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REPORT #
RRTAC 93-7

**Soil Series Information
for Reclamation Planning
in Alberta
Volume 1**

by

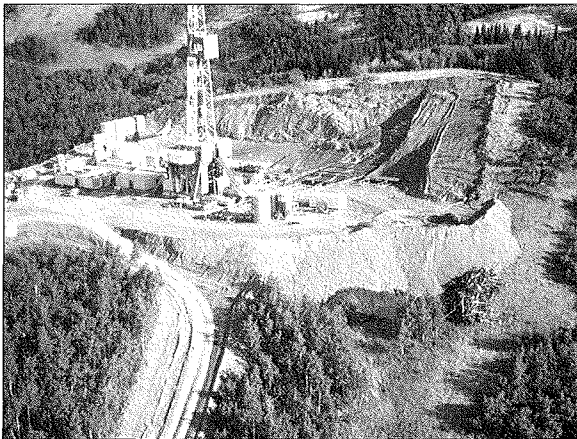
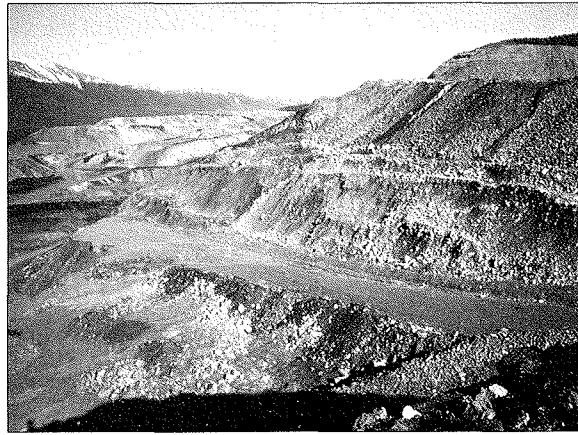
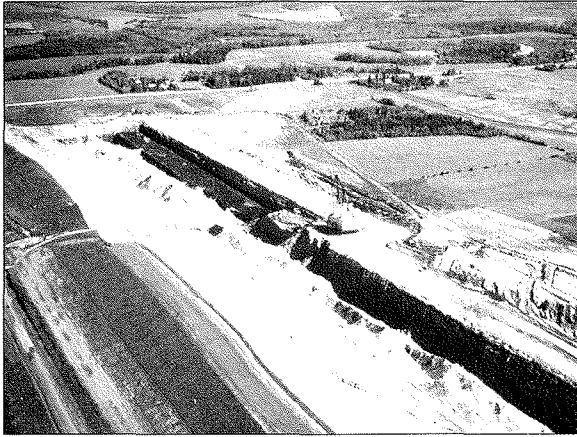
Pedocan Land Evaluation Ltd.

Prepared for

ALBERTA CONSERVATION AND RECLAMATION COUNCIL
(Reclamation Research Technical Advisory Committee)

1993

Reclamation Research Technical Advisory Committee



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DISCLAIMER

This report is intended to provide government and industry staff with up-to-date technical information to assist in the preparation and review of Conservation and Reclamation Approvals, and development of guidelines and operating procedures. This report is also available to the public so that interested individuals similarly have access to the most current information on land reclamation topics.

The opinions, findings, conclusions, and recommendations expressed in this report are those of the authors and do not necessarily reflect the views of government or industry. Mention of trade names or commercial products does not constitute endorsement, or recommendation for use, by government or industry.

The information and interpretations for each soil series in this manual are presented as typical examples - not as rules or regulations.

REVIEWS

This report was reviewed by members of RRTAC and the Oil and Gas and Plains Coal Reclamation Research Program Committees. Special thanks to Bob Howitt of the Alberta Research Council for his input.

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Chairman's Note

This manual is a first draft which is intended to be used on a trial basis. As people develop more experience in the field with each soil series the interpretations may need to be changed.

You are encouraged to send in suggestions for changes to the manual. Please send them to:

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EDMONTON, Alberta T5K 2J6

Your submission should identify the soil series, the location you worked with it, your suggested changes, and name and phone number.

PART I

BACKGROUND INFORMATION AND GUIDELINES

1. INTRODUCTION

This RRTAC manual has been published to provide reclamation and conservation planners with information and guidelines to help understand and use soil inventory data. This manual does not replace the need for site-specific soil inventory information — it merely provides guidelines for interpreting the maps and reports. **The information and interpretations are presented as typical examples — not as rules or regulations.**

The soil series included in this manual correspond to those in the Generation 2 Alberta Soil Names File (Alberta Soil Series Working Group 1992), which is part of the Alberta Soil Information System (Alta SIS). For access to any published Alberta Soil Survey information contact Publications, Alberta Research Council, Edmonton (Phone 450-5390).

Part 1 of this manual is a background and explanatory section that describes the terminology used in soil surveys and presents the assumptions and conventions upon which the interpretations are based. Part 2 presents typical data and interpretations for each soil series in Alberta. The interpretations were made by applying the guidelines presented in Part 1, and checking the results against experience and established practice.

1.1 Underlying Principle — Protection of Soil and Land Resources

Our soil landscapes are recognized as primary resources that are essential for production of food and fibre, and for maintaining water quality and other values. The issue of declining soil quality, especially of agricultural soils, was widely recognized in the 1970's and 80's. That recognition developed into numerous soil conservation initiatives, including the formation of active farm conservation groups in Alberta and elsewhere. Regulations and practices for soil reclamation after surface disturbances related to coal mining, sand and gravel extraction, pipeline construction, and other activities also evolved. The protection of soil quality and return of equivalent land capability following soil disturbance activities requires appropriate construction and reclamation techniques for the particular soil type, location, and land use. Techniques must also be appropriate for, and acceptable to, the industry involved.

This soils planning manual presents guidelines for interpreting soil survey information for preparing soil protection plans.

Protection of the soil resource means "maintaining soil quality"; or "returning equivalent capability" or more simply, "soil conservation". The concepts of soil quality (in the context of land reclamation) and guidelines for rating soil quality, can be found in the publication "Soil Quality Criteria Relative to Disturbance and Reclamation" prepared by the Soil Quality Criteria Working Group, 1987.

1.2 Reclamation Planning

Effective reclamation of disturbed lands is very much dependent on good planning. The main constituents of a reclamation plan are:

1. suitable site selection
2. description of existing site conditions
3. choice of final land use
4. soil handling and scheduling
5. establishment of final landform
6. water management and erosion control
7. soil reconstruction, and
8. revegetation

Detailed information on the pre-disturbance site conditions is an important component of reclamation planning. This baseline information includes data on slopes, elevations, aspects, drainage patterns, vegetation and soil conditions. Soil information can be used to determine the need for amendment or to select soils suitable for salvage. Description of vegetation provides information on plant species adapted to local climatic and soil conditions.

The choice of final land use should be determined at an early stage in the planning process, so that the economics and practicality of various reclamation options can be assessed. The appropriate land use should be chosen after discussion between the landowner(s), developer and various regulatory agencies.

The post-development landform should be compatible with the post-development land use objective and drainage regime. A critical feature of reclamation planning is to prevent erosion of the disturbed area, and to protect off-site water quality conditions.

1.3 Purpose and Use of this Manual

This manual identifies the key characteristics of each soil series in Alberta that are of interest to those involved in planning, soil handling and reclamation. It presents interpretations of topsoil and subsoil characteristics in terms of how they affect construction planning and operations, and how they relate to risk of soil quality degradation.

The interpretations are **intended to be used as guidelines** for interpreting soil maps and reports when developing a soil protection plan. **These are not rules**; many other factors must be considered before selecting appropriate soil handling and reclamation techniques. This manual does not replace the need for soil survey information of appropriate scale on a project, but rather it provides guidelines for interpreting project-specific information.

The following procedure is recommended when using this manual. Step 1: Identify the soil series you are working with from a soil map of appropriate scale (usually done for your project). Step 2: Look up the soil in Part 2 of this manual and compare the key characteristics listed to those of your soil to ensure a good match. Step 3: Check the interpretations that are relevant to your information requirement.

2. DESCRIBING, NAMING AND MAPPING SOILS

Soils are natural, dynamic bodies that are integral parts of the landscape and the environment. A pedologist (a soil scientist specialized in soil classification and mapping and land use interpretations) describes and classifies soil individuals, and maps soil-landscapes.

There are a number of properties of the soil and its environment described to characterize a soil and to classify, or name, a soil. Before you can predict the response of a soil to management actions you must know the characteristics of the soil profile, the landform and surface geological materials, and the climate.

2.1 Profiles, Pedons and Series

A **soil profile** (Figure 1) is a two-dimensional cross-section of the soil, through its horizons (horizontal layers) that is described and used to characterize and classify the soil.

Soil Classification is the "proper" identification of a soil using the Canadian System of Soil Classification which recognizes soil orders, great groups, subgroups, families and series. Many of the properties used to identify the appropriate classification come from a profile description.

A **soil pedon** is the smallest 3-dimensional unit in a landscape regarded as a soil individual.

A **Soil Series** is a category in the system of soil taxonomy, and more specifically it is a subdivision of a soil family. The link between a defined soil series (the concept) and a real body of soil is the pedon.

Soil series (within families of mineral soils) are differentiated on the basis of the following properties:

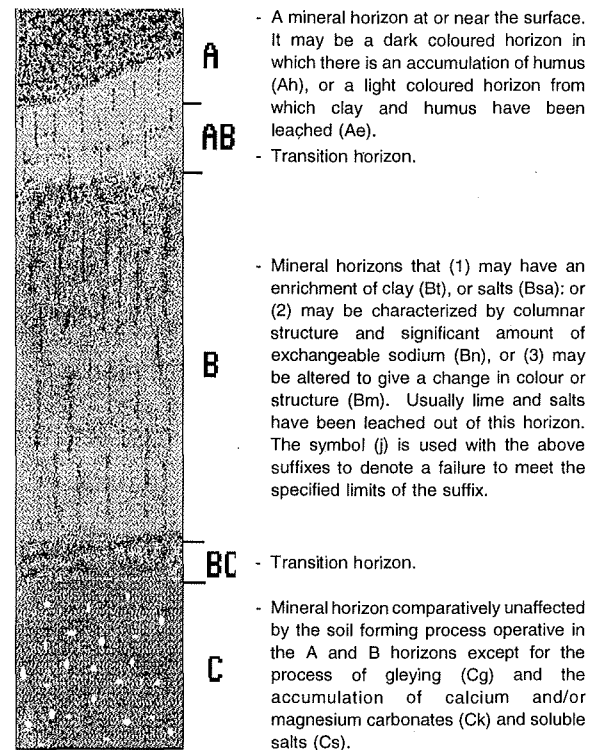


Figure 1. A theoretical soil profile with explanation of horizons.

1. Color, including mottling
2. Texture
3. Structure
4. Consistence
5. Thickness and degree of expression of horizons and of the solum
6. Abundance of coarse fragments
7. Depth to bedrock, permafrost, or contrasting material
8. Depth to free carbonates
9. Depth to and concentration of soluble salts
10. pH
11. Lithology

The reader is referred to the Canadian System of Soil Classification, (1987 edition) for further information on soil series definition, and to the Soil Survey Handbook, (1987 edition) for information on using series in mapping.

A **Soil Series** is identified by a geographic name that has been picked as a "code name" or "nickname" to

identify a particular soil and all of its characteristics, just as a person's name does. For example, once the user is familiar with the Duchess soil, all of the accessory information (and communication of it) is understood by reference to the soil name. The Alberta Soil Names File Generation 2, describes and names all of the soils currently recognized.

The limits of a soil series (Figure 2) are described in terms of soil horizons, texture, structure, color, parent material, and other characteristics.

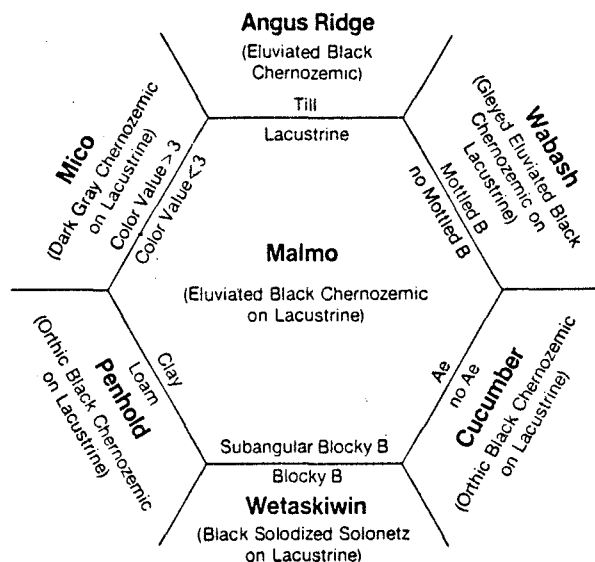


Figure 2. The limits of Malmo soil are defined by several characteristics which separate it from other soil series in the area (Mico, Penhold, etc.). After Coen (1983)

2.2 Soil Correlation Areas and Soil Names File

The Province of Alberta has been subdivided into 24 Soil Correlation Areas (SCA's) based on recognition of climatic parameters that affect soil development, soil use, and soil management (Alberta Soil Series Working Group 1992). The SCA map (Figure 3) boundaries generally coincide with the ecoregion boundaries of Strong and Leggat (1992), and therefore also coincide with Reclamation Species Suitability regions.

Soil correlation areas also correspond to (or may be divisions of) the soil zones. Soil Correlation Area 1, for example, is coincident with the Brown Soil Zone. Soil zone maps are available from Publications, Alberta Research Council, Edmonton (Ph: 450-5390).

The historic list of names and the coding practices have been standardized and correlated in the

Generation 2 Soil Names File. The Users' Handbook for Alberta Soil Names includes a Soil Correlation Areas (SCA) Map in addition to the listings of Soil Names and coding rules and explanations. Each of the 24 SCA's has a unique set of soil series names that can be used within that SCA. This practice ties each soil series to a soil-climate (eco-climate) region, which was considered desirable for most land use interpretations. The Generation 2 Soil Names Users' Handbook and the map and names files are available from Publications, Alberta Research Council (ph: 450-5390), in hard copy or in digital form.

2.3 Soil-landscapes

Soil and landscape parameters are used to map the extent and distribution of soils in a landscape. A soil map is a two-dimensional representation of the mapper's understanding of soil distribution across a landscape (a soil-landscape).

The terminology used to describe soil-landscape properties and characteristics (as in Figure 4) comes mostly from protocols established by the Canada Expert Committee on Soil Survey. The terminology is explained briefly in the following paragraphs. For in-depth explanations the reader is referred to the following reports:

1. Canada Expert Committee on Soil Survey, 1987. The Canadian System of Soil Classification, Second Edition, Research Branch, Agriculture Canada. Publication 1646.
2. Canada Expert Committee on Soil Survey, 1987. Soil Survey Handbook, Volume 1., Research Branch, Agriculture Canada. Technical Bulletin 1987-9E.
3. Canada Expert Committee on Soil Survey, 1982. The Canada Soil Information System (CanSIS) Manual for Describing Soils in the Field. Research Branch, Agriculture Canada Publication No. LRRI 82-52.

Soil profiles and soil pedons are observed and described while mapping in order to identify the soil series that characterizes a delineated part of the soil-landscape (Figure 4). We use the properties of the **characteristic series** to identify "typical properties" of the soil area such as topsoil color, topsoil thickness, and parent material type and texture.

2.4 Characteristics of Soil Landscapes

2.4.1 Soil Variability concepts must be understood prior to making or using soil maps, and prior to applying statistical tests to soil data.

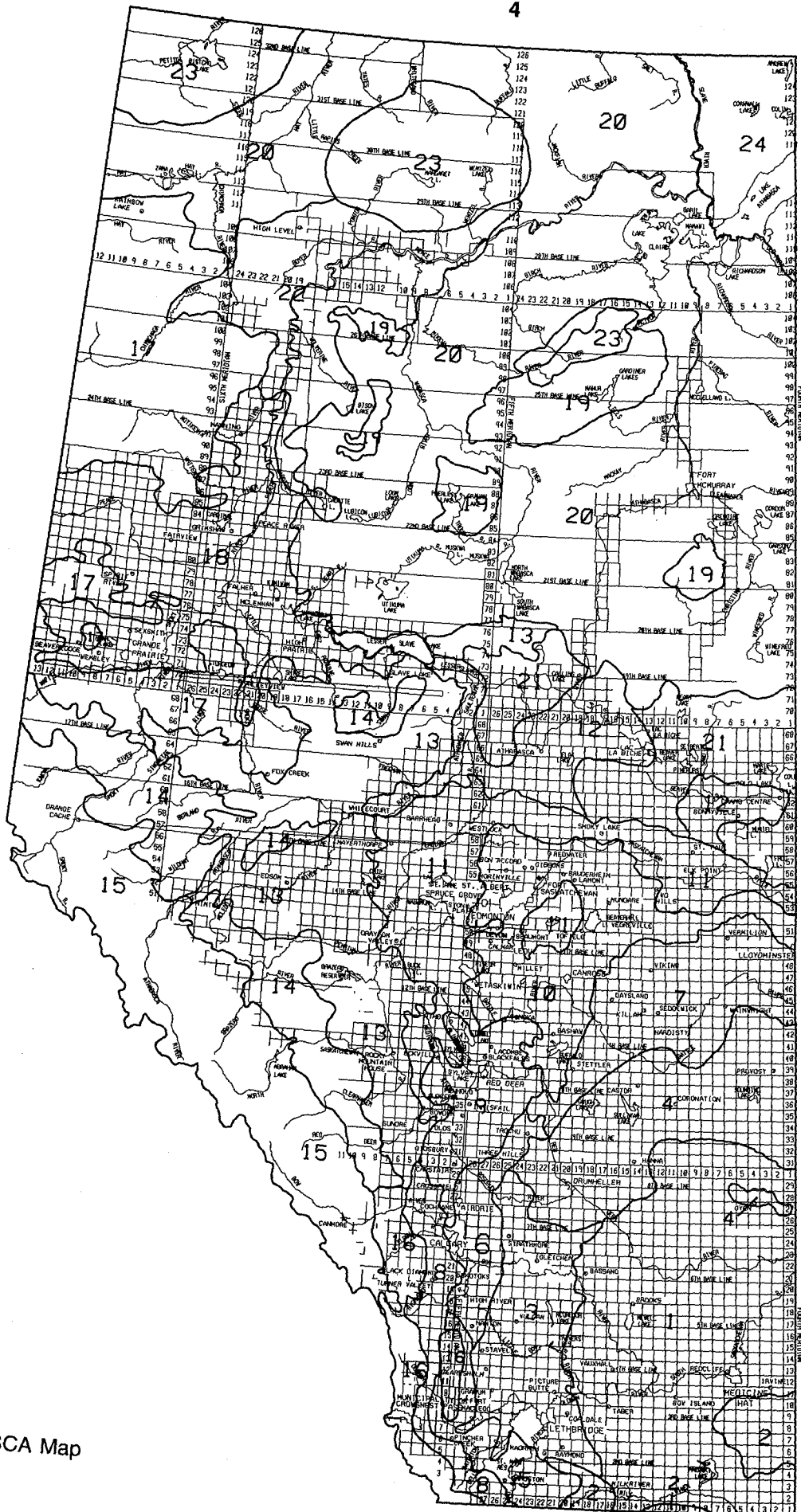
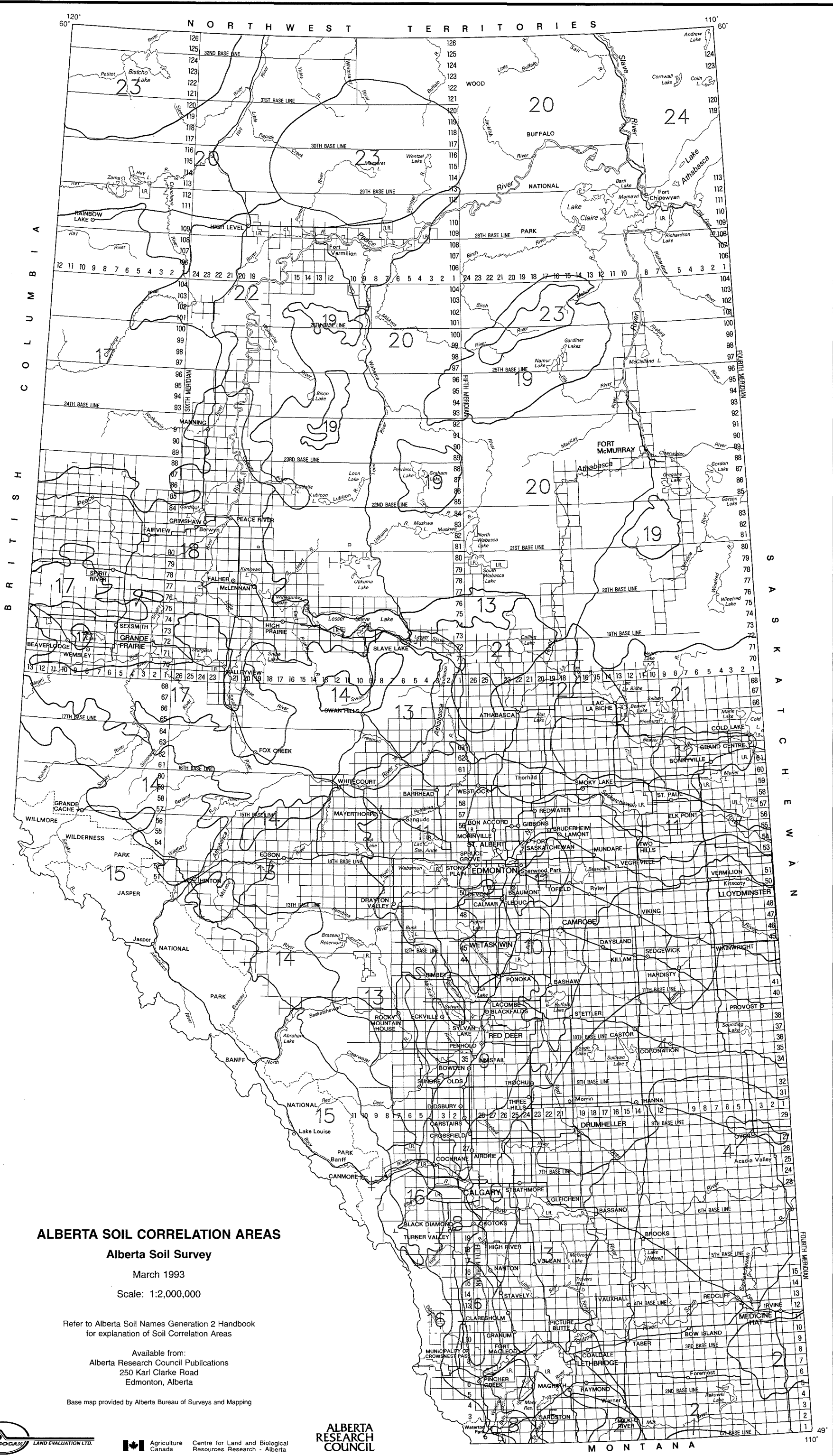


Figure 3. SCA Map



ALBERTA SOIL CORRELATION AREAS

Alberta Soil Survey

March 1993

Scale: 1:2,000,000

Refer to Alberta Soil Names Generation 2 Handbook
for explanation of Soil Correlation Areas

Available from:
Alberta Research Council Publications
250 Karl Clarke Road
Edmonton, Alberta

Base map provided by Alberta Bureau of Surveys and Mapping



Centre for Land and Biological
Resources Research - Alberta



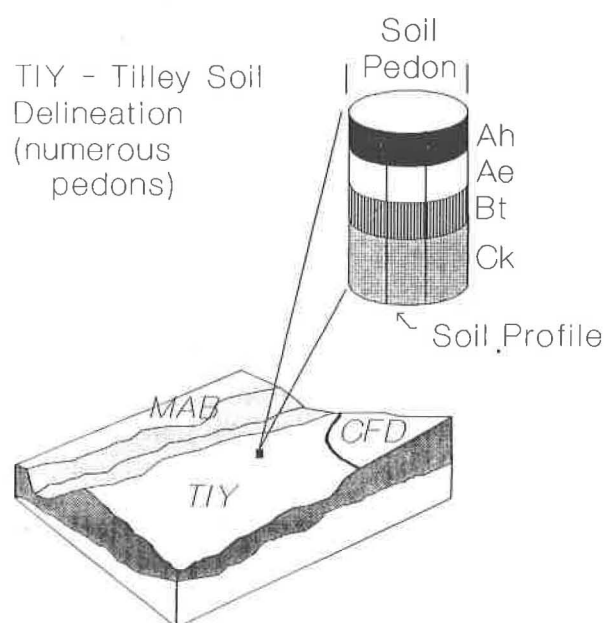


Figure 4. The relationship between the soil profile, the pedon and the soil delineation.

A question often asked is, "what are the limits of property x within series ABC?". Usually what the questioner really desires to know is the **spatial variability** of property x within a land area identified

on a soil map as being predominantly series ABC. This is very different from knowing the allowable range of property x within the definition of series ABC (the **conceptual variability**). Soil series in Alberta are currently identified and described by presenting the "central concept" or "modal profile" that typifies the series (we cannot bring the entire "soil" into the lab and analyze it). A central concept does not have variability. Descriptive statistics describing ranges, means, etc. of various properties of each series are not available.

Users of soil information must appreciate that soils do not have normal distributions, and they do not occur randomly in the landscape. Key soil properties should display equal variance within series, but not between series. Soils change systematically and (usually) predictably in distance and direction, both vertically and horizontally (soils are anisotropic and variation is spatially correlated).

2.4.2 Landforms (Table 1 and Figure 5) and **Soil Parent Material** or surface geological material in which the soil has formed (Tables 1 and 2), are key characteristics of a soil-landscape. Landforms are classified by their method of deposition (by glaciers, by running water, by wind, etc.) and by their surface form (hummocky, ridged, etc.). Parent materials are classified by type (method of deposition) and by texture group (coarse, medium, fine) as in Table 2.

Table 1. Summary of soil parent material types and landforms.

Parent Material		Mode of Deposition	Recognizable Features	Landforms
M	Morainal (glacial)	By glaciers while moving or melting	Heterogeneous mixture of boulders, sand, silt and clay; angular to rounded; non-sorted; non-stratified	Till plains; recessional moraines, drumlins
F(GF)	Fluvial (F) and glaciofluvial (GF)	By and in running water (e.g. river deposits)	Coarse textured; well rounded; sorted and often stratified. Crossbedding	Alluvial fans; flood plains; outwash plains; spillways; interlobate moraines; kames; eskers
L(GL)	Lacustrine (L) and glaciolacustrine (GL)	By running water into standing water (e.g. lake deposits)	Fine to medium textured; sorted and often varved with occasional ice-rafted pebbles. Sand and gravelly beach deposits	Deltas; lacustrine clay plains; beaches
E	Eolian	By wind	Coarse silt to medium sand; very well rounded; sorted; poorly compacted.	Dunes; loess blankets and veneers
O	Organic	In cool, wet depressions	Peat, organic remains in various stages of decomposition	Bogs; swamps; fens; marshes
C	Colluvial	Falling by gravity	Dependent on the nature of the material from which it was derived. Colluvium derived from bedrock typically contains angular coarse fragments	Talus cones, rubbly colluvial blankets
B	Bedrock	In ancient seas	Hard (lithic) bedrock of variable lithology	Rock knobs; knolls; plains and ridges
S	Softrock	Usually Cretaceous - aged sediments	Soft (paralithic), sometimes saline-sodic, mudstones; silt stones	Plains, ridges, knolls

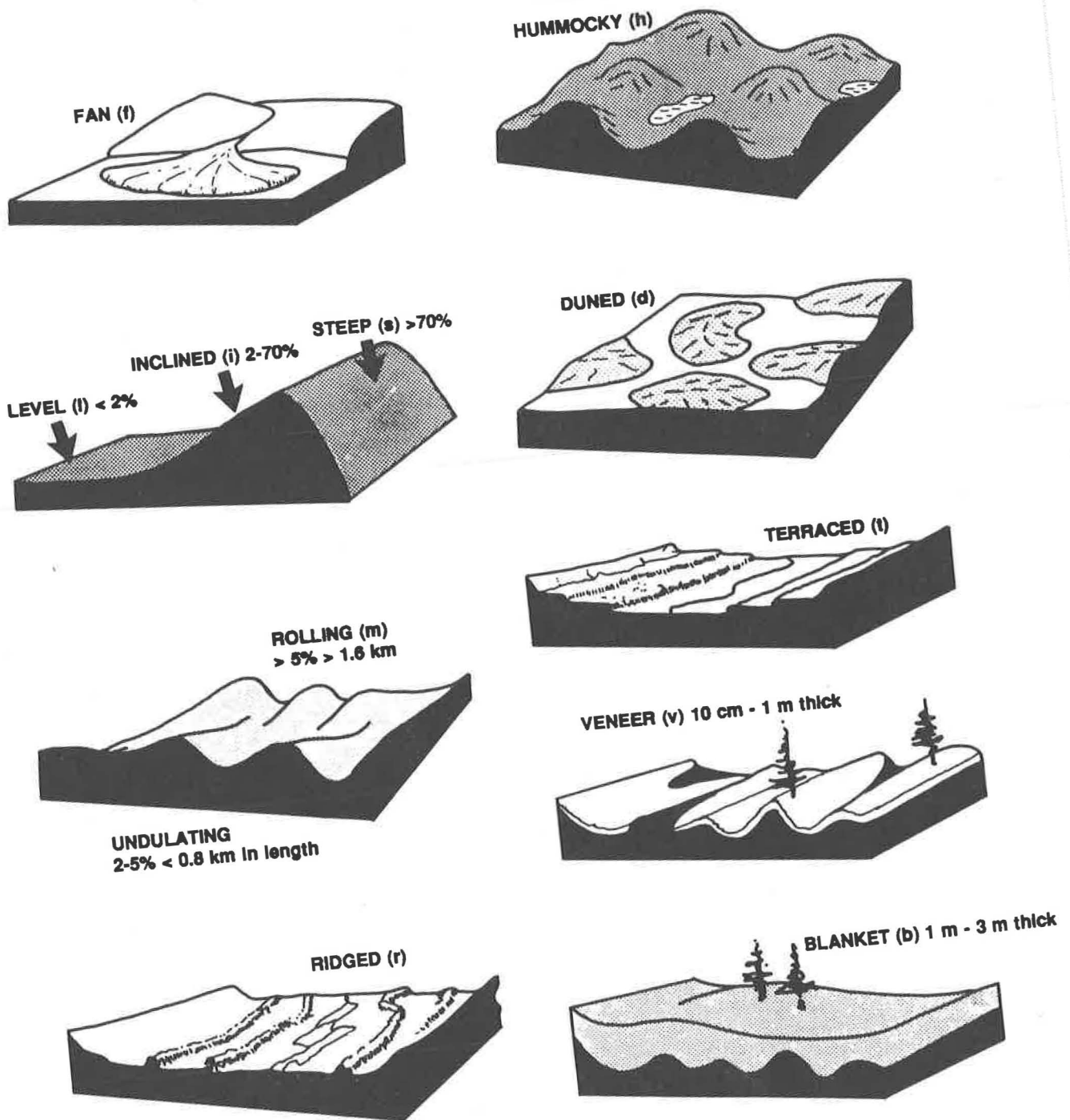


Figure 5. Surface expression terms for describing landforms.

Table 2. Codes for soil parent material types and texture groups used in Alberta Soil Names - Generation 2.

ANTH - Anthropogenic	GLLC - Glaciolacustrine
BRCG - Bedrock, conglomerate (lithic)	GLTL - Glaciolacustrine (till-like features)
BRGR - Bedrock, granitic (lithic)	LACU - Lacustrine (post-Pleistocene)
BRLS - Bedrock, limestone (lithic)	MARL - Marl
BRSH - Bedrock, shale (lithic)	PGFL - Preglacial Fluvial (e.g. Tertiary gravels)
BRSS - Bedrock, sandstone (lithic)	SEPT - Sedimentary Peat
BRUN - Bedrock, undifferentiated (lithic)	SPPT - Sphagnum Peat
COLL - Colluvial	SRCN - Softrock, coarse, not saline-sodic (paralithic)
EOLI - Eolian	SRFN - Softrock, fine, not saline-sodic (paralithic)
FLEO - Fluvioeolian (fluvial and eolian)	SRFS - Softrock, fine, saline-sodic (paralithic)
FLLC - Fluvio-lacustrine (fluvial and lacustrine)	SRUN - Softrock, undifferentiated (paralithic)
FLUV - Fluvial	TILL - Till (morainal)
FNPT - Fen Peat	UNDM - Undifferentiated mineral
FOPT - Forest Peat	UNDO - Undifferentiated organic
GLFL - Glaciofluvial	VOLC - Volcanic

CT Coarse Textured Group	Modifiers
MC - Moderately coarse textured; sandy loam and fine sandy loam	ST - Stony (20% to 50% by volume)
VC - Very coarse textured: sand and loamy sand	CB - Cobbly (20% to 50% by volume)
MT Medium Textured Group	GR - Gravelly (20% to 50% by volume)
ME - Medium textured: loam, silt loam and very fine sandy loam	VS - Very Stony (>50% by volume)
MF - Moderately Fine textured: sandy clay loam, clay loam, and silty clay loam	VB - Very Cobbly (>50% by volume)
FT Fine Textured Group	VG - Very Gravelly (>50% by volume)
FI - Fine textured: clay, silty clay and sandy clay	
VF - Very fine textured: heavy clay (more than 60% clay)	
O Organic (peat) Group	
OF - Organic Fibric	
OM - Mesic	
OH - Organic Humic	

2.4.3 Usual Soil Moisture Condition indicates the typical moisture regime of the soil (except for spring break-up or just after a rain). The descriptive terms used are:

droughty: indicates a soil with less capacity to supply water to a crop than is normal for the region. This may be due to sandy textures or limited rooting depth.

dry: indicates a normal condition for a dry region (such as south-eastern Alberta)

mesic: indicates a normal condition for a mesic region (such as central Alberta)

moist: indicates a soil with more capacity to supply water to a crop than is normal for the region. This may be due to clay textures or depressional locations.

watertable/ponding: indicates a soil that is usually wet due to a high watertable or ponding of runoff water.

temporary ponding: indicates a soil that is subject to temporary ponding after snowmelt or heavy rainfall events.

2.4.4 Surface Stoniness describes the abundance of stones on the soil surface. The class limits (Table 3) are defined in terms of the approximate amount of stones (25 to 60 cm in diameter or if flat 38 to 60 cm long) and of boulders (more than 60 cm in diameter or if flat more than 60 cm long); and of their spacing.

Table 3. Classes of stoniness and boulderiness in relation to surface coverage and spacing between fragments (after Canada Expert Committee on Soil Survey 1982).

Class and Name	Percentage of surface covered	Distance (metres) between stones or boulders if their diameter is ...		
		25 cm	60 cm	120 cm
Stones 0 Nonstony	<0.01	>25	>60	>120
Stones 1 Slightly stony	0.01-0.1	8-25	20-60	37-120
Stones 2 Moderately stony	0.1-3	1-8	3-20	6-37
Stones 3 Very stony	3-15	0.5-1	1-3	2-6
Stones 4 Exceedingly stony	15-50	0.1-0.5	0.2-1	0.5-2
Stones 5 Excessively stony	>50	<0.1	<0.2	<0.5

2.4.5 Soil Color is described using a standard color chart (the Munsell Color Chart) which provides codes for the color attributes of hue, value, and chroma. Almost all Alberta soils fall in the 10YR hue. The color chart also provides standard "common color names", such as dark gray for 10YR 4/1.

2.4.6 Soil Structure (Figure 6 and Table 4) describes the combination or arrangement of primary soil particles (sand, silt, clay) into definable secondary structure, often called aggregates. Structure of soil can be characterized in terms of how distinctive the structure appears or feels; the size of the aggregates, and the shape of the aggregates. Soil structure occurs as a result of soil forming processes like weathering of minerals and their movement down through the soil, the addition and decomposition of organic matter in the soil, freezing and thawing action, and wetting and drying action. Structure affects movement of water, air and roots; affects seedbed quality; and affects tillage properties.

Table 4. Soil structure codes.

Grade	Structureless (N) Weak (W) Moderate (M) Strong (S)
Size	Very Fine (VF) Fine (F) Medium (M) Coarse (C) Very Coarse (VC)
Shape	Platy (PL) Prismatic (PR) Columnar (COL) Angular Blocky (ABK) Subangular Blocky (SBK) Granular (GR) Massive (MA) Single Grain (SGR)

2.4.7 Soil Consistence describes the degree of cohesion or resistance to deformation or rupture (soil strength). Consistence may be described when the soil is dry, moist, or wet using the terms listed below. The most common moisture condition encountered for a particular soil is used in this manual.

Dry (D) Consistence

LD = Loose
SO = Soft
SLH = Slightly Hard
H = Hard
VH = Very Hard
EH = Extremely Hard
R = Rigid

Moist (M) Consistence

LM = Loose
VFR = Very Friable
FR = Friable
F = Firm
VF = Very Firm
EF = Extremely Firm

Wet (W) Consistence

N = Nonsticky
SLS = Slightly Sticky
S = Sticky
VS = Very Sticky

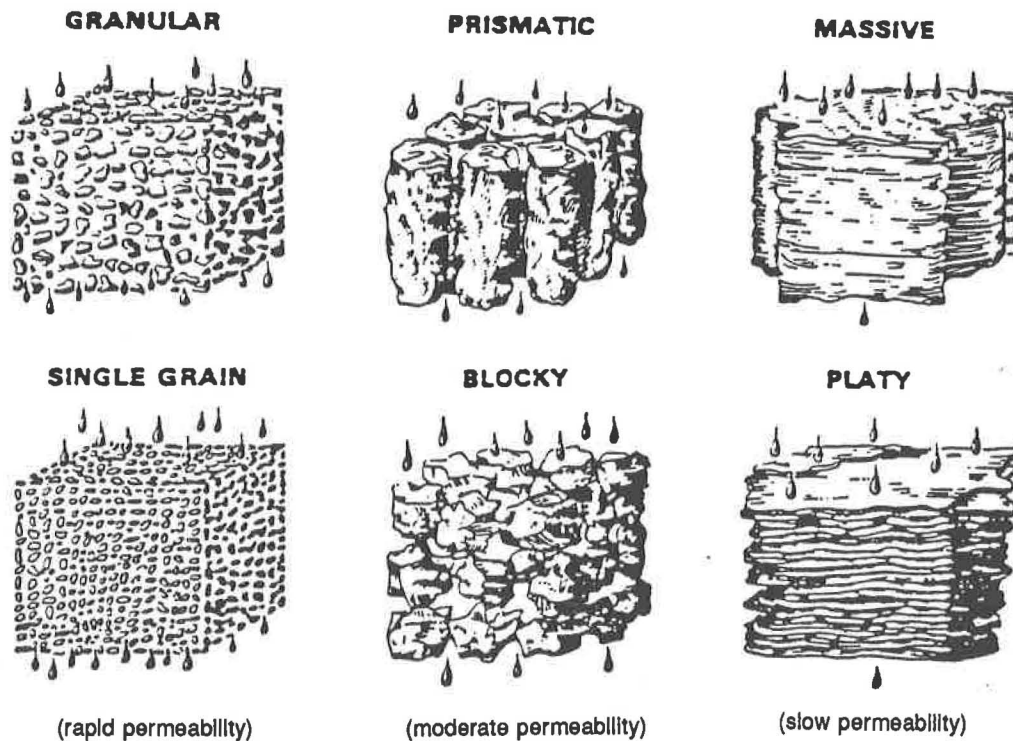


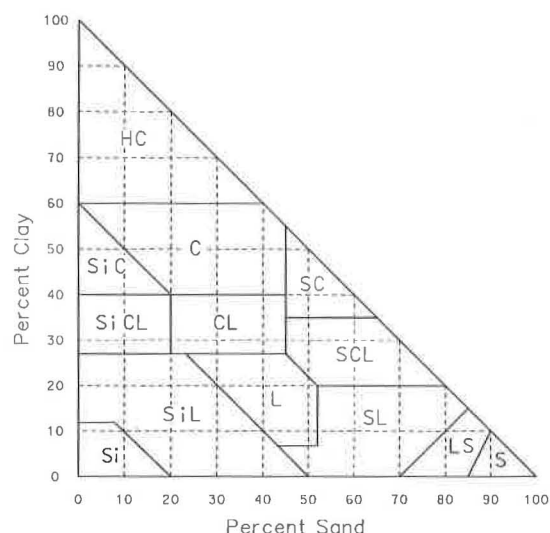
Figure 6. Illustration of soil structure and effect on water permeability.

2.4.8 Soil Texture is the term used to describe the particle size distribution of a soil. The determination of soil texture 'by feel' requires practice and depends on the ability to feel sand grains at one extreme of particle size and plasticity and stickiness of clays at the other. Accurate measures of particle size distribution must be performed in the laboratory. Texture classes are formed by grouping various size fractions.

A soil with silty clay loam texture has approximately 55% silt, 35% clay, and 10% sand-sized particles (Figure 7). A soil with loam texture has approximately 40% silt, 20% clay, and 40% sand-sized particles.

The textural class of each soil horizon can be determined from a knowledge of the particle size distribution and the textural triangle (Figure 7).

2.4.9 Organic Carbon (OC) content is expressed as % of oven-dry weight. This is **not** the same as organic matter content. To convert organic carbon to organic matter the usual formula used is $OC \times 1.7 = OM$, but the factor may actually range from 1.5 to 2.5 for different soils (Nelson and Sommers 1982), thus use of organic carbon content is preferred to a converted value. The presence of coal particles in a soil sample will increase the organic carbon value — use care in interpreting results.



NOTES:

1. The sand portion of the sand, loamy sand and sandy loam texture classes are described more specifically based on the dominant sand size class. For example: very coarse sand, loamy very fine sand and fine sandy loam.
2. The texture classes may be modified by adding suitable adjectives when coarse fragments occupy >20% of the soil volume. For volumes 20% to 50% use coarse fragment class name (p. 4) plus texture (e.g., gravelly sandy loam). For volumes >50% use additional adjective very (e.g., very gravelly sand).

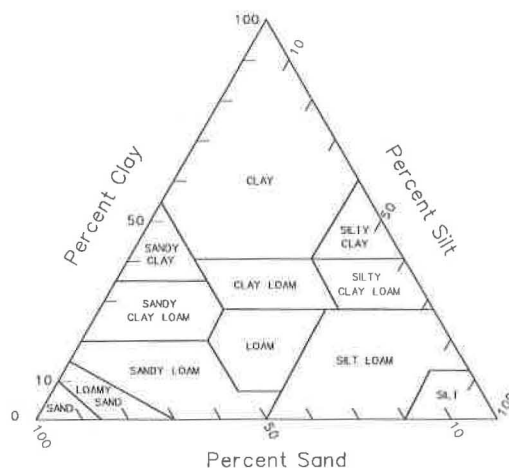


Figure 7. Two texture triangles in common use — both presentations give the same result.

2.4.10 Soil pH is a measure of the reaction, or acid-base status of the soil. Reaction classes used by soil surveyors are shown in Table 5. Values are for pH of a soil-water mixture, and information users should always be aware of the method used to determine soil pH. Soil pH determined by a neutral salt (such as CaCl_2) method will be approximately 0.5 units lower than a water method pH.

Most agricultural crops are negatively affected by soil pH of less than about 6 or greater than about 7.8.

Many tree and shrub species can easily tolerate low pH but are not so tolerant of high pH (refer to Fedhenheuer et al. 1987).

Table 5. Soil reaction classes, after the Canada Expert Committee on Soil Survey (1982).

Reaction Class	Water pH values
Extremely acid	<4.6
Very strongly acid	4.6-5.0
Strongly acid	5.1-5.5
Medium acid	5.6-6.0
Slightly acid	6.1-6.5
Neutral	6.6-7.3
Mildly alkaline	7.4-7.8
Moderately alkaline	7.9-8.4
Strongly alkaline	>8.4

2.4.11 Electrical Conductivity (EC) is a measure of soil salinity. The accepted SI unit for expressing EC of soils is deciSiemens per metre — dS/m (1dS/m = 1 mS/cm = 1000 uS/cm = 1mmho/cm). Classes of severity of soil salinity used by soil surveyors are shown in Table 6. The effect of salinity on plant growth is similar to a drought effect. Crops vary in their tolerance to salinity.

Table 6. Classification of severity of soil salinity (EC_{sat} in dS/m) after the Canada Expert Committee on Soil Survey (1982).

Depth (cm)	Non	Weak	Moderate	Strong	Very Strong
0-60	<2	2 - 4	4 - 8	8 - 16	>16
60-120	<4	4 - 8	8 - 16	16 - 24	>24

Saline soils are sometimes called "alkali" which is often confused with alkaline - meaning a basic pH level. Soil salinity is a result of the presence of water-soluble salts. Salt-affected soils can be classified as being saline or saline-sodic.

2.4.12 Sodium Adsorption Ratio (SAR) is a measure of the amount of soluble sodium in the soil, and is therefore a measure of sodicity. Sodic levels for agricultural soils can be described as follows (author's opinion).

not sodic no problem	problems in clay soils	problems in most soils	problems in all soils
SAR	10	15	20

Sodic soils tend to hold large amounts of water and make it unavailable to crops. They also have severe structural problems, with poor aggregation and large, dense clods. Sodic soils dry slowly after wetting, are very sticky when wet ("gumbo" soils), and are very hard when dry. Sodic soils (sodic but not saline) are sometimes called "black alkali", which is a confusing term.

2.4.13 Saturation percentage (Sat%) is a measure of how much water a soil holds when saturated, expressed as percentage of oven-dry weight of the soil. Values of less than 20% indicate very droughty soils, and values greater than 80% indicate high water retention. In both cases the ability of the soil to supply water to plants is outside the desirable range. Very high Sat% values (greater than 100%) may indicate a sodic soil.

3. INTERPRETING SOIL SERIES FOR RECLAMATION PLANNING

The practice of assigning **land use interpretations** to soil series has been established for many years. Interpretations have been developed for assigning tax assessment values to farmland; for rating land capability for agriculture (dryland and irrigated); for rating land capability for forestry; for planning recreational and park facilities; for urban planning; for engineering applications; and for various types of environmental impact assessment. Land use interpretations are based on consideration of all characteristics of a soil — from landform to profile.

The lower half of each Interpretation Guidelines sheet in Part 2 of this manual presents the planning interpretations made for each soil series.

3.1 Soil Quality Ratings for Reclamation

The soil quality ratings provide a subjective evaluation of the quality of each soil horizon for use as "growth medium" — or the suitability of the soil material for use as topsoil or subsoil. The rating is not done for the entire "soil-body" — it is done for each horizon independently. The ratings follow the guidelines contained in the "Soil Quality Criteria Relative to Disturbance and Reclamation" (1987 edition) published by Alberta Agriculture. Tables A1 through A5, at the end of Part 1 present the rating guidelines for the plains, northern forest, and eastern slopes regions. Figure A1, following these tables, outlines the three land regions and indicates which rating guideline was applied to each soil correlation area. The different guidelines recognize the important differences in soils and land use in the three regions.

Caution is advised in using the quality ratings to compare soils. A different rating category (for example fair vs. poor) may be due to a very slight difference in one quality variable (pH 5.5 vs 5.4) or it may indicate a much more serious change (EC 2 vs 8). The reason for the rating and the magnitude of difference should always be checked.

3.2 Soil Horizons and Soil Handling

Soils have naturally developed layers or horizons with differing properties. This horizontal segregation of properties and qualities in natural landscapes is a feature we try to replace in reconstructed soil landscapes. For example, when reclaiming agricultural soils we want to replace a good quality rootzone layer and a good quality seedbed layer if such layers existed before disturbance.

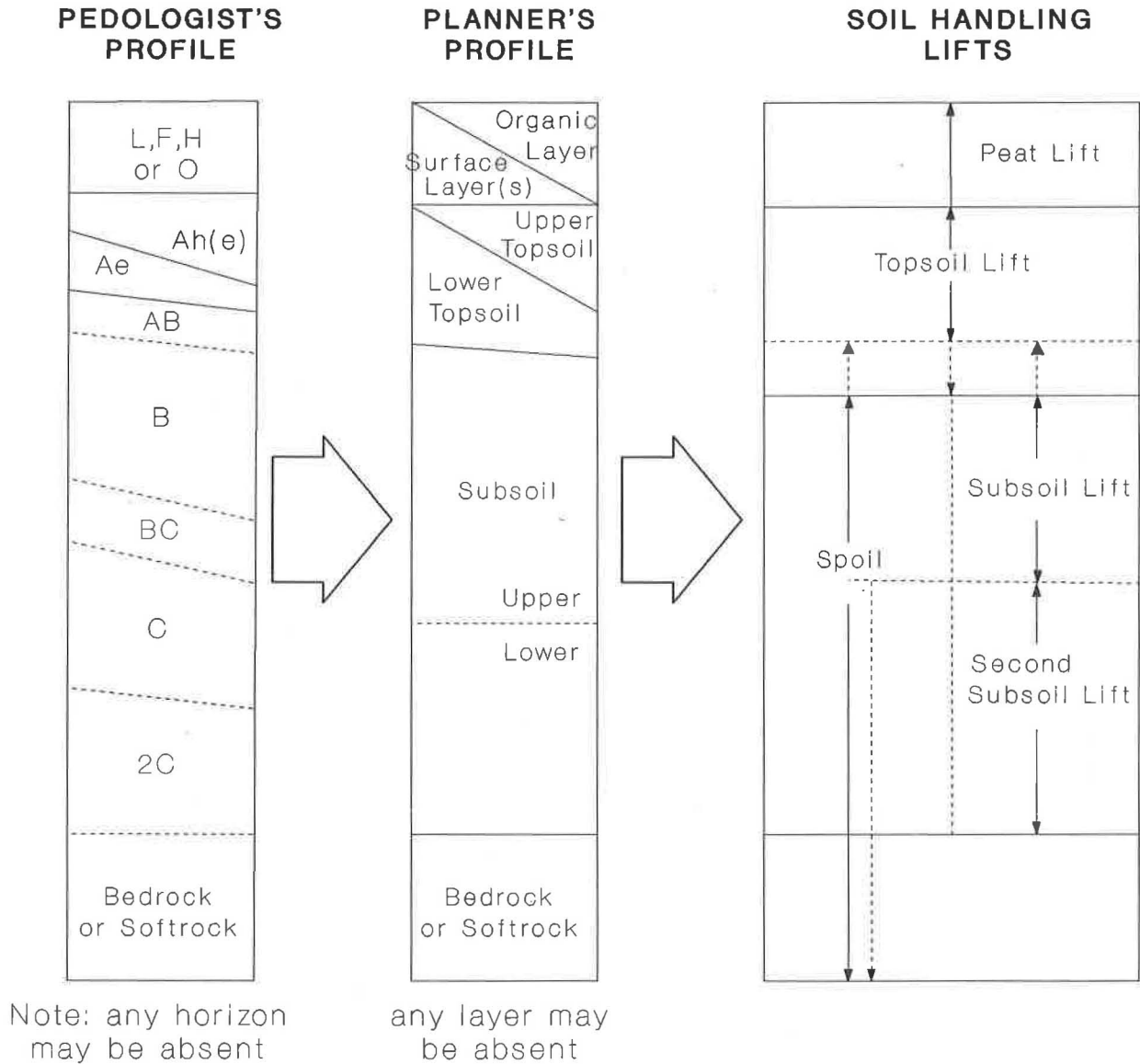


Figure 8. Soil profile terminology used by pedologists, reclamation planners, and construction operators.

It is important and necessary to define the terms used to name soil horizons and material handling layers. Terminology differs between pedologists, planners and construction crews; and between different industries. When terms such as topsoil, subsoil, surface layers, rootzone material, second lift, spoil and overburden are used, their meaning must be clearly understood. The terminology used: (1) by pedologists to name soil horizons, (2) by planners to name handling layers (which may aggregate some of the pedologist's horizons) and (3) by construction crews to name the

material lifts and stockpiles, is presented in Figure 9 in an attempt at standardization. Figure 9 presents typical soil profiles in the Plains, Northern Forest and Eastern Slopes Region.

The pedologist's profile and terminology follow the Canadian System of Soil Classification (Canada Expert Committee on Soil Survey 1987a). The other profiles and terminology have been developed for this manual.

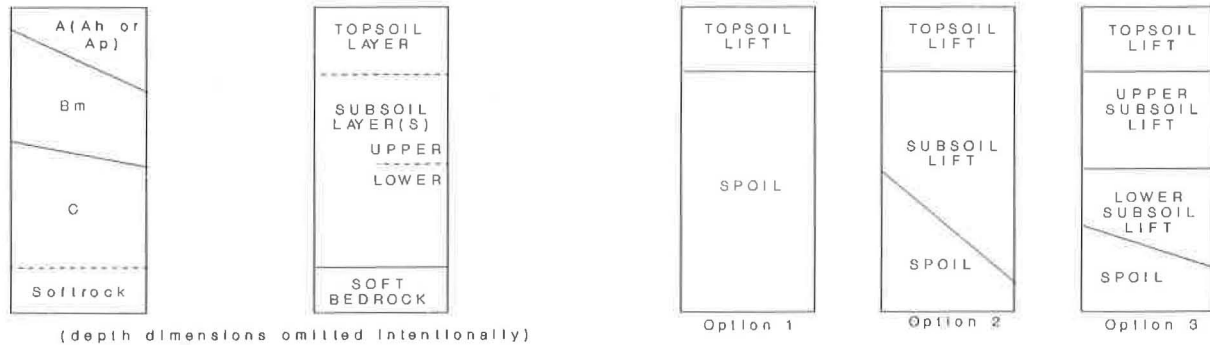
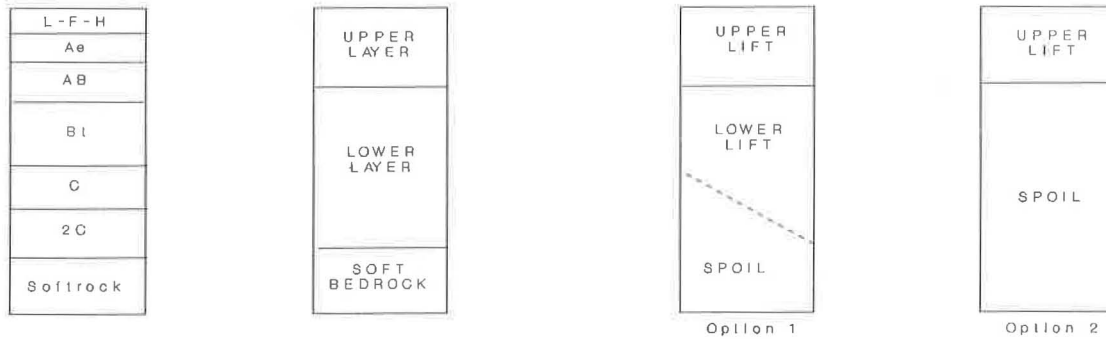
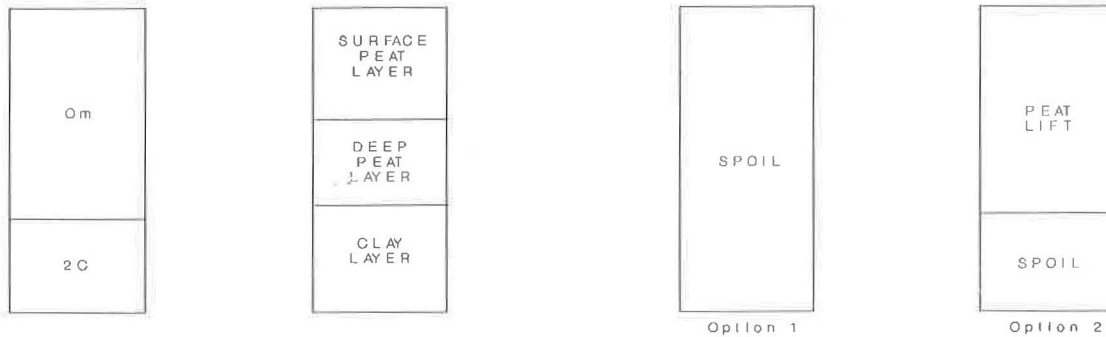
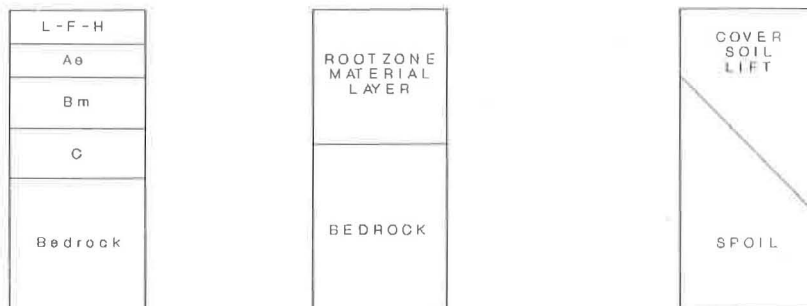
**PEDOLOGIST'S
PROFILE**
**PLANNER'S
PROFILE**
SOIL HANDLING LIFTS
PLAINS REGION - TYPICAL CULTIVATED OR GRASSLAND SOIL (CHERNOZEMIC)

NORTHERN FOREST REGION - TYPICAL FOREST SOIL (GRAY LUVISOL)

NORTHERN FOREST REGION - TYPICAL BOG SOIL (TERRIC ORGANIC)

EASTERN SLOPES REGION - TYPICAL MOUNTAIN FOREST SOIL (BRUNISOL)


Figure 9. Typical soil profiles in the Plains, Northern Forest, and Eastern Slopes Regions.

3.2.1 Topsoil, Upper Layer and Rootzone Material. In the **Plains Region** the surface soil layer is usually either:

1. an Ap horizon — the plowed or cultivated layer, which is generally 10 to 30 cm thick, and may be a cultivated A, B, C or O horizon.
2. an Ah or Ahe horizon — the organic matter-enriched "true topsoil" (including any turf or sod layer) which is usually 10 to 30 cm thick. The upper part or all of the layer may be cultivated.

These horizons meet established definitions of **Topsoil**.

In the **Northern Forest Region** the surface and near surface layers of a typical forest soil are:

1. an L, F, or H horizon — the leaf litter layer of forest soils, which is not topsoil but an organic layer of generally 5 to 15 cm thickness.
2. An Ae horizon — the gray, ashy, leached layer of soils developed under forests which is usually 10 to 20 cm thick.
3. an AB horizon — the layer of transition from the A to the B master horizons, which is usually 5 to 15 cm thick.

None of these horizons meets established definitions or concepts of "topsoil". The term **Upper Layer** is used to refer to a combination of any of the L-F-H, Ae, AB horizons.

Organic soils occur in all three regions but are most common in the Northern Forest Region. These soils have thick O horizons, which are peat materials in varying stages of decomposition. The upper 30 cm of peat is often considered to be the "more active" soil layer and it contains rhizomes and other viable plant material. The **Surface Peat Layer** (approximately 30 cm thick) is sometimes salvaged and replaced selectively. In the **Eastern Slopes Region** the thickness of the entire soil profile is treated as one material called **Rootzone Material**.

3.2.2 Subsoil Layers. The **Subsoil Layer** may be:

1. the B, BC and C soil horizons and the unconsolidated soil parent material (usually glacial drift) above bedrock.
2. the B and BC horizons but not the C and deeper parent material.
3. split into Upper Subsoil and Lower Subsoil layers due to an important change in soil properties that affects soil quality. The split may be at the bottom of the B or BC or may be within the C master horizon. Most soils do not have such strongly contrasting layers.

3.2.3 Bedrock and Softrock. The Bedrock and Softrock Layers may be:

1. consolidated beds of sandstone, limestone, shale or other lithologies; referred to as **Bedrock** in the Alberta Soil Names File, and most common in the Eastern Slopes Region.
2. unconsolidated (soft), sedimentary beds of mudstone, siltstone, sandstone referred to as **Softrock** in the Alberta Soil Names File, and common in the Plains Region and Northern Forest Region.

3.3 Soil Handling Case Examples

The following case examples of soil handling are included to illustrate common practices. This is not a comprehensive listing of practices.

3.3.1 Soil handling examples on cultivated land.

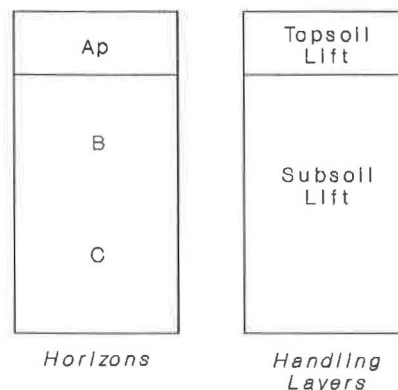
Case 1:

The thickness of the plow layer (or cultivated layer) equals or exceeds the total thickness of the Ah and Ahe horizons.

Practice

The topsoil lift thickness equals the thickness of the plow layer (the Ap horizon).

Chernozemic or Solonchic
Soil, Cultivated Land,
Shallow Topsoil



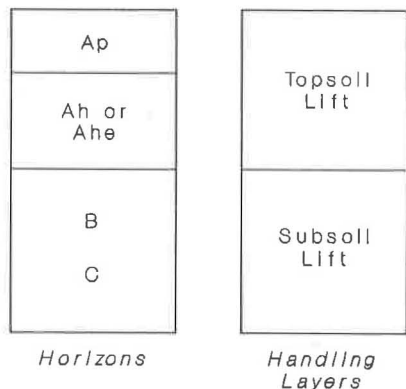
Case 2:

The thickness of the plow layer is less than that of the Ah and Ahe horizons.

Practice

The topsoil lift thickness equals the thickness of the Ah and Ahe horizons.

Chernozemic Soil,
Cultivated Land,
Deep Topsoil

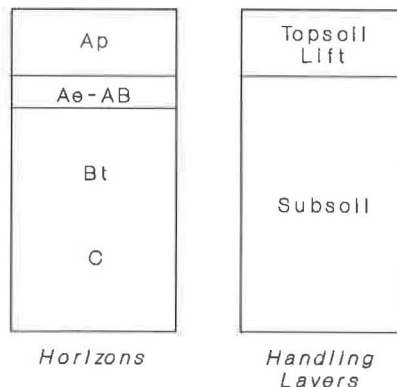
Case 4:

Cultivated forest (Luvisol) soil with the cultivated layer underlain by the remnant of the Ae-AB horizon.

Practice

The topsoil lift equals the cultivated layer (Ap) thickness. The light gray-colored Ae-AB layer serves as a marker for stripping depth.

Luvisolic Soil,
Cultivated Land

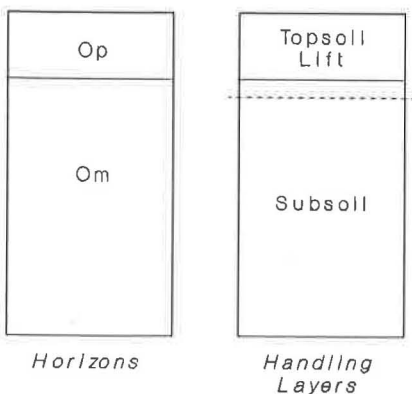
Case 3:

Cultivated Organic soils with a plow layer (cultivated layer).

Practice

The topsoil lift thickness exceeds the thickness of the actively cultivated layer by at least 5 cm. The excess removal is intended to ameliorate "shrinkage" during removal, storage, and replacement. A normal minimum removal thickness is 25 cm.

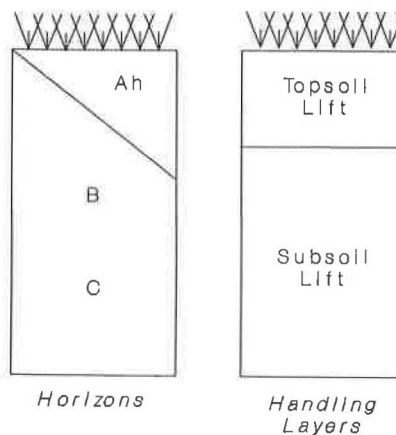
Organic Soil, Peatland,
Cultivated

**3.3.2 Soil handling examples on rangeland.**Case 1:

The soil has normal Chernozemic profile development with Ah (or Ahe), B, C horizon sequence.

Practice

The topsoil lift thickness equals the thickness of the Ah and Ahe horizons. When the thickness of the Ah and Ahe is less than 10 cm a common practice is to salvage a minimum of 10 cm, which includes the turf, the thin Ah and Ahe and part of the B horizon (this practice is often called overstripping).

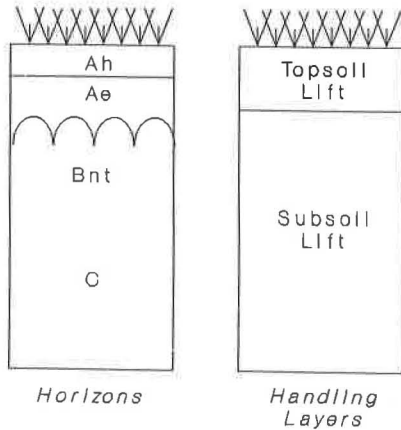


Case 2:

The soil has Solonetzic profile development with a very thin Ah or Ahe or Ae horizon (often discontinuous) over a Bnt "hardpan" horizon.

Practice

The topsoil lift consists of the materials above the hardpan — which includes the turf, and the thin Ah or Ahe. In areas of "blowouts" (eroded pits without topsoil) there will be no material salvaged.

**3.3.3 Soil handling example on peatlands (not cultivated).**Case 1:

Uncultivated Organic soils.

Practice

No topsoil lift is normally salvaged for disturbances such as pipelines, however the top 25 cm contains seeds and rhizomes of value for revegetation.

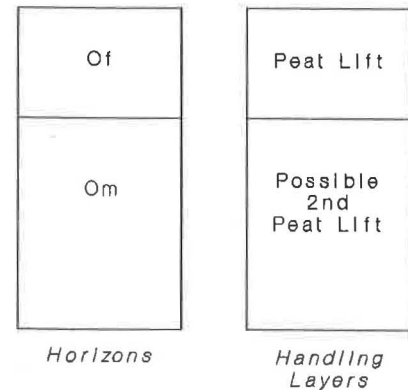
Peatlands Note 1:

Peat is a resource with considerable value as a soil conditioner and source of organic carbon. It is desirable for many surface disturbance operations to salvage the entire volume of peat available.

Peatlands Note 2:

Shallow "channel fens" often have large volumes of subsurface water flow through the peat. The flow is confined at fairly shallow depth by clays or other fairly impermeable material. Proper reclamation of these channel fen soils requires replacement of the peat layer to maintain water flow down the channel. Blocking the flow with backfilled clay or with ramping

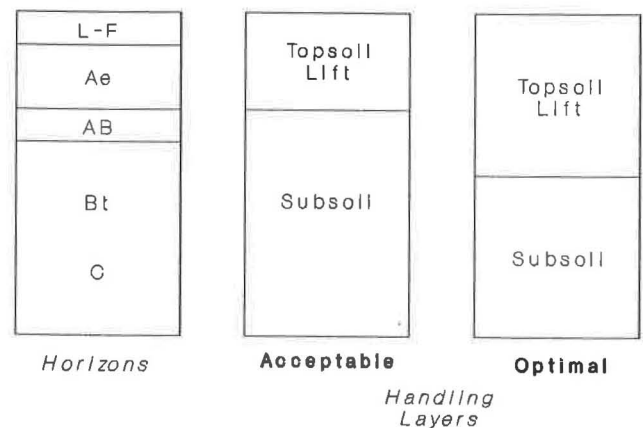
fill will cause flooding upstream of the blockage (problem was demonstrated in the Spruce Grove area, 1990-91). No such problem exists in bowl bogs or other peatlands where there is no subsurface flow.

**3.3.4 Soil handling example on forest land (not cultivated).**Case 1:

The soil has normal, Luvisolic profile development with L-F, Ae, AB, Bt horizons.

Practice

The topsoil lift thickness equals the average combined thickness of the L-F (litter or duff layer) and Ae horizons. The operator salvages a specified thickness (usually about 15 cm). An optimal (for best seedbed quality) practice would be to "overstrip" into the B horizon.



3.4 Topsoil Interpretations

The topsoil interpretations provide information that is useful for planning topsoil salvage and replacement programs. These are interpretations of soil data, and are intended for information only. These are not regulations.

3.4.1 Typical Topsoil Thickness (in centimetres) is the usual (median) thickness of topsoil for the soil series.

3.4.2 Topsoil Thickness Range (in centimetres) is the normal range of topsoil thickness for the soil series. Values outside the normal range can be found.

3.4.3 Color Change to Subsoil is described as visually obvious or not obvious to the observer. An obvious color change can be used to separate topsoil from subsoil by a machine operator. Where the color change is not obvious, closer inspection and depth specifications must be used.

3.4.4 Topsoil Stripping Limitations recognize several soil characteristics such as wetness and shallow depth that can limit topsoil stripping operations. The most common limitations to stripping are described below.

none:	no operational limitation
wetness:	water table is at or near the surface, and the wet soil conditions severely limit machine operations
very thin topsoil:	large machinery may have difficulties working with small increments of soil (both in removal and replacement operations)
very thick topsoil:	extra effort and storage space will be required to accommodate large quantities of topsoil
stony or gravelly:	excessive stones or gravel in topsoil may hamper workability of the material
discontinuous:	great variability in topsoil thickness over small areas means there will be areas with no topsoil present. This is a particular problem in Solonchic soil areas with numerous "blowouts".

3.5 Wind Erosion Risk Ratings

Wind Erosion Risk is estimated by the method described by Coote and Pettapiece (1989), which was a refinement of the Chepil wind erosion index (E). The attributes that affect E include surface roughness and aggregation, soil resistance to movement, drag velocity of wind at the soil surface, soil moisture shear resistance, and available moisture of the surface soil. The values used for the roughness factor and the resistance to movement factor are shown in Table 7 for various surface textures. Development of the other factors is described in Coote and Pettapiece (1989). The resulting values of E (a dimensionless index) range from 0 to greater than 1000 for Alberta soils. Three classes were developed to represent the risk of wind erosion on bare, unprotected soils as follows:

L Low	E = less than 250
M Moderate	E = 250-400
H High	E = greater than 400

Table 7. Values of *K* and *C* for wind erosion for various surface texture classes.

Surface Texture Class	Soil Roughness and Aggregation factor, <i>K</i>	Soil Resistance to Movement by Wind, <i>C</i>
Sand	1.0	0.00433
Loamy sand	0.75	0.00421
Fine sand	1.0	0.00433
Loamy fine sand	0.75	0.00321
Gravelly sand	0.7	0.00433
Sandy loam	0.6	0.00393
Fine sandy loam	0.5	0.00389
Gravelly sandy loam	0.45	0.00393
Loam	0.2	0.00357
Very fine sandy loam	0.4	0.00398
Silt loam	0.2	0.00361
Clay loam	0.18	0.00329
Silty clay loam	0.19	0.00309
Silty clay	0.5	0.00277
Clay	0.6	0.00245
Heavy clay	0.65	0.00197

3.6 Water Erosion Risk Ratings

A modified Universal Soil Loss Equation (USLE) approach described by Tajek, Pettapiece and Toogood (1985) was used to derive the ratings of water erosion risk. The USLE method predicts **long-term average**

soil loss from a land area with specific cropping and management practices. The predicted loss is an average for an entire slope. The method cannot predict the amount of soil loss from a specific storm event — especially an extreme storm. The method does however, produce comparisons of the erodibility of different soil series. A detailed description of the USLE approach can be found in the United States Department of Agriculture Handbook 537. The Universal Soil Loss Equation is stated as

$$A = R \cdot K \cdot LS \cdot C \cdot P$$

where:

A = annual average soil loss in T/ha.

R = The precipitation factor which includes rain and snow as modified by Tajek, Pettapiece and Toogood (1985). R values for Alberta range from 400 to 700 (Figure 10) with the East Slopes Region having the highest values. Areas with equal annual R values may differ in the contribution of snowmelt to total erosivity and in the distribution of rainstorms. The R factor is highly variable.

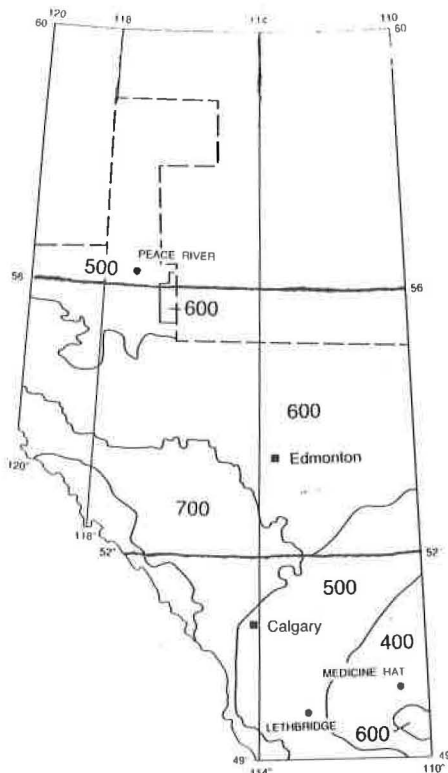


Figure 10. R factor map for Alberta (from Tajek, Pettapiece and Toogood 1985).

K = the inherent soil erodibility factor which relates to the susceptibility of soil to detachment and transportation. K values for individual soil series are assigned by use of the Wischmeier nomograph

(Figure 11) to rate measured or estimated soil properties. K values for Alberta soils range from 0.007 for very sandy soils to 0.072 for soils with silty textured topsoil overlying impermeable subsoils. The overall erosivity potential of Alberta soils is moderate to high, with 30 percent of soils having K values greater than 0.05, and only 3 percent with values less than 0.02.

LS = the topographic factor which is based on length, steepness, and shape of the slopes. The LS factor is a ratio of soil loss per unit area to that from a standard plot. The LS factor for simple slopes must be modified for complex slopes common in Alberta using guidelines in USDA Handbook 537. As the length and steepness of slopes increase, soil loss increases dramatically and the effect of the K factor becomes critical (Figure 12). Not all soil-landscape areas experience soil loss. Soils in depressional areas experience net gain rather than loss.

LS values have been calculated for typical landforms in Alberta by Tajek, Pettapiece and Toogood (1985) as shown in Table 8. Combining the K factor for a soil series with the LS factor for the appropriate landform provides the K•LS portion of the USLE calculation for a soil landscape.

C = the cropping (crop residue) cover and management factor. It is actually the ratio of soil loss under a specific crop condition to the soil loss from continually fallowed land. For reclaimed soils the C value could vary greatly.

P = the support practices factor. It is the ratio of soil loss with specific support practices to the loss from a field with up-and-down-slope cultivation. Conservation practices such as contour tillage, mulching and terracing slow runoff of water and reduce soil transport. The P factor therefore accounts for the reduction in soil loss achieved by good soil reclamation support practices.

Long-term annual soil loss estimates are **not reported** (except for a few examples in Table 9 to illustrate the method) due to the extreme variability that results between years and between locations in a single farm field. Also the C and P factors cannot be predicted and should not be assumed. These decisions are based on results of recent research by R. Howitt, Alberta Research Council.

Long-term soil loss estimates in tonnes per ha are highly inaccurate and can be misleading. We have derived our risk ratings from the soil (K) factor and the landform-slope (LS) factors only (Figure 12).

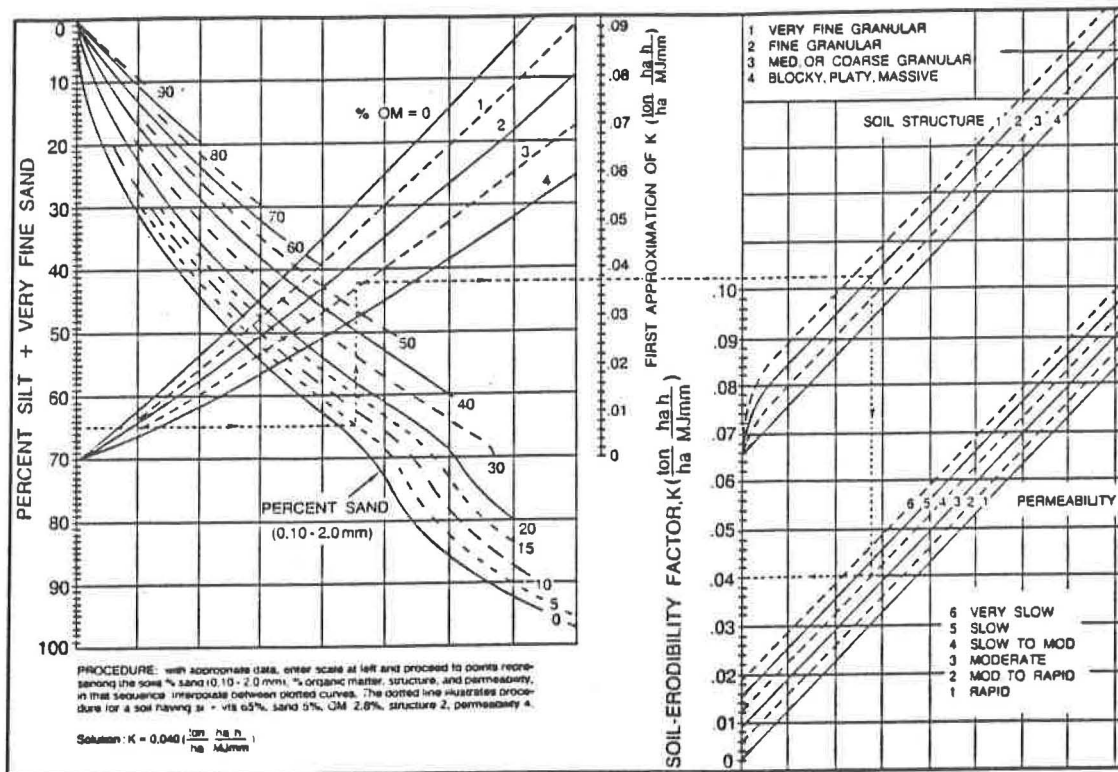


Figure 11. Nomograph for assigning risk classes using the K and LS factors.

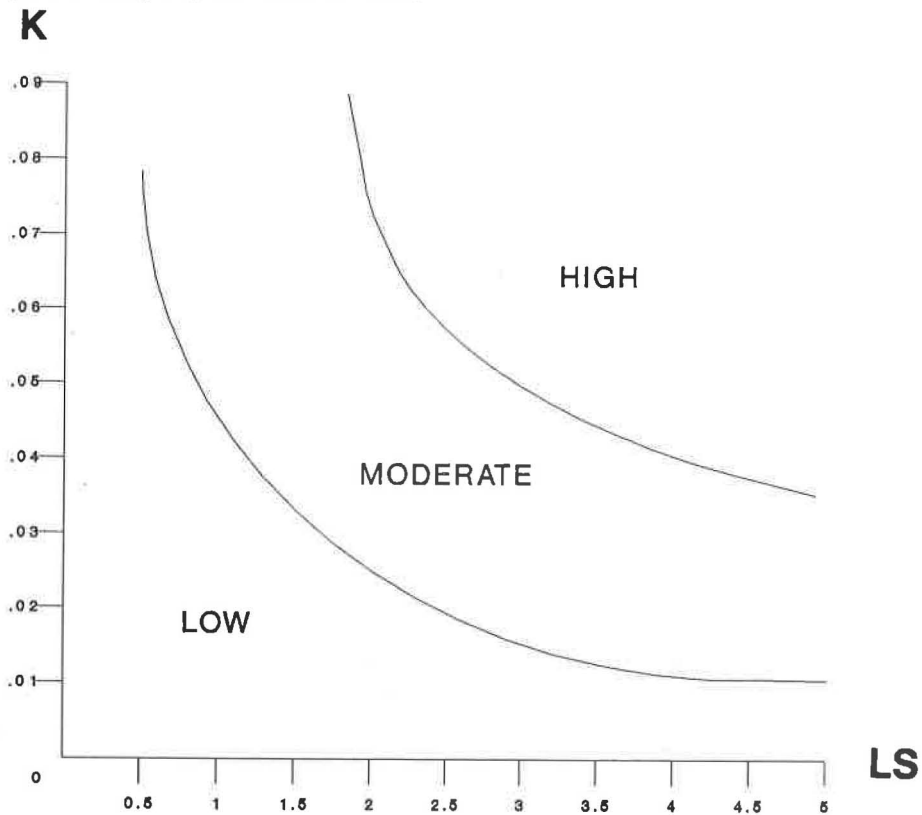


Figure 12. Soil erodibility (K) factor nomograph (modified to SI units by Foster et al. 1981).

Table 8. LS values associated with landforms in Alberta.

Landform*	Slope (%)	Length (m)	LS
Undulating or terraced (Mu, Ft, Lu, Lv/Lu.)	0-5	30	0.4
Level (Li, Fl)	0-5	50	0.4
Level to inclined (Li, Li)(Peace River)	0-5	200	0.6
Hummocky or ridged (Mh, Mr)	5-9	30	0.8
Rolling or inclined (Mm, Mi, Mb/Rm)	5-9	100	1.5
Inclined (Mi, Li, Mv/Ri)	5-9	200	2.0
Hummocky or ridged (Mh, Mr)	9-15	50	2.5
Rolling or inclined (Mm, Mi)	9-15	100	3.5
Steeper slopes (Mh, Mvb/Rm)	>15	30	5.0

*F = fluvial, L = lacustrine, M = morainal, R = rock

b = blanket, h = hummocky, i = inclined, l = level, m = rolling, r = ridged, t = terraced, u = undulating, v = veneer

Table 9. Examples of predicted annual soil loss (A) for typical soil series/landform situations.

SCA	Soil Series/Landform/Slope	R	K	LS	C	P	A	Class*
1	Cavendish / Fu / <5	400	0.020	0.4	0.75	1	2.4	VL
1	Chin / Fu / <5	400	0.040	0.4	0.75	1	4.8	VL
1	Maleb / Mh / 9-15	400	0.036	2.5	0.75	1	27.0	S
1	Seven Persons / Li / <5	400	0.025	0.4	0.75	1	3.0	VL
10	Mundare / Fu / <5	600	0.020	0.4	0.75	1	3.6	VL
10	Ponoka / Fu / <5	600	0.032	0.4	0.75	1	5.8	VL
10	Angus Ridge / Mm / 5-9	600	0.020	1.5	0.75	1	13.5	M
10	Malmo / Lu / <5	600	0.021	0.5	0.75	1	4.7	VL
10	Kavanagh / SRi / <5	600	0.040	0.6	0.75	1	10.8	L
11	Nakamun / Mm / 5-9	600	0.066	1.5	0.75	1	44.5	VS
11	Cooking Lake / Mh / 9-15	600	0.057	2.5	0.75	1	64.1	VS
13	Granada / SRr / 9-15	700	0.046	3.5	0.75	1	84.5	VS
17	Braeburn / Mm / 5-9	500	0.063	1.5	0.75	1	36.6	VS
18	Donnelly / Li / <5	500	0.066	0.6	0.75	1	14.8	M

* VL = very low, L = low, M = moderate, S = severe, VS = very severe

3.7 Subsoil Interpretations

The subsoil interpretations identify materials or conditions which limit the use of the soil material for reclamation, or limit soil handling operations.

3.7.1 High Watertable

All year: Watertable is at or near the surface year round (fens or bogs and Gleysols).

Spring: Watertable is at or near the surface only during the spring i.e. low lying areas that gather spring runoff or stream terraces.

3.7.2 Hard Bedrock (consolidated) bedrock occurs within about 1.5 m of the surface that usually needs blasting and results in rock fragments.

3.7.3 Non-Sodic Softrock includes weathered mudstone, sandstone or siltstone. This material can be ripped or bulldozed, and ranges from good to poor quality for reclamation.

3.7.4 Sodic Softrock is weathered mudstone, sandstone or siltstone that has high sodium (and sometimes soluble salts) content. This material has severe structural problems, is very slowly permeable, dries very slowly and does not support growth of grasses, shrubs or trees if left at the surface.

3.7.5 Gravel, very gravelly sands and cobbly materials require special material handling to prevent these materials from coming to the surface.

3.7.6 Excessively Stony Layers require special material handling to prevent these materials from coming to the surface. Stone picking will usually be required.

3.7.7 Instability of an exposed face results in slumps and cave-ins. If the soil texture is sandy loam, loamy sand, sand or gravel, pit or trench walls may slump. Coarse textured soil with very friable to loose consistence lack cohesion properties which often result in unstable faces. Heavy clays, especially when wet, also tend to be unstable. All soils with a high watertable are unstable and exposed faces will fail.

3.7.8 Solonetzic B Horizon (Bnt or hardpan layers) are an undesirable soil material due to severe structural problems and often high sodium content.

3.7.9 Saline or Sodic Lower Subsoil layers are undesirable for plant growth due to high EC or SAR.

3.7.10 Important Texture Change indicates change to a less desirable texture at depth. The soil has a substantial change in texture from the upper subsoil to the lower subsoil. Examples are: sandy loam upper subsoil over clay lower subsoil; clay loam upper subsoil over sand lower subsoil. Increasing the sand content of the upper subsoil decreases the water-holding capacity and increases drought effects in dry areas. Increasing the clay content of the upper subsoil in areas where excess moisture is common results in poorer internal drainage and lack of aeration.

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APPENDIX A. RATING TABLES AND LAND REGIONS OF ALBERTA

Table A1. Criteria for Evaluating Suitability of Topsoil Material for Revegetation in the Plains Region.

Rating/Property	Good (G)	Fair (F)	Poor (P)	Unsuitable (U)
Reaction (pH)	6.5-7.5	5.5-6.4 & 7.6-8.4	4.5-5.4 & 8.5-9.0	<4.5 and >9.0
Salinity (E.C.) (dS/m)	<2	2-4	4-8	>8
Sodicity (SAR)	<4	4-8	8-12	>12 ¹
Saturation (%)	30-60	20-30, 60-80	15-20, 80-120	<15 and >120
Stoniness Class	S0, S1	S2	S3, S4	S5
Texture	FSL, VFSL, L, SL, SiL	CL, SCL SiCL	LS, SiC, C ² , S, HC ³	
Moist Consistence	Very friable Friable	Loose	Firm, Very firm	Extremely firm
Organic Carbon (%)	>2	1-2	<1	
CaCO ₃ Equivalent (%)	<2	2-20	20-70	>70

¹ Materials characterized by a SAR of 12 to 20 may be rated as Poor if texture is sandy loam or coarser and saturation % is less than 100.

² C - may be upgraded to Fair or Good in some arid areas.

³ HC - may be upgraded to Fair or Good in some arid areas.

Source: Soil Quality Criteria Relative to Disturbance and Reclamation;
Alberta Soils Advisory Committee (1987).

Table A2. Criteria for Evaluating Suitability of Subsoil Material for Revegetation in the Plains Region.

Rating/Property	Good (G)	Fair (F)	Poor (P)	Unsuitable (U)
Reaction (pH)	6.5-7.5	5.5-6.4 & 7.6-8.5	4.5-5.4 & 8.6-9.0	<4.5 and >9.0
Salinity (EC) (dS/m)	<3	3-5	5-10	>10
Sodicity (SAR)	<4	4-8	8-12	>12 ¹
Saturation (%)	30-60	20-30 60-80	15-20, 80-120	<15 and >120
Stone Content (% Volume)	<3	3-25	25-50	>50
Texture	FSL, VFSL, L, SiL, SL	CL, SCL, SiCL	S, LS, SiC, C, HC	Bedrock
Moist Consistence	Very friable Friable	Loose, Firm	Very firm	Extremely firm
Gypsum CaCO ₃ Equivalent (%)	The suitability criteria for sodicity (SAR) may be altered by the presence of high levels of either lime (CaCO ₃) or gypsum (CaSO ₄) in excess of other soluble salts.			

¹ Materials characterized by an SAR of 12 to 20 may be rated as Poor if texture is sandy loam or coarser and saturation % is less than 100.

Source: Soil Quality Criteria Relative to Disturbance and Reclamation;
Alberta Soils Advisory Committee (1987).

Table A3. Criteria for Evaluating Suitability of Surface Material (upper lift) for Revegetation in the Northern Forest Region

Rating/Property	Good (G)	Fair (F)	Poor (P)	Unsuitable (U)
Reaction (pH) ¹	5.0-6.5	4.0-5.0 & 6.5-7.5	3.5-4.0 & 7.5-9.0	<3.5 and >9.0
Salinity (EC) ² (dS/m)	<2	2-4	4-8	>8
Sodicity (SAR) ²	<4	4-8	8-12	>12 ³
Saturation (%) ²	30-60	20-30 60-80	15-20, 80-120	<15 and >120
Stone/Rockiness Area ⁴ (% Area)	<30/<20	30-50/20-40	50-80/40-70	>80/>70
Texture	FSL, VFSL, L, SiL, SL	CL, SCL, SiCL	LS, SiC, C, HC, S	Bedrock
Moist Consistence	Very friable Friable	Loose, Firm	Very firm	Extremely firm
CaCO ₃ Equivalent (%)	<2	2-20	20-70	>70

¹ pH values presented are most appropriate for trees, primarily conifers. Where reclamation objective is for other end land uses, such as erosion control, and where other plant species may be more important, refer to Table A1.

² Limits may vary depending on plant species to be used.

³ Materials characterized by a SAR of 12-20 may be rated as **poor** if texture is sandy loam or coarser and saturation % is less than 100.

⁴ <25 cm diameter stones/rocks intercepting surface.

Source: Soil Quality Criteria Relative to Disturbance and Reclamation;
Alberta Soils Advisory Committee (1987).

Table A4. Criteria for Evaluating Suitability of Subsurface Material (lower lift) for Revegetation in the Northern Forest Region

Rating/Property	Good (G)	Fair (F)	Poor (P)	Unsuitable (U)
Reaction (pH) ¹	5.0-7.0 ²	4.0-5.0 & 7.0-8.0 ²	3.5-4.0 & 8.0-9.0	<3.5 and >9.0
Salinity (EC) ³ (dS/m)	<3	3-5	5-8	>8
Sodicity (SAR) ²	<4	4-8	8-12	>12 ⁴
Saturation (%) ²	30-60	20-30 60-80	15-20, 80-120	<15 and >120
Coarse Fragments (% Vol)	<30 ⁵ <15 ⁶	30-50 ⁵ 15-30 ⁶	50-70 ⁵ 30-50 ⁶	>70 ⁵ >50 ⁶
Texture	FSL, VFSL, L, SiL, SL	CL, SiC, SiCL	S,LS,S, C, HC	Bedrock
Moist Consistence	Very friable Friable Firm	Loose, Very Firm	Extremely firm	Hard rock
CaCO ₃ Equivalent (%)	<5	5-20	20-70	>70

¹ pH values presented are most appropriate for trees, primarily conifers. Where reclamation objective is for other end land uses, such as erosion control, and where other plant species may be more important, refer to Table A1.

² Higher value takes into consideration that in the lower lift the pH values of the soils are generally higher. Normally the pH rating should not be different from those shown in Tables 9 and 11.

³ Limit may vary depending on plant species to be used.

⁴ Materials characterized by a SAR of 12-20 may be rated as **poor** if texture is sandy loam or coarser and saturation % is less than 100.

⁵ Matrix texture (modal) finer than sandy loam

⁶ Matrix texture (modal) sandy loam and coarser.

Source: Soil Quality Criteria Relative to Disturbance and Reclamation;
Alberta Soils Advisory Committee (1987).

Table A5. Criteria for Evaluating Suitability of Root Zone Material in the Eastern Slopes Region.

Rating/Property	Good (G)	Fair (F)	Poor (P)	Unsuitable (U)
Reaction (pH) ¹	5.0-6.5	4.0-5.0 & 6.5-7.5 ²	3.5-4.0 & 7.5-9.0	<3.5 and >9.0
Salinity (EC) ² (dS/m)	<2	2-4	4-8	>8
Sodicity (SAR) ²	<4	4-8	8-12	>12 ³
Saturation (%) ²	20-30	30-60 60-80	15-20, 80-100	<15 and >100
Coarse Fragments (% Vol)	<30 ⁵ <15 ⁶	30-50 ⁵ 15-30 ⁶	50-70 ⁵ 30-50 ⁶	>70 ⁵ >50 ⁶
Texture	L, SiCL, SCL, SL, FSL	CL, SiL, VFSL, SC SiC,	LS, S Si, C, HC	Consolidated Bedrock
Moist Consistence	Very friable Friable Firm	Loose, Firm	Very firm	Extremely firm
CaCO ₃ Equivalent (%)	<2	2-20	20-70	>70

¹ pH values presented are most appropriate for trees, primarily conifers. Where reclamation objective is for other end land uses, such as erosion control, and where other plant species may be more important, refer to Table A1.

² Limit may vary depending on plant species to be used.

³ Materials characterized by SAR of 12-20 may be rated as **poor** if texture is sandy loam or coarser and saturation % is less than 100.

⁴ 0.2-2.5 cm diameter fragments in the soil material.

⁵ Matrix texture (modal) finer than sandy loam

⁶ Matrix texture (modal) sandy loam and coarser.

Source: Soil Quality Criteria Relative to Disturbance and Reclamation;
Alberta Soils Advisory Committee (1987).

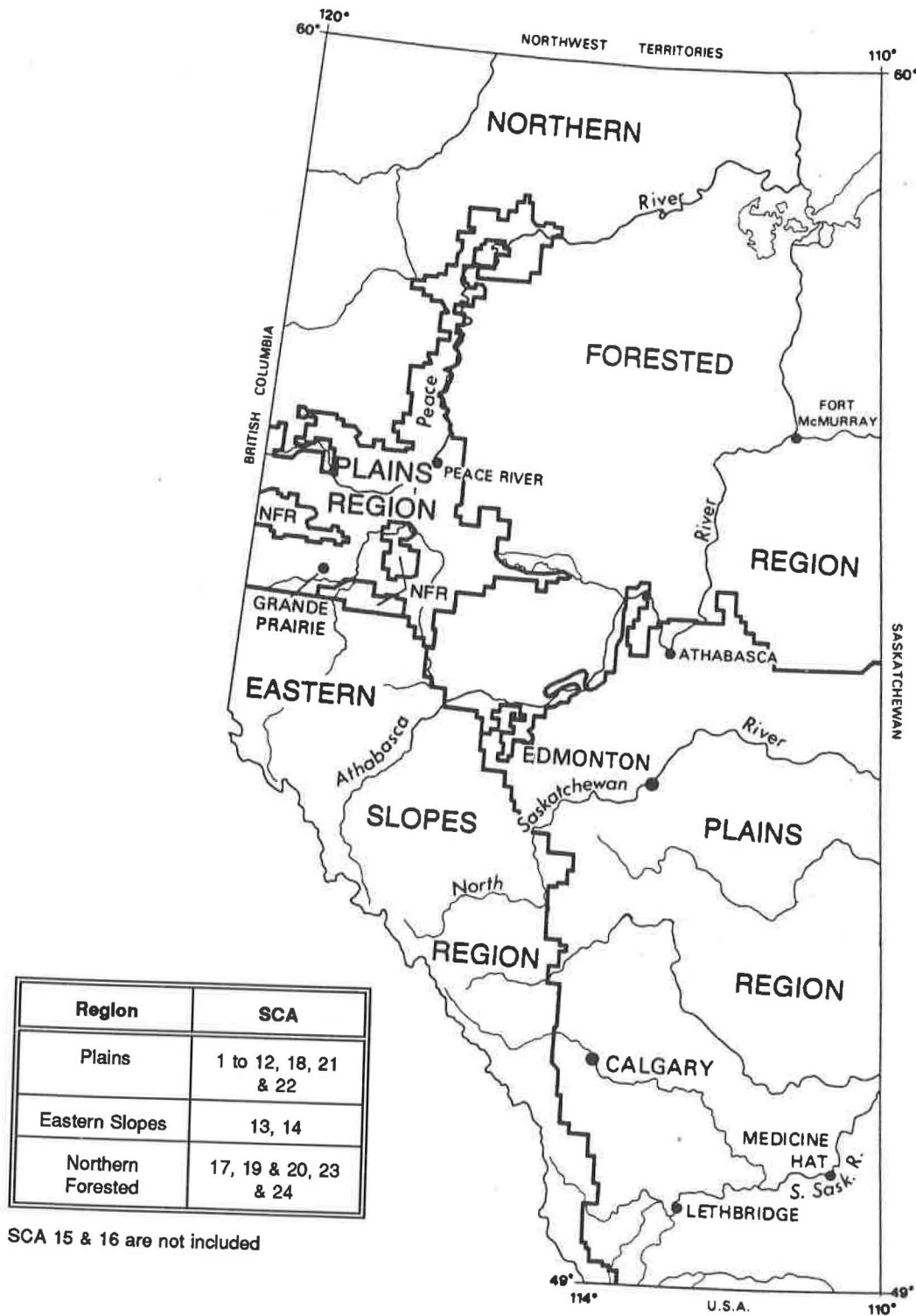


Figure A1. Land Regions of Alberta.

PART II

SOIL SERIES INFORMATION AND INTERPRETATIONS ORDERED BY SOIL CORRELATION AREA

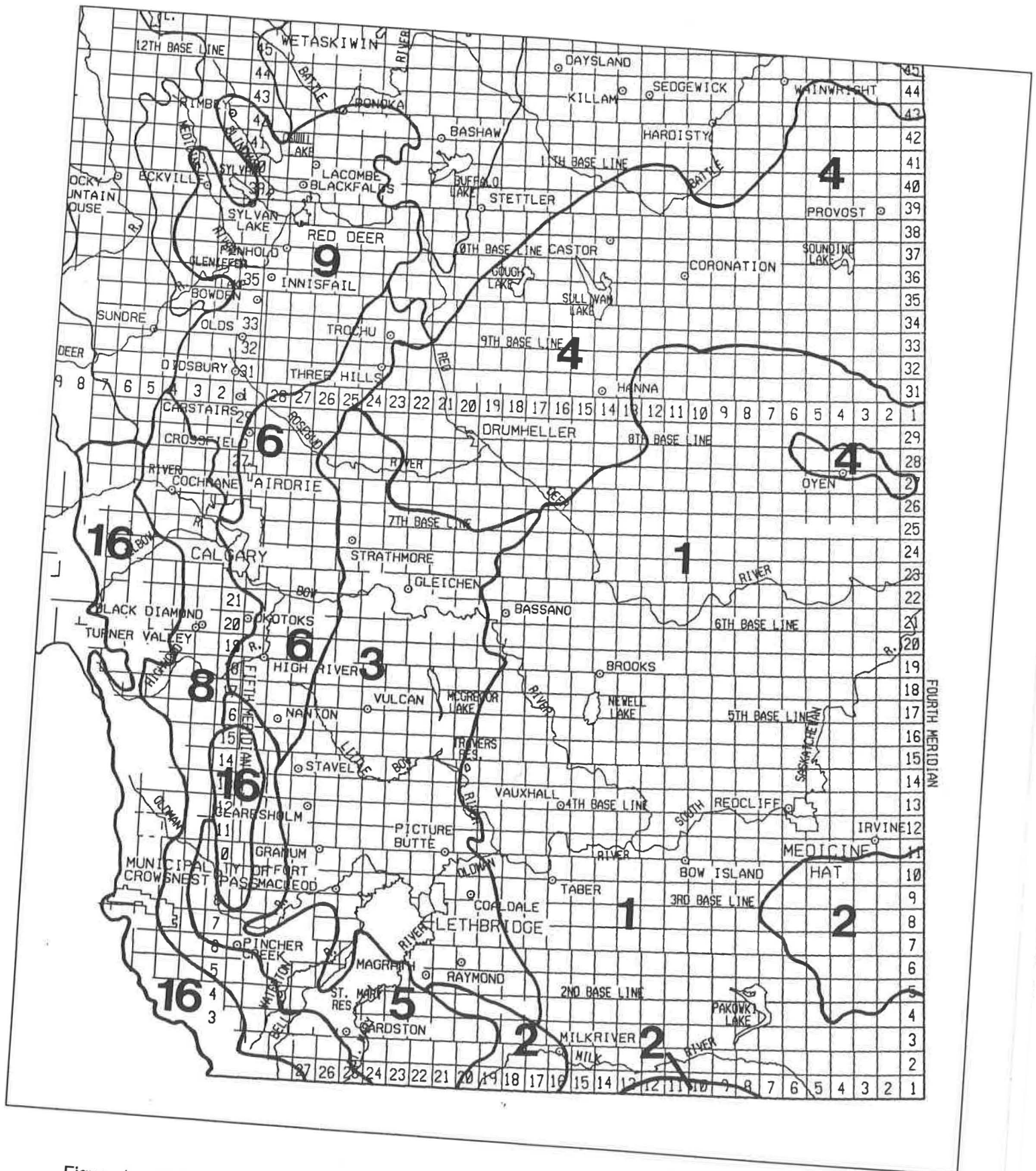
1. INTRODUCTION

Part 2 of this manual presents typical data and interpretations for most soil series in Alberta. The interpretations were made by applying the guidelines presented in Part I, and checking the results against experience and established practices.

1.1 Background to the Generation 2 Alberta Soil Names File

In 1992, the Alberta Soil Series Working Group revised and updated the Soil Names File in Alberta. The Province was divided into 24 Soil Correlation Areas (SCA's) based on climate and soil type. Figures 1 to 5 outline the area occupied by each SCA. As a result of these revisions, each SCA has its own set of soil names to be used in future mapping and interpretations. The SCA's and soil names used in Part II correspond to the Alberta Soil Names Generation 2 Users' Handbook, March 1993 version.

Note: "Home SCA", used in the Interpretation Guidelines, refers to the SCA where a particular soil name originated.



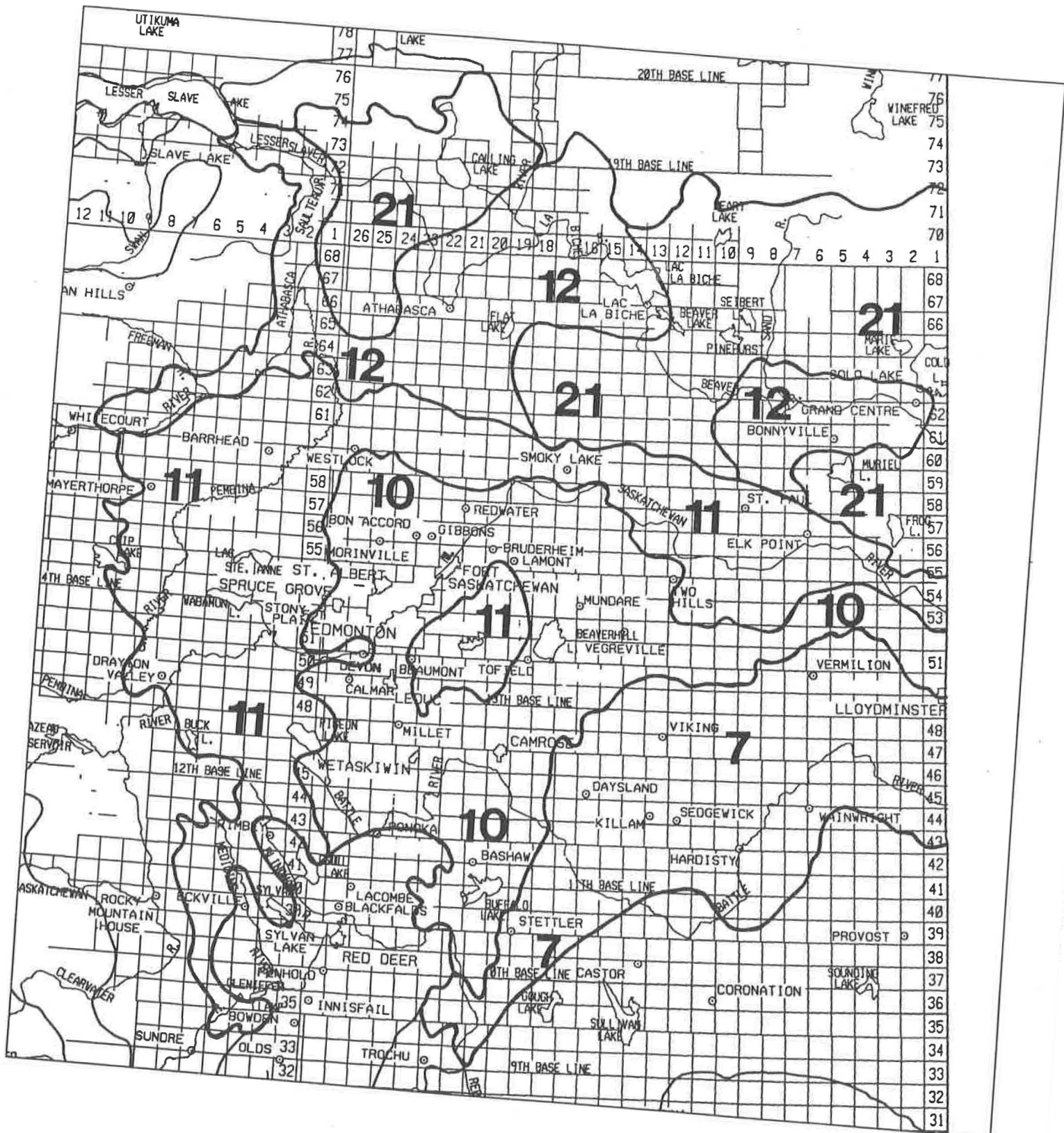


Figure 2. Soil Correlation Area 7, 10 to 12 and 21.

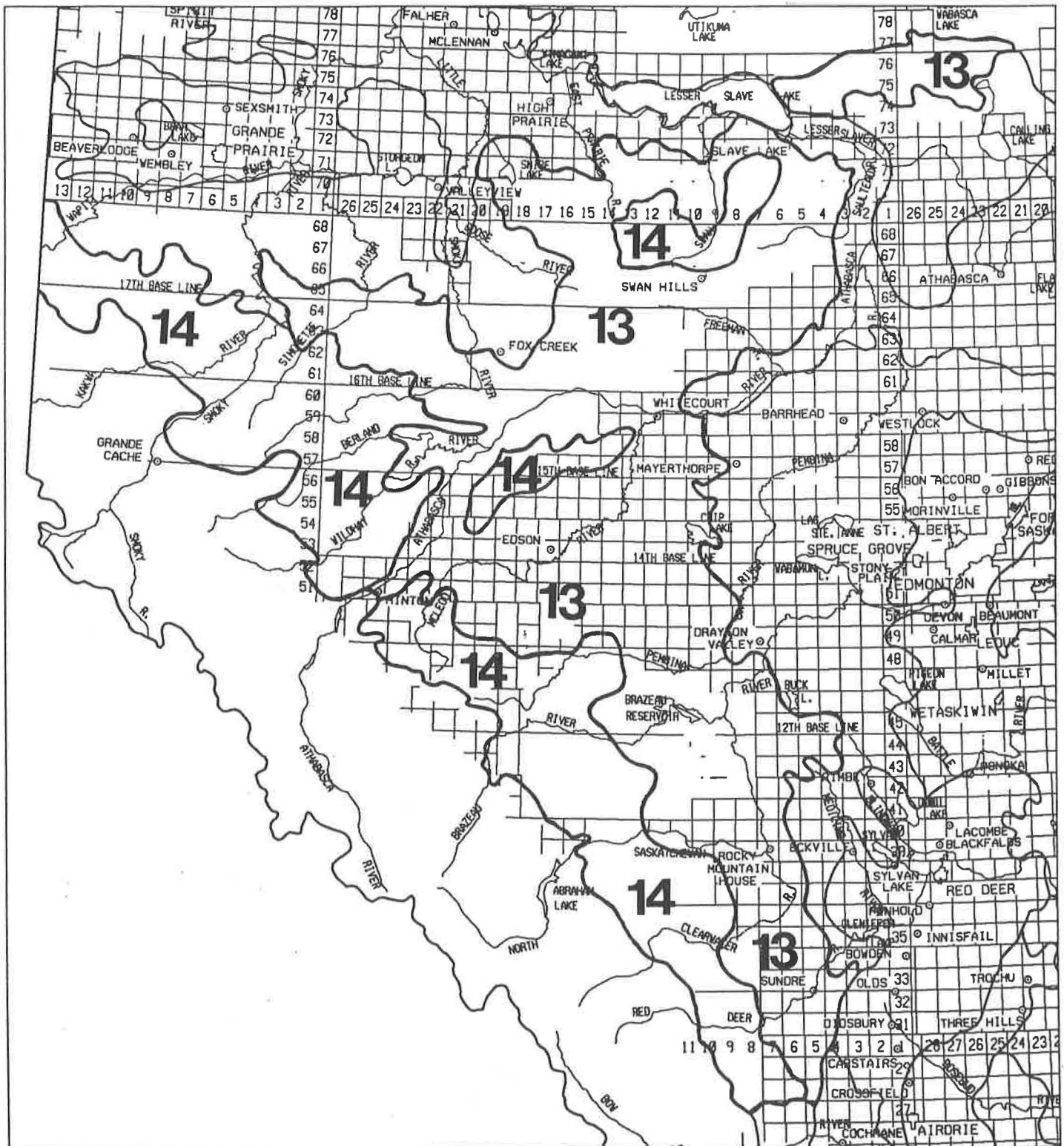


Figure 3. Soil Correlation Area 13 and 14.

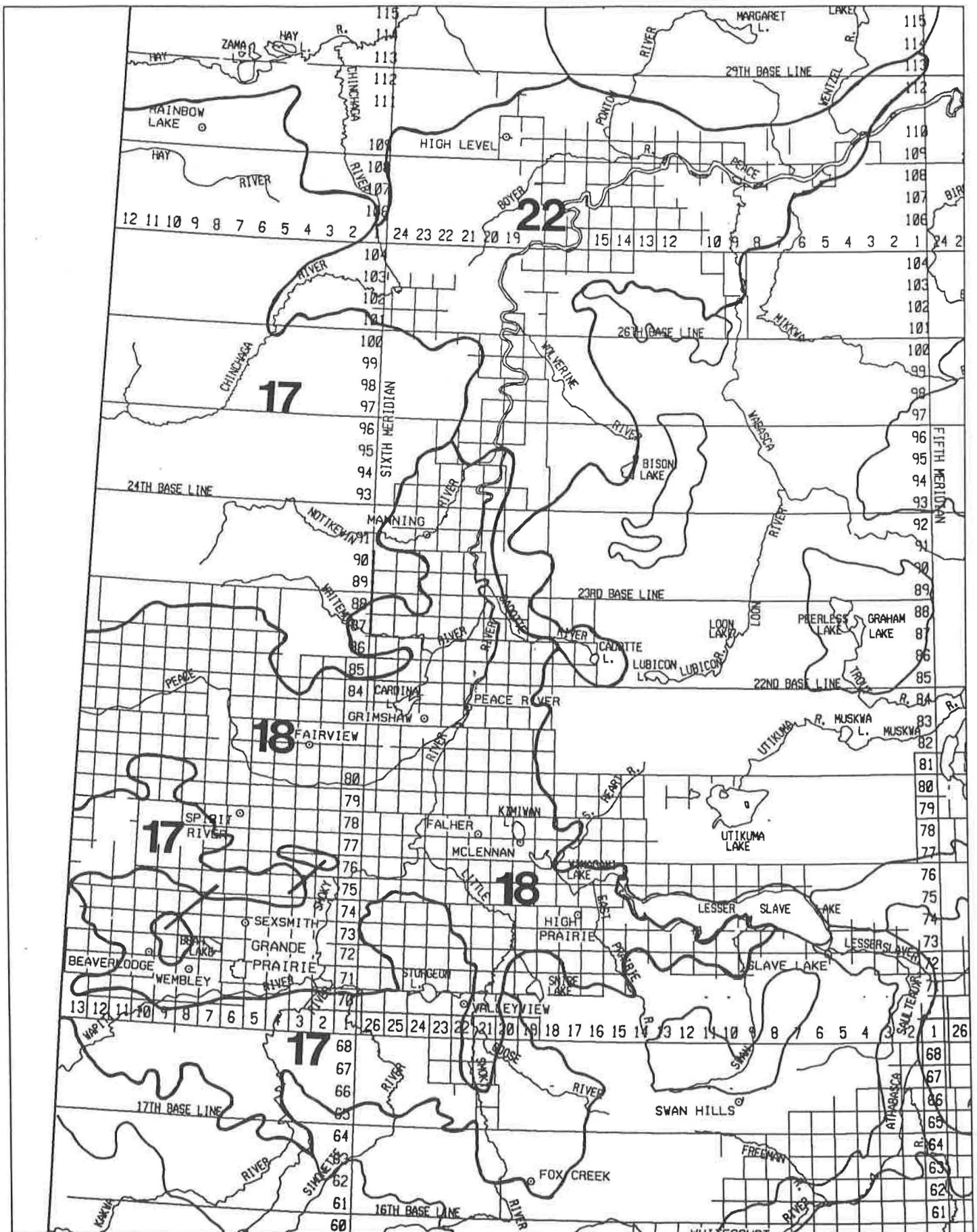


Figure 4. Soil Correlation Area 17, 18 and 22.

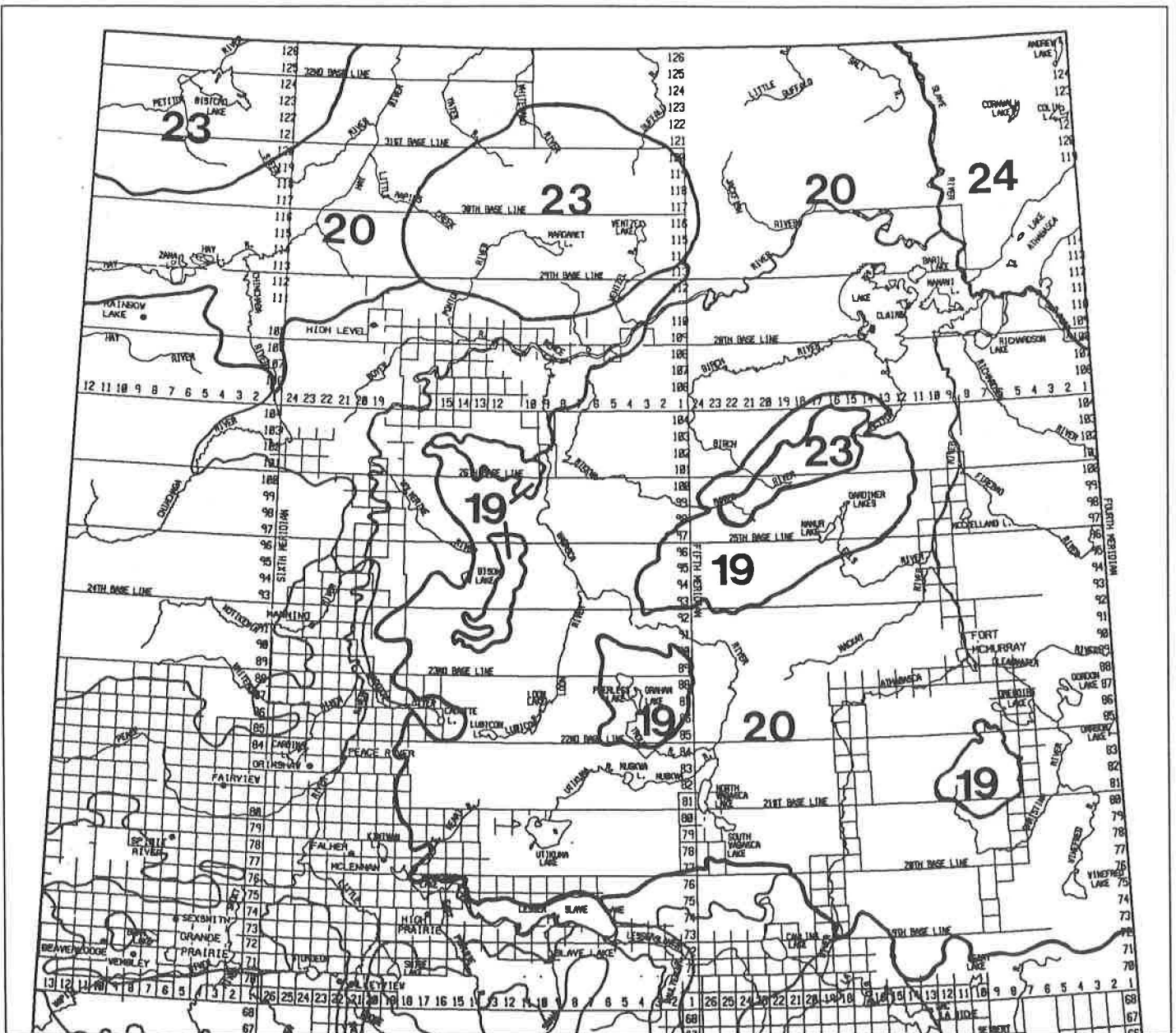


Figure 5. Soil Correlation Area 19, 20, 23 and 24.

1.2 List of Soils Included in Part II

Not every soil in the Generation 2 Alberta Names File occurs in this report although a great effort was made to collect data for all soils. The information came largely from Alberta soil survey reports and from development and reclamation plans of numerous pipelines. Some of the data collected were extrapolated for use with other similar soils. However, there remain numerous soils for which no characterization exists. Other information was omitted because of its relevance (SCA 15 - Rocky Mountains), and complicated nature (SCA 16). A large number of AA variant soils were left out from SCA 17 because of similarity to those in SCA 18.

Soil Name	Code	SCA
ACADEMY	ADY	6
ACADEMY-GL	glADY	6
ACADEMY-SA	saADY	6
ALBRIGHT	AGH	17
ALBRIGHT-AA	aaAGH	18
ALCAN	ALC	17
ALGAR	ALG	20
ALGAR-XT	xtALG	20
ALTARIO	ALT	4
ALTARIO-SC	scALT	4
AMBER VALLEY	ARV	21
AMISK	AMK	21
AMITY	AMT	7
ANGUS RIDGE	AGS	10
ANGUS RIDGE-ER	erAGS	10
ANGUS RIDGE-GL	glAGS	10
ANGUS RIDGE-SA	saAGS	10
ANGUS RIDGE-SC	scAGS	10
ANGUS RIDGE-ST	stAGS	10
ANSELL	ASL	13
ANSELL-AA	aaASL	14
ANSELL-AAST	aastASL	14
ANSELL-ST	stASL	13
ANTELOPE	ATP	1
ANTLER	ATL	9
ANTLER-GL	glATL	9
ANTLER-XP	xpATL	9
ANTON	ATO	11
ANTONIO	ANO	1
ARMENA	ARM	10
ARROWWOOD	AWD	3
ATHABASCA	ABC	21
BALZAC-AA	aaBZC	6
BARIL	BIL	14
BAWLF	BWF	10
BAWLF-XT	xtBWF	10
BEARBERRY	BAB	13
BEARSPAW	BPW	9
BEATTON	BAT	18
BEAUVAIS	BVA	8
BEAUVAIS-GR	grBVA	8

Soil Name	Code	SCA
BEAVERHILLS	BVH	10
BEAVERHILLS-CR	crBVH	10
BEAVERHILLS-ER	erBVH	10
BEAVERHILLS-SA	saBVH	10
BEAVERHILLS-SC	scBVH	10
BEAZER	BZR	5
BEAZER-CA	caBZR	5
BEAZER-SA	saBZR	5
BEAZER-TA	taBZR	5
BEDDINGTON	BED	6
BELLEVUE	BEV	16
BELLOY	BLY	18
BELLOY-GR	grBLY	18
BELLOY-GRXC	grxcBLY	18
BELLOY-ST	stBLY	18
BELLOY-STXC	stxcBLY	18
BELLOY-XC	xcBLY	18
BELLSHILL	BEL	7
BENALTO	BEN	11
BENALTO-ST	stBEN	11
BENALTO-XS	xsBEN	11
BERLAND	BER	14
BERWYN	BWY	18
BICKERDIKE	BCR	14
BICKERDIKE-AA	aaBCR	13
BIGKNIFE	BKF	4
BIGKNIFE-AA	aaBKF	7
BIGORAY	BGY	13
BINGVILLE	BVL	1
BINGVILLE-GR	grBVL	1
BINGVILLE-SA	saBVL	1
BINGVILLE-XP	xpBVL	1
BINGVILLE-ZR	zrBVL	1
BIRDSEYE	BDY	16
BIRDSEYE-GR	grBDY	16
BIRKLAND	BLA	21
BITUMOUNT	BMT	20
BLACKFOOT	BFT	5
BLACKFOOT-ZR	zrBFT	5
BLAINE LAKE	BLL	7
BLOOMSBURY	BLB	11
BLUE RIDGE	BLR	13
BONNIE	BNN	12
BONNIE-AA	aaBNN	21
BOSCOMBE	BOB	11
BOUNDARY	BUD	17
BOW VALLEY	BOV	6
BOW VALLEY-AA	aaBOV	9
BOW VALLEY-ZR	zrBOV	6
BOYER	BYR	22
BRAEBURN	BBN	17
BRAEBURN-AA	aaBBN	18
BRAEBURN-ST	stBBN	17
BRAGG CREEK	BRG	16
BREMAY	BMV	13
BREMAY-PT	ptBMV	13
BRETON	BTN	11

Soil Name	Code	SCA	Soil Name	Code	SCA
BRETON-ST	stBTN	11	CODESA-GR	grCOS	18
BRETON-XP	xpBTN	11	CODESA-ST	stCOS	18
BRETON-XP	xpBTN	11	CODNER	COD	13
BRIGHTBANK	BRK	11	CODNER-PT	ptCOD	13
BROCKET	BKE	3	COLUMBINE	CMB	12
BROCKET-SA	saBKE	3	CONNOP	CON	16
BRONCO	BOC	18	COOKING LAKE	COA	11
BROSSEAU	BSU	11	COOKING LAKE-ER	erCOA	11
BROSSEAU-CRZR	crzrBSU	11	COOKING LAKE-ST	stCOA	11
BROSSEAU-ER	erBSU	11	COPTON-AA	aaCOP	14
BROWNFIELD	BFD	4	CORDEL	COR	7
BROWNFIELD-ER	erBFD	4	CORONATION	CNN	4
BUCK LAKE	BLK	13	COWLEY	CWY	5
BUCK LAKE-ST	stBLK	13	COWLEY-SA	saCWY	5
BULLPOUND	BLP	1	COWLEY-ZR	zrCWY	5
BULLPOUND-SA	saBLP	1	CRADDUCK	CRD	3
BUNTON	BUT	1	CRADDUCK-SA	saCRD	3
BURMIS	BUR	8	CRADDUCK-ST	stCRD	3
BURMIS-ZZ	zzBUR	8	CRANFORD	CFD	1
CADOMIN-AA	aaCDM	14	CRANFORD-SC	scCFD	1
CADOTTE	CTE	22	CROOKED CREEK	CCR	16
CADOTTE-AA	aaCTE	18	CROWFOOT	CFT	3
CAMP LAKE	CPL	7	CROWFOOT-CA	caCFT	3
CAMP LAKE-XT	xtCPL	7	CUCUMBER	CCB	10
CAMROSE	CMO	10	CULP-ST	stCUL	18
CAMROSE-GL	glCMO	10	CYGNET	CYG	9
CAMROSE-GLXP	glxpCMO	10	DAKEN	DKN	11
CAMROSE-SA	saCMO	10	DAKEN-PT	ptDKN	11
CAMROSE-ST	stCMO	10	DALEHURST	DAU	14
CARDINAL	CRN	18	DALEHURST-AA	aaDAU	13
CARDSTON	CTN	5	DAYS LAND	DYD	7
CARDSTON-SA	saCTN	5	DAYS LAND-GL	glDYD	7
CARDSTON-ZT	ztCTN	5	DEBOLT	DBO	18
CAROLINE	CAR	13	DEERLICK	DEK	14
CARVEL	CVL	11	DEERLICK-XT	xtDEK	14
CARWAY	CRW	8	DEKALTA	DKT	13
CAVENDISH	CVD	1	DEL BONITA	DLB	5
CAVENDISH-CRSA	crsaCVD	1	DELACOUR	DEL	6
CAVENDISH-SC	scCVD	1	DELACOUR-GL	glDEL	6
CECIL	CCL	1	DEMAY	DMY	10
CECIL-ST	stCCL	1	DEMAY-CRSA	crsaDMY	10
CHATWIN	CTW	12	DEMMITT	DMT	17
CHILD LAKE	CHL	22	DESJARLAIS	DSJ	10
CHILD LAKE-PT	ptCHL	22	DESJARLAIS-AA	aaDSJ	7
CHIN	CHN	1	DESJARLAIS-ZR	zrDSJ	10
CHIN-SA	saCHN	1	DEVON	DEV	11
CHIN-SC	scCHN	1	DEVON-XC	xcDEV	11
CHINZ	CHZ	1	DEVON-YC	ycDEV	11
CHIP LAKE	CLK	13	DIAMOND	DIM	3
CHOKIO	CIO	3	DIDSBURY	DDY	9
CLARINDA-ST	stCLR	1	DIRLETON	DRN	12
COALDALE	CLD	3	DIRLETON-GL	glDRN	12
COALDALE-CA	caCLD	3	DISHPAN	DHP	1
COALDALE-SA	saCLD	3	DIXONVILLE	DXV	18
COALSPUR	CSP	14	DIXONVILLE	DXV	18
COALSPUR-ST	stCSP	14	DNISTER	DNT	11
CODESA	COS	18	DOIG	DIG	18

Soil Name	Code	SCA	Soil Name	Code	SCA
DOLCY	DCY	4	FERINTOSH	FTH	10
DOLCY-AA	aaDCY	3	FICKLE-AA	aaFKE	14
DOLCY-SC	scDCY	4	FIDLER-AA	aaFDL	14
DONNELLY	DON	18	FIREBAG	FIR	20
DONNELLY-XT	xtDON	18	FIREBAG-GL	glFIR	20
DOVER	DOV	20	FIREBAG-ST	stFIR	20
DOVER-XT	xtDOV	20	FISH CREEK	FSH	8
DOWNING	DWG	12	FISH CREEK-SA	saFSH	8
DOWNING-AA	DWG-AA	11	FLAGSTAFF	FST	4
DRINNAN	DIN	13	FLAGSTAFF-ST	stFST	4
DRUMHELLER	DMH	4	FLEET	FLT	4
DRUMHELLER-CR	crDMH	4	FOREMAN	FMN	7
DRYWOOD	DRW	8	FOREMOST	FMT	1
DRYWOOD-GR	grDRW	8	FOREMOST-ST	stFMT	1
DRYWOOD-ZR	zrDRW	8	FORESTBURG	FBG	4
DUAGH	DUG	10	FORT	FRT	20
DUAGH-GL	glDUG	10	FRANK	FRK	16
DUCHESS	DHS	1	GEM	GEM	1
DUCHESS-ER	erDHS	1	GLEDDIES	GLS	1
DUNVARGAN	DVG	8	GLORY	GOY	11
DUNVARGAN-GR	grDVG	8	GOLDEN SPIKE	GSP	11
DUNVARGAN-XP	xpDVG	8	GOODRIDGE	GOG	21
DUNVARGAN-ZR	zrDVG	8	GOODRIDGE-GR	grGOG	21
EAGLESHAM	EGL	18	GOOSE	GOS	18
EAGLESHAM-XS	xsEGL	18	GOOSE-PT	ptGOS	18
EAGLESHAM-XT	xtEGL	18	GOPHER	GPH	1
EASYFORD	ESF	13	GOUGH LAKE	GLK	4
EASYFORD-PT	ptESF	13	GRANADA	GRN	13
EDBURG	EDG	10	GRANDIN	GDI	21
EDBURG	EDG	10	GRATZ	GRZ	11
EDGERTON	ERT	4	GRATZ-AA	aaGRZ	12
EDGERTON-AA	aaERT	3	GRATZ-CAGL	caglGRZ	11
EDWAND	EDW	12	GREEN COURT	GRC	13
EDWAND-AA	aaEDW	11	GREGG	GGG	14
EGREMONT	EGO	11	GREGG-AA	aaGGG	13
ELK POINT	ELP	11	GRIFFIN	GIF	18
ELLS RIVER	ELS	20	GRIFFIN-AA	aaGIF	22
ELNORA	EOR	7	GRIMSHAW	GMW	18
ELNORA-ER	erEOR	7	GROSMONT	GMT	21
ELNORA-GL	glEOR	7	GRUDGE	GRG	2
ELNORA-SC	scEOR	7	GRUDGE-ER	erGRG	2
EMBARRAS	ERS	13	HAIGHT	HGT	10
ENILDA	END	18	HAIGHT-AA	aaHGT	7
ERITH	ERH	14	HAIRY HILL	HYL	10
ERITH-ZH	zhERH	14	HAIRY HILL-AA	aaHYL	7
ESHER	ESH	18	HALKIRK	HKR	4
ESHER-XT	xtESH	18	HALKIRK-ER	erHKR	4
ETA	ETA	13	HALKIRK-ST	stHKR	4
EVANSBURG	EBG	11	HALKIRK-XP	xpHKR	4
EXPANSE	EXP	1	HALLIDAY	HDY	1
FAIRVIEW	FVW	18	HALLIDAY-ER	erHDY	1
FALHER	FAL	18	HALLIDAY-ST	stHDY	1
FALUN	FLU	11	HALVERSON	HVN	17
FAWCETT	FWT	21	HALVERSON-GR	grHVN	17
FELTON-AA	aaFTO	14	HALVERSON-ST	stHVN	17
FENNER	FNR	4	HANALTA	HAN	4
FERGY	FRY	12	HANALTA-ST	stHAN	4

Soil Name	Code	SCA	Soil Name	Code	SCA
HANALTA-ZR	zrHAN	4	HUGHENDEN	HND	4
HANLAN	HNL	14	HUGHENDEN-SC	scHND	4
HANLAN-AA	aaHNL	13	HUGHENDEN-ST	stHND	4
HANLAN-AAST	aastHNL	13	HUGHENDEN-XP	xpHND	4
HANLAN-ST	stHNL	14	HYTHE	HYH	18
HAPPY VALLEY	HPV	6	IDAMAY	IMY	3
HARDISTY	HSY	14	INDUS	IND	6
HARDISTY-ST	stHSY	14	IRMA	IRM	7
HARGWEN	HGW	14	IRMA-CR	crIRM	7
HARGWEN-AA	aaHGW	13	IRMA-GL	glIRM	7
HARMATTON	HAR	9	IRMA-SCXT	scxtIRM	7
HARMATTON-CR	crHAR	9	ISLANDS	INS	1
HARMATTON-PT	ptHAR	9	ISLANDS-SA	saINS	1
HATTONFORD	HAT	13	JAMES RIVER	JMR	13
HATTONFORD-ST	stHAT	13	JAMES RIVER-XS	xsJMR	13
HAZELMERE	HZM	17	JAMES RIVER-XT	xtJMR	13
HAZELMERE-AA	aaHZM	18	JARVIE	JVE	11
HEART	HRT	18	JARVIE-PT	ptJVE	11
HEARTBREAK	HRK	2	JARVIS	JRV	13
HEARTBREAK-AA	aaHRK	3	JARVIS-AA	aaJRV	14
HEARTBREAK-ZR	zrHRK	2	JEFFREY	JFF	10
HEGSON	HEG	2	JOANTO	JAT	5
HEISLER	HER	7	JOSEPHINE	JOP	18
HELDAR	HDR	11	JOSEPHINE-AA	aaJOP	20
HELEN	HEN	18	JOSLYN	JSN	20
HELEN-AA	aaHEN	22	JOSLYN-GLZS	glzsJSN	20
HELLIWELL	HLW	11	JUDAH	JUH	18
HELLIWELL-GL	glHLW	11	JUDY	JUY	13
HELLIWELL-XC	xcHLW	11	KARLSBAD	KBD	1
HELLIWELL-XT	xtHLW	11	KARLSBAD-ER	erKBD	1
HELMSDALE	HMS	1	KARLSBAD-SA	saKBD	1
HELMSDALE-ST	stHMS	1	KATHLEEN	KTH	18
HEMARUKA	HUK	1	KAVANAGH	KVG	10
HEMARUKA-ER	erHUK	1	KAWOOD	KWO	11
HEMARUKA-ST	stHUK	1	KEEPHILLS	KHS	11
HEMARUKA-XP	xpHUK	1	KEG	KEG	22
HERCULES	HRL	10	KEG-PT	ptKEG	22
HIGH LEVEL	HLL	22	KEHIWIN	KHW	12
HIGH PRAIRIE	HPE	18	KEHOL	KHO	3
HIGHTOWER	HTW	14	KEHOL-ER	erKHO	3
HIGHTOWER-AA	aaHTW	13	KENZIE	KNZ	18
HIGHVALE	HGV	11	KENZIE-XC	xcKNZ	18
HILLBURN	HBR	17	KEOMA	KEO	6
HILLMER	HLM	5	KERENSKY	KSY	11
HOADLEY	HOD	11	KERENSKY-PTXC	ptxcKSY	11
HOADLEY-YP	ypHOD	11	KERENSKY-XT	xtKSY	11
HOADLEY-ZB	zbHOD	11	KESSLER	KSR	3
HOBBEMA	HBM	10	KILLAM	KLM	7
HOBBEMA-SA	saHBM	10	KILLAM-GL	glKLM	7
HOBBEMA-SC	scHBM	10	KINOSIS	KNS	20
HORBURG	HBG	13	KINOSIS-GL	glKNS	20
HORNBECK	HBK	14	KINSELLA	KNA	7
HORSE RIVER	HRR	20	KIRRIEMUIR	KUR	4
HOTCHKISS	HKS	22	KIRRIEMUIR-ST	stKUR	4
HUBALTA	HUB	13	KITSIM	KTM	1
HUBALTA-ST	stHUB	13	KNIGHT	KNT	5
HUBALTA-XP	xpHUB	13	KNIGHT-CO	coKNT	5

Soil Name	Code	SCA	Soil Name	Code	SCA
KNIGHT-ZR	zrKNT	5	MCMURRAY	MMY	20
LA COREY	LCY	12	MCMURRAY-GL	glIMMY	20
LANDRY	LAD	18	MCNAB	MCN	1
LANDRY-XT	xtLAD	18	MCNAB-AA	aaMCN	3
LANFINE	LFE	4	MCPHERSON	MPH	14
LANFINE-ST	stLFE	4	MCPHERSON-AA	aaMPH	13
LANONNE	LNN	11	MCPHERSON-AAST	aastMPH	13
LAWRENCE	LRC	22	MCPHERSON-ST	stMPH	14
LEIGHTON CENTRE	LTC	16	MEANDER	MER	20
LEIGHTON CENTRE-GR	grLTC	16	MENAIK	MAK	10
LEITH	LIH	18	MENAIK-PT	ptMAK	10
LEITH-ER	erLIH	18	MENAIK-SA	saMAK	10
LEITHEAD	LHD	4	MERCOAL	MCL	14
LENDRUM	LDM	13	MESA BUTTE	MSB	16
LETHBRIDGE	LET	3	METISKO	MET	4
LETHBRIDGE-SC	scLET	3	METISKO-SC	scMET	4
LEVI	LEV	14	MEWASSIN	MEW	11
LILLIAN	LLN	20	MICHICI	MIC	4
LINTON LAKE	LKE	22	MICO	MCO	11
LIVOCK-XC	xcLVK	20	MICO-GL	glMCO	11
LIZA	LIZ	21	MIKKWA	MKW	18
LLOYD LAKE	LLK	9	MIKKWA-AA	aaMKW	20
LLOYD LAKE-GL	glLLK	9	MILDRED	MIL	20
LLOYD LAKE-GLSA	glSaLLK	9	MILK RIVER	MKR	1
LOBLEY	LOB	13	MILK RIVER-AA	aaMKR	3
LODGE	LDG	13	MILLET	MLT	10
LOUGHEED	LOG	7	MINISTIK	MNK	11
LUNDBRECK	LNB	8	MINISTIK-XP	xpMNK	11
LUPEN	LUP	2	MISSAWAWI	MWI	12
MACKAY	MKY	13	MODESTE	MDE	11
MACKAY-PT	ptMKY	13	MOOSE HILLS	MHL	21
MACOLA	MLA	11	MORINVILLE	MVL	10
MACOLA-XT	xtMLA	11	MORINVILLE-GL	glMVL	10
MALEB	MAB	1	MORNINGSIDE	MGS	9
MALEB-ST	stMAB	1	MOUNTAIN CREEK	MCK	17
MALEB-XP	xpMAB	1	MUNDARE	MDR	10
MALMO	MMO	10	MURDALE	MUD	17
MALOY	MLY	21	MURDALE-AA	aaMUD	18
MANATOKAN	MNT	12	NAKAMUN	NKU	11
MAPOVA	MPV	12	NAMEPI	NMP	10
MAPOVA-AA	aaMPV	11	NAMPA	NMA	18
MAPOVA-PT	ptMPV	12	NAVARRE	NVR	10
MARSH HEAD	MSH	13	NAVARRE-SA	saNVR	10
MASINASIN	MSN	1	NAVARRE-SC	scNVR	10
MASINASIN-GR	grMSN	1	NAVARRE-SCXT	scxtNVR	10
MASINASIN-SA	saMSN	1	NAVARRE-XT	xtNVR	10
MASINASIN-ST	stMSN	1	NEUTRAL	NUT	4
MAUGHAN	MAA	11	NEUTRAL-ST	stNUT	4
MAYCROFT	MFT	8	NEW DAYTON	NED	3
MAYCROFT-GLZR	glzrMFT	8	NEW DAYTON-AA	aaNED	2
MAYCROFT-ZR	zrMFT	8	NEWBROOK	NWB	21
MAYWOOD	MYW	11	NEWBROOK-PT	ptNWB	21
MCDUGALL	MDL	13	NICOT	NIT	12
MCGILLVARY	MGV	16	NIOBE	NIB	9
MCGILLVARY-ZZ	zzMGV	16	NORMA	NRM	10
MCLELLAND	MLD	20	NORTH FORK	NFK	5
MCLELLAND-XC	xcMLD	20	NOSE CREEK	NSK	9

Soil Name	Code	SCA	Soil Name	Code	SCA
NOSE CREEK-AA	aaNSK	6	PLAMONDON-XT	xtPLM	12
NOSE CREEK-SA	saNSK	9	PONOKA	POK	10
NOSEHILL	NHL	14	PONOKA-SC	scPOK	10
NOSEHILL-AA	aaNHL	13	PONOKA-SCXT	scxtPOK	10
NOSEHILL-AAST	aastNHL	13	PONOKA-XC	xcPOK	10
NOSEHILL-ST	stNHL	14	POTHOLE CREEK	POT	8
NOTIKEWIN	NKW	18	POTHOLE CREEK-AA	aaPOT	16
OCHIESE	OHS	14	PRAIRIE POINT	PPT	22
OCHIESE-AA	aaOHS	13	PRIMULA	PRM	11
OCHIESE-ST	stOHS	14	PURESCAPE	PUR	2
OCKEY	OKY	5	PURPLE SPRINGS	PLS	1
OCKEY-AA	aaOKY	8	PUTZY	PZY	15
OCKEY-GR	grOKY	5	PUTZY-GL	glPZY	15
OCKEY-ZR	zrOKY	5	RAINIER	RIR	1
OLDMAN	ODM	5	RAMILLIES	RAM	1
ONNEVUE	OVE	4	RAT	RAT	13
ONOWAY	ONW	11	RAVEN	RVN	11
ONOWAY-PT	ptONW	11	RAVEN-PT	ptRVN	11
ORCHARD-AA	aaORC	13	RED DEER LAKE	RDL	8
OUTPOST	OTP	8	REDWATER	RDW	11
OUTPOST-CAZR	cazrOTP	8	REDWATER-CAXT	caxtRDW	11
OWENDALE	OWD	5	REDWATER-ER	erRDW	11
OWL RIVER	OWR	21	REDWATER-SA	saRDW	11
OWL RIVER-XT	xtOWR	21	REDWATER-XT	xtRDW	11
OXLEY	OXY	5	REDWILLOW	RED	7
PARMA	PMA	22	RIBSTONE	RIB	4
PARR	PAR	3	RICH LAKE	RLK	11
PASS CREEK	PCR	13	RIMBEY	RMY	11
PATHFINDER	PHF	11	RIMBEY-CA	caRMY	11
PATRICIA	PTA	1	RIMBEY-GL	glRMY	11
PATRICIA-ER	erPTA	1	RIMBEY-GLXT	glxtRMY	11
PATRICIA-SA	saPTA	1	RIMBEY-XC	xcRMY	11
PEACE HILLS	PHS	10	RIMBEY-XT	xtRMY	11
PEACE HILLS-GLXC	glxcPHS	10	RINARD	RND	5
PEACE RIVER	PRV	18	RINARD-CA	caRND	5
PEACE RIVER-AA	aaPRV	22	ROBINSON	RSN	16
PEDLEY	PDY	13	ROBINSON-AA	aaRSN	8
PEERS	PRS	13	ROCHESTER	RCS	11
PEGASUS	PGS	13	ROCHESTER-PT	ptRCS	11
PEMUKAN	PUN	1	ROCKFORD	RFD	5
PEMUKAN-SC	scPUN	1	ROCKYVIEW	RKV	6
PENHOLD	PED	9	ROLLING HILLS	RHS	1
PENHOLD-GL	glPED	9	ROLLING HILLS-SA	saRHS	1
PENHOLD-XC	xcPED	9	ROLLY VIEW	RLV	11
PENHOLD-XS	xsPED	9	RONALAIN	ROL	1
PENHOLD-XT	xtPED	9	RONALAIN-ST	stROL	1
PEORIA	PER	18	ROSEBANK	ROS	7
PEPPERS	PPS	14	ROSEMARY	RMR	1
PEPPERS-AA	aaPPS	13	ROSEMARY-ER	erRMR	1
PERCOTTE	PCO	13	ROSEMARY-SA	saRMR	1
PIBROCH	PIB	10	ROSEVEAR	RSV	13
PIBROCH-XP	xpPIB	10	RUTH LAKE	RUT	20
PINCHER	PNR	5	RYCROFT	RYF	18
PINEHURST	PIN	21	SADDLE	SAD	18
PINTO	PTO	14	SAKALO	SAK	5
PINTO-AA	aaPTO	13	SARCEE	SRC	8
PLAMONDON	PLM	12	SAVAGE-PT	ptSVG	22

Soil Name	Code	SCA	Soil Name	Code	SCA
SCOLLARD	SCD	4	THREE HILLS-AA	aaTHH	7
SEDGEWICK	SDG	7	THREE HILLS-AAGL	aaglTHH	7
SEDGEWICK-GL	glSDG	7	THRONE	THR	4
SEVEN PERSONS	SPS	1	THRONE-SA	saTHR	4
SEVEN PERSONS-SA	saSPS	1	TIGERLILY	TGL	11
SEVEN PERSONS-ZR	zrSPS	1	TIGERLILY-XCZB	xczbTGL	11
SEXSMITH	SXH	18	TIGERLILY-ZB	zbTGL	11
SEXTON	SXT	3	TILLEY	TIY	1
SEXTON-AA	aaSXT	2	TOAD	TOD	17
SHANDOR	SND	5	TODD CREEK	TDC	16
SHANDRO	SHD	10	TODD CREEK-GR	grTDC	16
SHARP HILLS	SHL	8	TODD CREEK-ZZ	zzTDC	16
SHEEP	SHP	15	TOFIELD	TFD	10
SIMONETTE	STT	14	TOLMAN	TOM	13
SIMONETTE-AA	aaSTT	15	TOM HILL	TML	14
SLOUGHAY	SLY	1	TOM HILL-AA	aaTML	13
SMOKY	SKY	14	TOM HILL-AAST	aastTML	13
SMOKY-AA	aaSKY	15	TOM HILL-ST	stTML	14
SNIPE	SNP	17	TORLEA	TLA	4
SNIPE-AA	aaSNP	18	TORLEA-AA	aaTLA	3
SNIPE-AAPT	aaptSNP	18	TORLEA-ER	erTLA	4
SNIPE-PT	ptSNP	17	TORLEA-ST	stTLA	4
SPEDDEN	SDN	12	TORRENS	TOR	15
SPIRIT RIVER	SRV	18	TORRENS-AA	aaTOR	14
SPRUCE RIDGE	SPR	16	TOUGH CREEK	TUC	16
SPRUCE RIDGE-GR	grSPR	16	TRAVERS	TVS	1
SPRUCE RIDGE-XP	xpSPR	16	TRAVERS-ST	stTVS	1
SPY HILL	SPY	8	TUCKER	TCK	21
ST.LINA	SLN	21	TWEEDSMUIR	TWS	9
STANDOFF	SOF	5	TWIN BRIDGES	TBR	8
STANDOFF-CA	caSOF	5	TWIN BRIDGES-AA	aaTBR	16
STEBBING	SBN	21	TWINING	TWG	6
STERCO	STC	15	TWO HILLS	TWH	11
STERCO-AA	aaSTC	14	UKALTA	UKT	10
STEVEVILLE	SIL	1	UKALTA-GL	glUKT	10
STEVEVILLE-ER	erSIL	1	UKALTA-SC	scUKT	10
STEVEVILLE-ST	stSIL	1	UNCAS	UCS	11
STOLBERG	STB	14	UNCAS-ST	stUCS	11
STRATHCONA	SCO	9	VALLEYVIEW	VVW	18
SULLIVAN LAKE	SUL	4	VAN CLEEVE	VAC	3
SUMMIT	SMT	14	VAN CLEEVE-AA	aaVAC	1
SUMMIT-AA	aaSMT	15	VAN CLEEVE-CA	caVAC	3
SUNCHILD	SCH	13	VAN CLEEVE-ZR	zrVAC	3
SUNDANCE	SUC	13	VENDISANT	VST	1
SUNDANCE-AA	aaSUC	14	VICTOR	VTR	4
SUNDANCE-ST	stSUC	13	VILNA	VIL	12
SUNDRE	SUD	13	VOLMER	VOL	10
SUNNYNOOK	SYK	1	WABAMUN	WAB	11
SURETTE LAKE	SKE	22	WABASH	WBH	11
TANGENT	TAG	18	WAINWRIGHT	WWT	4
TAWATINAW	TNW	12	WAMPUS	WPS	14
TEEPEE	TPE	17	WANHAM	WHM	18
TEMPEST	TEP	1	WANHAM-PT	ptWHM	18
THOMAS LAKE	TOA	7	WARBURG	WBG	11
THOMAS LAKE-XT	xtTOA	7	WARDLOW	WDW	1
THORSBY	TBY	11	WARDLOW-ER	erWDW	1
THREE HILLS	THH	6	WARDLOW-SA	saWDW	1

Soil Name	Code	SCA	Modifiers
WEALD	WLD	13	AA - Not modal SCA
WEASONE	WSN	13	AC - Acid
WESTCASTLE	WCT	16	CA - Calcareous
WESTEROSE	WSR	11	CB - Cobbly
WESTEROSE-GL	glWSR	11	CO - Coarse
WETASKIWIN	WKN	10	CR - Carbonated
WHITELAW	WHW	18	CY - Cryic
WHITFORD	WHF	10	CA - DarkAp(Cult.)
WHITNEY	WNY	3	DL - Disturbed
WIESE	WES	4	ER - Eroded
WIESE-XT	xtWES	4	FI - Fine
WILDA	WID	2	GL - Gleyed
WILDHAY	WHY	14	GM - Grumic
WILDHAY-AA	aaWHY	13	GR - Gravelly (entire profile)
WILDHAY-AAST	aastWHY	13	OB - Overblown
WILDHAY-ST	stWHY	14	OW - Overwashed
WILDWOOD	WWO	13	PT - Peaty
WILDWOOD-PT	ptWWO	13	SA - Saline
WILLOUGHBY	WLB	16	SC - Saline Subsoil
WILLOUGHBY-ZZ	zzWLB	16	ST - Stony
WINDFALL	WND	13	TA - Thin A
WINSTON	WST	21	TK - Thick A
WINTERBURN	WTB	11	XC - Clay at 30-99 cm
WINTERBURN-GL	glWTB	11	XG - Gravel at 30-99 cm
YARNLEY	YNY	1	XL - Lithic at 30-99 cm
YOUNGSTOWN	YTW	1	XP - Paralithic at 30-99 cm
YOUNGSTOWN-ER	erYTW	1	XS - Sand at 30-99 cm
			XT - Till at 30 - 99 cm
			XU - Undifferentiated material at 30-99 cm
			XZ - Permafrost at 30-99 cm
			YC - Clay at 100-200 cm
			YG - Gravel at 100-200 cm
			YL - Gravel at 100-200 cm
			YL - Lithic at 100-200 cm
			YP - Paralithic at 100-200 cm
			YS - Sand at 100-200 cm
			YT - Till at 100-200 cm
			YZ - Permafrost at 100-200 cm
			ZE - Eluviated
			ZF - Fibric
			ZG - Gleyed Rego
			ZH - Humic
			ZL - Luvisolic
			ZM - Mesic
			ZR - Rego
			ZS - Solodic
			ZT - Solonetzic
			ZZ - Atypical Subgroup
			AB - Brunisolic

2. SOIL INFORMATION AND INTERPRETATIONS

2.1 Soil Correlation Area #1

General Description of Area

The Brown Soil Zone of Southeastern Alberta

Ecoregion/Climate

- Dry Mixed Grass Ecoregion.
- SCA 1 is the driest and warmest part of Alberta. Agroclimate is 3A (moderate limitations due to drought). Growing season P-PE=-350 to -400 mm (Precipitation minus potential evapo-transpiration). Drought frequently limits growth of agricultural crops and native forage. Drought conditions frequently limit the success of revegetation projects.
- Although rains are scarce, intense thunderstorms occur in the summer months, and can result in spectacular water erosion problems.
- Strong winds occur with high frequency.
- There is seldom a good snow cover through the winter.
- Wind erosion is a frequent problem on agricultural soils and reclaimed sites. January to May is the highest risk period but wind erosion can, and does, occur in any month.

Soils and Landscapes

- Soil profile depth is typically between 25 and 40 cm with 5 to 10 cm of brown colored topsoil.
- Landscapes are typically morainal (till).
- Glacial drift is thin to thick.
- Soils are mostly Chernozemic but Solonchic soils and other salt-affected soils are also significant.

Soil Reclamation Issues

- Very thin topsoil, which is often discontinuous and difficult to salvage and replace without mixing.
- Wind erosion of topsoil stockpiles and of traffic areas during construction.
- Wind erosion of topsoil after soil reconstruction.
- Revegetation is often limited because of drought.
- Salt-affected soils often require special handling while salinity adds to revegetation difficulty.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ANTELOPE	(ATP)	LANDFORM:	DUNED
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC REGOSOL		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE EOLIAN SANDS		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name.	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-2	10YR 3/3	DARK BROWN	SGR	L	S	0.8	6.2		
C1	2-38	10YR 5/3	BROWN	SGR	L	S		6.9		
C2	38-122	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	S		7.3		
C3	122-244	10YR 4/3	BROWN	SGR	L	S		7.9		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	F	P	P	F				P (Topsoil)
C1	2-38	F	P		G				P (Subsoil)
C2	38-122	F	P		G				P (Subsoil)
C3	122-244	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	2 cm
THICKNESS RANGE:	0-5 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	VERY THIN, DISCONTINUOUS
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.02
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: ANTELOPE SOILS OCCUR IN SAND DUNES AND INTER-DUNES. THESE SOILS ARE VERY COARSE TEXTURED AND THE EXPOSED FACES ARE UNSTABLE. THESE SOILS ARE DROUGHTY SOILS AND DIFFICULT TO REVEGETATE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ANTONIO	(ANO)	LANDFORM:	VDNEER, HUMMOCKY
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	NON
	GLACIOFLUVIAL/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR	4/3	BROWN	WFGR	VFR	SL	1.5	7.4	1.6	34.	0.2
BM	10-42	10YR	4/4	DARK YELLOWISH BROWN	SGR	L	SL	1.	6.3	2.	42.	0.2
2CK1	42-90	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	L		7.8	0.8	57.	0.8
2CK2	90-130	10YR	6/4	LIGHT YELLOWISH BROWN	STRAT	F	SIL		7.8	4.	37.	0.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G	F	G	G	G	G	F (Topsoil)
BM	10-42	F	G		F	G	G	G	F (Subsoil)
2CK1	42-90	F	G		F	G	G	G	F (Subsoil)
2CK2	90-130	F	G		F	F	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: ANTONIO SOILS ARE EQUIVALENT TO A SHALLOW BINGVILLE OVER TILL, WITH APPROXIMATELY 40 CM OF SANDY LOAM SEDIMENTS OVER TILL. EXPOSED FACES OF THE UPPER MATERIAL ARE UNSTABLE DUE TO SANDY TEXTURES.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BINGVILLE (BVL)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	MODERATELY COARSE	USUAL SOIL MOISTURE:	DRY
	GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-14	10YR 4/3	BROWN	SGR	L	SL	2.7	6.5	0.3	42.	0.3
BM	14-55	10YR 5/4	YELLOWISH BROWN	SGR	L	SL	0.6	6.7	0.2	38.	0.3
CK	55-100	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	VFSL		7.9	0.4	39.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	F	G	G	G	G	G	G	F (Topsoil)
BM	14-55	F	G		G	G	G	G	F (Subsoil)
CK	55-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: BINGVILLE SOILS FALL BETWEEN CAVENDISH AND CHIN FOR TEXTURE. BINGVILLE SOILS ARE GOOD IRRIGATION SOILS, BUT SUBJECT TO DROUGHT UNDER RAINFED AGRICULTURE. HIGH WIND EROSION RISK. EXPOSED FACES OF THIS MATERIAL ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BINGVILLE-GR (grBVL)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	GRAVELLY MODERATELY COARSE	USUAL SOIL MOISTURE:	DRY
	GLACIOFLUVIAL	SURFACE STONINESS:	EXCESSIVELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-14	10YR 4/3	BROWN	SGR	L	GRSL		6.5	0.3	42.	0.3
BM	14-55	10YR 5/4	YELLOWISH BROWN	SGR	L	GRSL		6.7	0.2	38.	0.3
CK	55-100	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	GRVFSL		7.9	0.4	39.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	F	P		G	G	G	G	P (Topsoil)
BM	14-55	F	P		G	G	G	G	P (Subsoil)
CK	55-100	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: GRAVELLY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GRAVELLY VARIANT OF BINGVILLE. THESE SOILS ARE GRAVELLY THROUGHOUT THE PROFILE OR IN LAYERS. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BINGVILLE-SA (saBVL)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC (SALINE)	TYPICAL SLOPES:	2-9%
		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-20	10YR 4/3	BROWN-DARK BROWN	MFGR	FR	L-SL	1.4	7.1	3.7	53.	2.
BSK	20-45	10YR 4/4	DARK YELLOWISH BROWN	WFSBK	FR	L-SL	0.5	7.6	4.8	43.	2.9
CSK1	45-90	10YR 6/4	LIGHT YELLOWISH BROWN	MA	FR	L-SL		7.6	3.8	47.	2.1
CSK2	90-180	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	VFR	LS		7.9	2.2	29.	1.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-20	G	G	F	G	F	G	G	F (Topsoil)
BSK	20-45	G	G		F	F	G	G	F (Subsoil)
CSK1	45-90	G	G		F	F	G	G	F (Subsoil)
CSK2	90-180	G	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SALINE VARIANT OF BINGVILLE. SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BINGVILLE-XP (xpBVL)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	MODERATELY COARSE	USUAL SOIL MOISTURE:	DRY
	GLACIOFLUVIAL/SOFTROCK	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-14	10YR 4/3	BROWN	SGR	FR	SL		6.5	0.3	42.	0.3
BM	14-55	10YR 5/4	YELLOWISH BROWN	SGR	FR	SL		6.7	0.2	38.	0.3
2CK	55-80	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	FR	SL		7.9	0.4	39.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	G	G		G	G	G	G	G (Topsoil)
BM	14-55	G	G		G	G	G	G	G (Subsoil)
2CK	55-80	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: YES
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF BINGVILLE THAT HAS SOFT (PARALITHIC) BEDROCK WITHIN 1 M OF THE SURFACE. THE SOFTROCK MAY BE WEAKLY SALINE AND WEAKLY SODIC. IF THE SOFTROCK IS STRONGLY SALINE-SODIC THE SOIL SHOULD BE CALLED BINGVILLE-XPSC. THESE SOILS HAVE COARSE LOAMY TEXTURES AND LOOSE CONSISTENCE AND EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BINGVILLE-ZR (zrBVL)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	REGO BROWN CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	MODERATELY COARSE	USUAL SOIL MOISTURE:	DRY
	GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-14	10YR 4/3	BROWN	SGR	L	SL	2.7	6.5	0.3	42.	0.3
CK1	14-55	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	SL	0.6	6.7	0.2	38.	0.3
CK2	55-100	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	VPSL		7.9	0.4	39.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	F	G	G	G	G	G	G	F (Topsoil)
CK1	14-55	F	G		G	G	G	G	F (Subsoil)
CK2	55-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: REGO VARIANT OF BINGVILLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BULLPOUND (BLP)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BROWN SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 4/3	BROWN	MFGR	FR	SIL		5.7	0.3	72.	1.
BNT	10-35	10YR 4/3	BROWN	MMSBK	VF	SICL		7.	0.5	55.	4.1
CSK	35-110	2.5Y 4/4	OLIVE BROWN	MA	F	SICL		8.2	1.8	66.	8.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G		F	G	F	G	F (Topsoil)
BNT	10-35	P	F		G	G	G	F	P (Subsoil)
CSK	35-110	F	F		F	G	F	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	0-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	DISCONTINUOUS
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.04
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: BULLPOUND SOILS HAVE A VERY TOUGH BNT HARDPAN LAYER. THE TOPSOIL IS ABSENT IN BLOWOUT PITS, WHICH ARE COMMON IN NATIVE LANDSCAPES. TOPSOIL THICKNESS DOES NOT RELATE TO SLOPE POSITION. USUALLY OCCURS IN COMPLEX PATTERNS WITH NON-SOLONETZ. C HORIZON IS WEAKLY SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BULLPOUND-SA (saBLP)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BROWN SOLONETZ (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AHSA	0-10	10YR 4/3	BROWN	MFR	FR	SIL		5.7		72
BNTSA	10-35	10YR 4/3	BROWN	MMSBK	VF	SICL		7.		55
CSK	35-110	2.5Y 4/4	OLIVE BROWN	MA	F	SICL		8.2		66

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSA	0-10	G	G		F		F		F (Topsoil)
BNTSA	10-35	P	F		G		G		P (Subsoil)
CSK	35-110	F	F		F		F		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 0-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SALINE VARIANT OF BULLPOUND. SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	BUNTON	(BUT)	LANDFORM:	SPILLWAY, FAN, APRON
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM GLACIOFLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-14	10YR 4/2	DARK GRAYISH BROWN	GR	FR	L	3.3	6.6	0.5	45.	1.6
BM1	14-28	10YR 5/3	BROWN	MMSBK	FR	L	1.2	7.2	0.5	45.	1.6
BM2	28-52	10YR 5/3	BROWN	MMSBK	F	SL	0.8	7.4	0.6	49.	0.5
CK1	52-100	10YR 5/4	YELLOWISH BROWN	SGR	F	SL		8.	0.2	71.	0.
CK2	100-107	10YR 6/3	PALE BROWN	MA	FR	LS		8.	0.2		0.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	G	G	G	G	G	G	G	G (Topsoil)
BM1	14-28	G	G		G	G	G	G	G (Subsoil)
BM2	28-52	F	G		G	G	G	G	F (Subsoil)
CK1	52-100	F	G		F	P	F	P	P (Subsoil)
CK2	100-107	G	P		F	G		G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.04
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: PROFILE DEVELOPMENT IN THESE SOILS IS USUALLY WEAK AND NOT WELL DEFINED. VERY OFTEN THESE SOILS ARE UNDERLAIN BY GRAVELLY SANDY LOAM MATERIALS BELOW THE 1 M DEPTH. EXPOSED FACES MAY BE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CAVENDISH (CVD)	LANDFORM:	UNDULATING, RIDGED
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE EOLIAN OR GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-22	10YR 4/3	BROWN	SGR	L	LS	0.4	6.6	0.2	29.	0.3
BM	22-89	10YR 5/4	YELLOWISH BROWN	SGR	L	LS	0.2	6.8	0.2	29.	0.4
CK	89-180	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	S		7.7	0.5	31.	0.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-22	F	P	P	G	G	F	G	P (Topsoil)
BM	22-89	F	P		G	G	F	G	P (Subsoil)
CK	89-180	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .02
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: CAVENDISH SOILS ARE BETWEEN ANTELOPE AND BINGVILLE IN TEXTURE. A AND B HORIZONS SHOULD BE LS, AND C HORIZONS LS OR S. THIS IS A VERY DROUGHTY SOIL. EXPOSED FACES ARE UNSTABLE DUE TO SANDY TEXTURES. CAREFUL WIND EROSION PROTECTION IS REQUIRED. CAVENDISH SOILS THAT ARE, OR WERE AT SOME TIME CULTIVATED, ARE OFTEN SEVERELY WIND-ERODED.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CAVENDISH-SC (scCVD)	LANDFORM:	UNDULATING, RIDGED
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC (SALINE LOWER SUBSOIL	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE EOLIAN OR GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-22	10YR 4/3	BROWN	SGR	VF	LS		6.6	0.2	29.	0.3
BM	22-89	10YR 5/4	YELLOWISH BROWN	SGR	F	S		6.8	0.2	29.	0.4
CSK	89-180	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	VFR	S		7.7		31.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-22	P	P		G	G	F	G	P (Topsoil)
BM	22-89	F	P		G	G	F	G	P (Subsoil)
CSK	89-180	G	P		F		G		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.02
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF CAVENDISH WITH SALINE LOWER SUBSOIL, BUT A & B HORIZONS ARE NOT SALINE. OCCURS ON SANDS DEPOSITED BY WIND OR WATER, BUT NOT ON DUNES. SANDY MATERIAL RESULTS IN UNSTABLE EXPOSED FACES. CHECK FOR HIGH WATERTABLE AND CONFINING LAYER OR DISCHARGE AREA.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CECIL (CCL)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	SOLONETZIC BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC (ELUVIATED)	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-7	10YR 5/3	BROWN	MFGR	FR	L		6.9	0.5	56.	0.1
BTNJ	7-28	10YR 4/4	DARK YELLOWISH BROWN	MMSBK	F	CL		6.6	0.4	44.	0.2
CCA	28-100	10YR 6/2	LIGHT BROWNISH GRAY	MA	FR	L		7.7	0.5	42.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-7	G	G		G	G	G	G	G (Topsoil)
BTNJ	7-28	F	F		G	G	G	G	F (Subsoil)
CCA	28-100	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: CECIL SOILS ARE SIMILAR TO MALEB, BUT HAVE SOLONETZIC TENDENCIES IN THE B HORIZON. THEY OCCUR IN LANDSCAPES WITH MALEB, HEMARUKA AND HALLIDAY SOILS. THE BTNJ HORIZON IS FIRM AND ONLY WEAKLY SOLONETZIC. THESE SOILS ARE SLIGHTLY TO NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CECIL-ST	(stCCL)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	SOLONETZIC BROWN		USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC (ELUVIATED)		SURFACE STONINESS:	EXCEEDINGLY
PARENT MATERIAL:	STONY MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-7	10YR	5/3	BROWN	MFGR	FR	STL		6.9	0.5	56.	0.1
BTNJ	7-28	10YR	4/4	DARK YELLOWISH BROWN	MMSBK	F	STCL		6.6	0.4	44.	0.2
CCA	28-100	10YR	6/2	LIGHT BROWNISH GRAY	MA	FR	STL		7.7	0.5	42.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-7	G	P		G	G	G	G	P (Topsoil)
BTNJ	7-28	F	P		G	G	G	G	P (Subsoil)
CCA	28-100	G	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	7 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.04
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: CECIL SOILS THAT ARE STONIER THAN NORMAL ARE IDENTIFIED AS A STONY PHASE (stCCL). OTHER THAN STONINESS, TREAT THE SAME AS CECIL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CHIN	(CHN)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YR 5/3	BROWN	WFGR	FR	FSL		6.4	0.3	70.	0.3
BM	13-65	10YR 5/4	YELLOWISH BROWN	WFGR	FR	SIL		6.1	0.4	42.	0.3
BC	65-120	10YR 5/4	YELLOWISH BROWN	MA	FR	FSL		6.9	0.2	36.	1.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	G	G		F	G	F	G	F (Topsoil)
BM	13-65	G	G		F	G	G	G	F (Subsoil)
BC	65-120	G	G		G	G	G	G	G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: CHIN SOILS ARE VERY GOOD SOILS FOR IRRIGATION. MATERIALS ARE LOAMY
 (SIL-L-FSL) FLUVIAL SEDIMENTS. SOME CAN HAVE CLAY LOAM SUBSOIL LAYERS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES: CHIN-SA (saCHN) LANDFORM: UNDULATING PLAIN
 SOIL ZONE: BROWN TYPICAL SLOPES: 0-5%
 SOIL CLASSIFICATION: ORTHIC BROWN CHERNOZEMIC USUAL SOIL MOISTURE: TEMPORARY PONDING
 (SALINE) SURFACE STONINESS: NON
 PARENT MATERIAL: MEDIUM GLACIOLACUSTRINE

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-20	10YR 4/3	BROWN	MFGR	FR	L	0.9	6.6	5.2	42.	5.6
BMSA	20-40	10YR 4/4	DARK YELLOWISH BROWN	WFBSK	F	L	0.9	7.2	6.1	57.	7.8
CSK1	40-70	10YR 5/3	BROWN	MA	F	L		7.5	7.1	57.	1.8
CSK2	70-180	2.5Y 5/4	LIGHT OLIVE BROWN	MASTRAT	FR	SIL		8.2	8.1	45.	8.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-20	G	G	P	G	P	G	F	P (Topsoil)
BMSA	20-40	F	G		G	P	G	F	P (Subsoil)
CSK1	40-70	F	G		G	P	G	G	P (Subsoil)
CSK2	70-180	G	G		F	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SALINE VARIANT OF CHIN. SALINE AND SODIC TO THE SURFACE. SALT CONTENT
 USUALLY INCREASES WITH DEPTH.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CHIN-SC	(scCHN)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	(SALINE LOWER SUBSOI		SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YR	5/3	BROWN	WFGR	FR	FSL	4.6	6.4	0.3	70.	0.3
BM	13-30	10YR	5/4	YELLOWISH BROWN	WFGR	FR	SIL	1.7	6.1	0.4	42.	0.3
CSK1	30-85	2.5Y	4/4	OLIVE BROWN	MA	F	L		8.2	16.7	80.	30.7
CSK2	85-180	2.5Y	4/4	OLIVE BROWN	MA	F	L		7.4	14.1	60.	28.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	G	G	G	F	G	F	G	F (Topsoil)
BM	13-30	G	G		F	G	G	G	F (Subsoil)
CSK1	30-85	F	G		F	U	F	U	U (Subsoil)
CSK2	85-180	F	G		G	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF CHIN WITH SALINE LOWER SUBSOIL. THE TOPSOIL AND UPPER SUBSOIL ARE NOT SALINE-SODIC. THE LOWER SUBSOIL IS STRONGLY SALINE AND SODIC. CHECK FOR SEASONAL WATERTABLE OR CONFINING LAYER.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CHINZ	(CHZ)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	SOLONETZIC BROWN		USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-6	10YR	4/3	BROWN	WFGR	FR	L		7.1	1.	56.	
BTNJ	6-28	2.5Y	5/4	LIGHT OLIVE BROWN	MMSBK	F	L		7.6	0.7	52.	2.4
CCA	28-100	10YR	5/2	GRAYISH BROWN	MA	FR	L		7.8	3.4	48.	1.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-6	G	G		G	G	G	G	G (Topsoil)
BTNJ	6-28	F	G		F	G	G	G	F (Subsoil)
CCA	28-100	G	G		F	F	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SIMILAR TO A CHIN, BUT HAS SOLONETZIC TENDENCIES IN THE BTNJ HORIZON AND WEAKLY SALINE C.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CLARINDA-SA (saCLR)	LANDFORM:	STEEP, RIDGED
SOIL ZONE:	BROWN	TYPICAL SLOPES:	10-15%
SOIL CLASSIFICATION:	REGO BROWN CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-10	10YR 4/3	BROWN	GR	FR	L		8.2	9.9	61.	11.1
CSK	10-120	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	2.1	54.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-10	G	G		F	U	F	P	U (Topsoil)
CSK	10-120	F	F		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: TOPOGRAPHY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .045
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SALINE VARIANT OF CLARINDA. SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CLARINDA-ST (stCLR)	LANDFORM:	STEEP, RIDGED
SOIL ZONE:	BROWN	TYPICAL SLOPES:	10-15%
SOIL CLASSIFICATION:	REGO BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	STONY, MODERATELY FINE TILL	SURFACE STONINESS:	EXCESSIVELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-10	10YR 5/3	BROWN	WFGR	F	STL		7.4		
CK	10-120	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	STCL		7.9		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	P	P		G				P (Topsoil)
CK	10-120	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	TOPOGRAPHY, STONY
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.045
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF CLARINDA THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CRANFORD	(CFD)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	BROWN			PLAIN
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		TYPICAL SLOPES:	0-9%
PARENT MATERIAL:	MEDIUM		USUAL SOIL MOISTURE:	DRY
	GLACIOLACUSTRINE/TILL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-6	10YR 5/3	BROWN	WFGR	FR	L		6.8	0.4	31.	0.1
BM	6-30	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	F	L		6.8	0.2	23.	0.2
BC	30-50	10YR 5/3	BROWN	WFSBK	FR	SIL		6.8	0.2	23.	0.2
2CCA	50-100	10YR 6/3	PALE BROWN	MA	FR	L		7.3	0.2	24.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-6	G	G		G	G	G	G	G (Topsoil)
BM	6-30	F	G		G	G	F	G	F (Subsoil)
BC	30-50	G	G		G	G	F	G	F (Subsoil)
2CCA	50-100	G	G		G	G	F	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: EQUIVALENT TO A SHALLOW CHIN OVER TILL. THE TILL MAY BE WEAKLY SALINE.
 IF THE TILL IS STRONGLY SALINE USE CRANFORD-SC. TOPSOIL-SUBSOIL COLOR
 CHANGE IS NOT OBVIOUS. OVERSTRIPPING WILL NOT SERIOUSLY HARM TOPSOIL
 QUALITY.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	CRANFORD-SC (scCFD)	LANDFORM:	VENEER, UNDULATING
SOIL ZONE:	BROWN		PLAIN
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC (SALINE LOWER SUBSOIL)	TYPICAL SLOPES:	0-9%
		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-6	10YR	5/3	BROWN	WFGR	FR	L		6.8	0.4	31.	0.1
BM	6-30	10YR	4/4	DARK YELLOWISH BROWN	MFSBK	F	L		6.8	0.2	23.	0.2
BC	30-50	10YR	5/3	BROWN	WFSBK	FR	SIL		6.8	0.2	23.	0.2
2CCASA	50-100	10YR	6/3	PALE BROWN	MA	FR	L		7.3	12.2	24.	24.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-6	G	G		G	G	G	G	G (Topsoil)
BM	6-30	F	G		G	G	F	G	F (Subsoil)
BC	30-50	G	G		G	G	F	G	F (Subsoil)
2CCASA	50-100	G	G		G	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 6 cm
 THICKNESS RANGE: 2-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF CRANFORD THAT HAS A SALINE - SODIC LOWER SUBSOIL. THE LOWER SUBSOIL IS OFTEN THE TILL MATERIAL AND IT IS STRONGLY SALINE-SODIC. TOPSOIL-SUBSOIL COLOR CHANGE IS NOT OBVIOUS, BUT SOME OVERSTRIPPING WILL NOT SERIOUSLY HARM TOPSOIL QUALITY. THE LOWER SUBSOIL IS OF UNSUITABLE QUALITY AND SHOULD NOT BE LEFT ON THE SURFACE OF A RECLAIMED LANDSCAPE IF BETTER MATERIAL IS AVAILABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	DISHPAN	(DHP)	LANDFORM:	DRAINAGE CHANNELS
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	REGO GLEYSOL (SALINE)		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE LACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHSAKG	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F	SICL	0.9	7.9	1.	44.	6.6
CSKG1	12-130	10YR 5/2	GRAYISH BROWN	MA	F	CL		8.3	3.4	52.	25.9
CSKG2	130-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.3	6.9	197.	18.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSAKG	0-12	F	F	P	F	G	G	F	P (Topsoil)
CSKG1	12-130	F	F		F	F	G	U	U (Subsoil)
CSKG2	130-180	F	F		F	P	U	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 0-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS,
 DISCONTINUOUS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE ARE SALINE SLOUGH SOILS THAT ARE SALINE-SODIC NEAR OR AT THE SURFACE. TEXTURES ARE FINE TO MODERATELY FINE. TOPSOIL IS DISCONTINUOUS, AND STRIPPING IS OFTEN DIFFICULT DUE TO WETNESS. THESE SOILS ARE VERY STICKY WHEN WET AND DRY SLOWLY.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	DUCHESS	(DHS)	LANDFORM:	VENEER
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 5/3	BROWN	WFGR	FR	SIL	3.3	6.5	0.6	53.	1.8
BNT	10-30	10YR 3/3	DARK BROWN	MFSBK	VF	L	1.6	7.2	0.6	49.	0.5
CCA	30-70	10YR 6/4	LIGHT YELLOWISH BROWN	MA	FR	L		7.8	0.5	45.	1.6
2CSK	70-130	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		8.	8.6	71.	11.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G	G	G	G	G	G	G (Topsoil)
BNT	10-30	P	G		G	G	G	G	P (Subsoil)
CCA	30-70	G	G		F	G	G	G	F (Subsoil)
2CSK	70-130	F	G		F	P	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .049
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS HAVE A TOUGH BNT HORIZON OF POOR QUALITY DUE TO CONSISTENCE, BUT MAY BREAK DOWN IF CRUSHED. THE LOWER SUBSOIL IS MODERATELY SALINE AND SODIC. EQUIVALENT TO A SOLONETZ VERSION OF A CRANFORD. THE AP USUALLY INCLUDES AH AND AE. TOPSOIL MAY BE ABSENT IN LARGE PATCHES NOT RELATED TO SLOPE POSITION. STRIP TO HARDPAN (BNT) WHERE TOPSOIL IS PRESENT.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	DUCHESS-ER (erDHS)	LANDFORM:	VENEEER
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-2	10YR 5/3	BROWN	WFGR	FR	SIL		6.5	0.6	53.	1.8
BNT	2-30	10YR 3/3	DARK BROWN	MFSBK	VF	L		7.2	0.6	49.	0.5
CCA	30-70	10YR 6/4	LIGHT YELLOWISH BROWN	MA	FR	L		7.8	0.5	45.	1.6
2CSK	70-130	10YR 5/4	YELLOWISH BROWN	MA	F	L		8.	8.6	71.	11.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	G	G		G	G	G	G	G (Topsoil)
BNT	2-30	P	G		G	G	G	G	P (Subsoil)
CCA	30-70	G	G		F	G	G	G	F (Subsoil)
2CSK	70-130	F	G		F	P	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN, DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .049
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: TOPSOIL IS VERY THIN, OR ABSENT, DUE TO HISTORIC EROSION. THE BNT IS LIMITED BY CONSISTENCE BUT MAY BREAK DOWN IF CRUSHED. THE 2C (TILL) IS SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	EXPANSE	(EXP)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	CALCAREOUS BROWN		USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-14	10YR	3/3	DARK BROWN	WFGR	FR	L	1.6	7.8	0.6	46.	0.2
BMK	14-25	10YR	5/3	BROWN	WMPR	FR	SIL		7.9	0.4	46.	0.2
CCA	25-90	10YR	5/4	YELLOWISH BROWN	MA	FR	L		7.9	2.2	52.	0.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-14	G	G	F	F	G	G	G	F (Topsoil)
BMK	14-25	G	G		F	G	G	G	F (Subsoil)
CCA	25-90	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.045
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: SIMILAR TO CHIN EXCEPT CALCAREOUS TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	FOREMOST (FMT)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 5/3	BROWN	MFGR	FR	L		7.9	0.6	49.	0.2
BM	12-45	10YR 4/4	DARK YELLOWISH BROWN	MMSBK	F	L		7.4	0.3	36.	0.3
CK	45-100	10YR 6/3	PALE BROWN	MA	F	L		7.8	0.5	38.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G		F	G	G	G	F (Topsoil)
BM	12-45	F	G		G	G	G	G	F (Subsoil)
CK	45-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: FOREMOST IS DEVELOPED ON A "WASHED", MODIFIED TILL, WHICH OFTEN HAS SANDY LENSES.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	FOREMOST-ST (stFMT)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEM	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	STONY, MEDIUM TILL	SURFACE STONINESS:	EXCEEDINGLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR	5/3	BROWN	MFGR	FR	STL		7.9	0.6	49.	0.2
BM	12-45	10YR	4/4	DARK YELLOWISH BROWN	MMSBK	FR-F	STL		7.4	0.3	36.	0.3
CK	45-100	10YR	6/3	PALE BROWN	MA	FR-F	STL		7.8	0.5	38.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	P		F	G	G	G	P (Topsoil)
BM	12-45	F	P		G	G	G	G	P (Subsoil)
CK	45-100	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.04
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF FOREMOST THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	GEM	(GEM)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	BROWN			PLAIN
SOIL CLASSIFICATION:	BROWN SOLOD		TYPICAL SLOPES:	0-5%
PARENT MATERIAL:	MEDIUM		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	GLACIOLACUSTRINE/TILL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 5/3	BROWN	GR	FR	L		7.8	0.4	54.	0.6
AE	10-15	10YR 6/2	LIGHT BROWNISH GRAY	PL	VFR	SIL		6.6	0.7	61.	0.2
AB	15-25	10YR 4/3	BROWN	WFSBK	F	C		7.7	7.3	54.	7.4
BNT	25-40	10YR 3/3	DARK BROWN	COL	VF	SICL		6.6	0.7	61.	0.2
CSK	40-54	10YR 6/3	PALE BROWN	MA	F	SICL		6.7	0.5	47.	0.2
2CSK	54-120	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.7	0.5	48.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G		F	G	G	G	F (Topsoil)
AE	10-15	G	G		G	G	F	G	F (Subsoil)
AB	15-25	F	P		F	P	G	F	P (Subsoil)
BNT	25-40	P	F		G	G	F	G	P (Subsoil)
CSK	40-54	F	F		G	G	G	G	F (Subsoil)
2CSK	54-120	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 8-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .046
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: TOPSOIL TO SUBSOIL COLOR CHANGE IS NOT OBVIOUS. THE AH, AE AND AB HORIZONS COULD ALL BE STRIPPED (TOTAL=25 CM). THEREFORE, STRIP TO HARDPAN. THE BNT MATERIAL IS UNDESIRABLE. THE SUBSOIL IS WEAKLY TO MODERATELY SALINE. THE TEXTURE CHANGE BETWEEN MATERIALS IS NOT IMPORTANT. EQUIVALENT TO A SHALLOW KARLSBAD.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	GLEDDIES (GLS)	LANDFORM:	SPILLWAY
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	REGO GLEYSOL (SALINE)	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	FINE LACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHGJ	0-5	10YR 3/1	VERY DARK GRAY	MA	VF	C		5.7	1.1	69.	6.8
CSKG1	5-90	10YR 3/1	VERY DARK GRAY	MA	F	C		6.6	0.8	83.	3.9
CSKG2	90-120	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		6.6	0.8	83.	3.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHGJ	0-5	P	P		F	G	F	F	P (Topsoil)
CSKG1	5-90	F	P		G	G	P	G	P (Subsoil)
CSKG2	90-120	F	P		G	G	P	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-8 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN, WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE SLOUGH SOILS (FINE TEXTURED) THAT ARE SALINE AND SOMETIMES SODIC NEAR OR AT SURFACE. THE TOPSOIL IS OF POOR (SOMETIMES UNSUITABLE) QUALITY, AND IS DISCONTINUOUS. TOPSOIL SALVAGE IS NOT ALWAYS POSSIBLE OR NECESSARY. SOILS ARE OFTEN FLOODED, OR VERY WET.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	GOPHER	(GPH)	LANDFORM:	VENEER
SOIL ZONE:	BROWN		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	NON
	GLACIOFLUVIAL/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 4/3	BROWN	WFGR	VFR	SL	1.2	6.7	0.4	37,	0.7
BNT	12-48	10YR 5/3	BROWN	WFSBK	VF	SL	0.2	8.4	3.4	40,	24.
2CSK	48-80	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		8.	9.3	46,	15.7
2CSK2	80-180	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		7.9	5.7	45,	9.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G	F	G	G	G	G	F (Topsoil)
BNT	12-48	P	G		F	F	G	U	U (Subsoil)
2CSK	48-80	F	G		F	P	G	U	U (Subsoil)
2CSK2	80-180	F	G		F	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: THE TOPSOIL-SUBSOIL COLOR CHANGE IS NOT OBVIOUS, THEREFORE, STRIP TO HARDPAN LAYER. TOPSOIL ABSENT IN BLOWOUT PITS. BNT IS VERY TOUGH AND IS SODIC. THE BNT HORIZON MAY OCCUR IN THE GLACIOFLUVIAL MATERIAL OR THE TILL. LOWER SUBSOIL (TILL) IS SALINE-SODIC. UPPER LAYERS OFTEN SLUMP WHEN TRENCHED.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HALLIDAY	(HDY)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BROWN SOLOD		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 4/3	BROWN	MFGR	FR	L	1.7	7.	1.3	43.	0.5
BNT	12-30	10YR 3/4	DARK YELLOWISH BROWN	MSSBK	VF	CL		8.1	2.1	54.	7.1
CSK1	30-70	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.7	1.9	65.	15.
CSK2	70-180	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		8.2	9.9	61.	11.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	F	G	G	G	G	F (Topsoil)
BNT	12-30	P	F		F	G	G	F	P (Subsoil)
CSK1	30-70	F	F		P	G	F	U	U (Subsoil)
CSK2	70-180	F	F		F	P	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .042
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HALLIDAY IS A "SOLOD VERSION OF A HEMARUKA". WHEN CULTIVATED THE AP USUALLY INCLUDES AH AND AB. THE COLOR CHANGE FROM TOPSOIL TO SUBSOIL IS NOT OBVIOUS, THEREFORE, STRIP TO HARDPAN. THE BNT IS NOT USUALLY AS TOUGH AS A HEMARUKA BNT. THE TILL IS DERIVED FROM THE BEARPAW FORMATION, SAME AS HEMARUKA AND STEVEVILLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HALLIDAY-ER (erHDY)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BROWN SOLOD (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-2	10YR 4/3	BROWN	MFGR	FR	L		7.	1.3	43.	0.5
BNT	2-30	10YR 3/4	DARK YELLOWISH BROWN	MSSBK	VF	CL		8.1	2.1	54.	7.1
CSK1	30-70	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.7	1.9	65.	15.
CSK2	70-180	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		8.2	9.9	61.	11.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-2	G	G		G	G	G	G	G (Topsoil)
BNT	2-30	P	F		F	G	G	F	P (Subsoil)
CSK1	30-70	F	F		P	G	F	U	U (Subsoil)
CSK2	70-180	F	P		F	P	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .042
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF HALLIDAY. TOPSOIL IS VERY THIN OR ABSENT, AND COLOR CHANGE IS NOT OBVIOUS. THE BNT MATERIAL IS POOR QUALITY. THE SUBSOIL IS MODERATELY TO STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HALLIDAY-ST (stHDY)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BROWN SOLOD	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	STONY, MODERATELY FINE TILL	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 4/3	BROWN	MFGR	FR	STL		7.	1.3	43.	0.5
BNT	12-30	10YR 3/4	DARK YELLOWISH BROWN	MSSBK	VF	STCL		8.1	2.1	54.	7.1
CSK1	30-70	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	STCL		8.7	1.9	65.	15.
CSK2	70-180	10YR 4/2	DARK GRAYISH BROWN	MA	F	STCL		8.2	9.9	61.	11.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	P		G	G	G	G	P (Topsoil)
BNT	12-30	P	P		F	G	G	F	P (Subsoil)
CSK1	30-70	F	P		P	G	F	U	U (Subsoil)
CSK2	70-180	F	P		F	P	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .042
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HALLIDAY THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HELMSDALE (HMS)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	9-15%
SOIL CLASSIFICATION:	REGO BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-12	10YR 5/3	BROWN	MFGR	FR	L		7.7	0.7	44	0.1
CCA	12-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	FR	L		7.8	0.4	40	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-12	G	G		F	G	G	G	F (Topsoil)
CCA	12-100	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .045
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS HAVE NO B HORIZON. APK IS CALCAREOUS (OFTEN ERODED).
 TYPICALLY FOUND ON UPPER SLOPES IN ROLLING TO HILLY LANDSCAPES. COLOR
 CHANGE FROM TOPSOIL TO SUBSOIL IS NOT OBVIOUS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HELMSDALE-ST (sthMS)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	9-15%
SOIL CLASSIFICATION:	REGO BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	STONY, MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-12	10YR 5/3	BROWN	MFGR	FR	STL		7.7	0.7	44	0.1
CCA	12-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	FR	STL		7.8	0.4	40	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-12	G	P		F	G	G	G	P (Topsoil)
CCA	12-100	G	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	STONY, DISCONTINUOUS
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.045
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF HELMSDALE THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HEMARUKA	(HUK)	LANDFORM:	UNDULATING
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-8	10YR 4/3	BROWN	MFGR	FR	L	1.2	7.5	0.7	39.	1.8
BNT	8-15	10YR 5/3	BROWN	MSSBK	VF	CL		8.3	1.6	51.	16.3
CSK	15-160	10YR 6/3	PALE BROWN	MA	F	CL		8.3	3.4	69.	17.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-8	G	G	F	G	G	G	G	F (Topsoil)
BNT	8-15	P	F		F	G	G	U	U (Subsoil)
CSK	15-160	F	F		F	F	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS, VERY THIN
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .045
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE TOPSOIL IS FAIRLY THIN AND IS DISCONTINUOUS (BLOWOUT PITS ARE COMMON). TOPSOIL THICKNESS DOES NOT CONFORM TO SLOPE POSITION. COLOR CHANGE FROM TOPSOIL TO SUBSOIL IS NOT OBVIOUS, THEREFORE, STRIP TO HARDPAN. THE BNT MATERIAL IS UNSUITABLE. THE SUBSOIL IS STRONGLY SALINE AND SODIC. THE TILL IS DERIVED FROM THE BEARPAW FORMATION. HEMARUKA SOILS USUALLY OCCUR IN COMPLEX SOIL LANDSCAPES WITH SOLODS AND CHERNOZEMICS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HEMARUKA-ER (erHUK)	LANDFORM:	UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR	
AP	0-2	10YR	4/3	BROWN-DARK BROWN	MFGR	FR	L	1.2	7.5	0.7	39.	1.8
BNT	2-15	10YR	5/3	BROWN	COL	VF	CL		8.3	1.6	51.	16.3
CSK	15-160	10YR	6/3	PALE BROWN	MA	F	CL		8.3	3.4	69.	17.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-2	G	G	F	G	G	G	G	F (Topsoil)
BNT	2-15	P	F		F	G	G	U	U (Subsoil)
CSK	15-160	F	F		F	F	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	2 cm
THICKNESS RANGE:	0-4 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	DISCONTINUOUS, VERY THIN
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.045
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF HEMARUKA SOILS THAT HAVE ERODED TOPSOILS. THESE SOILS OFTEN OCCUR IN THE BLOWOUT OR ERODED PITS ASSOCIATED WITH SOME SOLONETZIC SOILS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HEMARUKA-ST (sthUK)	LANDFORM:	UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	STONY, MODERATELY FINE TILL	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YR 4/3	BROWN-DARK BROWN	MFGR	FR	STL	1.8	7.6	1.2	44.	1.7
BNT	13-45	10YR 5/3	BROWN	COL	VF	STCL		7.7	0.8	43.	1.8
CSK	45-180	10YR 6/3	PALE BROWN	MA	F	STCL		8.6	1.9	59.	17.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	G	P	F	F	G	G	G	P (Topsoil)
BNT	13-45	P	P		F	G	G	G	P (Subsoil)
CSK	45-180	F	P		P	G	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS, VERY THIN, STONY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .045
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HEMARUKA SOILS THAT ARE STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	HEMARUKA-XP (xpHUK)	LANDFORM:	UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE	SURFACE STONINESS:	MODERATELY
	TILL/SOFTROCK		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 4/4	DARK YELLOWISH BROWN	WFGR	FR	L					
AE	12-18	10YR 5/3	BROWN	MMPL	VFR	SIL					
BNT	18-40	10YR 3/3	DARK BROWN	SMSBK	VF	CL					
2CSK	40-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L					

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G						G (Topsoil)
AE	12-18	G	G						G (Topsoil)
BNT	18-40	P	F						P (Subsoil)
2CSK	40-100	F	G						F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	DISCONTINUOUS, VERY THIN
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.045
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	YES
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS ARE DEVELOPED ON TILL VENEERS. THE BNT MATERIAL IS UNDESIRABLE. THE SUBSOIL IS STRONGLY SALINE AND/OR SODIC. THE UNDERLYING WEATHERED BEDROCK OF THE BEARPAW FORMATION IS ENCOUNTERED ABOUT 0.4 M BELOW THE SURFACE AND IS STRONGLY SALINE AND/OR SODIC. THE TEXTURE CHANGE FROM CLAY LOAM TO LOAM AT 0.4 M IS NOT SIGNIFICANT.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ISLANDS	(INS)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	REGO GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-20	10YR 3/2	VERY DARK GRAYISH BROWN	SGR	L	LS		8.		
CG1	20-70	10YR 6/2	LIGHT BROWNISH GRAY	SGR	VFR	SiL		7.7		
CG2	70-100	10YR 6/6	BROWNISH YELLOW	SGR	L	GRLS		6.8		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	F	P		F				P (Topsoil)
CG1	20-70	G	G		F				F (Subsoil)
CG2	70-100	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE SANDY-GRAVELLY SLOUGH SOILS THAT ARE NOT SALINE-SODIC.
 LOCATED IN RECHARGE SLOUGHS. EXPOSED FACES ARE UNSTABLE DUE TO WETNESS
 AND SANDY-GRAVELLY MATERIALS. MAY BE DRY IN LATE SUMMER AND FALL.
 AREAS OF DEPOSITION, NOT EROSION.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ISLANDS-SA (saINS)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	REGO GLEYSOL (SALINE)	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSAK	0-17	10YR 3/2	VERY DARK GRAYISH BROWN	SGR	L	LS		7.7	1.2	31.	1.2
CSKG1	17-25	10YR 5/3	BROWN	SGR	L	LS		8.6	1.	22.	6.5
CSKG2	25-100	10YR 5/3	BROWN	SGR	L	LCS		8.7	2.7	31.	7.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSAK	0-17	F	P		F	G	G	G	P (Topsoil)
CSKG1	17-25	F	P		P	G	F	F	P (Subsoil)
CSKG2	25-100	F	P		P	G	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: WEAKLY SALINE VARIANT OF ISLANDS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	KARLSBAD	(KBD)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	BROWN SOLOD		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-5	10YR 4/3	BROWN	WMGR	VFR	SIL		6.5			
AE	5-12	10YR 5/3	BROWN	MFPL	VF	SIL		6.1			
AB	12-15	10YR 3/3	DARK BROWN	MFSBK	FR	L		6.3			
BTN	15-40	10YR 3/3	DARK BROWN	MFCOL	F	CL		7.5	1.		2.
CCA	40-106	10YR 5/4	YELLOWISH BROWN	WMABK	F	SIL		8.1	1.		1.
CSK	106-120	10YR 7/3	VERY PALE BROWN	MA	F	SICL		7.5	12.	51.	6.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-5	G	G		G				G (Topsoil)
AE	5-12	P	G		F				P (Topsoil)
AB	12-15	G	G		F				F (Topsoil)
BTN	15-40	F	F		G	G		G	F (Subsoil)
CCA	40-106	F	G		F	G		G	F (Subsoil)
CSK	106-120	F	F		G	U	G	F	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .046
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: STRIPPING DEPTH CAN INCLUDE AH, AE AND AB HORIZONS (TOTAL=15 CM).
 THEREFORE, STRIP TO HARDPAN. TOPSOIL THICKNESS INCREASES DOWNSLOPE.
 SOLONETZIC SOIL. THE BTN HORIZON IS BNT-LIKE, FIRM AND RESTRICTS
 DRAINAGE (DRYS SLOWLY AFTER RAIN). POOR AGRICULTURAL SOIL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	KARLSBAD-ER (erKBD)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	BROWN SOLOD (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AB	0-3	10YR	3/3	DARK BROWN	MFSBK	FR	L		6.3			
BTN	3-28	10YR	3/3	DARK BROWN	MFCOL	F	CL		7.5	1.		2.
CSK	94-120	10YR	7/3	VERY PALE BROWN	MA	F	SICL		7.5	12.	51	6.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AB	0-3	G	G		F				F (Topsoil)
BTN	3-28	F	F		G	G		G	F (Subsoil)
CSK	94-120	F	F		G	U	G	F	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 3 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .046
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF KARLSBAD.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	KARLSBAD-SA (saKBD)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	BROWN SOLOD (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHKA	0-5	10YR 4/3	BROWN	WMGR	VFR	SIL		6.5			
AESA	5-10	10YR 5/3	BROWN	MFPL	VF	SIL		6.1			
ABSA	12-15	10YR 3/3	DARK BROWN	MFSBK	FR	L		6.3			
BTN	15-40	10YR 3/3	DARK BROWN	MFCOL	F	CL		7.5			
CCA	40-106	10YR 5/4	YELLOWISH BROWN	WMABK	F	SIL		8.1			
CSK	106-120	10YR 7/3	VERY PALE BROWN	MA	F	SICL		7.5		51	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHKA	0-5	G	G		G				G (Topsoil)
AESA	5-10	P	G		F				P (Topsoil)
ABSA	12-15	G	G		F				F (Topsoil)
BTN	15-40	F	F		G				F (Subsoil)
CCA	40-106	F	G		F				F (Subsoil)
CSK	106-120	F	F		G		G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .046
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF KARLSBAD THAT IS SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	KITSIM	(KTM)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	REGO GLEYSOL (SALINE)		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHG	0-2	10YR 3/3	DARK BROWN	WFGR	FR	CL	4.73	5.1	0.7	88.	0.2
CG	2-10	10YR 4/4	DARK YELLOWISH BROWN	MA	VF	C	1.35	5.9	0.3	54.	0.3
CSAG	10-45	10YR 4/3	BROWN-DARK BROWN	MA	VF	C		7.7	1.2	67.	9.
CSKG1	45-60	10YR 4/3	BROWN-DARK BROWN	MA	F	C		7.7	2.	70.	10.4
CSKG2	60-120	10YR 4/3	BROWN-DARK BROWN	MA	F	CL		7.8	2.1	68.	8.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHG	0-2	G	F	G	P	G	P	G	P (Topsoil)
CG	2-10	P	P		F	G	G	G	P (Subsoil)
CSAG	10-45	P	P		F	G	F	P	P (Subsoil)
CSKG1	45-60	F	P		F	G	F	P	P (Subsoil)
CSKG2	60-120	F	F		F	G	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS,
 WETNESS
 WIND EROSION RISK:
 WATER EROSION K=: -
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE WEAKLY SALINE AND MODERATELY SODIC. THEY ARE VERY HARD AND IMPERMEABLE WHEN DRY AND EXTREMELY FIRM AND IMPERMEABLE WHEN WET.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MALEB	(MAB)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YR 5/3	BROWN	MFGR	FR	L	3.9	6.6	0.7	61.	0.2
BM	13-39	10YR 5/4	YELLOWISH BROWN	MFSBK	F	L	1.5	6.7	0.5	47.	0.2
CCA	39-60	10YR 6/3	PALE BROWN	MA	F	L		7.7	0.5	48.	0.3
CK	60-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		7.8	0.4	54.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	G	G	G	G	G	F	G	F (Topsoil)
BM	13-39	F	G		G	G	G	G	F (Subsoil)
CCA	39-60	F	G		F	G	G	G	F (Subsoil)
CK	60-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VERY COMMON SOIL IN SCA1. TOPSOIL THICKENS DOWNSLOPE. IN CULTIVATED FIELDS THE PLOW LAYER IS USUALLY INTO THE B OR C HORIZON. COLOR CHANGE FROM TOPSOIL TO SUBSOIL IS NOT OBVIOUS. OVERSTRIPPING SOME B MATERIAL WHEN THE TOPSOIL IS THIN IS OFTEN PREFERRED.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MALEB-SA	(saMAB)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	(SALINE)		SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 4/3	BROWN - DARK BROWN	WFGR	FR	L	2.1	7.6	1.5	52.	2.2
BSA	18-45	10YR 5/4	YELLOWISH BROWN	MMSEK	F	CL		7.7	7.3	54.	7.4
CSK	45-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.9	11.8	55.	11.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G	G	F	G	G	G	F (Topsoil)
BSA	18-45	F	F		F	P	G	F	P (Subsoil)
CSK	45-180	F	F		F	U	G	P	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF MALEB THAT IS SALINE, SODIC (AND USUALLY CARBONATED) AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MALEB-ST	(stMAB)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	STONY, MODERATELY FINE		SURFACE STONINESS:	VERY
	TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-4	10YR 4/3	BROWN	MFGP	FR	STL	2.6	6.6	0.5	43.	0.
BM	4-25	10YR 5/4	YELLOWISH BROWN	MFSBK	F	STCL		7.6	0.5	45.	0.3
CK	25-120	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	STCL		8.	0.6	54.	0.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-4	G	P	G	G	G	G	G	P (Topsoil)
BM	4-25	F	P		F	G	G	G	P (Subsoil)
CK	25-120	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS, STONY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF MALEB SOILS THAT ARE STONIER THAN NORMAL. STONE-PICKING
 PROBABLY REQUIRED, OTHERWISE HANDLE LIKE MALEB. TOPSOIL IS OFTEN VERY
 THIN OR ABSENT DUE TO EROSION ON UPPER SLOPES.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MALEB-XP	(xpMAB)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	MODERATELY
	TILL/SOFTROCK			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YR 5/3	BROWN	MFGR	FR	L		6.6	0.7	61.	0.2
BM	13-39	10YR 5/4	YELLOWISH BROWN	MFSBK	F	L		6.7	0.5	47.	0.2
CCA	39-60	10YR 6/3	PALE BROWN	MA	F	L		7.7	0.5	48.	0.3
CK	60-90	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		7.8	0.4	54.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	G	G		G	G	F	G	F (Topsoil)
BM	13-39	F	G		G	G	G	G	F (Subsoil)
CCA	39-60	F	G		F	G	G	G	F (Subsoil)
CK	60-90	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	YES
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF MALEB THAT HAS WEATHERED (PARALITHIC) BEDROCK WITHIN 1 M OF THE SURFACE. THE SOFTROCK IS SIMILAR TO THE TILL IN PHYSICAL AND CHEMICAL PROPERTIES.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MASINASIN (MSN)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	MODERATELY FINE TILL	USUAL SOIL MOISTURE:	DRY
		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 4/2	DARK GRAYISH BROWN	MFGR	FR	L	2.1	6.9	2.2	46.	3.5
BM	12-35	10YR 5/4	YELLOWISH BROWN	MFSBK	F	CL		7.	0.5	50.	0.
CCA1	35-80	10YR 5/3	BROWN	MA	F	L		8.	1.		3.
CCA2	80-100	10YR 6/3	PALE BROWN	MA	F	L		8.4	1.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	G	G	F	G	G	F (Topsoil)
BM	12-35	F	F		G	G	G	G	F (Subsoil)
CCA1	35-80	F	G		F	G		G	F (Subsoil)
CCA2	80-100	F	G		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: MASINASIN IS MAPPED ONLY SOUTH OF ETZIKOM COULEE (APPROXIMATELY). TOPSOIL THICKNESS INCREASES DOWNSLOPE. COLOR CHANGE TO SUBSOIL IS OBVIOUS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MASINASIN-GR (grMSN)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	GRAVELLY, MODERATELY FINE	USUAL SOIL MOISTURE:	DRY
	TILL	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 4/2	DARK GRAYISH BROWN	MFGR	FR	GRL		6.6	0.3	0.	
BM	12-30	10YR 4/3	BROWN-DARK BROWN	MMSBK	F	GRCL		6.9	0.2	0.	
CK	30-100	10YR 5/3	BROWN	MA	F	GRCL		8.	0.4	0.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	P		G	G	G		P (Topsoil)
BM	12-30	F	P		G	G	G		P (Subsoil)
CK	30-100	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: GRAVELLY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GRAVELLY VARIANT OF MASINASIN.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MASINASIN-SA (saMSN)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC (SALINE)	TYPICAL SLOPES:	2-9%
		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APKSA	0-15	10YR 3/3	DARK BROWN	MFGR	FR	CL	2.4	8.	6.6	56.	24.7
BKSA	15-50	10YR 4/3	BROWN	MFSBK	F	CL		8.3	10.5	64.	25.9
CKSA	50-120	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.6	15.	55.	33.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APKSA	0-15	G	F	G	F	P	G	U	U (Topsoil)
BKSA	15-50	F	F		F	U	F	U	U (Subsoil)
CKSA	50-120	F	F		P	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF MASINASIN SOILS THAT ARE CARBONATED AND SALINE-SODIC AT OR NEAR THE SURFACE. THESE SOILS HAVE VERY SEVERE LIMITATIONS FOR GROWTH OF CROPS, AND HAVE UNSUITABLE QUALITY RATINGS OF TOPSOIL AND SUBSOIL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MASINASIN-ST (stMSN)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEM	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	STONY, MODERATELY FINE	USUAL SOIL MOISTURE:	DRY
	TILL	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 4/2	DARK GRAYISH BROWN	MFGR	FR	STL	3.9	6.6	0.5	63.	0.
BM	10-15	10YR 5/4	YELLOWISH BROWN	MFSBK	F	STL		7.2	0.8	57.	0.
CCA	15-120	2.5Y 6/4	LIGHT YELLOWISH BROWN	MA	F	STL		7.9	0.5	54.	1.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	P	G	G	G	F	G	P (Topsoil)
BM	10-15	F	P		G	G	G	G	P (Subsoil)
CCA	15-120	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF MASINASIN SOILS THAT ARE STONIER THAN NORMAL. OTHER THAN STONE PICKING HANDLE LIKE MASINASIN.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MCNAB	(MCN)	LANDFORM:	SPILLWAY, FAN, APRON
SOIL ZONE:	BROWN		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC REGOSOL (SALINE)		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM FLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-8	10YR 4/2	DARK GRAYISH BROWN	MMGR	VF	CL		8.4	39.3	59	75.3
CCASA1	8-40	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		8.3	36.6	66	75.4
CCASA2	40-100	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		8.6	27.6	137	72.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-8	P	F		F	U	G	U	U (Topsoil)
CCASA1	8-40	F	F		F	U	F	U	U (Subsoil)
CCASA2	40-100	F	P		P	U	U	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: MCNAB SOILS OCCUR MAINLY WITHIN SPILLWAY VALLEYS ON FLUVIAL FANS AND APRONS. THESE SOILS HAVE LITTLE OR NO A HORIZON AND NO B HORIZON. THERE IS LAYERING OR BANDING IN THE SUBSOIL. THEY HAVE VERY SEVERE LIMITATIONS FOR GROWTH OF ANY CROPS DUE TO SALINITY AND/OR SODICITY. OFTEN ASSOCIATED WITH SOLONETZIC SOILS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	MILK RIVER (MKR)	LANDFORM:	FLOODPLAIN
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	CUMULIC REGOSOL	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-20	10YR 5/3	BROWN	WFGR	VFR	SIL					
CK1	20-30	10YR 5/2	GRAYISH BROWN	SGR	L	LS					
CK2	35-90	10YR 6/2	LIGHT BROWNISH GRAY	STRAT	VFR	SL					
2CK	90-120	10YR 5/2	GRAYISH BROWN	SGR	L	GRLS					

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-20	G	G						G (Topsoil)
CK1	20-30	F	P						P (Subsoil)
CK2	35-90	G	G						G (Subsoil)
2CK	90-120	F	P						P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	5 cm
THICKNESS RANGE:	5-10 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	VERY THIN
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.02
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: OCCURS ON RECENT FLOODPLAINS. THE PARENT MATERIAL CONSISTS OF LAYERS OF SANDY LOAM TO LOAMY SAND, INTERSPERSED BY BURIED AH HORIZONS, AND OTHER SANDY, SILTY OR GRAVELLY LAYERS. WITH DEPTH, THE FREQUENCY AND THICKNESS OF THE GRAVEL LAYERS INCREASES, OFTEN TO CONTINUOUS GRAVEL BELOW THE 1.1 M DEPTH. THESE SOILS ARE NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	PATRICIA (PTA)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-8	10YR 4/2	DARK GRAYISH BROWN	WFGR	FR	L	3.1	7.4			
AE	8-15	10YR 4/2	DARK GRAYISH BROWN	MMPL	FR	L	1.2	7.2			
BNT	15-30	2.5Y 4/4	OLIVE BROWN	MFSBK	VF	C	1.2	7.2	0.2		
CK	30-51	2.5Y 4/4	OLIVE BROWN	MFABK	F	CL		8.1	0.2		
CSK	51-100	2.5Y 4/4	OLIVE BROWN	WFABK	F	C		7.8	2.		9.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-8	G	G	G	G				G (Topsoil)
AE	8-15	G	G	F	G				F (Topsoil)
BNT	15-30	P	P		G	G			P (Subsoil)
CK	30-51	F	F		F	G			F (Subsoil)
CSK	51-100	F	P		F	G		P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS, VERY THIN
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: BOTH AH AND AE WHEN PRESENT SHOULD BE SALVAGED AS TOPSOIL. STRIP TO HARDPAN.
 THE BNT IS VERY TOUGH, BUT IS USUALLY NOT SODIC AND CAN BE BROKEN DOWN. THE LOWER
 SUBSOIL IS WEAKLY SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES: PATRICIA-ER (erPTA) LANDFORM: BLANKET
 SOIL ZONE: BROWN TYPICAL SLOPES: 0-5%
 SOIL CLASSIFICATION: BROWN SOLODIZED SOLONETZ USUAL SOIL MOISTURE: TEMPORARY PONDING
 (ERODED) SURFACE STONINESS: NON
 PARENT MATERIAL: FINE GLACIOLACUSTRINE

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-2	10YR 4/2	DARK GRAYISH BROWN	WFGR	FR	L	3.1	7.4			
AE	2-15	10YR 4/2	DARK GRAYISH BROWN	MMPL	FR	L	1.2	7.2			
BNT	15-30	2.5Y 4/4	OLIVE BROWN	MFSBK	VF	C	1.2	7.2	0.2		
CK	30-51	2.5Y 4/4	OLIVE BROWN	MFABK	F	CL		8.1	0.2		
CSK	51-100	2.5Y 4/4	OLIVE BROWN	WFABK	F	C		7.8	2.		9.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	G	G	G	G				G (Topsoil)
AE	2-15	G	G	F	G				F (Topsoil)
BNT	15-30	P	P		G	G			P (Subsoil)
CK	30-51	F	F		F	G			F (Subsoil)
CSK	51-100	F	P		F	G		P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS, VERY THIN
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF PATRICIA. BOTH AH AND AE WHEN PRESENT SHOULD BE SALVAGED AS TOPSOIL. STRIP TO HARDPAN. THE BNT IS VERY TOUGH, BUT IS USUALLY NOT SODIC AND CAN BE BROKEN DOWN. THE LOWER SUBSOIL IS WEAKLY SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	PATRICIA-SA (saPTA)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHSA	0-8	10YR 4/2	DARK GRAYISH BROWN	WFGR	FR	L	3.1	7.4			
AESA	8-15	10YR 4/2	DARK GRAYISH BROWN	MMPL	FR	L	1.2	7.2			
BNT	15-30	2.5Ym 4/4	OLIVE BROWN	MFCOL	VF	C	1.2	7.2			
CSK2	30-51	2.5Yd 4/4	OLIVE BROWN	MFABK	H	CL		8.1			
CSK1	51-66	2.5Yd 4/4	OLIVE BROWN	WFABK	H	C		7.8			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSA	0-8	G	G	G	G				G (Topsoil)
AESA	8-15	G	G	F	G				F (Topsoil)
BNT	15-30	P	P		G				P (Subsoil)
CSK2	30-51	F	F		F				F (Subsoil)
CSK1	51-66	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	DISCONTINUOUS, VERY THIN
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: SALINE VARIANT OF PATRICIA THAT IS SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	PEMUKAN	(PUN)	LANDFORM:	TERRACED, FLOODPLAIN
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE		SURFACE STONINESS:	NON
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 4/3	BROWN	SGR	L	LS	1.6	7.2	1.	42.	0.1
BM	12-45	10YR 5/4	YELLOWISH BROWN	SGR	L	LS	0.5	7.	0.5	26.	0.4
BC	45-100	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	GRLS		7.8	0.4	27.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	F	P	F	G	G	G	G	P (Topsoil)
BM	12-45	F	P		G	G	F	G	P (Subsoil)
BC	45-100	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	12 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.015
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: LOAMY SAND DEPOSITS OVER GRAVEL AT APPROXIMATELY 30 CM. HOWEVER, THE DEPTH TO GRAVEL CAN BE EXTREMELY VARIABLE WITHIN SHORT DISTANCES. GRAVEL IS USUALLY PEA-SIZED. EXPOSED FACES ARE UNSTABLE DUE TO GRAVELLY, SANDY MATERIALS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	PEMUKAN-SC (scPUN)	LANDFORM:	TERRACED, FLOODPLAIN
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC (SALINE LOWER SUBSOIL)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 4/3	BROWN	SGR	L	LS		7.2	1.	42.	0.1
BM	12-45	10YR 5/4	YELLOWISH BROWN	SGR	L	LS		7.	0.5	26.	0.4
BCSA	45-100	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	GRLS		7.8		27.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	F	P		G	G	G	G	P (Topsoil)
BM	12-45	F	P		G	G	F	G	P (Subsoil)
BCSA	45-100	F	P		F		F		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .015
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF PEMUKAN WITH SALINE LOWER SUBSOIL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	PURPLE SPRINGS (PLS)	LANDFORM:	VENEER
SOIL ZONE:	BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL OR EOLIAN/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-20	10YR	4/3	BROWN	SGR	L	LS	1.2	7.2	0.5	32.	0.7
BM	20-55	10YR	4/4	DARK YELLOWISH BROWN	SGR	L	LS	0.2	7.5	0.5	23.	0.7
BC	55-68	10YR	5/3	BROWN	SGR	VFR	SL		7.6	0.5	52.	6.4
2CK	68-180	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	CL		8.2	0.7	52.	4.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	F	P	F	G	G	G	G	P (Topsoil)
BM	20-55	F	P		G	G	F	G	P (Subsoil)
BC	55-68	G	G		F	G	G	F	F (Subsoil)
2CK	68-180	F	F		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.02
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: SANDY TEXTURED DEPOSITS OVER CLAY LOAM TILL AT APPROXIMATELY 0.7M.
EQUIVALENT TO A SHALLOW CAVENDISH. TOPSOIL THICKENS IN SWALES AND ON
LOWER SLOPES. COLOR CHANGE FROM TOPSOIL TO SUBSOIL IS NOT OBVIOUS.
EXPOSED FACES ARE UNSTABLE IN UPPER PART OF PROFILE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	RAINIER	(RIR)	LANDFORM:	VENEER
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	NON
	GLACIOFLUVIAL/			
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-14	10YR 5/3	BROWN	WFGR	L	FSL		6.6	4.1	65.	7.1
BM	14-45	10YR 5/4	YELLOWISH BROWN	WFGR	L	LS		6.8	0.4	46.	1.7
2BM	45-78	10YR 5/4	YELLOWISH BROWN	WMSBK	FR	SIL		7.7	6.3	52.	6.4
2CCA	78-120	10YR 4/3	BROWN	WMSBK	VFR	L		8.	1.	79.	6.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	F	G		G	P	F	F	P (Topsoil)
BM	14-45	F	P		G	G	G	G	P (Subsoil)
2BM	45-78	G	G		F	P	G	F	P (Subsoil)
2CCA	78-120	G	G		F	G	F	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: SANDY LOAM SEDIMENTS OVER CLAY LOAM TO CLAY GLACIOLACUSTRINE AT APPROXIMATELY 0.5M. EXPOSED FACES OF THE UPPER MATERIAL ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	RAMILLIES	(RAM)	LANDFORM:	TERRACED
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM		SURFACE STONINESS:	NON
	GLACIOFLUVIAL/GRAVEL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR	5/3	BROWN	WFGR	FR	SL-L		7.			0.
BM	10-35	10YR	4/4	DARK YELLOWISH BROWN	WFPR	FR	L		6.6	0.6	32.	1.
CCA	35-50	10YR	6/4	LIGHT YELLOWISH BROWN	MA	F	L		8.2	0.6	95.	1.
2C	50-75	10YR	6/4	LIGHT YELLOWISH BROWN	SGR	L	GR		7.5	1.7	29.	1.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G		G			G	G (Topsoil)
BM	10-35	G	G		G	G	G	G	G (Subsoil)
CCA	35-50	F	G		F	G	P	G	P (Subsoil)
2C	50-75	F	P		G	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.04
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: LOAM TO SILT LOAM TEXTURED GLACIOFLUVIAL DEPOSITS OVER GRAVELLY SAND AT APPROXIMATELY 0.5M. EXPOSED FACES OF THE UNDERLYING MATERIAL ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ROLLING HILLS (RHS)	LANDFORM:	VENEER
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL OR EOLIAN/GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 4/3	BROWN	SGR	L	LS					
AHE	15-32	10YR 5/4	YELLOWISH BROWN	SGR	L	LS	0.3	6.4			
2BNT	32-47	10YR 3/3	DARK BROWN	MMSBK	VF	CL		8.	1.	10.	
2CCA	47-63	10YR 6/4	LIGHT YELLOWISH BROWN	WCSBK	FR	SIC		7.9			
2CK	63-100	10YR 5/3	BROWN	WMABK	FR	SICL		8.			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	F	P						P (Topsoil)
AHE	15-32	F	P	P	F				P (Topsoil)
2BNT	32-47	P	F		F	G		P	P (Subsoil)
2CCA	47-63	G	P		F				P (Subsoil)
2CK	63-100	G	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .02
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: TOPSOIL SALVAGE SHOULD INCLUDE AP AND AHE. STRIP TO HARDPAN. NO
 TOPSOIL IN BLOWOUT PITS. LOAMY SAND DEPOSITS OVER MODERATELY FINE
 GLACIOLACUSTRINE. THE BNT IS VERY TOUGH AND OCCURS IN THE UNDERLYING
 GLACIOLACUSTRINE MATERIAL. EXPOSED FACES OF THE UPPER MATERIAL ARE
 UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ROLLING HILLS-SA (sarHS)	LANDFORM:	VENEER
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL OR EOLIAN/GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
APSA	0-15	10YR 4/3	BROWN	SGR	L	LS				
AHESA	15-32	10YR 4/4	YELLOWISH BROWN	SGR	L	LS	0.3	6.4		
2BNT	32-47	10YR 3/3	DARK BROWN	MMSBK	VF	CL		8.		
2CCASA	47-63	10YR 6/4	LIGHT YELLOWISH BROWN	WCSBK	FR	SIC		7.9		
2CSK	63-100	10YR 5/3	BROWN	WMABK	FR	SICL		8.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-15	F	P						P (Topsoil)
AHESA	15-32	F	P	P	F				P (Topsoil)
2BNT	32-47	P	F		F				P (Subsoil)
2CCASA	47-63	G	P		F				P (Subsoil)
2CSK	63-100	G	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .02
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF ROLLING HILLS THAT IS SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	RONALAINE (ROL)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	SOLONTEZIC BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 5/3	BROWN	WFGR	FR	L	2.6	6.4	0.4	51.	0.2
BTNJ	12-30	10YR 3/4	DARK YELLOWISH BROWN	MMSBK	F	L	1.7	7.4	0.8	60.	2.2
CSK	30-100	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	L		8.	0.8	54.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G	G	F	G	G	G	F (Topsoil)
BTNJ	12-30	F	G		G	G	G	G	F (Subsoil)
CSK	30-100	F	G		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: RONALAINE SOILS HAVE A BTNJ HORIZON THAT HAS SLIGHTLY SOLONETZIC PHYSICAL PROPERTIES AND THE LOWER SUBSOIL IS SLIGHTLY SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	RONALAINE-ST (stROL)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	OLONETZIC BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	STONY, MODERATELY FINE TILL	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR	5/3	BROWN	WFGR	FR	STL		6.4	0.4	51.	0.2
BNTJ	12-30	10YR	3/4	DARK YELLOWISH BROWN	MMSBK	F	STL		7.4	0.8	60.	2.2
CSK	30-100	10YR	6/4	LIGHT YELLOWISH BROWN	MA	F	STL		8.	0.8	54.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	P		F	G	G	G	P (Topsoil)
BNTJ	12-30	F	P		G	G	G	G	P (Subsoil)
CSK	30-100	F	P		F	G	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF RONALAINE THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ROSEMARY	(RMR)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLOD		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-7	10YR 4/2	DARK GRAYISH BROWN	WFGR	VFR	SIL	2.6	7.8		
AE	7-9	10YR 5/2	GRAYISH BROWN	WFPL	VFR	SIL	1.	8.3		
BNT	9-23	10YR 3/3	DARK BROWN	MMCOL	VF	SIC	1.2	8.1	1.	
CCA	23-46	10YR 4/4	DARK YELLOWISH BROWN	MFABK	FR	SICL		8.1	3.	3.
CSK	46-100	10YR 4/4	DARK YELLOWISH BROWN	MA	FR	SICL		7.8	2.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-7	G	G	G	F				F (Topsoil)
AE	7-9	G	G	F	F				F (Topsoil)
BNT	9-23	P	P		F	G			P (Subsoil)
CCA	23-46	G	F		F	F		G	F (Subsoil)
CSK	46-100	G	F		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .033
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS HAVE A BNT HORIZON AND THE LOWER SUBSOIL IS WEAKLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ROSEMARY-ER (erRMR)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLOD (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-2	10YR 4/2	DARK GRAYISH BROWN	WFGR	VFR	SIL	2.6	7.8			
AE	2-9	10YR 5/2	GRAYISH BROWN	WFPL	VFR	SIL	1.	8.3			
BNT	9-23	10YR 3/3	DARK BROWN	MMCOL	VF	SICL	1.2	8.1	1.		
CCA	23-46	10YR 4/4	DARK YELLOWISH BROWN	MFABK	FR	SICL		8.1	3.		
CSK	46-100	10YR 4/4	DARK YELLOWISH BROWN	MA	FR	SICL		7.8	2.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	G	G	G	F				F (Topsoil)
AE	2-9	G	G	F	F				F (Topsoil)
BNT	9-23	P	P		F	G			P (Subsoil)
CCA	23-46	G	F		F	F		G	F (Subsoil)
CSK	46-100	G	F		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .033
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF ROSEMARY.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	ROSEMARY-SA (saRMR)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLOD (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHSA	0-7	10YR 4/2	DARK GRAYISH BROWN	WFGR	VFR	SIL	2.6	7.8			
AESA	7-9	10YR 5/2	GRAYISH BROWN	WFPL	VFR	SIL	1.	8.3	5.	74.	5.9
BNTSA	9-23	10YR 3/3	DARK BROWN	MMCOL	VF	SIC	1.2	8.1	1.		
CCASA	23-46	10YR 4/4	DARK YELLOWISH BROWN	MFABK	FR	SICL		8.1	3.		3.
CSK	46-100	10YR 4/4	DARK YELLOWISH BROWN	MA	FR	SICL		7.8	2.	61.	41.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSA	0-7	G	G		F				P (Topsoil)
AESA	7-9	G	G		F	F	F	F	P (Topsoil)
BNTSA	9-23	P	P		F	G			P (Subsoil)
CCASA	23-46	G	F		F	F		G	P (Subsoil)
CSK	46-100	G	F		F	G	F	U	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .033
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF ROSEMARY THAT IS SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	SEVEN PERSONS (SPS)	LANDFORM:	DRAINAGE CHANNELS
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR	5/2	GRAYISH BROWN	MFGR	FR	SICL					
BM	10-34	10YR	4/2	DARK GRAYISH BROWN	WFPR	F	SICL-SIC					
CCA	34-100	2.5Y	4/4	OLIVE BROWN	MA	F	SICL		6.2	5.	74.	5.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	F						F (Topsoil)
BM	10-34	F	P						P (Subsoil)
CCA	34-100	F	F		F	F	F	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.025
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS ARE DEVELOPED ON FINE TEXTURED GLACIOLACUSTRINE MATERIAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	SEVEN PERSONS-SA (saSPS)	LANDFORM:	DRAINAGE CHANNELS
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC BROWN CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHSA	0-10	10YR 5/2	GRAYISH BROWN	MFGR	FR	SICL		8.8	1.		1.
BMSA	10-34	10YR 4/2	DARK GRAYISH BROWN	WFPR	F	SICL-SIC		8.2	20.	61.	41.4
CCASA	34-100	2.5Y 4/4	OLIVE BROWN	MA	F	SICL		7.5	1.		1.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSA	0-10	G	F		P	G		G	P (Topsoil)
BMSA	10-34	F	P		F	U	F	U	P (Subsoil)
CCASA	34-100	F	F		G	G		G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .025
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SALINE VARIANT OF SEVEN PERSONS THAT IS SALINE AND/OR SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	SEVEN PERSONS-ZR (zrSPS)	LANDFORM:	DRAINAGE CHANNELS
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	REGO BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 5/2	GRAYISH BROWN	MFGR	FR	SICL		9.2	2.	29.	
CCA1	10-34	2.5Y 4/4	OLIVE BROWN	MA	F	SICL-C		9.5	2.	23.	
CCA2	34-100	2.5Y 4/4	OLIVE BROWN	MA	F	SICL		8.8	1.	58.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	F		U	F		U	F (Topsoil)
CCA1	10-34	F	P		U	G		U	P (Subsoil)
CCA2	34-100	F	F		P	G		U	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.025
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: REGO VARIANT OF SEVEN PERSONS.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	SLOUGHAY (SLY)	LANDFORM:	LEVEL, DEPRESSIONAL
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-16	10YR 3/3	DARK BROWN	WFSBK	FR	SICL	1.5	6.8	9.2	1. 71.1	
CG	16-40	5Y 4 1/	DARK GRAY	MA	FR	SICL	0.6	7.		1.	
CKG1	40-78	10YR 4/1	DARK GRAY	MA	FR	SIC	0.5	8.		1.	
CKG2	78-120	10YR 5/3	BROWN	MA	FR	L		8.4	9.9	1. 126.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-16	G	F	F	G	G	G	U	F (Topsoil)
CG	16-40	G	F		G	G			F (Subsoil)
CKG1	40-78	G	P		F	G			P (Subsoil)
CKG2	78-120	G	G		F	G	F	U	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SLOUGHAY SOILS ARE WET THROUGHOUT THE YEAR. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	STEVEVILLE (SIL)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM TILL/SOFTROCK	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-5	10YR 3/3	DARK BROWN	WFGR	FR	L	2.7	6.2	0.4	46.	1.7
BNT	5-30	10YR 5/3	BROWN	SMSBK	VF	CL		7.3	1.	79.	6.1
2CSK1	30-80	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		7.6	6.3	52.	6.4
2CSK2	80-180	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	L		7.8	4.1	65.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-5	G	G	G	F	G	G	G	F (Topsoil)
BNT	5-30	P	F		G	G	F	F	P (Subsoil)
2CSK1	30-80	F	G		F	P	G	F	P (Subsoil)
2CSK2	80-180	F	G		F	F	F	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .047
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: STEVEVILLE SOILS ARE DEVELOPED ON THIN TILL VENEERS OVER WEATHERED
 SOFTROCK. BOTH MATERIALS ARE MEDIUM TEXTURED. THE BNT MATERIAL IS
 UNDESIRABLE AND THESE SOILS ARE MODERATELY TO STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	STEVEVILLE-ER (erSIL)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM TILL/SOFTROCK	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-2	10YR 3/3	DARK BROWN	WFGR	FR	L	2.7	6.2	0.4	46.	1.7
BNT	2-30	10YR 5/3	BROWN	SMSBK	VF	CL	7.3	1.	79.	6.1	
2CSK1	30-80	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L	7.6	6.3	52.	6.4	
2CSK2	80-180	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	L	7.8	4.1	65.	7.1	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	G	G	G	F	G	G	G	F (Topsoil)
BNT	2-30	P	F		G	G	F	F	P (Subsoil)
2CSK1	30-80	F	G		F	P	G	F	P (Subsoil)
2CSK2	80-180	F	G		F	F	F	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	2 cm
THICKNESS RANGE:	0-5 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	VERY THIN, DISCONTINUOUS
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	.047
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	YES
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: ERODED VARIANT OF STEVEVILLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	STEVEVILLE-ST (stSIL)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	STONY, MEDIUM TILL/SOFTROCK	SURFACE STONINESS:	EXCEEDINGLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-5	10YR 3/3	DARK BROWN	WFGR	FR	STL	2.7	6.2	0.4	46.	1.7
BNT	5-30	10YR 5/3	BROWN	SMSBK	VF	STCL		7.3	1.	79.	6.1
2CSK1	30-80	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	STL		7.6	6.3	52.	6.4
2CSK2	80-180	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	STL		7.8	4.1	65.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-5	G	P	G	F	G	G	G	P (Topsoil)
BNT	5-30	P	P		G	G	F	F	P (Subsoil)
2CSK1	30-80	F	P		F	P	G	F	P (Subsoil)
2CSK2	80-180	F	P		F	F	F	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS, STONY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .047
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF STEVEVILLE THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	SUNNYSOOK (SYK)	LANDFORM:	VENEER
SOIL ZONE:	BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY COARSE EOLIAN OR GLACIOFLUVIAL/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-15	10YR 4/3	BROWN	SGR	L	LS	0.9	6.6	0.6	32.	1.
BNT	15-60	10YR 5/3	BROWN	COL	F-VF	LS-SL	0.1	7.5	1.7	29.	11.9
CSK	60-85	10YR 5/4	YELLOWISH BROWN	SGR	L	LS-SL		8.4	17.3	50.	25.2
2CSK	85-170	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.2	12.1	95.	27.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	F	P	P	G	G	G	G	P (Topsoil)
BNT	15-60	P	P		G	G	F	P	P (Subsoil)
CSK	60-85	F	P		F	U	G	U	U (Subsoil)
2CSK	85-170	F	F		F	U	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	.02
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	YES

NOTES: SUNNYSOOK SOILS ARE DEVELOPED ON SANDY GLACIOFLUVIAL VENEERS OVERLYING CLAY LOAM TILL. THE BNT HORIZON OCCURS IN THE SANDY MATERIAL, IS NON TO WEAKLY SALINE, STRONGLY SODIC AND UNDESIRABLE. THE UNDERLYING TILL IS STRONGLY SALINE AND SODIC. EXPOSED FACES OF THE UPPER SANDY MATERIAL ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	TEMPEST	(TEP)	LANDFORM:	LEVEL, DEPRESSIONAL
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	HUMIC LUVIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YR 5/2	GRAYISH BROWN	MMGR	FR	L		8.1	3.8	55.	9.1
AE	13-20	10YR 6/2	LIGHT BROWNISH GRAY	MMPL	VFR	L		7.9	0.9	31.	3.7
BG	20-43	10YR 4/2	DARK GRAYISH BROWN	WMSBK	F	SICL		8.2	2.7	85.	5.3
CG	43-104	10YR 5/2	GRAYISH BROWN	MA	F	SICL		6.	0.4	29.	1.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	G	G		F	F	G	P	P (Topsoil)
AE	13-20	G	G		F	G	G	G	P (Topsoil)
BG	20-43	F	F		F	G	P	F	P (Subsoil)
CG	43-104	F	F		F	G	F	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: TEMPEST SOILS ARE WET ALL YEAR. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	TILLEY	(TIY)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	SOLONETZIC BROWN		USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC (ELUVIATED)		SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-15	10YR 4/3	BROWN	WMGR	FR	SIL	4.4	6.9		
AE	15-22	10YR 5/2	GRAYISH BROWN	WFPL	FR	SIL	1.	7.2		
BT	22-43	10YR 3/3	DARK BROWN	MMPR	FR	SICL	1.2	7.7		
CSK1	43-60	10YR 5/4	YELLOWISH BROWN	MA	VFR	SIL		8.2	5.	18.
CSK2	60-100	10YR 6/3	PALE BROWN	MA	VFR	SIL		7.9	5.	14.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G	G	G				G (Topsoil)
AE	15-22	G	G	F	G				F (Topsoil)
BT	22-43	G	F		F				F (Subsoil)
CSK1	43-60	G	G		F	P		U	U (Subsoil)
CSK2	60-100	G	G		F	P		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: TILLEY SOILS HAVE A BTNJ HORIZON THAT IS SLIGHTLY SOLONETZIC IN PHYSICAL AND CHEMICAL PROPERTIES. THE UNDERLYING SUBSOIL IS SLIGHTLY TO MODERATELY SALINE AND STRONGLY SODIC. THESE SOILS ARE ELUVIATED AND HAVE AN AE HORIZON.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	WARDLOW	(WDW)	LANDFORM:	LEVEL, UNDULATING
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-5	10YR 4/3	BROWN	WFGR	FR	L		5.3	6.2	31.	1.2
AE	5-10	10YR 6/2	LIGHT BROWNISH GRAY	MMPL	VFR	SIL		5.2	0.4	33.	0.5
BNT	10-30	10YR 4/3	BROWN	SMCOL	VF	SICL		6.2	5.	74.	5.9
CSK	30-110	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SICL		8.2	20.	61.	41.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-5	G	G		P	G	G	G	P (Topsoil)
AE	5-10	G	G		P	G	G	G	P (Topsoil)
BNT	10-30	P	F		F	P	F	F	P (Subsoil)
CSK	30-110	F	F		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .049
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: WARDLOW SOILS ARE STRONGLY SALINE AND SODIC. THE BNT MATERIAL IS VERY TOUGH AND UNDESIRABLE. STRIP TO THE HARDPAN.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	WARDLOW-ER (erWDW)	LANDFORM:	LEVEL, UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-2	10YR 4/3	BROWN	WFGR	FR	L		5.3	0.2	31.	1.2
AE	2-10	10YR 6/2	LIGHT BROWNISH GRAY	MMPL	VFR	SIL		5.2	0.4	33.	0.5
BNT	10-30	10YR 4/3	BROWN	SMCOL	VF	SICL		6.2	5.	74.	5.9
CSK	30-110	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SICL		8.2	20.	61.	41.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	G	G		P	G	G	G	P (Topsoil)
AE	2-10	G	G		P	G	G	G	P (Topsoil)
BNT	10-30	P	F		F	F	F	F	P (Subsoil)
CSK	30-110	F	F		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN, DISCONTINUOUS
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .049
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF WARDLOW.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	WARDLOW-SA (saWDW)	LANDFORM:	LEVEL, UNDULATING
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHSA	0-5	10YR 4/3	BROWN	WFGR	FR	L					
AHSA	5-10	10YR 6/2	LIGHT BROWNISH GRAY	MMPL	VFR	SIL					
BNTSA	10-30	10YR 4/3	BROWN	SMCOL	VF	SICL		6.2	5.	74.	5.9
CSK	30-110	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SICL		8.2	20.	61.	41.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSA	0-5	G	G						P (Topsoil)
AHSA	5-10	G	G						P (Topsoil)
BNTSA	10-30	P	F		F	P	F	F	P (Subsoil)
CSK	30-110	F	F		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .049
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF WARDLOW THAT IS STRONGLY SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	YARNLEY	(YNY)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL		SURFACE STONINESS:	NON
	OR EOLIAN			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-25	10YR 3/2	VERY DARK GRAYISH BROWN	SGR	VFR	LS		7.5	1.		1.
AE	25-36	10YR 4/2	DARK GRAYISH BROWN	SGR	L	S		8.8	1.	43.	1.
BNTK	36-70	10YR 3/3	DARK BROWN	WCCOL	FR	LS		9.5	2.	50.	23.
CSK1	70-98	10YR 5/4	YELLOWISH BROWN	SGR	VFR	LS		9.2	2.	51.	29.
CSK2J	98-135	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	VFR	LS		8.8	1.	40.	58.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-25	G	P		G	G		G	P (Topsoil)
AE	25-36	F	P		P	G	G	G	P (Topsoil)
BNTK	36-70	G	P		U	G	G	U	U (Subsoil)
CSK1	70-98	G	P		U	G	G	U	U (Subsoil)
CSK2J	98-135	G	P		P	G	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .02
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: YARNLEY SOILS HAVE A BNT HORIZON THAT IS UNDESIRABLE. THESE SOILS ARE
 NON TO WEAKLY SALINE AND STRONGLY SODIC. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

YOUNGSTOWN

SCA 1

09/01/93

SOIL SERIES:	YOUNGSTOWN (YTW)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 5/3	BROWN	WFGR	VFR	FSL		7.8	6.4	65.	33.1
AE	12-18	10YR 6/3	PALE BROWN	MFPL	VFR	FSL		7.9	7.7	127.	19.7
BNT	18-40	10YR 4/4	DARK YELLOWISH BROWN	VF	F	SL		8.2	9.2	53.	71.1
CSA	40-110	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	VFR	FSL		9.2	9.9	63.	126.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G		F	P	F	U	U (Topsoil)
AE	12-18	G	G		F	P	U	U	U (Topsoil)
BNT	18-40	P	G		F	P	G	U	U (Subsoil)
CSA	40-110	G	G		U	P	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS HAVE A BNT HORIZON THAT IS UNDESIRABLE AND SUBSOILS ARE
 STRONGLY SALINE AND SODIC. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 1

09/01/93

SOIL SERIES:	YOUNGSTOWN-ER (erYTW)	LANDFORM:	BLANKET
SOIL ZONE:	BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-5	10YR 5/3	BROWN	WFGR	VFR	FSL		7.8	6.4	65.	33.1
AE	5-18	10YR 6/3	PALE BROWN	MFPL	VFR	FSL		7.9	7.7	127.	19.7
BNT	18-40	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	VF	FSL		8.2	9.2	53.	71.1
CSA	40-110	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	VFR	FSL		9.2	9.9	63.	126.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-5	G	G		F	P	F	U	U (Topsoil)
AE	5-18	G	G		F	P	U	U	U (Topsoil)
BNT	18-40	P	G		F	P	G	U	U (Subsoil)
CSA	40-110	G	G		U	P	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF YOUNGSTOWN.

2.2 Soil Correlation Area #2

General Description of the Area

The Dark Brown Soil Zone of the Highlands of Southern Alberta.

Ecoregion/Climate

- SCA 2 consists of three highlands in Southern Alberta; the Cypress Hills, the Sweetgrass Hills and Milk River Ridge. The soils have dark brown surface horizons except for on top of the Cypress Hills where black and dark gray soils can also be found under forest cover (but this area is small).
- SCA 2 is not as dry as SCA1, and is within the Mixed Grass Ecoregion, which receives approximately 20 mm more precipitation than the Dry Mixed Grass (SCA1) Ecoregion (Strong and Leggatt 1992).
- Agroclimate is 2AH and 2H (slight moisture and heat limitations).
- Growing season P-PE = -250 to -350 mm.

Soils and Landscapes

- The landscapes tend to have longer slopes and longer, better integrated drainage networks than is typical for the prairies. Landforms are typically morainal veneers overlying an inclined or rolling softrock (weathered mudstone, siltstone, shales) surface. The thickness of till is generally less than one metre, and the softrock is often exposed.
- Dark brown colored A horizons are approximately 10 cm thick while profile development extends about 40 cm.

Soil Reclamation Issues

- Information requirements for planning soil handling focus on topsoil and subsoil thickness and quality, and on quality of the near-surface softrock materials.
- Control of wind erosion and water erosion are key concerns.
- The objective of maximizing water use efficiency should be recognized when reconstructing soil-landscapes.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	GRUDGE (GRG)	LANDFORM:	UNDULATING, INCLINED
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-2	10YR 4/2	DARK GRAYISH BROWN	WFG	SO	SIL					
AE	2-7	10Yrd 6/2	LIGHT BROWNISH GRAY	WFSBK	SO	SIL	1.69	7.1	1.		
BNT	7-30	10Yrd 3/2	VERY DARK GRAYISH BROWN	SCCOL	VH	HC	1.66	7.6	2.	19.	
BCS	30-40	10Yrd 4/3	BROWN-DARK BROWN	SMPR	VH	C		7.6	7.	14.	
CSA1	40-51	10Yrd 5/4	YELLOWISH BROWN	WMSBK	H	SICL		7.7	8.	14.	
CSA2	51-70	10Yrd 3/3	DARK BROWN	WMPR	H	SICL		7.7	9.	14.	
CKS	70-120	10Yrd 6/3	PALE BROWN	MA	VH	L		8.2	5.	20.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	G	G						G (Topsoil)
AE	2-7	G	G	F	G	G			F (Topsoil)
BNT	7-30	P	P		F	G		U	U (Subsoil)
BCS	30-40	P	P		F	P		U	U (Subsoil)
CSA1	40-51	F	F		F	P		U	U (Subsoil)
CSA2	51-70	F	F		F	P		U	U (Subsoil)
CKS	70-120	P	G		F	P		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 2-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE MODERATELY SALINE AND STRONGLY SODIC. THE BNT MATERIAL IS UNDESIRABLE.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES: *	GRUDGE-ER (erGRG)	LANDFORM:	UNDULATING, INCLINED
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
BNT	7-30	10YRd 3/2	VERY DARK GRAYISH BROWN	SCCOL	VH	HC	1.66	7.6	2.	19.	
BCS	30-40	10YRd 4/3	BROWN-DARK BROWN	SMPR	VH	C		7.6	7.	14.	
CSA1	40-51	10YRd 5/4	YELLOWISH BROWN	WMSBK	H	SICL		7.7	8.	14.	
CSA2	51-70	10YRd 3/3	DARK BROWN	WMPR	H	SICL		7.7	9.	14.	
CKS	70-120	10YRd 6/3	PALE BROWN	MA	VH	L		8.2	5.	20.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
BNT	7-30	P	P		F	G		U	U (Subsoil)
BCS	30-40	P	P		F	P		U	U (Subsoil)
CSA1	40-51	F	F		F	P		U	U (Subsoil)
CSA2	51-70	F	F		F	P		U	U (Subsoil)
CKS	70-120	P	G		F	P		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-3 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF GRUDGE.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	HEARTBREAK (HRK)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	DARK BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	2-15%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 3/3	DARK BROWN	WFGR	VFR	SL-LS		7.	0.3	34.	0.2
BM	10-60	10YR 4/4	DARK YELLOWISH BROWN	WFSBK	VFR	SL-LS		7.3	0.2	27.	0.2
CCA	60-150	10YR 5/3	BROWN	MA	VFR	SL-LS		8.	0.4	26.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	P		G	G	G	G	P (Topsoil)
BM	10-60	G	P		G	G	F	G	P (Subsoil)
CCA	60-150	G	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .007
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: LOW

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON WATER-LAID GLACIOFLUVIAL MATERIAL. EXPOSED
 FACES ARE UNSTABLE DUE TO VERY COARSE TEXTURES. HEARTBREAK SOILS ARE
 VERY DROUGHTY. WIND EROSION RISK IS HIGH DUE TO VERY COARSE SURFACE
 TEXTURES.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	HEARTBREAK-ZR (ZrHKR)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	DARK BROWN		RIDGED
SOIL CLASSIFICATION:	REGO DARK BROWN	TYPICAL SLOPES:	2-15%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR	3/3	DARK BROWN	WFGR	VFR	SL-LS		7.	0.3	34.	0.2
CK	10-120	10YR	5/3	BROWN	MA	VFR	SL-LS		8.	0.4	26.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	P		G	G	G	G	P (Topsoil)
CK	10-120	G	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: .007
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: LOW

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: REGO VARIANT OF HEARTBREAK.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	HEGSON	(HEG)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN		USUAL SOIL MOISTURE:	MOIST
	CHERNOZEMIC		SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	FINE GLACIOLACUSTRINE			
	(TILL-LIKE)			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 4/2	DARK GRAYISH BROWN	WFSBK	FR	SICL	2.9	6.5			
BM	10-30	10YR 3/2	VERY DARK GRAYISH BROWN	WMPR	F	SIC		6.5			
CCA	30-120	10YR 5/3	BROWN	MA	F	SIC		7.4			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	F	G	G				F (Topsoil)
BM	10-30	F	P		G				P (Subsoil)
CCA	30-120	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: .028
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE PARENT MATERIAL IS OFTEN REFERRED TO AS LACUSTRO-TILL OR GLACIAL-TILL.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	LUPEN	(LUP)	LANDFORM:	VDNEER, 'UNDULATING
SOIL ZONE:	DARK BROWN			PLAIN
SOIL CLASSIFICATION:	ORTHIC DARK BROWN		TYPICAL SLOPES:	1-5%
	CHERNOZEMIC		USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-15	10YR 4/3	BROWN-DARK BROWN	MFR	FR	L	4.3	7.7	0.4	47.	0.3
BMK	15-30	10YR 5/3	BROWN	MFSBK	FR	L		8.	0.4	49.	0.4
2CK	30-120	10YR 6/4	LIGHT YELLOWISH BROWN	STRAT	FR	SICL-L		8.7	0.6	56.	4.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-15	G	G	G	F	G	G	G	F (Topsoil)
BMK	15-30	G	G		F	G	G	G	F (Subsoil)
2CK	30-120	G	F		P	G	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: LUPEN SOILS ARE DEVELOPED ON MEDIUM GLACIOLACUSTRINE OVERLYING MODERATELY FINE TILL. THE TEXTURE CHANGE BETWEEN MATERIALS IS NOT SIGNIFICANT. THE TILL OCCURS ABOUT 0.5 CM BELOW THE SURFACE.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	NEW DAYTON-AA (aaNED)	LANDFORM:	TERRACED
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY MODERATELY COARSE FLUVIAL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 3/3	DARK BROWN	WFSBK	VFR	SL	2.3	6.5			
BM	10-30	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	GRLS		6.5			
CCA/CK	30-120	10YR 5/4	YELLOWISH BROWN	SGR	L	GR		7.4			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G	G	G				G (Topsoil)
BM	10-30	F	P		G				P (Subsoil)
CCA/CK	30-120	F	U		G				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: GRAVELLY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 3. GRAVEL INCREASES WITH DEPTH FROM A 10% CONTENT IN THE UPPER PROFILE TO NEAR 80% IN THE LOWER PROFILE.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	PURESCAPE (PUR)	LANDFORM:	HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	6-30%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YRm 3/2	VERY DARK GRAYISH BROWN	WCSBK	SLH	L	2.26	7.3			
BM	13-40	10YRm 3/3	DARK BROWN	MMPR	H	CL	1.43	7.2			
CK1	40-57	10YRm 5/2	GRAYISH BROWN	WMSBK	H	L		7.6	2.		
CK2	57-93	2.5Ym 5/2	GRAYISH BROWN	WCSBK	H	CL		7.7	0.5		
CK3	93-120	2.5Ym 4/2	DARK GRAYISH BROWN	MA	FR	CL		7.8	1.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	G	G	G	G				G (Topsoil)
BM	13-40	F	F		G				F (Subsoil)
CK1	40-57	F	G		F	G			F (Subsoil)
CK2	57-93	F	F		F	G			F (Subsoil)
CK3	93-120	G	F		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: TOPOGRAPHY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.030
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS OCCUR ON HUMMOCKY LANDSCAPES.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	SEXTON-AA (aaSXT)	LANDFORM:	SPILLWAY, APRON
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC HUMIC REGOSOL	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-23	10Yrd 3/2	VERY DARK GRAYISH BROWN	WFSBK	SO	FSL	1.58	7.7	0.5	
CK	23-34	10Yrd 6/3	PALE BROWN	MA	SO	FSL	0.6	7.9	0.5	
AHKB1	34-53	10Yrd 4/2	DARK GRAYISH BROWN	MA	SO	FSL	0.91	7.9	0.5	
CKB1	53-74	10Yrd 6/3	PALE BROWN	MA	SO	FSL	0.52	8.2	0.5	
CKB2	74-100	10Yrd 6/3	PALE BROWN	MA	SO	L	0.24	8.7	3.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-23	G	G	F	F	G			F (Topsoil)
CK	23-34	G	G		F	G			F (Subsoil)
AHKB1	34-53	G	G	P	F	G			P (Topsoil)
CKB1	53-74	G	G		F	G			F (Subsoil)
CKB2	74-100	G	G		P	F			P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: HOME SCA IS 3. BURIED AH HORIZONS ARE COMMON. THESE SOILS HAVE A LOW WATER HOLDING CAPACITY AND LOW NATURAL FERTILITY.

INTERPRETATION GUIDELINES

SCA 2

09/01/93

SOIL SERIES:	WILDA (WID)	LANDFORM:	HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	10-30%
SOIL CLASSIFICATION:	REGO DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATLEY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-15	10YRm 3/3	DARK BROWN	WFSEK	FR	CL	1.86	7.5	0.5		
CK1	15-41	10YRm 5/3	BROWN	MA	VFR	CL	1.02	7.8	0.5		
CK2	41-75	2.5Ym 6/2	LIGHT BROWNISH GRAY	MA	VFR	CL	0.31	7.9	0.5		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-15	G	F	F	G	G			F (Topsoil)
CK1	15-41	G	F		F	G			F (Subsoil)
CK2	41-75	G	F		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	TOPOGRAPHY
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.040
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS ARE CONCENTRATED IN AREAS OF ROUGH TOPOGRAPHY. DUE TO THE STEEPNESS OF THE SLOPES, WATER EROSION IS A CONTINUING PROBLEM.

2.3 Soil Correlation Area #3

General Description of the Area

The Dark Brown Soil Zone of South-Western Alberta

Ecoregion/Climate

- SCA 3 is characterized by soils with a dark brown A horizon, located in the "Chinook Zone" of south-western Alberta. This is an area of transition from the moist, Black Soil Zone (SCA 5) to the dry, Brown Soil Zone (SCA 1). SCA 3 occupies much of the Mixed Grass Ecoregion (Strong and Leggatt 1992).
- Agroclimate is 2A and 2AH (slight moisture and heat limitations).
- Growing season P-PE = -200 to -350 mm.

Soils and Landscapes

- The soils are predominantly Chernozemic but extensive Solonetzic soil-landscapes do occur. There are also extensive areas where soil salinity, including primary (historic) and secondary (dry-land) salinity are present.
- Dark brown colored A horizons are approximately 15 cm thick while profile development extends about 40 cm.
- Wind erosion risk is a major soil conservation concern in this area - especially on the sandy textured soils. Wind erosion can occur in any month of the year. The key to wind erosion control is maintaining soil cover in the form of a growing crop or residue from the previous crop. The magnitude of the effects of water erosion are often under-estimated in this area. Topsoil lost from upper slope positions is generally deposited in depressional areas. The lack of topsoil on upper slopes is then blamed on historic wind erosion. The net effect is that the original topsoil is often absent from upper slopes (knolls) in cultivated fields, and the current cultivated layer is actually in the B or C soil horizon. Trying to distinguish the "topsoil layer" of these soils using color change can be difficult.

Soil Reclamation Issues

Soil reclamation challenges in SCA 3 are similar to those in SCA 1, but there is more growing season precipitation in SCA 3. Typical soil reclamation problems include:

1. Wind erosion control - especially on sandy soils.
2. Establishment of vegetation cover - especially in dry areas.
3. Reclamation of salt-affected soils.
4. Dealing with near-surface, sodic softrock.
5. Reclamation of irrigation soils.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	ARROWWOOD (AWD)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	DARK BROWN SOLOD	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 5/3	BROWN	MMGR	H	L-SL	5.7	5.5	0.3	63.	
AB	10-20	10YR 5/3	BROWN	MFSBK	H	CL		5.8	0.3	64.	
BNT	20-35	10YR 3/2	VERY DARK GRAYISH BROWN	SMCOL	VF	L		7.8	8.2	63.	23.2
CSK1	35-70	10YR 5/6	YELLOWISH BROWN	MA	FR	CL		7.7	10.6	65.	17.6
CSK2	70-120	10YR 2/2	VERY DARK BROWN	MA	F	CL		7.9	9.1	71.	20.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	F	G	G	F	G	F		F (Topsoil)
AB	10-20	F	F		F	G	F		F (Subsoil)
BNT	20-35	P	G		F	P	F	U	U (Subsoil)
CSK1	35-70	G	F		F	U	F	U	U (Subsoil)
CSK2	70-120	F	F		F	P	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.041
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: ARROWWOOD SOILS HAVE A TOUGH, UNDESIRABLE BNT HORIZON AND ARE STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	BROCKET (BKE)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO DARK BROWN	USUAL SOIL MOISTURE:	MOIST
	CHERNOZEMIC	SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY FINE		
	GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR	4/2	DARK GRAYISH BROWN	MMGR	F	C	5.2	7.3	0.6	63.	1.3
CCA1	10-30	10YR	3/3	DARK BROWN	MA	F	CL		7.4	0.8	62.	1.1
CCA2	30-65	10YR	4/3	BROWN - DARK BROWN	MA	F	C		7.8	0.5	65.	1.3
CK1	65-90	2.5Y	3/2	VERY DARK GRAYISH BROWN	MA	F	C		7.9	0.4	61.	1.2
CK2	90-120	2.5Y	6/4	LIGHT YELLOWISH BROWN	MA	F	C		7.5	2.	55.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	P	P	G	G	G	F	G	P (Topsoil)
CCA1	10-30	F	F		G	G	F	G	F (Subsoil)
CCA2	30-65	F	P		F	G	F	G	P (Subsoil)
CK1	65-90	F	P		F	G	F	G	P (Subsoil)
CK2	90-120	F	P		G	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.021
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: BROCKET SOILS CRACK WHEN SEVERLY DRIED OUT.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	BROCKET-SA (saBKE)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO DARK BROWN	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC (SALINE)	SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY FINE		
	GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-5	10YR 4/2	DARK GRAYISH BROWN	MMGR	F	C	4.4	7.4	1.2	64.	16.7
CCASA	5-25	10YR 4/3	BROWN - DARK BROWN	MA	F	C		7.5	7.5	77.	16.7
CSK	25-120	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F	C		7.8	10.9	100.	17.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-5	P	P	G	G	G	F	U	U (Topsoil)
CCASA	5-25	F	P		G	P	F	U	U (Subsoil)
CSK	25-120	F	P		F	U	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF BROCKET THAT IS SALINE AND/OR SODIC AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	CHOKIO (CIO)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	CALCAREOUS DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	MODERATELY FINE FLUVIAL-LACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-5	10YR 3/3	DARK BROWN	WMGR	FR	C	4.5	7.5	0.5		1.
BTJK	5-14	10YR 3/2	VERY DARK GRAYISH BROWN	SFSBK	F	C		8.	0.7		4.8
CCA	14-40	10YR 6/3	PALE BROWN	MA	SO	CL		8.3	1.9		11.
CK	40-120	10YR 4/4	DARK YELLOWISH BROWN	MA	F	CL		8.	1.1		12.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-5	G	P	G	G	G		G	P (Topsoil)
BTJK	5-14	F	P		F	G		F	P (Subsoil)
CCA	14-40	G	F		F	G		P	P (Subsoil)
CK	40-120	F	F		F	G		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE PARENT MATERIAL IS GLACIOFLUVIAL OR GLACIOLACUSTRINE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	COALDALE (CLD)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	MOIST
	CHERNOZEMIC	SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP1	0-15	10YRm 3/2	VERY DARK GRAYISH BROWN	MMSBK	VH	SICL	2.03	7.6	2.	
AP2	15-26	10YRm 3/3	DARK BROWN	WCSBK	H	CL	1.91	7.7	2.	
BM1	26-38	10YRm 3/4	DARK YELLOWISH BROWN	MFSBK	F	SIC	1.04	7.7	1.	
BM2	38-47	10YRm 4/3	BROWN-DARK BROWN	WCPR	FR	SICL	0.78	7.8	0.5	
CCA	47-84	10YRm 5/2	GRAYISH BROWN	MA	FR	CL		8.	0.5	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP1	0-15	P	F	G	F	F			P (Topsoil)
AP2	15-26	P	F	F	F	F			P (Topsoil)
BM1	26-38	F	P		F	G			P (Subsoil)
BM2	38-47	G	F		F	G			F (Subsoil)
CCA	47-84	G	F		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE STONE-FREE PARENT MATERIAL IS USUALLY UNDERLAIN BY SAND OR GRAVEL AT 2 TO 3 M BELOW THE SURFACE. IN IRRIGATED AREAS, THE A HORIZON TENDS TO BE THICKER THAN NORMAL AND THE SOLUM IS OFTEN VERY WEAKLY CALCAREOUS.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	COALDALE-CA (caCLD)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	CALCAREOUS DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-5	10YR	3/3	DARK BROWN	MMGR	FR	C	5.9	6.5	0.4		
BTJK	5-30	10YR	3/2	VERY DARK GRAYISH BROWN	SFSEK	F	C		7.5	0.4		0.4
CCA	30-90	10YR	5/4	YELLOWISH BROWN	MA	H	SIC		8.2	0.6		2.9
CK	90-120	10YR	4/3	BROWN-DARK BROWN	MA	F	SIC		7.7	4.9		4.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-5	G	P	G	G	G			P (Topsoil)
BTJK	5-30	F	P		G	G		G	P (Subsoil)
CCA	30-90	F	P		F	G		G	P (Subsoil)
CK	90-120	F	P		F	F		F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: CALCAREOUS VARIANT OF COALDALE. THESE SOILS HAVE A BMK OR BTJK HORIZON.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	COALDALE-SA (saCLD)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/3	DARK BROWN	MMSBK	F	CL	4.5	5.8	0.5	59	
BTJSA	12-32	10YR 3/2	VERY DARK GRAYISH BROWN	SFSBK	F	C		7.5	0.8	60	10.9
CSK	32-70	10YR 4/3	BROWN - DARK BROWN	MA	F	C		8.2	2	71	13.7
CKSA	70-120	10YR 5/2	GRAYISH BROWN	MA	F	C		7.8	4.3	61	10.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	P	F	G	F	G	G		P (Topsoil)
BTJSA	12-32	F	P		G	G	F	P	P (Subsoil)
CSK	32-70	F	P		F	G	F	U	U (Subsoil)
CKSA	70-120	F	P		F	F	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF COALDALE THAT IS SALINE OR SODIC AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	CRADDUCK (CRD)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-15%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-17	10YRm 3/2	VERY DARK GRAYISH BROWN	MFSBK	VFR	L	2.32	6.8		
BM	17-31	7.5YR 3/2	DARK BROWN	MFPR	FR	CL	1.06	6.8		
CCA	31-58	2.5Ym 5/4	LIGHT OLIVE BROWN	MA	VFR	CL		7.4		
CK	58-100	2.5Ym 4/2	DARK GRAYISH BROWN	MA	VFR	CL		7.6	3.	13.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	G	G	G				G (Topsoil)
BM	17-31	G	F		F				F (Subsoil)
CCA	31-58	G	F		G				F (Subsoil)
CK	58-100	G	F		F	F		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS HAVE A HIGH SILT CONTENT. CRADDUCK SOIL AREAS HAVE BEDROCK
 WITHIN 5 TO 10 M OF THE SURFACE. STEEPER LANDSCAPES CAN BE
 INCLINED AND DISSECTED.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	CRADDUCK-SA (saCRD)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-17	10YRm 3/2	VERY DARK GRAYISH BROWN	MFSBK	VFR	L	2.32	6.8			
BMSA	17-31	7.5YR 3/2	DARK BROWN	MFPR	FR	CL	1.06	6.8			
CCASA	31-58	2.5Ym 5/4	LIGHT OLIVE BROWN	MA	VFR	CL		7.4			
CSK	58-100	2.5Ym 4/2	DARK GRAYISH BROWN	MA	VFR	CL		7.6	3.	13.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-17	G	G	G	G				P (Topsoil)
BMSA	17-31	G	F		F				P (Subsoil)
CCASA	31-58	G	F		G				P (Subsoil)
CSK	58-100	G	F		F	F		U	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF CRADDUCK THAT IS SALINE AND/OR SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	CRADDUCK-ST (stCRD)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	STONY, MODERATELY FINE TILL	SURFACE STONINESS:	EXCEEDINGLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-17	10YRm 3/2	VERY DARK GRAYISH BROWN	MFSBK	VFR	STL	2.32	6.8		
BM	17-31	7.5YR 3/2	DARK BROWN	MPPR	FR	STCL	1.06	6.8		
CCA	31-58	2.5Ym 5/4	LIGHT OLIVE BROWN	MA	VFR	STCL		7.4		
CK	58-100	2.5Ym 4/2	DARK GRAYISH BROWN	MA	VFR	STCL		7.6	3.	13.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	P	G	G				P (Topsoil)
BM	17-31	G	P		F				P (Subsoil)
CCA	31-58	G	P		G				P (Subsoil)
CK	58-100	G	P		F	F		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF CRADDUCK THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	CROWFOOT (CFT)	LANDFORM:	veneer, hummocky,
SOIL ZONE:	DARK BROWN		TERRACED
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	0-9%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MEDIUM	SURFACE STONINESS:	NON
	GLACIOFLUVIAL/GRAVEL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 3/3	DARK BROWN	MFGR	FR	L	2.3		6.5		
BM	10-30	10YR 4/2	DARK GRAYISH BROWN	WFSBK	FR	L			6.5		
CCA	30-120	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	GRLS			7.4		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G	G	G				G (Topsoil)
BM	10-30	G	G		G				G (Subsoil)
CCA	30-120	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: THESE SOILS ARE DEVELOPED ON MEDIUM GLACIOFLUVIAL VENEERS OVER VERY GRAVELLY, VERY COARSE GLACIOFLUVIAL. EXPOSED FACES OF THE UNDERLYING MATERIAL ARE UNSTABLE DUE TO VERY COARSE TEXTURES. THE DEPTH TO GRAVEL IS USUALLY ABOUT 0.5 CM BUT MAY VARY FROM 0.3 TO 1.5 M.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	CROWFOOT-CA (caCFT)	LANDFORM:	veneer, hummocky,
SOIL ZONE:	DARK BROWN		terraced
SOIL CLASSIFICATION:	CALCAREOUS DARK BROWN	TYPICAL SLOPES:	0-9%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MEDIUM	SURFACE STONINESS:	NON
	GLACIOFLUVIAL/GRAVEL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-10	10YR	3/3	DARK BROWN	MFGR	FR	L	2.3		6.5	
BMK	10-30	10YR	4/2	DARK GRAYISH BROWN	WFSBK	FR	L			6.5	
CCA	30-120	10YR	4/4	DARK YELLOWISH BROWN	SGR	L	GRLS			7.4	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G	G	G				G (Topsoil)
BMK	10-30	G	G		G				G (Subsoil)
CCA	30-120	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: CALCAREOUS VARIANT OF CROWFOOT. THESE SOILS HAVE A BMK HORIZON.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	DIAMOND	(DIM)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	REGO DARK BROWN		USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY FINE			
	FLUVIAL-LACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	4.1	5.7	0.5		
CK	12-100	10YR 4/3	BROWN	MA	F	CL		8.	0.7		0.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	G	F	G			F (Topsoil)
CK	12-100	F	F		F	G		G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.040
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THE PARENT MATERIAL CAN BE GLACIOFLUVIAL OR GLACIOLACUSTRINE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	DOLCY-AA (aaDCY)	LANDFORM:	VENEER
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 3/3	DARK BROWN	MFGR	FR	SL-SIL	2.4	6.5	0.3	0.3	
BM	10-25	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	FR	SL-SIL	1.6	6.4	0.2	0.4	
2BT	25-45	10YR 4/3	BROWN-DARK BROWN	SFSBK	F	CL	0.9	6.1	0.3	0.6	
2CCA	45-70	10YR 5/3	BROWN	MA	F	CL	7.7	3.3	2.4		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G	G	G	G		G	G (Topsoil)
BM	10-25	G	G		F	G		G	F (Subsoil)
2BT	25-45	F	F		F	G		G	F (Subsoil)
2CCA	45-70	F	F		F	F		G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: HOME SCA IS 4. DOLCY SOILS ARE DEVELOPED ON SANDY LOAM TEXTURED GLACIOFLUVIAL VENEERS OVERLYING LOAM TO CLAY LOAM TEXTURED TILL. EXPOSED FACES OF THE UPPER MATERIAL ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	EDGERTON-AA (aaERT)	LANDFORM:	DUNED
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	ORTHIC REGOSOL	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE EOLIAN	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-2	10YR 3/3	DARK BROWN	SGR	L	S	1.	5.5		
C	2-275	10YR 6/3	PALE BROWN	SGR	L	S		6.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-2	F	P	F	F				P (Topsoil)
C	2-275	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 4. THESE SOILS ARE VERY COARSE TEXTURED AND EXPOSED FACES ARE UNSTABLE. WIND EROSION RISK IS HIGH DUE TO VERY SANDY SURFACE TEXTURES. THERE IS OFTEN A BROWNISH GRAY TRANSITION AC HORIZON PRESENT BETWEEN THE A AND C HORIZONS. COLORS ARE HARD TO DIFFERENTIATE DUE TO THE TRANSITIONS.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	HEARTBREAK-AA (aaHRK)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	DARK BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	2-15%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-10	10YR	3/3	DARK BROWN	WFGR	VFR	SL-LS		7.	0.3	0.2
BM	10-60	10YR	4/4	DARK YELLOWISH BROWN	WFSBK	VFR	SL-LS		7.3	0.2	0.2
CCA	60-150	10YR	5/5	BROWN	MA	VFR	SL-LS		8.	0.4	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	P		G	G		G	P (Topsoil)
BM	10-60	G	P		G	G		G	P (Subsoil)
CCA	60-150	G	P		F	G		G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.077
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: LOW

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 2. THESE SOILS ARE DEVELOPED ON WATER-LAID GLACIOFLUVIAL MATERIAL. EXPOSED FACES ARE UNSTABLE DUE TO VERY COARSE TEXTURES. HEARTBREAK SOILS ARE VERY DROUGHTY. WIND EROSION RISK IS HIGH DUE TO VERY COARSE SURFACE TEXTURES.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	IDAMAY	(IMY)	LANDFORM:	LEVEL, UNDULATING
SOIL ZONE:	DARK BROWN			PLAIN
SOIL CLASSIFICATION:	DARK BROWN SOLONETZ		TYPICAL SLOPES:	0-2%
PARENT MATERIAL:	MODERATELY FINE		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	SICL		8.2	2.7	85.	5.3
BNT	10-30	10YR 4/2	DARK GRAYISH BROWN	WMCOL	VF	SICL		8.1	3.8	55.	9.1
CSK1	30-70	10YR 6/2	LIGHT BROWNISH GRAY	MA	F	SICL		7.9	0.9	31.	3.7
CSK2	70-110	10YR 5/3	BROWN	SGR	L	LS					

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	F		F	F	P	F	P (Topsoil)
BNT	10-30	P	F		F	F	G	P	P (Subsoil)
CSK1	30-70	F	F		F	G	G	G	F (Subsoil)
CSK2	70-110	F	P						P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: IDAMAY SOILS HAVE AN UNDESIRABLE SOLONETZIC B HORIZON THAT IS VERY CLOSE TO THE SURFACE. THESE SOILS ARE MODERATELY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	KEHOL (KHO)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-22	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	L	4.6	6.	1.4	52.
BNT	25-33	10YR 2/1	BLACK	COL	VF	CL		7.3	1.9	65.
CCASA	33-55	10YR 6/2	LIGHT BROWNISH GRAY	MA	F	L		8.1	13.1	62. 22.4
CSK	55-220	10YR 5/3	BROWN	STRAR	FR	SL		8.4	3.3	41. 9.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	G	G	F	G	G		F (Topsoil)
BNT	25-33	P	F		G	G	F		P (Subsoil)
CCASA	33-55	F	G		F	U	F	U	U (Subsoil)
CSK	55-220	G	G		F	F	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 15-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.043
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS HAVE A HARD COLUMNAR AND ROUND TOPPED BNT HORIZON THAT OCCURS AT ABOUT THE 0.2 CM DEPTH. KEHOL SOILS ARE MODERATELY SALINE AND SODIC. SALT ACCUMULATION IS USUALLY FOUND DIRECTLY BELOW THE SODIC BNT HORIZON.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	KEHOL-ER (erKHO)	LANDFORM:	UNDULATING PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-5	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	L	4.6	6.	1.4	52.	
BNT	5-13	10YR 2/1	BLACK	COL	VF	CL		7.3	1.9	65.	
CCASA	13-35	10YR 6/2	LIGHT BROWNISH GRAY	MA	F	L		8.1	13.1	62.	22.4
CSK	35-220	10YR 5/3	BROWN	STRAR	FR	SL		8.4	3.3	41.	9.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-5	G	G	G	F	G	G		F (Topsoil)
BNT	5-13	P	F		G	G	F		P (Subsoil)
CCASA	13-35	F	G		F	U	F	U	U (Subsoil)
CSK	35-220	G	G		F	F	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 2 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.043
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF KEHOL.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	KESSLER (KSR)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	DARK BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	2-9%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE	SURFACE STONINESS:	NON
	GLACIOFLUVIAL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-17	10YRd 4/2	DARK GRAYISH BROWN	WMSBK	VFR	FSL	1.72	7.4		
BM1	17-57	10YRm 4/3	BROWN-DARK BROWN	WMPR	F	FSL	1.12	7.2		
BM2	57-80	10YRm 4/4	DARK YELLOWISH BROWN	MA	H	FSL	1.04	6.3		
BM3	80-100	10YRm 4/4	DARK YELLOWISH BROWN	MA	F	FSL	0.55	6.8		
CCA	100-115	10YRm 5/4	YELLOWISH BROWN	MA	F	FSL		7.2		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	G	F	G				F (Topsoil)
BM1	17-57	F	G		G				F (Subsoil)
BM2	57-80	F	G		F				F (Subsoil)
BM3	80-100	F	G		G				F (Subsoil)
CCA	100-115	F	G		G				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 15-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: KESSLER SOILS ARE TYPICALLY DEEP SANDY LOAM MATERIALS WITH BROWNISH COLORS. WEAK STRUCTURES PERSIST THROUGHOUT THE PROFILE, ALTHOUGH IT BECOMES HARD WHEN DRY. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	LETHBRIDGE (LET)	LANDFORM:	LEVEL, UNDULATING,
SOIL ZONE:	DARK BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	0-9%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR 3/3	DARK BROWN	MFGR	FR	SIL	1.5	6.6	0.3	30.	0.7
BM	22-55	10YR 4/4	DARK YELLOWISH BROWN	WFSBK	FR	SIL		7.6	0.8	43.	2.6
CK	55-130	2.5Y 5/4	LIGHT OLIVE BROWN	WFSBK	FR	SIL		8.5	1.1	45.	6.49

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	G	F	G	G	F	G	F (Topsoil)
BM	22-55	G	G		F	G	G	G	F (Subsoil)
CK	55-130	G	G		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: LETHBRIDGE SOILS HAVE NO SEVERE LIMITATIONS.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	LETHBRIDGE-SC (scLET)	LANDFORM:	LEVEL, UNDULATING,
SOIL ZONE:	DARK BROWN		RIDGED
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	0-9%
	CHERNOZEMIC (SALINE LOWER	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	SUBSOIL)	SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR	3/3	DARK BROWN	MFR	FR	CL	4.1	6.8	0.4		
BTJ	12-30	10YR	4/4	DARK YELLOWISH BROWN	WFSBK	FR	SICL		7.5	0.5		1.4
CCASA	30-75	2.5Y	5/4	LIGHT OLIVE BROWN	WFSBK	FR	SICL		8.	8.2		10.1
CSK	75-120	10YR	5/4	YELLOWISH BROWN	MA	FR	SICL		8.4	12.6		23.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	F	G	G	G			F (Topsoil)
BTJ	12-30	G	F		G	G		G	F (Subsoil)
CCASA	30-75	G	F		F	P		P	P (Subsoil)
CSK	75-120	G	F		F	U		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF LETHBRIDGE WITH SALINE LOWER SUBSOIL. IT HAS BEEN OBSERVED THAT IRRIGATED AREAS USUALLY HAVE VARYING LEVELS OF SALINITY IN THE B AND C HORIZONS. IRRIGATED AREAS ALSO HAVE DARKER COLORS THAN THEIR NON IRRIGATED COUNTERPART.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	MCNAB-AA	(aaMCN)	LANDFORM:	SPILLWAY, FAN, APRON
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC REGOSOL (SALINE)		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM FLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
APKSA	0-8	10YR 4/2	DARK GRAYISH BROWN	MMGR	F	CL		8.4	39.3	75.3
CCASA1	8-40	10YR 4/2	DARK GRAYISH BROWN	MA	S	CL		8.3	36.6	75.4
CCASA2	40-120	10YR 4/2	DARK GRAYISH BROWN	MA	S	CL-C		8.6	27.6	72.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APKSA	0-8	P	F		F	U	G	U	U (Topsoil)
CCASA1	8-40	P	F		F	U	F	U	U (Subsoil)
CCASA2	40-120	P	P		P	U	U	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 1. MCNAB SOILS OCCUR MAINLY WITHIN SPILLWAY VALLEYS ON FLUVIAL FANS AND APRONS. THESE SOILS HAVE LITTLE OR NO A HORIZON AND NO B HORIZON. THERE IS LAYERING OR BANDING IN THE SUBSOIL. THEY HAVE VERY SEVERE LIMITATIONS FOR GROWTH OF ANY CROPS DUE TO SALINITY-SODICITY. OFTEN ASSOCIATED WITH SOLONETZIC SOILS.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	MILK RIVER-AA (aaMKR)	LANDFORM:	FLOODPLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	CUMULIC REGOSOL	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
APK	0-20	10YR 5/3	BROWN	WFGR	VFR	SIL				
CK1	20-35	10YR 5/2	GRAYISH BROWN	SGR	L	LS				
CK2	35-90	10YR 6/2	LIGHT BROWNISH GRAY	STRAT	VFR	SL				

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-20	G	G						G (Topsoil)
CK1	20-35	F	P						P (Subsoil)
CK2	35-90	G	G						G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.02
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: HOME SCA IS 1. OCCURS ON RECENT FLOODPLAINS. THE PARENT MATERIAL CONSISTS OF LAYERS OF SANDY LOAM TO LOAMY SAND, INTERSPERSED BY BURIED AH HORIZONS, AND OTHER SANDY, SILTY OR GRAVELLY LAYERS. WITH DEPTH, THE FREQUENCY AND THICKNESS OF THE GRAVEL LAYERS INCREASES, OFTEN TO CONTINUOUS GRAVEL BELOW THE 1 M DEPTH. THESE SOILS ARE NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	NEW DAYTON (NED)	LANDFORM:	TERRACED
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DROUGHTY
	CHERNOZEMIC	SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	GRAVELLY MODERATELY COARSE		
	FLUVIAL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-10	10YR 3/3	DARK BROWN	WFSBK	VFR	GRSL	2.3	6.5		
BM	10-30	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	GRLS		6.5		
CCA/CK	30-120	10YR 5/4	YELLOWISH BROWN	SGR	L	GR		7.4		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G	G	G				G (Topsoil)
BM	10-30	F	P		G				P (Subsoil)
CCA/CK	30-120	F	U		G				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	GRAVELLY
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.02
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: GRAVEL INCREASES WITH DEPTH FROM A 10% CONTENT IN THE UPPER PROFILE TO NEAR 80% IN THE LOWER PROFILE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	PARR	(PAR)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	1-9%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	SOLONETZ		SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-8	10YR	4/3	DARK BROWN	MFGR	FR	CL	4.8	7.8	0.7	52.	6.7
BNT	8-27	10YR	3/2	VERY DARK GRAYISH BROWN	SCCOL	VF	CL		8.3	3.1	120.	38.8
CSK	27-120	2.5Y	4/4	OLIVE BROWN	MA	F	CL		8.1	13.9	77.	21.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-8	G	F	G	F	G	G	F	F (Topsoil)
BNT	8-27	P	F		F	F	P	U	U (Subsoil)
CSK	27-120	F	F		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 8 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: PARR SOILS HAVE A TOUGH BNT HORIZON ABOUT 0.1 CM BELOW THE SURFACE.
 THESE SOILS ARE STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	SEXTON (SXT)	LANDFORM:	SPILLWAY, APRON
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC HUMIC REGOSOL	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-23	10YRd 3/2	VERY DARK GRAYISH BROWN	WFSBK	SO	FSL	1.58	7.7	0.5	
AHKB1	34-53	10YRd 4/2	DARK GRAYISH BROWN	MA	SO	FSL	0.91	7.9	0.5	
CKG1	53-74	10YRd 6/3	PALE BROWN	MA	SO	FSL	0.52	8.2	0.5	
CKB2	74-100	10YRd 6/3	PALE BROWN	MA	SO	L	0.24	8.7	3.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-23	G	G	F	F	G			F (Topsoil)
AHKB1	34-53	G	G	F	F	G			P (Topsoil)
CKG1	53-74	G	G		F	G			F (Subsoil)
CKB2	74-100	G	G		P	F			P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: BURIED AH HORIZONS ARE COMMON. THESE SOILS HAVE A LOW WATER HOLDING CAPACITY AND LOW NATURAL FERTILITY.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	TORLEA-AA (aaTLA)	LANDFORM:	PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	SOLONETZ	SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	MODERATELY FINE SOFTROCK		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-11	10YRm 4/3	DARK BROWN	WFGR	FR	SIL	4.42	5.4		
BNT	11-28	10YRm 3/2	VERY DARK GRAYISH BROWN	WCCOL	VF	CL	2.41	7.6	1.6	11.9
CSAK	28-48	10YRm 3/1	VERY DARK GRAY	MFABK	F	CL		7.9	4.13	17.9
CSK	48-120	5Yd 6/3	PALE OLIVE	WFPL	F	L		8.1	1.04	19.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-11	G	G	G	P				P (Topsoil)
BNT	11-28	P	F		F	G		P	P (Subsoil)
CSAK	28-48	F	F		F	F		U	U (Subsoil)
CSK	48-120	F	G		F	G		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-12 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	VERY THIN
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.045
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	YES
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: HOME SCA IS 4. THE VERY FIRM BNT HORIZON OCCURS ABOUT 0.15 M BELOW THE SURFACE. IT IS ROUND TOPPED, COLUMNAR, WITH INTENSE DARK ORGANIC MATTER STAINING. THESE SOILS ARE MODERATELY TO STRONGLY SALINE AND SODIC. THE PARENT MATERIAL IS WEATHERED SHALES AND SANDSTONES AND MAY HAVE REMINANTS OF A DISCONTINUOUS TILL VENEER. STRIP TO INDICATED DEPTH, DO NO OVERSTRIP.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	VAN CLEEVE (VAC)	LANDFORM:	VENEER, SPILLWAY,
SOIL ZONE:	DARK BROWN		TERRACED
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	2-9%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE	SURFACE STONINESS:	VERY
	TILL/SOFTROCK		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	L	3.3	6.1	0.8	49.	
BM	12-35	10YR 4/3	BROWN-DARK BROWN	MFSBK	FR-F	L-SIL		7.2	0.5	50.	
CK	35-70	10YR 5/3	BROWN	MA	FR-F	L		8.	0.6	50.	0.5
2CK	70-200	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SL		8.	2.9	44.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	G	F	G	G		F (Topsoil)
BM	12-35	F	G		G	G	G		F (Subsoil)
CK	35-70	F	G		F	G	G	G	F (Subsoil)
2CK	70-200	F	G		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: YES
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON THIN MODERATELY FINE TILL VENEERS OVERLYING MEDIUM SOFTROCK.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	VAN CLEEVE-CA (caVAC)	LANDFORM:	VENEER, SPILLWAY,
SOIL ZONE:	DARK BROWN		TERRACED
SOIL CLASSIFICATION:	CALCAREOUS DARK BROWN	TYPICAL SLOPES:	2-9%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE	SURFACE STONINESS:	VERY
	TILL/SOFTROCK		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	L	3.3	6.1	0.8	49.	
BMK	12-35	10YR 4/3	BROWN-DARK BROWN	MFSBK	FR-F	L-SIL		7.2	0.5	50.	
CK	35-70	10YR 5/3	BROWN	MA	FR-F	L		8.	0.6	50.	0.5
2CK	70-200	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SL		8.	2.9	44.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	G	F	G	G		F (Topsoil)
BMK	12-35	F	G		G	G	G		F (Subsoil)
CK	35-70	F	G		F	G	G	G	F (Subsoil)
2CK	70-200	F	G		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	YES
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: CALCAREOUS VARIANT OF VAN CLEEVE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	VAN CLEEVE-ZR (zrVAC)	LANDFORM:	VENEER, SPILLWAY,
SOIL ZONE:	DARK BROWN		TERRACED
SOIL CLASSIFICATION:	REGO DARK BROWN	TYPICAL SLOPES:	2-9%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE	SURFACE STONINESS:	VERY
	TILL/SOFTROCK		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	L	3.3	6.1	0.8	49.	
CK	12-70	10YR 5/3	BROWN	MA	FR-F	L		8.	0.6	50.	0.5
2CK	70-200	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SL		8.	2.9	44.	7.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	G	F	G	G		F (Topsoil)
CK	12-70	F	G		F	G	G	G	F (Subsoil)
2CK	70-200	F	G		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	YES
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: REGO VARIANT OF VAN CLEEVE.

INTERPRETATION GUIDELINES

SCA 3

09/01/93

SOIL SERIES:	WHITNEY (WNY)	LANDFORM:	VERNEER, UNDULATING
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-15	10YR 3/3	DARK BROWN	MFGR	FR	SICL				
BM	15-35	10YR 5/4	YELLOWISH BROWN	MFSBK	F	SICL				
CK	35-70	10YR 5/3	BROWN	MA	F	SICL				
2CK	70-110	2.5Y 4/4	OLIVE BROWN	MA	F	CL				

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	F						F (Topsoil)
BM	15-35	F	F						F (Subsoil)
CK	35-70	F	F						F (Subsoil)
2CK	70-110	F	F						F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: WHITNEY SOILS ARE DEVELOPED ON MEDIUM TEXTURED GLACIOLACUSTRINE VENEERS OVERLYING MODERATELY FINE TEXTURED TILL. THE DIFFERENCE IN TEXTURES OF BOTH MATERIALS IS NOT SIGNIFICANT. THE TILL, USUALLY ENCOUNTERED AT 0.5 TO 0.8 M, IS SLIGHTLY STONY. THE SURFACE MATERIAL IS STONE-FREE.

2.4 Soil Correlation Area #4

General Description of the Area

The Dark Brown Soil Zone of Southeast-Central Alberta.

Ecoregion/Climate

- SCA 4 is characterized by soils with dark brown A horizons in that part of southeast-central Alberta that is not usually affected by chinook winds in the winter.
- This is an area of transition from the moist, Black Soil Zone to the dry, Brown Soil Zone. On average, this SCA experiences less moisture deficit than SCA 1 or SCA 3, but there are frequent, extended periods of high moisture deficit.
- SCA 4 is partly in the Mixed Grass Ecoregion and partly in the Aspen Parkland Ecoregion (Strong and Leggatt 1992). Groves of aspen and perennial wetlands are common in the area.
- Salt-affected soils often require special handling procedures.
- Agroclimate is 2 AH (slight moisture and heat limitations).
- Growing season P-PE = -250 to -350 mm.

Soils and Landscape

- Soils are mostly Chernozemic, but Solonchic soils are very common in the Castor-Hanna area.
- Dark brown colored A horizons are approximately 10 to 15 cm thick while profile development extends about 50 cm.

Soil Reclamation Issues

- Wind erosion is an occasional problem, and always a concern, especially on sandy textured soils without good cover.
- Salt-affected soils often require special handling procedures.
- Dealing with near-surface sodic bedrock, especially in the Castor-Hanna area.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	ALTARIO	(ALT)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	2-35%
SOIL CLASSIFICATION:	REGO DARK BROWN		USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC		SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 3/3	DARK BROWN	MFGR	FR	L		8.	0.6	45.	0.4
CK1	10-50	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	CL		8.	0.9	45.	0.4
CK2	50-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		7.7	3.6	47.	0.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G		F	G	G	G	F (Topsoil)
CK1	10-50	F	F		F	G	G	G	F (Subsoil)
CK2	50-100	F	F		F	F	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	TOPOGRAPHY
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.04
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: ALTARIO SOILS ARE VERY SIMILAR TO HUGHENDEN SOILS EXCEPT THEY ARE REGO PROFILES.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES: ALTARIO-SC (scALT) LANDFORM: BLANKET
 SOIL ZONE: DARK BROWN TYPICAL SLOPES: 2-35%
 SOIL CLASSIFICATION: REGO DARK BROWN USUAL SOIL MOISTURE: DRY
 CHERNOZEMIC (SALINE LOWER SUBSOIL) SURFACE STONINESS: MODERATELY
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	1.2	7.7	1.5	36.	0.3
CK	12-65	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.5	0.6	52.	3.3
CSK	65-180	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.1	7.7	50.	9.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	F	F	G	G	G	F (Topsoil)
CK	12-65	F	F		F	G	G	G	F (Subsoil)
CSK	65-180	F	F		F	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: TOPOGRAPHY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF ALTARIO THAT HAS A SALINE AND/OR SODIC LOWER SUBSOIL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	BIGKNIFE	(BKF)	LANDFORM:	APRON
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC REGOSOL	(SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM FLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-7	10YR 2/1	BLACK	WFGR	FR	L		6.6	0.3	102.	7.
BG/CG	22-55	10YR 3/3	DARK BROWN	MA	F	CL		5.8	0.4	64.	2.7
CKG	70-120	2.5Y 4/4	OLIVE BROWN	MA	F	SIL		8.3	1.	74.	11.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-7	G	G		G	G	P	F	P (Topsoil)
BG/CG	22-55	F	F		F	G	F	G	F (Subsoil)
CKG	70-120	F	G		F	G	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 7 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS+
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE BANDED WITH TEXTURES RANGING FROM FINE SAND TO SANDY LOAM AND SILTY CLAY LOAMS. BEDROCK CAN BE ENCOUNTERED AT DEPTHS GREATER THAN 1 M. BIGKNIFE SOILS ARE ASSOCIATED WITH ROUGH BROKEN TERRAIN AND BEDROCK ESCARPMENTS. THESE SOILS ARE WEAKLY SALINE AND MODERATELY SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	BROWNFIELD (BFD)	LANDFORM:	LEVEL, UNDULATING
SOIL ZONE:	DARK BROWN		PLAIN
SOIL CLASSIFICATION:	DARK BROWN SOLOD	TYPICAL SLOPES:	1-5%
PARENT MATERIAL:	MODERATELY FINE TILL	USUAL SOIL MOISTURE:	TEMPORARY PONDING
		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP/AE/AB	8-22	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	7.2	6.1	0.3	61. 0.9
BNT	22-70	10YR 3/3	DARK BROWN	WMCOL	VF	CL		7.5	9.5	70. 18.6
CSK	70-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.5	9.5	70.6 18.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP/AE/AB	8-22	G	G	G	F	G	F	G	F (Topsoil)
BNT	22-70	F	F		F	P	F	U	U (Subsoil)
CSK	70-180	F	F		G	P	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.037
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE MODERATELY SALINE AND STRONGLY SODIC. THEY ARE VERY CLOSELY ASSOCIATED WITH HALKIRK SOILS WITHIN A LANDSCAPE, THEREFORE, ARE HARD TO PREDICT. TOPSOIL STRIPPING CAN INCLUDE THE AP/AH, AE AND AB HORIZONS; STRIP TO THE HARDFAN (BNT HORIZON).

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	BROWNFIELD-ER (erBFD)	LANDFORM:	LEVEL, UNDULATING
SOIL ZONE:	DARK BROWN		PLAIN
SOIL CLASSIFICATION:	DARK BROWN SOLOD (ERODED)	TYPICAL SLOPES:	1-5%
PARENT MATERIAL:	MODERATELY FINE TILL	USUAL SOIL MOISTURE:	TEMPORARY PONDING
		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-6	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	4.7	6.4	0.4	50.	2.7
AE	6-12	10YR 5/3	BROWN	MFPL	VFR	L					
AB	12-15	10YR 3/3	DARK BROWN	MCSBK	F	CL					
BNT	15-25	10YR 3/3	DARK BROWN	WMCOL	VF	CL	6.7	4.1	52.2	31.2	
CSK	25-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL	8.	9.3	88.	19.8	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-6	G	G	G	F	G	G	G	F (Topsoil)
AE	6-12	G	G						F (Topsoil)
AB	12-15	F	F						F (Topsoil)
BNT	15-25	P	F		G	F	G	U	U (Subsoil)
CSK	25-180	F	F		F	P	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-7 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.037
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF BROWNFIELD. TOPSOILS ARE VERY THIN AND DISCONTINUOUS, THEREFORE, THE STRIPPING DEPTH CAN INCLUDE THE AP, AH, AE AND AB HORIZONS; STRIP TO THE HARDPAN (BNT HORIZON).

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	CORONATION (CNN)	LANDFORM:	APRON
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MEDIUM GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR	3/3	DARK BROWN	MMGR	FR	L		6.3	0.4	37.	0.
BM	15-30	10YR	6/6	BROWNISH YELLOW	MMSBK	FR	L		6.7	0.4	49.	0.
CK	30-100	10YR	6/4	LIGHT YELLOWISH BROWN	MA	FR-F	L-SIL		8.1	1.4	54.	3.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G		F	G	G	G	F (Topsoil)
BM	15-30	G	G		G	G	G	G	G (Subsoil)
CK	30-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS HAVE HIGH AGRICULTURAL VALUE. THEY ARE STONE-FREE AND EASILY TILLED.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	DOLCY (DCY)	LANDFORM:	VENEER
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-20	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		5.8	0.4	40.	0.5
BM	20-40	10YR 4/3	BROWN	WMSBK	FR	SL		5.2	0.4	33.	0.5
BC	40-85	10YR 5/4	YELLOWISH BROWN	SGR	L	SL		5.3	0.2	31.	1.2
2C	85-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		5.9	0.2	38.	1.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	G		F	G	G	G	F (Topsoil)
BM	20-40	G	G		P	G	G	G	P (Subsoil)
BC	40-85	F	G		P	G	G	G	P (Subsoil)
2C	85-180	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: DOLCY SOILS ARE DEVELOPED ON SANDY LOAM TEXTURED, GLACIOFLUVIAL VENEERS OVER LOAM TO CLAY LOAM TEXTURED TILL. THE SANDY LOAM TEXTURED MATERIAL IS UNSTABLE WHEN FACES ARE EXPOSED.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES: DOLCY-SC (scDCY) LANDFORM: VENEER
 SOIL ZONE: DARK BROWN TYPICAL SLOPES: 2-9%
 SOIL CLASSIFICATION: ORTHIC DARK BROWN USUAL SOIL MOISTURE: TEMPORARY PONDING
 CHERNOZEMIC (SALINE LOWER SUBSOIL) SURFACE STONINESS: NON
 PARENT MATERIAL: MODERATELY COARSE
 GLACIOFLUVIAL/TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	SL	1.8	6.2	0.6	36.	1.3
BM	15-55	10YR 5/4	YELLOWISH BROWN	WFSBK	FR	SL		7.7	4.	36.	2.7
2CSK	55-180	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SIC		8.1	10.2	72.	16.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	F	F	G	G	G	F (Topsoil)
BM	15-55	G	G		F	F	G	G	F (Subsoil)
2CSK	55-180	F	P		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF DOLCY SOILS THAT HAS A SALINE LOWER SUBSOIL. THE UPPER MATERIAL IS SANDY LOAM TEXTURED AND NON SALINE-SODIC. EXPOSED FACES OF THE UPPER MATERIAL ARE UNSTABLE. THE LOWER MATERIAL (TILL) IS STRONGLY SALINE AND SODIC AND IS UNDESIRABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	DRUMHELLER (DMH)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	MOIST
	CHERNOZEMIC (GRUMIC)	SURFACE STONINESS:	NON
PARENT MATERIAL:	VERY FINE GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 3/1	VERY DARK GRAY	SMSBK	F	C	1.9	5.8	1.2	66.	1.4
BTJ	18-55	10YR 3/1	VERY DARK GRAY	MFSBK	F	C	3.1	6.6	2.	90.	2.
CK	80-110	10YR 4/1	DARK GRAY	MA	F	C		7.2	2.2	95.	3.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	P	P	F	F	G	F	G	P (Topsoil)
BTJ	18-55	F	P		G	G	P	G	P (Subsoil)
CK	80-110	F	P		G	G	P	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DRUMHELLER SOILS ARE DEVELOPED ON VERY FINE TEXTURED, GLACIOLACUSTRINE MATERIAL. EXPOSED FACES CAN BE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	DRUMHELLER-CR (crDMH)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO DARK BROWN CHERNOZEMIC (GRUMIC, CARBONATED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-10	10YR 3/2	VERY DARK GRAYISH BROWN	SMABK	F	C	3.4	7.	2.4	75.	1.2
BMK	10-60	10YR 4/2	DARK GRAYISH BROWN	MFSBK	F	C	2.	7.5	4.	85.	1.8
CK	60-100	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		7.4	6.2	104.	4.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-10	P	P	G	G	F	F	G	P (Topsoil)
BMK	10-60	F	P		G	F	P	G	P (Subsoil)
CK	60-100	F	P		G	P	P	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: CARBONATED VARIANT OF DRUMHELLER.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	EDGERTON	(ERT)	LANDFORM:	DUNED
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	ORTHIC REGOSOL		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE EOLIAN		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-25	10YR 3/3	DARK BROWN	SGR	L	LS					
C1	25-60	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	LS					
C2	60-110	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	S					

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-25	F	P						P (Topsoil)
C1	25-60	F	P						P (Subsoil)
C2	60-110	F	P						P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-25 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	DISCONTINUOUS
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.02
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: EDGERTON SOILS ARE VERY COARSE TEXTURED AND EXPOSED FACES ARE UNSTABLE. WIND EROSION RISK IS HIGH DUE TO VERY SANDY SURFACE TEXTURES. COLORS MAY BE HARD TO DIFFERENTIATE DUE TO TRANSITIONS.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	FENNER (FNR)	LANDFORM:	VENEER
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY COARSE FLUVIAL OR EOLIAN/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-18	10YR 4/3	BROWN	SGR	L	FSL		6.	0.3	62.
BM	18-55	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	LFS		6.1	0.5	28.
BNT	55-85	10YR 4/4	DARK YELLOWISH BROWN	WMCOL	F	FSL		7.3	12.1	25. 20.2
2CSK	85-110	10YR 3/3	DARK BROWN	MA	F	CL		8.4	17.3	50. 25.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	F	G		F	G	F		F (Topsoil)
BM	18-55	F	P		F	G	F		P (Subsoil)
BNT	55-85	F	G		G	U	F	U	U (Subsoil)
2CSK	85-110	F	F		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.02
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: FENNER SOILS ARE DEVELOPED ON COARSE TEXTURED FLUVIAL OR EOLIAN DEPOSITS OVERLYING MODERATELY FINE TEXTURED TILL. THESE SOILS HAVE A BNT HORIZON DEVELOPED IN THE SANDY MATERIAL THAT IS MODERATELY TO STRONGLY SALINE AND SODIC AND UNDESIRABLE. THE UNDERLYING TILL IS MODERATELY TO STRONGLY SALINE AND SODIC AND IS ALSO OF UNSUITABLE QUALITY.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	FLAGSTAFF (FST)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	SOLONETZIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		6.9	1.3	40.	1.7
BTNJ	12-28	10YR 3/4	DARK YELLOWISH BROWN	SFSBK	VF	CL		7.6	1.2	51.	6.2
CSK1	28-80	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	7.1	50.	8.8
CSK2	80-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	10.9	43.	15.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G		G	G	G	G	G (Topsoil)
BTNJ	12-28	P	F		F	G	G	F	P (Subsoil)
CSK1	28-80	F	F		F	P	G	P	P (Subsoil)
CSK2	80-180	F	F		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.033
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: FLAGSTAFF SOILS HAVE A BTNJ HORIZON THAT HAS SOLONETZIC TENDENCIES.
 THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	FLAGSTAFF-ST (stFST)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	SOLONETZIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	STONY, MODERATELY FINE TILL	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	STL	1.2	6.9	1.3	40.	1.7
BTNJ	12-28	10YR 3/4	DARK YELLOWISH BROWN	SFSBK	VF	STCL		7.6	1.2	51.	6.2
CSK1	28-80	2.5Y 4/4	OLIVE BROWN	MA	F	STCL		8.1	7.1	50.	8.8
CSK2	80-180	2.5Y 4/4	OLIVE BROWN	MA	F	STCL		8.1	10.9	43.	15.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	P	F	G	G	G	G	P (Topsoil)
BTNJ	12-28	P	P		F	G	G	F	P (Subsoil)
CSK1	28-80	F	P		F	P	G	P	P (Subsoil)
CSK2	80-180	F	P		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.033
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF FLAGSTAFF SOILS THAT ARE STONNIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	FLEET (FLT)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-4%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-9	2.5YR 2/0	BLACK	WMSBK	S	SIC	14.41				
BG	9-20	5Ym 2/2	BLACK	MCCOL	F	C	2.72		3.32		
CSAKG	20-45	5Ym 3/2	DARK OLIVE GRAY	MFABK	F	C			8.29		
CSKG	45-75	5Ym 3/2	DARK OLIVE GRAY	MFABK	F	C			7.11		
CKG	75-130	5Ym 4/2	OLIVE GRAY	MA	VFR	SL			5.8		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-9	P	P	G	G				P (Topsoil)
BG	9-20	F	P		F	F			P (Subsoil)
CSAKG	20-45	F	P		F	P			P (Subsoil)
CSKG	45-75	F	P		F	P			P (Subsoil)
CKG	75-130	G	G		F	P			P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=: -
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: FLEET SOILS ARE WET ALL YEAR THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	FORESTBURG (FBG)	LANDFORM:	LEVEL
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE SOFTROCK	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHG	0-12	10YR 2/2	VERY DARK BROWN	MMGR	FR	SIL	4.3	5.2	0.5	73.	0.7
BG	12-40	10YR 3/2	VERY DARK GRAYISH BROWN	MMSBK	F	CL	1.4	5.1	0.6	54.	1.3
CG1	40-70	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F	C		5.5	0.4	65.	2.
CG2	70-100	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F	C		6.3	0.3	69.	2.4
CG3	100-150	2.5YR 4/2	WEAK RED	MA	F	C		6.6	0.7	52.	1.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHG	0-12	G	G	G	P	G	F	G	P (Topsoil)
BG	12-40	F	F		P	G	G	G	P (Subsoil)
CG1	40-70	F	P		F	G	F	G	P (Subsoil)
CG2	70-100	F	P		F	G	F	G	P (Subsoil)
CG3	100-150	F	P		G	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	WETNESS
WIND EROSION RISK:	
WATER EROSION K=:	-
RISK ON <5% SLOPE:	-
RISK ON 5-9% SLOPE:	-
RISK ON 9-15% SLOPE:	-

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	ALL
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	YES
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: FORESTBURG SOILS ARE WET ALL YEAR THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	GOUGH LAKE (GLK)	LANDFORM:	LEVEL
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	REGO GLEYSOL (SALINE)	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	C	3.6	6.	0.7	99.	3.4
CKG	10-40	10YR 5/3	BROWN	MA	F	C	1.6	7.1	0.9	105.	66.
CSKG	40-135	10YR 5/2	GRAYISH BROWN	MA	F	C		7.5	5.4	85.	6.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	P	G	F	G	P	G	P (Topsoil)
CKG	10-40	F	P		G	G	P	F	P (Subsoil)
CSKG	40-135	F	P		G	P	P	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 8 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK: -
 WATER EROSION K=: -
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GOUGH LAKE SOILS ARE WET ALL YEAR THEREFORE EXPOSED FACES ARE UNSTABLE.
 THEY ARE SALINE AND/OR SODIC AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HALKIRK (HKR)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		5.7	0.4	44	7.7
BNT	12-32	10YR 3/3	DARK BROWN	SMSBK	VF	CL		7.3	6.3	71	30.5
CSK	32-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8	11.4	69	23.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G		F	G	G	F	F (Topsoil)
BNT	12-32	P	F		G	P	F	U	U (Subsoil)
CSK	32-180	F	F		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HALKIRK SOILS HAVE AN UNDESIREABLE BNT HORIZON. SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES
SCA 4
09/01/93

SOIL SERIES:	HALKIRK-ER (erHKR)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ (ERODED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-8	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	4.9	5.7	0.7	49.	9.6
BNT	8-20	10YR 3/3	DARK BROWN	COL	VF	CL		6.4	3.4	59.	33.4
CSK	20-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL-C		7.6	7.8	94.	15.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-8	G	G	G	F	G	G	P	P (Topsoil)
BNT	8-20	P	F		F	F	G	U	U (Subsoil)
CSK	20-180	F	P		F	P	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-8 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF HALKIRK.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HALKIRK-ST (stHKR)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	EXCEEDINGLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-14	10YR 3/3	DARK BROWN	WFGR	FR	STL	2.1	6.7	0.7	38.	3.6
BNT	14-38	10YR 3/3	DARK BROWN	MMSBK	VF	STCL	1.5	7.9	2.5	66.	11.9
CSK1	38-60	2.5Y 4/4	OLIVE BROWN	MA	F	STCL		8.	9.5	69.	11.4
CSK2	60-100	2.5Y 4/4	OLIVE BROWN	MA	F	STCL		7.9	9.4	83.	12.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-14	G	P	G	G	G	G	G	P (Topsoil)
BNT	14-38	P	P		F	G	F	P	P (Subsoil)
CSK1	38-60	F	P		F	P	F	P	P (Subsoil)
CSK2	60-100	F	P		F	P	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HALKIRK THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HALKIRK-XP (xpHKR)	LANDFORM:	VENEER, UNDULATING,
SOIL ZONE:	DARK BROWN		HUMMOCKY
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED	TYPICAL SLOPES:	2-9%
	OLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE	SURFACE STONINESS:	MODERATELY
	TILL/SOFTROCK		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-17	10YR 3/3	DARK BROWN	MFGR	FR	L		5.6	0.3	34.	3.7
BNT	17-35	10YR 3/4	DARK YELLOWISH BROWN	WMCOL	VF	CL		7.8	6.4	65.	33.1
CSK1	35-55	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		7.3	8.3	57.	14.8
CSK2	55-80	2.5Y 4/4	OLIVE BROWN	MA	F	CL					
2CSK	80-110	10YR 4/2	DARK GRAYISH BROWN	MA	VF	CL		7.9	7.7	127.	19.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	G		F	G	G	G	F (Topsoil)
BNT	17-35	P	F		F	P	F	U	U (Subsoil)
CSK1	35-55	F	G		G	P	G	U	U (Subsoil)
CSK2	55-80	F	F						U (Subsoil)
2CSK	80-110	P	F		F	P	U	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HALKIRK-XP SOILS ARE DEVELOPED ON A VENEER OF MODERATELY FINE TILL OVER MODERATELY FINE, WEATHERED BEDROCK (SOFTROCK). THE BEDROCK IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HANALTA (HAN)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	CL		7.5	0.5	55.	0.1
BM	13-30	10YR 3/3	DARK BROWN	MMPR	F	C		7.4	0.4	62.	0.1
CK	30-120	10YR 5/3	BROWN	MA	F	C		7.8	0.5	64.	0.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	F		G	G	G	G	F (Topsoil)
BM	13-30	F	P		G	G	F	G	P (Subsoil)
CK	30-120	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.03
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: RESTRICTED TO THE HAND HILLS. TOPSOIL IS THICKER ON LOWER SLOPES.
 TOPSOIL IS NOT EASILY DISTINGUISHED FROM SUBSOIL BY COLOR.
 OVERSTRIPPING IS PREFERRED WHEN TOPSOIL IS THIN.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HANALTA-ST (stHAN)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC	SURFACE STONINESS:	EXCEEDINGLY
PARENT MATERIAL:	MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	STCL		7.5	0.5	55.	0.1
BM	13-30	10YR 3/3	DARK BROWN	MMPR	F	STC		7.4	0.4	62.	0.1
CK	30-120	10YR 5/3	BROWN	MA	F	STC		7.8	0.5	64.	0.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	P		G	G	G	G	P (Topsoil)
BM	13-30	F	P		G	G	F	G	P (Subsoil)
CK	30-120	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.03
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HANALTA THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HANALTA-ZR (zrHAN)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	REGO DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	CL		7.5	0.5	55.	0.1
CK	13-120	10YR 5/2	BROWN	MA	F	C		7.8	0.5	64.	0.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	F		G	G	G	G	F (Topsoil)
CK	13-120	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.03
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: REGO VARIANT OF HANALTA

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HUGHENDEN (HND)	LANDFORM:	UNDULATING, ROLLING,
SOIL ZONE:	DARK BROWN		HUMMOCKY
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	2-30%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-15	10YR 3/2	VERY DARK GRAYISH BROWN	MFR	FR	L		7.1	1.4	53.	0.9
BM	15-28	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	F	L		7.	0.5	42.	0.6
CK	28-180	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		8.	0.7	47.	1.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G		G	G	G	G	G (Topsoil)
BM	15-28	F	G		G	G	G	G	F (Subsoil)
CK	28-180	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.03
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: TOPSOIL IS THICKER ON LOWER SLOPES. TOPSOIL IS NOT EASILY
 DISTINGUISHED FROM SUBSOIL BY COLOR. OVERSTRIPPING IS PREFERRED WHEN
 TOPSOIL IS THIN.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HUGHENDEN-SC (schND)	LANDFORM:	UNDULATING, ROLLING,
SOIL ZONE:	DARK BROWN		HUMMOCKY
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	2-30%
	CHERNOZEMIC (SALINE LOWER	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	SUBSOIL)	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR	3/2	VERY DARK GRAYISH BROWN	MFR	FR	L		7.4	0.8	38.	0.7
BM	10-38	10YR	4/4	DARK YELLOWISH BROWN	MFSBK	F	CL		6.5	0.7	45.	4.4
CSK	38-180	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	CL		8.1	8.2	58.	15.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G		G	G	G	G	G (Topsoil)
BM	10-38	F	F		G	G	G	F	F (Subsoil)
CSK	38-180	F	F		F	P	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.03
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF HUGHENDEN WITH A SALINE LOWER SUBSOIL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HUGHENDEN-ST (stHND)	LANDFORM:	UNDULATING, ROLLING,
SOIL ZONE:	DARK BROWN		HUMMOCKY
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	TYPICAL SLOPES:	2-30%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	EXCEEDINGLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-15	10YR	3/2	VERY DARK GRAYISH BROWN	MFGR	FR	STL	2.	7.5	0.5	38.	0.9
BMK	15-24	10YR	4/4	DARK YELLOWISH BROWN	MFSBK	F	STCL	1.4	7.7	0.6	44.	0.7
CK	24-180	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	STCL		7.7	2.7	39.	0.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-15	G	P	F	G	G	G	G	P (Topsoil)
BMK	15-24	F	P		F	G	G	G	P (Subsoil)
CK	24-180	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.03
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HUGHENDEN THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	HUGHENDEN-XP (xpHND)	LANDFORM:	UNDULATING, ROLLING,
SOIL ZONE:	DARK BROWN		HUMMOCKY
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	TYPICAL SLOPES:	2-30%
PARENT MATERIAL:	MODERATELY FINE TILL/SOFTROCK	USUAL SOIL MOISTURE:	DRY
		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 3/3	DARK BROWN	MFGR	FR	L		6.1	0.4	46.	2.2
BM	18-40	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	F	CL		5.6	0.4	48.	2.5
CK	40-70	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.7	0.6	62.	2.4
2CK	70-130	10YR 4/2	DARK GRAYISH BROWN	MA	VF	SICL		7.7	0.6	74.	5.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G		F	G	G	G	F (Topsoil)
BM	18-40	F	F		F	G	G	G	F (Subsoil)
CK	40-70	F	F		F	G	F	G	F (Subsoil)
2CK	70-130	P	F		F	G	F	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.03
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: YES
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HUGHENDEN-XP SOILS ARE DEVELOPED ON A VENEER OF MODERATELY FINE TILL OVER MODERATELY FINE, WEATHERED BEDROCK (SOFTROCK) OF THE EDMONTON FORMATION. THE UNDERLYING SOFTROCK IS USUALLY NON-SALINE AND NON TO WEAKLY SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	KIRRIEMUIR (KUR)	LANDFORM:	HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	9-15%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MEDIUM TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-8	10YRd 3/3	DARK BROWN	WFGR	SO	L	3.65	7.8		
BM	8-23	10YRd 3/4	DARK YELLOWISH BROWN	WCPR	FR	L	1.27	7.4		
CCA	23-46	10YRm 6/4	LIGHT YELLOWISH BROWN	MA	FR	L		8.2		
CK1	46-89	10YRm 5/4	YELLOWISH BROWN	MA	FR	L		8.4		
CK2	89-140	10YRm 3/3	DARK BROWN	MA	FR	L		8.3		
CK3	140-186	10YRm 3/2	VERY DARK GRAYISH BROWN	MA	FR	L		8.1		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-8	G	G	G	F				F (Topsoil)
BM	8-23	G	G		G				G (Subsoil)
CCA	23-46	G	G		F				F (Subsoil)
CK1	46-89	G	G		F				F (Subsoil)
CK2	89-140	G	G		F				F (Subsoil)
CK3	140-186	G	G		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON MEDIUM TEXTURED, HUMMOCKY TILL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	KIRRIEMUIR-ST (stKUR)	LANDFORM:	HUMMOCKY
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	9-15%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC	SURFACE STONINESS:	EXCESSIVELY
PARENT MATERIAL:	MEDIUM TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-8	10Yrd 3/3	DARK BROWN	WFGR	SO	STL	3.65	7.8		
BM	8-23	10Yrd 3/4	DARK YELLOWISH BROWN	WCPR	FR	STL	1.27	7.4		
CCA	23-46	10YRm 6/4	LIGHT YELLOWISH BROWN	MA	FR	STL		8.2		
CK1	46-89	10YRm 5/4	YELLOWISH BROWN	MA	FR	STL		8.4		
CK2	89-140	10YRm 3/3	DARK BROWN	MA	FR	STL		8.3		
CK3	140-186	10YRm 3/2	VERY DARK GRAYISH BROWN	MA	FR	STL		8.1		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-8	G	P	G	F				P (Topsoil)
BM	8-23	G	P		G				P (Subsoil)
CCA	23-46	G	P		F				P (Subsoil)
CK1	46-89	G	P		F				P (Subsoil)
CK2	89-140	G	P		F				P (Subsoil)
CK3	140-186	G	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF KIRRIEMUIR THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	LANFINE (LFE)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ELUVIATED DARK BROWN	USUAL SOIL MOISTURE:	DRY
	CHERNOZEMIC	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-25	10YR 3/3	DARK BROWN	MMGR	FR	SIL	3.7	5.5	0.2	60.	0.3
AE	25-30	10YR 5/2	GRAYISH BROWN	MMPL	VFR	L		5.5	0.3	35.	0.9
BT	30-60	10YR 4/4	DARK YELLOWISH BROWN	MCSEK	F	L	1.	5.6	0.3	40.	1.1
CCA	60-100	10YR 5/4	YELLOWISH BROWN	MA	F	L		7.8	0.9	44.	3.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-25	G	G	G	F	G	F	G	F (Topsoil)
AE	25-30	G	G		F	G	G	G	F (Topsoil)
BT	30-60	F	G		F	G	G	G	F (Subsoil)
CCA	60-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON MODERATELY FINE TEXTURED TILL. TOPSOIL IS EASILY
 DISTINGUISHED FROM SUBSOIL BY THE PRESENCE OF AN AE HORIZON AND/OR THE
 STRUCTURE OF A BT HORIZON.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	LANFINE-ST (stLFE)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ELUVIATED DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	EXCEEDINGLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-25	10YR	3/3	DARK BROWN	MMGR	FR	STSIL	3.7	5.5	0.2	60.	0.3
AE	25-30	10YR	5/2	GRAYISH BROWN	MMPL	VFR	STL		5.5	0.3	35.	0.9
BT	30-60	10YR	4/4	DARK YELLOWISH BROWN	MCSBK	F	STL	1.	5.6	0.3	40.	1.1
CCA	60-100	10YR	5/4	YELLOWISH BROWN	MA	F	STL		7.8	0.9	44.	3.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-25	G	P	G	F	G	F	G	P (Topsoil)
AE	25-30	G	P		F	G	G	G	P (Topsoil)
BT	30-60	F	P		F	G	G	G	P (Subsoil)
CCA	60-100	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	25 cm
THICKNESS RANGE:	20-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF LANFINE THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	LEITHEAD (LHD)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-8	10YR 3/3	DARK BROWN	SGR	L	SL				
BM	8-30	10YR 5/4	YELLOWISH BROWN	SGR	L	LS				
BNT	30-55	10YR 4/4	DARK YELLOWISH BROWN	SFSBK	VF	SL				
BC	55-80	10YR 4/4	DARK YELLOWISH BROWN	WFSBK	VFR	SL				
CSK	80-110	10YR 4/4	DARK YELLOWISH BROWN	SGR	VFR	SL				

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-8	F	G						F (Topsoil)
BM	8-30	F	P						P (Subsoil)
BNT	30-55	P	G						P (Subsoil)
BC	55-80	G	G						G (Subsoil)
CSK	80-110	G	G						G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.029
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: LEITHEAD SOILS HAVE AN UNDESIREABLE BNT HORIZON. THE LOWER SUBSOIL IS SALINE AND SODIC. MODERATELY COARSE TEXTURES CAUSE EXPOSED FACES TO BE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	METISKO (MET)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR	3/2	VERY DARK GRAYISH BROWN	WFGR	VFR	SL	1.6	5.9	0.8	32.	1.3
BM	12-60	10YR	5/4	YELLOWISH BROWN	WFSBK	VFR	SL	0.4	7.4	0.4	34.	0.6
CK	60-180	2.5Y	5/4	LIGHT OLIVE BROWN	SGR	VFR	SL		8.1	0.6	32.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G	F	F	G	G	G	F (Topsoil)
BM	12-60	G	G		G	G	G	G	G (Subsoil)
CK	60-180	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SANDY LOAM TEXTURED MATERIAL. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES: METISKO-SC (scMET) LANDFORM: BLANKET
 SOIL ZONE: DARK BROWN TYPICAL SLOPES: 2-15%
 SOIL CLASSIFICATION: ORTHIC DARK BROWN USUAL SOIL MOISTURE: TEMPORARY PONDING
 CHERNOZEMIC (SALINE LOWER SURFACE STONINESS: NON
 SUBSOIL)
 PARENT MATERIAL: MODERATELY COARSE
 GLACIOFLUVIAL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	VFR	SL	3.2	6.2	0.5	55.	2.
BM	12-30	10YR 4/4	DARK YELLOWISH BROWN	WFSBK	VFR	SL	1.2	6.9	1.	50.	1.1
CSK	30-180	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	VFR	SL		7.9	6.5	39.	5.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G	G	F	G	G	G	F (Topsoil)
BM	12-30	G	G		G	G	G	G	G (Subsoil)
CSK	30-180	G	G		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF METISKO WITH A SALINE AND/OR SODIC LOWER SUBSOIL. THE A AND B HORIZONS ARE NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	MICHICHI (MIC)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	DARK BROWN SOLOD	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	VERY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR	3/2	VERY DARK GRAYISH BROWN	MFGR	FR	SIC	2.	7.4	0.6	54.	0.9
BTN	10-28	10YR	4/2	DARK GRAYISH BROWN	COL	VF	C-HC		7.2	0.6	63.	1.6
CSK	28-180	10YR	3/2	VERY DARK GRAYISH BROWN	MA	F	C-HC		7.7	5.6	89.	7.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	P	F	G	G	G	G	P (Topsoil)
BTN	10-28	P	P		G	G	F	G	P (Subsoil)
CSK	28-180	F	P		F	P	P	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.028
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: MICHICHI SOILS ARE DEVELOPED ON CLAY TO HEAVY CLAY TEXTURED MATERIAL. DIFFERENTIATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE BTN HORIZON IS VERY TOUGH AND UNDESIRABLE THE LOWER SUBSOIL IS WEAKLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES: NEUTRAL (NUT) LANDFORM: BLANKET
 SOIL ZONE: DARK BROWN TYPICAL SLOPES: -
 SOIL CLASSIFICATION: CALCAREOUS DARK BROWN USUAL SOIL MOISTURE: DRY
 CHERNOZEMIC SURFACE STONINESS: MODERATELY
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-14	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	CL	1.4	7.7	0.8	47.	0.4
BMK	14-55	10YR 5/3	BROWN	WMPR	FR	CL		8.1	0.4	63.	0.4
CK	55-100	10YR 5/3	BROWN	MA	FR	STCL		8.	1.4	47.	1.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-14	G	F	F	F	G	G	G	F (Topsoil)
BMK	14-55	G	F		F	G	F	G	F (Subsoil)
CK	55-100	G	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY LOAM TEXTURED TILL. TOPSOIL IS DIFFICULT TO DISTINGUISH FROM SUBSOIL BY COLOR. THESE SOILS ARE CALCAREOUS INTO THE B HORIZON AND OFTEN THE A HORIZON.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	NEUTRAL-ST (stNUT)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	-
SOIL CLASSIFICATION:	CALCAREOUS DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	EXCEEDINGLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-14	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	STCL	1.4	7.7	0.8	47.	0.4
BMK	14-55	10YR 5/3	BROWN	WMPR	FR	STCL		8.1	0.4	63.	0.4
CK	55-100	10YR 5/3	BROWN	MA	FR	SCL-SICL		8.	1.4	47.	1.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-14	G	P	F	F	G	G	G	P (Topsoil)
BMK	14-55	G	P		F	G	F	G	P (Subsoil)
CK	55-100	G	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	STONY
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF NEUTRAL THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	ONNEVUE (OVE)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	SOLONETZIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DRY
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-18	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	L	1.4	6.4	0.3	44.	0.3
BTNJ	18-60	10YR 4/4	DARK YELLOWISH BROWN	PR	F	L	1.	7.4	0.5	41.	0.2
CCA	60-100	10YR 5/3	BROWN	MA	F	L		8.	1.1	40.	3.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-18	G	G	F	F	G	G	G	F (Topsoil)
BTNJ	18-60	F	G		G	G	G	G	F (Subsoil)
CCA	60-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.033
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY LOAM TEXTURED TILL. THE TOPSOIL IS NOT EASILY
 DISTINGUISHED FROM SUBSOIL BY COLOR. THE B HORIZON HAS WEAK SOLONETZIC
 TENDENCIES LOWER SUBSOIL IS NON TO WEAKLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	RIBSTONE (RIB)	LANDFORM:	VDENEER
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE FLUVIAL OR EOLIAN/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-25	10YR	3/2	VERY DARK GRAYISH BROWN	SGR	L	LS				
BM	25-70	10YR	5/4	YELLOWISH BROWN	SGR	L	LS				
2CK	70-110	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	CL				

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	F	P						P (Topsoil)
BM	25-70	F	P						P (Subsoil)
2CK	70-110	F	F						F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.013
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON A VENEER OF LOAMY SAND TEXTURED MATERIAL OVER TILL. THE SANDY OVERLAY CAUSES FACES TO BE UNSTABLE WHEN EXPOSED.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	SCOLLARD (SCD)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-45%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DROUGHTY
	CHERNOZEMIC	SURFACE STONINESS:	EXCEEDINGLY
PARENT MATERIAL:	GRAVELLY GLACIOFLUVIAL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-20	10YR 3/2	VERY DARK GRAYISH BROWN	SGR	L	LS	2.1	7.2	0.6	42.	1.3
BM	20-70	10YR 5/4	YELLOWISH BROWN	SGR	L	LS	0.3	7.7	0.6	27.	1.1
CK	70-180	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	GRS		8.1	0.5	25.	1.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	F	P	G	G	G	G	G	P (Topsoil)
BM	20-70	F	P		F	G	F	G	P (Subsoil)
CK	70-180	F	P		F	G	F	G	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: STONY, GRAVELLY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.02
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: DEVELOPED ON GRAVELLY SANDY LOAM TO LOAMY SAND TEXTURED MATERIAL. THE
 TOPSOIL IS USUALLY GRAVEL FREE. THE B HORIZON CONTAINS 15 TO 35%
 BY VOLUME OF GRAVEL AND THE C HORIZON CONTAINS 35 TO 60 PERCENT. EXPOSED
 FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	SULLIVAN LAKE (SUL)	LANDFORM:	VENEER
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL/TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	L-SL	3.4	5.4	0.2	37.	1.5
AE	22-26	10YR 6/2	LIGHT BROWNISH GRAY	WFPL	VPR	L-SL					
BNT	26-50	10YR 3/3	DARK BROWN	WMCOL	F-VF	L-SL	1.4	5.7	0.2	39.	1.3
BC	50-80	10YR 5/3	BROWN	SGR	L	SL		7.1	0.4	35.	4.3
2CSK	80-180	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.1	2.3	53.	9.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	G	G	P	G	G	G	P (Topsoil)
AE	22-26	G	G						P (Topsoil)
BNT	26-50	P	G		F	G	G	G	P (Subsoil)
BC	50-80	F	G		G	G	G	F	F (Subsoil)
2CSK	80-180	F	F		F	G	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.029
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON A SANDY LOAM VENEER OVER CLAY LOAM TILL. TOPSOIL IS EASILY DISTINGUISHED FROM SUBSOIL BY THE PRESENCE OF AN AE HORIZON. THE BNT HORIZON IS UNDESIRABLE AND THE LOWER SUBSOIL IS MODERATELY SALINE AND SODIC. THE SANDY OVERLAY MAY BE UNSTABLE ON EXPOSED FACES. THE BNT HORIZON MAY OCCUR IN THE GLACIOFLUVIAL MATERIAL OR THE TILL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	THRONE	(THR)	LANDFORM:	LEVEL
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	REGO GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHG	0-5	10YR 4/2	DARK GRAYISH BROWN	WFGR	FR	L	0.4	7.8		40.	
CKG1	5-50	2.5Y 4/2	DARK GRAYISH BROWN	MA	F	CL		8.3		36.	
CKG2	50-120	2.5Y 4/2	DARK GRAYISH BROWN	MA	F	SCL		8.3		37.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHG	0-5	G	G	P	F		G		P (Topsoil)
CKG1	5-50	F	F		F		G		F (Subsoil)
CKG2	50-120	F	F		F		G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THIN
 WIND EROSION RISK:
 WATER EROSION K=: -
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THRONE SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	THRONE-SA	(saTHR)	LANDFORM:	LEVEL
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	REGO GLEYSOL (SALINE)		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHJGSA	0-5	10YR 4/2	DARK GRAYISH BROWN	WFGR	FR	L	0.4	8.1	46.7	40.	51.4
CGSAK1	5-50	2.5Y 4/2	DARK GRAYISH BROWN	MA	F	CL		8.3	38.9	36.	33.9
CGSAK2	50-120	2.5Y 4/2	DARK GRAYISH BROWN	MA	F	SCL		8.3	37.	37.	22.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHJGSA	0-5	G	G	P	F	U	G	U	U (Topsoil)
CGSAK1	5-50	F	F		F	U	G	U	U (Subsoil)
CGSAK2	50-120	F	F		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THIN
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF THRONE SOILS THAT ARE SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	TORLEA (TLA)	LANDFORM:	PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE SOFTROCK	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-5	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	CL	4.	7.5	1.3	63.	9.1
BNT	5-25	10YR 4/2	DARK GRAYISH BROWN	SMSBK	VF	C		8.3	3.3	160.	29.5
CSK	25-180	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		8.2	13.2	136.	35.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-5	G	F	G	G	G	F	P	P (Topsoil)
BNT	5-25	P	P		F	F	U	U	U (Subsoil)
CSK	25-180	F	P		F	U	U	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-12 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.045
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE VERY FIRM BNT HORIZON OCCURS AT ABOUT 0.15 M BELOW THE SURFACE. IT IS ROUND TOPPED, COLUMNAR, WITH INTENSE DARK ORGANIC MATTER STAINING. THESE SOILS ARE MODERATELY TO STRONGLY SALINE AND SODIC. THE PARENT MATERIAL IS WEATHERED SHALES AND SANDSTONES AND MAY HAVE REMINANTS OF A DISCONTINUOUS TILL VENEER. STRIP TO INDICATED DEPTH, DO NOT OVERSTRIP.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES: TORLEA-ER (erTLA) LANDFORM: PLAIN
 SOIL ZONE: DARK BROWN TYPICAL SLOPES: 2-5%
 SOIL CLASSIFICATION: DARK BROWN SOLODIZED USUAL SOIL MOISTURE: TEMPORARY PONDING
 SOLONETZ (ERODED) SURFACE STONINESS: SLIGHTLY
 PARENT MATERIAL: MODERATELY FINE SOFTROCK

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-4	10YR 4/2	DARK GRAYISH BROWN	MFSBK	F	CL	3.8	4.8	2.1	56.	3.5
BNT	15-35	10YR 3/1	VERY DARK GRAY	MMSBK	VF	CL	1.9	6.4	2.5	58.	6.4
CSK	35-90	10YR 4/2	DARK GRAYISH BROWN	MA	VF	CL		7.6	6.2	58.	10.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-4	F	F	G	P	F	G	G	P (Topsoil)
BNT	15-35	P	F		F	G	G	F	P (Subsoil)
CSK	35-90	P	F		F	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-5 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.045
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF TORLEA THAT IS ERODED. ERODED PITS OR BLOWOUTS ARE VERY COMMON IN THESE LANDSCAPES.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	TORLEA-ST (stTLA)	LANDFORM:	PLAIN
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	STONY, MODERATELY FINE SOFTROCK	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-11	10YRm 4/3	DARK BROWN	WFGR	FR	STSIL	4.42	5.4			
BNT	11-28	10YRm 3/2	VERY DARK GRAYISH BROWN	WCCOL	VF	STCL	2.41	7.6	1.6	11.9	
CSAK	28-48	10YRm 3/1	VERY DARK GRAY	MFABK	F	STCL		7.9	4.13	17.9	
CSK	48-120	5Yd 6/3	PALE OLIVE	WFPL	F	STL		8.1	1.04	19.9	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-11	G	P	G	P				P (Topsoil)
BNT	11-28	P	P		F	G		P	P (Subsoil)
CSAK	28-48	F	P		F	F		U	U (Subsoil)
CSK	48-120	F	P		F	G		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-12 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN, STONY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.045
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF TORLEA THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	VICTOR (VTR)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	DARK BROWN SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-7	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	F	CL		7.	6.	91.	24.
BNTSA	7-25	10YR 3/2	VERY DARK GRAYISH BROWN	MMCOL	VF	C		7.8	8.8	88.	28.9
CSK1	25-40	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		7.7	6.	68.	10.3
CSK2	40-100	2.5Y 4/4	OLIVE BROWN	MA	F	C		7.7	6.	68.	10.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-7	P	F		G	P	P	U	U (Topsoil)
BNTSA	7-25	P	P		F	P	P	U	U (Subsoil)
CSK1	25-40	F	P		F	P	F	P	P (Subsoil)
CSK2	40-100	F	P		F	P	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT HORIZON HAS A STRONG, ROUND-TOPPED COLUMNAR STRUCTURE THAT IS DIFFICULT TO DISTINGUISH FROM TOPSOIL BY COLOR. THE LOWER SUBSOIL IS MODERATELY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	WAINWRIGHT (WWT)	LANDFORM:	UNDULATING, RIDGED
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	1-9%
SOIL CLASSIFICATION:	ORTHIC DARK BROWN	USUAL SOIL MOISTURE:	DROUGHTY
	CHERNOZEMIC	SURFACE STONINESS:	NON
PARENT MATERIAL:	VERY COARSE EOLIAN OR		
	GLACIOFLUVIAL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 4/2	DARK GRAYISH BROWN	SGR	L	LS		7.1	0.4	52.	
BM	18-48	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	LS		7.9	0.4	28.	1.6
BC	48-110	10YR 4/3	BROWN	SGR	L	LS		7.8	0.4	28.	3.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	F	P		G	G	G		P (Topsoil)
BM	18-48	F	P		F	G	F	G	P (Subsoil)
BC	48-110	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	10-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.013
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: WAINWRIGHT SOILS ARE DEVELOPED ON LOAMY SAND TEXTURED MATERIAL AND THEREFORE EXPOSED FACES ARE UNSTABLE. TOPSOIL IS EASILY DISTINGUISHED FROM SUBSOIL BY COLOR.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	WIESE	(WES)	LANDFORM:	BLANKET
SOIL ZONE:	DARK BROWN		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	SOLONETZ		SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY FINE			
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	SIC	1.5	7.6	1.	51.	1.8
BNTK	12-32	10YR 4/2	DARK GRAYISH BROWN	MMSBK	VF	HC		8.1	0.5	80.	4.
CSK	32-180	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F	HC		7.8	5.2	80.	7.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-12	G	P	F	F	G	G	G	P (Topsoil)
BNTK	12-32	P	P		F	G	P	F	P (Subsoil)
CSK	32-180	F	P		F	P	P	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.04
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THE WIESE SOIL IS DEVELOPED ON SILTY CLAY LOAM TEXTURED MATERIAL AND THE BNT HORIZON HAS AN UNDESIREABLE STRUCTURE. DISTINGUISHING TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 4

09/01/93

SOIL SERIES:	WIESE-XT (xtWES)	LANDFORM:	VENEER
SOIL ZONE:	DARK BROWN	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	DARK BROWN SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	SICL	1.8	7.	0.6	46.	1.6
BNT	12-22	10YR 4/2	DARK GRAYISH BROWN	MMSBK	VF	C	1.6	6.8	0.6	53.	2.2
CSK	22-70	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		8.1	0.7	92.	6.9
2CSK	70-180	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		7.9	6.9	52.	10.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	F	F	G	G	G	G	F (Topsoil)
BNT	12-22	P	P		G	G	G	G	P (Subsoil)
CSK	22-70	F	P		F	G	P	F	P (Subsoil)
2CSK	70-180	F	F		F	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.04
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF WIESE THAT HAS TILL WITHIN 1 M OF THE SURFACE. THE
 TEXTURAL DIFFERENCE BETWEEN THE TWO MATERIALS IS NOT SIGNIFICANT.

2.5 Soil Correlation Area #5

General Description of the Area

The Thin Black Soil Zone of Southwestern Alberta.

Ecoregion/Climate

- SCA 5 is characterized by Thin Black Soils (Black soils with less than 15 cm of topsoil) in the area from the U.S. border, north to the Porcupine Hills. This SCA is part of the Fescue Grass Ecoregion (Strong and Leggatt 1992), which receives more precipitation than SCA's 1 or 3, and has less (average) moisture deficit in the growing season. The area is subject to chinook winds and can experience extended periods of moisture deficit. Agricultural crop rotations tend to be continuous crop or long rotation rather than grain-fallow.
- Agroclimate is 2AH and 3AH (slight to moderate moisture and heat limitations).
- Growing season P-PE = -250 to -300 mm.

Soils and Landscapes

- The surface form of many of the landforms is controlled by the surface of the underlying bedrock. Veneers and blankets of glacial drift overly Tertiary- and Cretaceous-aged bedrock of varying lithology.
- Soils are dominantly Chernozemics (Thin Blacks), with rare occurrences of Solonchic and salt-affected soils. Many of the soils have a bedrock contact (lithic or paralithic) at shallow depth.
- Soil profile development extends to a depth of 40 cm, having 10 to 15 cm of topsoil.

Soil Reclamation Issues

- Wind erosion is a concern in this area due to the frequency of high velocity winds. Snow cover is frequently removed by Chinook winds. Wind erosion can occur in any month.
- Water erosion risk is high in much of the area due to steepness and length of slopes. Most water erosion occurs as a result of intense thunderstorms during the summer.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	BEAZER	(BZR)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	THIN BLACK			RIDGED
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		TYPICAL SLOPES:	6-20%
PARENT MATERIAL:	MODERATELY FINE TILL		USUAL SOIL MOISTURE:	MESIC
			SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH1	0-7	10YRm 3/2	VERY DARK GRAYISH BROWN	WMGR	L	CL	6.16	7.5			
AH2	7-17	10YRm 3/2	VERY DARK GRAYISH BROWN	WFSEK	L	CL	4.58	7.2			
BM	17-45	10YRd 4/3	BROWN-DARK BROWN	MFABK	SLH	CL	1.47	6.5			
BC	45-68	10YRd 4/3	BROWN-DARK BROWN	MMSBK	SLH	L		7.3			
CK1	68-96	10YRd 6/3	PALE BROWN	MA	SLH	CL		7.9	0.5		
CK2	96-120	10YRm 4/4	DARK YELLOWISH BROWN	MA	FR	CL		8.	0.5		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH1	0-7	F	F	G	G				F (Topsoil)
AH2	7-17	F	F	G	G				F (Topsoil)
BM	17-45	G	F		F				F (Subsoil)
BC	45-68	G	G		G				G (Subsoil)
CK1	68-96	G	F		F				F (Subsoil)
CK2	96-120	G	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY LOAM TEXTURED TILL. TOPSOIL IS EASILY DISTINGUISHED FROM SUBSOIL BY COLOR.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	BEAZER-CA (caBZR)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	THIN BLACK		RIDGED
SOIL CLASSIFICATION:	CALCAREOUS BLACK	TYPICAL SLOPES:	6-20%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR	2/1	BLACK	WFGR	FR	L	5.8	7.8	0.8	69.	0.1
BMK	15-35	10YR	4/2	DARK GRAYISH BROWN	WMPR	F	CL	2.1	8.	0.6	60.	0.3
CCA	35-100	10YR	5/2	GRAYISH BROWN	MA	F	CL		8.6	0.8	62.	2.2
CK	100-200	10YR	4/2	DARK GRAYISH BROWN	MA	F	CL		8.8	0.8	56.	4.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	F	G	F (Topsoil)
BMK	15-35	F	F		F	G	F	G	F (Subsoil)
CCA	35-100	F	F		P	G	F	G	P (Subsoil)
CK	100-200	F	F		P	G	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF BEAZER THAT IS CALCAREOUS.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	BEAZER-SA (saBZR)	LANDFORM:	UNDULATING, HUMMOCKY,
SOIL ZONE:	THIN BLACK		RIDGED
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	6-20%
	(SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AHSA1	0-7	10YRm 3/2	VERY DARK GRAYISH BROWN	WMGR	L	CL	6.16	7.5		
AHSA2	7-17	10YRm 3/2	VERY DARK GRAYISH BROWN	WFSBK	L	CL	4.58	7.2		
BMSA	17-45	10YRd 4/3	BROWN-DARK BROWN	MFABK	SLH	CL	1.47	6.5		
BCSA	45-68	10YRd 4/3	BROWN-DARK BROWN	MMSBK	SLH	L		7.3		
CSK1	68-96	10YRd 6/3	PALE BROWN	MA	SLH	CL		7.9		
CSK2	96-120	10YRm 4/4	DARK YELLOWISH BROWN	MA	FR	CL		8.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSA1	0-7	F	F	G	G				P (Topsoil)
AHSA2	7-17	F	F	G	G				P (Topsoil)
BMSA	17-45	G	F		F				P (Subsoil)
BCSA	45-68	G	G		G				P (Subsoil)
CSK1	68-96	G	F		F				P (Subsoil)
CSK2	96-120	G	F		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF BEAZER THAT IS SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	BLACKFOOT (BFT)	LANDFORM:	VENEER, TERACES
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE/GRAVEL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-11	10YR 2/1	BLACK	MFGR	FR	L	6.1	6.9		
BM	11-34	10YR 5/3	BROWN	MFSBK	FR	SIL	1.4	6.2		
CCA	34-67	10YR 6/4	LIGHT YELLOWISH BROWN	MA	FR	L		7.6		
2CK	67-110	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	VGSL		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-11	G	G	G	G				G (Topsoil)
BM	11-34	G	G		F				F (Subsoil)
CCA	34-67	G	G		F				F (Subsoil)
2CK	67-110	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON A LOAM TO SILT LOAM TEXTURED VENEER GREATER THAN 30 CM THICK OVER GRAVEL. GOOD COLOR SEPARATION OF TOPSOIL AND SUBSOIL. EXPOSED FACES ARE UNSTABLE IN THE UNDERLYING GRAVEL.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	BLACKFOOT-ZR (zrBFT)	LANDFORM:	VENEER, TERACES
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM	SURFACE STONINESS:	SLIGHTLY
	GLACIOLACUSTRINE/GRAVEL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-11	10YR 2/1	BLACK	MFGR	FR	L	6.1	6.9		
CCA	11-67	10YR 6/4	LIGHT YELLOWISH BROWN	MA	FR	L	1.4	7.6		
2CK	67-110	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	VGSL		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-11		G	G	G				G (Topsoil)
CCA	11-67		G		F				F (Subsoil)
2CK	67-110		U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	OBSVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: REGO VARIANT OF BLACKFOOT.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	CARDSTON (CTN)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-10	10YR 2/1	BLACK	MFGR	F	C	4.3	5.7		
BM	10-25	10YR 4/3	DARK BROWN	WMPR	F	SIC	2	6.8		
CCA	25-63	10YR 4/2	DARK GRAYISH BROWN	MA	F	SIC		7.8		
CK	63-100	10YR 4/1	DARK GRAY	MA	F	SIC		7.9		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	P	P	G	F				P (Topsoil)
BM	10-25	F	P		G				P (Subsoil)
CCA	25-63	F	P		F				P (Subsoil)
CK	63-100	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.021
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON SILTY CLAY TEXTURED MATERIAL. TOPSOIL SEPARATION FROM SUBSOIL BY COLOR IS DIFFICULT BECAUSE CRACKS THAT FORM WHEN THE SOIL DRIES MIX TOPSOIL MATERIAL INTO THE SUBSOIL.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	CARDSTON-SA (saCTN)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AHSA	0-12	10YR 2/1	BLACK	MFGR	F	SL		7.9		
BMSA	12-30	10YR 5/3	BROWN	WMPR	F	CL		8.		
CCASA	30-75	10YR 4/1	DARK GRAY	MA	F	SICL		8.5		
CSK	75-120	10YR 4/1	DARK GRAY	MA	F	C-SICL		8.4		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHSA	0-12	P	G		F		F		P (Topsoil)
BMSA	12-30	F	F		F		F		F (Subsoil)
CCASA	30-75	F	F		F		F		F (Subsoil)
CSK	75-120	F	P		F		F		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF CARDSTON THAT IS SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	CARDSTON-ZT (ztCYN)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	SOLONETZIC BLACK	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC	SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-12	10YR 2/1	BLACK	MFGR	FR	SICL	3.2	8.	0.6	56.	0.3
BTNJK	12-35	10YR 3/2	VERY DARK GRAYISH BROWN	SMSBK	VF	HC		8.	0.5	64.	0.3
BCK	35-110	10YR 4/2	DARK GRAYISH BROWN	MA	F	SIC-C		8.4	1.1	75.	4.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-12	G	F	G	F	G	G	G	F (Topsoil)
BTNJK	12-35	P	P		F	G	F	G	P (Subsoil)
BCK	35-110	F	P		F	G	F	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF CARDSTON WITH A BTNJ HORIZON THAT HAS SOLONETZIC TENDENCIES.
 THE LOWER SUBSOIL IS NON TO WEAKLY SALINE AND WEAKLY TO MODERATELY SODIC.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	COWLEY	(CWY)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	CALCAREOUS BLACK		USUAL SOIL MOISTURE:	MOIST
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-16	10YR 2/1	BLACK	MFGR	F	SIC	3.2	7.5			
BMK	16-30	10YR 3/3	DARK BROWN	WMPR	F	C	1.9	7.6			
CK1	30-74	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		7.8			
CK2	74-110	10YR 4/1	DARK GRAY	MA	F	C		8.			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-16	P	P	G	G				P (Topsoil)
BMK	16-30	F	P		F				P (Subsoil)
CK1	30-74	F	P		F				P (Subsoil)
CK2	74-110	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY TEXTURED MATERIAL. SEPARATION OF TOPSOIL FROM
 SUBSOIL BY COLOR IS DIFFICULT BECAUSE CRACKS THAT FORM WHEN THE SOIL
 DRIES CAUSE TOPSOIL TO BE MIXED WITH SUBSOIL.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	COWLEY-SA (saCWY)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	CALCAREOUS BLACK	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC (SALINE)	SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GALCIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHK	0-12	10YR 2/1	BLACK	MFGR	FR	CL		7.7	0.9	64.	0.3
BSK	12-55	10YR 4/3	BROWN-DARK BROWN	WMPR	F	CL		7.9	8.9	46.	3.5
CCASA	55-65	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		8.1	13.3	46.	5.
CSK	65-130	10YR 4/1	DARK GRAY	MA	F	C		8.	13.6	43.	5.5
CSKGJ	130-200	10YR 4/1	DARK GRAY	MA	F	C		8.	10.	59.	5.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHK	0-12	G	F		F	G	F	G	F (Topsoil)
BSK	12-55	F	F		F	P	G	G	P (Subsoil)
CCASA	55-65	F	P		F	U	G	F	U (Subsoil)
CSK	65-130	F	P		F	U	G	F	U (Subsoil)
CSKGJ	130-200	F	P		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.021
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF COWLEY THAT IS SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	COWLEY-ZR	(zrCWY)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-15	10YR 2/1	BLACK	MFGR	FR	SICL	4.1	8.	0.4	47.	0.2
CCA	15-55	10YR 4/2	DARK GRAYISH BROWN	MMSBK	F	SIC-SICL		8.2	0.3	52.	0.2
CK	55-100	10YR 4/2	DARK GRAYISH BROWN	MA	F	SIC-SICL		8.6	0.5	58.	1.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-15	G	F	G	F	G	G	G	F (Topsoil)
CCA	15-55	F	P		F	G	G	G	P (Subsoil)
CK	55-100	F	P		P	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: REGO VARIANT OF COWLEY.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	DEL BONITA (DLB)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM EOLIAN	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-12	10YR 2/2	VERY DARK BROWN	MFGR	FR	L	4.6	6.4		
BM	12-27	10YR 4/2	DARK GRAYISH BROWN	WFPR	FR	L	1.2	6.2		
CCA	27-100	10YR 5/2	GRAYISH BROWN	MA	FR	L		7.5		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G	G	F				F (Topsoil)
BM	12-27	G	G		F				F (Subsoil)
CCA	27-100	G	G		G				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	12 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.033
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DESICCATION CRACKS CAUSE TOPSOIL TO SLOUGH INTO THE CK HORIZON, CAUSING VARIABLE TOPSOIL THICKNESS AND DIFFICULTY IN SEPARATING TOPSOIL AND SUBSOIL BY COLOR.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	HILLMER	(HLM)	LANDFORM:	FANS, APRONS
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM FLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 2/1	BLACK	MFGR	FR	L	5.8	6.4			
BM	10-50	10YR 5/3	BROWN	WFPR	FR	L		6.2			
CCA	50-100	10YR 5/2	GRAYISH BROWN	MA	FR	L		7.4			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G	G	F				F (Topsoil)
BM	10-50	G	G		F				F (Subsoil)
CCA	50-100	G	G		G				G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	8-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: HILLMER SOILS ARE DEVELOPED ON MEDIUM TEXTURED SLOPEWASH DERIVED FROM LOESSIAL MATERIAL. THESE SOILS ARE FOUND IN UNGLACIATED REGIONS WHERE DOWNCUTTING AND BACKCUTTING DUE TO EROSIONAL PROCESSES HAVE PRODUCED FANS AND APRONS.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	JOANTO	(JAT)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	FINE LACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHG	0-15	10YR 2/1	BLACK	WFGR	FR	SIL	8.7	7.			
CKG	15-120	10YR 5/1	GRAY	MA	F	SICL		7.5			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHG	0-15	G	G	G	G				G (Topsoil)
CKG	15-120	F	F		G				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK: -
 WATER EROSION K=: -
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	KNIGHT	(KNT)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	NON
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-15	10YR 2/1	BLACK	WFGR	FR	SL	3.5	6.2		
BM	15-50	10YR 3/3	DARK BROWN	WFPR	FR	SL		6.5		
CCA	50-120	10YR 6/3	PALE BROWN	SGR	FR	SL		7.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G	G	F				F (Topsoil)
BM	15-50	G	G		G				G (Subsoil)
CCA	50-120	G	G		G				G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.013
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS ARE DEVELOPED ON SANDY LOAM TEXTURED ICE-CONTACT OR FLUVIAL MATERIALS. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	KNIGHT-CO	(coKNT)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-15	10YR 2/1	BLACK	SGR	L	LS		6.2		
BM	15-50	10YR 3/3	DARK BROWN	SGR	L	LS		6.5		
CCA	50-120	10YR 6/3	PALE BROWN	SGR	L	LS		7.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	F	P		F				P (Topsoil)
BM	15-50	F	P		G				P (Subsoil)
CCA	50-120	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.013
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF KNIGHT SOILS WHICH HAS COARSER THAN NORMAL TEXTURES.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	KNIGHT-ZR	(zrKNT)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	NON
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-15	10YR 2/1	BLACK	WFGR	FR	SL	3.5	6.2		
CK	15-120	10YR 6/3	PALE BROWN	SGR	FR	SL		7.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G	G	F				F (Topsoil)
CK	15-120	G	G		G				G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.013
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: REGO VARIANT OF KNIGHT.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	NORTH FORK (NFK)	LANDFORM:	VENEER
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	6-70%
SOIL CLASSIFICATION:	ORTHIC EUTRIC BRUNISOL	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM TILL/BEDROCK	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-5	10YR 2/2	VERY DARK BROWN	MMGR	FR	SCL	7.	7.1		
BM	5-14	10YR 4/3	BROWN-DARK BROWN	MFSBK	F	SCL	2.6	6.8		
BC	14-32	10YR 5/3	BROWN	WFSBK	F	CL	1.5	7.6		
CK1	32-57	10YR 5/2	GRAYISH BROWN	SGR	L	GRL		7.7		
CK2	57-85	10YR 5/3	BROWN	SGR	L	GRSL		7.9		
R	85-100	/				R				

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-5	G	F	G	G				F (Topsoil)
BM	5-14	F	F		G				F (Subsoil)
BC	14-32	F	F		F				F (Subsoil)
CK1	32-57	F	P		F				P (Subsoil)
CK2	57-85	F	P		F				P (Subsoil)
R	85-100		U						U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 4-9 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: TOPOGRAPHY, VERY THIN, STONY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: YES
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: DEVELOPED ON A VENEER OF MEDIUM TEXTURED TILL, WITH 20-40% COARSE FRAGMENTS, OVER LITHIC BEDROCK. INCREASING SAND AND COARSE FRAGMENT CONTENT WITH DEPTH SHOW THE INFLUENCE OF THE UNDERLYING SANDSTONE BEDROCK.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	OCKEY	(OKY)	LANDFORM:	VERNEER, RIDGED
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	15-70%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM TILL/BEDROCK		SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-11	10YR 2/1	BLACK	MMGR	FR	SCL	8.	6.2		
AB	11-23	10YR 5/2	GRAYISH BROWN	MCSBK	F	CL	2.6	5.8		
BM	23-40	10YR 5/3	BROWN	MFSBK	F	CL	2.1	5.9		
BC	40-52	10YR 5/3	BROWN	WFSBK	FR	L	1.8	7.3		
2BC1	52-67	10YR 4/3	BROWN-DARK BROWN	SGR	L	GRSIL		7.8		
2BC2	67-80	10YR 4/3	BROWN-DARK BROWN	SGR	L	GRSIL		7.9		
R	80-100	/				R				

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-11	G	F	G	F				F (Topsoil)
AB	11-23	F	F		F				F (Subsoil)
BM	23-40	F	F		F				F (Subsoil)
BC	40-52	G	G		G				G (Subsoil)
2BC1	52-67	F	P		F				P (Subsoil)
2BC2	67-80	F	P		F				P (Subsoil)
R	80-100		U						U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: TOPOGRAPHY, STONY
 GRAVELLY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: YES
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: DEVELOPED ON A VENEER OF MEDIUM TEXTURED TILL OVER LITHIC BEDROCK.
 CALCAREOUS RESIDUAL MATERIAL (IIBC HORIZONS) IS A WEAKLY WEATHERED
 "RIND" ON THE UNDERLYING BEDROCK WHICH IS SHALE AND SANDSTONE STRATA.
 THE COARSE FRAGMENT CONTENT INCREASES WITH DEPTH. AH MATERIAL OFTEN
 TONGUES DOWN TO THE BC HORIZON.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	OCKEY-GR	(groKY)	LANDFORM:	VENEER, RIDGED
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	15-70%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, MEDIUM		SURFACE STONINESS:	EXCEEDINGLY
	TILL/BEDROCK			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	GRSL-L		7.7	0.8	54.	0.1
BMK	12-25	10YR 4/2	DARK GRAYISH BROWN	WMFR	F	GRSL		8.1	0.3	49.	0.1
CK	25-90	10YR 4/2	DARK GRAYISH BROWN	MA	VF	GRSL		8.2	0.6	38.	0.7
2CK	90-200	10YR 4/2	DARK GRAYISH BROWN	MA	EH	SIC		8.2	0.5	43.	0.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	U		F	G	G	G	P (Topsoil)
BMK	12-25	F	P		F	G	G	G	P (Subsoil)
CK	25-90	P	P		F	G	G	G	P (Subsoil)
2CK	90-200	U	P		F	G	G	G	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: TOPOGRAPHY, STONY
 GRAVELLY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: YES
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: YES
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF OCKEY THAT HAS GRAVELLY LAYERS TO THE SURFACE. UPPER MATERIAL IS GRAVELLY MEDIUM TEXTURED TILL AND MAY BE UNSTABLE ON EXPOSED FACES. THE UNDERLYING LITHIC BEDROCK IS SILTY CLAY TEXTURED BUT EXTREMELY HARD.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	OCKEY-ZR	(zrOKY)	LANDFORM:	VENEER, RIDGED
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	15-70%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM TILL/BEDROCK		SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-11	10YR 2/1	BLACK	MMGR	FR	SCL	8.	6.2		
C	11-52	10YR 5/3	BROWN	WFSBK	FR	L	1.8	7.3		
2C1	52-67	10YR 4/3	BROWN-DARK BROWN	SGR	L	GRSIL		7.8		
2C2	67-80	10YR 4/3	BROWN-DARK BROWN	SGR	L	GRSIL		7.9		
R	80-100	/								

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-11	G	F	G	F				F (Topsoil)
C	11-52	G	G		G				G (Subsoil)
2C1	52-67	F	P		F				P (Subsoil)
2C2	67-80	F	P		F				P (Subsoil)
R	80-100		U						U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	TOPOGRAPHY, STONY
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	YES
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	YES
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: REGO VARIANT OF OCKEY. THESE SOILS HAVE NO B HORIZON.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	OLDMAN (ODM)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-14	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	SIL		8.	0.9	51.	0.1
CK1	14-40	10YR 3/3	DARK BROWN	MA	FR	SIL		8.1	1.2	55.	0.1
CK2	40-60	10YR 6/3	PALE BROWN	MA	FR	FSL		8.2	1.	34.	0.9
CK3	60-95	10YR 5/3	BROWN	MA	FR	SIL		8.1	1.4	40.	2.3
CK4	95-110	10YR 5/3	BROWN	MA	FR	FSL		8.	1.2	33.	2.5
CK5	110-200	10YR 5/3	BROWN	MA	F	CL		8.	1.3	42.	1.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-14	G	G		F	G	G	G	F (Topsoil)
CK1	14-40	G	G		F	G	G	G	F (Subsoil)
CK2	40-60	G	G		F	G	G	G	F (Subsoil)
CK3	60-95	G	G		F	G	G	G	F (Subsoil)
CK4	95-110	G	G		F	G	G	G	F (Subsoil)
CK5	110-200	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	13 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS OCCUR IN FLUVIAL AND ICE CONTACT TERRAIN. THE APK HORIZON, A MIXTURE OF THE ORIGINAL A PLUS CALCAREOUS DRIFT AND BM MATERIAL, HAS BEEN SLIGHTLY COMPACTED.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	OWENDALE	(OWD)	LANDFORM:	INCLINED
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	5-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM SOFTROCK		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-10	10YR 2/1	BLACK	WFGR	FR	SIL	4.1	7.		
BM	10-30	2.5Y 5/4	LIGHT OLIVE BROWN	WFSBK	FR	SIL		7.3		
CCA	30-120	2.5Y 6/4	LIGHT YELLOWISH BROWN	MA	FR	SIL		8.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G	G	G				G (Topsoil)
BM	10-30	G	G		G				G (Subsoil)
CCA	30-120	G	G		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: YES
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SILT LOAM TEXTURED SOFTROCK, LITHIC BEDROCK MAY OCCUR AT 1 M.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	OXLEY	(OXY)	LANDFORM:	INCLINED
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	9-30%
SOIL CLASSIFICATION:	SOLONETZIC BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM SOFTROCK			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-5	10YR	3/2	VERY DARK GRAYISH BROWN	WFGR	FR	CL					
BTNJ	5-20	10YR	4/2	DARK GRAYISH BROWN	WMCOL	VF	CL					
CSK	20-80	10YR	3/3	DARK BROWN	MA	F	CL		8.3	5.1	80.	6.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-5	G	F						F (Topsoil)
BTNJ	5-20	P	F						P (Subsoil)
CSK	20-80	F	F		F	P	P	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY LOAM TO LOAM TEXTURED SOFTROCK, LITHIC BEDROCK MAY OCCUR AT 1 M. SEPARATION OF TOPSOIL AND SUBSOIL BY COLOR IS DIFFICULT. THE BTNJ HORIZON HAS SOLONETZIC TENDENCIES. THE LOWER SUBSOIL IS MODERATELY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	PINCHER	(PNR)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-15	10YR 2/1	BLACK	MFGR	F	SICL	4.6	6.3		
BM	15-50	10YR 4/3	DARK BROWN	WMPR	F	SIC	1.2	6.5		
CCA	50-120	10YR 4/2	DARK GRAYISH BROWN	MA	F	SIC		7.4		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	P	F	G	F				P (Topsoil)
BM	15-50	F	P		G				P (Subsoil)
CCA	50-120	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-25 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.021
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON CLAY TO HEAVY CLAY TEXTURED MATERIAL. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	RINARD	(RND)	LANDFORM:	BLANKET, TERRACE
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, VERY COARSE		SURFACE STONINESS:	SLIGHTLY
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-13	10YR	2/1	BLACK	SGR	L	GRL	7.9	6.3		
BM	13-22	10YR	5/3	BROWN	SGR	L	VGL	3.1	6.2		
BMK	22-33	10YR	5/3	BROWN	SGR	L	VGSL	2.5	7.3		
CK	33-100	10YR	5/2	GRAYISH BROWN	SGR	L	VGL		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	F	P	G	F				P (Topsoil)
BM	13-22	F	U		F				U (Subsoil)
BMK	22-33	F	U		G				U (Subsoil)
CK	33-100	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	VERY THIN
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.017
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON SAND TO SANDY LOAM TEXTURED MATERIAL WITH 30 TO 80% GRAVELS.
THE COARSE TEXTURES CAUSE EXPOSED FACES TO BE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	RINARD-CA (caRND)	LANDFORM:	BLANKET, TERRACE
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-9%
SOIL CLASSIFICATION:	CALCAREOUS BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-13	10YR 2/1	BLACK	SGR	L	GRL	7.9	6.3			
BMK	13-33	10YR 5/3	BROWN	SGR	L	VGSL	2.5	7.3			
CK	33-100	10YR 5/2	GRAYISH BROWN	SGR	L	VGSL		7.6			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-13	F	P	G	F				P (Topsoil)
BMK	13-33	F	U		G				U (Subsoil)
CK	33-100	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	5-15 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	VERY THIN
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.017
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: CALCAREOUS VARIANT OF RINARD.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	ROCKFORD (RFD)	LANDFORM:	HUMMOCKY, RIDGED
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	6-20%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, MEDIUM GLACIOFLUVIAL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-10	10YRm 2/2	VERY DARK BROWN	SMSBK	H	L	4.02	7.4		
BM1	10-30	10YRm 4/3	BROWN-DARK BROWN	MMPR	H	L	0.99	7.2		
BM2	30-45	10YRm 3/3	DARK BROWN	MMPR	SLH	SL	0.84	7.2		
CK1	45-105	10YRm 5/4	YELLOWISH BROWN	MA	L	GRSL		7.7	0.5	
CK2	105-132	10YRm 5/4	YELLOWISH BROWN	MA	VFR	GRL		7.6	0.5	
CK3	132-180	10YRm 4/4	DARK YELLOWISH BROWN	MA	FR	GRCL		7.7	0.5	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	F	G	G	G				F (Topsoil)
BM1	10-30	F	G		G				F (Subsoil)
BM2	30-45	G	G		G				G (Subsoil)
CK1	45-105	F	P		F	G			P (Subsoil)
CK2	105-132	G	P		F	G			P (Subsoil)
CK3	132-180	G	P		F	G			P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON LOAM TO SANDY LOAM TEXTURED ICE CONTACT MATERIAL WITH
 10 TO 40% GRAVELS. EXPOSED FACES MAY BE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	SAKALO	(SAK)	LANDFORM:	VENEER
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM GLACIOFLUVIAL/VERY		SURFACE STONINESS:	NON
	COARSE GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-12	10YR 2/1	BLACK	MFGR	FR	L	4.1	6.5		
BM	12-37	10YR 5/3	BROWN	WFSBK	FR	L		6.5		
CCA	37-120	10YR 5/4	YELLOWISH BROWN	SGR	L	LS		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G	G	G				G (Topsoil)
BM	12-37	G	G		G				G (Subsoil)
CCA	37-120	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON LOAM TEXTURED MATERIAL OVER LOAMY SAND TEXTURED MATERIAL.
EXPOSED FACES MAY BE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	SHANDOR	(SND)	LANDFORM:	UNDULATING, INCLINED
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	FINE SOFTROCK		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-10	10YR 3/2	VERY DARK GRAYISH BROWN	WFSBK	F	SIC	3.5	6.5		
BM	10-35	10YR 4/2	DARK GRAYISH BROWN	MFSBK	F	SIC		7.		
CCA	35-120	10YR 5/4	LIGHT OLIVE BROWN	MA	F	SIC		7.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	P	P	G	G				P (Topsoil)
BM	10-35	F	P		G				P (Subsoil)
CCA	35-120	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	10 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.020
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	YES
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON SILTY CLAY TEXTURED, SLOPEWASH MATERIAL DERIVED FROM BEDROCK. LITHIC MATERIAL MAY OCCUR IN PLACES. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	STANDOFF	(SOF)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-17	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	5.2	5.8			
BM	17-60	10YR 3/3	DARK BROWN	MFPR	FR	L	1.2	6.			
CCA	60-120	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	CL		7.4			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-17	G	G	G	F				F (Topsoil)
BM	17-60	G	G		F				F (Subsoil)
CCA	60-120	F	F		G				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: OCCURS ON THE MILK RIVER UPLAND AND IS MOSTLY USED FOR PASTURE.

INTERPRETATION GUIDELINES

SCA 5

09/01/93

SOIL SERIES:	STANDOFF-CA (caSOF)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	CALCAREOUS BLACK	USUAL SOIL MOISTURE:	MESIC
	CHERNOZEMIC	SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY FINE		
	GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-17	10YR	3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	5.2	5.8		
BMK	17-60	10YR	3/3	DARK BROWN	MFPR	FR	L	1.2	6.		
CCA	60-120	10YR	6/4	LIGHT YELLOWISH BROWN	MA	F	CL		7.4		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-17	G	G	G	F				F (Topsoil)
BMK	17-60	G	G		F				F (Subsoil)
CCA	60-120	F	F		G				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-25 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: CALCAREOUS VARIANT OF STANDOFF.

2.6 Soil Correlation Area #6

General Description of the Area

The Thin Black Soil Zone of South-Central Alberta. SCA 6 is the central section of the Thin Black Soil Zone, extending from Nanton to Trochu.

Ecoregion/Climate

- This area receives less precipitation than the Thick Black Soil Zone, but appreciably more than the Dark Brown Soil Zone. SCA 6 is partly in the Fescue Grass Ecoregion and partly in the Aspen Parkland Ecoregion (Strong and Leggatt 1992).
- The influence of chinook winds decreases from south to north. Snow cover is usually present throughout the winter in the north part (in the Parkland Ecoregion) of SCA 6. Growing season moisture deficits also decrease from south to north.
- Agroclimate is 2AH (slight moisture and heat limitations).
- Growing P-PE = -200 to -300 mm.

Soils and Landscapes

- Soils in SCA 6 are dominantly Chernozemic while a few Solonetzic and other salt-affected soils are also present.
- The surface soil horizon is black, but is thin (less than 15 cm) compared to the thick Blacks to the west. Soil profile development extends to a depth of 45 cm.
- Landscapes are comprised of undulating moraine (till) with veneers and blankets of glaciolacustrine deposits over till. Small amounts of till blankets over rolling bedrock are also present.

Soil Reclamation Issues

- Potential for soil erosion by water is low.
- Potential for soil erosion by wind is moderate although severe soil disturbance will cause soil to be at a high degree of risk.
- Salt-affected soils do require special attention in local areas.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	ACADEMY	(ADY)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MMGR	FR	L		6.7	0.4	54.	0.
BM	25-40	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	FR-F	L		7.	0.4	50.	0.
CK	40-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	FR-F	L		7.6	1.4	43.	1.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G		G	G	G	G	G (Topsoil)
BM	25-40	F	G		G	G	G	G	F (Subsoil)
CK	40-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON LOAM TEXTURED TILL. TOPSOIL IS EASILY DISTINGUISHED FROM SUBSOIL BY COLOR.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	ACADEMY-GL	(glADY)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MMGR	FR	L		6.7	0.4	54	0.
BMGJ	25-40	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	FR-F	L		7.	0.4	50	0.
CKGJ	40-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	FR-F	L		7.6	1.4	43	1.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G		G	G	G	G	G (Topsoil)
BMGJ	25-40	F	G		G	G	G	G	F (Subsoil)
CKGJ	40-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED PHASE OF ACADEMY. THESE SOILS EXHIBIT GLEYING AND MOTTLING FEATURES, ARE IMPERFECTLY DRAINED AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	ACADEMY-SA (saADY)	LANDFORM:	UNDULATING, HUMMOCKY
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
APSA	0-20	10YR 2/1	BLACK	WFGR	FR	L		7.7		
BMSA	20-36	10YR 3/2	VERY DARK GRAYISH BROWN	MMSBK	FR	L		7.9		
CCASA	36-75	2.5Y 6/4	LIGHT YELLOWISH BROWN	MA	FR	L		8.4	3.7	9.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-20	G	G		F				P (Topsoil)
BMSA	20-36	G	G		F				P (Subsoil)
CCASA	36-75	G	G		F	F		P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF ACADEMY THAT IS SALINE AND/OR SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	BEDDINGTON (BED)	LANDFORM:	UNDULATING
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-15%
SOIL CLASSIFICATION:	BLACK SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-22	10YR 2/1	BLACK	MFGR	FR	CL		8.	8.2	12.
BNT	22-40	10YR 2/2	VERY DARK BROWN	MMSBK	VF	L		8.1	15.1	18.7
CSK	40-100	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.7	9.1	15.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	F		F	U		P	U (Topsoil)
BNT	22-40	P	G		F	U		U	U (Subsoil)
CSK	40-100	F	F		P	P		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT HORIZON HAS AN UNDESIREABLE STRUCTURE. ORGANIC STAININGS MAY MAKE SEPARATION OF TOPSOIL AND SUBSOIL BY COLOR DIFFICULT UNLESS AN AE HORIZON IS PRESENT. THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	BOW VALLEY (BOV)	LANDFORM:	TERRACED
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE FLUVIAL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-14	10YRm 2/1	BLACK	WFGR	VFR	L	3.9	7.4		
BM	14-25	10YRm 4/4	DARK YELLOWISH BROWN	MMPR	VFR	L-SIL	1.5	7.3		
CK	25-120	10YRm 5/2	GRAYISH BROWN	SGR	L	GR		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	G	G	G	G				G (Topsoil)
BM	14-25	G	G		G				G (Subsoil)
CK	25-120	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.017
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON GRAVEL TERRACES IN THE BOW VALLEY. THE SOIL OFTEN HAS 30 TO 50 CM OF A LOAM TO SANDY LOAM TEXTURED, STONE-FREE CAPPING MATERIAL SURFACE OVER THE GRAVEL. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	BOW VALLEY-ZR (zrBOV)	LANDFORM:	TERRACED
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE FLUVIAL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-14	10YRm 2/1	BLACK	WFGR	VFR	L	3.9	7.4		
CK	14-120	10YRm 5/2	GRAYISH BROWN	SGR	L	GR		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	G	G	G	G				G (Topsoil)
CK	14-120	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.017
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: REGO VARIANT OF BOW VALLEY. THESE SOILS LACK A B HORIZON BUT MAY HAVE SOME STONE-FREE CK MATERIAL ON TOP OF THE GRAVEL.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	DELACOUR (DEL)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-17	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		6.4	0.7	52.	0.3
BM	17-45	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	FR-F	L		6.6	0.5	36.	1.1
CK	55-100	10YR 6/4	LIGHT YELLOWISH BROWN	MA	FR-F	L		7.7	2.2	38.	0.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	G		F	G	G	G	F (Topsoil)
BM	17-45	F	G		G	G	G	G	F (Subsoil)
CK	55-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAM TEXTURED TILL. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS OBVIOUS.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	DELACOUR-GL (glDEL)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-17	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		6.4	0.7	52.	0.3
BMGJ	17-55	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	FR-F	L		6.6	0.5	36.	1.1
CKGJ	55-100	10YR 6/4	LIGHT YELLOWISH BROWN	MA	FR-F	L		7.7	2.2	38.	0.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	F	G		F	G	G	G	F (Topsoil)
BMGJ	17-55	G	G		G	G	G	G	G (Subsoil)
CKGJ	55-100	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF DELACOUR. THESE SOILS ARE IMPERFECTLY DRAINED,
 EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND USUALLY OCCUR
 IN LOWER SLOPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	HAPPY VALLEY (HPV)	LANDFORM:	TERRACE, DELTA
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-15%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE	SURFACE STONINESS:	NON
	GLACIOFLUVIAL/TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APKJ	0-14	10YRm 3/2	VERY DARK GRAYISH BROWN	SGR	VFR	SL	3.63	7.4			
CK	14-100	10YRm 5/3	BROWN	SGR	VFR	SL-LS		7.6			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APKJ	0-14	G	G	G	G				G (Topsoil)
CK	14-100	G	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.022
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE FOUND ON OUTWASH PLAINS, TERRACES AND DELTAS ADJACENT TO MAJOR GLACIAL OUTWASH CHANNELS. THEY CAN ALSO OCCUR ON IRREGULAR RIDGES, WHICH MAY BE ESKERS OR DUNES. THEY ARE DEVELOPED ON SANDY TO COARSE LOAMY TEXTURED MATERIAL WITH A HIGH SILT CONTENT. EXPOSED FACES MAY BE UNSTABLE. THE UPPER METRE IS, THEREFORE, HIGHLY VARIABLE IN TEXTURE, BUT FAIRLY UNIFORM TEXTURED TILL IS ENCOUNTERED WITHIN 0.5 TO 1.5 M OF THE SURFACE.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	INDUS (IND)	LANDFORM:	LEVEL
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	HUMIC LUVIC GLEYSOL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-17	10YRm 2/1	BLACK	MFGR	FR	SICL	4.74	6.1		
AHEG	17-24	10YRm 3/1	VERY DARK GRAY	MFPL	FR	SIL	1.71	6.2		
AEG1	24-33	10YRm 5/1	GRAY	SFPL	VFR	SIL	0.62	6.3		
AEG2	33-48	10YRm 4/1	DARK GRAY	SFPL	FR	SICL	0.53	6.3		
BTG	48-110	10YRm 3/1	VERY DARK GRAY	MFSBK	F	CL	0.57	6.2		
CKG	110-150	2.5Ym 4/2	DARK GRAYISH BROWN	MA	F	L		7.		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-17	G	F	G	F				F (Topsoil)
AHEG	17-24	G	G	F	F				F (Topsoil)
AEG1	24-33	G	G	P	F				P (Topsoil)
AEG2	33-48	G	F	P	F				P (Topsoil)
BTG	48-110	F	F		F				F (Subsoil)
CKG	110-150	F	G		G				G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=: -
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	KEOMA	(KEO)	LANDFORM:	VDNEER, LEVEL,
SOIL ZONE:	THIN BLACK			UNDULATING
SOIL CLASSIFICATION:	GLEIED BLACK SOLODIZED		TYPICAL SLOPES:	0-5%
	SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		7.5	0.7	59.	0.9
BNTGJ	28-50	10YR 5/3	BROWN	COL	VF	CL		7.6	3.4	54.	5.1
IICSGJ	50-100	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	CL		8.	3.5	60.	7.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G		G	G	G	G	G (Topsoil)
BNTGJ	28-50	P	F		F	F	G	F	P (Subsoil)
IICSGJ	50-100	F	F		F	F	F	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT HORIZON HAS AN UNDESIREABLE STRUCTURE. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT UNLESS AN AE HORIZON IS PRESENT. THE LOWER SUBSOIL IS SALINE AND SODIC. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES AND GENERALLY OCCUR IN LOWER LANDSCAPE POSITIONS. TEXTURES ARE UNIFORM.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	NOSE CREEK-AA (aaNSK)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-35	10YR 2/1	BLACK	WFGR	FR	L		7.4	0.6	55.	0.3
CK1	35-75	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	0.7	42.	1.
CK2	75-140	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.1	0.9	64.	1.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-35	G	G		G	G	G	G	G (Topsoil)
CK1	35-75	F	F		F	G	G	G	F (Subsoil)
CK2	75-140	F	F		F	G	F	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.030
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: HOME SCA IS 9. DEVELOPED ON LOAM TO CLAY LOAM TEXTURED TILL. TOPSOIL IS EASILY SEPARATED FROM SUBSOIL BY COLOR.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	ROCKYVIEW (RKV)	LANDFORM:	VDNEER, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	MEDIUM	USUAL SOIL MOISTURE:	MESIC
	GLACIOLACUSTRINE/TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-15	10YRd 2/1	BLACK	MFGR	VFR	SIL	6.61	7.4		
BM	15-40	10YRm 4/4	DARK YELLOWISH BROWN	SMPR	FR	SIL	1.53	7.4		
IICK	40-60	2.5Ym 5/4	LIGHT YELLOWISH BROWN	MA	F	CL		7.9		
IICCA	60-120	2.5Ym 5/4	LIGHT YELLOWISH BROWN	MA	F	CL		7.8		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G	G	G				G (Topsoil)
BM	15-40	G	G		G				G (Subsoil)
IICK	40-60	F	F		F				F (Subsoil)
IICCA	60-120	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.030
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON A VDNEER OF SILT LOAM TEXTURED MATERIAL OVER CLAY LOAM
 TEXTURED TILL. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS OBVIOUS.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	THREE HILLS (THH)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	2-15%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	USUAL SOIL MOISTURE:	MOIST
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-20	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR-F	SIC		7.5	0.6	84.	1.1
BM	20-32	10YR 4/2	DARK GRAYISH BROWN	MMSBK	F	HC		7.7	0.7	87.	1.7
CK	32-100	10YR 4/2	DARK GRAYISH BROWN	MA	F	HC		7.8	0.8	92.	2.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	P	P		G	G	P	G	P (Topsoil)
BM	20-32	F	P		F	G	P	G	P (Subsoil)
CK	32-100	F	P		F	G	P	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON HEAVY CLAY TEXTURED MATERIAL. SEPARATION OF TOPSOIL FROM SUBSOIL IS DIFFICULT.

INTERPRETATION GUIDELINES

SCA 6

09/01/93

SOIL SERIES:	TWINING (TWG)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	SOLONETZIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/1	VERY DARK GRAY	MFGR	FR	SICL-SIC		5.9	1.1	43.	
BTNJ	12-90	10YR 4/2	DARK GRAYISH BROWN	MFSBK	F	C		8.4	1.4	96.	9.2
CSK	90-110	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		7.8	9.1	58.	9.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	P		F	G	G		P (Topsoil)
BTNJ	12-90	F	P		F	G	P	P	P (Subsoil)
CSK	90-110	F	P		F	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNTJ HORIZON HAS WEAK SOLONETZIC TENDENCIES. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS SALINE AND SODIC.

2.7 Soil Correlation Area #7

General Description of the Area

- The Thin Black Soil Zone of east-central Alberta.
- Extends northeast from Trochu, through Sedgewick to Lloydminster.

Ecoregion/Climate

- Aspen Parkland ecoregion (transition between boreal forest and grassland).
- Agroclimate is 2H (slight heat limitation).
- Growing season P-PE= -200 to -250 mm.
- July is the wettest month in the Aspen Parkland whereas precipitation in the grassland areas is greatest during June.
- Cooler temperatures and less influence by chinook winds causes snow cover to remain longer than in the Dark Brown and southern Thin Black Soil Zones.

Soils and Landscapes

- Soils in SCA 7 are mostly Chernozemic, although Solonetzic soils occur extensively on the Daysland Plain.
- Profile development is generally 60 cm deep with approximately 15 cm of black colored A horizon.
- Undulating to hummocky and rolling morainal (till) landscapes are most common while the undulating Daysland Plain is composed of veneers and blankets of till over fine textured, saline and sodic softrock.

Soil Reclamation Issues

- Solonetzic soils, shallow soils with saline and sodic softrock, and others with highly saline and sodic subsoils may require special soil handling.
- Soil erosion by water is generally low while some areas have a moderate risk. The actual risks however, depend on local slope variations.
- The potential for soil erosion by wind is low for the most part. A moderate risk occurs for the southern-most portion where chinooks and higher wind speeds are more frequent. Sandy areas south of Wainwright have a high potential for soil erosion.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	AMITY	(AMT)	LANDFORM:	VENEEER, UNDULATING
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM GLACIOLACUSTRINE/ GLACIOFLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR 3/1	VERY DARK GRAY	WFG	VFR	L	2.7	6.	0.3	48.	0.1
BM	22-60	10YR 5/4	YELLOWISH BROWN	WFSBK	FR	L		6.9	0.2	36.	0.3
IIBC	60-120	10YR 5/6	YELLOWISH BROWN	MA	VFR	SL		7.	0.2	31.	0.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	G	G	F	G	G	G	F (Topsoil)
BM	22-60	G	G		G	G	G	G	G (Subsoil)
IIBC	60-120	G	G		G	G	G	G	G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: DEVELOPED ON A LOAM TEXTURED GLACIOLACUSTRINE VENEER OVER SANDY LOAM
 TEXTURED GLACIOFLUVIAL MATERIAL. THE LOWER MATERIAL MAY CAUSE UNSTABLE
 EXPOSED FACES.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	BELLSHILL (BEL)	LANDFORM:	BLANKET, UNDULATING
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR	3/1	VERY DARK GRAY	WFGR	VFR	L	4.3	6.1	0.4	52.	0.3
BM	18-50	10YR	5/4	YELLOWISH BROWN	WFSBK	FR	L-CL		6.9	0.3	47.	0.3
BC	50-120	10YR	5/3	BROWN	MA	F	L-CL		7.2	0.3	33.	0.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G	G	F	G	G	G	F (Topsoil)
BM	18-50	G	F		G	G	G	G	F (Subsoil)
BC	50-120	F	F		G	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: TOPSOILS ARE EASILY DISTINGUISHED FROM SUBSOILS BY COLOR.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	BIGKNIFE-AA (aaBKF)	LANDFORM:	APRON
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC REGOSOL (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MEDIUM FLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-7	10YR 2/1	BLACK	WFGR	FR	L		6.6	0.3	102.	7.
BG/CG	22-55	10YR 3/3	DARK BROWN	MA	F	CL		5.8	0.4	64.	2.7
CKG	70-120	2.5Y 4/4	OLIVE BROWN	MA	F	SIL		8.3	1.	74.	11.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-7	G	G		G	G	P	F	P (Topsoil)
BG/CG	22-55	F	F		F	G	F	G	F (Subsoil)
CKG	70-120	F	G		F	G	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 7 cm
 THICKNESS RANGE: 5-8 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 4. THESE SOILS ARE BANDED WITH TEXTURES RANGING FROM FINE SAND TO SANDY LOAM AND SILTY CLAY LOAMS. BEDROCK CAN BE ENCOUNTERED AT DEPTHS GREATER THAN 1 M. BIGKNIFE SOILS ARE ASSOCIATED WITH ROUGH BROKEN TERRAIN AND BEDROCK ESCARPMENTS. THESE SOILS ARE WEAKLY SALINE AND MODERATELY SODIC.

INTERPRETATION GUIDELINES

BLAINE LAKE

SCA 7

09/01/93

SOIL SERIES:	BLAINE LAKE (BLL)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 3/1	VERY DARK GRAY	WFGR	VFR	L	2.	6.4	0.4	40.	0.6
BT	15-50	10YR 5/4	YELLOWISH BROWN	WFSBK	FR	L		7.1	0.3	39.	0.5
BC	50-80	10YR 5/4	YELLOWISH BROWN	MA	VFR	L		7.8	0.5	39.	1.
CCA	80-120	10YR 5/3	BROWN	MA	FR	L		8.2	0.9	37.	3.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	F	F	G	G	G	F (Topsoil)
BT	15-50	G	G		G	G	G	G	G (Subsoil)
BC	50-80	G	G		F	G	G	G	F (Subsoil)
CCA	80-120	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: GOOD AGRICULTURAL SOIL. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS OBVIOUS.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	CAMP LAKE (CPL)	LANDFORM:	UNDULATING, TERRACES
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR	2/1	BLACK	SGR	L	LCS	1.	7.2	0.3	23.	0.1
BM	15-68	10YR	4/4	DARK YELLOWISH BROWN	SGR	L	LCS		7.4	0.2	20.	0.2
CK	68-140	2.5Y	5/4	LIGHT OLIVE BROWN	SGR	L	LCS		7.9	0.2	21.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	F	P	F	G	G	F	G	P (Topsoil)
BM	15-68	F	P		G	G	P	G	P (Subsoil)
CK	68-140	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.020
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAMY SAND TEXTURED MATERIAL. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	CAMP LAKE-XT (xtCPL)	LANDFORM:	UNDULATING, TERRACES
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE GLACIOFLUVIAL/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 2/1	BLACK	SGR	L	LCS	1.	7.2	0.3	23.	0.1
BM	15-68	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	LCS		7.4	0.2	20.	0.2
CK	68-90	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	LCS		7.9	0.2	21.	0.3
2CK	90-140	2.5Y 4/4	OLIVE BROWN	MA	F	CL					

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	F	P	F	G	G	F	G	P (Topsoil)
BM	15-68	F	P		G	G	P	G	P (Subsoil)
CK	68-90	F	P		F	G	F	G	P (Subsoil)
2CK	90-140	F	F						F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF CAMP LAKE THAT HAS TILL WITHIN 1 M OF THE SURFACE.
 EXPOSED FACES OF THE UPPER MATERIAL ARE UNSTABLE. THE UNDERLYING TILL
 IS NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	CORDEL	(COR)	LANDFORM:	LEVEL
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	1-2%
SOIL CLASSIFICATION:	HUMIC LUVIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-12	10YR 2/1	BLACK	WFGR	FR	L	6.	5.		1.	
BTG	28-480	10YR 5/2	GRAYISH BROWN	WMSBK	F	CL	1.	6.		2.	
CKG	48-120	10YR 5/1	GRAY	MA	F	CL		7.			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G	G	P			G	P (Topsoil)
BTG	28-480	F	F		F			G	F (Subsoil)
CKG	48-120	F	F		G				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 12 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	DAYSLAND (DYD)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	BLACK SOLOD	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-20	10YR 2/1	BLACK	MMGR	FR	L	3.	5.5			
BNT	35-55	10YR 3/2	VERY DARK GRAYISH BROWN	SCCOL	VF	CL	1.	7.5		14.	
CCASA	55-120	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.		6.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	G	G	G	F				F (Topsoil)
BNT	35-55	P	F		G			U	U (Subsoil)
CCASA	55-120	F	F		F			F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.037
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT STRUCTURE AND SODICITY IS UNDESIREABLE. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS WEAKLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	DAYS LAND-GL (glDYD)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEEYED BLACK SOLOD	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-20	10YR 2/1	BLACK	MMGR		L	3.				
BNTGJ	35-55	10YR 3/2	VERY DARK GRAYISH BROWN	SCCOL		CL	1.			14.	
CCASAGJ	55-120	2.5Y 4/4	OLIVE BROWN	MA		CL				6.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	G	G	G	F				F (Topsoil)
BNTGJ	35-55	P	F		G			U	U (Subsoil)
CCASAG	55-120	F	F		F			F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.037
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEEYED VARIANT OF DAYS LAND. THESE SOILS ARE IMPERFECTLY DRAINED,
 EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND USUALLY OCCUR
 IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	DESJARLAIS-AA (aaDSJ)	LANDFORM:	LEVEL, DEPRESSIONAL
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL (CARBONATED, SALINE)	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERTELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-47	10YR	2/1	BLACK	SGR	L	LS	2.1	5.6	0.3	48.	
BKG	47-90	10YR	5/2	GRAYISH BROWN	WMSBK	FR	SCL		8.	1.2	58.	17.
CKG	90-120	10YR	6/2	LIGHT BROWNISH GRAY	SGR	L	CS		8.4	1.2	52.	15.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-47	F	P	G	F	G	G		P (Topsoil)
BKG	47-90	G	F		F	G	G	U	U (Subsoil)
CKG	90-120	F	P		F	G	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 10-50 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 10. DEVELOPED ON SANDY LOAM TEXTURED MATERIAL. THE SOIL IS WEAKLY SALINE AND MODERATELY TO STRONGLY SODIC. SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	ELNORA	(EOR)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/2	VERY DARK BROWN	MF GR	FR	L	3.	6.6	0.6	46.	0.3
BM	18-48	10YR 5/4	YELLOWISH BROWN	MFSBK	F	CL	0.6	7.2	0.8	45.	0.3
CK	48-120	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	CL		7.7	3.3	46.	0.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G	G	G	G	G	G	G (Topsoil)
BM	18-48	F	F		G	G	G	G	F (Subsoil)
CK	48-120	F	F		F	F	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY LOAM TEXTURED TILL. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS OBVIOUS.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	ELNORA-ER (erEOR)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (ERODED)	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-7	10YR	2/2	VERY DARK BROWN	WFGR	FR	SL	2.1	6.2	0.3	37.	0.2
BM	7-30	10YR	5/4	YELLOWISH BROWN	WFSBK	FR	SL	1.1	6.6	0.6	43.	0.4
CK	30-120	10YR	6/4	LIGHT YELLOWISH BROWN	MA	F	L		7.9	0.5	44.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-7	G	G	G	F	G	G	G	F (Topsoil)
BM	7-30	G	G		G	G	G	G	G (Subsoil)
CK	30-120	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 7 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF ELNORA.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	ELNORA-GL	(gleOR)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR 2/2	VERY DARK BROWN	WFGR	FR	SL	2.1	6.2	0.3	37	0.2
BMGJ	13-36	10YR 5/4	YELLOWISH BROWN	WFSBK	FR	SL	1.1	6.6	0.6	43	0.4
CKGJ	36-120	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	L		7.9	0.5	44	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	G	G	F	G	G	G	F (Topsoil)
BMGJ	13-36	G	G		G	G	G	G	G (Subsoil)
CKGJ	36-120	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF ELNORA. THESE SOILS EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL, ARE IMPERFECTLY DRAINED AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	ELNORA-SC (scEOR)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (SALINE LOWER SUBSOIL)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/1	BLACK	MMGR	FR	L		5.7	0.3	64.	1.4
BM	18-40	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	F	L-CL		7.	3.2	58.	6.9
CSK	40-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	FR-F	L-CL		7.6	9.2	54.	13.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G		F	G	F	G	F (Topsoil)
BM	18-40	F	F		G	F	G	F	F (Subsoil)
CSK	40-100	F	F		F	P	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF ELNORA THAT HAS A SALINE LOWER SUBSOIL.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	FOREMAN	(FMN)	LANDFORM:	LEVEL
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	SOLONETZIC HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 2/1	BLACK	MFGR	FR	L	7.3	6.2	0.2	106	2.1
BGNJ	15-50	10YR 5/2	GRAYISH BROWN	MA	F	CL		7.4	1.9	86	14.3
CSKG	100-120	10YR 4/2	DARK GRAYISH BROWN	MA	F	SICL		7.7	4.4	104	11.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	P	G	P (Topsoil)
BGNJ	15-50	F	F		G	G	P	U	U (Subsoil)
CSKG	100-120	F	F		F	F	P	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.
 SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE B
 HORIZON HAS SOLONETZIC TENDENCIES AND IS VERY SODIC. THE LOWER SUBSOIL
 IS NON TO WEAKLY SALINE AND MODERATELY SODIC.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	HAIGHT-AA	(aaHGT)	LANDFORM:	LEVEL
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR	2/1	BLACK	MFGR	FR	L	3.	6.	1.1	47.	0.1
BTG	15-80	10YR	5/3	BROWN	WFSBK	F	C		6.9	0.4	61.	0.3
BCG	80-100	10YR	5/2	GRAYISH BROWN	MA	F	C		6.4	0.1	59.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	G	G	F (Topsoil)
BTG	15-80	F	P		G	G	F	G	P (Subsoil)
BCG	80-100	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-60 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 10. SOILS ARE FINE TEXTURED AND WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	HAIRY HILL-AA (aaHYL)	LANDFORM:	LEVEL
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL (CARBONATED, SALINE)	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHKS	0-18	10YR 2/1	BLACK	MFGR	FR	L	3.	8.	9.2	60.	13.
CSKG	18-46	10YR 4/2	DARK GRAYISH BROWN	MA	F	L-CL		8.5	10.8	60.	15.
CCASG	46-120	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		8.5	11.3	46.	15.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHKS	0-18	G	G	G	F	U	F	U	U (Topsoil)
CSKG	18-46	F	F		F	U	F	U	U (Subsoil)
CCASG	46-120	F	F		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 10. MODERATELY TO STRONGLY SALINE AND SODIC TO THE
 SURFACE. SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE
 UNSTABLE.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	HEISLER (HER)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	SOLONETZIC BLACK	TYPICAL SLOPES:	1-15%
	CHERNOZEMIC	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR	2/1	BLACK	MFGR	FR	L	2.1	5.6	1.2	33.	1.5
BTNJ	15-50	10YR	5/4	YELLOWISH BROWN	MMSBK	F	CL	0.6	6.8	0.8	37.	3.2
CSK	50-120	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	CL		7.9	7.7	39.	7.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	G	G	F (Topsoil)
BTNJ	15-50	F	F		G	G	G	G	F (Subsoil)
CSK	50-120	F	F		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BTNJ HORIZON HAS WEAK SOLONETZIC TENDENCIES. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	IRMA	(IRM)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK			ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		TYPICAL SLOPES:	1-15%
PARENT MATERIAL:	MODERATELY COARSE		USUAL SOIL MOISTURE:	MESIC
	GLACIOFLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR	2/2	VERY DARK BROWN	SGR	VFR	FSL	1.6	6.1	0.6	37.	0.1
BM	25-90	10YR	4/4	DARK YELLOWISH BROWN	WFSBK	FR	FSL		6.3	0.2	29.	0.1
BC	90-120	10YR	6/4	LIGHT YELLOWISH BROWN	SGR	VFR	FSL		6.6	0.2	25.	0.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G	F	F	G	G	G	F (Topsoil)
BM	25-90	G	G		F	G	F	G	F (Subsoil)
BC	90-120	G	G		G	G	F	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SANDY LOAM TEXTURED MATERIAL. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	IRMA-CR (crIRM)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (CARBONATED)	TYPICAL SLOPES:	1-15%
		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-25	10YR 2/2	VERY DARK BROWN	SGR	VFR	FSL	1.6		0.6	37.	0.1
BMK	25-90	10YR 4/4	DARK YELLOWISH BROWN	WFSBK	FR	FSL			0.2	29.	0.1
CK	90-120	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	VFR	FSL			0.2	25.	0.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-25	G	G	F		G	G	G	F (Topsoil)
BMK	25-90	G	G			G	F	G	F (Subsoil)
CK	90-120	G	G			G	F	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: CARBONATED VARIANT OF IRMA.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	IRMA-GL	(glIRM)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK			ROLLING
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC		TYPICAL SLOPES:	1-15%
PARENT MATERIAL:	MODERATELY COARSE		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	GLACIOFLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHGJ	0-30	10YR 2/1	BLACK	WFGR	VFR	L	3.3	6.5	0.6	56.	0.7
BGJ	30-70	10YR 5/3	BROWN	WFSBK	VFR	SL		6.7	0.2	40.	0.4
CGJ	70-120	10YR 5/3	BROWN	MA	VFR	SL		6.8	0.3	33.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHGJ	0-30	G	G	G	G	G	G	G	G (Topsoil)
BGJ	30-70	G	G		G	G	G	G	G (Subsoil)
CGJ	70-120	G	G		G	G	G	G	G (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF IRMA. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	IRMA-SCXT (scxtIRM)	LANDFORM:	VDENEER, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (SALINE LOWER SUBSOIL)	TYPICAL SLOPES:	1-15%
		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL/TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/1	BLACK	SGR	FR-L	SL	2.8	6.4	0.3	35.	0.4
BM	18-30	10YR 4/4	DARK YELLOWISH BROWN	SGR	FR-L	SL	0.7	6.8	0.4	33.	1.3
2CSK	30-120	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F	L		8.1	10.8	45.	17.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	F	G	G	F	G	G	G	F (Topsoil)
BM	18-30	F	G		G	G	G	G	F (Subsoil)
2CSK	30-120	F	G		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF IRMA THAT HAS A SHALLOW DEPTH TO SALINE TILL. EXPOSED FACES
 IN THE UPPER MATERIAL ARE UNSTABLE. THE B HORIZON USUALLY OCCURS IN
 THE UPPER SANDY LOAM TEXTURED MATERIAL AND IS NON SALINE-SODIC. THE
 UNDERLYING TILL IS LOAM TO CLAY LOAM TEXTURED AND STRONGLY SALINE AND
 SODIC.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	KILLAM	(KLM)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK			ROLLING
SOIL CLASSIFICATION:	BLACK SOLODIZED SOLONETZ		TYPICAL SLOPES:	1-9%
PARENT MATERIAL:	MODERATELY FINE TILL		USUAL SOIL MOISTURE:	TEMPORARY PONDING
			SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-33	10YR	2/1	BLACK	MFGR	FR	L	2.1	7.	0.7	40.	0.8
AE	33-43	10YR	5/2	GRAYISH BROWN	MFPL	VFR	SL					
BNT	43-60	10YR	3/2	VERY DARK GRAYISH BROWN	SMCOL	VF	CL		7.9	4.2	46.	25.5
CSK	60-180	2.5Y	4/4	OLIVE BROWN	MA	F	CL		8.1	8.	48.	13.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-33	G	G	G	G	G	G	G	G (Topsoil)
AE	33-43	G	G						F (Topsoil)
BNT	43-60	P	F		F	F	G	U	U (Subsoil)
CSK	60-180	F	F		F	P	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT HORIZON HAS AN UNDESIREABLE STRUCTURE. THE LOWER SUBSOIL IS SALINE AND SODIC. SEPARATION OF TOPSOIL BY COLOR IS DIFFICULT UNLESS AN AE HORIZON IS PRESENT.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	KILLAM-GL (g1KLM)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	GLEYED BLACK SOLODIZED	TYPICAL SLOPES:	1-9%
	OLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	2.1	6.8	2.2	74.	3.3
BNTSAGJ	20-50	10YR 4/4	DARK YELLOWISH BROWN	COL	VF	CL		7.1	15.2	57.	29.3
CSKGJ	50-100	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.6	17.	48.	30.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	G	F	F	G	F (Topsoil)
BNTSAG	20-50	P	F		G	U	G	U	U (Subsoil)
CSKGJ	50-100	F	F		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-30 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.040
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: GLEYED VARIANT OF KILLAM. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTILING FEATURES IN THE SUBSOIL AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	KINSELLA (KNA)	LANDFORM:	TERRACED
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 2/1	BLACK	WFGR	VFR	SL		5.8	0.4	30	0.4
BM	30-50	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	GRS		7.	0.4	24	0.3
CK	50-120	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	GRS		7.7	0.5	22	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G		F	G	F	G	F (Topsoil)
BM	30-50	F	P		G	G	F	G	P (Subsoil)
CK	50-120	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.007
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: LOW

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: A 10-15 CM LAYER OF SANDY LOAM TEXTURED MATERIAL OVERLIES GRAVEL.
 EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	LOUGHEED (LOG)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	BLACK SOLONETZ	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	MODERATELY FINE TILL	USUAL SOIL MOISTURE:	TEMPORARY PONDING
		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-35	10YR 2/2	VERY DARK BROWN	MFR	FR	L	2.7	6.	0.7	35.	2.5
BNT	35-65	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	VF	L-SCL	0.7	7.2	2.8	42.	17.8
CSK	65-120	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	L-SCL		7.8	10.6	49.	17.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-35	G	G	G	F	G	G	G	F (Topsoil)
BNT	35-65	P	F		G	G	G	U	U (Subsoil)
CSK	65-120	F	F		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	30 cm
THICKNESS RANGE:	20-40 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAM TO SANDY CLAY LOAM TEXTURED TILL. SEPARATION OF TOPSOIL AND SUBSOIL BY COLOR IS DIFFICULT UNLESS AN AE HORIZON EXISTS. THE BNT MATERIAL IS UNDESIRABLE. THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	REDWILLOW	(RED)	LANDFORM:	BLANKET
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE FLUVIAL OR		SURFACE STONINESS:	NON
	EOLIAN			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-12	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	SL					
BM	12-35	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	GRSL					
CK	35-80	2.5Y 4/4	OLIVE BROWN	SGR	L	GRSL		8.	0.5	38.	0.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-12	G	G						G (Topsoil)
BM	12-35	F	P						P (Subsoil)
CK	35-80	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.011
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAMY SAND TO SAND TEXTURED MATERIAL. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	ROSEBANK (ROS)	LANDFORM:	VDENEER, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	MODERATELY COARSE	USUAL SOIL MOISTURE:	DROUGHTY
	GLACIOFLUVIAL/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR	SL		5.6	1.5	40.	
BM	22-65	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	CS		6.2	0.8	33.	
BC	65-90	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	LS		7.5	0.6	22.	0.2
2CK	90-110	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.	0.8	47.	0.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	G		F	G	G		F (Topsoil)
BM	22-65	F	P		F	G	G		P (Subsoil)
BC	65-90	F	P		G	G	F	G	P (Subsoil)
2CK	90-110	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: A SIGNIFICANT TEXTURAL CHANGE OCCURS BETWEEN THE GLACIOFLUVIAL AND TILL MATERIAL. THE UPPER SANDY LAYER MAY BE UNSTABLE ON EXPOSED FACES.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	SEDGEWICK	(SDG)	LANDFORM:	BLANKET, UNDULATING
SOIL ZONE:	THIN BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BLACK SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/1	BLACK	MMGR	FR	SICL	8.5	6.8	3.7	74.	14.1
BNT	18-38	10YR 4/2	DARK GRAYISH BROWN	COL	VF	C		7.9	8.6	86.	18.9
CSK	38-130	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F-VF	C		8.	14.1	71.	18.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	F	G	G	F	F	U	U (Topsoil)
BNT	18-38	P	P		F	P	P	U	U (Subsoil)
CSK	38-130	P	P		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT MATERIAL IS UNDESIREABLE. SEPARATING TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT UNLESS AN AE HORIZON IS PRESENT. THE LOWER SUBSOIL IS STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	SEDGEWICK-GL (glSDG)	LANDFORM:	BLANKET, UNDULATING
SOIL ZONE:	THIN BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEYED BLACK SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-18	10YR 2/1	BLACK	MMGR	FR	SICL	8.5	6.8	3.7	74 14.1
BNTGJ	18-38	10YR 4/2	DARK GRAYISH BROWN	COL	VF	C		7.9	8.6	86 18.9
CSKGJ	38-130	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F-VF	C		8.	14.1	71 18.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	F	G	G	F	F	U	U (Topsoil)
BNTGJ	18-38	P	P		F	P	P	U	U (Subsoil)
CSKGJ	38-130	P	P		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF SEDGEWICK. THESE SOILS ARE IMPERFECTLY DRAINED,
 EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND USUALLY OCCUR
 IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	THOMAS LAKE (TOA)	LANDFORM:	BLANKET, LEVEL,
SOIL ZONE:	THIN BLACK		UNDULATING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	1-5%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	USUAL SOIL MOISTURE:	MOIST
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR 3/2	VERY DARK GRAYISH BROWN	SFGR	FR	SIC		5.5			
BM	13-46	10YR 3/2	VERY DARK GRAYISH BROWN	SCPR	VF	HC		6.2			
CK	46-120	10YR 3/2	VERY DARK GRAYISH BROWN	MA	F	SIC		7.6			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	P		F				P (Topsoil)
BM	13-46	P	P		F				P (Subsoil)
CK	46-120	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.013
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE PARENT MATERIAL IS FINE CLAYEY AND STONE-FREE. THESE SOILS ARE SLIGHTLY IMPERVIOUS AND HAVE GOOD MOISTURE RETENTION.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	THOMAS LAKE-XT (xtTOA)	LANDFORM:	VDENEER, LEVEL,
SOIL ZONE:	THIN BLACK		UNDULATING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	1-5%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE/TILL	USUAL SOIL MOISTURE:	MOIST
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YRm 3/2	VERY DARK GRAYISH BROWN	SFGR	FR	SIC		5.5			
BM	13-46	10YRm 3/2	VERY DARK GRAYISH BROWN	SCPR	VF	HC		6.2			
CK	46-90	10YRm 3/2	VERY DARK GRAYISH BROWN	MA	F	SIC		7.6			
2CK	90-120	10YRm 3/2	VERY DARK GRAYISH BROWN	MA	F	CL		8.2			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	P		F				P (Topsoil)
BM	13-46	P	P		F				P (Subsoil)
CK	46-90	F	P		F				P (Subsoil)
2CK	90-120	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-15 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.013
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF THOMAS LAKE HAVING TILL WITHIN 1 M OF THE SURFACE. THE CHANGE IN TEXTURE BETWEEN THE TWO MATERIALS IS NOT SIGNIFICANT.

INTERPRETATION GUIDELINES

SCA 7

09/01/93

SOIL SERIES:	THREE HILLS-AA (aaTHH)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	2-15%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	USUAL SOIL MOISTURE:	MOIST
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-20	10YR	3/2	VERY DARK GRAYISH BROWN	WFGR	FR-F	SIC		6.7	0.5	62.	0.3
BM	20-100	10YR	4/2	DARK GRAYISH BROWN	MMSBK	F	C		7.4	0.6	80.	0.7
CK	100-120	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	C		8.1	0.7	92.	3.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	P	P		G	G	F	G	P (Topsoil)
BM	20-100	F	P		G	G	P	G	P (Subsoil)
CK	100-120	F	P		F	G	P	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 6. DEVELOPED ON CLAY TEXTURED MATERIAL. SEPARATION OF
 TOPSOIL FROM SUBSOIL IS DIFFICULT.

INTERPRETATION GUIDELINES

THREE HILLS-AAGL

SCA 7

09/01/93

SOIL SERIES:	THREE HILLS-AAGL (aaglTHH)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THIN BLACK		ROLLING
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC	TYPICAL SLOPES:	2-15%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	USUAL SOIL MOISTURE:	TEMPORARY PONDING
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-20	10YR 3/2	VERY DARK GRAYISH BROWN	WFGR	FR-F	SIC		6.7	0.5	0.	0.3
CKGJ	100-120	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	C		8.1	0.7	0.	3.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	P	P		G	G	F	G	P (Topsoil)
CKGJ	100-120	F	P		F	G	P	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 6. GLEYED VARIANT OF THREE HILLS. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

2.8 Soil Correlation Area #8

General Description of the Area

- Thick Black Soil Zone of southwestern Alberta.
- Occurs northwest from the U.S. border along the west side of Pincher Creek, and north through Turner Valley to Cochrane.

Ecoregion/Climate

- The ecoregion of SCA 8 includes portions of the Fescue Grass, Montane, and Aspen Parkland (Strong and Leggat, 1992).
- Agroclimate is 4H (severe heat limitation).
- Growing season P-PE= -150 to -250 mm.
- Although temperatures are cooler and more precipitation is received during the growing season, moisture deficits do occur.
- Accumulation of snow is higher, but chinook activity results in comparable snow cover to SCA 5 & 6.

Soils and Landscapes

- Soils are predominantly Chernozemic while Solonetzic and salt-affected soils are rare.
- Landforms are highly influenced by the underlying bedrock. Veneers and blankets of glacial drift overlie Tertiary- and Cretaceous-aged bedrock of varying lithology.
- Landscapes are undulating to hummocky and rolling.
- Soil profile development is generally 50 m deep with 20 to 30 cm of black colored A horizon.

Soil Reclamation Issues

- Frequent strong winds cause erosion when the soil is disturbed.
- Potential soil erosion by water generally ranges from severe to moderate, although local conditions vary widely.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	BEAUVAIS (BVA)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	ORTHIC DARK GRAY CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHE	0-13	10YR 4/2	DARK GRAYISH BROWN	MMGR	FR	L	8.6	5.9	0.1	0.1	
AE	13-17	10YR 5/2	GRAYISH BROWN	MMPL	FR	SL		5.	0.1	0.1	
BT1	17-50	10YR 5/3	BROWN	MMSBK	F	L		5.4	0.1	0.1	
BT2	50-90	10YR 5/3	BROWN	MFSBK	F	CL		4.9	0.1	0.1	
BC	90-120	10YR 4/4	DARK YELLOWISH BROWN	MA	F	L		5.2	0.1	0.3	
CK	120-130	10YR 4/4	DARK YELLOWISH BROWN	MA	F	L		7.1	0.1	0.3	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHE	0-13	G	G	G	F	G		G	F (Topsoil)
AE	13-17	G	G		P	G		G	P (Topsoil)
BT1	17-50	F	G		P	G		G	P (Subsoil)
BT2	50-90	F	F		P	G		G	P (Subsoil)
BC	90-120	F	G		P	G		G	P (Subsoil)
CK	120-130	F	G		G	G		G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	12-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAM TO CLAY LOAM TEXTURED CONTINENTAL TILL.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	BEAUVAIS-GR (grBVA)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	ORTHIC DARK GRAY	USUAL SOIL MOISTURE:	MESIC
	CHERNOZEMIC	SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	GRAVELLY, MODERATELY FINE TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-18	10YR 4/2	DARK GRAYISH BROWN	MMGR	FR	GRSIL		6.5	0.1	
BM	30-45	10YR 5/3	BROWN	MMGR	FR	GRCL		5.7	0.1	
BC	80-100	10YR 4/4	DARK YELLOWISH BROWN	MA	F	GRCL		5.7	0.1	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	P		G	G			P (Topsoil)
BM	30-45	G	P		F	G			P (Subsoil)
BC	80-100	F	P		F	G			P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	12-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: GRAVELLY VARIANT OF HEARTBREAK. COARSE FRAGMENT CONTENT IS 15 TO 35%.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	BURMIS	(BUR)	LANDFORM:	TERRACE, FAN
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE		SURFACE STONINESS:	SLIGHTLY
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-5	10YR 2/1	BLACK	SGR	L	SL	9.4	7.		
AHK	5-17	10YR 2/1	BLACK	SGR	L	GRSL	5.2	7.4		
AC	17-38	10YR 3/2	VERY DARK GRAYISH BROWN	SGR	L	GRSL	3.4	7.5		
CK1	38-48	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGSL		7.6		
CK2	48-70	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGS		7.8		
CK3	70-115	10YR 5/2	GRAYISH BROWN	SGR	L	VGS		7.7		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-5	F	G	G	G				G (Topsoil)
AHK	5-17	F	P	G	G				P (Topsoil)
AC	17-38	F	P	G	G				P (Topsoil)
CK1	38-48	F	U		F				U (Subsoil)
CK2	48-70	F	U		F				U (Subsoil)
CK3	70-115	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	GRAVELLY
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.015
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THE SURFACE HORIZON MAY HAVE 10% COARSE FRAGMENTS BUT HORIZONS NEAR THE SURFACE MAY CONTAIN 40 TO 60%. TOPSOIL SEPARATION FROM SUBSOIL IS DIFFICULT BY COLOR AND MORE CONTROLLED BY GRAVEL LAYERS. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	BURMIS-ZZ	(zzBUR)	LANDFORM:	TERRACE, FAN
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	CALCAREOUS BLACK		USUAL SOIL MOISTURE:	DROUGHTY
	CHERNOZEMIC		SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE			
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-15	10YR 2/1	BLACK	SGR	L	SL	9.4	7.			
BMK	15-30	10YR 4/2	DARK GRAYISH BROWN	SGR	L	GRSL					
CK1	30-50	10YR 4/2	DARK GRAYISH BROWN	SGR	L	GRSL		7.6			
CK2	50-70	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGS		7.8			
CK3	70-120	10YR 5/2	GRAYISH BROWN	SGR	L	VGS		7.7			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	F	G	G	G				G (Topsoil)
BMK	15-30	F	P		G				P (Subsoil)
CK1	30-50	F	P		F				P (Subsoil)
CK2	50-70	F	U		F				U (Subsoil)
CK3	70-120	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	GRAVELLY
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.015
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF BURMIS THAT IS CLASSIFIED AS A CALCAREOUS BLACK CHERNOZEM.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	CARWAY (CRW)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	5-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-15	10YR 2/1	BLACK	WFGR	VFR	L	4.1	7.7	0.6	42.	0.1
BM	15-45	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	L		7.7	0.4	40.	0.2
CK	45-100	10YR 6/3	PALE BROWN	SGR	L	SL-LS		8.1	0.4	25.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G	G	F	G	G	G	F (Topsoil)
BM	15-45	F	G		F	G	G	G	F (Subsoil)
CK	45-100	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.024
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: SANDY LOAM TEXTURED MATERIAL WITH LESS THAN 2% COARSE FRAGMENTS.
EXPOSED FACES ARE UNSTABLE WHEN VERTICALLY DITCHED. ASSOCIATED WITH
ICE CONTACT STRATIFIED DRIFT LANDFORMS.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	DRYWOOD (DRW)	LANDFORM:	TERRACED
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MEDIUM GLACIOFLUVIAL/GRAVEL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-30	10YR 2/1	BLACK	WFGR	VFR	SL	3.9	5.8			
BM1	30-54	10YR 5/3	BROWN	WFSBK	VFR	SL	1.2	5.9			
BM2	54-61	10YR 5/2	GRAYISH BROWN	MFSBK	FR	L	1.4	5.9			
2BC	61-75	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGLS	1.7	7.4			
2CK	75-105	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	VGS		7.7			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-30	G	G	G	F				F (Topsoil)
BM1	30-54	G	G		F				F (Subsoil)
BM2	54-61	G	G		F				F (Subsoil)
2BC	61-75	F	U		G				U (Subsoil)
2CK	75-105	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	10-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON SANDY LOAM TO LOAM TEXTURED MATERIAL OVER GRAVEL WITH COARSE FRAGMENTS VARYING FROM 40 TO >60%. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	DRYWOOD-GR (grDRW)	LANDFORM:	TERRACED
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, MEDIUM GLACIOFLUVIAL/GRAVEL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-30	10YR 2/1	BLACK	SGR	L	GRSL	3.9	5.8		
BM1	30-54	10YR 5/3	BROWN	SGR	L	GRSL	1.2	5.9		
BM2	54-61	10YR 5/2	GRAYISH BROWN	SGR	L	GRL	1.4	5.9		
2BC	61-75	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGLS	1.7	7.4		
2CK	75-105	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	VGS		7.7		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-30	F	P	G	F				P (Topsoil)
BM1	30-54	F	P		F				P (Subsoil)
BM2	54-61	F	P		F				P (Subsoil)
2BC	61-75	F	U		G				U (Subsoil)
2CK	75-105	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: GRAVELLY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF DRYWOOD THAT IS GRAVELLY TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	DRYWOOD-ZR (zrDRW)	LANDFORM:	TERRACED
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MEDIUM	SURFACE STONINESS:	SLIGHTLY
	GLACIOFLUVIAL/GRAVEL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-30	10YR 2/1	BLACK	WFGR	VFR	SL	3.9	5.8			
CK	30-60	10YR 5/2	GRAYISH BROWN	WFSBK	FR	SL-L					
2CK	60-105	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGS		7.7			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-30	G	G	G	F				F (Topsoil)
CK	30-60	G	G						F (Subsoil)
2CK	60-105	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	10-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: REGO VARIANT OF DRYWOOD. THESE SOILS HAVE NO B HORIZON.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	DUNVARGAN (DVG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-45%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH1	0-14	10YR 2/1	BLACK	MMGR	F	CL	6.	6.1		
AH2	14-25	10YR 3/2	VERY DARK GRAYISH BROWN	WMGR	FR	CL	4.1	6.4		
BM	25-51	10YR 4/3	BROWN - DARK BROWN	MFSBK	F	CL	1.1	6.6		
BC	51-70	10YR 5/3	BROWN	WMGR	F	CL		7.2		
CK	70-95	10YR 5/3	BROWN	MA	F	CL		7.7		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH1	0-14	G	F	G	F				F (Topsoil)
AH2	14-25	G	F	G	F				F (Topsoil)
BM	25-51	F	F		G				F (Subsoil)
BC	51-70	F	F		G				F (Subsoil)
CK	70-95	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	25 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBTAINABLE
STRIPPING LIMITATIONS:	VERY THICK
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DUNVARGAN SOILS ARE DEVELOPED ON MODERATELY FINE TEXTURED TILL OF CONTINENTAL AND CORDILLERAN ORIGIN WITH 2 TO 20% COARSE FRAGMENTS.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	DUNVARGAN-GR (grDVG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-45%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	GRAVELLY, MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-27	10YR 2/1	BLACK	WFGR	FR	GRHC		5.6	0.	0.
BT	27-40	10YR 3/2	VERY DARK GRAYISH BROWN	MFSBK	FR-F	GRHC		6.9	0.	0.
CK	40-70	2.5Y 4/2	DARK GRAYISH BROWN	MA	F	GRHC		7.8	0.9	0.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-27	G	P		F	G		G	P (Topsoil)
BT	27-40	F	P		G	G		G	P (Subsoil)
CK	40-70	F	P		F	G		G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	25 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	GRAVELLY, VERY THICK
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: GRAVELLY VARIANT OF DUNVARGAN.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	DUNVARGAN-XP (xpDVG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-45%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL/SOFTROCK	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-40	10YR 2/1	BLACK	MMGR	FR	L		7.	0.6	78.	0.1
BMK	40-68	10YR 4/4	DARK YELLOWISH BROWN	MMSBK	F	L-CL		7.9	0.3	50.	0.2
2CK	68-80	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F-VF	CL		8.	0.4	49.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-40	G	G		G	G	F	G	F (Topsoil)
BMK	40-68	F	F		F	G	G	G	F (Subsoil)
2CK	68-80	P	F		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: YES
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF DUNVARGAN WITH PARALITHIC BEDROCK WITHIN 1 M. THE TEXTURE CHANGE BETWEEN MATERIALS IS NOT SIGNIFICANT.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	DUNVARGAN-ZR (zrDVG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-45%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AK	0-15	10YR 2/1	BLACK	MMGR	FR	L	2.6	7.7		
BC	15-21	10YR 4/3	BROWN-DARK BROWN	WMGR	F	CL	1.7	7.7		
CK1	21-40	10YR 5/2	GRAYISH BROWN	MA	F	CL	1.2	7.7		
CK2	40-100	10YR 5/3	BROWN	MA	F	CL	0.4	7.8		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AK	0-15	G	G	G	F				F (Topsoil)
BC	15-21	F	F		F				F (Subsoil)
CK1	21-40	F	F		F				F (Subsoil)
CK2	40-100	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	25 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	VERY THICK
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: REGO VARIANT OF DUNVARGAN. THESE SOILS HAVE NO B HORIZON.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	FISH CREEK (FSH)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-28	10YR 3/2	VERY DARK GRAYISH BROWN	MMGR	FR	CL	7.7	6.7	1.	77.	
BM	28-60	10YR 5/3	BROWN	MFSBK	F	C		7.4	0.5	80.	0.2
CK	60-110	10YR 5/4	YELLOWISH BROWN	MA	F	C		7.8	0.3	73.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-28	G	F	G	G	G	F		F (Topsoil)
BM	28-60	F	P		G	G	P	G	P (Subsoil)
CK	60-110	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 15-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.013
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON FINE CLAYEY TEXTURED, STONE-FREE GLACIOLACUSTRINE DEPOSITS.

INTERPRETATION GUIDELINES

FISH CREEK-SA

SCA 8

09/01/93

SOIL SERIES:	FISH CREEK-SA (saFSH)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
APSA	0-30	10YR 2/1	BLACK	MMGR	FR	L	3.4	6.9		71.
BTJSA	30-42	10YR 5/3	BROWN	MFSBK	F	C		7.3		78.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-30	G	G	G	G		F		P (Topsoil)
BTJSA	30-42	F	P		G		F		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 15-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.013
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF FISH CREEK THAT IS SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	LUNDBRECK (LNB)	LANDFORM:	TERRACED
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, VERY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-18	10YR 2/1	BLACK	SGR	L	GRSL	6.2	5.5		
BM	18-55	10YR 5/2	GRAYISH BROWN	SGR	L	GRSL	1.6	5.4		
BC	55-85	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGLS		7.3		
CK	85-150	10YR 4/2	DARK GRAYISH BROWN	SGR	L	VGS		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-18	F	P	G	F				P (Topsoil)
BM	18-55	F	P		P				P (Subsoil)
BC	55-85	F	U		G				U (Subsoil)
CK	85-150	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.013
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON GRAVELLY, SANDY LOAM TEXTURED MATERIAL (20 TO 40% COARSE FRAGMENTS) OVER GRAVEL (60% COARSE FRAGMENTS) AT ABOUT 50 CM EXPOSED FACES ARE UNSTABLE WHEN VERTICALLY DITCHED. THESE SOILS OCCUR ON UPPER AND LOWER TERRACES ASSOCIATED WITH MAJOR STREAMS.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	MAYCROFT	(MFT)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-7	10YR	2/1	BLACK	MMGR	FR	CL	7.6	6.3		
AH	7-24	10YR	2/1	BLACK	MMGR	FR	CL	6.5	6.3		
BM	24-58	10YR	5/3	BROWN	WFSBK	F	SICL	1.3	6.2		
CK1	58-64	2.5Y	5/4	LIGHT OLIVE BROWN	MA	FR	L		7.7		
CK2	64-90	2.5Y	5/4	LIGHT OLIVE BROWN	MA	FR	SIL		7.5		
CK3	90-105	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	SICL-CL		7.7		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-7	G	F	G	F				F (Topsoil)
AH	7-24	G	F	G	F				F (Topsoil)
BM	24-58	F	F		F				F (Subsoil)
CK1	58-64	G	G		F				F (Subsoil)
CK2	64-90	G	G		G				G (Subsoil)
CK3	90-105	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	25 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	VERY THICK
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS ARE DEVELOPED ON MODERATELY FINE TEXTURED GLACIOLACUSTRINE DEPOSITS VARYING FROM SILT LOAM TO CLAY LOAM TO SILTY CLAY LOAM.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	MAYCROFT-GLZR (glzrMFT)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	GLEYED REGO BLACK	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC	SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY FINE		
	GLACIOLACUSTRINE		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR	2/1	BLACK	MMGR	FR	L		6.6	0.4	82.	0.1
CKGJ	25-100	2.5Y	5/4	LIGHT OLIVE BROWN	MA	FR	SIL		7.9	0.4	46.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G		G	G	P	G	P (Topsoil)
CKGJ	25-100	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED AND REGO VARIANT OF MAYCROFT. THESE SOILS HAVE NO B HORIZON.
 THEY ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN
 THE SUBSOIL AND GENERALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	MAYCROFT-ZR (zrMFT)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MMGR	FR	L		6.6	0.4	82.	0.1
CK	25-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	FR	SIL		7.9	0.4	46.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G		G	G	P	G	P (Topsoil)
CK	25-100	G	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: REGO VARIANT OF MAYCROFT. THESE SOILS HAVE NO B HORIZON.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	OUTPOST	(OTP)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	STONY, MEDIUM		SURFACE STONINESS:	EXCEEDINGLY
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-20	10YR 2/1	BLACK	MFR	FR	STL	9.2				
BM1	20-32	10YR 5/3	BROWN	WFSBK	FR-F	STC	1.7				
BM2	32-47	10YR 5/2	GRAYISH BROWN	WFSBK	FR-F	STC	1.1				
BC1	47-80	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	FR	SBSCL	0.7				
BC2	80-100	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	VFR	SBSL					
CK	100-125	2.5Y 6/4	LIGHT OLIVE BROWN	SGR	L	GRLS					

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	G	P	G	F				P (Topsoil)
BM1	20-32	F	P		P				P (Subsoil)
BM2	32-47	F	P		P				P (Subsoil)
BC1	47-80	G	P		G				P (Subsoil)
BC2	80-100	G	P		G				P (Subsoil)
CK	100-125	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: MODERATE
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: YES
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON MAINLY SANDY LOAM TO LOAM TEXTURED GLACIOFLUVIAL MATERIAL THAT IS GRAVELLY, VERY COBBLY OR STONY WITH 35 TO 60% COARSE FRAGMENTS.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	POTHOLE CREEK (POT)	LANDFORM:	LEVEL, DEPRESSIONAL
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-30	10YR 2/1	BLACK	MMGR	FR	L		6.5	0.2		
BG	50-65	10YR 3/2	VERY DARK GRAYISH BROWN	MA	S	SIL		6.8	0.1		
BCG	90-110	10YR 3/3	DARK BROWN	MA	VS	C		7.	0.1		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-30	G	G		G	G			G (Topsoil)
BG	50-65	F	G		G	G			F (Subsoil)
BCG	90-110	P	P		G	G			P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE FINE TEXTURED AND WET ALL YEAR AND THEREFORE EXPOSED
 FACES ARE UNSTABLE. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS
 DIFFICULT.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	RED DEER LAKE (RDL)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	GLEYPED BLACK SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 2/1	BLACK	MFR	VFR	SIL-SICL	10.72	7.8			
AHEK	10-16	10YR 3/2	VERY DARK GRAYISH BROWN	MFSBK	FR	SICL-SIC	3.5	8.1			
ABKG	16-28	10YR 8/1	WHITE	SMSBK	FR	SICL	5.45	8.4			
BNTKG	28-43	2.5Y 4/4	OLIVE BROWN	SCCOL	VF	SICL	3.71	8.6			
BNTJKG	43-55	2.5Y 4/4	OLIVE BROWN	WMABK	F	SICL	0.79	9.6			
CSKG	55-120	2.5Y 4/4	OLIVE BROWN	MA	FR	SICL		9.6			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	F	G	F				F (Topsoil)
AHEK	10-16	G	P	G	F				P (Topsoil)
ABKG	16-28	G	F		F				F (Subsoil)
BNTKG	28-43	P	F		P				P (Subsoil)
BNTJKG	43-55	F	F		U				U (Subsoil)
CSKG	55-120	G	F		U				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.040
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES AND GENERALLY OCCUR IN LOWER LANDSCAPE POSITIONS. THE BNT MATERIAL IS UNDESIRABLE. THE LOWER SUBSOIL IS SALINE AND/OR SODIC.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	ROBINSON-AA (aaRSN)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK		ROLLING
SOIL CLASSIFICATION:	DARK GRAY LUVISOL	TYPICAL SLOPES:	2-9%
PARENT MATERIAL:	FINE TILL	USUAL SOIL MOISTURE:	MOIST
		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-30	10YR 2/1	BLACK	MFGR	FR	SICL	5.6	5.4	0.2	59.	
BT	30-75	10YR 4/3	BROWN-DARK BROWN	MMSBK	F	C		5.5	0.2	64.	
CK	75-120	5Y 5/3	OLIVE	MA	F	C		7.8	0.4	52.	0.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-30	G	F	G	P	G	G		P (Topsoil)
BT	30-75	F	P		F	G	F		P (Subsoil)
CK	75-120	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.050
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: HOME SCA IS 16. THESE SOILS SOMETIMES HAVE A LIGHT COLORED, PLATY AE HORIZON BETWEEN THE TOPSOIL AND THE SUBSOIL. WITH CULTIVATION, THIS HORIZON IS OFTEN PLOWED UNDER AND BECOMES PART OF THE AP HORIZON.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	SARCEE	(SRC)	LANDFORM:	TERRACED
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM GLACIOFLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-20	10YRm 2/2	VERY DARK BROWN	SMGR	VFR	CL	4.71	6.9		
BM	20-35	10YRm 3/3	DARK BROWN	MA	VFR	L	2.06	7.4		
CK	35-120	10YRm 4/3	BROWN-DARK BROWN	MA	VFR	L		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	G	F	G	G				F (Topsoil)
BM	20-35	G	G		G				G (Subsoil)
CK	35-120	G	G		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	10-30 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON FINE LOAMY RECENT FLUVIAL TERRACES. GRAVEL IS SOMETIMES ENCOUNTERED AT DEPTHS GREATER THAN 1.5 MS.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	SHARP HILLS (SHL)	LANDFORM:	BLANKET, RIDGED
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY COARSE GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-15	10YRm 3/1	VERY DARK GRAY	MFGR	FR	L	4.25	7.2		
CCA	15-30	10YRm 7/2	LIGHT GRAY	MA	FR	L		7.6		
CK	30-120	2.5Ym 5/2	GRAYISH BROWN	MA	F	L		8.1		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	G				G (Topsoil)
CCA	15-30	G	G		F				F (Subsoil)
CK	30-120	F	G		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.024
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAM TO SANDY LOAM TEXTURED MATERIAL. EXPOSED FACES WITH SANDY TEXTURES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	SPY HILL	(SPY)	LANDFORM:	HUMMOCKY, RIDGED
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	6-60%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	STONY MODERATELY FINE TILL		SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-18	10YR 2/1	BLACK	MFGR	FR	STL	5.5	7.1	0.7	54.	0.2
BTJ	18-40	10YR 4/2	DARK GRAYISH BROWN	MMSBK	F	STL		7.2	0.7	43.	0.3
CK	40-110	10YR 4/2	DARK GRAYISH BROWN	MA	F	STL		8.	0.4	47.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-18	G	P	G	G	G	G	G	P (Topsoil)
BTJ	18-40	F	P		G	G	G	G	P (Subsoil)
CK	40-110	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: THIN, TOPOGRAPHY
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON LOAM TEXTURED, STONY TILL (20 TO 30% COARSE FRAGMENTS) WHICH OVERLIES GRAVEL AT DEPTHS OF 10 M, SOMETIMES LESS. THE B HORIZON IS OFTEN VERY THIN OR ABSENT.

INTERPRETATION GUIDELINES

SCA 8

09/01/93

SOIL SERIES:	TWIN BRIDGES (TBR)	LANDFORM:	LEVEL
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-2
SOIL CLASSIFICATION:	GLEYED HUMIC REGOSOL	USUAL SOIL MOISTURE:	WATER TABLE
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL/VERY COARSE FLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHJK	0-12	10YRm 3/2	VERY DARK GRAYISH BROWN	SMGR	FR	SL-L	6.56	7.5			
CK	12-75	10YRm 3/3	DARK BROWN	SGR	VFR	LS-SL		7.5			
CKG	75-120	2.5Ym 4/2	DARK GRAYISH BROWN	SGR	VFR	LS-SL		7.6			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHJK	0-12	G	G	G	G				G (Topsoil)
CK	12-75	G	P		G				P (Subsoil)
CKG	75-120	G	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	12 cm
THICKNESS RANGE:	10-15 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	MODERATE
WATER EROSION K=:	0.013
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	ALL
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: DEVELOPED ON HIGHLY VARIABLE TEXTURED, RECENT FLUVIAL DEPOSITS. USUALLY TEXTURES ARE COARSE LOAMY OVER SANDY. EXPOSED FACES ARE UNSTABLE. THESE SOILS ARE IMPERFECTLY DRAINED BUT MODERATELY TO RAPIDLY PERVIOUS. RESTRICTED DRAINAGE RESULTS FROM A HIGH WATER TABLE, NOT FROM PONDING OF SURFACE WATER. MOTTILING AND GLEYING TEXTURE ARE COMMON BUT NOT ALWAYS PRESENT.

2.9 Soil Correlation Area #9

General Description of the Area

- Thick Black Soil Zone of southwestern Alberta.
- Occurs from the north edge of Calgary to Ponoka.

Ecoregion/Climate

- Aspen Parkland ecoregion.
- Agroclimate is 3H (moderate heat limitation).
- Growing season P-PE= -150 to -250 mm.
- Snow cover tends to persist throughout the winter because of cooler temperatures and the infrequent influence of chinooks.

Soils and Landscapes

- Chernozemic soils are most common while Solonetzic and other salt-affected soils are rare.
- Gleysolic soils (sloughs) occur in depressional areas.
- Undulating moraine (till), and glaciolacustrine blankets and veneers over till are the dominant landscapes. Some moraine veneers and blankets over bedrock are also present.
- Chernozemic soils have between 15 and 30 cm of a black colored A horizon and the profile is developed to 60 cm.
- Solonetzic soils are shallower and have less topsoil.

Soil Reclamation Issues

- Potential soil erosion by water is generally low except on the Delburne Upland (hummocky landscapes) where potential erosion is severe to moderate.
- The risk of soil erosion by wind increases from low in the north to moderate in the south, reflecting higher, average wind speeds. Sandy textured soils have a high potential for erosion by wind.
- Bedrock may be encountered at shallow (1 to 2 m) depth - usually sandstone that may be hard or soft.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	ANTLER	(ATL)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-15	10YR 2/1	BLACK	MFGR	FR	SCL		6.1	0.32	
BM	15-40	10YR 3/3	DARK BROWN	MMABK	F	CL		5.5	0.26	
CK1	40-80	2.5Y 4/2	DARK GRAYISH BROWN	MA	F	CL		7.7	0.34	
CK2	150-200	2.5Y 4/2	DARK GRAYISH BROWN	MA	F	CL		7.8	0.33	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	F		F	G			F (Topsoil)
BM	15-40	F	F		F	G			F (Subsoil)
CK1	40-80	F	F		F	G			F (Subsoil)
CK2	150-200	F	F		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON LOAM TO CLAY LOAM TEXTURED TILL OF MIXED CONTINENTAL AND CORDILLERAN ORIGIN.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	ANTLER-GL (glATL)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR	2/1	BLACK	MFGR	FR	L	8.2	6.4	0.4	71.	
BGJ	22-55	10YR	5/3	BROWN	MFSBK	F	SICL		6.2	0.3	71.	
CKGJ	55-130	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	CL		7.	0.5	46.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	G	G	F	G	F		F (Topsoil)
BGJ	22-55	F	F		F	G	F		F (Subsoil)
CKGJ	55-130	F	F		G	G	G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF ANTLER. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	ANTLER-XP (xpATL)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL/SOFTROCK	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-17	10YR 2/1	BLACK	MFGR	FR	L		7.	0.8	66.	0.4
BM	17-40	10YR 5/4	YELLOWISH BROWN	MFSBK	F	CL		7.2	0.6	52.	0.4
CK	40-100	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	L		8.	0.6	52.	0.3
2CK	100-110	2.5Y 5/6	LIGHT OLIVE BROWN	MA	FR-F	FSL		8.	0.4	42.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	G		G	G	F	G	F (Topsoil)
BM	17-40	F	F		G	G	G	G	F (Subsoil)
CK	40-100	F	G		F	G	G	G	F (Subsoil)
2CK	100-110	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: YES
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF ANTLER HAVING SOFTROCK WITHIN 1 M. THERE IS NO
 SIGNIFICANT TEXTURE CHANGE BETWEEN THE TWO MATERIALS. THE UNDERLYING
 WEATHERED SOFTROCK IS NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	BALZAC-AA (aaBZC)	LANDFORM:	VDENEER, LEVEL,
SOIL ZONE:	THICK BLACK		DEPRESSIONAL
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL (SALINE)	TYPICAL SLOPES:	0-2%
		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	FINE LACUSTRINE/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH1	0-11	10YR 3/2	VERY DARK GRAYISH BROWN	SFGR	VFR	CL	5.39	7.2		
AH2	11-21	10YR 3/1	VERY DARK GRAY	SCGR	H	CL	4.23	7.6		
AHSK	21-32	10YR 3/1	VERY DARK GRAY	WMPR	F	C	1.32	8.2		
CSAK	32-48	10YR 5/1	GRAY	MA	VF	CL		8.4		
CSAKG	48-120	10YR 5/1	GRAY	MA	F	CL		8.4		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH1	0-11	G	F	G	G				F (Topsoil)
AH2	11-21	G	F	G	F				F (Topsoil)
AHSK	21-32	P	F	F	F				P (Topsoil)
CSAK	32-48	P	F		F				P (Subsoil)
CSAKG	48-120	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: HOME SCA IS 6. THESE SOILS ARE DEVELOPED ON FINE TEXTURED RECENT LACUSTRINE SEDIMENTS OVERLYING MODERATELY FINE TEXTURED TILL. BALZAC SOILS ARE STRONGLY CALCAREOUS AND HAVE BEEN SALINIZED BY GROUNDWATER DISCHARGE. THESE SOILS ARE FINE TEXTURED AND WET ALL YEAR, THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	BEARSPAW	(BPW)	LANDFORM:	BLANKET, HUMMOCKY
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	6-15%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-45	10YR 2/1	BLACK	MMGR	FR	SICL	4.9	7.9	0.7	55.	0.1
CCA	45-100	10YR 4/4	DARK YELLOWISH BROWN	MA	VF	CL		8.3	0.5	38.	0.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-45	G	F	G	F	G	G	G	F (Topsoil)
CCA	45-100	P	F		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-15 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.033
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: MOST BEARSPAW SOILS HAVE THIN AND VARYING TOPSOIL THICKNESS CAUSING STRIPPING DIFFICULTY WITH LARGE MACHINERY.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	BOW VALLEY-AA (aaBOV)	LANDFORM:	TERRACED
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY GRAVELLY, VERY COARSE FLUVIAL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-14	10YRm 2/	BLACK	WFGR	VFR	L	3.9	7.4		
BM	14-25	10YRm 4/4	DARK YELLOWISH BROWN	MMPR	VFR	L-SIL	1.5	7.3		
CK	25-120	10YRm 5/2	GRAYISH BROWN	SGR	L	GR		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-14	G	G	G	G				G (Topsoil)
BM	14-25	G	G		G				G (Subsoil)
CK	25-120	F	U		F				U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.017
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: HOME SCA IS 6. DEVELOPED ON GRAVEL TERRACES IN THE BOW VALLEY. THE SOIL OFTEN HAS 30 TO 50 CM OF A LOAM TO SANDY LOAM TEXTURED, STONE-FREE CAPPING MATERIAL OVER THE GRAVEL. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	CYGNET	(CYG)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK			ROLLING
SOIL CLASSIFICATION:	ELUVIATED BLACK		TYPICAL SLOPES:	2-30%
	CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-35	10YR 2/1	BLACK	MMGR	FR	L	6.3	6.4	0.7	64.	0.
BTJ	35-70	10YR 6/6	BROWNISH YELLOW	MFSBK	FR-F	CL		7.2	0.5	59.	0.
CK	70-110	10YR 5/4	YELLOWISH BROWN	MA	F	CL		7.4	0.5	51.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-35	G	G	G	F	G	F	G	F (Topsoil)
BTJ	35-70	F	F		G	G	G	G	F (Subsoil)
CK	70-110	F	F		G	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-45 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: CYGNET SOILS ARE DEVELOPED ON CLAY LOAM TEXTURED TILL THAT IS MAINLY OF PASKAPOO ORIGIN. THESE SOILS SOMETIMES HAVE A LIGHTER COLORED, PLATY AE HORIZON BETWEEN THE TOPSOIL AND THE SUBSOIL. WITH CULTIVATION, THE AE HORIZON IS OFTEN PLOWED UNDER AND BECOMES PART OF THE AP HORIZON.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	DIDSBURY (DDY)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK		ROLLING
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	TYPICAL SLOPES:	1-15%
PARENT MATERIAL:	MODERATELY FINE TILL	USUAL SOIL MOISTURE:	MESIC
		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MFRG	FR	L	5.3	6.9	0.5	60.	0.
BM	25-65	10YR 5/4	YELLOWISH BROWN	MFSBK	F	L		7.6	0.6	45.	0.6
CK	65-110	10YR 5/3	BROWN	MA	F	CL		8.	0.3	48.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G	G	G	G	F	G	F (Topsoil)
BM	25-65	F	G		F	G	G	G	F (Subsoil)
CK	65-110	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-45 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DIDSBURY SOILS ARE DEVELOPED ON TILL MATERIAL WHICH APPEARS TO HAVE BEEN MODIFIED BY GLACIOFLUVIAL PROCESSES. THE UPPER 30 TO 50 CM OF THE TILL IS FREQUENTLY LOAM OR SANDY LOAM TEXTURED WHILE THE LOWER PORTION IS LOAM TO CLAY LOAM TEXTURED.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	HARMATTON (HAR)	LANDFORM:	veneer, level,
SOIL ZONE:	THICK BLACK		DEPRESSIONAL
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL	TYPICAL SLOPES:	0-2%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE/TILL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHG	0-60	10YR 2/1	BLACK	MMGR	FR	SCL	6.8	8.	0.5	46.	0.7
2CKG	60-120	10YR 5/3	BROWN	MA	F	CL		7.9	0.3	44.	0.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHG	0-60	G	F	G	F	G	G	G	F (Topsoil)
2CKG	60-120	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 35 cm
 THICKNESS RANGE: 30-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE FINE TEXTURED AND WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	HARMATTON-CR (crHAR)	LANDFORM:	veneer, level,
SOIL ZONE:	THICK BLACK		DEPRESSIONAL
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL (CARBONATED)	TYPICAL SLOPES:	0-2%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE/TILL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHK	0-60	10YR 2/1	BLACK	MMGR	FR	SCL	6.8	8.	0.5	46.	0.7
2CKG	60-120	10YR 5/3	BROWN	MA	F	CL		7.9	0.3	44.	0.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHK	0-60	G	F	G	F	G	G	G	F (Topsoil)
2CKG	60-120	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	35 cm
THICKNESS RANGE:	30-40 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	WETNESS, VERY THICK
WIND EROSION RISK:	-
WATER EROSION K=:	-
RISK ON <5% SLOPE:	-
RISK ON 5-9% SLOPE:	-
RISK ON 9-15% SLOPE:	-

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	ALL
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: CARBONATED VARIANT OF HARMATTON.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	HARMATTON-PT (ptHAR)	LANDFORM:	VDENEER, LEVEL,
SOIL ZONE:	THICK BLACK		DEPRESSIONAL
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL (PEATY)	TYPICAL SLOPES:	0-2%
PARENT MATERIAL:	FINE GLACIOLACUSTRINE/TILL	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
OM	0-18	10YR 2/1	BLACK			O	16.36	6.6		
AHG	18-27	5Y 2/1	BLACK	MMGR	VF	SICL	2.7	7.4		
CKG	27-120	5Y 6/2	LIGHT OLIVE GRAY	MA	F	SIL-CL		7.6		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
OM	0-18			G					(Peat)
AHG	18-27	P	F	G	G				P (Topsoil)
CKG	27-120	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm (PEAT & TOPSOIL)
 THICKNESS RANGE: 25-60 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HARMATTON THAT HAS 15 TO 50 CM OF SURFACE PEAT. THE UNDERLYING TOPSOIL IS ABOUT 10 CM THICK.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	LLOYD LAKE (LLK)	LANDFORM:	BLANKET, UNDULATING
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-40	10YR 2/1	BLACK	MMGR	FR	SICL	6.1	6.6	0.3	72.	
BM	40-85	2.5Y 5/4	LIGHT OLIVE BROWN	MMSBK	F	SIC		6.7	0.4	70.	
BC	85-130	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	SIC		6.9	0.3	66.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-40	G	F	G	G	G	F		F (Topsoil)
BM	40-85	F	P		G	G	F		P (Subsoil)
BC	85-130	F	P		G	G	F		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 15-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.030
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON STONE-FREE, FINE TEXTURED GLACIOLACUSTRINE SEDIMENTS WITH A HIGH SILT CONTENT. TOPSOILS ARE SELDOM LESS THAN 15 CM THICK.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	LLOYD LAKE-GL (glLLK)	LANDFORM:	BLANKET, UNDULATING
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-35	10YR 2/1	BLACK	MMGR	FR	SICL	6.5	7.4	0.9	54.	0.5
BGJ	35-90	10YR 5/2	GRAYISH BROWN	WMSBK	VF	C		7.8	0.5	60.	1.
CCAGJ	90-100	10YR 3/4	DARK YELLOWISH BROWN	MA	VF	C		7.9	0.8	56.	1.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-35	G	F	G	G	G	G	G	F (Topsoil)
BGJ	35-90	P	P		F	G	F	G	P (Subsoil)
CCAGJ	90-100	P	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 15-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.030
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF LLOYD LAKE THAT IS GLEYED. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTILING FEATURES IN THE SUBSOIL AND GENERALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

LLOYD LAKE-GLSA

SCA 9

09/01/93

SOIL SERIES: LLOYD LAKE-GLSA (glsaLLK) LANDFORM: BLANKET, UNDULATING
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 0-5%
 SOIL CLASSIFICATION: GLEYED BLACK CHERNOZEMIC USUAL SOIL MOISTURE: TEMPORARY PONDING
 (SALINE) SURFACE STONINESS: NON
 PARENT MATERIAL: FINE GLACIOLACUSTRINE

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-35	10YR 2/1	BLACK	MMGR	FR	SICL	6.5	7.4		54.	
BGJSA	35-90	10YR 5/2	GRAYISH BROWN	WMSBK	VF	C		7.8		60.	
CCAGJSA	90-100	10YR 3/4	DARK YELLOWISH BROWN	MA	VF	C		7.9		56.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-35	G	F	G	G		G		F (Topsoil)
BGJSA	35-90	P	P		F		F		P (Subsoil)
CCAGJS	90-100	P	P		F		G		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 15-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.030
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF LLOYD LAKE THAT IS GLEYED AND SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	MORNINGSIDE (MGS)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE FLUVIAL OR EOLIAN	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR 3/2	VERY DARK GRAYISH BROWN	SGR	L	LS		6.3	0.3	36.	0.2
BM	22-60	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	LS		6.8	0.2	36.	0.3
BC	60-110	10YR 5/4	YELLOWISH BROWN	SGR	L	LS					
CK	110-140	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	LS		8.2	0.6	25.	0.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	F	P		F	G	G	G	P (Topsoil)
BM	22-60	F	P		G	G	G	G	P (Subsoil)
BC	60-110	F	P						P (Subsoil)
CK	110-140	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	10-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.011
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON SANDS AND LOAMY SANDS. EXPOSED FACES ARE UNSTABLE BECAUSE OF LOOSE CONSISTENCE AND SANDY TEXTURES.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	NIOBE	(NIB)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BLACK SOLOD		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	MODERATELY
	GLACIOLACUSTRINE/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/1	BLACK	MMGR	FR-F	L	6.1	7.6	3.4	69.	3.7
BNTSK	18-80	10YR 3/3	DARK BROWN	WMSBK	F	CL-C		7.9	7.6	50.	10.
2CCASA	80-120	10YR 5/2	GRAYISH BROWN	MA	F	CL		8.	9.8	61.	15.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	P	G	G	F	F	F	G	P (Topsoil)
BNTSK	18-80	F	P		F	P	G	P	P (Subsoil)
2CCASA	80-120	F	F		F	P	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-25 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.038
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THE BNT HORIZON IS UNDESIREABLE. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS SALINE AND SODIC..

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	NOSE CREEK (NSK)	LANDFORM:	BLANKET, UNDULATING
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-35	10YR 2/1	BLACK	WFGR	FR	L	3.4	7.4	0.6	55.	0.3
CK1	35-75	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	0.7	42.	1.
CK2	75-140	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.1	0.9	64.	1.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-35	G	G	G	G	G	G	G	G (Topsoil)
CK1	35-75	F	F		F	G	G	G	F (Subsoil)
CK2	75-140	F	F		F	G	F	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.030
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAM TO CLAY LOAM TEXTURED TILL. TOPSOIL IS EASILY SEPARATED FROM SUBSOIL BY COLOR.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	NOSE CREEK-SA (saNSK)	LANDFORM:	BLANKET, UNDULATING
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSA	0-35	10YR 2/1	BLACK	WFGR	FR	L	3.4	7.4		55.	
CSK1	35-75	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1		42.	
CSK2	75-140	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.1		64.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSA	0-35	G	G	G	G		G		G (Topsoil)
CSK1	35-75	F	F		F		G		F (Subsoil)
CSK2	75-140	F	F		F		F		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.030
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF NOSE CREEK THAT IS SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	PENHOLD (PED)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	MEDIUM FLUVIAL OR LACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 3/3	DARK BROWN	MFGR	FR	L	2.1	7.	0.5	53.	0.3
BM	18-40	10YR 5/3	BROWN	WFSBK	F	L		7.4	1.	44.	0.2
CK	40-140	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	SIL		7.9	0.3	49.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G	G	G	G	G	G	G (Topsoil)
BM	18-40	F	G		G	G	G	G	F (Subsoil)
CK	40-140	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAM TO SILT LOAM TEXTURED MATERIALS. THESE SOILS ARE VERY GOOD ARABLE LANDS.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	PENHOLD-GL (glPED)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	MEDIUM FLUVIAL OR LACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-20	10YR 3/3	DARK BROWN	MFGR	FR	L	2.1	7.	0.5	53.	0.3
BMGJ	18-50	10YR 5/3	BROWN	WFSBK	F	L		7.4	1.	44.	0.2
CKGJ	40-75	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	SIL		7.9	0.3	49.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-20	G	G	G	G	G	G	G	G (Topsoil)
BMGJ	18-50	F	G		G	G	G	G	F (Subsoil)
CKGJ	40-75	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF PENHOLD. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND GENERALLY OCCUR IN THE SLIGHTLY DEPRESSIONAL AREAS OF LEVEL TO UNDULATING LANDSCAPES.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	PENHOLD-XC (xcPED)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM FLUVIAL OR LACUSTRINE/ GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR	2/1	BLACK	MFGR	FR	L	4.2	7.7	0.5	51.	0.1
BM	13-60	10YR	4/4	DARK YELLOWISH BROWN	WFSBK	FR-F	L-SIL		7.6	0.4	58.	0.2
2CK	60-140	2.5Y	5/4	LIGHT OLIVE BROWN	MA	F	SIC		8.3	2.4	62.	2.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	G	G	F	G	G	G	F (Topsoil)
BM	13-60	F	G		F	G	G	G	F (Subsoil)
2CK	60-140	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: VARIANT OF PENHOLD WITH CLAY AT LESS THAN 1 M BELOW THE SURFACE. TEXTURE CHANGE BETWEEN THE TWO MATERIALS IS SIGNIFICANT.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	PENHOLD-XS (xsPED)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM FLUVIAL OR LACUSTRINE/GLACIOFLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-20	10YR	2/1	BLACK	MFGR	FR	L	4.6	6.4	0.3	55.	0.1
BM	20-70	10YR	4/4	DARK YELLOWISH BROWN	WFSBK	FR-F	L-SIL		6.1	0.2	44.	0.3
2BC	70-100	10YR	5/6	YELLOWISH BROWN	SGR	L	LS		6.7	0.1	20.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	G	G	F	G	G	G	F (Topsoil)
BM	20-70	F	G		F	G	G	G	F (Subsoil)
2BC	70-100	F	P		G	G	P	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: VARIANT OF PENHOLD WITH SAND AT LESS THAN 1 M BELOW THE SURFACE. TRENCH WALLS OF THE UNDERLYING MATERIAL ARE UNSTABLE WHEN VERTICALLY DITCHED.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	PENHOLD-XT	(xtPED)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MEDIUM FLUVIAL OR		SURFACE STONINESS:	NON
	LACUSTRINE/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-40	10YR 2/1	BLACK	MFGR	FR	L-SIL		6.8	1.1	52.	0.
BM	40-65	10YR 4/4	DARK YELLOWISH BROWN	MMSBK	FR	L		6.8	0.6	53.	0.
2CK	65-100	10YR 5/4	YELLOWISH BROWN	MA	F	CL		7.6	2.	41.	0.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-40	G	G		G	G	G	G	G (Topsoil)
BM	40-65	G	G		G	G	G	G	G (Subsoil)
2CK	65-100	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	15-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.032
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF PENHOLD WITH TILL AT LESS THAN 1 M BELOW THE SURFACE. THE TEXTURE CHANGE BETWEEN THE TWO MATERIALS IS NOT SIGNIFICANT.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	STRATHCONA (SCO)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, MEDIUM GLACIOFLUVIAL	SURFACE STONINESS:	VERY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-15	10YRd 2/1	BLACK	WFGR	VFR	SIL-L	10.44	7.1		
BM1	15-22	7.5YR 4/4	DARK BROWN	WMPR	FR	L	2.16	6.		
BM2	22-40	10YRd 5/2	GRAYISH BROWN	SGR	L	GRL	4.34	7.2		
CCA	40-120	10YRd 6/2	LIGHT BROWNISH GRAY	SGR	L	GRL		7.5		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G	G	G				G (Topsoil)
BM1	15-22	G	G		F				F (Subsoil)
BM2	22-40	F	P		G				P (Subsoil)
CCA	40-120	F	P		G				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: STONY, GRAVELLY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.017
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: YES
 STONY LAYER: YES
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: DEVELOPED ON LOAM TO FINE SANDY LOAM AND SAND TEXTURED ESKERS, KAMES, DELTAS, FANS, AND MELT-WATER CHANNELS. THE DEPTH TO GRAVEL IS VARIABLE. THERE IS OFTEN A VERY THIN (<20 CM), LOAMY EOLIAN OR FLUVIAL VENEER OVER THE GRAVEL. THE GRAVEL CONTAINS LARGE QUANTITIES OF SAND, SILT, STONES AND BOULDERS. EXPOSED FACES ARE UNSTABLE WHEN VERTICALLY DITCHED.

INTERPRETATION GUIDELINES

SCA 9

09/01/93

SOIL SERIES:	TWEEDSMUIR (TWS)	LANDFORM:	TERRACED
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-50	10YR 2/1	BLACK	SGR	VFR	FSL	2.8	8.	0.6	37.	
CK	50-110	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	FSL		8.1	0.6	34.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-50	G	G	G	F	G	G		F (Topsoil)
CK	50-110	F	G		F	G	G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 10-50 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON FINE SANDY LOAM TEXTURED TERRACES AND DISSECTED CHANNELS.
 EXPOSED FACES ARE UNSTABLE WHEN VERTICALLY DITCHED. B HORIZONS ARE
 OFTEN VERY THIN OR ABSENT.

2.10 Soil Correlation Area #10

General Description of the Area

- Thick Black Soil Zone of central and east-central Alberta.
- Occurs in the vicinity of Bashaw, Edmonton, Westlock and Vegreville, with the exception of the Beaver Hills upland.

Ecoregion/Climate

- Aspen Parkland ecoregion.
- Agroclimate is 2H (slight heat limitation).
- Growing season P-PE= -150 to -250 mm.
- Snow cover persists throughout the winter as the influence of chinooks is rare.

Soils and Landscapes

- Soils are dominantly Chernozemic with significant Solonetzic and other salt-affected soils. Gleysolic soils (sloughs) occur in depressional areas.
- Undulating moraine (till) landscapes are the most common, with blankets and veneers of till over saline-sodic softrock on the Daysland Plain. Glaciolacustrine and glaciofluvial deposits comprise other significant landforms.
- Chernozemic soils have between 15 and 30 cm of a black colored A horizon and is developed to 65 cm. Solonetzic soils are shallower and have less topsoil.

Soil Reclamation Issues

- Solonetzic soils, shallow soils with saline and sodic softrock, and others with highly saline and sodic subsoils may require special soil handling during stripping and trenching.
- Potential soil erosion by water is generally low although the risk varies with local conditions.
- The risk of soil erosion by wind is low except for sandy textured areas where it is high.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	ANGUS RIDGE	(AGS)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK			HUMMOCKY
SOIL CLASSIFICATION:	ELUVIATED BLACK		TYPICAL SLOPES:	1-15%
	CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 2/1	BLACK	MFGR	FR	L	4.8	5.7	0.9	53.	0.5
BTJ	15-70	10YR 4/3	BROWN	MMSBK	F	CL		6.5	0.9	39.	3.1
CK	70-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.7	2.	46.	5.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	G	G	F (Topsoil)
BTJ	15-70	F	F		G	G	G	G	F (Subsoil)
CK	70-180	F	F		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY LOAM TEXTURED TILL. THIS SOIL IS VERY GOOD FOR AGRICULTURE. CULTIVATION MAY HAVE INCORPORATED THE AE HORIZON INTO THE PLOW LAYER.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	ANGUS RIDGE-ER (erAGS)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK		HUMMOCKY
SOIL CLASSIFICATION:	ELUVIATED BLACK	TYPICAL SLOPES:	1-15%
	CHERNOZEMIC (ERODED)	USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 3/1	VERY DARK GRAY	MFGR	FR	CL		6.1	0.5	40.	
BTJ	10-35	10YR 3/3	DARK BROWN	MMSBK	F	CL		7.5	0.6	42.	
CK1	35-55	10YR 5/3	BROWN	MA	F	CL		8.1	0.4	41.	
CK2	120-150	10YR 5/3	BROWN	MA	F	CL		8.4	1.8	44.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	F		F	G	G		F (Topsoil)
BTJ	10-35	F	F		G	G	G		F (Subsoil)
CK1	35-55	F	F		F	G	G		F (Subsoil)
CK2	120-150	F	F		F	G	G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-10 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF ANGUS RIDGE. OFTEN OCCUR ON UPPER SLOPES OR CRESTS OF HILLS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	ANGUS RIDGE-GL	(gLAGS)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK			HUMMOCKY
SOIL CLASSIFICATION:	GLEYED ELUVIATED BLACK		TYPICAL SLOPES:	1-15%
	CHERNOZEMIC		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-15	10YR 2/1	BLACK	MMGR	FR	L	3.6	5.6	0.6	66.	
BMGJ	15-50	10YR 3/3	DARK BROWN	MFSBK	F	SCL		5.2	0.4	48.	
BCGJ	50-130	10YR 5/3	BROWN	MA	F	CL		5.3	0.3	44.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-15	G	G	G	F	G	F		F (Topsoil)
BMGJ	15-50	F	F		P	G	G		P (Subsoil)
BCGJ	50-130	F	F		P	G	G		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF ANGUS RIDGE. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	ANGUS RIDGE-SA (saAGS)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK		HUMMOCKY
SOIL CLASSIFICATION:	ELUVIATED BLACK	TYPICAL SLOPES:	1-15%
	CHERNOZEMIC (SALINE)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 2/1	BLACK	MFGR	FR	L	3.8	5.6	0.4	53.	1.1
BTJSA	15-40	10YR 4/4	DARK YELLOWISH BROWN	MMSBK	F	CL		6.	1.3	51.	6.9
CSKSA	40-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.9	9.7	63.	8.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	G	G	F (Topsoil)
BTJSA	15-40	F	F		F	G	G	F	F (Subsoil)
CSKSA	40-180	F	F		F	P	F	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF ANGUS RIDGE THAT IS SALINE AND/OR SODIC AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	ANGUS RIDGE-SC	(scAGS)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK			HUMMOCKY
SOIL CLASSIFICATION:	ELUVIATED BLACK		TYPICAL SLOPES:	1-15%
	CHERNOZEMIC (SALINE LOWER		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	SUBSOIL)		SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 2/1	BLACK	MFGR	FR	L	4.8	5.2	0.7	52.	0.8
BTJ	10-50	10YR 4/3	BROWN-DARK BROWN	MMSBK	F	CL		5.7	1.2	41.	3.6
CSK	50-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.8	7.7	43.	9.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G	G	P	G	G	G	P (Topsoil)
BTJ	10-50	F	F		F	G	G	G	F (Subsoil)
CSK	50-180	F	F		F	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF ANGUS RIDGE WITH SALINE LOWER SUBSOIL. THE BTJ HORIZON IS NON SALINE-SODIC. THE C HORIZON IS MODERATELY TO STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	ANGUS RIDGE-ST	(stAGS)	LANDFORM:	BLANKET, UNDULATING,
SOIL ZONE:	THICK BLACK			HUMMOCKY
SOIL CLASSIFICATION:	ELUVIATED BLACK		TYPICAL SLOPES:	1-15%
	CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	STONY, MODERATELY FINE		SURFACE STONINESS:	EXCEEDINGLY
	TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-20	10YR 2/1	BLACK	MMGR	FR	STSL		7.	0.27	
BM	20-50	2.5Y 4/4	OLIVE BROWN	MMSBK	F	STSL		7.	0.2	
CK	50-180	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	STCL		7.6	0.22	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	P		G	G			P (Topsoil)
BM	20-50	F	P		G	G			P (Subsoil)
CK	50-180	F	P		F	G			P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: STONY, VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF ANGUS RIDGE THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	ARMENA	(ARM)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BLACK SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE FLUVIAL OR LACUSTRINE/TILL		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YRm 3/1	VERY DARK GRAY	WFGR	FR	SL	5.43	6.9			
AE	10-13	2.5Ym 4/4	OLIVE BROWN	WFPL	FR	SL	1.77	6.9			
BNT	13-30	10YRm 3/1	VERY DARK GRAY	SCCOL	VF	SCL	1.76	8.7			
2CKSAG	30-120	2.5Ym 4/4	OLIVE BROWN	MA	F	SL		8.7			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G	G	G				G (Topsoil)
AE	10-13	G	G	F	G				F (Topsoil)
BNT	13-30	P	F		P				P (Subsoil)
2CKSAG	30-120	F	G		P				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON MODERATELY FINE TEXTURED FLUVIAL OR LACUSTRINE DEPOSITS OVERLYING MODERATELY FINE TEXTURED TILL. THERE IS OFTEN A LIGHTER COLORED, PLATY AE HORIZON BETWEEN THE AH AND BNT HORIZONS WHICH WILL HELP IN SEPARATING TOPSOILS FROM SUBSOILS. THE BNT MATERIAL IS UNDESIRABLE. THE LOWER SUBSOIL IS SALINE AND SODIC. THESE SOILS OFTEN EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	BAWLF	(BWF)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-20	10YR	2/1	BLACK	WFGR	FR	L-SIL		6.2		32.
CK	20-100	2.5Y	4/4	OLIVE BROWN	MA	F	SICL		8.		43.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	G		F		G		F (Topsoil)
CK	20-100	F	F		F		G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	20-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.030
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: SILT LOAM TO SILTY CLAY LOAM TEXTURED MATERIAL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	BAWLF-XT	(xtBWF)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE		SURFACE STONINESS:	NON
	GLACIOLACUSTRINE/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-20	10YR 2/1	BLACK	WFGR	FR	L-SIL		6.2		32.
CK	20-70	10YR 4/4	OLIVE BROWN	MA	F	SICL		8.		43.
2CK	70-100	10YR 5/4	LIGHT OLIVE BROWN	MA	F	FSCL-CL		8.4		42.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	G		F		G		F (Topsoil)
CK	20-70	F	F		F		G		F (Subsoil)
2CK	70-100	F	F		F		G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	20-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.030
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF BAWLF WITH MODERATELY FINE TEXTURED TILL AT LESS THAN 1 M BELOW THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	BEAVERHILLS	(BVH)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	6-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR	2/1	BLACK	MMGR	FR	L		6.2	0.3	54.	0.4
BM	10-50	10YR	4/4	DARK YELLOWISH BROWN	MFSBK	F	CL		7.1	0.5	52.	0.5
CK	50-120	10YR	4/3	BROWN	MA	F	CL		8.1	0.4	47.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G		F	G	G	G	F (Topsoil)
BM	10-50	F	F		G	G	G	G	F (Subsoil)
CK	50-120	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	10-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: CLAY LOAM TEXTURED TILL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	BEAVERHILLS-CR (crBVH)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	6-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC (CARBONATED)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-30	10YR 2/1	BLACK	MFGR	FR	SIL		8.3	0.6	61.	
BMK	30-45	10YR 4/4	DARK YELLOWISH BROWN	MFSEK	F	SIL		8.	0.9	61.	
CCA	45-75	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	SICL		8.1	0.6	52.	
CK	75-400	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		8.2	0.7	43.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-30	G	G		F	G	F		F (Topsoil)
BMK	30-45	F	G		F	G	F		F (Subsoil)
CCA	45-75	F	F		F	G	G		F (Subsoil)
CK	75-400	F	F		F	G	G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	10-35 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: CARBONATED VARIANT OF BEAVERHILLS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: BEAVERHILLS-ER (erBVH) LANDFORM: BLANKET
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 6-30%
 SOIL CLASSIFICATION: ORTHIC BLACK CHERNOZEMIC USUAL SOIL MOISTURE: MESIC
 (ERODED) SURFACE STONINESS: MODERATELY
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-8	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		6.7	0.2	40.	
BM	20-35	10YR 3/3	DARK BROWN	WMSBK	FR	L		7.5	0.8	40.	
CCA	50-100	10YR 5/3	BROWN	MA	F	CL		8.4	1.4	47.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-8	G	G		G	G	G		G (Topsoil)
BM	20-35	G	G		G	G	G		G (Subsoil)
CCA	50-100	F	F		F	G	G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 5-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THIN,
 DISCONTINUOUS
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: ERODED VARIANT OF BEAVERHILLS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: BEAVERHILLS-SA (saBVH) LANDFORM: BLANKET
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 1-5%
 SOIL CLASSIFICATION: ORTHIC BLACK CHERNOZEMIC USUAL SOIL MOISTURE: TEMPORARY PONDING
 (SALINE) SURFACE STONINESS: MODERATELY
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-10	10YR 2/1	BLACK	MMGR	FR	L		6.1	0.6	70.	1.2
BMSA	10-30	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	F	CL		7.5	3.5	54.	5.4
CSK	30-100	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.3	8.	48.	5.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-10	G	G		F	G	F	G	F (Topsoil)
BMSA	10-30	F	F		G	F	G	F	F (Subsoil)
CSK	30-100	F	F		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF BEAVERHILLS THAT IS SALINE AND/OR SODIC AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: BEAVERHILLS-SC (scBVH) LANDFORM: BLANKET
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 6-30%
 SOIL CLASSIFICATION: ORTHIC BLACK CHERNOZEMIC USUAL SOIL MOISTURE: TEMPORARY PONDING
 (SALINE LOWER SUBSOIL) SURFACE STONINESS: MODERATELY
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-20	10YR 3/1	VERY DARK GRAY	SGR	FR	SIL		6.	0.2	45.
BM	20-50	10YR 4/4	DARK YELLOWISH BROWN	WMSBK	FR	SICL		7.6	0.4	39.
CCASA	70-100	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		8.2	9.2	42. 5.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	G		F	G	G		F (Topsoil)
BM	20-50	G	F		F	G	G		F (Subsoil)
CCASA	70-100	F	F		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF BEAVERHILLS WITH A SALINE LOWER SUBSOIL. THE BM HORIZON IS NON SALINE-SODIC. THE C HORIZON IS MODERATELY TO STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	CAMROSE	(CMO)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BLACK SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/1	BLACK	MFGR	FR	L	3.4	5.4	0.9	49.	9.3
BNT	18-36	10YR 3/3	DARK BROWN	SMCOL	VF	CL		7.5	5.8	84.	40.4
CSK	36-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.8	12.9	64.	35.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G	G	P	G	G	P	P (Topsoil)
BNT	18-36	P	F		G	P	P	U	U (Subsoil)
CSK	36-180	F	F		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT HORIZON IS UNDESIREABLE. SEPARATION OF TOPSOIL FROM SUBSOIL IS DIFFICULT UNLESS AN AE HORIZON IS PRESENT. THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: CAMROSE-GL (glCMO) LANDFORM: BLANKET
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 1-5%
 SOIL CLASSIFICATION: GLEYED BLACK SOLODIZED USUAL SOIL MOISTURE: TEMPORARY PONDING
 SOLONETZ SURFACE STONINESS: MODERATELY
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR 2/1	BLACK	MFGR	FR	L	4.3	6.2	0.4	44.	
BNTGJ	23-45	10YR 4/2	DARK GRAYISH BROWN	COL	VF	CL		7.	0.5	58.	
CSKGJ1	45-70	2.5Y 4/4	OLIVE BROWN	MA	F-VF	CL		7.8	0.6	61.	4.4
CSKGJ2	70-150	2.5Y 4/4	OLIVE BROWN	MA	F-VF	CL		7.9	0.8	60.	7.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	G	G	F	G	G		F (Topsoil)
BNTGJ	23-45	P	F		G	G	G		P (Subsoil)
CSKGJ1	45-70	P	F		F	G	F	F	P (Subsoil)
CSKGJ2	70-150	P	F		F	G	F	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF CAMROSE. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND GENERALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	CAMROSE-GLXP (glxpCMO)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEYED BLACK SOLODIZED SOLONETZ	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL/SOFTROCK	SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/1	BLACK	MFGR	FR	L	4.2	6.5	0.4	52.	
BNTGJ	18-40	10YR 4/2	DARK GRAYISH BROWN	COL	VF	CL		7.3	0.7	84.	8.
2CSKGJ	40-150	2.5Y 4/4	OLIVE BROWN	MA	F	SICL		8.2	0.6	178.	8.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G	G	G	G	G		G (Topsoil)
BNTGJ	18-40	P	F		G	G	P	P	P (Subsoil)
2CSKGJ	40-150	F	F		F	G	U	P	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF CAMROSE HAVING SOFTROCK AT LESS THAN 1 M BELOW THE SURFACE.
 THE TEXTURE CHANGE BETWEEN MATERIALS IS NOT SIGNIFICANT. BOTH THE TILL AND THE
 WEATHERED BEDROCK IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: CAMROSE-SA (saCMO) LANDFORM: BLANKET
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 1-5%
 SOIL CLASSIFICATION: BLACK SOLODIZED SOLONETZ USUAL SOIL MOISTURE: TEMPORARY PONDING
 (SALINE) SURFACE STONINESS: MODERATELY
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MMGR	FR	L	4.4	7.2	3.7		2.6
BNTSA	25-43	10YR 3/2	VERY DARK GRAYISH BROWN	COL	VF	CL-C		7.5	6.7		6.3
CSK	43-160	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		7.6	6.7		6.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G	G	G	F		G	F (Topsoil)
BNTSA	25-43	P	P		G	P		F	P (Subsoil)
CSK	43-160	F	F		F	P		F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF CAMROSE THAT IS SALINE AND/OR SODIC AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	CAMROSE-ST	(stCMO)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BLACK SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	STONY, MODERATELY FINE		SURFACE STONINESS:	EXCEEDINGLY
	TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 2/1	BLACK	MFGR	FR	STL		7.1	6.8	63.	
BNT	10-20	10YR 3/2	VERY DARK GRAYISH BROWN	COL	VF	STCL		8.	6.9	64.	14.7
CSK	20-100	2.5Y 4/4	OLIVE BROWN	MA	F	STCL		8.5	6.7	98.	22.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	P		G	P	F		P (Topsoil)
BNT	10-20	P	P		F	P	F	U	U (Subsoil)
CSK	20-100	F	P		F	P	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-35 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: STONY
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.036
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: YES
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF CAMROSE THAT IS STONIER THAN NORMAL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	CUCUMBER	(CCB)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MOIST
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-17	10YR	3/2	VERY DARK GRAYISH BROWN	MFGR	FR	SICL	2.84	6.4			
BM	17-45	10YR	5/4	YELLOWISH BROWN	MFSBK	F	C	0.93	7.7			
CK	45-100	10YR	6/4	LIGHT YELLOWISH BROWN	MA	F	SICL		8.2	1.2	62.	4.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	F	G	F				F (Topsoil)
BM	17-45	F	P		F				P (Subsoil)
CK	45-100	F	F		F	G	F	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.013
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SILTY CLAY LOAM TO CLAY TEXTURED MATERIAL. THE LOWER SUBSOIL MAY BE WEAKLY SODIC BUT NOT SALINE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	DEMAY	(DMY)	LANDFORM:	BLANKET, LEVEL,
SOIL ZONE:	THICK BLACK			DEPRESSIONAL
SOIL CLASSIFICATION:	ORTHIC LUVIC GLEYSOL		TYPICAL SLOPES:	0-2%
PARENT MATERIAL:	MODERATELY FINE TILL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
			SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 4/2	DARK GRAYISH BROWN	MFGR	FR	SIL		6.3	0.4	37.	
BTG	20-50	10YR 3/3	DARK BROWN	MMSBK	F	SICL		6.9	0.4	42.	
CKG	50-110	10YR 5/3	BROWN	MA	F	CL		8.	0.5	39.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G		F	G	G		F (Topsoil)
BTG	20-50	F	F		G	G	G		F (Subsoil)
CKG	50-110	F	F		F	G	G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-10 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THIN
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON CLAY LOAM TEXTURED TILL. SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE. THIN TOPSOIL MAY BE DIFFICULT TO REMOVE. AE HORIZONS ARE OFTEN INCORPORATED INTO THE PLOW LAYER.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	DEMAY-CRSA (crsaDMY)	LANDFORM:	BLANKET, LEVEL, DEPRESSIONAL
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC LUVIC GLEYSOL (CARBONATED, SALINE)	USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSAK	0-10	10YR 4/2	DARK GRAYISH BROWN	MFGR	FR	SIL					
BGSAK	20-50	10YR 3/3	DARK BROWN	MMSBK	F	SICL					
CSKG	50-110	10YR 5/3	BROWN	MA	F	CL		8.			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSAK	0-10	G	G						G (Topsoil)
BGSAK	20-50	F	F						F (Subsoil)
CSKG	50-110	F	F		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 5 cm
 THICKNESS RANGE: 0-10 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THIN
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF DEMAY THAT IS CARBONATED AND SALINE TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	DESJARLAIS	(DSJ)	LANDFORM:	LEVEL, DEPRESSIONAL
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
	(CARBONATED, SALINE)		SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY COARSE			
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APKSA	0-20	10YR 2/1	BLACK	MFGR	FR	SL		8.	1.9	54.	13.2
AHKSA	20-30	10YR 2/1	BLACK	MMGR	FR	L		8.5	2.	67.	17.9
CCASAG	30-100	10YR 6/2	LIGHT BROWNISH GRAY	STRAT	F	SIL		8.8	2.2	97.	28.4
CSKG	100-140	2.5Y 5/4	LIGHT OLIVE BROWN	STRAT	VFR	FSL		8.8	4.5	78.	34.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APKSA	0-20	G	G		F	G	G	U	U (Topsoil)
AHKSA	20-30	G	G		P	F	F	U	U (Topsoil)
CCASAG	30-100	F	G		P	G	P	U	U (Subsoil)
CSKG	100-140	G	G		P	F	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-50 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SANDY LOAM TEXTURED MATERIAL. THE SOIL IS WEAKLY SALINE AND MODERATELY TO STRONGLY SODIC. SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: DESJARLAIS-ZR (zrDSJ) LANDFORM: LEVEL, DEPRESSIONAL
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 0-2%
 SOIL CLASSIFICATION: REGO HUMIC GLEYSOL USUAL SOIL MOISTURE: WATERTABLE/PONDING
 (CARBONATED, SALINE) SURFACE STONINESS: NON
 PARENT MATERIAL: MODERATELY COARSE
 GLACIOFLUVIAL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APKSA	0-50	10YR 2/1	BLACK	MFGR	FR	SL	9.4	7.7	7.3	65.	10.6
CSKG1	50-70	10YR 6/2	LIGHT BROWNISH GRAY	STRAT	VFR	SL-LS		8.4	1.1	43.	5.1
CSKG2	70-140	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	L	LS		8.4	0.7	29.	2.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APKSA	0-50	G	G	G	F	P	F	P	P (Topsoil)
CSKG1	50-70	G	P		F	G	G	F	P (Subsoil)
CSKG2	70-140	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-50 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: REGO VARIANT OF DESJARLAIS. THESE SOILS HAVE NO B HORIZON.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	DUAGH	(DUG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	BLACK SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-16	10YR 2/1	BLACK	MFGR	FR	SICL	3.3	6.5	1.	67.	0.
BNT	16-32	10YR 3/2	VERY DARK GRAYISH BROWN	COL	VF	C		7.3	0.8	84.	1.4
CK	32-55	10YR 4/3	BROWN-DARK BROWN	MA	F	C		7.9	0.8	94.	2.2
CSK	55-155	10YR 4/3	BROWN-DARK BROWN	MA	F	C		7.6	4.	92.	2.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-16	G	F	G	G	G	F	G	F (Topsoil)
BNT	16-32	P	P		G	G	P	G	P (Subsoil)
CK	32-55	F	P		F	G	P	G	P (Subsoil)
CSK	55-155	F	P		F	F	P	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.034
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE SOLONETZIC B HORIZON IS UNDESIREABLE. SEPARATING THE TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS SALINE AND SODIC. THESE SOILS HAVE NO AE HORIZON BETWEEN THE TOPSOIL AND SUBSOIL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	DUAGH-GL	(glDUG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	GLEYED BLACK SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-12	10YR	4/1	DARK GRAY	MFGR	FR	L	4.5	7.9	5.6	8.3
BNTGJ	12-50	10YR	4/2	DARK GRAYISH BROWN	SCSBK	VF	L		8.1	9.1	14.7
CSAKGJ1	50-75	10YR	4/2	DARK GRAYISH BROWN	MA	F	SIL		8.	10.3	16.8
CSAKGJ2	75-100	10YR	4/2	DARK GRAYISH BROWN	MA	F	CL		7.8	7.6	12.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-12	G	G	G	F	P		P	P (Topsoil)
BNTGJ	12-50	P	G		F	P		U	U (Subsoil)
CSAKGJ	50-75	F	G		F	U		U	U (Subsoil)
CSAKGJ	75-100	F	F		F	P		U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-20 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.034
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: GLEYED VARIANT OF DUAGH. THESE SOILS ARE ALL IMPERFECTLY DRAINED AND EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	EDBURG	(EDG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	REGO BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-30	10YR 2/1	BLACK	MFG	FR	L	3.2	6.5	0.4	40.	1.
CK	30-100	10YR 4/4	DARK YELLOWISH BROWN	MA	F	CL		8.	8.9	47.	13.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-30	G	G	G	G	G	G	G	G (Topsoil)
CK	30-100	F	F		F	P	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.030
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON MODERATELY FINE TEXTURED TILL. TOPSOILS ARE EASILY DISTINGUISHED FROM SUBSOILS BY COLOR.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	FERINTOSH	(FTH)	LANDFORM:	TERRACE
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	GRAVELLY, MODERATELY		SURFACE STONINESS:	NON
	COARSE GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-30	10YR	2/1	BLACK	WFGR	VFR	SL		5.8	0.4	30.	0.4
BM	30-50	10YR	4/4	DARK YELLOWISH BROWN	SGR	L	VGS		7.	0.4	24.	0.3
CK	50-120	10YR	5/3	BROWN	SGR	L	VGS		7.7	0.5	22.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-30	G	G		F	G	F	G	F (Topsoil)
BM	30-50	F	U		G	G	F	G	U (Subsoil)
CK	50-120	F	U		F	G	F	G	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	30 cm
THICKNESS RANGE:	20-40 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	GRAVELLY, VERY THICK
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	YES
STONY LAYER:	NO
FACE INSTABILITY:	YES
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	YES

NOTES: SANDY LOAM TEXTURED MATERIAL OVERLIES GRAVEL AT VARIOUS DEPTHS. THE TOPSOIL MAY OR MAY NOT BE GRAVELLY. THESE SOILS HAVE DEVELOPED ON OUTWASH MATERIALS DEPOSITED EITHER IN A STREAM TRENCH OR ALONG ITS SLOPES. EXPOSED FACES ARE UNSTABLE WHEN VERTICALLY DITCHED.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	HAIGHT	(HGT)	LANDFORM:	LEVEL
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 4/2	DARK GRAYISH BROWN	MFGR	FR	L	3.	6.	1.1	47.	0.1
BTG	15-80	10YR 5/3	BROWN	MFSBK	F	C		6.9	0.4	61.	0.3
BCG	80-140	10YR 5/2	GRAYISH BROWN	MA	F	C		6.4	0.1	59.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	G	G	F (Topsoil)
BTG	15-80	F	P		G	G	F	G	P (Subsoil)
BCG	80-140	F	P		F	G	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-60 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE FINE TEXTURED AND WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: HAIRY HILL (HYL) LANDFORM: LEVEL
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 0-1%
 SOIL CLASSIFICATION: REGO HUMIC GLEYSOL (CARBONATED, SALINE) USUAL SOIL MOISTURE: WATERTABLE/PONDING
 SURFACE STONINESS: NON
 PARENT MATERIAL: MODERATELY FINE TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSAK	0-22	10YR 2/1	BLACK	MFGR	FR	L	4.3	8.	9.2	60.	13.
CSKG1	22-45	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		7.8	10.8	60.	15.
CSKG2	45-180	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		8.	11.3	46.	15.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSAK	0-22	G	G	G	F	U	F	U	U (Topsoil)
CSKG1	22-45	F	F		F	U	F	U	U (Subsoil)
CSKG2	45-180	F	F		F	U	G	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 10-35 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: MODERATELY TO STRONGLY SALINE AND SODIC TO THE SURFACE. SOILS ARE WET
 ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	HERCULES	(HRL)	LANDFORM:	LEVEL
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-1%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
	(SALINE)		SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-20	10YR	2/1	BLACK	MFGR	FR	SICL	4.4	7.5	3.2	108.	0.4
AHSAK	20-55	10YR	2/1	BLACK	MFGR	FR	SICL	0.9	7.9	6.4	54.	1.9
BSKG	55-85	10YR	5/1	GRAY	MA	F	SICL		8.1	8.	62.	3.3
CSKG	85-130	10YR	5/1	GRAY	MA	F	SICL		8.	8.	62.	3.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-20	G	F	G	G	F	P	G	P (Topsoil)
AHSAK	20-55	G	F	G	F	P	G	G	P (Topsoil)
BSKG	55-85	F	F		F	P	F	G	P (Subsoil)
CSKG	85-130	F	F		F	P	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 40 cm
 THICKNESS RANGE: 30-55 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE MODERATELY SALINE AND SODIC TO THE SURFACE. SOILS ARE FINE TEXTURED AND WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: HOBBEEMA (HBM) LANDFORM: VENEER
SOIL ZONE: THICK BLACK TYPICAL SLOPES: 0-5%
SOIL CLASSIFICATION: ELUVIATED BLACK USUAL SOIL MOISTURE: MESIC
CHERNOZEMIC SURFACE STONINESS: NON
PARENT MATERIAL: MEDIUM FLUVIAL/TILL OR
LACUSTRINE

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-13	10YR 2/1	BLACK	MFGR	FR	L	3.	6.5	0.3	51.	0.2
BM	13-35	10YR 5/4	YELLOWISH BROWN	WFSBK	F	L		5.5	0.2	44.	0.4
2BT	35-85	10YR 3/4	DARK YELLOWISH BROWN	MFSBK	F	CL		5.5	0.2	43.	0.7
2CK	85-120	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		7.9	0.4	49.	0.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-13	G	G	G	G	G	G	G	G (Topsoil)
BM	13-35	F	G		F	G	G	G	F (Subsoil)
2BT	35-85	F	F		F	G	G	G	F (Subsoil)
2CK	85-120	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
THICKNESS RANGE: 15-30 cm
COLOR CHANGE TO SUBSOIL: OBVIOUS
STRIPPING LIMITATIONS: NONE
WIND EROSION RISK: LOW
WATER EROSION K=: 0.032
RISK ON <5% SLOPE: LOW
RISK ON 5-9% SLOPE: MODERATE
RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
HARD BEDROCK: NO
NON-SODIC SOFTROCK: NO
SODIC SOFTROCK: NO
GRAVEL: NO
STONY LAYER: NO
FACE INSTABILITY: NO
SOLONETZIC B HORIZON: NO
SALINE OR SODIC LOWER SUBSOIL: NO
IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON SILTY CLAY LOAM GRADING TO SILT LOAM TEXTURED VENEERS WITH CLAY LOAM TILL OCCURRING ABOUT 30 TO 70 CM BELOW THE SURFACE. IN CULTIVATED AREAS, THE AE HORIZON IS USUALLY INCORPORATED INTO THE SLOW LAYER (AP HORIZON). THESE SOILS ARE ASSOCIATED WITH STREAM CHANNELS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	HOBBEMA-SA	(saHBM)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-5%
SOIL CLASSIFICATION:	ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC (SALINE)		SURFACE STONINESS:	NON
PARENT MATERIAL:	FLUVIAL OR LACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-23	10YR 2/1	BLACK	MFGR	FR	L	4.6	7.4	0.4	57.	1.4
BMSA	23-60	10YR 5/4	YELLOWISH BROWN	WFSBK	F	SICL	0.8	7.4	12.	52.	7.8
CSK	60-90	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	SICL		8.2	12.	45.	8.3
2CSK	90-120	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	7.8	34.	6.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-23	G	G	G	G	G	G	G	G (Topsoil)
BMSA	23-60	F	F		G	U	G	F	U (Subsoil)
CSK	60-90	F	F		F	U	G	P	U (Subsoil)
2CSK	90-120	F	F		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HOBBEMA THAT IS MODERATELY TO STRONGLY SALINE AND/OR SODIC
 AT OR NEAR THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: HOBBEMA-SC (schBM) LANDFORM: VENEER
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 0-5%
 SOIL CLASSIFICATION: ELUVIATED BLACK USUAL SOIL MOISTURE: TEMPORARY PONDING
 CHERNOZEMIC (SALINE LOWER SUBSOIL) SURFACE STONINESS: NON
 PARENT MATERIAL: FLUVIAL OR LACUSTRINE/TILL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-32	10YR 2/1	BLACK	MFGR	FR	L	4.8	7.1	0.4	59	0.4
BM	32-70	10YR 5/4	YELLOWISH BROWN	MFSBK	FR	L		7.8	1.2	46	1.6
CSK	70-110	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	L		8.1	7.1	53	3.3
2CSK	110-120	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		8.1	6.4	36	3.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-32	G	G	G	G	G	G	G	G (Topsoil)
BM	32-70	G	G		F	G	G	G	F (Subsoil)
CSK	70-110	F	G		F	P	G	G	P (Subsoil)
2CSK	110-120	F	F		F	P	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF HOBBEMA WITH LOWER SUBSOIL SALINITY. THE BM HORIZON IS NON SALINE-SODIC. THE LOWER SUBSOIL (C HORIZON) IS MODERATELY SALINE AND WEAKLY SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	JEFFREY	(JFF)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-2%
SOIL CLASSIFICATION:	GLEEDED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM FLUVIAL OR			
	LACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MFR	FR	L	2.1	6.7	0.3	44.	1.2
BGJ	30-50	10YR 4/4	DARK YELLOWISH BROWN	MFSBK	F	L	0.4	6.9	0.3	40.	1.3
BCGJ	50-100	10YR 5/4	YELLOWISH BROWN	WFSBK	F	L-SIL		6.9	0.3	49.	4.7
CKGJ	100-120	10YR 6/4	LIGHT YELLOWISH BROWN	MA	F	L-SIL		7.8	0.6	55.	7.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G	G	G	G	G	G	G (Topsoil)
BGJ	30-50	F	G		G	G	G	G	F (Subsoil)
BCGJ	50-100	F	G		G	G	G	F	F (Subsoil)
CKGJ	100-120	F	G		F	G	G	F	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: IN CULTIVATED AREAS, THE AE HORIZON IS OFTEN INCORPORATED INTO THE PLOW LAYER (AP HORIZON). THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES AND OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	KAVANAGH	(KVG)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	BLACK SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE SOFTROCK		SURFACE STONINESS:	SLIGHTLY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR 3/2	VERY DARK GRAYISH BROWN	MMSBK	F	CL		6.5	0.9	63.	4.7
BNT	22-45	10YR 3/3	DARK BROWN	WMCOL	VF	C		7.5	2.6	84.	10.6
CSK	45-100	10YR 4/2	DARK GRAYISH BROWN	MA	F	C		7.6	7.2	98.	9.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	P	F		G	G	F	F	P (Topsoil)
BNT	22-45	P	P		G	G	P	P	P (Subsoil)
CSK	45-100	F	P		F	P	P	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SILTY CLAY LOAM TO CLAY TEXTURED SOFTROCK. THE BNT HORIZON UNDESIREABLE. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT UNLESS AN AE HORIZON IS PRESENT. IN CULTIVATED AREAS, THE AE HORIZON IS USUALLY INCORPORATED INTO THE PLOW LAYER (AP HORIZON). THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	MALMO	(MMO)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-9%
SOIL CLASSIFICATION:	ELUVIATED BLACK		USUAL SOIL MOISTURE:	MOIST
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-20	10YR	2/1	BLACK	MFGR	FR	L	5.	6.	0.5	59.	0.2
BTJ	20-100	10YR	3/3	DARK BROWN	SFSBK	F	SICL		6.2	0.4	41.	0.7
CK	100-180	10YR	4/2	DARK GRAYISH BROWN	MA	F	SICL		7.6	0.9	44.	0.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	G	G	F	G	G	G	F (Topsoil)
BTJ	20-100	F	F		F	G	G	G	F (Subsoil)
CK	100-180	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: MALMO SOILS SOMETIMES HAVE A LIGHTER COLORED, PLATY AE HORIZON BETWEEN THE TOPSOIL AND SUBSOIL. HOWEVER, IN CULTIVATED AREAS, THE AE HORIZON IS USUALLY INCORPORATED INTO THE PLOW LAYER (AP HORIZON).

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	MENAİK	(MAK)	LANDFORM:	LEVEL
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MEDIUM FLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APK	0-30	10YR	2/1	BLACK	MFGR	FR	L	3.5	8.3	0.8	57.	0.3
CKG1	30-50	10YR	5/3	BROWN	STRAT	FR	SICL		8.8	0.6	73.	1.1
CKG2	50-140	10YR	5/6	YELLOWISH BROWN	STRAT	FR	SL		8.7	0.7	25.	3.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APK	0-30	G	G	G	F	G	G	F	F (Topsoil)
CKG1	30-50	G	F		P	G	F	F	P (Subsoil)
CKG2	50-140	G	G		P	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	MENAİK-PT	(ptMAK)	LANDFORM:	LEVEL
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	REGO HUMIC GLEYSOL (PEATY)		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MEDIUM FLUVIAL		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
OP	0-30	10YR 3/2	VERY DARK GRAYISH BROWN			O	20.7	4.	4.3	85.	0.6
AH	30-50	10YR 2/1	BLACK	WFGR	FR	L	7.1	3.4	3.9	43.	0.6
CKG	50-120	10YR 5/1	GRAY	MA	F	SICL		5.1	3.2	44.	0.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
OP	0-30			G		P	P	G	(Peat)
AH	30-50	G	G	G	U	F	G	G	U (Topsoil)
CKG	50-120	F	F		P	F	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF MENAİK THAT HAS 15 TO 50 CM OF SURFACE PEAT.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: MENAİK-SA (saMAK) LANDFORM: LEVEL
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 0-2%
 SOIL CLASSIFICATION: REGO HUMIC GLEYSOL (SALINE) USUAL SOIL MOISTURE: WATERTABLE/PONDING
 SURFACE STONINESS: NON
 PARENT MATERIAL: MEDIUM FLUVIAL

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSAK	0-20	10YR 2/1	BLACK	MFGR	FR	L-SL	3.7	8.1	1.96	54.13.2	
AHSAK	20-30	10YR 2/1	BLACK	MMGR	FR	L	4.5	8.5	2.	67.17.9	
CCASAG	30-100	10YR 6/2	LIGHT BROWNISH GRAY	STRAT	FR-F	SIL-SICL		8.8	2.2	97.28.4	
CSKG	100-140	2.5Y 5/4	LIGHT OLIVE BROWN	STRAT	VFR	FSL		8.8	4.5	78.34.9	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSAK	0-20	G	G	G	F	G	G	U	U (Topsoil)
AHSAK	20-30	G	G	G	P	F	F	U	U (Topsoil)
CCASAG	30-100	F	F		P	G	P	U	U (Subsoil)
CSKG	100-140	G	G		P	F	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF MENAİK THAT IS SALINE AND/OR SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	MILLET	(MLT)	LANDFORM:	LEVEL
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	ORTHIC HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	NON
	GLACIOFLUVIAL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-30	10YR 2/1	BLACK	WFGR	FR	SL	5.7	6.2	1.7	44.	
BG	30-90	10YR 3/3	DARK BROWN	MA	F	LS		6.3	0.9	58.	
CG	90-130	10YR 5/3	BROWN	SGR	L	LS-S		6.3	0.9	40.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-30	G	G	G	F	G	G		F (Topsoil)
BG	30-90	F	P		F	G	G		P (Subsoil)
CG	90-130	F	P		F	G	G		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: WETNESS, VERY THICK
 WIND EROSION RISK:
 WATER EROSION K=: -
 RISK ON <5% SLOPE: -
 RISK ON 5-9% SLOPE: -
 RISK ON 9-15% SLOPE: -

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: SOILS ARE SANDY AND WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	MORINVILLE	(MVL)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-15%
SOIL CLASSIFICATION:	ELUVIATED BLACK		USUAL SOIL MOISTURE:	MESIC
	CHERNOZEMIC		SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	MODERATELY FINE			
	TILL/SOFTROCK			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-32	10YR	2/1	BLACK	MFR	FR	L	5.8	7.1	0.2	52.	
BM	32-50	10YR	5/3	BROWN	MFSBK	F	CL		7.3	0.2	42.	0.3
2CK1	50-90	2.5Y	5/6	LIGHT OLIVE BROWN	MA	F	CL		7.7	0.3	56.	1.8
2CK2	90-150	2.5Y	5/6	LIGHT OLIVE BROWN	MA	F	CL		7.8	0.5	58.	1.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-32	G	G	G	G	G	G		G (Topsoil)
BM	32-50	F	F		G	G	G	G	F (Subsoil)
2CK1	50-90	F	F		F	G	G	G	F (Subsoil)
2CK2	90-150	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 15-50 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED ON CLAY LOAM TEXTURED TILL OVERLYING CLAY LOAM TO LOAM TEXTURED WEATHERED BEDROCK. THE UNDERLYING SOFTROCK OCCURS AT 40 TO 90 CM BELOW THE SURFACE AND IS NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	MORINVILLE-GL	(glMVL)	LANDFORM:	veneer
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-15%
SOIL CLASSIFICATION:	GLEYED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	MODERATELY FINE			
	TILL/SOFTROCK			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-17	10YR 2/1	BLACK	MFGR	FR	L	4.5	6.6	0.5	54.	
BTGJ	17-40	10YR 5/3	BROWN	MFSBK	F	CL		7.1	0.4	54.	
CKGJ	60-90	2.5Y 5/4	LIGHT OLIVE BROWN	MA	F	CL		7.7	0.4	45.	1.7
2CKGJ	90-150	2.5Y 5/6	LIGHT OLIVE BROWN	MA	FR-F	SL		7.8	0.4	26.	1.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-17	G	G	G	G	G	G		G (Topsoil)
BTGJ	17-40	F	F		G	G	G		F (Subsoil)
CKGJ	60-90	F	F		F	G	G	G	F (Subsoil)
2CKGJ	90-150	F	G		F	G	F	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 15-50 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.020
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: GLEYED VARIANT OF MORINVILLE. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND GENERALLY OCCUR IN THE LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	MUNDARE	(MDR)	LANDFORM:	BLANET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	6-30%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	VERY COARSE FLUVIAL OR		SURFACE STONINESS:	NON
	EOLIAN			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-25	10YR 3/2	VERY DARK GRAYISH BROWN	SGR	L	LS-S	4.9	6.	0.5	53.	0.2
BM	25-70	10YR 4/4	DARK YELLOWISH BROWN	SGR	L	LS-S		7.1	0.2	24.	0.2
BC	70-140	10YR 5/4	YELLOWISH BROWN	SGR	L	LS-S		6.9	0.2	26.	0.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-25	F	P	G	F	G	G	G	P (Topsoil)
BM	25-70	F	P		G	G	F	G	P (Subsoil)
BC	70-140	F	P		G	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	25 cm
THICKNESS RANGE:	15-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.011
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	NO
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	YES
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: DEVELOPED ON LOAMY SAND TO SAND TEXTURED MATERIAL. EXPOSED FACES ARE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	NAMEPI	(NMP)	LANDFORM:	UNDULATING
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEIED BLACK SOLODIZED		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	SOLONETZ		SURFACE STONINESS:	NON
PARENT MATERIAL:	MODERATELY FINE SOFTROCK			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-18	10YR 2/1	BLACK	MFGR	FR	L	4.2	5.9	0.5	55.	
BNTGJ	33-60	5Y 3/2	DARK OLIVE GRAY	COL	VF	CL		7.4	0.6	58.	6.3
CSKGJ	60-150	5Y 5/2	OLIVE GRAY	MA	VF	CL		8.2	0.9	80.	12.1

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G	G	F	G	G		F (Topsoil)
BNTGJ	33-60	P	F		G	G	G	F	P (Subsoil)
CSKGJ	60-150	P	F		F	G	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT HORIZON HAS AN UNDESIREABLE STRUCTURE. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS SALINE AND SODIC. THESE SOILS ARE IMPERFECTLY DRAINED AND EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	NAVARRE	(NVR)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-9%
SOIL CLASSIFICATION:	GLEYPED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 2/1	BLACK	WFGR	FR	L		5.7	1.1	64.	3.7
BM	15-50	10YR 4/3	BROWN - DARK BROWN	WMSBK	F	CL		7.2	0.3	72.	0.6
CCAGJ	50-80	10YR 2/2	VERY DARK BROWN	MA	F	SICL		8.6	2.	48.	2.8
CKGJ	80-120	10YR 4/2	DARK GRAYISH BROWN	MA	F	SIC		8.8	1.1	78.	4.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G		F	G	F	G	F (Topsoil)
BM	15-50	F	F		G	G	F	G	F (Subsoil)
CCAGJ	50-80	F	F		P	F	G	G	P (Subsoil)
CKGJ	80-120	F	P		P	G	F	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 10-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SILTY CLAY LOAM TO SILTY CLAY TEXTURED MATERIAL.
 SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS EASIER WHEN CULTIVATION
 HAS NOT DISTURBED THE AE HORIZON. THESE SOILS ARE IMPERFECTLY DRAINED
 AND EXHIBIT GLEYING AND MOTTILING FEATURES IN THE SUBSOIL. THESE SOILS
 ARE NON SALINE AND NON TO WEAKLY SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	NAVARRE-SA	(saNVR)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEEYED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC (SALINE)		SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
APSAK	0-20	10YR 2/1	BLACK	WFGR	FR	L		8.1	12.	65.	30.
BMSAKGJ	20-65	10YR 7/1	LIGHT GRAY	MA	FR	SIL-L		8.7	23.7	33.	47.
CSKGJ	65-120	10YR 5/2	GRAYISH BROWN	MA	F	SIC-C		8.7	9.6	93.	41.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
APSAK	0-20	G	G		F	U	F	U	U (Topsoil)
BMSAKG	20-65	G	G		P	U	G	U	U (Subsoil)
CSKGJ	65-120	F	P		P	U	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 10-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF NAVARRE THAT IS STRONGLY SALINE AND SODIC TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	NAVARRE-SC	(scNVR)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEEYED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC (SALINE LOWER		SURFACE STONINESS:	NON
	SUBSOIL)			
PARENT MATERIAL:	FINE GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-20	10YR 2/1	BLACK	MFGR	FR	L	5.2	5.6	0.8	59.	1.
BTJ	20-40	10YR 4/4	DARK YELLOWISH BROWN	MMSBK	F	CL		6.8	1.9	51.	4.6
CSK	50-180	10YR 3/4	DARK YELLOWISH BROWN	MA	F	SICL		7.9	11.3	56.	5.9

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-20	G	G	G	F	G	G	G	F (Topsoil)
BTJ	20-40	F	F		G	G	G	F	F (Subsoil)
CSK	50-180	F	F		F	U	G	F	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 10-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF NAVARRE WITH A SALINE LOWER SUBSOIL. THE BTJ HORIZON IS NON SALINE. THE LOWER SUBSOIL IS STRONGLY SALINE. THESE SOILS ARE USUALLY NON TO WEAKLY SODIC BUT THE LOWER SUBSOIL SOMETIMES HAS HIGHER SAR VALUES.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	NAVARRE-SCXT (scxtNVR)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-9%
SOIL CLASSIFICATION:	GLEEDED ELUVIATED BLACK CHERNOZEMIC (SALINE LOWER SUBSOIL)	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE/TILL	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-28	10YR 2/1	BLACK	MFR	FR	SICL	4.5	7.	0.7	66.	
BM	28-42	10YR 4/3	BROWN-DARK BROWN	MFSBK	F	SIC		7.5	0.5	70.	0.6
CCASA	42-90	10YR 5/3	BROWN	MA	F	SICL		7.5	4.	55.	1.5
2CSK	90-160	10YR 4/2	DARK GRAYISH BROWN	MA	F	CL		7.5	5.5	54.	3.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-28	G	F	G	G	G	F		F (Topsoil)
BM	28-42	F	P		G	G	F	G	P (Subsoil)
CCASA	42-90	F	F		G	F	G	G	F (Subsoil)
2CSK	90-160	F	F		G	P	G	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 10-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF NAVARRE WITH TILL AT LESS THAN 1 M BELOW THE SURFACE AND A SALINE LOWER SUBSOIL. THE TEXTURE CHANGE IS NOT SIGNIFICANT. THE B HORIZON IS NON SALINE WHILE THE C HORIZONS ARE MODERATELY TO STRONGLY SALINE. THESE SOILS ARE USUALLY NON TO WEAKLY SODIC BUT THE LOWER SUBSOIL SOMETIMES HAS HIGHER SAR VALUES.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	NAVARRE-XT	(xtNVR)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-9%
SOIL CLASSIFICATION:	GLEYED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	FINE GLACIOLACUSTRINE/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-23	10YR 2/1	BLACK	MFGR	FR	SICL	4.6	6.8	1.		
BM	23-70	10YR 4/3	BROWN-DARK BROWN	MFSBK	F	C		7.1	0.7		
CK	70-80	10YR 4/2	DARK GRAYISH BROWN	MA	F	SICL		7.4	0.8	61.	1.4
2CK	80-160	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.3	1.6	58.	1.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-23	G	F	G	G	G			F (Topsoil)
BM	23-70	F	P		G	G			P (Subsoil)
CK	70-80	F	F		G	G	F	G	F (Subsoil)
2CK	80-160	F	F		G	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 10-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF NAVARRE WITH TILL AT LESS THAN 1 M BELOW THE SURFACE. THE TEXTURE CHANGE IS NOT SIGNIFICANT. THESE SOILS ARE NON SALINE AND NON TO WEAKLY SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	NORMA	(NRM)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	SOLONETZIC BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-30	10YR 2/1	BLACK	MFGR	FR	L	4.1	6.9	0.3	48.	1.3
BTNJ	30-80	10YR 3/3	DARK BROWN	MMSBK	F	CL		6.7	3.6	44.	4.5
CSK	80-180	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.5	6.5	57.	8.8

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-30	G	G	G	G	G	G	G	G (Topsoil)
BTNJ	30-80	F	F		G	F	G	F	F (Subsoil)
CSK	80-180	F	F		G	P	G	P	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE B HORIZON HAS WEAK SOLONETZIC TENDENCIES. THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	PEACE HILLS	(PHS)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	DROUGHTY
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL		SURFACE STONINESS:	NON
	OR EOLIAN			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-38	10YR 2/1	BLACK	WFGR	VFR	SL	2.2	6.3	0.4	39.	0.5
BM	38-70	10YR 5/4	YELLOWISH BROWN	WFSBK	VFR	SL	0.5	6.7	0.3	29.	0.6
BC	70-95	2.5Y 5/4	LIGHT OLIVE BROWN	SGR	VFR	SL					
CK	95-180	10YR 6/4	LIGHT YELLOWISH BROWN	SGR	L	SL-LS		7.8	0.5	30.	1.5

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-38	G	G	G	F	G	G	G	F (Topsoil)
BM	38-70	G	G		G	G	F	G	F (Subsoil)
BC	70-95	G	G						F (Subsoil)
CK	95-180	F	P		F	G	F	G	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: DEVELOPED ON SANDY LOAM TEXTURED MATERIAL. EXPOSED FACES MAY BE UNSTABLE WHEN VERTICALLY DITCHED.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	PEACE HILLS-GLXC (glxcPHS)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	2-9%
SOIL CLASSIFICATION:	GLEYED BLACK CHERNOZEMIC	USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE FLUVIAL OR EOLIAN/GLACIOLACUSTRINE	SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-30	10YR 2/1	BLACK	WFGR	FR	SL	2.4	7.7	0.4	46.	0.2
BGJ	30-100	10YR 4/3	BROWN-DARK BROWN	SGR	L	SL		7.9	0.4	36.	0.3
2CKGJ	100-130	10YR 5/1	GRAY	MA	F	SICL		7.8	0.8	54.	0.4

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-30	G	G	G	F	G	G	G	F (Topsoil)
BGJ	30-100	F	G		F	G	G	G	F (Subsoil)
2CKGJ	100-130	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: GLEYED VARIANT OF PEACE HILLS WITH SILTY CLAY LOAM TEXTURED MATERIAL WITHIN 1 M OF THE SURFACE. EXPOSED FACES IN THE UPPER MATERIAL MAY BE UNSTABLE. THE UNDERLYING GLACIOLACUSTRINE MATERIAL IS SILTY CLAY LOAM TO CLAY TEXTURED. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLED FEATURES IN THE SUBSOIL AND USUALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	PIBROCH	(PIB)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEYPED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-22	10YR 4/2	DARK GRAYISH BROWN	MFGR	FR	L		6.4	0.2	48.	0.4
AHE	22-27	10YR 3/3	DARK BROWN	MFPL	FR	SIL		6.3	0.4		
BTGJ	27-65	10YR 4/2	DARK GRAYISH BROWN	MFSBK	F	CL		7.1	0.4	42.	
BCGJ	65-110	10YR 5/2	GRAYISH BROWN	MA	F	CL		7.1	0.5	44.	0.7

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-22	G	G		F	G	G	G	F (Topsoil)
AHE	22-27	G	G		F	G			F (Topsoil)
BTGJ	27-65	F	F		G	G	G		F (Subsoil)
BCGJ	65-110	F	F		G	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 20-30 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.026
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE IMPERFECTLY DRAINED AND EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	PIBROCH-XP	(xpPIB)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEYED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	MODERATELY
PARENT MATERIAL:	MODERATELY FINE			
	TILL/SOFTROCK			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code		Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-18	10YR	3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L		6.4	0.22	
BTGJ	18-45	2.5Y	4/2	DARK GRAYISH BROWN	MMSBK	F	CL		7.1	0.44	
2CKGJ	45-100	2.5Y	6/6	OLIVE YELLOW	STRAT	F	SL-SCL		7.9	0.52	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-18	G	G		F	G			F (Topsoil)
BTGJ	18-45	F	F		G	G			F (Subsoil)
2CKGJ	45-100	F	F		F	G			F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	20 cm
THICKNESS RANGE:	20-30 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	LOW
WATER EROSION K=:	0.026
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	LOW
RISK ON 9-15% SLOPE:	MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	YES
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
OLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	NO
IMPORTANT TEXTURE CHANGE:	NO

NOTES: VARIANT OF PIBROCH WITH PARALITHIC BEDROCK AT LESS 1 M BELOW THE SURFACE.
THE UNDERLYING SOFTROCK IS NON SALINE-SODIC AND SIMILAR IN TEXTURE TO THE TILL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	PONOKA	(POK)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ELUVIATED BLACK		USUAL SOIL MOISTURE:	MESIC
	CHERNOZEMIC		SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM FLUVIAL OR			
	LACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MFGR	FR	L	3.	7.6	0.5	50.	0.3
BM	25-60	10YR 4/3	BROWN	MFSBK	F	L	0.9	7.9	0.4	49.	0.2
CK	60-120	10YR 5/2	GRAYISH BROWN	MA	F	SIL		8.2	0.6	53.	0.2

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G	G	F	G	G	G	F (Topsoil)
BM	25-60	F	G		F	G	G	G	F (Subsoil)
CK	60-120	F	G		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE OCCURRENCE OF THESE SOILS IS ALWAYS ASSOCIATED WITH A STREAM OF SOME KIND. PONOKA SOILS ARE EXCELLENT AGRICULTURAL SOILS AND ARE EXTENSIVELY CULTIVATED. TOPSOILS ARE VERY DEEP AND THE AE HORIZON HAS ALMOST ALWAYS BEEN INCORPORATED INTO THE PLOW LAYER. THE TOPSOIL BECOMES BROWN IN COLOR WITH DEPTH.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	PONOKA-SC	(scPOK)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC (SALINE LOWER		SURFACE STONINESS:	NON
	SUBSOIL)			
PARENT MATERIAL:	MEDIUM FLUVIAL OR			
	LACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AP	0-28	10YR 2/1	BLACK	WFGR	FR	L	2.9	6.	0.2	48. 0.7
BM	28-70	10YR 4/4	DARK YELLOWISH BROWN	WFSBK	FR	L		7.3	0.7	40. 1.2
CSK	70-120	10YR 3/3	DARK BROWN	STRAT	FR	L		8.1	8.2	44. 6.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-28	G	G	G	F	G	G	G	F (Topsoil)
BM	28-70	G	G		G	G	G	G	G (Subsoil)
CSK	70-120	G	G		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: VARIANT OF PONOKA WITH A SALINE LOWER SUBSOIL. THE BM HORIZON OR UPPER
 SUBSOIL IS NON SALINE-SODIC. THE LOWER SUBSOIL IS MODERATELY TO
 STRONGLY SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	PONOKA-SCXT (scxtPOK)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK	TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ELUVIATED BLACK	USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC (SALINE LOWER SUBSOIL)	SURFACE STONINESS:	NON
PARENT MATERIAL:	MEDIUM FLUVIAL OR LACUSTRINE/TILL		

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-30	10YR 2/1	BLACK	MFGR	FR	L	3.2	6.5	1.2	58.	0.9
BTJ	35-57	10YR 5/4	YELLOWISH BROWN	MFSBK	FR	L		7.4	2.	64.	3.5
2CSK	57-140	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	5.9	54.	4.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-30	G	G	G	G	G	G	G	G (Topsoil)
BTJ	35-57	G	G		G	G	F	G	F (Subsoil)
2CSK	57-140	F	F		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF PONOKA WITH A SALINE LOWER SUBSOIL AND TILL AT LESS THAN 1 M BELOW THE SURFACE. UNDERLYING TILL IS CLAY LOAM TEXTURED AND OFTEN WHERE THE SALINITY AND SODICITY IS FOUND. THE B HORIZON OR UPPER SUBSOIL IS NON SALINE-SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES: PONOKA-XC (xcPOK) LANDFORM: VENEER
 SOIL ZONE: THICK BLACK TYPICAL SLOPES: 1-5%
 SOIL CLASSIFICATION: ELUVIATED BLACK USUAL SOIL MOISTURE: MESIC
 CHERNOZEMIC SURFACE STONINESS: NON
 PARENT MATERIAL: MEDIUM FLUVIAL OR
 LACUSTRINE/
 GLACIOLACUSTRINE

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-25	10YR 2/1	BLACK	MMGR	FR	L	4.2	7.4	0.5	61.	
BM	25-70	10YR 5/3	BROWN	MFSBK	FR	L	1.7	6.8	0.8	39.	
2CK	70-125	10YR 4/2	DARK GRAYISH BROWN	MA	F	C	0.4	8.2	0.5	56.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-25	G	G	G	G	G	F		F (Topsoil)
BM	25-70	G	G		G	G	G		G (Subsoil)
2CK	70-125	F	P		F	G	G		P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 25 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.032
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: MODERATE
 RISK ON 9-15% SLOPE: HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF PONOKA WITH CLAY TEXTURED MATERIAL AT LESS THAN 1 M BELOW THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	SHANDRO	(SHD)	LANDFORM:	LEVEL
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	0-2%
SOIL CLASSIFICATION:	SOLONETZIC HUMIC GLEYSOL		USUAL SOIL MOISTURE:	WATERTABLE/PONDING
PARENT MATERIAL:	MODERATELY FINE SOFTROCK		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AHKS	0-18	2.5Ym 2/0	BLACK	SFGR		SIC		8.			
BSKG	18-36	2.5Ym 4/2	DARK GRAYISH BROWN	WFGR		C		7.9			
CCASG	36-120	2.5Ym 4/4	OLIVE BROWN	MA		C		7.7			

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AHKS	0-18	P	P		F				P (Topsoil)
BSKG	18-36	F	P		F				P (Subsoil)
CCASG	36-120	F	P		F				P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 20 cm
 THICKNESS RANGE: 15-30 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: WETNESS
 WIND EROSION RISK:
 WATER EROSION K=:
 RISK ON <5% SLOPE:
 RISK ON 5-9% SLOPE:
 RISK ON 9-15% SLOPE:

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: ALL
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: YES
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE SOILS ARE SALINE AND SODIC TO THE SURFACE, HAVING A B HORIZON THAT HAS SOLONETZIC TENDENCIES. SOILS ARE WET ALL YEAR AND THEREFORE EXPOSED FACES ARE UNSTABLE. SHANDRO SOILS ARE CARBONATED TO THE SURFACE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	TOFIELD	(TFD)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BLACK SOLOD		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY FINE TILL		SURFACE STONINESS:	MODERATELY

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat% SAR
AH	0-23	10YRm 2/1	BLACK	WMGR	FR	SL	3.36	5.8		
AHE	23-30	10YRm 3/2	VERY DARK GRAYISH BROWN	WFPL	FR	SL	2.92	6.7		
AB	30-35	10YRm 5/4	YELLOWISH BROWN	MFABK	F	SCL		6.8		
BNT	35-55	10YRm 4/4	DARK YELLOWISH BROWN	MCCOL	VF	SCL		7.7		
CCASA	55-80	2.5Ym 5/2	GRAYISH BROWN	WFSBK	FR	L		7.9		
CK	80-120	2.5Ym 5/2	GRAYISH BROWN	WFSBK	FR	L		7.7		

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-23	G	G	G	F				F (Topsoil)
AHE	23-30	G	G	G	G				G (Topsoil)
AB	30-35	F	F		G				F (Subsoil)
BNT	35-55	P	F		F				P (Subsoil)
CCASA	55-80	F	G		F				F (Subsoil)
CK	80-120	F	G		F				F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	25 cm
THICKNESS RANGE:	20-30 cm
COLOR CHANGE TO SUBSOIL:	NOT OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.037
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	YES
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THE BNT HORIZON HAS AN UNDESIREABLE STRUCTURE AND IS SODIC. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	UKALTA	(UKT)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-15%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	MESIC
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	SLIGHTLY
	GLACIOFLUVIAL/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-23	10YR 2/1	BLACK	SGR	VFR	SL	2.7	6.6	0.2	44.	0.2
BM	23-30	10YR 5/3	BROWN	SGR	VFR	SL		7.2	0.2	28.	0.4
2BT	30-100	10YR 5/2	GRAYISH BROWN	MFSBK	F	CL		7.7	0.5	43.	0.5
2CK	100-120	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.8	0.4	42.	0.6

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-23	G	G	G	G	G	G	G	G (Topsoil)
BM	23-30	G	G		G	G	F	G	F (Subsoil)
2BT	30-100	F	F		F	G	G	G	F (Subsoil)
2CK	100-120	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: NO
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: DEVELOPED ON A SANDY LOAM TEXTURED VENEER OVER CLAY LOAM TEXTURED TILL.
 EXPOSED FACES OF THE SANDY MATERIAL MAY BE UNSTABLE.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	UKALTA-GL	(glUKT)	LANDFORM:	VDNEER, UNDULATING
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEVED BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	MODERATELY COARSE		SURFACE STONINESS:	SLIGHTLY
	GLACIOFLUVIAL/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-60	10YR 2/1	BLACK	WFGR	VFR	SL	2.6	7.4	0.5	40.	4.
BGJ	60-107	10YR 5/4	YELLOWISH BROWN	WFSBK	VFR	SL		7.	0.8	48.	
2CKGJ	107-150	2.5Y 4/4	OLIVE BROWN	MA	F	CL		7.7	0.4	48.	3.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-60	G	G	G	G	G	G	F	F (Topsoil)
BGJ	60-107	G	G		G	G	G		G (Subsoil)
2CKGJ	107-150	F	F		F	G	G	G	F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: YES

NOTES: GLEVED VARIANT OF UKALTA. THESE SOILS ARE IMPERFECTLY DRAINED, EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL AND GENERALLY OCCUR IN LOWER LANDSCAPE POSITIONS.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	UKALTA-SC	(scUKT)	LANDFORM:	VERNEER, UNDULATING
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	ORTHIC BLACK CHERNOZEMIC		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	(SALINE LOWER SUBSOIL)		SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	MODERATELY COARSE			
	GLACIOFLUVIAL/TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AH	0-25	10YR 2/2	VERY DARK BROWN	MMGR	FR	SL	4.2	6.	0.2	63.	
BM	25-65	10YR 4/3	BROWN-DARK BROWN	WMSBK	F	SL		6.4	0.3	53.	
2CSK	65-120	10YR 4/3	BROWN-DARK BROWN	MA	F	SCL		8.4	1.9	90.	17.

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AH	0-25	G	G	G	F	G	F		F (Topsoil)
BM	25-65	F	G		F	G	G		F (Subsoil)
2CSK	65-120	F	F		F	G	P	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 30 cm
 THICKNESS RANGE: 20-40 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: VERY THICK
 WIND EROSION RISK: HIGH
 WATER EROSION K=: 0.024
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: YES
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: YES

NOTES: VARIANT OF UKALTA WITH A SALINE AND/OR SODIC LOWER SUBSOIL. THE BM HORIZON OR UPPER SUBSOIL IS NON SALINE-SODIC. THE LOWER SUBSOIL (OFTEN THE UNDERLYING TILL) IS WEAKLY SALINE AND STRONGLY SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	VOLMER	(VOL)	LANDFORM:	VENEER
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	GLEEYED ELUVIATED BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	FINE GLACIOLACUSTRINE/ MEDIUM GLACIOLACUSTRINE			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-10	10YR 2/1	BLACK	MFGR	FR	L	3.7	7.9		58.	
BGJ	50-60	10YR 3/4	DARK YELLOWISH BROWN	MMSEK	F	CL		7.8		46.	
CLGJ	60-180	10YR 3/3	DARK BROWN	MA	F	SIL		7.7		34.	

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-10	G	G	G	F		G		F (Topsoil)
BGJ	50-60	F	F		F		G		F (Subsoil)
CLGJ	60-180	F	G		F		G		F (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 10 cm
 THICKNESS RANGE: 10-20 cm
 COLOR CHANGE TO SUBSOIL: OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.021
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: NO
 SALINE OR SODIC LOWER SUBSOIL: NO
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THESE SOILS ARE DEVELOPED IN GLACIOLACUSTRINE DEPOSITS THAT ARE FINE TEXTURED IN THE UPPER PROFILE AND MEDIUM TEXTURED IN THE LOWER PROFILE. VOLMER SOILS ARE IMPERFECTLY DRAINED AND EXHIBIT GLEYING AND MOTTLING FEATURES IN THE SUBSOIL.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	WETASKIWIN	(WKN)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	1-5%
SOIL CLASSIFICATION:	BLACK SOLODIZED SOLONETZ		USUAL SOIL MOISTURE:	TEMPORARY PONDING
PARENT MATERIAL:	FINE GLACIOLACUSTRINE		SURFACE STONINESS:	NON

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 2/1	BLACK	MFGR	FR	L	4.5	5.7	0.2	61.	3.2
BNT	15-30	10YR 3/3	DARK BROWN	SMCOL	VF	CL		7.6	2.2	56.	18.5
CSK	30-180	10YR 4/2	DARK GRAYISH BROWN	MA	F	SICL		7.8	13.7	64.	16.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	F	G	F (Topsoil)
BNT	15-30	P	F		F	G	G	U	U (Subsoil)
CSK	30-180	F	F		F	U	F	U	U (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS: 15 cm
 THICKNESS RANGE: 15-25 cm
 COLOR CHANGE TO SUBSOIL: NOT OBVIOUS
 STRIPPING LIMITATIONS: NONE
 WIND EROSION RISK: LOW
 WATER EROSION K=: 0.040
 RISK ON <5% SLOPE: LOW
 RISK ON 5-9% SLOPE: LOW
 RISK ON 9-15% SLOPE: MODERATE

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.: SPR
 HARD BEDROCK: NO
 NON-SODIC SOFTROCK: NO
 SODIC SOFTROCK: NO
 GRAVEL: NO
 STONY LAYER: NO
 FACE INSTABILITY: NO
 SOLONETZIC B HORIZON: YES
 SALINE OR SODIC LOWER SUBSOIL: YES
 IMPORTANT TEXTURE CHANGE: NO

NOTES: THE BNT HORIZON HAS AN UNDESIREABLE STRUCTURE AND IS SODIC. SEPARATION OF TOPSOIL FROM SUBSOIL BY COLOR IS DIFFICULT. THE LOWER SUBSOIL IS SALINE AND SODIC.

INTERPRETATION GUIDELINES

SCA 10

09/01/93

SOIL SERIES:	WHITFORD	(WHF)	LANDFORM:	BLANKET
SOIL ZONE:	THICK BLACK		TYPICAL SLOPES:	2-5%
SOIL CLASSIFICATION:	SOLONETZIC BLACK		USUAL SOIL MOISTURE:	TEMPORARY PONDING
	CHERNOZEMIC		SURFACE STONINESS:	SLIGHTLY
PARENT MATERIAL:	MODERATELY FINE TILL			

TYPICAL SOIL PROFILE:

Horizon	Depth	Color Code	Color Name	Structure	Consistence	Texture	O.C.	pH	EC	Sat%	SAR
AP	0-15	10YR 3/2	VERY DARK GRAYISH BROWN	MFGR	FR	L	4.8	5.6	0.17	39.	
BTNJ	15-50	2.5Y 5/4	LIGHT OLIVE BROWN	COL	F	CL		6.9	0.57	43.	
CSK	50-110	2.5Y 4/4	OLIVE BROWN	MA	F	CL		8.1	5.39	43.	6.3

SOIL QUALITY RATINGS:

Horizon	Depth	Consistence	Texture	O.C.	pH	EC	Sat%	SAR	Overall Rating
AP	0-15	G	G	G	F	G	G		F (Topsoil)
BTNJ	15-50	F	F		G	G	G		F (Subsoil)
CSK	50-110	F	F		F	P	G	F	P (Subsoil)

TOPSOIL INTERPRETATIONS:

TYPICAL THICKNESS:	15 cm
THICKNESS RANGE:	10-25 cm
COLOR CHANGE TO SUBSOIL:	OBVIOUS
STRIPPING LIMITATIONS:	NONE
WIND EROSION RISK:	HIGH
WATER EROSION K=:	0.036
RISK ON <5% SLOPE:	LOW
RISK ON 5-9% SLOPE:	MODERATE
RISK ON 9-15% SLOPE:	HIGH

SUBSOIL (TO 1.5 M) INTERPRETATIONS:

SEASONALLY HIGH W.T.:	SPR
HARD BEDROCK:	NO
NON-SODIC SOFTROCK:	NO
SODIC SOFTROCK:	NO
GRAVEL:	NO
STONY LAYER:	NO
FACE INSTABILITY:	NO
SOLONETZIC B HORIZON:	NO
SALINE OR SODIC LOWER SUBSOIL:	YES
IMPORTANT TEXTURE CHANGE:	NO

NOTES: THE BTNJ HORIZON HAS SOLONETZIC TENDENCIES. THE LOWER SUBSOIL IS SALINE AND SODIC.

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