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GRID SOIL GEOCHEMISTRY AND AIRBORNE GEOPHYSICS OF THE SNO 1 & 2 CLAIMS

OMINECA MINING DIVISION
NTS 93K/16W
Lat.: 54° 53' N. Long.: 124° 14' W.

BY

Uwe Schmidt, B.Sc., F.G.A.C.

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AND

AIRBORNE GEOPHYSICS

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March 16, 1990

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1. SUMMARY AND RECOMMENDATIONS

The Sno 1 & 2 claims are located in the Omineca Mining division, 55 km north of Fort St. James, B.C.

An airborne geophysical survey was flown over the claims and limited grid soil sampling was carried out in September 1989.

The grid geochemical soil survey was carried out by Northwest Geological Consulting Ltd. on Sept. 9,10, 1989. This survey was intended to outline the possible eastern extension of geochemical anomalies which occur on the Tas East property to the west. Two gold anomalies were outlined by the survey. The anomalies are open ended to the south, but the lack of accompanying base metal anomalies suggests that the anomalies are galcially transported from a source area which may lie to the south or southwest. Further reconnaissance grid soil geochemichal surveys are recommended to cover the remaining area of the claims.

2. INTRODUCTION

The Sno claims were staked in 1989 by A.A. Halleran. They are located 55 km north of Fort St. James, B.C. The claims were acquired to extend the present limits of the Tas East property of Fraser Exploration Ltd. Transfer of title to Fraser Explorations has not been completed.

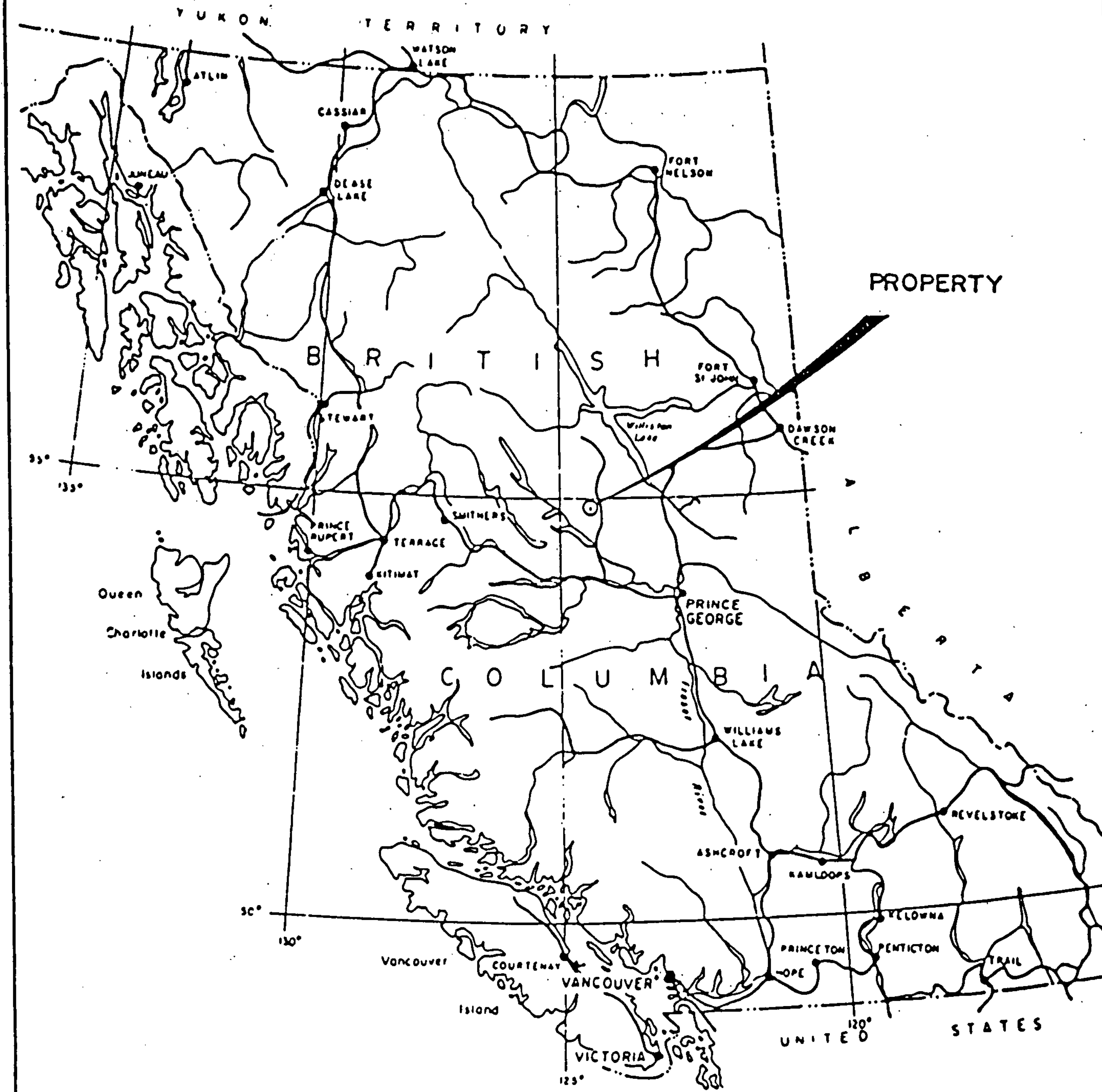
Work on the claims included a small soil geochemical grid survey, carried out by Northwest Geological Consulting Ltd. and an airborne geophysical survey carried out by Aerodat Limited on behalf of Fraser Explorations.

Soil sampling and reconnaissance mapping was carried out by geologists, A.A. Halleran and W.H. Halleran on Sept. 9,10, 1989.

The airborne geophysical survey was carried out between Sept. 18 and 20, 1989.

3. PROPERTY, LOCATION AND ACCESS

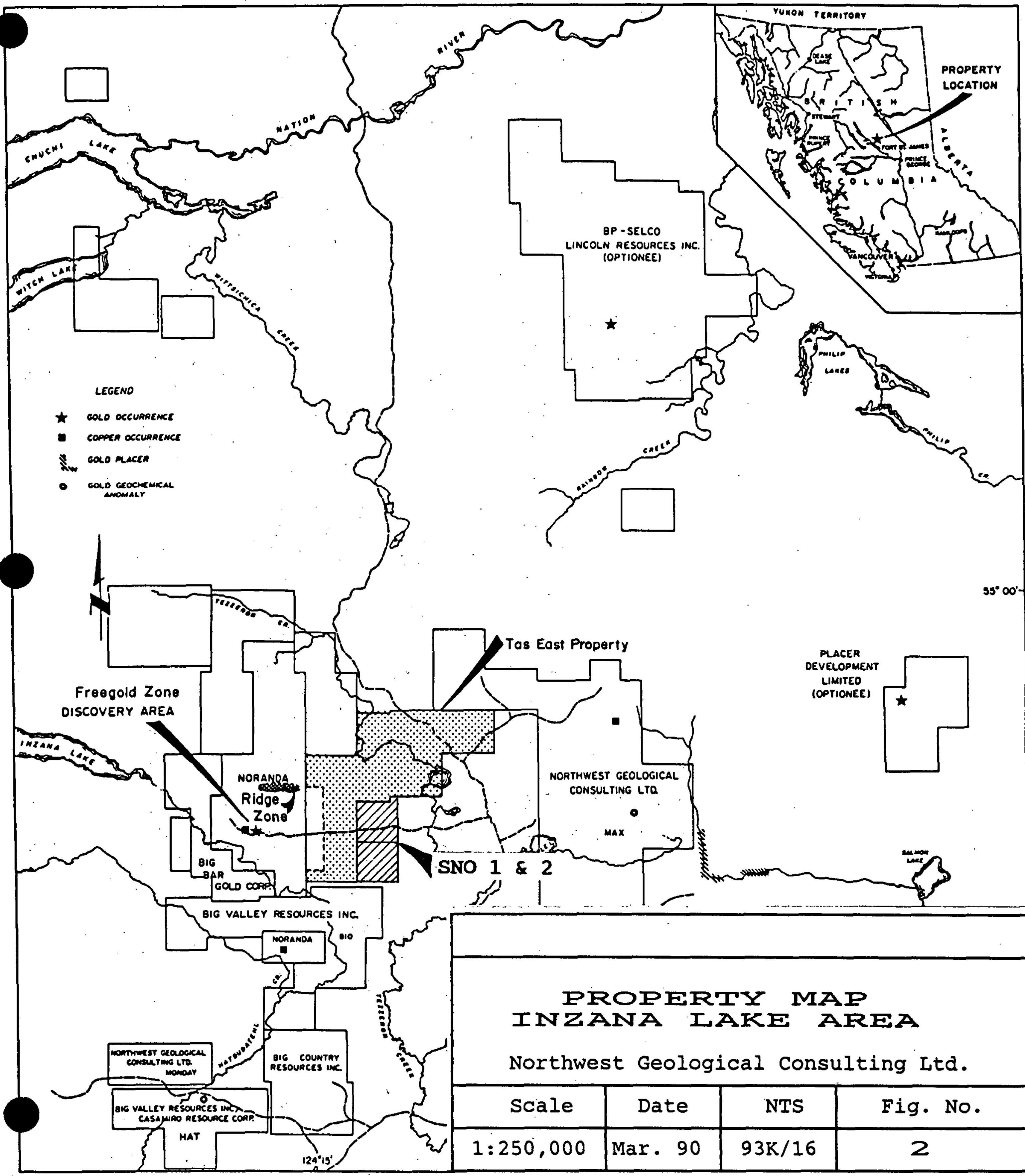
The Sno 1 & 2 claims are two 20 unit mineral claims having



LOCATION
SNO 1 & 2 CLAIM

Northwest Geological Consulting Ltd.

Scale	Date	NTS	Fig. No.
1:7000000	Mar.90	93K/16	1



PROPERTY MAP
INZANA LAKE AREA

Northwest Geological Consulting Ltd.

Scale	Date	NTS	Fig. No.
1:250,000	Mar. 90	93K/16	2

an area of 1000 hectares (2,470 acres). The claims are located 55 km. north of Ft. St. James, B.C. in the Omineca Mining Division.

The claims were staked by A.A. Halleran on April 22, 23, 1989.

The claims are located on NTS map sheet 93K/16 and the geographic coordinates of the approximate centre of the claims are 54° 53' N. latitude and 124° 14' W. longitude.

The details of the claims are as follows:

CLAIM NAME	CLAIM GROUP	NO.OF UNITS	RECORD NO.	RECORDING DATE	EXPIRY YEAR
Sno 1		20	10373	Apr. 22,89	1990
Sno 2		20	10374	Apr. 23,89	1990

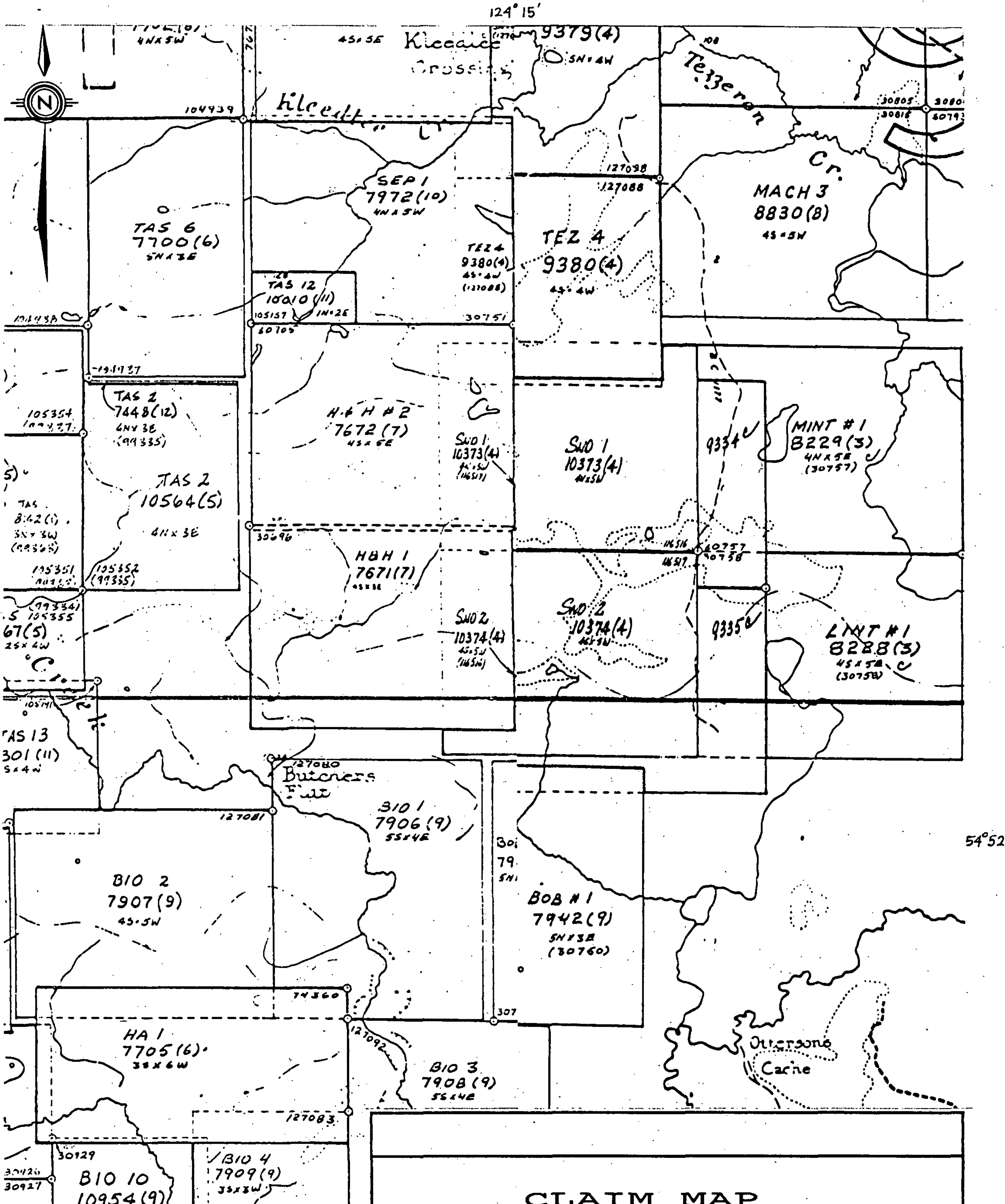
Road access to the claims is provided via the Germansen road from Fort St. James and the Inzana-Main Forestry road which passes through theclaims, in an east-west direction. Subsidiary logging roads, branching north and south from the main road, provide further access.

4. PHYSIOGRAPHY

The claims are located near the northern boundary of the Fraser Basin, a sub-division of the Interior Plateau. On a large scale the Fraser Basin is characterized by low relief with flat to rolling surfaces which for the most part lie below elevation of 900 m. Few bedrock exposures occur in these predominantly drift covered areas. Glacial ice moved in a northeasterly direction in the vicinity of the claims.

Elevations range from 950 to 1,050 metres. Outcrop in this area is generally limited to road cuts and ridge tops.

The topography is flat to gently rolling with deep drainage depressions meandering across the claims in a northeast direction. These post-glacial drainage features are



CLAIM MAP
SNO 1 & 2 ClAIM

Northwest Geological Consulting Ltd.

Scale	Date	NTS	Fig. No.
1:50,000	Mar. 90	93K/16	3

presently occupied by swamps and small streams.

A typical field season lasts from early June to late October.

5. HISTORY

The earliest record of staking in the vicinity of the claims dates back to 1968 when NBC Syndicate staked 3 claim groups in the area. One of these covered the present Tas property. The earliest exploration focussed on porphyry copper mineralization.

In 1981 and 1982 a regional airborne geophysical survey by Selco resulted in the staking of a number of small claim groups. Follow-up ground geophysical surveys and diamond drilling was carried out on most of the properties.

The most significant discovery in the area was made by Noranda Exploration Company Limited on claims staked by A.D. Halleran and A.A. Halleran in 1984. The property, known as the "Tas", has been explored intermittently since 1985. The most recent work has concentrated on the detail diamond drilling of four gold bearing shear zones.

During 1985 and 1986 Noranda completed geological mapping, geochemical soil sampling, induced polarization and magnetometer surveys. Work to date by Noranda has outlined several promising zones of gold mineralization. The discovery zone known as the "Freegold Zone" is a 10 metre wide, shear/contact zone which contains visible gold and assays up to 55 gm./T Au.

A geochemical soil survey along this shear zone led to the discovery of the Ridge Zone, which is a large gold, soil geochemical anomaly, located north of the Freegold Zone. Subsequent trenching and drilling of the Ridge Zone outlined four north-trending shear zones.

In 1987 Noranda continued with a program which included in excess of 5,000 feet of diamond core drilling and percussion drilling.

Late in 1987 Noranda entered into a joint venture with Goldcap Inc., a junior public company, to further fund exploration on the Tas. Under the terms of the agreement, Goldcap can earn a 50% working interest in the property.

In August 1988, Goldcap Inc. entered into an agreement with Black Swan Gold Mines Ltd. covering the completion of exploration financing for the Tas property. Black Swan Gold Mines will become a major shareholder of Goldcap by funding Goldcap's exploration commitment to Noranda. Black Swan as operator, carried out a detail drilling program on the Tas in October and November, 1988, and during late 1989.

In addition to the vein systems, three porphyry copper-gold targets have been reported but these have not been explored.

The Sno claims are situated 2.5 km east of Tas claims and are contiguous to the Tas East property of Fraser Explorations.

6. REGIONAL GEOLOGY

The claims are underlain by Upper Triassic to Lower Jurassic metasedimentary and volcanic rocks of the Takla Group. These lithologies lie within Quesnel Trough, a sub-division of the Intermontane tectonic belt. This narrow belt of sedimentary and volcanic rocks has been traced southward to beyond the international border. To the south, the lower, Upper Triassic sequences have been assigned to the Nicola Group.

The trough is fault bounded on the west and east. To the west, Quesnel Trough lies in fault contact with Paleozoic rocks of the Pinchi Belt. To the east the boundary between the trough and Intermontane Belt is marked by a major shear zone. Large scale tectonic imbrication and mylonitization on both sides of the zone suggest an eastward thrusting of the Intermontane over the Omineca Belt (REES,1981).

7. PROPERTY GEOLOGY

The claims and surrounding area are underlain by the Upper Triassic and later Takla Group (Armstrong, 1948). The Takla group comprises metasedimentary and volcanic rocks. Mapping of the claims has been limited to the area covered by the soil survey grid. No outcrop was discovered during the sampling and no other outcrops are known on the claims.

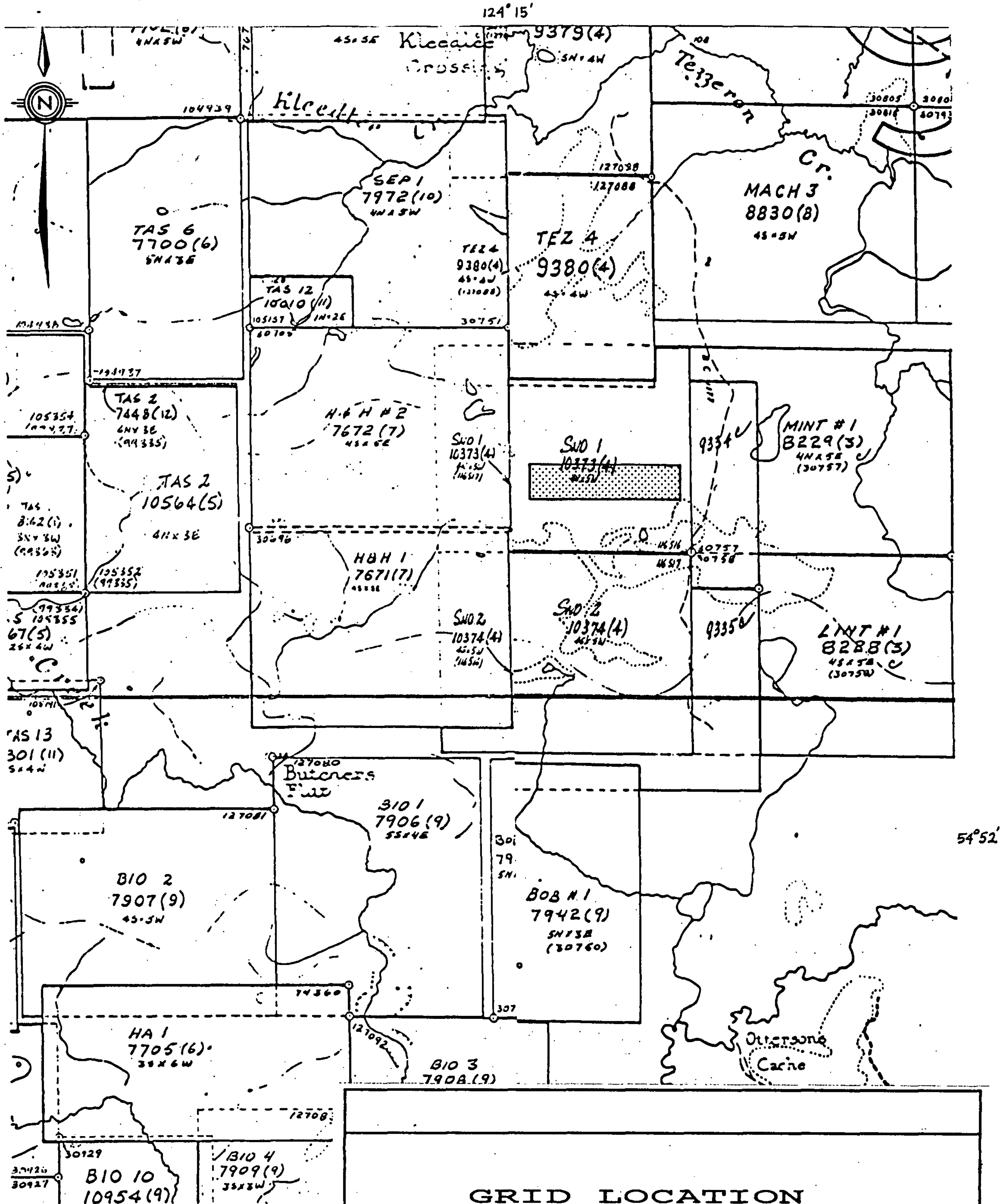
8. GEOCHEMISTRY

The aim of geochemical soil sampling was to satisfy the assessment requirements of the claims and to test for a possible extension of geochemical anomalies which are known on the Tas East property to the west.

Grid lines were run in an east-west direction at a line spacing of 100 metres and a sample interval of 50 metres. All sample lines are marked with flagging tape. Sample stations are identified by sample number and grid coordinates, marked on "Tivek" tags.

In total, 116 samples were collected and analyzed. Samples of B horizon soils were collected using sampling shovels. Typical sample depths ranged from 15 to 25 cm. In a few locations samples could not be taken because of swampy conditions.

Samples were analyzed by Acme Analytical Laboratories Ltd. of Vancouver. The analysis included Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As and Au. The first 10 elements were analyzed by Inductively Coupled Argon Plasma (ICP) methods and are reported in ppm (Fe in %). Gold was analyzed by Atomic Absorption using a 10 gm sample. Gold results are reported in ppb and have a detection limit of 1 ppb. A multi-element ICP geochemical analysis was chosen because base metals associated with gold anomalies often aid in anomaly definition. Sample certificates are appended to this report.



GRID LOCATION
SNO 1 & 2 CLAIM

Northwest Geological Consulting Ltd.

Scale	Date	NTS	Fig. No.
1:50,000	Mar. 90	93K/16	4

Analyses are presented at a scale of 1:2,500.

Two gold anomalies were outlined on the grid. These are outlined by gold analyses of 10 ppb or greater (fig.5B). Additional isolated gold values exceeding this threshold occur elsewhere on the grid but do not define patterns.

The gold patterns roughlyparallel the local direction of Pleistocene ice movement. However, there is nocopper and zinc support the gold results. Copper analyses of 50 ppm or greater and zinc values of 90 ppm or greater are considered anomalous on the adjacent Tas East grid.

9. GEOPHYSICS

An airborne magnetic and VLF-EM survey was carried out over the claims and adjacent Tas East property between Sept. 18 and 20, 1989. The survey was carried out by Aerodat Limited on behalf of Fraser Explorations Ltd. The report covering this work is appended to this report. Copies of the survey maps are modified to show only the portion of the survey which covers the claims.

10. CONCLUSIONS

The grid geochemical soil survey of the Sno claims has outlined two gold anomalies. The anomalies trend in a northerly direction, roghly parallel to Pleistocene ice movement, suggesting down ice anomaly displacement. This down ice displacement may indicate a source area to the south, or southwest on the Tas East property.

11. REFERENCES

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WARNER, L. (1985): Report on Soil Geochemical Survey, TAS 1, Assessment Report No. 13,979

WARNER, L. (1986): Summary Report, Tas Property, Noranda Exploration Co. Ltd., Unpublished Report

(April 18,1988) Northern Miner, "Initial Results from Goldcap Bet" p. 10

(Nov. 21,1988) Northern Miner, "Black Swan drilling"

12. STATEMENT OF EXPENDITURE

*indicates pro rated amount

1) MOBE/DEMOBE		
A. Halleran Sept.7,11, 1989		
W. Halleran Sept.7,11, 1989		
Transportation, Room and Board.........$1,530.00		
		*$ 1,021.00
2) LABOUR (FIELD)		
A. Halleran (Geologist) Sept.9,10, 1989		
2 days at $250/day....................$	500.00	
W. Halleran (Geologist) Sept.9,10, 1989		
2 days at $250/day....................$	500.00	
		$ 1,000.00
3) ROOM AND BOARD		
4 mandays x $45.00/m-d............$	180.00	
		$ 180.00
4) TRANSPORTATION		
1 Chevrolet 4x4		
2 day @ $55/day...................$	110.00	
Fuel..............................$	40.00	

$	150.00	
		$ 150.00
5) CONSUMABLES/SUPPLIES/SHIPPING........$	285.73	
		*$ 190.49
6) GEOCHEMISTRY		
(Acme Analytical Laboratories Ltd.)		
116 soil samples @ $10.85............................		$ 1,258.60
7) OFFICE COSTS		
Data Plotting, Interpretation, Report Writing		
U. Schmidt March 15,16, 1990		
2 days @ $325/day....................................		$ 650.00
Reproduction, Photocopying, Stationery..............		$ 125.00

TOTAL		$ 4,575.09
AIRBORNE GEOPHYSICS		
$22,050.00 X (40units/196units) =................		$ 4,500.00
		===========
CLAIM TOTAL		$ 9,075.09

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, Uwe Schmidt, of 656 Foresthill Place, Port Moody, B.C. do hereby declare:

(1) I am a consulting geologist and controlling shareholder of Northwest Geological Consulting Ltd.

(2) I am a 1971 graduate of the University of British Columbia with a B.Sc. degree in Geology.

(3) I am a Fellow of the Geological Association of Canada.

(4) I have practised my profession continuously since graduation.

(5) I have managed various mineral exploration projects in the Yukon Territory, B.C., and Ontario since graduation.

(6) This report is based on my previous field work in the area, and a study of available published and unpublished reports.

GEOLOGICAL ASSOCIATION OF CANADA
UWE SCHMIDT
FELLOW

Uwe Schmidt, B.Sc., F.G.A.C.

March 16, 1990
Port Moody, B.C

APPENDIX B

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

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Soil -80 Mesh AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: SEP 12 1989 DATE REPORT MAILED: Sept 15/1989 SIGNED BY. D.Toye. D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

NORTHWEST GEOLOGICAL CONS. LTD File # 89-3614 Page 1

CAT 1 ↓

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au* PPB
TE 89000	1	35	8	108	.4	22	9	536	2.76	2	10
TE 89001	1	51	6	94	.2	24	8	297	3.37	3	3
TE 89002	1	44	2	71	.3	26	9	374	3.00	4	6
TE 89003	1	81	12	86	.4	35	11	465	3.15	2	5
TE 89004	1	33	7	58	.3	22	7	357	1.79	4	4
TE 89005	1	47	6	86	.1	27	8	298	2.71	2	4
TE 89006	2	74	5	95	.5	33	12	444	2.94	5	4
TE 89007	3	91	11	112	1.4	43	27	1577	5.29	8	4
TE 89008	1	76	6	67	.2	30	13	418	3.48	6	22
TE 89009	1	54	2	84	.3	20	9	299	2.80	4	38
TE 89010	1	46	6	83	.1	19	10	431	2.91	2	23
TE 89011	1	32	8	81	.4	16	8	392	2.45	6	3
TE 89012	1	52	7	186	.5	27	15	512	4.45	9	6
TE 89013	2	64	6	95	.6	29	10	380	3.71	2	5
TE 89014	3	45	4	104	.4	18	10	285	4.34	12	25
TE 89015	1	42	6	79	.3	23	10	436	2.90	2	8
TE 89016	4	62	6	66	.2	33	16	825	3.69	8	17
TE 89017	1	37	6	69	.1	23	10	322	2.51	2	7
TE 89018	1	62	7	72	.3	31	11	454	3.33	9	5
TE 89019	1	79	6	66	.1	35	13	555	3.42	5	4
TE 89020	2	44	11	97	.2	25	10	322	3.13	10	3
TE 89021	1	39	6	80	.2	23	8	333	2.61	5	9
TE 89022	1	42	3	69	.3	24	8	314	2.84	2	16
TE 89023	1	41	5	74	.1	23	10	355	2.84	2	8
TE 89024	1	41	9	83	.4	21	10	352	2.86	6	4
TE 89025	1	42	6	103	.5	21	11	388	3.46	9	70
TE 89026	1	58	3	140	.2	31	11	372	4.34	4	5
TE 89027	1	30	8	78	.3	19	10	374	2.53	2	3
TE 89028	1	32	4	67	.1	20	9	393	2.63	6	7
TE 89029	2	56	6	81	.3	30	11	360	3.16	11	9
TE 89030	1	46	8	156	.6	27	17	435	4.08	3	3
TE 89031	1	48	5	66	.4	27	10	384	2.60	9	5
TE 89032	1	44	7	113	.1	26	12	505	3.03	4	9
TE 89033	1	55	9	115	.5	32	12	415	3.52	6	57
TE 89034	1	44	7	112	.5	28	14	799	3.41	3	4
TE 89035	1	39	7	55	.4	21	9	385	2.39	7	4
TE 89036	1	50	3	69	.3	24	10	413	2.96	3	6
STD C/AU-S	18	61	37	132	6.6	67	31	991	4.11	36	47

CAT 1 ↑
SND ↓

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au* PPB
TE 89037	1	45	13	160	.3	23	12	431	3.80	5	5
TE 89038	1	54	14	123	.3	38	14	318	3.62	8	5
TE 89039	1	40	10	54	.4	24	6	280	2.31	2	8
TE 89040	1	31	9	59	.5	18	5	264	1.80	2	22
TE 89041	1	38	10	74	.1	24	8	264	2.64	3	7
TE 89042	1	31	11	69	.4	19	18	771	2.32	3	28
TE 89043	3	115	14	95	.7	64	18	660	3.84	6	13
TE 89044	1	34	8	67	.3	20	8	385	2.12	3	15
TE 89045	1	32	5	71	.1	21	7	299	2.28	2	5
TE 89046	1	54	9	67	1.2	25	10	369	1.66	2	4
TE 89047	1	25	10	46	.2	18	5	183	1.72	2	18
TE 89048	1	28	9	44	.1	18	5	189	2.03	3	5
TE 89049	1	39	10	72	.1	26	8	224	2.37	2	6
TE 89050	1	21	10	56	.1	14	5	208	1.92	2	11
TE 89051	1	30	11	55	.1	21	8	219	2.14	2	15
TE 89052	1	30	14	64	.4	21	7	204	2.64	3	6
TE 89053	1	35	12	41	.3	20	4	143	1.61	3	4
TE 89054	1	27	8	43	.2	19	6	220	1.91	2	4
TE 89055	1	23	8	41	.2	16	5	148	1.49	4	6
TE 89056	1	30	9	67	.2	25	8	340	2.66	2	5
TE 89057	1	21	7	62	.2	17	6	321	2.12	6	20
TE 89058	1	27	12	84	.3	22	14	655	2.73	6	4
TE 89059	1	29	12	63	.3	21	6	229	2.16	3	5
TE 89060	1	34	8	61	.2	21	7	249	2.14	2	6
TE 89061	1	28	8	83	.3	19	9	381	2.36	6	4
TE 89062	1	30	9	77	.2	15	8	332	2.51	2	4
TE 89063	1	37	12	82	.1	17	8	341	2.52	5	4
TE 89064	1	13	8	43	.3	10	4	153	1.32	2	12
TE 89065	1	39	10	59	.4	20	7	223	2.38	5	5
TE 89066	1	40	10	64	.1	24	8	250	2.76	4	8
TE 89067	1	81	13	120	.9	36	10	353	3.40	6	7
TE 89068	1	42	12	81	.4	25	10	403	2.64	2	2
TE 89069	1	38	13	66	.4	21	7	262	2.16	4	3
TE 89070	1	60	8	68	.1	28	9	259	2.42	6	11
TE 89071	1	27	9	50	.2	19	6	231	1.86	2	6
TE 89072	1	32	12	69	.3	21	7	311	2.30	2	2
STD C/AU-S	18	60	40	132	7.2	67	30	1043	4.17	37	48

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au* PPB
TE 89073	1	27	7	53	.4	12	5	214	1.76	8	9
TE 89074	1	35	6	63	.4	22	6	238	2.66	10	3
TE 89075	1	30	2	63	.1	18	6	225	1.93	2	7
TE 89076	1	33	4	51	.2	20	7	279	1.90	3	5
TE 89077	1	32	7	78	.2	17	9	409	2.07	5	6
TE 89078	1	25	13	54	.1	14	7	319	1.67	2	5
TE 89079	1	31	11	65	.3	22	6	237	2.35	4	7
TE 89080	1	26	11	55	.1	22	5	214	1.88	2	3
TE 89081	1	29	5	82	.3	28	10	272	3.47	6	2
TE 89082	1	26	16	65	.2	20	6	224	2.16	3	4
TE 89083	1	27	5	76	.3	20	8	336	2.22	7	2
TE 89084	1	28	10	71	.4	23	9	292	2.81	4	4
TE 89085	1	29	5	72	.4	21	8	433	2.32	5	5
TE 89086	1	19	9	36	.1	12	3	110	1.58	2	3
TE 89087	1	25	10	81	.2	24	9	260	2.91	6	6
TE 89088	1	10	7	43	.2	6	3	146	1.30	3	6
TE 89089	1	22	4	58	.3	16	6	258	2.13	2	7
TE 89090	1	21	6	85	.5	15	5	216	2.04	2	2
TE 89091	1	19	9	48	.2	12	4	245	1.82	2	3
TE 89092	1	38	11	106	.7	27	8	326	3.03	4	22
TE 89093	1	24	8	72	.1	14	5	242	2.39	4	2
TE 89094	1	28	6	74	.6	19	7	218	2.82	8	13
SNO ↑ TE 89095	1	22	11	63	.3	14	5	249	2.13	4	5
TE 89096	1	30	9	81	.2	23	9	246	3.62	7	3
CAT I ↓ TE 89201	1	47	10	99	.2	26	8	316	3.17	7	3
TE 89202	2	129	20	189	.9	61	28	2141	6.73	18	3
TE 89203	1	61	6	126	.4	28	13	701	3.49	5	2
TE 89204	1	56	6	81	.2	25	9	408	3.04	7	3
TE 89205	1	61	5	79	.4	27	9	381	3.24	4	8
TE 89206	1	57	7	102	.5	29	12	500	3.25	7	5
TE 89207	2	38	12	106	.6	14	11	578	3.92	9	3
TE 89208	1	32	4	121	.6	14	10	343	3.83	3	1
TE 89209	2	116	5	218	.4	64	25	507	5.66	13	3
TE 89210	2	79	11	90	.6	32	15	768	3.99	7	15
TE 89211	1	84	8	128	.6	38	16	831	4.09	5	6
TE 89212	1	49	9	112	.4	26	11	442	3.05	10	5
STD C/AU-S	18	62	37	132	7.1	67	30	1020	4.11	38	52

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au* PPB
TE 89213	1	45	2	76	.1	23	8	421	2.65	5	17
TE 89214	1	46	2	72	.1	21	9	431	2.78	10	6
TE 89215	1	63	3	74	.1	29	9	446	3.45	9	2
TE 89216	1	42	3	96	.1	22	9	405	3.34	8	4
TE 89217	5	74	4	118	.2	31	13	550	4.21	9	16
TE 89218	1	87	2	101	.2	36	13	454	3.71	11	55
TE 89219	1	41	2	64	.1	21	8	402	2.45	5	3
TE 89220	1	69	2	68	.3	32	11	601	3.34	9	11
TE 89221	4	88	6	92	.3	37	15	918	4.42	15	1
TE 89222	1	37	2	114	.5	16	8	325	4.30	4	1
TE 89223	1	48	4	173	1.1	18	12	598	5.05	6	4
TE 89224	1	46	6	168	.1	27	11	317	5.42	7	1
TE 89225	1	35	2	62	.1	18	9	559	2.39	5	3
TE 89226	1	33	2	90	.1	22	8	295	2.90	7	5
TE 89227	1	51	3	92	.4	28	11	408	3.33	6	13
TE 89228	1	52	2	93	.2	42	11	344	3.72	10	48
TE 89229	1	51	2	68	.1	26	10	445	3.19	9	8
TE 89230	1	59	2	88	.3	26	9	398	3.63	6	1
TE 89231	1	37	2	86	.1	19	7	292	3.19	7	1
TE 89232	1	38	11	242	.6	19	14	1079	3.52	7	1
TE 89233	1	77	6	171	.5	35	15	452	6.17	7	8
TE 89234	1	52	6	128	.2	30	11	478	4.62	5	6
TE 89235	1	59	5	172	.5	14	13	747	5.13	3	2
TE 89236	1	49	11	84	.1	26	12	364	3.42	10	4
TE 89237	1	48	3	76	.1	29	9	356	2.92	10	5
TE 89238	1	38	9	75	.1	21	10	413	2.48	3	5
TE 89239	1	47	4	116	.3	30	13	659	3.04	6	7
TE 89240	1	58	12	99	.2	32	14	649	3.28	6	9
TE 89241	1	34	5	55	.1	22	8	378	2.45	6	14
TE 89242	1	20	13	47	.2	14	5	199	1.57	3	4
TE 89243	1	23	3	50	.1	13	5	196	1.53	3	7
TE 89244	1	34	8	64	.1	22	8	348	2.03	4	8
TE 89245	1	33	9	71	.1	21	8	355	1.82	5	4
TE 89246	1	31	11	81	.3	22	6	231	1.88	2	7
TE 89247	1	27	7	56	.1	19	6	270	1.85	6	15
TE 89248	1	24	5	53	.1	16	6	215	1.68	2	21
STD C/AU-S	18	61	39	133	6.8	68	31	1046	4.14	41	52

CAT 1 ↑

SNO ↓

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au* PPB
TE 89249	1	24	10	62	.1	19	7	328	2.10	5	1
TE 89250	1	28	3	59	.1	23	7	274	2.15	2	5
TE 89251	1	21	10	62	.3	19	6	201	1.95	6	4
TE 89252	1	18	7	61	.2	15	5	198	1.80	3	11
TE 89253	1	16	5	57	.1	15	5	197	1.83	4	1
TE 89254	1	21	5	59	.1	19	7	196	2.28	5	2
TE 89255	1	31	11	71	.2	27	9	212	2.75	9	1
TE 89256	1	20	7	73	.1	18	10	307	2.12	2	2
TE 89257	1	23	8	72	.3	23	8	282	2.32	9	1
TE 89258	1	23	4	64	.2	22	6	224	2.41	6	1
TE 89259	1	25	11	39	.2	17	4	112	1.82	4	1
TE 89260	1	27	9	69	.1	26	8	295	2.59	3	5
TE 89261	1	21	10	49	.2	19	6	181	2.15	6	7
TE 89262	1	33	10	59	.2	28	7	205	2.20	5	1
TE 39263	1	31	9	73	.2	29	8	250	2.58	4	1
TE 89264	1	40	3	57	.4	27	8	266	2.68	9	2
TE 89265	1	44	11	106	.3	37	11	257	3.51	11	1
TE 89266	1	49	9	98	.3	38	12	265	3.71	12	3
TE 89267	1	47	4	84	.3	32	9	247	2.73	10	1
TE 89268	1	29	8	68	.4	19	7	203	2.14	3	6
TE 39269	1	29	4	57	.2	22	7	209	2.13	3	2
TE 89270	1	20	5	99	.3	20	7	219	2.09	4	2
TE 89271	1	21	3	51	.3	16	5	189	1.70	4	2
TE 89272	1	24	5	62	.5	15	8	287	1.82	5	3
TE 89273	1	26	5	56	.2	16	6	204	1.97	3	3
TE 89274	1	29	2	76	.3	21	7	247	2.35	3	1
TE 89275	1	30	8	60	.2	20	8	326	2.18	6	9
TE 89276	1	22	4	53	.4	17	7	242	1.71	2	9
TE 89277	1	61	7	83	.4	35	9	191	2.94	3	2
TE 89278	1	37	9	84	.3	27	8	237	2.47	5	7
TE 89279	1	32	4	74	.3	23	9	341	2.34	7	2
TE 89280	1	18	6	45	.3	10	4	125	1.50	4	1
TE 89281	1	30	3	55	.2	23	7	252	2.12	3	5
TE 89282	1	39	5	72	.3	31	11	317	2.70	3	3
TE 89283	1	39	9	62	.3	26	9	275	2.48	10	2
TE 89284	1	24	2	66	.4	20	7	238	2.42	8	8
STD C/AU-S	18	61	41	132	6.7	67	31	1002	4.11	43	51

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au* PPB
TE 89285	1	21	4	53	.1	17	6	279	1.84	2	3
TE 89286	1	41	11	89	.1	32	8	234	2.55	8	2
TE 89287	1	45	8	80	.1	35	9	268	2.86	3	4
TE 89288	1	30	10	71	.2	28	10	394	2.72	8	3
TE 89289	1	33	6	77	.1	32	9	339	2.62	5	4
TE 89290	1	28	4	89	.1	25	6	202	2.89	7	2
TE 89291	1	30	5	56	.1	27	8	286	2.39	7	4
TE 89292	1	30	13	52	.1	25	5	153	1.91	3	2
TE 89293	1	17	2	51	.1	18	5	221	1.68	6	4
TE 89294	1	45	15	78	.1	34	9	242	3.16	7	3
TE 89295	1	31	5	73	.2	27	8	215	2.63	2	3
TE 89296	1	44	4	79	.2	32	10	276	3.09	6	4
TE 89297	1	31	10	71	.2	23	7	290	2.85	5	5
TE 89298	1	64	10	118	.2	48	13	429	3.59	11	5
TE 89299	1	25	11	78	.2	19	9	240	2.36	3	4
STD C/AU-S	18	61	45	133	6.9	71	31	1025	4.12	42	51

APPENDIX C

LOGISTICS REPORT ON COMBINED HELICOPTER BORNE MAGNETIC, AND VLF-EM SURVEY TAS EAST PROPERTY BRITISH COLUMBIA

FOR
FRASER EXPLORATIONS LTD.
BY
AERODAT LIMITED
October 24, 1989

J8979.B

Douglas Oneschuk
Geologist/Geophysicist

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APPENDIX I - Certificate of Qualifications
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LIST OF MAPS
(Scale 1:10,000)

Maps:

1. **BASE MAP;**
   photomosaic base map.

2. **FLIGHT PATH;**
   photocombination of flight lines and fiducials with the base map.

3. **TOTAL FIELD MAGNETICS;**
   photocombination of Total Field Magnetic contours with the flight lines and base map.

4. **CALCULATED VERTICAL MAGNETIC GRADIENT;**
   photocombination of Calculated Vertical Magnetic Gradient contours with the flight path and base map.

5. **TOTAL FIELD VLF-EM;**
   photocombination of Total Field VLF-EM contours with the flight path and base map.

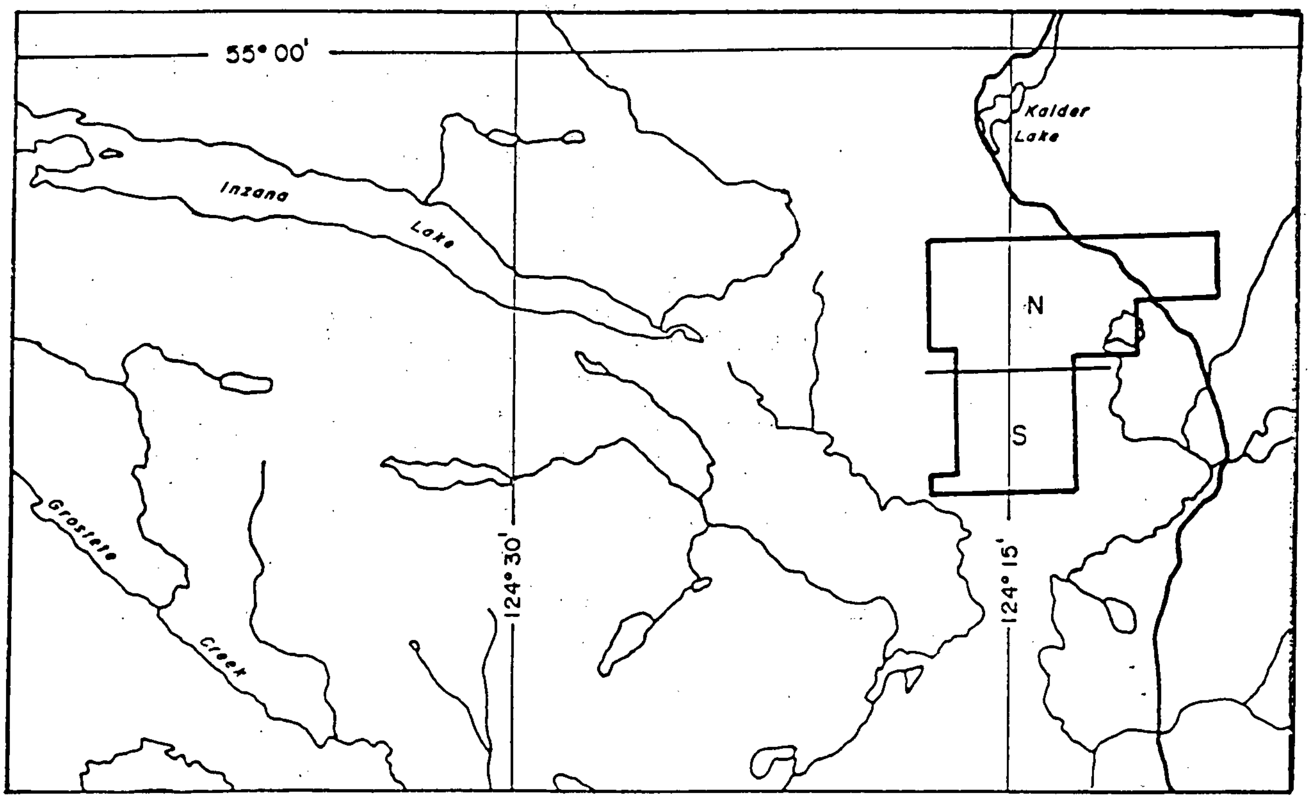
1. INTRODUCTION

This report describes an airborne geophysical survey carried out on behalf of Fraser Explorations Limited by Aerodat Limited. Equipment operated included a high sensitivity cesium vapour magnetometer, a two frequency VLF-EM system, a power line monitor, a video tracking camera, an altimeter and an electronic positioning system. Electromagnetic, magnetic and altimeter data were recorded both in digital and analog form. Positioning data were stored in digital form, encoded on the VHS format video tape and recorded at regular intervals in UTM co-ordinates on the analog trace, as well as being marked on the flight path map by the operator while in flight.

The survey areas are located north of Fort St. James in Central British Columbia. The grid was flown between September 18 and September 20, 1989. Four flights were required to complete the area, totalling 490 km. The flight lines were spaced 100 m apart and oriented in an east-west direction. Coverage and data quality were considered to be well within the specifications described in the service contract.

2. SURVEY AREA LOCATION

The survey area is depicted on the index map shown below.



3. AIRCRAFT AND EQUIPMENT

3.1 Aircraft

An Aerospatiale A-Star 350B helicopter, (CG-RGK), owned and operated by Canadian Helicopters Ltd., was used for the survey. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey aircraft was flown at a mean terrain clearance of 60 metres.

3.2 Equipment

3.2.1 VLF-EM System

The VLF-EM System was a Herz Totem 2A. This instrument measures the total field and quadrature components of two selected transmitters, preferably oriented at right angles to one another. The sensor was towed in a bird 12 metres below the helicopter. The transmitters monitored were NPM, Lualualei, Hawaii broadcasting at 23.4 kHz and NLK, Jim Creek, Washington broadcasting at 24.8 kHz.

3.2.2 Magnetometer

The magnetometer employed was a Scintrex Model VIW-2321 H8 cesium, optically pumped magnetometer sensor. The sensitivity of this instrument was 0.1 nanoTeslas at a 0.2 second sampling rate. The sensor was towed in a bird 12 metres below the helicopter.

3.2.3 Magnetic Base Station

An Barringer M-234 proton precession magnetometer was operated at the base of operations to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to facilitate later correlation.

3.2.4 Radar Altimeter

A Hoffman HRA-100 radar altimeter was used to record terrain clearance. The output from the instrument is a linear function of altitude for maximum accuracy.

3.2.5 Tracking Camera

A Sony video tracking camera was used to record flight path on VHS video tape. The camera was operated in continuous mode. Fiducial numbers and time reference marks, for cross reference to the analog and digital data were encoded on the video tape.

3.2.6 Analog Recorder

An RMS dot-matrix recorder was used to display the data during the survey. In addition to manual and time fiducials, the following data were recorded:

Channel	Input	Scale
VLT	VLF-EM Total Field, Line	2.5% ppm/mm
VLQ	VLF-EM Quadrature, Line	2.5% ppm/mm
VOT	VLF-EM Total Field, Ortho	2.5% ppm/mm
VOQ	VLF-EM Quadrature, Ortho	2.5% ppm/mm
RALT	Altimeter (150 m at top of chart)	3 m/mm
MAGF	Magnetometer, fine	2.5 nT/mm
MAGC	Magnetometer, coarse	25 nT/mm
MAGN	Magnetometer, noise	0.025 nT/mm

3.2.7 Digital Recorder

Positional informaiton was recorded at 0.5 second intervals on an RMS DGR-33 unit.

Equipment	Recording Interval
VLF-EM	0.2 seconds
Magnetometer	0.2 seconds
Altimeter	0.2 seconds

3.2.9 Radar Positioning System

Motorola Mini-Ranger (MRS III) radar navigation system was used for both navigation and flight path recovery. Transponders sited at fixed locations were interrogated several times per second and the ranges from these points to the helicopter measured to a high degree of accuracy. A navigational computer triangulates the position of the helicopter and provides the pilot with navigation information. The range/range data was recorded on magnetic tape for subsequent flight path determination.

4. DATA PRESENTATION

4.1 Base Map

A photomosaic base map at a scale of 1:10,000 was prepared from a photo lay down map, supplied by Aerodat, on a screened mylar base.

4.2 Flight Path Map

The flight path map was derived from the Mini-Ranger radar positioning system. The distance from the helicopter to two established reference locations was measured several times per second and the position of the helicopter calculated by triangulation. It is estimated that the flight path is generally accurate to about 10 metres with respect to the topographic detail of the base map.

The flight path map showing all flight lines, is presented on a Cronaflex copy of the photomosaic base map, with time and navigator's manual fiducials for cross reference to both the analog and digital data.

4.3 Total Field Magnetic Contours

The aeromagnetic data were corrected for diurnal variations by adjustment with the digitally recorded base station magnetic values. The corrected profile data were interpolated onto a regular grid at a 25 metre true scale interval using an Akima spline technique. The grid provided the basis for threading the presented contours at a 2 nanoTesla interval.

The contoured aeromagnetic data have been presented on a Cronaflex copy of the photomosaic base map.

4.4 Vertical Magnetic Gradient Contours

The vertical magnetic gradient was calculated from the gridded total field magnetic data. Contoured at a 0.1 nT/m interval, the gradient data were presented on a Cronaflex clear overlay base map.

4.5 VLF-EM Total Field Contours

The VLF-EM signals from NLK, Jim Creek, Washington and NPM, Lualualei, Hawaii were compiled in contour map form and presented on a Cronaflex copy of the photomosaic base map.

5. GENERAL INTERPRETIVE CONSIDERATIONS

5.1 Total Field Magnetics

The total field magnetic values in the survey area vary over a range from 57,760 to 58,366 nT.

The Tas east area's main features are a broad magnetic tow trending N.N.W. to S.S.E. in the southwestern section of the survey block, a magnetic high trending N.E. to S.W. in the North eastern section of the block, and a smaller magnetic high in the north western section of the block.

5.2 Calculated Vertical Gradient Contours

The vertical magnetic gradient calculation has the effect of removing the regional background and of emphasizing and providing greater resolution of shallow, closely spaced features. The zero contour level roughly corresponds to the contact between rocks of differing magnetic susceptibilities. The above characteristics make the vertical gradient data useful in evaluating and mapping geologic structure.

5.3 VLF-EM Total Field Contours

Examination of the VLF-EM contours reveals a north to north-northwest striking trend.

APPENDIX III

CERTIFICATE OF QUALIFICATIONS

I, DOUGLAS ONESCHUK, certify that: -

1. I hold two B. Sc. in Geology from McMaster University and a Certifical in Computer Programming from Ryerson Polytechnical Institute.

2. I reside at 2025 Chrisdon Road in the City of Burlington.

3. I have been engaged in a professional role in the resource industry in Canada for six years.

4. The accompanying report was prepared from a review of the proprietary airborne geophysical survey flown by Aerodat Limited for Fraser Explorations Ltd. I have not personally visited the property.

5. I have no interest, direct or indirect, in the property described nor do I hold securites in Fraser Explorations Ltd.

Signed,

Douglas Oneschuk
Geologist/Geophysicist

Mississauga, Ontario
October 24, 1988

APPENDIX II

PERSONNEL

FIELD

Flown	September, 1989
Pilot	B. Curistan
Operator	S. Arstad

OFFICE

Processing	D. Oneschuk G. McDonald
Report	D. Oneschuk

LEGEND
31 72 (Cu in ppm, Zn in ppm)
sample location
89123 (sample number)
no sample
gravel logging road
37+00N
36+00N
35+00N
34+00N
54° 53' 30"
36+00E
37+00E
38+00E
39+00E
40+00E
41+00E
42+00E
43+00E
44+00E
45+00E
46+00E
47+00E
48+00E
49+00E
50+00E
51+00E
124° 14'
GEOLOGICAL BRANCH
ASSESSMENT REPORT
19,918
0 50 100 150 200m
SNO 1&2 CLAIMS
Cu,Zn Geochemistry
NORTHWEST GEOLOGICAL CONSULTING LTD.
SCALE 1:2500
DATE Mar. 1990
NTS 93K/16
FIG. Nº 5A


LEGEND
(As in ppm, Au in ppb)
sample location
(sample number)
no sample
gravel logging road
Au >10ppm
GEOLOGICAL BRANCH
ASSESSMENT REPORT
19,918
0 50 100 150 200m
SNO 1&2 CLAIMS
As, Au Geochemistry
NORTHWEST GEOLOGICAL CONSULTING LTD.
SCALE 1:2500
DATE Mar. 1990
NTS 93K/16
FIG. No 5B
37+00N
36+00N
35+00N
34+00N
54° 53' 30"
124° 14'
36+00E
37+00E
38+00E
39+00E
40+00E
41+00E
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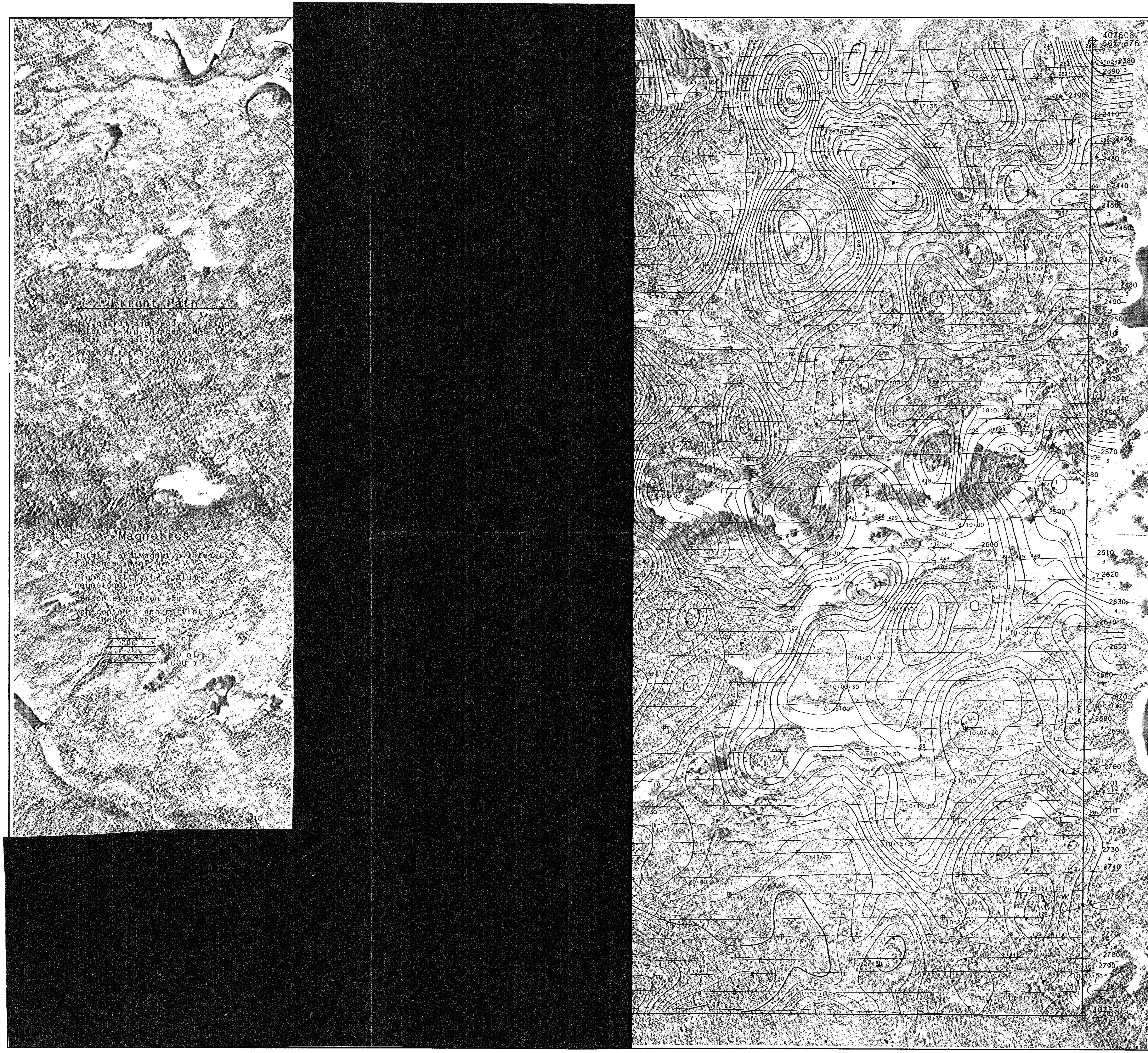
51+00E



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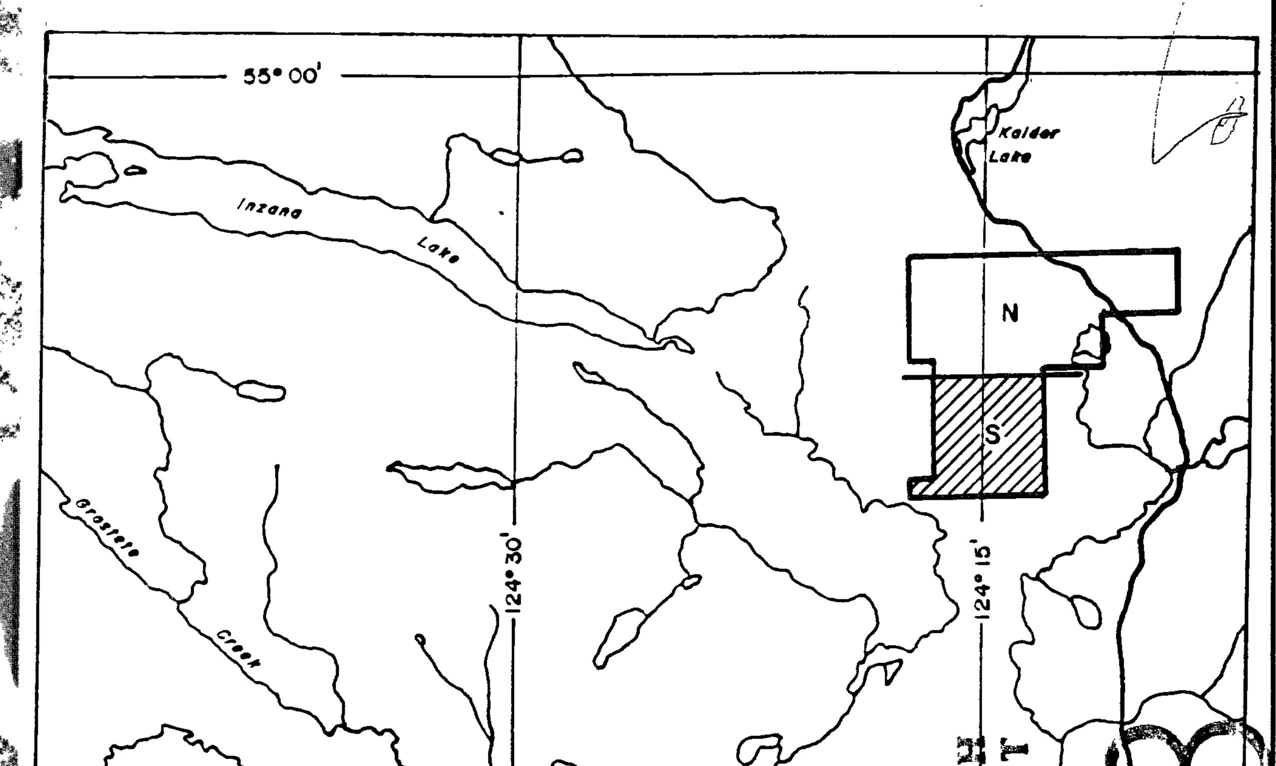


FRASER EXPLORATIONS LTD.

TOTAL FIELD MAGNETIC CONTOURS

TAS EAST AREA

BRITISH COLUMBIA

SCALE 1:10,000

0 330 660 1320 2640 Feet

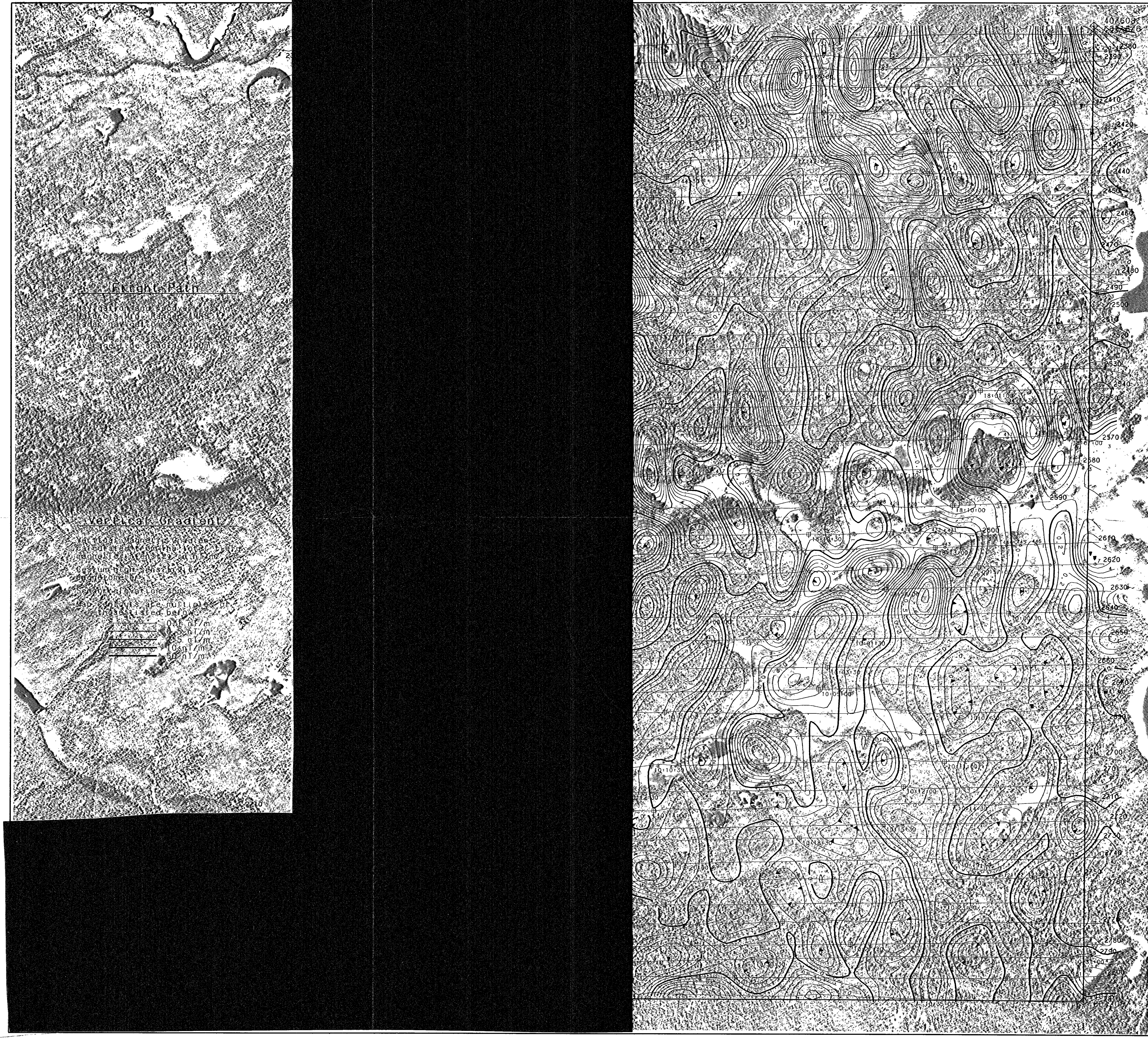
0 100 200 500 1000 Metres

AERODAT LIMITED

DATE: SEPT. 1989

NTS No: 93K/16

MAP No: 3S J8979



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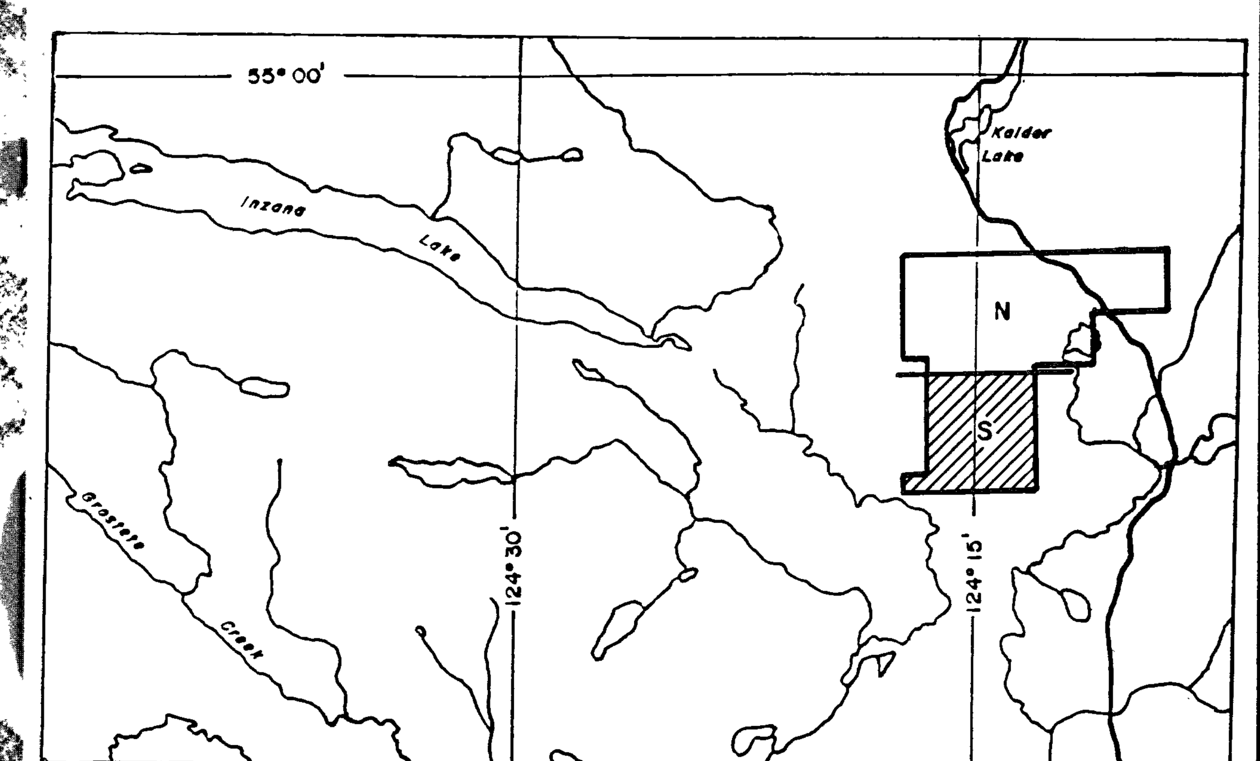


FRASER EXPLORATIONS LTD.

CALCULATED VERTICAL MAGNETIC GRADIENT

TAS EAST AREA

BRITISH COLUMBIA

SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

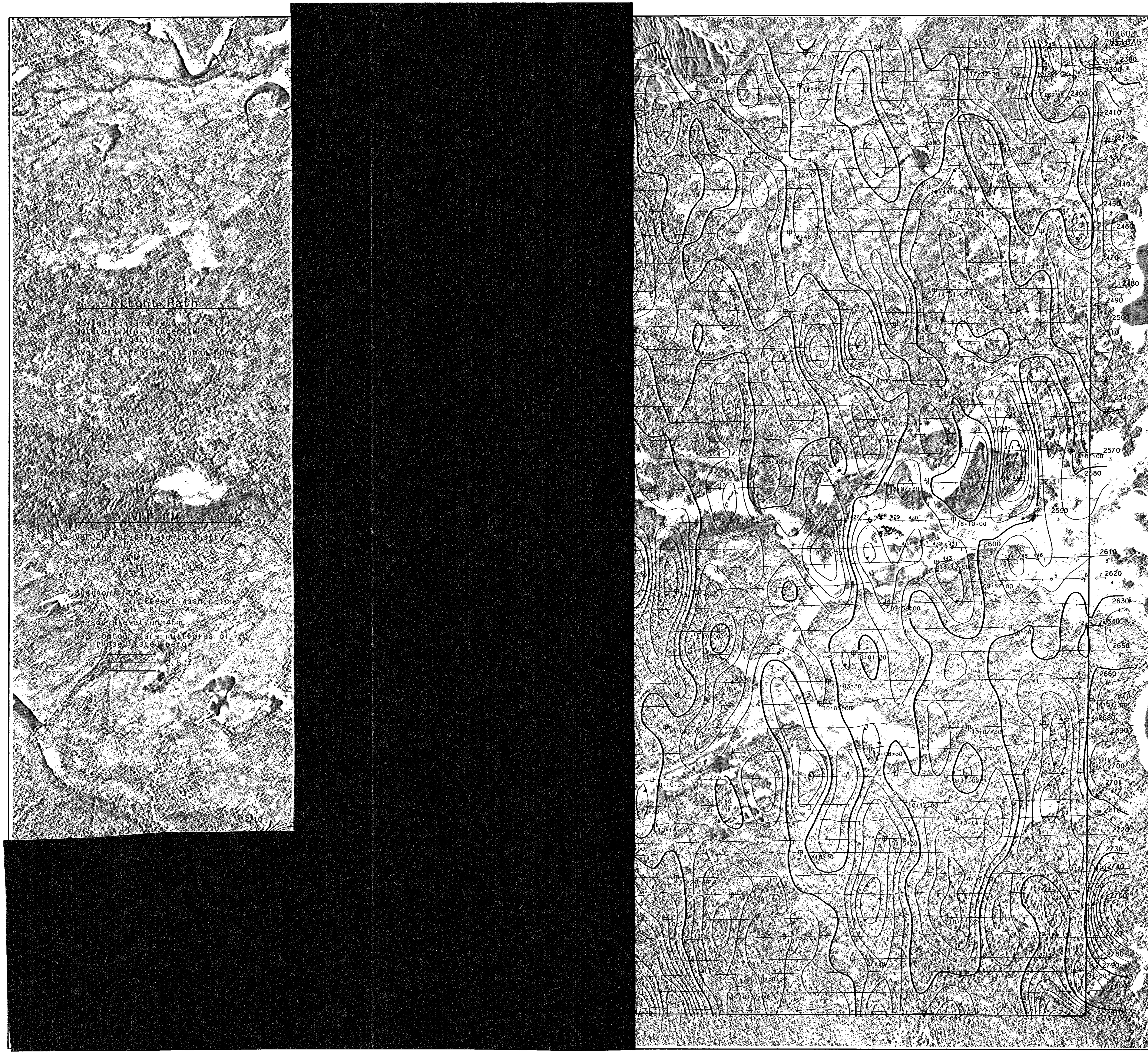
AERODAT LIMITED

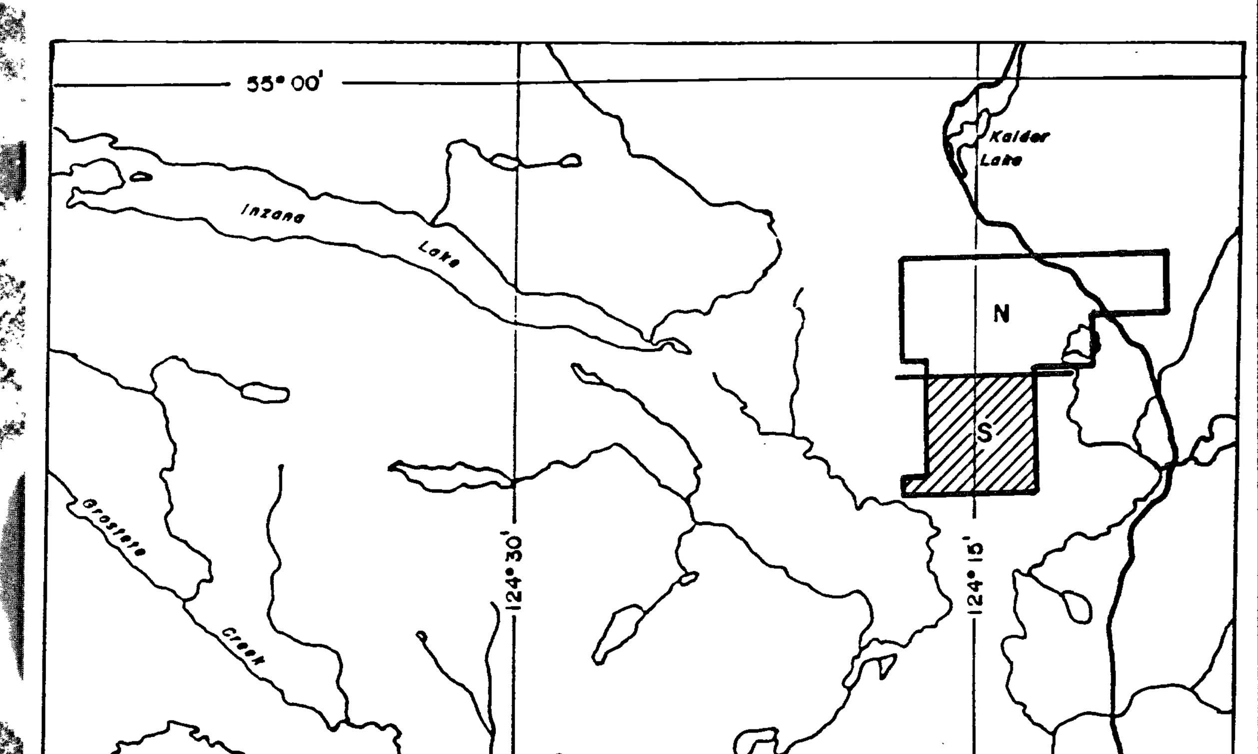
DATE: SEPT. 1989

NTS No: 93K/16

MAP No: 4S

J8979





FRASER EXPLORATIONS LTD.

VLF-EM TOTAL FIELD CONTOURS

TAS EAST AREA

BRITISH COLUMBIA

SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

GEOLOGICAL BRANCH ASSESSMENT REPORT

19,918

AERODAT LIMITED

DATE:	SEPT. 1989
NTS No:	93K/16
MAP No:	5S J8979