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A BIBLIOGRAPHY OF THE ATHABASCA OIL SANDS:

FORT MCMURRAY, ALBERTA AREA:

SOCIO-ECONOMIC AND ENVIRONMENTAL STUDIES

1982 SUPPLEMENT

Compiled by

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for

Alberta Environment Library

EDMONTON, Alberta January, 1982 1982 Supplement to Sixth Edition

NOTE: THIS SUPPLEMENT IS TO BE USED WITH THE 1980 CUMULATED UPDATE.

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# Introduction.

This 1982 supplement to the 1980 cumulated update of "A Bibliography of the Athabasca Oil Sands, Fort McMurray, Alberta Area: Socio-Economic and Environmental Studies" contains references to about 900 items. It lists journal articles received up to the end of November 1981 and reports received prior to February 1982 by the Alberta Environment Library. In addition to performing a computer search of selected data bases, the following sources were checked for pertinent references: the Alberta Oil Sands Index; the Alberta Municipal Affairs Library; the Alberta Tourism and Small Business Library; Alberta Culture, Historical Resources Division collection; the Library of the Northeast Alberta Regional Commissioner's Office; and the public reports published by Syncrude Canada Ltd. The assistance provided by staff of these libraries was greatly appreciated.

With the exception of the changes noted below, entries are arranged under the headings used in the 1980 cumulated update. All headings and numbers appear in the table of contents; those for which there are no relevant entries in this supplement are marked "No additions this supplement." These headings and notes are not repeated in the body of the work.

The heading for section A under "VIII. Socio-Economic Studies" has been changed from "Fort McMurray Area" to "Athabasca Oil Sands Area" to more accurately indicate the geographic area covered by items listed in this section. Section A also includes a new section "Education". As Fort McMurray is now a city, the heading for section VII. B has been changed to "Fort McMurray" from "New Town of Fort McMurray". Section VII. C "New Townsite (for Alsands Project)" has been established to allow for the subdivision of materials on the proposed new townsite.

The 1980 cumulated update provided for separate sections for the Cold Lake, Peace River and Wabasca Oil Sands. The subdivisions "Socio-Economic Studies" and "Environmental Studies" used under Cold Lake are further subdivided using headings comparable to those established for studies on the Athabasca Oil Sands. The Peace River and Wabasca sections both contain the following subdivisions: "General Background References", "Historical Background Material and Archaeology", "Socio-Economic Studies", and "Environmental Studies".

A few items listed in the 1980 cumulated update have been repeated in this supplement in order to either correct the entry printed previously or to include additional information.

The staff of the Alberta Environment Library would appreciate your bringing any omissions from this bibliography to their attention.

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# II. GENERAL BACKGROUND REFERENCES.

### Serial Publications

Great Canadian Oil Sands Ltd. Annual report. 1968-1978. Toronto, 1969-1979. Great Canadian Oil Sands Ltd. became the Oil Sands Division of Suncor Inc. in 1979. For later annual reports, see Suncor Inc. Annual report.

Oil Sands - researchers - projects. Helga Radvanyi, editor. 2nd ed. Edmonton, Research Council of Alberta, Apr. 1980. 492 p.

Research Council of Alberta. Annual report. 1st.- , 1920 -Edmonton, 1921- .

lst to 10th reports issued by the Council under its earlier names, Advisory Council of Scientific and Industrial Research, and Scientific and Industrial Research Council of Alberta.

Includes reports of the activities of the Council's Earth Sciences Branch and its Oil Sands Research Centre.

Suncor Inc.

Annual Report. 1979- . Toronto, 1980- . For earlier annual reports of Suncor Inc. Oil Sands Division see Great Canadian Oil Sands Ltd. Annual report.

Items Published Prior to 1978

Alberta. Dept. of Federal and Intergovernmental Affairs. Inventory of programs in the oil sands areas. Edmonton, March 1975.

iii, 65 p.

An inventory of projects in northeastern Alberta with federal, provincial, and industry/other participation.

Alberta. Dept. of Federal and Intergovernmental Affairs. Reply to question no. 172 requested by Mr. Miller on May 7, 1974, with respect to the development of the Alberta Athabasca Sands since January 1, 1973... 1 p.

Alberta. Sessional paper 1974-172.

Alberta. Northern Alberta Development Council. Day care in northern Alberta. Peace River, Nov. 1979. 24 p.

Buick, Ruby

Projects related to Athabasca Oil Sands development (1976-1978). Edmonton, Alberta. Dept. of Energy and Natural Resources. Resource Evaluation and Planning Division, fall 1977.

1v. (various pagings)

An inventory of projects sponsored by the federal and provincial governments, industry and academic institutions.

Canadian Petroleum Association.

Oil sands developments: risks, economics, outlook. Calgary, Feb. 1975.

1v. (various pagings) illus., maps.

Coombs, F. David

An impact assessment of the presence of the federal government in the Alberta oil sands area (North Eastern Alberta). Edmonton, Alberta. Dept. of Federal and Intergovernmental Affairs, March 1975.

ix, 24 p.

Examines the federal government's involvement in the oil sands area and assesses the impact of their current and/or potential involvement.

Govier, G.W.

Alberta's oil sands in the energy supply picture. By G.W. Govier, Alberta. Energy Resources Conservation Board. Paper presented to the American Association of Petroleum Geologists-Society of Economic Paleontologists and Mineralogists 1975 Annual Meeting, Dallas, Texas, April 9, 1975.

36 p. illus.

Re: Alberta's and Canada's overall crude oil supply situation, imports and exports, reserves of crude bitumen in Alberta, status of surface and in-situ synthetic crude operations and outlook for the future.

#### Items Published In 1978

Alberta. Dept. of Tourism and Small Business. Northern Development Branch.

A summary of documentation of government activity and spending in four northern Alberta communities. Edmonton, Dec. 1978.

38 p. illus.

Based on data submitted by Dr. W. Cecil Brown, Apr. 1978. The four communities studied are Anzac, Wabasca-Desmarais,

Chipewyan Lake and Janvier.

Alberta Oil Sands Environmental Research Program.

Third annual report 1977-78. Edmonton, 1978.

x, 144 p. illus., map (AOSERP Report 32)

Sponsored jointly by Alberta Environment and Environment Canada.

Bowman, C.W.

Tar sands and related products as chemical feedstocks. By C.W. Bowman, Alberta Oil Sands Technology and Research Authority. In World Conference on Future Sources of Organic Raw Materials, Toronto, 1978. Future sources of organic raw materials. Oxford, Pergamon Press, 1978.

p. 457-466. (Chemrawn I)

Canada. Dept. of Energy, Mines and Resources.

Heavy oils of Canada. In Canada. Dept. of Energy, Mines and Natural Resources. Oil and natural gas industries in Canada. Ottawa, 1978.

p. 38-46. illus. (Its Report ER 78-2)

General information on the oil sands and heavy oils of Alberta and Saskatchewan.

Humphreys, Reginald, D.

The Alberta oil sands: energy for the future. By R.D. Humphreys, AOSTRA and R. Schutte, Syncrude Canada Ltd. In Symposium on Oil Sand and Oil Shale Chemistry, Montreal, 1977. Oil sand and oil shale chemistry. New York, Verlag Chemie, 1978.

p. 1-9, illus.

Background information followed by a brief discussion of operational problems.

Jenkins, George R.

Twenty years operation of an in-situ combustion project. By George R. Jenkins, Amoco Canada Petroleum Company Ltd. and John W. Kilpatrick, Amoco Production Company. Paper presented at the 80th annual meeting, Canadian Institute of Mining and Metallurgy, Vancouver, B.C., April 23-27, 1978.

21 p. illus.

Regulatory and environmental considerations: p. 3-5. Based on Amoco Canada Petroleum Company Ltd.'s test project in the Athabasca Oil Sands.

Also issued as a preprint of a paper to be presented at the 29th annual technical meeting of the Petroleum Society of the Canadian Institute of Mining and Metallurgy, Calgary, June 13-16, 1978. 12 p. illus. (Paper no. 78-29-01)

Also published in <u>The Journal of Canadian Petroleum</u> <u>Technology</u>, V. 18, No. 1. Jan.-Mar. 1979, p. 60-65. Linn, H.D.

Economic, social and planning requirements for northern communities. By H.D. Linn and J.C. Stabler, Saskatchewan. Dept. of Mineral Resources. Saskatchewan Geological Survey. Regina, 1978.

lv. (various pagings) illus., tables (Miscellaneous report No. 78-1)

Includes discussion of selected socio-economic characteristics of northern, single-enterprise communities, economic, social and planning requirements, comparison of the traditional and new approaches to northern community development, and combined statistics on northern mining towns.

Spragins, Frank K.

Athabasca Tar Sands: occurrence and commercial projects. In Bitumens, asphalts and tar sands, ed. by G.V. Chilingarian and T.F. Yen. New York, Elsevier, 1978.

p. 93-121. illus. (Developments in Petroleum Science No.
7)

Steele, C.T.

Development of Alberta Oil Sands. By C.T. Steele, Alberta Oil Sands Technology and Research Authority. Paper presented to the Engineering Institute of Canada Conference, St. John's, Newfoundland, May 25-26, 1978.

18 p. illus.

Compares the Alberta Oil Sands deposits; describes recovery operations, technological problems and research and information operations sponsored by AOSTRA.

Symposium on Oil Sands and Oil Shale Chemistry, Montreal, 1977.

Oil sand and oil shale chemistry. Edited by Otto P. Strausz and Elizabeth M. Lown. New York, Verlag Chemie, 1978.

xii, 384 p.

The Symposium was held at the Second Annual Joint Meeting of the Chemical Institute of Canada and the American Chemical Society, Montreal, 1977.

Separate entries have been made for selected papers from this volume.

See also Symposium on Oil Sand and Oil Shale Chemistry, Montreal, 1977. Preprints of papers. Pittsburgh, American Chemical Society, 1977, which was listed in the 1980 cumulated update of this bibliography.

## Items Published in 1979

AERCB critical of Alsands project. <u>Oilweek</u>, V. 30, No. 46-48, Jan. 7, 1980, p. 27-29. Re: Summary of ERCB's report 79-H on the Alsands project.

Re. Bullindry of ERCB's report 75 if on the Risands project.

The Alberta oil sands: a corporate profile. Energy Analects, V. 8, No. 39, Oct. 5, 1979, p. 4. Re: Information included in "Alberta Oil Sands - Facts and Figures."

Alsands - Canada's third mining oil sands project. <u>Energy</u> <u>Processing/Canada</u>, V. 72, No. 1, Sept.-Oct. 1979, p. 44-47. (Oil sands and heavy oil report '79) Includes process schematic and a map locating the project area and plant site.

Alsands, Esso groom new projects. Canadian Chemical Processing, V. 63, No. 6, June 6, 1979, p. 30-34. Re: Alsands project and Esso's Cold Lake project.

Alternate fuel costs detailed. <u>Oil and Gas Journal</u>, V. 77, No. 38, Sept. 17, 1979, p. 92, 94, 97. Includes a summary of a paper presented by W.L. Oliver of G.C.O.S. and G.R. Gray of Syncrude on the economics of oil sands operations. The paper was given at the 10th World Petroleum Congress, Bucharest, 1979.

Bagby, R.R.

Attitude of Husky toward development of oilsands. By R.R. Bagby, Husky Oil Ltd. Paper presented to the Oil Sands Seminar '79, Edmonton, Oct. 31, 1979.

15 p.

Includes comments related to the responsibility for providing the social infrastructure neccessitated by oil sands developments, environmental issues, Canadian and Alberta content and government relations. Bherer, John

Future development of Alberta's oil sands - an update. By John R. Bherer, Petro-Canada. Paper presented to the Canadian Oil Scouts Association 29th Annual Meeting, Fairmont B.C., Sept. 1979.

16 p. illus.

Chrysler, K.M.

Fuel from tar sands not just a pipe dream. <u>U.S. News and World</u> <u>Report, V. 87, No. 22, Nov. 26, 1979, p. 59-60.</u> Re: Development of the Athabasca oil sands.

Clarification on P & NG rights in leased oil sands areas announced. Oilweek, V. 30, No. 45, Dec. 17, 1979, p. 34.

Collyer, C.R.

The hard truths about oil sands development. By C.R. Collyer, Syncrude Canada Ltd. Paper presented to Inter-Can '79 Petroleum Exhibition and Conference, Edmonton, Sept. 25-27, 1979.

14 p.

Re: The challenges in terms of manpower requirements and infrastructure presented by future oil sands developments and the need for a development plan for the oil sands.

Cookson, John W.

Alberta Environment's role in oil sands development. By the Honourable John W. (Jack) Cookson, Minister of the Environment. Address given at the Oil Sands Development and Reclamation Model Study Seminar, Nov. 14, 1979.

7 p.

Dawson-Grove, Glascott E.

The time economics of developing low-grade petroleum deposits, as exemplified by the Athabasca tar sands of Alberta, Canada. By G.E. Dawson-Grove, Petrophysical Consultants International Ltd. In Society of Professional Well Log Analysts Logging Symposium, 20th, Tulsa, Okla., June 3-6, 1979. Transactions. V. 2, p. 1-6. illus. ERCB approves two Alberta oil sands projects. <u>Oil & Gas Journal</u>, V. 77, No. 33, Aug. 13, 1979, p. 56-57. Re: Preliminary approval of the Esso and Alsands projects.

Fort McMurray's Syncrude: "Success in spite of problems". In-Site, V. 2, No. 7, July 1979, p. 20-21. Re: Syncrude's operations.

Getty, Don R.

Energy resources booming. By Don Getty, Alberta Minister of Energy and Natural Resources. <u>Western Miner</u>, V. 52, No. 4, April 1979, p. 48-50. Includes a review of oil sands developments to early 1979.

Grappling with the oilsands challenge. <u>Oilweek</u>, V. 30, No. 32, Sept. 17, 1979, p. 38, 40. Summary of a speech by John Bherer of Petro Canada to the Canadian Oil Scouts Association. Discusses developments in the oil sands, location of reserves, need for the oil.

Great Canadian Oil Sands. Energy Processing/Canada, V. 72, No. 1, Sept.-Oct. 1979, p. 50. (Oil sands and heavy oil report '79) Re: Effects of July 4 fire in the processing area of the plant.

Great Canadian Oil Sands to expand. <u>In-Site</u>, V. 2, No. 7, July 1979, p. 20-21.

HBOG, Fina now part of Syncrude. <u>Oilweek</u>, V. 30, No. 32, Sept. 17, 1979, p. 52.

Hard lessons learned by pioneers. <u>Canadaian Chemical Processing</u>, V. 63, No. 6, June 6, 1979, p. 24-26. (Syn-Crude Report 2) Re: Experience gained by CGOS and Syncrude during construction and operation of their oil sands plants. Also contains a chart listing in-situ testing programs for oil sand and heavy crude.

#### Hartnell, Jane

Oil from the sands is elusive and expensive. <u>Business Life in</u> <u>Western Canada</u>, V. 7, No. 12, Dec. 1979, p. 17-18. Re: Existing and proposed oil sands plants. Includes chart prepared by Alsands illustrating the timing of major projects from 1979-1986.

Heavy oil: Canada's vital resource. Canadian Chemical Processing, V. 63, No. 6, June 6, 1979, p. 21-22. (Syn-Crude Report 1) Re: Development of Alberta's oil sands and heavy oil deposits.

#### Linsley, E.F.

Heavy crude-this enormous underground resource may be our best answer to the oil shortage. <u>Popular Science</u>, Dec. 1979, p. 26-39.

A general article on tar sands including Alberta's and the challenge of recovering and refining the heavy oil from these.

# Logel, Sharon

Development of oil sands vital to Canadian energy. <u>Energy</u> <u>Processing/Canada</u>, V. 72, No. 1, Sept.-Oct. 1979, p. 31-34, 26-38, 40, 42. (Oil sands and heavy oil report '79) An overview of the oil sands/heavy oil deposits. Includes a map of the 4 major oil sands deposits; a review of projects underway in Alberta and Saskatchewan and of activities funded by AOSTRA.

Lougheed's ace: the tar sands could tip the balance for Alberta. <u>Alberta Report</u>, V. 6, No. 5, Nov. 23, 1979, p. 10-11. <u>Re: Lougheed's threat to slow down development of the oil sands</u> if Alberta dosen't get a fair price for its oil. Describes the Alberta oil sands deposits.

Mitchell, David E.

Albertans' participation in oil sands projects. By David E. Mitchell, Alberta Energy Company Ltd. Paper presented to the Oil Sands Seminar '79, Edmonton, Oct. 31, 1979.

9 p.

Re: The need for more participation by Canadian and Albertan firms in heavy oil and oil sands developments.

- "Oil from Tarsand" a lesson on our industry....<u>The Oilsander</u>, V. 1, No. 5, Dec. 1979, p. 3. Re: 2-day course on the history of the tar sands, mining, extraction, processing, tailings disposal and the environmental and economic considerations faced by a company operating a tar sands plant.
- Oil sands and heavy oil report '79. Energy Processing/Canada, V. 72, No. 1, Sept.-Oct. 1979, p. 31-34, 36-38, 40, 42, 44-50. Separate entries have been made for the articles which constitute this report.
- Oil sands farmin for Gulf Canada. <u>Oilweek,</u> V. 30, No. 37, Oct. 22, 1979, p. 8-9. Re: Gulf's obtaining a farmin on Athabasca bituminous sands lease No. 30 from Home Oil and Alminex.
- Oil sands pilot activity examined. <u>Oilweek</u>, V. 30, No. 41, Nov. 19, 1979, p. 22-24. Report on papers presented at the Inter-Can '79 technical session in Edmonton.

A piece of the action: western companies team up to land the big energy projects. <u>Alberta Report</u>, V. 6, No. 52, Nov. 30, 1979, p. 20-21. Re: P.B.S: consortium formed by PCL, H.A. Simons Companies Ltd. and C.F. Braun Ltd. to compete for construction contracts for major projects such as the Cold Lake project.

Private development of oil sands encouraged. <u>Oilweek</u>, V. 30, No. 41, Nov. 19, 1979, p. 8-9. Re: Lougheed's announcement that oil companies with oil sands leases will have to start spending on their acreage or run the risk of losing their leases.

Product prices survey includes Nov. 1 increase in oil sands levy. Energy Analects, V. 8, No. 45, Nov. 16, 1979, p. 3. Re: Increase in synthetic crude levy of a tenth of a per cent per litre Aug. 30, and of two-tenths of a cent Nov. 1. Scott, H. Brent

Surface mining of oil sands. By H. Brent Scott, Syncrude Canada Ltd. Paper presented to the Oil Sands Seminar '79, Edmonton, Oct. 31, 1979.

13 p.

Deals with the following issues: who should be responsible for local and regional infrastructure; Albertan and Canadian content; government-industry relations; environmental considerations and the regulatory and approval process.

Sellers, R.V.

Producing oil from tar sands: the Syncrude story. By R.V. Sellers, Cities Service Company. <u>World</u>, V. 13, No. 4, autumn 1979, p. 40-43.

Significant U.N. Conference: the future of heavy crude and tar sands. <u>In-Site</u>, V. 2, No. 4, April 1979, p. 6-7. Re: Topics to be covered at the First International Conference on The Future of Heavy Crude and Tar Sands.

Syncrude, Suncor-GCOS linked by pipeline. <u>Oilweek</u>, V. 30, No. 32, Sept. 17, 1979, p. 5.

Re: Pipeline which will enable companies to provide each other with emergency hydrotreating assistance if required.

Syncrude: the first year. Energy Processing/Canada, V. 72, No. 1, Sept.-Oct. 1979, p. 48. (Oil sands and heavy oil report '79) Re: Operations at the Syncrude plant.

The tar sands: from Suncor's 45,000 a day to Alsands' 140,000 barrels. Alberta Report, V. 7, No. 4, Dec. 28, 1979, p. 18.

Taylor, Graham

Energy research and development at the Canada Centre for Mineral and Energy Technology. In Intersociety Energy Conversion Engineering Conference, 14th, Boston, Aug. 5-10, 1979. Proceedings. Washington, D.C., American Chemical Society, 1979.

v. 2, p. 1788-1792.

Oil sands and heavy oils: p. 1790.

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Towson, Don E.

Current in-situ oil sands pilots in Alberta, Canada. By D.E. Towson, Petro-Canada. Paper presented to the UNITAR Conference on Long-term Energy Resources, Montreal, Nov. 26-Dec. 7, 1979. 8 p. illus.

Includes a list of the pilot projects.

Towson, Don E.

The oil sands of Alberta: the source of Canada's future oil supply? By Don E. Towson, Petro-Canada. <u>The Journal of</u> <u>Canadian Petroleum Technology</u>, V. 18, No. 4, Oct.-Dec. 1979, p. 10-12.

Also presented at an Engineering Institute of Canada. Calgary Branch meeting, Oct. 1, 1979. 17 p. illus.

The vast oil sands potential: extraction problems spur international joint action. In-Site, V. 2, No. 12, (Dec. 1979) p. 22-23.

Watson, Laurie

Amoco head proposes guidelines for oil sands development. <u>Canadian Mining Journal</u>, V. 100, No. 9, Sept. 1979, p 63, 65. Summarizes a talk given by Dr. Fraser Allen to the plenary session of the Unitar Conference, Edmonton, 1979.

Wennekers, J.H.N.

Heavy oil, tar sands play key role in Alberta, Saskatchewan production. By J.H.N. Wennekers and others, Petro-Canada. Pt. 1 - <u>Oil & Gas Journal</u>, V. 77, No. 46, Nov. 12, 1979, p. 290-304; Pt. 2 - <u>Oil & Gas Journal</u>, V. 77, No. 47, Nov. 19, 1979, p. 193-198. (Canadian heavy oil, tar sands) Paper presented at the 1978 annual convention of the American

Association of Petroleum Geologists, Energy Minerals Division, April 12, 1978, Oklahoma City.

World oil focus on Alberta: Canadian initiative acknowledged by global conference on oil sands. <u>In-Site</u>, V. 2, No. 7, July 1979, p. 18. Summary of Dr. Bowman's observations on the Alberta oil sands scene presented to the First International Conference on the Future of Heavy Crude and Tar Sands. World petroleum prices and Canadian supply/demand support oil sands plant development - Oliver. <u>The Oilsander</u>, V. 1, No. 3, Oct. 1979, p. 1-2.

Summary of the paper "Technology and Economics of Oil Sands Plants" which was jointly prepared by G.R. Gray, Syncrude and Bill Oliver, Suncor Oil Sands Division. The paper was presented at the 10th World Petroleum Congress, Bucharest, Romania.

## Items Published in 1980

AGTL, Petrocan to review feasibility of oil sands plant. Energy Analects, V. 9, No. 22, June 6, 1980, p. 3-4. Re: Their plans for an Athabasca oil sands mining complex. Contains one more paragraph than the article in <u>The Public</u> Sector listed above.

AGTL, Petrocan to review feasibility of oil sands plant. The Public <u>Sector</u>, V. 4, No. 23, June 9, 1980, p. 4. Re: Their joint venture agreement to review the technical and economic feasibility of a fourth oil sands mining complex in the Athabasca oil sands.

Alberta. Energy Resources Conservation Board.

Alberta's bitumen resources. Calgary, May 1980.

11 p.

Information on the role and activities of the Energy Resources Conservation Board is followed by a brief discussion of Alberta's oil sands resources, present and future commerical developments and experimental schemes.

Alberta. Northern Alberta Development Council.

Annual Report 1979/80. Peace River, May 1980.

23 p.

Lists the general objectives of the Northern Alberta Development Council, the 69 briefs received during 1979/80, including those from Peace River, Wabasca, and Fort McMurray, research and publications completed, and projects funded under the Alberta North Subsidiary Agreement. Alberta. Northern Alberta Development Council.

A "feedback" report on the results of discussion groups held at the "Alberta North in the '80s" conference (what the delegates were saying). Peace River, Nov. 1980.

46 p.

Subtitle: Alberta North in the '80s-Tier II Summary, Nov. 1980.

Includes an overview of the conference and summary of discussions, summaries of group discussions on business and employment opportunities, implications for people and infrastructure and servicing requirements, report on native development panel and list of criticisms and concerns from the delegates.

Alberta. Northern Alberta Development Council.

Minutes of a public meeting of the Northern Alberta Development Council, Fort Chipewyan, July 31, 1980. Peace River, 1980. 2 p.

Cover title: Public meeting, Fort Chipewyan, July 31, 1980.

Alberta. Northern Alberta Development Council.

Minutes of a public meeting of the Northern Alberta Development Council, Fort McMurray, July 29 and 30, 1980. Peace River, 1980.

9 p.

Cover title: Public meeting, Fort McMurray, July 29 and 30, 1980.

Includes list of briefs presented from individuals of Anzac, Plamandon, Wandering River, Fort McMurray and Cadotte Lake.

Alberta poses oil sands delay in price talks. <u>Oil & Gas Journal</u>, V. 78, No. 12, March 24, 1980, p. 206. Re: Alberta's warning that approval of oil sands projects may be delayed if agreement on oil prices cannot be reached with the federal government.

Alsands delays \$65 million in tar sands plant work. <u>Oil & Gas</u> <u>Journal</u>, V. 78, No. 39, Sept. 29, 1980, p. 66. Re: Alsands cancelling winter site preparation work and the proposal for synthetic oil pricing they presented the Alberta and federal governments. Alsands gets six months reprieve. Oilweek, V. 31, No. 44, Dec. 8, 1980, p. 8-9. Re: Alsands participants putting their project into a holding position until June 1, 1981.

Alsands halts: work stops and partners ponder pullout. <u>Alberta</u> <u>Report, V. 7, No. 43, Sept. 26, 1980, p. 15.</u> Re: Cancellation of Alsands 1980-81 winter site preparation program and suspension of approval of 1981 budget.

Alsands starts work on plant. <u>Heavy Construction News</u>, V. 24, No. 5, Feb. 4, 1980, p. 26.

Alsands to start work. Oilweek, V. 30, No. 50, Jan. 21, 1980, p. 5.

Alsands will meet start-up date if....<u>Oil & Gas Journal</u>, V. 78, No. 18, May 5, 1980, p. 130. Alsands will meet their 1986 start-up deadline only if there are no further delays.

Athabasca pilot project advances. <u>Oilweek,</u> V. 31, No. 33, Sept. 22, 1980, p. 60. Re: Japan Canada Oil Sands Ltd. (Jacos) contributions to the PCE group's electric preheat and steam drive process project in the Athabasca oil sands.

Bechtel group to build Alsands tar sand plant. <u>Oil & Gas Journal</u>, V. 78, No. 8, Feb. 25, 1980, p. 41.

Re: A joint venture group headed by Bechtel Canada Ltd. and also involving Monenco Ltd. and Loram International Ltd. have been chosen to build the Alsands plant. Big Alberta carbonate triangle resource seen. <u>Oil & Gas Journal</u>, V. 78, No. 23, June 9, 1980, p. 40-41. Re: Tests in this carbonate triangle in North Central Alberta show that the oil is similar to that of the Athabasca tar sands. Article also mentions that supplies of oil from Alberta's oil sands will not necessarily be exported and that nuclear power is being considered as a power source in developing the oil sands.

Bowman, C.W.

Overview of Alberta's oil sand and heavy oil activities. By C.W. Bowman, Alberta Oil Sands Technology and Research Authority. Paper to be presented to the Seminar on Nonconventional Oil Technology, Calgary, May 29-30, 1980. 6 p. illus. Re: AOSTRA activities.

Canada to lend \$40 million to oil sands project. Oil & Gas Journal, V. 78, No. 48, Dec. 1, 1980, p. 85. Re: \$40 million loan to Esso and Alsands request for a meeting with federal energy officials to discuss its project.

Canada to rescind synthetic oil price guarantee. <u>Oil & Gas Journal</u>, V. 78, No. 14, April 7, 1980, p. 56.

Canadian oil sands boom. <u>Engineering News - Record</u>, V. 204, No. 11, March 13, 1980, p. 16. Primarily re: Alsands project and Esso's Cold Lake project.

Canadian terms may delay Alsands plant. <u>Oil & Gas Journal</u>, V. 78, No. 9, March 3, 1980, p. 25. Re: Failure of the Alberta and Canadian governments to reach an agreement on royalties and pricing by April will delay the Alsands plant start-up by a year.

Canadianizing the oilsands: says Fluor's boss, the time is not now but soon. <u>Alberta Report</u>, V. 7, No. 16, March 28, 1980, p. 22. Re: Experience being gained by Canadians in construction of tar sands plants. Capital key to oil sands projects. <u>Oilweek</u>, V. 30, No. 50, Jan. 21, 1980, p. 4.

Re: Talk given by W.P. Lefaivre, assistant general manager of the Royal Bank of Canada, to the 1979 Oil Sands Seminar.

Carrigy, Maurice A.

The role of bituminous sands in extending the petroleum era beyond 2000 A.D. By Maurice A. Carrigy, Alberta Oil Sands Technology and Research Authority. Paper presented at the International Geological Congress, 26th, Paris, France, July 7-17, 1980.

8 p.

Information on the origin of the bituminous sands, the current world-wide status of their development and the transferability of recovery technology.

Coaxing governments with fail-safe price plans: world oil price the big unknown. Energy Analects, V. 9, No. 38, Sept. 26, 1980, p. 1, 3. Re: Proposal of D.W. Menzel, chairman of the Alsands

consortium, for a price mechanism for synthetic crude output from the Alsands project.

Devenny, D.W.

Definition of economically mineable oil sands. By D.W. Devenny and L.E. Marjanen, Gulf Canada Resources Inc. Paper to be presented at the Applied Oil Sands Geoscience Conference, Edmonton, June 11-13, 1980.

18 p.

Dunbar, R.B.

Mineable oil sands limits - surface facility locations. By R.B. Dunbar, R.A. Funk, and B.D. Prasad, Alberta. Energy Resources Conservation Board. Paper to be presented at the Applied Oilsands Geoscience Conference, Edmonton, June 11-13, 1980.

24 p. illus.

Re: Need to locate surface facilities properly so as to avoid the sterilization of mineable reserves.

Gabinet, Lonny

The oil sands confrontation-a timetable for inaction. <u>Canadian</u> Petroleum, V. 21, No. 5, May 1980, p. 29-30. Getting oil the hard way: Alberta's tar sands. Saturday Night, V. 95, No. 1, Jan.-Feb. 1980, p. 55-58. Partial contents: The world wants our heavy oil. Can we get it out of the ground? - The Syncrude surprise: how corporate welfare finally paid off. - Megaprojects for the 1980s: the race between Esso and Shell.

Government and industry duel over oil sands development. Energy Analects, V. 9, No. 47,Nov. 28, 1980, p. 3-4. Re: Federal government loan to Esso to keep the Cold Lake scheme operational for another six months; Alsands cancellation of its 1981 spending plans; plans of the Sandalta group, headed by Gulf Canada Resources, to investigate the feasibility of the commercial development of specific oil sands leases.

Government boosts oil sands levy. <u>Oilweek</u>, V. 31, No. 24, July 21, 1980. p. 8. Re: Increase in levy applied to all petroleum products in Canada to offset the cost of subsidizing world price for oil produced from the tar sands.

Government programs assist tar sands exploitation. Energy Analects, V. 9, No. 24, June 20, 1980, p. 5. Re: Governments' fiscal initiatives and AOSTRA's role in developing technology. Includes information on the status of in-situ oil sands pilot developments and heavy oil and commerical oil sands projects in Alberta.

Government programs assist tar sands exploitation. The Public Sector, V. 4, No. 25, June 23, 1980, p. 5. Re: Fiscal incentives from government and AOSTRA's role in developing oil sands/heavy oil technology. Does not include information on the status of heavy oil and oil sands projects in Alberta which is given in the article in Energy Analects cited above.

Hat in hand at Ottawa: that's seen as Lalonde's plan for the oil industry. <u>Alberta Report</u>, V. 7, No. 24, May 19, 1980, p. 16. Re: Reaction to Lalonde's announcement that prices paid for tar sands crude oil would be pegged at \$36 a barrel. In situ pilot pushed for tar sands. <u>Oil & Gas Journal</u>, V. 78, No. 49, Dec. 8, 1980, p. 43.

Re: Gulf and AOSTRA inviting participation by other companies in the Surmount in situ recovery project 29 miles south of Fort McMurray.

Japanese advance Canadian oil sands acquisition. <u>Oil & Gas Journal</u>, V. 78, No. 38, Sept. 22, 1980, p. 65. Re: Contribution of Japan Canada Oil Sands Ltd. (Jacos) to the northern Alberta oil sands project of the PCE group -Petro-Canada Exploration Inc., Canada-Cities Service Ltd. and Esso Reosurces Canada Ltd.

Keeley, Martin A.

Alsands group: risking the go-ahead. <u>Canadian Petroleum</u>, V. 21, No. 2, Feb. 1980, Fort McMurray Supplement, p. 6-7.

Keeley, Martin A.

Massive turnout for tar sands/heavy oil meet. <u>Canadian</u> <u>Petroleum</u>, V. 21, No. 7, July 1980, p. 48-50. Summarizes presentations made at the first seminar on non-conventional oil technology spnsored by AOSTRA and <u>Canadian</u> <u>Petroleum</u>.

Lalonde's energy strategy linked to referendum debate. <u>The Public</u> <u>Sector, V. 4, No. 16, April 21, 1980, p. 1.</u> Re: World price for tar sands and heavy oil.

Lefaivre, W. Paul Financing major energy related projects - the challenge and the risk. By W. Paul Lefaivre, Royal Bank of Canada. Paper presented at the Applied Oilsands Geoscience Conference, Edmonton, June 11-13, 1980. 14 p.

#### Lim, Y.C.

Oil sands technology: conventional oil from unconventional Canadian oil deposits. By Y.C. Lim and J.R. Thomas, MHG International Ltd. Paper to be presented to the 30th Canadian Chemical Engineering Conference, October 19-22, 1980, Edmonton. (Preprint p. 1060-1091)

31 p. illus., maps.

Provides general history of the Athabsca tar sands development, description of major processes involved including site preparation, mining, extraction, upgrading and tailings disposal, and innovative methods that could be used.

#### McCollough, Tom

Open letter from Tom McCollough. <u>The Oilsander</u>, V. 2, No. 7, July/Aug. 1980, p. 3.

Reviews the accomplishments and production figures of Suncor's Oil Sands Division for the first half of 1980.

#### Macdonell, R.A.

The role of oil sands and heavy oil in Canadian energy self-sufficiency. By R.A. MacDonnell, Shell Canada Resources Ltd. Paper presented to the Engineering Institute of Canada and the Canadian Society for Mechanical Engineering, 94th Annual Congress, Calgary, April 23-25, 1980.

33 p. illus.

Includes a discussion of the non-technical aspects of the Peace River in-situ pilot project.

Major Alberta oil sands deposits have over 900 billion barrels in place. <u>Oilweek</u>, V. 31, No. 7, March 24, 1980, p. 16, 20, 22, 27-28. Includes a chart and brief review of active experimental

projects in the oil sands and heavy oil areas of Alberta and Saskatchewan.

Muir, Jane

Suncor: struggling to survive. <u>Canadian Petroleum</u>, V. 21, No. 5, May 1980, p. 32-33.

Nickle urges immediate development. <u>Oilweek</u>, V. 31, No. 14, May 12, 1980, p. 12-13. Re: Need for immediate development of energy resources

available now, such as the oil sands.

Nuclear energy touted for oil sands. <u>Oilweek</u>, V. 31, No. 34, Sept. 29, 1980, p. 52. Re: Atomic Energy of Canada Ltd. promoting use of nuclear reactors in Alberta's oil sands.

Oil price hikes dislocate our energy plans: East coast, west coast, oil sands affected. Energy Analects, V. 9, No. 2, Jan. 18, 1980, p. 1-2. Includes speculation as to the possibility that the government will renege on its agreement to allow synthetic crude the world oil price and the effects of such action.

Oil sands development could be affected by proposed policy changes. <u>Oilweek</u>, V. 31, No. 7, March 24, 1980, p. 8. Re: The federal government's possible elimination of world oil prices for oil sands oil and their feeling that new oil sands plants may not be as necessary in light of the Hibernia oil find.

Oil sands development outlined. <u>Oilweek</u>, V. 31, No. 19, June 16, 1980, p. 12-13. Re: Examination of AOSTRA's role in developing oil sands and heavy oil.

The Oil Sands Division - from pioneer to pauper? <u>The Oilsander</u>, V. 2, No. 9, Nov. 1980, p. 2. Comments on Maurice A. Carrigy's paper "The role of bituminous sands in extending the petroleum era beyond 2000 A.D."

Oil sands price changes mulled in Canada. <u>Oil & Gas Journal,</u> V. 78, No. 3, Jan. 21, 1980, p. 52-53. Re: Effects of possible elimination of the world price arrangement on Alberta oil sands plants.

#### Oliver, W.L.

Technology and economics of oil sands operations. By W.L. Oliver, Great Canadian Oil Sands Limited and G.R. Gray, Syncrude Canada Ltd. In World Petroleum Congress, 10th, Bucharest, 1979. Proceedings. Philadelphia, Heyden and Sons, 1980. p. 1-8 (Paper RTD 2 (3))

Note: Volume number of proceedings not available.

Pace of oil sands and heavy oil development slowed by constraints. Oilweek, V. 31, No. 7, March 24, 1980, p. 12-13.

Peer, George A.

Alsands teams ready but waiting for green light. <u>Heavy</u> <u>Construction News</u>, V. 24, No. 25, June 23, 1980, p. 18-19. Re: Scope of construction planned for the site.

Peer, George A.

Drainage ditches extend 50 km. <u>Heavy Construction News</u>, V. 24, No. 25, June 23, 1980, p. 19-20. Re: Brush clearing and digging of drainage ditches for Alsands sites.

Petro-Canada, Alberta Gas Trunk plan joint tar sand plant. <u>Oil &</u> Gas Journal, V. 78, No. 23, June 9, 1980, p. 40.

Petro-Canada research centre now gearing up for May completion. <u>Oilweek</u>, V. 31, No. 7, March 24, 1980, p. 35, 37-38, 40. Includes a discussion of the research the centre will be involved in; some of this will relate to oil sands and heavy oil research.

Petrocan's Suncor play: with its tar sands profits gone, Suncor is ripe for plucking. <u>Alberta Report</u>, V. 7, No. 50, Nov. 14, 1980, p. 15. Re: Effects of the reduction of the price of Suncor's tar sands oil from the world price to the domestic price. Speculates that Petro-Canada will purchase Suncor shares to be issued by 1983. Playing the trump: the feds finesse for a tar sands deal. <u>Alberta</u> <u>Report,</u> V. 7, No. 50, Nov. 14, 1980, p. 6-7. <u>Re: Negotiations between the Alberta and federal governments</u>

for tar sands development conditions.

Politics mires Canadian oil sands work. <u>Oil & Gas Journal,</u> V. 78, No. 6, Feb. 11, 1980, p. 36, 38.

Re: Fall of Conservative government suspended tax, royalty negotiations for projects approaching construction. Discusses existing and proposed projects.

Prasad, Brahm D.

Overview of oil sands development and its role in meeting Canada's energy needs. By Brahm D. Prasad and Harry O. Lillo, Alberta. Energy Resources Conservation Board. Paper presented to International Mining Exhibition and Conference '80, Calgary, Aug. 26-28, 1980.

1 v. (various pagings) illus., maps.

Outlines the current status of commercial and experimental schemes in the oil sands, the role of the ERCB in processing and reviewing applications, estimated bitumen reserves in the world, and the rate of oil sands development needed to meet Canada's energy requirements.

Rankin, Alex

Oil sands and mining report. Compiled by Alex Rankin and Randy Scotland. <u>Oilweek</u>, V. 31, No. 7, March 24, 1980, p. 12-51. Note: Individual entries have been made for articles dealing with the oil sands.

Shell Canada Ltd.

Developing the oil sands: one of a series of Shell Canada briefing papers. Toronto, Oct. 1980. 9 p. illus.

Short term storms, but long-term clearing: crude oil supply outlook
 for Canada. Energy Analects, V. 9, No. 10, March 14, 1980, p.
 1, 3.

Includes information on oil sands projects planned by Esso, Alsands and Gulf Canada Ltd.

\$6.7 billion Alsands project ready to go. <u>Business Life in Western</u> Canada, V. 8, No. 7, July 1980, p. 15.

Slagorsky, Z. Charles
Alternative future supplies of oil in Canada and their costs.
Calgary, Canadian Energy Research Institute, May 1980.
vi, 36 p. (Canadian Energy Research Institute. Working
Paper 80-3)
Oil sands: p. 15-17.

Special issue on the First International Conference on the future of Heavy Crude and Tar Sands. Important for the Future, V. 4, No. 3, June 1979, 22 p. Includes a summary report of the Conference, Conference recommendations and "The future of heavy crude and tar sands," by Joseph Barnea.

Srajer, V.

1979 oil sands mining review. Ottawa, Canada. Dept. of Energy, Mines and Resources, Mar. 1980.

iii, 20 p. (Report ERP/MRL 80-50 (TR))

Includes mention of an oil sands reclamation study by Techman Ltd. and Rheinbraum Consulting GmbH, and research into a new mining method.

Sun: at long last, a bonanza from the tar sands of Alberta. Business Week, No. 2622, Feb. 4, 1980, p. 114-117. Re: Advantageous effects of NEB's freeing the price of synthetic crude from price controls.

Suncor: a new name for an old commitment. Canadian Petroleum, V. 21, No. 2, Feb. 1980, Fort McMurray Supplement, p. 10-11.

Suncor tests petroleum coke market. <u>Oilweek</u>, V. 31, No. 24, July 21, 1980, p. 6.

Re: Sale of petroleum coke from its oil sands plant to Japan.

Suncor to consolidate Oil Sands Division. <u>The Oilsander</u>, V. 2, No. 5, May 1980, p. 7.

Re: Suncor's plans to move its Edmonton Oil Sands Division office to its oil sands plant north of Fort McMurray.

Suncor to spend 1.1 billion dollars over next five years for exploration and development. <u>The Oilsander</u>, V. 2, No. 1, Jan. 1980, p. 1, 2. Mentions expansion of Fort McMurray plant, involvement in WECO's Fort Kent project and Amoco's Gregoire Lake project.

Suncor's Oil Sands Division purchases "Proudly Canadian". The Oilsander, V. 2, No. 7, July/Aug. 1980, p. 1, 4. Maintains that the Division has a long-standing record of having shopped primarily Canadian. Provides percentage breakdowns of the sources from which the Division purchased \$90 million worth of goods and services in 1979.

Syncrude oil flowing again. <u>Oilweek</u>, V. 13, No. 6, March 17, 1980, p. 9. Re: Commissioning of coker number one means Syncrude is producing synthetic crude again.

Syncrude sues over alleged plant defects. <u>Oil & Gas Journal,</u> V. 78, No. 13, March 31, 1980, p. 60. Re: Alleged defects in the utility plant section of the complex.

Synfuel from tar, oil sands, shale seen promising. <u>Oil & Gas</u> <u>Journal</u>, V. 78, No. 25, June 23, 1980, p. 86-87. Re: Findings of a study of the economics of fuel technologies by Bechtel Inc.

The tar sand fires: Syncrude finds the trouble after losing \$50 million. <u>Alberta Report</u>, V. 7, No. 13, Feb. 29, 1980, p. 21. Re: Fires in coker units and other start-up problems. Tar sands oil price game: a puzzling on-again, off-again Tory threat. <u>Alberta Report</u>, V. 7, No. 8, Jan. 25, 1980, p. 15. Re: Pricing agreement for synthetic crude produced from bitumen.

Towson, Donald E.

Alberta oil sands: help in the eighties and beyond. By Donald E. Towson, Petro-Canada. Paper to be presented at the Canadian Institute of Mining and Metallurgy, 82nd Annual Meeting, April 21-24, 1980.

17 p. illus.

Discusses current pilot and commercial developments in the Alberta oil sands.

Two mavericks make a deal: populist-born Petrocan & AGTL become No. 4 entry in the sands. <u>Alberta Report</u>, V. 7, No. 28, June 13, 1980, p. 12-13.

Western data centre established. <u>Oilweek</u>, V. 30, Nos. 46-49, Jan. 7, 1980, p. 29. Re: AOSTRA's signing a contract with Canada Systems Group Ltd. to establish a computerized oil sands and heavy oil data base system for process control and performance evaluation.

What's half a billion? That's how much the election could cost Alsands. <u>Alberta Report</u>, V. 7, No. 5, Jan. 4, 1980, p. 21. Re: Alsands claim that failure to get provincial cabinet approval for their project before mid-January will cause almost a year's delay in the project. Discusses requirements recommended by the E.R.C.B. in their report on the project.

## Items Published in 1981

Alberta. Dept. of Tourism and Small Business. Northern Development Branch. Summaries of research reports sponsored or co-sponsored by the Northern Development Council, 1975-1980. Peace River, Apr. 1981. 1 v. (various pagings) Includes summaries of 39 research projects completed between 1973 and 1981. Note: separate entries have been made for some of these studies.

Alberta. Energy Resources Conservation Board.

Alberta's reserves of crude oil, gas, natural gas liquids, and sulphur at 31 December 1980. Calgary, 1981.

1 v. (various pagings) map (folded, in back pocket) (ERCB Report 81-18)

Chapter 3: Crude bitumen and synthetic crude oil reserves.

Alberta. Energy Resources Conservation Board.

Atlas of Alberta's crude bitumen reserves at 31 December, 1980. Calgary, June 1981.

v, 31 p. maps (ERCB Report 81-38)

Contains information on the extent, nature and in-place volume (estimates) of Alberta's oil sand deposits.

Alberta. Energy Resources Conservation Board.

Guidelines respecting an application for a commercial crude bitumen recovery and upgrading project. By Energy Resources Conservation Board, Alberta. Dept. of the Environment. Standards and Approvals Division, and Alberta. Dept. of the Environment. Environmental Assessment Division. Calgary, 1981. 17 p. (ERCB Guide G-23) Alberta. Northern Alberta Development Council.

Annual report 1980/1981. Peace River, May 1981. 25 p.

Lists the 121 briefs submitted by groups and individuals from northern Alberta including Wabasca, Anzac, Peace River, Fort McMurray, Fort Chipewyan, Bonnyville, Grande Centre, Cold Lake, as well as a summary of research and other activities undertaken and projects funded under the Alberta North Subsidiary Agreement.

Allen, F.H.

The Canadian oil sands: a race against the clock. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 29-32. illus., map.

"... deals with the private sector's role in Canada's tar sands development." (p. 29)

Alsands plant on hold. <u>Oilweek,</u> V. 32, No. 26, Aug. 3, 1981, p. 8-9.

A Canadian oil glut: Dome's Gallagher sees it but many dispute it. <u>Alberta Report</u>, V. 8, No. 46, Oct. 23, 1981, p. 16. <u>Re:</u> reserves in Alberta's oil sands.

Conference Society of Alberta.

Proceedings of the 5th Jasper conference mega projects-impact on Albertans, Jasper, Alberta, October 16-18, 1980. Edmonton, 1981.

v, 73 p. illus.

Includes address by Mr. Vic Henning, Northeast Alberta Regional Commissioner (p. 15-20), regarding changes observed in northeast Alberta, the role of the Northeast Commission office and future considerations.

Fisher, Sidney T.

Four processes for synthetic crude. By Sidney T. Fisher, F.T. Fisher's Sons Ltd. <u>Energy Processing/Canada</u>, V. 74, No. 1, Sept.-Oct. 1981, p. 20-26. (Oil sands and heavy oil technology report '81)

Includes description of processes in use or proposed for large scale exploitation of Alberta's tar sands and heavy oil deposits and implications for water usage and net energy return.
Gabinet, Lonny

Alsands: the anatomy of a project in limbo. Canadian Petroleum, V. 22, No. 5, May 1981, p. 33-35.

Gabinet, Lonny

Syncrude masters mining to make more oil. Canadian Petroleum, V. 22, No. 5, May 1981, p. 28-31.

Re: changes made in many of Syncrude's operations since its startup in 1979.

Ghostkeeper. Elmer

The potential impact of energy development on Metis settlements of Alberta. In International Symposium on the Human Side of Energy, 2nd, Edmonton, Alberta, August 16-19, 1981.

9 p.

A general discussion of the impacts of megaprojects on the environment, people, employment and economic development of land.

Glick, I.N.

Boom towns: a quest for well-being. By I.N. Glick and Millie Glick, Co-West Associates. Edmonton, Canadian Mental Health Association, North Central Region/Alberta Division, Jan. 1981. viii, 94 p. illus.

Contains brief mention of growth in Fort McMurray, Cold Lake and Peace River areas and cites a few sociological studies done in the Fort McMurray area.

Hatter, David

Alberta's tar sands in the energy perspective. Canadian Geographic, V. 101, No. 2, April/May, 1981, p. 12-19. A general article on tar sands plants, history of development, production levels, and relative importance in Canadian energy scene.

Holdback with new oilsands in Athabasca. Oilweek, V. 32, No. 5, Mar 9, 1981, p. 33.

International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979.

The future of heavy crude oils and tar sands: papers presented at the First International Conference. R.F. Meyer and C.T. Steele, editors. New York, McGraw Hill, 1981.

liv, 915 p.

Cover title: The future of heavy crude and tar sands Bibliography: p. 855-897.

Sponsored by the United Nations Institute for Training and Research, Alberta Oil Sands Technology and Research Authority, and others.

Separate entries have been made for selected papers from this volume.

Janisch, A.

Oil sands and heavy oil: can they ease the energy shortage? In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 33-41. illus., maps.

Discusses developments in the oil sands and heavy oil areas of Western Canada.

Largest ever planning project for Suncor is well underway. <u>Oilweek</u>, V. 32, No. 7, Mar. 23, 1981, p. 26-28. (Oil sands report)

More dollars for oil sands research: AOSTRA a world leader. <u>In-Site</u>, V. 4, No. 2, Feb. 1981, p. 2-3. (Oil sands report) Re: Alberta Oil Sands Technology and Research Authority (AOSTRA) funding programs and other activites.

Oil sands, pipelines, power projects will strain capabilities: pileup of megaprojects will steepen inflation. <u>Energy</u> Analects, V. 10, No. 24, June 26, 1981, p. 1-3.

Oil sands pricing issue holds up Suncor's Canadianization plans. <u>Energy Analects</u>, V. 10, No. 15, Apr. 24, 1981, p. 3. Re: Prospect of distributing shares of Suncor through a public issue. Oil-sands projects hit a snag. Chemical Week, V. 129, No. 2, July 8, 1981, p. 36-37. Re: Financial status of existing and proposed oil sands plants, in light of taxation, oil pricing agreements and high capital costs.

- A plague on Syncrude. <u>Alberta Report</u>, V. 9, No. 4, Jan. 9, 1981, p. 16-18. Re: Describes three mishaps that led to production cutbacks, including a hydrogen compressor explosion.
- Policy dispute imperils two Alberta oil sands projects. <u>Oil and Gas</u> <u>Journal</u>, V. 79, No. 14, Apr. 6, 1981, p. 61. Re: Imperial Oil's Cold Lake project and the Alsands project.

Review of oil sands and heavy oil projects. <u>Oilweek</u>, V. 32, No. 7, Mar. 23, 1981, p. 16-26. (Oil sands report)

Scott, H. Brent

Oil sands mining projects: vital and viable. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981. p. 42-44.

Discusses Syncrude's experiences.

Smith, Stuart B.

Alberta Oil Sands Environmental Research Program 1975-1980: summary report. Prepared for Alberta. Dept. of the Environment. Research Management Division. Edmonton, AOSERP, 1981.

xix, 170 p. illus. (AOSERP Report 118)

Strom, N.A.

Bitumen resources of Alberta: converting resources to reserves. By N.A. Strom and R.B. Dunbar. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 47-60. illus., maps.

#### IV. HISTORICAL BACKGROUND MATERIAL.

Alberta's oil sands: discovered in 1778 and still a mystery. <u>In-Site</u>, V. 4, No. 2, Feb. 1981, p. 9-10. (Oil sands report) Re: General article on the history of development of Alberta's oil sands areas and recent activity by various companies.

Bell, Judy

'It was just a matter of time,' Walter Hill's 58 years in Fort McMurray. <u>Canadian Petroleum</u>, V. 21, No. 5, May 1980, p. 22-23.

Re: Reminisences of Walter Hill who has lived in Fort McMurray since 1922.

Clark, Karl A.

An account of the Athabasca Oil Sands for Grade V and VI pupils. 1952. 21 p. illus. Typescript.

Comfort, Darlene J.

The Abasand fiasco: the rise and fall of a brave oil sands extraction plant. Researched and written by Darlene J. Comfort, edited by Peter G. Duffy. Edmonton, Friesen Printers, Oct. 1980.

148 p. illus.

Re: History of activity in the Athabasca oil sands in the early 1900's, including the attempt by Sidney Ells and Maxwell Ball to operate an oil sands extraction plant in the 1930's and 1940's.

Donaldson, Gordon

Syncrude on stream: the risk and reality of oil in the tar sands. <u>The Review</u>, V. 65, No. 2, 1981, p. 8-13. A general article on the history of the tar sands, description of Syncrude's operation and major problems encountered, and brief mention of transition of Fort McMurray from a sleepy community to a city. Kerr, Aubrey

Alberta is oil sands. <u>Journal of Canadian Petroleum</u> <u>Technology</u>, V. 20, No. 1, Jan.-Mar. 1981, p. 34-35. Re: Early history of oil sands.

Parker, James M. History of the Athabasca Oil Sands region, 1890 to 1960's. By J.M. Parker and K.N. Tingley, Boreal Institute for Northern Studies. Edmonton, AOSERP, Sept. 1980. 2 v. (AOSERP Report 80) Projects HS 10.2, 10.1. Prepared for Alberta Oil Sands Environmental Research Program. Human System. Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment. Contents: V. 1. Socio-economic developments.- V. 2. Oral history.

Pioneer of the oil sands. Western Miner, V. 40, No. 9, Sept. 1967, p. 40. Re: Sidney C. Ells, early authority on the Athabasca Tar Sands.

Rasmussen, Mark

Historical resource concerns and park development in Northeastern Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, March 1980.

14 p.

Prepared for Alberta. Dept. of Recreation and Parks. Parks Division.

Re: The history and historic sites of the Northeast Alberta Region.

Sauerwein, Stan

Developing the oil sands means wealth and prosperity for Alberta. <u>Construction West</u>, V. 3, No. 5, May 1980, p. 72-73. A brief history of the development of the tar sands.

#### V. ARCHAEOLOGY.

The Archaeological Survey of Alberta has numerous reports dealing with the archaeology of this area. Access to these reports is restricted; interested persons should contact the Head, Resource Management Section, Archaeological Survey of Alberta, 8820 - 112 St., Edmonton, Alta. T6G 2P8, or telephone 427-2355 for further information.

Forsman, Michael R.A.

Historic sites investigations in Alberta. By Michael R.A. Forsman, Archaeological Survey of Alberta. In Archaeology in Alberta, 1979. Compiled by Paul F. Donahue, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1980.

p. 42-51.

Includes mention of the Fort-of-the Forks site on the Clearwater River near the junction with the Athabasca River.

Note: Archaeology in Alberta, 1979 is Archaeological Survey of Alberta Occasional Paper No. 15.

Gryba, Eugene M.

Highway archaeological survey of northern Alberta, 1978 project number 78-56-C. In Archaeology in Alberta, 1978. Compiled by J.M. Hillerud, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1979. p. 45-50.

Note: Archaeology in Alberta, 1978 is Archaeological Survey of Alberta Occasional Paper No. 14.

Head, T.

1978 highways mitigation northeastern Alberta project 78-71. By T. Head, Lifeways of Canada Limited. In Archaeology in Alberta, 1978. Compiled by J.M. Hillerud, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1979.

p. 34-37.

Re: Archaeological tests undertaken at a series of sites on the east side of the Athabasca River, about 50 miles north of Fort McMurray.

Note: Archaeology in Alberta, 1978 is Archaeological Survey of Alberta Occasional Paper No. 14. Heintzmann, Roderick J.

Fort Chipewyan III and IV: historical resources assessment programme, 1979, permit 79-100. In Archaeology in Alberta, 1979. Compiled by Paul F. Donahue, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1980. p. 91-100.

Note: Archaeology in Alberta, 1979 is Archaeological Survey of Alberta Occasional Paper No. 15

Heintzmann, Roderick J.

Historical resources assessment, Fort Chipewyan III, 1978. In Archaeology in Alberta, 1978. Compiled by J.M. Hillerud, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1979.

p. 14-21.

Note: Archaeology in Alberta, 1978 is Archaeological Survey of Alberta Occasional Paper No. 14.

Ives, John W.

Birch Mountains archaeological study, 1980. Permit Number 80-80. In Archaeology in Alberta, 1980. Compiled by Jack Brink, Archaeological Survey of Alberta. Edmonton, Alberta. Dept of Culture. Historical Resources Division, 1981.

p. 127-138.

Describes study undertaken in Eaglenest-Clear Lake drainage area of the Birch Mountains.

Note: Archaeology in Alberta, 1980 is Archaeological Survey of Alberta Occasional Paper No. 17.

Ives, John W.

Evaluating the effectiveness of site discovery techniques in boreal forest environments. By John W. Ives, Alberta. Dept. of Culture. Historical Resources Division. Archaeological Survey of Alberta. Paper presented to the 14th annual conference, Archaeological Association, University of Calgary, Nov. 12-14, 1981.

Pertains to the discovery of prehistoric sites on the cleared areas of Shell Lease #13 (Alsands), and comparison of detection rates with those in uncleared boreal forest areas.

<sup>13</sup> p.

#### Ives, John W.

The prehistory of the boreal forest of northern Alberta. By John W. Ives, Alberta. Dept. of Culture. Historical Resources Division. Archaeological Survey of Alberta. Paper presented to the annual meeting of the Archaeological Society of Alberta, Lethbridge, Alberta, Apr. 11-13, 1980.

39 p. illus., maps.

A general survey of what had been discovered up to 1979 in northern Alberta.

Ives, John W.

Small site assemblages and prehistoric economic patterns in the Birch Mountains, northeastern Alberta. By John W. Ives, Alberta. Dept. of Culture. Historical Resources Division. Archaeological Survey of Alberta. Paper presented to the 14th Annual Meeting of the Canadian Archaeological Association, Apr. 27-29, 1981, Edmonton, Alberta.

26 p. illus., maps.

Reports on two sites in the Eaglenest-Clear Lakes area.

Ives, John W.

A spatial analysis of artifact distribution on a boreal forest archaeological site. Edmonton, Fall 1977.

viii, 162 p. illus.

Thesis (M.A.)-University of Alberta. Dept. of Archaeology. Based on excavation material taken from the Eaglenest Portage Site located in the Birch Mountains.

Mallory, Oscar L.

Preliminary report: 1979 archaeological investigation on highway project no. 963, permit 79-124. By Oscar L. Mallory, Paleo-Sciences Integrated Ltd. In Archaeology in Alberta, 1979. Compiled by Paul F. Donahue, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1980.

p. 120-133.

Re: Fort McKay highway project archaeological investigations.

Note: Archaeology in Alberta, 1979 is Archaeological Survey of Alberta Occasional Paper No. 15. McCullough, E.J.

Archaeological reconnaissance-Alberta Transportation construction program: northeast Alberta Project 77-43. By E.J. McCullough and B.O.K. Reeves, Lifeways of Canada Limited. In Archaeology in Alberta, 1977. Compiled by W.J. Byrne, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture, Historical Resources Division, 1978.

p. 39-42.

Presents a very general survey of activities undertaken in northeastern Alberta.

Note: Archaeology in Alberta, 1977 is Archaeological Survey of Alberta Occasional Paper No. 5.

Pollock, John W.

Archaeological research in central and northern Alberta 1977. By John W. Pollock, Archaeological Survey of Alberta. In Archaeology in Alberta, 1977. Compiled by W.J. Byrne, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture, Historical Resources Division, 1978.

p. 43-54.

Includes reference to survey work done in Gregoire and Calling Lakes Provincial Parks.

Note: Archaeology in Alberta, 1977 is Archaeological Survey of Alberta Occasional Paper No. 5.

Pollock, John W.

Prehistoric and historic resources impact assessments for provincial park development work 1977 in central and northern Alberta. Edmonton, Archaeological Survey of Alberta, Feb. 1978.

14 p.

Prepared for Alberta. Dept. of Recreation, Parks and Wildlife. Parks Division.

Includes information on three sites in Gregoire Lake Provincial Park.

Reardon, Gerard V.

A cognitive approach to lithic analysis. Calgary, Nov. 1976. x, 129 p. illus.

Thesis (M.A.)-University of Calgary. Dept. of Archaeology. Examines lithic material from the Beaver Creek site in light of a cognitive model that is designed to derive cultural information from stone tools. Babcock, E.A.

A review of selected papers dealing with hydraulic fracturing with reference to fracturing oil sands. Edmonton, Alberta Oil Sands Technology and Research Authority, Aug. 1976. 50 p.

Deroo, G.

The oil sands deposits of Alberta: their origin and geochemical history. By G. Deroo, Institute Francais du Petrole, and T.G. Powell, Institute of Sedimentary and Petroleum Geology. In Symposium on Oil Sand and Oil Shale Chemistry, Montreal, 1977. Oil sand and oil shale chemistry. New York, Verlag Chemie, 1978.

p. 11-32. illus.

A revised version of the paper which was published in Symposium on Oil Sands and Oil Shale, Montreal, 1977. Preprints of papers. Pittsburgh, American Chemical Society, 1977. p. 183-184. illus.

Godfrey, John D.

Geology of the Fort Chipewyan District, Alberta. Edmonton, Research Council of Alberta, 1980.

20 p. illus., maps (Research Council of Alberta. Geological Division. Report 78-3)

Harrison, Rand S.

The geologic setting of the Grosmont thermal recovery project, northeastern Alberta. By Rand S. Harrison, Alberta Research Council and Bruce G. McIntyre, Union Oil Company of Canada Limited. Paper presented to the Seminar on Advances in Petroleum Recovery and Upgrading Technology, Calgary, May 24-26, 1981.

11 p.

Lennox, T.R.

The impact of geology on the design and performance of in-situ projects. By T.R. Lennox, Gulf Canada Resources Inc. Paper preprint for Seminar on Advances in Petroleum Recovery and Upgrading Technology, Calgary, May 24-26, 1981. 20 p. Mathews, K.E.

Investigation of the geotechnical and mining characteristics of the Devonian limestones, Athabasca oil sands area. By K.E. Mathews, G.E. Rawlings and S. Bharte, Golder Geotechnical Consultants Ltd. Paper presented to Applied Oilsands Geoscience Conference, Edmonton, June 11-13, 1980.

41 p. illus.

Studies the geotechnical and mining characteristics of the Devonian limestones "...with a view to their development as a means of access for mining the overlying oil sands or in situ extraction of the oil." (Abstract)

Mossop, Grant D.

Geology of Alberta's oil sands and heavy oil deposits. By G.D. Mossop and others. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 197-207, illus., map (Chapter 25)

Mossop, Grant D.

Geology of the Athabasca oil sands. By Grant D. Mossop, Research Council of Alberta. <u>Science</u>, V. 207, No. 4427, Jan. 11, 1980, p. 145-152.

Re: The geology of the Athabasca oil sands and implications for surface and in-situ mining.

Note: Reprint available free from Research Council of Alberta as Contribution Series 1004.

Mossop, Grant D.

The role of regional geology in oil sands development. By Grant D. Mossop, Research Council of Alberta. Alberta Geological Survey. Paper presented to Seminar on Advances in Petroleum Recovery and Upgrading Technology, Calgary, May 24-26, 1981, organized by AOSTRA and CANPET.

18 p.

Re: Oil Sands Geology Program of the Alberta Geological Survey.

Stelck, C.R.

Freboldiceras from the Grand Rapids Formation of north-central Alberta. By C.R. Stelck, University of Alberta. Dept. of Geology, and J.W. Kramers, Research Council of Alberta. Alberta Geological Survey. <u>Bulletin of Canadian Petroleum</u> Geology, V. 28, No. 4, Dec. <u>1980</u>, p. 509-521.

## VII. SOCIO-ECONOMIC STUDIES.

#### A. Athabasca Oil Sands Area.

## 1. Economic Aspects, including Industry and Resource Development.

Socio-economic studies are included in this section.

Alberta. Dept. of Business Development and Tourism. Northern Development Branch.

Transportation and communication services in Northern Alberta. Edmonton, July 1977.

76 p. map (fold.)

An analysis of the state of transportation and communications services in Northern Alberta followed by an inventory of the services available in each community.

Alberta. Northern Alberta Development Council.

The commercial fishing industry in Northern Alberta. Edmonton, Feb. 1978.

i, 76 p.

Evaluates the feasibility of upgrading Northern Alberta's commercial fishing industry.

Alberta. Northern Alberta Development Council.

Fishing in Northern Alberta. Edmonton, Oct. 1979.

iv, 24 p. illus., map.

A submission by the Council to the Select Committee of the Alberta Legislative Assembly on Fishing.

Alberta. Northern Alberta Development Council.

Inventory of infrastructure for northern communities. Edmonton, April 1980.

147 p.

Provides information on facilities, services, etc. for 97 communities north of Edmonton, including those in the Athabasca, Cold Lake, Peace River and Wabasca oil sands areas. Alberta. Northern Alberta Development Council.

Trends in Northern Alberta: a statistical overview, 1971-1979. Edmonton, Aug. 1980, revised Feb. 1981.

159 p. illus., map.

Presents information relating to social and economic change.

Most statistical information is presented by census division.

Alberta. Northern Development Group.

Summary of social and economic circumstances, northern Alberta. By Alberta. Northern Development Group and Canada. Dept. of Regional Economic Expansion. Edmonton ?, May 1977. v, 57 p. maps.

Alsands cuts 1981 tar-sands development budget. <u>Oil and Gas</u> Journal, V. 78, No. 50, Dec. 15, 1980, p. 43.

Beyond conventional oil: Alberta's mineable oil sands. By Brent Scott, President, Syncrude Canada Ltd. <u>In-Site</u>, V. 4, No. 2, Feb. 1981, p. 22. (Oil sands report) An edited version of remarks made to the annual meeting of the American Association for the Advancement of Science held in Toronto on January 5, 1981. Re: Current constraints to oil sands mining development, reforms needed to encourage rapid and orderly development, research needs and ways of streamlining and rationalizing government regulation and involvement.

Boon for industrial lands: new pipeline and tar sands plants spur land sales. <u>In-Site</u>, V. 2, No. 9, Sept. 1980, p. 21. Re: Comments of Ken Saunders of Weber Real Estate on the demand for industrial land in Edmonton area communities due to tar sand developments.

Brese (Wm. G.) & Associates Ltd.

Preliminary overview of oil sands sulphur marketing prospects. Edmonton, Oct. 1976.

26 p.

Prepared for the Northeast Alberta Regional Commission.

Construction program on schedule for unique oil sands pilot project. Oilweek, V. 32, No. 7, March 23, 1981, p. 12-15. (Oil sands report)

Re: CDC/Tecan in-situ steam drive pilot project about 40 km east of Fort McKay.

Co-West Associates.

A social and economic overview of northern Alberta. Prepared for Northern Alberta Development Council. Edmonton, Apr. 1981. iv, 278 p. illus.

Cover title: Socio-economic overview of Northern Alberta. Covers "topics of social and economic concern to residents of northern Alberta as indicated in recent literature and from discussions with northern residents and knowledgeable government officials. It also includes the consultant's perspective on future directions for government programs in the North..." (p. 1). This report covers the communitites in the Northern Alberta Development Council Area. The chapters are:

- 1.0 Study introduction and summary
- 2.0 Historical context
- 3.0 Development theories and strategies
- 4.0 Economic development in northern Alberta
- 5.0 Northern concerns: literature
- 6.0 Social and economic concerns and service gaps in northern Alberta
- 7.0 Government responses in selected areas of northern concern
- 8.0 Consultant observations and suggestions for change

Detomasi, Don D.

The growth of small towns: the special case of boom towns. By Don Detomasi, University of Calgary. Faculty of Environmental Design. In Small town Alberta: some points of view on growth and development. Proceedings of a conference held in Banff Park Lodge, March 11-14, 1979. Edmonton ?, 1979.

p. 135-151.

Comments of the reaction panel consisting of Ron Erickson, Dept. of Municipal Affairs; Ray Rink, University of Alberta. Dept. of Electrical Engineering; and Grant Howell, New town of Fort McMurray Board of Administrators and questions from the floor: p. 152-165.

Detomasi's comments relate to the boom town in general; those of Grant Howell, Ron Erickson and attendees relate to Fort McMurray and Cold Lake.

Fox, Michael G.

The impact of oil sands development on trapping with management implications. Calgary, Dec. 1977.

xi, 194 p.

Thesis (M.E. Des.) - University of Calgary.

Funded by Alberta Oil Sands Environmental Research Program.

Mulyk, Peter A.

Electric power and natural gas requirements for the maximum economic development hypothesis: Northeast Alberta Regional Plan. By Peter A. Mulyk and George H. Hoganson. Edmonton, Stanley Associates Engineering, March 1977.

iii, 27 p. (Ekistic Design Consultants Ltd. Utilities Working Document No. 6)

Alternate title: Northeast Alberta Regional Plan: electric power and natural gas requirements for the maximum economic development hypothesis.

Prepared for the Northeast Alberta Regional Commission.

Ondrack, J.W.

Survey of ceramic manufacturing potentials in the Northeast Region. n.p.', Dec. 1976.

71 p. illus. (part col. in pockets)

Prepared for the Northeast Alberta Regional Commission.

Peter C. Nichols and Associates Ltd.

Overview of local economic development in the Athabasca Oil Sands region since 1961. By Peter C. Nichols and Associates Ltd. Edmonton, AOSERP, August. 1979.

xxiii, 221 p. (AOSERP Report 77)

Project HS 20.1.

Prepared for Alberta. Dept. of the Environment, and Canada Dept. of the Environment.

Procor Ltd. of Oakville, Ont. and Sulmar Canada of Calgary are jointly building a sulfur granulating plant at Fort McMurray, Alta. which will use sulfur from the Alberta oil sands. Energy Analects, V. 9, No. 14, April 11, 1980, p. 2. Resources Management Consultants (Alberta) Ltd.

Requirements for a heavy industrial park for the Northeast

Alberta Region. Edmonton, June 1977.

38 p.

Prepared for the Northeast Alberta Regional Commission.

Ross (P.S.) and Partners.

Preliminary research on the economic base of northern Alberta. Edmonton, Oct. 1974.

41 p.

Prepared for Alberta. Northern Development Group. Reviews the economic base of Alberta census divisions

12-15.

Shell reasserts its July countdown on Alsands job. <u>Alberta Report</u>, V. 8, No. 24, May 22, 1981, p. 11.

Re: Waiting for energy pricing agreement by Federal and Alberta governments.

Smith, Stuart B.

Biological resources in relation to human ecology at Fort Chipewyan, Alberta. By S.B. Smith. In Proceedings on the Symposium on Lakes of Western Canada. Ed. by E.R. Reinelt, A.H. Laycock and W.M. Schultz. Edmonton, University of

Alberta, June 1973.

p. 370-382.

Re: the relationship between the lifestyle of area residents and biological conditions of the surrounding area.

Note: These proceedings are Publication No. 2, University of Alberta. Water Resources Centre.

This airline depends on waterways: Contact Airways Ltd. maintains Western Canada's oldest float plane base at Fort McMurray. <u>Business Life in Western Canada</u>, V. 7, No. 11, Nov. 1979, p. FM13.

Wright, Tom

Suncor's recovered sulphur to be commercially recycled. The Oilsander, V. 2, No. 5, May 1980, p. 1, 7.

Re: Sale of sulphur to Sulmar Canada Ltd., Canadian subsidiary of Delta Marketing and Shipping Corporation. Delta will also build a plant near Fort McMurray to granulate the sulphur.

## 2. Social Aspects.

Socio-economic studies are listed in section VII.A.1. <u>Economic</u> Aspects, including Industry and Resource Development.

Beer, Mitchell

Trend to mega-projects has negative social effects. By Mitchell Beer and Vic Yanda. <u>Canadian Renewable Energy News</u>, V. 4, No. 7, Sept. 1981, p. 13. Re: Report on Human Side of Energy Conference held in Edmonton.

Bell, Judy

Planning the social scenario. <u>Canadian Petroleum</u>, V. 21, No. 2, Feb. 1980, Fort McMurray Supplement, p. 3. Re: Social planning for Fort McMurray.

Earl Berger Limited.

Longitudinal study of personal adjustment and social conditions in the Fort McMurray area phase 1: draft final report. Edmonton, AOSERP, Aug. 1978.

2v. in 3 (AOSERP Open File Report 12, 13)

Project HS 30.1.

Prepared for Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Earl Berger Limited.

Longitudinal study of personal adjustment and social conditions in the Fort McMurray area: pre-test and modification of instruments. Edmonton, AOSERP, Dec. 1978.

1v. (various pagings) (AOSERP Open File Report 14)
Project HS 30.2.

Prepared for Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

English, Dave

Fort McMurray: a case study of the effects of the boom on the health, social services, and criminal justice system. Fort McMurray ?, June 1977.

68 p.

Prepared on behalf of the Yukon Association of Social Workers.

Fort McMurray-a "hindsight view" of impacts experienced during the Syncrude project period-1974 to 1979. In International Symposium on the Human Side of Energy, 2nd, Edmonton, 16-19, August 1981.

4 p.

Workshop leader: Don Fleming, City of Fort McMurray. Dept. of Social Services.

Gartrell, John W.

A study of human adjustment in Fort McMurray: interim report II. Edmonton, AOSERP, June 1979.

v, 164 p. (AOSERP Open File Report 11)
Project HS 30.5.
Note: AOSERP did not issue an "interim report I".
Conducted through Thames Group Research Inc., and

University of Alberta. Population Research laboratory. Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

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Gartrell, John W.

A study of human adjustment in Fort McMurray. By J.W. Gartrell, H. Krahn, and D.F. Sunahara. Edmonton, AOSERP, Dec. 1980.

2 v., illus. (AOSERP Report 112) Project HS 30.5.

Prepared by Thames Group Research Inc. through the University of Alberta. Population Research Laboratory, for the Alberta Oil Sands Environmental Research Program. Human System. Sponsored by Alberta. Dept. of the Environment. Jackson, James O.

Comparative industrial hygiene aspects of coal gasification and liquefaction, oil shale, and tar sands processing. By James O. Jackson, Gulf Science and Technology Company. In Symposium on Potential Health and Environmental Effects of Synthetic Fossil Fuel Technologies, Oak Ridge, Tennessee, Sept. 25-28, 1978. Washington, D.C. (?), U.S. Dept of Energy, 1978.

p. 266-276.

Includes outline of potentail health hazards associated with mining and processing of Alberta's tar sands.

The symposium proceedings are distributed by National Technical Information Service (NTIS), Springfield, Va. (NTIS CONF 780903).

Marino, Mary Louise

Early childhood services and day care requirements of Fort McMurray River Lot 5 residential development. Edmonton, Ekistic Design Consultants Ltd., July 1976. 17 p.

Marino, Mary Louise

Human perception of the natural environment. By M.L. Marino, J. Collins and G. Brawn, Graham Brawn and Associates.

Edmonton, AOSERP, May 1980.

xvi, 137 p. illus.

Project HS 50.1.

Prepared for Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

"...the focus of this research review is on the natural biophysical environment (e.g., air, water, land) and man's use of it (e.g., through park and recreational development)." (p. 3)

Morton M. Warner Health Care Associates Ltd.

Health needs in northern Alberta: a planning proposal. Vancouver, April 1980.

xix, 255 p. illus. maps.

Prepared for the Northern Alberta Development Council.

#### Parkinson, Anna

A study of the impact of construction camps on the people of northeast Alberta. By A. Parkinson, S.W. Montgomery, and R.D. Humphreys, Urban Consultants Ltd. and R.D. "Reg" Humphreys Engineering and Management Consultants Ltd. Edmonton, AOSERP, Dec. 1980.

xix, 121 p. (AOSERP Open File Report 23)

Project HS 40.3.

Prepared for Alberta Oil Sands Environmental Research Program. Human System.

Peter C. Nichols and Associates Ltd.

Service delivery in the Athabasca Oil Sands region since 1961. Edmonton, AOSERP, Aug. 1980.

xix, 92 p. (AOSERP Report 96)

Project HS 20.3.

Prepared for Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment.

Quarshe, Ellis

Behavioral health problems in industry focus on Fort McMurray. In International Symposium on the Human Side of Energy, 2nd, Edmonton, Alberta, August 16-19, 1981.

10 p.

Discusses alcohol abuse as a behavioral problem and programs undertaken by Syncrude and Suncor to curb the incidence of alcoholism among their employees.

Research design for the study of social problems. By E.W. Van Dyke and others, Applied Research Associates Ltd. Edmonton, AOSERP, May 1979.

xv, 97 p.

Project HE 2.2.1.

Prepared for the Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Sniatynski, Gillian

The human side of development. <u>Environment Views</u>, V. 3, No. 4, Oct./Nov. 1980, p. 3-5. Re: the many social impacts of large scale development, with mention of Fort McMurray. Urban Dimensions Group Inc.

A conceptual model for study of impacts of oil sands development in the Fort McMurray area: interim report. Edmonton, AOSERP, Mar. 1979.

iv, 85 p. illus. (AOSERP Open File Report 10)
Project HS 30.3.

Prepared for the Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Ward, Richard

Community development services available to Fort McMurray. Edmonton, Syncrude Canada Ltd., 1973.

2v.

V. 1 is a catalogue of government community services, V. 2 is an assessment of their efficiency.

Workshop on Health Needs in Northern Alberta, St. Paul, Alberta, Feb. 5-8, 1980.

Summary report of proceedings. Edmonton, Alberta. Northern Alberta Development Council, 1980.

16 p. illus. map.

Cover title: Health needs in northern Alberta: workshop report.

3. Regional Planning.

Alberta. Dept. of Municipal Affairs. Planning Services Division. Improvement District #18 land use strategy. Edmonton, June 1980.

26 p. map.

Provides "...a broad policy framework for land use and development in Improvement District 18." (p. 1)

Humphreys (R.D. "Reg") Engineering and Management Consultants Ltd. Technical update of base data used in preparation of the Northeast Alberta Regional Plan. Edmonton, June 1977. iv, 65 p. illus.

Reviews data on oil sands reserves, upgrading techniques, by-products and their uses, environmental protection measures, manpower requirements, and potential new townsites. Ironside, R.G.

The planning frameworks for resource development in Northern Alberta. By R.G. Ironside, University of Alberta. Dept. of Geography. Paper presented at the Symposium on the Problems of Rural Development in Highlands and High-Latitude Zones, Oulu, Finland, Aug. 1977.

24 p.

Deals with the Peace River Region and Northeast Alberta.

Mackenzie Spencer Associates.

Proposed Fort McMurray subregional plan: a land use guide for the Fort McMurray subregion. Edmonton, Northeast Alberta Regional Commission, Jan. 1980.

41 p. maps.

Prepared for Alberta. Dept. of Energy and Natural Resources and Alberta. Dept. of Municipal Affairs through the Northeast Alberta Regional Commission.

Intended to provide a framework for the orderly administration of land use in the vicinity of Fort McMurray.

Mackenzie Spencer Associates.

Proposed Fort McMurray subregional plan: background report. Edmonton, Northeast Alberta Regional Commission, Jan. 1980. 86 p. maps.

Prepared for Alberta. Dept. of Energy and Natural Resources and Alberta. Dept. of Municipal Affairs through the Northeast Alberta Regional Commission.

"...defines and describes the Subregional Plan area;...the land use categories, the information base, the land use factors considered, and the potential land use districts." (p. 2)

Northeast Alberta Regional Commission.

A preliminary plan for regional development in Northeast Alberta. Edmonton, Feb. 1978.

vii, 91 p. illus., maps (col.)

Note: 3rd printing, Oct. 1979 includes an amended 1979 map illustrating the optimal regional development pattern.

Young, G.M.

Urban alternatives - Northeast Alberta. Edmonton, Northeast Alberta Regional Commission, Oct. 1978.

111 p. illus.

Supercedes the author's Impact of further community activity on Northeast Alberta. Edmonton, Northeast Alberta Regional Commission, Oct. 1976. 33 p.

## 4. Community Planning.

Alberta. Dept. of Municipal Affairs.

Anzac land use plan. Compiled by the Dept. of Municipal

Affairs in consultation with the Anzac Citizens Association.

Edmonton, June 1980.

14 p. maps.

This plan was adopted by the Minister of Municipal Affairs in July, 1980.

Associated Engineering Services Ltd.

Fort Chipewyan: cost update water and sanitary sewer systems. Edmonton, Dec. 1978.

i, 30 p. illus. maps.

Alternate title: Alberta Environment Fort Chipewyan cost update: water and sanitary sewer systems.

Prepared for Alberta. Dept. of the Environment. Pollution Control Division.

Updates the costs of providing sewer and water services as reported in the Fort Chipewyan Community Plan, 1977.

Associated Engineering Services Limited.

Municipal engineering analysis for the Fort Chipewyan Community plan. Edmonton, April 1977.

iii, 35 p. illus. maps (part fold.)

At head of title: Northeast Alberta Regional Commission. A support document to the Fort Chipewyan Community Plan of July 1977 prepared by K.C. Mackenzie Associates Limited.

Carcajou Research Limited.

A preliminary report on the feasibility of bus service for Fort Mackay, Alberta. Edmonton, Nov. 1977.

36 p.

Prepared for the Northeast Alberta Regional Commission.

Parkinson, Anna

Planning resource towns for the Alberta tar sands. By Anna Parkinson and D.D. Detomasi. <u>Plan Canada</u>, V. 20, No. 2, June 1980, p. 91-102.

Re: Planning in Fort McMurray, planning for the Alsands townsite and planning for the effects of the Cold Lake Project on existing towns.

- 51 -

## 5. Agricultural Development.

Agriculture North Seminar, Peace River, Nov. 22-24, 1978. Proceedings. Edmonton, Alberta. Northern Alberta Development Council, 1979. 46 p. illus. Cover title: Agriculture North Seminar report.

Alberta. Northern Alberta Development Council. Agriculture in northern Alberta. Edmonton, Sept. 1978. 59 p. illus. map (fold.) A discussion paper.

Bjorn Holdings Ltd.

A study of the feasibility of establishing an agricultural base in the new town 59.8 miles north of Fort McMurray. Edmonton, 1979.

61 p. illus.

Prepared for the Northeast Alberta Regional Commission.

IEC Environmental Consultants Ltd.

Profile of part-time farmers in northern Alberta. July, 1980. 46 p. maps.

Prepared for Alberta. Northern Alberta Development Council.

Jones, Graham W.

An opinion on agricultural potential of Fort McMurray and region. Edmonton, Aug. 1976.

11 p.

Prepared for the Northeast Alberta Regional Commission.

7. Manpower and Employment.

Alberta. Department of Advanced Education and Manpower. Planning Secretariat. Manpower implications of future developments in the Alberta Oil Sands. Edmonton, Nov. 1976. 64 p. map. Alberta's oil sands ready to begin construction. <u>Oilweek</u>, V. 32, No. 20, June 22, 1981, p. 26-27.

Re: Manpower recruiting and training for the tar sands plants.

Keeley, Martin A.

Manpower crisis - fact or fancy?: the battle for engineers. <u>Canadian Petroleum</u>, V. 21, No. 5, May, 1980, p. 25-28. Re: Need for skilled personnel in the heavy oil/tar sands fields and possible solutions to the problems. Mentions AOSTRA workshop held to discuss this issue.

Madduri, Sastry

Employment multiplier for Fort McMurray. Edmonton, Alberta. Dept. of Advanced Education and Manpower. Planning Secretariat, Feb. 1976. 40 p.

Draft.

Oil sands development source of diverse employment opportunities. <u>Oilweek</u>, V. 30, No. 42, Nov. 26, 1979, p. 30, 32, 38. Re: An Alsands study undertaken to demonstrate how the employee needs of 4 major projects could be met without undue competition with each other for workers.

University of Alberta. Management Advisory Institute.

Projection of highly qualified manpower requirements in northern Alberta, 1981-1985. Edmonton, July 1980.

90 p. map.

Prepared for the Northern Alberta Development Council and Alberta. Dept. of Tourism and Small Business. Northern Development Branch.

Designed to supply officials involved with the Student Bursary Program with labour market information on highly qualified manpower needs.

#### 8. Native Populations.

Deines, Anne

Native employment patterns in Alberta's Athabasca Oil Sands region. By Anne Deines, Catherine Littlejohn, and Terence Hunt, Canadian Institute for Research in the Behavioral and Social Sciences. Edmonton, AOSERP, Aug. 1979.

xix, 216 p. illus (AOSERP Report 69)

Project HS 40.1.

Prepared for Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Justus, Roger

Major resource impact evaluation: benefits, burdens and implications of heavy oil sands development for native Indian communities in Northern Alberta. By Roger Justus and Joanne Simonetta, Justus-Simonetta Development Consultants Limited. <u>Social Impact Assessment</u>, nos. 55-56, Aug. 1980, p. 12-13. A summary of the study "Major resource impact evaluation" which deals with the effects of the construction and operation of the Suncor, Syncrude and Amoco oil sands plants and related development on selected native Indian communities in the area.

Justus-Simonetta Development Consultants Limited.

Major resource impact evaluation. Vancouver, Dec. 1979.

157 p. maps.

Prepared for the Cold Lake Band and the Indian and Inuit Affairs Program.

Evaluates the impacts of the Suncor, Syncrude and Amoco projects on Fort McKay, Fort Chipewyan and Fort McMurray area native peoples; anticipates the impacts of the proposed Esso facility on the Cold Lake Band and discusses measures for dealing with potential adverse effects through mitigation, compensation and conflict resolution. Littlejohn, Catherine

A study of native integration into the Fort McMurray labour force. By C. Littlejohn and R. Powell, Canadian Institute for Research in the Behavioural and Social Sciences. Edmonton, AOSERP, Apr. 1981.

xvi, 168 p. illus.

Project HS 40.2.

Preprared for the Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment.

MTB Consultants Ltd.

Training programs available to native people in northern Alberta. Edmonton, April 1980.

xiii, 92 p.

Prepared for Alberta. Northern Alberta Development Council.

The first 13 pages of this report have also been separately published with the title Training programs available to native people in northern Alberta: executive summary.

Syncrude Canada Ltd. Position paper: employment of residents of Northeastern Alberta. Edmonton, n.d. 5 p.

Syncrude Canada Ltd. Syncrude's Native Development Program: a stake in the future. Edmonton, 1980. 24 p. col. illus.

9. Recreational Facilities and Potential.

Alberta. Dept. of Recreation and Parks. Parks Division. An outdoor recreation plan for the Northeast Alberta region, 1980-2000. Edmonton, Sept. 1980.

74 p. illus., maps (part fold. in pocket).

Prepared for the Northeast Alberta Regional Commission. Outlines detailed objectives for 1980-85 and proposes some long range goals for the year 2000. Alberta. Dept. of Recreation, Parks and Wildlife.

Gregoire Lake Provincial Park program statement. Edmonton, April 1978.

54 p.

Cover title: Program statement: Gregoire Lake Provincial Park.

Provides direction for the expenditure of capital funds in the 1978/79 budget and direction for the utilization of any and all subsequent capital funds allocated to the park.

Bradley, Cheryl

An assessment of recreation/preservation values in the Clearwater River-Gipsy, Birch, Gordon Lakes study area. Edmonton, Alberta. Dept. of Recreation and Parks. Parks. Division, June 1980.

128 p. col. illus., maps (part fold.)

Cover title: Clearwater River-Gipsy, Birch, Gordon Lakes study area.

## Bradley, Cheryl

Precambrian Shield study. Edmonton, Alberta. Dept. of Recreation, Parks and Wildlife. Parks Division, Aug. 1978.

iv, 66 p. in 2v, col. illus., maps.

Contents: Part 1. Information survey and bibliography.-Part 2. Park potential and recommendations.

Deals with Lake Athabasca and all lands north to the Northwest Territories border and the Slave River and all lands east to the Saskatchewan border.

Fairbairns, Matt

Northeastern Alberta: a park resource assessment study. Edmonton, Alberta. Dept. of Recreation and Parks. Parks Division, 1979.

2 v. illus., maps.

Contents: v.1. Regional overview.- v.2. Recreation and preservation recommendations.

Gregg, A.A.

An ecological assessment and development capability of Gregoire Lake, 1976. By A.A. Gregg, W.R. Nordstrom and W.W. Smith. Edmonton, Alberta. Dept. of Recreation, Parks and Wildlife. Parks Division, 1976.

44 p. col. illus., maps (fold.)

Cover title: Gregoire Lake Provincial Park: ecological assessment and development capability, 1976.

Jones, Graham W.

An opinion on recreation and tourism of Fort McMurray and region. Edmonton, Aug. 1976.

7 p.

Prepared for the Northeast Alberta Regional Commission.

Landals, Maureen

Lake Athabasca sand dunes: a survey of preservation and recreation values of the sand dunes and surrounding area. 1978.

xii, 254 p. illus., maps.

Typescript.

Prepared for Alberta. Dept. of Recreation, Parks and Wildlife. Parks Division.

MTB Consultants Limited.

Analysis of the leisure delivery system 1972-1979, with projections for future servicing requirements. By MTB Consultants Limited. Edmonton, AOSERP, Sept. 1980.

xviii, 204 p. illus. (AOSERP Report 103)

Project HS 50.4.

Prepared for Alberta Oil Sands Environmental Research Program. Human System.

Sponsored by Alberta. Dept. of the Environment.

Phillips, William

A socioeconomic evaluation of the recreational use of fish and wildlife resources in Alberta, with particular reference to the AOSERP study area. By William Phillips, Denis DePape, and Leonard Ewanyk, University of Alberta. Dept. of Rural Economy. Edmonton, AOSERP, 1978-1979.

4v. illus. (AOSERP Report 43) (AOSERP Open File Report 15) Volumes 2 and 3 were not assigned report numbers.

Contents: v.1. Summary and conclusions.- v.2. Recreational fishing.- v.3. Recreational hunting.- v.4. Nonconsumptive recreational use of fish and wildlife.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Wayne H. Wright Architects. Interpretive centre, Fort McMurray, Alberta. Edmonton, July 1977.

18 p. illus.

"...outlines a concept in written and drawing form for the promotion of tourism, education and industry in the Northeast Alberta region."

10. Municipal Engineering.

New sewer system for Fort Chipewyan. <u>Oilweek</u>, V. 32, No. 7, Mar. 23, 1981, p. 53-54.

#### 12. Education.

Alberta. Northland School Division Study Group. Report of the Northland School Division Study Group to the Minister of Education. Edmonton, July 1975. 161 p. Cover title. The communities of Fort Chipewyan, Fort Mackay, and Anzac are part of the Northland School Division.

Alberta. Project North Task Force.

Report of an assessment of educational needs of northern Albertans. Edmonton, Alberta. Dept. of Education. Planning and Research, Nov. 1976.

xv, 181 p. maps.

Coordinator, Project North Task Force: Fred J. Dumont. Prepared for Alberta. Dept. of Education.

## B. Fort McMurray.

1. General.

Alberta. Dept. of Industry and Commerce. Fort McMurray community profile, Edmonton, Jan. 1973. 11 p. illus., map. One of a series of reports providing information on the facilities, services, etc. of Alberta communities.

Alberta. Dept. of Industry and Development. Survey of Fort McMurray. rev. ed. Edmonton, Aug. 1965. 23 p. illus., maps. Updates a preliminary report issued May 1964, on facilities, services, etc. in Fort McMurray.

Bell, Judy

Fort McMurray emerging a winner: a new image for the oil sands capital. <u>Canadian Petroleum</u>, V. 21, No. 2, Feb: 1980, Fort McMurray Supplement, p. 1-4.

- Fort McMurray: a city comes of age. <u>Municipal Counsellor</u>, V. 25, No. 5, Sept.-Oct. 1980, p. 3-5.
- Fort McMurray financial impact study. Prepared by L.J. D'Amore and Associates in association with Marshall, Macklin, Monaghan Ltd. Edmonton?, The Company, 1981? 59 p. Cover title. Prepared for the City of Fort McMurray.
- Fort McMurray: nourished by the Athabasca Oil Sands, this
  half-grown community shows signs of developing into Alberta's
  giant. Alberta Business Journal, V. 7, No. 1, Dec./Jan.,
  1972/73,
  p. 16-19.

Hanson, Eric J.

The local government finances of the town of Grande Cache and comparisons with the town of Fort McMurray and Alberta towns. Edmonton, Sept. 1973.

lv. (various pagings)

Analyzes and compares the local government fiscal development of Grande Cache and Fort McMurray from 1966 to 1973.

Hartnell, Jane Fort McMurray: catching up and forging ahead. <u>Business Life in</u> <u>Western Canada,</u> V. 7, No. 11, Nov. 1979, p. FM2-FM3, FM5-FM6, FM8-FM9, FM14.

Hot, cold, and ? Fort McMurray contends with economic extremes. <u>In-Site</u>, V. 4, No. 2, Feb. 1981, p. 4. (Oil sands report) Re: Impact of economic uncertainty on real estate, retailing, and general perceptions of its residents.

Image problem: Fort McMurray seeks to counter negative publicity. Alberta Report, V. 8, No. 2, Dec. 12, 1980, p. 14. Re: Fort McMurray's plans to hire a public relations firm to develop a program to portray Fort McMurray as a full-fledged city with all required amenities.

Jones, David

Annual report of city manager 1980. By David Jones, City Manager, City of Fort McMurray. Fort McMurray, Feb. 1981. 158 p. illus.

Includes address to Mayor and members of the City Council by the city manager and annual reports from Administration, Human Resources, Finance, Development Services, Fire, Transit System, R.C.M.P., Community Services and Operations departments.

Jones, David

Perceptions and realities: local government in Fort McMurray. Fort McMurray, 1979. 11 p. Modern new hospital to be completed next year. <u>Business Life in</u> <u>Western Canada</u>, V. 7, No. 11, Nov. 1979, p. FM12. <u>Re: Fort McMurray Hospital</u>.

Murray, Donna Alsands will add impetus to area economy. <u>Trade and Commerce</u>, V. 74, No. 11, Nov.-Dec. 1979, p. 118, 120, 126, 128, 130, 132, 134, 136. Re: Fort McMurray.

Parkinson, Anna Growth of small urban centres in Alberta, 1971-1976. Calgary, April 1978. ix, 200 p. illus., map. Thesis (Master of Environmental Design (Urbanism) -University of Calgary. Bibliography: p. 197-200. Includes information on Fort McMurray.

Robinson, Ira M.

Planning, building, and managing new towns on the resource frontier. By Ira M. Robinson, University of Calgary. In Urban and regional planning in a federal state: the Canadian experience. Ed. by W.T. Perks and Ira M. Robinson. Stroudsburg, Pa.: Dowden, Hutchinson & Ross, 1979. p. 54-75. Includes comments on Fort McMurray.

Sauerwein, Stan

Fort McMurray: community with a vision. Construction West, V. 3, No. 5, May 1980, p. 38-40. Re: Brief history of the development of Fort McMurray.

Ted Mason moved from mountie to mayor. Business Life in Western Canada, V. 7, No. 11, Nov. 1979, p. FM8.

Tyre, Robert

Oil sands capital hails city status. <u>Trade and Commerce,</u> V. 75, No. 10, Oct. 1980, p. 64, 66, 68-72, 74. Re: Fort McMurray.

# 2. Planning.

This section includes items on local transportation. Items on transportation in the Athabasca Oil Sands area and between the area and the rest of the province, country, etc. are in section VIII.A.9 Transportation and Pipeline Corridor.

Associated Engineering Services Ltd.

Preliminary development review, Fort McMurray. Edmonton, Jan. 1975.

22 p. map.

Prepared for Syncrude Canada Ltd.

City of Fort McMurray. Dept. of Development Services. General municipal plan: the City of Fort McMurray. Fort McMurray, Oct. 1980. 20 p. map. (in back pocket)

Cohos, Evamy & Partners.

Fort McMurray: proposed skeletal plan. By Cohos, Evamy & Partners; consultant planners, P.A.R.D. Associates. Calgary, Oct. 1973.

27 p. maps. (part fold., part col.)

Superseded by The New Town of Fort McMurray: the revised general plan, 1974 by Cohos, Evamy & Partners.

Cohos, Evamy & Partners Ltd.

New Town of Fort McMurray background information for CBD study. Calgary, 1974.

1 v. (various pagings) illus.

Includes: New Town of Fort McMurray central business district development plan. By Vukan T. Zikic, Alberta. Dept. of Municipal Affairs. Provincial Planning Branch, Apr. 1972.

Dale, Lynne

Fort McMurray: putting planning into context. Edmonton, Alberta. Dept. of Municipal Affairs. Planning Services Division, 1980.

16 p.

Prepared for a technical session entitled "Industrial and resource development impacts on small communities" at the Canadian Institute of Planners National Conference in Kitchener, June 22-26, 1980. Edwards, Felicity

Public participation in the planning process-search in Fort McMurray. In International Symposium on the Human Side of Energy, 1st, Laramie, Wyoming, July 7-9, 1980. Laramie, University of Wyoming. Faculty of Social Work, 1980. 10 p.

Outlines the use of SEARCH (community effort to determine a rational approach to resolving planning issues) approach (Nov 9-11, 1979) to recreation and followup action.

Fort McMurray Planning Team.

Background report (prepared for the) New Town's Committee (of the) Provincial Planning Board. Fort McMurray, Oct. 31, 1977.

82 p. maps.

Intended to acquaint members of the committee with Fort McMurray's current planning projects.

Glick, I.N.

A "well-community" boom town proposal. In International Symposium on the Human Side of Energy, 1st, Laramie, Wyoming, July 7-9, 1980. Laramie, University of Wyoming. Faculty of Social Work, 1980.

11 p.

Briefly mentions Ft. McMurray as an example.

IBI Group.

Fort McMurray overview. Prepared for Northward Developments Ltd. Edmonton, Feb. 1976.

2v. illus.

V. 2 has title Fort McMurray overview: background data.

IBI Group.

Study of retail/commercial/services space in Fort McMurray. Edmonton, May 1976.

lv. (various pagings)

Prepared for Northward Developments Ltd.

Examines existing facilities and estimates required space to 1980.

Lea (N.D.) & Associates Ltd.

Public transit feasibility study for the new town of Fort McMurray: final report. By N.D. Lea & Associates in association with the Grimble Consulting Group. Oakville, Ont.?, July 1977. 1v. (various pagings)

The fractions begings

Rink, Raymond E.

Boom town system dynamics: the BOOMH model. By Raymond E. Rink, University of Alberta. In computer models and forecasting socio-economic impacts of growth and development. Proceedings of a conference held in Jasper Park Lodge, Apr. 20-23, 1980. Edmonton, University of Alberta. Faculty of Extension, 1980? p. 179-219. Describes a formal, mathematical model that has been developed to simulate the changes that a boom town undergoes as it responds to rapid development, and its application to Fort McMurray during the Syncrude planning and construction phase of 1971-79.

Stanley Associates Engineering Ltd. Effect of Area Four traffic on the downtown street system: draft report. Edmonton, Oct. 1975. 32 p. maps.

Stanley Associates Engineering Ltd.

Study of residential development, town of Fort McMurray. Edmonton, May 1976.

29 p.

Prepared for the Northeast Alberta Regional Commission. Concerned with the density of residential development in Fort McMurray, the standards of design for servicing systems and the subdivision review and approval procedure.

Stanley Associates Engineering Ltd.

Timberlea City of Fort McMurray area structure plan. Prepared for Alberta Housing Corporation. Edmonton, Alberta Housing Corporation, Feb. 1981.

28 p. illus., maps.

Presents background information, overall design and land use distribution of the proposed Timberlea development within the City of Fort McMurray.
Stanley Associates Engineering Ltd.
Townsite development study. Edmonton ?, Nov. 1971.
xv, 52 p.
Draft.
Prepared for the New Town of Fort McMurray.

TES Research & Consulting Ltd. The New Town of Fort McMurray Area 5 internal street network analysis. Calgary, May 1975. 41 p. illus., maps. Prepared for Strong, Lamb & Nelson Ltd.

Underwood McLellan and Associates Ltd.

Area 5B Fort McMurray development assessment. Calgary, Oct. 1977.

28 p. illus. (part fold.) maps (part fold.)

Cover title: Fort McMurray Area 5B development assessment. Prepared for the Northeast Alberta Regional Commission.

Van Belle, Peter

Background for central business district implementation proposal. Fort McMurray, Fort McMurray Planning Team, 1977. 27 p.

Ward, G.

Preliminary evaluation of proposed country residential sites near Fort McMurray, Alberta. Edmonton, Alberta. Dept. of Energy and Natural Resources. Public Lands Division, 1975 ?. 1v. (various pagings) illus., maps.

Includes Kathol C.P. and R.A. McPherson. Geologic factors affecting land development at Fort McMurray. Edmonton, Research Council of Alberta, 1973. iii, 25 p.

### 3. Municipal Engineering.

Cohos, Delesalle & Evamy. New town of Fort McMurray on site services, Area 2, phases 1, 2, 3, 4. By Cohos, Delesalle & Evamy and Stanley Associates Engineering Ltd. Calgary ?, Cohos, Delesalle & Evamy ?, 1973? 1v. (unpaged) Prepared for Alberta Housing Corporation. Contains plan profiles of on site services.

Fort McMurray: with Alsands shelved, what will be done about those
plans for sewer & water? <u>Alberta Report</u>, V. 8, No. 1, Dec. 5,
1980, p. 22.
Re: Debate as to whether or not the city should proceed with
the installation of sewer and water services required to
accommodate the population growth Alsands is expected to bring.

Underwood McLellan and Associates Ltd. River Lot 5 phase 1 residential development preliminary analysis, servicing & traffic. Calgary, July 1976. 6 p. Based on a population of 1,500 people in 500 units.

Underwood McLellan and Associates Ltd. River Lot 5 residential development preliminary analysis, servicing and traffic. Calgary, April 1976. 8 p. Based on a population of 2,701 in 991 units.

Underwood McLellan and Associates Ltd. River Lot 5 residential development preliminary analysis, servicing and traffic. Calgary, June 1976. 10 p. Based on a population of 2,047 in 700 units.

# 4. Settlement, Mobility and Population.

### Krahn, Harvey

Social mobility in a Canadian single industry community. By Harvey Krahn and John W. Gartrell. Edmonton, University of Alberta. Population Research Laboratory, Nov. 1981.

33 p. (Population Research Laboratory. Discussion Paper No. 26)

This paper was presented at the 1981 meetings of the Canadian Sociology and Anthropology Association.

The research was funded by the Alberta Oil Sands Environmental Research Program. Human System.

### Vlassoff, Carol

Frontier fertility: a study of Fort McMurray families. By Carol Vlassoff and J.W. Gartrell. Edmonton, University of Alberta. Population Research Laboratory, Aug. 1980.

27 p. (Population Research Laboratory. Discussion Paper No. 21)

The data used in the analysis for this paper was collected under Research Project HS 30.5, funded by the Alberta Oil Sands Environmental Research Program. Human System.

This paper was presented at the Canadian Population Society 1980 Annual meeting.

## 5. Housing.

Includes reports on housing at the plant sites.

Chan, P.

Fort McMurray future housing needs study. By P. Chan and John Webb. Edmonton, Alberta Housing Corporation. Policy and Program Development, Sept. 1975.

20 p. illus.

Presented to the Fort McMurray Monitoring Committee, Sept. 3, 1975.

Taylor, Larrie R.

Resource town housing. n.p., April 1979.

10 p.

Presents an overview of housing issues and concerns in a new developing resource town in the Alberta context. Underwood McLellan and Associates Ltd. Engineered Homes Limited proposed construction camp, Fort McMurray. Calgary, 1973 ?. i, 15 p. illus. (fold. in pocket)

Proposal for the relocation of Engineered Homes' 800 man construction camp located at Kamloops in Fort McMurray.

Wensley (B. James) Architect Ltd.

Northward River Lot 5, Fort McMurray, Alberta. Edmonton, Aug. 1976.

13 p. illus.

Data on the number of suites in phases 1 and 2, site plans and typical floor plans.

6. Education.

Keyano to get new \$21 million main campus. <u>Business Life in Western</u> <u>Canada, V. 7, No. 11, Nov. 1979, p. FM10.</u> Re: Brief history of Keyano College's development.

Marino, Mary Louise

Elementary school requirements of Fort McMurray River Lot 5 residential development. Edmonton, Ekistic Design Consultants Ltd., Aug. 1976.

21 p.

Deals with the impact of the proposed River Lot 5 residential complex on elementary schools.

Peter C. Nichols & Associates Ltd.

Fort McMurray school districts: a financial study. Edmonton, Sept. 1975.

57 p.

Prepared for steering committee members representing Alberta. Dept. of Education, Fort McMurray Public School District #2833, Fort McMurray Separate School District #32, and Northeast Alberta Regional Commission.

# 7. Recreational Facilities.

Edwards Woolfenden Eriksson Architects.

Recreation-cultural centre for the town of Fort McMurray. By Edwards Woolfenden Eriksson Architects Ltd., and Stanley Associates Engineering Ltd. Edmonton, n.d. 19 p. illus. Alternate title: Fort McMurray recreational centre.

Johnston, Brian L.

A report to the new town of Fort McMurray on a five year parks and recreation master plan. Compiled by Brian L. Johnston, Pamela Wight, and Linda Johnston. Calgary, Professional Environmental Recreation Consultants Ltd., Oct. 1976.

lv. (various pagings)

Cover title: Fort McMurray: a five year parks and recreation master plan study.

C. New Townsite (for Alsands Project)

See section VII.A.11. <u>New Townsite Studies</u> in the 1980 cumulated update of this bibliography for related items.

1. General.

Brouwer, Bernard

Forest fire prevention and protection report, new town of Fort Hills. Edmonton, Alberta Forest Service, 1980. 48 p. illus., maps (part fold.)

Prepared for the Northeast Alberta Regional Commission.

De Leuw Cather Canada Ltd.

Development of contract administration procedures for new town, Alsands Project, Northeast Alberta Region. Edmonton, March 1980.

34 p.

Prepared for the Northeast Alberta Regional Commission.

QRD Systems.

Data processing plan for the new town in the Northeast Alberta region. Edmonton, March 1980.

69 p.

Prepared for the Northeast Alberta Regional Commission.

Wardrop (W.L.) & Associates Ltd. New townsite: manpower requirements and capital program. Edmonton, Nov. 1979. 34 p. illus. (part fold.)

Prepared for the Northeast Alberta Regional Commission.

Wardrop (W.L.) & Associates Ltd.

New townsite market survey and material supply constraints study. Edmonton, Aug. 1979.

2v.

Prepared for the Northeast Alberta Regional Commission. Re: Location of materials required for the New Town and their transportation to the site.

Wardrop (W.L.) & Associates Ltd.

New townsite materials inventory study. Edmonton, May 1979. 39 p. maps (part fold.)

Prepared for the Northeast Alberta Regional Commission. An inventory summary of all materials required for construction of the new townsite.

Young, G.M.

"Micropolis": an analysis of the cost implications of a new urban centre in Northeast Alberta. Edmonton, Northeast Alberta Regional Commission, March 1977. 33 p. map.

### 2. Planning.

This section includes items on local transportation. Items on transportation in the Athabasca Oil Sands area and between the area and the rest of the province, country, etc. are in section VIII.A.9. Transportation and Pipeline Corridor.

Catalyst Developments Company.

Land use options - new town development. Edmonton, Alberta. Northeast Alberta Regional Commission, Mar. 1981.

h, 63 p. illus.

Includes consideration of possible land disposition and use policies, land banking, and business development on town-owned land.

IBI Group.

The development of health care services - a proposal "New Town" Fort McMurray Region, Alberta. Calgary, Alsands Project Group, Feb. 1981.

1 v. (various pagings)

Re: Need for a full primary care facility in "New Town".

Klohn Leonoff Consultants Ltd.

Investigation of development limits proposed townsite McClelland Lake. By Klohn Leonoff Consulting Engineers. Prepared for Alsands Project Group. Calgary, Sept. 1980. 1 v. (various pagings) illus. (col.), maps (part. fold)

Mackenzie Spencer Associates.

New Town general municipal plan. Edmonton, March 1980. 167 p. maps (part fold.)

Prepared for the Northeast Alberta Regional Commission. Re: New Town to be built north of Fort McMurray.

Note: This document will be issued in a revised format.

### Mackenzie Spencer Associates.

New town subregional land use guide. Prepared for Alberta Energy and Natural Resources and the Northeast Alberta Regional Commission. Edmonton, Alberta. Northeast Alberta Regional Commission, May 1981.

43 p., map.

"The purpose of this document is to provide a framework for the orderly administration of land use in the vicinity of the New Town which will be required to support future oil sands development in the area north of Fort McMurray".

Mackenzie Spencer Associates.

New town subregional land use guide background report. Prepared for Alberta Energy and Natural Resources and the Northeast Alberta Regional Commission. Edmonton, Alberta. Northeast Alberta Regional Commission, May 1981.

66 p. illus., maps.

This document describes how the New Town Subregional Land Use Guide was prepared.

Stanley Associates Engineering Ltd.

Northeast Alberta Regional Commission townsite selection study. Edmonton, Jan. 1978.

63 p. maps (part fold.)

Alternate title: Townsite selection study. Prepared for the Northeast Alberta Regional Commission. Re: New town in the McClelland Lake area.

Westshore Pacific Developments.

Newtown Alsands: transit alternatives. By Westshore Pacific Developments and T. Parkinson. Vancouver, Feb. 1980. 39 p.

Prepared for Alberta. Dept. of Economic Development.

### 3. Municipal Engineering.

Acres Consulting Services Limited.

New town district energy study: final report. Calgary, Nov. 1980.

115 p.

Prepared for Alsands Project Group.

Alberta Power Limited.

Electric service to the proposed new town for the Alsands project. Edmonton, Nov. 1980.

1 v. (various pagings)

Outlines background information on Alberta Power, its capability and plans to serve the proposed new community.

Pickwell Energy Consultants.

District heating of a new town using Alsands tailings heat. By W.C.S. Pick and H.C. Sidwell. Edmonton, April 1979.

112 p. illus., map.

Submitted to J.T. Ryan, University of Alberta. Dept. of Chemical Engineering.

SNC Tottrup Services Ltd.

Alsands new town district heating. Edmonton, Dec. 1979. 25 p.

Prepared for Northeast Alberta Regional Commission.

Stanley Associates Engineering Ltd.

McClelland Lake townsite water supply pre-design report. Prepared for the Northeast Alberta Regional Commission. Edmonton, Jan. 1981.

1 v. (various pagings) illus.

Stanley Associates Engineering Ltd.

Preliminary design of onsite services McClelland Lake townsite. Prepared for the Northeast Alberta Regional Commission. Edmonton, Northeast Alberta Regional Commission, Apr. 1981.

1 v. (various pagings)

Assessment of various onsite servicing options for water supply, sanitary sewage, storm drainage and transportation for the New Townsite at McClelland Lake. W.L. Wardrop & Associates Ltd.

McClelland Lake townsite temporary sewage and refuse disposal and water supply study. Prepared for Northeast Alberta Regional Commission. Edmonton, Northeast Alberta Regional Commission, Apr. 1981.

31 p.

Examines how temporary systems could be provided for the construction workforce accommodation facility until the permanent facilities are in place. "This study is considered an extension to "Construction Workforce Residential Accommodations Functional Plan", June, 1980, by W.L. Wardrop and Associates Ltd." (Section VII-C-5 of this bibliography)

5. Housing.

Bunting, P.

Passive solar energy efficient housing. Calgary, Alsands Project Group, Aug. 1980.

227 p. illus.

Evaluates the state of the art in passive solar energy efficient housing. Alsands is committed to creating a town which will be a showpiece for energy efficient design in the northern environment.

New town plans studied for Alsands Project workers. <u>Business Life</u> in Western Canada, V. 7, No. 12, Dec. 1979, p. 30.

Wardrop (W.L.) & Associates Ltd.

Construction workforce residential accommodation functional plan, McClelland Lake townsite; pre-design report. Edmonton, June 1980.

v, 177 p. illus., maps (part fold.)

Prepared for the Northeast Alberta Regional Commission. Cover title: McClelland Lake townsite: construction workforce residential accommodations functional plan.

Appendix: MLM Ground-Water Engineering. Ground-water supply for town of Fort Hills. St. Albert, April 1980. 47 p. illus., map. Prepared for W.L. Wardrop & Associates Ltd.

# VIII A. ENVIRONMENTAL STUDIES

# 1. Ecology/Environment.

The Alberta Oil Sands Environmental Research Program. By W.R. MacDonald and others. Edmonton, AOSERP, 1980. 40 p. illus. Paper presented at the Chemical Congress of the North American Continent, 2nd, Las Vegas, Nev., Aug. 24-29, 1980.

Alberta Oil Sands Environmental Research Program. Study area familiarization tour and field seminar. Edmonton, May 11, 1978. 48 p. illus., maps.

Alberta: water, wastewater, energy. <u>Water and Pollution Control</u>, V. 113, No. 10, Oct. 1975, p. 26-27.

p. 27 includes a brief description of AOSERP's role.

Alberta. Energy Resources Conservation Board. Status of environment protection in the Alberta energy resource industries. Calgary, Oct. 1972.

lv. (various pagings) maps (part fold.) (ERCB Report 72-F) Includes information on environmental protection in oil sands processing and experimental schemes.

Bell, Judy

Avoiding the Sarnia nightmare. <u>Canadian Petroleum</u>, V. 21, No. 2, Feb. 1980. Fort McMurray Supplement, p. 13-15. Re: Environmental issues related to the development of the Athabasca Tar Sands.

Bott, Robert D.

It's boom time in Alberta. International Wildlife, V. 11, No. 2, Mar.-Apr. 1981, p. 36. Re: Environmental concerns about Athabasca oil sands development. Canada. Dept. of the Environment. Environmental Protection Service. Review of the Alsands Project Group environmental impact

assessment. Edmonton, May 1979.

iii, 19, ii, 20 p.

Bound with Federal-Provincial Air/Atmospheric Environment Committee. Report on Syncrude Canada Limited. March 1978.

de Nevers, Noel

Analysis of the environmental control technology for tar sand development. By Noel de Nevers, Bard Glenne, and Clifford Bryner. Salt Lake City, Utah, University of Utah. College of Engineering, June 1979.

lv. (various pagings) illus.

Prepared for United States. Dept. of Energy. Division of Environmental Control Technology.

Elliott, S.

Environmental research at Syncrude. By S. Elliott, Syncrude Canada Ltd. In Symposium on Biological Issues in Energy Development, Calgary. April 24, 1979. Biological issues in energy development. Edmonton, Alberta Society of Professional Biologists, 1979.

p. 53-58.

Hunt, Constance D.

Environmental regulation, its impact on major oil and gas projects: oil sands and Arctic. By Constance D. Hunt and Alastair R. Lucas, Canadian Institute of Resources Law, Calgary. Calgary, Economic Council of Canada, 1980.

xv, 155 p. illus.

Section III (p. 78-121) is entitled Alberta oil sands projects.

James F. MacLaren Ltd.

Assessment of data management alternatives for the Alberta Oil Sands Environmental Research Program. Edmonton, AOSERP, Aug. 1979.

2v. (AOSERP Program Management Report 4)

Prepared for Alberta Oil Sands Environmental Research Program. Program Management.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Contents: Part 1. Final report. - Part 2. Project information catalogue.

Part 2 is a data catalogue of all AOSERP research projects based on information available as of March 31, 1978.

Jaques, Dennis

Analysis and mapping of terrestrial ecosystems on the AMOCO lease area, Gregoire Lake, Alberta. By Dennis Jaques and Peter vanEck, University of Calgary. Kananaskis Centre for Environmental Research. Calgary, Kananaskis Centre, Feb. 1980.

2 v. illus., maps.

Prepared for Amoco Canada Petroleum Co. Ltd.

Kennedy, Kathy

The environmental impacts of energy extraction. Environment <u>Views</u>, V. 2, No. 1, April-May 1979, p. 3. Includes information on the environmental impact of the CGOS and Syncrude oil sands projects.

Klinzing, G.E.

Environmental effect of synthetic fuel production. By G.E. Klinzing, S.H. Chiang and J.T. Cobb, University of Pittsburgh. Chemical and Petroleum Engineering Dept. <u>Energy</u> <u>Communications</u>, V. 5, No. 5, 1979, p. 279-302. Tar sands: p. 292-294 and 295-301.

Kolisnyk, Z.

The Mildred Lake utility plant. By Z. Kolisnyk, Monenco Consultants Limited. In Engineering Institute of Canada. Western Region. First Regional Conference. The Athabasca oil sands. Montreal, 1974.

p. 121-138. illus. Environmental considerations: p. 124. McCann, T.J.

A plan for the identification of potentially toxic materials in the AOSERP study area. By T.J. McCann, T.J. McCann and Associates Ltd. Edmonton, AOSERP, May 1979.

xii, 60 p. illus.

Project AS 2.5.

Prepared for the Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Re: Identification of toxic materials released to the atmosphere and water in the AOSERP study area.

Oil sands plant processes own fuel, generates 61 Mw of by-product power. <u>Modern Power and Engineering</u>, V. 61, No. 8, Aug. 1967, p. 34-40.

Re: Power services of the GCOS plant. Air and water pollution control measures are described on p. 38.

#### Potkins, R.A.

Status of the Syncrude Project. By R.A. Potkins, Syncrude Canada Ltd. Paper to be presented to the Seminar on Nonconventional Oil Technology, Calgary, May 29-30, 1980.

24 p. illus.

Discusses problems in the mining, extraction and upgrading processes and their solutions. Includes discussion of reclamation, tailings pond, and air quality problems.

Smith, Stuart B.

The Alberta Oil Sands Environmental Research Program: an overview. Edmonton, Alberta Oil Sands Environmental Research Program, 1979.

9 p.

Presented to the Air Pollution Control Association. Pacific Northwest International Section, Edmonton, Nov. 7-9, 1979.

Suncor's Environmental Affairs lone industry voice at Hazardous
Waste Hearings. The Oilsander, V. 2, No. 2, June 1980, p. 3-4.
The text of the submission made by Suncor's Oil Sands Division
to the Hearings in Fort McMurray on May 22, 1980. Describes
the wastes it generates and uses and its techniques for
disposal or storage of these wastes.

Thiessen, H.W.

Alberta oil sands development environmental regulatory aspects. In International Conference on the future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981. p. 739-743.

Thompson, M.D.

Ecological habitat mapping of the AOSERP study area: phase I. By M.D. Thompson, M.C. Wride and M.E. Kirby, Intera

Environmental Consultants Ltd. Edmonton, AOSERP, 1978-1979.

2v. illus. maps. (AOSERP Report 31) (Supplement is AOSERP Report 57)

Report and 18 accompanying maps in plastic pouch.

Supplement published April 1979.

Project LS 2.3.1; formerly project VE 2.3.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Report 31 describes the development of a classification system for mapping vegetation and surficial geology.

Report 57 reports on ground surveys in the AOSERP study area and completes the mapping of the area.

2. Vegetation.

This section is used for baseline studies. Reports on the effects of air pollution on vegetation will be found in section VIII.A.14. Air Pollution - General.

Addison, P.A.

Baseline condition of jack pine biomonitoring plots in the Athabasca Oil Sands area, 1976-1977. By P.A. Addison, Canada. Dept. of the Environment. Canadian Forestry Service. Northern Forest Research Centre. Edmonton, AOSERP, Aug. 1980.

xii, 43 p. illus. (AOSERP Report 98)

Project LS 3.4.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Eulert, G.K.

Synecology and autecology of boreal forest vegetation in the Alberta Oil Sands Environmental Research Program study area. By G.K. Eulert and H. Hernandez, Interdisciplinary Systems Ltd. Edmonton, AOSERP, July 1980.

xii, 184 p. illus. (AOSERP Report 99)

Project LS 10.1.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Malhotra, S.S.

Physiology and mechanisms of airborne pollutant injury to vegetation, 1979-80. By S.S. Malhotra, and A.A. Khan, Canada. Dept. of the Environment. Canadian Forestry Service. Northern Forest Research Centre. Edmonton, AOSERP, Dec. 1980.

xiv, 49 p. illus. (AOSERP Report 110)

Project LS 3.3.

Prepared for the Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment.

Steen, O.A.

A review and assessment of vegetation information for the AOSERP study area. By O.A. Steen, Hardy Associates (1978) Ltd. Edmonton, AOSERP, Sept. 1980.

xiv, 100 p. illus.

Project LS 2.3.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System. Sponsored by Alberta. Dept. of the Environment.

4. Hydrology.

Acres Consulting Services Ltd. Fort McMurray ice control study: final report. Calgary, March 1979.

ca. 150 p. illus. (part fold.)

Beltaos, S.

Transverse mixing in natural streams. Edmonton, Research Council of Alberta. Transportation and Surface Water Engineering Division, Mar. 1978.

ix, 99 p. illus. (Research Council of Alberta. Open File Report 1978-5)

Field tests were conducted on the Athabasca River below Fort McMurray, the Athabasca River below Athabasca and the Beaver River near Beaver Crossing.

Doyle, P.F.

1978 breakup in the vicinity of Fort McMurray and investigation of two Athabasca River ice jams. By P.F. Doyle, Alberta Research Council and D.D. Andres, Alberta Environment. Edmonton, Alberta Research Council, Dec. 1978.

vi, 44 p. illus., maps (Report SWE-78/05, Open File Report 1978-8)

Carried out under the auspices of the Alberta Cooperative Research Program in Transportation and Surface Water Engineering.

Fort McMurray Flood Damage Abatement Technical Committee. Fort McMurray flood damage abatement: final report of the Technical Committee. Fort McMurray, Fort McMurray Planning Team, June, 1979.

ix, 50 p. illus., maps. Cover title.

Froelich, C.R.

Watersheds in the Athabasca Oil Sands Environmental Research Program study area: drainage basin delineations, watershed areas and stream profiles. By C.R. Froelich and G. Lee. Edmonton, AOSERP, Mar. 1980.

xii, 108 p. illus., maps.

Project HY 2.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Ground-Water Consultants Group.

Development of a ground water supply for proposed subdivision -Fort McMurray. Mar. 1977.

37 p. illus.

Prepared for Alberta. Dept. of Municipal Affairs.

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Hackbarth, Douglas A.

Hydrogeological concerns in underground excavation, Athabasca Oil Sands area. In AOSTRA Seminar on Underground Excavation in Oil Sands, Edmonton, May 19, 1978. Proceedings. Edmonton, Alberta Oil Sands Technology and Research Authority, 1978. 38 p. 4th set of pagings. illus., maps.

Also issued as Research Council of Alberta. Contribution 903.

Hackbarth, Douglas A.

The hydrogeology of the Athabasca Oil Sands area, Alberta. By D.A. Hackbarth and N. Nastasa. Edmonton, Research Council of Alberta, 1979.

39 p. illus., maps (Research Council of Alberta. Bulletin 38)

A joint project with Alberta. Dept. of Energy and Natural Resources.

Hackbarth, Douglas A.

Regional aquifer parameters evaluated during mine depressurization in the Athabasca Oil Sands, Alberta. By Douglas A. Hackbarth, Alberta Research Council. <u>Canadian</u> Geotechnical Journal, V. 17, No. 1, Feb. 1980, p. 131-136.

Also presented to the Applied Oilsands Geoscience Conference, Edmonton, June 11-13, 1980.

Hackbarth, Douglas A.

Water-level fluctuations due to earth tides at Fort McKay, Alberta. By D.A. Hackbarth, Northern Illinois University. Dept. of Geology. <u>Canadian Water Resources Journal</u>, V. 5, No. 1, Winter 1980, p. 87-99.

Presents the results of an analysis of fluctuations in water level, tidal-gravity and barometric pressure in an observation well near Fort MacKay. Lipsett, A.W.

Tributary mixing characteristics using water quality parameters. By A.W. Lipsett and S. Beltaos. Edmonton, Research Council of Alberta. Transportation and Surface Water Engineering Division, July 1978.

vii, 41 p. illus. (Research Council of Alberta. Open File Report 1978-7)

"A field test was conducted at the confluence of the Athabasca and Clearwater Rivers in northeastern Alberta to evaluate this method."

New Town of Fort McMurray. Dept. of Operations.

Summary of the study on the flood impact and preventive measures for the infrastructures of the New Town of Fort McMurray. Fort McMurray, n.d. 22 p. (Its Report No. 7)

Northwest Hydraulic Consultants Ltd.

A study of flood levels and the impact of dikes along the Clearwater River at Fort McMurray. By Northwest Hydraulic Consultants Ltd. and Thurber Consultants Ltd. Edmonton, Jan. 1979.

1 v. (various pagings) illus., maps. (part fold. in pockets)

Prepared for Alberta. Dept. of the Environment. Technical Services Division.

Ozoray, G.

Scientific and economic value of karst studies. By G. Ozoray, Research Council of Alberta. <u>The Albertan Geographer</u>, No. 12, 1976, p. 43-60.

Discusses the buried karst of the Athabasca oil sands area indicating reasons why those mining the oil sands, hydrologists, ecologists and those who enjoy the aesthetic value of scenic karst features, should be interested in karst studies.

Peter C. Nichols & Associates Ltd.

Economic analysis of Fort McMurray flood abatement measures. Edmonton, June 1979.

Prepared for the Fort McMurray Technical Committee on Flood Abatement.

<sup>28</sup> p.

Psutka, M.M.

Physical description of selected tributary mouths and sheltered backwaters of the Athabasca and Clearwater Rivers. By M.M. Psutka and B.W. Harvie, LGL Ltd. Environmental Research Associates. Edmonton, AOSERP, July 1980.

xiv, 105 p. illus.

Project WS 1.5.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Regional hydrogeological study, McMurray oil sands area, Alberta. Study co-ordinator: H.A. Gorrell. Prepared for the Oil Sands Environmental Study Group. Edmonton, Syncrude Canada Ltd., Oct. 1974.

92 p. illus. (part fold.) (Syncrude Canada Ltd. Environmental Research Monograph 1976-5)

Contains the hydrogeological data but not the recommendations found in the report "Regional hydrogeological study, McMurray oil sands area, Alberta: phase I" by J.C. Sproule and Associates Ltd.

Ryckborst, Hans

Streamflow network in the province of Alberta, 1980. By Hans Ryckborst, Petro-Canada. In Proceedings of the 1980 Specialty Conference, Irrigation and Drainage: Today's Challenges, July 23-25, 1980, Boise, Idaho. New York, American Society of Civil Engineers, 1980.

p. 63-76.

Includes mention of 30 oil sands production area stations.

Schwartz, F.W.

Hydrogeological investigation of Muskeg River Basin, Alberta. By F.W. Schwartz, University of Alberta. Dept. of Geology. Edmonton, AOSERP, Jan. 1980.

xiv, 97 p. illus. (AOSERP Report 87)

Project WS 2.2.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sproule (J.C.) and Associates Ltd.

Regional hydrogeological study, McMurray Oil Sands Area, Alberta: phase 1. Study co-ordinator: H.A. Gorrell. Calgary, Oct. 1974.

1v. (various pagings) illus. (part fold. in pocket)
Prepared for the Oil Sands Environmental Study Group.
The hydrogeological data in this report was reprinted by
Syncrude Canada Ltd. in their Environmental Research Monograph

1976-5.

Thorson, K.M.

Interim compilation of stream gauging data, 1979. By K.M. Thorson, Canada. Dept. of the Environment. Inland Waters Directorate. Water Survey of Canada. Edmonton, AOSERP, Aug. 1980.

xiii, 63 p. illus.

Project WS 1.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment.

Warner, L.A.

Interim compilation of 1977 suspended sediment data for the AOSERP study area. By L.A. Warner, Canada. Dept. of the Environment. Inland Waters Directorate. Water Survey of Canada. Edmonton, AOSERP, Dec. 1979.

х, 47 р.

Project WS 1.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Wright, Tom

Environmental Affairs funds erosion protection project. The Oilsander, V. 2, No. 2, Feb. 1980, p. 1, 5.

Re: Rip-rapping project undertaken to ensure the Tar-Island Dyke will be able to withstand the erosive stress of ice during spring break up or of the Athabasca river waters during peak water level periods.

### 5. Power Development.

Monenco Consultants Limited.

1977 re-appraisal of the hydroelectric potential of the Slave River. Calgary, Dec. 1977.

lv. (various pagings) maps (part fold.) Prepared for Calgary Power Ltd.

## 6. Soils and Soil Surveys.

Associated Engineering Services Ltd.

Aggregate deposits, Northeastern Alberta Region, Fort McMurray, Alberta. Edmonton, March 1976.

16 p. illus.

Prepared for the Northeast Alberta Regional Commission. Reviews the suitability of sand and gravel deposits located south of Fort NcMurray for satisfying the aggregate requirements in the area and assesses the impact of opening and using each area as a source of aggregate.

Baker, J.

Differences in the composition of soils under open and canopy conditions at two sites close-in to the great Canadian Oil Sands operation, Fort McMurray, Alberta. By J. Baker, Canada. Dept. of the Environment. Canadian Forestry Service. Northern Forest Research Centre. Edmonton, AOSERP, Apr. 1980.

xii, 24 p. illus. (AOSERP Report 97)

Project LS 3.4.1.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Brooker (E.W.) & Associates Ltd. Geotechnical evaluation, river lots 21, 23 and 24, Fort McMurray, Alberta. Edmonton, May 1973. 31 p. illus.

Burry, A.F.

Gravel report. Fort McMurray, Athabasca Realty Company Limited, Dec. 1975.

lv. (unpaged) illus., maps.

Prepared for the Northeast Alberta Regional Commission. Presents the results of a gravel search in the area southeast of Fort McMurray.

Commonwealth Seager Group. Alsands transportation corridor soil resistivity survey. Edmonton, Aug. 1980. 11 p. illus. (fold. in pocket)

Prepared for the Alsands Project Group.

Fox, J.C.

Sand and gravel resources of the Athbasca Oil Sands region, Northeastern Alberta. Edmonton, Research Council of Alberta, Aug. 1980.

32 p. illus., maps (Research Council of Alberta. Open File Report 1980-7)

One map folded in back pocket.

Prepared for Alberta. Dept. of Energy and Natural Resources. Resource Evaluation and Planning Division.

Holowaychuk, N.

Sensitivity of soils to acidic deposition in a selected region of western Canada. By N. Holowaychuk, Alberta Research Council, G. Padbury, Saskatchewan Institute of Pedology, and B. Schreiner, Saskatchewan Research Council. In Proceedings, Air Pollution Sessions, Canadian Meteorological and Oceanographic Society, Fifteenth Annual Congress, Saskatoon, Saskatchewan, May 27-29, 1981. Edmonton, Alberta. Dept. of the Environment. Pollution Control Division, 1981.

p. 99-118.

An initial attempt to assess the sensitivity of soils in northeastern Alberta and northern Saskatchewan to acidic deposition. Benklemen Beam readings on Beacon Hill Drive in Area 2, Fort McMurray. Calgary, Aug. 1977. 5 p. map (fold.)

Klohn Leonoff Consultants Ltd. Pavement failure, Beacon Hill Drive, Area 2 Fort McMurray. Calgary, Aug. 1977. 13 p. col. illus., map (fold.)

Re: Analysis of and recommendations for the pavement failure and water seepage zone on Beacon Hill Drive.

Klohn Leonoff Consultants Ltd. Poplar Creek granular material investigation, Fort McMurray, Alberta. Calgary, Nov. 1975. 46 p. illus. Prepared for Cohos Evamy & Partners Ltd.

Klohn Leonoff Consultants Ltd.
 Preliminary geotechnical investigation proposed townsite N.E.
 Alberta range parcel 8 c. Edmonton, May 1978.
 1 v. (various pagings)
 Prepared for Stanley Associates Engineering Ltd. and
 Northeast Alberta Regional Commission.

Klohn Leonoff Consultants Ltd. Preliminary geotechnical investigation proposed townsite N.E. Alberta range parcel 8c: addendum report. Calgary, July, 1978. 21 p. maps (fold. in pocket) Klohn Leonoff Consultants Ltd.

Soils investigation, proposed housing development, Fort MacKay, Alberta. Calgary, April 1976.

lv. (various pagings) maps (part fold. in pockets)
Prepared for the Alberta Housing Corporation.

McLaws, I.J.

Silica sands in the Fort McMurray area, Alberta, Edmonton, Research Council of Alberta, 1980.

48 p. illus. (Research Council of Alberta. Economic Geology Report 6)

McMurray Engineering Consultants Ltd.

The evaluation of granular resources, section 4, township 92, range 10, west of the 4th meridian and adjacent areas (referred commonly as the Poplar Creek gravel depositions). Edmonton, July 1976.

28 p. illus. (part fold.)

Prepared for Alberta. Dept of Energy and Natural Resources.

"...includes test hole logs obtained in the field, a plan showing the location of test holes, sieve analysis test results, air photos of the area and site plans." (p. 1)

Mollard (J.D.) & Associates Ltd.

Office airphoto study of sand and gravel prospects, vicinity of Fort McMurray, Alberta. Regina, Sask., June 1974.

1v. (various pagings) maps.

Prepared for Alberta. Dept. of Lands & Forests. Special Land Use Branch.

Shetsen, I.

Sand and gravel resources of the Athabasca Oil Sands region, Northeast Alberta: phase I: proposed townsite area. Edmonton, Research Council of Alberta, Mar. 1980.

27 p. illus., maps (Research Council of Alberta. Open File Report 1980-6)

Prepared for Alberta. Dept. of Energy and Natural Resources. Resource Evaluation and Planning Division. Turchenek, L.W.

Interim report on the soils inventory of the AOSERP study area. By L.W. Turchenek and J.D. Lindsay, Research Council of

Alberta. Soils Department. Edmonton, AOSERP, Jan. 1980.

81 p. (AOSERP Open File Report 9)

Project LS 2.1.

Prepared for the Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept of the Environment and Canada. Dept. of the Environment.

Wyndham, R.C.

Heterotrophic potentials and hydrocarbon biodegradation potentials of sediment microorganisms within the Athabasca oil sands deposit. By R.C. Wyndham and J.W. Costerton, University of Calgary. Dept. of Biology. <u>Applied and Environmental</u> Microbiology, V. 41, No. 3, Mar. 1981, p. 783-790.

Wyndham, R.C.

In-vitro microbial degradation of bituminous hydrocarbons and in situ colonization of bitumen surfaces within the Athabasca oil sands deposit. By R.C. Wyndham and J.W. Costerton, University of Calgary. Dept. of Biology. <u>Applied and Environmental Microbiology</u>, V. 41, No. 3, Mar. 1981, p. 791-800.

Yeung, Paul Y.P. Soil acidification by emitted sulphur in the Athabasca Oil Sands area. Edmonton, 1980. xvii, 137 p. illus. Thesis (M.Sc.)-University of Alberta, Dept. of Soil Science.

# 7. Wildlife.

## Beaver, Rick Darryl

Breeding distribution and behaviour of the white pelican in the Athabasca Oil Sands area. By R. Beaver and M. Ballantyne, Canadian Wildlife Service. Edmonton, AOSERP, Nov. 1979.

xv, 93 p. illus. (AOSERP Report 82)

 $\mathbb{R}^{2}$ ,  $\mathbb{R}^{2}$  p. 111d3. (ROBERT Report

Project LS 22.2 (TF 2.2)

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Christiansen, M.L.

Research update: bird deterrent and dispersal systems. By M.L. Christiansen and K.S. Yonge, Syncrude Canada Ltd. Edmonton, 1981.

13 p. (Syncrude Canada Ltd. Professional Paper 1981-3) Note: Paper was completed in Dec. 1979.

Includes a seven-page annotated bibliography.

Christiansen, M.L.

Research update: the problem of oil spills and birds. By M.L. Christiansen and K.S. Yonge, Syncrude Canada Ltd. Edmonton, 1981.

39 p. (Syncrude Canada Ltd. Professional Paper 1981-4). Note: Paper was completed in Dec. 1979. Includes 19-page annotated bibliography.

Ealey, D.M.

The distribution, foraging behaviour, and allied activities of the white pelican in the Athabasca Oil Sands area. By D. Ealey, Canadian Wildlife Service. Edmonton, AOSERP, Nov. 1979.

xvi, 70 p. illus. (AOSERP Report 83)

Project LS 22.2 (TF 2.2.)

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

#### Francis, J.

Habitat relationships and management of terrestrial birds in Northeastern Alberta. By J. Francis and K. Lumbis, Canadian Wildlife Service. Edmonton, AOSERP, Sept. 1979.

xxii, 365 p. illus. (AOSERP Report 78)

Project LS 22.1.1.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

### Fuller, Todd K.

Non-overlapping ranges of coyotes and wolves in Northeastern Alberta. By Todd K. Fuller and Lloyd B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. <u>Journal of Mammalogy</u>, General Notes, V. 62, No. 2, May 1981, p. 403-405.

### Fuller, Todd K.

Physical characteristics of woodland caribou in Northeastern Alberta. By Todd K. Fuller and Lloyd B. Keith, University of Wisconsin. Dept. of Wildlife Ecology, <u>Canadian</u> Field-Naturalist, V. 94, No. 3, 1980, p. 331-333.

Fuller, Todd K.

Summer ranges, cover-type use and denning of black bears near Fort McMurray, Alberta. By Todd K. Fuller and Lloyd B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. <u>Canadian</u> <u>Field-Naturalist</u>, V. 94, No. 1, 1980, p. 80-83.

Fuller, Todd K.

Wolf population dynamics and prey relationships in Northeastern Alberta. By T.K. Fuller and L.B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. Edmonton, AOSERP, Aug. 1980.

xiii, 58 p. illus. (AOSERP Report 102)

Project LS 21.1.4.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Fuller, Todd K.

Wolf population dynamics and prey relationships in Northeastern Alberta. By Todd K. Fuller and Lloyd B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. Journal of Wildlife <u>Management</u>, V. 44, No. 3, 1980, p. 583-602. Re: Baseline information on wolf population dynamics and impacts of wolf predation on moose, and comments on population

densities near disturbed sites, such as construction sites.

Fuller, Todd K.

Woodland caribou population dynamics in Northeastern Alberta. By T.K. Fuller and L.B. Keith, University of Wisconsin. Dept.

of Wildlife Ecology. Edmonton, AOSERP, Aug. 1980.

xiii, 63 p. illus. (AOSERP Report 101)

Project LS 21.1.3.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Fuller, Todd K.

Woodland caribou population dynamics in Northeastern Alberta. By Todd K. Fuller and Lloyd B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. Journal of Wildlife Management, V. 45, No. 1, 1981, p. 197-213.

Re: Caribou population in the Birch Mountains area.

Green, Jeffrey E.

Baseline states of small mammal populations in the AOSERP study area: interim report II. By Jeffrey E. Green, LGL Limited. Edmonton, AOSERP, Dec. 1979.

xiii, 137 p. illus. (AOSERP Open File Report 6) Project LS 7.1.2.

Prepared for the Alberta Oil Sands Environmental Research Program. Land System.

Green, Jeffrey E.

The ecology of five major species of small mammals in the AOSERP study area: a review. By Jeffrey E. Green, LGL Limited. Edmonton, AOSERP, Aug. 1979.

xii, 104 p. illus. (AOSERP Report 72)

Project LS 7.1.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Green, Jeffrey E.

Small mammal populations of Northeastern Alberta. By Jeffrey E. Green, LGL Limited. Edmonton, AOSERP, Nov. 1980.

2 v. illus. (AOSERP Report 107) (AOSERP Report 108) Projects LS 7.1.2 and LS 7.1.3.

Prepared for the Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment.

Contents: v.1. Populations in natural habitats.-

v.2. Populations in reclamation areas.

Hauge, Thomas M.

Dynamics of moose populations in Northeastern Alberta. By Thomas M. Hauge and Lloyd B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. Journal of Wildlife Management, V. 45, No. 3, 1981, p. 573-597. Re: Study carried out in undeveloped sections of Athabasca oil

sands region from January 1976 to June 1978.

Hauge, Thomas M.

Dynamics of moose populations in the AOSERP study area in Northeastern Alberta. By T.M. Hauge and L.B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. Edmonton, AOSERP, Nov. 1980.

xvii, 64 p. illus.

Project LS 21.1.1.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment.

Hennan, E.

Species distribution and habitat relationships of waterfowl in Northeastern Alberta. By E. Hennan and B. Munson, Canadian Wildlife Service. Edmonton, AOSERP, Nov. 1979.

xvii, 115 p. illus. (AOSERP Report 81)

Project LS 22.1.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Inventory of selected raptor, colonial, and sensitive bird species in the Athabasca Oil Sands area of Alberta. By B. Munson and others, Canadian Wildlife Service. Edmonton, AOSERP, Apr. 1980.

xvii, 66 p. illus.

Project LS 22.3.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Michielson, Joseph

Great Canadian Oil Sands small mammal study. By Joseph Michielsen and Andrew Radvanyi, Canadian Wildlife Service. Edmonton, Great Canadian Oil Sands, Mar. 1979.

viii, 65 p. illus. (In accordance with SA #571280).

1978 field results and final report of a four year study.

Penner, D.F.

A review and assessment of the baseline data relevant to the impacts of oil sands development on black bears in the AOSERP study area. By D.F. Penner, K.H. McCourt and K.E. Smyth, McCourt Management Ltd. Edmonton, AOSERP, Apr. 1980.

xiv, 53 p. (AOSERP Report 65)

Project LS 21.6.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Rolley, R.E.

Moose population dynamics and winter habitat use at Rochester, Alberta, 1965-77. By R.E. Rolley and L.B. Keith, University of Wisconsin. Dept. of Wildlife Ecology. Edmonton, AOSERP, Dec. 1979.

34 p. illus. (AOSERP Open File Report 5)

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Note: This report is listed because it was prepared for AOSERP; Rochester is not in the oil sands area.

Searing, Gary F.

Distribution, abundance and habitat associations of beavers, muskrats, mink and river otters in the AOSERP study area, Northeastern Alberta. By Gary F. Searing, LGL Limited. Edmonton, AOSERP, Aug. 1979.

xvi, 119 p. illus. (AOSERP Report 73)

Project LS 23.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Syncrude Canada Ltd.

Bird protection at Syncrude Canada Ltd. Edmonton, Sept. 1980. 7 p. illus.

Cover title.

"A Syncrude Wildlife Team publication."

Thompson, D.C.

A review and assessment of the baseline data relevant to the impacts of oil sands developments on large mammals in the AOSERP study area. By D.C. Thompson, D.M. Ealey, and K.H. McCourt, McCourt Management Ltd. Edmonton, AOSERP, Apr. 1980.

xvi, 155 p. (AOSERP Report 64)

Project LS 21.6.1.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Yonge, Keith S.

Development of a bird protection strategy for tar sands tailings ponds. By Keith S. Yonge, Syncrude Canada Ltd. Presented at Proceedings of 8th Bird Control Seminar, Bowling Green, Ohio, October 1979. Edmonton, Syncrude Canada Ltd., 1981.

22 p. illus. (Syncrude Canada Ltd. Professional Paper 1981-1)

Yonge, Keith S.

A review of bird migration patterns and techniques for monitoring migration. By K.S. Yonge and M.L. Christiansen, Syncrude Canada Ltd. Edmonton, 1981.

35 p. (Syncrude Canada Ltd. Professional Paper 1981-2)

Note: Paper was completed in Dec. 1979. Includes a 15-page annotated bibliography.

# 8. Limnology, Fishes and Invertebrates.

This section is used for base line studies. Studies on the effects of water pollution on aquatic systems will be found in section VIII.A.17. Water Quality and Pollution. Studies on both terrestrial and aquatic invertebrates are included in this section.

- 97 -

Aquatic System Workshop, 20 and 21 September 1978. Presented by T.W. Chamberlin, and E.A. Harding. Compiled and edited by E.M.

Wrangler and R.T. Seidner. Edmonton, AOSERP, Aug. 1979.

xiv, 148 p. illus., maps.

Project WS 3.4.

Prepared for Alberta Oil Sands Environmental Research Program. Program Management.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment:

Report of a workshop conducted to familiarize staff with the philosophy and practices of aquatic system inventory conducted by the Resource Analysis Branch, B.C. Ministry of the Environment and to provide staff with some practice in air photo interpretation and other methods of aquatic inventory.

## Ash, G.R.

A fisheries and water quality survey of ten lakes in the Richardson Tower area, Northeastern Alberta. By G.R. Ash, L.R. Noton, R.L. & L. Environmental Services Ltd. Edmonton, AOSERP, 1980.

2v. illus. (AOSERP Report 94)

Project WS 1.4.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment.

Contents: v.1. Methodology, summary and discussion (Report 94) - v.2. Data (limited distribution)

This survey was designed to provide the information required to assist in recreational planning and fishery management in this area.

Barton, D.R.

Ecological studies of the aquatic invertebrates of the Alberta Oil Sands Environmental Research Program study area of Northeastern Alberta. By D.R. Barton and R.R. Wallace, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, Apr. 1980.

xvii, 216 p. illus. (AOSERP Report 88)

Project AF 2.0.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Bond, W.A.

Fishery resources of the Athabasca River downstream of Fort McMurray, Alberta. By W.A. Bond, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, Feb. 1980.

3v. illus. (AOSERP Report 89)

Vols. 2 and 3 were coauthored by D.K. Berry, Alberta. Dept. of Energy and Natural Resources. Fish and Wildlife Division.

Project AF 4.3.2.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Funded by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Contents: v.1. Discussion and summary.- v.2. Back-up data for 1976.- v.3. Back-up data for 1977.

Bond, W.A.

An intensive study of the fish fauna of the Muskeg River Watershed of Northeastern Alberta. By W.A. Bond and K. Machniak, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, July 1979.

xxi, 180 p. illus. (AOSERP Report 76)

Project AF 4.4.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Crowther, R.A.

An assessment of benthic secondary production in the Muskeg River of northeastern Alberta. By R.A. Crowther, B.J. Lade, IEC Environmental Consultants Ltd. Edmonton, AOSERP, Dec. 1980.

xii, 106 p. illus. (AOSERP Report 116)

Project WS 1.3.5.

Prepared for the Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment.

Crowther, R.A.

A literature review and bibliography of factors affecting the productivity of benthic invertebrates in running waters and the use of trophic classification in aquatic energy studies. By R.A. Crowther and T.C. Griffing, IEC International

Environmental Consultants Ltd. Edmonton, AOSERP, Jan. 1980. xvi, 216 p. illus. (some col.)

Project WS 1.3.5.

Prepared for the Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

The ecology of macrobenthic invertebrate communities in Hartley Creek, Northeastern Alberta. By R.C.B. Hartland-Rowe and others, University of Calgary. Dept. of Biology. Edmonton, AOSERP, Mar. 1979.

xx, 144 p. illus. (AOSERP Report 49)

Project WS 1.3.3.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Fisheries and aquatic habitat investigations in the MacKay River Watershed of Northeastern Alberta. By K. Machniak and others, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, June 1980.

xxv, 273 p. illus. (AOSERP Report 93)

Project WS 1.3.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System, Syncrude Canada Ltd., and Canada. Dept. of the Environment.

Griffiths, W.E.

Aquatic habitat mapping of the AOSERP study area (1978): assessment and recommendations. By W.E. Griffiths, LGL Ltd. Environmental Research Associates. Edmonton, AOSERP, Jan. 1979.

75 p. (AOSERP Open File Report 18)

Project WS 3.4.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.
Hickman, M.

Interim report on a comparative study of benthic algal primary productivity in the AOSERP study area. By M. Hickman, S.E.D. Charlton, and C.G. Jenkerson, University of Alberta. Dept. of Botany. Edmonton, AOSERP, Nov. 1979.

xviii, 107 p. illus. (AOSERP Report 75)

Project WS 1.3.4.

Prepared for Alberta Oil Sands Environmental Research Program. Water Program.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Hickman, M.

A longitudinal physico-chemical and algal survey of five rivers flowing through the AOSERP study area. By M. Hickman, S.E.D. Charlton and C.G. Jenkerson, University of Western Ontario, Dept. of Plant Sciences. Edmonton, AOSERP, Sept. 1980.

xiv, 117 p. illus. (AOSERP Open File Report 28) Project WS 1.3.4.

Prepared for the Alberta Oil Sands Environmental Research Program.

Sponsored by Alberta. Dept. of the Environment.

Jantzie, T.

Response of confined aquatic biota to mine depressurization water in Beaver Creek Reservoir. By T. Jantzie, L.R. Noton, and N.R. Chymko, Chemical and Geological Laboratories Ltd. Edmonton, Syncrude Canada Ltd., Mar. 1980.

v, 78 p. illus. (Syncrude Canada Ltd. Environmental Research Report 1980-2)

Lock, Maurice A.

Ability of lotic micro-organisms and macrobenthos to degrade and asssimilate bitumen. By M.A. Lock and R.R. Wallace, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, July 1979.

xiv, 38 p.

Project WS 4.1.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Lock, Maurice A.

Aquatic biological investigations of the Muskeg River watershed. By M.A. Lock and R.R. Wallace, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, Aug. 1979.

xiv, 29 p. illus. (AOSERP Report 67)

Project WS 1.3.2.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Lock, Maurice A.

Interim report on ecological studies on the lower trophic levels of muskeg rivers within the Alberta Oil Sands Environmental Research Program study area. By M.A. Lock and R.R. Wallace, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, May 1979.

xix, 105 p. illus. (AOSERP Report 58) Project AF 2.0.2.

Prepared for Alberta. Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Lock, Maurice A.

Studies in recolonization of stream substrates by aquatic organisms. By M.A. Lock and R.R. Wallace, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, July 1979.

xiv, 22 p.

Project WS 4.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

McCart, P.J.

A review of aquatic biomonitoring with particular reference to its possible use in the AOSERP study area. By P.J. McCart and D.W. Mayhood, Aquatic Environments Ltd. Edmonton, AOSERP, June 1980.

xvi, 117 p. illus.

Project WS 3.5.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Machniak, K.

An intensive study of the fish fauna of the Steepbank River Watershed of Northeastern Alberta. By K. Machniak and W.A. Bond, Canada. Fisheries and Marine Service. Freshwater Institute. Edmonton, AOSERP, June 1979.

xxii, 196 p. illus. (AOSERP Report 61)

Project AF 4.5.2.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

O'Neil, J.P.

Fisheries survey of the Beaver Creek diversion system, 1978. By J.P. O'Neil, R. L. & L. Environmental Services Ltd. Edmonton, Syncrude Canada Ltd., June 1979. x, 76 p. illus. (some col.) (Syncrude Canada Ltd. Environmental Research Monograph 1979-3)

Retallack, J.T.

Poplar Creek benthic faunal survey 1979. By J.T. Retallack, Syncrude Canada Ltd. Edmonton, 1980.

vi, 40 p. illus. (Syncrude Canada Ltd. Professional Paper 1980-2)

Retallack, J.T.

Poplar Creek benthic faunal study 1980. By J.T. Retallack, Syncrude Canada Ltd. Edmonton, 1981.

vii, 48 p. illus. (Syncrude Canada Ltd. Professional Paper 1981-5) Ryan, James Kenneth

Insects on the Suncor Dike, a survey of the types present and an evaluation of their effects on dike vegetation. By James K. Ryan and Gerald J. Hilchie, McCourt Management Ltd. Edmonton, AOSERP, Mar. 1980.

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18 p. illus. (AOSERP Open File Report 24)

Project LS 28.1.3.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment.

Ryan, James Kenneth

Interim report on an ecological survey of terrestrial insect communities in the AOSERP study area. By James Ryan and Gerald J. Hilchie, McCourt Management Ltd. Edmonton, AOSERP, Jan. 1979.

xvii, 87 p. illus. (AOSERP Open File Report 20) Sub-project LS 28.1.1.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Ryan, James Kenneth

Report on an ecological survey of terrestrial insect communities in the AOSERP study area. By J.K. Ryan, G. Hilchie, McCourt Management Ltd. Edmonton, Alberta. Dept. of the Environment. Research Management Division, Mar. 1981.

xxii, 202 p. illus. (AOSERP Report 115).

Cover title: Ecological survey of terrestrial insect communities in the AOSERP study area.

Project LS 28.1.1.

Prepared for the Alberta Oil Sands Environmental Research Program. Land System.

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Sponsored by Alberta. Dept. of the Environment.

Sekerak, Aaron D.

Aquatic biophysical inventory of major tributaries in the AOSERP study area. By Aaron D. Sekerak, and Gordon L. Walder, LGL Ltd. Edmonton, AOSERP, 1980.

2 v. illus., maps (AOSERP Report 114)

Project WS 3.4.

Prepared for the Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment.

Contents: v.1. Summary - v.2. Atlas, by Gordon L. Walder and others.

Thompson, M.S.

Baseline inventory of aquatic macrophyte species distributions in the AOSERP study area. By M.S. Thompson, J. Crosby-Diewold, Beak Consultants Ltd. Edmonton, AOSERP, Aug. 1980.

xii, 73 p. illus. (AOSERP Report 100)

Project LS 10.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Tripp, D.B.

Fisheries and habitat investigations of tributary streams in the southern portion of the AOSERP study area. By D.B. Tripp, P.T.P. Tsui, Aquatic Environments Ltd. Edmonton, AOSERP, 1980.

2v. illus. (AOSERP Report 92) (AOSERP Open File Report 16) Project WS 1.6.2.

Prepared for Alberta Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Contents: v.1. Summary and conclusions (June 1980) - v.2. Data (Apr. 1980)

Tripp, D.B.

Investigations of the spring spawning fish populations in the Athabasca and Clearwater Rivers upstream of Fort McMurray. By D.B. Tripp and P.J. McCart, Aquatic Environments Ltd. Edmonton, AOSERP, 1979.

2 v. illus., maps. (V.1 is AOSERP Report 84) (V.2 is AOSERP Open File Report 0.F.4)

Project WS 1.6.1.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Contents: v.1. Summary.- v.2. Details of sampling location and catches.

Webb (R.) Environmental Services Ltd.

Lake and pond fisheries survey, Alsands Project area. Prepared for Alsands Project Group. Calgary, Webb, May 1980.

iii, 33, 12 p. illus. (col.), maps.

Supplemental information on fishes and their habitat as requested by Alberta. Dept. of the Environment. Environmental Assessment Division.

# 9. Transportation and Pipeline Corridor.

Items on local transportation in the town of Fort McMurray will be found in VII.B.2. <u>Planning</u>; those on local transportation in the new townsite for the Alsands Project will be found in VII.C.2. Planning. 2

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Alberta. Dept. of Transportation. Planning Branch. Project location report: Highway 963 S. of Athabasca R. - S.W. of Ft. Hills. Edmonton, Oct. 1976.

iv, 27, 39 p. maps (part fold.)

Cover title: Location study report: Highway 963 S. of Athabasca R. - S.W. of Ft. Hills.

"Describes the investigation into the determination of the recommended highway system that will serve the region of the proposed oil sands development north of Fort McMurray."

Dusseault, M.

Northern Alberta road location study. Edmonton, Grimble (L.G.) & Associates Ltd., May 1976.

65 p. illus. (Northern transportation study. Appendix 1) Prepared for Alberta. Northern Development Group. Report of a study conducted to assess the feasibility of surface route linkages between Fort McMurray and northern points.

New Athabasca bridge opens way to Alsands. <u>Heavy Construction News</u>, V. 24, No. 17, April 28, 1980, p. 8-9. Describes construction of the substructure of the bridge which is located 5 km north of the Syncrude oil sands plant. Ross (P.S.) & Partners.

Northern Alberta transportation study. By P.S. Ross & Partners and McNeal, Hildebrand and Associates Ltd. Edmonton, Sept. 1976.

500 p. in 2v. maps (part col.)

V. 2 has title Northern Alberta transportation study: final report to Steering Committee.

"...considers the transportation demands arising from natural and human resources of Northern Alberta together with exogenous transportation demand stemming from present and forecast activity in British Columbia, the Northwest Territories and Saskatchewan. It outlines desirable transportation system improvements and development in a broad context, and provide input to strategic planning for transportation in Alberta." (p. 1)

Stewart, Weir, Stewart, Watson & Heinrichs. Alberta oil sands corridor study presentation. Edmonton, 1974? 68 p. illus., maps (part fold.) Contains copies of the slides used in a summary presentation of the Alberta Oil Sands Corridor Study.

# 10. <u>Applications by Industry to the Government of Alberta</u>. (Arranged chronologically)

This section includes applications to the Energy Resources Conservation Board and its predecessor, their reports on these applications and transcripts of the hearings.

Note: Because titles for these are not significant, they have not been included in the title index.

Alberta. Energy Resources Conservation Board.

Report to the Lieutenant Governor in Council in the matter of an application by Petrofina Canada Ltd., Pacific Petroleums Ltd., Hudson's Bay Oil and Gas Company Limited and Murphy Oil Company Ltd. under Part 8 of the Oil and Gas Conservation Act and Part 2 of the Hydro and Electric Energy Act. Calgary, Nov. 1975.

25 p. illus. (Alberta Energy Resources Conservation Board. Report 74-X-A) (Alberta. Energy Resources Conservation Board. Report. 74-Y-A)

Addendum to Reports 74-X and 74-Y.

Alsands Project Group. Application to the Alberta Energy Resources Conservation Board for a power plant in conjunction with an oil sands mining project. Calgary, Apr. 1979. 20 p. illus. Re: Application no. 790191.

Alberta. Energy Resources Conservation Board. Alsands Fort McMurray Project. Calgary, Dec. 1979. vii, 141 p. illus. (Alberta. Energy Resources Conservation Board. Report 79-H) Re: Applications 780724 and 790191. At head of title: Report to the Lieutenant Governor in Council.

11. Pollution - Monitoring.

Addison, Paul A. Ecological bench-marking and biomonitoring for detection of airborne pollutant effects on vegetation and soils. By P.A. Addison, Canada. Dept. of the Environment. Canadian Forestry Service. Northern Forest Research Centre. Edmonton, AOSERP, Dec. 1980.

xiv, 48 p. (AOSERP Report 111)

Project LS 3.4.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment.

Hilchie, G.J. Approaches to the design of a biomonitoring program using arthropods as bioindicators for the AOSERP study area. By G.J. Hilchie and J.K. Ryan, McCourt Management Ltd. Edmonton, AOSERP, Aug. 1980. xii, 47 p. (AOSERP Report 105) Project LS 11.3. Prepared for Alberta Oil Sands Environmental Research Program. Land System. Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

12. Climatology.

General and specific studies of climate and weather are included in this section, including those of precipitation chemistry and acid rain.

Acid rain poses serious threat to western Canada. <u>Canadian</u> <u>Environmental Control Newsletter</u>, No. 204, Sept. 15, 1981, p. 1722-23. Re: Impact of acid rain on western Canadian Precambrian Shield

Re: Impact of acid rain on western Canadian Precamprian Shield in next two decades. Includes mention of detection of acid rain from Alberta tar sands plants in Cree Lake area of Saskatchewan.

Acid rain: we are fighting a holding battle. Civic Pubic Works. V. 31, No. 11, 1979, p. 22, 24. Briefly describes work done by Acres Consulting Services in the AOSERP study area.

Alberta the acid rainmaker: tar sands plant expansion is said to threaten vulnerable eastern lakes. <u>Alberta Report</u>, V. 8, No. 47, Oct. 30, 1981, p. 16. Baker, J.

Acidity of open and intercepted precipitation in forests and effects on forest soils in Alberta, Canada. By J. Baker and Drake Hocking, Northern Forest Research Centre and Marvin Nyborg, University of Alberta. In Proceedings of the First International Symposium on Acid Precipitation and the Forest Ecosystem. Upper Darby, Pennsylvania, United States. Dept. of Agriculture. Forest Service. Northeastern Forest Experiment Station, Aug. 1976.

p. 779-790.

Distributed by United States. Dept. of Commerce. National Technical Information Service, Springfield, Virginia.

Includes discussion of rainfall chemistry data from the GCOS plant area.

Note: These proceedings are printed as USDA Forest Service General Technical Report NE-23.

Balser, M.

Measuring wind turbulence with Doppler acoustic radar. By M. Balser, Xonics Technology Inc. and D. Netterville, Syncrude Canada Ltd. Edmonton, Syncrude Canada Ltd., 1980.

25 p. illus. (Syncrude Canada Ltd. Professional Paper 1980-4)

This paper will be published in the Journal of Applied Meteorology.

Davison, D.S.

A user-oriented climatological dispersion model for the Alberta oil sands. By D.S. Davison, and others, Intera Environmental Consultants Ltd. In Proceedings, Air Pollution Sessions, Canadian Meteorological and Oceanographic Society, Fifteenth Annual Congress, Saskatoon, Saskatchewan, May 27-29, 1981. Edmonton, Alberta. Dept. of the Environment. Pollution Control Division, 1981.

p. 135-146.

Hammer, U.T.

'Acid rain': the potential for Saskatchewan. By Dr. U.T. Hammer, University of Saskatchewan, Dept. of Biology. Saskatoon, The Saskatchewan Environmental Advisory Council, June 1980.

36 p. illus., maps.

Includes discussion of emission and deposition of  $SO_2$  from the Fort McMurray area.

Murray, W.A.

An observational study of fog in the AOSERP study area. By W.A. Murray and T.B. Low, Promet Environmental Group Ltd. Edmonton, AOSERP, Dec. 1979.

xiv, 54 p. illus. (AOSERP Report 86)

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Peters, R.R.

An analysis of precipitation chemistry in the oil sands area of northern Alberta. By R.R. Peters and H.S. Sandhu, Alberta. Dept. of the Environment, and W.D. Hume, Canada. Dept. of the Environment. Atmospheric Environment Service. In Proceedings, Air Pollution Sessions, Canadian Meteorological and Oceanographic Society, Fifteenth Annual Congress, Saskatoon, Saskatchewan, May 27-29, 1981. Edmonton, Alberta. Dept. of the Environment. Pollution Control Division, 1981.

p. 147-157.

Re: Results of a rainfall sampling program conducted from 1976 to 1979, including examination of seasonal variation of chemical constituents, study methods and data reliability.

Tar sands rain: in the long run, it hurts Saskatchewan. Alberta Report, V. 8, No. 32, July 17, 1981, p. 13-14. Re: Sulphur emmission levels from Syncrude plant and long term effects of oil sands mining expansion on Canadian Shield areas of northern Saskatchewan.

Taylor, Gregory

Oil sands development and acid rain in Alberta. <u>Alternatives</u>, V. 9, No. 4, Winter 1981, p. 3-10.

Re: Projected sulphur emissions from oil sands plants over next 20 years, sulphur removal technology available and required, areas sensitive to acid precipitation, and environmental problems predicted in the future. Taylor, Gregory

The potential for acid precipitation related environmental problems due to the development of the Alberta oil sands near Fort McMurray, Alberta. Calgary, University of Calgary. Faculty of Environmental Design, Dec. 1979. ii, 57 p. illus.

"This document is the result of four months of investigation as part of a directed study."

## 13. Air Quality - Permits.

Djurfors, S.G.

Incompatibility between air quality model predictions and regulatory requirements: attempt at solution. By S.G. Djurfors, Syncrude Canada Ltd. Edmonton, 1981. 7 p. (Syncrude Canada Ltd. Professional Paper 1981-7)

# 14. Air Pollution - General.

Includes studies on the measurement and detection of air pollution in the tar sands area, except acid rain (found in Section VIII.A.12 Climatology).

Includes studies on the effect of air pollution on vegetation. Baseline studies of vegetation are listed in section VIII.A.2. Vegetation and VIII.A.3. Forests and Forestry.

Air pollution studies in the plant areas and local vicinity are found in Section VIII.A.15 Air Pollution-Source Studies.

Acres Consulting Services Ltd.

Pollution deposition study plan. Edmonton, AOSERP, Mar. 1979. iii, 82 p. illus. (AOSERP Open File Report 17) Project AS 3.6.2.

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Air system summer field study in the AOSERP study area, June 1977. By F. Fanaki and others, Canada. Dept. of the Environment. Atmospheric Environment Service. Edmonton, AOSERP, Aug. 1979. xxiii, 248 p. illus. (AOSERP Report 68) Projects AS 1.5.3 and AS 3.5.2. Prepared for Alberta Oil Sands Environmental Research Program. Air System. Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Alberta. Environment Conservation Authority.

Environmental effects of the operation of sulphur extraction gas plants in Alberta: summary of the public hearings, Oct. 1972. Edmonton, July 1973.

xi, 159 p.

Oil sands: p. 44. Though the terms of reference for the public hearings didn't include oil sands extraction plants, some briefs received by the Authority commented on the situation.

An assessment of the models LIRAQ and ADPIC for application to the Alberta oil sands area. By D. Reid and others, Canada. Dept. of the Environment. Atmospheric Environment Service. Edmonton, AOSERP, May 1979.

xiv, 95 p. illus. (AOSERP Report 66)

Project AS 4.3.2.

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Bagg, David

Validation studies of the CRSTER model in application to the AOSERP study area. By D. Bagg, Canada. Dept. of the Environment. Atmospheric Environment Service. Edmonton, AOSERP, Mar. 1979.

vii, 35 p. illus. (AOSERP Open File Report 22) Project AS 4.2.3.

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

#### Barrie, L.A.

The fate of particulate emissions from an isolated power plant in the oil sands area of western Canada. By L.A. Barrie, Canada. Dept. of the Environment. Atmospheric Environment Service. <u>Annals of the New York Academy of Sciences</u>, V. 338, May 1980, p. 434-452.

Barrie, L.A.

A wintertime investigation of the deposition of pollutants around an isolated power plant in northern Alberta. By L.A. Barrie and J. Kovalick, Canada. Dept. of the Environment. Atmospheric Environment Service. Edmonton, AOSERP, May 1980.

xviii, 115 p. illus. (AOSERP Report 90)

Project AS 3.2.

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Bottenheim, Jan W.

The effect of a polluting source on the air quality downwind of pristine northern areas. By J.W. Bottenheim and O.P. Strausz, University of Alberta. Dept. of Chemistry. Hydrocarbon Research Centre. <u>Atmospheric Environment</u>, V. 13, No. 8, Aug. 1979, p. 1085-1089.

"...a modelling study of the effect of a polluting source at selected distances in time away from the source, where local pollution is assumed to be negligible...The results of this study should give an indication of the potential atmospheric consequences when industries are located in otherwise pristine environments, for example, the Athabasca oil sand plants." (p. 1085)

Davison, D.S.

Review of requirements for air quality simulation models. By D.S. Davison and R.B. Lantz, Intera Environmental Consultants Ltd. Edmonton, AOSERP, Sept. 1980.

xv, 86 p. (AOSERP Report 104)

Project AS 4.2.4.

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

ESP: environmental safety policy (Canadian bought). The Oilsander, V. 2, No. 7, July-Aug. 1980. p. 1. Re: Purchase of Canadian-made electrostatic precipitators designed to remove 95 per cent of the particulate content from the flue gas produced by burning coke in the power house boilers. Describes the operation of these ESP's.

Environmental sulphur research in Alberta: a review. By H.S. Sandhu and others. Edmonton, Alberta. Dept. of the Environment. Research Secretariat, Feb. 1980.

viii, 90 p.

Bibliography: p. 65-90.

"A review and analysis of published environmental sulphur research from Alberta...carried out to identify future research needs." (p. iii) Includes sections dealing specifically with sulphur emissions from oil sands plants.

Fanaki, F.

Air pollution studies at the Alberta Oil Sands area. By F. Fanaki, R. Hoff and M. Lusis. Downsview, Ont., Canada. Dept. of the Environment. Atmospheric Environment Service, 1979.

15 p. illus.

Presented to the Air Pollution Control Association. Pacific Northwest International Section, Edmonton, Nov. 7-9, 1979.

Gammage, R.B.

New techniques for measuring PNA in the workplace. By R.B. Gammage and others, Oak Ridge National Laboratory. Health and Safety Research Division. In Analytical chemistry of liquid fuel sources: tar sands, oil shale, coal and petroleum. Washington, American Chemical Society, 1978.

p. 78-98. (Advances in Chemistry Series 170)

Re: The instruments and techniques needed for monitoring of polynuclear aromatic (PNA) compounds released during the processing of tar sand, oil shale and coal in synthetic fuel cycles.

#### Gomez Bueno, C.O.

Physical and chemical characterization of Athabasca tar sands fly ash. By C.O. Gomez Bueno, G.L. Rempel and D.R. Spink, University of Waterloo. Dept. of Chemical Engineering. <u>CIM</u> <u>Bulletin</u>, V. 73, No. 820, Aug. 1980, p. 147-151. Presents a detailed characterization of the physical, chemical and morphological properties of size-classified GCOS fly ash which is important for metal recovery studies and evaluation of the potential health hazards of the fly ash.

## Hyne, J.B.

Desulfurization of fossil fuels. By J.B. Hyne, Alberta Sulphur Research Ltd. and University of Calgary. Dept. of Chemistry. In Tomlinson, M., ed. Chemistry for energy. Washington, D.C., American Chemical Society, 1979.

p. 45-65. (ACS Symposium Series 90)

Examines the issue of "fossil fuel desulfurization as it currently exists including solid, liquid and gas phase hydrocarbon fuels and technologies for their desulfurization in situ, in refining, during combustion and post combustion." (p. 45)

#### Kumar, A.

Air pollution control at a tar sands plant. By A. Kumar, Syncrude Canada Ltd. Paper presented at the Second International Symposium on Waste Treatment and Utilization, June 18-20, 1980, University of Waterloo, Waterloo, Ontario, Canada, Paper No. 1.4. Edmonton, Syncrude Canada Ltd., 1980. 18 p. illus. (Syncrude Canada Ltd. Professional Paper 1980-3) Describes the requirements for air pollution control facilities and their use, monitoring and research activities at Syncrude's

Kumar, Ashok

plant.

Air quality studies in the tar sands development area. By Ashok Kumar, Syncrude Canada Ltd. Prepared for presentation at the 73rd annual meeting of the Air Pollution Control Association, Montreal, Quebec, June 22-27, 1980. Edmonton, Syncrude Canada Ltd. Environmental Affairs, Feb. 1980. 19 p. maps. MacDonald, L.P.

Experimental burning of delayed coke in a wet process cement kiln. By L.P. MacDonald, St. Lawrence Cement Co. and F.J. Hopton, Ontario Research Foundation. Ottawa, Canada. Dept. of Fisheries and the Environment, Sept. 1977.

viii, 52 p. illus. (Canada. Environmental Protection Service. Technology Development Report EPS-4-WP-77-5)

Re: Experiments with burning delayed coke produced at the GCOS plant to determine the maximum rate of coke burning and the effect of the burn on both air and product quality.

Malhotra, S.S.

Symptomology and threshold levels of air pollutant injury to vegetation, 1979-80. By S.S. Malhotra, P.A. Addison, A.A. Khan, Canada. Dept. of the Environment. Canadian Forestry Service. Northern Forest Research Centre. Edmonton, AOSERP, Dec. 1980.

xii, 10 p. illus. (AOSERP Report 109) Project LS 3.1.

Prepared for the Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment.

Murray, W.A.

Gregoire Lake monitoring program: six month report, April to September 1979. By W.A. Murray, Promet Environmental Group Ltd. Edmonton, AOSERP, Mar. 1981.

xii, 66 p. illus.

Project AS 2.6.

Prepared for Amoco Canada Petroleum Co. Ltd., and Alberta Oil Sands Environmental Research Program. Air System. Sponsored by Alberta. Dept. of the Environment.

Murray, W.A.

Ion and metal content of the snow cover of the AOSERP study area. By W.A. Murray, Promet Environmental Group Ltd. In Proceedings, Air Pollution Sessions, Canadian Meteorological and Oceanographic Society, Fifteenth Annual Congress, Saskatoon, Saskatchewan, May 27-29, 1981. Edmonton, Alberta. Dept. of the Environment. Pollution Control Division, 1981.

p. 159-169.

Re: Levels of sulphate, nitrates and insoluable metals in snow samples taken from sites around existing oil sands plants.

Padro, Jacob

Application of the CRSTER model to the Alberta oil sands region. By Jacob Padro and David Bagg, Canada. Dept. of the Environment, Atmospheric Service. Edmonton, AOSERP, Dec. 1978.

35 p. illus. (AOSERP Open File Report 21)

Project AS 4.2.

Prepared for the Alberta Oil Sands Environmental Research Program. Air System. ÷.,

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Sponsored by Alberta. Dept. of the Environment.

Pertains to the use of the CRSTER model for predicting "worst" occurrences of air pollution.

Reavill, P.S.

Syncrude Canada Ltd. air monitoring network. By P.S. Reavill, Syncrude Canada Ltd. Paper presented to the Canadian Society for Chemical Engineering 29th Annual Conference, Sarnia, Ontario, Oct. 1, 1979.

21 p. illus.

Describes the five station air monitoring network and the data acquisition and processing system established by Syncrude to monitor air quality.

Schneider, Linda G.

Recovery of vanadium and nickel from oil sands coke ash. By Linda G. Schneider and Zacheria M. George, Alberta Research Council. Paper to be presented to the Extraction Metallury Conference '81, London, England, Sept. 21-23, 1981. 8 p. illus. (Alberta Research Council Contribution No. 1053)

Strosher, Mark M.

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Background air quality in the AOSERP study area, March 1977 to March 1980. By M.M. Strosher, Alberta. Dept. of the Environment. Pollution Control Division. Edmonton, AOSERP, 1981.

x. 67 p. (AOSERP Limited Distribution Report L73) Project AS 2.1.1.

Prepared for the Alberta Oil Sands Environmental Research Program.

Sponsored by Alberta. Dept. of the Environment.

Strosher, Mark M. Meteorologial factors affecting ambient SO<sub>2</sub> concentrations near an oil sands extraction plant. By M.M. Strosher, Alberta. Dept. of the Environment. Pollution Control Division, and R.R. Peters. Edmonton, AOSERP, Sept. 1980. xiv, 87 p. illus. Project AS 2.1. Prepared for Alberta Oil Sands Environmental Research Program. Air System. Sponsored by Alberta. Dept. of the Environment.

Strosher, Mark M.

Meteorological factors causing SO events from a point source with implications for atmospheric<sup>2</sup> modelling. By Mark M. Strosher and Roy Peters, Alberta. Dept. of the Environment. Environmental Protection Service. In Joint Conference on Applications of Air Pollution Meteorology, 2d, New Orleans, March 24-27, 1980. Proceedings. Boston, American Meteorological Society, 1980. p. 760-763. illus.

Sulfur regs threaten Alberta tar sands plant. <u>Oil & Gas Journal</u>, V. 77, No. 28, July 9, 1979, p. 182. Re: Alsands warns it may have to re-examine its plans if government guidelines for sulfur emissions are enforced. ERCB also questions Alsands plans for using the dragline method of mining.

Supple, M.A.

Reduction of flue gas particulates in a tar sand plant. By M.A. Supple and K. Rashid, Great Canadian Oil Sands Limited. Energy Processing/Canada, V. 72, No. 1, Sept.-Oct. 1979, p. 62-68.

Paper presented at the 27th Canadian Chemical Engineering Conference, Calgary.

Syncrude Canada Ltd.

Air quality management at Syncrude Canada Ltd. Edmonton, Feb. 1981.

8 p. illus. (col.)

Re: Use of air pollution control equipment to reduce emissions of sulphur, hydrocarbon vapours and particulates, monitoring of emissions and air quality, and air quality research. Syncrude, Suncor come under fire for exceeding air emission limits. <u>Eco/Log Week,</u> V. 9, No. 28, July 24, 1981, p. 1. Re: Stop Pollution Save Tomorrow's filing complaint with Alberta Attorney General's office over repeated violations of the Alberta Clean Air Act.

Syncrude simplifies pollution control by a computerized information
 retrieval system. <u>Oilweek</u>, V. 32, No. 7, Mar. 23, 1981, p. 32
 (Oil sands report)
 Poulaity monitoring and reporting preserver

Re: Air quality monitoring and reporting program.

Voldner, E.C.

A preliminary Canadian emissions inventory for sulphur and nitrogen oxides. By E.C. Voldner, Y. Shah and D.M. Whelpdale, Canada. Dept. of the Environment, Atmospheric Environment Service. <u>Atmospheric Environment</u>, V. 14, No. 4, Apr. 1980, p. 419-428. Outlines survey methods used for computer modelling. Includes point source and area SO<sub>2</sub> and NO<sub>2</sub> emission values for Athabasca tar sands area.

Weber, Harry J.

Sulphur emissions - Alberta energy industries. By Harry J. Weber and George A. Warne, Alberta. Energy Resources Conservation Board. Paper to be presented to the Pacific Northwest International Section-Air Pollution Control Association, 1979 Conference, Edmonton, Nov. 7-9. Calgary, Oct. 1, 1979.

20 p. illus., maps.

Discusses present and future emissions from oil sands operations, p. 6-7.

## 15. Air Pollution - Source Studies.

Includes plume, boundary layer and air pollution control studies.

Bottenheim, Jan W. Development of a chemically reactive plume model for application in the AOSERP study area. By Jan W. Bottenheim, and O.P. Strausz, University of Alberta. Dept. of Chemistry. Edmonton, Alberta. Dept. of the Environment. Research Management Division, Apr. 1981. xiv, 159 p. illus. (AOSERP Report 117). Project AS 3.5.4. Prepared for the Alberta Oil Sands Environmental Research Program. Air System. Sponsored by Alberta. Dept. of the Environment.

Davison, D.S. Analysis of AOSERP plume sigma data. By D.S. Davison and E.D. Leavitt, Intera Environmental Consultants Ltd. Edmonton, AOSERP, Dec. 1979. xxi, 251 p. illus. (AOSERP Report 63)

Project ME 3.8.3.

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment and Canada. Dept. of the Environment.

Davison, D.S.

Plume dispersion measurements from an oil sands extraction plant, June 1977. By D.S. Davison and K.L. Grandia, Intera Environmental Consultants Ltd. Edmonton, AOSERP, Mar. 1979.

xxii, 209 p. illus. (AOSERP Report 52)

Project ME 2.3.2.

Prepared for the Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Djufours, S.

Effect on plume behavior of cooling by wet scrubbing. Engineering Digest, V. 23, No. 5. May 1977, p. 35-36, 38-30. Re: Effects of wet scrubbing on plume behavior and subsequent ground impingement concentrations for sulfur dioxide. Intera Environmental Consultants Ltd.

Summary of Alberta oil sands plume dispersion data. Prepared for Syncrude Canada Ltd. Edmonton, Syncrude Canada Ltd., May 1981.

iii, 196 p. tables (Syncrude Canada Ltd. Professional Paper 1981-6)

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Kumar, Ashok

Considerations of the effects of cross-wind shear, surface roughness and PBL/TBL height for plume sigmas. Edmonton, Syncrude Canada Ltd., 1979.

4 p.

Prepared for the meeting on Systemization of Plume Sigmas for Canada, Dec. 4-5, 1979.

Kumar, Ashok Evaluation of inter-facial mixing constant for a boundary layer evolution model. By Ashok Kumar, Syncrude Canada Ltd. Edmonton, 1980. 25 p. illus. (Syncrude Canada Ltd. Professional Paper 1980-5) Note: Paper was completed in Aug. 1979.

Kumar, Ashok

Numerical modelling of the development of the thermal boundary layer near a synthetic crude oil plant. Edmonton, Syncrude Canada Ltd., 1978.

32 p. illus. (Syncrude Canada Ltd. Professional Paper Series 1978-4)

Prepared for presentation at the Air Pollution Control Association Pacific Northwest International Section, 1978 technical meeting.

Also published in <u>APCA Journal</u>, V. 29, No. 8, Aug. 1979, p. 827-832.

Netterville, D.D.J. Concentration fluctuations in plumes. Edmonton, Syncrude Canada Ltd., 1979.

xxiii, 228 p. illus. (Syncrude Canada Ltd. Environmental Research Monograph 1979-4)

## Netterville, D.D.J.

Probability estimates of high concentrations in plumes. By D. Netterville, Syncrude Canada Ltd. and D.J. Wilson, University of Alberta. Presented to the 5th International Clean Air Congress, Buenos Aires, Argentina, Oct. 1980. Edmonton, Syncrude Canada Ltd., 1980.

30 p. illus. (Syncrude Canada Ltd. Professional Paper 1980-6)

Slawson, P.R.

Dispersion modeling of a plume in the tar sands area. By P.R. Slawson, G.A. Davidson, and C.S. Maddukuri, Envirodyne Limited. Edmonton, Syncrude Canada Ltd., Dec. 1979. xxi, 316 p. illus. (Syncrude Canada Ltd. Environmental Research Report 1980-1)

Venkatram, Akula

Evaluation of the effects of convection on plume behaviour in the AOSERP study area. Edmonton, AOSERP, July 1980. xiv, 75 p. illus. (AOSERP Report 95) Project AS 4.2.6.

Prepared for Alberta Oil Sands Environmental Research Program. Air System.

Sponsored by Alberta. Dept. of the Environment.

Wilson, D.J.

Dispersion from low level sources in the wake of a tailings pond dyke. By D.J. Wilson and S.G. Djurfors. Edmonton, Syncrude Canada Ltd., 1980.

24 p. illus. (Syncrude Canada Ltd. Professional Paper Series 1980-1)

Wilson, D.J.

Wind tunnel simulation of plume dispersion at Syncrude Mildred Lake site. By D.J. Wilson, University of Alberta. Dept. of Mechanical Engineering. Edmonton, Syncrude Canada Ltd., 1979. xvii, 198 p. illus. (Syncrude Canada Ltd. Environmental Research Monograph 1979-1)

#### Laird, A.R.

Plume chemistry studies at a northern Alberta power plant. By A.R. Laird, University of Texas. Dept. of Civil Engineering; Paulette Middleton, National Centre for Atmospheric Research, Boulder, Colorado; and R.W. Miksad, University of Texas, Centre for Energy Studies. <u>Atmospheric Environment</u>, V. 14, No. 7, July 1980, p. 859-860.

Comments on the article "Plume chemistry studies at a northern Alberta power plant," by M.A. Lusis and others. <u>Atmospheric</u> <u>Environment</u>, V. 12, No. 12, Dec. 1978, p. 2429-2437. Re: GCOS plume data.

## 17. Water Quality and Pollution.

Includes studies on the effects of impure water on aquatic life. Baseline studies of aquatic life are listed in section VIII.A.8. Limnology, Fishes and Invertebrates. Studies on acid rain will be found in section VIII.A.12. Climatology.

Akena, Anthony Mark

An intensive surface water quality study of the Muskeg River Watershed. By Anthony Mark Akena, Alberta. Dept. of the Environment. Pollution Control Division, and C.R. Froelich, Alberta. Dept. of the Environment. Finance and Administration. Edmonton, AOSERP, Dec. 1979.

2 v. illus. (AOSERP Report 85)

Project HY 2.5.

Volume 2 was limited in distribution to selected Canadian libraries.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Contents: v.1. Water chemistry.- v.2. Hydrology.

Andreychuk, A.P.

Inventory of water use requirements and effluent discharge characteristics related to oil sands development. By A.P. Andreychuk, Stanley Associates Engineering Ltd. Edmonton, AOSERP, June 1980.

xiv, 84 p. illus.

Project WS 1.2.2.

Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment.

The assimilative capacity of the Athabasca River for organic compounds. By P. Wallis and others, University of Calgary. Kananaskis Centre for Environmental Research. Edmonton, AOSERP, Aug. 1980.

xx, 106 p. illus.

Project WS 2.3.2.

Prepared for the Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment.

Beebe, Trudy

Great Canadian Oil Sands, Fort McMurray, industrial effluent monitoring summary report 1976-1978. Edmonton, Alberta. Dept. of the Environment. Pollution Control Division, 1979? 72 p. illus.

Burchfield, Thomas E.

Some chemical and physical properties of tailings water from oil sands extraction plants. By Thomas E. Burchfield and Loren G. Hepler, University of Lethbridge. Dept. of Chemistry. <u>Fuel</u>, V. 58, No. 10, Oct. 1979, p. 745-747.

Carmack, Eddy C.

Observations on the dispersal of saline groundwater in the Beaver Creek Diversion System, 1976-1978. By Eddy C. Carmack and Peter D. Killworth, Cove Science Associates Ltd. Edmonton, Syncrude Canada Ltd., 1979.

viii, 83 p. illus. (Syncrude Canada Ltd. Environmental Research Monograph 1979-2)

Geesey, G.G.

Microbiology of a northern river: bacterial distribution and relationship to suspended sediment and organic carbon. By G.G. Geesey and J.W. Costerton, University of Calgary. Dept. of Biology. <u>Canadian Journal of Microbiology</u>, V. 25, No. 9, Sept. 1979, p. 1058-1062. Holdway, Douglas A.

Chronic toxicity of vanadium to American flagfish over one reproductive cycle. Guelph, 1978.

vi, 79 p.

Thesis (M.Sc.) - University of Guelph, 1978.

Re: Potential harmful effects of vanadium released during the extraction and processing of Alberta oil sands. Considers "safe" levels of vanadium for native fish.

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Hackbarth, Douglas A.

Natural temporal variations in the chemistry of shallow groundwater, Athabasca oil sands area, Alberta. By Douglas A. Hackbarth, Stanley Associates Engineering Ltd. <u>Canadian</u> <u>Journal of Earth Sciences</u>, V. 18, No. 10, Oct. 1981, p. 1599-1608.

Re: Annual pattern of variation in shallow groundwater chemistry of three wells in the Athabasca oil sands area.

Jack T.R.

The release of vanadium from Athabasca oil sands cokes by leaching techniques. By T.R. Jack, University of Toronto. Scarborough College. Physical Sciences Division; E.A. Sullivan and J.E. Zajic, University of Western Ontario. Faculty of Engineering Science. <u>CIM Bulletin</u>, V. 73, No. 817, May 1980, p. 151-156.

Discusses methods of releasing vanadium, iron, nickel and titanium from cokes produced in upgrading Alberta oil sands bitumen. Suggests that while metals in delayed coker and fluid coker cokes at near neutral pH will not be significantly dissolved by ground water, the lability of the nickel content of Flexicoker coke will present a major storage problem.

Lock, Maurice A.

The effects of synthetic crude oil on microbial and macroinvertebrate benthic river communities-Part I: colonisation of synthetic crude oil contaminated substrata. By Maurice A. Lock, Canada. Dept. of Fisheries and Oceans, Freshwater Institute and others. <u>Environmental Pollution</u>, (Series A), V. 24, No. 3, Mar. 1981, p. 207-217. Re: Colonisation of oiled bricks under conditions of light and dark. The results suggest that synthetic crude oil has a stimulatory action on bacterial, algal and macroinvertebrate benthic colonisation, but not under low light. Lock, Maurice A.

The effects of synthetic crude oil on microbial and macroinvertebrate benthic river communities-Part II: the response of an established community to contamination by synthetic crude oil. By Maurice A. Lock and others. <u>Environmental Pollution</u>, (Series A), V. 24, No. 4, Apr. 1981, p. 263-275.

Re: The colonisation of oiled and unoiled bricks by microbes and macroinvertebrates of the Muskeg River. The results suggest that a short catastrophic synthetic crude oil spill would have a negligible effect upon benthic communities in stream riffles.

MacKinnon, M.D.

A study of the chemical and physical properties of Syncrude's tailings pond, Mildred Lake, 1980. By M.D. MacKinnon, Syncrude Canada Ltd., Edmonton, Mar. 1981.

xvii, 139 p. illus., map. (Syncrude Canada Ltd. Environmental Research Report 1981-1)

Results of a sampling program of selected chemical and physical properties are discussed.

Majid, Abdul

Recovery of heavy minerals from oil sand tailings. By Abdul Majid, A.F. Sirianni and J.A. Ripmeester, National Research Council, Canada. Paper presented to 2nd World Congress of Chemical Engineering, Montreal, Oct. 4-9, 1981.

7 p. illus.

An assessment of the feasibility of the selective concentration of heavy metals, particularly titanium and zirconium, from various tailings, using oil phase agglomeration method. Metals, microbes and bituminous sands: chemical and

microbially-assisted leaching of Athabasca oil sand cokes. By J.E. Zajic and others, University of Western Ontario. Faculty of Engineering Science. London, Ont., University of Western Ontario. Faculty of Engineering Science, Oct. 1977-Dec. 1978.

2 v. illus. (Part 1. Biochemical Engineering v.2) (Part 2. Biochemical Engineering v.5)

Prepared for Alberta Oil Sands Technology and Research Authority under AOSTRA agreement #20.

Concerned with the removal of metals from the coke and ash by-products of different coking processes. This is being done to recover the vanadium and other metals and to make coke and coke ash more compatible for solid waste storage and other purposes. Assesses the environmental effects resulting from disposal of untreated coke.

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The multiple toxicity of vanadium, nickel and phenol to fish. By P.D. Anderson and others, Concordia University. Dept. of Biology. Edmonton, AOSERP, Oct. 1979. xvii, 109 p. illus. (AOSERP Report 79) Project AF 3.6.1. Prepared for Alberta Oil Sands Environmental Research Program. Water System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

New water clarification process developed to reduce tailing ponds. Oilweek, V. 31, No. 7, March 24, 1980, p. 14.

Nix, P.G.

The metabolism of selected organic compounds by micro organisms in the Athabasca River. By P.G. Nix, Chemical and Geological Laboratories Ltd., and others. Edmonton, Alberta. Dept. of the Environment. Research Management Division, Aug. 1981. xiv, 97 p. illus. (AOSERP Report 121)

Project WS 2.3.1.

Prepared for the Alberta Oil Sands Environmental Research Program.

Sponsored by Alberta. Dept. of the Environment.

#### Roberts, J.O.L.

Surveys of some tar sand sludge ponds: results and interpretations. By J.O.L. Roberts, Consultant; R.N. Yong, McGill University. Geotechnical Research Centre; and H.L. Erskine, Suncor Inc. Oil Sands Division. Paper presented at the Applied Oilsands Geoscience Conference, Edmonton, June 11-13, 1980.

36 p. illus.

Scott, J.D.

Engineering constraints on environmental enhancement of oil sands tailings ponds. By J.D. Scott, R.M. Hardy & Associates Ltd. In Symposium on Biological Issues in Energy Development, Calgary, April 24, 1979. Biological issues in energy development. Edmonton, Alberta Society of Professional Biologists, 1979.

p. 40-52.

Outlines "The state of present day technology and the costs associated with tailings disposal...to indicate the difficulty in satisfying the biological and other environmental issues associated with oil sands tailings disposal." (p. 40)

Tsui, P.T.P.

A laboratory study of long-term effects of mine depressurization groundwater on fish and invertebrates. By P.T.P. Tsui and others, Aquatic Environments Ltd. Edmonton, AOSERP, Dec. 1980.

xvii, 228 p. illus., map (AOSERP Report 113)
Project WS 2.6.1.

Prepared for Alberta Oil Sands Environmental Research Project. Water System.

Sponsored by Alberta. Dept. of the Environment.

# 19. Mining and Extraction.

Alberta Oil Sands Technology and Research Authority. Research and development on the Alberta oil sands: an inventory of activities funded by the Alberta Oil Sands Technology and Research Authority. Edmonton, AOSTRA, March 31, 1979. 18 p.

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AOSTRA and Canadian Petroleum expose technological forefront. Canadian Petroleum, V. 22, No. 6, June 1981, p. 22. Re: Second Advances in Petroleum Recovery and Upgrading Conference in Calgary.

AOSTRA Seminar on Underground Excavation in Oil Sands, Edmonton, May 19, 1978.

Proceedings. Edmonton, Alberta Oil Sands Technology and Research Authority, 1978.

1v. (various pagings) illus.

A separate entry has been made for one of the papers in these Proceedings.

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Bitumen recovery from tailings may be worthwhile. Resources Group Review, V. 1, No. 3, p. 1.

Brooker, E.W.

Geotechnical frontiers in oil sands mining. By E.W. Brooker, President, EBA Engineering Consultants Ltd. Paper presented to International Mining Exhibition and Conference '80, Calgary, Aug. 26-28, 1980. Calgary, 1980. 28 p. illus. (Technical Paper 80-4)

Discusses the role of geological engineering science in oil sands exploration and development, the various types of in-situ extraction techniques considered for the Athabasca tar sands, and the energy requirements for steam production and feasibility of using nuclear energy.

Capes, C. Edward

Agglomeration from liquid suspension: research and applications. By Edward C. Capes, Allan E. McIlhinney and Aurelio F. Sirianni, National Research Council, Canada. In International Symposium on Agglomeration, 2nd, Atlanta, 1977. Agglomeration 77. New York, American Institute of Mining, Metallurgical, and Petroleum Engineers, 1977.

Ch. 54, p. 910-930. illus.

Describes the "Spherical Agglomeration Process" which removes fine clay and mineral matter without the use of tailings ponds.

Carrol, John

Desliming the Athabasca tar sands tailings: preliminary feasibility study. Edmonton, Research Council of Alberta, Aug. 1979.

127 p.

"...presents an economic evaluation of a desliming process that improves the quality (higher solids content) and reduces the quantity of the tailings produced." (i)

Chakrabarty, T.

Improved bitumen recovery from low grade Athabasca tar sands. By T. Chakrabarty, M.A. Kessick and C.E. St. Denis, Alberta Research Council. Paper presented to the 2nd World Congress of Chemical Engineering, Montreal, Oct. 4-9, 1981.

8 p. illus.

A variation of the Alkali-Recycle process to recover bitumen from low grade oil sands promises higher bitumen recovery and better dewatering of the tailings than the Hot Water Process.

Chute, F. Stephen

Electrical properties of Athabasca Oil Sands. By F.S. Chute and others, University of Alberta. Dept. of Electrical Engineering. <u>Canadian Journal of Earth Sciences</u>, V. 16, 1979, p. 2009-2021.

Cymbalisty, L.M.

Two-stage hot water extraction process for recovery of heavy oils from tar sands. By L.M. Cymbalisty, Syncrude Research, Edmonton. Paper presented to 30th Canadian Chemical Engineering Conference, October 19-22, 1980, Edmonton.

15 p. illus.

Describes an improved hot water extraction process that produces higher bitumen recovery at lower temperatures, and uses about half the fresh water normally required.

#### Filby, John E.

Direct coking of Athabasca tar sand. By J.E. Filby, P.C. Flynn and J.M. Goldman, Syncrude Canada Ltd. <u>Canadian Journal of</u> <u>Chemical Engineering</u>, V. 58, No. 1, Feb. 1980, p. 77-83. Re: Coking the raw tar sands "...without prior separation of the bitumen, thereby combining the separation and upgrading steps" (p. 77) "Combustion of coked sand produces a flue gas rich in SO<sub>2</sub> and particulates, and a free flowing sand (which)...Settles readily in water and disposal does not present any obvious environmental concerns" (p. 83)

#### Funk, Edward W.

Behavior of tar sand bitumen with paraffinic solvents and its application to separations for Athabasca tar sands. By Edward W. Funk, Exxon Research and Engineering Company. <u>Canadian</u> <u>Journal of Chemical Engineering</u>, V. 57, No. 3, June 1979, p. 333-341. Suggests that an extraction process based on the concept of

bitumen dissolution with paraffinic solvents may reduce the size of the tailings ponds.

### Hall, E.S.

Recovery of residual bitumen by air sparging from the aqueous tailings from hot water extraction of oil sands. By E.S. Hall and E.L. Tollefson. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 751-760. illus.

Re: Methods of extracting bitumen from extraction plant tailings.

Hall, E.S.

Recovery of residual bitumen from the aqueous tailings from hot water extraction of oil sands by air sparging. By E.S. Hall and E.L. Tollefson, University of Calgary. Dept. Chemical Engineering. <u>Energy Processing/Canada</u>, V. 72, No. 1, Sept.-Oct. 1980, p. 39-46. Describes experiments conducted to remove hydrocarbons in Suncor's aqueous tailings.

Hodge, Doug

Sludge settling research shows promise. <u>Resources Group</u> Review, V. 1, No. 3, p. 7. In situ steam processes discussed. Oilweek, V. 30, No. 37, Oct. 22, 1979, p. 43. Summary of a talk by Don Towson of Petro-Canada to the Engineering Institute of Canada Calgary Branch.

Jain, Bimlesh

In situ recovery of oil sands. Calgary, 1976.
 xvi, 172 p. illus.
 Thesis (M.Sc.) - University of Calgary.
 Environmental and economic aspects: p. 117-132.

Kessick, M.A.

Complex acids and their role in the stability of clay sludges from oil sands. By M.A. Kessick, Research Council of Alberta. Clays and Clay Minerals, V. 27, No. 4, 1979, p. 301-302.

Kessick, M.A.

Ion exchange and dewaterability of clay sludges. By M.A. Kessick, Research Council of Alberta. <u>International Journal of</u> <u>Mineral Processing</u>, V. 6, No. 4, Feb. 1980, p. 277-283. (Research Council of Alberta. Contribution No. 1997) Concludes that "Freezing and thawing, or centrifrigation after lime addition, can provide not only a significant reduction on the volume of oil sands slimes...but also a method by which sodium hydroxide, as well as water, can be recovered during the process." (p. 282-283)

Komatsu digs in at Syncrude project. <u>Energy Processing/Canada</u>, V. 72, No. 1, Sept.-Oct. 1979, p. 49-50.

Re: Use of Komatsu bulldozers in mining operations and Komatsu pipelayers to lay pipes that transport sand tailings to the tailings pond.

Kruyer, Jan

The oleophilic sieve process, part I: an introduction. By Jan Kruyer, Kruyer Research & Development Ltd. Paper presented to the AOSTRA University - Industry Seminar, Fourth, Fort McMurray, Alberta, Sept. 27-29, 1979.

5 p.

Re: Process for separating oil sand slurries and in situ produced emulsions.

#### Mathews, K.E.

Potential for the underground mining of oil sands in Canada. By K.E. Mathews, Golder Associates. Paper presented to the International Symposium on Subsurface Space for Environmental Protection, Low Cost Storage and Energy Savings, Stockhom, Sweden, June 1980.

9 p. illus.

Reviews the potential for the mining of oil sands by hydraulic and in situ methods using the underlying limestone formations for access.

Note: Papers from this Symposium are to be published with the title ROCKSTORE 80 in 3 volumes in the fall of 1980 by Maxwell House, Fairview Park, Elmsford, New York.

# McIntyre, Hugh C.

Giant oil-sands plant comes on stream. <u>Chemical Engineering</u>, V. 85, No. 20. Sept. 11, 1978, p. 123-125. Briefly describes extraction and upgrading processes used by Syncrude Canada Ltd.

## Mittal, Hari K.

Disposal of tailings from oil sands open pit mines. By Hari K. Mittal, Klohn Leonoff Consulting Engineers. Paper to be presented to 32nd Annual Technical Meeting of the Petroleum Society of Canadian Institute of Mining, May 3-6, 1981. Calgary, Canadian Institute of Mining, 1981.

12 p. (Preprint, Paper No. 81-32-4)

Re: Current practice of tailings disposal and alternate methods that would reduce environmental and mining problems.

Montgomery, D.S.

Chemical factors involved in tar sand and oil shale resource evaluation. By D.S. Montgomery, University of Alberta. Hydrocarbon Research Centre. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 180-186.

"The manner in which the chemical properties of the tar sand or oil shale resource have an impact upon the process technology required to produce commercial products is reviewed, including those factors which have an impact on the environment." Most of the problems encountered after Syncrude startup now solved. <u>Oilweek</u>, V. 31, No. 7, March 24, 1980, p. 30, 34. Re: Problems in mining, extraction, tailings ponds, utilities section and upgrading.

National Research Council, Canada. The SESA process: application to bitumen recovery from Athabasca Oil Sands. Ottawa, 1980. 17 p. illus. Cover title.

New in situ laser method developed. <u>Oilweek</u>, V. 30, No. 43, Dec. 3, 1979, p. 96. Re: Laser-based method for oil sand extraction developed by

Joseph Rom, Technion-Israel Institute of Technology, Israel. Alberta is a likely site of testing programs for this method.

New process options now in sight. <u>Canadian Chemical Processing</u>, V. 63, No. 6, June 6, 1979, p. 35-36. (Syn-Crude Report 3) Re: Process for extracting bitumen from the oil sands.

Nyren, Robert, H.

Disposal of tar sand tailings at Syncrude Canada Ltd. By Robert H. Nyren, Kermit A. Haakonson, Syncrude Canada. Ltd. and Hari Mittal, R.M. Hardy & Associates Ltd. In International Tailings Symposium, 2nd, Denver, Colorado, May 21-25, 1978. Tailing disposal today. San Francisco, Miller Freeman, 1979. V.2, p. 54-74.

Presents information on the engineering design of tar sand tailings dykes.

Oil company working to solve tailings disposal problems. <u>Canadian</u> <u>Environmental Control Newsletter</u>, No. 203, Sept. 1, 1981, p. 1718-1719. Re: Describes Suncor's research into using a settling agent in tailings sludge.

- Oil recovery is higher in new tar sands route. <u>Chemical</u> <u>Engineering</u>, V. 87, No. 25, Dec. 15, 1980, p. 37-38. Re: Describes two-stage process used by Syncrude in a pilot plant that attains 95 per cent bitumen recovery from medium quality tar sands. It requires less energy and about half the water - the key is gentler washing at lower temperatures.
- Oil sands recovery research: U of A examines variety of options. <u>In-Site</u>, V. 3, No. 5, April 1980, p. 24-26. Discussion with Dr. Farouk Ali of studies underway at University of Alberta.
- Oil sands route looks for jobs in Canada, U.S. <u>Chemical</u> <u>Engineering</u>, V. 88, No. 17, Aug. 24, 1981, p. 59. Re: New methods of extracting bitumen from sand, including thermal separation process developed by Umatac Ltd. and the PCEJ in-situ pilot project.

Panel discusses oil sands in situ schemes. Oilweek, V. 30, No. 38, Oct. 29, 1979, p. 70-71. Re: Panel discussion of in situ combustion schemes in operation in the Alberta oil sands and the carbonates.

Peer, George A.

Dragline buckets may be 76 m<sup>3</sup>. <u>Heavy Construction News</u>, V. 24, No. 25, June 23, 1980, p. 19. Re: Mining procedures and equipment to be used by Alsands.

Quinn, P.C.

The mine-assisted in-situ project - an update. By P.C. Quinn, Petro-Canada. Paper presented to the UNITAR Conference on Long-term Energy Resources, Montreal,

Nov. 26-Dec. 7, 1979.

8 p. illus.

Re: Tests being conducted by Petro-Canada in conjunction with other companies at the Mildred Lake site, Athabasca oil sands.
Ranney, M.W.

Oil shale and tar sands technology: recent developments. Park Ridge, N.J., Noyes Data Corp., 1979.

xii, 430 p. illus. (Energy Technology Review No. 49) (Chemical Technology Review No. 137)

Includes company index, inventor index, and U.S. patent number index.

Tar sands: p. 16-22, 259-421.

Rao, S. Ramachandra

Flocculation and dewatering of Alberta oil sands tailings. By S. Ramachandra Rao, University of Lethbridge. Dept. of Chemistry. <u>International Journal of Mineral Processing</u>, V. 7, No. 3, 1980, p. 245-253. Describes an electrolytic process that could reduce the volume of tailings produced.

Rich oil sands endowment...and province leads world in recovery technology. <u>In-Site</u>, V. 3, No. 7, July 1980, p. 60-62. Information on the Athabasca, Cold Lake, Peace River and Wabasca oil sands is followed by a discussion of extraction problems.

Ripmeester, J.A.

Recovery of water and bitumen from the Athabasca oil sands tailings ponds. By J.A. Ripmeester and A.F. Sirianni, National Research Council, Canada. Journal of Canadian Petroleum <u>Technology</u>, V. 20, No. 1, Jan.-Mar. 1981, p. 131-133. (Tailings disposal)

Ritter, Robert A.

Tailings water reclamation. By Robert A. Ritter, Retco Engineering Ltd. Paper presented to Advances in Petroleum Recovery and Upgrading Technology, May 24-26, 1981. Re: A process that can recover bitumen and clay from tailings.

Schultz, Ward E.

Carbon/oxygen log monitors Athabasca tar sands recovery. By Ward E. Schultz and Harry O. Smith, Texaco Inc. <u>Oil & Gas</u> <u>Journal</u>, V. 77, No. 53, Dec. 31, 1979, p. 165-168. Re: C/O well logging program monitoring an in-situ bitumen recovery process at a Texaco Canada. Inc. pilot project in the Athabasca Oil Sands. Shouldering the search for non-conventional technology. By Alister Thomas. <u>Canadian Petroleum</u>, V. 22, No. 4, Apr. 1981, p. 50-52. Re: AOSTRA is funding programs for industry, university and institutional research. Includes mention of two research projects concerned with the tailings ponds: removal of clay from tailings using an electrical process, and separation of oil directly from the sand by heating in a rotating drum.

Smaller scale oil sands plants possible, by using Taciuk process. Oilweek, V. 32, No. 18, June 8, 1981, p. 28-29. Re: Design and development of pilot testing of Umatac process of extracting oil from tar sands.

Sochaski, R.O.

A cost comparison of nuclear and fossil power for the Alberta Tar Sands. By R.O. Sochaski and D.W. Smith. Pinawa, Manitoba, Whiteshell Nuclear Research Establishment, April 1977. 12 p. (AECL-5682)

A cost comparison of the power required for in-situ removal of bitumen by the injection of steam into the formation.

Sparks, B.D.

A combined solvent extraction and agglomeration technique for the recovery of bitumen from tar sands. By B.D. Sparks and F.W. Meadus, National Research Council, Canada. Chemistry Division. <u>Energy Processing/Canada</u>, V. 72, No. 1, Sept.-Oct. 1979, p. 55-61. Paper presented at the 27th Canadian Chemical Engineering Conference, Calgary.

Speight, J.G.

Surface and interfacial phenomena related to the hot water processing of Athabasca Oil Sands. By J.G. Speight and S.E. Moschopedis. Edmonton, Research Council of Alberta, 1980. 14 p. illus. (Research Council of Alberta. Information Series 86)

Spencer, Bev

New biochemical method developed for removing oil from oil sands. <u>Oilweek</u>, V. 31, No. 40, Nov. 10, 1980, p. 59-60. Re: Biochemical method of removing oil from oil sands developed by Worne Biochemicals Inc., Berlin, New Jersey. Strom, N.A.

Bitumen resources of Alberta: recovery and conversion to synthetic oil supply. By N. Strom, R.B. Dunbar and F.J. Mink, Alberta. Energy Resources Conservation Board. Preprint of a paper to be presented at the Petroleum Society of the Canadian Institute of Mining and Metallurgy, 31st Annual Technical Meeting, Calgary, May 25-28, 1980.

15 p. illus. (Petroleum Society of CIM. Paper No. 80-31-08)

Sulmar/Suncor venture underway but Canadian oil sands policy in state of flux. <u>Sulphur</u>, V. 152, Jan./Feb. 1981, p. 24-26. Re: Shipment and marketing of Suncor's sulphur inventory.

Syncrude solving problems: repairs made, efficiency improved. In-Site, V. 4, No. 2, Feb. 1981, p. 8. (Oil sands report) Re: Syncrude's approach to production reduction following equipment failure and fire.

Taciuk, W.

Oil sands treatment utilizing the Taciuk direct thermal processor. By W. Taciuk, Umatac Industrial Processes Ltd. <u>Energy Processing/Canada</u>, V. 74, No. 4, Sept./Oct., 1981, p. 27-30. Re: Process in which heat is applied to oil sands to simultaneously crack and remove the product oil from the host sand.

Tar sands professorships: the government funds three more at Alberta universities. Alberta Report, V. 7, No. 19, April 18, 1980, p. 32. Re: AOSTRA's role in tar sands research.

Trevoy, L.W.

Heavy minerals potential of the Athabasca tar sands. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 698-702.

Discusses the potential of recovery of several byproducts of the oil extraction processes, including sulphur, hydrocarbons, coke, metals from coke and fly ash, clay minerals, glass sand and heavy minerals. Trillions of barrels of oil in Canadian tar sands: research brings improved recovery systems. <u>In-Site</u>, V. 4, No. 2, Feb. 1981, p. 16-17. (Oil sands report) Re: New methods of recovery being tested in Alberta's oil sands.

Umatac oil sands process: success comes at a bad time. Energy Analects, V. 10, No. 21, June 5, 1981, p. 2. Re: The successful piloting of the Umatac process (dry cracking) has come at a time when oil sands development is stalled by pricing uncertainties and federal-provincial disagreement.

Watson, Laurie M.

GCOS future looks bright with improved mining methods, rising oil prices. <u>Canadian Mining Journal</u>, V. 100, No. 6, June 1979, p. 30-31, 34, 37-38. Re: GCOS mining program.

### Watson, Laurie M.

Syncrude beats tar sands, cold with modified equipment. Canadian Mining Journal, V. 100, No. 6, June 1979, p. 20.

Zajic, J.E.

Microbial extraction of bitumen from Athabasca oil sand. By J.E. Zajic and D.F. Gerson, University of Western Ontario. Dept. of Biochemical Engineering. In Symposium on Oil Sand and Oil Shale Chemistry, Montreal, 1977. Oil sand and oil shale chemistry. New York, Verlag Chemie, 1978.

p. 145-161. illus.

Discusses use of microbial surfactants and mentions that potential environmental effects of large scale production and use of these surfactants is unknown.

This is a revised version of the paper originally published in Symposium on Oil Sand and Oil Shale Chemistry, Montreal, 1977. Preprints of papers. Pittsburgh, American Chemical Society, 1977. p. 195-203. illus.

### 20. Reclamation.

Berry, C.B.

Reclamation of mined land, Great Canadian Oil Sands Ltd. lease site, Tar Island, Alberta. By C.B. Berry and D.J. Klym, Great Canadian Oil Sands Limited. Excerpt from Workshop on Reclamation of Disturbed Lands in Alberta: proceedings, March 27-28, 1974. Edited by Drake Hocking and William R. MacDonald. Edmonton, Alberta. Dept. of the Environment, 1974. p. 162-170.

Also published in Canadian Land Reclamation Association. Proceedings of the inaugural meeting. Guelph, University of Guelph. Ontario Agricultural College. Dept. of Crop Science, March 1976. p. 77-84. illus.

Bliss, L.C.

Performance of vegetation on mined sands. Edited by L.C. Bliss, University of Alberta. Dept. of Botany. Edmonton, AOSERP, 1979.

V, 251 p. illus. (AOSERP Open File Report 27) Project VE 6.1.

Prepared for the Alberta Oil Sands Environmental Research Program.

Sponsored by Alberta. Dept. of the Environment.

Devenny, David W.

Oil sand tailings: integrated planning to provide long-term stabilization. By D.W. Devenny, EBA Engineering Consultants Ltd. In Canadian Land Reclamation Association, 2nd Annual General Meeting, Edmonton, Aug. 17-20, 1977. Proceedings. Guelph, 1977.

15 p. 10th set of pagings. illus. (Paper 9) Reviews stability demands of the tailings retaining structure on a long-term basis.

Devenny, David W.

Subsidence problems associated with reclamation at oil sand mines. By D.W. Devenny, EBA Engineering Consultants Ltd. In Canadian Rock Mechanics Symposium, 10th, Kingston, Sept. 2-4, 1975. Proceedings. Kingston, Ont., Queens University. Dept. of Mining Engineering, 1975.

p. 161-179. illus.

Reviews characteristics of oil sand tailings materials and operations, identifies factors contributing to subsidence and outlines steps that can be taken to minimize the problem.

### Etter, H.M.

Agronomic properties and reclamation possibilities for surface materials on Syncrude Lease #17. By H.M. Etter, Thurber Consultants Ltd. and G. L. Lesko, Syncrude Canada Ltd. In Canadian Land Reclamation Association, 2nd Annual General Meeting, Edmonton, Aug. 17-20, 1977. Proceedings. Guelph, 1977.

9 p. 8th set of pagings. illus. (Paper 7) Describes a landscape design concept for the area.

Fedkenheuer, A.W.

Building soils using Athabasca Oil Sands tailings and soil amendments. Edmonton, Syncrude Canada Ltd., 1979. 19 p. map. (Syncrude Canada Ltd. Professional Paper Series 1979-8)

Also published in Canadian Land Reclamation Association, 4th Annual Meeting, Regina, July 13-15, 1979. Proceedings. Guelph, 1979? p. 175-193.

Fedkeheuer, A.W.

Early performance of native shrubs and trees planted on amended Athabasca oil sand tailings. By A.W. Fedkenheuer, H.M. Heacock and D.L. Lewis, Syncrude Canada Ltd. <u>Reclamation Review</u>, V. 3, No. 1, 1980, p. 47-55. Summarizes a study which provides "preliminary indications of what can be expected from vegetation on tailings sand treated with various amendments." (p. 54)

Fedkenheuer, A.W.

Native shrub research at Syncrude Canada Ltd. By A.W. Fedkenheuer, Syncrude Canada Ltd. In Workshop on Native Shrubs in Reclamation, Edmonton, Nov. 22, 1978. Proceedings. Edmonton, Alberta. Land Conservation and Reclamation Council, 1979?

p. 2-9.

Fedkenheuer, A.W.

Potential of soil amendments as sources of native plants for revegetation of Athabasca Oil Sands tailings. By A.W. Fedkenheuer and H.M. Heacock, Edmonton, Syncrude Canada Ltd., 1979.

15 p. map. (Syncrude Canada Ltd. Professional Paper Series 1979-7)

Also published in Canadian Land Reclamation Association, 4th Annual Meeting, Regina, July 13-15, 1979. Proceedings. Guelph, 1979. p. 223-237.

Fedkenheuer, A.W. Reclamation research for the future at Syncrude Canada Ltd.: soil simulation - revegetation studies on tailings sand. By A.W. Fedkenheuer and J. Browne. Edmonton, Syncrude Canada Ltd., Dec. 1979. 7 p. col. illus. Cover title. "A Syncrude Land Reclamation Team publication."

Fedkenheuer, A.W.

Revegetation practices at Syncrude Canada Ltd., Fort McMurray, Alberta. By A.W. Fedkenheuer, and A. Langevin. Edmonton, Syncrude Canada Ltd. Professional Paper Series 1978-2)

Also published in Canadian Land Reclamation Association, 3rd Annual Meeting, Sudbury, Ontario, May 29-June 1, 1978. Proceedings. Guelph, 1978. p. 173-183. illus.

Fedkenheuer, A.W.

Woody plant establishment in grassed reclamation areas of the Athabasca oil sands. By A.W. Fedkenheuer, Syncrude Canada Ltd. In Proceedings of Symposium on Surface Mining Hydrology, Sedimentology and Reclamation, University of Kentucky, Lexington, Dec. 1-5, 1980. Lexington, University of Kentucky. Office of Engineering Services, Dec. 1980. p. 423-429.

Note: These proceedings comprise University of Kentucky Bulletin V. 123.

Green, Jeffrey E. Interim report of an experimental approach to the biological control of small mammal damage to woody plants: 1978 studies. By Jeffrey E. Green, LGL Limited. Edmonton, AOSERP, Jan. 1980. 81 p. illus. (AOSERP Open File Report 8) Project LS 7.1.1. Prepared for the Alberta Oil Sands Environmental Research Program. Land System. Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

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Interim report of soil research related to revegetation of the oil sands area. By W.B. McGill and others, University of Alberta. Dept. of Soil Science. Edmonton, AOSERP, Jan. 1980.

x, 181 p. illus. (AOSERP Open File Report 7) Project LS 4.1.

Prepared for the Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Kong, K.

Characterization of stored peat in the Alberta Oil Sands area. By K. Kong, J.D. Lindsay, and W.B. McGill, Research Council of Alberta. Soils Division, and the University of Alberta. Dept. of Soil Science. Edmonton, AOSERP, Jan. 1980.

xvi, 116 p. illus. (ACSERP Report 91) Project LS 5.2.

Prepared for Alberta Oil Sands Environmental Research Program. Land System.

Sponsored by Alberta. Dept. of the Environment, and Canada. Dept. of the Environment.

Kumar, A.

A review of the key issues related to air quality and reclamation in the oil sands area. By A. Kumar, University of Toledo, and A.W. Fedkenheuer, Petro-Canada/Nova. Paper to be presented to 74th Annual Meeting of Air Pollution Control Association. Philadelphia, June 21-26, 1981.

13 p. illus.

The issues covered are the potential for "killer fog", the use of "best practical technology" for sulphur removal, health hazards of emissions, air pollutant effects on the ecosystem, reclamation of spent oil sands, stabilization of tailings pond dykes and reclamation of tailings ponds.

May, David

Reclaiming the oil sands: exactly what does it take to restore land stripped for oil production? <u>Environment Views</u>, V. 3, No. 7, April/May 1981, p. 22-24.

Oil sands reclamation study. <u>Environmental Engineering Newsletter</u>, V. 9, No. 11, Nov. 1979, p. 2. A brief summary of the study "Oil Sands Reclamation - A Study Integrating Mining, Tailings Disposal and Reclamation."

Oil sands reclamation study released in Alberta. <u>Canadian</u> <u>Environmental Control Newsletter</u>, No. 163, Jan. 2, 1980, p. 1391-1392. Re: The study "Oil Sands Reclamation - A Study Integrating Mining, Tailings Disposal and Reclamation."

Oil sands recommendations released. <u>Oilweek</u>, V. 30, No. 43, Dec. 3, 1979, p. 63-64. Summary of "Oil Sands Reclamation - A Study Integrating Mining, Tailings Disposal and Reclamation," by Techman Ltd. and Rheinbraum-Consulting GmbH.

Radvanyi, Andrew

Control of small mammal damage in the Alberta oil sands reclamation and afforestation program. By Andrew Radvanyi, Canadian Wildlife Service. Forest Science, V. 26, No. 4, Dec. 1980, p. 687-702. Re: Successful control of meadow voles that were girdling

young trees planted on a tailings pond dyke and overburden dump sites.

Radvanyi, Andrew

The return of the rodents: year three in the assessment of harmful small mammals in the Alberta Oil Sands reclamation and afforestation program, final report. Ottawa, Canada. Dept. of Fisheries and the Environment, May 1978.

iv, 82 p. illus. (part col.) mylar overlays (CWS-10-78) Available on microfiche, Report CWSC 2658.

Rowell, Michael J.

Revegetation and management of tailings sand slopes from tar sand extraction: 1978 results. By Michael J. Rowell, Norwest Soil Research Ltd. Edmonton, Syncrude Canada Ltd., 1979. x, 131 p. illus. (part col.) (Syncrude Canada Ltd. Environmental Research Monograph 1979-5)

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Rowell, Michael J.

The use of peat, fertilizers and mine overburden to stabilize steep tailings sands slopes. By Michael J. Rowell, Norwest Soils Research Ltd. In Canadian Land Reclamation Association, Annual General Meeting, 2nd, Edmonton, Aug. 17-20, 1977. Proceedings. Guelph, 1977.

22 p. 9th set of pagings (Paper 8)

Describes field scale investigations carried out at the GCOS plant.

Seminar reviews oil sands tailings disposal, reclamation. Eco/Log Week, Dec. 14, 1979, p. 2. Summarizes the presentations, which were based on the study entitled "Oil Sands Reclamation - A Study Integrating Mining, Tailings Disposal and Reclamation."

Shori, A.

Reclamation of oil sand mines. By A. Shori, R.W. Parker, and B. Martens, Techman Ltd. Paper presented to International Mining Exhibition and Conference '80, Calgary, Aug. 26, 1980. 30 p. illus.

Includes discussion of reclamation requirements (land area and type) and legislation, factors determining methods used, research and reclamation in the future in the Athabasca oil sands. Syncrude Canada Ltd.

Land reclamation at Syncrude Canada Ltd. Edmonton, Oct. 1981. 7 p. illus. (col.)

Techman Ltd.

A study integrating mining, tailings disposal and reclamation: seminar presentation. Prepared by Techman Ltd. and Rheinbraun-Consulting GmbH. Calgary?, Nov. 1979. Iv. (looseleaf) illus., maps. The seminar was designed to provide an overview of the study: Oil sand reclamation: a study integrating mining, tailings disposal and reclamation. Prepared for Alberta. Land Conservation and Reclamation Council.

Workshop on Native Shrubs in Reclamation, Edmonton, Nov. 22, 1978. Proceedings. Edited by P.F. Ziemkiewicz, C.A. Dermott, and H.P. Sims. Edmonton, Alberta. Land Conservation and Reclamation Council, 1979?

104 p. (Alberta. Land Conservation and Reclamation Council. Report RRTAC 79-2)

Separate entries have been made for selected papers from this volume.

#### IX. COLD LAKE, PEACE RIVER, AND WABASCA OIL SANDS

Note: Any item which deals with both these areas and the Athabasca Oil Sands will be found in the appropriate division of sections I through IX.

A. <u>General</u>.

Alberta. Northern Alberta Development Council.

Research review seminar, Peace River. June 16-18, 1981. Peace River, Sept. 1981.

23 p. illus.

Presents a summary of the proceedings that reviewed the 40 studies that have been conducted since 1973.

Bigam, Jerry F.

Industry and resources in Alberta's Census Division 15. Edmonton, Alberta. Dept. of Agriculture. Economics Division. Rural Development Research Branch, Sept. 1968. ix, 117 p. illus., maps. (Resource Study No. 801)

Financed under ARDA, Project No. 28038.

Fairbairn, Dr. K.J.

An economic base study of the Peace River Regional Planning Commission's region. By Dr. K.J. Fairbairn and Dr. R.G. Ironside, University of Alberta. Prepared for the Peace River Regional Planning Commission. Grande Prairie, Jan. 1973. V, 107 p. illus., maps. . .

Peace River Regional Planning Commission. People of the Peace-their goal and objectives. Peace River, Aug. 1972. 82 p. illus. Presents results of a questionnaire sent out to residents of the region on their views about their community and lifestyle.

Peter C. Nichols & Associates Ltd. Criteria and assessment for municipal assistance-Northern Alberta. Prepared for Northern Development Group. Edmonton, Apr. 1975. 8 p.

Regehr, Leo

Agriculture in Alberta's Census Division 15. Edmonton, Alberta. Dept. of Agriculture. Economics Division. Rural Development Branch, June 1968. ix, 38 p. illus. (Resource Study #801)

Financed under ARDA Project #28038.

Svenson, Ken A.

Population characteristics Alberta's Census Division 15. Edmonton, Alberta. Dept. of Agriculture. Economics Division. Rural Development Research Branch, Sept. 1968. vii, 52 p. illus., maps. (Resource Study No. 883) Financed under ARDA, Project No. 28038. Van Kooten, Casey G.

An evaluation of small business opportunities in northern Alberta. By Casey G. Van Kooten and Jane K. Miller. Edmonton, Alberta. Dept. of Business Development and Tourism. Northern Development Branch, Sept. 1975.

71 p.

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27 p. illus.

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18 p. col. illus., map.

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Face off on a power play: electricity's giants collide over Cold Lake rights. <u>Alberta Report</u>, V. 6, No. 50, Nov. 16, 1979, p. 25. Re: Rivalry between Calgary Power and Alberta Power as to who will have the right to supply Esso's Cold Lake heavy oil plant.

Matheny, Shannon L., Jr. WECO expands Cold Lake heavy-oil production. <u>Oil & Gas</u> <u>Journal</u>, V. 77, No. 44, Oct. 29, 1979, p. 104, 109-110, 115-118. Re: Steam injection process used at WECO's Fort Kent pilot project.

Miller, Paul

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Cotter, Nicholas

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31 p. illus.

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Esso lets pact for big Alberta heavy oil project. <u>Oil & Gas</u> <u>Journal</u>, V. 78, No. 11, March 17, 1980, p. 69. Re: Awarding of construction and engineering contract for Cold Lake project to a five-company consortium headed by Fluor Canada Ltd.

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Progress made on Cold Lake Project. <u>Oilweek</u>, V. 31, No. 15, May 19, 1980, p. 95-96, 100, 104. Summary of address given by G.E. Courtnage and J.F.C. DeSouza of Esso Resources to a meeting of the Engineering Institute of Canada in Calgary.

\$7 billion project still on hold. Business Life in Western Canada, V. 8, No. 7, July 1980, p. 15. Re: Esso's Cold Lake Project.

Suncor steams ahead with in-situ recovery. <u>The Oilsander</u>, V. 2, No. 2, Feb. 1980, p. 3. Re: Suncor's participation in the Fort Kent project, Cold Lake Heavy Oil Deposit.

World prices for Cold Lake needed. <u>Oilweek,</u> V. 31, No. 1, Feb. 11, 1980, p. 110. Re: Status report on Cold Lake project given by Len Pakulak, project director for Esso, to the Calgary Petroleum Industry Buyers Group.

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Keeping the team together: and riding out the political storm. <u>In-Site</u>, V. 4, No. 2, Feb. 1981, p. 11. (Oil sands report) Re: Esso's economic position with regards to the postponed Cold Lake project.

More recovery for heavy oils. <u>Oilweek</u>, V. 32, No. 7, Mar. 23, 1981, p. 39-40 (Oil sands report) Re: Steam assisted gravity drainage pilot project at Cold Lake. Oil sands job canned until Ottawa relents. Engineering News-Record, V. 207, No. 3, July 16, 1981, p. 34. Re: Suspension of work on Imperial Oil Ltd.'s Cold Lake oil sands project.

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Skrabec, J.F.

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Thomas, Alister

Chilly response to Cold Lake postponement. Canadian Petroleum, V. 22, No. 5, May 1981, p. 36-39.

Water resources study set for Cold Lake area. <u>Canadian</u> <u>Environmental Control Newsletter</u>, No. 191, Mar. 1981, p. 1618. Re: Long-term plan for water resources management in the Cold Lake area being developed by Alberta Environment.

# 3. Archaeology.

The Archaeological Survey of Alberta has numerous reports dealing with the archaeology of this area. Access to many of these reports is restricted; interested persons should contact the Head, Resource Management Section, Archaeological Survey of Alberta, 8820 - 112 St., Edmonton, Alta. T6G 2P8, or telephone (403) 427-2355 for further information.

Losey, Timothy C.

Archaeological investigation at Fort George. In Archaeology in Alberta, 1978. Compiled by H.M. Hillerud, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1979. p. 62-72.

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Reeves, B.

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Stanley Associates Engineering Ltd. Bedrock topography and surficial aquifers, Cold Lake area. Edmonton, Aug. 1978. 1v. (various pagings) Prepared for Imperial Oil Limited Cold Lake Project.

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a. <u>General</u>.

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Alberta. Dept. of Municipal Affairs. Municipal Planning Section. Census report 1981: Bonnyville, Grand Centre and Cold Lake. Edmonton, Oct. 1981. 11 p.

Alberta. Dept. of Municipal Affairs. Planning Services Division. 1980 census report: Bonnyville, Cold Lake, Grand Centre. Edmonton, Sept., 1980. 9 p.

Alberta. Dept. of Tourism and Small Business. Travel Alberta. Cold Lake/Grand Centre/Bonnyville tourism development concept: discussion paper. Edmonton, Oct. 1981. 67 p. illus., maps.

#### Associated Engineering Services Ltd.

Town of Bonnyville municipal servicing report. Edmonton, Jan. 1979.

94 p. maps (fold.)

Bain, Don

Multi-billion dollar oil plant in offing. <u>Trade and Commerce</u>, V. 73, No. 11-12, Nov.-Dec. 1978, p. 192-195. Re: Effects of Esso's Cold Lake Project on Grand Centre.

Charney, W.

Compilation of data describing commercial fisheries in the Cold Lake area of Alberta and Saskatchewan. By W. Charney, L. Carson and P. Cross. Calgary, Aquatic Environments Ltd., Oct. 1979.

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Cold Lake and area: townsmen demand a go-ahead as building permits dive and bankruptcies loom. <u>Alberta Report</u>, V. 8, No. 1, Dec. 5, 1980, p. 20.

Courtnage, G.E.

Financing and business opportunities in Esso Resources' Cold Lake Project. By G.E. Courtnage and J.F.C. De Souza, Esso Resources Canada Ltd. Paper to be presented to the Canada/U.S. Energy Financing and Development Conference, Denver, Colorado, Feb. 28-29, 1979.

24 p. illus.

Describes the Cold Lake Project and highlights some of the more important aspects relating to business opportunities, financing and inter-action with governments. Includes discussion of the need to gain acceptance from local communities and native peoples. Gartrell, John W.

Cold Lake baseline study: phase II. By John W. Gartrell, Harvey Krahn and David F. Sunahara, Thames Group Research and University of Alberta. Population Research Laboratory. Edmonton, Thames Group Research, July 1980-Oct. 1980.

6 v.

Prepared for Alberta. Dept. of Tourism and Small Business. Northern Development Branch.

Contents: Report 1. General population, pre-impact study: executive summary.- Report 2. General population, pre-impact study.- Report 3. Special populations: Canadian Forces Base Cold Lake.- Report 4. Special populations: the Indian reservations and Metis settlements.- Report 5. Business survey of the Cold Lake Region, by Peat, Marwick and Partners.- Report 6. Research methods.

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Provides a pre-impact report of the socio-economic characteristics of Bonnyville, Grand Centre, Cold Lake, Glendon, Fort Kent, Ardmore, C.F.B. (Medley), Cold Lake, Elizabeth, and Fishing Lake.

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Kelly, Russ

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McMillan, William James

An interpretation concept plan for Cold Lake Provincial Park. Calgary, Feb. 1977.

200 p. illus.

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A mighty impact on the economy of Alberta. <u>The Northern Miner</u>, V. 66, No. 6, April 17, 1980, p. B3. Re: Cold Lake oil sands project.

The only game in town: public involvement in Cold Lake. Edited by Brian Plesuk. Edmonton, Alberta. Dept. of the Environment. Environmental Assessment Division, July 1981. vi, 110 p. illus.

Reeling over the shutdown: Esso pulls out of Cold Lake, and local business plummets. <u>Alberta Report</u>, V. 8, No. 32, July 17, 1981, p. 12-13.

Sauerwein, Stan

Cold Lake - effect on construction industry already evident. <u>Construction West</u>, V. 3, No. 5, May 1980, p. 78, 80, 83. Includes a map illustrating the project area and plant sites.

Spearman, Jack

Social perspectives on growth. <u>Environment Views</u>, V. 3, No. 4, Oct./Nov. 1980, p. 26-30.

Re: Changes brought about by growth as seen by residents; includes a section on Cold Lake.

Stanley Associates Engineering Ltd.

Cold Lake Region - infrastructure development study

(1980-1990). Edmonton, Nov. 1979.

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Prepared for Esso Resources Canada Ltd. and Alberta. Cold
Lake Regional Coordinating Committee.

Tyre, Robert

Alberta's growth rate leaves rest of Canada green-eyed and glazed. <u>Trade and Commerce</u>, V. 73, Nos. 11-12, Nov.-Dec. 1978, p. 32-50. Cold Lake: p. 42, 44, 46.

### b. Planning.

This section includes studies on both regional and municipal planning. In the 1980 edition of this bibliography comparable studies are located in section IX.B.4. Socio-Economic Studies.

Alberta. Dept. of Municipal Affairs. Inter-agency Planning Branch. Planning in Elizabeth Settlement: the initial stages. Edmonton, Oct. 1979.

i, 45 p. illus.

Describes the existing land use, physical resources and implications of the physical resource inventory for planning on Elizabth Metis Settlement.

Alberta. Dept. of Municipal Affairs. Planning Services Division. Planning in Fishing Lake Settlement: the initial stages. Prepared by Inter-Agency Planning Branch and Planning Branch for the Federation of Metis Settlements. Edmonton, Feb. 1980.

i, 45 p. illus., maps.

Outlines the concepts and steps of land use planning, and the natural resources, present land use and potential land uses of the settlement.

Alberta. Dept. of Municipal Affairs. Planning Services Division. Regional Planning Section.

Muriel Lake area structure plan. Edmonton, Aug. 1980. 29 p. maps.

Prepared for The Municipal District of Bonnyville.

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Alberta. Dept. of Municipal Affairs. Planning Services Division. Regional Planning Section. Regional lake classification: the Lakeland region. Edmonton, May 1978.

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Alberta. Dept. of Municipal Affairs. Regional Planning Section. Draft Cold Lake regional plan. Edmonton, Jan. 24, 1980.

v, 71 p. maps.

Contains background information on the region and summary of citizens' input on future development. Includes: objectives and policies relating to agriculture, rural residential, settlement system, transportation and utilities, recreation and open space, fish and wildlife, industrial land use, water supply and demand, and historical resources.

Alberta. Dept. of Municipal Affairs. Regional Planning Section. Terms of reference: Cold Lake Regional Plan. Edmonton, July 1978.

32 p.

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Bonnyville. Planning Committee.

Bonnyville general municipal plan. Prepared by the Town of Bonnyville Planning Committee, with the assistance of Alberta. Dept. of Municipal Affairs. Planning Services Division. Edmonton, The Dept., Dec. 1979. 21 p. illus., maps.

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Cold Lake. Planning Committee. Town of Cold Lake general municipal plan. Cold Lake Planning Committee, and Alberta. Dept. of Municipal Affairs. Planning Services Division. Edmonton, The Dept., 1980. 32 p. illus. Grand Centre. Planning Committee.

Grand Centre general municipal plan. By Grand Centre Planning Committee and Alberta. Dept. of Municipal Affairs. Planning Services Division. Edmonton, The Dept., Dec. 1979. 38 p. illus., maps (part fold. in pocket) Cover title: Town of Grand Centre general municipal plan.

# 6. Environmental Studies.

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Alberta. Dept. of Energy and Natural Resources. Resource Planning Branch.

Biophysical analysis and evaluation of capability, Lakeland area. By W.L. Strong. Alberta. Dept. of Energy and Natural Resources. Resource Evaluation Branch. Resource Appraisal Group. Edmonton, Apr. 1978.

35 p. illus. (col.), maps (folded) (ENR report No. 63) Covers a 3400-square kilometre area from Township 62 to 68 and Range 6 to 13, west of the Fourth Meridian.

Amoco Canada Petroleum Company Limited.

Gas field facilities: Ipiatik East, Primrose Lake air weapons range. By TES Research and Consulting, Ltd. Calgary, 1979. 57 p. maps.

Presents results of biophysical resources inventory and land use capabilities studies, and recommendations for gas field development, long range land use and environmental protection.

Cold Lake Project final environmental impact assessment. Alberta <u>Wilderness Association Newsletter</u>, spring-summer 1980, p. 9. An A.W.A. summary of and comments on Esso's final environmental impact assessment for the Cold Lake Project.

Gibson, Maureen

Environmental overview. Excerpted from an article by Maureen Gibson, Esso Resources. <u>Alberta Wilderness Association</u> <u>Newsletter</u>, spring-summer 1980, p. 9. Re: Esso's Cold Lake Project environmental studies. Gossen R.G.

Environmental considerations in the Cold Lake Project. By R.G. Gossen and G.J. Mann. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton, June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 729-733.

Re: Effects of SO<sub>2</sub> emissions in soils and vegetation, withdrawal of water from Cold Lake, and disposal of wastewaters into the McMurray formation.

Hardy (R.M.) and Associates Ltd.

Preliminary report, biophysical reconnaissance of potential heavy oil plant site locations, Cold Lake area. Calgary, Oct. 1977.

21 p. illus.

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Hennig, R.D. A statement of current environmental setting: Cold Lake Lease, 1977. Calgary, Gulf Oil Canada Ltd., Dec. 1977. 1v. (various pagings) illus.

LGL Limited Review of the environmental conditions on the Cold Lake Lease. Edmonton, May 1977. vii, 62 p. illus. Prepared for Gulf Oil Canada Ltd.

Lombard North Group. Environmental study of the Imperial Oil Limited leases, Cold Lake area, Alberta. Calgary, 1974. 197 p. illus. Prepared for Imperial Oil Limited.

#### Mainland, G.G.

Esso Resources Cold Lake Project. By G.G. Mainland, Esso Resources Canada Limited. Paper to be presented to the Seminar on Nonconventional Oil Technology, Calgary, May 29-30, 1980.

16 p. illus.

Includes a discussion of environmental considerations, p. 8-9.

Measures for Cold Lake project aim to avoid 'sins of emission'. <u>Eco/Log Week</u>, V. 8, No. 19, May 16, 1980, p. 3. Re: Environmental protection measures incorporated into the project.

### Parry, David

Imperial and the environment...and 40 million dollars for Mother Nature. <u>The Review</u>, V. 63, No. 3. 1979, p. 27-29. Discusses Imperial's environmental activities across Canada, including those related to the Cold Lake Project.

Peterson, R.B.

Environmental management and the Cold Lake project. By R.B. Peterson, Esso Resources Canada Ltd. In Symposium on Environmental Management Strategies: Past, Present and Future, Edmonton, April 22 and 23, 1980. Edmonton, Alberta Society of Professional Biologists, 1982.

p. 106-125.

Cover title: Environmental Management Strategies: Past, Present and Future A Symposium.

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Sauchyn, David J.

Physical land classificaiton of the Cold Lake study area. Edmonton, Alberta. Dept. of Energy and Natural Resources. Resource Inventory and Appraisal. Land Classification Section, Apr. 1979.

30 p. illus. (Report No. 112)

### b. Vegetation, Forests and Forestry.

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Hardy Associates (1978) Ltd. Cold Lake soils and vegetation baseline and monitoring studies, baseline phase - 1979 program. Calgary, Esso Resources Canada Ltd., Feb. 1980. Iv. (various pagings) illus.

Hardy Associates (1978) Ltd. Lichen inventory, Cold Lake area. Calgary, Jan. 1979. ii, 7 p. Prepared for Esso Resources Canada Limited.

Hardy Associates (1978) Ltd. Timber inventory Esso Resources Canada Ltd. Cold Lake Project. Calgary, Nov. 1978. 19 p. map. Prepared for Esso Resources Canada Limited.

c. Hydrology.

Alberta. Dept. of the Environment. Earth Sciences Division. Grande [sic] Centre - Beaverdam. Edmonton, April, 1978. ii, 20 p. illus., maps. Report on a groundwater development and well construction project.

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Alberta. Dept. of the Environment. Earth Sciences Division. Groundwater Branch. Elizabeth Metis Colony: northern water supply program. Edmonton, Apr. 1978. ii, 56 p. illus., map. Describes water sampling program conducted during 1973, 1974 and 1975 and results obtained. Crowe, A.

Buried channel investigation and observation well installation at Bourque Lake. Edmonton, Alberta. Dept. of the Environment. Earth Sciences Division, May 1978. iii, 36 p.

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Hardy Associates (1978) Ltd.

Drainage efficiency improvements, Cold Lake Project leasehold area. By Hardy Associates (1978) Ltd., and Stanley Associates Engineering Ltd. Edmonton, Apr., 1979. 30 p. illus.

Prepared for Esso Resources Canada Limited. Date on cover is Feb. 1979.

Jackson, R.E.

On the probable impact of the Cold Lake Project on interprovincial aquifers. Ottawa, Canada. National Hydrology Research Institute, Aug. 1979.

9 p. Prepared at the request of the Canada. Prairie Provinces Water Board.

Stanley Associates Engineering Ltd.

Cold Lake water level control structure. Edmonton, June 1978. lv. (various pagings) illus. Prepared for Imperial Oil Limited.

Stanley Associates Engineering Ltd.

Downstream effects on Cold River system. Edmonton, Apr. 1979. vi, 39 p. illus.

Cover title: Downstream effects study, Cold River system. Alternate title: Cold Lake Project: downstream effects on Cold River system.

Prepared for Esso Resources Canada Limited.

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Water resources aspects for input to preliminary environmental
impact statement. Edmonton, Jan. 1978.
iv, 79 p. illus.
Cover title: Water resources environmental impact study.
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Stanley Associates Engineering Ltd.

Water well survey, Cold Lake, Alberta. Edmonton, May 1979. lv. (various pagings) maps. Prepared for Esso Resources Canada Limited.

Whalley, M.J.

Water conservation in a steam stimulation project. By M.J. Whalley and T.M. Wilson. In International Conference on the Future of Heavy Crude Oils and Tar Sands, 1st, Edmonton. June 4-12, 1979. The future of heavy crude oils and tar sands. New York, McGraw Hill, 1981.

p. 734-738. illus.

Re: Reducing freshwater requirements by re-using produced water from the heavy oil steam-simulation project proposed for Esso Resources Cold Lake Project.

### d. Soils and Soil Surveys.

Edwards, W.A.D. Sand and gravel resources of the Cold Lake area, Alberta. By W.A.D. Edwards and J.C. Fox. Edmonton, Research Council of Alberta, Aug. 1980. 45 p. illus., maps (fold. in pockets) (Research Council of Alberta. Open File Report 1980-8) Prepared for Alberta. Dept. of Energy and Natural Resources. Resource Evaluation and Planning Division.

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Impacts of development on wildlife: a review from the perspective of the Cold Lake Project. By Lennart G. Sopuck and others. Edmonton, LGL Limited, July 1979.

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Kristensen, John

Western Grebe Colony, Cold Lake. By John Kristensen and Wayne R. Nordstrom. Edmonton, LGL Limited, Apr. 1979.

vii, 47 p. illus.

Prepared for Alberta. Dept. of Recreation, Parks and Wildlife. Provincial Parks Division, and Esso Resources Canada Limited.

Preliminary investigations of the wildlife of the Imperial Oil Limited Cold Lake Lease, September-November 1977. By William R. Koski and others. Edmonton, LGL Limited, Dec. 1977. vi, 105 p. illus. Prepared for Imperial Oil Limited. Salter, Richard E.
Studies of ungulates on the Cold Lake Lease of Esso Resources
Canada Ltd., February 1978-March 1979. By Richard E. Salter
and William R. Koski. Edmonton, LGL Limited, Apr. 1979.
vii, 56 p. illus.
Prepared for Esso Resources Canada Limited.

Searing, Gary F.
The status of beaver and muskrat populations in the Cold Lake
area, Alberta. Edmonton, LGL Limited, Sept. 1979.
vi, 48 p. maps.
Prepared for Esso Resources Canada Limited.

Ward, John G. Surveys of water birds, raptors and grouse on the Cold Lake Lease of Esso Resources Canada Ltd., April-September 1978. Edmonton, LGL Limited, Apr. 1979. ix, 53 p. illus. Prepared for Esso Resources Canada Limited.

# f. Limnology, Fishes and Invertebrates.

This section is used for baseline studies. Reports on the effects of water pollution on aquatic systems will be found in section IX.B.6.i. Water Quality and Pollution.

Aquatic Environments Ltd.

Preliminary investigations of aquatic resources in the vicinity of the Imperial Oil Limited Cold Lake lease. Calgary, Jan. 1978.

iv, 71 p.
Prepared for Imperial Oil Limited.

Limnological and fishery surveys of the aquatic ecosystems at Esso Resources Cold Lake lease. By P.J. McCart and others. Calgary, Aquatic Environments Ltd., July 1979.

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Prepared for Esso Resources Canada Limited. Volume 2 is the data volume. Makowecki, Ray The trophy pike of Seibert Lake (condensed version). Edmonton, Alberta. Dept. of Lands and Forests. Fish and Wildlife Division, Nov. 1973.

46 p. illus. (Fisheries Research Report Number 10)

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McCart, P.J.

Summary of biological data for the Beaver River in the vicinity of Cold Lake. By P.J. McCart and D. Mayhood. Calgary, Aquatic Environments Ltd., May 1979.

40 p.

Prepared for Esso Resources Canada Limited.

Trew, D.O.

A trophic assessment of nine lakes in the Cold Lake region-interim report. Prepared by D.O. Trew, E.I. Yonge, R.P. Kaminski. Edmonton, Alberta. Dept. of the Environment. Pollution Control Division, Nov. 1981. vi, 70 p. illus.

Tsui, Philip T.P.

A baseline study of chlorinated hydrocarbon residues and heavy metals in several fish species from Esso's Cold Lake Project area. By Philip T.P. Tsui and Peter J. McCart. Calgary, Aquatic Environments Ltd., Feb. 1979.

46 p.

Prepared for Esso Resources Canada Limited.

Tsui, Philip T.P.

Winter limnological studies of the Cold Lake Project area: an interim report. By Philip T.P. Tsui, R. Green, and G.J. Mann. Calgary, Aquatic Environments Ltd., May 1978. iii, 93 p. illus. Prepared for Imperial Oil Limited.
g. <u>Applications by Industry to the Government of Alberta</u>. (Arranged Chronologically)

This section includes applications to the Energy Resources Conservation Board, its reports on these applications and transcripts of the hearings.

Note: Because titles for these publications are usually not significant, they have not been included in the title index.

Alberta. Energy Resources Conservation Board.

In the matter of Application No. 770866 pursuant to Section 43(1) of the Oil and Gas Conservation Act by Imperial Oil Limited for approval of a scheme or operation for the recovery of crude bitumen or products derived thereform within an area which includes portions of Cold Lake Oil Sands Leases 40, 42 and 49, located in Townships 64 and 65, Ranges 3 and 4, West of the 4th Meridian. The application is also made pursuant to Section 27(1) of the Coal Conservation Act for an industrial development permit authorizing the use of 2 300 000 tonnes (2 500 000 short tons) per annum of coal as fuel for the scheme. Calgary, The Board; Edmonton, Supreme Court Reporters (transcribers), 1978-79.

29 v.

Proceedings of the hearings held in Grand Centre Sept. 4, Dec. 4-8, 11-15, 18-20, 1978; January 3-5, 8-12, 15-18, and May 29-31, 1979.

Alberta. Energy Resources Conservation Board.

Electric service area, Cold Lake Project, made under sections 9, 14, 20 and 23 of the Hydro and Electric Energy Act. Calgary, June 1980.

iv, 25 p. (ERCB Report 80-C)

4

Re: Application 790181 by Calgary Power Ltd., and 790343 by Alberta Power Ltd. Grants Alberta Power the right to provide power to the Cold Lake project area.

Alberta. Energy Resources Conservation Board.

Make-up-fuel Esso Cold Lake project: decision on natural gas vs. coal as make-up fuel. Calgary, Feb. 1981.

v, 51 p. (ERCB Decision 81-C)

Re: Application by Esso Resources Canada Limited that the Board alter its order to use coal as a make-up fuel and authorize the use of natural gas. Esso Resources Canada Limited.

The Cold Lake Project: a report in support of an amendment to application 770866. Calgary, April 1979.

49 p.

Re: Esso's desire to use natural gas and liquid fuel instead of coal as the "balancing" fuel.

# h. Air Pollution.

Includes studies on the effect of air pollution on vegetation, and studies on acid rain. Baseline studies of vegetation are listed in section IX.B.6.b. Vegetation, Forests and Forestry.

Cold Lake: Saskatchewan as victim and accomplice. In Rain of death: acid rain in Western Canada. By Caroline Brown and others. Edmonton, Newest Press, 1981. p. 54-65.

Cold Lake still on hold. <u>Oilweek</u>, V. 32, No. 33, Sept. 21, 1981, p. 5. (Late news section)

Hardy Associates (1978) Ltd.
Impacts of sulphur-gas emissions on vegetation and soils in the
Cold Lake area. Calgary, June 1979.
iv, 124 p.
Prepared for Esso Resources Canada Limited.

Intera Environmental Consultants Ltd.
 Vegetation impact from atmospheric emissions and related
 conditions at Imperial's May-Ethel pilots. Calgary, Nov. 1976.
 iii, 33 p. illus.
 Prepared for Imperial Oil Limited.

Schindel, G.W. Air pollution control considerations in the Cold Lake Project. Calgary, Esso Resources Canada Limited, 1979. 21 p. illus. Presented to the Air Pollution Control Association. Pacific Northwest International Section, Edmonton, Nov. 7-9, 1979.

# i. Water Quality and Pollution.

Includes studies on the effects of impure water on aquatic life. Baseline studies of aquatic life are listed in section IX.B.6.f. Limnology, Fishes and Invertebrates.

Canada. Prairie Provinces Water Board. The impact of the proposed Cold Lake Oil Sands Project on the water quality of the Beaver River at the Alberta-Saskatchewan boundary. Regina?, Oct. 1979.

11 p. map.

Canada. Prairie Provinces Water Board.

Interim PPWB water quality requirements for the Beaver River at the Alberta-Saskatchewan boundary. Regina, Oct. 1979. 8 p.

Cross, Patricia, M.

Preliminary assessment of the effects of nutrient loading from muskeg drainage at Esso Resources Cold Lake lease. By Patricia M. Cross and Peter J. McCart. Calgary, Aquatic Environments Ltd., Mar. 1979. 52 p. illus.

Prepared for Esso Resources Canada Limited.

Gold, C.

Cold Lake Provincial Park groundwater study. Edmonton, Alberta. Dept. of the Environment. Earth Sciences Division, Nov. 1981. iii, 26 p. illus.

Intera Environmental Consultants Ltd.
 A remote sensing study of water quality, Cold Lake, Alberta.
 Calgary, Nov. 1978.
 18 p. illus.
 Prepared for Imperial Oil Limited.

Major effort needed to clean up oil sands production water. Canadian Environmental Control Newsletter, No. 164, Jan. 15,

1980, p. 1399-1400. Re: Need for research into the feasibility of recycling production water used in oil sands or heavy oil recovery operations using super-heated water.

Ross, W.K.

Protecting the aquatic environment at a tar sands plant. By W.K. Ross and K.S. Ng, Esso Resources Canada Limited. In Proceedings of the 35th Industrial Waste Conference, May 13, 14 and 15, 1980, Purdue University, Lafayette, Indiana. Ann Arbor, Michigan, Ann Arbor Science Publishers Inc., 1981.

p. 463-475 illus.

Discusses water use and reuse, storm water management, aqueous effluent discharge, deep well disposal and solid waste disposal of the proposed Cold Lake development.

Stanley Associates Engineering Ltd.

Beaver River assimilation study. Edmonton, May 1979. 1v. (various pagings) illus. Prepared for Esso Reosurces Canada Limited.

Tsui, Philip T.P.

Acute toxicity of produced water and bitumen/water mixture from an in-situ heavy oil extraction pilot plant in the Cold Lake area, Alberta. By Philip T.P. Tsui, and Peter J. McCart. Calgary, Aquatic Environments Ltd., Oct. 1979.

iv, 42 p.

Prepared for Esso Resources Canada Limited and Gulf Oil Canada Limited.

j. Extraction.

Deep buried wealth: how Esso gets at the viscid oil, a third of a mile down. <u>Alberta Report</u>, V. 7, No. 16, March 28, 1980, p. 21. Re: Process used by Esso to extract bitumen at their Cold Lake

Re: Process used by Esso to extract bitumen at their Cold Lake plant.

Esso seeks Cold Lake fuel change. <u>Oilweek</u>, V. 31, No. 33, Sept. 22, 1980, p.70-71. Re: Esso's request to use natural gas in place of coal as a primary make-up fuel.

The role of coal in extracting tar sands and heavy oils. <u>Western</u> <u>Miner</u>, V. 53, No. 11, Nov. 1980, p. 46, 48, 50-52. Summarizes the presentation made by G.H. Thomson, Vice-president and General Manager, Heavy Oil, Esso Resources Canada at the 32nd Canadian Conference on Coal. He discussed the Cold Lake Project and the reasons Esso will not initially use coal as its balancing fuel.

## k. Reclamation.

Hardy (R.M.) & Associates Ltd.
 Preliminary development and reclamation plan for the Imperial
 Oil Limited Cold Lake Project. Calgary, May 1978.
 iv., 43 p. illus.
 Prepared for Imperial Oil Limited.

# C. Peace River.

1. General Background References.

Items in this section include those pertaining to the regional economy and tar sands development.

Kitzan, P.

Design, construction and operations progress report on the Peace River In-Situ Project. By P. Kitzan, Shell Canada Resources Limited. Paper to be presented at the Seminar on Nonconventional Oil Technology, Calgary, May 29-30, 1980. 30 p. illus.

Merrell, Dennis

Resource developments spur service centre growth. <u>Trade and</u> <u>Commerce</u>, V. 75, No. 10, Oct. 1980, p. 124, 126. Re: Peace River. Mitchell, George

Record construction for resource centre. <u>Trade and Commerce</u>, V. 74, No. 11, Nov.-Dec. 1979, p. 164, 166-167. Includes information on the Peace River tar sands deposit.

Peace River Regional Planning Commission.

The Peace River oil sands. <u>People, Plans and the Peace,</u> Special Information Report No. 4, Nov. 1975. 12 p.

Peter C. Nichols & Associates Ltd.

A study of economic growth in the north Peace sub-region. Grande Prairie, Peace River Regional Planning Commission, Mar. 1981.

xviii, 197 p.

Prepared for Peace River Regional Planning Commission in cooperation with The Northern Alberta Development Council, and completed in Jan. 1981.

This study covers most of the Peace River oil sands area and includes chapters on historical perspective, physical resource base description and planning implications, sub-regional structure, economic base, and a summary of future growth.

Shell Canada Resources Ltd.

Peace River in-situ pilot project. Calgary, n.d.

5 p. col. illus.

A brief description of the project. Includes information on working conditions, environmental control and a timing projection schedule for advancement to a full-scale commerical project.

Shell, glamour girl of the petroleum world. Energy
Processing/Canada, V. 22, No. 3, Jan.-Feb. 1980, p. 20-21.
Re: Plans to build a refinery for synthetic crude from the oil
sands and the official opening of the Peace River in-situ oil
sands pilot project.

Shell in-situ pilot project opens, <u>Oilweek</u>, V. 30, No. 43, Dec. 3, 1979, p. 3. Re: Opening of Shell's Peace River pilot project.

#### 3. Historical Background Material and Archaeology.

Forsman, Michael R.A.

Approaches to fur trade archaeology project 77-22 in part. By Michael R.A. Forsman, Archaeological Survey of Alberta and Joseph G. Gallo, Systems, Data and Planning Services. In Archaeology in Alberta, 1978. Compiled by H.M. Hillerud, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1979.

p. 159-192.

Includes mention of Fort Fork, on the Peace River.

Note: Archaeology in Alberta, 1978 is Archaeological Survey of Alberta Occasional Paper No. 14.

Heintzmann, Roderick J.

Alberta highways north survey: historical resources assessment programme 1979, permit 79-67. By Roderick J. Heintzmann, John Priegert and Shirleen Smith. In Archaeology in Alberta, 1979. Compiled by Paul F. Donahue, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1980.

p. 60-74.

Includes mention of three areas surveyed within the Peace River lowlands.

Note: Archaeology in Alberta, 1979 is Archaeological Survey of Alberta Occasional Paper No. 15.

Peace River Regional Planning Commission.

Historical references bibliography: a listing of materials relevant to the history of the Peace River region of Alberta. By Maxine McMurchy. Grande Prairie, Sept. 1977. 39 p.

#### Wood, William J.

The upper Peace River, Alberta permit number 78-10. By William J. Wood, Archaeological Survey of Alberta. In Archaeology in Alberta, 1978. Compiled by J.M. Hillerud, Archaeological Survey of Alberta. Edmonton, Alberta. Dept. of Culture. Historical Resources Division, 1979. p. 26-33. Results of 1978 archaeological field work in the upper

Re: Results of 1978 archaeological field work in the upper Peace River area.

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#### 4. Socio-Economic Studies.

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# Peace River Regional Planning Commission. Demographic characteristics: Peace River region of Alberta-a technical report in support of the Regional Plan review. Grande Prairie, 1980.

1 v. (various pagings) illus.

b. Regional and Community Planning.

Makale, Holloway & Associates Ltd. Town of Peace River general plan. Prepared by Makale, Holloway & Associates Ltd., Associated Engineering Services Ltd. and Hickling-Johnston Limited. Edmonton, Oct. 1968. 86 p. maps (part. fold). Note: This document is "Schedule A" of the Bylaw 810 of

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This report was prepared for the Town of Peace River.

Peace River Regional Planning Commission. Country residential subdivisions: a guideline for the Peace region site analysis and design. Grande Prairie, June 1980. lv. (various pagings) illus.

Peace River Regional Planning Commission.
 Patterns for the future a regional policy plan for the Peace
 River region of Alberta. Grande Prairie, 1976.
 62 p. illus., maps.
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Peace River Regional Planning Commission.

Peace River townsite and area landscape corridors pilot study final draft. Prepared by Andy Bowcott and Ian Wight, Peace River Regional Planning Commission. Grande Prairie, Sept. 1977.

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A report on a pilot study sponsored by Alberta Environment Shorelands Task Force of the Conservation and Utilization Committee.

Peace River Regional Planning Commission.

Rural land use planning: a Peace region perspective. Prepared by the staff of the Peace River Regional Planning Commission as a contribution to the annual meeting and seminar of the Medicine Hat Regional Planning Commission, April 19, 1978. Grande Prairie, Apr. 1978.

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Peace River Regional Planning Commission.

The Town of Fahler development plan. Grande Prairie, Nov. 1970.

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Peace River Regional Planning Commission. Town of Peace River General municipal plan 1979. Prepared for

the Town of Peace River. Grande Prairie, June 11, 1979. 16 p. maps (col.)

Wight, Ian

An introduction to regional development planning: principles and practise-a course record and Peace Region commentary. Grande Prairie, Peace River Regional Planning Commission, Aug. 1977.

1 v. (various pagings) (Its Information Paper No. 11)

### c. Social Services.

L.W. Downey Research Associates Ltd.

Toward a system of adult education for northwestern Alberta and northeastern British Columbia: a discussion paper. Edmonton, Nov. 1973.

iv, 89 p. illus.

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Peace River Regional Planning Commission. Housing issues and the Peace River region of Alberta-draft. Grande Prairie, Feb. 1977. 24 p. (Its Information Report No. 8) Peace River Regional Planning Commission. An opening submission to the Alberta Housing Advisory Council-northern housing. Grande Prairie, May 1977. 14 p.

Peace River Regional Planning Commission. Outdoor recreation and tourism in the Peace River region of Alberta. Grande Prairie, 1974. 78 p. illus., maps (part. fold.)

e. <u>Transportation</u>.

Peace River Regional Planning Commission. Transportation in the Peace River reigon. Grande Prairie, 1975.

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#### 5. Environmental Studies.

Lorberg, E.

Groundwater resources Peace River basin and northern Alberta. By E. Lorberg and N. de la Cruz. Edmonton, Alberta. Dept. of the Environment. Earth Sciences Division, Jan. 1981.

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Peace River Regional Planning Commission.

The forestry industry in the Peace river region of Alberta. By Bill Shephard. Prepared as a contribution to the Environment Conservation Authority public hearings on forestry management practices and the environment. Grande Prairie, Aug. 1977. 16 p. map.

Peace River Regional Planning Commission.

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1. General Background References.

Gulf Canada Resources Inc. Pelican project. Calgary, Sept. 1979. 23 p. illus.

3. Historical Background Material and Archaeology.

Gruhn, Ruth

Archaeological research at Calling Lake, northern Alberta. By Ruth Gruhn, University of Alberta. Ottawa, National Museums of Canada, 1981.

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Sims, Cort

Archaeological investigations in the North Wabasca Lake area: the Alook site. <u>Alberta Archaeological Review</u>, No. 3, Autumn, 1981, p. 12-16. (Report)

4. Socio-Economic Studies.

b. Regional and Community Planning.

Alberta. Dept. of Municipal Affairs. Municipal Planning Section. Wabasca-Desmarais community plan January 1981. Edmonton, Jan. 1981.

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32 p. illus., maps (col.)

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Alberta. Northern Development Group. Wabasca-Desmarais land tenure research project: report of community survey March 1974. Peace River (?), Mar. 1974. iii, 105 p. Cover title: What the people of Wabasca-Desmarais said about land tenure and other problems.

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d. Municipal Servicing.

Associated Engineering Services Ltd.

Wabasca-Desmarais water and sanitation feasibility study. Prepared for Alberta Executive Council. Northern Development Group. Edmonton, May, 1974.

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Bearisto, Stewart, Weir Engineering Limited. Feasibility report water supply hamlets of Desmarais and Wabasca. Edmonton, Aug. 15, 1968. 5 p., maps.

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Alberta. Dept. of Energy and Natural Resources. Resource Planning Division. Management issues for the priority areas within the Slave Lake

forest. By D. Darrah, and P. Short. Edmonton, June 7, 1977. 19 p. (ENR Report No. 35)

Smith, A.R.

Preliminary biological survey of Utikuma and Utikumasis Lakes. Alberta. Dept. of Lands and Forests. Fish and Wildlife Division. Fisheries Section, Aug. 1969. 38 p. illus., maps. (Survey Report No. 7)

Turner, William R.

Preliminary biological survey of Wabasca Lakes area 1967. Edmonton, Alberta. Dept. of Lands and Forests. Fish and Wildlife Division. Fisheries Section, Apr. 19, 1968. 1v. illus., tables. (Survey Report No. 2)

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