

W.A. No.

NAME *FXI, SPAR, FLK*

SUBJECT *REPORTS*

8214017-07

PROPERTY FILE

004814

SPAR CLAIM GROUP

Adams Plateau Area

South Central British Columbia

INTRODUCTION

The property was examined on October 14, 1976, with Mr. G. Kachuck, president of Pamex Mining Ltd. and Mr. M. Pawlowski, geologist for Pamex Mining Ltd. Pamex is the owner of the Spar Claim group and under the direction of Mr. Kachuck has carried out a small mining operation on the property during the summer of 1976.

This report is written at the request of Mr. F. Marehard president of Hesca Resources Ltd.

8211-17
PROPERTY FILE

SUMMARY

The Spar 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.

The property 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 limey 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 drag-folds. 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.

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. 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. The assay results from these 2 samples should be available by October 21, 1976.

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 sub-parallelising 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 parallelising 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 3,400 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 reported to be in an overburden covered area and has not been investigated.

CONCLUSION

The Spar Group is located in a favorable geological environment for massive lead-zinc sulphide mineralization with associated silver values. The mineralization may be volcanogenic in origin but in the case of the Spar 1 adit zone it is probably replacement mineralization localized in fold structures and in part controlled by, and concentrated along fault structures.

Core drilling is required to trace the adit zone to the southwest along the 700 foot trace of the strong induced polarization anomaly.

Detailed prospecting, geological mapping and geochemical soil sampling should indicate whether the I.P. anomaly located to the north of the Spar 1 mineralized area is a drill target.

It is concluded that the Spar property has good exploration potential and definitely warrants detailed investigation.

RECOMMENDATIONS

The following exploration program is recommended:

Phase I

1. Map the outcrop geology using the existing lines for survey control on a scale of 1 inch = 200 feet.
2. Map the adit mineralized area on a scale of 1 inch = 20 feet.
3. Drill a minimum of three sections of holes across the southwest extension of the adit zone - I.P. anomaly. The first line of holes should be started just to the south of the face of the adit in order to determine the lateral extent and depth of the mineralization in the adit area. The hole spacing and the interval between the next line of holes will be determined by the geological mapping.
4. Collect soil samples at 50 foot intervals across the I.P. anomaly located to the north of the adit zone. The existing grid lines are at 300 foot intervals so the samples can be collected on three lines over an 800 foot width

Phase II

Phase II will be contingent on the results of Phase I.

REPORT ON THE

SPAR CLAIM GROUP
Adams Plateau Area
South Central British Columbia

51°03' 119°33'W
NTS-82M/4E

on behalf of

HESCA RESOURCES LTD.

by

G. Gutrath
Atled Exploration Management Ltd.

October, 1976.

TABLE OF CONTENTS

Introduction..... 1

Summary..... 2

Conclusions..... 4

Recommendations..... 5

Estimated Costs..... 6

Geography..... 7

Claims..... 9

History.....10

Geology.....11

Geophysics.....14

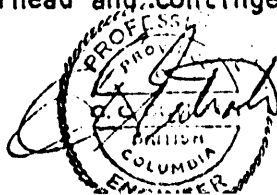
Location Map

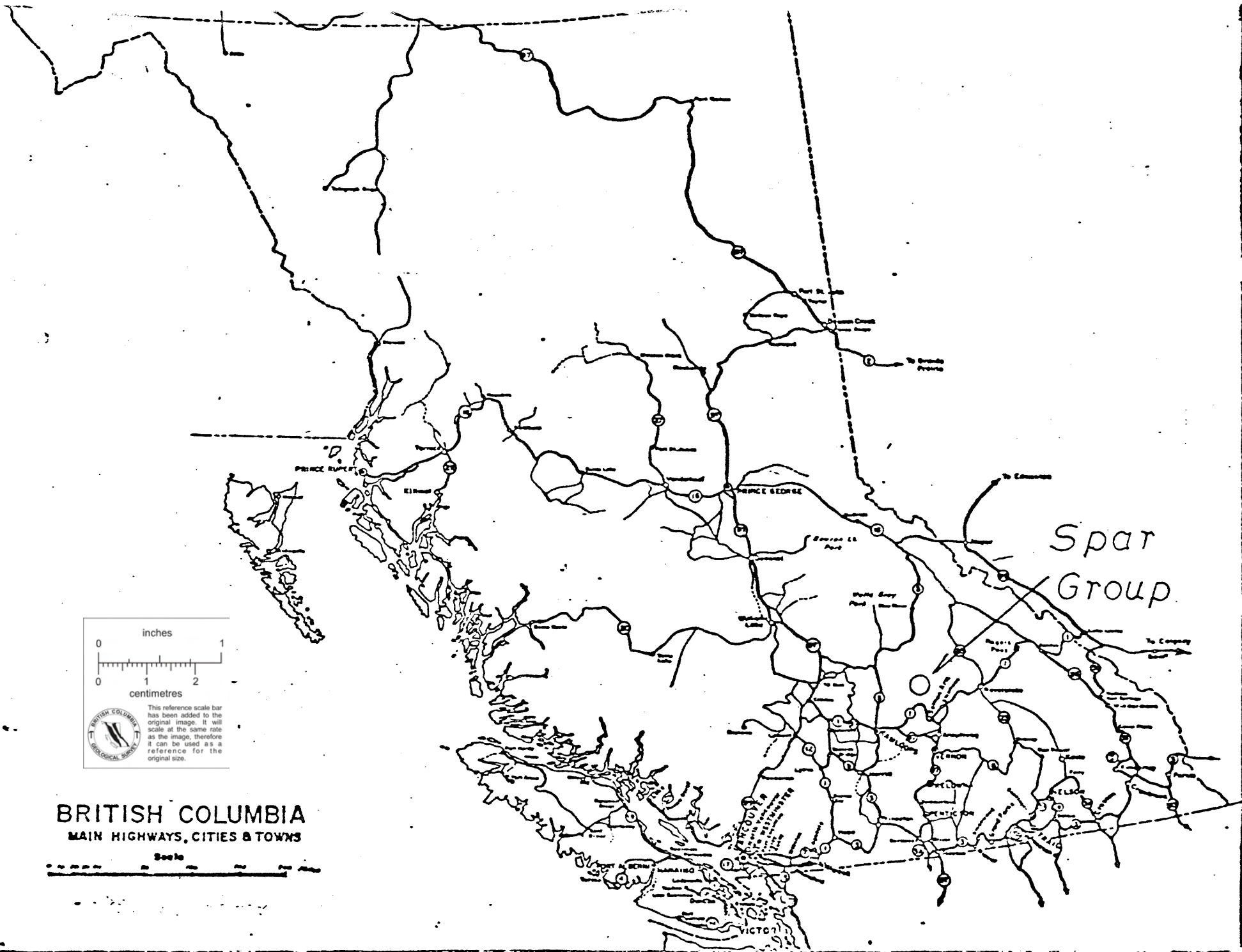
Induced Polarization Survey Map

ESTIMATED COSTSPhase 1

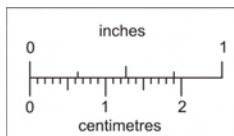
1. Overall supervision, geological mapping, geochemical soil sampling and core logging. 1 geologist.	\$ 2,500.00
2. Diamond drilling. 1,500 feet at a direct cost of \$12.00/foot	18,000.00
3. Transportation Drill and crew mobilization and demobilization	2,500.00
4. Camp 150 man days @ \$10.00/day	1,500.00
5. Bulldozer Drill site preparations	2,500.00
6. Analysis assaying \$2,000 geochemical analysis <u>250</u> <u>\$2,250</u>	2,250.00
7. Consulting, data compilation and reports	1,500.00
	<hr/> \$ 30,750.00
Overhead and contingencies @ 10%	3,075.00

 \$ 33,825.00



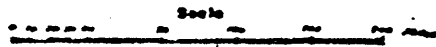


Spar Group



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BRITISH COLUMBIA
MAIN HIGHWAYS, CITIES & TOWNS



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.

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 logging road, suitable for 2-wheel drive vehicles, that goes north 18 miles to the Spar Claim Group.

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.

Vegetation

The Adams Plateau is timbered with spruce and balsam interspersed with open meadows and swamps.

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 4 miles of the property.

CLAIMS

The initial post of the Spar # 2 and the final post of the Spar # 1 was examined and found to be staked according to the Mineral Act.

The following information regarding the status of the claims has been obtained from the Mining Recorders office in Vancouver.

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
Spar # 1	127210	Nov. 5, 1976
Spar # 2	127211	Nov. 5, 1976

In addition there has been 4 units staked to the north of the Spar 2 and 4 units staked to the south of the Spar 1. These claims have not been recorded.

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 Mining 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 1950s. Pamex has made shipments to the custom mill at Lumley and the concentrates have been shipped to the Cominco Smelter.

GEOLOGYGeneral

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.

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 strata has 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.

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.						
Spar 2	Chip sample at 1' intervals across top of stockpile approx. 45' long, 5' high, 20' wide. Mineralization from "fringe" zone.						

These assay results are expected by October 21, 1976.

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.

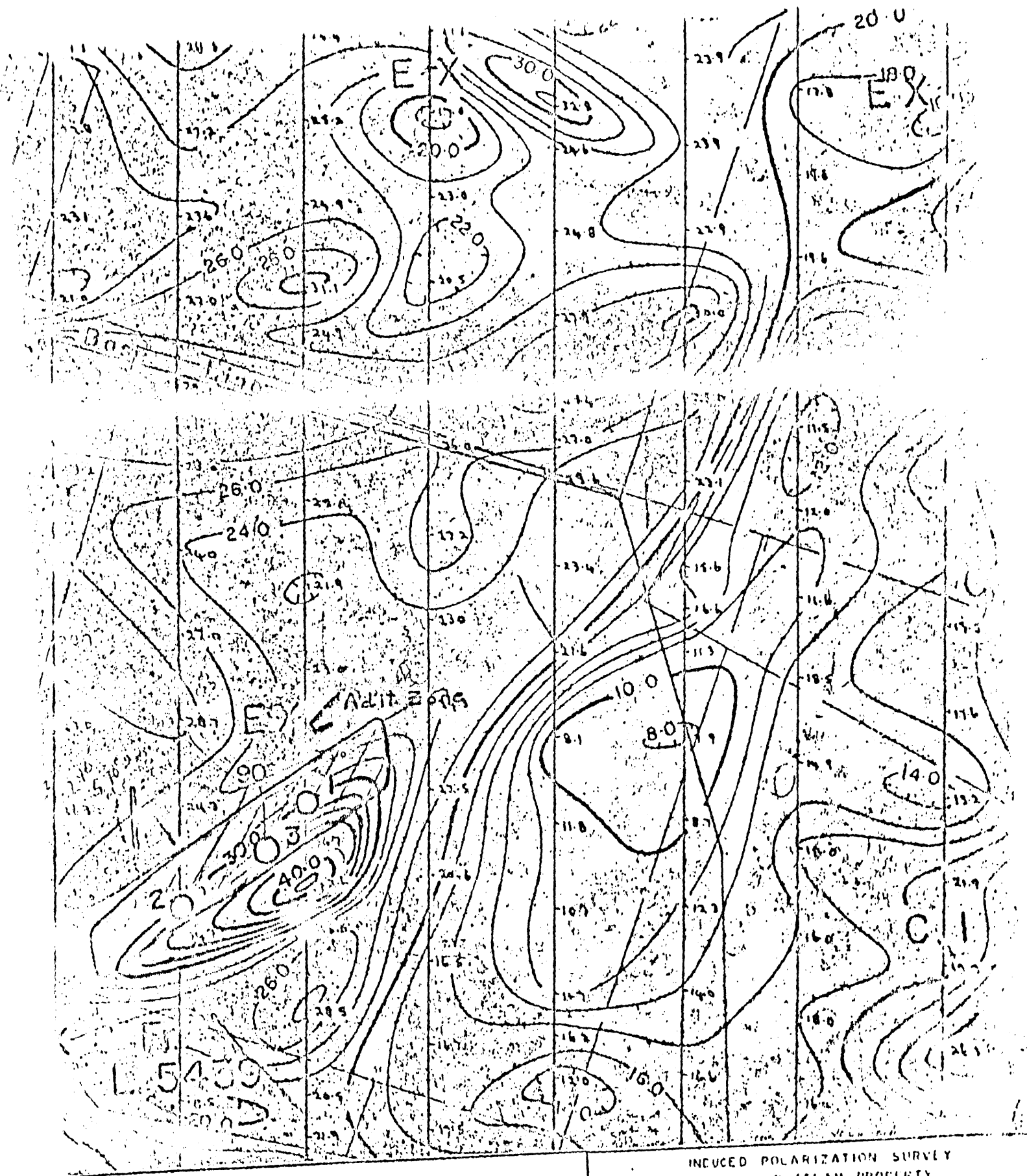
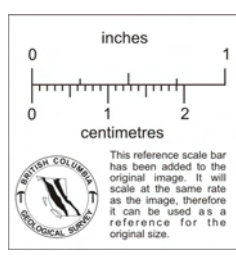


FIG. 2



INDUCED POLARIZATION SURVEY
 20AMP'S PLATEAU PROPERTY
 KAMLOOP'S MINING DISTRICT, B.C.

CONTOURS OF APPARENT CHARGEABILITY
 WITH INTERPRETATION

Contour Interval 2.0 millivolts
 SCALE 1 inch = 300 feet

Comment

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 drillhole 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 chargeability anomaly is important since it indicates that the adit zone extends 700 feet to the southwest. Instead of attempting to drill the anomaly along its strike it should have been drilled across the strike which would also be across the strike of the adit zone mineralization.

Respectfully submitted,

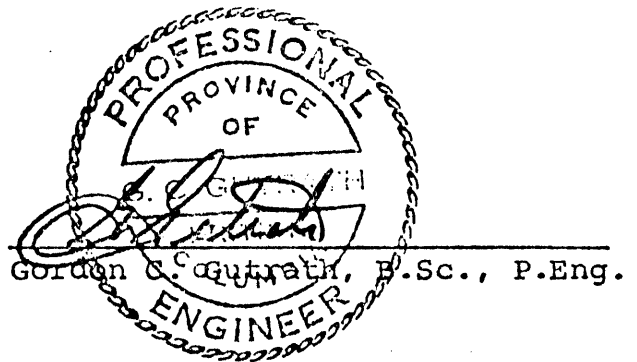
 G. G. G. P. Eng.
 Atled Exploration Management Ltd.

October, 1976.

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 *Hesca Resources Ltd.*



DATED at the city of Vancouver, Province of British Columbia, this 10 day of October, 1976

REPORT ON THE

SPAR CLAIM GROUP
Adams Plateau Area
South Central British Columbia

51°03' 119°33'W
NTS-82M/4E

on behalf of

HESCA RESOURCES LTD.

by

G. Gutrath
Atled Exploration Management Ltd.

October, 1976.

PROPERTY FILE

82M017-01

TABLE OF CONTENTS

Introduction.....	1
Summary.....	2
Conclusions.....	4
Recommendations.....	5
Estimated Costs.....	6
Geography.....	7
Claims.....	9
History.....	10
Geology.....	11
Geophysics.....	14

Location Map

Induced Polarization Survey Map

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Phase II

Phase II will be contingent on the results of Phase I.

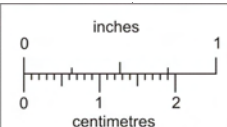
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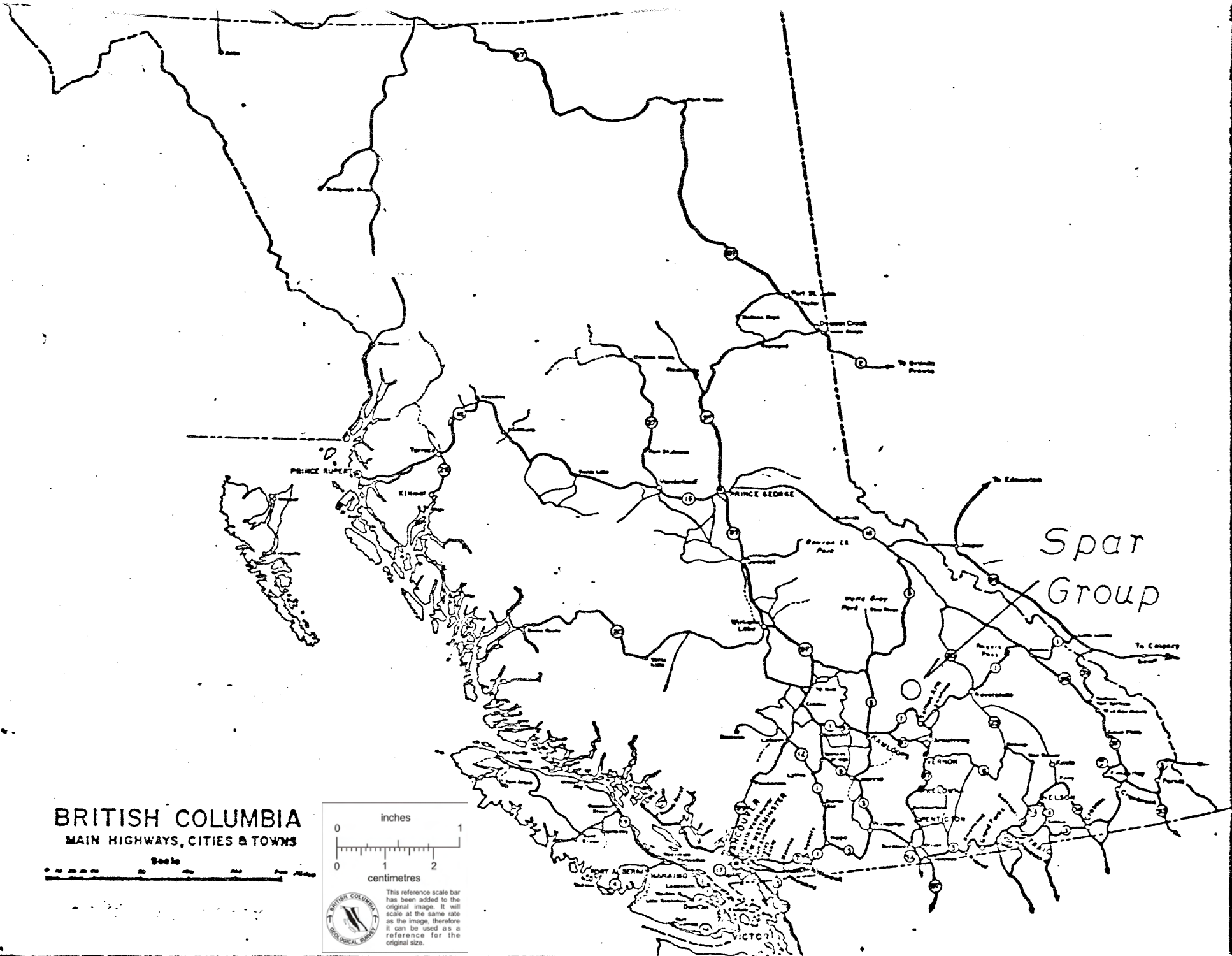


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Scale
0 100 200 300 400 500 Miles



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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.

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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.

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 strata has 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.

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.						
Spar 2	Chip sample at 1' intervals across top of stockpile approx. 45' long, 5' high, 20' wide. Mineralization from "fringe" zone.						

These assay results are expected by October 21, 1976.

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.

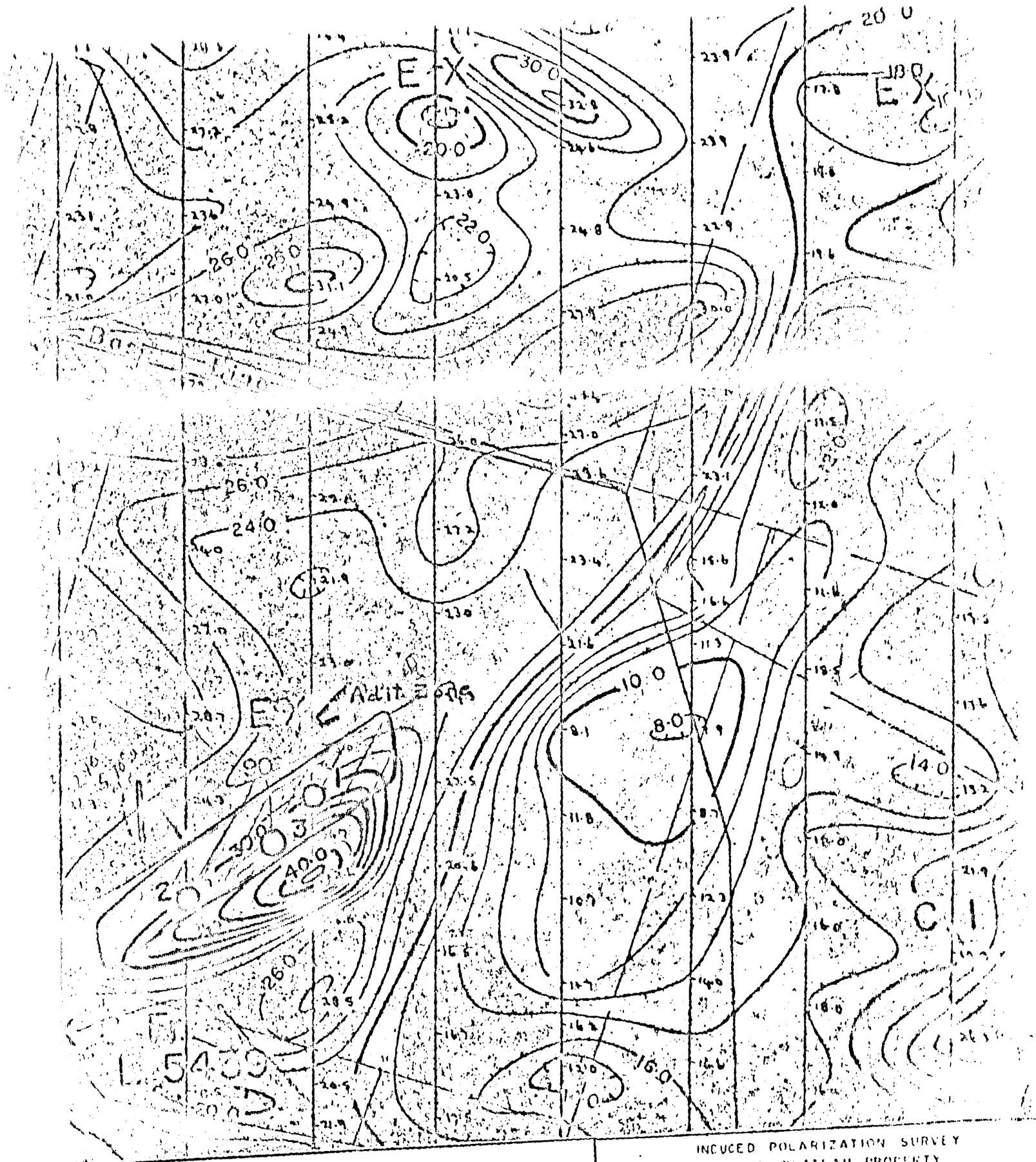
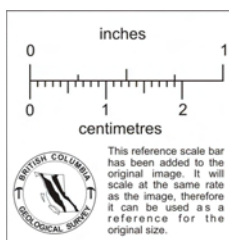


FIG. 2



INDUCED POLARIZATION SURVEY
 ADAMS PLATEAU PROPERTY
 KAMLOOPS MINING DISTRICT, B.C.


CONTOURS OF APPARENT CHARGEABILITY
 WITH INTERPRETATION

Contour Interval 2.0 millivolts
 Scale 1 inch = 100 feet

Comment

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 drillhole 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 chargeability anomaly is important since it indicates that the adit zone extends 700 feet to the southwest. Instead of attempting to drill the anomaly along its strike it should have been drilled across the strike which would also be across the strike of the adit zone mineralization.

Respectfully submitted,

 The seal is circular with a double-line border. The text 'PROFESSIONAL ENGINEER' is written along the top inner edge, and 'PROVINCE OF BRITISH COLUMBIA' is written along the bottom inner edge. In the center, there is a signature in cursive that appears to read 'G. G. G. G.'. Below the seal, the name 'G. G. G. G.' is printed, followed by 'Atled Exploration Management Ltd.'

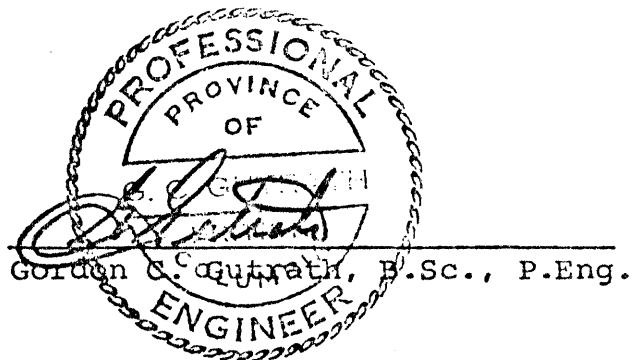
 G. G. G. G.
 Atled Exploration Management Ltd.

October, 1976.

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 *Hesca Resources Ltd.*



DATED at the city of Vancouver, Province of British Columbia, this 18 day of October, 1976

To Prop File

11.

E. NO. 1 (SPAR)

82M/4E 82M-17

GEOLOGY

General

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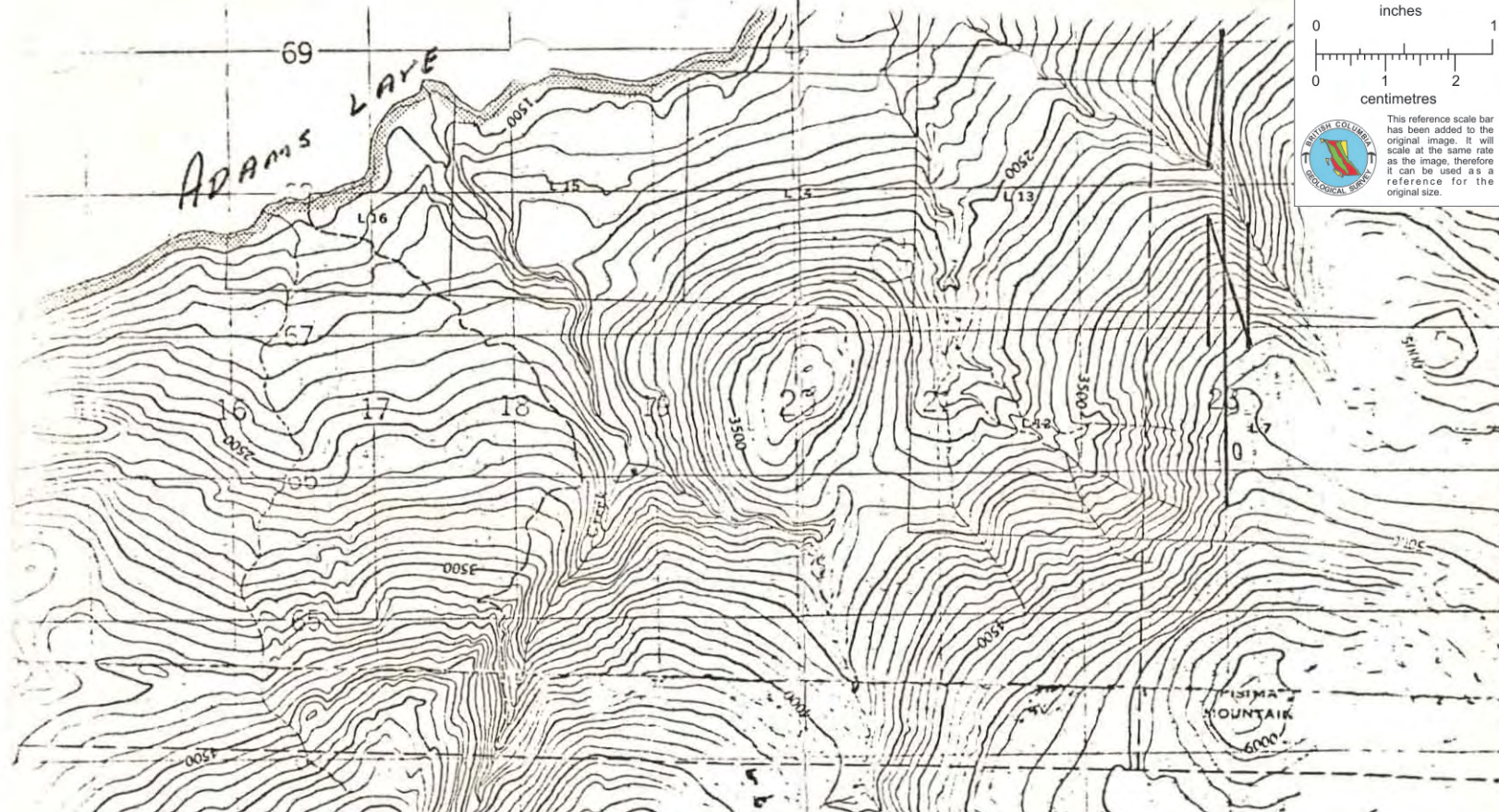
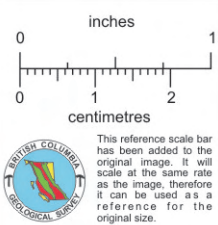
PROPERTY FILE

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ADAMS LAKE



OCT 6

PROVINCIA

FOREST

Lucky Coon
L 5228 L 5232
L 5229 L 5234 L 5232

OCT 2

OCT 3

MK3

AXL 2

LATEAU

AXL 1

OCT 1

Wini

VK

CAT

FOX

MK1 (Mosquito King)

AXL 3

Nov 76-1

OCT 4

MK 4

MK 2

OCT 1

34368

OCT 2

34376

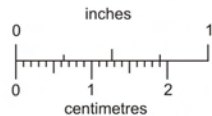
ADAMS PLATEAU B.C.

1" = 1000'

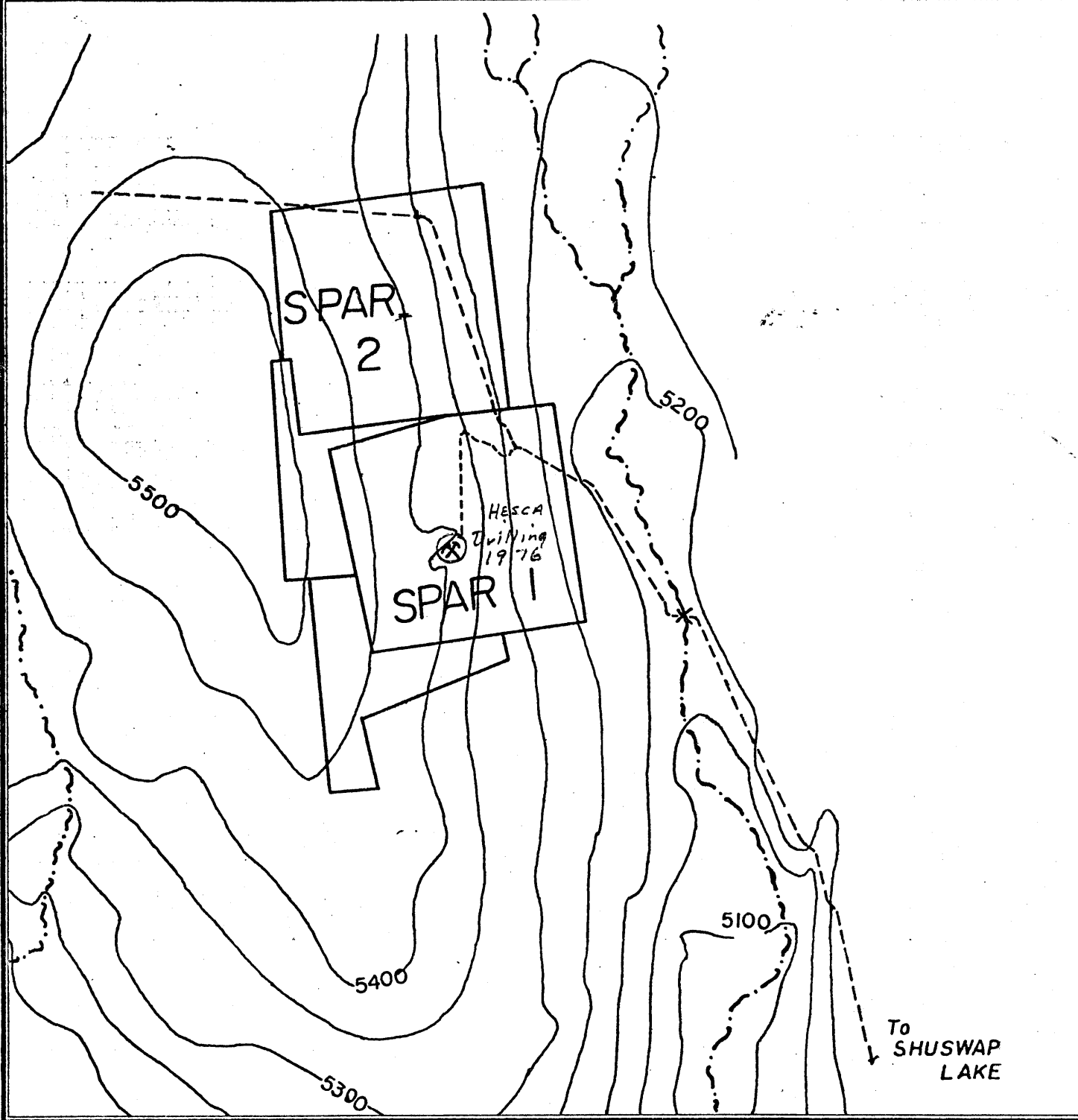


CONTOUR INTERVAL = 50'

M.R. Pawlowski B.Sc. Geologist



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.





THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

8-11-4E
82M/17

WHEN REPLYING PLEASE REFER TO

FILE NO.

31

DEPARTMENT OF MINES

Nelson, B.C.

July 16th, 1953.

Dr. H. Sargent,
Chief, Mineralogical Branch,
Department of Mines,
Victoria, B.C.

10098

DEPT. OF MINES
REC'D JUL 18 1953
SUBJECT
FILE
REFERRED TO

Dear Dr. Sargent:

Re: Ex Group - Adams Plateau.

On July 14th I visited the Ex group on Adams Plateau. Eric Larsen was present. Diamond drilling was in progress.

Larsen reported a shipment of 101 tons in the late winter, netting some \$50 per ton at Squilax for the lead alone. About 14 tons of 40% zinc concentrates are at Kenville awaiting enough to make up a car for shipment to an American smelter. He estimates about 150 tons additional of the same grade in piles at the mine and at loading points. The ore is certainly high in grade, containing about 30% lead. It contains abundant pyrrhotite and pyrite, and the shipping ore is almost all metal.

The high grade ore is in a pod in a fold in the schists, plunging at a low angle to the west. A 60-foot rock trench following the formation S 60 W meets a similar trench following a small ~~strip~~ fault west. At the intersection is a hole about 15 by 15 feet with 3 feet of water in it. High grade ore shows about 4 feet high in the face across about 12 feet and is reported to continue several feet under water. High grade ore still shows at the sides of the hole at the entrance. The geometry is such that lower grade ore

PROPERTY FILE

(possibly 15% metal) in the trenches represents "wings" from the main pod, principally in the first-mentioned trench, and no great tonnage is yet indicated.

This is a difficult body to measure or estimate, but judging from the nearly 300 tons already mined (including 14 tons by Bischoff) it would seem reasonable to expect 500 to 700 tons more of about the same grade, figuring about 15 tons per foot of advance on the main pod of ore; i.e. assuming continuity for 30 to 50 feet ahead of the present face.

The localizing fold seems all important, and although mineralization is exposed in a series of small cuts 1,000 feet to N.E. & S.W., the extent and continuity of low grade material is not proved. Exposures are very few, and although it is apparent that the attitude of the schist is not consistent, the character of the folding cannot be determined.

From a point 7 miles from the Celista road on the Saskatchewan loop logging road a jeep road extends 7 miles to the camp on the Mosquito King and an additional 2 miles to the showing. This road is poor, is just now drying up, and is too narrow for snow removal. The terrain is hummocky spruce forest with only one short steep grade. The chief problem would be drainage and a road would be impassable to trucks for a month or two in the spring. Even the logging road is not hauled on for about two months.

Larsen showed me a copy of an agreement with Bralorne signed by Matheson and O'Brien for Bralorne to take control of a 14,000 share

company, taking 744 shares at \$100. The agreement has not yet been ratified by A. C. Taylor. If the deal goes through Bralorne would drill the property. In the meantime the former agreement with Bischoff brothers is voided and it is now an option agreement for \$150,000, ore to be shipped on a royalty basis.

Larsen says from the camp a road can be built not more than 2 miles long to connect with a higher point on the logging road, over better ground than the present 7 miles. He says he has applied for the exact estimated cost. He is a road builder amongst other things, at Kamloops.

New Jersey Zinc is at present investigating a fluorspar deposit one mile past the Ex. As no company official was at the property and the showing was covered by spoil from bulldozing, the deposit could not be sized up, but the showing is not rumored to be very impressive.

The jeep road is said to continue 4 miles past the property, extended by the Forestry (?) Dept. Sheep graze the meadows at the head of Gold Creek in the autumn.

The above seems to cover the situation. My only comment is that the present road is adequate for exploration and is inadequate for summer hauling of ore for the better part of 9 miles. Ore to withstand shipping should gross \$50 at least in recovered metals. The present company probably needs to ship ore to finance exploration. Should Bralorne assume control they might consider drilling the deposit thoroughly before doing any mining. Drilling to date (2 $\frac{1}{2}$ holes) throws no new light on the situation.

One solution might be to spend about two weeks with a bulldozer on the present road to permit truck haulage in the drier part of the year. If a mine develops, the 2-mile relocation would be advisable and repair of the 2-mile stretch between camp and mine.

Yours very truly,

M. S. Hedley

Geologist.

MSH/HR

REFERRED TO	DATE	INITIAL
D.M.		
C.G.C.		
G.C.		
Acc's.		
C.T.B.	18/7	MS
C.I.		
C.A.		
R.&T.		
FILING CLERK		

82 M / 4 E

82 M - 16, 17

REPORT

on the

ADAMS PLATEAU PROPERTY

of

PROPERTY FILE

GIANT METALLICS MINES LTD. N.P.L.

SALMON ARM, B. C.

by

Allen Geological Engineering Ltd.

February 3, 1966

CONTENTS

	<u>Page</u>
INTRODUCTION	1
LOCATION AND ACCESSIBILITY	1
TOPOGRAPHY	1
HISTORY	1
PROPERTY	1
GEOLOGY	3
MINERAL SHOWINGS	3
SMELTER SHIPMENTS	4
MILL TESTS	4
SUMMARY AND CONCLUSIONS	4
RECOMMENDATIONS	5
REFERENCES	5
MAP	

Allen Geological Engineering Ltd.
519 United Kingdom Building
409 Granville Street
Vancouver 2, B. C.

February 3, 1966.

C E R T I F I C A T E

I, Alfred R. Allen, of 519 - 409 Granville Street, Vancouver, B.C. certify that:

I am a graduate of the University of British Columbia and hold the following therefrom:

BASc	Geological Engineering	1939
MASc	Geological Engineering	1941

I am a member of the Association of Professional Engineers of the Province of British Columbia, and a member of the Consulting Engineers' Division.

I have practised my profession for the past twenty-three years.

I hold no interest in the properties or securities of Giant Metallics Mines Ltd. NPL nor do I expect to receive any, directly or indirectly.

My report of February 3, 1966, is based upon examination on the ground by myself October 3, 1965.

Alfred R. Allen, P. Eng.

ADAMS PLATEAU PROPERTY

KAMLOOPS M.D.

B.C.

INTRODUCTION

The large group of mineral claims held by Giant Metallics Mines Ltd. N.P.L. was examined by the writer October 8th, 1965. Guidance and assistance was rendered by Mr. G. Kachuk and Mr. W. J. Sanden.

The object of the examination was to acquaint the writer with the local geology, mineral showings and exploratory workings, in order that this information, along with considerable data made available from the reports and maps of government and private agencies, could be assembled into one report to include an assessment of the property and a recommended programme of work for the coming field season.

LOCATION AND ACCESSIBILITY

The property is located in south central British Columbia, 60 miles north-east of Kamloops, B.C., longitude 119° - 30' west and latitude 51° - 08' north. From the Canadian Pacific Railway siding at Squilax it is 22 miles by good secondary road to the claims. Shuswap Lake road elevation is 1,150 feet and at the property it is 6,000 feet above sea level. The Adams Plateau is an area of active logging and mining. Secondary roads have been constructed over much of the area by logging companies during the past few years.

Access is via Kamloops and Chase, the logging road up Scotch Creek to the Spelay camp, and on to the showings over secondary roads.

TOPOGRAPHY

Adams Plateau is a relatively flat to gently rolling upland area bounded on the west by Adams Lake and south and east by Shuswap Lake. Gold and Scotch Creeks and the many small tributaries of same flow southerly in narrow V-shaped valleys into the Adams River and Shuswap Lake.

HISTORY

The mineral deposits were discovered and prospected by the Bischoff brothers about 1914.

Mr. I.W.C. Soloway and associates held the property in 1949 and completed considerable surface exploratory work on several of the showings.

The Consolidated Mining and Smelting Company diamond drilled the property, but there is no information available regarding the extent of this programme.

Trans Mountain Mines optioned the property in 1953 and conducted an exploration programme on the EX claims. Mill tests were conducted at the Kenville Mill near Nelson, B.C., and test shipments were made to the Consolidated Mining and Smelting Company smelter at Trail, B. C.

PROPERTY

MINERAL CLAIMS - GIANT METALLICS MINES LTD. N.P.L.

JANUARY 31, 1966

<u>Claim</u>	<u>Record number</u>	<u>Expiration date</u>
EX	10261	15 9 67
EX 1 Fr.	10262	4 9 67
EX 2 Fr.	12577	3 9 67
C 1	12569	2 9 67
C 2	12524	31 7 67
C3	12525	31 7 67
PAT 1	12575	3 9 67
PAT 2	12576	3 9 67
PAT 5	13733	2 6 67
PAT 6	13734	2 6 67
PAT 7	13830	9 7 67
PAT 8	13862	7 8 67
PAT 9	13863	7 8 67
PAT 10	13884	11 8 67
PAT 11	13885	11 8 67
PAT 12	13965	23 9 67
E 1	13370	26 9 66

<u>Claim</u>	<u>Record number</u>	<u>Expiration date</u>
E 3	13371	26 9 66
E 5	13372	26 9 66
E 7	13373	26 9 66
E 9	13374	26 9 66
E 2	13375	26 9 66
E 4	13376	26 9 66
E 6	13377	26 9 66
E 8	13378	26 9 66
E 10	13379	26 9 66
E 1	13698	17 5 67
E 2	13699	17 5 67
E 3	13700	17 5 67
E 4	37829	11 8 67
E 5 Fr.	38132	28 8 67
F	14684	26 5 67
F 1	14683	26 5 67
F 3	15360	29 7 67
F 4	15361	29 7 67
F 5	15362	29 7 67
F 6	15363	29 7 67
GARNET 1	30511	26 9 66
GARNET 2	30522	26 9 66
GARNET 3	30523	26 9 66
GARNET 4	30524	26 9 66
GARNET 5	30525	26 9 66
GARNET 6	30526	26 9 66
GARNET 7	30527	26 9 66
GARNET 8	30528	26 9 66
D 1	37831	11 8 66
D 2	37832	11 8 66
D 3	37833	11 8 66
D 4	37834	11 8 66
D 5	37835	11 8 66
D 6	37836	11 8 66
D 7	37837	11 8 66
LUCKY 1	44395	3 9 66
LUCKY 2	44396	3 9 66
LUCKY 3	44397	3 9 66
LUCKY 4	44398	3 9 66
LUCKY 5	44399	3 9 66
LUCKY 6	44400	3 9 66
LUCKY 7	44401	3 9 66
LUCKY 8	44402	3 9 66
LUCKY 9	44403	3 9 66
LUCKY 10	44404	3 9 66
LUCKY 11	44405	3 9 66
LUCKY 12	44406	3 9 66
LUCKY 15	44408	3 9 66
LUCKY 16	44409	3 9 66
LUCKY 17	44410	3 9 66
LUCKY 18	44411	3 9 66
LUCKY 19	44412	3 9 66
LUCKY 22	44415	3 9 66
LUCKY 23	44416	3 9 66
LUCKY 24	44417	3 9 66
LUCKY 25	44418	3 9 66
SPAR	43916	3 9 66
BEE	51266	16 8 66
BEE 1	51267	16 8 66
BEE 2	51268	16 8 66
REX 1	52218	12 10 66
REX 2	52219	12 10 66
REX 3	52220	12 10 66
REX	52217	12 10 66

GEOLOGY

The preliminary map of the Geological Survey, number 48-1963 shows the geology of the Adams Plateau on a scale of 4 miles per inch. No detailed map is available of the property, but the geology may be summarized as follows:

The area is underlain by a thick series of sedimentary and volcanic rocks which have been intruded by granite, granodiorite, and porphyry dykes. The general strike is northeasterly and the dip 20 to 50 degrees northwesterly. The most abundant rock comprise limestone, argillaceous limestone, greenstone schist, quartz sericite schist, quartzite and phyllite.

Throughout the sedimentary and metamorphic rocks there are zones of silver-lead-zinc and iron mineralization. The argillaceous limestone and schist are the most common host rocks. Strata showing drag folding and crenulations are usually found associated with the mineralized zones. The sulphide zones for the most part are narrow and usually separated by sparsely mineralized or barren wall rock.

The principal minerals are sphalerite, galena, pyrrhotite, arsenopyrite, chalcopyrite, tetrahedrite and argentite, along with minor quartz, epidote, chlorite, calcite and mica.

MINERAL SHOWINGS

Here and there, over 4,000 feet in an east-west direction and 8,000 feet in a north-south direction there are mineral showings on the property of Giant Metallics Mines Ltd.

On the EX 1 claim, near the headwaters of Gold Creek, there is an impressive showing of massive, banded, fine-grained galena, sphalerite, with some pyrite, magnetite, pyrrhotite and chalcopyrite. A zone is exposed by trenching and a 20-foot winze on the surface for a length of 120 feet. At the thickest point, the crest of a gentle fold, it is 27 feet thick. Width has not been definitely established. Underlying this, and separated by 7 to 15 feet of country rock, is a second zone, dipping westerly at about 10 degrees. It is 5 to 8 feet thick and of unknown length and width. A third zone has been probed by diamond drill holes, parallel and 18 to 20 feet below the second. This lowest zone is at least 200 feet long, 5 to 10 feet thick and of unknown width. This area has been tested by 31 diamond drill holes, the deepest reaching about 125 feet below the surface showing, and sixty feet below the lowest mineralized zone. A series of trenches at this location more or less delimited the extent of the surface trace of the upper zone. Shipments from this area are reported as follows:-

- 1952: 60 tons, to Trail, estimated grade, 0-01 ounces gold and 20 ounces silver per ton, 30% lead and 10% zinc.
- 1953: 9.716 tons, to Kenville Mill, averaging same as above.
- 1953: 130 tons (estimated)
- Later: 80 tons from bin, and 150 tons on several dumps of unknown grade.

Estimates of the average shipping grade are placed at silver, 12 ounces per ton, lead 19% and zinc 12%. This was undoubtedly material that had undergone an unknown amount of sorting.

The surrounding area is flat and rock outcrops are few; hence this is a prime location for exploratory work.

Near the southeast corner of the PAT Group there are showings exposed by stripping and rock trenching. There schist and limestone strike north 30 degrees east and dip 20 degrees westerly. For a length in excess of 100 feet a 6-inch to 1-foot vein of heavy fine-grained sphalerite and some galena lies along the footwall of the schist band above the limestone. A 2-foot quartz vein cuts across the zone. West of this on the north side of the road there are many exposures of vein material in banded schists and limy argillite. This zone appears to strike south of east, but because of the magnetic influence of local iron mineralization of the exact strike is not known. The dip is northwesterly 20 to 30 degrees. At the upper end there is an 8-inch band of massive pyrrhotite, throughout which there is irregularly banded sphalerite and some galena. Progressing northeasterly this band widens and gives way to 2 ½ feet of heavy fine-grained galena and sphalerite. Seventy feet easterly there is another outcrop of 4 feet thickness, the top of which is light grey argillite and the bottom silicified limestone. Between the two rock types is a 4-inch band of heavy sulphides and bottom 2 feet is streaked with bands of sulphides. Over the intervening 70 feet between the two outcrops there are pieces of heavily mineralized rock and a 3-foot light buff quartz porphyry dyke.

Two hundred feet northeasterly stripping has exposed a band of 1 to 1½ feet of heavy sulphides with a few quartz stringers. Three hundred feet farther northeasterly there is a small rock cut on a band of heavy sulphides and an old diamond drill set-up (believed to be a C.M. & S. hole).

Proceeding southwesterly, on the north side of the road for about 1,200 feet, an area about 500 feet by 200 feet is stripped of overburden. Several zones of heavy pyrrhotite mineralization are exposed. Little or no mineralization other than iron and some manganese staining was noted on the showings.

The road leads from the above showings westerly to a zone of mineralization exposed on the south side of the road, near the northwest corner of the PAT group. Extensive stripping has uncovered 6-inch to 18-inch bands of heavy sulphides, mostly sphalerite and galena, along with pyrrhotite. By narrow secondary road, proceeding southeasterly, a zone of iron-stained bedrock contains bands of sphalerite and galena up to 1 foot thick. This is on the E 3 mineral claim.

Continuing southerly to the E 5 claim there are wide zones of stripped bedrock showing iron-stained country rock and pyrrhotite. In 1964 diamond drill hole No. 1 was bored into this showing for 205 feet and No. 2 for 140 feet. A third hole 50 feet away was abandoned at 20 feet depth. Minor pyrrhotite and a few scattered specks of chalcopyrite were encountered in these holes. Three hundred and fifty feet above and 150 feet below this showing iron-rich bands are exposed on the road cuts. Easterly from the above, a short distance there is a band of iron mineralization about 40 feet wide in which is contorted schist; these are one to 30-inch bands of pyrrhotite and magnetite.

Most of the property between the scattered showings is covered with overburden.

SMELTER SHIPMENTS

From the showings on the EX 1 claim shipments have been made to the smelter at Trail, B. C. Records of three of these have been made available and they are as follows: -

<u>Date</u>	<u>Weight</u>	<u>Gold</u>	<u>Silver</u>	<u>Lead</u>	<u>Zinc</u>	<u>Iron</u>	<u>Silica</u>
Sep.17/52	Truck load	0.017	27.0	43.0	10.1	15.6	6.21
Sep.17/52	Truck load	0.015	25.8	40.2	9.4	16.2	6.10
Oct./53	Carload of lead concentrate from Kenville Mill at Nelson	0.08	42.6	64.4	6.0	7.40	1.00

In 1953 shipments from the Ex 1 workings were reported to be 517 tons grading and estimated 21.0 ounces silver per ton, 19% lead, and 12% zinc. In November 1960, 3 boxes of ore from the Mosquito King showings were sent to the Bunker Hill Co., and this assayed, 0.033 ounces gold and 9.2 ounces of silver per ton, 26.4% lead, 7.2% zinc and 11.2% iron.

MILL TESTS

In 1953 97.6 tons of ore from the EX1 showings were milled at the Kenville Mill near Nelson, B.C. It assayed 0.01 ounces of gold and 20.19 ounces of silver per ton, 30.13% lead and 10.04% zinc. A lead concentrate assayed 0.24 ounces of gold and 42.16 ounces of silver per ton, 61.4% lead and 6.65% zinc. The zinc concentrate assayed 0.68 ounces of gold and 5.16 ounces of silver per ton, 6.78% lead and 41.4% zinc. Total recoveries were 98.7% for lead, 89.1% for zinc, 100% for silver and 2% for gold.

If a mill were constructed on the property, there is every likelihood that these concentrates would be improved.

SUMMARY AND CONCLUSIONS

The 81-claim property of Giant Metallics Mines on the Adams Plateau is underlain by Palaeozoic rocks which have been tightly folded, contorted and highly altered. Jurassic igneous intrusives have invaded these sedimentary and volcanic strata, and it is the opinion of some engineers that the entire Adams Plateau is underlain at not too great depth by a batholithic body from which the mineral deposits now exposed on the surface may have been derived.

Over an area approximately one and one-half miles long and one mile wide, there are numerous zones of mineralization in which there are narrow, gently dipping, veins of fine-grained sphalerite and galena and/or pyrrhotite and magnetite, with minor associated silver-lead-zinc-copper minerals. On the EX1 there are three more or less parallel zones -- one above the other, separated by barren country rock. On the PAT claims there are veins and bands from a few inches to 2 1/2 feet thick composed of galena, sphalerite, pyrrhotite and magnetite.

On the E claims and elsewhere there are extensive cappings of iron mineralization composed mostly of pyrrhotite and magnetite.

The general strike is northeasterly and dips northwesterly at low angles.

Most of the area between the showings is covered with overburden and fairly heavy forest growth.

In the opinion of the writer, the several limited exploratory programmes conducted in the past have been planned on the premise that the known high-grade narrow deposits must expand to mines at one hundred feet or less underground or all hopes for commercial deposits were lost. Consequently, only very limited exploratory work has been done on the property. All exposed mineralized zones have been found by the prospectors as a result of diligent and persistent pick-and-shovel work.

It is concluded that the property of Giant Metallic Mines Ltd. on the Adams Plateau warrants a thorough explorative programme, with the object of discovering and developing additional and possibly more extensive zones of silver-lead-zinc mineralization.

RECOMMENDATIONS

It is recommended that a sizeable and thorough exploration programme be conducted over the property as soon as weather permits. An outline of this programme is as follows: -

	<u>Estimated costs</u>
1. Prospect the area, establish the claims locations, and stake additional claims where necessary	\$ 2,000.00
2. Geological survey	5,000.00
3. Magnetometer survey	7,000.00
4. Soil sampling survey	7,000.00
5. Stripping	10,000.00
6. Rock trenching	5,000.00
7. Diamond drilling	20,000.00
8. Induced Polarization Survey over selected areas	10,000.00
9. Overhead and supervision	6,000.00
10. Contingencies	<u>8,000.00</u>
Estimated costs	\$ 80,000.00

The above field programme may be planned so that several jobs are progressing concurrently, and it should be possible to carry it to completion by the end of the 1966 field season.

Respectfully submitted

Signed: Alfred R. Allen

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February 3, 1966.

REFERENCES

- B. C. Minister of Mines Annual Reports
- Adams Lake, G.S.C. Map 4E, 1963
- Report on the EX Group, R.E. Legg, August 26, 1953
- Geology of the EX 1 Mineral Claim, J.B. Colson, Sunshine Mining Company, July, 1954.