REPORT ON THE AIRBORNE GEOPHYSICAL SURVEY - VOLUME 1 OF 2

GIANT COPPER, RED GOLD AND SHIKO LAKE PROPERTIES
BRITISH COLUMBIA

FOR

IMPERIAL METALS CORPORATION

COMPILED BY

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<u>TWO VOLUME SET</u>

VOLUME 1	REPORT AND MAPS FOR REDGOLD/SHIKO LAKE PROPERTIES
VOLUME 2	MAPS FOR GIANT COPPER PROPERTY

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NM/cmp

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List of Maps for RedGold/Shiko Lake Properties

AUTHOR CERTIFICATION

I, Patrick McAndless of the City of Richmond certify the following:

1. I graduated from the University of British Columbia in 1970 with a B.Sc. Geology.

2. I am a member in good standing with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

3. I supervised the work described as Vice-President, Explorations of Imperial Metals Corporation.

Dated this 21st day of August 1996 in the City of Vancouver, B.C.

P. McAndless

STATEMENT OF COSTS

Salaries

Crew Chief (Dave Hayward)	$ 3,500.00
Systems Operator (D. Jamakosmanovic)	3,500.00
Geophysicist (J. Currie)	3,500.00
	$10,500.00

Mobilization	$9,000.00

Survey Charges

1,147.70 line kilometres @ 78.50	$90,094.45
Report Preparation	$1,200.00
Total	$110,794.45

Cost Allocation

Red Gold	$25,140.62
Shiko Lake	$18,206.03
Giant Copper	$67,447.80
Total	$110,794.45

NM/cmp
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REDGOLD PROPERTY

Mineral Tenure

The Redgold property consists of the Shik 1 through 7 minerals claims plus the RG 1 minerals claim. The Shik 1 through 7 claims are the modified grid type that were located between May 1982 and December 1989. RG 1 is a two post claim located in May 1994 to cover a singular internal fraction. The claims total 110 units and extend over an area of approximately 2500 hectares.

Location

The Redgold property is located in the Cariboo Region of British Columbia approximately 60 kilometers northeast of the city of Williams Lake. The property is located on NTS map sheets 93A/5 and 6 and is centered at latitude 52 28 N and longitude 121 28 W. Access to the claims is achieved by traveling to the village of Horsefly on a paved highway and then continuing on to the property on an all weather gravel logging road. The claims occur in a low elevation forested rolling terrrane dominated by interior Douglas fir,, cedar and pine. Much of the claim group has been clear-cut logged within the last 15 years. Soils developed on the claims are derived from clay rich glacial till materials that have been shown by drill testing to be at least as deep as 14 meters over parts of the property. Low lying areas are commonly swampy. Good exposures of outcrop are limited to the tops of hills.

History

Interest in the vicinity of the Redgold property was first noted following the release of aeromagnetic sheet number 5239G in 1968. This survey outlined a prominent circular magnetic high in the central region of the property. A similar feature 20 kilometers to the northwest on the adjacent sheet had previously resulted in the discovery of the Cariboo Bell (Mount Polley) deposit. The area of the present Shik claims were staked following this release but no information is available concerning this most early work.

The initial claims lapsed and the area of the present claim group was restaked in 1972 by Fox Geological Consultants of Kamloops on behalf of the Cariboo Syndicate (Dome Mines Canada and Newconex). The Cariboo Syndicate continued to work on this property until 1980. Work completed by the Syndicate included mapping, 16 kilometers of IP surveying, bulldozer trenching, and 7 short percussion drill holes (280 meters).

In 1980 the property then called the "SL" claims was old to a VSE company called Terramar Resource Corporation. Terramar completed three short diamond drill holes in the syenite core of the complex before abandoning the eastern side of the property in 1982 and the western side in 1989.

In 1982 Messrs. Morton and Durfeld staked the Shik 1 and 2 claims which constitute the eastern region of the present property. The western portion of the present claim group was staked in December 1989 following the final abandonment by Terramar.

In 1989 the present property was optioned to Phelps Dodge Corporation of Canada. Phelps Dodge continued with the option until January 1992 at which time the property was returned to Messrs. Morton and Durfeld. Phelps Dodge completed 66 kilometers of grid and geochemical survey, mapped the grid area, completed 37 kilometers of induced polarization survey and drilled 17 diamond drill holes totaling 1997 meters. Drilling was clustered in several areas and was predominantly in the central regions of very strong chargeability responses.

In 1993 Messrs. Morton and Durfeld leased a small area of the property to Quarry Pacific Industries Ltd. Mineralized syenitic and monzonitic rocks were exposed in an excavation completed in 1993. The mineralization is manifested as malachite stained fractures and disseminated bornite (and minor chalcopyrite) under a shallow leached and bleached surface layer (less than 1 meter deep). The excavation is located at the very southern edge of the gridded area beyond the limits of historic drilling.

Regional Geology

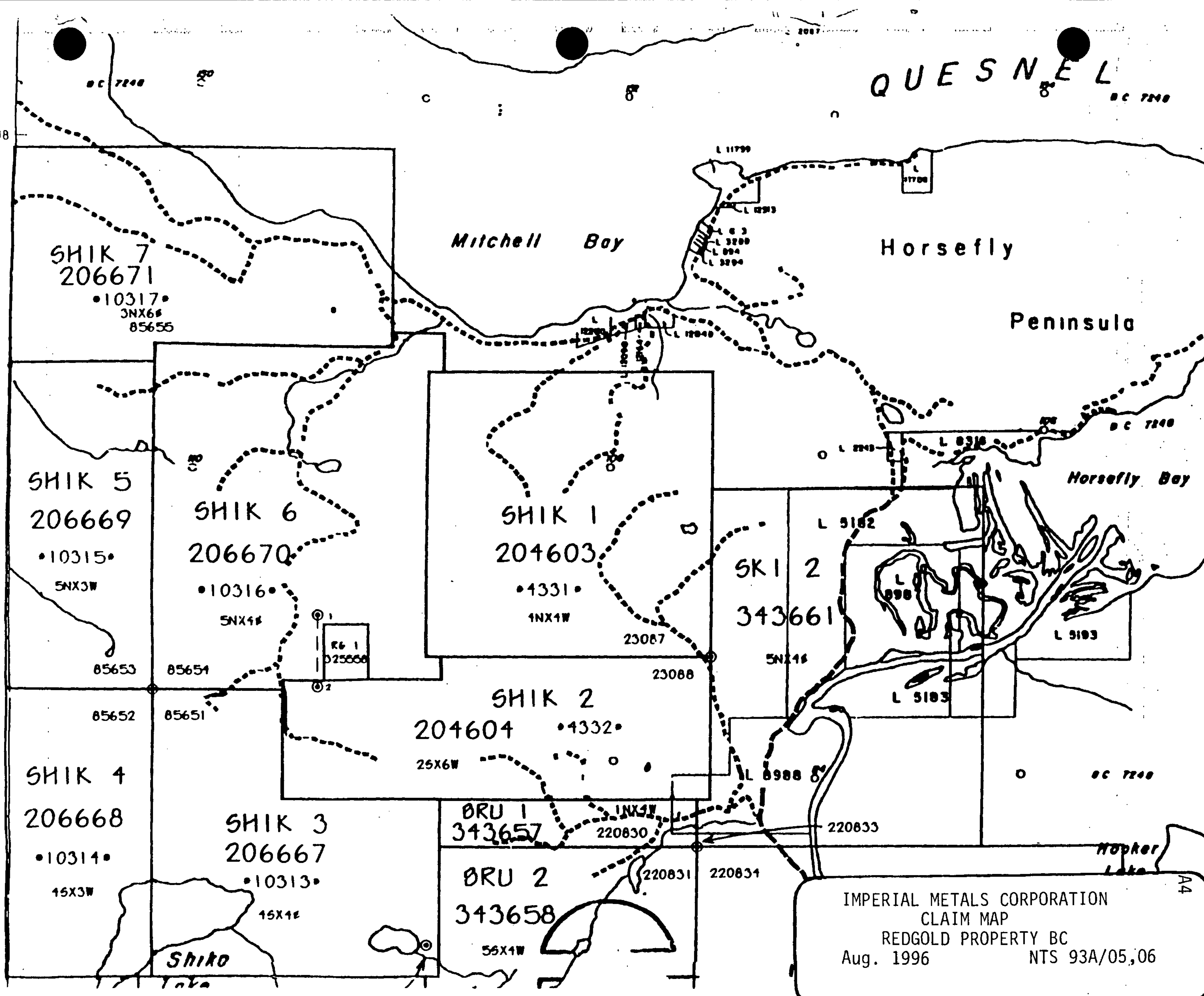
The Redgold Property is situated in the center of a crudely symmetrical northwest trending belt of Mesozoic volcanic rocks formerly referred to as the Quesnel Trough and more recently referred to as the Quesnel Terrane. The central axis of this belt is composed of trachytic (felsic) breccias (largely autobreccias) which are flanked to the east and west by mafic volcanic units and these in turn by Flyschoid Sediments. A linear sequence of dioritic intrusives that occurs along the central trace of this feature is believed to represent the comagmatic eruptive center of the trachytic volcanics. These stocks, which in fact vary in composition from gabbro to syenite, are spatially associated with porphyry style or porphyry related copper and or gold mineralization. Regional examples of economically significant mineralization include The Mount Polley (Cariboo Bell) copper-gold deposit located 20 kilometers to the northwest and the Quesnel River (QR) gold deposit located 32 kilometers to the northwest. The QR deposit is currently being placed into production.

Property Geology

The zoned dioritic Shiko stock with minimum dimension of approximately 1 by 1.5 kilometers is both spatially and significantly central to the Redgold (Shik) claim group. A large associated sulphide system is evidenced by a very strong induced polarization response and an extensive area of hornfelsing developed in volcanic and clastic lithologies outbound from the stock. Calc-silicate minerals including andradite garnet and diopside occurred in the hornfelsed (skarned) zone indicating an active versus passive emplacement of the stock. Still more extensive than the calc-silicate zone is a more outbound propylitic envelope best developed in the mafic volcanic sequence. This propylitic alteration has resulted in a high proportion of secondary carbonate, pyrite and epidote being developed in what is essentially a retrograde alteration zone. The propylitic zone may be important to the more gold dominant mineralization which occurs in the area in the vicinity of hole 91-20 where 15 metres grading 0.15% Cu and 815 ppb Au were intersectedc (extreme SE corner of grid).

PROJ NAME : REDGOLD

CLAIM NAME	RECORD #	CLAIM	SI	EXPIRY DTE
SHIK 1	204603	16	UN	1998/05/31
SHIK 2	204604	12	UN	1998/06/01
SHIK 3	206667	16	UN	1997/12/01
SHIK 4	206668	12	UN	1998/12/01
SHIK 5	206669	15	UN	1998/12/01
SHIK 6	206670	20	UN	1998/12/01
SHIK 7	206671	18	UN	1997/11/30
RG #1	325558	1	UN	1998/05/22
Total		110*		



IMPERIAL METALS CORPORATION
CLAIM MAP
REDGOLD PROPERTY BC
Aug. 1996 NTS 93A/05,06

A4

SHIKO LAKE PROPERTY

Mineral Tenure

The Shiko Lake property consists of the Bruski 1 and 2, Bru 1 through 3, Ski 1 and 2 mineral claims. The claims are modifed grid type located between February 1996 and April 1996. The claims total 108 units.

Location

The Shiko Lake property is located in the Cariboo Region of Britisnh Columbia approxiamtely 60 kilometers northeast of the city of Williams Lake. The property is located on NTS maps sheet 93A/6 and centred at latitute 52 26 N amd 121 25 W. Access to the claims is achieved by travelling to the village of Horsefly on a paved highway and then continuing on to the property on an all weather gravel logging road.

History

Interest in the vicinity of the Shiko Lake property was first noted following the release of aeromagnetic sheet number 5239G in 1968. This survey outlined a prominent circular magnetic high in the central region of the property. A similar feature 20 kilometers to the northwest on the adjacent sheet had previously resulted in the discovery of the Cariboo Bell (Mount Polley) deposit. No information is available concerning this most early work..

Regional Geology

The Shiko Lake Property is situated in the center of a crudely symmetrical northwest trending belt of Mesozoic volcanic rocks formerly referred to as the Quesnel Trough and more recently referred to as the Quesnel Terrane. The central axis of this belt is composed of trachytic (felsic) breccias (largely autobreccias) which are flanked to the east and west by mafic volcanic units and these in turn by Flyschoid Sediments. A linear sequence of dioritic intrusives that occurs along the central trace of this feature is believed to represent the comagmatic eruptive center of the trachytic volcanics. These stocks, which in fact vary in composition from gabbro to syenite, are spatially associated with porphyry style or porphyry related copper and or gold mineralization. Regional examples of economically significant mineralization include The Mount Polley (Cariboo Bell) copper-gold deposit located 20 kilometers to the northwest and the Quesnel River (QR) gold deposit located 32 kilometers to the northwest. The QR deposit is currently being placed into production.

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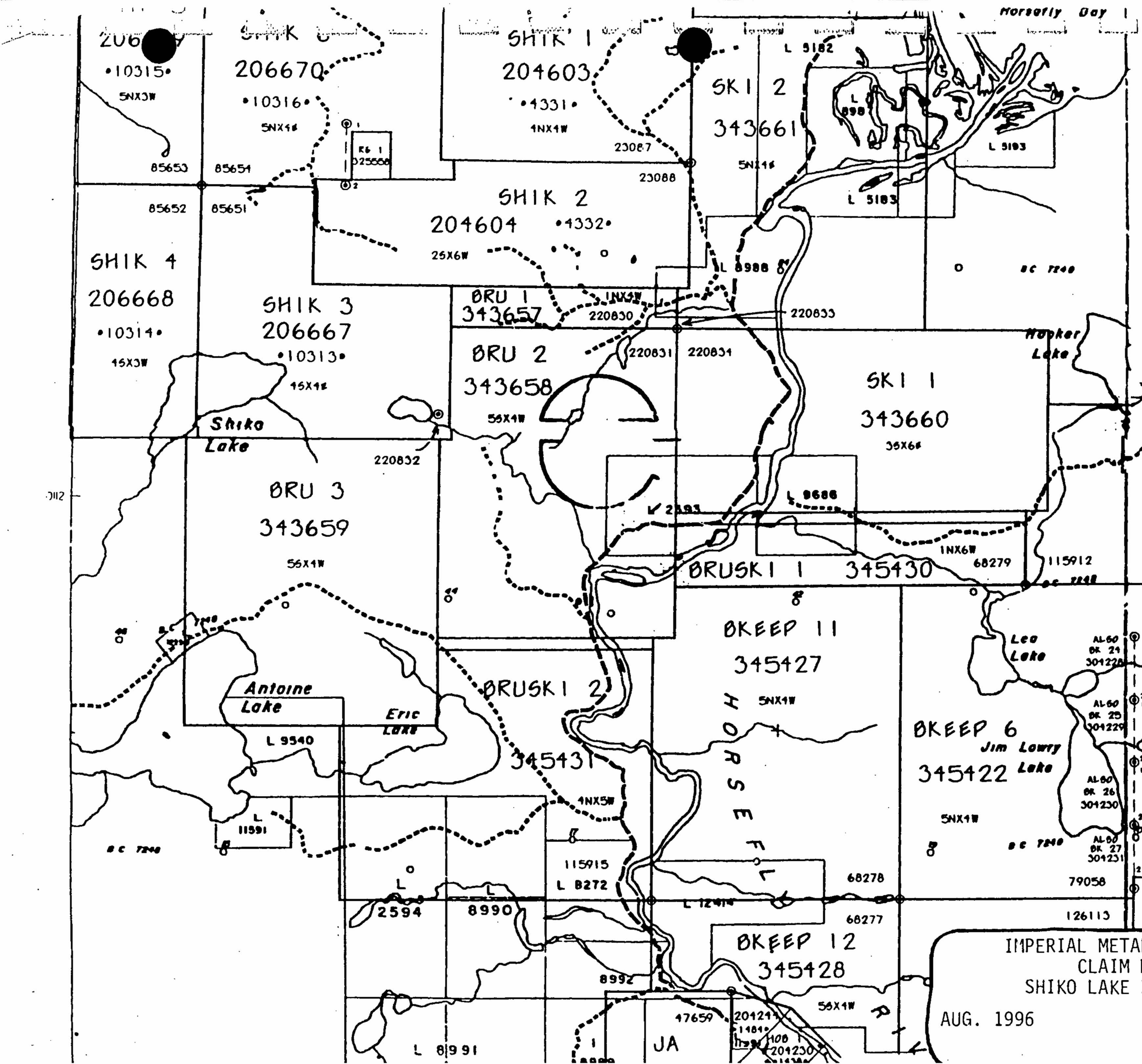
PROJ NAME : SHIKO LAKE

CLAIM NAME	RECORD #	CLAIM	SI	EXPIRY DTE
BRUSKI 1	345430	6	UN	1997/04/28
BRUSKI 2	345431	20	UN	1997/05/01
BRU 1	343657	4	UN	1997/02/24
BRU 2	343658	20	UN	1997/02/25
BRU 3	343659	20	UN	1997/02/25
SKI 1	343660	18	UN	1997/02/28
SKI 2	343661	20	UN	1997/02/28
	Total	108*		



IMPERIAL METALS CORPORATION
CLAIM MAP
SHIKO LAKE PROPERTY BC

AUG. 1996 NTS 93A/06

B4

GIANT COPPER PROPERTY

Mineral Tenure

A total of 163 located claims (195) units and eight Crown Granted claims comprised the property. All the claims are located within the New Westminster Mining Division.

Location

The Giant Copper property lies approximately 43 km southeast of Hope and is bounded on the northeast by Manning Park and to the southwest by the Skagit Valley Recreational Area. On the South side of Highway No. 3 a gravel road branches off positioned across the road just past a small bridge crossing the Skagit river. From the highway to the No. 15 level workings is approximately 9 km along a good gravel road.

The property lies between elevations 1,310 meters and 1,980 meters above sea level, on the west and southeast slope of Silverdaisy Mountain.

History

The Giant Copper was acquired by Bethlehem Resources Corporation (now amalgamated with and under the name Imperial Metals Corporation) from Campbell Resources in the spring of 1988 in exchange for a small retained interest in the property.

A number of deposit types are hosted within the property boundary. Previous exploration has concentrated on two main zones, the AM and the Invermay. These zones are breccia hosted copper-gold-silver and silver-lead-zinc-copper shear zone occurrences, respectively.

Published reserves on the AM breccia are approximately 2,700,000 tons at 1.35% Cu, 0.015 oz/ton Au and 0.64 oz/ton Ag. No reserve figures are available for the Invermay zone.

Regional Geology

A belt up to several km wide of steeply dipping and tightly folded metasedimentary rocks of the Jurassic Dewdney Creek Group forms a structural block between the northwesterly trending Hozameen and Pasayten thrust faults, along both of which older rocks are thrust from the west over younger rocks to the east. The Hozameen Fault separates rocks of the Dewdney Creek Group of Jurassic age from Carboniferous argillite, slate, and phyllite of the Hozameen Group to the west. The chuwanten (or Pasayten Fault) separates rocks of the Dewdney Creek Group from the Cretaceous arkose, siltstone, argillite and conglomerate of the Pasayten Group to the east. The Giant Copper property is near the western side of this block of rocks of the Dewdney Creek Group.

Property Geology

Sedimentary rocks of the Dewdney Creek Group have been intruded by abundant, mainly mafic to locally ultramafic sills of uncertain age, probably Jurassic/Cretaceous. Most of the sills are conformable to bedding and were folded with the sedimentary rocks.

The Invermay Stock, an elongate diorite to quartz diorite to locally granodiorite body of Cretaceous or Tertiary age was intruded into the older rocks, more or less along the northwest trending anticline axis seen within sediments at the southeast corner of the property. Associated synclinal structures occur on the northeast and southwest extremities of the property. Liberal interpretation of the lineaments surrounding the Invermay Stock indicate a roughly radiating set of faults. These were probably created during the magma chamber rising through the overlying sediments. There is also a strong northeast lineament trend throughout the property which appear to be preferential sites for deposits of silver, lead, zinc quartz vein mineralization, such as the Invermy workings.

Zones of potential economic interest include replacement bodies, breccia pipes and veins, almost all of which are near the contact of the metasedimentary rocks with the quartz diorite Invermy Stock and which have been considered historically to have been related in origin to the intrusive body.,

The Giant Fault , a major northeast-trending fault evident in the No. 10 underground workings, possibly truncates the south end of the AM Breccia and may offset it up to 1000meters to the northeast to the site of the No. 1 Anomaly, located close to the No. 10 level portal.

GIANT COPPER

DATE REVISED: JAN 21, 1994					
CLAIMS: 171*		UNITS: 195		AREA(ha):	
CLAIM	TENURE	UNITS	AREA(ha)	RECORD DATE	EXPIRY DATE
A.M.	L-1586	CG	19.45	FEB 02/40**	N/A
A.M. 1	L-1579	CG	19.46	NOV 02/77**	N/A
A.M. 2	L-1587	CG	11.23	JAN 02/40**	N/A
A.M. 3	L-1577	CG	16.34	JAN 02/40**	N/A
A.M. 4	L-1584	CG	20.51	JAN 02/40**	N/A
A.M. 5	L-1581	CG	17.83	NOV 02/77**	N/A
AUGUSTUS5	L-1585	CG	2.63	JAN 02/40**	N/A
REX 1 FR	L-1595	CG	6.75	NOV 02/77**	N/A
AXE 2	236816	1	20.9	OCT 13/71	OCT 13/2000
AXE 10 FR	236817	1	20.9	OCT 13/71	OCT 13/2000
BARB 3	236732	1	20.9	DEC 17/69	DEC 17/2000
BARB 4	236731	1	20.9	DEC 17/69	DEC 17/2000
BROWN 1	236528	1	20.9	SEP 01/54	SEP 01/99
BROWN 2	236529	1	20.9	SEP 01/54	SEP 01/99
BROWN 3	236530	1	20.9	SEP 01/54	SEP 01/99
BROWN 4	236531	1	20.9	SEP 01/54	SEP 01/99
CAMBORNE1	236526	1	20.9	FEB 24/54	FEB 24/99
CAMBORNE2	236527	1	20.9	FEB 24/54	FEB 24/2000
CANAM 1FR	235769	1	25	SEP 29/88[2]	SEP 29/2000
CANAM 2	235773	16	400	OCT 01/88[2]	OCT 01/2000
CANAM 3	235772	16	400	OCT 01/88[2]	OCT 01/2000
CANAM 4FR	235771	1	25	OCT 01/88[2]	OCT 01/2000
GC 35	236695	1	20.9	AUG 01/69	AUG 01/2000
GC 36	236743	1	20.9	DEC 08/69	DEC 08/2000
GC 37	236696	1	20.9	MAY 27/69	MAY 27/2000
GC 38	236697	1	20.9	AUG 01/69	AUG 01/2000
GC 39	236698	1	20.9	AUG 01/69	AUG 01/2000
GC 40	236699	1	20.9	MAY 27/69	MAY 27/2000
GC 41	236744	1	20.9	DEC 08/69	DEC 08/2000
GC 42	236700	1	20.9	MAY 27/69	MAY 27/2000
GC 43	236701	1	20.9	MAY 27/69	MAY 27/2000
GC 44	236745	1	20.9	DEC 08/69	DEC 08/99
GC 45	236746	1	20.9	DEC 08/69	DEC 08/99
GC 46	236702	1	20.9	MAY 27/69	MAY 27/99
GC 47	236747	1	20.9	DEC 08/69	DEC 08/99
GC 48	236703	1	20.9	MAY 27/69	MAY 27/99
GC 49	236704	1	20.9	MAY 27/69	MAY 27/99
GC 50	236705	1	20.9	MAY 27/69	MAY 27/99
GC 51	236706	1	20.9	MAY 27/69	MAY 27/99
GC 52	236711	1	20.9	OCT 08/69	OCT 08/99

*INCLUDES 8 CROWN GRANTS **DATE OF CERTIFICATE OF TITLE

[2] LOCATION DATE

GIANT COPPER

DATE REVISED: JAN 21, 1994					
CLAIMS: 171*		UNITS: 195		AREA(ha):	
CLAIM	TENURE	UNITS	AREA(ha)	RECORD DATE	EXPIRY DATE
GC 53	236712	1	20.9	OCT 08/69	OCT 08/99
GC 54	236713	1	20.9	OCT 08/69	OCT 08/99
GC 55	236714	1	20.9	OCT 08/69	OCT 08/99
GC 56	236715	1	20.9	OCT 08/69	OCT 08/99
GC 57	236716	1	20.9	OCT 08/69	OCT 08/2000
GC 58	236717	1	20.9	OCT 08/69	OCT 08/2000
GC 59	236718	1	20.9	OCT 08/69	OCT 08/2000
GC 60	236719	1	20.9	OCT 08/69	OCT 08/2000
GC 61	236720	1	20.9	OCT 08/69	OCT 08/2000
GC 62	236721	1	20.9	OCT 08/69	OCT 08/2000
GC 63	236722	1	20.9	OCT 08/69	OCT 08/2000
GC 64	236723	1	20.9	OCT 08/69	OCT 08/2000
GC 65	236724	1	20.9	OCT 08/69	OCT 08/2000
GC 66	236725	1	20.9	OCT 08/69	OCT 08/2000
GC 67	236726	1	20.9	OCT 08/69	OCT 08/2000
GC 68	236727	1	20.9	OCT 08/69	OCT 08/2000
GE 1	236590	1	20.9	OCT 09/64	OCT 09/2000
GE 2	236591	1	20.9	OCT 09/64	OCT 09/2000
GE 3	236592	1	20.9	OCT 09/64	OCT 09/2000
GE 3 FR	236655	1	20.9	MAY 10/68	MAY 10/2000
GE 4	236593	1	20.9	OCT 09/64	OCT 09/2000
GE 5	236594	1	20.9	OCT 09/64	OCT 09/2000
GE 6	236595	1	20.9	OCT 09/64	OCT 09/2000
GE 7	236596	1	20.9	OCT 09/64	OCT 09/2000
GE 8	236597	1	20.9	OCT 09/64	OCT 09/2000
GE 9	236651	1	20.9	MAY 10/68	MAY 10/2000
GE 10	236652	1	20.9	MAY 10/68	MAY 10/2000
GE 11	236653	1	20.9	MAY 10/68	MAY 10/2000
GE 12	236654	1	20.9	MAY 10/68	MAY 10/2000
GM 27	236645	1	20.9	MAY 10/68	MAY 10/2000
GM 28	236646	1	20.9	MAY 10/68	MAY 10/2000
GM 29	236647	1	20.9	MAY 10/68	MAY 10/2000
GM 30	236648	1	20.9	MAY 10/68	MAY 10/2000
GM 31	236649	1	20.9	MAY 10/68	MAY 10/2000
GM 32	236650	1	20.9	MAY 10/68	MAY 10/2000
HANK 1FR	236748	1	20.9	DEC 08/69	DEC 08/2000
HANK 2	236749	1	20.9	DEC 08/69	DEC 08/2000
HANK 4	236750	1	20.9	DEC 08/69	DEC 08/2000
HANK 5	236504	1	20.9	JUN 21/43	JUN 21/2000
HANK 6	236751	1	20.9	DEC 08/69	DEC 08/2000

*INCLUDES 8 CROWN GRANTS

GIANT COPPER

DATE REVISED: JAN 21, 1994

CLAIMS: 171*	UNITS: 195	AREA(ha):

CLAIM	TENURE	UNITS	AREA(ha)	RECORD DATE	EXPIRY DATE
HANK 7	236505	1	20.9	JUN 21/43	JUN 21/2000
HANK 8	236752	1	20.9	DEC 08/69	DEC 08/2000
INVMY N1	236755	1	20.9	DEC 08/69	DEC 08/2000
INVMY N2	236756	1	20.9	DEC 08/69	DEC 08/2000
INVMY N3	236525	1	20.9	FEB 24/54	FEB 24/99
IP 1 FR	236733	1	20.9	DEC 08/69	DEC 08/2000
IP 2 FR	236734	1	20.9	DEC 08/69	DEC 08/2000
IP 4 FR	235428	1	20.9	SEP 24/80	SEP 24/2000
IP 5 FR	236735	1	20.9	DEC 08/69	DEC 08/2000
IP 6 FR	236736	1	20.9	DEC 08/69	DEC 08/2000
IP 7 FR	236737	1	20.9	DEC 08/69	DEC 08/2000
IP 8 FR	236738	1	20.9	DEC 08/69	DEC 08/2000
IP 9 FR	236739	1	20.9	DEC 08/69	DEC 08/2000
JET 1 FR	236537	1	20.9	DEC 19/58	DEC 19/99
JET 2 FR	236754	1	20.9	DEC 08/69	DEC 08/2000
JOHN 1	235417	1	20.9	DEC 12/79	DEC 12/2000
JOHN 2	235418	1	20.9	DEC 12/79	DEC 12/2000
JOHN 3	235419	1	20.9	DEC 12/79	DEC 12/2000
JOHN 4	235420	1	20.9	DEC 12/79	DEC 12/2000
LESLIE	236639	1	20.9	JUN 13/67	JUN 13/99
LESLIE 1	236640	1	20.9	JUN 13/67	JUN 13/99
LESLIE 2	236641	1	20.9	JUN 13/67	JUN 13/99
LESLIE 3	236642	1	20.9	JUN 13/67	JUN 13/99
LOIS FR	236625	1	20.9	JUN 02/67	JUN 02/99
LOIS 1	236626	1	20.9	JUN 02/67	JUN 02/99
LOIS 2	236627	1	20.9	JUN 02/67	JUN 02/99
LOIS 3	236628	1	20.9	JUN 02/67	JUN 02/99
LOIS 4	236629	1	20.9	JUN 02/67	JUN 02/99
LOIS 5	236630	1	20.9	JUN 02/67	JUN 02/99
LOIS 6	236631	1	20.9	JUN 02/67	JUN 02/99
LOIS 7FR	236730	1	20.9	NOV 07/69	NOV 07/99
LOIS 8	236632	1	20.9	JUN 02/67	JUN 02/99
LOIS 9	236633	1	20.9	JUN 02/67	JUN 02/99
LOIS 10	236634	1	20.9	JUN 02/67	JUN 02/99
LOIS 11	236635	1	20.9	JUN 02/67	JUN 02/99
LOIS 12	236636	1	20.9	JUN 02/67	JUN 02/99
LOIS 13	236637	1	20.9	JUN 02/67	JUN 02/99
LOIS 14	236638	1	20.9	JUN 02/67	JUN 02/99
LORNA FR	236729	1	20.9	NOV 07/69	NOV 07/99
MAY FR	236753	1	20.9	DEC 08/69	DEC 08/99

*INCLUDES 8 CROWN GRANTS

GIANT COPPER

DATE REVISED: JAN 21, 1994

CLAIMS: 171*	UNITS: 195	AREA(ha):

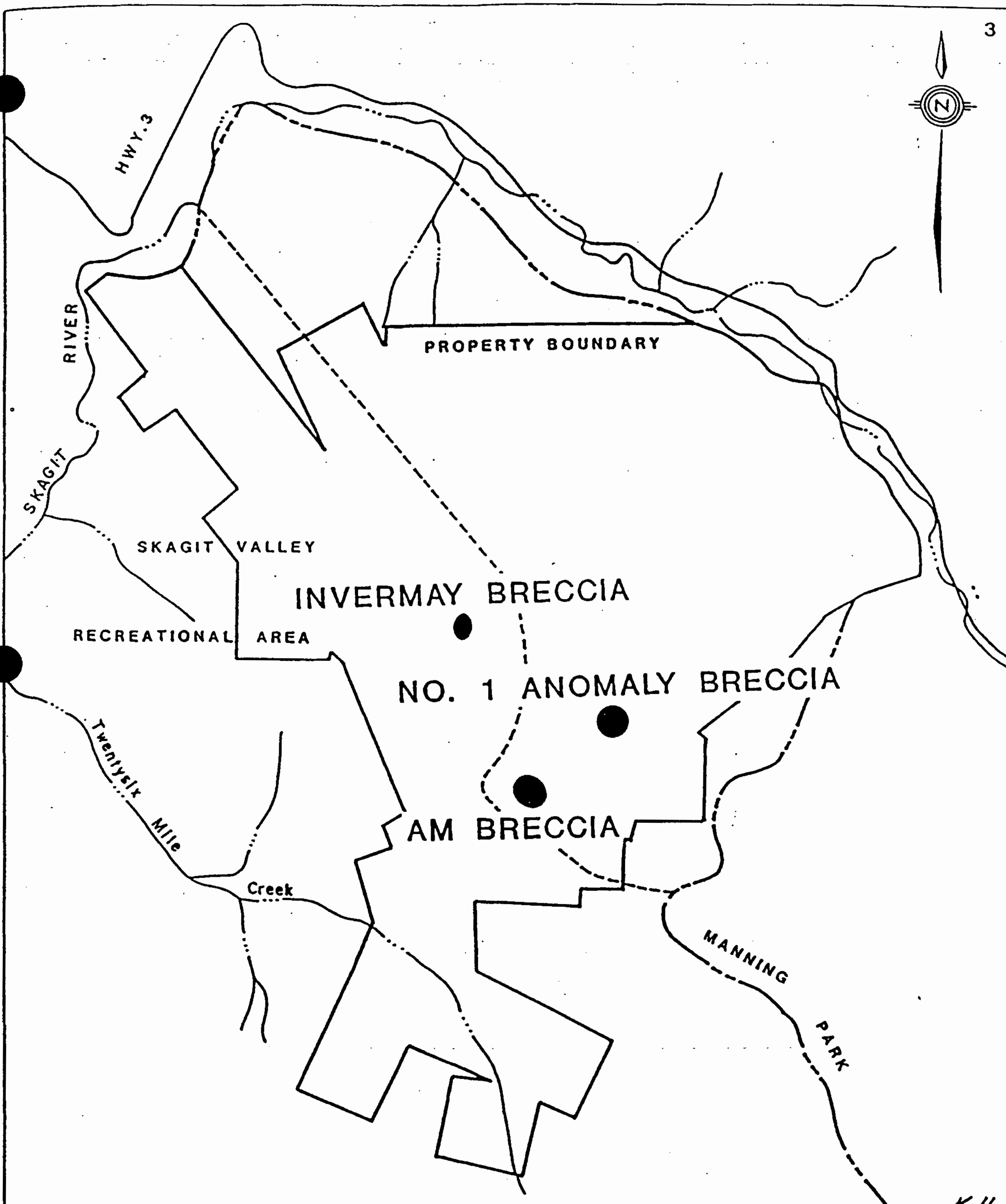
CLAIM	TENURE	UNITS	AREA(ha)	RECORD DATE	EXPIRY DATE
MAY 1	236514	1	20.9	FEB 09/54	FEB 09/99
MAY 2	236515	1	20.9	FEB 09/54	FEB 09/99
MAY 3	236516	1	20.9	FEB 09/54	FEB 09/99
MAY 4	236517	1	20.9	FEB 09/54	FEB 09/99
MAY 5	236518	1	20.9	FEB 09/54	FEB 09/99
MAY 6	236519	1	20.9	FEB 09/54	FEB 09/99
MAY 7	236520	1	20.9	FEB 09/54	FEB 09/99
MAY 8	236521	1	20.9	FEB 09/54	FEB 09/99
MAY 9	236522	1	20.9	FEB 09/54	FEB 09/99
MAY 10	236523	1	20.9	FEB 09/54	FEB 09/99
MAY 11	236524	1	20.9	FEB 09/54	FEB 09/99
MAY 16	236532	1	20.9	SEP 15/55	SEP 15/99
26MILEFR	236728	1	20.9	NOV 07/69	NOV 07/99
MISTY	236510	1	20.9	APR 15/53	APR 15/99
MISTY 1	236511	1	20.9	APR 15/53	APR 15/99
MISTY 2	236512	1	20.9	APR 15/53	APR 15/99
MISTY 3	236513	1	20.9	APR 15/53	APR 15/99
PEG 1	236709	1	20.9	OCT 08/69	OCT 08/99
PEG 2	236710	1	20.9	OCT 08/69	OCT 08/99
RAN	235414	3	62.7	SEP 21/79	SEP 21/2000
RAN FR	235415	1	20.9	SEP 21/79	SEP 21/2000
RED 1	236533	1	20.9	DEC 19/58	DEC 19/2000
RED 2	236534	1	20.9	DEC 19/58	DEC 19/2000
RED 3	236535	1	20.9	DEC 19/58	DEC 19/2000
RED 4	236536	1	20.9	DEC 19/58	DEC 19/2000
REX 11	236776	1	20.9	JUN 12/70	JUN 12/2000
REX 12	236777	1	20.9	JUN 12/70	JUN 12/2000
REX 13	236778	1	20.9	JUN 12/70	JUN 12/2000
REX 14	236779	1	20.9	JUN 12/70	JUN 12/2000
REX 15	236780	1	20.9	JUN 12/70	JUN 12/2000
REX 16	236781	1	20.9	JUN 12/70	JUN 12/2000
REX 17	236782	1	20.9	JUN 12/70	JUN 12/2000
REX 18	236783	1	20.9	JUN 12/70	JUN 12/2000
REX 19	236784	1	20.9	JUN 12/70	JUN 12/2000
REX 20	236785	1	20.9	JUN 12/70	JUN 12/2000
REX 21	236786	1	20.9	JUN 12/70	JUN 12/2000
REX 22	236787	1	20.9	JUN 12/70	JUN 12/2000
REX 22FR	236815	1	20.9	SEP 23/71	SEP 23/99
RIDGE1FR	236740	1	20.9	DEC 08/69	DEC 08/99
RIDGE2FR	236741	1	20.9	DEC 08/69	DEC 08/99
RIDGE3FR	236742	1	20.9	DEC 08/69	DEC 08/99

*INCLUDES 8 CROWN GRANTS

GIANT COPPER

DATE REVISED: JAN 21, 1994					
CLAIMS: 171*		UNITS: 195		AREA(ha):	
CLAIM	TENURE	UNITS	AREA(ha)	RECORD DATE	EXPIRY DATE
SABRE 1	236538	1	20.9	DEC 19/58	DEC 19/2000
SLIDE FR	235426	1	20.9	SEP 02/80	SEP 02/2000
VERNON 1	236496	1	20.9	JUN 21/43	JUN 21/99
VERNON 2	236497	1	20.9	JUN 21/43	JUN 21/99
VERNON 3	236498	1	20.9	JUN 21/43	JUN 21/2000
VERNON 4	236499	1	20.9	JUN 21/43	JUN 21/2000
VERNON 5	236500	1	20.9	JUN 21/43	JUN 21/99
VERNON 6	236501	1	20.9	JUN 21/43	JUN 21/99
VERNON 7	236502	1	20.9	JUN 21/43	JUN 21/99
VERNON 8	236503	1	20.9	JUN 21/43	JUN 21/99

*INCLUDES 8 CROWN GRANTS



BETHLEHEM RESOURCES CORPORATION

GIANT COPPER PROJECT

CLAIM MAP

KEN HICKS CONSULTING	DATE:	MAP INDEX Nº.	SCALE	DRAWING Nº.
[illegible]	[illegible]	[illegible]	[illegible]	FIG. 2

REPORT ON THE AIRBORNE GEOPHYSICAL SURVEY GIANT COPPER & SHIKO LAKE PROPERTIES, BRITISH COLUMBIA

DATA ACQUISITION & PROCESSING

for

Imperial Metals Corporation

by

SCINTREX LIMITED
222 Snidercroft Road
Concord, Ontario, Canada
L4K 1B5

Tel: (905) 669-2280
Fax: (905) 669-9334

June, 1996

AIRBORNE GEOPHYSICAL SURVEY IN BRITISH COLUMBIA

FINAL REPORT

APPENDICES

A. Area Location Map

B. EM Anomaly Listing

C. Flight Logs

D. Weekly Operation Reports

IMPERIAL METALS CORPORATION

AIRBORNE GEOPHYSICAL SURVEY IN BRITISH COLUMBIA
GIANT COPPER & SHIKO LAKE PROPERTIES

FINAL REPORT

ABSTRACT

During the period of time from April 20 until May 12, 1996, Scintrex carried out two multi-sensor high-resolution airborne geophysical surveys for Imperial Metals Corporation in British Columbia. The properties surveyed were designated as the Giant Copper property, near Hope, and the Shiko Lake property, near Horsefly.

The survey was part of a service contract signed with **Imperial Metals Corporation,** of Vancouver, British Columbia, to survey their exploration concessions totaling approximately 107.4 km^2 for these regions. A total of 1147.7 line-km of geophysical data with about 34.9 helicopter flying hours were expended.

Data processing involved the data compilation, gridding and contouring of the geophysical data collected, using the processing center at Scintrex Limited, Toronto. EM anomaly identification was undertaken using a semi-automated process for picking and determination of the conductance using the response from a vertical plate model in free space with 300 X 600 m dimensions. of

The processed survey results have been presented as 7 maps for the survey areas at the scale of 1:10,000; total magnetic intensity, total magnetic intensity reduced to pole, first vertical derivative of total magnetic intensity, electromagnetic anomaly symbol map using two frequencies (Cx-875 Hz and Cx- 4800 Hz), apparent resistivity for Cp-930 Hz, apparent resistivity for Cp-4170 Hz, and VLF of the summed residual field; and 1 map at 1:20,000; total magnetic intensity.

1. INTRODUCTION

1.1. General Considerations

These services are the result of the Agreement made on **March 28, 1996** between **Imperial Metals Corporation** and **Scintrex Limited** to perform an airborne geophysical survey over exploration concessions in British Columbia. The survey consisted of 1147.7 l-km of electromagnetic, magnetic, radiometric and VLF data.

The data acquisition was carried out between April 20 and May 12, 1996. The data processing started when the data was sent to Scintrex's office in Toronto and was completed at the end of June, 1996.

1.2. Survey Specifications and Deliverable Products

The geophysical service, as specified in the contract, was a helicopter-borne multi-parameter electromagnetic-magnetic-VLF geophysical survey, with flight lines 100 m apart, sensor flying height varying from 30 to 60 m, GPS differential positioning and 0.1 second sample rate.

Data compilation and processing were carried out by the application of Geosoft and Scintrex computing programs to generate the colour contour maps and other products. Seven types of geophysical maps for each survey block were presented at a scale of 1:10,000 and one map was presented at 1:20,000. EM anomalies were picked for all flight lines and are presented in a special symbol map. The Giant Copper maps at 1:10,000 were split into two map sheets, a north half and a south half. The 1:20,000 map fit on one map sheet. The Shiko Lake maps all fit onto one map sheet.

The survey report describes the procedures for data acquisition, processing, and final map presentation and the specifications for the digital data sets. A tabulation of the identified EM anomalies also forms part of this report (Appendix II). Detailed discussion and interpretation of the results were not part of this report.

1.3. Relief and Vegetation

The Giant Copper property is in an area of rugged relief with altitudes varying from 30 to 2300 m.

The Shiko Lake property is less rugged and altitudes range from 800 to 1100 m.

Vegetation in both regions is well developed and composed of coniferous forests.

2. DATA ACQUISITION

2.1 Survey Area

The survey areas (see sketch Appendix I) and general flight specifications are outlined as follows:

AREA	LINE SPACING	LINE DIRECTION	TOTAL LINE KM	AREA
Giant Copper	100/8000m	0°/90°	658.8 Lkm	61.9 Km^2
Shiko Lake	100/2000m	0°/90°	488.9 Lkm	45.5 Km^2

The airborne survey comprised a total of 1147.7 l-km of geophysical data acquired from April 20 to May 12, 1996 by surveying an area of 107.4 km^2. About 34.9 helicopter flying hours were required to complete the survey block.

For the Giant Copper survey, the helicopter was based at the local airport in Hope. For the Shiko Lake survey, the base was at the William's Lake airport.

2.2 Operations Bases

During the data acquisition for the Giant Copper property, the base station was located at the local airport in Hope. For the Shiko Lake property, the base station pas placed at the William's Lake airport.

2.3 Flight Specifications

The flight line directions and spacings for the block were established by the client, following the principle of crossing the general geological structure with a normal angle. The blocks were surveyed in a north - south direction. The line spacing was established at 100 m. This was very difficult to maintain, especially over the Giant Copper property, due to extreme topography.

The optimum terrain clearance adopted for the helicopter and instrumentation during normal survey flying was 60 m with sensors suspended below (mag at -15m, VLF at -15m, EM bird at -30m). Actual terrain clearance of the helicopter varied between 40 and 80 m and averaged 60 m because of the rugged topography.

Normal helicopter airspeed averaged around 80 km/h. In areas of rugged terrain and depending on wind intensity, more variations were encountered. Data was recorded using a 0.1 second sample rate resulting in geophysical measurements approximately every 2 to 3 meters along the survey lines. Sampling rates and resolutions for data in each channel are specified in the Table 2.1 below.

TABLE 2.1

SYSTEM/No. of CHANNELS	SAMPLING RATES/SEC.	RESOLUTION
Total Field Magnetics	0.1 sec	0.001 nT
E.M. - 875, 930 Hz (4 channels)	0.1 sec	0.10 ppm
E.M. - 4170, 4800 Hz (4 channels)	0.1 sec	0.20 ppm
E.M. - 35,000 Hz (2 channels)	0.1 sec	0.50 ppm
VLF - 2 frequencies (4 channels)	0.1 sec	0.3%
Radar Altimeter (1 channel)	0.1 sec	0.15 feet
GPS Navigation	1.0 sec	0.1 m

2.4. Helicopter and Survey Instruments

2.4.1. Helicopter

The helicopter employed was an Aerospatiale (Eurocopter) A-STAR model 350 - B1. It was rented from Northern Mountain Helicopters Inc. of Prince George, British Columbia.

2.4.2. Electromagnetic System

A Scintrex HEM-V System, with 5 frequencies and multi-coil geometry, installed in a 7 m bird, was used with the configuration specified in Table 2.2 below.

Table 2.2

COIL FREQUENCY	COIL ORIENTATION	COIL SEPARATION	CHANNELS	RESOLUTION
875 Hz	vertical coaxial	6.54 m	I, Q	0.10 ppm
930 Hz	horizontal coplanar	6.54 m	I, Q	0.10 ppm
4,800 Hz	vertical coaxial	6.54 m	I, Q	0.20 ppm
4,170 Hz	horizontal coplanar	6.54 m	I, Q	0.20 ppm
35,000 Hz	horizontal coplanar	6.54 m	I, Q	0.50 ppm

The internal noise for normal flight conditions was typically less than 2 ppm of the transmitted field. The EM data related to the ten EM channels were sampled at 0.1 second intervals or approximately every 3 m along the survey line. Additionally, the operator monitored the spheric events and the power-line noise levels as measured by the 60 Hz channel. The EM sensor was towed by an external cable 30 m long, and was maintained at a nominal flight height of 30 m above the terrain.

2.4.3. Airborne Magnetometer

A Scintrex CS - 2 Airborne Cesium Magnetometer was used on the survey. This system utilizes a split-beam, optically-pumped cesium vapor magnetic sensor, which is sampled at 0.1 seconds and which has an in-flight sensitivity of 0.001 nT. The sensor capabilities guaranteed correct sampling of high magnetic gradient zones. The total field intensity range for this instrument is approximately 20,000 to 100,000 nT. The magnetometer sensor was transported and attached to a tow-cable 15 m below the helicopter. The noise rarely exceeded 0.1 nT for this contract.

2.4.4. VLF System

A Herz VLF system, Totem 2A model, was used to measure the total field and vertical quadrature components of both of the two VLF stations, operating in the range of 15 kHz - 30 kHz. VLF channels were also sampled at a 0.1 second interval. The sensor was transported in the same auxiliary bird used for the magnetic sensor.

The transmitters used were chosen to be aligned with the main structural trends of the area geology. Those were as follows:

NLK, Seattle, Washington, USA	24.8 kHz
NAA, Cutler, Maine, USA	24.0 kHz

2.4.5. GPS Positioning System

A Scintrex Differential GPS system comprising a PNAV-486 navigation computer and NovaTel 951 R GPS Card 10-channel receiver was employed to provide positioning and navigation control. The system determines the absolute position of the helicopter in three dimensions, resulting in a position sampling accuracy of about 5 m. As many as 7 to 10 satellites are monitored during all flight periods in order to provide continuous and actualized information to the pilot. This data is combined with base station GPS data in a post-flight correction procedure. The GPS positioning data were recorded at 1.0 second intervals.

2.4.6. Data Acquisition/Recording System

A Scintrex PDAS-1000 data acquisition system was used to record and monitor the geophysical data. Data were also simultaneously recorded on hard disk and then ported to a laptop hard drive and dumped to the field computers for post-flight computer processing.

2.4.7. Ancillary Equipment

A Scintrex VFPR-3 Video Flight Path Recorder System, comprising a Panasonic colour video camera and a Sony VCR operating in 8 mm format was used to record the flight path of the helicopter. Time and fiducial information were superimposed on the video recording along with the uncorrected GPS position.

A Bendix-King KRA-10 radar altimeter system was used to record the terrain clearance with an accuracy of about 1 m.

The altimeter was interfaced to the data acquisition system with an output repetition rate of 0.1 second. Recording was carried out in both digital and analog format.

2.5. Ground Equipment

2.5.1. Magnetometer and GPS Base Station

A Scintrex CS-2 cesium magnetometer, with digital recording, was operated continuously throughout the airborne data acquisition phase. The instrument was set up with a sampling interval of 2 seconds and sensitivity of 0.1 nT, to monitor the diurnal variation and periodic magnetic storms. At the end of the days work, the data stored in the magnetometer was transferred to the field workstation but not used in the data reduction.

A ground base station GPS unit was also installed at the operations base to monitor GPS satellite correction data. The records from the base station GPS were used with the aircraft files to determine the differential correction (DGPS) of the flight path.

2.5.2. Field Computer Work Station

A dedicated PC-based field computer workstation was used for purposes of reproducing the geophysical data for quality control, plotting a corrected flight for navigation control and for copying and verifying the digital data. The data were then sent to Scintrex's Toronto office for final processing.

2.6. Data Acquisition Procedures

Data is collected in a binary format with a header file in ASCII and one binary file per line. As well, a binary file of the remote positioning information accumulates while the aircraft is surveying.

The survey area in British Columbia was initially planned by using the GPS Navtrain simulation program. For each block, the coordinates as well as line spacing, direction, etc, were input in the program to compile the survey parameters and to generate the total line kilometers and the survey control files. These files were used by the operator for real time navigation purposes.

Daily routine involved a series of calibrations and set up procedures for the geophysical system:

a) An external coil was used to calibrate the EM system periodically and an internal coil was employed to check the system calibration by repeating the checking procedures at least twice per survey flight. The EM system was also phase adjusted with an external ferrite bar before each survey flight;

b) The VLF system was tuned to two of the VLF transmitters located in the United

States, according to the survey area location and flight line direction. In all cases, NAA and NLK were used for this survey.

c) The magnetometer sensor performance was evaluated by the noise level showing up on the analog record (4th difference profile).

The field office routine comprised the compilation and data quality control, as follows:

a) Data quality control involved checking the EM noise levels and drift, identifying the presence and amplitude of spherics, as well as implementing correct calibration procedures. For magnetic data, the noise envelope was measured by 4th difference record; spikes due to cultural effects or sensor orientation were carefully monitored. VLF was checked for data recording spikes and noise levels;

b) Analysis of GPS flight path plot files involved comparing the initial plot of the flight path with the planned flight path;

c) Video tape flight path checking to confirm cultural sources affecting data and anomaly locations;

d) Plotting the base station magnetometer data files in order to reproduce the diurnal variation profile. For acceptance of magnetic data, the diurnal variations had to be less than 40 nT for a 5 minute period;

After the pre-processing, the data were organized in the Geosoft format data files. These files, including the geophysical and positioning information, were transferred to an optical disk for office processing purposes.

2.7. Field Personnel

The survey crew consisted of the following personnel:

Dave Hayward	Crew Chief
Damir Jamakosmanovic	Systems Operator
John Currie	Data man/Geophysicist

The pilot and flight engineer were supplied by the Helicopter company (Northern Mountain Helicopters Inc., Prince George, British Columbia).

General project management was under the responsibility of Terry McConnell, Vice President and General Manager, Systems and Surveys Division, Scintrex Limited.

3. DATA PROCESSING

3.1. Considerations

Data processing involved applying the Scintrex Computer Mapping and Processing routines to the data. The data center at Scintrex is configured in a PC environment with workstations based on Pentium 90 series computers, with high capacity hard disks and E-size Hewlett-Packard Inkjet plotters.

Basically the processing consisted of four different steps, as follows:

a. Post-flight processing to generate a flight path derived from the GPS locations.
b. Generation of the Oasis database merging the position relative to the data.
c. Geophysical data reduction in Oasis by application of correction procedures.
d. Processing of the data and preparation of plot files by standard methods.

During post flight processing, the GPS corrected positions are reduced and the survey data is imported into an OASIS binary database. The OASIS system is used for all merging, corrections, editing functions and preconditioning. Once this segment of the work is completed, specific X,Y,Z files are exported from the binary database ready for processing with GEOSOFT software. This system permitted on-site monitoring of data quality during survey, and allows immediate preliminary map production and follow-up of exploration anomalies and mapping targets.

Different procedures were followed in order to process the data for map generation. According to the data character (i.e. Magnetic, EM, or VLF), different correction procedures were applied and were standardized for all work in British Columbia as outlined in the following section.

3.2. Data Compilation

3.2.1. Flight Path Generation

After importing each survey flight into the database, the corrected GPS positions were merged for each successive flight. At this point, an X,Y,Z file containing an Easting and Northing, together with a fiducial could be created in order to test the flight path.

3.2.2. Magnetic Data

No base station variation removal was carried out on the surveyed magnetic field because magnetic diurnal variation was minor at all times. The airborne total field data was leveled by the use of tie lines exclusively throughout the survey work.

Data quality check was accomplished by computing the fourth difference and plotting the unlevelled data with the difference function. This technique permitted tracking the performance and deterioration of the magnetometer sensor as well as the noise levels which were superimposed on the data during survey activities. The bad data was removed in a special column of the data base after copying the original data to a new channel, thus preserving the raw magnetic values. The manual editing consisted of occasional elimination of dropout spikes which were up to 1.5 seconds wide and were caused by the magnetometer losing orientation while climbing up steep mountain faces.

The leveling was carried out by adjusting the intersection points on the traverse lines such that the differences were minimized with the control lines. First a leveling intersection network is established and intersections are weighted according to their magnetic differences. For example an intersection on a sharp magnetic high having a high gradient may be weighted much lower than the average point or simply may be eliminated from the network.

OASIS permitted visual examination of the intersections for each tie-line if manual editing was required. As well, the leveled line could be visually compared to the unleveled line at any time during the leveling process. The leveled data was then exported to an X,Y,Z file and a preliminary map was generated and inspected.

A minimum curvature, Akima spline was applied. The data were gridded and then prepared for contouring by applying a Hanning filter to the gridded values.

The IGRF field was not removed from the leveled total field because of large regional variations in the measured total field over relatively short distances. An FFT-based, two-dimensional operation was used to generate the Reduction-to-the-Pole version (RTP) of the total magnetic intensity map. Another FFT-based operation was used to calculate the first vertical derivative of the total magnetic intensity. The data was gridded and prepared for contouring by applying a Hanning filter to gridded values.

3.2.3. VLF Data

The processing applied to VLF data involved first correcting for a 2.0 second lag (caused by the internal acquisition of the instrument). Then the field strengths from the two stations were summed. A regional field was calculated from the summed values and then subtracted from the summed values such that the resultant residual contained anomalous wavelengths shorter or equal to one thousand meters.

This filtering removes responses caused by long wavelength changes in signal strength and sharpens the short wavelength responses and produces a multi-directional image. However, all VLF maps can be very affected by terrain, resulting in anomalies displaying a high correlation with ridges that are parallel to the transmitter direction and that are moderately conductive.

3.2.4. Electromagnetic Data

Initially all channels of EM data were inspected for noise and noise characteristics on a flight by flight, line by line basis. Data falling within the allowable noise envelope were first treated with a non-linear filter (1.5 seconds width and 5% of tolerance) to reduce the amplitude of all spikes to within the acceptable noise envelope. Next, the data was treated with a lowpass, matched, recursive filter (0.3 second cutoff) to separate the signal from the remaining short period noise. This signal enhanced channel formed the basis for all further processing of the electromagnetic data in that channel. The procedure was then repeated for all EM channels. A visual inspection of the raw and filtered channels profiles at the same scale was carried out on every flight line.

The EM data were then subjected to a semi-automated anomaly picking using the low and mid frequency coaxial coil pairs (875 Hz and 4,800 Hz) in order to ensure the highest resolution possible with respect to the anomalous zone nearest the surface. The technique was implemented by first calculating a residual for the inphase and quadrature components and plotting these at the same scale on the OASIS screen. As well, the original filtered component and the computed regional of the inphase component are plotted on the same screen to prevent the possibility of picking filter artifacts.

The picker then referred to the plots to pick the anticipated conductor locations and to the numerical window to check the digital values of the respective inphase and quadrature components. At this point the picker inserted an anomaly flag in the anomaly column such that he can export the amplitudes and location at the picked points only. The amplitudes are then used to interpret the conductance which could arise from a plate model (finite plate 600 X 300 m). The interpreted conductances were inserted into the database and an anomaly X,Y,Z file was re-exported and merged with the flight path in order to make an anomaly map.

Leveling of the EM channels was carried out on the coplanar coil pairs so that apparent resistivity map could be made. A table was constructed which consisted of averaged end point values of inphase and quadrature components of all sequential calibration flights along with their respective GPS times for each frequency. From this point a table file was made for each flight, for each component and for each frequency.

The required frequencies (930 Hz and 4,170 Hz) were leveled by assuming that linear drifting had occurred between the calibration lines. A resistivity value was then extracted from a lookup table of half space resistivity grid values for that frequency and component. If non-linear drifting had occurred (common in mountainous terrain) the zero levels was manually adjusted such that leveling errors in the data were minimized. Finally, the lower limit of values below the signal to noise threshold were clipped to a constant value. As well, those values above the approximate value of the respective frequency were also clipped to a constant value depending on the coherency of the resistivity data. A lowpass filter (cutoff at 0.5 seconds) was applied to the calculated resistivity and this data was then exported in X,Y,Z format such that a resistivity map could be made.

3.3. Map Generation

3.3.1. General Characteristics

A standard grid cell size of 25 m was used. Computer generated contour maps of total field magnetics, vlf and resistivity were typically created from their respective grids. Colour maps were produced by interpolating the grid down to an appropriate pixel size. This data is then incremented with respect to specific amplitude ranges to provide solid colour "contour" maps. Black-line contours were also superimposed on the colour maps using GEOSOFT merging routines.

The UTM coordinate net was superimposed on the maps as well as the flight path. Latitude and Longitude ticks were also added to the map surrounds. A colour pallet located at the right side of the map shows the different levels of intensity relative to the colour being mapped. Legend information identifying the client and the product is then added to the map surround.

The characteristics that have been produced and presented for these surveys are described below:

3.3.2. Magnetic Maps

Three different magnetic map sets were produced: **Total Magnetic Intensity** and **Calculated First Vertical Derivative** and the **Total Magnetic Intensity Reduced to the Pole.** The total magnetic intensity data were contoured by using 2,10 and 50 nT intervals.

3.3.3. Electromagnetic Maps

Contoured Apparent Resistivity Map at 930 Hz - resistivity (in ohm-m), calculated using a half space formula for the horizontal co-planar frequency of 930 Hz.

Contoured Apparent Resistivity Map at 4170 Hz - resistivity (in ohm-m), calculated using a half space formula for the horizontal co-planar frequency of 4170 Hz.

EM Anomaly Symbol Maps - The symbols express conductance estimates for the anomalies detected by the vertical co-axial coils of 870 Hz and 4800 Hz. Each Symbol shows the anomaly referenced by a letter, the frequency of the picked conductance and the conductance in Siemens based on a thin vertical plate 600 m X 300 m in dimension, separated in four different classes, as below:

Class I -	over 100 Siemens
Class II -	10 ≤ 100 Siemens
Class III-	1 ≤ 10 Siemens
Class IV -	≤ 1 Siemens

3.3.4. Other Contour Maps

The VLF data were presented in a colour version and tittled the **Summed Residual VLF Field Strength Map.** It was generated by processing of the total field measured by Line and Ortho stations. The VLF contouring information is presented in percent (%) of the primary field strength.

3.4. Digital Archives

A Digital archive in GEOSOFT format containing raw and corrected data was prepared.

3.5. Data Processing Personnel

Scintrex operations at the Data Center in Toronto was carried out by geophysicist John Currie.

4. DELIVERED PRODUCTS

4.1. Survey Report

The survey report describes the data acquisition, processing, and final presentation of the survey results. In addition to computed maps a tabulation of identified anomalies, anomaly sources and their characteristics forms part of the report.

4.2. Maps

The following maps were presented to Imperial Metals Corporation as results of the airborne geophysical survey carried out over concessions in British Columbia:

4.2.1. Colour and Contour Maps

- 1:20,000 Total Magnetic Intensity
- 1:10,000 Total Magnetic Intensity Reduced to the Pole
- 1:10,000 Calculated First Vertical Derivative of Total Magnetic Intensity
- 1:10,000 Summed VLF Field Strength
- 1:10,000 Apparent Resistivity @ 930 Hz
- 1:10,000 Apparent Resistivity @ 4170 Hz

4.2.2. EM Anomaly Map

- 1:10,000 EM Anomaly Symbols

4.2.3. Black line Contour Maps

- 1:10,000 Total Magnetic Intensity

4.2.4. Tabulation of Supplied Maps

	Giant Copper (# of maps)	Shiko Lake (# of maps)
1:10,000 TMI Contour	2	1
1:10,000 TMI RTP	2	1
1:10,000 1st Derivative	2	1
1:10,000 EM Anomaly	2	1
1:10,000 Resistivity (930 Hz)	2	1
1:10,000 Resistivity (4170 Hz)	2	1
1:10,000 VLF	2	1
1:20,000 TMI	2	1
Totals:	15	8
3 copies:	45	24

Grand Total: = 69 maps

Fifteen (15) different geophysical maps were supplied for the Giant Copper property as listed above. Due to the physical size of the property, the maps at 1:10,000 had to be divided into two map sheets; the North half and the South half.

Eight (8) different geophysical maps were supplied for the Shiko Lake property. The entire area fit onto one map sheet at 1:10,000.

Three copies of each map were delivered to Imperial Metals Corporation. Therefore, the grand total of supplied maps is 69.

4.3. Digital Archives

A digital archive in GEOSOFT format containing raw and corrected data was supplied to Imperial Metals Corporation.

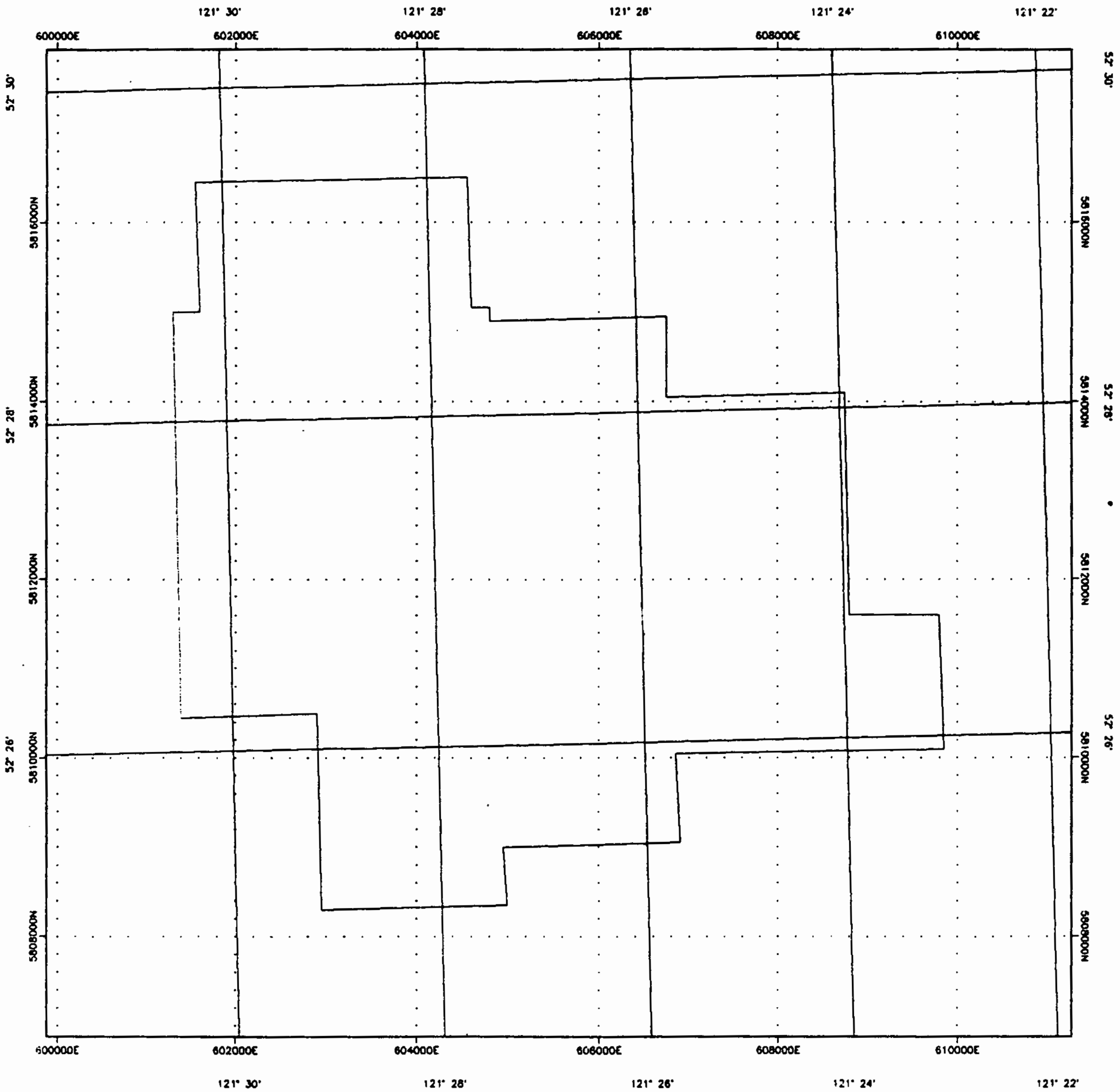
4.4. Flight Path Videos

All original 8 mm video tapes available for each survey flight were delivered to Imperial Metals Corporation.

APPENDIX A

SURVEY AREA LOCATION

AREA LOCATION MAP
SHIKO LAKE PROPERTY



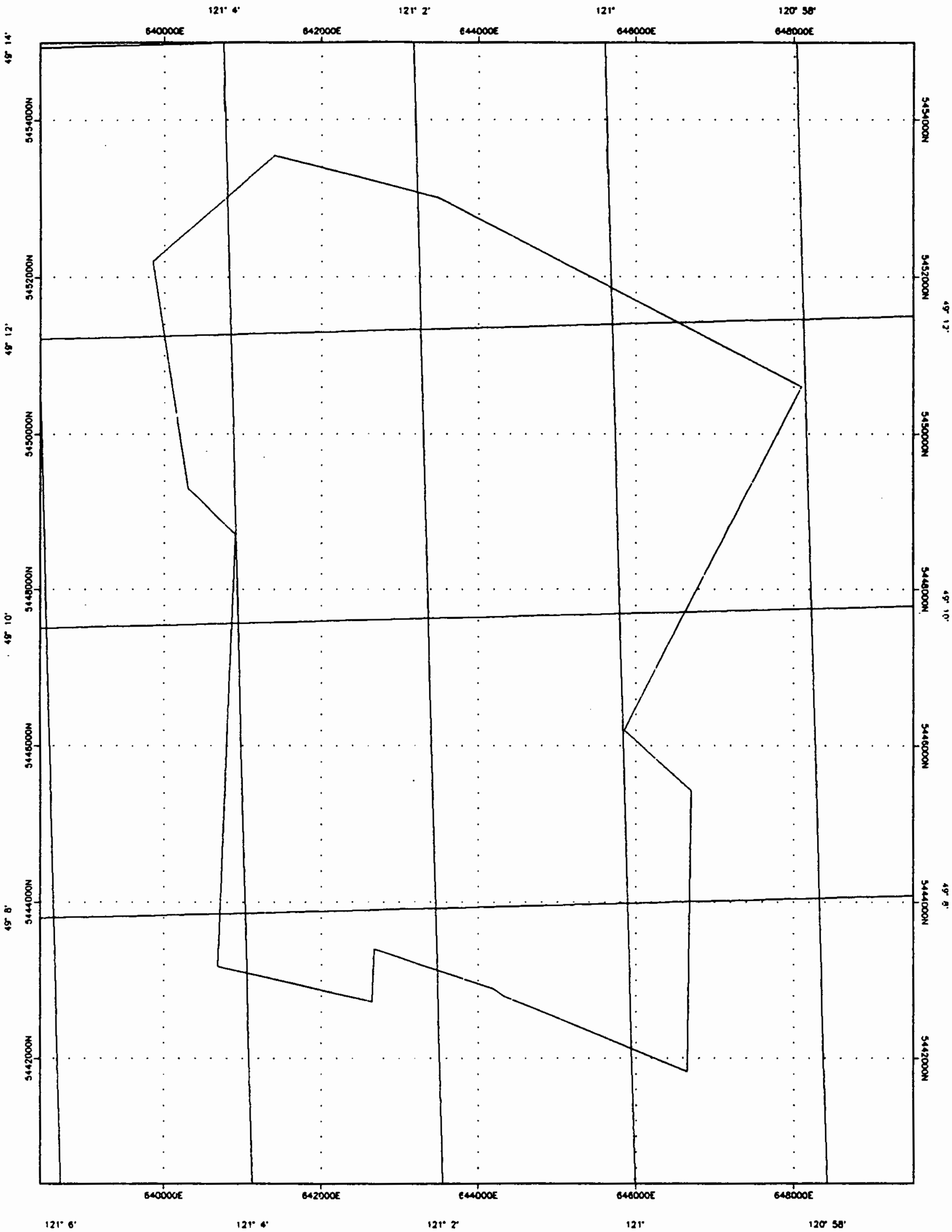
IMPERIAL METALS CORPORATION

SHIKO LAKE PROPERTY

1000 0
(meters)

N

AREA LOCATION MAP
GIANT COPPER PROPERTY



1000 0
(meters)

IMPERIAL METALS CORPORATION

GIANT COPPER PROPERTY

A 3

N

APPENDIX B

EM ANOMALY LISTING

EM ANOMALY LISTING
SHIKO LAKE PROPERTY

X (m)	Y (m)	Time Fiducial (sec)	Conductivity (siemens)	Frequency (Hz)	Anomaly Letter
Line 20					
601316.0	5814326.9	481.0	3.4	4800	A
Line 30					
601426.0	5811810.5	630.0	8.6	875	A
Line 40					
601507.7	5814457.0	771.0	7.0	875	A
601522.0	5811783.8	838.0	1.9	4800	B
Line 60					
601709.7	5814652.4	1071.0	7.3	875	A
Line 80					
601912.2	5814436.6	1404.0	5.0	875	A
601904.6	5810626.9	1505.0	1.5	4800	B
Line 90					
602010.9	5810999.2	1529.0	2.1	4800	A
Line 100					
602097.2	5815087.7	1694.0	2.8	4800	A
Line 110					
602204.5	5814675.1	1945.0	4.4	875	A
Line 140					
602497.2	5811984.9	2432.0	1.7	4800	A
Line 160					
602703.9	5815123.2	2709.0	8.5	875	A
602698.1	5811854.9	2797.0	2.6	4800	B
Line 180					
602902.2	5812468.5	3280.0	1.8	4800	A
602916.6	5810539.8	3329.0	8.4	875	B
Line 190					
603007.8	5811039.4	3439.0	3.9	4800	A
603015.8	5812408.9	3481.0	1.1	4800	B
Line 200					
603110.9	5812181.8	3799.0	3.3	875	A
Line 210					
603215.4	5808493.4	178.0	4.4	875	A
603194.0	5810052.4	219.0	2.1	875	B
603213.5	5811902.1	270.0	7.6	875	C

EM ANOMALY LISTING
SHIKO LAKE PROPERTY

X (m)	Y (m)	Time Fiducial (sec)	Conductivity (siemens)	Frequency (Hz)	Anomaly Letter
Line 220					
603372.7	5813735.1	466.0	3.3	4800	A
603322.2	5810312.7	564.0	0.8	4800	B
603331.9	5808681.5	613.0	1.0	4800	C
Line 230					
603418.9	5814354.9	797.0	5.7	875	A
Line 250					
603648.4	5811627.6	1153.0	1.4	4800	A
603616.4	5814938.8	1247.0	1.3	4800	B
Line 270					
603815.2	5811576.4	1591.0	0.9	4800	A
Line 280					
603875.7	5815777.7	1723.0	2.8	4800	A
603877.6	5814286.9	1764.0	2.5	4800	B
Line 290					
604009.9	5815579.5	2141.0	0.5	4800	A
Line 300					
604068.7	5815596.6	2167.0	1.7	4800	A
Line 310					
604222.3	5814963.6	2547.0	1.1	4800	A
Line 320					
604303.6	5814901.2	2602.0	1.3	4800	A
604300.7	5811304.5	2699.0	0.7	4800	B
Line 330					
604422.1	5812478.8	2903.0	1.8	4800	A
604428.9	5815065.8	2973.0	2.2	4800	B
Line 340					
604513.0	5814239.5	3019.0	1.4	4800	A
604479.7	5810769.2	3116.0	0.6	4800	B
604455.9	5808812.7	3176.0	1.0	4800	C
Line 350					
604615.5	5811460.9	3282.0	2.1	4800	A
604583.0	5813612.5	3336.0	5.3	4800	B
604589.0	5814274.1	3353.0	2.0	4800	C

EM ANOMALY LISTING
SHIKO LAKE PROPERTY

	X (m)	Y (m)	Time Fiducial (sec)	Conduct-ivity (siemens)	Frequency (Hz)	Anomaly Letter
Line 360						
	604711.2	5810312.7	3503.0	3.3	4800	A
	604684.7	5808653.3	3549.0	3.4	4800	B
Line 370						
	604818.2	5810629.7	564.0	2.7	4800	A
Line 380						
	604898.6	5813130.1	732.0	1.5	4800	A
	604911.0	5810241.7	799.0	6.8	875	B
Line 390						
	605031.7	5810607.5	889.0	2.0	4800	A
	604998.0	5813758.9	973.0	2.9	4800	B
Line 400						
	605119.6	5812879.8	1071.0	2.2	4800	A
	605095.1	5811410.7	1108.0	2.1	4800	B
Line 410						
	605204.3	5812041.3	1269.0	2.4	4800	A
	605205.5	5812829.2	1292.0	1.2	4800	B
Line 430						
	605403.5	5811875.2	1631.0	1.6	4800	A
	605416.2	5812526.3	1653.0	1.0	4800	B
Line 440						
	605506.1	5812851.6	1788.0	0.8	4800	A
Line 450						
	605602.9	5812239.6	2003.0	1.0	4800	A
	605609.2	5813571.4	2041.0	0.8	4800	B
Line 460						
	605697.4	5812762.8	2153.0	3.2	4800	A
Line 470						
	605807.2	5813401.2	2404.0	1.1	4800	A
Line 500						
	606105.7	5811098.5	3059.0	1.6	4800	A
Line 520						
	606299.8	5813389.6	3382.0	1.1	4800	A
Line 530						
	606396.9	5813344.3	3651.0	1.2	4800	A

EM ANOMALY LISTING
SHIKO LAKE PROPERTY

	X (m)	Y (m)	Time Fiducial (sec)	Conductivity (siemens)	Frequency (Hz)	Anomaly Letter
Line 540						
	606506.8	5813202.9	3757.0	0.6	4800	A
	606497.2	5809613.3	3855.0	0.9	4800	B
Line 550						
	606598.9	5812629.0	4003.0	6.9	875	A
	606601.2	5813008.9	4014.0	2.4	4800	B
Line 560						
	606674.0	5812991.2	4126.0	2.6	4800	A
Line 570						
	606817.4	5812221.0	4332.0	0.9	4800	A
	606801.6	5812903.5	4354.0	1.4	4800	B
Line 580						
	606863.2	5813961.7	4393.0	1.8	4800	A
Line 590						
	607023.1	5813083.3	4637.0	6.3	875	A
Line 650						
	607611.8	5811202.3	5552.0	0.6	4800	A
	607618.0	5813429.0	5644.0	2.0	4800	B
Line 660						
	607709.3	5813336.0	5693.0	1.9	4800	A
Line 670						
	607779.3	5813491.0	5956.0	1.7	4800	A
Line 680						
	607896.8	5812678.1	6002.0	1.1	4800	A
Line 690						
	608018.0	5813488.9	467.0	3.3	4800	A
Line 700						
	608054.5	5813031.2	528.0	2.8	4800	A
Line 710						
	608215.3	5812180.4	724.0	1.3	4800	A
	608215.2	5812840.0	758.0	1.1	4800	B
Line 720						
	608334.0	5813942.8	807.0	1.4	4800	A
Line 740						
	608458.8	5813965.2	1142.0	3.4	4800	A

EM ANOMALY LISTING
SHIKO LAKE PROPERTY

X (m)	Y (m)	Time Fiducial (sec)	Conductivity (siemens)	Frequency (Hz)	Anomaly Letter
608467.4	5813762.5	1148.0	1.0	4800	B
608467.1	5813220.0	1167.0	0.7	4800	C
Line 750					
608557.4	5812888.8	1412.0	1.3	4800	A
608568.2	5813257.9	1428.0	1.1	4800	B
Line 800					
609096.2	5811453.7	1779.0	2.1	4800	A
609110.9	5810825.1	1799.0	2.2	4800	B
Line 820					
609319.7	5810589.3	1937.0	4.3	875	A
Line 850					
609614.1	5811084.7	2129.0	6.1	875	A
Tie 9010					
603053.0	5810191.8	2344.0	1.7	4800	A
607161.4	5810265.6	2494.0	1.0	4800	B
607950.0	5810177.9	2519.0	1.1	4800	C
Tie 9020					
601727.6	5812293.3	47.0	1.6	4800	A
601955.8	5812312.8	56.0	1.2	4800	B
602970.9	5812322.4	90.0	3.5	4800	C
605493.8	5812327.2	166.0	0.6	4800	D
Tie 9040					
602630.8	5816036.8	452.0	4.5	875	A

EM ANOMALY LISTING
GIANT COPPER PROPERTY

	X (m)	Y (m)	Time Fiducial (sec)	Conduct-ivity (siemens)	Frequency (Hz)	Anomaly Letter
Line 110						
	640723.4	5447673.1	3701.0	7.0	875	A
Line 120						
	640852.1	5448336.4	4267.0	7.4	875	A
Line 130						
	640995.2	5452440.1	1198.0	5.6	4800	A
Line 160						
	641275.8	5453168.0	2528.0	3.9	4800	A
	641283.7	5452884.9	2537.0	4.8	875	B
	641261.6	5450363.6	2619.0	2.7	4800	C
Line 170						
	641393.2	5450429.4	3401.0	7.6	875	A
	641344.9	5451198.6	3439.0	0.9	4800	B
	641367.3	5452134.3	3480.0	4.5	4800	C
	641384.0	5453310.4	3514.0	7.6	875	D
Line 180						
	641459.9	5453308.6	3539.0	7.4	4800	A
	641496.9	5453149.3	3551.0	1.6	875	B
	641473.6	5452028.9	3589.0	2.1	4800	C
	641513.7	5450415.9	3640.0	2.9	875	D
	641472.1	5443434.4	3980.0	1.1	4800	E
Line 190						
	641616.5	5446436.8	4173.0	4.2	4800	A
	641591.4	5453283.5	4526.0	2.7	4800	B
Line 200						
	641648.8	5452975.6	363.0	1.6	4800	A
Line 210						
	641764.3	5446913.6	2196.0	1.0	4800	A
Line 220						
	641851.8	5449921.3	3186.0	16.1	875	A
Line 230						
	641985.6	5449766.8	4275.0	2.2	4800	A
	641953.7	5453073.4	4465.0	1.1	4800	B

EM ANOMALY LISTING
GIANT COPPER PROPERTY

X (m)	Y (m)	Time Fiducial (sec)	Conductivity (siemens)	Frequency (Hz)	Anomaly Letter
Line 240					
642063.8	5453153.7	247.0	2.0	4800	A
642025.2	5449503.4	444.0	1.0	4800	B
Line 250					
642161.0	5450776.8	676.0	1.3	4800	A
Line 270					
642360.4	5450159.4	2424.0	2.8	4800	A
Line 280					
642437.7	5450177.1	512.0	1.3	4800	A
Line 420					
643867.5	5450208.2	1248.0	1.1	4800	A
Line 460					
644276.2	5446201.1	2741.0	1.2	4800	A
Line 480					
644456.4	5445958.1	3587.0	0.9	4800	A
644453.6	5446310.1	3609.0	3.6	4800	B
Line 490					
644554.4	5445905.3	4391.0	1.3	4800	A
Line 500					
644665.5	5445759.9	4639.0	6.5	875	A
Line 520					
644876.6	5446018.9	5571.0	1.3	4800	A
644879.4	5446813.1	5623.0	1.2	4800	B
Line 540					
645114.3	5445914.8	993.0	0.9	4800	A
Line 550					
645167.4	5444295.1	1704.0	1.3	4800	A
Line 560					
645278.1	5444514.6	1877.0	1.2	4800	A
Line 600					
645640.0	5445463.6	931.0	1.3	4800	A
Tie 9010					
641607.2	5453454.7	322.0	2.5	4800	A

APPENDIX C

FLIGHT LOGS

...TREX ...E G... ...SICA... ...GHT L...

CLIENT: IMPERI... METAL	BLOCK #: 2	JOB: 6126	PAGE OF

FLT #	01	DATE:	APR. 20/96	OPERATOR:	DAMIR
PILOT:	PAUL WINIECKI	O.A.T.:	8°C /	A/C REG:	ASTAR B1
BASE:	HOPE	QNH:	/	FUEL:	60 %
TAKE OFF:	6:30	LAND:	6:50	FLT TIME:	0.20
HEIGHT:	200	VLF LINE:	SEATTLE	VLF ORTHO:	MAINE
EM FREQ: F1 F2 F3 F4 F5				VIDEO TAPE #	1

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S		
TEXT:	TEXT: NO REC		TOTAL COUNT		
DUP:	DUP:		POTASSIUM		
RAW GPS:	RAW GPS:		URANIUM		
			THORIUM		

TEST LINE C...S:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
									TEST FLIGHT FOR PHISICAL
									LIFTING AND EQUIPMENT CHECKING

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GE[illegible]SICAL FLIGHT LOG

CLIENT: IMPERI[illegible] METAL	BLOCK #: 2	JOB: 6126	PAGE OF
FLT #: 002	DATE: APR 22/96	OPERATOR: DAMIR J.	
PILOT: PAUL W.	O.A.T.: 15°C / 15°C	A/C REG: ASTAR B1	
BASE: HOPE	QNH: /	FUEL: 60 %	
TAKE OFF: 11:05	LAND: 12:25	FLT TIME: 1:20	
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE	
EM FREQ: F1 F2 F3 F4 F5		VIDEO TAPE #: 1	

TEST LINE CO[illegible]:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES		FLIGHT DATA FILES	
TEXT:	15.T47	TEXT:	S6042118.T07
DUP:	15.D47	DUP:	S6042118.D07
RAW GPS:		RAW GPS:	

SPECTROMETER R.O.I.'S		
TOTAL COUNT		
POTASSIUM		
URANIUM		
THORIUM		

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
10.01	1					15B48			GND NULL, PHASE, QC
10.03	1					18824			317 - 350 G.C.
10. S	~~391~~	402				18B54			
20. N	453					18B56			
30 N	498					19B00			
40. S	560					19B03			
50 N	691					19B07			
60 S	807					19B12			
70 N	1006					19B17			CANCELED LINE GPS (NO DATA)

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE G[illegible]SICAL FLIGHT LOG

CLIENT: INPE[illegible]AL METAL	BLOCK #: 2	JOB: 612E	PAGE OF	TEST LINE CODES:
FLT #: 003	DATE: APR 22/96	OPERATOR: DAMIR J.		EM GND PHASE: XXX1
PILOT: PAUL W.	O.A.T.: 15°C / 14°C	A/C REG: ASTAR B1		EM GMD Q COIL: XXX2
BASE: HOPE	QNH: /	FUEL: 60 %		EM NULL/Q AIR: XXX3
TAKE OFF: 13:20	LAND: 14:55	FLT TIME: 1:35		GND SPEC BG,UR TH: XXX4
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MARINE		SPEC BG H2o/AIR XXX5
EM FREQ: F1 F2 F3 F4 F5		VIDEO TAPE # 1		SPEC TEST LINE XXX6

GND TEST FILES	FLIGHT DATA FILES	SPECTROMETER R.O.I.'S		
TEXT:	TEXT: 56042120.T36	TOTAL COUNT		RADAR ALT CAL XXX7
DUP:	DUP: 20D36	POTASSIUM		TO BE ANNOUNCED XXX8
RAW GPS:	RAW GPS:	URANIUM		TO BE ANNOUNCED XXX9
		THORIUM		XXX=FLIGHT NUMBER

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
70.03	1					20B41			
70.S	251					20B49			GPS JUMPS
80.N	380					20B55			
90.S	586					21B02			GPS JUMPS
100N	907					21B14			F1 NOISE 1320-1400
110S	1656					21B30			CANCELED LINE
120N	1794					21B35			NULL. QC.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GE ... SICAL FLIGHT LOG

CLIENT: IMPER AL METAL	BLOCK #: 2	JOB: 6126	PAGE OF

FLT #: 004
PILOT: PAUL W
BASE: HOPE
TAKE OFF: 17:15
HEIGHT: 200
EM FREQ: F1 ___ F2 ___ F3 ___ F4 ___ F5 ___

DATE: APR 27 /96
O.A.T.: 15°C / 14°C
QNH: /
LAND: 18:45
VLF LINE: SEATTLE

OPERATOR: DAMIR J.
A/C REG: ASTAR 01
FUEL: 60%
FLT TIME: 1:30
VLF ORTHO: MAINE
VIDEO TAPE #: 2

TEST LINE CO ES:
EM GND PHASE: XXX1
EM GMD Q COIL: XXX2
EM NULL/Q AIR: XXX3
GND SPEC BG,UR TH: XXX4
SPEC BG H2o/AIR: XXX5
SPEC TEST LINE: XXX6
RADAR ALT CAL: XXX7
TO BE ANNOUNCED: XXX8
TO BE ANNOUNCED: XXX9
XXX=FLIGHT NUMBER

GND TEST FILES
TEXT: 23T41
DUP: 23D41
RAW GPS:

FLIGHT DATA FILES
TEXT: 2800.T05
DUP: 2800D05
RAW GPS:

SPECTROMETER R.O.I.'S
TOTAL COUNT
POTASSIUM
URANIUM
THORIUM

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
8881 N	1					23B42			NULL ALSO Q.C.
9983 U	1					00B29			
7777.E	549					00B34			TEST LINE
70 S	717					00B39			
80 N	893					00B43			
90 S	1146					00B48			GPS JUMP
90 S	1331					00B55			GPS JUMP
90 N	1432					00B59			
100 S	1730					01B04			CONNECTOR TX OUT
110 N	3412					01B34			CANCELED

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GEOPHYSICAL FLIGHT LOG

CLIENT: IMPERIAL METAL | BLOCK #: 2 | JOB: 6126 | PAGE OF

FLT #: 005 | DATE: APR 27/96 | OPERATOR: DAMIR J
PILOT: PAUL W | O.A.T.: 10°C / 10°C | A/C REG: ASTAR B1
BASE: HOPE | QNH: / | FUEL: 60 %
TAKE OFF: 19:20 | LAND: 20:45 | FLT TIME: 1:25
HEIGHT: 200 | VLF LINE: SEATTLE | VLF ORTHO: MAINE
EM FREQ: F1 F2 F3 F4 F5 | VIDEO TAPE # 2

TEST LINE NUMBERS:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES
TEXT:
DUP:
RAW GPS:

FLIGHT DATA FILES
TEXT: 2801.T41
DUP: 2801.D41
RAW GPS:

SPECTROMETER R.O.I.'S
TOTAL COUNT
POTASSIUM
URANIUM
THORIUM

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
9983N	1					02B32			NULL CHECK.
9993S	297					02B37			QC.
120 S	432					02B43			HIGH ~~ALTITUDE~~ MOUNTAIN
110N	1912					03B09			
9993S	3025					03B28			NULL. 3220 QC.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GEOPHYSICAL FLIGHT LOG

CLIENT: IMPERIAL METAL	BLOCK #: 2	JOB: 6126	PAGE OF

FLT #: 006
PILOT: PAUL W
BASE: HOPE
TAKE OFF: 8:35
HEIGHT: 200
EM FREQ: F1 ____ F2 ____ F3 ____ F4 ____ F5 35 KHZ

DATE: APR 28 / 96
O.A.T.: 12°C / 14°C
QNH: ____ / ____
LAND: 10:05
VLF LINE: SEATTLE

OPERATOR: DAMIR J
A/C REG: ASTAR BI
FUEL: 60%
FLT TIME: 1:30
VLF ORTHO: MAINE
VIDEO TAPE #: 3

TEST LINE CODES:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES

TEXT: S6042803.T36
DUP: S6042803.D36
RAW GPS:

FLIGHT DATA FILES

TEXT: S6042815.T18
DUP: S6042815.D18
RAW GPS:

SPECTROMETER R.O.I.'S

TOTAL COUNT
POTASSIUM
URANIUM
THORIUM

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
8881.S	1					15B06			NULL 239 QC 1130
9983S	1					15B47			QC 262 NULL
130.S	346					16B08			VERTICAL LIFTING VERY SLOW UP TO 7.000 FEET
140.N	1761					16B32			
9993N	2955					16B54			NULL Q.C 3112

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

REX-...E GE... SICA... HT L...

CLIENT: IMPER[illegible] METAL	BLOCK #: 2	JOB: 612 G	PAGE OF
FLT # 007	DATE: APR 28/96	OPERATOR: DAMIR J	
PILOT: PAUL W	O.A.T.: 14°C / 14°C	A/C REG: ASTAR B1	
BASE: HOPE	QNH: /	FUEL: 65%	
TAKE OFF: 10:30	LAND: 12:15	FLT TIME: 1:45	
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE	
EM FREQ: F1 F2 F3 F4	F5 35KHz	VIDEO TAPE # 3	

TEST LINE C[illegible]S:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES	SPECTROMETER R.O.I.'S
TEXT:	TEXT: S6042817.T0C	TOTAL COUNT
DUP:	DUP: S6042817.000	POTASSIUM
RAW GPS:	RAW GPS:	URANIUM
		THORIUM

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
9983N	1					17802			NULL; Q.C.
150 S	458					17846			GPS NO UPDATE (CAN NOT PICK UP SATTEL)
160 N	1676					18808			
170 S	2768					18827			
180 N	3828					18846			
9993 S	4741					19802			NULL Q.C

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GE[illegible]SICAL FLIGHT LOG

CLIENT: IMPER[illegible]L METAL	BLOCK #:	JOB: 6126	PAGE OF	TEST LINE C[illegible]S:
FLT # 008	DATE: APR 28/96		OPERATOR: DAMIR J.	EM GND PHASE: XXX1
PILOT: PAUL W.	O.A.T.: 14°C / 14°C		A/C REG: ASTAR B1	EM GMD Q COIL: XXX2
BASE: HOPE	QNH: /		FUEL: 60%	EM NULL/Q AIR: XXX3
TAKE OFF: 12:50	LAND: 14:25		FLT TIME: 1:35	GND SPEC BG,UR TH: XXX4
HEIGHT: 200	VLF LINE: SEATTLE		VLF ORTHO: MAINE	SPEC BG H2o/AIR XXX5
EM FREQ: F1 F2	F3 F4	F5 35 KHz	VIDEO TAPE # 3	SPEC TEST LINE XXX6

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S			
TEXT:	TEXT: S6042819.T07		TOTAL COUNT			RADAR ALT CAL XXX7
DUP:	DUP: S6042819.007		POTASSIUM			TO BE ANNOUNCED XXX8
RAW GPS:	RAW GPS:		URANIUM			TO BE ANNOUNCED XXX9
			THORIUM			XXX=FLIGHT NUMBER

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
9983	1					20B00			NULL, QC.
190 S	380					20B07			
200 N	1705					20B31			
210 S	2579					20B47			
220 N	3486					21B03			
9993	4209					21B17			NULL, Q.C.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

[illegible]REX [illegible]BE GE[illegible]SICAL FLIGHT LOG

CLIENT: — —	BLOCK #:	JOB: ///	PAGE OF
FLT #: 009	DATE: MAY 3/96	OPERATOR: DAMIR J.	
PILOT: PAUL W	O.A.T.: /	A/C REG: ASTAR 61	
BASE: HOPE	QNH: /	FUEL:	
TAKE OFF: 13:35	LAND: 14:20	FLT TIME: 0:45	
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE	
EM FREQ: F1 F2 F3 F4 F5		VIDEO TAPE #: /	

TEST LINE CODES:

- EM GND PHASE: XXX1
- EM GMD Q COIL: XXX2
- EM NULL/Q AIR: XXX3
- GND SPEC BG,UR TH: XXX4
- SPEC BG H2o/AIR XXX5
- SPEC TEST LINE XXX6
- RADAR ALT CAL XXX7
- TO BE ANNOUNCED XXX8
- TO BE ANNOUNCED XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES	SPECTROMETER R.O.I.'S
TEXT:	TEXT: S6042817.T13	TOTAL COUNT
DUP:	DUP:	POTASSIUM
RAW GPS:	RAW GPS:	URANIUM
		THORIUM

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
999.3S	1					20B41			TEST FLIGHT FOR CUSTOMER PRESENTATION
111. S	255					20B48			
121. N	535					20B57			
999.3N	897					21B05			
1009 S	1255					21B09			

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GE[illegible]YSICAL FLIGHT LOG

CLIENT: IMPERI[illegible] METAL	BLOCK #: 2	JOB: 6126	PAGE OF	TEST LINE C[illegible]ES:
FLT #: 010	DATE: MAY 31/96	OPERATOR: DAMIR J.		EM GND PHASE: XXX1
PILOT: PAUL W.	O.A.T.: 14°C / 12°C	A/C REG: ASTAR B1		EM GMD Q COIL: XXX2
BASE: HOPE	QNH: /	FUEL: 65%		EM NULL/Q AIR: XXX3
TAKE OFF: 16:25	LAND: 18:05	FLT TIME: 1:40		GND SPEC BG,UR TH: XXX4
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE		SPEC BG H2o/AIR XXX5
EM FREQ: F1 F2	F3 F4	F5	VIDEO TAPE # 3	SPEC TEST LINE XXX6

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S		
TEXT: S6042816.T46	TEXT: S6042821.T14		TOTAL COUNT		
DUP: 2816.D46	DUP: 2821.D14		POTASSIUM		
RAW GPS:	RAW GPS: 2821.R13		URANIUM		
			THORIUM		

RADAR ALT CAL XXX7
TO BE ANNOUNCED XXX8
TO BE ANNOUNCED XXX9

XXX=FLIGHT NUMBER

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		
	FID	START	END	START	END	NAME	FID	BOUNDRY	COMMENTS
222.1 S	1					16B48			NULL, PHASE TO 730 FID Q.C. 848 CONT
998.3 S	1					23B33			
200 S	330					23B44			– GPS JUMPS
210 N	1743					00B08			– GPS JUMPS
220 S	2799					00B27			– GPS JUMPS
230 N	3791					00B45			– GPS JUMPS
999.3 N	4497					00B58			

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

REX BE G SICA GHT L

CLIENT: IMPER[illegible]L METAL	BLOCK #: 2	JOB: 6126	PAGE OF

FLT #: 011	DATE: MAY 31 96	OPERATOR: DAMIR J.			
PILOT: PAUL W	O.A.T.: 13°C / 12°C	A/C REG: ASTAR B1			
BASE: HOPE	QNH: /	FUEL: 65%			
TAKE OFF: 18:40	LAND: 20:15	FLT TIME: 1:35			
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE			
EM FREQ: F1	F2	F3	F4	F5	VIDEO TAPE # 4

TEST LINE C[illegible]S:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S		
TEXT:	TEXT: S6042801.T04	2801.T59	TOTAL COUNT		
DUP:	DUP: S6042801.D04	2801.D59	POTASSIUM		
RAW GPS:	RAW GPS: R6042801.R04	2801.R59	URANIUM		
			THORIUM		

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
998.3S	1					01B41			NULL, QC.
240 S	235					01B47			(PDAS COMPUTER OUT 700 METERS BEFORE END OF LINE) MUST RUN PDAS AGAIN.
		NEW	TEXT FILE	28	01.T59				
250 N	1					02B05			– GPS JUMPS
260 S	898					02B21			– GPS JUMPS
270 N	1837					02B37			– GPS JUMPS
999.3N	2630					02B52			NULL, QC

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GEOPHYSICAL FLIGHT LOG

CLIENT: IMPERIAL METAL	BLOCK #: 2	JOB: 6126	PAGE OF
FLT #: 012	DATE: MAY 5/96	OPERATOR: DAMIR J	
PILOT: BOB M.	O.A.T.: 10°C / 11°C	A/C REG: ASTAR B1	
BASE: HOPE	QNH: /	FUEL: 65%	
TAKE OFF: 10:05	LAND: 11:40	FLT TIME: 1:35	
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE	
EM FREQ: F1 F2 F3 F4	F5 35K	VIDEO TAPE # 4	

TEST LINE CODES:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES	SPECTROMETER R.O.I.'S
TEXT: S60505I6T30	TEXT: S60505I7.T02	TOTAL COUNT
DUP: S60505I6D30	DUP: S60505I7.D02	POTASSIUM
RAW GPS:	RAW GPS:	URANIUM
		THORIUM

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
120.1N	1					16B33			NULL, OC. CROSTOR, GND
998.3S	1					17B14			
280 S	263					17B25			GPS NO UPDATE (NO SAT.) JUMPS
290 N	996					17B39			
300 S	1682					17B52			
310 N	2273	XXXXX				—			CONECTOR TX OUT / CANCELED LINE
NEW TEXT FILE 18T20									
310 S	1					18B25			CONECTOR TX OUT / CANCELED LINE

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

REX-... GE... SICA... HT L...

CLIENT: IMPE... L METAL	BLOCK #: 2	JOB: 6126	PAGE OF

FLT # 013	DATE: MAY 5/96	OPERATOR: DAMIR J	
PILOT: BOB M.	O.A.T.: 12°C / 12°C	A/C REG: ASTAR 61	
BASE: HOPE	QNH: /	FUEL: 70%	
TAKE OFF: 12:25	LAND: 14:20	FLT TIME: 1:55	
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE	
EM FREQ: F1 F2 F3	F4 F5 35K	VIDEO TAPE # 4	

TEST LINE C...ES:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S		
TEXT:	TEXT: S6050518.T33		TOTAL COUNT		
DUP:	DUP: S6050518.033		POTASSIUM		
RAW GPS:	RAW GPS:		URANIUM		
			THORIUM		

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
998.3S	1					18B35			NULL, Q.C.
310 S	427					19B39			
320 N	1000					19B46			
330 S	1501					19B55			GPS JUMPS 1550 - 1580
340 N	2048					20B05			
350 S	2529					20B13			
360 N	3079					20B23			GPS JUMPS
370 S	3625					20B33			
380 N	4179					20B43			GPS JUMPS TO 4280
390 S	4741					20B53			
400 N	5212					21B02			
999.3 N	5735					21B12			NULL Q.C.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

CLIENT: IMPERIAL METAL	BLOCK #: 2	JOB: 6126	PAGE OF

FLT #: 014	DATE: MAY 5 /96	OPERATOR: DAMIR
PILOT: BOB M.	O.A.T.: 12°C / 12°C	A/C REG: ASTAR B1
BASE: HOPE	QNH: /	FUEL: 70%.
TAKE OFF: 15:10	LAND: 17:15	FLT TIME: 2:05
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE
EM FREQ: F1 F2 F3 F4	F5 35K	VIDEO TAPE # 5

TEST LINE CODES:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES	SPECTROMETER R.O.I.'S
TEXT:	TEXT: 56050521.T20	TOTAL COUNT
DUP:	DUP: 56050521.D20	POTASSIUM
RAW GPS:	RAW GPS:	URANIUM
		THORIUM

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
998.3 S	1					22B15			NULL QC.
400 S	262					22B23			
420 N	905					22B34			
430 S	1365					22B43			
440 N	1809					22B51			
450 S	2232					22B59			
460 N	2615					23B06			
470 S	3037					23B14			
480 N	3456					23B21			
490 S	3986					23B31			
500 N	4504					23B40			
510 S	4950					23B48			
520 N	5404					23B56			
999.3 N	5865					00B07			NULL QC

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GEOPHYSICAL FLIGHT LOG

CLIENT: IMPERIAL METAL	BLOCK #: 2	JOB: 6126	PAGE OF
FLT #: 015	DATE: MAY 5 /96	OPERATOR: DAMIR J.	
PILOT: BOB M.	O.A.T.: 11 °C / 10 °C	A/C REG: ASTAR B1	
BASE: HOPE	QNH: /	FUEL: 70%	
TAKE OFF: 17:35	LAND: 19:05	FLT TIME: 1:30	
HEIGHT: 200	VLF LINE: SEATTLE	VLF ORTHO: MAINE	
EM FREQ: F1 F2 F3 F4	F5 35K	VIDEO TAPE # 5	

TEST LINE CODES:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES	SPECTROMETER R.O.I.'S
TEXT:	TEXT: S6050600.T12	TOTAL COUNT
DUP:	DUP: S6050600.D12	POTASSIUM
RAW GPS:	RAW GPS:	URANIUM
		THORIUM

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
998.3 S	1					00B41			NULL QC.
530 S	254					00B47			
540 N	754					00B56			VERY WINDY
550 S	1280					01B05			
560 N	1783					01B14			
570 S	2225					01B22			
580 N	2689					01B30			
999.3 N	3173					01B43			NULL QC.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

CLIENT:	BLOCK #:	JOB:	PAGE OF
FLT # 016	DATE: MAY 9/96	OPERATOR:	
PILOT:	O.A.T.: /	A/C REG:	
BASE: HOPE	QNH: /	FUEL:	
TAKE OFF: 8:00	LAND: 10:00	FLT TIME: 2:00	
HEIGHT:	VLF LINE:	VLF ORTHO:	
EM FREQ: F1 F2	F3 F4	F5	VIDEO TAPE #

TEST LINE CODES:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S
TEXT: 050901 T 50	TEXT: ~~0509 01 T~~ 50	01 T 56	TOTAL COUNT
DUP:	DUP:		POTASSIUM
RAW GPS:	RAW GPS:		URANIUM
			THORIUM

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
160.1N	1					14B25			GND Q.C. PHASE Q.C.
998.35	1					15B05			NULL QC CRESTON
590 S	326					15B17			
600 N	808					15B26			
610 S	1212					15B33			PS NULL 1700 → LINE
620 N	1845								
630 S	2221					15B51			TX CON OUT
6309	~~2?82~~					16B20			CONT
640 N	2782					16B23			2890 2483
650 S	3314					16B33			OK.
660 N	3655					16B40			GPS JUMPS
999.34	4044					16B49			NULL QC.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GEOPHYSICAL FLIGHT LOG

CLIENT:	BLOCK #:	JOB:	PAGE OF	**TEST LINE CODES:**
FLT # 17	DATE: MAY 9/96	OPERATOR:		EM GND PHASE: XXX1
PILOT:	O.A.T.: /	A/C REG:		EM GMD Q COIL: XXX2
BASE:	QNH: /	FUEL:		EM NULL/Q AIR: XXX3
TAKE OFF: 10:50	LAND: 12:50	FLT TIME: 2:00		GND SPEC BG,UR TH: XXX4
HEIGHT:	VLF LINE:	VLF ORTHO:		SPEC BG H2o/AIR XXX5
EM FREQ: F1 F2 F3 F4 F5		VIDEO TAPE #		SPEC TEST LINE XXX6

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S	
TEXT:	TEXT: 0916T56		TOTAL COUNT	RADAR ALT CAL XXX7
DUP:	DUP:		POTASSIUM	TO BE ANNOUNCED XXX8
RAW GPS:	RAW GPS:		URANIUM	TO BE ANNOUNCED XXX9
			THORIUM	XXX=FLIGHT NUMBER

LINE #	START	TIME		BOUNDARIES		FILE	ACCEPTED INTERVAL		COMMENTS
	FID	START	END	START	END	NAME	FID	BOUNDRY	
99835	1					17051			
670 S	225					17B57			
680 N	587					18B03			
690 S	963					18B10			
700 N	1257					18B18			
710 S	1390					18B20			
720 N	1545					18B24			
730 S	1660					18B27			
740 N	1792								
750 S	1904					18B32			
760 N	2021					18B35			
770 S	2111					18B37			
780 N	2183					18B39			
790 S	2251					18B40			
800 N	2302					18B42			
810 S	2343					18B43			[illegible]
820 N	2388					18B44			[illegible]
70 S						18B48			
80 N	2598					19B05			
90 S	2719					19B08			
100 N						19B16			
110 S	3485					19B23			9993H 4470 19B52
120 N	3933					19B32			

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GE[illegible]SICAL FLIGHT LOG

CLIENT:	BLOCK #:	JOB:	PAGE OF

FLT #: 18 DATE: MAY 8 196

PILOT: O.A.T.: / OPERATOR:

BASE: QNH: / A/C REG:

TAKE OFF: 13:15 LAND: 15:10 FUEL:

HEIGHT: VLF LINE: FLT TIME: 1:55

EM FREQ: F1 F2 F3 F4 F5 VLF ORTHO:

VIDEO TAPE # 6

TEST LINE CODES:

EM GND PHASE:	XXX1
EM GMD Q COIL:	XXX2
EM NULL/Q AIR:	XXX3
GND SPEC BG,UR TH:	XXX4
SPEC BG H2o/AIR	XXX5
SPEC TEST LINE	XXX6
RADAR ALT CAL	XXX7
TO BE ANNOUNCED	XXX8
TO BE ANNOUNCED	XXX9

XXX=FLIGHT NUMBER

GND TEST FILES
TEXT:
DUP:
RAW GPS:

FLIGHT DATA FILES
TEXT: 09197 52
DUP:
RAW GPS:

SPECTROMETER R.O.I.'S
TOTAL COUNT
POTASSIUM
URANIUM
THORIUM

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
998.35	1					20B27			
9010 E						20B28			CTRL
9020 W	519					20B37			
130 W	727					20B43			
140 S	1220					20B53			GPS JUMPS
150 N	1910					21B06			GPS JUMPS
160 S	2382					21B14			NULL F5 → 2450 GPS JUMPS
170 N	3016					21B26			
180 S	3524					21B35			
190 N	4002					21B44			
999.34	4559					21B55			NULL CAL

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-GARBE G... SICAL FLIGHT L...

CLIENT:	BLOCK #:	JOB: 6126	PAGE OF

FLT #: 19 DATE: MAY 11/96 OPERATOR:
PILOT: O.A.T.: / A/C REG:
BASE: QNH: / FUEL:
TAKE OFF: 16:20 LAND: 18:10 FLT TIME: 1:50
HEIGHT: VLF LINE: VLF ORTHO:
EM FREQ: F1 F2 F3 F4 F5 VIDEO TAPE # 7

GND TEST FILES
TEXT: 05112 2T07
DUP:
RAW GPS:

FLIGHT DATA FILES
TEXT: 1123T10 1201T01
DUP:
RAW GPS:

SPECTROMETER R.O.I.'S
TOTAL COUNT
POTASSIUM
URANIUM
THORIUM

TEST LINE CODES:
EM GND PHASE: XXX1
EM GMD Q COIL: XXX2
EM NULL/Q AIR: XXX3
GND SPEC BG,UR TH: XXX4
SPEC BG H2o/AIR XXX5
SPEC TEST LINE XXX6
RADAR ALT CAL XXX7
TO BE ANNOUNCED XXX8
TO BE ANNOUNCED XXX9

XXX=FLIGHT NUMBER

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
190.1 N	1					22B38			
9983 N	1					23B22			
10 N	~~457~~								
20 S	457					23B41			
30 N	596					23B44			
40 S	712					23B47			
50 N	878					23B51			
60 S	1024					23B56			
70 N	1181					00B00			
80 S	1350					00B03			
90 N	1515					00B06			
100 S	1658					00B10			
110 N	1825					00B14			
120 S	1996					00B17			
130 N	2156					00B20			
140 S	2319					00B25			
150 N	2488					00B29			
160 S	2666					00B33			
170 N	2841	-				00B37			2960 HAUSES
180 S	3170					00B43			3364 HAUSES
190 N	3378					00B49			
200 S	3589					00B53			3690
999.3	1					01B01			HULL

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE G… …SICAL FLIGHT LOG

CLIENT:	BLOCK #:	JOB: 6126	PAGE OF
FLT # 20	DATE: MAY 11/96	OPERATOR:	
PILOT:	O.A.T.: /	A/C REG:	
BASE:	QNH: /	FUEL:	
TAKE OFF: 18:35	LAND:	FLT TIME: 1:35	
HEIGHT:	VLF LINE: 19:10	VLF ORTHO:	
EM FREQ: F1 F2	F3 F4 F5	VIDEO TAPE #	

TEST LINE CODES:

- EM GND PHASE: XXX1
- EM GMD Q COIL: XXX2
- EM NULL/Q AIR: XXX3
- GND SPEC BG,UR TH: XXX4
- SPEC BG H2o/AIR XXX5
- SPEC TEST LINE XXX6
- RADAR ALT CAL XXX7
- TO BE ANNOUNCED XXX8
- TO BE ANNOUNCED XXX9

XXX=FLIGHT NUMBER

GND TEST FILES	FLIGHT DATA FILES		SPECTROMETER R.O.I.'S		
TEXT:	TEXT: 1201T12		TOTAL COUNT		
DUP:	DUP:		POTASSIUM		
RAW GPS:	RAW GPS:		URANIUM		
			THORIUM		

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
998.3	1					01B36			NULL
210 N	170					01B41			
220 S	388					01B45			[illegible]
230 N	632					01B50			
240 S	841					01B54			
250 N	1065					01B59			
260 S	1273					02B03			
270 N	1500					02B08			
280 S	1717					02B12			
290 N	1944					02B16			
300 S	2156					02B20			
310 N	2372					02B24			
320 S	2568					02027			
330 N	2789					02B31			
340 S	2990					02B35			
350 N	3197					02B39			
360 S	3376					02B43			
999.3S	3571					02B48			NULL

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SCINTREX-CARIBE GEOPHYSICAL FLIGHT LOG

CLIENT:	BLOCK #:	JOB: 6126	PAGE OF	TEST LINE CODES:
FLT # 21	DATE: MAY 12	OPERATOR:		EM GND PHASE: XXX1
PILOT: BOB H	O.A.T.: 14°C /	A/C REG:		EM GMD Q COIL: XXX2
BASE: HORSFLY	QNH: /	FUEL:		EM NULL/Q AIR: XXX3
TAKE OFF:	LAND:	FLT TIME:		GND SPEC BG,UR TH: XXX4
HEIGHT: 200	VLF LINE:	VLF ORTHO:		SPEC BG H2o/AIR XXX5
EM FREQ: F1 F2 F3	F4 F5	VIDEO TAPE #		SPEC TEST LINE XXX6
GND TEST FILES	FLIGHT DATA FILES	SPECTROMETER R.O.I.'S		RADAR ALT CAL XXX7
TEXT: 6051220T03	TEXT: 1220T14	TOTAL COUNT		TO BE ANNOUNCED XXX8
DUP:	DUP:	POTASSIUM		TO BE ANNOUNCED XXX9
RAW GPS:	RAW GPS:	URANIUM		
		THORIUM		XXX=FLIGHT NUMBER

LINE #	START FID	TIME START	TIME END	BOUNDARIES START	BOUNDARIES END	FILE NAME	ACCEPTED INTERVAL FID	ACCEPTED INTERVAL BOUNDRY	COMMENTS
210.1S	1					20B05			PHASE, Q.C. NULL
998.3H	1					20B24			
370 H	474					20B38			
380S	671					20B42			
390H	836					20B45			
400 S	1007					20B48			
410 N	1172					20B52			7 1310 4.5
420 S	1352					20B56			
430H	1532					20B59			
440 S	1725					21B03			
450H	1897					21B06			
460S	2080					21B09			
470H	2259					21B13			
480S	2453					21B17			HOUSES ← 2470
490H	2640					21B20			2735 →
500 S	2940					21B25			
510 H	3135					21B29			
520S	3330					21B33			HAUS END
530H	3512					21B37			HAUS ~~[illegible]~~ START
540S	3701					21B40			
550H	3878					21B43			
560 S	4076					21B47			5 TS JUMPS
570 H	4250					21B51			

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

Scintrex Limited
Airborne Systems & Surveys Division

WEEKLY OPERATIONS REPORT

Job #: 6126
Client: IMPERIAL METALS
Area: HOPE, BC

Base: HOPE
Aircraft: ASTAR B1

Week Ending: APRIL 28, 1996

Date	Flt #	Area	Flight Time			Production		Down Time				Comments
			Total	Ferry	Survey	Flown	Accepted	A/C	Equip.	Diurnal	WX	
Monday APR. 22	2	HOPE	1.3	1.0	.3	16.3	12.6	⊕	⊕	⊕	⊕	
	3	HOPE	1.6	1.1	.5	47.8	0.0					EM NOISE PROBLEM
Tuesday APR. 23								⊕	⊕	⊕	●	
Wednesday APR. 24								⊕	⊕	⊕	●	
Thursday APR. 25								⊕	⊕	⊕	●	
Friday APR. 26								⊕	⊕	⊕	●	
Saturday APR. 27	4	HOPE	1.5	.9	.6	36.9	0.0	⊕	⊕	⊕	⊕	EM NOISE PROBLEM
	5	HOPE	1.4	.6	.8	20.8	0.0					
Sunday APR. 28	6	HOPE	1.5	.7	.8	20.4	0.0	⊕	⊕	⊕	⊕	EM NOISE PROBLEM
	7	HOPE	1.7	.4	1.3	41.9	0.0					
	8	HOPE	1.6	.5	1.1	42.0	0.0					
Weekly Totals			10.6	5.2	5.4	226.1	12.6					
Previous Totals			-	-	-	-	-					
Job Totals			10.6	5.2	5.4	226.1	12.6					

Crew Chief: DAVE HAYWARD
Data Processor: JOHN CURRIE
Pilot: PAUL WINIECKI
Engineer: ANDREE LESSARD
Operator: DAMIR JAMAKOSMANOVIC

Scintrex Limited
Airborne Systems & Surveys Division

WEEKLY OPERATIONS REPORT

Job #: 6126
Client: IMPERIAL METALS
Area: HOPE, BC

Base: HOPE
Aircraft: ASTAR B1

Week Ending: MAY 5, 1996

Date	Flt #	Area	Flight Time			Production		Down Time				Comments
			Total	Ferry	Survey	Flown	Accepted	A/C	Equip.	Diurnal	WX	
Monday APR. 29								⊕	⊕	⊕	●	
Tuesday APR. 30								⊕	⊕	⊕	●	
Wednesday MAY 1								⊕	⊕	⊕	●	
Thursday MAY 2								⊕	⊕	⊕	●	
Friday MAY 3	9	HOPE	.7	.7	0.0	0.0	0.0	⊕	⊕	⊕	⊕	
	10	HOPE	1.7	.5	1.2	42.0	42.0					
	11	HOPE	1.6	.6	1.0	42.0	42.0					
Saturday MAY 4								⊕	⊕	⊕	●	
Sunday MAY 5	12	HOPE	1.6	.6	1.0	38.8	29.4	⊕	⊕	⊕	⊕	
	13	HOPE	1.9	.3	1.6	96.2	96.2					
	14	HOPE	2.1	.5	1.6	116.9	116.9					
	15	HOPE	1.5	.6	.9	58.0	58.0					
Weekly Totals			11.1	3.8	7.3	393.9	384.5					
Previous Totals			10.6	5.2	5.4	226.1	12.6					
Job Totals			21.7	9.0	12.7	620.0	397.1					

Crew Chief: DAVE HAYWARD
Data Processor: JOHN CURRIE
Pilot: PAUL W / BOB M
Engineer: ANDREE LESSARD
Operator: DAMIR JAMAKOSMANOVIC

Scintrex Limited
Airborne Systems & Surveys Division

WEEKLY OPERATIONS REPORT

Job #: 6126
Client: IMPERIAL METALS
Area: HOPE , HORSEFLY BC

Base: HOPE , WILLIAMS LAKE
Aircraft: ASTAR B1

Week Ending: MAY 12, 1996

Date	Flt #	Area	Flight Time			Production		Down Time				Comments
			Total	Ferry	Survey	Flown	Accepted	A/C	Equip.	Diurnal	WX	
Monday MAY 6								⊕	⊕	⊕	●	
Tuesday MAY 7								⊕	⊕	⊕	●	
Wednesday MAY 8								⊕	⊕	⊕	●	
Thursday MAY 9	16	HOPE	2.0	.9	1.1	76.8	76.8	⊕	⊕	⊕	⊕	
	17	HOPE	2.0	.8	1.2	98.1	98.1					
	18	HOPE	1.9	.6	1.3	86.8	86.8					
Friday MAY 10								⊕	⊕	⊕	⊕	TRAVEL FROM HOPE TO WILLIAMS LAKE
Saturday MAY 11	19	HORSEFLY	1.8	.8	1.0	126.0	126.0	⊕	⊕	⊕	⊕	
	20	HORSEFLY	1.6	.6	1.0	126.1	126.1					
Sunday MAY 12	21	HORSEFLY	2.2	.5	1.7	166.9	166.9	⊕	⊕	⊕	⊕	
	22	HORSEFLY	1.7	.8	.9	69.9	69.9					
Weekly Totals			13.2	5.0	8.2	750.6	750.6					
Previous Totals			21.7	9.0	12.7	620.0	397.1					
Job Totals			34.9	14.0	20.9	1370.6	1147.7					

Crew Chief: DAVE HAYWARD
Data Processor: JOHN CURRIE
Pilot: BOB M
Engineer: ANDREE LESSARD
Operator: DAMIR JAMAKOSMANOVIC