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GEOLOGICAL, GEOPHYSICAL
AND
GEOCHEMICAL REPORT
ON THE EAST ARM PROJECT

(Rime I - 29 Claims)

NTS: 114 P / ~~114~~, 12 E, 13 E

LAT.: 59° ~~42.1~~ 42.1'

LONG.: 137° ~~36.6~~ 36.6'

Atlin Mining Division

OWNER: ST. JOE CANADA INC.

Joint Venture with

OPERATOR: NEWMONT MINES LTD.

15,426

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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I. SUMMARY

A five week geological and geophysical exploration program was carried out by St. Joe Canada Inc. in joint venture with Newmont Mines Ltd. during August and September of 1986 on the East Arm property (Rime 1 to 26 and 29) located in the Alsek-Tatshenshini River area of the St. Elias Mountains in northwestern British Columbia.

The program entailed detailed geological mapping (1:1,000), sampling, VLF-EM and magnetometer surveys and regional prospecting. It concentrated on two areas in the central and northwestern parts of the claim group (X-showing and Pampero), which had been identified as favourable targets during previous programs.

The detailed mapping of the X-showing area revealed that the auriferous, massive sulfide mineralization (previous sampling had yielded 0.82 ounces Au/ton over 1.2 metres true width) occurs stratiform in black, calcareous argillite and can be characterized as a sedex-type mineralization. The magnetic survey proved to be useful in tracing the mineralized horizon 125 metres to the SE and 350 metres to the NW of the original showing.

At Pampero, the lithology corresponds to that of the hostrock of the Windy-Craggy deposit 5 kilometres to the SW. A prominent volcanic/sedimentary contact is associated with widespread weak to intensive hydrothermal alteration with disseminated and stringer sulfide mineralization. This horizon continues towards the SE under the glacier and is exactly on strike with the large magnetic anomaly (see St. Joe's Assessment Report 1984) over the main glacier.

Eleven additional insitu sulfide mineralizations (pyrite, pyrrhotite, chalcopyrite, ± sphalertie, ± galena) were located in the NW part of the property. They include stratabound massive sulfide lenses, stockwork- and vein-type mineralizations.

The program resulted in:

- extension of the known strike length of the stratiform, auriferous massive sulfide mineralization of the X-showing
- identification of the favourable horizon for Windy-Craggy type mineralization along strike of the large magnetic anomaly over the main glacier
- location of numerous massive sulfide occurrences in the NW portion of the property, some of which contain anomalous gold values
- outlining the NW striking, volcano-sedimentary zone of about 10.5 kilometres extent with favorable geology, massive sulfide bedrock occurrences and the magnetic high roughly at the centre.

The next phase of fieldwork at the East Arm property should concentrate on the Windy-Craggy stratigraphic horizon by drill-testing of the magnetic high and the X-showing as the most advanced targets. A program of detailed geological work concentrating on stratigraphy and structure and additional magnetic and EM surveys on the favourable horizon should be carried out concurrently.

The large magnetic high near the centre of East Arm Glacier has long been postulated as the source of the massive sulphide boulders containing abundant pyrrhotite found at the toe of the glacier. A deep penetrating UTEM survey in this area produced a response which has been interpreted as being caused by mafic intrusives. The only way that the magnetic high can be definitively tested is by drilling and probably it is less expensive to drill at this stage than to carry out additional survey work which will ultimately leave the cause of the magnetic high unresolved, and thus still requiring drilling.

2. INTRODUCTION

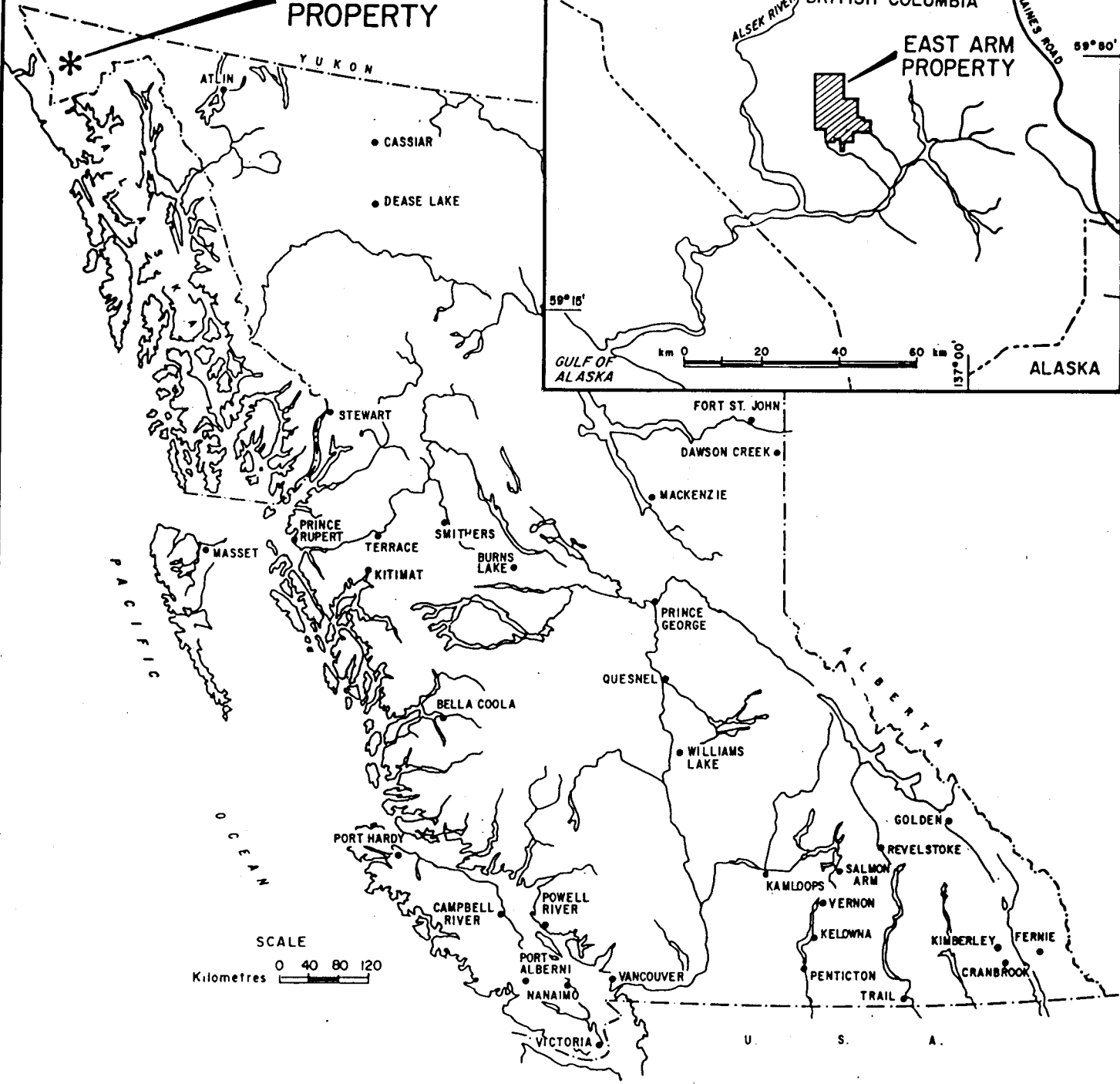
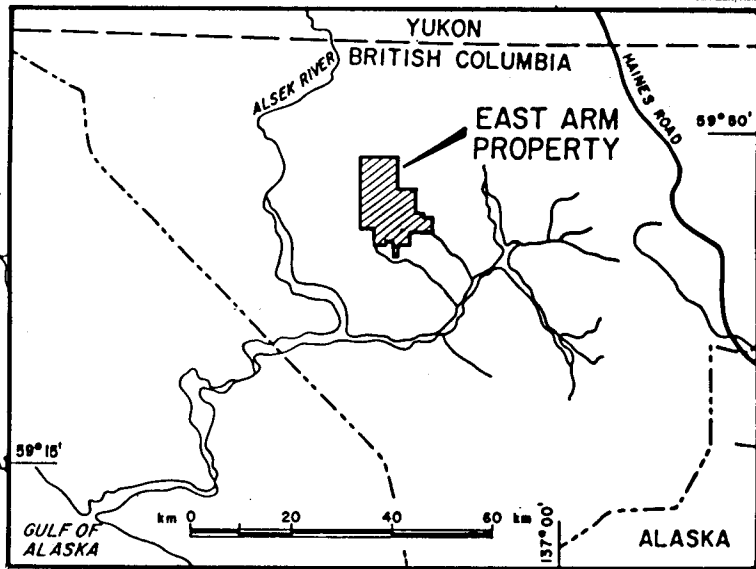
2.1. Location and access

The East Arm property is located in the Alsek-Tatshenshini River area of the St. Elias Mountains in the extreme northwestern corner of British Columbia (see location map fig. 1). The central coordinates of the property are $59^{\circ} 44'$ northern latitude and $127^{\circ} 32'$ western longitude (NTS 114P/11W, 12E, 13E).

The area is heavily glaciated and is characterized by jagged peaks and ridges ranging up to 2200 metres above MSL.

Access to the property is by light fixed wing aircrafts from Whitehorse to the 800 metre long gravel strip at Tats Lake (200 km) and from there by helicopter to the East Arm Glacier (12 km).

EAST ARM PROPERTY



ST. JOE CANADA INC.
EAST ARM PROPERTY
 LOCATION MAP

DATE: 1986 N.T.S. 114 P FIGURE No. 1

2.2 EXPLORATORY HISTORY

In 1974, personnel of the Swiss Aluminum Mining Company of Canada (SAMCAN), located stream sediment geochemical anomalies in Henshi Creek which is the drainage from East Arm Glacier. This led to their discovery of massive sulfide boulders in the outwash of East Arm Glacier.

SAMCAN staked a total of 21 mineral claims, comprising 309 units, over the presumed source area for the massive sulfide boulders (Mus claims).

In 1975, SAMCAN geologists mapped East Arm Glacier catchment basin at a scale of 1:25,000. Magnetic and electromagnetic surveys were conducted over the same region. A large magnetic anomaly was detected over East Arm Glacier close to the junction of the north and west branches (B.C. Assessment Report #5841).

In 1980, SAMCAN personnel continued mapping of the property and conducted a gravimetric survey over the magnetic anomaly and other parts of East Arm Glacier. The gravimetric survey calculated ice thickness to be 300 metres \pm 50 metres.

In 1981, SAMCAN carried out a detail geological survey which included mapping at a scale of 1:10,000, prospecting and subsequent petrographic work (B.C. Assessment Report #9360). During this program the "X-showing", a copper-rich, finegrained, banded, massive sulfide zone was discovered. No analyses were performed on samples collected from this showing and gold was not recognized (Della Valle pers. communication). The X-showing is approximately 3 kilometres south of the magnetic anomaly.

SAMCAN geologists concluded the magnetic anomaly was caused by a major, stratabound, massive sulfide deposit located under the glacier. The sulfide boulders were believed to be derived from this source.

By the fall of 1982 the property came open and was restaked by St. Joe Canada Inc. in late January, 1983.

St. Joe Canada Inc. contracted Questor Surveys Ltd. in 1983 to conduct a helicopter Input EM and Magnetic survey over the property.

St. Joe's fieldwork in 1983 consisted of relocating the magnetic anomaly over the main glacier and conducting a deep penetrating UTEM survey over this area. An intensive helicopter supported reconnaissance sampling and mapping program was conducted at the same time.

A short program was undertaken by St. Joe during the 1984 field season, mostly directed towards detailed geological and geophysical work at the X-showing. A glaciological study was conducted by B. Broster, glaciologist at UBC, to determine the transport mechanism and source areas of the massive sulfide boulders found in the glacial outwash.

In 1986 St. Joe Canada Inc. entered a joint venture with Newmont Mines Ltd. and conducted a five week geological - geophysical program during August and September of 1986.

2.3 PROPERTY

The claim group comprises 485 contiguous units (see tab. 1 and fig. 2) and is situated in Atlin Mining Division of B.C. Total area covered by the claim is 12,125 hectares.

Relevant data concerning the claims constituting the East Arm Property is tabulated below:

<u>Claim Name</u>	<u>Number</u>	<u>Units</u>	<u>Date of Record</u>
Rime 1	1775	20	January 28, 1983
Rime 2	1776	20	January 28, 1983
Rime 3	1777	12	January 28, 1983
Rime 4	1778	20	January 28, 1983
Rime 5	1779	20	January 28, 1983
Rime 6	1780	16	January 28, 1983
Rime 7	1781	20	January 28, 1983
Rime 8	1782	20	January 28, 1983
Rime 9	1783	16	January 28, 1983
Rime 10	1784	20	January 28, 1983
Rime 11	1785	20	January 28, 1983
Rime 12	1786	20	January 28, 1983
Rime 13	1787	20	January 28, 1983
Rime 14	1788	20	January 28, 1983
Rime 15	1789	20	January 28, 1983
Rime 16	1790	20	January 28, 1983
Rime 17	1791	20	January 28, 1983
Rime 18	1792	20	January 28, 1983
Rime 19	1793	20	January 28, 1983
Rime 20	1794	20	January 28, 1983
Rime 21	2070	20	November 16, 1983
Rime 22	2071	15	November 16, 1983
Rime 23	2072	2	November 16, 1983
Rime 24	2073	20	November 16, 1983
Rime 25	2074	20	November 16, 1983
Rime 26	2075	18	November 16, 1983
Rime 29	2078	6	November 16, 1983
<u>27 claims</u>		<u>485 units</u>	

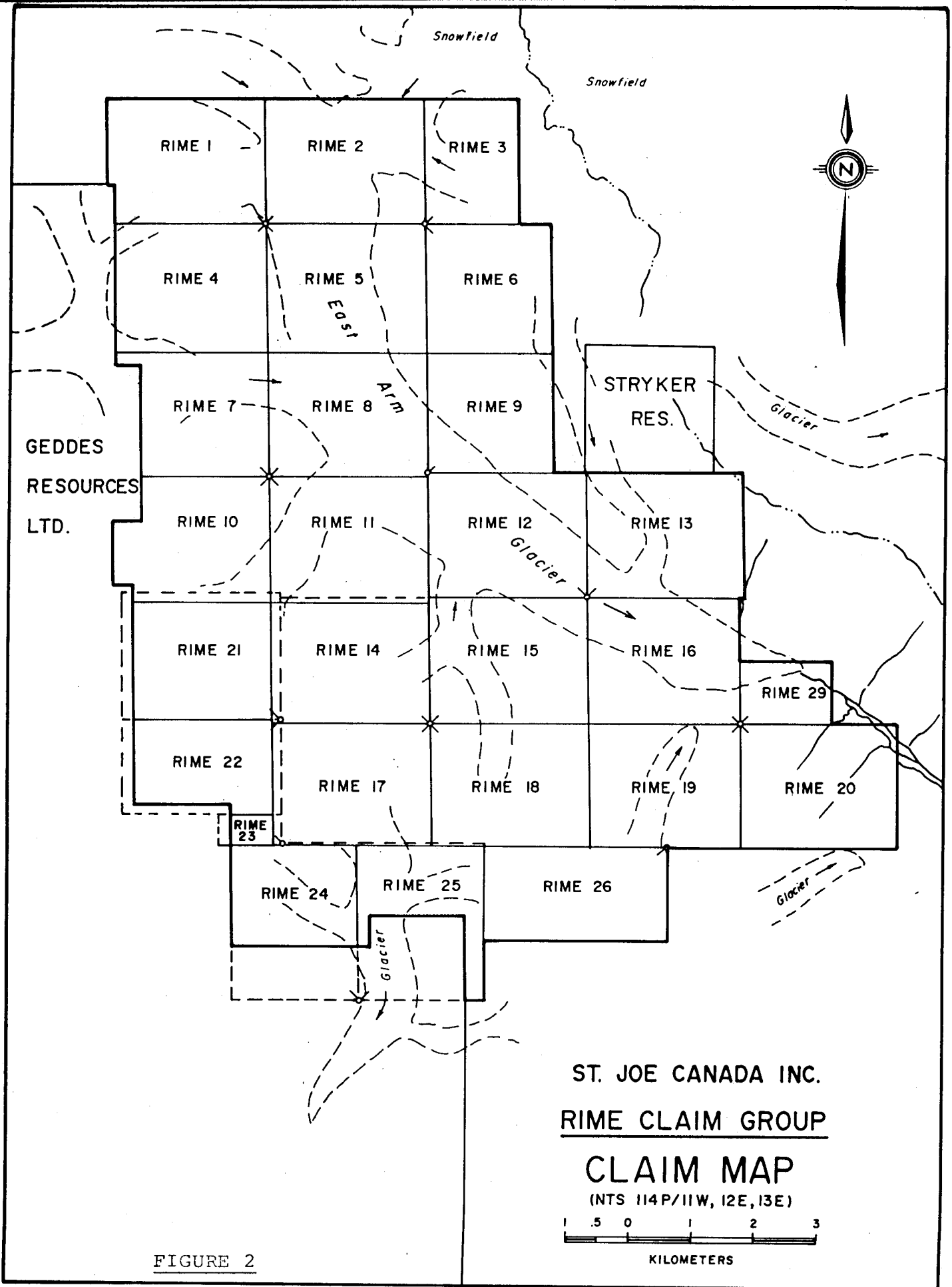


FIGURE 2

3. REGIONAL AND LOCAL GEOLOGY

3.1 General

The regional geology of the Tatshenshini map area (114P) has been compiled by the Geological Survey of Canada (1:125,000; Campbell and Dodds 1983). Mapping in the area of East Arm Glacier and the Windy-Craggy deposit was conducted by the BCDM (MacIntyre 1984).

The East Arm property and the nearby copper-cobalt-gold Windy-Craggy deposit are located within the Alexander Terrane or Allochthon of the Insular Tectonic Belt of British Columbia (fig. 3). This terrane comprises a thick succession of Precambrian to Permian basinal to platformal carbonate and clastic rocks that is unconformably overlain by Late Triassic calcareous turbidites and a bimodal, mainly submarine, volcanic suite (MacIntyre 1986). This volcano-sedimentary sequence is intruded by Triassic and younger diorites and quartz-diorites and Jurassic to Cretaceous granodiorites.

According to MacIntyre (1986) the Triassic volcanic rocks of the Alexander Terrane have calc-alkaline characteristics typical of island arcs or back-arc basins developed in continental crust.

The Alexander Terrane is bounded at the southwest by the Border Ranges and Hubbard fault system, and at the northeast by the Duke River and Denali fault systems (fig. 3) to the Wrangellia and Taku Terranes, respectively. It may represent an "exotic terrane" formed in a low paleolatitude and accreted to the North American cratonic margin during Mesozoic time.

The rocks are affected by multiphase deformation (folding, re-folding, and faulting) and by low grade regional metamorphism (lower greenschist facies).

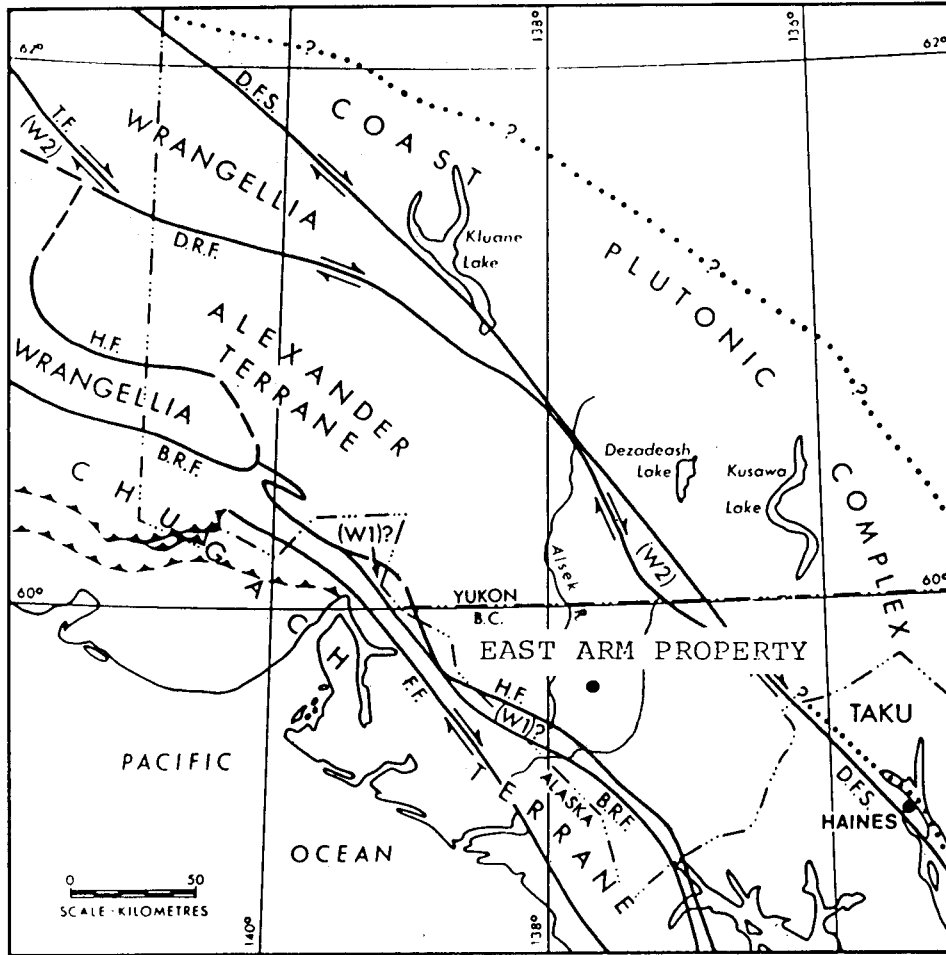


Figure 3 Property Location with respect to the major tectonic elements as defined by Campbell and Dodds, 1983, G.S.C. Open File 926 Legend.

B.R.F. = Border Ranges fault; F.F. = Fairweather fault
H.F. = Hubbard Fault; D.R.F. = Duke River fault
D.F.S. = Denali fault system; T.F. = Totschunda fault;
W1/W2 = Wrangellia terranes

3.2 Stratigraphy

A preliminary stratigraphic description for the Alesk-Tatshenshini map area is given by MacIntyre (1984, 1986) and MacIntyre and Schroeter (1985) as part of a BCDM study of the metallogeny in the Alexander Terrane (fig. 4, 5).

The East Arm/Windy-Craggy area is underlain by intermediate to mafic, submarine, volcanic rocks with variable amounts of interbedded calcareous argillites of Late Triassic (Norian) age and an Early to Middle Paleozoic clastic and carbonate sequence.

The oldest unit consists of Ordovician to Devonian, medium to thin bedded limestones (or marbles) with interbedded calcareous siltstones and arenaceous limestones. (Unit 1) Limestones of this unit northeast of the East Arm glacier have yielded Devonian macrofossils (AR 9360).

Resting unconformably on this unit is a volcano-sedimentary sequence of Late Paleozoic to Late Triassic age which can be subdivided into four units:

Unit 2A - a basal unit dominated by grey-weathering calcareous siltstones and shales with minor intercalations of volcanics.

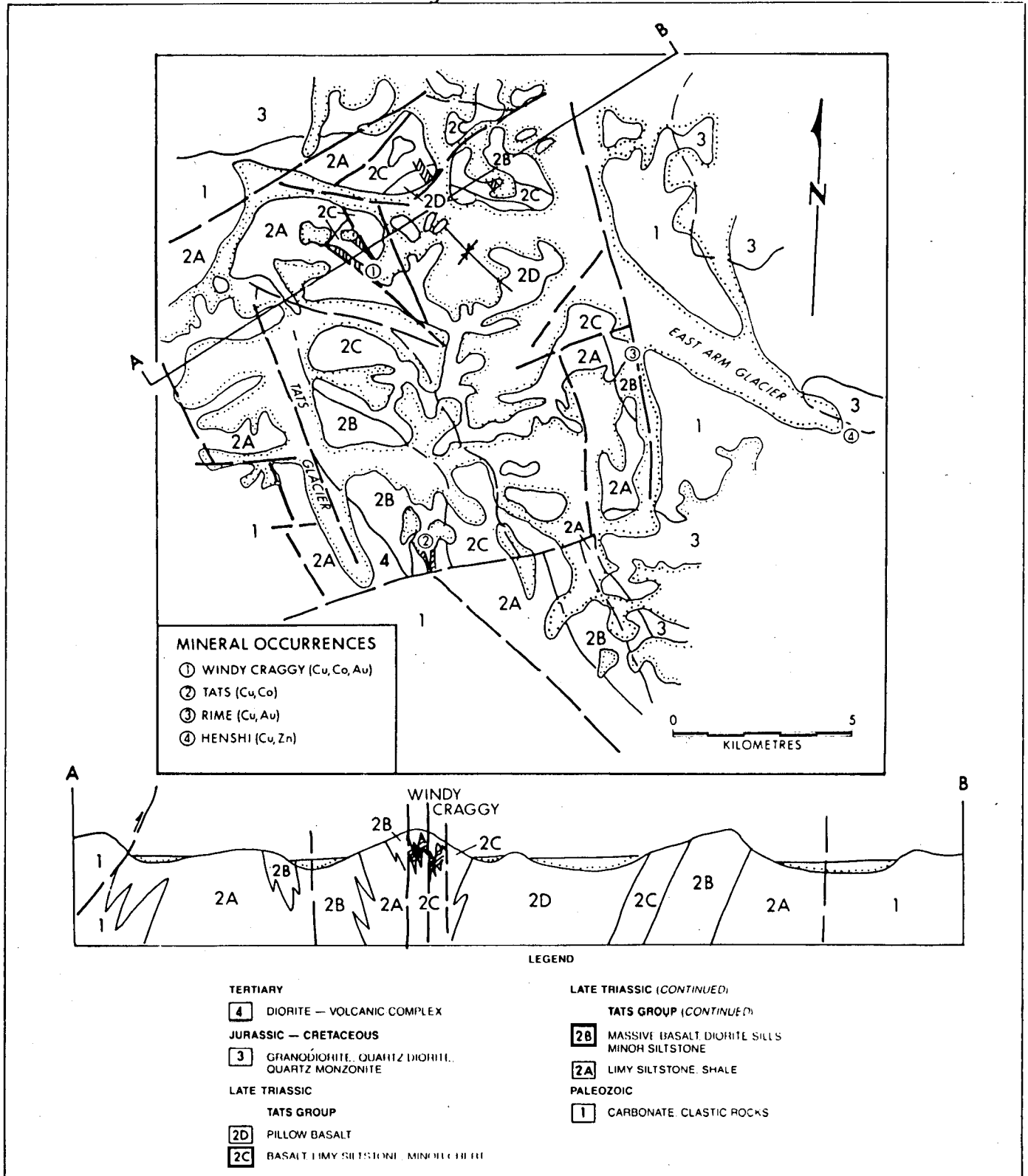
Unit 2B - a mixed volcanic-sedimentary unit of massive, thickly bedded, dacitic to andesitic flows separated by beds of dark, calcareous siltstones and banded limestones. Columnar jointing is locally well developed.

Unit 2C - a unit dominated by dacitic to andesitic, amygdaloidal, pillowed flows with intercalated calcareous siltstones and argillaceous limestones. Mafic dikes are common in this unit and probably represent the feeder dikes for unit 2D.

Unit 2D - a unit of massive pillow lavas with a distinct basal layer of agglomerate and no interbedded sedimentary rocks.

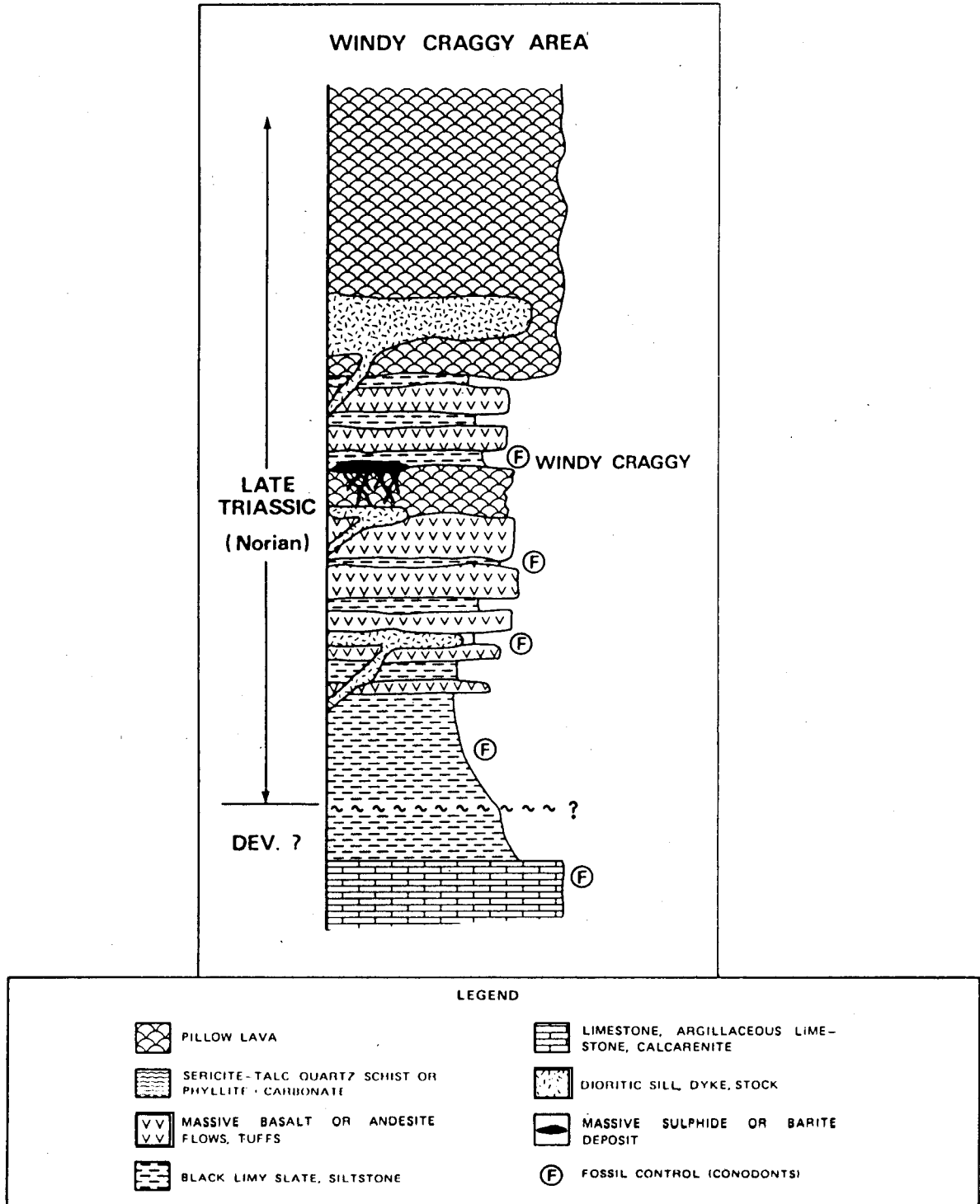
Unit 3 consists of intrusions contemporaneous (Triassic) with and later (Jurassic to Cretaceous) than the Units 2A-C.

Figure 4



Geology of the Windy Craggy area, Geology from MacIntyre(1986).

Figure 5



Generalized stratigraphic column for the Windy-Craggy area showing approximate position of mineral occurrence. (MacIntyre and Schroeter, 1985)

3.3 Mineralization

The Windy-Craggy deposit owned by Geddes Resources on the claim group adjacent to the East Arm property is the most prominent mineralization of economic potential so far located in the area. The deposit was discovered in 1958 following the location of massive sulfide boulders in the moraines of the Tats glacier. Recent drilling (1981, 1982, 1983) has defined a concordant, steeply northeast dipping massive sulfide body with a strike length in excess of 1,000 m and an average thickness of 100 m.

The drill indicated reserves of the deposit are about 300 million tonnes grading 1.52% Cu and 0.08% Co (Northern Miner, 13-01-83). Some portions of the deposits have significant concentrations of gold (e.g., 61.23 metres with 11 grams per tonne; George Cross Newsletter #197, 12-10-83).

The mineralization occurs at the contact of mafic to intermediate, pillowed flows with overlying calcareous argillites. The cross-cutting, stockwork-type mineralization and alteration of the orebody is mainly hosted by the pillow lavas.

Limy beds in the stratigraphic hanging wall of the deposit have yielded Late Triassic (Norian) conodonts (MacIntyre 1983).

Several other stratabound, massive sulfide occurrences of undetermined extent and economic significance are found lower in the stratigraphic sequence (unit 2B).

The general geological environment of the Windy-Craggy deposit is assumed to be that of a narrow, landlocked, submarine rifting system with short lived spreading centres, similar to the present-day Guaymas Basin. Formed by the active rifting of the Baja California from mainland Mexico, the Guaymas Basin is characterized by high sedimentation rates (1-2 m/thousand years) resulting in a thick sequence of terrigenous and biogenic sediments. Seafloor hydrothermal vents are positioned above subvolcanic sills.

The Windy-Craggy deposit may, therefore, be classified as a Besshi-type deposit, i.e. the sediment-hosted subtype of a rift-related metallogenic spectrum which contains the sediment-starved Cyprus-type deposit as another subtype.

Most of the deposits in a given epicratonic rifting episode occur as a specific stratigraphic horizon (e.g., in the Sanbagawa belt of SW Japan), usually close to or at the contact between a volcanic and sedimentary sequence. However, mineralization also occurs to a lesser extent at other stratigraphic levels.

4. 1986 FIELD PROJECT

4.1. General

A five week geological/geophysical exploration project was conducted during August and September 1986. The fieldwork was based out of Geddes Resources Limited's Tats Lake camp, from where the East Arm property was reached by a short helicopter flight.

The field crew was composed of four geologist/climbers and three field assistants/climbers.

Excellent weather conditions during a period of extended Indian summer contributed to the overall success of this project.

4.2 Targets

According to the general geological environment described in 3.3. two types of mineralization constitute the principal exploration targets in the East Arm area:

- Besshi-type volcanogenic, massive sulfide deposits with economic gold grades as exemplified by the Cu-Co-Au Windy-Craggy deposit
- Exhalative gold mineralization (Sedex-type) distal to massive sulfide mineralizations or related to individual hydrothermal vent systems.

Skarn-type mineralizations which occur in the area, were not considered as exploration targets during this project.

4.3 Objectives

The objectives of the 1986 program were the following:

- outlining the extent and defining the stratigraphic and/or tectonic control of the auriferous, stratabound massive sulfide mineralization of the X-showing (best grades from previous sampling yielded 0.82 ounces Au/ton over 1.2 metres true width)
- follow-up investigation of areas of interest identified during the 1983 reconnaissance program, including Pampero, which was described by MacIntyre (1983) as hosting a "distal exhalative" in a "similar stratigraphic succession to that hosting the Windy-Craggy deposit"
- Ground follow-up investigation of the Questor airborne Input-EM targets
- further definition of the volcano-sedimentary stratigraphy in order to characterize horizons favorable for massive sulfide mineralization
- prospecting, sampling and reconnaissance mapping in areas not yet or so far only insufficiently covered.

4.4 WORK PROGRAM

4.4.1. X-showing and Barbican Mount

4.4.1.1. Grid Establishment

A grid was established with the massive sulfide showing as origin, covering the area of the X-showing and extending to the southeast over the X-glacier to the north tip of the Barbican Mount (Fig. 22). The baseline has an orientation of N 015° W, i.e. parallel to the strike of the stratiform mineralization, and a length of 1.64 kilometres. 10.1 kilometres of lines were established with stations chained in at 20 metre intervals.

The slope of the terrain averages 45° with some parts as steep as 65° . A degree of climbing expertise is required to work in this area.

4.4.1.2. Geological mapping, sampling

The area from Line 200S to 700N was mapped at a scale of 1:1,000 (Fig. 6). Based on this detailed mapping the area was sampled (121 samples from the X-showing area, 31 samples from the northern part of Barbican Mount) (fig. 7, 8, 9, 10).

In addition to the rock samples 26 samples of talus fines were taken along the scree slope below the edge of the outcrop in the X-showing area (fig. 7, 8).

4.4.1.3. Geophysical surveys

A magnetic survey was conducted along the grid lines with an EDA PPM 350 proton precision field magnetometer (fig. 11). Readings were taken at 5 metre intervals. An EDA PPM 400 basestation magnetometer, stationed in camp, was used for automatic correction of diurnal variations. The survey is comprised of 2173 stations.

An EM 16 instrument manufactured by Geonics was used for a VFL-EM survey, covering the entire grid. The readings were taken at 10 metre intervals for two transmitter stations (fig. 13 and 14).

The same instrument with the attachment for the resistivity mode was used for a resistivity survey along a few lines close to the origin of the grid.

4.4.2. Pampero

4.4.2.1. Grid Establishment

A grid with a baseline striking N 030° W was established at Pampero (fig. 22). The area has a low relief in its NW part and drops sharply from this plateau like feature down

to the glacier in its SE portion. A total of 12.6 line kilometres were chained in and marked at 20 metre intervals.

4.4.2.2. Geological mapping, sampling

The area of the grid was mapped at a scale of 1:1,000 (fig. 16, reduced to 1:2,000) and 50 samples, mostly chip channels, were taken (fig. 17, 18).

4.4.2.3. Geophysical surveys

A magnetic and a VLF-EM survey were conducted over the grid as specified under 4.4.1.3. (fig. 19, 20, 21). Readings for the VLF-EM survey were taken at 20 metre intervals.

4.4.3. Follow-up of airborne Input-EM anomalies

Several zones identified by the 1983 Questor airborne Input-EM and Magnetic survey (see St. Joe Canada Assessment Report 1984) were followed-up on the ground. Zone A2, 3, and A9, 10, 11 were tied into the X-showing and Pampero grid, respectively. The zones at the east side of the glacier were checked by helicopter supported traverses. One of the zones on the east side of the glacier (A 14, fig. 22) was systematically sampled.

4.4.4. Reconnaissance mapping and sampling

The NW part of the property was mapped and sampled in a reconnaissance style (fig. 22). The terrain is generally steep and requires technical climbing in several places. One of the mineralized zones localized (Zone 1) was subsequently tied into the Pampero Grid.

4.5 RESULTS

4.5.1. X-showing and Barbican Mount

The geological mapping (1:1,000; fig. 6) of the X-showing reveals a sequence of massive, amygdaloidal, dacitic and andesitic flows with intercalated calcareous shales, siltstones, argillaceous limestones and minor chert. The outcrop pattern of this volcanic-sedimentary sequence reflects the interference pattern of superposed folds. On a detailed scale synsedimentary deformation is indicated.

This sequence is tentatively assigned to the map unit 2B (fig. 22) and constitutes part of an internally complexly deformed fault block. The apparent reversal of the stratigraphic sequence west of the X-showing (unit 2B to unit 2A to unit 2C) indicates a structural complexity which is not understood yet.

The dip of the sequence is generally steep to the west with a strike nearly parallel to the baseline. However, no unambiguous indications of stratigraphic tops were encountered and the whole sequence may be overturned. Abundant quartz/calcite veins and veinlets (see below) in the structural hanging wall of the X-showing horizon may be part of the feeder system for the stratiform mineralization and, therefore, may represent the stratigraphic footwall. The mineralization occurs in the calcareous argillites as stratiform, finely banded layers of sulfides (pyrrhotite, chalcopyrite, pyrite). Where exposed the mineralization is deeply weathered to a limontic, earthy material. A petrographic study of samples from the X-showing (see Appendix C, samples R 13000, 13000A, 13002B) was undertaken. The textural relationships between the sulfides and the carbonate matrix confirm the synsedimentary-exhalitive nature of this polymetallic mineralization. Free Gold, 5 to 25 microns in size, occurs within pyrite or in the carbonate matrix.

X-showing can be traced by the magnetic survey (fig. 11) as an anomaly of several hundred gammas for 125 metres to the SE (under the scree slope and the X-glacier) and for about 350 metres to the NW, where it is cut off by a E-W striking magnetic break. The fluctuations of the amplitude of the anomaly may reflect a discontinuous, stratiform mineralization or changes in the composition of the massive sulfides. The same horizon is delineated as a zone of conductivity by the VLF-EM survey (fig. 13 and 14).

A strike extension of the original showing was located in a handtrench at the baseline 13 metres south of the origin.

Samples from the mineralized horizon yielded results of 4,000, 2,560, 2,250 ppb Au, 15.4, 10.1, 25.0 ppm Ag, 0.22, 0.15, 0.56% Cu and 0.26, 0.15, 1.06% Zn respectively.

Parallel argillite horizons with minor sulfide mineralizations were sampled but failed to yield any anomalous gold values.

A sample of the numerous quartz/calcite veins gave an elevated Au value (350 ppb Au, 3.5 ppm Ag, 0.036% Cu, and 0.11% Zn) (fig. 7, 8).

A volcanic-sedimentary sequence similar to and on strike with that of the X-showing is exposed at the north tip of the Barbican Mount (fig. 22). Therefore, the grid was extended to the base of this nunatak. Rock samples (fig. 9 and 10) gave elevated copper and zinc values, with a few samples slightly elevated in Au. A sample of a feeder-zone type quartz vein yielded 82 ppb Au, 72.7 ppm Ag, 3.8% Pb, and 1.4% Zn.

4.5.2. Pampero

The area covered by the Pampero grid is underlain by a sequence dominated by dacitic to andesitic, amygdular, usually pillowed flows (fig. 16). Horizons of calcareous argillites to argillaceous limestones are intercalated with the volcanic rocks. Weak to strong hydrothermal alteration and stockwork-type sulfide mineralizations, producing prominent gossans, are widespread in this area. Reconnaissance sampling during the 1983 field program yielded highly anomalous Ba values. A gossan sampled by MacIntyre (1984) was described by him as a possible distal exhalative.

The rocks are assigned to the map unit 2C (fig. 22). A distinct horizon of pale weathering pillow lava in the eastern portion of the grid was used by MacIntyre (1984) as a marker unit in separating the units 2B and 2C. In a subsequent petrographic and geochemical study (MacIntyre 1986) the felsic appearance of these rocks was attributed to alteration rather than to different chemical composition. A thin section study of a sample taken from this horizon during the 1986 field season confirms the andesitic composition but attributes the leucocratic appearance to the lack of any opaque constituents and not to alteration (See Appendix 3, Sample R 13001). With the elimination of this "marker horizon" the subdivision of the volcanic-sedimentary pile into the units 2B and 2C loses some justification. The whole sequence can be regarded as a continuous development of intermittent sedimentation and volcanic activity with an increasing proportion of volcanism with time.

However, unit 2B is here used to describe the lower, mixed volcanic and sedimentary portion of the sequence, overlying a mainly sedimentary basal unit (unit 2A). Unit 2C represents the upper part of the sequence dominated by pillowed, intermediate volcanics.

Another characteristic of unit 2C is a prominent volcanic-sedimentary contact in the upper part of this unit (fig. 16), representing a period of volcanic quiescence. This contact is interpreted as corresponding to the one at which the mineralization of Windy-Craggy occurs.

Windy-Craggy is located about 5 km SW of the origin of the Pampero grid.

Rock samples of the weakly mineralized volcanics and sediments at Pampero (fig. 17, 18) yield relatively low precious and base metal values.

VLF-EM surveys over the Pampero Grid showed a marked alignment of northwest trending conductive zones, often associated with argillite horizons within the predominantly volcanic series. The overall magnetic pattern is more subtle but generally aligns north west. Within this area two highly anomalous zones have been located, the first is located at 2+00 W between 1+00N and 2+00S. Fraser filtering of the VLF data resulted in values of over 100 units, a very strong anomaly associated with magnetics of 500 gammas above local background. The combination of magnetics and conductivity suggests a massive sulphide body containing pyrrhotite or magnetite and as no explanation for the anomaly was seen in surface mapping the area is considered a target for short hole drilling.

A second area with coincident magnetic and VLF-EM response is located on L5+75S at 1+10E. Again the suspected source is massive sulphides, though none were noted in the course of mapping. The area is considered a target for a short drill hole which should explain the anomalous condition.

The magnetic high over the main glacier is located exactly on strike with the aforementioned volcanic/sedimentary contact, the centre of the magnetic anomaly is 3.9 km SE of the Pampero grid origin.

This gives further support to the interpretation of the magnetic high as being caused by a pyrrhotite and/or magnetite rich massive sulfide body.

4.5.3. Follow-up of airborne Input-EM anomalies

The ground follow-up of the Questor Input-EM targets resulted in the location of one strongly limonitic andesite horizon in the northeast part of the property (A 14, fig. 22). Systematic sampling of this horizon by chip channels yielded consistently low precious and base metal values. Other anomalies on the east side of the glacier appear to be related to graphitic horizons within the black shale sequence.

4.5.4. Reconnaissance mapping and sampling

Reconnaissance-type mapping and sampling in the northwestern part of the property resulted in the location of eleven sulfide showings (fig. 22). Due to the very steep nature of most of the terrain, requiring technical climbing aids, and the restricted time only about a third of the area can be considered as adequately covered. The mineralizations include:

- A. Stratabound, massive sulfide (pyrrhotite, pyrite, chalcopyrite, sphalerite) lenses of up to 2 metres thickness and several tens of metres strike length in the calcareous argillites, which are interbedded with intermediate volcanic flows. Anomalous gold values (zone 4, 5), highly enriched copper (zone 4, 5, 9) and zinc values (zone 2, 4) occur in this type of mineralization. These showings occur in the geological unit 2B and, therefore, in a similar stratigraphic position as the X-showing.

A sample from Zone 4 was selected for a polished thin section study (see Appendix C, sample R-14140). It consists of monomineralic pyrrhotite with traces of pyrite and chalcopyrite in a mainly dolomitic matrix. Sedimentary structures are essentially obscured due to extensive recrystallization.

- B. Fracture controlled, vein-type mineralizations. This type consists mainly of massive pyrrhotite and pyrite and has slightly (zone 1, 3) or highly elevated Cu values (zone 8).
- C. Stockwork-type mineralizations of abundant disseminated sulfides and pockets of massive sulfides. Strong alteration is associated with this type. Copper and Zinc are enriched (zone 11).
- D. A lens of massive chalcopyrite, pyrite and magnetite of unknown extent occurring in andesite flows (zone 7). This zone at Gramp's Crag yielded up to 15% Cu and 24.8 ppm Ag. across a 15 cm sample width. The petrographic study of sample R-14165 (see Appendix C) describes this rock as a extensively carbonatized, andesitic, lithic tuff with a strongly oxidized chalcopyrite and magnetic mineralization.

- E. Disseminated copper mineralization. The area of the multiphase intrusion between Gramp's Crag and Duck's Face is characterized by widespread copper mineralization in the form of malachite staining.

All of these zones but zone II are located in the catchment basin of the the East Arm Glacier and, therefore, may be regarded as possible sources for the massive sulfide boulders in the outwash of the glacier. A first evaluation of this assumption, using a Ag vs Mn scatter plot employed by Day (1985) to divide the massive sulfide boulders of the glacial outwash into two geochemical groups (group C = 47% and group D = 53% of the boulders) shows that most of the samples of the mineralized zones in the NW part of the property fall into or close to the cluster marking the C geochemical group. Therefore, some of the massive sulfide boulders in the Henshi Creek may have been derived from the mineralizations of the NW corner of the claim group, even though further statistical testing of this conclusion is clearly warranted. To date the showings found are of limited extent, far too small to produce the large massive sulphide boulders (up to a few tons) found at the glacier toe.

4.5.5. Magnetic Susceptibility Study of Boulders at the Toe of East Arm Glacier

A magnetic susceptibility study was carried out on 7 mafic boulders and 6 massive sulphide boulders. The purpose was to quantify the magnetic parameters of each with the hope that they would show very different characteristics for each group. It was hoped that modelling the susceptibilities of each group to conform with the observed magnetic anomaly located about half way up the glacier would lead us to conclude that the anomaly was caused by either sulphides or mafic material. The results obtained are entirely inconclusive. By altering the dimensions of an assumed deposit of sulphides or mafic material either can modelled as the anomaly source. The magnetic susceptibility work was carried out in the Physical Property Laboratory of Elliot Geophysical Co. Inc. in Tuscon, Arizona. The study data is included as Appendix C.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- A NW-striking zone of approximately 10.5 kilometres extent and a width of up to 2 kilometres between Barbican Mount and Duck's Face constitute the most promising area for the outlined exploration targets on the East Arm property.
- This zone contains a volcano-sedimentary sequence (units 2B and 2C) of about 1,500 metres thickness.
- Stratabound and vein-type sulfide mineralizations are abundant in the lower part of this sequence (unit 2B).
- The stratabound, sedex-type mineralizations are enriched in Au and/or copper and zinc.
- The vein-type mineralizations are enriched in silver, lead, and zinc.
- Several of the horizons hosting stratabound massive sulfide mineralizations in the NW part of the property extend under the East Arm glacier and it is probable that some of the massive sulfide boulders in the glacial outwash are derived from such sources.
- The unit 2C at Pampero is characterized by widespread alteration and low grade sulfide mineralization.
- Unit 2C contains a prominent volcano-sedimentary contact which is interpreted to be the same stratigraphic horizon as that on which the Windy-Craggy Cu/Co/Au deposit occurs.
- The alteration and mineralization associated with this contact at Pampero could indicate a distal position to a major massive sulfide mineralization at the same stratigraphic horizon.

- This contact strikes towards the SE under the East Arm glacier and is on strike with the magnetic high over this glacier.
- This magnetic high coincides with the intersection of two major faults.
- The multiphase intrusion between Gramp's Crag and Duck's Face ranges from dioritic to hornblenditic phases.
- A magnetic high is associated with the more mafic phases of this intrusion.
- A magnetic high of similar magnitude as the one over the glacier (if the fall-off due to 350 metres of ice is considered) is caused by a mafic intrusion 6 kilometres to the NW of the high over the glacier. The favorable contact identified at Pampero (see above) is right on strike with this magnetic high over the glacier. The evidence for the source of the anomaly (massive sulfides vs. intrusion) is still conflicting.

Recommendations

- 1) Drill test the magnetic-high over the main glacier to test for a massive sulfide deposit underneath it.
- 2) Drill test the goldbearing mineralization at the X-showing, initially under the showing then along the continuation of the mineralized horizon as indicated by the magnetic survey
- 3) Drill test the two coincident Magnetic and VLF-EM anomalies on the Pampero Grid with short holes.
- 4) Continue the reconnaissance mapping and sampling of the NW part of the property
- 5) Carry out detailed mapping of the eastern part of Pampero by traverses (technical climbing required).
- 6) Increase magnetic and VLF-EM survey coverage for selected areas in the NW part of the property.
- 7) Conduct detailed geological mapping and sampling at Barbican Mount.
- 8) Carry out further detailed investigations of the structural style and the stratigraphy of the volcano-sedimentary sequence between Barbican Mount and Duck's Face.
- 9) Conduct reconnaissance-style mapping and sampling in the south and southwest part of the property.
- 10) Carry out statistical studies to test the similarities between the newly discovered massive sulfide occurrences and the massive sulfide glacial outwash.

EAST ARM PROJECT

Proposed Budget 1987

PHASE I (July 1 to August 15)

Diamond Drilling			
Ice Hole	2,000 ft. @ \$77/ft. (all inclusive)	\$ 154,000	
Short Hole	2,500 ft. @ \$55/ft. (all inclusive)	137,500	
3 Geologists, 3 Assistants for 6 weeks		20,000	
Assaying		10,000	
Travel, Field Expense, Supplies		7,000	
Rental - Magnetometer, VLF-EM, HF Radio		4,500	
Fixed Wing Aircraft (non drill related)		4,000	
Helicopter	20 hours @ \$500 (non drill related)	10,000	
Commercial Air		4,000	
Drafting, Typing, Printing		3,000	
		<hr/>	
		\$ 354,000	
Contingency	10% on non drill portion	6,250	
Operation Fee	5% on drill portion	14,575	
	10% on non drill portion	5,350	
		<hr/>	
TOTAL PHASE I			\$ 380,175

PHASE II (August 15 to September 5)

Diamond Drilling	4,000 ft @ \$69/ft. (all inclusive)	\$ 276,000	
2 Geologists, 2 Assistants		7,000	
Assaying		3,000	
Travel, Field Expense, Supplies		3,000	
Helicopter	10 hours @ \$500	5,000	
Fixed Wing Aircraft		3,000	
Commercial Air		2,000	
Expediting		1,000	
		<hr/>	
		\$ 300,000	
Contingency	10% on \$ 24,000	2,400	
Operator's Fee	5% on \$ 267,000	13,800	
Operators Fee	10% on \$ 24,000	2,400	
		<hr/>	
TOTAL PHASE II			\$ 318,600
		<hr/>	
TOTAL PHASE I AND PHASE II			\$ 698,775
		<hr/>	
	Say		\$ 700,000
			<hr/> <hr/>

COST STATEMENT

<u>WAGES - FIELD TIME</u>		(August 19 - September 20 inclusive)	
D. Kennedy	33	days @ \$193	\$ 6,369
A. Vogt	33	days @ 120	3,960
E. Ochs	24	days @ 94	2,491
C. Boyle	30	days @ 147	4,410
P. Smith	31	days @ 95	2,948
D. Smith	31	days @ 83	2,573
P. Walker	31	days @ 83	2,573
S. Bushell	33	days @ 89	2,937

<u>WAGES - OFFICE TIME</u>			
A. Vogt	28	days @ 120	3,360
E. Ochs	19	days @ 94	1,786
D. Kennedy	14	days @ 193	<u>2,702</u>
			\$ 36,109

<u>OTHER EXPENSES</u>		
Helicopter Charter		23,536
Fuel (helicopter, camp, truck, propane)		8,661
Commercial Air		3,196
Charter fixed wing		10,260
Camp rental including truck		10,000
Camp supplies, food		11,448
Technical supplies		408
Assaying		6,508
Expediting		2,242
Rental Magnetometer, EM-16R, HF Radio		3,240
Freight courier		302
Petrographic study (estimate)		500
Drafting, typing, printing (estimate)		<u>3,000</u>
	TOTAL	\$ 119,410

COST ALLOCATION

Total Expenditures \$119,410

Time analysis indicates the following breakdown of field time.

<u>Description</u>	<u>Group</u>	<u>Man Days</u>	<u>%</u>	<u>\$ Value</u>
X Showing Area	B, C, D, E	121	49	\$ 58,511
Pampero Area	A	96	39	46,570
Barbicon Mount Area	D	12	5	5,971
Airborne Input Reconnaissance	E	10	4	4,776
Questor 14 Sampling	E	5	2	2,388
General Area Prospecting	(unallocated)	<u>2</u>	<u>1</u>	<u>1,194</u>
		246	100%	\$119,410

X Showing work can further be broken down on the basis of the proportion of grid work in each of the four groups.

X Showing Area Work --- \$58,511

<u>Group</u>	<u>%</u>	<u>Value</u>
B	44	\$25,745
C	24	14,043
D	22	12,872
E	<u>10</u>	<u>5,851</u>
	100%	\$58,511

Totals available from this year's work.

Group A	(Rime 1, 2, 4, 5, 8)	\$ 46,570	(100 units)
Group B	(Rime 7, 11, 10, 21, 22, 23)	\$ 25,745	(97 units)
Group C	(Rime 14, 17, 24, 25)	\$ 14,043	(80 units)
Group D	(Rime 15, 16, 18, 29) (\$12,872 + 5,971)	\$ 18,843	(66 units)
Group E	(Rime 3, 6, 9, 12) (\$5,851 + 4,776 + 2,388)	\$ 13,015	(64 units)

	<u>Claim</u>	<u>Record #</u>	<u>Units</u>	<u>Years</u>	<u>Rate</u>	<u>Total</u>	<u>Expiry</u>
Group A	Rime 1	1775(1)	20	2	\$200	\$ 8,000	Jan. 28/89
	Rime 2	1776(1)	20	2	200	8,000	Jan. 28/89
	Rime 4	1778(1)	20	2	200	8,000	Jan. 28/89
	Rime 5	1779(1)	20	2	200	8,000	Jan. 28/89
	Rime 8	1782(1)	20	2	200	8,000	Jan. 28/89
			<u>100</u>			<u>\$40,000</u>	

Available = \$46,570 - \$40,000 = \$6,570 to PAC

Group B	Rime 7	1781(1)	20	2	\$200	\$ 8,000	Jan. 28/89
	Rime 10	1784(1)	20	1	200	4,000	Jan. 28/89
	Rime 11	1785(1)	20	1	200	4,000	Jan. 28/89
	Rime 21	2070(11)	20	1	200	4,000	Nov. 16/88
	Rime 22	2071(11)	15	1	200	3,000	Nov. 16/88
	Rime 23	2072(11)	2	1	200	400	Nov. 16/88
			<u>97</u>			<u>\$23,400</u>	

Available = \$25,745 - \$23,400 = \$2,345 to PAC

Group C	Rime 14	1788(1)	20	1	\$200	\$ 4,000	Jan. 28/89
	Rime 17	1791(1)	20	1	200	4,000	Jan. 28/89
	Rime 24	2073(11)	20	1	200	4,000	Nov. 16/88
	Rime 25	2074(11)	20	1	200	4,000	Nov. 16/88
			<u>80</u>			<u>\$16,000</u>	

Available = \$14,043 - \$16,000 = (-\$1,957) from PAC

Group D	Rime 15	1789(1)	20	2	\$200	\$ 8,000	Jan. 28/89
	Rime 16	1790(1)	20	1	200	4,000	Jan. 28/89
	Rime 18	1782(1)	20	1	200	4,000	Jan. 28/89
	Rime 29	2078(11)	6	1	200	1,200	Nov. 16/88
			<u>66</u>			<u>\$17,200</u>	

Available = \$18,843 - \$17,200 = \$1,643 to PAC

Group E	Rime 3	1777(1)	12	1	200	\$ 2,400	Jan. 28/88
	Rime 6	1780(1)	12	1	200	3,200	Jan. 28/88
	Rime 9	1783(1)	16	1	200	3,200	Jan. 28/88
	Rime 12	1786(1)	20	2	200	8,000	Jan. 28/89
			<u>64</u>			<u>\$16,800</u>	

Available = \$13,015 - \$16,800 = (-\$3,785) from PAC

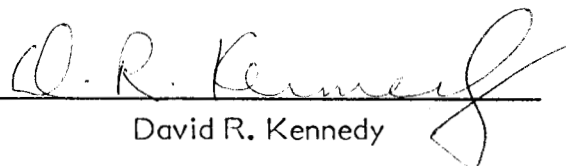
STATEMENT OF QUALIFICATIONS

I, DAVID ROY KENNEDY, of 465 West 26th Street, North Vancouver, B.C. do hereby declare that:

1. I am a geologist, having obtained the degree of B.Sc. (major Geology) from Acadia University in Wolfville, Nova Scotia in 1970.
2. I am a member in good standing of the Canadian Institute of Mining and Metallurgy.
3. I am a Fellow in good standing of the Geological Association of Canada.
4. I have continuously practiced my profession in Canada since graduation in 1970.
5. The statements in this report are based on 33 days of field work and office compilation time on the East Arm property carried out from August 19 to September 20, 1986. I have personally supervised or carried out the work documented in this report.

Dated at Vancouver, in the Province of British Columbia, this 3rd day of December 1986.





David R. Kennedy

STATEMENT OF QUALIFICATIONS

I, ANDREAS HANS VOGT of 3712 Riviere Place, North Vancouver, B.C. do hereby declare that:

1. I have studied geology at the universities of Muenchen, Goettingen (West Germany), and Leoben (Austria).
2. I obtained a Magister rer.nat. degree (M.Sc. equivalent) in Mining Geology from the Mining University of Leoben (Austria) in December of 1982.
3. Since my graduation I have worked as exploration geologist in West Germany, Austria, Canada, Spain and Chile.
4. Presently I am employed as exploration geologist with St. Joe Canada Inc., Vancouver, B.C.
5. I am a member of SME/AIME, Society for Geology applied to mineral deposits, Bundesverband Duetscher Geologen, Deutsche Geologische Gesellschaft, Deutsche Geologische Vereinigung.
6. The statements in this report are based on 33 days of field work on the East Arm Property during August and September of 1986.

Dated at Vancouver, in the Province of British Columbia, this 3rd day of December 1986.



Andreas Hans Vogt

APPENDIX A

ROCK GEOCHEMISTRY DATA

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-822R/P1+2

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 24, 1986

(VALUES IN PPM)	AS	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R14117	.7	12100	1	9	21	2.1	6	45600	2.7	5	32	60200
R14118	1.6	5630	201	17	34	16.3	24	61540	13.1	19	71	211570
R14119	1.0	10220	1	9	64	3.0	9	13840	2.5	13	109	148470
R14120	1.2	13250	16	13	66	3.4	13	32910	3.2	17	73	222780
R14121	1.0	4670	52	9	26	5.9	9	47160	6.2	17	106	115470
R14122	1.1	15120	1	14	15	2.5	12	42730	7.7	14	40	230960
R14123	1.3	3500	265	21	54	19.9	28	43840	23.2	24	64	287490
R14124	1.5	4410	229	19	50	17.6	24	72450	17.4	17	33	255280
R14125	6.8	7400	428	33	72	30.4	44	2760	25.6	24	1720	354400
R14126	1.7	5050	342	25	62	25.0	32	22580	19.5	31	125	344180
R14127	1.3	4410	312	24	57	22.9	28	54510	33.2	20	61	276820
R14128	1.1	2970	179	13	32	13.7	16	76850	16.9	9	13	160960
R14129	1.5	2710	491	31	64	34.6	35	10380	23.0	51	206	406660
R14130	1.7	6390	259	21	50	20.0	23	58510	18.1	30	121	252060
R14131	1.9	4060	219	18	43	17.4	20	57770	13.2	39	316	210860
R14132	1.9	8130	234	23	42	18.0	20	80490	14.4	25	100	217420
R14133	2.0	4560	237	19	52	18.2	17	10420	21.4	21	154	201700
R14134	1.4	5770	281	22	57	20.3	22	35430	16.4	37	165	265770
R14135	1.2	8240	203	20	38	15.8	17	59200	15.5	26	174	207900
R14136	1.2	10550	185	19	47	15.0	18	9230	11.9	30	158	260790
R14137	1.3	6950	213	19	37	17.0	19	49770	12.5	40	554	222970
R14138	1.0	15190	236	24	48	17.4	19	35940	16.7	23	79	189900
R14139	8.3	3710	366	26	49	26.1	43	44560	26.6	138	5528	309320
R14140	3.6	2610	399	27	53	28.7	37	34030	26.6	120	2413	348140
R14141	3.7	1850	353	23	51	26.0	35	30630	39.1	93	2894	291750
R14142	1.3	24510	214	31	37	17.9	18	58220	14.2	52	91	190740
R14143	1.4	3910	407	28	58	29.4	28	7630	20.5	66	257	338300
R14144	1.7	3170	457	30	61	32.8	35	6980	23.1	192	1167	383280
R14145	3.4	5190	433	31	78	30.9	33	27250	22.0	173	1884	362040
R14146	1.1	6170	191	12	20	9.4	11	7350	8.9	41	157	126620
R14147	3.6	2930	375	25	73	26.4	27	10910	19.9	15	538	328260
R14148	1.2	26660	69	31	22	8.0	13	20960	10.4	15	488	152860
R14151	2.1	4210	376	28	60	27.3	26	28660	19.5	53	344	314600
R14152	10.5	2420	1	2	10	1.1	9	77740	2.4	4	1636	19910
R14153	2.2	2550	263	22	41	20.7	28	39970	46.8	77	2538	242500
R14154	7.8	2180	383	27	49	26.1	41	30750	21.9	192	4444	303390
R14155	2.6	2570	349	26	52	25.9	26	55230	19.3	33	390	315250
R14156	3.5	2560	371	28	52	28.6	37	3810	20.6	148	4498	342680
R14157	1.1	4190	308	24	45	24.3	25	5610	19.2	130	1282	291300
R14158	1.8	3840	259	26	41	20.2	27	20500	22.1	120	3112	245580
R14159	1.1	9400	215	21	60	17.3	18	48430	14.0	53	160	190980
R14160	1.2	11710	170	21	53	14.0	13	51350	13.4	40	156	159870
R14161	1.0	14740	181	23	33	14.5	15	50800	12.2	35	103	171550
R14162	1.2	13670	95	19	71	9.3	10	87610	7.5	19	59	158060
R14163	1.0	5660	217	20	38	18.3	17	40560	12.2	27	80	217790
R14164	24.8	4260	191	23	218	14.4	342	76700	16.9	24	99999	341180
R14165	19.3	2190	135	22	141	10.7	544	43040	25.2	20	152825	379940
R14166	11.2	4890	58	13	139	5.6	289	54030	14.3	15	82929	267360
R14167	.8	2760	7	11	16	3.7	8	155620	16.2	4	1080	55840
R14168	1.9	3520	326	27	48	24.1	34	20160	20.3	144	4183	295010
R14269	1.3	26570	51	24	25	5.8	8	125850	11.9	12	223	102610
R14270	1.1	44960	26	35	27	6.4	11	33580	10.5	16	169	159310
R14271	.9	32360	26	27	24	5.3	9	91970	8.6	13	109	127720
R14272	.9	42780	7	32	30	4.5	10	49950	7.4	15	75	188670
R14273	1.2	38960	1	31	61	4.2	12	52730	7.9	17	64	255850
R14274	1.5	47520	15	38	40	5.6	13	38670	9.9	24	80	321650
R14275	1.0	45250	1	36	31	4.5	11	43780	8.9	18	43	291370
R14276	1.7	37120	42	31	23	7.3	12	32440	11.0	26	171	259460
R14277	1.4	41050	34	34	28	7.5	13	38470	9.9	28	141	227580
R14278	.9	32930	15	25	22	4.9	11	24770	7.7	16	54	199030

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-022R/P1+2

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 24, 1986

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
R14117	340	6	10320	595	2	180	18	830	59	5	57	1
R14118	60	1	2420	236	22	10	65	790	231	58	43	1
R14119	1550	2	4940	136	6	470	22	1800	41	9	44	1
R14120	1750	6	9120	527	4	220	53	2700	47	10	38	1
R14121	470	1	2380	526	9	250	53	1000	79	21	39	1
R14122	190	8	12010	569	3	130	42	1190	46	8	25	1
R14123	470	1	2840	377	20	30	84	950	271	74	62	1
R14124	560	2	4110	639	19	40	61	990	239	64	63	1
R14125	680	1	4710	248	71	10	75	1090	622	103	78	1
R14126	510	1	3610	319	25	30	130	710	309	86	72	1
R14127	540	2	4050	643	25	30	107	520	269	80	74	1
R14128	140	1	2900	522	17	20	47	370	163	49	54	1
R14129	90	1	3310	172	41	10	164	430	428	121	82	1
R14130	380	2	4840	803	24	20	104	600	242	72	91	1
R14131	470	1	3690	458	18	60	130	960	216	62	55	1
R14132	320	4	7140	870	20	30	98	630	229	63	94	1
R14133	590	1	2960	108	22	50	107	1020	229	63	48	1
R14134	750	2	4440	380	22	70	127	940	253	71	68	1
R14135	550	3	6860	556	17	70	118	470	224	53	42	1
R14136	910	1	3350	494	21	150	142	740	207	50	49	1
R14137	740	2	2540	396	16	70	125	860	207	56	43	1
R14138	30	4	15490	304	25	120	116	860	278	56	59	2
R14139	50	1	12870	455	40	10	85	510	360	93	131	1
R14140	20	1	4830	246	42	10	76	400	360	102	84	1
R14141	20	1	4800	298	35	10	66	370	378	91	93	1
R14142	20	6	24310	525	25	20	92	1090	313	53	68	2
R14143	380	1	3420	110	34	20	136	500	370	95	70	1
R14144	30	1	3500	42	35	10	227	380	363	108	76	1
R14145	110	1	4260	167	35	50	212	440	353	103	79	1
R14146	160	1	5010	127	11	530	69	140	116	28	30	1
R14147	30	1	2660	13	37	30	66	380	309	93	79	1
R14148	340	24	20610	561	14	2580	76	250	147	21	66	1
R14151	520	1	3770	461	34	20	212	500	330	94	76	1
R14152	410	1	2250	338	3	100	16	350	1734	5	54	1
R14153	20	1	5850	1114	36	10	61	410	262	74	91	1
R14154	20	1	4230	504	39	10	65	470	746	114	75	1
R14155	280	1	3140	864	34	10	133	420	356	92	78	1
R14156	30	1	2830	18	33	10	169	420	313	97	69	1
R14157	30	1	4020	120	31	20	141	370	284	62	60	1
R14158	70	1	3800	400	26	60	97	480	259	69	53	1
R14159	300	2	8720	667	25	110	109	730	242	58	74	2
R14160	210	4	12490	583	21	190	101	980	412	47	79	2
R14161	40	4	12860	730	23	90	107	810	235	47	58	2
R14162	770	4	11660	990	13	90	71	770	168	30	48	1
R14163	70	1	4960	380	24	30	83	470	318	59	49	1
R14164	520	3	5930	780	28	150	65	2080	294	110	33	1
R14165	220	2	3150	1062	46	30	44	3370	291	140	50	1
R14166	1240	6	4730	1134	18	290	32	2000	154	73	24	1
R14167	70	2	40610	3290	9	20	37	430	148	19	17	1
R14168	50	1	2620	78	29	50	222	380	285	87	101	1
R14269	170	8	21270	1929	11	30	58	2200	131	17	119	1
R14270	330	17	39780	1617	9	90	72	1540	149	11	70	1
R14271	150	12	29070	1841	9	50	56	1040	138	11	115	1
R14272	310	17	38600	1736	6	110	64	1420	106	8	83	1
R14273	930	14	32430	1518	2	130	43	1380	100	8	75	1
R14274	240	15	39590	2032	1	100	58	2420	115	13	56	1
R14275	210	15	36740	1893	1	80	49	2140	103	9	59	1
R14276	80	13	32740	1903	4	90	61	1720	144	20	41	1
R14277	90	13	35350	1909	8	50	68	2310	144	19	60	1
R14278	140	11	28340	1592	5	80	48	1350	111	11	36	1

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-822R/P1+2

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 24, 1986

(VALUES IN PPM)	U	V	ZN
R14117	1	32.6	47
R14118	1	13.1	107
R14119	1	53.4	33
R14120	1	45.5	25
R14121	1	47.1	30
R14122	1	45.0	288
R14123	1	11.4	2868
R14124	1	12.8	1684
R14125	1	30.5	1214
R14126	1	11.8	213
R14127	2	8.8	4642
R14128	1	9.6	2002
R14129	1	4.5	311
R14130	1	7.2	169
R14131	1	15.5	125
R14132	1	20.3	59
R14133	1	12.9	4349
R14134	1	17.0	579
R14135	1	28.1	440
R14136	1	35.0	50
R14137	1	22.2	126
R14138	1	103.5	45
R14139	1	9.2	293
R14140	1	3.8	547
R14141	1	3.7	3990
R14142	1	66.5	55
R14143	1	14.0	340
R14144	1	3.1	62
R14145	1	9.5	72
R14146	1	22.0	33
R14147	1	41.2	71
R14148	1	80.2	76
R14151	1	13.0	77
R14152	1	7.0	37
R14153	1	7.0	8220
R14154	1	3.2	595
R14155	1	7.4	280
R14156	1	1.7	68
R14157	1	7.6	62
R14158	1	16.0	1620
R14159	1	73.1	50
R14160	1	89.0	47
R14161	1	92.4	42
R14162	1	51.5	36
R14163	1	25.5	198
R14164	1	4.9	80
R14165	1	5.1	342
R14166	1	34.0	155
R14167	1	13.8	354
R14168	1	17.3	58
R14269	1	103.6	188
R14270	1	139.5	150
R14271	1	100.0	168
R14272	1	148.8	140
R14273	1	152.7	173
R14274	1	191.5	374
R14275	1	176.6	318
R14276	1	151.1	357
R14277	1	157.3	324
R14278	1	135.6	209

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-822R/P3-4

ATTENTION: DAVE KENNEDY

(604)980-5814 DR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 24, 1966

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R14279	1.2	42790	32	34	36	6.7	14	22860	12.5	18	116	297440
R14280	1.4	38360	2	30	37	5.0	15	16060	9.8	13	95	351770
R14281	1.4	41250	21	32	44	5.6	15	16580	10.3	18	105	338030
R14282	1.3	32080	11	26	46	4.1	11	36280	14.2	19	95	226050
R14283	1.2	34160	19	27	57	4.9	11	49860	23.4	20	89	216670
R14284	1.0	33250	3	25	76	4.0	12	52940	15.7	19	84	218070
R14285	1.1	29700	10	23	81	3.7	11	40680	7.0	15	73	221480
R14286	1.1	35490	13	28	107	5.3	11	26780	10.4	18	85	234360
R14287	1.1	34110	28	28	95	5.3	12	33660	8.3	21	166	230840
R14288	.9	17640	69	17	38	6.5	9	129180	7.8	8	78	86300
R14289	.5	31370	121	27	27	10.0	12	64550	10.1	9	126	111100
R14290	1.1	35090	144	32	34	11.3	12	71290	10.7	12	199	122310
R14291	1.9	23480	91	22	30	8.0	13	94290	7.7	9	794	96150
R14292	.9	27880	88	25	32	8.2	9	104220	7.2	9	199	98460
R14293	.8	39770	120	33	28	11.4	14	46340	12.3	10	181	127380
R14294	.8	4950	4	5	18	1.8	4	2050	1.7	7	59	52970
R14295	.8	4160	1	4	15	1.7	2	2220	1.9	4	38	56990
R14296	.6	6020	2	4	33	1.9	4	1910	4.0	4	42	62590
R14298	.7	5270	1	4	59	2.3	4	1090	4.0	4	45	60190
R14299	.9	6510	1	5	136	1.9	4	2120	6.1	6	45	67330
R14300	.6	17410	8	13	162	3.5	6	8730	5.0	14	75	90900
R14301	1.0	12860	31	10	338	4.3	5	1110	5.4	6	26	49960
R14302	.7	9890	26	8	288	3.5	5	1700	4.3	7	25	43470
R14303	.7	10630	19	9	634	3.5	4	1080	2.5	7	30	43350
R14304	.9	9090	2	6	749	2.3	2	870	2.1	5	25	30700
R14305	.8	8570	16	6	530	2.9	4	770	2.5	5	30	39990
R14306	.6	14200	21	12	482	4.0	4	900	5.1	5	35	64490
R14307	.8	4740	27	5	107	4.1	5	420	2.7	4	26	47530
R14308	.6	9450	27	9	378	3.4	4	640	3.3	3	16	55770
R14309	.7	8460	17	7	440	3.1	4	850	5.1	4	26	63640
R14310	.5	11700	44	10	447	4.0	4	870	4.6	5	32	74730
R14311	.7	9290	31	8	222	3.8	5	960	5.1	4	23	87610
R14312	.5	8460	27	7	217	2.9	4	420	4.1	2	20	47250
R14313	.5	9060	31	8	125	3.3	4	340	4.0	2	22	53930
R14314	.6	12830	62	12	72	5.4	6	330	7.8	3	26	80740
R14315	.5	21530	64	19	256	6.7	10	4940	9.2	10	58	147560
R14316	.7	30460	43	25	403	6.2	10	11760	9.1	15	72	130830
R14317	.4	30070	1	22	415	3.7	5	9540	5.6	21	114	92030
R14318	.6	32540	1	22	671	3.3	7	21430	6.1	14	58	129490
R14319	.5	17380	1	11	541	2.4	4	7230	5.6	11	71	73740
R14320	.4	4820	1	3	163	1.4	2	1980	1.9	7	97	42290
R14321	.5	4770	1	4	88	1.3	2	3510	2.2	9	95	46560
R14322	.6	22000	9	20	599	4.0	6	16840	5.6	13	112	85800
R14323	.4	7260	63	9	337	5.8	6	1360	4.5	5	48	103360
R14324	.6	4550	4	4	183	1.9	2	1190	2.6	4	30	60080
R14325	.8	6000	1	4	205	1.3	3	1360	2.7	5	45	59340
R14326	.2	5080	28	5	106	4.1	4	920	3.5	3	31	50250
R14327	.4	4580	38	5	209	4.3	4	350	4.3	4	42	50170
R14328	.4	5890	22	5	525	2.9	4	420	3.2	2	19	42060
R14329	.5	8080	18	7	413	3.4	4	1540	3.8	4	29	67930
R14330	.7	13940	8	11	402	3.6	5	5870	4.2	7	65	95570
R14331	.5	7630	60	8	565	6.2	6	400	5.8	4	18	74180
R14332	.6	7900	6	6	330	2.8	4	2610	2.9	4	26	54090
R14333	.7	7570	38	7	317	4.2	4	1510	4.1	5	38	63510
R00419	1.4	28660	1	59	53	3.0	14	21830	4.9	18	58	335770
R00420	1.4	26490	1	23	56	2.6	13	16860	5.5	19	57	358790
R00421	1.3	32000	1	27	61	3.5	13	18280	3.8	19	57	355790
R00422	.5	13780	30	18	58	6.1	7	42940	5.9	13	48	56710
R00423	1.2	18520	1	16	27	1.9	10	61810	3.0	16	70	265770
R00424	1.1	19170	1	17	41	2.5	10	34120	3.7	15	63	261100

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1Z2

FILE NO: 6-822R/P3+4

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 24, 1986

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
R14279	170	13	34500	1822	3	100	55	2750	124	14	46	1
R14280	280	11	31740	1454	3	140	35	2160	76	10	34	1
R14281	350	13	34020	1469	3	100	52	1480	90	10	37	1
14282	460	11	28100	2232	3	80	59	990	101	10	74	1
R14283	690	12	29570	2100	4	80	78	1120	126	9	48	1
R14284	900	13	28810	2093	2	110	72	1080	83	8	56	1
R14285	1070	11	25600	1523	2	90	63	1080	84	8	46	1
R14286	1370	13	27270	1766	3	90	69	1440	90	9	47	1
R14287	910	12	27690	1937	6	110	87	1190	92	13	47	1
R14288	170	8	9240	3629	13	10	56	4780	130	20	149	1
R14289	30	8	11220	2246	16	10	54	4850	158	24	96	1
R14290	50	8	12040	2659	18	10	64	7420	172	27	101	1
R14291	60	8	9110	3755	15	10	65	3830	164	22	95	1
R14292	130	13	10090	4227	16	10	64	3270	168	21	99	1
R14293	40	14	14850	2957	19	10	63	3750	181	28	77	1
R14294	160	4	4130	91	13	600	33	340	33	6	7	1
R14295	190	1	4090	89	13	540	19	290	32	6	6	1
R14296	410	3	5240	61	11	550	23	220	25	6	7	1
R14298	400	4	5610	57	11	520	20	330	41	7	8	1
R14299	1320	5	5630	96	7	610	27	240	33	6	8	1
R14300	2150	11	11330	195	8	980	36	670	60	7	16	1
R14301	1360	12	13280	158	14	400	30	420	83	11	19	1
R14302	1890	11	10830	114	14	430	34	530	71	11	16	1
R14303	4120	16	10470	108	15	520	42	430	69	8	14	1
R14304	4380	16	10280	100	14	580	35	430	63	5	10	1
R14305	2990	10	8130	92	10	590	32	440	60	8	13	1
R14306	2960	15	14250	111	12	350	33	450	72	10	18	1
R14307	1090	4	4030	53	12	520	21	340	71	12	13	1
14308	4990	9	9670	83	11	420	19	400	61	10	16	1
R14309	3360	7	8390	84	10	390	20	320	52	9	11	1
R14310	2980	8	10460	102	13	330	31	310	73	12	16	1
R14311	1780	6	8860	74	10	370	22	210	59	11	15	1
R14312	1530	5	7440	46	12	480	15	260	64	8	12	1
R14313	980	5	10290	83	15	400	18	280	69	9	12	1
R14314	720	6	14180	104	17	290	26	540	96	17	24	1
R14315	2640	9	18680	271	13	880	43	370	105	18	26	1
R14316	4160	14	26370	519	11	800	63	300	114	13	39	1
R14317	3810	22	23690	640	7	750	95	160	99	4	31	1
R14318	3340	14	18910	543	5	2800	48	630	75	1	84	1
R14319	3400	13	13720	341	5	940	51	170	51	3	27	1
R14320	660	3	4760	113	7	560	27	290	23	5	7	1
R14321	250	3	3750	164	5	550	32	340	14	2	9	1
R14322	2230	12	18010	486	7	1590	62	170	70	6	31	1
R14323	1420	5	7320	53	14	530	24	430	86	18	18	1
R14324	1900	4	5140	59	11	370	14	180	44	6	6	1
R14325	3140	7	7090	89	14	410	18	180	53	5	6	1
R14326	900	4	3830	49	12	560	16	430	58	11	15	1
R14327	1470	5	4830	84	16	340	21	300	62	13	12	1
R14328	2770	8	7070	78	12	320	15	220	53	9	11	1
R14329	2850	9	8140	82	11	500	18	380	51	10	13	1
R14330	2020	13	10980	142	9	1060	24	570	59	8	33	1
R14331	3580	11	9650	86	15	410	22	540	99	20	19	1
R14332	1980	7	6410	80	10	650	18	400	48	7	17	1
R14333	1780	8	7240	81	13	480	30	470	72	13	14	1
J0419	2370	26	29330	549	5	320	55	2050	65	8	36	1
R00420	2300	24	26210	471	3	280	53	2100	46	7	26	1
R00421	2450	29	30840	485	5	230	60	2010	54	8	31	1
R00422	2430	5	15210	785	11	260	43	2790	90	15	91	1
R00423	600	22	16500	646	4	240	44	2170	35	6	99	1
R00424	1890	21	17550	588	4	300	48	1960	40	7	37	1

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-B22R/P3+4

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)986-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 24, 1986

(VALUES IN PPM)	U	V	ZN
R14279	1	170.5	703
R14280	1	177.0	313
R14281	1	143.5	565
R14282	1	104.2	1308
R14283	1	85.5	2562
R14284	1	82.6	1526
R14285	1	66.4	403
R14286	1	81.8	366
R14287	1	73.6	402
R14288	1	138.9	97
R14289	1	215.8	136
R14290	2	317.4	131
R14291	1	287.3	109
R14292	1	202.0	104
R14293	1	331.2	159
R14294	1	48.6	69
R14295	1	45.9	53
R14296	1	44.2	144
R14298	1	64.2	89
R14299	1	98.8	159
R14300	1	153.5	71
R14301	1	157.5	49
R14302	1	220.5	38
R14303	1	259.2	34
R14304	1	305.9	21
R14305	1	267.7	26
R14306	1	197.4	37
R14307	1	148.8	28
R14308	1	189.4	23
R14309	1	255.2	30
R14310	1	284.0	40
R14311	1	205.1	34
R14312	1	222.7	32
R14313	1	300.9	37
R14314	1	253.1	39
R14315	1	123.7	87
R14316	1	148.2	93
R14317	1	95.4	179
R14318	1	105.9	76
R14319	1	107.1	61
R14320	1	102.0	30
R14321	1	40.7	33
R14322	1	89.3	57
R14323	1	163.7	29
R14324	1	41.3	13
R14325	1	82.8	13
R14326	1	89.7	20
R14327	1	108.6	21
R14328	1	122.7	13
R14329	1	186.7	15
R14330	1	129.9	18
R14331	1	222.7	16
R14332	1	108.1	15
R14333	1	184.0	16
R00419	1	134.5	148
R00420	1	130.8	105
R00421	1	140.0	52
R00422	10	75.2	82
R00423	1	78.5	34
R00424	1	83.0	34

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-022R/P5

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)989-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 24, 1986

(VALUES IN PPM)	AB	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R00425	1.2	16280	1	15	27	2.0	9	67440	5.5	15	72	221420
R00426	1.0	23940	3	19	21	3.7	9	53850	6.7	12	52	192370
R00427	.8	21200	1	18	29	2.7	9	53060	5.4	25	55	201730
R00428	1.2	26520	1	24	29	2.9	11	29680	6.9	26	55	254020
R00429	1.0	24970	1	20	29	2.3	8	16810	3.5	17	53	233040
R00430	1.0	30360	1	26	23	1.0	9	26440	2.7	16	60	228840
R00431	1.0	35020	1	26	24	2.2	11	17620	5.0	19	65	258540
R00432	.9	27720	19	23	19	4.0	13	14200	6.5	18	76	283070
R00433	.9	27910	1	22	17	3.5	11	16860	3.8	21	79	271130

COMPANY: ST. JOE CANADA INC.

MIN-EN LABS ICP REPORT

(ACT:6E027) PAGE 2 OF 3

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-822R/PS

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 24, 1986

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
R00425	470	15	18590	635	3	130	87	2040	55	8	56	1
R00426	220	17	22570	512	2	160	47	1870	79	8	83	1
R00427	740	16	20330	659	1	290	124	1210	73	7	44	1
R00428	1250	19	25120	483	4	340	128	1420	70	6	49	1
R00429	890	16	23160	397	4	370	69	1360	49	6	43	1
R00430	260	14	20600	401	3	290	71	1520	32	1	44	1
R00431	130	19	28530	505	3	280	78	1630	46	1	42	1
R00432	250	16	18390	426	4	320	80	840	69	9	40	1
R00433	210	17	18640	497	4	270	100	900	59	7	36	1

COMPANY: ST. JOE CANADA INC.

MIN-EN LABS ICP REPORT

(ACT:6E027) PAGE 3 OF 3

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-822R/P5

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 24, 1986

(VALUES IN PPM)	U	V	ZN
R00425	1	92.9	25
R00426	1	122.0	211
R00427	1	55.5	93
R00428	1	72.5	79
R00429	1	69.0	54
R00430	1	71.2	28
R00431	1	102.1	43
R00432	1	86.0	74
R00433	1	81.8	59

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R 14159	28.4	9240	222	30	31	16.0	855	640	13.4	78	144194	389520
R 14170	4.9	2250	368	27	41	29.5	111	1120	14.6	1067	15757	257180
R 14171	2.4	5060	237	20	59	20.3	30	51360	62.4	57	729	198430
R 14172	1.2	29580	64	24	41	8.4	13	19650	6.5	24	195	135930
R 14173	1.9	23520	233	33	74	21.7	26	12840	10.8	53	550	148910
R 14174	1.8	8250	164	16	55	15.1	16	23540	6.1	24	80	193770
R 14175	2.5	4160	262	21	41	21.4	21	59380	9.9	42	134	264980
R 14176	1.5	9430	83	11	19	7.7	10	53650	18.4	27	71	168330
R 14177	1.7	7550	162	16	25	14.2	17	19740	45.5	48	75	183320
R 14178	2.1	15890	325	35	42	29.2	31	12890	12.0	210	905	233340
R 14179	1.1	12410	1	7	5	1.7	7	66530	1.7	8	202	63570
R 14180	1.4	11200	1	31	6	2.1	5	119030	4.2	10	112	70500
R 14181	1.5	29300	8	23	26	3.6	6	21520	3.3	14	163	152110
R 14182	2.2	19900	126	25	22	10.5	10	25520	14.9	91	467	289390
R 14183	2.0	13950	187	25	40	16.3	16	23450	33.6	33	174	239160
R 14184	1.7	4380	43	3	9	5.3	8	161490	2.8	7	69	65070
R 14334	2.0	13510	29	15	97	2.9	3	19690	6.8	15	121	231520
R 14335	3.3	11700	5	11	29	1.3	1	16370	1.2	13	64	245420
R 14336	2.5	21740	1	16	21	1.4	1	18860	1.2	12	53	232260
R 14351	1.6	24460	7	19	17	1.6	1	14980	1.5	13	57	217120
R 14352	1.3	25010	11	20	15	2.1	2	9130	2.2	12	50	206820
R 14353	1.6	21530	18	18	18	2.5	2	20060	2.5	15	94	228860
R 14354	1.6	13280	34	11	21	3.6	4	44970	2.0	18	85	206890
R 14355	1.2	14660	1	9	15	.9	1	69480	1.6	10	39	157610
R 14356	1.4	14380	3	12	28	1.3	1	34710	1.1	15	52	197490
R 14357	1.0	19090	1	12	11	1.2	1	25250	2.3	14	40	192240
R 14451	.8	4570	146	13	23	16.2	14	7670	44.9	36	249	133910
R 14452	1.6	4430	266	22	45	25.4	21	27060	11.6	29	452	214330
R 14453	1.4	5590	190	17	34	19.7	19	37610	10.3	26	786	175370
R 14454	1.7	12660	130	49	43	14.2	14	29360	6.8	26	143	150640
R 14455	1.1	18720	72	21	47	6.5	9	26960	4.8	14	68	74260
R 14456	1.6	19770	44	22	49	5.5	7	28820	4.3	18	77	160670
R 14457	1.9	7640	252	27	36	23.7	27	8860	10.5	267	963	222260
R 14458	2.1	4700	374	32	46	33.0	34	3490	14.8	398	1025	286760
R 14459	1.3	14730	8	12	64	2.3	2	11860	2.2	15	109	124860
R 14460	1.5	15070	54	15	17	6.4	5	29360	3.6	13	55	144660
R 14041	1.5	5230	1	2	29	2.0	3	161290	2.6	4	42	51420

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-969R/P1+2

ATTENTION: D. KENNEDY

(604)980-5814 OR (604)980-4524

* TYPE ROCK GEOCHEM *

DATE: OCT 15, 1986

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PP	SB	SR	TH
R 14169	20	1	6950	54	49	30	14	3600	373	151	22	1
R 14170	40	1	3700	49	61	40	48	770	369	92	50	1
R 14171	500	1	2560	447	28	110	460	930	211	60	49	1
R 14172	990	4	17320	719	14	230	43	1080	124	17	39	1
R 14173	1400	2	11450	418	31	60	150	1030	241	53	52	2
R 14174	1670	1	2960	205	19	200	111	1310	159	44	37	1
R 14175	590	1	3060	635	27	70	161	560	228	64	62	1
R 14176	190	1	6740	384	11	330	157	1150	98	25	31	1
R 14177	200	1	2810	127	20	170	191	930	172	40	42	1
R 14178	240	1	5600	46	43	30	331	460	265	74	59	2
R 14179	510	1	1580	142	6	100	31	1570	31	4	36	1
R 14180	480	1	3450	104	7	210	41	1550	39	7	19	1
R 14181	3150	11	10630	295	7	2610	13	1140	61	6	232	1
R 14182	70	1	12550	220	15	20	406	1050	115	34	43	1
R 14183	380	1	9320	324	24	160	341	1090	174	46	55	1
R 14184	30	1	1380	784	9	20	51	1440	80	17	12	1
R 14334	1010	1	13530	327	6	390	49	2170	63	15	24	1
R 14335	660	11	14170	257	2	480	12	2710	106	13	18	1
R 14336	830	22	21640	638	3	420	10	3180	159	11	48	1
R 14351	420	11	18530	378	4	570	42	930	42	6	28	1
R 14352	290	16	21260	389	5	380	34	1330	50	7	18	1
R 14353	270	10	16160	334	5	320	40	1220	51	10	27	1
R 14354	440	3	9900	401	6	280	81	1050	54	14	33	1
R 14355	280	2	10170	598	2	220	58	1150	25	4	37	1
R 14356	400	6	14930	527	6	390	193	1130	37	9	29	1
R 14357	90	3	13640	573	2	300	74	430	18	3	18	1
R 14451	20	1	1550	157	23	20	462	700	174	42	36	1
R 14452	300	1	3050	282	58	20	122	600	304	67	53	1
R 14453	200	1	4040	362	34	30	97	700	214	52	46	1
R 14454	780	1	8740	434	21	110	113	1190	162	36	37	1
R 14455	1660	1	10240	633	11	170	39	1320	86	14	33	1
R 14456	980	2	19020	651	15	270	41	1250	89	15	29	1
R 14457	260	1	4960	48	31	270	131	1670	222	62	49	1
R 14458	60	1	3770	39	44	80	192	1090	294	87	61	2
R 14459	1410	1	8960	220	6	1230	74	200	49	7	46	1
R 14460	370	1	7300	584	11	280	27	1110	80	18	21	1
R 14041	670	1	5000	1038	5	20	15	1260	51	9	42	1

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-969A/P1+2

ATTENTION: D. KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: OCT 15, 1986

(VALUES IN PPM)	U	V	ZN
R 14169	1	10.7	346
R 14170	1	37.4	53
R 14171	2	12.7	11693
R 14172	1	72.3	95
R 14173	1	45.4	265
R 14174	1	17.5	33
R 14175	2	11.3	74
R 14176	1	32.9	3147
R 14177	1	17.9	9454
R 14178	1	6.9	73
R 14179	2	26.2	55
R 14190	2	36.2	71
R 14181	1	50.1	22
R 14182	1	33.7	2444
R 14183	1	31.3	10122
R 14184	2	15.2	115
R 14334	1	86.3	187
R 14335	1	72.0	63
R 14336	1	64.2	60
R 14351	1	63.4	75
R 14352	1	75.3	40
R 14353	1	53.5	28
R 14354	1	42.4	47
R 14355	1	36.7	24
R 14356	1	32.7	58
R 14357	1	42.2	63
R 14451	1	8.8	8618
R 14452	1	13.4	70
R 14453	1	14.4	36
R 14454	1	39.2	89
R 14455	2	37.7	50
R 14456	1	71.5	39
R 14457	1	39.0	32
R 14458	1	14.6	38
R 14459	1	48.8	24
R 14460	1	76.4	41
R 14041	2	17.8	37

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-767/P1+2

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 16, 1986

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R14001	1.9	27390	1	21	55	.9	11	53320	3.8	16	42	386390
R14002	1.7	26160	1	18	57	1.0	9	57040	2.5	17	44	376590
R14003	1.6	27560	1	20	66	.9	11	49860	3.3	16	43	383240
R14004	1.6	29910	1	21	77	1.9	11	40220	2.6	20	59	406570
R14005	1.7	25090	1	18	75	1.6	11	40410	2.7	18	61	383200
R14006	2.7	15820	5	13	142	2.8	7	96880	4.8	8	74	145770
R14007	1.9	6020	1	5	35	1.5	4	143610	3.7	6	60	89420
R14008	1.8	6000	1	4	47	1.7	4	121700	2.7	5	48	73390
R14010	2.3	12300	1	10	146	2.5	6	82020	3.9	8	72	126020
R14011	1.5	31450	1	22	50	.9	11	30350	2.1	18	54	389470
R14012	1.7	22530	1	16	35	.5	10	40670	.5	17	53	377970
R14013	1.8	33160	1	25	37	1.8	12	40730	3.1	22	71	443550
R14014	1.3	38250	1	29	32	2.8	11	20940	5.6	18	48	398650
R14015	1.6	1820	1	2	21	1.1	4	185670	.9	4	30	66360
R14016	1.4	2340	1	1	23	.8	2	174020	2.1	4	34	69150
R14017	1.7	4890	1	4	22	1.4	4	174880	1.2	5	34	78590
R14018	1.8	2630	1	1	24	1.0	4	130130	.5	5	50	80230
R14019	2.0	7620	11	6	45	2.2	6	70360	3.4	8	82	128880
R14020	2.1	2940	1	3	24	1.0	4	157010	2.1	5	41	76440
R14021	1.7	23610	1	17	32	1.2	8	51890	2.9	13	45	303790
R14022	1.6	24430	1	18	29	1.3	9	47670	2.3	15	43	284190
R14023	1.7	23560	1	17	28	1.6	8	32100	1.2	16	47	300210
R14024	1.6	26230	1	20	28	2.0	9	26840	2.3	17	66	271960
R14025	1.6	2730	1	2	16	1.3	4	145710	4.2	6	37	81530
R14026	2.2	4380	8	3	16	1.6	4	149380	1.2	5	51	78750
R14027	1.5	19980	1	14	71	2.3	5	114310	3.4	12	70	116160
R14028	1.5	15580	1	12	49	2.2	5	145010	3.0	7	51	84430
R14029	.9	37370	1	26	69	3.4	7	24660	5.6	15	62	171590
R14030	1.4	24890	1	18	70	2.0	6	53040	3.4	12	52	148490
R14031	1.2	34570	7	33	48	4.5	8	39320	7.0	13	64	170930
R14032	1.6	30650	4	24	64	3.4	8	50980	5.7	19	79	215220
R14033	1.1	34860	1	26	60	3.9	9	8470	5.4	18	65	236510
R14034	1.0	38730	1	28	55	4.4	9	8540	5.6	24	100	250670
R14035	1.2	36210	1	27	91	3.8	9	14180	4.6	15	60	233110
R14036	1.4	28300	1	21	69	3.4	8	72250	5.2	13	54	166560
R14037	1.6	13200	15	10	33	3.5	5	167500	5.7	5	59	49690
R14038	1.5	14190	21	11	26	3.9	6	149380	5.3	6	65	67390
R14039	1.6	7250	1	5	31	2.5	4	131920	4.1	5	47	56880
R14040	1.5	4190	1	2	19	1.5	2	185560	1.0	3	30	45320
R14042	1.2	4510	1	1	21	1.0	3	138110	1.3	3	19	34980
R14043	1.9	4680	1	6	41	2.1	3	200210	3.6	4	36	36710
R14044	1.5	5930	1	6	20	1.7	3	191450	2.4	3	26	33950
R14045	2.1	11410	67	11	48	6.1	7	113440	6.8	8	109	56480
R14046	1.5	5370	20	6	28	3.0	4	177110	4.3	4	65	39970
R14047	1.3	3920	11	6	15	2.2	4	224270	3.2	4	43	42750
R14048	1.4	4970	1	5	24	2.1	3	186840	1.8	3	35	32860
R14049	1.4	5890	1	5	19	2.1	4	193770	2.8	4	42	35690
R14050	1.4	8440	1	9	36	2.3	2	182350	2.4	4	35	34870
R14051	1.3	7110	2	5	19	2.3	4	188850	3.2	4	32	36230
R14052	1.8	7580	2	8	28	2.3	4	188050	4.4	4	37	37590
R14053	1.6	11050	8	8	49	3.1	4	146960	4.3	4	31	35330
R14054	1.4	8110	1	6	28	2.4	4	161570	3.1	3	27	32720
R14056	2.2	2660	1	2	56	1.3	3	145510	1.4	3	29	36220
R14057	2.4	7730	1	7	78	1.9	4	123570	2.9	5	60	56150
R14058	2.2	6790	1	5	82	1.7	4	127780	2.8	6	52	68490
R14059	2.3	7530	1	6	96	1.9	4	87570	2.6	7	71	60840
R14060	1.9	6930	1	5	67	1.9	4	105840	3.8	6	72	62460
R14061	2.0	7090	1	6	98	1.7	4	77150	2.8	8	66	67960
R14062	2.2	5960	1	5	69	1.8	4	119330	2.3	7	54	65310
R14063	1.8	4120	44	5	35	4.8	6	139730	4.7	6	64	54920

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-767/P1+2

ATTENTION: DAVE KENNEDY

(604)980-5814 DR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 16, 1986

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
R14001	2370	27	27890	755	2	90	43	1390	15	1	70	1
R14002	2880	26	27080	735	2	120	44	1530	24	1	76	1
R14003	3380	28	28150	737	2	120	43	1610	32	1	71	1
R14004	3320	30	30200	709	2	130	59	1690	26	2	58	1
R14005	2970	26	26020	611	1	150	46	1490	55	5	55	1
R14006	2600	17	14210	968	6	130	39	1490	52	7	78	1
R14007	1040	7	7360	1213	3	110	43	770	39	9	102	1
R14008	1150	7	6850	974	3	90	37	750	36	6	83	1
R14010	3190	16	10820	717	6	110	42	1090	43	7	57	1
R14011	2090	27	24290	558	3	140	39	1690	28	1	35	1
R14012	1280	19	18690	474	2	190	32	1420	17	1	34	1
R14013	1420	27	27290	656	3	130	53	1510	26	1	44	1
R14014	1780	36	32380	591	4	160	48	1760	40	1	38	1
R14015	400	2	2490	609	4	100	29	1670	24	7	92	1
R14016	580	3	3090	556	2	160	31	1670	26	8	79	1
R14017	720	6	4980	675	3	110	29	1740	31	7	80	1
R14018	780	4	3330	475	2	280	29	760	19	7	54	1
R14019	2090	12	9790	342	5	410	51	820	47	9	35	1
R14020	610	4	3990	480	4	120	29	1100	29	8	72	1
R14021	1650	19	18210	677	2	220	35	1670	20	1	39	1
R14022	1530	19	18780	628	2	190	40	1860	31	1	40	1
R14023	1280	19	17830	597	1	230	47	1970	39	2	27	1
R14024	1120	20	19240	577	1	200	43	1680	46	1	35	1
R14025	390	2	3200	833	3	170	43	720	25	8	145	1
R14026	560	5	5770	582	4	130	35	780	48	10	109	1
R14027	1130	5	14460	1101	5	80	45	1890	61	4	61	1
R14028	750	5	14810	1098	5	30	33	1110	68	6	55	1
R14029	1200	12	27530	796	6	80	54	430	77	1	63	1
R14030	1480	7	17660	743	4	60	38	310	50	1	50	1
R14031	610	15	35900	1550	9	90	61	800	109	4	37	1
R14032	1060	12	29310	1171	2	150	57	820	80	7	37	1
R14033	600	14	32740	835	2	130	52	600	69	3	31	1
R14034	800	15	35960	886	2	140	60	740	78	4	35	1
R14035	1530	13	32350	842	2	130	43	610	77	2	35	1
R14036	1210	11	26390	1379	1	80	48	1260	74	6	40	1
R14037	440	5	13300	1235	8	20	31	2890	87	10	65	1
R14038	160	5	15240	1373	8	10	34	2310	74	12	73	1
R14039	650	2	5160	737	4	80	27	2290	54	9	47	1
R14040	420	1	3700	940	2	10	21	1320	44	9	51	1
R14042	280	1	4760	933	3	10	17	820	28	5	43	1
R14043	900	3	2990	1223	5	10	24	1570	46	10	61	1
R14044	300	3	4200	1126	5	10	18	1590	43	8	52	1
R14045	630	8	9230	1510	11	20	42	1970	107	20	63	1
R14046	380	3	4980	1652	6	10	22	4160	59	13	85	1
R14047	80	2	4990	1617	5	10	25	1750	72	13	121	1
R14048	250	2	5250	1335	5	10	20	2000	52	9	125	1
R14049	250	2	6380	1515	5	10	20	1830	61	9	116	1
R14050	550	3	8280	1427	5	10	26	1320	62	9	122	1
R14051	270	3	7090	1292	5	10	19	1460	64	10	88	1
R14052	430	3	7350	1131	5	10	21	2530	81	9	85	1
R14053	930	4	9530	947	5	10	27	1460	70	9	67	1
R14054	470	3	8020	997	5	10	23	980	58	8	73	1
R14056	810	1	1780	655	2	50	28	660	29	7	116	1
R14057	1590	4	6350	601	3	110	42	930	44	7	97	1
R14058	1570	3	5270	613	2	90	37	960	45	7	109	1
R14059	1880	4	4760	533	3	200	59	930	37	6	69	1
R14060	1330	4	5720	450	3	120	48	730	39	6	83	1
R14061	1270	4	5540	404	2	130	58	650	35	7	55	1
R14062	1080	3	5100	542	4	90	53	810	43	8	83	1
R14063	560	3	4320	2596	8	50	42	1650	96	21	105	1

(VALUES IN PPM)	U	V	ZN
R14001	1	101.3	67
R14002	1	102.4	81
R14003	1	100.5	61
R14004	1	117.0	68
R14005	1	107.1	63
R14006	1	76.4	115
R14007	1	52.6	117
R14008	1	38.2	95
R14010	1	58.7	133
R14011	1	82.0	57
R14012	1	87.0	56
R14013	1	90.6	54
R14014	1	94.3	47
R14015	1	62.0	77
R14016	1	82.8	79
R14017	1	84.5	78
R14018	1	49.7	125
R14019	1	99.9	157
R14020	1	71.7	77
R14021	1	84.4	50
R14022	1	83.2	43
R14023	1	83.0	59
R14024	1	71.6	51
R14025	1	33.4	230
R14026	1	58.5	87
R14027	1	68.0	42
R14028	1	57.5	40
R14029	1	83.2	68
R14030	1	54.1	46
R14031	1	117.7	166
R14032	1	157.1	70
R14033	1	137.1	80
R14034	1	151.9	87
R14035	1	145.0	91
R14036	1	91.5	59
R14037	1	74.1	66
R14038	1	91.1	76
R14039	1	33.8	50
R14040	1	15.5	41
R14042	1	19.9	13
R14043	1	24.3	60
R14044	1	23.5	32
R14045	1	106.1	134
R14046	1	63.2	88
R14047	1	45.2	40
R14048	1	45.0	30
R14049	1	37.7	24
R14050	1	38.9	24
R14051	1	43.9	41
R14052	1	60.4	60
R14053	1	46.8	116
R14054	1	34.0	87
R14056	1	13.0	76
R14057	1	34.7	128
R14058	1	31.1	88
R14059	1	36.0	124
R14060	1	35.8	113
R14061	1	32.3	131
R14062	1	26.1	120
R14063	1	45.7	84

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-767/P3+4

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 16, 1986

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R14064	2.2	6540	70	9	46	6.1	7	61100	6.4	8	76	54110
R14065	2.2	4560	104	9	70	7.5	7	64440	6.1	9	108	66010
R14066	2.2	3500	51	5	48	4.6	5	90390	4.3	8	82	50030
R14067	2.4	3490	19	3	75	3.0	4	91360	17.5	6	56	37630
R14101	1.5	19850	1	16	22	2.0	6	15660	2.2	13	46	190970
R14102	1.5	24090	1	19	20	1.9	7	17780	4.0	12	34	207150
R14103	2.1	30380	1	25	19	2.6	10	28650	4.6	17	108	301240
R14104	2.0	17380	1	16	18	1.5	7	20500	1.1	12	56	237540
R14105	2.1	24440	1	31	16	2.0	6	65990	2.5	12	68	179820
R00409	1.3	1100	1	1	7	.3	3	233160	1.3	2	5	28930
R00410	1.3	42450	21	30	39	5.8	10	54020	7.9	14	89	169980
R00411	1.2	56870	42	41	36	9.4	10	9850	12.7	20	80	170860
R00412	1.0	52280	14	39	32	6.4	10	4410	8.7	17	80	194130
R00413	1.5	32760	38	25	37	7.0	8	33320	8.4	14	93	88230
R00414	1.5	52620	31	38	33	7.3	12	12780	9.3	17	131	220840
R00415	3.0	13490	64	14	49	6.9	9	115950	12.1	11	241	76430
R00416	3.5	9340	66	10	34	5.8	8	176060	12.1	7	361	83130
R00417	1.6	24700	1	17	59	1.9	7	32870	4.2	15	92	162350
R00418	1.6	22530	2	17	54	2.8	7	51910	6.1	12	79	153410
R05822	1.6	52990	58	40	63	9.2	11	13470	12.2	21	220	161070
R05823	1.7	47360	41	34	63	6.9	11	61000	8.0	15	62	176910
R05824	2.0	12880	4	9	42	2.7	5	178540	7.8	6	41	47430
R05825	3.6	10070	70	12	112	5.5	6	132050	8.0	10	101	64270
R05826	1.5	31360	20	23	41	5.0	7	70620	6.8	10	51	53470
R05827	1.3	11670	1	9	14	1.9	4	190840	4.0	5	20	58660
R05828	1.6	22680	21	17	60	4.3	6	113670	5.0	10	67	97960
R05829	1.8	8960	9	8	26	2.6	5	179430	4.7	6	76	54180
R05830	1.9	12660	61	11	33	5.7	7	100270	7.3	6	99	57040
R05831	1.3	34460	26	25	54	5.4	8	30290	6.3	18	76	105630
R05832	1.4	5730	1	4	51	1.1	3	123040	2.9	3	17	23700
R05833	.5	3110	1	1	15	.5	1	153330	2.2	2	19	20070
R05834	1.3	7950	18	5	18	3.1	4	140350	4.8	5	67	47770
R05835	.3	5840	1	33	39	1.8	1	85430	2.2	3	35	21040
R05836	.8	4330	25	4	62	3.5	4	70100	3.4	7	19	32960
R05837	1.2	13550	23	10	65	4.2	5	105830	5.2	6	48	44380
R05838	1.4	11740	10	7	17	3.2	5	142810	5.7	6	64	54530
R05839	1.2	11140	11	8	11	3.0	4	189490	4.1	5	43	61140
R05840	.6	41390	6	28	25	5.4	9	8180	5.4	12	59	165030
R14055	1.9	5680	1	5	120	1.3	3	131300	2.4	5	31	52970

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PB	SR	SR	TH
R14064	760	4	5420	1935	12	130	62	2630	115	24	54	1
R14065	740	4	3420	1970	13	130	74	1630	138	31	74	1
R14066	760	1	2490	2523	7	120	63	2200	85	21	60	1
R14067	930	1	6940	1703	6	80	36	1530	704	14	100	1
R14101	720	20	15210	314	2	310	33	1580	45	1	57	1
R14102	810	30	20840	411	3	260	40	2120	44	1	40	1
R14103	620	24	21390	226	29	50	121	3370	48	3	149	1
R14104	290	10	9110	108	23	230	62	1950	14	2	53	1
R14105	300	3	4740	119	2	150	67	1860	28	1	74	1
R00409	40	1	2260	1663	3	10	8	110	31	6	186	1
R00410	480	16	39370	1391	6	130	61	950	110	6	88	1
R00411	310	25	52730	1547	12	20	82	1000	178	10	59	1
R00412	420	22	52170	1182	9	50	65	690	122	4	42	1
R00413	330	17	37380	1623	12	110	62	1130	134	13	74	1
R00414	230	21	50770	1139	8	60	53	720	133	7	48	1
R00415	320	4	11390	4342	13	10	54	1470	147	25	142	1
R00416	160	3	7570	5051	11	10	44	1310	158	25	126	1
R00417	950	9	19590	598	2	90	45	490	55	1	30	1
R00418	1000	7	15770	767	2	50	42	630	72	6	61	1
R05822	460	19	41280	2266	14	40	87	920	170	13	54	1
R05823	560	15	35160	2991	10	30	70	590	133	9	52	1
R05824	360	5	13000	2461	6	30	34	770	93	10	225	1
R05825	1200	4	9000	1880	12	30	46	4340	173	22	109	1
R05826	330	13	32940	1659	10	50	54	1230	124	7	125	2
R05827	90	4	11680	1885	4	10	27	1120	63	7	183	1
R05828	1140	8	22780	1748	7	20	47	2700	96	9	69	1
R05829	170	3	9820	1690	5	10	29	3370	71	11	71	1
R05830	420	5	16820	1622	10	10	40	1740	138	18	55	2
R05831	850	14	31760	1053	11	60	52	910	109	7	54	1
R05832	890	2	4600	720	3	10	12	170	32	5	73	1
R05833	320	2	3820	981	2	10	9	120	21	2	157	1
R05834	290	4	7340	1498	5	10	24	2110	65	11	109	1
R05835	2520	2	3420	729	3	100	20	1140	37	3	54	1
R05836	1090	2	15760	1208	8	80	39	510	70	13	68	1
R05837	1380	7	11040	2502	8	20	51	3510	96	11	120	1
R05838	120	3	9630	2466	6	10	29	2680	84	11	62	1
R05839	40	3	13250	1809	5	10	32	2290	79	12	81	1
R05840	390	20	36510	934	7	90	46	650	103	2	36	1
R14055	1990	2	2490	718	2	90	26	1280	24	6	136	1

(VALUES IN PPM)	U	V	ZN
R14064	1	70.1	196
R14065	2	60.7	235
R14066	1	42.8	167
R14067	1	23.6	301
R14101	1	42.7	49
R14102	1	54.6	67
R14103	1	81.4	59
R14104	1	51.8	27
R14105	1	46.7	36
R00409	1	5.3	10
R00410	1	117.7	84
R00411	1	166.9	60
R00412	1	170.3	51
R00413	2	141.0	54
R00414	1	181.5	60
R00415	2	57.1	363
R00416	1	42.1	1143
R00417	1	57.5	36
R00418	1	59.2	54
R05822	1	136.6	163
R05823	1	112.5	91
R05824	1	57.5	383
R05825	1	124.0	185
R05826	2	130.0	237
R05827	1	54.7	41
R05828	1	104.2	43
R05829	1	117.6	61
R05830	1	109.3	130
R05831	1	150.0	75
R05832	1	17.8	15
R05833	1	13.5	4
R05834	1	80.6	60
R05835	1	15.0	38
R05836	1	22.8	29
R05837	1	70.8	82
R05838	1	97.3	180
R05839	1	57.9	46
R05840	1	143.3	68
R14055	1	25.1	149

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-791/P1+2

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 17, 1986

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R05841	.9	16370	35	11	57	5.9	12	18690	5.5	15	56	222650
R05842	1.4	15240	25	9	47	3.6	11	12610	2.6	10	32	265340
R05843	1.1	11330	73	10	71	7.0	14	7010	4.8	9	29	379450
R05844	1.4	6880	8	1	30	3.4	5	129300	5.6	8	61	96210
R05845	1.2	19910	82	15	58	10.1	15	23190	6.8	17	117	245940
R05846	.9	20990	15	13	37	4.7	9	75640	4.0	14	42	152660
R05847	.9	19760	53	16	45	6.7	12	17390	6.0	21	71	281100
R05848	1.1	12810	17	9	71	4.5	11	38930	4.5	17	73	226020
R14068	3.5	5170	35	2	56	3.9	6	186980	18.2	5	124	50340
R14069	1.4	26510	28	40	43	4.5	8	89610	8.6	11	95	131990
R14070	2.0	20670	36	13	104	6.0	8	110270	14.4	8	94	61370
R14071	1.9	19820	56	12	123	7.3	8	95150	11.4	8	96	61580
R14072	3.9	20570	99	14	31	9.4	9	83740	15.4	9	154	110530
R14073	4.3	17810	110	14	30	9.4	11	139870	60.9	9	233	105790
R14074	1.4	22330	57	14	177	7.4	9	138130	9.1	10	58	102810
R14075	.8	52250	85	37	366	10.7	11	31580	11.7	18	52	207450
R14076	3.5	13230	64	8	68	4.9	6	177520	12.4	7	88	56790
R14077	2.1	4530	12	1	39	2.2	4	203060	6.3	4	44	40470
R14078	2.0	11370	22	6	92	3.9	4	147460	5.8	7	68	52010
R14079	.9	38340	11	24	161	5.4	7	53190	7.5	16	59	103470
R14080	.9	24890	30	15	89	5.4	6	72620	8.2	13	65	48140
R14081	1.0	21550	11	14	64	4.6	6	111600	8.2	11	63	62750
R14082	1.0	12610	1	5	41	2.2	4	135480	4.4	7	61	41880
R14083	1.1	11850	29	6	13	4.0	4	145950	5.7	6	72	47790
R14084	1.5	11670	29	6	15	4.4	4	157500	7.7	7	80	55660
R14085	1.1	9590	6	5	10	2.9	4	183600	4.0	4	39	44040
R14086	1.6	13180	37	8	15	4.6	6	165640	6.3	7	75	50230
R14087	1.2	12680	12	6	12	3.5	4	167550	5.4	4	42	43960
R14088	1.5	17410	36	10	17	5.2	7	143140	7.5	6	63	50080
R14089	1.3	19520	20	10	15	4.1	6	117600	7.1	7	60	75890
R14090	1.2	10160	12	5	15	3.0	6	208050	4.8	4	35	54560
R14091	1.4	8750	27	5	67	4.7	7	65900	6.6	10	58	36590
R14092	.8	24910	43	16	169	6.8	10	35560	9.1	12	28	55650
R14093	1.1	4990	28	4	106	4.4	4	38660	4.0	7	13	33000
R14094	.8	33700	49	19	158	7.0	11	26820	8.2	14	23	62020
R14095	1.0	21000	60	19	184	7.6	11	25170	9.1	12	21	61610
R14096	1.3	21900	45	14	190	6.3	7	40890	7.8	10	15	47650
R14097	1.1	13940	35	9	305	5.8	7	69700	6.0	11	42	54270
R14098	.8	25290	32	17	522	5.8	12	45020	7.4	13	16	102210
R14099	1.0	21080	40	13	266	5.7	10	42560	9.6	11	30	58680
R14100	.9	35600	37	23	201	7.2	14	34280	8.1	17	52	75300
R14106	2.0	11580	241	15	51	21.4	30	6070	30.0	53	218	210400
R14107	1.4	7490	149	9	36	14.3	22	8870	7.8	27	53	186290
R14108	3.2	4950	336	17	51	28.9	36	18190	16.7	24	55	213740
R14109	72.7	960	12	1	27	2.4	5	24010	476.6	6	15	19860
R14110	2.3	6950	180	13	43	17.6	28	9750	15.4	37	243	207670
R14111	1.5	18150	105	18	38	11.9	23	19200	9.1	22	125	217290
R14112	1.5	11930	174	16	37	16.3	26	14540	12.4	41	205	235700
R14113	.9	15790	14	11	22	3.8	14	34810	2.0	13	98	238660
R14114	1.6	13040	110	13	37	11.0	20	16960	6.7	15	88	229990
R14115	1.5	6180	94	7	54	10.2	16	7380	9.8	27	122	195110
R14116	1.9	6610	114	10	37	12.2	18	54090	12.1	22	123	178370
R14251	1.3	1000	17	1	27	2.3	5	173400	3.4	4	43	37880
R14252	1.6	4120	19	2	36	3.7	6	179210	5.0	5	38	46350
R14253	2.9	8860	70	7	82	7.4	9	64910	7.5	9	79	58650
R14254	2.9	20520	88	16	64	9.3	11	70850	12.9	10	96	68490
R14255	25.0	1600	176	8	44	14.2	40	95530	52.4	9	5559	105750
R14256	1.6	8530	19	4	51	3.9	5	121480	4.4	6	163	42410
R14257	1.6	23530	22	15	79	5.7	8	72080	9.6	11	105	53730
R14258	1.4	7930	22	4	30	4.2	5	139210	5.3	7	83	44690

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-791/PI+2

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 17, 1986

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
R05841	1000	5	9970	388	2	250	52	1500	69	16	48	1
R05842	750	4	9270	227	2	270	29	1190	64	11	36	1
R05843	1090	2	5750	1	3	330	19	1210	100	29	21	1
R05844	620	2	5360	697	1	130	34	1480	102	13	101	1
R05845	1650	5	9100	398	2	170	53	1310	129	26	48	1
R05846	1250	7	13510	967	1	210	45	2080	55	9	54	1
R05847	1060	7	14850	413	3	220	66	1500	78	18	29	1
R05848	2100	3	5870	340	2	170	42	1750	65	14	30	1
R14068	460	2	5990	2352	6	10	33	1280	188	19	74	1
R14069	240	9	21580	2357	3	140	62	980	93	10	54	1
R14070	1270	7	16130	2425	10	40	45	1310	166	14	77	1
R14071	1630	6	11250	3126	12	40	41	1190	121	17	77	1
R14072	60	4	11370	3465	14	10	49	2070	158	25	62	1
R14073	70	3	10370	3717	15	10	56	4110	365	29	55	1
R14074	410	2	11580	3708	8	10	47	940	110	18	54	1
R14075	1130	11	27110	2674	6	30	91	540	144	15	69	1
R14076	580	5	11970	3461	8	10	38	3080	185	19	93	1
R14077	490	2	5390	2302	6	10	25	1340	119	12	99	1
R14078	1130	4	10650	2224	8	20	39	3060	115	13	89	1
R14079	2150	15	31690	2183	4	70	79	590	105	3	58	1
R14080	840	11	25810	1969	10	90	76	890	95	7	81	1
R14081	570	8	27470	2250	7	90	59	1020	89	9	109	1
R14082	480	5	11400	1445	5	10	31	2970	67	7	96	1
R14083	30	2	12460	2108	8	10	34	2120	79	12	80	1
R14084	30	2	12150	1997	6	10	36	2960	112	14	90	1
R14085	30	2	10960	2207	5	10	26	2020	77	11	113	1
R14086	30	4	13550	2160	10	10	38	3070	92	14	90	1
R14087	30	5	12560	2246	8	10	31	2080	82	10	96	1
R14088	40	7	17050	2460	11	10	43	2500	105	13	87	1
R14089	30	7	18320	2205	6	10	42	2080	96	10	97	1
R14090	20	2	10730	3039	5	10	30	2170	85	12	181	1
R14091	1170	5	4850	997	7	140	27	1800	70	12	89	1
R14092	2230	15	24100	987	12	140	62	3630	110	10	111	1
R14093	1710	2	10200	829	7	210	37	2730	72	13	102	1
R14094	2010	22	28600	1050	12	140	80	3830	130	7	75	1
R14095	3370	11	23530	747	11	140	57	4680	115	15	111	1
R14096	2040	12	18100	1230	11	150	51	4480	114	11	75	2
R14097	2960	6	12470	1578	10	110	51	4110	94	13	101	1
R14098	8330	13	29120	1301	5	130	74	3530	98	11	170	1
R14099	3430	12	22080	1032	10	120	57	3810	106	10	133	1
R14100	2920	20	28750	1088	11	130	76	3870	135	8	67	1
R14106	620	2	4520	70	16	80	203	1170	355	62	54	1
R14107	290	1	3490	310	7	200	70	950	171	44	39	1
R14108	90	1	3740	149	24	60	98	960	357	89	60	1
R14109	340	1	8650	922	8	40	16	380	38220	66	52	1
R14110	560	1	3760	76	10	70	120	1270	344	52	41	1
R14111	760	7	10030	399	3	120	66	1460	204	34	46	1
R14112	440	4	6650	147	8	130	127	1300	246	50	45	1
R14113	540	5	9880	456	3	150	43	1390	60	12	28	1
R14114	290	1	3720	105	3	110	77	230	135	33	47	1
R14115	1160	2	4030	6	4	260	118	1530	115	32	16	1
R14116	820	2	4990	453	5	140	76	1370	141	38	43	1
R14251	340	1	5220	2274	4	10	22	1970	75	13	145	1
R14252	480	2	5260	2964	5	30	34	1910	99	17	91	1
R14253	1440	3	8290	3205	12	100	72	1910	178	24	48	1
R14254	880	8	16870	3211	14	50	73	2020	209	25	89	2
R14255	120	1	2830	2579	24	10	43	820	351	62	44	1
R14256	460	3	7470	2269	6	10	31	2940	80	14	61	1
R14257	800	8	19450	1897	8	30	52	1140	93	10	53	1
R14258	320	4	8820	1945	6	10	34	2970	81	15	140	1

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-791/P1+2

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: SEPT 17, 1986

(VALUES IN PPM)	U	V	ZN
R05841	1	54.2	162
R05842	1	67.3	85
R05843	1	109.2	91
R05844	1	59.8	272
R05845	1	63.2	122
R05846	1	77.1	36
R05847	1	68.6	68
R05848	1	39.2	135
R14068	1	42.1	1804
R14069	1	126.1	259
R14070	1	56.9	1326
R14071	1	52.8	775
R14072	1	111.1	1033
R14073	1	172.1	6372
R14074	1	67.4	306
R14075	1	110.8	215
R14076	1	78.3	854
R14077	1	29.6	255
R14078	1	53.0	99
R14079	1	84.8	70
R14080	1	81.7	46
R14081	1	94.8	82
R14082	1	74.0	18
R14083	1	93.6	69
R14084	1	114.5	130
R14085	1	73.1	46
R14086	1	118.8	94
R14087	1	62.2	65
R14088	1	110.6	121
R14089	1	105.2	115
R14090	1	59.1	39
R14091	1	51.4	78
R14092	1	58.3	67
R14093	1	21.0	51
R14094	1	78.9	83
R14095	1	64.2	130
R14096	1	51.9	95
R14097	1	38.3	55
R14098	1	55.8	48
R14099	1	48.5	69
R14100	1	89.8	84
R14106	1	32.1	4150
R14107	1	28.2	153
R14108	1	22.8	141
R14109	1	5.4	13673
R14110	1	24.8	1004
R14111	1	55.0	103
R14112	1	49.1	223
R14113	1	39.7	63
R14114	1	52.9	258
R14115	1	34.0	448
R14116	1	34.8	872
R14251	1	12.0	45
R14252	1	31.0	78
R14253	1	51.0	313
R14254	1	122.0	431
R14255	1	17.2	10587
R14256	1	39.7	319
R14257	1	61.4	540
R14258	1	78.1	46

PROJECT NO: 720

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-791/P3

ATTENTION: DAVE KENNEDY

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: SEPT 17, 1986

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
R14259	2.2	15430	63	9	56	5.8	10	122740	9.0	7	55	57870
R14260	3.1	27050	140	21	66	11.5	17	58330	13.8	10	184	94370
R14261	10.3	8320	169	11	55	13.1	29	102490	26.8	9	2814	107520
R14262	1.5	8480	26	4	23	3.5	5	193420	6.7	5	44	54500
R14263	.9	52170	21	35	79	6.9	13	32060	7.7	17	72	173150
R14264	.4	48750	11	32	43	5.3	9	11530	9.3	17	70	182590
R14265	1.8	4150	27	4	41	3.6	5	177900	5.3	6	66	47950
R14266	10.1	3250	145	5	54	11.6	18	22200	10.3	7	1449	78680
R14267	15.4	8780	245	13	96	18.9	26	32290	19.2	10	2196	140080
R14268	1.7	23350	1	9	50	2.3	5	15110	6.2	10	106	111600

(VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PR	SB	SR	TH
R14259	480	5	11040	2440	12	10	47	2340	130	19	104	1
R14260	820	9	17950	2526	22	10	73	1770	231	31	71	2
R14261	600	4	7940	4116	24	10	62	1360	377	48	56	1
R14262	140	3	6710	3870	7	10	35	1630	89	14	112	1
R14263	890	21	40650	2368	4	70	88	640	124	2	54	1
R14264	420	20	40660	1832	3	110	82	600	110	1	37	1
R14265	410	3	5360	3117	8	20	35	2840	92	15	128	1
R14266	330	3	2360	1338	21	10	46	900	197	43	38	2
R14267	160	3	6800	1257	33	10	55	1280	304	69	57	2
R14268	640	9	19620	1015	1	60	49	330	56	2	26	1

(VALUES IN PPM)	U	V	ZN
R14259	1	88.8	333
R14260	1	114.2	662
R14261	1	40.1	3436
R14262	1	56.2	363
R14263	1	124.9	176
R14264	1	140.6	187
R14265	1	53.8	114
R14266	1	44.9	1547
R14267	1	46.8	2604
R14268	1	49.6	240

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Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 DR (604) 988-4524

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: ST. JOE CANADA
Project: 720
Attention: DAVE KENNEDY

File: 6-767/P1
Date: SEPT 16/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R14001	10
R14002	1
R14003	2
R14004	1
R14005	1
R14006	2
R14007	5
R14008	4
R14010	1
R14011	3
R14012	2
R14013	1
R14014	2
R14015	2
R14016	3
R14017	4
R14018	6
R14019	10
R14020	20
R14021	1
R14022	3
R14023	2
R14024	1
R14025	2
R14026	8
R14027	7
R14028	9
R14029	2
R14030	1
R14031	4

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PHONE: (604)980-5814 OR (604)988-4524

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: ST. JOE CANADA
Project: 720
Attention: DAVE KENNEDY

File: 6-767/P2
Date: SEPT 16/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R14032	1
R14033	2
R14034	2
R14035	3
R14036	1
R14037	2
R14038	1
R14039	1
R14040	3
R14042	2
R14043	1
R14044	2
R14045	1
R14046	1
R14047	2
R14048	1
R14049	2
R14050	3
R14051	1
R14052	1
R14053	3
R14054	2
R14056	1
R14057	2
R14058	1
R14059	1
R14060	2
R14061	1
R14062	1
R14063	3

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Certificate of GEOCHEM

Company: ST. JOE CANADA
Project: 720
Attention: DAVE KENNEDY

File: 6-767/P3
Date: SEPT 16/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R14064	3
R14065	2
R14066	12
R14067	4
R14101	1
R14102	1
R14103	6
R14104	2
R14105	2
R00409	3
R00410	2
R00411	2
R00412	2
R00413	1
R00414	5
R00415	18
R00416	350
R00417	8
R00418	1
R05822	1
R05823	7
R05824	3
R05825	1
R05826	2
R05827	2
R05828	1
R05829	20
R05830	4
R05831	1
R05832	1

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Certificate of GEOCHEM

Company: ST. JOE CANADA
Project: 720
Attention: DAVE KENNEDY

File: 6-767/P4
Date: SEPT 16/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PFB
R05833	40
R05834	5
R05835	1
R05836	2
R05837	1
R05838	1
R05839	2
R05840	1
R14055	20

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TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM


Company: ST. JOE CANADA
Project: 720
Attention: DAVE KENNEDY

File: 6-791/P1
Date: SEPT 17/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R05841	8
R05842	18
R05843	4
R05844	5
R05845	12
R05846	3
R05847	4
R05848	1
R14068	9
R14069	3
R14070	17
R14071	9
R14072	29
R14073	54
R14074	6
R14075	26
R14076	21
R14077	7
R14078	4
R14079	4
R14080	2
R14081	2
R14082	3
R14083	2
R14084	8
R14085	4
R14086	10
R14087	1
R14088	5
R14089	3

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Certificate of GEOCHEM

Company: ST. JOE CANADA
Project: 720
Attention: DAVE KENNEDY

File: 6-791/P2
Date: SEPT 17/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R14090	6
R14091	3
R14092	3
R14093	1
R14094	2
R14095	2
R14096	1
R14097	7
R14098	3
R14099	27
R14100	8
R14106	4
R14107	9
R14108	27
R14109	82
R14110	12
R14111	10
R14112	6
R14113	2
R14114	3
R14115	1
R14116	3
R14251	6
R14252	2
R14253	21
R14254	250
X R14255	2250
R14256	310
R14257	82
R14258	8

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Certificate of GEOCHEM

Company: ST. JOE CANADA
Project: 720
Attention: DAVE KENNEDY

File: 6-791/P3
Date: SEPT 17/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE
R14259	41
XR14260	600
R14261	280
R14262	9
R14263	2
R14264	1
R14265	8
XR14266	2650
XR14267	4000
R14268	105

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TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: ST. JOE CANADA INC.
Project: 720
Attention: DAVE KENNEDY

File: 6-822/P1
Date: SEPT 24/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PFB
R 14117	2
R 14118	25
R 14119	5
R 14120	6
R 14121	4
R 14122	3
R 14123	7
R 14124	8
R 14125	28
R 14126	5
R 14127	3
R 14128	5
R 14129	10
R 14130	8
R 14131	10
R 14132	17
R 14133	50
R 14134	14
R 14135	12
R 14136	10
R 14137	17
R 14138	8
R 14139	10
R 14140	26
R 14141	38
R 14142	20
R 14143	10
R 14144	7
R 14145	5
R 14146	6

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Certificate of GEOCHEM

Company: ST. JOE CANADA INC.
Project: 720
Attention: DAVE KENNEDY

File: 6-822/P2
Date: SEPT 24/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R 14147	70
R 14148	2
R 14151	15
R 14152	30
R 14153	40
R 14154	225
R 14155	34
R 14156	57
R 14157	30
R 14158	390
R 14159	25
R 14160	15
R 14161	10
R 14162	4
R 14163	18
R 14164	27
R 14165	15
R 14166	20
R 14167	3
R 14168	8
R 14269	15
R 14270	5
R 14271	4
R 14272	8
R 14273	5
R 14274	3
R 14275	4
R 14276	6
R 14277	2
R 14278	4

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TELEX: VIA USA 7601067 UC

Certificate of GEOCHEMCompany: ST. JOE CANADA INC.
Project: 720
Attention: DAVE KENNEDYFile: 6-822/P3
Date: SEPT 24/86
Type: ROCK GEOCHEMWe hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R 14279	4
R 14280	3
R 14281	4
R 14282	3
R 14283	7
R 14284	3
R 14285	2
R 14286	33
R 14287	2
R 14288	5
R 14289	9
R 14290	31
R 14291	15
R 14292	27
R 14293	12
R 14294	3
R 14295	4
R 14296	2
R 14298	3
R 14299	2
R 14300	2
R 14301	2
R 14302	13
R 14303	3
R 14304	2
R 14305	1
R 14306	2
R 14307	1
R 14308	1
R 14309	1

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TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: ST. JOE CANADA INC.
Project: 720
Attention: DAVE KENNEDY

File: 6-822/P4
Date: SEPT 24/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R 14310	12
R 14311	23
R 14312	16
R 14313	14
R 14314	4
R 14315	10
R 14316	7
R 14317	6
R 14318	2
R 14319	11
R 14320	15
R 14321	5
R 14322	9
R 14323	8
R 14324	1
R 14325	7
R 14326	2
R 14327	6
R 14328	10
R 14329	4
R 14330	18
R 14331	5
R 14332	4
R 14333	48
R 00419	6
R 00420	9
R 00421	12
R 00422	7
R 00423	50
R 00424	13

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Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604)980-5814 DR (604)988-4524

TELEX: VIA USA 7601067 UH

Certificate of ASSAY

Company: ST. JOE CANADA INC.
Project: 720
Attention: DAVE KENNEDY

File: 6-822/P5
Date: SEPT 24/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R 00425	19
R 00426	12
R 00427	4
R 00428	13
R 00429	8
R 00430	9
R 00431	6
R 00432	3
R 00433	7

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Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: ST. JOE CANADA INC.

File: 6-969

Project: 720

Date: OCT 16/86


Attention: D. KENNEDY

Type: SOIL GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AG PPM	AU PPB
86-1	1.2	10
86-2	1.1	10
86-3	1.2	5
86-4	1.0	10
86-5	1.2	10
86-6	1.0	75
86-7	1.0	5
86-8	1.1	10
86-9	0.9	15
86-10	27.2	10000
86-11	2.3	360
86-12	1.6	240
86-13	1.4	10
86-14	1.2	50
86-15	1.0	5
86-16	1.4	5
86-17	1.0	5
86-18	1.0	35
86-19	1.2	10
86-20	1.0	5
86-21	1.0	10
86-22	1.2	5
86-23	1.0	5
86-24	0.8	3
86-25	1.6	5
86-26	1.6	10

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PHONE: (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UH

Certificate of GEOCHEM

Company: ST. JOE CANADA INC.
Project: 720
Attention: D. KENNEDY

File: 6-969/P1
Date: OCT 14/86
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
XR 14169	300
XR 14170	255
R 14171	29
R 14172	4
R 14173	31
R 14174	6
R 14175	2
R 14176	1
R 14177	9
R 14178	4
R 14179	4
R 14180	3
R 14181	2
R 14182	8
R 14183	12
R 14184	9
R 14334	6
R 14335	7
R 14336	5
R 14351	4
R 14352	7
R 14353	6
R 14354	3
R 14355	6
R 14356	5
R 14357	2
R 14451	18
R 14452	15
R 14453	13
R 14454	8

Certified by _____


MIN-EN LABORATORIES LTD.

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 DR (604) 988-4524

TELEX: VIA USA 7601067 UC

Certificate of GEOCHEM

Company: ST. JOE CANADA INC.

Project: 720

Attention: D. KENNEDY

File: 6-969/P2

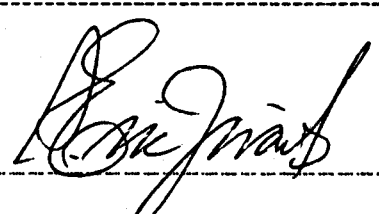
Date: OCT 14/86

Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
R 14455	4
R 14456	8
R 14457	23
R 14458	49
R 14459	6
R 14460	3
R 14041	9

Certified by _____


MIN-EN LABORATORIES LTD.

APPENDIX B

PHYSICAL PROPERTIES STUDY



ELLIOT GEOPHYSICAL CO., INC.

4653 EAST PIMA STREET

TUCSON, ARIZONA 85712

TEL. (602) 323-2421

15 November, 1986

Ref. SJ43P

Paul A. Read
St. Joe American Corp.
2002 N. Forbes Blvd., Suite 108
Tucson, AZ 85745

Dear Paul:

RE: Physical Property Laboratory Determinations
Toe East Arm Glacier Project

The 13 samples that were received on 11-7-86 have been run in the physical property laboratory of ELLIOT GEOPHYSICAL CO., INC. to determine the requested physical property. The following physical property method was run:

-Volume Magnetic Susceptibility

The physical property procedure was performed following conventional techniques of laboratory analysis and is described in the attachment. The resulting data with the specific parameters and units employed are presented on the accompanying table.

A one-inch diameter core was cut from each of the submitted samples in order to provide appropriate means for measurement of the requested physical property.

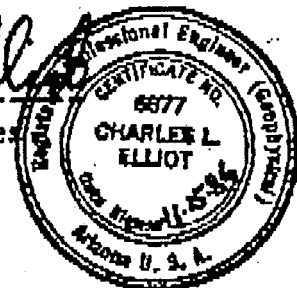
The samples are being returned to you via United Parcel Service.

Sincerely yours,

ELLIOT GEOPHYSICAL CO., INC.

Charles L. Elliot

Charles L. Elliot, Pres



ATTACHMENTS: Table
Physical Property Procedure

ENCL: Invoice

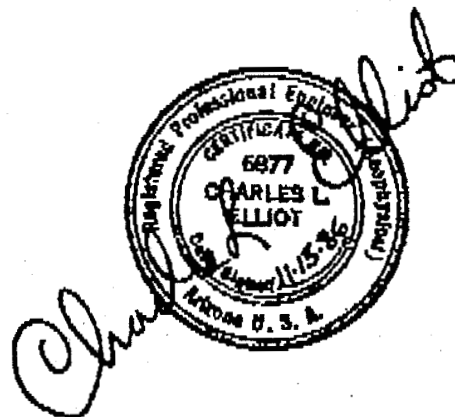
ROCK PHYSICAL PROPERTY LABORATORY DETERMINATIONS

St. Joe American Corp.
Toe East Arm Glacier Project

15 November, 1986

REF. SJ43P

REF. NO.	SAMPLE DESIGNATION	VOLUME MAGNETIC SUSCEPTIBILITY (k) micro cgs units
1	Sulfide- 3	360.
2	Sulfide- 4	6300.
3	Sulfide-10	420.
4	Sulfide-12	2300.
5	Sulfide-13	3700.
6	Sulfide-20	720.
7	Mafic- 2	82.
8	Mafic- 5	7900.
9	Mafic-11	130.
10	Mafic-14	53.
11	Mafic-15	61.
12	Mafic-16	80.
13	Mafic-18	19000.



PROCEDURES FOR THE DETERMINATION OF VOLUME MAGNETIC SUSCEPTIBILITIES

The volume magnetic susceptibility measurements made in the physical property laboratory utilizes a magnetic susceptibility bridge type instrument operating at a frequency of 400 Hertz. The limits of detectability of the bridge are approximately 1.0 micro cgs units (12.56E-06 SI units). Resulting data are presented in micro cgs units of volume magnetic susceptibility. The SI unit conversion is:

$$k_{SI} = (12.566) k_{cgs}$$

Magnetic susceptibility measurements are made on a 1.0 inch diameter bicylindrical core, cut from each submitted sample to facilitate the determination. Sometimes surface samples may be broken to chip size which can be run with appropriate correction for the rock/void ratio of material. Also, sand, mud or chip samples can be utilized in the determination of volume magnetic susceptibility with appropriate corrections for porosity and/or voids.

PROCEDURES FOR THE DETERMINATION OF WET BULK DENSITIES

The density determinations made in the physical property laboratory are determined following conventional laboratory procedures for determining bulk densities utilizing the bouyancy method. The accuracy of the bouyancy technique of density measurement is better than 0.01 grams per cubic centimeter (10.0 SI units). The results of the laboratory density determinations are reported in grams per cubic centimeter. The SI unit conversion is:

$$D_{kg/m^3} = (1000.0) D_{gms/cc}$$

Density measurements can be made on bicylindrical cores, grab samples or drill cores. Cuttings or sand samples can be measured but with some loss in accuracy.

APPENDIX C

PETROGRAPHIC STUDY



Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1J0

PHONE (604) 888-1323

Invoice #6128

November 17th, 1986

Report for: Andreas Vogt,
St. Joe Canada Inc.,
410-553 Granville St.,
Vancouver, B.C.
V6C 1X6

Samples:

5 rock samples for sectioning and petrographic description. Sample numbers and preparation type are as follows:

R 13000	Polished thin section
R 13001	Thin section
R 13002 A	Polished thin section
B	Polished thin section
R 14140	Polished thin section
R 14165	Polished thin section

Individual petrographic descriptions of each sample are attached.

Summary:

R 13001 is a fine-grained, non-porphyrific, amygdaloidal andesite. It is rather leucocratic in composition and is fresh and apparently unmetamorphosed.

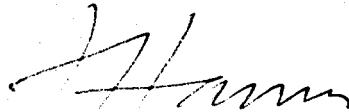
R 14165 is a mineralized andesitic fragmental, probably a lapilli tuff. This has been extensively permeated by carbonate, which is probably a gangue component accompanying the chalcopryrite-magnetite mineralization. The chalcopryrite shows strong oxidation and secondary enrichment effects.

R 13000 and 13002 are examples of disseminated to semi-massive pyrite polymetallic sulfide mineralization, consisting of pyrite with accessory chalcopryrite, sphalerite and pyrrhotite in a granular carbonate matrix. Both sulfides and carbonate are dominantly very fine-grained and exhibit textural relationships suggestive of co-precipitation, probably as a chemical sediment, followed by recrystallization. Sample 13002 includes a more siliceous area which probably originated as a segregation of chert in the limey, sulfidic muds.

No clastic features were recognizable and these samples may represent an exhalative intercalation within the clastic sequence (calcareous argillites) mentioned in your covering letter.

As is commonly the case in deposits of this type, sulfide/sulfide and sulfide/gangue intergrowths are on a very fine scale and may present problems in the preparation of saleable Cu and Zn concentrates. The source of the contained Au values was identified in one slide as native Au in particles 5 - 25 microns in size, occurring both within pyrite and in carbonate.

R 14140 is a rock of related type in which the sulfides, rather than pyrite, are essentially monomineralic pyrrhotite, and the hosting carbonate is dolomitic rather than calcitic.



J.F. Harris Ph.D.

Estimated mode

Carbonate	45
Quartz	trace
Pyrite	40
Pyrrhotite	6
Sphalerite	5
Chalcopyrite	4

This sample consists of fine-grained sulfides rather densely, but irregularly disseminated through a matrix of carbonate.

The latter consists of a non-foliated anhedral mosaic of widely varying grain size (0.02 - 0.5mm). Clumps of relatively coarser carbonate form texturally gradational islands in the predominantly finer matrix. Rare tiny quartz grains are locally intergrown with the carbonate.

The carbonate shows local variations in its reactivity to dilute acid. The majority of it appears to be calcite but a minor proportion of intergrown dolomite (not optically distinguishable) is probably present.

The distribution of the sulfides, though showing a weakly developed banding, is notably irregular. The relatively sulfide-free patches sometimes tend to be composed of the coarser carbonate, but this is by no means a consistent relationship.

The sulfides are texturally bimodal. One form consists of relatively coarse pyrite as clumps of cubic euhedra, 0.1 - 0.5mm in size; the other consists of a very fine-grained, intimate intergrowth of pyrite, pyrrhotite, sphalerite and chalcopyrite on the 5 - 50 micron scale. The latter form occurs as semi-compact aggregates (intimately sieved with carbonate) moulded around and interstitial to the clusters of pyrite cubes, and also in more dispersed form as disseminated clusters, framboids and atolls throughout the carbonate matrix.

The overall aspect of the carbonate/sulfide aggregate is that of a co-precipitated chemical deposit, possibly somewhat modified by recrystallization. No indication of primary clastic features was seen.

Estimated mode

Plagioclase	67
Amphibole	16
Chlorite	8
Carbonate	3
Sphene	3
Epidote	3

This is a fine-grained, non-porphyritic andesite composed of a meshwork aggregate of grain size 0.1 - 0.3mm, made up of slender, prismatic plagioclase and accessory, pale-coloured, acicular amphibole.

The plagioclase appears completely fresh, but the amphibole is commonly flecked with or, in some cases, pseudomorphed by carbonate.

Interstitial spaces within the meshwork are filled by felted chlorite and rather abundant minute granules of sphene.

The rock contains epidote as scattered, disseminated, equant, sub-rounded grains (0.1 - 1.0mm) and coarser, elongate/irregular clumps. This is a variety showing a distinctive, intense blue, anomalous birefringence. In some of the larger clumps the epidote is intergrown with chlorite.

These segregations are almost certainly amygdules. The rock in the vicinity of some of the larger ones exhibits a textural variation consisting of feathery or fibrous/sub-radiate, very fine-grained plagioclase, sieved with emulsion-like inclusions of chlorite and dusted with micron-sized clusters of sphene.

The lack of any opaque constituents (oxides or sulfides) or dispersed ferruginous matter in this rock probably accounts for its light colour. It shows very little alteration.

Estimated mode

Carbonate	60
Quartz	1
Pyrite	35
Chalcopyrite	3
Sphalerite	1
Pyrrhotite	trace

This sample consists of a generally similar style of mineralization to 13000.

The hosting matrix is again granular carbonate as a randomly oriented, anhedral to polygonal mosaic showing patchy to lenticular variations in grain size in the range 0.01 - 0.2mm. There are very occasional augen-like masses of coarser, strained material.

Quartz occurs as sparse, small clusters integral to the granular carbonate mosaic. It tends to be confined to a single elongate zone or band.

A weak suggestion of banding is also apparent as variations in the proportion of disseminated sulfides, which are less clumped and more regularly distributed than in 13000.

The textural bimodality of sulfides noted in 13000 is also less noticeable in this sample. The mineralization is mainly in the form of lines and partially coalescent network clusters of disseminated pyrite cubes, 0.01 - 0.2mm in size.

Fine-grained mixed sulfides, equivalent to the cementing/interstitial phase in the previous sample, here consist mainly of chalcopyrite, locally with intergrown sphalerite, as irregular grains 10 - 100 microns in size. Very fine-grained 'spongy' pyrite is also developed but pyrrhotite (strongly altered) is confined to a few isolated patches.

The pyrite cubes in the previous sample are generally homogenous, but in this one they are commonly strongly sieved with minute (2 - 20 micron) inclusions of chalcopyrite and occasional pyrrhotite.

Gold was seen as an irregular-shaped, 20 micron grain totally enclosed within pyrite, and as two rounded grains, 5 and 25 microns in size, in carbonate.

As in 13000, the sulfides and associated carbonate appear codepositional and somewhat recrystallized. Vestiges of spheroidal textures are occasionally seen as relict forms within the carbonate mosaic. Judging from its reaction with acid, the latter appears to be mainly calcite, with minor intergrown dolomite.

Estimated mode

Quartz	68
Carbonate	14
Pyrite	13
Chalcopyrite	3
Pyrrhotite	1
Sphalerite	1

It is not clear from the slabbed portions remaining of this sample what constitutes the 'fragment' referred to in your query. However, the section certainly appears to have been cut from an area which differs in composition from the majority of the rock (as exemplified by 13002A).

Quartz is the dominant matrix constituent in this slide rather than carbonate. Also the sulfides, which are less abundant overall than in previous slides, are relatively less pyritic.

The matrix consists primarily of an anhedral/polygonal mosaic aggregate of quartz of highly variable grain size (0.02 - 0.2mm). It exhibits comparable features to the carbonate-rich samples previously described, being a non-oriented fabric with a patchy distribution of relatively coarser and extremely fine cherty material within the overall fine matrix. Irregular patches and networks of granular carbonate occur randomly intergrown with the siliceous aggregate.

One end of the slide shows a fairly sharply gradational change to a more foliated, carbonate-rich assemblage, which presumably represents the edge of the siliceous segregation.

The sulfides consist of very fine-grained pyrite (1 - 2 microns) generally concentrated as 'spongy' clumps and elongate/crustified or cellular patches. This material is sometimes intergrown with chalcopyrite on a very fine scale.

The bulk of the chalcopyrite is as coarser segregations of grain size 0.02 - 0.2mm, independently disseminated or moulded onto pyrite clusters. Strongly altered pyrrhotite and sphalerite occur in similar mode and in mutual intergrowths with chalcopyrite.

The finest cherty quartz tends to host the finest disseminated sulfides; the medium-grained mosaic has intergranular networks of sulfides and coarser, pockety segregations. The coarsest quartz patches are generally free of sulfides.

The transition to a carbonate-rich matrix on the edge of the siliceous area is marked by rather coherent bands of spongy, very fine-grained pyrite with minor sphalerite. The ratio of chalcopyrite to pyrite is strongly elevated in the siliceous area.

The rock is cut by late, cross-cutting veinlets of dolomite.

Estimated mode

Carbonate	45
Quartz	14
Chlorite	1
Pyrrhotite	40
Chalcopyrite	trace
Pyrite	trace

Although this is another rock consisting of densely disseminated fine-grained sulfides in a carbonate matrix, it is distinct from others of the suite in two main respects: the sulfides are essentially monomineralic pyrrhotite; and the carbonate is a non-reactive variety, probably predominantly dolomite, rather than calcite.

The grain structure of the matrix carbonate is also quite different to the patchy vari-sized aggregates of the other samples. Here it is a rather even, relatively coarse mosaic of grain size 0.1 - 0.3mm, having the textural aspect of a marble.

This fabric is, however, extensively modified by the presence of intergrown irregular pockets of quartz, sometimes of similar grain size to the carbonate and sometimes of very fine-grained, cherty type; by wisps and streaks of a brown, probably ankeritic carbonate which locally forms a matrix or intergranular cement to the dolomite grains; and by pyrrhotite as extensive, coalescent, intergranular impregnations, and as a dusting of tiny inclusions within the carbonate grains.

Scattered, small flecks of a brownish chlorite occur throughout, generally on the contact of sulfide clumps.

The pyrrhotite is mainly in the form of small grains, 0.05 - 0.15mm in size, intergrown as polygonal mosaic aggregates to form semi-massive patches and networks. These aggregates include rare, scattered, individual grains of pyrite and tiny interstitial pockets of chalcopyrite. Finer-grained pyrrhotite (0.01 - 0.05mm) forms a disseminated phase between the more concentrated wisps.

The pyrrhotite is totally fresh and unaltered.

The overall structure is obscure. The sulfides are generally distributed pervasively throughout, but with local concentrations exhibiting a highly irregular, small-scale, wispy/laminar pattern within the non-foliated carbonate matrix. Possibly this represents a remnant slumped sedimentary structure which has partially survived the extensive recrystallization.

ANDESITE LAPILLI TUFF WITH
CHALCOPYRITE-MAGNETITE MINERALIZATION

Estimated mode

Carbonate	48
Hornblende	5
Epidote	2
Plagioclase	2
Magnetite	15
Chalcopyrite	16
Bornite	2
Chalcocite	2
Covellite	2
Malachite	2
Limonite	4

This is a heterogenous, strongly mineralized, altered rock, extensively affected by oxidation and secondary enrichment.

Its original character is obscure. It is certainly fragmental, at least in part, and may have been a coarse tuff. The origin of the abundant carbonate, which now cements the altered lithic fragments and acts as matrix to the sulfide/oxide mineralization, is uncertain, but it is most likely an introduced gangue component of the mineralizing event.

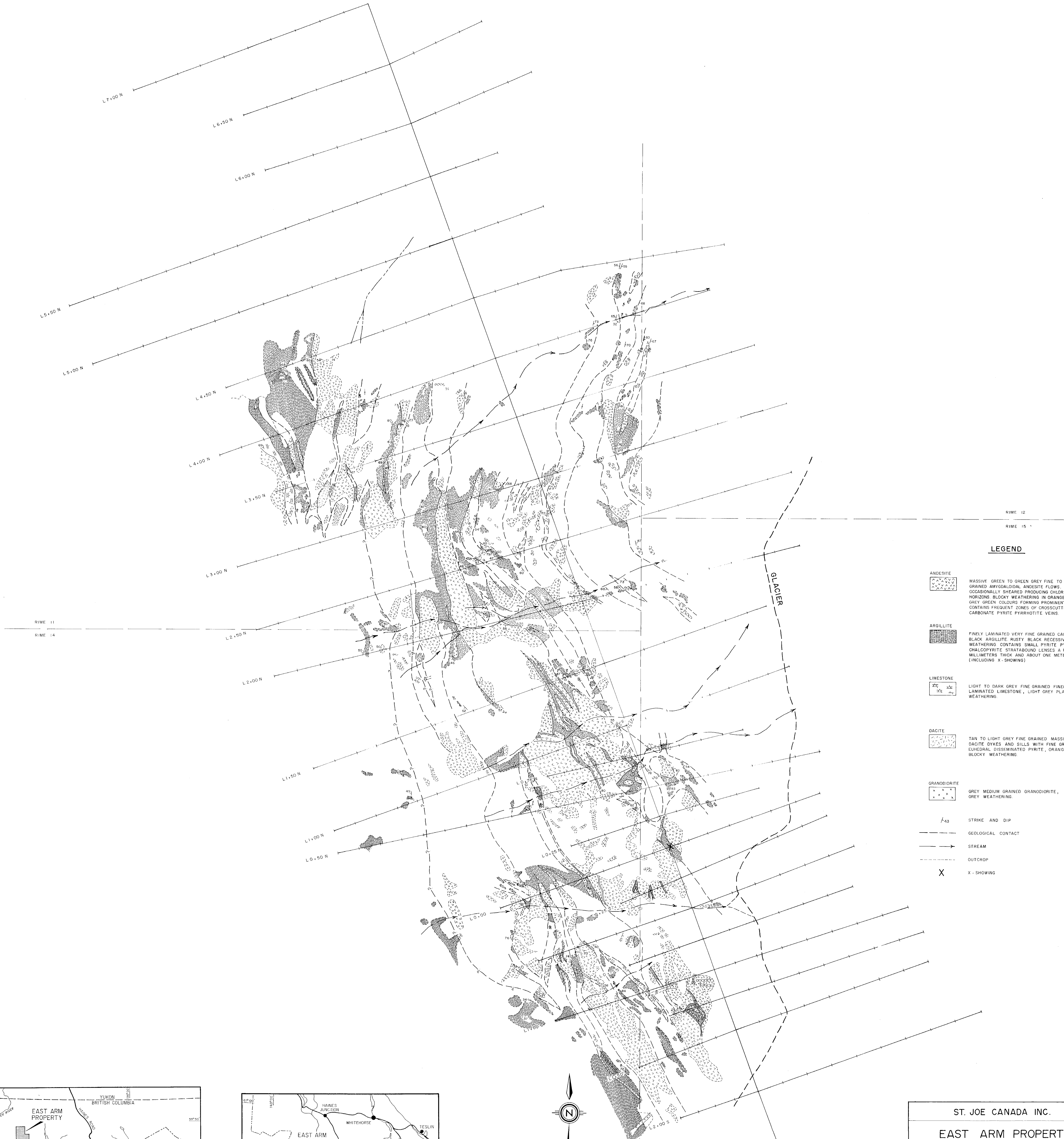
The carbonate (probably a mixture of calcite and dolomite) occurs as an aggregate of angular to rounded grains, 0.02 - 0.2mm in size, more or less strongly cemented by limonite.

Tiny grains of amphibole occur in interstitial mode within the carbonate, and there are occasional coarser amphiboles which appear porphyroblastic (but could be partially assimilated crystal clasts). Other non-sulfide constituents are scattered clumps of epidote, and pockets and veinlets of coarser carbonate.

Rounded and elongate lithic fragments up to about 5mm in size consist of hornblende-carbonate and hornblende-plagioclase-epidote assemblages (probably altered andesites).

Mineralization, consisting primarily of chalcopyrite and magnetite, mutually intergrown as grains 0.05 - 0.2mm in size, occurs as irregular clumps, coalescent networks and fine disseminations throughout the carbonate. The lithic fragments, though generally unmineralized, locally show peripheral replacement by sulfides.

The chalcopyrite is extensively rimmed and veined by secondary covellite and limonite. In addition, some grains are wholly or partly replaced by bornite and chalcocite. Pockets and intergranular impregnations of limonite and malachite occur adjacent to the sulfides.



LEGEND

- ANDESITE**

MASSIVE GREEN TO GREEN GREY FINE TO MEDIUM GRAINED ANFOGEOIDAL ANDESITE FLOWS OCCASIONALLY SHEARED PRODUCING CHLORITIC SCHIST HORIZONS BLOCKY WEATHERING IN ORANGE GREY AND GREY GREEN COLOURS FORMING PROMINENT BLUFFS CONTAINS FREQUENT ZONES OF CROSSCUTTING QUARTZ CARBONATE PYRITE PYRRHOTITE VEINS
- ARGILLITE**

FINELY LAMINATED VERY FINE GRAINED CALCAREOUS BLACK ARGILLITE RUSTY BLACK RECESSIVE WEATHERING CONTAINS SMALL PYRITE PYRRHOTITE CHALCOPYRITE STRATABOUND LENSES A FEW MILLIMETERS THICK AND ABOUT ONE METER LONG (INCLUDING X-SHOWING)
- LIMESTONE**

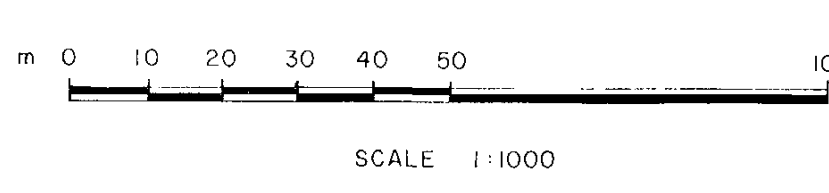
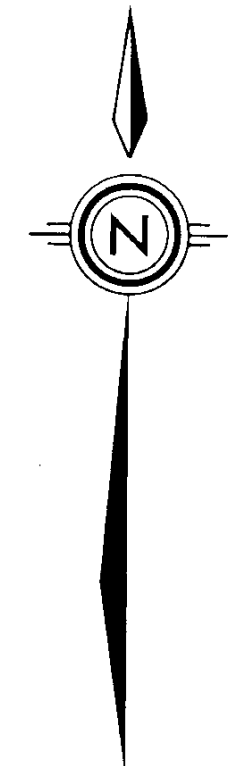
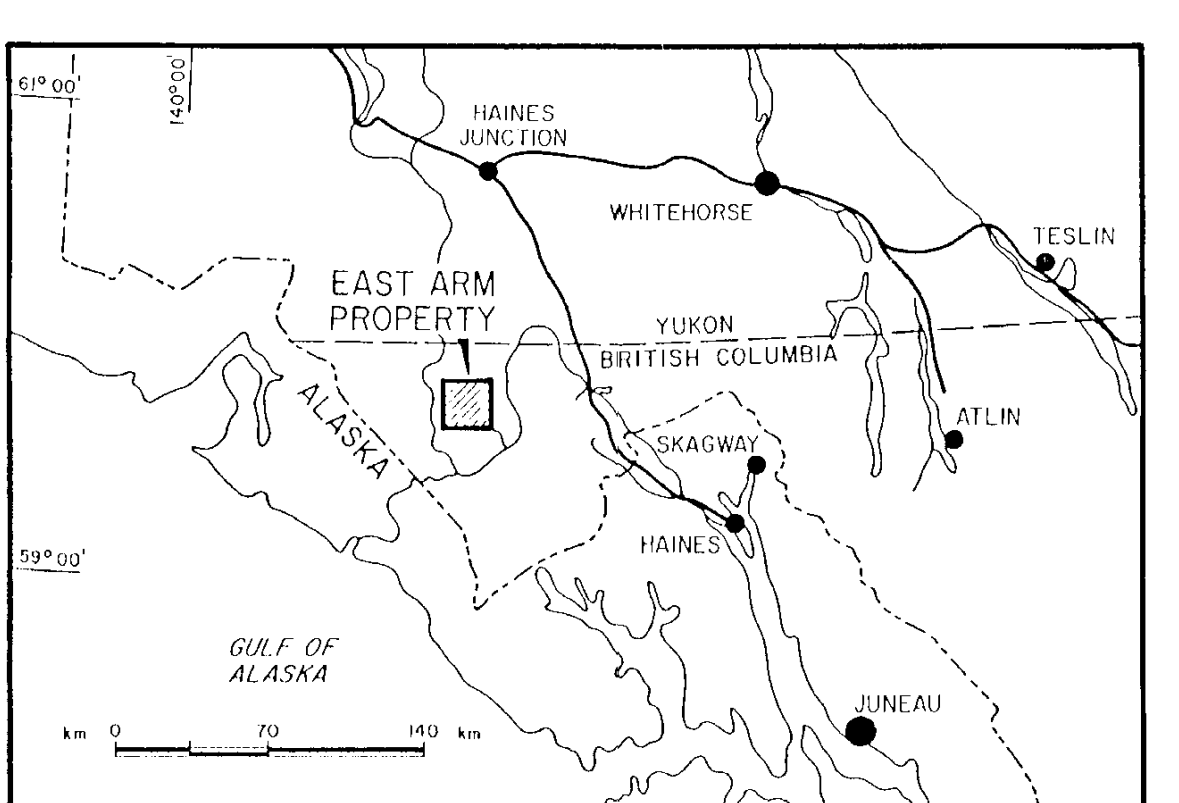
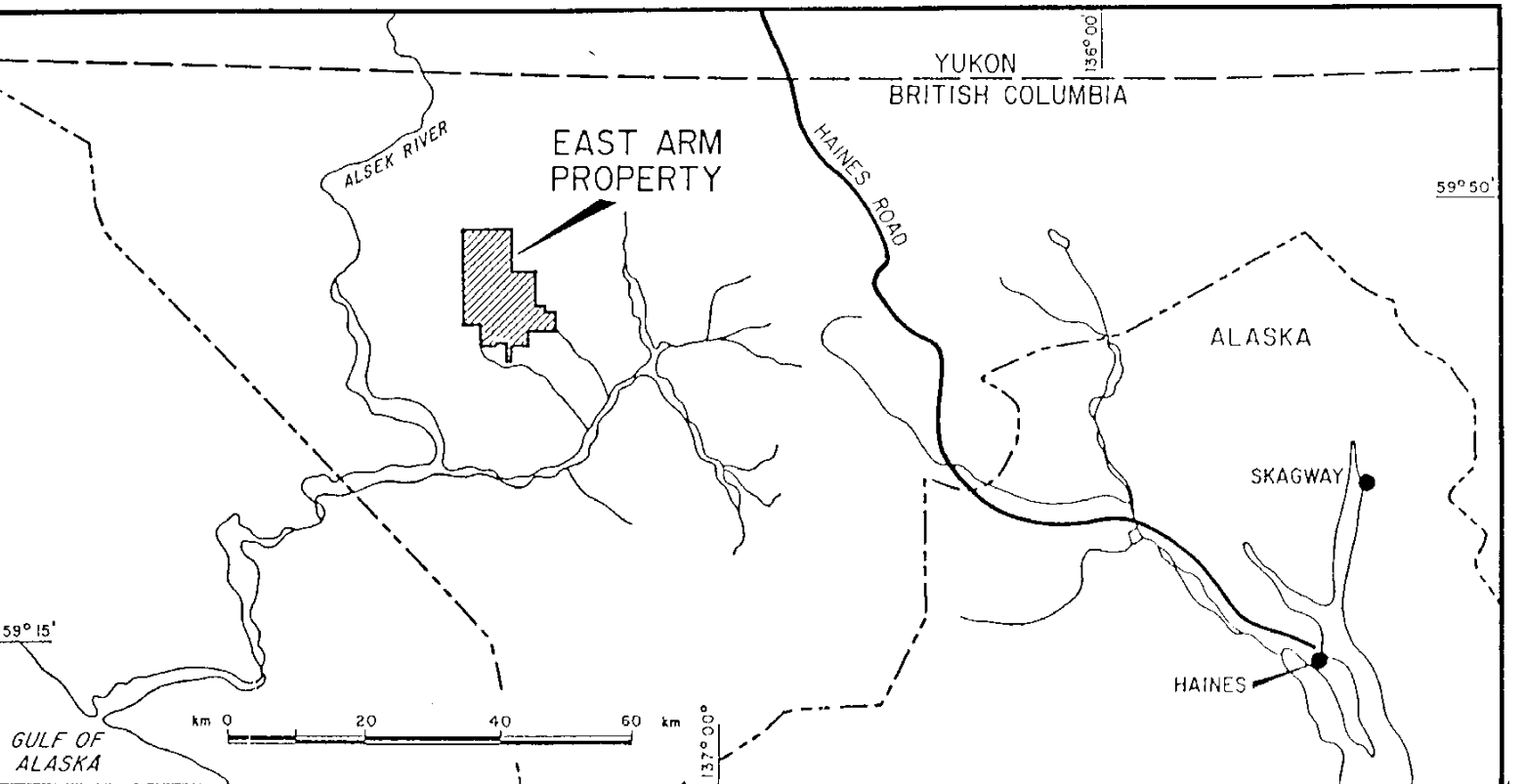
LIGHT TO DARK GREY FINE GRAINED FINELY LAMINATED LIMESTONE, LIGHT GREY PLATY WEATHERING
- DACITE**

TAN TO LIGHT GREY FINE GRAINED MASSIVE DACITE DYKES AND SILLS WITH FINE GRAINED EUBEDRAL DISSEMINATED PYRITE, ORANGE BLOCKY WEATHERING
- GRANDIODORITE**

GREY MEDIUM GRAINED GRANDIODORITE, GREY WEATHERING
- f_{AS}**

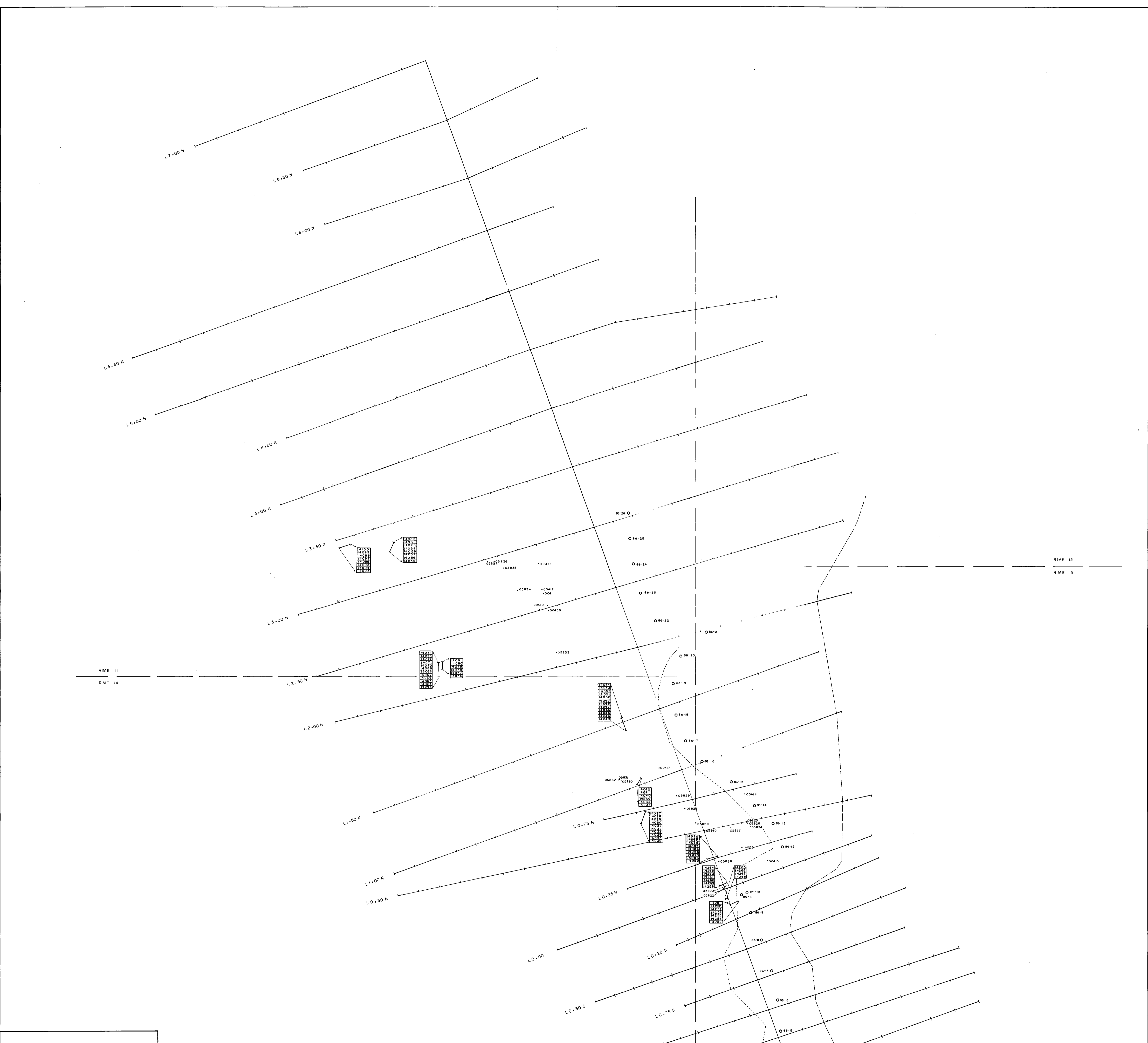
STRIKE AND DIP
- GEOLOGICAL CONTACT
- STREAM
- OUTCROP
- X**

X-SHOWING



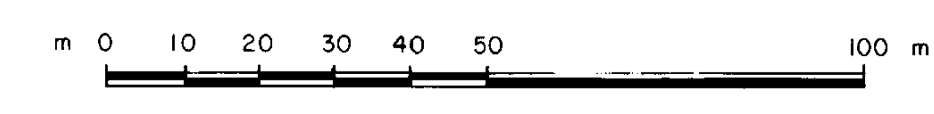
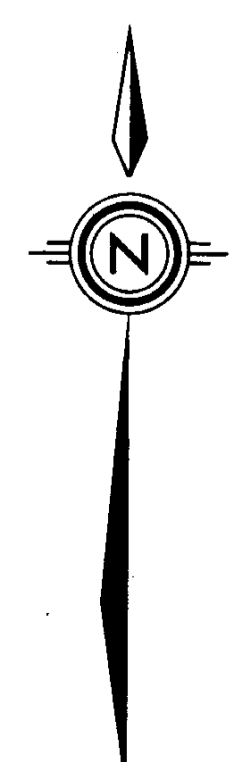
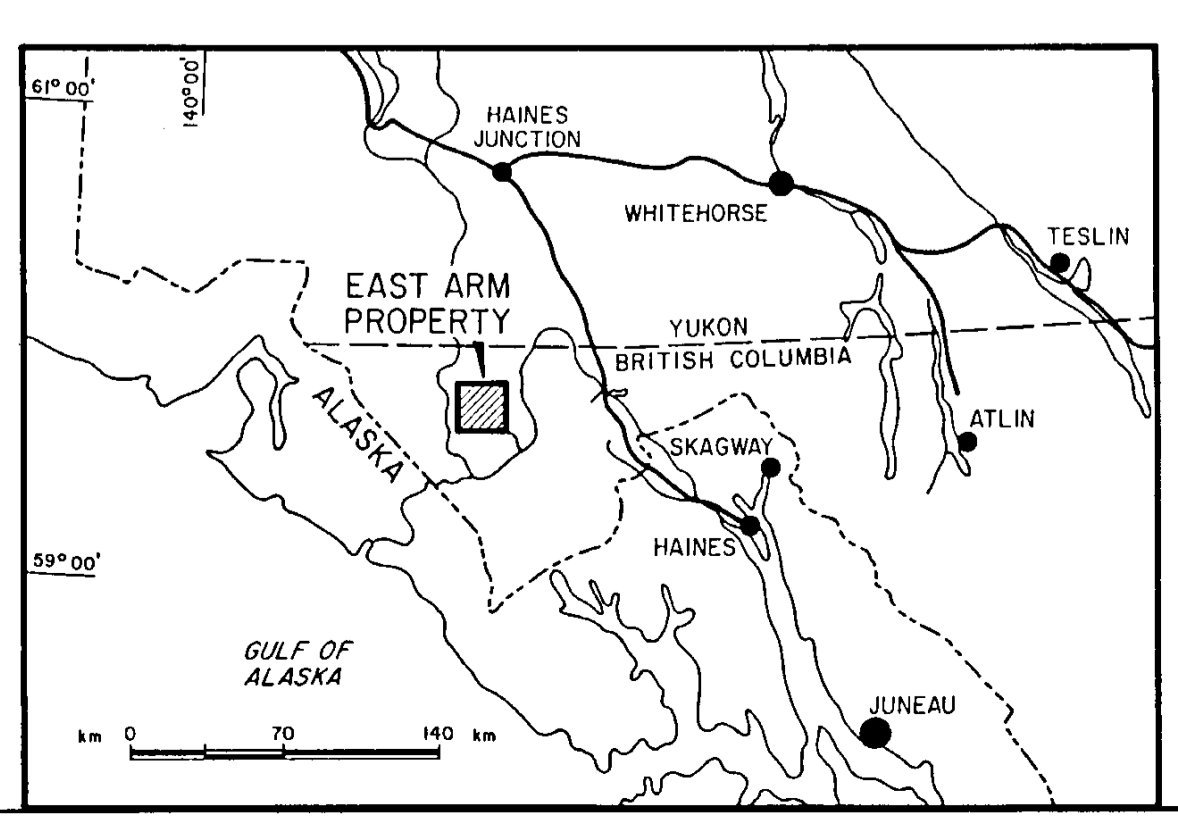
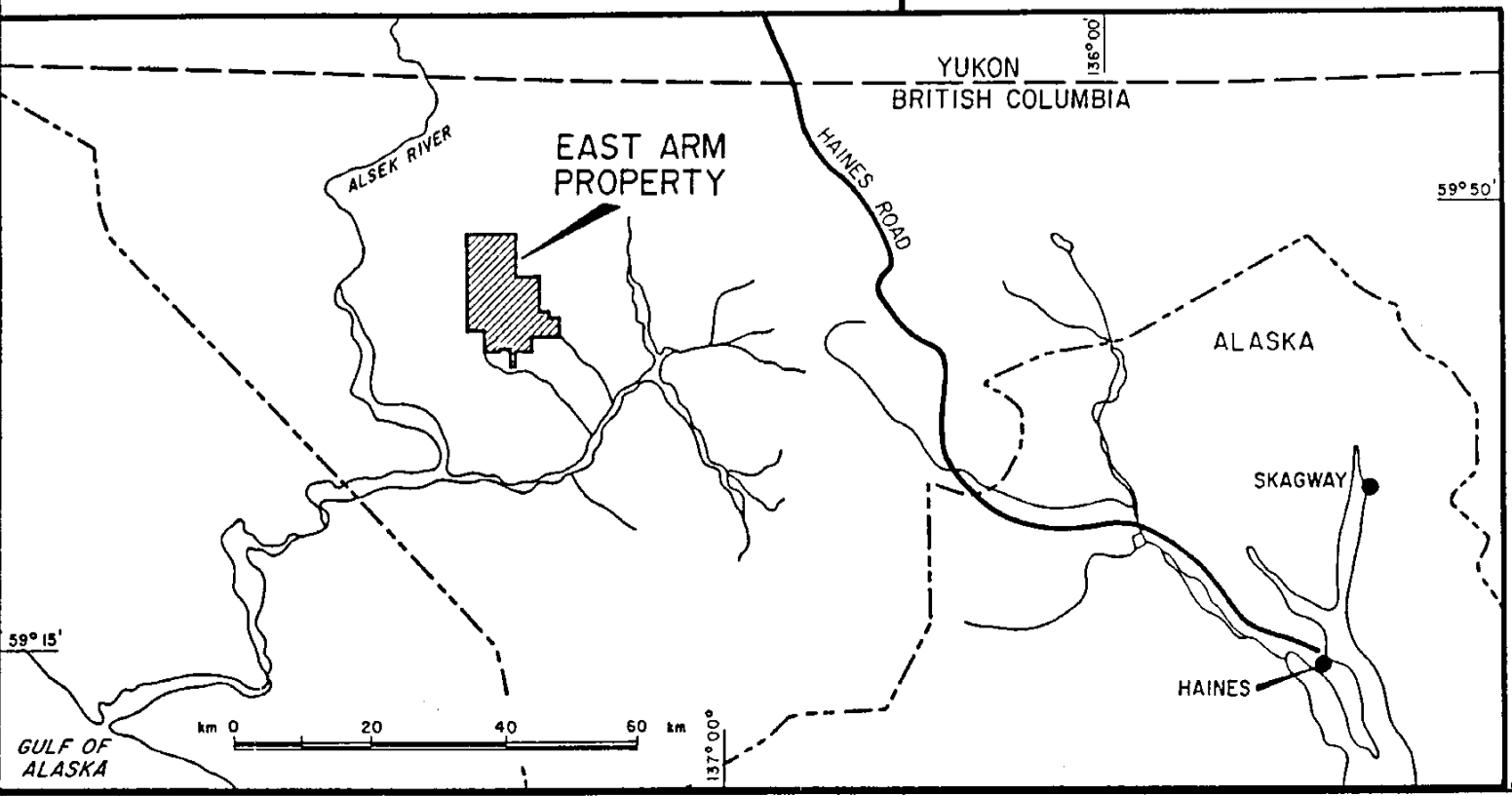
15,426 GEOLOGICAL MAP

ST. JOE CANADA INC.			
EAST ARM PROPERTY			
GEOLOGICAL BRANCH ASSESSMENT REPORT			
X - SHOWING			
REVISED:	DATE:	DRAWN BY:	FIGURE No.
	NOVEMBER 1986	J.M.K.	6
	N.T.S.		
	114P/12E		



LEGEND

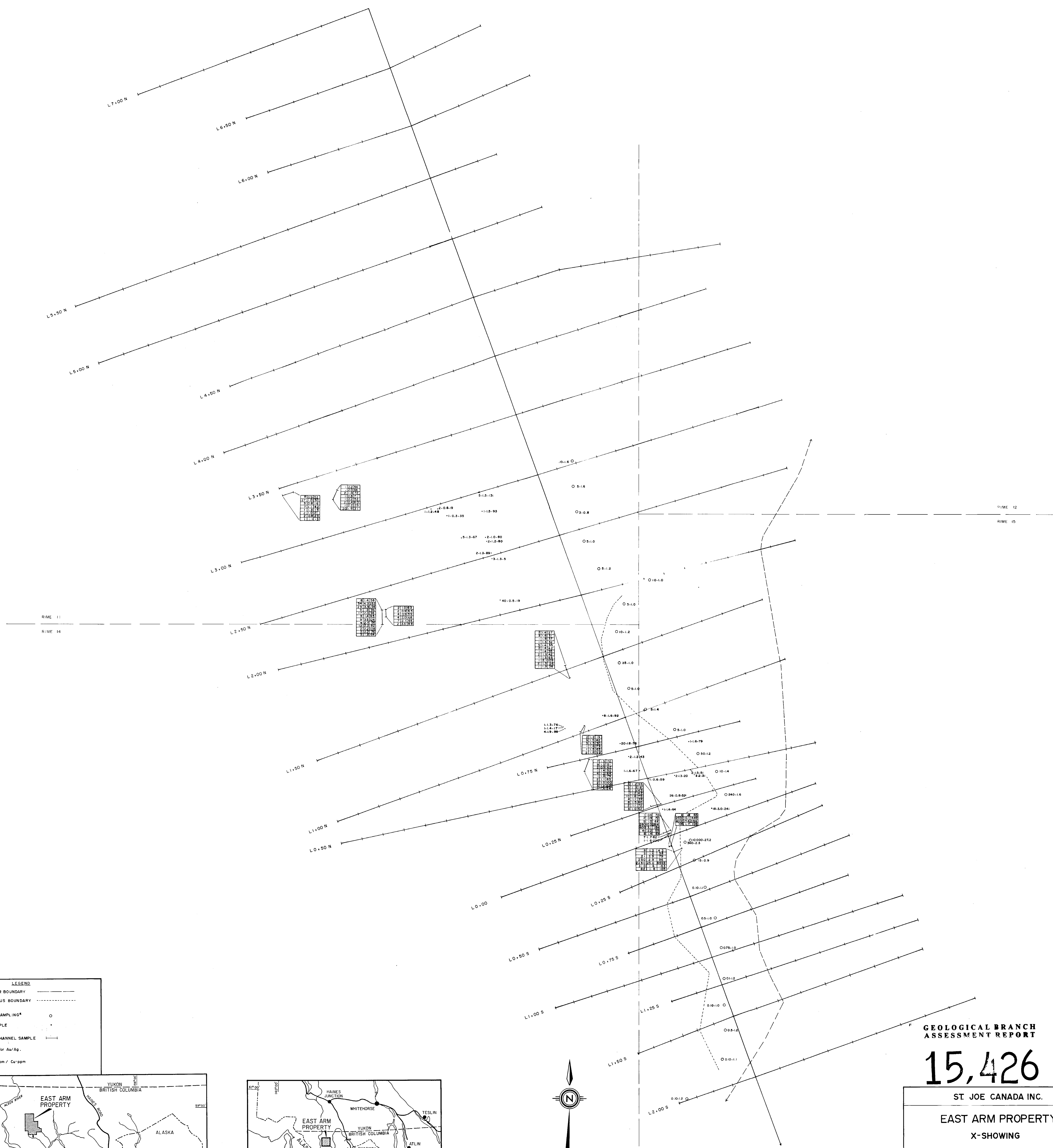
TALUS/GLACIER BOUNDARY	---
OUTCROP/TALUS BOUNDARY	----
TALUS FINES SAMPLING	○
CHANNEL SAMPLE	•
CONTINUOUS CHANNEL SAMPLE	— —



GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,426

ST. JOE CANADA INC.			
EAST ARM PROPERTY X-SHOWING SAMPLE LOCATION MAP			
SCALE 1:1000			
PLAN No.	DRAWN BY: EC	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S. 11/47/12E	7



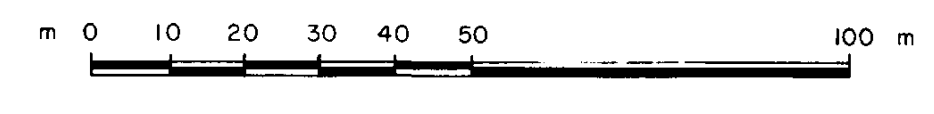
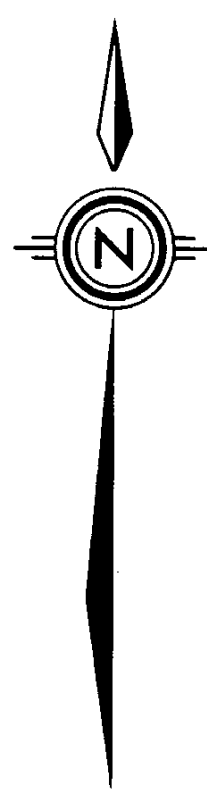
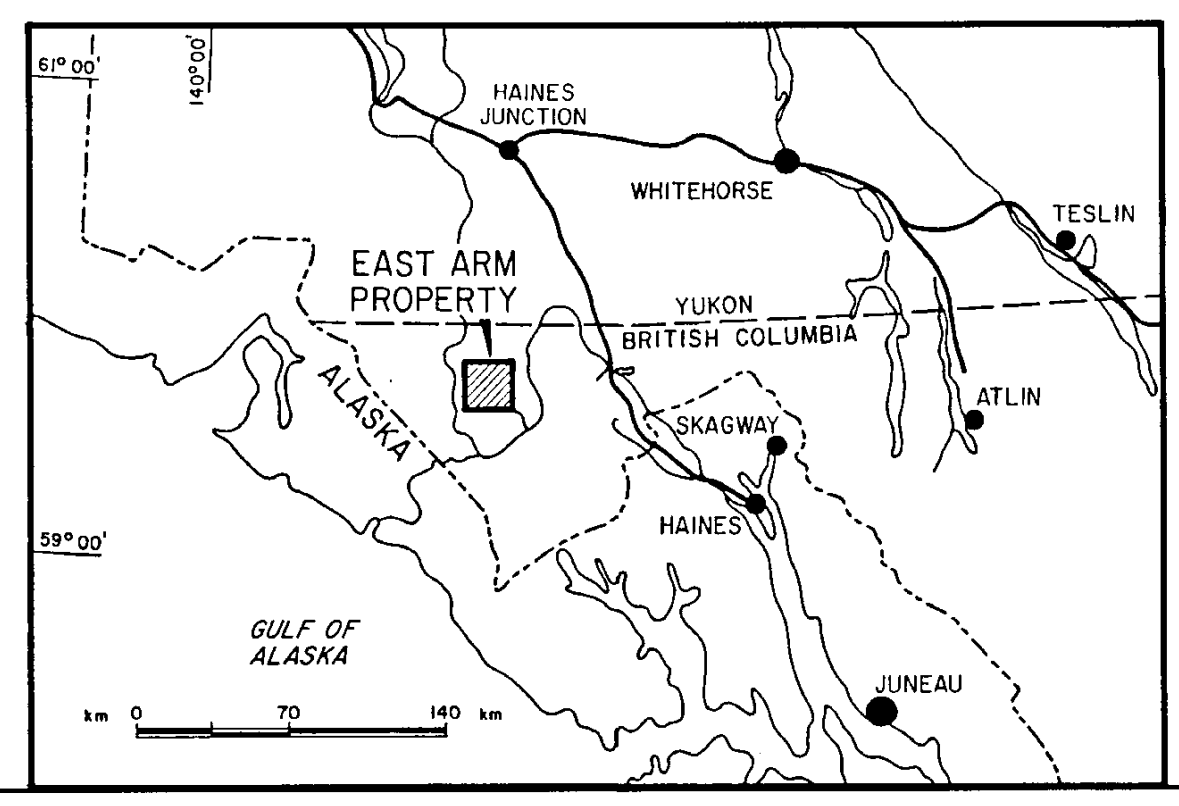
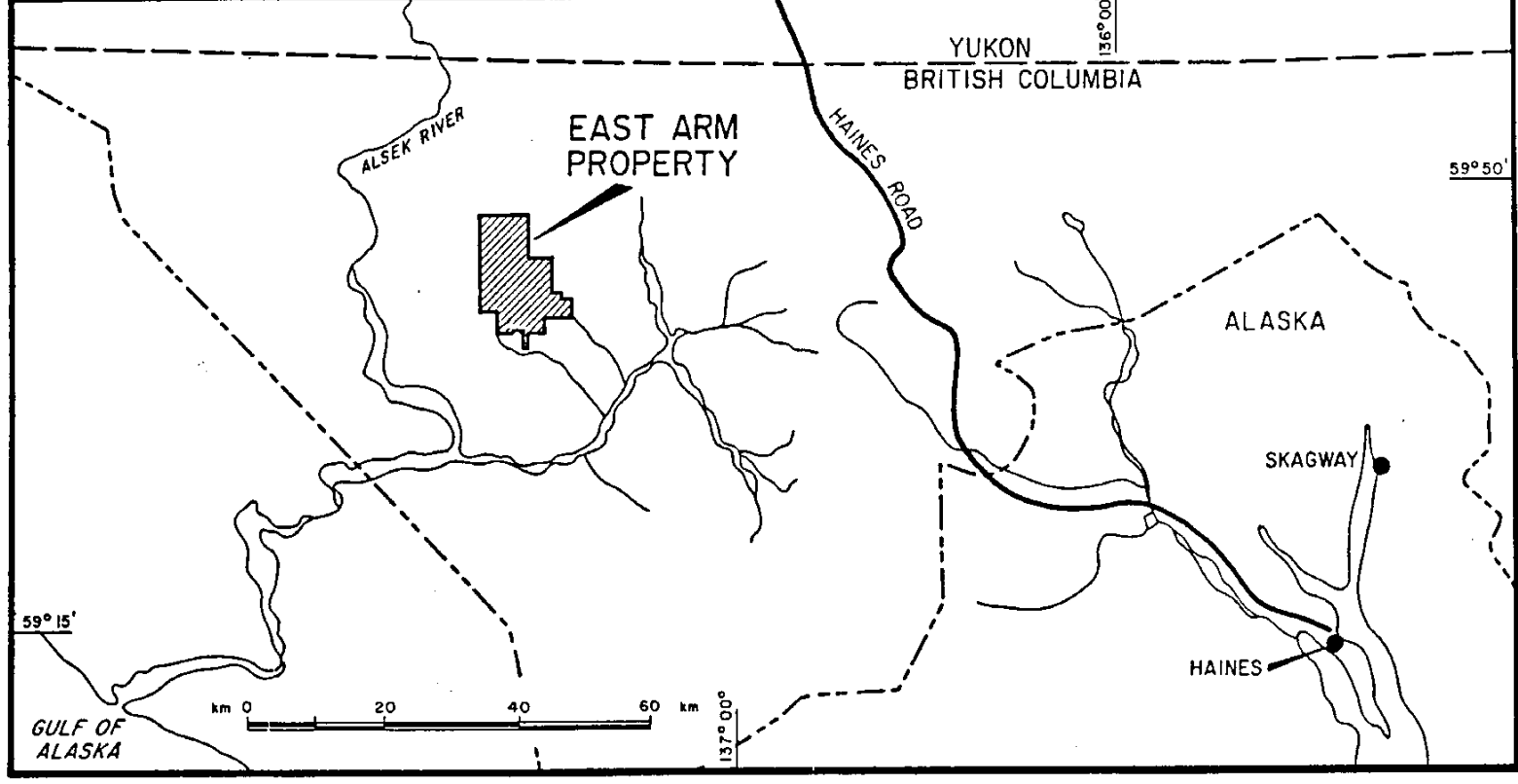
RIME 12
RIME 15

RIME 11
RIME 14

LEGEND

- TALUS/GLACIER BOUNDARY ————
- OUTCROP/TALUS BOUNDARY - - - - -
- TALUS FINES SAMPLING* ○
- CHANNEL SAMPLE *
- CONTINUOUS CHANNEL SAMPLE —

*Analysed only for Au/Ag.
Au:ppb / Ag:ppm / Cu:ppm



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15,426

ST JOE CANADA INC.

EAST ARM PROPERTY
X-SHOWING

ROCK GEOCHEMISTRY Au/Ag/Cu

PLAN No.	DRAWN BY	DATE	FIGURE No.
	EO	NOV 86	8
REVISED		N.T.S.	
		1/4P/12E	

L 2100 S

L 4100 S

MORRAIN

GLACIER

MORRAIN

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14400

BARBICAN MOUNT

L 9440 S

BARBICAN

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,426

LEGEND
CONTINUOUS CHANNEL SAMPLE

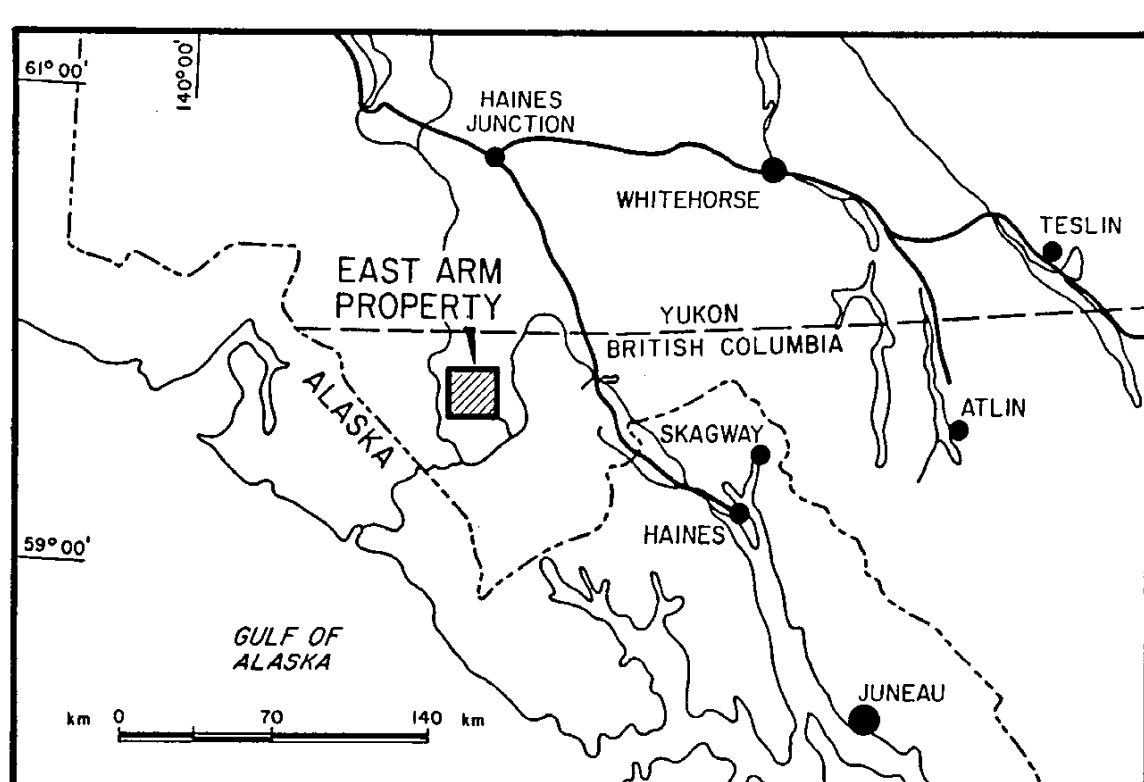
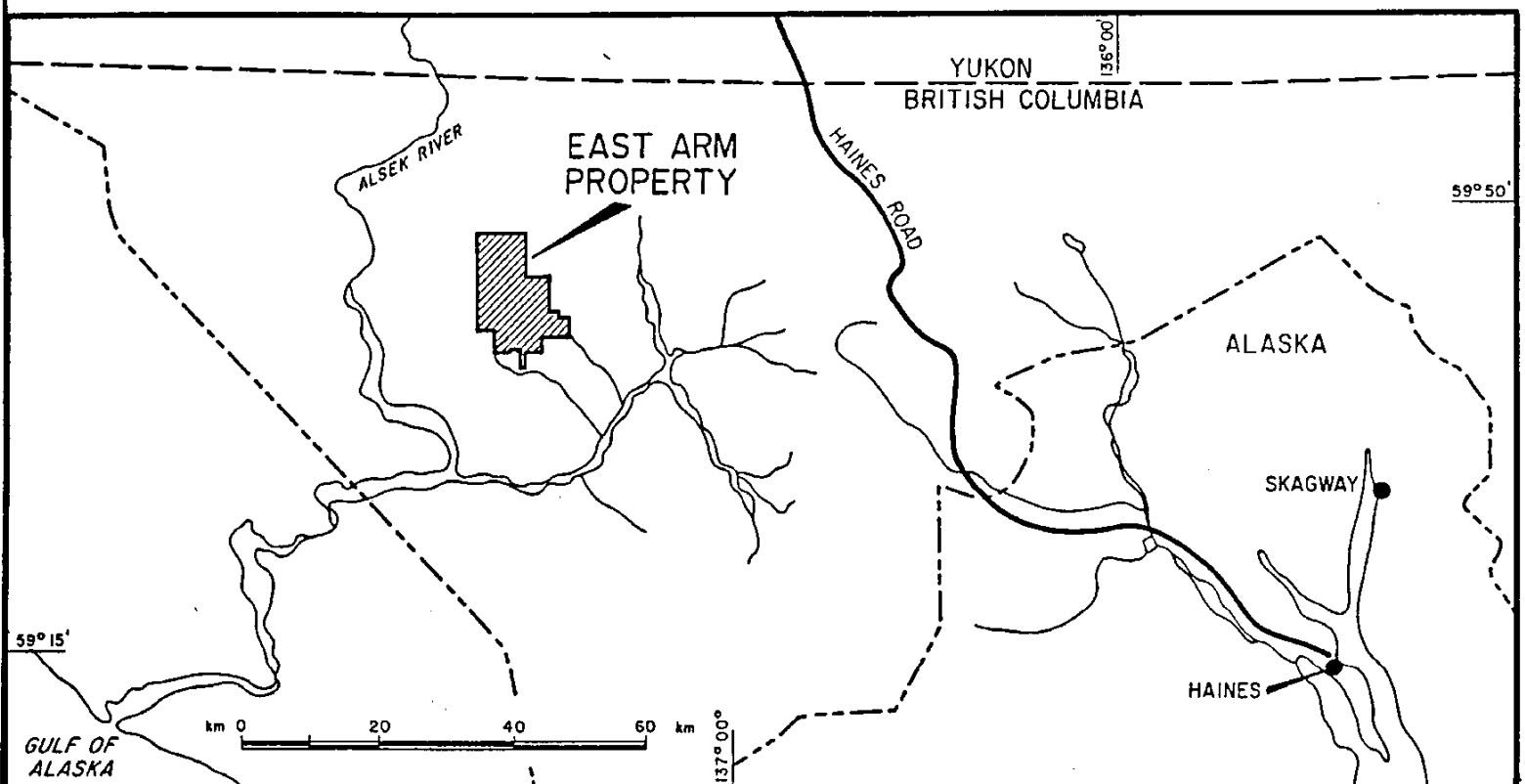
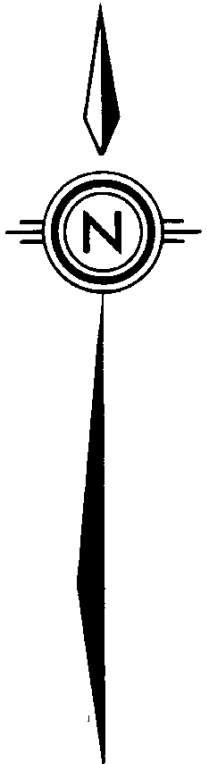
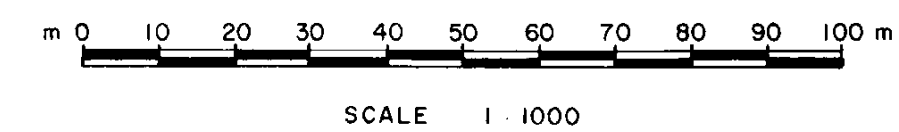
ST. JOE CANADA INC.

EAST ARM PROPERTY

BARBICAN MOUNT

SAMPLE LOCATIONS

PLAN No.	DRAWN BY: EQ	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S.	9



L 2+00 S

L 4+00 S

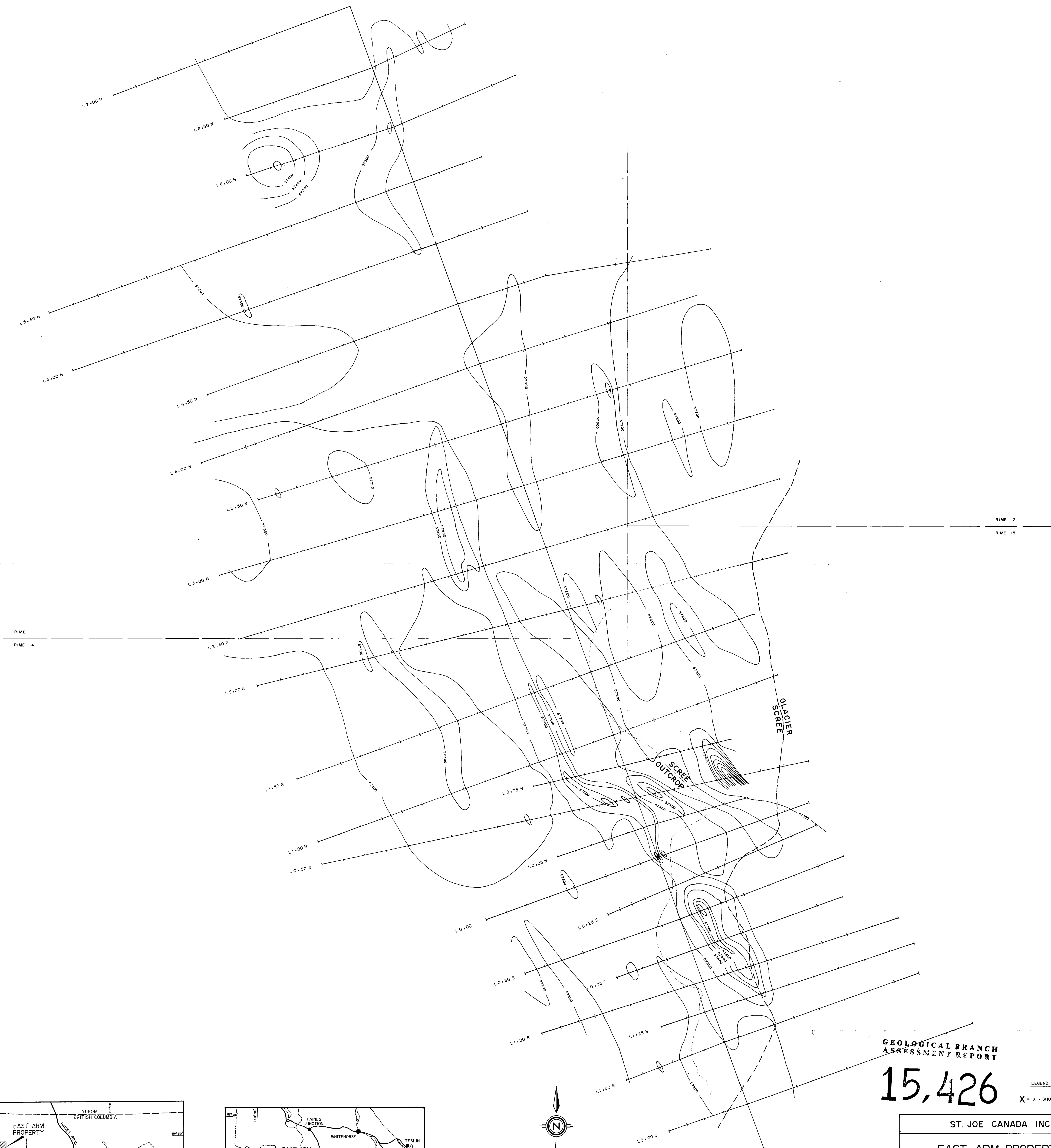
L 9+40 S

GLACIER

GLACIER

BARBICAN MOUNT

Au	Ag	Cu
30.91	7.23	1.12
31.01	7.25	1.13
31.11	7.27	1.14
31.21	7.29	1.15
31.31	7.31	1.16
31.41	7.33	1.17
31.51	7.35	1.18
31.61	7.37	1.19
31.71	7.39	1.20
31.81	7.41	1.21
31.91	7.43	1.22
32.01	7.45	1.23
32.11	7.47	1.24
32.21	7.49	1.25
32.31	7.51	1.26
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32.81	7.61	1.31
32.91	7.63	1.32
33.01	7.65	1.33
33.11	7.67	1.34
33.21	7.69	1.35
33.31	7.71	1.36
33.41	7.73	1.37
33.51	7.75	1.38
33.61	7.77	1.39
33.71	7.79	1.40
33.81	7.81	1.41
33.91	7.83	1.42
34.01	7.85	1.43
34.11	7.87	1.44
34.21	7.89	1.45
34.31	7.91	1.46
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34.51	7.95	1.48
34.61	7.97	1.49
34.71	7.99	1.50
34.81	8.01	1.51
34.91	8.03	1.52
35.01	8.05	1.53
35.11	8.07	1.54
35.21	8.09	1.55
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35.41	8.13	1.57
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35.81	8.21	1.61
35.91	8.23	1.62
36.01	8.25	1.63
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36.41	8.33	1.67
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36.71	8.39	1.70
36.81	8.41	1.71
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37.91	8.63	1.82
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39.61	8.97	1.99
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39.91	9.03	2.02
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40.11	9.07	2.04
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40.61	9.17	2.09
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40.81	9.21	2.11
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41.71	9.39	2.20
41.81	9.41	2.21
41.91	9.43	2.22
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42.11	9.47	2.24
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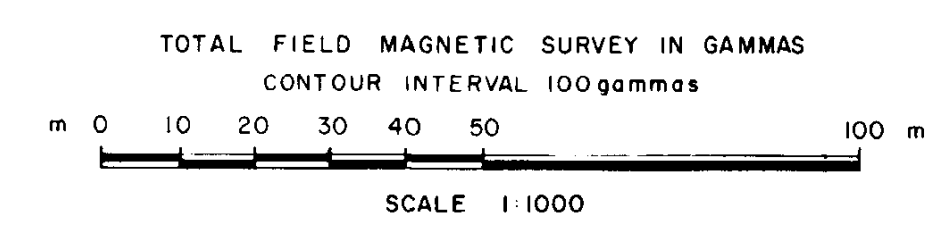
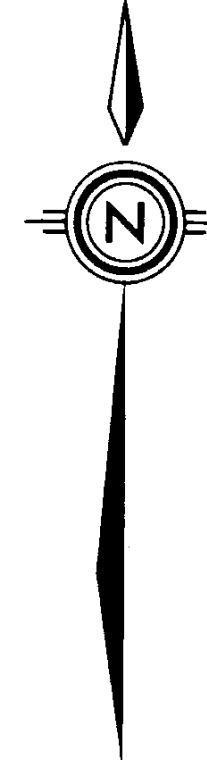
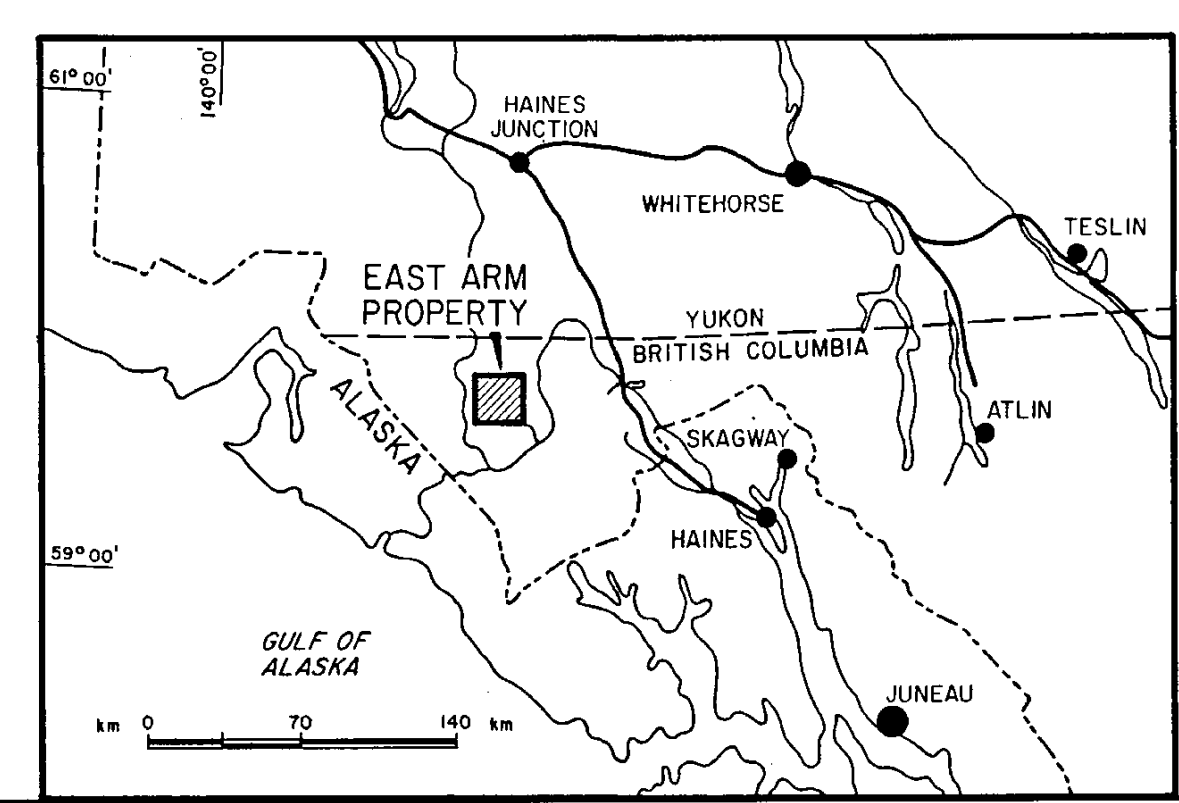
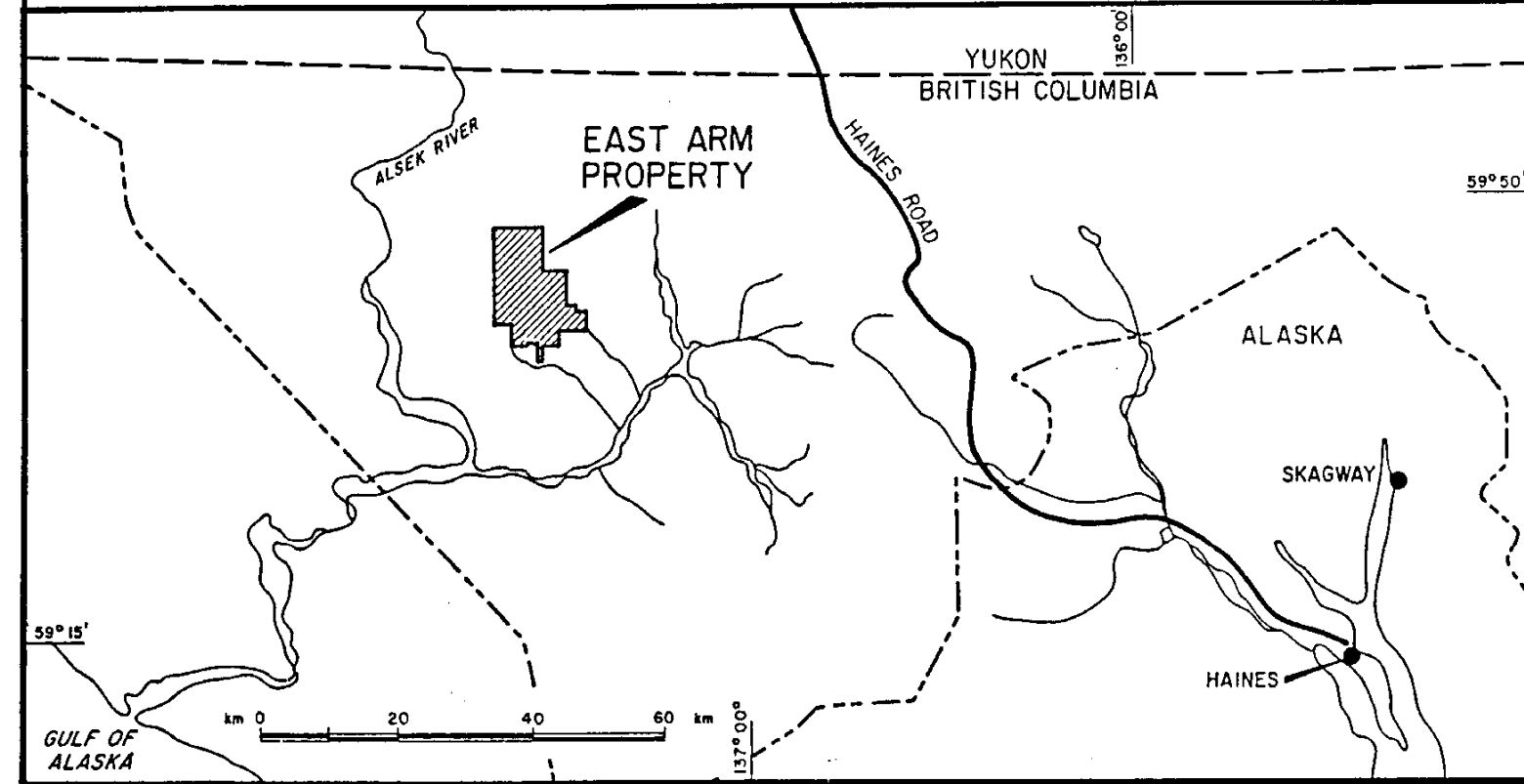
RIME 12
RIME 15

RIME 11
RIME 14

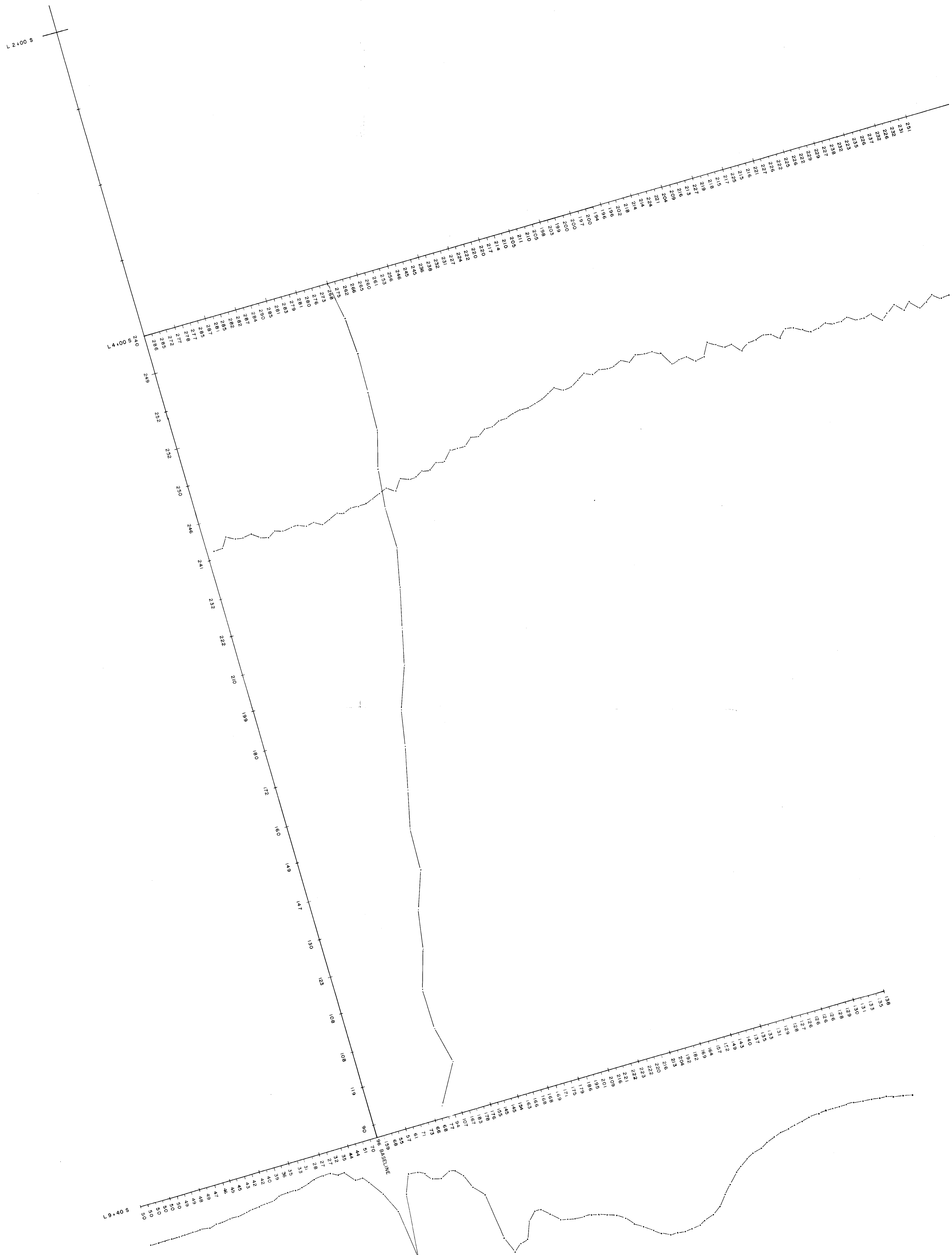
GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,426

LEGEND
X - X - SHOWING



ST. JOE CANADA INC.			
EAST ARM PROPERTY			
X - SHOWING			
MAGNETIC SURVEY			
PLAN No.	DRAWN BY: J.M.K.	DATE: OCTOBER 1986	FIGURE No. 11
REVISED:		N.T.S.	114 P / 12 E



GEOLOGICAL BRANCH
ASSESSMENT REPORT

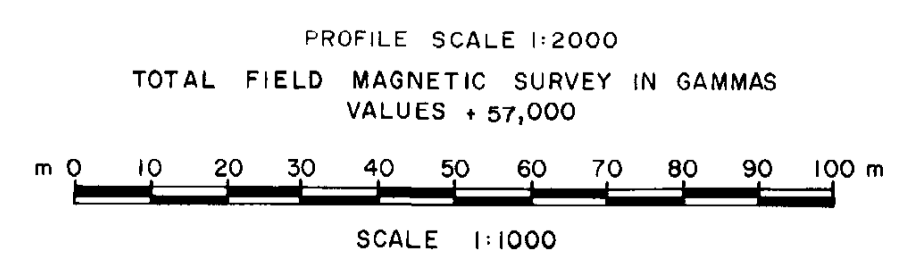
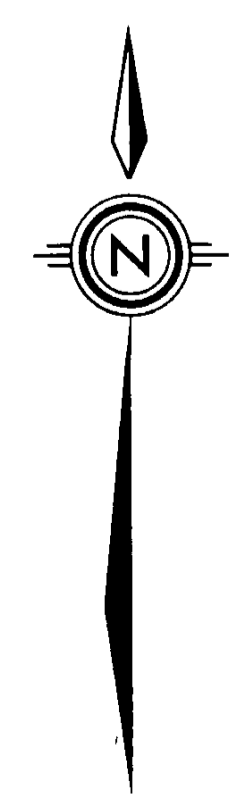
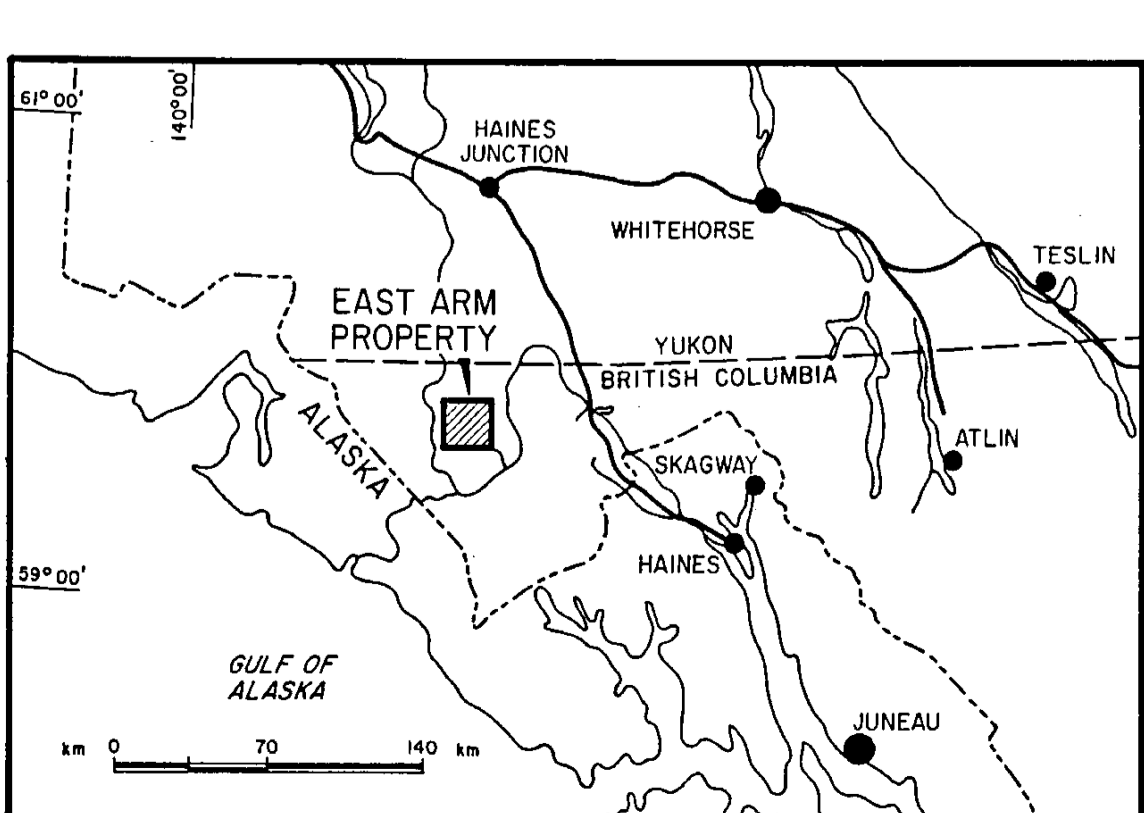
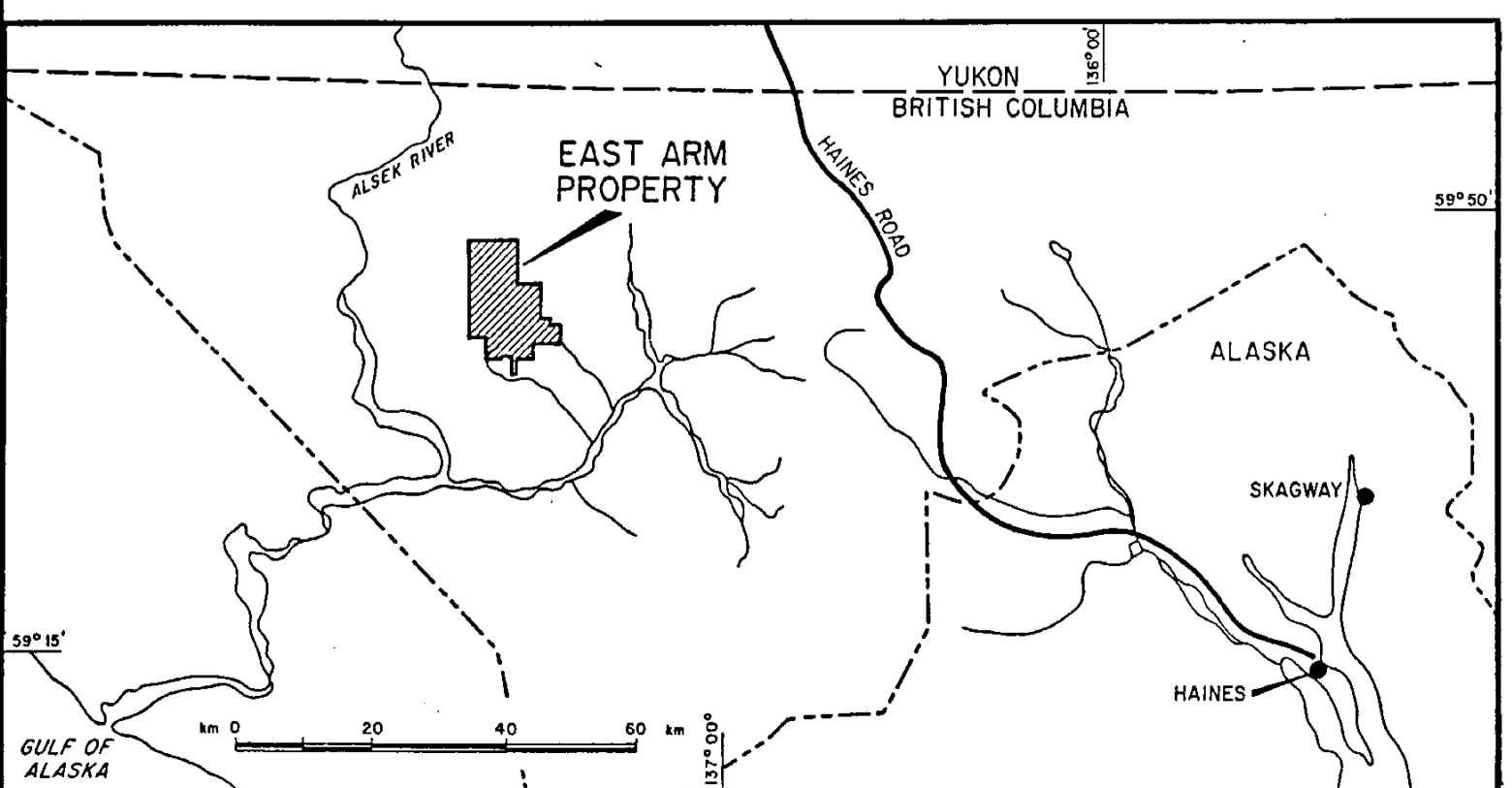
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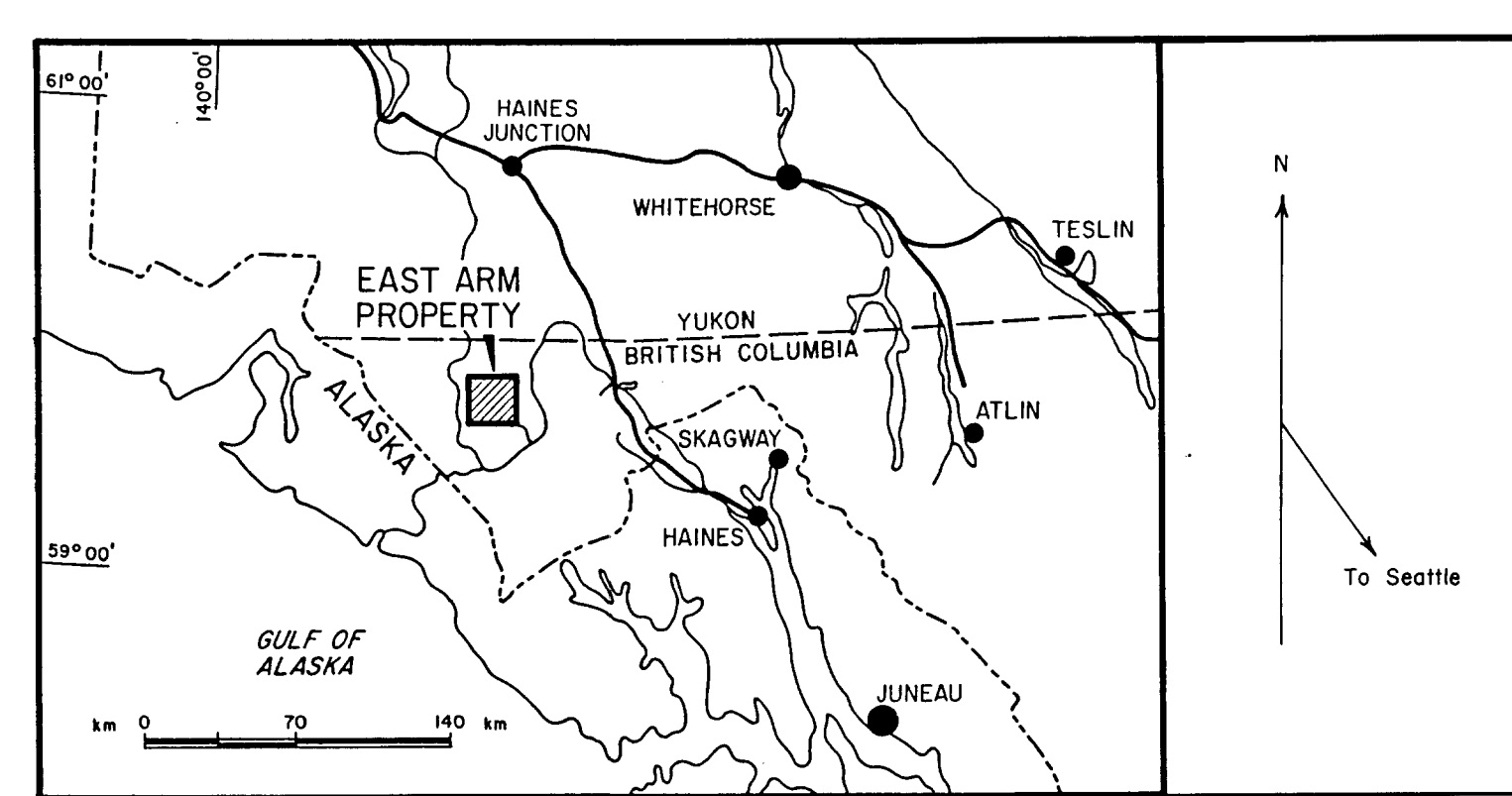
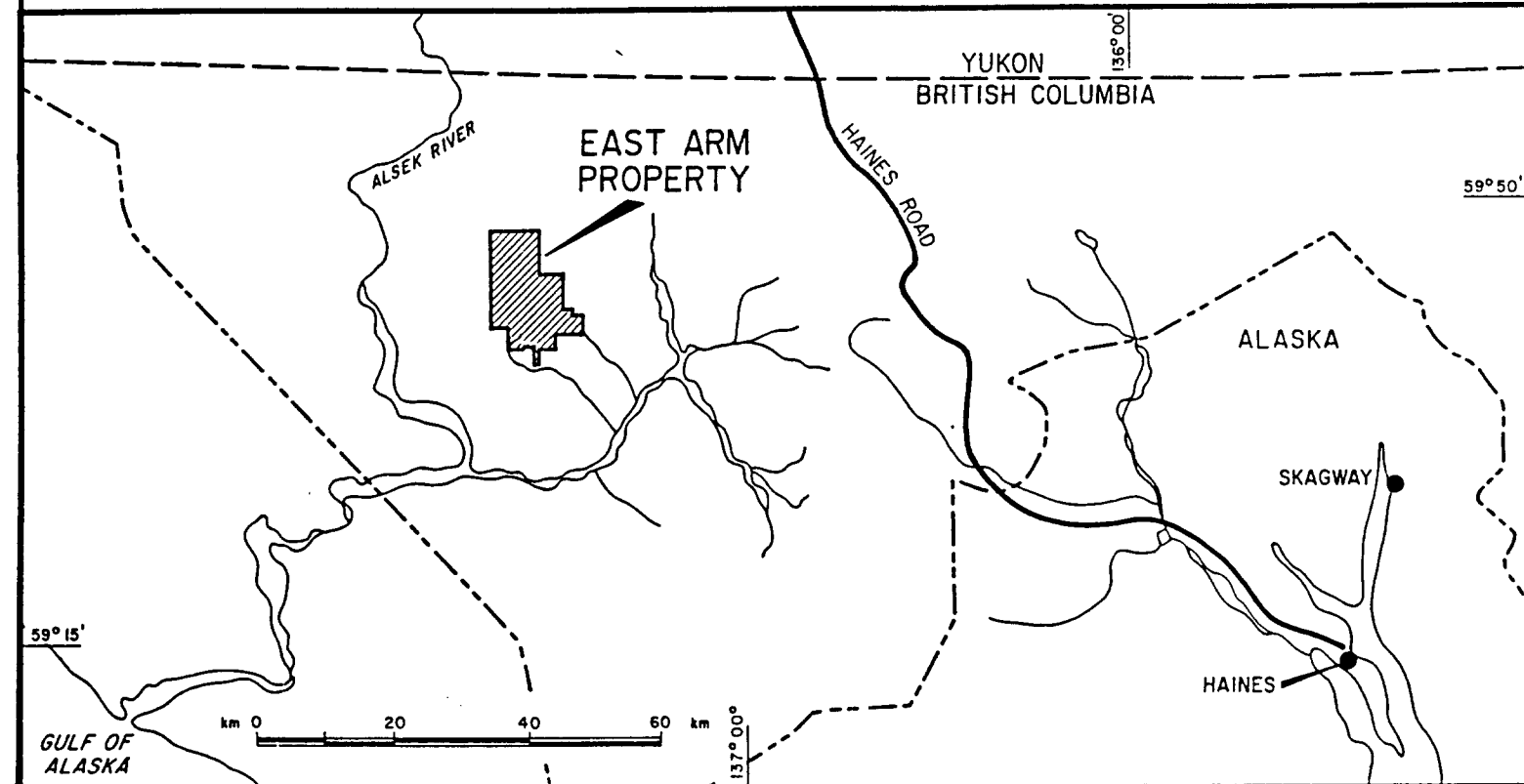
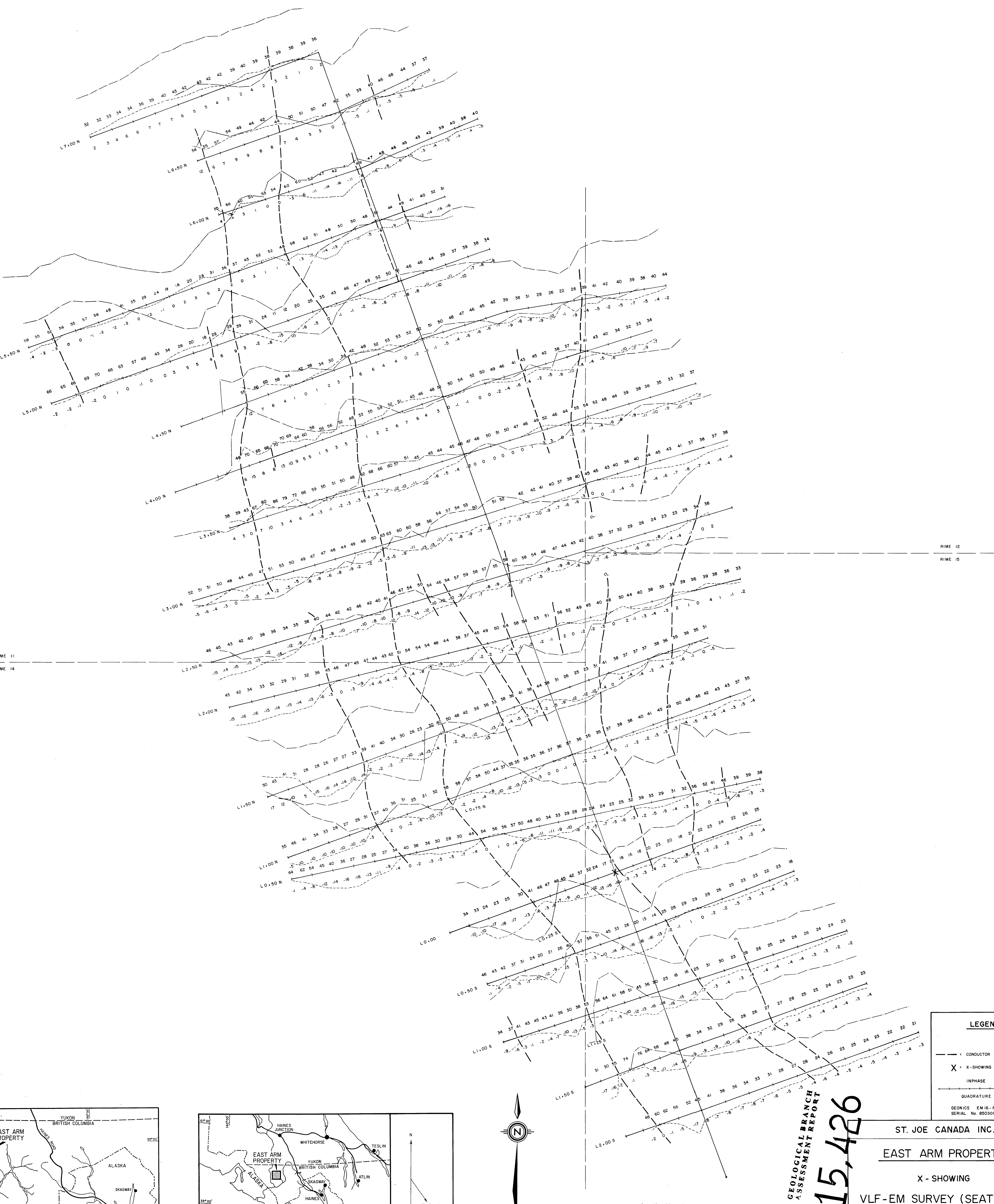
ST. JOE CANADA INC.

EAST ARM PROPERTY
BARBICAN MOUNT

MAGNETIC SURVEY

PLAN No.	DRAWN BY:	DATE	FIGURE No.
	EO	NOV 86	12
REVISED:		NTS.	11/47/12E





LEGEND

- CONDUCTOR AXIS
- X X-SHOWING
- INPHASE

QUADRATURE
GEONICS EM 16-R
SERIAL No. 8503006

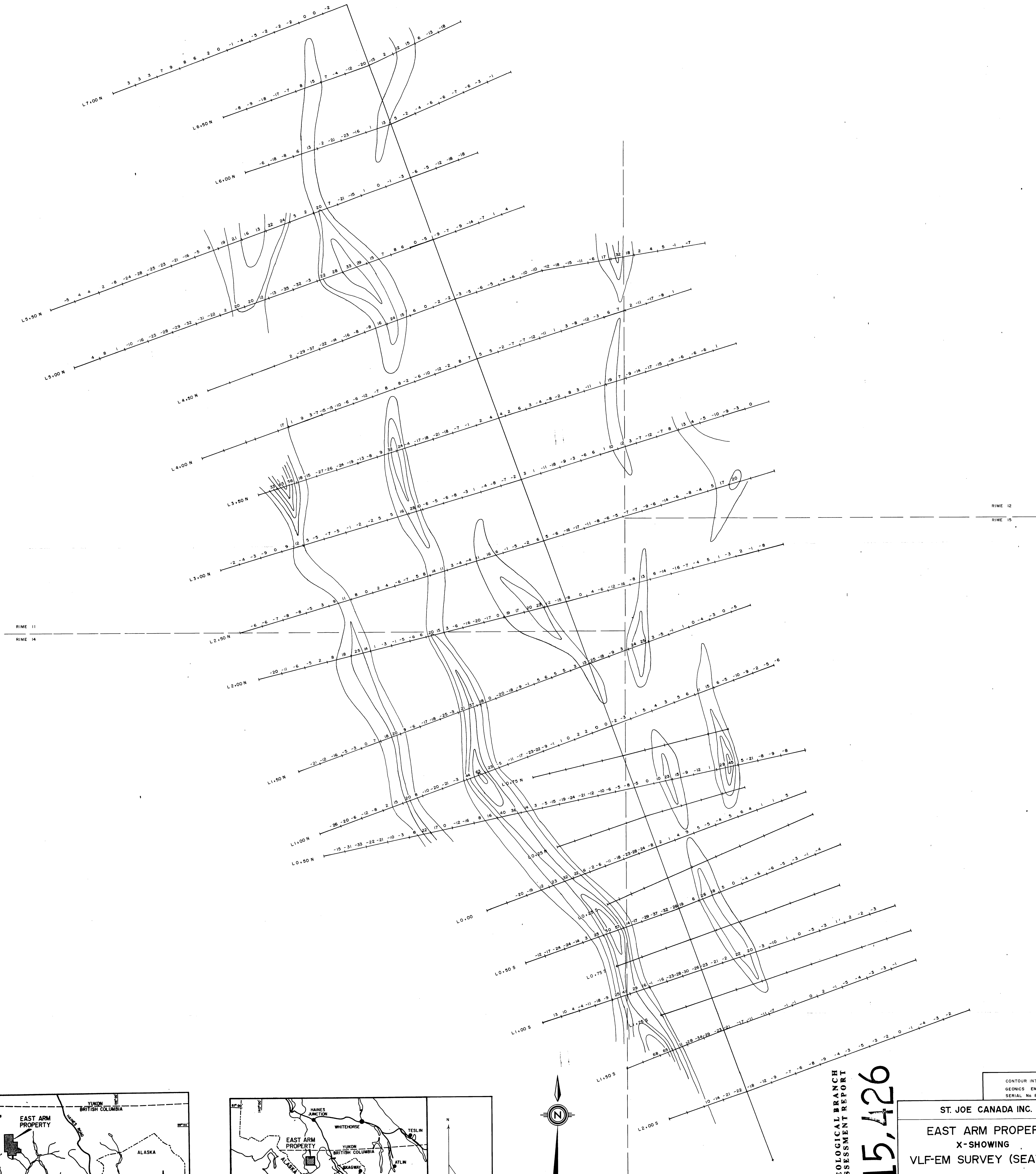
GEOLOGICAL BRANCH
 ASSESSMENT REPORT
15,426

ST. JOE CANADA INC.

EAST ARM PROPERTY

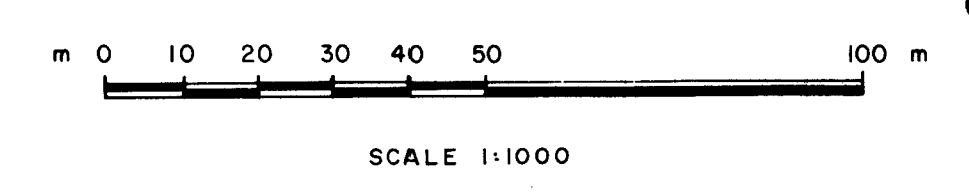
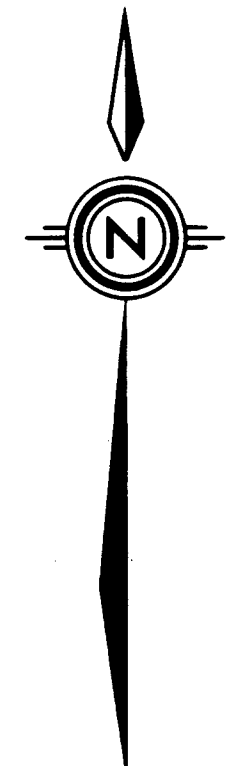
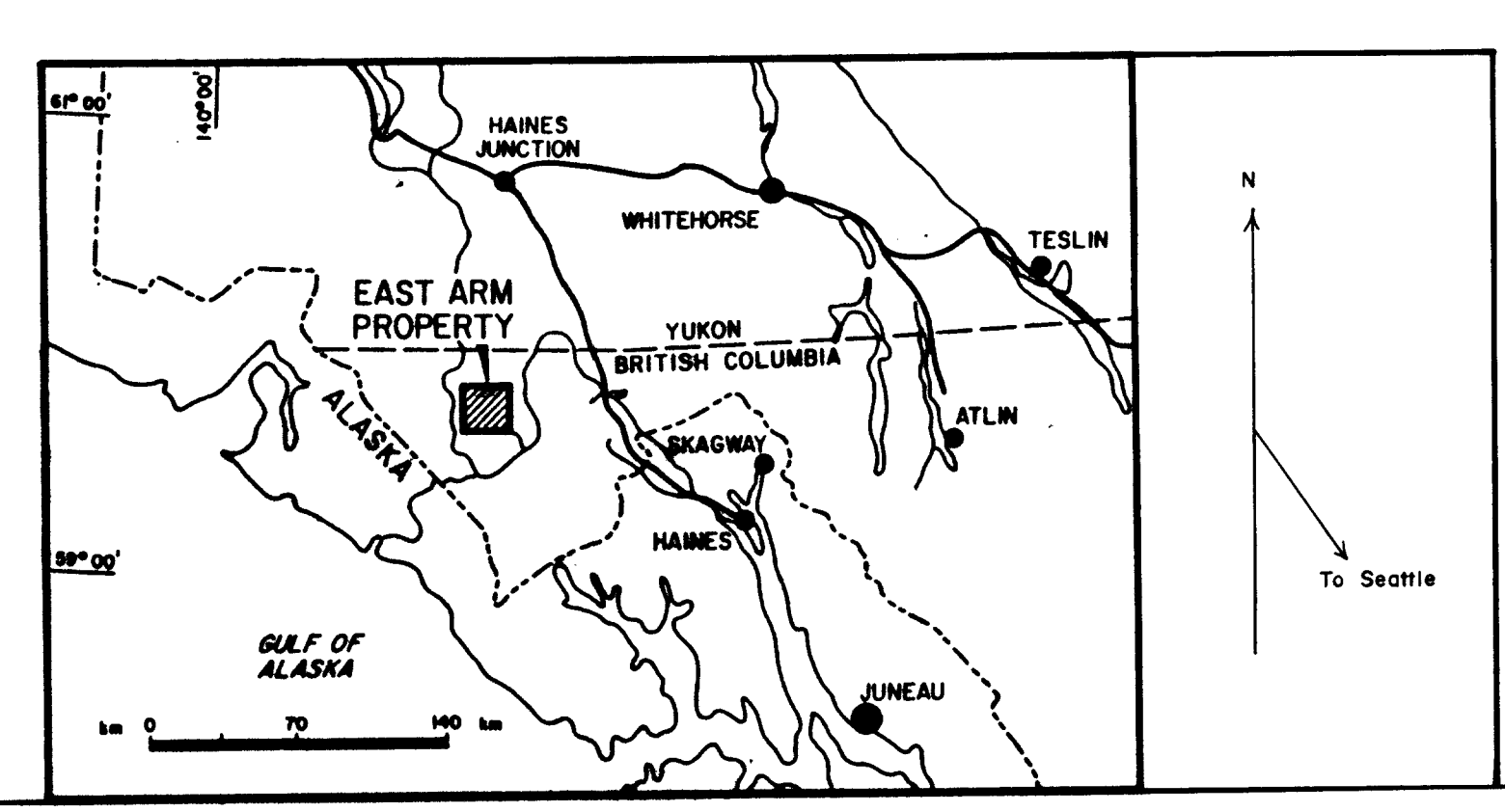
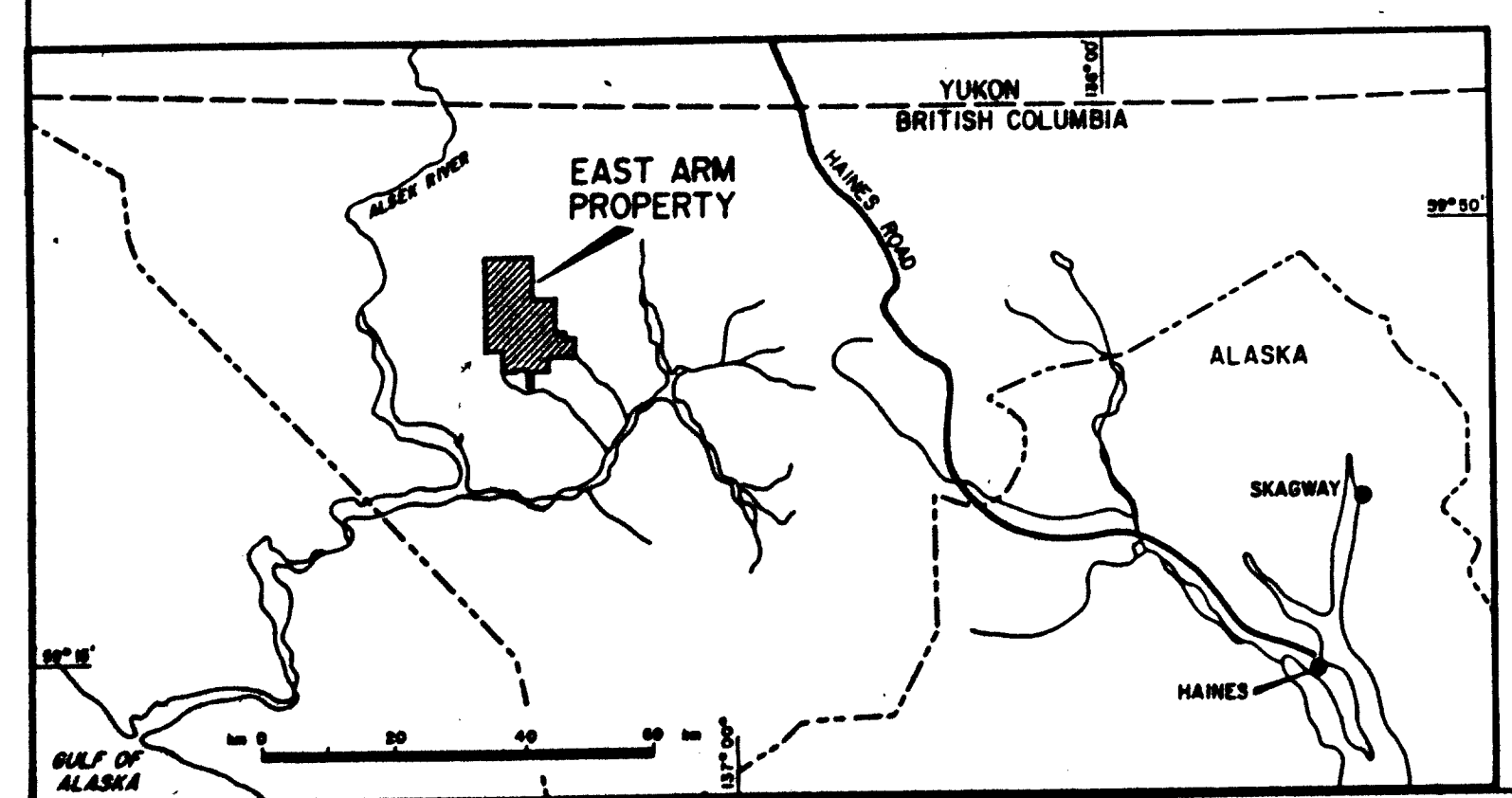
X - SHOWING
VLF-EM SURVEY (SEATTLE)

PLAN No.	DRAWN BY: J.M.K.	DATE: NOVEMBER 1986	FIGURE No. 13
REVISED:		N.T.S.	114/P/12E



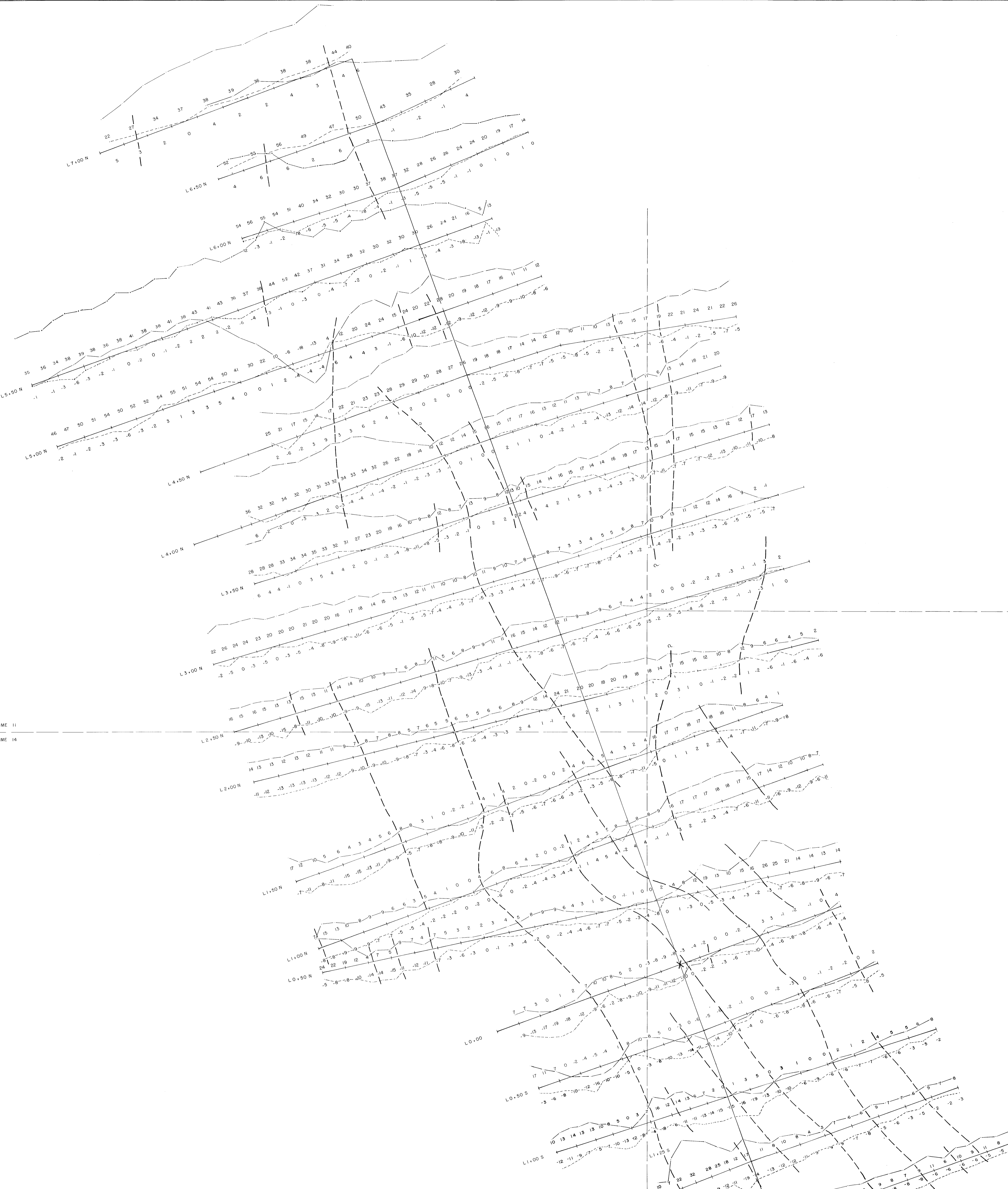
RIME 12
RIME 15

RIME 11
RIME 14



GEOLOGICAL BRANCH
 ASSESSMENT REPORT
15,426

CONTOUR INTERVAL 10 GEONICS EM 16-R SERIAL No 8503006			
ST. JOE CANADA INC.			
EAST ARM PROPERTY			
X-SHOWING			
VLF-EM SURVEY (SEATTLE)			
FRASER FILTER			
PLAN No.	DRAWN BY: EO	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S. 1:14P/12E-13E	13A



RIME 12
RIME 15

RIME 11
RIME 14

LEGEND

- X X - SHOWING
- CONDUCTOR AXIS
- INPHASE
- QUADRATURE

GEONICS EM 16 - R
SERIAL No. 8503006

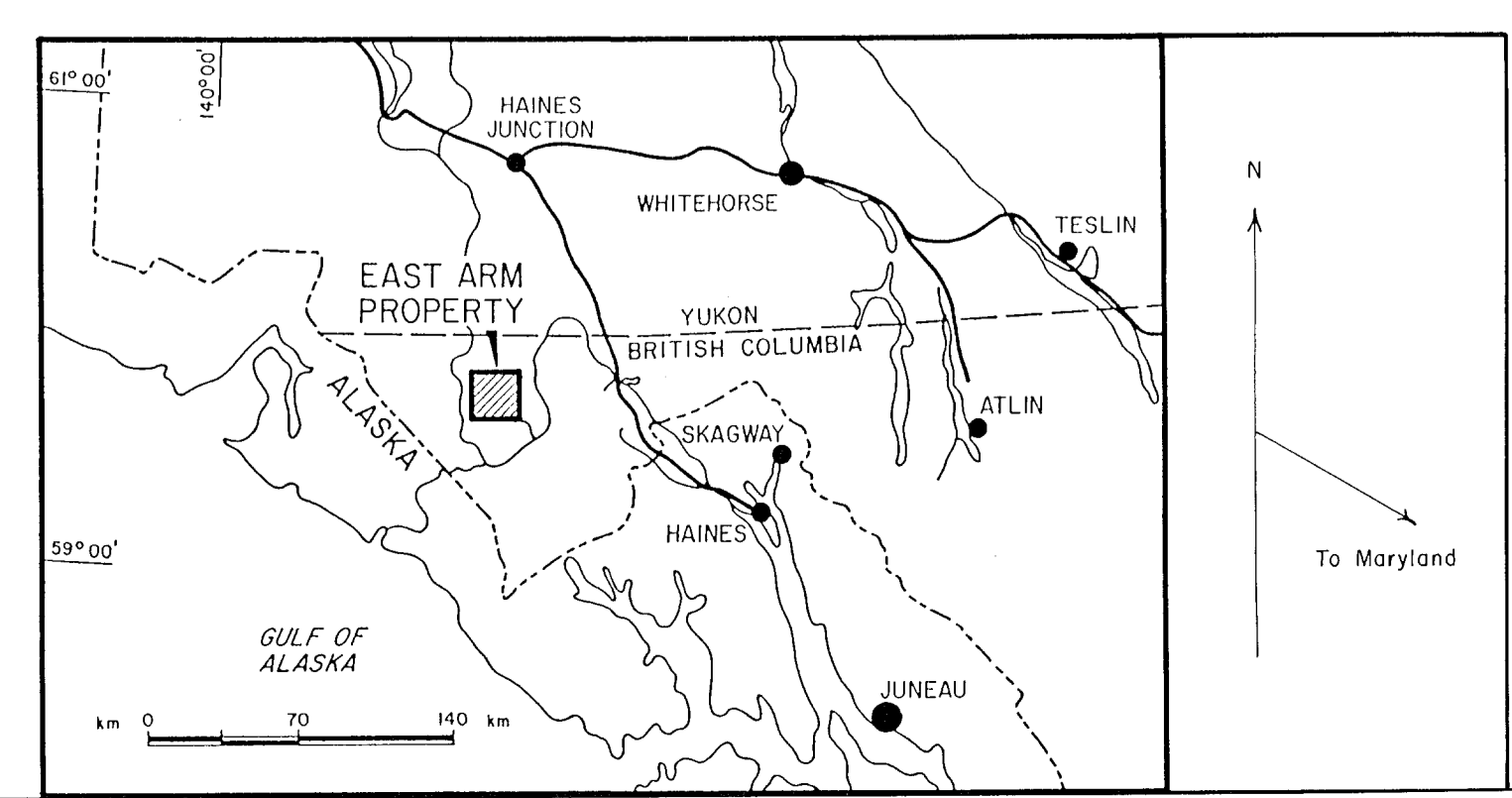
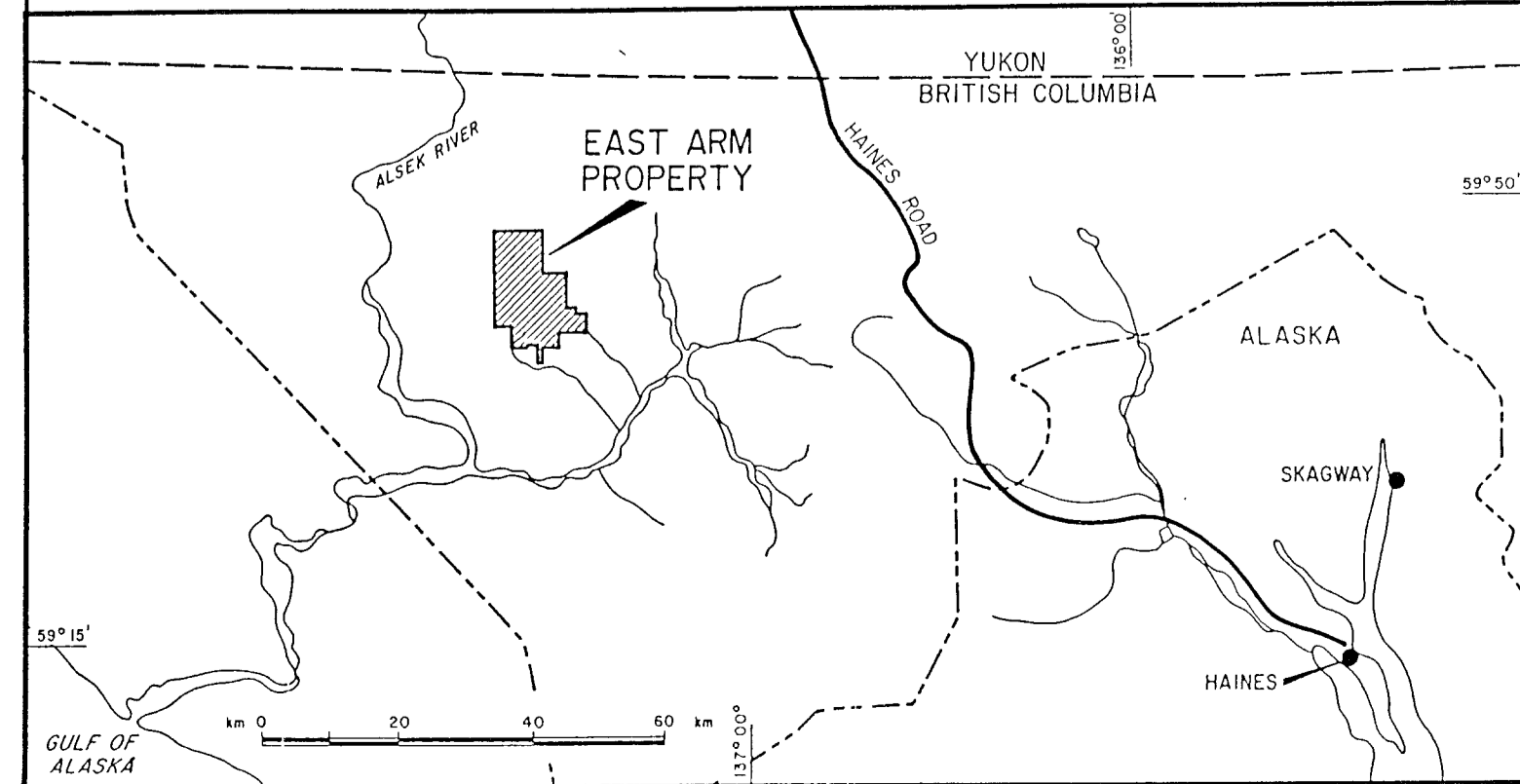
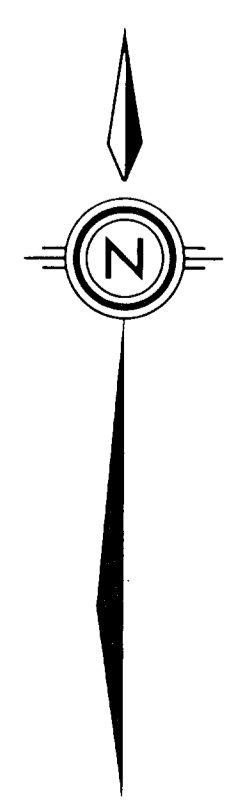
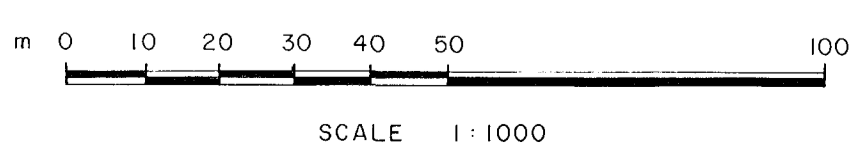
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 GEOLOGICAL BRANCH
 ASSESSMENT REPORT

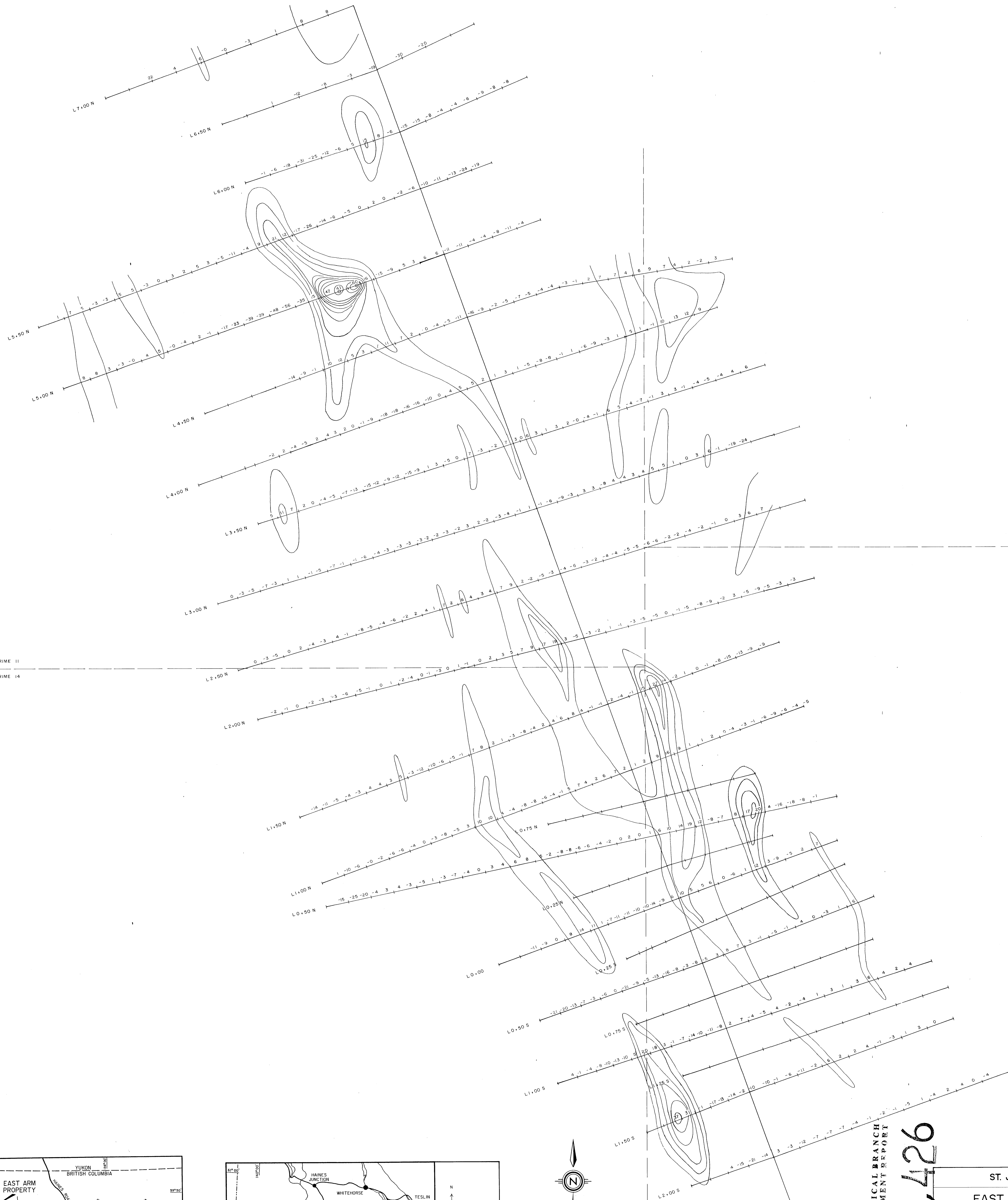
ST. JOE CANADA INC.

EAST ARM PROPERTY
 X - SHOWING
 VLF-EM SURVEY (MARYLAND)

PLAN No.	DRAWN BY: JMK	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S.	14

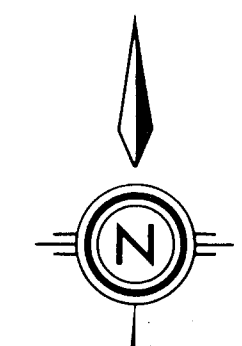
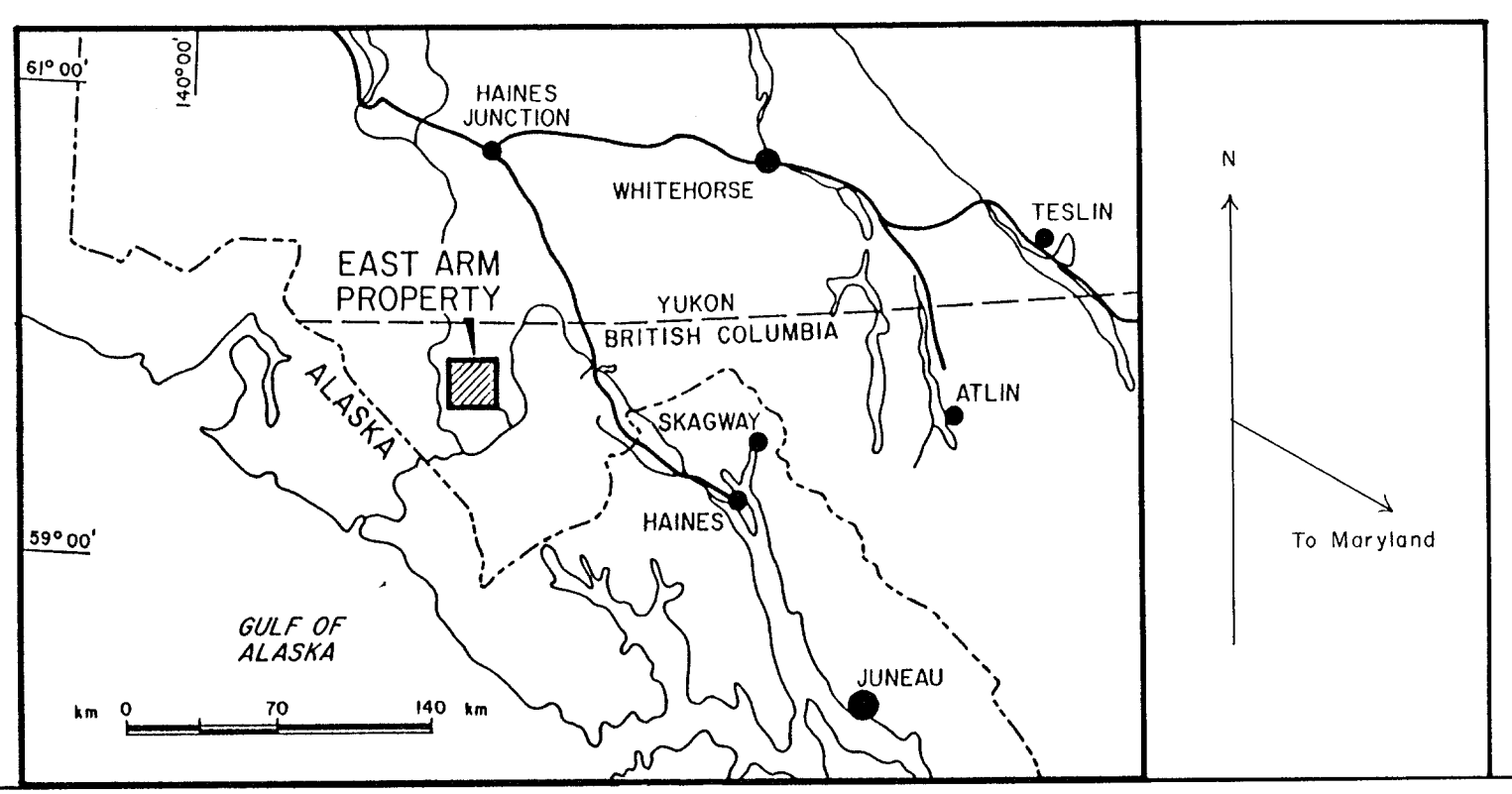
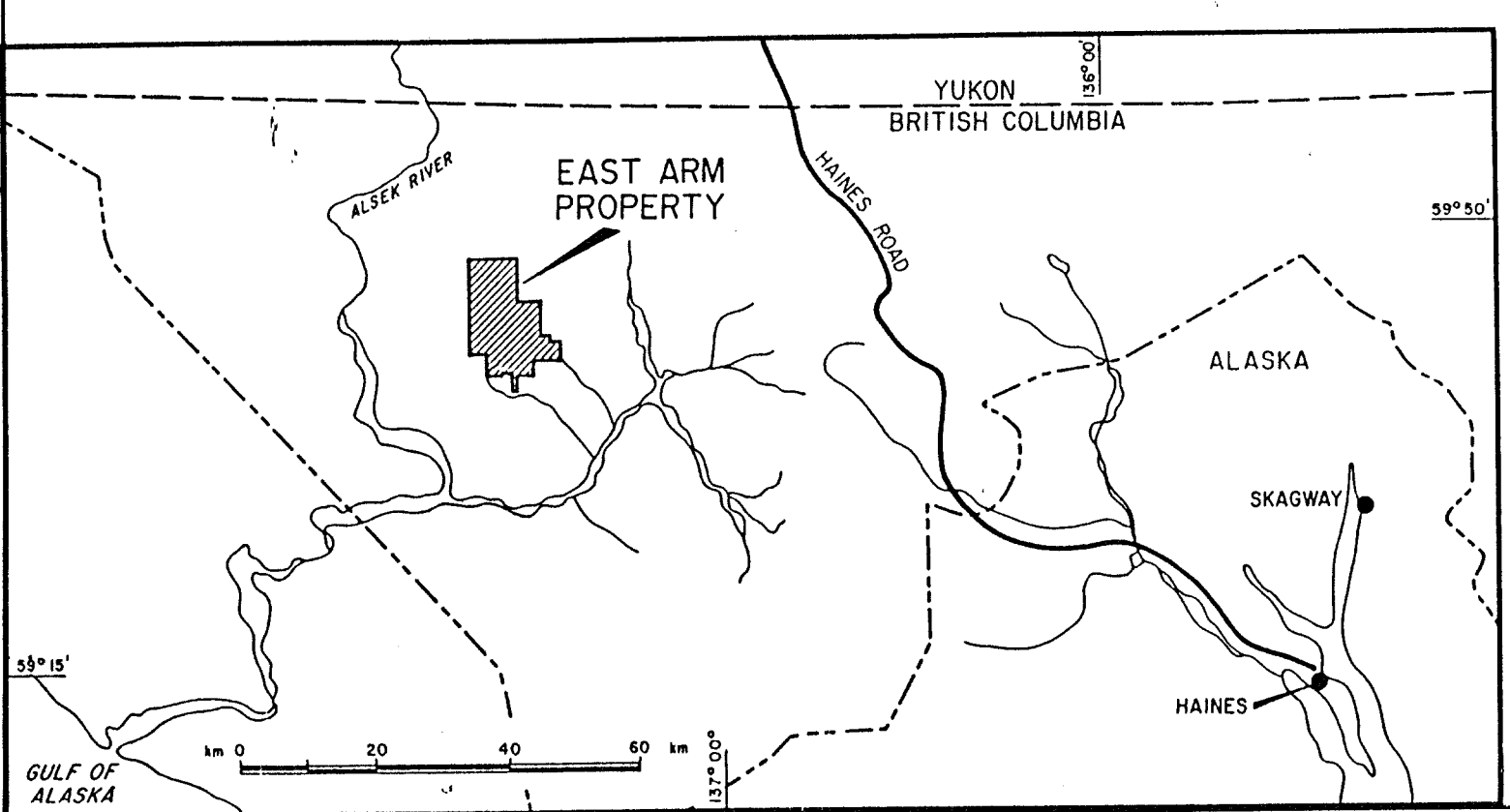
114P/12E





RIME 12
RIME 15

RIME 11
RIME 14



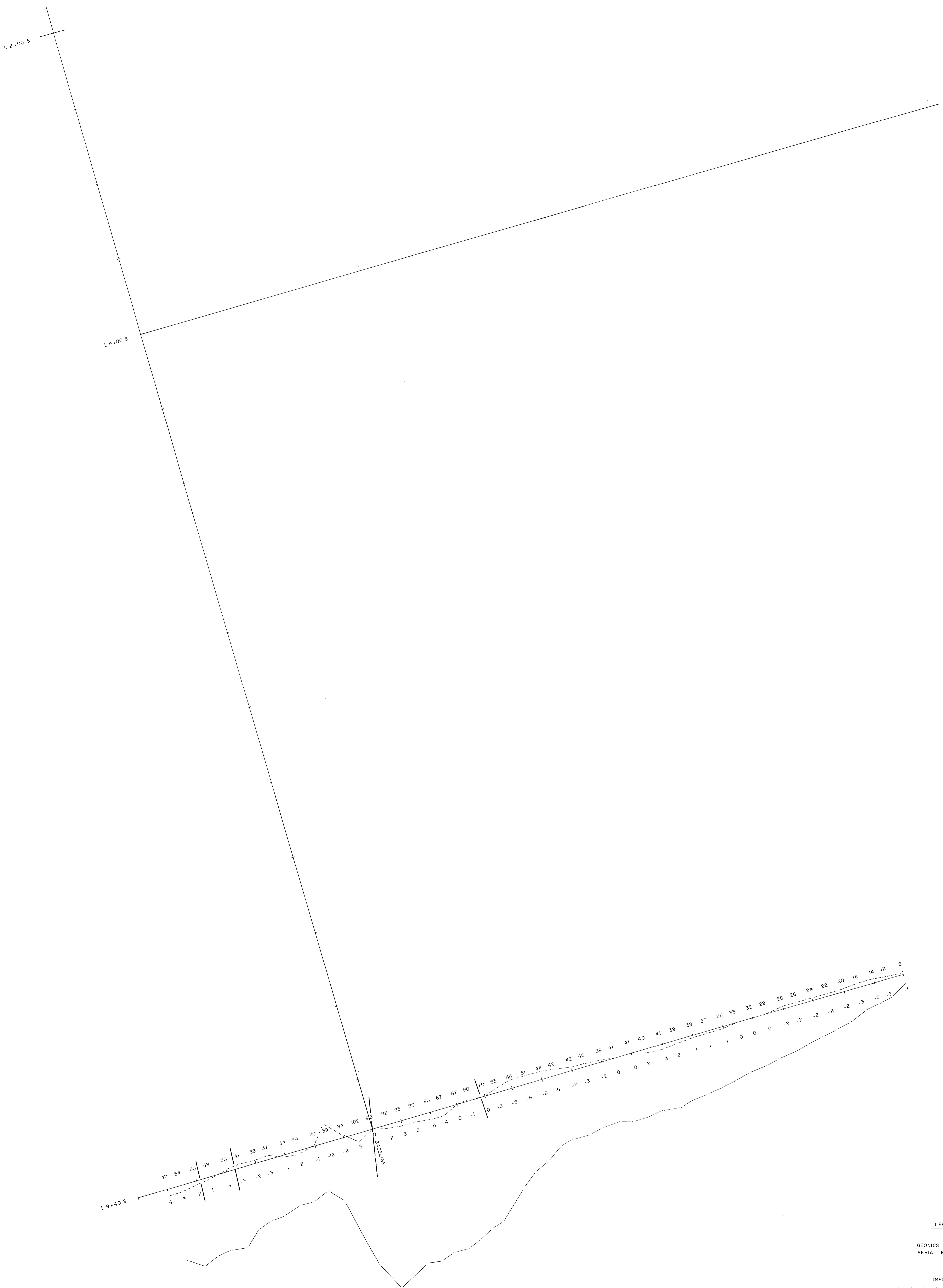
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GEOLOGICAL BRANCH
 ASSESSMENT REPORT
 15,426

CONTOUR INTERVAL 10
GEONICS EM-16-R
SERIAL No. 8503006

ST. JOE CANADA INC.
 EAST ARM PROPERTY
 X-SHOWING
 VLF EM-SURVEY (MARYLAND)
 FRASER FILTER

PLAN No.	DRAWN BY:	DATE:	FIGURE No.
	EO	NOV 86	14A
REVISED:		N.T.S.	
		104P/12E	



LEGEND

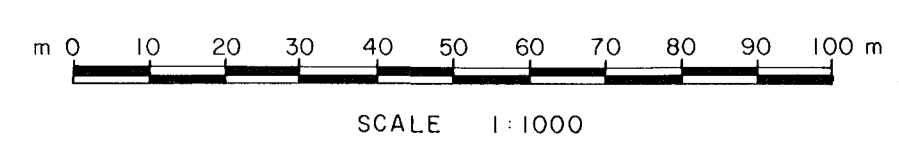
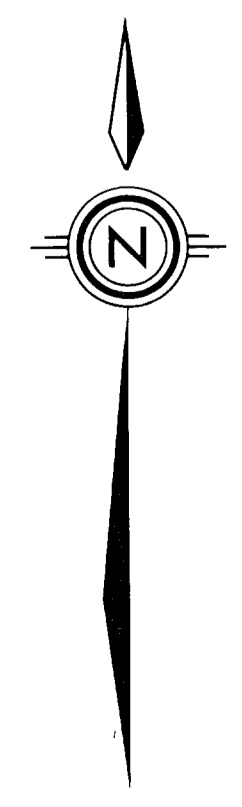
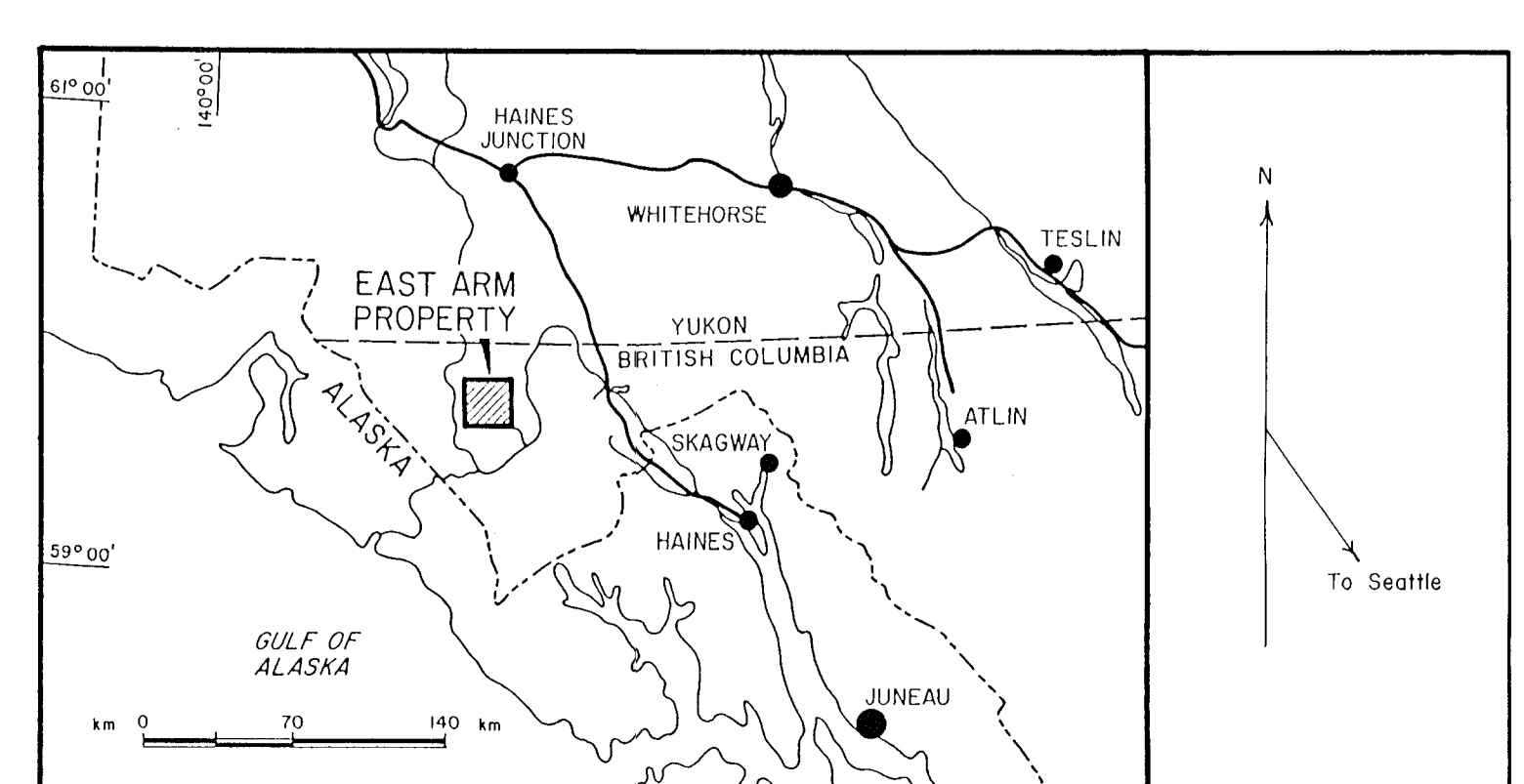
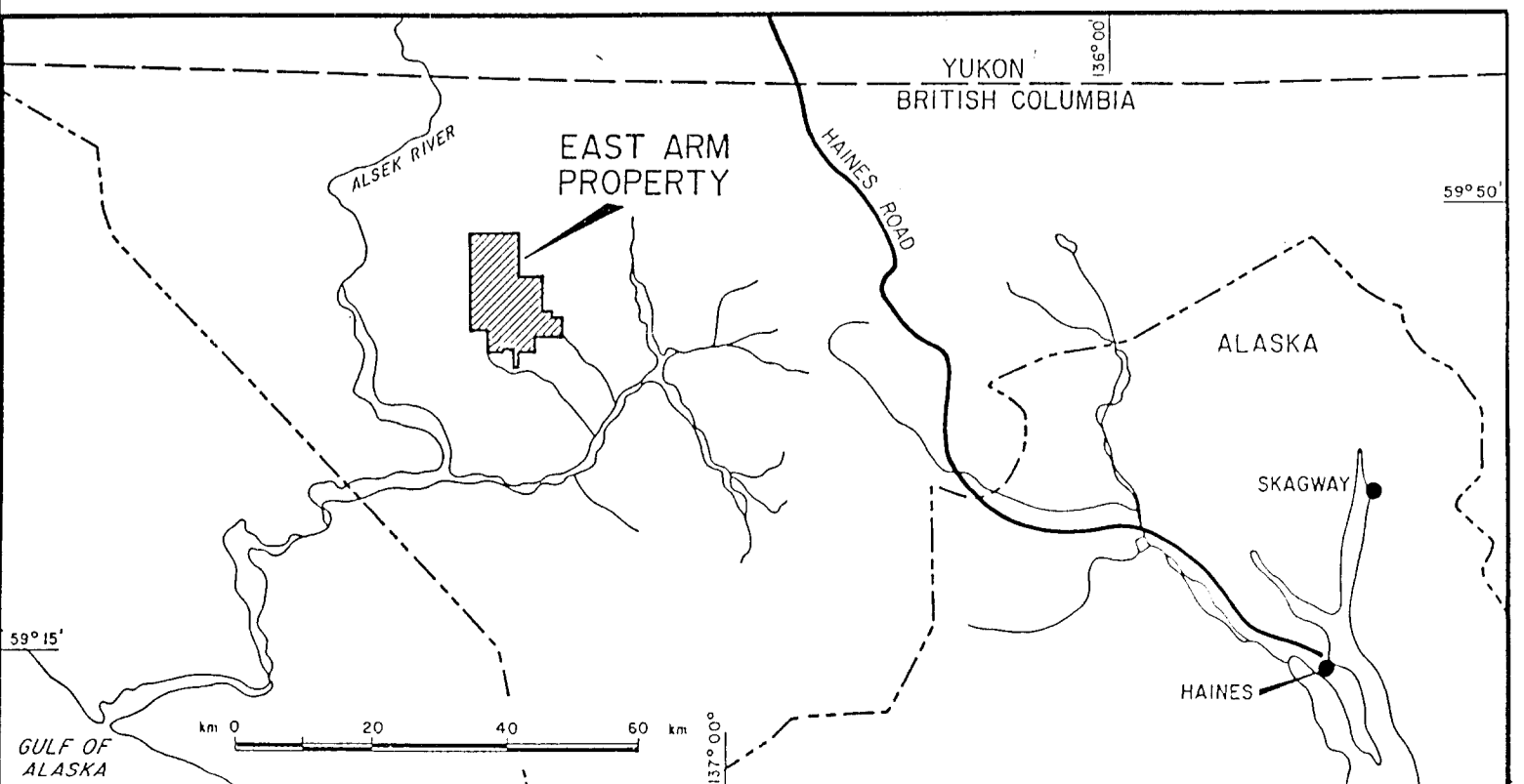
GEONICS EM 16-R
SERIAL No. 8503006

INPHASE
QUADRATURE

CONDUCTOR AXIS

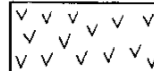
GEOLOGICAL BRANCH
 ASSESSMENT REPORT
15,426

ST. JOE CANADA INC.			
EAST ARM PROPERTY			
BARBICAN MOUNT			
VLF-EM SURVEY (SEATTLE)			
PLAN No.	DRAWN BY: J.M.K.	DATE: OCTOBER 1986	FIGURE No.
REVISED:		N.T.S.	15
			114 P / 12 E




LEGEND

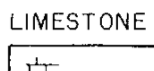
- ANDESITE**



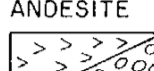
GREY TO DARK GREY FINE GRAINED MASSIVE AND PILLOWED ANDESITE WITH CALCITE FILLED AMYGDULES, PILLOWS UP TO A METRE ACROSS AND CLEARLY DISTINGUISHABLE ON GREY TO GREEN GREY WEATHERED SURFACES.
- ARGILLITE**



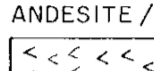
BLACK PLATY CALCAREOUS ARGILLITE WITH PYRITIC SEAMS AND BODINGS OF QUARTZ CARBONATE AND ANDESITE BILLS, PLATY FRACTURE WITH RECESSIVE BLACK WEATHERING, OCCASIONALLY RUSTY.
- LIMESTONE**




BLACK AND DARK GREY FINE GRAINED SILTY LIMESTONE, MASSIVE TO FINELY LAMINATED INTIMATELY INTERBEDDED WITH ARGILLITE.
- ANDESITE**



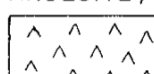
GREEN TO GREEN GREY FINE GRAINED MASSIVE AND PILLOWED ANDESITE FLOWS WITH ZONES OF MODERATE TO INTENSIVE CALCITE AMYGDULE DEVELOPMENT. PILLOWED STRUCTURE IS INTERMITTENT AND PILLOWS ARE GENERALLY SMALL (10-20cm ACROSS) OCCASIONALLY SHOWS SHEARING WITH DEVELOPMENT OF CHLORITE IN SCHISTOSE TEXTURE AND FREQUENTLY CONTAINS ZONES OF FRACTURING ACCOMPANIED BY BLEACHING AND PYRITE MINERALIZATION. CONTACTS WITH SEDIMENTS ARE FREQUENTLY GRADATIONAL AND MARKED BY AN INCREASE IN ARGILLACEOUS MATERIAL IN THE INTERSTICES OF PILLOW STRUCTURES. OUTCROPS ARE GENERALLY MASSIVE AND WEATHER GREY TO GREEN GREY, RUSTY ORANGE WHEN SULPHIDES OCCUR.
- ANDESITE / DACITE**




LIGHT BUFF TO GREY FINE GRAINED MASSIVE ANDESITE/DACITE WITH FINE DISSEMINATED PYRITE, WEATHERS TO A DISTINCTIVE LIGHT GREY TO WHITE BLOCKY OUTCROPS.
- BASALT DYKES**





BLACK FINE GRAINED BASALT DYKES CROSSCUTTING STRATIGRAPHY WEATHERING BLACK AND RESISTIVE.
- ANDESITE / BASALT**




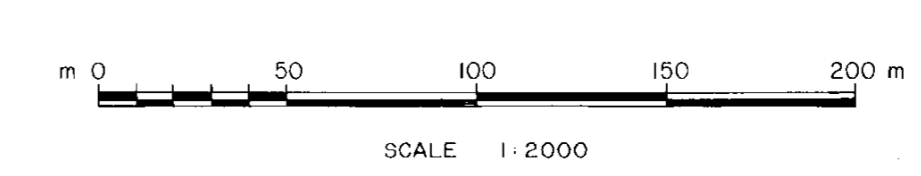
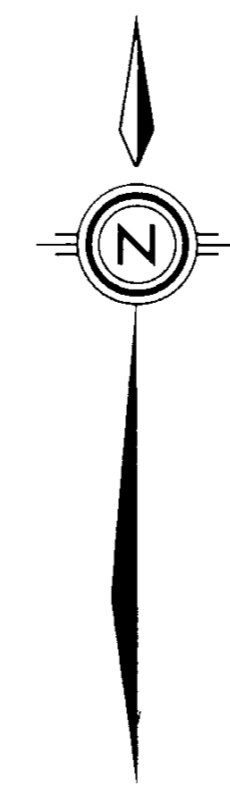
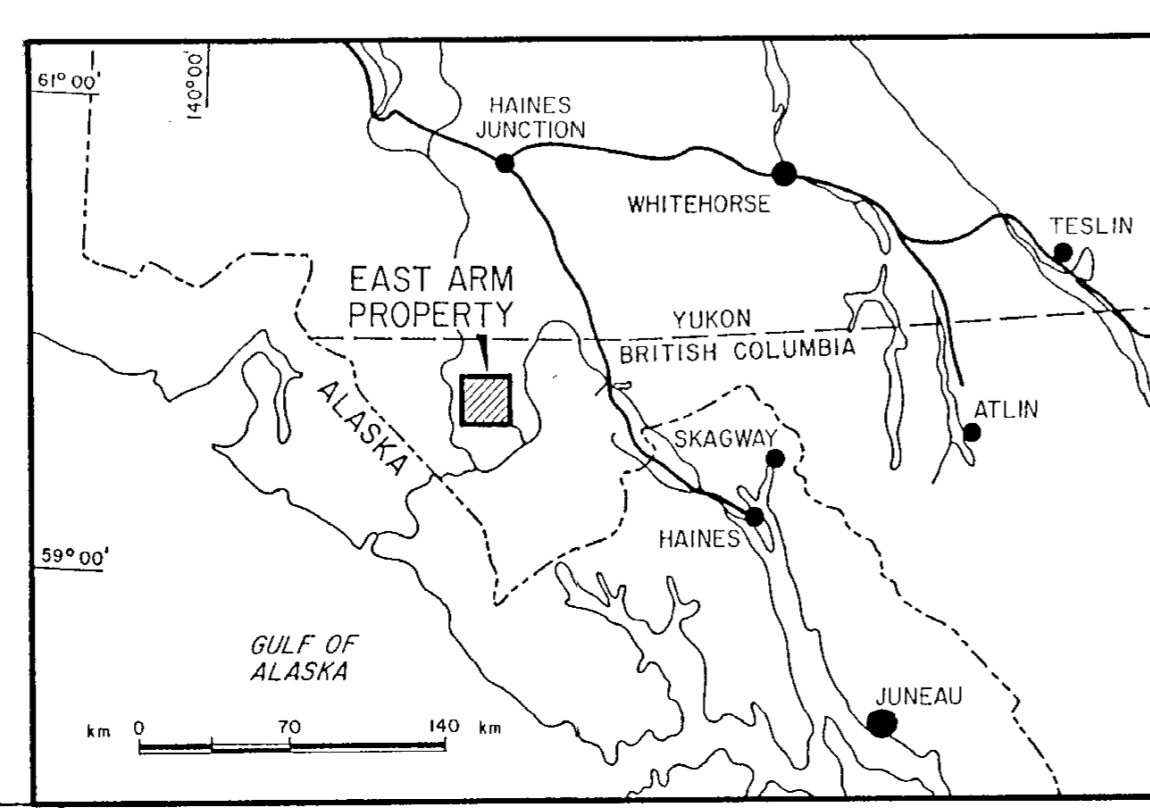
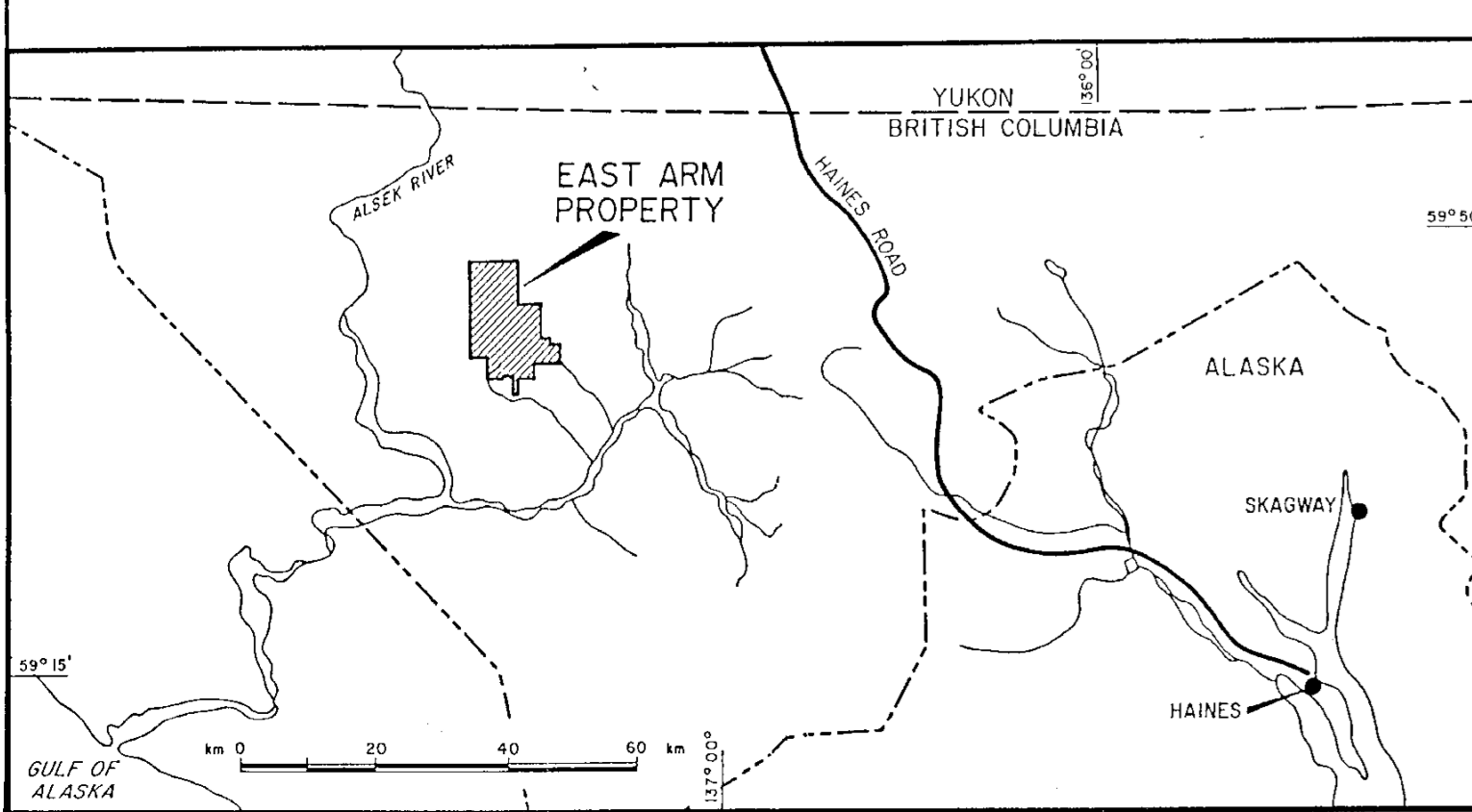
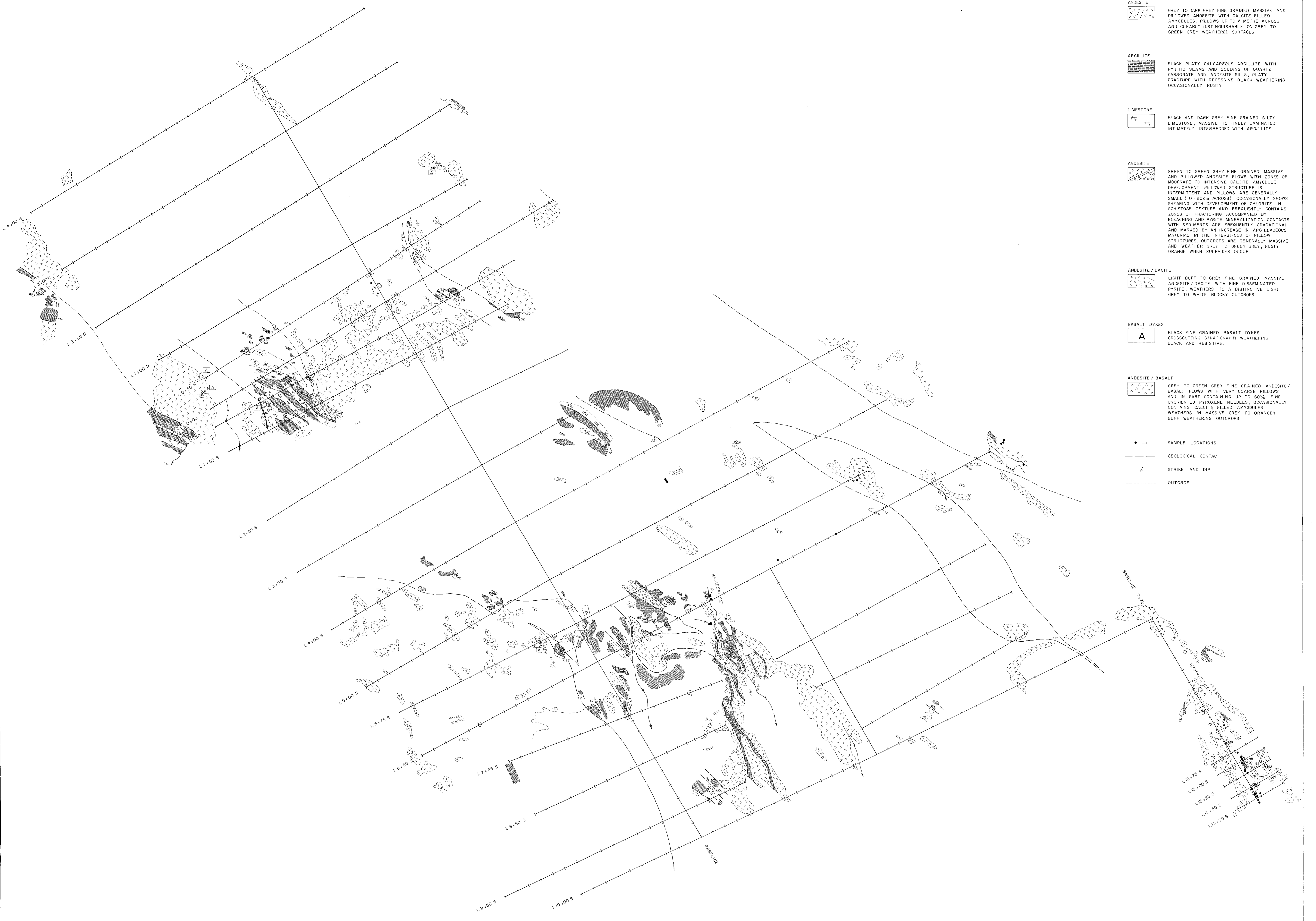
GREY TO GREEN GREY FINE GRAINED ANDESITE/BASALT FLOWS WITH VERY COARSE PILLOWS AND IN PART CONTAINING UP TO 50% FINE UNORIENTED PYROXENE NEEDLES, OCCASIONALLY CONTAINS CALCITE FILLED AMYGDULES. WEATHERS IN MASSIVE GREY TO ORANGEY BUFF WEATHERING OUTCROPS.
- SAMPLE LOCATIONS**


- GEOLOGICAL CONTACT**


- STRIKE AND DIP**


- OUTCROP**





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ASSESSMENT REPORT

15,426

ST. JOE CANADA INC.
EAST ARM PROPERTY
PAMPERO
GEOLOGICAL MAP

PLAN No.	DRAWN BY J.M.K.	DATE NOVEMBER 1986	FIGURE No.
REVISED		N.T.S. 114P/12E-13E	16



GEOLOGICAL BRANCH
ASSESSMENT REPORT

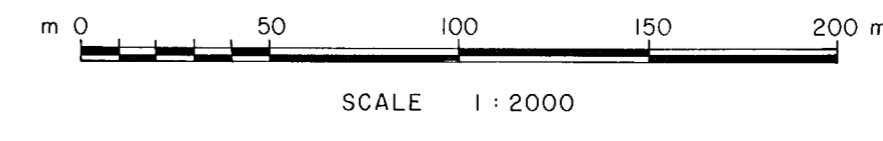
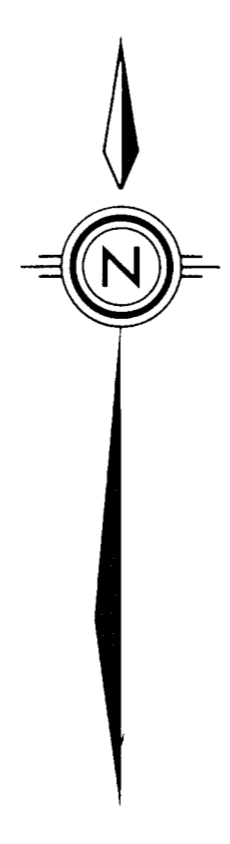
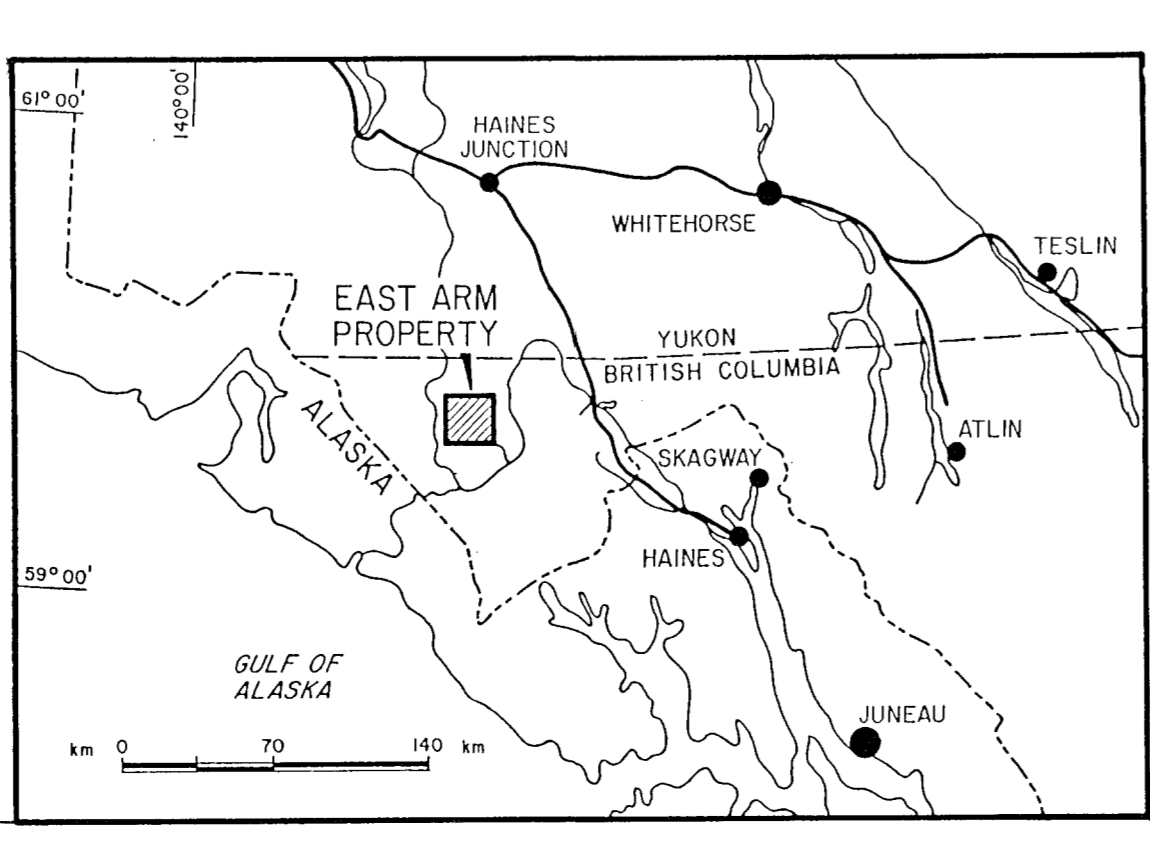
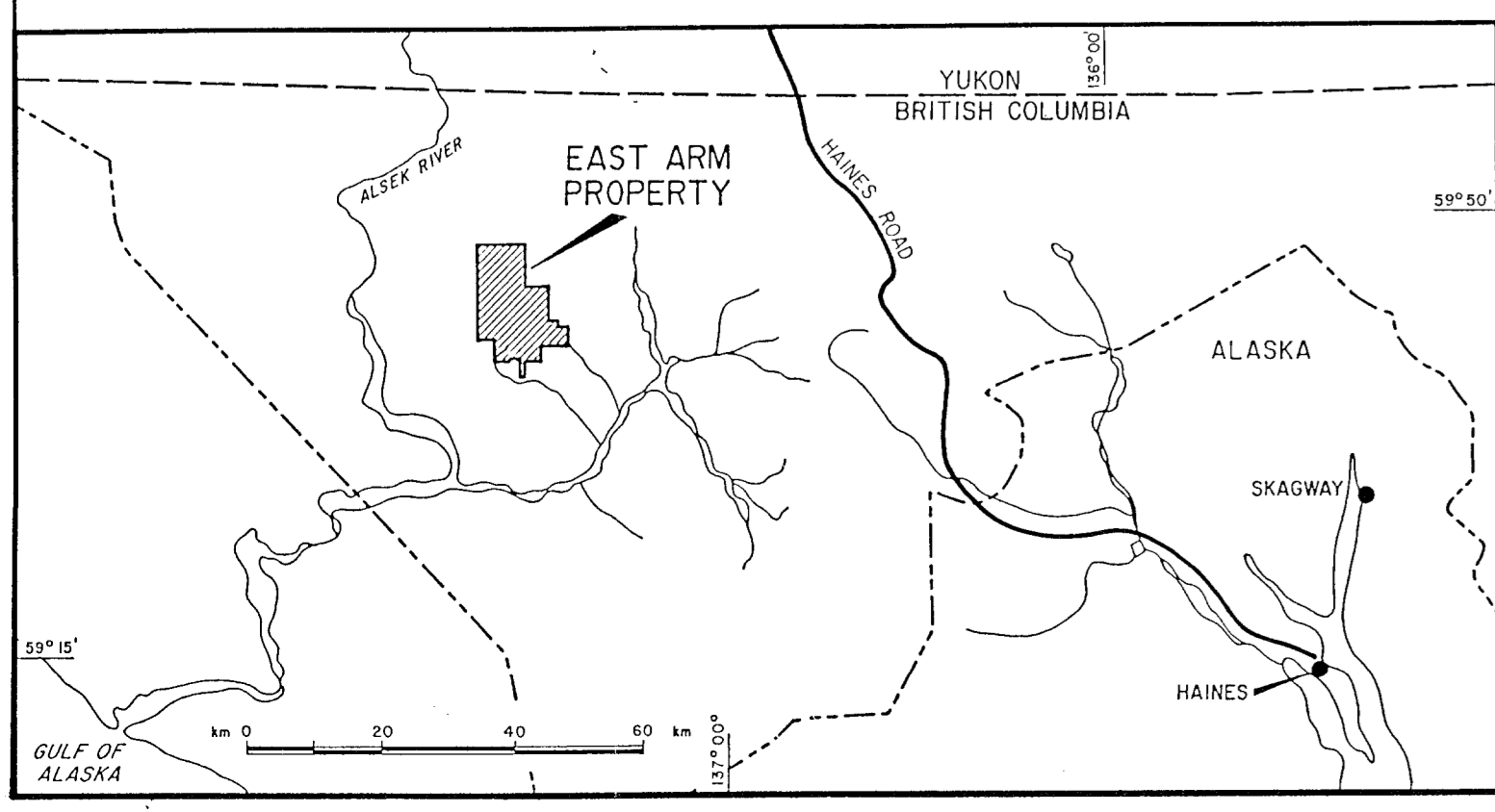
15,426

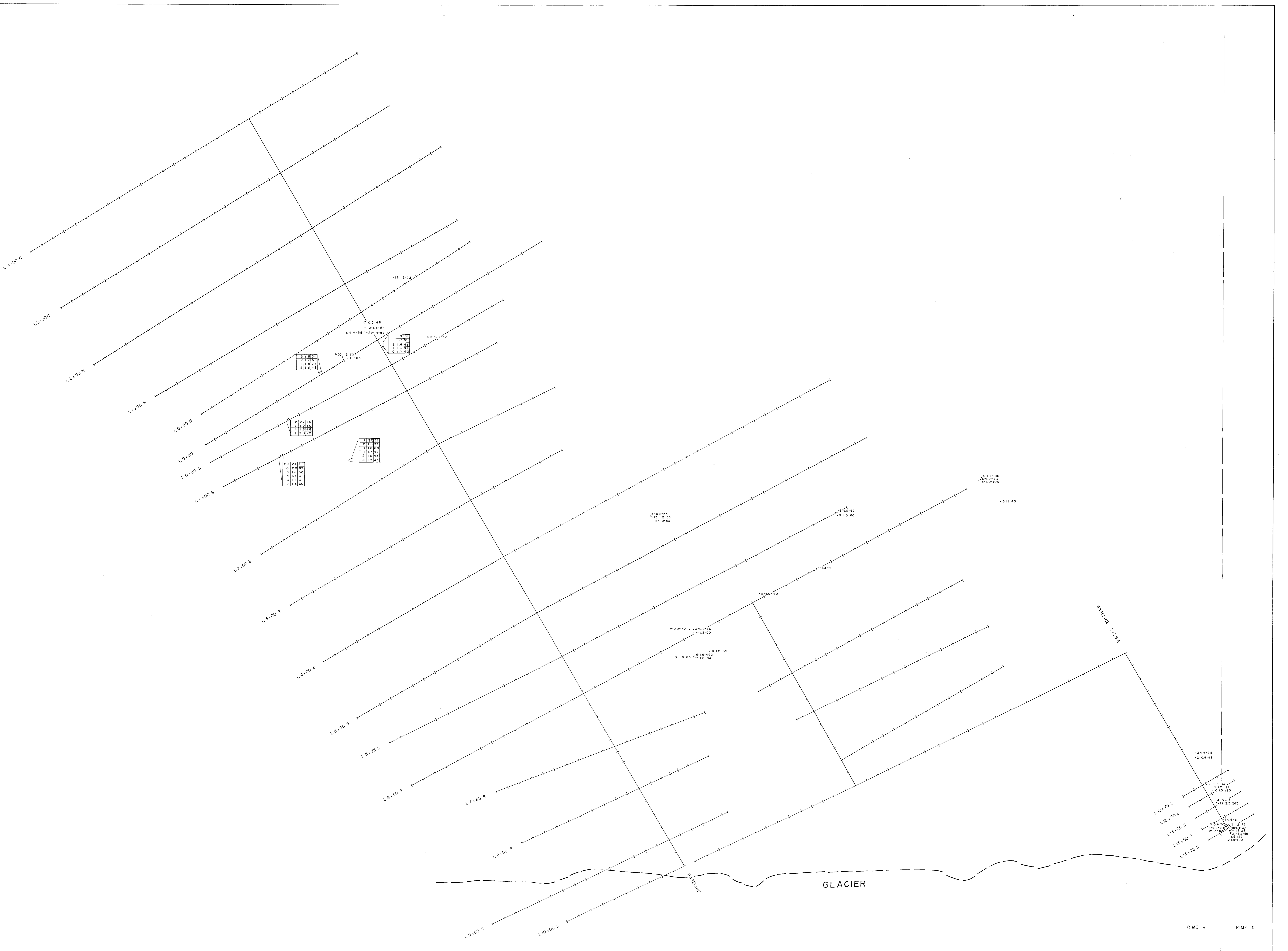
LEGEND
 • CHANNEL SAMPLE
 — CONTINUOUS CHANNEL SAMPLE

ST. JOE CANADA INC.

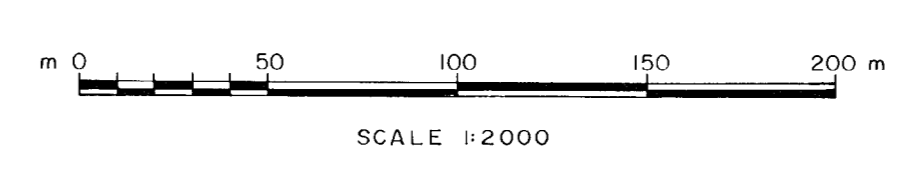
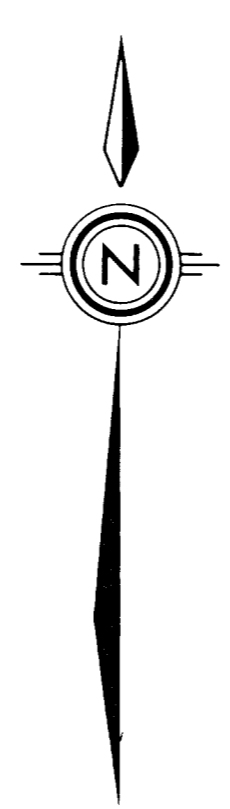
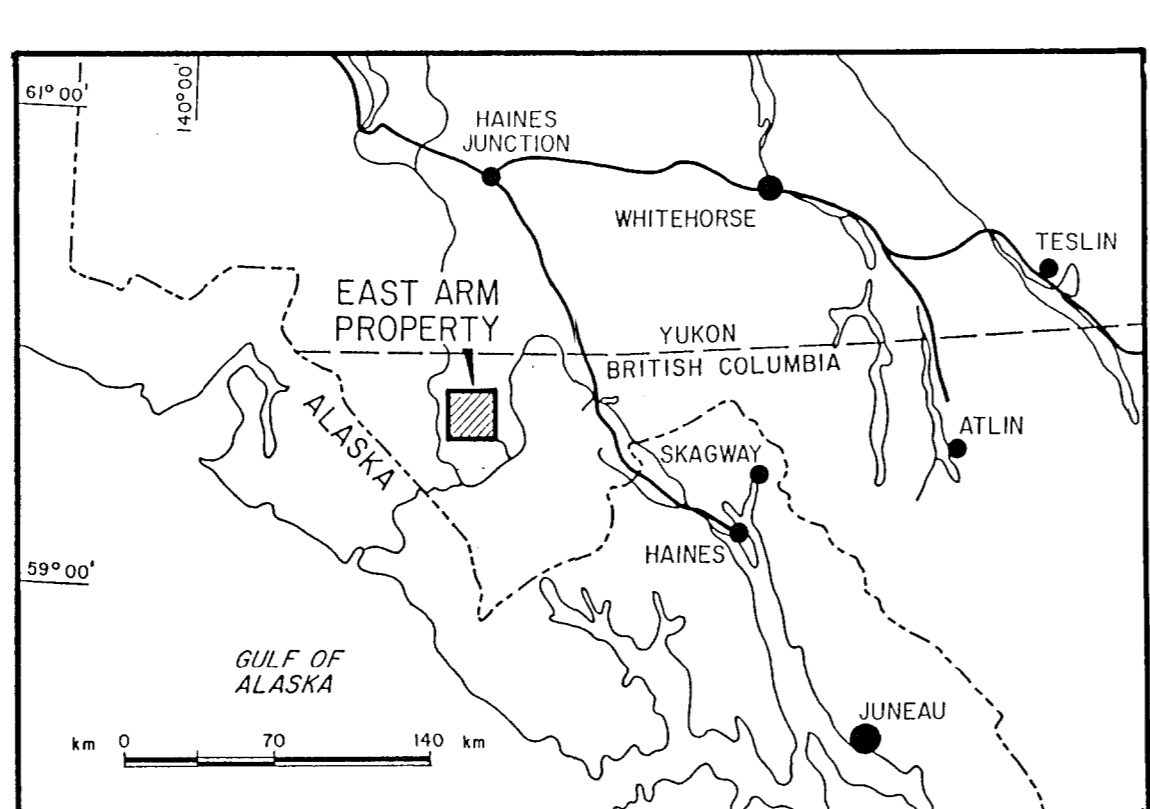
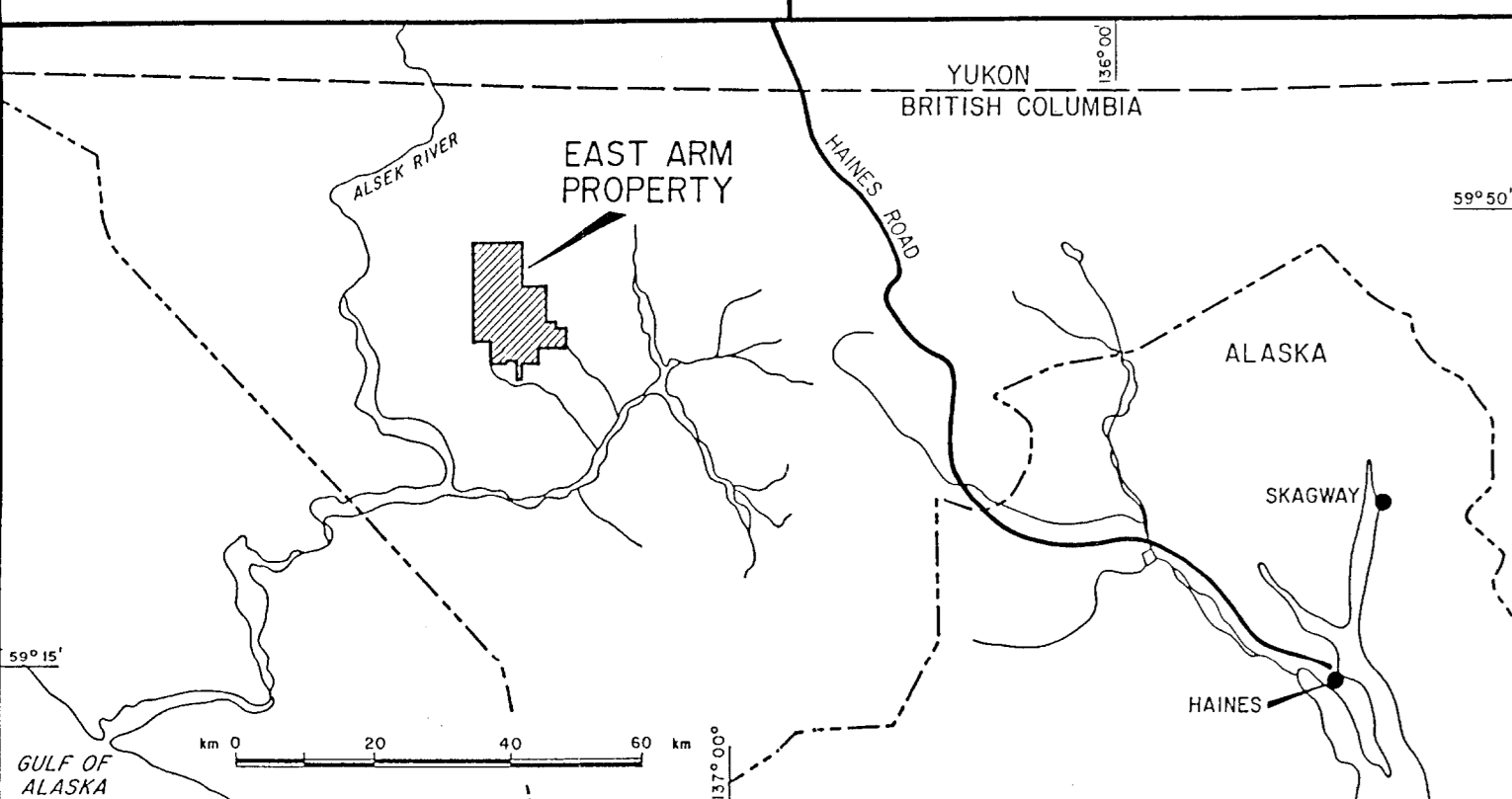
EAST ARM PROPERTY
PAMPERO
SAMPLE LOCATIONS

PLAN No.	DRAWN BY: EO	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S.	17
		1:4 P. / 12E-13E	





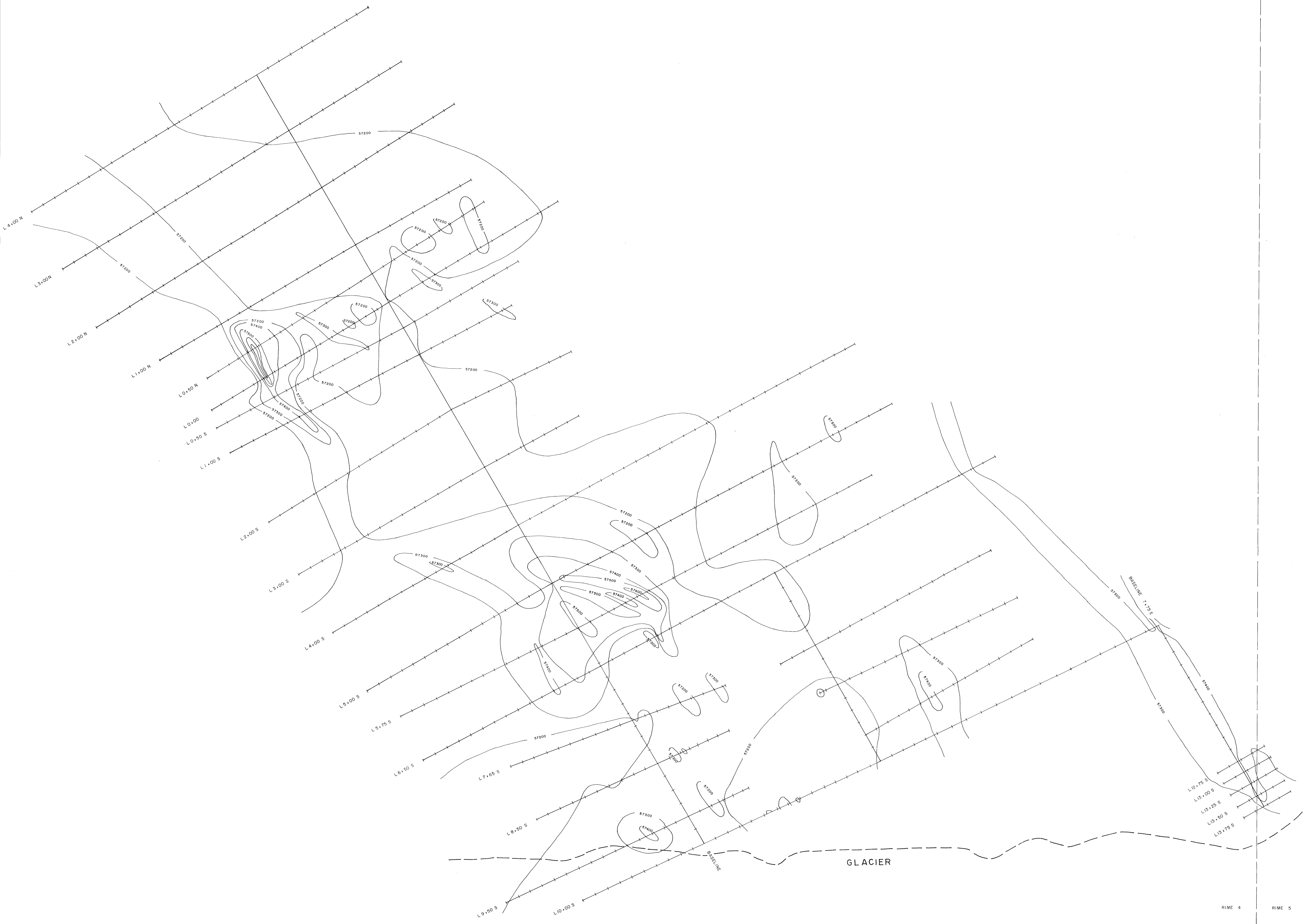
LEGEND
 • CHANNEL SAMPLE
 — CONTINUOUS CHANNEL SAMPLE



GEOLOGICAL BRANCH
 ASSESSMENT REPORT

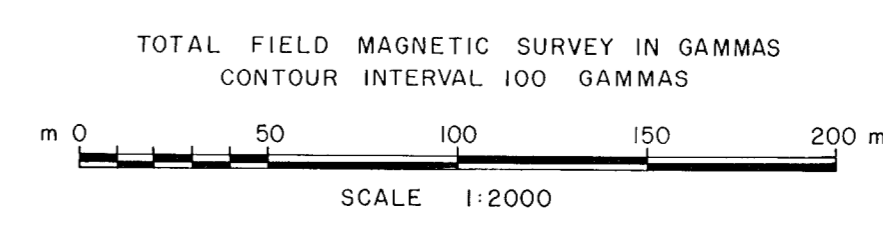
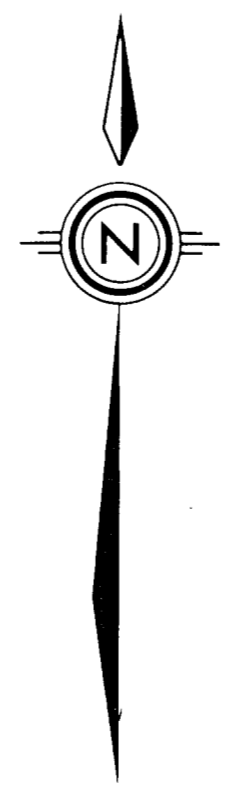
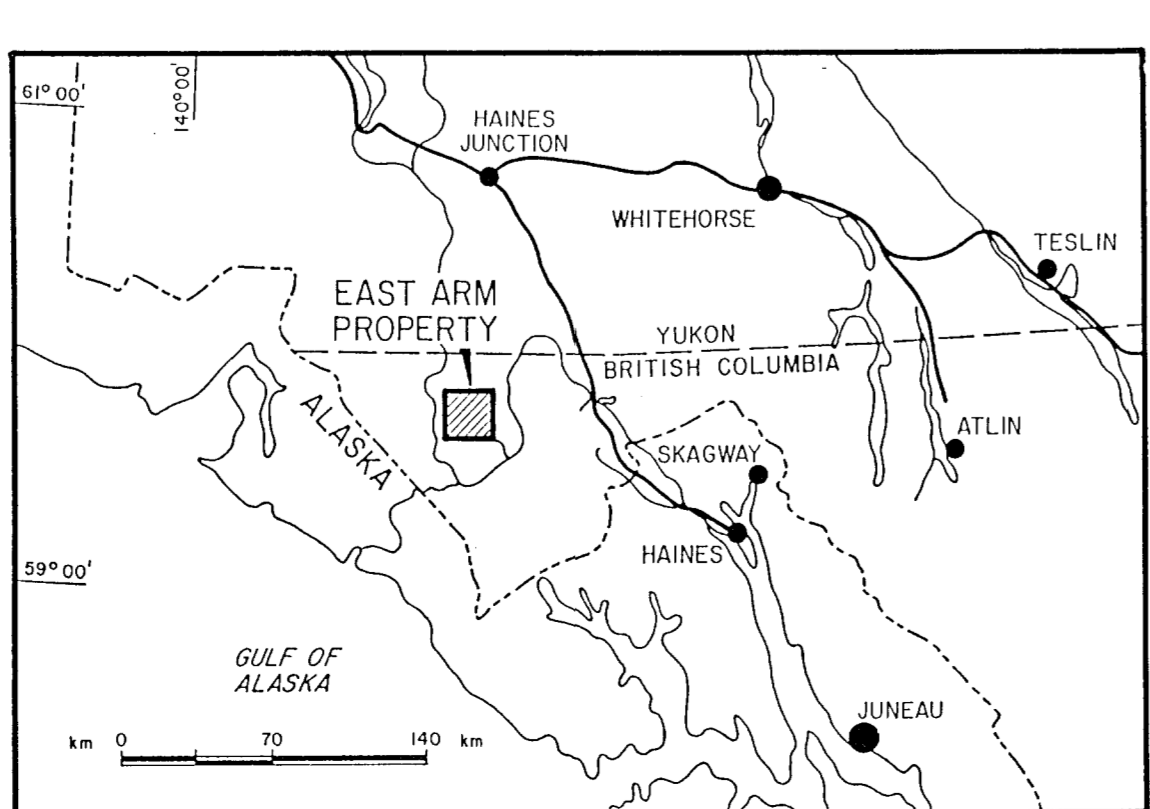
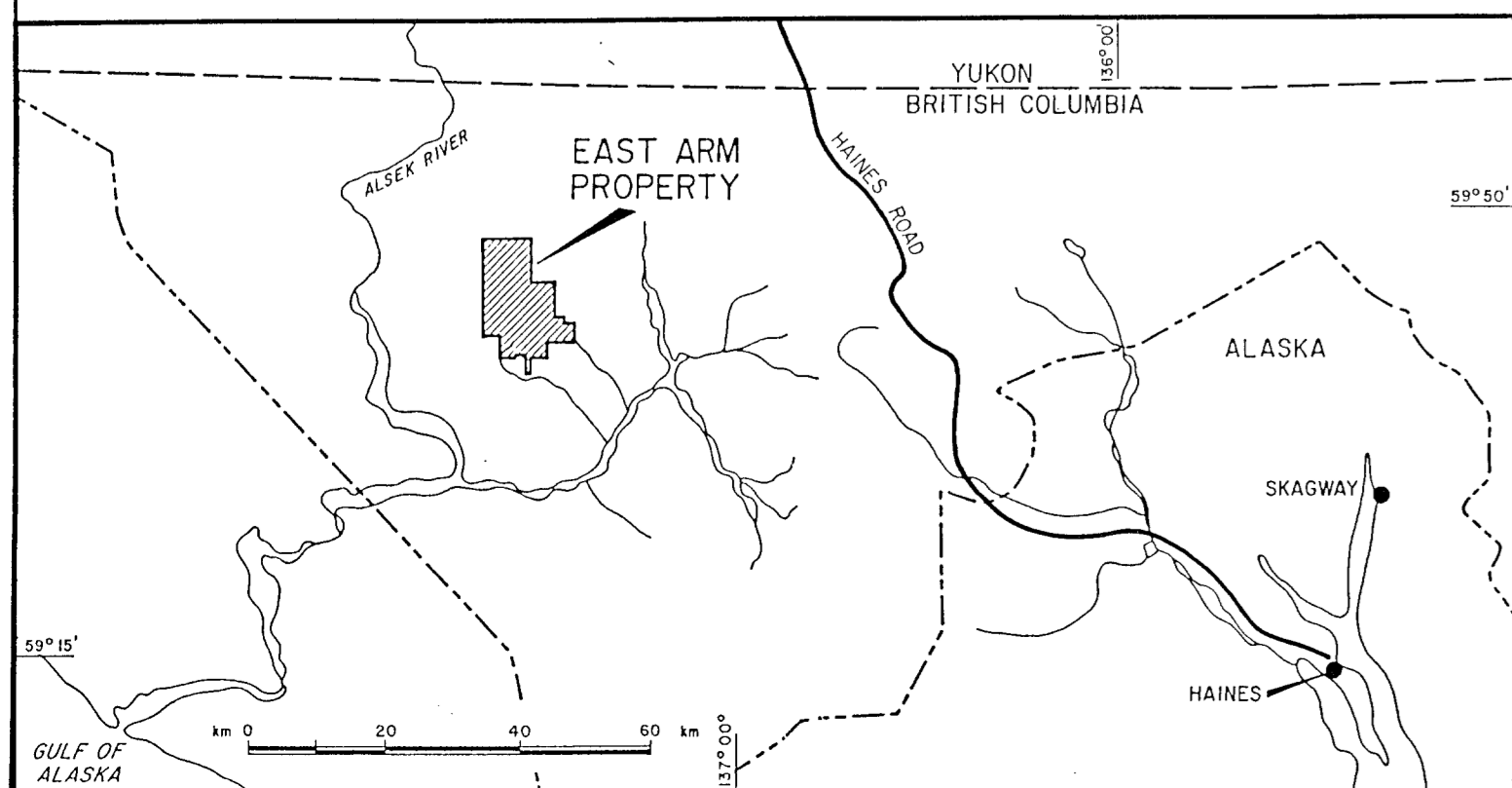
15,426

ST. JOE CANADA INC.			
EAST ARM PROPERTY			
PAMPERO			
ROCK GEOCHEMISTRY			
Au-ppb / Ag-ppm / Cu-ppm			
PLAN No.	DRAWN BY: EO	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S. 1:14 P/12E-13E	18



GEOLOGICAL BRANCH
ASSESSMENT REPORT

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ST. JOE CANADA INC.			
<u>EAST ARM PROPERTY</u>			
PAMPERO			
MAGNETIC SURVEY			
PLAN No.	DRAWN BY:	DATE:	FIGURE No.
	J.M.K.	NOVEMBER 1986	19
REVISED:		N.T.S. 114 P / 12E - 13E	

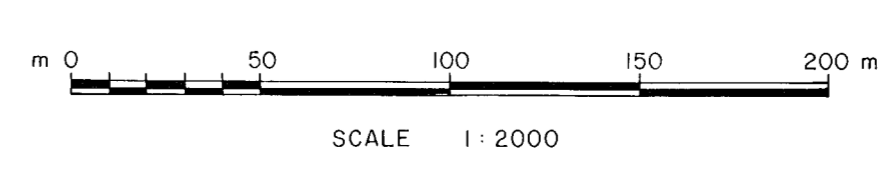
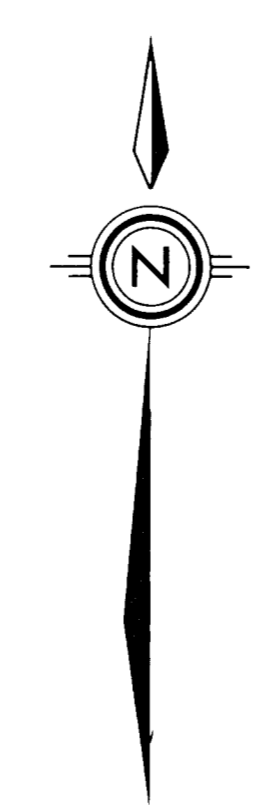
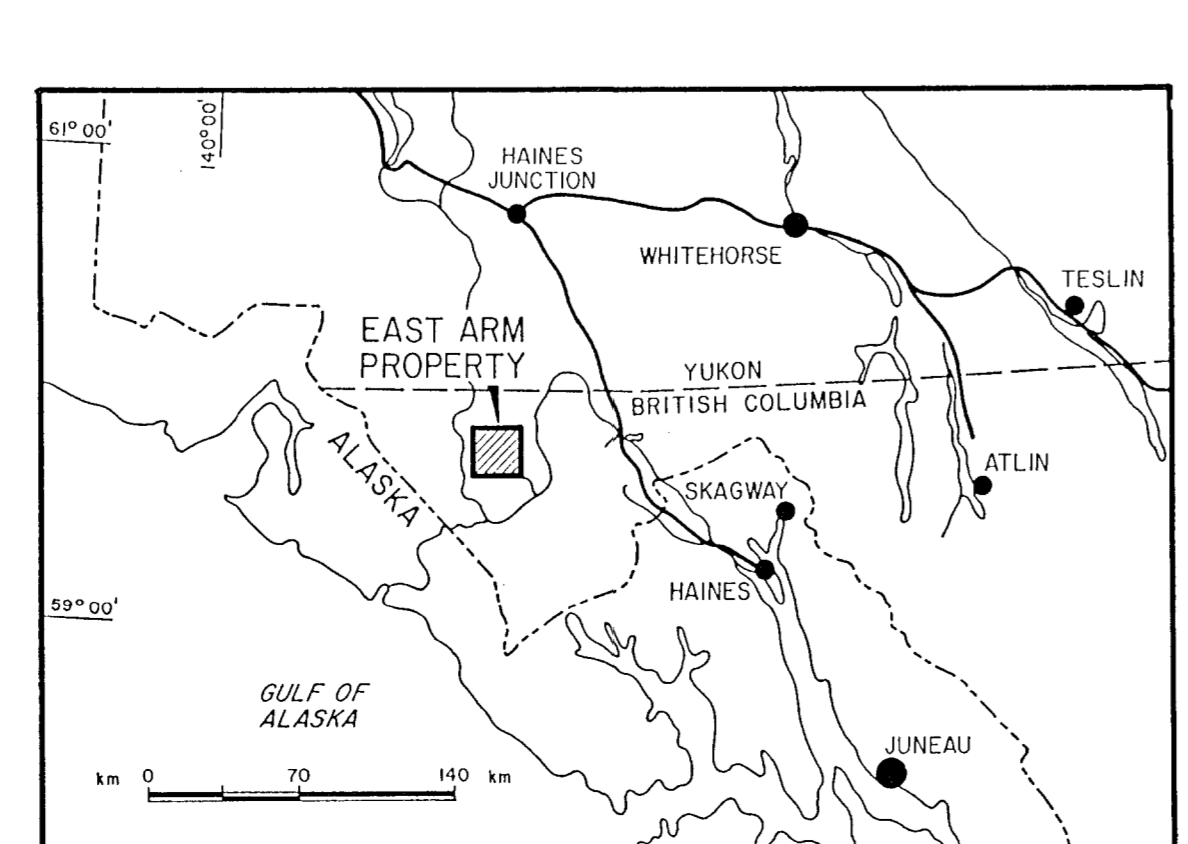
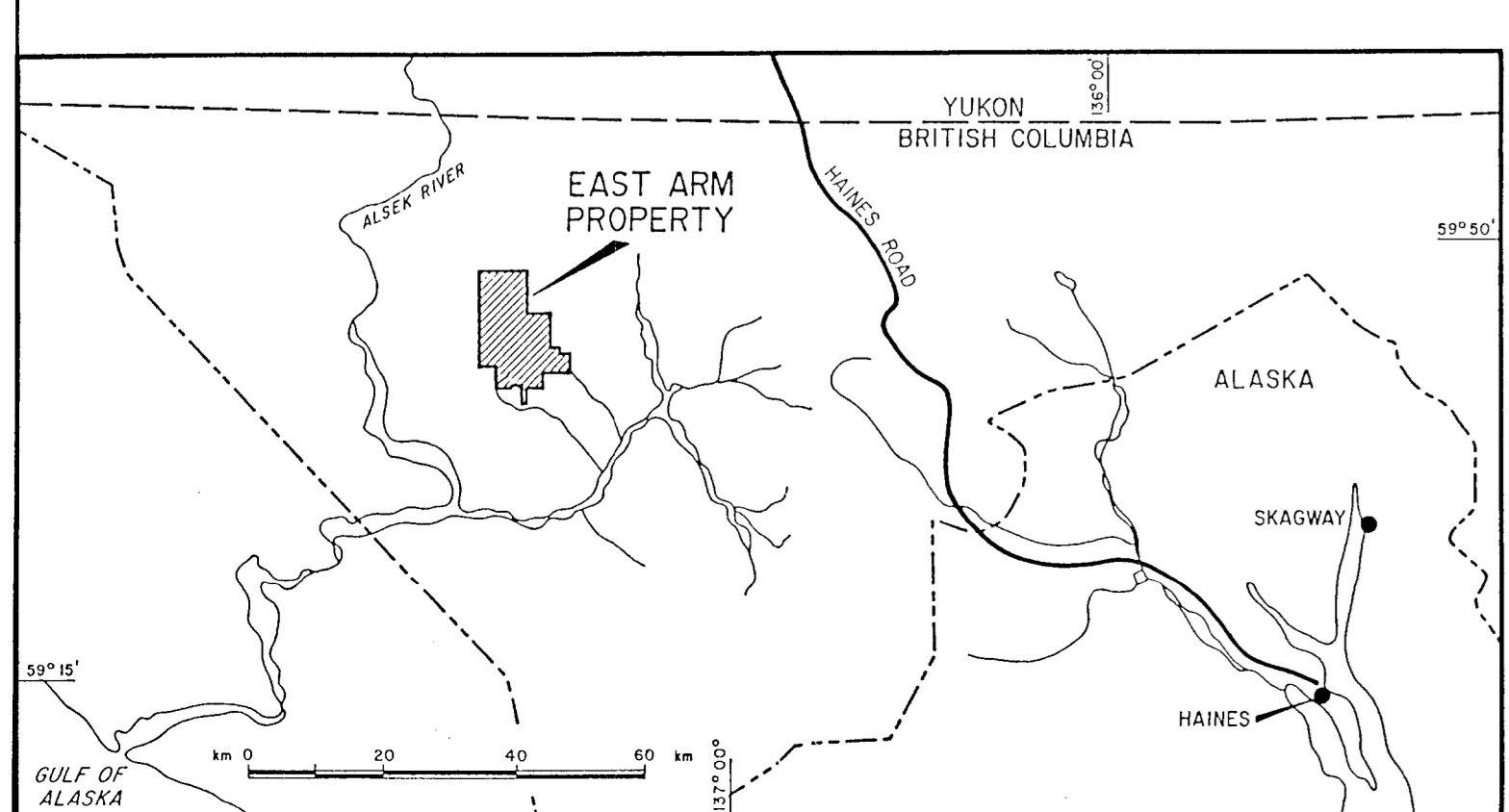


GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,426

LEGEND

- CONDUCTOR AXIS
- - - INPHASE
- - - QUADRATURE
- GEONICS EM 16-R
SERIAL No. 8503006

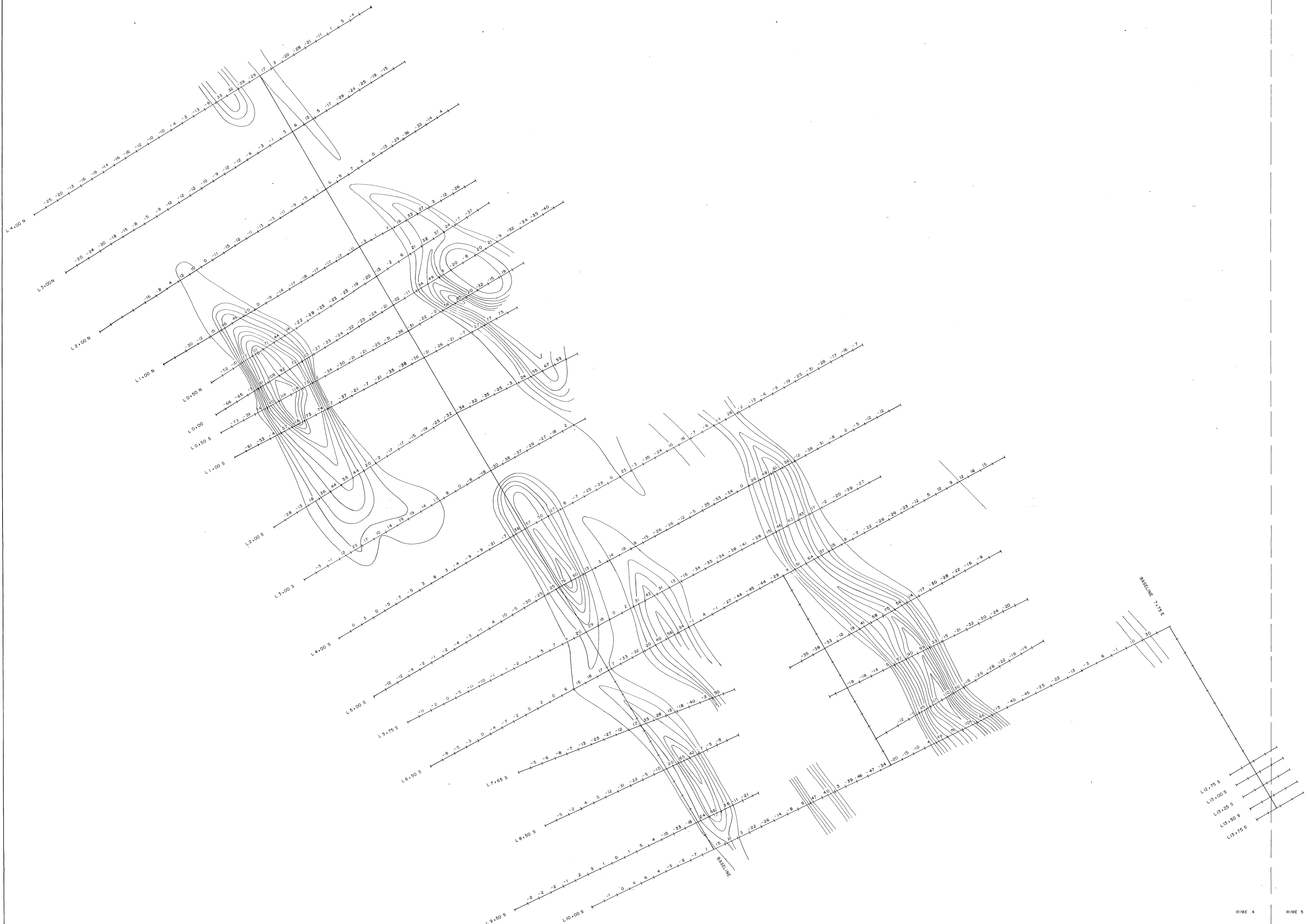


ST. JOE CANADA INC.

EAST ARM PROPERTY
PAMPERO
VLF-EM SURVEY (SEATTLE)

PLAN No.	DRAWN BY: EO	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S. IMP/12E-13E	20

RIME 4 RIME 5



GEOLOGICAL BRANCH
ASSESSMENT REPORT

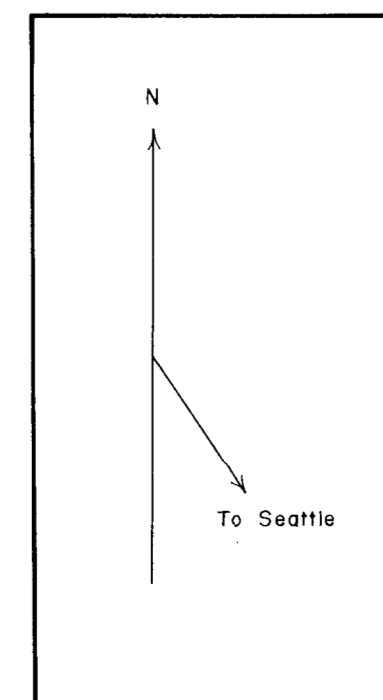
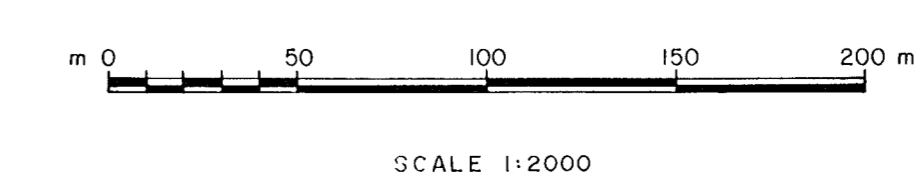
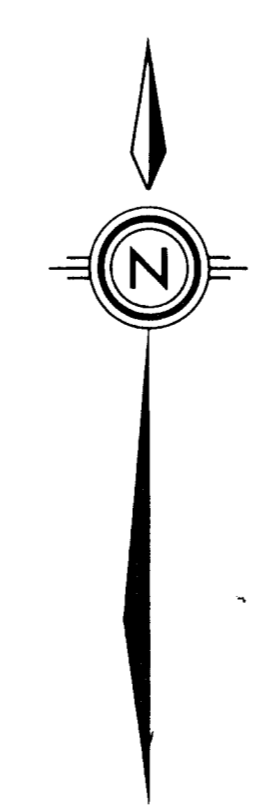
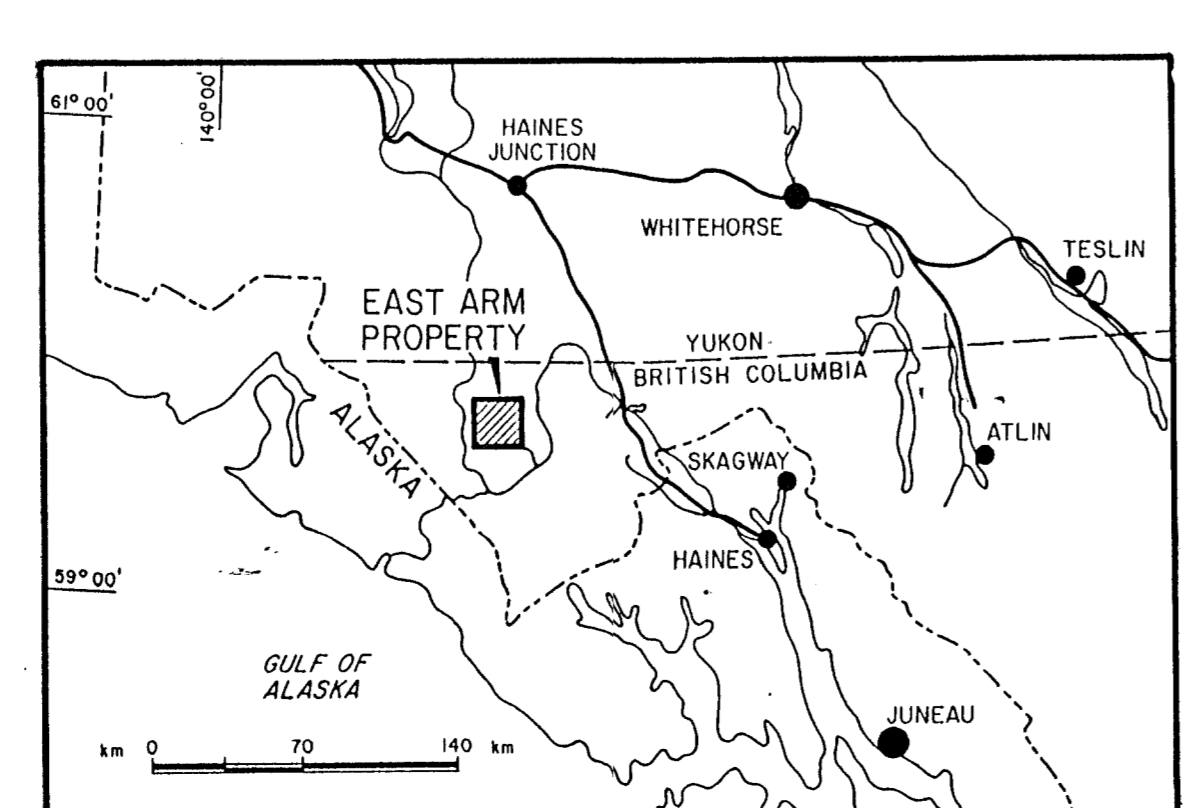
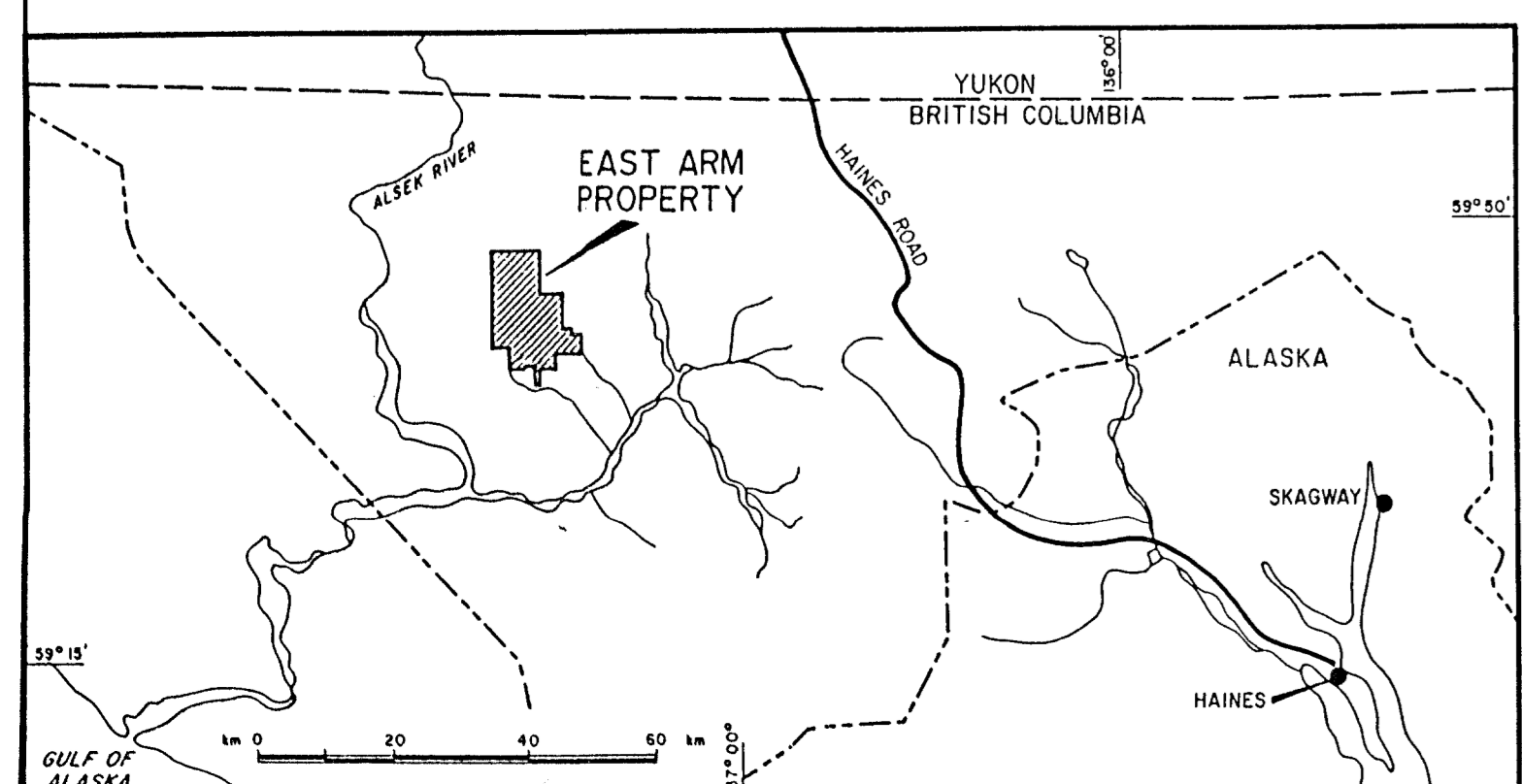
15,426

CONTOUR INTERVAL 10
GEOLOGICAL BRANCH
SERIAL No. 8503006

ST. JOE CANADA INC.

EAST ARM PROPERTY
PAMPERO
VLF-EM SURVEY (SEATTLE)
FRASER FILTER

PLAN No.	DRAWN BY: EO	DATE: NOV 86	FIGURE No.
REVISED:		N.T.S.	20A



RIME 4 RIME 5



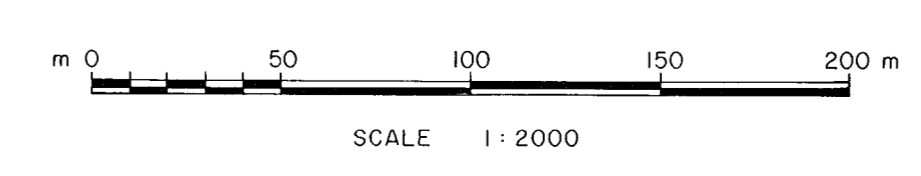
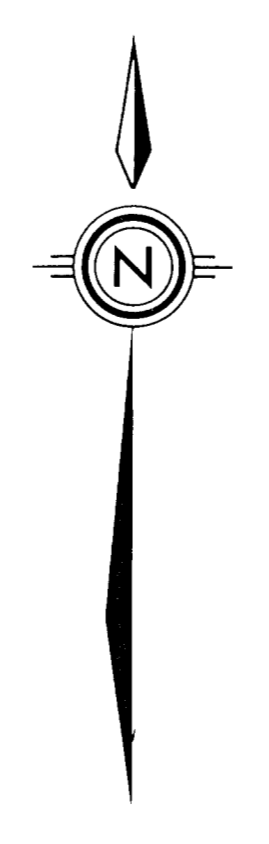
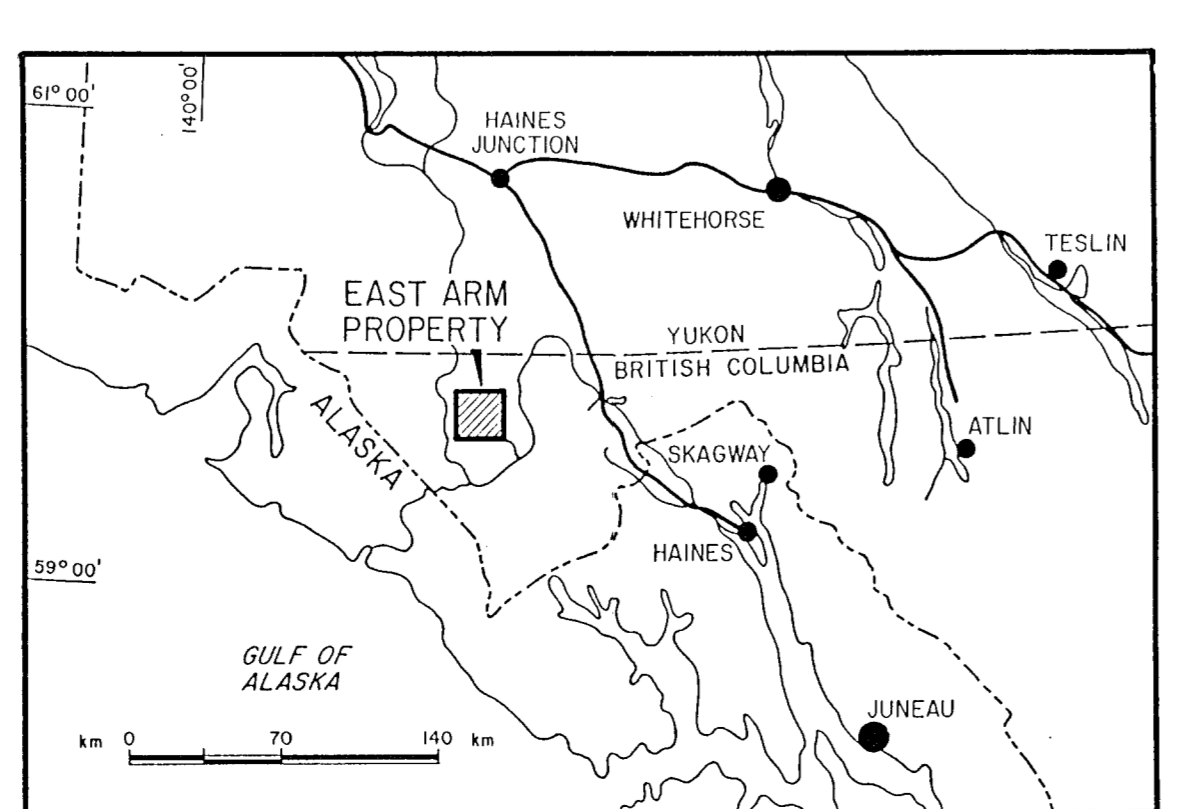
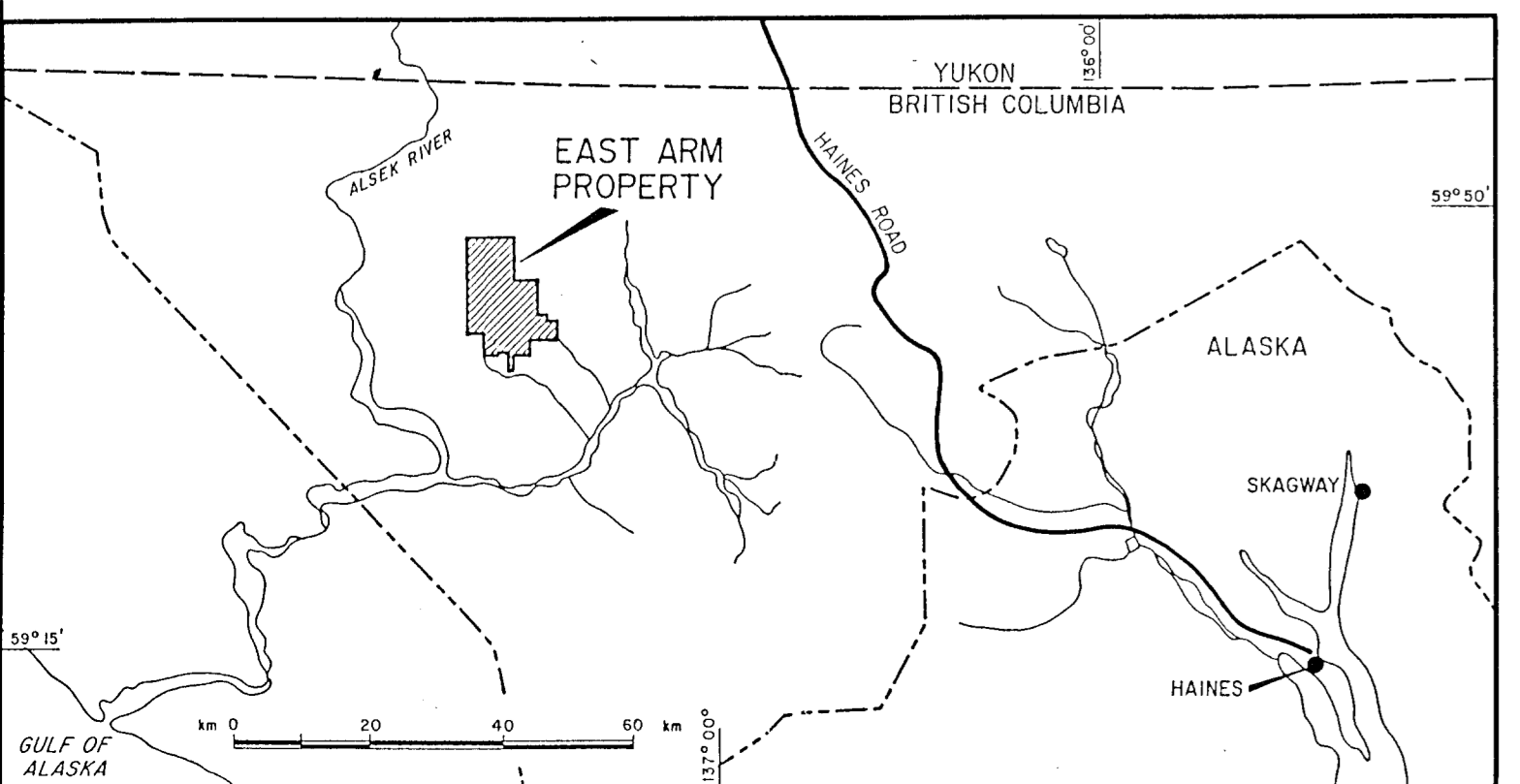
GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,426

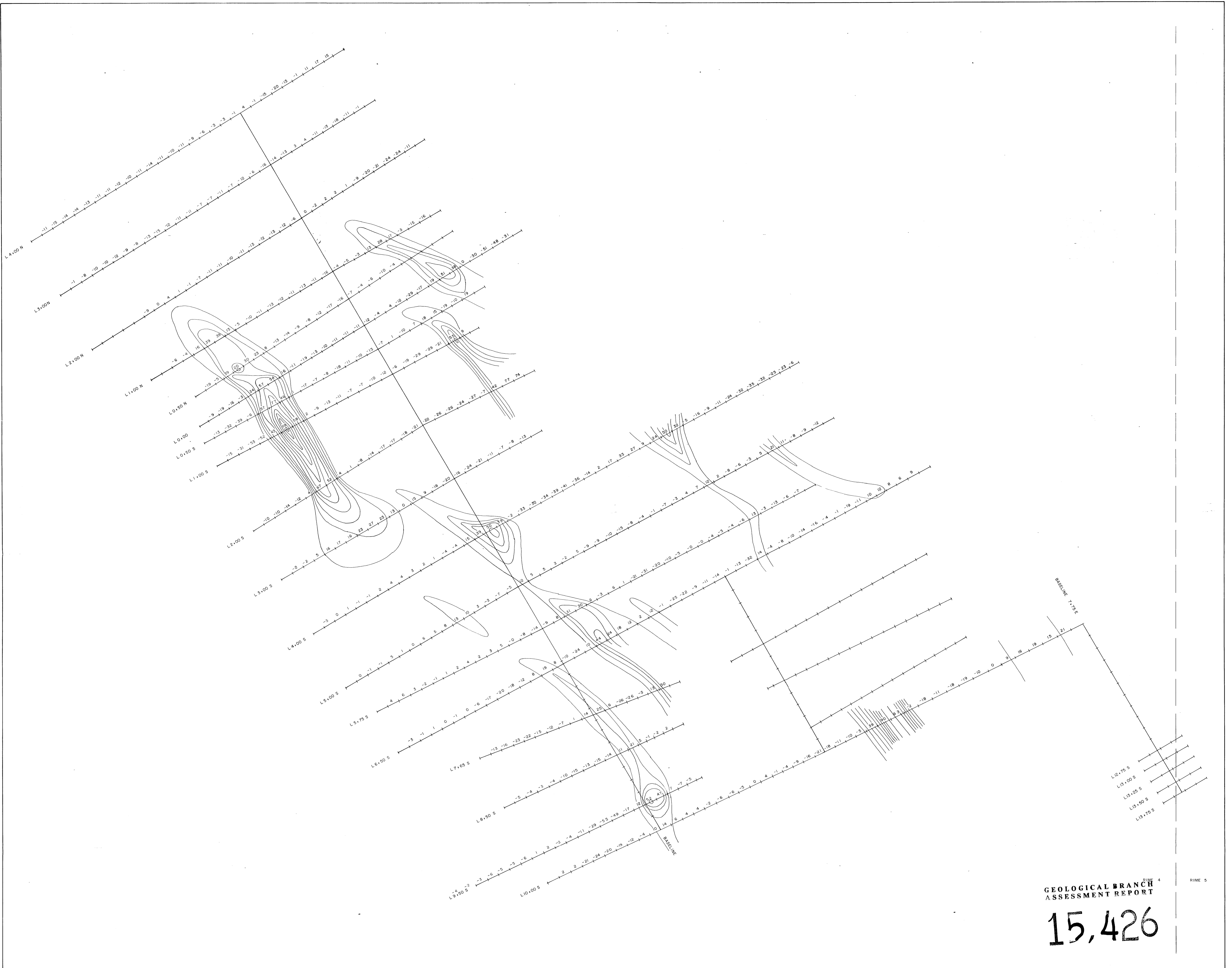
RIME 4 RIME 5

LEGEND

- CONDUCTOR AXIS
- INPHASE
- QUADRATURE
- GEONICS EM 16-R SERIAL No. 8503006

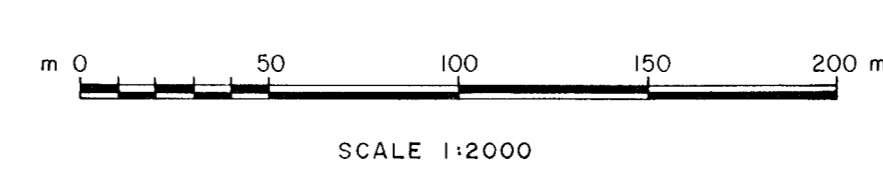
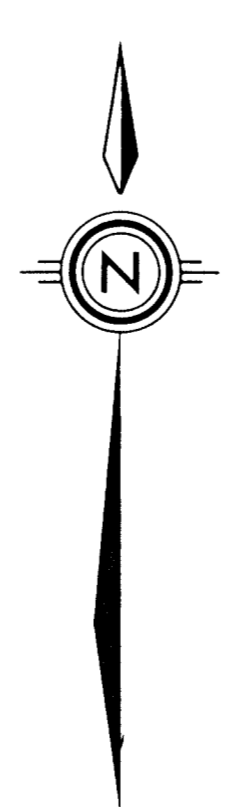
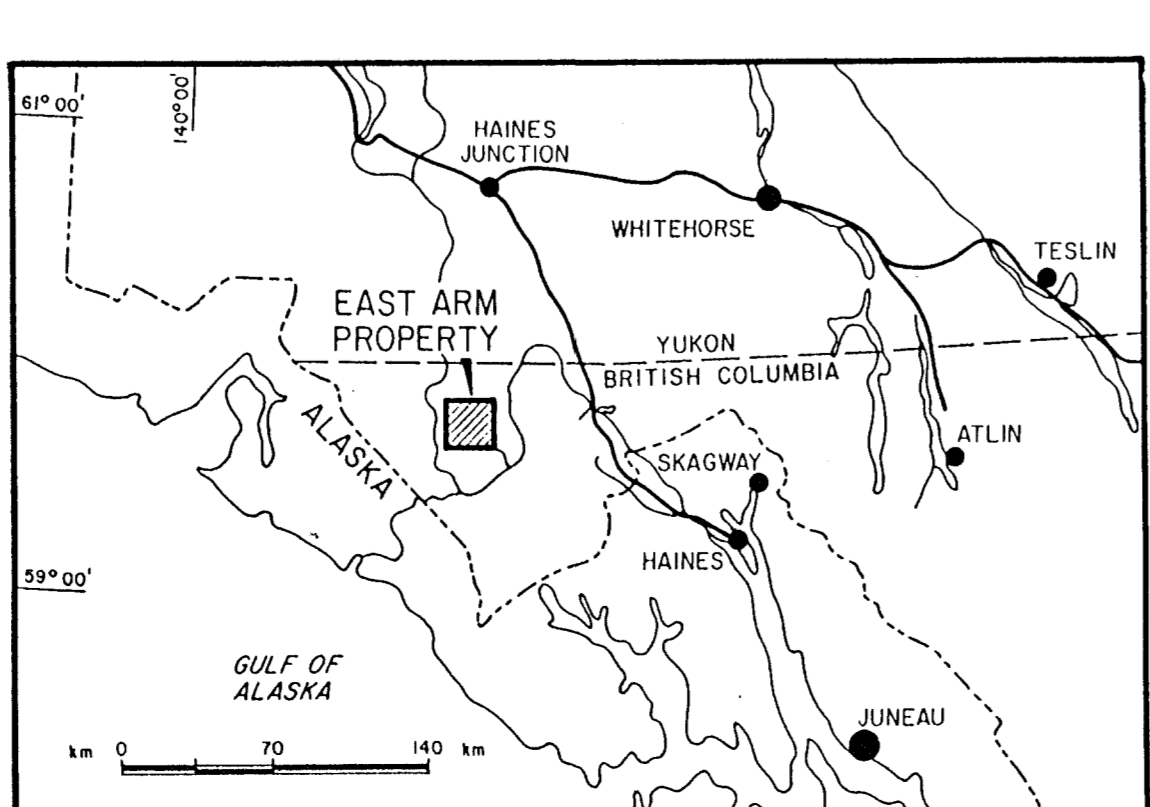
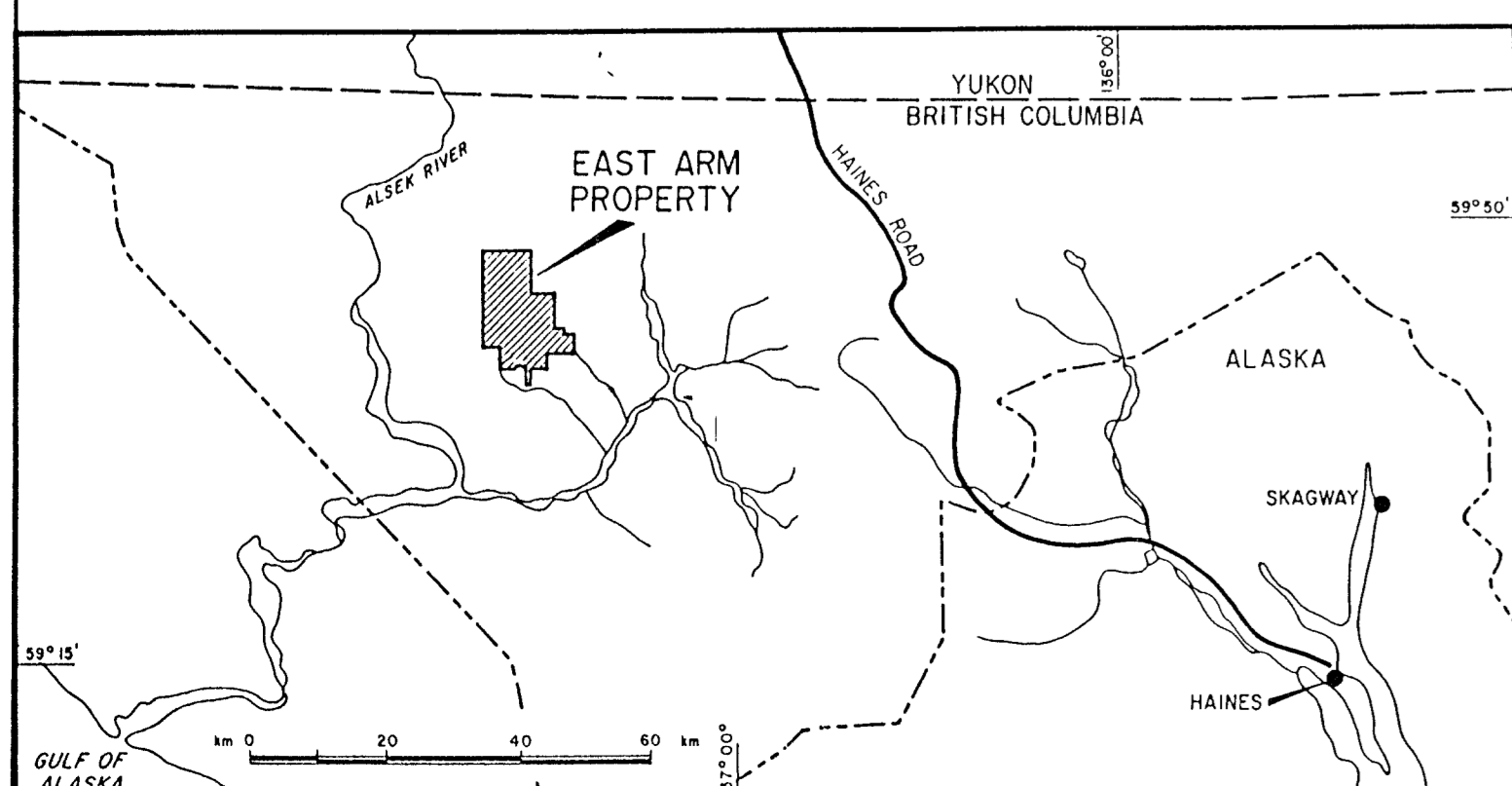


ST. JOE CANADA INC.			
EAST ARM PROPERTY			
PAMPERO			
VLF-EM SURVEY (MARYLAND)			
PLAN No.	DRAWN BY: E.O.	DATE: 30-10-86	FIGURE No.
REVISED:		N.T.S. 1:44P/12E-13E	21



GEOLOGICAL BRANCH
ASSESSMENT REPORT

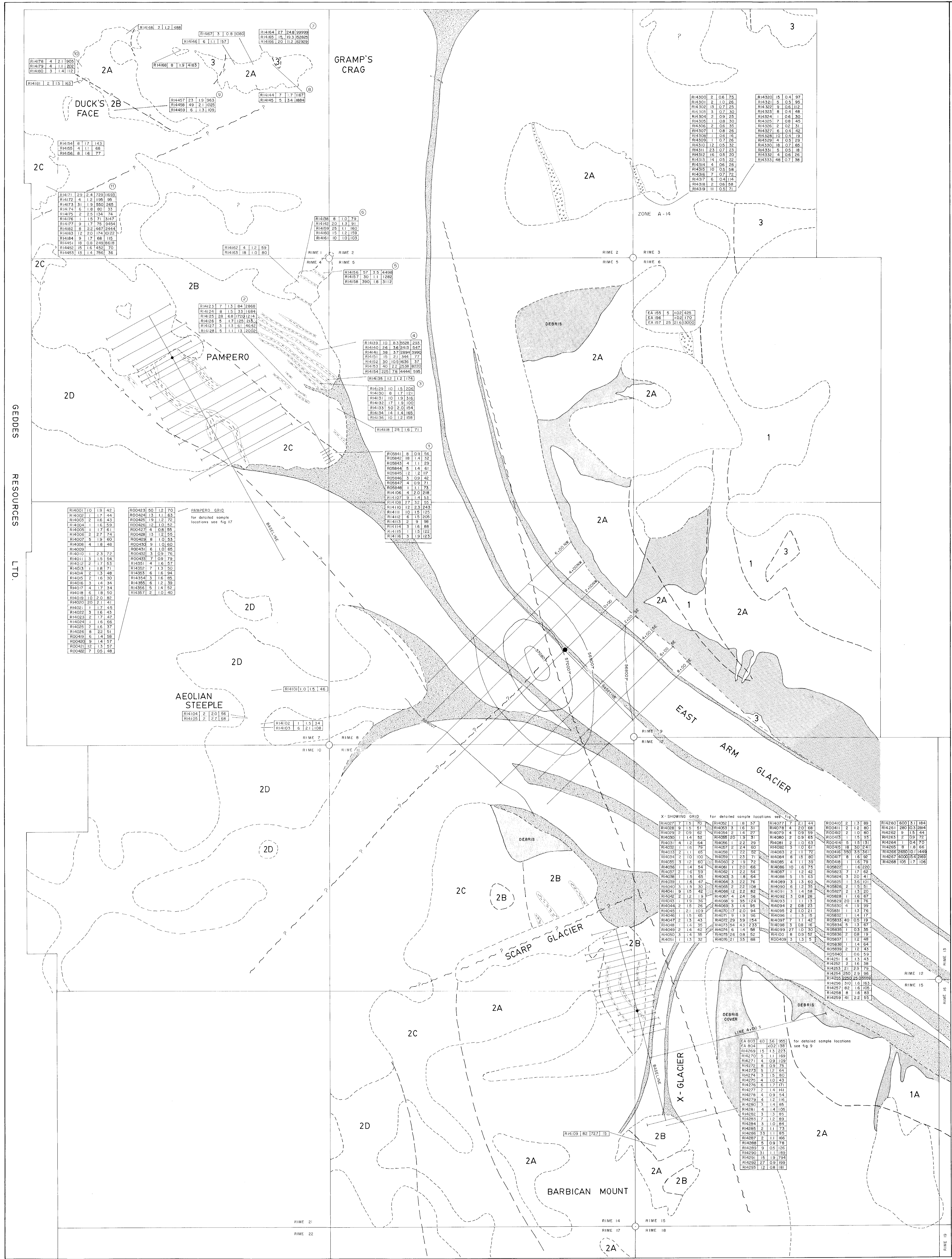
15,426



ST. JOE CANADA INC.			
EAST ARM PROPERTY			
PAMPERO			
VLF-EM SURVEY (MARYLAND)			
FRASER FILTER			
PLAN No.	DRAWN BY	DATE	FIGURE No.
	EO	NOV 86	21A
REVISED		N.T.S.	
		1/4P/12E-13E	

CONTOUR INTERVAL 10
GEONCS EM 16-R
SERIAL No. 8505006

RING 4
RIME 5



LEGEND

JURASSIC - CRETACEOUS
3 "SELIAS" INTRUSIONS, MAINLY MULTIPHASE INTRUSIONS, MAINLY GRANODIORITIC AND DIORITIC, LOCALLY HORNBLENDITIC

TRIASSIC
2D PILLOWED ANDESITIC LAVA FLOWS AND ANDESITIC AGGLOMERATES

TRIASSIC
2C DACITIC TO ANDESITIC, PILLOWED, VESICULAR FLOWS WITH WIDE-SPREAD WEAK HYDROTHERMAL ALTERATION, OCCASIONAL INTERCALATIONS OF DARK, LIMY ANGLITES

TRIASSIC
2B DACITIC TO ANDESITIC FLOWS INTERBEDDED WITH BLACK SHALES, SILTSTONES AND LIMY ANGLITES

PALEOZOIC - TRIASSIC
2A LIMY SILTSTONES AND SHALES, INTERCALATIONS OF LIMESTONES, NUMEROUS CROSSCUTTING DIKES INTERCALATIONS OF ANDESITIC FLOWS

PALEOZOIC
1 MEDIUM TO THIN-BEDDED, LIGHT GREY TO BLACK LIMESTONES OR MARBLES, WITH INTERBEDDED CALCARENITES AND LIMY SILTSTONES, MACROFOSSILS (RHYNDO)

ANDESITIC FLOWS

ANGLITES, CALCAREOUS ANGLITES AND LIMESTONES

MORAINE

DEBRIS

ROCK UNIT CONTACT

ROCK TYPE CONTACT

FAULT

GLACIER

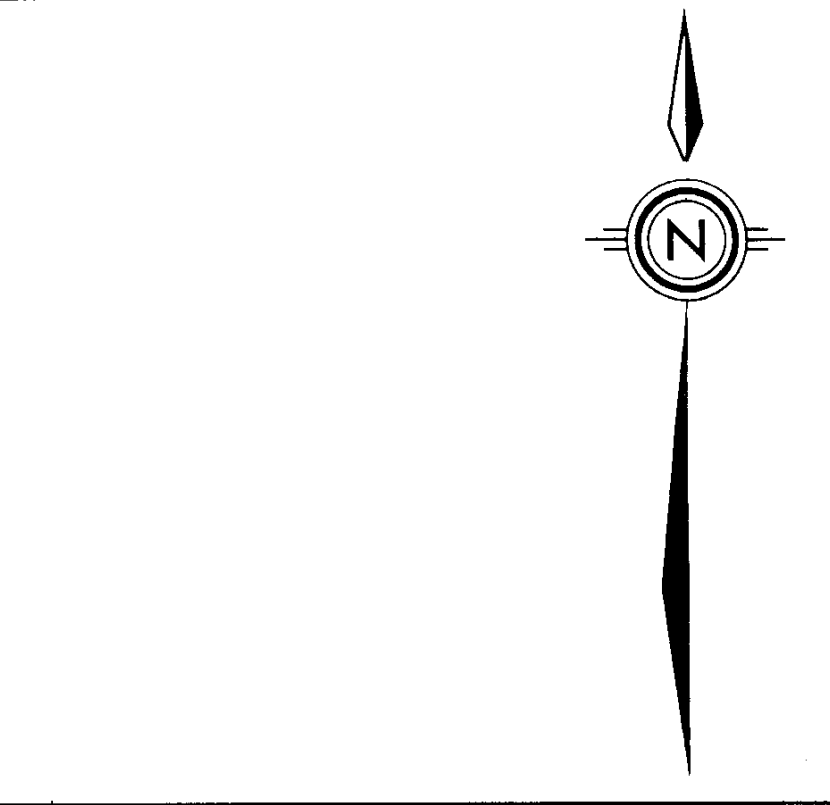
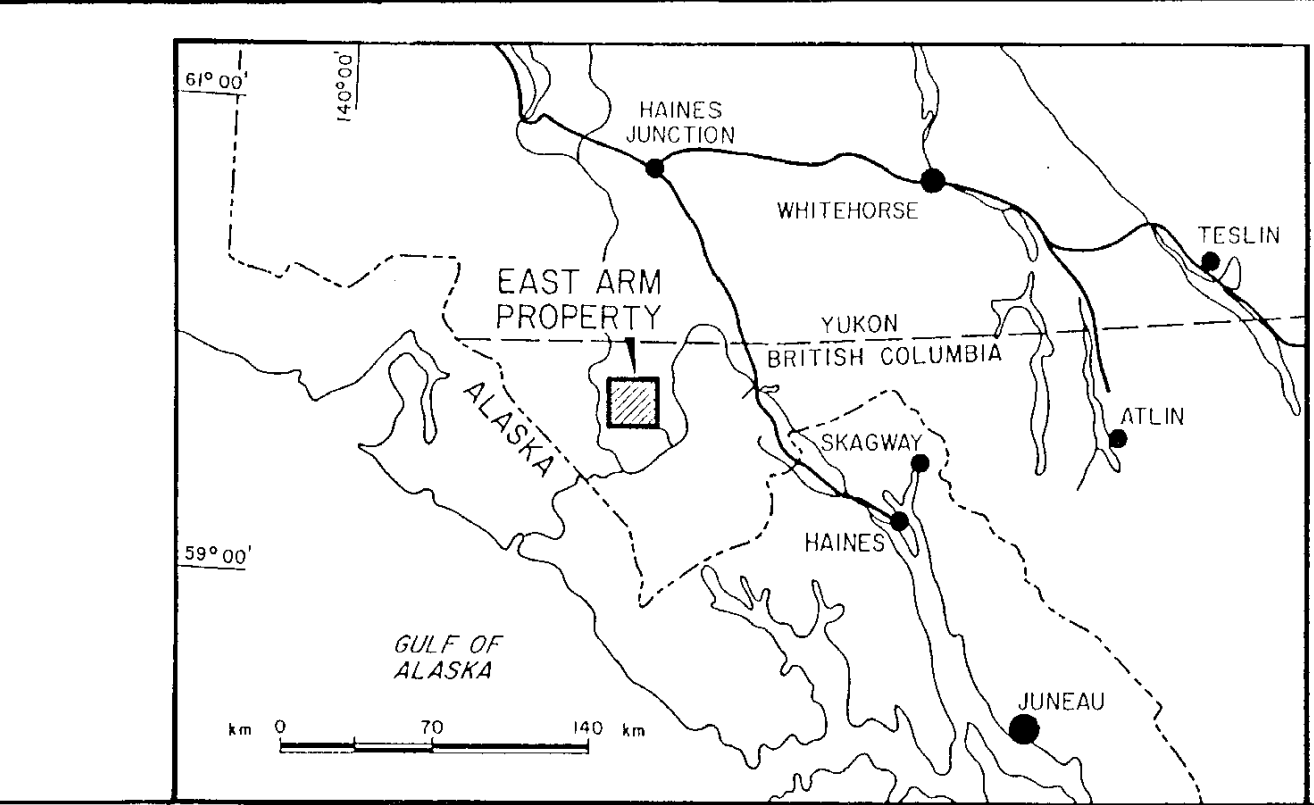
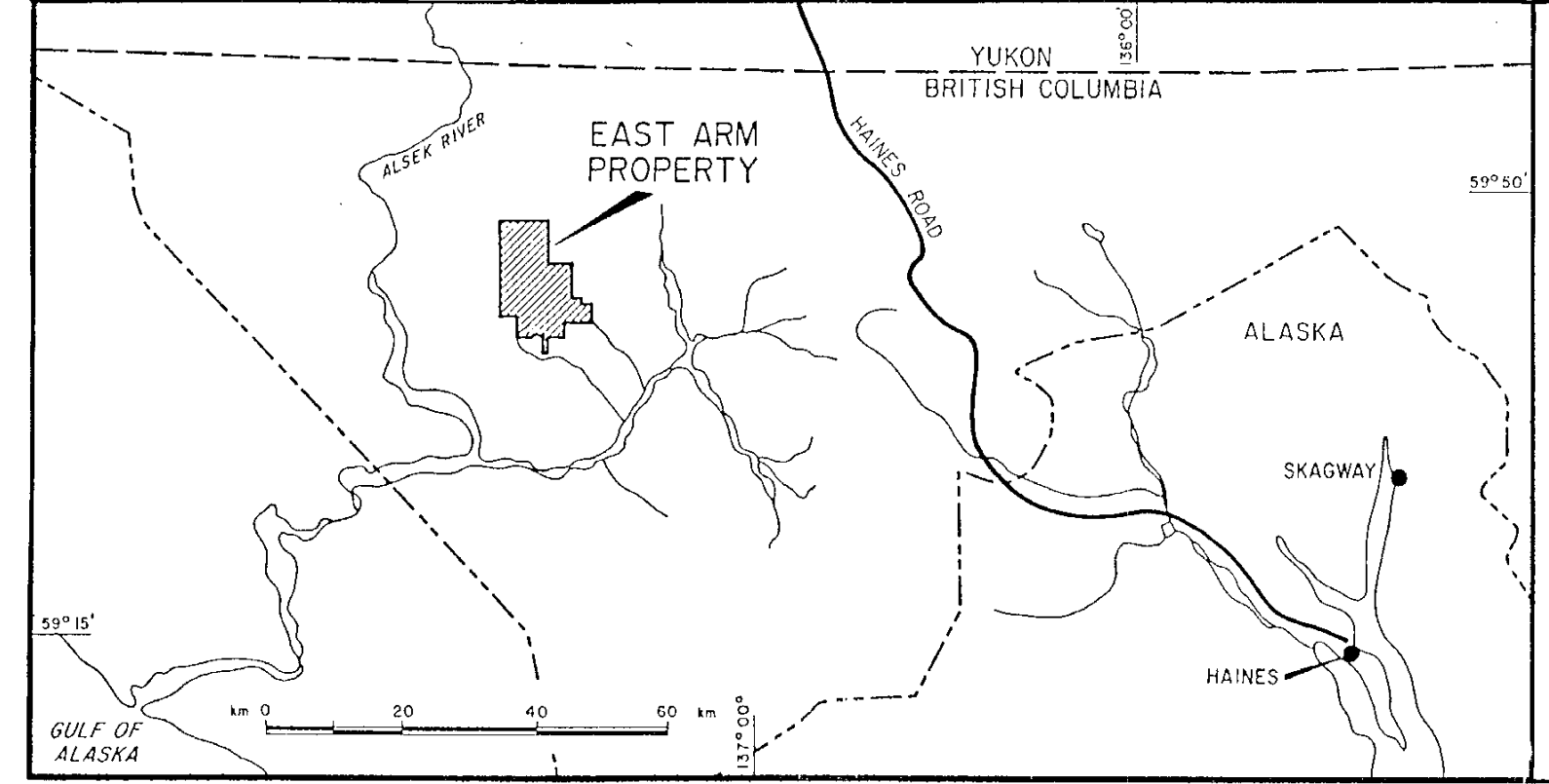
LEGAL CORNER POST

GRID ORIGIN

SAMPLE NUMBER
 EA 105 5 409 025
 EA 106 4 020 170
 EA 107 25 216 3000

EA 105 5 409 025
 EA 106 4 020 170
 EA 107 25 216 3000

GEDDES RESOURCES LTD.



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GEOLOGICAL BRANCH ASSESSMENT REPORT

ST. JOE CANADA INC.

EAST ARM PROPERTY

COMPILATION MAP RIME 1-15
 GEOLOGY, GRID LOCATION,
 SAMPLE LOCATION,
 ROCK GEOCHEMISTRY Au/Ag/Cu/Zn

PLAN No. _____ DRAWN BY: JMK DATE: NOVEMBER 1986 FIGURE No. 22
 REVISED _____