Oil Shale Recentations Nos. 1-13 General Correspondence

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DEPARTMENT OF NATURAL RESOURCES

REFER TO THE

Saskatchewan Resources Building, Regina, Saskatchewan, April 5, 1951.

Dr. J. D. Allan, Chief Geologist, Department of Mines and Natural Resources, Winnipeg, Manitoba.

Dear Don

Thanks for your letter of April 4th regarding possible oil seepages in the Pasqua Hills area of Northern Saskatchewan. It has been passed on to me for reply.

These reports are not entirely new but to my knowledge have not been investigated. If you obtain any further information, I would appreciate your passing it along. We may have one of our geologists make a reconnaisance trip into that general area next summer.

Apparently a porous shale member of the Boyne formation has oil showings at Kamsack. Gas is produced from this horizon and probably corresponds to the lst white speck zone of the upper cretaceous. Therefore, it is quite possible that minor seepages do occur up dip where the formation is exposed.

Best wishes,

Yours very truly,

Dr. Harold F. Morrow, Chief Geologist.

Harred M

HFM: js

PASQUIA HILLS

011

April 4, 1951

Mr. J. T. Cawley,
Director of Resources,
Department of Natural Resources and
Industrial Development,
REGINA, Saskatchewan.

Dear Jin:

Iast fall I had some correspondence with Mr. F. B. Chalmers who is Supervisor for the Northern Resources Area of the Manitoba Government, regarding a report in The Pas newspaper that a local citizen knew of oil scepages in that vicinity. As his remarks may be of interest to you, I will quote from his last memo.

"With regard to your remarks that Zaceas Buck, an Indian trapper of The Pas had reported oil seepages in the Northern Mail, I have some knowledge of this report, as Mr. Buck called at this office to discuss the matter.

"The seepages, according to him, are in the Pasquia Hills in Northern Saskatchewan and it is approximately a week's journey from The Pas to the area and back. He had not seen these oil seepages for about four years but claims that to his knowledge they have been known to the Indians for many years. When I found that they were located in Saskatchewan I did not follow the matter up any further.

"If you are interested and there is more detail required I shall be pleased to see Mr. Buck again,

(over)

November 14, 1950

Mr. F. B. Chalmers, Supervisor of Pesources, THE PAS, Manitoba

Dear Mr. Chalmers:

We are presently preparing mineral sets so I hope to be able to send these sets you requested in the near future.

Some time ago in "The Northern Mail" there was a report that Zaceas Buck, an Indian trapper of The Pas area, had found oil seepage within 40 miles of The Pas. The report said that he had offered to gaide members of the Provincial Government Survey and California Standard geologists to the showings. Both our field men and the California Standard geologists say that they heard rumours of this seepage but were unable to find anyone who knew much about it. If you get any more detail on the subject or a sample of oil from it, I would greatly appreciate receiving it.

Yours very truly,

J. D. Allan, Chief Geclogist

JDA:G

-LINTER-DÉPARTME NÉMORANDUM

Pa-f 22 ~

Re

Chalmers, Supervisor, Northern Resources Area.

Oil Seepages

PROVINCE OF MANITOBA.

J. Richards, Director of Mines.

J.D. Allan.

17 November, 1950.

I am pleased to receive your memorandum of November 14 advising that mineral sets are being prepared and that they may be available for distribution to some of our field men in the near future.

With regard to your remarks that Zaceas Buck, an Indian trapper of The Pas had reported oil seepages in the Northern Mail, I have some knowledge of this report, as-Mr. Buck called at this office to discuss the matter.

The seepages; according to him, are in the Pasquia Hills in Northern Saskatchewan and it is approximately a week's journey from The Pas to the area and back. He had not seen these oil seepages for about four years but claims that to his knowledge they have been known to the Indians for many veers. When I found that they were located in Saskatchewan I did not follow the matter up any further.

If you are interested and there is more detail required I shall be pleased to see Mr. Buck again, although he does not have any samples of oil and in order for thim to get this an expedition would have to be financed to take Mr. Buck into the area. I am very doubtful as to how reliable Mr. Buck is, although the matter may be worthwhile following up next summer.))

Mallalmus

F.B. Chalmers, -Supervisor.

FBC/llr

DEPARTMENT OF MINIES & NATURAL PESOURCES

DIRECTOR OF MINES

J. S. Richards, Director of Mines.



February 7, 1966.

Tylir. Stuart Anderson,
Deputy Minister.

amendment to the

Oil Shale Regulations.

originally forwarded with my memo of February 2nd, has been redrafted in accordance with your verbal request, wireteen copies are attached hereto.

JSR/or

nen.

J. /6./zichards

c. c. to: Honourable Sterling R. Lyon, Q.C., L.

Mr. M. J. Gobert Assistant Deputy Minister

Mr. T Morgan,

D PAR

FEB 8 - 1966

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Carlo Marian a di

PS 15

J. S. Richards, Director of Hines:

February 2, 1966.

Kr. Stuart anderson,
Deputy Kinister.

Amendment to the

Oll Shale Regulations.

. Attached, hereto, the following:

1. - Cabinet Paper:

re a suggested emendment to the Gil Shale Regulations.

This amendment authorizes the issuance of reservations which will grant the right to prospect for phosphate adeposits under the same terms and conditions as those applicable to the Oil Shale Regulations.

Council and Schedule have been approved by the Attorney-General's Department.

JSRedb

Ents

c. c. to: Honourable Sterling R. Lyon, Q.C., Minister of Mines and Natural Resources.

>Mr. M. J. Gobert, // Assistant Deputy/Minister.

FEB 2 - 1966

SSISTANTE L.P- IV MILL

Alle.

DEFARTMENT OF MINES AND NATURAL RESOURCES

SUBJECT:

A proposed amendment to the oil shale regulations which would authorize the granting of reservations for the purpose of searching for phosphate deposits under the same terms and conditions as those pertaining to reservations for oil shale.

BACKGROUND:

In June, 1964, Regulations were passed prescribing the terms and conditions under which prospecting for oil shale on Crown lands could be carried out, and stipulating that, if the prescribed amount of work is completed, the holder of an oil shale reservation shall have the right to acquire a lease of 10% of the tract contained in the reservation. Three oil companies acquired oil shale reservations, in accordance with these Regulations, and preliminary field and laboratory investigations have been undertaken.

An application has been received from Mr. John C. Blair, Calgary, Alberta, for the right to prospect, in Township 25, Ranges 20, and 21, W.F.M., for commercial deposits of phosphate within the shales comprising the Manitoba escarpment. Mr. Blair is not a professional man nor, as far as we are aware, is he associated with any established company. He apparently is acting on behalf of himself and a few associates.

Mr. Blair has been edvised that Township 25, Range 21, W., is part of a reservation within which the oil shale rights have been granted to Sun Oil Company; and, also, that, as his work (probably in the same shale) could conflict with the work being done by Sun Oil, we feel his application should not be approved in respect to this township. Mr. Blair has elected to carry out exploration only in Township 25, Range 20, W., and requested first refusal on Township 25, Range 21, W.

Although formal grants for the right to prospect for phosphate have never been issued by this department, the possibility that such deposits occur in the shales of the Manitoba escarpment has been recognized for many years. Several unsuccessful attempts have been made to locate phosphate occurrences in these shales.

PROFOSAL:

That the Oil Shale Regulations be amended to authorize the granting of reservations for the purpose of searching for phosphate deposits under the same terms and conditions as those pertaining to reservations for oil shale.

2.4

If this proposal is approved it will mean that Mr. Blair would pay a fee of \$250.00, and post a cash deposit of \$750.00 as a guarantee of an expenditure of an equivalent sum in 😤 prospecting for phosphate deposits in Township 25, Range 20W. This township contains 10,400 acres of Grown mineral rights. This is not a very large expenditure, but it is equivalent to that required for oil shale exploration, in respect to 20,000 acres. As previously stated, no phosphate occurrence is known which has any economic interest. One occurrence of academic interest (a narrow layer of fish bones) has been reported. Therefore, surface prospecting and sampling is the logical initial approach; if this approach fails the venture will be abandoned. The requirements of the other forms of disposition provided for by the regulations under The Mines Act would, in our opinion, be unreasonable if applied to this type of venture. The area applied for is equivalent to 208 mining claims. If these rights were granted in the form of mining claims an exploration expenditure of \$15,000 to \$16,000 would be required. If these rights were granted in the form of a pot ash permit an annual expenditure of \$40,000 for the drilling of wells would be required.

The terms and conditions of any lease which may be issued under these regulations are such as the Minister of Mines and Natural Resources may prescribe. Consequently, should a phosphate deposit, with an economic potential, be discovered, its further development may be controlled by the conditions and stipulations which form part of the lease.

RECOMMENDATION:

That the Recommendation-to-Council and Schedule attached thereto, which provides for these amendments, be approved.

Sterling R. Lyon, Minister of Mines and Natural Resources. 2--Cabinet Paper

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February 1, 1966.

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ACCOMMENDATION:

That the Recommendation-to-Council and Schedule attached thereto, which provides for these amendments, be approved:

Sterling R. Lyon, Nanister of Mines and Natural Resources.

REPLACED BY SHEET ABOVE.

Mines and Actural Huncurous

Capter 126 of the Covient September of the Line Int. Palm Capter 126 of the Covient September of Scientific 1996; provides, to pot to follows:

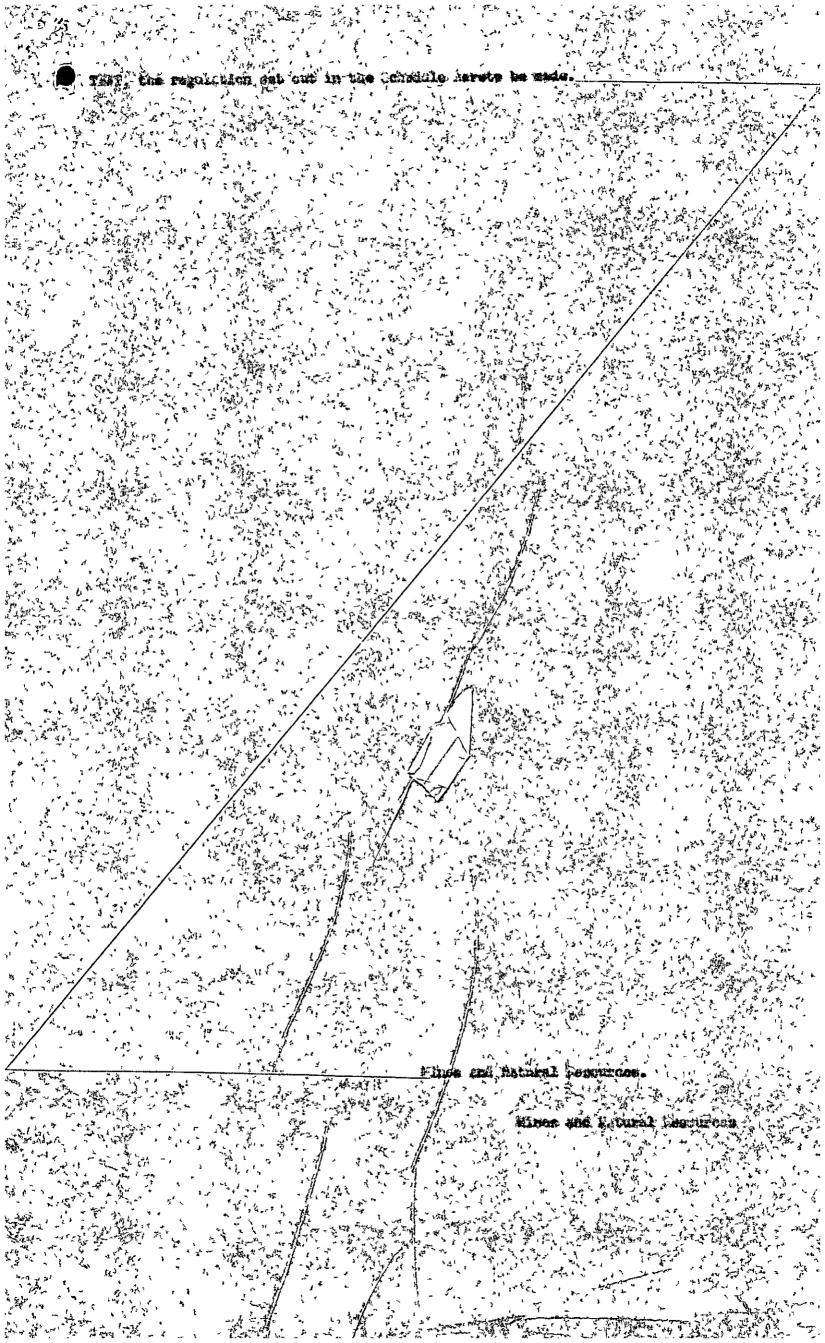
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SCHEDULE

Manitoba regulation ... /6

being.

Regulation under The Mines Act

to Further amend Menitoba Regulation 29/50

- 1. Section 1924 of Manitoba Regulation 29/50 (hereinafter called "the regulation"), as passed by Manitoba Regulation 42/64, is amended by adding the words for phosphates after the word ashale in the second line thereof.
 - smended by edding the words for phosphates after the words shale in the first line thereof.
- words "or phosphates" after the word "shale" in the first line thereof.

IPARIMENIAL MEMORANDUM

. J F Dav_es

Jamef Ceologist

- - Oil Shale Exploration

MANITOBA

November 15, 1965 DATE

1r. J. S. Richards
LEPARTMENT OF MINES

Lirector of Mines MATURAL PESOURCES

11.7 15 1965

DIRECTOR OF MINES

1. Sun Oil Company

- have taken scattered surface samples for analyses

- arilled 8 holes in Manitoba, obtained core analyses for 7

TO

- one hole gave poor recovery and not analysed
- depths ranged between 101 and 233 feet
- 2. Atlantic Refining Company
 - drilled 4 core holes. Man formation density logs and induction logs on 3 of these holes. One note not logged. No analyses yet received on any of the holes
- Aquitaine Limited
- ine Limited rave done surface sampling. Core hole programme planned
- 4. hiscellaneous
 - Both Shell Development Company and Pan American Petroleum L. L. f. Corporation have obtained shale core from the Mines Branch collection and nave had analyses made.

F. Davies Cnief Geologist

JFD/1k

-a. c. on: Oil Shale - General.



R3C OP8

August 1, 1972.

Mr. Grant G. Pitcher, Pitcher Resource Management Ltd., 1819-Three Calgary Place, Calgary 1, Alberta. T2P OJ1

Dear Mr. Pitcher:

Fe: Regulations pertaining to - 0il Shales -

In reply to your letter of July 7, 1972 we are pleased to advise that most of the material requested has been forwarded.

With regards to your request for a copy of regulations pertaining to oil shales, we refer you to Part X of the attached Regulations under The Mines Act - Starting at Page 82.

If you wash further information please let us know.

Yours sincerely,

cc: B. Bannatyne

I. Haugh Chief Geologist

JSP/gh



Province of Manitoba

Department of Mines, Resources and Environmental Management

Mines Branch

Geology Division

Geology Division 901 401 York Avenue Winnipeg Manitoba R3C 0P8

July 4, 1972.

Mr Grant G Pitcher Pitcher Resource Management Ltd. 1819 - Three Calgary Place Calgary 1, Alberta

Dear Mr Patcher

Re Oil shale in Manitoba

As requested in your letter of June 22nd, we are enclosing copies of the results of investigations into the oil shale reserves of Manitoba made in the period from 1964 to 1967. Also, enclosed is a 1921 report by S. C. Ells, Department of Miner, Ottawa

More detailed information, particularly on the Aquitaine Reservation No 9, is available if you require it The information is noted on the attached list of assessment files

At present, there are not any receivations for oil shale in the Province

Enclosed is an invoice to cover reproduction costs

Yours very truly,

I haugh

Chref Ceologist

BB/hf Encle. DEPT of MINES RESOURCES and ENVIRONMENTAL MANAGEMENT

JUL 5 1972

ASSISTANT DEPUTY MINISTER'S OFFICE



IT YOU ILL ID NIVER SIDIN A STRIP FIRM Strip mine near Paradice, Muhlenberg County, Kentucky Here game in green hills once abounded and the Green River teemed with fish, last year Muhlenberg County produced more coal than any other county in America

By HILLINY M CAUDILL

**= DSCENDANTS of he people who settled in the sudlow vailey of the Green River founded a small hamlet called Paradisc hy It was well named for the countrys de was green and pleasant ara the stream teemed with fish Game abounded and a man could live an unvorried life the tedium broken by an occasional visit to the county sea to listen to riais and swap yains with friends from other parts of A Lhlenberg County

But times have changed. There is still a dot called Paradise on the map of Kentucky bu last year Muhlen berg produced 176 mill on tons of coal-rore than any other county in America-and the production record vas achieved at a staggering cost Paradise is isolated and shrunken hiddica in an appolling vaste. Thou is o leres of errinare piled high וזכר ל שייון ייחד ביים

with coal sometimes brown with sulphur. The streams that wind through this dead landscape are de void of rife

Here in western Kontucky part of America's Eastern Into or coal field the mineral lies near the surface and ne region has follen brey to simp mining or an immense scale. Still ming is as easy as it is rubless It simp ears the earth apart s ricuri by smatter n order to rip out the runerals Conventional tunnel and po amming leaves the surface receively undsurved busi pping totally disrupts the land and its ecology

In a typical Appalach ar operation the development may proceed in two or more serms of coal at different levels in a mountair. The uppermosserm may be laid care by the violent expedient of blasting a vay the chure overly ng crest—a process known to the industy as casing the overburden Lower cown the sour is exposed on faced by \mathfrak{b}_{ω} dozing and unarniting the timber and so a away from the coal The unrooted trees loose due and shittered stone are p seed down the sone The coal is located by high it usive charges chanted up to a power movers and o cours on a minimum or or in Ting

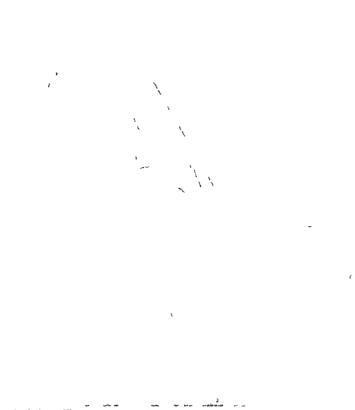
to the nearest railroad load ng docks

Where the terrain is level or gently rolling the bulldozers and power shovels scrape away the dir' to expose the rock layer roofing the coa Tre store is then shattered with ayram te and lifted by immerse stores or diaglines onto the spoil heap accumulations that somet mes rise almost sheer to a height of 200 feet Several acres of the fuer may be cared in this number before smaller silo ets begin loading it onto the trucks

One gigantic shovel owned by Peabody Coal Company is as tal as a 17 story building and has become a major tourist attraction. Thousands of people drive out of their vay to watch it devastate the American land

TRAVELER comes in along the new Kentucky Turnp e from The Buegrass where the tavms and fields are manicured and the miles of wooden fences gleam with fresh white paint. There the influence of the early German mm grants aves on and in the counties a ound Les ington it is easy to conclude that the nation's heritage in s land is being safely guarded

The tumpike carries the theveter through a line of lovely low h a mto the wes (Cortinua a or corre pare)



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I- 0-0 202 t00 acres in a In -dozen courties have been Cos Sendor Trank Lausene a sanch i end of business as repeated y demourance are s - prems to are thing so much of his sale So complete is the curastation that 'm sor ε areas once-valuable familiarus ora now be bought for as little as 25 cents per acre

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Dako'as are 1 21, to be wrecked on a guillo scrie in the next two or large acc anes

In addition there is talk of cooking Colo-alo shes for their petro earn I this occurs the shales in be acovercu b, strip mining and the oceatiful hills of Colorado will a c the extinction but no thous ens so much of re appalachian runge

TAT kind of comporations committes mu cor of the landscape? O e might suppose them to be ob cure entities whose mannal s have not ye learned that in the 20th century it s good ous ness to preserve wa which cannot be replaced

Not so Tan, or the gre t

strichers ale sios dates o well known which our corpor tions - Bechiene " Sice Fe public Steel Inlune Sicel Intertake Steel 1/e - or State S ce Youngstorm Seel and Tune and United Stales Sieel Trur saverusements proclaim an enlightened concern for the perpetuation of the #merican way of I fe but in Appainchian valleys they rulbiess'y i'l the land on which future garerations of Americans mus cepend. The most brutal example of corporate imassonsio n'v Hes on the Poor Tork of the Cumberland River n Flar an County Kentucky where ce United States Coal and Co Company has shalfered ale Big Black Youngs a for more than 20 miles realizing much of this robe towair feature o a rubble hero

The coal companies profits are fartastic Platsburgh-Con solidation Coa. Co-paration earned \$19 20 000 n 1955 and its of Glen / Ican Corpor or rose from \$ 0.000 a accorde ago to \$6,000 00) a est ago Plabody Coal en c ea a past increase in the same decade from \$9,430,000 to \$30, 70,000 Ayrshire Colores increased its net income from 32 520 000 to \$5,790,000 T c profits of Pittston Co. Compri zoomed from \$2 190 000 o \$15 720 000 in the same decade

The land companies trat own the mineral vicalth and lease it to sino miners show the most pro nole brinner shee's in Ame can indus v In 1964 the Vinginia Coni a a Iron Corporation cared as net profits 6. per cer of its income and bull out 45 per cer of 1 s gross prcome as dividends. This record was equa ed by ano her huge 1 nd

compa y we Kentucky River Coal Corpo ation By con tras in the same year Gen c .. Lotors cleared a come out or each collar received and palu out ain ekel in dividends

_ND \ hat of the people whose common is are shred and function to the common Obviously runed ands must be aban cored a d he strip mired cour es a'l have shown sharp popula ion declines. A milion people have moved out of Appalacria in the past 10 years and the Eastern Interior f c'a has fareal : le better As suple--a-ean mining declined thousands of families passed on o the public assistance rods Today welfare rot rang poices most of the mo ev spent by families in the ration's conditie ds

It Apple chir exploitation has recueed a orde-proud and even olen people to the most bassive and trampledupon part of the American population Passivity has renched its Litimate depths in enstern Kentucky where whole communities have been impoverished and debased with scarcely a profest There coal companies often own the minerals underlying the lands. of farmers and the states righest court has ruled that the compunes have the right to destroy the land in order o get out 'ne m nerals

With this Leense to wreck many opera ors have procesced with complete abandon They have rolled rocks through some homes and have pushed olices off them foundations Yany have been demolished by avalanches from the spoil panes In Knott Courty a ore armed coal mirer came rome from a retraining progrim co duc cd as a pirt of ne war on poverty to find hs ouse and all its contents bired bereath a mammoch

iamuslida

When a group of mountaineers cull no themselves The Ampaire on Group to Save the Land and People visited Gov Daward T Breathitt of senuciy jast June an 80 year old a oman told him that she had swood on the front porch of hir ittle home and atened and kullaggers invade her i m is cemeters. She said I though my heart would break For the coffins of my child en come out of the ground and ent over the h li This stuation prompted one mountaineer to comment that the coal rousery digs up the coad and puries the lying

But even in the er ue y Mourtains sat ering and or tience have them in s In the Clear Clear community woman copied the tactics of civil " g" ts demonstra ors and stopped the strimpers o lying down in front o he but dozers They were promptly hauled off to jail but the ma chires ale sill sulled by recalcitrant mountaineers actermined to sale tiem ands from run-and themselves from total moover shment

LINEPICA is not alone in ies crave, for coa or in facing the properts are ing out of strp minir, Tr Europe postw " recons ruct on has seen a Scallist Government in Great B itain and a Com munist Government in Catche slovakin suthorize the demo-I tion of whole on o get at the cost be eath them. In England strp mers hale gone to a cepth of 700 fce -500 feet deeper ' man -hrg yet "ttemp ea in America _

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But Europear national coal boards have demons rated that complete reclamation of strip mined sites is possible In England for earning on top soil is carefull scraped off and saved in separa e leaus Next the subsoil is pushed as de and similarly solated. So is the rock above the coal At the erc of the one ation the rock goes back muo the pit first ther the subsoil s pushed in finally the topse? is restorea to its original's e The restored land is com pacted as a is replaced. After it is cor o red it is fort lized and treated with himestone It then tracegoes an intensive f ve year agrou uta restortuon treat ent lost o the land sit up ed to am cuture the real plan ed, ne timper To cot a e ages timper about \$1 a ton of coal re coveredy Trese of 18 8 ments demonstra e frat long recla mation on the mont tenain is within er y reach of Amecan industry

N 1875 Chliforn a outlawed hydraulie go a mining or the ground that this ad streams and caused the flooding of valuable farm lands. In s valuable farm lancs type or mang was comparaveit him ess her compared i hoca stroping out i is unitely roun y of the states will free up so squarely to our moder proper's In the coal states legistures are composed in the nan olittle men thought desting to bill dishments and enticements



Ollweek - January 31/66

DENVER: Commercial production of oil from Colorado's vast shale deposits may be as little as five years away according to T.W. Nelson, senior vice-president of Socony Mobil, which is project manager for U.S. Interior Department's pilot plant at Anvil Points, Colorado. Optimum size plant would mine and retort about 80,000 tons of shale a day to produce 50,000 b/d of raw shale oil, he said, which would be coked to produce 1,200 tons of premium quality coke and 43,000 b/d of coker distillate that could be piped to refinery. Thirty gallons of shale oil would produce 14.3 gal. of motor fuel, 10 gal. of diesel fuel, 0.6 gal. of heavy fuel oil, 0.6 gal. of LPG's and 40 lbs of electrode coke.



hotes as one shale exploration

In time, 1964, regulations were passed stipulating the conditions under which areas would be reserved for oil shale exploration. Subsequently, Sun 311 Company, Applicable Company of Canada Limitud, and The Atlantic Refining Company, acquired reservations comprising approximately 1,586,000, 119,000 and 434,000 seres respectively, in accordance with these regulations. In Argust, 1965, the regulations were amended to authorize the approval of research work as an expenditure made for the purposes for which the reservation was granted.

Since the acquisition of its reservations, Sun Oil Company has varried out a program of surface sampling and has deilled 3 holes to Copths renging between 101 and 231 feet. Analyses were obtained from 7 cores. The company has also sarried out research relative to recovery of oil from shales and the treatment of shale oil in its research laboratory in the United States. Research expenses in the amount of \$28,156.00, attributable to the company's Familiate acreage, has been reported. My department has accepted the work carried out to date as estimated by the first year of the company's reservations and has extended a parmits to July 33, 1966, and one permit to October 23, 1965.

drilled A holes between the opines toods forest madero and the international touristy. The company surrendered the three reservations, company and 1965.

atudies and surface sampling on the area of 117,000 acres, comprising its reservation, which lies south and east of the cloth Heuntain wational Park. Samples are being analysed at the company's reserval laboratories in Transa. The company's reservation has been extended for one year to tendental.

Secretary of the Interior, by an Cil Shale Advisory Scard appointed to enalyse the problems associated with development of oil shale deposits on Federally-eward lapts, would, I believe, be taluminating. This report emphasises the immoned potential value of the ell chales in United States which has been established by a great deal of work over a period of many years. It is stated that shale yielding 25 gallons or more per ton contains about 500 billion barrels of oil equivalent. In contrast, as yet, we do not know it landtoba possesses any oil shale of possible scommic nightfloarce.



2-Motes re vil Shele uploration.

Cil Shale levisory beard has, to date, been unable to reach any agreement as to the terms and socialitions under which U.S. Federal lands should be leased, nor to make specific recommendations relative to conservation problems which may arise from an oil shale operation. The main reason for this impulity to define a policy is that the recovery processes to be employed have not, as yet, been perfected.

I draw attention to the U.S. estuation to explanate that while exploration rights for cil whele have been granted, by by department, no conditiont has been made in respect to the terms and conditions will which oil shale leases will be granted. These terms and conditions will not be established until such time as more is known about, (a) the quality and quantity of oil shale in Funitoba, and (b) the processes to be used to convert such deposits into a convertal operation have been established.

Kovember 16, 1965.

Koncurable Sterling R. Lyon, Q.C., Minister of Mines and Matural Resources.

Dr. D. H. Krastjanson, Secretary, Manitoba Development Authority.

- 011 Shale Exploration -

Policy re Disposition of Cruwn Rights and Control of Production Operations.

SUMMARY:

On June 30, 1964 the United States Secretary of the Interior appointed an Cil Shale Advisory Board, "to analyze the problems associated with development of oil shale deposits on Federally owned lands". This Deard hald four meetings and on February 1, 1965 submitted an Interim Report to the Secretary of the Interior, which suggested certain objectives for developing a Federal oil shale policy, and three alternative courses to achieve these objectives. The purpose of this paper is to consider what application, if any, the suggestions made by this Board may have to exploration and development of oil shale in Manitoba.

BACKGROURD:

The three courses suggested by the U.S. Cil Shale Advisory Board, to stimulate oil shale development, may be summarized as follows:

- 1. That the Government should "actively support research" directly or through private contracts.". It is also implied that the lessing of Federal lands should be deferred until this program has achieved results.
- 2. That the Covernment make evailable for leasing, areas of tand subject to "first performance requirements".
- 3. The third suggestion is a compresse between 1. and 2. Small tracts would be offered for research and development, and commercial leases would follow if such investigation showed "that commercial production is viable in the light of economic and conservation requirements".

It will be noted that the Board members reached little agreement among themselves. As one member of the Board states "We agreed then to disagree on clear-cut alternative means through which oil shale development might be stimulated.".

One area in which agreement was reached was the need for more research, whether this research be carried out by Covernment or private enterprise. Because of the need for better knowledge it is suggested that government should "proceed cautiously toward development and maintain flexibility".

Dr. E. H. Kristjanson, Secretary, Kanitoba Dovelopment Authority.

This report also refers to conservation problems such as "pretecting landscape, preventing pollution and conserving water". However, no means to these objectives are suggested because the recovery processes to be employed have not, as yet, been perfected.

In summary it may be said that the U.S. Loard expressed three different points of view; (1) that the Government should carry out or support a major part of the necessary research and go alow in respect to the leasing of Federal lands; (2) that the development of oil shales should be carried out by private enterprise with little participation by Government except in the field of pollution control and the conservation of land and water; (3) a middle-of-the-road compromise between these two points of view. As mentioned before, the one major point of agreement was the need for more research either by Government or private enterprise.

This U.S. report also emphasizes the immense potential value of the cil shales in the United States. It is stated that shale yielding 25 gallons or more per ton contains about 600 billion barrels of cil, equivalent, and shale yielding 10 gallons or more per ton contains about 2,000 billion barrels of cil equivalent. In contrast, as yet, we do not know if Manitoba possesses any cil shale of possible economic significance.

Manitoba Regulation 42/64 passed in June, 1964 stipulated the conditions under which areas would be reserved for the exploration for eil shale. Subsequently, Cun Cil Company, Aquitaine Limited, and Atlantic Refining Company acquired reservations, comprising approximately 1,586,000, 119,000 and 434,000 acres respectively, in accordance with this Regulation.

Since the acquisition of its reservations, Sun Cil Company have carried out a program of surface sampling and has drilled 8 holes to depths ranging between 101 and 233 feet. Analyses were obtained from 7 cores. Atlantic Refining Company has drilled 4 core holes and ran geophysical logs on 3 of these holes. No analyses have, as yet, been received. The work performed by Aquitains Limited, to date, has been limited to geological studies and surface sampling.

My department has accepted the progress reports submitted by Sun Gil Company to date, as satisfactory compliance with the regulations, and has extended the company's reservations for one year, subject to the retention of a deposit of \$64,500 that further work will be carried out during this period.

Dr. B. H. Kristjanson, Secretary, Manitoba Development Authority.

The reservations held by Aquitaine Limited have also been extended for a second year subject to the retention of a deposit in the assunt of C4.500.

The first year of the term of the reservations held by Atlantic Refining terminates December 4, 1965.

Following discussion which the officials of my department halo with representatives of the three companies holding Grown oil shale reservations, Kanitoba Regulation 42/64 was exended to authorize the Minister of Mines and Natural Resources to approve "the cost of experimental work in a laboratory, or pilot plant, or other testing or research work....., as an expenditure sade for the purpose for which the reservation was granted". This amendment recognized the need for industry to carry out research into methods for extracting oil from the shale and processes for producing a commercial product.

The reservations granted to the three companies permit them to explore for oil shale on Crown lands and carry on research to determine if such deposits are economically viable. The reservations may be extended for a third year by the Minister of Mines and Natural Resources and for further periods by the Lieutenant-Governor-in-Council. Provided the companies fulfil their obligations within the reservation period, they have the right to a lease, or leases, comprising up to ten percent of the area of all the reservations without regard to the boundaries of the individual reservations. However, the regulations are silent in respect to the principal terms and conditions, under which such leases shall be issued; "Every such lease shall contain such conditions, stipulations and provisos as the minister may prescribe....".

HECONMINDATION:

In view of the fact that it is, as yet, not known whether deposits of oil shale possessing an economic potential occur in Manitoba, and that definite processes have not been established for the extraction and processing of shale oil, it is recommended that (1) the companies holding oil shale reservations be advised that regulations stipulating the terms and conditions under which oil shale leases will be issued will not be considered until such time as more is known about: (a) the quality and quantity of oil shale in Manitoba and (b) the processes to be used to convert such deposits into a commercial operation have been established; and (2) should the companies in a year or two, as in their

Dr. B. H. Kristjanson, Secretary, Manitoba Development Authority.

right, apply for leases and either 1. (a) or 1. (b) has still not been established such leases will contain a provision that substantial capital expanditures will be made at specified intervals of time, or the leases will be cancelled.

In the interim, the Department of Mines and Matural Resources proposes to maintain close surveillance on the development of the United States policy in respect to the leasing of oil shale rights and technological research applicable to this resource.

JSR/or

Sterling R. Lyon, Minister of Mines and Natural Resources.

Orig. on: Acts and Regulations - Oil Shale.

INTER - DEPARTMENTAL MEMORANDUM

FROM

S. Eagleton.

PROVINCE

MANITOBA

DATE

TO M. J. Gobert.

NOV 16 1965

& NA E " P COLLEGES

E II O- MINES

DISE TOS OF MINITO

November 15/65.

SUBJECT

OIL SHALE;

As discussed, it is my understanding that you have spoken to the Minister on this matter and that he expressed no immediate concern about the preparation of the M.D.A. Paper and any necessary changes to Acts and Regulations, but that you are working on these items and will prepare them for presentation in due course.

Attached is the copy of the Minister's memo, which you did not previously receive, that outlines this request.

Orig. on: Acts and Regulations - Oil Shale. p.c. on: Oil Shale - General.

O. S. Eagleton

Enc.

cc Mr. Richards

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MG 724 **Z**

DEPARTMENT OF MINES, RESOURCES

AND ENVIRONMENTAL MANAGEMENT

Dil Shale PROVINCE OF MANITOBA

MINERAL RESOURCES
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September 30, 1966.

J. S. Richards, Director of Mines:

Mr. W. Winston Mair, Deputy Minister.

Sun Oil Company

7.011 Shale Reservations:

(exploration permits), which required the expenditure of \$61,500 on a exploration and/or experimental and research work.

The company posted Canada Bonds with a face value of \$60,000 and \$4,500 in cash as a guarantee that these expenditures would be made. The company has submitted Statutory Declarations and other evidence of expenditures on:

- (a) exploration \$ 18,088
- (b) analyses and research \$ 96 247.

These figures include an 8% overhead charge.

shale reservations require the approval of the Minister in respect of experimental and research costs. The information submitted substantiates that at least \$53,781 has been spent on research and experimental work related to the Manitoba reservation and it is recommended that this amount be approved.

the Minister, or you, sign the duplicate of this memo and return it to this office. This will provide us with the authorization necessary to return the company deposits.

JSR/or

c'c to Mr M J. Gobert, J. Assistant Deputy, Minister

8. Richards.

DEPARTMENT OF MINES AND NATURAL RESOURCES

OCT 3-1966

FSISTANT P IT-MI

GF





August 3, 1966;

Mr. R. D. Jones Sun Oil Company, Production Department, Petro-Chemical Building, 805 - 8th Avenue, W., Calgary, Alta.

Deer Mr. Jones:

advising that Sun Oil Company will not request renewal of Oil Shale Permits 12 to 8, inclusive, which terminated July 30, 1966.

A more formal surrender is not required.

requested earlier, will be forwarded in the very near future:

Yours very truly.

JSR/or

J. S. Richards, Director of Mines.

> Mr T Morgan, Chief Mining Recorder.

A D N UNA ST 966



GEORGE E DUNLAP
Manager Canadian Production D sion

LLOYD E MILLER

Assistant Division Manager

FRODUCTION DEPARTMENT SUN OIL COMPANY Potro Chemical Building 805 8th Avenue W Drawer 38 Calgary Alberta Canada

July 27, 1966

Province of Manitoba,
Department of Mines and Natural Resources,
Mines Branch,
901 Norquay Building,
401 York Avenue,
WINNIPEG 1, Manitoba.



Attention Mr J S Richards

Dear Sirs

Re Manitoba Oil Shale Permits 1-8 incl., dated July 30, 1964

Our records indicate that the above-noted Permits will complete their present term on July 30, 1966. We have therefore reviewed our Oil Shale acreage commitments in detail and have decided not to request the renewal of these Permits. We do not propose to convert any of the Permit areas to lease. We trust you will advise in the event a more formal surrender form is required.

Information requested in your letter dated June 30, 1966 is being obtained and will be forwarded to you in the very near future

Yours very truly,

SUN OIL COMPANY

RDJ sm

R. D Jones

p c to Mr M J Gobert,
Assistant Deputy Minister.





- June 30, 1966.

Mr. R. D. Jones,
Production Department,
Sun Gil Company,
Petro-Chemical Building,
805 - 8 Av. V.
Drawer 38,
Calgary,
Alberta

June 22nd, and the attached "Report of Research on baskatchewan and Manitoba Oil Shales", together with a Statenent of Expenditures verified by Gelb, Valestuk Loeppky, & Co.

This statement supplies no breakdown of the items which comprise the total of \$60,951.90. It would be appreciated if you would supply the individual expenditures incurred in respect to the following:

- भेड़) , analysis of oil obtained by retorting shales
 - b) analysis of gas obtained by retorting shales
- c) analysis of spent shale for fixed carbon heating value
- d) indevelopment of assaying techniques (1254)
 - development of batch retorts for producing large
 - samples of oil development of retorting process for production of synthetic fuels from oil shale

DAPAR

JUL-5 1966

SSISTANTED PARY MIP'S

TISR A

Yours very truly,

J.S. Richards, Director of Mines.

c. c. to: Mr. M. J. Gobert, Assistant Deputy Minister.



GEORGE E DUNLAP
Manager Canadian Production Divis on
LLOYD E VILLER
Assistant D vision Manager

PRODUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 800 8th Avenue W Drawer 38 Calgary Alberta Canada

Department of Mines and Natural Resources, Mines Branch, 904 Norquay Building, 401 York Avenue, WINNIPEG 1, Manitoba. June 22, 1966

FEET STOF MINES

CURAL RESOURCES

JUN 2 41966

CIRCLOR OF MINES

Attention Mr. J. S. Richards

Dear Sirs

Re Manitoba Oil Shale Permits 1-8 incl. dated July 30, 1964 and Manitoba Oil Shale Permit 10 dated October 23, 1964

Further to your letter dated March 9, 1966, we enclose an up-to-date report on our research activities relative to both Manitoba and Saskatchewan Oil Shales as prepared by our Research Laboratory at Richardson, Texas, U.S.A. This work was commenced last year and is still being actively pursued. Expenses relating to this and other work for the period up to June 1, 1965 have been previously forwarded by virtue of the statement included in our letter dated January 5, 1966.

We now enclose a Statement of Expenditure verified by the firm of Geib, Valestuk & Co, Chartered Accountants, in support of expenditures incurred by Sun Oil Company on the above-noted Reservations for the period June 1, 1965 to February 28, 1966. In preparing this statement we have followed the same procedure as that followed in the preparation of the previous statement in that the total amount of expenses allocated to our Manitoba holdings represents only that proportion (44 29%) of actual total expenditures that our Manitoba Oil Shale acreage bears to our total Canadian Oil Shale holdings.

Pursuant to Section 192(c), we have deposited Government of Canada $4\frac{1}{2}\%$ Bond Nos T29C 50749/50 Inc. and D 00433/34 Inc. Bearer due September 1, 1983 in the amount of \$60,000.00.

In view of the expenditures incurred to date amounting to \$48,497.21 (period ending June 1, 1965), and \$65,838.05 (period June 1, 1965 to February 28, 1966), for a total expenditure of \$114,335.26, we respectfully request a

Att Mr. J S Richards - 2 -June 22, 1966 refund of our cash deposits pursuant to Section 192 I(2) of the Regulations. Since Section 192 I(3) requires that at least 30% of the cash deposit shall be retained until after the Reservation holder has submitted the record required to be submitted under Section 192 M, we suggest that the refund at this time should include Bonds equal in value to \$40,000.00. We trust you will find our report of interest and our expenditure statement in good order. If so, we request that the Bonds to be refunded should be forwarded to Royal Bank of Canada, 740 - 8th Avenue S W, Calgary, Alberta. Yours very truly, SUN OIL COMPANY RDJ sm Jone's Encls. p. c. to:> Mr. M. J. Gobert, Assistant Deputy Minister.

COPY

March 9, 1966,

Mr. R. D. Jones,
Production Department,
Sun Oil Company,
Petro-Chemical Building
805 - 8 Avenue, West,
Drawer 38,
Calgary,
Alberta

Dear Mr. Jones:

Many thanks for your letter of February 14th, relative to Oil Shale Reservations Nos. 1 to 8 and 10. We also regret any misunderstanding that has arisen in regard to your work commitments in respect to these reservations.

offer except the comment that our understanding was based on a Memorandum to File, written shortly after the discussions referred to in our correspondence.

that your program is active, continuous, and systematic, the matter appears to be academic.

Yours very truly,

J. S. Richards, Director of Mines.

JSR:db

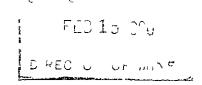
c.c. to Mr. M. J Gobert, Assistant Deputy Mind stell PARIME 1. 14 W - S

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ASSISTANT DIP TY MI







GEORG. E DUN AP
Manage Canadian Production Disposition
OYD E MILLER
A SIS ant Division Manager

PRISUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 805 8th Avenue W

Drawer 38 Calgary Alberta Canada

February 14, 1966

Department of Mines and Natural Resources Mines Branch 901 Norquay Building 401 York Avenue Winnipeg 1, Manitoba

ATTENTION Mr. J.S. Richards

Dear Sir

Re Manitoba 0:1 Shale Reserves
Nos. 1-8 inclusive and No. 10

We acknowledge your letter dated January 26th, the contents of which have been discussed at length with our Mr.E.E. Gilbert. In reply, we respectfully submit the following comments to the understandings expressed in your letter -

1. "The deposits would be retained until the end of the second year"

It is Mr. Gilbert's understanding that deposits would be retained until the end of the second year subject to the right to request their return upon providing satisfactory evidence that work was performed. This understanding was confirmed by the fact that we recently forwarded evidence of expenditures for your approval. However, regardless of the understanding reached, we are agreeable to leave the deposits on file with your department and postpone our request for reimbursement until the end of the second year.

2. "If Sun performed no work during the second year of the Reservations, the Crown would retain the entire work deposit."

We could not determine any basis for this understanding. We agree the deposits would be forfeited if no work was performed "by" the end of the second year. (Including both first and second years).

DIPM A.D.N. UW

FEB 1 8 1966

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However, this point is probably academic in that Sun is currently spending during the second year very substantial amounts by way of research utilizing previous information acquired in the reservation areas. It has been our intention to submit these further expenditures for your approval at the end of the second year anniversary date.

We naturally regret any misunderstandings that may have risen in this regard and we would appreciate any further information you have which would assist us in clarifying these various matters. Our concern in resolving these misunderstandings is perhaps magnified by our company's exploration program, which we feel has been active, continuous, and systematic and involved very substantial expenditures.

Yours very truly,

SUN OIL COMPANY

R.D. Jones

RDJ/cel

cc to Mr. E.E Gilbert

p. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister. (2).

January 26.

Mr. R. D. Jones. Production Department, Sun Oil Company. Petro-Chemical Building, 805 - B Av., W., Drawer 38, Calgary, Alberte.

Dear Mr. Jones:

This will acknowledge receipt of your letter of January 5, together with the Statement of Expenditures, verified by Geib, Valestuk & Co., Chartered Accountants...

It is noted that you intend to apply for a refund of cash deposits, in accordance with Section 192'I.(2) of the Regulations. Our understanding of the discussion, which wa held with Mr. E.E. Gilbert, was that the deposit would be retained until the end of the second year of the term of the reservations. Also that, in the event that during the second year of the permits Sun Oil did no work in respect to the permit areas, the Crown would retain the entire work deposit posted. In other words, that work done during the first year would not be credited for a refund of part of the deposit at the end of the second year,

Yours very truly,

Richards, Director of Mines.

to: Mr. Stuart Anderso:

Deputy Minister:

Mr. M. J. Gobert, Assistant: Deputy Ministen 26 1966

D. PARTMET Street

ALD NATURAL R

IN R - DEPARTMENTAL MEMORANDUM

FROM

J. S. Richards, Director of Mines.



DATE

January 24, 1966.

TO

Mr. M. J. Gobert, Assistant Deputy Minister.

SUBJECT Sun Oil Company -

Oil Shale Reservations.

Aggs and

Attachea, hereto, copy of a letter from Mr. R. D. Jones, together with a copy of the "Statement of Expenditures Incurred", referred to therein.

The expenditures as such appear reasonable, including the method of allocating research expenses, namely, "that portion which our Manitoba acreage bears to our total Canadian holdings ".

You will note, in the last paragraph, that it is the company's intention to apply for a refund under Section 192I (2). This suggestion, as you are aware, is not in accord with our understanding of the points of agreement reached in discussions with Mr. E. E. Gilbert.

In my memo to file, dated August 25, 1965, (under 3.), I stated that Mr. Gilbert agreed that, if no work was done during the second year, "it would be equitable for the Crown to retain the entire work deposit posted by Sun Oil.". I believe you agree with this statement.

Kindly advise if I shall write to Sun Oil, advising them accordingly.

JSR:db

Encs.

J.S. Richards.

DEPARTMENT OF MINES AND NATURAL RECOURAGE JAN 25 066

ri i r

GEORGE E DUNLAP Manager Canad an Production D son LLOYD E MILLER Assistant Division Manager



PRODUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 805 8th Avenue W • Drawer 38 Calgary Alberta Canada

January 5, 1966.

Department of Mines and Natural Resources, Mines Branch, 904 Norquay Building, 401 York Ave., Winnipeg 1, Manitoba.

DEPARTMENT C & NATURAL . LS Jun 1567 DIREC.

ATTENTION Mr. J.S Richards.

Dear Sir

Manitoba Oil Shale Permits 1-8 Inclusive, dated July 30, 1964. Manitoba Oil Shale Permit #10, dated October 23, 1964.

In accordance with Section 192 I of the Oil Shale Reservation Regulations, we enclose a Statement of Expenditures verified by the firm, Geib, Valestuk & Co., Chartered Accountants, relating to expenses incurred by Sun'Oil Company on the above noted Reservations for the period ending June 1, 1965. Detailed progress reports pursuant to Section 192 I (1) have been forwarded previously.

As a word of explanation, we wish to point out that total expenditures involved in research amounted to much more than reported in this Statement The amount reported here is that portion which our Manitoba Oil Shale acreage bears to our total Canadian Oil Shale holdings and to which our research program was related. We trust you will find this method of allocating expenditures satisfactory.

In the event the enclosed expenditures, in the amount of \$48,497.21, meets with your approval it will be our intention to apply for a refund of cash deposits under Section 192 I (2).

Kindly advise if further information is required.

p. c. to Mr. M. J. Gobert,

Assistant Deputy Minister;

with Statement of Expenditures Incurred.

D PARINT A. D N. What he o Ros

RDJ/cbm. **Enclosures**

JAN 25 1966

CSISTANT TO BE OFFICE

ACCES VERY MANUFACTURE TO THE

Yours very truly, SUN OIL COMPANY.

R. D. Jones.

DECLARATION

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES PROVINCE OF MANITOBA MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights #1 to #8 inclusive and Reservation of Oil Shale Rights #10.

TO WIT, I, Otto Joseph Geib, of the City of Calgary, in the Province of Alberta, a partner in the firm of Geib, Valestuk & Co., Chartered Accountants, do solemnly declare:

- 1. THAT Expenditures incurred by Sun Oil Company in connection with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period ending June 1, 1965 are as shown on Exhibit "A" attached hereto.
- 2. AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Calgary, in the 'Province of Alberta this _____ day of Alberta______ day.

Otto Joseph Gelb

A Notary Public in and for the Province of Alberta

DEPARTMENT OF MINES
ALD NATURAL REPOURCES
JAN 25 756

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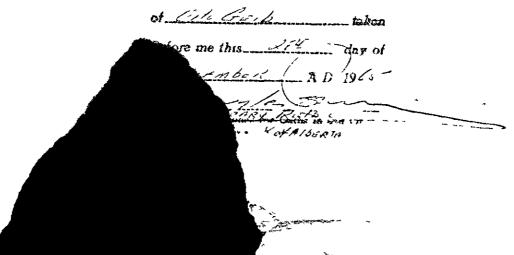
Statement of Expenditures Incurred by Sun Oll Company On Manitoba Reservation of Oil Shale Rights Numbers 1 to 8 Inclusive and #10 To June 1, 1965

Field Party Expenses (Party No. 12) Incurred to gather oil shale samples along outcrop on Manitoba escarpment for analysis and to establish regional trends of oil	\$ 1,983.00
shale occurrences.	
Second Core Hole Program To establish regional trends of oil shale values along edge of outscrop after failure of field parties.	11,228.35
Cutside Consultant Report To obtain preliminary evaluation of the economic potential of Manitoba oil shales and advise as to recommended exploration program.	3,462.00
Sun Oil Company Research Expenses on Oil Shale Technology Incurred by Sun Oil Company's research laboratory in the United States.	28,156.48
Audit Fees	<u>75.00</u>
Sun Oil Company administrative overhead of 8% added to above expenditures.	\$ 44,904.83 3,592.38 \$ 48,497.21
Note Through the Fish had the	

This is the Exhibit "A" referred to in the declaration of-Mr.-Otto-Joseph-Gelb-dated-_____A.D.-1965

This is Sahiral I Judges I by & the

ASSENT DEUSLES BLANCE





DEPARTMENT OF MINES AND NATURAL RESOURCES MINES BRANCH

RECORDING DIVISION
904 NORQUAY BUILDING
401 YORK AVENUE WINNIPEG 1

November 13, 1964

Sun Oil Company c/o Hontreal Trust Company Notre Dame at Albert Street Winnipeg, Manitoba

Gentlemen:

Attached Reservation of Oil Shale Rights No. 10 issued in the name of Sun Oil Company, Calgary dated October 23, 1964.

Also enclosed Official Receipt No. G 11106 in the amount of \$250.00 covering application fee and G 11107 in the amount of \$4,500.00 covering cash deposit on Oil Shale Reservation No. 10. These Receipts are issued in the name of Montreal Trust Company.

Yours truly,

T. Morgan

Chief Mining Recorder

TM/ar Encs.(3)

cc: Dr. J. F. Davies Chief Geologist

Reservation of Oil Shale Aights No 1

In consideration of and subject to the provisos, conditions and restrictions, hereinafter contained, permission is hereby granted to

Sun Oil Corpany, Colgary,

c/o Pontreal Trust Conrany, kotre Dame and albert Street, "In apeg, Manatoba

its successors, and assigns, to carry on geological and geophysical evarinations or both, including investigations relating to successors geology on the following linds, namely

Tomsin	Range
21 21 and 22 23 and 24 23 and 24	15 16 17 18
23 and 24 23 and 24 24	19 20
24 25, 26, 27 and 28	21
2h, 27, 24, 29 and 30	22

nll West of the Principal Meridian, containing #197,030 12 acres, more or less See attached list.

bee attached 115t.

"The lines of and Part Y of Hamitoba Perulation 29/50 reversing the disposal of boring claims, and any prendments thereto

Dated of 'am apeg this

(1)

Director of Manes

This reservation is subject in all respects to

Recention o. 1

Toman p 21, Tance 21, 4.P.M.

S. 1.1 Sec. 7, 12 and N.L. Sec. 18, 15 Sec. 26, F2 and N.W. Sec. 31.
All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 20, 22, 24, 25 to 30 incl., 32, 34 and 36.

Township 25, Namme 21 '. D f.

Sh Sec. 6, N.b.1 Sec. 18. All Sections 2, 4, 10 to 12 ircl., 14, 16, 20, 22, 24, 26 to 50 incl., 32 and 34.

To manip 26, Range 21, M.P ..

N.F. 2 Sec. 13, S.W. 2 Sec. 15, E' and N.W. 2 Sec. 21, N.F. 2 Sec. 26, N.L. 2 Sec. 27, S.V. 2 Sec. 33, L. and N.F. 2 Sec. 35. All actions 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 32, 34 and 36.

Tormship 27, Pange 21, W.P.M.

NaWal, Sec. 9, Nº Sec. 10, Nº Sec. 11, Hº Sec 12, Lº Sec. 15, Fº and NaW & Sec. 25, Value Sec. 26, N Sec. 27, Nav. Sec 33, W. Sec. 35.

All Sections 14, 16, 18, 20, 22 to 24 incl., 28 to 30 incl., 32, 34 and 36.

Town thip 28, Tange 21, W.P h.

No Sec. 17, Ed Sec. 21, W and S. . . Sec. 33.
All Sections 4, 6, 9, 16, 18 to 20 incl., 28 to 32 incl.

To mahip 26, Renge 22, U.F. t.

W¹ and N.L. Sec. 10, N 7.2 Sec. 26. All Sections 2, 11, 12, 14, 22, 24, 34 and 36.

Township 27, Range 22, J.P.M.

No Sec. 10, M' Sec. 11, 1' Sec. 12, N E. 2 Sec. 26. All Sections 14, 22, 24, 25, 34 and 36.

Tornehip 28, Bance 22, U.P. H.

No Sec. 26.
All pections 1, 2, 4, 6 to 8 incl., 10 to 12 ircl.,
14 to 20 ancl, 22 to 24 incl., Sec. 27 to 34 and 36.

Township 29, ange 22, ".".".

L¹ Sec. 9, V¹ and N E.z Sec. 13, 5.V.¹ Sec. 15, N.V.¹ Sec. 21, 5¹ Sec. 25, N.E. Sec. 26, V¹ Sec. 27 E¹ Sec. 33.

All Sections 1 to 7 incl., 10 to 12 incl., 14, 16 to 20 incl., 22, 24, 23 to 32 incl., 34 and 35.

Torship 20, Tric 22, "P .

Ali Sections 2, 11 to 1, incl , 23 to 25 incl., 35 and 36.

Pesemintain e. 1

Jo mahar 21. Farre 15. 7. P ".

S.E. 2 'cc. 7, " and S.V. 1 Sec. 9, S.L. 2 Sec. 17, S.E. 2 Sec. 19, 1. v., Sec 21, 3.L. 2 sec 33.

All sections 4 to 6 incl., 16, 18, 20, and 28 to 32 incl.

To 1,9hip 21, P yr 16, N.P. 1.

N.E. & Lec. 11, N.W. & Sec. 13, E¹ and S.W. & Sec. 14, F.E. & Sec. 26, N.J. & Sec. 28, 1.J. & Sec. 31.
All Sections 1, 12, 22 to 25 incl., 27 and 32 to 36 incl.

To mship 22, Range 16, 1.P.M.

* Sec. 19, k. Sec. 25, M.F. Sec. 26, All Sections 1, 2, 4 to 7 incl., 10 to 12 incl., 14 to 18 incl., 20 to 24 incl., and 27 to 36 incl.

Tornshin 23. Rarge 17. b.f.".

S.E.1, 1. V.1 and Wi of N.E.1 Sec. 1, C. Dec. 3, S. Sec. 9, S. S. Sec. 21, h.m. Sec. 26, N.E.2 Sec. 33.
All Sections 2, 4, 6, 7, 10 to 14 incl., 16 to 20 incl., 22, 24, 23 to 32 incl., 34 and 36.

Township 74. Range 17. .. P.M.

All Cections 5 to 7 incl., and 16 to 18 incl.

Townside W. Lance 1d. W.1.1.

N.I. \pm Sec. 1, L and N.N. \pm Sec. 12, r^{λ} and N.W. \pm Sec. 13, N. .. Sec. 26, ".'. \pm Sec. 27. All Section 22 to 24 incl., 28, 32, 34 and 36.

To mean 2L, P age Jr. W.P.

's Sec. 4, Wh Sec. 6.
All 'estions ?, 10 to 12 and 14, 16 and 18.

Tormsonp 20, Turn 19, N.P.M.

All Sections 33, 32, 34 and 36.

Icinship 24, , ree 19, 1/ P. s.

S and N.W., Sec. 2, N.W., Sec. 9, E3 and S.W.: Sec. 14, L' and h.W., Sec. 18.
All Sections 4, 6, 10, 11 and 16.

Toumship %, Range 20, 1, P.11.

S. 1 Sec. 13, " and N.T. Sec. 18, Ny Sec. 21, N.E. Sec. 25, 1 L., sec. 26, Sec. 27, L' Sec. 33, L and N U sec 34, W sec 18. Sec. 36.

All Sections 2, 1, 6, 10 to 12 irel., 14, 16, 20, 27, 24, 25 to 30 incl., and 32.

Peservot on of Oil Shale Ru ts No. 1

In consideration of and subject to the provisos, conditions and restrictions hereinafter contained, permission is hereby granted to

Sur Oil Company, Calgary,

c/o hontred Trust Comeny, Notre Dame and Albert Street, Wirnipeg, Manitoba.

its successors and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology, on the following lands, namely

To mship	<u> Pange</u>
21	15
21 and 22	16
23 and 24	17
23 and 24	18
23 and 24	19
21,	20
21, 25, 26, 27 and 28	21
^6, 27, 28, 29 and 30	22

all West of the Principal Meriai in, containing 197,030.12 acres, more or las. See Attached List.

This reservation is subject in all respects to "The kines Act" and Part X of Manitoba Regulation 29/50 governing the aisposal of toring claims, and any amendments thereto, until the cash deposit rejured under subsection 2 of Section 1920 of the said regulation is made, the examination shill be restricted to surface replace.

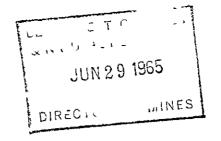
Dated at Winnipeg this

30th day of July, 1964.

Director of Mines







GEORGE E DUNLAP
Nanager Canadian Production Division
LLOYD E MILLER
Assistant Division Manager

S JOTION DEPARTMENT SUN OIL COVIDARY Petro Chemical Building 805 8th Avenue W. Drawer 38 Calgary Alberta Canada

June 25, 1965

Jun für Asla Mr

Mr J S Richards,
Department of Mines and Natural Resources,
901 Norquay Building - 401 York Avenue,
Winnipeg 1, Manitoba

Dear Sir

I am enclosing herewith three copies showing all of the analyses we have received to date for our Manitoba core These are analyses for core holes No 13, No (16C) No (17) No (19A) No 20 and No 21 and you will note that some sheets which are enclosed herewith show more than one well These same sheets also snow our outcrop samples with those having a prefix "L" having been taken by our geologist whose name was Linckens Some of the samples enclosed herewith were prepared and analyzed by the Chemical and Geological Laboratory here in Calgary These are for hole No 13, No 20 and No 21 and this analysis is dated May 25th this to be a fairly correct analysis, however, you will note that we have also enclosed analyses for the same holes from the same people dated April 13th It was this first set of analyses that made us feel that there may be an error and as a result we took one of our Saskatchewan cores where half of the core had already been analyzed by the Chemical and Geological Lab and sent the balance of the core to Colorado for comparative analysis As a result we came to the conclusion that the Chemical and Geological analysis was too low and they have rechecked their procedure and recalibrated their process and have given us the May 25th analysis

The core from core hole No 18 has been shipped to Golden, Colorado but we do not anticipate having the results for at least another two weeks. The core recovery on hole No 16A was very poor and it therefore has not been analyzed.

Very truly yours,

E E Gilbert

EEG/gm Encl p. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister.
Dr. J. F. Davies,
Chief Geologist.

de"

Mr J R Richards

I am enclosing herewith two zerox copies of items which I feel may be of some interest to you. One of these mentions the opening of the bridge at Fort McMurray, the other describes the surrender of the Montreal Trust holdings in the oil shale area of Saskatchewan. These Montreal Trust lands, in my opinion, are lands which were taken on behalf of Imperial Oil. They lie to the north of Sun's Pasquia Hills area as well as to the west of Sun's Pasquia Hills and a third block lies to the south of Sun's Saskatchewan oil shale permits and to the west of Sun's Manitoba oil shale reservations.

E E Gilbert

EEG/gm Encl

p. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister; -- with two-enclosures.

Dr. J. F. Davies, Chief Geologist; — with two enclosures.

August 5, 1964.

.

Shell Canada Limited, P. O. Box 186, Edmonton, Alberta.

ATT: Mr. D.W. Walker

Re: Oil Shale Reservations - Manitoba.

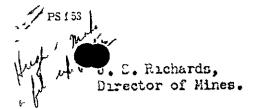
Dear Sir:

Enclosed are copies of Reservations #1 to #8, Townships 21 to 44, comprising some 1,476,532 acres, and a copy of the Regulations 42/64 under which the reservations were acquired.

Yours very truly,

F. S. Gamey, Reservoir Geologist.

FSG/1k





Sun Oil Company -

Oil Shale Reservations.

Attached, hereto, the original and a copy of Sun Oil's application for eight reservations of oil shale rights. These are the same areas which were discussed with the company sometime ago.

As you are aware, Section 192A of the Regulations provides that the granting of all such reservations are "Subject to the approval of the minister,".

If satisfactory, would you kindly have the approval indicated on the original application, and return it to this office.

Sun letter, outlining the proposed program, is also attached.

Richards.

JSR:db

c. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister.

Mr. T. Morgan, Chief Mining Recorder.

Dr. J. F. Davies, Chief Geologist.

"Approved by

Hon. George Hutton Acting Minister of Mines and Natural Resourcesⁿ

Montreal Trust Company

EXECUTORS & TRUSTEES . NOTRE DAME AT ALBERT STREET, WINNIPEG MAN . TELEPHONE WHItehalf 3-0451

July 27th, 1964.

Attention - Mr. Richards

Derartment of Mines and Natural Resources, Mines Branch, WIANIPEG, M a n 1 t o b a

Dear Sirs

On behalf of Sun Oil Company, Calgary, we now make application for exploration permits covering the following blocks of land set out in the attached list.

Attached you will also find a letter from Sun Oil Company describing the scope of the exploration and examination to be carried out and the estimated cost thereof. This is required under your regulations and we trust you will find it in order.

Application fees and deposits to be paid are estimated as follows --

Statement of Tees

		Control of the Lawrence of the	
		Application Fee	Deposit
Reservation		\$250.00	\$7,500.00
	#2	250.00	7,500.00
# # ##	#3	250.00 *	7,500.00
	7 /4	250.00	7,500.00
	# 5	250.00	7,500.00
	#6	250.00	7,500.00
	#7	250.00	7,500.00
	#8	250.00	4,500.00
		\$2,000.00	57,000.00
			2,000.00
	Total	•••••••	\$59,000.00

You already have our cheque for \$69,500.00 which was forwarded with our letter of June 1st, 1964. Thus, there would appear to be a refund due us for the credit of Sun Oil Company of \$10,500.00. We presume you will remit this to us at your convenience.

Yours truly,

MONTREAL TRUST COMPANY

V. E. Driver, Manager, Mortgage Department

VED/1r

Encl.

p. c. to: Mr. M. J. Gobert, Assistant Deputy Minister;

> Mr. T. Morgan, Chief Mining Recorder:

Dr. J. P. Davies, Chief Geologiat. SUN DIL COMPANY

CANADIAN PRODUCTION DIVISION

G E DUNLAP

805 BTH AVE W

CALGARY, ALBERTA

17 July 1964

L E MILLER

M E AUSTIN

Chief Mining Recorder,
Department of Mines and Natural Resources,
Mines Branch,
WINNIPEG, Manitoba.

Dear Sir

Pursuant to Manitoba Regulation 42/64, you require data setting out the extent of the examination to be made and the estimated cost thereof

It is our present plan to perform surface field geology along the exposed outcrops of the Niobrara formation within the Province of Manitoba and upon our various oil shale reservations. In the course of our surface geological investigations, we will take samples of the outcropping formations and these samples will be analysed for oil content and other associated mineral content. These samples will be analysed in one of several laboratories, either Colorado School of Mines at Golden, Colorado or our own Research Laboratory at Richardson, Texas, or in our newly built laboratory in Calgary, or perhaps at some as yet undetermined laboratory

From the analyses we anticipate determining

- Oil content in gallons per ton
- The specific gravity of the oil
- 3 The amount of total water in gallons per ton In addition, we will further analyse the oil shale to determine its other chemical properties.

Following our initial analyses of the samples taken in the field, we will determine whether any area appears to contain oil shales approximating the oil content which we believe would be required in order to economically proceed towards potential plant construction. We will then proceed with more detailed geological field examination and with further sample recovery and analyses. This will cover more closely

located outcrops within the same apparently desirable area and this work will undoubtedly include trenching of the outcrop face so that the surface samples may be obtained below the weathered surface

If these more detailed samples support the earlier studies and show that an area of apparently economic oil shales has been located, we will then quite possibly wish to do sub-surface examinations through core hole drilling to further delineate the extent of the apparently economic oil shales We anticipate that the cost of a surface geological field party, consisting of two men, will be approximately \$4,000 per month. In addition, our present arrangement with the Colorado School of Mines is that we will pay \$1 00 per sample for sample preparation and \$4.00 per sample for the Fischer Analysis These prices are in U.S. dollars addition, we will have some costs attributable to our further analyses in our Richardson and Calgary laboratories We do not know yet what these costs will be, however, one test which will be made on selected samples $_{ extsf{LS}}$ X-Ray analysis and I understand this costs approximately \$30 00 per sample It is impossible at this point to determine how many samples will be analysed and what our costs will be for this analyses work In actuality, it really depends upon what quality of oil shale we find in our initial field geological work

The problems associated with our oil shale exploration are entirely new and we just cannot say for sure what our full program will eventually entail. At present we have a geologist by the name of William Linckens, who is a consultant, and his assistant William Goodman, working along the Niobrara outcrops in the Province of Manitoba. These men are working under the supervision of our Chief Geologist, Mr. H. Westmore, who is a Professional Engineer for the Province of Manitoba.

It is impossible for me at this time to estimate what our total exploration expenditures on these permits will be We do realize of course that we have placed deposits and at present I anticipate that our expenditures may approximate those deposits. This is such a new problem as compared to the conventional oil business that we just cannot firmly say what our costs will be

I trust that this report will be sufficient for the formal application for these oil shale permits which have been applied for by the Montreal Trust Company for the Sun Oil Company.

Yours very truly

E E Gilbert

EEGss

p. c. to: Mr. Stuart Anderson, Deputy Minister.

Mr. M. J. Gobert, Assistant Deputy Minister.

Orig. to: Mr. T. Morgan, Chief Mining Recorder.
-p. c. to Dr. J. F. Davies, Chief Geologist.

SUN OIL COMPANY

CANADIAN PRODUCTION DIVISION

G E DUNLAP MANAGER

805 BTH AVE W PO DRAWER 38 CALGARY, ALBERTA CANADA

M E AUSTIN

4 November 1964

SUPT OPERATING DE T

Department of Mines and Natural Resources, Mines Branch Director's Office, 901 Norquay Building - 401 York Avenue, WINNIPEG I, Manitoba

CT MINES

Attention Mr J S Richards

Dear Sir

The Royal Bank of Canada, Main Branch Calgary Alberta is forwarding Dominion of Canada Government Bonds to the value of \$57 000 for deposit with your department with regard to our oil shale reservations numbered I to 8 inclusive. In addition, the same bank is forwarding similar bonds to the value of \$3,000 for deposit with your department to replace a cash drilling deposit which has previously been placed with your department

When the bonds have been received, will you please return our cash deposits to my attention

Thanking you, I remain,

Yours very truly

E E Gilbert

EEGss



Chief Li ing Recorder

November 13, 1 64.

Depretmental Accountant

Attention "r. F V. Sterar

Sun Oil Co pany

I would advise you that Oil Shale Reservations tere issued to the above Corpany on July 39, 1964, and cash in the amount of \$57,000.00 deposited as a performance bond.

On hovember 12, 1964, The Royal Bank of Canada forwarded \$60,000.30 Government of Canada Bonds 455 due September 1, 1963, T 29 650749/50 inc., D 00433/54 inc., with Farch 1965 sca. I telephoned James Richardson today, and they quoted the selling price of these bonds at \$93.00, so the cash value of these bonds today would be \$55,800.00

Interest rayable Parch 31, 196, will be a1,300.00, being the value of the deposit to \$57,150.00. The deposit is not callable after this date.

Please advise Treasury not to clip the coupons without our approval.

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T. "organ.

Hovember 18, 1904

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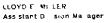
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PRODUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 805 8th Avenue W Drawer 38 Calgary Alberta Canada

March 10, 1965

Department of Mines & Natural Resources Mines Branch Recording Division 904 Norquay Building 401 York Avenue Winnipeg l, Manitoba

Attention Mr. T. Morgan

Dear Sir

On November 9, 1964, the Royal Bank of Canada forwarded \$60,000 Canada Conversion 4 ½% Bearer Bonds to your department to replace our cash deposits held by you as follows

> \$57,000 3,000 Oil Shale Reservations Nos. 1 to 8 Drilling License No. 2019

To date we have been refunded the \$57,000 cash deposit on the Oil Shale Reservations but have not received the \$3,000 being held as a Drilling deposit.

Would you kindly look into this matter and refund the \$3,000 as soon as possible.

As the interest coupons on the \$60,000 bonds became payable March 1, 1965, we would appreciate it if you would clip these coupons and forward them to the following bank for deposit to our regular account.

> The Royal Bank of Canada 740 - 8th Avenue S.W. CALGARY, Alberta

Please double register the transmission of these coupons and kindly charge us for any costs that you may have incurred in this connection.

Please use this letter as your standing authority to clip all subsequent coupons as they fall due and forward them to the address mentioned above.

Authorized by

Allondon (the can)

10 AC.

COPY r. J. count,

Sun Cil Company -

Cil Shale Pepervations.

ttached, rereto, comy of a letter from la. F. D. Jones, together with a copy of the "Little ent of Line witures Incurred, referred to dicress."

The expenditures as such as ear reasonable, ancluding the method of allocating research excesses, namely, it into police than our naminose acreage nears to our total Canadian rolango ".

You will note, in the last paragraph, that it is the commany's intentic to apply for a medial macr. Secure 1921 (2). This capacition, as you are a me, is not in according our unicustanding of the points of agree of the calcustence in classical inviting to the Gilbert.

In my scho to fale, d-tel August 25, 1965, (under 3.). I stated that ... Calbert agreed that, if no cork was done outing the second very list would be equitable for the Croim to recan the entire for denosit posted by Sun Oil.". I believe you agree with this scatterent.

Vandly savase if I shall raits to Eun Oil, advasing them accordantly.

JSF ab

Encs.

c. c. to Air. T. Forgen, Chief lining Recorder. Jy S. Fic ards.





GEORGE E DUNLAP Manage Canad an Production D is on LLOYD E MILLER Assistant D son Manager

PRODUCT ON DEPARTMENT SUN OIL COMPANY Pero Chemica Building 805 8th Avenue W . Drawer 38 Calgary Alberta Canada

January 5, 1966.

Department of Mines and Natural Resources, Mines Branch, 904 Norquay Building, 401 York Ave., Winnipeg 1, Manitoba.

DEPARTMENT (& NATURAL, 15 J-1 5-1983

ATTENTION Mr J.S Richards.

Dear Sir

Manitoba Oil Shale Permits 1-8 Inclusive, dated July 30, 1964. Manitoba Oil Shale Permit #10, dated October 23, 1964

In accordance with Section 192 I of the Oil Shale Reservation Regulations, we enclose a Statement of Expenditures verified by the firm, Gerb, Valestuk & Co., Chartered Accountants, relating to expenses incurred by Sun'Oil Company on the above noted Reservations for the period ending June 1, 1965. Detailed progress reports pursuant to Section 192 I (1) have been forwarded previously.

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In the event the enclosed expenditures, in the amount of \$48,497 21, meets with your approval it will be our intention to apply for a refund of cash deposits under Section 192 I (2).

Kindly advise if further information is required.

p. c. to: Mr. M. J. Gopert,

/ssictant Deputy Limistor;

vich State ent of Expenditures Incurred.

>Mr. T. Morgan, Chief Lining Recorder.

RDJ/cbm, Enclosures Yours very truly,

SUN OIL COMPANY.

DECLARATION

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES

PROVINCE OF LANITOBA

MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights # 1 to # 8 inclusive and Reservation of Oil Shale Rights # 10 TO WIT, I, Otto Joseph Gerb, of the City of Calgary, in the Province of Alberta, a partner in the firm of Geib, Valestuk Loeppky & Co, Chartered Accountants, do solemnly declare

- THAT Expenditures incurred by Sun Oil Company in connection 1 with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period from June 1, 1965 to February 28, 1966 are as shown on Exhibit "A" attached hereto.
- 2 AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and my virtue of the Canada Evidenc≏ Act

DECLARED BUFORD ME at the Caty of

Calgary, in the Province of Alberta

A D 1965.

1106 Joseph Euch

A Notary Fublic injerd for the Province of Albeita

Exhibit "A"

Statement of Expenditures Incurred
by Sun Oil Company
On Manitoba Reservation of Oil Shale Rights
Numbers 1 to 8 Inclusive and #10
From June 1, 1965 to February 28, 1966

Sun Oil Company Research Expenses on \$ 60,951 90
Oil Shale Technology
Incurred by Sun Oil Company's research
laboratory in the United States

Audit Fees 10.00
\$ 60,961 90

Sun Oil Company administrative overhead of 8% 4,876 15

added to above expenditures \$ 65,838 05

July James of 11

DECLARATION

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES PROVINCE OF MANITOBA MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights #1 to #3 inclusive and Reservation of Oil Shale Rights #10.

TO WIT, I, Otto Joseph Gerb, of the City of Calgary, in the Province of Alberta, a partner in the firm of Gerb, Valestuk & Co., Chartered Accountants, do solemnly declare

- 1. THAT Expenditures incurred by Sun Oil Company in connection with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period ending June 1, 1965 are as shown on Exhibit "A" attached hereto.
- 2. AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Calgary, in the Province of Alberta this _____ day of // / / / / A.D 1965.

Otto Joseph Geib

A Notary Public in and for the Province of Alberta

illing the state of

\$ 1,983.00

Statement of Expenditures Incurred by Sun Oil Company On Manitoba Reservation of Oil Shale Rights Numbers 1 to 8 Inclusive and #10 Fo June 1, 1965

Field Party Expenses (Party No. 12) Incurred to gather oil shale samples along outcrop on Manitoba escarpment for analysis and to establish regional trends of oil shale occurrences.

Second Core Hole Program 11,228.35

To establish regional trends of oil snale values along eage of outscrop after failure of field parties.

Outside Consultant Report 3,462.00

To obtain preliminary evaluation of the economic potential of Manitopa oil shales and advise as to recommerded exploration program.

Sun Oil Company Research Expenses on 28,156.48 Oil Shale Technology

Incurred by Sun Oil Company's research laboratory in the United States.

Augst Fees **75** 00

\$ 44,904.83 Sun Oil Company administrative overhead of 8% 3,592,38 added to above expenditures.

\$ 48,497 21

<u>Note</u>

This-is-the-Exhibit-"A"-referred-to-in-the-declarationof Mr Otto Joseph-Gelb dated ______A.D.-1965

Tren w Franch Z Tongs I by & For

All with Dellassie

of Lill E. A. taken

Before me this day of

DECLARATION

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES PROVINCE OF LANITOBA MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights #1 to #8 inclusive and Reservation of Oil Shale Rights #10.

TO NIT, I, Otto Joseph Gerb, of the City of Calgary, in the Province of Alberta, a partner in the firm of Geib, Valestuk & Co., Chartered Accountants, do solemnly declare:

- THAT Expenditures incurred by Sun Oil Company in connection 1. with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period ending June 1, 1965 are as shown on Exhibit "A" attached hereto.
- AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

DECLARED BEFORE ME at the City of Calgary, in the Province of Alberta this day of Al molin &

A D 1965.

A Notary Public in and for the Province of Alberta

Statement of Expenditures Incurred by Sun Cil Company On Manitoba Reservation of Oil Shale Rights Numbers 1 to 8 Inclusive and #10 To June 1, 1965

Field Party Expenses (Party No. 12) Incurred to gather oil shale samples along outcrop on Manitoba escarpment for analysis and to establish regional trends of oil shale occurrences.

\$ 1,983.00

Second Core Hole Program

11,228.35

To establish regional trends of oil shale values along edge of outscrop after failure of field parties.

Outside Consultant Report

3,462.00

To obtain preliminary evaluation of the economic potential of Manitoba oil shales and advise as to recommended exploration program.

Sun Oil Company Pesearch Expenses on Oil Shale Technology Incurred by Sun Oil Company's research

laboratory in the United States.

23,156.48

Audit Fees

75 00

\$ 44,904.83

Sun Oil Company administrative overhead of 8% added to above expenditures.

3,592.38

\$ 48,497.21

<u>Note</u>

This-is-the-Exhibit-"A"-referred-to-in-the-declarationof Mr. Otto Joseph-Gerb dated ______A.D. 1965

This w Brand " mon it o re

Filmont D. Shally

of (1) F-h talon

Briore me this day of

E PES OF STATE OF STA

Reservation of Onl Shale Rights No. 2

In consideration of end subject to the provisos, conditions and restrictions, hereinafter contained, permission is hereby granted to

Sun Oil Corpany, Calgary,

c/o Montreal Trust Corwany, Notre Dame and Albert Street, Winnipeg, Manitoba.

its successors and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology on the following lands, namely

Rarge
22 23 24

all West of the Principal Meridian and containing an area of 194,432.00 acres, more or less. See attached list.

This reservation is subject in all respects to
"The Mines Act" and Part X of Manitoba Regulation 29/50 governing
the disposal of boring claims, and any amendments thereto, until the
cash deposit required under subsection 2 of Sert_on 1920 of the said
regulation is made, the examination shall be restricted to surface
geology
Dated at Winniper this

30th day of July, 1964.

Jeticlaus.
Director of lines

Reservation do. 2

Tornoidp 30, tanca 22, M.P.M.

\(\text{and N ... Sec 15, 1' and N. ... Sec 21, 5 Sec. 33.} \)
All Sections 4 to 7 incl., 9, 10, 16 to 20 incl., 22, 27 to 32 incl., and 34.

Township 31, hence 22, W.P.M.

N.I. 2 Sec. 26.
All Sections 1 to 7 incl., 9 to 25 _ncl., and 27 to 36 incl.

Townside 32. Janea 22. U.P.H.

All Sections 4 to 7 incl., 9, 16 to 21 incl., and 28 to 33 incl.

Touriship 33, Finne 22, 14.P 4

All Sections 4 to 7 incl., 9, 16 to 21 incl., and 28 to 33 incl.

Township 30. Rance 23. U.P. 1.

All Sections 1 to 36 incl.

Township 31, Range 23, N.P.H.

All Sections I to 36 incl.

Township 32, Langu 23, P. L.

N.F. 1 Sec. 26. All Sections 1 to 25 ircl., and 27 to 36 incl.

To mehin 33, Ronge 23, V.2.M.

M.L.4 Sec 26, All Sections 1 to 25 incl., and 27 to 36 incl.

Township 30, ange 24, 1.P 1.

All Sections 1 to 36 incl.

Towns up 31, Pance 24, V.P Y.

All Sections 1 to 36 ancl.

Control of the state of the sta

Reservation of Onl Shile Rights No. 3

In consideration of and subject to the provisos, conditions and restrictions, hereinafter contained, permission is hereby granted to

Sum Oil Company, Calgary,

c/o Nontreal Trust Company, Notro Damo and Albert Street, Whnnipeg, Manitoba.

its successors and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology on the following lands, namely:

<u>Township</u>	Range
34, 35 and 36	23
32, 33, 34, 35 and 36	24
34, 35 and 36	25
36	26

all Vest of the Principal Meridien, and containing an area of 192,795.70 acres, more or loss. See attached list.

This reservation is subject in all respects to "The Tires Act" and Part X of Manitoba Pepulation 29/50 governing the disposal of boring claims, and any amendments thereto.

Until the cash deposit required under subsection

2 of Section 1920 of the slid regulation is made, the communition sall
be restricted to surface geology.

Dated at Winnipeg this

30th day of Jul, 1964.

Director of Mines

recorration "o. 3

Tom 1'L 74, 11 9 73, 1 1.11.

J.E.1 Sec. 26.
All Sections 1 to 7, 9 to 25 incl., and 27 to 36 ancl.

Tounchap 35, Payre 23, J.P.M.

All Sections h to 7 and 1, 9, 16 to $\mathcal A$ incl., and 23 to 33 incl.

Tornel p 36, Jane 23, L.P M.

All Sections 4 to 9 incl., and 16 to 18 incl.

Township 32, Rance 2L, W.P. (

All Sections 1 to 36 incl.

To m hip 33, Fance 24, V P.M.

All Sections 1 to 36 incl.

To whim 3 .. Pance 24, ".P.H.

All Sections 3 to 36 incl.

Townshap 35, F nee 2c. '.P.".

All Sections 1 to 36 incl.

To matur 26, Range 21, V.F.

All Sections 1 to 7 incl., and 9 to 18 incl.

Township 34, Renge 25, '1.P.'.

All Sections 1 to 36 incl.

Township 35, Range 25, ".P. C.

All Sections 1 to 4 incl., 6, 10 to 16 incl., 18, 20, 22 to 30 incl., 32, and 34 to 36 incl.

Townshir 36, Franc 25, 1 .F. 1.

All Sections 2, 4, 6, 10 to 12 incl., 14, 16 and 18.

Tornship 3(, Par a 26, V.P i.

M.E. & Sec. 15.

All becalons 2, 4, 6, 10 to 12 incl , 14, 16 and 18.

Constant Con

Reservation of Oil Shalo Pigats No. 4

In consideration of and subject to the provisos, conditions and restrictions, hereinafter contained, permission is hereby granted to

Sun Oll Commany, Calgary,

c/o Montreal Trust (ompany, Notre Damo and Albert Street, Winning, Manitoba.

its stocessors and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology on the following lands, namely:

To nship	Range
32 and 33 33, 34 and 35	25 26
33, 34 and 35	27
33 and 34	28
34	29

all West of the Principal Meridian, and containing an area of 199,247.15 acres, nore or less. See attached list.

This reservation is subject in all respects to

"The Mines Act" and Part X of Mamitoba Regulation 29/50 governing

the disposal of boring claims; and any emendments thereto.

Un'il the cash demosit ; ou had income section

Until the cash demonstration and the most on 2 on Scot on 1990 of the sold mail throng is made, the exprimation shall are restricted to surface prology.

Dated at dimineg this 30th day of July, 1964.

Director of Mines

wation lo. 4

14p 33, E. no 25, W.F.A.

All Sections 1 to 36 incl.

umobin 33. Range 25, ".F.".

All Sections 1 to 36 ircl.

formship 33, Range 26, W.P M.

All Sections 1 to 36 incl.

To makip 34, Range 26, W P.M.

All Sections 1 to 36 incl.

Township 35, Range 26, W P.M.

W₂ and k.E. Sec. 5, All Section 1 to 4 incl., 6, 10 to 12 incl., 14, 16, 18, 20, 22, 21, 23 to 30 incl., 32, 34 and 36.

Tornship 33, Range 27, U.P H.

All Sections 1 to 36 incl.

Township 34. Rango 27. W P.M.

St Sec. 21, N.E. & Sec. 26, E. Sec. 27, S.E. & Sec. 35, All Sections 1 to 7 incl., 9 to 14 incl., 10, 18, 20, 22, 23, 24, 25, 28 to 30 incl., 32, 34 and 30.

Toyns'dp 35, Range 27, W.P.V.

All Sections 2, h, 6, 10 to 12 incl, 14, 16, 18, 20, 22, 24, 23 to 30 incl., 32, 34 and 36.

Township 33. Range 28. W.P.M.

E2 Sec. 25, N.E.2 Sec. 26, N. Sec. 27, All Sections 1 to 6 incl., 9 to 18 incl., 20, 22 to 24 incl. 28 to 30 incl., 32 and 34 to 36 incl.

Township 34, Range 28, W.P.M.

N.E. $\frac{1}{2}$ Sec. 26, All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 32, 34 and 36.

To nship 34, Range 29, U.P. ".

N.E.1 Sec. 26, All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 ircl., 32, 34 and 36. Canada R. Tillian

Reservation of Cil Shale Rights No. 5

In consideration of and subject to the provisos, condutuors and restrictions, hereinafter contained, permission is hereby granted to

Sun Oil Company, Calgary,

c/o Montroal Trust Company, Notre Dane and Albert Street. Winnipeg, Manitoba.

its successors, and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology on the following lands, namely:

<u>Township</u>	Renge
39 and 40	26
38 and 39	27
35, 37, 38 and 39	28
35, 36, 37 and 38	29

all best of the Principal Meridian, and containing an area of 197,377.15 acres, Lord or less. See attached list.

This reservation is subject in all respects to

"The Mines Act" and Part X of Manitoba Regulation 29/50 govern-

ing the disposal of boring claims, and any amendments thereto. Int 1 the rish descrit minuses under subsect on 2 of left r 1920 of the frid result ion is mile, the exist ion sill be re-tricted to surface reology Dated at Vinnipeg this

30th day of July, 1964

Director of Mines

an hip 39. Range 26. W.P.M.

N.E. & Sec. 26, All Sections 1 to 25 incl, and 27 to 36 incl.

Township 40, Range 26, W.P. 1.

All Sections 1, 2, 11 to 14 incl., 23 to 25 incl. and 36.

Township 38, Range 27, V.P.M.

F.L. 2 Sec. 26.
All Sections 2, L, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 32 incl., 34 and 36.

Township 39, Range 27, W.P.

All Sections 1 to 36 incl.

Township 35. Renge 28. 4 P.1.

All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl, 32, 34 and 36.

Tormship 37, Range 28, 7 P. A.

N.E. 2 Sec. 26, All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 3, 34 and 36.

Township 38, Range 22, U.P.Y

F1 and N.W.r Sec. 1, All Sections 2, 4, 6, 10 to 12 incl., 14, 16 to 35 incl.

Towns hip 39, Range 28, W.P.M.

All Sections 1 to 36 incl.

Township 35, Range 29, W.P.M.

All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 21, 23 to 30 incl., 32, 34 and 36.

Township 36, Renge 29, W.P.M.

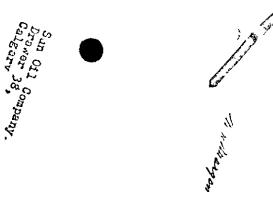
E¹, N.W.½ and N¹ of S W.½ Sec. 4, N.E.? Sec. 26, All Sections 2, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 32, 34 and 36.

Township 37, Range 29, 1',p,1'

S.W. L Sec. 8, N.E. Sec. 26, All Sections 1 to 7 incl., 9 to 25 incl., 27 to 36 incl.

Township 38, Range 29, J.P Y.

All Sections 1 to _6 incl.



Pescryption of Oil Shale Rights No. 6

In consideration of and subject to the provises, conditions and restrictions, hereinafter contained, permission is hereby granted to:

Sun Oal Company, Calgary,

c/o Montroal Trust Company, Not a Dama and Albort Street, Minning, Manitoba.

its successors and assigns, to carry on reclogical and goophysical examinations or bot h, including investigations relating to subsurface goology on the following lands, namely:

Tour hip	Rango
41 and 42	25
40, 41, 42, 43 and 44	26
40 and 44	27
40	28

all West of the minospal horidian, and containing an area of 176,620 acres, more or loss. See attac ed list.

This reservation is subject in all respects to

"The Mines Act" and Fart X of Manitom Regulation 29/50 rovoming the disposal of boring claims, and any amendments thereto.

Until the cash denosit recurred under subjection 2 of pectagn 1926 of the said minute is mide, the examination shall be related to surface replay.

Dates at Minnipeg this

30th day of July, 1964.

120 lietars

Directo, of Mines

£207 100 6

Mr. L. Prom or . To.

All bections 4 to 7 irel., 9, 16 to 21 incl, and 21 to 33 irel.

/-- Htp 12. Ponto 25, H.P. H.

E: Soc. 8, All Sections 4 to 7 incl., 9, 16 to 21 incl., and 23 to 33 incl.

Tornship 40, Parce 26, U.P.M.

All Sections 3 to 10 incl., 15 to 22 incl., 27 to 35 incl.

Township Li. Rongo 26, W.P.M.

All Sections 1 to 36 incl.

Township 42. Hance 26, W.P.H.

N.T. Sec. 26, /11 Sections 1 to 25 incl., and 27 to 36 incl.

Township 43, Panco 26, W.P.M.

N.E. Sec. 26, All Sections I to 25 incl., and 27 to 36 incl.

Tomohip LL. Range 26, U.P. 11.

All Sections 1 to 7 incl., and 9 to 36 ircl.

Tomordo 40. Fe co Sta 1'-P. ".

All Sections 1 to 36 incl.

Tomship 44. Pongo 27, Y. P. 11.

P.E. Sec. 76.
All Sections 1 to 25 incl., and 27 to 36 incl.

Tome in 40. Lange ?', w.P.'l.

All Sections 1 to 36 incl.

Poserv tion of Cil Sigle I pito 10. 7

In consideration of and subject to the provices, conditions and restrictions, horoinafter contained, pagmission is here w granted to

Sun Cil Company, Colgary,

c/o Montre 1 Trast Corrany, lotre Dane and Albert Street, Windper, Lantobr.

its successors and essigns, to carry or geological and geophysical examinations or both, including investigations relating to subsurface geology on the following lands, namely:

To noble	Reygo
42 and 43	27
42, 43 and 14	<i>2</i> 3
42, 43 and 44	29

all 'out of the Principal' eridian, and containing an eroa of 183,681.60 acros, more or less. Sou attract list.

The reservation is cabject in all respects to

"The Mine" Act" and Part X of "Anitoba Regulation 29/50 rovening

the discosal of Loring claims, and any area ments thereto. Until the case demosit required under I section ? of section 1926 of the allo mill tion is a de, the explanation until to restricted to surface renloar

Dated at ind, or this

30th day of July, 1964.

Director of 'Hnou

11 - 22 7 10. 7

To moran 12, Ton- 27, 3 11,

All cetions 1 to 36 incl.

To nehin 43, Fourd 27, F.

All Sections 1 to 36 incl.

Tornehip 12. Tance ? . (.F.)

all lections 1 to 36 irol.

" Or a m 13 thin or "

All Sect or 1 to 3 ircl.

To not in the nee 22. it.

1 and ... ec. 2'.
All ecoural to 25 and., and 2" to 30 incl.

"סוד פון דו בים, ז את אין, ה".

/11 Tecti n. 1 to 36 incl.

· or - 13. 35 No ...

.11 cca no 1 to 30 - cl.

"comm" 11, " " ". ...

1. . Sec. %.
All 'estical 2 to of incie, of 27 to 36 incie

A CONTRACTOR OF THE PARTY OF TH

Reservation of Oil Stale Roghts No. 8

In consideration of and subject to the provises, conditions and restrictions, hereinafter contained, permission is hereby granted to:

Sun Oil Company, Calgary,

c/o Nontreal Trust Commany, Lotre Dame and Albert Street, Minnipog, inniteba.

its successors and assigns, to carry on geological and georhysical examinations or both, including investigations relating to subsurface geology on the following lands, namely

To mohip	Ronge
139, 10, 11	27
14	20
14	29

all jest of the Principal Meridian, and containing an area of 115,200 acres, more or less. See attached list.

This reservation is subject in all respects to

"The Mines Act" and Fart X of Manitoba Fegulation 29/50 poverning

the disposal of boring claims; and any amarkments thereto.
Until the condensate reduced during subjection 2 of pectron 1920 of the mid regulation is suce, the examination small refracted to surface reducty.

Dated at Winniper this

30th day of July, 1964.

Director of dames

secretion in B

ir mohin 11. 7. nes 77. 1.2.1.

All Sectmons non. 1 to 36.

To mahip 11. Tours 22. W.P.M.

All Sections Nos. 1 to 36.

To n 'ar 39. I nm 29. 1.7.".

All Sections hos. 1 to 36.

Torm hip 10, Rence 29, '.p.'.

All Sections Pos. 1 to 36.

To make 1.1. Bringe 29, N.T.H.

All Sections Nos. 1 to 36.

RESIDVATE OF OUR SHIP PIC TO IT . 10

C 3/

In consideration of and subject to the provisor, conditions and restrictions here mafter contained, peralesion is hereby granted to: Sum Oil Company, Calgary,

c/o 'ontreal Trust 'o play, Notre Pere at Albert Street, Vintage, Nanatoba.

its successore and assigns, to carry on coological and geophysical expinations or both, including investigations relating to subsurface geology on the follo include, namely:

Tourship	Paner
23	20~
23	21 ~
23,24,25,26	22
23,24,25,20	23
21,,25,25	24
25	25

all West of the Principal Peridian, containing 109, 268, 82 acres, more or less. <u>see Actual ed List</u>.

This reservation is subject in all respects to "The "dies Act" and Part X of huntoba Logulation 27/50 governing the disposal of boring claims, and any abundments to rote, until the cash deposit received under Subsection 2 of section 1920 of the said regulation is used, the obtain tion shall be restricted to surface rectory.

Dated at lunniper this
23rd dry of reteber, 1964.

1) Her Leas

2. Tenero 20 1 .P. .

Pt. 13 Sec. 7, Pt. 13 Sec. 8, Pt. 13 sec. 15, Ft. Sec. 16 Pt. Sec. 17, All Sec. 16, 19, 20, 21, 77, Pt. Sec. 23, 1 Sec. 25, Ft. 5 Sec. 26, 16 Sec. 20, All Sec. 27, 23, 29, 30, 31, 37, 33, 34, 35 and 36.

To asii, 23. Pance 21 ".P.M.

H' Soc. 1, All Secs. 12, 13, 24, M.F. 2 Sec. 25, M.E. 2 Sec. 26, All Secs. 2', 29, 30, 32, 34 and 36.

Temphin 23, France 22 /.P 1.

N.I. Soc. 2., All secs. 23, 29, 30, 32, 34 and 36.

Terms 1p 24, Pango 22 11.P. 1.

1.W. Sec. 1, the of 5.1.2 Sec. 1, What are 3.F.2 Sec. 2, All Sec. 4, F. and 5.1.2 Sec. 6, 5.1. Sec. 9, All Sec. 10 and 11, F and 5.1.2 Sec. 12, 11.1. Sec. 13, All Sec. 14, 1 and 5.1.2 bec. 16, All Sec. 16, 1 and 5.7. Sec. 20, 5.11.2 Sec. 21, All Secs. 22, 24, Whoc. 25, 1.1 sec. 25, 1.11.2 Sec. 27 and 5.11.2 sec. 27, All Secs. 28, 29, 30, Frind 5.11. Sec. 37, Sec. 33, All Sec. 34, 5.1.2 Sec. 35 and All Sec. 36.

Townsein 25, 1 mma 22 1.P. 4.

All sec. 2, 1 to .4.1 xc. L, All Secs. 6, 10, 11, 11 Sec. 12, All Secs. 14, 16, 1 Sec. 12, All Secs. 20, 22, 21, 1.1.1 Sec. 25, All xcc. 23, 29, 30, 32, 31 and 5. . 1 Sec. 36.

To me dip 26, R. nee 22 11.1.1.

All 3ccs. 4, 6, 16, 16, 20, 2', 29, 1' Sec. 30, and All Sec. 32.

Tomerio 23. Penro 23 v.P.".

All Sccs. 25 and 36.

Toma' in 2/4. Ranco 23 .. P. 11.

All Sec. 2, 3 Sec. 4, Li and M. W. Sec. 6, All Secs. 1), 11, 12, 14, 16, 17, 20, 24, 24, ar. Sec. 4, All Secs. 21, 29, 30, L. D. 1 of Sec. 31, All Secs. 32, 34 and 36.

LO 713' ID 25. . . C 23 1 .P. .

All uccs. C, L, 6, 10, 11, 12, 14, 16, 18, 20, 27, 24, 25, 29, 30, 32, 34 and 30,

To no in 2', tome 23 .1'. .

All Sc e. 2, 4, 10, 11, 12, 11, 10, 10, 70, 22, 21, 28, 29, 30, 32, 34 and 36.

To mo 1 7 2/. 100 2/1 . ". .

All Secs. M_s 22, L^1 and S. .. Sec. 25, 1 \cdots, Loc. 25, All Secs. 34 and 30.

Town do 25. Printe 24 T. .

All Sees. 2, 4, 6, 10, 11, 19, 11, 16, 16, 20, 20, 74, 7, 29, 20, 32, 34, and 3:.

21 - 5 26. Perra 74 1 . 1 . 1.

All secs. 2, 11, 17, 14, 24, 4.1. Soc. 25, 11, ec. 26, All Secs. 35 and 36.

Tarron 25, 1 rma 25 .F. .

E' Sec. 1, All Jecs. 2, 11, 12, 1/1, 24 and 36.

- white

FINAL ROAD LINK TO MCMURRAY TO BE OPENED JULY 1

be closed July I when the highway bridge across the Athabasca River will be opened officially and turned over to the province of Alberta W Harold Rea, board chairman of Great Canadian Oil Sands Limited, will deliver the bridge to Hon Gordon Taylor, Alberta minister of highways GCOS put up more than half the money of the huge quarter-mile span which cost \$3.3 million. It links Fort McMurray with a new road-to-the oil sands

A parade through Fort McMurray will precede the noon-time ceremony. Afterwards the public will be invited to cross the "bridge to tomorrow's energy" and tour the GCOS extraction and processing plant site 20 miles north. Just a year ago Alberta premier Ernest C. Manning set a plaque marking the start of construction on the \$210 million project, scheduled for completion September 1967.

As a memento of the occasion, GCOS will present to the provincial government a scale model of the bridge. The first car to cross will burst through a ribbon six feet high. Past and present will be represented in a modest tableau at the start of the ceremony

Completion of the bridge is a significant stage in the scheduled progression of work on the large integrated project. The highway will be used for transportation of equipment and supplies for the later stages of construction, including the northern part of the pipeline from the plant site to Edmonton.

GCOS is currently winding up the details of distribution of its new partially convertible debenture issue sold for \$12.5 million to 125,000 Alberta residents. It is the only company with a provincial permit for commercial production from the tar sands. On completion the facilities will produce 45,000 b/d of synthetic crude, plus byproduct coke and sulphur. Most of the oil will be sold to parent Sun Oil Company Limited for its Sarnia refinery and to this company's parent Sun Oil Company for its Toldeo refinery.

OIL'S-ALE PERMITS ISSUED

PERMITS SURRENDERED

Montreal Trust Company - 94,800 acres. Effective June 4, 1965.

PS.29 - Mortreal Trust Company - 99,200 acres. Effective June 4, 1965.

PS.30 - Contreal Trust Company - 99,401 acres. Effective June 4, 1965.

PS.31 - Montreal Trust Company - 99,994 acres. Effective June 4, 1965.

PS.32 - Montreal Trust Company - 97,760 acres. Effective June 4, 1965.

PS.33 - Montreal Trust Company - 95,680 acres. Effective June 4, 1965.

PS 34 - Montreal Trust Company - 96,320 acres. Effective June 4, 1965.

PS.35 - Montreal Trust Company - 69,120 acres. Effective June 7, 1965.

PS.36 - Montreal Trust Company - 74,880 acres. Effective June 7, 1965.

PS.37 - Montreal Trust Company - 92,160 acres. Effective June 7, 1965.

PS.38 - fontreal Trust Company - 86,400 acres. Effective June 7, 1965.
PS.39 - Mortreal Trust Company - 92,160 acres. Effective June 7, 1965.

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September 30, 1966

Mr. W. Winston Mair, Deputy Minister.

J. S. Richards, Director of Mines.

Sun 011 Company

Oil Shale Reservations.

(exploration permits) which required the expenditure of \$61,500 on exploration and/or experimental and research work.

\$60,000 and \$4,500 in cash as a guarantee that these expenditures would be made. The company has submitted Statutory Declarations and other evidence of expenditures on:

- (a) _exploration | \$18,088}
- (b) analyses and research \$196,247.

These figures include an 8% overhead charge.

The regulations governing the administration of oil shale reservations require the approval of the Minister in respect of experimental and research costs. The information submitted substantiates that at least \$53,781 has been spent on research and experimental work related to the Manitoba reservation and it is recommended that this amount be approved.

If this recommendation is approved, it is requested that the Minister, or you, sign the duplicate of this memo and return it to this office. This will provide us with the authorization necessary to return the company deposits.

JSR/or

arc to Mr M. J. Gobert, A. Assistant Deputy Minister

8. Richards.

- DEPARTMENT¿QF¸MINES ; ≮AND NATURAL RESOURCES

ÔCT 3 - 1966∙

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COPY

August 3, 1966.

Mr. R. D. Jones,
Sun Oil Company,
Production Department,
Petro-Chemical Building,
805 - Sth Avenue, W.,
Calgary, Alta.

Déar Mr. Jones :

This will acknowledge receipt of your letter of July 27th, advising that Sun Oil Company will not request renewal of Oil Shale Permits 1 to 8, inclusive, which terminated July 30, 1966.

A more formal surrender is not required.

requested earlier, will be forwarded in the very near future.

Yours very truly,

JSR/or

J. S. Richards, Director of Mines.

c c to Mr. M. J. Gobert, Assistant Deputy Minister.

Mr. T. Morgan, Chief Mining Recorder.

AUG -5 1966

CSISTANT DOF TYPE



GEORGE E DUNLAP

Manager Canadian Production D s on

LLOYD E MILLER

PRODUCTION DEPARTMENT SUN OIL COMPANY Potro Chemical Bullding 805 8th Avenue W • Drawer 38 Calgary Alberta Canada

July 27, 1966

Province of Manitoba,
Department of Mines and Natural Resources,
Mines Branch,
901 Norquay Building,
401 York Avenue,
WINNIPEG 1, Manitoba



Attention Mr. J. S. Richards

Dear Sirs

Re Manitoba Oil Shale Permits 1-8 incl , dated July 30, 1964

Our records indicate that the above-noted Permits will complete their present term on July 30, 1966. We have therefore reviewed our Oil Shale acreage commitments in detail and have decided not to request the renewal of these Permits. We do not propose to convert any of the Permit areas to lease. We trust you will advise in the event a more formal surrender form is required.

Information requested in your letter dated June 30, 1966 is being obtained and will be forwarded to you in the very near future

Yours very truly,

SUN OIL COMPANY

RDJ sm

R. D Jos

p c to Mr M J Gobert,
Assistant Deputy Minister





Juné 30, 1966.

Mr. R. D. Jones,
Production Department,
Sun Oil Company,
Petro-Chemical Building,
805 - 8 Av., W.,
Drawer 38,
Calgary,
Alberta.

June 22nd, and the attached "Report of Research on Saskatchewan and Manitoba Oil Shales"; together with a Statement of Expenditures verified by Geib, Valestuk Looppky & Co.

the items which comprise the total of \$60,951.90. It would be appreciated if you would supply the individual expenditures incurred in respect to the following:

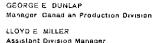
- analysis of oil obtained by retorting shales
- b) analysis, of gas obtained by retorting shales
- c) analysis of spent shale for fixed carbon heating value
- d) development of assaying techniques 4 5 % () / 2
- e) development of batch retorts for producing large
- development of retorting process for production of synthetic fuels from oil shale

JUL-51966

SSISTANT LE PAYAMP LE USREM

Yours very truly,

J. S. Richards, F. Director of Mines.





PRODUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 805 8th Avenue W . Drawer 38 Calgary Alcerta Canada

Department of Mines and Natural Resources, Mines Branch, 904 Norquay Building, 401 York Avenue, WINNIPEG 1, Manitoba.

Attention Mr. J. S Richards

Dear Sirs

CINTURAL RESOURCES
JUN 2 41966
DIRECTOR OF MINES

June 22, 1966

Re Manitoba Oil Shale Permits 1-8 incl. dated July 30, 1964 and Manitoba Oil Shale Permit 10 dated October 23, 1964

Further to your letter dated March 9, 1966, we enclose an up-to-date report on our research activities relative to both Manitoba and Saskatchewan Oil Shales as prepared by our Research Laboratory at Richardson, Texas, U.S.A. This work was commenced last year and is still being actively pursued Expenses relating to this and other work for the period up to June 1, 1965 have been previously forwarded by virtue of the statement included in our letter dated January 5, 1966.

We now enclose a Statement of Expenditure verified by the firm of Geib, Valestuk & Co , Chartered Accountants, in support of expenditures incurred by Sun Oil Company on the above-noted Reservations for the period June 1, 1965 to February 28, 1966 In preparing this statement we have followed the same procedure as that followed in the preparation of the previous statement in that the total amount of expenses allocated to our Manitoba holdings represents only that proportion (44.29%) of actual total expenditures that our Manitoba Oil Shale acreage bears to our total Canadian Oil Shale holdings.

Pursuant to Section 192(c), we have deposited Government of Canada $4\frac{1}{2}\%$ Bond Nos. T29C 50749/50 Inc. and D 00433/34 Inc. Bearer due September 1, 1983 in the amount of \$60,000.00

In view of the expenditures incurred to date amounting to \$48,497.21 (period ending June 1, 1965), and \$65,838.05 (period June 1, 1965 to February 28, 1966), for a total expenditure of \$114,335.26, we respectfully request a

Att Mr. J S Richards

- 2 -

June 22, 1966

refund of our cash deposits pursuant to Section 192 I(2) of the Regulations. Since Section 192 I(3) requires that at least 30% of the cash deposit shall be retained until after the Reservation holder has submitted the record required to be submitted under Section 192 M, we suggest that the refund at this time should include Bonds equal in value to \$40,000.00.

We trust you will find our report of interest and our expenditure statement in good order. If so, we request that the Bonds to be refunded should be forwarded to

Royal Bank of Canada, 740 - 8th Avenue S W , Calgary, Alberta.

Yours very truly,

SUN OIL COMPANY

RDJ sm Encls.

R. D. Jones

p. c. to: Mr. M. J. Gobert, Assistant Deputy Minister.

COPY

March 9, 1966.

Mr. R. D. Jones,
Production Department,
Sun Oil Company,
Petro-Chemical Building,
805 - 8 Avenue, West,
Drawer 38,
Calgary,
Alberta.
Dear Mr. Jones:

Many thanks for your letter of February 14th; relative to Oil Shale Reservations Nos. 1 to 8 and 10. We also regret any misunderstanding that has arisen in regard to your work commitments in respect to these reservations.

offer except the comment that our understanding was based on a Memorandum to File, written shortly after the discussions referred to in our correspondence.

that your program is active, continuous, and systematic; the matter appears to be academic.

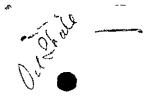
Yours very truly,

J. S. Richards, Director of Mines

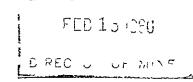
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c. to Mr. M. J Gobert, Assistant Deputy Minister PARIME (AF A) AND NATURAL R. TOURLE

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OYD E MILLER
A SISTANT DISON MADAGER

PRODUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 800 8th Avenue W

Drawer 38 Calgary Alberta Caraca

February 14, 1966

Department of Mines and Natural Resources Mines Branch 901 Norquay Building 401 York Avenue Winnipeg 1, Manitoba

ATTENTION Mr. J.S. Richards

Dear Sir

Re Manitoba Oil Shale Reserves
Nos. 1-8 inclusive and No. 10

We acknowledge your letter dated January 26th, the contents of which have been discussed at length with our Mr.E.E. Gilbert. In reply, we respectfully submit the following comments to the understandings expressed in your letter -

1. "The deposits would be retained until the end of the second year".

It is Mr Gilbert's understanding that deposits would be retained until the end of the second year subject to the right to request their return upon providing satisfactory evidence that work was performed. This understanding was confirmed by the fact that we recently forwarded evidence of expenditures for your approval. However, regardless of the understanding reached, we are agreeable to leave the deposits on file with your department and postpone our request for reimbursement until the end of the second year

2. "If Sun performed no work during the second year of the Reservations, the Crown would retain the entire work deposit"

We could not determine any basis for this understanding. We agree the deposits would be forfeited if no work was performed "by" the erd of the second year. (Including both first and second years).

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A. D N U., "

FEB 1 8 1966

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Fowever, this point is probably academic in that Sun is currently spending during the second year very substantial amounts by way of research utilizing previous information acquired in the reservation areas. It has been our intention to submit these further expenditures for your approval at the end of the second year anniversary date.

We naturally regret any misunderstandings that may have risen in this regard and we would appreciate any further information you have which would assist us in clarifying these various matters. Our concern in resolving these misunderstandings is perhaps magnified by our company's exploration program, which we feel has been active, continuous, and systematic and involved very substantial expenditures.

Yours very truly,

SUN OLL COMPANY

RDJ/ce1

cc to Mr. E E Gilbert

p. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister. (2).

January 26, 1966.

Mr. R. D. Jones, Production Department Sun Oil Company. Petro-Chemical Building. 805 - 8 Av., W., Drawer 38, Calgary,' Alberta.

Dear Mr. Jones:

This will acknowledge receipt of your letter of January 5, together with the Statement of Expenditures, verified by Geib, Valestuk & Co., Chartered Accountants,

It is noted that you intend to apply for a refund of cash deposite; in accordance with Section 192 I (2) of the Regulations. Our understanding of the discussion, which we held with Mr. E.E. Gilbert, was that the deposit would be retained until the end of the second year of the term of the reservations. Also that, in the event that during the second year of the permits ; Sun Oil did no work in respect to the permit areas, the Crown would retain the entire work deposit posted. In other words, that work done during the first year would not be credited for a refund of part of the deposit at the end of the second year,

Yours very truly,

& Pichards. Director of Mines.

c. to? Mr. Stuart Anderson, 'Deputy Minister.

Mr. M. J. Gobert, Assistant Deputy Ministed 26 1966

D PARTIMES LESSINGS AND NOTURAL R OL



FROM

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J. S. Richards, Director of Mines.



DATE

January 24, 1966.

TO

Mr. M. J. Gobert, Assistant Deputy Minister.

SUBJECT Sun Cil Company -

Oil Shale Reservations.

Attachea, hereto, copy of a letter from Mr. R. D. Jones, together with a copy of the "Statement of Expenditures Incurred", referred to therein.

The expenditures as such appear reasonable. including the method of allocating research expenses, namely, "that portion which our Manitoba acreage bears to our total Canadian holdings ".

You will note, in the last paragraph, that it is the company's intention to apply for a refund under Section 1921 (2). This suggestion, as you are aware, is not in accord with our understanding of the points of agreement reached in discussions with Mr. E. E. Gilbert.

In my memo to file, dated August 25, 1965, (under 3.), I stated that Mr. Gilbert agreed that, if no work was done during the second year, "it would be equitable for the Crown to retain the entire work deposit posted by Sun Oil.". I believe you agree with this statement.

Kindly advise if I shall write to Sun Oil, advising them accordingly.

JSR.db

Encs.

. S. Richards.

D_PARIMENT OF MINES



PRODUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 805 8th Avenue W • Drawer 38 Calgary Alberta Canada

January 5, 1966.

Department of Mines and Natural Resources, Mines Branch, 904 Norquay Building, 401 York Ave., Winnipeg 1, Manitoba. DEPARTMENT (
& NATURAL . 1 .

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DIREC.

ATTENTION Mr J.S Richards.

Dear Sir

RE Manitoba Oil Shale Permits 1-8 Inclusive, dated July 30, 1964.

Manitoba Oil Shale Permit #10, dated October 23, 1964.

Reservation Regulations, we enclose a Statement of Expenditures verified by the firm, Geib, Valestuk & Co., Chartered Accountants, relating to expenses ending June 1, 1965. Detailed progress reports pursuant to Section 192 I (1) have been forwarded previously.

As a word of explanation, we wish to point out that total expenditures involved in research amounted to much more than reported in this Statement. The amount reported here is that portion which our Manitoba Oil Shale acreage bears to our total Canadian Oil Shale holdings and to which our research program was related. We trust you will find this method of allocating expenditures satisfactory.

In the event the enclosed expenditures, in the amount of \$48,497.21, meets with your approval it will be our intention to apply for a refund of cash deposits under Section 192 I (2).

Kindly advise if further information is required.

p. c. to: Mr. M. J. Gobert,
Assistant Deputy

Assistant Deputy Minister;

with Statement of Expenditures Incurred.

Yours very truly, SUN OIL COMPANY,

RDJ/cbm, Enclosures. D PARI I A. D N Uhma Kalu Road

JAN 25 1968

SSIS.ANT . I ANT E

OFFICE

A. D. Jones.

PR NTED IN U.S.A.

DECLARATION

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES PROVINCE OF MANITOBA MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights #1 to #8 inclusive and Reservation of Oil Shale Rights #10.

TO WIT, I, Otto Joseph Geib, of the City of Calgary, in the Province of Alberta, a partner in the firm of Geib, Valestuk & Co., Chartered Accountants, do solemnly declare:

- 1. THAT Expenditures incurred by Sun Oil Company in connection with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period ending June 1, 1965 are as shown on Exhibit "A" attached hereto.
- 2. AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

DECLARED BEFORE ME at the City of Calgary, in the Province of Alberta this _____ day of Section & A.D. 1965.

Otto Joseph Gelb

A Notary Public in and for the Province of Alberta

DEPARTMENT OF MINES AFD NATURAL RESOURCES

JAN 25 766

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Statement of Expenditures Incurred by Sun Oil Company On Manitoba Reservation of Oil Shale Rights Numbers 1 to 8 Inclusive and #10 <u>To June 1, 1965</u>

Field Party Expenses (Party No. 12)

Incurred to gather oil shale samples along outcrop on Manitoba escarpment for analysis and to establish regional trends of oil shale occurrences.

Second Core Hole Program

11,228.35

To establish regional trends of oil shale

values along edge of outscrop after failure

of field parties.

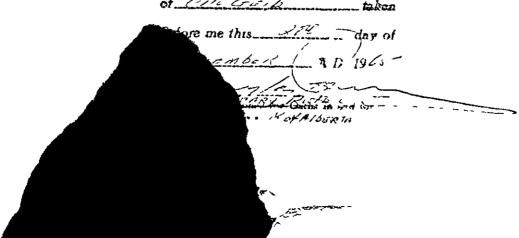
Outside Consultant Report

To obtain preliminary evaluation of the economic potential of Manitoba oil shales and advise as to recommended exploration program.

Sun Oil Company Research Expenses on 28,156.48
Oil Shale Technology
Incurred by Sun Oil Company's research
laboratory in the United States.

Note

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DEPARTMENT OF MINES AND NATURAL RESOURCES MINES BRANCH

RECORDING DIVISION
904 NORQUAY BUILDING
401 YORK AVENUE WINNIPEG 1

November 13, 1964

Sun Oil Company c/o Montreal Trust Company Notre Dame at Albert Street Winnipeg, Manitoba

Gentlemen:

Attached Reservation of Oil Shale Rights No. 10 issued in the name of Sun Oil Company, Calgary dated October 23, 1964.

Also enclosed Official Receipt No. G 11106 in the amount of \$250.00 covering application fee and G 11107 in the amount of \$4,500.00 covering cash deposit on Oil Shale Reservation No. 10. These Receipts are issued in the name of Montreal Trust Company.

Yours truly,

T. Morgan

Chief Mining Recorder

TM/ar Encs.(3)

cc: Dr. J. F. Davies Chief Geologist

Reservation of Oil Shale Pights No 1

Ir consideration of and subject to the provisos, conditions and restriction, hereinafter contained, permission is hereny grinted to

Sun Oil Corpany, Colgan,

c/o contreal Trust Compan, otre Dame and Albert Street, Vanniper, Manitoba

its successors, and assigns, to carry on geological and reophysical evalunations or both, including investigations relating to subsurface meology on the following lands, namely

lo msnip	Range
21	15
21 and 22	16
13 and 24	17
23 and 24	18
23 and 24	19
$2\dot{l}_{i}$	20
24, 25, 26, 27 and 28	27
25, 27, 22, 29 and 30	22

all 'est of the Principal Heradian, containing #197,630.12 cores, more or less See attacred list.

This reservation is subject in all respects to "The hines of and Fa t X of Manitoba Perulation 29/50 overning the disposal of boring claims, and any mendments thereto

Dated at thrriper this

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Director of times

Receivation o. 1

Toimshin 2L, Ance 21, 11. F M.

S.t. Sec. 7, 12 and N.E. Sec. 18, 14 Sec. 26, E2 and N.W. Sec. 31.
All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 20, 22, 24, 28 to 30 incl., 32, 34 and 36.

Township 25, Panne 21, '. P ".

Sk Sec. 6, N.W. & Sec. 18.
All Sections 2, 4, 10 to 12 incl , 14, 16, 20, 22, 24, 28 to 30 incl , 32 and 34.

Township 26, Range 21, W.P .

N.E.# Sec. 13, 5.4.1 Sec. 15, E' and N W.1 Sec. 21, N.E. Sec. 20, N L.# Sec. 27, S.V 1 Sec. 33, W and N E. Sec. 35. All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 12, 20, 22, 24, 28 to 30 incl., 32, 34 and 36.

Township 27, Pange 21, W.P.Y.

N.W \(\frac{1}{2} \) Sec. 9, N\ Sec. 10, N\ \frac{1}{2} \) Sec. 11, H\ \frac{1}{2} \) Sec. 12, E\ \frac{1}{2} \) ec. 15, I\ \(\frac{1}{2} \) and N\ W\ \(\frac{1}{2} \) bec. 25, I\ \(\frac{1}{2} \) Sec. 26, N\ \(\text{sec. 27,} \)
N\(\frac{1}{2} \) \(\text{sec. 33,} \) \(\text{cc. 35.} \)
All Sections 14, 16, 18, 20, 22 to 24 incl., 28 to 30 incl., 32, 34 and 36.

Town thip 28, Lange 21, V.P.

N3 Sec. 17, b3 Sec 21, W1 and 5.4.4 Sec. 33.
All Sections 4, 6, 9, 16, 18 to 20 incl., 28 to 32 incl.

Township 26, Kange 22, W.T 1.

W¹ and N F. Sec. 10, N.D. Sec. 26. All sect_one 2, 11, 12, 14, 22, 24, 34 and 36.

Township 27, Range 22, 1.1 H

No Sec. 10, N' Sec. 11, h Sec 12, N.E. 4 Sec. 26. All Sections 14, 22, 24, 25, 34 and 36.

To mship 28, Renge 22, ".P '.

No Sec. 26.
All pections 1, 2, 4, 6 to 8 ircl , 10 to 12 incl.,
14 to 20 incl, 22 to 24 incl., Sec. 27 to 34 and 36.

Tornship 29 Lnge 22 1. ".".

L? Sec. 9, Whand M.E. Sec. 13, S.W. Sec. 15, M.W. Sec. 21, 5 Sec. 25, W. Ler Sec. 26, W. Sec. 27 F. Sec. 33.
All Sections 1 to 7 incl., 10 to 10 incl., 14, 16 to 20 incl., 22, 24, 28 to 32 incl., 34 and 30.

Tor hp 30. Tare 22, 11 P.

Ali Sections 2, 11 to 1, incl , 23 to 25 incl., 35 and 36.

Peschitzin c. 1

Joman Cl. Forme 15, J.P ".

S.E. 4 'cc. 7, ' and S.''. Sec. 9, S.F. 2 Sec. 17, S.E. 2 Sec. 19, I. .. bec 21, '.... sec 33.

All bectrums 4 to 6 incl., 16, 18, 20, and 28 to 32 incl.

To mship 21, R. 177 16, 1, P.

N E.# Lec. Li, N.N & Sec. 13, E' and S.W. Sec. 14, F.E. Sec. 27, N. & Sec. 28, N. at Sec 31. All cetions 1, 12, 22 to 25 incl., 27 and 32 to 36 incl.

Toumship 22. Pance le. (.P.".

Fs and it low Sec. 3, N Low Sec. 9, Ed and N.W. 5ec. 13, L' Sec. 19, N. Sec. 25, North Sec. 26, All Sections 1, 2, 4 to 7 incl., 10 to 12 incl., 14 to 18 incl., 20 to 24 incl., and 27 to 36 incl.

Township 23. Rarge 17. W.I.".

S.E., 1. V.1 and Wh of N.E., Sec. 1, Coec. 3, S. Sec. 9, S. V. Sec. 21, 1, ..., Sec. 26, N.E., Sec. 33.
All Scrtiens 2, 4, 6, 7, 10 to 14 incl , 16 to 20 incl., 22, 24, 28 to 32 incl., 34 and 36.

Township 54, Range 17, w.P.M.

it and R.L. Soc. 4, F. Sec. 8.
All Sections 5 to 7 incl., and 16 to 18 incl.

Township 23, Cance 1d, k.l'.l'.

N.L. + Sec. 1, r and N.I. + Sec 12, r and N.W. + Sec. 13, N. . + Sec. 26, N. I. Sec 27.
All Sections 22 to 24 incl., 28, 32, 34 and 36.

To mship 2L. P nge Js. W.P.

"} Sec. 4, Wh Sec. 6.
All Sections ?, 10 to 12 med., 14, 16 and 18.

To marap 22, Tinra 19, 1'.P.1.

All Sertions 31, 32, 34 and 36.

Township 24, 1 yere 19, 1/ P.M.

S' and U.W.; Sec. 2, N. 1.1 Sec. 9, E2 and S.W.; Sec. 14, L' rne N.W.; Sec. 16.
All Sections 4, 6, 10, 11 and 16.

Toimship 24. Range 20, 11 P.M.

S.r.? Sec. 13, 11 and N.F.? Sec. 18, N. Sec. 21, N.F.? Sec. 25, P. L.? Sec. 26, 5 Sec. 27, L' Sec. 33, E and N.V. Dec 34, W. and N.F.? Sec 36.

All Sections 2, h, 6, 10 to 12 ircl., 14, 16, 20, 27, 24, 2 to 30 incl., and 32.

Peserv t.o. of Oil Shale Ru ts No. 1

In consideration of and subject to the provisos, conditions and restrictions hereinafter contained, permission is hereby granted to

Sur Oil Company, Calgary,

c/o hortreal Trust Company, Notre Dame and Albert Street, Wirmineg, Ma intoba.

its successors and assigns, to carry on geological and geophysic 1 examinations or both, including investigations relating to subsurface geology on the following lands, namely

To nship	Range
21	15
21 and 22	16
23 and 24	17
23 and 24	18
23 and 24	19
2L	20
21, 25, 26, 27 erd 28	21
26, 27, 28, 29 and 30	22

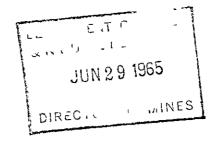
all West of the Principal Meridian, cortaining 197,030.12 acres, more or less. See Attached List.

This reservation is subject in all respects to "The lames Act" and Part X of Manutoba Regulation 29/50 governing the ausposal of boring claims, and any amendments thereto, until the cash deposit re-wired under subsection 2 of Section 1920 of the and resulat on is made, the examination shall be restricted to surface reolegy Dated at Winnipeg this

30th day e July, 19(4.

Director of lines





GEORGE E DUNLAP
Manager Canadian Production Division

LLOYD E MILLER
Assistant Division Manager

June 25, 1965

Pr DUCTION DEPARTMENT SUN OIL CO パラムツM Petro Chemical Building 805 8th Avenue W Drawer 38 Calgary Alberta Canada

Jun für Asla

Mr J S Richards,
Department of Mines and Natural Resources,
901 Norquay Building - 401 York Avenue,
Winnipeg 1, Manitoba

Dear Sir

I am enclosing herewith three copies showing all of the analyses we have received to date for our Manitoba core holes _ These are analyses for core holes No 13, No (16C) No (17) No 19A, No 20 and No 21 and you will note that some sheets which are enclosed herewith show more than one well These same sheets also snow our outcrop samples with those having a prefix "L" having been taken by our geologist whose name was Linckers Some of the samples enclosed herewith were prepared and analyzed by the Chemical and Geological Laboratory here in Calgary These are for hole No 13, No 20 and No 21 and this analysis is dated May 25th this to be a fairly correct analysis, however, you will note that we have also enclosed analyses for the same holes from the same people dated April 13th It was this first set of analyses that made us feel that there may be an error and as a result we took one of our Saskatchewan cores where half of the core had already been analyzed by the Chemical and Geological Lab and sent the balance of the core to Colorado for comparative analysis As a result we came to the conclusion that the Chemical and Geological analysis was too low and they have rechecked their procedure and recalibrated their process and have given us the May 25th analysis

The core from core hole No 18 has been shipped to Golden, Colorado but we do not anticipate having the results for at least another two weeks. The core recovery on hole Wo 16A was very poor and it therefore has not been analyzed.

Very truly yours,

E E Gilbert

EEG/gm Encl p. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister.
Dr. J. F. Davies,
Chief Geologist.

de *

Mr J R Richards

I am enclosing herewith two zerox copies of items which I feel may be of some interest to you. One of these mentions the opening of the bridge at Fort McMurray, the other describes the surrender of the Montreal Trust holdings in the on shale area of Saskatchewan. These Montreal Trust lands, in my opinion, are lands which were taken on behalf of Imperial. Oil. They lie to the north of Sun's Pasquia Hills area as well as to the west of Sun's Pasquia Hills and a third block lies to the south of Sun's Saskatchewan oil shale permits and to the west of Sun's Manitoba oil shale reservations.

E E Gilbert

EEG/gm Encl

p. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister; -- with two-enclosures.

Dr. J. F. Davies, Chief Geologist; — with two enclosures.

August 5, 1964.

Shell Canada Limited, P. O. Box 186, Edmonton, Alberta.

ATT: Mr. D.W. Walker

Re: Oil Shale Reservations - Manitoba.

Dear Sir:

Enclosed are copies of Reservations #1 to #8, Townships 21 to 44, comprising some 1,476,532 acres, and a copy of the Regulations 42/64 under which the reservations were acquired.

Yours very truly,

F. S. Gamey, Reservoir Geologist.

FSG/1k

PS 153 Director of Mines.

July 28, 1964.



Sun Oil Company -

Oil Shale Reservations.

Attached, hereto, the original and a copy of Sun Oil's application for eight reservations of oil shale rights. These are the same areas which were discussed with the company sometime ago.

As you are aware, Section 192A of the Regulations provides that the granting of all such reservations are "Subject to the approval of the minister,".

If satisfactory, would you kindly have the approval indicated on the original application, and return it to this office.

Sum letter, outlining the proposed program, is also attached.

Richards

JSR:db

c. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister.

Mr. T. Morgan, Chief Mining Recorder.

Dr. J. F. Davies, Chief Geologist.

"Approved by
Hon. George Hutton
Acting Minister of Mines and
Natural Resources"

8

Montreal Trust Company

EXECUTORS & TRUSTEES NOTRE DAME AT ALBERT STREET, WINNIPEG MAN . TELEPHONE WHItehall 3-0451

July 27th, 1964.

itiention - Mr. Richards

Department of Mines and Natural Resources, Mines Branch, WINIPEG,
M a n 1 t o b a

Dear Sirs

On behalf of Sun Oil Company, Calgary, we now make application for exploration permits covering the following blocks of land set out in the attached list.

Attached you will also find a letter from Sun Oil Company describing the scope of the exploration and examination to be carried out and the estimated cost thereof. This is required under your regulations and we trust you will find it in order.

Application fees and deposits to be paid are estimated as follows.--

	Statement of Tees	
	Application Fee	Deposit
Reservation #1	\$250.00	\$7,500.00
#2	250.00	7,500.00
#3	250.00	7,500.00
#4	250.00	7,500.00
<i>#</i> 5	250.00	7,500.00
#6	250.00	7,500.00
<i>#</i> 7	250.00	7,500.00
#8	250.00	4,500.00
	\$2,000.00	57,000.00 2,000.00
Total	••••••••	\$59,000.00

You already have our cheque for \$69,500.00 which was forwarded with our letter of June 1st, 1964. Thus, there would appear to be a refund due us for the credit of Sun Oil Company of \$10,500.00. We presume you will remit this to us at your convenience.

Yours truly,

MONTREAL TRUST COMPANY

V. E. Driver, Manager, Mortgage Department

VED/lr

Encl.

p. c. to: Mr. M. J. Gobert,
Assistant Deputy Minister;

Mr. T. Morgan, Chief Mining Recorder:

⊃Dr. J. F. Davies, Chief Geologist. SUN DIL COMPANY

CANADIAN PRODUCTION DIVISION

G E DUNLAP

805 STH AVE W
PO DRAWER 38

ASSISTANT MANAGER

M E AUSTIN

L E MILLER

CALGARY, ALBERTA

17 July 1964

Chief Mining Recorder,
Department of Mines and Natural Resources,
Mines Branch,
WINNIPEG, Manitoba.

Dear Sir

Pursuant to Manitoba Regulation 42/64, you require data setting out the extent of the examination to be made and the estimated cost thereof

It is our present plan to perform surface field geology along the exposed outcrops of the Niobrara formation within the Province of Manitoba and upon our various oil shale reservations. In the course of our surface geological investigations, we will take samples of the outcropping formations and these samples will be analysed for oil content and other associated mineral content. These samples will be analysed in one of several laboratories, either Colorado School of Mines at Golden, Colorado, or our own Research Laboratory at Richardson, Texas, or in our newly built laboratory in Calgary, or perhaps at some as yet undetermined laboratory

From the analyses we anticipate determining

- I Oil content in gallons per ton
- 2 The specific gravity of the oil
- 3 The amount of total water in gallons per ton In addition, we will further analyse the oil shale to determine its other chemical properties

Following our initial analyses of the samples taken in the field, we will determine whether any area appears to contain oil shales approximating the oil content which we believe would be required in order to economically proceed towards potential plant construction. We will then proceed with more detailed geological field examination and with further sample recovery and analyses. This will cover more closely

located outcrops within the same apparently desirable area and this work will undoubtedly include trenching of the outcrop face so that the surface samples may be obtained below the weathered surface

If these more detailed samples support the earlier studies and show that an area of apparently economic oil shales has been located, we will then quite possibly wish to do sub-surface examinations through core hole drilling to further delineate the extent of the apparently economic oil shales We anticipate that the cost of a surface geological field party, consisting of two men, will be approximately \$4,000 per month. In addition, our present arrangement with the Colorado School of Mines is that we will pay \$1 00 per sample for sample preparation and \$4.00 per sample for the Fischer Analysis These prices are in U.S. dollars addition, we will have some costs attributable to our further analyses in our Richardson and Calgary laboratories We do not know yet what these costs will be, however, one test which will be made on selected samples is X-Ray analysis and I understand this costs approximately \$30 00 per sample It is impossible at this point to determine how many samples will be analysed and what our costs will be for this analyses work. In actuality, it really depends upon what quality of oil shale we find in our initial field geological work

The problems associated with our oil shale exploration are entirely new and we just cannot say for sure what our full program will eventually entail. At present we have a geologist by the name of William Linckens, who is a consultant, and his assistant William Goodman, working along the Niobrara outcrops in the Province of Manitoba. These men are working under the supervision of our Chief Geologist, Mr. H. Westmore, who is a Professional Engineer for the Province of Manitoba.

It is impossible for me at this time to estimate what our total exploration expenditures on these permits will be. We do realize of course that we have placed deposits and at present I anticipate that our expenditures may approximate those deposits. This is such a new problem as compared to the conventional oil business that we just cannot firmly say what our costs will be

I trust that this report will be sufficient for the formal application for these oil shale permits which have been applied for by the Montreal Trust Company for the Sun Oil Company

Yours very truly

EEGss

E E. Gilbert

p. c. to. Mr. Stuart Anderson, Deputy Minister.

Mr. M. J. Gobert, Assistant Deputy Minister. Orig. to: Mr. T. Morgan, Chief Mining Recorder.

-p. c. to. Dr. J. F. Davies, Chief Geologist.

SUN DIL COMPANY

CANADIAN PRODUCTION DIVISION

G E DUNLAP

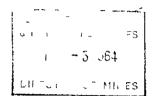
PO DRAWER 38
CALGARY, ALBERTA
CANADA

4 November 1964

L E MILLER

M E AUSTIN

Department of Mines and Natural Resources, Mines Branch Director's Office, 901 Norquay Building - 401 York Avenue, WINNIPEG 1, Manitopa



Attention Mr J S Richards

Dear Sir

The Royal Bank of Canada, Main Branch Calgary Alberta is forwarding Dominion of Canada Government Bonds to the value of \$57 000 for deposit with your depaitment with regard to our oil shale reservations numbered I to 8 inclusive. In addition, the same bank is forwarding similar bonds to the value of \$3,000 for deposit with your department to replace a cash drilling deposit which has previously been placed with your department.

When the bonds have been received, will you please return our cash deposits to my attention

Thanking you, I remain,

Yours very truly

E E Gilbert

EEGss



Chief li ing Recorder

November 13, 1 84.

Departmental Accountant

Attention "r. F. V. Sterar

Sun Oil Company

I vould advise you that Oil Shale Reservations were issued to the above Co pany on July 39, 1964, and cash in the amount of \$57,000.00 deposited as a performance bond.

On november 12, 1964, The Royal Bank of Canada forwarded \$60,000.00 Government of Canada Bonds 420 due Septe ber 1, 1903, T 29 0,0749/50 inc., D 00433/04 inc., with larch 1965 sea. I telephoned James Richardson today, and they quoted the selling price of these bonds at \$93.00, so the cash value of these bonds today would be \$10,800.00

Interest rayable serch 31, 196, will be (1,300.00, being the value of the deposit to 7,100.00. The deposit is not callable after this date.

Please advise Tressury not to clip the courons without our approval.

Tived

T. Morgan.

Hovember 18, 1964

Company Income

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GEORGE E DUNLAP Manager Ciain Poduction D son LLOYDE MI ER Assistant D. son Manager

PRODUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 805 8th Avenue W . Drawer 38 Calgary Alberta Canada

March 10, 1965

Department of Mines & Natural Resources Mines Branch Recording Division 904 Norquay Building 401 York Avenue Winnipeg 1, Manitoba

Attention Mr. T. Morgan

Dear Sir

On November 9, 1964, the Royal Bank of Canada forwarded \$60,000 Canada Conversion $4 \frac{1}{2}\%$ Bearer Bonds to your department to replace our cash deposits held by you as follows

> \$57,000 3,000 Oil Shale Reservations Nos. 1 to 8 Drilling License No. 2019

To date we have been refunded the \$57,000 cash deposit on the Oil Shale Reservations but have not received the \$3,000 being held as a Drilling deposit.

Would you kindly look into this matter and refund the \$3,000 as soon as possible.

As the interest coupons on the \$60,000 bonds became payable March 1, 1965, we would appreciate it if you would clip these coupons and forward them to the following bank for deposit to our regular account.

> The Royal Bank of Canada 740 - 8th Avenue S.W. CALGARY, Alberta

Please double register the transmission of these coupons and kindly charge us for any costs that you may have incurred in this connection.

Please use this letter as your standing authority to clip all subsequent coupons as they fall due and forward them to the address mentioned above.

Authorized by

Allndom (Hilly C. H. Ovapp

CI LIDS.

San Cil Company -

Cil Shale Popervations.

trached, rereto, complete from lar. P. D. Jones, together hat a copy of the Hatche ont of the matters Incurred, referred to together.

The exper starce as each as car reasonable, ancluding the method of allocating research excesses, namely, "that position then out lambous acr age to use to out total Gametian relatings ".

Tou will note, in the last paragraph, that it is the company's but him to high for a melant area. Secure 1721 (2). This summation, is now to a tre, is not in according our will estimate on the points of a remember and in cascassions with it. ". I. Calbert.

In my term to fale, detail Advant 25, 1965, (under 3.), I stated that in addition thread that, if no coracus done obtain to second your. "In abuild no equatable for the Grown to record the entire took deposit posted by Sun Oil.". I believe you agree that was statement.

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J. S. Fic .rdc.

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LnC5.

c. c. to. Mr. T. Morgan, Chief lining Recorder.





GEORGE E DUNLAP
Manager Canad an Production D is on
LLOYO E MILLER
Assistant D v s on Manager

PPO DUCTION DEPARTMENT SUN OIL COMPANY Petro Chemical Building 805 8th Avenue W. Drawer 38 Calgary Alberta Canada

January 5, 1966.

Department of Mines and Natural Resources, Mines branch, 904 Norquay Burlding, 401 York Ave., Winnipeg 1, Manitoba. DEPARTMENT (
& NATURAL . 1:

J' 3-1903

DIREC: .=3

ATTENTION Mr J.S Richards.

Dear Sir

RE Manitoba Oil Shale Permits 1-8 Inclusive, dated July 30, 1964.

Manitoba Oil Shale Permit #10, dated October 23, 1964

In accordance with Section 192 I of the Oil Shale Reservation Regulations, we enclose a Statement of Expenditures verified by the firm, Geib, Valestuk & Co, Charteied Accountants, relating to expenses incurred by Sun'Oil Company on the above noted Reservations for the period ending June 1, 1965. Detailed progress reports pursuant to Section 192 I (1) have been forwarded previously.

As a word of explanation, we wish to point out that total expenditures involved in research amounted to much more than reported in this Statement. The amount reported here is that portion which our Manitoba Oil Shale acreage bears to our total Canadian Oil Shale holdings and to which our research program was related. We trust you will find this method of allocating expenditures satisfactory.

In the event the enclosed expenditures, in the amount of \$48,497 21, meets with your approval it will be our intention to apply for a refund of cash deposits under Section 192 I (2).

Kindly advise if further information is required.

p. c. to: Mr. M. J. Gobert,

Assistant Doputy Hudstor:

vich States ent of Expenditures Incurred.

Mr. T. Mongan, Chief Mining Recorder.

RDJ/cbm, Fnclosules Yours very truly,

SUN OIL COMPANY,

R. D. Jones.

DECLARATICN

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES

PROVINCE OF MANITOBA

MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights # 1 to # 8 inclusive and Reservation of Oil Shale Rights # 10 TO WIT, I, Otto Joseph Gerb, of the City of Calgary, in the Province of Alberta, a partner in the firm of Gerb, Valestuk Loeppky & Co, Chartered Accountants, do solemnly declare

- 1. THAT Expenditures incurred by Sun Oil Company in connection with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period from June 1, 1965 to February 28, 1966 are as shown on Exhibit "A" attached hereto
- 2 AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evadence Act

DECLARED BIFORE ME at the City of

Calgary, in the Province of Alberta

106 Joseph Such

A Notary Fully in and for the

Frovince or Alberta

Exhibit "A"

Statement of Expenditures Incurred

by Sun Oil Company

On Manitoba Reservation of Oil Shale Rights

Numbers 1 to 8 Inclusive and #10

From June 1, 1965 to February 28, 1966

Sun Cal Company Research Expenses on \$ 60,951 90

Oil Snalc Technology

Incurred by Sun Oil Company's research
laboratory in the United States

Audit Fees 10 00
\$ 60,961 90
Sun Oil Company administrative overhead of 8% 4,876 15
added to above expenditures \$ 65,838 05

Osto Juga chil

DECLARATION

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES PROVINCE OF LANITOBA MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights $\not\!\!$ 1 to $\not\!\!\!/$ 3 inclusive and Reservation of Oil Shale Rights $\not\!\!\!/$ 10.

TO WIT, I, Otto Joseph Gerb, of the City of Calgary, in the Province of Alberta, a partner in the firm of Gerb, Valestuk & Co., Chartered Accountants, do solemnly declare

- 1. THAT Expenditures incurred by Sun Oil Company in connection with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period ending June 1, 1965 are as shown on Exhibit "A" attached hereto
- 2. AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if the made under oath and by virtue of the Canada Evidence Act.

A.D 1965

Otto Joseph Geal

A Notary Public in and for the Province of Alberta

\$ 1,983.00

3,462.00

Statement of Expenditures Incurred by Sun Oil Company On Manitoba Reservation of Oil Shale Rights Numbers 1 to 8 Inclusive and #10 Fo June 1, 1965

Field Party Expenses (Party No. 12) Incurred to gatner oil shale samples along outcrop on Waritopa escarpment for analysis and to establish regional trends of oil shale occurrences.

Second Core Hole Program 11,228.35 To establish regional trends of oil snale values along edge of outscrop after failure of field parties.

Outside Consultant Report To obtain preliminary evaluation of the economic potential of Manitoba oil shales and advise as to recommended exploration program.

Sun Oil Company Research Expenses on 28,156.48 Oll Shale Technology Incurred by Sun Oil Company's research laboratory in the United States.

Augst Fees 75 00 \$ 44,904.83 Sun Oil Company administrative overhead of 8% 3,592,38 added to above expenditures. \$ 48,497 21

Note

This-is-the-Exhibit-"A'-referred-to-in-the-declarationof Mr. Otto Joseph Gerb dated_____A.D.-1965

> True we same at " sufferent to a "me ASS CHITH PORCH SHIP See Com of all Ch taken Brore me this day of

DECLARATION

TO - DEPARTMENT OF MINES AND NATURAL RESOURCES PROVINCE OF MANITOBA MINES BRANCH

IN THE MATTER OF Crown Reservation of Oil Shale Rights #1 to #8 inclusive and Reservation of Oil Shale Rights #10. TO WIT, I, Otto Joseph Geld, of the City of Calgary, in the Province of Alberta, a partner in the firm of Geib, Valestuk & Co., Chartered Accountants, do solemnly declare:

- THAT Expenditures incurred by Sun Oil Company in connection ı. with Reservations of Oil Shale Rights #1 to #8 inclusive and #10, for the period ending June 1, 1965 are as shown on Exhibit "A" attached hereto.
- AND I make this solemn declaration conscientiously pelieving it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

DECLARED BEFORE ME at the City of

Calgary, in the Province of Alberta

this of day of Milmilia

A.D 1965.

A Notary Public in and for the Province of Alberta

3,462,00

Statement of Expenditures Incurred
by Sun Oil Company
On Manitoba Reservation of Oil Snale Rights
Numbers 1 to 8 Inclusive and #10
To June 1, 1965

Faeld Party Expenses (Party No 12)

Incurred to gather oil shale samples along outcrop on Wanitoba escarpment for analysis and to establish regional trends of oil shale occurrences.

Second Core Hole Program

11,228.35

To establish regional trends of oil shale values along edge of outscrop after failure of field parties.

Cutside Consultant Report

To obtain preliminary evaluation of the economic potential of Manitoba oil shales and advise as to recommended exploration program

Sun Oil Company Research Expenses on 28,156.48
Oil Shale Technology
Incurred by Sun Oil Company's research
laboratory in the United States.

Audit Fees 75 00
\$ 44,904.83
Sun Oil Company administrative overnead of 8% 3,592.38
added to above expenditures. \$ 48,497.21

This is Franch Taken 1 to 0 mg

All with Description 1 to 0 mg

of the taken

Before me this 20 day of

Different 1 1965

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Stranger Control of the stranger of the strang

Reservation of O'l Shale Rights No. 2

In consideration of end subject to the provisos, concutions and restrictions, hereinafter contained, permission is hereby granted to

Sun Oll Corpany, Calgary,

c/o Montreal Trust Corrany, Notre Dame and Albert Street, Winnipeg, Manitoba.

its successors and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology on the following lands, namely

Township	Range
30, 31, 32 and 33	22
30, 31, 32 and 33	23
30 and 31	24

all West of the Principal Meridian and containing an area of 194,432.06 acres, more or less. See attuched list.

This reservation is subject in all respects to "The Mires Act" and Part X of Manitoba Regulation 29/50 governing the disposal of boring claims, and any amendments thereto, until the cash deposit required under subscction 2 of Section 1920 of the anid regulation is made, the examination shall be restricted to surface seclogy Dated at Winnipeg this

30th day of July, 1964.

Director of Mines

Reservation No. 2

Toimulate 30, Tanca 22, U.P.M.

and P. . Sec 15, 1 and P. . Sec. 21, 5 Sec. 33. All Sections 4 to 7 and 1, 9, 10, 16 to 20 and 22, 27 to 32 and 34.

Township 31, hange 22, W.P.M.

N.I. Sec. 26.
All Sections 1 to 7 incl., 9 to 25 incl., and 27 to 36 incl.

Township 32. Tanca 22. W.P.N.

All Sections 4 to 7 incl., 9, 16 to 21 incl., and 28 to 33 incl.

iomshio 33, Eanre 22, M.P.A.

All Sections h to 7 incl., 9, 16 to 21 incl., and 28 to 23 incl.

Townshin 30. Rance 23. MaP.Me.

All Sections 1 to 36 incl.

Township 31, Range 23, ".P.M.

All Sections 1 to 36 incl.

Tomerap 32, Lance 3, 1.P 1.

 M_{\bullet} ⁻¹ Sec 2' All Sections 1 to 25 ircl., and 27 to 36 incl.

Township 33, Renge 23, ' P.M.

M.L., Sec. 26, All Sections 1 to 25 incl., and 27 to 36 incl.

Township 30, ange 24, I.P. I.

All Sactions 1 to 36 incl.

Toms up 31, Rence 24, V.P N.

All Sections 1 to 36 ancl.

Reservation of Oil Shile Rights No. 3

In consideration of and subject to the provisos, conditions and restrictions, hereinafter contained, permission is hereby granted to

Sun Oil Company, Calgary,

c/o Montreal Trust Company, Notre Dame and Albert Street, Winnipeg, Manitoba.

its successors and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface reology on the following lands, namely:

<u>Township</u>	Range
34, 35 and 36	23
32, 33, 34, 35 and 36	24
34, 35 and 36	25
36	26

all Vest of the Principal Veridian, and containing an area of See attached list. 192,795.70 acres, more or less.

This reservation is subject in all respects to "The Mires Act" and Part X of Manitoba Pogulation 29/50 governing the disposal of boring claims, and any amendments thereto.

Until the cash demosit required under subscction 2 of Section 1920 of the said regulation is made, the examination scall be restricted to surface geology.

Datod at Winnipeg this

30th day of July, 1964.

Director of Mines

recommation to, 3

To menip ?L. 1 8 23, 1/ P.11.

N.h. Sec. 26 All Sections 1 to 7, 9 to 25 incl., and 27 to 36 ircl.

To mrn_p 35, Fige 23, .P.'.

All Sections h to 7 incl., 9, 16 to A1 incl., and 28 to 33 incl.

To makin 36, Pance 23, L.P 1,

All Jections 4 to 9 incl., and 16 to 18 incl.

Township 32, Range 21, W.P. .

All Sections 1 to 36 incl.

To nahip 33, Fanne 24, 1.P.H.

All Sections 1 to 36 incl.

To 7 Ship 3. Range 24, 1 P.M.

All Sections J to 36 incl.

Townshap 35, P nre 24, ',P.

All Sections 1 to 36 incl.

To not in 36. Lange 24. V.F.

All Sections 1 to 7 ircl., and 9 to 13 incl.

Township 31, Lange 25, 11 P. 1

All Sections 1 to 36 incl.

Town hip 35, Range 25, U.P. H.

All Sections 1 to 4 incl., 6, 10 to 16 incl., 18, 20, 22 to 30 incl., 32, and 34 to 36 incl.

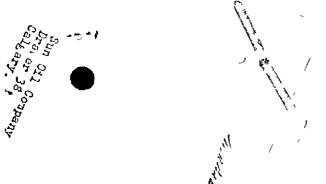
Townshir 36, Frage 25, 1 .F 1.

All Sections 2, 4, 6, 10 to 12 ircl., 14 16 and 18.

Township 36, Range 26, 4,P 1.

M E. . Sec. 15.

All rections 2, 4, 6, 10 to 12 incl., 14, 16 and 18.



Reservation of Oil Shalo Rights No. 4

In consideration of and subject to the provisor, conditions and restrictions, hereinafter contained, permission is hereby granted to

Sun Oil Company, Calgary,

c/o Montreal Trust Company, Notre Dame and Albert Street, Winning, fanitoba.

its successors and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology on the folloring lands, namely:

25 26
27
28 29

all West of the Principal Meridian, and containing an area of 199,247.15 acres, more or loss. See attached list.

This reservation as subject in all respects to

"The Hines Act" and Part X of Manitoba Regulation 29/50 governing

the disposal of boring claims, and any anonuments thereto.

Until the char deposit r ou more uncon a ection 2 of Sect a 1920 of the said result on is the examination shall be restricted to surface reclosy.

Dated it Winnipeg this 30th day of July, 1964.

Director of 'lines

hation No. 4

1in 32, Enge 25, Y.P. ...

All Sections 1 to 36 incl.

mohin 33, Range 25, V.F.F.

All Sections 1 to 36 incl.

formship 33, Rarge 26, W P.M.

All Sections 1 to 36 incl.

To riship 34. Range 26, W P.M.

All Sections 1 to 36 incl.

Township 35, Pango 26, W P II.

W; and N.E.A Sec. 5, All Section 1 to 4 incl., 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 32, 34 and 36.

Township 33, Range 27, M.P M.

All Sections 1 to 36 incl.

Toumship 34, Rango 27, W.P M.

St Sec. 21, N.E.t Sec. 26, E' Sec. 27, S E.t Sec. 35, All Sections 1 to 7 incl., 9 to 14 incl., 10, 18, 20, 22, 23, 24, 25, 28 to 30 incl., 32, 34 and 30.

Township 35, Range 27, 11 P.M.

All Sections 2, 4, 6, 10 to 12 incl, 14, 16, 18, 20, 22, 24, 23 to 30 incl., 32, 34 and 36.

Township 33. Range 28. W P.M.

E2 Sec. 25, N.E.2 Sec. 26, No Sec. 27, All Sections 1 to 6 incl., 9 to 18 incl., 20, 22 to 24 incl. 28 to 30 incl., 32 and 34 to 36 incl.

Township 34, Range 28, W.P.H.

N.E. F Sec. 26, All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 32, 34 and 30.

To mship 34, Range 29, W P.M.

N.E.1 Sec. 26, All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl , 52, 34 and 36. Color of Col

Reservation of Oil Shale Rights No. 5

In consideration of and subject to the provisos, conditions and restrictions, hereinafter contained, permission is hereby granted to:

Sun Oil Company, Calgary,

c/o Montreal Trust Company, Notre Dame and Albert Street, Winnipeg, Manutoba.

its successors, and assigns, to carry on geological and geophysical examinations or both, including investigations relating to subsurface geology on the following lands, namely:

<u>Township</u>	Range
39 and 40	26
38 and 39 35, 37, 38 and 39	27 28
35, 36, 37 and 38	29

all Wost of the Principal Meridian, and containing an area of 197,307.15 acres, more or less. See attacled list.

This reservation is subject in all respects to

"The Vines Act" and Part X of Manitoba Regulation 29/50 govern-

ing the disposal of boring claims, and any mendments thereto.

Until the cost deposit required under subsect on 2 of section 1920 of the cost mendiation is more, as ear in tion in the recorded to surface recolor.

Dated at Minnipeg this

30th day of July, 1964.

Director of Mines

anship 39. Range 26, k P W.

N.E.2 Sec. 26, All Sections 1 to 25 incl, and 27 to 36 incl.

Township 40, Henge 26, W.P. H.

All Sections 1, 2, 11 to 14 incl., 23 to 25 incl. and 36.

Township 38, Range 27, W.P.M.

N.b.# Sec. 26.

All Sections 2, L, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 32 incl., 34 and 36.

Townslip 39, Range 27, W.P.M.

All Sections 1 to 36 incl.

Tormship 35, Range 28, V P 16.

All Sections 2, 4, 6, 10 to 12 incl., 11, 16, 18, 20, 22, 24, 28 to 30 incl, 32, 31 and 36.

To mahip 37, Range 28, 4 Pad.

N.B.\frac{1}{4} Sec. 26, All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 3°, 34 and 36.

Tomship 38, Range 28, 1.p. 4.

E¹ and N.W.: Sec. 1, All Sections 2, 4, 6, 10 to 12 incl., 14, 16 to 35 incl.

Towns hip 39, Renge 28, W.P.'i.

All Sections 1 to 36 incl.

Township 35, Range 29, W P.W.

All Sections 2, 4, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 22, 28 to 30 incl., 32, 31 and 36.

Tourship 36, Renge 29, W.P.M.

E¹, N.W.¹ and N¹ of S.W.¹ Sec. 4, N.E.¹ Sec 26, All Sections 2, 6, 10 to 12 incl., 14, 16, 18, 20, 22, 24, 28 to 30 incl., 32, 34 and 36.

Township 37, Range 29, U.P.M

S.V. Sec. 8, N.E. Sec. 26, All Sections 1 to 7 incl., 9 to 25 incl., 27 to 36 incl.

Township 38, Renge 29, 1.P. 1.

All Sections 1 to 36 incl.

San Ott Company

Pescryation of Oil Shale Rights No. 6

In consideration of an subject to the provises, conditions and restrictions, hereinafter contained, penalssion is hereby granted to:

Sun Oil Company, Calgary,

c/o Montreal Trust Company, Motre Dame and Albert Street, Minnines, Manitoba.

its successors and assigns, to carry on geological and geophysical examinations or lot h, including investigations relating to subsurface geology on the following lands, namely:

Torre do	Ranca
#1 end 42	25
#0, #1, #2, #3 and #4	26
#0 end 44	27
#0	28

all Yout of the ammonpal Moridian, and containing in area of 196,620 words, nore or less. Soo attac od list.

This reservation is samper in all respects to

"The Mines Act" and "art X of Manitoon Regulation 29/50 povorming the disposal of toring claims; and any amendments thereto.

Until the cash denosit required under nuclection 2 of section 19% of the said rand from a made, the earning tion shall be restricted to surface replace

Dates et Minniven this

30th day of Jan, 1764.

Malukant

Director of Mines

8 on to 6

Mr. 11. Paro 25.

All Dections 4 to 7 incl., 9, 16 to 21 incl, and 23 to 33 incl.

Amenda 12. Ponto 25, H.P. II.

E' Sec. 8, 411 Sections 4 to 7 incl., 9, 16 to 21 incl., and 28 to 33 incl.

To mehin 40, Parco 26, 11.P.M.

All Sections 3 to 10 incl., 15 to 22 incl., 27 to 35 incl.

Tomorio Li. Penge 26, U.P.".

All Sections 1 to 36 incl.

Counship L2, Range 26, W.P. H.

H.F. Sec. 26, All Sections 1 to 25 incl., and 27 to 36 incl.

Township 43. Ranco 26, ".P.".

N.M. & Sec. 26, All Sections 1 to 25 incl., and 27 to 36 incl.

Township I.L. Rango 76, U.P. I.

Fil Sections 1 to 7 incl., and 9 to 36 incl.

Township 40, Duro 27, V.P. ".

All Scottons 1 to 36 incl.

To mahip 44. Dingo 27. .P. 11.

F.E.] Soc. 26, All Sections 1 to 25 incl., and 27 to 36 incl.

Jorna in 40. Impo T. ..P. J.

All Sections 1 to 36 incl.

4

Reservation of (41 State Latte to. 7

In consider tion of and subject to the provises, conditions and restrictions, hereinafter contained, permission is here w granted to

Sun Cil Commany, Calgary,

c/o Montreal Trist Corruny, Lotro Dans and Allert street, thr. ipog, limitob.

its successors and assigns, to carry on geological and peoplysical examinations or both, including investigations relating to subsurface geology on the following lands, namely:

To ms .in	Re re
42 and 43	27
42, 43 and 44	23
42, 43 and 44	29

all lest of the Principal erician, and containing an area of 183,681.60 acros, more or less. Sco attruhed list.

This reservation is subject in all respects to

"The Mine" Act" and Fart X of Innitoba Regulation 29/50 governing

the discosal of torine claims, and any error ments thereto.
Until the cash deposit recoursed under subsection ? of section 1920 of the race mulation is made, the even intion soll be restricted to runtace menlo ,

Dated at Annier this

30th day of July, 1964.

Director of 'Hno.

1007

To many 12, Fran 27, . 1.1.

All octions 1 to 36 incl.

To not ~ 43. Fence 27, .P. .

All Sections 1 to 36 incl.

To n 1'n 42, Tence 27, 1.T. .

all ections 1 to 36 incl.

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All 5 et eral to 3 irel.

All recount 1 to or incl., and 27 to 30 incl.

Tor show 12, T no, 10, 50.

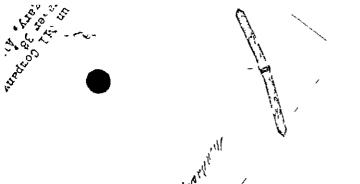
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amm 1 11, 16 7, 50.

1... Sec. (.
All texts 2 to 2 fres., 2' 27 to 36 incl.



Reservation of Oil Shale Rights No. 8

In consideration of and subject to the provises, conditions and restrictions, hereinafter contained, permission is hereby granted to.

Sun Oil Company, Calcary,

c/o Nontreal Trust Commany, Totre Dome and Albert Street, winnipog, innitoba.

its successors and assigns, to corry on puological and georphysical examinations or both, including investigations relating to subsurface geology on the following lands, namely

To mohip	Rengo	
39, 70° 17	2 7	
17	23	
17	29	

all lost of the Principal Moridian, and containing an area of 115,200 acres, more or less. See attac od List.

This reservation is subject in all respects to

"The lines Act" and Part X of Manitobs Regulation 29/50 governing

the disposal of toring claims, and any amendments thereto. Until the cash denosit medu r under subjection 2 of section 1920 of the cold mentletion is made, the ecompact on hall be restricted to furf co reology

Dated at Amnipeg this

30th day of July, 1964.

Director of fares

secretion to. 8

In right 11. E nes 27. 'P. 1.

All Sections not. 1 to 36.

To wahip 41. Take 22. v.P.H.

All Sections Pos. 1 to 36.

Tornel 10 39, I' nee 29, '.".".

All Sections Nos. 1 to 36.

To muhip 40, Renge 29, 1.0.

All Sections "os. 1 to 36.

Tomonio 41, Prago 29, '1,7 H.

All Sections Nos. 1 to 36.

RESUVATION OF OTHER PLEATERS IN. 10

C - 3

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In consideration of and subject to the provisor, conditions and restrictions here mafter contained, permission is hereby granted to: Sun Oil Company, Calgary,

c/o Montreal Trust To puny, Notre Mare at '1 ert Street, Wingareg, manatoba.

its successors and assisms, to carry on soological and recphysical excitations or both, including investigations relating to subsurface peology on the following lands, namely:

Towship	Ranco
23	20 ~
23	21 ~
23,24,25,26	22
23,24,25,20	23
24,27,20	24
25	25

all Most of the Principal Veridian, containing 109, 268, 82 acros, more or less. See Attiched List.

This reservation is subject in all respects to "The "ines Act" and Part X of huntoba Regulation 29/50 governing the disposal of boring claims, and any amendments thereto, until the care demosis required under Subsection 2 of Section 1920 of the sand regulation is made, the one in them shall be restricted to surface gouldry.

Dated at lannipos this 23rd dry of October, 1964.

Jarce or of dist

2. 1 noo 20 .P. .

Pt. '1 Sec. 7, Pt. 1' Sec. 8, Pt. 1 sec. 15, Ft. Sec. 16 Pt. Sec. 17, All Sec. 16, 19, 20, 21, 72, Pt. sec. 73, 1 Sec. 25, Ft. Sec. 25, All secs. 27, 21, 29, 30, 31, 37, 33, 34, 35 and 36.

To nelio 33. Fence 21 W.P.F.

P) Sec. 1, All Secs. 12, 13, 24, P.F.2 Sec. 25, N.F.1 Sec. 26, All Secs. 2, 29, 30, 32, 34 and 36.

To malio 23, Pance 22 1.P.

H.I. Sec. 2., All secs. 28, 29, 30, 32, 34 and 36.

Ternship 24, Pango 22 11.P. I.

F.W. 1 Sec. 1, 12 of 5.1.2 Sec. 1, When G.I.2 Sec. 2, All Sec. 4, L2 and S.C. 500. 6, 12.1 Sec. 9, All Sec. 10 and 11, I and S.C.2 Sec. 12, 1. Sec. 13, All Sec. 11, 11 and S.C.2 Sec. 12, 1. Sec. 13, All Sec. 21, All Sec. 21, All Sec. 22, 24, Nd Sec. 25, 1.1 Sec. 20, I.V. Sec. 27 and S.L. Sec. 27, All Secs. 20, 25, 30, Fr and S.M. Sec. 32, 100. 33, All Sec. 34, S.C. 35 Sec. 35 and All Sec. 36.

Township 25, 1 on a 22 1.P.d.

All Sec. 2, 1 to 11. xc. L, All Secs. 6, 10, 11, to Sec. 12, All Secs. 10, 21, to Sec. 12, All Secs. 20, 27, 24, 1.0. Sec. 25, All xes. 23, 29, 30, 32, 34 and benefitee. 36.

Tomanio 26, R nea 22 1.1.1.

All secs. 4, 6, 16, 10, 2), 2', 29, F' Sec. 30, and All Sec. 32.

Toimel in 20, lenge 23 J.P. ..

ALL Sccs. 25 and 36.

Toma' 10 24. Range 23 select.

All Sec. 2, o' Sec. 4, 13 and H. 1. Sec. 6, All Secr. 10, 11, 10, 1, 10, 10, 20, 20, 11, sec. 11, All Secs. 23, 25, 30, L. D. D. 1 of Sec. 31, All Secs. 32, 34 and 30.

kormal prise take 23 .". .

All Jees, 2, L, 6, 10, 11, 12, 14, 16, 18, 20, 22, 24, 28, 29, 27, 32, 3n and 3c.

" mo in 2', 1 ero 23 'a". .

All wors. 2, 1, 10, 11, 12, 11, 16, 19, 20, 22, 21, 28, 29, 30, 32, 34 and 36.

Tomsin 21. 16 21. 1.

All Secs. 14, \mathcal{P}_{s} L¹ and S. s. Sec. 25, %. Sec. 26, All Secs. 34 and 36.

Torn do 25, Panco 24, T.

All Sers. 2, 4, 6, 10, 11, 10, 14, 16, 10, 20, 20, 24, 1, 29, 30, 32, 34 and 30.

_C-30

1-7 76, har - 741 . 1.

All secs. 2, 11, 17, 14, 24, '.". Soc. 25, 11, 'ec. 26, All Secs. 35 and 36.

700 25 .F.' .

E's Sec. 1, All Such. 2, 11, 12, 14, 24 and 36.

FINAL ROAD LINK TO MCMURRAY TO BE OPENED JULY 1

ne last gap in ground connection to the McMirray tar sands development area will be closed July I when the highway bridge across the Athabasca River will be opened officially and turned over to the province of Alberta W. Harold Rea, board chairman of Great Canadian Oil Sands Limited, will deliver the bridge to Hon. Gordoil Taylor, Alberta minister of highways. GCOS put up more than half the money of the huge quarter-mile span which cost \$3.3 million. It links Fort McMirray with a new road-to the oil sands.

A parade through Fort McMurray will precede the noon-time ceremony. Afterwards the public will be invited to cross the "bridge to tomorrow's energy" and tour the GCOS extraction and processing plant site 20 miles north. Just a year ago Alberta premier Ernest C. Manning set a plaque marking the start of construction on the \$210 million project, scheduled for completion September 1967.

As a memento of the occasion, GCOS will present to the provincial government a scale model of the bridge. The first car to cross will burst through a ribbon six feet high. Past and present will be represented in a modest tableau at the start of the ceremony.

Completion of the bridge is a significant stage in the scheduled progression of work on the large integrated project. The highway will be used for transportation of equipment and supplies for the later stages of construction, including the northern part of the pipeline from the plant site to Edmonton.

GCOS is currently winding up the details of distribution of its new partially convertible depenture issue sold for \$12.5 million to 125,000 Alberta residents. It is the only company with a provincial permit for commercial production from the facilities will produce 45,000 b/d of synthetic crude, plus byproduct coke and sulphur. Most of the oil will be sold to parent Sun Oil Company Limited for its Sarnia refinery and to this company's parent Sun Oil Company for its Toldeo refinery.

OIL SHALE PERMITS ISSUED

PERMITS SURRENDERED

PS.28 Mortreal Trust Company - 94,800 acres. Effective June 4, 1965.

PS.29 - Montreal Trust Company - 99,200 acres. Effective June 4, 1965.

PS.30 - Yontreal Trust Company - 99,401 acres. Effective June 4, 1965.

PS.31 - Montreal Trust Company - 99,994 acres. Effective June 4, 1965.

PS.32 - Montreal Trust Company - 97,760 acres. Effective June 4, 1965.

PS.33 - Montreal Trust Company - 95,680 acres. Effective June 4, 1965.

PS 34 - Montreal Trust Company - 96,320 acres. Effective June 4, 1965.

PS.35 - Montreal Trust Company - 69,120 acres. Effective June 7, 1965.

PS.36 - Montreal Trust Company - 74,880 acres. Effective June 7, 1965.

PS.37 - Montreal Trust Company - 92,160 acres. Effective June 7, 1965.

PS.38 - Montreal Trust Company - 86,400 acres. Effective June 7, 1965.

PS.39 - Montreal Trust Company - 92,160 acres. Effective June 7, 1965.

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