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OK SYNDICATE
INTERIM REPORT

Orvana Resources
1991

OK Syndicate
Interim Report
November 1, 1991

The Okanogan Syndicate (OK Syndicate) has generated and acquired 8 exploration projects as a result of the 1991 field season through November 1, 1991.

These projects are predominantly gold skarns (the original basis for the OK Syndicate); however, several other target types exist. The properties and model type are as follows:

Project	Model
Mother Lode	Au Skarn
Thimble Mtn	Au Skarn/precious metal replacement
Eholt	Au Skarn
Burnt Basin	Au Skarn/precious metal replacement
Lone Silver	Structurally/stratigraphically controlled bulk mineable Au
Swift Creek	Structurally/stratigraphically controlled bulk mineable Au/ Au Skarn/Cu-Au porphyry
Kelly Camp	Au Skarn
Goosmus Creek	Presious metal replacement/ Au Skarn/Gold enriched alkaline intrusive

The eight projects vary in maturity from grass roots (Goosmus Creek) to drill target defined (Mother Lode). This report contains individual property descriptions as well as proposed programs and budgets. The budgets are designed to continue testing the defined targets and to generate drill targets on the others. When a project approaches the drilling stage the project should be transferred into a joint venture.

At present, Mother Lode and Thimble Mountain are proposed to become joint ventures while the remainder would be funded by the OK Syndicate budget. The Lone Silver property could easily move into the joint venture stage following a successful stage of work. Additional reconnaissance of new properties and continued work on existing syndicate projects would warrant further funding of the OK Syndicate from now through the field season 1992.

The budgets as outlined in the text are as follows: All funds are in U.S. dollars.

us $

Property	Syndicate Budget	JV Budget
Mother Lode		$ 2~~44~~ 64,000
Thimble Mtn		251,375
Eholt	$ 32,759	
Burnt Basin	93,510	
Lone Silver	58,025	Phase II $112,200*
Swift Creek	13,679	
Kelly Camp	51,645	
Goosmus Cr	42,680	
Syndicate budget existing projects	$292,298	$495,375**

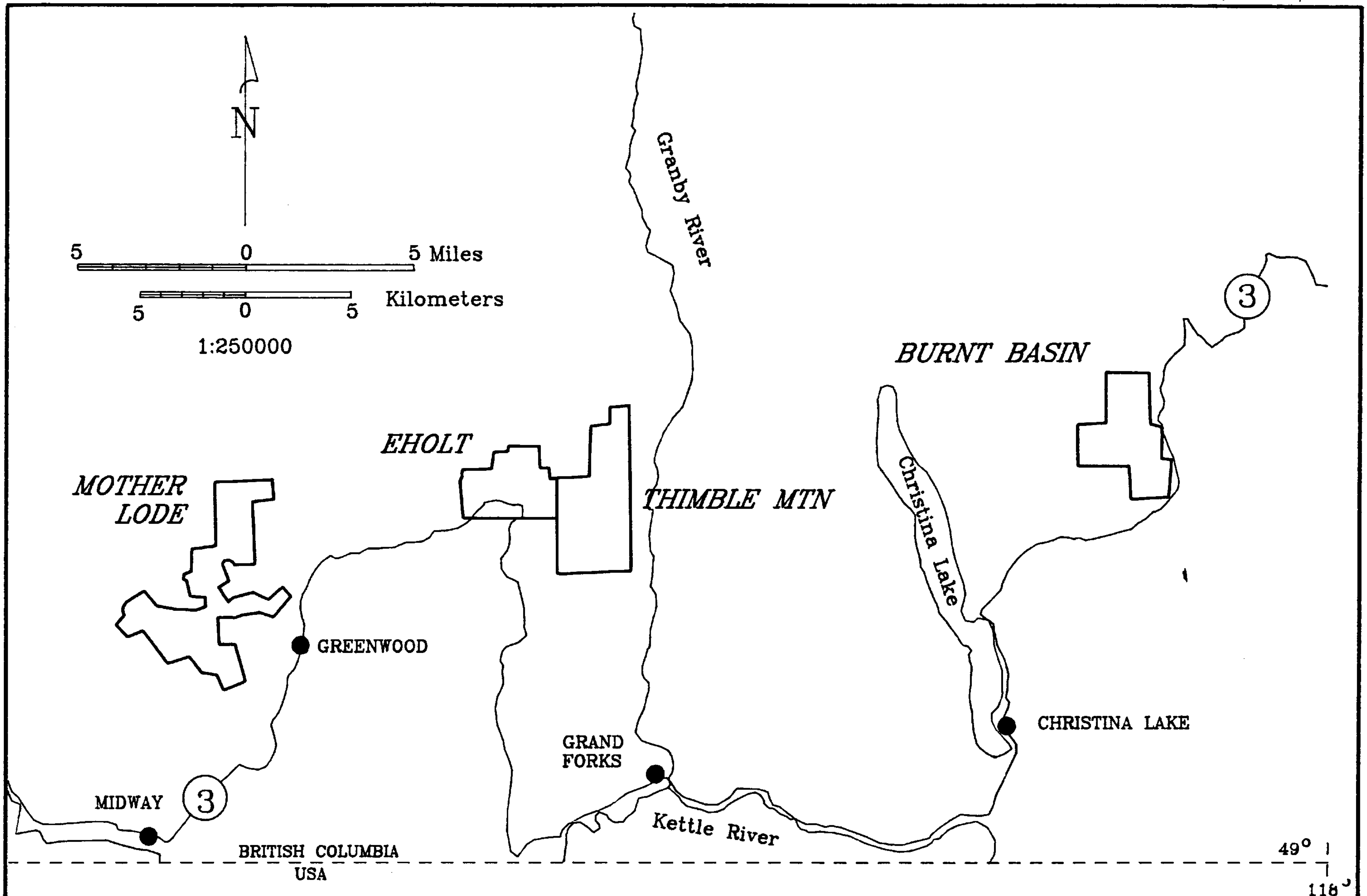
Syndicate budget for reconnaissance and new acquisitions $150,000 for US & Canada

* Contingent upon a successful Phase 1 Program
** Does not include Phase 2 budget for Lone Silver

Projected Totals	Recon Syndicate	Projects w/i Syndicate	Joint Venture Projects
	U.S.$150,000	U.S.$292,298	U.S.$495,375

Total Property Payments Cdn $ 170,500 - U.S. $144,925

Note: Payments may be substantially reduced as projects are evaluated. As a whole, these property payments do not escalate.



OK SYNDICATE PROPERTY LOCATIONS
Greenwood Mining District, B.C.

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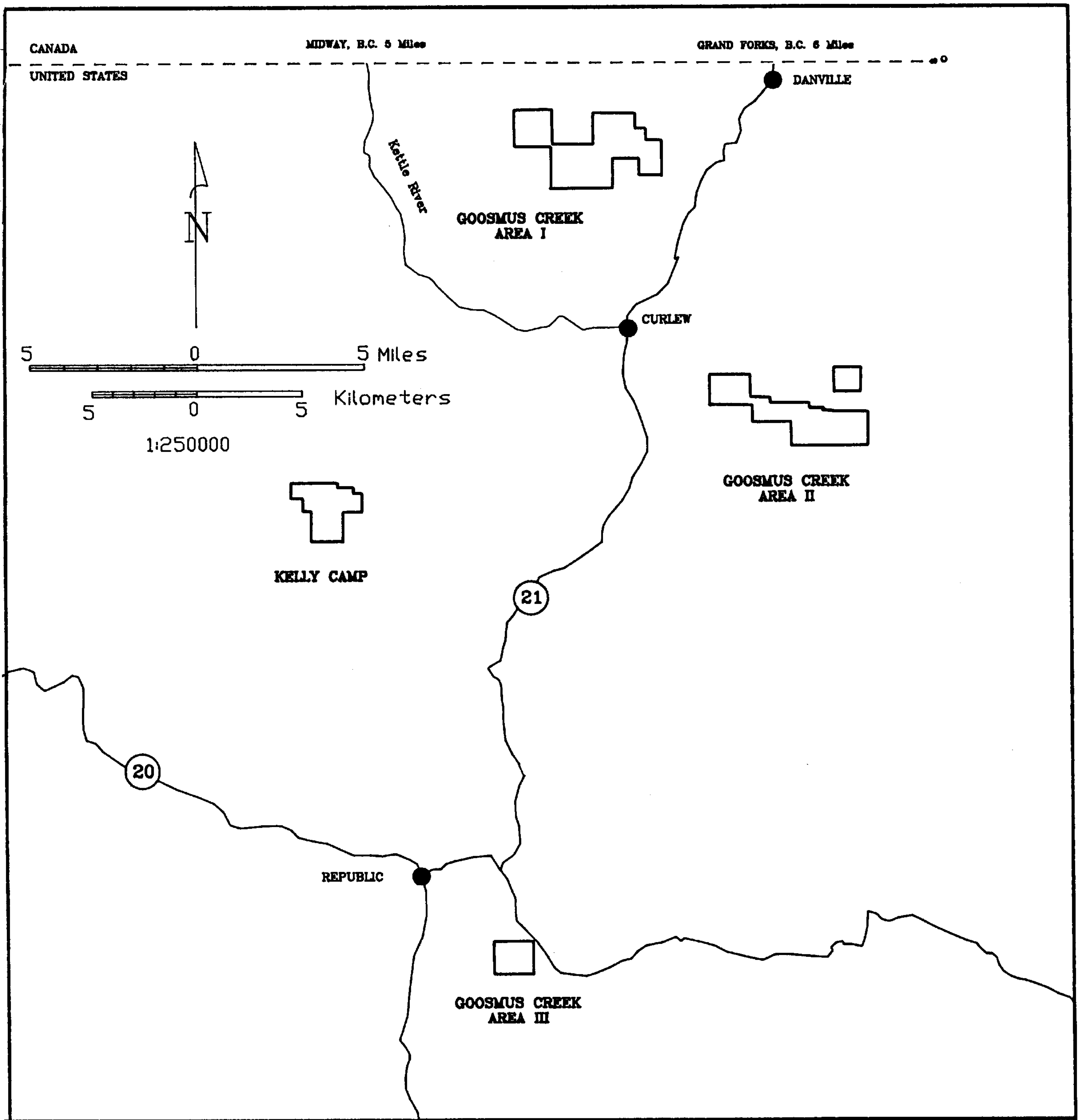

OK SYNDICATE PROPERTY LOCATIONS
Republic Mining District, WA

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Fig. 1

MOTHER LODE

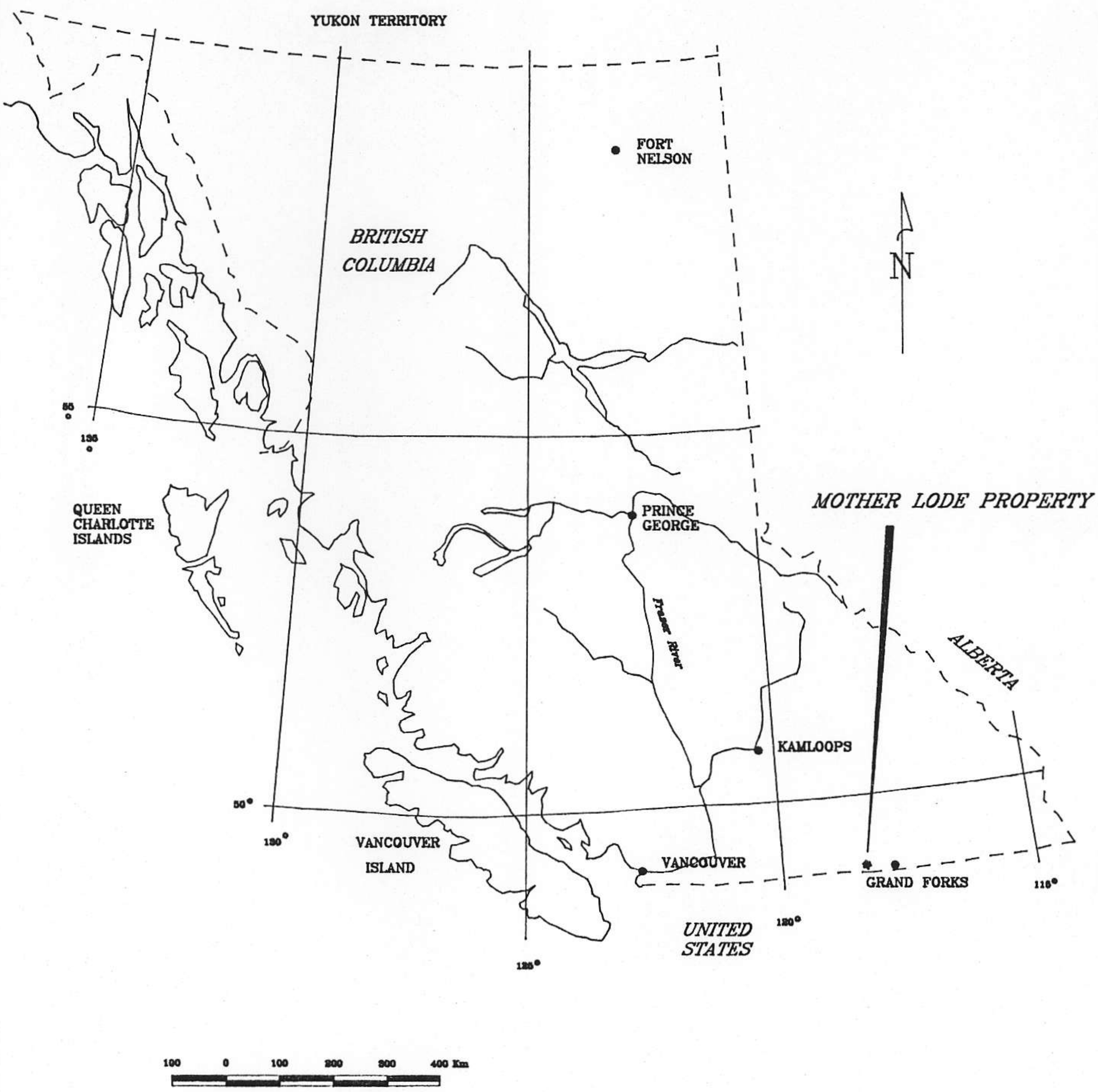

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Fig. 1

LOCATION MAP

OK SYNDICATE
Northeastern Washington and southern British Columbia

Oct. 91

Summary Report on

Mother Lode - Greyhound Claim Group

Greenwood Mining Division, British Columbia

NTS 82E/2E

49°05'30" - 49°07' N. Latitude, 118°41'30" - 118°44' W. Longitude

For

Orvana Resources Corp.
Coeur d'Alene, ID

Art Ettlinger, November 1991

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Location

The Mother Lode - Greyhound property is located 2 km northwest of the Greenwood townsite within the Deadwood mining camp in the Greenwood Mining Division, British Columbia (Fig. 1). The property is centered at approximately 118°43' W. Long. and 49°06' N. Lat., on NTS map sheet 82E/2. Access to the property is excellent with an all-season gravel road leading from Greenwood to the property. Numerous secondary mining and logging roads cross the property.

Property Description

The Mother Lode - Greyhound property is the subject of an option/joint venture between Pan Orvana Resources, on behalf of the OK syndicate, and International Corona Corp. The property consists of 13 crown granted mineral claims, two reverted crown grants, four mineral leases, and 18 located mineral claims and covers an area of approximately 437 hectares (Fig. 1).

In October 1991, Pan Orvana signed an agreement with International Corona Corp. to earn up to a 60% interest in the property after spending $1.6 M in exploration costs and property payments of $100,000 over a 6 year period. This report recommends further work on the property at a total expenditure of $665,000.

Property History

Production of copper, gold and silver is recorded from two mines on the property. The largest operation, the Mother Lode mine, produced 34,900 tonnes Cu, 5,390 kg Au, and 21,400 kg Ag from 4.2 million tonnes of ore during the periods 1900-1918 and 1957-1962. The Greyhound mine produced 597 tonnes Cu, 16 kg Au, and 349 kg Ag from 221,000 tonnes of ore during 1970. Numerous exploration shafts, caved adits

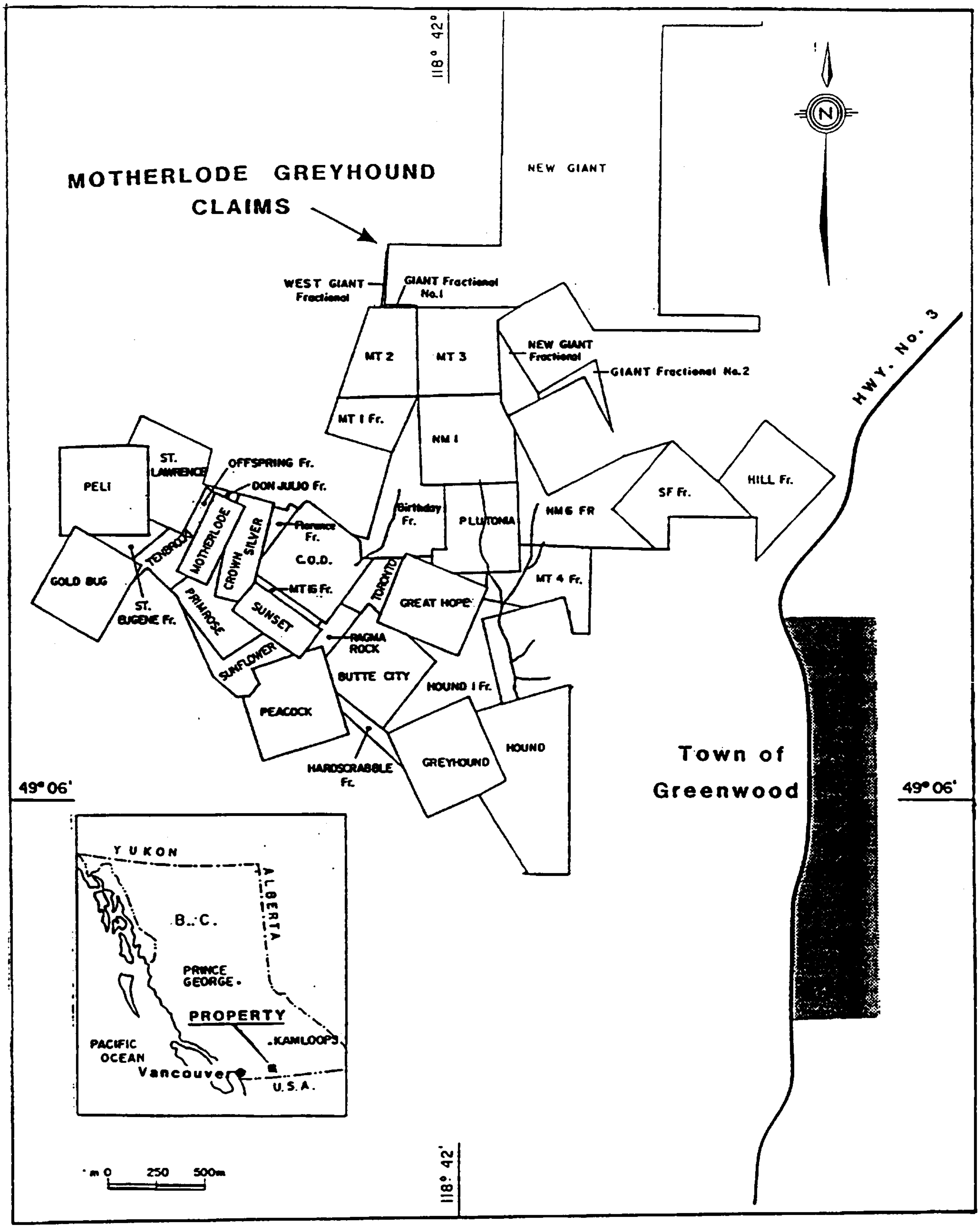


Figure 1. Location map and claim boundaries of Mother Lode - Greyhound Property.

and shallow pits are scattered about the property. A vertical shaft and small dump are present on the Marguerite showing, however no historic production is recorded. The property was acquired by Mascot Mines and Petroleums Ltd. in 1973. During 1973-1974 Mascot worked on property data compilation, surface mapping, limited geophysical and geochemical surveys and diamond, percussion and reverse circulation drilling. Total drilling of 7312 m identified a geologic reserve estimated at 496,000 tonnes grading 0.78% Cu in the Mother Lode area. This resource was not further considered, in part due to high stripping ratios and to excessive dilution from past mining operations.

Mascot returned to the property during 1988-1989 installing a grid over the entire property and collecting over 2200 soil samples in a property wide gold exploration program. This work identified six gold in soil geochemical anomalies. The largest and strongest is located on the Great Hopes crown grant (Fig. 2) between the Greyhound and Marguerite mines. Up to 2710 ppb Au is recorded in the eastern half of the claim coinciding with an elevated knob of pyritic chert. A maximum of 800 ppb gold is recorded in the remaining five geochemical anomalies. Many of these anomalies coincide with culturally disturbed areas (ie mine sites, waste dumps, roads) and were not followed-up. This program was the first designed specifically for gold on the property.

As a follow-up to the 1988-1989 soil geochemistry program, Corona Corp., current survivor of a previous Corona-Mascot merger, initiated surface trenching and surface magnetometer and VLF-EM surveys on, and surrounding the Great Hopes claim. The geophysical surveys were not considered successful. Measurement spacings, and use of the Seattle transmitter did not yield any distinct VLF-EM anomalles in the claim block. Several "prominent" conductors were identified outside of this area but were not followed-up. Magnetic anomalies responded as expected to known areas of magnetite mineralization. A weak gradient of 200 gammas was obtained in the Great Hopes area.

Follow-up trenching, however, uncovered a zone of massive pyrite and a 1-2" thick vein of arsenopyrite that yielded 2.002 opt Au (Corona Corp. 1990, Report on Geophysical and Trenching Work on the Mother Lode - Greyhound Property).

Based on this previous work, and new research on the nature and distribution of gold in skarn deposits (Meinert 1988; Ettlinger and Ray, 1988, 1989; Ettlinger, 1990), Pan Orvana Inc. entered into a joint venture with Corona Corp. during summer 1991 to explore for gold skarn mineralization on the property. Work by Pan Orvana through October 1991, includes reconnaissance mapping at 1:4 800 scale, lithogeochemistry, and transmitted and reflected light petrography.

Geology

Previous Workers

The property is underlain by sedimentary and volcanic rocks belonging to the Upper Paleozoic Knob Hill and Upper Triassic Brooklyn Formations. These rocks are intruded by granodiorite and quartz diorite dykes and stocks which probably belong to the Cretaceous Nelson intrusive suite, and by syenite and pulaskite dykes and sills belonging to the Coryell intrusive suite. Copper-gold skarn deposits within the Deadwood and nearby Phoenix camps occur near granodiorite and quartz diorite contacts and are hosted by limestone and chert conglomerate belonging to the Brooklyn Group (Church, 1986; Ettlinger and Ray, 1989).

Recent 1:50,000 scale mapping in the Greenwood-Grand Forks area (Fyles, 1990) has added significantly to the understanding of the structural evolution of the district. The distribution and description of rock units, as described by Fyles, generally agrees with earlier mapping by Church (1986). Fyles has offered; however, a much more complicated structural evolution dominated by several low angle thrust faults. At least two of these thrusts underlie, and may truncate, mineralization in the Mother Lode mine and at the Phoenix mine in the nearby Greenwood camp.

Shear (1974) mapped the Mother Lode - Greyhound area at a scale of 1:4 800. His mapping indicates that much of the property is underlain by cherts and andesites belonging to the Knob Hill Group, whereas, areas of copper skarn mineralization, such as in the Mother Lode and Greyhound mines, are hosted by Brooklyn Formation limestone and conglomerate. A north-northeasterly trend, defined by dike attitudes, mineralization trends and some lithologic contacts is noticeable on Shear's map. Marron Formation andesitic and trachytic dikes strike in this direction, as do some of the Brooklyn limestone - Knob Hill chert contacts. Additionally, areas of mineralization at the Greyhound and Marguerite mines and in the Great Hope trench area define a north-south mineralized trend.

Pan Orvana Work

Work by Pan Orvana on the property includes 1:4800 scale geologic mapping, lithogeoohemistry (42 samples) and petrographic analyses at Washington State University. This work has shown that at least some of the units previously mapped as Knob Hill chert are skarn altered and/or intensely silicified and not simple cherts. Additionally, in the Great Hope trench area (Fig. 2), a possible intrusive unit and limited garnet skarn is also identified.

Chert, chert breccia, limestone and andesite are the most abundant rock types encountered. The chert is generally pyritic and limonite stained. In the eastern portion of the map area, the chert often exhlbits a black color and is locally bleaehed near faults and fractures. Chert breccia is most common in the trenches on the eastern half of the

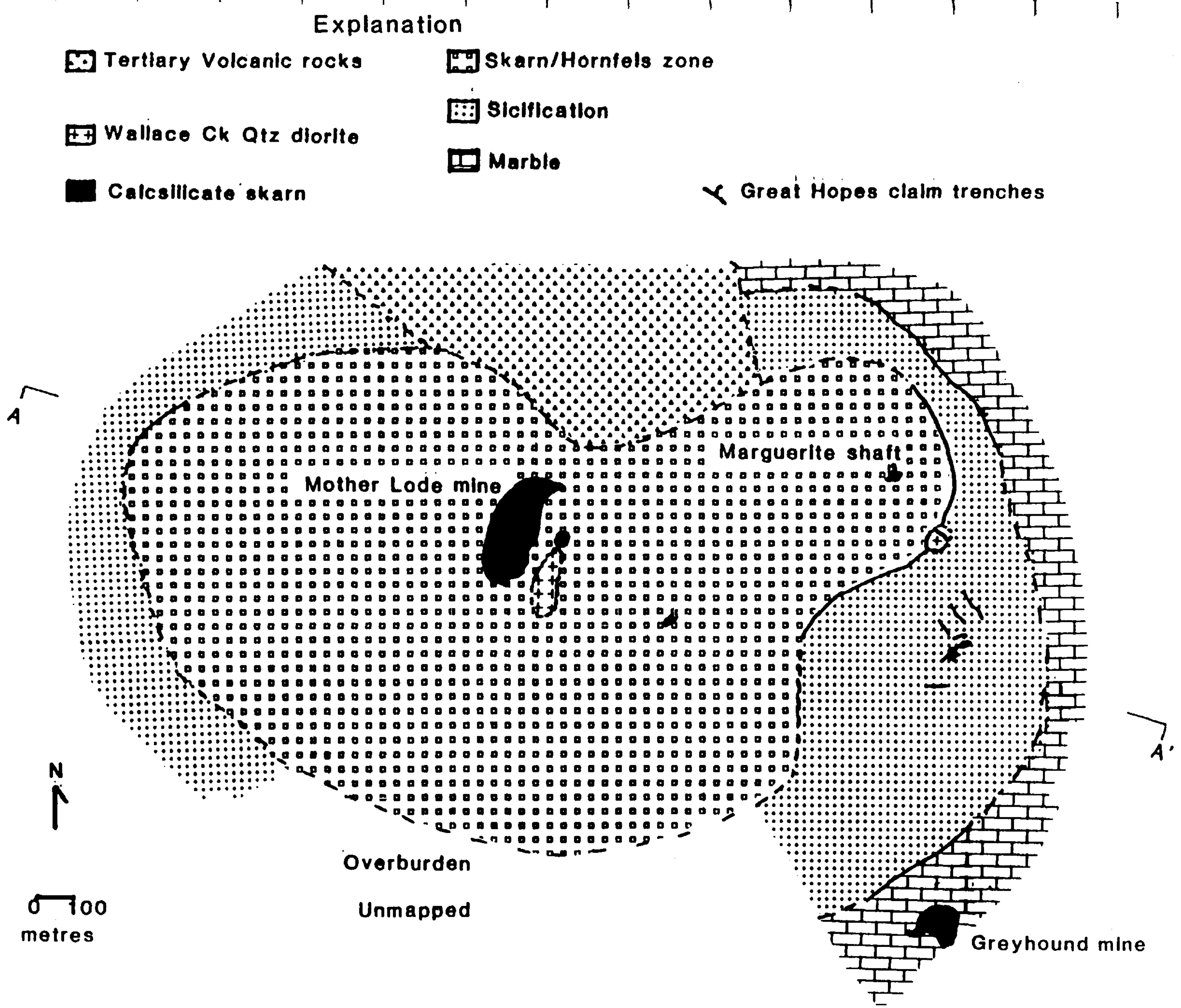


Figure 2. Schematic illustration of property geology and alteration.

Great Hopes claim. Occasionally fragments within the chert appear to have a phyric texture and may be of igneous origin.

Limestone is abundant in the northeastern portion of the map area (Fig. 2) where it is generally recrystallized to white marble. Alteration in the limestone is limited in this area; however, a small pod of garnet-magnetite skarn is present at the base of a power line tower north of the map sheet. Limestone is also exposed in the Mother Lode and Greyhound mines, and as a small lens intercalated with siltstone(?) in an exploration trench approximately 25 m northwest of the Marguerite shaft. At all of the mine locations, the limestone is partially replaced by calcsilicate skarn.

Rocks of andesitic composition are common in the northern half of the property. Northeast of the Mother Lode mine, the andesite is weakly hornfelsed or propyllitically altered. These andesite occurrences are tentatively correlated with a greenstone member of the Knob Hill Formation described by Fyles (1990). According to Fyles, the greenstone overlies chert breccia and conglomerate. This is permissible for andesites found near the Marguerite mine, which do appear to be stratigraphically higher than the chert breccia exposed in the Great Hope trenches. If the correlation is proper for the andesites found northeast of the Mother Lode mine, the possibility exists for further pyritic (and mineralized?) chert to be present in this area. A small outcrop of chert at approximately 200 m northeast of the main Mother Lode pit suggests this is the case.

Potassium feldspar porphyries overlie much of the Paleozoic and Mesozoic rocks in the northern half of the property. These rocks are tentatively correlated with volcanic flows belonging to the Eocene Marron volcanic suite.

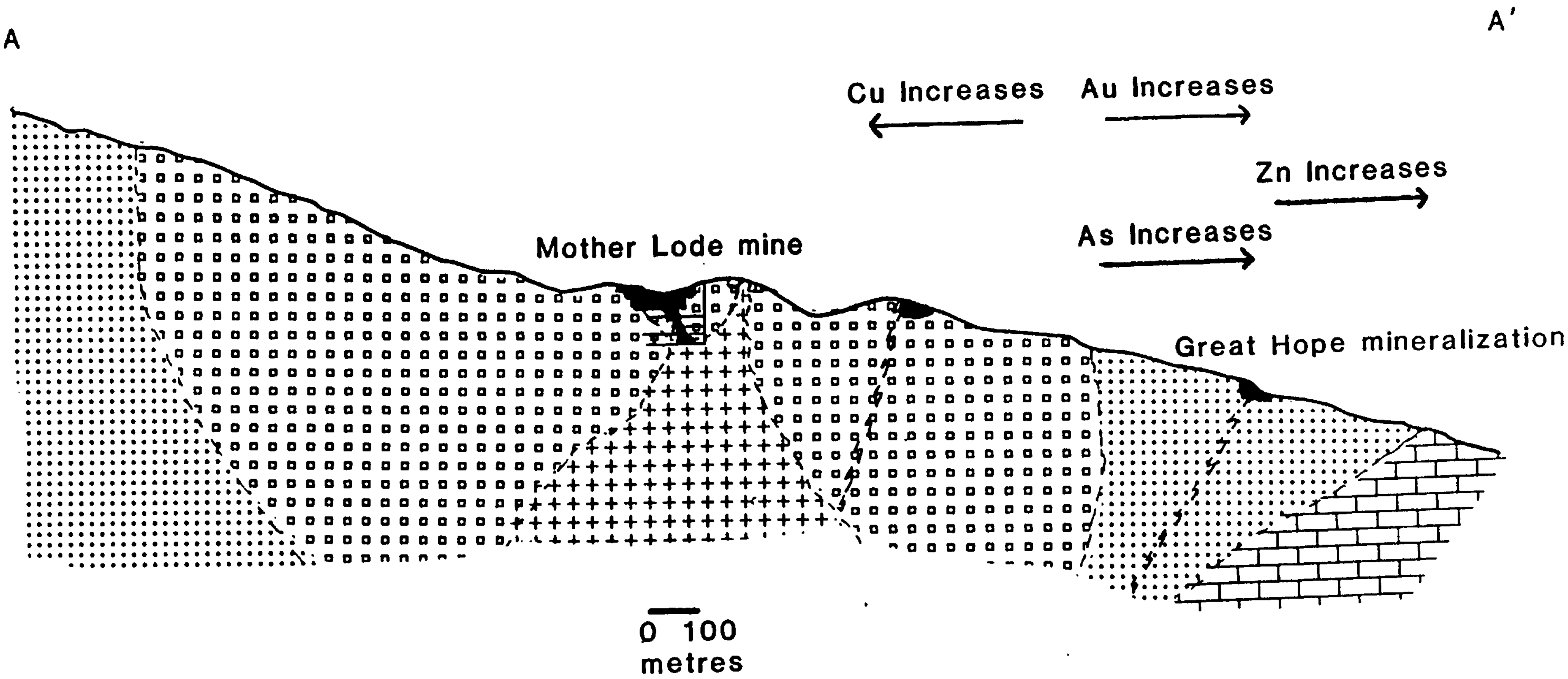
Quartz diorite/diorite crops out in the area of the Mother Lode and Greyhound mines, and in an east-west trending belt between the Great Hopes and Marguerite prospects. It is genetically related to copper skarn mineralization at the Mother Lode and Greyhound mines, and is also probably related to skarn at the Marguerite mine. The relationship, if any, of the diorite to mineralization in the Great Hopes area is, however, not clear.

Alteration and Mineralization

Copper-gold skarn mineralization occurs at the the Mother Lode, Greyhound and Marguerite mines (Figs. 2 and 3). The largest and most intense area of alteration is located in and around the Mother Lode deposit. Skarn in the mine is associated with an altered quartz diorite apophyse of the Wallace Creek stock (Church, 1986). The skarn is garnet rich and retrograde altered. Magnetite and chalcopyrite are the most common opaque minerals present. Except for the high average gold content (1.3 gm/tenne) of the ore, this skarn is similar to other copper-magnetite skarns described by Einaudi, et al. (1981).

Surrounding the area of high temperature, proximal calcsilicate skarn in the Mother Lode mine, is a large, circular halo of hornfelsing and scattered skarn occurrences, which includes the Greyhound and Marguerite deposits. Outward of this hornfels/skarn zone, is an area of intense silicification which may result in the large amount of "chert" mapped by previous workers on the property. Limestone recrystallization, observed over 1.5 km away from the Mother Lode pit, may represent the most distal alteration facies of this hydrothermal system.

Semimassive to massive pyrite, with small amounts of arsenopyrite and chalcopyrite are exposed in trenches on the Great Hopes claim. Rocks in this area are intensely silicified.



See Fig. 2 for explanation

Figure 3. Schematic cross section through central portion of Mother Lode property. Section A-A' located in Fig. 2. Looking north-northeast.

Petrographic analyses show that chlorite, amphibole, epidote, carbonate, biotite, and pyroxene, are also present indicating that the rocks are skarn altered.

Discussion

Current work by Pan Orvana on the Mother Lode property is focused on the gold skarn potential of this area. Recent research on skarn deposits, specifically those skarns containing mineable quantities of gold, has resulted in a geologic model for the formation of this deposit type. Earlier workers (Einaudi et al., 1981; Meinert, 1983, 1984) concentrated on ferrous and base metal skarns. These deposits form in characteristic tectonic environments and are found associated with specific plutonic rocks. Gold skarns, form in similar tectonic environments as calcic iron and copper skarns, but differ from these deposits in their plutonic associations, host rock characteristics, and calcsilicate mineralogy. Skarns containing gold as the primary economic commodity tend to be associated with highly reduced, calcalkaline, mafic intrusions (Ettlinger and Ray, 1989; Ettlinger, 1990). Ettlinger and Ray also point out the importance of nonhomogeneous, volcanic-rich clastic sequences as a preferential host to gold skarns.

Composition of skarn garnet and pyroxene can also be used as an aid in determining whether a skarn may contain gold mineralization. Gold skarns tend to contain abundant Fe-rich pyroxene and subordinate amounts of Al-rich garnet relative to Fe and Cu-skarns. This is a function of the lower oxidation environment of gold skarns which is also reflected in the pyrrhotite, arsenopyrite, bismuth-rich sulfide assemblage, ilmenite- (little or no primary igneous magnetite) bearing intrusive, and association with nonhomogeneous, often carbonaceous, clastic rocks.

The geochemical associations with gold in gold skarns are unique to this deposit type. Meinert (1989) describes gold skarns as geochemically enriched in As-Bi-Te-Co when compared to the other skarn types. Copper/gold and copper/silver ratios of mineralized rock from gold skarns can also be used to identify the potential of an unknown skarn system (Ray et al., 1990).

A highly significant result of this recent gold skarn research is the recognition of zoned skarn systems and the fact that gold mineralization tends to occur on the outer margin of calcsilicate skarn alteration. Proximal copper-rich, gold-poor skarn grades away from high temperature fluid conduits and/or magma sources, to an outer gold-rich, copper-poor portion of the skarn system. Gold skarn mineralization at the Fortitude mine near Battle Mt., NV (Myers and Meinert 1989) and the Nickel Plate Deposit , near Hedley, B.C. (Ettlinger 1990), are both located away from the main skarn-forming pluton at the outer margin of calcsilicate alteration. Copper skarn deposits were mined at the contact of the Copper Canyon stock, approximately 1 km south of the Fortitude deposit. Between these two mining centers is a continuous area of zoned calcsilicate skarn which contains very low copper and gold values. This "geochemically dead zone" can lead to misinterpretation of the gold potential of a skarn system. Historically, prospecting for metals associated with skarn alteration was typically centered about a causative pluton or structure. Moving away from these alteration centers into the dead zone often discouraged early explorers, resulting in missed gold skarn deposits.

The Mother Lode - Greyhound property contains such a zoned skarn system. Copper mineralization in the Mother Lode pit represents a proximal, copper-rich skarn deposit, whereas, the gold-bearing silicified zone on the Great Hopes claim is a surface expression of the marginal gold-rich portion of the hydrothermal system. This gold-favorable zone occurs as an annulus on the outer margin of calcsilicate skarn/hornfels as illustrated in Figures 2 and 3. The Mother - Lode Greyhound system is an excellent gold-skarn target because of the high gold budget within the skarn system as indicated by a 1.3 gm/tonne Au average grade for what is normally gold-poor skarn.

Proposed Program and Budget

The Mother Lode - Greyhound property is still in the early stages of exploration. To fully test the gold skarn potential of this property, the following exploration program is outlined. Geologic mapping and further lithogeochemistry is required to delineate the full extent of skarn alteration and mineralization on the property. This should be followed by petrographic and electron microprobe analyses of selected samples for identification of alteration assemblages and geochemical gradients which are essential for the proper interpretation of skarn systems. Because of the large amount of glacial overburden on the property, surface trenching to expose additional bedrock is required.

An induced polarization (IP) geophysical survey for identification of zones of disseminated sulphides along the calcsilicate-silicification interface would aid in the location of additional drill targets. A short diamond drill program, consisting of approximately 7500 feet of drilling is recommended for a three dimensional analysis of stratigraphy and skarn alteration and to test the potential of areas covered by young volcanic rocks. Drill holes west of the Great Hopes trench area would serve a dual purpose of supplying information on stratigraphy and alteration beween the Mother Lode mine and the outer margin of calcsilicate alteration, while also testing the continuiity of mineralization exposed in the trenches.

Budget

Stage 1

Complete 1:4800 scale geologic mapping and lithology sampling of property	
5 days @ $280/day	$1,400
Lithogeochemistry	
50 samples @ $22.50/sample	1,130
Petrographic analyses	
Thin section Prep. - 10 samples @ $22.50/sample	230
Analyses - 10 samples @ $45/sample	450
Electron Microprobe analyses	
7 hours @ $28/hr operator time + $62/hr beam time = $90/hr	630
IP Geophysical Survey	
Grid rehabilitation and extension - 5 days @ $225/day	1,130
IP Survey - 7 line miles at $1700/line-mile	11,900
Geophysical expenditures may include a follow-up magnetometer survey.	
Surface trenching	
Excavation: 5-10 hr days @ $90/hr	4,500
Supervision - 5 days @ 280/day	1,400
Channel sampling - 5 days @ 280/day	1,400
Assaying and lithogeochemistry - 200 samples @ $22.50/sample	4,500
Lithology and alteration drill testing	
7500 feet diamond drilling @ $28/foot	210,000
Geologist - supervision and core logging - 25 days @ $280/day	7,000
Assaying and geochemistry - 1000 samples @ $22.50/sample	22,500
Petrographic analyses - 25 samples @ $67.50/sample	1,700
Electron microprobe analyses - 7 hours @ $90/hour	630

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Stage 1 Budget (cont.)

Reporting and drafting	
12 days @ $280/day	3,400
Room and board	
45 days @ $60/day	2,700
Stage 1 subtotal:	276,600
contingency - 10%	27,700
Stage 1Total	**$304,000**

Phase I budget proposal

Depending on the success of Stage 1, exploration on the Mother Lode - Greyhound property could proceed as follows:

Stage II

Surface trenching	
Excavation: 10-10 hr days @ $90/hr	$9,000
Supervision - 10 days @ $280/day	2,800
Channel sampling - 10 days @ $280/day	2,800
Assaying and lithogeochemistry - 200 samples @ $22.50/sample	4,500
Target definition drilling	
10000 feet diamond drilling @$28/foot	280,000
Geologist - supervision and core logging - 30 days @$280/day	8,400
Assaying and geochemistry - 2000 samples @$22.50/sample	45,000
Reporting and drafting	
20 days @ $280/day	5,600
Room and board	
50 days @ $60/day	3,000
Stage 2 total:	**$361,000**

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THIMBLE MOUNTAIN

THIMBLE MOUNTAIN PROJECT
Greenwood Mining Division, B.C.

INTRODUCTION

The Thimble Mountain Property was acquired by Pan Orvana Resources Inc. during the summer of 1991 as part of the Okanogen Syndicate agreement with Placer Dome. The Property is located approximately 20 km. north of Grand Forks on the west bank of the Granby River. It is underlain by Triassic Brooklyn Formation sediments and volcenics intruded by Cretaceous diorite and Eocene syenite. Skarn mineralization and silicification is present in a broad belt of alteration roughly concordant with the sediments. Numerous old shafts, adits and trenches are located on small sulphide replacement bodies, most of which contain significant copper and gold values. The location of the property is shown in Fig. 1.

LAND STATUS

The Thimble Mountain property consists of 119 mineral claim units and one crown grant under option from seven different owners. In addition are 40 units staked by Pan Orvana in April of 1991 for a total area of 1980 hectares. The assessment due dates fall throughout the year and the consent of the owners is being sought to submit a Notice To Group to incorporate all claims. The current claim map is shown in Fig. 2.

PREVIOUS WORK

Records of the early work on the property have been lost but it is believed work on some of the adits and shafts was begun in the 1920's. Since the 1960's various groups have conducted exploration programs over various areas of the property, generally soil geochem and some mag and VLF surveys, all on different grids, metric and English in different orientations. Most previous exploration has targeted copper mineralization and many of the soil samples were not assayed for gold. The property has never been treated as a single project.

GEOLOGY

Regional Geology

Stratified rocks from the late Paleozoic through the Cretaceous underlie most of the area of the Phoenix-Boundary mining camp between the Granby river to the east and Boundary Creek to the west. They generally trend north-east and the oldest are the Carboniferous-Permian Knob Hill and Attwood Groups, both containing andesitic volcanics and various units of argillites, siltstones, limestones, cherts and conglomerates. These are overlain by the Triassic Brooklyn

Formation, consisting also of andesitic flows microdiorites, and tuffs, with interbedded units of limestone, sandstone, siltstone, argillite, chert, and conglomerates. The conglomerates, limestones and volcanics of the Brooklyn are host to most of the deposits mined in the camp. All these rocks are intruded by Jurassic Nelson Diorites, Quartz Diorites, and Granodiorites, believed to be responsible for the ore forming mineralizing events. Later Tertiary rocks include the Marron volcanics, the Kettle River sediments, and the Coryell syenitic intrusions. Regional geology is shown in Fig. 3.

Local Geology

Most of the Thimble Mountain property is underlain by the Brooklyn Formation. Striking between north and north-north-east, dips vary from flat to steeply NW and SE, in places suggesting anticlinal structure. The most significant members are:

1) Chert or "Sharpstone" conglomerate,
2) Massive pale to dark grey argillaceous limestone, and
3) Andesitic volcanics and volcaniclastics.

The Sharpstone is host to ore at the Phoenix mine and is a striking rock, containing very angular chert fragments in a green tuffaceous matrix. Minor greenstone, limestone, and older schist fragments are also seen. The Sharpstone pinches and swells and often is believed to be a locally derived fanglomerate. The limestone makes up most of the lower eastern slope of the property and is usually thin bedded and argillaceous, often with thin dirty interbeds of calcareous tuff. The most widespread of the Brooklyn members is the volcanic sequence, making up most of Thimble mountain. This consists of andesitic flows and dikes, related subvolcanic microdiorites, tuffs and tuff breccias. Lesser Brooklyn units include sandstone, siltstone, conglomerate and minor chert.

The Brooklyn is intruded by small stocks of the Nelson Intrusive. This is a coarse grained hornblende diorite of very consistent texture and composition. Both the Nelson and the Brooklyn are intruded by Eocene Coryell syenites and pulaskite dikes usually pink to grey aphanitic with strong Kspar or biotite phenocrysts. The youngest rocks on the property are the Marron Volcanics, also Eocene and of similar composition to the Coryell. They overlie the Brooklyn andesites to form the top of Thimble Mountain. An idealized long section of the property is shown in Fig. 4.

Alteration and Mineralization

Most of the property is altered to lower greenschist facies. Similar amphibole, epidote, chlorite, carbonate retrograde skarn alteration can also be seen in a strong continuous belt from the north slope of Thimble Mountain across Lime and Brown Creeks to the Strawberry showing, a distance of 3000 m. Within this lies a smaller belt of silicification, mostly in the Sharpstone and other clastics, extending from the Shickshock area across the railway grade towards Brown Creek. Garnet-pyroxene skarn can be seen in smaller restricted areas, notably the Shickshock showing, the Strawberry showing, the Sharpstone in the area of the Tunnel showing, and on the Seattle showing. The limestone exhibits patchy marblization, strongest in the Shickshock area, and scattered across the east slopes of the property. Alteration and summary geology are shown in Fig. 6.

Sulphide mineralization is present at all of the showings, indicated on Fig. 5, usually as replacement pods of massive pyrrhotite or less commonly pyrite, and often with minor chalcopyrite disseminated throughout. Also seen, at the Shickshock and Strawberry showings, is massive magnetite with pyrrhotite.

In 107 rock samples colleoted, gold values ranged up to 66240 ppb, (1.92 oz/T) with 23 samples running >500 ppb and 17 samples >1000ppb. Copper values ranged up to 19800 ppm with 36 samples >1000 ppm and 10 samples >5000 ppm. Arsenic ranged up to 22709 ppm, with only 5 samples > 1000. The highest gold grades came from; 1) Pyrite in a 20 cm. fracture or shear zone in marble adjacent to diorite at the Hummingbird showing, 2) Strong chlorite-hematite retrograde skarn with minor pyrite in andesite at the Thimble Mountain showing, 3) Massive pyrhotite with chalcopyrite in weak skarn altered finely interbedded tuff and limestone at the Ike showing. No statistical analysis has been done yet and as of Nov. 1 results are still pending on about 20 more samples. Results to date for gold copper and arsenic are plotted on Fig. 6.

MODEL

The occurrence of the highest gold grades at some distance from the high temperature garnet skarn showings is consistent with the alteration and mineralization model worked out at the Phoenix mine. In that csse most of the ore was mined from the retrograde altered material at the distal edge of the calc silicate zone. The proximal, low gold garnet skarn is only present on the far eastern pit wall and was not considered part of the ore. The ore bodies at the Nickel Plata and Fortitude Deposits are also distal to the ore forming plutons.

WORK TO DATE

Following property acquisition a stream sediment sampling program was conducted on all the drainages on the claims. Follow up sediment sampling up Rathmullen creek yielded values up to 36 ppb. Au, 103 ppm. Cu, and 26 ppm As, suggesting a gold source in the Shickshock-Senator area and a base metal source higher up at the head waters of the creek. A short program of mapping and sampling was conducted in Sept.-Oct. to follow up and examine the mineralization at the known showings and to identify alteration and mineralization patterns between and beyond them. A preliminary alteration map was constructed as discussed above and is presented with the geology summary on Fig. 5. There were also ten samples of skarn material submitted for petrographic analysis, to determine garnet composition and for correlation with alteration mapping. Results are still pending.

TARGET AREAS

Targets are centered around the known showings on figure 4. Those not mentioned above include the Rim showings at the north end of the property, believed to be in paleozoic Knob Hill volcanics and schist. Gold values up to 1913 ppb., copper up to 1.57% and arsenic up to 415 ppm were obtained. The Tunnel showing is in silicified, skarn altered Sharpstone at the tunnel on the railway grade where it turns south. Result from adit dump samples are still pending. The Senator showing is in a mixed package of volcanics and siltstones on the west side of Rathmullen Creek. It is adjacent to a Coryell syenite dike, believed to be post mineral, and returned values up to 1206 ppb. gold, 3036 ppm copper, and 22709 ppm. arsenic.

PROGRAM AND BUDGET

5000m baseline cross lines 1000 to 1500m at 200m spacing = 37500m
15 cross lines to infill at 1500m each 22500m total 60000m

The first phase of the 1992 work program for Thimble Mountain will consist of geological mapping on orthophotos and sampling to confirm the alteration and mineralization patterns suggested in 1991. A comprehensive grid program of soil sampling and a ground mag survey should be conducted over the entire length of the mineralized zone, a strike distance of 5 km. Initial grid work on line spacing of 200 meters will be followed by follow up infilling on the 100 meter lines. The grid would total about 60 line km. Phase two will entail trenching, sampling and detailed mapping of the targets generated by the grid work. This should amount to 1000 meters of excavation on five or more targets. Phase three will be the drilling of those targets confirmed by the trenching. Drilling to 200m. in 15 holes on three or more targets would total up to 3000m. Total costs for the year are shown in Table 1.

TABLE 1

THIMBLE MOUNTAIN BUDGET

Phase 1

Supervision, mapping and sampling		
30 days	Cdn $	9,000
Rock assays		
150		6,000
Grid and soil sampling		
60 days		9,000
Soil assays		
1500		22,500
Mag survey		9,000
Living Expenses		
150 man days		3,750
Vehicle Expenses		
3 trucks 9000 km		2,340
Orthophotos		3,000
Field supplies		
Say $1,000		1,000
Compilation, reporting and planning		
10 days		3,000
Subtotal	Cdn	$ 68,590 Phase I

Phase 2

Trench excavation		
1000m.	Cdn	$ 15,000
Trench sampling		
60 days		9,000
Trench assays		
300 samples		6,000
Supervision, trench mapping		9,000
Living Expenses		
90 man days		2,250
Vehicle Expenses		
2 trucks 6000 km		1,560
Field supplies		
Say $1,000		1,000
Compilation, reporting, and planning		
10 days		3,000
Subtotal	Cdn	$ 46,810

Phase 3

Drilling			
3000m.			198,000
Core sampling			
30 days			4,500
Core rack construction			
5 racks			2,000
Supervision and core logging			
30 days			9,000
Living Expenses			
60 man-days			1,500
Vehicle Expenses			
1 truck 3000 km			1,560
Field supplies			
Say $1,000			1,000
Final compilation and reporting			
20 days			5,000
	Subtotal	Cdn	$ 222,560
	Total	Cdn	$ 337,960

In addition, property payments totaling $58,000 will come due in 1992. This figure is subject to reduction depending on program results.

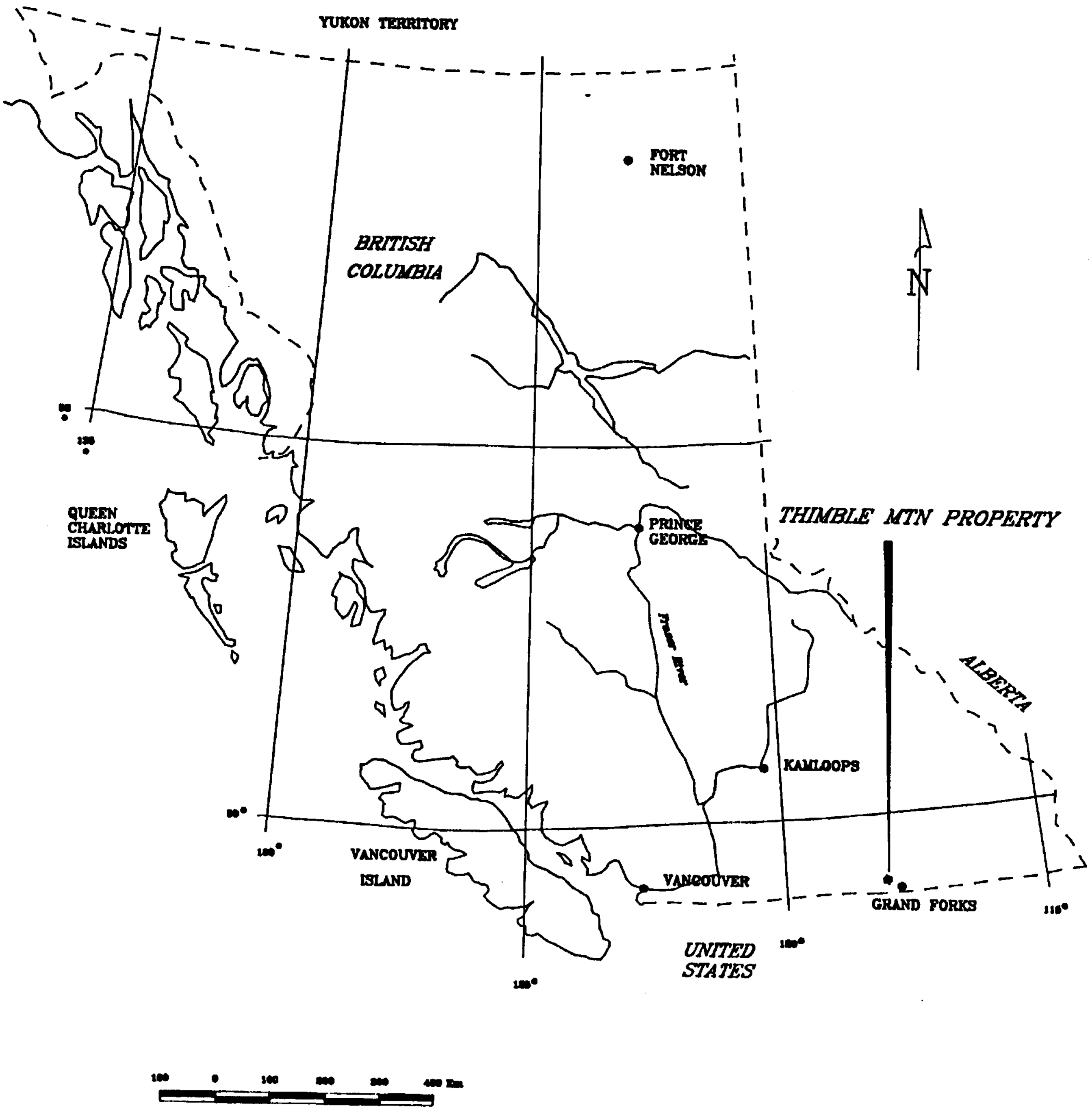

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Fig. 1

LOCATION MAP

OK SYNDICATE
Northeastern Washington and southern British Columbia

Oct. 91

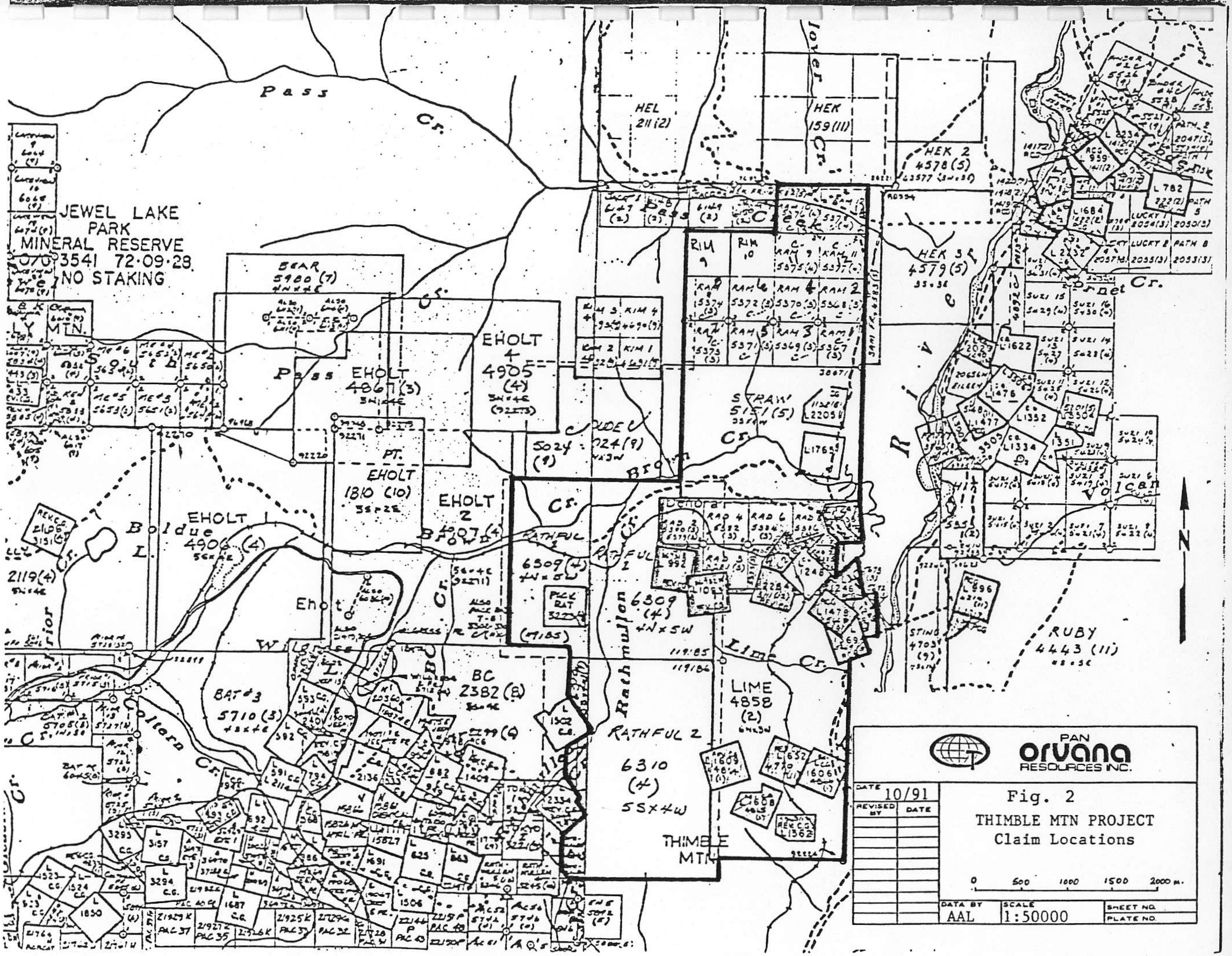
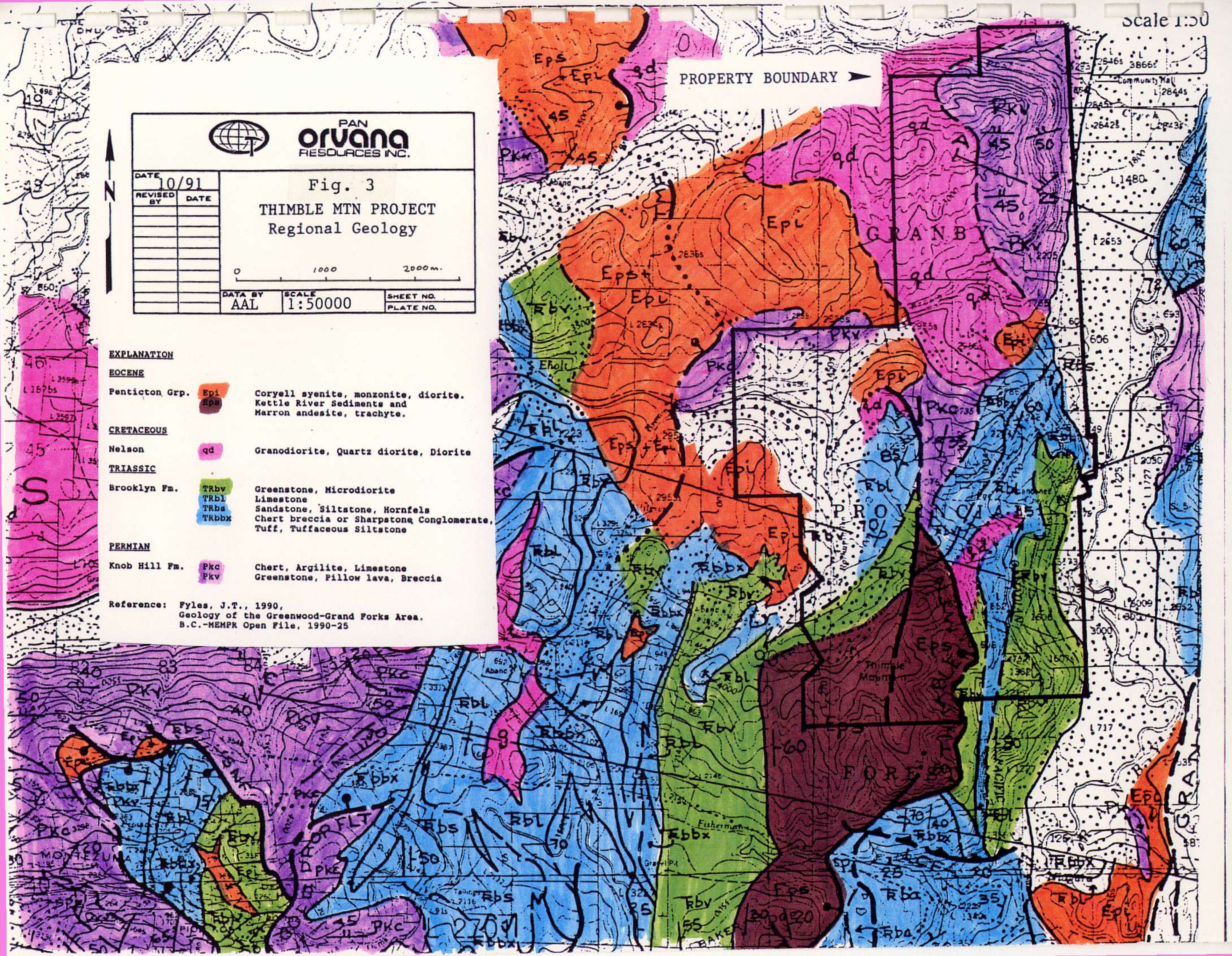
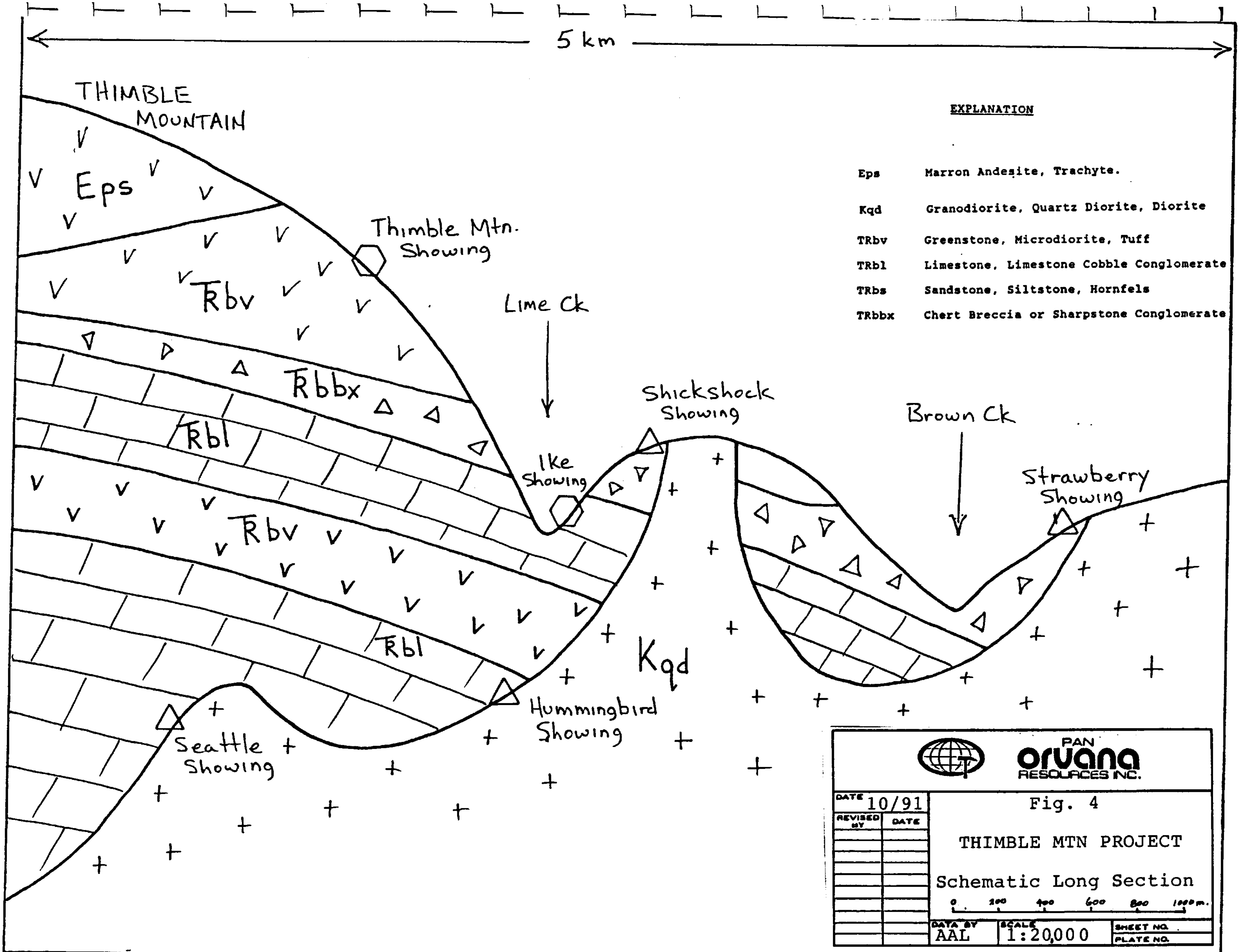


Fig. 2
THIMBLE MTN PROJECT
Claim Locations


PAN ORVANA RESOURCES INC.
DATE 10/91
REVISED BY
DATE
Fig. 3
THIMBLE MTN PROJECT
Regional Geology
0
1000
2000 m.
DATA BY AAL
SCALE 1:50000
SHEET NO.
PLATE NO.
N
PROPERTY BOUNDARY
Scale 1:50
EXPLANATION
EOCENE
Penticton Grp.
Epi Coryell syenite, monzonite, diorite.
Eps Kettle River Sediments and Marron andesite, trachyte.
CRETACEOUS
Nelson
qd Granodiorite, Quartz diorite, Diorite
TRIASSIC
Brooklyn Fm.
TRbv Greenstone, Microdiorite
TRbl Limestone
TRbs Sandstone, Siltstone, Hornfels
TRbbx Chert breccia or Sharpstone Conglomerate, Tuff, Tuffaceous Siltstone
PERMIAN
Knob Hill Fm.
Pkc Chert, Argilite, Limestone
Pkv Greenstone, Pillow lava, Breccia
Reference: Fyles, J.T., 1990, Geology of the Greenwood-Grand Forks Area. B.C.-MEMPR Open File, 1990-25
GRANBY
PROVINCIAL
FORKS
Thimble Mountain
MONTEZUMA



EXPLANATION

Eps	Marron Andesite, Trachyte.
Kqd	Granodiorite, Quartz Diorite, Diorite
TRbv	Greenstone, Microdiorite, Tuff
TRbl	Limestone, Limestone Cobble Conglomerate
TRbs	Sandstone, Siltstone, Hornfels
TRbbx	Chert Breccia or Sharpstone Conglomerate

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DATE 10/91

REVISED BY | DATE

Fig. 4

THIMBLE MTN PROJECT

Schematic Long Section

DATA BY AAL

SCALE 1:20,000

SHEET NO.

PLATE NO.

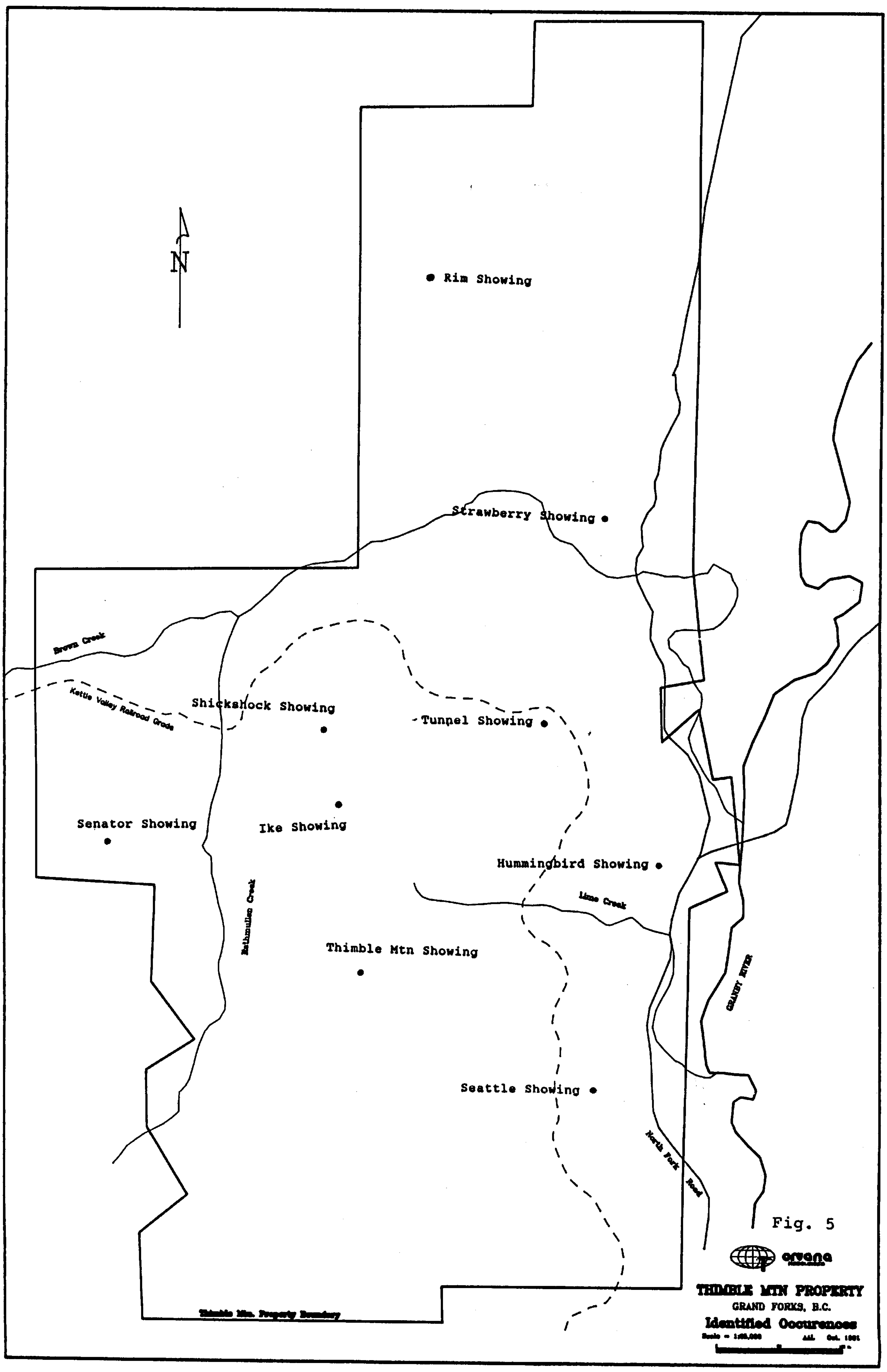

N
Rim Showing
Strawberry Showing
Brown Creek
Kettle Valley Railroad Grade
Shickshock Showing
Tunnel Showing
Senator Showing
Ike Showing
Hummingbird Showing
Lime Creek
Rathmullen Creek
Thimble Mtn Showing
Granby River
Seattle Showing
North Fork Road
Thimble Mtn. Property Boundary
orvana
THIMBLE MTN PROPERTY
GRAND FORKS, B.C.
Identified Occurences

Fig. 5

EHOLT

EHOLT PROJECT
Greenwood Mining Division

INTRODUCTION

The Eholt Property was acquired by Pan Orvana Resources Inc. during the summer of 1991 as part of the Okanogen Syndicate agreement with Placer Dome. The Property is located approximately 12 km. north east of Greenwood on and north of highway 3. It is underlain by Permian Knob Hill volcanics and Triassic Brooklyn Formation sediments and volcanics intruded by Cretaceous diorite and Eocene syenite. Minor Eocene arkosic sandstones are present in the north west corner of the property. Skarn mineralization has been found in isolated patches generally trending along the Knob Hill and Brooklyn volcanics. Several old shafts and trenches are located on small sulphide replacement bodies, most of which contain significant copper and gold values. The location of the property is shown in Fig. 1.

LAND STATUS

The Eholt property consists of four claims totaling 58 units covering 1300 hectares under option from Herman Hoen of Grand Forks. Assessment due dates are March 26, April 29 and October 9 of 1992. The claims' location is shown on Fig. 2.

PREVIOUS WORK

Records of the early work on the property have been lost but there are old shafts and prospect pits. Recent exploration conducted by Golden Kootenay Resources from 1987 to 1989 includes rock and soil sampling, mag and VLF surveys, and three diamond drill holes totaling 293 meters.

GEOLOGY

Regional Geology

The regional geology is the same as that of the Thimble Mountain property as the two are contiguous. That regional summary is repeated here. Stratified rocks from the late Paleozoic through the Cretaceous underlie most of the area of the Phoenix-Boundary mining camp between the Granby river to the east and Boundary Creek to the west. They generally trend north-east and the oldest are the Carboniferous-Permian Knob Hill and Attwood Groups, both containing andesitic volcanics and various units of argillites, siltstones, limestones, cherts and conglomerates. These are overlain by the Triassic Brooklyn Formation, consisting also of andesitic flows microdiorites, and tuffs, with interbedded units of limestone, sandstone, siltstone, argillite, chert, and conglomerates. The conglomerates, limestones and volcanics of the Brooklyn are host to most of the deposits mined in the camp. All these rocks are intruded by Jurassic Nelson Diorites, Quartz Diorites, and Granodiorites, believed to be responsible for the ore forming mineralizing events. Later Tertiary rocks include the Marron volcanios, the Kettle River sediments, and the Coryell syenitic intrusions. Regional geology is shown in Fig. 3.

Local Geology

The oldest rocks are cherts siltstones and minor volcanics of the Knob Hill group in the south and south west corner of the property. Most of the rest of the claims are underlain by the Brooklyn Formation and intruding Eocene syenites. Trending north west, the Brooklyn consist of andesites, tuffs, andesite breccias with very minor amounts of limestone and a few occurrences of Sharpstone Conglomerate. The Cretaceous Nelson diorite is reported to occur only rarely. The Eocene Coryell intrusives range from biotite porphyry syenites to kspar porphyry pulaskite. Previous work in the area has suggested the Coryell intrusions may be more responsible for mineralization than the Nelson. The youngest rocks on the property are the Eocene Kettle Valley arkosic sandstones in the north west corner of the property. The geology is shown on Fig. 4.

Alteration and Mineralization

As at Thimble Mt. the older sediments are altered to greenschist facies. Skarn alteration is also present in the Brooklyn volcanics near contacts with the Coryell syenite. Skarn is also
reported to occur in the Knob Hill volcanics and siltstone as is marblization of the Brooklyn limestone. Typically the skarn is accompanied by massive pyrrhotite and pyrite replacement bodies. These have been the targets of minor trenching and test pitting for which no data has been located.

Rock assays taken from dumps and walls of the old shafts returned values up to 0.57 oz./T Au and 2.3% Cu. Soil samples assayed as high as 330 ppb. Au and 413 ppm. Cu. but most highs are quite isolated. Low level copper anomalies lie over Brooklyn-Coryell contacts. The drilling was targeted on the old workings and the best section ran 0.043 oz./T Au and 0.14% Cu over 15 feet.

MODEL

The Brooklyn Sharpstone Conglomerate has hosted ore in both the Phoenix and Motherlode mines and has been the target for exploration throughout the camp. It remains, along with the volcanics, the most likely ore host on the Eholt property. The Nelson diorite and the Coryell syenite have both been proposed as ore forming plutons and both are present on the property.

As the ore body at the Phoenix mine was found to be at some distance distal to the pluton, any favorable horizons within 1000 m. of the Nelson or Coryell intrusives should be considered.

WORK TO DATE

Following property acquisition a stream sediment sampling program was conducted with results ranging to 52 ppb. Au, 110 ppm. cu and 15 ppm. As. Since then only a few days have been spent mapping and sampling. Some assays are still pending. Others are shown with geology on Figure 4. The remaining time was spent searching for claim posts to solve a discrepancy in reported claim positions.

TARGET AREAS

This property still needs some basic prospecting but the best targets now are still the old shaft and previous drill holes at the center of the property. Other significant occurrences include a skarn in andesite near a syenite contact at the top of Eholt Ridge, and skarn in Sharpstone Conglomerate at the top of the knob due north of the old shaft. Also the entire area south of the highway needs some attention as it is reported to be largely Knob Hill and Brooklyn with several Coryell intrusions and is adjacent to the north edge of the Phoenix mining camp.

PROGRAM AND BUDGET

The first phase of work for 1992 should consist of geological mapping and sampling to confirm previous work and to establish a pattern or trends to the alteration. This should include the area south of the highway which seems to have been overlooked in the past. A better under standing of the geology and mineralization should be followed by soil sampling and VLF/Mag surveys, both infilling and expanding the Golden Kootenay grid and testing previously untested ground. The extension of the earlier grid could require up to 10 line km. and the peripheral work as much as 15 km. This entire phase would require 15 days of geology and 20 days of grid work. A second phase would involve trenching up to 300 m. on favorable soil and geophysical anomalies to generate some drill targets. Three hundred meters of trench would require 20 man days to map and sample. It is too early to estimate the extent of any drill program on the Eholt Property.

Total costs for the year are shown in Table 1.

TABLE 1

EHOLT BUDGET

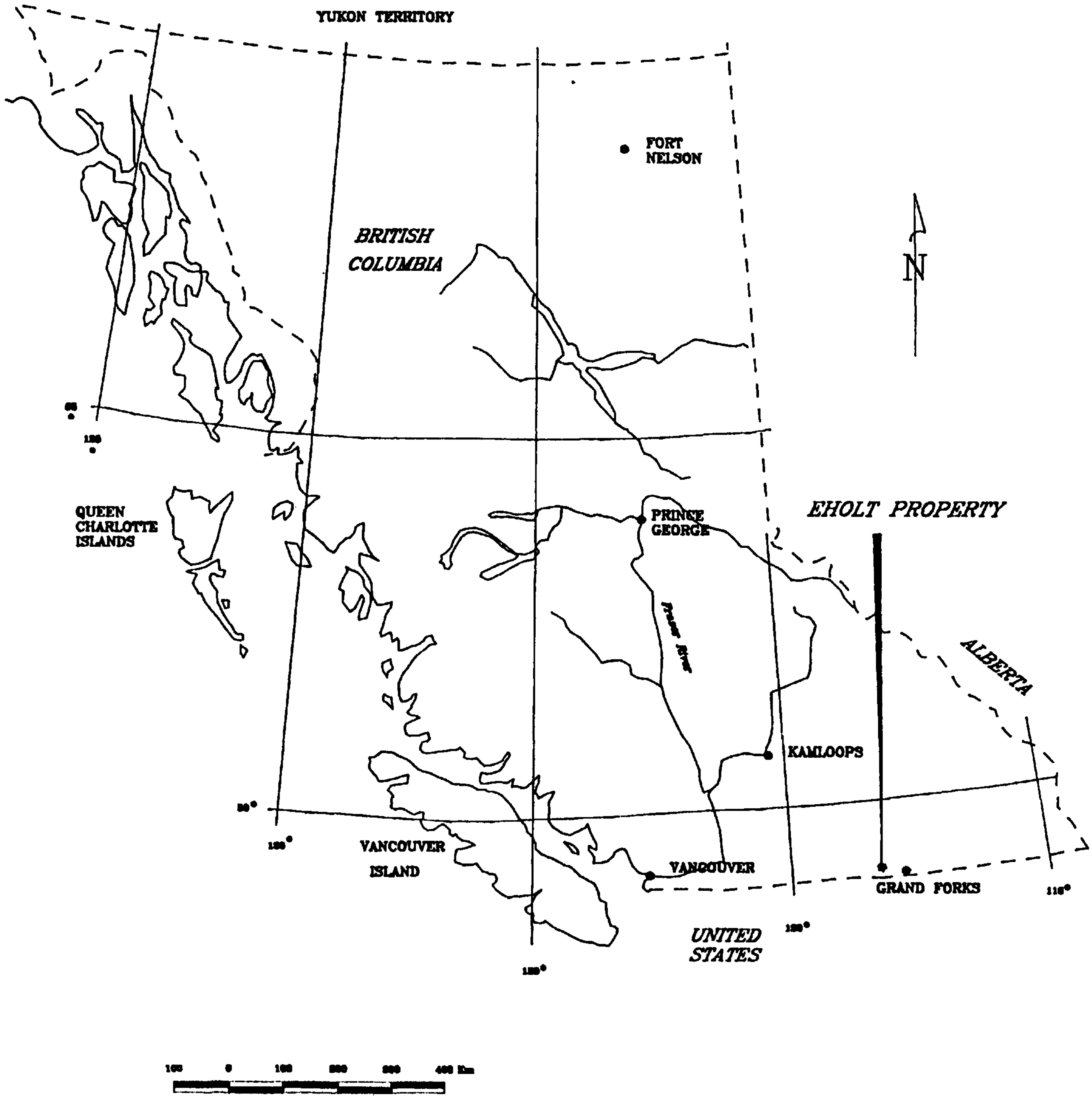
Phase 1

Supervision, mapping and sampling 15 days	Cdn $	4,500
Rock assays 50		1,000
Grid and soil sampling 20 days		3,000
Soil assays 625		9,375
Mag/VLF survey		3,000
Living Expenses 45 man days		1,125
Vehicle Expenses 1 truck 2000 km		520
Field supplies Say $500		500
Compilation, reporting and planning 5 days		1,500
Subtotal	Cdn $	24,520

Phase 2

Trench excavation 300m.		4,500
Trench sampling 10 days		1,500
Trench assays 100 samples		2,000
Supervision, trench mapping 10 days		3,000
Living Expenses 20 man days		500
Vehicle Expenses 1 truck 2000 km		520
Field supplies Say $500		500
Compilation, reporting, and planning 5 days		1,500
Subtotal	Cdn $	14,020
Total 1992	Cdn $	38,540

In addition, property payments totaling $15,000 will come due in 1992.



orvana RESOURCES

Fig. 1

LOCATION MAP

OK SYNDICATE
Northeastern Washington and southern British Columbia

Oct. 91

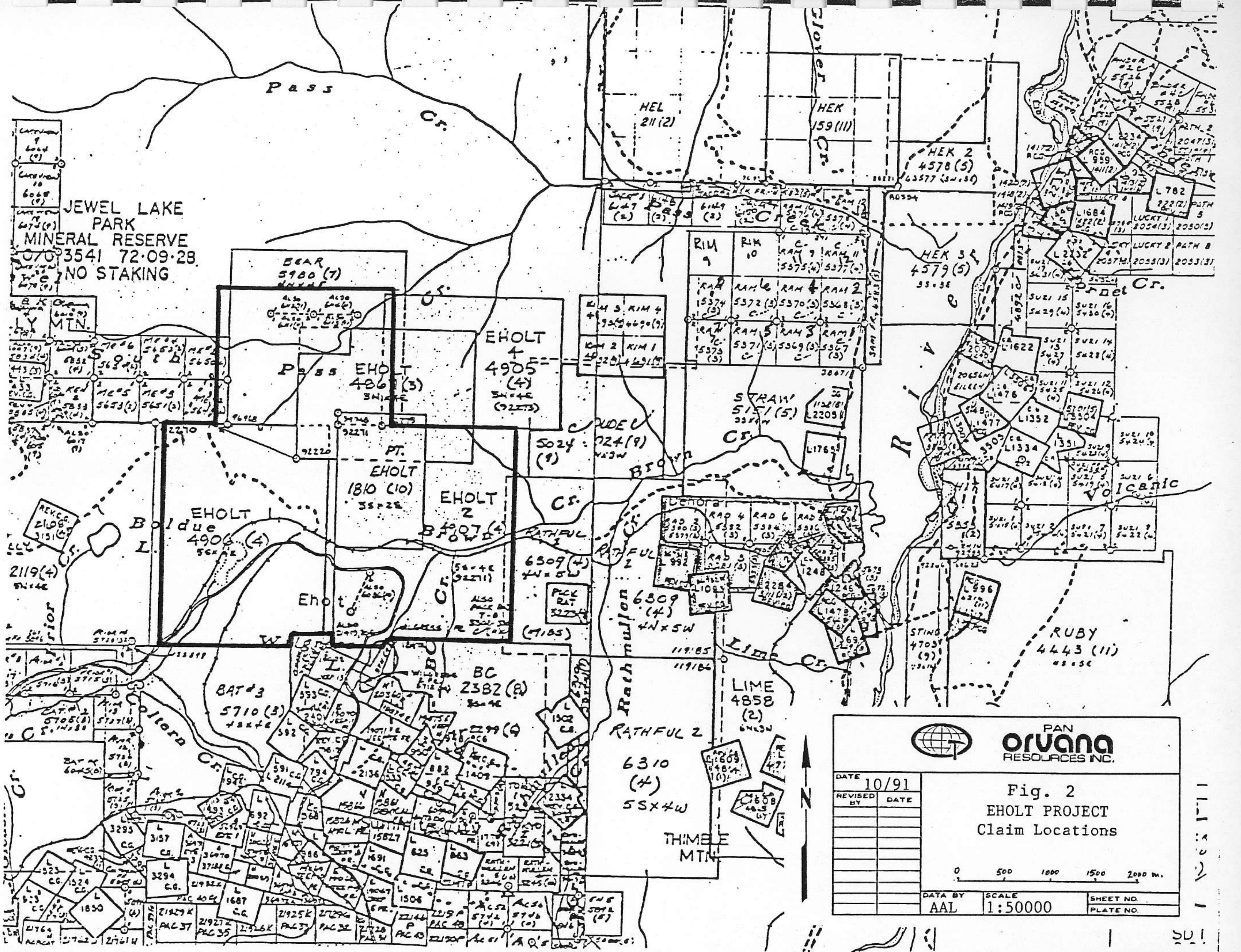
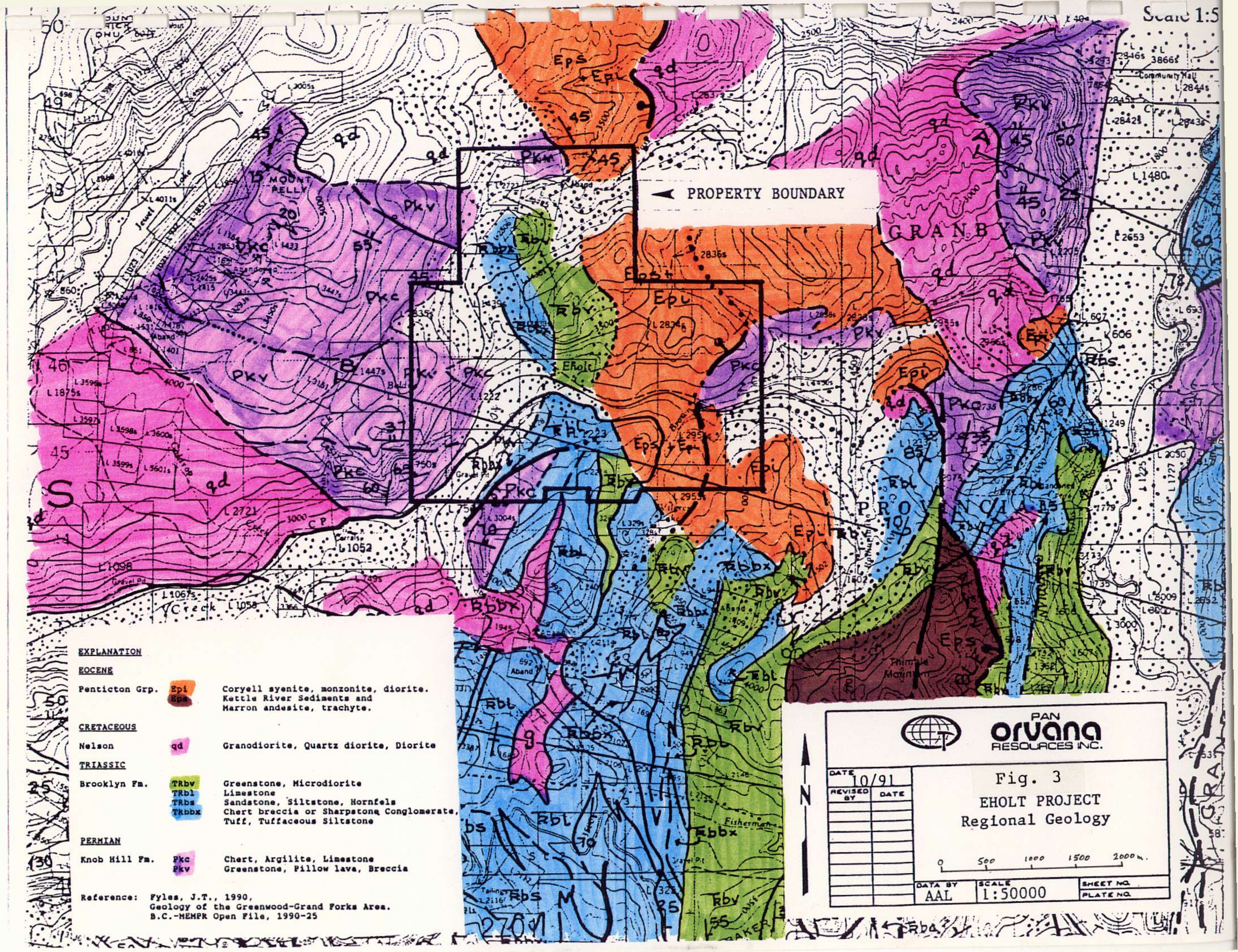


Fig. 2
EHOLT PROJECT
Claim Locations



Scale 1:5
PROPERTY BOUNDARY
MOUNT PELLY
GRANBY
EXPLANATION
EOCENE
Penticton Grp. Epi Eps Coryell syenite, monzonite, diorite. Kettle River Sediments and Marron andesite, trachyte.
CRETACEOUS
Nelson qd Granodiorite, Quartz diorite, Diorite
TRIASSIC
Brooklyn Fm. TRbv Greenstone, Microdiorite
TRbl Limestone
TRbs Sandstone, Siltstone, Hornfels
TRbbx Chert breccia or Sharpstone Conglomerate, Tuff, Tuffaceous Siltstone
PERMIAN
Knob Hill Fm. Pkc Chert, Argilite, Limestone
Pkv Greenstone, Pillow lava, Breccia
Reference: Fyles, J.T., 1990, Geology of the Greenwood-Grand Forks Area. B.C.-MEMPR Open File, 1990-25
PAN orvana RESOURCES INC.
N
DATE 10/91
REVISED BY
DATE
Fig. 3
EHOLT PROJECT
Regional Geology
0 500 1000 1500 2000 m.
DATA BY AAL
SCALE 1:50000
SHEET NO.
PLATE NO.

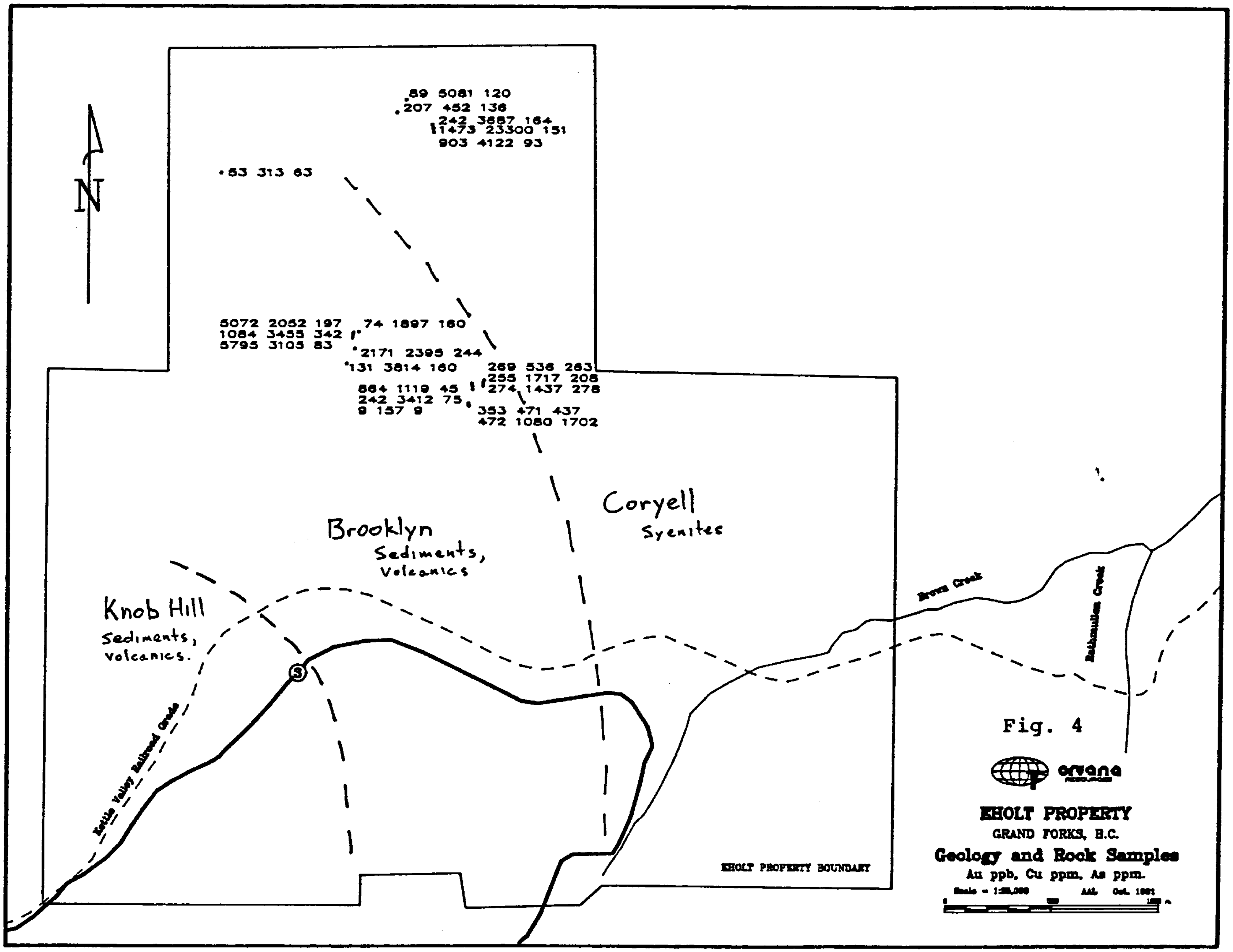


Fig. 4

EHOLT PROPERTY
GRAND FORKS, B.C.
Geology and Rock Samples
Au ppb, Cu ppm, As ppm.

BURNT BASIN

BURNT BASIN PROJECT
Greenwood Mining Division
Southcentral British Columbia

INTRODUCTION

The Burnt Basin property was acquired by Pan Orvana Resources Inc. during July, August, and September, 1991, as part of the Okanogan Syndicate venture with Placer Dome. Burnt Basin is located 15 km northeast of Christina Lake in southcentral British Columbia (Fig. 1). It hosts a geologic environment permissive of gold skarn formation and occurrences of mineralization that may represent portions of a large skarn system.

PROPERTY

The Burnt Basin property consists of three separate property packages, Burnt Basin (central area), Molly Gibson (southern portion), and Siltech (northern portion). They include the following:

Burnt Basin	- 32 units of 2 and 4 post Josh claims
	- 15 reverted crown grants
Molly Gibson	- 16 units in the Molly Gibson 1990 claim
Siltech	- 20 units in the Siltech claim
	- 2 reverted crown grants

The entire property totals 68 units of located mineral claims and 17 reverted crown grants.

One crown grant, L1753 (Manitou) is not part of the above packages and has not been acquired (Fig. 2).

PREVIOUS WORK

Ores rich in Zn, Pb, Ag, and Au were discovered in Burnt Basin prior to the turn of the century. Small scale production from several crown grants occurred sporadically over the years, the latest occurring during 1974-1976. High zinc content in most of the Burnt Basin area ores discouraged early producers. Production records for the camp are incomplete. It is recorded that the Burnt Basin claim produced 5,410 tons of ore yielding 34 oz Au, 14,746 oz Ag, 420,031 lbs Pb, 562,375 lbs An, and the Molly Gibson claim 310 tons of ore yielding 331 oz Au and 140 oz Ag.

Since 1965, several companies have conducted exploration programs at Burnt Basin. Most of the programs were focused toward discovering silver ores on the Burnt Basin claims.

Alteration and Mineralization

Alteration on the Burnt Basin property includes propyllitic, phyllic, and calcsilicate styles. Propyllitic alteration occurs as chlorite and minor epidote in the Nelson intrusives in the north part of the property, end as chlorite and common epidote in the volcanic rocks of the Mount Roberts Formation. This alteration is commonly pervasive. Phyllic alteration occurs over small areas in both the Nelson intrusives and the Mount Roberts volcanic package, probably localized along structures. Calcsilicate alteration is common in the Mount Roberts sedimentary package.

It is exposed by small areas of garnet-diopside skarn in carbonate beds near intrusive contacts, and by alteration selvages of fine-grained pyroxene and potassium feldspar within biotite hornfels. In some areas this alteration to cacsilicate hornfels appeers pervasive.

Mineralization on the Burnt Basin property includes three known types that host gold and/or base metals. The most common is Pb, Zn, Ag sulphide-magnetite replacement pods within the Mount Roberts sedimentary package. These occurrences are commonly associated with dike contacts and contain highly variable amounts (up to ore grades) of Au and Cu. They are concentrated in a 1/2 km 1 km area along the north side of Mollie Creek. Small shipments of these ores during the 1970's graded 3.1-6.0 oz/ton Ag, 4.45-8% Pb, and 6.75-16% Zn.

Gold is the principal metal in the other two types of mineralization that have produced in Burnt Basin. At the Molly Gibson, pyrrhotite, pyrite, and chalcopyrite occur as massive to stringer zones along and near limestone/hornfels contacts proximal to syenite dikes. Grades at the Molly Gibson averaged just over 1 oz/ton Au. At the Motherlode reverted crown grant, gold occurs in quartz veins that range 0.35-1.2 m in width. Grades at the Motherlode average 0.229 oz/ton Au. Government publications indicate anomalous platinum at the Motherlode, with assays up to 0.75 oz/ton.

MODEL

The Burnt Basin property was initially targeted as a Au skarn play. It has several features that are favorable for the development of Au skarns, including a stratigraphic section containing thinly bedded limestone, siltstone, and volcanics. The presence of numerous dikes and sills is also important. Pb-Zn-Ag sulphide replacement bodies in the central portion of Burnt Basin may represent distal base metal mineralization, a feature common in Au skarns. The large area of biotite hornfels and crosscutting pyroxene/k-spar hornfels selvages in the Molly Gibson area and southwest from there down to the highway potentially represents a very large metasomatic

Turn to next page
for continuation
of previous page

Several hundred tons of Ag-Pb-Zn ore were subsequently shipped. The latest exploration has been directed toward Au on the Burnt Basin claims (1989) and the Molly Gibson claim (1988).

GEOLOGY

Regional Geology

West of Christina Lake is a large area underlain by the Proterozoic Grand Forks gneiss, which includes gneiss and pegmatite. East of Christina Lake are limestone and shale sedimentary and metasedimentary rocks that are variously mapped as Ordovician(?) to Devonian(?) age or Pennsylvanian(?) to Permian(?) age Mount Roberts Formation. Additionally, there is peridotite and serpentinite of the Anarchist Group (Carboniferous or earlier Paleozoic) and Rossland Group greenstone (upper Traissic/later Jurassic). Intruding these rocks are quartz diorite, granodiorite, and granite of the Nelson suite (middle Jurassic) and Okanogan Batholith (Cretaceous or Jurassic) and syenite and monzonite of the Coryell Syenite (Eocene) (Fig. 3).

Property Geology

Rocks on the Burnt Basin property include Mount Roberts Formation sediments and volcanics and their metamorphic equivalents, and intrusives of both Nelson and Coryell group affinities.

The Mount Roberts Formation includes a sediment-dominant package on the south (contains thin to medium-bedded clean to dirty, tuffaceous limestone, siltstone, argillite, tuff, and volcanic/volcaniclastic beds), and a volcanic-dominant package on the north (contains andesitic greenstone subvolcanic diorite, minor limestone, and fine-grained clastic sediments). Bedding in the Mount Roberts Formation generally strikes NW and dips steeply east.

The Mount Roberts Formation is intruded by Nelson monzonite, syenite, and granite in the northern part of the property, and by Coryell monzonite on the southern part of the property. Additionally, sills and dikes of equigranular to porphyritic syenite, monzonite, and diorite are common within the Mount Roberts Formation.

system. The abundance of pyroxene selvages and scattered garnet/pyroxene skarn in the Molly Gibson workings area may indicate increasing proximity to the higher temperature core of a skarn system. This is the area most likely to host a Au skarn deposit.

WORK TO DATE

During 1991, Orvana conducted a program of geologic mapping, rock sampling, and soil sampling. The mapping consisted of widely spaced traverses across various portions of the property. The result is an understanding of the general geology of the property, alteration and mineralization types present. Rock sampling and geochemical analysis are important in defining metal zonation within the mineralizing system.

The soil sampling program was designed to further define two areas of anomalous soil geochemistry that were discovered by earlier surveys. A total of 436 soil samples were collected over 24720 m of grid line. The assay data was only recently received; interpretation of the results has not been completed.

TARGET AREAS

The principal area of interest on the Burnt Basin property is the Molly Gibson area. Calcsilicate alteration characteristic of Au skarns is best developed in this area. Additionally, the presence of significant Au values in pyrrhotite and pyrite replacement of hornfels and favoreble trace element geochemistry indicate that Au skarn development may occur proximal to the Molly Gibson showings.

Other portions of Burnt Basin warrant additional investigation beyond the first pass mapping completed to date. Scattered anomalous Au values occur in soils in the Mother Lode area. Several old crown grants (reverted or expired) located in the eastern part of Burnt Basin and on the Silteoh claim, though not advanced enough to be considered target areas, should be mapped and sampled.

PROGRAM AND BUDGET

A two phase program of exploration is proposed at Burnt Basin for 1992. An initial phase would include geologic mapping and sampling over those areas of the property not yet visited. More detailed mapping with support petrography will be conducted in the Molly Gibson area with emphasis on working out zonation of calcsilicate alteration. A relatively amall program of soil sampling will be conducted. This first phase program will require approximately three weeks.

As targets become more defined on the ground, a second phase program will be initiated which will include initial trenching and subsequent diamond drilling. Approximately 500 m of excavator trenching and 500 m of core drilling are anticipated. This phase will require approximately three to four weeks.

Projected expenditures for both phases of exploration total $93,510. Table 1 presents an itemized budget of expenditures.

TABLE 1

BURNT BASIN BUDGET

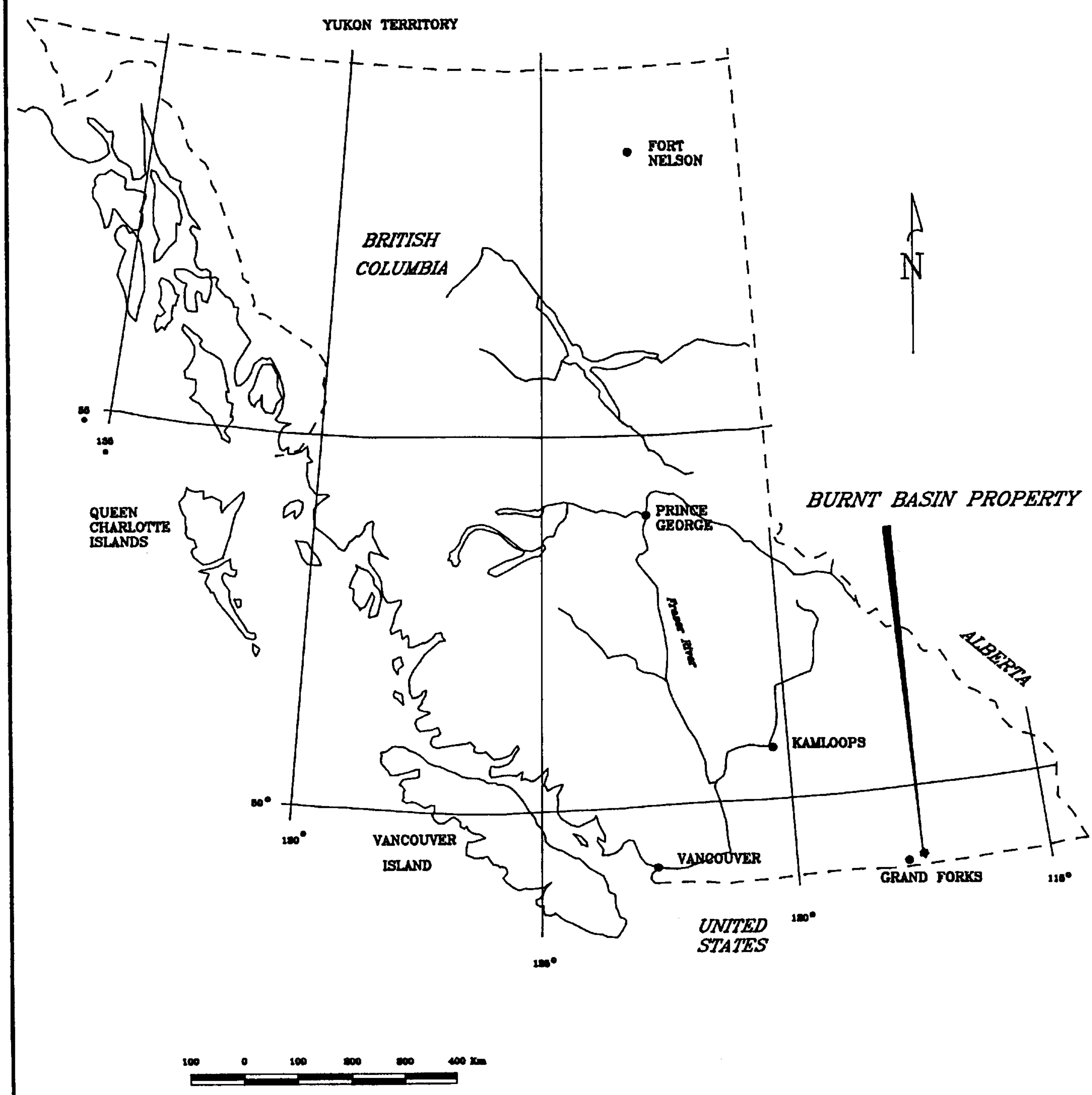
Phase 1

Geologic Mapping (surface and underground)			
3 man weeks		U.S.	$ 5,250
Rock Sample Assays			
Approx. 75 sx			1,500
Petrography & Microprobe			1,000
Grid & Soil Sampling			
200 sx @ $50/sx			10,000
Soil Analysis			
200 @ $12/sx			2,400
	Subtotal	U.S.	$ 20,150

Phase 2

Trenching			
500 m @ $20/m			10,000
Diamond Drilling			
500 m @ $60/m			30,000
Assays			
250 sx @ $18/sx			4,500
Supervision, trench mapping/sampling, core logging/sampling			8,750
Compilation			
3 weeks			5,250
Living Expenses			
8 man weeks			3,360
Vehicle Expenses			
6000 miles @ $0.50			3,000
	Subtotal	U.S.	$ 85,010
Contingency @ 10%			8,500
	Total		$ 93,510
Property Payments		Cdn	$ 45,000

Note: These payments subject to reduction based on program results.



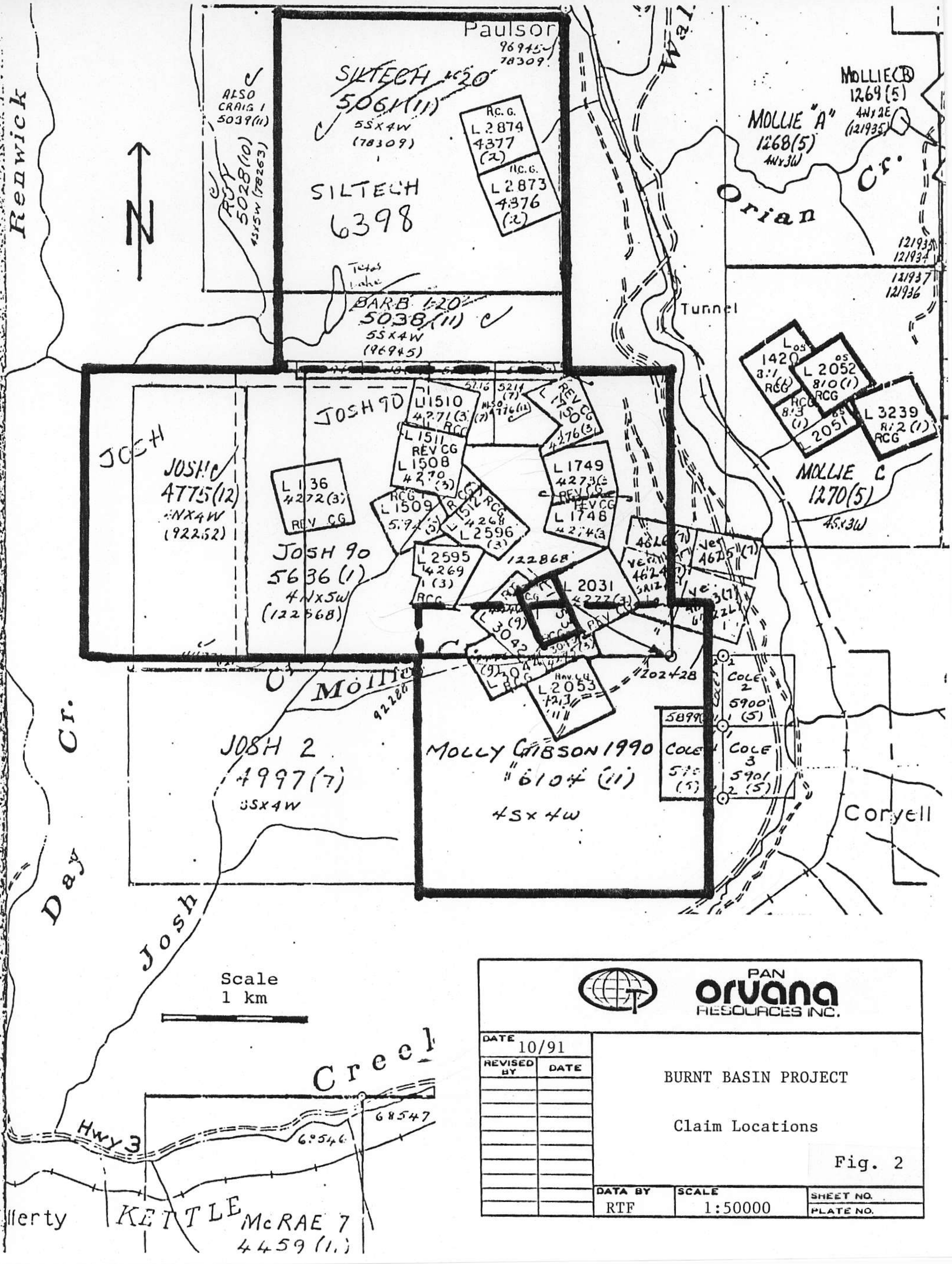
orvana RESOURCES

Fig. 1

LOCATION MAP

OK SYNDICATE
Northeastern Washington and southern British Columbia

Oct. 91



PAN ORVANA RESOURCES INC.

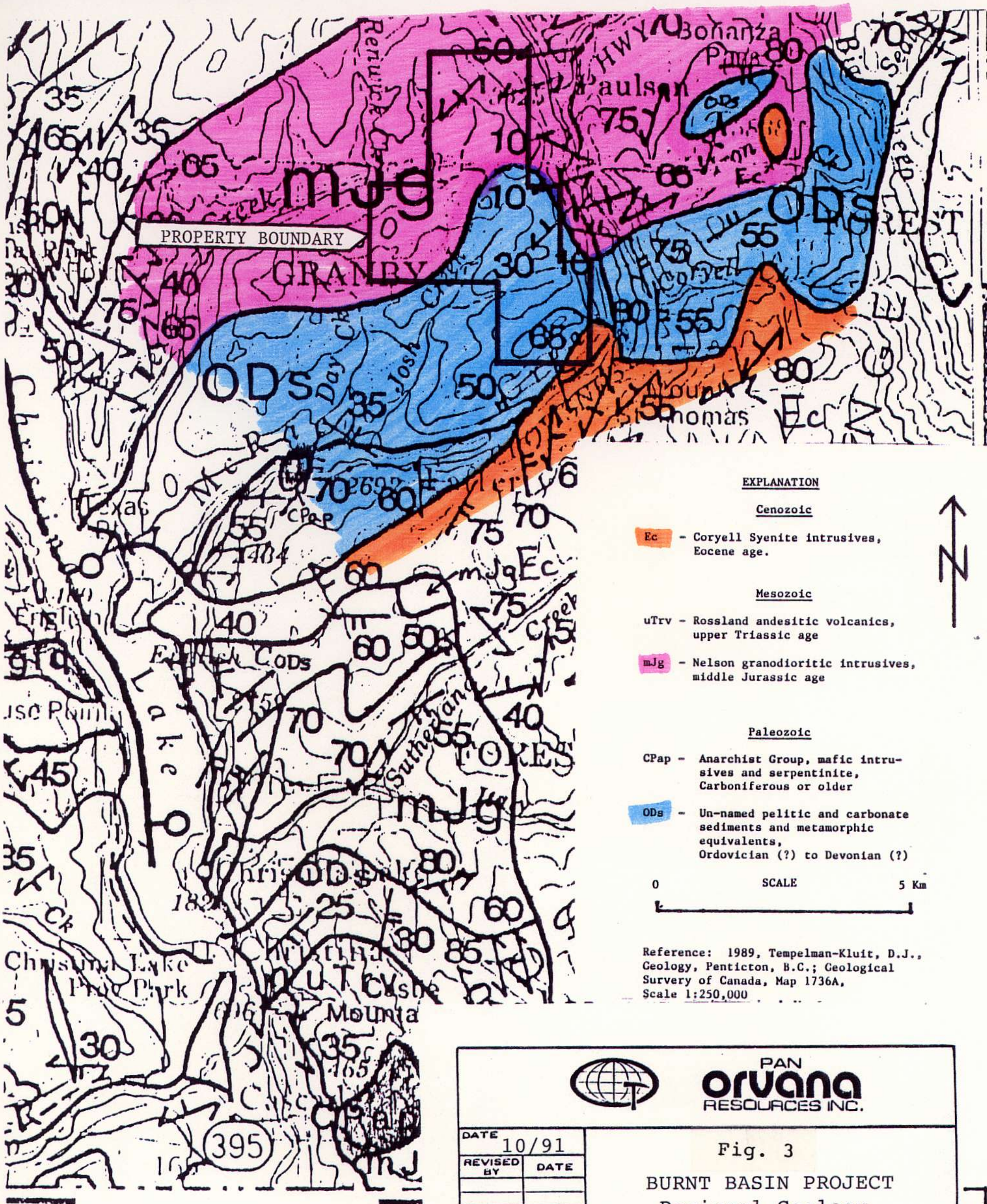
DATE	10/91
REVISED BY	DATE

BURNT BASIN PROJECT

Claim Locations

Fig. 2

DATA BY	SCALE	SHEET NO. / PLATE NO.
RTF	1:50000	



EXPLANATION

Cenozoic

Ec - Coryell Syenite intrusives, Eocene age.

Mesozoic

uTrv - Rossland andesitic volcanics, upper Triassic age

mJg - Nelson granodioritic intrusives, middle Jurassic age

Paleozoic

CPap - Anarchist Group, mafic intrusives and serpentinite, Carboniferous or older

ODs - Un-named pelitic and carbonate sediments and metamorphic equivalents, Ordovician (?) to Devonian (?)

SCALE 0 — 5 Km

Reference: 1989, Tempelman-Kluit, D.J., Geology, Penticton, B.C.; Geological Survey of Canada, Map 1736A, Scale 1:250,000

PAN ORVANA RESOURCES INC.

DATE 10/91	Fig. 3 BURNT BASIN PROJECT Regional Geology
REVISED BY / DATE	
DATA BY	SCALE 1:100000	SHEET NO. / PLATE NO.

49°
118° 0

LONE SILVER

LONE SILVER PROJECT
Sheep Creek Mining District
Nelson Mining Division

INTRODUCTION

The Lone Silver Project is being acquired from International Corona Corporation as a joint venture project in behalf of the OK Syndicate. High grade gold mineralization occurs within quartz lenses and fracture zones within dolomite breccia. The regional Black Bluff Thrust and northwest trending Styx Creek Fault indicate a potential for bulk-mineable structurally and stratigraphically hosted Au-Ag mineralization.

PROPERTY/LOCATION

The claims of the Lone Silver Project are located south of Highway 3 and east of Highway 6 approximately 14 km south of Salmo, B.C. (Fig. 1).

The Lone silver Project is comprised of the following six claims, under joint venture with International Corona Corporation and Orvana, and an area of influence with M. Kaufman (Fig. 2).

Name	Record #	Units	Expiry Date
Lone Silver1	55	1	9/06/91
Lone Silver2	1331	1	7/11/91
Lone Silver3	1332	1	7/11/91
Cat	4890	9	16/11/91
Zip 1	4595	20	2/04/91
Zip 2	4596	15	4/04/91
Total Units		47	

PREVIOUS WORK

The claim area shipped Au-Ag ore from 1909 to 1915 and again from 1935 to 1941, and from 1961 to 1963. Production records are as follows for the various mines:

Mine	Period	Tonnage	Au opt	Ag opt
Lone Silver	1909-15	86	0.26	156.5
	1936-41	106	0.60	83.5
Davne	1938	4	2.75	42.5
Lucky Strike	1938-40	51	1.30	38.2
	1961-63	9	1.30	13.6

Aside from the above mentioned production, very limited geologic investigation has been conducted, largely due to the extensive overburden and poor exposure. No diamond drilling has occurred.

Corona (Lacana) acquired the claims in 1987 and continues to maintain them in good standing. Corona completed a limited geologic mapping program coincident with a sampling program consisting of 1255 soil samples, 135 rock samples, 2 heavy mineral creek samples, and 4 creek silt samples. This sampling, in addition to confirming the style of mineralization with which the old workings are associated, also delineated scattered anomalous gold values in the carbonate hangingwall to the Black Bluff fault.

GEOLOGY

Regional Geology

The project area consists of an early sedimentary sequence of dolomite, limestone, phyllite, argillite, and highly deformed slate. Within the sequence, dolomite and limestone of the mid Cambrian Nelway fm is unconformably overlain by the argillite, slate and argillaceous limestones of the mid Ordovician Active fm (Fig. 3).

Property Geology

The regional Black Bluff fault strikes 066^{o} and dips to the SE bringing the middle member dolomite of the Nelway fm to the south into contact with the argillite of the Active fm. This thrust fault is underlain by a similar thrust (Argillite) and it is very probable that the thrust faulting is imbricate, causing numerous subsidiary thrusts with many overturned folds.

No intrusives occur within the claim area, and the main alteration are dolomitization and carbonate veining. To the southwest, the Reeves-MacDonald mine is located along the same Black Bluff fault. The mineralization is very different from the Reeves-MacDonald and contains predominantly grey copper minerals. The highest grab sample value was associated with grey carbonate veining and ran 0.34 opt Au.

WORK TO DATE

Preliminary field check and sampling by Orvana confirmeda potential bulk mineable gold target at Lone Silver. This type target is very different from other occurrences in the Sheep Creek Camp and the Reeves-MacDdonald base metal mine.

MODEL

The target at Lone Silver represents a bulk mineable target represented by gold leakage in the upper plate rocks with further host structural preparation by the northwest trending Styx Creek feult. Additional targets may exist related to imbricate fault zones underlying the Black Bluff fault (Fig. 4).

PROGRAM AND BUDGET

Although the Lone Silver Project has had limited exploration, a work program to test the above model could evolve rapidly. A two phase program is proposed. The initial phase would involve reconnaissance and detailed mapping to locate all exposures and sample all carbonate veins. The immediate property area has extensive glacial drift so outcrops are limited and the carbonate veins have not been exhaustively prospected as is so common in other districts. The mapping would be followed by establishment of soil grids and then trenching. At the present time it appears that the type mineralization being studied is not amenable to geophysical techniques. The second phase would involve approximately 600 feet of rotary drilling.

Projected expenditures for Phase 1 totals U.S. $ 58,025, while Phase 2 totals U.S. $ 112,200. By Phase 2 the Lone Silver Project would likely be included as a joint venture project. Table 1 shows the itemized budget as discussed.

TABLE 1

LONE SILVER BUDGET

<u>Phase 1</u>

Geologic Mapping		
20 days		U.S. $ 5,000
Rock Sample Assays		
250 @ $20/sx		5,000
Grid and Soil Sampling		
300 @ $50/sx		15,000
Soil Sample Assays		
300 @ $12/sx		3,600
Excavation		
80 hr @ $80/hr		6,400
Trench Assays		
250 @ $20/sx		5,000
Supervision		
20 days		6,000
Vehicle Expense		
4000 mi @ $0.50		2,000
Living Expenses		
40 days @ $50/day		2,000
Field Expenses		
Say $1,500		1,500
Compilation		
5 days		1,250
	Subtotal	U.S. $ 52,750
Contingency 10%		5,275
	Total	U.S. $ 58,025

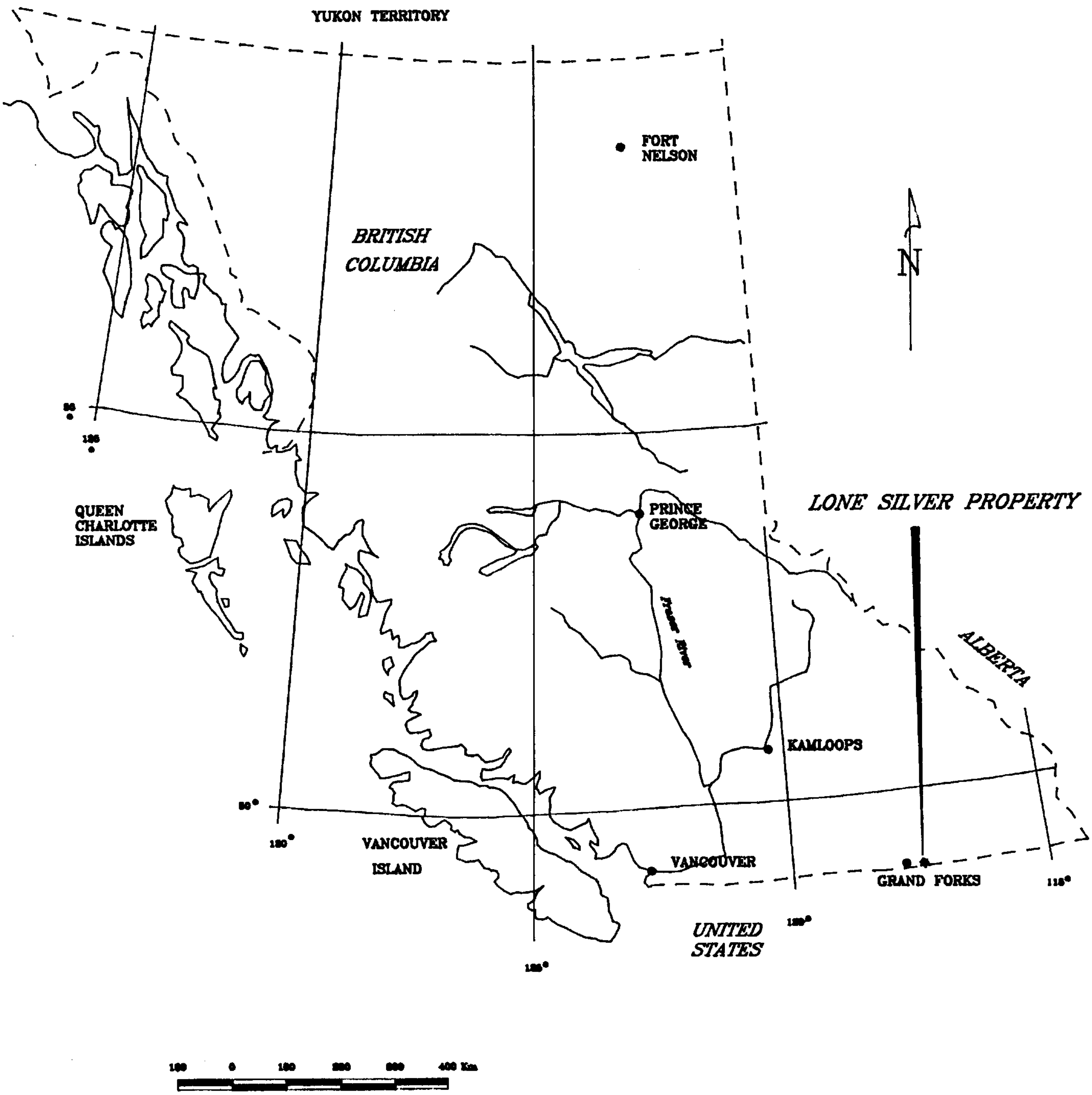
<u>Phase 2</u>

Geologic Supervision, logging, sampling, etc.		9,000
Excavation		
60 hrs @ $80/hr		4,800
Trench Assays		
175 @ $20/sx		3,500
Reverse Circulation Drilling		
5000 ft @ $12/ft		60,000
Assaying		
600 samples @ $20/sx		12,000
Supervision		
25 days		7,500
Vehicle Expenses		
3500 mi @ $0.50/mi		1,750
Living Expenses		
25 days @ $50/day		1,250
Field Expenses		
Say $1,700		1,700
Compilation		
7 days		1,750
	Subtotal	U.S. $102,000

Contingency 10%		10,200
	Total	U.S. $112,200

Note: Phase 1 would be funded by OK Syndicate budget while Phase 2 would require separate funding as a joint venture.

Property Payments	0



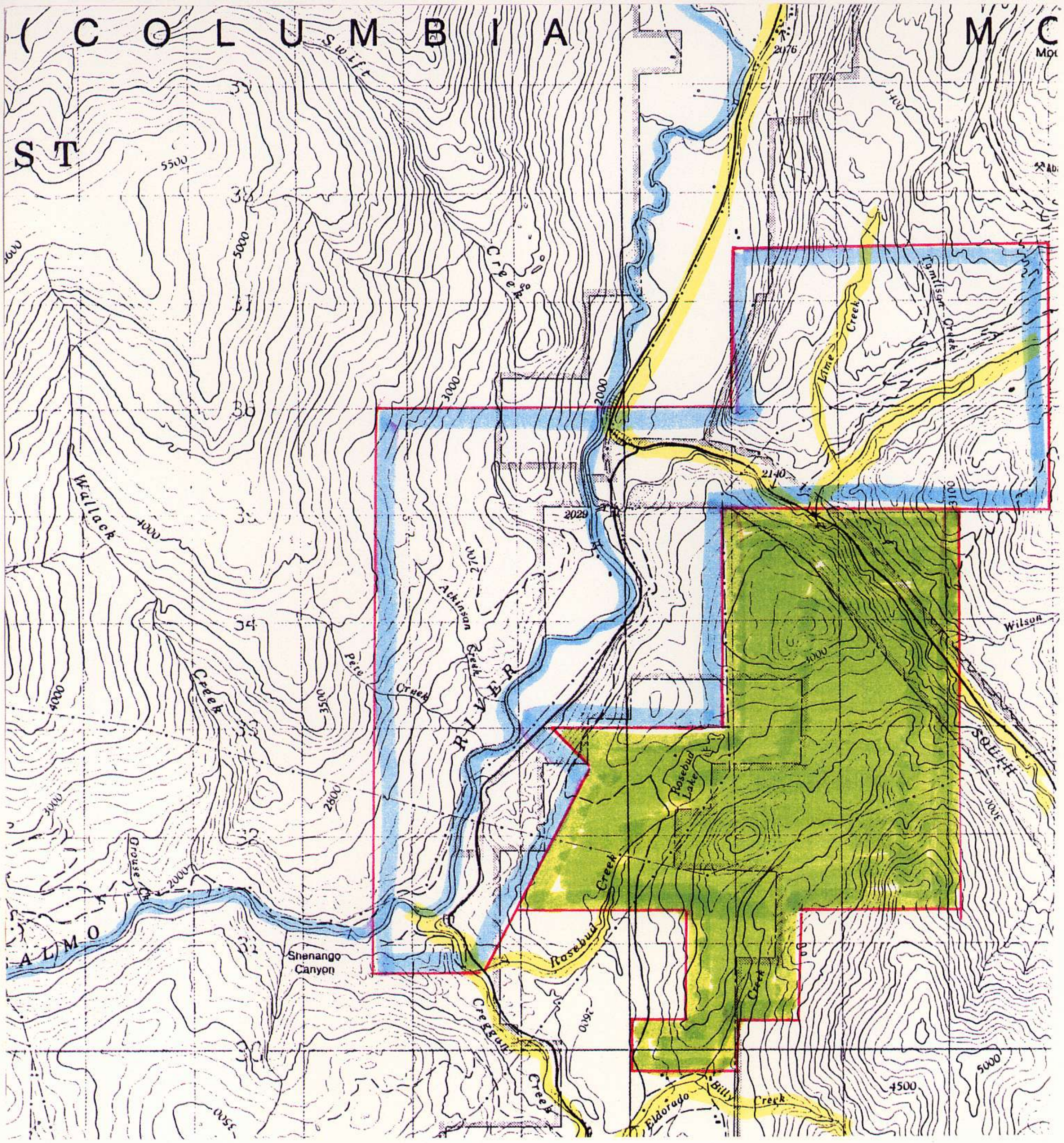
orvana RESOURCES

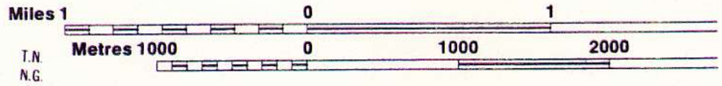
Fig. 1

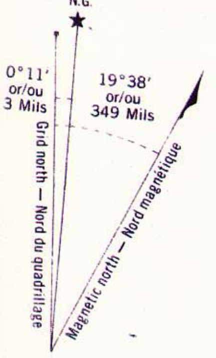
LOCATION MAP

OK SYNDICATE
Northeastern Washington and southern British Columbia

Oct. 91





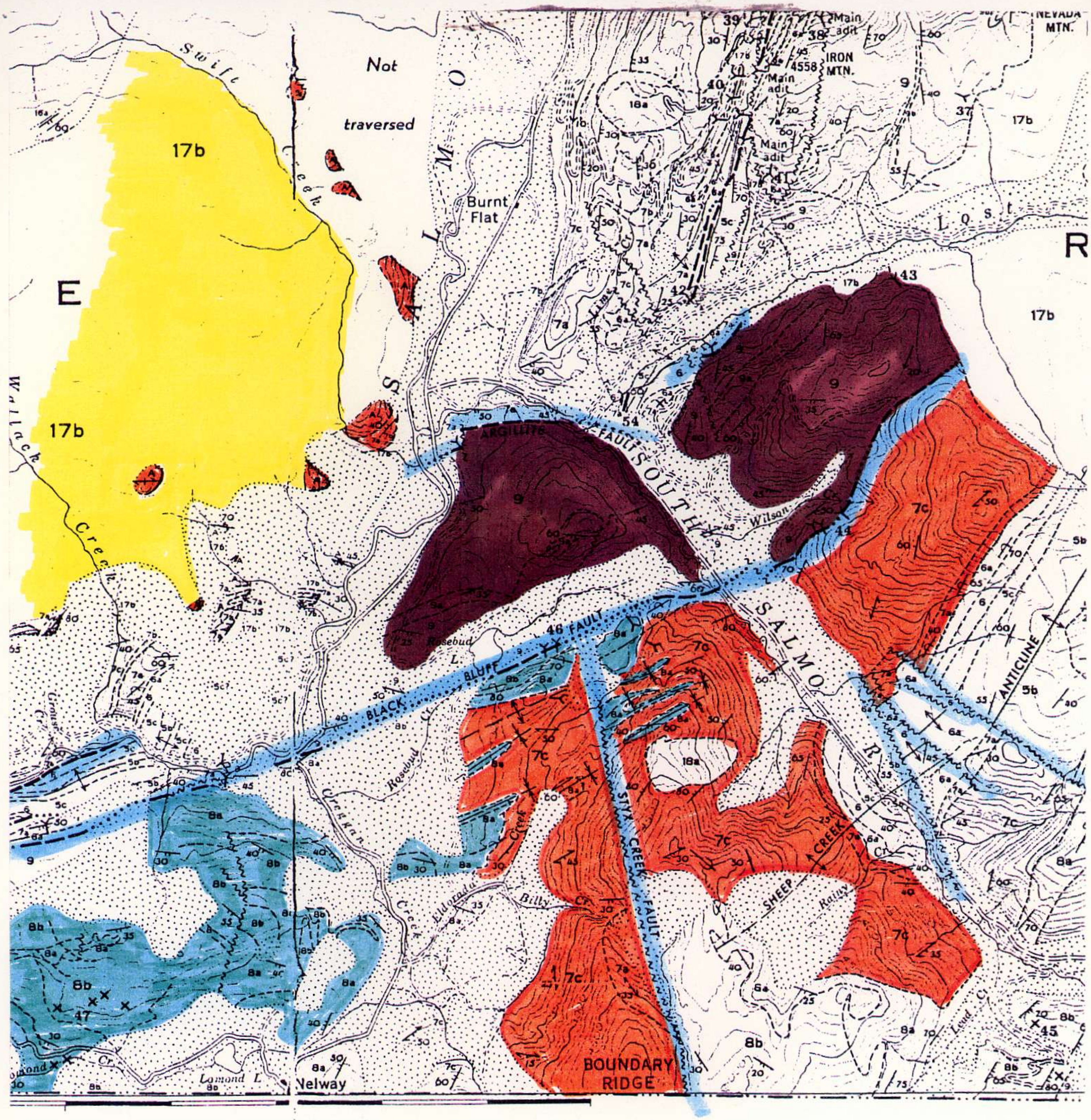


CORONA AGREEMENT
Leased to Orvana

MK AGREEMENT
6/30/91

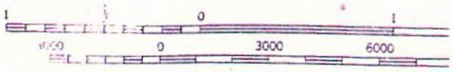
PAN ORVANA RESOURCES INC.

DATE 10/91	Fig. 2 LONE SILVER Sheep Cr. District B.C. Land Status Salmo 82F/3		
REVISED BY	DATE		
DATA BY	SCALE 1:50,000	SHEET NO.	PLATE NO.



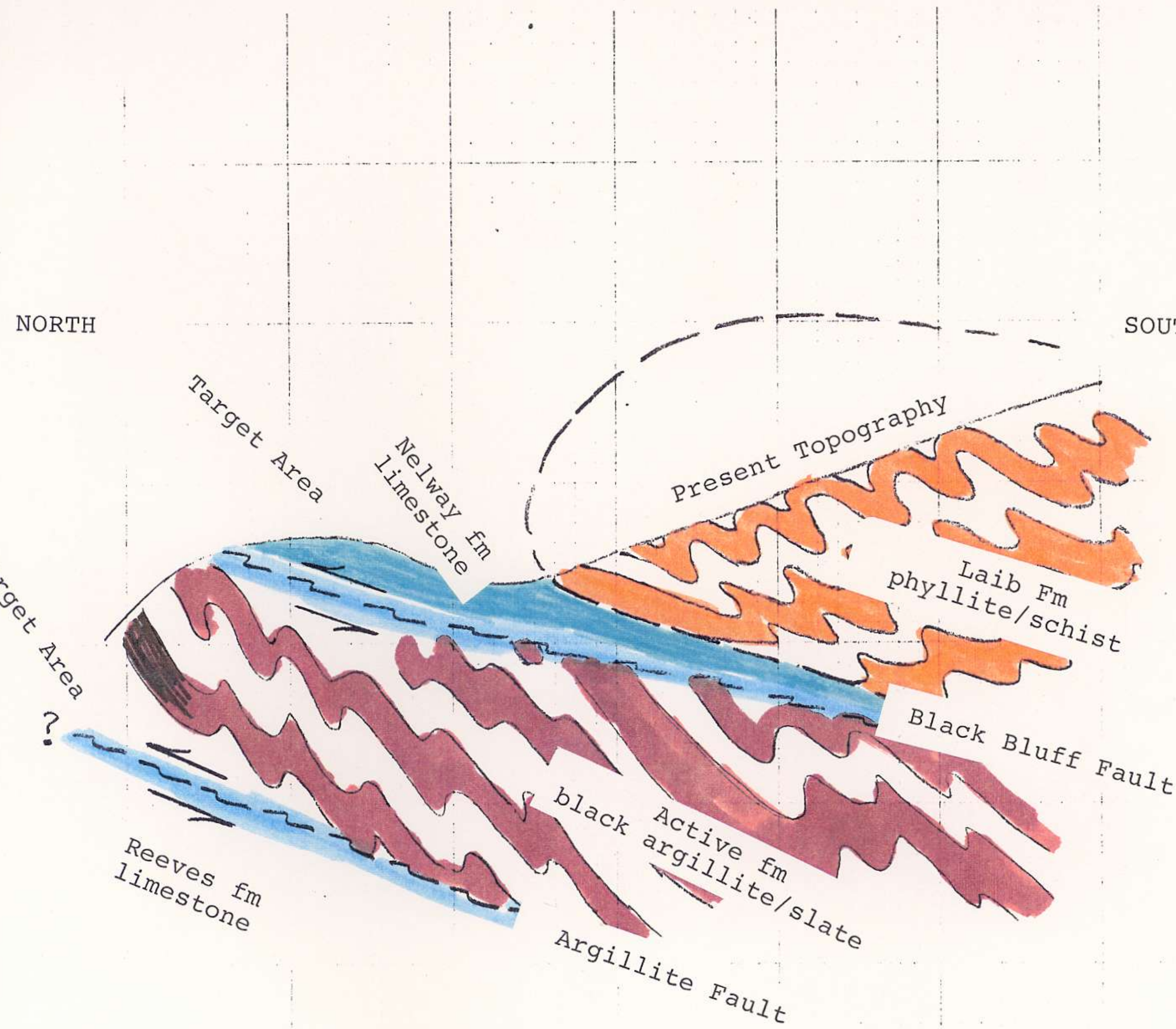
Nelson intrusive
Active fm (Argillite)
Nelway fm (limestone)
LAIB fm (phyllite)

Regional Faults



PAN orvana RESOURCES INC.

DATE 10/91	LONE SILVER AND SWIFT CREEK Sheep Cr Mining District Fig. 3 Regional Geology
REVISED BY / DATE	
DATA BY	SCALE 1: 62,500
SHEET NO.	PLATE NO.



Nelson intrusive
Active fm (Argillite)
Nelway fm (limestone)
LAIB fm (phyllite)

Regional Faults

PAN orvana RESOURCES INC.

DATE 10/91	Fig. 4 LONE SILVER Sheep Cr. Mining District Idealized Longitudinal Section Parallel to Styx Cr. Fault Looking N.E.
REVISED BY / DATE	DATA BY / SCALE Not to Scale / SHEET NO. / PLATE NO.

SWIFT CREEK

SWIFT CREEK PROJECT
Sheep Creek Mining District
Nelson Mining Division

INTRODUCTION

The Swift Creek Project is located between Salmo, B.C. and the U.S. boundary. The Sheep Creek gold camp is located 8 miles northeast of Swift Creek and the Reeves-MacDonald mine is approximately 5 miles to the southwest. (Fig. 1).

The project area is comprised of 14 units located by Orvana Resources on behalf of the OK Syndicate. The claims were located based on anomalous gold in stream sediment samples from data released to the public by the BCGS in July, 1991.

The area is bounded to the west by Nelson age intrusives and covers a wedge of partially mapped Paleozoic Laib fm. A program of mapping and sampling is proposed to determine the source of gold for the anomalous stream sediments.

PROPERTY/LOCATION

The 14 claims located by Orvana are situated immediately to the west-northwest of the junction of Highway 3 and Highway 6 (Fig. 2). The claims are included in an agreement with M. Kaufman that requires a one time U.S. $5,000 payment after year 1 and three consecutive annual U.S. $50,000 payments at the start of production.

PREVIOUS WORK

No record of early exploration exists; however, early prospectors have no doubt scoured the ground.

The area was recognized by M. Kaufman and Orvana during the July, 1991 B.C. Geological Survey RGS release. A single point survey recorded a gold value of 110 ppb at the confluence of the Salmo River and Swift Creek.

GEOLOGY

Regional Geology

As shown in Fig. 3 in the Lone Silver section of this report, the Swift Creek area can be characterized as a contact zone of mid Cambrian sediments of the Laib fm intruded by a Nelson age stock.

WORK TO DATE

A series of 10 stream sediment samples were collected by Orvana following the BCGS-RGS data release (Fig. 4). The samples returned impressive gold values with a high of 1276 ppb Au and a mean of all samples = 317 ppb Au.

Based on these geochem results Orvana located the 14 claims to cover 4 km of strike along the anomalous creek. Sampling indicates the values are not derived from the Nelson stock.

MODEL

No productive mines are noted in the drainage to explain the anomalous samples. The Swift Creek area is proximal to Lone Silver with a similar structural and stratigraphic setting; therefore clearing the way for a Lone Silver type target. Au-skarn occurrences exist to the northeast and Cu-Au porphyries exist to the north. Without further field work one would be foolish to attempt an explanation for a model.

PROGRAM AND BUDGET

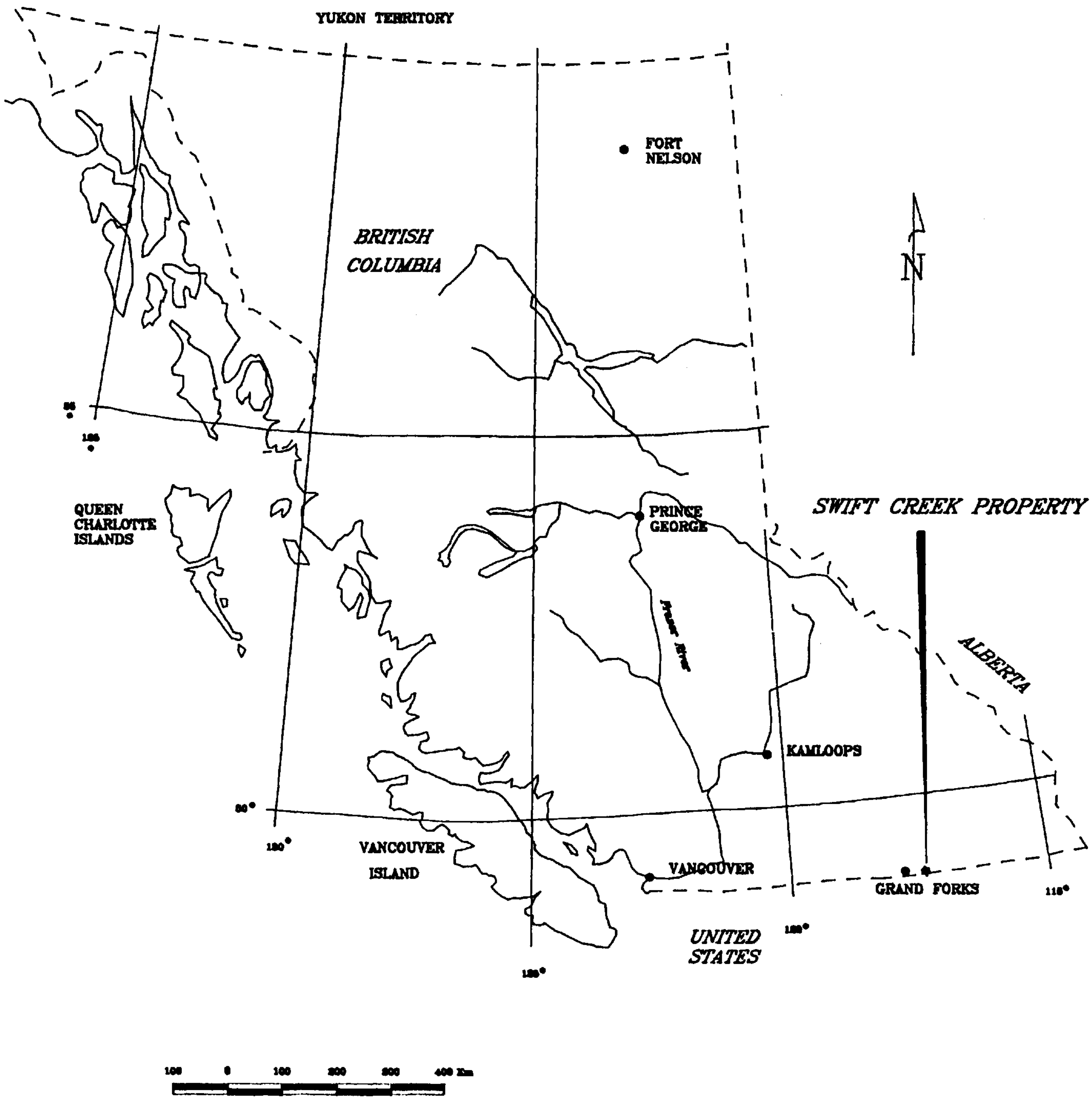
The next stage exploration at Swift Creek will require reconnaissance mapping and sampling, additional stream sediment sampling, and a review of all historic records. A second phase program cannot be suggested until the initial phase data is collected and processed. Table 1 outlines the budget necessary to proceed to the next decision point at Swift Creek.

TABLE 1

SWIFT CREEK BUDGET

Phase 1

Geologic Mapping		
15 days		U.S. $ 3,750
Rock Sample Assays		
125 @ $20/sx		2,500
Stream sediment Assays		
30 @ $12/sx		360
Supervision		
7 days		2,100
Vehicle Expenses		
2250 mi @ $.050		1,125
Living Expenses		
17 days @ $50		850
Field Expenses		
Say $500		500
Compilation		
5 days		1,250
	Subtotal	U.S. $ 12,435
Contingency @ 10%		1,244
		U.S. $ 13,679
Property Payment		U.S. $ 5,000



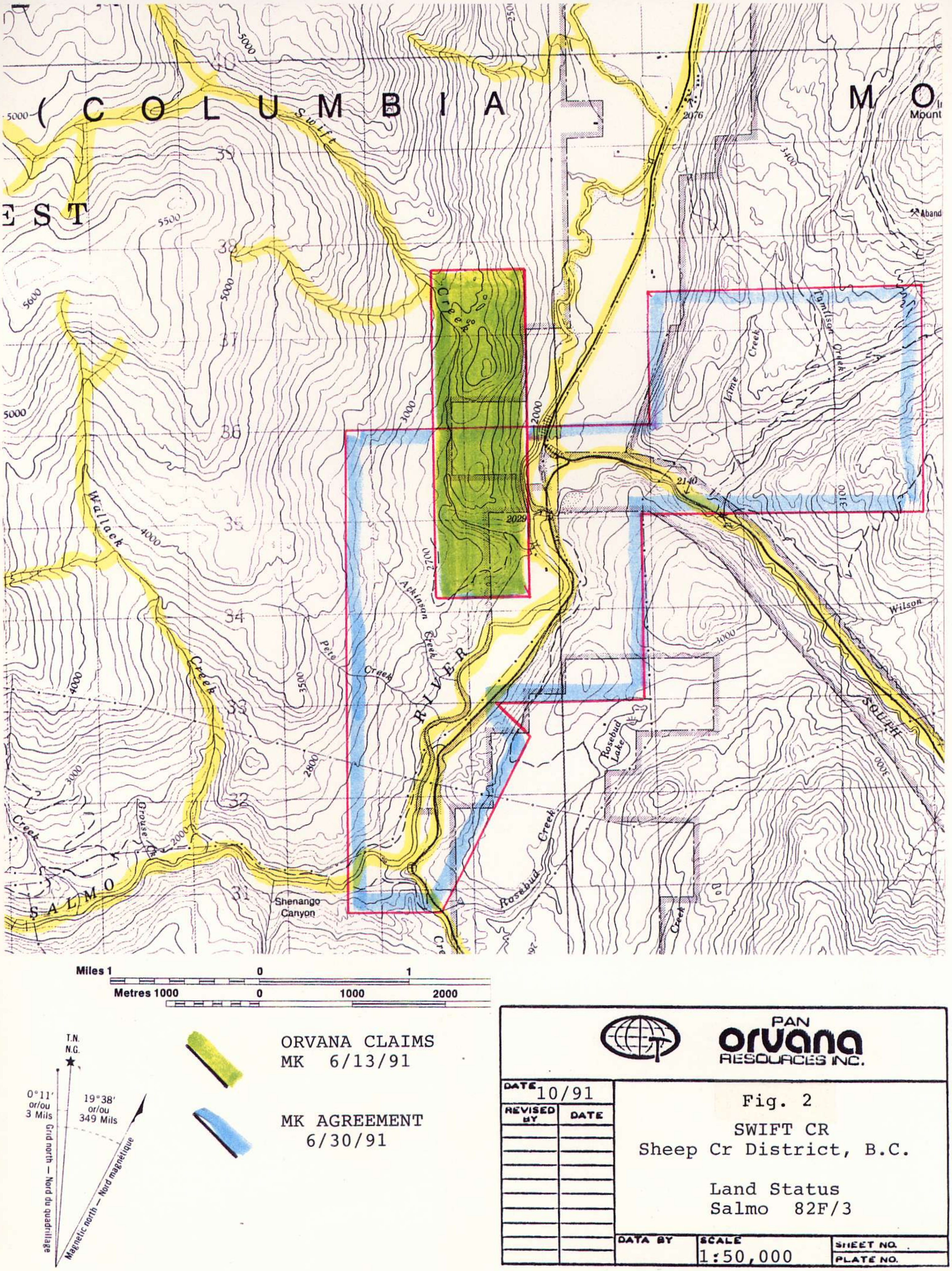
orvana RESOURCES

Fig. 1

LOCATION MAP

OK SYNDICATE
Northeastern Washington and southern British Columbia

Oct. 91

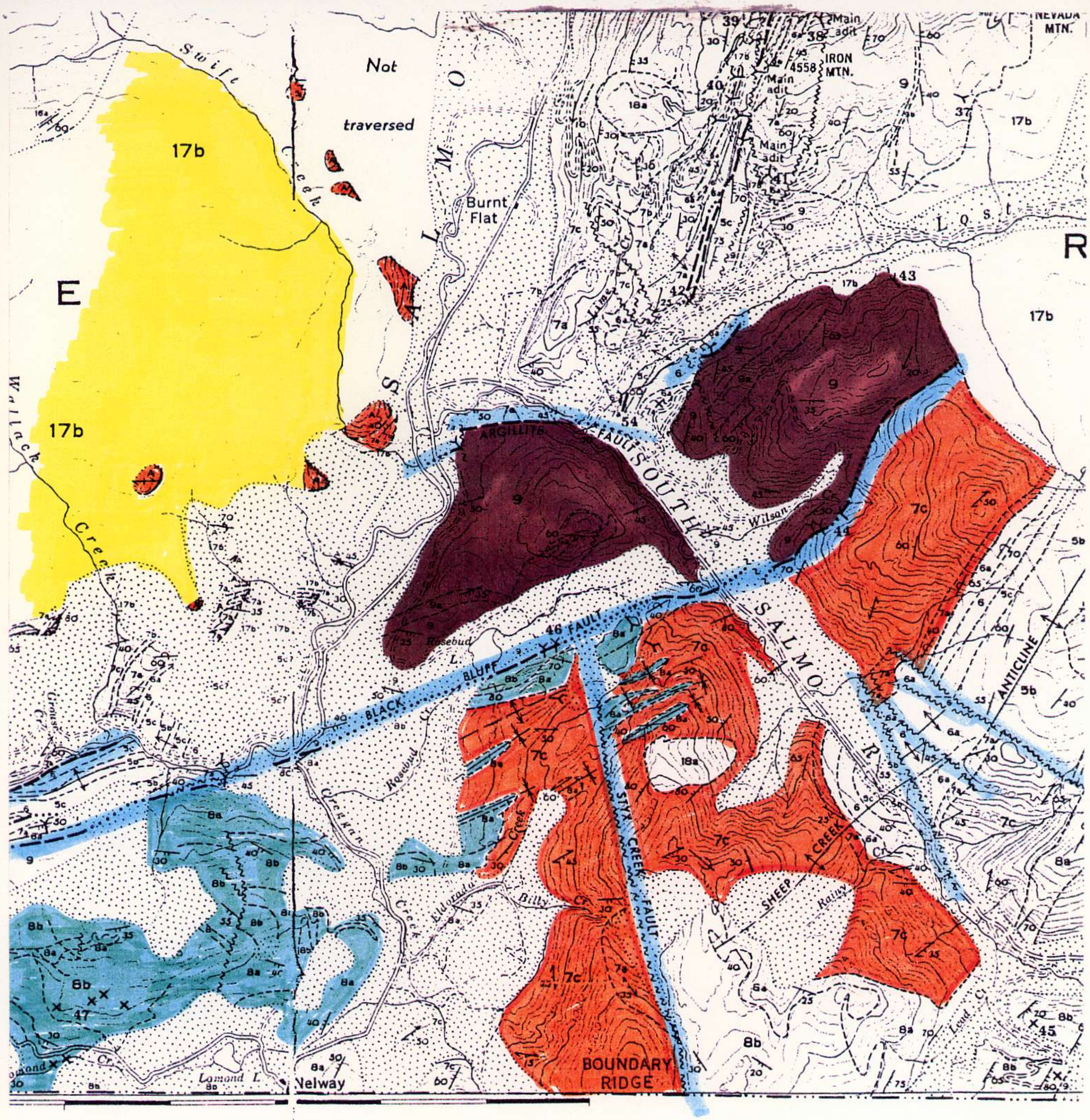


ORVANA CLAIMS
MK 6/13/91

MK AGREEMENT
6/30/91

PAN
orvana
RESOURCES INC.

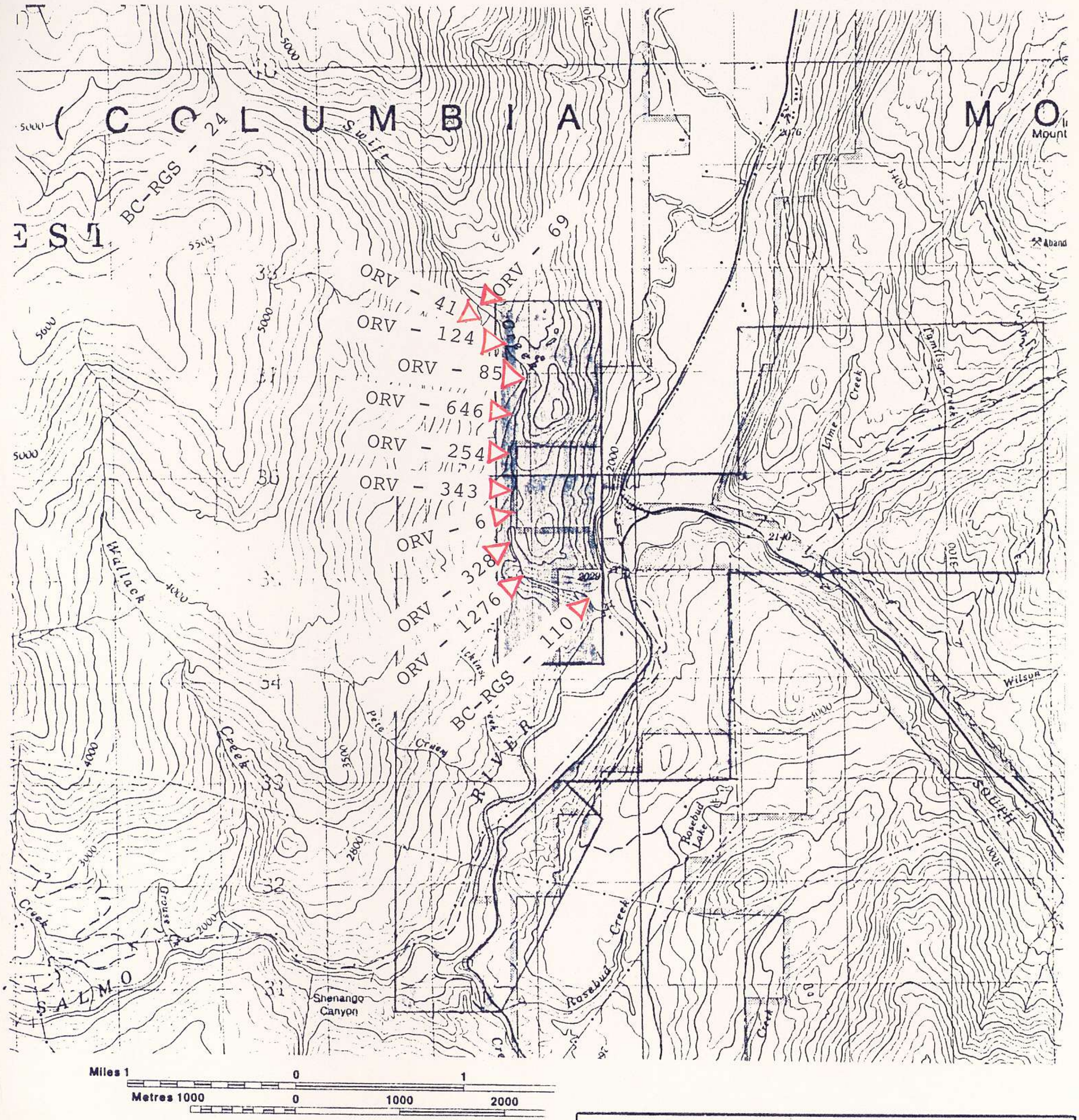
DATE 10/91	Fig. 2
REVISED BY / DATE	SWIFT CR Sheep Cr District, B.C. Land Status Salmo 82F/3
DATA BY	SCALE 1:50,000
SHEET NO.	PLATE NO.

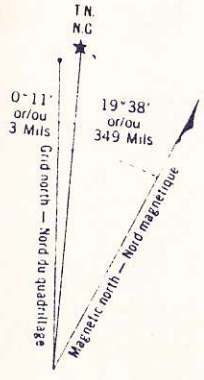


(yellow)	Nelson intrusive
(dark brown)	Active fm (Argillite)
(blue-green)	Nelway fm (limestone)
(orange)	LAIB fm (phyllite)
(blue line)	Regional Faults

PAN ORVANA RESOURCES INC.

DATE 10/91	LONE SILVER AND SWIFT CREEK
REVISED BY / DATE	Sheep Cr Mining District
	Fig. 3
	Regional Geology
DATA BY	SCALE 1: 62,500
	SHEET NO. / PLATE NO.





EXPLANATION

BC-RGS -Government Stream Sed Sample, Au in ppb.

ORV -Orvana Stream Sed Sample, Au in ppb

PAN ORVANA RESOURCES INC.

DATE 10/91		Fig. 4 SWIFT CREEK Sheep Cr. District, B.C. Assay Map Stream Sediment Sampling Salmo 82F/3	
REVISED BY	DATE		
DATA BY		SCALE 1:50,000	SHEET NO. PLATE NO.

KELLY CAMP

KELLY CAMP PROJECT
Ferry County, Washington

INTRODUCTION

The Kelly Camp Project is located in northeastern Washington approximately 12 miles north of Republic (Fig. 1). The land position consists of 58 unpatented claims owned by Atlas Mine & Mill Supply of Spokane. Orvana is in the process of formalizing a lease agreement in order to continue exploration on the project. Orvana was attracted to the property by anomalous gold values in samples collected during a cursory exam of the old workings.

Kelly Camp represents tungsten mineraliztion in a contact-metamorphic zone along the west side of a roof pendant of metamorphic rocks.

A program of mapping and sampling followed by trenching is recommended to determine the extent and style of mineralization present. Lithogeochemistry will guide the program in under-standing mineral zoning covered by glacial drift.

PROPERTY LOCATION

The 58 unpatented claims owned by Atlas Mine & Mill Supply are located approximately 12 miles north of Republic and 7 miles northwesterly from Curlew Lake on Highway 21 (Fig. 2).

A formal lease agreement is being processed by Orvana/Atlas for the benefit of the OK Syndicate. The agreement consists of escalating work expenditures starting at U.S. $30,000 and escalating advance cash royalties starting at U.S. $20,000, and a production royalty of 5% NSR. The production royalty may be purchased down by 2% at any time for U.S. $250,000. In addition, escalating work expenditures can be negotiated should the gold price fall to $325/ounce.

PREVIOUS WORK

Exploration and development at Kelly Camp in the past has been directed towards copper and tungsten. A U.S. Government-funded (DMEA) exploration program was conducted for tungsten in 1951-1952. This work consisted of sinking a decline to a depth of approximately 74 feet below the surface. Some interest in platinum followed when a head sample of Kelly Camp ore analyzed by the U.S. Bureau of Mines was reported to contain 0.46 opt platinum.

Significant stoping in the near surface mine workings indicates evidence for near economic concentrations of copper and tungsten although no production records have been found.

GEOLOGY

Regional Geology

The regional structural geology is dominated by the western and eastern margins of the Republic and Toroda Cr. Grabens respectively. The block of rocks bounded by these Tertiary Grabens consist of older pre-Permian foliated, lineated, folded and faulted intrusive and sedimentary rocks. The Kally Camp Project is located within these older rocks in a 5-6 mile wide horst that trends northeasterly from Republic into Canada (Fig. 3).

Property Geology

The Kelly Camp area consists of metamorphased sedimentary rocks of pre-Permian age as a roof pendant within younger Tertiary granodiorite intrusive rocks.

The granodiorite is important at Kelly Camp for the following reasons:

- Skarns containing gold as a significant commodity tend to be associated with highly reduced, calcalkaline, mafic intrusions,
- Other intrusives in the area are commonly quartz monzonite in nature, thus marking the granodiorite in the Kelly Camp area as unique.
- Detailed mapping indicates considerable areas favorable to mineralization covered by glacial till.

Alteration and Mineralization

The Kelly Camp mineralization is located along the contact of a roof pendant (+ $1mi^2$) of metamorphic rocks consisting of argillites, granulites, fine-grained schist, limestone, marble and local skarn. Additional prospects are located within exposed pendant material at least one mile to the west with glacial till covering the intervening ground.

The mineralization at Kelly Camp consists of scheelite, chalcopyrite, minor molybdenite, and magnetite associated with garnet, epidote calcite, and amphibole contact alteration assemblages. Gold values to 0.9 opt Au have been reported and a program to define the limits of gold skarn mineralization is proposed.

MODEL

The Kelly Camp Project, although a recognized tungsten skarn, merits additional work because of certain gold skarn criteria including the following:

- A tungsten skarn environment exists.
- Gold values have been confirmed.
- Large portions of the system are partially till covered.
- The granodiorite intrusion at Kelly Camp is uniques to the area and is associated with the known skarn.
- The skarn system is potentially several square miles in extent.
- Gold skarn alteration assemblages are present.

PROGRAM AND BUDGET

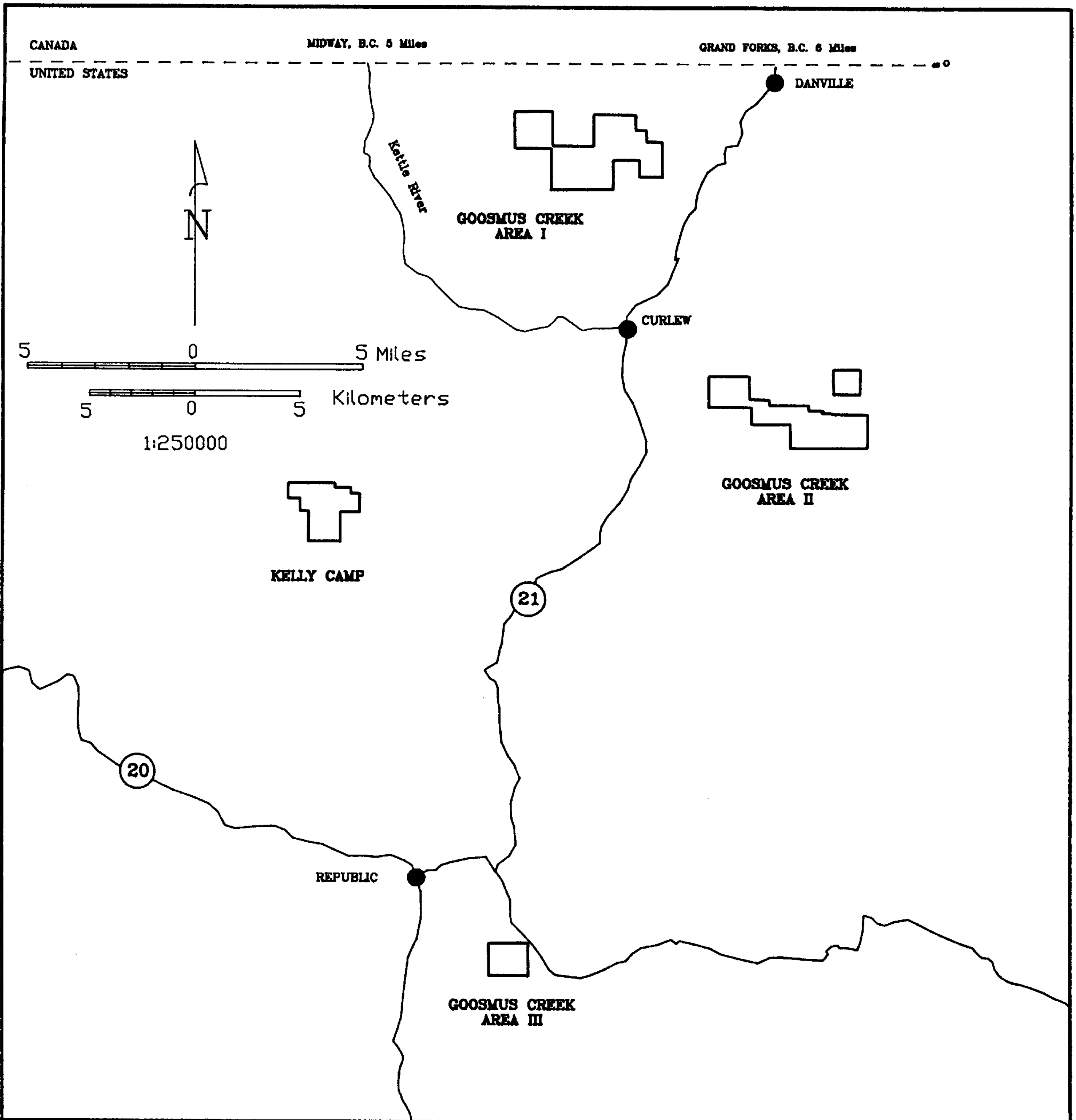
A program to explore and define the gold potential at Kelly Camp includes mapping, sampling, soil geochemistry, lithogeochemistry, ground magnetometer surveys, and trenching. Following this initial phase program, success could drive a second phase program to include drilling.

The initial phase budget is outlined in Table 1.

TABLE 1

KELLY CAMP BUDGET

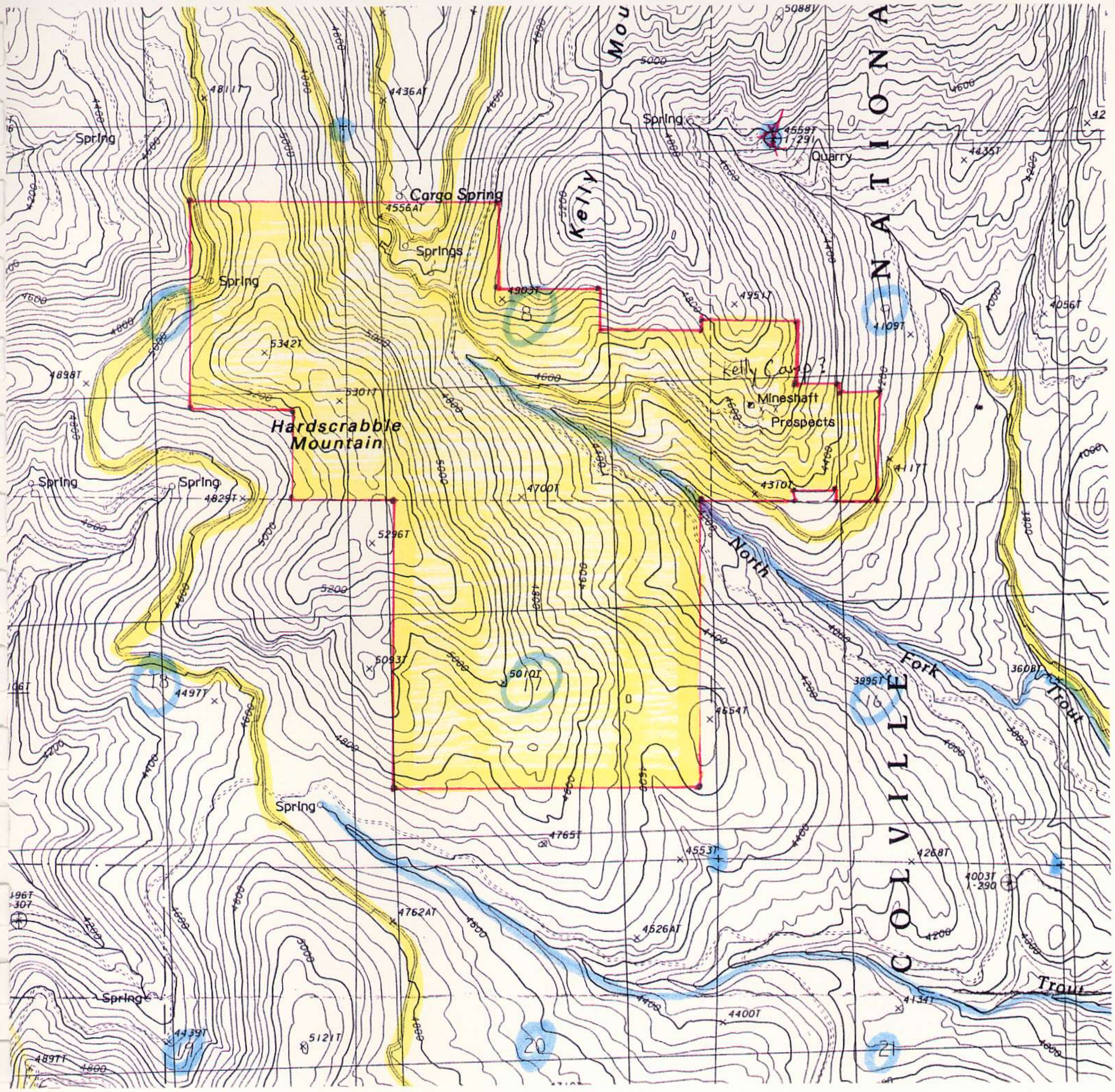
Geologic Mapping		
20 days	U.S. $	5,000
Rock Sample Assays		
225 @ $20/sx		4,500
Grid & Soil Sampling		
250 @ $40/sx		10,000
Soil Sample Assays		
250 @ $12/sx		3,000
Lithogeochemistry		
25 @ $20/sx		500
Petrographic Analysis		
Prep 14 @ $20/sx		300
Analysis 15 @ $40/sx		600
Electron Microprobe		
Lab and analysis		
5 hrs @ $80/hr		400
Ground Magnetometer Survey		
Field time and rental		3,000
Excavation		
30 hrs @ $80/hr		2,400
Trench Assays		
300 @ $20/sx		6,000
Supervision		
15 days		4,500
Living Expenses		
35 days @ $50/day		1,750
Vehicle Expenses		
2500 miles @ $0.50/mi		1,250
Field Expenses		
Say $1,500		1,500
Compilation		
9 days		2,250
	Subtotal U.S. $	46,950
Contingency 10%		4,695
	Total U.S. $	51,645
Property Payments	U.S. $	20,000



OK SYNDICATE PROPERTY LOCATIONS
Republic Mining District, WA

orvana
RESOURCES

Fig. 1



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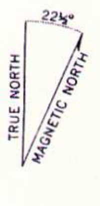
1000 0 METERS 1000

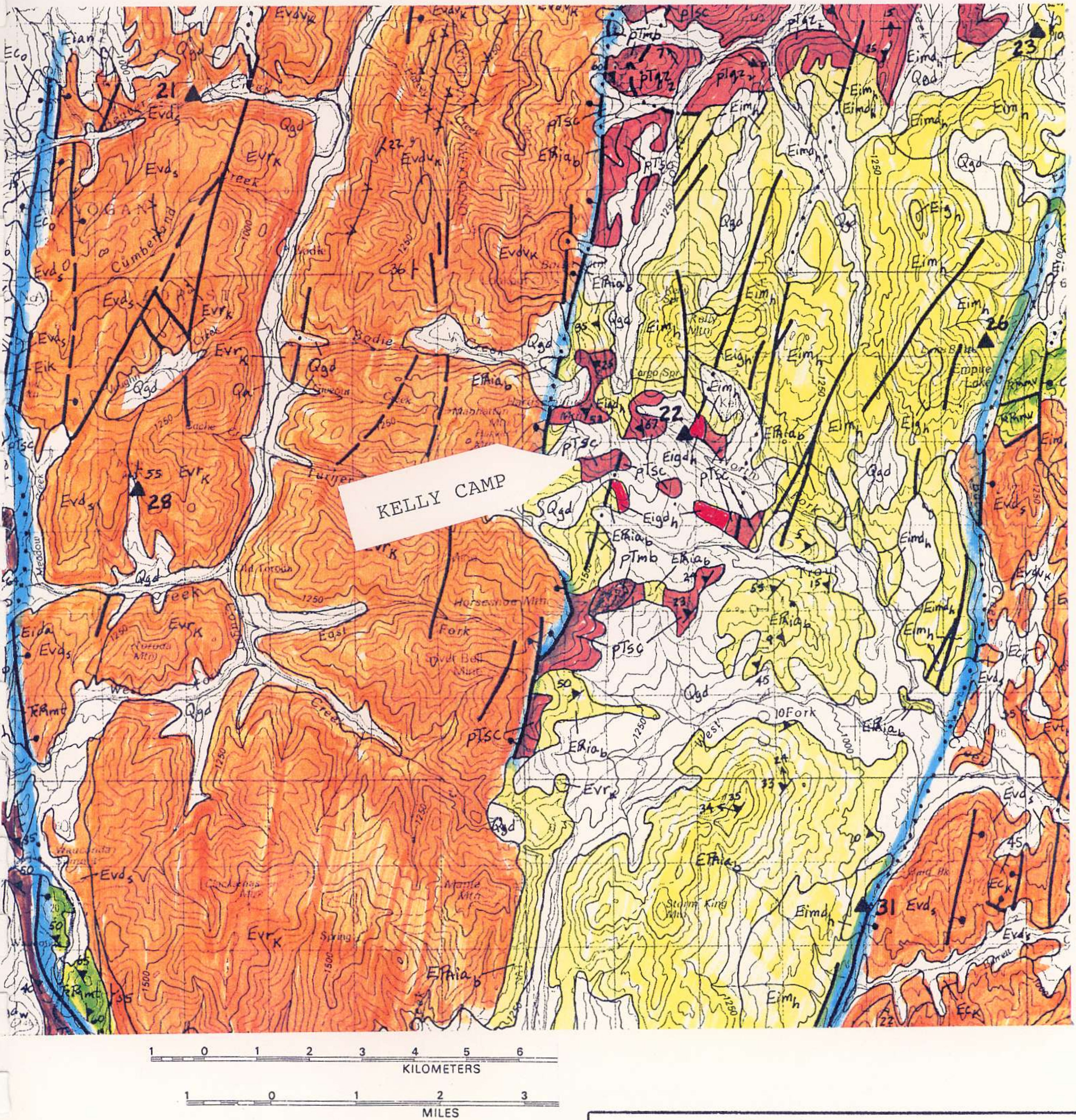
1 .5 0 MILES

1000 0 1000 2000 3000 4000 5000 6000 FEET



QUADRANGLE LOCATION

PAN ORVANA RESOURCES INC.		
DATE 10/91		Fig. 2 KELLY CAMP Ferry Co., WA Landstatus T38N,R32E
REVISED BY	DATE	
DATA BY	SCALE 1:24,000	SHEET NO. PLATE NO.



( ) Qgd - Glacial drift

Ev,Ec - Eocene Volcanics

Ei - Eocene Intrusives

Eigd - Eocene granodiorite

TR P - Triassic-Permian metavol & metased

pT - Layered metamorphics

Toroda & Republic Graben

PAN orvana RESOURCES INC.

DATE 10/91	Fig. 3
REVISED BY / DATE	KELLY CAMP Ferry Co., WA Regional Geology
DATA BY	SCALE 1:100,000 / SHEET NO. / PLATE NO.

GOOSMUS CREEK

GOOSMUS CREEK PROJECT
Ferry County, Washington

INTRODUCTION

Orvana optioned the Goosmus Creek properties for the benefit of the OK Syndicate in August, 1991. The option allows Orvana to earn up to a 90% interest by spending a total of U.S. $190,000 and fulfilling annual property payments of $7,500 to the vendors.

The properties consist of a number of State Leases acquired from the State of Washington in three separate areas.

PROPERTY/LOCATION

The prospecting leases are located in three separate areas between Republic, WA and the B.C. boundary. The eleven leases total approximately 5,360 acres (Fig. 1 & 2).

PREVIOUS WORK

Although the three areas are proximal to productive operations (Republic, Kettle, Key, Overlook, Gold Dike, & Lone Star), no economic mineral occurrences are known on the lease areas. A modified suction dredge stream sediment sampling program by the vendors collected a total of 44 samples which ranged as high as +10,000 ppb Au. A follow-up geochem and mapping program to determine the character of these sample results is warranted.

GEOLOGY

The general area is characterized by Tertiary sedimentary, volcanic and intrusive rocks. The most significant structural feature is the Republic Graben (Fig. 3) within the vicinity outlined by the three areas.

The following geologic environments exist:

- o Knob Hill - Republic type epithermal deposit
- o Key, Overlook - Manto replacement deposit
- o Gold Dike - Alkalic deposit
- o Crown Jewel - Skarn deposit

The cursory nature of the previous work does not allow, at this time, a postulated deposit model.

PROGRAM AND BUDGET

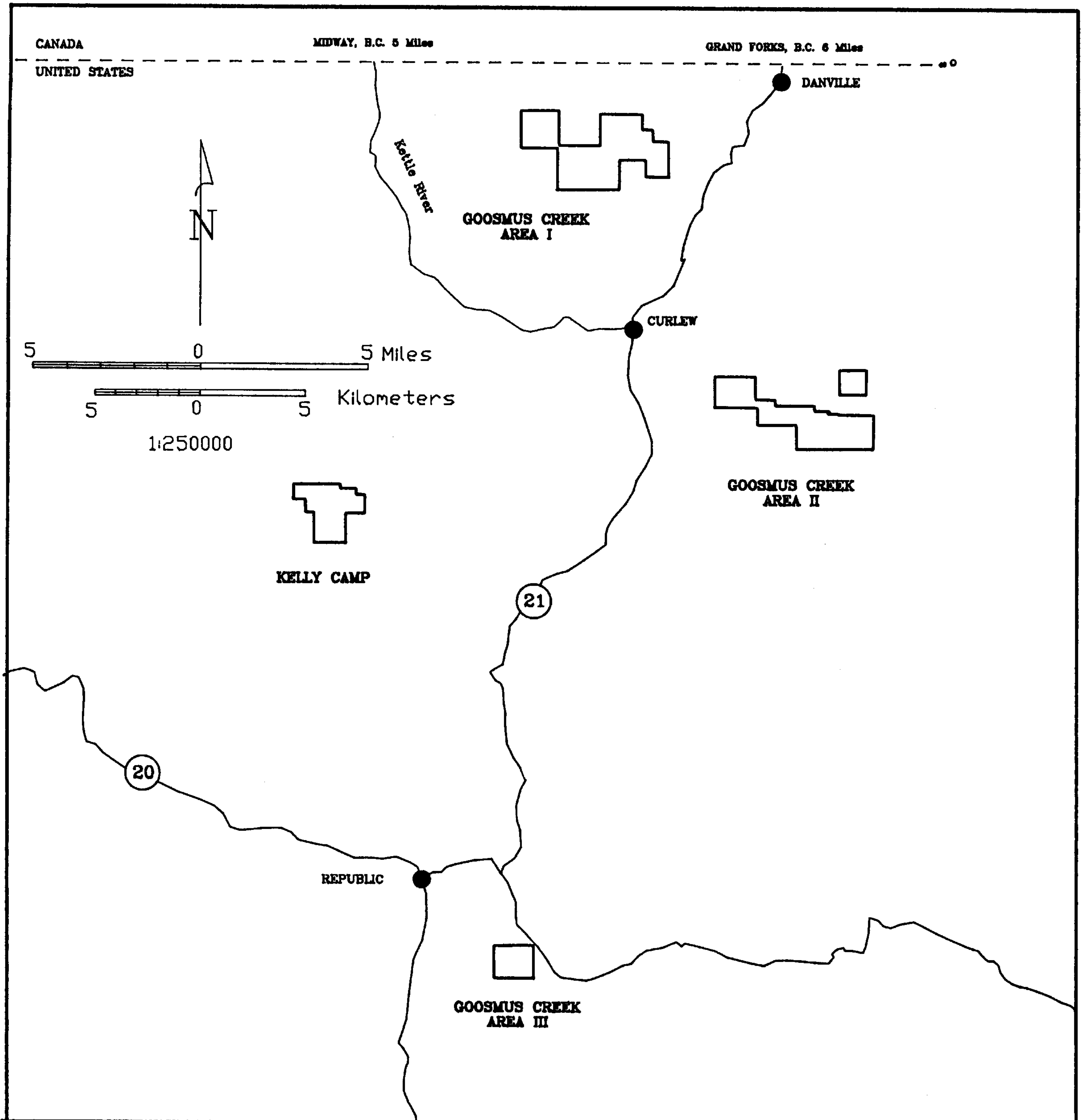
A program of reconnaissance mapping, sampling, and stream sediment sampling is recommended. Ground magnetometer surveys as well as some random soil sampling lines may follow the initial program. Table 1 outlines the program budget.

TABLE 1

GOOSMUS CREEK BUDGET

Phase 1

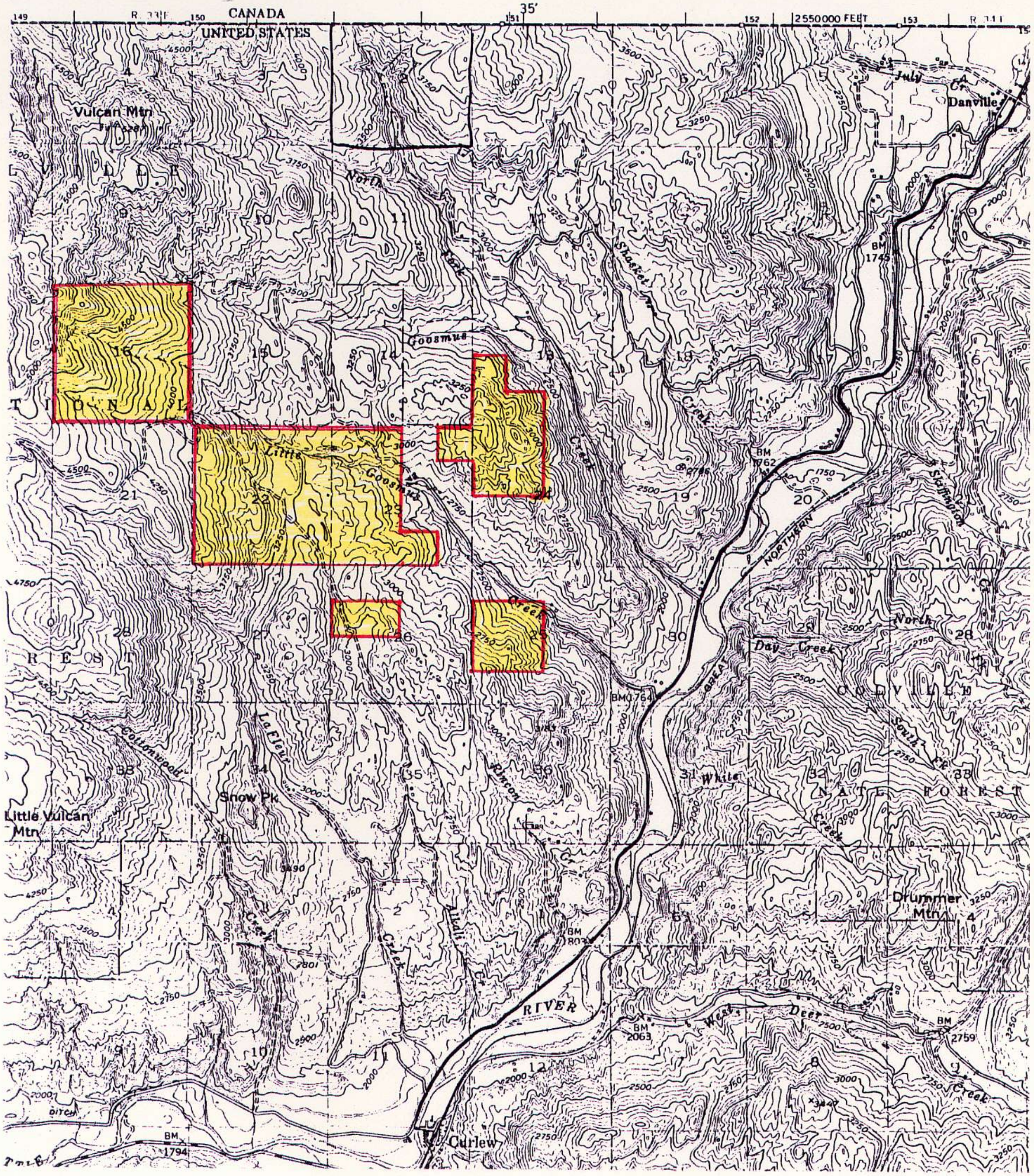
Geologic Mapping			
20 days		U.S. $	5,000
Rock Sample Assays			
200 @ $20/sx			4,000
Soil Sample Assays			
200 @ $12/sx			2,400
Stream Sediment Samples			
75 @ $12/sx			900
Magnetometer Survey			
Rental and Operation			3,000
Supervision			
10 days			3,000
Vehicle Expenses			
3000 miles @ $0.50/mi			1,500
Living Expenses			
30 days @ $50/day			1,500
Field Expenses			
Say $1,200			1,200
State Lease			
Say $15,000			15,000
Compilation			
5 days			1,250
	Subtotal	U.S. $	38,800
Contingency 10%			3,880
	Total	U.S. $	42,680
Property Payments		Cdn $	7,500

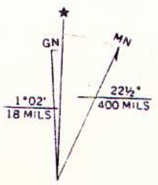


OK SYNDICATE PROPERTY LOCATIONS
Republic Mining District, WA

orvana
RESOURCES

Fig. 1





PAN
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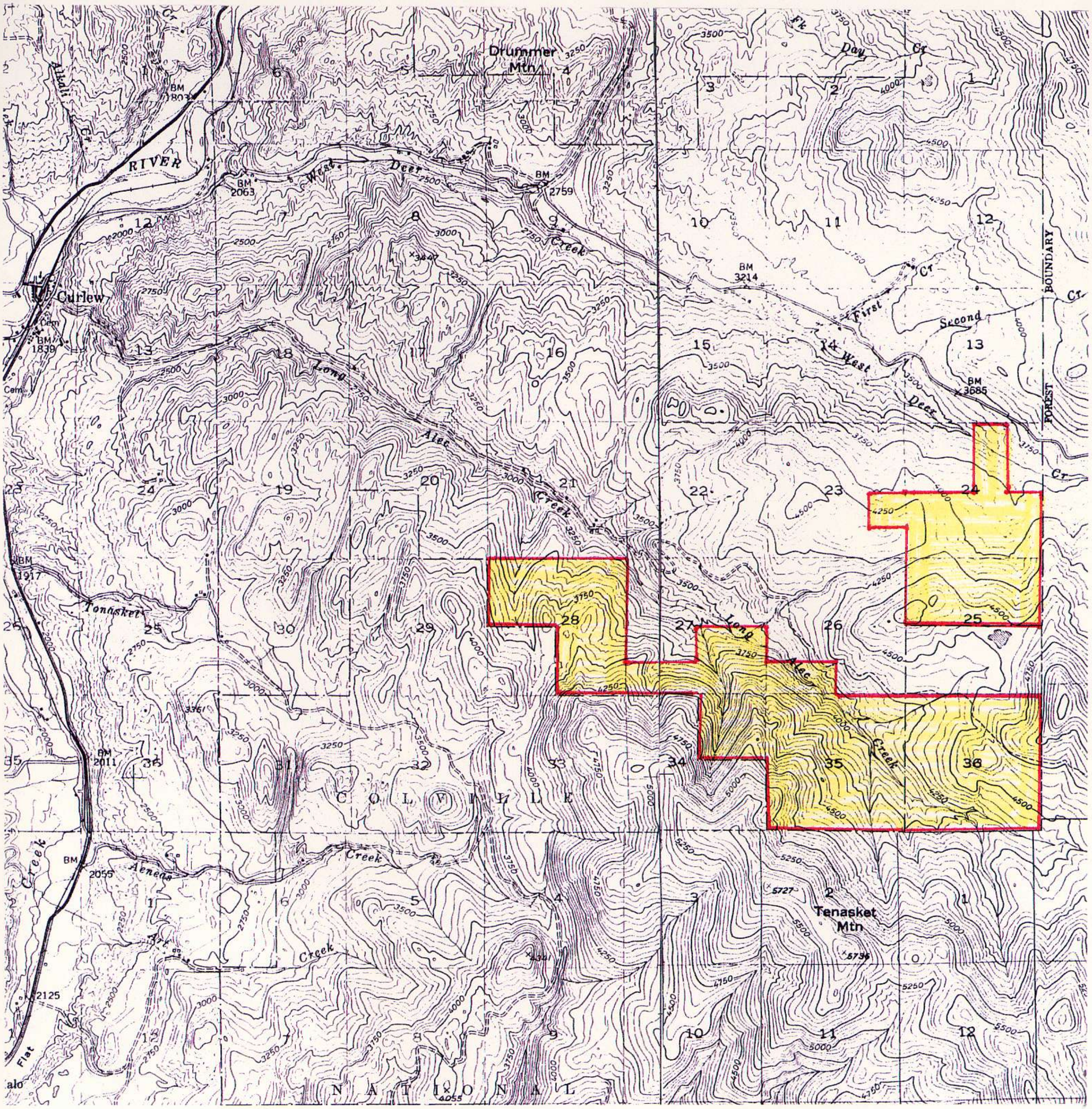
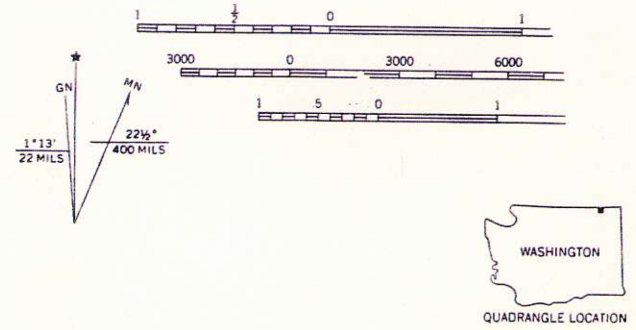
RESOURCES INC.

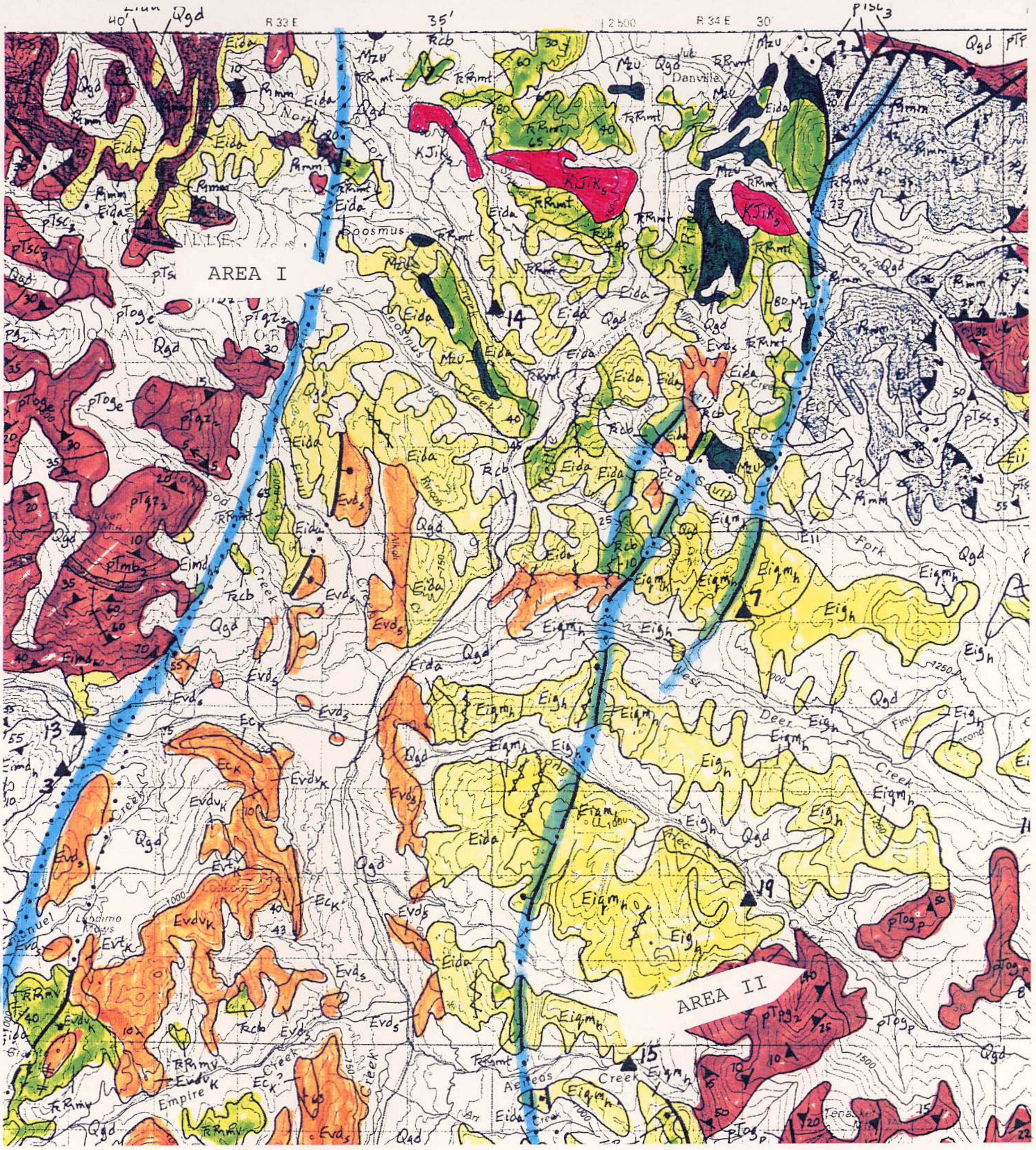
DATE 10/91		Fig. 2 GOOSMUS CR Ferry Co., WA AREA I Land Status T40N,R33E		
REVISED BY	DATE			
		DATA BY	SCALE 1:62,500	SHEET NO. PLATE NO.





PAN ORVANA RESOURCES INC.

DATE 10/91		Fig. 3
REVISED BY	DATE	GOOSMUS CR Ferry Co., WA Area II Land Status T39N, R34E
DATA BY	SCALE 1:62,500	SHEET NO. PLATE NO.



Qgd	- Glacial drift
Ev, Ec	- Eocene volcanics
Ei	- Eocene intrusives
KJiK	- Alkalic intrusive
Mzn	- Ultrabasics
TR P	- Triassic-Permian
pT	- Layered metamorphics
	Republic Graben

1 0 1 2 3 4 5
KILOMETERS

1 0 1 2
MILES

PAN orvana RESOURCES INC.

DATE 10/91

REVISED BY | DATE

Fig. 4
GOOSMUS CR
Ferry Co., WA

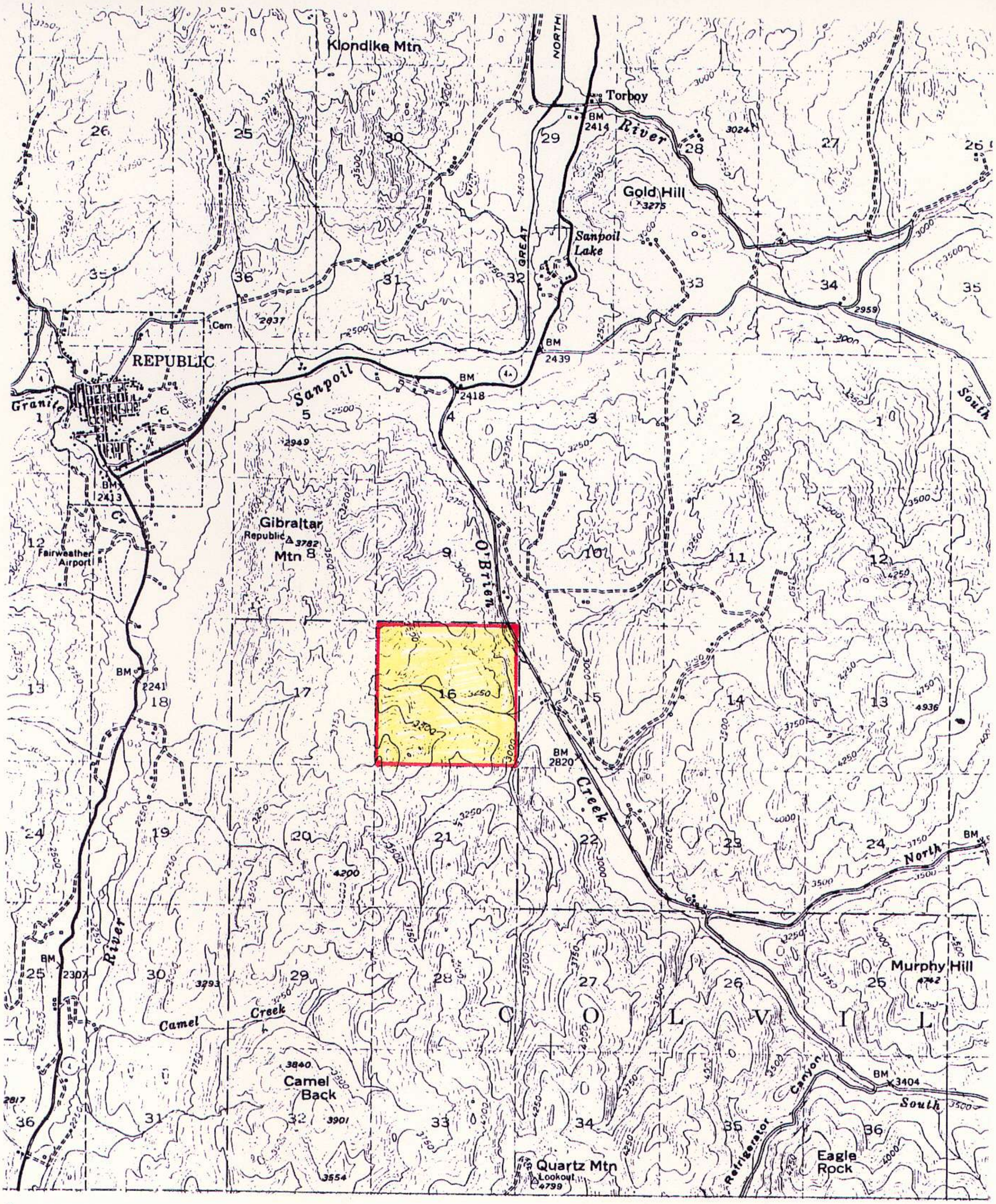
Regional Geology
Areas I & II

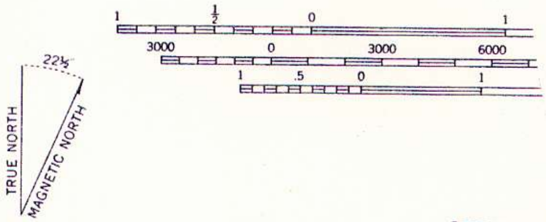
DATA BY

SCALE 1:100,000

SHEET NO.

PLATE NO.





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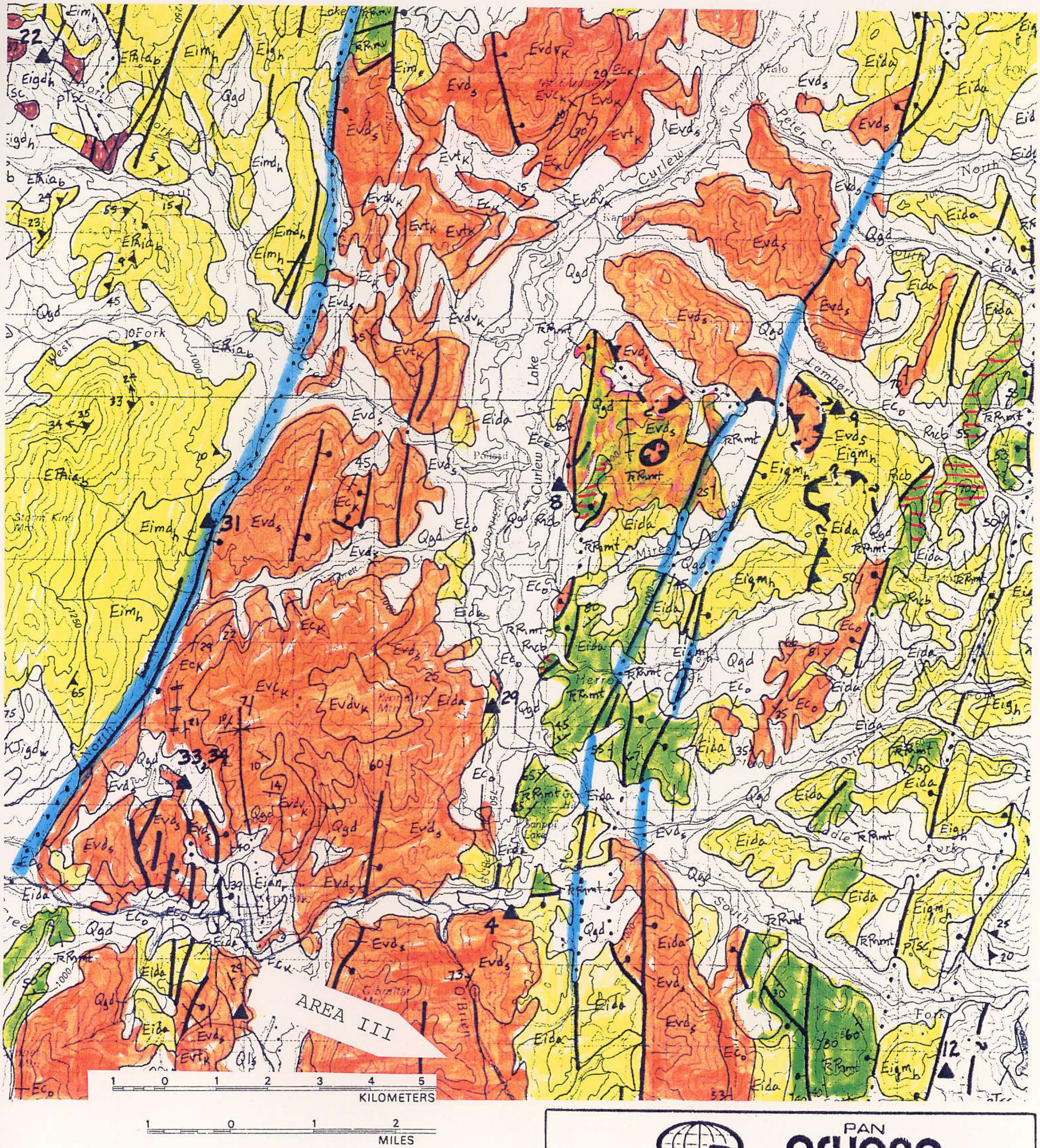
RESOURCES INC.

DATE 10/91	Fig. 5
REVISED BY / DATE	GOOSMUS CR
	Ferry Co., WA
	AREA III
	Land Status
	Sec. 16, T36N,R33E
DATA BY	SCALE 1:62,500
	SHEET NO.
	PLATE NO.



( )	Qgd	- Glacial drift
	Ev, Ec	- Eocene Volcanics
( )	Ei	- Eocene intrusives
	TR P	- Triassic-Permian metavol & metaseds
	pT	- Layered metamorphics
		Republic Graben

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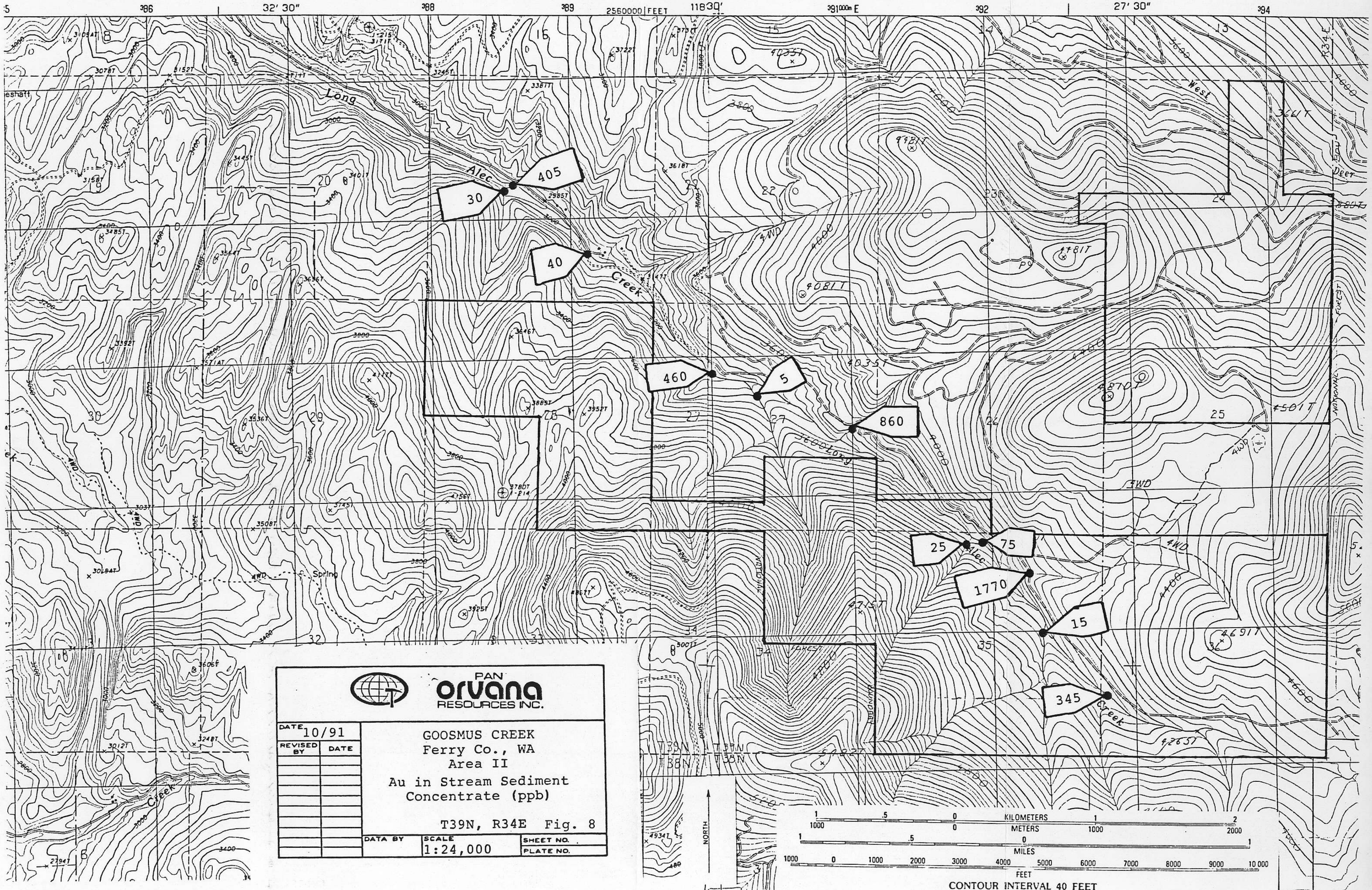
RESOURCES INC.

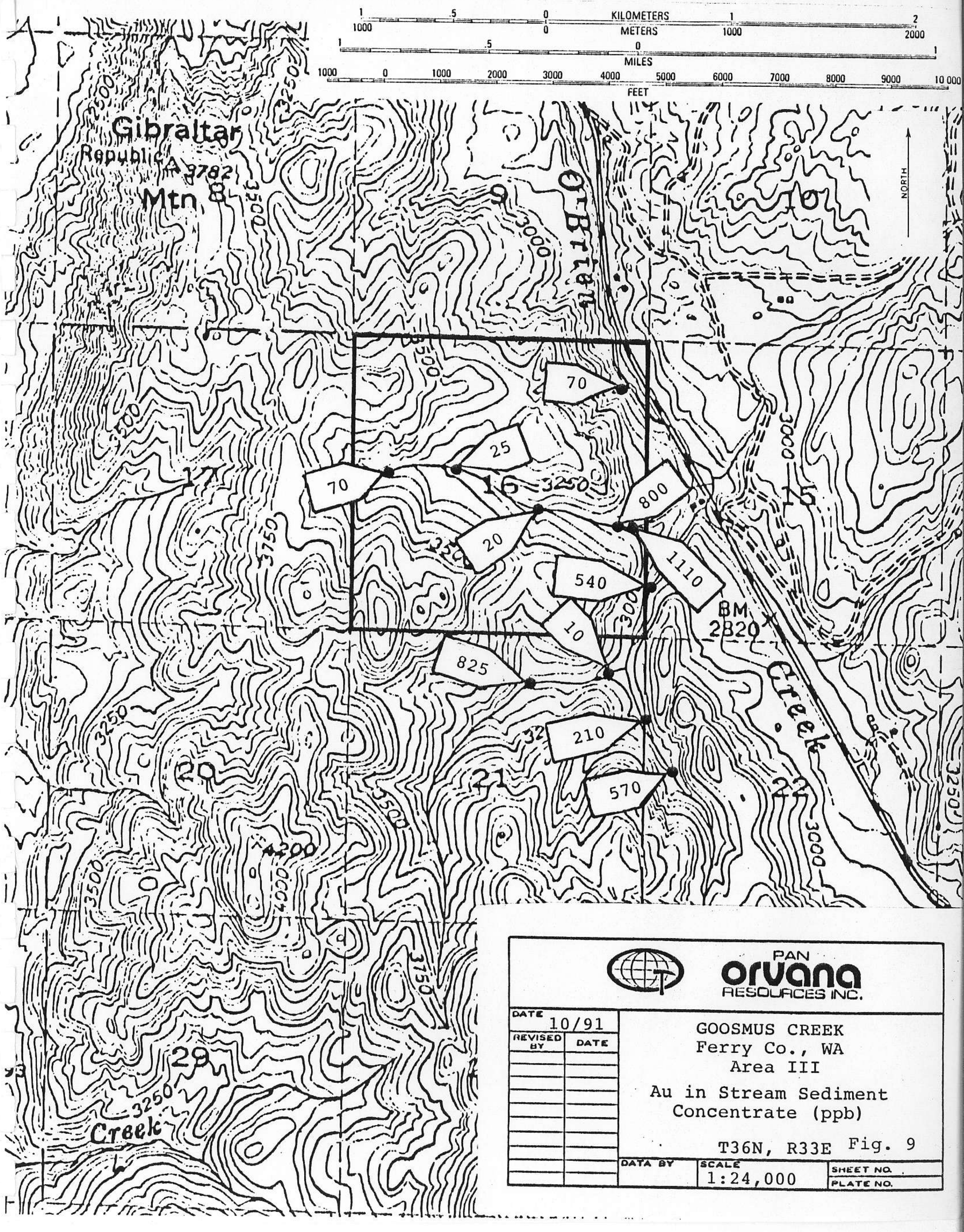
DATE 10/91	Fig. 6
REVISED BY / DATE	GOOSMUS CR Ferry Co., WA Regional Geology Area III
DATA BY	SCALE 1:100,000
SHEET NO.	PLATE NO.

PAN orvana RESOURCES INC.

DATE 10/91	GOOSMUS CREEK Ferry Co., WA Area I Au in Stream Sediment Concentrate (ppb)
REVISED BY / DATE	T40N, R33E Fig. 7
DATA BY	SCALE 1:24000
SHEET NO.	PLATE NO.



PAN ORVANA RESOURCES INC.
DATE 10/91
REVISED BY
DATE
GOOSMUS CREEK
Ferry Co., WA
Area II
Au in Stream Sediment
Concentrate (ppb)
T39N, R34E Fig. 8
DATA BY
SCALE 1:24,000
SHEET NO.
PLATE NO.
Long Alec Creek
West Deer
Spring
30
405
40
460
5
860
25
75
1770
15
345
T39N T38N
R34E
NORTH
KILOMETERS
METERS
MILES
FEET
CONTOUR INTERVAL 40 FEET
32' 30"
27' 30"
118 30'
2560000 FEET



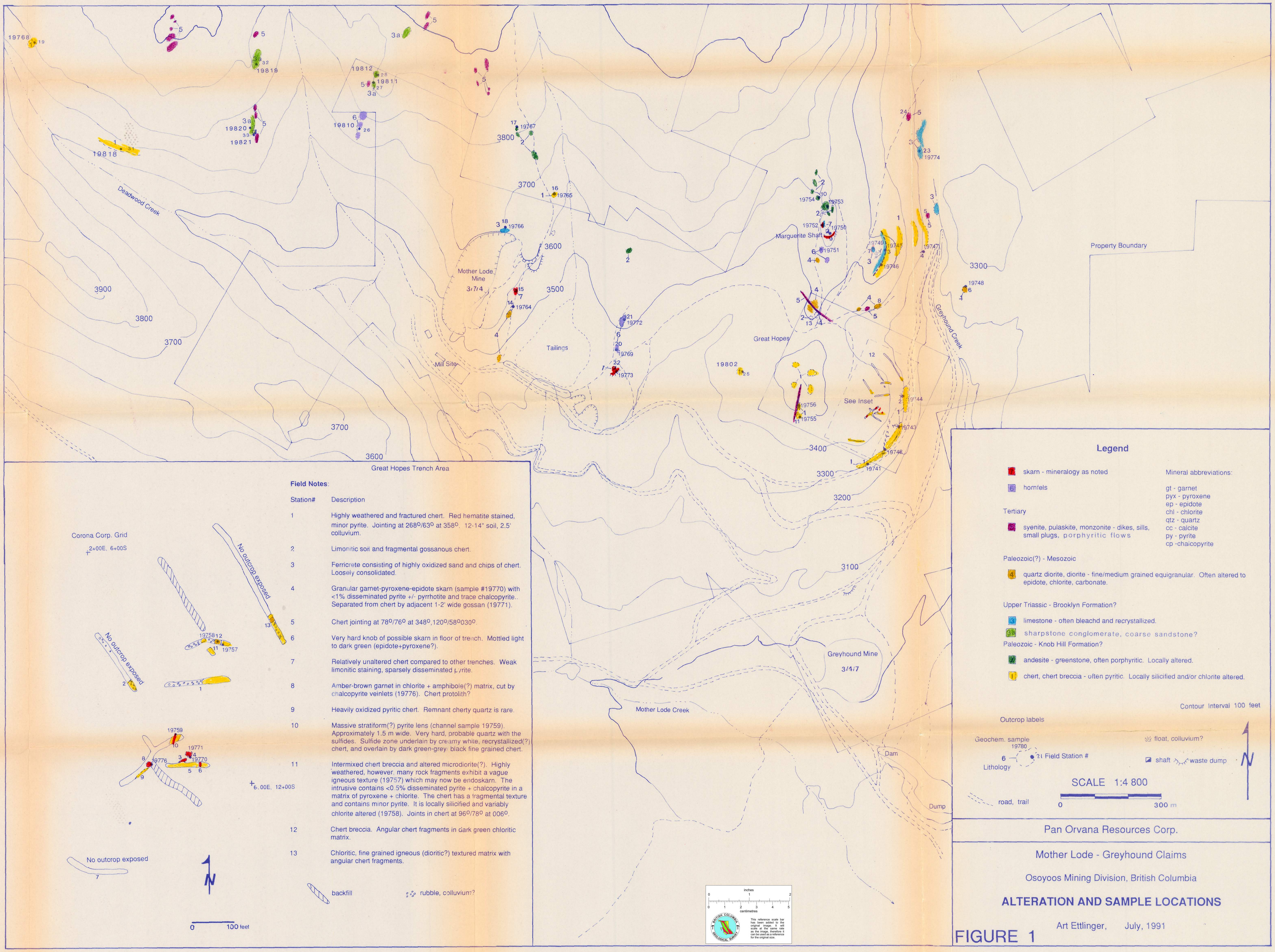
PAN ORVANA RESOURCES INC.

GOOSMUS CREEK
Ferry Co., WA
Area III

Au in Stream Sediment Concentrate (ppb)

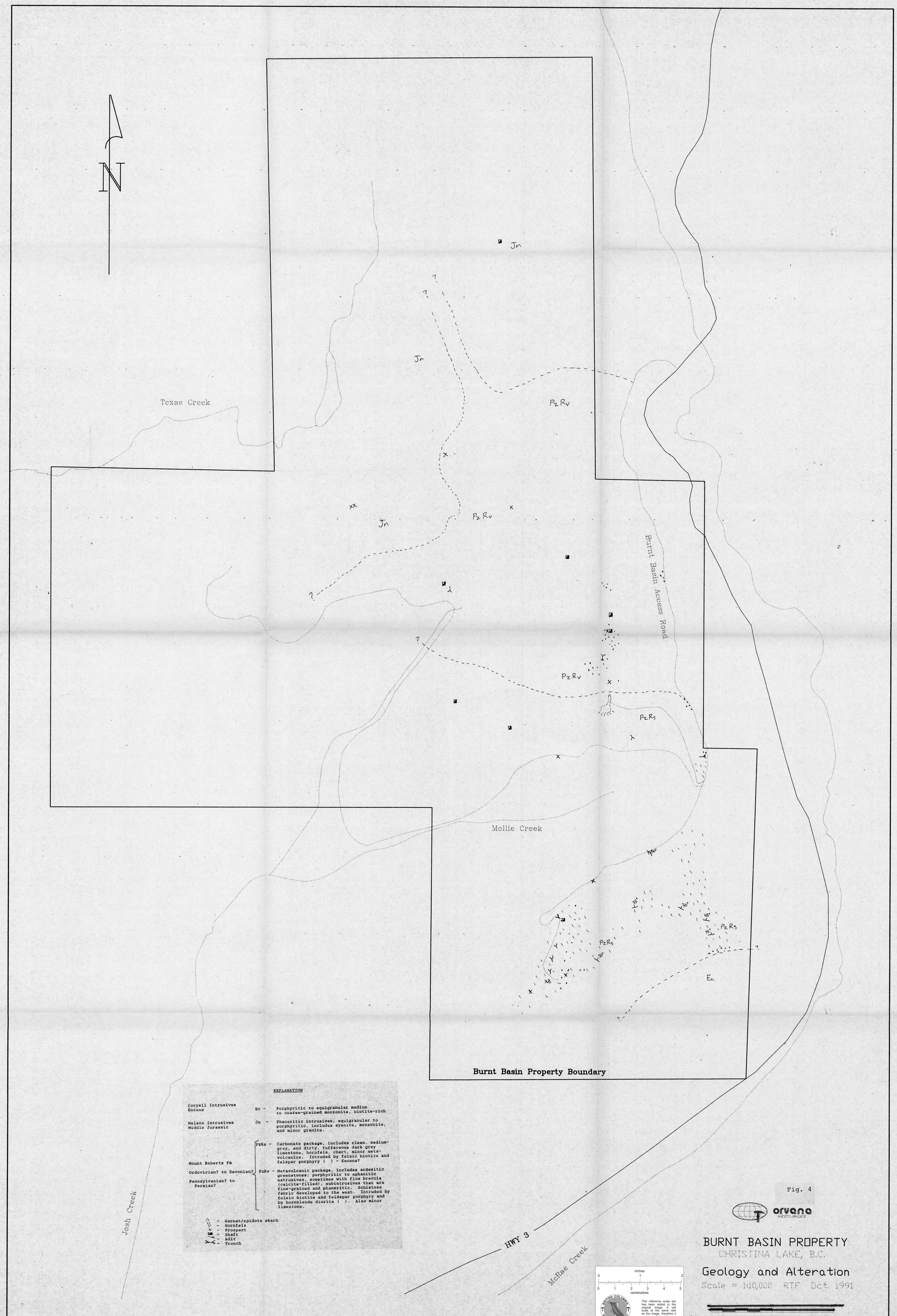
T36N, R33E Fig. 9

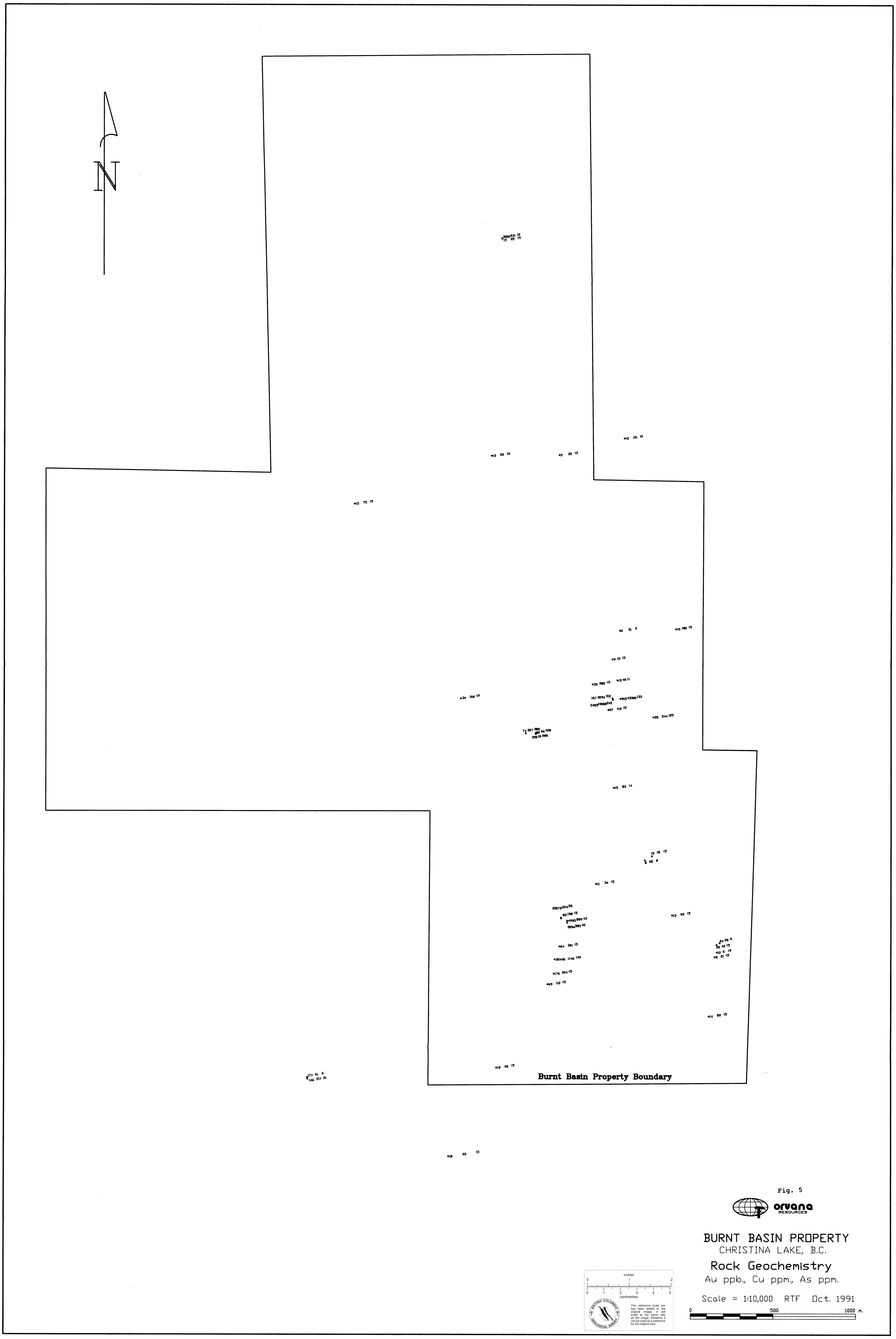
DATE	10/91
REVISED BY	DATE
DATA BY	
SCALE	1:24,000
SHEET NO.	
PLATE NO.	



Deadwood Creek
Mother Lode Mine
Mill Site
Tailings
Marguerite Shaft
Great Hopes
See Inset
Greyhound Creek
Property Boundary
Greyhound Mine
Mother Lode Creek
Dam
Dump
3900
3800
3700
3600
3500
3400
3300
3200
3100
Great Hopes Trench Area
Corona Corp. Grid
2+00E, 6+00S
6+00E, 12+00S
No outcrop exposed
No outcrop exposed
No outcrop exposed
Field Notes:
Station# Description
1 Highly weathered and fractured chert. Red hematite stained, minor pyrite. Jointing at 268°/63° at 358°. 12-14" soil, 2.5' colluvium.
2 Limonitic soil and fragmental gossanous chert.
3 Ferricrete consisting of highly oxidized sand and chips of chert. Loosely consolidated.
4 Granular garnet-pyroxene-epidote skarn (sample #19770) with <1% disseminated pyrite +/- pyrrhotite and trace chalcopyrite.. Separated from chert by adjacent 1-2' wide gossan (19771).
5 Chert jointing at 78°/76° at 348°,120°/58°030°.
6 Very hard knob of possible skarn in floor of trench. Mottled light to dark green (epidote+pyroxene?).
7 Relatively unaltered chert compared to other trenches. Weak limonitic staining, sparsely disseminated pyrite.
8 Amber-brown garnet in chlorite + amphibole(?) matrix, cut by chalcopyrite veinlets (19776). Chert protolith?
9 Heavily oxidized pyritic chert. Remnant cherty quartz is rare.
10 Massive stratiform(?) pyrite lens (channel sample 19759). Approximately 1.5 m wide. Very hard, probable quartz with the sulfides. Sulfide zone underlain by creamy white, recrystallized(?) chert, and overlain by dark green-grey/ black fine grained chert.
11 Intermixed chert breccia and altered microdiorite(?). Highly weathered, however, many rock fragments exhibit a vague igneous texture (19757) which may now be endoskarn. The intrusive contains <0.5% disseminated pyrite + chalcopyrite in a matrix of pyroxene + chlorite. The chert has a fragmental texture and contains minor pyrite. It is locally silicified and variably chlorite altered (19758). Joints in chert at 96°/78° at 006°.
12 Chert breccia. Angular chert fragments in dark green chloritic matrix.
13 Chloritic, fine grained igneous (dioritic?) textured matrix with angular chert fragments.
backfill
rubble, colluvium?
0 100 feet
Legend
7 skarn - mineralogy as noted
6 hornfels
Tertiary
5 syenite, pulaskite, monzonite - dikes, sills, small plugs, porphyritic flows
Paleozoic(?) - Mesozoic
4 quartz diorite, diorite - fine/medium grained equigranular. Often altered to epidote, chlorite, carbonate.
Upper Triassic - Brooklyn Formation?
3 limestone - often bleachd and recrystallized.
3a sharpstone conglomerate, coarse sandstone?
Paleozoic - Knob Hill Formation?
2 andesite - greenstone, often porphyritic. Locally altered.
1 chert, chert breccia - often pyritic. Locally silicified and/or chlorite altered.
Mineral abbreviations:
gt - garnet
pyx - pyroxene
ep - epidote
chl - chlorite
qtz - quartz
cc - calcite
py - pyrite
cp -chalcopyrite
Contour Interval 100 feet
Outcrop labels
Geochem. sample
19780
6
Lithology
21 Field Station #
float, colluvium?
shaft
waste dump
N
SCALE 1:4 800
0 300 m
road, trail
Pan Orvana Resources Corp.
Mother Lode - Greyhound Claims
Osoyoos Mining Division, British Columbia
ALTERATION AND SAMPLE LOCATIONS
Art Ettlinger, July, 1991

FIGURE 1


N
Texas Creek
Jn
PzRv
PzRs
Ec
Burnt Basin Access Road
Mollie Creek
Burnt Basin Property Boundary
Josh Creek
HWY 3
McRae Creek
EXPLANATION
Coryell Intrusives Eocene
Ec - Porphyritic to equigranular medium to coarse-grained monzonite, biotite-rich
Nelson Intrusives Middle Jurassic
Jn - Phaneritic intrusives, equigranular to porphyritic, includes syenite, monzonite, and minor granite.
Mount Roberts Fm
Ordovician? to Devonian?
Pennsylvanian? to Permian?
PzRs - Carbonate package, includes clean, medium-grey, and dirty, tuffaceous dark grey limestone, hornfels, chert, minor meta-volcanics. Intruded by felsic biotite and felspar porphyry ( ) - Eocene?
PzRv - Metavolcanic package, includes andesitic greenstones; porphyritic to aphanitic extrusives, sometimes with flow breccia (calcite-filled), subintrusives that are fine-grained and phaneritic. Schistose fabric developed to the west. Intruded by felsic biotite and feldspar porphyry and by hornblende diorite ( ). Also minor limestone.
- Garnet/epidote skarn
- Hornfels
- Prospect
- Shaft
- Adit
- Trench
Fig. 4
orvana RESOURCES
BURNT BASIN PROPERTY
CHRISTINA LAKE, B.C.
Geology and Alteration
Scale = 1:10,000 RTF Oct. 1991
0
500
1000m


Burnt Basin Property Boundary
Fig. 5
orvana RESOURCES
BURNT BASIN PROPERTY
CHRISTINA LAKE, B.C.
Rock Geochemistry
Au ppb., Cu ppm., As ppm.
Scale = 1:10,000 RTF Oct. 1991
0 500 1000 m.

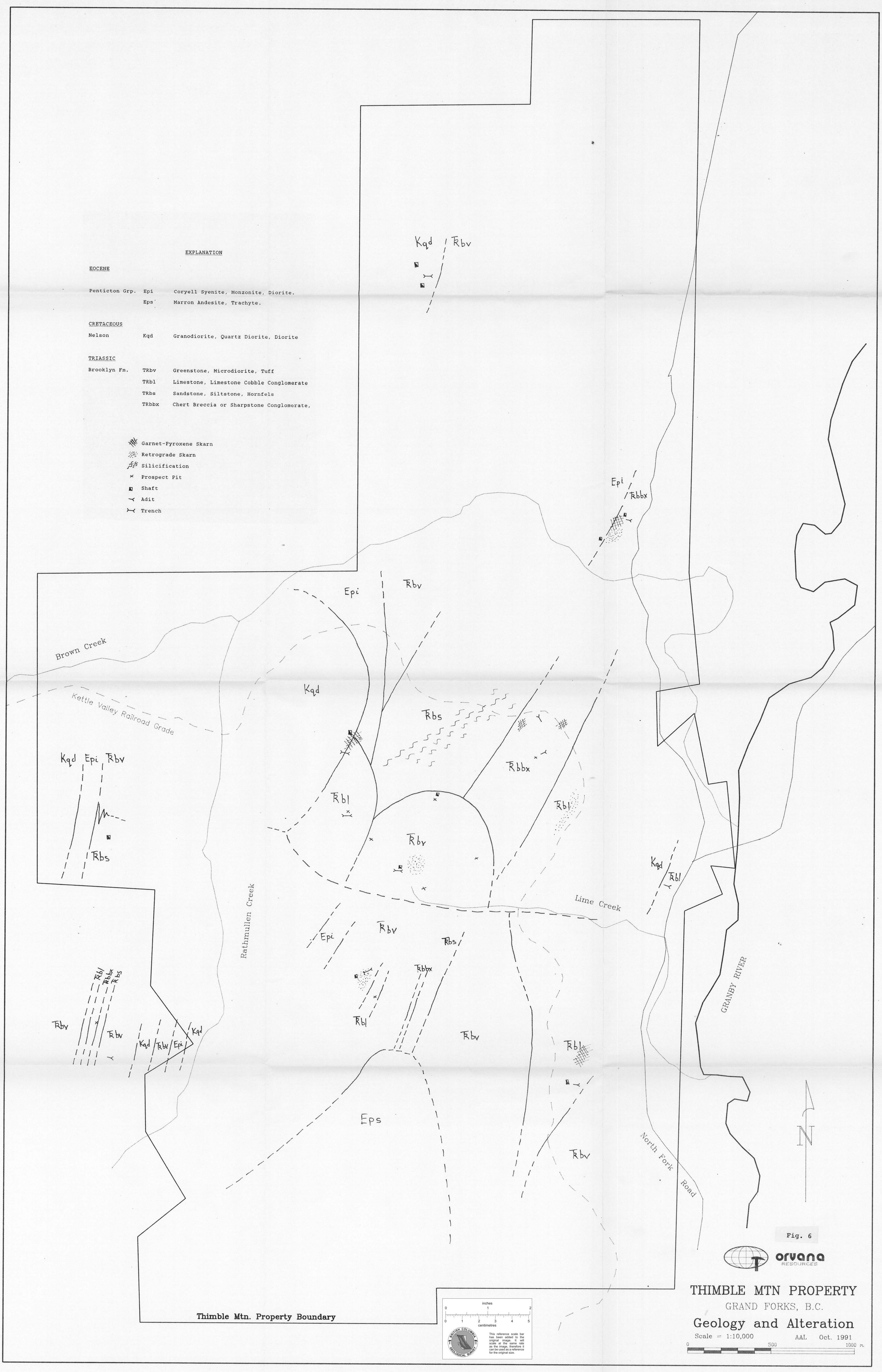


Fig. 6

THIMBLE MTN PROPERTY
GRAND FORKS, B.C.
Geology and Alteration

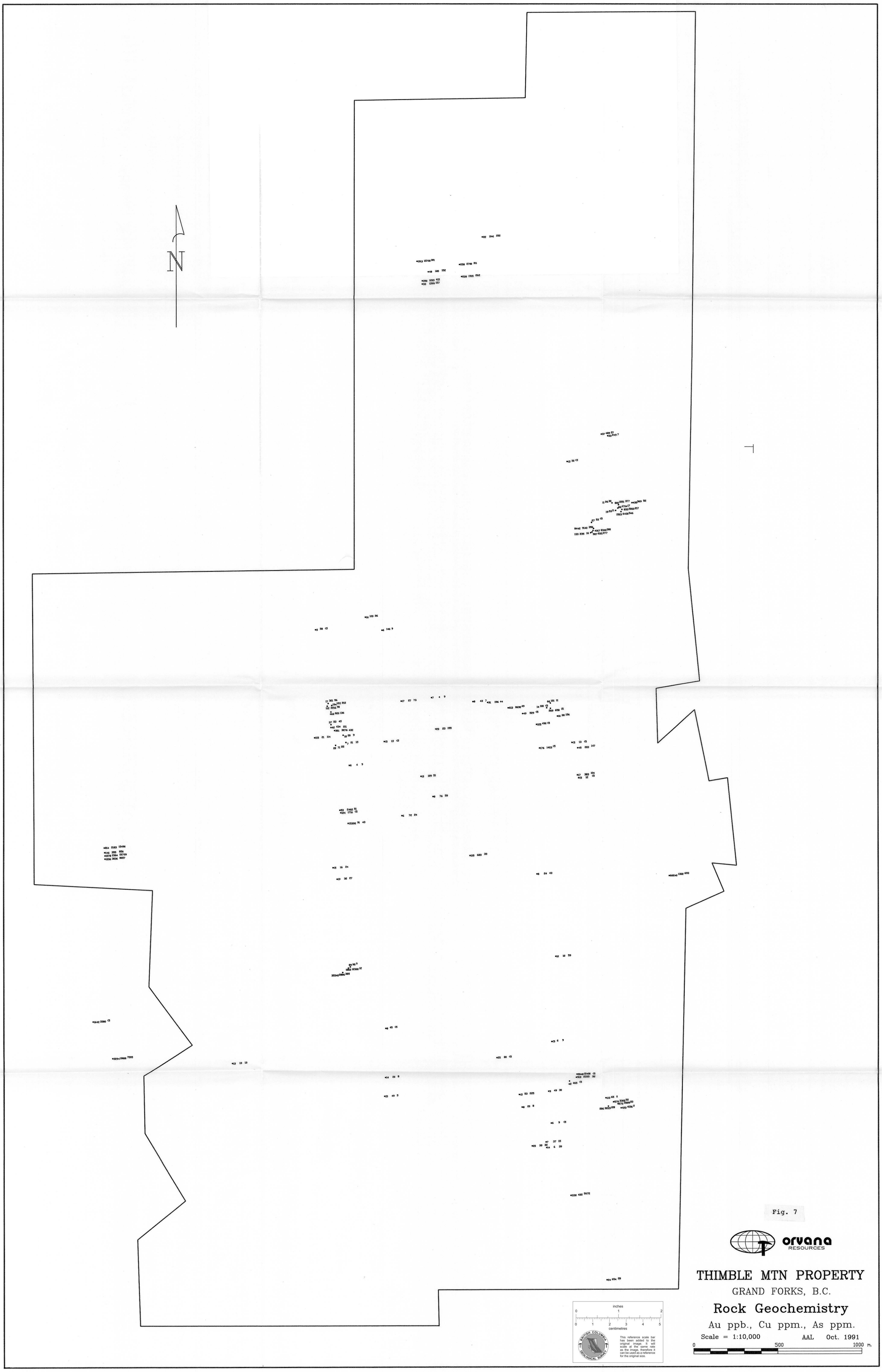


Fig. 7

THIMBLE MTN PROPERTY

GRAND FORKS, B.C.

Rock Geochemistry

Au ppb., Cu ppm., As ppm.

Scale = 1:10,000   AAL   Oct. 1991