

MANAGEMENT LIBRARY

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McGILL UNIVERSITY





Descriptions and locations of important areas of search and development in British Columbia, Alberta, Saskatchewan and the Northwest Territories. September 15, 1969.

#### **Head Offices**

Suite 574, Calgary Place #1, Calgary, Alberta

> 1840 - 777 Hornby Street, Vancouver 1, B.C.

#### Officers

W. J. Worrall, President R. S. Lennie, Secretary R. W. Brown, Treasurer

#### Directors

W. J. Worrall R. W. Brown R. S. Lennie K. P. Bottoms

#### **Bankers**

Bank of Montreal, 10th Ave. & Granville Street, Vancouver, B.C.

Bank of Montreal—Main Branch 140 - 8th Ave. S.W. Calgary, Alberta

#### **Registrar & Transfer Agent**

Crown Trust Company, 455 Howe Street, Vancouver, B.C.

#### **Auditors**

Doherty, Meyer, Sapera & Bornett, 1033 West Georgia Street, Vancouver, B.C.

#### Solicitors

Shulman & Company, 1710 Board of Trade Tower, 1177 West Hastings Street, Vancouver 1, B.C.

#### **Exchange Listing**

Vancouver Stock Exchange Symbol: SLR

#### **Authorized Capital**

\$2,500,000.00 divided into 5,000,000 shares
— par value 50c
Issued 4,357,720



During the past 18 months Silver Arrow Exploration Ltd. has developed into an aggressive and highly successful corporation, active in the search for and development of petroleum and mineral resources. Silver Arrow's most prominent success began in November, 1967 when the company joined Stampede Oils Ltd., Bata Resources and others in the drilling of the discovery well in the Strachan Field, potentially Canada's largest Leduc reef sulphur and condensate bearing natural gas reservoir.

This discovery, the Stampede B.A. Strachan 6-33 gas well, resulted in an intensive geological and geophysical program which has generated exploratory drilling over a potential reef trend extending for more than 40 miles. A record 31.8 million dollars was paid to the Province of Alberta for available petroleum and natural gas lands during the 20 month period following the discovery.

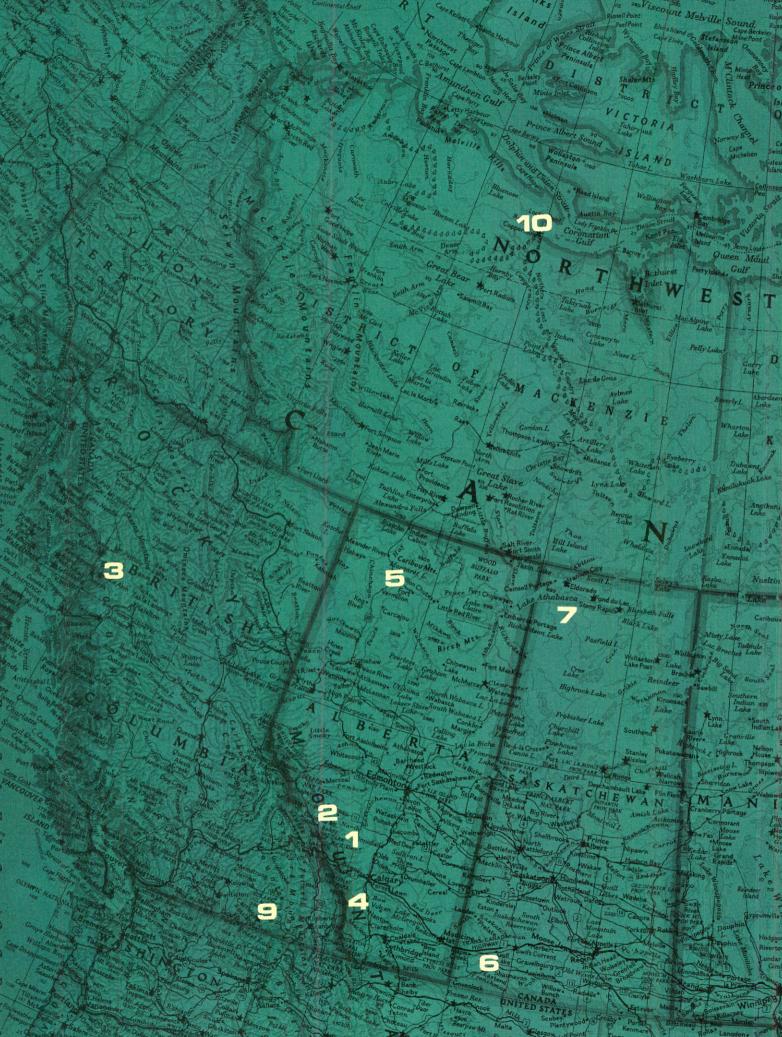
In searching for extensions to the Strachan reef complex, a new Cardium oil and wet gas reservoir was discovered at depths from 9000' to 9500'. approximately 4000' shallower than the Leduc reef. To date one successful well has been drilled on the Silver Arrow interest lands and the Cardium sand is developing into a major reservoir throughout the area.

Since completion of the 6-33 discovery well, Silver Arrow and partners have drilled two additional reef wells which constitute the two largest reef gas wells in Canada. The most recent of them, the Gulf et al 11-22 also encountered a major sour gas reservoil in the D-1 (Wabamun) carbonates, some 2500 feet above the reef, adding significantly to the total Strachan gas reserves. Additional exploratory D-3 reef tests are currently drilling to further evaluate the vast Strachan reserves which already are of sufficient size to support a major gas and sulphur plant which will be completed by November, 1970.

The Company has also acquired extensive interests in other large foothills gas and sulphur plays comparable to Strachan in ultimate potential. Two such prospects will be commenced within the next two months. The Company is pursuing only those petroleum and mineral prospects capable of major potential.

The search for uranium constitutes the second major exploration effort currently being carried out by the Company. Silver Arrow is presently exploring four major uranium prospects, one of which is the largest individual program currently under way in Canada, involving the evaluation of 1,290,700 acres stretching across southwestern Saskatchewan.

Under the direction of W. J. Worrall, K. P. Bottoms and R. S. Lennie, who were founding directors of Stampede Oils Ltd. and United Bata Resources, Silver Arrow will continue to move into areas which offer sound potential for major mineral and hydrocarbon accumulations. In addition to increasing the search for natural resources Silver Arrow will also grow through the acquisition of other successful public and private companies in the resources industry.





1. STRACHAN-RICINUS

Alberta – gas & sulphur

2. BLACKSTONE-CHUNGO

Alberta - gas & sulphur

3. BOWSER BASIN

British Columbia - oil & gas

4. HAPPY VALLEY-CALLUM CREEK

Alberta - gas & sulphur

5. VIRGO-ZAMA

Alberta - oil

6. SASKATCHEWAN LIGNITE

Saskatchewan - uranium

7. LAKE ATHABASCA

Saskatchewan - uranium

8. BAKER LAKE (not shown)

N.W.Territory — uranium

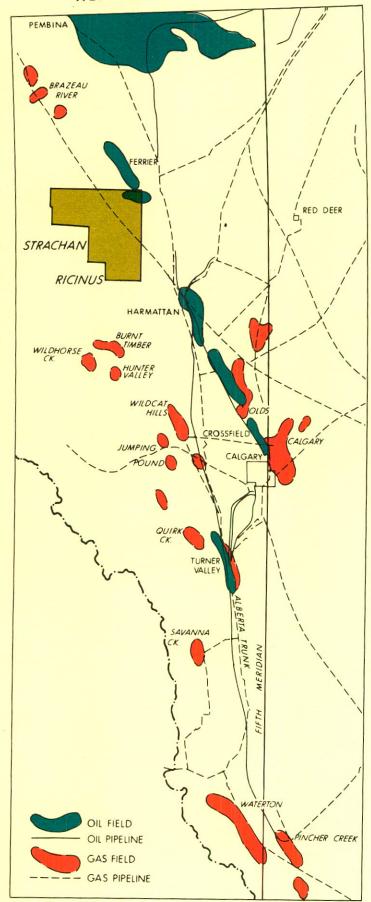
9. CASTLEGAR

British Columbia - uranium

10. COPPERMINE

N.W.Territory - copper

### WESTERN ALBERTA INDEX MAP





## STRACHAN - RICINUS WELL CONTROL AND DRILLING ACTIVITY



- 1. Stampede B.A. Strachan 6-33
- 2. B.A. et al Strachan 11-27
- 3. Gulf et al Strachan 11-22
- 4. Gulf et al Strachan 10-24
- 5. Gulf et all Strachan 7-28
  6. Pan Am A-1 Ricinus 6-24
- Pan Am A-1 Ricinus 6-24
   Pacific Pan Am Ricinus 7-19
- 8. Mobil Ricinus 6-10
- 9. Amerada et al Strachan 10-34
- 10. SOBC Calstan Strachan 10-25
- 11. B.A. Strachan 12-31A
- 12 Chevron SOBC Strachan 14-2
- 13. Gulf Oil Canada Strachan 3-21
- 14. Pacific Pan Am Phoenix 10-27
- 15. B.A. Prairie Creek 9-20
- 16. Amerada et al Strachan 10-17
- 17. Banff Aquitaine Strachan 10-31
- Banff Aquitaine Strachan 7-32
   Banff Aquitaine Strachan 6-28

Devonian (D-3) gas well
Strachan discovery well
Devonian (D-3) gas well
Devonian test (D-3) gas well
Devonian test (D-3) gas well
Devonian test (D-3) — Drilling
Devonian (D-3) test — Drilling
Devonian (D-3) test
Dry and Abandoned
Devonian (D-3) Test — Drilling
Devonian (D-3) Test — Drilling

Dry and Abandoned Devonian (D-3) Test Dry and Abandoned

Devonian (D-3) test

Devonian (D-3) gas well Devonian (D-3) gas well

Devonian (D-3) test — Drilling

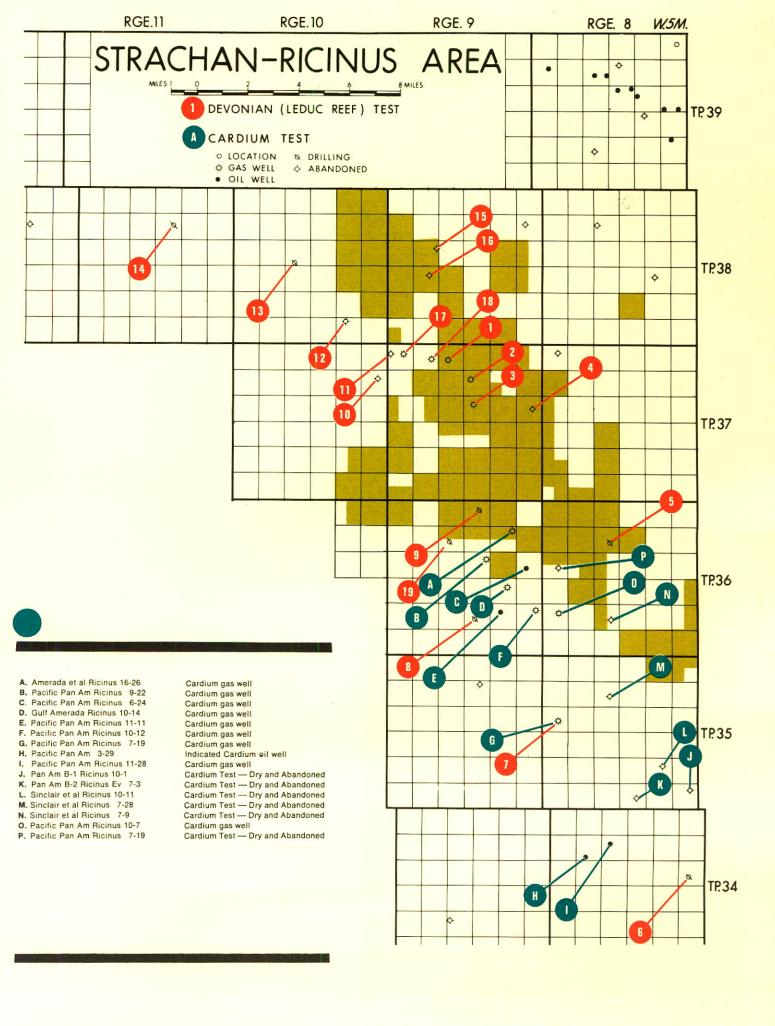
Silver Arrow holds varying interests over a block of land totalling in excess of 53,000 acres centering on the nucleus of Canada's newest and most significant sulphur bearing gas reservoir. In conjunction with Stampede Oils Ltd. and others, Silver Arrow participated to the extent of 5% in drilling the 14,100' Stampede B.A. 6-33 Strachan discovery well in the fall of 1967.\* Since that time two additional major D-3 development wells and one successful Ricinus Cardium wildcat have been completed, and D-3 wildcats are currently drilling.

Leduc D-3 gas reserves in the Strachan-Ricinus area are estimated to exceed 10 trillion cubic feet ranking the field among the largest in North America. The second well completed by Silver Arrow and others, the B.A. et al 11-27 encountered more than 700 feet of net pay in the D-3 reef. The 11-22, a one mile south offset to the 11-27 success found 620 feet of net pay in the D-3 reef plus more than 250 feet of pay in the D-1, a carbonate zone at 11,000 feet, some 2,500 feet above the reef.

Since drilling the discovery well in the fall of 1967 Silver Arrow and partners have acquired 30,080 acres (47 sections), in addition to the original farmout block of 36 sections earned from Gulf. Gas contracts have been concluded and signed with Canada Pipelines Ltd. for the sale of the total Silver Arrow Strachan reserves. A \$20,000,000.00 gas-sulphur plant is currently being designed and construction will begin in October of 1969, to be completed in November of 1970. Silver Arrow's projected revenue based on proven reserves to date will approximate one million dollars annually over a twenty year contract. Should the field develop as presently indicated Silver Arrow's annual revenue will be many times this figure.

\* The company's interest has been increased through the acquisition of gross overriding royalties covering the over 53,000 acres.

# Strachan-Ricinus





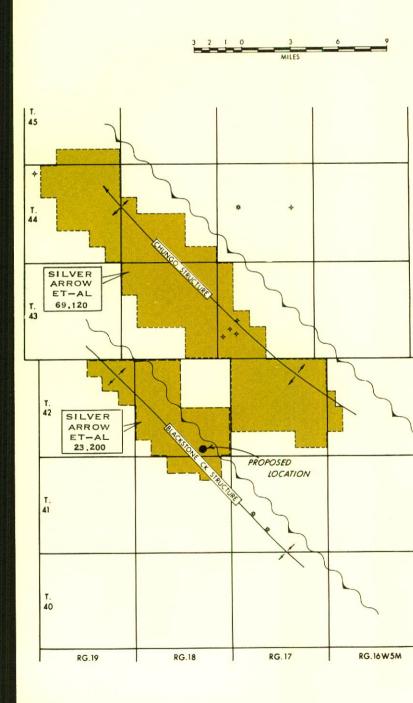
# Blackstone-Chungo Project

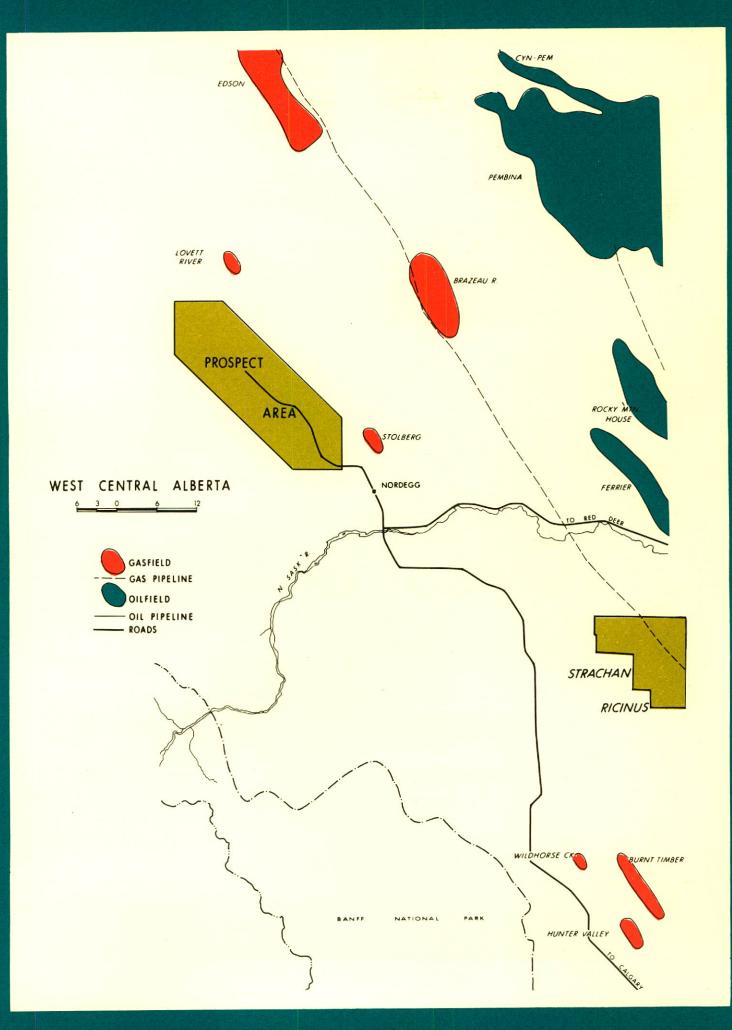
Silver Arrow Explorations Ltd. has obtained a 30% working interest (7.50% net) in the drilling of an 11,000 foot Devonian reef test on a 23,200 acre farmout from Gulf Oil Canada Ltd. The Blackstone prospect, which will be operated by United Bata Resources Ltd., is located in the Alberta foothills 150 miles northwest of Calgary. The Fairholme (D-3) Reef, the primary drilling target, is projected to exceed 700 feet in thickness and is known from surface geologic data to be porous and permeable, and potential reserves are comparable to the Strachan reef complex 45 miles to the southeast. Cost of the initial earning well is expected to be in excess of \$750,000.00. The blackstone8-3-42-18 was spudded on Sept. 1, 1969, and is currently drilling. It is anticipated that the prime target is expected to be reached within ten weeks.

The reef reservoir is capable of containing several trillion cubic feet of gas, and the 36 sections earned blanket the nucleus of the prospect. Extensive geophysical work carried out by the partners strongly supports the prospect which is regarded as the finest of its type in the Alberta foothills.

The importance of the Blackstone test to Silver Arrow is magnified by the Chungo block of 69,120 acres which adjoins Blackstone to the northeast. Success of the Blackstone well will confirm the much larger Chungo play which was acquired under seismic option from Chieftain Development Co. Ltd. Through its commitment to the Blackstone well, Silver Arrow also earns a ground floor participation of 10% in the Chungo prospects. The partners are currently conducting a \$105,000.00 seismic program to gain an option to drill a Devonian test prior to September, 1970. The well will earn an undivided 50% in the Chungo acreage.

Silver Arrow's total commitment to the Blackstone - Chungo prospect will approximate \$300,-000.00, and constitutes the company's most significant project since the drilling of the Strachan discovery well in 1967.





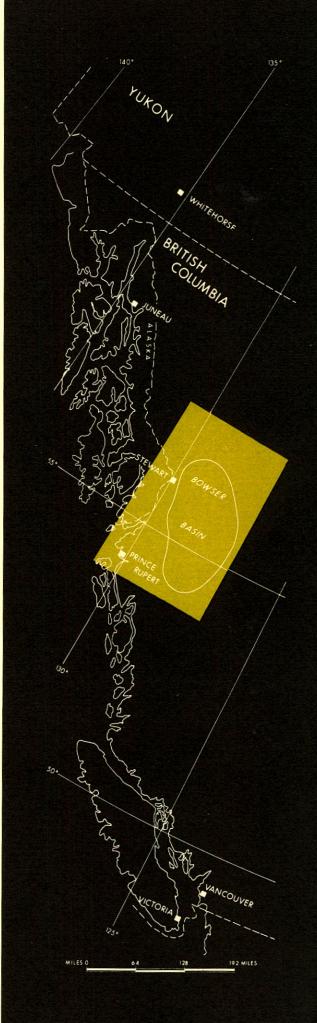


## **Bowser Basin**

The Bowser Basin is an untested sedimentary
Basin located 20 miles from permanent tide
water near Stewart, B.C. This basin has been
known to exist for many years but the dense
rain forest vegetation restricted efforts to map
the area geophysically and geologically.
Certain surface structures, however, are known
to exist and Dome Petroleum, is currently
drilling below 7,000 feet toward a 10,000 foot
target to evaluate the sediments in the basin and
the potential closure on the Ritchie anticline.

The Bowser Basin contains upwards of 20,000 feet of sediments and has exhibited oil seeps in remote areas over the past several years and owes its virginity only to the dense vegetation which covers the area. In the event that Dome is successful in indicating or establishing production in the Bowser Basin a new chapter will have been added to the petroleum industry of western Canada.

Silver Arrow is well represented in this potentially new producing area with more than 319,581 acres in petroleum and natural gas permits, located in geologically favourable areas of the basin.



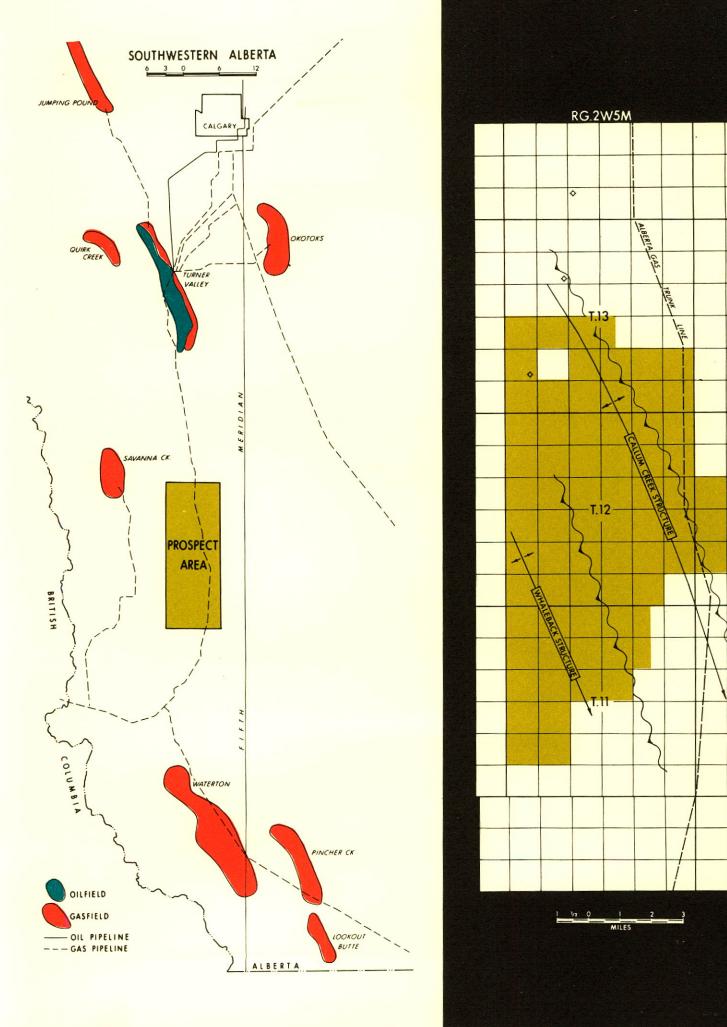


## **Happy Valley Project**

#### CALLUM CREEK, ALBERTA

Silver Arrow holds an undivided 20% net interest in 44,800 acres on a prominent structure in the Callum Creek area 60 miles south of Calgary in the Alberta foothills. Pincher Creek and Turner Valley, fields which contain prolific sour gas reserves, are located on similar structures on trend with the Happy Valley feature, which is documented geophysically as well as from surface geologic studies. The Happy Valley play will be drilled during the fall of 1969 to evaluate the Mississippian carbonates at a depth of 15,200 feet, and the Devonian potential below 18,000 feet and a projected Cambrian Reef at 19,000 feet. The Devonian and Cambrian will be penetrated pending structural confirmation on the Mississippian, and at 19,000 feet will be the deepest well ever drilled in Canada.

Silver Arrow has farmed out its obligation of \$400,000.00 in the first two exploratory tests and will maintain a 10% carried interest through completion of these wells at no expense to the Company. Cost of the earning well is expected to approximate one million dollars.



## Virgo-Zama

Silver Arrow has acquired a 2% net working interest in a geophysical exploration program to evaluate potential Keg River Reef prospects in the Virgo-Zama area of north central Alberta. Based on results of the initial program lands were purchased from the Province of Alberta and two wells were drilled; one of which encountered approximately 175 feet of oil pay. This well, Banner et-al Vergo 15-30-115-6, after months of remedial action to solve mechanical problems, has been placed on production at the rate of 700 barrels per day. The Oil and Gas Conservation Board of Alberta has approved reserves of oil in place of 15,900,000 barrels, of which 6,360,000 barrels are recoverable.

## Kinnaird-Castlegar

B.C. URANIUM PROSPECT KINNAIRD AND CASTLEGAR AREAS

Silver Arrow holds 20 contiguous claims (Claim Block "A")
near the municipality of Kinnaird and 16 contiguous
claims (Claim Block "B") four miles north of Castlegar.
The claims are located in a geologic environment
conducive to the presence of uranium as recently discovered in the China Creek area less than two miles
southwest of Claim Block "A". An evaluation program
is being prepared based on a recently completed
preliminary study of the surface geology.

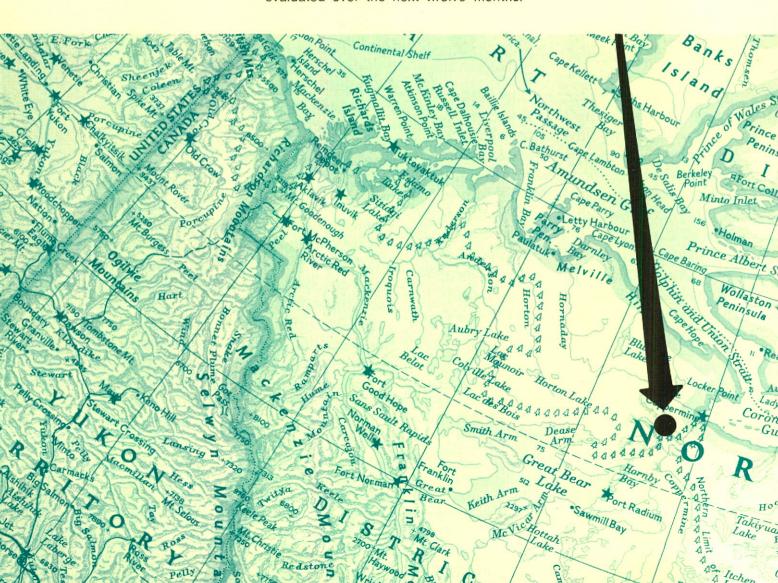


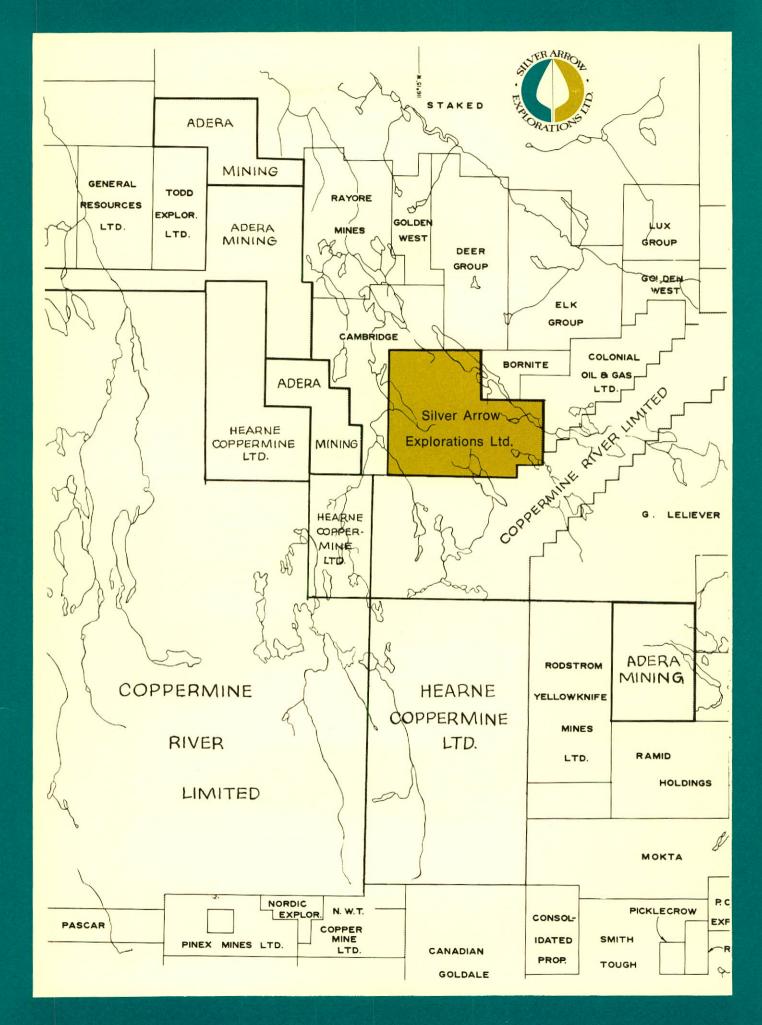
## Coppermine

#### COPPERMINE AREA, N.W.T.—COPPERMINE PROJECT

Silver Arrow holds an undivided 50% interest in 98 located contiguous mineral claims in the District of Mackenzie, Northwest Territories, approximately 35 miles southwest of Coppermine. The remaining 50% interest has been assigned to Adera Explorations Ltd. in return for Adera's expenditure of approximately \$30,000.00 in preliminary exploration work. Several significant geochemical copper anomalies have been defined and a diamond drilling program of ten 250-foot holds is planned to commence immediately.

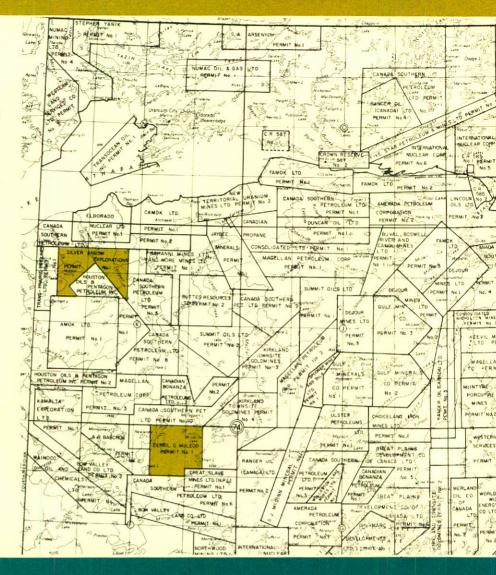
Development of the general Coppermine region as a copper producing area is anticipated within the next few years by major mining companies and exploration activity has recently increased in the area. Silver Arrow is well represented with prospective acreage which will be systematically evaluated over the next twelve months.

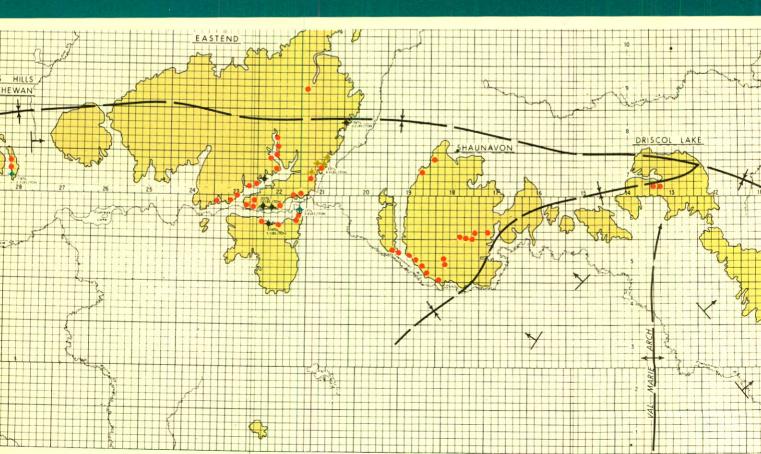




## Lake Athabasca Projects

WOLLASTON LAKE AREA NORTHERN SASKATCHEWAN







# Uranium Exploration Projects

SOUTHWESTERN SASKATCHEWAN
URANIFEROUS LIGNITE

MAP SHOWING DISTRIBUTION OF URANIFEROUS LIGNITES IN ALBERTA AND SASKATCHEWAN, CANADA.

#### LEGEND

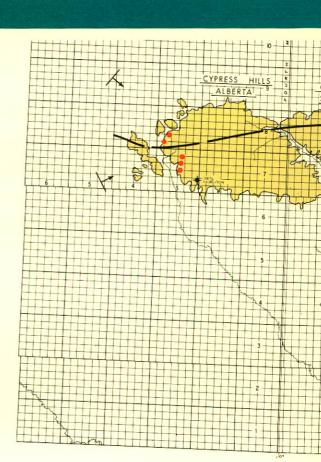
TOPOGRAPHIC HIGH UNDERLAIN BY URANIFEROUS LIGNITES

OUTCROP CONTAINING TRACE TO 118 U<sub>2</sub> O<sub>8</sub> PER TON (TR - 05%)

GUTCROP CONTAINING 1 - 2 LBS. U2 O4 PER TON (-05 - 10%)

DUTCROP CONTAINING 2 - 3 LBS. U<sub>3</sub> O<sub>8</sub> PER TON (-10 - -15%)

[APPROX. CONC. BY BURNING = 4 - 5 TIMES]





# **Uranium Exploration Projects**

#### SOUTHWESTERN SASKATCHEWAN—URANIFEROUS LIGNITE

Silver Arrow has acquired a 6¼% working interest in a program designed to evaluate the uranium potential of a 1,290,700 acre block of land extending across southwestern Saskatchewan. Shallow lignite bands have been noted to carry measurable amounts of uranium, coincident with uranium bearing sandstone units below the coal seams. The program, in addition to geologic and geophysical efforts, will ultimately require the drilling of 2,000 holes, of which 80 have been completed to date.

The project, the largest of its kind in North America, is of such scope that moderate success would provide sufficient accessible uranium reserves to preclude the search for radioactive ore bodies in inaccessible northern areas. The acreage under evaluation is currently exhibiting significant promise and prime targets are becoming apparent as drilling continues. The project area is accessible by numerous provincial roads and the open rangeland is readily travelled by truck mounted drilling rigs, which have been employed for the duration of the project.

## Lake Athabasca Projects

#### WOLLASTON LAKE AREA—NORTHERN SASKATCHEWAN

Silver Arrow, owner of a 60% net interest in one exploration permit and 75% net interst in another, each involving 192,000 acres each, is currently conducting regional and local exploration programs over Exploration Permit # 1, located immediately south of Lake Athabasca in northwestern Saskatchewan. To date 861 miles of airborne spectrometer coverage have been carried out to determine the extent of surface radiation on the project lands. Surface geologic parties have mapped the permit area and sampled the spectrometer anomalies. In addition surface water samples have been collected from 320 geochemical stations to be analyzed for uranium and metallic sulphide content. Work on Silver Arrow et-al permit #2 where the company holds a 75% net interest will commence immediately. A drilling program will be initiated after freeze-up to test the basal Athabasca sands which are presumed to be radioactive from work carried out by others on adjoining properties.

## Baker Lake, N.W.T.

Silver Arrow prospecting Permit 66-A-1, consisting of 167,755 acres, is located immediately west of Hudson's Bay near Baker Lake in an area that is highly prospective for the production of uranium minerals in addition to nickel and asbestos accumulations. Exploration projects, which are currently being considered with adjoining permit holders, are scheduled to begin in late summer.

