

GEOLOGICAL REPORT
ON THE
IAN 1-4 MINERAL CLAIMS
Iskut River Area
Liard Mining Division
British Columbia

FOR
ASHBURTON OIL LTD.

BY
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February 12, 1987

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SUMMARY

Ashburton Oil Ltd. holds 4 Modified Grid mineral claims comprising approximately 60 units in the western Iskut River area of northwestern British Columbia. The property is accessible by fixed wing aircraft and helicopter.

The western Iskut River area has long been noted as an area of good mineral potential but only sporadic mineral exploration took place prior to the early 1980's. Recognition of the significance of Skyline Explorations Ltd.'s Reg gold property has renewed interest in the area.

Most known mineral deposits and occurrences in the Iskut River area are hosted by early Mesozoic volcanic-sedimentary sequences and are fracture controlled. Many are spatially related to distinctive feldspar porphyry intrusions.

The Ian 1-4 mineral claims are underlain by volcanic and lesser sedimentary rocks of probable Mesozoic age north of Iskut River and east and west of Verrett River. Limited previous work in the area of the present claims has yielded a 650 ppb gold analysis from a heavy mineral stream sediment sample collected from a tributary of Verrett River. Upstream from this sample site is a pyritic zone in cherty sediments and soil samples from the immediate area have gold values ranging from 45 to 200 ppb.

Based on the limited information available, the Cam 1-4 claims warrant a preliminary exploratory program consisting of geological mapping, prospecting, geochemical and geophysical surveys. Estimated cost of the recommended program is \$60,000.00.

INTRODUCTION

Ashburton Oil Ltd. holds 4 Modified Grid mineral claims in the Iskut River area, Liard Mining Division, British Columbia.

This report, prepared at the request of Ashburton Oil Ltd., is based on a review of available public and private reports and on a reconnaissance of the Iskut River area January 20, 1987.

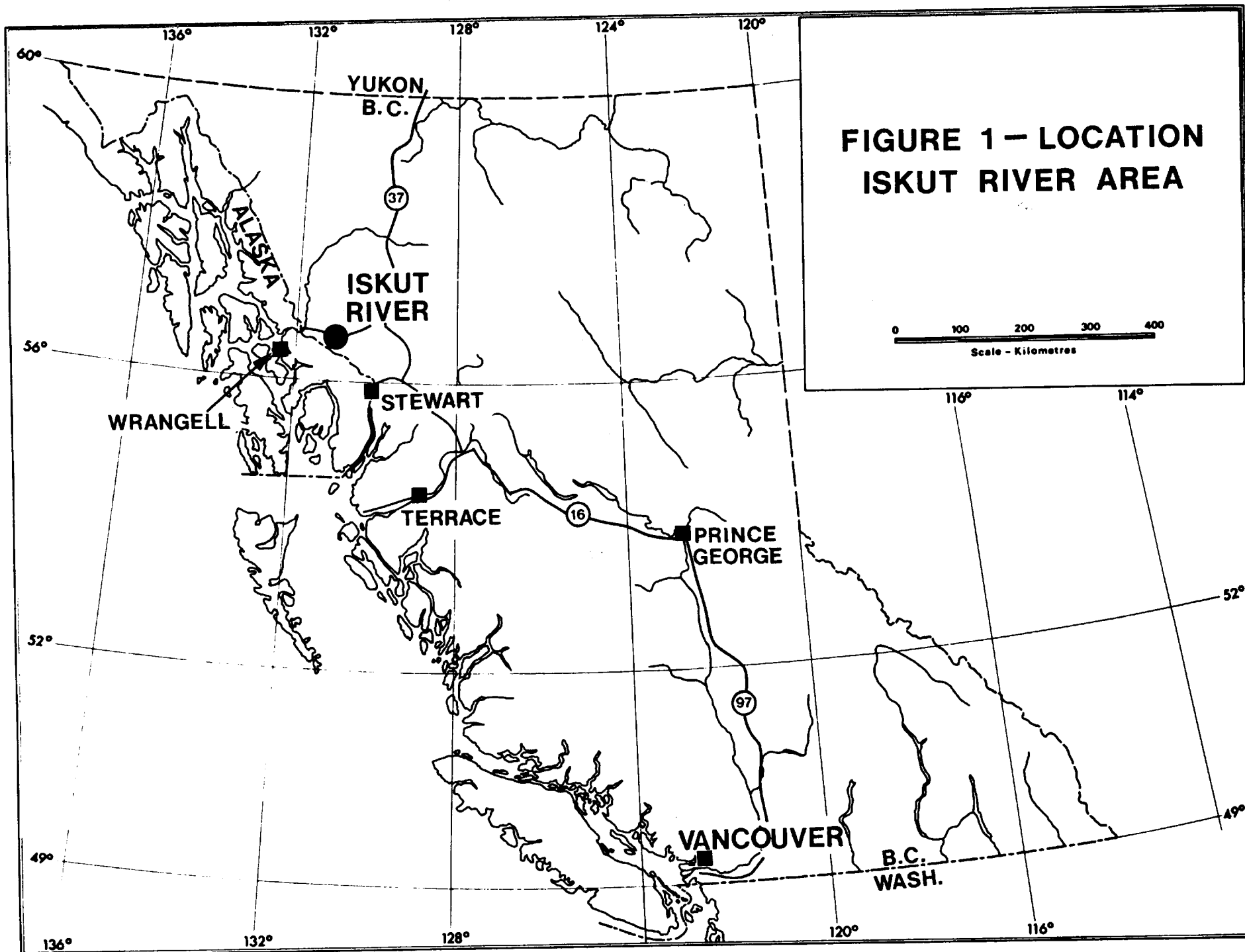
The writer also has a good working knowledge of the geology and mineral deposits of northwestern British Columbia, derived from numerous mineral property investigations throughout the area between Terrace and Atlin.

LOCATION AND ACCESS

The Ian 1-4 mineral claims are situated in the western Iskut River area of northwestern British Columbia (Figure 1), close to the Alaska panhandle boundary. The property, at 56°43' North latitude and 130°59' West longitude in NTS map-areas 104B/10W and 11E, is 70 air miles northwest of Stewart and 50 air miles east of Wrangell, Alaska.

Access into the area is by air from Wrangell, Stewart or Terrace to gravel airstrips at Mt. Johnny and Snippaker Creek. The latter, at an elevation of 1,800 feet, has scheduled service during the summer months and is capable of accomodating Caribou aircraft with larger loads.

The nearest road is highway 37 at Bob Quinn Lake, 40 miles to the northeast (Figure 1).



MINERAL PROPERTY

Ashburton Oil Ltd. holds 4 Modified Grid mineral claims comprising approximately 60 units in the Liard Mining Division of Northwestern British Columbia. These mineral claims are shown on Figure 2 and details are as follows:

<u>Claim Name</u>	<u>Record Number</u>	<u>Units</u>	<u>Date of Record</u>
Ian 1	3730	10	December 5, 1986
Ian 2	3731	20	"
Ian 3	3732	10	"
Ian 4	3733	20	"

These four claims were located by a common Legal Corner Post situated approximately 1 mile northeast of the confluence of Verrett and Iskut Rivers (Figure 2). The Ian 1 and 3, located as 20 unit claims, are in part an overstaking of previously held ground to the south, and as such, each effectively covers an area of roughly 10 mineral claim units as shown on Figure 2.

No claim posts were examined by the writer during a visit to the area January 20, 1987.

PHYSICAL SETTING

Iskut River, some 100 miles in length, heads at Kinaskan Lake and flows southwesterly for its first 60 miles before turning abruptly westward, joining the Stikine River 10 miles north of the International Boundary. Over the last 30 miles of its length, the Iskut occupies a 1 to 2 mile wide gravel flat over which

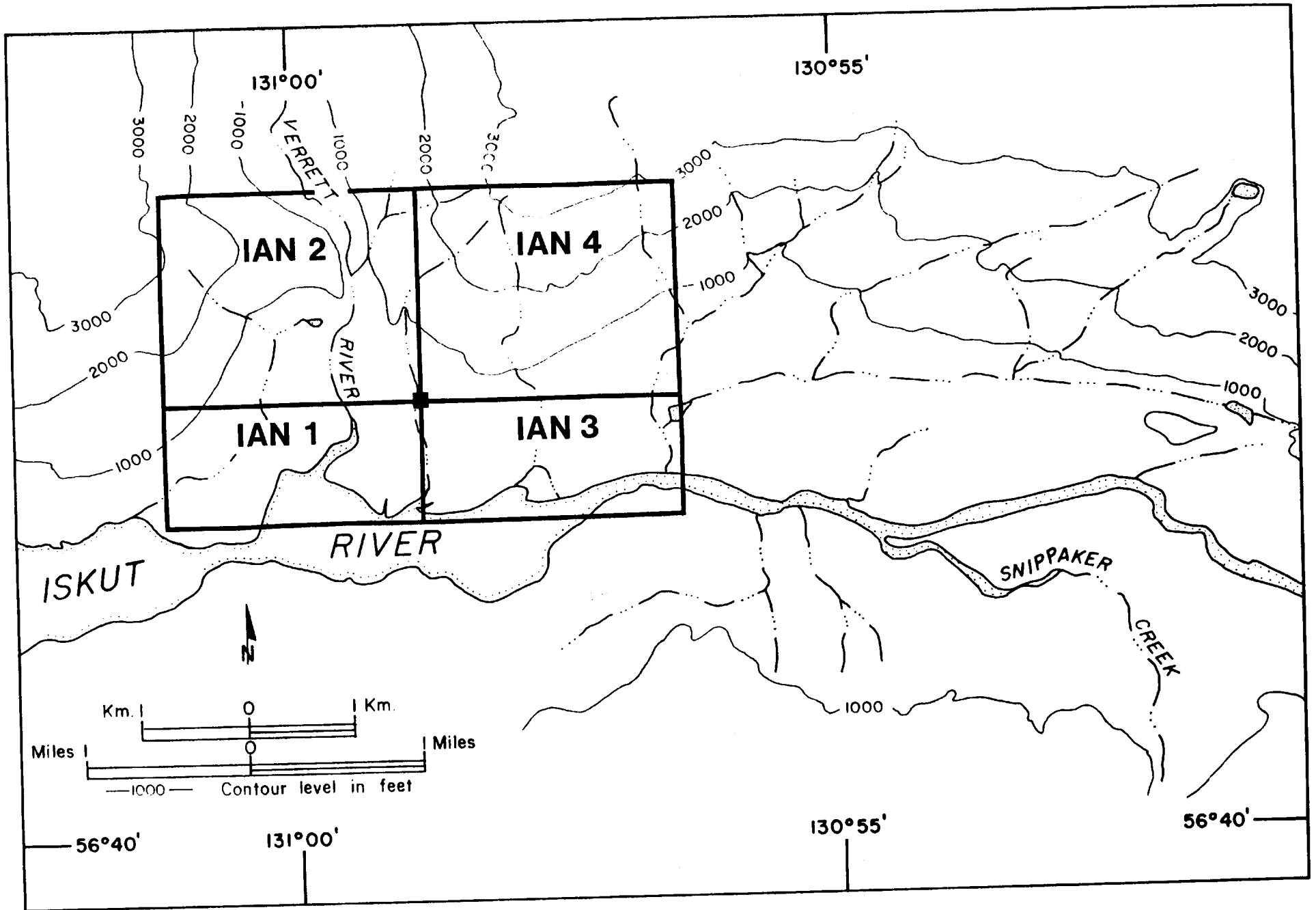


FIGURE 2 – IAN 1-4 CLAIMS

numerous channels are continually shifting. Above this section, between Snippaker and Forrest Kerr Creeks, the river has cut a 100 to 200 ft. wide channel through Recent basaltic lavas along which are 100 ft. high near vertical walls.

The western Iskut River is within the Coast Mountains and elevations rise abruptly from river levels of 200 to 500 feet to more than 6,000 feet. South of Iskut River, Snippaker Creek and Jekill and Craig Rivers have incised deep valleys while to the north, most tributary streams have steep gradients, heading in glaciers which mark the southern extremity of a 200 square mile icefield. Most peaks in the area south of the river are capped by permanent ice and snowfields.

The area is in the coastal wet belt and is snow free for a 3 to 4 month period.

Lower areas, mainly in the valleys of the major drainages, feature dense undergrowth between cottonwood stands. The lower slopes support a mature forest cover of spruce, hemlock and fir except for slide areas in which dense alders are prevalent. Tree line extends to 3,000 to 3,500 feet elevation.

The Ian 1-4 mineral claims extend north from Iskut River and east and west of Verrett River (Figure 2). The Ian 1 and 3 claims cover the floodplain on the north side of Iskut River while topography on the Ian 2 and 4 claims rises abruptly to a maximum of 3,500 feet along the north boundary of the Ian 4 claim.

The two northern claims feature well forested, rugged topography

in which Verrett River and tributary drainages have incised deep, steep-walled valleys.

HISTORY

The earliest recorded prospecting activity in the Iskut River area took place in 1905 when F.F. Bronson and associates from Wrangell, Alaska explored a prominent gossan zone above the lower reaches of Bronson Creek north of Mt. Johnny. Iskut Mining Company was incorporated around 1910 and claims covering the section along Bronson Creek and a relatively flat area on the north slope of Mt. Johnny were Crown granted in 1914 and 1915. Work done to 1920 included a 30 ft. adit and numerous surface trenches.

Consolidated Mining and Smelting Company staked 48 claims on Mt. Johnny in 1929 but there is no record of further work until the mid-1950's when Hudson's Bay Mining and Smelting prospectors found high grade sulfide float on Mt. Johnny. These showings were briefly investigated by Kennco and Noranda prior to 1965 when the original Crown grants and surrounding claims were explored by a consortium of Cominco, Copper Soc Mining Ltd. and Tuksi Mining and Development Ltd.. Some 1,800 feet of diamond drilling in 10 holes was completed. Additional geological work was carried out in 1968 and the porphyry copper potential of the Mt. Johnny area was investigated by Texas Gulf Inc. in 1974.

Work elsewhere in the Iskut River in the 1960's and 1970's

included geological and geochemical surveys, trenching and packsack drilling by Iskut Silver Mines Ltd. on a prospect north of Iskut River between Twin and Verrett Rivers. Newmont also carried out considerable work on several prospects near the headwaters of Forrest Kerr Creek and a nickel-copper deposit was discovered at the headwaters of Snippaker Creek by Silver Standard Mines Ltd. Sumitomo Metal Mining subsequently optioned the property and by the end of 1971 had completed 1,500 feet of underground work in addition to surface and underground drilling.

Skyline Explorations Ltd. restaked the Mt. Johnny area in 1980 and completed trenching and limited diamond drilling of gold-bearing sulfide rich zones in an area of relatively gentle topography northwest of the summit of Mt. Johnny in 1981. The property was optioned to Placer Development Ltd. in 1982, which company formed a joint venture with Anaconda Canada Ltd. to carry out various surveys, trenching and diamond drilling in 1983. Anaconda continued exploration work in 1984 after which the property reverted to Skyline.

Work by Skyline in 1985 and 1986 has included diamond drilling and 1,500 feet of underground cross-cutting and drifting to further define several known gold-bearing zones. Skyline's work over the past several years has resulted in a number of companies carrying out exploration work elsewhere in the area.

Some of this work has been done within and adjacent to the area of the present Ian 1-4 claims, most notably by DuPont of

Canada Explorations Ltd., who completed a two day program of geochemical sampling east of Verrett River in an area now covered by the Ian 4 claim.

REGIONAL GEOLOGY AND MINERALIZATION

The lower Iskut River area features complex geological relationships by virtue of its location at the boundary between the Coast Crystalline and Intermontane tectonic belts. Only generalized geological relationships are available and the following comments are after Kerr(1930,1948), Grove(1986) and Geological Survey of Canada Maps 9-1957, 1418A and 1505A. A generalized geological setting of the lower Iskut River area is shown on Figure 3.

Oldest rocks recognized in the area and apparently restricted to the Coast Crystalline belt are complexly folded and metamorphosed schists and gneisses of probable mid-Paleozoic age within and adjacent to plutonic rocks. White to grey crystalline limestone overlies the metamorphic rocks and is believed to be part of a late Paleozoic sedimentary sequence which includes some minor greenstone units.

Intermontane belt in the Iskut River area is comprised principally of a Mesozoic volcanic and sedimentary sequence originally regarded as late Triassic. Grove(1986) is of the opinion that much of this sequence is correlative with Lower and Middle Jurassic units of the Unuk River and Stewart areas to the

southeast. On the north slopes of Mt. Johnny and Snippaker Mtn., Paleozoic metasedimentary rocks overlie the Jurassic rocks and apparently represent the upper plate of an east-west regional thrust fault along the axis of the Iskut River (Grove, 1986).

Plutonic rocks of the Coast Crystalline belt, late Cretaceous to early Tertiary in age and ranging in composition from quartz diorite to quartz monzonite, intrude both the Paleozoic and Mesozoic sequences. Small granitic plugs and stocks are prevalent east of the main plutonic complex (Figure 3).

Youngest rocks of the area are Quaternary olivine basalt flows and ash deposits underlying Hoodoo Mtn. and parts of the valleys of Iskut River and Snippaker Creek (Figure 3).

Kerr (1930, 1948) noted that extensive alteration of country rocks marginal to small granitic intrusions included locally abundant pyrite and other sulfide minerals. The original mineral showing in the area, along Bronson Creek 2 miles from its confluence with Iskut River, were marked by a prominent gossan central to a feldspar (orthoclase) porphyry intrusion. Volcanic rocks in this area are sheared and altered within a zone 2 miles long and 1,000 to 2,000 feet wide and sulfide minerals include fracture filling and disseminated to near massive pyrite and lesser arsenopyrite, pyrrhotite, chalcopyrite, galena, sphalerite tetrahedrite and molybdenite in fractures and quartz veinlets within and adjacent to the intrusion. Good copper and silver grades with some gold values were reported from earlier work.

Similar altered and pyritized rocks adjacent to feldspar porphyry intrusions along Iskut and Craig Rivers were also reported by Kerr (1948).

A number of narrow quartz-sulfide veins and skarn deposits are known along Iskut River. Most of these have reported good grades of copper, lead, zinc and silver and associated low gold values. Mineralized float has been reported (Kerr, 1948) in moraine below several glaciers in the region.

Between 1965 and 1971, extensive surface and underground exploration and development work was carried out on a nickel-copper deposit hosted by a gabbro intrusion near the headwaters of Snippaker Creek. Some 3.2 million tons grading 0.80% nickel and 0.60% copper are indicated in two zones.

The most significant known mineral deposit in the Iskut area is the Reg property of Skyline Explorations Ltd. Situated in a relatively gentle area on the north slope of Mt. Johnny (Figure 3), the Reg property includes at least seven gold-bearing sulfide rich mineral lenses and quartz veins, collectively referred to as the Stonehouse Gold Zone (Grove, 1986). The zones are hosted by an east-west striking, northerly dipping sequence of Lower Jurassic volcanoclastics and feldspar porphyry flows. These are overlain unconformably by Middle Jurassic volcanic breccias and well stratified volcanic sediments and tuffs on the upper slopes of Mt. Johnny.

Known mineralization is restricted to northeast trending, steeply dipping fractures developed in a zone some 4,700 feet

long and 900 feet wide (Grove,1986). Mineralized zones consist of pods, lenses and quartz veins containing a variety of sulfide and sulfosalt minerals in addition to native gold and electrum. Wallrocks marginal to the zones exhibit extensive K-feldspar alteration.

Gold is the major economic mineral on the Reg property but recoverable quantities of copper and silver are also present. Surface and underground work to date indicates a reserve inventory of 938,446 tons grading 0.73 oz/ton gold, 0.85 oz/ton silver and 0.76% copper (Grove,1987), of which 233,446 tons of 0.897 oz/ton gold is classified as measured and drill-indicated.

Geochemical soil sampling and VLF-EM surveys have been demonstrated to be effective tools in the discovery and definition of the various gold-bearing zones.

In summary, known base and precious metals mineralization in the western Iskut River area is mainly fracture controlled with northeast fractures being the most favourable orientation. In addition, there is a spatial relationship between several mineralized zones and feldspar porphyry intrusions.

PROPERTY GEOLOGY

The Ian 1-4 mineral claims are underlain principally by Mesozoic (Lower Jurassic?) felsic to intermediate volcanic rocks. The Ian 2 and 4 claims cover most of the pre-existing Bax claim, located by DuPont in 1980 following a heavy mineral stream sediment

sampling program which yielded a 650 ppb gold value in a small tributary of Verrett River on what is now the Ian 2 claim at an elevation of 700 feet.

Follow-up work (Strain,1981) disclosed the presence of a gossan zone in the northwest part of the Ian 4 claim at an elevation of 2,700 feet. Banded cherty tuffs and felsites were noted to contain 2-15% pyrite in fractures and as disseminations. Four of nine soil samples collected in the immediate area of the gossanous outcrop returned values of between 40 and 200 ppb gold and three contained 2.4-6.5 ppm silver. Three rock samples yielded low gold assays of 0.001 and 0.002 oz/ton.

Work on claims immediately west of the Ian 1-4 property in 1983 (Macrae and Hall,1983) showed the area to be underlain by an east-west sequence of of felsic to intermediate volcanic flows and pyroclastics with some intercalated siltstones and cherty tuffs. Some granitic intrusive rocks were also noted and Landsat imagery showed distinct northeast linear features traversing the area. Heavy mineral stream sediment samples collected 6,000 to 8,000 feet west of the Ian 1 and 2 claims boundary yielded 5250 and 12000 ppb gold and 11.1-18.8 ppm silver. No follow-up work was undertaken.

The Tungco Resources Corp. property, adjoining the Ian 1 and 3 claims on the south, includes three gold showings in low ground on the south side of Iskut River. Grab samples returned assays ranging from 0.495 to 2.873 oz/ton gold (Caulfield and Ikona,1985).

These showings and anomalous areas indicated by soil geochemistry and an airborne EM survey have distinct northeast trends as do mineralized zones discovered by DuPont (Eccles,1981; Barde and Radford,1983) on the steep slope of Snippaker Mtn. to the south.

CONCLUSIONS AND RECOMMENDATIONS

The Ian 1-4 mineral claims are underlain by Mesozoic volcanic and lesser sedimentary units considered to be favourable host rocks for precious and base metals in the Iskut River area.

Limited previous work within the boundaries of the present claims has disclosed significant gold (and silver) values in stream sediment and soil samples. Fracture filling and disseminated pyrite is known to occur in at least one locality within the claim group.

Contiguous claims to the west of Ian 1-4 are known to host anomalous concentrations of gold in stream sediments and three gold showings have been located on claims immediately to the south.

Northeast trending fracture zones are the preferred orientation for known gold-bearing mineral zones in the district and drainage patterns suggest similar fracture patterns on the Ian 1-4 claims.

The property warrants a preliminary program to follow up earlier results and to assess the potential of the entire claims area.

RECOMMENDED PROGRAM

A 15 to 20 day program of geological mapping, prospecting, soil and stream sediment sampling and VLF-EM orientation surveys is recommended for the Ian 1-4 claims.

Field work should be preceded by an air photo interpretation study and preparation of an adequate base map. Initial work in the field should be directed to the known gossan area in the northwest part of the Ian 4 claim.

Stream sediment (heavy mineral) sampling should be undertaken of all tributary drainages within the claims area. Soil and/or rock samples could be collected during geological reconnaissance and prospecting of the more accessible areas.

Exact location of the common Legal Corner Post for the four claims and proper definition of individual claim boundaries should be established during the course of the exploration program.

In view of anticipated difficulty of access over much of the property, it is recommended that a four person crew be deployed from a base camp at Snippaker Creek airstrip, 14 miles southeast. Daily set-outs and pick-ups by helicopter should result in a more efficient program.

A second phase program, involving follow-up work, would be contingent on results obtained from the recommended preliminary work.

COST ESTIMATE

Phase One

Crew Wages (geologist, prospector, 2 assistants)	\$20,000.00
Camp costs (including freight)	\$7,500.00
General transportation	\$2,500.00
Helicopter support - 20 hours -	\$12,000.00
Sample analyses	\$5,000.00
Base map preparation, air photos	\$2,000.00
Engineering, supervision, reports	\$5,000.00
Contingencies	\$6,000.00
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Total	\$60,000.00

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CERTIFICATE

I, NICHOLAS C. CARTER, of Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist registered with the Association of Professional Engineers of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc. (1960), Michigan Technological University with M.S. (1962) and the University of British Columbia with Ph.D. (1974).
3. I have practised my profession in eastern and western Canada and in parts of the United States over the past 25 years.
4. This report is based on public and private reports dealing with the geology and mineral deposits of the Iskut River area, British Columbia, and on a reconnaissance of the area January 20, 1987.
5. I have no interest, direct or indirect, in the Ian 1-4 mineral claims or in Ashburton Oil Ltd.
6. Permission is hereby granted to Ashburton Oil Ltd. to use this report in support of a Prospectus, Statement of Material Facts or Filing Statement to be submitted to the Office of the Superintendent of Brokers and the Vancouver Stock Exchange.

N.C. Carter, Ph.D. P.Eng.

Victoria, B.C.
February 12, 1987

N.C. CARTER, Ph.D., P.Eng.
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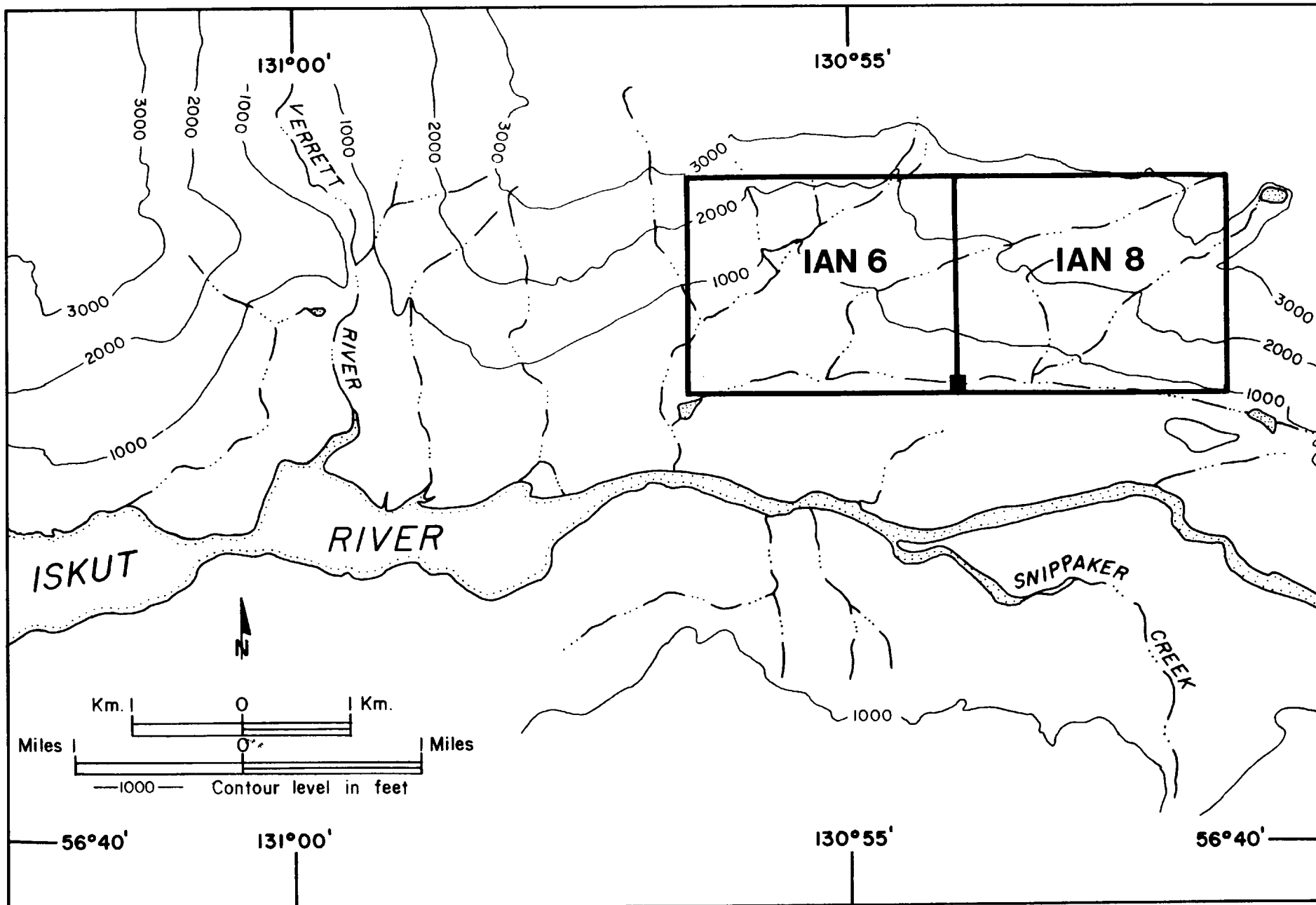


FIGURE 2 – IAN 6 & 8 CLAIMS

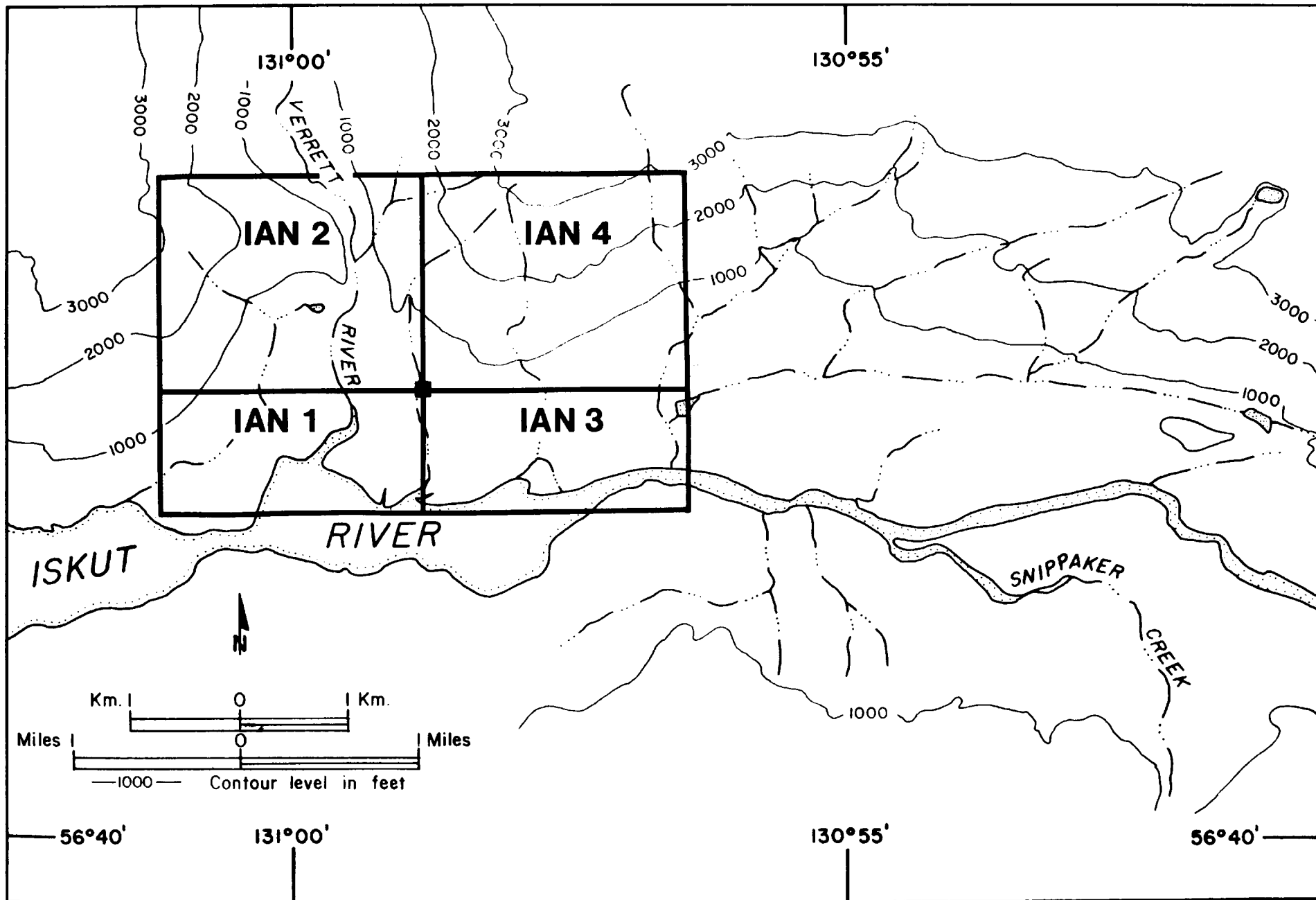
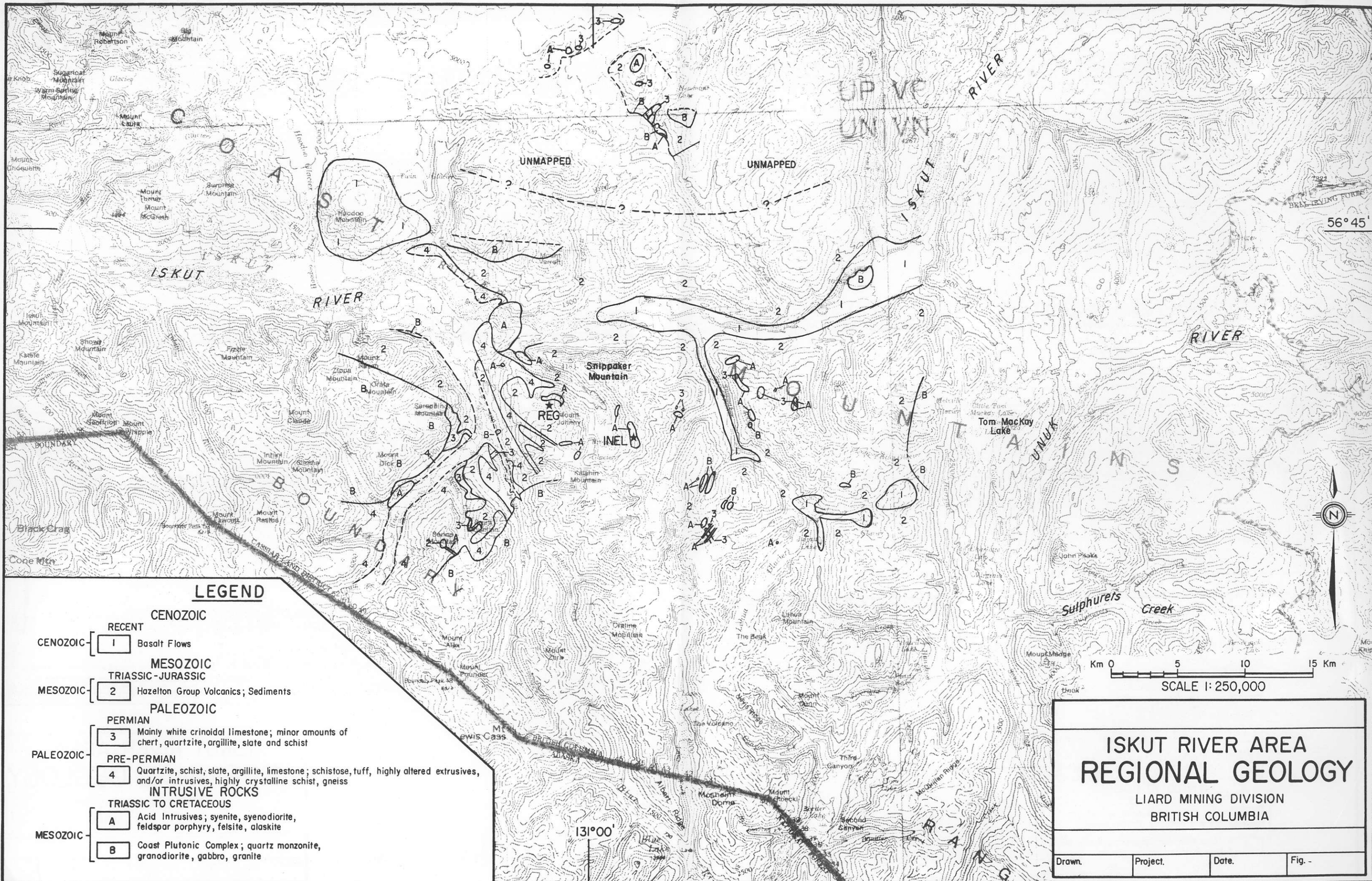


FIGURE 2 – IAN 1-4 CLAIMS



LEGEND

- CENOZOIC**
- RECENT
- CENOZOIC [1] Basalt Flows
- MESOZOIC**
- TRIASSIC-JURASSIC
- MESOZOIC [2] Hazelton Group Volcanics; Sediments
- PALEOZOIC**
- PERMIAN
- PALEOZOIC [3] Mainly white crinoidal limestone; minor amounts of chert, quartzite, argillite, slate and schist
- PRE-PERMIAN
- PALEOZOIC [4] Quartzite, schist, slate, argillite, limestone; schistose, tuff, highly altered extrusives, and/or intrusives, highly crystalline schist, gneiss
- INTRUSIVE ROCKS**
- TRIASSIC TO CRETACEOUS
- MESOZOIC [A] Acid Intrusives; syenite, syenodiorite, feldspar porphyry, felsite, alaskite
- MESOZOIC [B] Coast Plutonic Complex; quartz monzonite, granodiorite, gabbro, granite

**ISKUT RIVER AREA
REGIONAL GEOLOGY**

LIARD MINING DIVISION
BRITISH COLUMBIA

Drawn.	Project.	Date.	Fig. -
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