MAR 19900001: ATHABASCA GOLD

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A MEMORANDUM REPORT

ON THE

ATHABASCA GOLD PROJECT

OF

359341 ALBERTA LTD.

By Kenneth Richardson, Prospector

August, 1990

THE ATHABASCA GOLD PROJECT

.E PROJECT

An exploratory drilling program was carried our by 359341 Alberta Ltd., to inv igate the sources of gold reported on the east bank of the Athabasca River in northern Alberta. See Index Map. A Brief report of the results secured and comments theron are hereinafter set forth.

The proj ct was started February 1989 and was completed approximately April 28, 1989. Extensive examination was made of the area and site was choosen for drilling of t e the old churn drill holes reportedly drilled in 1911.

74E/4,5

The drill area is situated near a block of Metallic Mineral Claims in Township 95 and 96, Range 10 and 11, West 4thM, approximately 48 miles north down the Athabasca River from Fort McMurray, in the Province of Alberta. The Subject area is within the Athabasca Bituminous Sands area and the mining right were coexistant with previously granted lease permits for the development if the bituminous sands.

The drilling equipment, camp fixtures and supplies were trucked in by the winter road to Fort Chipewan and the west down siesmic lines conveniently located to the drill site. Very little vegetation was distrubed at any time.

TOPOGRAPHY AND COVER

The surface of the area is peneplaned to fairly even level approximately 65 metres above the Athabasca River except where incised by numerous steep walled meandering tributary streams. The elevation of the river, (Low Level), is taken from Ell's map as being 231.64 metres, while the of the immediate drill area on the upper level surface id 295 metres above sea level.

The land area has a dense cover of brush and soft wood leaf trees, mostly birch and alder, with occasional stands of spruce trees that have escaped the periodic forest fires. In some places dandy ridges, remnants of glacial eskers have a park-like grassland vegetation. The road to Bitumint follows along remnants of an esker for about 3 of the 5 mile length.

NERAL GEOLOGY

The Athabasca Oil Sands of Cretaceous Age occupy the entire surfeoe of one region. The oil impregnated sands of the McMurray formation from spectacular outcrops along the Athabasca River and its tributaries. The sands have been estimated to contain more the 300 billion barrels of heavy oil, and are generally considered to be the largest known reservoir of oil. There are 2 bituminous sand formations in the region but the upper, the Clearwater, has been removed by erosion from the drill area, which is actually near the northeastern boundary.

The oil sands are underlain by 800 ft. of limestone, shaley limestones, limy shales and limy muds, and a succession of gypsum and anhydrite beds, with some bituminous shales, to the Precambrian basement rocks.

LL HOLE

Diamond Drill Hole No. 1 was drilled with a 4¾ inch Tri-cone bit down to 218'. Cassing was the set and cemented in according to ERCB requirements. B.Q. core was taken from 218' to a final depth of 998' The rig was closed down several days for Easter and then stuck in hole for about 10 says at which time Baroid of Canada Ltd. was called in to give chemical and technical service for 2 days. Completion of Coring and logging was April 28, 1989.

SUMMARY OF DRILLING RESULTS

The purpose of the drill program was to locate, test and develop the source of gold purportedly found in the area. The location was chosen as being the most likely spot. From the data secured the following deductions seem to be logical:

1. No evidence of gold mineralization was found to be present other that what may be normal consentrations.

2. No Evidence of any quartz veins was found in the sedimentary formations.

3. No evidence was found of any structural breaks, faults, brecciat. zones, silicified zones, or zones showing effects of hydrothermal alertation.

4 The work done so far in the confined area does not conclusively prove that there is not gold present in the vicinity.

SEDIMENTARY ROCKS

Approximately 1,000' of sedimentary rock is reported by other holes drilled in the area to lie on the Precambrain granite basement rocks in this area. At the surface is found the oil impregnated sands of the McMurray Formation, Lower Cretaceous in age, which is about 205' thick in the drill area.

The McMurray is described as being arenaceous and of rather a coarse grain and varies from massive to thick bedded. The lower part is in many places bross-bedded, with beds dripping 5 to 40 degrees. There is no system to the succession of rich and lean bituminous sand beds in the sections through the sand formation which may contain fr[redacted]0 to 30% by volume of heavy oil. Apparently the sand particles are surrounded by a film of water and the oil does not wet the sand, fortunately, making it possible to obtain a fairly high percentage of recovery of oil in the processing operations.

The sand formation contains irregular concentrations of marcasite (iron-sulphide), and where these consentrations have oxidized at the surface, stones and slabs of "ironstone" are found.

The McMurray oil sand formation lies unconformably on an old erosion surface of Upper Devonian limestones, shales, limy shales, shaly limestones and limy muds. Devonian time was marked by a submergence that spread the Appalachian seaway westward to the Mississippi Valley, and soon brought another vast Arctic flood creeping southward across western Canada by way of the Mackenzie Valley region in a seaway nearly 1,000 miles wide The seaways were barely awash, however, and at various times great arms of the sea were cut off and long periods of evaporation of the sea waters took place, laying down alternate layers of evaporites of gypsum, salt and potash brines. The Bitumont area was near the high water mark, however, and received only gypsum evaporites. McMurray has 200' of salt in salt wells but the bed thins out 26 miles north of McMurray. Further east in Saskatchewan over 1200' of salt was deposited as well as potash brines.

In such arms of the sea brackish water favored the growth of low forms of marine organic life which became buried in the marine muds and formed the bituminous (petroliferous) shales that are found in the zone from 767 to 928 ft. Such periods were interrupted frequently by the periods of evaporation as shown by the frequent bands of gypsum. Oil and gas were formed in the bituminous shales and have mostly migrated elsewhere. It seems possible that the oil now found in the Athabasca Tar Sands has migrated from its sources of formation at least partly from the underlaying Devonian shales from dip down slopes many miles to the east southeast and south, for these formations thicken and deepen in those directions.

There is some question question of the age of the lower part of the sedimentary formations for during the Middle Devonian and Upper Silurian apparently the same conditions prevailed and with no apparent unconformity of physical expression. Possibly a careful study of the fossil remains would settle this question

PRECAMBRIAN BASEMENT ROCKS

The Precambrian rocks that make up the Canadian Shield from the bedrock for a land area of about 1,864,000 sq. mi. in Canada. The western edge of it surface outcrop is about 60 to 70 miles northeast of the property and here it is covered with about 1,000 ft. of sediments. Where it is exposed to the northeast it is a nearly flat, featureless plain with gentle undulations. While the topography is somewhat featureless, the composition is a complex aggregation of highly metamorphosed and deformed group of igneous instrusions, stock, dikes, sills, flows and remnants of altered sedimentary formations.

STRUCTURAL GEOLOGY

No evidence of any structure was noted in this area by the writer. It was stated that a fault displacement was visible along the river bank a few miles north of the property. (M.P. McDougall). According to Contribution 118, Kidd, 1951; and Carrigy, 1959, state that the eastern margin of oil impregnation coincides with a major depression on the pre-Cretaceous erosion surface, which trends in a northwesterly direction. Also that at the northern end of this depression in the vicinity of Bitumont Township 96, Range 10, the Clearwater and McMurray formations have been folded into a basin formed by post-Cretaceous collapse of the limestone. This suggests that a major depression

existed before the oil sands were deposited and that they collapsed later, folding the oil sands. More discussion of this subject will be given under the subject GEOPHYSICAL PHENOMENA below.

Geologic history of the Precambrian Shield indicated that most of the oroge- structural dislocations also took place during Precambrian time. Some down-. ting of blocks took place here and there during submergences during Devonian Silurian and Cretaceous time, but other than the depression mentioned in the above paragraph, none is known in this area. It is probable, however, that some fracturing took place. Presumably the land remained stable following the Post-Cretaceous uplift and it is believed that the even skylines represent the Tertiary peneplain that followed this uplift. The great glacial period with its advances and retreats of enormous thickness of ice may have caused some buckling for it is known that elastic rebound is still continuing in some areas.

The presence of some fractures in the area can be surmised from the presence of the water holes discharging hydrogen sulphide gas. Surface waters percolating downward carying organic acids and bacteria reduce the sulphates in the gypsum layers. There is no evidence that any of such fractures might have been subjected to the presence of any mineralizing solutions. On the other hand, if they should have been, the surface cover of Cretaceous oil sands would not be conducive to making them evident at the surface.

GEOPHYSICAL PENOMENA

A copy of Sheet 74 I/4 of Geophysics Paper 440, being an Aero-Magnetic Survey, June to September 1952, by the Geophysics Division, Geological Survey of Canada, was obtained.

The expressions of magnetism are shown by contours on the map as recorded at flight altitude of 1,000 ft. above the surface. These variations are for the most part due to changes in the magnetic content of the rocks making up the basement, but may also be due to the distance to the basement and its attitude. Strong anomalies are probably due to an increased magnetic content, but small anomalies may be due to either or all of the above causes.

A considerable number of writers, Vacquier and others, have noted that when considerable geologic knowledge of a region is available, if applied correctly, interpretations of magnetic anomalies may yield information on , maximum depth of sedimentary cover, location of rock contact including faults,and location of probable areas of differenteation and of mineralization when a locality is underlain by igneous rocks. They further reflect that an isoanomaly map indicates the structural history of the region.

The Aero-magnetic Map indicates that the center of a synclinal trough of low magnetic intensity (1200 gammas), lies exactly¼l mile west of the drill site. It strikes North 22 West and slopes upward slowly for 10 miles to the northwest, then steeply upward between magnetic highs of 3300 on the east and 2800 on the west. To the southeast its slope is gradual to 1560 at the bottom of the map area 4 miles south of Mildred Lake.

The property itself is on a gentle undulating magnetic ridge, 2200 to 2400, about 2 miles in width and trending northerly. To the east there are

several scattered oval shaped domes and depressions of small relief, 300 to 600 gammas.

It is thought by the writer that the major depression of the Pre-Cretaceous erosion surface, followed by Post-Cretaceous collapse during which the oil sands were folded, as set forth in Contribution 118, was probably diagnosed from the interpretation of the Aero-Magnetic map. Nothing was mentioned however, about the structure which must have been necessary to have caused the Post-Cretaceous collapse of the limestone.

It is the writer's opinion that collapse could have taken place only from the leaching away of the limestones by solutions by solutions circulating through fractures, faults or shear zones, or from the leaching away of the gypsum by solutions circulating through the same structures. The simple truth is that if one takes place the other does also. It is clear that some fractures penetrate the gypsum layers reducing hydrogen-sulphide gas which bubbles to the surface from 3 wells known to the writer, all 3 of which are within the depression zone.

It is known that there are no dislocations of such magnitude as to cause interruption of the oil sands, so that the structure deduced to be present is probably no more that a series of fractures. Neither do the contours show steep variations necessary to indicate faults of magnitude.

GENERAL COMMENTS

The possibility of finding gold in the limestones above the Precambrian surface has been a unexplainable enigma to the writer since the first examination of the property. This is nor considered any unsurmountable obstacle from finding ore, however, for ore has been found many times in places that have been "firsts" either in types or locations.

All of the well-known gold camps of Canada are found in a metallogenic province of the Percambrian Canadian Shield extending more than 2,000 miles from Great Slave Lake to eastern Quebec. It was thought by the writer that the best chance of gold occurence would be from gold veins within the Precambrian rocks themselves or from placer deposits accumulated on top of them. To find placer gold on such surfaces, it would have been necessary to find some type of channels of accumulation.

The only evidence here of any metallization is the presence of marcasite in the tar and its mode of origin is rather vague. It may or may not have had any direct connection with mineralizing solutions of hydrothermal origin. The fracture system indicated to be occupying the zone marked by the magnetic movements of late Cretaceous and Tertiary Epochs could have furnished the tectonic and magnetic sources for miners, though there is little surface evidence tha t this has happened.

In some notable instances slumps in limestone areas have been the loci where important ore bodies have been formed, i.e., the great zinc-lead deposits of the Mississippi Valley region, Pine Point, and others. Such ores frequently have marcasite and pyrite as gangue minerals. The hidden slumps are now traced out by geophysical methods, followed by geological study and exploration drilling. These methods have located important new lead and one iron ore deposit in southeastern Missouri within recent years.

In this case there are present two possible indicators of favorable conditions of ore deposition, with several unfavorable. In the weight of geological evidence it is a bet, but not a very good one. Possibly it might warrant a thorough surface examination in the region from the mouth of the Ells River Westward for 3 miles in search for further indications of mineralization.

PREVIOUS AND CONTEMPORARY DRILLING

By far the greatest amount of drilling in the area has been to test the oil sands, a subject beyond the scope of this report. A few wells were drilled to explore for oil in the underlying Paleozoic formations with a few reaching the Precambrian; most of these wells are also beyond the scope of this report. However, one such well was drilled on the east side of the Athabasca River at a surface elevation of 816 feet (248.7m) in Lsd. 8, Sec 2, Tp. 96, R. 11 W4. It is designated Athabasca Oils Ltd. No. 1.. Certain details concerning it in a report by Allan (1920) differ from those in a report by Ells (1926)

	Allan (1920)	Ells (1926)
Date drilled	1911-12	1915
Depth to Precambrian	336.8 m (1105')	291.7 m (957')•
Total Depth	344.4 m (1130')	313.9 m (1030')

In addition Allan (1920) reported that the 25 feet of precambrian granite carried $13.00 per ton in gold. At the then prevailing price for gold, this works out to 0.63 oz/ton. A statement (Appendix 4) sworn on January the 14th 1946 at Trumbull County, Courtland, Ohio apparently by one of the drillers of Athabaska Oils Ltd. No. 1 refers to two Auriferous quartz veins five feet apart, three and and seven and one half feet thick, in limestone at a depth of 907 feet (276.5m). Recent examinations of the area at the reported site of Athabaska Oils Ltd. No. 1 revealed casing from two wells: One (CD-1) less than 30 m and a second (CD-2) about 210 m, east of the bank of Athabasca River. CD-1 fits the location of Athabaska Oils Ltd. No. 1 as reported by Allan (1920), Ells (1926), and a photostat of a Dominion well card. CD-2 appears to be Athabaska Oils Ltd. No. 2 according to a photostat of dominion well cards, but some of the information given differs from that of Ells (1926). In all Athabaska Oils Ltd. drilled five wells in Tp. 96, R. 11 W4, but only No. 1 appears to have penetrated below the oil sands.

During the period of 1962 10 07 to 1963 01 09 four holes were drilled for Scurry-Rainbow Oil Limited (Elstone, 1963) near CD-2 in order to check for the gold reported by Allan (1920) in Athabasca Oil Ltd. No. 1; only three holes reached the Precambrian.

In March 1986 Tanner Arctic Oils Ltd. drilled a hole about 1.3 metres

south of CD-1 to a depth of 296.3 metres. It bottomed in 1 metre of coarse-grained re Precambrain granite. As far as is known the upper part of this hole was triconed with the core point not stated, but core recovery was good below 277.1 metres. Five samples from the cored interval are believed to have been submitted for assay with all gold concentrations in the low ppb range. No Analytical results of samples of cuttings from the known cored section have been reported; presumably none were sent analyses.

None of the depths to the Precambrain in the three 1962-63 holes and the one 1986 hole agrees with that reported by Allan (1920) for Athabasca Oils No.1, but are close to that reported by Ells(1926). If Bradly's sworn statement, apparently referring to Athabaska Oils Ltd. No. 1 is accurate, the gold appears to be in the methy formation, not in the Precambrain as reported by Allan (1920).

PROPERTY

The property consists of a Metallic Minerals Exploration Permit under agreement No. 6888060001 dated 1988 6 30 with a term of three years to 1991 7 9 and renewable for up to four additional years. This comprises the following area:

Part of	M	Rg	Twp	Sec	Part
	4	11	096	1	W,L10,L15
				2	NE
				11	E
				12	W,L2,L7.

It totals 512 hectares according to the legislated conversion factor used by Alberta Energy and Resources. It is held in the name of Kenneth Richardson who was required to make a work refundable deposit of $10.00 per hectare or $5,120.00 for the first three years of the permit. If the renewed, assessment work at the rate of $20.00 per hectare is required in the first renewal period of two years and $15.00 per hectare in each of the second and third renewal periods of one year each.

Sufficient work has been done to keep all the property in good standing and cause the Alberta Energy and Natural Resources to make a refund of the $5,120.00 to the permit holder Mr. Kenneth Richardson.

The project has been a most interesting one, it is believed that the disclosures are sufficiently encouraging to warrant the completion of the program of drilling further holes.

Respectfully submitted,

[redacted]

Kenneth Richardson
Prospector

I, Kenneth Richardson, Prospector of the City of Edmonton in the Province of Alberta,

MAKE OATH AND SAY, THAT:

1. I have knowledge of the work done on Metallic Minerals Exploration Permit No. 6888060001 as described in the report of which this statement is part.

2. The expenses listed above were incurred in conducting work on Metallic Minerals Exploration Permit No. 6888060001.

Sworn before me at Edmonton, Alberta
the 17 day of August 1990

[redacted]

A Commissioner for Oaths
Leonard E. Richardson
Expiry 7/9/92

Kenneth Richardson

KAMLOOPS
RESEARCH & ASSAY
LABORATORY LTD.

B.C. CERTIFIED ASSAYERS

912 - 1 LAVAL CRESCENT — KAMLOOPS, B.C.
V2C 5P5
PHONE: (604) 372-2784 — FAX: (604) 372-1112

359341 Alta. Ltd.
Box 11, S'te 14, R.R. 4,
Edmonton, Alta.
T5E 5S7

Attn: Kenneth Richardson

INVOICE. 89-0320
DATE. August 22, 1989
FILE No G 2182

43 Sample preparation	@ $ 3.00	$ 129.00
43 Gold geochem	@ 6.75	290.25
		$ 419.25

OK

419-25 ✓
62.10 ✓
752-62 ✓
993.60 ✓
893.29 ✓
107.10 ✓
1186.32 ✓
750.00 ✓
1246.00 ✓
816.00 ✓
2092.00 ✓
675.00 ✓
440.00 ✓
6200.00 ✓
5170.65 ✓
22251.60
41880,00
41051.60 !

A SERVICE CHARGE OF 2% ($1.00 min.) PER MONTH, 24% PER ANNUM, WILL BE CHARGE
CARRIED FORWARD FROM PREVIOUS MONTH.
THIS IS AN ACCOUNT FOR PROFESSIONAL SERVICES AND IS DUE ON PRESENTATION

BARRINGER
Laboratories (Alberta) Ltd.

SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

4200B - 10 STREET N E
CALGARY, ALBERTA T2E 6K3
PHONE (403) 250-1101

DATE: May 5, 1989

PROJECT:

PERIOD COVERED:

SALES ORDER:
PROGRESS: KLING:
SHIPPING REPORT:
WORK REPORT: 6191-89
FED. SALES TAX: Exempt

359341 Alberta Ltd.
Box 11, Site 14
R.R.#4
Edmonton, AB
T5E 5S7

TERMS: NET 30 DAYS

AUTHORITY: K. Richardson

TO:

5	Au, Ag analysis FA.AA	9.75	48.75
5	Rock chip sample preparation	3.75	18.75
			67.50
	Less 8%		-5.40
	TOTAL AMOUNT DUE:		$62.10

OK

INVOICE 3570

BARRINGER
Laboratories (Alberta) Ltd.
SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

4700B - 10 STREET N.E.
CALGARY, ALBERTA T2E 6K3
PHONE: (403) 250-1001

DATE: April 21, 1989
PROJECT:
PERIOD COVERED:
SALES ORDER:
PROGRESS BILLING:
SHIPPING REPORT:
WORK REPORT: 6178-8
FED. SALES TAX: Exempt

359341 Alberta Ltd.
Box 11, Site 14,
R.R. #4
Edmonton, AB
T5E 5S7

TERMS: NET 30 DAYS

AUTHORITY: K. Richardson

TO:

61	Au, Ag analysis FA.AA	9.75	594.75
61	Sample Preparation	3.75	228.75
			823.50
	Less 8% discount		-65.88
	TOTAL AMOUNT DUE:		$757.62

CK

INVOICE 3553

BARRINGER
Laboratories (Alberta) Ltd.
SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

42008 - 10 STREET N E
CALGARY, ALBERTA T2E 6K3
PHONE (403) 250-1901

DATE: April 24, 1989

PROJECT:

PERIOD COVERED:

SALES ORDER:
PROGRESS BILLING:
SHIPPING REPORT:
WORK REPORT: 5179-89
FED. SALES TAX: Exempt

359341 ALBERTA LTD.
Box 11, Site 14
R.R. # 4
Edmonton, AB
T5E 5S7

TERMS: NET 30 DAYS

AUTHORITY: Ken Richardson

TO:

80	Au, Ag analysis FA.AA	9.75	780.00
80	Sample Preparation	3.75	300.00
			$1,080.0
	Less 8% discount		-86.40
	TOTAL AMOUNT DUE:		$993.60

OR.

INVOICE 3556

BARRINGER
Laboratories (Alberta) Ltd.
SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

42008 - 10 STREET N.E.
CALGARY, ALBERTA T2E 6K3
PHONE (403) 250-[illegible]

DATE June 6, 1989

PROJECT

PERIOD COVERED

SALES ORDER

PROGRESS BILLING

SHIPPING REPORT

WORK REPORT 6203-89

FED SALES TAX Exempt

359341 Alberta Ltd.
Box 11, Site 14
R.R.#4
Edmonton, AB
T5E 5S7

TERMS: NET 30 DAYS

AUTHORITY: K. Richardson

TO:

77	Au analysis FA.AA	8.50	654.50
77	Sample Preparation	3.75	288.75
			$943.25
	Less 8% discount		-75.46
			$867.79
3	Au analysis from Loring Labs	8.50	25.50
	TOTAL AMOUNT DUE:		$893.29

INVOICE 3594

CUSTOMER COPY (RIG)

NOTE SCREENED ☐ AREA - OFFICE USE ONLY

F ROID OF CANADA
CAL Y ALBERTA
(403) 263-8740

DELIVERY TICKET
No. DT 119749

April 6/89

SHIPMENT - INVOICE

SOLD TO
359341 Alberta Ltd.
Kenneth ~~Richerson~~ Richardson
Box 39
St.Albert, Alberta. T8N 2G3

SOLD BY: BAROID

DELIVERY WAREHOUSE: 23 Onoway, Alberta.

April 6/89

957-5398

SHIP TO COMPLETE LOCATION: SASK

Picked Up

		PRODUCT NO. OR CODE	QUANTITY	DESCRIPTION				
1								
2			3	Tannex	50 lb.		$35.70	$107.10
3								
4								
5				Total Weight: 150 lbs.				
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

SUB TOTAL

PROV. TAX

TOTAL

[redacted]

April 6/89

CUSTOMER COPY (RIG)

NOTE SCREENED ☐ AREA - OFFICE USE ONLY

BAROID OF CANADA, LTD.
CALGARY ALBERTA
(403) 263-8740

DELIVERY TICKET

No DT 114969

DATE: April 14/89

CUSTOMER CODE:

WELL NUMBER:

SHIPMENT - INVOICE

SOLD TO:
Leo Halonen Construction
Red Water, Alberta

SOLD BY: BAROID

DELIVERY WAREHOUSE No: [2] Onoway, Alberta
WAREHOUSE PHONE NO: 967-5388

CUSTOMER ORDER No:

ORDERED BY: Leo

DATE SHIPPED: April 14/89

SHIP TO
COMPLETE LOCATION: ODH 3 Good 1

CONTRACTOR

SHIP VIA: Baroid Pick-up

MANUAL ☐ COMPUTER [ ]

ITEM	QUANTITY	DESCRIPTION	PACKAGE SIZE	UNIT PRICE	AMOUNT
1					
2	2	Aluminum Sterate	25 lb.	101 10	202 20
3	2 Ex	Caustic Soda	50 lb.	35 20	70 40
4	1	Kelzan XCD	25 kg.		495 50
5	(8)	Ex Spot	20 L	[illegible]	
6	1	Scot Free	15 gal		354 37
7	1	Soda Ash	100 lb.		26 45
8	1	Q-Broxin	50 lb.		37 40
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

REMARKS (DETAIL OF TRANSPORTATION, ETC.)

CODES

SUB TOTAL: 1186 32

TRANSPORTATION

PROV TAX

TOTAL

MATERIAL RECEIVED IN GOOD ORDER BY (AUTHORIZED REPRESENTATIVE OF CUSTOMER)

TYPE NAME OR PRINT [redacted] SIGNATURE

DATE: April 14/89

TOMER COPY (RIG)

BAROID OF CANADA LTD.

CALGARY ALBERTA
(403) 263-8740

DATE: April 14/89

SERVICE AGREEMENT NO SA 300841

SOLD TO: LEO HALONEN CONSTRUCTION
RR 6 WATER, ALTA

I ☑ INVOICE
C ☐ CREDIT NOTE

SERVICED BY: BAROID

SERVICE REPRESENTATIVE: R. SORENSEN

CUSTOMER ORDER NO

ORDERED BY

WELL DESCRIPTION NAME: DDH 3 - GOLD 1

WELL LOCATION (BLOCK AREA RIG PLATFORM)

NO SERVICING LOCATION

DAYS ON JOB: 2

EQU UNIT NO

BEGIN: 9:00 AM ☑ PM ☐ DAY 14 MO 04 YR 89

END: 7:00 AM ☐ PM ☑ DAY 16 MO 04 YR 89

PRODUCT LINE (CIRCLE ONE): BAROID

EQUIPMENT TYPE

☐ MANUAL

CUSTOMER (S) NO

CS NO

CURRENCY M / C

ITEM	PROD LINE ETC	SERVICE (S)	PART (M) CODE	PRODUCT (P)	QUANTITY (DAYS PER SHOTS etc.)	DESCRIPTION OF SERVICE EQUIPMENT etc.	H OR SR	TAX %	UNIT PRICE	PER	AMOUNT
1					2	TECHNICAL SERVICE DAY			375.00	DAY	750.00
2						TECHNICAL SERVICE DAY - STANDBY					
3						RENTAL WORKING				DAY	
4						RENTAL STANDBY					
5						EQUIP INSTALLATION/ON					
6						EQUIP REMOVAL ON					
7											
8											
9											
10											
11											
12											
13											
14											
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17											
18											
19											
20											

REMARKS (DETAIL OF TRANSPORTATION etc.)

CODES

SUB TOTAL 750.00

TRANSPORTATION

PROV TAX

TOTAL 750.00

SIGNED BY: (AUTHORIZED REPRESENTATIVE OF CUSTOMER)

TYPE NAME OR PRINT

SIGNATURE

OR PRINT

[redacted]

DATE

QTY CONT.

CHAMCO

INVOICE

9302	MISCELLANEOUS	8530 111	N/A	03/16/89	3[illegible]5

			TERMS
DOUG CAVIN	03/14/89	03/16/89	28793	NET 30 DAYS

SOLD TO
HMS PROPERTIES LTD.
BOX 2, SITE 14, R.R. 4
EDMONTON, ALTA.
T5E 5S7

SHIP TO
HALLOEN INDUSTRIES
FT. MCMURRAY AIRPORT

CONFIRMATION ONLY - PAID BY CHEQUE**

PARTS FOR FIN/REA.. ROYAL TRIFLEX PISTON PUMP

FOR CORE DRILL RIG. OLD MODEL #4296C

NEW MODEL: L0412ECD

1	1	CAST IRON FLUID END COMPLETE WITH CORE DRILL BALL VALVES, VALVE COVERS, AND CYLINDER END GASKETS	1,246.00	1,246.00
1	1	PARTS ILLUSTRATION - N/C	.00	.00
1	1	CHAMCO PRODUCT LIST - N/C	.00	.00

MERCHANDISE 1,246.00
*** INVOICE AMOUNT *** 1,246.00

OK

CANADA WIDE
DIAMOND DRILLING SUPPLIERS LTD.

3611 WEST 16th AVENUE
VANCOUVER, B C V6R 3C3

PHONE (604) 228-9668
TELEX 04-506-409

STATEMENT

To/a

359341 ALBERTA LTD.
BOX 11, SITE 14, R.R.#4
EDMONTON,
ALBERTA , ATTN: KEN
T5E 5S7

STATEMENT DATE

03/31/89

PREVIOUS BALANCE

0.00

TRANSACTION DATE	PURCHASES/PAYMENTS/CREDITS	AMOUNT
03/30/89	INV#7856	816.00

PREVIOUS BALANCE	PAYMENTS	PURCHASES	CREDITS	INTEREST	NEW BALANCE
0.00	0.00	816.00	0.00	0.00	816.00

AGING	CURRENT	30 DAYS	60 DAYS	90 DAYS	OVER 90 DAYS
	816.00	0.00	0.00	0.00	0.00

BAROID OF CANADA
500, 840 - 7th AVE SW
CALGARY, ALBERTA T2P 3G2
TELEPHONE (403) 263-8740

STATEMENT

[illegible] 24 [illegible]

LEO MALDEN CONSTRUCTION
BOX 415
RED WATER, ALBERTA
T0A 2W0

STATEMENT DATE	PAGE
91 APR 30	1 OF 1
ACCOUNT	
[illegible]	CUSTOMER #
AMOUNT DUE	
2,092.20	

CANADIAN DOLLARS

REFERENCE	DATE	•		GROSS AMOUNT	PAYMENTS	DISCOUNTS & ADJUSTMENTS	BALANCE
9206111715	91 APR 30		1	2092.20			2092.20

CURRENT	31-60	61-90	91 +	BALANCE DUE
2092.20				2092.20

2092.20

SABINA AGENCIES LTD.
#200, 12-06 - 112 AVENUE
EDMONTON, ALBERTA
T5M 2S9

71-0796
TELEPHONE:
(403)454-0391

STATEMENT OF ACCOUNT

359341 ALBERTA LTD.
C/O KEN RICHARDSON
BOX 11, SITE 14, R.R. 4
EDMONTON ALBERTA T5E 5S7

02/28/89
THR184
14

Please return this portion with your payment

AMOUNT ENCLOSED $ _____

DATE	INVOICE NO	DESCRIPTION	AMOUNT
02/27/89	COVERNOTE	COMPOSIT MERC	675.00

AMOUNT PAST DUE	PLEASE PAY AMOUNT DUE
	675.00

SABINA AGENCIES LTD.

2.000% LATE CHARGE AFTER 30 DAYS SUBJECT TO .00 MINIMUM CHAR

ALLAN M FREW, 10311 - 49 ST
EDMONTON, ALTA T6A 3C8

INVOICE 020556

SOLD TO Mr. K. Richardson
RR #4 - PEACE RIVER, ALTA

SHIP TO

ADDRESS VIA

MAY 17 81

ORDER NUMBER

REPRESENTATIVE

TERMS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
10.	Professional services		400 00
	Typist		10 00
	Travel Expenses		30 00
			440 00
	Opinions		

Halonen CONSTRUCTION LTD.

BOX 415, REDWATER
ALBERTA T0A 2W0
TELEPHONE 942-3403

Construction & Maintenance of Oilfield Roads, Leases, Highways, Plantsites

Line Clearing & Brushing ———— Pipeline Surface Maintenance

TO: Mr. Kenneth Richardson
RR#4
NAMAO, Alberta
TJA 2NJ

December 13 19 89

Invoice No. 425-2

Purchase Order No. _____

Our W.C.B. No.111802.

To backcharge for goods and services rendered on drilling program at Ft. McKay, Alberta.

Dec	21/10040	Universal Exploration..rig(Partial)	$ 10 000.00
	29/10049	Arnold Bros. ..transport pipe	391.00
	10/9790	Globe Drilling...	50.00
	10/9791	Globe Drilling...pipe	7 883.94
	30/1401	George Failing Co.	1 207.34
	07/10014	Budget Rental..truck to transport pipe	525.00
	09/cash	BC Ferry Corp.Leo's truck to Island	21.00
	10/cash	BC Ferry Corp..trucks to mainland	49.20
Jan	03/10052	Larry McGuigan	3 000.00
	25/10115	Longyear..#6158477	1 036.00
	16/1400	Larry McGuigaan	2 000.00
Feb	20/10127	M & D Pipe Sales #33992	569.18
	22/10973	M & D Pipe Sales #33998	170.94
Mar	16/10218	Longyear #6158592, 6158517	1 054.00
	28/9437	Al Auto..used deck	375.00
	12/9445	Larry McGuigan	429.00
	27/9795	McMurray Plumbing #1651	319.05
	07/10131	Dennis Gable...tank	250.00
		Rental of light Plant...Ebco Rental	740.00
			$30.172.65

FUNDS RECEIVED RE ABOVE STATEMENT

December	22/88	359341 Alta	$ 8800.00
	22/88	359341 Alta	10000.00
January	11/89	K. Richardson	4200.00
	17/89	K. Richardson	2000.00
May	05/89	K. Richardson	5170.65
			$ 30170.65

ONE-WAY TRUCK RENTALS • ONE-WAY TRUCK RENTALS • ONE-WAY

Budget rent a truck

ONE-WAY RESERVATIONS NUMBER
1-800-663-9331 B.C. 112-800-663-9417

Renting city: [illegible] BC
Owning P.O.: [illegible]
Date: [illegible] 88

Receiving city:

[redacted]
HALGREN CONSTRUCTION LTD
LEO HALGREN

Renter: LEO HALGREN
Residence: BOX 415
City / Province: REDWATER BC
Licence no: [redacted] Expiration: 89

Company: [illegible]
Address: BOX [illegible]

	Amount	Auth no
Advance deposit	$ 625 00	0882[illegible]
Deposit	$	
Total deposit	$	

	Replacement Truck	Original Truck
Truck no	1435	T6165
Licence no	6990 RP	5331-[illegible]
Make	1 TON M/VAN	5 TON M/VAN
Time out	DEC 10 A 920	
Mileage in	53113	
Mileage out	53763	100815
Miles driven	310	

FLAT RATE INCLUDES
2 MILES / [illegible] DAYS
[illegible] KMS
RATES DO NOT INCLUDE GASOLINE

Flat	$ 425 00
Days	$ [illegible]
Hours	$ [illegible]
Miles	$ .25
Total time and mileage charges	425 00
Sub total	
Dolly	
Blankets	
Other	
Other	
Sub total	425 00
Sales tax 6%	25 50
Sub total	450 50
Collision damage waiver charge daily 16.95	16 95
Personal accident ins daily	
Cargo insurance daily	N/A
Gas	24 [illegible]
Total charge	492 15
Less deposits	(625 00)
Net due Budget	
Net due renter	

Remarks: ONE WAY TO [illegible]

IN THE EVENT OF BREAKDOWNS OR WEATHER RELATED DELAYS "BUDGET" IS NOT RESPONSIBLE FOR LOSS OF TIME, WAGES, INCONVENIENCE, LOSS OF USE OF THE VEHICLE OR OTHER CONSEQUENTIAL DAMAGE OR EXPERIENCE

COLLISION DAMAGE LIABILITY WAIVER (C.D.L.W.)
BY SIGNING CUSTOMER AGREES TO PAY THE FEE CURRENTLY CHARGED FOR EACH DAY OR FRACTION THEREOF THAT THIS RENTAL AGREEMENT IS IN EFFECT AND BUDGET AGREES TO WAIVE ALL CLAIMS AGAINST CUSTOMER FOR COLLISION DAMAGE ONLY TO VEHICLE PROVIDED IT IS OPERATED OR USED IN CONFORMITY WITH RENTAL AGREEMENT
[redacted]
Customer signature

LIMITED DAMAGE LIABILITY
BY SIGNING CUSTOMER AGREES TO PAY BUDGET FOR ALL LOSS OR DAMAGE TO VEHICLE (REGARDLESS OF NEGLIGENCE) LIMITED HOWEVER, TO $ [illegible] PER ACCIDENT PROVIDED VEHICLE IS OPERATED OR USED IN CONFORMITY WITH RENTAL AGREEMENT
Customer signature

VEHICLES TOWED ARE NOT COVERED BY BUDGET INSURANCE
SEE ITEMS [illegible] ON REVERSE SIDE HEREOF

RENTER IS RESPONSIBLE FOR ALL DAMAGE TO VEHICLE INCLUDING ALL TIRE & TUBE REPAIRS WHILE TRAVELLING OFF PAVED HIGHWAYS EVEN THOUGH SIMILAR DAMAGE MAY HAVE BEEN CAUSED WHILE TRAVELLING ON PAVED HIGHWAY.

Due back by: 0920 AM 12 day of DEC 19 88
At address: BUDGET [illegible]
City: [illegible]
Additional driver:
Address: NONE

Returned at:
Called in by:
Contract closed by:

RENTER TO BE ONLY AUTHORIZED DRIVER
[illegible]

I AGREE TO BE BOUND BY THE TERMS AND CONDITIONS ON BOTH SIDES OF THIS RENTAL AGREEMENT AND TO RETURN VEHICLE TO BUDGET [illegible]

X [redacted]
Renter's signature
X [illegible] Smith
Signature authorized Budget representative

INTER BRANCH
Refunded $ [illegible]
Mail refund $

Charged	Paid
$	$

0W 31753

ANY ADDITIONAL LICENCES OR PERMITS REQUIRED BY PROVINCIAL OR STATE AUTHORITIES ARE THE RESPONSIBILITY OF THE RENTER.

[illegible] PER MONTH ON OVERDUE ACCOUNTS AND ON [illegible] DAMAGE

CHAMCO

INVOICE

CASH SALE MISCELLANEOUS 1999 04/14/89 33325

DOUG CAVIN 04/14/89 04/14/89 28916 C.O.D. TERMS

SOLD TO
A MISCELLANEOUS - ALTA
HIMS HYDRAULICS LTD
BOX 6 SITE 10, RR4
EDMONTON, ALBERTA
T5E 5S7
ATTENTION: LEO HALONEN

SHIP TO
359341 ALBE LTD.
EDMONTON, AB
C/W CDN. AIRLINES, FT. MCM.

1- 258/1200

**CONFIRMATION ONLY PAID BY CERTIFIED CHEQUE*

2	2	PACKING CUPS	22.36	67.08 FST (1)
6	6	GASKETS	2.42	14.52 FST (1)
1	1	CYLINDER	158.04	158.04 FST (1)
3	3	PLUNGER CUPS	50.38	151.14 FST (1)
1	1	COURIER TO AIRPORT	5.00	5.00

MERCHANDISE 395.78
FEDERAL SALES TAX (1) 12.0000 % 46.89
*** INVOICE AMOUNT *** 442.67

OK

ENR-LSAS
LSEM2200
SCREEN ID:
KEY ID: 068 688806000;
SPECIFIC WELL ID (OPTIONAL) **

MINERAL RESOURCES
RETRIEVAL SUBSYSTEM
MINERAL AGREEMENT DETAIL
QUARTZ/METALLIC MINERAL EXPLORATION PERMIT

1990-08-21
08:29:45
USER ID: LSDJ141

W /

CURRENT STATUS

STATUS: 5 ACTIVE
LAST UPDATE DATE: 1989-10-03
AGREEMENT AREA: 512.0000
TERM DATE: 1988-06-07
CURRENT EXPIRY DATE: 1991-06-07
CANCELLATION DATE:
SECURITY TYPE: METALLIC MINERAL
SECURITY DEPOSIT AMT: $5,120.00

STATUS EFFECTIVE DATE: 1988-07-02
LAST UPDATE TIME: 15:14:16

TERM: 3 YRS 0 MTHS 0 DAYS

CANCELLATION TYPE:

ENCUMBRANCE COUNT: 0

DC914172 HERE IS THE DATA YOU HAVE REQUESTED

PAGE OF

[illegible]

le No.: - ANTA - [illegible]

le Size: - [illegible]

[illegible] - Section [illegible]

Logged by: ALLAN [illegible]

Richardson [illegible]

[illegible] 1959

INTERSECTION
FROM — TO

DESCRIPTION

[illegible]

0 - 215' : [illegible]

- 325.5' : **SHALE:** [illegible] normal to hole axis. [illegible]

- 388.5' : **LIMESTONE:** Fine grained [illegible] massive, light to medium grey. [illegible] shaley appearance at [illegible] spaced locations throughout section. 357 - 388.5': Banded, narrow [illegible] m.m. bands of light [illegible] interbedded dolomite. Widely spaced fractures.

- 398' : - **GYPSUM:** Banded [illegible] brownish grey and dark grey gypsum with narrow bands [illegible] gypsum. Some narrow [illegible] colored dolomitic bands. Numerous irregular fractures filled with white fibrous [illegible]

- 445' : - **DOLOMITE:** [illegible] grained with narrow bands of [illegible] limestone. [illegible] brecciation [illegible] throughout section.

- 454' : - **SHALE:** Massive, very [illegible] light greenish grey. [illegible] broken at 445-450 and 45[illegible]-454.

- 477' : - **GYPSUM:** Mixture of [illegible] gypsum with [illegible] and alterations [illegible] breccia and [illegible] gypsum.

- 481' : - **DOLOMITE:** [illegible] bands of buff colored [illegible] normal to hole axis.

Poor Quality
Original

481' - 603' : - DOLOMITE: Interbedded light grey and medium grey dolomite. Occasional narrow bands of silty dolomite. Widely spaced beds of gypsum at following locations: 499', 534', and 577'. Locally there are narrow fracture-fillings of white fibrous gypsum.
578'-603': Massive dolomite - light grey with buff tinge locally.

69(5': - HALITE: Massive, crystal-clear salt, medium to coarsely grained.

690.5' . . - DOLOMITE-LIMESTONE: Massive, dark and light grey dolomitic limestone with widely spaced narrow silty bands.

710' - 719' : - DOLOMITE: Interbedded light to dark buff colored dolomite and medium to light grey dolomitic limestone. Bedding normal to hole axis.

719' - 730.5': - DOLOMITE: Thinly bedded (banded) light and dark buff colored massive fine grained dolomite. Brecciated over last 2 feet.

730.5' - 760' : - SILICIFIED LIMESTONE: Massive, very fine grained, light grey to white. Highly silicious. Widely spaced irregular fragments of light to medium brown, dolomitic limestone.

760' - 770' : - DOLOMITE & LIMESTONE: Silicified, narrow bands medium grey and light to medium brown dolomite and limestone with bands of gypsum and shale.

770' - 776' : - GYPSUM: Intermixture of brown, light and dark grey, fine to medium grained gypsum.

776' - 833.5': - DOLOMITE: Interbedded massive and thinly bedded buff, medium and dark brown, fine grained dolomite. Bedding normal to hole axis.

812' - 833.5': Fragmental dolomite, various sized and shaped fragments ranging in size from 2 m.m. to 3 cm. across. Colors range from dark grey to buff to dark brown within a medium to dark brown dolomite groundmass. The fragments range from sharply angular to sub-rounded, elongate and rounded.

3.5' - 837'	-	SHALE: Dark brown to black, fine grained shale with narrow quartz bands and thin seams of pyrite. There is a ½" seam of very fine grained, massive pyrite at about 836'.
837' - 855'	-	SHALE with large fragments of LIMESTONE: Dark brown to black shale with large (up to 3") rounded fragments of dark grey limestone.
855' - 888'	-	INTERBEDDED SILICEOUS LIMESTONE, SHALE and DOLOMITE: Mixture of medium brown, light and grey shale, limestone, and buff colored dolomite. Fine to very fine grained. Numerous narrow fracture filling of white, fibrous gypsum. Bedding normal to hole axis.
888' - 931'	-	SHALE: Medium to dark grey, fine grained, massive shale. Occasional 1/4" wide fracture filling of white, fibrous gypsum.
931' - 963'	-	SHALE: Fine to medium grained with extensive dark reddish brown limonitic staining. Wide spaced zones up to 3" across which are not stained - here the shale is light greenish grey color. Numerous narrow fracture fillings of white fibrous gypsum, also bands up to 7" across, of fibrous gypsum. Section becomes sandy towards bottom.
963' - 983.5'	-	ARKOSE: Dark reddish brown, sandy groundmass with various sized angular fragments of feldspar. Zones of red hematitic staining. Locally vuggy.
983.5' - 998'	-	PRE-CAMBRIAN BASEMENT: Gneissic red feldspar and dark green ferro-magnesian mineral intermixed. The feldspar is course grained. Locally hematitic, particularly along shear surfaces. The last 1 foot contains much white, milkly quartz and is less gneissic.
998'	-	END OF HOLE.

Allan M. Frew, P. Geol.