GEOLOGICAL AND GEOPHYSICAL REPORT

on the

EPI 1-13 CLAIMS

Twin Lakes Area
Osoyoos Mining Division

82E-4, 5
(49°15' N. Lat.,119°46' W. Long.)

for

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by

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January, 1990

TABLE OF CONTENTS

	Page
SUMMARY AND RECOMMENDATIONS	1
1.0 INTRODUCTION	3
1.1 General	3
1.2 Location and Access	3
1.3 Physiography	4
1.4 Property and Claim Status	4
1.5 Area and Property History	5
2.0 EXPLORATION PROCEDURE	9
3.0 GEOLOGY AND MINERALIZATION	12
3.1 Regional Geology	12
3.2 Claim Geology	16
3.3 Mineralization and Alteration	18
4.0 GEOCHEMISTRY	21
4.1 Heavy Metal Concentrates	21
5.0 GEOPHYSICS	22
5.1 Induced Polarization Survey	22
5.2 OMNI plus VLF EM and Magnetometer Survey	22
5.3 Magnetometer Survey	22
6.0 CONCLUSIONS AND RECOMMENDATIONS	24
7.0 REFERENCES	25
8.0 CERTIFICATE OF QUALIFICATION	27

APPENDICES

Appendix I - Certificates of Analysis
Appendix II - Geophysical Equipment Specifications
Appendix III - Rock Sample Descriptions
Appendix IV - Magnetic Data
Appendix V - Interpretex Resources Ltd. Report
Appendix IV - Cost Statement

ILLUSTRATIONS

FIGURE		PAGE
G-1.	Location Map	follows page 3
G-2.	Claim Map	follows page 4
G-3.	Regional Geology	follows page 12
G-4.	Claim Geology	pocket
G-5.	Geology, Grid A	pocket
G-6.	Geology, Grid B	pocket
G-7.	Geology, EPI 7, 8, 9, Claims	pocket
G-8.	Magnetometer Survey, Grid A	pocket
G-9.	Magnetometer Survey, Grid B	pocket
G-10	Geophysical Interpretation, Grid A	pocket
G-11	Geophysical Interpretation, Grid B	pocket

TABLES

TABLE		PAGE
I	Rock Geochemical Results	20
II	Heavy Metal Concentrate Results	21

SUMMARY AND RECOMMENDATIONS

The EPI Claims are located approximately 25 kilometers southwest of Penticton B.C. in southern British Columbia. The claims are bounded by Olalla on the west, Twin Lakes on the north, Park Rill on the east and Keremeos and Cawston on the south. The property consists of 13 claims covering 205 units in the Osoyoos Mining Division.

Mining has been carried out in the South Similkameen-South Okanagan since the late 1800's. The important gold camps in the area include Hedley, Fairview, Orofino Mountain and Olalla.

The EPI Claims are located in a favourable geological environment for epithermal gold and silver mineralization as they are mainly underlain by Tertiary volcanic and sedimentary rocks of the Penticton Tertiary Outlier. At least three gold occurrences are found within the Tertiary rocks of the area including the Vault, Dusty Mac and Venner Meadows Properties.

The Dusty Mac property produced 58,700 tons of ore yielding 19,484 ounces of gold and 339,282 ounces of silver from 1969 through 1976. Mineralization was related to a silicified lens of White Lake Formation cut by many faults. The mineralization appears to be associated with and occurrs adjacent to these faults.

The Vault property is a relatively recent discovery (1982) and consists of two types of epithermal gold mineralization occurring within Tertiary rocks. The first is a large quartz stockwork zone with abundant chalcedony and pyrite and prominent east-west fractures. Gold values in this zone are on the average about 0.07 ounces per ton. A second, more important type of mineralization is a distinct east-west quartz-calcite-adularia vein. Considerable exploration on the vein has indicated reserves of 150,000 tonnes grading 0.49 ounces gold per ton. A northeast trending fault crossing the property is thought to be a major control of mineralization.

The 1989 exploration program on the EPI Claims consisted of geological mapping and prospecting over various areas of the property, and establishing two grids and conducting geological mapping, prospecting and magnetometer surveying over the grids. Interpretex Resources Ltd. carried out orientation induced polarization and Omni plus combined VLF EM amd magnetometer surveys over part of Grid A.

The program yielded a number of favourable results for the presence of epithermal gold mineralization. The magnetometer survey indicated a large number of north trending magnetic lows which represent major structural trends. These structural trends

have the potential to be feeder zones for epithermal gold mineralization.

The induced polarization survey delineated a weak chargeability anomaly near a clay altered outcrop of dacite. This anomaly may represent sulphide mineralization within an epithermal system.

Prospecting and geological mapping resulted in the discovery of a number of weakly to strongly clay altered zones and areas with chalcedony float. The most significant of these zones occurrs on Grid B where sampling gave weakly anomalous mercury (130 ppb) and arsenic (77 ppm) values. The clay alteration may be indicating favourable structures with epithermal gold mineralization at depth.

Recommendations are to continue exploration on the property. This should include continuing geological mapping and prospecting on all areas of the property and carrying out VLF EM surveying and soil sampling over favourable structural trends and geological environments which have been located by this survey.

Respectfully submitted,

Grant Crooker, B.Sc., F.G.A.C.,
Geologist

1.0 INTRODUCTION

1.1 GENERAL

Field work was carried out on the EPI Claims during the summer and fall of 1989 by Grant Crooker Geologist, two field assistants and a geophysical crew from Interpretex Resources Ltd.

Geological mapping and prospecting were carried over a number of areas of the property. Two grids were established and prospecting, geological mapping, amd magnetometer surveying were carried over these grids. Interpretex Resources Ltd. carried out I.P., magnetometer and VLF EM surveys over a small portion of grid A.

Chain and compass surveying was also carried out along the northern and eastern edges of the claims to determine the claim boundaries.

1.2 LOCATION AND ACCESS

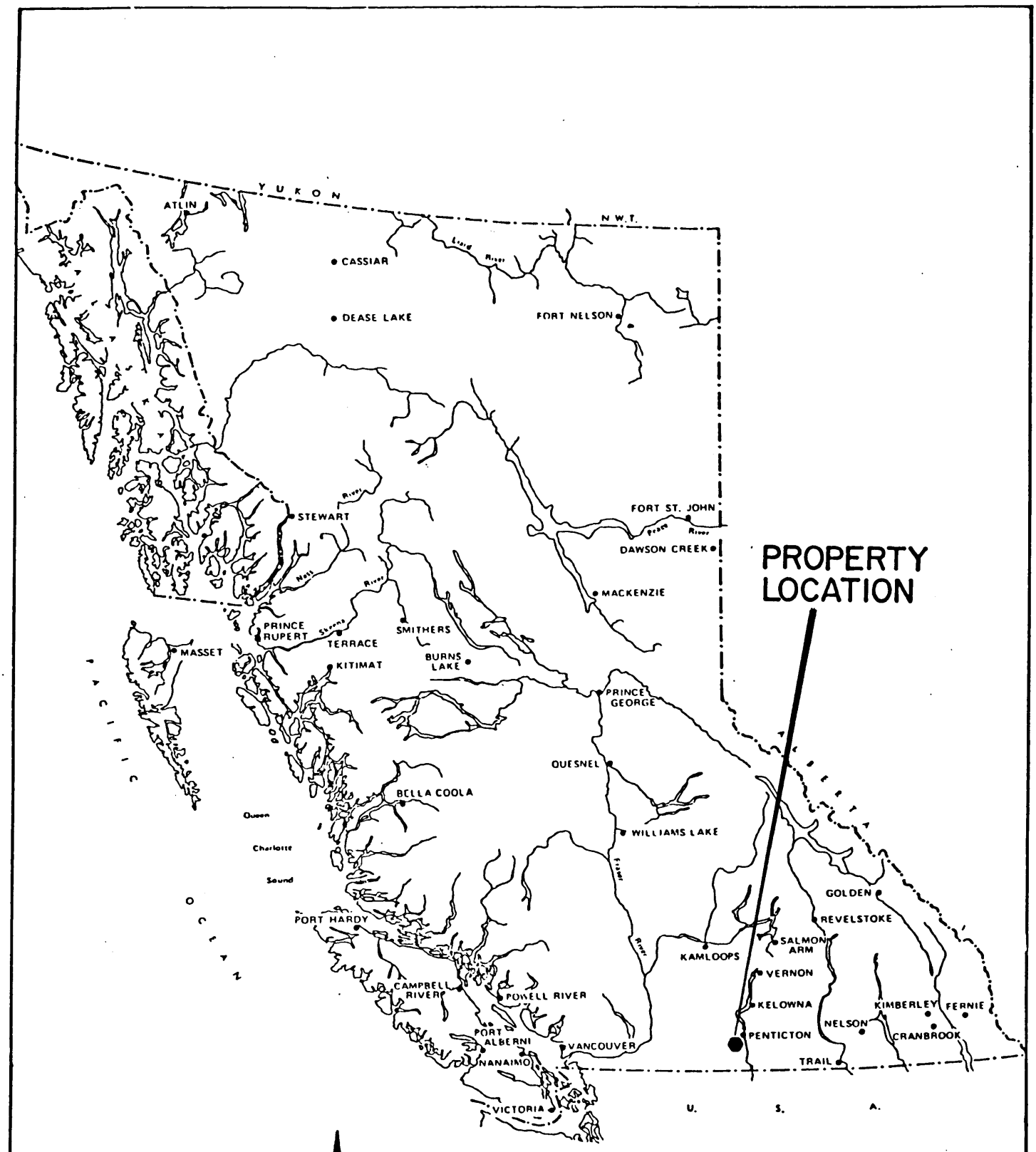
The property (Figure G-1) is located approximately 25 kilometers southwest of Penticton in southern British Columbia. It is bounded by Olalla (Figure G-2) on the west, Twin Lakes on the north, Park Rill on the east and Keremeos and Cawston on the south. The claims lie between 49°12'30" and 49°18' north latitude and 119°42'20" and 119°48'15" west longitude (NTS 82E-4, 5).

Excellent access to the property is available through a variety of routes. The Taylor Lake logging road provides the best access, turning off Highway 3A at the Twin Lakes junction and proceeding south. This is an all weather two wheel drive road which gives access to the eastern and southern portions of the property.

The Horn Creek logging road turns off from the Twin Lakes road and gives access to the northern and eastern portions of the property. This is a two wheel drive road but it does contain some rough sections.

An old four wheel drive logging road leads to Armstrong Creek and the Columns Provincial Park, and provides access to the southwestern portion of the property. This road turns east off Highway 3A between Keremeos and Olalla.

A large number of old logging roads and power line roads link up all of the above roads, although some of these are usable by four wheel drive vehicles only.



GRANT F. CROOKER

EPI CLAIMS

LOCATION MAP

N.T.S. 82E-4,5 OSOYOOS M.D., B.C.

0 200 400KM.

DRAWN BY: G.C.	SCALE : AS SHOWN
DATE : DEC. 1989	FIGURE Nº. G1

1.3 PHYSIOGRAPHY

The property is located within the Thompson Plateau section of the Interior Plateau. Elevation varies from 580 to 1580 meters above sea level and topography varies from flat to steep. Many of the higher sections of the property are relatively flat but extremely steep cliffs occur where the property drops down into Olalla, Manuel Creek and Horn Creek.

Outcrop is relatively abundant on the ridges but becomes sparse on the lower slopes and structural trends.

A number of creeks flow through the property, including Horn, Manuel and Armstrong Creeks. These creeks all cut steep canyons through the property. Water can be found in all of these creeks in localized sections with the source of the water being abundant springs. Many swamps on the higher sections of the property contain water throughout the entire year.

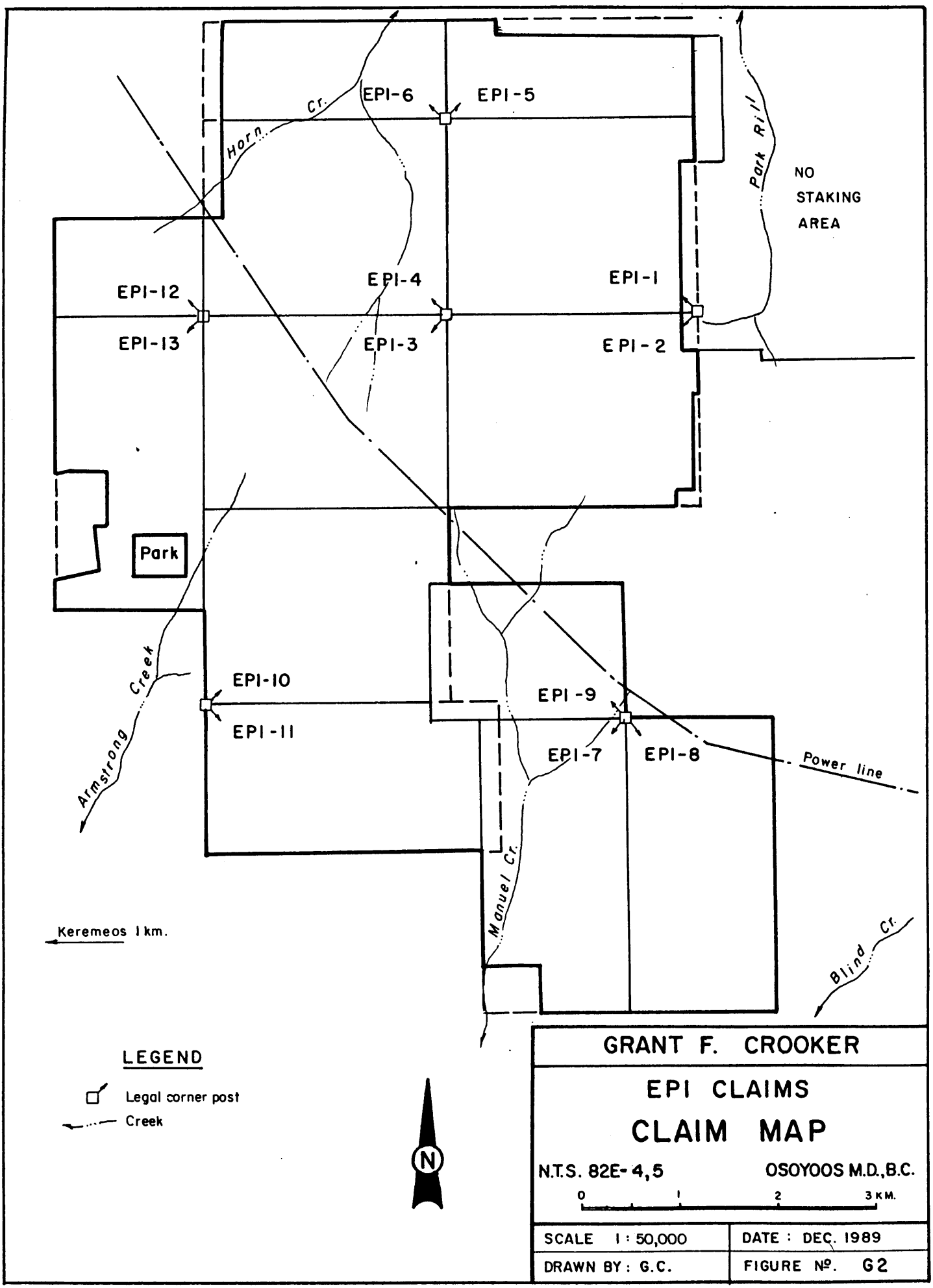
Vegetation varies from open range land to a forest cover of pine and fir trees. Large areas of the property have been logged from the 1950's to the present. A major B.C. Hydro transmission passes through the center of the property.

1.4 PROPERTY AND CLAIM STATUS

The EPI 1-13 Claims (Figure G-2) are owned by Grant Crooker of Keremeos B.C. and consists of 13 claims covering 205 units in the Osoyoos Mining Division.

Claim	Units	Mining Division	Record Number	Record Date	Expiry Date
EPI-1	20	Osoyoos	3127(3)	17/03/89	17/03/94*
EPI-2	20	Osoyoos	3128(3)	18/03/89	18/03/93*
EPI-3	20	Osoyoos	3129(3)	21/03/89	21/03/93*
EPI-4	20	Osoyoos	3130(3)	23/03/89	23/03/93*
EPI-5	5(red.)	Osoyoos	3131(3)	22/03/89	22/03/94*
EPI-6	10	Osoyoos	3132(3)	22/03/89	22/03/94*
EPI-7	18	Osoyoos	3133(3)	26/03/89	26/03/92*
EPI-8	18	Osoyoos	3134(3)	26/03/89	26/03/91*
EPI-9	12	Osoyoos	3135(3)	26/03/89	26/03/91*
EPI-10	20	Osoyoos	3136(3)	29/03/89	29/03/92*
EPI-11	18	Osoyoos	3137(3)	30/03/89	30/03/92*
EPI-12	6	Osoyoos	3138(4)	01/04/89	01/04/93*
EPI-13	18	Osoyoos	3139(4)	01/04/89	01/04/93*

* Including the work credits from this report.


EPI-6
EPI-5
Horn Cr.
Park Rill
NO STAKING AREA
EPI-12
EPI-4
EPI-1
EPI-13
EPI-3
EPI-2
Park
EPI-10
EPI-9
EPI-11
EPI-7
EPI-8
Power line
Armstrong Creek
Manuel Cr.
Blind Cr.
Keremeos 1 km.
LEGEND
Legal corner post
Creek
N
GRANT F. CROOKER
EPI CLAIMS
CLAIM MAP
N.T.S. 82E-4,5
OSOYOOS M.D., B.C.
0 1 2 3 KM.
SCALE 1 : 50,000
DATE : DEC. 1989
DRAWN BY : G.C.
FIGURE Nº. G2

1.5 AREA AND PROPERTY HISTORY

The EPI Claims are located in the South Similkameen-South Okanagan, an area which has a very significant history of mining. Placer mining began in the area in the 1860's, with hardrock mining begining soon after. A number of gold camps are located around the claim group, including Hedley, Olalla, Orofino Mountain and Fairview. Many other gold properties, including the Dusty Mac, Venner Meadows (Au-Rain) and Vault are also located near the EPI Claims.

The Hedley Camp has the most significant production in the area, with 3,981,553 tons of ore producing 1,730,643 ounces of gold and 190,091 ounces of silver between 1904 and 1955. The Nickel Plate Mine was reopened in 1987 by Corona Corporation with open pit reserves of 7,200,000 tons grading 0.15 ounces per ton gold. The gold mineralization in the Hedley Camp is related to skarns.

The Fairview Camp has the second highest record of production in the area, with 536,500 tons of ore producing 17,040 ounces of gold and 169,497 ounces of silver between 1898 and 1949. Recent exploration within the Fairview Camp by Oliver Gold Corp. has given 762,000 tons of proven, possible and probable ore grading 0.110 ounces per ton gold and 1.2 ounces per ton silver. Production from this area has been from quartz veins.

A limited amount of ore has also been produced from the Orofino Mountain Camp. Approximately 21,800 tons of ore yielded 8,846 ounces of gold and 2,393 ounces of silver. Brightwork Resources Inc. is currently carry out exploration om the Grandoro and King properties and is expected to spend $ 125,000 over the next 12 months. Gold and silver mineralization at this camp is also related to quartz veins.

A number of precious metal occurrences are found within the Olalla Camp, although only a limited amount of ore has been produced. Gold and silver mineralization is related to skarns (Bullion, Juniper-Bell) and quartz veins and breccias with carbonate alteration (Sunrise, Something Good, Cliff Claims). Goldcliff Resource Corporation is currently exploring the Cliff Claims.

At least three gold and silver occurrences are found within the same Tertiary volcanic and sedimentary rocks as underlie the EPI Claims. These are the Dusty Mac, Vault and Venner Meadows (Au-Rain) properties and all are related to epithermal gold mineralization.

The Dusty Mac property produced 58,700 tons of ore yielding 19,484 ounces of gold and 339,282 ounces of silver between 1969 and 1976. The deposit consisted of a lens like zone of silicified Eocene White Lake Formation volcanic rocks and

sedimentary debris containing minor disseminated pyrite and native silver. Some quartz veins on the property also carry minor bornite and chalcopyrite. The zone has been cut by an important system of reverse faults. The system generally trends southeasterly, with interwoven easterly and southerly striking segments and splays. Quartz veins and gossans are present in or adjacent to most of the main faults.

The Venner Meadows property was apparently discovered in a logging road cut in 1973 and was known at that time as the Au-Rain Claims. Work programs, including soil sampling, magnetometer and VLF EM surveys, and trenching were carried out by a number of companies through 1978, when the claims were allowed to lapse. Erratic gold and silver mineralization occurrs within a northeasterly trending shear zone with associated silicified patches and bands and calcite veins.

The area was restaked in 1979 and additional work programs carried out. Subsequent diamond drilling intersected significant gold mineralization. The mineralization is associated with faulting and brecciation within a propylitically altered andesite. Quartz and carbonate veining is found throughout the andesite, as narrow 1mm lacey veining and larger veins up to 20cm in width. The veins are generally broken and cut by numerous small scale offsets, and pyrite is common along fractures, within quartz veins, as fine disseminations, and as partial matrix in breccia zones. Common accessory minerals are purple fluorite and amethyst. Electrum has been identified and is generally associated with and surrounded by pyrite and silica. At present the property is under option to Tigris Minerals Corp..

The Vault property is the most significant property within the Tertiary Penticton Outlier. It is a relatively recent discovery, having been staked by M. Morrison in March 1982 to cover a gossanous area of silicified breccias that carried anomalous values in gold. Riocanex optioned the property in May 1982, and carried out percussion drilling in late 1982 and diamond drilling in April of 1983. A number of intersections contained anomalous gold and silver values, but the grades were not considered high enough by Riocanex and the option terminated.

In late 1983 Dome Exploration (Canada) Ltd. optioned the property and in early 1984 an induced polarization survey was carried out over the Discovery Zone with follow-up diamond drilling. Dome concluded that the precious metals and associated arsenic, mercury and antimony values are related to a zone of multi-stage silicification, pyritization, and brecciation accompanied by argillic alteration along and above a major southerly dipping fault zone which seperates the Marron Formation from the overlying Marama Formation. They also concluded the mineralization was sub-economic and terminated the option.

Seven Mile High Resources Inc. optioned the property in November of 1984. Geological mapping, geochemical soil sampling and geophysical surveying were carried out over various areas of the property. This work resulted in the discovery of a new, large, gossanous, silicified and clay altered zone named the MH Zone. A number of percussion holes were drilled to test the new discovery but no economic intersections were encountered.

In May of 1986, Canadian Nickel Company Limited entered into an option agreement with Seven Mile High Resources Inc. to earn a 60% interest in the property and act as operator. Subsequent to this option agreement, approximately $ 3,500,000 has been spent on exploration including 37,000 meters of diamond drilling. The drilling has located epithermal gold mineralization in two east-west trending zones: the Main Zone and North Vein.

The Main Zone contains numerous gold-bearing veins in a quartz stockwork which is 600 m long, 40 to 125 m wide and 5 to 30 m thick. The top of the mineralization is 170 m below surface at the west end and 500 m below surface at the east end. Although several ore-grade intersections have been identified within the veins, the overall grade of the stockwork is less than 0.07 oonces gold per ton.

The North Vein is a discrete narrow quartz-calcite-adularia vein located 300 m north of the Main Zone. Diamond drilling to date has indicated a mineral resource of 150,000 tonnes grading 0.49 ounces gold per ton. The average true width for the intersections included in the tonnage calculation is 0.57 m. The North Vein has been tested over a strike length of 1,050 m and a vertical depth varying from 100 to 200 m. The exploration program under consideration for 1990 by the partners is estimated to cost $ 350,000 and to consist of surface sampling and diamond drilling on the North Vein.

The Vault deposit consists of two types of mineralized zones, individual quartz-calcite-adularia veins with high gold values (North Vein) and a larger quartz stockwork with low gold values (Main Zone). A northeast trending fault cuts through the property and epithermal gold-silver mineralization appears to be controlled by a set of east-west trending fractures. A first phase of ascending fluids selectively silicified the matrix of the pyroclastics, followed by repeated fracturing of the now brittle pyroclastics and emplacement of gold-silver bearing quartz veins and veinlets.

The Vault deposit is significant in that it is a new discovery and it is basically a blind deposit, with no significant gold values on surface.

There is little documentation of exploration on the EPI Claims. Pacific Petroleum (Petro Canada) carried out regional geological and geochemical surveys on the property for uranium in 1976. Several uranium, copper, molybdenum and fluorine anomalies were located by the survey. Detailed grid follow up and diamond drilling occurred in 1977 and 1978 but no radioactive deposits were found. In 1978 the claims were placed in the uranium moratorium, amd when the claim came open in 1989 they were staked by Grant Crooker.

2.0 EXPLORATION PROCEDURE

The 1989 program consisted of prospecting and geologically mapping various areas of the property and establishing two grids (A and B) and carrying out detailed prospecting, mapping and geophysical surveying on the grids. Interpretex Resources Ltd. carried out preliminary I.P., magnetometer and VLF EM surveys on a small portion of Grid A.

The south end of a small lake near the legal corner post for the EPI 1 and 2 Claims was chosen as 10,000N and 10,000E. The necessary baselines and tielines were established from this point.

GRID PARAMETERS

-declination 21°
-Grid A baseline direction N-S along 8700E
-survey lines perpendicular to baseline
-survey line separation 50 and 100 meters
-survey station spacing 12.5 and 25 meters
-survey total - flagged lines - 19 kilometers
-survey total - cut I.P.lines - 5.3 kilometers
-Grid B baseline direction N-S along 6200E
-survey lines perpendicular to baseline
-survey line separation 100 meters
-survey station spacing 25 meters
-survey total - flagged lines - 17.25 kilometers

GEOCHEMICAL SURVEY PARAMETERS

-survey totals - 47 rock samples
- 4 heavy metal concentrates
-47 rock samples analyzed by 31 element ICP, Hg, F, & Au, (sample series 89-ER-1 to 89-ER-47)
-16 rock samples analyzed by Au, Ag, FA+AA, Sb, As, Hg, geochem, (sample series GS-1 to GS-16)
-4 heavies analyzed by 31 element ICP, Hg, F, & Au

The four heavies and rock samples labelled 89-ER were sent to Min-En Laboratories Ltd., 705 West 15th Street, North Vancouver, B.C. for geochemical analysis. Laboratory techniques for geochemical analysis consists of preparing samples by drying at 95° C, and seiving to minus 80 mesh or grinding to minus 150 mesh. A 31 element ICP analysis, Hg, F and Au (aqua-regia digestion, atomic adsorption finish) were then carried out on the samples.

The 16 rock samples labelled GS were sent to the Silver Valley Laboratory Inc., P.O. Box 929-One Gov't Gulch, Kellogg, Idaho for analysis. Laboratory technique included assaying gold and silver

by fire assay with an AA finish, and antimony, arsenic and mercury by geochemical methods.

The geochemical data was plotted on figures G-4 (1:15,000), and G-5 through G-7 (1:5,000).

GEOPHYSICAL SURVEY PARAMETERS

INDUCED POLARIZATION SURVEY

-survey carried out by Interpretex Resources Ltd.
-survey line separation 50 meters
-survey station spacing 25 meters
-survey totals - 2.7 kilometers

OMNI PLUS, VLF EM AND MAGNETOMETER SURVEY

-survey carried out by Interpretex Resources Ltd.
-survey line separation 50 meters
-survey station spacing 12.5 meters
-survey totals - 5.0 kilometers

The Interpretex Resources Ltd. technical report is included in its entirety in Appendix V. This report contains detailed technical data with the information plotted on figures 3 through 12.

TOTAL FIELD MAGNETIC SURVEY

-survey line spacing 100 meters
-survey station spacing 25 meters
-survey total - Grid A - 21.0 kilometers
-survey total - Grid B - 16.5 kilometers
-Scintrex MP-2 magnetometer used for all survey
-measured total magnetic field in gammas
-instrument accuracy ± 1 gamma

A base station reading was taken at each grid and this value was used to obtain standard values for all baseline readings. All loops ran off the baselines were then corrected to these standard values by the straight line method.

The magnetic data was plotted on figures G-8 through G-11 at a scale of 1:5000.

3.0 GEOLOGY AND MINERALIZATION

3.1 REGIONAL GEOLOGY

The EPI claims are located along the eastern margin of the Intermontane Belt of southern British Columbia. Most of the claims (figure G-3) are underlain by Early Tertiary volcanic and minor sedimentary rocks of the Penticton Tertiary Outlier. The Penticton Tertiary Outlier, as well as other bedded Tertiary deposits in southwestern British Columbia and northern Washington are erosional remnants of what was probably once a continuous belt composed of mainly volcanic rocks extending from central Washington to central British Columbia.

The Tertiary rocks rest on a pre-tertiary basement varying from Triassic or older metasedimentary and metavolcanic rocks of the Shoemaker and Old Tom Formations to Cretaceous and Jurassic granites, granodiorites and syenites.

A brief description of the Tertiary rocks is given below as described by Church (1973, 1979).

The basal Springbrook Formation is the oldest formation and rests unconformably on pre-tertiary basement rocks. The formation is mainly exposed along the western extremity of the area and is believed to range in thickness from 200 to 700 feet. The basal beds are a conglomerate containing large angular boulders, grading upwards into a conglomerate composed of smaller, more rounded material, to an uppermost strata consisting of tuffaceous sandstones and siltstones. At present a Middle Eocene age has been tentatively assigned to the formation, based on K-Ar dates obtained from similiar rocks in southern British Columbia.

The Springbrook Formation has been tentatively correlated with the following Tertiary sedimentary rocks: Kettle River, Curry Creek, Coldwater, Allenby and O'Brien Formations. The beds generally dip 10 to 15 degrees east.

The Marron Formation overlies with slight angular unconformity the Springbrook Formation and has been divided into the Yellow Lake, Kitley Lake, Kearns Creek, Nimpit Lake and Park Rill Members.

The Yellow Lake Member forms the lower most unit of the formation and varies from about 500 to 1,800 feet in thickness. The rocks can be broadly classified as anorthoclase-augite porphyry with many rocks containing rhomb-shaped phenocrysts of anorthoclase. In many places the rocks are amygdaloidal and contain abundant calcite and natrolite, some thomsonite and rarely brewsterite.

VAULT PROPERTY

EPI CLAIMS

OKANAGAN FALLS

KEREMEOS

OLALLA

SIMILKAMEEN RIVER

MEYERS FLAT

JULY 1979

PRELIMINARY MAP 35

GEOLOGY OF THE PENTICTON TERTIARY OUTLIER

BY B. N. CHURCH

SKAHA FORMATION

- 10a — MOSTLY CHERT AND GREENSTONE SLIDE BRECCIA AND SOME TEPHRITE LAVA OVERLAIN BY POLYMICTIC FANGLOMERATE
- 10b — CHANNEL DEPOSIT OF GRANITE BOULDER CONGLOMERATE AND BRECCIA AND ARKOSIC SANDSTONES

WHITE LAKE FORMATION

- 9 — MOSTLY VOLCANIC BRECCIAS INCLUDING PYROCLASTIC ROCKS AND LAHARS, MINOR TRACHYTIC AND ANDESITIC LAVAS
- 8 — VOLCANIC CONGLOMERATE, SANDSTONES, AND SHALES

MARAMA FORMATION

- 7a — MASSIVE APHANITIC DACITE LAVA AND SOME BRECCIA FORMING MOSTLY REMNANTS OF VOLCANIC DOMES
- 7b — VOLCANIC CONGLOMERATE WITH CLASTS FROM THE MARRON FORMATION
- 7c — RHYOLITE PYROCLASTIC ROCKS AND SOME LAVA

MARRON FORMATION

- 6 — PARK RILL MEMBER: MEROCRYSTALLINE ANDESTIC LAVA AND MINOR BRECCIA
- 5 — NIMPIT LAKE MEMBER: TAN TRACHYTE AND TRACHYANDESITE LAVA AND MINOR BRECCIA
- 4 — KEARNS CREEK MEMBER: OFTEN HIGHLY VESICULAR PYROXENE-RICH BASALTIC ANDESITE LAVA
- 3 — KITLEY LAKE MEMBER: MOSTLY TRACHYANDESITE LAVA WITH CONSPICUOUS GLOMEROPHENOCRYSTIC CLOTS OF FELDSPAR

MARRON FORMATION

- 2 — SHATFORD CREEK MEMBER: LOCAL DEPOSIT OF BROWN ANDESITE LAVA AND BRECCIA WITH SOME QUARTZ-FILLED AMYGDALES

YELLOW LAKE MEMBER:

- 1d — MOSTLY PYROXENE-RICH MAFIC PHONOLITE LAVA WITH LOCAL WELL-DEVELOPED PHENOCRYSTS OF RHOMB-ANORTHOCLASE AND SOME PRIMARY ANALCITE, ABUNDANT ZEOLITE FILLINGS IN CRACKS AND AMYGDALES
- 1c — PURPLE AND GREY VOLCANIC WACKE FROM EROSION OF 1a AND PINK RADIOACTIVE FELDSPATHIC TRACHYTIC ASH FLOW, SANDSTONE, AND CONGLOMERATE
- 1b — CLARK CREEK PORPHYRY: A SILL-LIKE BODY RELATED TO 1a WITH COARSE FELDSPAR PHENOCRYSTS

SPRINGBROOK FORMATION

- Oa — POLYMICTIC CONGLOMERATE AND BRECCIA WITH CLASTS DERIVED MAINLY FROM PRE-TERTIARY BEDDED ROCKS

KETTLE RIVER FORMATION

- Ob — MAINLY GRANITE BOULDER CONGLOMERATES, ARKOSE, VOLCANIC WACKE, AND RHYOLITE BRECCIA
- Oc — SHINGLE CREEK PORPHYRY: A COARSE SANIDINE QUARTZ PORPHYRY INTRUSION FEEDER TO THE RHYOLITE VOLCANICS OF Ob

PRE-TERTIARY BASEMENT ROCKS:

- Y — MAINLY GRANITIC INTRUSIONS
- Z — MAINLY CHERTS, GREENSTONES, SCHISTOSE ROCKS, AND MINOR INTRUSIONS

SYMBOLS

- DRIFT-COVERED AREA
- GEOLOGICAL BOUNDARY (APPROXIMATE)
- BEDDING: HORIZONTAL, INCLINED
- FAULT, APPROXIMATE, ASSUMED
- TOPOGRAPHICAL CONTOUR (INTERVAL, 500 FEET)
- STRUCTURE SECTION — A D
- STREAM
- MAIN ROAD
- CHEMICAL ANALYSIS STATION
- K/Ar SPECIMEN LOCALITY — dk
- DYKE
- INAMINO DRILL HOLE
- LAKE

GOLD OCCURRENCE

N

GRANT F. CROOKER

EPI CLAIMS

REGIONAL GEOLOGY

N.T.S. 82E- 4,5 OSOYOOS M.D., B.C.

0 2 4 KM.

SCALE AS SHOWN	DATE : DEC. 1989
DRAWN BY : G.C.	FIGURE Nº. G3

The Kitley Lake Member comformably overlies the Yellow Lake Member and has a relatively uniform thickness of 1,000 feet. It forms the lower part of the Marron Formation. The rocks form conspicuous, thick, tan trachyte flows with with discrete tabular crystals, polygonal clusters and clots of feldspar phenocrysts measuring 3 to 6 millimeters in diameter.

Conformably overlying the Kitley Lake Member in the middle part of the Marron Formation is the Kearns Creek Member. This unit attains a maximum thickness of about 400 feet and consists of dark brown, vesicular, basaltic lava and flow breccia. The rocks typically have abundant pyroxene phenocrysts and scattered laths of plagioclase. Most vesicules are filled with chlorite, chalcedony and some calcite.

The Nimpit Lake Member overlies the Kearns Creek Member conformably in the upper middle part of the Marron Formation. It varies between 200 and 1000 feet in thickness. The rocks are chemically similiar to the Kitley Lake trachyte and trachyandesite lavas but differ in texture and stratigraphic position. The trachyte flows are typically yellowish or cream coloured where fresh and contain scattered small phenocrysts of pyroxene, and radiating plagioclase glomerophenocrysts. Pyroclastic deposits are generally thin, discontinuous and composed of agglomerate and tuff.

The Park Rill Member forms the uppermost unit of the Marron Formation and conformably overlies the Nimpit Lake Member. The unit varies in thickness from 200 to 1500 feet and is mainly dark brown, non-vesiculiar andesite lavas. The rocks are typically merocrystalline, containing equal parts glass and crystal measuring about one millimeter in diameter.

The dip of the Marron beds rarely exceeds 30 degrees except in areas of severe fault disturbance. The beds are cut by numerous faults, many of which are of the gravity type show large vertical displacement. The Maron Formation appears to be correlative with the Midway, Princeton and Kamloops Groups.

The Marama Formation is a unit characteristically composed of rhyolitic and rhyodacitic rocks that unconformably overlie the Marron Formation and underlie the White Lake Formation. The rocks are up to 1,000 feet in thickness but in several areas the formation appears to be absent from the stratigraphic succession.

The lowermost beds of the Marama Formation consists of conglomerate, minor sandstone, and shale with seams of pyroclastic rocks intercalated throughout. These beds appear to be overlain by rhyodacite volcanic breccia and massive lava. The upper part and major portion of the formation is composed of thick rhyodacite lavas. These rocks are shades of grey, light brown and cream, and are brittle, non-vesiculiar and tend to

cleave into thin plates perpendiculiar to the bedding surface.

The Marama beds show great variation in attitude and have been cut by many north trending normal faults, some of which have downthrows of several hundred feet. The Marama Formation may be comparable to the Sanpoil Volcanics in northeastern Washington State.

The White Lake Formation overlies the Marron and Marama Formations with angular unconformity and is in turn overlain by younger sedimentary rocks and breccias. The formation consists of a thick succession of lake and stream sediments and volcanic rocks that is about 3,500 feet thick at its thickest section.

The White Lake beds are divisable into three members. The lower and middle members contain interdigitated sedimentary and volcanic deposits while the upper member consists mainly of volcanic rocks with some intercalated sedimentary rocks.

The stratigraphy of the sedimentary rocks consists of a lower succession of thick beds of fine grained sediments overlain by equally thick beds of coarse grained sediments. The mudstones range in colour from light to dark grey and are thinly bedded, but because of their non-resistant nature are poorly exposed. The sandstones are are commonly massive but locally thinly bedded or flaggy. These rocks contain a high percentage of volcanic fragments and may be best described as a volcanic wacke. Carbonaceous shales with thin seams of coal are reported throughout the sequence.

The sedimentary rocks are intercalated with many lenses and layers of pyroclastic rock with the tuffaceous layers generally non-fissile and light coloured. Wood, stems and leaf fossils are abundant in these rocks, especially in mudstones. Needle-bearing branches identified as Metasequoia sp. are common, along with some fern like Comptonia sp. and broad leaf foliage.

The volcanic rocks have a thickness of about 3,000 feet and can be divided into three members. The lowest member is about 1,500 feet thick and consists of thin feldspar porphyry lava flows and abundant lahar and pyroclastic rocks containing some accidental fragments of Marama dacite. The middle member, about 1,200 feet thick consists of a few feldspar porphyry lava flows and much lahar and agglomerate. The upper member is about 300 feet thick and consists mainly of brown augite porphyry lava and breccia containing small quartz xenoliths and a few blocks of granite.

The White Lake beds are folded and cut by many faults. Near White Lake the beds are folded into the broad "White Lake syncline", plunging about 25 drgrees east. White Lake beds are generally more steeply inclined than older Tertiary rocks in adjacent areas.

These beds are probably of Eocene but may be of Oligocene age and bear marked structural and lithilogical similarity to the lower unit of the Klondike Mountain Formation north of Republic in Washington State.

The Skaha Formation contains the youngest Tertiary beds in the area. It is slightly younger than the White Lake Formation and overlies the White Lake Formation with minor unconformity. The Skaha Formation consists of two members, a lower one composed mainly of slide breccia and some volcanic rock, and an upper one composed of coarse boulder block conglomerate (fanglomerate).

The lower member consists of three facies, basal breccia, augite porphyry and granite breccia. The basal breccia facies are composed mainly of fragments of the Shoemaker, Old Tom and Vaseaux Formations in a chaotic mixture of coarse and finely broken rocks, massive blocks of chert and greenstone, and some conglomerate. The augite porphyry lave (tephrite) is massive, dense, dark brown and contains large euhedral augite crystals embedded in a fine grained matrix. It makes up only a small portion of the formation. The granite breccia facies consists of slide debris, mainly slabs and blocks of granite and some aplite, and a few beds of granite boulder conglomerate and arkose.

The upper member of the Skaha Formation consists of coarse clastic sedimentary rock of mixed provenance. The unit is a thick bedded mixed boulder and block conglomerate containing fragments up to six feet in diameter, but commonly less than one foot. The fragments are composed of older Tertiary and pre-Tertiary rocks.

The rocks of the Penticton Tertiary Outlier have been intersected by many important gravity faults. Folds are important only within the White Lake and Okanagan Falls synclines. The main structural features are as follows: 1) The area underlain by Tertiary rocks is mostly bounded by gravity faults. 2) The Tertiary pile is thickest and structurally lowest near the Okanagan Valley. 3) Beds commonly dip in an easterly direction, westerly dipping beds are few.

3.2 CLAIM GEOLOGY

The EPI Claims are mainly underlain by Tertiary volcanic rocks with minor sedimentary rocks. Geological mapping at a scale of 1:5,000 was carried out on Grids A and B (Figures G-5 and G-6) as well as the EPI 7, 8 and 9 Claims (Figure G-7). This information was compiled on figure G-4 at a scale of 1:15,000 to allow interpretation of the data as a whole. The same terminology for the rock units used by Church was kept for the claim geology to keep continuity of information. A brief description of the rock units is given below.

The oldest rocks are pre-Tertiary units occurring along the southern and western boundraries of the claim group. They have been labelled unit Z, and divided into Z-a, consisting of mainly cherts, argillites and quartzites and Z-b, consisting of greenstones.

The oldest Tertiary rocks are sediments of the Springbrook Formation, Unit 0. The Springbrook Formation has been divided into units 0-a and 0-b. The lowest section, unit 0-b is a polymictic conglomerate with well rounded clasts, mainly of chert, up to 10 centimeters in diameter. A few narrow interbeds of fine grained tuffaceous sandstone occur between the conglomerate beds. The top of the unit, 0-a is composed of grey tuffaceous sandstones and siltstones. The Springbrook Formation outcrops along the western portion of the claims and generally strikes between 317° and 338° with dips of 18° to 34° east.

Rocks of the Marron Formation overlie the Springbrook Formation and have been divided into the Yellow Lake, Kitley Lake, Kearns Creek and Nimpit Lake Members.

The Yellow Lake Member, unit 1, is the lowest member and has been divided into units 1-a and 1-b. Unit 1-a is generally a light green, anorthoclase-augite porphyry with abundant rhomb shaped phenocrysts of anorthoclase. Tiny flecks of biotite are often seen scattered within the matrix. Unit 1-b differs from 1-a in that it contains abundant amygdules mainly filled with quartz and calcite.

The Yellow Lake Member underlies most of Grid A west of baseline 8700E and outcrops along the central portion of the EPI 7 Claim.

The Kitley Lake Member, unit 3, overlies the Yellow Lake Member and is divided into units 3-a and 3-b. Unit 3-a is a cream to tan coloured trachyte and trachyandesite with abundant discrete tabular crystals and clots of feldspar phenocrysts 3 to 6 millimeters in diameter. Plagioclase is the most abundant feldspar and biotite flecks are often imbedded in the fine crystalline matrix. Unit 3-b is an agglomerate which has only been noted at approximately 9,015N & 6,920E. It is composed of

clasts of dark purple trachyandesite up to one meter in diameter.

Rocks of the Kitley Lake Member are by far the most abundant underlying the EPI Claims. They underlie all but the extreme western portion of Grid B, the western and northern portions of Grid A and large portions of the EPI 7, 8 and 9 Claims.

The Kearns Creek Member, unit 4 overlies the Kitley Lake Member. It has been divided into units 4-a, 4-b and 4-c. Unit 4-c is the lowest and consists of a relatively narrow band of grey tuffaceous sandstone and mudstone overlying the Kitley Lake Member. This unit is very recessive, only exposed in road cuts and strikes 016°to 031° and dips gently east. It outcrops through the EPI 7, 8 and 9 Claims and is poorly exposed in the western portion of Grid B.

Units 4-a and 4-b make up almost all of the Kearns Creek Member. Unit 4-b is a dark brown to black, massive basaltic andesitic lava, typically with abundant pyroxene phenocrysts and scattered laths of plagioclase. Unit 4-a is similiar to 4-b, except it has abundant vesicules often filled with chlorite, chalcedony and calcite. These units outcrop through the central portion of the EPI 8 Claim, the western portion of the EPI 9 Claim and the western part of Grid B.

The Nimpit Lake Member, unit 5, overlies the Kearns Creek Member. This is commonly a light tan coloured trachyte containing scattered small phenocrysts of pyroxene and radiating plagioclase in a fine crystalline matrix. Several relatively narrow beds of pyroclastics were noted immediately above the Kearns Creek contact and scattered outcrops of tan tuff were exposed in road cuts. This unit outcrops in the northeast corner of the EPI 8 Claim.

A number of northerly trending faults were noted on the property. At the western part of Grid B a fault contact separates Kearns Creek rocks from Kitley Lake rocks. A major northeasterly trending structural feature follows Armstrong and Horn Creeks.

Several north to northwesterly trending faults occur on Grid A. These form the contact between Yellow Lake and Kitley Lake rocks. A northeasterly trending fault in the southeast corner of the grid separates older pre-Tertiary rocks from the Tertiary rocks.

3.3 MINERALIZATION AND ALTERATION

A number of clay altered zones were found on the property along with a significant amount of chalcedony float. Table I gives a summary of the rock geochemical results from sampling.

Weak to moderate clay altered Kitley Lake rocks are exposed intermittently in road cuts for several hundred meters in the western portion of the EPI 2 Claim (samples 2-7). The rocks show some fracturing and rustiness but are weakly anomalous in only fluorine.

A number of clay altered zones were found on Grid A. Weak to strong clay alteration with pyrite and fracturing (samples 15 and 23) is exposed for about 600 meters along a road running from line 10,800N & 8,400E to line 11,400N & 8,240E. Sample 23 gave a weakly anomalous 30 ppb mercury but was not anomalous in gold.

Strong clay alteration was exposed in outcrop and found in float along the main road at 10,500N & 8,900E (samples 17 and 19). These rocks were entirely altered to clay and the sample of float was brecciated and rusty.

Outcrop of clay altered dacite? with possible crosscutting gas streaming features is exposed in a road cut at 10,700N & 8,850E (sample 8). The extent of the outcrop is not known due to overburden cover. However an induced polarization survey carried out over the area indicated a weak chargeability anomaly, along with a VLF EM conductor and several magnetic low features. The sample taken at this location was not anomalous in any elements.

A small outcrop of bleached Yellow Lake rocks are exposed in a landing at 11,015N & 8,515E (sample 16). The outcrop is weakly clay altered and fractured with tiny calcite veinlets with yellow and orange iron oxides. The sample was weakly anomalous in fluorine.

A number of other samples (13, 18, 21-22) were collected from the grid area, mainly of chalcedony float. However none of the samples gave anomalous values in gold.

Five float samples (43-47) of calcite and chalcedony on narrow fractures were collected from the area of Manuel Creek. Several of these gave weakly anomalous mercury values (45-120 ppb) but the source of the float is not known at this time.

Two areas of interest were found on Grid B, the first at the head of Armstrong Creek at approximately 8,450N & 5,725E. Strongly sheared, rusty and weakly clay altered Kitley Lake rocks are exposed in several road cuts. Several distinct fracture systems were observed but the four rock samples (9-12) taken did not show any anomalous values.

The second area of interest is located in the eastern portion of the grid and is the the most significant area. The area extends from line 8,500N between 6,700E & 6,900E to line 9,200N between 6,900E & 7,200E. Within this area a large amount of chalcedony float was found. Some of the float consisted of sub-angular boulders of bleached Kitley Lake rocks up to one meter in diameter. The rocks were weakly silicified with limonite, minor pyrite, calcite and manganese stain on the fractures. Sampling (samples 35-37) gave anomalous mercury values up to 130 ppb and arsenic up to 77 ppm although gold was not anomalous. Numerous pieces of chalcedony float, some up to one meter in diameter were also sampled. These consisted of multi-generations of varicoloured chalcedony surrounding clay altered and silicified breccia fragments. Sampling (38-42) of this float gave weakly anomalous mercury values in the order of 55 to 65 ppb. Little outcrop is exposed throughout this area.

A zone of weak fracturing and silicification occurrs immediately west of the area of chalcedony float. The zone extends from approximately line 8,900N between 6,750E & 6,850E to line 9,000N between 6,775E & 6,875E. Within this zone chalcedony occurrs on a number of widely spaced fractures. At several locations the chalcedony widens to 2 to 6 centimeters over lengths of 30 centimeters. Sampling (30-32) of the chalcedony gave weakly anomalous arsenic values in the 30 to 60 ppm range.

A total of 16 rock samples (GS-1 to GS-16) were also taken by the Hecla Mining Co. and the locations of these samples are given in Appendix III. These samples returned low gold values with the highest value 40 ppb.

Sample No.	Au ppb	Hg ppb	F ppb	Ag ppm	As ppm	Mo ppm	Ba ppm
1	5	5	800	.9	1	1	285
2	5	10	980	.7	4	2	200
3	10	5	990	1.0	9	1	182
4	5	5	790	.7	6	2	162
5	5	15	950	.8	12	2	178
6	5	5	675	.8	9	2	215
7	10	5	865	.9	6	1	400
8	5	10	125	.1	6	1	64
9	5	5	90	.9	6	3	248
10	5	5	795	1.0	5	2	1926
11	10	5	660	.9	3	1	451
12	5	5	540	.9	14	1	709
13	5	5	1135	1.3	39	5	178
14	5	5	270	.5	11	2	195
15	10	5	710	.7	8	3	214
16	5	5	945	1.2	14	2	569
17	5	5	130	.1	1	3	28
18	5	5	105	.4	19	2	221
19	5	25	530	1.0	7	2	315
20	10	20	800	2.5	23	5	162
21	10	15	220	.5	4	3	309
22	5	15	140	.6	22	2	269
23	5	30	750	1.6	33	4	391
24	5	20	300	.7	14	1	74
25	10	15	175	.9	20	3	502
26	10	10	115	.4	18	2	35
27	5	5	165	.5	20	1	231
28	5	5	115	.9	1	1	1381
29	5	30	165	.9	8	1	519
30	5	20	400	.9	56	4	198
31	5	15	425	.9	30	3	119
32	5	10	440	.6	30	4	133
33	10	40	140	.6	25	2	204
34	5	10	300	.3	1	3	83
35	5	130	475	1.3	42	5	414
36	5	80	510	1.2	77	12	423
37	5	110	660	1.2	43	6	356
38	5	25	165	.7	27	3	154
39	5	15	135	.6	11	3	874
40	20	20	130	.4	18	3	248
41	10	55	135	.8	14	3	121
42	5	65	155	1.2	20	2	318
43	5	120	270	.6	4	4	16
44	5	70	520	2.5	63	5	45
45	5	95	320	1.0	1	2	1261
46	5	45	485	1.1	1	2	514
47	5	5	545	.7	38	7	142

Table I - Rock Geochemical Results, EPI Claims.

4.0 GEOCHEMISTRY

4.1 HEAVY METAL CONCENTRATES

Four heavy metal concentrate samples (Figure G-4) were taken from the property, two on Manuel Creek and two on Horn Creek. The samples were collected by taking three pans of sand and gravel at each sample location and panning the material until only the heavy metal concentrate remained. The samples were then sent for geochemical analysis.

The creeks flow water yearround, but the flow is intermittent with springs providing the source of water and many sections are dry. The sediment in the creeks is localized and in most cases very coarse. Higher sections of the creeks contain almost 100% organic material.

A summary of the geochemical results is given in Table II. None of the samples were anomalous for gold or mercury. However sample H-1 was anomalous for fluorine and arsenic, and sample H-3 was weakly anomalous in silver.

Sample No.	Au ppb	Hg ppb	F ppb	Ag ppm	As ppm	Mo ppm	Ba ppm
H-1	10	5	1150	1.5	69	1	61
H-2	5	5	645	.6	1	1	47
H-3	5	5	785	2.6	34	1	54
H-4	5	5	640	1.5	18	3	92

Table II - Heavy Metal Concentrates, EPI Claims.

5.0 GEOPHYSICS

5.1 INDUCED POLARIZATION SURVEY

An induced polarization survey was carried out over a small portion of Grid A by Interpretex Resources Ltd. to determine the response over an area with clay altered dacite and possible crosscutting gas streaming features. Only a summary of the survey will be given here with the detailed information given in Appendix V.

The induced polarization/resistivity survey delineated one apparent chargeability trend (Figure G-10) on lines 10,700N, 10,750N and 10,800N at approximately 8,850E. This is a weak chargeability trend which may represent either sulphide mineralization in bedrock or membrane polarization within clay layers in the alteration zone. Although the trend is weak, it is important due to its coincidence with the known alteration zone and because chargeability pseudosections suggest that the trend has good depth extent. Apparent resistivity data did not appear to delineate any anomalies coincident with the chargeability trend.

5.2 OMNI PLUS COMBINED VLF EM AND MAGNETOMETER SURVEY

An Omni plus combined VLF EM and magnetometer survey was carried out by Interpretex Resources Ltd. over 5 kilometers of Grid A, near a clay altered zone. Again, only a summary of the information will be given here with more detailed information given in Appendix V.

Several magnetic features and VLF EM conductors were indicated by the survey and are described in Appendix V. The conductor (Figure G-10) associated with the induced polarization chargeability trend appears to be the most important feature. This is a weak to moderate conductor exhibiting short wavelengths extending from 10,800N & 8862.5E to 10,650N & 8762.5 E. On lines 10,600N and 10,700N between 8700E and 8800E the continuation of the conductor becomes indefinite since the conductor may follow either of two different conductive trends.

5.3 MAGNETOMETER SURVEY

A magnetometer survey was carried out over both Grid A (Figures G-8 and G-9) and Grid B (Figures G-10 and G-11).

The magnetic response over Grid A was observed to be moderately active with total field magnetic values ranging from 56,011 to 58,971 gammas. The magnetic highs are believed to represent more

mafic rocks within the total volcanic package.

A large number of north to northwesterly trending magnetic lows were indicated by the survey. These zones of low magnetism are believed to represent structural trends and often occur coincidentally with topographic lows. Several of the magnetic lows coincide with faults separating different rock units. These include the magnetic lows between 10,000N & 8,850E and 10,800N & 8,400E, and between 11,400N & 8,600E and 11,000N & 8,550E.

Two other magnetic lows trending from 10,200N & 8,900E to 10,900N & 8,875E, and 10,000N & 9,000E to 10,800N & 8,900E may be significant. The first appears to be associated with the clay altered dacite at 10,725N & 8,825E, occurs approximately 25 meters east of the chargeability anomaly and is partially coincidental with a VLF EM conductor. The second appears to be associated with a clay altered fault zone exposed in a road cut at 10,500N & 8,925E, and occurrs 10 to 50 meters east of the chargeability anomaly. These lows may represent possible feeder zones for epithermal mineralization.

The magnetic response over Grid B was again observed to be moderately active with total field magnetic values ranging from 55,686 to 58,080 gammas. A large number of magnetic highs and lows were observed from the survey. The highs are believed to represent more mafic rocks within the volcanic unit while the lows represent structural trends.

A large number of north to northeasterly trending zones of low magnetism were observed, often occurring with topographic lows. The most significant of these magnetic lows appears to define a large fault zone occurring along Armstrong Creek and Horn Creek. A second magnetic low between 8,500N & 5,525E and 9,200N & 5,300E defines a fault zone separating Kearns Creek and Kitley Lake rocks. A third area with a number of magnetic lows occurrs near a logging road running from 8,500N & 6,700E to 9,100N & 7,075E. These lows occurr in an area where a significant amount of chalcedony float has been found and may represent possible feeder zones for epithermal mineralization.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The EPI Claims are located in a favourable geological environment for epithermal gold and silver mineralization as they are mainly underlain by Tertiary volcanic and sedimentary rocks of the Penticton Tertiary Outlier. At least three gold occurrences are found within the Tertiary rocks of the area including the Vault, Dusty Mac and Venner Meadows Properties. These gold occurrences are related to strong structural features.

The 1989 exploration program on the EPI Claims consisted of geological mapping and prospecting over various areas of the property, and establishing two grids and conducting geological mapping, prospecting and magnetometer surveying over the grids. Interpretex Resources Ltd. carried out orientation induced polarization and Omni plus combined VLF EM amd magnetometer surveys over part of Grid A.

The program yielded a number of favourable results for the presence of epithermal gold mineralization. The magnetometer survey indicated a large number of north trending magnetic lows which represent major structural trends. These structural trends have the potential to be feeder zones for epithermal gold mineralization.

The induced polarization survey delineated a weak chargeability anomaly near a clay altered outcrop of dacite. This anomaly may represent sulphide mineralization within an epithermal system.

Prospecting and geological mapping resulted in the discovery of a number of weakly to strongly clay altered zones and areas with chalcedony float. The most significant of these zones occurrs on Grid B where sampling gave weakly anomalous mercury (130 ppb) and arsenic (77 ppm) values. The clay alteration may be indicating favourable structures with epithermal gold mineralization at depth.

Recommendations are to continue exploration on the property. This should include continuing geological mapping and prospecting on all areas of the property and carrying out VLF EM surveying and soil sampling over favourable structural trends and geological environments which have been located by this survey.

Respectfully submitted,

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Geologist

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To Twin Lakes

EPI-6 EPI-5

EPI-12 EPI-13 EPI-4 EPI-3 EPI-1 EPI-2

EPI 10 EPI-11 EPI-9 EPI-7 EPI-8

GRID A

GRID B

114+00 N

100+00 N

93+00 N

85+00 N

B.L. 87+00E

B.L. 62+00 E

NO STAKING AREA

PARK

KING 5

KING 4

Horn Creek Road

Horn Creek

Park Rill

Taylor Lake road

Armstrong Creek

Daly road

Daly Creek

Manuel Creek

Power line

Fairview road

Blind Creek

KEREMEOS

LEGEND

MARRON FORMATION
- NIMPIT LAKE MEMBER
  - 5 Trachyte, trachyandesite, minor tuff & breccia
- KEARNS CREEK MEMBER
  - 4a Vesicular basaltic andesite lava
  - 4b Massive " " "
  - 4c Tuffaceous sandstone & siltstone
- KITLEY LAKE MEMBER
  - 3a Tan trachyte & trachy andesite
  - 3b Agglomerate with trachyte & trachyandesite clasts
- YELLOW LAKE MEMBER
  - 1a Anorthoclase-augite porphyry
  - 1b " " " with abundant amygdules

SPRINGBROOK FORMATION
- 0a Tuffaceous sandstone, minor siltstone
- 0b Polymictic conglomerate

PRETERTIARY BASEMENT
- Za Chert, argillite, quartzite
- Zb Greenstone

× Outcrop
Geological contact – defined, approx., assumed
Fault — " " "
Bedding
Fracturing
○ 89-2 Bedrock sample location & Nº.
△ 89-5 Float " " " "
○ 89-2H Heavy metal concert. sample location & Nº.
Grid station
Clay alteration

Swamp
Creek
—1100— Contour at 100 m. interval
Road
Legal corner post

N

GRANT F. CROOKER

EPI CLAIMS

CLAIM GEOLOGY

N.T.S. 82E-5W OSOYOOS M.D., B.C.

0 500 1000 Metres

SCALE 1:15,000	DATE: DEC. 1989
DRAWN BY: G.C.	FIGURE Nº. G4

82+00E

B.L. 87+00E

92+00E

97+00E

114+00 N

110+00N

105+00 N

100+00N

89-13

89-16 rusty

89-23

89-15

89-8

89-18

89-19

89-20

89-17

89-13

89-21

89-22

rusty

rusty

calcite

DACITE

strong clay alt.

rusty

calcite

rusty calcite

calcite

3a ?

3a

3a

3a

3a

1

1

1

1

1

1

1

1

EPI 1

EPI 2

Za

LEGEND

MARRON FORMATION
- NIMPIT LAKE MEMBER
  - 5 Trachyte, trachyandesite, minor tuff & breccia
- KEARNS CREEK MEMBER
  - 4a Vesicular basaltic andesite lava
  - 4b Massive " " "
  - 4c Tuffaceous sandstone & siltstone
- KITLEY LAKE MEMBER
  - 3a Tan trachyte & trachy andesite
  - 3b Agglomerate with trachyte & trachyandesite clasts
- YELLOW LAKE MEMBER
  - 1a Anorthoclase-augite porphyry
  - 1b " " " with abundant amygdules

SPRINGBROOK FORMATION
- Oa Tuffaceous sandstone, minor siltstone
- Ob Polymictic conglomerate

PRETERTIARY BASEMENT
- Za Chert, argillite, quartzite
- Zb Greenstone

- Outcrop
- Geological contact – defined, approx., assumed
- Fault — " " "
- Bedding
- Fracturing
- 89-2 Bedrock sample location & Nº.
- 89-5 Float " " " "
- 89-2H Heavy metal concert. sample location & Nº.
- Grid station
- Clay alteration
- Spring
- Creek
- Road
- Legal corner post
- Swamp
- Py Pyrite

N

GRANT F. CROOKER

EPI CLAIMS
GRID A
GEOLOGY

N.T.S. 82E -5W OSOYOOS M.D., B.C.

0 100 200 300 METRES

SCALE 1:5000	DATE : DEC. 1989
DRAWN BY : G.C.	FIGURE Nº. G 5

CHONG

52+00E 57+00E B.L. 62+00 E 67+00E 72+00E

90+00N

85+00 N

Horn Creek road

Power line

S. Fork Horn Cr.

Armstrong Cr.

89-24 89-25 89-27 89-26 89-34 89-2H 89-33 89-35 89-38 89-31,32 89-30 89-36 89-37 89-39,40 89-28 89-29 89-41 89-42 89-10 to 12 89-9

ZONE OF WEAK FRACTURING & SILICIFICATION

3a 3a 3a 3a 3a 3b 4c 4a 3a

70 62

LEGEND

MARRON FORMATION
- NIMPIT LAKE MEMBER
  - 5 Trachyte, trachyandesite, minor tuff & breccia
- KEARNS CREEK MEMBER
  - 4a Vesicular basaltic andesite lava
  - 4b Massive " " "
  - 4c Tuffaceous sandstone & siltstone
- KITLEY LAKE MEMBER
  - 3a Tan trachyte & trachy andesite
  - 3b Agglomerate with trachyte & trachyandesite clasts
- YELLOW LAKE MEMBER
  - 1a Anorthoclase-augite porphyry
  - 1b " " " with abundant amygdules

SPRINGBROOK FORMATION
- 0a Tuffaceous sandstone, minor siltstone
- 0b Polymictic conglomerate

PRETERTIARY BASEMENT
- Za Chert, argillite, quartzite
- Zb Greenstone

Outcrop
Geological contact – defined, approx., assumed
Fault — " " "
Bedding
Fracturing
89-2 Bedrock sample location & Nº.
89-5 Float " " " "
89-2H Heavy metal concert. sample location & Nº.
Grid station
Clay alteration
Spring
Creek
Road
Legal corner post
Swamp
py Pyrite

N

GRANT F. CROOKER

EPI CLAIMS
GRID B
GEOLOGY

N.T.S. 82E-5W OSOYOOS M.D., B.C.

0 100 200 300 METRES

SCALE 1:5000	DATE : DEC. 1989
DRAWN BY : G.C.	FIGURE Nº. G6

CHONG