

2001 Assessment & Compilation Report

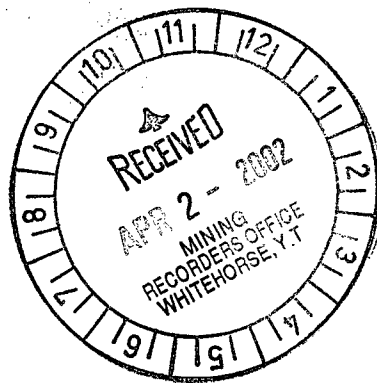
on the

Ellen Property

Ellen 1-5 (YA97362-66)
Ellen 6-8 (YB26797-99)
Ellen 9-20 (YB27078-89)
Ellen 25-27 (YB27094-96)
Ellen 28-31 (YB35480-83)
Ellen 32-37 (YB36844-49)

094258

**NTS 115 A/13
Lat. 60°52'N, Long. 137°58'W
Whitehorse Mining District**



**For: Midnight Mines Ltd.
Box 31293
Whitehorse, YT
Y1A 5P7**

**By: Tintina Consultants
March 29, 2002**

Period of Work: September/October 2001

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 5000.

M. B. H.
for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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Summary

The Ellen Property consists of 33 mineral claims on the west side of the Shakwak Valley. The property, situated in the Whitehorse Mining District, is located on a tributary of the Jarvis River at the north end of Mt. Decoeli. An 8 km tote road connects the property to the Alaska Highway approximately 28 km north of Haines Junction, 190 km from Whitehorse and 240 km from the deepwater port at Haines Alaska.

The property was first discovered in the early 1950's during regional exploration for Cu-Ni occurrences similar to the Wellgreen and Canalask deposits to the northwest. The property has undergone numerous exploration program since that time. Exploration to date has consisted of prospecting, soil sampling, mag, VLF-EM and HLEM surveys, trenching (hand, blast and bulldozer) and diamond drilling (5,074 feet in 17 holes). This work has focused on the main mineralized zone which outcrops within, and crosses the Ellen Creek gully.

This main zone covers a copper rich horizon consisting of veins and lenses of chalcopyrite, pyrrhotite, pyrite and quartz in layers of chloritic and sericitic tuff within a Triassic mafic volcanic sequence. Although the surface expression of the zone is 10 metres thick on the northwestern side of Ellen Creek and 7 metres thick on the southeastern side, drill results outline a mineralized zone approximately 5 metres in width that crosses the Ellen Creek gully and continues to the southeast.

The 2001 program at the Ellen Property saw a program consisting of prospecting, rock sampling and hand trenching. Prospecting in 2001 was directed toward the discovery of mineralization in areas where previous surveys have outlined geophysical anomalies or where previous prospecting had shown the presence of mineralization. Another target of the 2001 program was to attempt to locate occurrences of Cu-Au mineralization along strike on the escarpment faces and upstrata of the drill holes from the 1995 program, thus outlining new targets for future exploration programs.

The potential to expand the zone of mineralization on the property is very good, as the zone is open to the northwest, southeast, and the west. There is also potential for additional zones of mineralization upstrata of the drilled area on the property. Additional outcrops of sulphide mineralization and geophysical anomalies have been only partially tested, if at all. Follow up work should, along with focus on these areas, include further grid geophysical surveys along strike of the main zone to develop future drill targets. The ultramafic sill found along the thrust fault to the east of the main zone also warrants exploration work to determine if Cu-Ni-PGE-Au mineralization is present.

1. Introduction

Work on the property was completed in two separate time periods. Work was carried out on the Ellen 6,7,27,32-35 claims on September 5 and 6, 2001 and on the Ellen 1,6,7,8,15,26 claims between October 10-12, 2001. Work in September of 2001 was carried out by Mr. B. Harris of Midnight Mines Ltd., and by Mr. B. Harris and Mr. R. Stack in October.

The purpose of this report is two-fold. This report is prepared to describe and present the results of work completed during 2001 as well as to compile previous work on the property. The writer has made several trips to the region, yet has not visited the Ellen Property itself.

2. Location and Access

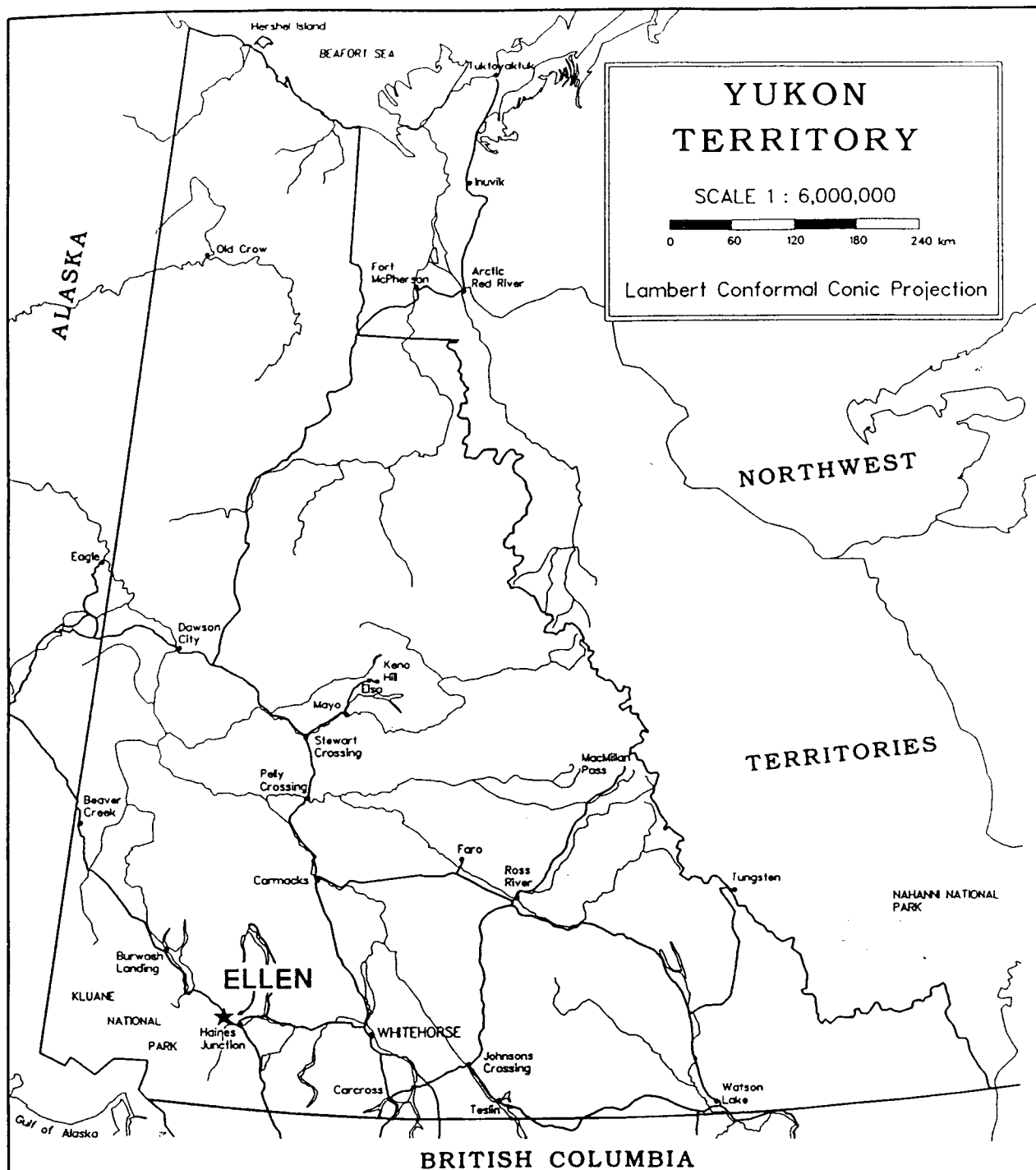
The Ellen claims are located 27 km northwest of Haines Junction on NTS map sheet 115 A/13 at latitude 60° 52'N and longitude 137°58'W in the southwestern Yukon Territory. The property is situated 8 km west of the Alaska Highway and is accessible via a road which leaves the highway approximately 1 km north of the Jarvis River Bridge. This road follows the Jarvis River to placer workings on Kimberley Creek. An old tote road connects the Ellen claims to the Kimberley Creek road 250 m west of the Jarvis River crossing. Figure 1 shows the property location.

3. Physiography

The claims lie on the west margin of the Shakwak Valley in the Kluane Ranges of the St. Elias Mountains. The Shakwak Valley is a deep northwest-southeast oriented depression stretching for several hundred kilometers from northwestern British Columbia to Alaska. In the Jarvis River area the valley is 8-10 km wide, bounded on the west side by the rugged Kluane Ranges which rise to 2588 m.

The property is located at the northern end of Mt. Decoeli covering an alpine plateau incised by a deep creek gully. The plateau is bounded on the east by a steep north facing slope which descends to the low lying Shakwak Valley floor. Elevations on the property range from 900 to 1500 m. The copper showings are located in a rugged steep sided gully, oriented perpendicular to the Shakwak Valley. Outcrop is abundant in the gully and on steeper slopes, however the surrounding uplands are covered with glacial till. The Shakwak Valley features spruce forest broken by tundra.

The Haines Junction area has a northern interior climate strongly influenced by the St. Elias Mountains. The area is known for high winds which constantly blow from the mountains into the Shakwak Valley. Winter temperatures average -20°C while summers are cool and last from June to September. The exploration season extends from mid-May to October.



Midnight Mines Ltd.		
LOCATION MAP		
Ellen Property		
<i>Tintina Consultants</i>		
Scale 1:6,000,000	Modified from Fig. 1	Date: March 2002
NTS: 115 A/13	Davidson (1993)	Figure 1

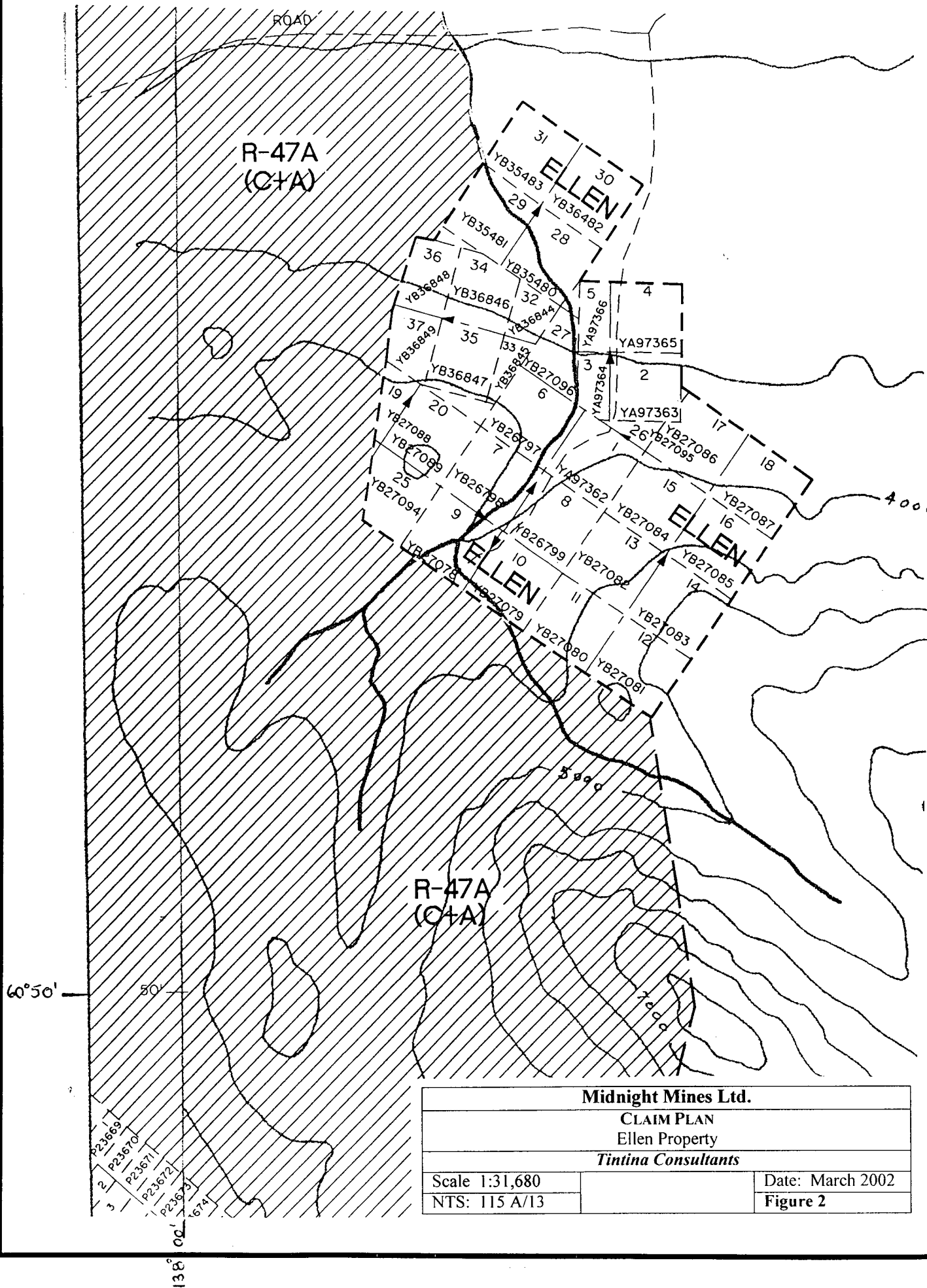
4. Property/Claim Summary

The property consists of 33 claims including the Ellen 1-20 and Ellen 25-37 claims. Figure 2 shows the claim plan.

During the 2001 field season, work was carried out on the claims in the table below.

Table 1: Claims Worked On in 2001

Claim Name	Grant Number
Ellen 1	YA97362
Ellen 6	YB26797
Ellen 7	YB26798
Ellen 8	YB26799
Ellen 15	YB27084
Ellen 26	YB27095
Ellen 27	YB27098
Ellen 32	YB36844
Ellen 33	YB36845
Ellen 34	YB36846
Ellen 35	YB36847



Midnight Mines Ltd.

CLAIM PLAN

Ellen Property

Tintina Consultants

Scale 1:31,680

NTS: 115 A/13

Date: March 2002

Figure 2

The table below updates the claim status following this work being applied.

Table 2: Claim Status following 2001 Work

Claim Name	Grant Number	Expiry Date	New Expiry Date*	Registered Owner
Ellen 1	YA97362	2001/11/14	2003/11/14	R. Stack
Ellen 2	YA97363	2001/11/14	2003/11/14	R. Stack
Ellen 3	YA97364	2001/11/14	2003/11/14	R. Stack
Ellen 4	YA97365	2001/11/14	2003/11/14	R. Stack
Ellen 5	YA97366	2001/11/14	2003/11/14	R. Stack
Ellen 6	YB26797	2001/09/29	2003/09/29	G. Davidson
Ellen 7	YB26798	2001/09/29	2003/09/29	G. Davidson
Ellen 8	YB26799	2001/09/29	2003/09/29	G. Davidson
Ellen 9	YB27078	2001/12/11	2003/12/11	R. Stack
Ellen 10	YB27079	2001/12/11	2003/12/11	R. Stack
Ellen 11	YB27080	2001/12/11	2002/12/11	R. Stack
Ellen 12	YB27081	2001/12/11	2002/12/11	R. Stack
Ellen 13	YB27082	2001/12/11	2002/12/11	R. Stack
Ellen 14	YB27083	2001/12/11	2002/12/11	R. Stack
Ellen 15	YB27084	2001/12/11	2002/12/11	R. Stack
Ellen 16	YB27085	2001/12/11	2002/12/11	R. Stack
Ellen 17	YB27086	2001/12/11	2002/12/11	R. Stack
Ellen 18	YB27087	2001/12/11	2002/12/11	R. Stack
Ellen 19	YB27088	2001/12/11	2003/12/11	R. Stack
Ellen 20	YB27089	2001/12/11	2003/12/11	R. Stack
Ellen 25	YB27094	2001/12/11	2002/12/11	R. Stack
Ellen 26	YB27095	2001/12/11	2002/12/11	R. Stack
Ellen 27	YB27096	2001/12/11	2003/12/11	R. Stack
Ellen 28	YB35480	2001/10/22	2003/10/22	G. Davidson
Ellen 29	YB35481	2001/10/22	2003/10/22	G. Davidson
Ellen 30	YB35482	2001/10/22	2003/10/22	G. Davidson
Ellen 31	YB35843	2001/10/22	2003/10/22	G. Davidson
Ellen 32	YB36844	2002/08/12	2003/08/12	R. Stack
Ellen 33	YB36845	2002/08/12	2003/08/12	R. Stack
Ellen 34	YB36846	2002/08/12	2003/08/12	R. Stack
Ellen 35	YB36847	2002/08/12	2003/08/12	R. Stack
Ellen 36	YB36848	2002/08/12	2003/08/12	R. Stack
Ellen 37	YB36849	2002/08/12	2003/08/12	R. Stack

*following approval of filings

5. History

Prospectors first explored the Kluane Ranges around 1900. During the 1920's and 1930's placer mining was active along the front range from Dalton Post to Beaver Creek. The next exploration in the Kluane Ranges took place in the 1950's, with prospectors and exploration companies exploring for copper-nickel sulphide mineralization. At this time, deposits were outlined at the Canalask and Wellgreen properties. The Wellgreen property was subsequently mined in 1972-1973 (Davidson, 1995).

Prospecting in the area of the Ellen claims prior to 1950 led to the discovery of chalcopyrite in greenstone on a tributary of the Jarvis River. Davidson (1995) notes that "several old crown grant posts were found about the main showing but the grants were not registered. Many old cut stumps attest to considerable activity during the early years."

The Ellen property was first staked as the Jude, Nor and Tar claims in 1953 by R. Reber who subsequently optioned the property to Hudson Bay Mining and Smelting Co. Hudson Bay drilled 5 holes (323 m/1060 feet) and built a tote road to within 500 m of the copper showings.

In 1962 T. Worbetts restaked the area as the MC claims. The claims were optioned to Canadian Barranca Mines Ltd. who extended the road to the showings and completed an extensive surface exploration program. Three diamond drill holes in 1966 (434 m/1421 feet) and four more in 1969 were drilled into chalcopyrite bearing horizons in mafic volcanic rocks. Copper values of 3.15% over 5.2 m and 2.20% over 6.4 m were reported in two of the earlier drill holes. Canadian Barranca returned the property to the owner in 1971 (Davidson, 1995).

The showings were reacquired in 1987 by the present owners. In June of 1989, a 7 m wide section of chalcopyrite, pyrite and quartz bearing mineralization was exposed on the east side of the gully using explosives. The mineralization was traced over a 10 m width on the west side of the gully, with extensive malachite and azurite staining. Samples of the sulphide bearing rock returned 1.5-11.9% copper and trace to 2787 ppb gold. The 1989 work outlined a layered sulphide occurrence over a strike length of 50 metres (which became the "Main Zone") and indicated the presence of volcanogenic type sulphide mineralization on the Ellen Claims.

A late season geological and geophysical program in 1990 outlined HLEM anomalies at the main showing and on the upland. Patchy copper mineralization was located along strike of the main occurrence and several quartz rich sulphide bearing horizons were located to the north. Sample results ranged from 0.2% to 18.3% copper and trace to 6632 ppb gold (Davidson, 1990).

In 1993, a pre-listing exploration program was conducted for Probe Resources Ltd. The program involved grid establishment, soil and rock sampling, detailed (1:5,000) geological mapping as well as geophysical surveys (HLEM and VLF). Back hoe and

blast trenching was completed on the mineralized zones. Several pits were also excavated over EM anomalies. The program outlined a strong copper geochemical anomaly coincident with HLEM and VLF conductors around the main zone, and located widespread concordant chalcopyrite-pyrite-quartz mineralization downstream and along strike from the main showing (Davidson, 1993).

During 1995, five diamond drill holes totaling 457 m (1500 feet) were drilled on the property. Blast trenching of several showings exposed occurrences to the southeast of the main showing. Probe returned the property to the owners in 1996. No work had been carried out on the property until 2001.

The text below outlines in detail the historical work.

5.1 Grid Development

In 1990, a 1.2 km picket baseline trending 110° was established across the gully and uplands passing approximately 80 m downstream of the main showing. Picket cross lines were run from 100 m centres with flag stations at 25 m intervals. Lines were slashed out with axe and machete in the brush. A total of 30.1 km of lines were run.

By 1993, little remained of the 1990 grid, however, it was used as a basis for a new grid. A total of 36 line kilometres were run covering approximately 80% of the claim block. A 2.6 km tie-line trending 110° was cut along the base of the slope at 5+00N. Crosslines from 100 m centers were established across gully and uplands. Lines (15km) were cut through alder and spruce forest below the upland. The lines were marked with pickets at 100 m intervals and flag stations at 25 m intervals.

5.2 Trenching and Rock Sampling

Blast trenching in June of 1989 cleared away mud and debris on the east side of the Ellen Creek gully, below the old drill sites. Chalcopyrite, pyrite and quartz bearing argillaceous horizons were exposed over a 7 m section. A total of 15 rock samples were collected. Blast trenching with a Pinjar gas drill was completed in 1990 to expose fresh bedrock on the main showing and on a second chalcopyrite bearing horizon located near the baseline. Approximately 60 cubic metres of material was excavated from the trenches. Mapping and detailed sampling of the trenches was not performed due to the weather. However, a total of 19 samples were collected, mainly from the blast trenches. The trenching helped expose the main zone on both sides of the gully. The sulphide mineral content averages ten percent through the section (Davidson, 1990). In 1993 one trench was excavated using a Kubota hoe and five blast pits were completed on steep slopes. Mapping and sampling of the trenches was performed. Approximately 110 cubic metres of material was excavated from the trenches and pits. A total of 51 rock samples were collected from various areas on the property. In 1994, 3 chip samples were collected from the west side of the Main Zone, and one to the east. A grab sample of rock float was taken to 300 m north of the Main Zone. In 1995 blast trenching exposed occurrences to the southeast of the main showing. Approximately 100 cubic meters of material was excavated from the hand pits.

According to available records, a total of 85 rock samples (grab/chip) have been collected on the property since 1989. The samples are documented in the following table. The locations of the samples have been documented on various maps, with the location of the map referenced.

Table 3: Historical Rock Samples and Values

Year	Sample #	Width	Description	Au (ppb)	Cu (%)	Map
1989	119126	75 cm chip	East bank, upper horizon	36	1.99	A-1
1989	119127	150 cm chip	East bank, lower horizon	250	1.81	A-1
1989	119128	300 cm chip	East bank	69	.12	A-1
1989	119129	200 cm chip	West bank	350	8.55	A-1
1989	84261	Grab	East bank	105	10.08	A-1
1989	84262	40 cm chip	East bank	5	2.0	A-1
1989	84263	.50 cm chip	East bank	172	9.6	A-1
1989	84264	100 cm chip	East bank	780	4.68	A-1
1989	1451	150 cm chip	East bank, lower horizon	222	2.26	A-2
1989	1452	20 cm	East bank, lower horizon	2787	6.74	A-2
1989	1453	100 cm chip	East bank, upper horizon	156	1.36	A-2
1989	1454	100 cm chip	West bank, upper section	133	1.39	A-2
1989	1455	150 cm chip	West bank	618	1.5	A-2
1989	1456	40 cm chip	West bank, chalcopryite quartz band	2084	4.1	A-2
1989	1457	Float	West bank, massive chalcopryite	2692	11.9	A-2
1990	A9162	13 cm chip	Massive sulphide pod in argillaceous horizon, cpy + py	213	3.74	A-2
1990	A9163	80 cm chip	Andesitic tuff, minor argillite intercalations	14	0.292	A-2
1990	A9164	110 cm chip	Andesitic tuff, quartz & epidote veinlets, diss. Py	28	0.672	A-2
1990	A9165	50 cm chip	Andesitic tuff & argillite, pods & lenses of cpy + py	359	7.219	A-2
1990	A9166	25 cm chip	Andesitic tuff, silica replaced, 20-30% py	133	14.8	A-2
1990	A9167	50 cm chip	Andesitic tuff, argillaceous, malachite, diss. Py	49	5.58	A-2
1990	A9168	20 cm chip	Med. Grained quartz, 10-20% sulphides, hosted by andesitic tuff & argillite	1236	0.445	A-2
1990	A9169	25 cm chip	Tuffaceous argillite, 15 to 35% cpy along laminations, quartz veins	6632	0.810	A-2
1990	A9170	Grab	Tuffaceous andesite, 15% diss. Py	67	18.3	A-2
1990	A9171	Grab	Tuffaceous andesite, 1-2% py in lenses	134	0.172	A-2
1990	18351	Grab	Tuffaceous andesite, quartz lenses, diss. Cpy	<10	0.02	A-2
1990	18352	Grab	Tuffaceous andesite, quartz lenses, diss. Cpy	<10	0.47	A-2
1990	18353	75 cm chip	Tuffaceous andesite, cpy in quartz veins	<10	0.34	A-2
1990	18354	25 cm chip	Argillaceous tuff, quartz bands, cpy blebs and veins	45	0.46	A-2

Table 3 : Historical Rock Samples and Values (cont'd)						
Year	Sample #	Width	Description	Au (ppb)	Cu (%)	Map
1990	18355	Grab	Siliceous tuff, carbonate veinlets	<10	0.012	A-2
1990	18356	Grab	Andesite tuff, minor cpy	<10	0.13	A-2
1990	18357	Grab	Andesite tuff, quartz veins, minor cpy, limonite	33	0.13	A-2
1990	18358	Grab	Mafic tuff, quartz lenses, minor cpy along foliations	<10	0.26	A-2
1990	18359	40 cm chip	Black argillaceous tuff, quartz lenses, cpy veins and blebs	457	5.26	A-2
1993	18313	Grab	Greenstone, quartz lenses, minor cpy, malachite	9	.0308	Fig. 4
1993	18314	Grab	Chloritic greenstone, minor cpy in quartz veinlets	8	.0118	Fig.4
1993	18315	Grab	Serpentinized mafic volcanic quartz-calcite veins, py cubes	22	.0124	Fig.4
1993	18316	Grab	Narrow quartz vein, limonite gouge	9	.0669	Fig.4
1993	18317	Grab	Greenstone, quartz-calcite-chlorite vein, cpy + py, malachite	>6667	.7321	Fig.4
1993	18318	Grab	Serpentinized greenstone, heavily weathered, cpy, malachite, limonite	217	1.1059	Fig.4
1993	18319	Grab	Chloritic argillite, patches of cpy + py	352	.6697	Fig.4
1993	18320	Grab	Greenstone, minor cpy	60	.0363	Fig.4
1993	18321	Grab	Gabbro, serpentinized, py	178	.0081	Fig.4
1993	18322	Grab	Fine grained peridotite, limonite	<5	.0020	Fig.4
1993	18323	Grab	Mafic volcanic, 2% py, limonite	8	.0774	Fig.4
1993	18324	Grab	Mafic tuff, quartz veins, diss. Cpy, chlorite	6	.3049	Fig.4
1993	18325	Grab	Mafic tuff, quartz veinlets, cpy + py, malachite	10	.2829	Fig.4
1993	18326	50 cm chip	Main zone, argillite, stringers & lenses of cpy + py, malachite	109	2.4	Fig. 5
1993	18327	100 cm chip	Main zone, argillite, greenstone lenses & veinlets cpy + py, malachite	943	2.6	Fig. 5
1993	18328	100 cm chip	Main zone, waxy black to brown weathered argillite, 20% lenses & veins cpy + py	516	9.0	Fig. 5
1993	18329	180 cm chip	Main zone, black argillaceous tuff, 5% cpy lenses & bands	2286	1.6434	Fig. 5
1993	18330	180 cm chip	Main zone, argillaceous and greenstone tuff, quartz veins, 3% cpy + py bands	274	1.7393	Fig. 5
1993	18331	Grab	Main zone, best mineralized argillite, 25% cpy + py	6606	21	Fig. 5
1993	18332	150 cm chip	Main zone, argillite, quartz bands, bands & lenses of cpy + py 20%, malachite, azurite	373	4.0	Fig. 5
1993	18333	150 cm chip	Main zone, same as above	844	2.8	Fig. 5
1993	18334	50 cm chip	Main zone, argillite, 5% cpy + py bands	56	3.5	Fig. 5
1993	18335	90 cm chip	Main zone, argillite, cpy + py bands	25	.9781	Fig. 5
1993	18336	120 cm chip	Main zone, greenstone & black argillaceous layers, cpy + py + quartz, malachite	44	.4908	Fig. 5
1993	18337	150 cm chip	Main zone, andesite & argillite, ands and lenses of cpy + py + quartz	1060	6.7	Fig. 5
1993	18338	Grab	Main zone, 5 cm wide quartz sulphide vein, heavily weathered, limonite	304	16	Fig. 5
1993	18339	Grab	Argillaceous tuff, bands of cpy+py+quartz, malachite, azurite	79	9.1	Fig. 4

Table 3 : Historical Rock Samples and Values (cont'd)						
Year	Sample #	Width	Description	Au (ppb)	Cu (%)	Map
1993	18340	Grab	Argillaceous tuff, quartz rich layers, 2% cpy in veinlets	23	1.0515	Fig. 4
1993	18341	Grab	Greenschist, rusty weathering, minor py, limonite	10	.0447	Fig. 4
1993	18342	Grab	Serpentinized zone, quartz-carbonate-sericite rock	10	.0318	Fig. 4
1993	18343	Grab	Quartz-carbonate-sericite rock, limonite	15	.0067	Fig. 4
1993	18344	Grab	Greenstone, quartz-calcite-chlorite veins	13	.3560	Fig. 4
1993	18345	Grab	Greenstone, quartz + cpy + py vein, limonite, 20% sulphides	993	13	Fig. 4
1993	18346	Grab	25 cm wide quartz-sulphide vein, 30% cpy + py cubes	>6667	6.4	Fig. 4
1993	18347	Grab	Greenstone, quartz banding, 2% diss. Cpy + py	37	1.1919	Fig. 4
1993	18348	Grab	Serpentinized greestone, malachite, azurite	70	.7489	Fig. 4
1993	18349	Grab	Silicified greenstone, quartz bands and lenses, minor cpy	14	.2809	Fig. 4
1993	18350	Grab	Greenschist, quartz bands, 3% cpy + py azurite	199	1.8238	Fig. 4
1993	18351	Grab	Same as above, more quartz	40	.5207	Fig. 4
1993	18352	Grab	Greenschist, quartz bands, py cubes, limonite	140	.0993	Fig. 4
1993	18353	Grab	Greenschist, minor cpy + py	18	.0174	Fig. 4
1993	18354	Grab	Greenstone, serpentinized, py	9	.0280	Fig. 4
1993	18355	300 cm chip	Foiliated greenstone, minor py	10	.0179	Fig. 4
1993	18356	250 cm chip	Greenstone, minor py	64	.0173	Fig. 4
1993	18357	200 cm chip	Greenschist, limonite	12	.0187	Fig. 4
1993	18358	200 cm chip	Greenschist, limonite	13	.0200	Fig. 4
1993	18359	200 cm chip	Greenschist	35	.0225	Fig. 4
1993	18360	300 cm chip	Quartz-carbonate-sericite zone, limonite	9	.0126	Fig. 4
1993	18361	200 cm chip	Same as above	12	.0200	Fig. 4
1993	18362	200 cm chip	Same as 18360	8	.0251	Fig. 4
1993	18363	200 cm chip	Same as 18360	10	.0211	Fig. 4
1993	18364	Grab	Greenstone, quartz-carbonate, minor cpy + py	433	.7578	Fig. 4
1994	3212	1.52 m chip	West bank mineralization main zone	1741	9.79	A-3
1994	3213	1.52 m chip	West bank mineralization main zone	187	1.61	A-3
1994	3214	1.66 m chip	West bank mineralization main zone	373	2.41	A-3
1994	3215	1.22 m chip	East bank mineralization main zone	373	5.82	A-3
1994	3216	Grab	Massive sulphides float	715	27.32	A-4

Maps A-1, A-2, A-3 and A-4 can be found in Appendix A. Figures 4 and 5 are found later in the report. The analytical certificates for the 1993 samples are also found in Appendix A.

5.3 Geochemical Work

A total of 682 soil samples were collected at 50 m intervals over the entire grid in the 1993 program. The soil varied from a poorly developed B layer to C layer. On the upland, till underlay a thin organic layer with very little B horizon development. Copper values ranged from 32 ppm to 4818 ppm. A strong anomaly 200 x 400 meters of >500 ppm copper lies on the west side of the Ellen Creek gully and extends into the Shakwak Valley. This anomaly outlines the northeasterly trending mineralization in and around the main zone. The western ends of HLEM conductors A & B, outlined from the 1990 program lie within the 500 ppm copper anomaly. West and downslope of this are several weaker copper geochem anomalies. Other spotty values lie to the east and south. (Davidson, 1993)

The gold values are quite sporadic, and range up to 1340 ppb. A moderate correlation with copper geochemical anomalies is evident.

Plots of the 1993 geochem values for copper and gold can be found in Appendix B. The analyses for the 1993 geochem samples are also found in Appendix B.

5.4 Geophysical Work

According to Davidson (1990) a 40 km (25 mile) magnetometer survey was carried out by Canadian Barranca Mines Ltd. in 1963. The data from this survey could not be found by the author.

Total magnetic field and HLEM surveys were conducted on the Ellen Property in 1990. Power (1990) summarizes the survey as follows:

The magnetic field survey covered approximately 26 line-km of grid at a 25 m station spacing and the HLEM survey covered approximately 2 line-km at a 12.5 m station spacing using a 50 m coil spacing. The EM survey was performed with a McPhar 660 VHEM at 600 Hz and 2600 Hz and located several conductors which are grouped into three trends. One is coincident with the main sulphide showing and the other two are to the east. The magnetic field survey located a strong anomaly in the northwest corner of the property.

Davidson (1990) defined the three conductors as follows:

Conductor A traces the main showing from the creek to the east. Conductors B & C are located on the upland southeast of the gully and have similar responses to that encountered in the main showing. These anomalies are potential sulphide occurrences that require further exploration.

Davidson (1990) plotted the conductors on Plate 5, which is located in Appendix A, and is referenced as Map A-2.

A total of 11 km of HLEM survey utilizing an Apex Parametrics Maxmin I-9 instrument was completed on the property in 1993, as well as 25 line km of EM-16 VLF. Davidson (1993) summarizes the 1993 survey as follows:

The HLEM survey located two weak conductors (B and C) and one strong conductor in the area of known massive sulphide occurrences. Conductor B traces the main zone from the creek to the west. Conductor C has a similar response to that encountered at the main zone but is located on the east edge of the upland. The strong conductor A has an apparent conductance in the range expected for massive sulphides, and has an apparent strike length of 300 meters. Anomaly A indicates a body less than 10 m thick which dips at a shallow angle to the north. The VLF-EM survey outlined a strong anomaly coincident with HLEM conductor A.

These anomalies are referenced on Figure 4, in this report, and on the Ellen Property Anomaly Map located in Appendix C. Complete copies of both of the geophysical reports are also located in Appendix C.

5.5 Drilling

A total of 1,547 m (5,074 feet) of drilling has been performed on the property. Table 4 summarizes the drilling.

Table 4: Summary of Drilling

Year	Company	# of Holes	Total Feet Drilled
1953	Hudson Bay	5	1,060
1966	Canadian Barranca Mines Ltd.	3	1,421
1969	Canadian Barranca Mines Ltd.	4	1,093
1995	Probe Resources	5	1,500
		17	5,074

Appendix D contains:

- Detailed drill logs for 1966, 1969 and 1995 drilling
- Sections based upon the drilling for 1995.
- Drill Hole Plan showing location of 1995 drilling.

The drilling in 1966 and 1969 tested chalcopyrite bearing horizons in andesite. Holes MC-1 to MC-3 were drilled from the base of the gully, above the main showing. Hole MC-4 appears to test an ultramafic unit for nickel. Drill holes MC-5 to MC-6 were drilled from the same setup, approximately 80 meters uphill to the west of the main showing. Drill hole MC-7 was located 30 meters lower in elevation than MC-5 & 6. Copper results from the drill holes are summarized in the following table (Davidson, 1990).

Table 5: 1960s Drill Results

Drill hole	From-To (feet)	Length (feet)	Cu (%)
DDH MC-1	59-76	17	3.15
DDH MC-2	90-124	34	1.64
Including	103-124	21	2.20
DDH MC-3	80-97	17	1.20
DDH MC-5	203-206	3	1.10
DDH MC-6	205-219	14	0.66
DDH MC-7	212-217	5	0.17
And	230-235	5	0.73

Five diamond drill holes totaling 1,500 feet were drilled in 1995 from 3 sites. Drill holes 95-1 & 95-2 were drilled from the same pad on the west side of Ellen Creek and drill hole 95-3 was drilled from a pad on the east side of the gully above Ellen Creek. Drill holes 95-4 & 95-5 were drilled from a pad on the road up Ellen Creek. Drill hole locations and drill sections are located in appendix D.

Table 6: 1995 Significant Drill Results

Drill hole	From-To (feet)	Length (feet)	Description	Au (ppb)	Cu (%)
DDH 95-1	87-91	4	Foliated chloritic argillaceous tuff, quartz bands, stringers and blebs of massive fine grained chalcopyrite and pyrrhotite	803	3.47
	91-94	3	Same as above	100	1.65
	94-101	7	Same as above	207	1.15
	101-105	4	Pale green andesitic tuff, sericitized, quartz banding, stringers and blebs of massive and fine grained chalcopyrite	93	1.19
	87-105	18			1.94
DDH95-2	142-152	10	Foliated chloritic argillaceous tuff, quartz banding, stringers and blebs of massive fine grained chalcopyrite and pyrrhotite	6	0.365
	152-157	5	Same as above	36	1.67
	157-160	3	Same as above	106	1.22
	160-165	5	Same as above	25	0.898
	165-170	5	Same as above	49	0.572
	145-170	25			0.876
DDH95-3	175-180	5	Andesitic tuff, sericitized, epidote banding, a few chalcopyrite layers	6	0.416
	180-190	10	Same as above	<5	0.057
	190-197	7	Foliated chloritic argillaceous tuff, quartz banding, stringers and blebs of massive fine grained chalcopyrite and pyrrhotite	<5	0.351
	197-204	7	Same as above	2098	1.960
	204-210	6	Andesitic tuff, sericitized, quartz banding, epidote, a few chalcopyrite and pyrrhotite stringers and blebs	48	0.422
	210-220	10	Same as above	16	0.216
	220-230	10	Same as above	9	0.090
	230-240	10	Same as above	<5	0.204
	240-250	10	Same as above	8	0.178
	190-210	20			0.935

Drill core from 95-1 to 95-3 is stored in the core library in Whitehorse. Drill holes 95-4 and 95-5 intersected a serpentinite sill that assayed an average of 0.18% nickel.

6. Regional Geology

Davidson (1995) describes the regional geology as follows:

The Mt. Decoeli area lies east of the Denali Fault, the structural division between the Coast Plutonic Belt and the Wrangellia Terrane in the Kluane Ranges. The Shawkak Valley lies east of Mt. Decoeli. The wedge of rocks lying between the Denali Fault and the Shawkak Valley is an assemblage of Jurassic and Triassic volcanic and sedimentary rocks interpreted as part of the Alexander Terrane. The geology of the district was released in Open File #831 by the G.S.C. (see Figure 3).

Mount Decoeli consists of a thick andesitic to mafic volcanic sequence of Triassic age unconformably overlain by Jurassic Dezadeash Group shale, limestone and slate. The Triassic rocks are tuffaceous to massive layered andesites, variably altered to greenschist. Andesite, diorite, serpentinite and peridotite sills occur in the sequence.

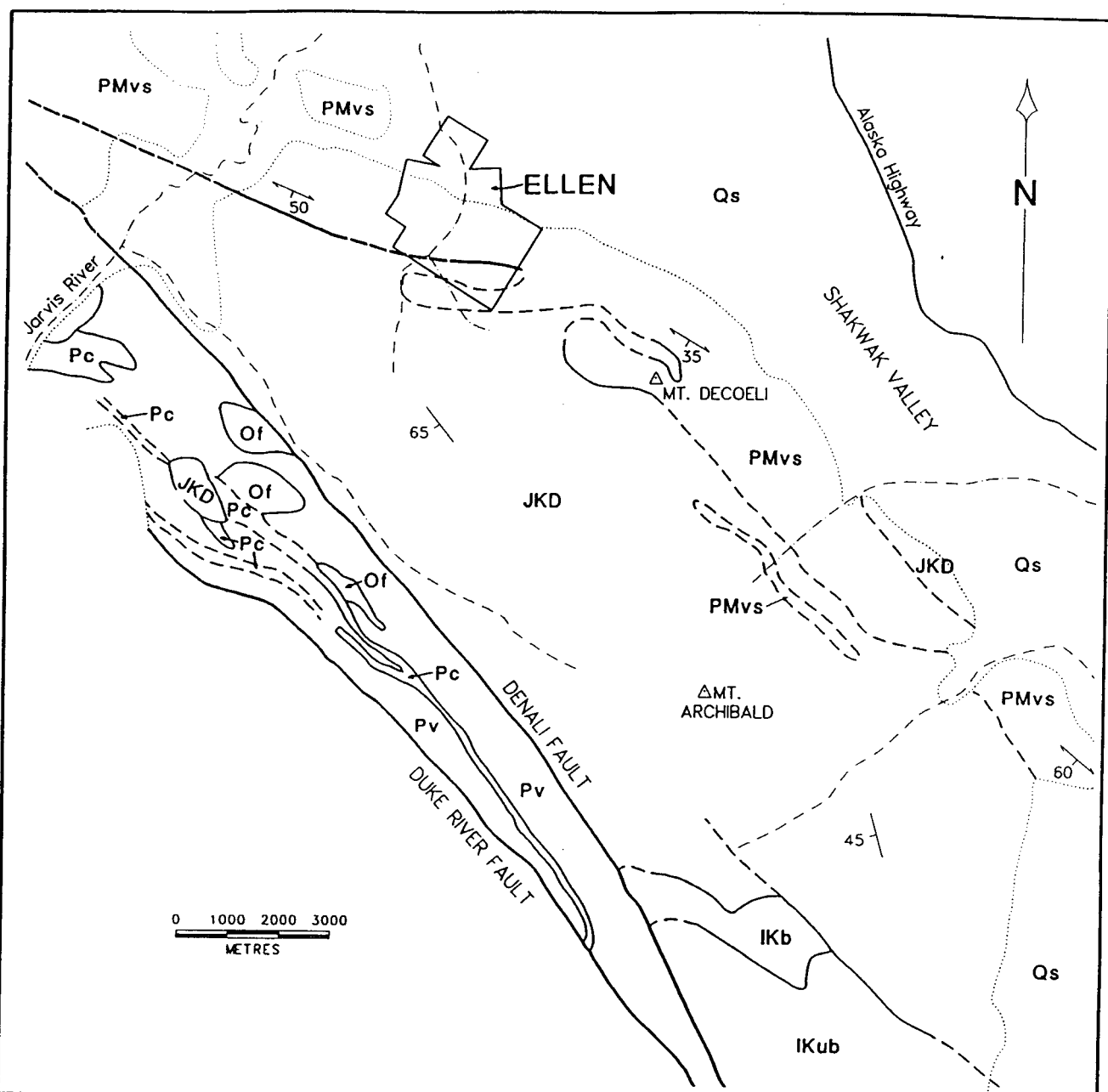
Thrust faults mark the lower contact between volcanic rocks and Paleozoic metamorphic basement rocks. Elongate bodies of copper and nickel mineralization occurs within the basal section of the ultramafic sills and in adjoining rocks. Copper-gold quartz veins occur in the hanging wall of the ultramafic bodies.

7. Property Geology

The property geology is described by Davidson (1995) as follows:

The property is primarily underlain by a thick layered felsic to mafic volcanic sequence consisting of andesite flows, andesitic and mafic tuffs, and thin layers of tuffaceous argillite. The volcanics have been variably foliated forming quartz sericite schist and narrow bands of black chlorite schist. Epidote and quartz banding is common. A few serpentine bands occur in more mafic sections. Diorite, andesite and fine grained peridotite sills occur within the volcanics. The sills are emplaced along thrust faults at the base of the Triassic volcanic sequence. The units strike 110° and dip 30° to 50° to the south.

At the south end of the claim block the volcanics are conformably overlain by limestone and schists containing sections of green tuffaceous volcanics. The sediments are cut by narrow quartz carbonate veins sometimes forming stockworks.



LEGEND

STRATIFIED ROCKS

QUATERNARY

Qs undivided surficial deposits

JURASSIC & CRETACEOUS

JKD Dezadeash Group
greywacke, sandstone,
siltstone, argillite,
conglomerate

PALEOZOIC &/or MEZOZOIC

PMvs greenstone, greenschist,
minor argillite and greywacke

CARBONIFEROUS TO PERMIAN

Pc Skolai Group
Hansen Creek Fmn. limestone
Pv Station Creek Fmn. volcanics

INTRUSIVE ROCKS

TERTIARY

Of felsite, Qtz. latite
porphyry

LOWER CRETACEOUS

IKb, Pyroxenite Creek
IKub Ultramafic Complex

SYMBOLS

Geological boundary, defined, approx. ————

High angle fault, defined, approx. ————

Limit of outcrop ————

Bedding, strike-dip ————

Foliation, cleavage, strike-dip ————

65
60

Midnight Mines Ltd.

REGIONAL GEOLOGY

Ellen Property

Tintina Consultants

Scale 1:125,000

NTS: 115 A/13

Modified from Fig. 3

Davidson (1995)

Date: March 2002

Figure 3

Along the cliff walls of Ellen Creek, block faulting has caused minor displacement of the volcanic layers. Poor core recovery was common across these minor structures. A strong foliation fabric is developed in the units, parallel to the trend of the Shakwak Valley. Greenschist alteration is prevalent as chlorite and sericite. Serpentinization is common towards the base of the volcanic sequence consisting of bands and bladed serpentine and quartz-carbonate veining.

The serpentinite sill intersected in drill holes 95-4&5 occurs in sericite schist and graphitic siltstone. Mylonite, talc and graphite gouge occur in the fault zone.

The property geology can be seen in the "property plan" from Davidson (1993) in Figure 4 on the next page.

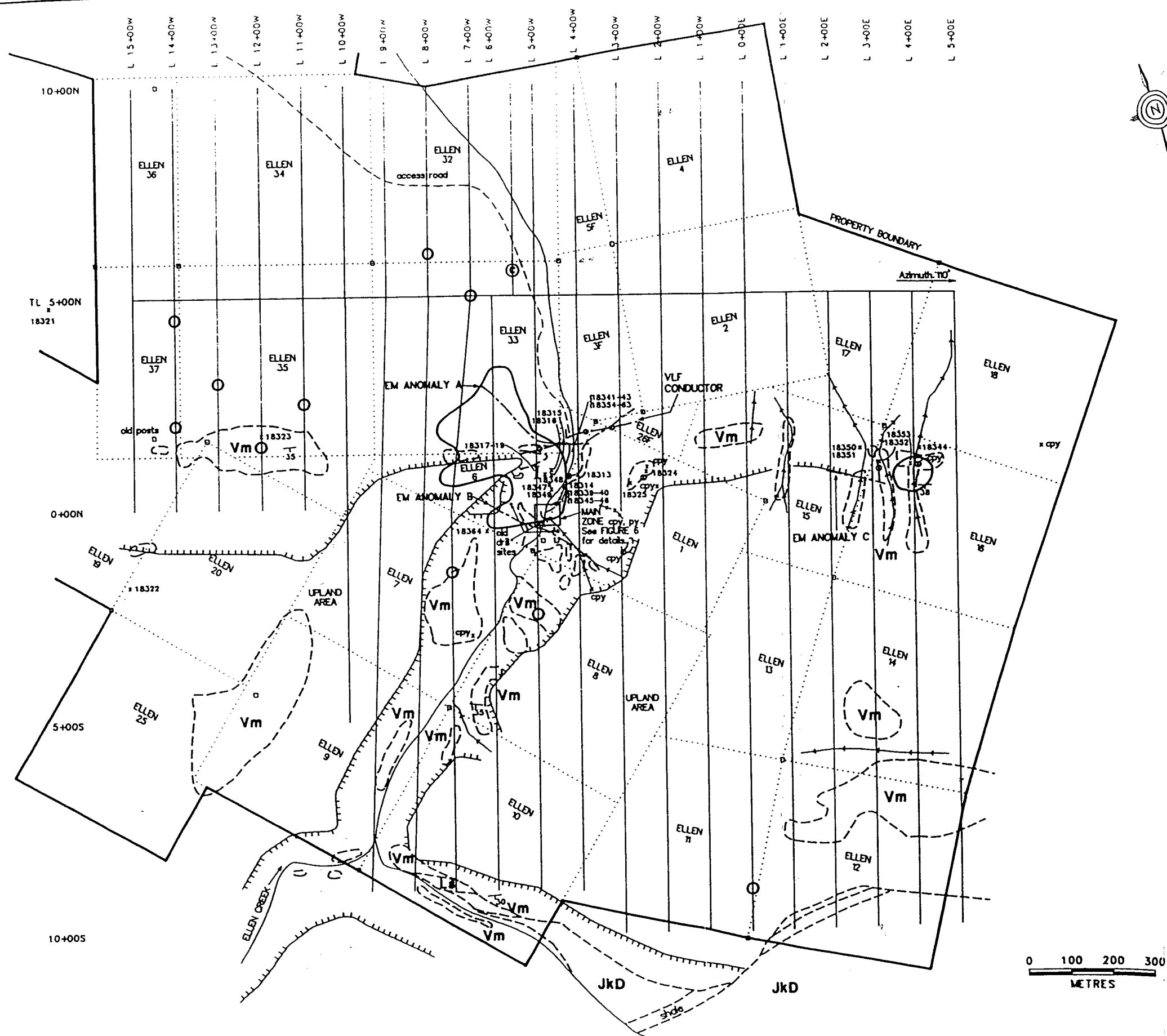
8. Mineralization

Davidson (1993) documents the mineralization as follows:

Mineralization consists of veins and blebs of massive to disseminated chalcopyrite, pyrrhotite and pyrite hosted by layers of tuffaceous argillite and silicified greenstone. At the main showing (see Fig. 5) mineralization is exposed on both sides of the gully. On the east side three distinct layers of chalcopyrite bearing chloritic argillite are hosted by sericitic andesite tuff. The units strike 110° and dip 20° to the south. The lower mineralized horizon is about 3 m thick, composed of stringers and stockworks of chalcopyrite, pyrite, and quartz with several massive layers of chalcopyrite and pyrrhotite up to 25 cm thick. The total sulphide content averages 5-10% over 3 m. The upper two layers are 0.5-1 m thick and contain blebs and veins of chalcopyrite, pyrrhotite and quartz. Chip samples 18332-35 from the above layers assayed 0.98% to 4.0% copper and 25 to 844 ppb gold.

On the west side of the gully the mineralized zone is approximately 10 m thick, striking 65° and dipping 40° south. Stringers, bands and veins of chalcopyrite, pyrrhotite and quartz are exposed in a rock face composed of black chloritic tuff and sericitized andesite. The sulphides are weathered and patches of vivid azurite and malachite stain the rock. Several 10-20 cm wide quartz-chalcopyrite veins are concordant with the bedding. Chip samples 18326-30 & 19337 on the west side of the creek produced copper values of 1.6-9.0% and gold values of 109-2286 ppb. A grab sample of a quartz-chalcopyrite vein ran 21% copper and 6606 ppb gold.

Along strike approximately 100 meters northwest of the main zone patchy mineralization is exposed in a blast pit over a width of 10 meters. Grab samples 18317-19 assayed 0.67-1.1% copper and 217->6667 ppb gold. The high gold analysis was from a narrow quartz calcite vein.



Midnight Mines Ltd.

PROPERTY GEOLOGY

Ellen Property

Tintina Consultants

Modified from Fig. 5, Davidson (1993)

Scale 1:10,000

Date: March 2002

NTS: 115 A/13

Figure 4

JkD

JURASSIC and CRETACEOUS
Mica schist, slate.

PMvs

PALEOZOIC and/or MESOZOIC

Vm Mafic volcanics, tuffs,
greenschist, minor argillite
and greywacke. Peridotite.

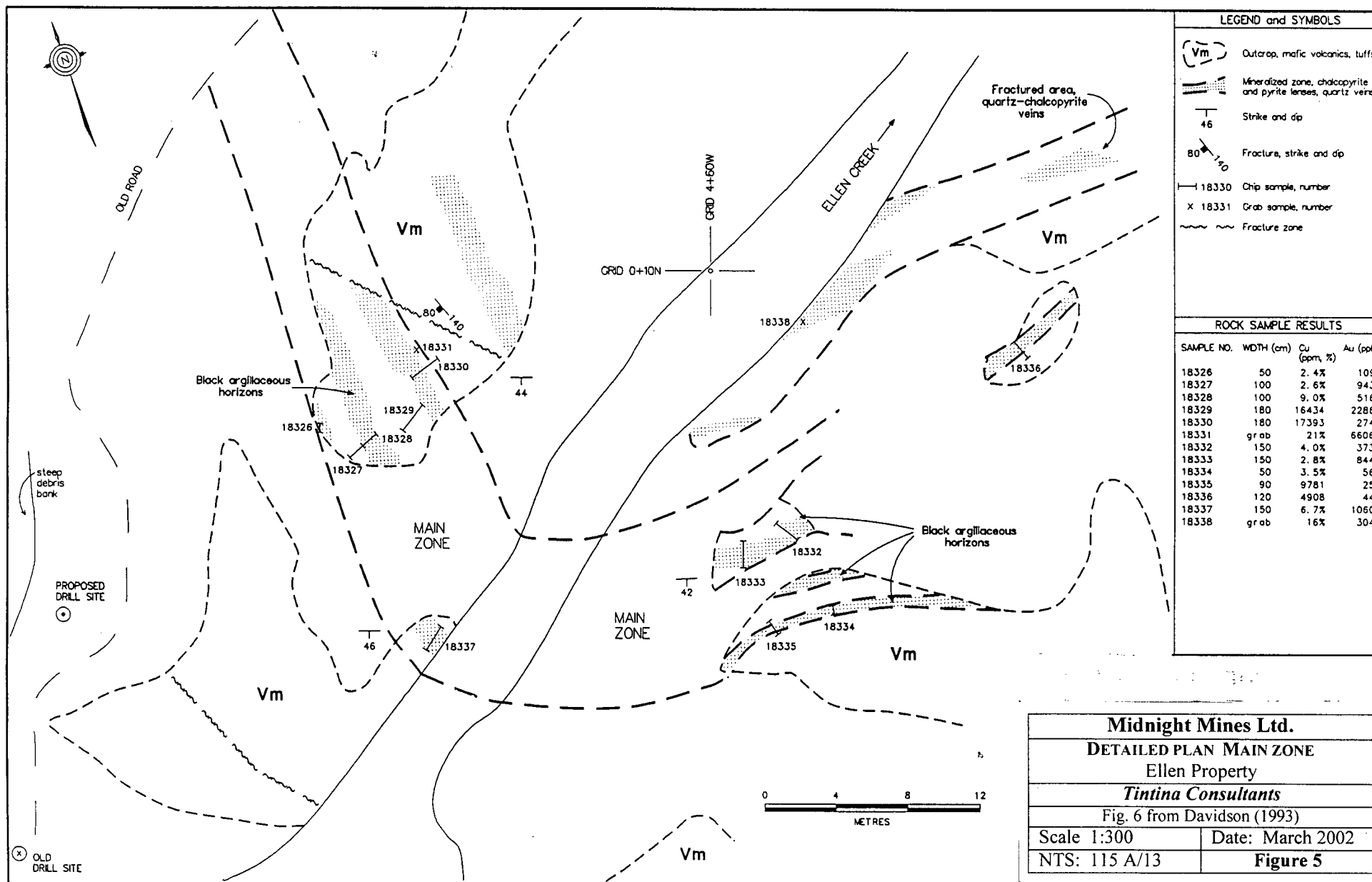
Ls Limestone and meta-
sedimentary rock.

SYMBOLS

- Outcrop, strike and dip
- Cu geochem >500 ppm
- HLEM conductor
- VLF conductor
- Blast or backhoe trench or pit
- Rock sample location, number
- Narrow gully
- Edge of upland plateau
- Claim boundary and posts
- Camp

ROCK SAMPLE RESULTS

SAMPLE NO.	WIDTH (cm)	Cu (ppm,%)	Au (ppb)
18313	grab	303	9
18314	grab	118	8
18315	grab	124	22
18316	grab	669	9
18317	grab	7321	>6667
18318	grab	11059	217
18319	grab	6697	352
18320	grab	363	60
18321	grab	81	178
18322	grab	20	<5
18323	grab	774	8
18324	grab	3049	6
18325	grab	2829	10
18339	grab	9.1%	79
18340	grab	10515	23
18341	grab	447	10
18342	grab	318	10
18343	grab	67	15
18344	grab	3560	13
18345	grab	13%	993
18346	grab	6.4%	>6667
18347	grab	11919	37
18348	grab	7489	70
18349	grab	2809	14
18350	grab	18238	199
18351	grab	5207	40
18352	grab	993	140
18353	grab	174	18
18354	grab	280	9
18355	300	179	10
18356	250	173	64
18357	200	187	12
18358	200	200	13
18359	200	225	35
18360	300	126	9
18361	200	200	12
18362	200	251	8
18363	200	211	10
18364	grab	7578	433



Downstream of the main showing chalcopyrite veins are present along the walls of the gully for several hundred metres. The veins usually occur in black tuffaceous layers or in quartz rich layers. A well mineralized horizon 0.5-3.0 m thick outcrops on both sides of the creek approximately 75 meters north of the main zone. The mineralization can be traced for 100 meters strike length. It consists of argillaceous tuff and greenstone containing blebs and veins of chalcopyrite in a quartz stringer zone. The sulphide mineral content of this zone ranges from 1-2%. Several well mineralized quartz veins of 10-30 cm width occupy fractures concordant with bedding. Grab samples 18339-40, 18345-46 from a pit blasted east of Ellen Creek along this trend contain up to 20% chalcopyrite + pyrite. A quartz vein sample assayed 6.4% copper and >6667 ppb gold.

Further downstream a backhoe trench was excavated on a strong HLEM conductor (Conductor A) on the west side of the Ellen Creek valley. Bedrock consists of weathered greenschist in contact with a band of heavily oxidized, broken quartz-carbonate-sericite gouge. Chip samples 18360-64 of the quartz-carbonate returned low copper and gold values but grab sample 18343 assayed 0.1% nickel and 1129 ppm chromium.

East and 200 m along strike of showings in the Ellen Creek gully, a 3 m wide zone of chalcopyrite bearing quartz occurs in siliceous tuff at Grid 2 + 65 W, 1 + 15 N. A pit was blasted at this occurrence and grab samples assayed 0.3% copper with trace gold. Pits were also blasted 500-700 meters further to the east on chalcopyrite occurrences in several steep gullies. Sample 18350 ran 1.8% copper.

Davidson (1995) documented the following:

Ultramafic rocks at the base of the metavolcanics contain fine blebs and veinlets of pyrrhotite and minor pyrite. The total sulphide content rarely exceeds 1%. The pyrrhotite occurs as fine plates and films along fractures and cleavage planes in serpentinite.

9. 2001 Exploration Program

The 2001 exploration program on the Ellen Property was conducted in two phases during September and October 2001. The programs were conducted from an off-site camp with personnel hiking approximately 2 kilometres up the access road from a culvert which had washed out in heavy rains in 2000-2001. The existing camp on the property is in good repair, although it has not been used in recent years.

The 2001 work program on the Ellen Property consisted of prospecting, hand trenching and sampling. During the September program, traverses were taken along the face of the hill to the northwest and southeast of Ellen Creek.

Malachite and azurite in float was found in both directions, at several different elevations along the face. Traverses were also undertaken on the upland plateau area, to the northwest of the main showing in an attempt to locate rock which outcropped through the glacial veneer. Again, float containing malachite, azurite and rare chalcopyrite was recovered, but no in place mineralization was found. These extensive occurrences of copper mineralization in float strongly suggest the presence of undiscovered areas of in place mineralization. Three samples (2956-2958) were taken on the traverse to the southeast of Ellen Creek and three samples were collected to the northwest (2959-2961) in September. All of the samples were collected along the face of the escarpment, often where it was cut by small watercourses, exposing material under the moss and buckbrush.

In October the property was visited by R. Stack and B. Harris conducting another program of prospecting and hand trenching. Prospecting traverses were undertaken on the portion of the upland surface and escarpment face southeast of Ellen Creek. The area as far to the southeast, as what would be line 6+00E was prospected, as well as several creek gullies containing poorly exposed bedrock. Several good sized pits were excavated by hand along the escarpment facing north to the southeast of Ellen Creek. Chip samples containing massive chalcopyrite, malachite and azurite were taken from narrow beds (~8") in argillites and andesites within the pits. More extensive trenching was impossible due to the presence of permafrost on these north facing slopes and difficulty of trenching without explosives. The October sampling was all done from the material excavated from the hand trenches. Samples 2951-52 were taken from Pit 1, sample 2953 was taken from Pit 2. Pit 3, which is located within the valley of Ellen Creek, also provided two samples (2954-2955).

Although narrow when found in place (in pits 1 and 2) and intermittently where in float, this mineralization is extensive throughout the upland area. The presence of bedded sulphides found up strata from the highest drill collar (Hole 2, 1995) clearly shows the potential for future discovery of stratabound and strataform mineralization with the characteristics of a volcanogenic massive sulphide.

Table 6 on the following page summarizes the 2001 samples collected. Figure 6 shows the location of samples collected and the hand trenches excavated during the 2001 program. The samples from the 2001 program have yet to be assayed and will be reported in the future.

Table 6: 2001 Rock Samples

Sample #	Mineralization	Description
2951	Qtz, Az, Mal	Silicified chloritic tuff with quartz banding and minor epidote
2952	Cpy	Heavily oxidized, pyritized altered "argillite"
2953	Mal, Az	Pale green silicified chlorite with quartz blebs
2954	Qtz, Cpy	Heavily oxidized altered argillite
2955	Az, Mal	Wallrock, light grey-green chloritic tuff
2956	Qtz, Cpy, Mal, Az	Grab sample, quartz-carbonate banding with cpy and pyrite, minor malachite and azurite
2957	Qtz, Mal, Cpy	Float grab; carbonate veining with heavy malachite staining and minor chalcopyrite
2958	Mal, Cpy	Float grab, fine grained dark grey argillite with blebs of chalcopyrite and malachite
2959	Mal, Az, Cpy	Grab; dark green argillite with malachite and azurite and minor pyrite, chalcopyrite
2960	Mal, Cpy	Grab; dark green andesite with bands of pyrite and chalcopyrite
2961	Heavy Mal, Cpy	Grab float; dark green andesite with minor pyrite and chalcopyrite

10. Discussion

The drill programs and surface exploration have partially defined the main zone of mineralization composed of beds, stringers and blebs of chalcopyrite and pyrrhotite carrying low grade gold values over a 5-10 metre width. The mineralization is volcanogenic massive sulphide occurring in a mafic volcanic sequence. Drill intersections from the previous phases of drilling, when added to geochemical and geophysical targets along strike provide an interesting target with good potential for a large tonnage VMS deposit.

The strong HLEM anomaly down section of the main showing located graphitic siltstone and schist hosting a serpentinite sill carrying low grade nickel values. This sequence marks a thrust fault underlying the mafic volcanic rocks. This and other thrust faults along the west side of the Shawkak Valley are good targets for Cu-Ni-Pt-Pd mineralization. The presence of low grade nickel mineralization in the drill holes (95-4 and 95-5) averaging 0.18% nickel is also interesting in that quite often throughout the Kluane Ultramafic Belt, PGE mineralization is found with low grade nickel and higher grade copper. Mineralization farther along the belt is found to be intermittent with higher grade copper-nickel values found at the base of the sill.

11. Recommendations

Further prospecting and blast trenching should be done along the strike of the beds and structures above and below the mineralized main zone. The same initial program should also be carried out on the area locally known as "Joe's Showing" (approximately L6+00E & 1+ 100 N) and the EM anomaly C from the 1995 geophysical survey. These areas, although found in previous programs, were never followed up by trenching, even though they are surrounded by surface sulphide showings. Pits 1 and 2 from the 2001 program, which are located upstrata from the highest drill collar (hole 95-2), should also be

followed up by more intensive prospecting and blast trenching. The narrow beds exposed could be part of a more extensive stacked series of beds.

The black "leader bed" on the hanging wall side of the sulphide bed in the main zone (discovered in 1993, personal communication, Trevor Bremner, P. Geol.) should also be noted when it occurs in other areas of the property. This 2" thick bed indicates that this is a bedded VMS type deposit and its location as a possible mappable horizon should be followed up on.

Additional grid geophysical surveys along the strike of the main zone would help develop future drill targets.

Follow up work (mag surveys) are recommended to determine the presence of higher grade nickel mineralization along the thrust fault which was identified by the 1995 drilling of an HLEM anomaly. VLF-EM surveys will also identify the edges of the sill and other structural features which may be important as controls for mineralization. As well as higher grade nickel mineralization these sills have been found throughout the Kluane ultramafic belt to be excellent hosts for high and low grade Cu-Ni-PGE+/- Au mineralization. The thrust faults along the west side of the Shawkak valley are also good targets for Cu-Ni mineralization.

Certificate

I, SUSAN PATRICIA CRAIG, of the City of Whitehorse, in the Yukon Territory,
HEREBY CERTIFY:

1. That I am consulting geologist.
2. That I am a graduate of Lakehead University (M.Sc. Geology, 1991) and the University of Calgary (B.Sc., Geology, 1986).
3. That I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia.
4. That I have been engaged in mineral exploration and development on a full time basis for 10 years in the Yukon and British Columbia.
5. That I have no interest, direct or indirect in the properties or securities of Midnight Mines Ltd. nor do I expect to receive such interest.

SIGNED at Whitehorse, Yukon this 29th day of March, 2002

Susan P. Craig

Susan P. Craig, P. Geo.



Statement of Costs

2001 Work

Prospecting

Bill Harris, 5 days @ \$300/day	\$1,500
Ron Stack, 3 days @ \$300/day	\$900

Transportation

Truck Rental, 8 days @ \$100/day	\$800
Fuel	\$260

Food

8 days @ \$35/day	\$280
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Report

	<u>\$1,300</u>
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Total	\$5,040
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References

Canadian Barranca Mines Ltd. (1966) Drill Logs, Assessment File 091313.

Davidson, G. (1990) Summary Report on the Ellen 1-20, 25-38 Claims, for R. Stack-Kincora Syndicate.

Davidson, G. (1993) Assessment Report on the Ellen 1-20, 25-37 Claims, for Probe Resources Inc.

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Harjay Exploration Ltd. (1989) Property Plan

Power, M. (1993) HLEM and VLF Survey on the Ellen Property, for Probe Resources Inc.

Power, M. (1990) A Total Magnetic Field and HLEM Survey of the Ellen Claims, for G. Davidson.

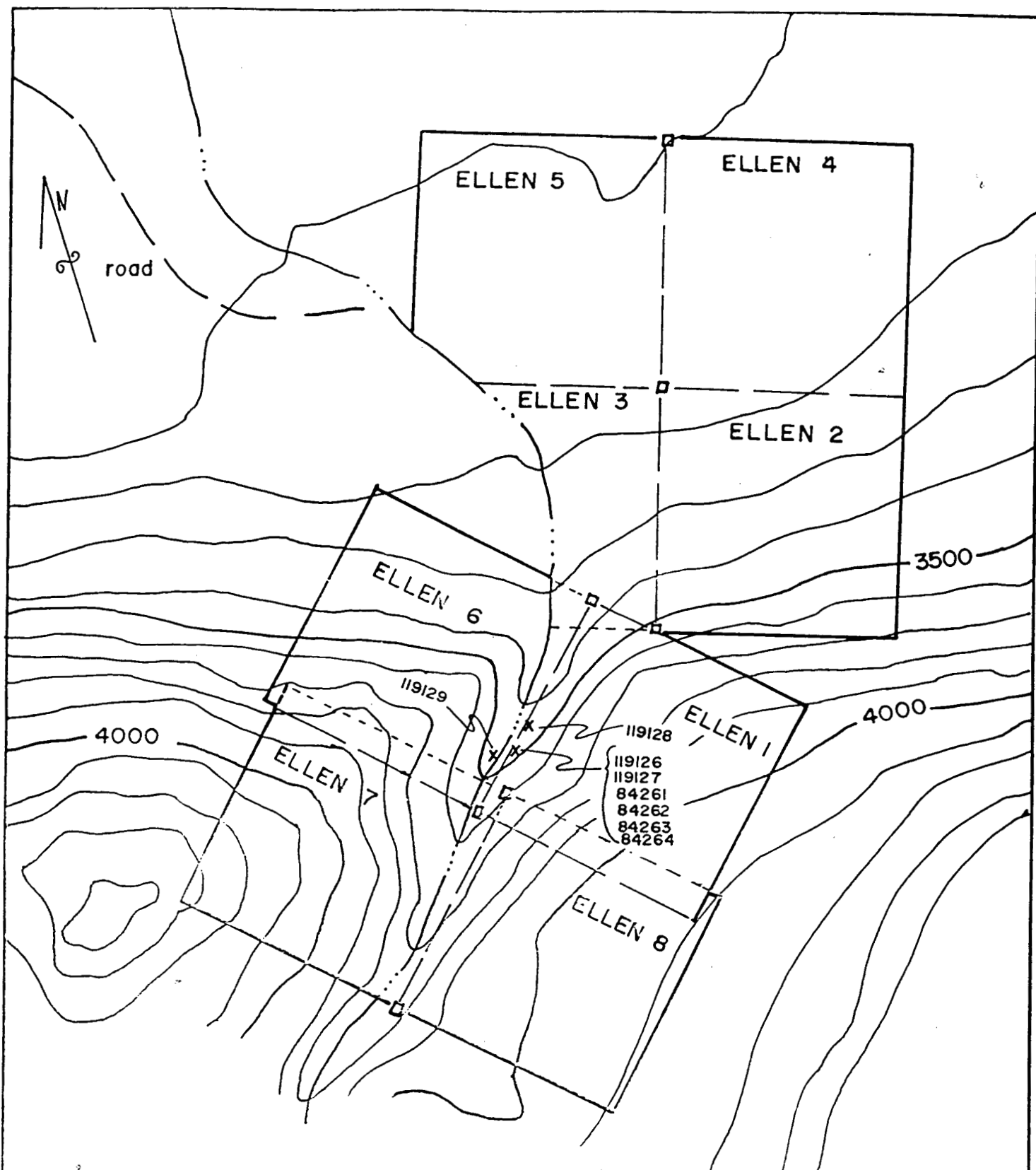
Probe Resources Ltd., Public Offering Document (1995)

Tully, D.W. (1994) Report for Probe Resources; selected figures only available

Appendix A
Rock Samples
Plan Maps/Figures

- A-1: Property Plan, 1:10,000 (Fig. 6 taken from Harjay Exploration, 1989)
- A-2: Geology, Grid and Sample Plan, 1:5,000 (Plate 5 taken from Davidson, 1990)
- A-3: Detailed Plan, Main Zone, 1:300 (Figure 12 taken from Probe Resources, 1995)
- A-4: Property Plan, 1:10,000 (Figure 11 taken from Tully, 1994)

1993 Analyses (taken from Davidson, 1993)



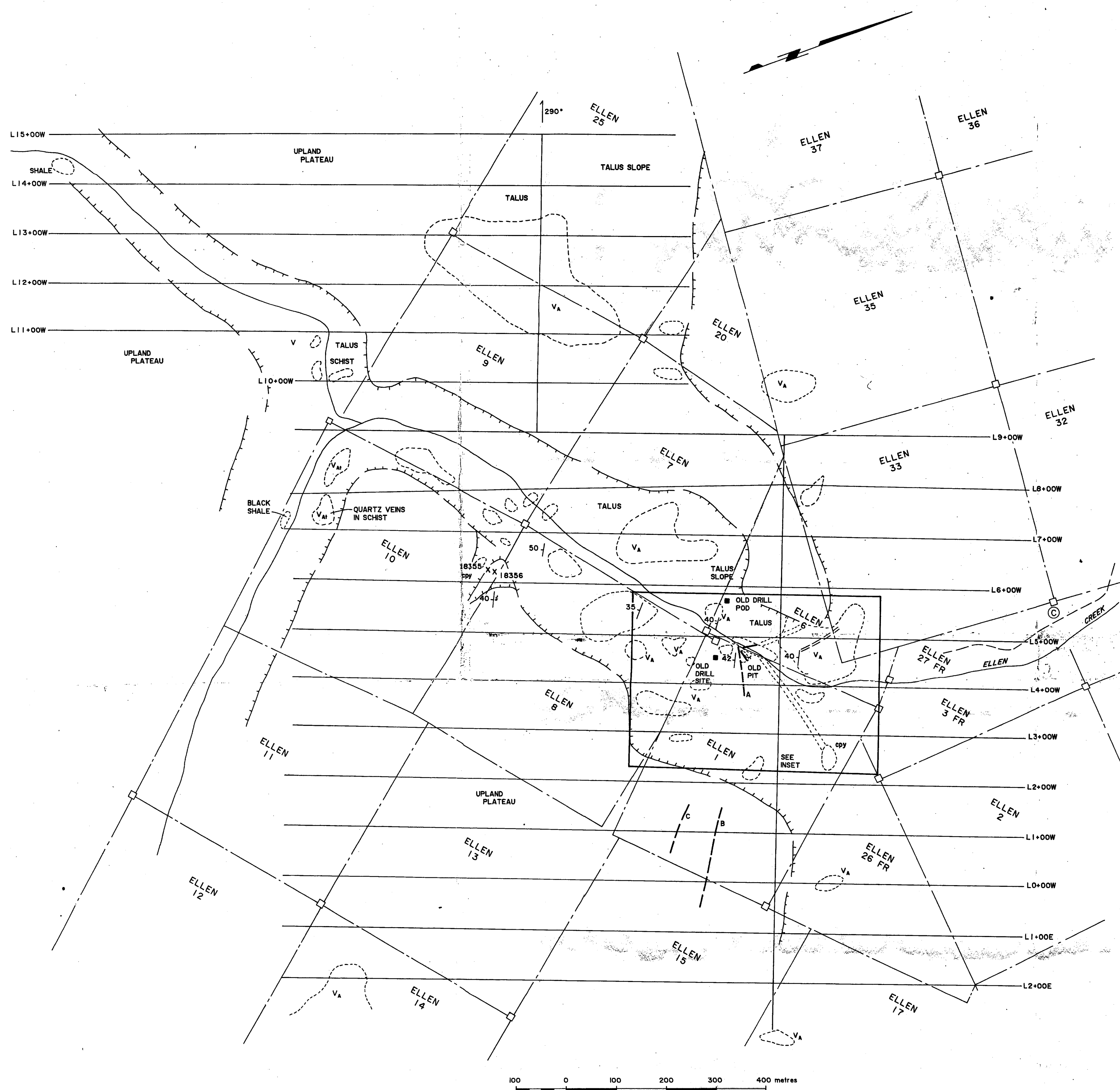
SAMPLE NUMBER	WIDTH	Alt	Fe	Pd	Cu% NI	Cr
119126	.75m	36			1.95	
119127	1.5 m	250			1.01	
119128	3.0m	08			.12	
119129	2.0m	310			8.55	
84261	grc.	105	40	10	10.08	57 412
84262	.4m	5	100	2	2.0	77 360
84263	.5m	172	30	15	9.6	64 412
84264	1.0m	700	15	20	4.68	40 523

HARJAY EXPLORATION LTD.

PROPERTY PLAN

JARVIS RIVER, YUKON TERR.

Scale 1:10,000	Tech.	Date Oct. 89
ITS 115 A 13	Draft. GD	Fig. 6



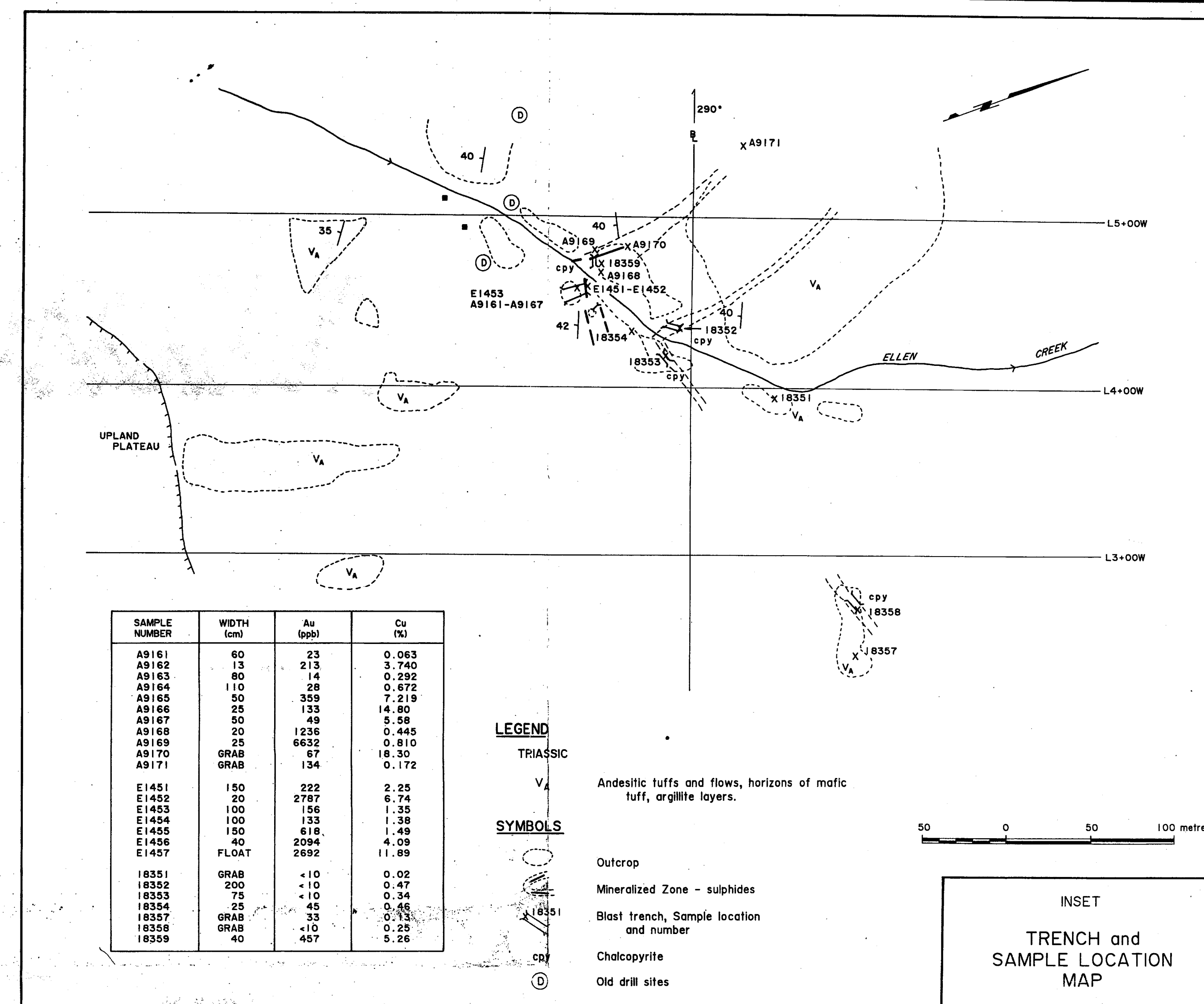
SAMPLE NUMBER	WIDTH (cm)	Au (ppb)	Cu (ppm)
18355	GRAB	<10	117
18356	GRAB	<10	1290

LEGEND
TRIASSIC

V_A Andesite, tuff, some mafic tuff, a few argillaceous layers.

SYMBOLS

- Outcrop
- Chalcopyrite-pyrite veins and blebs in argillaceous tuff
- 50° Geological strike and dip
- A HLEM anomaly
- Claim boundary post
- Edge of upland
- Road
- ⊙ Camp
- cpy Chalcopyrite



SAMPLE NUMBER	WIDTH (cm)	Au (ppb)	Cu (%)
A9161	60	23	0.063
A9162	13	213	3.740
A9163	80	14	0.292
A9164	110	28	0.672
A9165	50	359	7.219
A9166	25	133	14.80
A9167	50	49	5.58
A9168	20	1236	0.445
A9169	25	6632	0.810
A9170	GRAB	67	18.30
A9171	GRAB	134	0.172
E1451	150	222	2.25
E1452	20	2787	6.74
E1453	100	156	1.35
E1454	100	133	1.38
E1455	150	618	1.49
E1456	40	2094	4.09
E1457	FLOAT	2692	11.89
18351	GRAB	<10	0.02
18352	200	<10	0.47
18353	75	<10	0.34
18354	25	45	0.46
18357	GRAB	33	0.13
18358	GRAB	<10	0.25
18359	40	457	5.26

LEGEND

TRIASSIC

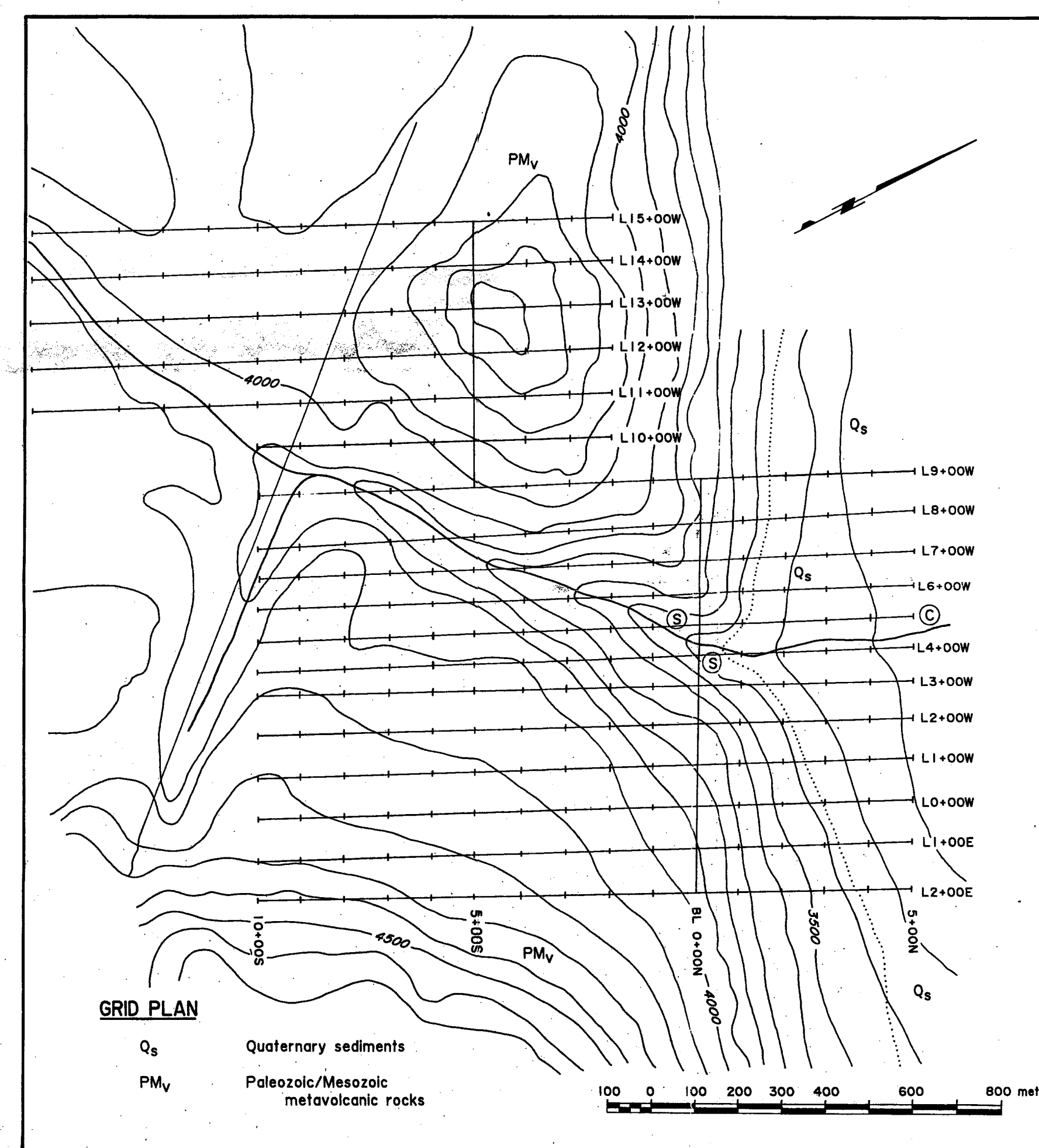
V_A Andesitic tuffs and flows, horizons of mafic tuff, argillite layers.

SYMBOLS

- Outcrop
- Mineralized Zone - sulphides
- Blast trench, Sample location and number
- Chalcopyrite
- Old drill sites

50 0 50 100 metres

INSET
TRENCH and
SAMPLE LOCATION
MAP



GRID PLAN

Q_s Quaternary sediments
PM_v Paleozoic/Mesozoic metavolcanic rocks

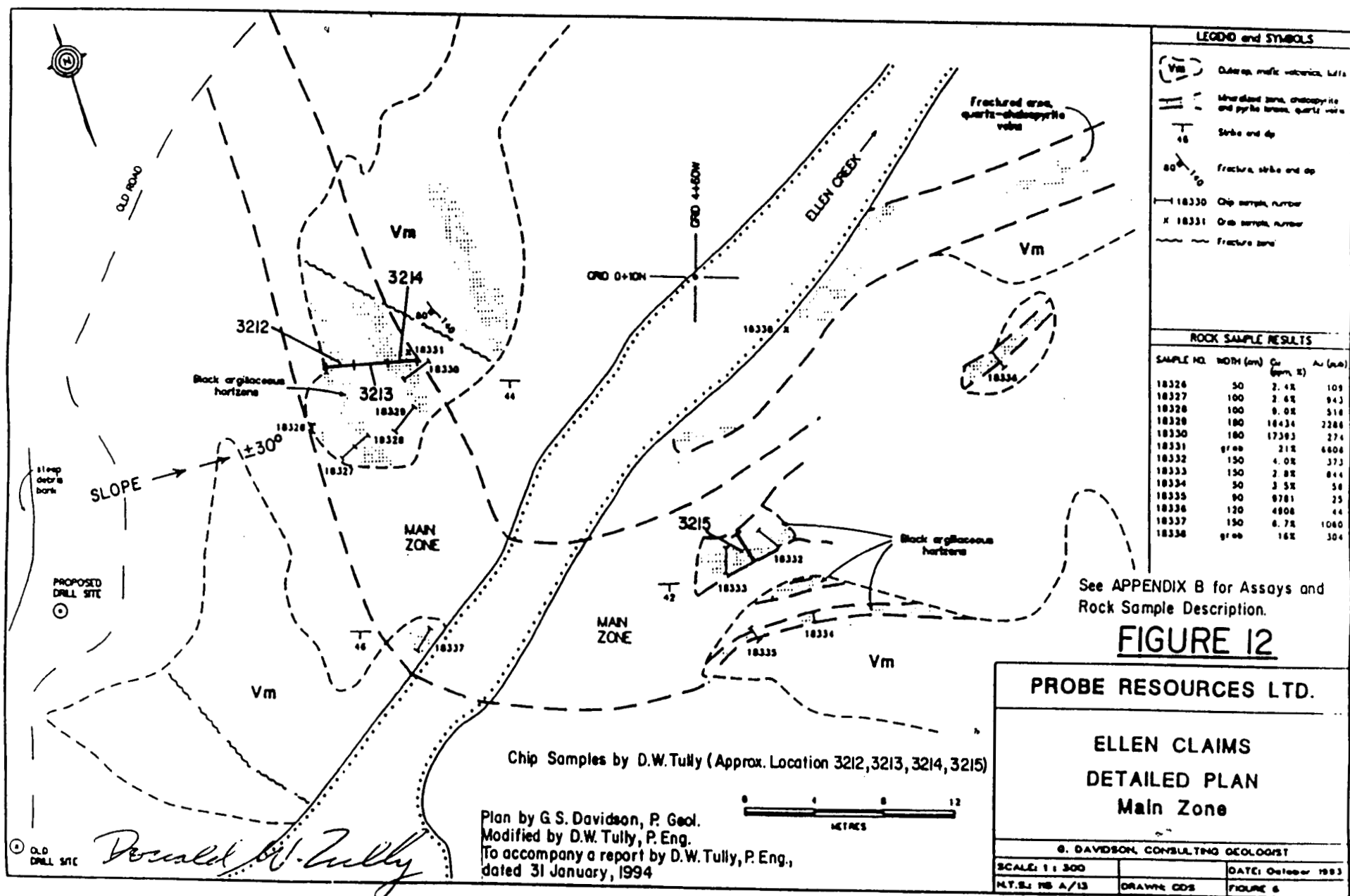
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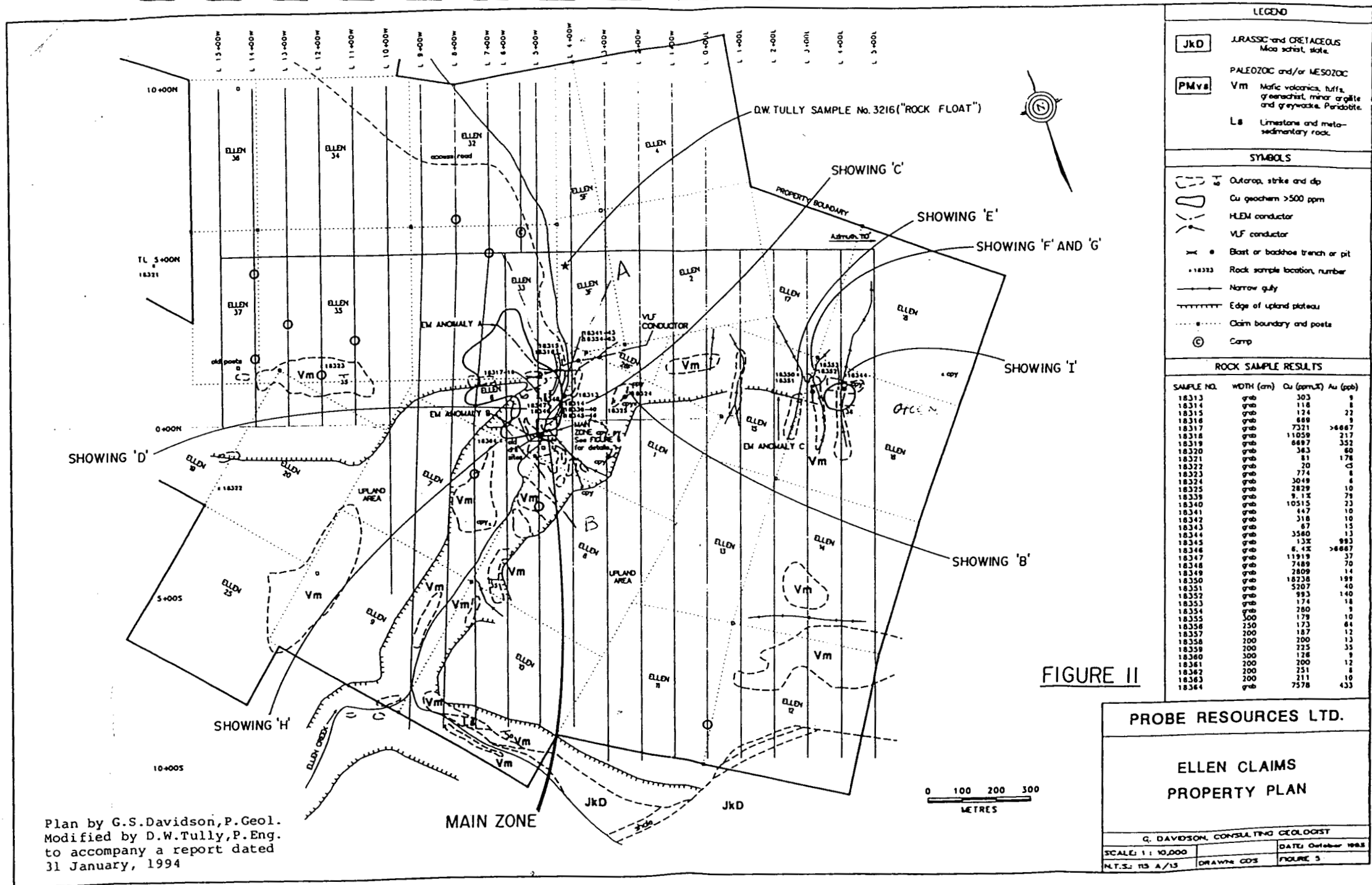
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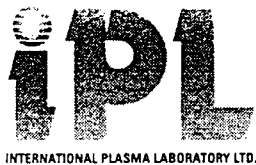
ELLEN PROPERTY

GEOLOGY, GRID
and
SAMPLE PLAN

N.T.S. : TECH. : G. DAVIDSON DATE : DECEMBER 1990
SCALE : AS NOTED DRAFTING : HANDESIGN FIGURE No. : 094258







CERTIFICATE OF ANALYSIS
iPL 93J1402

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Northern Analytical Laboratories

Out: Oct 20, 1993 Project: WO 00346
In : Oct 14, 1993 Shipper: Norm Smith
PO#: Shipment: ID=C030901

41 Samples

Raw Storage: 0= Rock 0= Soil 0= Core 0=RC Ct 0= Pulp 41=Other
Pulp Storage: -- -- -- -- -- 03Mon/Dis
12Mon/Dis

[057011:55:15:39102093]
Mon=Month Dis=Discard
Rtn=Return Arc=Archive

Msg: ICP(AqR)30

Msg: Data Disk

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ATT: Norm Smith

Ph:403/668-4968
Fx:403/668-4890

Analytical Summary

##	Code	Met	Title	Limit	Limit	Units	Description	Element	##
		hod		Low	High				
01	721P	ICP	Ag	0.1	100	ppm	Ag ICP	Silver	01
02	711P	ICP	Cu	1	20000	ppm	Cu ICP	Copper	02
03	714P	ICP	Pb	2	20000	ppm	Pb ICP	Lead	03
04	730P	ICP	Zn	1	20000	ppm	Zn ICP	Zinc	04
05	703P	ICP	As	5	9999	ppm	As ICP 5 ppm	Arsenic	05
06	702P	ICP	Sb	5	9999	ppm	Sb ICP	Antimony	06
07	732P	ICP	Hg	3	9999	ppm	Hg ICP	Mercury	07
08	717P	ICP	Mo	1	9999	ppm	Mo ICP	Molybdenum	08
09	747P	ICP	Tl	10	999	ppm	Tl ICP 10 ppm	Thallium	09
10	705P	ICP	Bi	2	999	ppm	Bi ICP	Bismuth	10
11	707P	ICP	Cd	0.1	100	ppm	Cd ICP	Cadmium	11
12	710P	ICP	Co	1	999	ppm	Co ICP	Cobalt	12
13	718P	ICP	Ni	1	999	ppm	Ni ICP	Nickel	13
14	704P	ICP	Ba	2	9999	ppm	Ba ICP	Barium	14
15	727P	ICP	W	5	999	ppm	W ICP	Tungsten	15
16	709P	ICP	Cr	1	9999	ppm	Cr ICP	Chromium	16
17	729P	ICP	V	2	999	ppm	V ICP	Vanadium	17
18	716P	ICP	Mn	1	9999	ppm	Mn ICP	Manganese	18
19	713P	ICP	La	2	9999	ppm	La ICP	Lanthanum	19
20	723P	ICP	Sr	1	9999	ppm	Sr ICP	Strontium	20
21	731P	ICP	Zr	1	999	ppm	Zr ICP	Zirconium	21
22	736P	ICP	Sc	1	99	ppm	Sc ICP	Scandium	22
23	726P	ICP	Ti	0.01	1.00	%	Ti ICP	Titanium	23
24	701P	ICP	Al	0.01	9.99	%	Al ICP	Aluminum	24
25	708P	ICP	Ca	0.01	9.99	%	Ca ICP	Calcium	25
26	712P	ICP	Fe	0.01	9.99	%	Fe ICP	Iron	26
27	715P	ICP	Mg	0.01	9.99	%	Mg ICP	Magnesium	27
28	720P	ICP	K	0.01	9.99	%	K ICP	Potassium	28
29	722P	ICP	Na	0.01	5.00	%	Na ICP	Sodium	29
30	719P	ICP	P	0.01	5.00	%	P ICP	Phosphorus	30

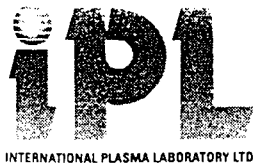


iPL 93J1402

Fax (604) 879-7898

Certified BC Assayer: David Chiu

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 Z=Estimate % Max=No Estimate																														
International Plasma Lab Ltd. 2036 Columbia St. Vancouver BC V5Y 3E1 Ph: 604/879-7878 Fax: 604/879-7898																														



INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93J14022036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898Client: Northern Analytical Laboratories
Project: WO 00346 41 Rock Pulp

iPL: 93J1402

Out: Oct 20, 1993
In: Oct 14, 1993

Page 2 of 2

Section 1 of 1
Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
018352	R 1.9	993	2	9	80	9	<	27	<	<	<	5	5	12	<	94	22	67	<	5	1	1	0.06	0.21	0.05	3.11	0.15	0.01	0.02	0.01
018353	R 0.4	174	11	63	9	<	<	12	<	<	<	27	40	10	<	97	210	656	<	9	3	3	0.49	2.22	0.39	5.82	2.23	0.02	0.04	0.03

Min Limit 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
Max Reported* 99.9 20000 20000 20000 9999 9999 9999 9999 999 999 99.9 999 999 9999 999 9999 999 9999 9999 9999 9999 9999 999 99 1.00 9.99 9.99 9.99 9.99 9.99 9.99 5.00 5.00
Method ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP
—=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

08-Oct-93date

Assay Certificate

Page1

Probe Resources

WO 00346

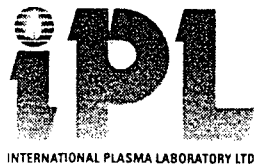
Sample Au ppb

18313	9
18314	8
18315	22
18316	9
18317	>6667
18318	217
18319	352
18320	60
18321	178
18322	<5
18323	8
18324	6
18325	10
18326	109
18327	943
18328	516
18329	2286
18330	274
18331	6606
18332	373
18333	844
18334	56
18335	25
18336	11
18337	1060
18338	304
18339	79
18340	23
18341	10
18342	10
18343	15
18344	13
18345	993
18346	>6667
18347	37
18348	70
18349	14
18850	199
18351	40
18352	140
18353	18

Certified by

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890





CERTIFICATE OF ANALYSIS

iPL 93J1403

2036 Columbia Street
Vancouver, B.C.
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Phone (604) 879-7878
Fax (604) 879-7898

Northern Analytical Laboratories 11 Samples

Out: Oct 20, 1993 Project: W0 00349
In : Oct 14, 1993 Shipper: Norm Smith
PO#: Shipment: ID=C030901

Msg: ICP(AqR)30

Msg: Data Disk

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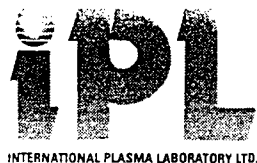
Ph:403/668-4968
Fx:403/668-4890

Raw Storage: 0= Rock 0= Soil 0= Core 0=RC Ct 0= Pulp 11=Other
Pulp Storage: -- -- -- -- -- 03Mon/Dis 12Mon/Dis

[057111:56:31:39102093]
Mon=Month Dis=Discard
Rtn=Return Arc=Archive

Analytical Summary

##	Code	Met Title	Limit	Limit	Units	Description	Element	##
		hod	Low	High				
01	721P	ICP Ag	0.1	100	ppm	Ag ICP	Silver	01
02	711P	ICP Cu	1	20000	ppm	Cu ICP	Copper	02
03	714P	ICP Pb	2	20000	ppm	Pb ICP	Lead	03
04	730P	ICP Zn	1	20000	ppm	Zn ICP	Zinc	04
05	703P	ICP As	5	9999	ppm	As ICP 5 ppm	Arsenic	05
06	702P	ICP Sb	5	9999	ppm	Sb ICP	Antimony	06
07	732P	ICP Hg	3	9999	ppm	Hg ICP	Mercury	07
08	717P	ICP Mo	1	9999	ppm	Mo ICP	Molybdenum	08
09	747P	ICP Tl	10	999	ppm	Tl ICP 10 ppm	Thallium	09
10	705P	ICP Bi	2	999	ppm	Bi ICP	Bismuth	10
11	707P	ICP Cd	0.1	100	ppm	Cd ICP	Cadmium	11
12	710P	ICP Co	1	999	ppm	Co ICP	Cobalt	12
13	718P	ICP Ni	1	999	ppm	Ni ICP	Nickel	13
14	704P	ICP Ba	2	9999	ppm	Ba ICP	Barium	14
15	727P	ICP W	5	999	ppm	W ICP	Tungsten	15
16	709P	ICP Cr	1	9999	ppm	Cr ICP	Chromium	16
17	729P	ICP V	2	999	ppm	V ICP	Vanadium	17
18	716P	ICP Mn	1	9999	ppm	Mn ICP	Manganese	18
19	713P	ICP La	2	9999	ppm	La ICP	Lanthanum	19
20	723P	ICP Sr	1	9999	ppm	Sr ICP	Strontium	20
21	731P	ICP Zr	1	999	ppm	Zr ICP	Zirconium	21
22	736P	ICP Sc	1	99	ppm	Sc ICP	Scandium	22
23	726P	ICP Ti	0.01	1.00	%	Ti ICP	Titanium	23
24	701P	ICP Al	0.01	9.99	%	Al ICP	Aluminum	24
25	708P	ICP Ca	0.01	9.99	%	Ca ICP	Calcium	25
26	712P	ICP Fe	0.01	9.99	%	Fe ICP	Iron	26
27	715P	ICP Mg	0.01	9.99	%	Mg ICP	Magnesium	27
28	720P	ICP K	0.01	9.99	%	K ICP	Potassium	28
29	722P	ICP Na	0.01	5.00	%	Na ICP	Sodium	29
30	719P	ICP P	0.01	5.00	%	P ICP	Phosphorus	30



INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS

iPL 93J1403

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Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client: Northern Analytical Laboratories
Project: WO 00349

iPL: 93J1403

Out: Oct 20, 1993
In: Oct 14, 1993

Page 1 of 1

Section 1 of 1
Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
018354	<	280	12	70	<	<	<	4	<	<	<	34	40	9	<	86	128	911	<	11	2	2	0.42	1.90	1.00	5.01	1.95	0.01	0.04	0.09
018355	0.1	179	11	96	<	<	<	5	<	<	<	34	51	37	<	109	142	953	2	52	2	10	0.29	2.23	2.97	5.28	3.03	0.07	0.02	0.07
018356	0.2	173	14	92	<	<	<	5	<	<	<	36	60	193	5	119	194	1081	2	92	2	20	0.24	3.09	4.79	6.23	4.40	0.11	0.03	0.07
018357	0.2	187	13	87	<	<	<	6	<	<	<	39	63	131	<	116	187	1015	<	72	2	14	0.34	2.73	4.18	6.33	3.75	0.14	0.03	0.07
018358	<	200	13	86	5	<	<	5	<	<	<	40	65	106	<	111	165	1122	<	65	2	10	0.39	2.66	3.41	6.45	3.59	0.11	0.03	0.07
018359	0.1	225	14	82	<	<	<	5	<	<	<	41	90	59	<	178	141	869	<	25	2	6	0.45	2.58	1.32	5.51	2.93	0.08	0.03	0.06
018360	<	126	13	56	6	6	<	4	<	<	<	38	114	7	6	258	76	554	<	15	1	3	0.31	2.21	0.85	4.06	2.49	0.02	0.03	0.04
018361	<	200	10	70	6	5	<	4	<	<	<	41	107	5	<	232	96	672	<	21	2	3	0.45	2.42	1.37	4.69	2.57	0.01	0.02	0.04
018362	<	251	9	61	<	9	<	4	<	<	<	38	101	49	<	290	95	611	<	49	3	3	0.49	2.05	1.62	4.07	2.28	0.04	0.03	0.04
018363	<	211	9	58	<	6	<	4	<	<	<	31	84	21	<	224	74	596	<	21	3	3	0.39	1.87	2.56	3.36	2.26	0.02	0.03	0.04
018364	1.6	7578	10	57	<	<	<	3	<	<	<	31	41	5	<	113	77	440	<	14	3	3	0.33	1.61	0.78	4.10	1.71	<	0.04	0.05

Min Limit 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
Max Reported* 99.9 20000 20000 20000 9999 9999 9999 9999 999 999 99.9 999 999 9999 999 9999 999 9999 9999 9999 9999 999 99 1.00 9.99 9.99 9.99 9.99 9.99 9.99 5.00 5.00
Method ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP
---No Test ins=Insufficient Sample S=Soil R=Rock C=Corn L=Silk P=Pulp U=Unknown

08-Oct-93date

Assay Certificate

Page1

Probe Resources

WO 00349

Sample Au ppb

18354	9
18355	10
18356	64
18357	12
18358	13
18359	35
18360	9
18361	12
18362	8
18363	10
18364	433

Certified by



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CERTIFICATE OF ANALYSIS

iPL 93J1401

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Northern Analytical Laboratories 682 Samples

Out: Oct 20, 1993 Project: WO 00325

In: Oct 14, 1993 Shipper: Norm Smith

PO#: Shipment: ID=C030901

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Msg: Data Disk

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Ph: 403/668-4968

Fx: 403/668-4890

Raw Storage: --

Pulp Storage: --

0= Rock

0= Soil

0= Core

0=RC Ct

678= Pulp

4=Other

[056911:45:16:39102093]

-- 12Mon/Dis 03Mon/Dis

Mon=Month Dis=Discard

-- 12Mon/Dis 12Mon/Dis

Rtn=Return Arc=Archive

Analytical Summary

##	Code	Met	Title	Limit	Limit	Units	Description	Element	##
		hod		Low	High				
01	721P	ICP	Ag	0.1	100	ppm	Ag ICP	Silver	01
02	711P	ICP	Cu	1	20000	ppm	Cu ICP	Copper	02
03	714P	ICP	Pb	2	20000	ppm	Pb ICP	Lead	03
04	730P	ICP	Zn	1	20000	ppm	Zn ICP	Zinc	04
05	703P	ICP	As	5	9999	ppm	As ICP 5 ppm	Arsenic	05
06	702P	ICP	Sb	5	9999	ppm	Sb ICP	Antimony	06
07	732P	ICP	Hg	3	9999	ppm	Hg ICP	Mercury	07
08	717P	ICP	Mo	1	9999	ppm	Mo ICP	Molybdenum	08
09	747P	ICP	Tl	10	999	ppm	Tl ICP 10 ppm	Thallium	09
10	705P	ICP	Bi	2	999	ppm	Bi ICP	Bismuth	10
11	707P	ICP	Cd	0.1	100	ppm	Cd ICP	Cadmium	11
12	710P	ICP	Co	1	999	ppm	Co ICP	Cobalt	12
13	718P	ICP	Ni	1	999	ppm	Ni ICP	Nickel	13
14	704P	ICP	Ba	2	9999	ppm	Ba ICP	Barium	14
15	727P	ICP	W	5	999	ppm	W ICP	Tungsten	15
16	709P	ICP	Cr	1	9999	ppm	Cr ICP	Chromium	16
17	729P	ICP	V	2	999	ppm	V ICP	Vanadium	17
18	716P	ICP	Mn	1	9999	ppm	Mn ICP	Manganese	18
19	713P	ICP	La	2	9999	ppm	La ICP	Lanthanum	19
20	723P	ICP	Sr	1	9999	ppm	Sr ICP	Strontium	20
21	731P	ICP	Zr	1	999	ppm	Zr ICP	Zirconium	21
22	736P	ICP	Sc	1	99	ppm	Sc ICP	Scandium	22
23	726P	ICP	Ti	0.01	1.00	%	Ti ICP	Titanium	23
24	701P	ICP	Al	0.01	9.99	%	Al ICP	Aluminum	24
25	708P	ICP	Ca	0.01	9.99	%	Ca ICP	Calcium	25
26	712P	ICP	Fe	0.01	9.99	%	Fe ICP	Iron	26
27	715P	ICP	Mg	0.01	9.99	%	Mg ICP	Magnesium	27
28	720P	ICP	K	0.01	9.99	%	K ICP	Potassium	28
29	722P	ICP	Na	0.01	5.00	%	Na ICP	Sodium	29
30	719P	ICP	P	0.01	5.00	%	P ICP	Phosphorus	30

Appendix B

Geochemical Figures and Analyses

1993: Copper in ppm (Figure 7 taken from Davidson, 1993)

1993: Gold in ppb (Figure 8 taken from Davidson, 1993)

1993 Analyses (taken from Davidson, 1993)



SYMBOLS

x 117 Soil sample location, Cu-ppm
(see other symbols below)

COPPER GEOCHEMISTRY

PPM		PERCENTILE
4818	⊗	MAXIMUM
652	⊕	98
412	⊠	95
286	○	90
173	△	70
126	x	50
32		MINIMUM

Number of Samples - 678
Ins - Insufficient pulp for assay

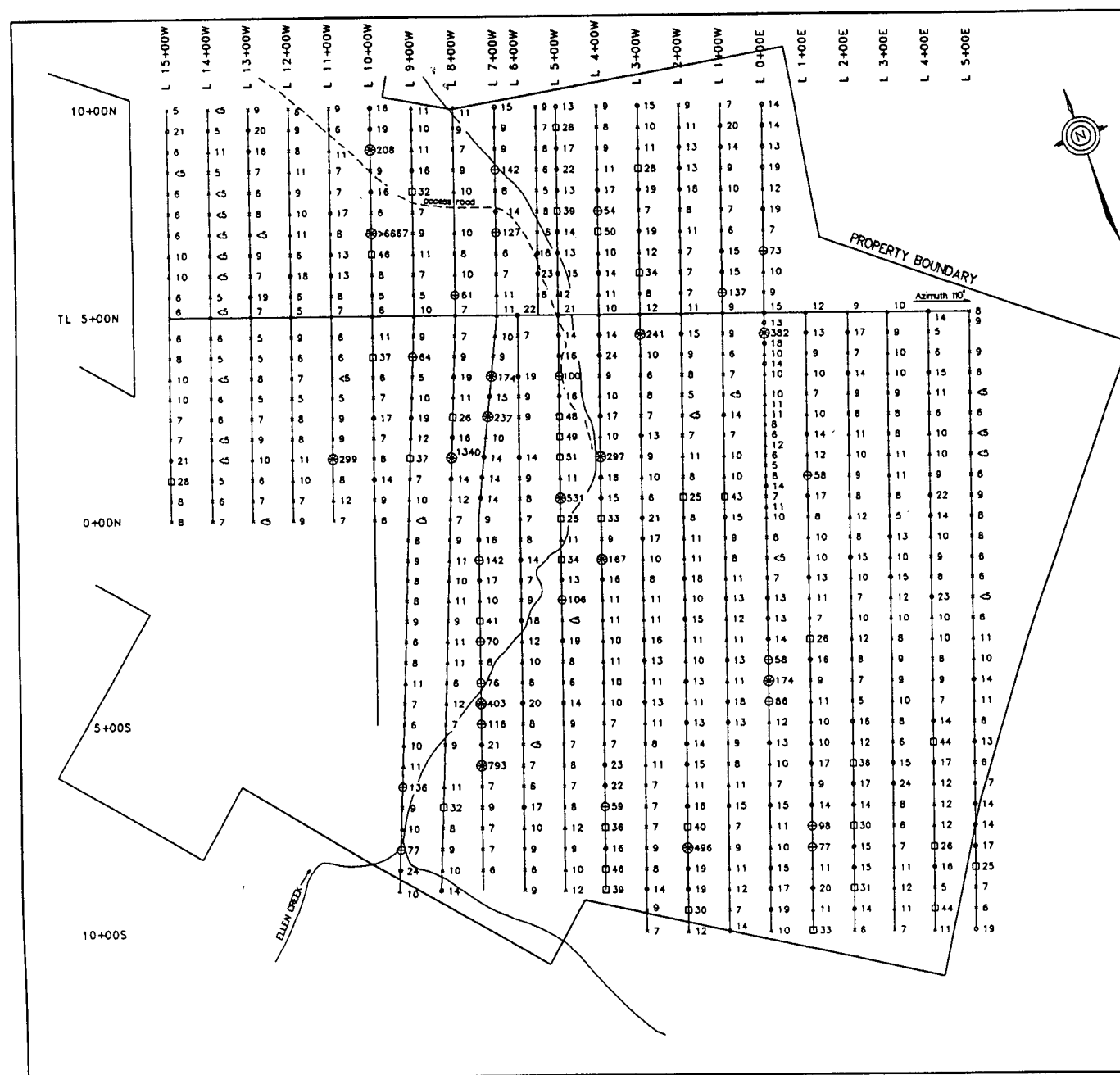
0 100 200 300
METRES

PROBE RESOURCES LTD.

ELLEN CLAIMS
COPPER GEOCHEMISTRY - ppm

G. DAVIDSON, CONSULTING GEOLOGIST

SCALE: 1 : 15,000	DATE: October 1993
N.T.S.: 115 A/13	DRAWN: GDS
	FIGURE 7



SYMBOLS

x 8 Soil sample location, Au-ppb,
(see other symbols below)

GOLD GEOCHEMISTRY

PPB		PERCENTILE
1340	⊗	MAXIMUM
152	⊕	98
54	⊖	95
25	□	90
13	○	70
10	△	50
<5	x	MINIMUM

Number of Samples - 682

0 100 200 300
METRES

PROBE RESOURCES LTD.

ELLEN CLAIMS
GOLD GEOCHEMISTRY - ppb

G. DAVIDSON, CONSULTING GEOLOGIST

SCALE: 1 : 15,000

DATE: October 1993

N.T.S.: 115 A/13

DRAWN: GDS

FIGURE 8



iPL 93J1401

Fax (604) 879-7898

Section 1 of 1
Certified BC Assayer: David Chiu

[illegible]



Fax (604) 879-7898

7878
7898

[illegible]

[illegible]



iPL 93J1401

Fax (604) 879-7898

Section 1 of 1
Certified BC Assayer: David Chiu

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	9999	9999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
--No Test	ins=Insufficient Sample S=Soil P=Pink C=Corn L=Silt B=Bulk U=Undefined e=Estimate/1000 * Estimate ** M=Mg Solubility																												



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Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 2+50S 3+00W	<	107	17	93	10	<	<	5	<	<	0.2	24	52	138	<	62	68	611	6	28	2	4	0.09	1.97	0.71	3.96	1.46	0.05	0.02	0.07
L 3+00S 3+00W	<	138	23	94	10	<	<	5	<	<	0.1	23	56	130	<	58	67	693	6	53	2	5	0.13	1.86	2.08	3.92	1.44	0.06	0.02	0.04
L 3+50S 3+00W	<	105	15	83	13	<	<	5	<	<	<	23	54	136	<	65	72	515	7	30	2	5	0.14	2.06	0.68	4.41	1.46	0.06	0.02	0.03
L 4+00S 3+00W	<	103	19	99	7	<	<	4	<	3	<	21	52	124	<	59	74	663	8	39	2	6	0.15	2.09	0.89	4.13	1.49	0.09	0.03	0.05
L 4+50S 3+00W	<	88	12	110	14	<	<	5	<	<	0.2	18	43	148	<	41	52	902	7	65	1	2	0.05	1.49	1.67	3.35	0.98	0.06	0.02	0.09
L 5+00S 3+00W	<	107	19	148	9	<	<	4	<	<	<	25	54	145	<	58	76	977	9	37	3	6	0.13	2.12	0.84	4.19	1.47	0.15	0.03	0.09
L 5+50S 3+00W	<	104	20	115	16	<	<	5	<	<	<	22	49	124	<	52	67	741	9	42	1	5	0.10	1.97	0.91	4.19	1.31	0.12	0.03	0.05
L 6+00S 3+00W	<	76	15	115	13	<	<	5	<	<	<	21	47	76	<	55	67	678	6	30	3	5	0.14	2.00	0.67	4.12	1.47	0.08	0.02	0.10
L 6+50S 3+00W	<	93	21	122	11	<	<	5	<	<	<	25	61	125	<	54	72	1030	9	34	4	6	0.14	1.93	0.71	4.40	1.33	0.15	0.03	0.11
L 7+00S 3+00W	<	83	22	136	13	<	<	5	<	<	<	25	55	172	<	51	66	928	8	38	2	5	0.10	2.00	0.80	4.17	1.35	0.08	0.02	0.08
L 7+50S 3+00W	<	63	20	124	14	<	<	5	<	<	0.2	17	44	122	<	46	59	514	5	36	1	4	0.09	1.81	0.77	3.73	1.21	0.06	0.02	0.04
L 8+00S 3+00W	<	75	22	221	18	<	<	7	<	<	0.8	19	43	111	<	40	53	735	7	29	1	3	0.05	1.54	0.75	4.10	1.24	0.05	0.02	0.07
L 8+50S 3+00W	<	68	15	106	17	<	<	5	<	<	0.1	19	44	106	5	47	62	661	7	33	1	5	0.10	1.84	0.66	3.88	1.24	0.07	0.02	0.08
L 9+00S 3+00W	<	73	16	108	13	<	<	5	<	<	<	18	47	107	<	48	62	630	7	32	2	6	0.12	1.91	0.61	3.72	1.24	0.07	0.02	0.08
L 9+50S 3+00W	<	67	21	133	15	<	<	8	<	<	0.5	21	42	154	<	39	51	728	7	53	1	3	0.05	1.60	1.17	3.88	1.02	0.07	0.02	0.09
L10+00S 3+00W	<	59	22	149	20	<	<	6	<	<	<	23	43	140	5	44	59	714	8	39	1	4	0.05	1.92	0.63	4.37	1.18	0.06	0.02	0.08
L 0+50N 4+00W	<	270	12	157	12	<	<	4	<	<	0.4	27	68	145	<	64	63	808	6	44	1	4	0.07	1.70	1.06	3.75	1.26	0.06	0.02	0.08
L 1+00N 4+00W	<	179	13	330	25	5	<	9	<	<	2.1	27	64	82	6	49	51	902	8	38	1	3	0.09	1.53	0.60	4.92	1.17	0.05	0.02	0.10
L 1+50N 4+00W	<	110	17	248	23	<	<	8	<	<	1.0	25	57	72	<	43	46	816	7	36	1	3	0.08	1.44	0.54	4.88	1.08	0.04	0.02	0.09
L 2+00N 4+00W	<	91	12	206	19	<	<	8	<	<	0.7	21	48	50	<	43	43	734	4	28	2	3	0.09	1.47	0.54	4.37	1.15	0.03	0.02	0.08
L 2+50N 4+00W	<	105	10	258	24	<	<	10	<	<	0.9	24	55	68	<	40	46	785	6	38	2	3	0.08	1.42	0.54	5.02	1.06	0.04	0.02	0.09
L 3+00N 4+00W	0.2	172	139	237	18	<	<	8	<	<	0.8	26	62	69	<	57	55	856	5	30	1	3	0.13	1.58	0.63	4.86	1.33	0.05	0.03	0.09
L 3+50N 4+00W	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
L 4+00N 4+00W	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
L 4+50N 4+00W	<	161	21	231	20	<	<	8	<	<	0.8	24	57	57	6	54	53	787	5	27	2	3	0.10	1.61	0.60	4.65	1.33	0.03	0.02	0.08
L 5+00N 4+00W	<	103	13	175	20	<	<	7	<	<	1.4	19	51	100	5	44	43	658	5	34	1	2	0.05	1.23	0.70	3.86	0.97	0.06	0.02	0.09
L 5+50N 4+00W	<	92	15	144	24	<	<	8	<	<	<	20	45	117	5	55	54	716	6	30	<	3	0.05	1.65	0.41	4.67	1.19	0.03	0.02	0.08
L 6+00N 4+00W	<	84	30	376	13	<	<	6	<	<	5.8	20	44	208	<	47	65	785	5	22	<	3	0.05	1.66	0.34	3.76	0.85	0.05	0.02	0.09
L 6+50N 4+00W	<	54	17	170	17	<	<	8	<	<	1.2	15	39	132	6	54	54	553	4	29	1	2	0.04	1.57	0.53	3.86	1.15	0.03	0.02	0.09
L 7+00N 4+00W	<	108	27	242	25	<	<	10	<	3	<	33	66	216	<	68	61	1518	6	36	1	4	0.06	2.01	0.52	5.34	1.53	0.03	0.02	0.09
L 7+50N 4+00W	<	91	12	141	23	<	<	9	<	<	<	16	40	97	<	50	51	595	6	26	1	3	0.05	1.53	0.39	4.81	1.13	0.03	0.02	0.07
L 8+00N 4+00W	<	91	17	188	24	<	<	10	<	3	<	29	51	152	7	51	56	1226	6	31	1	4	0.05	1.62	0.51	4.90	1.18	0.02	0.02	0.08
L 8+50N 4+00W	<	158	37	304	23	<	<	8	<	2	1.1	28	78	317	6	58	67	1026	11	41	1	4	0.03	2.03	0.67	4.81	1.15	0.04	0.02	0.10
L 9+00N 4+00W	<	55	17	207	22	<	<	9	<	2	0.4	19	44	142	<	54	59	665	4	28	<	3	0.03	1.72	0.35	4.60	1.16	0.05	0.02	0.07
L 9+50N 4+00W	<	159	26	213	25	<	<	8	<	3	0.7	25	80	81	<	49	49	765	6	31	1	3	0.07	1.48	0.46	4.74	1.15	0.04	0.02	0.08
L10+00N 4+00W	<	102	27	209	20	<	<	8	<	<	1.4	22	53	126	5	48	51	721	5	35	<	3	0.05	1.49	0.59	4.37	1.10	0.04	0.02	0.09
L 0+00 4+00W	<	139	15	123	9	<	<	4	<	<	0.4	22	50	187	6	64	59	719	6	36	1	4	0.04	1.95	0.79	3.79	1.38	0.05	0.02	0.09
L 0+50S 4+00W	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
L 1+00S 4+00W	<	178	15	123	10	<	<	4	<	<	0.4	22	49	100	<	61	60	703	5	29	1	4	0.08	1.71	0.68	3.76	1.34	0.05	0.02	0.08

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core I=Silt P=Pulp U=Undefined m=Estimate/1000 % = Estimate % Max-No Estimate																														



iPL 93J1401

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Client: Northern Analytical Laboratories
Project: WO 00325 682 Soil Pulp

iPL: 93J1401

Out: Oct 20, 1993
In: Oct 14, 1993

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Section 1 of 1
Certified BC Assayer: David Chiu

Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 1+50S 4+00W	0.07	<	264	10	100	10	<	<	4	<	<	0.3	24	62	75	<	74	69	669	4	23	1	4	0.12	1.72	0.62	3.95	1.52	0.06	0.02	0.07
L 2+00S 4+00W	0.07	<	168	54	134	16	5	<	6	<	<	<	31	106	128	<	91	70	877	7	27	1	5	0.12	1.90	0.59	4.58	1.68	0.09	0.02	0.07
L 2+50S 4+00W	0.07	<	212	21	125	8	<	<	5	<	<	<	31	70	131	<	78	79	929	4	41	2	4	0.18	2.13	1.57	4.84	1.82	0.07	0.02	0.07
L 3+00S 4+00W	0.07	<	102	13	102	11	<	<	4	<	<	0.2	23	50	108	<	53	66	580	7	35	2	5	0.11	1.93	0.82	3.97	1.39	0.10	0.02	0.07
L 3+50S 4+00W	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
L 4+00S 4+00W	0.09	<	107	15	94	8	<	<	3	<	<	0.1	15	51	133	7	51	57	576	7	48	2	5	0.08	1.77	1.20	3.50	1.21	0.11	0.02	0.09
L 4+50S 4+00W	0.09	<	114	15	99	9	<	<	3	<	<	0.1	18	50	112	5	51	62	468	8	43	2	5	0.10	1.83	1.02	3.70	1.26	0.10	0.02	0.09
L 5+00S 4+00W	0.11	<	107	17	122	13	<	<	5	<	2	<	23	59	112	<	61	74	770	8	40	3	6	0.14	2.16	0.85	4.43	1.50	0.18	0.03	0.11
L 5+50S 4+00W	0.06	<	102	17	101	11	<	<	4	<	3	<	19	50	130	<	55	63	587	7	39	1	4	0.09	1.84	0.93	3.85	1.29	0.08	0.02	0.06
L 6+00S 4+00W	0.07	<	54	15	117	10	<	<	4	<	<	<	20	42	89	<	50	62	554	6	28	2	5	0.11	1.85	0.60	3.74	1.25	0.10	0.02	0.07
L 6+50S 4+00W	0.10	<	110	16	159	12	<	<	5	<	2	0.5	25	61	136	<	53	66	676	9	37	3	6	0.11	1.93	0.82	4.28	1.33	0.11	0.02	0.10
L 7+00S 4+00W	0.10	<	81	11	137	14	<	<	4	<	<	0.7	16	38	112	6	38	47	583	5	42	1	3	0.07	1.52	1.27	3.27	1.11	0.06	0.02	0.10
L 7+50S 4+00W	0.09	<	68	14	126	12	<	<	5	<	<	0.3	19	46	119	<	45	57	669	6	43	1	4	0.08	1.79	0.95	3.81	1.18	0.08	0.02	0.09
L 8+00S 4+00W	0.09	<	74	13	92	10	<	<	4	<	<	<	23	47	96	<	49	64	803	7	33	2	5	0.12	1.97	0.65	3.90	1.31	0.08	0.02	0.09
L 8+50S 4+00W	0.10	<	61	17	123	21	<	<	6	<	<	0.3	17	37	123	<	37	49	700	5	52	1	3	0.04	1.49	1.05	3.80	0.98	0.06	0.02	0.10
L 9+00S 4+00W	0.09	<	95	13	107	19	<	<	5	<	<	0.3	23	44	168	<	34	45	779	8	62	1	3	0.05	1.45	1.33	3.58	0.88	0.05	0.02	0.09
L 0+50N 5+00W	0.09	<	1778	15	135	11	<	<	6	<	<	<	34	90	91	5	116	91	865	4	39	3	6	0.19	2.35	1.15	5.28	2.30	0.08	0.02	0.09
L 1+00N 5+00W	0.07	<	695	19	117	14	<	<	5	<	<	<	28	67	111	5	76	72	815	5	45	2	4	0.13	2.03	1.42	4.62	1.70	0.07	0.02	0.07
L 1+50N 5+00W	0.08	<	1175	15	144	10	<	<	5	<	<	<	34	77	114	<	102	90	958	3	30	1	5	0.14	2.35	0.88	5.39	2.03	0.14	0.02	0.08
L 2+00N 5+00W	0.09	<	643	10	148	8	<	<	5	<	<	1.1	19	57	170	<	53	48	623	4	83	1	3	0.06	1.38	2.95	3.12	1.14	0.06	0.03	0.09
L 2+50N 5+00W	0.08	<	439	9	194	8	<	<	3	<	<	1.2	15	42	140	6	32	30	513	3	103	1	1	0.03	0.91	3.35	2.07	0.74	0.04	0.03	0.08
L 3+00N 5+00W	0.09	<	288	10	111	9	<	<	4	<	<	0.7	23	52	110	6	65	54	833	3	58	1	3	0.06	1.46	1.84	3.30	1.28	0.04	0.02	0.09
L 3+50N 5+00W	0.08	<	460	13	137	12	<	<	4	<	<	1.1	26	53	151	<	50	48	1664	6	57	<	3	0.05	1.39	1.52	3.07	0.90	0.03	0.03	0.08
L 4+00N 5+00W	0.08	<	395	15	115	10	<	<	3	<	<	0.9	18	59	142	<	68	73	955	8	42	1	4	0.09	1.78	1.00	3.38	1.28	0.05	0.03	0.08
L 4+50N 5+00W	0.13	<	241	9	110	11	<	<	5	<	<	0.5	16	42	192	5	36	43	619	5	78	1	2	0.02	1.27	2.21	3.10	0.75	0.03	0.02	0.13
L 5+00N 5+00W	0.10	<	122	14	260	22	<	<	8	<	<	0.2	28	53	138	<	62	58	892	6	50	1	4	0.07	1.81	0.83	4.82	1.40	0.07	0.02	0.10
L 5+50N 5+00W	0.09	<	119	16	216	22	<	<	7	<	<	0.7	23	52	81	<	51	52	757	5	30	1	3	0.09	1.62	0.55	4.55	1.24	0.04	0.02	0.09
L 6+00N 5+00W	0.09	<	118	13	246	24	<	<	9	<	<	1.0	25	57	72	5	46	49	827	6	37	2	3	0.10	1.54	0.65	4.88	1.17	0.04	0.02	0.09
L 6+50N 5+00W	0.08	<	155	11	223	20	5	<	8	<	<	1.0	23	54	60	6	49	49	748	5	28	1	3	0.10	1.47	0.57	4.44	1.20	0.03	0.02	0.08
L 7+00N 5+00W	0.08	<	171	18	175	20	<	<	7	<	<	0.8	23	62	87	<	53	52	960	9	27	<	4	0.06	1.59	0.49	4.28	1.25	0.05	0.02	0.08
L 7+50N 5+00W	0.08	<	120	12	172	17	<	<	7	<	<	0.5	20	47	62	<	47	46	711	5	26	1	3	0.08	1.51	0.42	4.24	1.20	0.03	0.02	0.08
L 8+00N 5+00W	0.10	<	97	16	188	22	<	<	7	<	<	0.6	22	46	62	6	49	50	732	5	27	1	3	0.08	1.57	0.40	4.40	1.20	0.04	0.02	0.10
L 8+50N 5+00W	0.07	<	85	17	215	22	<	<	7	<	<	0.8	24	50	77	<	57	58	804	6	27	1	4	0.09	1.65	0.49	4.37	1.26	0.04	0.02	0.07
L 9+00N 5+00W	0.08	<	149	15	202	20	<	<	8	<	<	0.4	23	67	167	<	57	56	1062	9	39	1	4	0.06	1.78	0.56	4.50	1.28	0.06	0.02	0.08
L 9+50N 5+00W	0.07	<	55	16	157	24	5	<	8	<	<	<	16	44	86	8	59	57	614	4	27	<	3	0.08	1.67	0.40	4.35	1.30	0.03	0.02	0.07
L10+00N 5+00W	0.06	<	101	15	183	28	<	<	10	<	2	<	27	55	98	8	66	64	739	7	28	<	4	0.08	1.92	0.33	5.04	1.34	0.03	0.02	0.06
L 0+00 5+00W	0.10	<	2160	19	158	13	<	<	7	<	<	<	37	111	122	5	128	95	976	5	49	2	6	0.17	2.57	1.21	5.76	2.51	0.10	0.03	0.10
L 0+50S 5+00W	0.09	<	247	13	160	13	<	<	6	<	<	<	29	73	90	<	75	66	810	4	29	1	4	0.13	1.86	0.76	4.61	1.67	0.05	0.02	0.09
L 1+00S 5+00W	0.07	<	262	15	136	17	<	<	5	<	<	<	36	131	166	5	121	87	941	5	35	2	6	0.14	2.46	0.90	5.20	2.37	0.14	0.03	0.07

[illegible]



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Section 1 of 1
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[illegible]



iPL 93J1401

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Certified BC Assayer: David Chiu

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
---No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 Z=Estimate Z Max=No Estimate																															



iPL 93J1401

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Certified BC Assayer: David Chiu

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate																														

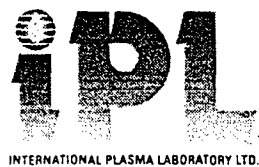


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Certified BC Assayer: David Chiu

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	99.9	999	999	999	9999	9999	999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	9.99	5.00	5.00	
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
—=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 Z=Estimate Z Max=No Estimate																														

[illegible]



CERTIFICATE OF ANALYSIS
iPL 93J1401

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Client: Northern Analytical Laboratories
Project: WO 00325 682 Soil Pulp

iPL: 93J1401

Out: Oct 20, 1993
In: Oct 14, 1993

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Section 1 of 1
Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ₄ ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 8+50N 11+00W	<	138	14	188	24	6	<	8	<	<	<	28	60	114	<	62	73	940	8	43	1	5	0.15	2.00	0.60	5.19	1.46	0.04	0.03	0.09
L 9+00N 11+00W	<	92	15	188	27	9	<	8	<	<	<	27	52	88	<	67	73	847	7	41	1	5	0.14	2.08	0.62	5.31	1.52	0.06	0.03	0.09
L 9+50N 11+00W	<	136	14	201	20	5	<	8	<	<	0.2	27	57	144	<	66	76	801	8	45	1	5	0.14	2.16	0.70	5.31	1.51	0.08	0.03	0.08
L10+00N 11+00W	<	120	13	209	18	<	<	7	<	<	<	26	59	126	<	59	65	810	8	41	1	5	0.13	1.86	0.64	4.85	1.38	0.05	0.02	0.09
L 0+00 12+00W	<	157	14	95	9	7	<	3	<	<	<	38	204	108	<	155	97	842	6	43	3	6	0.23	2.37	1.31	4.98	2.90	0.13	0.04	0.07
L 0+50N 12+00W	<	147	14	100	13	7	<	3	<	<	<	39	240	162	<	146	91	993	7	54	2	5	0.15	2.42	1.75	4.98	2.81	0.14	0.04	0.07
L 1+00N 12+00W	<	199	15	111	11	6	<	3	<	<	<	35	141	172	<	125	93	892	6	46	2	5	0.14	2.44	1.35	5.03	2.51	0.16	0.04	0.07
L 1+50N 12+00W	<	553	15	144	8	6	<	4	<	<	<	37	95	140	<	120	110	1356	5	34	1	5	0.21	2.69	1.19	5.84	2.54	0.12	0.04	0.11
L 2+00N 12+00W	<	464	10	115	<	<	<	4	<	<	<	34	74	86	<	108	95	979	3	27	1	5	0.19	2.45	0.90	5.06	2.21	0.10	0.03	0.09
L 2+50N 12+00W	<	404	14	119	8	5	<	3	<	<	<	38	94	118	<	128	112	1106	4	31	1	5	0.26	2.74	1.07	5.67	2.57	0.09	0.03	0.09
L 3+00N 12+00W	<	339	10	105	9	<	<	4	<	<	<	34	82	94	<	112	97	984	3	28	1	4	0.24	2.38	1.02	5.00	2.28	0.10	0.03	0.08
L 3+50N 12+00W	<	226	10	137	10	<	<	5	<	<	<	31	59	135	<	84	95	891	5	35	1	4	0.18	2.19	0.90	4.88	1.58	0.18	0.03	0.07
L 4+00N 12+00W	<	246	19	204	14	<	<	5	<	<	0.4	31	65	98	<	89	118	544	9	32	3	7	0.18	3.05	0.70	5.52	1.49	0.08	0.04	0.04
L 4+50N 12+00W	<	260	15	108	9	<	<	5	<	3	<	36	85	85	<	128	110	1166	4	41	2	6	0.27	2.75	1.18	5.52	2.47	0.09	0.03	0.05
L 5+00N 12+00W	<	380	21	134	10	7	<	5	<	<	<	40	90	126	<	138	130	1061	6	40	2	6	0.20	3.49	0.94	6.72	2.49	0.09	0.04	0.06
L 5+50N 12+00W	<	297	13	111	<	5	<	3	<	<	<	37	88	78	<	123	105	1001	4	31	2	5	0.28	2.57	1.07	5.41	2.51	0.09	0.03	0.07
L 6+00N 12+00W	<	190	11	97	<	<	<	2	<	<	<	29	71	94	<	98	87	777	5	39	2	5	0.21	2.25	1.25	4.39	1.97	0.07	0.03	0.07
L 6+50N 12+00W	<	189	11	123	13	6	<	3	<	<	<	32	91	150	<	117	92	896	5	55	2	5	0.14	2.62	1.48	5.04	2.30	0.07	0.03	0.09
L 7+00N 12+00W	<	173	12	92	7	6	<	2	<	<	<	24	65	91	<	80	75	610	5	51	2	4	0.15	1.91	1.40	3.95	1.66	0.06	0.03	0.08
L 7+50N 12+00W	<	177	13	175	18	5	<	7	<	<	<	18	53	83	<	60	64	527	7	34	1	5	0.12	1.77	0.64	4.26	1.35	0.05	0.02	0.07
L 8+00N 12+00W	<	133	12	203	22	<	<	9	<	<	<	24	57	89	<	60	61	666	8	39	1	4	0.11	1.75	0.58	4.83	1.34	0.04	0.02	0.09
L 8+50N 12+00W	<	100	13	185	19	<	<	7	<	<	<	25	50	92	<	58	63	821	7	39	1	4	0.11	1.76	0.69	4.83	1.30	0.05	0.02	0.09
L 9+00N 12+00W	<	146	16	163	18	5	<	6	<	<	0.1	18	51	76	<	57	59	587	7	39	1	4	0.10	1.69	0.69	4.51	1.27	0.06	0.03	0.09
L 9+50N 12+00W	<	82	12	141	16	<	<	6	<	<	<	20	43	71	<	53	52	720	6	30	1	3	0.11	1.54	0.44	4.18	1.20	0.04	0.02	0.08
L10+00N 12+00W	<	96	14	164	23	<	<	6	<	<	<	22	49	69	<	52	57	702	5	34	1	4	0.11	1.62	0.52	4.65	1.21	0.04	0.02	0.06
L 0+50N 13+00W	<	118	17	79	8	<	<	3	<	<	<	28	136	118	<	106	70	750	6	47	1	4	0.09	1.90	1.50	3.94	2.00	0.10	0.03	0.07
L 1+00N 13+00W	<	264	20	124	6	<	<	3	<	<	<	29	116	136	<	112	83	883	6	33	1	5	0.13	2.19	0.84	4.60	2.08	0.11	0.03	0.09
L 1+50N 13+00W	<	470	21	120	8	<	<	3	<	<	<	32	108	129	<	117	91	894	5	26	1	4	0.18	2.38	0.72	4.96	2.34	0.12	0.03	0.09
L 2+00N 13+00W	<	362	14	93	5	<	<	3	<	3	<	32	75	73	<	100	89	845	2	21	2	4	0.22	2.22	0.80	4.82	2.27	0.11	0.03	0.08
L 2+50N 13+00W	<	103	15	75	6	<	<	3	<	2	<	21	43	85	<	59	80	536	4	26	1	3	0.15	1.42	0.57	3.71	1.12	0.08	0.03	0.06
L 3+00N 13+00W	<	546	22	142	5	5	<	4	<	2	<	42	94	123	<	138	111	1159	4	29	2	5	0.18	3.13	0.91	6.50	2.97	0.16	0.03	0.08
L 3+50N 13+00W	<	274	10	103	6	<	<	4	<	<	<	36	79	84	<	110	102	968	2	25	1	4	0.23	2.51	0.82	5.48	2.44	0.10	0.03	0.07
L 4+00N 13+00W	<	228	22	117	10	<	<	4	<	<	<	33	73	97	<	104	110	782	4	26	2	4	0.21	2.59	0.66	5.55	1.98	0.09	0.03	0.04
L 4+50N 13+00W	<	386	21	121	<	<	<	5	<	<	<	39	105	121	<	138	103	960	3	28	2	5	0.15	3.01	0.94	5.92	2.85	0.11	0.03	0.07
L 5+00N 13+00W	<	203	14	100	6	<	<	4	<	3	<	33	84	111	<	113	96	742	4	28	2	5	0.19	2.52	0.85	4.67	2.25	0.07	0.03	0.06
L 8+50N 13+00W	<	130	16	209	16	<	<	8	<	<	<	24	58	78	<	63	63	809	6	35	1	4	0.12	1.80	0.55	4.83	1.43	0.04	0.03	0.08
L 9+00N 13+00W	<	122	18	182	28	5	<	8	<	<	<	25	60	181	<	70	68	874	7	38	1	4	0.10	1.88	0.57	5.28	1.43	0.04	0.02	0.09
L 9+50N 13+00W	<	107	14	224	19	7	<	7	<	<	1.0	23	57	104	<	65	62	904	7	38	1	4	0.10	1.91	0.62	4.81	1.48	0.04	0.02	0.08
L10+00N 13+00W	<	59	14	169	17	5	<	6	<	3	<	19	40	48	<	49	54	643	4	28	1	3	0.11	1.52	0.44	4.15	1.21	0.04	0.02	0.08

Min Limit 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01 0.01
Max Reported* 99.9 20000 20000 20000 9999 9999 9999 9999 999 999 999 99.9 999 999 9999 999 9999 999 9999 9999 9999 999 99 1.00 9.99 9.99 9.99 9.99 9.99 5.00 5.00
Method ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP
---No Test ---Insufficient Sample S=Soil R=Rock C=Core L=Silt+ P=Dirt U=Unidentified m=Estimate/1000 %=Estimate % Max=No Estimate



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Certified BC Assayer: David Chiu

[illegible]

-No Test	ins=Insufficient Sample	S-Seal	P-Pack	C-Com	I-Silt	D-Dls	U-Undefined			= Estimate /1000	* Estimate *	M	M	E-Estimate
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CERTIFICATE OF ANALYSIS
iPL 93J1401

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Client: Northern Analytical Laboratories
Project: W0 00325 682 Soil Pulp

iPL: 93J1401

Out: Oct 20, 1993
In: Oct 14, 1993

Page 14 of 18

Section 1 of 1
Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 5+50N 15+00W P	<	178	9	86	6	<	<	3	<	<	<	22	87	140	<	77	57	694	3	56	1	3	0.06	1.65	1.96	3.01	1.42	0.05	0.03	0.11
L 6+00N 15+00W P	<	121	18	68	<	<	<	2	<	<	<	30	115	65	<	107	97	717	4	31	3	6	0.34	1.99	0.94	4.04	2.04	0.08	0.03	0.04
L 6+50N 15+00W P	<	174	13	77	5	<	<	3	<	<	<	19	92	128	<	69	67	660	5	56	2	4	0.14	1.64	1.91	3.08	1.33	0.05	0.03	0.08
L 7+00N 15+00W P	<	177	15	86	<	<	<	3	<	<	<	24	95	136	<	79	71	697	4	56	2	4	0.13	1.81	2.02	3.54	1.59	0.08	0.04	0.07
L 7+50N 15+00W P	<	167	12	107	7	<	<	3	<	<	0.3	25	99	136	<	85	75	715	5	49	1	5	0.17	1.83	1.56	3.60	1.66	0.09	0.04	0.08
L 8+00N 15+00W P	<	126	13	79	<	<	<	3	<	<	<	26	85	118	<	91	75	649	5	34	1	5	0.15	1.86	0.95	3.70	1.69	0.06	0.03	0.07
L 8+50N 15+00W P	<	122	8	69	5	<	<	2	<	3	1.6	15	51	115	<	33	43	458	4	54	1	1	0.05	0.93	1.89	2.04	0.63	0.04	0.03	0.09
L 9+00N 15+00W P	<	268	9	117	<	<	<	3	<	2	0.6	21	85	96	<	78	61	514	4	43	2	4	0.13	1.57	1.49	3.27	1.56	0.07	0.03	0.08
L 9+50N 15+00W P	<	75	11	145	17	<	<	7	<	<	1.0	17	39	91	<	49	58	532	5	27	1	4	0.11	1.65	0.39	4.00	1.13	0.03	0.02	0.06
L10+00N 15+00W P	<	95	15	155	17	<	<	7	<	<	<	18	42	82	<	45	49	521	8	31	1	4	0.09	1.42	0.43	3.92	1.06	0.04	0.02	0.07
L 5+50N 5+50W P	<	272	19	187	15	<	<	5	<	<	0.3	21	45	107	<	48	52	703	5	32	1	3	0.11	1.46	0.56	4.28	1.15	0.06	0.02	0.09
L 6+00N 5+50W P	<	111	14	157	14	5	<	6	<	<	<	19	40	48	<	47	58	570	4	30	1	4	0.12	1.62	0.38	4.23	1.13	0.03	0.02	0.07
L 6+50N 5+50W P	<	111	24	253	19	5	<	8	<	<	1.0	26	57	85	<	51	57	854	7	43	2	4	0.14	1.66	0.64	4.78	1.24	0.05	0.03	0.09
L 7+00N 5+50W P	<	74	14	136	20	<	<	8	<	<	<	21	37	92	<	50	59	748	7	27	1	4	0.11	1.64	0.39	4.38	1.16	0.03	0.02	0.07
L 7+50N 5+50W P	<	95	11	143	19	6	<	7	<	<	<	18	41	102	<	50	62	696	7	32	1	4	0.12	1.66	0.55	4.25	1.19	0.04	0.03	0.08
L 8+00N 5+50W P	<	58	16	210	14	<	<	6	<	<	0.4	17	41	73	<	52	79	406	5	29	1	3	0.09	1.88	0.51	4.55	1.00	0.09	0.02	0.04
L 8+50N 5+50W P	<	67	14	181	21	<	<	7	<	<	0.6	17	40	53	<	49	57	552	4	31	1	3	0.11	1.48	0.49	4.08	1.11	0.04	0.02	0.07
L 9+00N 5+50W P	<	74	13	157	17	<	<	6	<	<	0.3	18	40	75	<	51	57	565	4	32	1	3	0.10	1.51	0.52	4.05	1.16	0.04	0.02	0.08
L 9+50N 5+50W P	<	125	16	220	14	<	<	6	<	<	3.1	21	51	140	<	45	47	820	6	39	1	3	0.06	1.34	0.80	3.68	1.08	0.05	0.02	0.09
L10+00N 5+50W P	<	87	14	178	15	<	<	7	<	<	0.5	22	47	80	<	53	52	723	5	36	1	4	0.08	1.51	0.52	4.04	1.16	0.05	0.02	0.07
L 0+50N 5+00E P	<	193	15	102	13	<	<	4	<	<	<	22	60	147	<	70	68	664	4	48	1	4	0.11	1.75	1.23	3.62	1.41	0.05	0.03	0.07
L 1+00N 5+00E P	<	174	24	93	19	<	<	5	<	<	0.1	26	45	169	<	68	74	864	6	38	1	4	0.08	1.84	0.86	3.94	1.39	0.06	0.03	0.09
L 1+50N 5+00E P	<	120	11	90	16	<	<	4	<	<	<	21	36	297	<	66	72	633	6	39	1	3	0.05	1.98	0.76	3.51	1.24	0.03	0.03	0.12
L 2+00N 5+00E P	<	195	11	130	15	<	<	4	<	<	0.3	24	49	150	<	69	77	810	4	37	1	4	0.12	1.74	1.06	3.80	1.43	0.04	0.03	0.08
L 2+50N 5+00E P	<	236	12	125	17	<	<	4	<	2	0.2	27	55	91	<	78	85	814	4	29	1	4	0.14	1.90	0.83	4.30	1.65	0.08	0.03	0.08
L 3+00N 5+00E P	<	183	13	131	13	<	<	4	<	<	0.8	35	48	153	<	68	79	1735	4	37	1	4	0.10	1.77	1.01	3.84	1.42	0.05	0.02	0.10
L 3+50N 5+00E P	<	251	10	121	14	<	<	3	<	3	0.2	20	47	142	<	64	77	616	5	41	1	4	0.13	1.67	1.17	3.59	1.33	0.05	0.02	0.06
L 4+00N 5+00E P	<	199	19	139	5	<	<	3	<	<	0.7	20	45	169	<	62	65	660	4	53	1	3	0.07	1.62	1.58	3.25	1.28	0.06	0.03	0.06
L 4+75N 5+00E P	<	172	12	89	10	<	<	3	<	3	0.1	19	45	148	<	70	78	525	4	39	1	4	0.15	1.83	1.17	3.75	1.47	0.04	0.03	0.05
L 5+00N 5+00E P	<	317	118	94	19	<	<	4	<	<	0.5	19	44	182	<	50	59	800	7	68	1	3	0.05	1.43	2.07	3.26	0.94	0.04	0.03	0.09
L 0+00 5+00E P	<	181	9	86	6	<	<	3	<	2	<	24	54	64	<	87	82	609	4	28	2	5	0.24	1.72	0.85	3.73	1.54	0.05	0.02	0.08
L 0+50S 5+00E P	<	99	11	121	11	<	<	4	<	<	0.5	25	85	100	<	81	66	676	5	55	2	5	0.13	1.67	1.52	3.73	1.70	0.08	0.03	0.08
L 1+00S 5+00E P	<	69	21	128	17	<	<	4	<	<	<	21	55	120	<	67	71	663	4	44	1	4	0.12	1.93	1.02	4.03	1.57	0.09	0.03	0.05
L 1+50S 5+00E P	<	139	14	144	15	<	<	3	<	<	<	25	75	107	<	79	71	634	6	44	1	5	0.11	1.83	1.16	4.07	1.68	0.09	0.03	0.08
L 2+00S 5+00E P	<	66	7	101	8	<	<	3	<	<	0.5	17	51	69	<	58	53	593	5	78	3	4	0.11	1.32	2.48	3.12	1.35	0.05	0.03	0.08
L 2+50S 5+00E P	<	255	12	99	25	<	<	4	<	<	<	22	45	143	<	66	72	706	6	51	1	3	0.04	1.95	1.44	4.13	1.53	0.07	0.02	0.10
L 3+00S 5+00E P	<	216	11	101	29	<	<	4	<	<	0.2	18	42	116	<	54	66	573	5	45	1	3	0.06	1.60	1.32	3.68	1.30	0.06	0.03	0.08
L 3+50S 5+00E P	<	192	11	138	32	<	<	6	<	<	0.2	34	52	215	<	65	80	1072	7	37	1	3	0.04	1.98	0.78	4.56	1.53	0.07	0.03	0.10
L 4+00S 5+00E P	<	263	11	122	25	<	<	6	<	<	<	41	60	105	<	55	105	1052	6	23	1	5	0.14	2.10	1.22	4.79	1.80	0.07	0.03	0.08

Min Limit 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01
Max Reported* 99.9 20000 20000 20000 9999 9999 9999 9999 999 999 99.9 999 999 9999 999 9999 999 9999 9999 9999 999 99 1.00 9.99 9.99 9.99 9.99 9.99 9.99 5.00 5.00
Method ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP
---No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
--No Test	ins=Insufficient Sample				S=Soil	R=Rock	C=Core	L=Silt	P=Pulp	U=Undefined	m=Estimate/1000	Z=Estimate %							% Max=No Estimate											

Client: Northern Analytical Laboratories
Project: WO 00325 682 Soil Pulp

iPL: 93J1401

Out: Oct 20, 1993
In: Oct 14, 1993

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Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 8+50S 4+00E	1.1	110	19	322	40	10	<	10	<	<	0.3	27	59	164	<	46	66	1038	11	16	1	3	0.06	1.81	0.20	5.58	1.25	0.04	0.03	0.06
L 9+00S 4+00E	<	98	19	252	36	11	<	12	<	<	0.5	15	57	308	<	49	58	665	11	34	1	4	0.03	1.60	0.36	4.70	1.20	0.06	0.03	0.10
L 9+50S 4+00E	3.8	83	63	458	256	48	<	50	<	<	0.5	6	77	289	<	7	45	324	12	84	3	3	<	0.38	0.17	7.49	0.06	0.10	0.07	0.13
L10+00S 4+00E	<	211	13	1138	48	8	<	13	<	<	15.2	74	164	141	<	45	126	1818	9	116	7	12	<	2.02	0.53	7.68	1.59	0.08	0.02	0.05
L 0+50N 3+00E	<	269	18	149	14	8	<	4	<	<	<	29	92	101	<	96	86	782	6	44	3	6	0.17	2.14	1.20	4.61	1.98	0.09	0.04	0.10
L 1+00N 3+00E	<	251	29	152	14	<	<	3	<	2	<	25	55	116	<	80	81	638	4	44	2	5	0.16	1.93	1.14	4.27	1.65	0.06	0.03	0.08
L 1+50N 3+00E	<	121	11	121	14	5	<	4	<	<	0.1	24	43	213	<	47	57	620	6	46	1	3	0.05	1.55	1.04	3.47	0.93	0.07	0.03	0.09
L 2+00N 3+00E	<	92	16	144	12	6	<	4	<	<	0.3	22	68	122	<	66	64	935	5	36	1	4	0.10	1.85	0.74	3.74	1.44	0.06	0.03	0.09
L 2+50N 3+00E	<	192	19	197	13	<	<	4	<	<	0.1	26	66	187	<	70	70	960	7	53	1	5	0.07	2.07	1.17	4.03	1.47	0.09	0.03	0.10
L 3+00N 3+00E	<	112	17	162	14	5	<	3	<	<	0.2	21	44	211	<	66	74	713	6	48	1	4	0.09	2.07	1.04	3.87	1.45	0.08	0.03	0.10
L 3+50N 3+00E	<	134	26	184	18	<	<	6	<	<	<	25	48	174	<	68	73	1076	5	53	1	4	0.07	1.96	1.19	4.57	1.39	0.07	0.03	0.12
L 4+00N 3+00E	<	282	13	145	16	6	<	5	<	<	<	34	66	228	<	73	79	1512	7	60	1	5	0.10	2.18	1.36	4.52	1.51	0.06	0.04	0.08
L 4+50N 3+00E	<	254	11	159	9	7	<	2	<	2	0.3	23	56	176	<	74	80	695	6	50	2	5	0.15	2.12	1.23	4.08	1.63	0.07	0.03	0.09
L 5+00N 3+00E	<	152	16	100	10	6	<	4	<	<	0.5	8	39	197	<	29	34	289	4	95	1	2	0.04	0.89	2.45	1.98	0.53	0.03	0.04	0.07
L 0+00 3+00E	<	163	16	132	20	7	<	4	<	<	<	26	52	254	<	53	66	887	9	53	1	4	0.07	2.02	0.87	4.10	1.17	0.07	0.03	0.08
L 0+50S 3+00E	<	117	17	128	15	5	<	2	<	<	0.2	25	55	157	<	52	64	798	7	66	1	3	0.10	1.90	1.50	3.87	1.31	0.07	0.03	0.08
L 1+00S 3+00E	<	167	15	136	18	7	<	4	<	<	<	25	57	266	<	55	71	857	10	61	1	4	0.07	2.14	1.02	4.37	1.26	0.07	0.03	0.09
L 1+50S 3+00E	<	193	11	117	12	6	<	3	<	<	<	18	64	167	<	64	70	596	8	56	1	4	0.08	2.07	1.37	4.16	1.51	0.08	0.03	0.07
L 2+00S 3+00E	<	150	13	127	17	9	<	4	<	<	<	25	71	141	<	76	80	806	8	41	2	5	0.12	2.15	0.93	4.64	1.71	0.08	0.03	0.05
L 2+50S 3+00E	<	164	14	119	17	5	<	4	<	<	0.6	14	52	123	<	37	44	451	5	69	2	2	0.05	1.18	2.19	2.78	0.89	0.06	0.03	0.09
L 3+00S 3+00E	<	164	10	130	18	9	<	3	<	<	<	24	53	165	<	63	85	861	7	40	1	6	0.13	2.08	1.06	4.58	1.57	0.08	0.04	0.06
L 3+50S 3+00E	<	193	19	159	25	8	<	5	<	<	<	28	60	167	<	78	92	943	9	46	1	5	0.13	2.33	1.01	5.18	1.77	0.09	0.03	0.08
L 4+00S 3+00E	<	184	13	126	15	<	<	4	<	<	<	26	49	122	<	56	102	711	7	43	2	5	0.23	2.07	1.12	4.68	1.65	0.11	0.03	0.08
L 4+50S 3+00E	<	147	31	184	46	9	<	6	<	<	<	34	58	270	<	69	94	1211	9	53	1	5	0.10	2.46	0.97	5.40	1.79	0.10	0.03	0.10
L 5+00S 3+00E	<	144	15	201	48	7	<	6	<	3	<	32	56	298	<	66	96	1138	8	36	1	5	0.08	2.41	0.64	5.47	1.81	0.07	0.03	0.07
L 5+50S 3+00E	<	182	13	158	58	8	<	4	<	<	<	31	57	289	<	61	83	1167	10	68	1	3	0.05	2.15	1.53	4.83	1.74	0.07	0.03	0.10
L 6+00S 3+00E	<	247	18	115	21	8	<	4	<	<	<	31	61	135	<	98	111	802	4	36	1	5	0.13	2.64	0.99	5.50	2.77	0.09	0.02	0.05
L 6+50S 3+00E	<	220	25	119	63	8	<	5	<	<	<	30	63	102	<	91	99	773	5	28	1	5	0.15	2.29	0.67	5.14	2.41	0.08	0.03	0.07
L 7+00S 3+00E	<	234	15	172	41	7	<	6	<	<	<	31	67	198	<	80	88	996	9	37	1	5	0.09	2.19	0.86	4.90	1.82	0.09	0.03	0.08
L 7+50S 3+00E	<	100	16	158	34	<	<	6	<	<	1.0	25	49	209	<	45	60	977	9	57	1	3	0.04	1.81	1.03	3.99	1.20	0.08	0.03	0.14
L 8+00S 3+00E	<	116	15	185	15	6	<	5	<	<	1.0	24	47	208	<	36	53	904	16	75	1	4	0.03	1.59	1.57	3.65	1.05	0.07	0.04	0.12
L 8+50S 3+00E	<	256	20	142	<	<	<	8	<	<	<	49	65	42	<	45	214	1180	7	74	2	15	0.13	4.06	2.96	7.97	4.47	0.07	0.02	0.21
L 9+00S 3+00E	<	170	26	215	32	6	<	6	<	<	<	45	67	82	<	11	43	2386	20	33	1	10	0.02	1.94	0.64	5.25	1.07	0.04	0.02	0.11
L 9+50S 3+00E	<	120	20	215	23	7	<	9	<	<	0.2	27	57	226	<	58	68	1032	11	33	1	4	0.04	1.89	0.28	4.64	1.22	0.05	0.04	0.09
L10+00S 3+00E	<	106	15	213	19	7	<	8	<	<	0.6	25	55	146	<	54	53	775	9	33	1	3	0.03	1.48	0.52	3.99	1.11	0.07	0.03	0.12
L 0+50N 2+00E	<	55	14	122	8	6	<	3	<	<	0.5	21	32	87	<	49	58	648	3	33	1	3	0.10	1.27	0.76	3.03	1.05	0.07	0.03	0.06
L 1+00N 2+00E	<	98	17	131	12	7	<	3	<	<	<	24	84	91	<	85	72	642	5	32	2	5	0.16	2.01	0.67	4.04	1.71	0.08	0.03	0.05
L 1+50N 2+00E	<	69	14	114	13	6	<	3	<	<	0.1	20	38	144	<	49	58	655	7	47	1	4	0.06	1.83	0.94	3.59	1.23	0.06	0.03	0.07
L 2+00N 2+00E	<	143	17	110	19	6	<	5	<	<	0.2	27	43	228	<	49	57	1033	9	49	1	3	0.03	1.71	0.95	3.87	1.07	0.05	0.04	0.13

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	99999	999	99999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
--=No Test	ins=Insufficient Sample	S=Soil	R=Rock	C=Core	L=Silt	P=Pulp	U=Undefined	m=Estimate/1000	%=Estimate %	Z Max=No Estimate																				



CERTIFICATE OF ANALYSIS
iPL 93J1401

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Client: Northern Analytical Laboratories
Project: WO 00325 682 Soil Pulp

iPL: 93J1401

Out: Oct 20, 1993
In: Oct 14, 1993

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Certified BC Assaver: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 2+50N 2+00E	<	65	16	112	9	7	<	4	<	<	0.2	18	39	150	<	56	60	603	5	44	1	3	0.06	1.58	0.86	3.13	1.13	0.06	0.03	0.09
L 3+00N 2+00E	<	54	11	88	13	<	<	4	<	<	0.9	16	25	122	<	32	70	598	5	35	1	2	0.06	1.00	0.63	3.02	0.56	0.04	0.03	0.07
L 3+50N 2+00E	<	216	12	154	13	<	<	3	<	<	<	25	59	164	<	73	76	788	5	43	1	4	0.13	1.90	1.14	4.11	1.58	0.10	0.03	0.09
L 4+00N 2+00E	<	74	12	120	9	5	<	4	<	<	0.1	17	35	130	<	52	74	574	4	42	1	3	0.11	1.54	0.95	3.63	1.11	0.04	0.03	0.08
L 4+50N 2+00E	<	104	16	130	8	<	<	4	<	<	<	27	49	116	<	72	79	877	4	40	1	4	0.16	1.88	0.92	3.92	1.44	0.07	0.03	0.08
L 5+00N 2+00E	<	139	14	165	19	6	<	6	<	<	0.1	30	55	209	<	62	72	1613	6	57	1	4	0.09	1.88	1.34	4.60	1.26	0.06	0.03	0.09
L 0+00 2+00E	<	126	22	147	9	<	<	2	<	<	<	25	58	112	<	56	72	724	6	57	4	6	0.16	2.12	1.51	4.03	1.55	0.10	0.03	0.09
L 0+50S 2+00E	<	60	14	120	14	6	<	4	<	<	<	20	39	93	<	43	68	630	5	50	2	6	0.16	2.14	1.02	4.12	1.40	0.08	0.02	0.04
L 1+00S 2+00E	<	108	32	113	17	5	<	5	<	<	0.3	17	38	133	<	39	51	524	6	83	1	2	0.05	1.42	1.95	3.22	0.89	0.06	0.04	0.09
L 1+50S 2+00E	<	108	21	118	17	6	<	3	<	<	<	26	42	173	<	50	68	839	10	45	1	4	0.08	2.19	0.78	4.22	1.31	0.08	0.02	0.09
L 2+00S 2+00E	<	116	18	107	11	5	<	4	<	<	<	21	54	156	<	67	77	671	5	38	2	5	0.12	2.12	0.82	4.24	1.57	0.07	0.03	0.05
L 2+50S 2+00E	<	151	15	130	9	<	<	4	<	<	0.1	19	51	148	<	64	71	648	7	38	1	5	0.10	2.01	0.95	3.73	1.54	0.07	0.03	0.06
L 3+00S 2+00E	<	116	19	117	17	7	<	3	<	<	0.4	22	48	145	<	47	59	799	7	49	1	3	0.07	1.61	1.40	3.67	1.23	0.07	0.03	0.10
L 3+50S 2+00E	<	234	12	133	18	7	<	4	<	<	0.7	15	49	170	<	47	52	451	5	67	1	2	0.05	1.40	2.39	3.22	1.11	0.06	0.03	0.10
L 4+00S 2+00E	<	206	17	144	17	5	<	3	<	<	<	22	45	154	<	59	71	761	8	48	1	4	0.07	1.88	1.31	4.20	1.38	0.07	0.03	0.08
L 4+50S 2+00E	<	169	17	161	23	<	<	4	<	<	<	21	44	157	<	50	85	679	9	55	1	3	0.08	1.66	1.42	4.40	1.25	0.06	0.04	0.09
L 5+00S 2+00E	<	188	16	155	19	8	<	4	<	<	<	26	58	171	<	63	77	934	11	38	1	5	0.12	2.14	0.58	4.73	1.49	0.10	0.03	0.06
L 5+50S 2+00E	<	303	41	144	25	6	<	4	<	3	<	32	67	144	<	80	104	994	7	33	2	6	0.19	2.22	0.88	5.07	1.96	0.10	0.03	0.05
L 6+00S 2+00E	<	280	25	133	19	7	<	4	<	<	<	38	68	162	<	86	107	979	7	29	2	5	0.20	2.17	0.78	5.09	1.91	0.10	0.03	0.06
L 6+50S 2+00E	<	213	31	137	22	5	<	5	<	<	<	31	61	166	<	57	81	838	8	47	1	4	0.10	1.91	1.19	4.37	1.38	0.07	0.03	0.09
L 7+00S 2+00E	<	161	15	165	22	6	<	6	<	<	<	31	62	184	<	82	96	914	8	32	1	6	0.12	2.47	0.58	5.44	1.75	0.07	0.03	0.06
L 7+50S 2+00E	0.7	147	27	159	24	8	<	5	<	<	0.2	27	56	224	<	65	79	1018	9	45	1	4	0.06	2.06	0.95	4.62	1.61	0.07	0.03	0.09
L 8+00S 2+00E	<	177	27	198	24	<	<	7	<	<	0.4	42	84	161	<	85	91	942	13	49	2	8	0.09	2.17	0.85	6.79	1.86	0.09	0.03	0.17
L 8+50S 2+00E	0.2	179	15	159	8	<	<	5	<	<	<	29	55	142	<	49	118	894	8	79	1	8	0.06	2.64	1.78	5.47	2.55	0.07	0.04	0.08
L 9+00S 2+00E	1.3	109	25	393	70	12	<	22	<	<	3.1	12	55	206	<	17	55	583	17	79	1	4	<	0.97	0.22	5.20	0.64	0.08	0.04	0.13
L 9+50S 2+00E	1.2	115	17	306	26	7	<	10	<	<	2.6	23	64	231	<	39	56	961	12	55	1	3	0.03	1.52	1.10	4.59	1.06	0.13	0.03	0.25
L10+00S 2+00E	<	433	27	246	12	9	<	6	<	2	1.0	58	129	131	<	116	92	1213	6	30	1	9	0.08	2.52	0.88	5.74	2.06	0.07	0.03	0.08
L 0+50N 1+00E	<	95	23	114	11	7	<	4	<	<	<	20	51	130	<	68	79	633	6	36	1	5	0.14	2.30	0.72	4.13	1.62	0.07	0.03	0.07
L 1+00N 1+00E	<	76	22	124	12	<	<	4	<	<	<	26	40	131	<	61	81	922	5	29	1	4	0.11	1.84	0.54	4.09	1.34	0.06	0.03	0.09
L 1+50N 1+00E	<	222	15	134	13	6	<	5	<	<	<	26	60	137	<	79	78	857	6	40	1	5	0.10	2.18	0.94	4.48	1.70	0.10	0.03	0.10
L 2+00N 1+00E	<	144	18	123	9	7	<	3	<	<	0.3	22	54	106	<	69	72	706	5	40	1	5	0.12	1.94	1.02	3.96	1.55	0.09	0.03	0.08
L 2+50N 1+00E	<	67	21	107	10	6	<	3	<	<	0.2	23	65	169	<	62	62	732	7	45	1	4	0.07	1.77	0.92	3.60	1.28	0.07	0.04	0.10
L 3+00N 1+00E	<	74	25	114	5	<	<	4	<	<	<	25	52	177	<	69	77	895	6	35	1	4	0.11	2.01	0.68	3.97	1.39	0.07	0.03	0.09
L 3+50N 1+00E	<	50	16	126	10	5	<	3	<	<	0.3	16	48	168	<	72	71	488	6	45	1	4	0.10	2.11	0.86	3.58	1.53	0.07	0.03	0.11
L 4+00N 1+00E	<	125	19	97	13	5	<	3	<	<	<	24	52	90	<	62	82	777	6	51	2	6	0.25	1.93	1.57	4.09	1.66	0.08	0.03	0.10
L 4+50N 1+00E	<	62	25	125	15	5	<	5	<	<	<	26	42	121	<	62	85	772	5	42	1	4	0.14	1.94	0.80	4.27	1.15	0.09	0.03	0.05
L 5+00N 1+00E	<	128	16	172	16	5	<	2	<	<	<	26	68	187	<	81	77	895	6	67	1	5	0.12	2.07	1.65	4.02	1.53	0.09	0.03	0.09
L 0+00 1+00E	<	63	12	98	9	5	<	2	<	<	0.1	19	38	123	<	49	68	758	4	51	2	4	0.18	1.68	1.36	3.34	1.25	0.07	0.03	0.04
L 0+50S 1+00E	<	84	17	115	11	7	<	4	<	<	<	17	38	108	<	55	69	598	4	49	1	4	0.11	1.89	1.23	3.65	1.40	0.08	0.03	0.06

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	99999	999	99999	999	9999	9999	99	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 % =Estimate % Max=No Estimate																														



iPL 93J1401

2036 Columbia Street
Vancouver, B.C.
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Phone (604) 879-7878
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iPL: 93J1401

Out: Oct 20, 1993
In: Oct 14, 1993

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Section 1 of 1
Certified BC Assayer: David Chiu

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 1+00S 1+00E	<	67	16	117	15	6	<	5	<	<	<	16	37	101	<	56	74	495	5	37	2	4	0.09	1.98	0.88	4.37	1.54	0.07	0.02	0.07
L 1+50S 1+00E	<	80	11	106	11	6	<	4	<	<	<	23	42	137	<	61	78	663	5	37	2	5	0.13	2.30	0.83	4.33	1.66	0.06	0.02	0.06
L 2+00S 1+00E	<	100	21	96	12	5	<	4	<	<	<	23	49	134	<	56	73	796	7	30	2	6	0.15	2.05	0.62	4.24	1.49	0.06	0.04	0.03
L 2+50S 1+00E	<	90	15	93	15	6	<	3	<	3	<	24	47	108	<	56	72	809	7	42	2	5	0.13	1.87	1.18	4.22	1.36	0.08	0.02	0.05
L 3+00S 1+00E	<	173	20	107	13	6	<	4	<	2	<	22	57	149	<	59	70	795	10	40	2	5	0.10	1.90	1.32	4.14	1.61	0.09	0.04	0.06
L 3+50S 1+00E	<	193	17	97	14	<	<	4	<	<	0.2	20	50	145	<	55	63	647	8	52	1	3	0.08	1.74	1.73	3.64	1.34	0.07	0.03	0.08
L 4+00S 1+00E	<	164	15	118	16	8	<	4	<	<	<	22	52	168	<	69	84	610	8	45	2	6	0.12	2.38	1.00	4.52	1.75	0.08	0.03	0.06
L 4+50S 1+00E	<	143	28	103	16	7	<	5	<	<	0.4	17	47	159	<	52	59	591	6	60	1	3	0.07	1.61	1.69	3.59	1.20	0.07	0.03	0.08
L 5+00S 1+00E	0.5	155	399	99	26	5	<	4	<	<	<	18	46	178	<	57	76	608	7	48	1	4	0.07	1.93	1.20	4.15	1.61	0.07	0.02	0.08
L 5+50S 1+00E	<	212	74	114	47	<	<	4	<	<	<	31	57	148	<	79	103	922	7	35	1	6	0.15	2.43	0.89	5.30	2.35	0.10	0.02	0.07
L 6+00S 1+00E	<	110	42	105	14	6	<	3	<	<	0.2	18	42	180	<	53	64	572	6	47	1	3	0.05	1.76	1.11	3.79	1.25	0.05	0.03	0.08
L 6+50S 1+00E	<	92	54	104	14	5	<	5	<	<	0.5	12	35	127	<	38	45	403	5	51	1	2	0.04	1.17	1.53	2.98	0.87	0.05	0.03	0.09
L 7+00S 1+00E	<	116	40	149	17	5	<	6	<	2	<	25	51	213	<	53	69	879	9	47	1	3	0.05	1.86	0.89	4.30	1.29	0.07	0.03	0.10
L 7+50S 1+00E	<	118	31	162	20	5	<	5	<	<	0.4	27	55	205	<	57	70	1059	9	45	1	4	0.05	1.91	0.90	4.46	1.46	0.09	0.03	0.10
L 8+00S 1+00E	<	134	34	180	166	6	<	7	<	<	<	26	60	150	<	50	75	960	13	44	1	7	0.06	2.05	0.84	5.22	1.64	0.08	0.03	0.14
L 8+50S 1+00E	0.8	173	24	584	32	7	<	10	<	<	4.8	30	96	157	<	33	50	1225	17	32	2	7	0.05	1.58	0.43	4.75	1.00	0.05	0.02	0.08
L 9+00S 1+00E	0.2	117	25	467	46	7	<	12	<	<	6.2	26	75	416	<	22	52	1041	15	79	1	5	0.01	0.98	0.30	3.76	0.38	0.12	0.03	0.09
L 9+50S 1+00E	1.0	153	21	284	28	8	<	13	<	<	0.6	27	73	267	<	56	60	812	13	47	1	5	0.03	1.62	0.53	5.01	1.12	0.07	0.03	0.14
L10+00S 1+00E	1.6	106	20	195	22	6	<	9	<	<	1.6	25	56	234	<	50	54	824	10	44	1	4	0.04	1.48	0.72	4.19	0.93	0.06	0.03	0.13

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	999	999	99	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	

--No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 Z=Estimate Z Max=No Estimate

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Probe Resources

WO 00325

Sample Au ppb

L 5+00E	5+00N	8
L 5+00E	4+75N	9
L 5+00E	4+00N	9
L 5+00E	3+50N	6
L 5+00E	3+00N	<5
L 5+00E	2+50N	6
L 5+00E	2+00N	<5
L 5+00E	1+50N	<5
L 5+00E	1+00N	6
L 5+00E	0+50N	9
L 5+00E	0+00S	8
L 5+00E	0+50S	8
L 5+00E	1+00S	6
L 5+00E	1+50S	6
L 5+00E	2+00S	<5
L 5+00E	2+50S	6
L 5+00E	3+00S	11
L 5+00E	3+50S	10
L 5+00E	4+00S	14
L 5+00E	4+50S	11
L 5+00E	5+00S	6
L 5+00E	5+50S	13
L 5+00E	6+00S	6
L 5+00E	6+50S	7
L 5+00E	7+00S	14
L 5+00E	7+50S	14
L 5+00E	8+00S	17
L 5+00E	8+50S	25
L 5+00E	9+00S	7
L 5+00E	9+50S	6
L 5+00E	10+00S	19
L 4+00E	5+00N	14
L 4+00E	4+50N	5
L 4+00E	4+00N	6
L 4+00E	3+50N	15
L 4+00E	3+00N	11
L 4+00E	2+50N	6
L 4+00E	2+00N	10
L 4+00E	1+50N	10
L 4+00E	1+00N	9
L 4+00E	0+50N	22
L 4+00E	0+00S	14

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Probe Resources

WO 00325

Sample Au ppb

L 4+00E	0+50S	10
L 4+00E	1+00S	9
L 4+00E	1+50S	8
L 4+00E	2+00S	23
L 4+00E	2+50S	10
L 4+00E	3+00S	10
L 4+00E	3+50S	8
L 4+00E	4+00S	9
L 4+00E	4+50S	7
L 4+00E	5+00S	14
L 4+00E	5+50S	44
L 4+00E	6+00S	17
L 4+00E	6+50S	12
L 4+00E	7+00S	12
L 4+00E	7+50S	12
L 4+00E	8+00S	26
L 4+00E	8+50S	16
L 4+00E	9+00S	5
L 4+00E	9+50S	44
L 4+00E	10+00S	11
L 3+00E	5+00N	10
L 3+00E	4+50N	9
L 3+00E	4+00N	10
L 3+00E	3+50N	10
L 3+00E	3+00N	9
L 3+00E	2+50N	8
L 3+00E	2+00N	8
L 3+00E	1+50N	11
L 3+00E	1+00N	11
L 3+00E	0+50N	8
L 3+00E	0+00S	5
L 3+00E	0+50S	13
L 3+00E	1+00S	10
L 3+00E	1+50S	15
L 3+00E	2+00S	12
L 3+00E	2+50S	10
L 3+00E	3+00S	8
L 3+00E	3+50S	9
L 3+00E	4+00S	9
L 3+00E	4+50S	10
L 3+00E	5+00S	8
L 3+00E	5+50S	6

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Page3

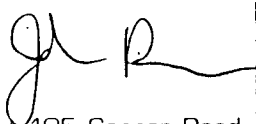
Probe Resources

WO 00325

Sample Au ppb

L 3+00E	6+00S	15
L 3+00E	6+50S	24
L 3+00E	7+00S	8
L 3+00E	7+50S	6
L 3+00E	8+00S	7
L 3+00E	8+50S	11
L 3+00E	9+00S	12
L 3+00E	9+50S	11
L 3+00E	10+00S	7
L 2+00E	5+00N	9
L 2+00E	4+50N	17
L 2+00E	4+00N	7
L 2+00E	3+50N	14
L 2+00E	3+00N	9
L 2+00E	2+50N	8
L 2+00E	2+00N	11
L 2+00E	1+50N	10
L 2+00E	1+00N	9
L 2+00E	0+50N	8
L 2+00E	0+00S	12
L 2+00E	0+50S	8
L 2+00E	1+00S	15
L 2+00E	1+50S	10
L 2+00E	2+00S	7
L 2+00E	2+50S	10
L 2+00E	3+00S	12
L 2+00E	3+50S	8
L 2+00E	4+00S	7
L 2+00E	4+50S	5
L 2+00E	5+00S	16
L 2+00E	5+50S	12
L 2+00E	6+00S	36
L 2+00E	6+50S	17
L 2+00E	7+00S	14
L 2+00E	7+50S	30
L 2+00E	8+00S	15
L 2+00E	8+50S	15
L 2+00E	9+00S	31
L 2+00E	9+50S	14
L 2+00E	10+00S	6
L 1+00E	5+00N	12
L 1+00E	4+50N	13

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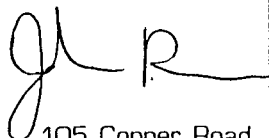
Probe Resources

WO 00325

Sample Au ppb

L 1+00E	4+00N	9
L 1+00E	3+50N	10
L 1+00E	3+00N	7
L 1+00E	2+50N	10
L 1+00E	2+00N	14
L 1+00E	1+50N	12
L 1+00E	1+00N	58
L 1+00E	0+50N	17
L 1+00E	0+00	8
L 1+00E	0+50S	10
L 1+00E	1+00S	10
L 1+00E	1+50S	13
L 1+00E	2+00S	11
L 1+00E	2+50S	7
L 1+00E	3+00S	26
L 1+00E	3+50S	16
L 1+00E	4+00S	9
L 1+00E	4+50S	11
L 1+00E	5+00S	10
L 1+00E	5+50S	10
L 1+00E	6+00S	17
L 1+00E	6+50S	9
L 1+00E	7+00S	14
L 1+00E	7+50S	98
L 1+00E	8+00S	77
L 1+00E	8+50S	11
L 1+00E	9+00S	20
L 1+00E	9+50S	11
L 1+00E	10+00S	33
L 0+00E	10+00N	14
L 0+00E	9+50N	14
L 0+00E	9+00N	13
L 0+00E	8+50N	19
L 0+00E	8+00N	12
L 0+00E	7+50N	19
L 0+00E	7+00N	7
L 0+00E	6+50N	73
L 0+00E	6+00N	10
L 0+00E	5+50N	9
L 0+00E	5+00N	15
L 0+00E	4+75N	13
L 0+00E	4+50N	382

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Probe Resources

WO 00325

Sample Au ppb

L 0+00E	4+25N	18
L 0+00E	4+00N	10
L 0+00E	3+75N	14
L 0+00E	3+50N	10
L 0+00E	3+00N	10
L 0+00E	2+75N	11
L 0+00E	2+50N	11
L 0+00E	2+25N	8
L 0+00E	2+00N	6
L 0+00E	1+75N	12
L 0+00E	1+50N	6
L 0+00E	1+25N	5
L 0+00E	1+00N	8
L 0+00E	0+75N	14
L 0+00E	0+50N	7
L 0+00E	0+25N	11
L 0+00E	0+00	10
L 0+00E	0+50S	8
L 0+00E	1+00S	<5
L 0+00E	1+50S	7
L 0+00E	2+00S	13
L 0+00E	2+50S	13
L 0+00E	3+00S	14
L 0+00E	3+50S	58
L 0+00E	4+00S	174
L 0+00E	4+50S	86
L 0+00E	5+00S	12
L 0+00E	5+50S	13
L 0+00E	6+00S	10
L 0+00E	6+50S	7
L 0+00E	7+00S	15
L 0+00E	7+50S	11
L 0+00E	8+00S	10
L 0+00E	8+50S	15
L 0+00E	9+00S	17
L 0+00E	9+50S	19
L 0+00E	10+00S	10
L 1+00W	10+00N	7
L 1+00W	9+50N	20
L 1+00W	9+00N	14
L 1+00W	8+50N	9
L 1+00W	8+00N	10

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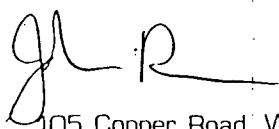
Probe Resources

WO 00325

Sample Au ppb

L 2+00W	7+00N	11
L 2+00W	6+50N	7
L 2+00W	6+00N	7
L 2+00W	5+50N	7
L 2+00W	5+00N	11
L 2+00W	4+50N	15
L 2+00W	4+00N	9
L 2+00W	3+50N	8
L 2+00W	3+00N	5
L 2+00W	2+50N	<5
L 2+00W	2+00N	7
L 2+00W	1+50N	11
L 2+00W	1+00N	8
L 2+00W	0+50N	25
L 2+00W	0+00	8
L 2+00W	0+50S	11
L 2+00W	1+00S	11
L 2+00W	1+50S	18
L 2+00W	2+00S	10
L 2+00W	2+50S	15
L 2+00W	3+00S	11
L 2+00W	3+50S	10
L 2+00W	4+00S	13
L 2+00W	4+50S	11
L 2+00W	5+00S	13
L 2+00W	5+50S	14
L 2+00W	6+00S	15
L 2+00W	6+50S	11
L 2+00W	7+00S	16
L 2+00W	7+50S	40
L 2+00W	8+00S	496
L 2+00W	8+50S	19
L 2+00W	9+00S	19
L 2+00W	9+50S	30
L 2+00W	10+00S	12
L 3+00W	10+00N	15
L 3+00W	9+50N	10
L 3+00W	9+00N	11
L 3+00W	8+50N	28
L 3+00W	8+00N	19
L 3+00W	7+50N	7
L 3+00W	7+00N	19

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Probe Resources

WO 00325

Sample Au ppb

L 1+00W	7+50N	7
L 1+00W	7+00N	6
L 1+00W	6+50N	15
L 1+00W	6+00N	15
L 1+00W	5+50N	137
L 1+00W	5+00N	9
L 1+00W	4+50N	9
L 1+00W	4+00N	6
L 1+00W	3+50N	7
L 1+00W	3+00N	<5
L 1+00W	2+50N	14
L 1+00W	2+00N	7
L 1+00W	1+50N	10
L 1+00W	1+00N	10
L 1+00W	0+50N	43
L 1+00W	0+00	15
L 1+00W	0+50S	9
L 1+00W	1+00S	8
L 1+00W	1+50S	11
L 1+00W	2+00S	13
L 1+00W	2+50S	12
L 1+00W	3+00S	11
L 1+00W	3+50S	13
L 1+00W	4+00S	11
L 1+00W	4+50S	18
L 1+00W	5+00S	13
L 1+00W	5+50S	9
L 1+00W	6+00S	8
L 1+00W	6+50S	11
L 1+00W	7+00S	15
L 1+00W	7+50S	7
L 1+00W	8+00S	9
L 1+00W	8+50S	11
L 1+00W	9+00S	12
L 1+00W	9+50S	7
L 1+00W	10+00S	14
L 2+00W	10+00N	9
L 2+00W	9+50N	11
L 2+00W	9+00N	13
L 2+00W	8+50N	13
L 2+00W	8+00N	18
L 2+00W	7+50N	8

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Probe Resources

WO 00325

Sample Au ppb

L 3+00W	6+50N	12
L 3+00W	6+00N	34
L 3+00W	5+50N	8
L 3+00W	5+00N	12
L 3+00W	4+50N	241
L 3+00W	4+00N	10
L 3+00W	3+50N	6
L 3+00W	3+00N	8
L 3+00W	2+50N	7
L 3+00W	2+00N	13
L 3+00W	1+50N	9
L 3+00W	1+00N	10
L 3+00W	0+50N	6
L 3+00W	0+00	21
L 3+00W	0+50S	17
L 3+00W	1+00S	10
L 3+00W	1+50S	8
L 3+00W	2+00S	11
L 3+00W	2+50S	11
L 3+00W	3+00S	16
L 3+00W	3+50S	13
L 3+00W	4+00S	11
L 3+00W	4+50S	13
L 3+00W	5+00S	11
L 3+00W	5+50S	8
L 3+00W	6+00S	11
L 3+00W	6+50S	7
L 3+00W	7+00S	7
L 3+00W	7+50S	7
L 3+00W	8+00S	9
L 3+00W	8+50S	8
L 3+00W	9+00S	14
L 3+00W	9+50S	9
L 3+00W	10+00S	7
L 4+00W	10+00N	9
L 4+00W	9+50N	8
L 4+00W	9+00N	9
L 4+00W	8+50N	11
L 4+00W	8+00N	17
L 4+00W	7+50N	54
L 4+00W	7+00N	50
L 4+00W	6+50N	10

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Probe Resources

WO 00325

Sample Au ppb

L 4+00W 6+00N	14
L 4+00W 5+50N	11
L 4+00W 5+00N	10
L 4+00W 4+50N	14
L 4+00W 4+00N	24
L 4+00W 3+50N	9
L 4+00W 3+00N	10
L 4+00W 2+50N	17
L 4+00W 2+00N	10
L 4+00W 1+50N	297
L 4+00W 1+00N	18
L 4+00W 0+50N	15
L 4+00W 0+00N	33
L 4+00W 0+50S	9
L 4+00W 1+00S	167
L 4+00W 1+50S	16
L 4+00W 2+00S	11
L 4+00W 2+50S	11
L 4+00W 3+00S	10
L 4+00W 3+50S	11
L 4+00W 4+00S	10
L 4+00W 4+50S	10
L 4+00W 5+00S	7
L 4+00W 5+50S	7
L 4+00W 6+00S	23
L 4+00W 6+50S	22
L 4+00W 7+00S	59
L 4+00W 7+50S	36
L 4+00W 8+00S	16
L 4+00W 8+50S	46
L 4+00W 9+00S	39
L 4+00W 9+50S	24
L 5+00W 10+00N	13
L 5+00W 9+50N	28
L 5+00W 9+00N	17
L 5+00W 8+50N	22
L 5+00W 8+00N	13
L 5+00W 7+50N	39
L 5+00W 7+00N	14
L 5+00W 6+50N	13
L 5+00W 6+00N	15
L 5+00W 5+50N	12

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Probe Resources

WO 00325

Sample Au ppb

L 5+00W	5+00N	21
L 5+00W	4+50N	14
L 5+00W	4+00N	16
L 5+00W	3+50N	100
L 5+00W	3+00N	16
L 5+00W	2+50N	48
L 5+00W	2+00N	49
L 5+00W	1+50N	51
L 5+00W	1+00N	11
L 5+00W	0+50N	531
L 5+00W	0+00	25
L 5+00W	0+50S	11
L 5+00W	1+00S	34
L 5+00W	1+50S	13
L 5+00W	2+00S	106
L 5+00W	2+50S	<5
L 5+00W	3+00S	19
L 5+00W	3+50S	8
L 5+00W	4+00S	6
L 5+00W	4+50S	14
L 5+00W	5+00S	9
L 5+00W	5+50S	7
L 5+00W	6+00S	8
L 5+00W	6+50S	7
L 5+00W	7+00S	8
L 5+00W	7+50S	12
L 5+00W	8+00S	9
L 5+00W	8+50S	10
L 5+00W	9+00S	12
L 5+50W	10+00N	9
L 5+50W	9+50N	7
L 5+50W	9+00N	8
L 5+50W	8+50N	6
L 5+50W	8+00N	5
L 5+50W	7+50N	8
L 5+50W	7+00N	6
L 5+50W	6+50N	16
L 5+50W	6+00N	23
L 5+50W	5+50N	6
L 6+00W	5+00N	22
L 6+00W	4+50N	7
L 6+00W	3+50N	19

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Probe Resources

WO 00325

Sample Au ppb

L 6+00W	3+00N	9
L 6+00W	2+50N	9
L 6+00W	1+50N	14
L 6+00W	1+00N	9
L 6+00W	0+50N	8
L 6+00W	0+00	7
L 6+00W	0+50S	8
L 6+00W	1+00S	14
L 6+00W	1+50S	7
L 6+00W	2+00S	9
L 6+00W	2+50S	18
L 6+00W	3+00S	12
L 6+00W	3+50S	10
L 6+00W	4+00S	6
L 6+00W	4+50S	20
L 6+00W	5+00S	8
L 6+00W	5+50S	<5
L 6+00W	6+00S	7
L 6+00W	6+50S	6
L 6+00W	7+00S	17
L 6+00W	7+50S	10
L 6+00W	8+00S	9
L 6+00W	8+50S	6
L 6+00W	9+00S	9
L 7+00W	10+00N	15
L 7+00W	9+50N	9
L 7+00W	9+00N	9
L 7+00W	8+50N	142
L 7+00W	8+00N	8
L 7+00W	7+50N	14
L 7+00W	7+00N	127
L 7+00W	6+50N	6
L 7+00W	6+00N	7
L 7+00W	5+50N	11
L 7+00W	5+00N	11
L 7+00W	4+50N	10
L 7+00W	4+00N	9
L 7+00W	3+50N	174
L 7+00W	3+00N	15
L 7+00W	2+50N	237
L 7+00W	2+00N	10
L 7+00W	1+50N	14

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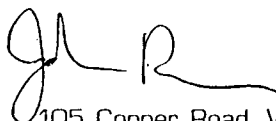
Probe Resources

WO 00325

Sample Au ppb

L 7+00W	1+00N	14
L 7+00W	0+50N	14
L 7+00W	0+00	9
L 7+00W	0+50S	16
L 7+00W	1+00S	142
L 7+00W	1+50S	17
L 7+00W	2+00S	10
L 7+00W	2+50S	41
L 7+00W	3+00S	70
L 7+00W	3+50S	8
L 7+00W	4+00S	76
L 7+00W	4+50S	403
L 7+00W	5+00S	116
L 7+00W	5+50S	21
L 7+00W	6+00S	793
L 7+00W	6+50S	7
L 7+00W	7+00S	9
L 7+00W	7+50S	7
L 7+00W	8+00S	7
L 7+00W	8+50S	6
L 8+00W	10+00N	11
L 8+00W	9+50N	9
L 8+00W	9+00N	7
L 8+00W	8+50N	9
L 8+00W	8+00N	10
L 8+00W	7+00N	10
L 8+00W	6+50N	8
L 8+00W	6+00N	10
L 8+00W	5+50N	61
L 8+00W	5+00N	7
L 8+00W	4+50N	7
L 8+00W	4+00N	9
L 8+00W	3+50N	19
L 8+00W	3+00N	11
L 8+00W	2+50N	26
L 8+00W	2+00N	16
L 8+00W	1+50N	1340
L 8+00W	1+00N	14
L 8+00W	0+50N	12
L 8+00W	0+00S	7
L 8+00W	0+50S	9
L 8+00W	1+00S	11

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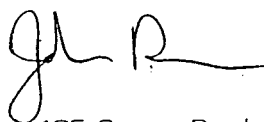
Probe Resources

WO 00325

Sample Au ppb

L 8+00W	1+50S	10
L 8+00W	2+00S	11
L 8+00W	2+50S	9
L 8+00W	3+00S	11
L 8+00W	3+50S	11
L 8+00W	4+00S	6
L 8+00W	4+50S	12
L 8+00W	5+00S	7
L 8+00W	5+50S	9
L 8+00W	6+50S	11
L 8+00W	7+00S	32
L 8+00W	7+50S	8
L 8+00W	8+00S	9
L 8+00W	8+50S	10
L 8+00W	9+00S	14
L 9+00W	10+00N	11
L 9+00W	9+50N	10
L 9+00W	9+00N	11
L 9+00W	8+50N	16
L 9+00W	8+00N	32
L 9+00W	7+50N	7
L 9+00W	7+00N	9
L 9+00W	6+50N	11
L 9+00W	6+00N	7
L 9+00W	5+50N	5
L 9+00W	5+00N	10
L 9+00W	4+50N	9
L 9+00W	4+00N	64
L 9+00W	3+50N	5
L 9+00W	3+00N	10
L 9+00W	2+50N	19
L 9+00W	2+00N	12
L 9+00W	1+50N	37
L 9+00W	1+00N	7
L 9+00W	0+50N	10
L 9+00W	0+00	<5
L 9+00W	0+50S	8
L 9+00W	1+00S	9
L 9+00W	1+50S	8
L 9+00W	2+00S	8
L 9+00W	2+50S	9
L 9+00W	3+00S	6

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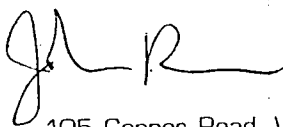
Probe Resources

WO 00325

Sample Au ppb

L 9+00W	3+50S	8
L 9+00W	4+00S	11
L 9+00W	4+50S	7
L 9+00W	5+00S	6
L 9+00W	5+50S	10
L 9+00W	6+00S	11
L 9+00W	6+50S	136
L 9+00W	7+00S	9
L 9+00W	7+50S	10
L 9+00W	8+00S	77
L 9+00W	8+50S	24
L 9+00W	9+00S	10
L 10+00W	10+00N	16
L 10+00W	9+50N	19
L 10+00W	9+00N	208
L 10+00W	8+50N	9
L 10+00W	8+00N	16
L 10+00W	7+50N	6
L 10+00W	7+00N	>6667
L 10+00W	6+50N	46
L 10+00W	6+00N	8
L 10+00W	5+50N	5
L 10+00W	5+00N	6
L 10+00W	4+50N	11
L 10+00W	4+00N	37
L 10+00W	3+50N	6
L 10+00W	3+00N	7
L 10+00W	2+50N	17
L 10+00W	2+00N	7
L 10+00W	1+50N	8
L 10+00W	1+00N	14
L 10+00W	0+50N	9
L 10+00W	0+00	8
L 11+00W	10+00N	9
L 11+00W	9+50N	6
L 11+00W	9+00N	11
L 11+00W	8+50N	7
L 11+00W	8+00N	7
L 11+00W	7+50N	17
L 11+00W	7+00N	8
L 11+00W	6+50N	13
L 11+00W	6+00N	13

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Probe Resources

WO 00325

Sample Au ppb

L 11+00W 5+50N	8
L 11+00W 5+00N	7
L 11+00W 4+50N	6
L 11+00W 4+00N	6
L 11+00W 3+50N	<5
L 11+00W 3+00N	5
L 11+00W 2+50N	9
L 11+00W 2+00N	9
L 11+00W 1+50N	299
L 11+00W 1+00N	8
L 11+00W 0+50N	12
L 11+00W 0+00	7
L 12+00W 10+00N	6
L 12+00W 9+50N	9
L 12+00W 9+00N	8
L 12+00W 8+50N	11
L 12+00W 8+00N	9
L 12+00W 7+50N	10
L 12+00W 7+00N	11
L 12+00W 6+50N	6
L 12+00W 6+00N	18
L 12+00W 5+50N	6
L 12+00W 5+00N	5
L 12+00W 4+50N	9
L 12+00W 4+00N	6
L 12+00W 3+50N	7
L 12+00W 3+00N	5
L 12+00W 2+50N	8
L 12+00W 2+00N	8
L 12+00W 1+50N	11
L 12+00W 1+00N	10
L 12+00W 0+50N	7
L 12+00W 0+00	9
L 13+00W 10+00N	9
L 13+00W 9+50N	20
L 13+00W 9+00N	16
L 13+00W 8+50N	7
L 13+00W 8+00N	6
L 13+00W 7+50N	8
L 13+00W 7+00N	<5
L 13+00W 6+50N	9
L 13+00W 6+00N	7

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Probe Resources

WO 00325

Sample Au ppb

L 13+00W 5+50N	19
L 13+00W 5+00N	7
L 13+00W 4+50N	5
L 13+00W 4+00N	5
L 13+00W 3+50N	8
L 13+00W 3+00N	5
L 13+00W 2+50N	7
L 13+00W 2+00N	9
L 13+00W 1+50N	10
L 13+00W 1+00N	6
L 13+00W 0+50N	7
L 13+00W 0+00	<5
L 14+00W 10+00N	<5
L 14+00W 9+50N	5
L 14+00W 9+00N	11
L 14+00W 8+50N	5
L 14+00W 8+00N	<5
L 14+00W 7+50N	<5
L 14+00W 7+00N	<5
L 14+00W 6+50N	<5
L 14+00W 6+00N	<5
L 14+00W 5+50N	5
L 14+00W 5+00N	<5
L 14+00W 4+50N	6
L 14+00W 4+00N	5
L 14+00W 3+50N	<5
L 14+00W 3+00N	6
L 14+00W 2+50N	8
L 14+00W 2+00N	<5
L 14+00W 1+50N	<5
L 14+00W 1+00N	5
L 14+00W 0+50N	6
L 14+00W 0+00	7
L 15+00W 10+00N	5
L 15+00W 9+50N	21
L 15+00W 9+00N	6
L 15+00W 8+50N	<5
L 15+00W 8+00N	6
L 15+00W 7+50N	6
L 15+00W 7+00N	6
L 15+00W 6+50N	10
L 15+00W 6+00N	10

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Probe Resources

WO 00325

Sample Au ppb

L 15+00W 5+50N	6
L 15+00W 5+00N	6
L 15+00W 4+50N	6
L 15+00W 4+00N	8
L 15+00W 3+50N	10
L 15+00W 3+00N	10
L 15+00W 2+50N	7
L 15+00W 2+00N	7
L 15+00W 1+50N	21
L 15+00W 1+00N	28
L 15+00W 0+50N	8
L 15+00W 0+00S	8

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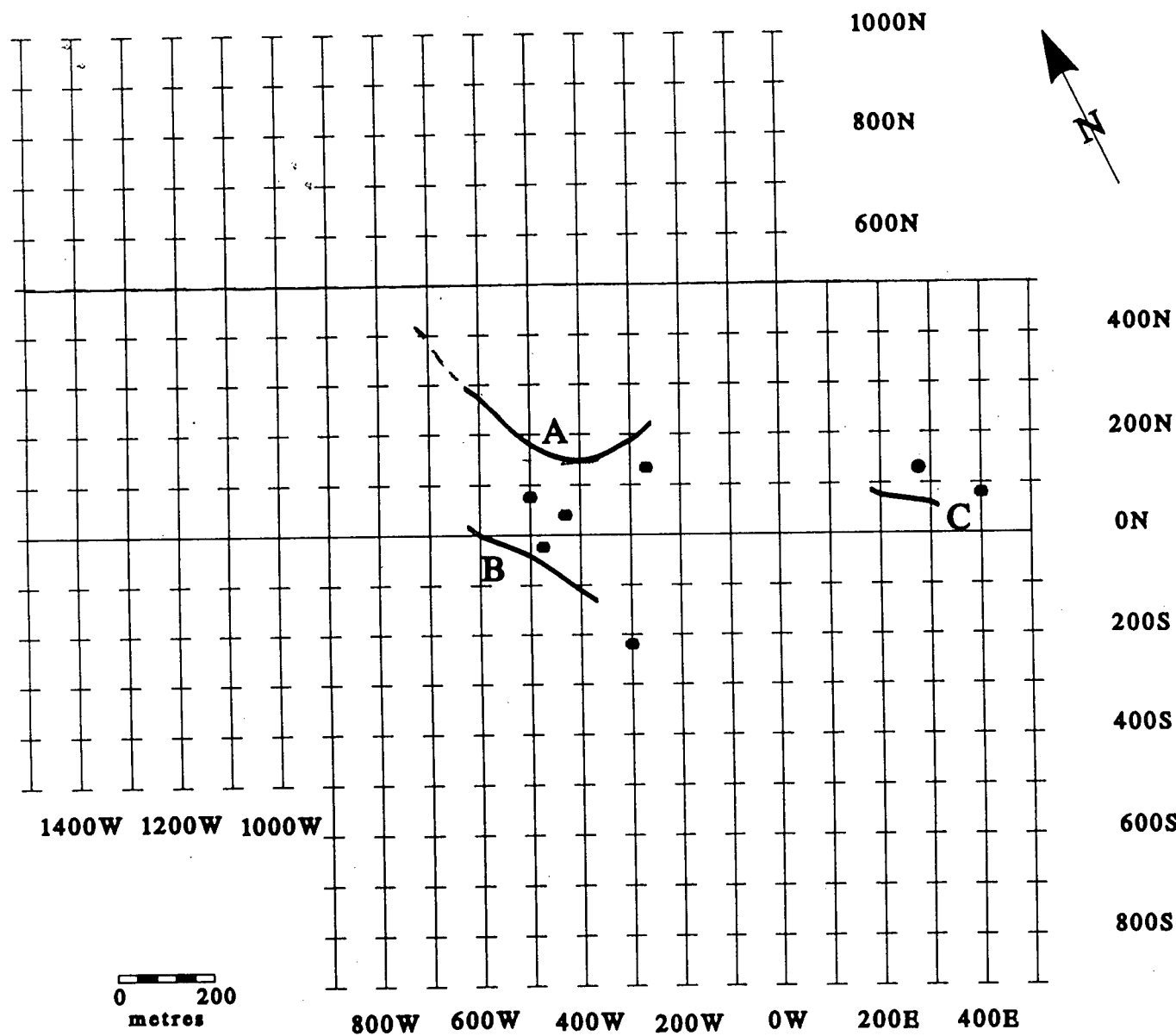
Appendix C

Geophysical

Figure of Conductors (Figure 9 from Davidson, 1993)

1990 Report: A Total Magnetic Field and HLEM Survey of the Ellen Claims, for G. Davidson, by M. Power

1993 Report: HLEM and VLF Survey on the Ellen Property for Probe Resources Inc., by M. Power



● - Sulphide showing

— - HLEM Conductor Axis

PROBE RESOURCES

Claims: ELLEN I-37

ELLEN PROPERTY
Anomaly Map

Mining District: Whitehorse

NTS: 1:5 A 13

INTERPRETER: M. Power

AMEROK GEOPHYSICS

DATE: 15 OCT 93

Figure: 9

A TOTAL MAGNETIC FIELD
AND HLEM SURVEY OF THE
ELLEN CLAIMS, JARVIS RIVER
AREA, YUKON TERRITORY

M.A. Power M.Sc.

For: Graham Davidson
#17 4078 4th Avenue
Whitehorse, Yukon Territory
Y1A 4K8

CLAIMS

ELLEN 1-5	YA97362-YA97366
ELLEN 6-8	YB26797-YA26799
ELLEN 9-20	YB27078-YB27098
ELLEN 25-27	YB27094-YB27096
ELLEN 28-31	YB35380-YB35483
ELLEN 32-37	YB35588-YB35593

NTS: 115 A 13
Location: 60° 52' N 137° 57' W
Whitehorse Mining District, Yukon Territory
Date: January 4, 1991

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Summary

Total magnetic field and HLEM surveys were conducted on the ELLEN CLAIMS between October 28 and November 9, 1990. The magnetic field survey covered approximately 26 line-km of grid at a 25 m station spacing and the HLEM survey covered approximately 2 line-km at a 12.5 m station spacing using a 50 m coil spacing. The EM survey was performed with a McPhar 660 VHEM at 600 Hz and 2600 Hz and located several conductors which are grouped into three trends. One is coincident with the main sulphide showing and the other two are to the east. The magnetic field survey located a strong anomaly in the northwest corner of the property background.

A. Introduction

This report describes a total magnetic field and horizontal loop electromagnetic (HLEM) survey of the ELLEN CLAIMS conducted between October 28 and November 9, 1990. Approximately 26 line-km of grid were covered by the total magnetic field survey and approximately 2 line-km of grid were covered by the HLEM survey. The aim of the surveys was to determine the strike extent of the main showing on the property and to locate other geophysical targets.

B. Location and access

The ELLEN CLAIMS are located at 60° 52'N 137° 57'W in the Kluane Ranges of the Yukon Territory, approximately 200 km west of Whitehorse (Fig. 1). The property can be reached from the Alaska Highway using a tote road which meets the highway about 1 km north of the Jarvis River bridge. This road runs 3.5 km southwest to a ford on the Jarvis River and then 5 km south into the property.

C. Property

The ELLEN CLAIMS consist of 27 quartz claims in the Whitehorse Mining District, Y.T. The outline of the claim block is shown in Figure 1 and the property data is shown below:

Claim name	Record Number	Expiry Date
Ellen 1 - 5	YA97362-YA97366	14 Nov 92
Ellen 6 - 8	YB26797-YA26799	29 Sep 93
Ellen 9 - 20	YB27078-YB27098	10 Dec 95
Ellen 25 - 27	YB27094-YB27096	10 Dec 95
Ellen 28 - 31	YB35480-YB35483	22 Oct 91
Ellen 32 - 37	YB35588-YB35593	23 Nov 91

D. Geology

The ELLEN claims are underlain by metavolcanic and metasedimentary rocks and by thick unconsolidated glacial deposits (Fig. 2). Andesitic and basaltic volcanic rocks with intercalated pelagic shales (PMv) form a homoclinal unit with a mean bedding orientation of approximately 110° 50' S. The entire sequence has been metamorphosed to lower greenschist facies. Regional mapping by Campbell and Dodds (1980) assigns rocks in this area to the Coast Plutonic Complex but the lithology and

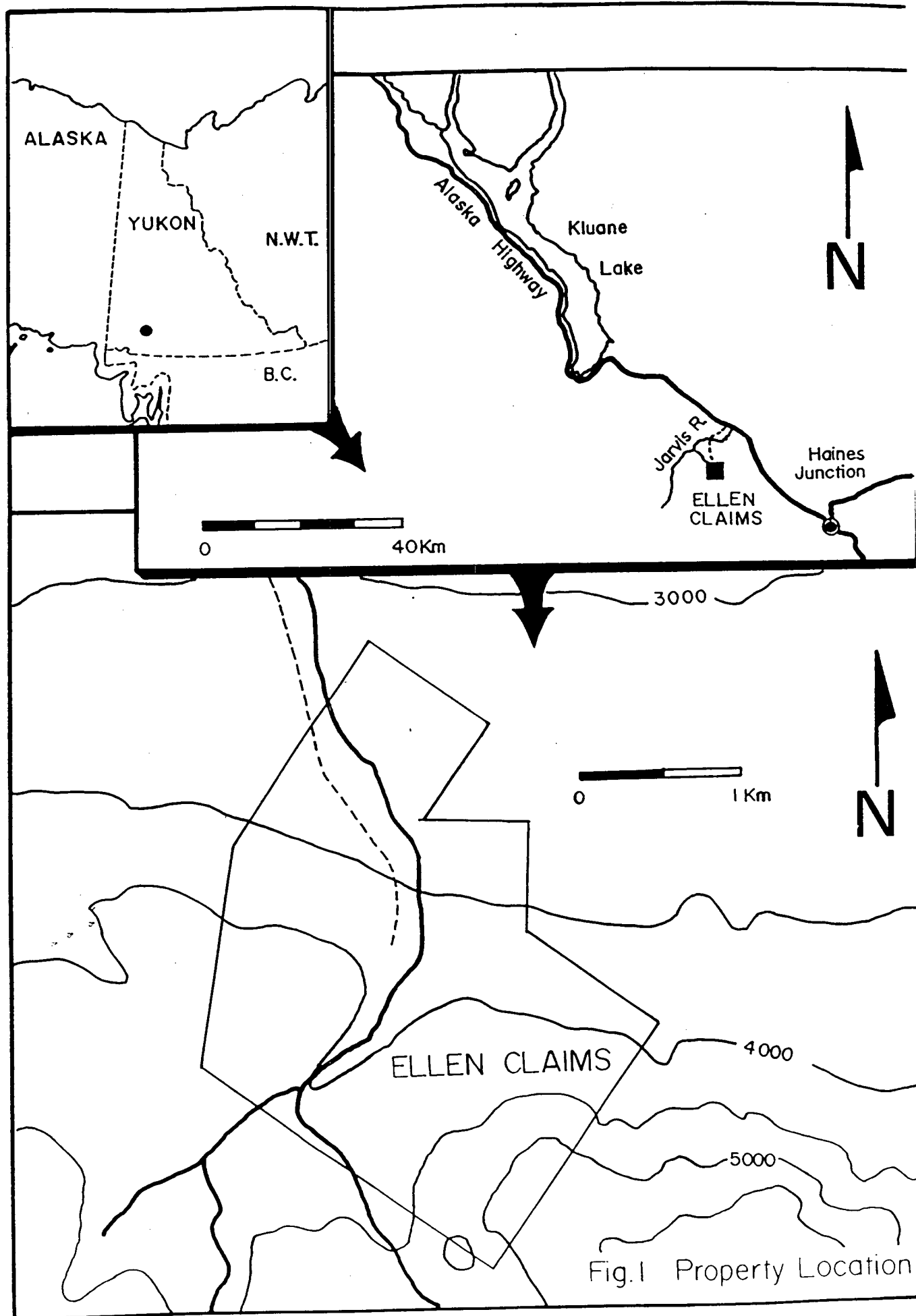


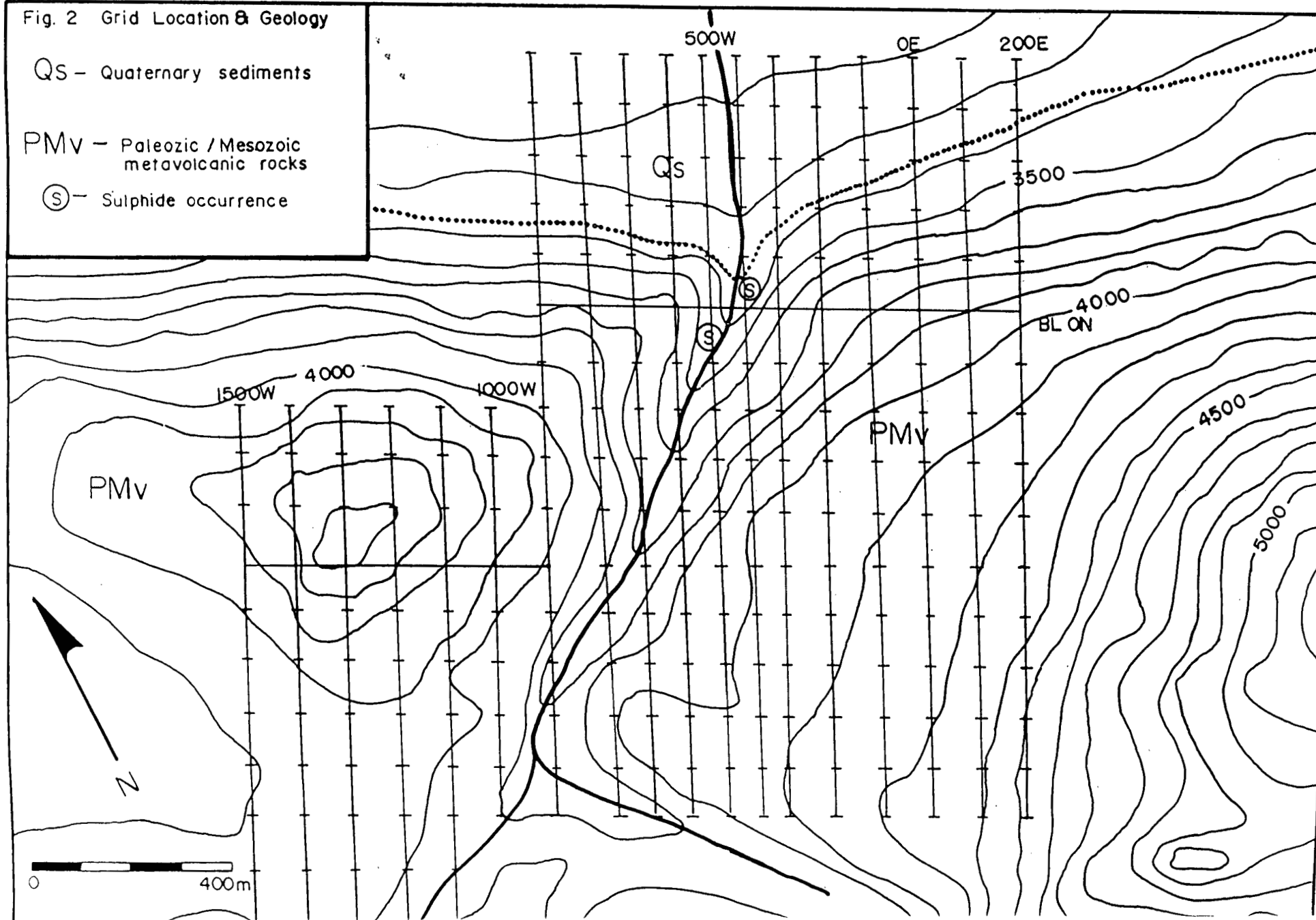
Fig.1 Property Location

Fig. 2 Grid Location & Geology

QS - Quaternary sediments

PMV - Paleozoic / Mesozoic
metavolcanic rocks

Ⓢ - Sulphide occurrence



metamorphic grade are not consistent with this. It appears that these rocks probably belong to the Alexander Terrane.

Unconsolidated glacial till (Qs) covers most of the property below 3500 feet. Clay-rich boulder till is exposed in cuts along the access road and creek beds. Thin deposits of locally derived glacial till cover most of the property but above the 3500 foot level these appear to be no more than 5 to 15 m thick.

No faults or obvious major folds have been mapped on the property. Since outcrop is generally restricted to the creek gorge, structural features may be obscured.

The main showing occurs along the creek approximately 100 m south of the baseline. It consists of a tabular massive sulphide body, about 1 m thick and oriented $110^{\circ} 40' S$. It consists mostly of chalcopryite with lesser pyrite and quartz. Drill hole logs mention pyrrhotite as an accessory mineral. Disseminated pyrite and chalcopryite in quartz veins occurs below this showing near the baseline on the creek; this may be part of a feeder system beneath the sulphide showing. It appears that the massive sulphide body is concordant with bedding.

Using the mineralogy and dimensions of the massive sulphide showing as a guide, any conductors of interest on this property should have conductances of at least 10 S, be tabular and dip to the south. Overburden conductivity is probably in the range of 0.1 to 0.01 S.

E. Grid and survey specifications

The survey grid consists of approximately 30 line-km of grid line orthogonal to a baseline running 110° (Fig. 2). Survey lines are 100 m apart extending from 200E to 1500W and are up to 2500 m long. The lines are not tied into correction lines and their nominal locations are shown in Figure 2. In order to mitigate HLEM coil spacing and orientation error near the creek, survey lines running up the creek bed and along the ridge to the west were used rather than the adjacent lines.

The total magnetic field survey was performed by G. Davidson using an Omni IV proton precession magnetometer and base station magnetometer. The base station was installed in the camp at the north end of the property and cycled at a variable interval of 10 to 90 s. The field unit readings were corrected using a reference field level of 57000 nT. Readings were taken at 25 m intervals along the survey lines and approximately 26 line-km of grid was surveyed.

The HLEM survey was performed with a McPhar VHEM model 660 by R. Stack and the author. A fixed coil spacing of 50 m was

used throughout and readings of the vertical in-phase and quadrature field were taken at 600 Hz and 2600 Hz. Coil orientation and spacing were maintained constant by using chainage marks on the reference cable and by setting the tilt of both coils to the estimated slope of the intervening terrain. Using this procedure, in-phase error was kept to approximately $\pm 3\%$ and quadrature errors to approximately $\pm 1\%$.

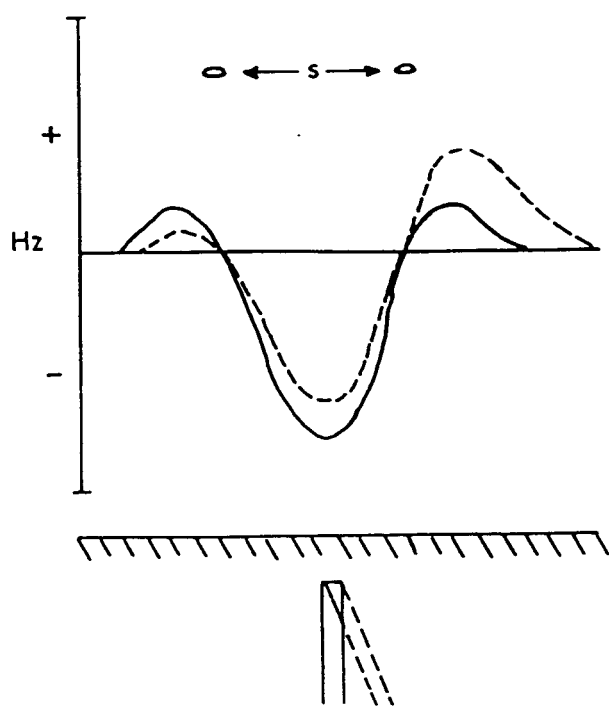
F. Data

The total magnetic field data files together with the base station records are in Appendix B. This data was contoured at a 50 nT interval and is shown in the total magnetic field map in Appendix A. The HLEM data is contained in the data base file records in Appendix B. The last 6 data records contain the EM data with the 600 Hz data in the first two locations, the 2600 Hz data in the next two locations and the last two being blank. The HLEM data is plotted in line profile or stacked profile maps for each frequency in Appendix A. The plot-point for the data is the midpoint between the transmitter and receiver coils and the zero level is coincident with the survey lines in the line profile maps.

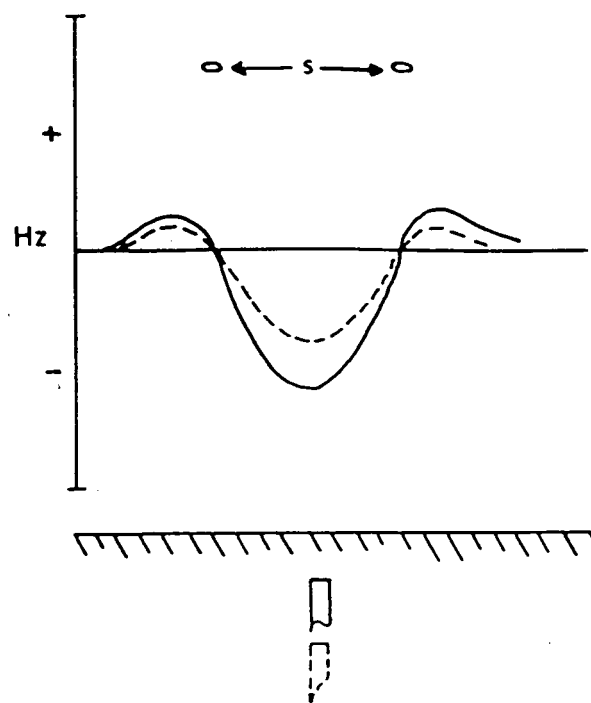
G. HLEM and total magnetic field responses

The theory and application of the HLEM method to prospecting for massive sulphides is well described by Telford et al. (1976) and by Parasnis (1966). The essential features of the method are summarized below.

Conventional HLEM surveying involves traversing the grid with a transmitter and receiver connected by a reference and communication cable. The transmitter and receiver antennas consist of coils with multiple windings held horizontal or parallel to the mean slope between them. The magnetic field about the transmitting coil is roughly horizontal at a distance and any steeply dipping conductors will be energized by it. The induced flux will oppose the transmitter flux and hence will be sensed as a negative signal. Features of HLEM responses are shown in Figure 3. Over a vertical to steeply dipping conductor the response consists of a negative signal which is at a maximum over the apex of the conductor and of two smaller and equal positive flanking anomalies (for simplicity only the in-phase component is shown in Figure 3a and 3b). When either of the coils is on top of the conductor, the conductor response is zero because all the flux originating in the conductor is horizontal and parallel to the coil; a transmitting coil could not energize the conductor nor could a receiver coil receive a response from it under these conditions. If the conductor dips at less than approximately 60° , the positive flanking anomaly on the hanging wall will be larger than that of the footwall. As the depth to



a. Dip effect



b. Depth effect

c. Conductivity effect

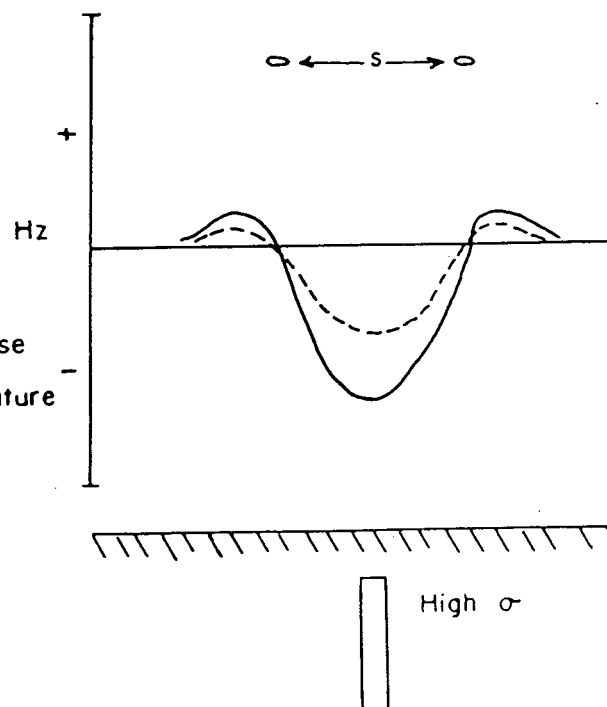
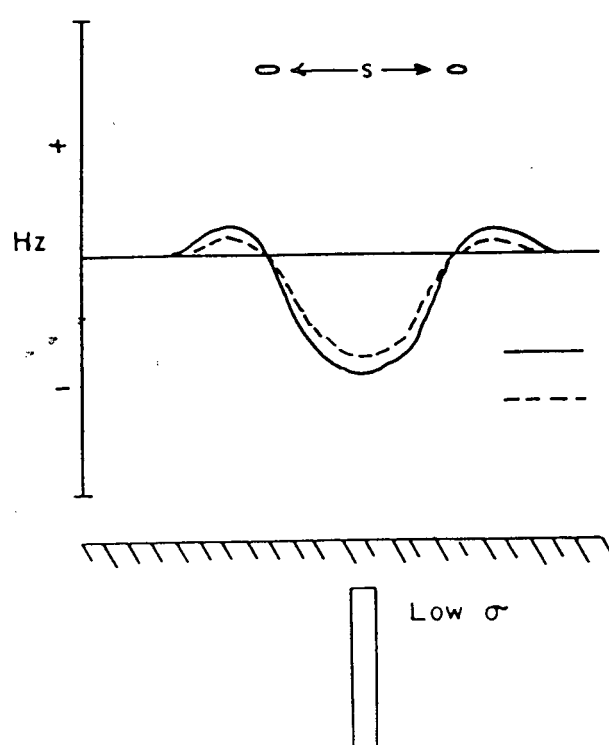


Fig. 3 Features of HLEM responses

the conductor increases, the response amplitude decreases. As a rule of thumb, the depth of detection is no greater than one half the coil spacing; conductors deeper than this have responses which are barely detectable or undetectable above the noise level of the system. The conductance or conductivity-thickness product is diagnostic of the electrical conductivity and dimensions of the conductor and can be used to discriminate between good conductors such as sulphides (and graphite) and weak conductors such as clay rich shear zones or overburden features. The ratio of the maximum negative in-phase to quadrature component is proportional to the conductance. It is generally impossible to separate the conductance into electrical and dimensional components without making limiting assumptions.

Noise in the responses can generally be traced to one of three sources. Atmospheric noise (sferics) is occasionally a problem at large coil spacings and is reduced by averaging the signal over perhaps a minute of readings. Variations in the composition of overburden can cause responses which appear to be noisy or which mimic bedrock conductor responses. In particular, clay-filled depressions can generate responses which are very similar to those of bedrock conductors. The last source of noise arises from changes in coil spacing and orientation. A 1% change in coil spacing will induce a 3% error in the in-phase response while coil orientation error in the in-phase response is proportional to the cube of the sine of the angular difference. This source of noise can be minimized by secant chaining and tilt compensation. Despite the best efforts of a field crew this will always be a serious source of noise at short coil spacings.

HLEM data may be interpreted to yield fairly reliable estimates of conductance, dip and depth to the apex. In general, conductance estimates are less prone to error because the quadrature component is nearly insensitive to coil spacing error and because the conductance estimates are made from the strongest component of the response. Depth and dip estimates are affected to a much greater degree by coil orientation and spacing error because they are based on the difference between flanking positive in-phase and quadrature responses - features which have much higher relative noise levels. In the interpretation that follows, estimates of conductance can be taken as fairly reliable while estimates of dip should be used only as a guide in the absence of any reliable geological information.

Expected magnetic responses over dikes or other tabular bodies magnetized in the direction of the earth's field should consist of a strong positive magnetic anomaly immediately south of the apex and a very weak negative response to the north of it. This is a consequence of the steep inclination of the earth's magnetic field at this latitude (75°).

H. Results

The HLEM data was interpreted using type curves developed by Ketola and Puranen (1967). Negative HLEM responses with the distance between zero crossovers (baselevel adjusted) of 50 to 60 m probably arise from bedrock conductors. Overburden in the survey area appears to range in depth from 5 to 15 m and all detected conductors are probably no deeper than 25 m. Conductors with conductances greater than 20 S could contain sulphides (or graphite). The following is a listing of conductors detected during this survey:

LINE	STATION	CONDUCTOR DESCRIPTION	DESIGNATOR
CREEK	50S	Wide conductor at 2600Hz. Conductance 2-10S. Steep dip to south. No response at 600 Hz. Probable source: disseminated sulphides or shear/alteration zone.	
CREEK	87.5S	Sulphide showing 20 m east of line. Slight in-phase anomaly.	a
400W	75S	Narrow conductor. Conductance 19-28S Steep dip; possibly to N. Probable updip extension of sulphide showing.	a
100W	125S	Wide conductor response at 2600 Hz. Narrow response at 600 Hz. Conductance 20-28S. Steep dip - possibly to N.	b
100W	200S	Narrow conductor. Conductance 20-28S. Steep dip - possibly to S.	c
0E	75S	Narrow conductor present only at 2600 Hz. Conductance 20-28S. Steep dip to S. Possibly an off-conductor response from the conductor on line 100W.	b

The following features are apparent in the magnetic field responses:

(a) General field characteristics: The magnetic field over most of the grid is surprisingly uniform given the presence of metavolcanic rocks. The base level of approximately 57000 nT is roughly the average value of the earth's field at this latitude. Consequently the flat field suggests that there is a low concentration of accessory magnetite in the rocks.

(b) Anomaly at Line 1500W 900S. The comparatively strong negative response north of the axis at 800S suggests that the

body is dipping to the south. Regardless of dip direction, the apex of the source body will be nearly beneath the positive peak of the anomaly.

There were no magnetic responses associated with the HLEM anomalies.

I. Conclusions

The results of the survey lead to the following conclusions:

(1) The main sulphide showing probably extends to the east at least 75m and intersects line 400W at 75S (± 10 m). No continuation of the main showing within 25 m of the surface appears to exist either west of the creek or to the east of line 400W.

(2) Conductors b and c have responses similar to that encountered at the main showing. They occur on the plateau above the creek and it is unlikely that they are caused by topography or coil control errors.

(3) EM methods appear to provide a means of determining the location and extent of sulphide showings on this property. Since graphitic horizons do not appear to be present, any detected strong conductors merit additional investigation.

J. Recommendations

Trenching or shallow drilling should be conducted on Line 400W at 65-85S and on Line 100W at 110-130S and at 190-210S to determine the source of the HLEM anomalies.

The property should be surveyed with either a Maxmin I or Genie (SE-88) EM system using a 100 m coil spacing and at a station spacing not exceeding 25 m. This would provide the most cost-effective means of locating additional sulphide occurrences.

Respectfully submitted



M.A. Power M.Sc.

Whitehorse, Yukon Territory
January 4, 1991

References Cited

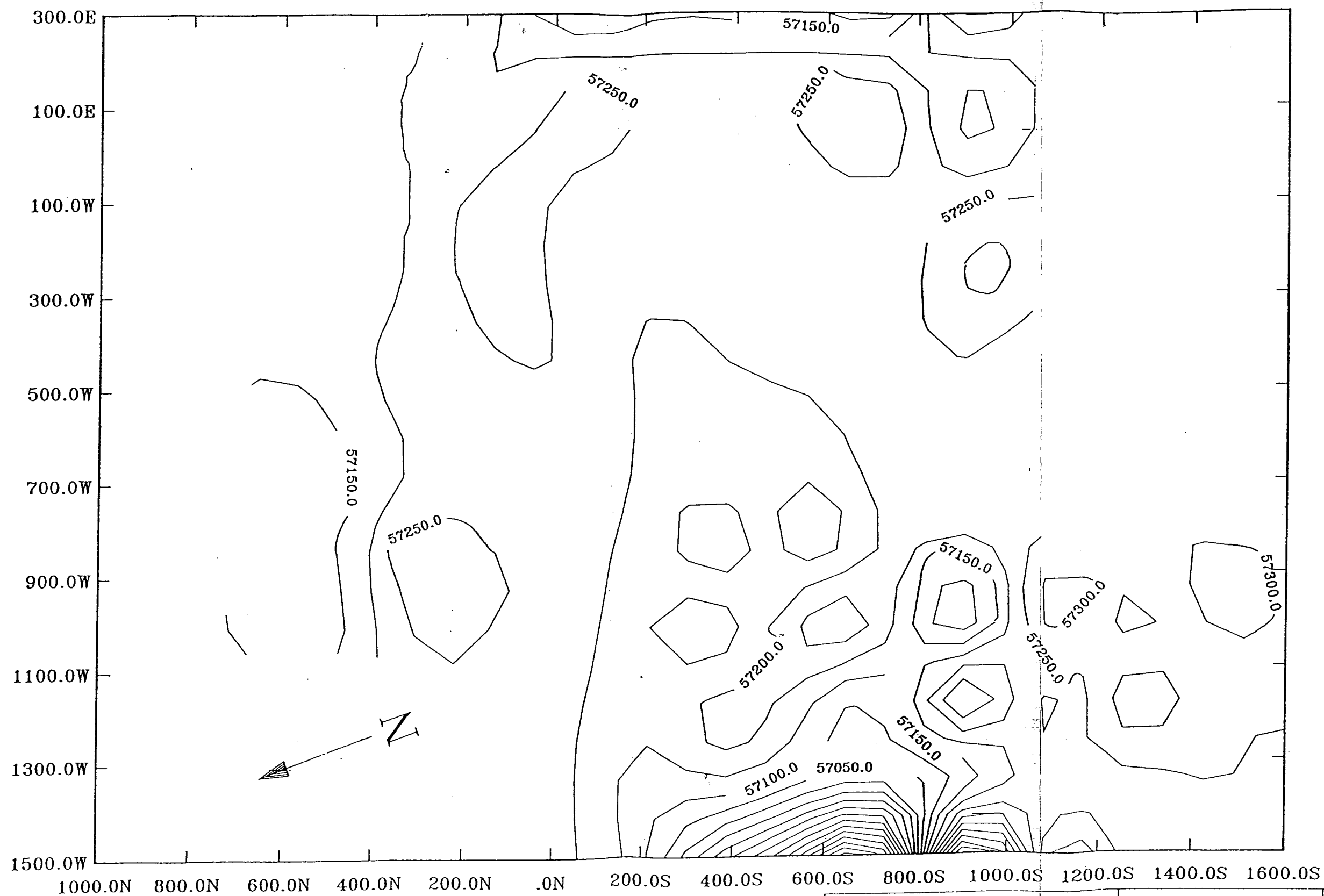
Campbell R.B. and C.J. Dodds (1980) Operation St. Elias Open File 831. Geological Survey of Canada.

Ketola M. and M. Puranen (1967) Type curves for the interpretation of Slingram (horizontal loop) anomalies over tabular bodies. Geological Survey of Finland.

Parasnis D.S. (1966) **Mining geophysics**. New York: Elsevier.

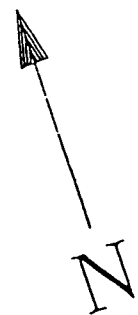
Telford W.M., L.P. Geldart, R.E. Sheriff, and D.A. Keys (1976) **Applied Geophysics**. New York: Cambridge University Press.

Appendix A. Total magnetic field and HLEM line profile maps



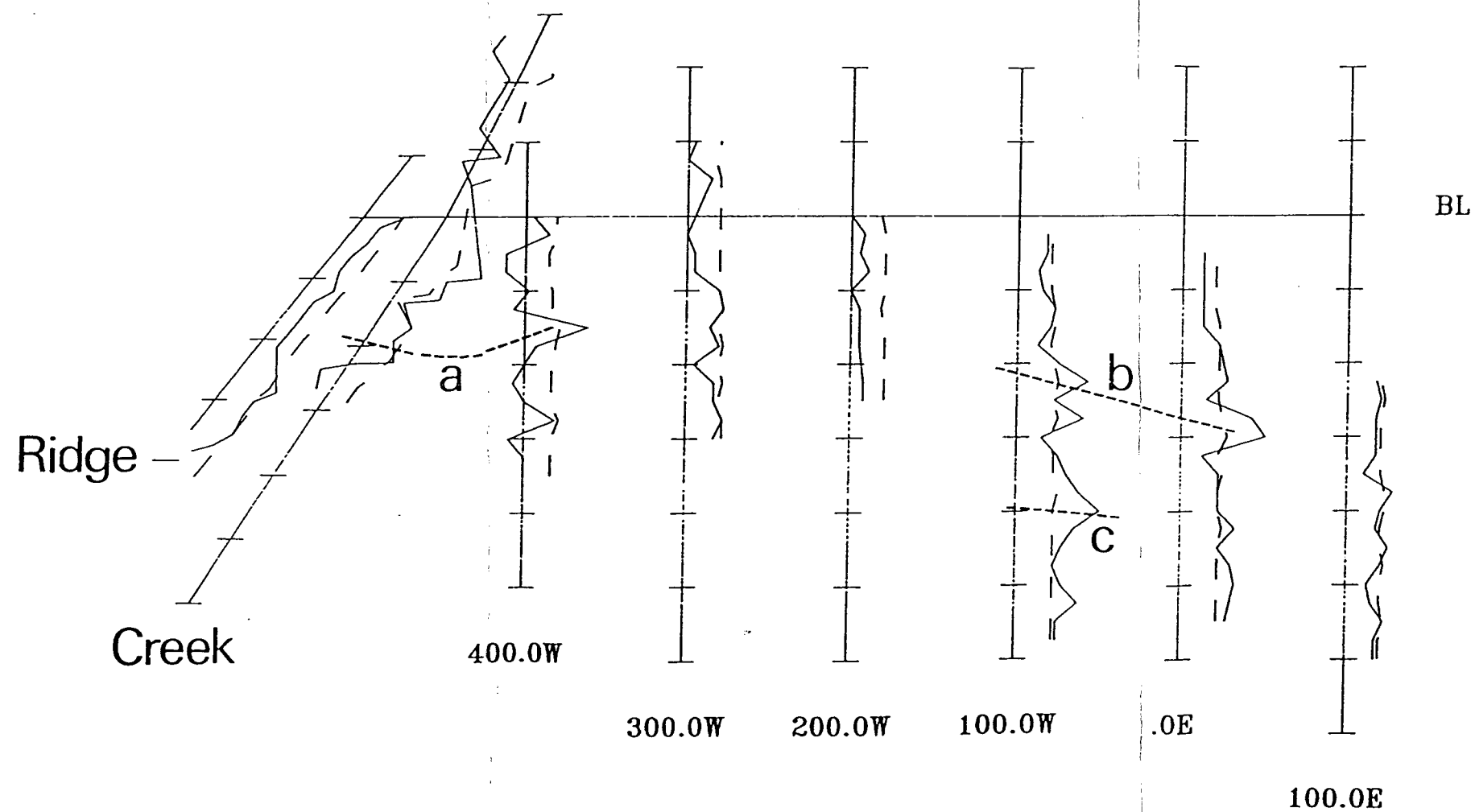
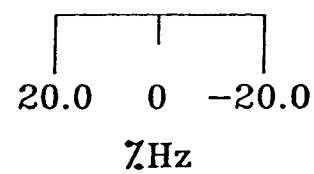
0 300.0
metres

GRAHAM DAVIDSON ELLEN CLAIMS Total Magnetic Field	Scale 1: 8100	04Jan90
	NTS: 115A	M.D.: Whitehorse
	AMEROK GEOPHYSICS	



Frequency: 2600.0 Hz

Coil spacing: 50.0 m



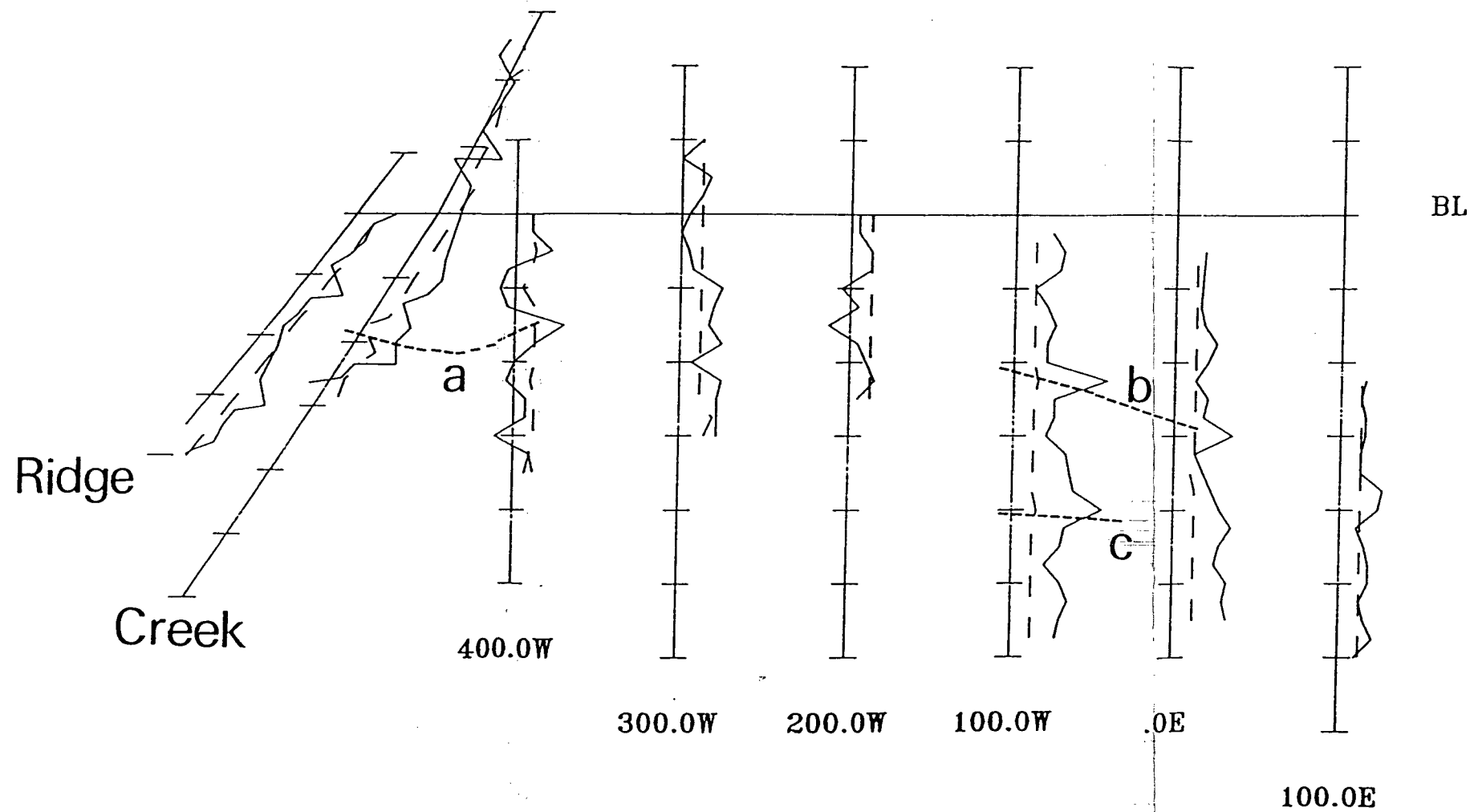
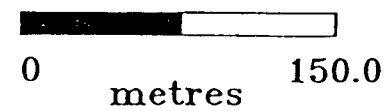
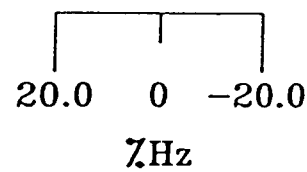
GRAHAM DAVIDSON
ELLEN CLAIMS
HLEM Survey

Scale 1: 3500 (A) 22Dec90
NTS: 115B M.D.: Whitehorse
AMEROK GEOPHYSICS



Frequency: 600.0 Hz

Coil spacing: 50.0 m



GRAHAM DAVIDSON
ELLEN CLAIMS
HLEM Survey

Scale 1: 3500 (A)	22Dec90
NTS: 115B	M.D.: Whitehorse
AMEROK GEOPHYSICS	

Appendix C. Statement of Qualifications

I. Michael Allan Power of Whitehorse, Yukon Territory.
certify that:

1. I obtained a B.Sc. (Honors) degree in Geology from the University of Alberta in 1986 and a M.Sc. degree in Geophysics from the University of Alberta in 1988.

2. I have worked in the mining exploration industry and in geophysical research since 1984.

3. I visited the Ellen Claims between November 6, 1990 and November 9, 1990, conducted the electromagnetic geophysical survey described in this report and prepared the report for submission.

4. I have not received, directly or indirectly, nor expect to receive any interest in the Ellen Claims.



M.A. Power M.Sc.

Whitehorse, Yukon Territory
January 4, 1991

PROBE RESOURCES LTD.

**HLEM AND VLF SURVEYS OF THE ELLEN
PROPERTY, HAINES JUNCTION AREA,
YUKON TERRITORY**

M. A. Power M.Sc.

Quartz claims

ELLEN 1-5	YA97362-YA97366
ELLEN 6-8	YB26797 -YB26799
ELLEN 9-20	YB27078 - YB27089
ELLEN 25-27	YB27094 - YB27096
ELLEN 28-31	YB35380 - YB35383
ELLEN 32-37	YB36844 - YB36849

Location: 60° 52' N 137° 57 ' W

NTS: 115 A 13

Territory/Province: Yukon Territory

Mining District: Whitehorse

Work Performed: August 26 - September 17, 1993

Date: October 22, 1993

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B. Location and access	2
C. Property	2
D. Geology	2
E. Grid and survey specifications	5
F. Results.....	7
G. Conclusions.....	14
H. Recommendations.....	14
References cited	15
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Appen

Summary

HLEM and VLF surveys were conducted on portions of the Ellen Property near the Jarvis River, Haines Junction area, Yukon Territory in August and September 1993. The HLEM survey located two weak conductors and one strong conductor in the area of known massive sulphide occurrences. The strong conductor has an apparent conductance in the range expected for massive sulphides, is discordant and stratigraphically below the exposed mineralization, and has an apparent strike length of 300 m.

A. Introduction

This report describes the results of horizontal loop electromagnetic (HLEM) and very low frequency (VLF) surveys of portions of the Ellen Property near Jarvis River, Kluane area, Yukon. The surveys were undertaken to locate massive sulphide targets in PermoTriassic volcanic rocks near the Shawkak Fault.

B. Location and access

The Ellen Property is located at 60° 52' N 137° 57' W in the Kluane Ranges of the Yukon Territory, approximately 200 km west of Whitehorse (Fig. 1). The property can be reached from the Alaska Highway using a tote road which meets the highway about 1 km north of the Jarvis River bridge. This road runs 3.5 km southwest to a ford on the Jarvis River and then 5 km south into the property.

C. Property

The Ellen Property consist of 49 Quartz claims in the Whitehorse Mining District, Y.T. The outline of the claim block is shown in Figure 1 and the property data as of 20 OCT 93 is shown below:

<u>Claim name</u>	<u>Record Number</u>	<u>Expiry Date</u>
Ellen 1-5	YA97362 - YA97366	14 NOV 95
Ellen 6	YB26797	29 SEP 95
Ellen 7	YB26798	01 MAY 95
Ellen 8	YA26799	29 SEP 95
Ellen 9-20	YB27078 - YB27089	11 DEC 95
Ellen 25 - 27	YB27094 - YB27096	11 DEC 95
Ellen 28-31	YB35480 - YB35483	22 OCT 97
Ellen 32-37	YB36844 - YB36849	12 AUG 97

D. Geology

The Ellen Property is underlain by metavolcanic and metasedimentary rocks and partially covered by thick unconsolidated glacial deposits (Fig. 2). Andesitic and basaltic volcanic rocks with intercalated pelagic shales (PMv) form a homoclinal unit with a mean bedding orientation of approximately 110° 50° S. The entire sequence has been metamorphosed to lower greenschist facies (Campbell and Dodds 1980). Unconsolidated

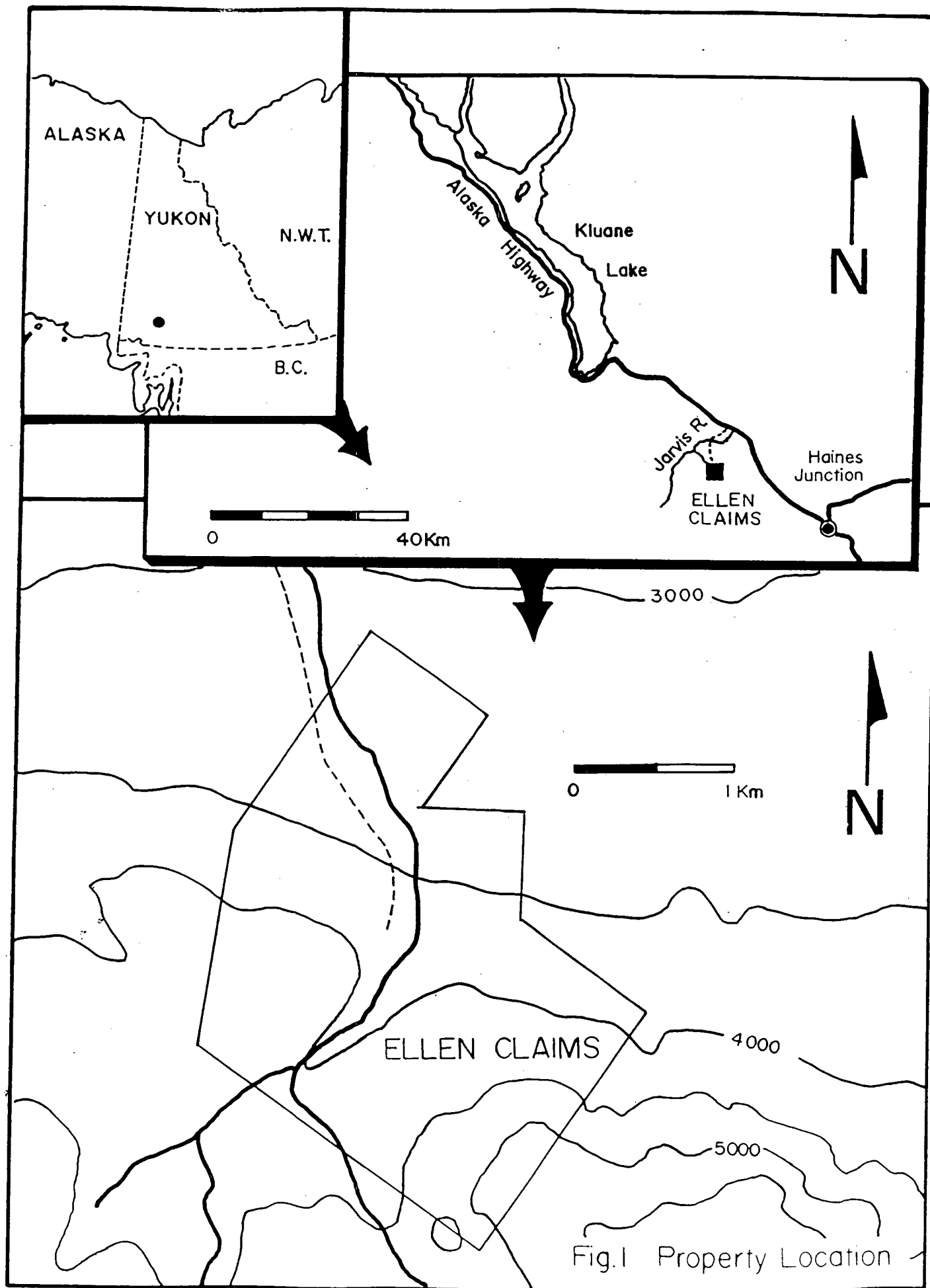
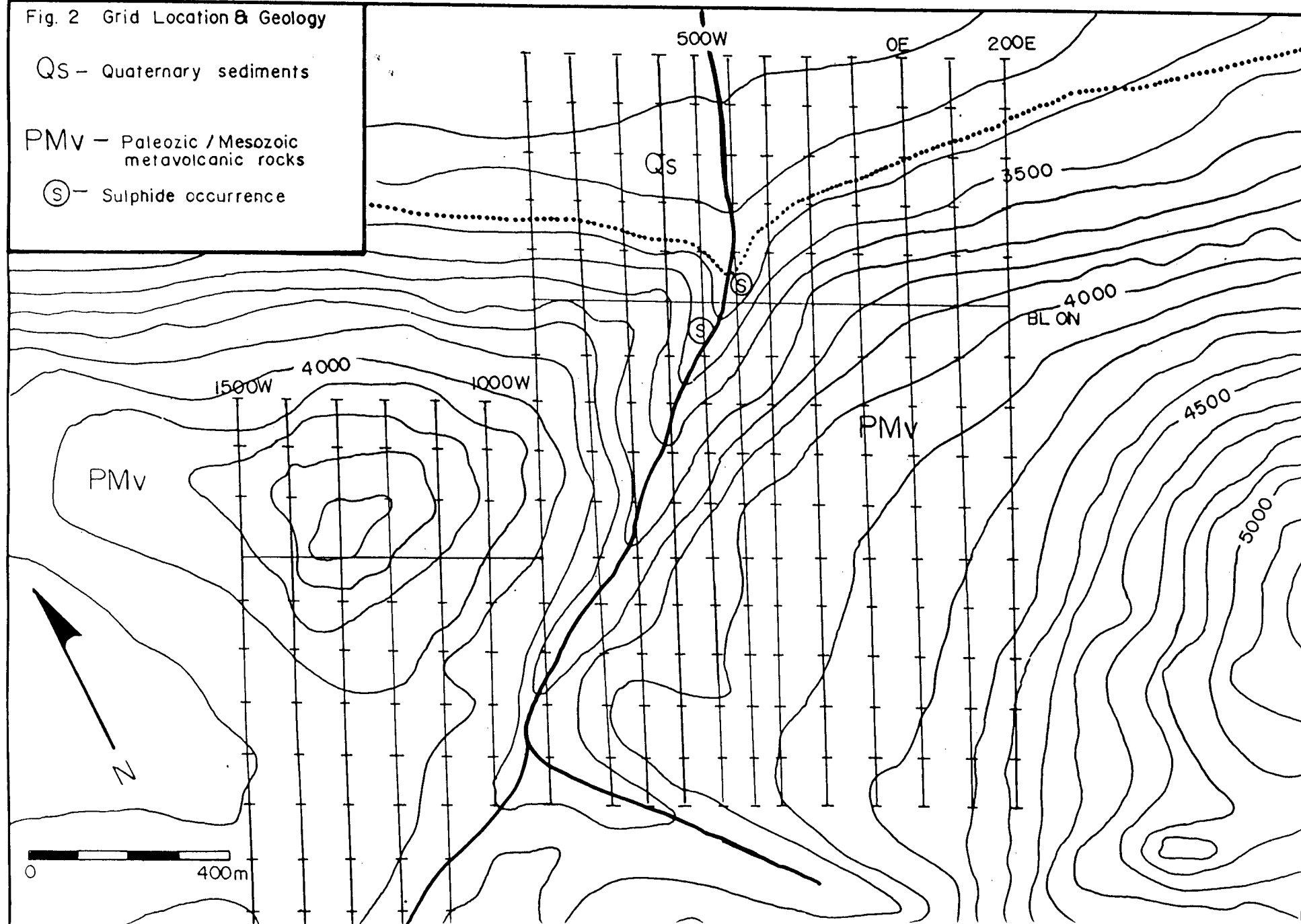


Fig. 2 Grid Location & Geology

QS - Quaternary sediments

PMv - Paleozoic / Mesozoic
metavolcanic rocks

Ⓢ - Sulphide occurrence



glacial till (Qs) covers most of the property below 3500 feet. Clay-rich boulder till is exposed in cuts along the access road and creek beds. Thin deposits of locally derived glacial till cover most of the property but above the 3500 foot level these appear to be no more than 5 to 15 m thick. Outcrop is generally restricted to the creek beds and no large scale structures have been mapped on the property.

The main showing occurs along Ellen Creek approximately 100 m south of the base line between lines 400W and 500W. It consists of a tabular massive sulphide body, about 1 m thick and oriented $110^{\circ} 40' S$ composed mostly of chalcopyrite with lesser pyrite and quartz. Drill hole logs mention pyrrhotite as an accessory mineral. Disseminated pyrite and chalcopyrite in quartz veins occur north of this showing near the baseline on the creek.

E. Grid and survey specifications

The survey grid consists of 18 survey lines orthogonal to a baseline trending 110° . Lines vary in length from 1500 to 2500 m. The grid was first established in 1990 and the original grid is shown in Figure 2. The grid was re-established and extended in August 1993. Survey lines are 100 m apart extending from 200E to 1500W and stations run from 1000S to 1500N. Line 450W is an intermediate survey line parallel to Ellen Creek, covering the main showing. All line and station locations were slope corrected. Only a portion of the grid centred on the main showing in Ellen Creek was covered by the HLEM and VLF survey.

The HLEM survey was performed with an Apex Parametrics Maxmin I-9. A complete description of the system is provided in Betz (1976). Gary Lee, P. Eng. operated the instrument on-site and performed the initial data processing. Frequency and coil separations used in the survey are listed below:

<u>Pass</u>	<u>Coil Spacing</u>	<u>Frequency</u>
Initial	100 m	220 Hz
		880 Hz
		3520 Hz
Follow-up	50 m	440 Hz
		1760 Hz
		3520 Hz
	150 m	440 Hz
		880 Hz
		1760 Hz

Operating frequencies at the low end of the instrument range were selected to attenuate responses from weak conductors such as faults or zones of disseminated sulphide

mineralization.

Variations in coil geometry strongly affect the in-phase component of the HLEM response. To remove this source of noise, the survey was conducted with a nominal fixed cable length and measurements of the station-to-station terrain slope were taken with a clinometer. In effect, the grid was rechained without slope correcting. The corrected in-phase (IP) and quadrature (Q) components were then calculated from:

$$IP = (IP_m + 100)K - 100 + 300 \sin^2 \phi \quad (1)$$

$$Q = Q_m K \quad (2)$$

where:

$$K = (a_{\text{corr}} / a)^3 \quad (3)$$

$$\phi = \tan^{-1} (\sum \sin \theta_i / \sum \cos \theta_i) \quad (4)$$

$$a_{\text{corr}} = d ((\sum \sin \theta_i)^2 + (\sum \cos \theta_i)^2)^{1/2} \quad (5)$$

and

a - nominal coil spacing

a_{corr} - corrected coil spacing

d - station spacing

θ_i - slope to the i-th station between the transmitter and receiver measured in the direction of travel and summed over the number of stations in a coil spacing.

Q_m - uncorrected quadrature component

IP_m - uncorrected in-phase component

The apparent noise envelope after these corrections is approximately $\pm 4\%$ for the 50 m coils and $\pm 2\%$ for the larger coil spacings.

Portions of the grid were on slopes exceeding 45° and this created a significant mismatch between the HLEM grid coordinates recorded by the operator and the true slope-corrected grid coordinates. Consequently, HLEM data listed in this report (Appendix B and Figures 4 and 5) are referenced to a straight chained grid coordinate system: VLF and magnetic field data together with HLEM conductor axes on the anomaly map (Fig. 7) are referenced to the slope-corrected grid coordinate system.

The VLF-EM survey was conducted with a Geonics EM-16 VLF receiver operated by Brian Sauer. Readings of the field tilt in percent using the Cutler, Maine (NAA) transmitter were taken at 25 m stations. The facing direction was south producing anomalies which cross from positive to negative moving north to south over a discrete conductor.

F. Results

Total magnetic field data collected in 1990 by G. Davidson, P. Geol., was reprocessed and is plotted in Figure 3. Despite the presence of pyrrhotite in drill holes near the main showing, there is no magnetic response in this area (400W - 500W, 100S). A pronounced magnetic low occurs on the northwest edge of the grid; it appears to be caused by a reversed magnetized source and is distant from all known sulphide occurrences.

The results of the HLEM survey are shown in Figures 4 to 7. Appendix B contains a listing of the corrected HLEM data. Figure 4 displays a line profile map of the HLEM data collected at the 100 m coil spacing on the 3520 Hz channel. This frequency produced the best responses. One strong anomaly (A) and two weak anomalies (B, C) were detected on this pass. The slope-corrected grid locations of all conductor axes are shown in Figure 7 together with known sulphide occurrences.

Anomaly A was considered promising given its strength and proximity to known sulphide occurrences. Portions of lines 300W, 400W and 450W covering this anomaly were resurveyed in a second pass. The strongest responses were recorded on line 400W and the results are shown in Figure 5. Best estimates of conductor parameters were calculated from characteristic curves developed by Ketola and Puranen (1967). They are listed below:

Apex: Line 400W Station 160N (slope corrected grid)

Depth to top: Less than 25 m; a weak response at the 50 m coils suggests that the conductor may not outcrop beneath colluvium.

Dip: Shallow to the North. This is indicated by the topographic expression of the conductor axis, by solution of the 3-point problem and by the response asymmetry. The larger positive response flanking the central low will occur on the down dip side of the conductor. In this case, the larger flanking positive anomalies tend to occur on the north side of the low.

Strike: Approximately 350°.

Thickness: Less than 10 m; the distance between zero crossovers is not significantly different from the coil spacings.

1400N

1200N

1000N

800N

600N

400N

200N

0N

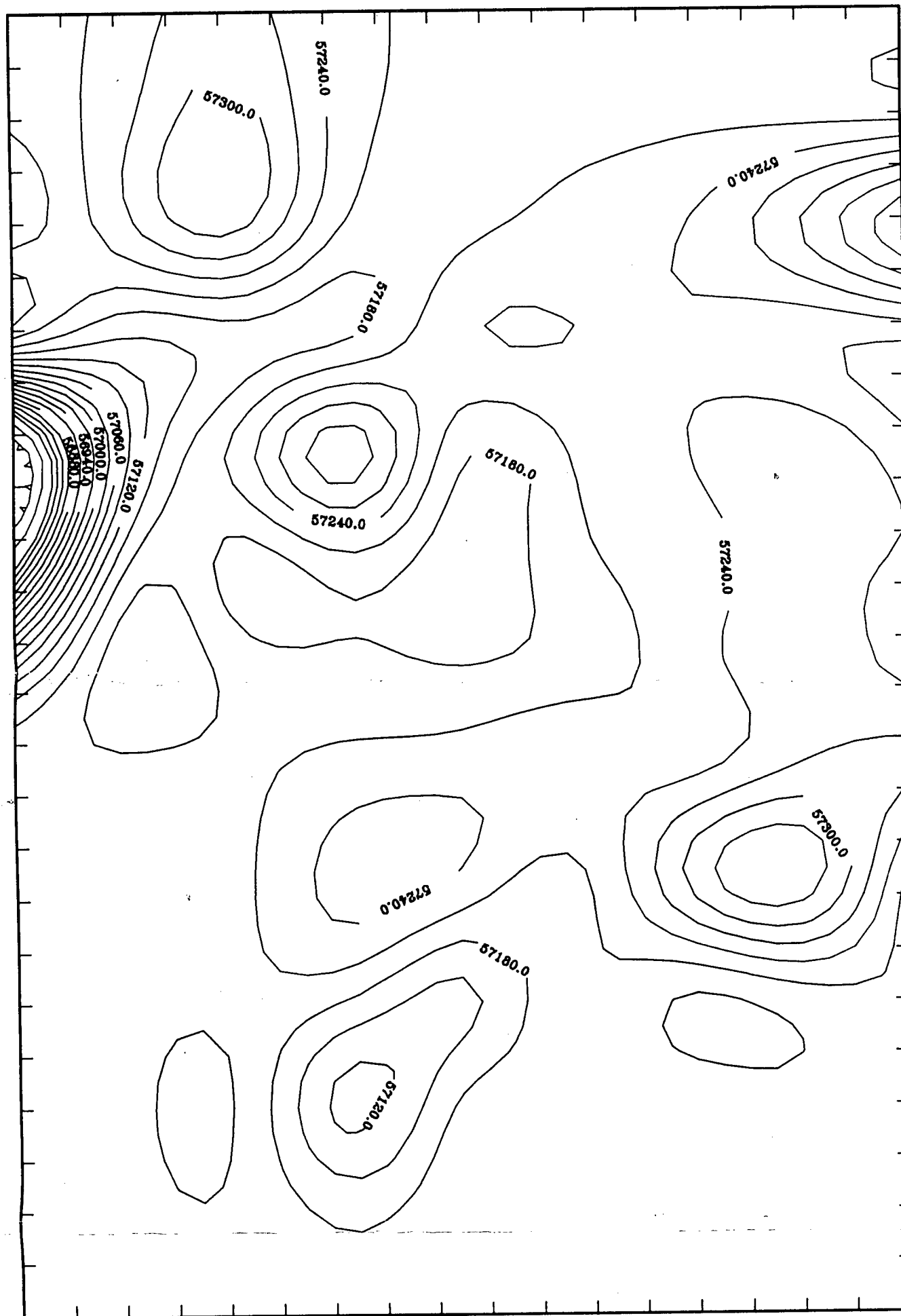
200S

400S

600S

800S

1000S



1400W 1200W 1000W 800W 600W 400W 200W 0E 200E

0 400
metres

Contour interval: 30 nT

PROBE RESOURCES

Claims: ELLEN I-37

ELLEN PROPERTY
Total Magnetic Field Survey

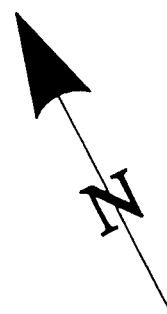
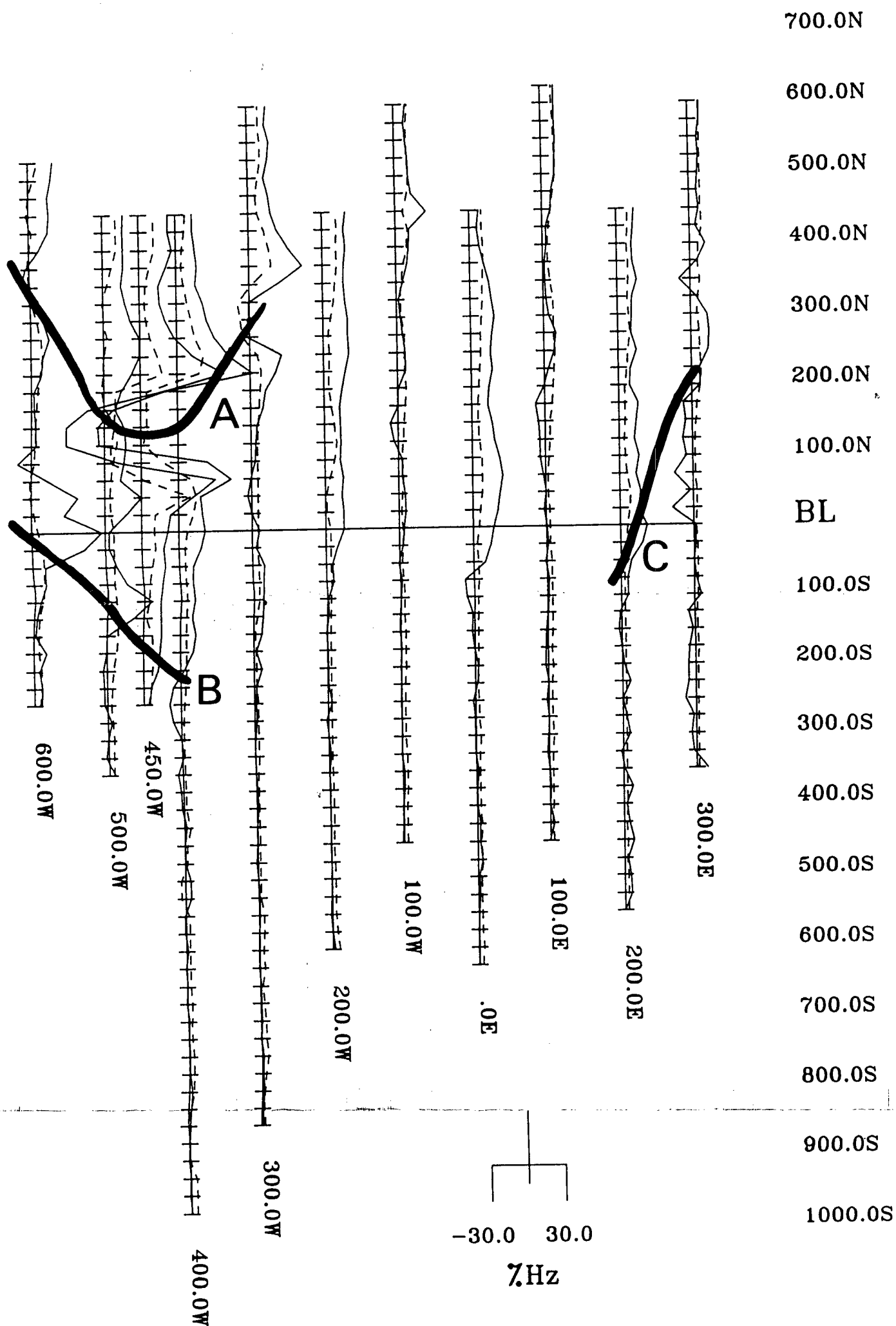
Mining District: Whitehorse

NTS: 1:5 A 13

OPERATOR: G. Davidson P. Geol.

AMEROK GEOPHYSICS

DATE: 15 OCT 93 Figure: 3



(In-Phase solid / Quadrature dashed)

PROBE RESOURCES

Claims: ELLEN I-37

ELLEN PROPERTY
Maxmin I-9 Survey

Mining District: Whitehorse

NTS: 1:5 A 13

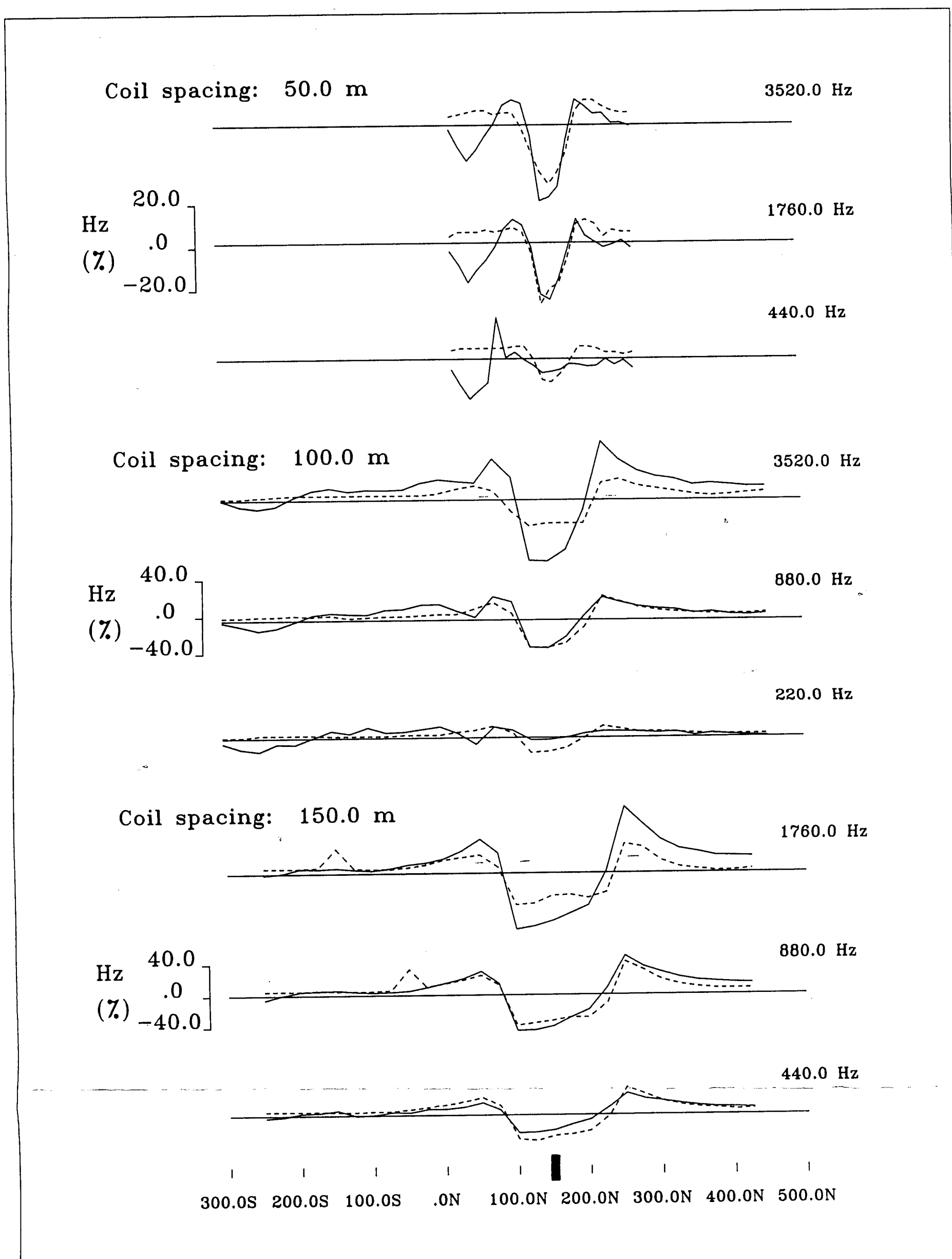
OPERATOR: G. Lee P.Eng.

AMEROK GEOPHYSICS

DATE: 15 OCT 93 Figure: 4

Coil Spacing: 100 m
Frequency: 3520 Hz

— - Conductor axis



Stacked Profiles - Line 400W

(In-phase solid / Quadrature dashed)

PROBE RESOURCES	Claims: ELLEN I-37	
ELLEN PROPERTY Maxmin I-9 Survey	Mining District: Whitehorse	
	NTS: 15 A 13	
AMEROK GEOPHYSICS	OPERATOR: G. Lee P.Eng.	
	DATE: 15 OCT 93	Figure: 5

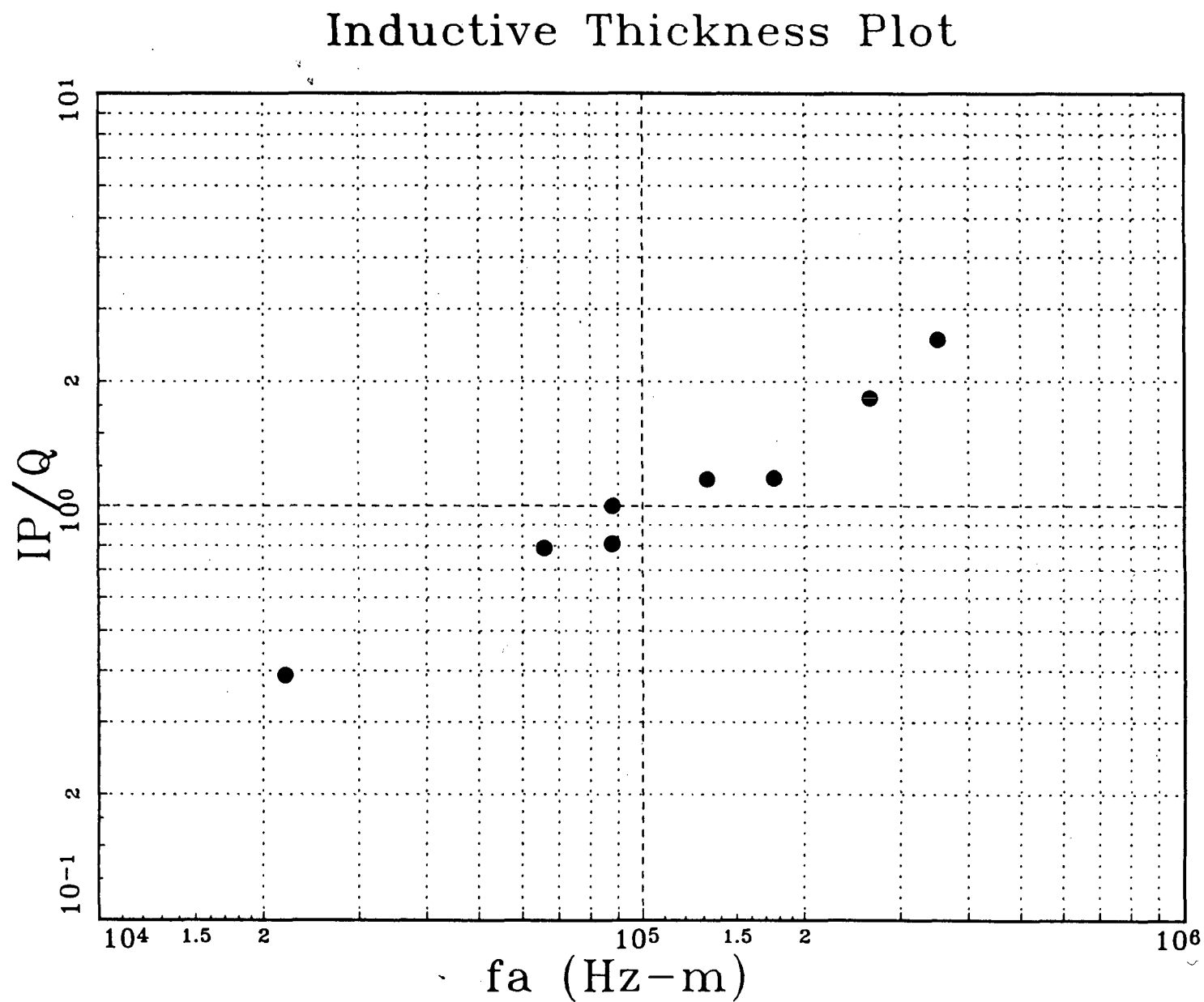


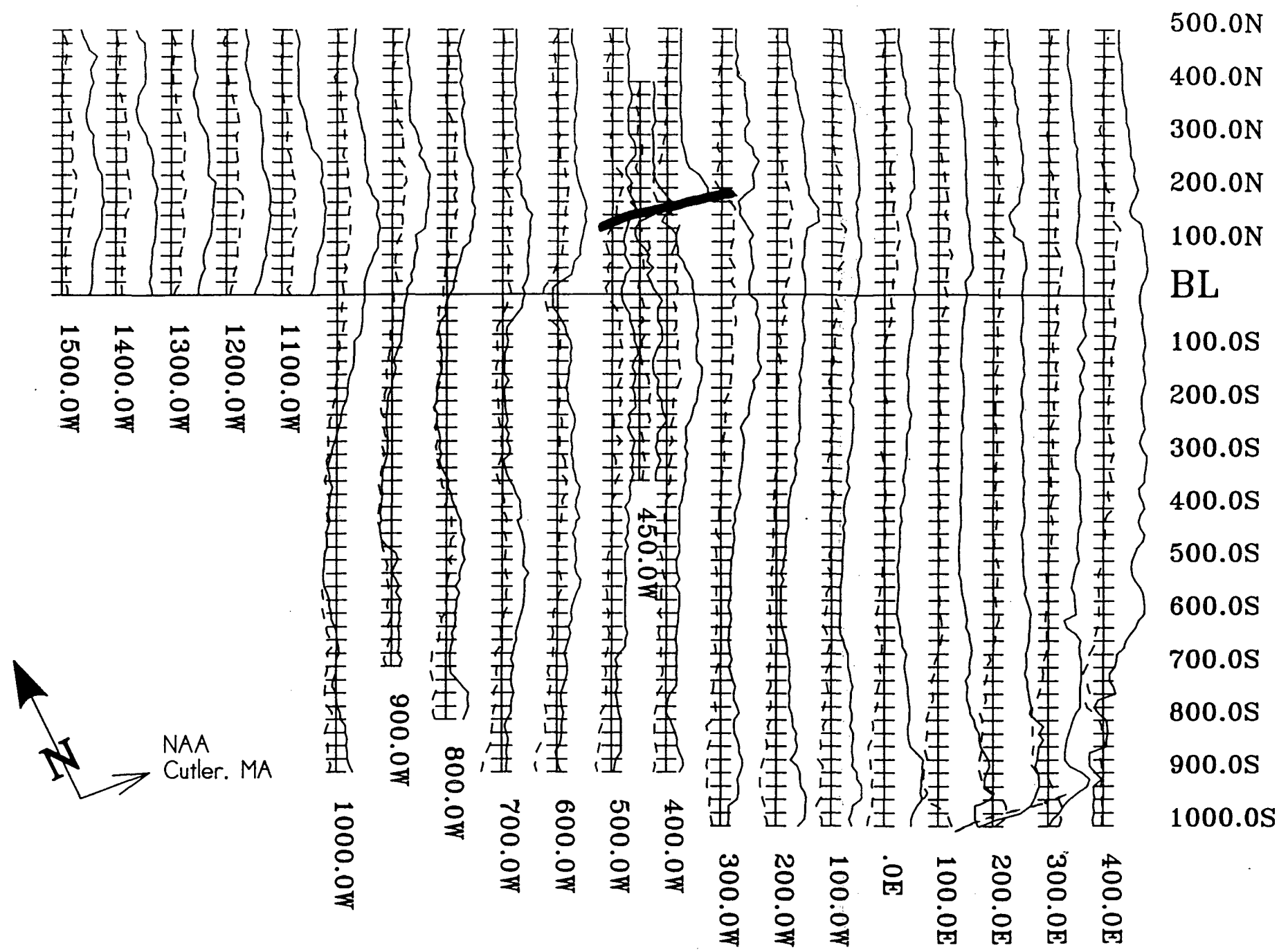
Figure 6. IP/Q ratios versus frequency-separation products for Line 400W

σt : Approximately 6 S.

σt estimates can be significantly in error and are usually too low if the conductor is not "inductively thin" (Betz 1967). This property can be verified by plotting the ratio of IP/Q versus the response parameter or, equivalently, versus the product of the frequency and coil spacing ($f \cdot a$). In an inductively thin conductor, a log-log plot of IP/Q versus $f \cdot a$ will produce a straight line. A plot of IP/Q versus $f \cdot a$ for the responses on line 400W is shown in Figure 6. The general trend of the data is definitely linear, confirming the reliability of the σt estimate. The estimated conductance of 6 S is within the range of conductances normally noted over massive sulphide conductors (Palacky 1987). Unfortunately, it is also within the recorded conductance range of graphite conductors.

Anomalies B and C are very weak inflection anomalies which could be following a geological contact. They are of interest only insofar as they are proximal to sulphide occurrences.

The results of the VLF-EM survey are shown in Figure 8 and a data listing is contained in Appendix C. A pronounced response coincident with Anomaly A is the only significant feature in the data. The long wave length anomalies in the data are apparently caused by topography.



— - Conductor axis

0 400
metres

-30.0 30.0
%Hz

PROBE RESOURCES	Claims: ELLEN I-37	
ELLEN PROPERTY EM-16 VLF Survey	Mining District: Whitehorse	
	NTS: I5 A I3	
AMEROK GEOPHYSICS	OPERATOR: B. Sauer	
	DATE: 15 OCT 93	Figure: 8

G. Conclusions

The results of the survey lead to the following conclusions:

- (1) Conductor A has a σt within the range of conductances normally displayed by massive sulphides and graphite.
- (2) Conductor A is proximal to and stratigraphically down section from several concordant sulphide showings.
- (3) Conductor A is possibly a discordant structure apparently dipping at a shallow angle to the north whereas bedding dips moderately south.
- (4) Anomalies B and C are very weak and their source conductors are unlikely to be significant bodies of conductive massive sulphide.

H. Recommendations

Anomaly A should be tested by drill holes on lines 400W and 300W. If sulphides are intersected, the drill hole should be surveyed with a down hole time domain EM system (eg. Crone or UTEM) to attempt to locate a possibly larger, concordant massive sulphide body.

Respectfully submitted,
AMEROK GEOPHYSICS



M.A. Power M. Sc.
Geophysicist

Whitehorse, Yukon Territory
October 22, 1993

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Appendix A. Statement of Qualifications

I, Michael Allan Power of Whitehorse, Yukon Territory, certify that:

1. I obtained a Bachelor of Science degree with First Class Honours in Geology from the University of Alberta in 1986 and a Masters degree in Geophysics from the University of Alberta in 1988.
2. I have worked in the mining exploration industry and in geophysical research since 1984.
3. I supervised the HLEM survey described in this report and prepared this report for submission.
4. I have not received nor expect to receive, directly or indirectly, any interest in the property of Probe Resources Ltd.



Michael A. Power M.Sc.

Whitehorse, Yukon Territory
October 22, 1993

Appendix D

Diamond Drill Hole Logs 1964, 1969 (Canadian Barranca)

Diamond Drill Hole Logs 1995 (Davidson, 1995)

Diamond Drill Hole Sections 1995 (Figures 5, 6 & 7 from Davidson, 1995)

Diamond Drill Hole Plan (1995 drilling) (Figure 4 from Davidson, 1995)

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M.C. - YUKON Property

DIAMOND DRILL HOLE RECORD

DIP TEST		
FOOTAGE	ANGLE	
	READING	CORRECTED

West bank of creek 081313 SHEET No. 31190 HOLE No. MC-1

LEVEL SURFACE BEARING N 58° E HOLE No. MC-1

LOCATION West bank creek LENGTH 84' FINISHED Sept 3 1966

ELEVATION VERT. COMP. -45° PURPOSE EX.

LATITUDE HOR. COMP. TOTAL RECOVERY 70%

DEPARTURE CROSS SECT. LOGGED BY R. L. L.

FOOTAGE		DESCRIPTION	EDICOUNTER		CORE SAMPLES					
FROM	TO		FOOTAGE	READING	SAMPLE No.	FROM	TO	WIDTH	AV. GRAIN	AV.
0	84'	Sheared andesite with sections more basic - possibly intercalated peridotite or fine fractures show minor picritic.			33875	44'	59'	15'	101	
		Core in general very blocky with much base.			76	59	69'	10'	2.70	3.072
		Scattered pyrite with spots of chalcopyrite			77	69	76	7'	3.60	17'
		0-59 followed by fairly massive sulphides in bands and blebs to 76'.			78	76	84	8'	104	
		Main sulphide section showed recovery of 60%, with water lost from 59 to end of hole. Main sulphide, pyrite & chalcopyrite								
84		End of hole								
		EXT core 7/8"								
		60% recovery in sulphide section								

77812

U.C. Group Property

DIAMOND DRILL HOLE RECORD

DIP TEST		
FOOTAGE	ANGLE	
	READING	CORRECTED
0	42	-42

LEVEL Surface BEARING N40°E HOLE No. M.C-4
 LOCATION East LENGTH 301' FINISHED Aug. 15 - 1965
 ELEVATION 3500 VERT. COMP. _____ PURPOSE EX-EM-16-3-4
 LATITUDE _____ HOR. COMP. _____ TOTAL RECOVERY _____
 DEPARTURE _____ CROSS SECT. _____ LOGGED BY BCM

FOOTAGE		DESCRIPTION	DDH COUNTER		CORE SAMPLES					
FROM	TO		FOOTAGE	READING	SAMPLE No.	FROM	TO	WIDTH	%U ₃₀	AV.
0	35	Casing							Ni%	
35	36	Graphitic schist - schistosity at 80°								
36	37	Siliceous zone with epidote banding, partly schistose								
37	42	Lost core								
42	63	Talc schist - (impure serpentine) with quartz bands. Feinly banded 51'-63'. Some epidote + quartz. 43-44 lost core, 45-51 lost core, 56-63 lost core, Ni powder positive			2598	51'	53'	2'	0.11	
					77	145	151	6'	0.11	
					78	160	170	10'	0.10	
63	135	Graphitic schist - schistosity 60° to 90° Interbedded massive quartz bands. 77-94.5 - 6.0' bulk quartz. Lost core at 64.5-66, 68-70, 71-76, 78.5-82, 82.5-85, 85.5-87, 89-90, 92-95, 96-97, 98-103, 104-106, 107-110, 110.5-112, 118-122.5, 123-126, 127.5-132.5, 133.5-135'								
135	166	Talc schist as 42-63 - schistosity varies from 45° to crossbedded. 15' lost core. Nickel powder positive								
166	182	Graphitic schist as 63 to 135'. 12' lost core								
182	187	Quartz + lost core - possible Fe schist.								
187	196	Lost core								
196	301	Granular rock - gray to black; sections mottled with quartz - carbonate flecks. 74' lost core.								
301		End of hole								

APPENDIX I-DRILL LOGS

DRILL HOLE 95-1, BEARING 030 AT -50

Grid Location 0+52S, 4+88W

DRILL HOLE NUMBER	WIDTH	DESCRIPTION	AU PPB	CU %
DDH 95-1	0-87'	Light green, fine to medium grained, sericitized andesitic tuff, variable epidote and quartz bands, some carbonate veining, minor chalcopyrite and pyrite		
	87-91'	Foliated chloritic argillite, quartz bands, stringers and blebs of massive fine grained chalcopyrite and pyrrhotite	803	3.47
	91-94'	Same as above	100	1.65
	94-101'	Same as above	207	1.15
	101-105'	Pale green andesitic tuff, sericitized, quartz banding, stringers and blebs of massive fine grained chalcopyrite	93	1.19
	105-120'	Same as above, minor chalcopyrite		
	120-135'	Darker chloritic tuff, quartz and epidote banding, minor chalcopyrite		
	135-191'	Pale green sericitized tuff, variable epidote and quartz banding, minor pyrite and chalcopyrite		
	191-250'	Chloritic to graphitic tuff, some andesitic layers, minor pyrite and chalcopyrite		

DRILL HOLE 95-2, VERTICAL HOLE

Grid Location 0+52S, 4+88W

DRILL HOLE NUMBER	WIDTH	DESCRIPTION	AU PPB	CU %
DDH 95-2,	0-41'	Pale green, sericitized andesitic tuff, epidote and quartz banding, minor pyrite and chalcopyrite		
	41-88'	Andesite and/or diorite, epidote bands, minor pyrite and chalcopyrite		
	88-120'	Foliated chloritic tuff		
	120-145'	pale green sericitized andesitic tuff		
	145-152'	Foliated chloritic tuff, quartz banding, stringers and blebs of massive fine grained chalcopyrite and pyrrhotite	6	0.365
	152-157'	Same as above	36	1.67
	157-160'	Same as above	106	1.22
	160-165'	Same as above	25	0.898
	165-170'	Same as above	49	0.572
	170-195'	Andesitic tuff, epidote banding, minor chalcopyrite and pyrite		
	195-229'	Black chloritic tuff, quartz banding, <1% chalcopyrite and pyrite		

DRILL HOLE 95-3, BEARING 040 AT -70

Grid Location 0+70S, 4+40W

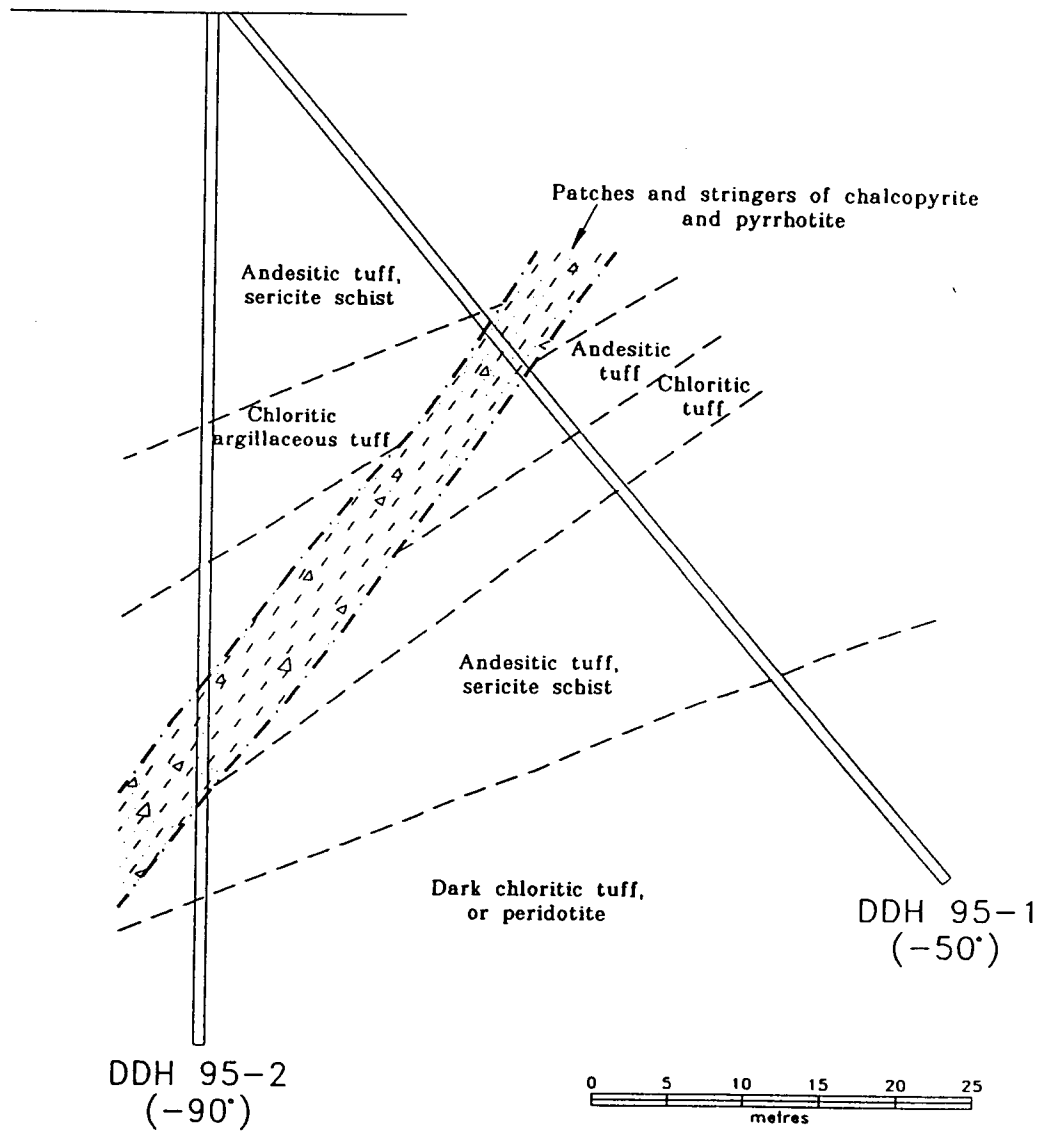
DRILL HOLE NUMBER	WIDTH	DESCRIPTION	AU PPB	CU %
DDH 95-3, - 70 at 40 bearing	0-175	Pale green sericite andesitic tuff, variable epidote and quartz banding, some calcite veining, minor pyrite		
	175-180'	Andesitic tuff, sericitized, epidote banding, a few chalcopyrite stringers and patches	6	0.416
	180-190'	Same as above	<5	0.057
	190-197'	Foliated chloritic tuff, quartz banding, stringers and blebs of massive fine grained chalcopyrite and pyrrhotite	<5	0.351
	197-204'	Same as above	2098	1.960
	204-210'	Andesitic tuff, sericitized, quartz banding, epidote, a few chalcopyrite and pyrrhotite stringers and blebs	48	0.422
	210-220'	Same as above	16	0.216
	220-230'	Same as above	9	0.090
	230-240'	Same as above	<5	0.204
	240-250'	Same as above	8	0.178
	250-401'	Sericite andesite tuff, variable epidote and quartz banding, minor pyrite and pyrrhotite, minor chalcopyrite especially in chloritic and quartz rich layers, limonite on fractures		

DRILL HOLE 95-4, BEARING 020 AT -50
Grid Location 0+78N, 4+34W

DRILL HOLE NUMBER	WIDTH	DESCRIPTION	AU PPB	NI %
DDH 95-4, - 50 AT 30 BEARING	0-105'	Pale green to black foliated andesitic tuff, sericite, chlorite, quartz and epidote banding, < 1% pyrrhotite and pyrite, minor chalcopyrite		
	105-171'	Light grey siltstone with a few layers of graphitic siltstone, quartz-carbonate bands and veins		
	171-276'	Serpentinite, talc layers at contacts, fine grained pyrrhotite along fractures, as blebs and on cleavage surfaces		
	276-320'	Graphitic schist, quartz bands, 1-5% pyrite		

DRILL HOLE 95-5, BEARING 020 AT -77.5
Grid Location 0+78N, 4+34W

DRILL HOLE NUMBER	WIDTH	DESCRIPTION	AU PPB	NI %
DDH 95-5,	0-112'	Black to green chloritic or sericitic tuff, epidote and quartz banding		
	112-189'	Sericite schist, a few chlorite schist layers, quartz banding, < 1% pyrrhotite and pyrite		
	189-261'	Graphitic or sericitic quartz schist, a few talc and black siltstone layers, some serpentinite, < 1% pyrrhotite and pyrite		
	261-302'	Serpentinite, fine grained pyrrhotite along fractures, as blebs and on cleavage surfaces		



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**ELLEN CLAIMS
CROSS SECTION DDH 95-1 & DDH 95-2**

Graham Davidson, Consulting Geologist

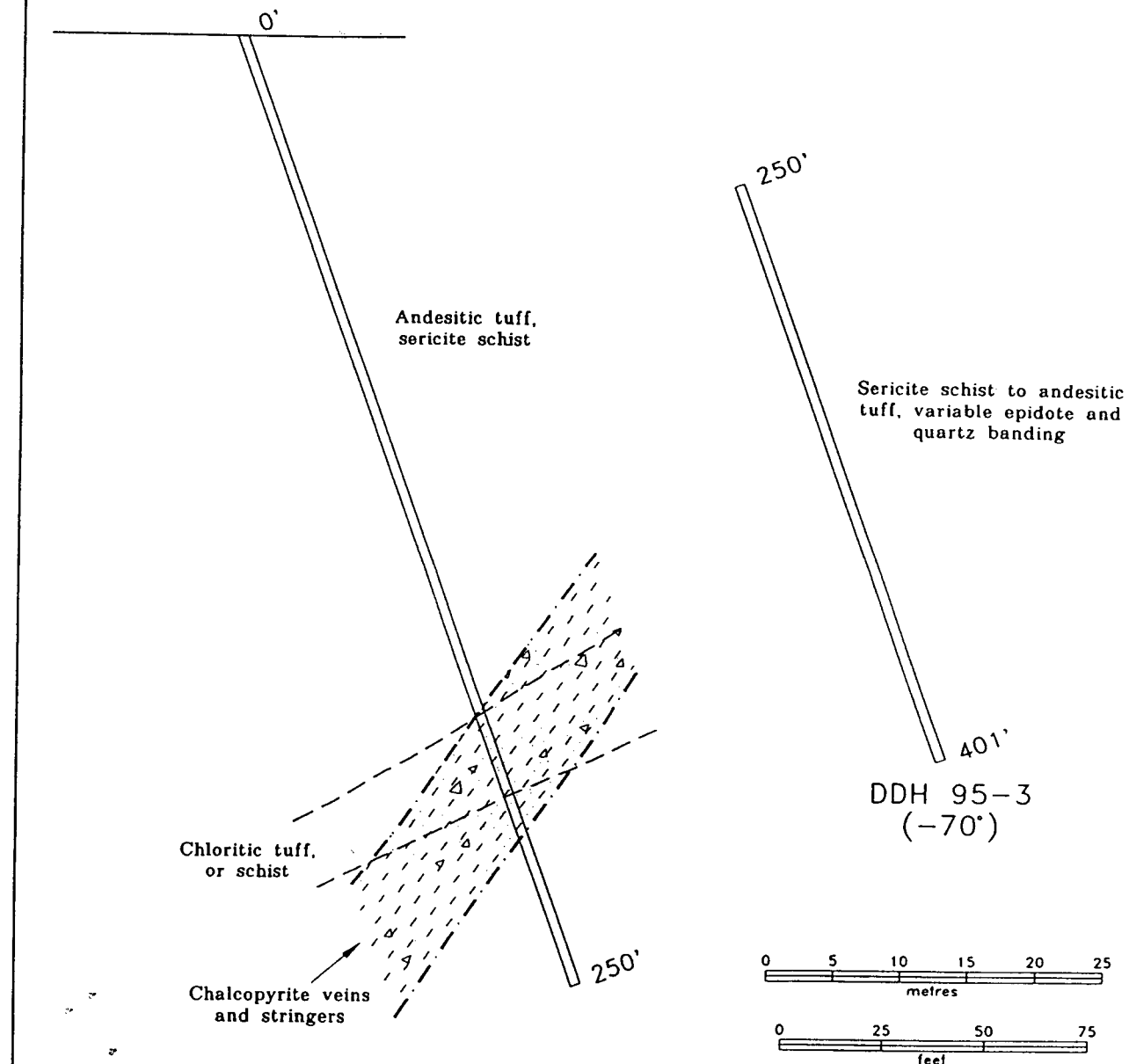
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DATE: Aug. 1995

NTS: 115 A/13

DRAWN:

FIGURE 5



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**ELLEN CLAIMS
CROSS SECTION DDH 95-3**

Graham Davidson, Consulting Geologist

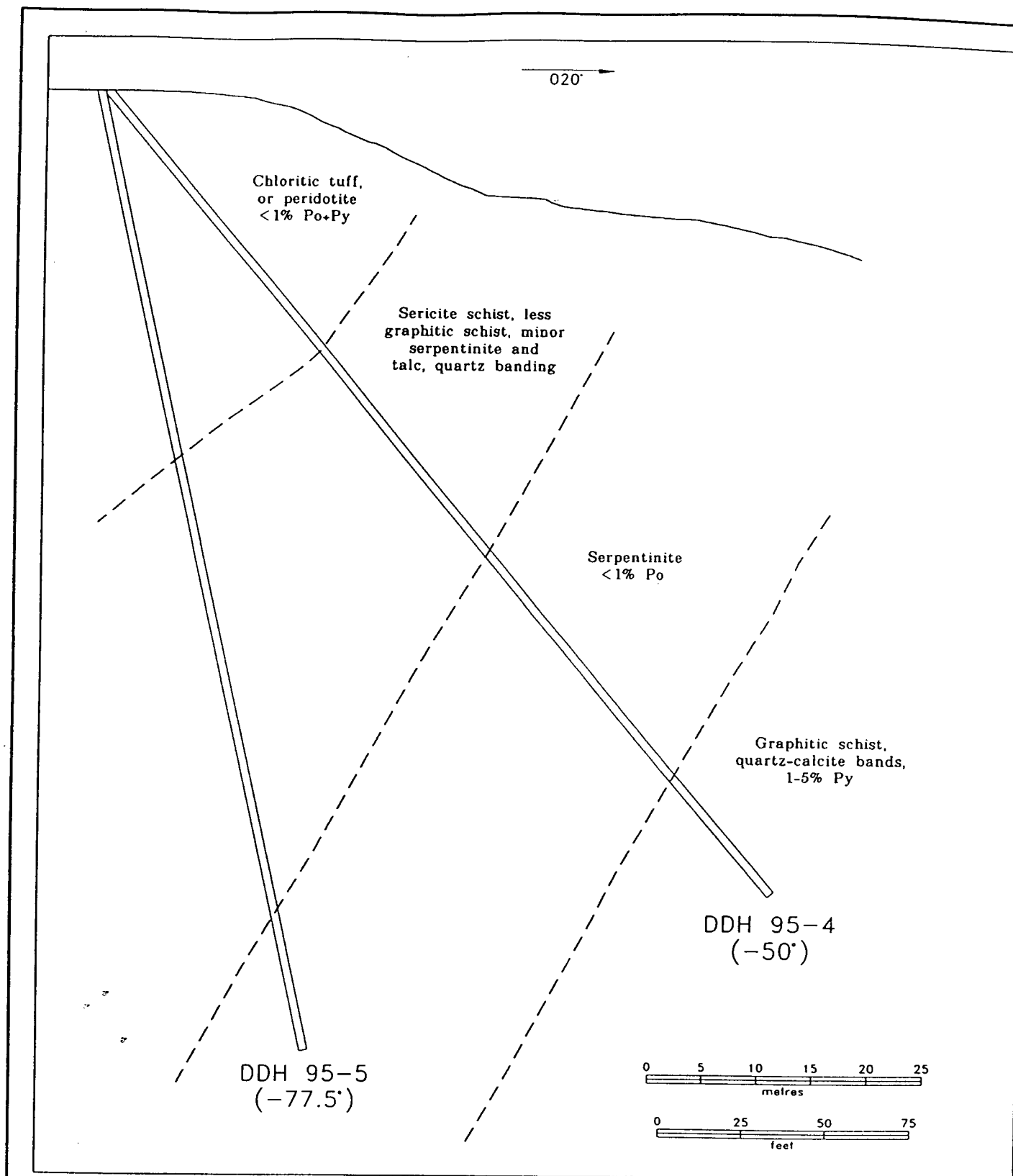
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FIGURE 6



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ELLEN CLAIMS

CROSS SECTION DDH 95-4 & DDH 95-

Graham Davidson, Consulting Geologist

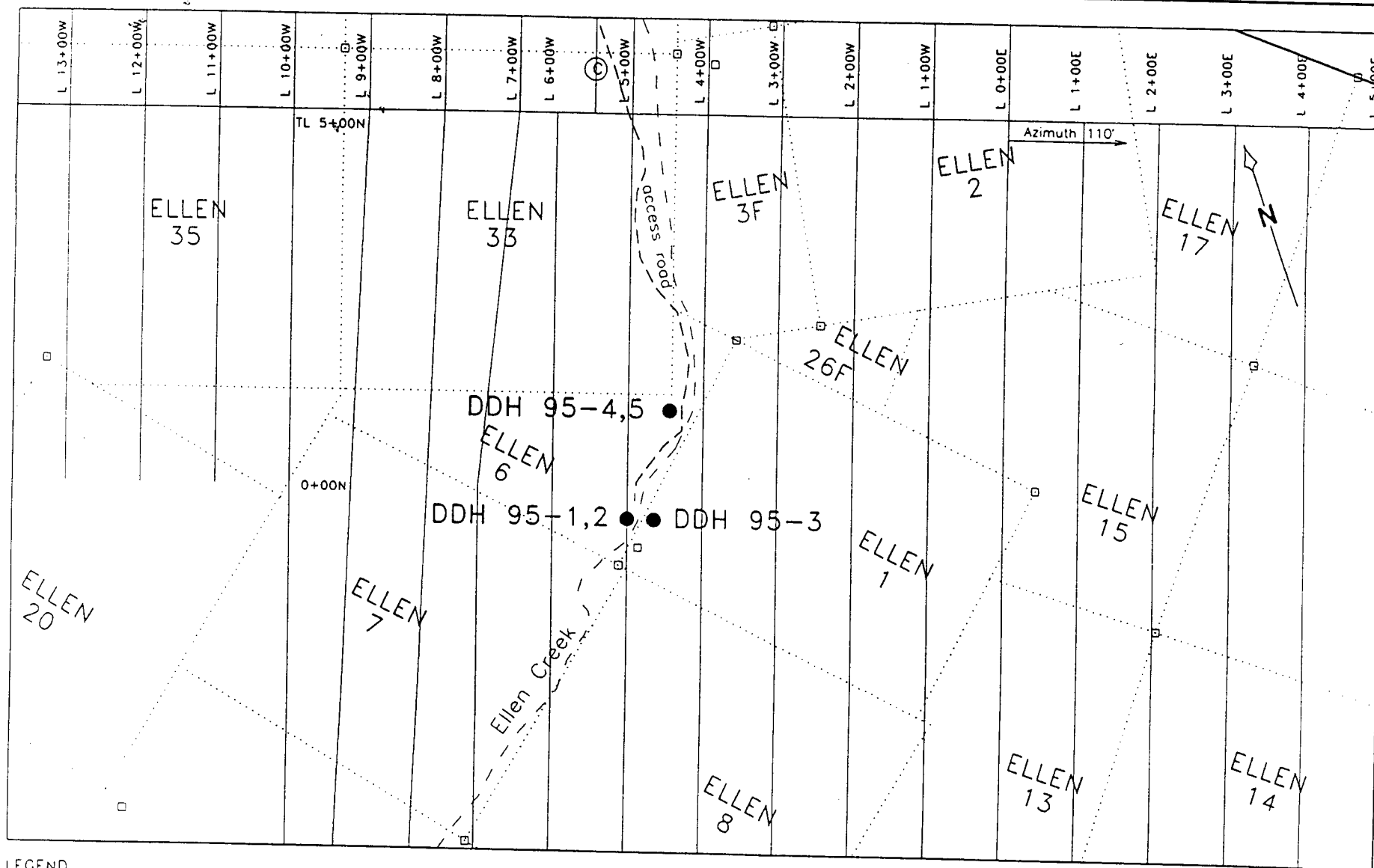
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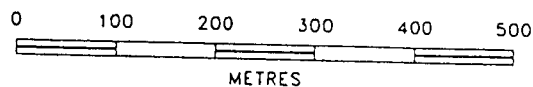
DRAWN: G. Davidson

FIGURE 7



LEGEND

- stream, creek
 - 4-wheel drive road
 - claim boundary
 - property boundary
 - grid line
 - camp location
 - diamond drill hole location, number
- DDH 95-3



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ELLEN CLAIMS	
GRID PLAN & DRILL HOLE LOCATIONS	
Graham Davidson, Consulting Geologist	
SCALE: 1 : 7,500	DATE: Aug. 1995