1991

GEOLOGICAL/GEOPHYSICAL

REPORT ON THE

SPEC PROPERTY

Liard Mining Division
British Columbia

Latitude 57° 15′ North
Longitude 130° 45′ East

NTS 104G/2E,7E

Prepared for

Noranda Exploration Company Ltd.
1050 Davie St.
Vancouver, B.C.
V6B 3T5

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December, 1991

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SUMMARY

The Spec mineral property is comprised of 135 units situated on the headwaters of Moore Creek, approximately 50 kilometers west of Bob Quinn on Highway 37, in northwestern British Columbia.

The geology of the Spec property consists of Upper Triassic Stuhini andesite and basalt volcanic flows and tuffs that have been intruded by predominantly medium-coarse grained and porphyritic syenite based rocks of Triassic-Jurassic or Eocene age. Rhyolite dykes cut northward trending argillaceous, tufaceous sediments which underlie much of the central and eastern portion of the property. One to 5 metre thick Eocene-Recent basalt flows cover large portions of the property on the mountain slopes at lower elevations and throughout the plateau to the west. Copper, silver and minor gold mineralization is related to chlorite-epidote-K-feldspar, and locally pervasive diopside-garnet altered fractures and shear zones that contain chalcopyrite, pyrite, and magnetite within moderate to strongly altered volcanic, sedimentary, and intrusive rocks. Minor amounts of galena and sphalerite occur with chalcopyrite and 1-5% pyrite in fractures peripheral to the more strongly altered areas.

Alteration and mineralization appears consistent with a syenite related porphyry copper system hosted within volcanic and sedimentary rocks.

The results of the program indicate that high copper values are found associated with shears and fractures within both the syenite and volcanic rocks. The most common structures appear to trend northwards with east-west structures cross cutting; the juncture of these structures develops localized shear zones. To date, copper mineralization has been intermittently located over a 1.5 kilometre (east-west) and 4 kilometre (north-south) area on the Spec 1, 3, and 7 claims. Initial geophysical work performed on the Basin Zone on the northern end of the property indicates that shears within moderate to strongly resistive host rocks are conductive, magnetic, and chargeable.

The favourable geological environment beneath the basalt flows for a large tonnage porphyry copper deposit dictates the need for a larger program of geophysics, mapping and continuous chip sampling of the known zones. Pending results of this program, several test drill holes would be necessary to evaluate the property's potential further.

INTRODUCTION

The author was contacted to perform a geological and geophysical program on the Spec property while working in the field during August of 1991. The 1991 exploration program on the Spec property was carried out between August 17 and August 24, 1991. During this time a program of V.L.F., Magnetometer, gradient, and pole-dipole I.P. geophysical surveys and mapping on a scale of 1:5,000 was performed on the Basin Zone (formerly Butte, Pup, View Zones) of the Spec 1 and 7 claims (Figure 4, Appendix B). Prospecting and mapping of the surrounding area was also done; the Canyon Zone was examined by mapping and brief sampling was performed (Figure 5).

This report is based on the work performed by the author during the 1991 program, and a review of the previous assessment reports relating to the property.

LOCATION AND ACCESS

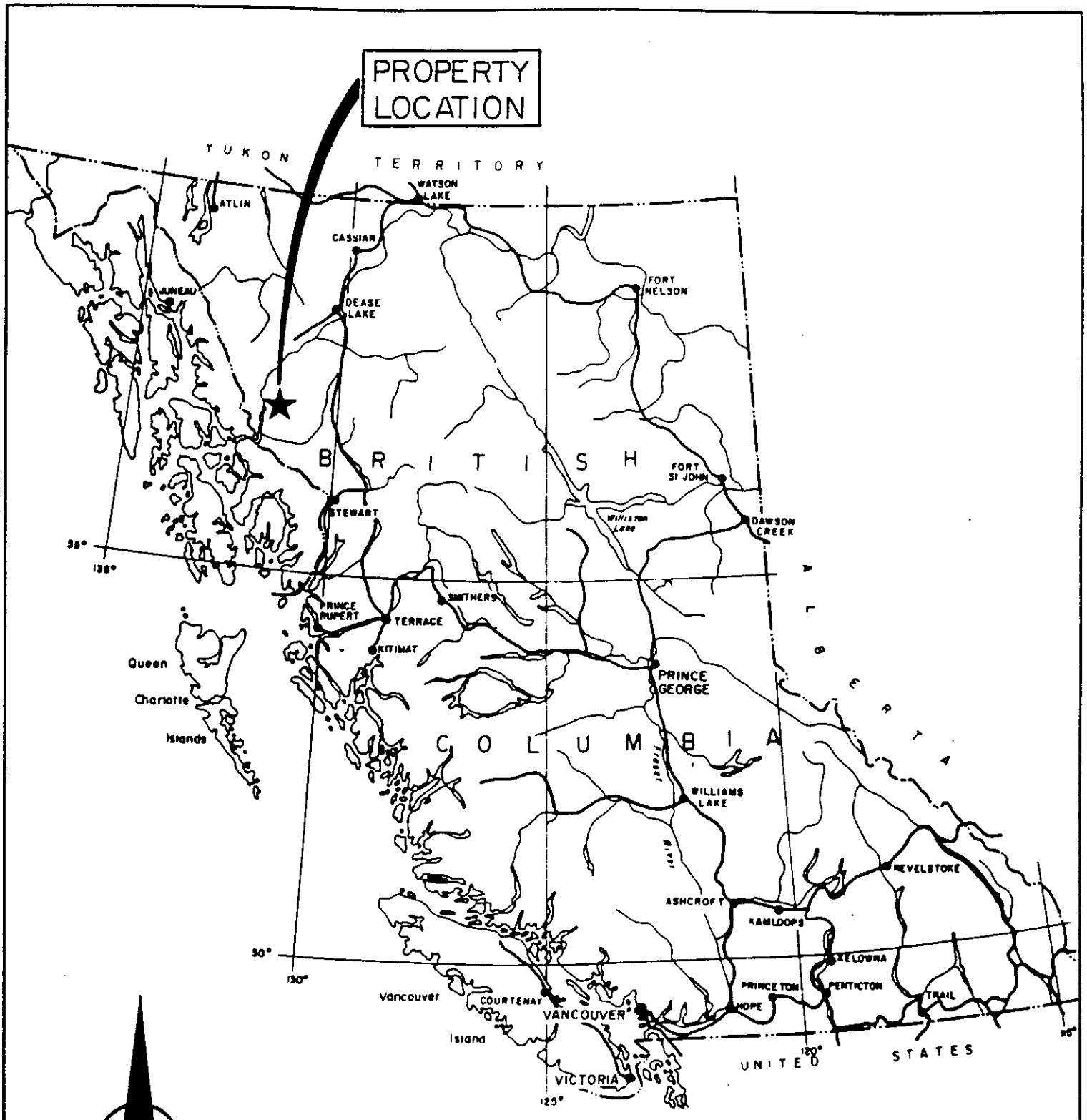
The Spec property is situated on the east side of the headwaters of Moore Creek, and southwest of the headwaters of Ball Creek, approximately 40 kilometres northwest of Bob Quinn on Highway 37 in northwestern British Columbia (Figure 1).

It is centred around 57°6′ latitude and 131° 31′ longitude on NTS map sheet 104 G/ 2E,7E.

Currently, access to the property is accomplished by a 0.5 hour helicopter flight from Bob Quinn, approximately 345 kilometres northwest of Smithers, B.C..

TOPOGRAPHY AND PHYSIOGRAPHY

More Creek originates from a large plateau on the southwest side of Mt. Edziza Provincial Park. The western portion of the claims cover the edge of a plateau 1,500 metres in elevation in which Arctic Lake lies 5 kilometres to the southwest and west, and the central and eastern portion of the claims cover eroded angular peaks reaching a little over 2,000 metres in elevation. Pocket glaciers and snowfields occupy high north facing slopes and meltwater drains west into Moore Creek and east into Ball Creek.



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SPEC PROPERTY
PROPERTY LOCATION MAP

LIARD MINING DIVISION

NORIAN RESOURCES CORP.

DRAWN BY:	NTS:	DATE:	FIGURE:
B.K	104G/2E, 7E	DECEMBER, 1991	1

Vegetation on the property is limited to alpine grasses, flowers and heather, with patches of stunted alpine spruce and hemlock in the valleys to the east.

HISTORY

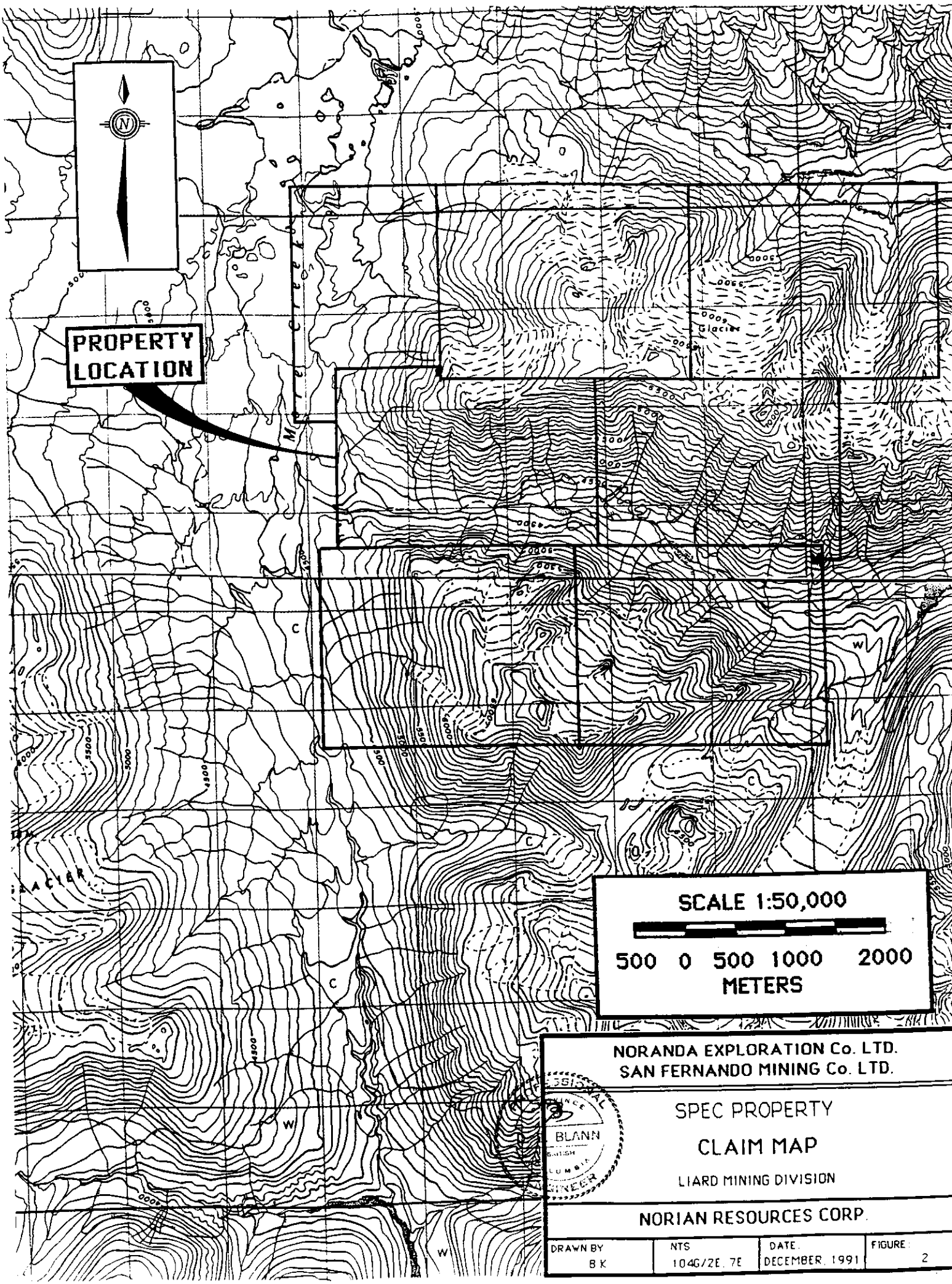
During the past 30 years, intermittent exploration for porphyry related copper deposits has resulted in the discovery of several world class deposits in the area. Regional work by major companies has shown that a favourable geological environment exists in the Moore Creek and Schaft Creek area. In 1976, Newconex Ltd. carried out a reconnaissance program in the Moore Creek drainage, and resulted in the discovery of mineralization in the area now covered by the Spec claims.

Edziza Resources and Skylark Resources carried out a geophysical, geochemical and prospecting program during 1980 and 1988 on the area now referred to as the Canyon Zone. This work focused on an area of copper mineralization within a creek canyon that drains to the west into the top of Moore Creek (Figure 2).

During August to September, 1990, field work carried out by personnel of Alaska Fern Mines Ltd. outlined an area of copper mineralization north of the Canyon Zone, and several copper showings to the south of the Canyon Zone. Preliminary geological work and rock assays returned favourable results, indicating the potential for a syenite related copper-gold porphyry deposit to exist in the area.

PROPERTY DESCRIPTION

The Spec property is comprised of seven modified grid claims registered in the Liard Mining Division of British Columbia. They are owned by Noranda Exploration Company Ltd. of Vancouver, B.C., and operated by Alaska Fern Mines Ltd., of Vancouver, B.C., which has an option to earn 50%.



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SPEC PROPERTY

CLAIM MAP

LIARD MINING DIVISION

NORIAN RESOURCES CORP.

DRAWN BY	NTS	DATE	FIGURE
B K	104G/2E, 7E	DECEMBER, 1991	2

TABLE 1

CLAIM INFORMATION

Claim	Record #	Units	Expiry date*
Spec 1	6511	20	10/05/92
Spec 2	6512	20	10/05/92
Spec 3	6513	20	10/05/92
Spec 4	6514	20	10/05/92
Spec 5	6515	20	10/05/92
Spec 6	6516	20	10/05/92
Spec 7	6524	15	02/22/93
	Total	135	

* Pending assessment approval

REGIONAL GEOLOGY

The Telegraph Creek map sheet (NTS 104 G/2E,7E) was mapped by J.G. Souther of the Geological Survey of Canada during the period 1956 to 1969 (GSC paper 71-44). This report describes the Moore Creek area as being underlain by sedimentary and volcanic rocks of Triassic and Jurassic age (units 5,7,8,9,13). These rocks are intruded by granitic plutons and rhyolite dikes of Triassic and /or Cretaceous age (units 17,20). Basaltic flows and volcanoclastics of the Mt. Edziza volcanic complex are of Tertiary and Quaternary age (Figure 3).

The Triassic and Jurassic sedimentary and volcanic rocks are suggested to be of the Stuhini Group, a division of the Stikina Terrane (Read et al, GSC open file 2094).

TABLE 2

STIKINA TERRANE

	- Mesozoic-Tertiary	Plugs and dikes
Stikina	- Mid Jurassic-Tertiary Sloko Group, Edziza/ Spectrum range Volcanic arc basalt	Coast Range Plutonic Complex
Terrane	- Upper Triassic Stuhini Group flows, tuffs, breccia, sediments + Hazelton Group equivalents	Hickman plutonic Suite
	- Mid Triassic silty shales, argillites, limy dolomitic siltstone, cherty and rare carbonaceous limestone	
	- Pre Permian to Mid Jurassic Stikine Assemblage sediments, tuffs, intermediate volcanics, limestone	

The accretion of the Stikina Terrane developed various penetrative planar foliation in the Paleozoic and mid-Triassic strata. Upper Triassic and younger rocks have dominantly northward trending zones of schistosity and foliation.

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

29 Pleistocene gravel; sand, silt; glacial outwash, till, alpine moraine and colluvium

28 Hot-spring deposit, tufa , aragonite

27 Olivine basalt, related pyroclastic rocks and loose tephra; younger than some of 26

TERTIARY AND QUATERNARY
UPPER TERTIARY AND PLEISTOCENE

26 Rhyolite and dacite flows, lava domes, pyroclastic rocks and related sub-volcanic intrusions; minor basalt

25 Basalt, olivine basalt, dacite, related pyroclastic rocks and subvolcanic intrusions; minor rhyolite; in part younger than some 26

CRETACEOUS AND TERTIARY
UPPER CRETACEOUS AND LOWER TERTIARY
SLOKO GROUP

24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments

22 22. Biotite leucogranite, subvolcanic stocks, dykes and sills
23 23. Porphyritic biotite andesite, lava domes, flows and (?) sills

SUSTUT GROUP

21 Chert-pebble conglomerate, granite-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal

20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orthoclase rhyolite; in part equivalent to 22

19 Medium- to coarse-grained, pink biotite-hornblende quartz monzonite

JURASSIC AND/OR CRETACEOUS
POST-UPPER TRIASSIC PRE-TERTIARY

18 Hornblende diorite

17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite

JURASSIC
MIDDLE (?) AND UPPER JURASSIC
BOWSER GROUP

16 Chert-pebble conglomerate, grit, greywacke, subgreywacke, siltstone and shale; may include some 15

MIDDLE JURASSIC

15 Basalt, pillow lava, tuff-breccia, derived volcaniclastic rocks and related subvolcanic intrusions

LOWER AND MIDDLE JURASSIC

14 Shale, minor siltstone, siltstone and calcareous siltstone, greywacke and limestone

MESOZOIC

LOWER JURASSIC

13 Conglomerate, polymictic conglomerate, granite-boulder conglomerate, grit, greywacke, siltstone; basaltic and andesitic volcanic rocks, pyroclastics, pillow-breccia and derived volcaniclastic rocks

TRIASSIC AND JURASSIC
POST-UPPER TRIASSIC PRE-LOWER JURASSIC

12 Granite, orthoclase porphyry, monzonite, pyroxenite

HICKMAN BATHOLITH

11, 10 11. Hornblende granodiorite, minor hornblende-quartz diorite 11. Hornblende quartz diorite, hornblende-pyroxene diorite, amphibolite and pyroxene-bearing amphibolite

TRIASSIC
UPPER TRIASSIC

9 Undifferentiated volcanic and sedimentary rocks (units 8 to 4 inclusive)

8 Augite- andesite flows, pyroclastic rocks, derived volcaniclastic rocks and related subvolcanic intrusions; minor greywacke, siltstone and polymictic conglomerate

7 Siltstone, thin-bedded siliceous siltstone, ribbon chert, calcareous and dolomitic siltstone, greywacke, volcanic conglomerate, and minor limestone

6 Limestone, fetid argillaceous limestone, calcareous shale and recrystallized limestone; may be in part younger than some 7 and 8

5 Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone

MIDDLE TRIASSIC

4 Shale, concretionary black shale; minor calcareous shale and siltstone

PERMIAN
MIDDLE AND UPPER PERMIAN

3 Limestone, thick-bedded mainly bioclastic limestone; minor siltstone, chert and tuff

PERMIAN AND OLDER

2 Phyllite, argillaceous quartzite, quartz-sericite schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone

PALEOZOIC

MISSISSIPPIAN

1 Limestone, orthoceral limestone, ferruginous limestone; maroon tuff, chert and phyllite

B Amphibolite, amphibolite gneiss; age unknown, probably pre-Upper Jurassic

A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic

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SPEC PROPERTY

REGIONAL GEOLOGY MAP

LIARD MINING DIVISION

NORIAN RESOURCES CORP.

DRAWN BY:	NTS	DATE:	FIGURE:
B.K.	L104G/2E,7E	DECEMBER, 1991	3

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There are numerous copper and gold mineral deposits and occurrences within the Stuhini Group of rocks. They include the Galore Creek deposit, estimated to contain at least 137,500,000 tons grading 1.06% copper with 0.25 oz/ton silver and 0.013 oz/ton gold. The Copper Canyon Deposit, located 7 kilometers east of the Galore Creek deposit contains preliminary geological reserves of 37,000,000 tons of 1.5 % copper equivalent, and the Schaft Creek deposit with over one billion tons grading 0.4 % copper. These deposits are hosted within a highly sheared biotite-K-feldspar altered series of porphyry to megacrystic syenites and altered Stuhini volcanic rocks.

For a complete and detailed description of the regional geology of the Galore Creek and Moore Creek area, works of Souther (1971), Allan/Panteleyev (1976), Read et al, and Logan/Koyanagi (1989) can be referred to.

PROPERTY GEOLOGY

The rock units on the Spec property are Stuhini Group Triassic-Jurassic aged fine to medium grained lithic, lapilli and crystal andesite-basalt flows and tuffs to the west, and fine grained andesitic volcanic rocks and clastic sediments that occupy a northward trending belt originating from the central portion of the claims (Figure 4). The sediments are dominantly calcareous argillite and siltstone. The volcanic and sedimentary rocks are intruded by multi-phase syenite intrusions. Intrusive rock types noted by the author are as follows:

1.) Dark brown fine-medium grained syenite
2.) White-pink fine-medium grained syenite
3.) Dark and light colored medium grained syenite feldspar porphyry
4.) Dark and light colored syenite megacrystic feldspar porphyry
5.) Fine-medium grained diabase/lamprophyre dikes
6.) White to pinkish grey colored very fine grained rhyolite dykes

Within the grid area, syenite intrusions cut through the volcanics dominantly west of line 6300 E. East of this area the rock are more sedimentary in origin, and are cut by rhyolite and diabase dykes. Approximately 1.5 kilometres to the south of the grid area, in the Canyon Zone, a similar geological environment is found (Figure 5).

Several hundred metres southeast of the Basin Zone, an area of chalcedony and locally coomscombe and vuggy quartz breccia veins approximately 1-2 metres in width occur within mixed volcanic and sedimentary rocks. A sample taken from this interesting area was unfortunately lost on the property.

ALTERATION AND ASSOCIATED MINERALIZATION

Moderate to extremely strong chlorite-epidote-K-feldspar alteration of the volcanic-sedimentary rocks occurs in shear zones and fractures that trend roughly north-northeast and east-west. Areas of intense garnet-diopside-epidote-K-Feldspar skarn occur in proximity to many of the volcanic-sedimentary and syenite contacts. Chalcopyrite, bornite and minor pyrite mineralization occurring within altered, fractured and sheared, volcanic-sedimentary and various syenite intrusive rocks have returned values from trace to over six percent copper. Up to 529 PPB gold and 85.5 PPM silver are associated with the copper values.

Within weak to moderately chlorite-epidote altered volcanic and sedimentary rocks peripheral, and locally overlapping, areas of extensive syenite and K-Feldspar alteration, are zones of up to 5% disseminated pyrite. Within and beyond the pyritic areas are quartz-carbonate fractures up to 30 cm in width containing galena, sphalerite and minor chalcopyrite. Galena is also found in narrow quartz-carbonate veins several hundred metres southwest of the Canyon Zone.

East of both the Basin Zone and the Canyon Zone, the predominantly felsic volcanic rocks are sporadically chlorite and epidote altered, and syenite intrusions are present locally.

Magnetite occurs within chlorite-epidote-K-Feldspar selvages and veinlets up to 3 cm. in width. The magnetite content increases in quantity to the west on the grid area of the Basin Zone, and the regional airborne map indicates weak circular and oval shaped anomalies to the west-southwest of the Basin Zone. Overlying basalt flows may be, in part, responsible for these anomalies.

ROCK SAMPLING

Twenty four character samples and specimens were taken from the various areas of mineralization on the Spec property. Areas of shearing and alteration show strong chalcopyrite and bornite mineralization, although those located to date appear limited in width and appear restricted in extent. High grade mineralization is found in both the altered volcanic and syenite intrusive rocks (#R10, #R14). Occurrences of chalcopyrite are found over much of the northwest corner of the Spec claims, where erosion has removed the basalt cover.

GEOLOGICAL ANALYSIS OF GEOPHYSICS

Gradient and Pole-Dipole I.P., magnetometer and V.L.F. geophysical methods were used on the Basin Zone of the Spec claims. Magnetometer results show a significant change in response between the underlying Stuhini volcanics and sediments with the extensive Edziza Basalts (Plate G1A). The V.L.F. survey outlined a north trending conductive zone roughly along line 6000E. This conductor corresponds to a north trending altered, and mineralized shear zone. There is also an I.P. chargeability response corresponding to areas of stronger pyrite mineralization that increases eastward of the Basin Zone.

DISCUSSION

The Spec claims contain areas of strong chlorite-epidote-K-feldspar and garnet-diopside alteration with associated chalcopyrite, pyrite and magnetite mineralization. Multiphase syenite intrusions have extensively altered the host volcanics and sediments. Shears locally contain up to 6% copper, and disseminated and fracture controlled chalcopyrite mineralization occurs throughout syenite, volcanic and sedimentary rocks. The alteration and associated mineralization appears similar to other syenite porphyry related copper deposits in the Galore creek and Schaft creek area. Structures denoted by geophysics and mapping suggest there is a shear and fracture system trending north to northeast from the Canyon zone to the Basin Zone, and a west-northwest trending structure may extend through, and beyond, the Canyon zone. Galena, sphalerite and chalcopyrite in quartz-K-feldspar veinlets and moderate to strongly pyritic shears and fractures occur peripheral to the areas of multiphase syenite intrusion; these characteristics suggest a base metal and pyrite halo may exist. Although basalt covers much of the interlying area, the Basin Zone and the Canyon Zone may be geologically related.

To the east of the Basin Zone, little work has been done, historically. The chalcedony quartz breccias located approximately 1.3 kilometres southeast of the Butte zone appear to be due to an epithermal event.

CONCLUSIONS

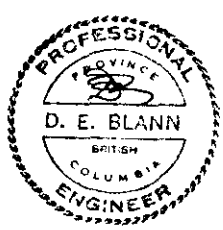
The Spec property contains alteration and associated mineralization consistent with a syenite related volcanic-sedimentary hosted porphyry copper deposit. A west-northwest and north-northeast system of shearing, alteration and mineralization occurs with base metal and pyrite halos; both the Canyon and Basin Zones may be geologically related.

RECOMMENDATIONS

A program of I.P., magnetometer and V.L.F. geophysics, as well as mapping and sampling on a scale of 1:5,000 should be performed on the Canyon zone and to the west, north and south to test for possible extensions and changes in mineralization and alteration. Investigation of the chalcedony and quartz breccias located to the east of the Basin Zone is also warranted.

STATEMENT OF COSTS

Personnel:	D. Blann, P.Eng., 11 days @ $300.00/day	$3,300.00
	W. Kushner, geologist, 8 days @ $225/day	$1,800.00
	C. Basil, geo. tech. 10 days @ $225/day	$2,250.00
	D. Ridley, prospector, 7 days @ $225/day	$1,575.00
		$8,925.00
Contractor:	S.J. Geophysics Ltd.- Syd Vissor+helper	
	Mob/demob	$2,000.00
	Rate/day $1000.00/day X 7 days	$7,000.00
	Mag/VLF rental $200.00/day X 2 days	$ 400.00
	Geophysical report	$1,200.00
		$10,600.00
Camp Mob/Demob		
Helicopter charges		
	5.0 Hrs @ $702/hr Hughes 500D	$3,510.00
	0.6 Hrs @ $1,750/hr Bel 205	$1,050.00
Transportation + room/board		$ 810.50
		$4,560.00
Field Accommodation 42 mandays @ $45.00/day		$1,890.00
Supplies, rentals		$ 675.00
Communications		$ 100.00
Shipping		$ 100.00
Assays: 25 X $14.25/each for I.C.P.		$ 365.25
Report		$1,800.00
		$4,930.25
Subtotal		$30,205.20
	GST @ 7%	$ 2,114.36
Subtotal - assessable costs		$32,319.56
Filing Fees:	135 units @ $10.00/unit	$ 1,350.00
	TOTAL EXPENDITURES	$33,669.56



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STATEMENT OF QUALIFICATIONS

I, David E. Blann, of 38233 View Place, Squamish, in the Province of British Columbia, DO HEREBY CERTIFY:

1.) THAT I am a member of the Association of Professional Engineers of the Province of British Columbia.

2.) THAT I am a graduate of the British Columbia Institute of Technology in Mining Engineering Technology, and the Montana College of Mineral Science and Technology, Butte, Montana, in Geological Engineering (1986).

3.) THAT the information, conclusions and recommendations in this report are based on personal work on the property during 1991, and a review of relevant literature.

4.) THAT I am a director of San Fernando Mining Company Ltd.

DATED at Vancouver, British Columbia, this 19 day of December, 1991.

David Ellis Blann, P.Eng.

APPENDIX A

ROCK SAMPLE DESCRIPTIONS

SAMPLE #	DESCRIPTION	Cu PPM	Au PPB	Ag PPM	Pb PPM	Zn PPM
91G-SP-D01	CHL-EP-KFELD ALTD VOLCANICS. WEAKLY FRACTURED, CP, PY 2%	5459	61	8.4	985	245
91G-SP-D03	FINE GRAINED DISS. CP IN KFELD ALTD SYENITE. FRACTURES 350° 014°	8540	506	8.5	36	172
91G-SP-D04	SIL. CHL-EP ALTD. VOLC. PY 5%, GL 5%, CARBONATE 10%	65	14	3.7	4344	146
91G-SP-D05	CHL-EP-KFELD-DIOPSIDE SKARN IN VOLC AND SYENITE; CARBONATE	96	25	2.6	451	630
91G-SP-D06	STRONG CHL-EP VOLC. MAGNETITE PATCHES OF CP. FRACTURES 040°	6436	41	2.6	17	389
91G-SP-D07	V. STRONG CHL-EP-KFELD ALTD SYENITE. MINOR CP IN SHEARS 080°, 120°	1610	12	1.1	35	108
91G-SP-D08	CHL-KFELD ALTD. DARK SYENITE TRACE MAL, AZ.	805	8	0.8	19	164
91C-SP-D09	1 METRE CHIP. STRONG CHL-EP ALTD. VOLC. IN SHEAR 022°/70°E FRACTURES AT 140°	380	12	0.4	34	119
91G-SP D10	2 CM SHEAR IN WEAK CHL-EP ALTD BASALT: 040°/70°E MOD. MAGNETIC: TRACE CP	1203	13	1.3	2	103
91G-SP-D11	CHL-EP-KFELD ALTD BASALT (MOD MAGNETIC) P-1 2-3% MINOR QTZ IN KFELD VEINLETS	169	4	0.6	317	295
91G-S-R1	HIGHLY FRACTURED, KFELD ALTD SYENITE. SHEAR 060°/70°SE PY, CP 3%	15423	67	30.8	124	413
91F-SP-R2	CHL-EP-KFELD-DIOPSIDE SKARN 5-10% FINE GRAINED PY. FLOAT.	84	8	0.5	49	81
91F-SP-R3	STRONG KFELD ALTD. SYENITE LENSES OF PY, CP IN FRACTURES. FLOAT	23771	10	20.2	3	79
91G-SP R4	GRAB ACROSS 45 CM. CHL-EP ALTD VOLC. WELL FRACTURED. CP UP TO 3%	16256	38	14.1	12	214

APPENDIX A

ROCK SAMPLE DESCRIPTIONS

SAMPLE #	DESCRIPTION	Cu PPM	Au PPB	Ag PPM	Pb PPM	Zn PPM
91C-SP-R5	CHIP 2M. CHL-EP-Cu ALTD VOLC WITH KFELD STOCKWORK TRENDING 050°/45SW. CP+PY .5%	941	8	1.0	108	235
91G-SP-R6	GRAB OVER 1M. FINE GRAINED DARK SYENITE. SHEARED. 5-10% PY+CP MINOR MAGNETITE.	2723	118	5.6	30	93
91C-SP-R7	CHIP 2M. STRONG CHL-EP-KFELD ALTD. VOLC. WELL FRACTURED. MINOR PY, CP.	1432	11	0.9	13	50
91G-SP R8	30 CM SHEAR IN SYENITE. STRONG CP. WALLROCK HIGHLY FRACTURED.	54495	87	71.2	116	333
91F-SP R9	POSSIBLE SUBCROP. DARK SYENITE HIGHLY FRACTURED. PERVASIVE KFELD FLOODING. CP 25% FLOAT	46553	524	49.1	876	4018
91G-SP-R10	GRAB OVER 40 CM. CHL-EP-KFELD-BIOTITE ALTD. VOLC. PERVASIVE KFELD FLOODING 25% CP, TR SP	60270	71	85.5	243	3807
91G-SP-R11	GRAB OVER 50 CM. QTZ-CARBONATE VEIN WITH CP (040°/90) IN CHL-EP ALTD VOLC.	13936	253	19.8	817	1021
91G-SP-R12	GRAB OVER 1.5 M. SHEARED KFELD ALTD BROWN SYENITE. MINOR EP. FRACTURES 360°	15510	52	8.7	51	164
91G-SP-R13	GRAB OVER 70 CM. SHEAR 150°. CHL-EP-KFELD ALTD FINE GRAINED TUFF. VEINLETS AND DISS. CP	11106	14	10.4	33	377
91F-SP R14	LIGHT GREY SYENITE; KFELD FLOODING. CP UP TO 15% FLOAT	50234	35	28.7	27	132

Norian Resources Corp. PROJECT SPEC 91 File # 91-4167 Page 1

P.O. Box 756, Squamish BC V0N 3G0 Submitted by: DAVID BLANN

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 %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
91C-SP-D09	1	380	34	119	.4	29	14	588	2.26	2	5	ND	1	434	.5	2	2	74	1.89	.107	8	32	.81	33	.24	2	1.32	.05	.27	1	12
91G-SP-D01	5	5959	985	245	8.4	49	28	992	4.44	5	5	ND	2	155	7.0	2	28	144	2.64	.075	18	11	1.18	63	.15	5	1.24	.03	.17	1	61
91G-SP-D03	6	8540	36	172	8.5	69	19	459	3.13	5	5	ND	1	136	3.4	2	24	94	1.74	.133	10	58	1.25	53	.21	5	1.15	.04	.30	1	506
91G-SP-D04	6	65	4344	146	3.7	16	6	2000	5.23	8	5	ND	2	199	3.8	2	18	251	11.29	.070	7	23	1.22	16	.21	5	1.97	.10	.36	1	14
91G-SP-D05	7	96	451	630	2.6	16	11	1477	6.36	25	5	ND	1	228	17.2	2	2	163	18.03	.056	23	18	.54	29	.14	5	1.45	.02	.07	1	25
91G-SP-D06	1	6436	17	389	2.6	9	25	1416	5.30	2	5	ND	1	125	3.4	2	22	82	1.44	.082	5	8	1.53	10	.18	7	1.55	.10	.03	1	41
91G-SP-D07	4	1610	35	108	1.1	11	21	626	2.70	8	5	ND	2	703	.2	2	6	71	3.55	.187	15	11	1.56	56	.36	4	2.06	.05	.87	1	12
91G-SP-D08	1	805	19	164	.8	13	22	1115	5.45	3	5	ND	2	130	.4	2	3	231	1.98	.156	14	9	1.79	98	.14	5	1.71	.06	.14	1	8
91G-SP-D10	1	1203	2	103	1.3	45	22	910	5.06	6	5	ND	1	91	.5	2	8	107	2.02	.096	4	48	1.59	86	.27	7	2.14	.20	.94	1	13
91G-SP-D11	9	169	317	285	.6	8	23	1265	5.61	9	5	ND	1	52	5.1	2	2	109	2.66	.084	3	6	2.00	83	.35	10	3.23	.42	1.20	1	4
91C-SP-R5	4	991	108	235	1.0	112	20	1722	3.74	4	5	ND	1	296	.7	2	7	177	5.75	.117	11	105	2.28	75	.21	5	2.45	.03	1.10	1	8
91C-SP-R7	2	1432	13	50	.9	14	8	1116	3.17	2	5	ND	4	226	.2	2	11	111	4.81	.113	18	9	1.03	64	.04	6	1.26	.06	.08	1	11
91F-SP-R2	8	84	49	81	.5	51	18	497	5.95	10	5	ND	1	769	.2	2	2	160	2.55	.116	8	54	2.06	64	.30	6	1.97	.04	1.35	2	8
91F-SP-R3	3	23771	3	79	20.2	45	66	186	4.82	12	5	ND	22	45	.7	2	2	19	.32	.003	16	1	.12	26	.03	6	.36	.09	.08	3	10
91F-SP-R9	27	46553	876	4018	49.1	371	165	2038	15.16	11	5	ND	1	66	50.8	2	19	408	3.75	.044	10	10	1.57	21	.09	5	1.91	.02	.74	1	529
91F-SP-R14	9	50234	27	132	28.7	59	110	250	6.50	9	5	ND	17	28	2.7	3	24	7	.43	.001	22	2	.03	13	.01	8	.22	.09	.02	1	35
91G-SP-R4	4	16256	12	214	14.1	429	46	988	4.99	12	5	ND	1	235	2.3	2	7	145	2.99	.084	9	331	2.34	105	.24	7	2.35	.07	1.50	1	38
91G-SP-R6	15	2723	30	93	5.6	37	17	217	4.14	14	5	ND	4	166	.6	2	16	179	1.22	.096	18	18	.40	74	.03	5	.66	.03	.33	1	118
91G-SP-R8	32	54495	116	333	71.2	164	131	180	8.49	4	5	ND	1	33	2.5	2	8	113	.11	.019	9	3	.47	31	.01	8	.78	.02	.22	1	87
91G-SP-R10	85	60270	243	3807	85.5	272	212	742	10.74	10	5	ND	1	145	70.6	2	2	103	4.22	.079	11	30	1.13	28	.13	7	.85	.04	.92	1	71
91G-SP-R11	679	13836	817	1021	19.8	111	55	601	4.27	72	5	ND	2	409	17.1	3	13	82	12.74	.052	11	45	.77	35	.14	6	1.22	.04	.69	1	253
91G-SP-R12	14	15510	51	164	8.7	39	18	969	4.24	4	5	ND	7	194	1.1	2	10	294	2.43	.067	16	8	.61	251	.11	8	1.29	.04	.17	1	52
91G-SP-R13	2	11106	33	377	10.4	150	54	819	3.98	4	5	ND	1	194	5.7	2	23	178	4.03	.114	9	70	.94	29	.21	5	1.45	.03	.55	1	14
RE 91G-SP-R8	34	57059	113	350	74.3	179	142	194	8.94	7	5	ND	1	34	3.2	2	2	118	.12	.023	10	5	.50	29	.01	8	.82	.02	.24	1	85
91G-S-R1	13	15423	124	413	30.8	72	39	384	6.20	5	5	ND	1	113	10.1	2	13	129	.85	.105	14	20	.49	181	.04	4	.69	.04	.33	1	67
STANDARD C/AU-R	17	57	36	127	6.6	66	31	946	3.98	40	21	6	35	50	18.0	15	18	56	.46	.081	36	56	.85	172	.08	34	1.89	.06	.14	11	460

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: P1 ROCK P2 SILT AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.
Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 5 1991 DATE REPORT MAILED: Sept 12/91 SIGNED BY ..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

APPENDIX B

GEOPHYSICAL REPORT

MAGNETOMETER, VLF-EM
AND
INDUCED POLARIZATION
SURVEY
ON THE

SPEC CLAIM GROUP

FOR

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

BY

SJ GEOPHYSICS LTD.

LIARD, M.D. N.T.S. 104 G/2 & 104 G/7

AUGUST 1991

Report By
Syd J. Visser
SJ GEOPHYSICS LTD.

MAGNETOMETER, VLF-EM

AND

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DATA PRESENTATION		2
INTERPRETATION		3
RECOMMENDATION		4
CONCLUSION		5
APPENDIX I	Statement of Qualifications	
APPENDIX II	Induced Polarization Pseudosection Line 5600E	

In Envelope

Plate G1	Magnetics Survey Total Field Profile Map
Plate G1A	Magnetics Survey Total Field Contour Map
Plate G2	VLF-EM Survey Profiles Dip Angle, Quadrature & Total Field
Plate G2A	VLF-EM Survey Total Field Contour Map
Plate G2B	VLF-EM Survey Profiles Fraser Filtered Dip Angle
Plate G2C	VLF-EM Survey Contours Fraser Filtered Dip Angle
Plate G3	Induced Polarization (Gradient) Resistivity & Chargeability Profiles
Plate G3A	Induced Polarization (Gradient) Chargeability Contours
Plate G3B	Induced Polarization (Gradient) Resistivity Contours
Plate G4	Magnetics & VLF-EM Survey Compilation Map
Plate G4A	Induced Polarization (Gradient) Compilation Map

INTRODUCTION

A Magnetometer, VLF-EM and Induced Polarization (Gradient), surveys were completed during the period of August 17, 1991 to August 23, 1991 on the Spec Claim Group property by SJ Geophysics Ltd. and Coast Mountain Geological at the request of Mr. Mohan Vulimiri and Mr. David Blann, geologists with Alaska Fern Mines Ltd.. The Spec Claim Group is located approximately 35 Km north west of Bob Quinn near the headwaters of Moore creek. Bob Quinn is located on the Cassiar highway in northern B.C., in the Liard Mining District of B.C. (N.T.S. 104 G/2 & 104 G/7.

The purpose of the survey was to search for sulphide concentrations, which are known to contain gold and copper.

FIELD WORK AND DISCUSSION OF FIELD PARAMETERS

A EDA Omni Plus combined proton precession magnetometer and VLF-EM field instrument along with a EDA Omni Plus proton precession magnetometer base station was used to complete the Magnetometer and VLF-EM survey. The operator for the survey was Chris Basil of Coast Mountain Geological Ltd.. The VLF-EM station from Jim Creek was used for the majority of the survey (8 KM) as shown on Plate G2. Both the Jim Creek and Hawaii stations were shut down for most of the survey preventing the completion of the survey. The magnetometer survey was completed on 13 Km of the grid as shown on Plate G1.

The induced polarization survey was performed by Syd Visser (Geophysicist) and Neil Visser (Operator) both with SJ Geophysics Ltd. and helpers provided by Coast Mountain Geological Ltd. during August 17, 1991 to August 23, 1991. Six lines were surveyed for a total of approximately 11 km including overlap. A gradient survey with a dipole spacing of 50M was used for the main survey. The current stakes were

separated by approximately 1.1 Km allowing the grid as shown on Plate G3, to be surveyed from 3 setups. A pole-dipole array with an "a" spacing of 50M "N" of 1 to 6 was used to survey line 5600E.

The equipment used for the I.P. survey was a 2.5 KW Huntec Mk-2 time domain transmitter, with a cycle time of 2 sec. on and 2 sec off, and a Androtex TDR-6 time domain receiver. The delay time of the receiver was set at 80 msec with 10 integrating windows, for a total chargeability window of 1840 msec. The chargeability for each window and the total chargeability were recorded. Total chargeability along with the calculated apparent resistivity was plotted by computer for interpretation purposes.

DATA PRESENTATION

The magnetometer data and the VLF-EM data was plotted as both profiles and contour maps. The total Chargeability and the apparent resistivity collected from the gradient I.P. survey were plotted as profiles and as contour maps. The chargeability and the apparent resistivity from line 5600E were plotted as a pseudosection. The following is a list of the enclosed plots:

Section	Induced Polarization Pseudosection Line 5600E
Plate G1	Magnetics Survey Total Field Profile Map
Plate G1A	Magnetics Survey Total Field Contour Map
Plate G2	VLF-EM Survey Profiles Dip Angle, Quadrature & Total Field
Plate G2A	VLF-EM Survey Total Field Contour Map
Plate G2B	VLF-EM Survey Profiles Fraser Filtered Dip Angle

Plate G2C	VLF-EM Survey Contours Fraser Filtered Dip Angle
Plate G3	Induced Polarization (Gradient) Resistivity & Chargeability Profiles
Plate G3A	Induced Polarization (Gradient) Chargeability Contours
Plate G3B	Induced Polarization (Gradient) Resistivity Contours
Plate G4	Magnetics & VLF-EM Survey Compilation Map
Plate G4A	Induced Polarization (Gradient) Compilation Map

INTERPRETATION

The Magnetic data indicated a definite geological contact striking across the survey grid from approximately 5500E on line 5000N to 5250E on line 4500N as shown on the compilation map, Plate G4. The rocks to the east of this contact are likely sedimentary rocks or a intrusive with very low and uniform magnetite content. The western part of the grid indicated volcanic or intrusive rocks with a fairly high and variable magnetite content . There also appears to be a more subtle magnetic contact striking across the grid near 6000E. This weak magnetic high correlates with a strong VLF-EM anomaly.

The VLF-EM indicates a weak em anomaly, as shown on the compilation map, Plate G4, along the strong magnetic contact at 5500E which is likely due to the geological contact. The weak VLF-EM anomalies between 5600E and 5800E correlate with resistivity boundaries seen in the I.P. resistivity data. A strong VLF-EM anomaly strikes across the grid from approximately 6030E on line 5000N to 5950E on line 4500N. This anomaly appears to correlate with a I.P. resistivity low, the western contact of a resistivity and chargeability high and a weak magnetic anomaly. This anomaly

is likely due to a conductive shear or fault zone. It does not appear to be due to sulphides because of the lack of a high chargeability response. The weak VLF anomaly directly to the west, of the strong anomaly, is likely the western contact of the conductive zone. The weak VLF-EM anomaly near 6250E and 6400E appears to be inclosing a weakly conductive zone (less resistive than the rocks to the west or east).

The I.P. data indicates a high resistivity zone along with an elevated chargeability directly east of the magnetic contact near 5500E. The pole-dipole survey confirms the gradient data. This zone is likely a alteration zone which is either silicified or has potassium alteration along with an increase in sulphide content (alteration of magnetite to sulphides). The resistivity is generally higher to the east of this contact with a low resistivity zone that correlates with the VLF-EM anomaly located at approximately 6030E. The resistivity along with the chargeability increases significantly to the east of this zone likely indicating a geological unit with an higher resistivity and chargeability background. The I.P. survey was not extended to the east to confirm if this may be lithological or a discrete anomaly.

RECOMMENDATIONS

It is recommended to closely correlate the anomalous areas between 5500E and 5600E and east of 6000E with the known geology to determine the significance of these anomalies. If the geology warrants further investigation the survey should be extended to the south and east where possible.

CONCLUSION

The magnetic data indicates that there is a major change in lithology between the western and the eastern side of the grid with the eastern geology consisting of rocks with a low uniform magnetite content and the western rock with a highly variable magnetite content. The I.P. response shows a alteration zone with elevated resistivities and chargeabilities on the eastern side of this contact. There is an second major structure on the eastern side of the grid which is likely a conductive fault or shear zone with a low chargeability response suggesting that the conductivity is not due to sulphides. The resistivity and the chargeability increases significantly east of this conductive zone. It is not clear if this increase is lithological or due to potential economic mineralization.

Syd Visser, B.Sc., F.G.A.C.
Geophysicist
SJ Geophysics Ltd.

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Syd J. Visser, of 11762 94th Avenue, Delta, British Columbia, hereby certify:

That I am a Consulting Geophysicist of S.J.V. Consultants Ltd., located at 11762 94th Ave., Delta, B.C.

1) I am a graduate from the University of British Columbia, 1981, where I obtained a B.Sc. (Hon.) Degree in Geology and Geophysics.

2) I am a graduate from Haileybury School of Mines, 1971.

3) I have been engaged in mining exploration since 1968.

4) I am a Fellow of the Geological Association of Canada.

5) This report is compiled from data obtained from a Induced Polarization survey carried out by SJ Geophysics Ltd..

Syd J. Visser, B.Sc., F.G.A.C.
Geophysicist

22,001

SPEC 1
4N 5W

BSLT
BSLT
STRONG CHL-EP-K FELD ALTD VOLC.. SYP
UNDER BASALT
Mod. MAG, Cp, Py
D06 (6436, 41, 2.6)
SYP
CHL-EP-K
WEAK QTZ STCK

BASALT

Py 1.5% Tr Mal
R1 (15423, 67, 30.8)
Py 2%
SYP
H. VOLC.
(8540, 506, 8.5)
D03
Py 2%
K-CHL-EP
HN FELSED VOLC/SED
SED
WK. CHL-EP
FRZ (84, 8, -6)
BUTTE ZONE
V. CHL-EP
db DIKE
Py Sy
Ga-Fp-SKARN
HN FELSED VOLC
CHL-EP-K
Cp
HN. FELSED VOLC.
Ga-Fp-SKARN
LCP: GOLD RUN 1986
D04 (65, 14, 2.7)
RHy
CHL V Ep Ca
CHL-Ep-K Tr Mal
SNOW
CHL-Ep-Ca
D05 (96, 25, 2.6)
CHL-EP-Ca SKARN
SECONDARY BIOTITE
MEGA SYP
CHL-EP-K Cp
VIEW ZONE
75
SNOW
WEAK K-FELD SHEAR
Py 1-2%

5000N
4900N
4800N
4700N
4600N
4500N
4400N
4300N
4200N
4100N
4000N

4500E 4600E 4700E 4800E 4900E 5000E 5100E 5200E 5300E 5400E 5500E 5600E 5700E 5800E 5900E 6000E 6100E 6200E 6300E 6400E 6500E

N

LEGEND

Cp - Chalcopyrite
Mal - Malachite
Az - Azurite
Py - Pyrite
Ca - Calcite
Ga - Garnet
Chl - Chlorite
Ep - Epidote
K - K-Feldspar

Sy - Syenite
Syp - Feldspar porphyry syenite
Sym - Feldspar megacrystic syenite
BSLT - Basalt
db - Diabase
RHy - Rhyolite
Fp - Feldspar porphyry
V - Volcanic
+ - Intrusive

Pyrite >2% (± pyrrhotite)
Chlorite-epidote boundary
Lithological contact
Outcrop boundary
Fault/shear
Fracture measurement
X Rock sample location

Geochemical values for rock samples expressed as:
D05 (96, 25, 2.6)
SAMPLE# (Cuppm, Aupph, Agppm)

0 50 100 200 300
Metres

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. E. BLANN

San Fernando Mining Co./
Noranda Exploration Ltd.

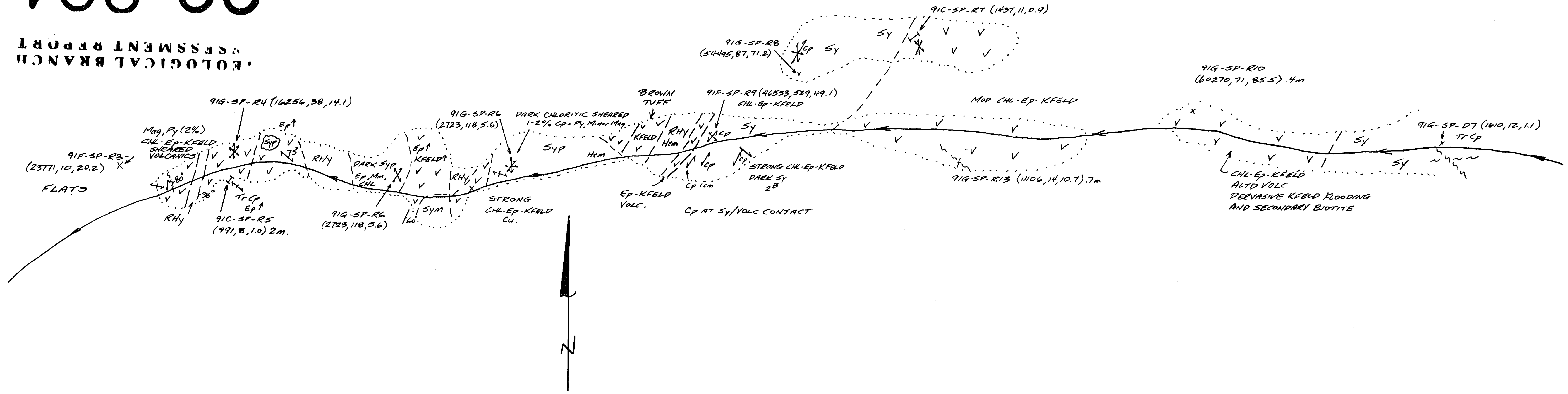
SPEC PROPERTY
BASIN ZONE GEOLOGY

DATE: OCT '91 | SCALE 1:5000 | FIGURE: 4

Norian Resources Corp.

22,001

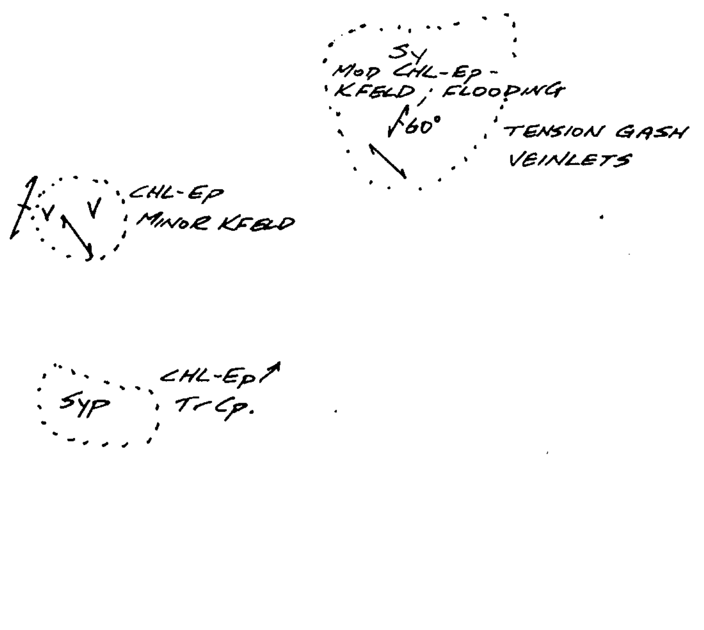
GEOLOGICAL BRANCH
ASSESSMENT REPORT

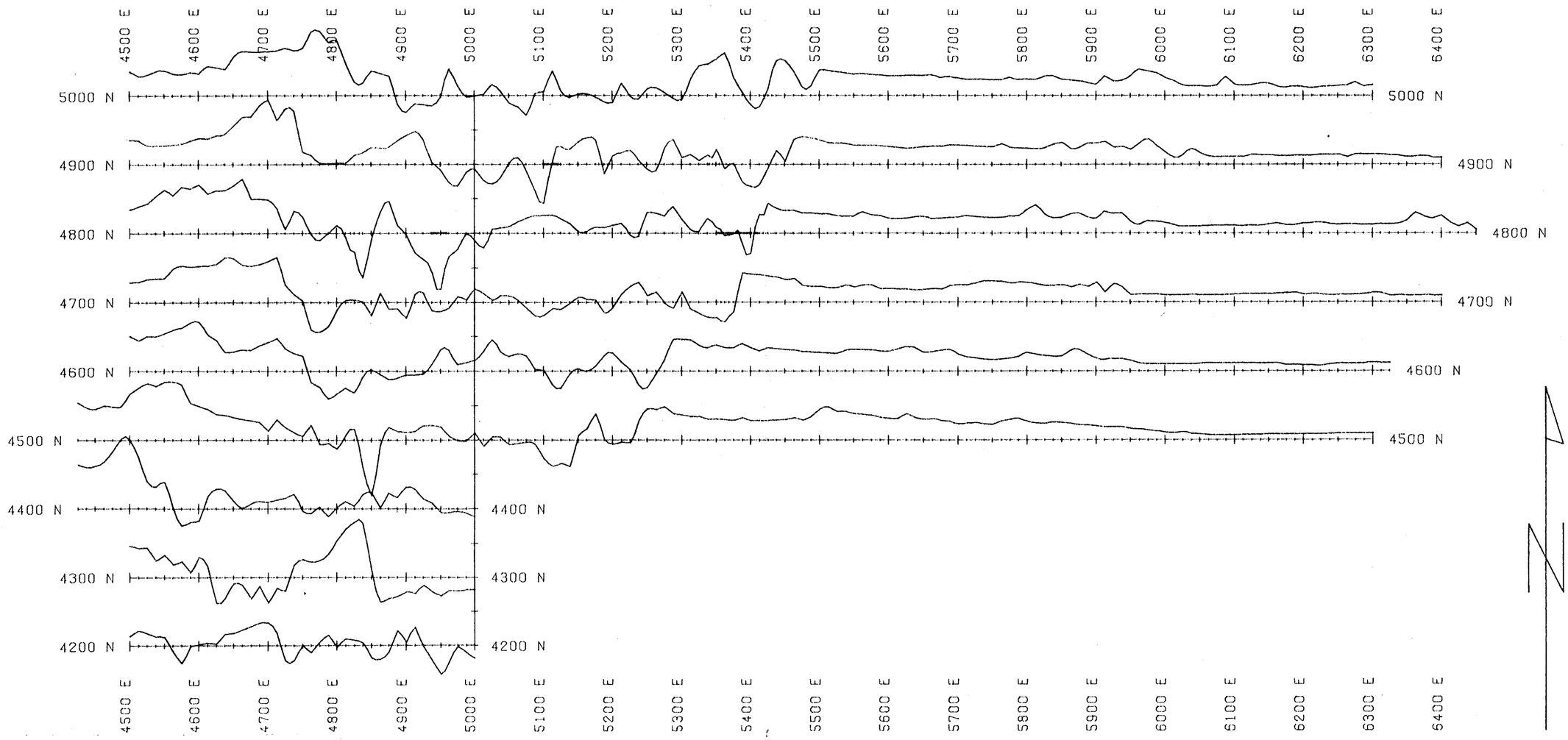


LEGEND

Cp - CHALCOPYRITE
Mal - MALACHITE
Az - AZURITE
Py - PYRITE
Ca - CALCITE
Ga - GARNET
CHL - CHLORITE
Ep - EPIDOTE
K - K-FELDSPAR

Sy - SYENITE
Syp - FELDSPAR PORPHYRY SYENITE
Sym - FELDSPAR MEGACRYSTIC SYENITE
BSLT. BASALT
db - DIABASE
RHy - RHYOLITE
Fp - FELDSPAR PORPHYRY
V - VOLCANIC
\+ - INTRUSIVE

--- LITHOLOGICAL CONTACT
.... OUTCROP BOUNDARY
~~~ FAULT/SHEAR
→ FRACTURE MEASURMENT

GEOCHEMICAL VALUES FOR ROCK SAMPLES EXPRESSED AS:
91C-SP-R5 (991,8,1.0)
SAMPLE# (Cuppm, Auppb, Agppm)



0 10 20 40 60 80 100 METRES
SCALE: 1:1000

PROFESSIONAL ENGINEER — D. E. BLANN — PROVINCE OF BRITISH COLUMBIA

SAN FERNANDO MINING Co. / NORANDA EXPLORATION LTD.		
SPEC PROPERTY CANYON ZONE GEOLOGY		
DATE: OCT '91	SCALE 1:1000	FIGURE: 5
NORIAN RESOURCES CORP.		
~~~



LEGEND

SURVEY DIRECTION FACING EAST
PROFILES POSITIVE UP
MAGNETICS PROFILES - SOLID LINES
PROFILE SCALE: 1500 NT/CM
BASE VALUE: 57000 NT
MAXIMUM VALUE: 60036 NT
MINUMUM VALUE: 54939 NT
INSTRUMENTATION:
FIELD: EDA OMNI-PLUS PROTON PRECESSION MAGNETOMETER
BASE: EDA OMNI-PLUS PROTON PRECESSION MAGNETOMETER

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

MAGNETICS SURVEY
TOTAL FIELD PROFILE MAP

SCALE 1:5000

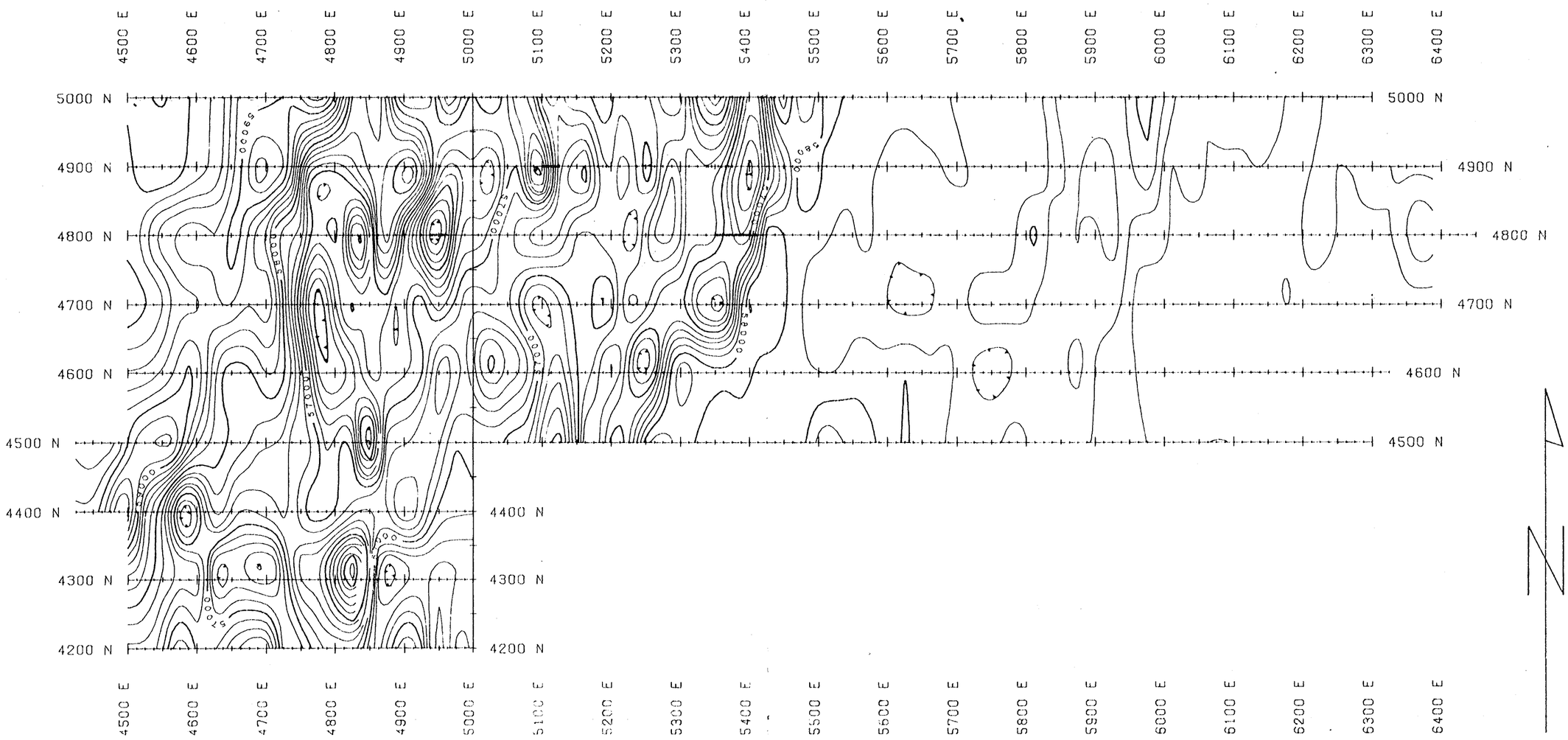
200 0 200 400 600

SCALE IN METRES

S.J.V. CONSULTANTS LTD.

AUGUST 1991

PLATE G1



LEGEND

CONTOUR INTERVAL: 200 NT
POSTED INTERVAL: 1000 NT
MAXIMUM VALUE: 60036 NT
MINUMUM VALUE: 54939 NT
TREND ROTATION: 0 DEG.
GRIDDED AT 12.5 X 12.5

INSTRUMENTATION:
FIELD: EDA OMNI-PLUS PROTON PRECESSION MAGNETOMETER
BASE: EDA OMNI-PLUS PROTON PRECESSION MAGNETOMETER

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

MAGNETICS SURVEY
TOTAL FIELD CONTOUR MAP

SCALE 1:5000

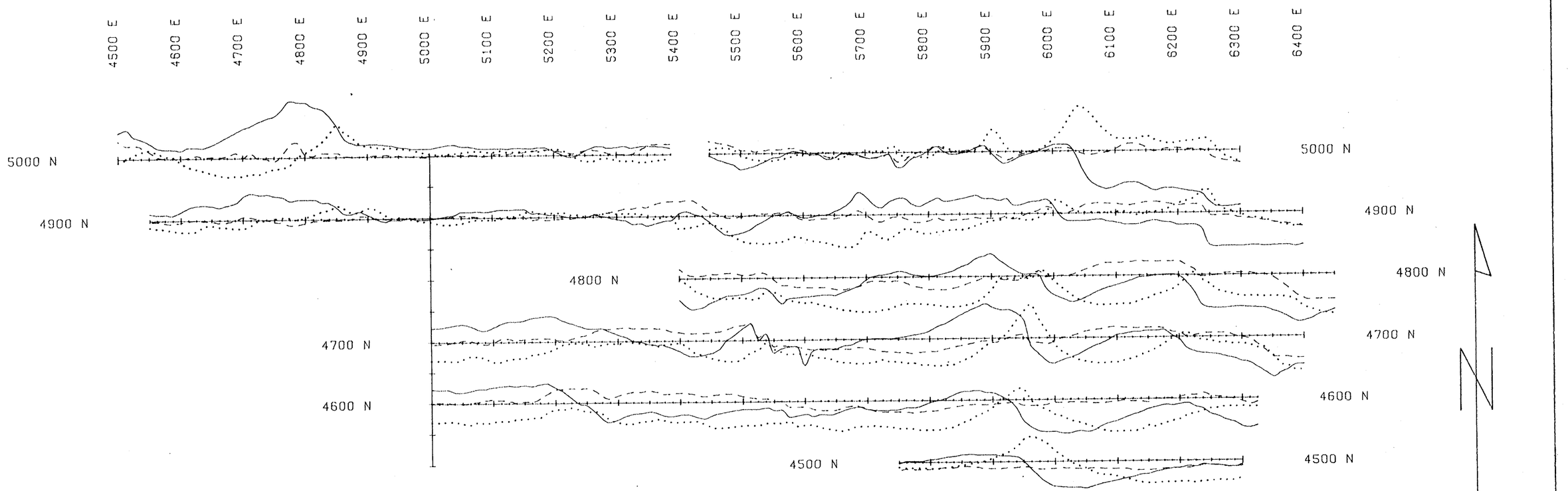
200 0 200 400 600

SCALE IN METRES

S.J.V. CONSULTANTS LTD.

AUGUST 1991

PLATE G1A



LEGEND

SURVEY DIRECTION FACING EAST
PROFILES POSITIVE UP
DIP ANGLE PROFILE - SOLID LINES
 PROFILE SCALE: 20% / CM
 BASE VALUE: 0
QUADRATURE PROFILE - DASHED LINES
 PROFILE SCALE: 20% / CM
 BASE VALUE: 0
TOTAL FIELD PROFILE - DOTTED LINES
 PROFILE SCALE: 10% / CM
 BASE VALUE: 50%

INSTRUMENTATION: EDA OMNI-PLUS VLF-EM SYSTEM
STATION: NLK SEATTLE 24.8 KHZ

S.J.V. CONSULTANTS LTD.

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

VLF-EM SURVEY PROFILES
DIP ANGLE, QUADRATURE & TOTAL FIELD

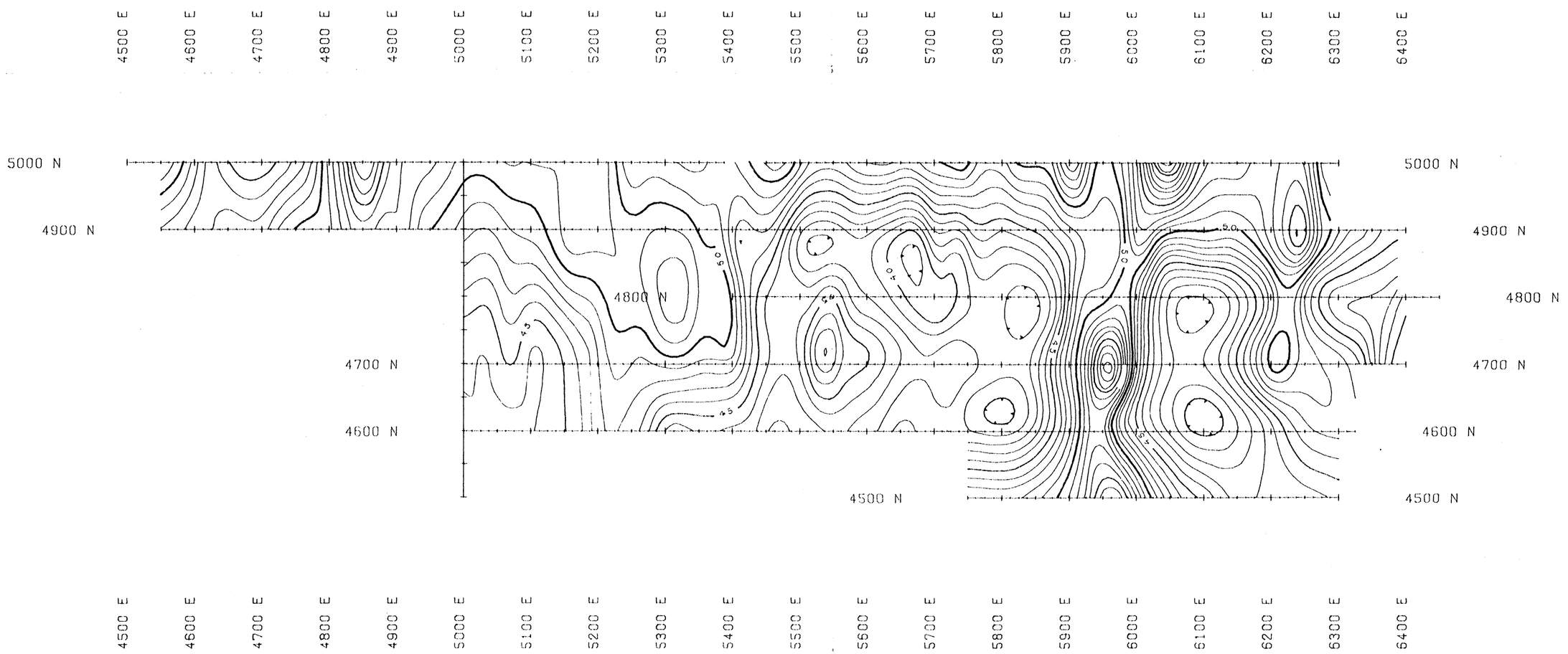
SCALE 1:5000

200 0 200 400 600

SCALE IN METRES

AUGUST 1991

PLATE G2



LEGEND

CONTOUR INTERVAL: 1%
POSTED INTERVAL: 5%
MAXIMUM VALUE: 64.00%
MINUMUM VALUE: 37.30%
TREND ROTATION: 0 DEG.
GRIDDED AT 12.5 X 12.5
INSTRUMENTATION:
EDA OMNI-PLUS VLF-EM SYSTEM
STATION: NLK SEATTLE 24.8 KHZ.

22,001

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

VLF - EM SURVEY
TOTAL FIELD CONTOUR MAP

SCALE 1:5000

200 0 200 400 600

SCALE IN METRES

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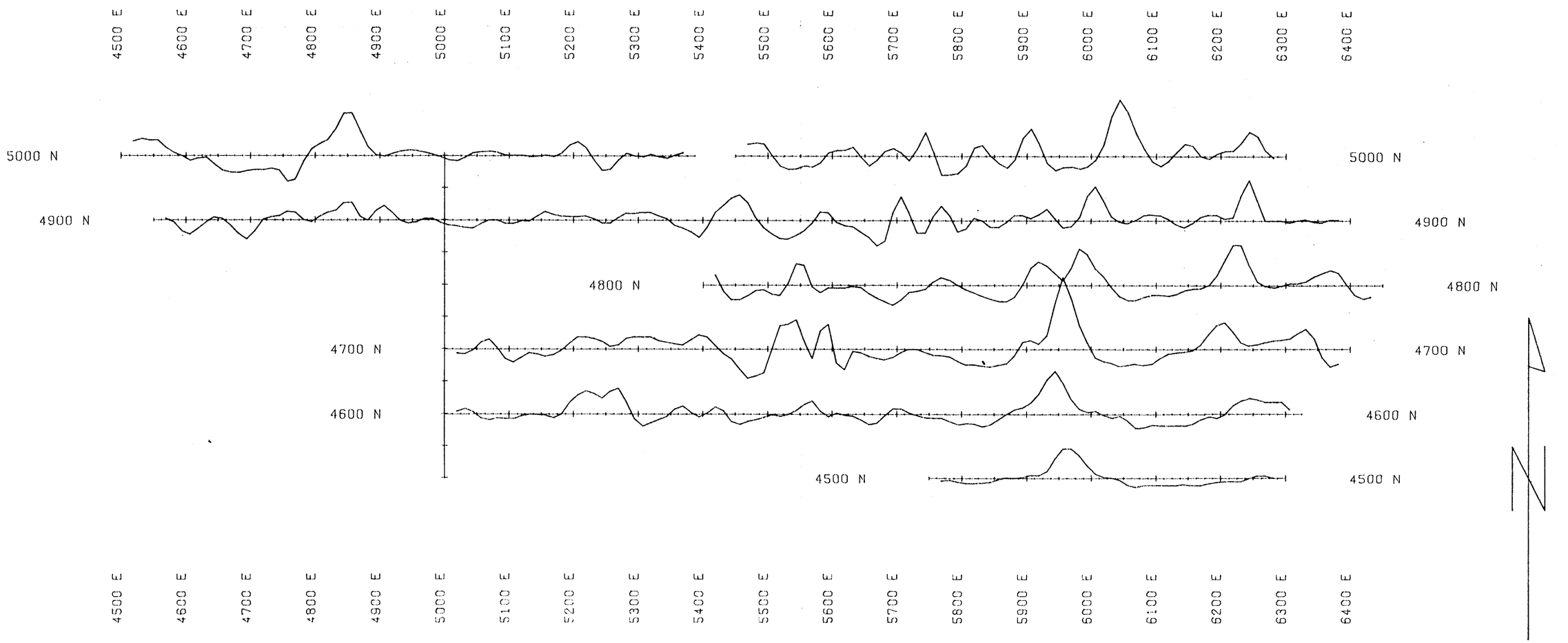
AUGUST 1991

PLATE G2A



LEGEND

SURVEY DIRECTION FACING EAST
PROFILES POSITIVE UP
FRASER FILTERED DIP ANGLE PROFILES
PROFILE SCALE: 20% / CM
BASE VALUE: 0
INSTRUMENTATION:
EDA OMNI-PLUS VLF-EM SYSTEM
STATIO: NLK SEATTLE 24.8 KHZ

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SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

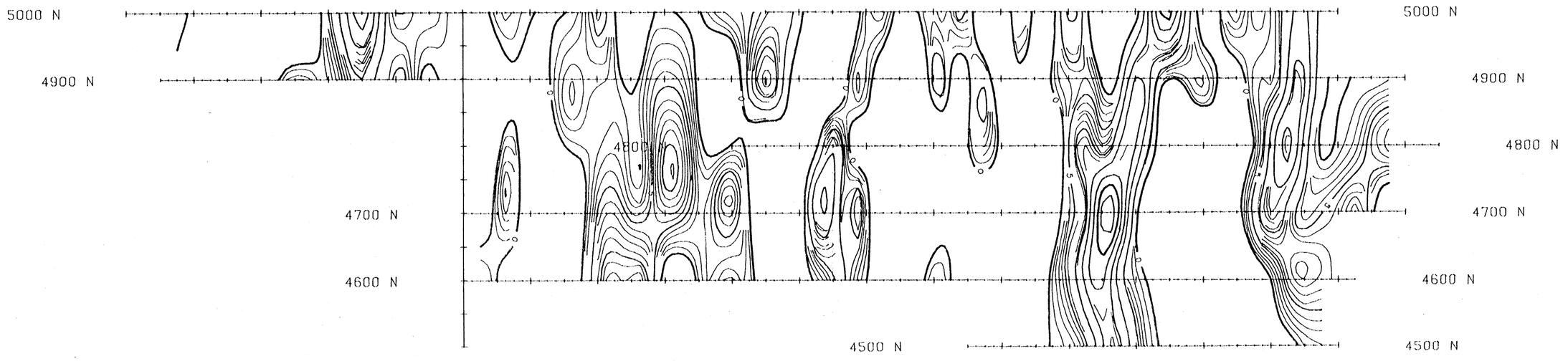
VLF - EM SURVEY PROFILES
FRASER FILTERED DIP ANGLE

SCALE 1:5000

200 0 200 400 600

SCALE IN METRES

S.J.V. CONSULTANTS LTD. AUGUST 1991 PLATE G2B



LEGEND

CONTOUR INTERVAL: 1 %
POSTED INTERVAL: 5 %
MAXIMUM VALUE: 39.15 %
MINUMUM VALUE: 0
TREND ROTATION: 0 DEG.
GRIDDED AT 12.5 X 12.5
INSTRUMENTATION:
EDA OMNI-PLUS VLF-EM SYSTEM
STATION: NLK SEATTLE 24.8 KHZ.

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

VLF - EM SURVEY CONTOURS
FRASER FILTERED DIP ANGLE

SCALE 1:5000

200 0 200 400 600

SCALE IN METRES

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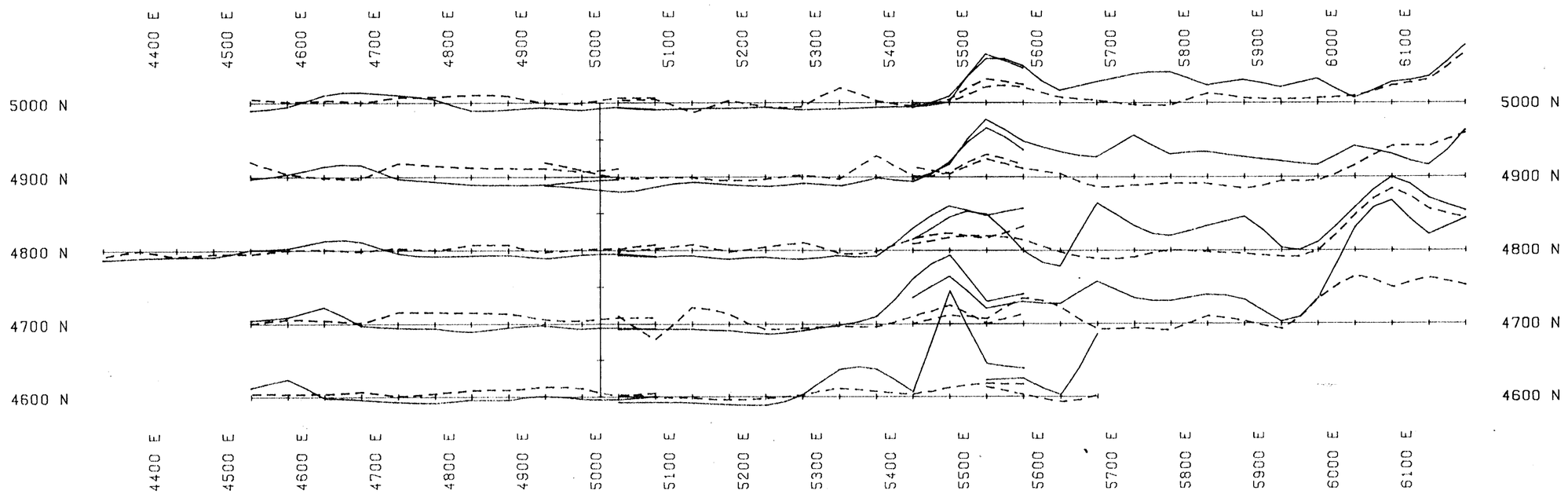
AUGUST 1991

PLATE G2C



LEGEND

PROFILES POSITIVE UP
RESISTIVITY PROFILES - SOLID LINES
PROFILE SCALE: 1000 OHM-M / CM
BASE VALUE: 500 OHM-M
CHARGEABILITY PROFILES - DASHED LINES
PROFILE SCALE: 10 MSEC / CM
BASE VALUE: 5 MSEC
INSTRUMENTATION:
RECIEVER: TIME DOMAIN ANDROTEX TDR-6
TRANSMITTER: 2.5 KW HUNTEC MK-2

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

INDUCED POLARIZATION (GRADIENT) RESISTIVITY & CHARGEABILITY PROFILES

SCALE 1:5000

200 0 200 400 600

SCALE IN METRES

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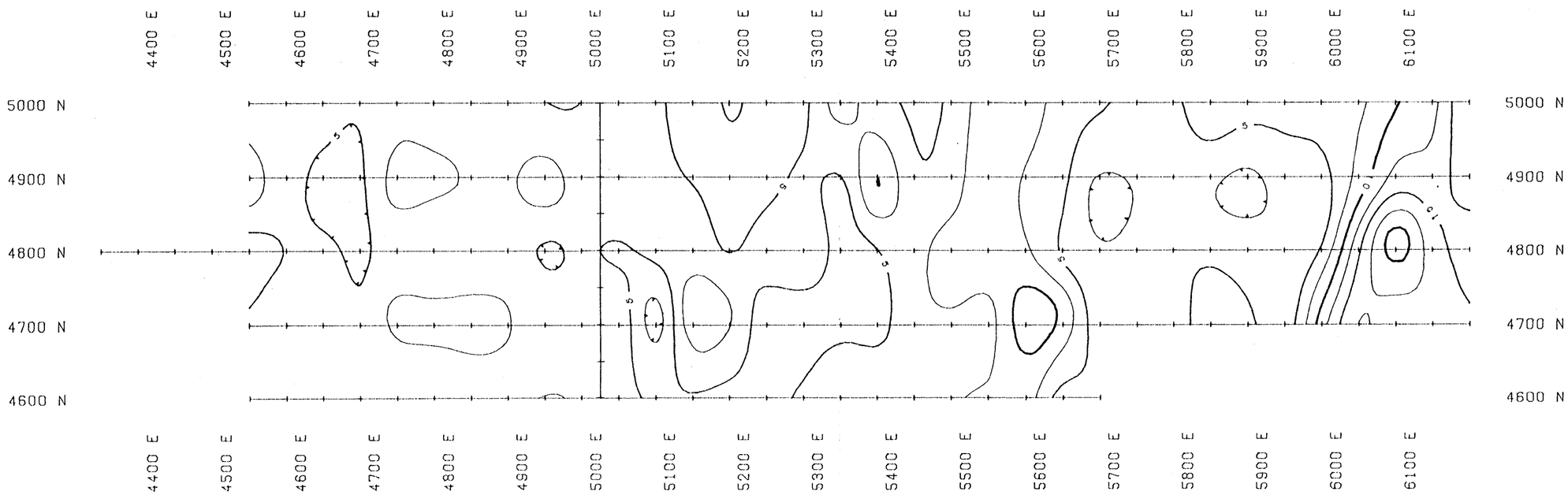
AUGUST 1991

PLATE G3



LEGEND

CONTOUR INTERVAL: 2.5 MSEC
POSTED INTERVAL: 5 MSEC
MAXIMUM VALUE: 21.8 MSEC
MINUMUM VALUE: 0.7 MSEC
TREND ROTATION: 0 DEG.
GRIDDED AT 12.5 X 12.5
INSTRUMENTATION:
RECIEVER: TIME DOMAIN ANDROTEX TDR-6
TRANSMITTER: 2.5 KW HUNTEC MK-2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,001

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

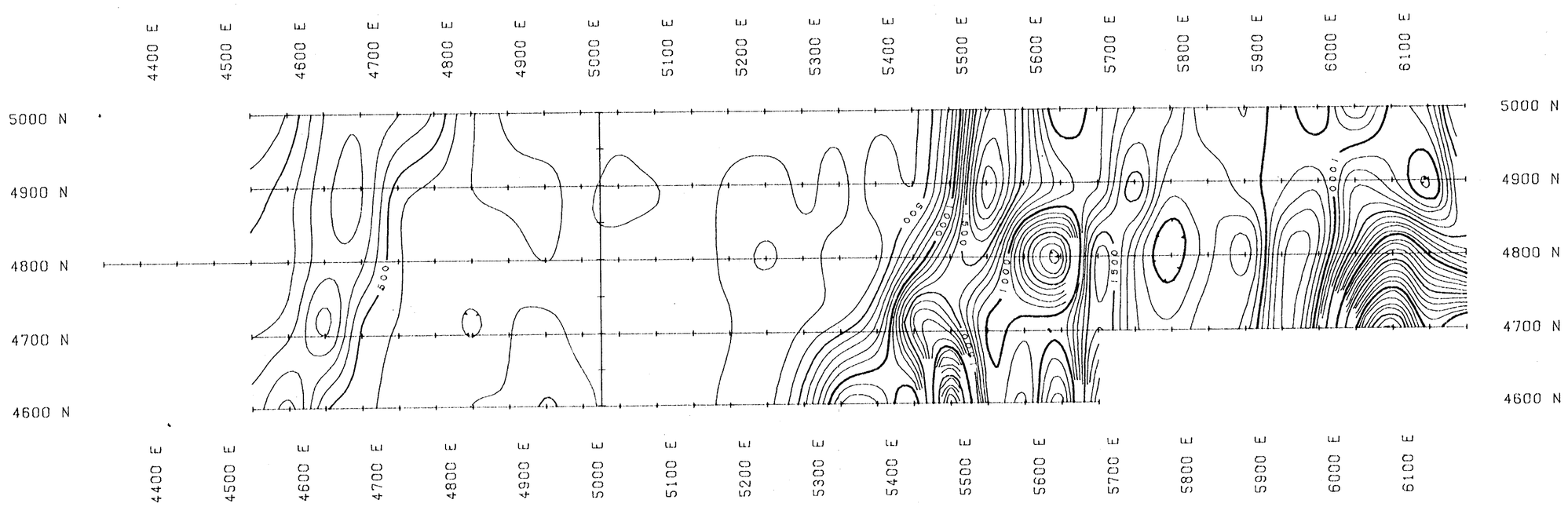
INDUCED POLARIZATION (GRADIENT) CHARGEABILITY CONTOURS

SCALE 1:5000

200 0 200 400 600

SCALE IN METRES

S.J.V. CONSULTANTS LTD. AUGUST 1991 PLATE G3A



LEGEND

CONTOUR INTERVAL:	100 OHM-M
POSTED INTERVAL:	500 OHM-M
MAXIMUM VALUE:	3856.6 OHM-M
MINUMUM VALUE:	68.38 OHM-M
TREND ROTATION:	0 DEG.
GRIDDED AT 12.5 X 12.5	
INSTRUMENTAYION:	
RECEIVER:	TIME DOMAIN ANDROTEX TOR-6
TRANSMITTER:	2.5 KW HUNTEC MK-2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,001

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

INDUCED POLARIZATION (GRADIENT) RESISTIVITY CONTOURS

SCALE 1:5000

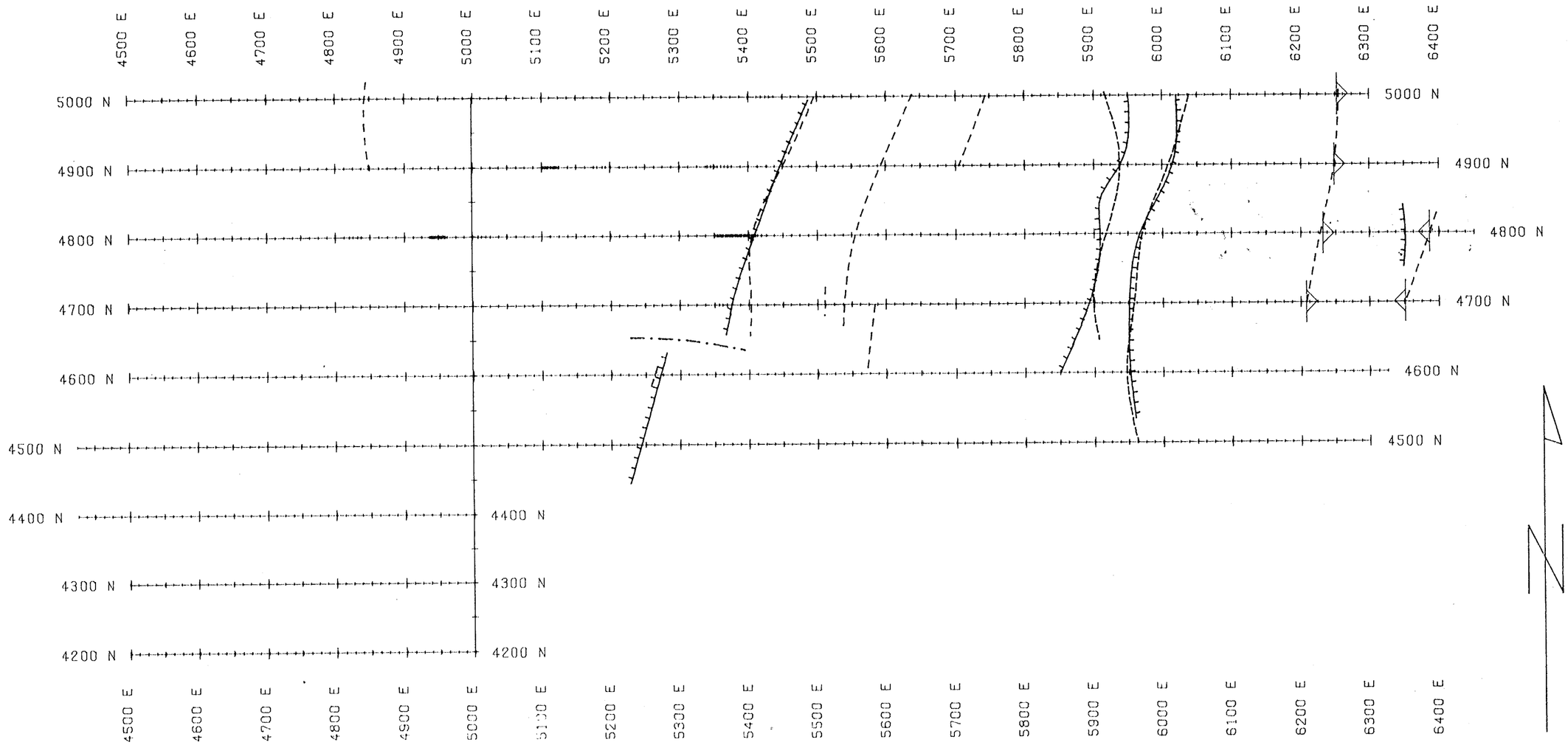
200 0 200 400 600

SCALE IN METRES

S.J.V. CONSULTANTS LTD.

AUGUST 1991

PLATE G3B



LEGEND

- MODERATE VLF CONDUCTOR AXIS (arrow points in direction of increasing conductivity)
- STRONG VLF CONDUCTOR AXIS
- MAGNETIC CONTACTS SHOWING MAG. HIGH
- MAGNETIC CONTACTS SHOWING MAG. LOW
- POSSIBLE CROSS-STRUCTURES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,001

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

MAGNETICS & VLF - EM SURVEY
COMPILATION MAP

SCALE 1:5000

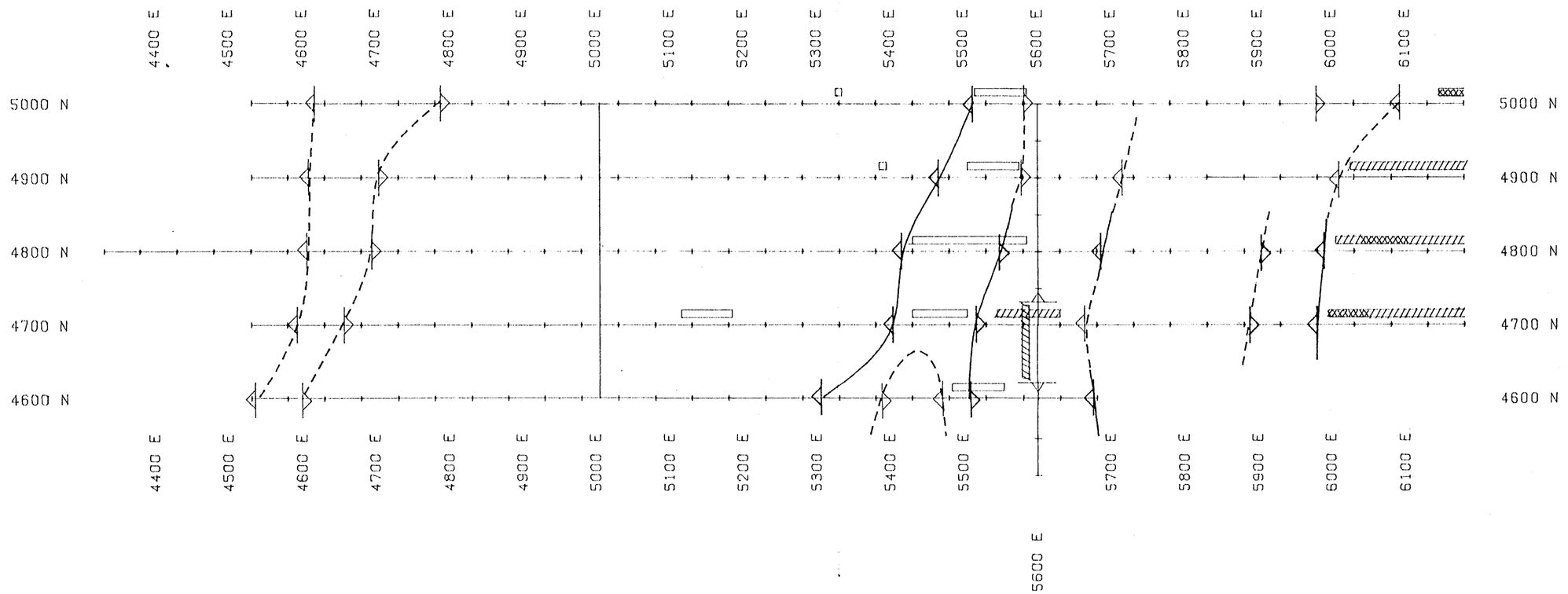
200 0 200 400 600

SCALE IN METRES

S.J.V. CONSULTANTS LTD.

AUGUST 1991

PLATE G4



LEGEND

RESISTIVITY CONTRAST (CONTACT ZONE)
(arrow in the direction of decreasing resistivity)

POORLY DEFINED

WELL DEFINED

CHARGEABILITY ANOMALY

GOOD

MODERATE

WEAK

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,001

ALASKA FERN MINES LTD. & NORANDA EXPLORATION LTD.

SPEC CLAIM GROUP

LIARD MINING DIVISION, B.C. NTS: 104 G/2, 104 G/7

INDUCED POLARIZATION (GRADIENT) COMPILATION MAP

SCALE 1:5000

200 0 200 400 600

SCALE IN METRES

S.J.V. CONSULTANTS LTD.

AUGUST 1991

PLATE G4A