

824017-07

REPORT ON THE  
SPAR, WILLI, VK, K AND M.P. CLAIMS

ADAMS PLATEAU AREA  
South Central British Columbia  
51°03'N 119°33'W  
NTS 82M/4E

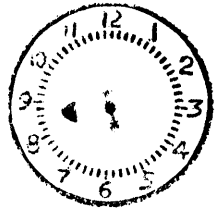
Property file 82M/4E.  
( See also Assess Rpt 6587 )

738

Vancouver, B.C.  
Feb. 3 1978

R# 8469  
FEB - 7 '78 AM

Pamex Mining Ltd  
800-675 West Hastings  
Vancouver, B.C.



DEPT. OF MINES  
AND PETROLEUM RESOURCES

Mr. E.J. Bowles  
Chief Gold Commissioner  
411 Douglas Bldg.  
Victoria, B.C.

Dear Mr. Bowles:

Re: Spar Group of Mineral Claims ( Affidavit submitted  
#18 with the Gold Commissioner at Vancouver, B.C.  
Oct. 18/77 M.R. 116740 -E )

M.P. Group of Mineral Claims ( Affidavit submitted  
#175 with the Gold Commissioner at Kamloops, B.C.  
Nov. 19/77 )

Enclosed please find Geological Report on the Spar  
Group of Mineral Claims including the Report of the Diamond Drill  
Logs and the Geological Report on the M.P. Group.

Yours very truly, /

*W. Kovacevic*

Willy Kovacevic  
Manager- Pamex Mining Ltd.

REFERRED TO	DATE	INITIAL
C.G.C.	<i>Feb 8 1978</i>	<i>W.K.</i>
D.C.G.C.		
G.C.		
FILE NO.		
FILING CLERK		

REPORT ON THE  
SPAR, WILLI, VK, K and M.P. Claims

Adams Plateau Area  
South Central British Columbia  
51°03'N 119°33'W  
NTS 82M/4E

on behalf of

Pamex Mining Ltd.

by

G. Gutrath  
Atled Exploration Management Ltd.

March, 1977.

TABLE OF CONTENTS

Introduction.....	1
Summary.....	2
Conclusions.....	5
Recommendations.....	6
Estimated Costs.....	8
Geography.....	9
Claims.....	11
History.....	12
Geology.....	13
Sampling.....	15
Diamond Drilling (1976).....	15
Geophysics.....	17
Engineering Certificate	
References	
Maps	
Location Map	
Topographic Map	
Claim Map	
General Geology	

1

SPAR, WILLI, VK, K and M.P. Claims  
Adams Plateau Area  
South Central British Columbia

Introduction

The property was examined for the first time on October 14, 1976 with Mr. G. Kachuck, director of Pamex Mining Ltd. and Mr. M. Pawlowski, geologist for Pamex Mining Ltd. During October and November, 1976 the property was visited a number of times in order to log the core from a drilling program being carried out on the Spar 1 claim. In addition, numerous traverses were carried out in the general Adams Plateau area.

This report is written at the request of Mr. W. Kovacevic, president of Pamex Mining Ltd.

SUMMARY

The lead-zinc-silver property is located on the south-eastern edge of the Adams Plateau approximately 28 miles north-northwest of the community of Salmon Arm. There is good road access to the property. x

The property is made up of two separate claim groups. The Spar Group consists of 12 units and covers approximately 720 acres. The M.P. claim, consisting of 4 units, covers 248 acres and is located 3 miles to the southeast of the Spar Group.

Craigmont Mines Ltd. have optioned and located claims adjoining the Spar Group to the east and claims owned by Hesca Resources Ltd. surround the Spar Group on the north, south and west.

The Spar Group is underlain by a band of grey to brown limey phyllites with minor interbanded sericitic quartzite, limestone and chloritic metavolcanics. The band has a general east-west trend and dips gently to the north.

Massive sulphide mineralization consisting of galena and sphalerite with lesser amounts of chalcopyrite, pyrite and pyrrhotite is localized in the crests of drag-folds in a multiple folded silicified chloritic phyllite. The central portion of the zone is composed primarily of massive galena and is well exposed in the face of a short adit. The massive mineralization is bordered by a "fringe" zone of galena, sphalerite, pyrite and pyrrhotite concentrated on the crests of a series of dragfolds. The axis of the fold structures strike south 60° west and have a flat dip. The crests of the folds plunge at 10° to the southwest. The overall

mineralized zone has been traced in an open cut and the short tunnel for approximately 75 feet and over a maximum thickness of 50 feet and a width of 50 feet before being obscured by overburden.

It is believed that the mineralization is stratabound and was originally flat-lying in a more siliceous or silicified unit that has been folded and metamorphosed resulting in the migration and concentration of the sulphide minerals along the crests of the folds.

In 1952, 59 tons of hand picked highgrade mineralization sent to the Cominco smelter had a grade of 19.05 oz./ton silver, 35.45% lead and 8.86% zinc. A sample was taken by the writer across a 3 foot thickness of massive galena mineralization at the face of the adit. It assayed 15.7% lead, 8.69% zinc, 1166 oz./t. silver and 0.014oz./t. gold. A second sample, composed of a series of chips, was taken at approximately 1 foot intervals along the length of a stockpile at the edge of the open cut. This stock pile is approximately 45 feet long and is composed of material from the "fringe" zone. This sample assayed 5.73% lead, 6.01% zinc, 3.70 oz./ton silver and .003 oz./ton gold and 0.05% arsenic.

In 1966 Hunttec Limited, on behalf of Giant Metallics Ltd., carried out an induced polarization survey over the Spar claim area and the adjoining Mosquitoe King property to the east. The survey outlines a strong chargeability anomaly that Hunttec reported as being clearly associated with the mineralization in the adit zone on the Spar 1 claim. Hunttec outlined the conductive zone subparalleling the strike of the adit zone but lying approximately 150 to 200 feet southeast of the zone. Hunttec recommended three holes be drilled along this zone. Two holes were drilled and they located disseminated sulphides but they did not intersect mineralization compared to that found in the adit zone. It is the writer's belief that the 2 holes drilled are too far to the

southeast to have intersected the southwest extension of the adit zone. The chargeability anomaly may or may not be coincident with the adit zone but it does outline a highly conductive zone paralleling the adit mineralized zone for a strike length of 700 feet to the southwest beyond the known area of mineralization.

A second chargeability anomaly is located 3,000 feet north of the adit zone on the Spar 1 claim. This anomaly has only been partially outlined as it is on the west edge of the survey area. Hunttec have outlined this anomalous zone as being 300 feet wide and 600 feet long (open to west). The anomaly has a high chargeability of 40 milliseconds and a southwesterly trend. The amplitude and the trend of this anomaly is very similar to the adit zone anomaly on the Spar 1 claim. This anomaly is in an overburden covered area and has not been investigated.

In October 1976, the Spar claim group was optioned to Hesca Resources Ltd. who carried out a BQ wireline drill program in the adit area on the Spar 1 claim. Hesca drilled 8 vertical holes to a maximum depth of 150 feet within a radius of 100 feet of the adit zone in an attempt to determine the extent of the sulphide mineralized zone.

DDH 76-1, drilled to test the central core of the adit zone, intersected 16 feet of massive sulphide mineralization that assayed 18.88% lead, 8.5 % zinc, 0.23% copper, 11.12oz./ton silver and .023% gold. DDH 76-2 was drilled 40 feet to the southwest of 76-1 and intersected 6.5 feet of massive sulphide mineralization assaying 12.0% lead, 4.10% zinc, 0.18% copper, 6.92oz./ton silver and 0.014oz./t. gold. From these two holes it can be seen that the massive sulphides thin rapidly from 16 feet to 6.5 feet along the southwest plunge of the zone. No drilling was done to the southwest of DDH 76-2 to see if the zone completely pinches out or possibly thickens. DDH 76-3 to 76-5 were drilled to the north and northwest of the adit zone and did not intersect any mineralization



of economic interest. DDH 76-7 was drilled 40 feet to the south of DDH 76-2 and did not intersect any significant sulphide sections. DDH 76-8 was not completed because of winter conditions that resulted in the termination of the drill program.

### CONCLUSION

The Spar Group and M.P. Group Claim are located in a favorable geological environment for massive lead-zinc-sulphide mineralization with associated silver values.

The adit zone sulphides are often banded and appear to be strata-bound and generally flat lying. Strong drag folding, steep faulting and metamorphism have resulted in the sulphides be mobilized and concentrated in the crests of the folds and possibly along fault structures, or intersections of fault structures. Regardless of the secondary structural events the overall zone still appears to be flat lying. Drilling has limited the extension of the mineralization to the north and northwest but possible extensions to the southwest, south and east have not been thoroughly investigated. The induced chargeability Anomaly 0 located 3000 feet to the north of the adit zone has many similarities to the chargeability anomaly associated with the adit zone.

It is concluded that the Spar Group and the M.P. Claim Group have good exploration potential for massive sulphide mineralization and warrant detailed investigation.

## RECOMMENDATIONS

The following exploration program is recommended to continue the exploration of the adit zone, chargeability Anomaly 0 and other sulphide mineralized zones on the Spar Group. In addition a preliminary exploration program is recommended for the M.P. Group Claim.

### Phase I

#### SPAR GROUP

##### a. Geophysics

Carry out detailed magnetic and electro-magnetic surveys over an area of 2000 feet by 2000 feet centred on the adit zone and on Anomaly 0. The existing lines can be used and fill-in lines should be surveyed at 150 foot intervals with stations every 50 feet. The adit zone area (400 feet x 400 feet) should be magnetically surveyed on a line spacing of 50 feet and if necessary readings should be taken every 25 feet to see if the sulphide zone can be traced.

##### b. Geology

The outcrop geology on the entire Spar Group mapped on a scale of 1 inch = 100 feet. Map the geology of the adit zone on a scale of 1 inch = 20 feet and survey the drill holes. Re-log all the drill core from the 1976 drilling of the adit zone area. A petrographic and mineralized study should be made of typical rock types and mineralization found in the drill cores in order to gain a better understanding of the geology and possible mineral genesis.

##### c. Trenching

The oxidized zones indicative of sulphide mineralization should be trenched with a bulldozer with rippers (D-7 or larger machine). This should expose less oxidized mineralization for sampling if the oxidation does not extend to too great a depth.

Phase 11

SPAR GROUP

The results of Phase 1 will determine where the drilling should be done in the adit zone area and in the Anomaly 0 area. Additional geophysical surveys and detailed geological mapping may be required to delineate mineralized gossan zones that warrant drilling.

Phase 111 (Contingent on results of Phase 1 and 11)

M.P. GROUP CLAIM

If the results of Phase 1 are encouraging, geophysical surveys, bulldozer trenching and sampling will be required prior to defining drill targets.

SPAR GROUP

If warranted, additional diamond drilling will be required to further delineate mineralized zones.

ESTIMATED COSTSPhase ISPAR GROUPa. Geophysics

Magnetometer and E.M. survey of adit zone  
and Anomaly 0. Approximately 12 line miles  
@ an overall cost of \$350/mile \$ 4,200.00

b. Geology

1 geologist and overall supervision.  
Outcrop geology, adit zone geology, surveying  
drill holes, relogging core, mapping and  
sampling trenches.  
10 days @ an overall cost of \$200/day \$2000.00  
Petrographic studies and analysis \$1000.00  
\$3000.00 \$ 3,000.00

c. Bulldozer Trenching

50 hours @ an overall cost of \$60/hour \$ 3,000.00

M.P. GROUP

Reconnaissance Geological Mapping and Geochemical  
Surveys.  
geologist for 5 days @ \$200/day \$1000.00  
analysis \$ 400.00  
\$1400.00 \$ 1,400.00  
\$ 11,600.00

Phase IISPAR GROUP

1000 feet of diamond drilling @ an overall  
cost of \$20/foot \$ 20,000.00  
\$ 31,600.00  
Contingencies @ 10% 3,160.00  
\$ 34,760.00

M.P. GROUP Contingent on results of Phase I

Phase III

SPAR GROUP and M.P. CLAIM Contingent on results of Phase I and II.

## GEOGRAPHY

### Location

The Spar Group is located on the southeastern edge of the Adams Plateau approximately 28 miles north-northwest of the community of Salmon Arm in southcentral British Columbia. The confluence of Adams River and Shuswap Lake is 11 miles south of the property.

The approximate coordinates of the property are 51°03' N and 119°33' W.

The M.P. Claim is located 3 miles southeast of the Spar Group on the west side of Sparkle Creek, a small tributary that flows southeast into the Scotch Creek valley.

### Access

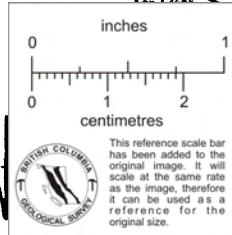
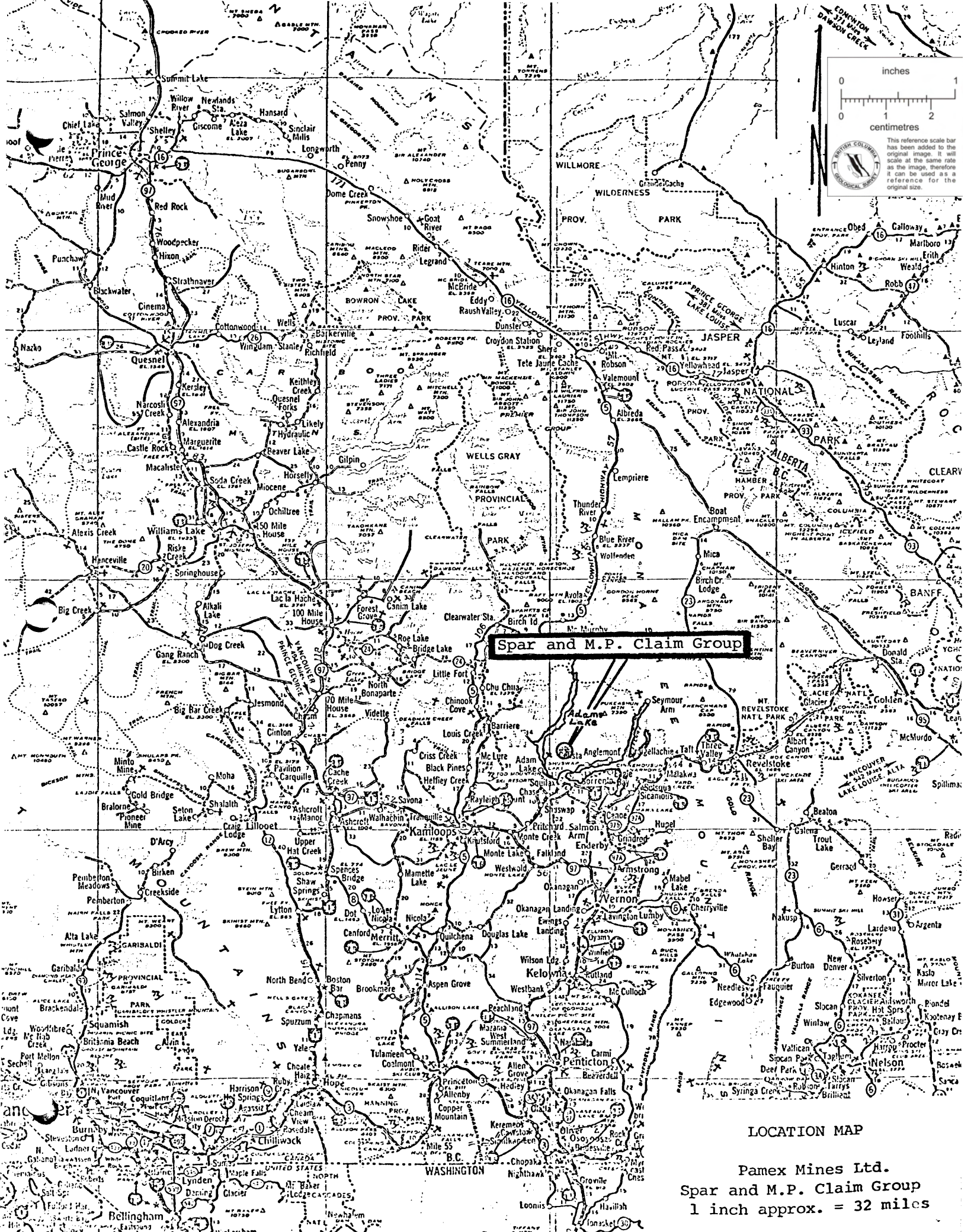
There is a paved secondary road that leaves the Trans Canada Highway at Squilax, crosses Little River and the Adams River and follows the north shore of Shuswap Lake. At Corning Creek, approximately 3 miles east of the Adams River bridge, there is a good gravel road, suitable for 2-wheel drive vehicles, that goes north 18 miles to the Spar Claim Group.

There is logging road access to the M.P. Claim.

### Topography

The claim group is located on the east side of a rounded ridge at an elevation of 5,400 feet. The ridge separates the two creek forks at the headwaters of Nikwikaia Creek.

The M.P. Claim is located on the west edge of the Scotch Creek valley between an elevation of 4,700 feet and 5,400 feet.



**Spar and M.P. Claim Group**

LOCATION MAP

Pamex Mines Ltd.  
 Spar and M.P. Claim Group  
 1 inch approx. = 32 miles

### Vegetation

The Adams Plateau is timbered with spruce and balsam interspersed with open meadows and swamps. The timber has been partially logged-off in the area of the M.P. Claim.

### Climate

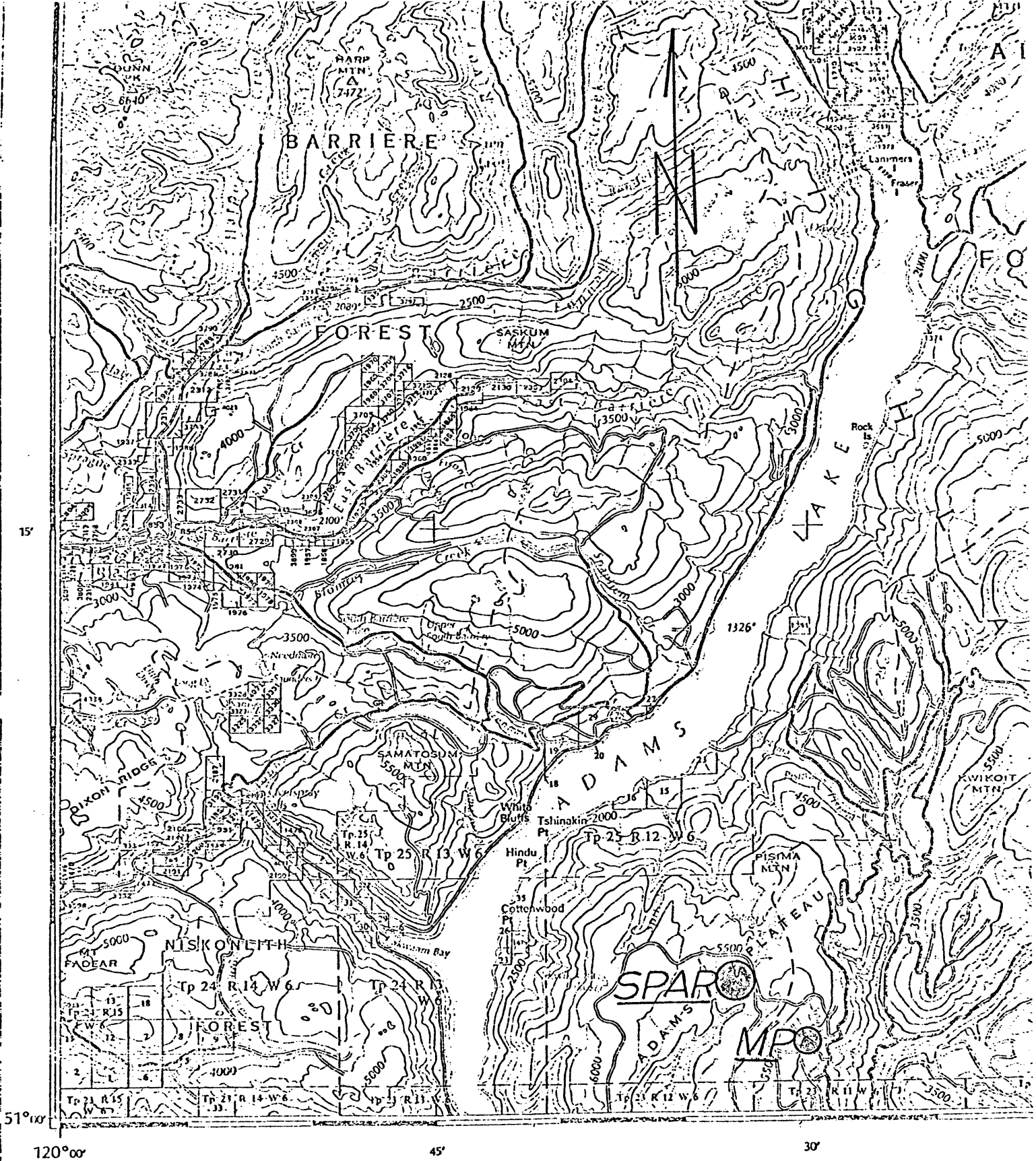
The Adams Plateau is in a transition area between the interior dry belt and the Columbia River rain belt. Average precipitation on the plateau would be in the order of 40 inches and compacted winter snowfall would vary from 4 feet to 7 feet. The area is free of snow from June through October.

### Water

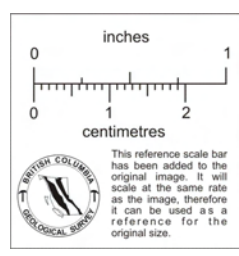
There is ample water in the area for drilling or future mill requirements.

### Power

B.C. Hydro has just completed a major three phase power line that passes within 6 miles of the property.



TOPOGRAPHIC MAP  
 Adams Lake Area  
 Southern British Columbia  
 1 inch = 4 miles





CLAIMS

The location line between the initial posts and final posts of the Spar 1 and Spar 2 claims has been chain. and compass surveyed and the tags on the posts examined. The claims were found to be staked according to the Mineral Act.

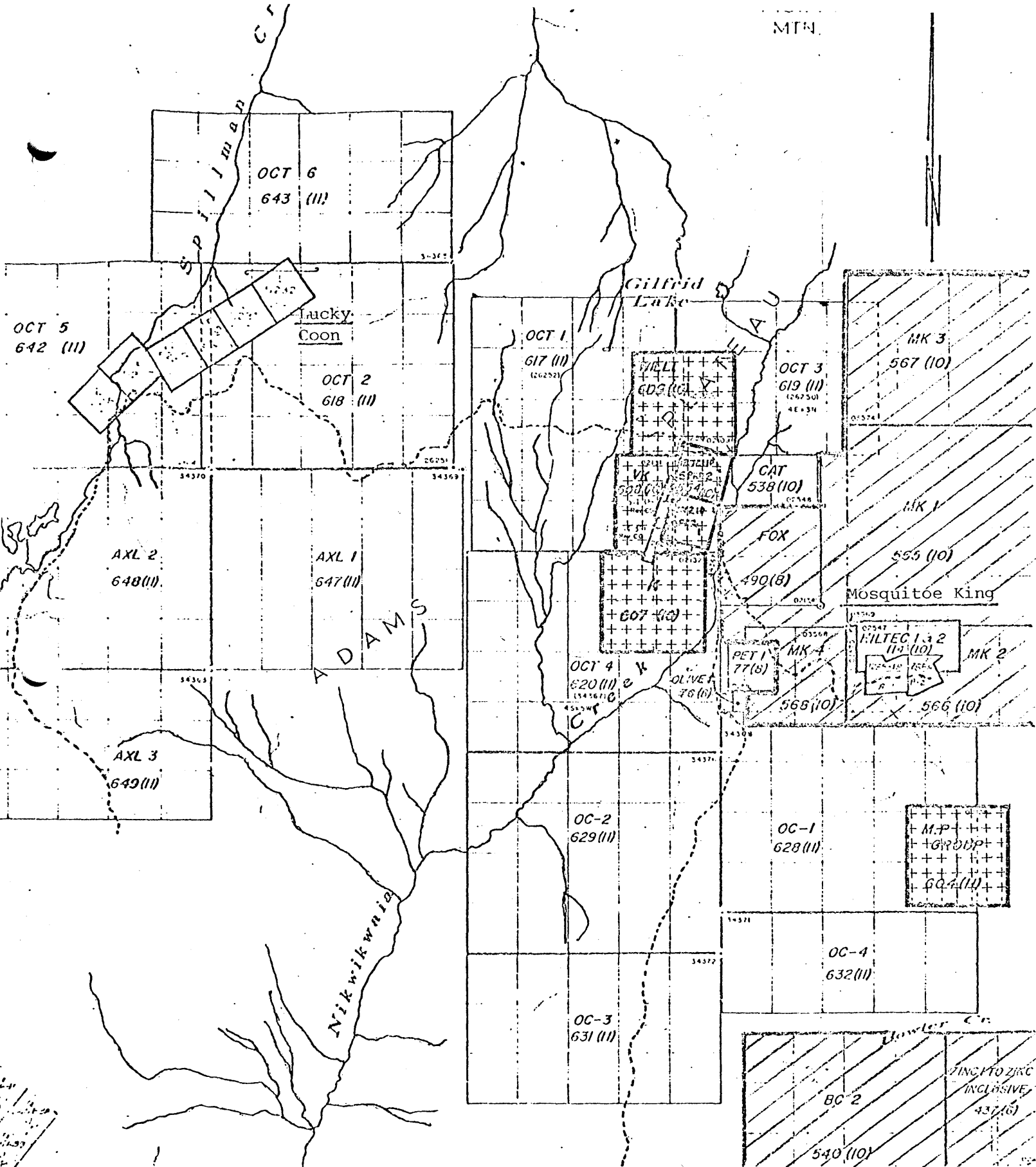
A number of the identification posts and claim lines for the K claim and Willi claim were noted while making traverses in the general area.

The M.P. Group claim has not been examined.

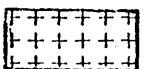
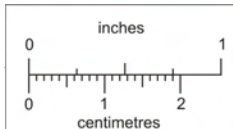
The following information regarding the status of the claims has been obtained from the Mining Recorder's office in Vancouver and Kamloops.

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
Spar 1	127210	Nov. 5/79
Spar 2	127211	Nov. 5/79
Willi	609	Oct. 21/77
K.	607	Oct. 28/77
V.K.	608	Oct. 21/77
M.P. Group	604	Nov. 12/77

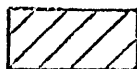
MTN



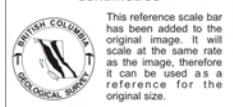
CLAIM MAP



Pamex Mines Ltd.



Craigmont Mines Ltd.  
(optioned or located claims)



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

Scale 1:50,000

## HISTORY

Massive sulphide mineralization was first discovered on the Adams Plateau in 1927 and in 1928 Granby Mining, Smelting and Power Company optioned the Lucky Coon property that is located on the west side of the plateau. Granby carried out an extensive program of trenching combined with limited diamond drilling before terminating their agreement on the property. In 1948, Pioneer Gold Mines prospected the area and in 1949 Consolidated Mining and Smelting Company optioned the Mosquitoe King property that is located approximately 1.5 miles to the southeast of the present day Spar Group.

The Spar Group, then known as the EX Claim, was owned by P. Bischoff who shipped 59 tons of hand picked high grade to the Cominco smelter in 1952.

During the 1950's, additional shipments were made to the Cominco smelter as well as some close spaced drilling to trace the massive galena mineralization. The results of this drilling is not available.

In the 1960's, the Mosquitoe King property and the EX claims (Spar property) were acquired by Giant Metallics Ltd., who carried out an extensive surface exploration program that included an induced polarization survey and diamond drilling. Giant Metallics shipped approximately 250 tons of high grade mineralization from the adit zone to the Kam Kotia mill at Sandon. Giant Metallics allowed the EX claims to lapse in 1973 and they were acquired by George Kachuck on behalf of Pamex Mines Ltd.

During 1976, Pamex constructed a new road to the adit zone and opened up the tunnel so that the face could be seen for the first time since the 1950's. Pamex has made shipments to the custom mill at Lumley and the concentrates have been shipped to the Cominco Smelter.

In October, 1976 the Spar Group was optioned by Hesca Resources who drilled the property in October and November. The option was terminated in early 1977.

## GEOLOGY

### General

The Adams Plateau is underlain by a thick series of sedimentary and interbedded volcanic rocks of Permian or earlier age.

The sediments are composed of argillites and limey argillites with minor thin beds of limestone and quartzite. These units are moderately to strongly foliated and form phyllites and schists.

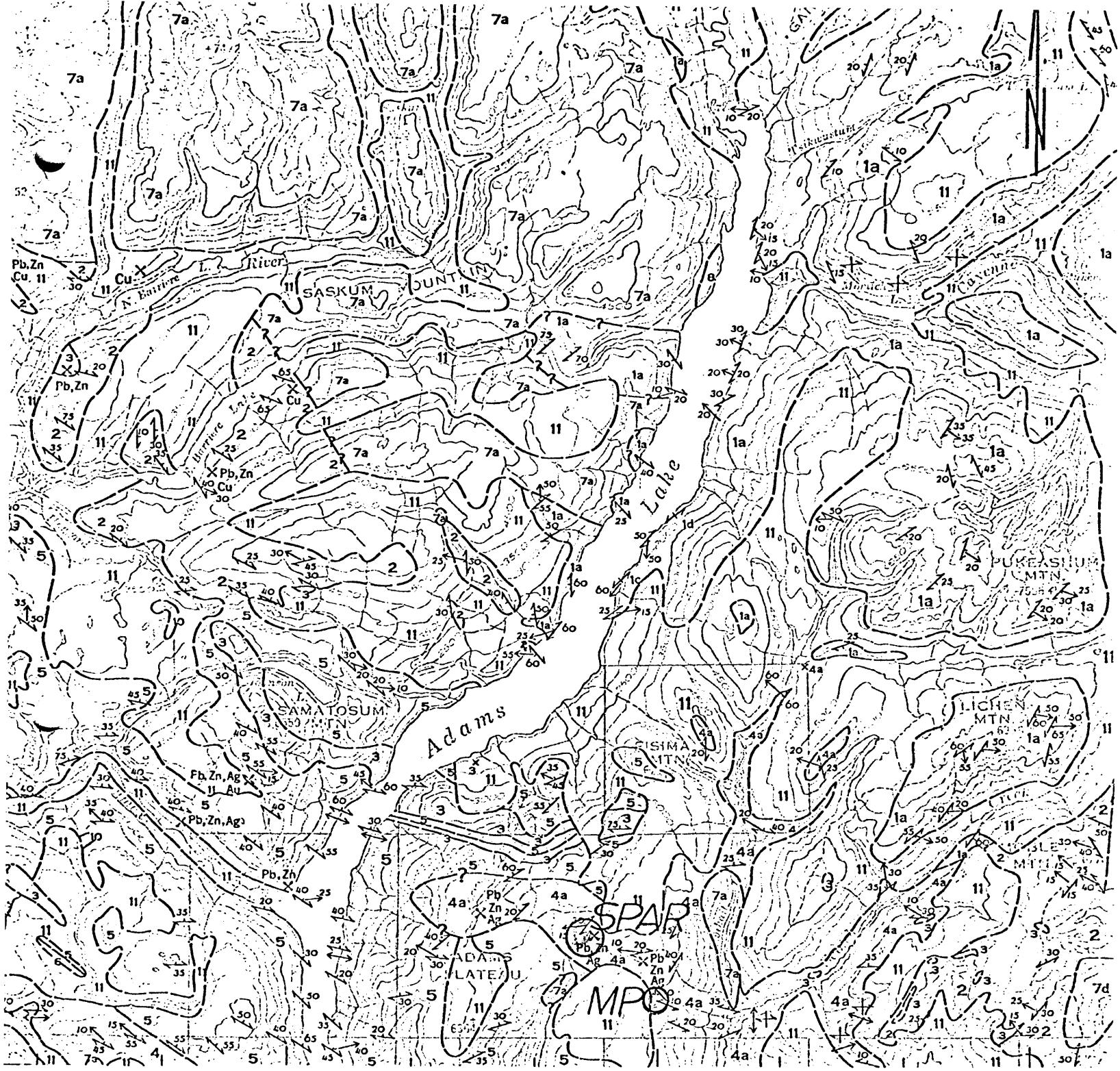
The volcanics have also been metamorphosed to form green chlorite schists.

This sedimentary-volcanic series has a general east-west strike and dips gently northward. The foliation in most instances sub-parallel the bedding. There are a number of northerly trending faults that cross the plateau.

### Property

The Spar Group is underlain by a band of grey to brown limey phyllites with minor irregular bands of sericitic quartzite, limestone and chloritic meta-greenstone. This band is approximately 2 miles wide, trends in an east-west direction across the plateau and dips gently to the north. It is bordered on both sides by chloritic meta-greenstones.

The mineralization in the adit area on the Spar 1 claim is primarily sphalerite and galena associated with varying lesser amounts of pyrite, pyrrhotite and chalcopyrite. Minor amounts of tetrahedrite, arsenopyrite and argentite have also been recognized in the mineralized zone.



General Geology

Scale 1 inch = 4 miles

PLEISTOCENE

11 Glacial Deposits

JURASSIC

7 Biotite Granodiorite & diorite

PERMIAN OR EARLIER

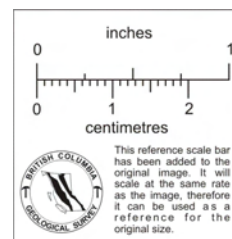
5 Greenstone

4 Limey phyllite

3 Limestone

2 Greenstones

1 Shuswap Metamorphic Complex



Massive galena with sphalerite and minor pyrite occurs as a cylindrical shaped elongate body that appears to be elliptical in cross section. This massive zone is exposed in the lower 1/3 of the adit face and along the lower walls of the adit. Its overall dimensions can only be estimated but it is expected to be 4 to 6 feet thick, 10 feet wide and it has been mined over a strike length of at least 30 feet so it could easily continue another 30 feet beyond the face of the adit. This massive galena mineralization is localized in the crest of a drag-fold whose axis strikes south 60 west, has a flat dip and plunges at 10 to 15° to the southwest. This massive galena drag-fold zone is also at the intersection of 2 steep dipping faults striking south 70° east and south 40° east. There is only a thin gouge zone along the faults but the movement could be substantial since the beds have been dragged along the fault plane.

Bordering the massive galena mineralization is a strongly drag-folded "fringe" zone that is also well mineralized with galena, sphalerite, pyrite, pyrrhotite and chalcopyrite concentrated at the crest of the drag-folds and disseminated along the limbs. This zone is well exposed for about 60 feet on the northwest wall of the adit zone over a thickness of 5 to 15 feet. The folds are isoclinally stacked with an axis striking in a general direction of S 60° W and with a flat dip. The folds plunge in a southwesterly direction paralleling or subparalleling the plunge of the central massive galena zone. The extent of this mineralization down the dip of the fold axis is not known.

Another galena-sphalerite occurrence has been uncovered in a new road cut approximately 1,000 feet to the northeast of the adit zone.

There are a number of highly oxidized, gossan zones related to sulphide mineralization on the Willi, V.K. and K claims that have only received a cursory examination.

The M.P. claim is underlain by geology very similar to the Spar Group. The writer has not examined the claim but Mr. Kovacevic reports that a zinc-sulphide mineralized zone has been located on the claim.

### Sampling

It is reported in the 1952 Minister of Mines Report that P. Bischoff shipped 59 tons of high grade ore from the adit zone that assayed 12 oz. silver, 19% lead and 12% zinc.

The writer took 2 samples from the adit zone.

<u>Sample No.</u>	<u>Description</u>	<u>Gold oz./T.</u>	<u>Silver oz./T.</u>	<u>Lead %</u>	<u>Zinc %</u>	<u>Copper %</u>	<u>Arsenic %</u>
Spar 1	Chip sample across 3' thickness of massive galena at face of adit.	0.014	11.66	15.7	8.69		
Spar 2	Chip sample at 1' intervals across top of stockpile approx. 45' long, 5' high, 20' wide. Mineralization from "fringe" zone.	0.003	3.70	5.73	6.10		0.05

### Diamond Drilling (1976)

The holes were drilled with a Smit SK 300 BQ wireline equipped drill. The locations of holes 76-1 to 76-5 have been tape and compass surveyed and the core logged by the writer. Holes 76-6 to 8 have not been surveyed or logged by the writer.

DDH 76-1 is a vertical hole drilled to a depth of 58.5 feet approximately 6 feet to the southwest of the face of the adit. Between 18 feet and 34 feet (16 feet) the hole intersected a highly silicious chlorite schist with blebs, veinlets and massive sections of galena, sphalerite, pyrite, pyrrhotite and chalcopyrite. This 16 foot section assayed 18.88% lead, 8.5% zinc, 0.23% copper, 11.12 oz./t. silver and 0.023 oz./t. gold.

From 34 feet to 58.5 feet the hole continued in a silicious chlorite schist with random sulphide veinlets and dissemination but with no mineralized sections of economic interest.

DDH 76-2 was drilled 40' to the southwest of 76-1 to a depth of 110 feet. Between 34 and 46 feet the hole intersected a silicified quartz chlorite schist with 10% to 20% sulphide but only minor galena and sphalerite. Between 46 and 52.5 feet (65') the hole intersected a massive sulphide-quartz zone that assayed 12.0% lead, 4.10% zinc, 0.18% copper, 6.92 oz./ton silver and 0.014% gold. From 52.5 to 70 feet the hole continued in silicified quartz chlorite schist with 10% sulphides but with only minor galena and sphalerite. From 70 to 110 feet the hole intersected a limey quartz chlorite schist with highly contorted (drag folded) banding. Sulphide content varies from 5 to 10% but with only minor galena and sphalerite.

DDH 76-3, 4 and 5 were drilled on the west and north sides of the adit zone without intersecting sulphide mineralization of economic interest. DDH 76-6 to the north of DDH 76-1 and DDH 76-7 was drilled approximately 40 feet to the south of DDH 76-2 and DDH 76-8 was drilled approximately 80 feet to the southwest of DDH 76-7. The writer has not logged these holes but it is reported that DDH 76-7 did not intersect mineralization of economic interest and DDH 76-8 was stopped before reaching its objective.

The drill program was terminated because of winter conditions.



GEOPHYSICS

Giant Metallics Mines Ltd. had Hunttec Limited carry out an extensive induced polarization survey over the Mosquitoe King property that included the present Spar claims, then known as the EX - 1 workings. The EX - 1 workings are located on the eastern edge of the survey area and there is only 600 feet of coverage to the west of the EX - 1 workings (adit zone).

The following excerpt is from Hunttec's report specifically dealing with a chargeability anomaly located on the Spar 1 claim.

"Anomaly K

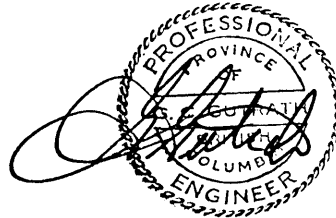
This anomaly is clearly associated with the mineralization at the EX-1 workings. It appears to strike in a northeast direction and lies at the southern edge of the workings. Detail profile on Line AK as mentioned earlier in this report indicates a zone approximately 200 feet wide and very near the surface. The conductivity is very high and the strongest zone of mineralization appears to lie still farther south of the southernmost part of the present workings. Undoubtedly, part of the response is due to the mineralization that has been outlined but it is felt that continued drilling to the south and southwest would be very worthwhile. Inasmuch as the mineralization discovered so far is in flat-lying lenses, it appears that vertical drillholes would be desirable. It is recommended that the three drillholes shown on the reconnaissance plan be given the top priority. "

Two vertical holes were drilled on the outline of the chargeable body as recommended by Hunttec. The drillhole locations are shown on Fig. 2 along with the location of the adit zone. It is reported by Mr. Kachuck that the two holes did not intersect mineralization of economic interest but that there was disseminated pyrrhotite, pyrite and very minor galena and sphalerite in the holes.

Huntec is specific in stating that the chargeability anomaly is directly related to the adit zone and yet the holes did not intersect mineralization similar to the adit zone. The description of the drill-hole mineralization does not appear to be the causative source of the strong anomaly and the writer suspects that the anomaly is displaced approximately 150 feet to 200 feet to the southeast of the adit zone. Another explanation could be that the disseminated mineralization bordering the adit zone to the southeast is actually causing a stronger chargeability response than the massive mineralization in the adit zone. If this is the case the adit zone is subparalleling the chargeability anomaly above the northwest side of the anomaly. In any case, the adit zone has not been tested along strike to the southwest except in the immediate area of the adit.

The Huntec I.P. survey also located a second chargeability anomaly (Anomaly 0) on the Willi claim 3,000 feet north of the adit zone on the Spar 1 claim. This anomaly is on the edge of the survey area so it has not been completely delineated. The anomaly has been traced in a southwest direction for 700 feet and over a width of approximately 300 feet. The anomaly occurs in a flat area with no outcrop and there is no indication that the anomaly has been investigated by drilling or trenching.

Respectfully submitted,



G. Gutrath, P.Eng.

Atled Exploration Management Ltd.

March, 1977.

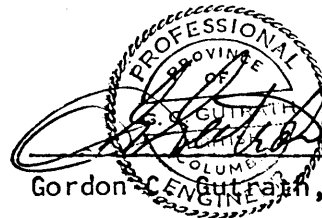
REFERENCES

- a. Minister of Mines  
1949  
Adams Plateau Area  
p. A 132 to A 137
- b. Jones, A.G.  
1951  
Vernon Map-Area  
Memoir 296
- c. Cambell, R.B.  
1963  
Adams Lake Map A8 - 1963
- d. White, G.  
1976  
B.C. Department of Mines  
Summary Report Pamex Mines  
82 M/4E Spar 1
- e. Watson; E.M.  
1966  
I.P. Chargeability Map  
Huntec Limited. Dec. 1966

ENGINEER'S CERTIFICATE

I, GORDON C. GUTRATH, of 3636, Lakedale Avenue, in the Municipality of Burnaby, in the Province of British Columbia, DO HEREBY CERTIFY:-

1. That I am a consulting geologist with a business address of 420 - 475 Howe Street, Vancouver, B.C. V6C 2B3.
2. That I am a graduate of the University of British Columbia where I obtained my B.Sc., in geological science in 1960.
3. That I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia.
4. That I have practised my profession as a geologist for the past sixteen years, and
5. That I have no interest in the property with which this report is concerned, nor do I expect to receive any such interest, nor do I have any interest in Pamex Mining Ltd.

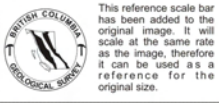
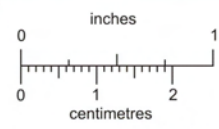
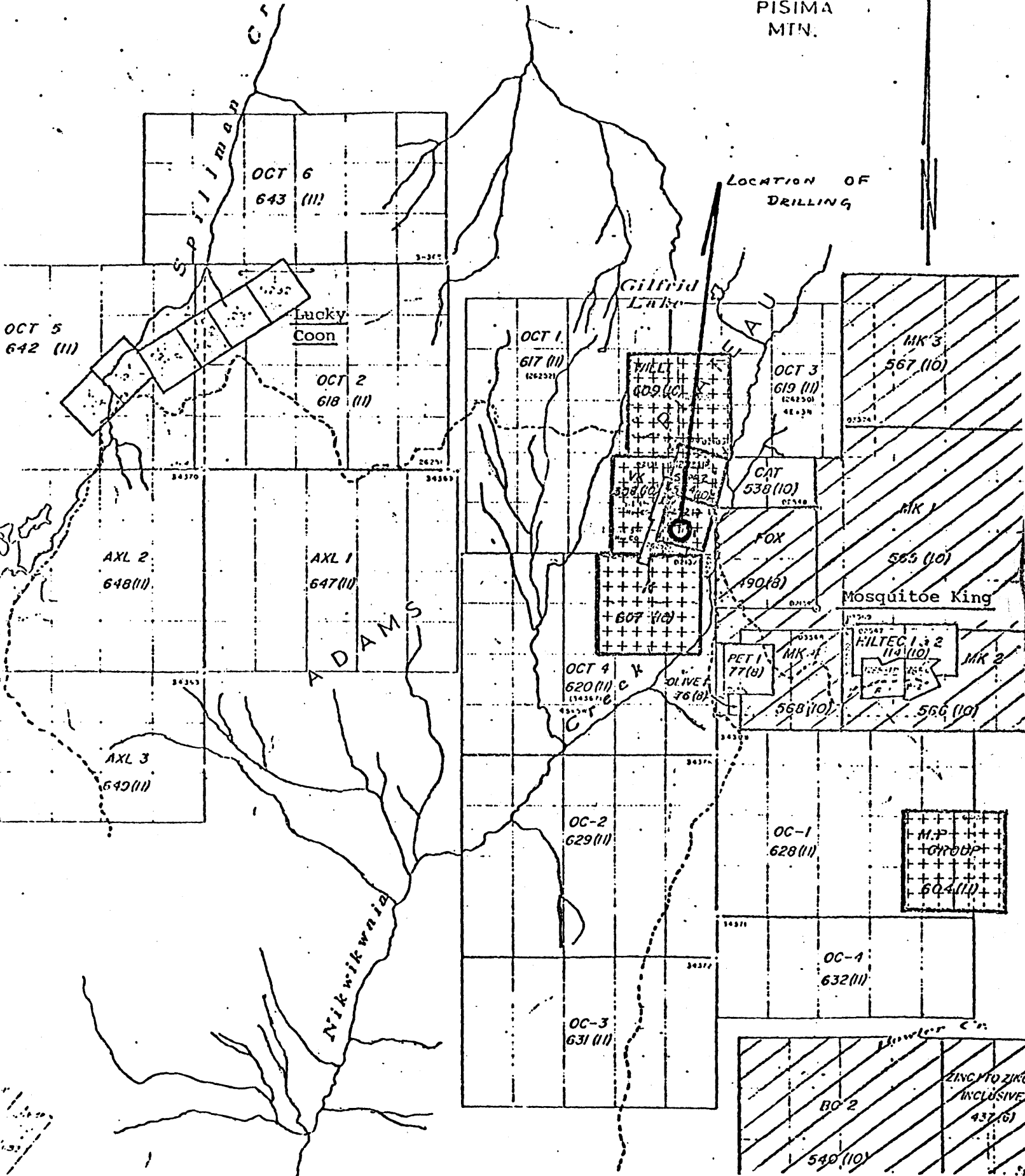


Gordon C. Gutrath, B.Sc., P.Eng.

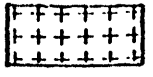
DATED at the city of Vancouver, Province of British Columbia, this 28th day of March, 197

PISIMA  
MTN.

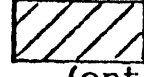
LOCATION OF  
DRILLING



CLAIM MAP



Pamex Mines Ltd.



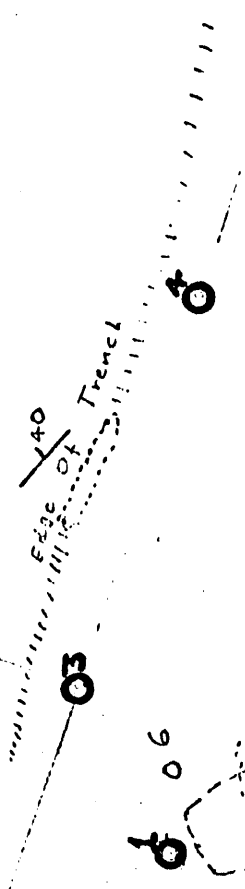
Craigmont Mines Ltd.  
(optioned or located claims)

Scale 1:50,000

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

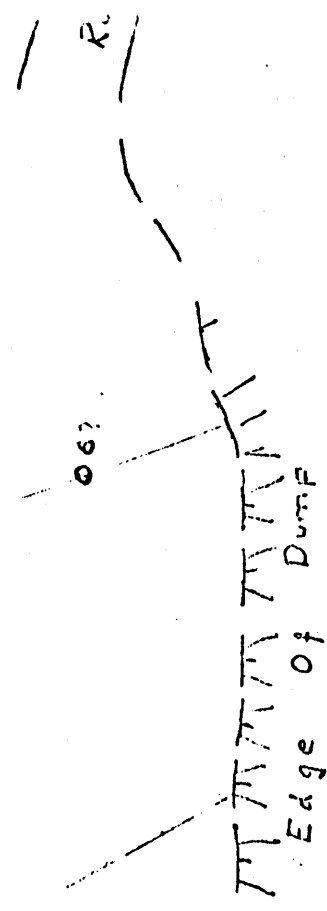
08  
25°

A1  
B



05  
26°

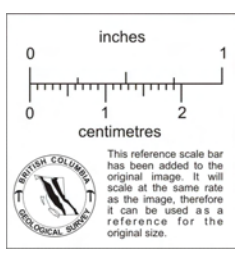
B1



SCALE 1" = 40'

PAMEX MINES LTD.

○ DDH with logs attached.



Footage	Description	Foliation Dip	Magnetite 1-10 %	Pyrite %	Galena %	Sphalerite %	Sample No Footage Int. Length.
0-5'	Overburden, broken material. No core.						
5-7'	Quartzite. Poorly banded, siliceous with some irregular chert-like bands. Light whitish grey colour.	30°	1	3%	1%	1%	1962 A 7'-18' (11')
7-7.5'	Quartz, chlorite epidote (?) schist. Strongly foliated.	20°	6	10%	3%	3%	1/4 sample
7.5-18'	Quartz chlorite schist. 65% finely quartzite) and 35% chlorite bands. Light grey quartz with light green bands. Short sections up to 2" that are more highly chloritic & these normally carry more sulphides. Some quartz veins carry minor pyrite & zinc. 7.5 to 12' foliation 17° @ 12' becomes more cumulated and chloritic foliation 20° to 25° underlying folded zone (dry folded zone)	0-70°	5	5%	2%	2%	1963 A 18'-28' (10') 1/4 sample
18'-28'	Quartz-chlorite schist ( <u>Hejler Sulphides</u> ) Quartz gangue with galena, sphalerite Pyrite. Foliation is present as preserved as from 5 to 18' of section. massive quartz & sulphides. Dominant fol. 50°	15-35°					
28-34'	Massive Sulphides - Pyrite. Pyrite massive sulphide. 75% Occurring in sulphides, galena, sphalerite pyrite, pyrrhotite, sphalerite & blende, chalcocypite and arsenic minerals. Foliation at 50°-90° 30-5-40 quartz with sections low sulphides. Chlorite sometimes more grey	50-90°	5	20%	20%	10%	1964 A 28-34' (6') 1/4 sample

Sample No.  
Footage Int.  
Length

Sample No.	Description	Thick.	Pyrite	Galena	Sphal.	Sample No.	Footage Int.	Length
38	Quartz chlorite schist. 34-36 More heavy in quartz with some good short unweathered sections - Foliation 15°-30°.	3	15%	3%	3%	1965A	34-38'	(4')
53	Quartz chlorite biotite schist. Good banding very consistent @ 20-30° to core - More chlorite than previous sections some short quartz rich zone with massive galena pyrrh. sphal. sections 2-3%.	2				1966A	38-53'	(15')
55-55.5	Quartz sulphide zone - light grey quartz rich foliation disappears. Truqueta sphalder of pyrite, lesser pyrrh., minor galena and sphalrite.	5	25%	5%	4%	1967A	53-57.5'	(4.5')
55.5-57.5	Same as 38-53. Lots of sphalrite zone galena zone in quartz chlorite schist.	6	15%	2%	2%			
57.5-58.5	Quartz sericite chlorite schist (Quartzite) light grey green very silicious low in sulphide. Purely foliated at 30° to core.	0	1%	0%	0%			

End of Hole.



Footage	Description	Mag.	Pl.	Galen.	Spinel	Sample
2-30	Quartz-Chlorite Schist (Weakly limy sections) high & dense banding fairly consistent foliation @ 70 & 80' to core. Blobs and fine bands of epidote & pyroxene with minor zircon and garnet.	4	7%	1%	1%	
30-46	Quartz Chlorite Schist No 8 as well banded and as consistent. Irregular foliation (Dry Fold). Much more Sulphides than Quartz. Very Fine light green mica bands 25° with bands of zircon garnet 75%. Minor epidote. 45-46 strongly sheared chlorite rich.	4	10%	5%	5%	1968A 30-39' (8) 1969A. 38-46' (8)
46-52.5	Sulphide-Vein-Quartz zone. Very minor banding Quartz blobs & veins 10" some chlorite poor. White Quartz - Vein end @ 52. but considerable mineralization @ 52-5	4	10%	10%	7%	1970(a) 46-52.5' (6.5')
52.5-70	Silicified Quartz chlorite Schist. Variable foliation Some areas highly silicified. Foliation fairly consistent ant. 70° to 85°. Considerable sulphides. Spotted banding.					1971.A 52.5-60' (7.5) 1972.A 60-70' (10)
70-110'	Limonite Banded Quartz Chlorite Schist Consistent banding 50% quartz 50% Chlorite Very limy compared with earlier sections. Banding @ 65° to 80° to core to 76. Then becomes very contorted and is at 30° & 70° to core banding actually 1/2 core distance. Still considerable sulphides. At 99' banding becomes very irregular. More silica, rusty veins & epidote chlorite highly contorted core.	5	5%	3%	2%	1973.A. 70-80' (10) 1974.A 80-90' (10) 1975.A 99-110' (Not split) 1976.A



Footage	Description	Murch	H. for	Galen	Page 1	Sample No
7-2'	Overburden Very sil. 12' 4'					
2-9'	light & Dark Banded Quartz chlorite schist lining, fine light bands. Thin next sections. Crystalline calcite pyrite zone pyrobitite @ 5'. Possible Siderite zone filling, possibly oxidized. Fol @ 60° to 70° split sections only minor galena & zinc (Zn)	+3	5%	1%	1%	1980 A 2'-12' (10')
9-31	Dark banded lining argillaceous quartz chlorite schist. Coarse calcite pyrite blebs & zones. pyrobitite, minor Zn Pb, Crumpled dragfolded banding striking @ 27° to 30°	+3	5%	1%	1%	
31-38.5	light banded same as 2-9'. Quartz chlorite schist with short dashes section 60-70° to east perpendicular.					
38.5-40	Siliceous zone - crystal alteration zone sil. faulting and cutting zone @ 30° argillite splashed minor Pb Zn	1	3	< 5%	1%	
40-95'	Lining argillaceous chlorite - quartz schist Very uniform banding. Fine to coarse banding minor Crumpled - Minor sulphides 81' patch of pyrobitite pyrite // boundary Pelitic, resembles 2 to 95' ground 3' of core. @ 92' possible fault	-1%	2%			
95-105'	Indur. a more blocky, arg. green quartzite Garnet. Dark band up to 1/2" thin. Sil. sections	1%	2%			

P.P. G. L. S. Sample No.

Description

0-2	Overburden			
2-15'	Very siliceous - <u>Quartz Vein (?)</u> epidote Irregular veinlets & patches of pyrite Chlorite	5%	21	21
15-33'	<u>Chlorite Quartz Schist</u> 30% Quartz bands 50% 1/4" wide dark greenish black chlorite bands. Constant banding at 60-80° Disseminated sulphide fine to med. grains	3%	-	-
33'-515'	<u>Quartz Chlorite Schist</u> Quartz 60-70% Chlorite dark bands 30-40%. Constant banding at 60-80° to core. Appears to be pervasive schistosity banded in some sections is interbedded, fracturing. Irregular patches of quartz mixed with sulphide patches black, harder than 5-10% high green chlorite or some other green mica some epidote pyrite veinlets X-cut banding	10%	21	1981A 33'-43' (10) 8-10% pyrite etc. etc.
515-680'	<u>Siliceous Chlorite Quartz Schist</u> - Very similar to 15-33' but lighter colored greenish grey, 15% quartz - quartz veins less abundant, darker green. Banding is very consistent at 60-80° to core. 515-540' edge of massive fault zone at 50% quartzite 540-570' light grey, siliceous zone with a highly siliceous matrix, some quartz veins pyrite			
680-750'	<u>honey combed chlorite schist</u> - more similar to 15-33' some siliceous sections	56-515'	19-17	
750-790'	Quartz, epidote chlorite zone	565	19-17	
790-880'	<u>Siliceous quartz chlorite schist</u>	570-515'	19-17	
880-995'	Irregularly bedded siliceous schist. Very little chlorite. Constant banding at 70° west	3%	1	1

570-515' siliceous zone  
515-570' siliceous zone  
570-515' siliceous zone  
515-570' siliceous zone



Description

Sample #13

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

15-33' ...

1971  
334-43  
(13)