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GEOCHEMICAL AND GEOLOGICAL REPORT

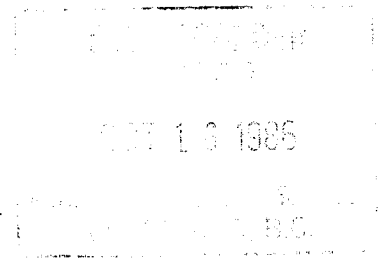
A-1 CLAIM, SPANISH CREEK, LIKELY AREA

Record No. 4997 (7)

CARIBOO MINING DIVISION

MAPSHEET 93A - 11 W

Lat 52° 37' North/Long: 121° ~~26~~ West
257'



Owner/Operator: *for:* MIRAMAR ENERGY CORP.

211-543 Granville Street
Vancouver, B.C.

604-669-0115

FILMED

by:

BARRY J. PRICE, M.Sc., F.G.A.C.

Consulting Geologist

RAPITAN RESOURCES INC.
3447 West 7th Avenue
Vancouver, B.C.
V6R 1W2 733-6902

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15, 1986

OCTOBER 15, 1986

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SUMMARY

A work program costing \$4,000 was done by B.J.Price, M.Sc., consulting Geologist and V.Guinet, Prospector from July 15 to 18, 1986 on the A-1 property owned by Miramar Energy Corp., near Spanish Creek, east of Likely, B.C. in the Cariboo Mining Division.

The work included geological mapping and geochemical soil and rock sampling.

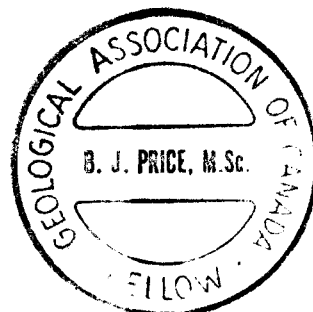
The property is situated near the eastern boundary of the Quesnel Trough, a major structural region of the central part of the province characterized by basic to intermediate Triassic Nicola and Jurassic volcanics and associated volcanoclastics and thin sedimentary units. The volcanics are host to significant copper-gold porphyry style mineral deposits such as the QR deposit near Quesnel Forks (2 million tons of 0.20 oz/ton gold equivalent) or the Cariboo Belle porphyry, which contains 128 million tons of material grading 0.31% copper and 0.012 oz/ton gold.

The black phyllite unit adjacent to the east boundary of the trough is host to gold mineralization in quartz veins and stockworks; the "Madre Zone" adjacent to Spanish Creek, less than 3 km from the A-1 claim, contains approximately 1 million tons of potentially open-pit mineable reserves grading 0.08 oz/ton gold.

The black phyllite unit underlies the A-1 claim, and soil sampling on the south boundary line gave anomalous concentrations of gold over 260 meters on Line 1. Abundant quartz float was found and several float samples were anomalous.

On the opposite slope of the hill, creeks draining the claim area contain large angular float boulders of quartz and carbonate containing silver-rich galena. These samples assayed up to 56 oz/ton silver and up to 0.04 oz/ton gold. The adjacent creek, Black Bear Creek has numerous large but lensoid quartz veins that contain silver-rich galena. Small shipments of high grade material were made in 1926 from one of the veins, a short distance north of the A-1 property.

Additional mapping and sampling are recommended for the 1987 season with a minimum budget of \$15,000 to be spent.



respectfully submitted

Barry Price

Barry Price, M.Sc.,
Consulting Geologist.
October 15, 1986

INTRODUCTION:

The Federal-Provincial geochemical survey and data release in 1981 in the Quesnel Lake area resulted in considerable staking and renewed exploration in an area which has had several periods of exploration for different commodities. The discovery of significant gold deposits in phyllitic rocks in the belt of phyllitic rocks extending from Likely and Spanish Creek to Frasergold Creek resulted from this renewed exploration pulse.

This report outlines work done on the A-1 claim in 1986 and summarizes geological knowledge of the area at present.

LOCATION AND ACCESS:

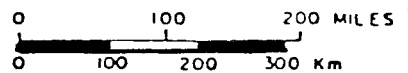
The property is situated on the crest of the mountain separating Spanish Lake and Blackbear Creek, 10 kilometers east of Likely, B.C. The west end of Spanish Lake is 2 km south and the northerly flowing portion of Spanish Creek is 2 km west of the claim.

Access to the claim is by gravel road eastward from Likely, B.C. toward Blackbear Creek and Cariboo Lake. The Blackbear Creek road skirts the base of the hill, roughly 1.5 km west of the west claim boundary and an old logging road (impassable by vehicle) extends southeastward from near the Blackbear Creek bridge to within 500 meters of the north boundary. A new mining exploration road built by Bob Mickle crosses Spanish Creek, roughly 0.8 km from its source, and extends uphill to within 800 meters of the south claim boundary.



MIRAMAR ENERGY CORP.

Property Location Map



MAP 1A

Likely is situated 70 kilometers, (one hour driving time), northeast of Williams Lake, B.C., which is serviced by daily jet flights from Vancouver. Groceries and limited supplies may be purchased in Likely, where lodge or hotel accommodation is also available, but Williams Lake has all supplies and equipment and is a more reliable supply center. No camping areas are practical on the property, although a road could be extended on to the property from either the south or north with minimal effort.

CLAIM DATA:

The property consists of one claim, A-1, with record number 4997, expiry date July 20, 1987 (with the application of one years work with this report). The claim is owned by Miramar Energy Corp., 211-543 Granville Street, Vancouver, B.C.

Old claim tags found in the area were copper tags numbered A6637 I.P., 119680 F.P., and 140172, I.P. This indicates the claims were restaked a number of times, probably in the 1930's or 1940's.

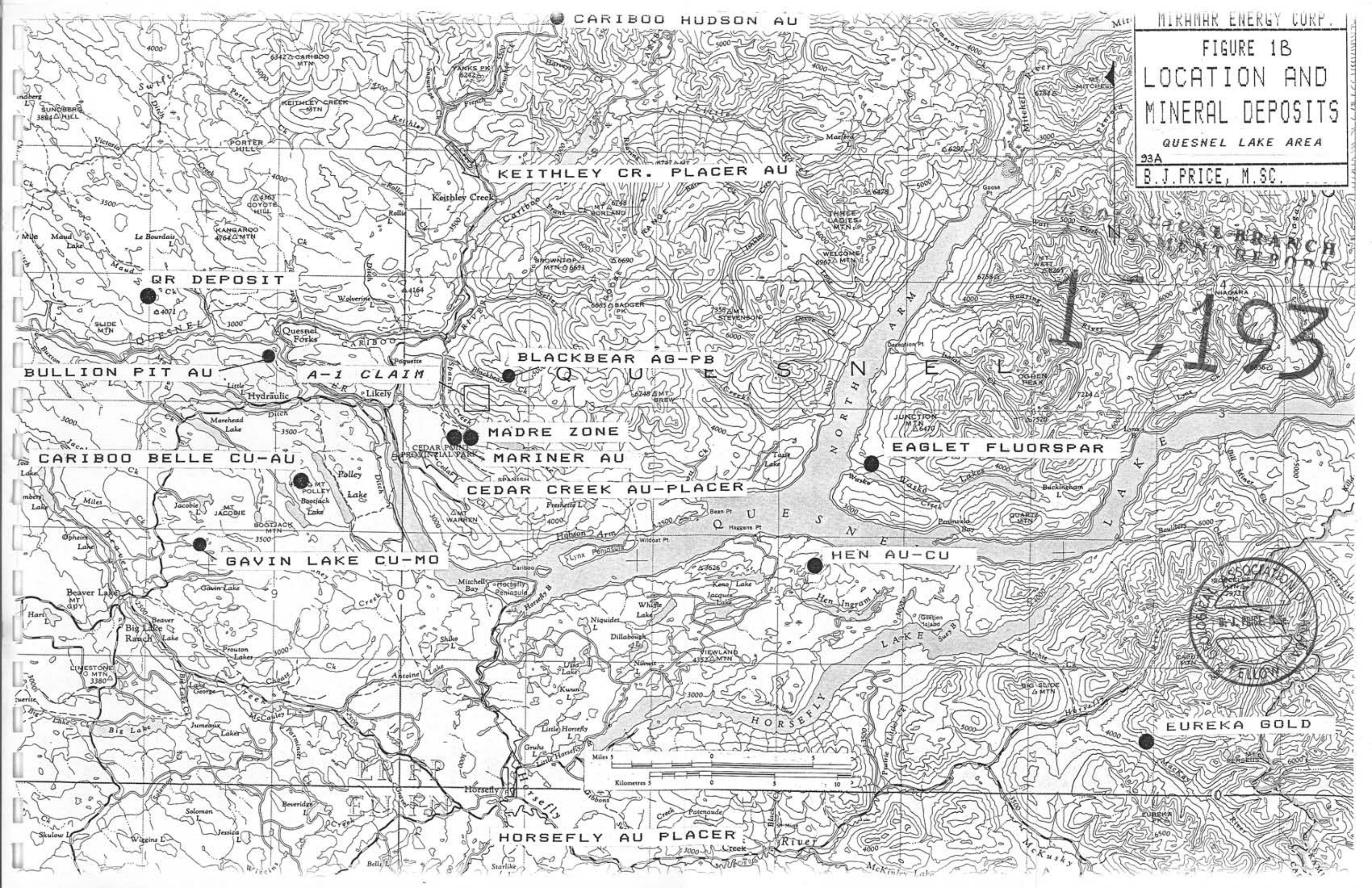
The claim partially overlaps pre-existing claims.

HISTORY OF THE AREA:

Placer gold claims were first staked in the area in 1859, and lode prospecting would have been done in the area shortly afterward. First mention of lode gold in the Spanish Mountain area is in the Minister of Mines Annual Report from 1885. (p.489) for the Black Bear Creek showings and 1925 for Spanish Mountain. Initial exploration in the area was of course for high grade

FIGURE 1B LOCATION AND MINERAL DEPOSITS

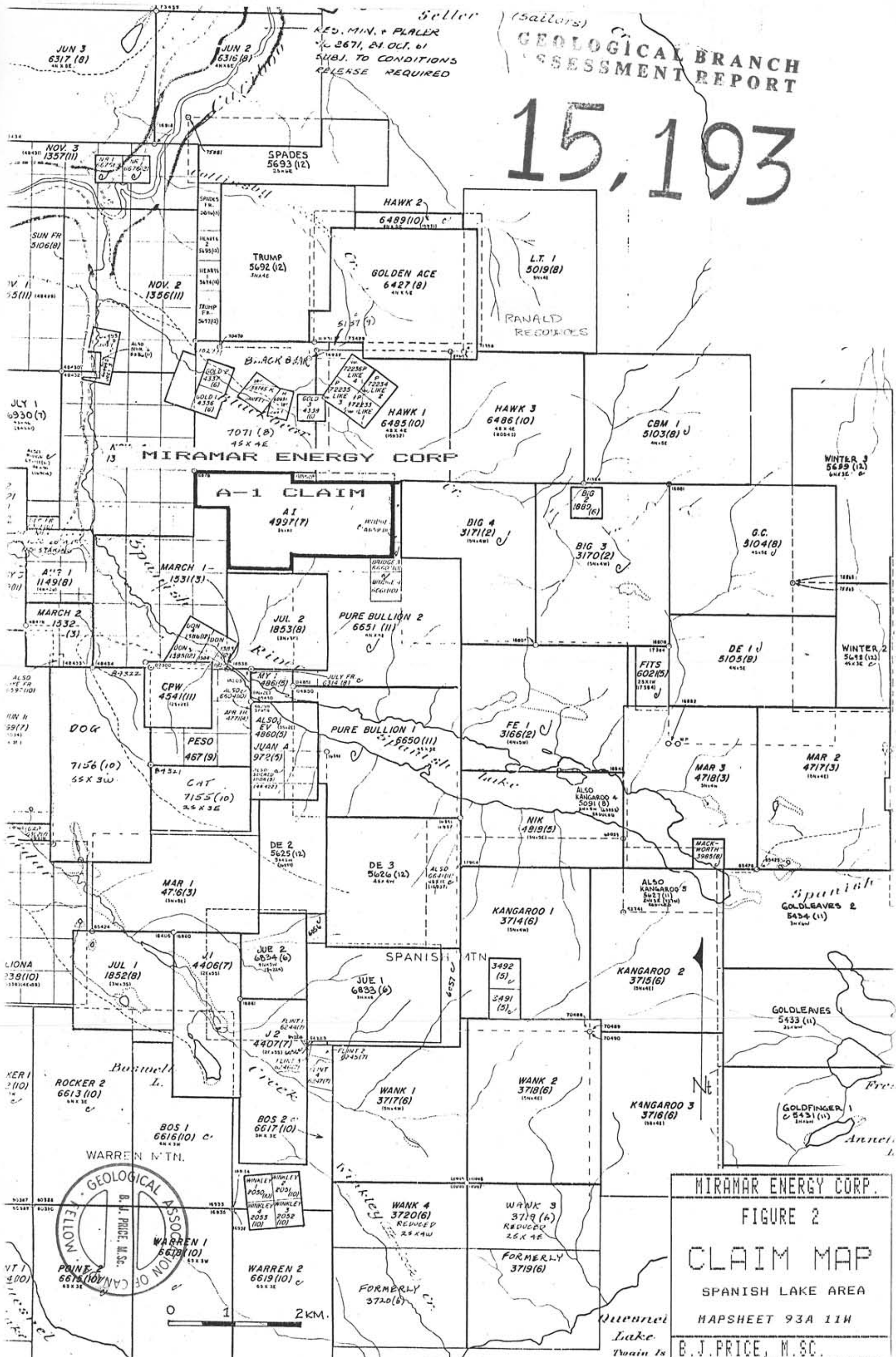
QUESNEL LAKE AREA
93A
B. J. PRICE, M. SC.



193

ASSOCIATION
OF MINING ENGINEERS
OF CANADA
B. J. PRICE M. SC.
1933

15, 193



RED. MIN. & PLATER
% 2671, 21 OCT. 61
SUBJ. TO CONDITIONS
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JUL 1 1852 (8)
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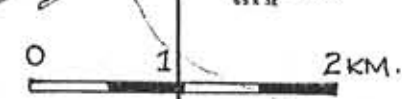
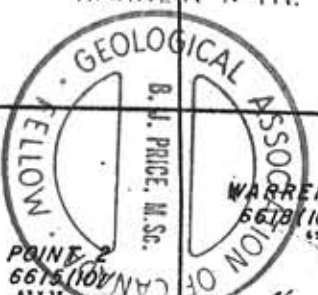
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MIRAMAR ENERGY CORP.
FIGURE 2
CLAIM MAP
SPANISH LAKE AREA
MAPSHEET 93A 11W
B.J. PRICE, M.Sc.



silver/gold in quartz veins. A pulse of exploration for porphyry copper-gold deposits led to considerable staking and exploration in 1968-1970. The exploration aftermath of the Federal-Provincial geochemical release in 1981 led to a second rush of staking of porphyry copper-gold and disseminated gold showings, leading to the significant discoveries of Mt. Calvary Mines Ltd. in the Spanish Creek area and Eureka Resources Inc. in the Frasergold Creek areas.

REGIONAL GEOLOGY:

The A-1 property is situated at the eastern margin of the Quesnel Trough, a linear partly fault-bounded feature extending from northern Washington to northern British Columbia. The trough is filled with Triassic to Jurassic volcanics and sediments, and is flanked by the Pinchi Geanticline, on the west which has shed debris into it from Upper Paleozoic rocks, (Cache Creek Group), and the Omineca Geanticline to the east, comprising Proterozoic Kaza group rocks and Upper Paleozoic Cariboo Group rocks.

Oldest rocks in the trough are the Nicola Group basic to intermediate volcanics and a black phyllite unit on the eastern margin of the trough which may be partly time equivalent (Upper Triassic). Overlying the Triassic rocks are Early to Middle Jurassic volcanic and sedimentary rocks.

A number of 200 million year old (Upper Triassic) intrusions cut the Nicola Group rocks and are the locus of significant copper-gold porphyry deposits - the major copper mines of British Columbia, for example Ingerbelle, Bethlehem Copper, Valley Copper,

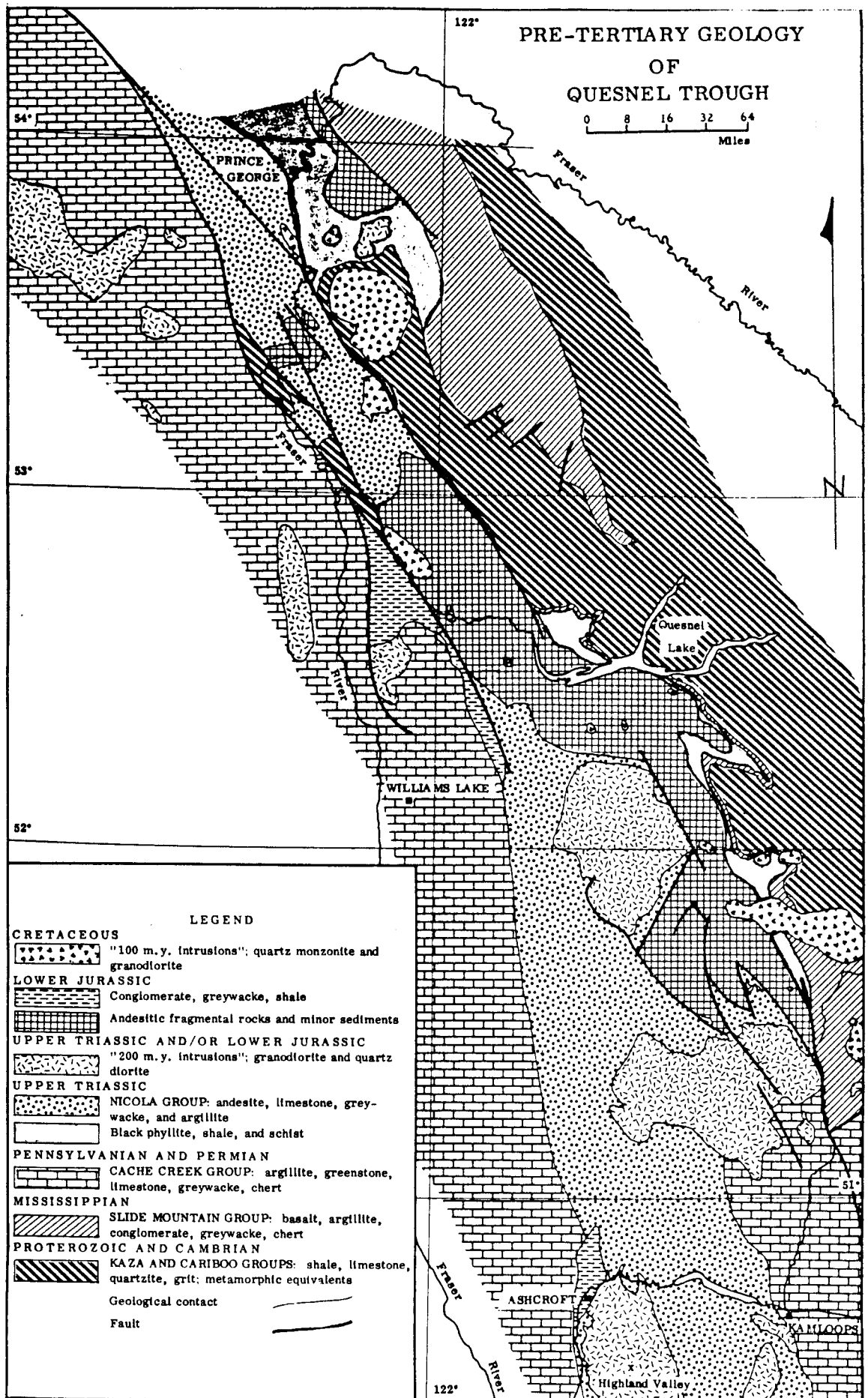


FIGURE 2 — Schematic map of the pre-Tertiary geology of the Quesnel Trough and surroundings. The Trough is defined by the occurrence of Upper Triassic and Lower Jurassic volcanic and sedimentary rocks and is bounded by Paleozoic or older rocks on either side.

FIGURE 3A: Regional Geology - Quesnel Trough.

Lornex, and Afton Mines.

Tertiary volcanics including Eocene Kamloops Group (Basalt to rhyolite), and Miocene-Pliocene "Plateau Basalts" cover extensive areas of the Trough, leaving occasional "windows" from which pre-Tertiary geology has been deduced (Figure 3A).

Within the Quesnel Trough, rocks are only mildly deformed, but characteristically the contained rocks are affected by a period of block faulting, with northwest and north northeast trends common. The Pinchi Fault in the northern part of the trough is a prominent northwesterly trending feature with associated mercury and gold deposits.

Gold deposits are concentrated along the east and west sides of the trough and copper porphyry deposits in the trough are characteristically gold-rich.

BLACK_PHYLLITE_UNIT:

Rees, (1981) describes the unit in more detail as being comparatively uniform, with minor amounts of siltstone, volcanoclastics, carbonate and impure chert. The internal structure is obscure because of fine grain size, low metamorphic grade and lack of stratigraphic marker horizons. Two or three cleavages may be present. Local laminae or carbonate beds are probably transposed within the dominant cleavage. Trend of both main cleavages is about 130 degrees.

Rees feels that the unit may represent "hemipelagic"

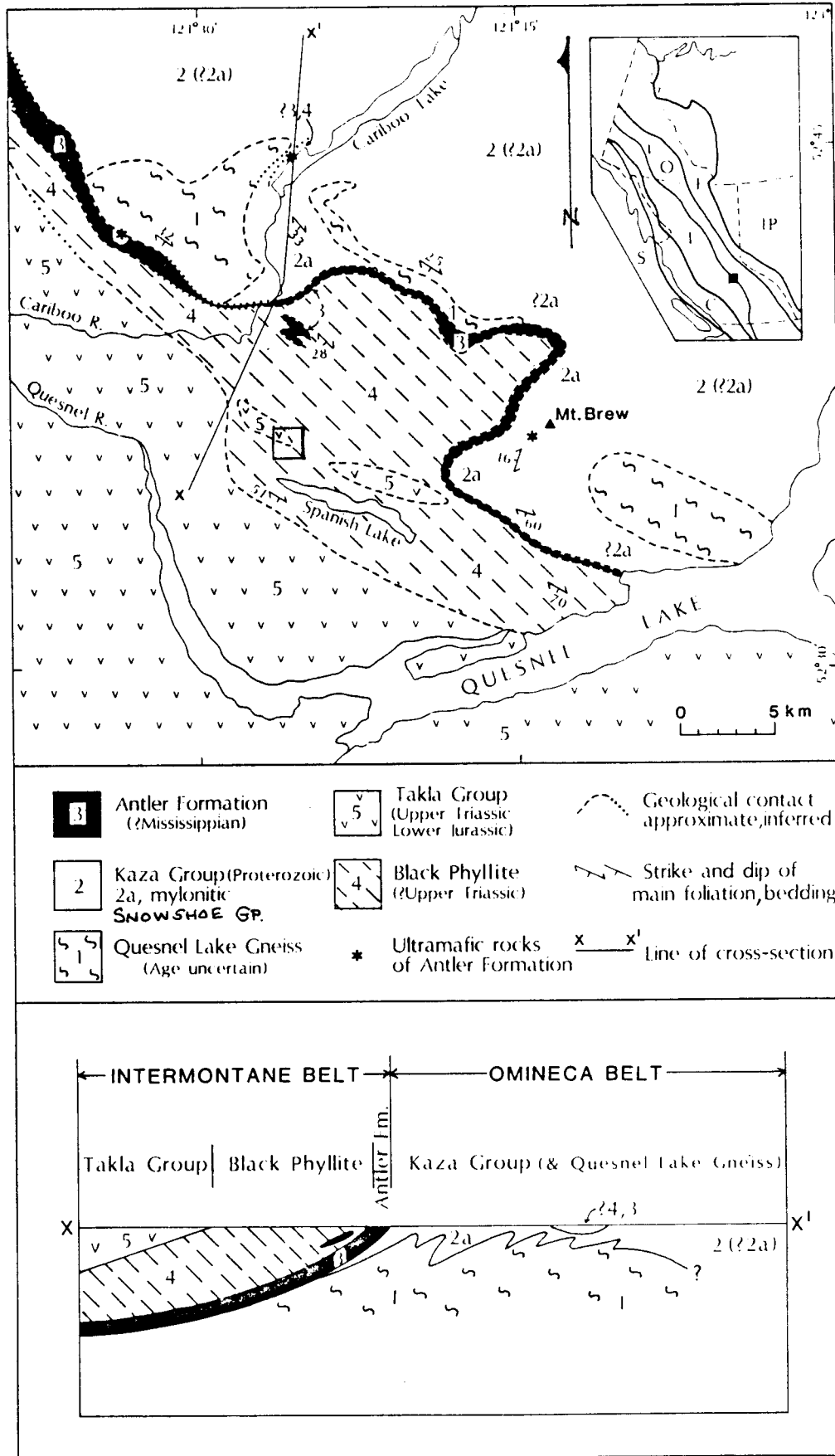


FIGURE 3B: Regional Geology, Quesnel Lake Area.

(From Rees, C.S., 1981)

carbonaceous muds deposited on the oceanic crust. Contacts should exist between the black phyllite and the Nicola volcanics; these would be obscured by faulting enhanced by the plastic nature of the phyllite. Contacts with the underlying Antler greenstone are present; the greenstones are altered and veined with orange-brown ankerite.

The Antler greenstone is regarded as the primitive ocean floor, and the contact with underlying rocks is strongly mylonitized, with mylonitization decreasing eastward.

Struik defines this contact as the southwest dipping "Eureka Thrust", traced from near Prince George southeasterly to Mahood Lake. This thrust defines the lower limit of the "Quesnel Terrane" or "Quesnellia", which rests on Snowshoe Group rocks of the "Barkerville Terrane". The greenstone below the Black Phyllite unit in the Spanish Lake area is mapped by Struik as the "Crooked Amphibolite". Regional geology is shown in figures 3A and 3B.

MINERAL DEPOSITS IN THE AREA:

A. Placer Deposits:

First interest in the Likely area (named after prospector John "Plato" Likely) was generated by the placer gold rush extending up the Fraser and into the Cariboo Area. First discoveries were made in 1859, but it was only in 1874 that accurate records of production were started. Recorded production from creeks in the area is as follows: (Table on next page).

CREEK AND YEARS OF PRODUCTION	AMOUNT	\$ VALUE (\$500/OZ.)
CARIBOO RIVER 1876-1945	8,297 OZ	\$ 4,148,500
CEDAR CREEK, 1881-1945	37,784 OZ	\$ 18,892,000
GOOSE CREEK 1891-1910	286 OZ.	143,000
KEITHLEY CREEK 1874-1945	35,395 OZ	\$ 17,697,500
MOREHEAD CREEK 1911-1945	1,538 OZ	769,000
NIGGER CREEK 1891-1945	2,201 OZ	1,100,500
QUESNEL RIVER 1874-1945	120,187 OZ	\$ 60,093,500
SPANISH CREEK 1881-1945	3,706 OZ	1,853,000
TOTAL *	209,394 OZ	\$104,697,000

* NOTE: Many other creeks have unrecorded but known production. For example: Blackbear Creek, Eureka Creek, Frasergold Creek and others.

B. HARDROCK DEPOSITS:

A brief description of some of the more important types of deposits in the project area is given below:

CARIBOO BELLE DEPOSIT:

The Cariboo Belle deposit, situated a short distance south of Likely, occurs in late Triassic and younger intrusive rocks. Magnetite and chalcopyrite occur in stockworks in monzonite porphyry breccias and syenite. The property is being explored by Mascot Gold Corporation who have done considerable diamond and percussion drilling to develop 128 million tons of reserves grading 0.012 oz/ton gold and 0.31 % copper.

CARIBOO HUDSON DEPOSIT:

The Cariboo Hudson Mine is situated on the southern slope of Roundtop Mountain, on a tributary of Cunningham Creek. Quartz veins cut sericitic schists of the Snowshoe Group, and both A and B type veins are represented. Tungsten and lead values are present in the veins. Production from 1938 to 1939 was 13,400 tons from which 5,186 ounces of gold and 2,626 ounces of silver were produced. A 125 ton/day mill on the property was later sold in order to keep the property in good standing.

The property is currently held by Imperial Metals Ltd., who have reopened the 200 level, and by close-spaced drilling have developed 60,000 tons of reserves grading 0.4 oz/ton gold and 0.5 oz/ton silver.

QR DEPOSIT:

The QR deposit, owned by Dome Mines Ltd. and Orbex Industries Inc., is located near Quesnel River north of Quesnel Forks. Nicola Group basic volcanics are altered to epidote, chlorite and pyrite adjacent to an alkalic stock. Considerable exploration conducted by Dome and Orbex has developed in the order of 2 million tons of copper-gold mineralization grading 0.2 oz/ton gold in open pit mineable zones.

EUREKA (FRASERGOLD) DEPOSIT:

The Frasergold Creek deposit, owned by Eureka Resources Inc., situated near McKay River, southeast of Horsefly, B.C. and 60 km east of Williams Lake, B.C., was explored from 1983 to 1985 by Amoco Canada Exploration Ltd.

Gold occurs associated with quartz veins in Upper Triassic Black phyllite on the north limb of a major overturned syncline. Five drill holes in 1983 intersected gold along a 800 meter strike length, whic was extended to 1500 meters by 1984 drilling. Intervals from 1.5 meters to 7.5 meters wide assayed from 0.072 to 0.477 oz./ton gold. After Amoco dropped the option in 1985, further work by Eureka outlined geochemical anomalies along a 10 km strike length.

Preliminary tonnage expectations (Stockwatch, July 8/85) were as follows:

Cut off 0.015 oz/ton	15,000,000 T x 0.045 oz/T
Cut off 0.05 oz/ton	4,000,000 T x 0.10 oz./T
Cut off 0.09 oz/ton	2,000,000 T x 0.15 oz./T

SPANISH MOUNTAIN PROPERTIES:

A large number of showings on Spanish Mountain have been explored for over 50 years, these have been described in Annual Reports of the Minister of Mines under the names Max and Mariner, Pine, Moose, Lukin, Joy, and Golden Horn and Cedar Creek placer deposits

MT. CALVERY MINES:

Mt. Calvery Mines Ltd. has an option to acquire 50% interest in 396 claims (25,000 acres) on Spanish Mtn. and in Spanish Creek valley, adjacent to the A-1 claim. These claims which include the Jun, June, Jul, J, Rose, Dug, Novr, Ast, Nob, Nore, Easy, Marh, E, and Ty claims (1984) but excluded the Don, Peso, and Juan A claims optioned or owned by Hycroft Resources Ltd. Constant restaking in the area with name changes introduces some confusion in ownership and position of showings. Portions of the property have been explored at various times by Union Carbide Ltd., Leemac Mines Ltd., Carolin Mines Ltd., Aquarius Resources Ltd. and many others.

Extensive soil sampling was done on 359 km. of grid in 1984, and I.P and Magnetic surveys run, geological mapping and test pitting done on the large claim bloick which includes the Jun and Jul claims on the soutyh boundary of the A-1 claim.

Gold occurs in a variety of environments on the claims: in east/west shear zones cutting basalts, with quartz veins in east and north trending shear zones cutting altrered andesitic tuffs, with arsenpyrite in quartz veinlets cutting pyritic phyllites, and in siliceous and graphitic phyllites in shear zones. (GEM 1984)

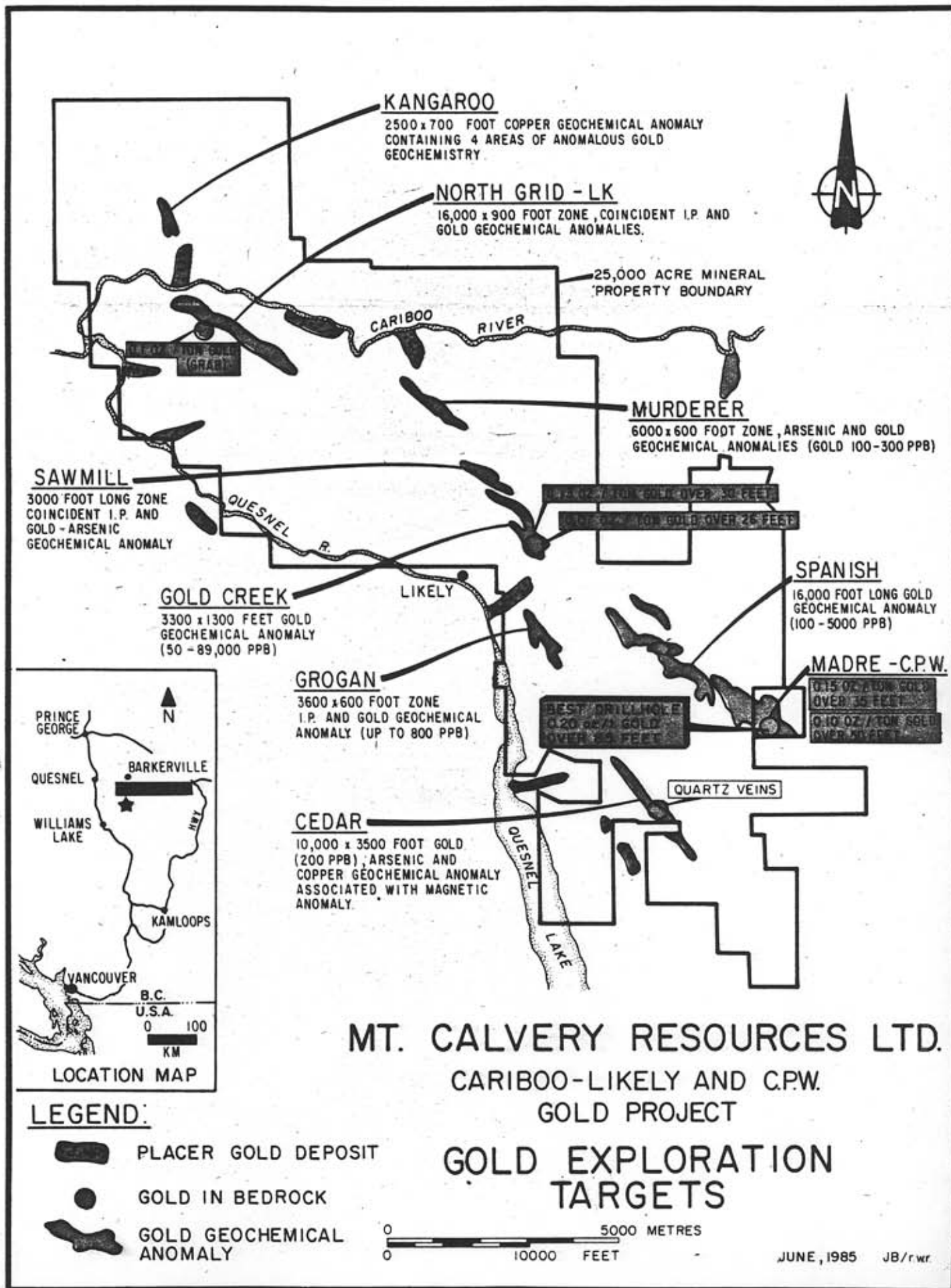


FIGURE 4: Mt. Calvary Exploration and results.

(Northwest Prospector)

The rocks are thought to be upper Triassic phyllites, as in the Eureka deposit farther southeast. Volcanic rocks are probably Jurassic in age. Strongly carbonatized or ankeritized rocks are thought to represent altered alaskite or rhyolite dykes.

1984 exploration resulted in a number of significant gold geochemical soil anomalies scattered throughout the claims from Cedar Creek to Cariboo River. The most significant anomaly occurred on the "Madre" zone in the CPW claim, south of Spanish Creek, as shown in Figure 4, reproduced from the "Northwest Prospector". This 1500 ft x 3000 ft. anomaly was trenched, and 12 trenches exposed gold in quartz stringers with values up to 0.15 oz/ton over 50 feet. Fourteen widely spaced drill holes intersected values from 0.04 oz/ton to 0.10 oz/ton over widths from 10 to 30 feet. The best diamond drill hole averaged 23 feet of 0.09 oz/ton, but rotary percussion holes returned up to 85 feet of 0.20 oz/ton gold.

In 1985, additional rotary percussion drilling (3550 m), diamond rilling (665 m - 7 holes) and trenching, (1400 m.) was done. Additional trenching and exploration was done in 1986. Reserves are estimated at 1 million tonnes grading 3 grams/tonne (981,000 tons @ 0.08 oz./ton gold).

NOV CLAIMS:

The Nov claims adjoin the A-1 property on the west. The claims are underlain by black phyllites slates and siltstones of the Midas Formation. A number of auriferous quartz veins dip shallowly to the northeast. Six areas with anomalous gold in soils were discovered in a soil-sampling program (1610 samples) by J.DeLeen for Apex Energy Corp. In 1984, geophysical surveys included magnetometer, EM, and I.P. surveys.

OCT CLAIM:

The Oct claims, adjoining the A-1 claim on the south were re-staked as the Pure Bullion claims; present ownership is unknown.

Work done by E.Livgard in 1982 for E.Lorntzen, indicated the presence of quartz veins with galena and tetrahedrite in upper Triassic phyllites, argillites and quartzite. Recent work history of the claim is unknown.

PROVIDENCE PROPERTY:

The Providence property, consisting of the Trump, Spades, Spades Fr., Trump Fr., and Hearts 1-2 claims are owned by Momestake Mineral Development Co., (a subsidiary of Homestake Mining Co.). who also own the Winter 2,3 claims nearby.

The property, situated on the slope between Blackbear Creek and Collinsby Creek, is underlain by black Triassic phyllites, andesite breccia and tuffs metamorphosed to greenschist facies. Quartz veins containing silver-bearing galena occur in the phyllite and andesite. Sericitic alteration accompanies the veins as "haloes" or envelopes.

In 1984 (GEM, p.283) geological mapping was done and a small soil, silt and rock sampling program completed.

BLACKBEAR CREEK:

The silver bearing veins on Blackbear Creek, north of the A-1 property boundary, have been explored since 1926, and probably as early as 1902. In 1926 the prospect was known as the Blackbear but in 1947 it was known as the Providence.

The property at one time included 14 2-post claims extending up Blackbear Creek, and accessed by a trail from the bridge to a camp at elevation 3,500 feet. At present the property comprises 9 2-post claims and 1 LCP claim with 16 units.

Lensoid quartz veins contain silver-bearing galena with about 2 ounces silver for each percent (unit) of lead. In 1926, the property consisted of 4 claims owned by J.C.Holsclaw and leased to the Harrington brothers and Richard Gladney. A wide quartz vein exposed on the right bank of the creek, about 2 miles above the junction with Spanish Creek, trends northwesterly and dips 45 degrees to the southwest. It was exposed by a 43 foot cross-cut and a 34 foot open cut along the strike. Wallrocks are sericitic schists and the vein parallels foliation and includes bands of schist. From the open cut, about 10 to 15 tons of galena were mined and sacked in 1926; best material from this assayed 76% lead, 144 oz/ton silver and 0.06 oz/ton gold. Another crosscut 25 vertical feet below the first crosses 25 feet of banded schist and quartz with sparse galena.

Additional veins occur on Blackbear Creek, at elevation 4,750 feet A.S.L., the Silver King, Silver Queen and Star claims existed in 1926. On the right bank of the creek, a vein with apparent northeast trend may follow foliation in flat-lying graphitic phyllite or shale. Hand picked galena assayed 50% lead, 104 oz/ton silver and 0.20 oz/ton gold.

Below the Providence showing about one-half mile, the Dial and Highland Mary claims in 1926 covered a 50 ft wide quartz vein exposed in a falls in the creek. Wallrock was silicified quartz schist.

Numerous other showings were reported but not described in 1926 (B.C.Min. Mines Ann Report, 1926, pp.A177-178).

In 1947 the property was owned by Gostling, Horton-Jack, and Pascoe. but very little additional work had been done since 1926. A copy of the 1947 data is included in the appendix.

Present ownership of the property has not been researched, but it is believed that showings are covered by several different owners.

1986 WORK PROGRAM:

From July 15 to 17th 1986, the A-1 property was worked by the writer and Vic Guinet, prospector. Mobilization from Vancouver and Quesnel began on the 15th, and work was done on the 16th and 17th. A total of 25 soil samples and 20 rock samples were taken and analyzed for 30 elements (Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, (3ppm detection Limit), Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, and W), by ICP (Induction Coupled Plasma) methods by Acme Analytical Laboratories Ltd. Gold was analysed in all samples by Atomic Absorption methods from a 10 gram sample.

Soil samples were taken with mattock or pick from the B-horizon where possible, and stored in water resistant kraft envelopes (up to 300 grams).

Rock samples were taken as several chips, generally in kraft envelopes holding up to several hundred grams. Large quartz vein samples were taken as grab samples up to 2 kg in small or large plastic bags.

Samples were taken along two parallel traverses along the southern part of the claim near its boundary with the adjacent Jul 2 and Pure Bullion 2 claims. Soils were of reasonable quality and overburden appears to be thin, with abundant outcrop in places, particularly higher on the slope, or on shoulders of the slope and in creek gullies.

(Sample descriptions are included in the appendix.)

MINERAL DEPOSITS
LIKELY - HORSEFLY AREA

COPPER-GOLD PORPHYRIES

DEPOSIT	RESERVES or PRODUCTION	GRADE AU oz/ton	AG oz/ton	CU %	OTHER %
QR	950,000.* poss 2,000,000.	0.21	?	?	
CARIBOO BELLE	128,000,000	0.012		0.31	
GIBRALTAR	360,000,000	?	?	0.371	0.016

LODE/DISSEMINATED GOLD DEPOSITS

DEPOSIT	RESERVES or PRODUCTION	GRADE AU oz/ton	AG oz/ton	CU %	MO %
CARIBOO HUDSON (1938-39)	60,000 R 13,492 P	0.4 0.38	0.5 0.195		
MADRE ZONE	981,060 R	0.08	?		
EUREKA RES	4,000,000 EST	0.10	?		
MOSQUITO CREEK	81,566 P 7,750 R	0.335 0.380	0.321		

NOTE: R = Reserves, P = Production.

SOURCE: Canadian Mines Handbooks, Stockwatch, MR 186.

PROPERTY GEOLOGY AND RESULTS:

The property is underlain by black phyllites of Triassic age, at lower elevations, overlain by sericitic schists higher on the slope, which may represent hydrothermal alteration of the phyllite adjacent to major faults, above which massive green andesite or microdiorite is structurally superimposed. The andesite could be Nicola (Triassic) or could be Jurassic.

Black phyllite is exposed on road cuts leading down to a new bridge crossing of Spanish Creek, (constructed by prospector Bob Mickle). A new, steep exploration road extends easterly uphill 1 kilometer from the bridge, and many road cuts and exploration pits in this area expose crenulated black phyllite, cut by numerous lensoid quartz veins.

Eastward from the highest Backhoe trench and pit, old exploration grid markers, believed to be Lacana Mining Corp. grid from 1983, were encountered. Correlation with our northward, traverse toward the property, they are:

241 meters	Ln 53+00W - 7+15 N
288 meters	Ln 53+00W - 717.5N
341 meters	Ln 53+00W - 8+25 N
418 meters	Ln 53+00W - 9+00 N

At the 521 meter mark, old claim posts with copper tags (Numbers: A 6637, FP; 119680 IP; 140172 IP) were found in the same area as numerous quartz veins that have been exposed in shallow pits. (These are evidently just south of the property boundary and were covered by Lacana's grid.) Veins strike about 320 degrees, dip roughly vertical and are up to 4 feet wide. Grab samples P1, P2, and G2 from different veins in this area are "Bull

Quartz" with no sulphides, gold or silver.

At 716 meters, quartz float was found, Sample P3, which contained 11 ppb gold, 51 ppm Copper, and 28 ppm lead, all of which are considered anomalous.

From a point 734 meters slope distance from the origin and 213 meters above the old claim posts and pits, a sampling line was run eastward along a claim line which proved to be the north boundary of the Jul 2 claim.

Soils along this line are grey, generally containing small chips of black phyllite. Numerous pieces of quartz float are abundant along the line. Samples G2 and G3, had weakly anomalous gold (29 and 18 ppb, respectively), but soils along the initial 260 meters have anomalous gold, and molybdenum, with scattered anomalous lead, zinc and copper:

No.	Sample Description	Au ppb	Ag. ppm	Mo ppm	Pb ppm	Zn ppm
P4	Rocky clay soil, grey phyllite chips. 50 m from start	16	0.8	15	18	184
P5	Quartz float 94 m.	1	0.1	1	2	6
P6	Soil, grey phyllitic chips. 100 m.	70	0.5	6	8	78
P7	Soil, 155 m.	9	0.3	1	4	30
G2	Quartz Float 195 m	29	0.1	2	6	62
G3	Quartz float 195 m.	18	1.1	2	222	13
P8	Grey soil, phyllite chips, 205 m.E	51	0.8	9	12	80
P9	Grey soil, 260 m.	34	0.1	7	11	94

From the end of the line at 600 m E, at which point corner post 3N/3E for Jul 2 was found, a tie line was run 500 meters long was run northward, uphill. On this line, outcrop of quartz

sericite schist with large pyrite cubes was seen. This may represent a bleached and altered equivalent of the black phyllite.

Along the upper traverse line, soils are red, probably as a result of decomposition of carbonatized sericite schist with pyrite. These soils have increased Fe and Mn content, and Co, Ni, Cu, Pb, and Zn levels are elevated but are not considered anomalous because these elements are generally adsorbed on iron-manganese oxides.

On the upper line at 350 meters west of the origin, abundant rock exposures of blocky medium green andesitic volcanics were encountered, and these continued to the end of the traverse at 550 meters. Soils in this area are poor and grey in color, and depleted in most elements. One piece of quartz vein float sampled at the end of the line (68) contains anomalous silver (1.2 ppm) and lead (252 ppm) although no other elements are anomalous.

The mapping confirms that done by Campbell (Map 3-1961). The green volcanics are thought to be Nicola Volcanics, and may or may not be fault bounded.

The presence of anomalous amounts of gold in soil on the south claim boundary is considered encouraging. Phyllites in the area have the appearance of porosity caused by the weathering of myriads of pyrite cubes and/or ankerite crystals. This rock is locally known as "Aero Bar" rock, and is correlated in other claims with gold anomalies.

On the north side of the claim block, creeks draining the claim were silted and checked for quartz float. Pieces of galena

bearing quartz and carbonate float from two creeks have strongly anomalous silver and lead:

SECOND (MAJOR) CREEK

No.	Sample Description	Au ppb	Ag. ppm	Pb ppm	Zn ppm
P29	Silt, Creek draining claim	1	0.3	49	211
P30	Rock, Float, Qtz + galena	13	2.7	4280	63
	Same creek as P29				
P31	Rock, Float, White bull Qtz.	1	0.1	2	1
P32	Rock, Float, Quartz, specularite	1	0.2	149	27
P33	Rock, Float, Quartz, galena	2	0.2	385	52

FIRST CREEK

No.	Sample Description	Au ppb	Ag. ppm	Pb ppm	Zn ppm
P34	Silt, creek half way from hwy	2	0.6	56	155
P35	Rock, float, creek, Carbonate	260	476	20268	1016
	with abund dissem galena				
	* rerun	na	576	75055	1030
	NOTE: Cd: 25 ppm, Sb: 21 ppm, Sr: 2873 ppm, Bi: 1060 ppm.				
P36	Rock, Float, same creek, diff.	1360	335.1	25036	669
	piece of similar material				
	* rerun	na	1912	10.9%	1060
	NOTE: Cd: 53 ppm, Sb: 125 ppm, Sr: 2104 ppm, Bi: 4217 ppm.				

INTERPRETATION:

The following parameters are considered representative in the area for threshold values, above which results (For soils and rocks) are considered anomalous:

<u>ELEMENT</u>	<u>THRESHOLD</u>
GOLD	>15 PPB
SILVER	>0.7 PPM
COPPER	>60 PPM
LEAD	>25 PPM
ZINC	>100 PPM
MOLYBDENUM	>3 PPM

These thresholds are based on the writers experience in the area and not on exhaustive statistical analysis.

Along 260 meters from the origin of Line 1, results are considered anomalous for gold in soil. Scattered samples are anomalous for one or more of Molybdenum, silver, lead, and zinc. Most float or in-situ vein quartz is not anomalous, but this is a common phenomenon in the area, where nugget effect in sampling is common.

Float quartz-carbonate-sulfide veins on the opposite slope, (the south side of Blackbear Creek valley) are strongly anomalous in silver.

Additional grid sampling of soil and quartz float is certainly warranted, considering proximity to the "Madre" zone nearby, at which one million tons of 0.08 oz/ton gold has been discovered.

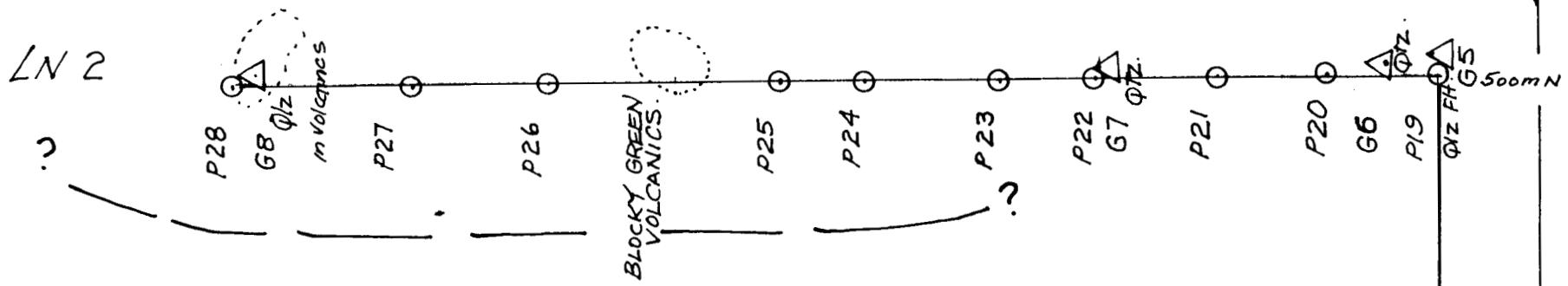


FIGURE 6A

SAMPLE TRAVERSES AND LOCATIONS
A-1 CLAIM. 1986 WORK.

MAP SHEET 93A-11W. Cariboo M.D.

LEGEND

- △ ROCK (FLOAT) SAMPLE
- SOIL SAMPLE
- CLAIM POST
- OUTCROP.

B. J. PRICE, M.Sc. 1986.
 To accompany Assessment Rept.
 dated. Oct 15. 1986.

SCALE 1:3,000.



A-1 CLAIM.

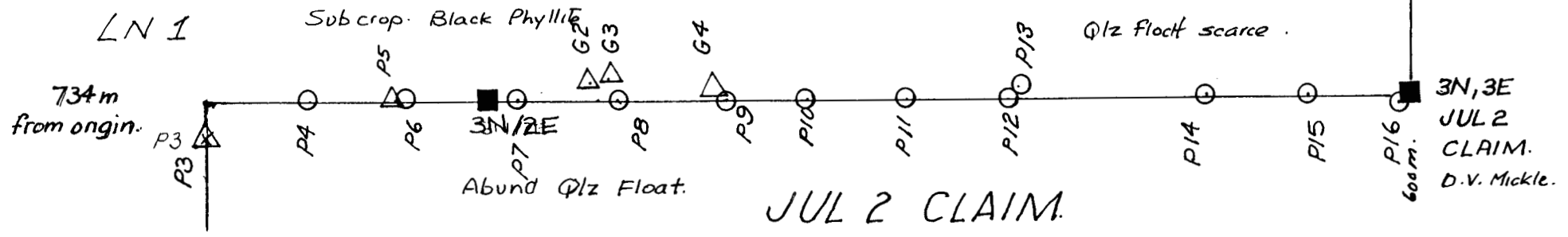
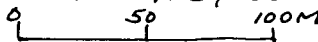
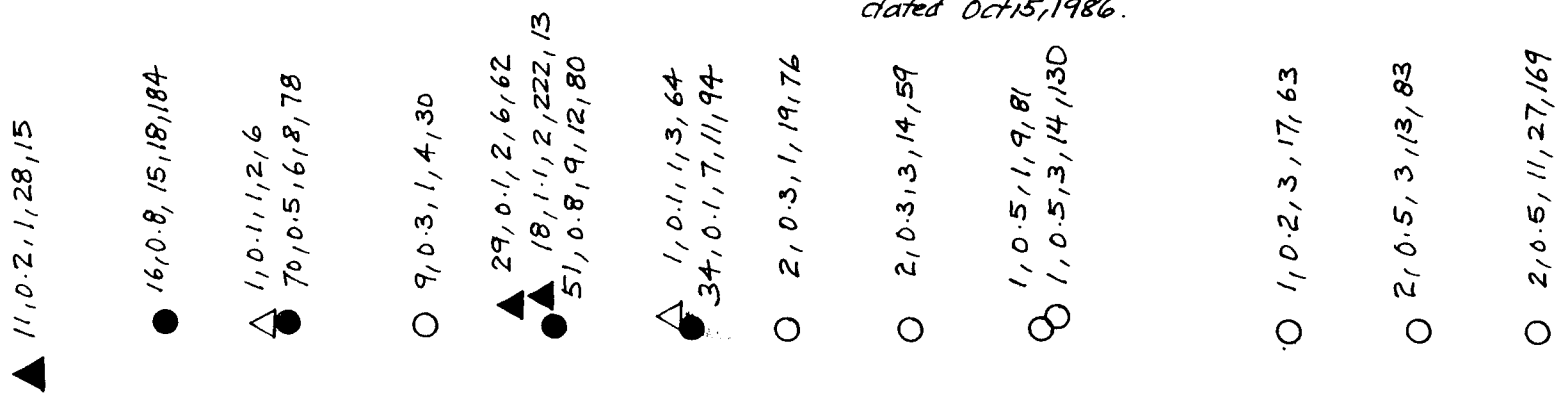


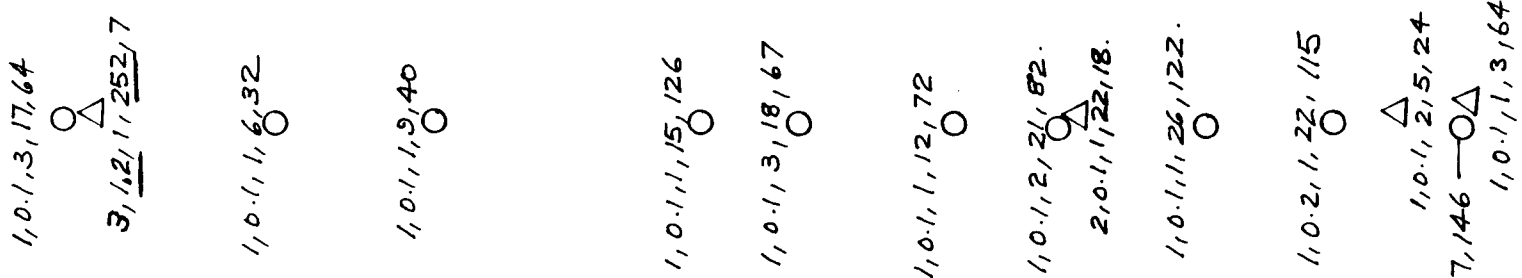
FIGURE 6B
SAMPLE RESULTS Au, Ag, Mo, Pb, Zn.
A-1 CLAIM 1986 WORK.

- △ ROCK (FLOAT).
- SOIL Au (ppb), Ag, Mo, Pb, Zn (ppm).
- >10 ppb Au. (Anomalous).

SCALE 1:3,000.




B. J. PRICE, M.Sc. 1986
 To accompany Assessment. Rept.
 dated Oct 15, 1986.



Zt

RECOMMENDATIONS:

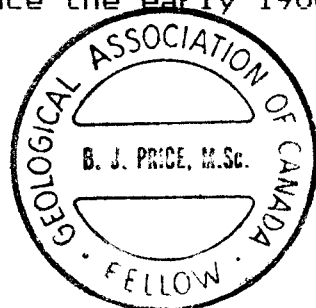
Continued exploration in the 1987 season is strongly recommended. Exploration of adjacent claims is active and known gold occurrences exist to the south. Access is being improved, and extension of a cat road to the property would improve exploration logistics.

Soil and rock chip sampling should be continued, and additional and more detailed lines should be run adjacent to the moderate gold anomalies in the 1986 soil line (Line 1). Twenty-five meter soil sample spacing will be adequate, and the property should be tested by at least 500 samples on this basis. A Base line and tie line should be cut by powersaw through the center of the property and at the east and west boundaries.

Resulting soil anomalies should be trenched with a cat or backhoe as has proved efficient on the adjacent CPW claim. Equipment and operators are available locally.

PROPOSED BUDGET:

The budget proposed for this work in the forthcoming season should be in the order of \$15,000; to include geological mapping, soil and float sampling, and VLF-EM surveys. Orientation lines should, with the permission of the owners, be run on adjacent known gold deposits such as the Madre Zone on the CPW claim. Considerable data compilation can be done from assessment reports available from the adjacent gold and lead-silver deposits, which have been explored since the early 1900's.



respectfully submitted,

Barry Price

Barry Price, M.Sc.

Consulting Geologist.

BIBLIOGRAPHY AND REFERENCES

B.C. DEPT MINES ANNUAL REPORTS, 1926; p. A 177-178, 1947; p. A 123-128, 1948; p. A 91, 1949 p. A103,

CAMPBELL, K.V., (1970), Quesnel Lake Map area, British Columbia, (93A), in: Report of Activities, April to October 1969, G.S.C. Paper 70-1, Pt. A, pp 32-35.

CAMPBELL, R.B., (1961); Quesnel Lake Sheet, West Half. G.S.C. Map 3-1961.

CAMPBELL, R.B. and TIPPER, HOWARD W., (1970); Geology and Mineral Exploration Potential of the Quesnel Trough, British Columbia. CIM Bulletin, July 1970, pp. 785-790.

HOLLAND, STUART S.; (1980); Placer gold production of British Columbia. Reprint. Bulletin 28. Ministry of Energy Mines and Petroleum Resources, B.C., 89 pp.

MURTON, J.W., (1983); Geological Report on the A#1 and Big 4 Claims, Cariboo Mining Division. Assessment Report for Miramar Energy Corp. dated Sept 1, 1983.

REES, C.S., (1981); Western margin of the Omineca Belt at Quesnel Lake, British Columbia., in: Current Research, Part A, G.S.C. Paper 81-1A, P223-226.

SUTHERLAND BROWN, A., (1957); Geology of the Antler Creek Area, Cariboo district, British Columbia. B.C. Dept Mines and Petroleum Resources Bulletin 38

SUTHERLAND BROWN, A., (1963); Geology of the Cariboo River Area, British Columbia. B.C. Dept. Mines and Petroleum Resources, 60 pp.

SIMPSON, R AND SALEKEN, L.W., (1983); Cariboo Belle Deposit. In: GAC-MAC Field trip Guidebook, Trip 4, Some Gold Deposits in Western Canada. pp 14-21.

STRUJK, L.C., (1986); Imbricated Terranes of the Cariboo Gold Belt with correlations and implications for tectonics in southern British Columbia, Canadian Journal of Earth Sciences, V.23, pp 1047-1061.

STRUJK, L.C. 1983. Bedrock Geology of Spanish Lake 93A/11 and parts of adjoining map areas, British Columbia. G.S.C. Open File 920.

STRUJK, L.C. 1983. Bedrock Geology of Quesnel Lake 93A10 and part of Mitchell lake, 93A 15 map areas, Central British Columbia. G.S.C. Open File 962.

APPENDICES

1. ITEMIZED COST STATEMENT
2. ANALYTICAL RESULTS
3. SAMPLE DESCRIPTIONS
4. QUALIFICATIONS
5. MINISTER OF MINES REPORTS - Spanish Mountain
and Blackbear Creek areas.

ITEMIZED COST STATEMENT

A-1 Property Work
July 15-18, 1986

MIRAMAR ENERGY CORP.,
211-543 Granville St.,
Vancouver, B.C.

CONSULTING FEES:

Field work, 2.5 days @ \$300/day (July 15-18)	\$750.00
Report Writing, (October 10-15), 4 days	1,200.00
V.Guinet, Prospector, July 15-18, \$200/day	600.00

DISBURSEMENTS:

Airfare, Accommodation, meals etc.	459.09
Xeroxing, Reproduction (Estimate)	50.00
Maps	10.70
Preparation of Negative and Mylar	42.22
Prints and Sepia	9.66

GEOCHEMICAL ANALYSES:

Acme Analytical Inv # 86-1646	530.00
-------------------------------	--------

VEHICLE RENTAL:

4.Wheel drive Ford 250 (Guinet)	
3 days @ \$75.00 per day	225.00

WORD PROCESSING:

Rapitan North Star Advantage	100.00
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SERVICE CHARGE (5 % on Disbursements)

28.08

=====

TOTAL THIS INVOICE

\$4,004.75

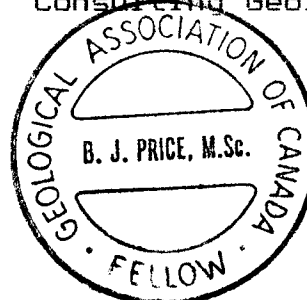
APPLIED: \$3,300 AND \$1,700 PRIOR CREDIT

4,000.00

respectfully submitted

Barry Price

Barry Price, M.Sc.
Consulting Geologist.



A-1 PROPERTY SAMPLES SOILS

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE 253-3158

DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, MG, BA, TI, B, AL, NA, V, W, SI, ZR, CE, SN, Y, NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1 SOILS & SILTS -80 MESH P2 ROCKS AU ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: JULY 24 1986

DATE REPORT MAILED:

July 28/86

ASSAYER: *D. Jeps* ... DEAN TOYE, CERTIFIED B.C. ASSAYER.

MIRAMAR ENERGY CORPORATION FILE # B6-1646

PAGE 1

SAMPLE#	Mn	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	Au#	
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
A1-P4	15	53	18	184	.8	55	9	416	2.62	30	5	ND	10	8	1	2	2	19	.04	.043	20	17	.22	78	.02	4	.70	.01	.05	1	16
A1-P6	6	9	8	78	.5	13	4	173	1.48	11	8	ND	6	5	1	4	2	12	.05	.033	24	7	.03	50	.01	2	.53	.01	.04	2	70
A1-P7	1	2	4	30	.3	4	1	190	.52	4	5	ND	6	5	1	4	2	11	.08	.017	19	6	.04	52	.01	2	.55	.01	.02	2	9
A1-P8	9	16	12	80	.8	16	2	74	.88	6	5	ND	7	3	1	4	2	13	.02	.026	16	6	.04	46	.01	2	.48	.01	.05	1	51
A1-P9	7	20	11	94	.1	19	4	270	1.86	6	5	ND	4	12	1	2	3	16	.06	.046	16	9	.05	42	.02	5	.35	.01	.04	1	34
A1-P10	1	8	19	76	.3	12	2	292	.79	3	5	ND	5	9	1	5	2	15	.12	.025	15	12	.11	70	.02	2	.41	.01	.09	1	2
A1-P11	3	11	14	59	.3	16	3	110	1.39	7	11	ND	6	6	1	2	2	21	.06	.036	15	20	.25	48	.02	2	.62	.01	.06	2	3
A1-P12	1	11	9	81	.5	18	4	120	1.42	4	9	ND	5	10	1	2	2	20	.09	.042	14	21	.26	72	.03	2	.62	.01	.06	2	1
A1-P13	3	19	14	130	.5	26	6	187	2.05	7	12	ND	11	9	1	3	2	27	.07	.085	20	30	.37	65	.02	3	.91	.01	.07	1	1
A1-P14	3	13	17	63	.2	19	4	90	1.74	8	5	ND	5	10	1	2	2	19	.05	.071	13	21	.24	62	.03	2	.55	.01	.07	1	1
A1-P15	3	14	13	83	.5	24	6	330	1.76	2	5	ND	6	14	1	2	2	29	.17	.044	19	25	.25	64	.04	3	.52	.02	.10	2	2
A1-P16	11	47	27	169	.5	49	7	201	3.62	14	5	ND	15	18	1	3	3	28	.06	.137	22	31	.36	72	.02	5	.89	.02	.06	1	2
A1-P19	2	18	27	146	.5	46	12	2696	2.86	2	5	ND	7	14	1	2	5	40	.18	.071	17	88	.58	174	.06	5	1.17	.02	.14	1	1
A1-P20	1	27	22	115	.2	68	13	271	4.63	9	8	ND	11	6	1	4	2	36	.11	.117	15	26	.20	57	.03	5	.76	.01	.07	1	1
A1-P21	1	56	26	122	.1	84	18	959	8.46	32	5	ND	15	5	1	2	6	34	.08	.206	12	60	.50	70	.01	3	1.12	.02	.05	2	1
A1-P22	2	33	21	82	.1	67	14	486	4.12	2	5	ND	7	5	1	4	3	33	.08	.078	13	41	.26	55	.02	6	.65	.02	.07	1	1
A1-P23	1	14	12	72	.1	48	10	217	3.65	2	5	ND	9	3	1	2	2	27	.06	.057	12	15	.05	64	.01	4	.65	.01	.05	1	1
A1-P24	3	16	18	67	.1	34	6	148	3.05	3	5	ND	11	5	1	5	2	35	.07	.056	17	23	.20	46	.03	5	.78	.01	.05	2	1
A1-P25	1	25	15	126	.1	52	10	318	3.89	6	5	ND	11	10	1	2	3	60	.21	.096	20	61	.62	102	.05	5	1.33	.02	.10	1	1
A1-P26	1	8	9	40	.1	24	4	156	1.33	2	5	ND	6	11	1	2	2	34	.16	.023	13	43	.42	61	.14	2	.81	.01	.06	1	1
A1-P27	1	9	6	32	.1	27	5	80	1.73	2	5	ND	7	5	1	2	2	36	.07	.028	15	71	.44	69	.01	3	1.06	.01	.04	2	1
A1-P28	3	14	17	64	.1	23	5	84	1.75	2	5	ND	12	8	1	2	2	29	.07	.030	20	26	.28	45	.04	3	.72	.01	.06	1	1
A1-P29	8	61	49	211	.3	65	16	940	4.04	12	5	ND	9	22	2	2	2	40	.29	.106	17	41	.77	77	.04	5	1.05	.02	.06	2	1
A1-P34	6	49	56	155	.6	61	16	1152	3.78	12	5	ND	6	26	1	2	2	36	.37	.081	16	47	.65	83	.03	5	1.02	.02	.07	1	2
STD C/AU-0.5	21	62	41	142	7.1	72	30	1151	3.97	40	19	7	36	50	19	16	21	71	.48	.109	36	61	.89	186	.09	39	1.72	.09	.14	15	490

A1 - PROPERTY SAMPLES ROCKS

MIRAMAR ENERGY CORPORATION FILE # 92-1546

PAGE 2

SAMPLE#	Mo	Cu	Pt	Zn	Ag	Ni	Co	Mn	Fe	As	S	Al	Th	Sr	Cd	Sb	Pb	V	Ca	F	La	Cr	Mg	Ba	Ti	E	Al	Na	K	AJ	
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	%	%	%	PPM	PPM	
A1-61	1	6	2	4	.1	6	2	228	.44	6	5	ND	1	2	1	4	2	1	.01	.007	2	3	.01	6	.01	2	.01	.01	.02	1	1
A1-62	2	7	222	13	1.1	4	1	70	.47	6	7	ND	1	4	1	2	5	1	.01	.010	2	4	.01	3	.01	2	.02	.01	.02	1	18
A1-64	1	6	2	14	.1	4	1	42	.56	2	5	ND	1	1	1	2	4	1	.01	.004	2	2	.01	2	.01	6	.02	.01	.02	1	1
A1-65	1	5	3	64	.1	9	2	124	.64	3	5	ND	2	12	1	2	3	3	.27	.130	5	4	.02	22	.01	3	.17	.01	.14	1	1
A1-66	2	11	5	24	.1	15	2	122	1.00	4	5	ND	1	2	1	2	2	2	.06	.012	4	5	.01	10	.01	2	.07	.01	.06	1	1
A1-67	1	24	22	16	.1	19	7	283	.97	2	5	ND	2	3	1	2	3	2	.05	.029	4	7	.02	20	.01	4	.11	.01	.04	1	2
A1-68	1	10	252	7	1.2	8	1	55	.56	5	5	ND	1	1	1	2	4	1	.01	.001	2	4	.01	1	.01	2	.01	.01	.01	1	2
A1-F1	1	4	2	2	.1	4	1	41	.35	5	5	ND	1	1	1	2	3	1	.01	.001	2	7	.01	1	.01	2	.01	.01	.01	1	1
A1-F2	1	5	2	1	.1	4	1	49	.44	3	5	ND	1	1	1	3	2	1	.01	.001	2	4	.01	1	.01	2	.01	.01	.01	1	1
A1-F3	1	51	28	15	.2	8	1	358	1.01	8	5	ND	1	1	1	2	2	2	.01	.010	2	5	.01	56	.01	4	.06	.01	.04	1	11
A1-F5	1	5	2	6	.1	5	1	78	.52	7	5	ND	1	1	1	2	2	1	.01	.003	2	4	.01	5	.01	3	.01	.01	.01	1	1
A1-F17	2	12	2	25	.1	7	2	274	.50	3	5	ND	1	2	1	2	4	2	.01	.008	3	1	.01	28	.01	2	.06	.01	.03	1	1
A1-F18	2	6	2	10	.1	5	1	75	.74	4	5	ND	1	1	1	4	3	1	.01	.006	2	3	.01	5	.01	3	.07	.01	.01	1	2
A1-F20	2	8	4280	63	2.7	5	1	262	.59	5	8	ND	1	14	1	4	9	2	.09	.045	2	1	.01	16	.01	2	.01	.01	.01	1	13
A1-F21	1	5	2	1	.1	4	1	92	.42	2	5	ND	1	1	1	2	2	1	.01	.001	2	4	.01	1	.01	2	.01	.01	.01	1	1
A1-F32	1	9	149	27	.3	7	1	327	.57	4	5	ND	1	4	1	2	5	1	.07	.016	2	1	.02	25	.01	2	.03	.01	.01	1	1
A1-F33	2	6	385	52	.2	6	1	300	.59	2	5	ND	1	5	1	2	4	1	.04	.016	2	3	.01	15	.01	3	.01	.01	.01	1	2
A1-F35	3	18	20268	1016	476.0	9	1	4737	.97	17	5	ND	1	2873	25	21	1060	1	32.88	.003	6	3	.47	23	.01	2	.01	.10	.01	3	260
A1-F36	1	29	25036	669	335.1	13	2	4332	.94	21	15	ND	1	2104	53	125	4217	1	26.37	.001	6	1	.38	15	.01	2	.01	.09	.01	2	1360
A1-F38	1	33	590	4	3.2	12	8	57	1.44	4	5	ND	1	4	1	2	5	1	.03	.001	2	3	.01	1	.01	3	.01	.01	.01	1	1
STD C/AU-0.5	22	60	39	139	7.2	73	29	1136	3.98	41	20	7	35	49	19	15	21	70	.48	.109	39	62	.89	185	.08	41	1.73	.09	.14	14	500
AL-F35 .16 *	2	4	15011	206	115.2	2	1	1164	.25	6	12	ND	1	704	5	7	237	1	9.25	.001	2	1	.11	6	.01	2	.01	.05	.01	1	-
AL-F36 .16 *	1	7	21799	212	382.4	4	1	1080	.27	4	13	ND	1	547	15	35	1067	1	7.32	.001	2	1	.09	4	.01	2	.01	.05	.01	2	-

* .1g sample - multiply results by 5.

↙ Assay required for correct result ↘

NOTE G2 on next page with New Property Samples.

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN, FE, CA, P, CR, MG, BA, TI, B, AL, NA, K, W, BI, ZR, CE, SN, Y, ND AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: ROCKS & SOILS -80 MESH AU ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: JULY 25 1986 DATE REPORT MAILED: *July 29/86* ASSAYER: *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER.

GOLDEN EYE MINERALS FILE # 86-1663

PAGE 1

HEN PROPERTY

SAMPLE#	Mn	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au1
	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	I	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	I	I	PPH	PPH	I	PPH	I	PPH	I	I	I	PPH	PPH
H651	3	3033	32	14	3.7	451	487	89	41.19	6	5	ND	4	1	1	14	7	4	.03	.001	2	1	.11	12	.01	27	.17	.06	.03	1	28
H652	3	977	44	34	10.5	16	13	69	1.84	7	5	58	1	11	1	2	2	11	.34	.075	8	8	.09	42	.08	2	.19	.02	.14	1	37000 ✓
H653	3	1352	38	53	5.7	12	12	70	1.91	8	5	29	1	7	1	2	2	12	.41	.086	7	3	.11	39	.07	2	.13	.02	.11	1	31000 ✓
H654	2	1272	32	45	8.0	165	1695	49	.97	3130	5	48	2	10	1	2	2	9	.36	.104	36	3	.06	34	.05	2	.14	.02	.12	1	73000 ✓
H655	1	645	16	16	2.2	46	162	43	1.57	340	5	6	4	10	1	2	2	14	.61	.181	85	5	.07	12	.09	2	.10	.08	.04	1	15000 ✓
H656	7	202	7	41	.7	92	28	161	2.55	29	5	2	2	25	1	2	2	91	.56	.105	12	12	.65	49	.24	3	.68	.09	.17	1	1360
H657	14	987	15	41	1.6	42	179	94	3.81	280	5	2	3	6	1	2	2	13	.28	.058	25	5	.21	19	.07	3	.17	.05	.04	1	1210
HP-1	437	596	76	229	1.5	347	221	246	16.60	54	5	ND	2	5	1	2	2	29	.48	.072	17	49	.49	12	.05	2	.33	.05	.05	1	70
HP-2	41	2231	14	78	5.4	120	306	106	6.99	411	5	8	4	11	1	2	2	14	1.00	.332	32	6	.27	26	.06	7	.18	.05	.07	1	9780
HP-3	2	205	12	28	.3	27	24	70	3.07	2	5	ND	2	34	1	2	2	32	.56	.160	11	7	.14	49	.16	5	.32	.08	.14	1	28
A162	2	9	6	62	.1	6	4	746	1.83	6	5	ND	1	2	1	2	2	2	.03	.037	4	1	.01	26	.01	2	.04	.01	.01	1	29
H658 Soil	8	100	14	120	.6	103	15	428	3.61	5	5	ND	4	76	1	2	2	92	2.87	.087	14	118	1.84	86	.19	44	1.44	.14	.20	12	4
STD C/AU-0.5	22	59	38	135	7.1	71	29	1105	3.95	38	19	7	35	49	18	15	21	62	.48	.104	37	57	.88	181	.08	40	1.73	.09	.13	13	500

A-1 SAMPLE

HEN

Assay required for correct result

SAMPLE DESCRIPTIONS AND RESULTS
TRAVERSE LINE 1

No.	Sample Description	Au ppb	Ag. ppm	Mo ppm	Pb ppm	Zn ppm
P1	Rusty quartz vein o/c	1	0.1	1	2	2
P2	Quartz vein 4 ft wide	1	0.1	1	2	1
G1	Quartz vein near post	1	0.1	1	2	4
P3	Quartz float in grey phyllite 11		0.2	1	28	15
P4	Rocky clay soil, grey phyllite chips. 50 m from start		0.8	15	18	184
P5	Quartz float 94 m.	1	0.1	1	2	6
P6	Soil, grey phyllitic chips. 100 m.	70	0.5	6	8	78
P7	Soil, 155 m.	9	0.3	1	4	30
G2	Quartz Float 195 m	29	0.1	2	6	62
G3	Quartz float 195 m.	18	1.1	2	222	13
P8	Grey soil, phyllite chips, 205 m.E	51	0.8	9	12	80
P9	Grey soil, 260 m.	34	0.1	7	11	94
G4	Quartz float, 260 m.	1	0.1	1	3	64
P10	Grey clay soil, 300 m.	2	0.3	1	19	76
P11	Grey soil, bushy area, 350 m.	2	0.3	3	14	59
P12	Grey soil, bushy area, 400 m.	1	0.5	1	9	81
P13	Soil, 404 m.E	1	0.5	3	14	130
P14	Soil, 500 m.E	1	0.2	3	17	63
P15	Soil, 550 m.E	2	0.5	3	13	83
P16	Soil, 600 m. End Traverse Post 3N,3E, of Jul 2 claim	2	0.5	11	27	169
P17	Quartz float, 205 m.N of P16	1	0.1	2	2	25
P18	Quartz float, 277 m N of P16	2	0.1	2	2	10

TRAVERSE LINE 2

No.	Sample Description	Au ppb	Ag. ppm	Mo ppm	Pb ppm	Zn ppm
P19	Soil, rusty. 00 Ln 2	1	0.5	2	27	146
G6	Quartz float, 25 m. W	1	0.1	2	5	24
P20	Soil, Red., 50 m.W.	1	0.2	1	22	115
P21	Red soil, 100 m.W	1	0.1	1	26	122
P22	Red soil, 157 m W.	1	0.1	2	21	82
P23	Red Soil, 200 m.W	1	0.1	1	12	72
P24	Red soil, 262 m. W	1	0.1	3	18	67
P25	Soil , 300 m. W	1	0.1	1	15	126
	Blocky andesite o/c No sample. 350 m.					
P26	Grey rocky soil 409 m. Blocky andesite above.	1	0.1	1	9	40
P27	Soil. 471 m.	1	0.1	1	6	32
P28	Soil, 550 m.	1	0.1	3	17	64

TRAVERSE LINE 3
ROAD NORTH OF CLAIM

No.	Sample Description	Au ppb	Ag. ppm	Mo ppm	Pb ppm	Zn ppm
P29	Silt, Creek draining claim	1	0.3	8	49	211
P30	Rock, Float, Qtz + galena Same creek as P29	13	2.7	2	4280	63
P31	Rock, Float, White bull Qtz.	1	0.1	1	2	1
P32	Rock, Float, Quartz, specularite	1	0.2	1	149	27
P33	Rock, Float, Quartz, galena	2	0.2	2	385	52
P34	Silt, creek half way from hwy	2	0.6	6	56	155

TRAVERSE LINE 3
MINERALIZED FLOAT ROAD NORTH OF CLAIM

No.	Sample Description	Au ppb	Ag. ppm	Mo ppm	Pb ppm	Zn ppm
P35	Rock, float, creek, Carbonate with abund disseminated galena * rerun NOTE: Cd: 25 ppm, Sb: 21 ppm, Sr: 2873 ppm, Bi: 1060 ppm.	260	476	3	20268	1016
P36	Rock, Float, same creek, diff. piece of similar material * rerun NOTE: Cd: 53 ppm, Sb: 125 ppm, Sr: 2104 ppm, Bi: 4217 ppm.	1360	335.1	1	25036	669
P37	Rock, Float, same creek Quartz with galena	Missing				
P38	Float, Qtz. w. Pyrrhotite 800 m from highway	1	3.2	1	590	4

PROFESSIONAL QUALIFICATIONS

BARRY JAMES PRICE, M.Sc., F.G.A.C.

Born: SMITHERS, B.C., CANADA, AUGUST 19, 1944

EDUCATION:

A. HIGH SCHOOL: Smithers, B.C. Graduated 1961

B. UNIVERSITY: University of British Columbia, Vancouver, B.C.

B.Sc. (Honors Geology) 1965. Thesis Topic:

"Tertiary Sediments at Driftwood Creek,
Smithers Map Area, B.C.

M.Sc. Geology 1972. Thesis Topic:

"Minor Elements in Pyrite and Exploration
Applications of Minor Element Studies".

EMPLOYMENT RECORD:

1961 QUALITY SPRUCE SAWMILL, Topley, B.C., Greenchain, Resaw.

1962 B.C. FOREST SERVICE, Houston, B.C. Cooks Helper.

1963 GEOLOGICAL SURVEY OF CANADA, Calgary, Alberta.

 Micropalaeontology Lab., supervised by T.P. Chamney

1964 GEOLOGICAL SURVEY OF CANADA. Junior Field Assistant,

 Geological mapping party, Kananaskis and Canal Flats

 Mapsheets, Alberta and B.C. Supervised by Dr. G.B. Leech.

1965 - 1968 CHEVRON STANDARD LTD. Calgary, Alberta. Senior

 Field Assistant on mapping party in Mackenzie and

 Richardson Mountains. Subsurface exploration studies,

 Carbonate reef research, Wellsite supervision and

 Production Department duties.

1968 MANEX MINING LTD, Smithers, B.C. Geological mapping
and diamond drill supervision

1969 MANEX MINING LTD., Smithers, B.C. Property mapping and
evaluation, geophysical and geochemical surveys, super-
vision of Diamond Drilling, Evaluation of Jade deposits.

1970 ARCHER, CATHRO AND ASSOCIATES, Party Chief, Sedimentary
Copper exploration, Mackenzie Mountains, regional map
preparation and coordination of prospectors.

1971 J.R.WOODCOCK CONSULTANTS LTD., Project Geologist in
Massive Sulphide exploration project. Regional
exploration and property geology, geophysics and geo-
chemistry. Barriere and Adams Plateau areas.

1972 MANEX MINING LTD. Vancouver, B.C. Senior Geologist
to 1976 Consulting geological work for a variety of corporate
clients Ref: M.J.Beley

1976 PETRA GEM EXPLORATIONS OF CANADA LTD., Vice-President
to 1986 and managing director. Exploration for gem materials
and Geological Consulting. Exploration and development
of precious metal, base metal and industrial mineral
deposits. Exploration for Jade deposits and kimberlites.
Exploration in Mexico and Republic of Phillipines.

1979 RAPITAN RESOURCES INC. President and sole shareholder.
to 1986 Consulting Geological Services for major companies and
speculative junior companies. Management of prospecting
programs. Development of exploration plays and
preparation of qualifying reports. Property evaluation
Development of geological computer programs.

CORPORATE DIRECTORSHIPS

DELPHI RESOURCES LTD.: Director, 1974 to 1986
TERRITORIAL GOLD PLACERS LTD.: Director, 1975 TO 1982
PETRA GEM EXPLORATIONS OF CANADA LTD.: Vice-President, 1976-1986
GOLDEN EYE MINERALS LTD.: Director, VSE-Listed, 1983-1986
GEOSTAR MINING CORP: Vice-President, VSE-Listed, 1985-86
MIRAMAR ENERGY CORP: Secretary, VSE-Listed, 1985-86

PROFESSIONAL MEMBERSHIPS

GEOLOGICAL ASSOCIATION OF CANADA: Fellow, 1975-1986
CANADIAN INSTITUTE OF MINING, Member.
B.C. YUKON CHAMBER OF MINES, Member
ENGINEERS CLUB, Member 1980-1986
SOCIETY OF EXPLORATION GEOLOGISTS, Member 1984-1986

PUBLICATIONS

Sinclair, A.J., Fletcher, A.K., Price, B.J., Bentzen, A, and Wong, S.S; (1977) Minor Elements in Pyrites from some Porphyry-Type Deposits, British Columbia. Transactions of Society of Mining Engineers, June 1977, vol.262, pp.94-100.

Godwin, C.I. and Price, B.J. (In press) Geology of the Mountain Diatrema, Northwest Territories. CIM Special Volume.

Price, B.J., (1984); The Driftwood Creek Fossil Beds. Brochure for CIM District Six Convention, Smithers, B.C.

Price, B.J. (1985); The Entrepreneurial Geologist. Lecture Notes for Geology 549 Course at U.B.C.

KEITHLEY SECTION.

This property is described in the Annual Reports for the years 1921, 1922, 1923, 1924, and 1925. Operations during the year were conducted under the management of K. C. Laylander, and comprised opening up a new pit, about half a mile above the former pit, also Keystone-drilling of areas delineated previously by magnetometric survey. The drilling of thirty-two holes proved, it is stated, the correctness of the magnetometric indications. Hydraulic mining was impeded by shortage of water since July, but the total yardage piped off was in the neighbourhood of 645,000 cubic yards.

Small-scale Operators.—Among these may be mentioned: W. Bleuveldt, on Duck creek, just below the south end of Cariboo lake, and J. Hodgson, at the mouth of Harvey creek on Swamp river.

LODE-MINING.

Black Bear Creek.

Considerable interest was manifested during the year in the lead content of the quartz veins of Black Bear creek and the more immediate vicinity. Characteristic of many of the veins of the Cariboo and Quesnel Mining Divisions is the occurrence of galena with the other sulphides, and frequently the galena occurs in small lenses or "bunches," so that quantities varying from a few hundred pounds to a few tons can be selected by hand without much difficulty so as to give a product high in lead content.

From one such lens from a vein on the *Black Bear No. 1* and adjoining claims P. Harrington and associates sorted out during the summer between 10 and 15 tons of nice clean lead ore. This is the largest lens of galena which has so far been found, but from an examination of this property and neighbouring claims there would appear to be no grounds for anticipating bodies of such size as to enable the veins to be worked for their galena content *alone*. Were transportation close at hand, it is quite likely that the prospector-owner would be able to mine and ship such lenses at a profit, because the silver content of the Black Bear Creek galena seems to be distinctly higher than galena found in the Barkerville area, for example. On Black Bear creek the galena seems to carry about 2 oz. silver to the unit of lead. An ore assaying 50 per cent. lead and 100 oz. to the ton would yield at present prices (London lead, 6 cents a pound; silver (New York), 55 cents an ounce) a gross smelter value of \$95 a ton. Allowing a treatment rate of \$8 a ton, such ore would net at the smelter \$87 a ton. The nearest railway point is Williams Lake, on the Pacific Great Eastern. Assuming a railway freight rate of \$8 a ton from Williams Lake to Trail, the value at Williams Lake would be \$79 a ton. Likely is distant 65 miles from Williams Lake and the present motor-truck rate between the two places is \$40 a ton. Black Bear creek is distant by indifferent road and trail about 9 miles from Likely and ore has to be packed out for nearly half this distance. It is said that the present cost of packing and trucking from Black Bear creek to Williams Lake is \$45 a ton, which would give a net value of \$34 a ton to this grade of ore at the mine. Assuming that a wagon-road was built through up Black Bear creek, giving road transportation of 75 miles through to Williams Lake, motor-trucking costs even for large quantities of ore would not be less than 40 cents a ton-mile, or a total of \$30 a ton.

The quartz veins of this creek are certainly of impressive size, but there is yet to be afforded any exposure showing appreciable gold values, apart from such as are contained in galena and iron pyrites, which represent a very small proportion of the whole vein. Of course very little development has as yet been done. There are many quartz-showings, but none has been followed up for any distance. In most cases the exposures are inadequate to determine whether the vein is interbedded or cuts across the enclosing country, except in the case of the *Black Bear No. 1* and adjoining claims, where the vein seems to be interbedded. In this case a crosscut had been run from wall to wall, so that it was easy to sample, but no values in precious metals beyond mere traces were found except in the galena.

So far there is not disclosed any evidence of the cross-veins, which are a feature of the Barkerville vein system, but no steps have as yet been taken to look for them. The quartz vein exposed at Black Bear Creek falls on the *Dial* claim is at least 50 feet wide and is evidently not fully exposed, but mineralization is very sparse and only a little galena shows. The vein on the *Black Bear No. 1* is at the point of crosscutting 43 feet in width. An account of the prospects visited follows:—

The Annual Reports of the British Columbia Minister of Mines for 1881 and 1883 give the value of Sugar Creek gold as \$15.70 and \$15.35 per ounce, corresponding to an average fineness of about 750. This agrees very closely with the average fineness of three shipments of placer gold from Cooper Creek which totalled 80 oz. and contained 753½ parts gold and 219½ parts silver.

Old placer-workings extend along Sugar Creek for about 3,400 feet up-stream from the mouth of Cooper Creek. Low bed-rock benches on either side of the creek were worked by hand and by hydraulicking. From the mouth of Cooper Creek, old workings extend down-stream for about 2 miles. The most extensive workings are on bed-rock benches which lie from 10 to 25 feet above creek-level and extend from the mouth of Cooper Creek to the mouth of Little Mustang Creek. The gravel in most places was fairly shallow, except in several old hydraulic pits on the east side of the creek. There is no placer-mining on Sugar Creek at present.

There are no indications of former placer operations along Stevens Gulch, which joins Sugar Creek about 2,600 feet up-stream from Cooper Creek.

Cooper Creek has been placered from its mouth up-stream for about 3,200 feet to the head of the hydraulic pit on the west branch. Most of the ground up-stream to immediately above the forks evidently was shallow and rapidly worked out.

There are no indications of former placer-workings on the south branch of Cooper Creek. It seems reasonable to conclude that the quartz veins along that branch did not shed any gold into the creek.

A small hydraulic plant was installed on Cooper Creek by Triple Hydraulic Placers, Limited, an organization which worked the creek from 1937 to 1941. Work was in charge of A. W. Frankish and George Warren, of Calgary. Officially recorded production in the above five-year period amounted to 229 oz. of gold, valued at \$6,353. The average fineness of three shipments, totalling 80 oz., is 753½ parts gold and 219½ parts silver.

Water required for the hydraulicking is obtained through a ditch running from the head of Stevens Gulch around to the south fork of Cooper Creek, and thence through another ditch 3,500 feet long around to the west fork of Cooper Creek. In 1947 the above ditch system delivered water under a head of 100 feet to a No. 1 monitor. The hydraulic pit, opened up about 400 feet west of the forks of Cooper Creek, is some 900 feet long. The creek has a grade of about 12 per cent. It is said that most of the gold recovered was nuggetty and coarse, and that much of it carried attached quartz.

During 1947 A. W. Frankish camped on Cooper Creek and did some work to recondition the plant and ditches.

[References: *Geol. Surv., Canada*, Ann. Rept., Vol. III, Pt. C, 1889, pp. 40-42; also Map No. 370, 1895, Sugar, Hardscrabble, and Slough Creeks; Sum. Rept., 1933, Pt. A, pp. 40, 41, 60, 61. *Minister of Mines, B.C.*, Ann. Rept., 1934, p. C 26.]

Gold.

(52° 121° N.W.) Company office, 514, 19 Melinda Street, Toronto. Max (El Toro B.C. Mines, Ltd.).* W. E. Bateman, president; J. E. Callaghan, vice-president and general manager. Capital: 5,000,000 shares, \$1 par value. During 1947 the company undertook a diamond-drilling programme to explore quartz-vein showings, between 3,900 and 4,300 feet altitude, on the north-east side of Spanish Mountain (Fig. 14). Transfer of the Max group to the company has been recorded. This group of eight claims on the north-east side of Spanish Mountain was recorded in July, 1946, covering ground formerly located by E. J. Eddington, as the Joe claims.

* By Stuart S. Holland.

In the same vicinity the claims Mariner, Mariner No. 5, Mariner No. 6, and Mariner Fraction were recorded in October, 1947, by John E. Callaghan, covering ground recorded in 1933, as the Mariner claims, by F. A. Dickson and T. Bayley.

The property is reached by a trail which branches from the Spanish Lake road about 100 yards east of Johnny Lyne's cabin, and climbs about 900 feet to an old cabin near the top of a ridge north-east of Spanish Mountain. In 1947 the company established a camp well down the hillside, about a quarter of a mile up the trail from the Spanish Lake road.

The first vein discoveries were made in 1933, and for several years thereafter the claims were prospected, additional veins found, and some stripping was done. In 1938 an option was taken on the property by the N. A. Timmins Corporation, which did a large amount of stripping and drove two adits on the lower vein-showings. The north slope of Spanish Mountain is closely timbered and apparently covered by fairly heavy overburden. Outcrops are exceedingly scarce.

The claims are underlain largely by black argillaceous schist, dark argillaceous quartzite, and light-coloured quartzite belonging to the Precambrian Cariboo series. The rocks near the quartz showings, between elevations of 3,900 and 4,200 feet, are intruded by sills or dykes of a white to pale biscuit-coloured rhyolite porphyry. Argillaceous schist, quartzite, and rhyolite porphyry are carbonatized in varying degrees with ankerite. An analysis of ankerite separated from a specimen containing about 20 per cent. ankerite is 28.1 per cent. CaO, 13.7 per cent. MgO, 13.1 per cent. FeO, and 45.1 per cent. CO₂. The fresh unweathered ankerite is white to grey in colour, but weathering produces spots and patches of various shades of orange and red brown. Ankerite in the argillaceous schist appears as porphyroblasts up to a quarter of an inch across, and in the quartzite and rhyolite porphyry as irregular areas and crystals replacing quartz grains and feldspar phenocrysts and ground-mass. In some instances the degree of ankeritization is so complete that the identity of the original rock can only be deduced by microscopic study of thin sections. For example, white ankeritized core from diamond-drill hole No. 4, at footages 50 and 125 feet, is carbonatized quartzite and carbonatized argillaceous schist, in contrast to core from drill-hole No. 1 at footages 360, 442, and 520 feet which is ankeritized porphyry, as is the outcrop near the small vein-showings 200 feet north of the cabin at elevation 4,200 feet.

A considerable number of quartz veins are exposed on the property, and, for convenience, descriptions are referred to five areas shown on the accompanying sketch-map (Fig. 14).

At elevation 3,950 feet (north-western part of Fig. 14), two quartz veins are exposed in surface cuts for lengths of 100 and 150 feet respectively. The lower vein is about 6 feet wide in the face of two open-cuts and dips about 20 degrees southward. The other vein, about 5 feet wide in the western adit (*see* Fig. 14), evidently pinches on its eastern end and also dips about 20 degrees south. The quartz in both is hard and unfractured, and is sparsely mineralized with ankerite and pyrite. Work on these veins was done by the N. A. Timmins Corporation in 1938, which drove an adit 42 feet south 27 degrees west from a point on the foot-wall side of the vein. Ninety feet to the east an incline was driven down the dip of the vein for an unstated distance. The incline is now flooded and inaccessible.

The vein at the portal of the western adit lies above a fault dipping 20 degrees and also south of a fault dipping about 55 degrees south. It is thought that the two vein-outcrops represent a single, faulted vein. This belief is supported by the fact that hole No. 2, drilled at an inclination of minus 45 degrees and 192 feet deep, did not penetrate any vein-quartz at depth.

The company drilled two other holes from a set-up at the mouth of the adit, No. 1 hole being drilled flat for 709 feet and No. 3 hole being drilled at an angle of 45 degrees

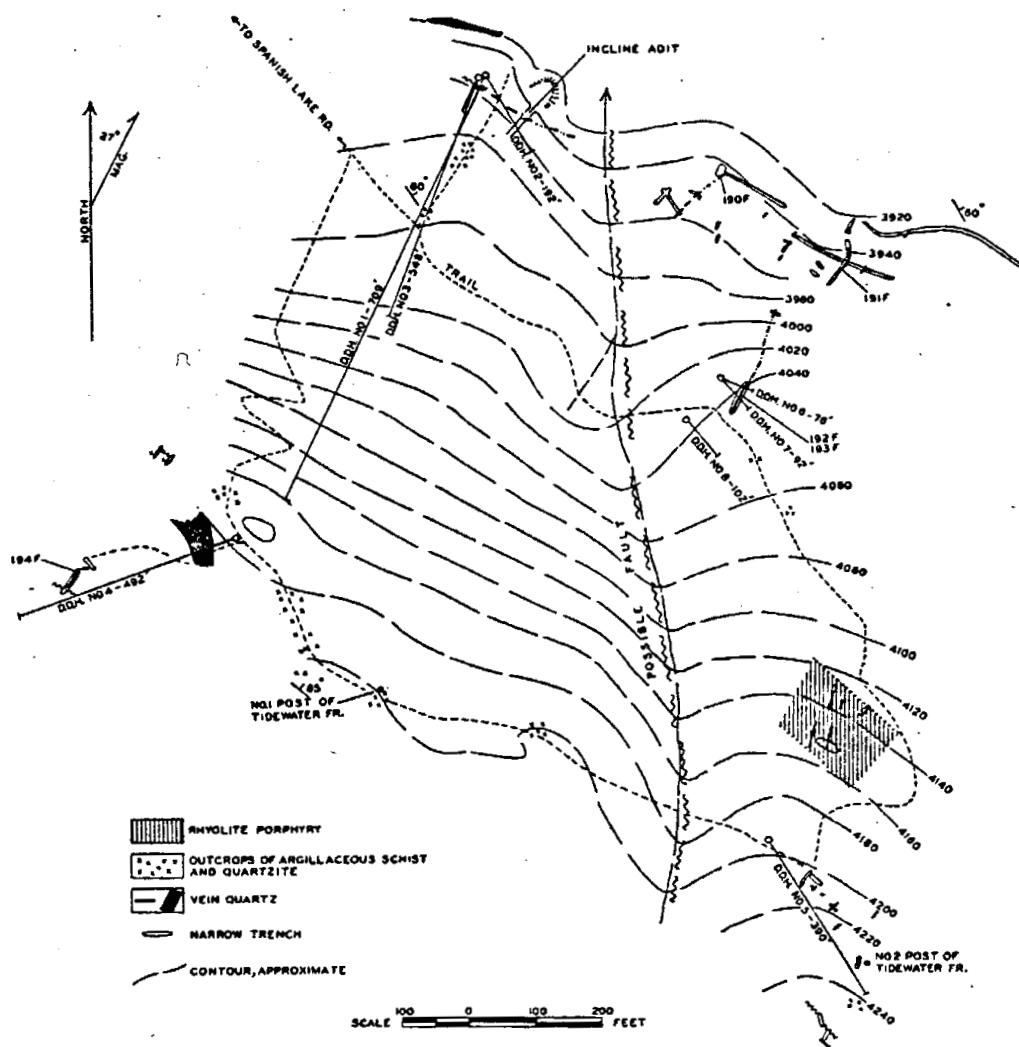


Fig. 14. Sketch-map of Max group, Spanish Mountain.

for 548 feet. Although No. 1 began on the foot-wall side of the vein near the portal, it did not intersect any vein-quartz. It did, however, cross several white ankeritized rhyolite porphyry sills in grey ankeritic argillaceous schist.

No. 3 drill-hole did not cut any quartz vein, being too steep to intersect the projection of the upper vein-outcrop and also being on the hanging-wall side of the fault which drops the vein down to its lower outcrop position. At depth it penetrates white, strongly ankeritized rock, some of which is quartzite and some of which may be rhyolite.

East of a depression and a small creek, between the 3,920- and 4,060-foot contours, extensive trenching has disclosed and partly stripped five veins, all more or less parallel and striking about north 30 degrees east. One vein, close to the trail, at elevation 4,040 feet, is stripped for a length of 35 feet, and two open-cuts off to the north extend its length to about 150 feet. The vein is 20 to 24 inches wide and dips 65 degrees west. The quartz is mineralized with pyrite, galena, and sphalerite. The pyrite occurs in pencil-like aggregates at right angles to the walls and, on weathering, produces a

honeycomb or horse-tooth structure in the quartz. This vein has visible gold in the oxidized surface quartz, and from it F. A. Dickson is said to have crushed and panned several hundred dollars' worth of gold. One sample (192F) of selected quartz, well mineralized with pyrite and galena, assayed: Gold, 0.30 oz. per ton; silver, *nil*. Another selected sample (193F) of pieces containing about 25 per cent. pyrite assayed: Gold, 1.12 oz. per ton; silver, 0.4 oz. per ton.

During July, 1947, the company put down three minus 45-degree drill-holes close to the outcrop of this vein. No. 6 drill-hole encountered 12 inches of quartz sparsely mineralized with pyrite and galena at 32 feet, No. 7 hole encountered no quartz, nor did No. 8 drill-hole, which lies 80 feet to the south-west.

Downhill to the north, extensive trenching along a length of 500 feet and across a width of 150 feet has disclosed four sub-parallel veins up to 18 inches in width and with sparse ankerite and pyrite mineralization. No visible gold was seen, and although the vein-showings appear less attractive than the one uphill to the south, several high gold assays were obtained from them.

Sample 190F (*see* Fig. 14), taken from a 4- to 6-inch quartz vein mineralized with pyrite, galena, and chalcopyrite, assayed: Gold, 4.43 oz. per ton; silver, 2.3 oz. per ton. Sample 191F (*see* Fig. 14), of selected honeycomb quartz containing pyrite, assayed: Gold, 0.52 oz. per ton; silver, *nil*.

Also east of the creek, at elevation 4,150 feet, two narrow quartz veins are exposed in trenches in ankeritized rhyolite porphyry. The sill apparently has an outcrop-width of about 100 feet. The two veins, 4 to 12 inches wide, are parallel and 20 feet apart, strike about south 35 degrees west, and dip 50 to 65 degrees north-westward. The western vein has sparse pyrite and ankerite mineralization and contains visible gold in small specks.

South of the cabin and about elevation 4,200 feet (south-eastern part of Fig. 14), several short, narrow, poorly mineralized quartz veins are exposed in old open-cuts. The veins all strike between south 20 degrees and south 40 degrees west. At the southern-most exposure two open-cuts expose a strong north-easterly trending fault and irregular broken vein quartz. It is reported that from this locality two spectacular samples containing free gold have been obtained.

Diamond-drill hole No. 5 was drilled 390 feet at minus 45 degrees in this vicinity. No mineralized quartz was intersected. A 100-foot section of white, highly ankeritized rhyolite, cut between footages of 215 and 320 feet, is evidently another sill or dyke in the dark, ankeritic argillaceous schist.

The quartz veins east of the creek are sub-parallel and lie within 350 feet to the east of a fairly straight, north-trending gully. The setting strongly suggests the possibility that a north-south fault may trend along the gully and may be responsible for the fracturing now occupied by vein-quartz. There is no evidence to prove the presence of a fault that is associated with the vein-fracturing. Nevertheless, if it were so, the strip of ground to the west of the gully and parallel to it would offer encouragement for further prospecting.

An outcrop of vein-quartz (south-western part of Fig. 14) is 25 to 40 feet wide and about 75 feet long. The quartz contains little mineralization, and diamond-drill hole No. 4 beneath the surface exposure intersected only 1 foot of unmineralized quartz at 56 feet depth.

Two hundred feet west of the large outcrop, on the west side of a shallow depression, the company excavated an open-cut on a vein striking about south 35 degrees west. The vein, exposed for about 30 feet in the open-cut, is terminated at the southern end by a fault striking north 50 degrees west and dipping 50 degrees south-westward. The vein-quartz has a maximum width of 18 inches and is mineralized with pyrite, galena, chalcopyrite, and tetrahedrite. It is reported that specimen pieces

of free gold have been obtained from this vein. A sample of selected quartz, well mineralized with galena and containing some sphalerite and small amounts of pyrite and chalcopyrite, assayed: Gold, 5.88 oz. per ton; silver, 32 oz. per ton.

During 1947 the company undertook a programme of diamond-drilling. Eight holes, totalling about 2,600 feet, were completed by July, when work on the property was suspended. The only other work was done on the open-cut on the vein at location (5).

In October 4 tons of picked ore from surface cuts were shipped to Tacoma smelter. Net contents: Gold, 8 oz.; silver, 40 oz.; copper, 82 lb.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1933, p. 134; 1936, p. C 38; 1938, p. C 48.]

Silver-Lead.

(52° 121° N.E.) Fourteen mineral claims extending up Black Bear Creek from the falls, in a block five claims long by three claims wide, are recorded in the names of L. O. Gostling, of Likely; W. P. Horton-Jack, of Vancouver; and C. S. Pascoe, of Tacoma, Wash. Black Bear Creek enters Spanish Creek from the east about a mile above its junction with Cariboo River. A trail about 2¾ miles long runs up the east side of the creek from the bridge across Spanish Creek to a camp at an elevation of about 3,500 feet.

Work has been done on some quartz veins on the east side of Black Bear Creek just up-stream from the camp. The "T" vein outcrops about 50 feet above creek-level on the east bank, and for a length of about 45 feet is about 4 feet wide. Its strike is about north 45 degrees west and its dip north-east. Twenty-five feet below the outcrop an adit is driven north 57 degrees east for 49 feet, at which point a drift is driven south 28 degrees east for 23 feet. The drift reveals irregular vein-quartz with spotty mineralization of galena, pyrite, and ankerite. The vein cutting across ankeritic schists which strike north 60 degrees west and dip 50 degrees south-westward may be the underground projection of the "T" vein outcrop.

At the portal of this adit a 4-foot quartz vein exposed on the east wall dips 62 degrees east and pinches upward to 6 inches within a distance of a few feet. About 3 tons of selected galena ore is piled on the side at the portal of the upper adit.

It is recorded in the 1926 Annual Report of the British Columbia Minister of Mines, page 178, that 10 to 15 tons of sorted ore was sacked, and that a grab sample of the best of this ore assayed: Gold, 0.06 oz. per ton; silver, 144 oz. per ton; lead, 76 per cent. The owner states that a shipment was made at that time, but there is no official record of the tonnage or grade.

From a point 40 feet south of the upper adit a second adit 20 feet lower is driven toward the veins. It runs north 53 degrees east for 31 feet, at which point a raise extends upward for 20 feet to a 24-foot sub-level drift along a vein running north 38 degrees west. At the 31-foot point the direction of the adit changes to north 24 degrees east and continues a further distance of 40 feet to the face.

The adit crosses mostly soft, brown and biscuit-coloured papery schists striking about north 30 degrees west, and with low but variable dips to the south-west. There appears to be some rolling in the formation, but the exact structure has not been determined.

At a point 23 feet from the portal the "L" vein, 3 to 20 inches of quartz with erratic galena mineralization, crosses the adit. The vein strikes about north 30 degrees west and dips 45 degrees north-eastward.

A third vein, strike about north 35 degrees west and dip north-eastward, was followed for 24 feet in the sub-level. It is cut in the lower adit at a point 53 feet from

• By Stuart S. Holland.

the portal, and quartz is exposed along both walls for 17 feet to the face. On the sub-level the vein attains a width of 24 inches, but, on the level below, quartz several feet in thickness and dipping gently toward the north-east is exposed.

The three veins referred to above occupy sub-parallel north-east-dipping fractures. The fractures are weak, and the veins not only send branches out along the planes of schistosity, but may roll over from a cross-cutting north-east-dipping fracture-filling to a south-west-dipping formational vein. The veins, as a consequence, are almost unpredictably irregular.

The quartz is mineralized with small lenses and irregular masses of galena. Although no attempt was made to obtain average values by sampling, it is apparent that the average galena content of the vein-quartz is low. A silver-lead ratio of 2 oz. to 1 per cent. is indicated by an assay of gold, 0.06 oz. per ton; silver, 85.3 oz. per ton; and lead, 42.9 per cent., from selected galena ore piled at the portal of the upper adit. This sample also contained 0.6 per cent. bismuth. A selected piece containing 50 per cent. pyrite assayed: Gold, 0.01 oz. per ton; silver, 0.4 oz. per ton. This indicates that the gold content of both the galena and the pyrite mineralization is low.

The total underground work in the two adits aggregates 190 feet of crosscuts and drifts. Both adits were begun in 1926, and a considerable proportion of the total work was done in that year.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1902, p. 86; 1926, pp. 177, 178.]

Gold.

(52° 121° N.E.) These groups of claims are on Snowshoe Plateau, **Jim and Midas**, north-east of Yanks Peak. Lieut.-Col. F. H. M. Codville, of Duncan, B.C., assisted by his two sons and J. Pickering, did a considerable amount of prospecting on these claims, which includes the old Midas property formerly worked by Amparo Mining Company. Using a portable 90-lb. gasoline-driven jack-hammer, numerous quartz veins were exposed in surface trenches. A crosscut was started on the Don Fraction to explore a vein on the Jim claim.

TASEKO LAKE (51° 123° S.W.)*

Gold.

Company office, 184 Bay Street, Toronto. G. H. Rainville, president; **Hi Do (Pellaire Mines, Ltd.)** J. W. Scott, mine manager. Capital: 3,000,000 shares, \$1 par value. This company continued to develop the Hi Do group, which is on the south-eastern side of Falls Creek, about 5 miles south-west of the southern end of Taseko Lake. The property is reached by 150 miles of road and lake travel from Williams Lake.

The tent camp, which is at elevation 7,880 feet, was reopened in April and underground work was commenced on May 14th. The No. 2 and No. 3 adits, which were started in 1946 on Nos. 4 and 3 veins respectively, were advanced a further 707 feet and 617 feet respectively. The No. 4 vein was further prospected by another adit, which was collared 108 feet lower down the slope, where 146 feet of drifting was done. Two adits were also started on the No. 5 vein at elevations 7,768 and 7,685 feet. Drifting, amounting to 651 feet and 232 feet respectively, was done in these adits. The surface exposures on all the veins were carefully resampled, and a considerable amount of stripping was done with the bulldozer, particularly on the No. 2 vein-zone south of the camp. Roads were built to the various portals, and about 2 miles of the main road was relocated. About twenty-seven men were employed. Operations ceased on October 12th owing to weather conditions.

* By J. W. Peck.

(52° 121° N.E.) Company office, Royal Bank Building, Vancouver.
Cariboo Hudson W. B. Burnett, president. Capital: 3,000,000 shares, 50 cents par
Gold Mines value. This property is on Pearce Gulch and is reached by 21 miles
(1946), Ltd. of road from Barkerville. No work was done on this property in 1948.

However, the sale of the company's 125-ton mill to Discovery Yellowknife Mines, Limited, has provided sufficient funds to maintain the property in good standing. The rest of the mine-plant equipment has been retained with the intention of resuming development-work at some future date.

LIKELY.

Silver-Lead.

(52° 121° N.E.) Mine office, Williams Lake. L. O. Gostling, mine
Providence manager. Mr. Gostling and associates hold eight claims by record.
Mining & Milling This property is reached from the highway bridge across Spanish
Syndicate. Creek by 3 miles of trail which extends up the east side of Black Bear
 Creek. A winze, of 32 degrees slope and bearing north 65 degrees
 east, immediately west of the upper adit, has been sunk from the surface a slope distance of 100 feet. At a point 90 feet down the slope a crosscut with the same bearing as the winze extends 300 feet into the mountain. The crosscut was driven in an endeavour to intersect the downward projection of the quartz vein exposed on the surface and in two old adits. The work was done by a crew of five men working under a partnership agreement.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1902, p. 86; 1926, pp. 177, 178; 1947, pp. 127, 128.]

The drift at the sump on 3000 level was extended 14 feet, and a concrete dam 6 feet high was erected at the outer edge of the sump. This will increase the sump storage capacity on this level from 11,000 gallons to 27,500 gallons.

The average number of men employed was 117.

Production: Ore milled, 44,336 tons. Gross contents: Gold, 18,834 oz.; silver, 2,570 oz.

KEITHLEY CREEK (52° 121° N.E.).*

Gold.

Midas. F. H. M. Codville, of Duncan, V.I., and J. Pickering, of Keithley Creek, in partnership, have installed a 15-ton Gibson mill and a Wilfley table at the Midas mine on Yanks Peak, 11 miles by road from Keithley Creek P.O. In 1949 ore was hauled from the shaft vein and from the dump at the shaft to the mill by Bren carrier. Test runs were made, but the returns from the concentrates were insufficient to continue treating this ore.

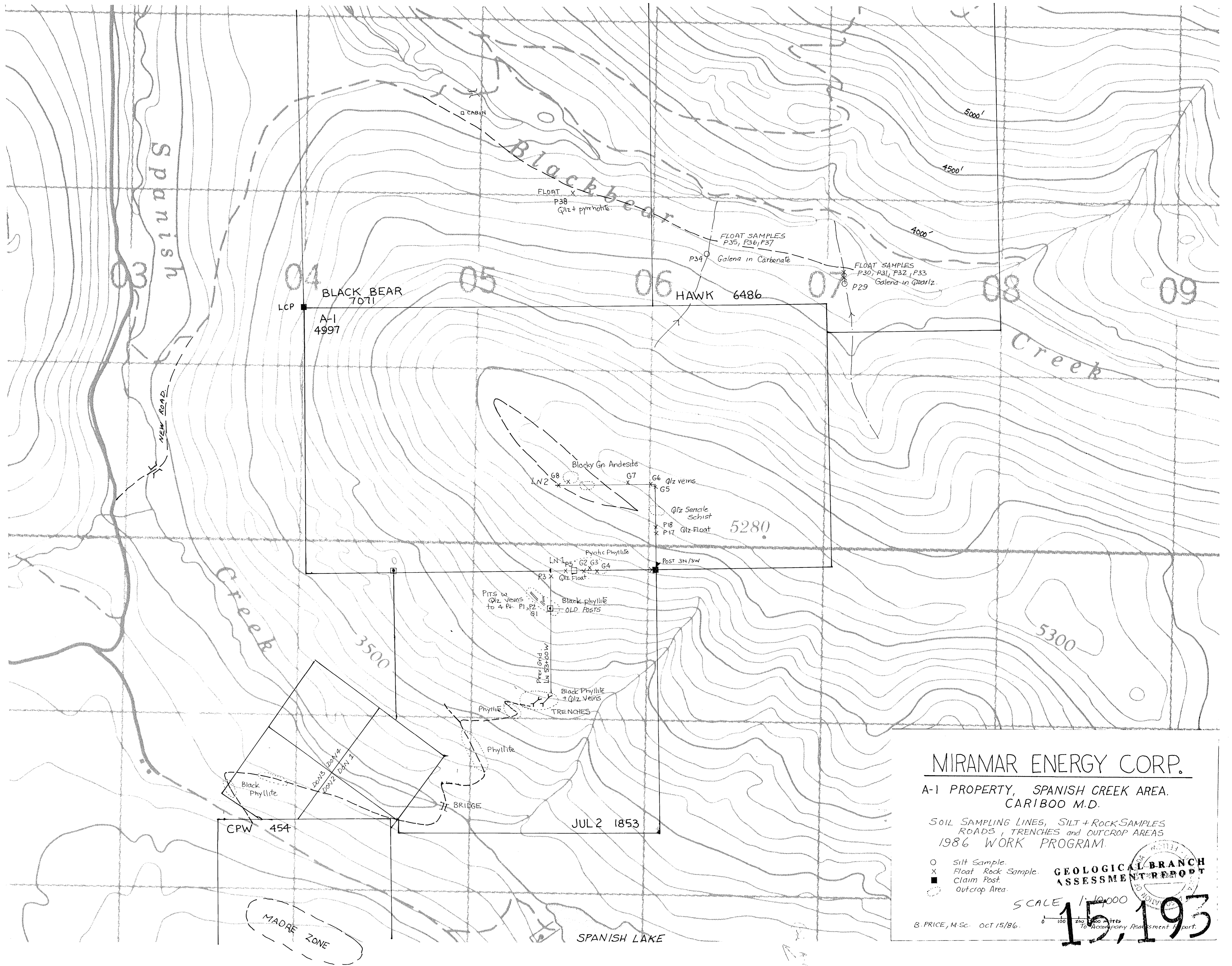
Crosscutting on the Jim group, located north of the Midas group, was resumed in an endeavour to intersect a vein previously found. It was anticipated that 21 feet of crosscut would be required.

An average of four men was employed.

LIKELY (52° 121° N.E.).*

Silver-Lead.

Providence Mining & Milling Syndicate. Mine office, Williams Lake. L. O. Gostling, manager. Mr. Gostling and associates hold eight claims by record on Black Bear Creek, a tributary of Spanish Creek. The property is reached from the highway bridge across the Cariboo River by 3 miles of trail extending up the north side of Black Bear Creek. In 1949 the crosscut from the winze was extended 100 feet to a point 400 feet from the bottom of the winze. Work was halted in February, when the crosscut broke through into gravel. At this time a crew of five men was employed. These workings are now flooded to creek level in the winze. Since then Mr. Gostling, working alone, has drifted westerly from the lower adit for more than 80 feet. A shipment of 4½ tons of hand-sorted galena ore was made to Trail in September. Production: Ore mined, 5 tons. Gross contents: Silver, 319 oz.; lead, 3,294 lb.; zinc, 12 lb.



MIRAMAR ENERGY CORP.

A-1 PROPERTY, SPANISH CREEK AREA.
CARIBOO M.D.

SOIL SAMPLING LINES, SILT + ROCK SAMPLES
ROADS, TRENCHES and OUTCROP AREAS
1986 WORK PROGRAM.

- O Silt Sample.
 - X Float Rock Sample.
 - Claim Post
 - Outcrop Area.
- GEOLOGICAL BRANCH
ASSESSMENT REPORT**

SCALE 1:10,000

B. PRICE, M.Sc. OCT 15/86. 0 100 200 METRES To Accompany Assessment Report.

15, 1993