Report On

Geological, Geochemical, and Geophysical Surveys

JORDAN RIVER PROPERTY

Copeland Group
Lat. 51° 07.5'N Long. 118° 24'W
UTM 5664500N 401500E

Frisby Group
Lat. 51° 08.5'N Long. 118° 17'W
UTM 5666000N 410000E

Revelstoke Mining Division
NTS 82M 1W

Owner and Operator:
First Standard Mining Ltd.
802-6540 Burlington Ave.
Burnaby, B.C.
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Date: December 10, 1991

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1.0 Introduction

1.1 Summary

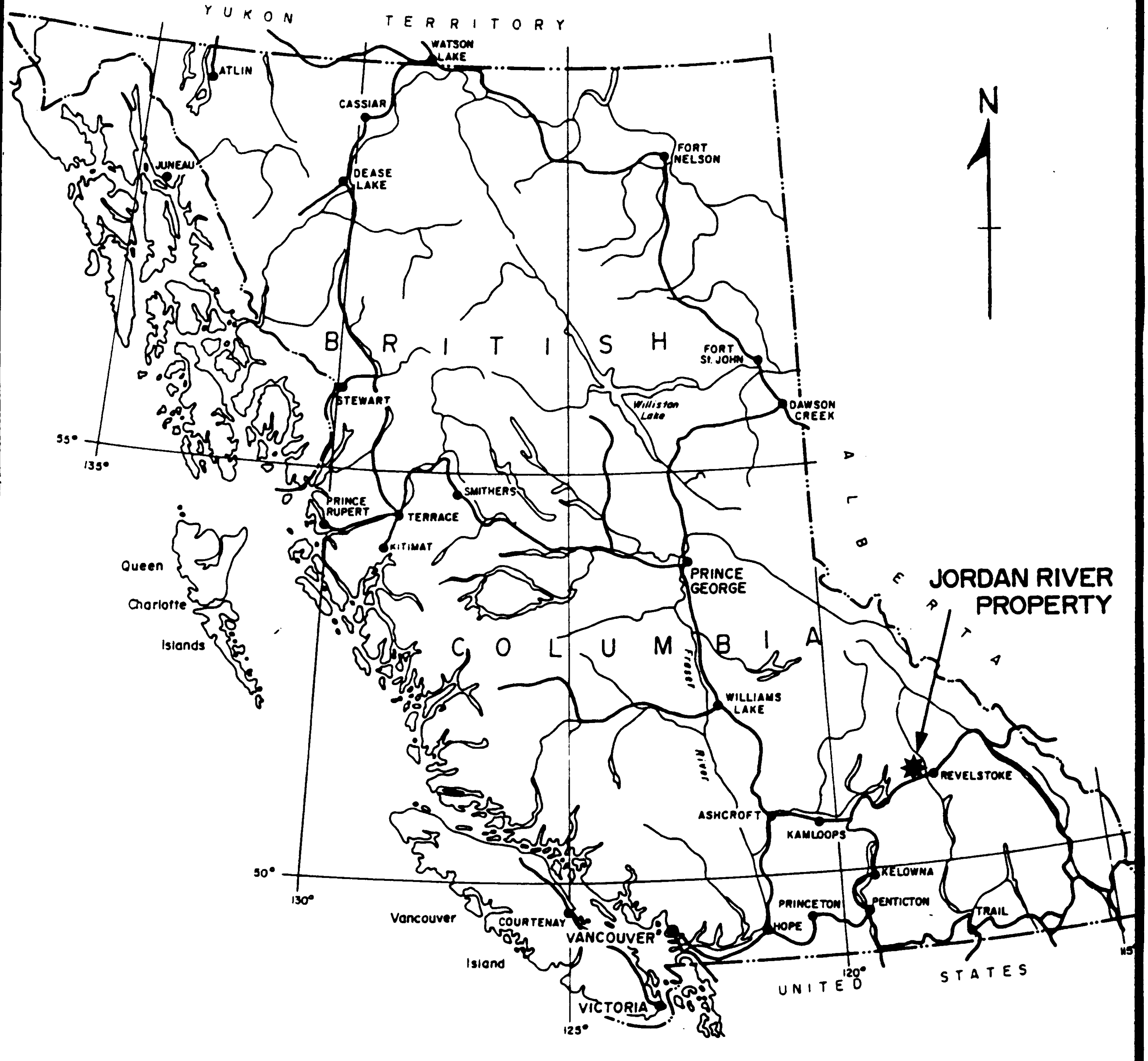
The Jordan River property, near Revelstoke, B.C., consists of the Copeland Group and the Frisby Group. The Copeland Group contains the King Fissure Pb-Zn-Ag-Ba massive sulphide deposit, while the Frisby Group covers additional exposures of the sulphide-bearing stratigraphy.

Work on the Jordan River property in 1991 consisted of linecutting, geological mapping, geophysical (magnetic and VLF-EM) surveys, a soil geochemical survey, prospecting, and rock chip sampling.

On the King Fissure Deposit, geological mapping and geophysical surveys were successful in tracing the massive sulphide layer around the eastern closure of the Copeland synform. Evidence seen in drag folds, the general fold morphology as indicated by surface exposures and limited drilling, and in regional folding patterns, suggests that hinge zone thickening should occur in the eastern half of the synform. Preliminary examination of the West zone has demonstrated the presence of footwall sulphide stockworking, brecciated zones within the massive sulphides, and a massive sulphide-barite sequence exceeding 4m thickness. Brecciation and high-grade Pb-Zn-Ag stockworking is also seen in the Cliff Zone, where massive sulphides commonly exceed 2m thickness. These features indicate proximity to exhalative sulphide vent zones.

Prospecting and geological mapping on the Frisby Group have traced the favourable sulphide-host carbonate stratigraphy for approximately 2.5km. Within this sequence, the massive Zn-Pb sulphide layer has been traced for over 1.2km in the Big Slide zone, and remains unexplored to the south.

A light rare-earth bearing extrusive carbonatite layer was recognized in the King Fissure Deposit in 1990. This unit, occurring less than 50m stratigraphically below the massive sulphide horizon, was also successfully traced on the Frisby Group.



FIRST STANDARD MINING LTD.	
JORDAN RIVER PROPERTY LOCATION MAP	
REVELSTOKE M.D.	
SCALE As shown	DATE Dec. 1991
NTS 82M 1w	FIG. No. 1

1.2 Location, Access, and Vegetation

The Jordan River property lies in mountainous terrain on both sides of the Jordan River, approximately 19 km northwest of the town of Revelstoke, B.C.. The Copeland and Frisby groups lie west and east, respectively, of the Jordan River. Elevations range from 620m in the river valley to 2560m at Mount Copeland. Access to the property is by a 15 minute helicopter flight from Revelstoke. A road accessing the former Mount Copeland molybdenum mine leads to within approximately 10 km of the King Fissure Deposit. An old pack trail leaves the road at Hiren Creek and proceeds up Jordan River and Copeland Creek to the King Fissure Deposit, a distance of 10km.

The Copeland Group is mostly rugged, rocky terrain, entirely in alpine. The upper part of Frisby Ridge on the Frisby Group lies mostly in sub-alpine, while the lower regions (generally below 1500m) are densely treed with fir, cedar, spruce, and pine. Open areas are covered with thick slide alder and scrub brush. Drainage from the Copeland Group is into Copeland and Hiren Creeks, which in turn drain easterly into the Jordan River. Drainage from the Frisby Group is both west into the Jordan River and east into Lake Revelstoke on the Columbia River.

1.3 Property Details

The Jordan River property is composed of two groups totalling 185 units as follows*:

Frisby Group

Claim	Record #	Units	Expiry Date**
Jordan 2	248446	10	Nov. 20, 1993
Jordan 3	248447	20	Nov. 20, 1993
Jordan 4	248448	10	Nov. 20, 1993
Frisby 1	248440	12	Nov. 6, 1993
Frisby 2	248441	12	Nov. 20, 1993
Frisby 3	248442	12	Nov. 20, 1993
Frisby 4	248443	12	Nov. 20, 1993

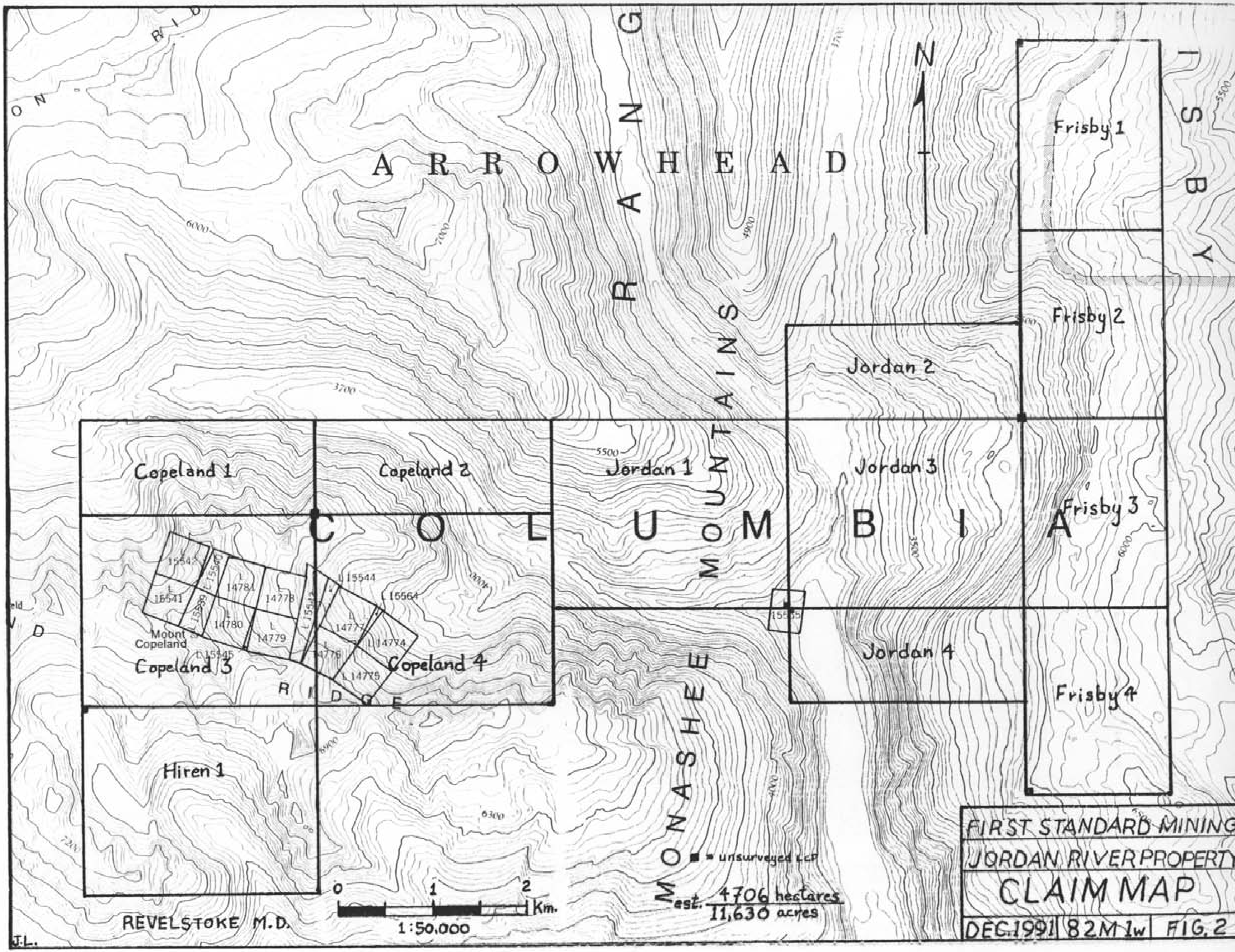
Total size of the Frisby Group is 88 units.

Copeland Group

Claim	Record #	Units	Expiry Date**
Copeland 1	248318	10	Nov. 22, 1992
Copeland 2	248319	10	Nov. 22, 1992
Copeland 3	248321	20	Nov. 22, 1993
Copeland 4	248320	20	Nov. 22, 1993
Jordan 1	248445	20	Nov. 20, 1992
L. 14774	--	--	--
L. 14775	--	--	--
L. 14776	--	--	--
L. 14777	--	--	--
L. 14778	--	--	--
L. 14779	--	--	--
L. 14780	--	--	--
L. 14781	--	--	--
L. 15539	--	--	--
L. 15540	--	--	--
L. 15541	--	--	--
L. 15542	--	--	--
L. 15543	--	--	--
L. 15544	--	--	--
L. 15545	--	--	--
L. 15564	--	--	--
L. 15565	--	--	--

Total size of the Copeland Group is 97 units.
(* The 20 unit Hiren 1 claim, also part of the Jordan River property, staked in October, 1991, is not included in this report.)
(** Assuming acceptance of this report)

All claims, including crown-granted claims which cover the King Fissure Deposit, are 100% owned by First Standard Mining Ltd.. The Copeland 1-4 claims were staked to protect ground surrounding the deposit. The Jordan 1-4 and Frisby 1-4 claims were staked to cover favourable stratigraphy east of the King Fissure Deposit.


ARROWHEAD
RANGE
MONASHEE MOUNTAINS
COLUMBIA
RIDGE
Copeland 1
Copeland 2
Copeland 3
Copeland 4
Jordan 1
Jordan 2
Jordan 3
Jordan 4
Frisby 1
Frisby 2
Frisby 3
Frisby 4
Hiren 1
Mount Copeland
L 15542
L 15540
L 15541
L 15539
L 14781
L 14778
L 14780
L 14779
L 15543
L 15544
L 15564
L 14777
L 14774
L 14776
L 14775
L 15545
15565
N
■ = unsurveyed LCP
est. 4706 hectares
11,630 acres
0 1 2 Km.
1:50,000
REVELSTOKE M.D.
J.L.
FIRST STANDARD MINING
JORDAN RIVER PROPERTY
CLAIM MAP
DEC.1991
82M 1w
FIG. 2

1.4 History

The King Fissure Deposit was discovered in the late 1800's by early prospectors who cut a trail into the property and drove three short tunnels. No other systematic exploration was carried out on the property until the late 1950's when American Standard Mines Ltd. and Bunker Hill Mines Ltd. conducted extensive surface sampling and metallurgical testing. Bralorne Pioneer Mines Ltd. drilled five diamond drill holes in 1963 and another five in 1965. A summary report, drill logs, and preliminary mine plans prepared subsequent to this drilling are not available.

In 1970, Dr. J. T. Fyles of the B.C. Department of Mines published a report on geology and mineral deposits of the Jordan River area. The report included detailed maps and preliminary cross sections of the King Fissure Deposit.

In the fall of 1990, a re-examination of the property was conducted by J. Laird and R. MacGillivray. Significant results of this work included identification and sampling of several high-grade Pb-Zn-Ag-Ba zones within the King Fissure Deposit, and the recognition of a light rare-earth bearing extrusive carbonatite layer stratigraphically below the massive sulphides.

1.5 Summary of Work

Work on the Jordan River property was conducted between August 23 and September 30, 1991.

Copeland Group:

All work on the Copeland Group was performed on the Copeland 3-4 claims.

1. Grid establishment - A total of 7.8km of line were established on two grids on the King Fissure Deposit.
2. Geological mapping - 7.8km's of grid were mapped at a scale of 1:2,500.
3. Geochemical sampling - A total of 29 rock chip samples were collected from the Copeland Group; all samples were variously analyzed by ICP or whole rock methods; 14 samples were assayed for base and precious metals, and 4 extrusive carbonatite samples were analyzed for light rare-earth element content.
4. Geophysical surveys - 7.4km's of grid were surveyed for magnetics; 4.35km's of grid were surveyed by VLF-EM methods.

Frisby Group:

1. Grid establishment - 15.6km's of grid were established on the Frisby 1-3 claims.
2. Geological mapping - 12.7km's of the grid were mapped at a scale of 1:2,500.
3. Geochemical sampling - 173 soil samples were collected from grid on the Frisby 2 claim and analyzed for 35 elements by ICP methods; A total of 32 rock chip samples were collected from the Frisby 1-4 and Jordan 2-4 claims; all samples were variously analyzed by ICP or whole rock methods. In addition, 12 samples were assayed for base and precious metals, and 4 extrusive carbonatite samples were analyzed for light rare-earth element content.
4. Geophysical surveys - 0.49km's of grid on the Frisby 3 claim were surveyed for magnetics; 3.0km's of grid on the Frisby 2 claim were surveyed by VLF-EM methods.

2.0 Geology

2.1 Regional Geology (Figure 3)

The Jordan River property is underlain by Monashee Complex metamorphic rocks which lie within the Paleozoic and older Shuswap metamorphic complex. The Monashee Complex consists of a series of granitic gneiss domes of probable Aphebian age enveloped by metasedimentary gneisses and schists (Hoy, 1987). The Jordan River map area lies on the southeastern flank of the northernmost of these domes, the Frenchman Cap gneiss dome.

Compilation work conducted in the winter of 1990-1991 has resulted in stratigraphic and structural interpretations substantially different to those in previous publications (ex. Fyles, 1970, Hoy and Brown, 1980). This re-interpretation, made possible largely by the recognition of an extrusive carbonatite layer in the King Fissure Deposit, has enabled correlations to be made with stratigraphy elsewhere in the Monashee Complex, such as the Cottonbelt area on the northwest flank of the Frenchman Cap gneiss dome (see Hoy, 1987). Units referred to in this report are keyed to those on the Jordan River area geology map (Figure 3).

The Frenchman Cap gneiss dome consists largely of medium-to dark-grey, medium-grained, granitic biotite-feldspar gneiss. Within the granitic gneiss are inclusions of biotite-hornblende gneiss and light grey granitic gneiss.

Folding within the gneiss intensifies towards the unconformably overlying metasediments (Fyles, 1970). Previously referred to as mixed gneiss (Wheeler, 1965; Fyles, 1970), it is herein referred to as Unit 1 granitic gneiss.

Overlying the core gneisses are Unit 2 quartz-pebble conglomerates, white quartzites, and less commonly, quartz-mica schists. In most places the conglomerates and quartzites are between 15 and 60m thick, but in hinge zones of folds they can exceed 300m thickness. Cross-bedding has been noted in the transition zone between the lower conglomerate and overlying quartzites (Fyles, 1970).

Above Unit 2 lies Unit 3, a package of green calc-silicate gneiss, calcareous schist, marble, biotite schist, quartzite, and Tremolite-rich, locally dolomitic marble occurs as discontinuous layers and lenses. Where quartzites achieve appreciable thicknesses they are recognized separately as Unit 3q. Amphibolite sills(?) are also locally significant. Fenite has been noted in correlative stratigraphy in the Mt. Grace area on the northwest flank of the Frenchman Cap gneiss dome (Hoy, 1987). Unit 3 has been described as being a few hundred feet thick, pinching out west of the Jordan River, south of Hiren Creek (Fyles, 1970).

Overlying Unit 3 is grey-green coloured calc-silicate gneiss of Unit 4. Amphibolites intercalated with the calc-silicate gneiss, generally less than 2m thick, are thought to be sills due their pinching and swelling nature. Quartzites also occur within this unit, and where significantly thick are mapped as Unit 4q.

Above Unit 4 lies Unit 5, a predominantly carbonate sequence hosting the massive Pb-Zn-Ag-Ba sulphide layer. Lithologies within this unit are continuous over large areas, and are directly correlatable with massive sulphide-bearing stratigraphy described in the Mt. Grace area (Hoy, 1987).

In the Jordan River area the base of the Unit 5 sequence is indicated by a 0.5-1.0m thick gneissic-textured marble layer, informally named the basal marble. This marble consists of white to light-grey calcite, with brown biotite laminations occurring near the upper contact. This upper contact with the extrusive carbonatite layer is gradational over approximately 15cm, with the base of the carbonatite containing laminations of light grey marble. The continuity and contact relationships of the basal marble suggest it may also have an exhalative origin.

The extrusive carbonatite (Unit 5c) is medium to dark brown in colour, commonly over 5m thick, and ranges from non- to highly fragmental in nature. Mineralogy of the matrix consists primarily of calcite and phlogopite, with lesser fluorapatite and pyrochlore, while the light grey breccia fragments consist almost entirely of albite and phlogopite (Hoy, 1987). Fragment size ranges from less than 1cm to over 20cm. The largest fragments occur in the most intensely brecciated sections, and are interpreted to be near vent zones. More detailed descriptions of the carbonatite can be found in Hoy (1987). Above the carbonatite lies interlayered fine grained mica schist and calc-silicate gneiss and schist, in turn overlain by a regionally continuous white marble layer, informally named the marker marble (Unit 5m). The carbonatite-marker marble contact appears to be gradational, with brown phlogopite-biotite layers occurring near the base of the marble; these micaceous intercalations do not appear to be appreciably anomalous in rare earth element content (T. Hoy, verb. comm.). Thickness of the marble is commonly 3-10m. Mineralogy is almost entirely calcite, although accessory scapolite occurs on Frisby Ridge. Above the marker marble lies relatively non-descript, grey, fine-grained mica schist and calc-silicate gneiss 5-30m thick. This is overlain by the massive sulphide sequence (Unit 5s). The sulphide layer, while not ubiquitous, is locally well-developed (ex. King Fissure and Cottonbelt deposits). Sulphides consist primarily of fine to coarse grained pyrrhotite, sphalerite, galena, and pyrite, commonly within a siliceous or calcareous matrix. Barite ranging in occurrence from discrete crystals to massive layers is intimately associated with the sulphides. More detailed descriptions of the massive sulphide layer are presented in property geology sections.

Above the sulphide layer lie quartzites and quartz-biotite schists of Unit 5q grade upwards into Unit 6. Amphibolite sills(?) displaying local contact metamorphism are common in the 5q metasediments.

Unit 6 medium-grained biotite-sillimanite schists and quartzites commonly form rusty weathering cliffs, best exposed on the King Fissure Deposit, on the north side of lower Copeland Creek, and on the western slope of Frisby Ridge. The schists often have a knotted appearance, and are migmatitic in the centre of the King Fissure Deposit. Thin (<1m), irregular marble layers occur within Unit 6 on Frisby Ridge and Mount Copeland.

Intruding the metasedimentary sequence are gneissic nepheline syenites (Unit N). These grey, medium-grained feldspar-biotite gneisses have moderately-well defined foliations and locally pitted weathering surfaces. Nepheline amounts to as much as 20 percent; accessory minerals include calcite, zircon, sphene, fluorite, and magnetite. Concentrations of molybdenite occurring in the border phases of the nepheline syenite have been mined at the Mount Copeland molybdenum mine. Lack of quartz and effervescence of some samples with acid distinguish the syenite from biotite-quartz-feldspar gneisses (Fyles, 1970). Zircons extracted from the nepheline syenite have been dated at 740 +/- 36 Ma (Parrish and Scammell, 1988). Regional mapping indicates that the syenites' preferred level of intrusion was in the upper regions of unit 3, and that it is folded by the earliest recognized deformation. This is best displayed in the area southwest of Mount Copeland.

The youngest rocks recognized in the Jordan River area are Tertiary lamprophyre dykes. Ranging from <1m to over 3m thickness and often occurring in swarms, these dykes tend to fill northerly trending faults and fractures. Rarely the lamprophyre forms sills. In the King Fissure Deposit area, fault-hosted and manto style Pb-Zn-Ag mineralization is associated with the dykes and structures. On the north side of Copeland Creek, on the Wild Goose property, similar structures host Au-bearing Pb-Zn-Ag-Cu veins.

Three phases of folding are recognized in the Jordan River area (Fyles, 1970). Phase 1 folds, having warped axial planes dipping primarily to the southwest, are isoclinal with highly attenuated limbs and thickened hinge zones. Thrust faulting and local shearing parallel to the foliation accompanies Phase 1 folding. Phase 2 folds are generally overturned, with axial planes dipping at low to moderate angles to the south and southwest. Although most Phase 2 folds are of a concentric style, thickened hinge zones have been noted, particularly near the gneiss dome.

One large Phase 3 antiform has been mapped straddling the Jordan River valley. The axis of this fold plunges moderately to the south, dipping steeply to the east (Fyles, 1970).

2.2 Copeland Group Geology (King Fissure Deposit - Figure 4)

The King Fissure Deposit lies within a southeasterly trending, southwesterly dipping syncline with an overturned southern limb, known as the Copeland synform (Fyles, 1970). Folding is open and concentric at the western end, but tightens considerably towards the east. The synform has approximate dimensions of 2.5km long by 0.8km wide. Stratiform massive sulphides are seen on both limbs of the fold. Several zones within the deposit have been established by Riley (1961); the West, Cliff, and East zones as well as the newly named Northeast and Lake zones were examined during the 1991 fieldwork.

2.2.1 Lithology

Rock units 4, 5, and 6 are present in the King Fissure Deposit area. At the bottom of the sequence, Unit 4 grey-green gneiss, quartzites and quartz-biotite schists, form virtually inaccessible cliffs along the overturned southern limb of the deposit. Commonly weathering to grey and black, these rocks are unusually rusty above the Cliff Zone.

Above Unit 4, the Unit 5 basal marble is commonly less than 1m thick. In gradational contact with the basal marble is the extrusive carbonatite (Unit 5c). Best exposures of the carbonatite occur in the Cliff and Northeast zones. In the Cliff zone the carbonatite is approximately 5m thick and almost entirely tuffaceous in nature. Rare fragments less than 2cm in size tend to occur along discrete horizons. Repetitive centimetre-scale interlayering of fine and medium grain sizes indicates several episodes of deposition. In the Northeast zone, the carbonatite is highly fragmental and reaches 10m in thickness. Poorly sorted, matrix-supported fragments up to 25cm in size form approximately 20% of the volume, and are interpreted to be indicative of a proximal source vent. Light rare-earth element content is markedly higher in the Northeast zone samples than in the Cliff zone samples, particularly with respect to Ce, La, and Nd.

Discontinuous medium to coarse grained amphibolite layers are often present within the immediate carbonatite stratigraphy, and probably represent metamorphosed basic volcanics and related intrusives (Hoy, 1987). Amphibolite samples KF-1 and KF-2 from the King Fissure deposit are chemically similar to basic metavolcanic rocks near Blais Creek in the Cottonbelt area (Hoy, 1987, p. 19).

The marker marble, Unit 5m, ranges from 3-10m in thickness, is composed almost entirely of coarse-grained white calcite, and may also be of exhalative origin.

Above the marker marble lies feldspar-porphyroblastic grey mica schist with lesser calc-silicate schist. This unit is uniformly non-descript, notable only in that it directly underlies the massive sulphides.

The massive sulphide horizon (Unit 5s) can be traced throughout the entire King Fissure deposit with the exception of talus and snow covered intervals. Greatest known primary massive sulphide thicknesses occur in the West and Cliff zones. Mineralogy consists mostly of fine to coarse grained pyrrhotite, sphalerite, galena and pyrite, often within a siliceous or calcareous matrix. Massive barite occurs with sulphides in the Northeast and West zones. More detailed descriptions of the massive sulphides and barite are presented in section 2.2.3.

Directly overlying the sulphide horizon are more grey mica schists and calc-silicate gneisses, in turn overlain by interlayered quartzites and mica schists (Unit 5q). The quartzites are generally white to tan coloured and have well-developed micaceous partings. Most of the mica is muscovite, although a green (fuchsite?) mica is often present.

Biotite schist layers become more prevalent upsection, leading into biotite-sillimanite schist and quartzite of Unit 6 occurring in the core of the Copeland synform. This highly tectonized and locally migmatitic unit weathers to a strongly Fe-oxidized surface. Chaotic ptygmatic folding is common, and displacement along foliation planes may be significant, but is difficult to measure.

Several northerly trending biotite-lamprophyre dykes cut through the deposit, particularly in the central and eastern regions of the Copeland synform. Often occurring in swarms, the lamprophyres weather to a dark brown colour, with fine grained biotite and subordinate amphibole within an aphanitic groundmass. Thickness of individual dykes ranges from <0.5m to 3m.

2.2.2 Structure

The King Fissure Deposit lies within a southeasterly trending, southwesterly dipping syncline with approximate dimensions of 2.5km long by 0.8km wide. The fold has been named the Copeland synform by Fyles (1970).

The Copeland synform is open and concentric in the western end, but tightens considerably to the east. In the western end, an anticline superimposed on the keel of the Copeland synform has created a "W" shaped folding pattern, effectively raising the structural level of the keel and establishing easterly plunges to folds. Structural measurements in the West zone indicate that the Copeland synform plunges approximately 30^0 towards 150^0 (Fyles, 1970). The central antiform, plunging more steeply than the Copeland synform, diminishes in magnitude towards the east, at some point disappearing entirely as three fold axes coalesce into one. Near this point on the surface a major northerly trending fault zone, known as the Camp fault, cuts across the synform with a dextral offset of approximately 20m. This late structure may be related to stress created at the junction of the earlier folding. East of the Camp fault the Copeland synform is assumed to have a near horizontal keel.
East of the King Fissure Deposit, structural mapping indicates that fold axes in Unit 4 rocks plunge approximately 15^0 to the west (Fyles, 1970).

On L24+00E on the East zone grid, massive sulphides on each limb of the Copeland synform are approximately 150m apart. Geological mapping and magnetic survey data indicate that the closure of the synform probably lies under talus and thick bush cover between L27+00E and L29+00E (Figures 8 & 9).

2.2.3 Mineralization

Exploration on the King Fissure Deposit is focused primarily on stratiform base-metal massive sulphides (Unit 5s) which occur near the top of the Unit 5 carbonate sequence. The sulphide horizon is well exposed along both limbs of the Copeland synform. Numerous trenches and shallow adits occur in the Cliff, East, and Northeast zones.

Cliff Zone:

In the Cliff zone, massive sulphides range from 1.5m to >3m thick. A vertical zonation within the massive sulphide layer is recognizable; at the base is a dark weathering 0.2-1.0m layer of mostly sphalerite and galena, with minor pyrrhotite. This is overlain by 0.5-2m of rusty weathering, massive, fine-grained pyrrhotite containing eyes of grey quartz and fine grained sphalerite and galena. A representative of this type of mineralization is photographed in Fyles (Plate XV, 1970).

Above the pyrrhotite-dominant middle layer is a 0.2-1.0m siliceous horizon hosting coarse grained pyrite with galena, sphalerite, and minor pyrrhotite. This siliceous upper layer is most easily distinguished by its abundant pyrite and light grey to white weathered surfaces. Brecciation and footwall sulphide stockworking were noted in the Cliff zone. Barite has not been recognized.

East Zone:

In the East zone, massive sulphide layers are approximately 0.5-1.0m thick, consisting mostly of sphalerite and galena with lesser pyrrhotite and pyrite within a siliceous matrix. Barite has not been noted. On the north limb (near the north end of East zone grid L25+00E) is a pyrrhotite-rich zone containing wallrock breccia fragments. This zone is similar in mineralogy and appearance to the middle layer of the Cliff zone massive sulphide unit. Multiple layering over an interval of 3m occurs on the north limb. The extrusive carbonatite layer is present in the East zone but has not been sampled.

Northeast Zone:

In the Northeast zone there are up to three massive sulphide layers separated by calcareous and siliceous layers with barite, spanning a total interval of 1.5m-3.0m. Three sulphide layers, intersected in diamond drill holes drilled by Bralorne Pioneer Mines Ltd., were previously interpreted to be structural repetitions of the same unit.

Small sulphide replacements and mantos occur adjacent to late structures in the Northeast zone.

The well-exposed extrusive carbonatite layer is locally highly fragmental and reaches approximately 5m in thickness. Fragments exceeding 25cm size were noted. Two carbonatite samples from the Northeast zone were relatively enhanced in light rare-earth content compared to the Cliff zone.

West Zone:

Massive sulphide mineralogy in the West zone consists of galena, sphalerite, pyrite, and pyrrhotite. The massive sulphide layers display several important characteristics. Perhaps most highly notable is the occurrence of massive barite interbedded with the sulphides. The light grey coloured barite is medium to coarse grained and contains a fine mesh-work of galena. One section of six massive sulphide layers plus barite was measured to be 4.5m thick. The mineralized horizon contains highly brecciated lenses with <1cm-10^{+}cm wallrock fragments in a massive sulphide and barite matrix. Flow textures are visible around breccia fragments which often display an internal foliation and are slightly elongated parallel to layering. The breccias are thought to have formed below areas of slope instability during sulphide deposition. Near these breccia zones is an underlying sulphide stockworking. This stockworking, along with brecciation, multiple layering, and the occurrence of barite are indicative of proximity to sulphide venting.

The extrusive carbonatite occurs in the West zone but has not been sampled.

Lake Zone:

Mineralization in the Lake zone is distinct in that the sulphide layer has a unique mineralogy and does not exceed 1m in thickness. Galena, sphalerite, pyrite and minor greenockite are dominant with pyrrhotite being notably absent. An emerald green-coloured silicate mineral, found intimately associated with the sulphide layer in the Lake zone, was recently identified as gahnite, a zinc-bearing spinel (Hoy, pers. comm., 1991). This mineral also occurs in the sulphide layer at the Cottonbelt deposit (Hoy, 1987) and in the metamorphosed early Proterozoic Zn-Pb-Cu Saxberget deposit in Sweden (Vivallo and Rickard, 1990).

The extrusive carbonatite is well exposed in the Lake zone, but was not sampled.

Summary:

The King Fissure Deposit has previously been described as being formed by replacement of an impure marble (ex. Riley, 1961). The writers of this report suggest a sedimentary-exhalative (sedex) origin. Supporting evidence includes multiple layering of barite and sulphides, and footwall stockworking adjacent to brecciated zones within the massive sulphides. Sulphide deposition and widespread amphibolite intrusions within a thick metasedimentary sequence are indicative of episodic basinal subsidence during an extensional tectonic regime.

KING FISSURE DEPOSIT
SUMMARY OF ASSAY RESULTS
1991 SAMPLING PROGRAM

Sample	Zone	Type	Pb(%)	Zn(%)	Ba (%)	Ag(g/t)
CZ-1	Cliff	1.0m chip	29.80	25.70	0.01	324.0
CZ-2	Cliff	2.0m chip	2.26	12.20	0.45	29.0
EZ-1	East	dump grab	12.90	5.70	0.01	87.5
EZ-2	East	talus grab	3.90	18.90	0.01	57.5
EZG-1	East	0.5m chip	6.50	9.24	0.78	62.6
EZG-2	East	0.5m chip	0.83	5.79	0.42	11.0
EZG-4	East	1.0m chip	46.70	3.65	0.73	375.0
EZG-5	East	1.0m chip	5.45	12.30	3.81	61.8
NEZ-1	Northeast	1.5m chip	10.40	2.25	21.54	71.5
NEZ-2	Northeast	1.5m chip	2.05	2.74	1.45	18.9
NEZ-3	Northeast	1.0m chip	14.20	0.19	43.53	78.2
NEZ-4	Northeast	1.0m chip	3.30	9.50	3.25	29.3
WZ-1	West	2.0m grab	1.20	11.35	0.89	15.7
WZ-2	West	2.6m chip	8.10	1.70	40.92	68.8
CF-1	Camp fault	grab	79.20	1.22	0.005	132.0

2.3 Frisby Group Geology

The Frisby Group is underlain by units 1-6 (Figure 3). Units 4, 5, and 6 outline a large synform having an overturned southern limb and a warped axial plane dipping to the south and southeast. The fold, which trends across the Jordan River, is similar to the Copeland synform and has been informally named the Frisby synform. Grids on Frisby Ridge were established over areas indicated on regional maps to be underlain by Unit 5, and in particular the marker marble (Unit 5m).

The overturned south limb of the Frisby synform is repetitively folded along the top of Frisby Ridge, resulting in complex outcrop patterns. A massive sulphide layer (unit 5s) up to 1m thick was traced intermittently for 1.2km in the Big Slide zone. The extrusive carbonatite (unit 5c) is present throughout the explored Frisby Ridge area.

2.3.1 Lithology

Frisby Ridge North Grid (Figure 29):

The Frisby Ridge North Grid covers favourable Unit 5 stratigraphy on the Frisby 1 claim. The lowermost (structurally highest) stratigraphy, outcropping in the northeastern region of the grid, consists of interbedded calc-silicate schists and quartz-biotite schists. Stratigraphically above this lies the extrusive carbonatite, which subcrops near TL 37+00E, 78+00N. The carbonatite contains rare, small (<2cm) breccia fragments, and appears highly recrystallized; a sample from this location was highly anomalous in Ce (488.0 ppm), La (304.0 ppm), and Nd (150 ppm). Thickness of the carbonatite is impossible to determine at this location. Above the carbonatite are poorly exposed quartz-biotite and calc-silicate schists, in turn overlain by the marker marble (Unit 5m). The marble, averaging 5m thickness, weathers white to light grey and is coarsely recrystallized. Where not exposed, the marble can often be traced by following sinkholes. Marble in the western region of the grid contains scattered 0.5-3cm crystals of beige-coloured scapolite. Scapolite within marble in the Monashee Complex is indicative of deposition under hypersaline conditions common in restricted lagoons and tidal flats (Hoy, 1987). Above the marker marble lies feldspar-porphyroblastic quartz-biotite schist and calc-silicate schist. The uppermost stratigraphy exposed on the grid consists of fine to medium grained, well-bedded, brown to grey quartzites and quartz-mica schists. Graded bedding and cross-laminations are visible in quartzites outcropping in the northwest area of the grid. Minor amphibolite sills(?) are present in the southwest corner of the grid, stratigraphically underlying the marker marble. The sulphide horizon was not found in the North Grid area.

Frisby Ridge South Grid (Figure 15):

The Frisby Ridge South Grid covers favourable Unit 5 stratigraphy on the Frisby 2 and Frisby 3 claims. The stratigraphic sequence and rock descriptions are similar to those on the North Grid, with a few notable exceptions. Scapolite was not noted in the marker marble, and garnets are more common in the stratigraphically underlying schists.

The extrusive carbonatite-marker marble sequence is well exposed in cliffs around TL 36+50E, 64+00N, where the carbonatite is estimated to be 2-3m thick.

Two carbonatite samples from the South Grid contained similar amounts of light rare-earth elements to samples from the Cliff zone on the King Fissure Deposit. The sulphide layer was not found in the South Grid area.

Big Slide Zone (Figure 11, 12, 14):
In the Big Slide zone the favourable unit 5 stratigraphy, including the extrusive carbonatite (Unit 5c), marker marble (Unit 5m), and massive sulphide layer (Unit 5s), is well exposed in cliffs (Figure 12). On the Big Slide grid in the southern end of the zone, highly deformed, grey calcareous schists outcrop both above and below massive sulphide exposures.

South Frisby Ridge:
Traverses in this area did not locate the favourable Unit 5 stratigraphy where indicated on regional geological maps. Samples of pyritic quartzites from old trenches were not anomalous (FRS-SL1, SL2).

2.3.2 Structure

The dominant structures on Frisby Ridge are repetitive Phase 1 folds with southerly dipping axial planes. The folds plunge at low angles towards 070-110^{0}, and are best outlined by the marker marble (Figures 3, 15, and 29). Shallowly dipping limbs combine with relatively gentle topography along the ridge top to create sinuous outcrop patterns. Complex folding with thickened hinge zones is visible in cliffs along the west side of the ridge. A northeasterly trending, southerly dipping thrust fault cuts across Frisby Ridge near BL 52+00N, and is most likely related to the larger Frisby Ridge fault a short distance to the south (Figure 3). The fault area is marked by a large area of brecciation, silicification, and ankeritization.

2.3.3 Mineralization

Massive sulphides (Unit 5s) outcrop at the base of cliffs along the western edge of Frisby Ridge in the Big Slide zone (Figures 11-14). Mineralogy consists of massive sphalerite, galena, pyrrhotite, pyrite, and marcasite in a siliceous or calcareous gangue. Coarse green amphibole crystals are locally intergrown with the massive sulphides.

No massive sulphides (Unit 5s) were noted in the Frisby Ridge North or South Grid areas. This, combined with the decreased thickness of the carbonate units and presence of scapolite in the marker marble, suggests shallow water deposition, distal from sulphide and carbonatite sources.

Silicification and quartz veining containing minor chalcopyrite and malachite occur within complexly folded Unit 5m marble in the South Grid area. A sample of this material contained 0.48% Cu and 460ppb Au (sple FRS-CU1).

3.0 Geochemistry

3.1 Copeland and Frisby Groups Rock Geochemistry

Significant results from massive sulphide and extrusive carbonatite samples have been summarized in previous sections. Additional rock samples taken from fault zones, veins, and distinctive stratigraphic units were analyzed by ICP and whole rock methods. These results, along with those from past exploration programs, will help form a geochemical database for depositional environment modelling and comparison with other mineral deposits.

3.2 Frisby Group Soil Geochemistry

A soil geochemical survey totalling 173 samples was conducted over the Frisby Ridge South Grid. Samples were collected from the red-brown "B" Horizon, which was usually well developed between 10-20cm depth, and placed in standard kraft paper soil envelopes. Lab preparation consisted of drying then sieving samples to -80 mesh. All samples were analyzed at Acme Labs of Vancouver, B.C., by ICP methods for 35 elements; a summary of the analysis procedure is included with results in Appendix 3.

Nine elements representing a base-metal plus rare-earth element suite were examined in detail: they are Pb, Zn, Ag, Ba, Sr, La, Y, Nb, and Sc. Extreme high values were discarded from the data base before statistical analysis.

	Pb ppm	Zn ppm	Ag ppm	Ba ppm	Sr ppm	La ppm	Y ppm	Nb ppm	Sc ppm
# samples	173	173	173	169	172	172	173	172	172
Mean value	24.4	83.2	0.14	603	214	43.5	22	19.5	9.94
Maximum value	153	715	0.6	977	505	105	87	104	30.2
Minimum value	2	31	0.1	235	132	14	9	3	5
Std. Deviation	15.7	58.1	0.08	138	56	15.5	9.24	9.36	3.03
Variance	249	3376	0.0	18959	3141	242	85.4	87.6	9.22

Values above the mean plus one- and two standard deviations were considered possibly and definitely anomalous, respectively. Each element was contoured separately (Figures 16-24, 26-28).

Lead anomalies, with thresholds of 40ppm and 56ppm, are well constrained. Distribution of anomalous Zn (141ppm, 200ppm) and Ag (0.3ppm, 0.4ppm) is more widespread, with many apparently random single sample anomalies throughout the entire grid area. Barium (741ppm, 878ppm) and strontium (270ppm, 326ppm) display similar distribution patterns, with several anomalies scattered in the southern half of the grid. Lanthanum (59ppm, 75ppm), ytrium (31ppm, 40ppm), niobium (29ppm, 38ppm), and scandium (13ppm, 16ppm) all exhibit similar distribution patterns. Of these elements, Nb and Y show the greatest dispersion, while Sc shows the least.

Two multi-element anomalies exist on the Frisby Ridge South Grid. The first, bounded by L65+50 and L63+50N, consists of Pb, Zn, Ag, Sr, La, Y, Nb, and Sc. The anomaly trends approximately 060° with dimensions of 250m long by 50m wide, and is open both to the east and west. While the extrusive carbonatite (Unit 5c) outcrops within the anomaly area, no appreciable sulphides were noted during geological mapping and prospecting. The combination of base-metal and rare-earth element constituents of the anomaly indicates that the sulphide horizon and the extrusive carbonatite are probably within 50m of each other.

The second multi-element soil anomaly on the Frisby Ridge South Grid, occurring between L66+25N and L68+50N, consists of La, Y, Nb, and Sc. With dimensions of approximately 375m long by 30m wide, the anomaly forms a rough "S" shape.

The westernmost finger of the anomaly, seen in the distribution of Y and La, is interpreted to be a downslope dispersion effect. The anomaly is successful in tracing the carbonatite for 150m north of the last outcrop in the area.

A single sample anomaly lies at BL 35+00E, 53+50N. The sample is highly elevated in Pb (153 ppm), Zn (715 ppm), La (1048 ppm), Ba (1098 ppm), Y (67 ppm), Nb (1125 ppm), and Sc (127.7 ppm) content. Although no massive sulphide or carbonatite outcrops were noted, the favourable sulphide-host carbonate stratigraphy occurs within 50m of the sample location.

4.0 Geophysics

Magnetic and VLF-EM surveys were conducted over grids on both the Copeland and Frisby groups. Instruments used were a Scintrex MP2 magnetometer and a Ronka EM-16 VLF receiver. Readings were taken at 25m intervals along grid lines and recorded in a field notebook. When time permitted, or anomalous zones were encountered, readings were taken at 12.5m intervals. For each magnetic survey, readings were taken at a base station at intervals throughout each day. Significant diurnal variations requiring correction occurred only during the Cliff Zone survey on the King Fissure Deposit. Corrections for diurnal variation were calculated by graphing the diurnal variation as a function of time, then interpolating appropriate correction factors for each reading. The Seattle VLF transmitting station was used for all VLF-EM surveys.

4.1 Copeland Group

A magnetic survey was conducted over the Cliff Zone grid, while both magnetic and VLF-EM surveys were run on the East Zone grid. Data for the East Zone was interpreted separately by a consulting geophysicist, D. R. MacQuarrie. The complete interpretation is supplied in Appendix 6.

4.1.1 Magnetic Surveys

For the East Zone (Figure 9), a contoured plan of the relative magnetic values reveals a possible fold closure between L27+00E and L29+00E. Such a structure, consistent with geological mapping, would be the eastern closure of the Copeland synform, although definition is limited with the 100m spaced grid lines.

Three probable pyrrhotite concentrations have been identified at the north end of L25+00E, at 9+87.5 to 10+00N on L26+00E, and at BL 10+00N on L27+00E. These zones are near surface with interpreted widths of 10-15m, based on the 1/2 width of the magnetic profile. On L27+00E, L30+00E, and probably L25+00E, magnetic highs coincide with positive fraser filter VLF-EM anomalies, suggesting that the pyrrhotite is massive over reasonably continuous distances (MacQuarrie, Appendix 6).

Magnetic data from the Cliff Zone grid (Figure 7) required correction for diurnal variation. Corrected values are still widely varied from one station to the next, and as a result the entire survey should be regarded with some caution. The plan map was contoured using relative values of 100, 200, 500, & 1000 gammas above the mean. Single station and spurious anomalies were discarded. A 200m long positive anomaly at the southern edge of the grid between L10+00E and L12+00E corresponds to mapped exposures of pyrrhotite-rich massive sulphides. As the anomaly diminishes to the west the sulphide layer, with pyrrhotite becoming subordinate to sphalerite, is covered by snow and ice. At the eastern end of the anomaly the sulphide layer becomes covered by ice and glacial debris. The north-central part of the grid contains widely varied readings with extreme lows and highs. This area is underlain by Unit 6 rusty biotite-sillimanite schist with lesser quartzites and amphibolites. These extremes appear to be suppressed in the northeast part of the grid where Unit 6 is covered by snow and ice.

4.1.2 VLF-EM Survey

On the East Zone Grid, a Fraser filtered plan map of the in phase % data reveals a 300m long, arcuate conductor at the north ends of L26+00E and L27+00E (Figure 10 and Appendix 6). The conductor is open to the north. While coinciding with massive sulphides observed on L27+00E, much of the conductor is over stratigraphy directly below the massive sulphide horizon. Possible disseminated sulphides below the massive sulphide layer are indicated (MacQuarrie, Appendix 6).

4.2 Frisby Group

4.2.1 Magnetic Survey

A magnetic survey was conducted over 0.485km of grid in the Big Slide zone (Figure 13). Readings were taken every 5m along grid lines, and no corrections for diurnal variation were required. Test readings taken directly over massive sulphide exposures were magnetic lows (<57931 gammas). Contours of standard deviations from the mean show a 150m long linear anomaly extending southwest along the projected strike of the massive sulphide layer. The anomaly consists of 2 magnetic lows (<57931 gammas) separated by a magnetic high (>58012 gammas), and is open to the southwest.

4.2.2 VLF-EM Survey

A 3.0km VLF-EM survey was conducted over the southern portion of the Frisby Ridge South Grid (Figure 25). Results do not reveal any significant anomalies or trends.

5.0 Recommendations

5.1 Copeland Group

In the Cliff Zone, a channel sampling program of the massive sulphides is recommended to complement a comprehensive diamond drill program. Drilling should systematically test downdip width and grade continuity of the zone.

In the East zone, a well-controlled grid with 50m spaced lines should be established. Work on the grid should include the geophysical surveys recommended by D. R. MacQuarrie (Appendix 6) in conjunction with detailed geological mapping and sampling. Compilation of these surveys will assist in planning of a diamond drill program. This drill program should be designed to thoroughly test the keel area of the Copeland synform for potential tectonic thickening.

The Northeast zone warrants detailed geological mapping, sampling, and geophysical surveys. This program should be conducted as an extension of grid work in the East zone.

The West zone, with the thickest known exposures of massive sulphides plus barite, warrants aggressive exploration. A program of detailed sampling, geological mapping, and geophysical surveys is necessary to define drill targets.

The Lake zone warrants detailed geological mapping, sampling, and geophysical surveys.

The extrusive carbonatite layer is present throughout the entire King Fissure Deposit, and as yet is poorly understood. Geological mapping, detailed sampling, and petrographic studies are required to better understand the distribution and economics of Nb plus light rare-earth elements present.

Reported sulphide showings in the North Copeland ridge area remain unexplored and should be located and evaluated.

5.2 Frisby Group

In the Big Slide zone, massive sulphide exposures merit further geological mapping, detailed sampling, and geophysical surveys. The zone remains unexplored southwest to the Jordan River. Surface exploration in this area should begin with establishment of a cut-line grid followed by geological mapping, rock and soil sampling, and geophysical surveys. Cost-effective access may be made possible by upgrading and extending the old pack trail from the road along the Jordan River into this area.

The first South Grid soil geochemical anomaly, bounded by 63+50N and 65+50N, should be re-examined and sampled. The area was anomalous in Pb, Zn, and Ag, and is underlain by the massive sulphide host stratigraphy. The area of the highly anomalous soil sample located at 53+50N on the Frisby Ridge baseline should also be examined and sampled in detail.

On the Frisby Ridge North and South grids, the extrusive carbonatite layer merits further evaluation as per that recommended for the King Fissure area.

6.0 ITEMIZED COST STATEMENTS

COPELAND GROUP

Wages:	
T. Clarke, geologist (Aug. 23-28, Sept. 6-9)	
10 days @ $200/day	$ 2,000.00
J. Laird, prospector (Aug. 23-28, Sept. 6-9)	
10 days @ $200/day	$ 2,000.00
Food & Accommodation:	
2-man camp (Aug. 25-27, Sept. 7-9)	
8 days @ $25/day	$ 200.00
Hotel (Aug. 23, Sept.6)	$ 138.79
Food/meals (Aug. 23-28, Sept. 6-9)	$ 449.16
Transportation	
Truck rental (Aug. 23, 28)	
1200km x $0.25/km	$ 300.00
gas, highway toll	$ 118.91
Helicopter charter (Aug. 24-28, Sept. 7-9)	
5.5 hours @ $700/hour	$ 3,850.00
Geophysical Equipment Rental:	
Scintrex MP-2 Proton Precession Magnetometer and Geonics EM-16 VLF-EM Receiver (Sept. 1-14)	
0.5 month @ $1,836.00/month	$ 918.00
Geochemical Analyses:	
Min-En Labs:	
7 samples assayed for Ag, Ba, Pb, Zn @ $29.75/sample	$ 208.25
8 samples assayed for Pb, Zn @ $13.25/sample	$ 106.00
2 samples assayed for Ba @ $10.00/sample	$ 20.00
17 sample prep. @ $3.75/sample	$ 63.75
1 rock geochem. 31 element ICP @ $6.00/sample	$ 6.00
2 geochem. F @ $4.50/sample	$ 9.00
7 geochem. 26 element major ICP @ $13.50/sample	$ 94.50
1 rock geochem. Ag @ $2.50/sample	$ 2.50

Acme Labs:		
3 sample prep. @ $3.25/sample	$	9.75
3 samples analyzed for 35 element ICP @ $6.50/sample	$	19.50
3 Au analyses by acid leach @ $5.00/sample	$	15.00
1 Cu assay @ $7.50/sample	$	7.50
Chemex Labs:		
9 assay prep. @ $4.35/sample	$	39.15
9 whole rock + immobile element analyses @ $28.00/sample	$	252.00
4 rock samples analyzed for light rare-earth elements plus ultra-trace 19 @ $55.50/sample	$	222.00
sub-total	$	1,074.90
G.S.T.	$	75.24
Total lab costs	$	1,150.14
Report preparation, drafting, supplies	$	1,500.00

TOTAL COPELAND GROUP EXPLORATION EXPENDITURES $12,625.00

FRISBY GROUP

Wages:	
T. Clarke, geologist (Sept. 9-29)	
21 days @ $200/day	$ 4,200.00
J. Laird, prospector (Sept. 9-29)	
21 days @ $200/day	$ 4,200.00
M. Andrews, geologist (Sept. 14-29)	
15 days @ $160/day	$ 2,400.00
Food & Accommodation:	
2-man camp (Sept. 9-13)	
5 days @ $25/day	$ 125.00
3-man camp (Sept. 15-20, 22-27)	
12 days @ $35/day	$ 420.00
Hotel (Sept. 14,21, 28)	$ 346.97
Food/meals (Sept. 10-29)	$ 911.94
Transportation:	
Truck rental (Sept. 6, 28, 29)	
2400km x $0.25/km	$ 600.00
gas, highway toll	$ 237.92
Helicopter charter (Sept. 10-28)	
5 hours @ $700/hour	$ 3,500.00
Geophysical Equipment Rental:	
Scintrex MP-2 Proton Precession Magnetometer and Geonics EM-16 VLF-EM Receiver (Sept. 15-30)	
0.5 month @ $1,836.00/month	$ 918.00
Geochemical Analyses:	
Min-En Labs:	
2 rock sample prep. @ $3.75/sample	$ 7.50
2 rock geochem. 31 element ICP @ $6.00/sample	$ 12.00
2 rock geochem. Au (fire) @ $7.25/sample	$ 14.50
Acme Labs:	
173 soil samples analyzed for 35 element (ICP)	

@ 6.50/sample	$ 1,124.50
173 soil sample prep. @ $1.00/sample	$ 173.00
26 rock sample prep. @ $3.25/sample	$ 84.50
26 samples analyzed for 35 element ICP @ $6.50/sample	$ 169.00
26 Au (acid leach) @ $5.00/sample	$ 130.00
2 geochem. Au, Pt, Pd @ $8.50/sample	$ 17.00
2 Cu assays @ $7.50/sample	$ 15.00
7 Pb, Zn assays @ $10.50/sample	$ 73.50
1 Zn assay @ $7.50/sample	$ 7.50
Chemex Labs:	
4 sample prep. @ $4.35/sample	$ 17.40
4 whole rock analyses @ $28.00/sample	$ 112.00
4 rare-earth 10 plus ultra-trace-19 analyses @ $55.50/sample	$ 222.00
sub-total	$ 2,179.40
G.S.T.	$ 152.56
Total lab costs	$ 2,331.96
Report preparation, drafting, supplies	$ 1,500.00

TOTAL FRISBY GROUP EXPLORATION COSTS **$21,691.79**

7.0 BIBLIOGRAPHY

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APPENDIX 1

QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Tiro Clarke, hereby certify that:

1. I am a Geologist residing at 301-357 East 2nd Street, North Vancouver, British Columbia, V7L 1C6

2. I am a graduate of the University of British Columbia with a B.Sc.(Hon.) in Geology and Oceanography, 1988.

3. I have practised geology since 1986, and mineral exploration geology continuously since graduation.

4. I personally conducted or supervised fieldwork described in this report.

5. I currently own 500 shares of First Standard Mining, Ltd., purchased in 1990. I do not plan to acquire or receive any other interest, direct or indirect, in First Standard Mining Ltd. or the Jordan River Property.

6. I consent to the use of this report, or excerpts therefrom, in any prospectus, statement of material facts, or compilation as required by First Standard Mining Ltd..

Dated at Vancouver, British Columbia, this 5th day of December, 1991.

Tiro Clarke

Tiro Clarke, B.Sc.(Hon.)

STATEMENT OF QUALIFICATIONS

I, James W. Laird, hereby declare that:

1. I reside and maintain a business office at 3869 Mount Seymour Parkway, North Vancouver, B.C., V7G 1C4.

2. I am a self-employed prospector and mining exploration contractor and have been so full-time for 11 years.

3. I have completed the B.C. Department of Mines course "Advanced Mineral Exploration for Prospectors", 1980.

4. I am a member in good standing of the Canadian Institute of Mining and Metallurgy and the B.C. and Yukon Chamber of Mines.

5. I have extensively explored the Kootenay-Revelstoke area for mineral deposits for several years, and am very familiar with the geology and mines thereof.

6. I currently own 3500 shares of First Standard Mining, Ltd., purchased in 1990.

Dated at Vancouver, British Columbia, this 5th day of December, 1991.

James W. Laird

James W. Laird

STATEMENT OF QUALIFICATIONS

I, Martin Andrews, hereby certify that:

1. I am a geologist residing at 203-2105 West 7th Street, Vancouver, British Columbia, V6K 1X9.

2. I am a Graduate of the University of British Columbia with a B.Sc. in Geology (1989).

3. I personally conducted fieldwork described in this report.

4. I do not hold, nor plan to acquire or receive any interest, direct or indirect, in First Standard Mining Ltd. or the Jordan River Property.

5. I consent to the use of this report, or excerpts therefrom, in any prospectus, statement of material facts, or compilation as required by First Standard Mining Ltd..

Martin Andrews

Martin Andrews, B.Sc.

APPENDIX 2

ROCK GEOCHEMISTRY RESULTS

MINERAL
• ENVIRONMENTS
LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-0967-RA1

Company: LAIRD EXPLORATION
Project: JORDAN RIVER
Attn: JAMES LAIRD

Date: SEP-05-91
Copy 1. LAIRD EXPLORATION, NORTH VANCOUVER, B.C.

We hereby certify the following Assay of 7 ROCK samples submitted AUG-30-91 by J.LAIRD.

Sample Number	AG g/tonne	AG oz/ton	BA %	PB %	ZN %	F PPM
EZ-1	87.5	2.55	.01	12.90	5.70	
EZ-2	57.5	1.68	.01	3.90	18.90	
CZ-1	324.0	9.45	.01	29.80	25.70	
NEZ-1	71.5	2.09	21.54	10.40	2.25	
NEZ-2	18.9	.55	1.45	2.05	2.74	
NEZ-3	78.2	2.28	43.53	14.20	.19	40
NEZ-4	29.3	.85	3.25	3.30	9.50	

Certified by [signature]

MIN-EN LABORATORIES

COMP: LAIRD EXPLORATION
PROJ: JORDAN RIVER
ATTN: J.LAIRD

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-0967-RJ1
DATE: 91/09/06
* ROCK * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU-FIRE PPB
EZ-3	.6	3130	16	1	1570	.4	2	14970	.1	18	17	14810	980	1	680	319	5	10	9	240	868	1	20	1	55	6.4	811	1	1	10	248	1
FR-1	.9	15910	17	1	878	1.1	8	11690	.1	18	3188	28130	1770	12	9390	1368	3	90	27	1110	529	5	19	5	551	20.7	241	2	1	6	121	1
FR-2	1.1	3510	2	1	1865	5.1	3	69570	.1	9	28	22930	2410	1	52390	831	1	10	4	170	255	1	2795	1	31	20.6	135	1	1	2	49	1

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

James W. Laird File # 91-4986

3868 Mt. Seymour Parkway, North Vancouver BC V7G 1C4

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
FRS-1	6	40	32	5560	.3	37	15	719	5.78	5	5	ND	6	535	1.9	2	2	73	11.16	.039	27	82	3.34	3069	.19	6.20	.39	2.16	2	6	1	16	13	5.2	8.6
FRS-2	3	28	38	5296	.4	30	11	337	2.27	2	5	ND	4	768	1.3	3	2	58	20.51	.025	17	71	2.31	1297	.12	5.08	.23	1.44	2	6	1	11	10	1.7	6.9
FRS-3	2	30	26	5752	.6	21	8	252	1.79	2	5	ND	1	644	1.5	2	2	43	18.48	.022	13	56	2.31	651	.10	4.05	.30	.93	2	4	1	12	12	1.4	5.8
FRS-4	2	24	22	2085	.4	24	12	524	2.80	2	5	ND	5	581	.5	2	2	41	13.15	.015	30	73	2.14	726	.18	6.50	.40	1.68	2	5	1	15	15	2.3	9.4
FRS-5	2	34	20	391	.4	28	12	303	3.12	4	5	ND	4	506	.4	4	2	40	13.85	.018	27	73	2.13	1155	.18	5.93	.37	1.64	2	4	1	11	15	2.4	8.6
FRS-6	23	58	714	22473	.7	19	26	189	28.00	19	5	ND	3	35	9.2	2	2	29	.40	.013	2	20	.21	2171	.05	1.37	.04	.30	2	2	1	3	1	15.3	1.1
FRS-7	25	61	1921	34604	.8	22	23	273	26.66	16	7	ND	4	45	12.7	2	2	42	.34	.010	2	38	.25	1935	.07	1.55	.07	.43	2	4	1	4	4	13.3	1.8
FRS-8	17	111	3866	61631	.7	73	19	478	25.94	18	5	ND	1	31	24.0	6	2	35	.24	.005	2	44	.09	2345	.02	.48	.03	.16	2	1	1	2	1	18.3	.2
FRS-9	10	47	269	733	.2	24	11	337	1.78	9	5	ND	4	634	.6	2	2	110	15.83	.022	18	45	2.30	2889	.12	3.87	.28	1.33	2	7	1	11	13	1.7	5.4
FRS-10	3	35	43	194	.2	36	18	561	4.09	2	5	ND	10	473	.5	2	2	92	5.00	.035	55	131	2.59	3460	.33	10.24	.72	2.30	2	9	1	20	17	5.9	14.9
FRS-11	2	18	104	403	.1	30	10	652	2.27	8	5	ND	6	710	1.0	2	2	83	12.59	.047	29	70	2.27	549	.20	5.35	.42	1.39	2	7	1	15	14	2.1	7.1
FRS-12	15	203	2081	24911	3.5	104	38	407	40.35	5	5	ND	5	73	16.2	2	2	36	.47	.005	3	29	.15	986	.03	.96	.04	.30	2	1	1	4	1	19.8	.2
FRS-13	51	69	8991	31178	6.7	16	8	360	6.18	26	5	ND	5	335	41.6	18	27	136	2.74	.029	30	74	1.25	1299	.19	4.92	.28	2.06	2	5	1	14	14	6.4	7.3
FRS-14	17	80	5591	99999	.1	39	17	1293	17.96	48	5	ND	1	37	115.4	2	2	19	.27	.012	2	15	.15	1097	.02	.54	.03	.25	2	2	1	2	1	9.4	.2
FRS-15	12	113	5994	99999	2.6	73	25	706	29.47	31	5	ND	3	19	57.4	2	3	14	.04	.013	2	1	.03	432	.01	.28	.02	.12	2	2	1	1	1	16.0	.2
FRS-16	2	3285	32	728	6.6	10	9	1088	1.15	2	5	ND	1	182	1.2	2	2	20	10.29	.013	90	35	.15	247	.05	1.99	.07	.77	2	1	1	32	9	.7	7.0
FRS-17	18	168	4381	60669	1.5	69	9	345	30.93	16	5	ND	2	32	19.8	15	2	37	.18	.004	2	99	.06	2188	.03	.53	.01	.01	2	1	1	2	1	19.0	.2
FRS-CU 1	3	4833	74	948	.9	10	3	110	1.16	2	5	ND	1	2	.8	4	6	1	.04	.014	4	20	.01	92	.01	.22	.02	.08	2	1	1	5	1	.3	.2
FRS-QV 1	3	162	7	101	.5	27	8	89	.96	2	8	ND	1	10	.3	2	2	5	.21	.007	2	19	.09	40	.01	.40	.03	.10	2	1	1	1	2	.2	.5
FRS-FZ 1	4	66	41	298	.2	100	30	422	7.70	4	5	ND	23	312	.2	8	2	144	.08	.050	65	216	.57	1789	.36	8.69	1.59	3.83	2	3	1	12	11	7.6	14.6
FRS-SL 1	15	20	11	119	.5	69	67	195	5.15	6	5	ND	1	6	.2	3	2	5	.01	.002	3	31	.01	59	.01	.18	.02	.07	2	2	1	1	1	3.5	.4
FRS-SL 2	4	24	11	74	1.0	29	48	165	1.63	7	5	ND	11	13	.2	2	2	9	.02	.014	5	41	.01	40	.02	.30	.01	.07	4	1	1	5	19	.2	.5
RE FRS-CU 1	3	5102	72	930	2.1	15	3	107	1.19	2	5	ND	1	2	1.0	2	3	1	.04	.006	5	20	.01	96	.01	.22	.01	.08	2	1	1	5	1	.2	.2
FRN-1	2	108	52	203	3.1	43	20	460	4.75	2	5	ND	7	474	.5	2	2	81	7.18	.051	48	162	1.25	305	.29	10.80	.25	.89	2	3	1	16	11	5.3	14.7
FRN-2	5	102	34	126	1.4	94	38	351	5.44	3	5	ND	9	410	.7	7	2	159	6.90	.058	56	181	1.64	803	.43	12.40	.61	2.49	3	4	1	18	14	5.8	17.6
FRN-3	5	64	84	148	3.5	61	24	310	4.68	2	5	ND	7	549	.4	2	2	82	6.11	.035	42	153	1.75	897	.35	10.41	.84	2.47	2	3	1	15	11	3.1	14.1
CF-CU 1	3	12642	7	1	.8	13	6	309	1.43	2	5	ND	1	30	1.5	2	8	2	2.21	.014	5	22	.03	28	.01	.35	.02	.09	2	1	1	16	1	.2	1.6
CZ-FZ 1	1	120	40	146	1.5	100	35	848	7.79	21	5	ND	6	558	1.4	2	2	121	7.05	.088	29	106	1.40	467	.12	7.56	2.45	1.95	2	1	1	25	1	6.5	11.2
KF-4	4	28	49	60	11.1	24	7	1112	4.61	8	5	ND	1	353	.8	2	2	154	18.60	.135	19	43	3.50	540	.05	1.70	.06	.71	2	1	3	14	5	1.6	2.6
FB-1	28	137	47	328	.8	77	19	470	3.54	4	5	ND	5	535	2.6	11	2	401	3.67	.183	65	155	1.17	2764	.34	8.18	2.73	1.32	2	2	1	28	178	1.5	10.3
STANDARD HFC	23	61	44	148	7.5	103	52	1306	4.81	41	25	7	36	60	20.0	17	21	84	.64	.124	38	112	1.21	224	.08	2.11	.08	.17	11	4	17	8	3	.2	6.1

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 10ML HCLO3-HNO3-HF AT 200 DEG. C TO FUMING AND IS DILUTED TO 10 ML WITH DILUTED AQUA REGIA. THIS LEACH IS PARTIAL FOR MAGNETITE, CHROMITE, BARITE, OXIDES OF AL, ZR & MN AND MASSIVE SULFIDE SAMPLES. AU DETECTION LIMIT BY ICP IS 3 PPM.
AS, CR, SB SUBJECT TO THE LOST OF VOLATILIZATION DURING HCLO4 FUMING.
- SAMPLE TYPE: ROCK Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 9 1991 **DATE REPORT MAILED:** Oct 11/91. **SIGNED BY**.........D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

James W. Laird FILE # 91-4986
3868 Mt. Seymour Parkway, North Vancouver BC V7G 1C4

SAMPLE#	Au* ppb	Au** ppb	Pt** ppb	Pd** ppb	Cu %	Pb %	Zn %
FRS-1	7	-	-	-	-	-	-
FRS-2	2	-	-	-	-	-	-
FRS-3	2	-	-	-	-	-	-
FRS-4	4	-	-	-	-	-	-
FRS-5	4	-	-	-	-	-	-
FRS-6	11	-	-	-	-	.11	2.87
FRS-7	20	-	-	-	-	.30	3.86
FRS-8	11	-	-	-	-	.51	6.92
FRS-9	4	-	-	-	-	-	-
FRS-10	2	-	-	-	-	-	-
FRS-11	4	-	-	-	-	-	-
FRS-12	2	2	1	1	-	.26	2.92
FRS-13	16	-	-	-	-	1.29	3.50
FRS-14	34	-	-	-	-	.76	32.25
FRS-15	77	-	-	-	-	.74	16.23
FRS-16	23	-	-	-	.32	-	-
FRS-17	4	4	1	1	-	-	6.89
FRS-CU 1	460	-	-	-	.48	-	-
FRS-QV 1	10	-	-	-	-	-	-
FRS-FZ 1	7	-	-	-	-	-	-
FRS-SL 1	7	-	-	-	-	-	-
FRS-SL 2	21	-	-	-	-	-	-
RE FRS-CU 1	390	-	-	-	-	-	-
FRN-1	5	-	-	-	-	-	-
FRN-2	5	-	-	-	-	-	-
FRN-3	3	-	-	-	-	-	-
CF-CU 1	20	-	-	-	1.19	-	-
CZ-FZ 1	3	-	-	-	-	-	-
KF-4	5	-	-	-	-	-	-
FB-1	3	-	-	-	-	-	-
STANDARD AU-R	480	465	483	494	.85	1.36	2.39

- SAMPLE TYPE: ROCK Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 9 1991 **DATE REPORT MAILED:** Oct 17/91.

SIGNED BY......D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

MIN • EN LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
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FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate 1V-1261-RG1

Company: LAIRD EXPLORATION
Project: JORDAN RIVER PROJECT 1991
Attn: JAMES LAIRD

Date: OCT-18-91
Copy 1. LAIRD EXPLORATION, NORTH VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 9 ROCK samples submitted OCT-09-91 by JAMES LAIRD.

Sample Number	AU-FIRE PPB	AG PPM	F PPM
EZG-1	21		
EZG-2	13		
EZG-3	4		
EZG-4	128		
EZG-5	59		
CZ-2	61		
CF-1	23	132.0	
WZ-1	18		
WZ-2	76		30

Certified by ______________________
MIN-EN LABORATORIES

MIN • EN LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

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SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-1261-RA1

Company: LAIRD EXPLORATION
Project: JORDAN RIVER PROJECT 1991
Attn: JAMES LAIRD

Date: OCT-22-91
Copy 1. LAIRD EXPLORATION, NORTH VANCOUVER,B.C.

We hereby certify the following Assay of 8 ROCK samples submitted OCT-09-91 by J.LAIRD.

Sample Number	BA %	PB %	ZN %
EZG-1		6.50	9.24
EZG-2		.83	5.79
EZG-4		46.70	3.65
EZG-5		5.45	12.30
CZ-2		2.26	12.20
CF-1		79.20	1.22
WZ-1	.89	1.20	11.35
WZ-2	40.92	8.10	1.70

Certified by ____________________

MIN-EN LABORATORIES

COMP: LAIRD EXPLORATION
PROJ: JORDAN RIVER PROJECT 1991
ATTN: JAMES LAIRD

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-1261-RL1
DATE: 91/10/22
* ROCK * (ACT:F26)

SAMPLE NUMBER	AL2O3 %	BA %	BE %	CAO %	CO %	CR2O3 %	CU %	FE2O3 %	K2O %	MGO %	MNO2 %	MO %	NA2O %	NB %	NI %	P2O5 %	PB %	RB %	SIO2 %	SN %	SR %	TIO2 %	V %	W %	ZN %	ZR %
EZG-1	8.57	.780	.005	5.81	.005	.03	.010	13.61	1.99	3.75	.26	.005	.01	.01	.005	.05	1.045	.01	39.96	.005	.05	.38	.020	.005	10.450	.010
EZG-2	6.77	.420	.001	3.21	.005	.03	.005	28.22	1.33	1.35	.17	.005	.01	.01	.005	.01	.435	.01	37.94	.005	.01	.26	.010	.005	5.040	.005
EZG-3	8.43	.020	.001	15.45	.005	.12	.010	8.52	1.06	7.70	.08	.005	.31	.01	.020	.45	.220	.01	49.35	.010	.02	3.39	.025	.005	.420	.025
EZG-4	1.23	.730	.001	.10	.005	.03	.035	4.96	.19	.27	.17	.005	.01	.01	.005	.01	45.280	.01	30.56	.005	.01	.05	.005	.005	3.575	.005
EZG-5	4.31	3.810	.001	1.61	.005	.03	.035	30.55	.80	.69	.28	.005	.01	.01	.005	.03	.200	.01	27.48	.005	.06	.18	.005	.005	12.250	.005
CZ-2	5.11	.450	.001	5.16	.005	.03	.005	15.73	1.05	1.49	.20	.005	.03	.01	.005	.01	.130	.01	48.18	.005	.02	.20	.010	.005	13.135	.005
CF-1	.16	.005	.001	.01	.005	.01	.150	1.96	.08	.02	.12	.005	.01	.01	.005	.03	77.490	.01	1.76	.005	.01	.01	.005	.005	1.255	.005

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: LAIRD, JAMES W.

3868 MT. SEYMOUR PARKWAY
NORTH VANCOUVER, BC
V7G 1C4

Project : JORDAN RIVER
Comments:

Certificate Date: 22-OCT-91
Invoice No. :I9123055
P.O. Number :

CERTIFICATE OF ANALYSIS A9123055

SAMPLE	PREP CODE		Al_2O_3 %	BaO %	CaO %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	P_2O_5 %	SiO_2 %	TiO_2 %	LOI %	TOTAL %	Cr ppm	Nb ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm
CZ-CB1	208	294	13.87	0.45	18.06	5.09	2.18	3.30	0.03	0.97	0.04	41.37	0.51	12.49	98.35	81	12	120	544	26	88
CZ-CB2	208	294	13.57	0.12	22.03	4.38	1.86	3.07	0.04	2.32	0.08	33.56	0.48	17.25	98.75	68	17	100	751	23	87
CZ-GA1	208	294	18.68	0.03	5.56	20.35	1.49	1.75	0.64	0.62	0.38	44.30	0.75	0.32	94.86	327	16	82	100	60	467
FRN-CB1	208	294	10.29	0.26	24.35	4.99	1.60	4.42	0.26	2.96	0.38	29.13	0.36	19.04	98.04	48	122	67	3390	27	166
FRN-SMB1	208	294	0.10	< 0.01	37.66	0.12	0.02	2.55	0.02	< 0.01	< 0.01	28.42	< 0.01	29.91	98.84	22	< 5	< 5	237	< 5	20
FRS-CB1	208	294	4.99	0.07	36.74	1.86	0.74	3.93	0.04	0.79	0.09	18.93	0.19	29.70	98.05	25	16	32	749	12	54
FRS-CB2	208	294	11.50	0.30	30.93	3.63	1.09	3.54	0.05	1.28	0.08	26.78	0.33	20.52	100.05	30	18	56	793	16	100
KF-1	208	294	13.90	< 0.01	9.86	11.30	0.55	9.82	0.11	1.20	0.81	46.40	1.69	1.90	97.55	594	67	13	56	27	179
KF-2	208	294	15.58	0.34	9.71	11.02	2.39	6.69	0.20	2.08	0.43	43.35	1.89	2.00	95.68	218	72	65	857	29	178
KF-3	208	294	15.75	0.06	0.28	0.79	6.61	0.11	0.02	3.18	0.38	74.32	0.02	0.38	101.90	81	< 5	162	210	19	38
KF-5	208	294	10.85	1.33	7.83	7.08	8.89	6.07	0.14	0.56	1.60	44.84	1.12	9.07	99.37	201	43	183	3860	50	611
NEZ-CB1	208	294	14.01	0.17	17.39	3.35	1.43	4.12	0.12	4.18	0.13	38.37	0.43	14.36	98.06	47	80	64	1575	17	90
NEZ-CB2	208	294	9.56	0.23	24.45	4.02	1.20	4.48	0.32	3.82	0.37	29.16	0.30	21.08	98.99	22	146	66	2570	22	94

CERTIFICATION:

Chemex Labs Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: LAIRD, JAMES W.
3868 MT. SEYMOUR PARKWAY
NORTH VANCOUVER, BC
V7G 1C4

Project : JORDAN RIVER
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 18-NOV-91
Invoice No. : I9123057
P.O. Number :
Account : HDI

CERTIFICATE OF ANALYSIS A9123057

SAMPLE	PREP CODE		Ag ppm	As ppm	Ba ppm	Bi ppm	Cd ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	La ppm	Mn ppm	Mo ppm	Pb ppm	Sb ppm	Sr ppm	Tl ppm	V ppm	W ppm	Zn ppm
CZ-CB1	299	288	0.10	< 0.5	2290	0.4	0.6	33.5	3.85	20	0.2	80	330	2.5	24	< 0.2	645	5.0	184	10	187
CZ-CB2	299	288	0.05	< 0.5	1360	0.4	0.2	15.5	3.08	19	0.9	80	370	< 0.5	10	< 0.2	871	1.5	105	10	114
FRN-CB1	299	288	0.05	< 0.5	2910	0.2	0.4	14.5	3.55	14	< 0.1	300	2220	2.0	11	0.2	3780	1.0	50	< 10	97
FRN-SMB1	299	288	< 0.05	< 0.5	50	0.2	< 0.1	< 0.5	0.28	< 1	< 0.1	90	280	< 0.5	3	< 0.2	349	2.0	4	< 10	3
FRS-CB1	299	288	0.10	< 0.5	830	0.2	0.5	14.0	1.33	7	0.3	100	385	1.0	11	0.2	867	2.0	104	< 10	57
FRS-CB2	299	288	< 0.05	0.5	3220	< 0.2	0.2	3.0	2.41	15	< 0.1	90	425	0.5	13	< 0.2	902	2.0	84	10	95
NEZ-CB1	299	288	0.05	0.5	1850	0.2	0.5	11.5	2.47	18	< 0.1	100	980	1.0	47	< 0.2	1795	2.0	55	< 10	103
NEZ-CB2	299	288	0.10	0.5	2330	0.4	0.9	9.0	2.81	11	< 0.1	170	2440	6.5	39	< 0.2	2680	4.0	29	10	120

CERTIFICATION: ____________

Chemex Labs Ltd.
Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: LAIRD, JAMES W.
3868 MT. SEYMOUR PARKWAY
NORTH VANCOUVER, BC
V7G 1C4

Project : JORDAN RIVER
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 18-NOV-91
Invoice No. : I9123057
P.O. Number :
Account : HDI

CERTIFICATE OF ANALYSIS A9123057

SAMPLE	PREP CODE		Ce NAA ppm	Eu NAA ppm	La NAA ppm	Lu NAA ppm	Nd NAA ppm	Sm NAA ppm	Tb NAA ppm	Th NAA ppm	U NAA ppm	Yb NAA ppm
CZ-CB1	299	288	70.0	1.00	43.0	0.10	25	5.30	0.20	14.0	4.0	1.30
CZ-CB2	299	288	66.0	1.50	43.0	0.20	20	6.10	0.50	12.0	2.0	1.40
FRN-CB1	299	288	698.0	3.50	595.0	0.10	200	22.30	0.50	9.0	1.0	1.40
FRN-SMB1	299	288	6.0	< 0.50	2.0	< 0.10	< 5	0.50	< 0.10	< 1.0	< 1.0	0.10
FRS-CB1	299	288	68.0	0.50	48.0	< 0.10	15	3.40	< 0.10	5.0	1.0	0.60
FRS-CB2	299	288	60.0	0.50	40.0	0.10	20	4.60	0.40	6.0	2.0	1.00
NEZ-CB1	299	288	162.0	2.00	112.0	0.10	55	8.00	1.10	19.0	1.0	0.80
NEZ-CB2	299	288	488.0	3.50	304.0	0.10	150	19.50	0.80	5.0	2.0	1.00

CERTIFICATION:

MIN • EN LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-1261-XA1

Company: LAIRD EXPLORATION
Project: JORDAN RIVER PROJECT 1991
Attn: JAMES LAIRD

Date: DEC-02-91
Copy 1. LAIRD EXPLORATION, NORTH VANCOUVER, BC.

We hereby certify the following Assay of 8 ROCK samples submitted OCT-09-91 by JAMES LAIRD.

Sample Number	AG g/tonne	AG oz/ton
EZG-1	62.6	1.83
EZG-2	11.0	.32
EZG-3	5.2	.15
EZG-4	375.0	10.94
EZG-5	61.8	1.80
CZ-2	29.0	.85
WZ-1	15.7	.46
WZ-2	68.8	2.01

Certified by ______________
MIN-EN LABORATORIES

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: LAIRD, JAMES W.

3868 MT. SEYMOUR PARKWAY
NORTH VANCOUVER, BC
V7G 1C4

A9123055

Comments:

CERTIFICATE A9123055

LAIRD, JAMES W.

Project: JORDAN RIVER
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-OCT-91.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
208	13	Assay ring to approx 150 mesh
294	13	Crush and split (0-10 pounds)
200	13	Whole rock fusion

* NOTE 1:

Code 1000 is used for repeat gold analyses
It shows typical sample variability due to
coarse gold effects. Each value is
correct for its particular subsample.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	13	Al2O3 %: Whole rock	ICP-AES	0.01	99.99
542	13	BaO %: Whole rock	ICP-AES	0.01	99.99
588	13	CaO %: Whole rock	ICP-AES	0.01	99.99
586	13	Fe2O3(total) %: Whole rock	ICP-AES	0.01	99.99
821	13	K2O %: Whole rock	ICP-AES	0.01	99.99
593	13	MgO %: Whole rock	ICP-AES	0.01	99.99
596	13	MnO %: Whole rock	ICP-AES	0.01	99.99
599	13	Na2O %: Whole rock	ICP-AES	0.01	99.99
597	13	P2O5 %: Whole rock	ICP-AES	0.01	99.99
592	13	SiO2 %: Whole rock	ICP-AES	0.01	99.99
595	13	TiO2 %: Whole rock	ICP-AES	0.01	99.99
475	13	L.O.I. %: Loss on ignition	FURNACE	0.01	99.99
540	13	Total %	CALCULATION	0.01	105.00
894	13	Cr ppm		50	N/A
973	13	Nb ppm	ICP	5	10000
1067	13	Rb ppm		50	N/A
898	13	Sr ppm		50	N/A
974	13	Y ppm	ICP	5	10000
978	13	Zr ppm	ICP	5	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: LAIRD, JAMES W.

3868 MT. SEYMOUR PARKWAY
NORTH VANCOUVER, BC
V7G 1C4

A9123057

Comments:

CERTIFICATE A9123057

LAIRD, JAMES W.

Project: JORDAN RIVER
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 24-OCT-91.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	8	Sample split from other certif
288	8	NAA encapsulation/irradiation

* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
1941	8	Ag ppm: Ultra trace package	EXT-ICP	0.05	200
1092	8	As ppm: Ultra trace package	EXT-ICP	0.5	5000
1093	8	Ba ppm: Ultra trace package	ICP	5	10000
1094	8	Bi ppm: Ultra trace package	EXT-ICP	0.2	5000
1095	8	Cd ppm: Ultra trace package	EXT-ICP	0.1	1000
1097	8	Cu ppm: Ultra trace package	EXT-ICP	0.5	5000
1099	8	Fe %: Ultra trace package	ICP	0.01	25.00
1098	8	Ga ppm: Ultra trace package	EXT-ICP	1	5000
1935	8	Hg ppm: Ultra trace package	EXT-ICP	0.1	5000
1930	8	La ppm: Ultra trace package	ICP	5	10000
1934	8	Mn ppm: Ultra trace package	ICP	5	10000
1939	8	Mo ppm: Ultra trace package	EXT-ICP	0.5	5000
1933	8	Pb ppm: Ultra trace package	EXT-ICP	1	5000
1089	8	Sb ppm: Ultra trace package	EXT-ICP	0.2	1000
1942	8	Sr ppm: Ultra trace package	ICP	1	10000
1943	8	Tl ppm: Ultra trace package	EXT-ICP	0.5	5000
1945	8	V ppm: Ultra trace package	ICP	1	10000
1944	8	W ppm: Ultra trace package	ICP	5	10000
1946	8	Zn ppm: Ultra trace package	EXT-ICP	1	5000
135	8	Ce ppm: Trace rock, soil	NAA	0.5	10000
137	8	Eu ppm: Trace rock, soil	NAA	0.05	100.00
110	8	La ppm: Trace rock, soil	NAA	0.5	10000
136	8	Lu ppm: Trace rock, soil	NAA	0.05	500.0
128	8	Nd ppm: Trace rock, soil	NAA	1	1000
134	8	Sm ppm: Trace rock, soil	NAA	0.05	500.0
141	8	Tb ppm: Trace rock, soil	NAA	0.05	100.00
150	8	Th ppm: Trace rock, soil	NAA	0.1	10000
131	8	U ppm: Gamma counting	NAA	0.5	10000
138	8	Yb ppm: Trace rock, soil	NAA	0.05	1000.0

APPENDIX 3

ROCK SAMPLE DESCRIPTIONS

KEY	
py	pyrite
po	pyrrhotite
sp	sphalerite
gl	galena
ba	barite
qtz.	quartz
biot.	biotite
mssx	massive sulphides
tr.	trace

SAMPLE DESCRIPTIONS COPELAND GROUP – KING FISSURE DEPOSIT	
Cliff Zone	
CZ–1 1.0m chip	Massive sulphide; sp–gl–py–po rich basal layer underlain by mssx stockwork breccia; overlain by several metres of fine-grained po, py, sp, gl with breccia fragments.
CZ–2 2.0m chip	Massive sulphide layer; po, sp, py, and gl; fine grained with breccia fragments.
CZ–CB1 1.0m chip	Extrusive carbonatite tuff–breccia
CZ–CB2 1.0m chip	Extrusive carbonatite tuff–breccia
CZ–FZ–1 1.0m chip	Coarse py crystals in qtz–ankerite–calcite altered late fault zone.
CZ–GA1 grab	Skarny contact zone between amphibolite sill and thin marble layer; large pinkish–red pyralspite garnets, qtz, biot., and others.
East Zone	
EZ–1 dump grab	Massive sulphide layer; gl, sp, po, py; easternmost exposure of southern limb mssx; old workings, possibly caved adit.
EZ–2 talus grab	Massive sulphide layer; sp, gl, po, py; north limb.
EZ–3 grab	2m qtz. vein in biot. schist.
EZG–1 0.5m chip	Massive sulphide layer; po, py, sp, gl; north limb.
EZG–2 0.5m chip	Massive sulphide layer; po, py, sp, gl; north limb; 25m east of sple EZG–1.
EZG–3 1.0m chip	Disseminated po in calc–silicate schist and marble.
EZG–4 1.0m chip	Massive sulphide layer; gl, sp, po, py in old trenches near west end of south ridge on East Zone ridge.
EZG–5 1.0m chip	Massive sulphide layer; coarse "buckshot" textured py, po, sp, gl; north limb.
Northeast Zone	
NEZ–1 1.5m chip	Massive sulphide layer (hanging wall); ba, gl, sp, py, po; face of an old shallow adit.
NEZ–2 1.5m chip	Massive sulphide layer (footwall); po, py, sp, gl, ba; contiguous with sple NEZ–1.
NEZ–3 1.0m chip	Massive sulphide layer; ba, gl, sp, po, py; central ba–rich core layer within mssx.
NEZ–4 1.0m chip	Massive sulphide layer; po, sp, py, gl, ba in an old open cut; 10m west of NEZ–1,2,3 on same horizon.
NEZ–CB1 3.0m chip	Extrusive carbonatite tuff–breccia with minor biot. schist and marble; down–section from NEZ–1,2,3,4.
NEZ–CB2 3.0m chip	Extrusive carbonatite tuff–breccia with minor schist and amphibolite layers; same location as 1990 slpes JLR–8,9.

COPELAND GROUP – KING FISSURE DEPOSIT (continued)	
West Zone	
WZ–1 2.0m grab	Massive sulphide layer; coarse dark sp, py, gl, ba; sulphide layers vary from 0.3–2.0m width with up to 6 layers observed over 4.5m max. width. Interlayers include barite, marble, and siliceous schist.
WZ–2 2.6m chip	Massive sulphide layer; coarse grey ba, gl, sp, py, po, and minor cp with wallrock breccia fragments.
Miscellaneous	
CF–1 0.3m grab	Subcrop; massive sheared gl with minor sp and cp; coated with manganese stain, cerussite, and tr. malachite; pods(?) of mssx within lamprophyre dyke swarm in Camp fault.
CF–CU1 talus grab	Malachite stained chalcopyrite stringers in quartzite.
KF–1 0.75m chip	Coarse grained, well crystallized amphibolite sill(?); downsection and west of sple NEZ–CB2.
KF–2 1.5m chip	Fine–grained streaky layered amphibolite sill(?); approx. 100m upsection from KF–1.
KF–3 grab	Tourmaline–bearing granitic pegmatite.
KF–4 grab	Pyrrhotite–bearing qtz–calcite breccia in late fault zone.
KF–5 grab	Biotite lamprophyre dyke.

SAMPLE DESCRIPTIONS FRISBY GROUP	
Big Slide Zone	
FRS–1 2.0m chip	Gossanous calc–silicate wallrock adjacent to massive sulphide layer; prob. stratigraphic hangingwall, now structural footwall.
FRS–2 2.0m chip	Contiguous to, and same description as FRS–1.
FRS–3 2.0m chip	Contiguous to FRS–2; same description as FRS–1.
FRS–4 2.0m chip	Contiguous to FRS–3; same description as FRS–1.
FRS–5 2.0m chip	Contiguous to FRS–4; same description as FRS–1.
FRS–6,7 0.5mx0.5m panel	Massive sulphide layer; po, py, sp, gl, and marcasite.
FRS–8 0.5x1.0m panel	Massive sulphide layer; po, py, sp, gl, and marcasite.
FRS–9, 10 1.0m chip	Same description as FRS–1–5; hanging wall and footwall adjacent to FRS–8.
FRS–11 0.2mx2.0m chip	Grey carbonate layer adjacent to FRS–8,9,10; stratigraphic footwall.

SAMPLE DESCRIPTIONS FRISBY GROUP (cont.)	
FRS-12 0.3m chip	Massive sulphide layer; po, py, sp, gl, intergrown with coarse green amphibolite.
FRS-13 0.3m chip	Massive sulphide layer; po, py, sp and gl within siliceous layer.
FRS-14 talus grab	Massive sulphide layer; large talus blocks broken off showings near FRS-15; coarse sp, po, py, gl, and marcasite.
FRS-15 1.0m chip	Massive sulphide layer; coarse sp, po, py, gl, and marcasite; isoclinally folded with thickened hinges.
FRS-16 grab	Malachite stained cp stringers in quartzite.
FRS-17 talus grab	Massive sulphide layer; po, py, sp, gl; intergrown with coarse green amphibolite.
FRS-FZ1 grab	Brecciated low-angle fault zone; strongly silicified and ankeritized with minor graphite and pyrite; brecciation visible for several 100's metres along ridge.
FB-1 grab	Disseminated pyrite in biotite schist.
FR-1 talus grab	Malachite coated cp stringers in quartzite.
FR-2 grab	Quartz-ankerite; probably late fault breccia.
South Frisby Ridge	
FRS-SL1 grab	Fine-grained py in gossanous quartzite; site of old trench near northwest corner of a small lake.
FRS-SL2	Same as sple FRS-SL1; several 100's m west along strike, near larger lake; more old trenches.
North Grid	
FRN-1 grab	Py and po in qtz-calcite veins in schist approx. 1m above carbonatite layer.
FRN-2 0.5m chip	Py and po in siliceous fine-grained schist; 1m below carbonatite layer.
FRN-3 0.5m chip	Same as FRN-2, approx. 2.5m west.
FRN-CB1 0.75m chip	Extrusive carbonatite tuff-breccia; same location as FRN-1,2,3
FRN-SMB1 grab	Scapolite-bearing white marker marble.
South Grid	
FRS-QV1 1.0m chip	Rusty qtz. vein cross-cutting carbonatite and biot. schist.
FRS-CU1 3.0m chip	Quartz vein stockwork in folded marble with widespread malachite-coated chalcopyrite stringers.
FRS-CB1 1.5m chip	Extrusive carbonatite tuff-breccia with interlayered biot. schist, marble, and amphibolite.
FRS-CB2 1.5m chip	Extrusive carbonatite tuff-breccia with dissem. phlogopite mica.

APPENDIX 4

SOIL GEOCHEMISTRY RESULTS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

James W. Laird File # 91-4871 Page 1

3868 Mt. Seymour Parkway, North Vancouver BC V7G 1C4

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
L70+25N 37+20E	4	5	10	45	.1	3	4	359	2.40	2	10	ND	4	209	.4	2	2	39	.82	.117	21	13	.36	416	.32	6.80	1.99	1.47	2	110	1	20	13	1.0	6.9
L70+25N 37+30E	2	13	2	42	.2	1	4	310	2.59	2	9	ND	5	189	.7	2	2	36	.66	.092	14	10	.34	374	.27	5.85	2.27	1.40	2	100	1	14	11	.7	5.0
L70+00N 34+50E	3	13	12	49	.1	6	5	370	2.35	2	11	ND	5	211	.3	3	2	41	.84	.157	21	18	.45	488	.33	6.35	2.14	2.25	2	98	2	18	14	1.1	6.9
L70+00N 35+00E	4	19	19	69	.1	19	9	657	3.13	4	5	ND	9	185	.8	2	2	55	.80	.188	37	35	.93	590	.32	6.15	1.68	3.63	2	39	3	23	21	1.5	9.4
L70+00N 35+50E	4	20	11	68	.1	10	8	547	3.00	2	6	ND	8	242	.5	2	2	52	1.09	.203	31	29	.72	580	.32	6.75	2.16	3.13	2	46	3	21	20	1.6	8.2
L70+00N 36+00E	4	14	16	55	.1	7	6	382	1.91	2	5	ND	3	209	.2	7	2	30	1.12	.242	21	15	.53	244	.21	6.74	1.59	.98	2	44	1	17	11	1.0	5.8
L70+00N 36+50E	2	10	23	73	.2	17	8	491	2.96	7	8	ND	8	241	.5	4	2	55	1.13	.216	33	34	.89	573	.34	5.99	1.79	2.44	9	48	2	22	21	1.5	8.1
L70+00N 37+00E	1	22	11	53	.1	9	6	419	1.85	2	5	ND	2	250	.2	3	2	33	1.15	.284	20	15	.61	243	.22	8.02	1.80	1.09	4	35	1	15	7	.9	8.3
L69+90N 37+25E	2	24	14	55	.1	4	6	432	2.55	2	11	ND	7	255	.2	2	2	35	1.09	.141	21	16	.48	440	.29	7.65	2.14	1.46	2	110	1	20	11	1.0	7.7
L69+50N 34+50E	4	9	20	63	.1	11	6	385	2.62	10	9	ND	6	211	.2	5	3	58	1.00	.226	28	34	.73	562	.34	6.22	1.54	2.24	2	72	1	18	18	1.5	8.5
L69+50N 35+00E	2	6	24	61	.2	9	7	456	2.84	4	10	ND	7	257	.2	2	2	87	1.55	.078	35	43	.76	702	.52	6.02	1.66	2.61	2	39	1	24	27	1.9	10.9
L69+50N 35+50E	3	20	29	69	.1	17	8	461	3.47	3	12	ND	12	217	.5	4	2	59	1.03	.182	45	43	.76	645	.37	7.13	1.53	2.37	2	48	2	28	23	2.1	9.8
L69+50N 36+00E	4	16	12	59	.4	12	7	421	2.49	2	11	ND	6	250	.3	2	2	46	1.12	.229	24	23	.63	430	.29	6.73	1.81	1.65	2	60	2	18	14	1.3	7.5
L69+50N 36+50E	3	19	19	55	.1	9	6	390	2.19	3	12	ND	5	270	.6	6	2	39	1.10	.103	24	18	.47	598	.34	6.47	2.24	2.22	2	94	2	22	17	1.8	6.9
L69+50N 37+00E	1	8	16	49	.1	7	6	256	2.73	2	7	ND	8	167	.4	2	2	53	.55	.154	31	35	.78	534	.32	6.52	1.25	3.82	2	46	1	13	13	1.3	7.5
L69+00N 34+50E	1	12	16	51	.1	14	5	351	3.78	2	5	ND	9	177	2.3	2	2	65	.75	.050	37	39	.71	694	.37	6.11	1.56	3.74	2	20	1	22	21	1.7	8.9
L69+00N 35+00E	1	17	13	53	.1	15	6	308	2.81	2	6	ND	9	177	1.6	2	2	57	.69	.110	40	33	.65	646	.32	5.70	1.55	2.94	2	38	1	24	19	1.6	8.2
L69+00N 35+50E	2	17	24	60	.1	13	7	462	3.25	2	5	ND	11	188	.6	2	2	49	.90	.119	33	33	.60	567	.32	6.49	1.52	2.37	2	50	2	29	18	1.7	8.7
RE L69+50N 36+50E	2	14	21	52	.3	2	5	342	2.04	2	12	ND	6	249	.5	2	2	37	.97	.082	21	16	.43	588	.33	5.55	2.25	1.81	2	96	2	22	17	1.6	6.1
L69+00N 36+00E	2	11	21	51	.1	3	5	343	3.32	9	8	ND	9	210	.9	2	2	46	.88	.116	31	22	.39	589	.35	6.72	1.73	2.65	6	63	2	29	20	1.7	7.7
L69+00N 36+50E	2	13	34	54	.1	5	5	293	2.38	2	5	ND	8	198	1.1	2	2	34	.79	.135	35	20	.44	609	.27	6.17	1.94	2.64	3	52	1	29	19	1.9	6.3
L69+00N 37+00E	2	13	17	53	.2	10	5	332	2.12	2	5	ND	7	267	1.1	2	2	48	.91	.079	36	28	.54	891	.34	7.71	2.72	3.97	2	55	1	26	24	2.5	8.0
L68+50N 34+50E	2	39	19	89	.1	32	13	876	5.47	2	5	ND	13	162	1.4	2	2	100	.84	.266	59	94	1.46	549	.44	7.85	1.19	2.20	2	31	3	17	18	1.1	14.1
L68+50N 35+00E	1	18	12	57	.1	14	6	346	2.77	2	5	ND	8	218	.8	2	2	62	.95	.084	39	36	.77	633	.35	7.21	1.63	3.12	2	34	1	18	16	1.7	8.9
L68+50N 35+50E	3	24	10	46	.3	13	5	265	1.64	2	9	ND	6	135	.4	2	2	34	.61	.195	23	24	.43	235	.17	5.60	.84	.83	2	34	1	14	12	1.0	6.5
L68+50N 36+00E	3	22	20	57	.3	3	6	337	2.56	2	8	ND	8	214	.5	2	2	40	.85	.143	29	21	.44	532	.27	6.08	1.68	2.07	2	55	3	22	17	1.6	6.4
L68+50N 36+50E	3	19	22	59	.4	7	6	360	3.23	2	10	ND	5	232	.6	2	2	43	.94	.154	17	16	.50	464	.35	5.76	2.07	1.49	2	99	2	17	14	.9	6.1
L68+50N 37+00E	2	12	27	56	.1	5	7	317	3.65	2	6	ND	10	175	.6	2	2	58	.89	.031	42	37	.53	727	.34	6.36	1.26	2.99	2	27	5	31	27	2.5	7.7
L68+00N 34+50E	4	18	38	70	.1	17	9	412	4.22	6	6	ND	6	177	.2	2	2	90	.89	.070	28	47	.83	492	.49	6.15	1.09	1.69	2	44	5	13	21	1.1	9.8
L68+00N 35+00E	2	16	43	89	.1	24	12	471	3.16	9	5	ND	9	183	1.0	2	2	83	1.46	.128	42	53	.90	624	.38	6.24	1.08	2.70	2	24	4	22	24	1.9	9.6
L68+00N 35+50E	4	33	36	112	.1	62	21	727	3.96	2	8	ND	18	167	.3	2	2	60	1.53	.114	105	67	1.29	705	.35	6.17	1.17	3.27	2	11	5	87	30	3.6	11.4
L68+00N 36+00E	2	16	18	92	.1	18	9	366	2.12	2	11	ND	12	241	1.0	2	2	55	1.15	.191	74	44	.96	690	.35	7.19	1.68	2.34	2	48	2	48	21	2.6	10.4
L68+00N 36+50E	1	19	21	92	.1	23	10	356	2.63	2	13	ND	10	248	1.3	2	2	64	1.17	.203	67	44	1.01	617	.35	7.92	1.63	2.12	2	46	1	44	18	2.1	11.0
L68+00N 37+00E	2	17	11	67	.2	17	8	371	3.44	5	8	ND	6	251	1.7	2	2	70	1.10	.195	24	39	.81	409	.34	7.13	1.52	1.64	2	41	1	10	14	.8	8.4
L67+50N 34+50E	1	23	24	88	.1	20	12	824	4.13	2	5	ND	10	184	1.8	2	2	74	.82	.182	43	50	.95	553	.36	7.49	1.21	2.56	2	38	1	16	18	1.3	10.2
L67+50N 35+00E	4	33	23	102	.3	30	14	658	4.64	2	10	ND	9	196	.2	2	2	96	.94	.244	33	70	.99	564	.42	8.60	1.14	1.79	2	47	3	13	21	1.2	11.6
L67+50N 35+50E	3	27	24	148	.1	49	21	630	4.05	2	8	ND	11	223	1.0	2	2	100	1.56	.224	61	82	1.44	661	.44	8.56	.99	1.72	2	25	3	31	33	2.3	15.0
STANDARD HFC	23	61	46	147	7.5	103	51	1303	4.76	43	16	7	38	60	20.0	17	20	80	.64	.120	39	110	1.21	219	.08	2.16	.07	.15	11	5	17	8	5	.2	6.0

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 10ML HCLO3-HNO3-HF AT 200 DEG. C TO FUMING AND IS DILUTED TO 10 ML WITH DILUTED AQUA REGIA. THIS LEACH IS PARTIAL FOR MAGNETITE, CHROMITE, BARITE, OXIDES OF AL, ZR & MN AND MASSIVE SULFIDE SAMPLES. AU DETECTION LIMIT BY ICP IS 3 PPM.
AS, CR, SB SUBJECT TO THE LOST OF VOLATILIZATION DURING HCLO4 FUMING.
- SAMPLE TYPE: SOIL <u>Samples beginning 'RE' are duplicate samples.</u>

DATE RECEIVED: OCT 2 1991 **DATE REPORT MAILED:** Oct 7/91. **SIGNED BY** C. Leong ... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

James W. Laird FILE # 91-4871

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
L67+50N 36+00E	3	3	23	80	.1	19	8	373	2.97	9	5	ND	10	177	.9	2	2	49	1.04	.150	36	38	.78	591	.31	4.51	1.51	2.43	5	58	3	24	24	.9	7.0
L67+50N 36+50E	4	4	27	53	.1	16	6	275	2.26	8	5	ND	9	199	.5	2	2	42	.96	.191	42	26	.50	438	.28	5.81	1.36	1.48	2	129	4	26	22	.7	7.7
L67+50N 37+00E	3	11	21	65	.1	17	7	384	2.75	7	5	ND	7	266	.7	2	2	48	1.24	.132	29	27	.71	555	.32	6.50	1.84	1.99	2	89	4	17	20	.5	7.6
L67+00N 34+50E	2	20	23	56	.1	19	8	326	4.06	5	5	ND	11	159	1.0	2	2	69	.75	.093	39	50	.75	582	.37	6.91	1.11	2.08	2	51	7	15	23	.2	9.2
L67+00N 35+00E	3	23	21	77	.1	27	12	706	2.90	2	5	ND	9	150	1.6	2	2	59	.70	.231	31	41	.79	542	.28	6.43	1.16	1.62	2	45	6	10	14	.2	7.3
L67+00N 35+50E	2	15	32	123	.1	28	15	699	3.65	8	10	ND	23	189	1.1	2	2	52	1.38	.214	84	53	1.00	727	.34	7.49	1.57	2.91	4	39	9	47	29	1.5	13.0
L67+00N 36+00E	4	15	10	73	.1	15	7	397	2.75	2	5	ND	10	229	.7	2	2	53	1.13	.195	35	31	.67	514	.30	5.75	1.54	1.82	2	62	9	19	21	.9	7.8
L67+00N 36+50E	4	23	7	56	.1	15	6	327	2.23	2	7	ND	9	199	.7	2	2	42	.76	.252	34	25	.54	399	.25	5.57	1.37	1.56	2	70	14	16	17	.6	7.2
L67+00N 37+00E	4	13	22	59	.1	14	5	421	3.24	3	5	ND	14	201	1.1	2	2	50	.79	.135	42	30	.56	646	.32	5.65	1.43	2.47	2	58	9	24	24	.7	7.6
L66+50N 34+50E	3	53	25	166	.1	94	38	1128	4.78	2	8	ND	9	258	2.4	2	2	109	2.27	.227	73	91	1.85	667	.39	6.34	.94	1.57	2	25	8	20	40	.4	11.7
L66+50N 35+00E	3	8	37	57	.1	15	6	313	4.20	6	6	ND	11	157	.8	2	2	68	.84	.071	35	40	.53	721	.34	4.89	1.44	2.99	3	31	9	25	30	1.0	7.6
L66+50N 35+50E	2	83	18	181	.3	74	40	2170	7.12	2	13	ND	13	139	3.6	2	2	326	1.97	.257	52	124	2.62	504	1.09	8.54	.71	2.63	2	12	2	25	38	.2	25.1
L66+50N 36+00E	2	23	15	63	.1	20	6	368	2.56	3	5	ND	8	241	.8	2	2	46	.98	.180	27	26	.68	466	.27	6.71	1.80	1.58	2	72	1	15	15	.7	7.0
L66+50N 36+50E	3	17	19	71	.3	18	9	569	2.94	6	5	ND	12	223	1.9	2	2	55	.83	.176	44	33	.68	633	.33	6.36	1.58	2.56	2	59	3	19	20	1.0	8.0
RE L66+00N 35+50E	3	13	30	58	.1	15	6	342	3.52	6	6	ND	15	190	.5	2	2	57	1.06	.082	48	38	.60	775	.33	7.48	1.73	3.27	3	56	3	32	28	2.0	9.4
L66+50N 37+00E	5	13	28	68	.2	17	20	1796	2.95	8	5	ND	9	191	.2	2	2	52	.84	.252	36	38	.68	554	.28	5.62	1.19	2.08	2	63	1	21	20	.9	7.4
L66+00N 34+50E	2	22	23	110	.1	29	17	1784	4.11	9	5	ND	10	198	1.9	2	2	75	1.01	.150	41	52	1.10	538	.36	7.76	1.19	1.49	2	54	1	16	17	.2	10.2
L66+00N 35+00E	3	27	26	103	.1	39	14	412	3.87	9	5	ND	14	236	1.3	2	2	75	1.34	.188	48	63	1.43	564	.35	7.72	1.10	2.10	2	41	1	21	20	1.1	11.7
L66+00N 35+50E	2	15	30	57	.1	20	6	295	3.38	7	5	ND	15	187	.7	2	2	59	.97	.085	47	37	.63	769	.33	7.46	1.80	3.24	2	57	1	33	28	2.2	8.0
L66+00N 36+00E	3	15	25	68	.1	15	8	382	3.01	5	5	ND	13	196	.8	2	2	59	1.01	.128	46	40	.83	675	.32	6.51	1.38	2.38	2	68	1	30	24	1.9	9.8
L66+00N 36+50E	5	17	34	100	.1	29	17	1437	4.18	7	5	ND	12	201	.8	2	2	74	.75	.316	39	56	1.15	557	.37	7.24	1.10	2.27	2	53	1	17	22	.9	11.5
L66+00N 37+00E	2	14	26	65	.1	12	6	354	3.98	4	5	ND	20	180	.5	2	2	45	.88	.199	53	31	.60	730	.30	6.67	1.54	3.36	2	65	2	34	26	1.7	7.8
L65+50N 34+50E	1	26	32	138	.1	40	20	4401	3.15	9	5	ND	9	284	1.0	2	2	72	2.81	.177	44	59	1.42	800	.27	5.95	.62	1.38	2	20	1	15	15	.8	10.0
L65+50N 35+00E	3	23	28	97	.1	28	15	1306	4.08	10	5	ND	10	230	1.1	2	2	71	1.03	.219	38	46	.89	585	.39	7.39	1.41	2.04	3	81	1	18	18	.9	10.3
L65+50N 35+50E	3	25	24	73	.1	14	10	508	4.08	15	5	ND	7	1037	.9	2	2	90	1.50	.371	51	32	1.09	2056	.40	8.58	2.32	2.34	5	215	1	16	17	1.5	13.2
L65+50N 36+00E	4	12	31	66	.1	12	7	506	3.72	11	5	ND	12	258	.9	2	2	63	1.05	.158	40	33	.63	700	.40	7.18	1.82	2.40	2	113	2	26	27	1.6	9.3
L65+50N 36+50E	4	18	26	60	.1	12	6	388	3.51	5	5	ND	10	283	.8	2	2	66	1.13	.059	36	29	.56	731	.43	6.89	2.13	2.74	2	75	1	24	26	1.5	8.5
L65+50N 37+00E	2	16	17	44	.1	9	5	276	2.15	11	5	ND	8	197	.5	2	2	32	.77	.103	23	16	.39	480	.27	5.83	1.94	1.37	2	168	1	23	14	1.1	6.3
L65+00N 34+50E	3	14	16	68	.1	25	13	1212	4.07	9	5	ND	10	138	.2	2	2	75	.54	.148	36	54	.75	557	.38	4.58	.85	1.92	2	101	1	14	19	1.0	7.8
L65+00N 35+00E	2	19	24	70	.1	12	9	786	4.25	9	5	ND	12	226	.9	2	2	69	1.07	.258	38	39	.68	592	.39	6.93	1.54	2.12	2	109	1	23	23	1.2	10.1
L65+00N 35+50E	3	25	19	54	.1	8	5	371	2.53	7	5	ND	6	269	.2	2	2	46	1.01	.166	19	19	.44	544	.36	7.49	2.21	1.86	2	176	3	15	15	1.0	7.9
L65+00N 36+00E	2	18	22	64	.1	11	7	540	3.21	12	5	ND	9	231	.8	2	2	58	1.01	.147	36	29	.57	668	.36	6.84	1.62	2.53	5	83	1	23	19	1.6	8.4
L65+00N 36+50E	3	62	92	221	.4	97	38	1393	5.88	13	12	ND	13	310	1.2	9	3	176	1.90	.321	63	138	2.16	792	.63	9.97	1.01	1.81	10	28	1	20	33	2.1	19.9
L65+00N 37+00E	2	38	42	162	.1	68	21	596	4.30	9	10	ND	20	244	.2	2	2	87	1.59	.180	90	71	1.35	719	.43	8.10	1.44	2.75	2	38	1	50	32	3.0	14.6
L64+50N 34+50E	4	29	32	115	.1	22	13	1236	4.43	6	5	ND	16	243	.9	2	2	83	1.03	.239	64	53	1.10	734	.40	7.61	1.47	2.75	2	51	3	22	23	1.4	12.6
L64+50N 35+00E	3	18	24	98	.1	21	15	1583	4.06	13	5	ND	13	209	.2	2	2	73	.98	.234	50	51	.90	713	.39	7.13	1.32	2.77	8	46	3	23	23	1.9	11.9
L64+50N 35+50E	1	90	137	221	.6	119	48	2031	6.72	3	11	ND	10	207	1.3	4	2	342	1.77	.321	66	264	2.33	622	1.03	7.44	.42	1.98	2	11	1	33	46	1.3	30.2
STANDARD HFC	22	61	45	149	7.6	100	50	1287	4.69	43	18	7	35	60	20.0	15	20	78	.58	.128	40	110	1.10	230	.07	2.07	.06	.15	13	4	17	7	5	.2	6.0

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
L64+50N 36+00E	1	80	26	135	.1	270	68	1600	6.72	4	5	ND	8	490	1.1	2	2	194	7.50	.589	78	281	2.34	811	1.03	7.62	.93	1.19	2	9	1	31	104	1.4	20.8
L64+50N 36+50E	2	45	39	94	.4	56	34	871	6.66	11	5	ND	11	132	1.2	2	3	58	3.31	.287	41	65	1.18	448	.29	6.56	.42	2.32	2	3	1	26	13	1.1	13.2
L64+50N 37+00E	6	30	29	103	.2	32	16	595	3.74	8	7	ND	15	214	.2	2	3	71	1.60	.220	65	58	.92	522	.38	7.90	1.52	1.81	2	106	3	33	19	1.4	14.2
B.L.35+00E 64+00N	3	18	31	163	.2	32	19	1374	4.34	4	5	ND	13	181	.2	2	4	93	1.14	.203	54	68	1.28	733	.39	6.82	1.16	2.03	2	49	2	23	19	1.1	13.4
B.L.35+00E 63+75N	2	18	43	171	.2	31	20	1158	3.98	5	5	ND	10	217	1.4	2	5	102	1.62	.231	59	81	1.35	512	.49	6.46	1.12	1.37	2	47	1	19	33	.9	13.5
B.L.35+00E 63+50N	1	24	22	155	.2	37	19	1147	3.67	2	5	ND	10	174	1.2	2	2	77	1.32	.227	43	68	1.45	500	.31	7.79	.90	1.40	2	47	1	15	12	1.0	11.6
B.L.35+00E 63+25N	1	25	16	138	.3	37	17	820	3.26	7	5	ND	11	174	.8	2	2	72	1.66	.194	43	69	1.49	464	.28	6.60	.64	1.18	2	47	1	16	12	.9	11.0
B.L.35+00E 63+00N	4	31	25	152	.3	57	23	813	3.70	4	5	ND	9	143	1.3	2	2	95	1.03	.153	36	63	1.05	678	.27	5.72	.74	1.43	2	29	1	14	13	.8	10.8
B.L.35+00E 62+50N	5	12	24	109	.1	28	16	894	4.11	2	6	ND	14	163	1.0	2	4	87	1.00	.178	52	62	1.08	789	.35	6.07	1.09	1.84	2	39	1	25	20	1.1	12.7
B.L.35+00E 62+00N	3	17	30	107	.2	24	12	697	3.96	4	5	ND	11	206	.7	2	5	98	1.30	.161	50	68	.95	691	.43	6.17	1.14	1.55	2	56	1	21	27	1.1	12.4
B.L.35+00E 61+75N	2	6	25	65	.1	9	5	423	2.53	2	9	ND	8	230	.2	2	3	68	1.13	.095	41	36	.56	712	.39	5.99	1.75	2.45	2	71	2	25	22	1.6	9.6
B.L.35+00E 61+50N	1	35	26	168	.1	53	19	409	4.35	6	5	ND	13	172	.9	7	2	102	1.23	.172	51	96	1.84	714	.37	9.40	.76	1.68	2	39	1	19	15	1.2	14.0
RE B.L.35+00E 60+00N	3	21	33	94	.1	26	11	883	4.83	7	10	ND	26	158	.2	2	2	80	.76	.147	111	68	1.00	686	.41	7.24	1.12	2.42	2	57	1	24	20	1.1	13.8
B.L.35+00E 61+00N	3	11	20	82	.1	17	9	611	3.74	6	5	ND	10	189	.2	2	2	70	.93	.198	44	49	.88	549	.38	6.79	1.46	2.03	2	85	2	20	18	1.1	11.5
B.L.35+00E 60+75N	1	12	25	69	.1	10	8	328	3.21	7	9	ND	9	505	.7	2	3	76	1.69	.282	56	60	.86	871	.45	7.06	1.67	1.95	2	111	2	25	23	1.3	11.8
B.L.35+00E 60+50N	4	15	22	54	.1	11	4	346	3.03	2	5	ND	7	218	.9	2	3	52	.88	.103	29	25	.38	511	.35	6.48	1.98	1.77	2	130	3	16	16	.9	7.8
B.L.35+00E 60+25N	4	17	21	69	.1	14	5	348	3.33	4	21	ND	11	273	.2	2	4	64	1.18	.184	42	32	.62	549	.40	7.86	2.18	1.92	2	211	1	24	19	1.4	10.9
B.L.35+00E 60+00N	4	24	27	96	.1	30	11	925	5.07	6	5	ND	21	178	1.4	2	2	86	.76	.158	84	69	1.04	805	.43	7.49	1.50	3.24	2	50	2	25	23	1.0	14.3
B.L.35+00E 59+75N	4	17	11	65	.3	11	5	324	2.99	2	7	ND	8	249	.2	2	2	52	1.12	.164	27	23	.52	477	.34	7.67	2.05	1.46	2	163	1	16	14	.9	8.9
B.L.35+00E 59+50N	4	19	21	79	.3	15	8	649	3.57	7	5	ND	11	227	.7	2	2	64	1.13	.198	40	39	.73	520	.37	6.94	1.82	1.89	2	112	2	18	17	.9	10.1
B.L.35+00E 59+25N	6	5	29	62	.1	6	5	314	2.93	2	5	ND	11	189	.2	2	7	65	.94	.123	47	40	.52	849	.41	7.32	1.74	3.10	2	97	4	27	26	1.5	10.3
B.L.35+00E 59+00N	2	10	25	78	.2	9	8	642	3.46	4	5	ND	12	177	.2	2	2	56	.91	.119	49	37	.62	631	.35	6.81	1.63	2.46	2	78	3	25	22	1.3	9.7
B.L.35+00E 58+50N	1	23	30	83	.1	24	8	459	4.01	6	5	ND	14	156	.5	2	2	72	.73	.151	63	52	.73	673	.40	7.09	1.49	2.75	5	78	3	26	21	1.0	11.8
B.L.35+00E 58+00N	2	6	23	69	.2	8	6	631	3.25	2	5	ND	13	208	.2	2	3	64	.95	.145	55	40	.60	693	.39	6.31	1.63	2.22	2	71	2	22	22	1.0	9.8
B.L.35+00E 57+50N	1	10	29	67	.1	13	4	293	2.70	2	5	ND	10	194	.8	2	3	50	.87	.113	43	30	.44	719	.35	5.82	1.81	2.54	2	53	4	26	24	1.2	8.5
B.L.35+00E 57+00N	4	17	14	47	.2	9	3	237	2.82	2	5	ND	6	186	.4	2	2	40	.75	.100	19	14	.31	384	.28	7.68	2.11	1.00	2	176	2	14	9	.3	7.3
B.L.35+00E 56+50N	2	25	19	69	.2	16	5	448	4.06	3	5	ND	9	223	.2	2	3	65	.85	.152	35	36	.48	572	.39	7.03	2.15	1.92	2	141	3	18	17	.3	9.8
B.L.35+00E 56+00N	2	12	25	72	.3	14	8	332	3.42	2	5	ND	7	200	.2	2	2	60	.98	.171	31	39	.68	467	.33	6.52	1.48	1.31	2	78	4	13	16	.3	9.2
B.L.35+00E 55+50N	3	22	26	98	.2	21	11	607	4.35	2	5	ND	12	171	.2	2	2	81	.86	.197	47	65	.79	556	.45	8.03	1.69	2.18	2	89	4	18	20	.4	12.7
B.L.35+00E 55+00N	2	21	18	91	.3	21	10	742	4.18	2	5	ND	11	181	.2	2	2	73	.80	.110	45	50	.77	536	.40	7.76	1.60	1.60	2	85	2	16	16	.7	11.3
B.L.35+00E 54+50N	4	24	28	75	.1	12	6	540	3.40	2	5	ND	12	201	.6	2	3	76	.89	.127	51	40	.65	680	.46	6.92	1.92	2.24	2	69	3	16	26	.6	10.0
B.L.35+00E 54+00N	3	31	20	69	.2	11	5	505	3.53	2	5	ND	8	228	.2	2	2	54	.84	.196	25	24	.52	490	.37	7.70	2.38	1.52	2	196	1	14	12	.2	9.3
B.L.35+00E 53+50N	13	49	153	715	.1	39	37	11325	13.16	14	5	ND	20	457	5.4	2	3	108	1.71	1.281	1048	112	.77	1098	.39	5.80	.77	2.15	2	34	1	67	1125	4.6	127.7
B.L.35+00E 53+00N	1	26	30	98	.1	14	9	1073	3.67	2	5	ND	8	204	.8	2	5	67	.74	.212	61	46	.64	516	.35	7.30	1.83	1.57	2	113	1	13	31	.4	12.1
B.L.35+00E 52+50N	4	18	16	68	.1	19	8	604	3.61	2	5	ND	11	159	.2	2	2	65	.56	.183	64	43	.56	464	.35	7.17	1.50	1.50	2	114	2	14	42	.3	10.8
B.L.35+00E 52+00N	2	23	11	64	.3	16	4	338	2.98	7	5	ND	6	272	1.2	2	2	50	.94	.249	19	17	.39	472	.30	8.55	2.85	1.67	2	206	1	13	11	.4	8.5
B.L.35+00E 51+50N	3	19	16	84	.1	24	10	589	4.32	4	5	ND	13	214	.2	2	4	81	.77	.182	50	55	.85	576	.42	8.13	1.84	2.06	3	117	1	14	24	.7	11.9
STANDARD HFC	23	61	43	144	7.3	102	51	1241	4.84	43	21	6	36	61	20.0	15	21	84	.58	.120	38	110	1.10	221	.09	2.19	.08	.17	11	4	18	7	4	.2	6.0

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
B.L.35+00E 51+00N	2	13	22	78	.1	13	9	1018	3.01	4	5	ND	9	172	1.4	2	2	49	.57	.160	37	33	.61	533	.27	6.36	1.75	1.80	4	117	1	12	14	.8	8.2
B.L.35+00E 50+50N	3	18	25	103	.1	26	9	1247	3.23	5	5	ND	10	156	1.7	2	2	59	.55	.230	47	48	1.01	590	.30	6.16	1.61	2.68	2	54	1	9	20	.9	8.5
B.L.35+00E 50+00N	2	15	29	99	.1	20	10	732	3.99	2	5	ND	14	161	2.0	2	2	70	.63	.161	65	62	1.25	715	.35	7.72	1.42	2.68	2	52	1	12	17	1.1	11.6
T.L.36+00E 64+00N	1	10	18	97	.2	18	9	651	3.76	3	5	ND	13	218	1.8	2	2	82	1.02	.098	58	42	.87	775	.40	7.00	1.88	3.03	2	53	1	21	21	1.5	10.2
T.L.36+00E 63+75N	2	10	19	61	.1	18	6	482	2.75	8	5	ND	8	304	.9	2	2	55	.92	.137	38	45	.78	1006	.33	6.88	2.15	2.21	6	125	1	14	13	1.7	8.9
T.L.36+00E 63+50N	2	10	14	65	.1	12	4	349	2.85	2	5	ND	9	240	1.4	2	2	54	.89	.070	47	29	.52	698	.34	6.61	1.96	2.47	2	75	1	19	15	1.4	7.9
T.L.36+00E 63+25N	2	14	29	55	.1	5	3	320	1.57	2	5	ND	8	354	.9	2	2	52	.94	.018	46	24	.47	1259	.40	6.69	2.61	3.72	2	80	1	16	20	1.8	7.4
T.L.36+00E 63+00N	3	13	19	52	.1	11	4	314	2.60	4	5	ND	8	214	.9	2	2	45	.83	.132	35	24	.45	662	.32	6.68	2.08	2.14	2	96	2	18	16	1.4	7.7
T.L.36+00E 62+75N	2	11	19	64	.1	9	6	525	3.28	2	5	ND	12	193	1.5	2	2	58	.75	.162	49	36	.62	703	.34	6.09	1.81	2.96	3	67	1	18	19	1.3	7.8
T.L.36+00E 62+50N	3	10	13	71	.2	10	7	491	2.51	5	5	ND	9	142	1.3	2	2	49	.70	.186	40	32	.57	609	.26	4.16	1.33	2.21	2	51	1	18	16	1.2	6.4
T.L.36+00E 62+25N	3	18	16	82	.2	12	7	672	3.07	2	5	ND	10	217	1.0	2	2	61	.94	.141	46	35	.65	801	.33	6.35	1.87	2.63	2	54	1	19	17	1.4	8.2
T.L.36+00E 62+00N	2	15	21	74	.1	17	7	511	2.99	2	5	ND	11	221	1.4	2	2	51	.89	.208	51	35	.72	628	.31	6.54	1.83	2.61	2	74	1	21	22	1.3	8.3
T.L.36+00E 61+75N	3	4	37	93	.2	19	8	800	3.33	4	5	ND	11	204	.9	2	2	64	.88	.212	47	43	.80	782	.35	6.61	1.66	2.23	2	60	1	18	17	1.3	9.3
T.L.36+00E 61+50N	2	23	33	101	.1	21	10	1019	3.45	3	5	ND	14	208	.9	2	2	59	.95	.193	61	42	.86	702	.33	7.17	1.71	2.69	3	64	1	22	16	1.5	9.5
T.L.36+00E 61+25N	2	6	23	68	.1	16	6	471	2.94	4	5	ND	9	237	.4	2	2	57	.95	.135	40	39	.60	804	.35	6.79	2.03	3.07	3	100	2	19	18	1.6	8.5
T.L.36+00E 61+00N	4	18	16	73	.1	14	6	416	3.46	5	5	ND	10	291	.7	2	2	65	1.03	.223	42	43	.76	810	.38	6.94	2.05	2.36	3	124	1	18	20	1.3	9.7
T.L.36+00E 60+75N	3	13	26	72	.1	15	8	466	3.43	4	5	ND	13	184	.5	2	2	75	.95	.097	61	51	.72	840	.38	6.02	1.56	3.31	2	65	1	29	23	1.9	10.0
T.L.36+00E 60+50N	1	10	16	85	.1	26	14	638	4.37	4	5	ND	6	387	1.5	2	2	138	1.90	.108	40	36	1.22	540	.78	5.63	2.67	1.65	2	67	1	21	27	.9	12.2
T.L.36+00E 60+25N	4	21	23	90	.1	15	7	385	3.77	4	5	ND	11	239	1.2	2	2	78	.95	.245	51	49	.92	755	.39	7.22	1.77	2.72	2	77	1	18	19	1.3	10.6
T.L.36+00E 60+00N	5	14	23	66	.3	13	7	384	3.44	3	5	ND	10	216	.6	2	2	56	.88	.173	41	36	.64	677	.33	6.65	1.73	2.54	4	75	1	19	15	1.2	9.1
T.L.36+00E 59+75N	2	7	28	73	.1	20	8	777	3.41	3	5	ND	12	195	.6	2	2	68	.89	.122	59	49	.68	802	.38	6.68	1.42	2.90	2	37	2	20	21	1.9	10.0
T.L.36+00E 59+50N	4	8	27	68	.1	15	8	452	3.83	4	6	ND	13	199	.4	2	2	65	.96	.124	63	54	.69	819	.36	6.38	1.39	2.96	2	45	2	23	23	1.9	9.7
T.L.36+00E 59+25N	2	16	33	87	.1	12	10	1231	3.38	4	5	ND	12	227	.2	2	2	59	1.14	.159	62	42	.79	812	.33	6.55	1.59	2.78	2	43	1	24	21	1.8	9.3
T.L.36+00E 59+00N	4	10	25	102	.1	17	10	1176	3.56	3	5	ND	12	235	.7	2	2	66	1.02	.222	59	47	.86	827	.38	6.94	1.67	3.10	2	60	1	21	21	1.7	10.1
T.L.37+00E 64+00N	6	20	21	154	.1	38	19	1348	3.57	2	8	ND	9	258	.5	2	2	80	1.61	.326	72	64	1.16	566	.36	7.84	1.50	1.59	2	64	1	29	16	1.8	10.9
T.L.37+00E 63+75N	5	26	29	121	.1	20	12	1123	3.95	6	5	ND	9	272	.5	2	2	81	1.11	.247	41	60	1.10	860	.38	6.19	1.68	2.57	2	81	1	18	22	.9	10.7
T.L.37+00E 63+50N	6	17	23	108	.1	16	13	1506	3.16	5	5	ND	8	204	.9	2	2	59	.92	.287	37	43	.83	666	.32	5.71	1.65	2.49	2	74	1	16	13	1.5	8.0
T.L.37+00E 63+25N	5	15	33	92	.1	18	9	576	3.51	5	5	ND	11	178	.2	2	2	52	.94	.195	47	41	.63	666	.31	6.32	1.37	2.50	2	80	4	24	20	1.8	8.7
T.L.37+00E 63+00N	3	7	28	62	.1	12	6	373	2.86	5	5	ND	7	171	.2	2	2	49	.87	.138	30	34	.47	622	.30	4.90	1.52	2.48	2	72	1	18	20	1.5	6.5
RE T.L.37+00E 64+00N	6	20	30	152	.1	31	20	1341	3.53	4	6	ND	8	234	.2	4	2	77	1.63	.312	66	64	1.10	501	.33	7.37	1.21	1.42	2	66	1	30	17	2.0	10.5
T.L.37+00E 62+75N	5	19	20	79	.1	17	17	631	2.89	5	5	ND	11	190	.3	2	2	51	.83	.273	66	40	.74	588	.28	5.93	1.31	2.26	2	50	1	22	16	1.8	8.4
T.L.37+00E 62+50N	4	25	21	66	.1	19	8	366	2.98	2	5	ND	14	186	.8	2	2	46	.77	.205	52	36	.55	558	.28	6.39	1.42	2.19	2	69	2	23	14	1.5	7.9
T.L.37+00E 62+25N	4	14	24	123	.1	12	11	744	4.00	7	5	ND	11	409	1.5	2	2	63	1.53	.350	81	37	.96	645	.48	7.31	1.93	2.50	2	70	4	28	37	2.1	10.8
T.L.37+00E 62+00N	2	14	32	68	.1	10	5	287	2.12	3	5	ND	11	210	.2	2	2	60	.77	.084	54	46	.84	977	.33	6.53	1.34	4.30	2	25	2	20	19	2.4	10.0
T.L.37+00E 61+75N	4	20	30	80	.1	15	11	532	3.14	5	5	ND	14	179	.3	2	2	54	.85	.163	60	45	.76	681	.30	6.87	1.61	2.92	3	69	2	26	17	2.0	8.7
T.L.37+00E 61+50N	3	14	21	54	.1	12	6	320	3.51	9	5	ND	9	176	.5	2	2	51	1.00	.122	34	32	.80	590	.33	5.40	1.41	2.67	2	103	2	19	15	.8	7.8
T.L.37+00E 61+25N	3	15	18	72	.2	12	8	335	2.40	2	5	ND	8	199	.3	2	2	48	.97	.154	36	41	.73	599	.27	5.33	1.68	2.51	2	61	3	18	16	1.4	7.9
STANDARD HFC	22	63	47	144	7.3	98	51	1302	4.78	43	17	6	38	59	20.0	15	22	80	.58	.128	38	110	1.10	219	.07	2.02	.06	.17	11	4	17	7	4	.2	6.0

Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
T.L.37+00E 61+00N	4	16	31	73	.1	10	6	507	2.85	2	5	ND	6	225	.2	2	2	49	1.09	.169	30	33	.52	643	.37	5.97	1.75	2.39	2	111	3	32	19	2.0	11.2
T.L.37+00E 60+75N	2	25	18	69	.1	24	8	671	3.87	4	5	ND	8	217	.2	2	2	68	1.62	.216	52	126	.78	616	.66	6.12	1.72	2.63	2	118	2	38	35	2.2	15.2
T.L.37+00E 60+50N	2	22	24	79	.1	18	8	581	3.02	4	5	ND	12	244	.5	2	2	54	1.22	.210	61	49	.87	692	.35	6.45	1.69	2.39	3	69	2	36	17	2.2	13.6
T.L.37+00E 60+25N	1	26	30	71	.1	18	7	446	3.20	6	5	ND	16	142	.2	5	2	49	.91	.114	69	52	.74	672	.29	5.96	1.12	3.05	2	35	2	43	18	2.9	12.3
T.L.37+00E 60+00N	1	12	20	51	.1	9	3	454	2.51	2	5	ND	6	255	.6	2	2	49	.85	.080	33	33	.40	790	.36	5.81	1.88	2.85	2	105	1	23	15	1.6	9.5
T.L.37+00E 59+75N	2	18	32	58	.1	8	3	432	1.95	5	5	ND	6	190	.4	2	2	45	.91	.075	38	32	.37	720	.30	5.16	1.34	2.72	2	44	3	28	20	2.1	8.3
T.L.37+00E 59+50N	1	12	25	79	.1	11	7	1105	2.90	6	5	ND	10	203	.7	2	2	59	.95	.131	56	40	.59	581	.35	5.48	1.41	1.92	2	53	1	23	16	1.4	10.6
T.L.37+00E 59+25N	2	10	26	55	.1	14	5	552	3.06	2	5	ND	9	163	.5	2	2	54	.79	.102	42	43	.52	654	.32	5.60	1.32	2.43	2	39	2	26	17	1.8	10.2
T.L.37+00E 59+00N	4	20	26	71	.2	10	8	1528	3.15	3	5	ND	7	191	.5	2	2	54	.89	.186	34	42	.66	507	.34	5.72	1.41	1.77	2	72	2	19	12	1.3	10.4
T.L.38+00E 64+00N	3	16	26	63	.3	9	6	460	2.74	2	5	ND	6	206	.4	2	2	46	1.02	.046	30	31	.46	583	.34	5.74	1.62	2.01	2	81	2	27	15	1.8	8.9
T.L.38+00E 63+75N	3	21	17	63	.1	16	7	510	2.65	6	5	ND	6	166	.2	2	2	39	.86	.165	27	33	.58	355	.25	5.49	1.13	1.16	2	94	1	20	9	1.3	8.4
T.L.38+00E 63+50N	3	13	27	62	.1	17	8	553	2.57	6	5	ND	5	220	.2	2	2	42	1.00	.204	49	37	.73	493	.26	5.09	1.20	1.51	2	75	1	22	12	1.5	9.0
T.L.38+00E 63+00N	2	22	15	46	.1	12	5	380	2.56	6	5	ND	6	201	.2	2	2	49	.85	.121	29	35	.40	504	.35	6.48	1.65	1.72	2	126	2	17	9	1.0	9.8
T.L.38+00E 62+75N	3	19	29	54	.1	9	6	518	1.94	4	5	ND	6	266	.7	3	3	54	1.41	.060	37	35	.64	677	.38	6.00	2.01	2.12	2	93	3	21	13	1.5	9.4
T.L.38+00E 62+50N	3	30	14	51	.2	14	7	434	3.32	7	5	ND	12	160	.2	2	2	37	.69	.162	37	37	.45	383	.26	5.71	1.17	1.23	2	106	2	26	10	1.0	9.5
T.L.38+00E 62+25N	2	31	12	45	.1	12	5	322	1.90	5	5	ND	10	150	.2	2	2	26	.73	.153	23	26	.40	250	.18	5.65	1.10	.75	2	89	1	16	6	.8	7.7
T.L.38+00E 62+00N	4	23	25	48	.2	11	7	482	3.10	2	5	ND	7	196	.2	2	2	38	.89	.163	31	26	.53	384	.32	5.86	1.55	1.03	2	141	1	24	10	.8	8.7
T.L.38+00E 61+75N	2	16	12	42	.1	6	4	425	1.73	2	5	ND	3	265	.2	2	2	27	1.16	.101	16	11	.43	435	.27	7.11	2.25	1.24	2	170	1	16	3	.8	8.3
RE T.L.38+00E 62+50N	2	35	16	45	.4	12	7	462	3.60	4	6	ND	14	168	.5	2	2	40	.73	.165	35	36	.49	411	.28	6.16	1.26	1.11	2	110	1	25	10	.7	9.8
T.L.38+00E 61+50N	4	16	13	31	.2	9	4	288	3.28	4	5	ND	5	143	.2	2	2	32	.66	.129	18	28	.36	250	.23	6.11	1.16	.75	2	101	1	12	6	.5	7.8
T.L.38+00E 61+25N	4	11	23	59	.1	9	6	503	3.34	5	5	ND	6	245	.2	2	2	58	1.16	.070	32	35	.67	583	.39	6.26	1.90	1.74	2	86	2	19	13	.9	9.5
T.L.38+00E 61+00N	2	19	19	63	.2	17	8	482	3.05	2	5	ND	8	179	.2	2	2	44	.95	.131	39	37	.71	439	.27	5.74	1.23	1.36	2	73	1	21	11	.9	8.9
T.L.38+00E 60+75N	2	23	18	71	.1	21	16	665	3.50	4	5	ND	12	201	.5	2	2	53	1.09	.295	55	52	1.11	571	.30	5.96	1.08	1.69	2	66	1	29	14	1.3	11.1
T.L.38+00E 60+50N	2	23	11	62	.3	11	7	469	2.06	6	5	ND	3	227	.2	2	2	42	1.21	.342	18	29	.81	283	.28	5.55	1.40	.92	2	60	2	10	9	.6	8.5
T.L.38+00E 60+25N	2	53	18	63	.6	22	8	469	2.99	4	5	ND	11	201	.4	2	2	51	.98	.265	37	42	.96	432	.28	6.53	1.35	1.16	2	75	2	20	10	.7	10.4
T.L.38+00E 60+00N	3	16	23	67	.1	21	9	508	4.30	2	5	ND	12	180	.2	2	2	77	.92	.139	49	61	1.10	683	.43	6.93	1.17	2.09	2	66	2	24	16	.8	12.9
T.L.38+00E 59+75N	3	25	18	64	.1	16	9	516	5.17	4	5	ND	9	215	.5	2	2	74	1.10	.115	43	57	.85	570	.44	6.18	1.47	1.72	2	69	3	19	15	.3	10.9
T.L.38+00E 59+50N	2	13	22	61	.1	15	7	629	4.27	6	5	ND	12	158	.2	2	2	74	.77	.069	59	59	.81	668	.40	6.50	1.18	2.56	3	39	1	22	17	.9	11.6
T.L.38+00E 59+25N	3	33	15	64	.1	16	8	597	4.67	2	5	ND	12	157	.2	2	2	68	.57	.163	52	61	.87	450	.41	7.63	1.29	1.54	2	98	1	15	10	.3	11.8
T.L.38+00E 59+00N	4	25	24	57	.2	10	8	1966	4.35	2	5	ND	9	187	.6	2	2	70	.79	.155	45	55	.75	538	.45	7.37	1.51	2.03	2	60	2	12	14	.4	11.4
STANDARD HFC	21	59	45	140	6.7	97	47	1240	4.44	37	16	7	38	55	21.0	16	19	82	.58	.120	38	110	1.25	230	.06	1.93	.07	.16	11	5	15	6	4	.2	6.2

Samples beginning 'RE' are duplicate samples.

APPENDIX 5

EAST ZONE VLF-EM DATA

King Fissure Deposit - East Zone VLF Survey

Inphase Response

	L23+00E	L23+50E	L24+00E	L25+00E	L26+00E	L27+00E	L28+00E	L29+00E	L30+00E	L31+00E	
11+50N	-6	-10			-23				18	8	11+50N
					-22				18	8	
11+25N	-3	-6		-7	-12				13	10	11+25N
				-3	-9				18	9	
11+00N	0	-2		-1	-3				18	9	11+00N
				0	3				18	15	
10+75N	1	0		3	2				20	13	10+75N
			1	5	5				19	12	
10+50N	2	0	0	4	6	-27			20	10	10+50N
			2	5	2	-28			18	5	
10+25N	7	7	2	10	2	-19			19	5	10+25N
			-2	8	0	-22			17	0	
10+00N	-3	-4	0	7	-4	-20	-4	4	15	0	10+00N
			-3	8	-7		0	2	16	-3	
9+75N	-10	-15	-5	12	-5	4	5	-3	9	2	9+75N
			-11	2	-4		7	-1	0	11	
9+50N	-12		-10	-9	-6	3	9	0	7	8	9+50N
			-9	-14	-4		0	-5	-2	1	
9+25N	-9		-11	-13	1	6	-3	-3	0	5	9+25N
			-12	-9	4		-7	-6	-5	0	
9+00N	-6		-12	-5	6	-6	-8	0	1	1	9+00N
			-13		10				0	4	
8+75N	-5		-10	-4	10	1	-2	0	-4	-8	8+75N
			-9		10				-15	-20	
8+50N			-8	-2	9	-5	-3	-3	-14	-28	8+50N
			-6		12				-12	-20	
8+25N			-8	0	13	1	3	-3	-15	-15	8+25N
			-8						-10	-13	
8+00N			-5	5	9	4	2	-3	-2	-11	8+00N
			-4		8				-6	-5	
7+75N			-2	8	8	10	3	-2	-1	-10	7+75N
			1		9				2	-11	
7+50N			0	7	13		0	-1	6	-14	7+50N
			3		8				3	-30	
7+25N			-3	10			3	1	5	-24	7+25N
			3								
7+00N			-2	13			4	2	40		7+00N

King Fissure Deposit - East Zone VLF Survey

Quadrature

	L23+00E	L23+50E	L24+00E	L25+00E	L26+00E	L27+00E	L28+00E	L29+00E	L30+00E	L31+00E	
11+50N	24	23			19				26	23	11+50N
					16				28	23	
11+25N	20	24		17	15				31	26	11+25N
				16	16				30	27	
11+00N	15	14		18	14				30	30	11+00N
				16	18				32	30	
10+75N	15	15		16	17				33	32	10+75N
			26	19	18				36	30	
10+50N	19	18	26	15	19	19			37	34	10+50N
			17	12	18	21			35	33	
10+25N	20	35	15	10	19	24			36	35	10+25N
			18	6	15	25			38	37	
10+00N	17	16	14	4	12	28	30	36	36	40	10+00N
			13	9	12		32	33	38	40	
9+75N	11	38	8	14	12	32	34	35	40	39	9+75N
			8	-4	14		35	33	40	39	
9+50N	10		7	-10	16	38	37	31	37	38	9+50N
			7	-9	16		40	29	36	37	
9+25N	16		7	-5	17	25	28	30	35	39	9+25N
			6	1	16		22	26	36	40	
9+00N	18		6	7	20	14	18	24	35	40	9+00N
			6		24				40	39	
8+75N	20		9	12	21	15	16	27	39	40	8+75N
			9		23				39	38	
8+50N			11	12	28	18	20	28	38	39	8+50N
			12		26				38	39	
8+25N			13	17	29	18	22	20	38	40	8+25N
			14						40	39	
8+00N			14	20	28	18	18	18	32	39	8+00N
			16		26				31	38	
7+75N			18	22	28	22	23	23	35	40	7+75N
			18		31				38	40	
7+50N			18	23	30		22	26	40	40	7+50N
			16		24				40	40	
7+25N			19	22			23	32	38	38	7+25N
			20								
7+00N			21	26			28	35	40		7+00N

APPENDIX 6

EAST ZONE GEOPHYSICAL INTERPRETATION

November 1, 1991

TO: First Standard Mining

ATTENTION: Mr. Tiro Clarke
301 - 357 East 2nd St.,
North Vancouver, B.C., V7L 1C6

Dear Sirs: RE: KING FISSURE DEPOSIT GEOPHYSICAL SURVEYS

This letter will confirm that I was requested by Mr. Clarke to review geophysical data from the King Fissure deposit, East Zone. The following data was supplied:

1) VLF-EM in phase and quadrature % data, Ronka EM16;
2) Total Field Magnetic data, Scintrex MP2 magnetometer;
3) Geology, preliminary plan map at scale 1:2,500

INTERPRETATION

VLF - EM Survey

The massive sulfide bands noted on the geology map are striking approximately perpendicular to the line drawn between the survey location and the VLF-EM transmitter in Seattle, Washington. This orientation results in minimum electromagnetic coupling which decreases the potential amplitude of any crossovers thereby negating much of the usefulness of the survey technique. More useful data would have been obtained using a transmitter location nearer on strike with the sulfide bands - for example Cutler, Maine.

In order to further interpret the VLF data, a contoured plan map of the Fraser filtered in phase % data was completed, Figure 1. With this technique, conductors are indicated by positive values, and topographic and geological noise are generally suppressed.

The data contours reasonably well indicating an arcuate conductor located at 11+00N on the north end of L26E, bending around to the baseline on L27E and then westerly toward 9+00N on L25E. This feature does not generally correlate with the observed massive sulfide bands nor with any noted distinct geological unit, and is not closed off by survey data to the north and north east. The generally high quadrature values relative to the in phase values are typical of poor conductors in a highly resistive host rock. It may be related to an area of increased conductivity or perhaps disseminated sulfide mineralization.

The most promising fraser filter anomaly occurs on L27E at between stations 9+62.5N to 10+12.5N, and correlates well with the mapped massive sulfide bands at L27E 10+00N and locally anomalous magnetic responses.

...../2

The anomalous highs in the south east corner of the grid, in an area noted covered by a "snow/ice field" do not appear to be of any geological interest and are probably related to changes in bedrock topography.

MAGNETIC Survey

The contoured plan of relative magnetic values is shown as Figure 2. The values were calculated by subtracting 57,955 gammas (the average total field magnetic value for all the observed stations) from each station. Profiles of relative magnetic value and fraser filtered VLF-EM were plotted for L25 to 27E and L30E, figures 3a to 3d.

Given the generally wide line spacing (100 metre) for the data and a narrow target (sulfide bands are generally less than 10 metres wide), the data contouring was biased in the direction of the mapped strike of the massive sulfide bands. Further surveying with a 50 metre line spacing will be required to confirm the validity of the interpretation.

In general the data exhibits a fairly high geological noise background with readings varying 20 to 50 gammas between stations - fairly typical for metamorphic rocks of this type and indicating variable magnetite content.

With the exception of the anomalous high values (greater than 200 gammas) concentrated in a tight "fold structure" in the central to north western part of the grid and likely related to sulfide (pyrrhotite) mineralization - the magnetic data does not appear to differentiate between the geologic units mapped as calc silicate gneiss or quartz biotite schist.

The observed "fold structure" appears consistent with the geological observations of Mr. Clarke, that is sulfide bands (variable pyrrhotite/sphalerite/galena) occupying two limbs of a tight, recumbent fold with an axial plane oriented approximately at 130 to 147 degrees. The sulfide band occupying the southern limb of the fold appears to dip to the west south west.

Probable pyrrhotite concentrations in the bands occur on the north end of L25E (>1000 gammas), at BL 10+00N on L27E (884 gammas) and at 9+87.5 to 10+00N on L26E (675, 1064 gammas). Each of these zones is near surface with widths of 10 to 15 metres based on the 1/2 width of the magnetic profile. On L27E and L30E, and probably on L25E, these magnetic highs correlate with a positive fraser filter anomaly, suggesting the pyrrhotite is massive over reasonably continuous distances.

CONCLUSIONS AND RECOMMENDATIONS

The survey has successfully demonstrated the usefulness of both magnetic and VLF electromagnetic techniques to outline the massive sulfide bands.

Further magnetic surveying on a 50 metre grid line spacing is recommended to fully outline and define the trace of the pyrrhotite mineralization. The grid should be expanded particularly to the north and north west. As this data is being acquired, further VLF - EM data, using Cutler, Maine should be obtained. My preference would be to use an instrument which measures field strength rather than dip angle, such as Scintrex IGS VLF (this instrument can measure and store both magnetic and VLF data).

The strongest fraser filter anomaly occurs on L27E near the BL, in the "nose" area of the interpreted fold. This strong response is probably more related to the strike direction of the sulfides rotating around to an increased coupling orientation, rather than to increasing conductivity in the sulfides.

On completion of the magnetic survey, a detailed low frequency horizontal loop electromagnetic survey, such as GENIE SE-88 should be carried out over noted magnetic highs to determine the precise location, width, conductivity and dip of the sources. The GENIE is particularly useful in areas of rough topography due to its general insensitivity to topography and station spacing accuracy.

Respectfully submitted,

Douglas R. MacQuarrie
Geophysicist

enclosures

Dmq11101

CERTIFICATE

I, Douglas R. MacQuarrie, certify that:

1. I am a Consulting Geophysicist with offices at 704 - 850 West Hastings Street, Vancouver, B.C., V6C 1E1.

2. I am a graduate of the University of British Columbia with an Honours degree in Geology and Geophysics (B.Sc., 1975).

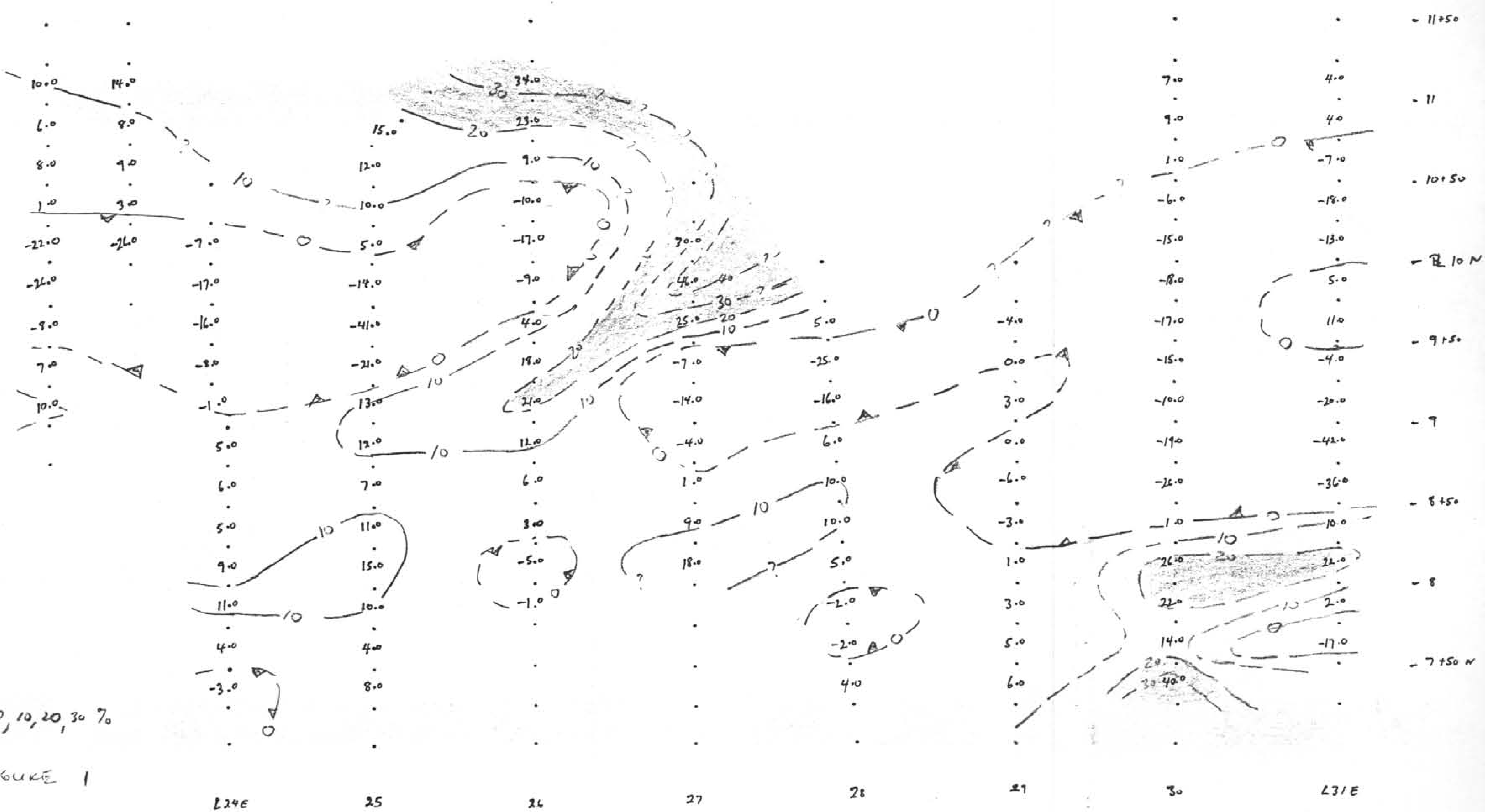
3. I have been practising my profession since 1975 and have been active in the mining industry since 1971.

4. I am an active member of the British Columbia Geophysical Society.

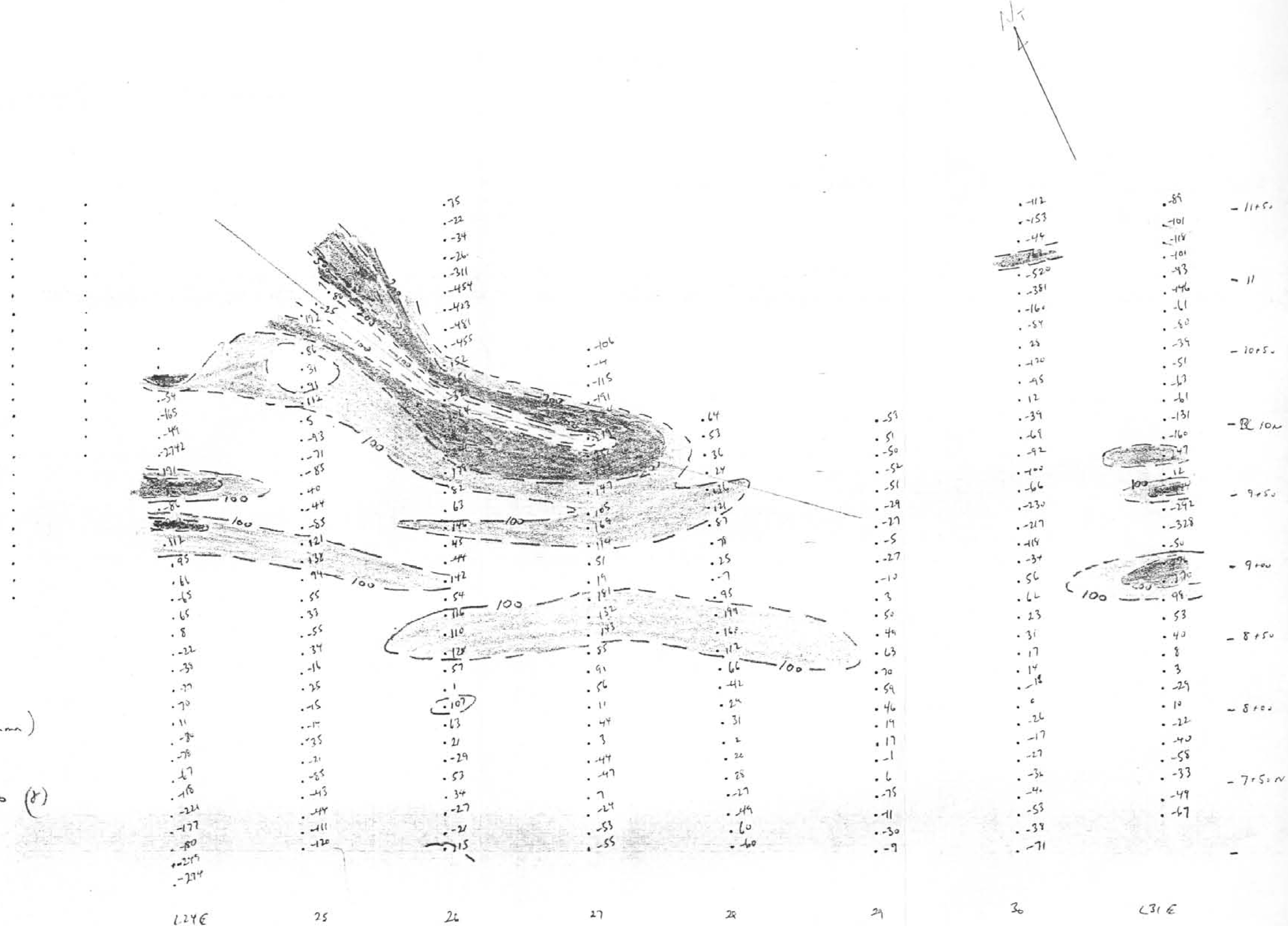
5. This report is based on fieldwork presented to me by Mr. Tiro Clarke. I have not visited the property.

November 1, 1991
Vancouver, B.C.

Douglas R. MacQuarrie
B.Sc.



EAST ZONE
VLF - SEATTLE
FRASER FILTER
Contoured @ 0, 10, 20, 30 %
1:2500
FIGURE 1



East Zone
Relative Mag (gamma)
1:2500
100, 200, 500, 1000 (γ)

Figure 2

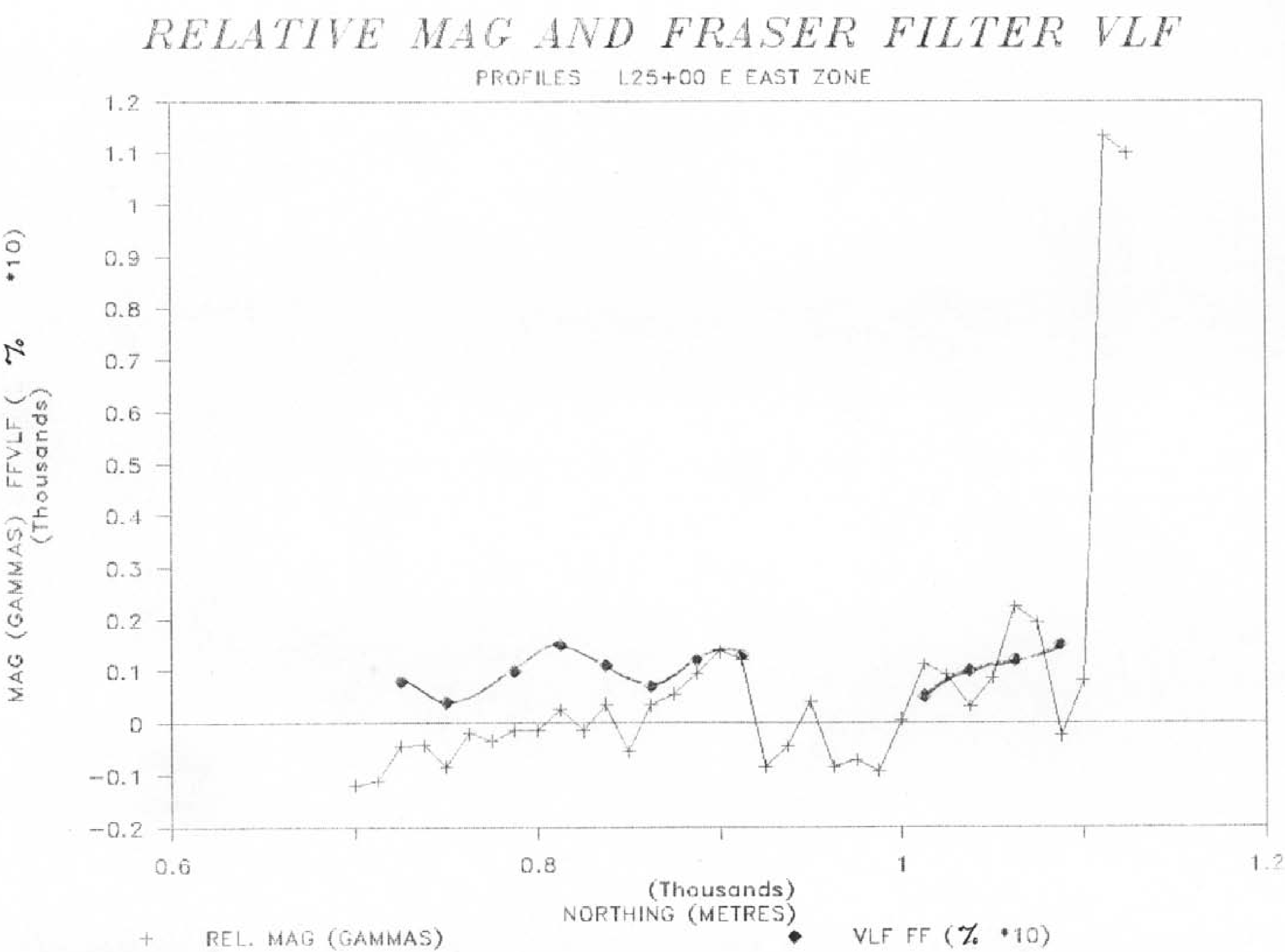

RELATIVE MAG AND FRASER FILTER VLF
PROFILES L25+00 E EAST ZONE
MAG (GAMMAS) FFVLF (% *10)
(Thousands)
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
−0.1
−0.2
0.6
0.8
1
1.2
(Thousands)
NORTHING (METRES)
REL. MAG (GAMMAS)
VLF FF (% *10)

Fig 3a

RELATIVE MAG AND FRASER FILTER VLF

PROFILES L26+00 E EAST ZONE

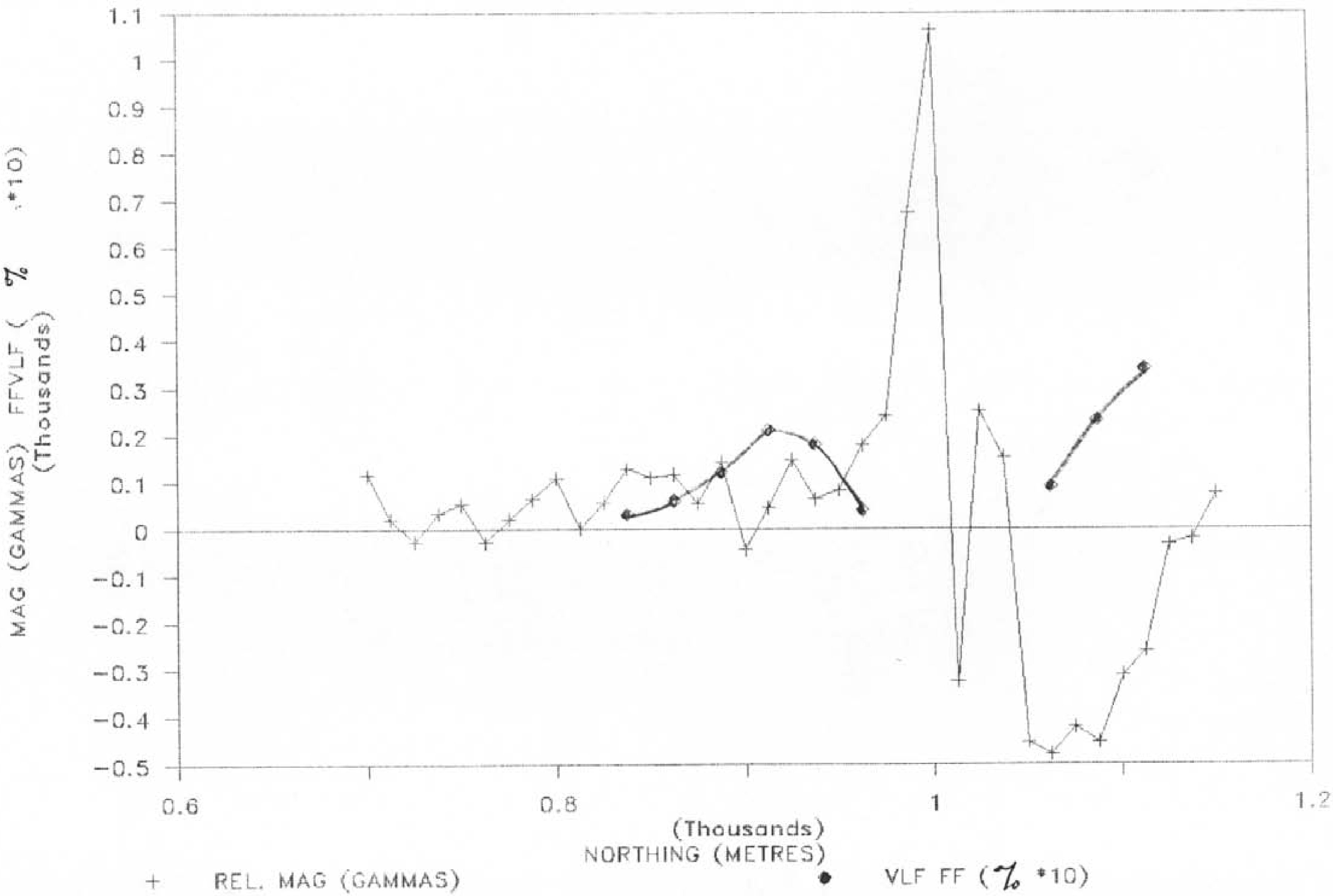


FIG. 36

RELATIVE MAG AND FRASER FILTER VLF

PROFILES L27+00 E EAST ZONE

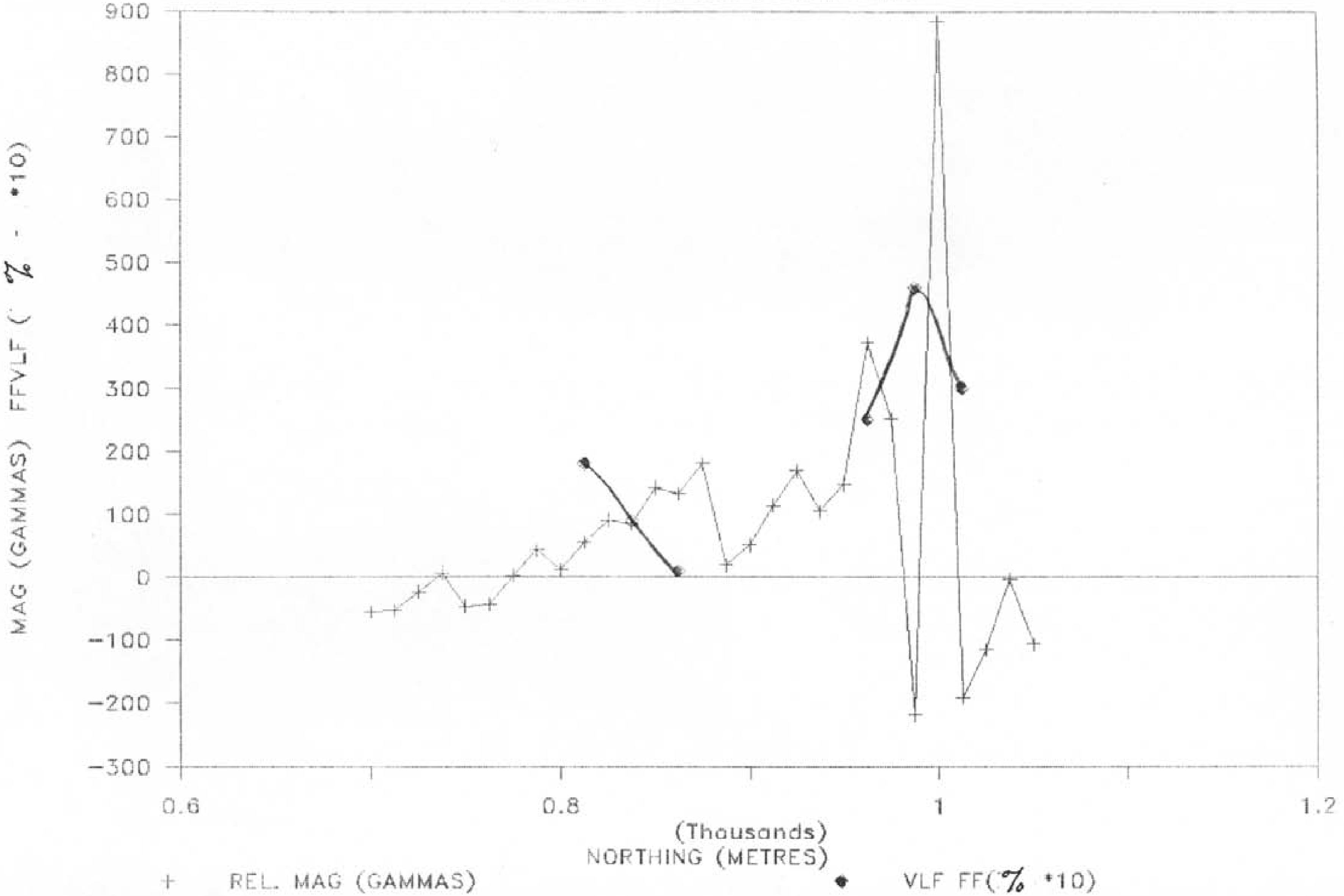


FIG. 3c

RELATIVE MAG AND FRASER FILTER VLF

PROFILES L30+00 E EAST ZONE

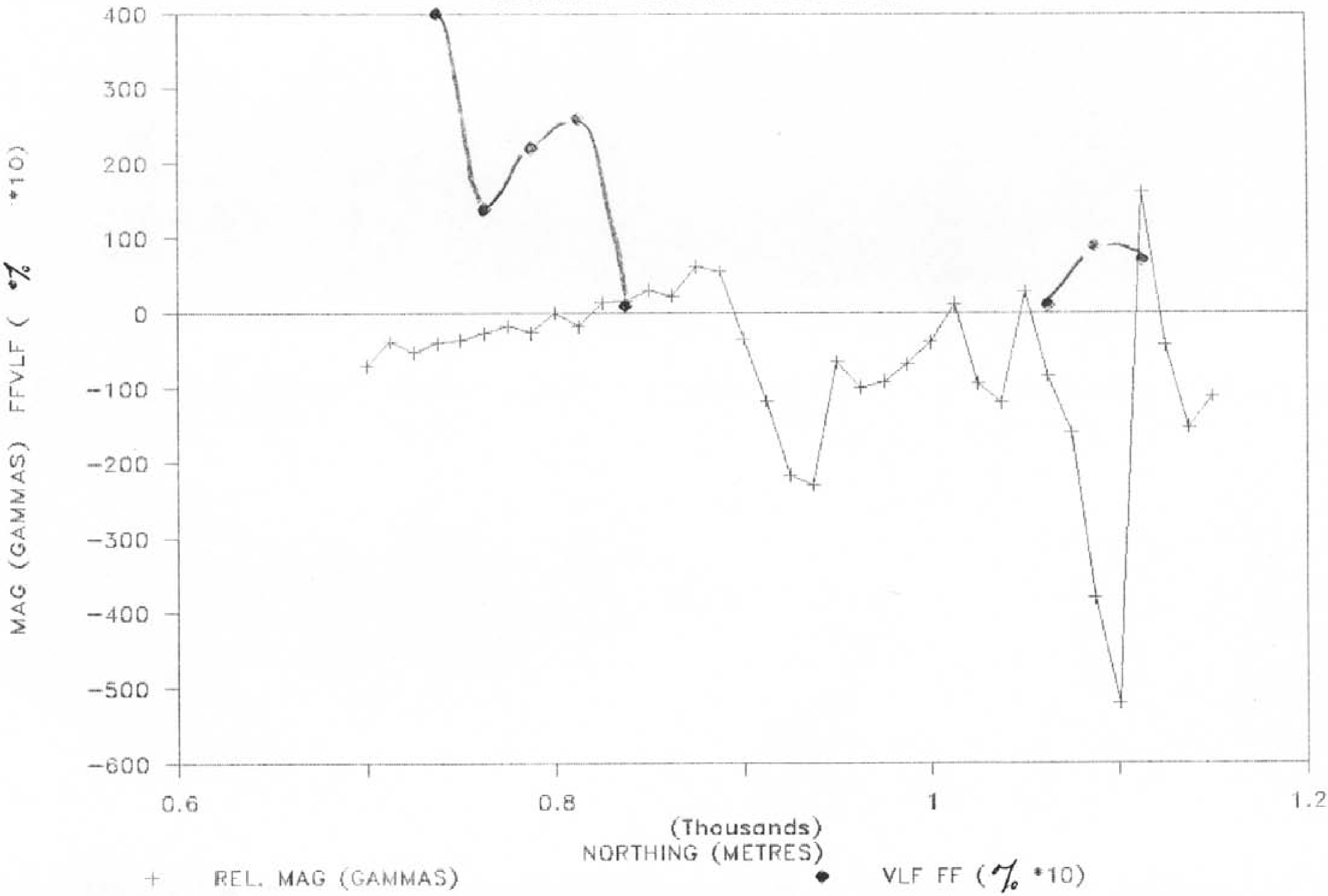


Fig 3D

APPENDIX 7

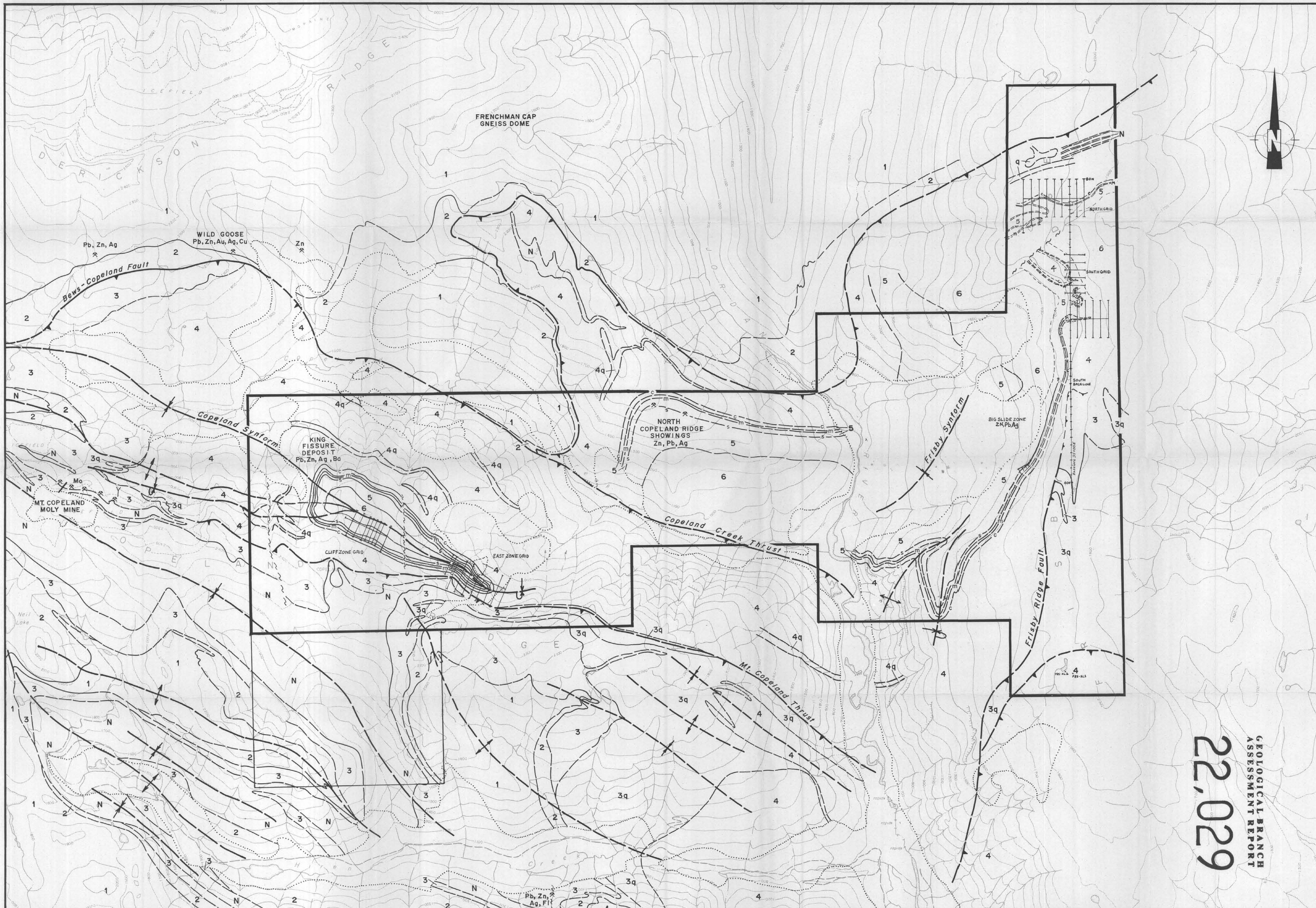
FRISBY RIDGE SOUTH GRID VLF-EM DATA

FRISBY RIDGE SOUTH GRID
VLF–EM DATA
(in phase %)

	BL35+00E	TL36+00E	TL37+00E	TL38+00E	TL39+00E	TL40+00E	
64+00N	40	0	–25	–14	–14	–25	64+00N
	42	–3	–26	–14	–16	–26	
63+50N	39	–4	–27	–14	–18	–27	63+50N
	35	–5	–28	–14	–17	–27	
63+00N	29	–7	–28	–14	–20	–27	63+00N
	25	–8	–28	–15	–21	–25	
62+50N	24	–10	–27	–15	–21	–25	62+50N
	24	–12	–22	–15	–22	–25	
62+00N	26	–12	–16	–15	–24	–24	62+00N
	26	–12	–17	–18	–23	–22	
61+50N	19	–11	–18	–18	–24	–21	61+50N
	12	–11	–17	–19	–24	–21	
61+00N	11	–10	–22	–21	–23	–21	61+00N
	7	–15	–21	–20	–21	–21	
60+50N	7	–15	–18	–19	–20	–20	60+50N
	7	–15	–19	–19	–21	–19	
60+00N	6	–17	–20	–21	–20	–18	60+00N
	5	–19	–22	–23	–18	–13	
59+50N	5	–21	–23	–24	–16	–7	59+50N
	6	–23	–24	–22	–11	–2	
59+00N	7	–23	–24	–19	–6	–4	59+00N

FRISBY RIDGE SOUTH GRID
VLF-EM DATA
(quadrature)

	BL35+00E	TL36+00E	TL37+00E	TL38+00E	TL39+00E	TL40+00E	
64+00N	14	-6	-15	-8	-4	-6	64+00N
	14	-7	-15	-6	-4	-6	
63+50N	10	-6	-18	-4	-2	-8	63+50N
	9	-6	-18	-1	3	-8	
63+00N	6	-8	-16	1	1	-7	63+00N
	4	-8	-14	3	0	-5	
62+50N	8	-7	-9	4	0	-5	62+50N
	10	-8	-1	6	-1	-6	
62+00N	13	-7	4	5	-2	-6	62+00N
	13	-5	0	1	-3	-5	
61+50N	8	-3	-2	0	-5	-3	61+50N
	3	-2	2	1	-6	-4	
61+00N	0	0	-10	-4	-4	-4	61+00N
	-4	-10	-8	-2	-2	-4	
60+50N	-3	-8	-4	1	-2	-5	60+50N
	-3	-8	-5	-2	-6	-7	
60+00N	-4	-10	-8	-6	-9	-6	60+00N
	-5	-14	-11	-11	-9	-3	
59+50N	-5	-16	-14	-14	-7	3	59+50N
	-4	-18	-16	-14	-4	6	
59+00N	-3	-19	-14	-10	1	1	59+00N



LEGEND

Tertiary

50my.	(line symbol)	Lamprophyre dikes; local Au-Ag-Pb-Zn-Fl shear veins (not shown)

Monashee Complex

500-550 my.	6	Biotite-sillimanite schist, calc-silicate gneiss
	6q	Quartzite (not shown)
	5	Calcareous grey schist, calc-silicate gneiss
	5m	White marble
	5s	Sedex Pb-Zn-Ag-Ba layer
	5c	Carbonatite tuff-breccia
	5q	Quartzite (not shown)
	4	Grey-green calc-silicate gneiss, amphibolite, mafic meta-volcanics, mica schist
	4q	Quartzite
740my.	N	Nepheline syenite sills, dikes & gneiss; fenite, amphibolite; pegmatite ± molybdenum
	3q	Quartzite
	3	Green calc-silicate gneiss, marble schist, quartzite, amphibolite, fenite
	2	Quartzite, quartz-pebble conglomerate, mica schist

Frenchman Cap Gneiss Dome

1900-2100 my.	1	Granitic gneiss, paragneiss; minor quartzite schist, amphibolite; pegmatite zones

Mineralized showing
Outcrop
Geological contact (known, inferred)
Thrust fault
Normal fault
Anticline (known, inferred)
Syncline (known, inferred)
Overturned syncline (known, inferred)
s Sedex Pb, Zn, Ag, Ba, Cu horizon
m White marker marble
c Carbonatite tuff-breccia Nb & LREE-enriched
Property boundary
Road
Creek
Open water
Icefield
Swamp
Contour (100 metre interval)
Cliff
Dam

500 0 1000
SCALE 1:20,000

First Standard Mines Ltd.

JORDAN RIVER PROPERTY

GEOLOGY COMPILATION

After	Scale	N.T.S.
Currie (1976) Fyles (1970) Hoy & Brown (1980) Vigrass (1970)	Scale 1:20,000 Date Dec., 1991 By T. Clarke/J. Laird	N.T.S. Revelstoke M.D. 82 M/1 Figure 3

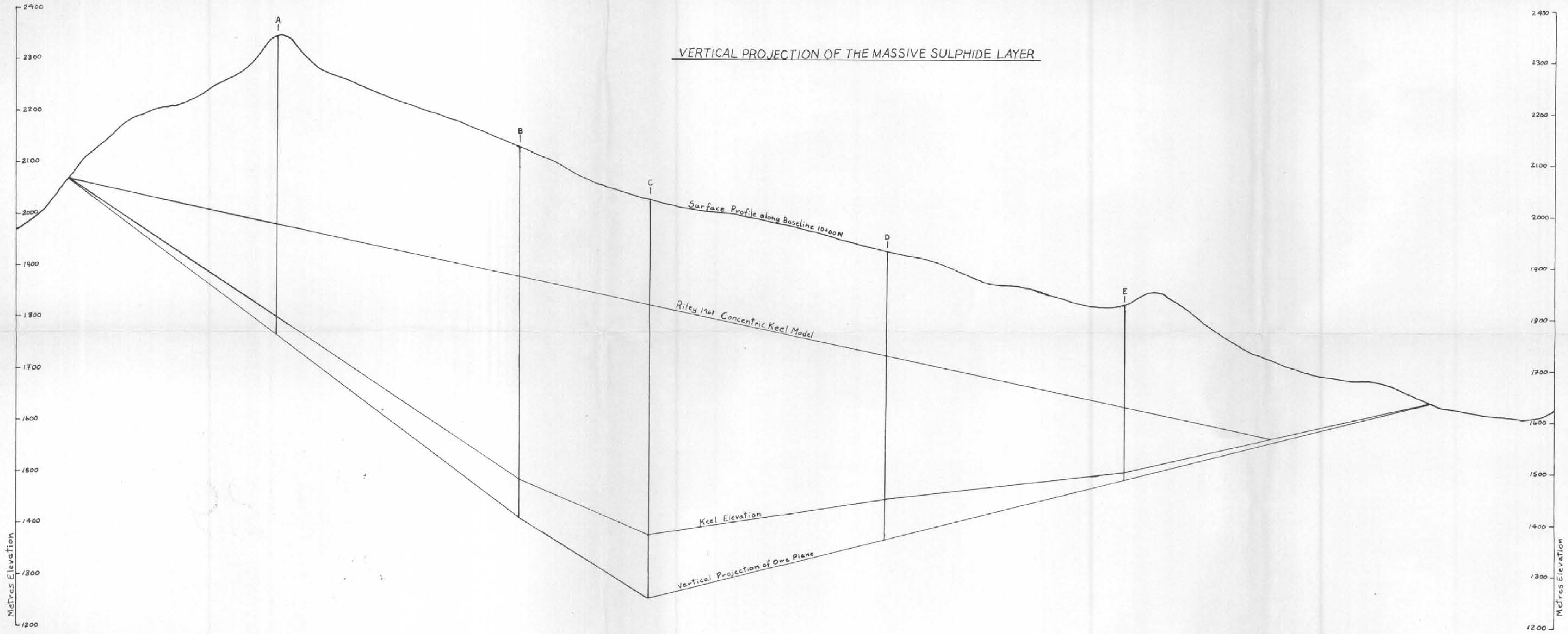
First Standard Mining Ltd.

JORDAN RIVER PROPERTY

KING FISSURE DEPOSIT

GEOLOGY

Revelstoke M.D.	Scale: 1:5,000	N.T.S.: 82 M/1W
Drafted by: J.L.	Date: Dec., 1991	Figure: 4
After: Fyles, 1970	By: James Laird	



ROUGH TONNAGE/GRADE ESTIMATES

Massive Sulphide Zn, Pb, Ag Layer

total surface area =	2,250,000 sq. m.
x average width 2.0m =	4,500,000 cu. m.
x 4 tonnes per cu. m. =	18,000,000 m.t.
+ thickened Keel area(?)	2,000,000 m.t.

Potential Gross Tonnage – 20,000,000 m.t.

Estimated Mining Grade – 7.5% Zn, 7.5% Pb, 100g/t Ag

Extrusive Carbonatite REE Layer

total surface area =	2,500,000 sq. m.
x average width 5.0m =	12,500,000 cu. m.
x 2.7 tonnes per cu. m. =	33,750,000 m.t.

No Ore Grade Established

*Note – These estimates are based on surface exploration and structural data and require detailed drilling to classify potential tonnage as an ore reserve.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,029

Modified sections after:
Ives, 1956
Riley, 1961
R.A.H. 1963
Fyles, 1970

LEGEND

Monashee Complex

6	Biotite-sillimanite schist, calc-silicate gneiss, quartzite
5 (500-550 my.)	Calcareous grey schist, calc-silicate gneiss, quartzite, amphibolite
5s	Sedex Zn, Pb, Ag, layer
5m	White marble
5c	Carbonatite tuff-breccia
4	Grey-green calc-silicate gneiss, amphibolite, mafic meta-volcanics, mica schist, quartzite

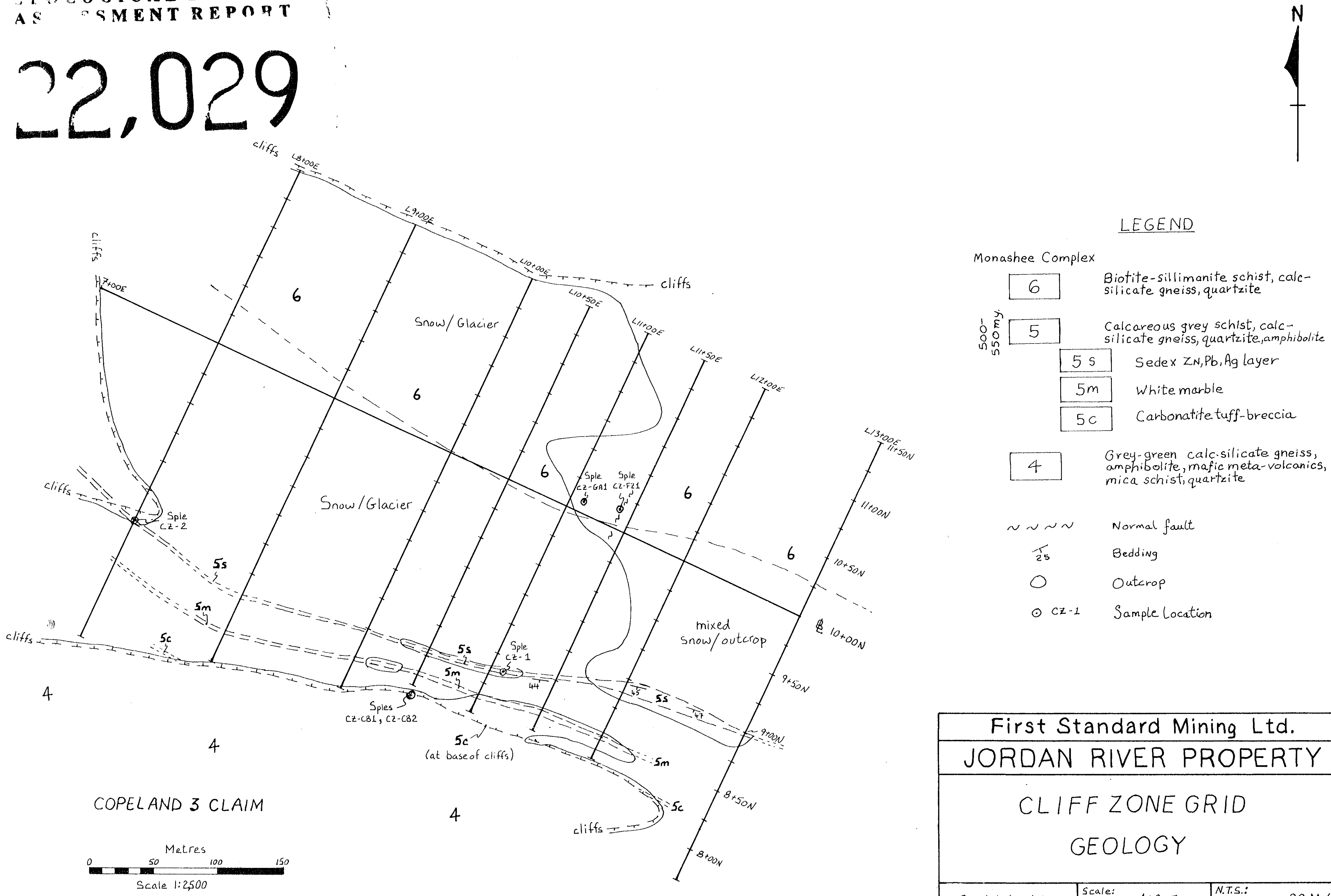
0 50 100 150 200 250 Metres
1:5000

First Standard Mining Ltd.

JORDAN RIVER PROPERTY

KING FISSURE DEPOSIT
DIAGRAMMATIC GEOLOGICAL
SECTIONS

Revelstoke M.D.	Scale: 1:5000	NTS 82M1w
	Date: Dec. 1991	Figure: 5
Drafted By: J.L.	By: James Laird	



First Standard Mining Ltd.

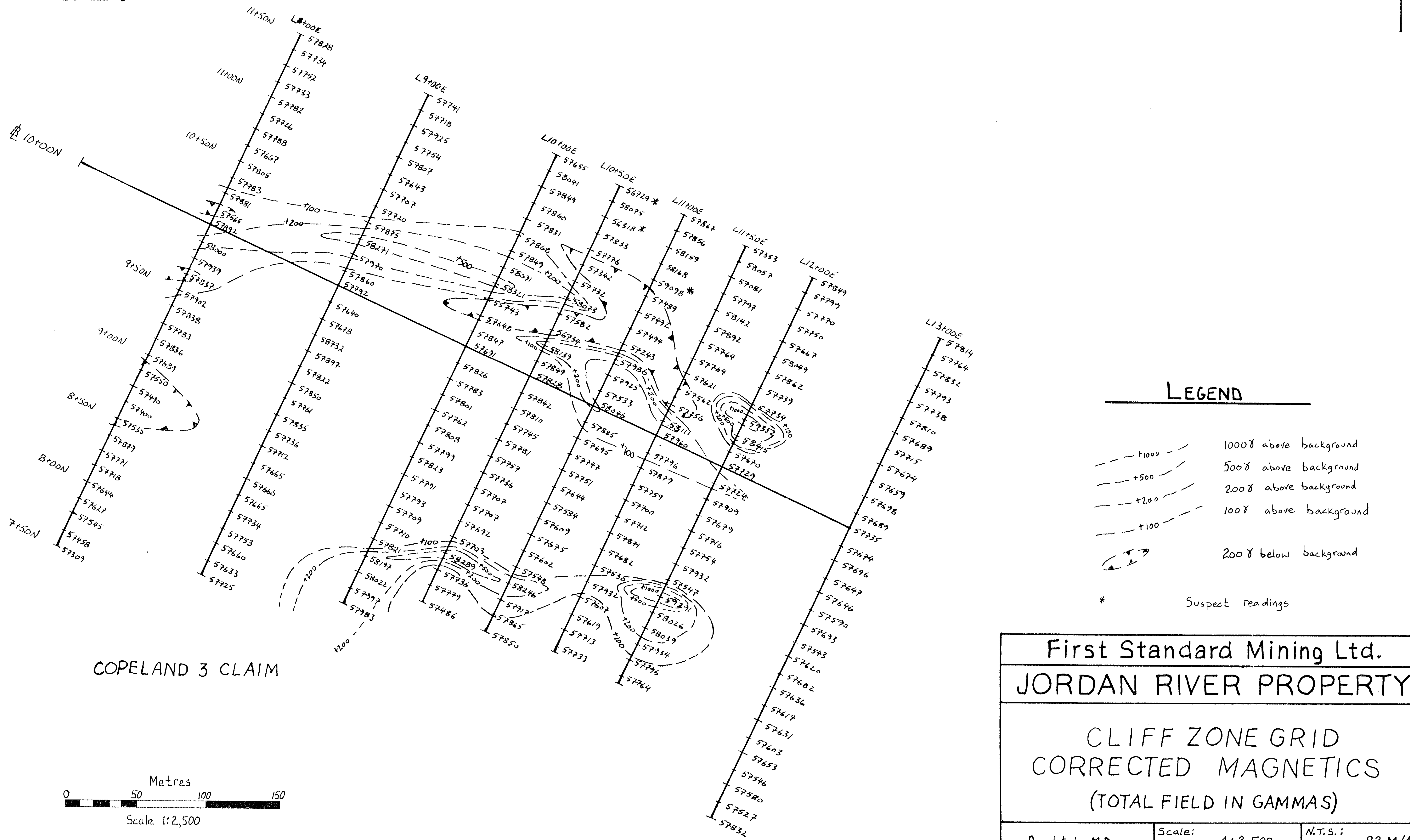
JORDAN RIVER PROPERTY

CLIFF ZONE GRID GEOLOGY

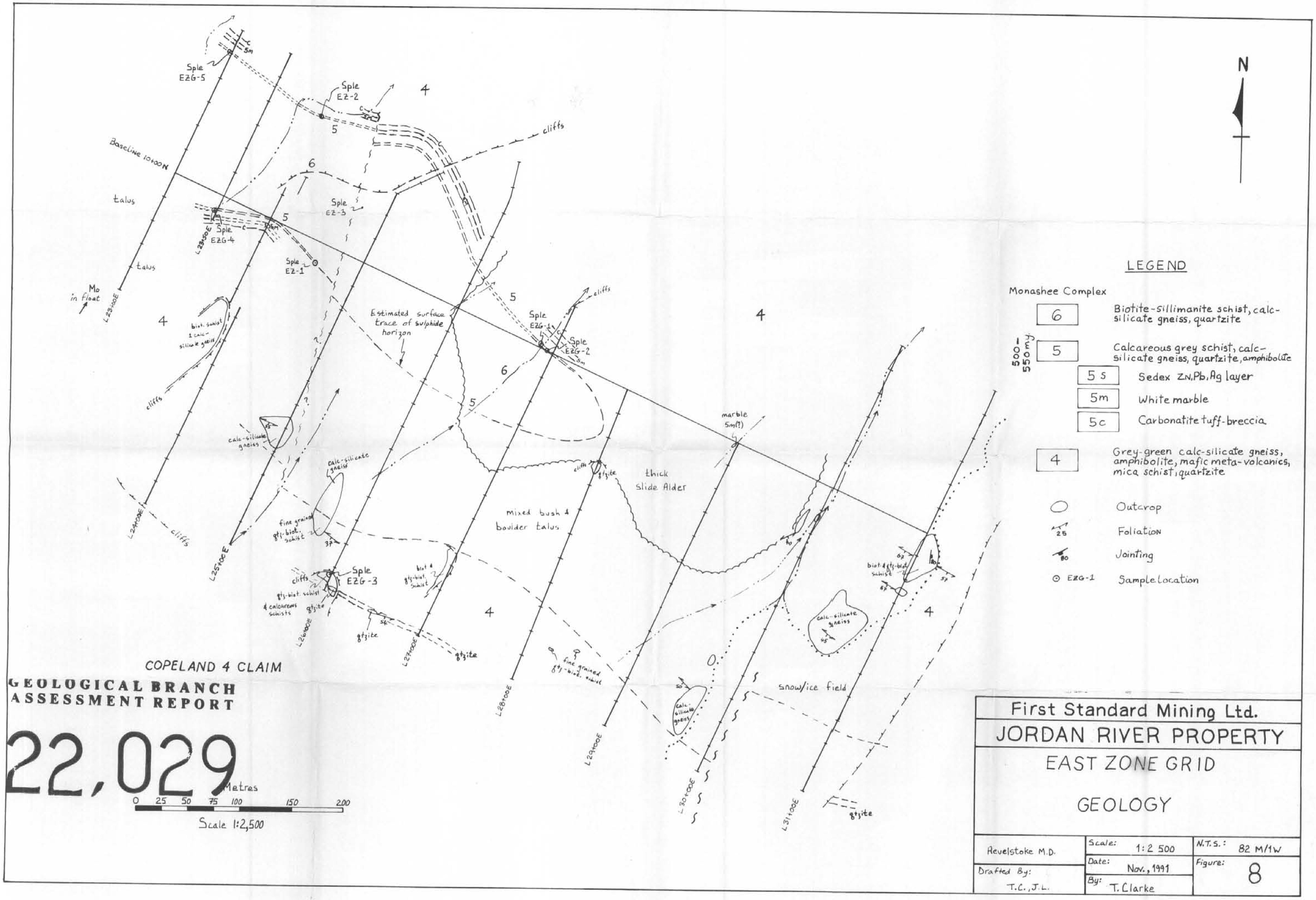
Revelstoke M.D.	Scale: 1:2,500	N.T.S.: 82 M/1W
Drafted By: T.C., J.L.	Date: Nov., 1991 By: T. Clarke	Figure: 6

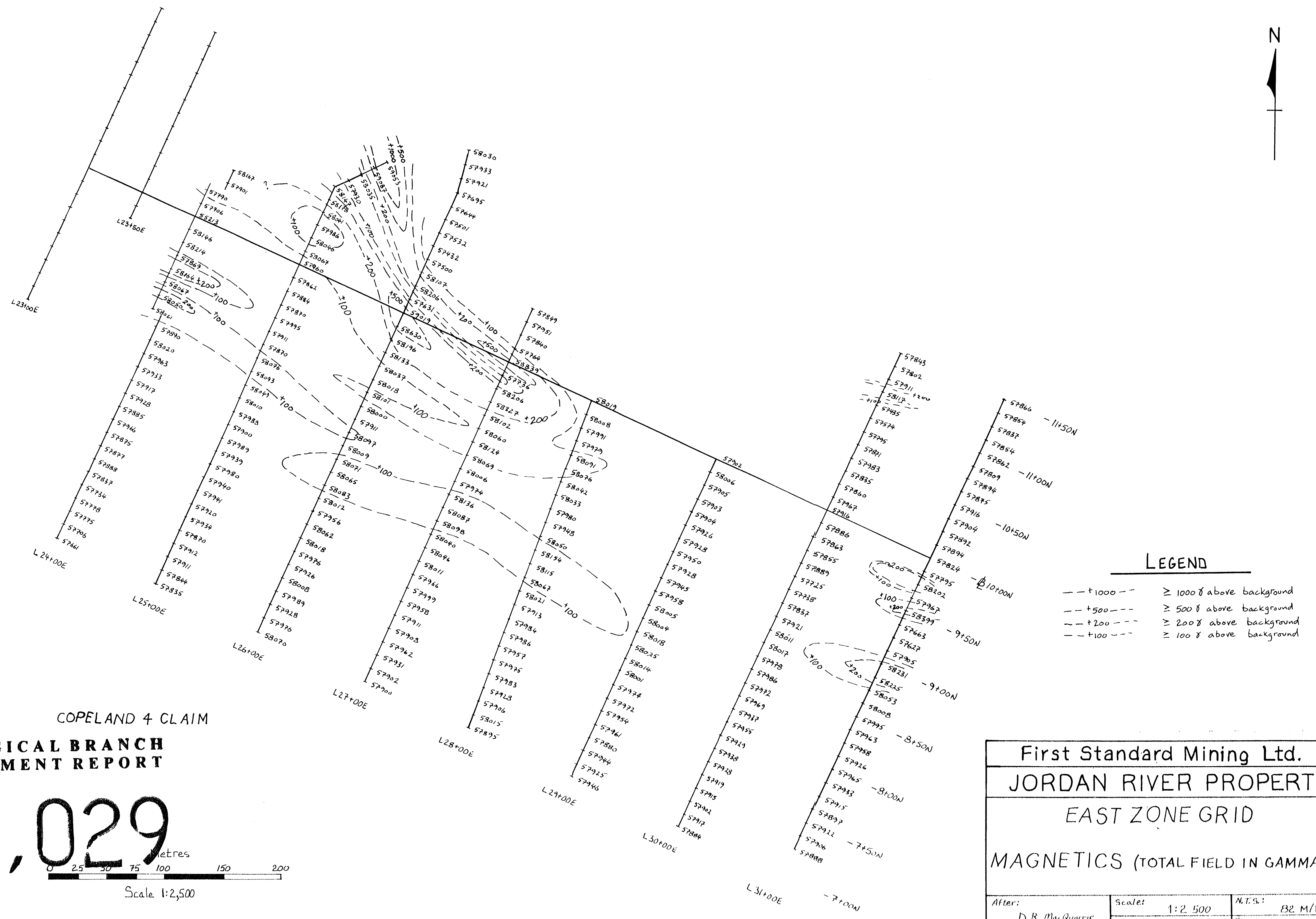
GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,029



First Standard Mining Ltd.		
JORDAN RIVER PROPERTY		
CLIFF ZONE GRID CORRECTED MAGNETICS (TOTAL FIELD IN GAMMAS)		
Revelstoke M.D.	Scale: 1:2,500	N.T.S.: 82 M/1W
Drafted By: T.C.	Date: Nov., 1991	Figure: 7
	By: T. Clarke	


First Standard Mining Ltd.
JORDAN RIVER PROPERTY
EAST ZONE GRID
GEOLOGY
Revelstoke M.D.
Scale: 1:2 500
N.T.S.: 82 M/1W
Drafted By: T.C., J.L.
Date: Nov., 1991
Figure: 8
By: T. Clarke
LEGEND
Monashee Complex
6 Biotite-sillimanite schist, calc-silicate gneiss, quartzite
500-550 my
5 Calcareous grey schist, calc-silicate gneiss, quartzite, amphibolite
5s Sedex Zn,Pb,Ag layer
5m White marble
5c Carbonatite tuff-breccia
4 Grey-green calc-silicate gneiss, amphibolite, mafic meta-volcanics, mica schist, quartzite
Outcrop
Foliation
Jointing
EZG-1 Sample Location
N
COPELAND 4 CLAIM
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
Metres
0 25 50 75 100 150 200
Scale 1:2,500
Baseline 10+00N
L23+00E
L23+50E
L24+00E
L25+00E
L26+00E
L27+00E
L28+00E
L29+00E
L30+00E
L31+00E
Sple EZG-5
Sple EZ-2
Sple EZ-3
Sple EZ-1
Sple EZG-4
Sple EZG-1
Sple EZG-2
Sple EZG-3
talus
cliffs
Mo in float
Estimated surface trace of sulphide horizon
marble 5m(?)
thick Slide Alder
mixed bush & boulder talus
snow/ice field
calc-silicate gneiss
fine grained qtz-biot. schist
qtzite



GEOLOGICAL BRANCH ASSESSMENT REPORT

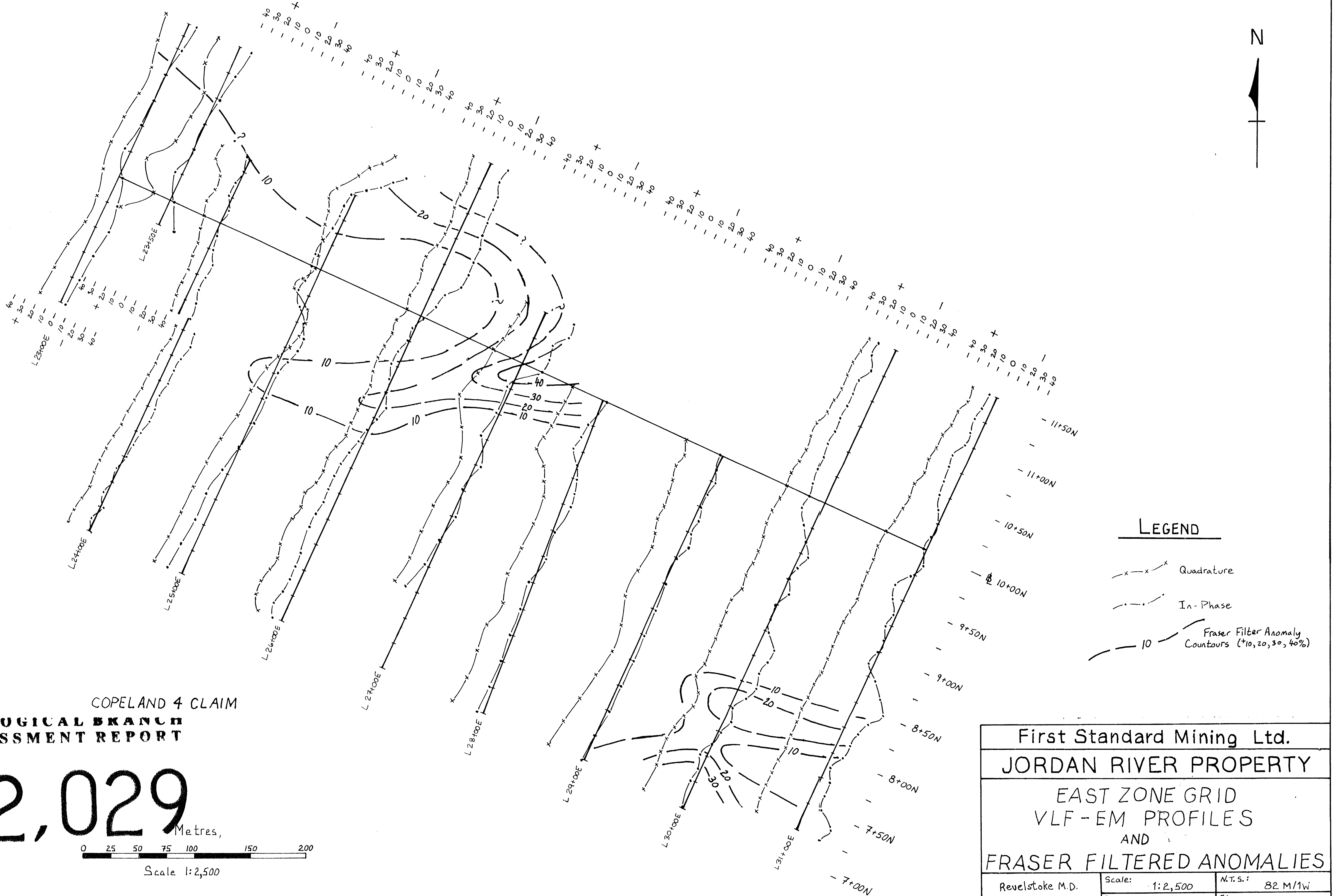
22,029

First Standard Mining Ltd.		
JORDAN RIVER PROPERTY		
EAST ZONE GRID		
MAGNETICS (TOTAL FIELD IN GAMMAS)		
After: D.R. MacQuarrie	Scale: 1:2,500	N.T.S.: 82 M/1W
	Date: Nov., 1991	Figure: 9
Drafted By: T.C.	By: T. Clarke	

COPELAND 4 CLAIM

GEOLOGICAL BRANCH
ASSESSMENT REPORT

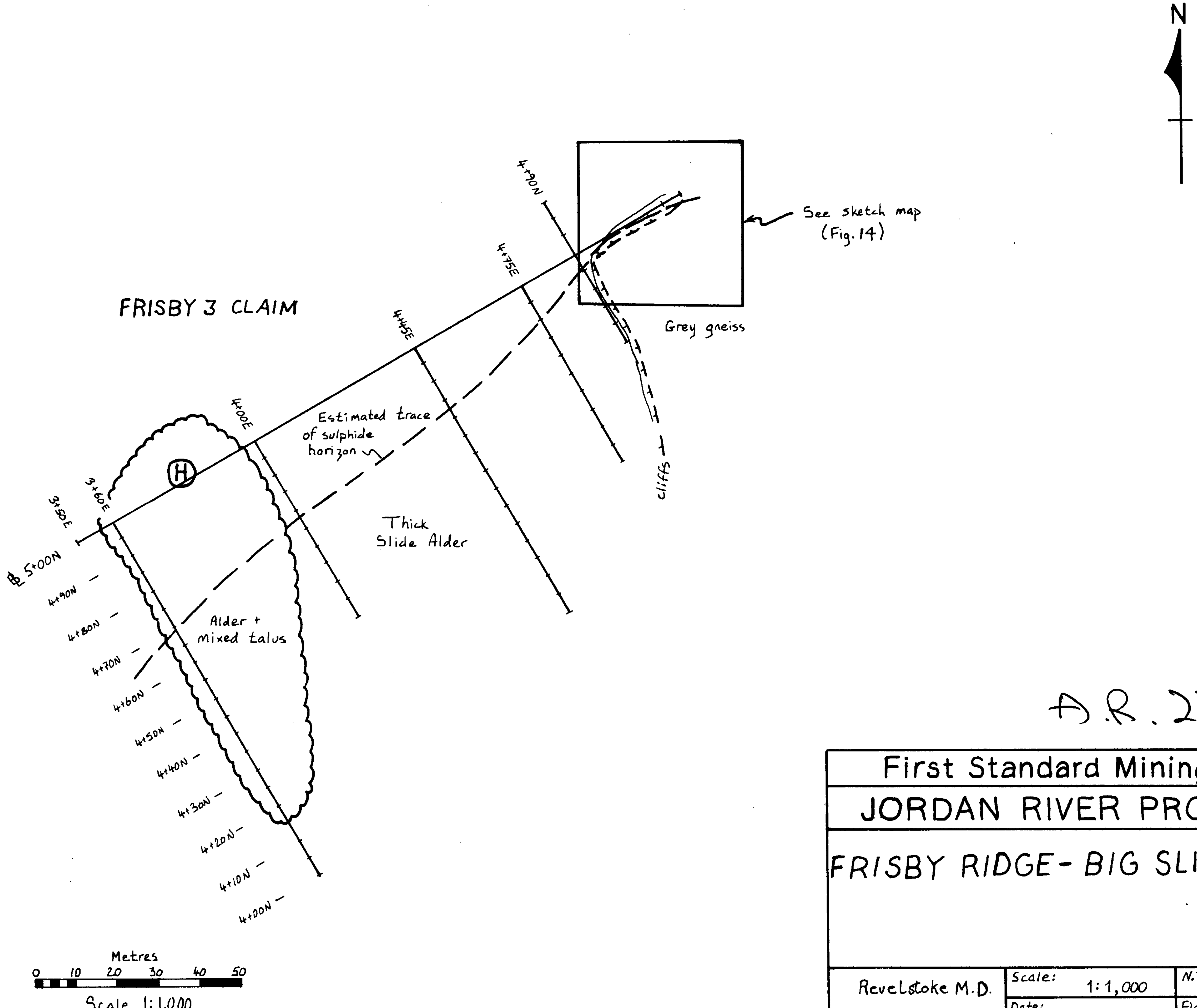
22,029



Metres
0 25 50 75 100 150 200
Scale 1:2,500

First Standard Mining Ltd.		
JORDAN RIVER PROPERTY		
EAST ZONE GRID VLF-EM PROFILES AND FRASER FILTERED ANOMALIES		
Revelstoke M.D.	Scale: 1:2,500	N.T.S.: 82 M/1W
Drafted By: T.C.	Date: Nov., 1991	Figure: 10
	By: M. Andrews	

JORDAN 2
FRISBY 2
JORDAN 3
FRISBY 3
1S
1431
1400
1500
1600
1700
1800
1900
2000
N
6
5
4
55N
54N
53N
52N
51N
50N
49N
48N
47N
46N
45N
44N
43N
53+50 GEOCHEM ANOMALY Pb,Zn,Sr,La,Ba Y,Nb,Sc (see figures 26,27,28)
silicified, ankeritized breccia along a low-angle, bedded fault zone.
FRS-FZ1
Fe-gossan talus float
FR-1
FR-2
FRS-12
FRS-13
FRS-14
FRS-15
FRS-16
FRS-17
TRAVERSE ROUTE
Baseline 35+00E
To 40N
MARBLE SAMPLING
MARKER MARBLE
EXTRUSIVE CARBONATITE
BIG SLIDE GRID
(see figures 12,13,14)
MAG TRACE
PROJECTED STRIKE OF 'BIG SLIDE ZONE'
FB-2
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
LEGEND
Monashee Complex
500-550 my.
6 Biotite-sillimanite schist, calc-silicate gneiss, quartzite
5 Calcareous grey schist, calc-silicate gneiss, quartzite, amphibolite
5s Sedex Zn,Pb,Ag layer
5m White marble
5c Carbonatite tuff-breccia
4 Grey-green calc-silicate gneiss, amphibolite, mafic meta-volcanics, mica schist, quartzite
Low-angle fault zone
Complex isoclinal folding
FRS-13 Rock Sample Location
Helipad
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - BIG SLIDE ZONE
PROSPECTING AND SAMPLING
Revelstoke M.D.
Drafted by: J.L.
Scale: 1:2,500
Date: Nov., 1991
By: J. Laird
N.T.S: 82M/1
Figure: 11



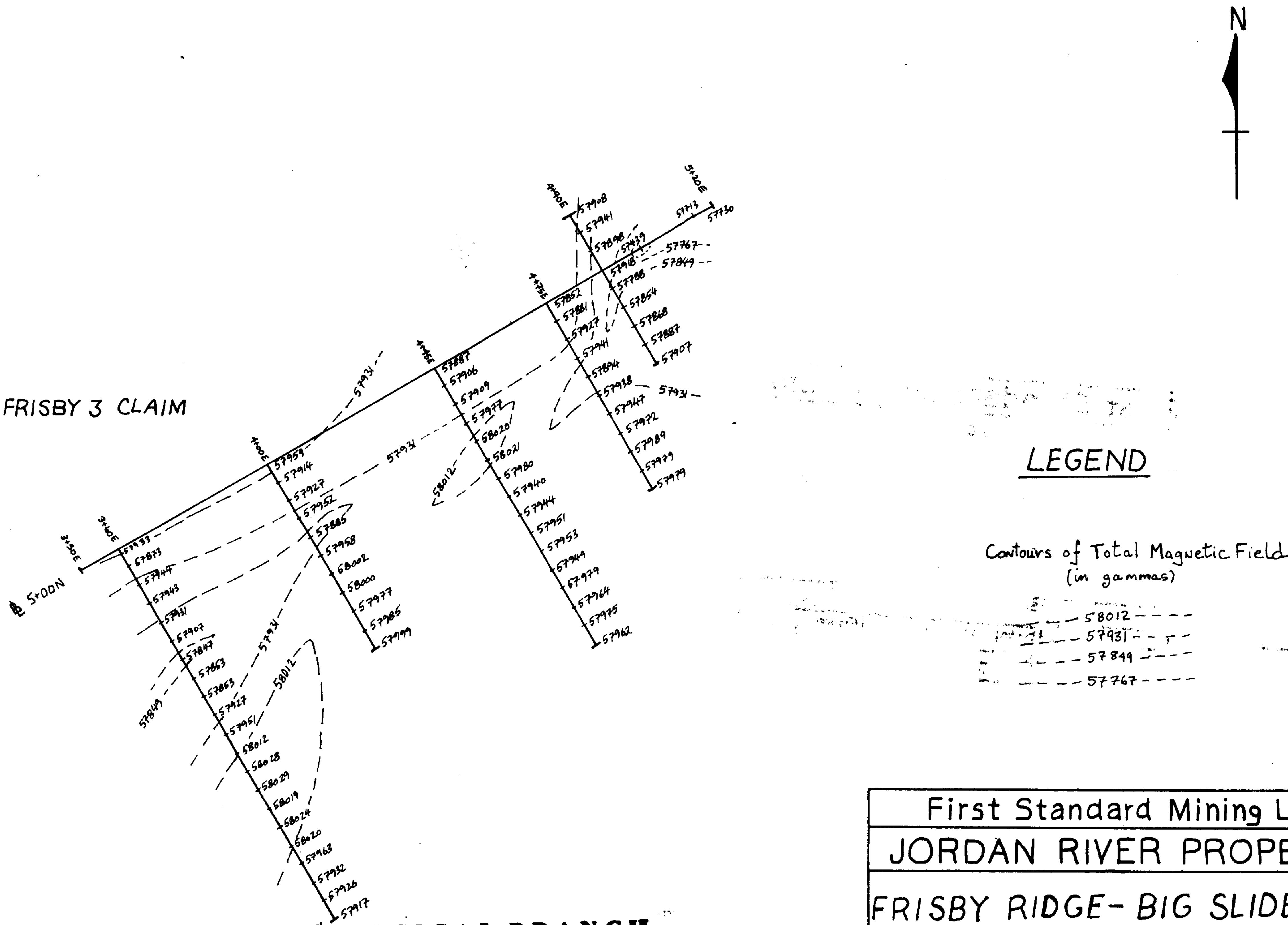
A.R. 22029

First Standard Mining Ltd.

JORDAN RIVER PROPERTY

FRISBY RIDGE - BIG SLIDE GRID

Revelstoke M.D.	Scale: 1:1,000	N.T.S.: 82 M/1W
Drafted By: T.C.	Date: Nov., 1991 By: T. Clarke	Figure: 12



LEGEND

Contours of Total Magnetic Field
(in gammas)

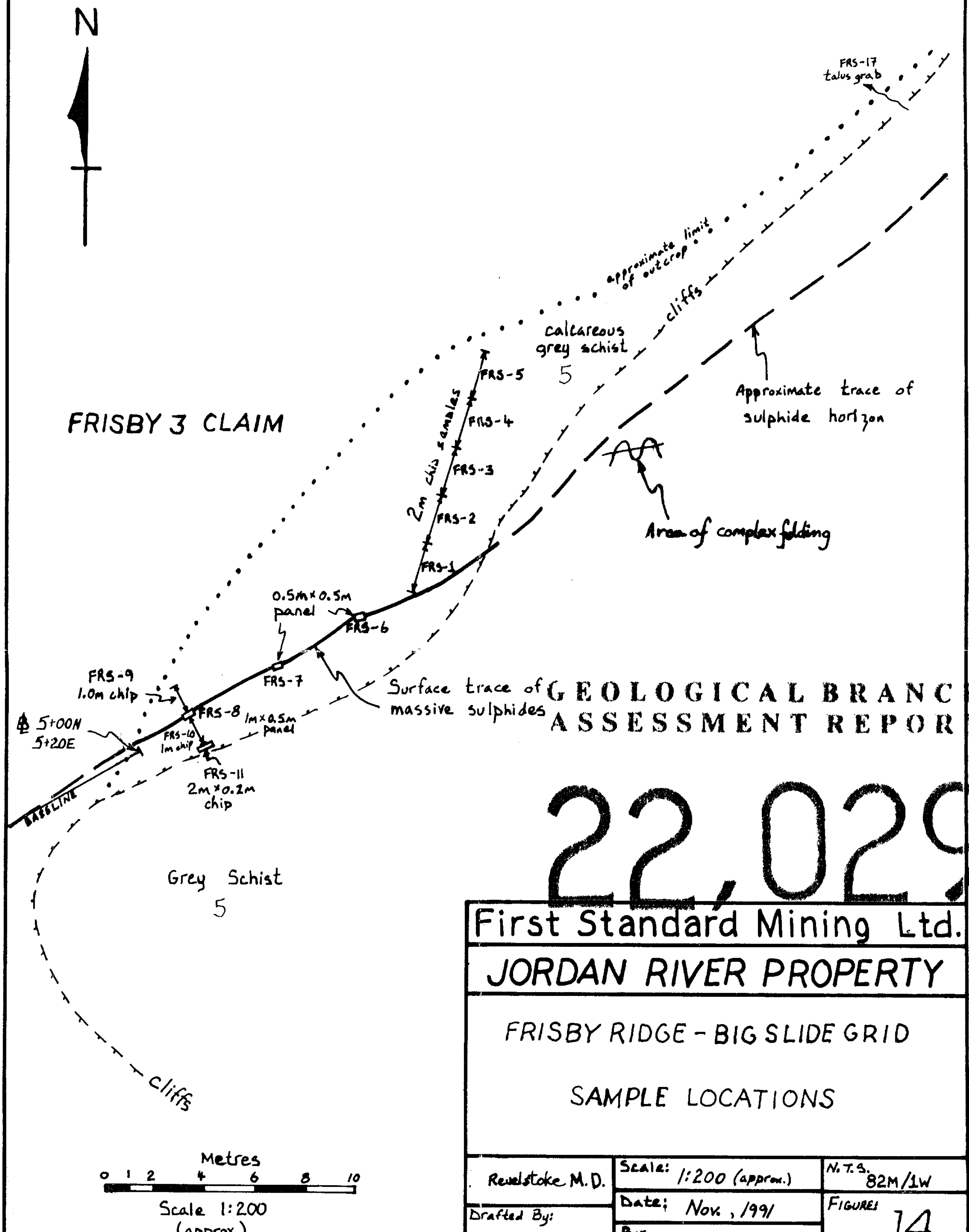
- 58012
- 57931
- 57849
- 57767

GEOLOGICAL BRANCH
ASSESSMENT REPORT

Metres
0 10 20 30 40 50
Scale 1:1,000

22,029

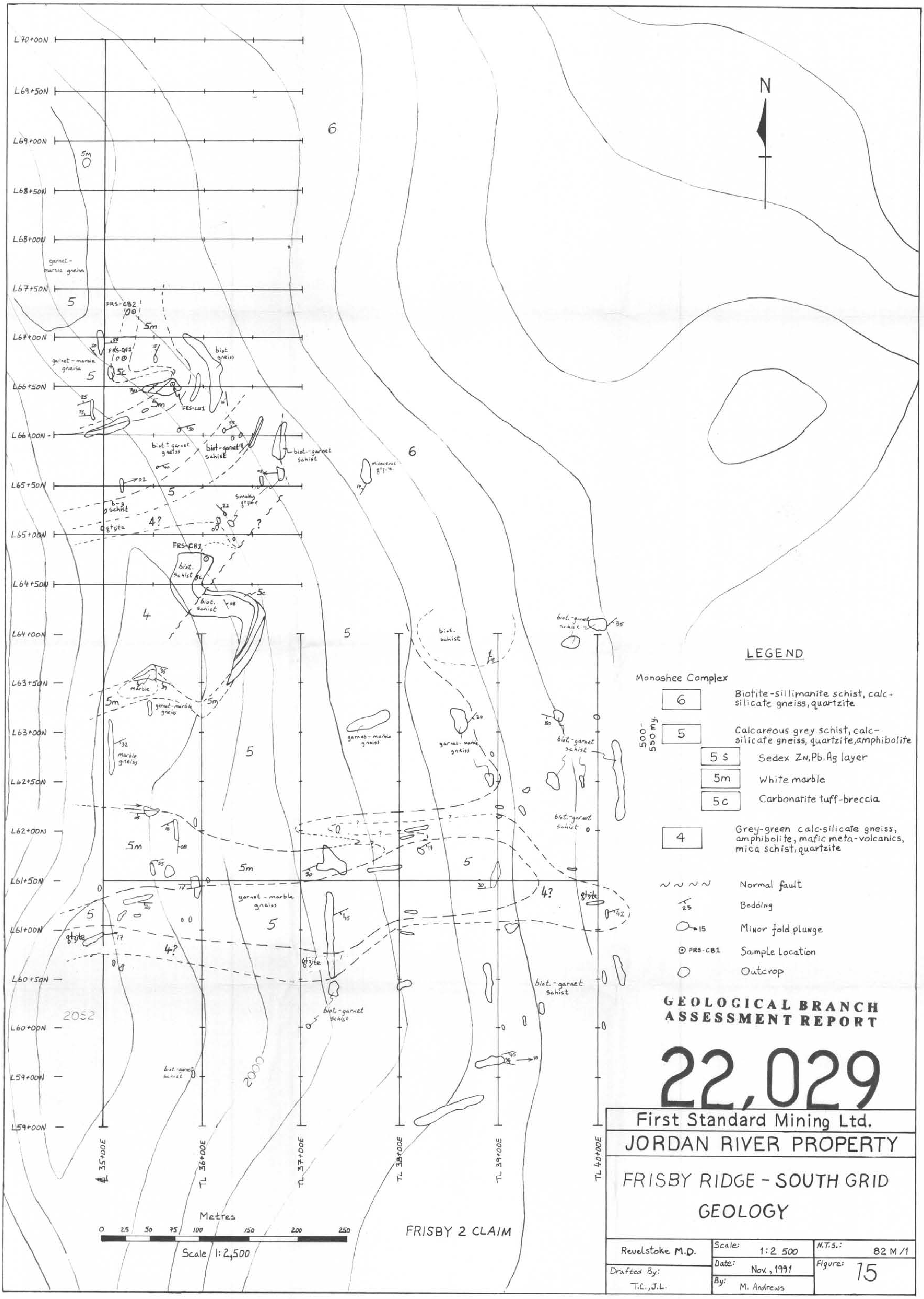
First Standard Mining Ltd.		
JORDAN RIVER PROPERTY		
FRISBY RIDGE- BIG SLIDE GRID		
MAGNETICS (TOTAL FIELD IN GAMMAS)		
Revelstoke M.D.	Scale: 1:1,000	N.T.S.: 82 M/1W
Drafted By: T.C.	Date: Nov., 1991	Figure: 13
	By: T. Clarke	

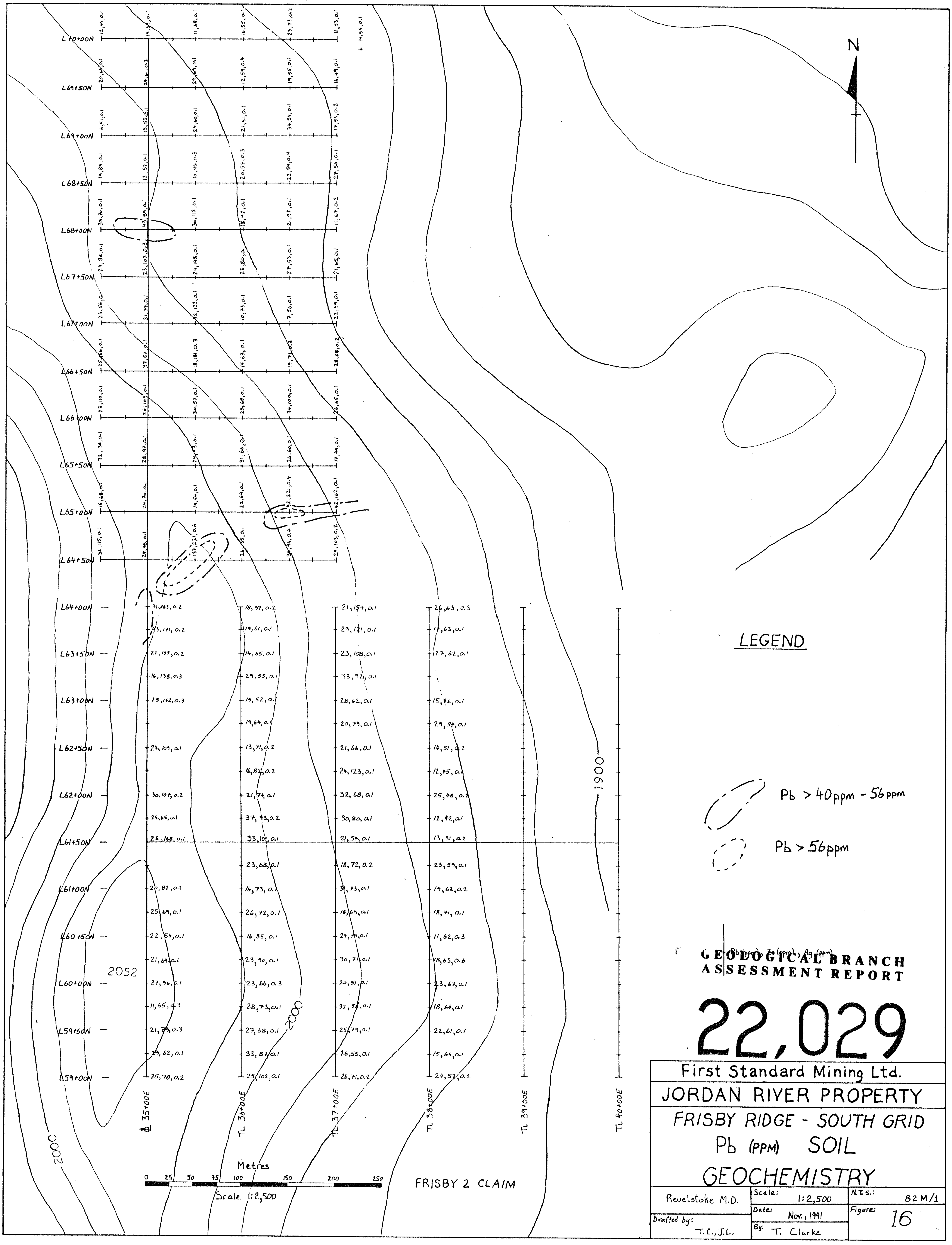


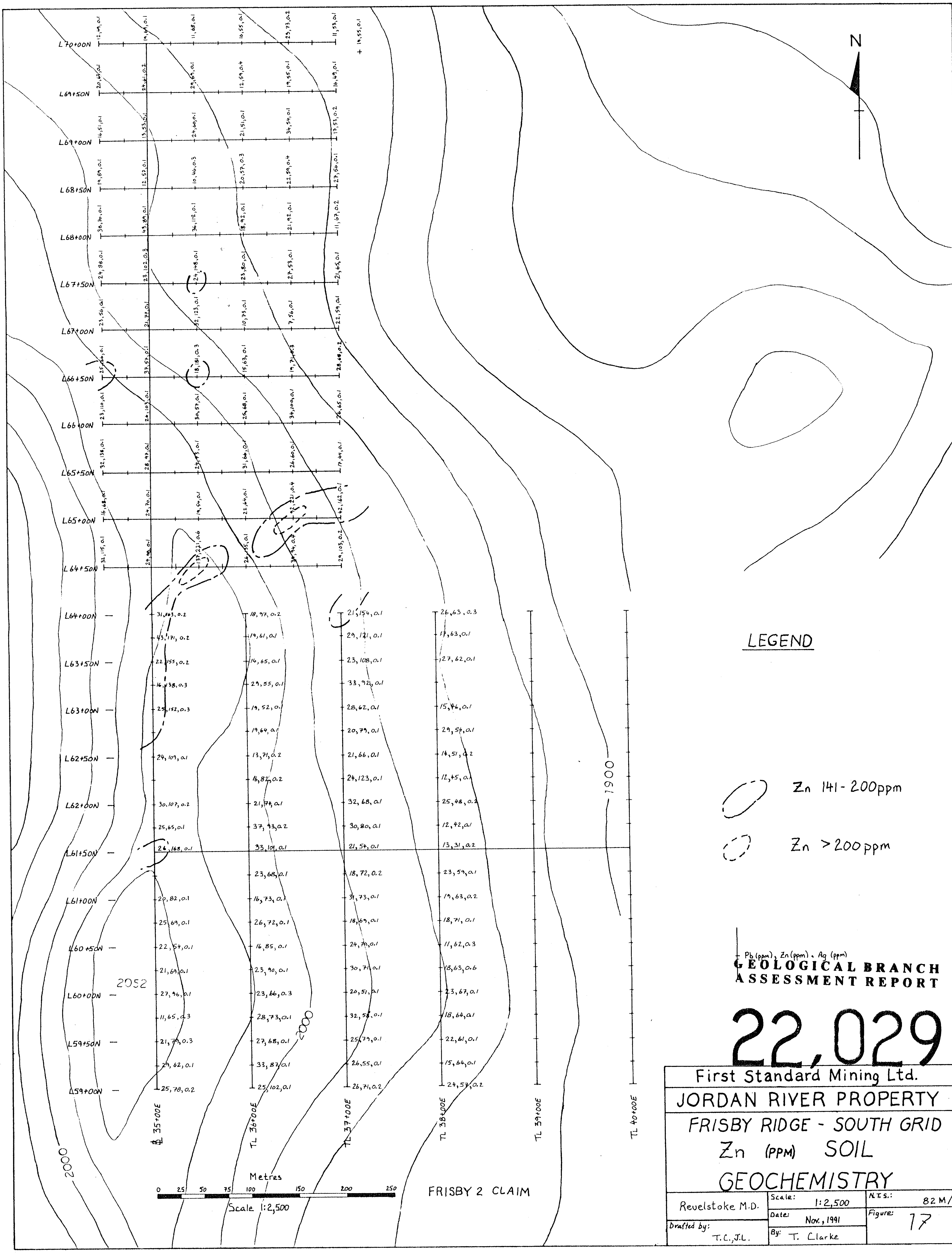
GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,029

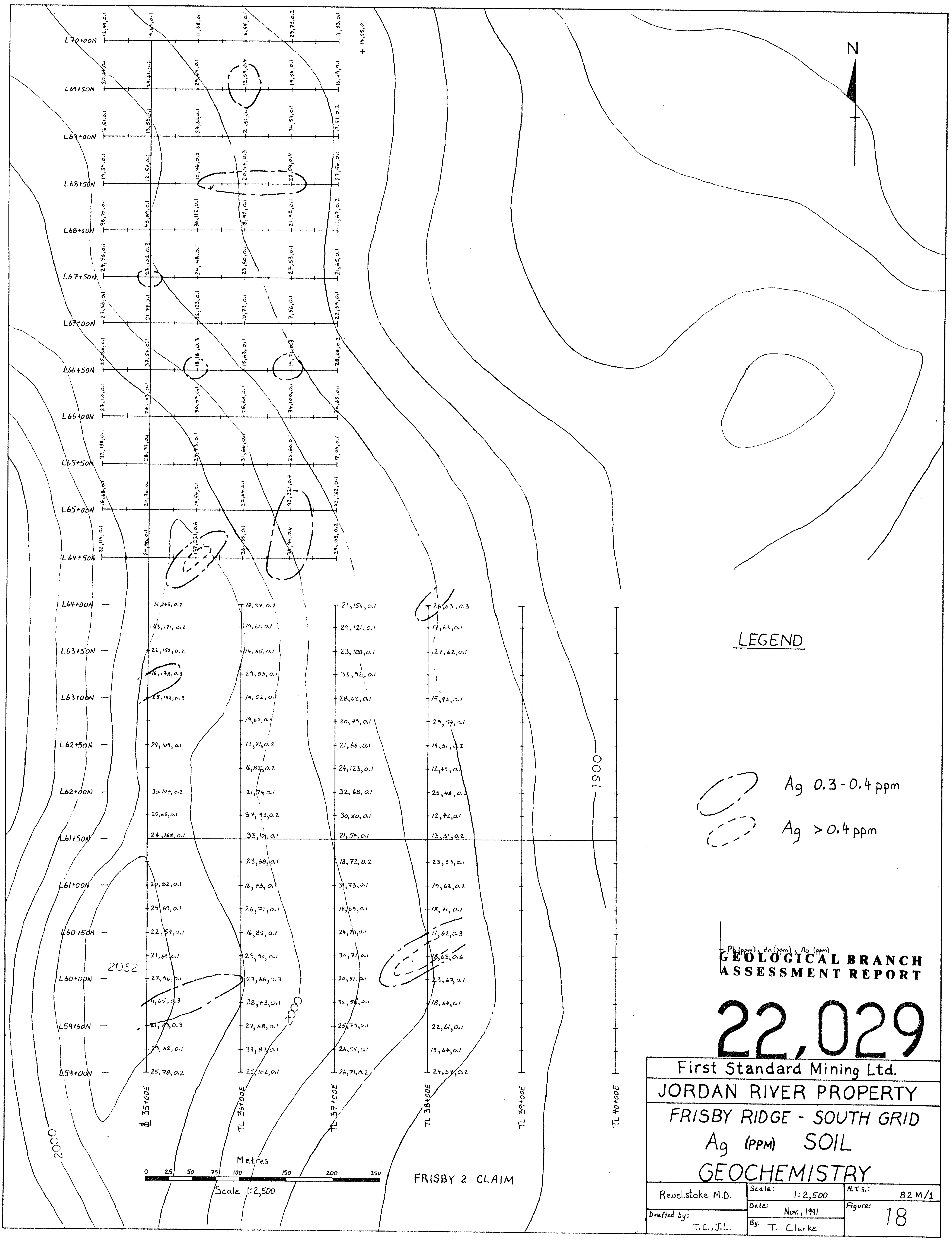
First Standard Mining Ltd.		
JORDAN RIVER PROPERTY		
FRISBY RIDGE - BIG SLIDE GRID SAMPLE LOCATIONS		
Revelstoke M.D.	Scale: 1:200 (approx.)	N.T.S. 82M/1W
Drafted By: T.C., J.L.	Date: Nov., 1991 By: J. Laird	Figure: 14


L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+00N
L59+00N
35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
N
6
5
5m
4
4?
5c
garnet-marble gneiss
biot. gneiss
biot-garnet schist
biot ± garnet gneiss
FRS-CB2
FRS-QR1
FRS-CU1
FRS-CB1
smoky qtzite
micaceous qtzite
b-g schist
biot. schist
marble
marble gneiss
garnet-marble gneiss
qtzite
biot.-garnet schist
2052
2000
LEGEND
Monashee Complex
500-550 m.y.
6 Biotite-sillimanite schist, calc-silicate gneiss, quartzite
5 Calcareous grey schist, calc-silicate gneiss, quartzite, amphibolite
5s Sedex Zn, Pb, Ag layer
5m White marble
5c Carbonatite tuff-breccia
4 Grey-green calc-silicate gneiss, amphibolite, mafic meta-volcanics, mica schist, quartzite
Normal fault
Bedding
Minor fold plunge
FRS-CB1 Sample Location
Outcrop
GEOLOGICAL BRANCH ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
GEOLOGY
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
FRISBY 2 CLAIM
Revelstoke M.D.
Scale: 1:2 500
N.T.S.: 82 M/1
Drafted By: T.C., J.L.
Date: Nov., 1991
By: M. Andrews
Figure: 15

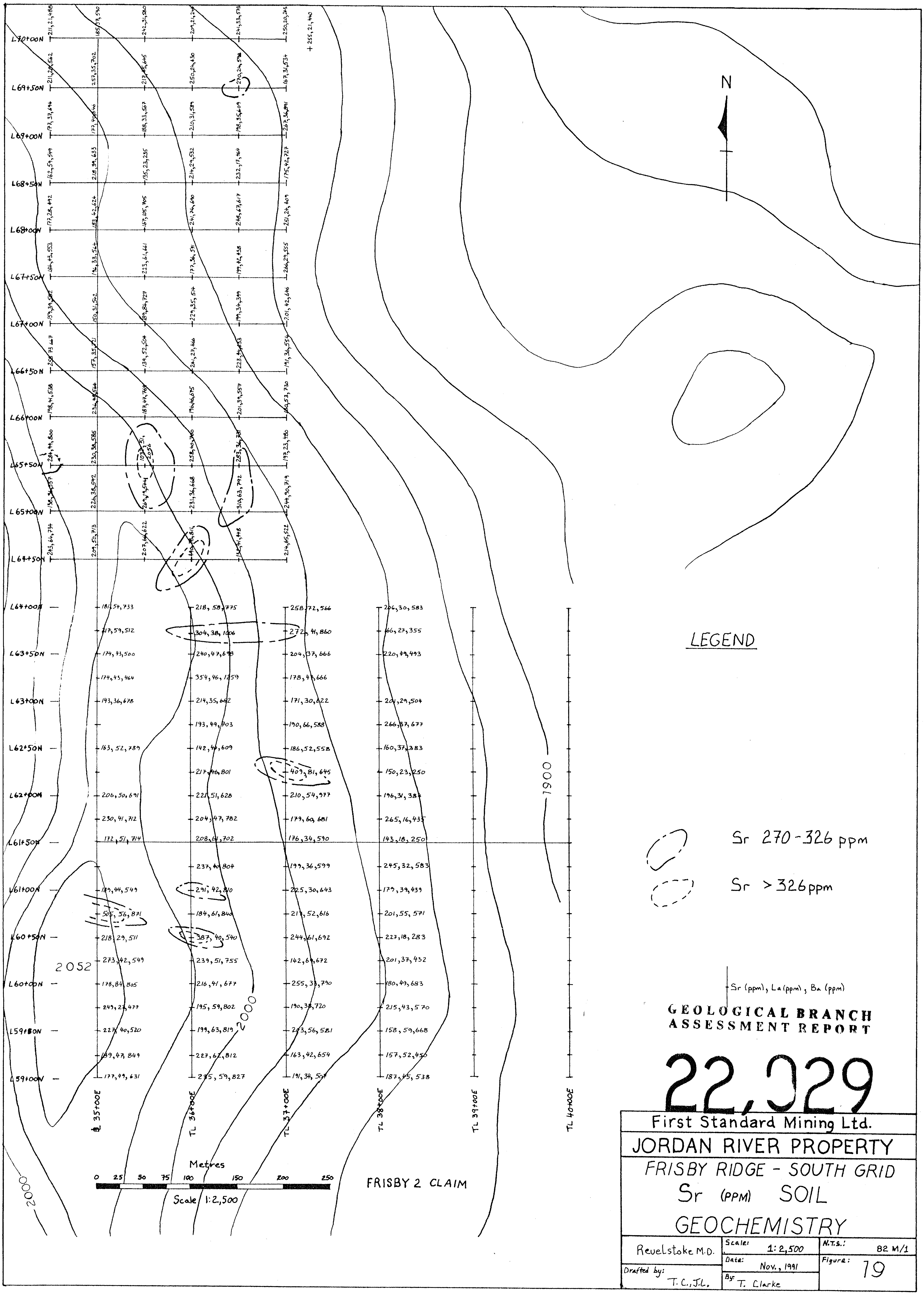

N
LEGEND
Pb > 40ppm - 56ppm
Pb > 56ppm
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Pb (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2,500
N.T.S.: 82 M/1
Date: Nov., 1991
Figure: 16
Drafted by: T.C., J.L.
By: T. Clarke
Metres
Scale 1:2,500
FRISBY 2 CLAIM
2052
2000
1900
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
L59+00N
BL 35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E

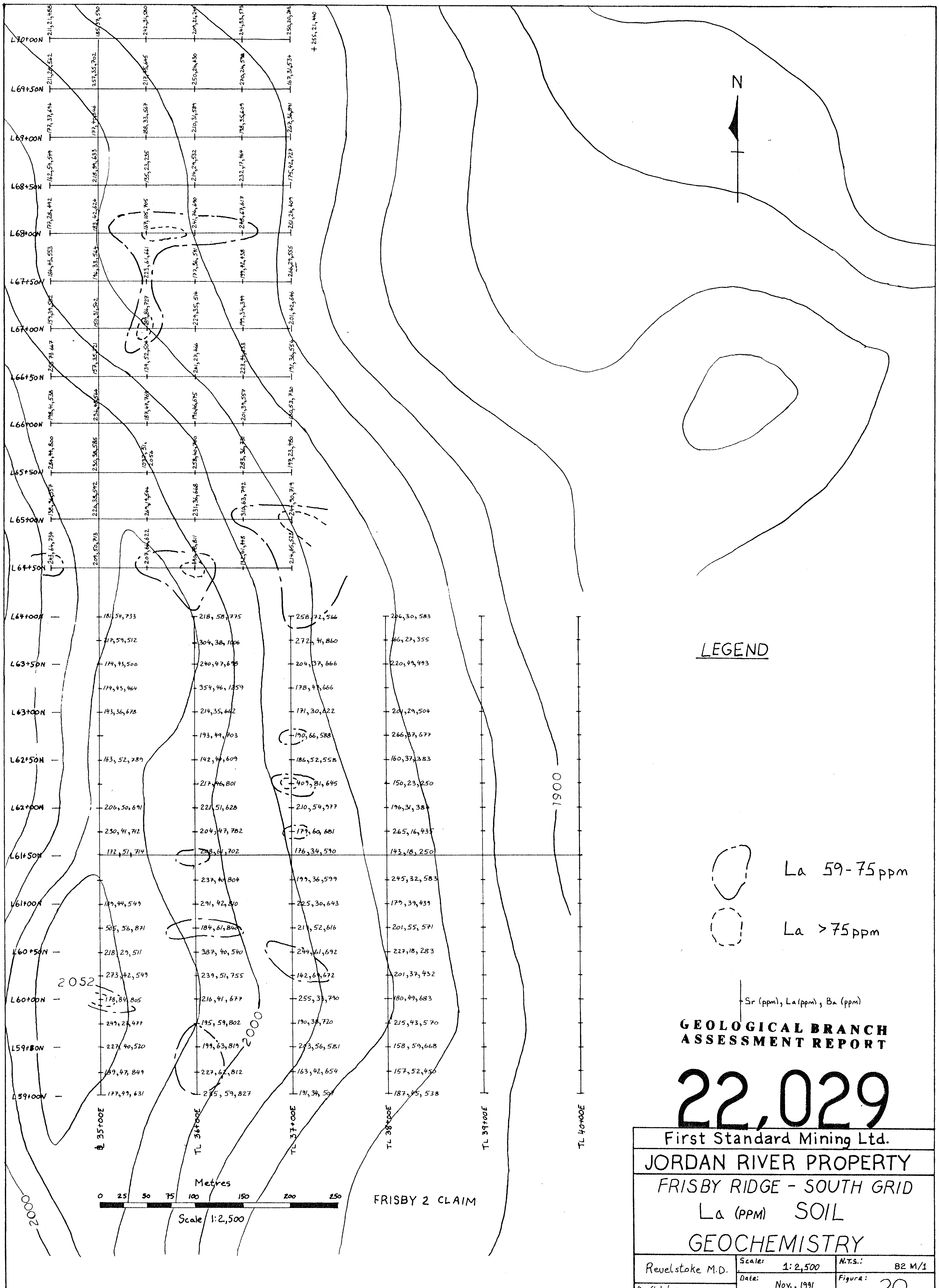


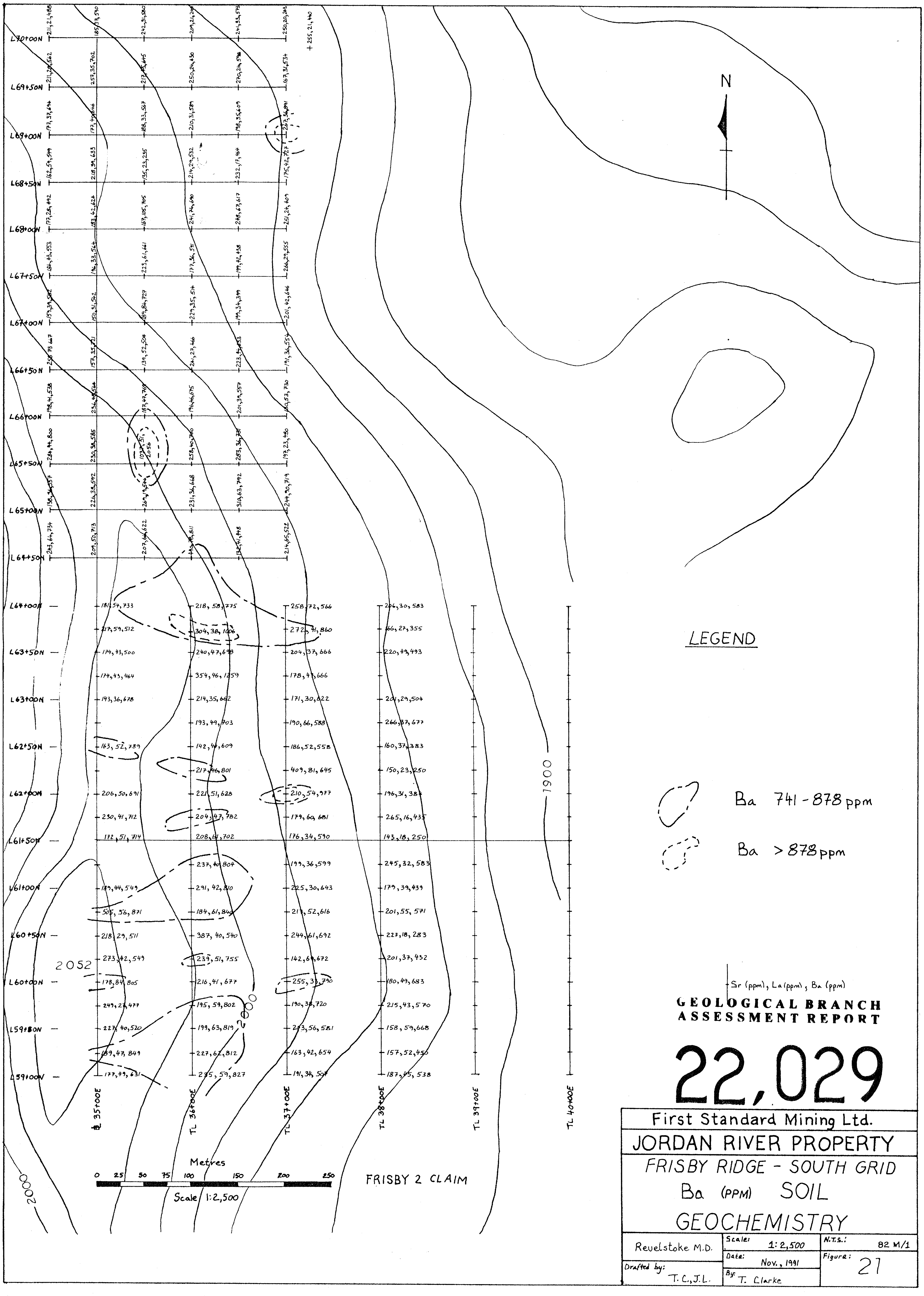
N
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
L59+00N
BL 35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
2052
2000
1900
LEGEND
Zn 141-200ppm
Zn >200ppm
Pb (ppm), Zn (ppm), Ag (ppm)
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
FRISBY 2 CLAIM
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Zn (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2,500
N.T.S.: 82 M/1
Date: Nov., 1991
Figure: 17
Drafted by: T.C., J.L.
By: T. Clarke



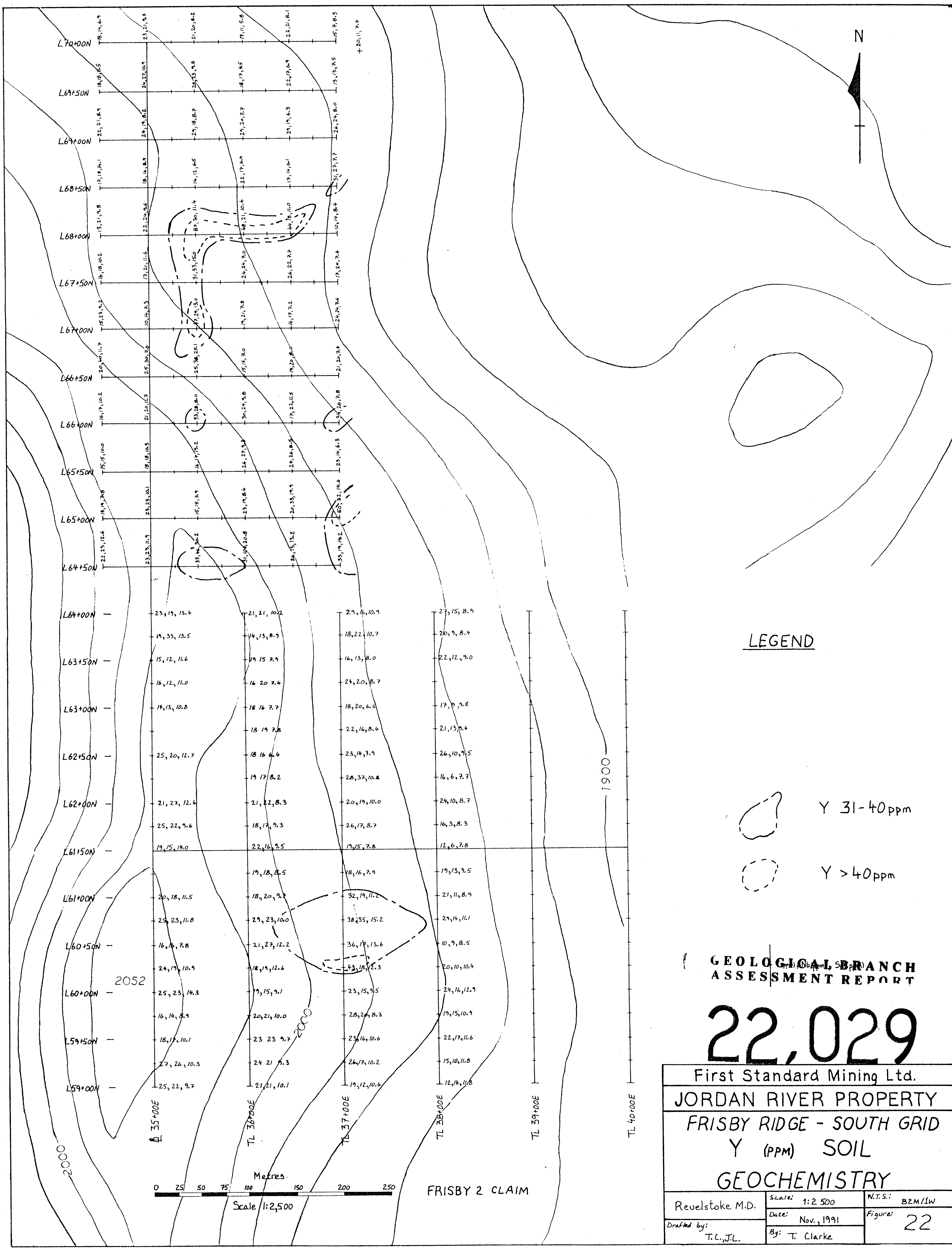
N
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
L59+00N
35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
2052
2000
1900
LEGEND
Ag 0.3-0.4 ppm
Ag >0.4 ppm
Pb (ppm), Zn (ppm), Ag (ppm)
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
FRISBY 2 CLAIM
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Ag (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2,500
N.T.S.: 82 M/1
Date: Nov., 1991
Figure: 18
Drafted by: T.C., J.L.
By: T. Clarke


N
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
L59+00N
BL 35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
1900
2000
2052
LEGEND
Sr 270-326 ppm
Sr >326ppm
Sr (ppm), La (ppm), Ba (ppm)
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
FRISBY 2 CLAIM
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Sr (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2,500
N.T.S.: 82 M/1
Date: Nov., 1991
Figure: 19
Drafted by: T.C., J.L.
By: T. Clarke

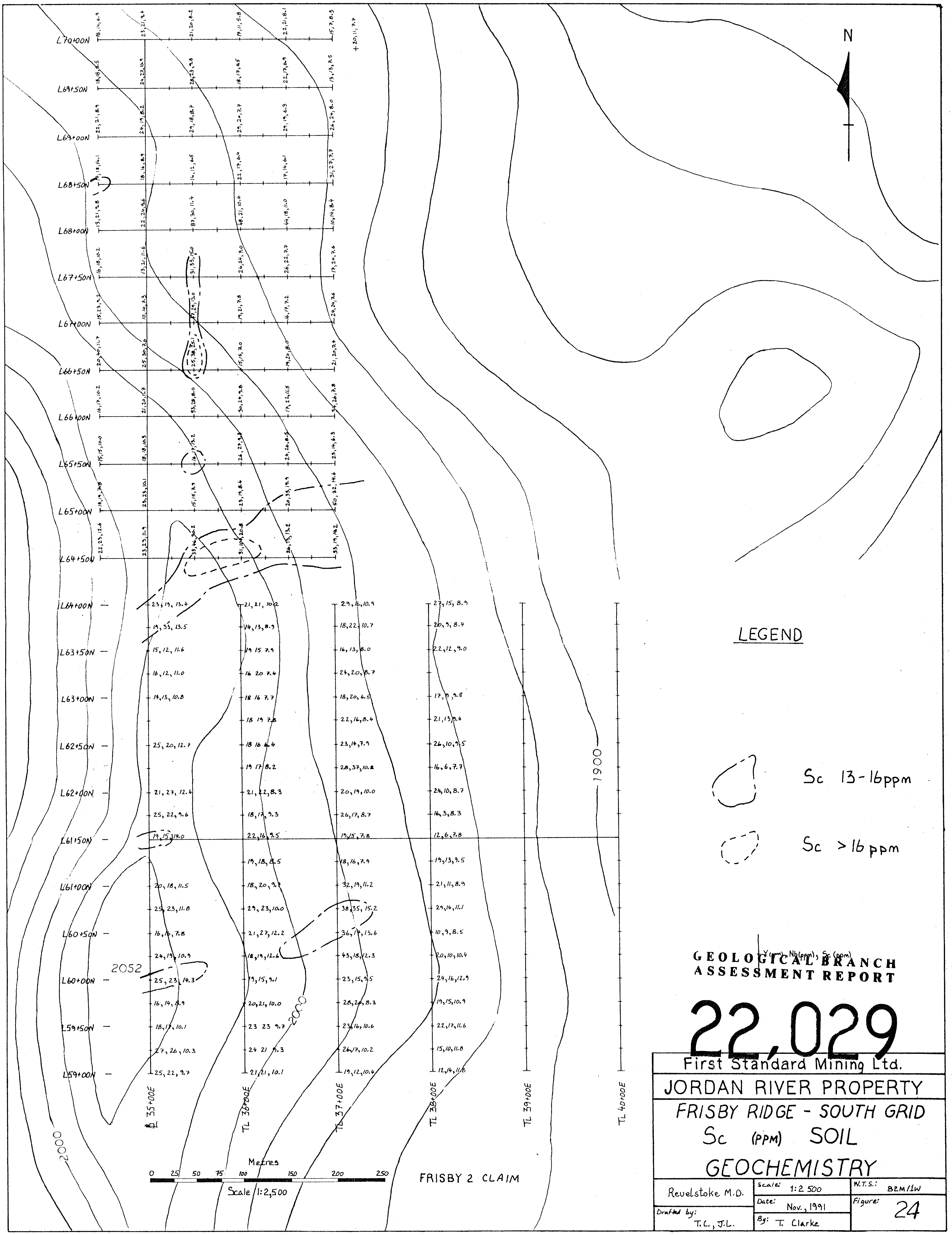

N
LEGEND
La 59-75ppm
La >75ppm
Sr (ppm), La (ppm), Ba (ppm)
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
La (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2,500
N.T.S.: 82 M/1
Drafted by: T.C., J.L.
Date: Nov., 1991
By: T. Clarke
Figure: 20
Metres
Scale 1:2,500
FRISBY 2 CLAIM
1900
2000
2052



N
LEGEND
Ba 741-878 ppm
Ba >878 ppm
Sr (ppm), La (ppm), Ba (ppm)
1900
2000
2052
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
L59+00N
℄ 35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
FRISBY 2 CLAIM
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Ba (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2,500
N.T.S.: 82 M/1
Date: Nov., 1991
Figure: 21
Drafted by: T.C., J.L.
By: T. Clarke


N
LEGEND
Y 31-40ppm
Y >40ppm
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Y (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2 500
W.T.S.: 82M/1W
Date: Nov., 1991
Figure: 22
Drafted by: T.C., J.L.
By: T. Clarke
FRISBY 2 CLAIM
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
L59+00N
BL 35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
2052
2000
1900


N
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
L59+00N
BL 35+00E
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
2052
2000
1900
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
FRISBY 2 CLAIM
LEGEND
Nb 29-38ppm
Nb > 38ppm
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Nb (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2 500
W.T.S.: 82M/1W
Date: Nov., 1991
Figure: 23
Drafted by: T.C., J.L.
By: T. Clarke


N
LEGEND
Sc 13-16ppm
Sc >16 ppm
Y(ppm), Nb(ppm), Sc (ppm)
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID
Sc (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2 500
Date: Nov., 1991
By: T. Clarke
Drafted by: T.C., J.L.
N.T.S.: 82M/1W
Figure: 24
FRISBY 2 CLAIM
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
L70+00N
L69+50N
L69+00N
L68+50N
L68+00N
L67+50N
L67+00N
L66+50N
L66+00N
L65+50N
L65+00N
L64+50N
L64+00N
L63+50N
L63+00N
L62+50N
L62+00N
L61+50N
L61+00N
L60+50N
L60+00N
L59+50N
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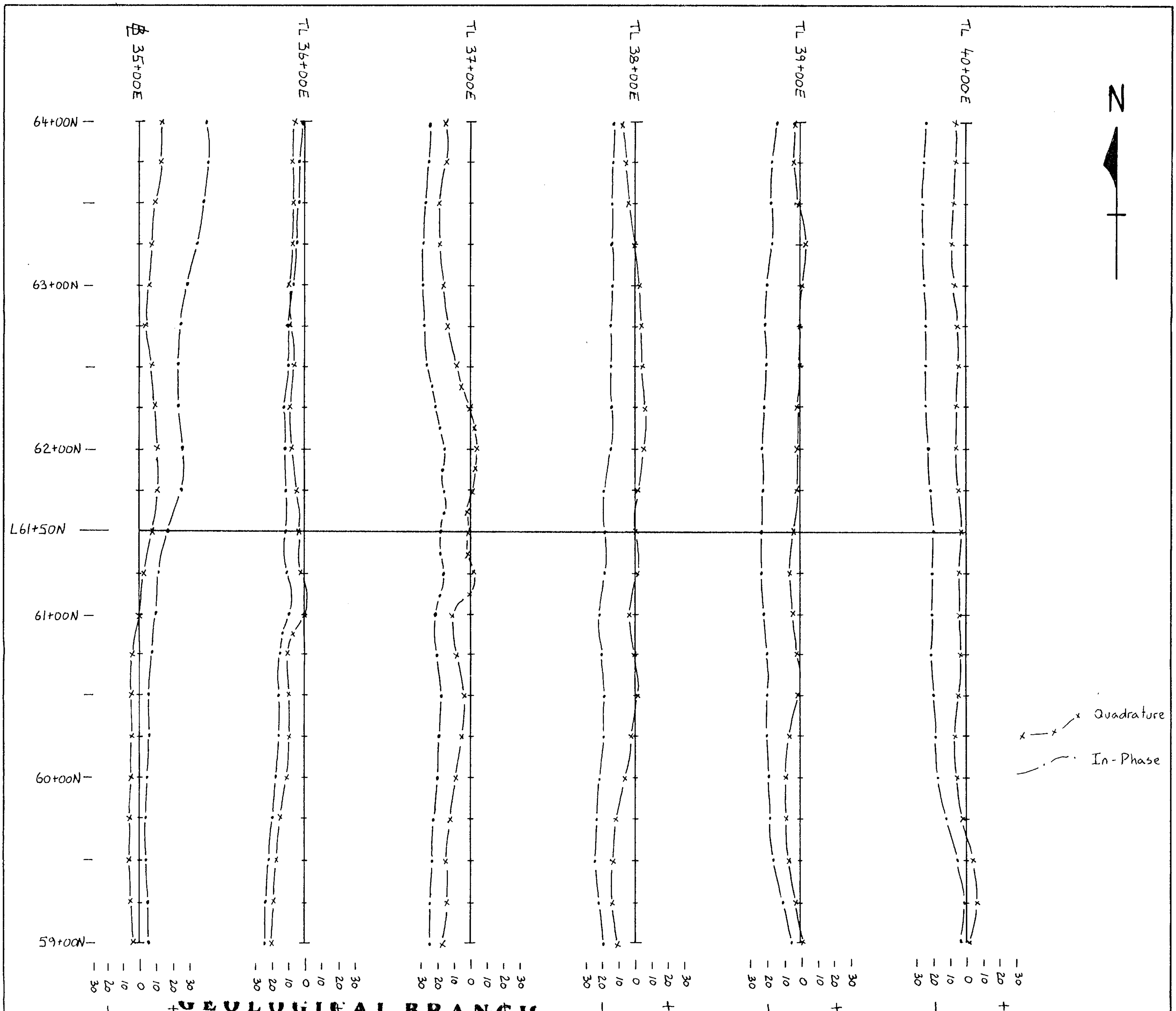
TL 36+00E
TL 37+00E
TL 38+00E
TL 39+00E
TL 40+00E
1900
2000
2052



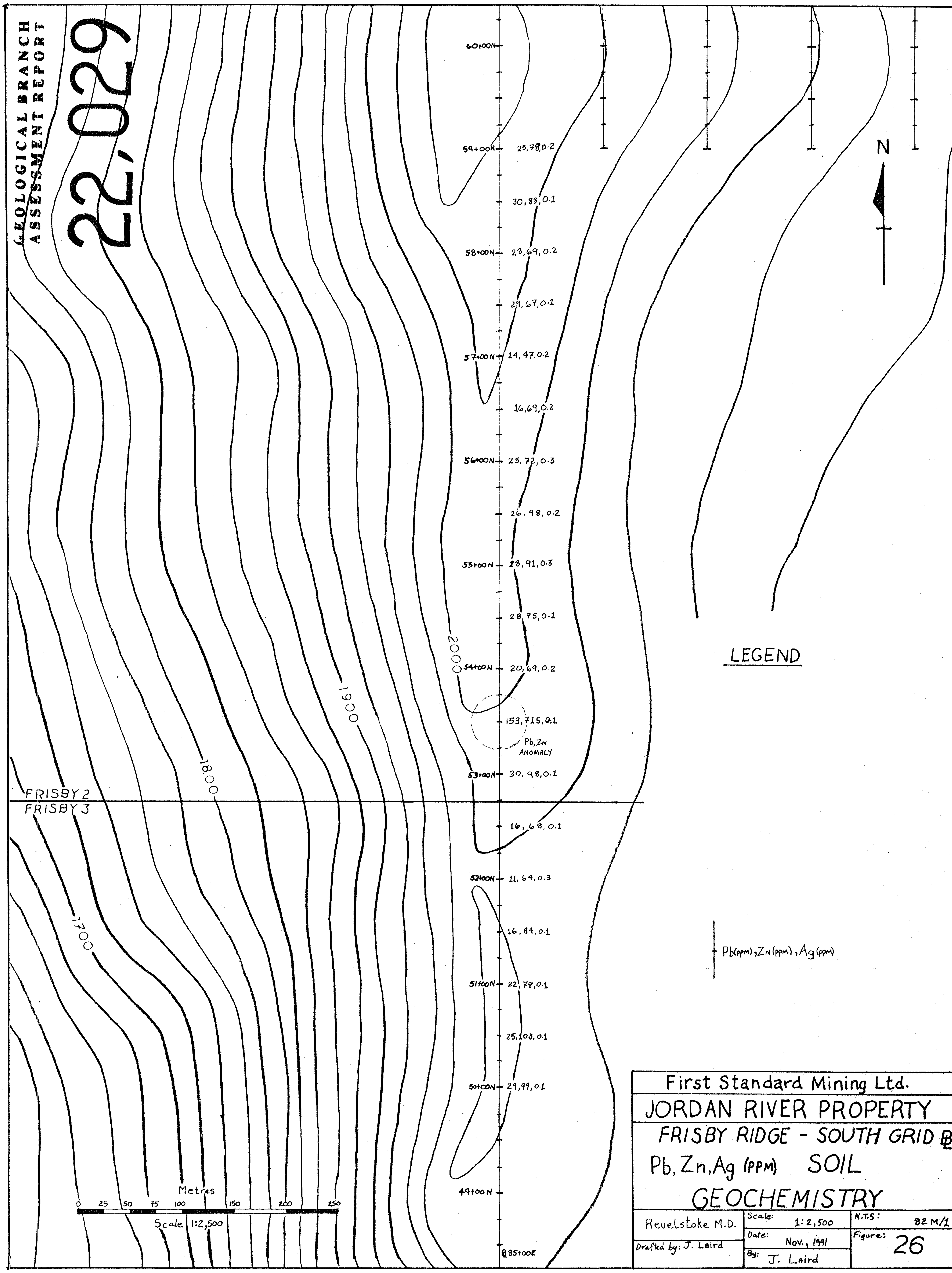
FRISBY 2 CLAIM

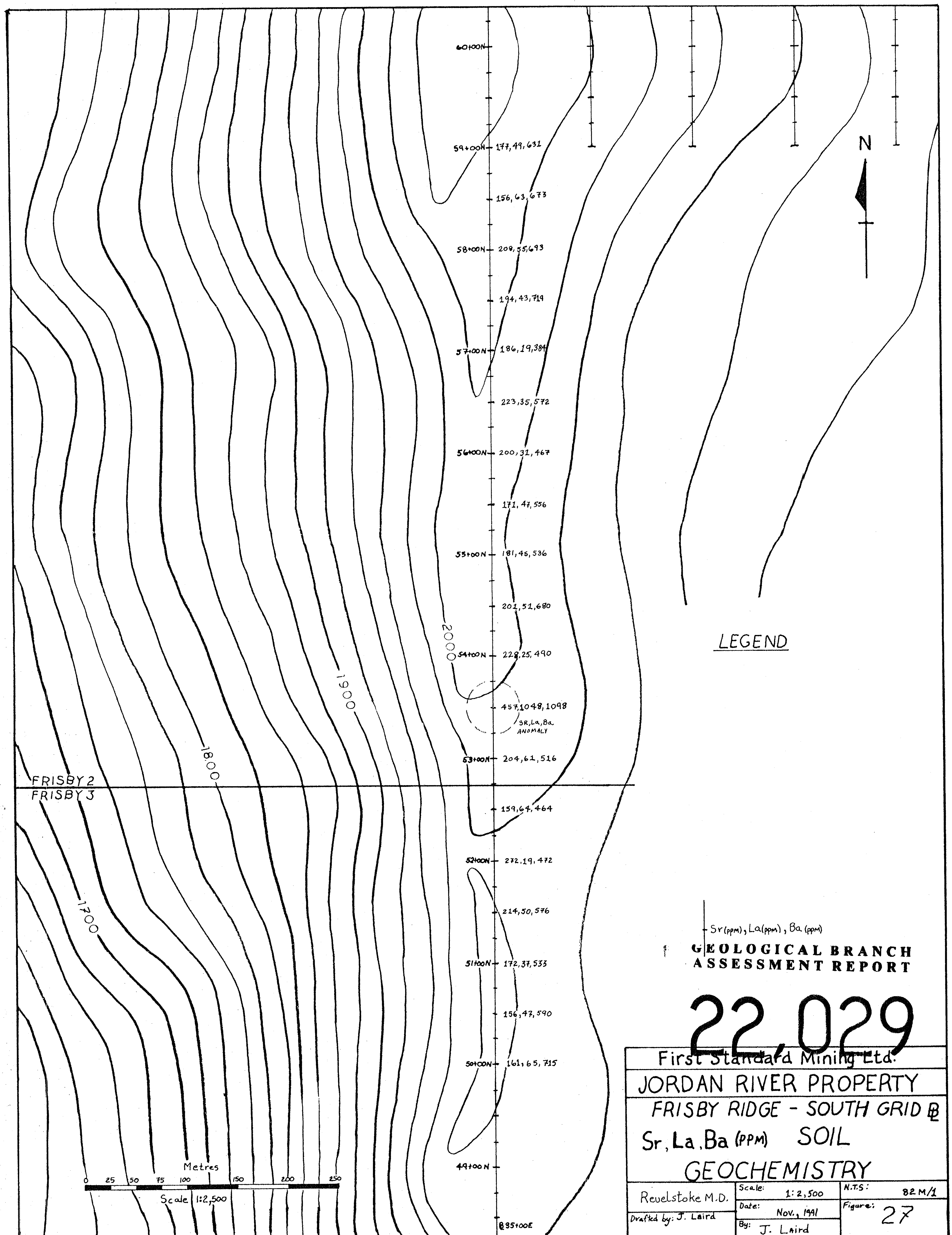
Metres

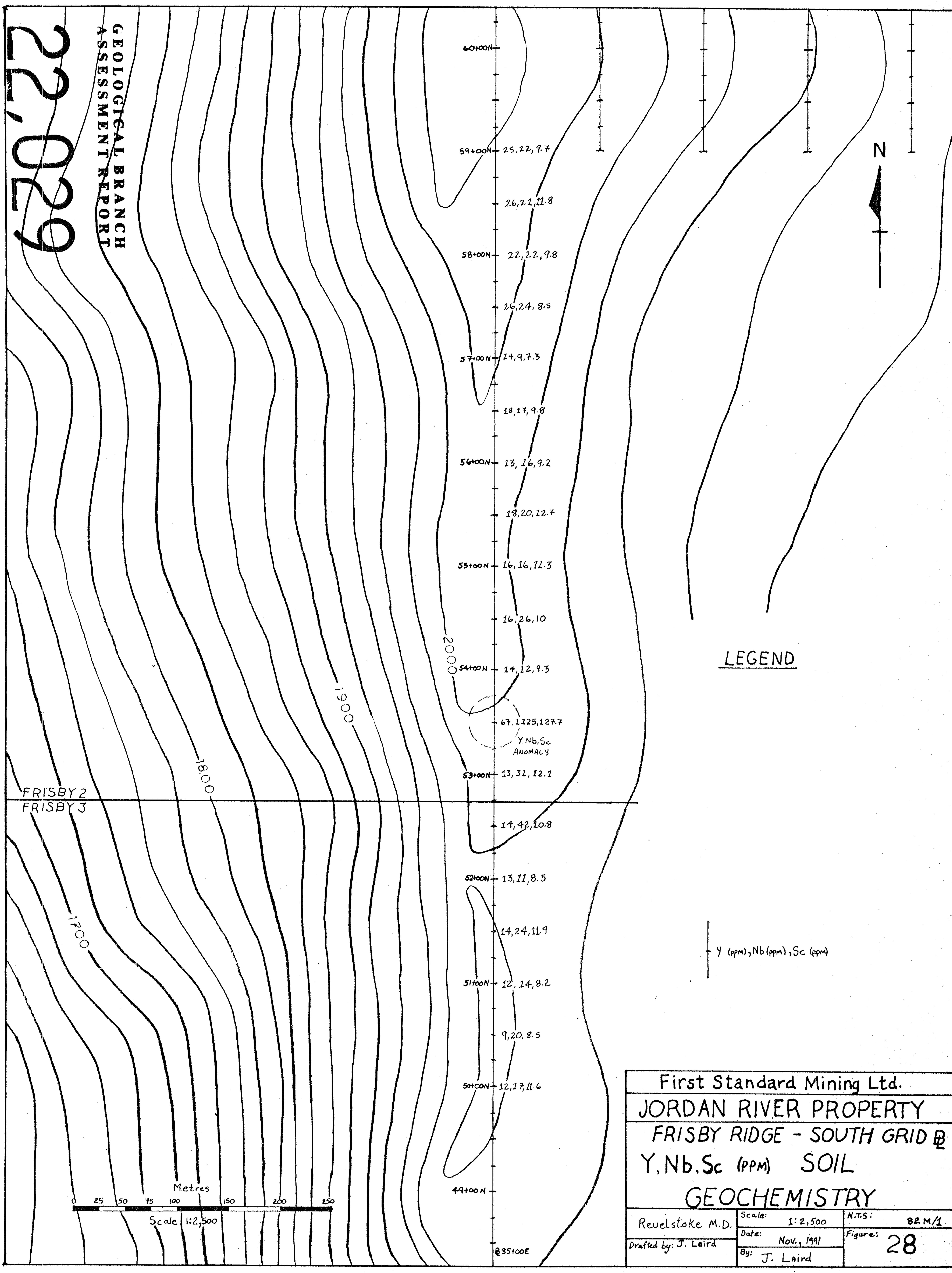
0 25 50 75 100 150 200

Scale 1:2,500

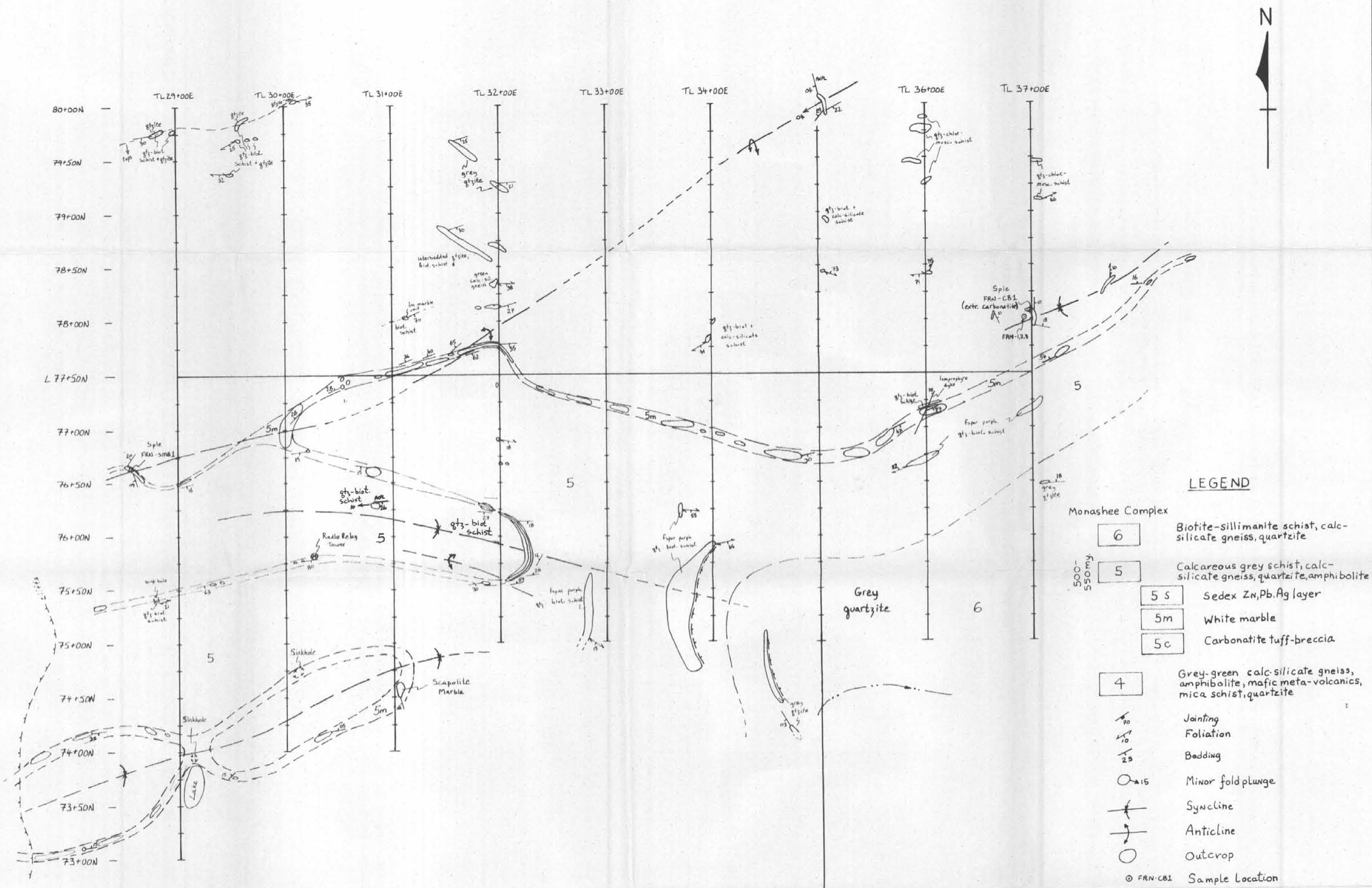
First Standard Mining Ltd.		
JORDAN RIVER PROPERTY		
FRISBY RIDGE - SOUTH GRID VLF-EM PROFILES		
Revelstoke M.D.	Scale: 1: 2,500	N.T.S.: 82 M/1W
Drafted By: T.C.	Date: Nov., 1991	Figure: 25
	By: M. Andrews	


GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
N
60+00N
59+00N
58+00N
57+00N
56+00N
55+00N
54+00N
53+00N
52+00N
51+00N
50+00N
49+00N
35+00E
25,78,0.2
30,83,0.1
23,69,0.2
29,67,0.1
14,47,0.2
16,69,0.2
25,72,0.3
26,98,0.2
18,91,0.3
28,75,0.1
20,69,0.2
153,715,0.1
Pb,Zn
ANOMALY
30,98,0.1
16,68,0.1
11,64,0.3
16,84,0.1
22,78,0.1
25,103,0.1
29,99,0.1
2000
1900
1800
1700
FRISBY 2
FRISBY 3
LEGEND
Pb(ppm), Zn(ppm), Ag(ppm)
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID B
Pb, Zn, Ag (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Scale: 1:2,500
N.T.S.: 82 M/1
Date: Nov., 1991
Figure: 26
Drafted by: J. Laird
By: J. Laird


N
60+00N
59+00N 177,49,631
156,63,673
58+00N 208,55,693
194,43,719
57+00N 186,19,384
223,35,572
56+00N 200,31,467
171,47,556
55+00N 181,46,536
201,51,680
54+00N 228,25,490
457,1048,1098
SR,La,Ba ANOMALY
53+00N 204,61,516
159,64,464
52+00N 272,19,472
214,50,576
51+00N 172,37,533
156,47,590
50+00N 161,65,715
49+00N
B35+00E
2000
1900
1800
1700
FRISBY 2
FRISBY 3
LEGEND
Sr(ppm), La(ppm), Ba(ppm)
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,029
Metres
0 25 50 75 100 150 200 250
Scale 1:2,500
First Standard Mining Ltd.
JORDAN RIVER PROPERTY
FRISBY RIDGE - SOUTH GRID B
Sr, La, Ba (PPM) SOIL
GEOCHEMISTRY
Revelstoke M.D.
Drafted by: J. Laird
Scale: 1:2,500
Date: Nov., 1991
By: J. Laird
N.T.S: 82 M/1
Figure: 27



First Standard Mining Ltd.		
JORDAN RIVER PROPERTY		
FRISBY RIDGE - SOUTH GRID B		
Y.Nb.Sc (PPM) SOIL GEOCHEMISTRY		
Revelstoke M.D.	Scale: 1:2,500	N.T.S: 82 M/1
Drafted by: J. Laird	Date: Nov., 1991	Figure: 28
	By: J. Laird	



FRISBY 1

claimline

FRISBY 2

GEOLOGICAL BRANCH ASSESSMENT REPORT

22,029

Metres

0 25 50 75 100 150 200

Scale 1:2,500

℄ 35+00 E

First Standard Mining Ltd.

JORDAN RIVER PROPERTY

FRISBY RIDGE - NORTH GRID

GEOLOGY

Revelstoke M.D.	Scale: 1:2,500	N.T.S.: 82 M/1W
Drafted By: T.C.	Date: Nov., 1991	Figure: 29
	By: T. Clarke	