

ASSESSMENT REPORT

SOIL AND ROCK GEOCHEMISTRY, GROUND MAGNETICS

GNOME CLAIM (RECORD NO. 1419)

VIDETTE LAKE AREA

CLINTON MINING DIVISION

51°10'N, 120°53'

N.T.S. 92P/2

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021

OWNER: CHEVRON CANADA LIMITED

OPERATOR: CHEVRON CANADA RESOURCES LIMITED

Report by Ragnar U. Bruaset

March 1984

Work performed September 21-28, 1983

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INTRODUCTION

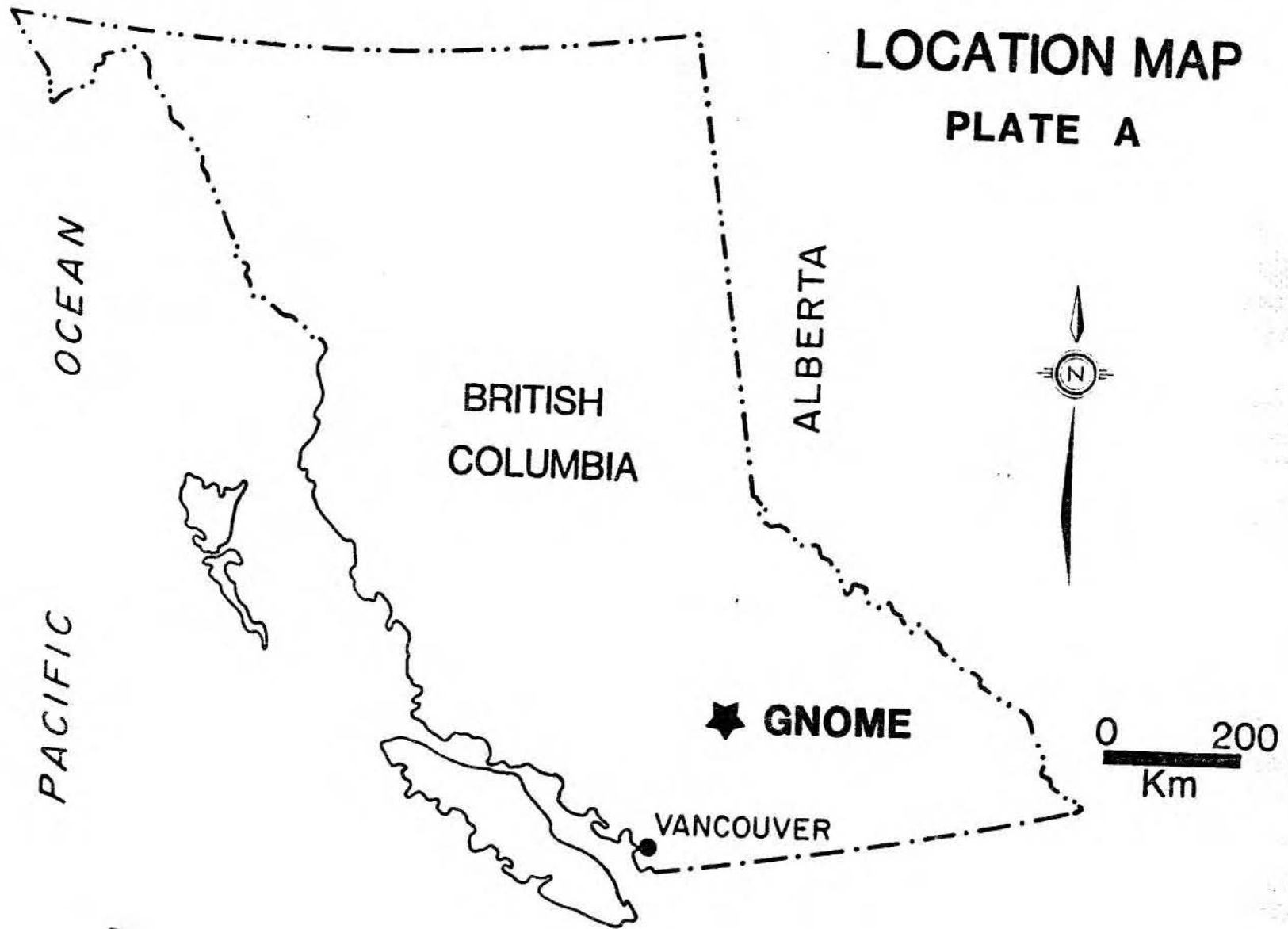
This report presents multi-element soil and rock geochemical as well as ground magnetic data from surveys conducted by Chevron last fall on its GNOME claim located in the Vidette Lake area of south central B. C.

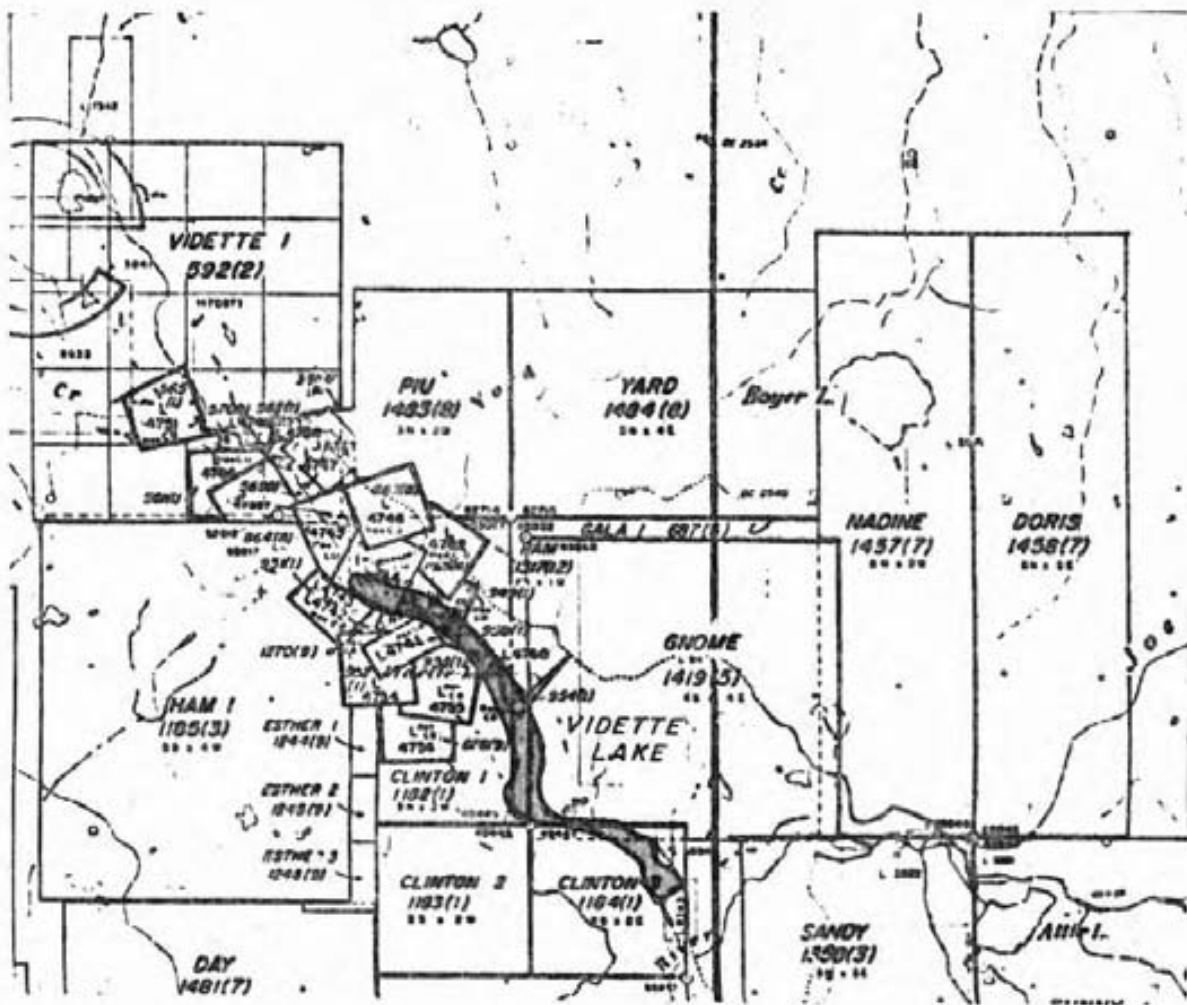
A total of 377 soils and silts and 59 rock geochemical samples were collected and 11.3 km of lines were surveyed with a magnetometer. An eleven km picket grid was put in for ground control.

The property is accessible by the Deadman River road which starts at the Trans Canada Highway about 35 km east of Cache Creek. The distance from the highway to the claim is about 50 km over good gravel road maintained by the Department of Highways.

During the interval between the early 1930's and the first years of World War II, the Vidette Lake area saw extensive exploration for lode gold deposits. The Vidette Mine discovered and developed in the early 1930's produced 40,000 oz Au, 30,000 oz Ag and 50 tons of copper (Dawson, 1973). Minor exploration work in search for porphyries took place during the 1970's and early 1980's (Dawson, 1973, Scott, 1981). During the last 12 months, extensive claim staking has taken place in the Vidette Lake area. Again the principal interest lies in gold deposits.

LOCATION MAP PLATE A





GNOME

RECORD No. 1419 (5)

SCALE 1:50,000

CLAIM MAP

PLATE B



REF. M 92 P / 2W

TOPOGRAPHY, CLIMATE, OVERBURDEN

Much of the GNOME claim lies on the gently rolling plateau overlooking the valley of Vidette Lake. The maximum relief on the plateau within the claim area is about 75 m. The land rises gently in a northerly direction.

The total precipitation in the plateau portion of the GNOME is about 38 cm/year according to Mr. Douglas Allen of Deadman River. Mr. Allen owns the surface rights of L947 in the GNOME area. Caliche is developed in the overburden of this arid to semi arid region of low relief. Caliche is extensively developed in the road cuts in the area. On the plateau where the main part of the Chevron land lies, caliche was noted at a depth of 1 m at station GNOME RB 30W. According to Horsenail & Elliott, 1971, mobility of copper and molybdenum may be inhibited by caliche. Little data is available on the affect of caliche bearing overburden on the mobility of the other elements. Caliche probably affects the mobility of most elements for which analyses were made, except mercury perhaps, which tends to be highly mobile in its vapour phase.

GEOLOGY

The GNOME is largely underlain by augite andesite of the Upper Triassic Nicola Group and Tertiary Plateau Lavas (Campbell and Tipper, 1971). The Upper Triassic rocks form a prominent window at Vidette, one of several, located along the valley of Deadman River. The Plateau Lavas, which characterize much of the bedrock geology on the Interior Plateau (Holland 1964), underlie the northeastern part of the claim. Intruding the Upper Triassic at several locations north and west of the GNOME are a series of small porphyritic granitic intrusions of unknown age (Cockfield 1936).

TREATMENT OF DATA

Rock, soil and silt geochemical data on a total of 9 elements are plotted on plans for individual elements at a scale of 1:5000 (Plates D-L). These plans also show the outline of the GNOME claim with the Legal Corner Post tied to the northwest corner of L947. Ground magnetic data is plotted on a scale of 1:2500 (Plate M). The appendix contains a list of geochemical analyses and information about the analytical procedures.

GEOCHEMICAL SAMPLING

The GNOME claim is largely drift covered. Based on scattered outcrops in the grid area, it appears that the overburden is everywhere shallow, perhaps only a few metres maximum. The northern parts of the claim were selected for sampling due to the presence of certain untested and unexplained I.P. anomalies obtained by another operator (Scott 1981), and the presence of gold as indicated by another (Dawson, 1973). Elements selected for determination are common constituents of epithermal gold systems. Soil samples were obtained from the "B" horizon whenever possible, usually from depths ranging from 18 to 30 cm. The samples were placed in conventional soil sample envelopes and dried in the field at room temperatures. Soil profiles were collected at several locations along line 0+00. Such samples contain a suffix of "A", "B" or "C" to denote the respective soil horizons. Rock samples are substantial chip samples, usually take over the entire outcrop. Samples were collected in plastic bags. Silt is not well developed in the drainages traversed by the grid.

DISCUSSION OF GEOCHEMICAL RESULTS

Gold (Plate D)

In general, anomalies are defined by one or two stations, usually located on the same line. Anomalies are also generally weak. A gold soil anomaly centred at 4+00E 0+40N stands out with five anomalous readings. The areas of soil samples TL 23 (215 ppb) and TL 18 (145 ppb) require further sampling. It is notable that sample TL 18 is also anomalous for Ag (1.2 ppm), for Sb (3.4 ppm), for As (25 ppm), for Zn (640 ppm), for Pb (95 ppm), for Hg (220 ppb) and Cu (227 ppm).

Silver (Plate E)

Generally weakly anomalous silver in soil and rock occur in the vicinity of old pits and trenches centred approximately at 2+00W 3+40N, 4+60W 4+25N and in the area 0.6 Km SSE of the grid origin. Sample TL 18 contains 1.2 ppm Ag and correlates with high gold. Up to 8.0 ppm Ag occurs in locally derived Nicola rubble near the edge of the plateau to the WSW of the grid origin. In this area, veins containing pyrite, chalcopyrite and hematite were noted.

Arsenic (Plate F)

Broad, weak, arsenic soil anomalies are centered at approximately 5+80E, 1+40N and at 2+80W, 1+25N. The relatively large aerial extent of these anomalies and their association with other anomalous elements suggests these anomalies are worthy of closer examination.

Antimony (Plate G)

Scattered rock samples anomalous in antimony occur in an area located south of the grid in vicinity of sample site TL 18. Detailed soil sampling should be carried out in this area of reconnaissance coverage.

Copper (Plate H)

A copper soil anomaly centred at 5+30E L0+75N exhibits a pattern closely resembling arsenic. There is also a modest five point gold anomaly within the base metal soil anomaly.

Zinc and Lead (Plates I,J)

These base metals are generally present in background levels both in soils and rocks. Sample TL 18 (soil) contains 640 ppm Zn and 95 ppm Pb, however.

Bismuth Plate K)

Bismuth values are generally at background levels throughout the sample area. Anomalous bismuth, 4.2 ppm, occurs in rock sample TL 01 near 0+60W 1+65N. This sample contains 1825 ppb Au. The material sampled is a pod of quartz about 15 cm x 20 cm situated in a shear zone. Heavy pyrite and minor associated chalcopyrite was noted in the shear. Dawson (1973) refers to a gold occurrence in this area and our sample site appears to be the same as that indicated in the reference.

Mercury (Plate L)

Selected samples only were run for mercury. Because of the high mobility of mercury in its vapour phase it seems unlikely that a porous material, such as caliche, would interfere with mercury mobility. One of the highest mercury values obtained in our survey occurs at the TL 18.

MAGNETIC SURVEY

The survey was conducted with an EDA PPM 350 magnetic system. The base station magnetometer was placed at 1+06N 0+25E for convenience. This magnetometer measures the diurnal variations with time recording the corrected absolute magnetic field at the base station. The magnetometer carried by the surveyor records the local magnetic field at 25 m intervals along the lines, again with time. At the end of the day or at the end of the survey, the operator combines the data storage of the two magnetometers to obtain the absolute magnetic field for each station corrected for diurnal variations. For convenience and plotting ease, an arbitrary value, this time 54,750 gamma was subtracted from each corrected station reading in order to yield plotting points that are generally positive and have as few digits as possible. The survey was conducted by Terry Lee. Lee had previously been instructed in the operation of the instrument by John Steele, Chevron Geophysicist. Steele reviewed the data with Lee and the author of this report after the completion of the survey.

DISCUSSION OF GROUND MAGNETICS (Plate M)


The main purpose of the magnetic survey was to indicate possible structures such as faults which could be associated with lode gold deposits. Magnetic data would also assist in the interpretation of an I.P. survey conducted earlier over portions of the GNOME claim (Scott, 1981). By enlarge, the magnetic field in the grid area from about 1+50W to 8+50E is quite uniform. The magnetic pattern is broken only by broad highs and lows only slightly above and below the magnetic background. This same pattern extends westward, to cover most of the remaining portion of the grid. In the area from 1+50N to 4+75N and lying to the west of 1+50W the earlier noted monotonous pattern include several high amplitude anomalies. These highs indicate local increases

in the abundance of magnetic minerals such as magnetite and pyrrhotite. Prospecting in the area indicates the presence of pyrrhotite within the strongest portion of anomaly "A". Anomaly "B", a characteristic thumb print anomaly located on the end of the "A" trend, exhibits an entirely different pattern from "A". It is possible that anomaly "B" is a deeper expression of a portion of anomaly "A".

CONCLUSIONS

Several geochemical anomalies were obtained in the survey. Some of the anomalies are well defined by existing sampling while others require further sampling. In spite of the presence of caliche in the area and its probable masking effect, the survey succeeded in indicating a number of areas for on going work. It appears that the soil geochemical association of gold-arsenic-copper is of particular interest. The principal anomaly of this type occurs in the southeastern part of the grid in close proximity to an untested I.P. anomaly. The need for detail soil sampling to the south beyond the grid is indicated and should be carried out as part of an on going program including geological and geophysical surveys.

The prominent positive magnetic anomalies "A" and "B" coincide with known occurrences of pyrrhotite and an I.P. anomaly (Scott 1981). Detailed geological information on this area is needed.


Reported by R.U. Bruaset, B.Sc.
Geologist

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Sample Description	prep code	prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Sb ppm	Bi ppm	Hg ppb	Au ppb
L4+25N 4+50W	201	0	120	1	265	0.9	10	1.2	0.1		25
L4+25N 4+75W	201	0									10
L4+25N 5+00W	201	0	100	1	95	0.1	16	1.4	0.1		20
L4+25N 5+25W	201	0									10
L4+25N 5+50W	201	0	98	1	87	0.1	15	1.6	0.2		5
L4+25N 5+75W	201	0									10
L4+25N 6+00W	201	0	45	1	81	0.1	10	1.2	0.1		<5
L4+25N 6+25W	201	0									5
L4+25N 6+50W	201	0	23	1	115	0.1	4	1.1	0.1		<5
L4+25N 6+75W	201	0									20
L4+25N 7+00W	201	0	35	1	75	0.1	7	1.1	0.1		5
L4+75N 0+00	201	0									5
L4+75N 0+25E	201	0	23	1	63	0.1	5	1.2	0.1		5
L4+75N 0+50E	201	0									5
L4+75N 0+75E	201	0	25	1	54	0.1	9	1.0	0.1		20
L4+75N 1+00E	201	0									<5
L4+75N 1+25E	201	0	26	4	62	0.1	5	0.8	0.1		5
L4+75N 1+50E	201	0									<5
L4+75N 1+75E	201	0	25	1	62	0.1	7	1.0	0.1		10
L4+75N 2+00E	201	0									15
L4+75N 0+25W	201	0	20	1	54	0.1	5	0.8	0.1		25
L4+75N 0+50W	201	0									<5
L4+75N 0+75W	201	0	21	1	60	0.1	6	0.8	0.1		10
L4+75N 1+00W	201	0									5
L4+75N 1+25W	201	0	25	1	103	0.1	7	1.0	0.1		<5
L4+75N 1+50W	201	0									5
L4+75N 1+75W	201	0	30	1	60	0.1	24	0.8	0.2		10
L4+75N 2+00W	201	0									<5
L4+75N 2+25W	201	0	37	1	55	0.1	23	1.2	0.1		<5
L4+75N 2+50W	201	0									<5
L4+75N 2+75W	201	0	22	1	52	0.1	7	1.0	0.1		<5
L4+75N 3+00W	201	0									<5
L4+75N 3+25W	201	0	40	1	72	0.2	10	1.2	0.1		<5
L4+75N 3+50W	201	0									15
L4+75N 3+75W	201	0	40	1	47	0.1	11	1.2	0.1		5
L4+75N 4+00W	201	0									<5
L4+75N 4+25W	201	0	95	1	98	0.1	16	1.4	0.2		<5
L4+75N 4+50W	201	0									5
L4+75N 4+75W	201	0	34	1	68	0.1	11	1.2	0.1		<5
L4+75N 5+00W	201	0									<5
L4+75N 5+25W	201	0	120	1	193	0.1	14	1.6	0.3		<5
L4+75N 5+50W	201	0									<5
L4+75N 5+75W	201	0	35	1	95	0.1	9	1.0	0.1		<5
L4+75N 6+00W	201	0									80
L4+75N 6+25W	201	0	30	2	90	0.1	6	1.0	0.1		<5
L4+75N 6+50W	201	0									<5
L4+75N 6+75W	201	0	30	1	75	0.1	9	1.0	0.1		<5
L4+75N 7+00W	201	0									25
GNOME RB 01	201	0	55	1	73	0.1	200	5.2	0.1	50	<5
GNOME RB 15	201	0	128	1	70	0.6	12	0.9		50	<5

Sample description	prep code	prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Sb ppm	Bi ppm	Hg ppb	Au ppb
GNOME RB 24	201	0	150	2	152	0.1	20	1.6	0.1	60	<5
GNOME RB 31	201	0	122	1	120	0.4	53	3.0		60	5
GNOME RB 32	201	0	17	1	68	0.1	6	0.8	0.1	50	<5
GNOME RB 33	201	0	78	2	103	0.1	50	2.8		70	15
GNOME RB 34	201	0	14	1	45	0.1	5	0.8	0.1	60	<5
GNOME RB 35	201	0	20	1	55	0.1	4	0.4		40	<5
GNOME RB 36	201	0	28	1	75	0.1	3	0.8	0.1	60	<5
GNOME RB 37	201	0	33	1	150	0.1	15	0.9		50	5
GNOME RB 58	201	0	123	1	108	0.4	36	1.8	0.1	50	10
GNOME RB 60 SILT	201	0	103	1	113	0.4	24	1.4	0.1		10
GNOME RB 64	201	0	165	1	128	0.3	19	1.2		60	10
GNOME RB 69	201	0	45	1	57	0.1	61	3.6	0.1	40	15
GNOME RB 74	201	0	83	4	117	0.3	81	1.4		60	45
GNOME RB 80	201	0	14	1	23	0.1	2	0.2	0.1	70	15
GNOME RB 81	201	0	75	2	77	0.2	61	5.0		70	25
GNOME RB 82	201	0	120	1	82	0.5	22	4.0	0.1	110	50
GNOME TL 04	201	0	70	1	95	0.5	9	1.8	0.4	80	70
GNOME TL 07	201	0	222	2	98	0.7	51	1.4		70	35
GNOME TL 09	201	0	98	3	142	0.7	22	1.8	0.2	110	50
GNOME TL 10	201	0	150	1	130	0.4	9	1.2		60	145
GNOME TL 11	201	0	146	2	98	0.8	10	1.8	0.2	80	20
GNOME TL 13 BREC	201	0	37	7	94	0.1	12	0.8		60	10
GNOME TL 18	201	0	227	95	640	1.2	25	3.4	0.1	220	145
GNOME TL 23	201	0	215	1	68	0.8	14	0.8		100	215
GNOME TL 60 SILT	214	0								70	
GNOME RB 4245	201	0	34	3	112	0.1	11	0.8		70	10
GNOME RB 30R	201	0	73	16	76	0.7	71	3.6	0.1	90	75
GNOME RB 30W	201	0	47	1	49	0.5	14	1.2	0.1	60	10

CHEVRON CANADA RESOURCES
GNOME PROJECT -- 1983 ROCK GEOCHEMICAL DATA

PAGE 1

Sample description	prep code	prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Sb ppm	Bi ppm	Hg ppb	Au ppb
RBGNOME 2	205	0	333	1	50	0.9	46	1.4	0.2	20	15
RBGNOME 3	205	0	137	1	110	0.6	9	1.8	0.3	20	5
RBGNOME 4	205	0	88	1	70	0.3	790	26.0	0.1	30	10
RBGNOME 5	205	0	51	1	69	0.6	60	6.2	0.1	70	10
RBGNOME 6	205	0	9	1	3	2.6	10	4.2	0.1	80	25
RBGNOME 7	205	0	300	1	80	0.7	4	0.2	0.2	30	5
RBGNOME 8	205	0	115	1	73	0.5	7	3.4	0.1	30	5
RBGNOME 9	205	0	160	1	83	0.4	4	0.2	0.2	30	5
RBGNOME 10	205	0	200	1	80	0.3	4	0.6	0.1	20	<5
RBGNOME 11	205	0	165	1	63	0.8	3	0.2	0.1	20	5
RBGNOME 12	205	0	180	1	65	0.6	2	0.2	0.1	20	<5
RBGNOME 14	205	0	370	1	77	1.2	6	1.2	0.2	10	<5
RBGNOME 17	205	0	32	1	39	0.4	2	0.2	0.1	10	5
RBGNOME 21	205	0	78	1	56	0.5	4	0.2	0.1	10	5
RBGNOME 24	205	0	22	1	42	0.1	10	6.2	0.1	30	5
RBGNOME 26	205	0	138	1	80	0.3	6	0.8	0.1	20	5
RBGNOME 27A	205	0	40	5	68	0.4	7	1.6	0.1	50	15
RBGNOME 27B	205	0	57	4	68	0.2	7	2.2	0.1	30	10
RBGNOME 30	205	0	55	1	38	0.5	39	2.6	0.1	20	5
RBGNOME 30Y	205	0	29	1	33	0.5	75	2.4	0.1	40	25
RBGNOME 54A	205	0	167	1	22	0.7	5	0.2	0.1	20	30
RBGNOME 54B	205	0	49	1	20	0.4	4	0.2	0.1	20	25
RBGNOME 56	205	0	15	1	15	0.1	2	0.2	0.1	10	40
RBGNOME 56B	205	0	11	1	19	0.2	3	0.2	0.1	10	5
RBGNOME 59	205	0	165	1	82	0.3	14	0.6	0.1	20	10
RBGNOME 59B	205	0	54	1	38	0.4	19	1.2	0.3	20	20
RBGNOME 64	205	0	184	1	100	0.3	41	1.4	0.1	20	10
RBGNOME 71	205	0	64	1	76	0.1	3	1.0	0.1	20	5
RBGNOME 77	205	0	67	47	76	0.9	50	3.2	0.1	80	15
RBGNOME 78	205	0	21	1	26	0.2	620	55.0	0.1	1500	40
RBGNOME 79	205	0	118	1	59	0.2	10	1.2	0.1	40	<5
RBGNOME 79B	205	0	24	1	48	0.1	145	8.0	0.1	90	5
RBGNOME 85	205	0	29	1	78	0.2	10	0.8	0.1	20	5
RBGNOME 90	205	0	29	1	38	1.8	50	1.4	0.1	100	60
RBGNOME 91	205	0	96	1	90	0.3	3	0.6	0.1	10	10
RBGNOME 98	205	0	52	1	60	0.2	9	0.6	0.1	20	<5
RBGNOME 100	205	0	54	1	58	0.2	6	0.8	0.1	10	5
RBGNOME 101	205	0	28	1	10	2.2	25	3.2	0.1	20	10
RBGNOME 4247	205	0	33	1	42	0.4	20	1.0	0.1	10	<5
TLGNOME 1	205	0	800	8	104	4.8	105	1.0	4.2	20	1825
TLGNOME 2	205	0	148	1	118	0.7	7	0.2	0.4	20	15
TLGNOME 3	205	0	55	1	43	0.5	5	0.6	0.3	30	60
TLGNOME 5	205	0	138	1	75	0.6	2	0.2	0.1	10	10
TLGNOME 6	205	0	83	1	81	0.3	3	0.2	0.1	10	10
TLGNOME 8	205	0	85	4	118	20.0	7	0.5	0.1	60	50
TLGNOME 12	205	0	31	1	76	0.3	29	1.4	0.5	70	210
TLGNOME 13	205	0	34	1	32	0.4	20	1.2	0.1	20	15
TLGNOME 14	205	0	21	1	29	3.2	17	2.6	0.1	20	35
TLGNOME 15	205	0	141	2	36	0.2	225	3.2	0.1	20	45
TLGNOME 16	205	0	120	1	65	0.3	10	0.4	0.1	70	10

Sample Description		prep code	prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Sb ppm	Bi ppm	Hg ppb	Au ppb
TLGNOME	17	205	0	82	1	58	0.6	41	290.0	0.1	20	15
TLGNOME	19	205	0	95	1	48	0.3	7	1.4	0.1	10	15
TLGNOME	20	205	0	27	1	49	0.5	12	1.6	0.2	20	20
TLGNOME	21	205	0	189	1	66	0.5	3	0.6	0.2	10	30
TLGNOME	22	205	0	1790	1	39	1.7	4	0.6	0.1	40	50
TLGNOME	24	205	0	>10000	2	32	8.0	1	0.2	0.1	30	20
TLGNOME	25	205	0	226	2	58	0.5	3	0.3	0.1	20	<5
TLGNOME	26	205	0	120	6	93	0.4	6	0.2	0.1	20	5

APPENDIX II

GEOCHEM PROCEDURES

PPB Mercury: The sample is digested with nitric acid plus a small amount of hydrochloric acid. Following digestion the resulting clear solution is transferred to a reaction flask connected to a closed system absorption cell. Stannous sulfate is rapidly added to reduce mercury to its elemental state. The mercury is then flushed out of the reaction vessel into the absorption cell where it is measured by cold vapour atomic absorption methods with a Jarrell Ash Multi-Versatility Spectrophotometer. The absorbance of samples is compared with the absorbance of freshly-prepared mercury standard solutions carried through the same procedure. The detection limit of this method is 5 ppb.

PPM Arsenic: a 1.0 gram sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digest is acidified, reduced with KI and mixed. A portion of the reduced solution is converted to arsine with NaBH_4 and the arsenic content determined using flameless atomic absorption.

Detection limit - 1 PPM

PPM Silver: a 1.0 gm portion of sample is digested in conc. perchloric-nitric acid ($\text{HClO}_4 - \text{HNO}_3$) for approx. 2 hours. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Silver is determined by atomic absorption technique using background correction on analysis.

Detection limit - 0.2 PPM

GOLD FA-AA COMBO METHOD

For low grade samples and geochemical materials a 10 gram sample is fused in litharge, carbonate and siliceous flux with the addition of 10 mg of Au-free Ag metal and cupelled. The silver bead is parted with dilute HNO_3 and then treated with aqua regia. The salts are dissolved in dilute HCl and analyzed for Au on an atomic absorption spectrophotometer.

Detection limit - 5 ppb.

GEOCHEM PROCEDURES:

PPM Antimony: a 2.0 gm sample digested with concentrated hydrochloric acid in hot water bath. The iron is reduced to Fe +2 state and an iodide complex of antimony is formed on the addition of potassium iodide. The complex is extracted with TOPO-MIBK (Trioctyl phosphine oxide-methyl isobutyl ketone) and analyzed by atomic absorption spectroscopy. Correcting for background absorption 0.2 ppm \pm 0.2 ppm.
Detection limit - 0.2 PPM

PPM Bismuth: a 2.0 gram sample is digested with Conc. HCl and potassium chlorate. The solution cooled. After the addition of KI and the reduction of iron, the solution is extracted with MIBK-aliquot 336 and analyzed via standard AA procedure correcting for background absorption.
Detection limit - 0.2 PPM

COPPER, ZINC, LEAD PPM:

A 1.00 gram portion of sample is weighed into a calibrated test tube. The sample is digested using hot 70% perchloric acid and concentrated nitric acid. Digestion time = 2 hours. Sample volume is adjusted to 25 mls. using demineralized water. Sample solutions are homogenized and allowed to settle before being analyzed by atomic absorption procedures.

Detection limits using Varian atomic absorption unit are as follows:

Copper	-	1 ppm
Zinc	-	1 ppm
Lead	-	1 ppm

GEOCHEMICAL PREPARATION

Geochemical samples (soils, silts) are dried at 50 deg. C for a period of 12 to 24 hours. The dried sample is sieved to -80 mesh fraction through a nylon and stainless steel sieve.

Rock geochemical materials are crushed, dried and pulverized to -100 mesh. The reject material is retained for possible future use.

APPENDIX III

STATEMENT OF QUALIFICATIONS FOR TERRY LEE
MAGNETOMETER OPERATOR

Mr. Lee was instructed in the operation of the magnetometer by Mr. John Steele, geophysicist for Chevron Canada Resources Limited. Previous ground magnetic experience by Mr. Lee includes:

1980: Supervising ground magnetic field crew in the Yukon.

1979: Surveying with magnetometer in N.W.T. Responsible for readings, corrections and interpretation of 40 km survey.

APPENDIX III

STATEMENT OF QUALIFICATIONS

RAGNAR U. BRUASET

I, Ragnar U. Bruaset with business address 1900 - 1055 West Hastings Street, Vancouver, B. C. do hereby certify that I have supervised the exploration program on behalf of Chevron Canada Resources Limited on its GNOME claim. The work included soil and rock geochemical sampling and ground magnetics.

I do certify that:

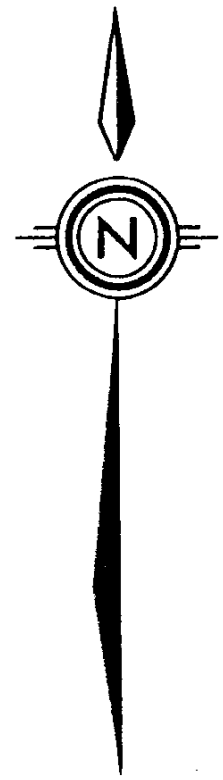
- (1) I am a 1967 graduate of the University of British Columbia with a degree of B.Sc. in geology.
- (2) I have been engaged in mineral exploration continuous for more than fifteen years. During this time I have been intimately involved in exploration for base and precious metals including assessment of geological, geochemical and geophysical data.
- (3) I am a member of the Geological Association of Canada and the Canadian Institute of Mining & Metallurgy.



R. U. Bruaset

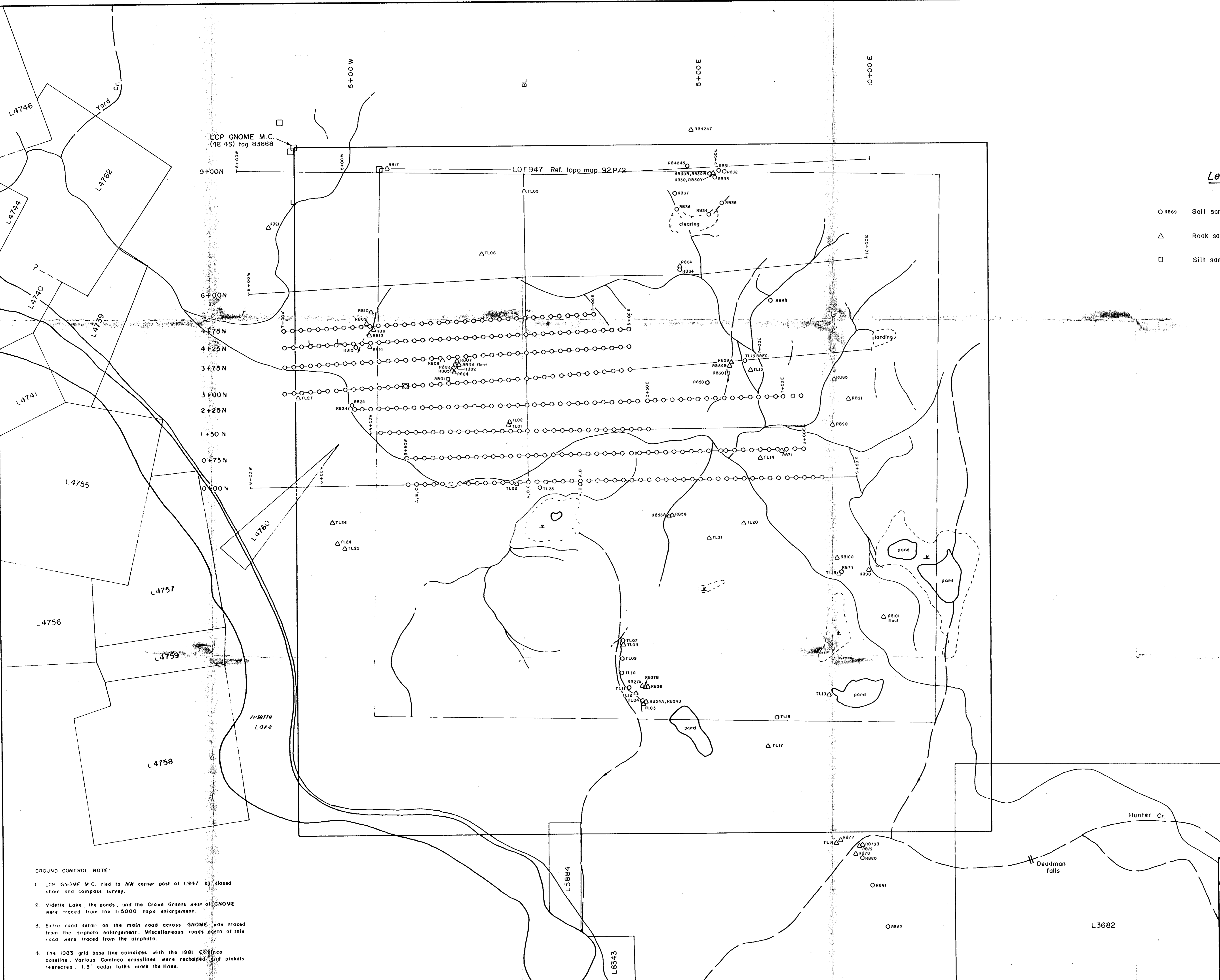
APPENDIX IV
GNOME
COST STATEMENT

<u>Preparation of Samples:</u> Soils and silts	366 samples @0.60	\$ 219.60
Rock	52 samples @2.50	130.00
<u>Analyses:</u> Au: Soils and silt and rocks	418 @6.25	2,612.50
Ag: Soils and silt and rocks	253 @1.90	480.70
As: Soils and silt and rocks	253 @3.25	822.25
Sb: Soils and silt and rocks	254 @3.75	952.50
Cu: Soils and silt and rocks	253 @ .90	227.70
Zn: Soils and silt and rocks	253 @ .90	227.70
Pb: Soils and silt and rocks	252 @ .90	226.80
Bi: soils and rocks	237 @3.75	888.75
Hg: soils and rocks	75 @3.50	<u>262.50</u>
Total preparation and analysis	Sub Total	7,051.00
<u>Magnetometer:</u> September 25-29/83 5 days @\$100./day		500.00
<u>Hotel Accommodation:</u> \$31.80 per room/day x 2 rooms x 8 days		508.80
<u>Food:</u> September 21-28/83 - 8 days x 2 men x \$19.97/man/day		319.52
<u>Truck Transportation:</u> September 21-28 - 8 days @\$41.65/day		333.20
<u>Pickets for Grid:</u>		17.30
<u>Salary:</u> R.U. Bruaset September 21-28 - 8 days @\$250.		2,000.00
<u>Salary:</u> T. Lee September 21-28 - 8 days @\$130.		1,040.00
<u>Drafting:</u> T. Lee October 17-21, 24-28 - 10 days @\$130.		1,300.00
<u>Report Preparation:</u> R.U. Bruaset February 20-24 - 5 days @\$250.		<u>1,250.00</u>
TOTAL		\$14,319.82



Legend

- RB69 Soil sample / Sample number
- △ Rock sample
- Silt sample



- GROUND CONTROL NOTE:**
1. LCP GNOME M.C. tied to NW corner post of L347 by closed chain and compass survey.
 2. Vidette Lake, the ponds, and the Crown Grants west of GNOME were traced from the 1:5000 topo enlargement.
 3. Extra road detail on the main road across GNOME was traced from the airphoto enlargement. Miscellaneous roads north of this road were traced from the airphoto.
 4. The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechecked and pickets reerected. 1.5" cedar laths mark the lines.

GEOLOGICAL BRANCH ASSESSMENT REPORT

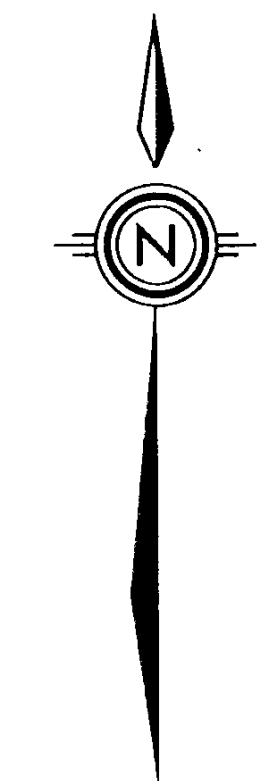
12,021
0 50 100 200 300 400 metres

TO Accompany Report by R. Williams

Chevron Canada Resources Limited Minerals Staff

GNOME M.C. SAMPLE NUMBERS

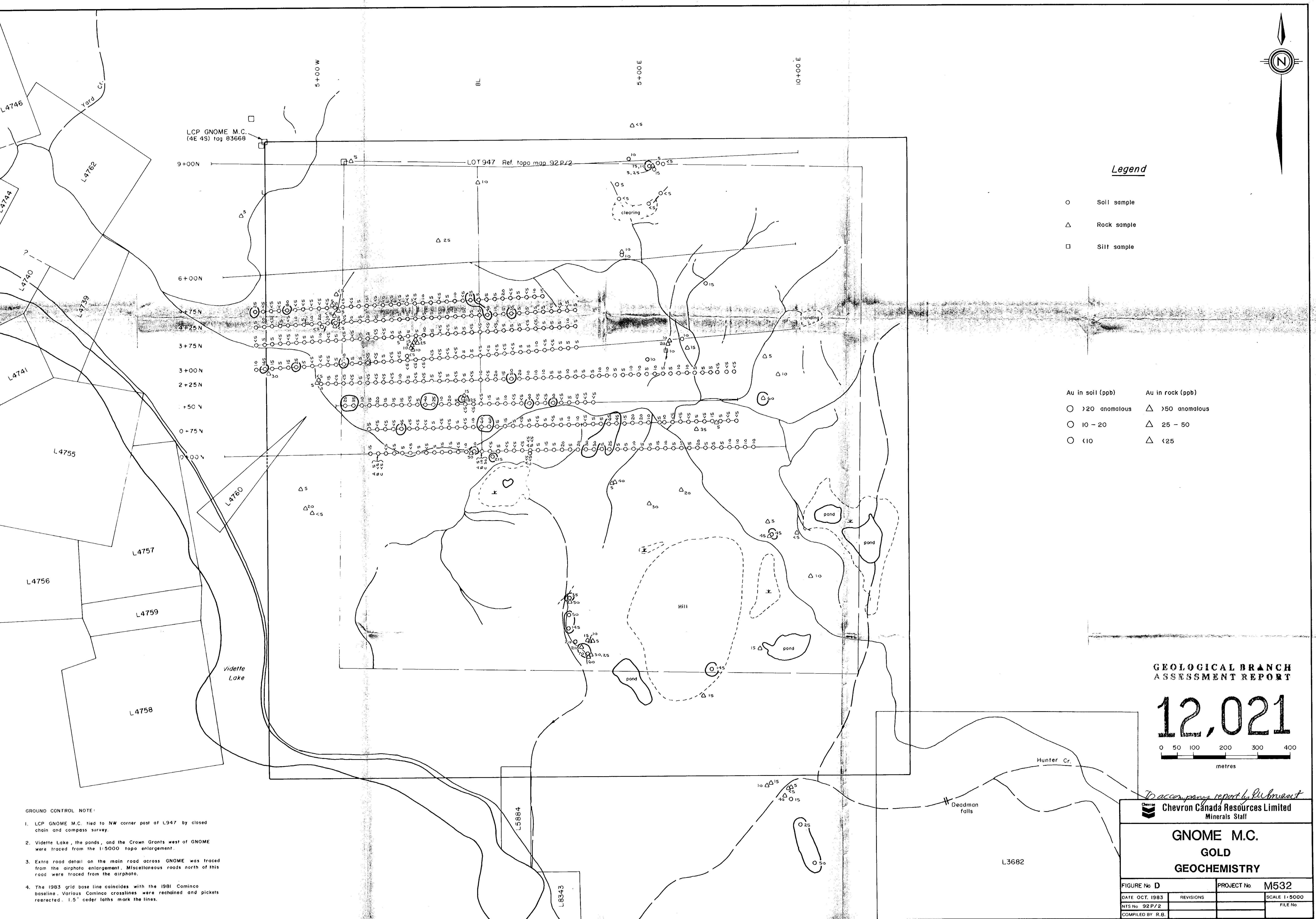
FIGURE No C	PROJECT No M532
DATE OCT. 1983	REVISIONS
NTS No 92P/2	SCALE 1:5000
COMPILED BY R.B.	FILE No



Legend

- Soil sample
- △ Rock sample
- Silt sample

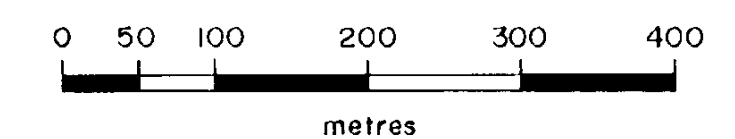
- | | |
|------------------|------------------|
| Au in soil (ppb) | Au in rock (ppb) |
| ○ >20 anomalous | △ >50 anomalous |
| ○ 10 - 20 | △ 25 - 50 |
| ○ <10 | △ <25 |



- GROUND CONTROL NOTE:**
- LCP GNOME M.C. tied to NW corner post of L947 by closed chain and compass survey.
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 - The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechecked and pickets reerected. 1.5' cedar laths mark the lines.

GEOLOGICAL BRANCH ASSESSMENT REPORT

12,021

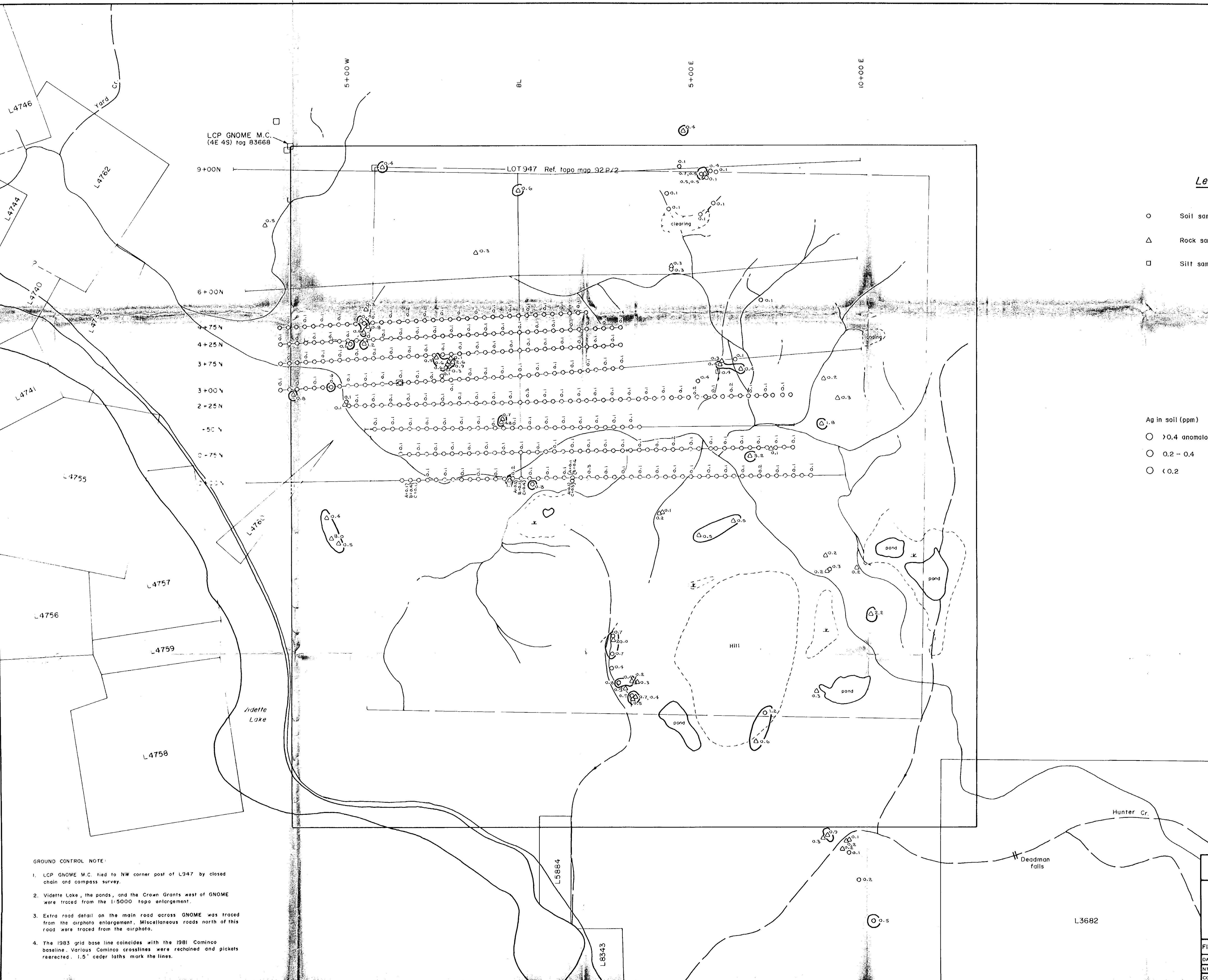
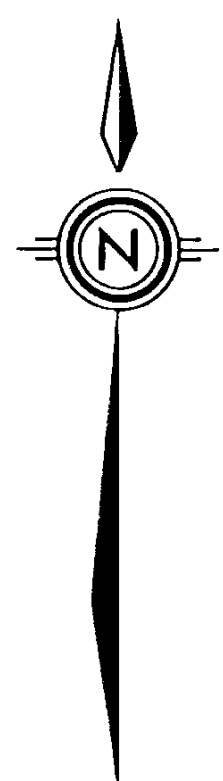


To accompany report by Submitt

Chevron Canada Resources Limited
Minerals Staff

GNOME M.C. GOLD GEOCHEMISTRY

FIGURE No D	PROJECT No M532
DATE OCT. 1983	REVISIONS
NTS No 92P/2	SCALE 1:5000
COMPILED BY R.B.	FILE No



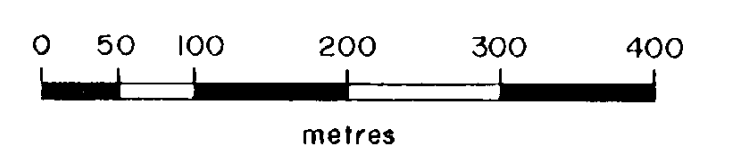
Legend

- Soil sample
- △ Rock sample
- Silt sample

- | | |
|------------------|------------------|
| Ag in soil (ppm) | Ag in rock (ppm) |
| ○ >0.4 anomalous | △ >0.3 anomalous |
| ○ 0.2 - 0.4 | △ 0.2 - 0.3 |
| ○ <0.2 | △ <0.2 |

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021



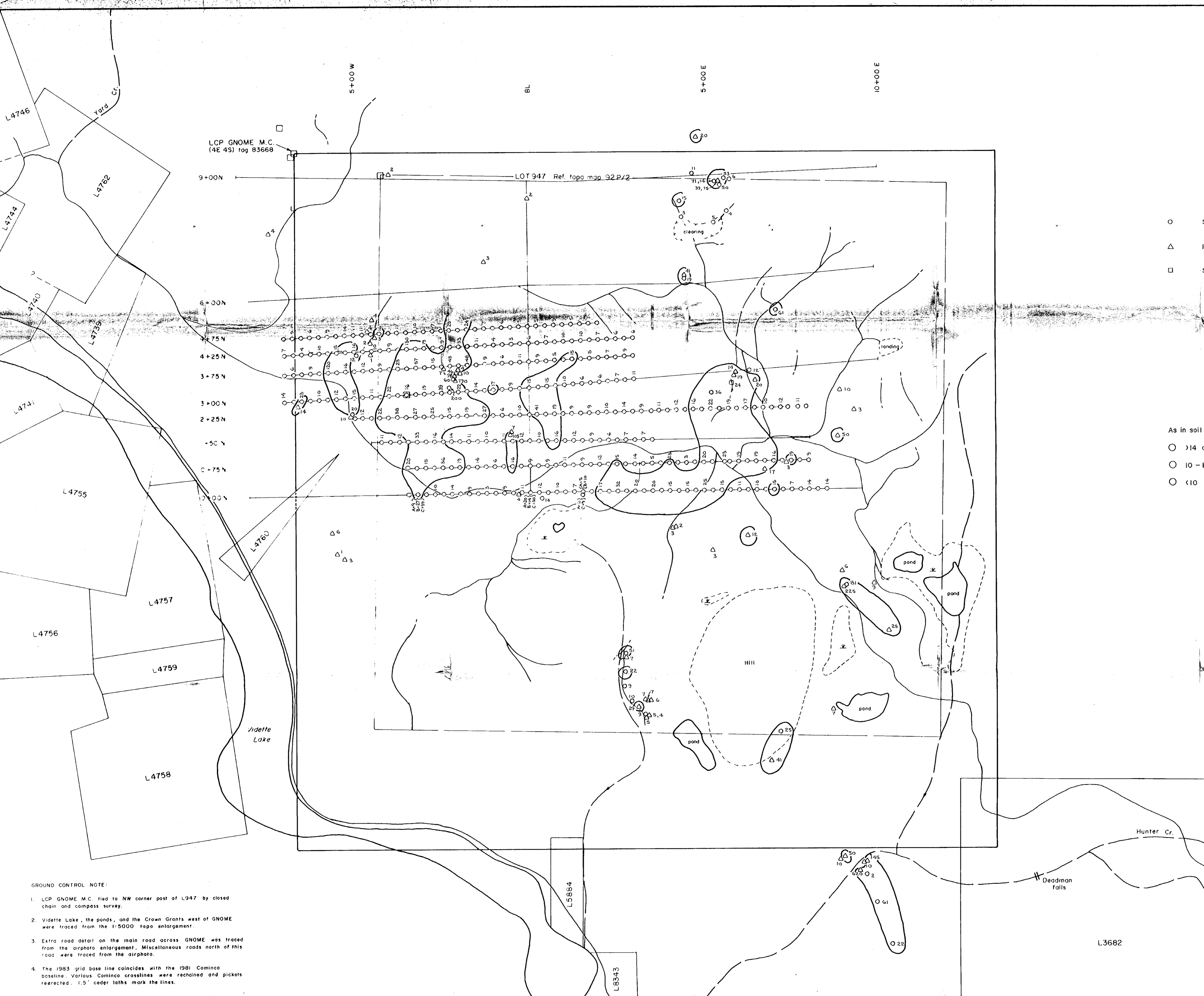
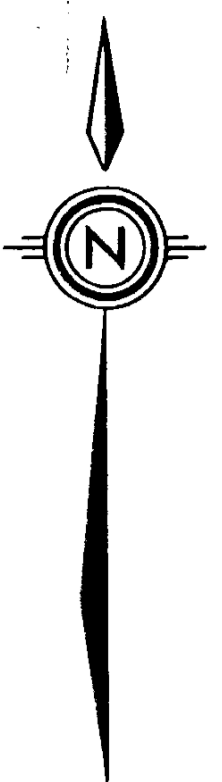
- GROUND CONTROL NOTE:**
- LCP GNOME M.C. tied to NW corner post of L947 by closed chain and compass survey.
 - Vidette Lake, the ponds, and the Crown Grants west of GNOME were traced from the 1:5000 topo enlargement.
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 - The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechecked and pickets rechecked. 1.5' cedar laths mark the lines.

to accompany report by R. B. Stewart

**Chevron Canada Resources Limited
Minerals Staff**

**GNOME M.C.
SILVER
GEOCHEMISTRY**

FIGURE No. E	PROJECT No. M532
DATE OCT. 1983	REVISIONS
NTS No. 92P/2	SCALE 1:5000
COMPILED BY R.B.	FILE No.



Legend

- Soil sample
- △ Rock sample
- Silt sample

- | | |
|------------------|------------------|
| As in soil (ppm) | As in rock (ppm) |
| ○ >14 anomalous | △ >10 anomalous |
| ○ 10 - 14 | △ 5 - 10 |
| ○ <10 | △ <5 |

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

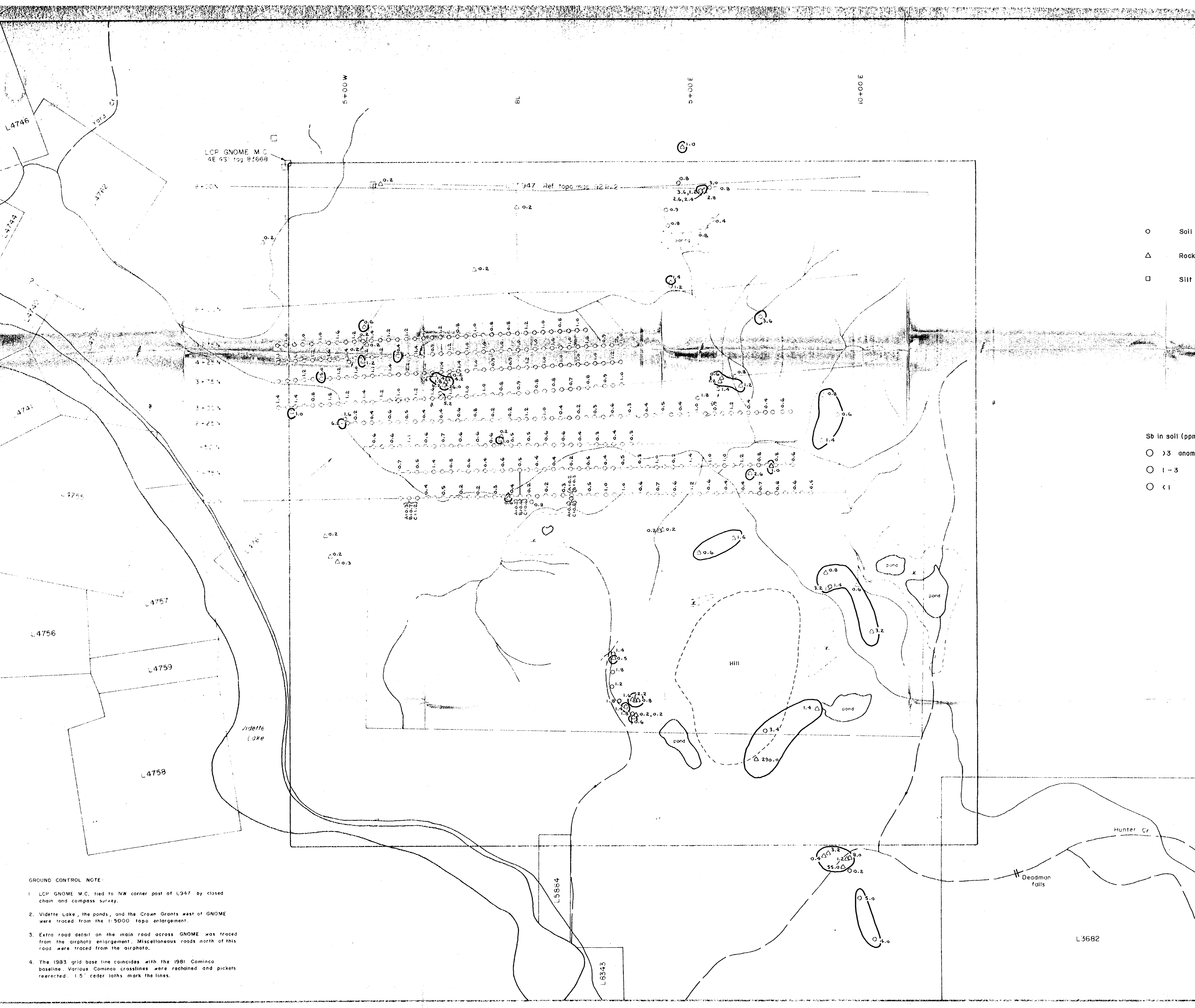
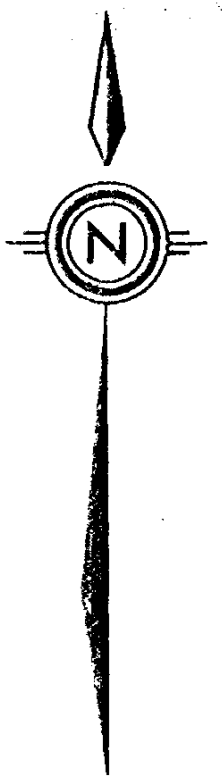
12,021
0 50 100 200 300 400
metres

72 accompanying report by R. B. Macneil
Chevron Canada Resources Limited
Minerals Staff

**GNOME M.C.
ARSENIC
GEOCHEMISTRY**

FIGURE No F	PROJECT No M532	
DATE OCT. 1983	REVISIONS	SCALE 1:5000
NTS No 92P/2		FILE No
COMPILED BY R.B.		

- GROUND CONTROL NOTE:**
- LCP GNOME M.C. tied to NW corner post of L947 by closed chain and compass survey.
 - Vidette Lake, the ponds, and the Crown Grants west of GNOME were traced from the 1:5000 topo enlargement.
 - Extra road detail on the main road across GNOME was traced from the airphoto enlargement. Miscellaneous roads north of this road were traced from the airphoto.
 - The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechaind and pickets reerected. 1.5" cedar laths mark the lines.



Legend

- Soil sample
- △ Rock sample
- Silt sample

- Sb in soil (ppm)
- >3 anomalous
 - 1-3
 - <1
- Sb in rock (ppm)
- △ >0.4 anomalous
 - △ 0.2-0.4

GROUND CONTROL NOTE:

1. LCP GNOME M.C. tied to NW corner post of L947 by closed chain and compass survey.
2. Vidette Lake, the ponds, and the Crown Grants west of GNOME were traced from the 1:5000 topo enlargement.
3. Extra road detail on the main road across GNOME was traced from the airphoto enlargement. Miscellaneous roads north of this road were traced from the airphoto.
4. The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechaind and pickets reerected. 1.5" center laths mark the lines.

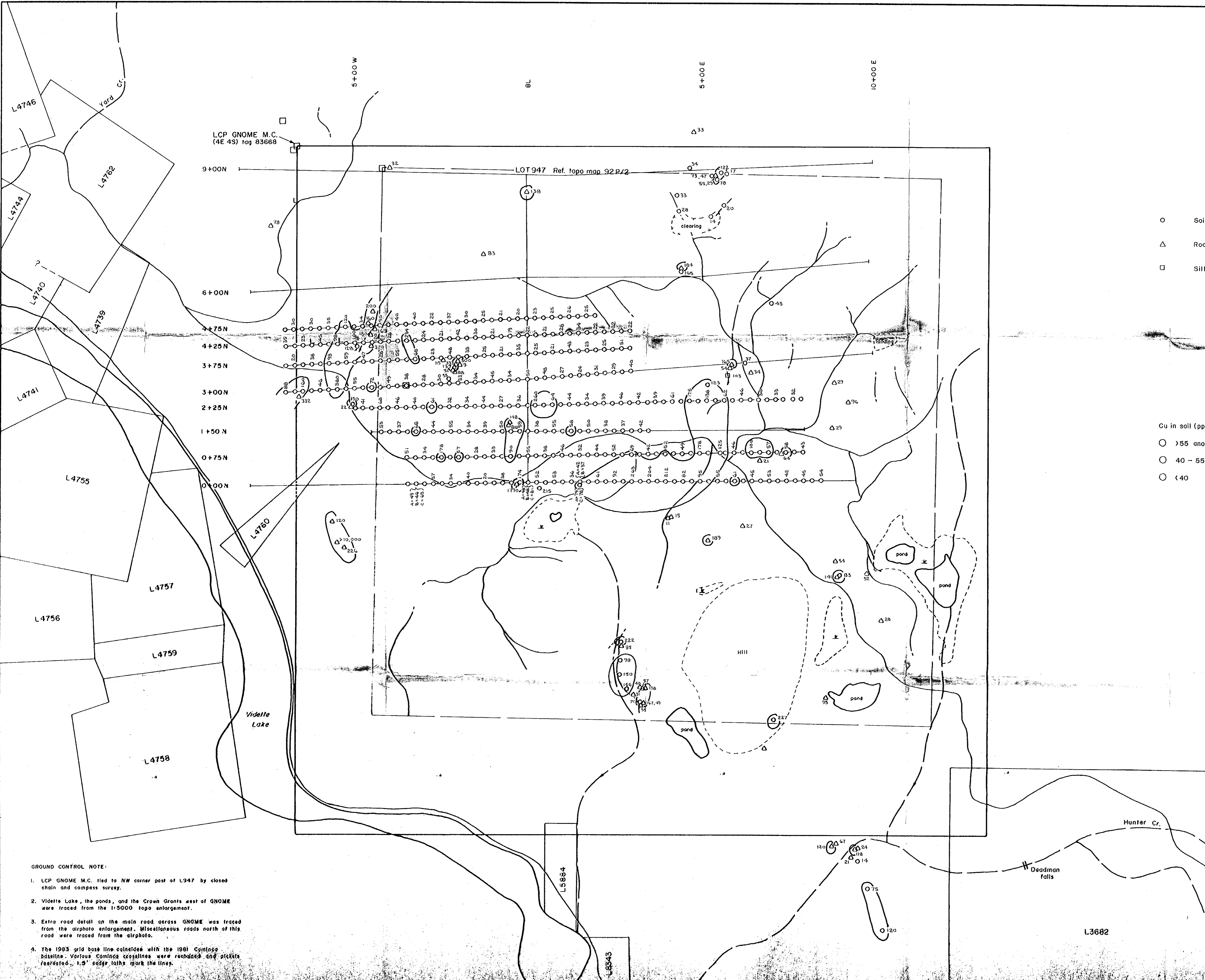
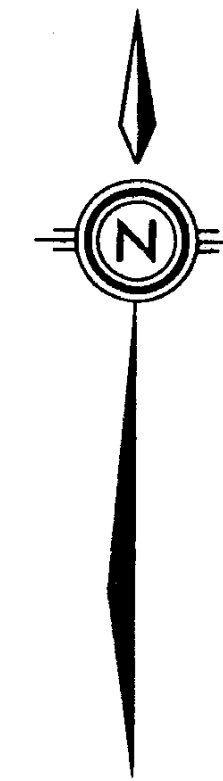
**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021

Prepared by R.B. Bennett
**Chevron Canada Resources Limited
Minerals Staff**

**GNOME M.C.
ANTIMONY
GEOCHEMISTRY**

FIGURE No G	PROJECT No M532
DATE OCT. 1983	REVISIONS
NTS No 92P/2	SCALE 1:5000
COMPILED BY R.B.	FILE No



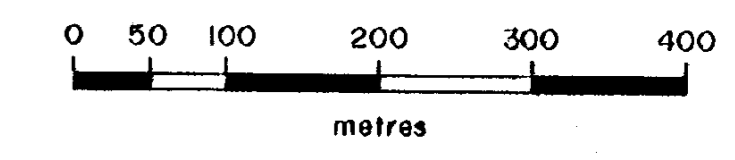
Legend

- Soil sample
- △ Rock sample
- Silt sample

- | | |
|------------------|------------------|
| Cu in soil (ppm) | Cu in rock (ppm) |
| ○ >55 anomalous | △ >100 anomalous |
| ○ 40 - 55 | △ 75 - 100 |
| ○ <40 | △ <75 |

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021



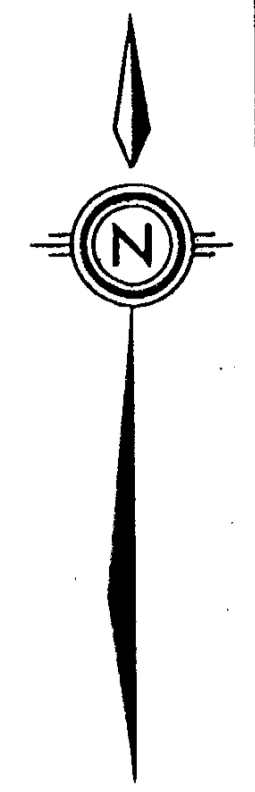
- GROUND CONTROL NOTE:**
- LCP GNOME M.C. tied to NW corner post of L947 by closed chain and compass survey.
 - Vidette Lake, the ponds, and the Crown Grants west of GNOME were traced from the 1:5000 topo enlargement.
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 - The 1983 grid base line coincides with the 1981 Comline basaltic. Various Comline crosslines were rechecked and pickets reerected. 1.5' scale ticks mark the lines.

To accompany report by R. Branson

Chevron Canada Resources Limited
Minerals Staff

GNOME M.C.
COPPER
GEOCHEMISTRY

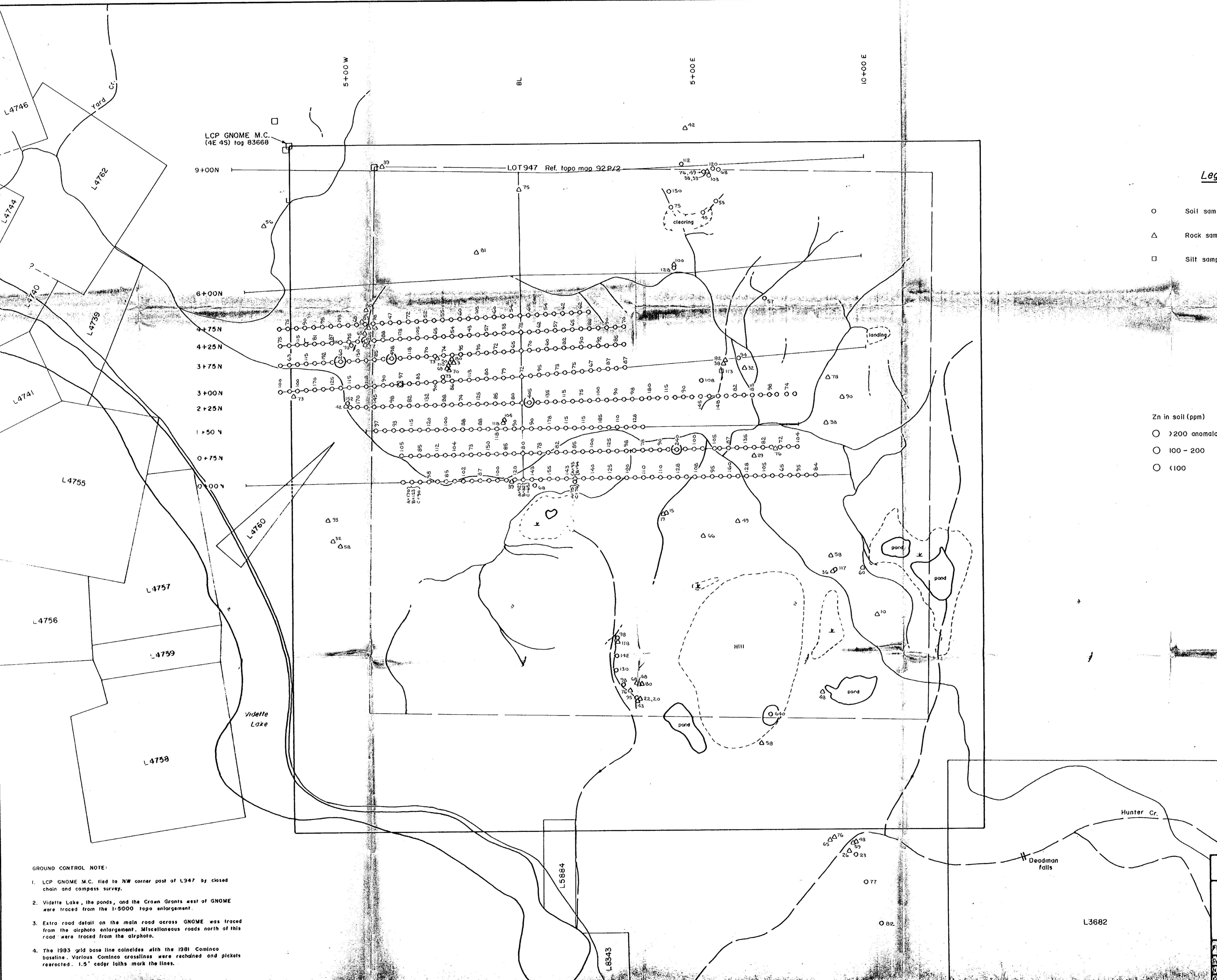
FIGURE No. H	PROJECT No. M392
DATE OCT. 1983	SCALE 1:1000
SHEET No. 92P/2	DATE
COMPILED BY G.B.	



Legend

- Soil sample
- △ Rock sample
- Silt sample

- Zn in soil (ppm)
- >200 anomalous
 - 100 - 200
 - <100
- Zn in rock (ppm)
- △ 100 - 200
 - △ <100

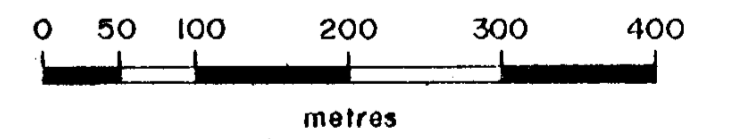


GROUND CONTROL NOTE:

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**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021

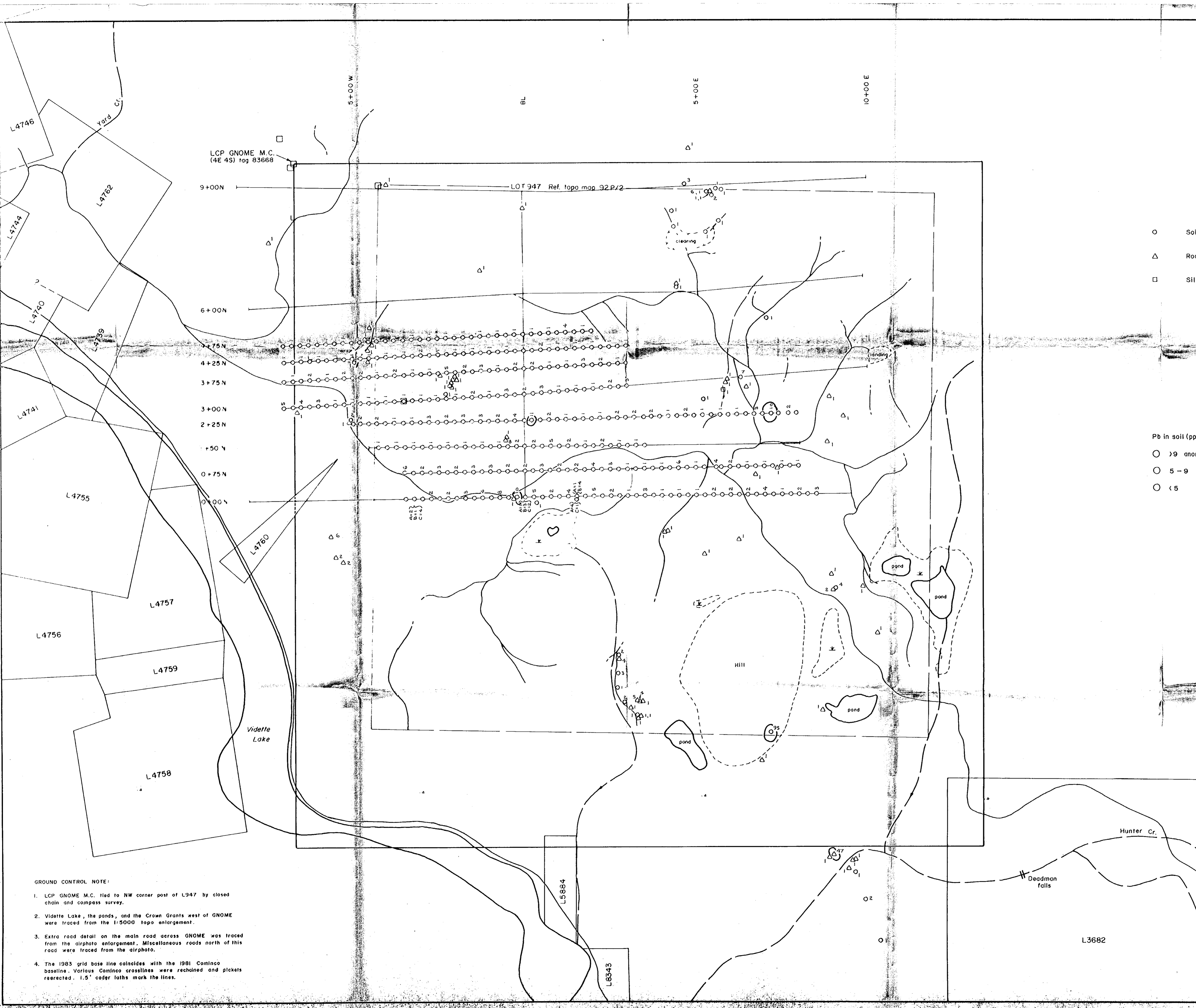
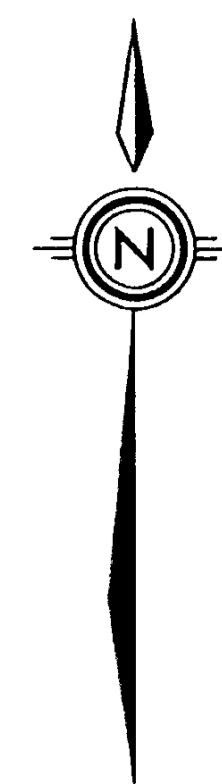


Accompany report by R. Chouart

**Chevron Canada Resources Limited
Minerals Staff**

**GNOME M.C.
ZINC
GEOCHEMISTRY**

FIGURE No. 1	PROJECT No. M532
DATE 007.1983	SCALE 1:5000
NO. 02272	FILE No.
COMPILED BY B.A.	



Legend

- Soil sample
- △ Rock sample
- Silt sample

- Pb in soil (ppm)
- >9 anomalous
 - 5-9
 - <5
- Pb in rock (ppm)
- △ >8 anomalous
 - △ 3-8
 - △ <3

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021
0 50 100 200 300 400
metres

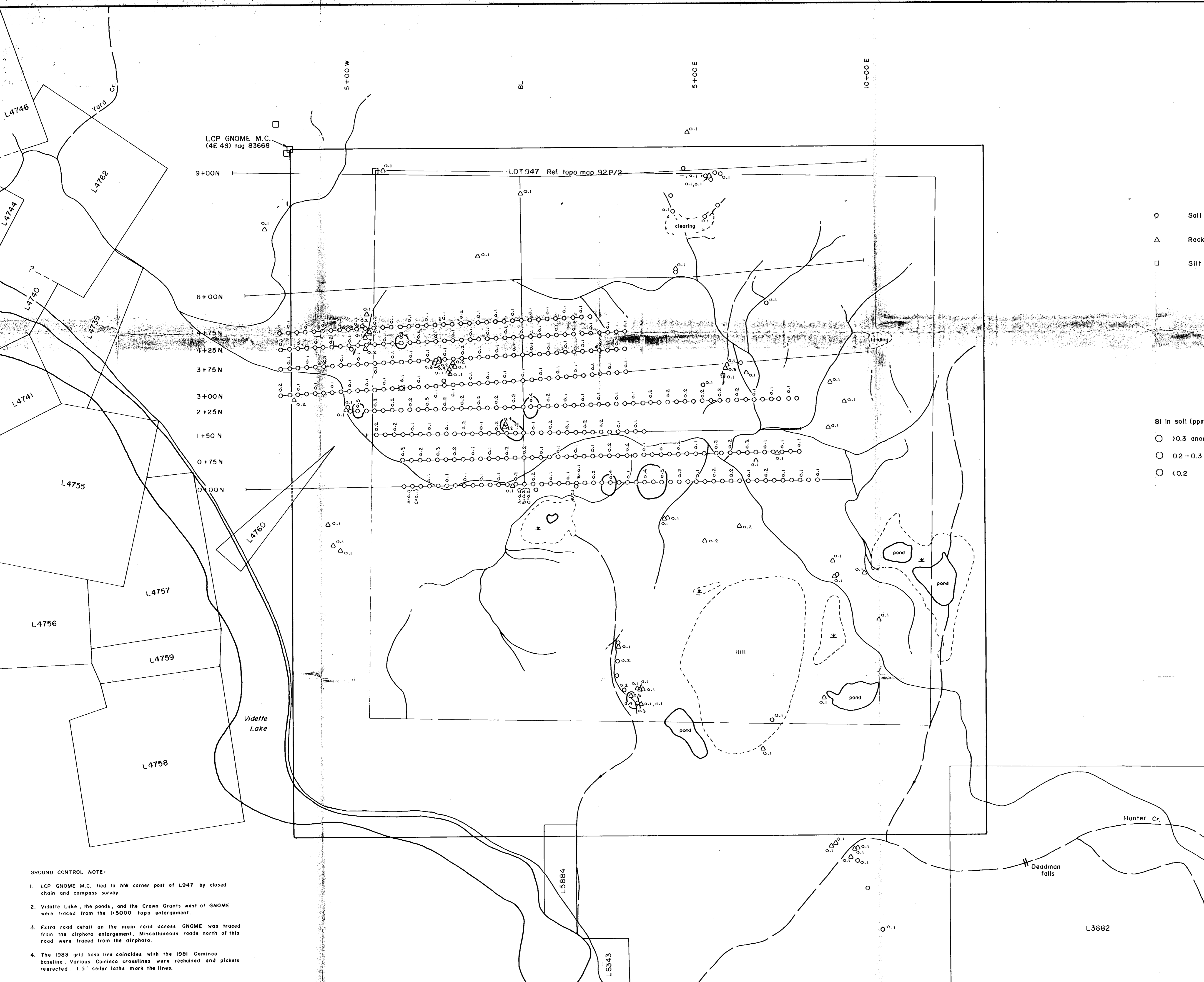
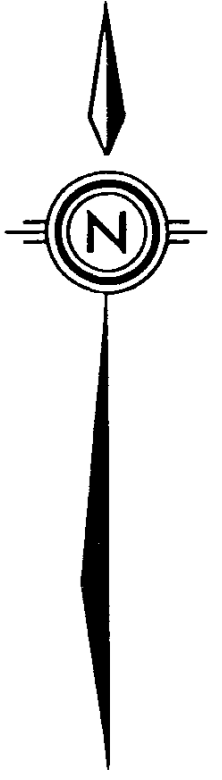
In accompanying report by R. B. Macdonald

Chevron Canada Resources Limited
Minerals Staff

GNOME M.C.
LEAD
GEOCHEMISTRY

FIGURE No. J	PROJECT No. M532
DATE OCT. 1983	REVISIONS
NTS No. 92P/2	FILE No.
COMPILED BY R.B.	

- GROUND CONTROL NOTE:**
1. LCP GNOME M.C. tied to NW corner post of L947 by closed chain and compass survey.
 2. Vidette Lake, the ponds, and the Crown Grants west of GNOME were traced from the 1:5000 topo enlargement.
 3. Extra road detail on the main road across GNOME was traced from the airphoto enlargement. Miscellaneous roads north of this road were traced from the airphoto.
 4. The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechecked and pickets reerected. 1.5' cedar laths mark the lines.



Legend

- Soil sample
- △ Rock sample
- Silt sample

- | | |
|------------------|------------------|
| Bi in soil (ppm) | Bi in rock (ppm) |
| ○ >0.3 anomalous | △ >0.3 anomalous |
| ○ 0.2 - 0.3 | △ 0.2 - 0.3 |
| ○ <0.2 | △ <0.2 |

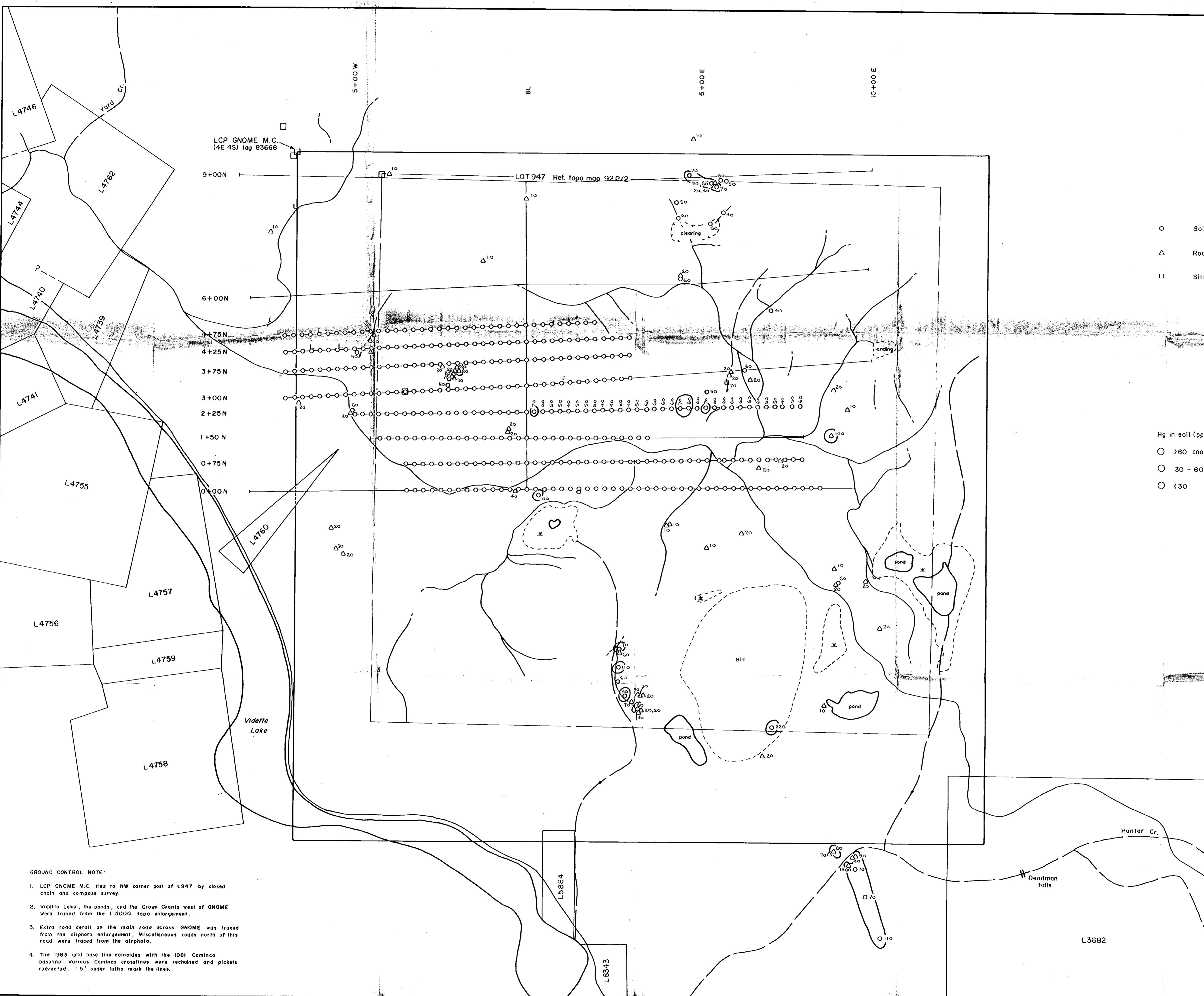
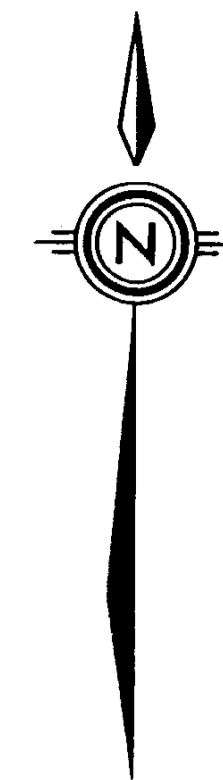
- GROUND CONTROL NOTE:**
- LCP GNOME M.C. tied to NW corner post of L947 by closed chain and compass survey.
 - Vidette Lake, the ponds, and the Crown Grants west of GNOME were traced from the 1:5000 topo enlargement.
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 - The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechaind and pickets reerected. 1.5" cedar laths mark the lines.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021
0 50 100 200 300 400
metres

To accompany report by R. B. Swartz

Chevron Canada Resources Limited Minerals Staff		
GNOME M.C. BISMUTH GEOCHEMISTRY		
FIGURE No. K	PROJECT No. M532	
DATE OCT. 1983	REVISIONS	SCALE 1:5000
NTS No 92P/2		FILE No
COMPILED BY R.B.		



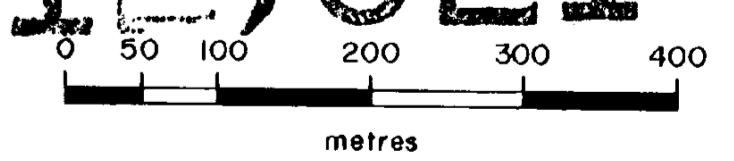
Legend

- Soil sample
- △ Rock sample
- Silt sample

- Hg in soil (ppb) Hg in rock (ppb)
- >60 anomalous △ >70 anomalous
 - 30 - 60 △ 50 - 70
 - <30 △ <50

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,021



- GROUND CONTROL NOTE:**
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 - The 1983 grid base line coincides with the 1981 Cominco baseline. Various Cominco crosslines were rechecked and pickets reerected. 1.5" cedar laths mark the lines.

To accompany report by P. B. MacInt

Chevron Canada Resources Limited
Minerals Staff





**GNOME M.C.
MERCURY
GEOCHEMISTRY**

FIGURE No. L	PROJECT No. M532
DATE OCT. 1983	REVISIONS
NTS No 92P/2	SCALE 1:5000
COMPILED BY R.B.	FILE No.

LCP GNOME M.C.
(4E 4S) Tag 83668

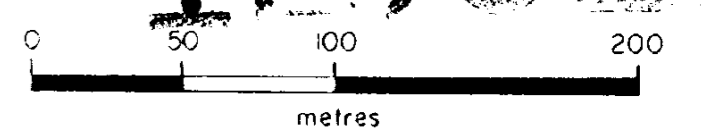


Legend


-  Contour interval 100 gammas
-  Base station mag. location
1+08 N 0+28 W
Base level 54,750 γ
-  Extreme magnetic high
-  Extreme magnetic low

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12.021



To accompany report by R. S. Innes

 Chevron Canada Resources Limited Minerals Staff	
GNOME M.C.	
TOTAL FIELD MAGNETICS	
FIGURE No. M	PROJECT No. M532
DATE NOV. 1983	REVISIONS
NTS No. 92 P/2	SCALE 1:2500
FILE No.	FILE No.
COMPILED BY T.L.	