Ahbau Infill

Geochemical Report

Prepared by

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Helicopter-|Borne Geophysical Survey

Prepared By

Emily Farquhar

QUESNEL RIVER AREA

CARIBOO MINING DIVISION

BRITISH COLUMBIA

NTS 093G/1W

54 47 81, 124 70 82 W

UTM zone 10

prepared for

Richfield Ventures Corp.

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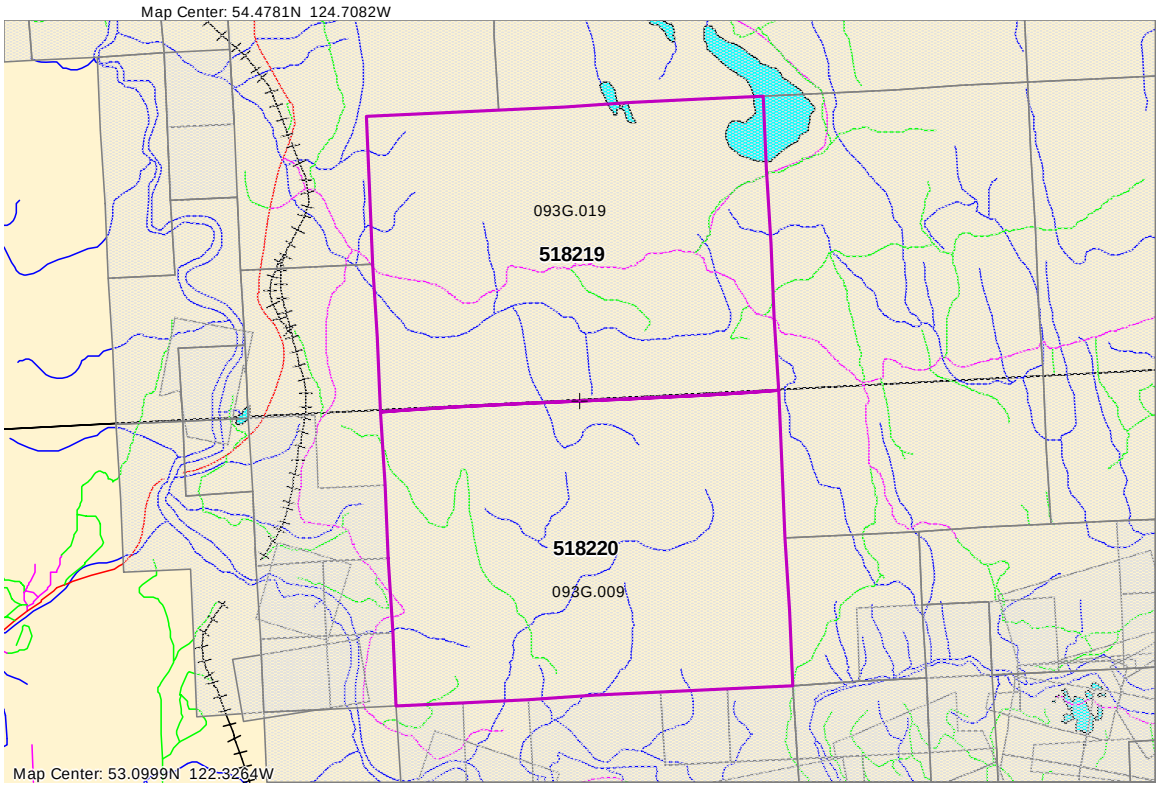
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Tenure Number	Type	Claim Name	Good Until	Area (ha)
518219	Mineral	PTTARGET	20070725	465.852
518220	Mineral	PTTARGETSOUTH	20070725	466.034

Total Area: 931.886 ha

ACCESSIBLITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Project area is in central BC, immediately east of the Cariboo transportation-utility corridor. Cariboo Highway (97), the B.C. Rail mainline, electric transmission lines, and gas transmission pipelines follow this corridor (Figure 3). Access to the project area is by highway 26, the Quesnel-Wells highway which bisects the project area into northern and southern halves. Within the Project area access is facilitated by innumerable recent logging roads that branch from the Cariboo Highway and the Wells-Barkerville Highway.

The climate in the area is boreal continental. Summers are hot, varying from dry to fairly wet. Winters tend to be cold with -30º C. temperatures common. Precipitation is fairly evenly distributed throughout the year with snow accumulations commonly more that a meter. The exploration working season is from mid-April to end October.

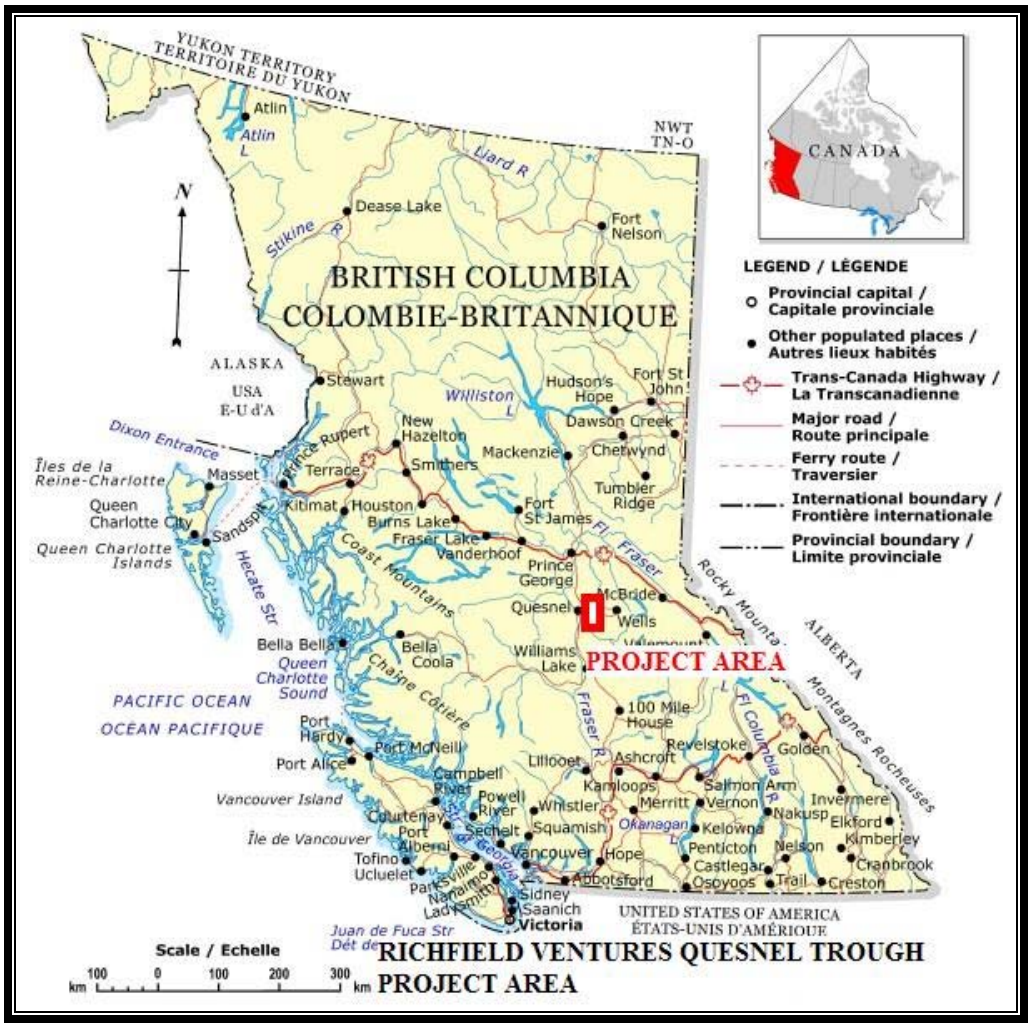


Figure 1. ***Index map.***

Quesnel, the city, is immediately west of the project area. Prince George, Quesnel and local smaller centers provide experienced manpower, equipment, logistical support and services. Prince George, 120 km north of Quesnel is a major regional center, with regularly scheduled air services to Vancouver and Kamloops. Helicopters and small fixed wing aircraft are readily available for charter.

The project area lies within the Interior Plateau physiographic province, a region of rolling north-northwest trending hills incised by small to medium sized, steep walled stream valleys. The relief is modest, generally less than 300 m, and the topography is dominated by drumlins and deglaciation drainage channels. Drainage is westward to the Fraser River. Much of the project area is underlain by thick glaciofluvial cover. As in many glaciated areas bedrock outcrops are most common on hill tops and in stream valleys. Logging road construction has improved access and increased outcrop exposure.

GEOLOGICAL SETTING

The project area is in the heart of Quesnel Trough, a linear northwest trending belt underlain by Late Triassic and Early Jurassic basalt and sedimentary rocks. From north to south the belt includes strata assigned to the Takla, Stuhini and Nicola groups. Quesnel Trough is generally 20 to 40 km wide and can be followed most of the length of BC from near Mackenzie to the 49th parallel. On the southwest Quesnel Trough is flanked by sedimentary and volcanic rocks of the Permian Cache Creek Group and on the northeast are metamorphic rocks of the Omineca Belt, dominantly Late PreCambrian and Early Paleozoic in age. The Pinchi Fault system forms the boundary of Quesnel Trough on the southwest and the Eureka-Spanish Mountain thrusts are at the Omineca Belt boundary.

Alkalic basaltic volcanic and volcaniclastic rocks of the upper Triassic Nicola Group (Quesnel Terrane) are the main rock types on the west side of the project area (Figures 3 and 4). Massive saussuritized green to dark brown green rocks dominate. The volcaniclastic textures are rarely visible and then only on weathered surfaces. Depositional or structural layering is lacking. Locally thin beds of black slate are intercalated with the volcaniclastic rocks.

Polyphase composite dykes, plugs and stocks of monzonite (nepheline) syenitic, syeno-diorite and alkali-gabbro intrude the alkalic volcaniclastic rocks and basalt. These undersaturated intrusive rocks are coeval with, or just younger than, the volcanics they invade. The stocks represent the remnants of eruptive centres of felsic volcanic rocks. They host alkalic suite porphyry mineral deposits.

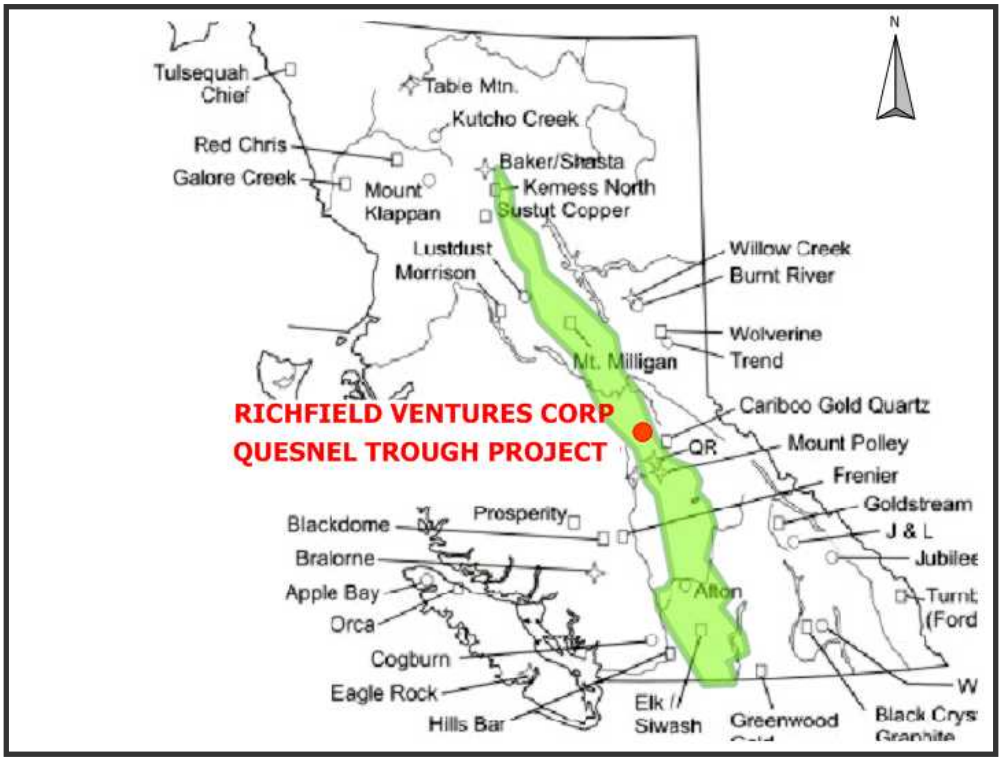


Figure 2. ***Quesnel Trough runs most of the length of BC.***

It is a narrow belt of Late Triassic volcanic and sedimentary rock. Quesnel Trough hosts many important porphyry copper-gold deposits in BC.

The east margin of the project area follows the Eureka and Spanish thrusts approximately. These thrust faults bring eastern Nicola slate over the Proterozoic to Permian Snowshoe Group. The Snowshoe is dominated by quartz mica schist and micaceous quartzite and represents metamorphosed continental sourced sedimentary and volcanic rocks. Along the thrust faulted boundary are slices and sheets of serpentinized ultramafic rocks (Crooked Amphibolite), thought to represent obducted remnants of oceanic crust and associated oceanic sediments.

Between the Eureka Spanish thrust and the Nicola volcanic belt is a low area with little relief and few outcrops. Here are scattered outcrops of black recessive weathering slate. Silty to fine sandy black slate, volcanic tuff and calcareous slate are interbedded locally. The rocks are weakly metamorphosed to lower greenschist facies and mostly unaltered. A slaty cleavage is common, but recrystallization along it is lacking. Bedding and cleavage trend northwest. Open to subisoclinal folds that trend northwest are seen locally.

Relations between the black slate and the volcanic rocks are not exposed. The slate is considered to be broadly coeval with the volcaniclastic Nicola and they may be an eastern forearc or backarc facies.

Quartz monzonite to granodiorite radiometrically dated as Cretaceous, the Naver Plutonic suite, invade the older rocks in the northwest part of the project area. They form a pluton of which only the southern extremity reaches the project area.

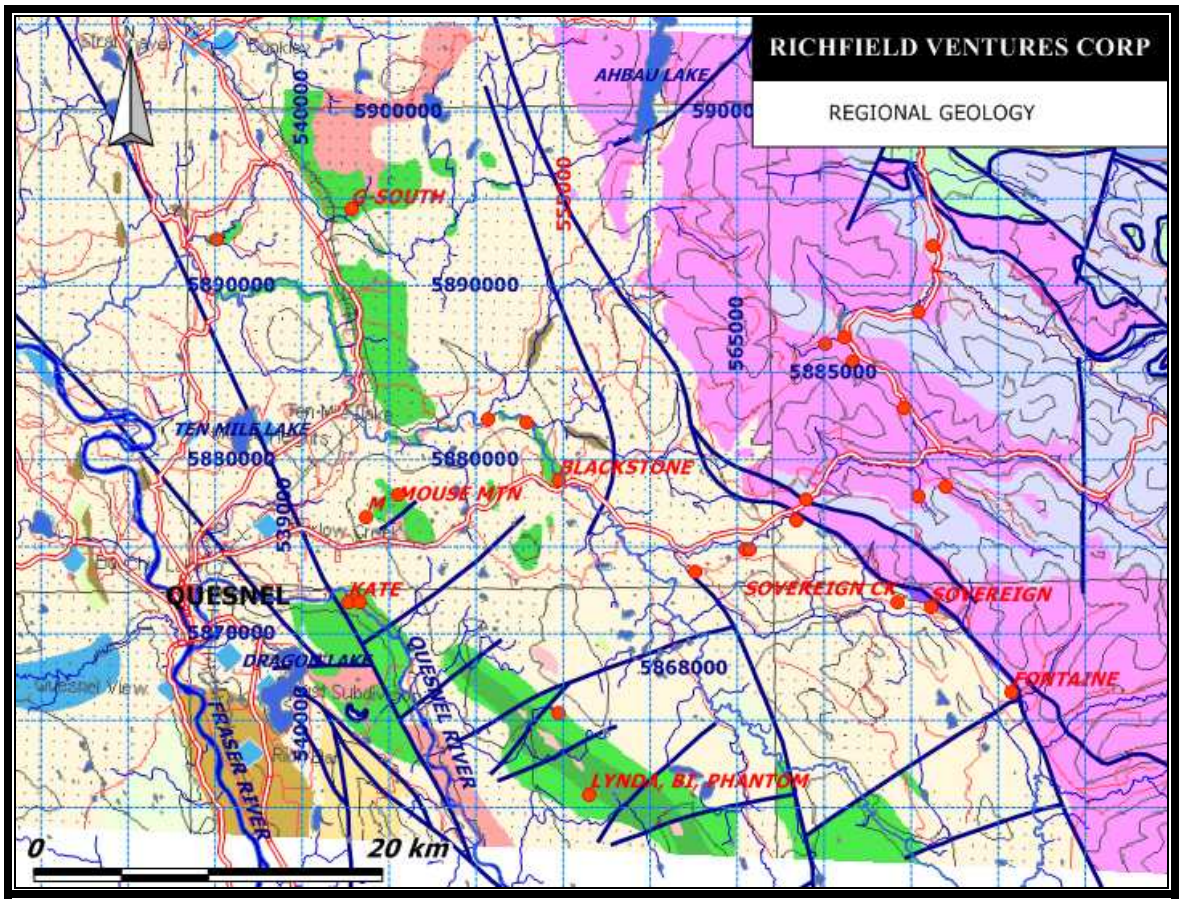


Figure 3. ***Geological Map of the project area.***
This geological map shows the known mineral occurrences in Richfield's Quesnel Trough project area in relation to the regional geology. Red circles mark known occurrences; bedrock showings are labeled and unlabelled circles represent placer occurrences. Mouse Mountain and G-South are the two main bedrock mineral occurrences in the region.

Note the three main rock units. On the east are quartzite and mica schist of the Precambrian to Carboniferous Snowshoe Group (coloured purple-pink). In the central belt (uncoloured) is slate of the eastern Nicola facies. These rocks are late Triassic in age. On the west (coloured green) are alkalic volcanic and volcaniclastic rocks of the late Triassic to early Jurassic Nicola Group. Faults are indicated by dark blue lines. Small bodies of syenite and allied rocks invade the Nicola volcanics; one is seen immediately south of the Mouse Mountain showing. The Naver pluton, a large granodiorite body, is shown in pink immediately north of the G-South occurrence. Ultramafic rocks occupy a discontinuous area along the fault boundary between the eastern Nicola facies and the Snowshoe Group. The two faults along this boundary are the Eureka and Spanish Thrusts.

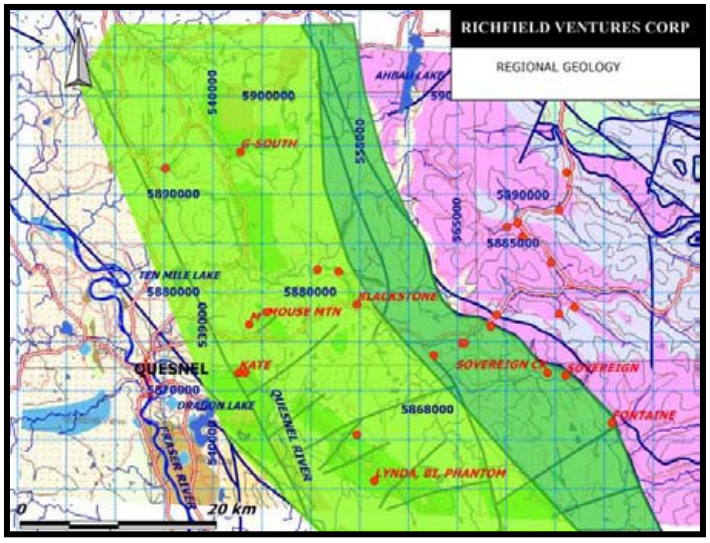


Figure 4. ***Facies distribution of the Nicola Group.***
This map shows the eastern (dark green) and western (light green) Nicola Group facies of Quesnel Trough in the project area. The Eureka-Spanish Thrust system (dark blue line) on the east is the boundary of Quesnel Trough with Barkerville Terrane.

Isolated exposures of Tertiary rocks, the Eocene Kamloops Group and Eocene to Oligocene Endako Group volcanics and sediments, are found in the south of the Project area.

The geologic fabric seen only in the eastern Nicola rocks and in the Snowshoe Group, strikes north northwest. This fabric is accompanied by regional and lesser faults which also trend north-northwest. Many sub regional northeast trending faults truncate this north-northwest trend. The northeast striking faults locally displace Cretaceous and earlier rocks.

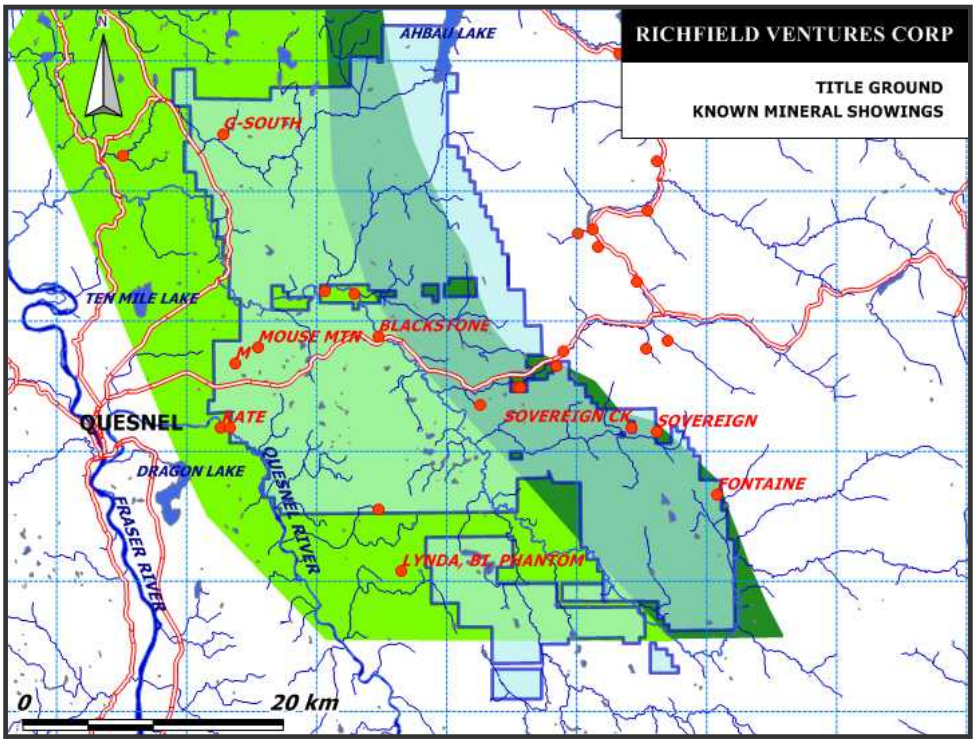


Figure 5. ***Map of RVC title and known mineral showings.***
Here the Richfield Ventures Corp title ground in pale blue (as of June 12, 2006) is shown on the geological map as taken from mapplace.ca. Note that the eastern claims cover most of the area underlain by the black slate eastern Nicola facies. In contrast the western claims are underlain by the volcanic part of the Nicola Group.

RICHFIELD VENTURES CORP
SOIL GEOCHEMISTRY OF THE PT GRID

INTRODUCTION

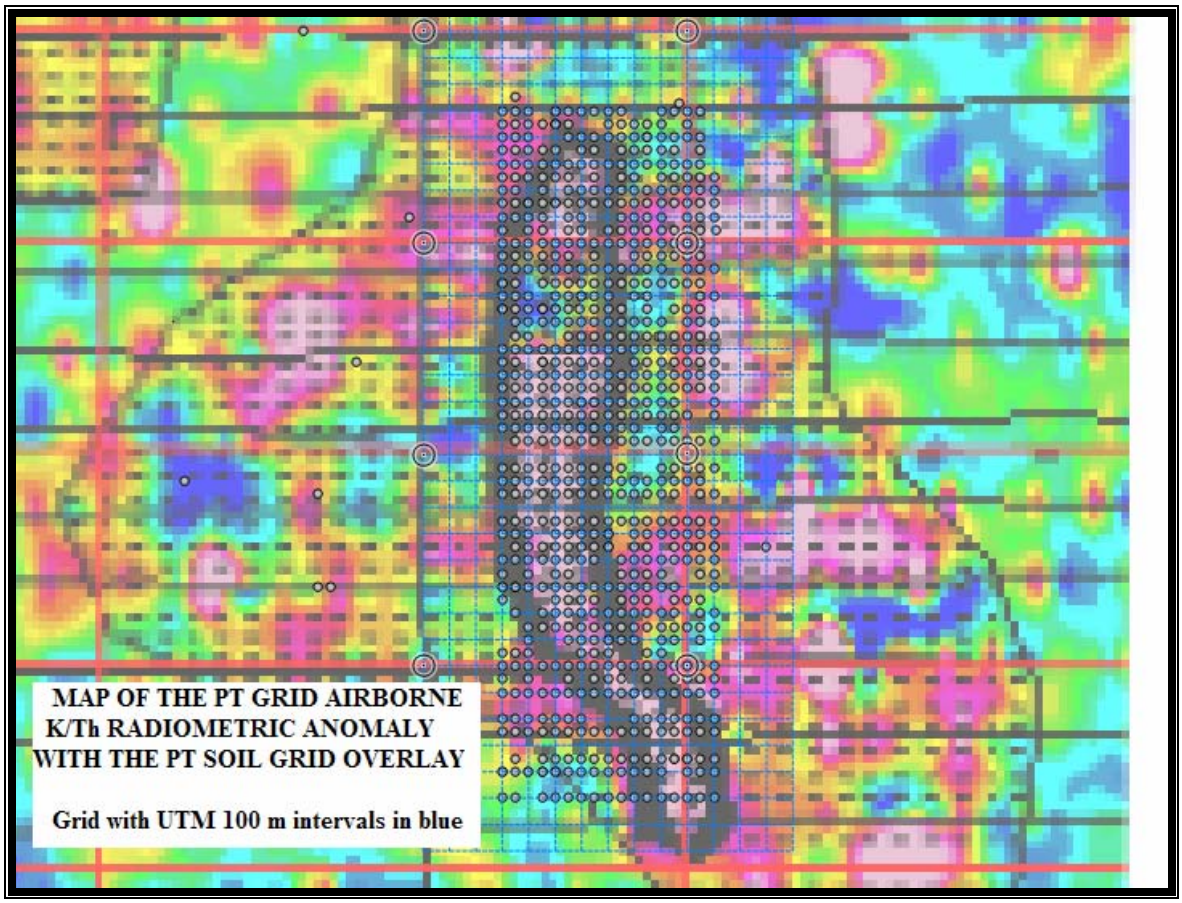
This review of the soil geochemical results from the PT grid is specifically prepared for Richfield Ventures Corp. The writer was not involved in the sampling or the analysis, but undertook the plotting of the results which were sent by Eco Tech, the analytical company. The writer spent part of one day on part of the grid during late August to examine rock exposures accessible from roads. Sampling was done at 50 m intervals on east-west lines spaced at 50 m and most samples were collected and analyzed during July and August 2005.

The geochemical results for the 738 analyzed samples were collated from the Excel files provided. These files were reformatted to XY coordinates and imported into Manifold for plotting, contouring and output diagrams. The results of this study are presented in maps of the chemistry by element. The maps show the same 100 m interval grid that is labeled by UTM northing and easting. Results of the analyses for each metal are shown by labels of the value of the metal at each locality. In most of the maps the anomalous values are highlighted in red. The metal values are represented in the maps as a topographic surface coloured in conventional topographic colours to represent highs and lows. The surface was automatically generated by a kriging program in Manifold.

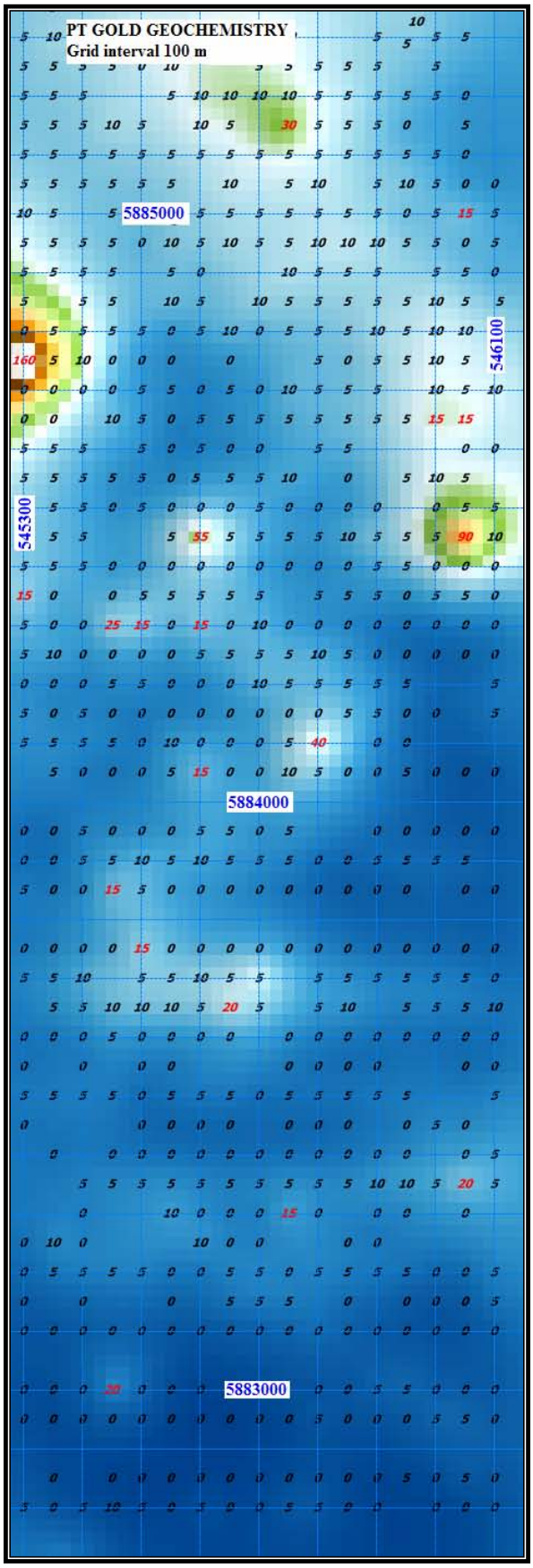
In general the grid responds in Cobalt, Chromium, Manganese, Nickel, Copper, Zinc and Gold and maps for these metals and their distribution are given here. For many other metals the results are consistently low and no plots were made for these elements. For example Silver, Arsenic, Bismuth, Cadmium, Lanthanum, Molybdenum, Lead showed no response in the analyses and no maps are given here for these metals. In most of these metals few if any samples even reached detection limits.

The PT soil grid location was determined by the K/Th ratio map interpretation of Mr Ron Sheldrake based on the airborne radiometric survey responses. A long narrow K high is seen where the grid was placed. Given the high K response it was expected that the geochemistry would respond particularly in Mo, Cu, Ag, Au and other metals seen with potassium rich alteration or potassic host rocks such as are found in porphyry deposits. No potassic alteration is seen on the ground so shallowly buried intrusive rocks were suspected as a cause of the K high. The geochemistry does not bear this out; the metals that responded are a dominantly mafic suite high in Fe, Mg, Co, Cr, Mn, and Ni with minor Cu and Au.

From overlaying the various geochem maps on the K/Th map it is clear that no correlation exists between the geochem maps and the K/Th anomaly as outlined by Mr Sheldrake. This leads to the question of what the radiometrics are picking up- with no answer in the geochemistry, or in the geology as mapped for that matter. The K/Th map with the soil gid overlain on it is reproduced below for reference.



This map shows a part of Mr Sheldrake's figure 5 on the Snake block with the outline of the K/Th high in pink with a black border. The small circles represent 738 sample localities on the soil grid and the blue lines represent the UTM grid with lines spaced at 100m. The grid covers the K/Th anomaly completely. The larger circles east and west of the anomaly represent control points used in georegistering the geochemical and geophysical data sets.

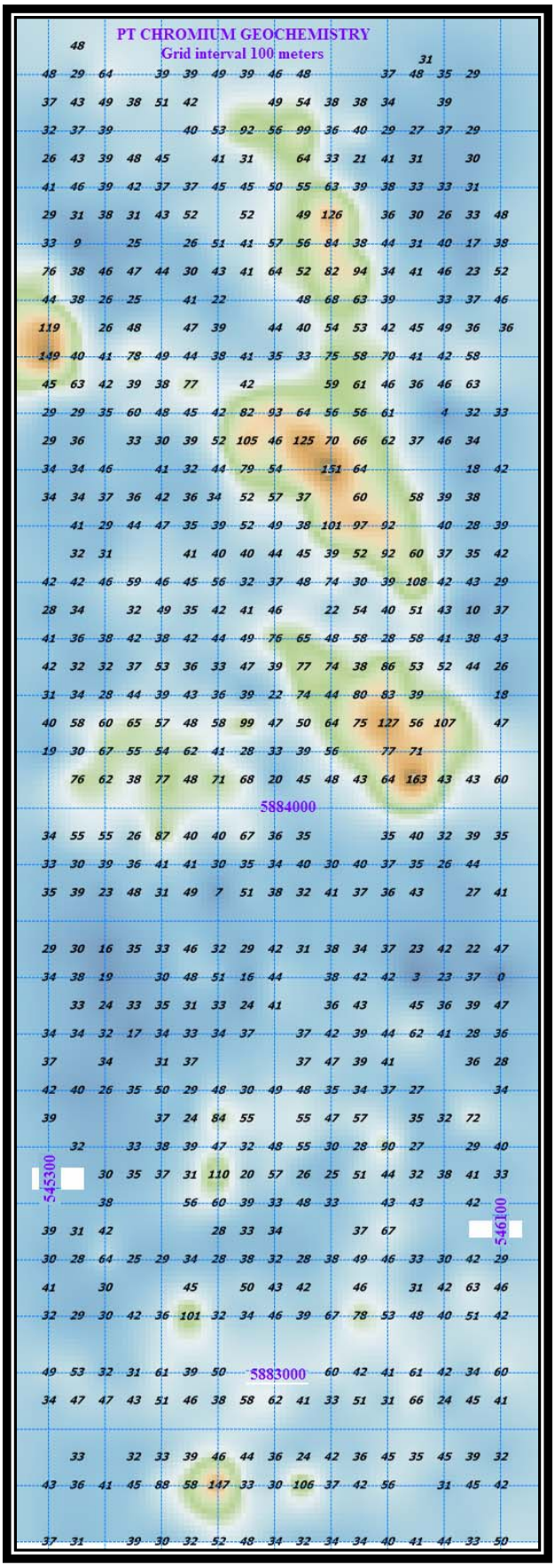


For gold 21 samples returned 15 ppb or higher which is considered the anomalous threshold; the highest being 160 ppb followed by 90, 55, 40, 30, 30, 25, 20, 20.

The high results are isolated samples not surrounded by other highs as shown on the map. The gold distribution also does not correlate with that of any other metal including Zn, Cu, Co, Cr, Fe, Mn.

The single high value at 545300E 5884750N should be followed up by prospecting and densification sampling to see if continuity can be established for the single high value. A small ancillary grid of 30 soil samples at 20 m intervals on lines spaced at 20 m should do the trick. Five lines from 5884700N to 5884800N and each of 6 samples from 545240E to 545360E are envisaged.

Arsenic commonly follows gold but not here. The arsenic map follows.



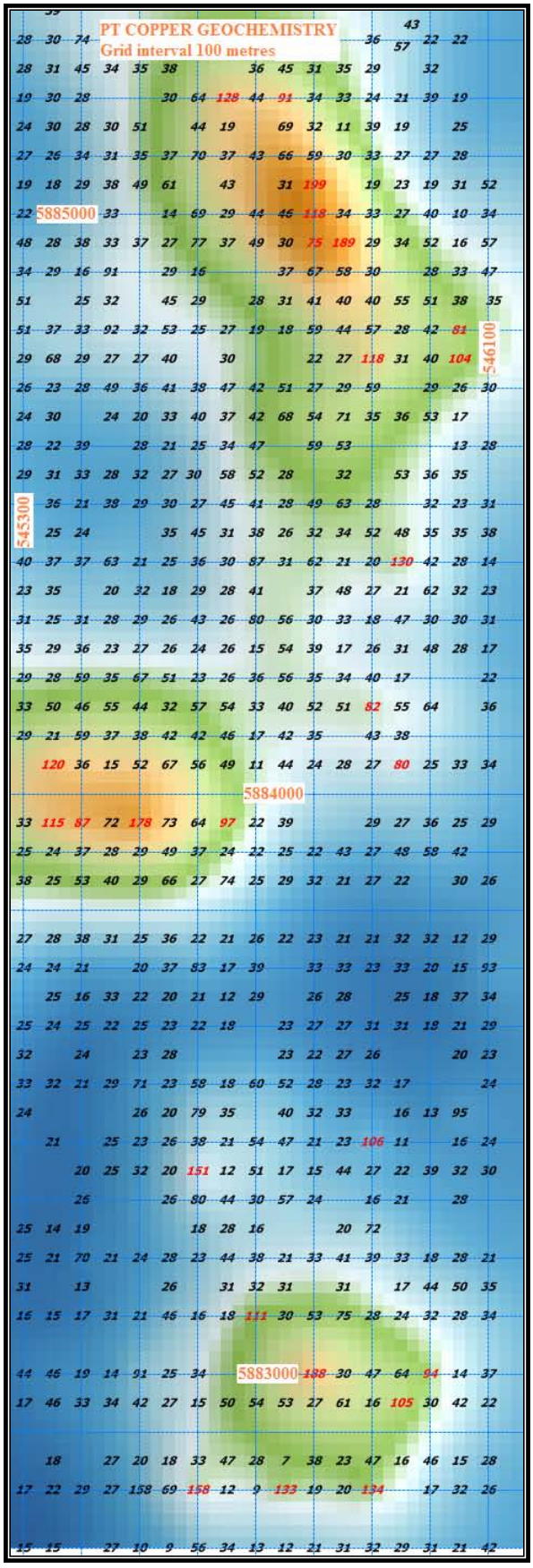
264 of the 738 samples, fully a third of the samples on the PT grid, are anomalous in Cr using the threshold value of 45 ppm Cr. Either the threshold used is too low for this grid or the area really has extreme Cr content.

The Chromium surface shows the most consistent pattern of any of the maps in this grid and the high values are not solitary samples as in some other metals but surrounded by other equally highvalues.

This suggests that the pattern represents a real geological feature, perhaps a mappable distinctive geological unit. No such unit is shown on current geological maps and a cursory examination of the outcrops here does not suggest anything obvious so the feature mapped by the Cr may be subtle.

A likely cause for the high chromium are quartz carbonate alteration zones. These are common in the area in the Nicola volcaniclastic rocks. A number of such orange weathering iron carbonate zones are seen on strike to the southeast.

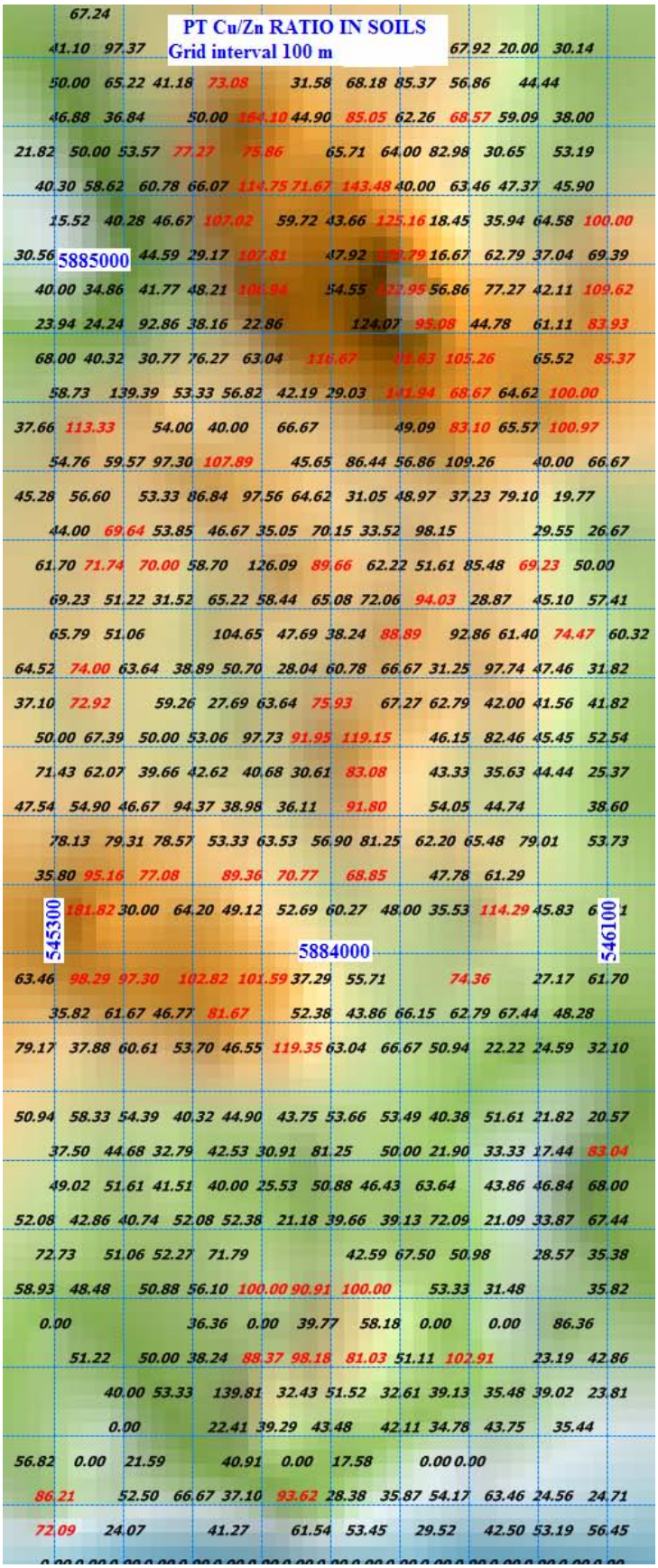
Zones such as the rocks at Rykert's pit are reflected with a Cr response. For example a sample from Reichert's pit at 542536E 5876126N returned 106 ppm Cr and 86 ppm Cu but no anomalous values in other metals.



Copper has 41 samples above the 76 ppm threshold which is about right for the size of the grid. The response shows a pattern as this map demonstrates. The highest result was 238 ppm Cu from a solitary sample off the grid to the west. It is not shown on this map.

The high copper zone in the north of the grid is interesting, more so because it has a corresponding high in the Cu/Zn ratio map as shown in the following diagram.

In overlaying the other metal maps on the copper soil geochem map no other metal correlation with copper is obvious.



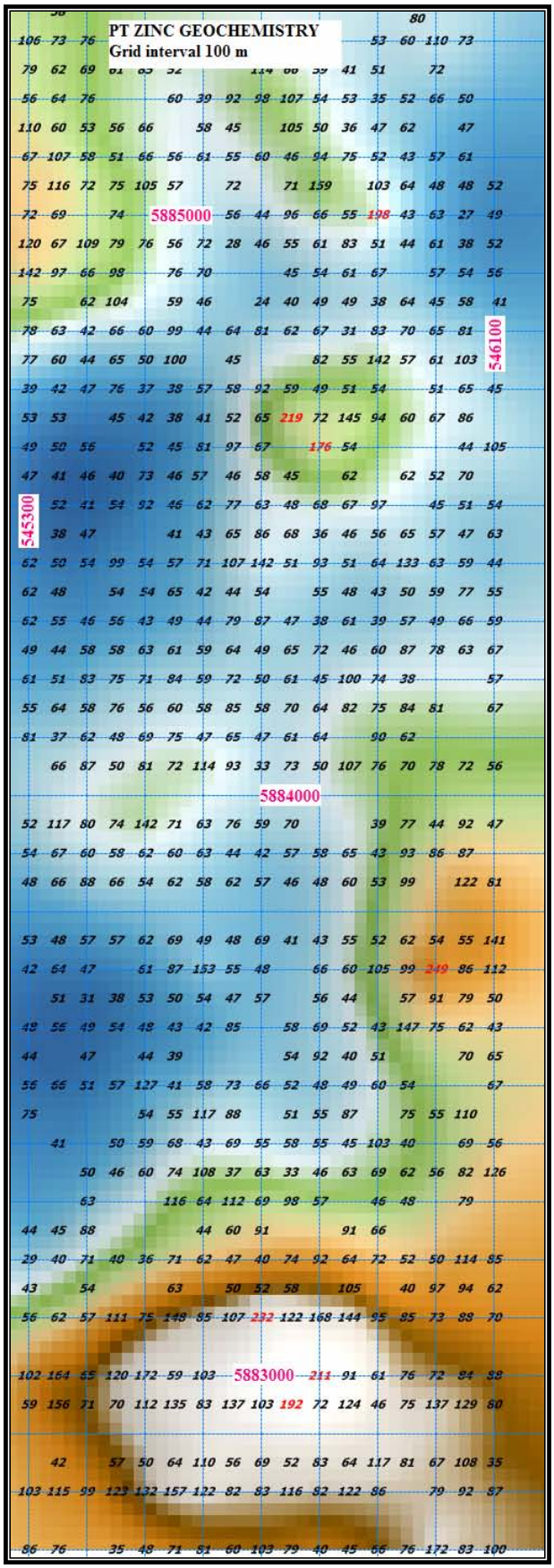
This map shows the Cu/Zn ratio distribution of the PT soil grid. Ratios are labeled on the map as percent rather than simple ratio. Ratios above 0.7 are labeled with red labels.

The Cu/Zn high in the north of the grid has a number of values near and above unity. This high corresponds with that in the copper map and coincides with it. This locality should be followed up by propecting and probably trenching.

The best target for followup is at **545800E 5885000N.**

A second more subtle target also with corresponding copper and Cu/Zn highs is at **545400E 5884000N**.

Prospecting these targets by trenching is recommended. Trenches will probably reach bedrock at shallow depth as there is a fair amount of outcrop here generally.

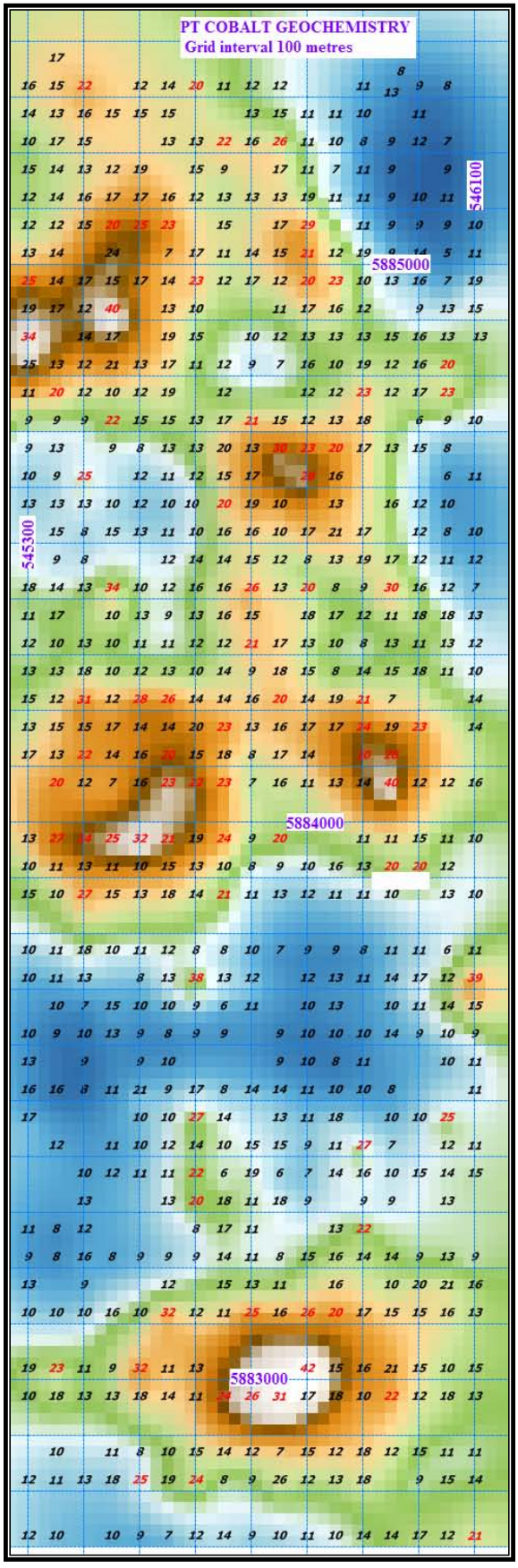


This map shows the zinc geochemistry of the PT grid. Only 11 samples are higher than the 167ppm Zn threshold. Sample localities labeled in red are above this threshold. The map shows a large high at the south end of the grid where three anomalous results cluster with a number of samples that had modestly high results in Zn.

The two main zinc highs coincide with highs on the cobalt map, but other cobalt highs lack a zinc response.

The single large zinc high should be trenched especially as the copper targets need to be followed up. The highest part of this target is at **545759E 5883025N;** that locality should be investigated. The second high with two anomalous sample results is centered at **545800E 5884650N.** This should also be trenched at the same time as the other trenching is done. Both these targets have high cobalt results also.

Interestingly the subtle Zn high at 545500E and 5884000N also has a coincident Co high



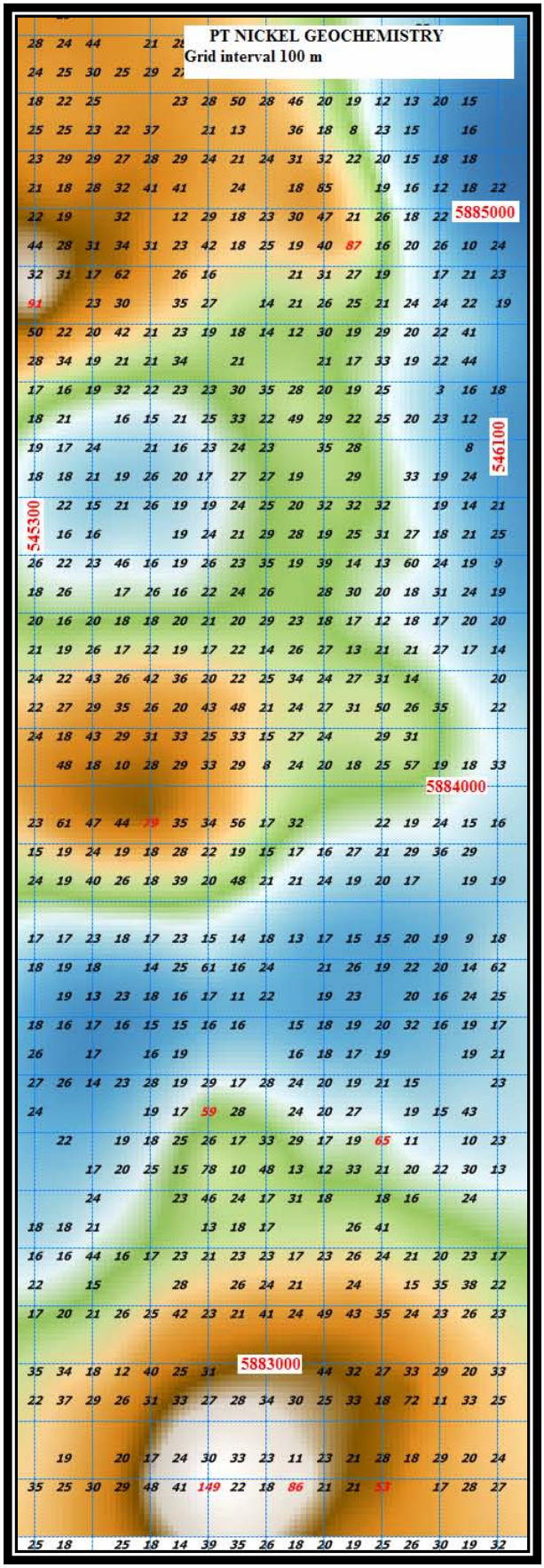
The cobalt map of the PT soil grid shows a number of highs and generally the cobalt, zinc, chromium, nickel and iron maps show broad correspondence although they show plenty of variation in detail. For example not every high in Co has a coincident high in the other metals but these five generally behave the same way spatially on this grid.

For cobalt the PT grid has 80 samples above the 20ppm Co threshold, fully 10% of the results are anomalous for Co. this is probably too high and a higher threshold should be used for Co on this grid. If a threshold of 23 ppm Co is used only 38 samples would be anomalous, about the right number for the size of the grid.

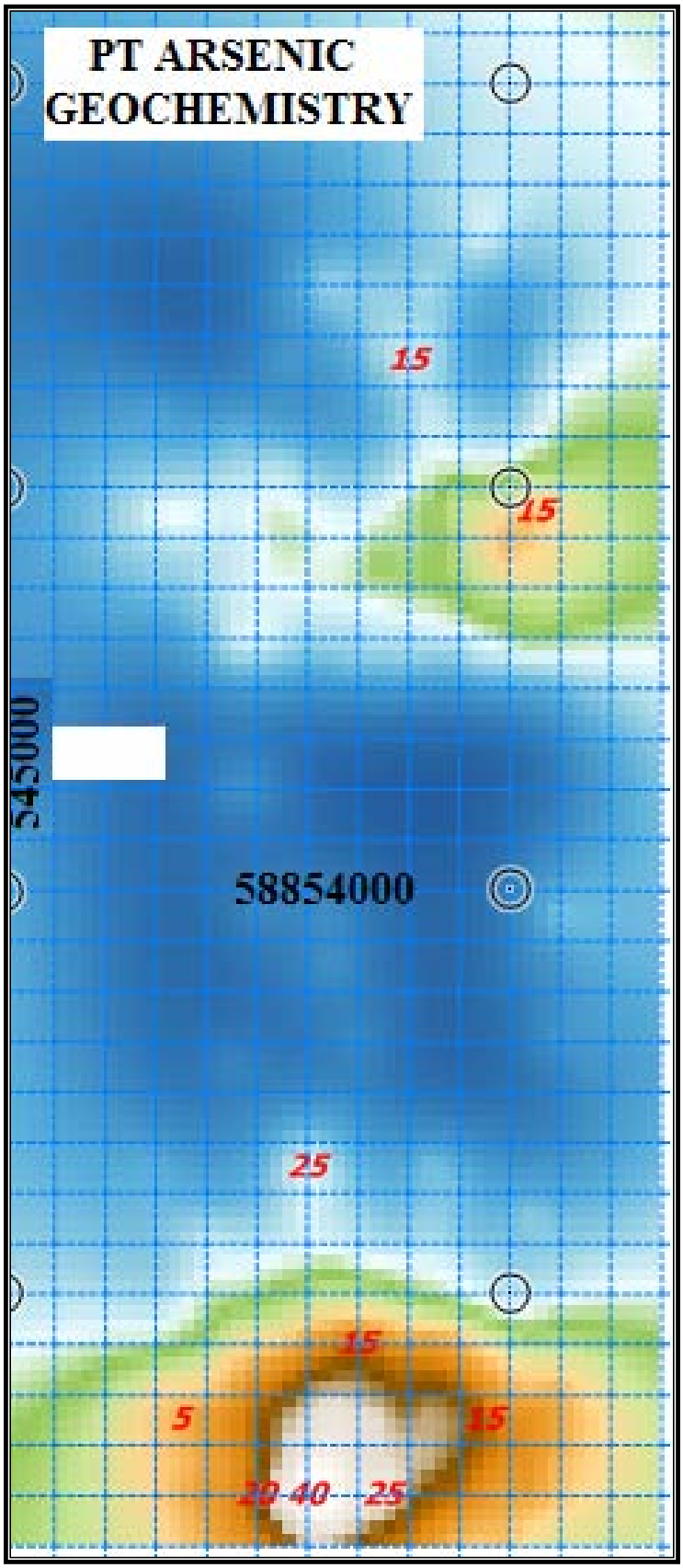
As in other maps the red labels are reserved for results above threshold- in this case 20ppm Co.

Probably the cobalt, chromium and zinc reflect the underlying bedrock geology pattern more than some buried mineral occurrence.

Followup of these results on the ground should be to prospect and examine the rocks at the various Co highs. No trenching at these localities is warranted until that has been done and then only if the results of that work indicate a need for trenching.



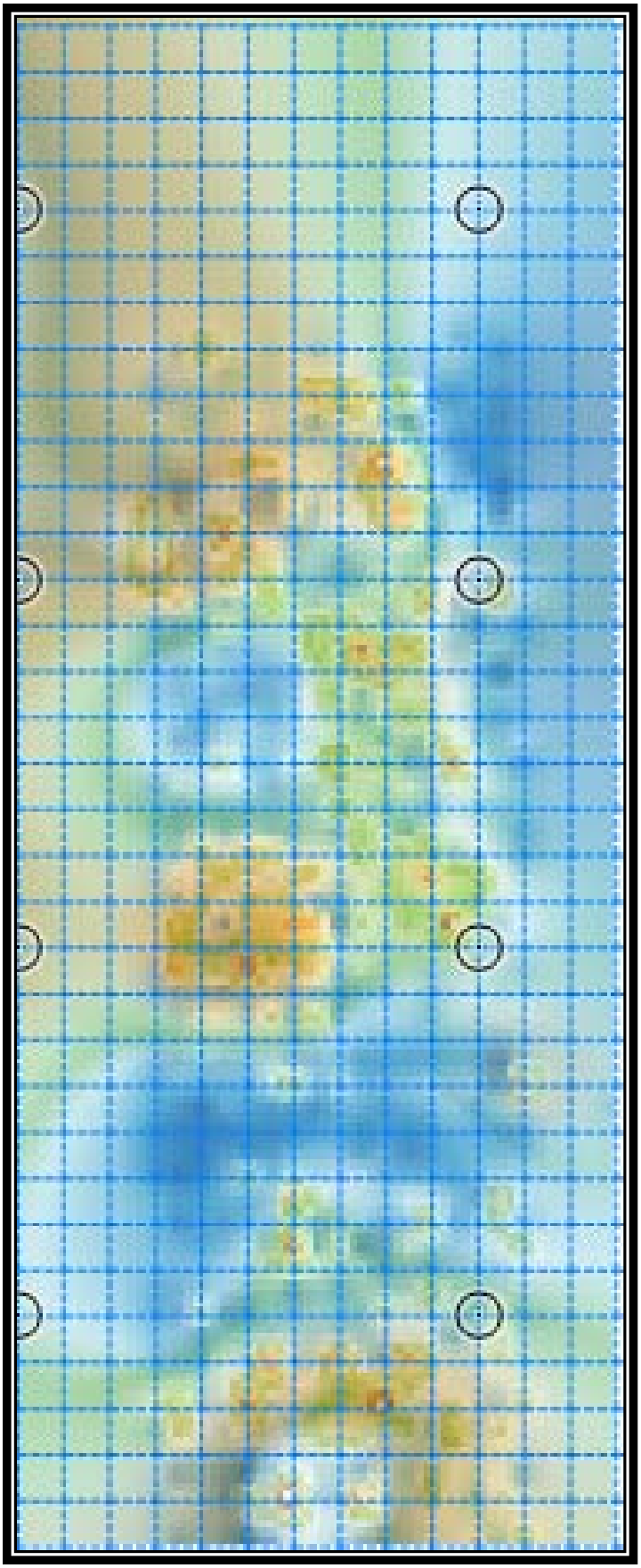
The nickel map shows general correspondence with the cobalt, zinc, chromium and iron maps. Some 18 samples have results above the 55ppm threshold used here. This is a small number and for this grid a threshold of 47 ppm Ni would have been appropriate. That would give about 35 anomalous samples or 5% of the population. Sample localities labeled in red are those with anomalous results as before.



The arsenic map, with the same UTM grid of 100 m and red labels for the anomalous As responses, shows two response areas.

The strongest is at the south end of the grid at the same place where copper, zinc, cobalt and nickel all have strong responses also. This locality is 545700E 5882900N. In the next map we see the strong responses from these other metals at this locality

The second, more subtly arsenic high has no coincident companion highs in other metals.



This interesting map demonstrates the coincidence of the various metals mentioned earlier. This is a collage of the maps of five metals overlain on each other. Each layer is transparent enough to show what is below so that each metal map contributes equally to the total picture here. From the top down we have nickel on top of manganese on top of iron on top of cobalt on top of chromium.

The grid is the same as in previous maps. What I find interesting is the general correspondence of highs and lows. Also striking is that when we add zinc to this mix the same highs and lows remain. I feel that this pattern most likely reflects variation in the bedrock geology not mineralization, but I am unsure of what sort of variation would result in this pattern.

On this collage map the three high areas in all metals are centered at
545458E 5884900N,
545500E 5884060N and
545700E 5882836N

It is important to examine these three places carefully for clues about their geology and reason for this coincidence of highs. Similarly it is important to compare the geology with that at the two lows. The lows are centered at 545458E 5884510N and 545400E 5883540N.

Especially the southern high is intriguing. A followup soil grid of 192 samples, with line and sample spacing of 25 meters is recommended. The grid should run from 54500E to 545900E and from 5882700N 5883000N. given the potential for platinum in the region and the mafic metal response here the samples should be analyzed for platinum group elements.

CONCLUSIONS AND RECOMMENDATIONS

This analysis of the geochemistry of the PT grid shows that the rocks here respond in Cobalt, Chromium, Manganese, Nickel, Copper, Zinc and Gold which fits the general regional geology and the underlying Nicola Group volcaniclastic rocks.

The chromium response may reflect iron carbonate altered zones in the volcanic rocks. So far this alteration has proved economically uninteresting as for example at the Wild Goose.

This analysis also demonstrates that for Silver, Arsenic, Bismuth, Cadmium, Lanthanum, Molybdenum, Lead the geochemistry shows no response on this grid.

A small followup grid of 30 soil samples is recommended on the single high gold result to see if this is more than a single spurious result.

Two targets based on coincident copper and Cu/Zn ratio highs are recommended for trenching at
545800E 5885000N
545400E 5884000N

Two targets defined by the zinc map at
545759E 5883025N and
545800E 5884650N
should be trenched.

The most interesting area for followup is at the south end of the grid. Here we see striking coincidence of highs in six mafic suite metals, namely nickel, cobalt, iron, manganese, zinc and arsenic. This coincident high of six metals is at
545700E 5882850N

It is recommended that a densification soil grid of 192 samples be done over this geochem high at line and sample spacings of 25 meters. The locations are noted above. Given the mafic suite metal response at this locality and given that the region generally has potential for platinum it is further recommended that these soil samples be analyzed for platinum group elements as well as the normal ICP-MS elements. The results of this sampling will lead to a decision on trenching.

WRITER'S CERTIFICATE

I, Dirk Tempelman-Kluit, residing at 4697 West 4th Avenue, Vancouver, British Columbia, do hereby certify that:

1. I am a geologist residing in Vancouver, B.C.

2. I obtained a Bachelor of Applied Science degree in Geological Engineering in 1962 and a Master of Applied Science degree in Geological Engineering in 1964 from The University of British Columbia,Vancouver, British Columbia, Canada and obtained a Ph D in Geology in 1968 from Mc Gill University in Montreal, Quebec, Canada.

3. I have practiced my profession as a geologist since 1962 for the Geological Survey of Canada and several junior exploration companies. Work has included detailed and regional property examinations and mapping. I have directly supervised and conducted programs of geological mapping.

4. I am a Fellow of the Geological Association of Canada, fellow #1969.

5. By reason of education, work experience and professional membership I am a "qualified person" as defined by National Instrument 43-101.

6. I am not aware of any material fact or material change with respect to the subject matter of the report which is not reflected in the report and by which the omission to disclose would make the Technical Report misleading.

7. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

8. I am a not an employee of Richfield Ventures Corp. and have no interest in the subject property.

9. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

10. I hereby consent to the publication of this report by Richfield Ventures Corp. I further consent to the filing of this report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated in Vancouver, British Columbia this 4h of June, 2006.



Dirk Jacob Tempelman-Kluit

Cost Statement

Technical

Airborne Survey	$14,875.00
Assays	13,914.60
Geologist	1,884.28
TOTAL TECHNICAL	$30,673.88

Physical

Soil Sampling	
14 man days @$275/day	$ 3,850.00
Fuel	728.15
Supplies	16.23
TOTAL PHYSICAL	$ 4,594.38

09-Aug-05

ECO TECH LABORATORY LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

Phone: 250-573-5700
Fax : 250-573-4557

ICP CERTIFICATE OF ANALYSIS AK 2005-799

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 80
Sample type: Soil
Project #: N/A
Shipment #: N/A
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT 5298E 4550N	5	<0.2	0.92	<5	75	<5	0.31	<1	10	32	26	2.12	<10	0.40	298	<1	0.02	18	300	6	<5	<20	19	0.09	<10	67	<10	6	50
2	PT 5300E 4450N	5	<0.2	0.98	<5	70	<5	0.28	<1	13	34	29	2.28	<10	0.41	446	<1	0.02	18	390	4	<5	<20	19	0.08	<10	72	<10	6	47
3	PT 5300E 4650N #1	<5	0.2	0.88	<5	65	<5	0.29	<1	11	34	30	2.17	<10	0.41	247	<1	0.01	19	370	4	<5	<20	17	0.08	<10	70	<10	6	44
4	PT 5300E 4650N #2	<5	<0.2	0.87	<5	80	<5	0.29	<1	9	29	24	2.02	<10	0.32	282	<1	0.01	18	600	4	<5	<20	16	0.08	<10	60	<10	5	53
5	PT 5300E 4700N	<5	<0.2	0.76	<5	55	<5	0.28	<1	9	29	26	1.96	<10	0.34	197	<1	0.01	17	350	4	<5	<20	15	0.08	<10	63	<10	6	39
6	PT 5300E 4800N	<5	0.2	1.73	<5	55	<5	0.56	<1	25	149	51	4.65	<10	1.50	509	<1	0.02	50	1340	4	<5	<20	32	0.11	<10	127	<10	1	78
7	PT 5350E 4450N	5	<0.2	0.83	<5	55	<5	0.28	<1	9	32	25	1.97	<10	0.38	219	<1	0.02	16	330	4	<5	<20	17	0.08	<10	65	<10	5	38
8	PT 5350E 4650N	<5	0.2	1.06	<5	90	<5	0.30	<1	13	36	30	2.32	<10	0.39	680	<1	0.02	21	480	4	<5	<20	19	0.08	<10	71	<10	9	53
9	PT 5350E 4700N	<5	<0.2	0.81	<5	55	<5	0.28	<1	9	29	23	1.79	<10	0.36	187	<1	0.02	16	280	2	<5	<20	16	0.09	<10	62	<10	5	42
10	PT 5350E 4800N	5	<0.2	1.33	<5	80	<5	0.35	<1	13	40	37	2.87	<10	0.42	541	1	0.03	22	610	2	<5	<20	49	0.08	<10	82	<10	4	63
11	PT 5351E 4550N	5	<0.2	0.94	<5	65	<5	0.28	<1	13	34	31	2.17	<10	0.40	352	<1	0.02	18	320	2	<5	<20	17	0.08	<10	69	<10	7	41
12	PT 5400E 4450N	5	<0.2	0.87	<5	60	<5	0.28	<1	8	31	24	1.92	<10	0.35	196	<1	0.02	16	360	4	<5	<20	17	0.08	<10	60	<10	5	47
13	PT 5400E 4550N	5	<0.2	1.01	<5	70	<5	0.32	<1	13	37	33	2.39	<10	0.47	427	<1	0.02	21	490	4	<5	<20	20	0.08	<10	78	<10	7	46
14	PT 5400E 4700N	<5	<0.2	0.94	<5	60	<5	0.28	<1	9	35	28	2.23	<10	0.40	206	<1	0.02	19	440	4	<5	<20	16	0.09	<10	74	<10	7	47
15	PT 5400E 4800N	5	<0.2	1.07	<5	65	<5	0.38	<1	12	41	33	2.56	<10	0.42	332	<1	0.03	20	350	6	<5	<20	23	0.10	<10	84	<10	7	42
16	PT 5450E 4450N	<5	<0.2	1.03	<5	70	<5	0.32	<1	11	36	33	2.26	<10	0.47	219	<1	0.02	20	310	4	<5	<20	21	0.10	<10	73	<10	7	43
17	PT 5450E 4550N	5	<0.2	0.96	<5	60	<5	0.30	<1	10	36	28	2.16	<10	0.43	247	<1	0.02	19	320	4	<5	<20	19	0.09	<10	73	<10	6	40
18	PT 5450E 4650N	10	<0.2	0.91	<5	60	<5	0.27	<1	9	33	24	2.09	<10	0.38	156	<1	0.01	16	310	2	<5	<20	17	0.09	<10	68	<10	4	45
19	PT 5450E 4700N	<5	<0.2	1.79	<5	100	<5	0.36	<1	22	60	49	3.71	<10	0.68	1156	<1	0.02	32	760	4	<5	<20	23	0.09	<10	119	<10	7	76
20	PT 5450E 4800N	5	<0.2	1.68	5	135	<5	0.59	<1	21	78	92	4.28	<10	0.94	741	<1	0.02	42	880	8	<5	<20	44	0.09	<10	118	<10	15	66
21	PT 5500E 4450N	<5	0.2	0.76	<5	80	<5	0.33	<1	10	29	20	1.79	<10	0.27	494	<1	0.03	12	520	6	<5	<20	19	0.08	<10	59	<10	6	54
22	PT 5500E 4550N	5	<0.2	1.30	<5	95	<5	0.33	<1	12	42	32	2.70	<10	0.49	274	<1	0.01	26	880	4	<5	<20	18	0.09	<10	81	<10	5	73
23	PT 5500E 4650N	5	<0.2	0.80	<5	50	<5	0.29	<1	8	30	20	1.78	<10	0.34	165	<1	0.01	15	230	2	<5	<20	14	0.09	<10	57	<10	6	42
24	PT 5500E 4700N	5	<0.2	1.21	<5	70	<5	0.44	<1	15	48	36	2.87	<10	0.60	496	<1	0.02	22	680	6	<5	<20	29	0.11	<10	102	<10	9	37
25	PT 5500E 4800N	5	<0.2	1.64	<5	100	<5	0.29	<1	13	49	32	3.35	<10	0.44	457	<1	0.01	21	770	6	<5	<20	20	0.09	<10	113	<10	4	60

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
26	PT 5550E 4450N	5	<0.2	1.07	<5	70	<5	0.39	<1	12	41	35	2.56	<10	0.50	322	<1	0.02	19	600	6	<5	<20	27	0.10	<10	88	<10	8	41
27	PT 5550E 4550N	<5	<0.2	1.04	<5	60	<5	0.33	<1	10	36	27	2.22	<10	0.47	243	<1	0.02	20	330	4	<5	<20	20	0.10	<10	75	<10	6	46
28	PT 5550E 4650N	<5	0.2	1.00	5	70	<5	0.38	<1	13	39	33	2.47	<10	0.49	366	<1	0.02	21	520	6	<5	<20	23	0.10	<10	84	<10	7	38
29	PT 5550E 4700N	5	<0.2	1.22	5	65	<5	0.36	<1	15	45	41	2.88	<10	0.56	316	<1	0.02	23	590	4	<5	<20	26	0.11	<10	97	<10	7	38
30	PT 5550E 4800N	<5	<0.2	1.95	5	80	<5	0.42	<1	17	44	53	3.90	<10	0.49	731	<1	0.04	23	1330	8	<5	<20	19	0.12	<10	126	<10	4	99
31	PT 5592E 4550N	5	<0.2	1.20	<5	85	<5	0.31	<1	10	34	30	2.42	<10	0.38	280	<1	0.01	17	840	4	<5	<20	20	0.08	<10	73	<10	4	57
32	PT 5600E 4450N	55	<0.2	1.30	<5	80	<5	0.42	<1	14	40	45	2.62	<10	0.48	485	<1	0.02	24	350	2	<5	<20	26	0.09	<10	81	<10	15	43
33	PT 5600E 4650N	5	<0.2	1.49	<5	75	<5	0.36	<1	13	52	40	2.97	<10	0.53	225	<1	0.02	25	650	<2	<5	<20	25	0.10	<10	92	<10	4	41
34	PT 5600E 4700N	<5	<0.2	1.55	5	75	<5	0.35	<1	13	42	38	3.05	<10	0.47	267	<1	0.01	23	1340	4	<5	<20	24	0.09	<10	91	<10	4	57
35	PT 5600E 4800N	5	<0.2	0.99	<5	90	<5	0.41	<1	11	38	25	2.34	<10	0.40	460	<1	0.02	19	760	4	<5	<20	23	0.09	<10	72	<10	6	44
36	PT 5650E 4450N	5	<0.2	1.51	<5	90	<5	0.37	<1	14	40	31	2.94	<10	0.44	418	<1	0.02	21	740	6	<5	<20	29	0.10	<10	88	<10	4	65
37	PT 5650E 4550N	5	<0.2	1.51	<5	85	<5	0.56	<1	20	52	58	3.47	<10	0.74	504	<1	0.02	27	650	6	<5	<20	34	0.13	<10	113	<10	8	46
38	PT 5650E 4650N	5	<0.2	1.57	<5	70	<5	0.31	<1	20	105	37	4.37	<10	0.71	251	<1	0.01	33	1320	4	<5	<20	18	0.10	<10	111	<10	2	52
39	PT 5650E 4700N	5	<0.2	1.72	<5	70	<5	0.34	<1	17	82	47	4.06	<10	0.67	349	<1	0.01	30	900	6	<5	<20	23	0.11	<10	120	<10	3	58
40	PT 5650E 4800N	10	<0.2	1.13	<5	90	<5	0.35	<1	12	41	27	2.56	<10	0.42	222	<1	0.02	18	660	4	<5	<20	22	0.09	<10	74	<10	5	64
41	PT 5700E 4450N	5	0.2	1.75	5	105	<5	0.37	<1	15	44	38	3.25	<10	0.44	248	<1	0.02	29	1330	6	<5	<20	17	0.10	<10	86	<10	5	86
42	PT 5700E 4550N	5	<0.2	1.78	<5	100	<5	0.53	<1	19	57	52	3.59	<10	0.65	536	<1	0.02	27	1340	6	<5	<20	24	0.12	<10	105	<10	5	58
43	PT 5700E 4650N	5	<0.2	1.36	<5	60	<5	0.45	<1	13	46	42	3.07	<10	0.60	239	<1	0.02	22	870	4	<5	<20	21	0.12	<10	101	<10	5	65
44	PT 5700E 4700N	<5	<0.2	1.88	<5	75	<5	0.38	<1	21	93	42	4.44	<10	1.01	415	<1	0.02	35	2430	6	<5	<20	34	0.10	<10	117	<10	2	92
45	PT 5700E 4800N	<5	0.2	0.83	<5	75	<5	0.37	<1	9	35	19	2.01	<10	0.36	200	<1	0.02	14	610	6	<5	<20	25	0.09	<10	61	<10	6	81
46	PT 5750E 4450N	5	0.2	1.65	<5	105	<5	0.24	<1	12	45	26	2.99	<10	0.37	164	<1	0.02	28	1430	2	<5	<20	17	0.08	<10	79	<10	4	68
47	PT 5750E 4550N	10	<0.2	0.99	<5	75	<5	0.32	<1	10	37	28	2.26	<10	0.47	308	<1	0.02	19	440	6	<5	<20	21	0.09	<10	74	<10	7	45
48	PT 5750E 4650N	5	1.4	2.80	10	215	<5	0.83	<1	30	125	68	5.99	<10	1.42	2244	<1	0.07	49	1070	4	<5	<20	223	0.11	<10	147	<10	3	219
49	PT 5750E 4700N	10	0.2	1.55	5	95	<5	0.54	<1	15	64	51	3.64	<10	0.69	670	<1	0.02	28	710	6	<5	<20	36	0.09	<10	117	<10	9	59
50	PT 5750E 4800N	5	0.6	0.85	<5	75	<5	0.22	<1	7	33	18	2.37	<10	0.26	162	<1	0.02	12	1260	6	<5	<20	15	0.06	<10	68	<10	3	62
51	PT 5800E 4450N	5	0.2	1.23	5	50	<5	0.26	<1	8	39	32	2.29	<10	0.39	180	<1	0.02	19	440	4	<5	<20	19	0.06	<10	72	<10	4	36
52	PT 5800E 4650N	5	<0.2	1.61	<5	90	<5	0.34	<1	23	70	54	3.47	<10	0.64	997	1	0.03	29	930	8	<5	<20	24	0.07	<10	111	<10	3	72
53	PT 5800E 4700N	5	<0.2	1.00	<5	55	<5	0.28	<1	12	56	27	2.60	<10	0.45	225	<1	0.02	20	420	4	<5	<20	22	0.09	<10	79	<10	4	49
54	PT 5800E 4800N	5	0.5	1.95	5	115	<5	0.30	<1	16	75	59	3.80	<10	0.68	409	<1	0.03	30	560	8	<5	<20	21	0.07	<10	109	<10	3	67
55	PT 5850E 4450N	10	<0.2	1.08	<5	70	<5	0.37	<1	13	52	34	2.76	<10	0.63	337	<1	0.02	25	820	4	<5	<20	25	0.09	<10	88	<10	7	46
56	PT 5850E 4550N	<5	<0.2	1.54	<5	90	<5	0.31	<1	13	60	32	3.30	<10	0.52	198	<1	0.02	29	1310	6	<5	<20	19	0.09	<10	93	<10	4	62
57	PT 5850E 4650N	5	0.3	1.66	<5	65	<5	0.28	<1	20	66	71	5.46	<10	0.46	386	2	0.03	22	3500	10	<5	<20	33	0.10	<10	132	<10	1	145
58	PT 5850E 4700N	5	0.2	1.19	<5	70	<5	0.26	<1	13	56	29	2.69	<10	0.48	216	<1	0.03	19	560	6	<5	<20	22	0.09	<10	85	<10	4	51
59	PT 5850E 4800N	5	<0.2	1.48	<5	70	<5	0.31	<1	10	58	44	2.69	<10	0.53	150	<1	0.02	19	440	8	<5	<20	23	0.08	<10	99	<10	6	31
60	PT 5890E 4550N	10	0.2	0.96	<5	70	<5	0.28	<1	11	58	24	2.45	<10	0.39	285	<1	0.02	16	970	4	<5	<20	18	0.09	<10	75	<10	4	50
61	PT 5900E 4450N	5	0.2	1.40	<5	45	<5	0.42	<1	19	92	52	3.60	<10	1.01	295	<1	0.03	31	620	4	<5	<20	25	0.11	<10	109	<10	5	56
62	PT 5900E 4650N	5	<0.2	1.53	5	90	<5	0.48	<1	17	62	35	3.36	<10	0.55	913	<1	0.04	25	1240	6	<5	<20	37	0.09	<10	97	<10	2	94
63	PT 5900E 4700N	5	0.2	1.36	<5	65	<5	0.46	<1	18	61	59	3.07	<10	0.59	505	<1	0.04	25	360	6	<5	<20	37	0.10	<10	106	<10	8	54
64	PT 5900E 4800N	10	0.2	1.96	10	100	<5	0.47	<1	19	70	57	3.57	<10	0.63	1271	<1	0.03	29	530	4	<5	<20	32	0.08	<10	121	<10	8	83
65	PT 5950E 4450N	5	<0.2	1.38	5	65	<5	0.55	<1	17	60	48	3.30	<10	0.66	479	<1	0.02	27	450	4	<5	<20	37	0.10	<10	100	<10	8	65

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
66	PT 5950E 4550N	5	0.2	1.74	5	105	<5	0.41	<1	16	58	53	3.22	<10	0.69	703	<1	0.02	33	480	4	<5	<20	31	0.09	<10	95	<10	8	62

67	PT 5950E 4650N	5	0.2	1.13	<5	115	<5	0.44	<1	13	37	36	2.46	<10	0.47	558	<1	0.03	20	860	8	<5	<20	29	0.08	<10	80	<10	7	60
68	PT 5950E 4800N	5	0.2	1.26	<5	110	5	0.34	<1	12	41	28	3.12	<10	0.41	246	<1	0.02	20	1540	4	<5	<20	20	0.08	<10	86	<10	5	70
69	PT 6000E 4450N	5	0.2	1.14	<5	75	<5	0.31	<1	12	37	35	2.57	<10	0.47	435	<1	0.01	18	380	4	<5	<20	21	0.08	<10	82	<10	6	57
70	PT 6000E 4550N	10	<0.2	1.24	<5	75	<5	0.32	<1	12	39	36	2.57	<10	0.49	429	<1	0.02	19	530	4	<5	<20	20	0.08	<10	82	<10	6	52
71	PT 6000E 4650N	15	0.8	1.64	10	130	<5	0.42	<1	15	46	53	2.83	<10	0.48	638	1	0.02	23	580	8	<5	<20	28	0.06	<10	90	<10	4	67
72	PT 6000E 4700N	10	0.3	3.03	10	60	<5	1.91	<1	6	4	29	1.56	<10	0.35	487	2	0.01	3	570	10	<5	<20	198	0.01	<10	31	<10	2	51
73	PT 6000E 4800N	10	0.3	1.36	<5	105	<5	0.42	<1	16	42	42	2.81	<10	0.54	834	<1	0.03	22	770	6	<5	<20	26	0.08	<10	90	<10	8	65
74	PT 6050E 4450N	90	<0.2	1.16	<5	70	<5	0.35	<1	11	35	35	2.56	<10	0.52	325	<1	0.02	21	600	4	<5	<20	23	0.09	<10	84	<10	6	47
75	PT 6050E 4550N	5	0.2	1.44	<5	85	<5	0.30	<1	10	38	35	2.81	<10	0.43	208	1	0.02	24	780	4	<5	<20	18	0.08	<10	78	<10	5	70
76	PT 6050E 4650N	15	0.4	1.32	<5	75	<5	0.24	<1	8	34	17	3.01	<10	0.22	147	<1	0.01	12	1470	4	<5	<20	13	0.09	<10	93	<10	4	86
77	PT 6050E 4700N	5	0.3	1.14	5	65	<5	0.26	<1	9	32	26	2.39	<10	0.41	211	<1	0.01	16	770	2	<5	<20	16	0.08	<10	72	<10	4	65
78	PT 6050E 4800N	10	0.2	1.73	10	155	<5	0.52	<1	20	58	81	4.01	<10	0.71	968	2	0.03	41	710	6	<5	<20	41	0.09	<10	118	<10	16	81
79	PT 6100E 4550N	10	0.2	1.58	<5	95	<5	0.30	<1	12	42	38	3.27	<10	0.52	209	<1	0.02	25	770	4	<5	<20	21	0.09	<10	97	<10	7	63
80	PT 6100E 4700N	10	0.2	1.08	<5	65	<5	0.39	<1	10	33	30	2.01	<10	0.46	275	<1	0.02	18	350	4	<5	<20	24	0.07	<10	67	<10	8	45

QC DATA:

Repeat:

1	PT 5298E 4550N	5	<0.2	0.97	<5	75	<5	0.32	<1	10	33	26	2.12	<10	0.41	299	<1	0.02	16	300	4	<5	<20	19	0.10	<10	69	<10	8	48
10	PT 5350E 4800N	5	<0.2	1.33	<5	90	<5	0.41	<1	15	44	41	3.09	<10	0.46	595	<1	0.04	23	680	4	<5	<20	48	0.10	<10	94	<10	5	67
19	PT 5450E 4700N	5	<0.2	1.90	5	110	<5	0.40	<1	23	61	51	3.83	<10	0.70	1167	<1	0.02	32	800	4	<5	<20	25	0.10	<10	123	<10	8	78
28	PT 5550E 4650N	5	0.2	1.07	<5	75	<5	0.41	<1	14	39	33	2.51	<10	0.52	355	<1	0.02	22	550	4	<5	<20	27	0.11	<10	85	<10	8	39
36	PT 5650E 4450N	5	<0.2	1.51	<5	80	<5	0.36	<1	12	36	28	2.86	<10	0.38	396	<1	0.01	19	700	4	<5	<20	28	0.08	<10	78	<10	4	59
45	PT 5700E 4800N	<5	0.2	0.77	<5	75	<5	0.34	<1	8	32	18	1.90	<10	0.34	188	<1	0.02	15	590	6	<5	<20	23	0.09	<10	57	<10	6	76
54	PT 5800E 4800N	5	0.5	1.87	5	115	<5	0.28	<1	15	72	58	3.70	<10	0.66	419	<1	0.04	29	550	6	<5	<20	21	0.07	<10	108	<10	3	63
63	PT 5900E 4700N	5	<0.2	1.36	<5	65	<5	0.46	<1	18	59	60	3.11	<10	0.60	512	<1	0.03	25	370	4	<5	<20	36	0.10	<10	108	<10	8	53
71	PT 6000E 4650N	15	0.8	1.68	5	130	<5	0.42	<1	15	47	52	2.83	<10	0.48	597	1	0.03	23	590	10	<5	<20	28	0.07	<10	92	<10	5	67
80	PT 6100E 4700N	5	0.2	1.06	<5	65	<5	0.38	<1	10	32	29	1.98	<10	0.46	268	<1	0.01	18	340	4	5	<20	24	0.07	<10	66	<10	8	44

Standard:

GEO '05		145	1.5	1.48	55	155	<5	1.27	<1	19	55	87	3.61	<10	0.79	556	<1	0.03	28	570	22	<5	<20	52	0.10	<10	71	<10	11	73
GEO '05		140	1.6	1.39	55	145	<5	1.23	<1	19	53	84	3.47	<10	0.76	540	<1	0.04	28	560	20	<5	<20	57	0.11	<10	66	<10	11	73
GEO '05		140	1.6	1.47	50	150	<5	1.28	<1	18	56	82	3.51	<10	0.67	473	2	0.02	30	490	20	<5	<20	59	0.11	<10	69	<10	9	71

JJ/ga/bs
df/794
XLS/05

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

ECO TECH LABORATORY LTD.
10041 Dallas Drive
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V2C 6T4

Phone: 250-573-5700
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ICP CERTIFICATE OF ANALYSIS AK 2005-800

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 63
Sample type: Soil
Project #: N/A
Shipment #: N/A
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT 4500N 5350E	5	<0.2	1.18	<5	95	<5	0.39	<1	15	41	36	2.73	<10	0.47	682	<1	0.02	22	430	4	<5	<20	25	0.11	<10	93	<10	11	52
2	PT 4500N 5400E	5	<0.2	0.82	<5	60	<5	0.33	<1	8	29	21	1.75	<10	0.33	166	<1	0.02	15	220	2	<5	<20	19	0.10	<10	58	<10	9	41
3	PT 4500N 5450E	<5	<0.2	1.24	10	90	<5	0.44	<1	15	44	38	2.83	<10	0.51	513	<1	0.02	21	630	4	<5	<20	25	0.12	<10	93	<10	13	54
4	PT 4500N 5500E	5	<0.2	1.52	10	130	<5	0.37	<1	13	47	29	3.12	<10	0.44	196	<1	0.03	26	1370	4	<5	<20	21	0.11	<10	88	<10	5	92
5	PT 4500N 5550E	<5	0.2	1.05	5	65	<5	0.41	<1	11	35	30	2.20	<10	0.44	298	<1	0.02	19	520	4	<5	<20	25	0.09	<10	74	<10	10	46
6	PT 4500N 5600E	<5	<0.2	1.36	<5	110	<5	0.35	<1	10	39	27	2.74	<10	0.30	142	<1	0.03	19	1360	4	<5	<20	24	0.09	<10	77	<10	7	62
7	PT 4500N 5650E	<5	<0.2	1.62	5	90	<5	0.46	<1	16	52	45	3.43	<10	0.51	510	<1	0.03	24	1020	8	<5	<20	31	0.13	<10	107	<10	8	77
8	PT 4500N 5700E	5	0.2	1.73	<5	100	<5	0.52	<1	16	49	41	3.44	<10	0.56	363	<1	0.02	25	1550	2	<5	<20	27	0.13	<10	104	<10	8	63
9	PT 4500N 5750E	<5	<0.2	1.16	5	70	<5	0.38	<1	10	38	28	2.41	<10	0.43	301	<1	0.02	20	710	6	<5	<20	25	0.10	<10	83	<10	8	48
10	PT 4500N 5800E	<5	<0.2	1.43	<5	65	<5	0.77	<1	17	101	49	3.50	<10	0.92	282	<1	0.03	32	620	4	5	<20	43	0.11	<10	108	<10	9	68
11	PT 4500N 5850E	<5	<0.2	1.45	5	70	<5	0.58	<1	21	97	63	3.84	<10	1.03	584	<1	0.04	32	1330	6	<5	<20	48	0.11	<10	120	<10	7	67
12	PT 4500N 5900E	<5	<0.2	1.09	<5	245	<5	0.60	<1	17	92	28	3.46	<10	0.77	993	<1	0.05	32	1560	8	<5	<20	54	0.11	<10	106	<10	4	97
13	PT 4500N 6000E	<5	<0.2	1.04	5	70	<5	0.44	<1	12	40	32	2.58	<10	0.48	371	<1	0.02	19	620	6	<5	<20	28	0.11	<10	88	<10	9	45
14	PT 4500N 6050E	5	0.2	0.96	10	90	<5	0.34	<1	8	28	23	1.86	<10	0.23	243	<1	0.03	14	950	6	<5	<20	21	0.07	<10	56	<10	6	51
15	PT 4500N 6100E	5	0.3	1.26	5	70	<5	0.29	<1	10	39	31	2.60	<10	0.40	200	<1	0.02	21	520	4	<5	<20	18	0.10	<10	82	<10	9	54
16	PT 4600N 5300E	5	<0.2	0.92	5	65	<5	0.37	<1	10	34	28	2.17	<10	0.39	253	<1	0.02	19	450	4	<5	<20	21	0.11	<10	71	<10	9	49
17	PT 4600N 5350E	5	<0.2	0.84	<5	65	<5	0.32	<1	9	34	22	1.99	<10	0.31	181	<1	0.02	17	270	4	<5	<20	18	0.10	<10	66	<10	8	50
18	PT 4600N 5400E	5	0.2	1.24	5	100	<5	0.39	<1	25	46	39	2.82	<10	0.46	1094	<1	0.02	24	580	4	<5	<20	23	0.09	<10	96	<10	11	56
19	PT 4600N 5500E	5	0.2	1.02	5	65	<5	0.38	<1	12	41	28	2.26	<10	0.43	322	<1	0.02	21	400	4	<5	<20	19	0.10	<10	72	<10	10	52
20	PT 4600N 5550E	<5	0.3	0.88	<5	65	<5	0.32	<1	11	32	21	1.97	<10	0.34	406	<1	0.02	16	280	4	<5	<20	19	0.09	<10	65	<10	8	45
21	PT 4600N 5600E #1	<5	<0.2	0.96	5	55	<5	0.32	<1	8	33	24	1.99	<10	0.34	192	<1	0.03	17	400	4	<5	<20	19	0.08	<10	61	<10	7	49
22	PT 4600N 5600E #2	5	<0.2	1.71	10	95	<5	0.31	<1	12	44	25	3.24	<10	0.35	238	<1	0.02	23	1140	8	<5	<20	21	0.10	<10	88	<10	6	81
23	PT 4600N 5650E	<5	<0.2	1.32	5	160	<5	0.41	<1	15	79	34	3.43	<10	0.45	722	<1	0.02	24	1120	6	<5	<20	24	0.12	<10	101	<10	5	97
24	PT 4600N 5700E	<5	<0.2	1.31	5	75	<5	0.48	<1	17	54	47	3.35	<10	0.60	367	<1	0.02	23	780	6	<5	<20	24	0.14	<10	110	<10	9	67
25	PT 4600N 5800E	5	<0.2	1.80	5	125	<5	0.75	<1	28	151	59	5.13	<10	1.28	1261	<1	0.04	35	2620	8	<5	<20	59	0.15	<10	150	<10	5	176

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
26	PT 4600N 5850E	5	0.2	1.18	5	50	<5	0.64	<1	16	64	53	3.04	<10	0.66	294	<1	0.04	28	430	8	<5	<20	37	0.11	<10	92	<10	12	54
27	PT 4600N 6050E	<5	0.3	0.52	5	70	<5	0.27	<1	6	18	13	1.24	<10	0.18	687	<1	0.03	8	370	6	<5	<20	15	0.08	<10	43	<10	6	44
28	PT 4600N 6100E	<5	0.3	1.33	5	80	<5	0.34	<1	11	42	28	2.89	<10	0.43	325	<1	0.02	19	760	6	<5	<20	19	0.11	<10	88	<10	7	105
29	PT 4750N 5300E	160	0.2	1.44	10	125	<5	0.40	<1	11	45	29	3.12	<10	0.43	204	<1	0.02	28	1660	6	<5	<20	21	0.10	<10	77	<10	8	77
30	PT 4750N 5400E	10	<0.2	0.96	5	65	<5	0.36	<1	12	42	29	2.37	<10	0.43	301	<1	0.02	19	520	6	<5	<20	20	0.11	<10	80	<10	8	44
31	PT 4750N 5450E	<5	<0.2	1.06	<5	65	<5	0.35	<1	10	39	27	2.29	<10	0.45	224	<1	0.02	21	370	4	<5	<20	16	0.12	<10	75	<10	8	65
32	PT 4750N 5500E	<5	<0.2	1.16	5	75	<5	0.32	<1	12	38	27	2.47	<10	0.40	261	<1	0.02	21	430	6	<5	<20	20	0.11	<10	80	<10	8	50
33	PT 4750N 5550E	<5	<0.2	1.73	5	90	<5	0.48	<1	19	77	40	4.08	<10	0.56	588	<1	0.03	34	970	8	<5	<20	22	0.13	<10	125	<10	6	100
34	PT 4750N 5650E	<5	<0.2	1.07	5	65	<5	0.39	<1	12	42	30	2.57	<10	0.45	391	<1	0.02	21	520	6	<5	<20	22	0.10	<10	94	<10	8	45
35	PT 4750N 5800E	5	0.2	1.11	5	100	<5	0.32	<1	12	59	22	3.06	<10	0.42	219	<1	0.02	21	1290	6	<5	<20	21	0.10	<10	90	<10	5	82
36	PT 4750N 5850E	<5	<0.2	1.18	<5	80	<5	0.37	<1	12	61	27	3.16	<10	0.34	300	<1	0.03	17	1120	8	<5	<20	37	0.12	<10	105	<10	5	55
37	PT 4750N 5900E	5	0.2	1.88	10	65	<5	0.40	<1	23	46	118	5.38	<10	0.80	713	2	0.05	33	1570	10	<5	<20	67	0.14	<10	153	<10	5	142
38	PT 4750N 5950E	5	<0.2	1.01	5	105	<5	0.65	<1	12	36	31	2.33	<10	0.36	601	<1	0.04	19	890	6	<5	<20	39	0.08	<10	73	<10	6	57
39	PT 4750N 6000E	10	0.5	1.30	<5	125	<5	0.47	<1	17	46	40	2.97	<10	0.46	701	<1	0.04	22	500	10	<5	<20	29	0.10	<10	93	<10	9	61
40	PT 4750N 6050E	5	0.9	2.07	15	155	<5	0.80	<1	23	63	104	4.15	<10	0.64	1131	3	0.04	44	840	8	<5	<20	43	0.08	<10	110	<10	13	103
41	PT 535N 4750N	5	0.2	1.67	10	120	<5	0.60	<1	20	63	68	3.59	<10	0.66	1583	<1	0.04	34	550	8	<5	<20	33	0.13	<10	111	<10	25	60
42	PT 5600N 4550E	5	<0.2	1.20	<5	75	<5	0.47	<1	28	187	42	4.90	<10	1.15	547	<1	0.03	47	1320	4	<5	<20	21	0.13	<10	131	<10	3	74
43	PT 6400N 5450E	5	<0.2	0.98	5	70	<5	0.43	<1	15	45	31	2.62	<10	0.48	446	<1	0.02	20	690	6	<5	<20	25	0.11	<10	90	<10	9	45
44	CB 5467N 6226E	5	2.4	1.28	10	215	<5	0.40	2	10	40	50	2.61	<10	0.38	1591	5	0.02	40	550	14	<5	<20	38	0.02	<10	50	<10	17	169
45	CB 5470N 5976E	<5	0.5	1.03	10	120	<5	0.09	<1	4	29	27	1.87	<10	0.32	139	5	<0.01	30	270	10	<5	<20	9	0.02	<10	47	<10	7	100
46	CB 5471N 6178E	5	0.7	0.78	10	95	<5	0.07	<1	4	24	25	2.03	<10	0.19	189	11	<0.01	20	490	6	<5	<20	8	0.01	<10	50	<10	2	94
47	CB 5472N 5802E	5	0.5	0.84	10	150	<5	0.12	<1	6	29	26	2.00	<10	0.28	425	7	<0.01	28	400	8	<5	<20	12	0.02	<10	43	<10	4	116
48	CB 5472N 6070E	5	1.0	0.96	10	180	<5	0.10	<1	6	26	36	2.33	<10	0.29	222	9	<0.01	27	1010	10	<5	<20	19	<0.01	<10	48	<10	2	164
49	CB 5472N 6126E	5	1.1	0.95	5	140	<5	0.14	<1	6	31	30	2.56	<10	0.29	245	11	<0.01	31	950	8	<5	<20	13	0.01	<10	55	<10	2	148
50	CB 5473N 5872E	5	1.3	0.76	10	165	<5	0.20	<1	5	24	22	1.85	10	0.16	395	8	0.03	19	320	8	<5	<20	19	0.02	<10	51	<10	5	81
51	CB 5475N 5825E	10	1.3	1.47	10	220	<5	0.13	<1	12	42	41	2.80	<10	0.34	1093	11	0.03	37	660	14	<5	<20	16	0.01	<10	71	<10	5	147
52	CB 5475N 5903E	5	0.6	0.77	5	115	<5	0.11	<1	6	22	23	2.00	<10	0.21	616	7	<0.01	22	630	10	<5	<20	9	0.01	<10	42	<10	2	92
53	CB 5475N 6100E	5	0.6	0.92	10	125	<5	0.07	<1	6	28	38	2.49	<10	0.32	261	10	<0.01	33	630	6	<5	<20	11	<0.01	<10	43	<10	2	116
54	CB 5476N 5750E	5	0.4	0.83	10	90	<5	0.13	<1	8	31	31	2.27	<10	0.36	436	9	<0.01	34	360	8	<5	<20	13	0.02	<10	43	<10	6	110
55	CB 5477N 5855E	5	0.9	0.84	10	135	<5	0.20	<1	6	27	27	1.98	<10	0.29	486	8	0.02	29	330	8	<5	<20	19	0.01	<10	44	<10	4	102
56	CB 5477N 5950E	5	2.1	1.57	10	135	<5	0.10	<1	6	37	40	2.41	<10	0.25	429	8	0.02	35	530	10	<5	<20	10	0.02	<10	69	<10	5	119
57	CB 5478N 5928E	5	0.5	0.83	10	75	<5	0.05	<1	8	23	36	1.81	<10	0.23	387	6	0.02	35	440	8	<5	<20	6	<0.01	<10	29	<10	2	128
58	CB 5478N 6052E	5	0.6	0.75	10	100	<5	0.06	<1	5	21	34	2.05	<10	0.22	132	6	0.02	28	700	10	<5	<20	8	<0.01	<10	39	<10	1	107
59	CB 5479N 5778E	5	0.7	0.53	<5	135	<5	0.12	1	4	20	19	1.39	<10	0.11	342	5	0.02	18	380	6	<5	<20	11	0.01	<10	31	<10	5	95
60	CB 5479N 6029E	5	0.4	0.46	5	60	<5	0.06	<1	3	15	18	1.29	<10	0.16	112	6	<0.01	18	420	6	<5	<20	5	<0.01	<10	25	<10	2	84
61	CB 5479N 7600E	10	0.3	0.64	5	75	<5	0.09	<1	5	19	26	1.62	<10	0.25	170	5	<0.01	26	520	6	<5	<20	8	0.01	<10	27	<10	2	84
62	CB 5480N 6160E	10	0.7	0.56	5	55	<5	0.06	<1	5	20	22	1.62	<10	0.22	343	8	0.02	17	440	8	<5	<20	6	0.01	<10	33	<10	1	92
63	CB 5480N 6204E	5	1.3	0.96	5	110	<5	0.11	<1	6	33	25	2.71	<10	0.27	162	8	<0.01	26	670	10	<5	<20	10	0.02	<10	48	<10	2	115

09-Aug-05

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
QC DATA:																														
Repeat:																														
1	PT 4500N 5350E	5	<0.2	1.06	<5	80	<5	0.35	<1	14	39	32	2.50	<10	0.42	593	<1	0.02	22	370	4	<5	<20	19	0.10	<10	82	<10	9	51
10	PT 4500N 5800E	5	<0.2	1.30	5	60	<5	0.70	<1	16	96	45	3.28	<10	0.84	254	<1	0.02	31	560	4	10	<20	38	0.10	<10	99	<10	7	64
19	PT 4600N 5500E	5	0.2	1.05	5	70	<5	0.40	<1	13	46	29	2.44	<10	0.44	344	<1	0.02	22	440	6	<5	<20	19	0.11	<10	78	<10	10	55
28	PT 4600N 6100E	<5	0.2	1.34	5	85	<5	0.34	<1	12	42	28	3.00	<10	0.44	349	<1	0.02	21	780	8	<5	<20	19	0.11	<10	91	<10	7	107
36	PT 4750N 5850E	<5	<0.2	1.10	5	75	<5	0.34	<1	12	58	26	3.02	<10	0.32	289	<1	0.03	17	1070	8	<5	<20	32	0.11	<10	98	<10	5	54
45	CB 5470N 5976E	<5	0.5	1.01	10	120	<5	0.08	<1	4	28	28	1.86	<10	0.32	151	5	<0.01	30	260	8	<5	<20	9	0.02	<10	47	<10	7	98
54	CB 5476N 5750E	<5	0.5	0.85	10	95	<5	0.14	<1	9	31	30	2.30	10	0.36	452	10	<0.01	36	370	10	<5	<20	13	0.03	<10	44	<10	6	110
Standard:																														
GEO '05		140	1.6	1.32	60	140	<5	1.32	<1	18	57	86	3.53	<10	0.68	538	<1	0.03	24	550	22	5	<20	45	0.11	<10	77	<10	11	72
GEO '05		140	1.6	1.39	55	145	<5	1.32	<1	16	60	87	3.66	<10	0.71	553	<1	0.03	25	560	20	<5	<20	46	0.11	<10	74	<10	11	73

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga
df/800
XLS/05

ECO TECH LABORATORY LTD.
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ICP CERTIFICATE OF ANALYSIS AK 2005-872

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 50
Sample type: Soil
Project #: N/A
Shipment #: N/A
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT-L83100-5800	5	<0.2	1.05	<5	50	5	0.40	<1	10	31	25	1.90	<10	0.40	223	<1	0.02	18	700	8	<5	<20	25	0.09	<10	53	<10	4	60
2	PT-L83150-5300	<5	<0.2	1.16	<5	50	<5	0.43	<1	13	41	31	2.30	<10	0.49	236	<1	0.02	22	960	8	<5	<20	24	0.12	<10	64	<10	5	43
3	PT-L83150-5400	<5	0.2	1.00	<5	70	5	0.26	<1	9	30	13	1.83	<10	0.26	160	<1	<0.01	15	850	8	<5	<20	15	0.09	<10	47	<10	3	54
4	PT-L83150-5550	<5	0.2	1.54	<5	80	<5	0.31	<1	12	45	26	2.45	<10	0.41	191	<1	<0.01	28	760	10	<5	<20	18	0.09	<10	60	<10	4	63
5	PT-L83150-5650	5	<0.2	1.27	<5	55	5	0.33	<1	15	50	31	2.58	<10	0.56	276	<1	<0.01	26	530	8	<5	<20	20	0.13	<10	72	<10	4	50
6	PT-L83150- 5700	5	0.2	1.38	<5	50	<5	0.32	<1	13	43	32	2.48	<10	0.48	207	<1	0.01	24	480	8	<5	<20	22	0.11	<10	70	<10	3	52
7	PT-L83150-5750	5	<0.2	1.48	<5	60	<5	0.27	<1	11	42	31	2.46	<10	0.45	199	<1	0.01	21	1080	8	<5	<20	20	0.09	<10	67	<10	3	58
8	PT-L83150-5850	<5	0.2	1.74	<5	55	5	0.31	<1	16	46	31	3.06	<10	0.50	244	<1	0.01	24	1030	10	<5	<20	26	0.11	<10	77	<10	3	105
9	PT-L83150-5950	<5	<0.2	1.00	<5	45	5	0.31	<1	10	31	17	1.86	<10	0.35	273	<1	0.01	15	460	6	<5	<20	22	0.10	<10	53	<10	3	40
10	PT-L83150-6000	<5	0.2	2.08	<5	125	5	0.35	<1	20	42	44	3.05	<10	0.63	640	<1	0.01	35	980	12	<5	<20	63	0.11	<10	76	<10	4	97
11	PT-L83150-6050	<5	<0.2	2.53	<5	115	5	0.33	<1	21	63	50	3.49	<10	0.76	617	<1	0.01	38	1230	14	<5	<20	20	0.17	<10	91	<10	4	94
12	PT-L83150-6100	5	<0.2	1.42	5	120	<5	0.37	<1	16	46	35	2.80	<10	0.73	503	<1	0.01	22	700	12	<5	<20	35	0.14	<10	84	<10	3	62
13	PT-L82850-5350	<5	<0.2	0.88	<5	50	<5	0.25	<1	10	33	18	2.01	<10	0.35	257	<1	0.01	19	260	6	<5	<20	16	0.10	<10	54	<10	4	42
14	PT-L83250-5450	<5	<0.2	1.15	<5	65	5	0.36	<1	11	32	27	2.07	<10	0.48	307	<1	0.01	20	430	6	<5	<20	22	0.11	<10	56	<10	5	57
15	PT-L83250-5500	<5	<0.2	0.99	<5	50	<5	0.30	<1	8	33	20	1.85	<10	0.42	167	<1	0.01	17	240	6	<5	<20	18	0.10	<10	53	<10	4	50
16	PT-L83250-6000	<5	<0.2	1.65	<5	110	<5	0.27	<1	11	47	18	2.99	<10	0.29	230	<1	0.01	16	2580	10	<5	<20	18	0.09	<10	71	<10	3	84
17	PT-L82850-6100	<5	0.2	1.19	<5	70	<5	0.42	<1	11	32	28	2.20	<10	0.35	468	<1	0.01	24	320	8	<5	<20	21	0.08	<10	56	<10	11	35
18	PT-L83300-5600	<5	0.5	2.45	<5	140	10	0.72	<1	20	60	80	3.98	10	0.77	899	<1	0.01	46	560	16	<5	<20	42	0.10	<10	94	<10	16	64
19	PT-L83000-5650	<5	<0.2	1.70	<5	85	10	0.33	<1	18	39	44	3.41	<10	0.59	442	<1	<0.01	24	1330	10	<5	<20	19	0.16	<10	78	<10	2	112
20	PT-L83000-5700	<5	<0.2	1.53	<5	65	<5	0.33	<1	14	36	25	2.81	<10	0.40	492	<1	<0.01	24	710	10	<5	<20	19	0.11	<10	72	<10	3	104
21	PT-L83000-5750	15	<0.2	1.68	<5	60	5	0.32	<1	18	48	57	3.03	<10	0.52	216	1	0.01	31	680	12	<5	<20	24	0.10	<10	73	<10	3	98
22	PT-L83300-5800	<5	<0.2	1.09	<5	75	5	0.34	<1	9	33	24	2.05	<10	0.45	271	<1	0.01	18	850	8	<5	<20	22	0.11	<10	57	<10	4	57
23	PT-L83300-5900	<5	<0.2	0.97	<5	50	<5	0.38	<1	9	43	16	2.08	<10	0.39	153	<1	0.01	18	390	6	<5	<20	23	0.10	<10	58	<10	3	46
24	PT-L83300-6050	<5	<0.2	1.65	<5	105	5	0.34	<1	13	42	28	2.61	<10	0.49	279	<1	<0.01	24	1110	10	<5	<20	21	0.10	<10	62	<10	4	79
25	PT-L83400-5350	<5	<0.2	1.12	<5	60	<5	0.33	<1	12	32	21	1.84	<10	0.47	310	<1	0.01	22	270	8	<5	<20	21	0.11	<10	53	<10	6	41
26	PT-L83400-5450	<5	<0.2	1.21	<5	60	<5	0.30	<1	11	33	25	1.93	<10	0.45	298	<1	0.01	19	370	6	<5	<20	19	0.09	<10	54	<10	4	50
27	PT-L83400-5500	<5	<0.2	1.20	<5	65	<5	0.35	<1	10	38	23	2.23	<10	0.43	183	<1	0.01	18	980	8	<5	<20	23	0.11	<10	61	<10	4	59
28	PT-L83400-5550	<5	<0.2	1.46	<5	100	5	0.30	<1	12	39	26	2.36	<10	0.41	240	<1	0.01	25	850	8	<5	<20	20	0.10	<10	61	<10	3	68
29	PT-L83400-5600	<5	<0.2	1.50	<5	75	<5	0.55	<1	14	47	38	2.90	<10	0.65	425	<1	0.01	26	680	12	<5	<20	29	0.12	<10	78	<10	8	43
30	PT-L83400-5650	<5	0.2	1.14	<5	65	5	0.39	<1	10	32	21	1.99	<10	0.42	227	<1	0.01	17	1020	8	<5	<20	22	0.09	<10	54	<10	4	69

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT-L83400-5700	<5	0.3	1.83	<5	90	5	0.66	<1	15	48	54	2.82	<10	0.58	294	<1	0.01	33	380	10	<5	<20	43	0.09	<10	72	<10	9	55
32	PT-L83400-5750	<5	0.3	1.78	<5	70	5	0.43	<1	15	55	47	2.89	<10	0.69	304	<1	0.01	29	540	14	<5	<20	28	0.10	<10	81	<10	6	58
33	PT-L83400-5800	<5	0.2	1.00	<5	50	5	0.35	<1	9	30	21	1.85	<10	0.40	230	<1	0.01	17	740	8	<5	<20	21	0.10	<10	50	<10	4	55
34	PT-L83400-5850	<5	0.2	1.04	<5	50	<5	0.46	<1	11	28	23	1.93	<10	0.47	391	<1	0.02	19	580	6	<5	<20	29	0.08	<10	54	<10	5	45
35	PT-L83400-5900	<5	0.3	3.21	5	170	10	0.59	<1	27	90	106	5.39	10	1.22	1258	<1	0.01	65	1110	20	<5	<20	43	0.09	<10	127	<10	16	103
36	PT-L83400-5950	<5	<0.2	0.82	<5	50	5	0.26	<1	7	27	11	1.65	<10	0.27	153	<1	0.01	11	460	6	<5	<20	18	0.08	<10	49	<10	3	40
37	PT-L83400-6050	<5	0.2	1.05	<5	45	5	0.27	<1	12	29	16	4.15	<10	0.28	731	1	<0.01	10	1570	10	<5	<20	38	0.22	<10	109	<10	2	69
38	PT-L83400-6100	5	<0.2	1.64	<5	65	5	0.27	<1	11	40	24	2.23	<10	0.47	204	<1	0.01	23	410	10	<5	<20	20	0.09	<10	59	<10	3	56
39	PT-L83450-5500	<5	<0.2	1.16	<5	65	<5	0.37	<1	10	37	26	2.16	<10	0.47	189	<1	0.01	19	620	8	<5	<20	25	0.12	<10	62	<10	4	54
40	PT-L83450-5550	<5	<0.2	1.13	<5	105	5	0.45	<1	10	24	20	2.19	<10	0.38	524	<1	0.01	17	960	8	<5	<20	26	0.10	<10	59	<10	3	55
41	PT-L83550-5300	<5	<0.2	1.37	<5	75	<5	0.40	<1	13	37	32	2.19	<10	0.53	408	<1	0.01	26	340	8	<5	<20	26	0.11	<10	62	<10	7	44
42	PT-L83550-5400	<5	<0.2	1.09	<5	55	<5	0.36	<1	9	34	24	1.84	<10	0.47	207	<1	0.01	17	320	8	<5	<20	23	0.11	<10	53	<10	4	47
43	PT-L83550-5500	<5	<0.2	1.06	<5	50	<5	0.38	<1	9	31	23	1.89	<10	0.42	189	<1	0.02	16	630	8	<5	<20	24	0.11	<10	58	<10	4	44
44	PT-L83550-5550	<5	<0.2	1.25	<5	50	<5	0.38	<1	10	37	28	2.02	<10	0.54	228	<1	0.01	19	620	8	<5	<20	25	0.11	<10	58	<10	5	39
45	PT-L83550-5750	<5	<0.2	1.16	<5	60	5	0.33	<1	9	37	23	2.13	<10	0.43	191	<1	0.01	16	910	8	<5	<20	19	0.11	<10	61	<10	4	54
46	PT-L83550-5800	<5	0.2	1.41	<5	70	<5	0.30	<1	10	47	22	2.74	<10	0.39	165	<1	0.01	18	1570	10	<5	<20	19	0.10	<10	65	<10	4	92
47	PT-L83550-5850	<5	0.2	1.18	<5	55	5	0.32	<1	8	39	27	1.94	<10	0.44	186	<1	0.01	17	380	8	<5	<20	22	0.08	<10	51	<10	5	40
48	PT-L83550-5900	<5	<0.2	1.18	<5	50	5	0.27	<1	11	41	26	2.18	<10	0.47	174	<1	0.01	19	330	8	<5	<20	20	0.11	<10	62	<10	4	51
49	PT-L83550-6050	<5	<0.2	1.24	<5	75	<5	0.38	<1	10	36	20	2.26	<10	0.38	245	<1	0.01	19	1350	8	<5	<20	22	0.09	<10	57	<10	4	70
50	PT-L83550-6100	<5	<0.2	1.11	<5	90	<5	0.34	<1	11	28	23	2.22	<10	0.41	486	<1	0.01	21	850	8	<5	<20	20	0.09	<10	57	<10	4	65

QC DATA:

Repeat:

1	PT-L83100-5800	<5	<0.2	1.09	<5	50	<5	0.39	<1	10	32	26	2.00	<10	0.42	228	<1	0.02	18	750	8	<5	<20	25	0.09	<10	54	<10	5	62
10	PT-L83150-6000	<5	0.2	2.04	<5	120	10	0.34	<1	20	41	43	3.04	<10	0.63	647	<1	0.01	35	960	12	<5	<20	62	0.11	<10	75	<10	4	95
19	PT-L83000-5650	<5	<0.2	1.72	<5	85	10	0.32	<1	19	39	46	3.49	<10	0.61	448	<1	<0.01	25	1360	10	<5	<20	19	0.12	<10	77	<10	2	106
28	PT-L83400-5550	5	0.2	1.47	<5	100	5	0.30	<1	12	39	27	2.38	<10	0.41	237	<1	0.01	25	890	10	<5	<20	19	0.10	<10	61	<10	3	70
36	PT-L83400-5950	<5	<0.2	0.85	<5	50	<5	0.28	<1	7	28	11	1.67	<10	0.27	158	<1	0.01	11	440	8	<5	<20	20	0.09	<10	50	<10	3	42
45	PT-L83550-5750	<5	<0.2	1.16	<5	60	5	0.34	<1	9	36	23	2.09	<10	0.43	192	<1	0.01	16	830	10	<5	<20	20	0.11	<10	60	<10	4	53

Standard:

GEO '05		135	1.5	1.49	50	125	10	1.41	<1	18	59	88	3.37	<10	0.84	603	<1	0.02	29	660	22	<5	<20	56	0.11	<10	67	<10	10	74
GEO '05		135	1.5	1.50	50	125	10	1.43	<1	18	59	88	3.40	<10	0.85	609	<1	0.02	29	660	22	<5	<20	57	0.10	<10	67	<10	9	72

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga
df/n872
XLS/05

ECO TECH LABORATORY LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

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ICP CERTIFICATE OF ANALYSIS AK 2005-900

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 51
Sample type: Soil
Project #: N/A
Shipment #: N/A
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT-L83200-5300E	<5	<0.2	0.72	<5	50	<5	0.24	<1	9	30	25	2.10	<10	0.33	205	<1	0.01	16	510	<2	<5	<20	15	0.08	<10	62	<10	5	29
2	PT-L83200-5350E	5	<0.2	0.72	<5	55	<5	0.21	<1	8	28	21	2.02	<10	0.33	161	<1	0.01	16	360	<2	<5	<20	12	0.07	<10	56	<10	5	40
3	PT-L83200-5400E	5	0.6	2.12	10	175	<5	0.43	<1	16	64	70	4.09	<10	0.63	952	<1	0.01	44	450	<2	<5	<20	27	0.08	<10	95	<10	8	71
4	PT-L83200-5450E	5	<0.2	0.70	<5	55	<5	0.22	<1	8	25	21	1.81	<10	0.32	342	<1	0.01	16	430	<2	<5	<20	12	0.06	<10	50	<10	5	40
5	PT-L83200-5500E	5	<0.2	0.77	<5	55	<5	0.22	<1	9	29	24	1.94	<10	0.39	251	<1	0.01	17	310	<2	<5	<20	14	0.07	<10	55	<10	5	36
6	PT-L83200-5550E	<5	<0.2	1.13	5	100	<5	0.26	<1	9	34	28	2.69	<10	0.36	183	<1	0.01	23	1190	<2	<5	<20	16	0.07	<10	65	<10	4	71
7	PT-L83200-5600E	<5	<0.2	0.98	5	115	<5	0.25	<1	9	28	23	2.35	<10	0.34	432	<1	0.01	21	1200	<2	<5	<20	16	0.06	<10	55	<10	3	62
8	PT-L83200-5650E	5	<0.2	1.11	5	75	<5	0.30	<1	14	38	44	2.78	<10	0.47	347	<1	0.01	23	740	<2	<5	<20	17	0.08	<10	82	<10	6	47
9	PT-L83200-5700E	5	<0.2	1.00	5	75	<5	0.29	<1	11	32	38	2.51	<10	0.47	214	<1	0.01	23	770	<2	<5	<20	20	0.07	<10	68	<10	4	40
10	PT-L83200-5750E	<5	<0.2	0.95	5	100	<5	0.27	<1	8	28	21	2.35	<10	0.29	237	<1	0.01	17	1460	<2	<5	<20	17	0.06	<10	54	<10	3	74
11	PT-L83200-5800E	5	<0.2	1.70	<5	80	<5	0.22	<1	15	38	33	3.71	<10	0.45	717	<1	0.01	23	1160	<2	<5	<20	17	0.08	<10	98	<10	1	92
12	PT-L83200-5850E	5	<0.2	1.47	<5	40	<5	0.43	<1	16	49	41	3.35	<10	0.64	290	1	<0.01	26	1030	12	<5	<20	25	0.12	<10	89	<10	3	64
13	PT-L83200-5900E	5	<0.2	1.66	<5	75	<5	0.28	<1	14	46	39	3.41	<10	0.55	269	<1	0.02	24	1540	<2	<5	<20	24	0.07	<10	87	<10	3	72
14	PT-L83200-5950E	5	<0.2	1.21	<5	50	<5	0.28	<1	14	33	33	2.85	<10	0.49	249	<1	0.01	21	530	<2	<5	<20	18	0.10	<10	77	<10	6	52
15	PT-L83200-6000E	<5	<0.2	0.87	<5	70	<5	0.28	<1	9	30	18	2.38	<10	0.29	153	<1	0.01	20	770	<2	<5	<20	15	0.07	<10	60	<10	5	50
16	PT-L83200-6050E	<5	0.2	1.66	<5	95	<5	0.18	<1	13	42	28	3.55	<10	0.35	293	<1	<0.01	23	1420	<2	<5	<20	11	0.09	<10	87	<10	3	114
17	PT-L83200-6100E	5	<0.2	0.91	<5	100	<5	0.29	<1	9	29	21	2.47	<10	0.30	245	<1	0.01	17	1530	<2	<5	<20	16	0.06	<10	55	<10	3	85
18	PT-L83500-4600E	<5	<0.2	0.87	<5	70	<5	0.25	<1	10	29	26	2.37	<10	0.35	238	<1	0.01	20	790	<2	<5	<20	14	0.07	<10	61	<10	5	46
19	PT-L83500-4650E	5	<0.2	0.96	<5	65	<5	0.27	<1	11	28	28	2.19	<10	0.38	370	<1	0.01	18	480	<2	<5	<20	17	0.07	<10	61	<10	8	49
20	PT-L83500-5300E	5	0.2	0.80	<5	60	<5	0.24	<1	8	27	24	1.97	<10	0.35	170	<1	0.01	17	290	<2	<5	<20	14	0.07	<10	53	<10	7	49
21	PT-L83500-5350E	5	<0.2	0.68	<5	50	<5	0.27	<1	7	24	19	1.74	<10	0.30	150	<1	0.01	12	460	<2	<5	<20	15	0.08	<10	52	<10	6	43
22	PT-L83500-5400E	5	<0.2	0.75	<5	65	<5	0.27	<1	8	26	21	1.93	<10	0.33	202	<1	0.01	14	380	2	<5	<20	16	0.08	<10	59	<10	6	51
23	PT-L83500-5450E	5	<0.2	1.05	<5	70	<5	0.26	<1	11	35	29	2.79	<10	0.41	195	<1	0.01	23	760	<2	<5	<20	15	0.08	<10	74	<10	5	57
24	PT-L83500-5500E	<5	<0.2	2.33	<5	130	<5	0.21	<1	21	50	71	4.91	<10	0.37	767	<1	0.01	28	1400	<2	<5	<20	17	0.11	<10	119	<10	3	127
25	PT-L83500-5550E	5	<0.2	0.84	<5	50	<5	0.26	<1	9	29	23	2.22	<10	0.32	174	<1	0.01	19	630	<2	<5	<20	13	0.07	<10	58	<10	4	41
26	PT-L83500-5600E	5	0.2	1.56	<5	100	<5	0.53	<1	17	48	58	3.27	<10	0.60	586	<1	0.02	29	370	<2	<5	<20	35	0.08	<10	88	<10	10	58
27	PT-L83500-5650E	5	<0.2	1.05	<5	85	<5	0.17	<1	8	30	18	2.74	<10	0.25	126	<1	0.01	17	1480	<2	<5	<20	10	0.07	<10	71	<10	2	73
28	PT-L83500-5700E	<5	0.2	1.52	<5	105	<5	0.44	<1	14	49	60	3.24	<10	0.56	392	<1	0.02	28	770	<2	<5	<20	31	0.07	<10	81	<10	9	66
29	PT-L83500-5750E	5	<0.2	1.31	<5	95	<5	0.43	<1	14	48	52	3.48	<10	0.57	404	<1	0.01	24	850	4	<5	<20	23	0.10	<10	107	<10	9	52
30	PT-L83500-5800E	5	<0.2	0.86	<5	50	<5	0.29	<1	11	35	28	2.52	<10	0.40	188	<1	0.01	20	440	2	<5	<20	17	0.09	<10	70	<10	8	48

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT-L83500-5850E	5	<0.2	0.82	<5	50	<5	0.29	<1	10	34	23	2.43	<10	0.41	220	<1	0.01	19	680	<2	<5	<20	16	0.07	<10	67	<10	6	49
32	PT-L83500-5900E	5	<0.2	1.00	<5	65	<5	0.26	<1	10	37	32	2.53	<10	0.46	190	<1	0.02	21	360	<2	<5	<20	16	0.09	<10	73	<10	6	60
33	PT-L83500-5950E	5	<0.2	0.82	<5	65	<5	0.20	<1	8	27	17	2.16	<10	0.26	157	<1	0.01	15	1150	<2	<5	<20	11	0.06	<10	54	<10	4	54
34	PT-L83500-6100E	5	<0.2	1.13	<5	75	<5	0.23	<1	11	34	24	2.93	<10	0.32	168	<1	0.01	23	1740	<2	<5	<20	13	0.07	<10	71	<10	4	67
35	PT-L83500-5300E	5	<0.2	1.17	<5	95	<5	0.33	<1	16	42	33	2.87	<10	0.49	768	<1	0.01	27	460	<2	<5	<20	20	0.08	<10	76	<10	8	56
36	PT-L83500-5350E	5	<0.2	1.12	<5	95	<5	0.30	<1	16	40	32	2.90	<10	0.40	839	<1	0.01	26	370	4	<5	<20	18	0.07	<10	76	<10	8	66
37	PT-L83350-5400E	5	<0.2	0.78	<5	65	<5	0.27	<1	10	30	20	2.13	<10	0.32	294	<1	0.01	17	430	4	<5	<20	14	0.07	<10	57	<10	6	50
38	PT-L83350-5450E	5	<0.2	0.84	<5	55	<5	0.31	<1	12	35	25	2.37	<10	0.41	348	<1	0.01	20	560	4	<5	<20	15	0.09	<10	69	<10	8	46
39	PT-L83350-5500E	5	<0.2	1.12	<5	90	<5	0.29	<1	11	37	32	2.94	<10	0.40	227	<1	0.01	25	1110	2	<5	<20	17	0.08	<10	72	<10	6	60
40	PT-L83350-5550E	5	<0.2	0.83	<5	125	<5	0.23	<1	11	31	20	2.39	<10	0.26	539	<1	0.01	15	1090	4	<5	<20	14	0.07	<10	59	<10	3	74
41	PT-L83350-5600E	5	0.9	3.40	10	245	<5	0.97	<1	22	110	151	6.79	<10	0.87	906	3	0.02	78	710	<2	<5	<20	51	0.08	<10	143	<10	28	108
42	PT-L83350-5650E	5	<0.2	0.51	<5	50	<5	0.26	<1	6	20	12	1.42	<10	0.21	169	<1	0.01	10	400	2	<5	<20	13	0.08	<10	41	<10	5	37
43	PT-L83350-5700E	5	<0.2	1.68	5	150	<5	0.49	<1	19	57	51	3.72	<10	0.60	647	<1	0.02	48	480	<2	<5	<20	28	0.08	<10	94	<10	13	63
44	PT-L83350-5750E	5	<0.2	0.58	<5	50	<5	0.36	<1	6	26	17	1.73	<10	0.20	106	<1	0.01	13	190	4	<5	<20	19	0.07	<10	51	<10	5	33
45	PT-L83350-5800E	5	<0.2	0.73	<5	60	<5	0.21	<1	7	25	15	2.03	<10	0.25	130	<1	0.01	12	620	2	<5	<20	10	0.07	<10	56	<10	4	46
46	PT-L83350-5850E	5	<0.2	1.28	5	105	<5	0.60	<1	14	51	44	3.39	<10	0.41	420	<1	0.01	33	400	<2	<5	<20	24	0.08	<10	83	<10	11	63
47	PT-L83350-5900E	10	<0.2	1.20	<5	60	<5	0.29	<1	16	44	27	2.77	<10	0.38	541	<1	0.01	21	560	4	<5	<20	14	0.09	<10	76	<10	6	69
48	PT-L83350-5950E	10	<0.2	1.21	<5	75	<5	0.25	<1	10	32	22	2.47	<10	0.30	199	<1	0.01	20	760	2	<5	<20	15	0.07	<10	63	<10	4	62
49	PT-L83350-6000E	5	<0.2	1.22	<5	80	<5	0.34	<1	15	38	39	2.86	<10	0.46	336	<1	0.01	22	800	<2	<5	<20	19	0.10	<10	79	<10	7	56
50	PT-L83350-6050E	20	<0.2	1.22	10	80	<5	0.24	<1	14	41	32	3.25	<10	0.40	210	<1	0.01	30	1370	<2	<5	<20	13	0.08	<10	78	<10	4	82
51	PT-L83350-6100E	5	<0.2	1.23	<5	60	<5	0.62	<1	15	33	30	4.18	<10	0.47	594	<1	<0.01	13	1680	<2	<5	<20	44	0.17	<10	105	<10	7	126

QC DATA:

Repeat:

1	PT-L83200-5300E	20	<0.2	0.67	<5	45	<5	0.22	<1	9	29	22	2.01	<10	0.31	192	<1	0.01	17	460	<2	<5	<20	13	0.07	<10	58	<10	4	29
19	PT-L83500-4650E	<5	<0.2	0.88	<5	70	<5	0.25	<1	10	30	26	2.35	<10	0.35	358	<1	0.01	20	500	<2	<5	<20	19	0.07	<10	61	<10	6	46
28	PT-L83500-5700E	<5	<0.2	1.51	<5	110	<5	0.44	<1	15	51	60	3.31	<10	0.57	427	<1	0.02	29	770	<2	<5	<20	30	0.06	<10	83	<10	9	67
36	PT-L83500-5350E	<5	0.2	1.31	<5	110	<5	0.34	<1	18	44	38	3.11	<10	0.45	999	<1	0.01	29	410	2	<5	<20	21	0.08	<10	80	<10	11	70
45	PT-L83350-5800E	5	<0.2	0.79	<5	55	<5	0.23	<1	8	27	17	2.12	<10	0.27	137	<1	0.01	14	620	<2	<5	<20	12	0.08	<10	61	<10	5	47

Standard:

GEO '05		140	1.5	1.42	55	145	<5	1.27	<1	19	59	86	3.61	<10	0.69	559	<1	0.02	29	570	20	<5	<20	54	0.11	<10	71	<10	11	73
GEO '05		135	1.5	1.46	55	145	<5	1.29	<1	18	59	89	3.71	<10	0.70	564	<1	0.02	29	590	20	<5	<20	54	0.10	<10	74	<10	10	76

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga
df/900
XLS/05

ECO TECH LABORATORY LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

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ICP CERTIFICATE OF ANALYSIS AK 2005-901

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 119
Sample type: Soil
Project #: n/a
Shipment #: n/a
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT-L83650-5350E	5	<0.2	1.23	<5	55	<5	0.40	<1	10	33	25	2.12	<10	0.47	246	<1	0.02	19	360	10	<5	<20	25	0.12	<10	61	<10	5	51
2	PT-L83650-5400E	5	<0.2	0.82	<5	35	<5	0.34	<1	7	24	16	1.47	<10	0.34	157	<1	0.01	13	260	8	<5	<20	19	0.10	<10	45	<10	4	31
3	PT-L83650-5450E	10	<0.2	1.33	5	60	<5	0.52	<1	15	33	33	2.62	<10	0.61	491	<1	0.02	23	720	12	<5	<20	33	0.14	<10	87	<10	6	38
4	PT-L83650-5500E	10	<0.2	1.31	<5	75	<5	0.37	<1	10	35	22	2.40	<10	0.40	266	<1	0.02	18	840	10	<5	<20	23	0.12	<10	69	<10	4	53
5	PT-L83650-5550E	10	<0.2	1.11	<5	65	<5	0.43	<1	10	31	20	2.06	<10	0.43	260	<1	0.02	16	790	10	<5	<20	26	0.11	<10	60	<10	4	50
6	PT-L83650-5600E	5	<0.2	1.14	<5	40	<5	0.32	<1	9	33	21	2.06	<10	0.44	228	<1	0.01	17	450	8	<5	<20	21	0.10	<10	60	<10	4	54
7	PT-L83650-5650E	20	<0.2	0.82	<5	50	<5	0.27	<1	6	24	12	1.54	<10	0.25	131	<1	0.01	11	410	8	<5	<20	19	0.08	<10	45	<10	3	47
8	PT-L83650-5700E	5	<0.2	1.51	<5	80	<5	0.52	<1	11	48	29	2.75	<10	0.55	229	1	0.03	23	1100	12	<5	<20	31	0.13	10	78	<10	5	59
9	PT-L83650-5750E	5	<0.2	1.54	<5	85	<5	0.44	<1	11	41	29	2.63	<10	0.58	238	<1	0.02	22	1000	10	<5	<20	26	0.13	<10	77	<10	6	57
10	PT-L83650-5800E	5	<0.2	1.27	<5	80	<5	0.50	<1	10	36	26	2.37	<10	0.52	300	<1	0.02	19	830	10	<5	<20	29	0.14	<10	70	<10	6	56
11	PT-L83650-5850E	10	<0.2	1.41	<5	60	<5	0.50	<1	13	43	28	2.62	10	0.64	334	<1	0.03	23	900	10	<5	<20	31	0.14	<10	80	<10	6	44
12	PT-L83650-5900E	5	<0.2	1.75	<5	75	<5	0.47	<1	18	43	38	3.15	<10	0.64	461	<1	0.02	27	940	12	<5	<20	28	0.15	<10	91	<10	5	55
13	PT-L83650-5950E	5	0.2	1.51	<5	85	<5	0.44	<1	10	45	25	2.92	<10	0.46	211	1	0.02	20	1890	12	<5	<20	26	0.12	<10	78	<10	5	57
14	PT-L83650-6000E	5	<0.2	1.34	<5	85	<5	0.40	<1	11	36	18	2.37	<10	0.40	257	<1	0.02	16	1250	10	<5	<20	22	0.14	<10	66	<10	4	91
15	PT-L83650-6050E	5	<0.2	1.66	<5	75	<5	0.49	<1	14	39	37	2.86	<10	0.65	414	1	0.02	24	1300	10	<5	<20	22	0.14	<10	79	<10	5	79
16	PT-L83650-6100E	10	<0.2	1.56	5	85	<5	0.49	<1	15	47	34	3.02	<10	0.65	387	<1	0.02	25	1090	12	<5	<20	31	0.14	<10	86	<10	5	50
17	PT-L83650-6300E	5	<0.2	1.41	<5	75	<5	0.48	<1	13	37	33	2.47	<10	0.60	391	<1	0.02	25	540	10	<5	<20	28	0.14	<10	75	<10	7	41
18	PT-L83700-5300E	5	<0.2	1.20	<5	65	<5	0.45	<1	10	34	24	2.07	<10	0.46	214	<1	0.02	18	380	10	<5	<20	28	0.14	<10	63	<10	6	42
19	PT-L83700-5350E	5	<0.2	1.37	<5	70	<5	0.42	<1	11	38	24	2.58	<10	0.44	259	1	0.02	19	930	12	<5	<20	26	0.13	<10	72	<10	5	64
20	PT-L83700-5400E	10	<0.2	1.17	<5	70	<5	0.48	<1	13	19	21	2.13	<10	0.43	575	1	0.02	18	510	10	<5	<20	29	0.14	<10	63	<10	6	47
21	PT-L83700-5500E	5	<0.2	1.18	<5	75	<5	0.36	<1	8	30	20	2.18	<10	0.33	245	<1	0.02	14	710	10	<5	<20	25	0.13	<10	66	<10	4	61
22	PT-L83700-5550E	5	<0.2	1.87	<5	85	<5	0.56	<1	13	48	37	3.21	<10	0.63	281	<1	0.03	25	1520	12	<5	<20	35	0.14	<10	86	<10	6	87
23	PT-L83700-5600E	10	0.4	3.35	<5	160	<5	0.72	<1	38	51	83	5.19	10	0.77	1510	2	0.03	61	1100	22	<5	<20	53	0.13	<10	109	<10	13	153
24	PT-L83700-5650E	5	<0.2	1.05	<5	75	<5	0.37	<1	13	16	17	2.18	<10	0.36	697	<1	0.02	16	500	10	<5	<20	23	0.13	<10	64	<10	4	55
25	PT-L83700-5700E	30	<0.2	1.93	5	100	<5	0.54	<1	19	54	60	3.69	<10	0.85	533	1	0.03	31	980	14	<5	<20	31	0.16	<10	104	<10	6	60
26	PT-L83700-5750E	5	0.3	1.51	5	75	<5	0.53	<1	12	44	39	3.01	<10	0.65	316	1	0.02	24	580	12	<5	<20	33	0.13	<10	87	<10	6	48
27	PT-L83700-5800E	5	<0.2	1.45	<5	95	<5	0.62	<1	12	38	33	2.82	<10	0.51	374	1	0.02	21	1560	12	<5	<20	36	0.12	<10	76	<10	4	66
28	PT-L83700-5850E	5	<0.2	1.64	<5	65	<5	0.56	<1	13	42	33	2.97	<10	0.67	437	<1	0.03	26	660	12	<5	<20	34	0.13	<10	88	<10	7	60
29	PT-L83700-5900E	5	0.2	1.69	<5	80	<5	0.54	<1	11	42	23	3.19	<10	0.39	279	1	0.02	19	2710	12	<5	<20	33	0.11	<10	77	<10	4	105
30	PT-L83700-5950E	5	0.3	1.37	<5	135	<5	0.80	<1	14	3	33	2.84	<10	0.55	1369	1	0.02	22	1500	12	<5	<20	37	0.14	<10	77	<10	4	99

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT-L83700-6000E	5	0.2	1.51	<5	120	<5	0.54	<1	17	23	20	3.17	<10	0.51	776	<1	0.02	20	1830	14	<5	<20	27	0.20	<10	87	<10	4	249
32	PT-L83700-6050E	5	0.2	1.16	<5	105	<5	0.45	<1	12	37	15	2.10	<10	0.44	271	<1	0.02	14	910	10	<5	<20	21	0.18	<10	64	<10	5	86
33	PT-L83700-6100E	<5	0.4	3.77	5	190	<5	0.69	<1	39	<1	93	5.79	10	1.06	4009	3	0.02	62	1080	28	<5	<20	47	0.10	<10	148	<10	14	112
34	PT-L83850-4600E	5	1.2	4.78	10	240	<5	1.35	1	37	85	238	6.47	30	1.33	1226	2	0.02	82	940	28	<5	<20	73	0.09	<10	161	<10	30	94
35	PT-L83850-5300E	5	<0.2	1.54	<5	70	<5	0.61	<1	15	35	38	2.85	<10	0.72	488	<1	0.03	24	850	10	<5	<20	33	0.16	<10	88	<10	7	48
36	PT-L83850-5350E	<5	0.2	1.32	<5	70	<5	0.40	<1	10	39	25	2.46	<10	0.45	183	<1	0.02	19	1110	10	<5	<20	24	0.14	<10	64	<10	5	66
37	PT-L83850-5400E	<5	<0.2	1.94	<5	120	<5	0.68	<1	27	23	53	3.41	<10	0.82	1180	1	0.02	40	810	14	<5	<20	39	0.11	<10	83	<10	8	88
38	PT-L83850-5450E	15	<0.2	1.69	<5	75	<5	0.36	<1	15	48	40	3.45	<10	0.60	372	1	0.02	26	1260	14	<5	<20	25	0.14	<10	90	<10	5	66
39	PT-L83850-5500E	5	<0.2	1.19	<5	95	<5	0.61	<1	13	31	29	2.49	<10	0.53	430	<1	0.02	18	1000	10	<5	<20	36	0.14	<10	71	<10	4	54
40	PT-L83850-5550E	<5	0.2	2.41	<5	110	<5	0.73	<1	18	49	66	3.76	10	0.79	737	1	0.02	39	600	16	<5	<20	43	0.12	<10	89	<10	11	62
41	PT-L83850-5600E	<5	<0.2	1.18	<5	75	<5	0.44	<1	14	7	27	2.23	<10	0.44	952	1	0.02	20	480	8	<5	<20	27	0.12	<10	62	<10	6	58
42	PT-L83850-5650E	<5	0.3	2.99	5	150	<5	0.93	<1	21	51	74	4.22	10	0.81	1012	2	0.02	48	810	18	<5	<20	48	0.10	<10	94	<10	18	62
43	PT-L83850-5700E	<5	<0.2	1.41	<5	45	<5	0.47	<1	11	38	25	2.38	<10	0.44	229	<1	0.02	21	760	10	<5	<20	30	0.11	<10	67	<10	5	57
44	PT-L83850-5750E	<5	<0.2	1.24	<5	65	<5	0.54	<1	13	32	29	2.49	<10	0.59	399	<1	0.02	21	960	10	<5	<20	30	0.14	<10	74	<10	6	46
45	PT-L83850-5800E	<5	<0.2	1.35	<5	60	<5	0.55	<1	12	41	32	2.82	<10	0.60	318	<1	0.03	24	1190	10	<5	<20	34	0.12	<10	80	<10	5	48
46	PT-L83850-5850E	<5	<0.2	1.39	<5	55	<5	0.38	<1	11	37	21	2.71	<10	0.47	312	<1	0.02	19	800	10	<5	<20	23	0.11	<10	78	<10	4	60
47	PT-L83850-5900E	<5	<0.2	1.30	<5	50	<5	0.41	<1	11	36	27	2.49	<10	0.52	367	<1	0.02	20	390	10	<5	<20	26	0.12	<10	74	<10	5	53
48	PT-L83850-5950E	<5	<0.2	1.43	<5	100	<5	0.61	<1	10	43	22	3.07	<10	0.43	207	<1	0.02	17	3200	10	<5	<20	36	0.11	<10	74	<10	4	99
49	PT-L83850-6050E	<5	0.8	1.66	<5	175	<5	0.43	<1	13	27	30	3.15	<10	0.49	683	<1	0.02	19	2080	12	<5	<20	26	0.15	<10	78	<10	5	122
50	PT-L83850-6100E	<5	0.2	1.74	<5	130	<5	0.47	<1	10	41	26	3.40	<10	0.45	379	1	0.02	19	3200	12	<5	<20	25	0.11	<10	81	<10	4	81
51	PT-L83950-5300E	<5	<0.2	1.38	<5	65	<5	0.60	<1	13	34	33	2.59	<10	0.64	397	<1	0.03	23	850	8	<5	<20	33	0.14	<10	73	<10	7	52
52	PT-L83950-5350E	<5	0.5	3.11	<5	175	<5	0.67	<1	27	55	115	4.93	10	1.01	1250	2	0.02	61	980	20	5	<20	41	0.13	<10	107	<10	13	117
53	PT-L83950-5400E	5	0.4	2.44	<5	120	<5	0.66	<1	24	55	87	4.26	10	0.93	989	2	0.02	47	670	18	<5	<20	41	0.13	<10	105	<10	14	80
54	PT-L83950-5450E	<5	0.3	1.97	<5	125	<5	0.57	<1	25	26	72	4.05	10	0.80	1420	1	0.02	44	1000	16	<5	<20	36	0.12	<10	106	<10	10	74
55	PT-L83950-5500E	<5	0.9	4.24	5	255	<5	0.98	1	32	87	178	6.76	10	1.39	1327	2	0.02	79	1040	28	5	<20	62	0.12	<10	131	<10	18	142
56	PT-L83950-5550E	<5	0.2	1.87	<5	120	<5	0.75	<1	21	40	73	3.43	10	0.76	715	1	0.03	35	1010	14	<5	<20	45	0.12	<10	89	<10	13	71
57	PT-L83950-5600E	5	0.3	1.82	<5	105	<5	0.75	<1	19	40	64	3.37	10	0.78	784	1	0.02	34	940	14	<5	<20	41	0.12	<10	89	<10	11	63
58	PT-L83950-5650E	5	0.3	3.46	5	190	<5	1.16	<1	24	67	97	4.89	10	1.02	1032	1	0.02	56	1020	20	5	<20	60	0.10	<10	105	<10	22	76
59	PT-L83950-5700E	<5	0.2	1.29	<5	55	<5	0.45	<1	9	36	22	2.34	<10	0.43	204	<1	0.02	17	620	10	<5	<20	30	0.12	<10	70	<10	6	59
60	PT-L83950-5750E	5	<0.2	1.69	<5	95	<5	0.60	<1	20	35	39	3.23	10	0.63	796	<1	0.03	32	740	10	<5	<20	35	0.13	<10	88	<10	10	70
61	PT-L83950-5900E	<5	<0.2	1.33	<5	65	<5	0.57	<1	11	35	29	2.54	<10	0.57	381	<1	0.03	22	820	10	<5	<20	34	0.12	<10	76	<10	7	39
62	PT-L83950-5950E	<5	<0.2	1.34	<5	75	<5	0.45	<1	11	40	27	2.76	<10	0.50	219	2	0.02	19	1190	12	<5	<20	30	0.14	<10	74	<10	5	77
63	PT-L83950-6000E	<5	0.2	1.42	<5	65	<5	0.65	<1	15	32	36	2.60	<10	0.62	510	<1	0.02	24	580	12	<5	<20	32	0.13	<10	79	<10	10	44
64	PT-L83950-6050E	<5	0.2	1.19	<5	125	<5	0.47	<1	11	39	25	2.78	<10	0.45	258	<1	0.02	15	930	12	<5	<20	29	0.16	<10	82	<10	4	92
65	PT-L83950-6100E	<5	<0.2	1.16	10	90	<5	0.49	<1	10	35	29	2.62	<10	0.44	244	2	0.03	16	1140	8	<5	<20	26	0.16	<10	73	<10	4	47
66	PT-L84350-4750E	<5	<0.2	1.80	<5	70	<5	0.39	<1	14	49	32	3.25	<10	0.49	252	<1	0.02	22	990	14	<5	<20	24	0.15	<10	93	<10	4	67
67	PT-L84350-5300E	15	0.2	1.17	<5	60	<5	0.43	<1	11	28	23	2.02	<10	0.45	336	<1	0.02	18	350	8	<5	<20	24	0.13	<10	57	<10	5	62
68	PT-L84350-5350E	<5	<0.2	1.39	<5	65	<5	0.52	<1	17	34	35	2.93	<10	0.61	596	<1	0.02	26	690	12	<5	<20	28	0.16	<10	90	<10	7	48
69	PT-L84350-5405E	<5	<0.2	1.53	<5	70	<5	0.56	<1	16	41	39	2.96	<10	0.63	411	1	0.02	26	660	12	<5	<20	31	0.18	<10	90	<10	6	58
70	PT-L84350-5450E	<5	<0.2	1.13	<5	60	<5	0.42	<1	10	32	20	2.04	<10	0.41	249	<1	0.02	17	380	8	<5	<20	23	0.15	<10	65	<10	5	54

24-Aug-05

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
71	PT-L84350-5503E	5	<0.2	1.46	<5	75	<5	0.48	<1	13	49	32	2.94	<10	0.61	251	<1	0.02	26	850	10	<5	<20	28	0.15	<10	83	<10	5	54
72	PT-L84350-5550E	5	<0.2	1.12	<5	60	<5	0.38	<1	9	35	18	2.04	<10	0.40	191	<1	0.02	16	610	8	<5	<20	22	0.12	<10	58	<10	4	65
73	PT-L84350-5600E	5	<0.2	1.44	<5	55	<5	0.66	<1	13	42	29	2.63	<10	0.52	249	1	0.02	22	330	10	<5	<20	28	0.12	<10	72	<10	5	42
74	PT-L84350-5650E	5	<0.2	1.34	<5	45	<5	0.51	<1	16	41	28	2.72	<10	0.58	302	1	0.03	24	510	10	<5	<20	29	0.15	<10	83	<10	4	44
75	PT-L84350-5700E	5	<0.2	1.56	<5	70	<5	0.51	<1	15	46	41	2.92	<10	0.64	294	1	0.02	26	1010	10	<5	<20	27	0.15	<10	87	<10	5	54
76	PT-L84350-5800E	5	<0.2	1.70	<5	65	<5	0.47	<1	18	22	37	2.90	<10	0.54	1106	1	0.02	28	580	12	<5	<20	30	0.11	<10	80	<10	6	55
77	PT-L84350-5850E	5	<0.2	1.79	<5	65	<5	0.53	<1	17	54	48	3.38	<10	0.75	632	<1	0.02	30	1030	12	<5	<20	32	0.13	<10	100	<10	6	48
78	PT-L84350-5900E	5	<0.2	1.32	<5	55	<5	0.49	<1	12	40	27	2.58	<10	0.51	261	1	0.02	20	760	10	<5	<20	35	0.11	<10	76	<10	4	43
79	PT-L84350-5950E	<5	<0.2	1.45	<5	35	<5	0.36	<1	11	51	21	3.04	<10	0.48	210	2	0.02	18	230	10	<5	<20	40	0.15	<10	112	<10	2	50
80	PT-L84350-6000E	5	0.2	1.68	<5	75	<5	0.68	<1	18	43	62	3.44	10	0.74	622	1	0.02	31	490	14	<5	<20	43	0.13	<10	100	<10	12	59
81	PT-L84350-6050E	5	0.2	1.49	<5	85	<5	0.38	<1	18	10	32	2.96	<10	0.51	1204	2	0.02	24	420	12	<5	<20	24	0.14	<10	85	<10	6	77
82	PT-L84350-6100E	<5	<0.2	1.36	<5	65	<5	0.45	<1	13	37	23	2.81	<10	0.50	324	1	0.02	19	800	12	<5	<20	24	0.14	<10	83	<10	5	55
83	PT-L84200-5300E	<5	<0.2	1.29	<5	70	<5	0.52	<1	15	31	29	2.59	<10	0.55	446	<1	0.02	24	710	10	<5	<20	30	0.15	<10	74	<10	6	61
84	PT-L84200-5350E	<5	0.2	1.23	<5	65	<5	0.46	<1	12	34	28	2.43	<10	0.50	329	<1	0.02	22	430	8	<5	<20	26	0.14	<10	71	<10	6	51
85	PT-L84200-5400E	<5	<0.2	2.46	<5	130	<5	0.58	<1	31	28	59	4.53	10	0.90	1729	1	0.02	43	930	16	<5	<20	37	0.15	<10	119	<10	12	83
86	PT-L84200-5450E	5	<0.2	1.43	5	80	<5	0.51	<1	12	44	35	3.12	10	0.54	293	1	0.02	26	1230	12	<5	<20	31	0.11	<10	78	<10	7	75
87	PT-L84200-5500E	5	0.2	2.24	5	95	<5	0.59	<1	28	39	67	4.42	10	0.91	1425	1	0.02	42	780	16	<5	<20	36	0.15	<10	120	<10	13	71
88	PT-L84200-5550E	<5	0.3	2.37	<5	65	<5	0.67	<1	26	43	51	4.49	<10	0.63	729	2	0.02	36	2100	18	<5	<20	60	0.14	<10	105	<10	6	84
89	PT-L84200-5600E	<5	<0.2	1.60	<5	55	<5	0.59	<1	16	44	37	3.00	<10	0.69	334	<1	0.02	29	410	10	<5	<20	33	0.15	<10	84	<10	5	52
90	PT-L84200-5650E	5	<0.2	1.95	<5	85	<5	0.74	<1	16	10	35	3.21	10	0.48	1458	1	0.02	31	390	16	<5	<20	32	0.11	<10	93	<10	14	88
91	PT-L84200-5700E	10	<0.2	1.53	<5	55	<5	0.56	<1	16	22	36	2.91	<10	0.56	980	<1	0.01	25	430	12	<5	<20	29	0.12	<10	82	<10	9	50
92	PT-L84200-5750E	5	<0.2	2.10	<5	45	<5	0.83	<1	20	74	56	4.22	<10	0.72	424	1	0.01	34	520	16	<5	<20	28	0.14	<10	110	<10	12	61
93	PT-L84200-5800E	5	<0.2	1.27	<5	40	<5	0.48	<1	14	44	35	2.83	<10	0.55	333	<1	0.02	24	1190	10	<5	<20	30	0.11	<10	84	<10	5	45
94	PT-L84200-5850E	5	<0.2	1.45	<5	75	<5	0.64	<1	19	80	34	4.56	<10	0.67	929	1	0.01	27	1550	14	<5	<20	29	0.16	<10	124	<10	3	100
95	PT-L84200-5900E	5	<0.2	1.50	<5	55	<5	0.60	<1	21	83	40	4.09	<10	0.87	518	1	0.01	31	1250	12	<5	<20	33	0.14	<10	110	<10	3	74
96	PT-L84200-5950E	5	0.2	1.09	<5	50	<5	0.25	<1	7	39	17	2.46	<10	0.27	129	<1	0.01	14	860	10	<5	<20	19	0.10	<10	67	<10	3	38
97	PT-L84200-6000E	<5	0.2	1.10	<5	70	<5	0.51	<1	14	36	23	2.85	<10	0.42	385	<1	0.01	20	1250	10	<5	<20	30	0.13	<10	80	<10	4	59
98	PT-L84200-6050E	<5	0.2	1.26	<5	80	<5	0.46	<1	14	39	26	2.95	<10	0.52	298	<1	0.01	22	800	12	<5	<20	27	0.13	<10	79	<10	6	72
99	PT-L84200-6100E	5	0.2	1.10	<5	65	<5	0.49	<1	14	18	22	2.23	<10	0.45	635	1	0.01	20	560	10	<5	<20	28	0.10	<10	63	<10	5	57
100	PT-L84100-5300E	5	<0.2	1.31	<5	70	<5	0.45	<1	17	19	29	2.77	<10	0.50	821	<1	0.01	24	750	12	<5	<20	26	0.12	<10	75	<10	7	81
101	PT-L84100-5350E	5	<0.2	1.07	<5	45	<5	0.40	<1	13	30	21	2.34	<10	0.47	407	<1	0.02	18	490	8	<5	<20	26	0.13	<10	82	<10	5	37
102	PT-L84100-5400E	5	0.3	2.17	<5	90	<5	0.82	<1	22	67	59	4.37	10	0.78	790	1	0.01	43	590	16	<5	<20	35	0.14	<10	103	<10	18	62
103	PT-L84100-5450E	5	<0.2	1.61	<5	60	<5	0.68	<1	14	55	37	3.10	<10	0.61	268	<1	0.01	29	430	12	<5	<20	29	0.14	<10	75	<10	8	48
104	PT-L84100-5500E	<5	<0.2	1.99	<5	90	<5	0.38	<1	16	54	38	3.77	<10	0.66	300	<1	0.01	31	1490	14	<5	<20	22	0.14	<10	89	<10	4	69
105	PT-L84100-5550E	10	<0.2	2.21	<5	55	<5	0.60	<1	20	62	42	4.35	<10	0.90	442	1	0.01	33	1040	16	<5	<20	29	0.20	<10	121	<10	4	75
106	PT-L84100-5600E	5	<0.2	1.84	<5	65	<5	0.41	<1	17	41	31	3.49	<10	0.56	312	1	0.01	26	1260	14	<5	<20	17	0.15	<10	93	<10	3	68
107	PT-L84100-5650E	5	<0.2	1.09	<5	50	<5	0.50	<1	10	26	21	1.89	<10	0.42	266	<1	0.02	17	320	8	<5	<20	26	0.10	<10	55	<10	6	48
108	PT-L84100-5700E	<5	<0.2	1.13	<5	45	<5	0.35	<1	8	33	17	2.17	<10	0.32	173	<1	0.01	15	520	10	<5	<20	21	0.11	<10	63	<10	4	47
109	PT-L84100-5750E	5	<0.2	1.72	<5	40	<5	0.77	<1	17	39	42	3.27	<10	0.77	646	<1	0.02	27	390	12	<5	<20	31	0.19	<10	96	<10	8	61
110	PT-L84100-5800E	40	<0.2	1.56	<5	55	<5	0.38	<1	14	56	35	3.59	<10	0.67	300	1	0.01	24	1310	12	<5	<20	22	0.13	<10	96	<10	4	64

24-Aug-05

ECO TECH LABORATORY LTD. **ICP CERTIFICATE OF ANALYSIS AK 2005-901** Richfield Ventures Corp.

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn

111	PT-L84100-5900E	<5	<0.2	1.63	<5	45	<5	0.45	<1	20	77	43	4.05	<10	0.91	539	<1	0.01	29	1500	12	<5	<20	28	0.13	<10	102	<10	3	90
112	PT-L84100-5950E	<5	<0.2	1.72	<5	40	<5	0.39	<1	20	71	38	3.92	<10	0.65	368	1	0.01	31	980	12	<5	<20	25	0.14	<10	106	<10	4	62
113	PT-L84100-6000E	<5	<0.2	1.42	<5	55	<5	0.50	<1	15	41	42	3.06	<10	0.57	343	1	0.01	25	920	12	<5	<20	34	0.12	<10	88	<10	5	47
114	PT-L84100-6050E	<5	<0.2	1.59	<5	65	<5	0.84	<1	18	28	46	3.27	<10	0.66	1035	1	0.02	33	570	12	<5	<20	52	0.11	<10	87	<10	11	65
115	PT-L5800-3950E	<5	0.2	1.33	<5	80	<5	0.51	<1	11	44	29	3.05	<10	0.50	229	1	0.02	22	2110	10	<5	<20	33	0.10	<10	72	<10	5	61
116	PT-L5800-5300E	<5	0.2	1.19	<5	65	<5	0.34	<1	13	29	23	2.69	<10	0.48	564	2	0.01	20	590	10	<5	<20	23	0.10	<10	78	<10	4	76
117	PT-L5800-5300E	<5	0.2	1.71	<5	90	<5	0.40	<1	16	37	42	3.39	<10	0.60	688	2	0.01	29	770	14	<5	<20	26	0.11	<10	93	<10	7	84
118	PT-L45850-5850E	5	<0.2	1.28	<5	75	<5	0.59	<1	16	26	32	2.70	<10	0.57	655	<1	0.02	25	1060	10	<5	<20	39	0.10	<10	71	<10	7	66
119	PT-L4100-6100E	<5	<0.2	1.01	<5	80	<5	0.42	<1	10	31	19	2.47	<10	0.39	294	2	0.01	16	870	8	<5	<20	26	0.12	<10	63	<10	4	52

QC DATA:

Repeat:

1	PT-L83650-5350E	5	<0.2	1.31	<5	60	<5	0.40	<1	10	34	26	2.23	<10	0.50	258	<1	0.02	20	380	10	<5	<20	24	0.13	<10	64	<10	5	53
10	PT-L83650-5800E	5	<0.2	1.21	<5	80	<5	0.48	<1	10	35	24	2.31	<10	0.50	316	<1	0.02	19	780	10	<5	<20	29	0.14	<10	67	<10	5	53
19	PT-L83700-5350E	5	<0.2	1.33	<5	70	<5	0.39	<1	10	35	23	2.40	<10	0.42	256	<1	0.02	18	900	10	<5	<20	23	0.12	<10	67	<10	5	62
28	PT-L83700-5850E		<0.2	1.59	<5	65	<5	0.52	<1	13	43	32	2.87	<10	0.64	399	<1	0.02	25	610	12	<5	<20	32	0.12	<10	84	<10	7	59
36	PT-L83850-5350E	<5	0.2	1.37	<5	70	<5	0.43	<1	10	39	26	2.52	<10	0.46	191	<1	0.02	19	1110	10	<5	<20	26	0.15	<10	66	<10	5	65
45	PT-L83850-5800E	<5	<0.2	1.46	<5	65	<5	0.61	<1	13	45	36	2.98	<10	0.64	332	<1	0.03	26	1230	10	<5	<20	36	0.13	<10	87	<10	6	49
54	PT-L83950-5450E	5	0.3	2.08	5	130	<5	0.61	<1	26	29	76	4.11	10	0.84	1390	1	0.03	45	1030	16	<5	<20	38	0.14	<10	109	<10	11	77
63	PT-L83950-6000E		<0.2	1.49	<5	70	<5	0.71	<1	16	34	38	2.84	10	0.67	565	<1	0.03	26	600	12	<5	<20	36	0.14	<10	80	<10	10	46
65	PT-L83950-6100E	<5																											
71	PT-L84350-5503E		<0.2	1.48	<5	80	<5	0.47	<1	13	49	32	2.90	<10	0.60	253	<1	0.02	25	860	10	<5	<20	28	0.15	<10	84	<10	5	53
73	PT-L84350-5600E	5																											
80	PT-L84350-6000E		0.2	1.70	<5	75	<5	0.71	<1	18	44	63	3.52	10	0.75	629	2	0.02	32	500	14	<5	<20	44	0.13	<10	103	<10	12	61
81	PT-L84350-6050E	<5																											
89	PT-L84200-5600E	<5	<0.2	1.39	<5	45	<5	0.54	<1	15	41	32	2.73	<10	0.62	308	<1	0.02	27	390	10	<5	<20	30	0.14	<10	76	<10	5	49
98	PT-L84200-6050E	<5	0.2	1.24	<5	80	<5	0.45	<1	13	40	26	2.90	<10	0.51	283	1	0.01	22	780	10	<5	<20	26	0.14	<10	77	<10	5	73
106	PT-L84100-5600E	<5	<0.2	1.90	<5	70	<5	0.43	<1	17	43	32	3.60	<10	0.58	333	<1	0.01	27	1300	14	<5	<20	19	0.16	<10	96	<10	3	69

Standard:

GEO '05	130	1.5	1.45	60	145	<5	1.70	<1	20	59	82	4.06	<10	0.99	739	<1	0.03	30	750	24	5	<20	56	0.12	<10	74	<10	11	74
GEO '05	145	1.5	1.50	55	140	<5	1.66	<1	20	59	85	4.02	<10	0.94	702	<1	0.03	30	730	24	5	<20	58	0.11	<10	71	<10	10	76
GEO '05	140	1.5	1.51	55	130	<5	1.72	<1	19	58	87	3.98	<10	0.90	690	<1	0.04	29	770	24	<5	<20	55	0.12	<10	72	<10	10	76
GEO '05	140	1.5	1.47	50	145	<5	1.61	<1	19	59	89	3.98	<10	0.80	628	<1	0.02	29	750	22	<5	<20	51	0.10	<10	70	<10	9	74

JJ/ga
df/n901
XLS/05

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

ECO TECH LABORATORY LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

Phone: 250-573-5700
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ICP CERTIFICATE OF ANALYSIS AK 2005-902

RICHFIELD VENTURES CORP.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

Values in ppm unless otherwise reported

No. of samples received: 50
Sample type: Soil
Project #: n/a
Shipment #: n/a
Samples submitted by: not indicated

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT-L83600-5300	<5	<0.2	1.04	<5	55	<5	0.35	<1	10	34	25	1.87	<10	0.40	241	<1	<0.01	18	250	8	<5	<20	21	0.11	<10	55	<10	5	48
2	PT-L83600-5350	<5	<0.2	1.06	<5	70	<5	0.38	<1	9	34	24	1.88	<10	0.39	169	<1	<0.01	16	590	10	<5	<20	24	0.12	<10	53	<10	4	56
3	PT-L83600-5400	<5	<0.2	1.19	<5	50	<5	0.37	<1	10	32	25	1.82	<10	0.43	242	<1	<0.01	17	390	8	<5	<20	22	0.10	<10	52	<10	4	49
4	PT-L83600-5450	5	0.2	1.07	<5	70	<5	0.35	<1	13	17	22	1.89	<10	0.37	640	1	<0.01	16	530	8	<5	<20	22	0.10	<10	56	<10	4	54
5	PT-L83600-5500	<5	<0.2	1.12	<5	60	<5	0.41	<1	9	34	25	1.96	<10	0.42	199	<1	0.01	15	510	8	<5	<20	28	0.11	<10	61	<10	4	48
6	PT-L83600-5550	<5	<0.2	1.03	<5	50	<5	0.43	<1	8	33	23	1.83	<10	0.43	188	<1	0.01	15	540	8	<5	<20	27	0.11	<10	53	<10	4	43
7	PT-L83600-5600	<5	<0.2	1.08	<5	50	<5	0.40	<1	9	34	22	1.80	<10	0.43	186	<1	0.01	16	350	8	<5	<20	26	0.10	<10	54	<10	5	42
8	PT-L83600-5650	<5	<0.2	1.26	<5	85	<5	0.37	<1	9	37	18	2.22	<10	0.33	202	<1	<0.01	16	1230	8	<5	<20	22	0.09	<10	57	<10	4	85
9	PT-L83600-5750	<5	<0.2	1.15	<5	65	<5	0.35	<1	9	37	23	2.01	<10	0.39	175	<1	<0.01	15	710	10	<5	<20	22	0.12	<10	63	<10	4	58
10	PT-L83600-5800	<5	<0.2	1.23	<5	70	<5	0.40	<1	10	42	27	2.36	<10	0.45	205	<1	<0.01	18	1350	10	<5	<20	21	0.10	<10	64	<10	4	69
11	PT-L83600-5850	<5	<0.2	1.17	<5	60	<5	0.40	<1	10	39	27	2.05	<10	0.47	275	<1	<0.01	19	660	10	<5	<20	25	0.09	<10	55	<10	6	52
12	PT-L83600-5900	<5	<0.2	1.17	<5	50	<5	0.45	<1	10	44	31	2.25	<10	0.52	230	<1	<0.01	20	600	8	<5	<20	28	0.12	<10	69	<10	5	43
13	PT-L83600-5950	<5	0.3	1.45	<5	120	<5	0.39	<1	14	62	31	2.54	<10	0.56	454	<1	<0.01	32	2730	12	<5	<20	21	0.11	<10	52	<10	3	147
14	PT-L83600-6000	<5	<0.2	1.26	<5	75	<5	0.31	<1	9	41	18	2.32	<10	0.31	145	<1	<0.01	16	1980	10	<5	<20	20	0.09	<10	53	<10	3	75
15	PT-L83600-6050	<5	<0.2	1.03	<5	65	<5	0.40	<1	10	28	21	1.91	<10	0.34	336	<1	<0.01	19	1030	6	<5	<20	24	0.08	<10	50	<10	4	62
16	PT-L83600-6100	<5	<0.2	1.11	<5	50	<5	0.39	<1	9	36	29	2.00	<10	0.42	191	1	0.01	17	620	10	<5	<20	26	0.12	<10	57	<10	5	43
17	PT-L83750-5300	<5	<0.2	1.01	<5	55	<5	0.42	<1	10	29	27	1.84	<10	0.42	304	<1	0.01	17	540	8	<5	<20	25	0.12	<10	54	<10	5	53
18	PT-L83750-5350	<5	<0.2	1.12	<5	60	<5	0.44	<1	11	30	28	2.05	<10	0.49	403	<1	0.01	17	610	10	<5	<20	27	0.13	<10	61	<10	4	48
19	PT-L83750-5400	<5	<0.2	1.42	<5	70	<5	0.43	<1	18	16	38	2.46	<10	0.49	1040	1	<0.01	23	700	12	<5	<20	26	0.11	<10	69	<10	6	57
20	PT-L83750-5450	<5	<0.2	1.12	<5	50	<5	0.45	<1	10	35	31	2.06	<10	0.47	244	<1	0.01	18	760	10	<5	<20	27	0.12	<10	60	<10	5	57
21	PT-L83750-5500	15	<0.2	1.17	<5	45	<5	0.41	<1	11	33	25	2.05	<10	0.44	289	<1	0.01	17	710	8	<5	<20	26	0.11	<10	59	<10	5	62
22	PT-L83750-5550	<5	<0.2	1.45	<5	90	<5	0.43	<1	12	46	36	2.64	<10	0.52	251	<1	0.01	23	1310	12	<5	<20	29	0.11	<10	68	<10	5	69
23	PT-L83750-5600	<5	<0.2	1.01	<5	45	<5	0.36	<1	8	32	22	1.83	<10	0.40	236	<1	<0.01	15	350	8	<5	<20	22	0.11	<10	54	<10	4	49
24	PT-L83750-5650	<5	<0.2	0.96	<5	50	<5	0.36	<1	8	29	21	1.81	<10	0.37	259	<1	<0.01	14	410	8	<5	<20	22	0.11	<10	55	<10	4	48
25	PT-L83750-5700	<5	<0.2	1.30	<5	70	<5	0.37	<1	10	42	26	2.37	<10	0.44	207	<1	0.01	18	990	10	<5	<20	25	0.11	<10	66	<10	4	69
26	PT-L83750-5750	<5	<0.2	0.93	<5	45	<5	0.39	<1	7	31	22	1.75	<10	0.38	191	<1	<0.01	13	530	6	<5	<20	23	0.10	<10	51	<10	4	41
27	PT-L83750-5800	<5	<0.2	1.04	<5	45	<5	0.45	<1	9	38	23	1.98	<10	0.47	227	<1	0.02	17	410	8	<5	<20	33	0.11	<10	58	<10	4	43
28	PT-L83750-5850	<5	<0.2	1.06	<5	55	<5	0.35	<1	9	34	21	1.97	<10	0.38	269	<1	<0.01	15	410	8	<5	<20	23	0.09	<10	57	<10	4	55
29	PT-L83750-5900	<5	<0.2	1.01	<5	45	<5	0.36	<1	8	37	21	1.95	<10	0.37	164	<1	<0.01	15	630	8	<5	<20	22	0.11	<10	57	<10	4	52
30	PT-L83750-5950	<5	<0.2	1.29	<5	95	<5	0.38	<1	11	23	32	2.23	<10	0.42	626	<1	<0.01	20	1070	10	<5	<20	25	0.10	<10	62	<10	4	62

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT-L83750-6000	<5	<0.2	1.15	<5	60	<5	0.49	<1	11	42	32	2.17	<10	0.38	205	<1	0.01	19	330	10	<5	<20	25	0.12	<10	62	<10	6	54
32	PT-L83750-6050	<5	<0.2	0.62	<5	25	<5	0.26	<1	6	22	12	1.32	<10	0.23	127	<1	<0.01	9	210	6	<5	<20	17	0.09	<10	39	<10	3	55
33	PT-L83750-6100	<5	<0.2	1.61	<5	115	<5	0.37	<1	11	47	29	3.01	<10	0.50	284	<1	0.01	18	2340	10	<5	<20	22	0.13	<10	74	<10	4	141
34	PT-L83900-4100	5	<0.2	1.79	<5	110	<5	0.36	<1	10	47	22	3.07	<10	0.38	189	<1	<0.01	16	2520	12	<5	<20	24	0.11	<10	75	<10	4	154
35	PT-L83900-5300	<5	<0.2	1.09	<5	50	<5	0.38	<1	10	33	25	2.02	<10	0.42	256	<1	0.01	15	560	8	<5	<20	23	0.12	<10	60	<10	4	54
36	PT-L83900-5350	<5	<0.2	1.07	<5	55	<5	0.39	<1	11	30	24	1.98	<10	0.42	342	<1	<0.01	19	380	8	<5	<20	23	0.11	<10	57	<10	5	67
37	PT-L83900-5400	5	0.5	1.28	<5	65	<5	0.57	<1	13	39	37	2.34	<10	0.57	393	<1	0.01	24	590	12	<5	<20	34	0.12	<10	65	<10	9	60
38	PT-L83900-5450	5	<0.2	1.06	<5	55	<5	0.48	<1	11	36	28	2.16	<10	0.50	268	<1	0.01	19	720	10	<5	<20	29	0.12	<10	62	<10	5	58
39	PT-L83900-5500	10	<0.2	1.16	<5	60	<5	0.44	<1	10	41	29	2.33	<10	0.48	203	<1	0.01	18	720	10	<5	<20	29	0.12	<10	65	<10	5	62
40	PT-L83900-5550	5	<0.2	1.64	<5	80	<5	0.58	<1	15	41	49	2.85	<10	0.64	656	1	<0.01	28	570	14	<5	<20	33	0.11	<10	74	<10	8	60
41	PT-L83900-5600	10	<0.2	1.26	<5	65	<5	0.49	<1	13	30	37	2.36	<10	0.54	551	<1	<0.01	22	500	10	<5	<20	29	0.11	<10	64	<10	6	63
42	PT-L83900-5650	5	<0.2	0.95	<5	55	<5	0.44	<1	10	35	24	2.02	<10	0.40	291	<1	0.01	19	570	8	<5	<20	26	0.10	<10	58	<10	4	44
43	PT-L83900-5700	5	<0.2	1.00	<5	40	<5	0.44	<1	8	34	22	1.87	<10	0.39	174	1	0.02	15	680	8	<5	<20	30	0.10	<10	54	<10	5	42
44	PT-L83900-5750	5	<0.2	1.15	<5	55	<5	0.34	<1	9	40	25	2.16	<10	0.44	218	<1	<0.01	17	630	8	<5	<20	20	0.11	<10	62	<10	4	57
45	PT-L83900-5800	<5	<0.2	1.05	<5	70	<5	0.42	<1	10	30	22	2.01	<10	0.43	420	<1	0.01	16	930	10	<5	<20	27	0.11	<10	57	<10	4	58
46	PT-L83900-5850	<5	<0.2	1.59	<5	65	<5	0.53	<1	16	40	43	2.94	<10	0.69	804	<1	0.01	27	820	14	<5	<20	33	0.11	<10	84	<10	7	65
47	PT-L83900-5900	5	<0.2	1.09	<5	55	<5	0.55	<1	13	37	27	2.19	<10	0.52	387	1	0.02	21	760	8	<5	<20	31	0.11	<10	67	<10	6	43
48	PT-L83900-5950	5	<0.2	1.63	<5	80	<5	0.58	<1	20	35	48	2.74	<10	0.64	731	<1	0.01	29	440	14	<5	<20	32	0.12	<10	77	<10	8	93
49	PT-L83900-6000	5	0.2	1.67	<5	105	<5	0.58	<1	20	26	58	3.20	<10	0.68	1152	1	<0.01	36	530	16	<5	<20	27	0.13	<10	93	<10	8	86
50	PT-L83900-6050	5	<0.2	1.73	<5	80	<5	0.44	<1	12	44	42	2.73	<10	0.57	317	1	<0.01	29	980	14	<5	<20	26	0.10	<10	64	<10	6	87
QC DATA:																														
Repeat:																														
1	PT-L83600-5300	<5	<0.2	1.09	<5	60	<5	0.37	<1	10	34	25	1.89	<10	0.41	245	<1	<0.01	18	270	8	<5	<20	22	0.11	<10	56	<10	5	48
10	PT-L83600-5800	<5	<0.2	1.30	<5	75	<5	0.42	<1	10	44	29	2.46	<10	0.47	213	<1	<0.01	20	1390	10	<5	<20	23	0.11	<10	66	<10	5	73
19	PT-L83750-5400	<5	<0.2	1.34	<5	65	<5	0.42	<1	17	15	35	2.30	<10	0.46	961	<1	<0.01	22	650	12	<5	<20	26	0.10	<10	65	<10	5	55
28	PT-L83750-5850	<5	<0.2	1.12	<5	55	<5	0.36	<1	10	34	23	2.09	<10	0.40	309	1	<0.01	16	430	8	<5	<20	25	0.10	<10	61	<10	4	56
36	PT-L83900-5350	<5	<0.2	1.07	<5	55	<5	0.38	<1	11	31	23	1.98	<10	0.41	335	<1	<0.01	18	380	8	<5	<20	22	0.11	<10	57	<10	4	65
45	PT-L83900-5800	5																												
Standard:																														
GEO '05		135	1.5	1.50	45	135	<5	1.40	<1	17	58	86	3.26	<10	0.78	585	<1	0.01	29	660	22	<5	<20	54	0.10	<10	68	<10	10	71
GEO '05		135	1.5	1.45	50	135	<5	1.38	<1	17	59	87	3.20	<10	0.76	571	<1	0.01	28	610	22	<5	<20	56	0.10	<10	66	<10	10	71

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga
df/n902
XLS/05

24-Aug-05

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ICP CERTIFICATE OF ANALYSIS AK 2005-903

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 96
Sample type: Soil
Project #: n/a
Shipment #: n/a
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT-L84250-5300E	5	<0.2	1.22	<5	60	<5	0.47	<1	13	42	35	2.43	<10	0.54	368	<1	<0.01	21	530	10	<5	<20	29	0.14	<10	69	<10	6	49
2	PT-L84250-5350E	10	<0.2	1.05	<5	55	<5	0.35	<1	13	32	29	2.06	<10	0.42	347	<1	<0.01	19	330	10	<5	<20	21	0.11	<10	58	<10	4	44
3	PT-L84250-5400E	<5	<0.2	1.53	<5	75	<5	0.40	<1	18	32	36	2.78	<10	0.51	832	<1	<0.01	26	470	12	<5	<20	26	0.12	<10	77	<10	7	58
4	PT-L84250-5450E	<5	<0.2	1.06	<5	55	<5	0.36	<1	10	37	23	2.09	<10	0.41	229	<1	<0.01	17	410	8	<5	<20	22	0.12	<10	58	<10	4	58
5	PT-L84250-5500E	<5	<0.2	1.22	<5	65	<5	0.35	<1	12	53	27	2.63	<10	0.49	209	1	<0.01	22	860	10	<5	<20	22	0.11	<10	68	<10	4	63
6	PT-L84250-5550E	<5	<0.2	1.33	<5	60	<5	0.39	<1	13	36	26	2.22	<10	0.41	299	<1	<0.01	19	690	10	<5	<20	24	0.10	<10	55	<10	5	61
7	PT-L84250-5600E	5	<0.2	1.20	<5	50	<5	0.38	<1	10	33	24	2.07	<10	0.46	233	<1	<0.01	17	550	10	<5	<20	25	0.11	<10	55	<10	5	59
8	PT-L84250-5650E	5	<0.2	1.54	<5	65	<5	0.45	<1	14	47	26	2.69	<10	0.42	226	1	<0.01	22	580	12	<5	<20	24	0.13	<10	73	<10	4	64
9	PT-L84250-5700E	5	<0.2	1.15	<5	50	<5	0.37	<1	9	39	15	2.15	<10	0.32	138	1	<0.01	14	450	10	<5	<20	22	0.13	<10	62	<10	3	49
10	PT-L84250-5750E	5	<0.2	1.84	<5	50	<5	0.48	<1	18	77	54	3.89	<10	0.66	261	<1	<0.01	26	1550	16	<5	<20	27	0.16	<10	94	<10	3	65
11	PT-L84250-5800E	10	<0.2	1.60	<5	50	<5	0.35	<1	15	74	39	3.16	<10	0.53	217	<1	<0.01	27	1030	12	<5	<20	23	0.12	<10	81	<10	4	72
12	PT-L84250-5850E	5	<0.2	1.05	<5	65	<5	0.25	<1	8	38	17	2.12	<10	0.29	236	<1	<0.01	13	980	10	<5	<20	17	0.10	<10	58	<10	3	46
13	PT-L84250-5900E	<5	<0.2	1.38	<5	60	<5	0.37	<1	14	86	26	3.45	<10	0.56	321	<1	<0.01	21	1370	12	<5	<20	22	0.12	<10	84	<10	2	60
14	PT-L84250-5950E	<5	<0.2	1.51	<5	95	<5	0.34	<1	15	53	31	3.24	<10	0.57	667	<1	<0.01	21	1910	14	<5	<20	24	0.11	<10	80	<10	3	87
15	PT-L84250-6000E	<5	<0.2	1.52	<5	65	<5	0.52	<1	18	52	48	3.39	<10	0.61	577	1	<0.01	27	1020	14	<5	<20	31	0.13	<10	93	<10	5	78
16	PT-L84250-6050E	<5	<0.2	1.30	<5	65	<5	0.37	<1	11	44	28	2.71	<10	0.47	259	1	<0.01	17	940	12	<5	<20	25	0.11	<10	75	<10	4	63
17	PT-L84250-6100E	<5	<0.2	1.02	<5	50	<5	0.29	<1	10	26	17	1.99	<10	0.33	382	<1	<0.01	14	530	8	<5	<20	18	0.11	<10	53	<10	4	67
18	PT-L83250-5300E	<5	<0.2	1.05	<5	55	<5	0.40	<1	11	39	25	2.24	<10	0.45	265	<1	<0.01	18	500	10	<5	<20	25	0.13	<10	60	<10	5	44
19	PT-L83250-5400E	<5	<0.2	1.40	<5	105	<5	0.31	<1	12	42	19	2.63	<10	0.36	235	1	<0.01	21	1470	10	<5	<20	20	0.10	<10	58	<10	3	88
20	PT-L83250-5600E	10	<0.2	0.94	<5	55	<5	0.35	<1	8	28	18	1.61	<10	0.35	155	<1	<0.01	13	280	8	<5	<20	24	0.09	<10	42	<10	4	44
21	PT-L83250-5700E	<5	<0.2	1.28	<5	65	<5	0.32	<1	11	34	16	2.07	<10	0.28	244	<1	<0.01	17	680	10	<5	<20	21	0.10	<10	51	<10	3	91
22	PT-L83300-5550E	10	<0.2	1.81	<5	105	<5	0.34	<1	13	56	26	3.52	<10	0.43	214	1	<0.01	23	2380	10	<5	<20	24	0.11	<10	75	<10	4	116
23	PT-L83300-5700E	<5	0.2	1.15	<5	70	<5	0.41	<1	11	33	30	2.10	<10	0.40	278	<1	<0.01	17	650	12	<5	<20	28	0.09	<10	51	<10	4	69
24	PT-L83300-5950E	<5	<0.2	1.12	<5	30	<5	0.43	<1	9	43	21	2.53	<10	0.39	183	<1	<0.01	16	430	10	<5	<20	27	0.12	<10	73	<10	3	48
25	PT-L89406-3305E	<5	<0.2	0.99	<5	65	<5	0.26	<1	10	33	20	2.02	<10	0.36	289	<1	<0.01	18	310	10	<5	<20	19	0.10	<10	53	<10	5	78
26	PT-L84150-5300E	5	<0.2	1.29	<5	60	<5	0.41	<1	13	40	33	2.52	<10	0.53	394	<1	<0.01	22	380	12	<5	<20	25	0.14	<10	70	<10	5	55
27	PT-L84150-5350E	<5	<0.2	1.89	<5	85	<5	0.47	<1	15	58	50	3.42	<10	0.60	254	1	<0.01	27	1450	14	<5	<20	30	0.13	<10	87	<10	6	64
28	PT-L84150-5400E	5	0.2	1.55	<5	65	<5	0.58	<1	15	60	46	2.99	<10	0.59	435	1	<0.01	29	440	14	<5	<20	29	0.14	<10	76	<10	10	58
29	PT-L84150-5450E	<5	<0.2	2.04	<5	85	<5	0.62	<1	17	65	55	3.75	10	0.66	702	<1	<0.01	35	370	20	<5	<20	30	0.12	<10	93	<10	17	76
30	PT-L84150-5500E	<5	0.2	1.70	<5	60	<5	0.59	<1	14	57	44	3.13	<10	0.59	342	<1	<0.01	26	270	14	<5	<20	32	0.14	<10	78	<10	11	56

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT-L84150-5550E a	<5	<0.2	1.49	<5	35	<5	0.55	<1	14	48	32	2.73	<10	0.51	251	<1	<0.01	20	380	12	<5	<20	26	0.14	<10	77	<10	5	60
32	PT-L84150-5550E b	<5	0.7	1.92	<5	60	<5	0.72	<1	20	58	57	3.53	<10	0.80	891	<1	<0.01	43	350	16	<5	<20	36	0.17	<10	111	<10	13	58
33	PT-L84150-5600E	<5	<0.2	2.20	<5	110	<5	0.53	<1	23	99	54	4.34	10	1.12	541	1	0.02	48	1450	18	<5	<20	64	0.16	<10	103	<10	4	85
34	PT-L84150-5650E	<5	<0.2	1.62	<5	70	<5	0.38	<1	13	47	33	2.80	<10	0.49	324	1	<0.01	21	1050	12	<5	<20	27	0.12	<10	75	<10	4	58
35	PT-L84150-5700E	<5	<0.2	1.61	<5	70	<5	0.39	<1	16	50	40	3.18	<10	0.54	341	1	<0.01	24	1510	12	<5	<20	23	0.13	<10	79	<10	4	70
36	PT-L84150-5800E	<5	<0.2	1.61	<5	45	<5	0.45	<1	17	64	52	3.45	<10	0.57	307	1	<0.01	27	720	14	<5	<20	28	0.12	<10	93	<10	5	64
37	PT-L84150-5850E	5	<0.2	2.24	<5	60	<5	0.42	<1	17	75	51	4.18	<10	0.68	414	2	<0.01	31	1280	16	<5	<20	25	0.13	<10	107	<10	4	82
38	PT-L84150-5900E	5	0.2	3.25	<5	105	<5	0.96	<1	24	127	82	5.63	<10	1.10	1188	1	<0.01	50	470	26	<5	<20	51	0.12	<10	121	<10	16	75
39	PT-L84150-5950E	<5	<0.2	1.76	<5	70	<5	0.37	<1	19	56	55	4.07	<10	0.70	754	<1	<0.01	26	1270	16	<5	<20	35	0.12	<10	108	<10	3	84
40	PT-L84150-6000E	<5	0.2	2.08	<5	55	5	0.51	<1	23	107	64	4.75	<10	1.10	644	<1	<0.01	35	1070	16	<5	<20	41	0.15	<10	123	<10	3	81
41	PT-L84150-6100E	5	<0.2	1.31	<5	75	<5	0.41	<1	14	47	36	2.92	<10	0.53	306	1	<0.01	22	890	14	<5	<20	26	0.13	<10	75	<10	7	67
42	PT-L84300-5300E	5	<0.2	1.28	<5	60	<5	0.44	<1	12	41	31	2.45	<10	0.50	284	<1	<0.01	20	490	10	<5	<20	26	0.14	<10	69	<10	5	62
43	PT-L84300-5350E	<5	<0.2	1.07	<5	50	5	0.37	<1	10	36	25	2.03	<10	0.40	206	<1	<0.01	16	340	8	<5	<20	21	0.12	<10	56	<10	4	55
44	PT-L84300-5400E	<5	<0.2	1.21	<5	55	<5	0.46	<1	13	38	31	2.42	<10	0.52	349	<1	<0.01	20	580	10	<5	<20	26	0.14	<10	71	<10	5	46
45	PT-L84300-5450E	25	<0.2	1.13	<5	55	<5	0.37	<1	10	42	28	2.34	<10	0.44	210	<1	<0.01	18	490	8	<5	<20	23	0.13	<10	65	<10	5	56
46	PT-L84300-5500E	15	<0.2	1.12	<5	45	<5	0.38	<1	11	38	29	2.23	<10	0.50	321	<1	<0.01	18	390	10	<5	<20	24	0.12	<10	62	<10	5	43
47	PT-L84300-5550E	<5	<0.2	1.09	<5	55	<5	0.41	<1	11	42	26	2.30	<10	0.46	261	<1	<0.01	20	630	10	<5	<20	25	0.11	<10	60	<10	6	49
48	PT-L84300-5600E	15	<0.2	1.41	<5	55	<5	0.66	<1	12	44	43	2.65	<10	0.61	286	<1	<0.01	21	740	12	<5	<20	35	0.14	<10	73	<10	6	44
49	PT-L84300-5650E	<5	<0.2	1.55	<5	55	5	0.38	<1	12	49	26	2.81	<10	0.40	165	1	<0.01	20	1080	12	<5	<20	27	0.11	<10	67	<10	4	79
50	PT-L84300-5700E	10	<0.2	2.10	<5	90	10	0.45	<1	21	76	80	4.22	<10	0.72	417	<1	<0.01	29	1530	20	<5	<20	30	0.16	<10	109	<10	3	87
51	PT-L84300-5750E	<5	<0.2	1.58	<5	80	<5	0.54	<1	17	65	56	3.29	<10	0.65	426	<1	<0.01	23	500	14	<5	<20	27	0.15	<10	91	<10	6	47
52	PT-L84300-5800E	<5	<0.2	1.45	<5	60	<5	0.42	<1	13	48	30	2.67	<10	0.41	340	<1	0.01	18	240	12	<5	<20	28	0.10	<10	72	<10	4	38
53	PT-L84300-5850E	<5	<0.2	1.60	<5	60	5	0.28	<1	10	58	33	2.75	<10	0.39	203	1	<0.01	17	1080	14	<5	<20	20	0.10	<10	72	<10	4	61
54	PT-L84300-5900E	<5	<0.2	0.98	<5	40	10	0.36	<1	8	28	18	1.89	<10	0.33	302	<1	0.01	12	210	12	<5	<20	22	0.09	<10	50	<10	4	39
55	PT-L84300-5950E	<5	<0.2	1.59	<5	60	10	0.34	<1	13	58	47	3.05	<10	0.53	286	<1	<0.01	18	870	16	5	<20	34	0.10	<10	79	<10	4	57
56	PT-L84300-6000E	<5	<0.2	1.20	<5	50	<5	0.40	<1	11	41	30	2.54	<10	0.41	260	<1	<0.01	17	440	10	<5	<20	31	0.11	<10	68	<10	5	49
57	PT-L84300-6050E	<5	<0.2	1.23	<5	65	<5	0.39	<1	13	38	30	2.58	<10	0.52	453	1	<0.01	20	570	10	<5	<20	23	0.13	<10	71	<10	5	66
58	PT-L84300-6100E	<5	0.2	1.30	<5	55	<5	0.39	<1	12	43	31	2.61	<10	0.55	294	1	<0.01	20	530	12	<5	<20	24	0.14	<10	73	<10	5	59
59	PT-L83450-5650E	<5	0.2	1.97	<5	85	<5	0.39	<1	14	55	35	3.61	<10	0.49	341	<1	<0.01	28	1170	14	<5	<20	26	0.12	<10	83	<10	4	88
60	PT-L83450-5750E	<5	<0.2	1.62	<5	55	<5	0.44	<1	13	55	40	2.92	<10	0.59	327	<1	<0.01	24	730	14	<5	<20	26	0.13	<10	78	<10	6	51
61	PT-L83450-5800E	<5	<0.2	1.32	<5	70	<5	0.49	<1	11	47	32	2.78	<10	0.55	257	<1	<0.01	20	970	12	<5	<20	34	0.12	<10	75	<10	5	55
62	PT-L83450-6000E	5	<0.2	0.99	<5	60	<5	0.46	<1	10	32	13	2.03	<10	0.32	290	<1	<0.01	15	630	8	<5	<20	23	0.11	<10	50	<10	3	55
63	PT-L83450-6050E	<5	0.5	2.92	<5	80	<5	0.40	<1	25	72	95	4.80	<10	0.54	342	2	<0.01	43	2120	26	<5	<20	34	0.12	<10	101	<10	4	110
64	PT-L84400-5300E	5	0.2	1.59	<5	85	<5	0.53	<1	18	42	40	3.04	<10	0.68	664	<1	<0.01	26	620	14	<5	<20	31	0.13	<10	76	<10	8	62
65	PT-L84400-5350E	5	<0.2	1.33	<5	60	<5	0.53	<1	14	42	37	2.76	<10	0.60	486	<1	<0.01	22	790	12	<5	<20	29	0.14	<10	78	<10	7	50
66	PT-L84400-5400E	5	<0.2	1.22	<5	55	<5	0.46	<1	13	46	37	2.56	<10	0.55	293	1	<0.01	23	400	10	<5	<20	25	0.14	<10	71	<10	5	54
67	PT-L84400-5450E	<5	0.2	2.42	<5	135	5	0.49	<1	34	59	63	4.51	<10	0.81	1198	1	<0.01	46	1010	22	<5	<20	33	0.13	<10	108	<10	9	99
68	PT-L84400-5500E	<5	<0.2	1.14	<5	55	<5	0.36	<1	10	46	21	2.34	<10	0.38	175	<1	<0.01	16	580	8	<5	<20	22	0.13	<10	68	<10	4	54
69	PT-L84400-5550E	<5	<0.2	1.14	<5	60	<5	0.43	<1	12	45	25	2.36	<10	0.49	289	<1	<0.01	19	620	10	<5	<20	26	0.13	<10	67	<10	5	57
70	PT-L84400-5600E	<5	<0.2	1.77	<5	140	<5	0.63	<1	16	56	36	3.40	<10	0.59	321	1	<0.01	26	2100	12	<5	<20	32	0.13	<10	75	<10	4	71

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
71	PT-L84400-5650E	<5	<0.2	1.98	<5	90	<5	0.40	<1	16	32	30	3.48	<10	0.48	883	<1	<0.01	23	1420	14	<5	<20	27	0.13	<10	82	<10	3	107

72	PT-L84400-5700E	<5	0.2	2.84	<5	85	10	0.56	<1	26	37	87	5.29	<10	0.71	1033	1	<0.01	35	1850	26	<5	<20	78	0.12	<10	113	<10	4	142
73	PT-L84400-5750E	<5	<0.2	1.31	<5	55	<5	0.46	<1	13	48	31	2.74	<10	0.52	306	<1	<0.01	19	670	12	<5	<20	29	0.13	<10	78	<10	6	51
74	PT-L84400-5800E	<5	<0.2	2.63	<5	100	<5	0.46	<1	20	74	62	4.48	<10	0.83	777	<1	<0.01	39	1010	22	<5	<20	31	0.11	<10	102	<10	6	93
75	PT-L84400-5850E	<5	<0.2	0.99	<5	60	<5	0.41	<1	8	30	21	1.82	<10	0.39	407	<1	0.01	14	420	10	<5	<20	26	0.10	<10	52	<10	4	51
76	PT-L84400-5900E	5	<0.2	1.00	<5	45	<5	0.58	<1	9	39	20	2.01	<10	0.38	169	<1	0.01	13	530	10	<5	<20	32	0.11	<10	54	<10	4	64
77	PT-L84400-5950E	5	0.6	3.35	<5	115	10	1.43	<1	30	108	130	6.10	10	1.46	1917	1	<0.01	60	1380	34	<5	<20	76	0.09	<10	126	<10	18	133
78	PT-L84400-6000E	<5	0.2	1.34	<5	85	<5	0.56	<1	16	42	42	3.07	<10	0.51	512	2	<0.01	24	590	14	<5	<20	40	0.12	<10	80	<10	6	63
79	PT-L84400-6050E	<5	0.2	1.28	<5	55	<5	0.36	<1	12	43	28	2.66	<10	0.53	266	<1	<0.01	19	640	10	<5	<20	23	0.13	<10	73	<10	4	59
80	PT-L84400-6100E	<5	0.2	0.90	<5	45	<5	0.31	<1	7	29	14	1.90	<10	0.25	146	<1	<0.01	9	580	10	<5	<20	19	0.10	<10	55	<10	3	44
81	PT-L84050-5350E	5	0.6	2.37	<5	125	<5	1.22	<1	20	76	120	4.26	20	0.76	703	1	<0.01	48	920	26	<5	<20	52	0.10	<10	94	<10	32	66
82	PT-L84050-5400E	<5	<0.2	1.70	<5	160	<5	0.46	<1	12	62	36	3.40	<10	0.47	256	1	<0.01	18	3700	14	<5	<20	27	0.11	<10	68	<10	3	87
83	PT-L84050-5450E	<5	<0.2	0.96	<5	60	5	0.27	<1	7	38	15	2.17	<10	0.23	152	<1	<0.01	10	1300	10	<5	<20	17	0.11	<10	54	<10	3	50
84	PT-L84050-5500E	<5	<0.2	2.18	<5	95	<5	0.44	<1	16	77	52	4.39	<10	0.69	226	1	<0.01	28	2020	18	<5	<20	29	0.15	10	97	<10	5	81
85	PT-L84050-5550E	5	<0.2	2.13	<5	55	<5	0.79	<1	23	48	67	4.13	<10	0.88	655	1	<0.01	29	1120	20	<5	<20	35	0.18	<10	114	<10	7	72
86	PT-L84050-5600E	15	<0.2	2.92	<5	70	5	0.69	<1	22	71	56	5.17	<10	0.89	528	2	<0.01	33	1910	22	<5	<20	39	0.21	<10	137	<10	4	114
87	PT-L84050-5650E	<5	<0.2	2.77	<5	100	5	0.68	<1	23	68	49	5.20	<10	0.95	374	1	<0.01	29	2330	20	<5	<20	31	0.24	<10	122	<10	4	93
88	PT-L84050-5700E	<5	<0.2	0.78	<5	40	<5	0.33	<1	7	20	11	1.30	<10	0.23	170	<1	0.01	8	280	6	<5	<20	22	0.08	<10	42	<10	3	33
89	PT-L84050-5750E	10	<0.2	2.16	<5	105	5	0.43	<1	16	45	44	3.69	<10	0.60	635	1	<0.01	24	1500	16	<5	<20	18	0.15	<10	87	<10	4	73
90	PT-L84050-5800E	5	0.2	1.57	<5	85	<5	0.33	<1	11	48	24	2.95	<10	0.35	155	<1	<0.01	20	1480	12	<5	<20	22	0.10	10	67	<10	4	50
91	PT-L84050-5850E	<5	0.2	1.67	<5	120	<5	0.32	<1	13	43	28	3.80	<10	0.32	410	2	<0.01	18	1670	14	<5	<20	23	0.10	<10	90	<10	3	107
92	PT-L84050-5900E	<5	<0.2	1.55	<5	55	<5	0.51	<1	14	64	27	3.35	<10	0.50	214	<1	<0.01	25	2020	12	<5	<20	29	0.09	<10	72	<10	4	76
93	PT-L84050-5950E	5	0.2	2.29	<5	70	10	0.88	<1	40	163	80	7.15	<10	0.79	566	1	<0.01	57	600	22	<5	<20	43	0.19	<10	219	<10	14	70
94	PT-L84050-6000E	<5	<0.2	1.44	<5	50	<5	0.49	<1	12	43	25	2.77	<10	0.38	212	2	<0.01	19	350	10	<5	<20	29	0.11	<10	78	<10	3	78
95	PT-L84050-6050E	<5	<0.2	1.18	<5	50	<5	0.62	<1	12	43	33	2.60	<10	0.45	220	1	<0.01	18	450	10	<5	<20	47	0.12	<10	66	<10	4	72
96	PT-L84050-6100E	<5	<0.2	1.52	<5	45	<5	0.49	<1	16	60	34	3.09	<10	0.60	307	<1	<0.01	33	950	14	<5	<20	27	0.11	<10	79	<10	3	56

QC DATA:

Repeat:

1	PT-L84250-5300E		<0.2	1.24	<5	60	<5	0.48	<1	13	40	35	2.51	<10	0.53	377	<1	<0.01	20	550	12	<5	<20	28	0.14	<10	69	<10	6	50
3	PT-L84250-5400E	5																												
10	PT-L84250-5750E		<0.2	1.92	<5	50	<5	0.51	<1	18	82	57	4.04	<10	0.69	270	1	<0.01	27	1640	16	<5	<20	30	0.17	<10	99	<10	4	66
11	PT-L84250-5800E	5																												
19	PT-L83250-5400E	<5	<0.2	1.43	<5	105	<5	0.32	<1	12	43	20	2.69	<10	0.37	235	<1	<0.01	21	1500	10	<5	<20	21	0.11	<10	60	<10	3	90
28	PT-L84150-5400E	<5	<0.2	1.56	<5	65	<5	0.59	<1	15	56	46	2.98	<10	0.59	449	<1	<0.01	29	430	14	<5	<20	29	0.15	<10	76	<10	10	62
36	PT-L84150-5800E	<5	<0.2	1.61	<5	45	<5	0.47	<1	17	65	54	3.51	<10	0.59	328	<1	<0.01	28	750	14	<5	<20	29	0.13	<10	96	<10	5	62
45	PT-L84300-5450E	5	0.2	1.02	<5	50	5	0.32	<1	9	38	27	2.25	<10	0.37	188	<1	<0.01	16	410	10	<5	<20	20	0.12	<10	59	<10	4	50
54	PT-L84300-5900E	<5	<0.2	1.04	<5	40	<5	0.41	<1	11	33	19	2.00	<10	0.40	381	<1	<0.01	14	220	10	<5	<20	26	0.11	<10	58	<10	4	38
63	PT-L83450-6050E	<5	0.5	2.92	<5	80	<5	0.42	<1	25	73	97	4.90	<10	0.55	359	2	<0.01	43	2050	28	<5	<20	37	0.12	<10	104	<10	4	109
71	PT-L84400-5650E	<5	<0.2	2.05	<5	90	<5	0.42	<1	16	38	30	3.60	<10	0.50	829	1	<0.01	23	1410	14	<5	<20	28	0.14	<10	85	<10	4	109
80	PT-L84400-6100E	<5	0.3	0.92	<5	45	<5	0.32	<1	7	29	14	1.89	<10	0.26	145	<1	<0.01	10	600	8	<5	<20	20	0.11	<10	55	<10	3	43
89	PT-L84050-5750E	<5																												

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
QC DATA:																														
Standard:																														
GEO '05		145	1.5	1.61	50	120	<5	1.45	<1	18	59	85	3.73	<10	0.82	607	<1	<0.01	26	690	22	<5	<20	52	0.11	<10	70	<10	10	76

GEO '05	145	1.5	1.64	50	125	<5	1.50	<1	18	59	86	3.86	<10	0.84	634	<1	<0.01	29	710	20	<5	<20	54	0.11	<10	71	<10	9	74
GEO '05	145	1.4	1.62	50	125	<5	1.49	<1	18	60	87	3.89	<10	0.84	633	<1	<0.01	29	680	22	<5	<20	53	0.11	<10	72	<10	10	76

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga
df/n903
XLS/05

09-Sep-05

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ICP CERTIFICATE OF ANALYSIS AK 2005-905

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 45
Sample type: Soil
Project #: N/A
Shipment #: N/A
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT-L82700-5300	<5	<0.2	0.96	<5	75	<5	0.39	<1	12	37	15	2.77	<10	0.33	213	<1	0.01	25	1100	6	<5	<20	18	0.09	<10	61	<10	8	86
2	PT-L82700-5350	10	<0.2	0.74	5	80	<5	0.41	<1	10	31	15	2.20	<10	0.28	313	<1	0.01	18	1030	4	<5	<20	16	0.09	<10	54	<10	8	76
3	PT-L82700-5450	<5	0.3	0.97	5	70	<5	0.80	<1	10	39	27	2.37	<10	0.24	149	<1	0.01	25	110	6	<5	<20	24	0.09	<10	62	<10	15	35
4	PT-L82700-5500	<5	<0.2	0.76	<5	75	<5	0.22	<1	9	30	10	1.99	<10	0.17	180	<1	<0.01	18	240	4	<5	<20	9	0.08	<10	52	<10	6	48
5	PT-L82700-5550	<5	<0.2	0.71	<5	80	<5	0.24	<1	7	32	9	2.06	<10	0.17	134	<1	<0.01	14	560	6	<5	<20	10	0.08	<10	54	<10	5	71
6	PT-L82700-5600	<5	0.5	1.45	10	100	<5	0.63	<1	12	52	56	3.26	<10	0.33	307	<1	0.01	39	260	6	<5	<20	21	0.10	<10	77	<10	30	81
7	PT-L82700-5650	<5	0.2	1.18	5	95	<5	0.74	<1	14	48	34	3.10	<10	0.39	521	<1	0.02	35	220	4	<5	<20	24	0.09	<10	70	<10	14	60
8	PT-L82700-5700	<5	<0.2	1.02	5	155	<5	0.40	<1	9	34	13	2.62	<10	0.31	227	<1	<0.01	26	1650	2	<5	<20	21	0.07	<10	59	<10	4	103
9	PT-L82700-5750	<5	<0.2	0.81	<5	70	<5	0.30	<1	10	32	12	2.33	<10	0.27	166	<1	0.01	18	170	4	<5	<20	14	0.10	<10	65	<10	6	79
10	PT-L82700-5800	<5	<0.2	0.74	5	60	<5	0.41	<1	11	34	21	2.49	<10	0.30	343	<1	0.02	20	280	4	<5	<20	22	0.09	<10	71	<10	7	40
11	PT-L82700-5850	<5	<0.2	0.94	5	65	<5	0.64	<1	10	34	31	2.62	<10	0.27	197	<1	0.02	19	210	4	<5	<20	27	0.09	<10	74	<10	7	45
12	PT-L82700-5900	<5	<0.2	1.17	<5	75	<5	0.71	<1	14	40	32	3.01	<10	0.40	595	<1	0.04	25	270	2	<5	<20	40	0.11	<10	86	<10	10	66
13	PT-L82700-5950	<5	<0.2	1.20	<5	105	<5	0.63	<1	14	41	29	2.99	<10	0.37	814	<1	0.03	26	370	4	<5	<20	31	0.11	<10	84	<10	15	76
14	PT-L82700-6000	<5	<0.2	1.58	10	175	<5	0.58	<1	17	44	31	3.52	<10	0.44	485	<1	0.03	30	2150	4	<5	<20	27	0.11	<10	85	<10	6	172
15	PT-L82700-6050	<5	<0.2	0.96	<5	65	<5	0.42	<1	12	33	21	2.40	<10	0.32	353	<1	0.02	19	350	2	<5	<20	21	0.11	<10	70	<10	8	83
16	PT-L82700-6100	<5	<0.2	1.98	<5	125	<5	0.47	<1	21	50	42	3.92	<10	0.51	493	<1	0.02	32	960	<2	<5	<20	30	0.14	<10	109	<10	8	100
17	PT-L82800-5300	<5	<0.2	0.91	5	65	<5	0.34	<1	12	38	20	2.63	<10	0.36	282	<1	0.01	24	430	4	<5	<20	17	0.10	<10	70	<10	7	56
18	PT-L82800-5400	<5	<0.2	1.18	10	75	<5	0.31	<1	14	41	32	2.96	<10	0.35	240	<1	0.01	31	630	2	<5	<20	16	0.10	<10	72	<10	8	79
19	PT-L82800-5450	<5	<0.2	0.81	<5	70	<5	0.32	<1	9	33	17	2.17	<10	0.30	215	<1	0.01	20	200	4	<5	<20	16	0.10	<10	61	<10	9	51
20	PT-L82800-5500	<5	0.2	1.91	5	145	<5	0.31	<1	16	57	36	4.33	<10	0.44	270	<1	0.01	37	2030	2	<5	<20	15	0.12	<10	102	<10	5	170
21	PT-L82850-5550	<5	<0.2	0.94	<5	80	<5	0.27	<1	10	39	18	2.52	<10	0.31	163	<1	<0.01	24	540	4	<5	<20	13	0.08	<10	67	<10	5	64
22	PT-L82850-5600	<5	<0.2	1.57	5	110	<5	0.40	<1	15	46	33	3.54	<10	0.47	248	<1	0.01	30	890	2	<5	<20	21	0.14	<10	91	<10	9	110
23	PT-L82850-5650	<5	0.5	1.52	5	100	<5	0.57	<1	14	44	47	2.69	<10	0.28	291	<1	0.04	33	200	6	<5	<20	21	0.08	<10	74	<10	17	56
24	PT-L82850-5700	<5	<0.2	1.25	<5	90	<5	0.31	<1	12	36	28	2.81	<10	0.36	191	<1	0.01	23	600	4	<5	<20	17	0.11	<10	74	<10	7	69
25	PT-L82850-5750	<5	<0.2	0.66	<5	70	<5	0.30	<1	7	24	7	1.78	<10	0.14	126	<1	0.01	11	540	4	<5	<20	15	0.09	<10	50	<10	6	52
26	PT-L82850-5800	<5	<0.2	1.27	5	130	<5	0.57	<1	15	42	38	3.27	<10	0.45	433	<1	0.03	23	1350	4	<5	<20	33	0.13	<10	90	<10	9	83
27	PT-L82850-5850	<5	0.2	1.12	10	70	<5	0.58	<1	12	36	23	2.70	<10	0.30	220	<1	0.03	21	420	4	<5	<20	30	0.10	<10	72	<10	8	64
28	PT-L82850-5900	<5	<0.2	1.53	5	120	<5	0.55	<1	18	45	47	3.66	<10	0.46	310	<1	0.03	28	1510	4	<5	<20	43	0.12	<10	92	<10	7	117
29	PT-L82850-5950	<5	0.4	1.24	5	100	<5	0.55	<1	17	50	48	3.25	<10	0.40	933	<1	0.02	34	300	6	<5	<20	24	0.11	<10	93	<10	14	74
30	PT-L82850-6000	<5	0.2	1.45	10	85	<5	0.72	<1	15	45	46	3.00	<10	0.40	779	<1	0.02	29	640	2	<5	<20	31	0.10	<10	84	<10	13	67

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT-L82850-6050	5	<0.2	1.36	10	95	<5	0.32	<1	11	39	15	3.31	<10	0.24	237	<1	0.01	20	1810	4	<5	<20	16	0.10	<10	80	<10	6	108
32	PT-L83000-5300	<5	0.2	1.41	10	95	<5	0.48	<1	19	49	44	3.44	<10	0.38	1432	<1	0.01	35	440	6	<5	<20	18	0.10	<10	97	<10	16	102
33	PT-L83000-5350	<5	0.3	1.61	5	115	<5	0.49	<1	23	53	46	4.14	<10	0.44	1212	<1	0.05	34	1210	8	<5	<20	23	0.14	<10	100	<10	7	164
34	PT-L83000-5400	<5	<0.2	0.92	<5	65	<5	0.33	<1	11	32	19	2.52	<10	0.31	189	<1	0.02	18	400	4	<5	<20	14	0.12	<10	71	<10	9	65
35	PT-L83000-5450	20	0.3	0.93	<5	80	<5	0.28	<1	9	31	14	2.76	<10	0.17	223	<1	0.04	12	980	8	<5	<20	12	0.12	<10	75	<10	7	120
36	PT-L83000-5500	<5	0.2	2.64	10	115	<5	0.49	<1	32	61	91	6.49	<10	0.95	574	<1	0.02	40	810	6	<5	<20	22	0.27	<10	169	<10	12	172
37	PT-L83000-5550	<5	<0.2	1.01	<5	85	<5	0.36	<1	11	39	25	2.61	<10	0.36	222	<1	0.01	25	630	6	<5	<20	16	0.10	<10	72	<10	8	59
38	PT-L83000-5600	<5	<0.2	1.69	10	90	<5	0.28	<1	13	50	34	3.47	<10	0.37	251	<1	0.01	31	960	6	<5	<20	14	0.11	<10	90	<10	6	103
39	PT-L83000-5800	<5	0.3	2.70	<5	165	<5	0.52	<1	42	60	188	7.48	<10	0.96	777	<1	0.02	44	1170	8	<5	<20	18	0.31	<10	197	<10	12	211
40	PT-L83000-5850	<5	<0.2	1.42	10	110	<5	0.48	<1	15	42	30	3.28	<10	0.36	218	<1	0.03	32	1650	4	<5	<20	29	0.10	<10	84	<10	7	91
41	PT-L83000-5900	5	0.2	1.08	5	70	<5	0.63	<1	16	41	47	2.95	<10	0.38	571	<1	0.03	27	330	4	<5	<20	29	0.11	<10	81	<10	15	61
42	PT-L83000-5950	5	<0.2	1.45	5	100	<5	0.68	<1	21	61	64	3.58	<10	0.57	377	<1	0.03	33	750	6	<5	<20	69	0.13	<10	89	<10	9	76
43	PT-L83000-6000	<5	<0.2	1.04	<5	70	<5	0.50	<1	15	42	94	2.92	<10	0.38	534	<1	0.03	29	230	6	<5	<20	24	0.13	<10	88	<10	12	72
44	PT-L83000-6050	<5	0.2	0.92	<5	135	<5	0.41	<1	10	34	14	2.41	<10	0.26	161	<1	0.02	20	900	6	<5	<20	21	0.10	<10	61	<10	8	84
45	PT-L83000-6100	<5	<0.2	1.84	10	115	<5	0.41	<1	15	60	37	3.93	<10	0.46	311	<1	0.01	33	940	8	<5	<20	23	0.12	<10	107	<10	6	88

QC DATA:

Repeat:

1	PT-L82700-5300	<5	<0.2	1.00	5	70	<5	0.39	<1	12	37	15	2.74	<10	0.34	212	<1	0.01	23	1070	2	<5	<20	17	0.10	<10	63	<10	7	83
10	PT-L82700-5800	<5	<0.2	0.76	<5	60	<5	0.41	<1	12	39	21	2.55	<10	0.31	341	<1	0.02	21	290	4	<5	<20	22	0.10	<10	73	<10	7	40
19	PT-L82800-5450	<5	<0.2	0.83	<5	70	<5	0.34	<1	10	33	18	2.23	<10	0.32	238	<1	0.01	20	220	4	<5	<20	16	0.11	<10	63	<10	10	52
28	PT-L82850-5900	<5	<0.2	1.51	5	120	<5	0.58	<1	18	47	46	3.65	<10	0.46	323	<1	0.03	29	1430	4	<5	<20	44	0.12	<10	92	<10	7	120
36	PT-L83000-5500	<5	0.2	2.54	<5	110	<5	0.49	<1	31	61	85	6.32	<10	0.90	573	<1	0.01	38	770	4	<5	<20	21	0.26	<10	164	<10	11	173

Standard:

OXF41	795																													
OXF41	805																													
GEO '05		1.5	1.40	65	150	<5	1.44	<1	18	60	86	4.04	<10	0.70	610	<1	0.03	28	620	18	<5	<20	56	0.11	<10	67	<10	10	76
GEO '05		1.5	1.51	65	145	<5	1.44	<1	17	60	85	4.00	<10	0.67	598	<1	0.03	29	620	19	<5	<20	52	0.10	<10	66	<10	10	74

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga
df/900r
XLS/05

09-Sep-05

ECO TECH LABORATORY LTD.
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ICP CERTIFICATE OF ANALYSIS AK 2005-906

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 60
Sample type: Soil
Project #: N/A
Shipment #: N/A
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT L82800 5300E	5	<0.2	1.17	5	105	<5	0.33	<1	12	43	17	3.19	<10	0.32	216	<1	<0.01	35	960	8	<5	<20	13	0.08	<10	69	<10	5	103
2	PT L82800 5350E	<5	<0.2	1.22	5	125	<5	0.28	<1	11	36	22	3.02	<10	0.33	293	<1	<0.01	25	1380	4	<5	<20	14	0.09	<10	67	<10	5	115
3	PT L82800 5400E	5	0.2	1.16	5	90	<5	0.36	<1	13	41	29	3.15	<10	0.37	298	<1	<0.01	30	970	6	<5	<20	18	0.10	<10	71	<10	5	99
4	PT L82800 5450E	10	0.6	1.54	10	185	<5	0.53	1	18	45	27	3.87	<10	0.48	1361	<1	0.04	29	660	10	<5	<20	30	0.13	<10	97	<10	8	123
5	PT L82800 5500E	5	0.5	3.04	20	545	<5	0.41	<1	25	88	158	6.12	<10	1.51	949	<1	0.05	48	720	10	<5	<20	32	0.19	<10	156	<10	11	132
6	PT L82800 5550E	<5	<0.2	2.03	10	130	<5	0.41	<1	19	58	69	4.39	<10	0.55	312	<1	0.01	41	2160	8	<5	<20	20	0.13	<10	100	<10	7	157
7	PT L82800 5600E	5	1.8	4.96	40	365	<5	1.65	<1	24	147	158	8.04	20	0.69	1058	2	0.06	149	610	14	<5	<20	60	0.11	<10	130	<10	94	122
8	PT L82800 5650E	<5	<0.2	0.73	5	90	<5	0.27	<1	8	33	12	2.29	<10	0.25	210	<1	<0.01	22	540	4	<5	<20	9	0.07	<10	55	<10	5	82
9	PT L82800 5700E	<5	<0.2	0.79	<5	70	<5	0.28	<1	9	30	9	2.43	<10	0.24	140	<1	<0.01	18	380	6	<5	<20	11	0.09	<10	67	<10	5	83
10	PT L82800 5750E	5	0.8	3.69	25	250	<5	0.75	<1	26	106	133	6.84	<10	0.71	1787	3	0.01	86	410	12	<5	<20	38	0.10	<10	143	<10	33	116
11	PT L82800 5800E	5	<0.2	1.22	5	110	<5	0.36	<1	12	37	19	2.82	<10	0.28	269	<1	0.02	21	750	4	<5	<20	18	0.10	<10	71	<10	6	82
12	PT L82800 5850E	<5	<0.2	1.08	<5	145	<5	0.42	<1	13	42	20	2.97	<10	0.38	450	<1	0.02	21	1000	6	<5	<20	21	0.12	<10	74	<10	7	122
13	PT L82800 5900E	<5	0.7	1.64	10	170	<5	1.03	<1	18	56	134	4.00	<10	0.43	1112	<1	0.02	53	400	8	<5	<20	36	0.11	<10	88	<10	18	86
14	PT L82800 6000E	<5	<0.2	0.91	<5	80	<5	0.43	<1	9	31	17	2.45	<10	0.23	188	<1	0.02	17	1050	6	<5	<20	22	0.09	<10	62	<10	6	79
15	PT L82800 6050E	<5	<0.2	1.62	10	115	<5	0.43	<1	15	45	32	3.56	<10	0.40	296	<1	0.02	28	1180	4	<5	<20	23	0.12	<10	86	<10	5	92
16	PT L82800 6100E	<5	<0.2	1.31	5	110	<5	0.34	<1	14	42	26	3.13	<10	0.32	469	<1	0.01	27	610	4	<5	<20	20	0.11	<10	82	<10	5	87
17	PT L82850 5950E	5	<0.2	0.88	<5	110	<5	0.41	<1	12	35	16	2.53	<10	0.25	337	<1	0.02	18	1140	6	<5	<20	19	0.09	<10	64	<10	6	81
18	PT L82950 5300E	<5	<0.2	0.79	5	70	<5	0.28	<1	10	34	17	2.31	<10	0.26	215	<1	<0.01	22	680	4	<5	<20	11	0.08	<10	55	<10	5	59
19	PT L82950 5350E	<5	<0.2	1.59	5	100	<5	0.45	<1	18	47	46	3.86	<10	0.35	654	<1	0.01	37	1040	8	<5	<20	17	0.11	<10	96	<10	7	156
20	PT L82950 5400E	<5	<0.2	1.30	10	80	<5	0.26	<1	13	47	33	3.36	<10	0.39	235	<1	<0.01	29	630	6	<5	<20	13	0.09	<10	91	<10	5	71
21	PT L82950 5450E	<5	<0.2	1.05	5	70	<5	0.38	<1	13	43	34	2.72	<10	0.34	468	<1	0.01	26	300	4	<5	<20	15	0.10	<10	71	<10	11	70
22	PT L82950 5500E	<5	<0.2	1.54	5	100	<5	0.31	<1	18	51	42	3.68	<10	0.45	482	<1	<0.01	31	750	6	<5	<20	13	0.16	<10	94	<10	8	112
23	PT L82950 5550E	<5	<0.2	1.59	10	120	<5	0.26	<1	14	46	27	3.50	<10	0.35	387	<1	<0.01	33	1370	6	<5	<20	12	0.10	<10	78	<10	5	135
24	PT L82950 5600E	<5	<0.2	1.14	5	120	<5	0.24	<1	11	38	15	2.65	<10	0.27	225	<1	<0.01	27	560	6	<5	<20	10	0.08	<10	65	<10	4	83
25	PT L82950 5650E	<5	<0.2	1.49	10	150	<5	0.46	<1	24	58	50	3.99	<10	0.51	1409	<1	0.01	28	1050	6	<5	<20	16	0.17	<10	102	<10	7	137

Richfield Ventures Corp. AK 2005-906

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
26	PT L82950 5700E	<5	<0.2	1.66	5	125	<5	0.48	<1	26	62	54	4.87	<10	0.91	412	<1	0.02	34	570	6	<5	<20	33	0.20	<10	121	<10	9	103
27	PT L82950 5750E	<5	0.3	1.57	10	135	<5	0.36	<1	31	41	53	4.37	<10	0.29	958	<1	0.01	30	1680	10	<5	<20	17	0.11	<10	87	<10	6	192
28	PT L82950 5800E	5	<0.2	0.95	<5	85	<5	0.36	<1	17	33	27	2.58	<10	0.30	317	<1	0.01	25	530	4	<5	<20	21	0.09	<10	68	<10	7	72
29	PT L82950 5850E	<5	0.3	1.73	10	155	<5	0.47	<1	18	51	61	3.85	<10	0.47	575	<1	0.02	33	1140	8	<5	<20	121	0.13	<10	93	<10	6	124
30	PT L82950 5900E	<5	<0.2	0.76	5	65	<5	0.41	<1	10	31	16	2.46	<10	0.27	168	<1	0.02	18	870	6	<5	<20	21	0.10	<10	65	<10	7	46
31	PT L82950 5950E	<5	0.7	2.45	15	215	<5	1.14	<1	22	66	105	4.86	<10	0.38	651	<1	0.01	72	540	10	<5	<20	38	0.09	<10	114	<10	19	75
32	PT L82950 6000E	5	<0.2	0.77	<5	125	<5	0.37	<1	12	24	30	2.55	<10	0.17	357	<1	0.02	11	1150	6	<5	<20	21	0.09	<10	62	<10	4	137
33	PT L82950 6050E	5	0.4	1.50	10	130	<5	0.36	<1	18	45	42	3.78	<10	0.51	782	<1	0.01	33	1080	8	<5	<20	18	0.10	<10	88	<10	6	129
34	PT L82950 6100E	<5	<0.2	1.16	5	90	<5	0.36	<1	13	41	22	2.98	<10	0.32	204	<1	0.01	25	1140	6	<5	<20	19	0.10	<10	75	<10	6	80
35	PT L83100 5300E	<5	0.2	0.71	<5	125	<5	0.35	<1	10	32	16	2.12	<10	0.25	342	<1	0.01	17	790	6	<5	<20	14	0.11	<10	55	<10	7	56
36	PT L83100 5350E	<5	<0.2	0.73	<5	70	<5	0.29	<1	10	29	15	2.11	<10	0.27	312	<1	0.01	20	260	4	<5	<20	13	0.08	<10	56	<10	7	62
37	PT L83100 5400E	<5	<0.2	0.75	<5	60	<5	0.31	<1	10	30	17	2.25	<10	0.29	233	<1	<0.01	21	290	6	<5	<20	13	0.09	<10	62	<10	6	57
38	PT L83100 5450E	<5	<0.2	1.41	10	90	<5	0.33	<1	16	42	31	3.43	<10	0.43	334	<1	0.01	26	930	6	<5	<20	13	0.13	<10	86	<10	7	111
39	PT L83100 5500E	<5	<0.2	1.05	5	85	<5	0.30	<1	10	36	21	2.64	<10	0.30	180	<1	0.01	25	720	6	<5	<20	14	0.09	<10	65	<10	5	75
40	PT L83100 5550E	<5	<0.2	2.00	<5	95	<5	0.56	<1	32	101	46	6.46	<10	0.82	917	<1	0.01	42	710	4	<5	<20	15	0.19	<10	168	<10	5	148
41	PT L83100 5600E	<5	<0.2	0.96	5	85	<5	0.23	<1	12	32	16	2.64	<10	0.25	359	<1	<0.01	23	830	4	<5	<20	11	0.08	<10	67	<10	3	85
42	PT L83100 5650E	<5	<0.2	1.02	5	70	<5	0.25	<1	11	34	18	2.89	<10	0.24	165	<1	0.01	21	1120	4	<5	<20	12	0.08	<10	69	<10	3	107
43	PT L83100 5700E	<5	0.2	1.86	15	105	<5	0.29	<1	25	46	111	5.21	<10	0.52	699	1	0.01	41	1850	8	<5	<20	16	0.12	<10	113	<10	4	232
44	PT L83100 5750E	<5	<0.2	1.46	10	125	<5	0.36	<1	16	39	30	3.07	<10	0.35	400	<1	0.01	24	1290	6	<5	<20	19	0.10	<10	77	<10	5	122
45	PT L83100 5800E	<5	0.3	2.27	10	250	<5	0.51	<1	26	67	53	4.83	<10	0.39	2314	1	0.01	49	1330	10	<5	<20	25	0.09	<10	102	<10	7	168
46	PT L83100 5850E	<5	<0.2	1.81	10	75	<5	0.35	<1	20	78	75	5.40	<10	0.58	319	<1	0.02	43	1860	8	<5	<20	22	0.13	<10	125	<10	4	144
47	PT L83100 5900E	<5	<0.2	1.50	10	100	<5	0.43	<1	17	53	28	3.75	<10	0.57	266	<1	0.02	35	1410	6	<5	<20	25	0.11	<10	99	<10	5	95
48	PT L83100 5950E	<5	<0.2	1.15	5	105	<5	0.40	<1	15	48	24	2.99	<10	0.35	299	<1	0.02	24	860	4	<5	<20	21	0.11	<10	82	<10	5	85
49	PT L83100 6000E	<5	0.2	1.04	5	80	<5	0.49	<1	15	40	32	2.91	<10	0.46	376	<1	0.02	23	510	4	<5	<20	23	0.12	<10	81	<10	8	73
50	PT L83100 6050E	<5	<0.2	1.39	<5	105	<5	0.42	<1	16	51	28	3.67	<10	0.53	508	<1	0.02	26	970	6	<5	<20	16	0.15	<10	99	<10	7	88
51	PT L83100 6100E	<5	<0.2	1.16	5	70	<5	0.38	<1	13	42	34	2.87	<10	0.41	229	<1	0.02	23	600	6	<5	<20	19	0.12	<10	80	<10	8	70
52	PT L83250 5350E	10	<0.2	0.80	<5	70	<5	0.32	<1	8	31	14	2.29	<10	0.23	150	<1	0.01	18	730	4	<5	<20	13	0.09	<10	61	<10	6	45
53	PT L83250 5650E	<5	<0.2	0.95	5	100	<5	0.41	<1	17	33	28	2.45	<10	0.29	595	<1	0.01	18	470	6	<5	<20	20	0.09	<10	71	<10	10	60
54	PT L83250 5850E	<5	0.2	0.95	5	75	<5	0.45	<1	13	37	20	2.65	<10	0.34	224	<1	0.01	26	930	4	<5	<20	20	0.10	<10	67	<10	6	91
55	PT L83250 5900E	<5	<0.2	1.51	5	100	<5	0.72	<1	22	67	72	4.22	<10	0.89	516	<1	0.02	41	880	6	<5	<20	23	0.18	<10	109	<10	17	66
56	PT L83300 5400E	<5	<0.2	1.01	10	75	<5	0.41	<1	13	38	26	2.55	<10	0.39	432	<1	0.01	24	280	8	<5	<20	18	0.11	<10	70	<10	10	63
57	PT L83450 5300E	<5	<0.2	0.96	5	70	<5	0.38	<1	17	39	24	2.74	<10	0.38	582	<1	0.01	24	530	6	<5	<20	17	0.11	<10	77	<10	9	75
58	PT L83450 5600E	<5	0.4	2.52	25	180	<5	0.74	<1	27	84	79	5.56	<10	0.64	1416	3	0.01	59	730	10	<5	<20	36	0.08	<10	123	<10	17	117
59	PT L83450 5850E	<5	<0.2	1.24	10	95	<5	0.43	<1	18	57	33	3.35	<10	0.51	866	<1	0.01	27	720	6	<5	<20	25	0.10	<10	90	<10	11	87
60	PT L83450 5950E	<5	<0.2	1.01	<5	60	<5	0.35	<1	10	35	16	2.62	<10	0.24	179	<1	0.02	19	740	6	<5	<20	17	0.08	<10	67	<10	5	75

Richfield Ventures Corp. AK 2005-906

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
QC DATA:																														
Repeat:																														
1	PT L82800 5300E	<5	<0.2	1.25	10	110	<5	0.36	<1	13	47	18	3.39	<10	0.34	224	<1	<0.01	38	980	8	<5	<20	13	0.09	<10	73	<10	6	110
10	PT L82800 5750E	<5	0.8	3.96	35	265	<5	0.78	<1	28	112	144	7.35	<10	0.77	2062	3	0.01	90	410	8	<5	<20	40	0.10	<10	154	<10	31	122
19	PT L82950 5350E	<5	<0.2	1.58	10	95	<5	0.45	<1	19	47	45	3.85	<10	0.34	651	<1	0.01	35	1050	8	<5	<20	17	0.11	<10	95	<10	7	157
28	PT L82950 5800E	<5	<0.2	0.98	5	90	<5	0.37	<1	18	34	28	2.70	<10	0.31	315	<1	0.02	25	490	6	<5	<20	21	0.09	<10	70	<10	7	75
36	PT L83100 5350E	<5	<0.2	0.74	5	70	<5	0.30	<1	10	31	14	2.19	<10	0.28	349	<1	0.01	21	280	6	<5	<20	13	0.09	<10	58	<10	7	64
45	PT L83100 5800E		0.3	2.08	15	220	<5	0.47	<1	22	62	47	4.44	<10	0.36	2025	2	0.01	43	1210	12	<5	<20	23	0.08	<10	94	<10	5	159
47	PT L83100 5900E	<5																												
54	PT L83250 5850E	<5																												
Standard:																														
OXF41		785																												
OXF41		790																												
GEO '05			1.5	1.27	65	145	<5	1.41	<1	17	61	89	4.02	<10	0.66	599	<1	0.02	28	600	20	<5	<20	55	0.10	<10	69	<10	10	72
GEO '05			1.5	1.27	60	145	<5	1.42	<1	17	60	84	4.09	<10	0.66	603	<1	0.02	29	620	20	<5	<20	54	0.10	<10	71	<10	11	73

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga
df/906/900r
XLS/05

ECO TECH LABORATORY LTD.
10041 Dallas Drive
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V2C 6T4

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ICP CERTIFICATE OF ANALYSIS AK 2005-908

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 111
Sample type: Soil
Project #: n/a
Shipment #: n/a
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT L82500 5300E	5	0.2	1.06	<5	125	<5	0.32	<1	9	34	21	2.17	<10	0.34	323	<1	0.05	23	760	6	<5	<20	23	0.06	<10	56	<10	9	56
2	PT L82500 5350E #1	<5	0.2	0.65	<5	70	<5	0.26	<1	6	21	12	1.52	<10	0.20	211	<1	0.01	12	260	2	<5	<20	16	0.07	<10	45	<10	9	35
3	PT L82500 5350E #2	<5	<0.2	1.47	<5	135	<5	0.27	<1	10	40	19	3.22	<10	0.29	159	<1	0.01	30	1630	4	<5	<20	16	0.08	<10	81	<10	6	79
4	PT L82500 5400E	5	<0.2	0.67	<5	75	<5	0.28	<1	6	25	11	1.58	<10	0.20	432	<1	0.01	13	260	2	<5	<20	17	0.07	<10	52	<10	6	39
5	PT L82500 5450E	5	<0.2	1.01	<5	80	<5	0.27	<1	11	33	22	2.38	<10	0.36	279	<1	0.02	19	630	4	<5	<20	17	0.08	<10	69	<10	7	52
6	PT L82500 5500E	<5	<0.2	1.01	<5	70	<5	0.33	<1	10	32	20	2.19	<10	0.40	391	<1	0.01	20	580	6	<5	<20	19	0.09	<10	62	<10	9	43
7	PT L82500 5550E	5	<0.2	0.82	<5	75	<5	0.31	<1	7	27	15	1.85	<10	0.32	252	<1	0.01	15	550	8	<5	<20	18	0.09	<10	56	<10	8	53
8	PT L82500 5600E	<5	<0.2	0.68	<5	70	<5	0.24	<1	6	21	10	1.44	<10	0.22	217	<1	0.01	11	290	10	<5	<20	14	0.07	<10	43	<10	6	46
9	PT L82500 5650E	5	<0.2	0.95	<5	80	<5	0.28	<1	7	29	16	1.91	<10	0.33	210	<1	0.01	17	420	4	<5	<20	17	0.08	<10	55	<10	7	44
10	PT L82500 5700E	<5	<0.2	0.92	5	75	<5	0.33	<1	9	33	22	2.29	<10	0.39	272	<1	0.02	19	550	6	<5	<20	20	0.08	<10	68	<10	8	38
11	PT L82500 5750E	<5	<0.2	0.99	<5	80	<5	0.29	<1	10	38	20	2.44	<10	0.41	210	<1	0.01	30	640	4	<5	<20	15	0.08	<10	64	<10	7	47
12	PT L82500 5800E	<5	<0.2	0.74	<5	65	<5	0.28	<1	7	25	11	1.69	<10	0.25	209	<1	0.01	14	470	6	<5	<20	15	0.07	<10	50	<10	7	44
13	PT L82500 5850E	<5	0.2	1.34	<5	105	<5	0.28	<1	10	36	20	2.78	<10	0.31	175	<1	0.01	27	930	2	<5	<20	18	0.07	<10	72	<10	5	76
14	PT L82500 5900E	<5	<0.2	0.83	<5	60	<5	0.53	<1	9	23	17	1.80	<10	0.32	246	<1	0.04	13	490	4	<5	<20	40	0.09	<10	62	<10	8	40
15	PT L82500 5950E	<5	<0.2	0.92	<5	55	<5	0.54	<1	10	30	23	2.28	<10	0.37	212	<1	0.03	15	800	2	<5	<20	41	0.09	<10	72	<10	8	53
16	PT L82500 6000E	40	<0.2	1.93	<5	110	<5	0.52	<1	16	52	60	3.72	<10	0.47	342	<1	0.03	39	390	4	<5	<20	32	0.10	<10	97	<10	11	54
17	PT L82500 6050E	<5	<0.2	0.98	<5	75	<5	0.35	<1	9	29	21	2.23	<10	0.28	174	<1	0.02	16	570	6	<5	<20	22	0.09	<10	66	<10	7	54
18	PT L82500 6100E	<5	0.3	2.09	<5	200	<5	0.66	<1	22	58	149	4.01	<10	0.50	2098	1	0.02	49	1030	4	<5	<20	30	0.09	<10	88	<10	13	131
19	PT L82550 5300E	5	0.2	1.50	5	155	<5	0.33	<1	18	45	31	3.06	<10	0.44	1085	<1	0.01	27	670	4	<5	<20	23	0.07	<10	76	<10	9	79
20	PT L82550 5350E	5	<0.2	0.81	<5	90	<5	0.29	<1	10	26	18	1.86	<10	0.27	440	<1	0.01	17	440	4	<5	<20	18	0.07	<10	52	<10	10	45
21	PT L82550 5400E	15	<0.2	0.72	<5	65	<5	0.25	<1	6	22	13	1.57	<10	0.25	183	<1	0.01	14	270	2	<5	<20	13	0.07	<10	46	<10	7	40
22	PT L82550 5450E	5	0.2	0.71	<5	70	<5	0.27	<1	7	22	12	1.60	<10	0.26	189	<1	0.01	14	310	4	<5	<20	15	0.08	<10	47	<10	8	45
23	PT L82550 5500E	<5	0.3	1.21	<5	85	<5	0.30	<1	9	37	23	2.45	<10	0.42	288	<1	0.01	24	600	2	<5	<20	20	0.09	<10	66	<10	8	53
24	PT L82550 5550E	5	0.2	0.88	<5	95	<5	0.31	<1	9	28	19	1.92	<10	0.29	579	<1	0.01	18	430	2	<5	<20	18	0.07	<10	56	<10	10	48
25	PT L82550 5600E	5	0.2	1.09	<5	110	<5	0.28	<1	10	34	14	2.55	<10	0.30	259	<1	0.01	23	1060	6	<5	<20	15	0.07	<10	62	<10	6	91
26	PT L82550 5650E	5	0.2	1.19	<5	105	<5	0.29	<1	10	41	17	2.80	<10	0.38	191	<1	0.01	30	580	4	<5	<20	16	0.08	<10	70	<10	7	65
27	PT L82550 5700E	<5	<0.2	0.74	<5	65	<5	0.27	<1	7	26	12	1.74	<10	0.27	336	<1	0.01	14	410	4	<5	<20	16	0.07	<10	54	<10	7	41
28	PT L82550 5750E	5	<0.2	0.77	<5	70	<5	0.22	<1	7	24	10	1.72	<10	0.26	312	<1	<0.01	14	340	2	<5	<20	12	0.07	<10	49	<10	6	55
29	PT L82550 5800E	<5	<0.2	0.72	<5	85	<5	0.27	<1	7	24	10	1.53	<10	0.25	532	<1	0.01	14	410	2	<5	<20	15	0.07	<10	44	<10	6	47
30	PT L82550 5850E	5	0.2	1.44	<5	90	<5	0.32	<1	11	41	22	3.06	<10	0.39	198	<1	0.01	28	1120	6	<5	<20	18	0.08	<10	75	<10	5	72

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT L82550 5900E	<5	<0.2	0.70	<5	75	<5	0.41	<1	7	23	15	1.76	<10	0.24	242	<1	0.03	10	540	6	<5	<20	32	0.09	<10	61	<10	7	30
32	PT L82550 5950E	<5	<0.2	1.03	<5	70	<5	0.58	<1	11	32	27	2.41	<10	0.42	336	<1	0.03	18	1090	4	<5	<20	42	0.09	<10	75	<10	10	48
33	PT L82550 6050E	5	0.3	1.76	<5	130	<5	0.80	<1	15	55	82	3.67	<10	0.51	616	<1	0.02	35	420	2	<5	<20	35	0.09	<10	91	<10	16	64
34	PT L82550 6100E	<5	<0.2	0.62	<5	70	<5	0.31	<1	7	23	14	1.69	<10	0.18	371	<1	0.01	11	530	4	<5	<20	17	0.08	<10	51	<10	6	51
35	PT L82600 5300E	<5	<0.2	0.99	<5	100	<5	0.33	<1	11	35	16	2.45	<10	0.33	400	<1	0.01	21	870	6	<5	<20	20	0.08	<10	67	<10	8	62
36	PT L82600 5350E	20	<0.2	0.85	<5	75	<5	0.26	<1	8	26	15	1.95	<10	0.29	248	<1	0.01	15	370	4	<5	<20	16	0.09	<10	56	<10	8	53
37	PT L82600 5400E	5	<0.2	0.82	<5	75	<5	0.25	<1	8	24	13	1.91	<10	0.28	263	<1	0.01	15	450	6	<5	<20	14	0.07	<10	53	<10	6	54
38	PT L82600 5450E	10	<0.2	0.88	<5	80	<5	0.30	<1	7	27	16	2.01	<10	0.29	212	<1	0.01	16	640	4	<5	<20	16	0.08	<10	56	<10	8	64
39	PT L82600 5500E	5	<0.2	0.95	<5	65	<5	0.38	<1	10	34	23	2.32	<10	0.41	289	<1	0.02	21	740	2	<5	<20	19	0.09	<10	67	<10	10	43
40	PT L82600 5550E	5	<0.2	1.16	<5	140	<5	0.28	<1	8	37	13	2.73	<10	0.27	399	<1	<0.01	20	1750	4	<5	<20	14	0.07	<10	64	<10	5	101
41	PT L82600 5600E	5	<0.2	0.88	10	75	<5	0.34	<1	11	34	22	2.42	<10	0.38	301	<1	0.01	23	780	4	<5	<20	18	0.09	<10	65	<10	10	53
42	PT L82600 5650E	5	<0.2	0.84	<5	65	<5	0.37	<1	8	30	17	1.94	<10	0.35	264	<1	0.01	18	590	2	<5	<20	21	0.08	<10	57	<10	10	39
43	PT L82600 5700E	5	<0.2	0.85	<5	60	<5	0.35	<1	9	31	19	2.15	<10	0.34	291	<1	0.02	18	810	4	<5	<20	21	0.08	<10	59	<10	9	48
44	PT L82600 5750E	5	<0.2	0.98	<5	95	<5	0.25	<1	9	33	11	2.33	<10	0.29	242	<1	<0.01	21	1080	6	<5	<20	13	0.07	<10	59	<10	6	68
45	PT L82600 5800E	<5	0.3	1.12	<5	130	<5	0.26	<1	12	32	17	2.38	<10	0.28	821	<1	0.01	20	1140	4	<5	<20	19	0.07	<10	64	<10	5	92
46	PT L82600 5850E	5	<0.2	0.94	<5	75	<5	0.39	<1	9	26	19	2.02	<10	0.28	365	<1	0.03	14	650	4	<5	<20	30	0.08	<10	64	<10	6	49
47	PT L82600 5900E	5	<0.2	0.95	<5	65	<5	0.58	<1	9	27	22	2.03	<10	0.35	292	<1	0.04	13	930	6	<5	<20	44	0.08	<10	68	<10	9	40
48	PT L82600 6000E	10	0.3	2.12	5	170	<5	1.04	<1	13	58	104	3.92	10	0.58	207	<1	0.04	45	530	4	<5	<20	50	0.09	<10	91	<10	27	47
49	PT L82600 6050E	5	0.7	4.48	15	275	<5	1.04	<1	24	104	313	6.64	10	0.87	848	4	0.02	86	610	2	<5	<20	50	0.10	<10	155	<10	34	94
50	PT L82600 6100E	5	<0.2	1.53	<5	80	<5	0.57	<1	17	53	83	3.54	<10	0.62	464	<1	0.02	33	710	4	<5	<20	33	0.12	<10	98	<10	13	49
51	PT L82561 5600E	<5	<0.2	0.63	<5	135	<5	0.51	<1	9	24	14	1.74	<10	0.19	863	<1	0.03	10	580	6	<5	<20	34	0.08	<10	53	<10	6	75
52	PT L82650 5300E	5	0.2	1.12	<5	175	<5	0.44	<1	9	39	16	2.83	<10	0.34	241	<1	0.01	26	1490	4	<5	<20	31	0.08	<10	67	<10	9	88
53	PT L82650 5350E	5	<0.2	0.78	<5	90	<5	0.25	<1	7	28	10	1.97	<10	0.25	207	<1	0.01	15	690	4	<5	<20	14	0.08	<10	54	<10	7	82
54	PT L82650 5400E	5	0.2	0.90	<5	85	<5	0.34	<1	8	26	15	1.94	<10	0.30	300	<1	0.01	19	550	6	<5	<20	20	0.08	<10	54	<10	9	60
55	PT L82650 5450E	5	0.5	1.69	<5	145	<5	0.59	<1	12	41	54	2.59	<10	0.39	237	<1	0.02	38	310	2	<5	<20	39	0.06	<10	72	<10	19	38
56	PT L82650 5700E	5	<0.2	1.00	<5	85	<5	0.33	<1	10	37	25	2.41	<10	0.44	309	<1	0.01	36	670	4	<5	<20	19	0.07	<10	61	<10	11	47
57	PT L82650 5750E	5	<0.2	0.86	<5	60	<5	0.34	<1	9	33	18	2.22	<10	0.34	274	<1	0.02	22	770	4	<5	<20	20	0.08	<10	60	<10	9	49
58	PT L82650 5800E	10	<0.2	0.82	<5	70	<5	0.40	<1	8	29	18	1.95	<10	0.33	256	<1	0.02	18	830	4	<5	<20	24	0.07	<10	57	<10	9	43
59	PT L82650 5850E	5	0.2	0.99	<5	100	<5	0.36	<1	9	32	18	2.31	<10	0.29	585	<1	0.01	16	970	2	<5	<20	22	0.07	<10	66	<10	6	61
60	PT L82650 5900E	5	<0.2	0.92	<5	90	<5	0.49	<1	10	29	24	2.20	<10	0.35	305	<1	0.03	15	1060	4	<5	<20	35	0.09	<10	71	<10	9	50
61	PT L82650 5950E	5	<0.2	1.07	<5	85	<5	0.53	<1	13	33	32	2.57	<10	0.41	693	<1	0.03	22	820	4	<5	<20	34	0.09	<10	77	<10	11	44
62	PT L82650 6000E	5	<0.2	0.87	<5	50	<5	0.47	<1	9	30	20	2.26	<10	0.36	207	<1	0.03	16	330	4	<5	<20	28	0.10	<10	71	<10	8	35
63	PT L82650 6050E	5	<0.2	0.67	<5	55	<5	0.37	<1	8	29	15	1.92	<10	0.25	148	<1	0.02	13	330	2	<5	<20	24	0.09	<10	62	<10	8	35
64	PT L82650 6100E	5	<0.2	0.96	<5	65	<5	0.35	<1	10	30	21	2.20	<10	0.31	247	<1	0.02	16	320	6	<5	<20	24	0.09	<10	69	<10	8	47
65	PT L83150 5350E	5	<0.2	0.69	<5	60	<5	0.29	<1	8	25	15	1.76	<10	0.28	466	<1	0.01	14	350	4	<5	<20	15	0.09	<10	51	<10	8	46
66	PT L83150 5500E	5	<0.2	1.24	<5	85	<5	0.28	<1	12	40	26	2.89	<10	0.37	190	<1	0.01	22	1380	4	<5	<20	17	0.10	<10	78	<10	7	51
67	PT L83150 5600E	5	0.2	1.29	<5	115	<5	0.22	<1	12	35	29	2.60	<10	0.27	786	<1	0.01	20	1250	6	<5	<20	16	0.08	<10	67	<10	5	79
68	PT L83150 5900E	5	<0.2	1.46	<5	70	<5	0.35	<1	13	36	27	3.04	<10	0.37	216	<1	0.07	21	940	4	<5	<20	24	0.10	<10	84	<10	6	85
69	PT L83550 5350E	5	<0.2	1.18	<5	70	<5	0.46	<1	12	37	39	2.58	<10	0.51	322	<1	0.02	22	810	2	<5	<20	28	0.12	<10	83	<10	12	40
70	PT L83550 5450E	5	<0.2	1.39	5	80	<5	0.49	<1	13	45	46	3.15	<10	0.59	354	<1	0.02	23	780	4	<5	<20	31	0.13	<10	100	<10	11	44

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
71	PT L83550 5650E	<5	0.2	1.29	<5	100	<5	0.42	<1	12	39	37	3.01	<10	0.53	316	<1	0.02	22	970	4	<5	<20	28	0.12	<10	93	<10	8	53
72	PT L83550 5700E	5	<0.2	1.12	5	90	<5	0.40	<1	13	37	32	2.58	<10	0.41	305	<1	0.02	20	970	6	<5	<20	27	0.11	<10	79	<10	8	54
73	PT L83550 5950E	<5	<0.2	1.06	<5	75	<5	0.41	<1	11	35	31	2.50	<10	0.42	241	<1	0.02	21	1000	2	<5	<20	23	0.11	<10	73	<10	6	62
74	PT L83550 6000E	10	<0.2	1.29	<5	85	<5	0.39	<1	12	36	27	2.73	<10	0.42	249	<1	0.02	25	1370	4	<5	<20	24	0.10	<10	76	<10	7	61
75	PT L83400 5300E	5	<0.2	1.21	<5	75	<5	0.37	<1	14	37	28	2.41	<10	0.46	546	<1	0.02	21	330	4	<5	<20	23	0.11	<10	77	<10	9	50
76	PT L83400 5400E	5	0.2	1.41	5	75	<5	0.44	<1	16	42	38	2.96	<10	0.54	739	<1	0.02	25	610	2	<5	<20	29	0.11	<10	92	<10	8	52
77	PT L83400 6000E	5	<0.2	1.14	<5	80	<5	0.43	<1	12	35	22	2.44	<10	0.38	330	<1	0.02	21	1250	4	<5	<20	25	0.11	<10	67	<10	6	60
78	PT L83800 5300E	5	0.2	1.23	<5	80	<5	0.39	<1	11	38	34	2.71	<10	0.46	220	<1	0.02	22	900	6	<5	<20	24	0.12	<10	81	<10	8	58
79	PT L83800 5350E	5	0.4	1.89	5	120	<5	0.45	<1	20	51	56	3.41	<10	0.62	913	<1	0.05	30	820	4	<5	<20	31	0.11	<10	95	<10	9	78
80	PT L83800 5400E	5	0.3	1.93	5	95	<5	0.38	<1	17	52	53	3.46	<10	0.63	780	<1	0.02	32	430	2	<5	<20	28	0.11	<10	103	<10	8	60
81	PT L83800 5450E	<5	0.2	0.97	<5	60	<5	0.36	<1	9	29	26	2.08	<10	0.37	206	<1	0.02	15	670	4	<5	<20	26	0.11	<10	66	<10	7	44
82	PT L83800 5500E	<5	<0.2	1.37	10	75	<5	0.51	<1	15	42	43	2.99	<10	0.62	601	<1	0.03	23	690	2	<5	<20	35	0.12	<10	97	<10	10	45
83	PT L83800 5550E	5	0.3	1.60	<5	90	<5	0.56	<1	15	44	47	2.94	<10	0.59	613	<1	0.02	27	620	4	<5	<20	36	0.10	<10	86	<10	11	51
84	PT L83800 5600E	<5	0.2	0.96	<5	60	<5	0.37	<1	9	28	26	1.91	<10	0.38	195	<1	0.02	15	440	4	<5	<20	25	0.10	<10	62	<10	8	49
85	PT L83800 5650E	<5	<0.2	0.71	<5	50	<5	0.34	<1	7	25	18	1.73	<10	0.29	146	<1	0.02	12	390	6	<5	<20	23	0.11	<10	55	<10	7	34
86	PT L83800 5700E	5	0.3	1.04	<5	55	<5	0.36	<1	9	33	21	2.39	<10	0.34	155	<1	0.03	16	1060	2	<5	<20	27	0.09	<10	72	<10	6	48
87	PT L83800 5750E	5	0.2	0.70	<5	55	<5	0.28	<1	7	24	12	1.65	<10	0.24	203	<1	0.02	10	410	4	<5	<20	18	0.10	<10	57	<10	6	38
88	PT L83800 5800E	5	0.3	1.38	<5	85	<5	0.42	<1	13	44	38	3.03	<10	0.56	283	<1	0.02	24	890	6	<5	<20	26	0.12	<10	94	<10	8	56
89	PT L83800 5850E	5	0.2	1.07	<5	75	<5	0.46	<1	10	34	26	2.32	<10	0.45	325	<1	0.02	19	670	2	<5	<20	28	0.11	<10	71	<10	6	58
90	PT L83800 5900E	5	0.2	1.27	5	70	<5	0.45	<1	13	39	38	2.75	<10	0.55	404	<1	0.02	22	740	4	<5	<20	29	0.12	<10	87	<10	9	46
91	PT L83800 5950E	<5	0.4	1.13	<5	105	<5	0.30	<1	11	31	22	2.77	<10	0.26	231	<1	0.05	10	1410	4	<5	<20	17	0.11	<10	81	<10	5	96
92	PT L83800 6000E	<5	<0.2	1.26	5	70	<5	0.57	<1	13	38	43	2.78	<10	0.53	345	<1	0.02	25	620	4	<5	<20	27	0.12	<10	82	<10	9	56
93	PT L83800 6050E	<5	0.3	1.41	<5	150	<5	0.35	<1	10	40	25	3.36	<10	0.40	224	<1	0.02	19	2540	6	<5	<20	21	0.11	<10	83	<10	5	102
94	PT L83800 6100E	<5	0.5	0.64	<5	140	<5	0.59	<1	7	22	18	1.53	<10	0.23	961	<1	0.05	10	560	4	<5	<20	35	0.09	<10	53	<10	6	52
95	PT L84000 5300E	5	0.3	1.39	<5	95	<5	0.46	<1	13	37	45	2.60	<10	0.54	492	<1	0.02	22	460	4	<5	<20	32	0.11	<10	78	<10	9	58
96	PT L84000 5350E	5	0.4	1.99	10	150	<5	0.58	<1	14	57	87	3.69	<10	0.70	483	<1	0.02	35	440	4	<5	<20	42	0.11	<10	101	<10	17	75
97	PT L84000 5400E	5	0.3	1.50	5	95	<5	0.59	<1	17	43	44	3.21	<10	0.64	896	<1	0.03	26	680	2	<5	<20	38	0.12	<10	101	<10	12	65
98	PT L84000 5450E	5	<0.2	1.14	<5	75	<5	0.52	<1	11	33	29	2.31	<10	0.48	314	<1	0.02	18	700	4	<5	<20	30	0.11	<10	75	<10	8	57
99	PT L84000 5500E	5	0.2	1.33	10	80	<5	0.74	<1	14	40	40	2.74	<10	0.53	519	<1	0.02	22	660	2	<5	<20	39	0.11	<10	91	<10	12	58
100	PT L84000 5550E	<5	<0.2	1.43	<5	125	<5	0.88	<1	15	31	31	2.69	<10	0.44	705	<1	0.05	16	590	4	<5	<20	43	0.12	<10	97	<10	7	102
101	PT L84000 5600E	<5	0.2	1.46	<5	65	<5	0.57	<1	11	32	28	2.94	<10	0.51	300	<1	0.02	17	1510	2	<5	<20	73	0.09	<10	77	<10	5	73
102	PT L84000 5650E	<5	0.2	2.21	<5	85	<5	0.94	<1	22	50	73	4.09	<10	1.00	651	<1	0.03	31	1010	4	<5	<20	46	0.18	<10	131	<10	16	65
103	PT L84000 5700E	<5	<0.2	1.01	<5	60	<5	0.41	<1	9	30	21	2.19	<10	0.38	163	<1	0.03	14	720	4	<5	<20	30	0.10	<10	68	<10	7	52
104	PT L84000 5750E	5	0.2	2.01	5	120	<5	0.51	<1	16	41	70	3.58	<10	0.55	710	<1	0.06	21	2690	2	<5	<20	28	0.11	<10	93	<10	6	94
105	PT L84000 5800E	5	0.2	1.05	<5	75	<5	0.55	<1	10	34	29	2.44	<10	0.46	250	<1	0.03	21	760	4	<5	<20	35	0.11	<10	74	<10	9	49
106	PT L84000 5850E	<5	0.2	1.95	<5	95	<5	0.35	<1	19	42	61	5.44	<10	0.51	473	1	0.02	21	1740	4	<5	<20	24	0.11	<10	155	<10	3	117
107	PT L84000 5900E	<5	0.5	1.96	<5	150	<5	0.92	<1	20	57	114	4.15	<10	0.68	828	1	0.08	38	590	2	<5	<20	62	0.07	<10	143	<10	13	66
108	PT L84000 5950E	<5	0.8	2.10	15	165	<5	1.95	1	16	53	203	4.21	30	0.58	1182	5	0.07	59	970	4	<5	<20	121	0.03	<10	135	<10	63	44
109	PT L84000 6000E	<5	0.9	2.77	15	150	<5	1.55	<1	19	78	147	4.71	10	0.81	1760	3	0.10	51	730	4	<5	<20	106	0.05	<10	130	<10	44	65

12-Sep-05

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
110	PT L84000 6050E	<5	0.6	2.36	15	110	<5	0.78	<1	20	64	131	4.48	<10	0.75	862	2	0.05	43	480	4	<5	<20	50	0.08	<10	138	<10	31	64
111	PT L84000 6100E	<5	<0.2	1.28	5	65	<5	0.41	<1	10	37	48	2.40	<10	0.53	258	<1	0.02	23	470	4	<5	<20	24	0.09	<10	85	<10	10	34
QC DATA:																														
Repeat:																														
1	PT L82500 5300E		0.2	1.09	<5	120	<5	0.33	<1	9	32	20	2.17	<10	0.34	335	<1	0.01	21	780	6	<5	<20	22	0.07	<10	58	<10	9	55
2	PT L82500 5350E #1	<5																												
10	PT L82500 5700E	<5	<0.2	0.91	<5	70	<5	0.33	<1	9	33	21	2.31	<10	0.37	272	<1	0.02	19	560	4	<5	<20	20	0.08	<10	67	<10	8	39
19	PT L82550 5300E	5	0.3	1.59	5	165	<5	0.34	<1	19	47	33	3.23	<10	0.46	1185	<1	0.01	31	720	2	<5	<20	24	0.07	<10	81	<10	10	82
28	PT L82550 5750E	<5	<0.2	0.76	<5	70	<5	0.22	<1	7	24	10	1.68	<10	0.25	301	<1	<0.01	15	330	4	<5	<20	12	0.07	<10	49	<10	6	54
36	PT L82600 5350E	<5	<0.2	0.89	<5	75	<5	0.29	<1	8	27	14	1.97	<10	0.31	224	<1	0.01	18	370	4	<5	<20	16	0.09	<10	58	<10	9	54
45	PT L82600 5800E	5	0.3	1.14	<5	125	<5	0.26	<1	12	30	17	2.32	<10	0.28	818	<1	0.01	20	1130	6	<5	<20	20	0.07	<10	64	<10	5	89
54	PT L82650 5400E	5	<0.2	0.91	<5	85	<5	0.35	<1	8	27	16	1.93	<10	0.30	297	<1	0.01	20	510	4	<5	<20	22	0.08	<10	53	<10	10	59
63	PT L82650 6050E	<5	<0.2	0.72	<5	50	<5	0.39	<1	8	26	15	1.93	<10	0.27	162	<1	0.02	13	350	4	<5	<20	25	0.10	<10	62	<10	8	37
71	PT L83550 5650E	<5	0.2	1.29	<5	95	<5	0.42	<1	12	40	36	2.91	<10	0.52	296	<1	0.02	22	950	2	<5	<20	29	0.12	<10	91	<10	8	52
80	PT L83800 5400E	15	0.2	1.95	5	95	<5	0.38	<1	17	50	53	3.41	<10	0.63	735	<1	0.02	32	400	4	<5	<20	28	0.12	<10	102	<10	8	59
89	PT L83800 5850E	<5	0.2	1.11	<5	75	<5	0.47	<1	10	36	27	2.38	<10	0.47	299	<1	0.02	19	660	4	<5	<20	30	0.11	<10	74	<10	7	58
98	PT L84000 5450E	<5	<0.2	1.19	5	75	<5	0.54	<1	11	33	30	2.34	<10	0.50	319	<1	0.02	17	710	2	<5	<20	32	0.11	<10	77	<10	9	58
106	PT L84000 5850E	<5	<0.2	1.97	<5	95	<5	0.35	<1	20	42	64	5.71	<10	0.54	551	<1	0.02	22	1790	6	<5	<20	25	0.12	<10	163	<10	3	117
Standard:																														
GEO '05			1.5	1.66	55	145	<5	1.40	<1	17	59	83	3.97	<10	0.87	585	<1	0.02	25	630	22	<5	<20	51	0.11	<10	76	<10	9	74
GEO '05			1.5	1.59	55	145	<5	1.36	<1	16	58	84	3.87	<10	0.89	569	<1	0.02	27	670	20	<5	<20	51	0.10	<10	74	<10	10	71
GEO '05			1.5	1.69	60	150	<5	1.38	<1	16	57	83	3.84	<10	0.88	579	<1	0.02	29	680	24	<5	<20	52	0.11	<10	76	<10	9	69
GEO '05			1.5	1.72	55	145	<5	1.38	<1	16	59	84	3.87	<10	0.90	578	<1	0.02	26	680	22	<5	<20	54	0.11	<10	72	<10	10	69
OXf41		795																												
OXf41		795																												
OXf41		800																												
OXf41		800																												

ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

JJ/ga/kk
df/908
XLS/05

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10041 Dallas Drive
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V2C 6T4

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ICP CERTIFICATE OF ANALYSIS AK 2005-909

Richfield Ventures Corp.
350 St. Laurent
Quesnel, BC
V2J 5A3

ATTENTION: Peter Bernier

No. of samples received: 74
Sample type: Soil
Project #: n/a
Shipment #: n/a
Samples submitted by: not indicated

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	PT L82750 5300E	<5	<0.2	0.95	<5	90	<5	0.28	<1	9	32	14	2.35	<10	0.27	248	<1	0.01	17	780	<2	<5	<20	19	0.08	<10	62	<10	5	70
2	PT L82750 5350E	<5	0.2	1.14	<5	100	<5	0.28	<1	9	34	13	2.47	<10	0.31	196	<1	0.01	21	850	<2	<5	<20	16	0.09	<10	63	<10	5	69
3	PT L82750 5400E	<5	1.7	2.94	10	175	<5	0.89	1	18	66	201	4.67	20	0.54	2142	<1	0.07	86	400	<2	<5	<20	39	0.11	<10	114	<10	57	106
4	PT L82750 5450E	<5	<0.2	1.14	<5	130	<5	0.29	<1	10	37	19	2.60	<10	0.37	203	<1	0.02	27	780	<2	<5	<20	19	0.10	<10	70	<10	7	44
5	PT L82750 5500E	10	0.6	2.92	<5	355	<5	0.39	<1	26	49	121	4.99	<10	1.09	930	<1	0.06	43	1500	<2	<5	<20	48	0.17	<10	124	<10	9	216
6	PT L82750 5550E	5	0.3	2.68	10	270	<5	0.32	<1	17	52	112	4.07	<10	0.82	351	<1	0.02	37	1540	<2	<5	<20	34	0.13	<10	100	<10	6	111
7	PT L82750 5600E	5	0.7	5.18	20	280	<5	1.32	<1	21	113	171	6.48	30	0.79	967	2	0.07	94	380	<2	<5	<20	56	0.10	<10	134	<10	65	84
8	PT L82750 5650E	<5	0.6	3.37	15	190	<5	1.06	<1	18	80	85	4.66	10	0.59	922	2	0.08	61	360	<2	<5	<20	42	0.09	<10	105	<10	35	74
9	PT L82750 5700E	<5	<0.2	1.31	10	125	<5	0.37	<1	7	35	14	2.41	<10	0.25	195	<1	0.01	18	1080	<2	<5	<20	20	0.07	<10	65	<10	4	64
10	PT L82750 5750E	<5	0.2	1.13	<5	70	<5	0.35	<1	9	31	24	2.11	<10	0.26	197	<1	0.01	18	190	<2	<5	<20	21	0.08	<10	62	<10	6	40
11	PT L82750 5800E	<5	<0.2	1.07	<5	125	<5	0.30	<1	8	27	18	2.27	<10	0.27	230	<1	0.02	14	1590	<2	<5	<20	25	0.09	<10	61	<10	5	77
12	PT L82750 5850E	<5	0.2	1.03	<5	65	<5	0.69	<1	8	29	23	2.21	<10	0.21	180	<1	0.06	15	170	<2	<5	<20	34	0.08	<10	67	<10	7	33
13	PT L82750 5900E	<5	<0.2	1.58	5	80	<5	0.60	<1	13	42	46	3.12	<10	0.60	259	<1	0.04	25	1160	<2	<5	<20	53	0.12	<10	93	<10	9	61
14	PT L82750 5950E	<5	0.4	2.20	10	185	<5	0.79	<1	18	55	74	3.92	<10	0.51	2257	<1	0.13	45	280	<2	<5	<20	40	0.11	<10	98	<10	18	74
15	PT L82750 6000E	<5	<0.2	0.88	<5	55	<5	0.53	<1	11	28	25	2.10	<10	0.37	320	<1	0.03	16	400	<2	<5	<20	36	0.10	<10	67	<10	10	36
16	PT L82750 6050E	<5	<0.2	2.98	15	145	<5	0.58	<1	22	57	95	4.62	<10	0.80	362	<1	0.03	36	2280	<2	<5	<20	49	0.16	<10	123	<10	7	110
17	PT L82750 6100E	<5	0.2	2.20	10	140	<5	0.29	<1	17	42	46	3.27	<10	0.41	472	<1	0.02	36	1140	<2	<5	<20	22	0.10	<10	80	<10	5	146
18	PT L82900 5300E	<5	<0.2	1.10	<5	85	<5	0.35	<1	14	34	30	2.41	<10	0.37	593	<1	0.02	25	360	<2	<5	<20	22	0.09	<10	72	<10	15	49
19	PT L82900 5350E	<5	<0.2	1.36	<5	90	<5	0.28	<1	12	38	24	2.44	<10	0.39	209	<1	0.02	25	510	<2	<5	<20	18	0.10	<10	71	<10	7	52
20	PT L82900 5400E	<5	<0.2	1.13	<5	90	<5	0.32	<1	10	32	22	2.35	<10	0.37	206	<1	0.02	22	380	<2	<5	<20	20	0.09	<10	71	<10	6	51
21	PT L82900 5450E	<5	<0.2	1.25	5	80	<5	0.35	<1	12	37	28	2.67	<10	0.33	373	<1	0.02	21	810	<2	<5	<20	18	0.09	<10	70	<10	5	93
22	PT L82900 5500E	<5	0.2	3.51	10	145	<5	0.61	<1	36	72	173	6.28	<10	1.04	441	<1	0.02	63	2290	<2	<5	<20	33	0.11	<10	145	<10	2	116
23	PT L82900 5550E	<5	0.4	3.22	20	215	<5	0.59	<1	24	79	101	4.90	<10	0.98	2620	<1	0.02	69	370	<2	<5	<20	36	0.10	<10	132	<10	17	88
24	PT L82900 5600E	<5	<0.2	1.44	5	115	<5	0.33	<1	12	37	31	2.91	<10	0.43	279	<1	0.01	23	1080	<2	<5	<20	21	0.10	<10	80	<10	6	74
25	PT L82900 5650E	<5	<0.2	1.72	5	95	<5	0.32	<1	15	36	34	3.05	<10	0.54	358	<1	0.02	25	650	<2	<5	<20	19	0.13	<10	87	<10	7	74
26	PT L82900 5700E	<5	<0.2	1.57	5	100	<5	0.37	<1	15	41	27	2.82	<10	0.54	610	<1	0.02	21	950	<2	<5	<20	29	0.12	<10	73	<10	6	102
27	PT L82900 5750E	<5	<0.2	1.14	<5	75	<5	0.28	<1	11	28	17	2.34	<10	0.27	220	<1	0.01	17	680	<2	<5	<20	19	0.09	<10	65	<10	4	58
28	PT L82900 5800E	<5	<0.2	0.81	<5	55	<5	0.33	<1	7	23	15	1.55	<10	0.23	165	<1	0.03	11	130	<2	<5	<20	30	0.09	<10	57	<10	8	38
29	PT L82900 5850E	<5	0.3	2.33	<5	120	<5	0.46	<1	18	39	98	3.93	<10	0.58	291	<1	0.03	33	1450	<2	<5	<20	70	0.13	<10	95	<10	6	96
30	PT L82900 5900E	<5	<0.2	1.50	<5	85	<5	0.41	<1	12	34	27	3.05	<10	0.37	182	<1	0.03	19	1200	<2	<5	<20	38	0.11	<10	82	<10	6	59

Et #	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
31	PT L82900 5950E	<5	<0.2	0.86	<5	75	<5	0.42	<1	9	26	21	1.94	<10	0.28	413	<1	0.03	16	430	<2	<5	<20	32	0.09	<10	62	<10	7	35
32	PT L82900 6000E	<5	<0.2	1.00	<5	90	<5	0.53	<1	10	31	23	2.31	<10	0.40	195	<1	0.04	21	930	<2	<5	<20	41	0.10	<10	71	<10	8	34
33	PT L82900 6050E	<5	<0.2	1.53	5	70	<5	0.64	<1	17	44	44	3.14	<10	0.65	434	<1	0.03	29	760	<2	<5	<20	39	0.12	<10	101	<10	11	40
34	PT L82900 6100E	<5	<0.2	1.62	<5	70	<5	0.53	<1	13	43	50	2.87	<10	0.49	239	<1	0.03	28	490	<2	<5	<20	38	0.10	<10	89	<10	10	52
35	PT L83000 5300E	<5	<0.2	1.10	<5	65	<5	0.36	<1	10	31	29	2.08	<10	0.47	280	<1	0.02	19	330	<2	<5	<20	26	0.11	<10	69	<10	10	33
36	PT L83000 5350E	<5	0.3	1.73	5	110	<5	0.48	<1	17	43	52	2.83	<10	0.60	593	<1	0.02	28	490	<2	<5	<20	35	0.09	<10	79	<10	15	52
37	PT L83050 3050E	<5	<0.2	0.84	<5	60	<5	0.29	<1	8	23	14	1.64	<10	0.27	207	<1	0.02	13	350	<2	<5	<20	20	0.09	<10	55	<10	7	68
38	PT L83050 5300E	<5	<0.2	1.20	<5	80	<5	0.35	<1	14	38	37	2.52	<10	0.48	351	<1	0.02	21	360	<2	<5	<20	24	0.13	<10	85	<10	10	37
39	PT L83050 5350E	<5	<0.2	1.16	<5	60	<5	0.30	<1	11	35	34	2.51	<10	0.43	241	<1	0.02	23	750	<2	<5	<20	20	0.08	<10	73	<10	7	42
40	PT L83050 5400E	<5	<0.2	1.39	<5	110	<5	0.30	<1	10	33	26	2.47	<10	0.34	311	<1	0.02	19	1050	<2	<5	<20	19	0.08	<10	69	<10	6	74
41	PT L83050 5450E	<5	<0.2	2.54	10	100	<5	0.24	<1	14	54	75	3.64	<10	0.62	254	<1	0.02	33	1110	<2	<5	<20	22	0.10	<10	104	<10	8	55
42	PT L83050 5500E	<5	0.2	1.76	<5	85	<5	0.33	<1	12	39	44	3.32	<10	0.50	229	<1	0.02	20	1190	<2	<5	<20	21	0.12	<10	97	<10	8	66
43	PT L83050 5550E	<5	0.2	1.71	<5	95	<5	0.26	<1	11	41	20	3.31	<10	0.39	212	<1	0.01	26	1170	<2	<5	<20	15	0.09	<10	87	<10	4	97
44	PT L83050 5600E	<5	<0.2	1.71	<5	115	<5	0.33	<1	12	38	33	2.90	<10	0.43	363	<1	0.02	24	940	<2	<5	<20	23	0.10	<10	82	<10	5	80
45	PT L83050 5700E	<5	<0.2	1.37	<5	50	<5	0.34	<1	16	35	96	2.75	<10	0.45	247	<1	0.02	30	200	<2	<5	<20	23	0.10	<10	80	<10	10	58
46	PT L83050 5750E	<5	<0.2	2.85	<5	120	<5	0.44	<1	26	55	103	4.96	<10	0.95	551	<1	0.07	28	1110	<2	<5	<20	34	0.22	<10	146	<10	11	92
47	PT L83050 5800E	<5	0.3	2.31	<5	115	<5	0.33	<1	13	47	42	3.57	<10	0.47	337	<1	0.07	29	630	<2	<5	<20	29	0.08	<10	103	<10	5	69
48	PT L83050 5850E	<5	0.2	1.66	<5	80	<5	0.43	<1	17	39	65	3.54	<10	0.60	348	<1	0.12	26	600	<2	<5	<20	57	0.12	<10	102	<10	7	54
49	PT L83050 5900E	10	0.3	2.80	5	150	<5	0.85	<1	21	60	102	4.56	10	0.62	1463	<1	0.03	47	400	<2	<5	<20	62	0.12	<10	120	<10	25	68
50	PT L83050 5950E	5	1.1	5.15	15	225	<5	1.00	<1	28	115	389	6.85	20	1.34	1407	1	0.08	86	670	<2	<5	<20	63	0.11	<10	170	<10	44	97
51	PT L83050 6000E	<5	<0.2	1.06	<5	75	<5	0.38	<1	10	32	25	2.10	<10	0.41	204	<1	0.03	20	450	<2	<5	<20	28	0.09	<10	67	<10	9	49
52	PT L83050 6100E	<5	<0.2	2.18	5	85	<5	0.37	<1	14	52	60	3.47	<10	0.61	223	<1	0.07	28	930	<2	<5	<20	34	0.12	<10	114	<10	9	49
53	PT L83055 5650E	<5	0.2	2.24	<5	105	<5	0.41	<1	25	43	120	5.03	<10	0.72	452	<1	0.02	33	1610	<2	<5	<20	29	0.15	<10	123	<10	8	179
54	PT L83150 5450E	5	<0.2	1.82	<5	120	<5	0.35	<1	20	48	39	3.41	<10	0.55	921	<1	0.02	28	850	<2	<5	<20	24	0.10	<10	100	<10	7	64
55	PT L83250 5550E	<5	0.3	1.52	<5	120	<5	0.37	<1	12	37	27	2.75	<10	0.41	260	<1	0.02	22	1510	<2	<5	<20	25	0.10	<10	74	<10	7	77
56	PT L83250 5750E	<5	0.2	1.62	<5	110	<5	0.44	<1	22	45	65	4.60	<10	0.66	584	<1	0.02	23	1730	<2	<5	<20	30	0.13	<10	128	<10	6	75
57	PT L83250 5800E	<5	0.2	1.73	<5	85	<5	0.39	<1	18	48	41	3.24	<10	0.61	486	<1	0.02	25	680	<2	<5	<20	24	0.16	<10	109	<10	10	65
58	PT L83250 5950E	<5	<0.2	2.60	<5	90	<5	0.48	<1	19	31	38	4.40	<10	1.28	487	<1	0.03	22	1340	<2	<5	<20	93	0.11	<10	139	<10	3	75
59	PT L83250 6050E	<5	<0.2	1.17	<5	65	<5	0.33	<1	9	30	22	2.27	<10	0.34	190	<1	0.03	16	750	<2	<5	<20	29	0.09	<10	74	<10	8	37
60	PT L83250 6100E	<5	<0.2	1.10	<5	65	<5	0.31	<1	9	29	20	2.29	<10	0.32	133	<1	0.06	17	470	<2	<5	<20	24	0.11	<10	77	<10	8	39
61	PT L83300 5450E	<5	0.2	1.60	<5	95	<5	0.40	<1	17	41	46	2.84	<10	0.55	667	<1	0.06	26	430	<2	<5	<20	29	0.11	<10	87	<10	14	56
62	PT L83300 5500E	<5	<0.2	1.15	<5	65	<5	0.33	<1	10	36	35	2.42	<10	0.46	196	<1	0.02	22	330	<2	<5	<20	23	0.12	<10	79	<10	12	38
63	PT L83300 5650E	5	0.2	1.59	<5	120	<5	0.51	<1	14	51	53	3.46	<10	0.73	278	<1	0.03	24	1230	<2	<5	<20	35	0.12	<10	107	<10	9	62
64	PT L83300 5750E	<5	1.8	4.85	15	250	<5	1.18	1	25	114	295	6.87	20	1.09	1351	2	0.06	88	690	<2	<5	<20	72	0.10	<10	163	<10	40	82
65	PT L83300 5850E	<5	<0.2	1.34	<5	70	<5	0.52	<1	13	41	42	2.70	<10	0.58	308	<1	0.03	28	630	<2	<5	<20	38	0.11	<10	87	<10	12	38
66	PT L83300 6000E	<5	<0.2	2.00	<5	100	<5	0.32	<1	17	45	31	3.43	<10	0.35	270	<1	0.02	22	1050	<2	<5	<20	23	0.09	<10	99	<10	5	66
67	PT L83300 6100E	<5	<0.2	3.32	<5	120	<5	0.64	<1	34	56	86	7.05	<10	1.67	886	<1	0.02	34	2490	<2	<5	<20	32	0.30	<10	197	<10	13	146
68	PT L83450 5350E	<5	<0.2	1.06	<5	60	<5	0.34	<1	10	31	28	2.18	<10	0.41	262	<1	0.02	17	490	<2	<5	<20	25	0.11	<10	71	<10	10	40
69	PT L83450 5400E	<5	<0.2	1.12	<5	60	<5	0.40	<1	9	33	29	2.14	<10	0.49	226	<1	0.03	18	530	<2	<5	<20	28	0.11	<10	74	<10	11	35
70	PT L83450 5450E	5	<0.2	1.25	<5	75	<5	0.44	<1	11	33	36	2.34	10	0.53	248	<1	0.03	19	500	<2	<5	<20	34	0.13	<10	80	<10	13	40

12-Sep-05

ECO TECH LABORATORY LTD. ICP CERTIFICATE OF ANALYSIS AK 2005-909 Richfield Ventures Corp.

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
71	PT L83450 5700E	5	0.2	1.15	<5	65	<5	0.43	<1	12	39	33	2.61	<10	0.45	400	<1	0.02	21	230	<2	<5	<20	24	0.09	<10	76	<10	11	38
72	PT L83450 5900E	<5	<0.2	1.40	5	65	<5	0.36	<1	14	47	45	3.22	<10	0.62	276	<1	0.02	25	520	<2	<5	<20	25	0.12	<10	106	<10	7	39
73	PT L83450 6100E	<5	<0.2	1.83	5	100	<5	0.33	<1	13	38	30	3.46	<10	0.39	388	<1	0.01	23	1300	<2	<5	<20	25	0.09	<10	96	<10	2	70
74	PT L83550 5600E	5	<0.2	1.36	10	85	<5	0.38	<1	13	44	47	3.12	<10	0.59	387	<1	0.02	23	840	<2	<5	<20	26	0.10	<10	96	<10	5	52

QC DATA:

Repeat:

1	PT L82750 5300E	<5	<0.2	0.89	<5	90	<5	0.26	<1	8	32	14	2.34	<10	0.25	231	<1	0.01	18	750	<2	<5	<20	16	0.08	<10	61	<10	5	67
10	PT L82750 5750E	<5	<0.2	1.09	<5	70	<5	0.33	<1	9	31	25	2.12	<10	0.26	195	<1	0.01	18	180	<2	<5	<20	20	0.08	<10	62	<10	6	38
19	PT L82900 5350E	<5	<0.2	1.38	<5	90	<5	0.27	<1	11	36	25	2.46	<10	0.39	204	<1	0.02	26	540	<2	<5	<20	17	0.09	<10	71	<10	5	52
28	PT L82900 5800E	<5	<0.2	0.74	<5	50	<5	0.29	<1	6	20	15	1.40	<10	0.22	152	<1	0.02	10	130	<2	<5	<20	23	0.08	<10	51	<10	8	34
36	PT L83000 5350E	<5	0.4	1.84	<5	115	<5	0.49	<1	18	45	55	2.94	10	0.63	619	<1	0.02	28	510	<2	<5	<20	36	0.10	<10	85	<10	15	53
45	PT L83050 5700E	<5	<0.2	1.42	<5	55	<5	0.36	<1	16	38	97	2.87	<10	0.47	255	<1	0.02	32	220	<2	<5	<20	24	0.11	<10	83	<10	11	61
54	PT L83150 5450E	<5	<0.2	1.75	5	120	<5	0.35	<1	19	44	38	3.25	<10	0.53	803	<1	0.02	25	760	<2	<5	<20	24	0.10	<10	95	<10	8	62
63	PT L83300 5650E	<5	<0.2	1.69	<5	125	<5	0.54	<1	15	53	55	3.58	<10	0.76	280	<1	0.03	26	1260	<2	<5	<20	39	0.14	<10	111	<10	11	62
71	PT L83450 5700E	5	<0.2	1.04	<5	60	<5	0.39	<1	11	36	30	2.39	<10	0.42	350	<1	0.02	21	210	<2	<5	<20	22	0.08	<10	69	<10	10	36

Standard:

GEO '05		1.5	1.69	60	150	<5	1.38	<1	19	57	87	3.84	<10	0.88	579	<1	0.02	28	580	20	<5	<20	55	0.11	<10	68	<10	10	74
GEO '05		1.5	1.62	55	145	<5	1.38	<1	19	59	88	3.87	<10	0.90	578	<1	0.02	29	580	20	<5	<20	53	0.11	<10	71	<10	10	74
OXF41	800																													
OXF41	820																													
OXF41	800																													

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XLS/03

FUGRO AIRBORNE SURVEYS

Report #04078

A HELICOPTER-BORNE GEOPHYSICAL SURVEY FOR GEOLOGICAL SURVEY OF CANADA

BRITISH COLUMBIA, 2004

PARTS OF NTS 92P, 93A, 93G, 93K, 93N and 93O

Emily Farquhar
Geophysicist

MAY, 2006

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1. INTRODUCTION

A high sensitivity helicopter-borne Magnetic and Gamma-ray Spectrometric airborne geophysical survey was carried out for the Geological Survey of Canada over several blocks in the central region of British Columbia. The survey was flown by Fugro Airborne Surveys under the terms of an agreement with the Geological Survey of Canada, dated August 19, 2004 and accepted September 2, 2004. Appendix A lists the personnel involved in the acquisition, processing and presentation of the survey data.

Geophysical equipment comprised a high-sensitivity cesium magnetometer mounted in a stinger configuration and a 256-channel spectrometer with 33.6 litre downward looking crystal. Ancillary equipment included analog and digital recorders, radar, laser and barometric altimeters, a video flight path camera, and a global positioning system (GPS), which provided accurate real-time navigation and subsequent flight path recovery. Surface equipment included magnetic and GPS base stations, and a PC-based field workstation, which was used to check the data quality and completeness on a daily basis.

This report describes the acquisition, processing and presentation of data for the British Columbia 2004-2005 survey blocks.

2. SURVEY AREA

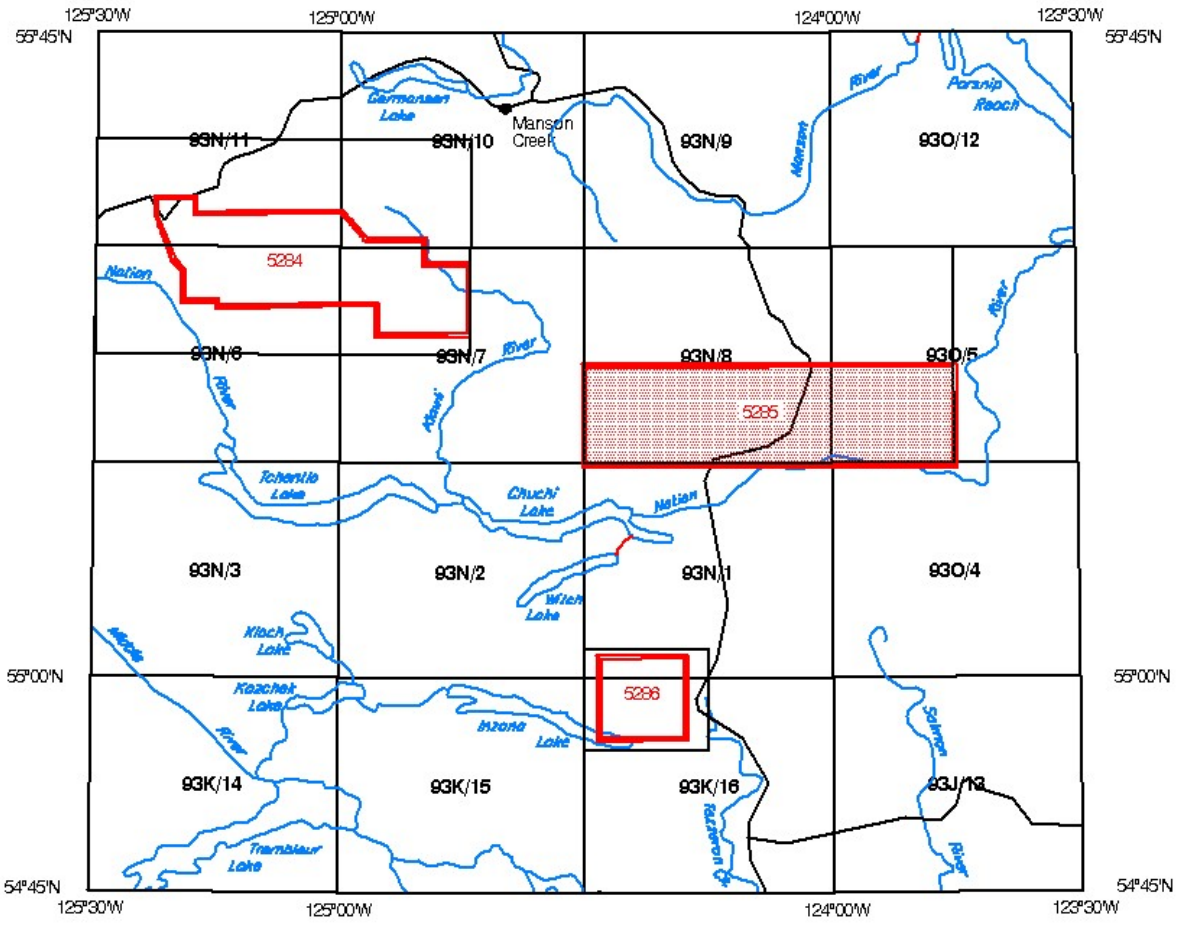
The survey project consisted of fifteen (15) blocks grouped into nine (9) discrete survey areas (Figures 2-A through 2-I) which covered portions of NTS sheets 92P, 93A, 93G, 93K, 93N and 93O in the central region of British Columbia. Tables 2-1 lists the corner points of the survey areas in coordinates for the Universal Transverse Mercator (UTM) (Zone 10N) projection using North American Datum 1983 (GRS80). The final maps and data products for this survey are presented in UTM Zone 10N coordinates, NAD83.

The survey blocks were flown for the Geological Survey of Canada, The British Columbia and Yukon Chamber of Mines, Yekooche First Nation and five industry partners, including Serengeti Resources Inc., Richfield Ventures Corp., GWR Resources Inc., Yankee Hat Minerals Ltd. And Amarc Resources Ltd.. The Geological Survey of Canada provided survey supervision and quality control. Total coverage of the British Columbia survey blocks consisted of 14226 line-kilometres as per the flight planning. The surveys were carried out over two seasons, from September 18 to November 17, 2004 and June 15 to August 8, 2005.

Line spacing and direction for survey and control lines were selected for each block to ensure the best intersection of local geological features. These parameters are summarized for each of the fifteen blocks in tables 2-1.

Survey blocks were flown at a sensor survey altitude of either 90 or 120 m and the terrain clearance was monitored by radar altimeter. Laser altimeter data was also available for the surveying completed in the 2005 season. The average speed of the helicopter was 90 km/hr.

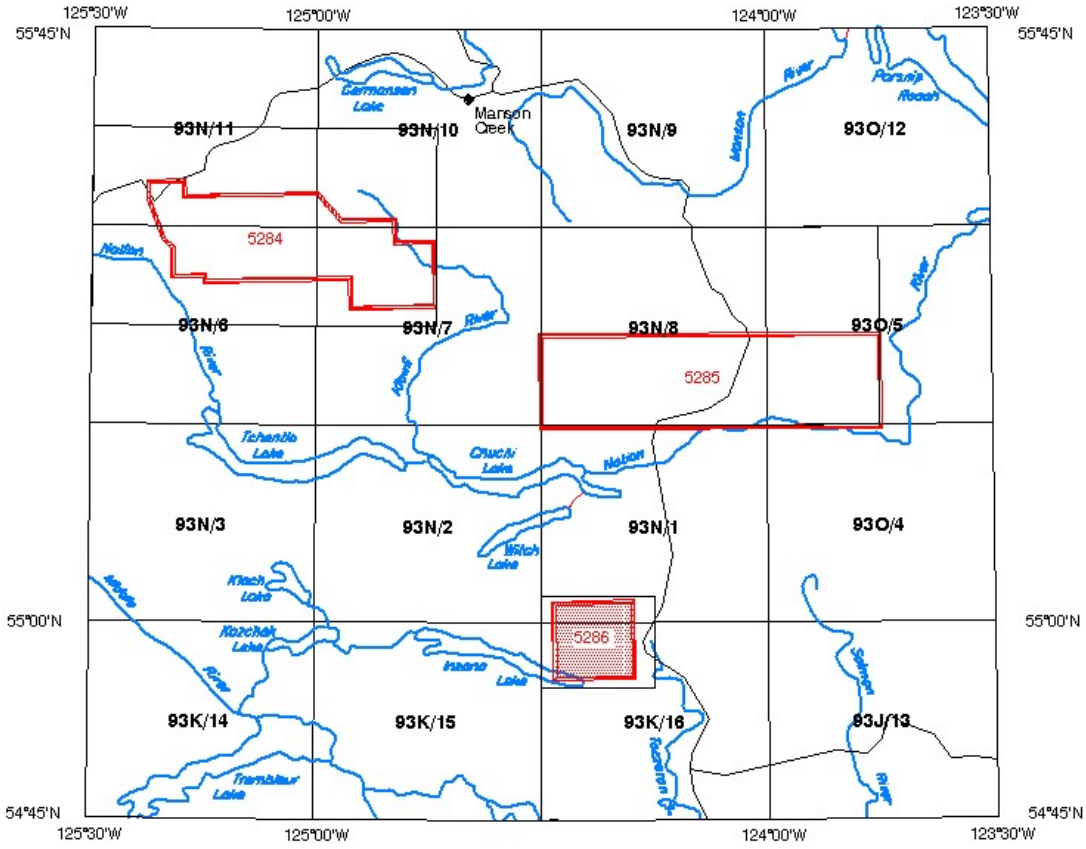
Figure 2-A
Location/Index Map of Block A, Mount Sylvester Block



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

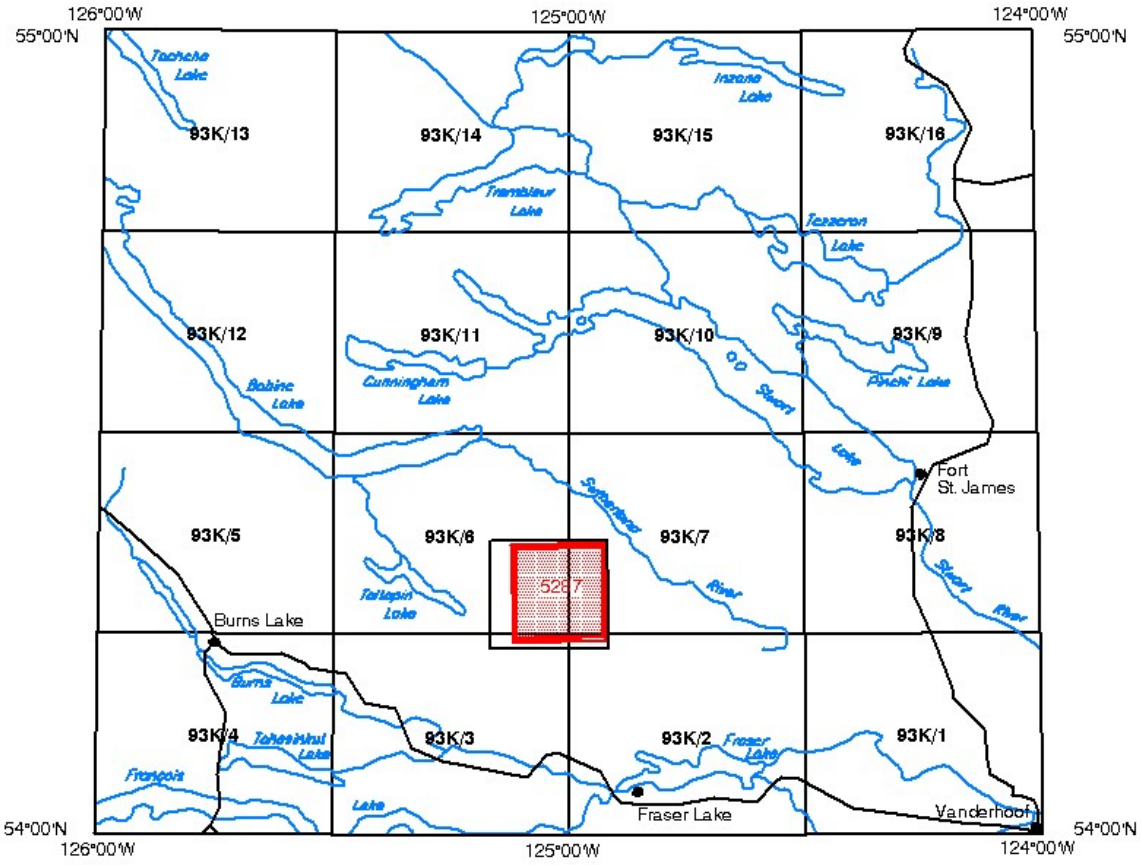
Figure 2-B

Location/Index Map of Block B, Fran Block



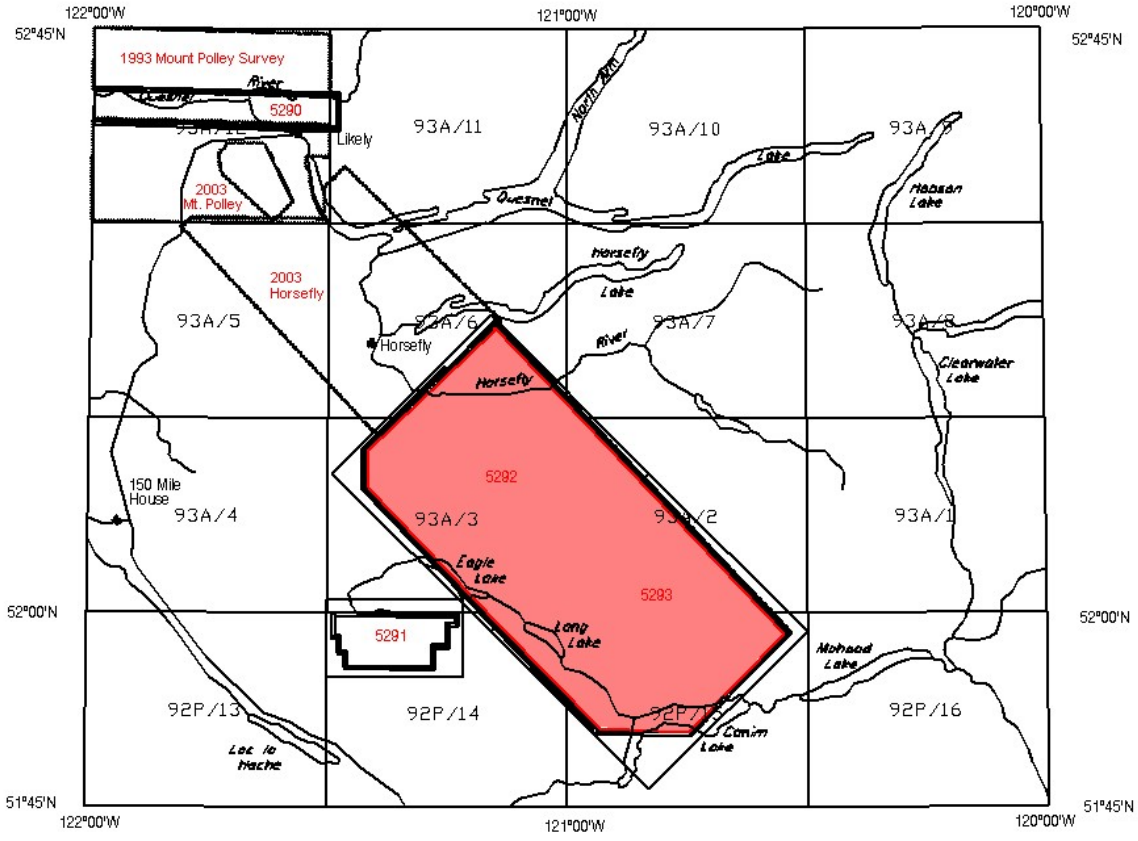
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Figure 2-C
Location/Index Map of Block C, Helene Lake Block



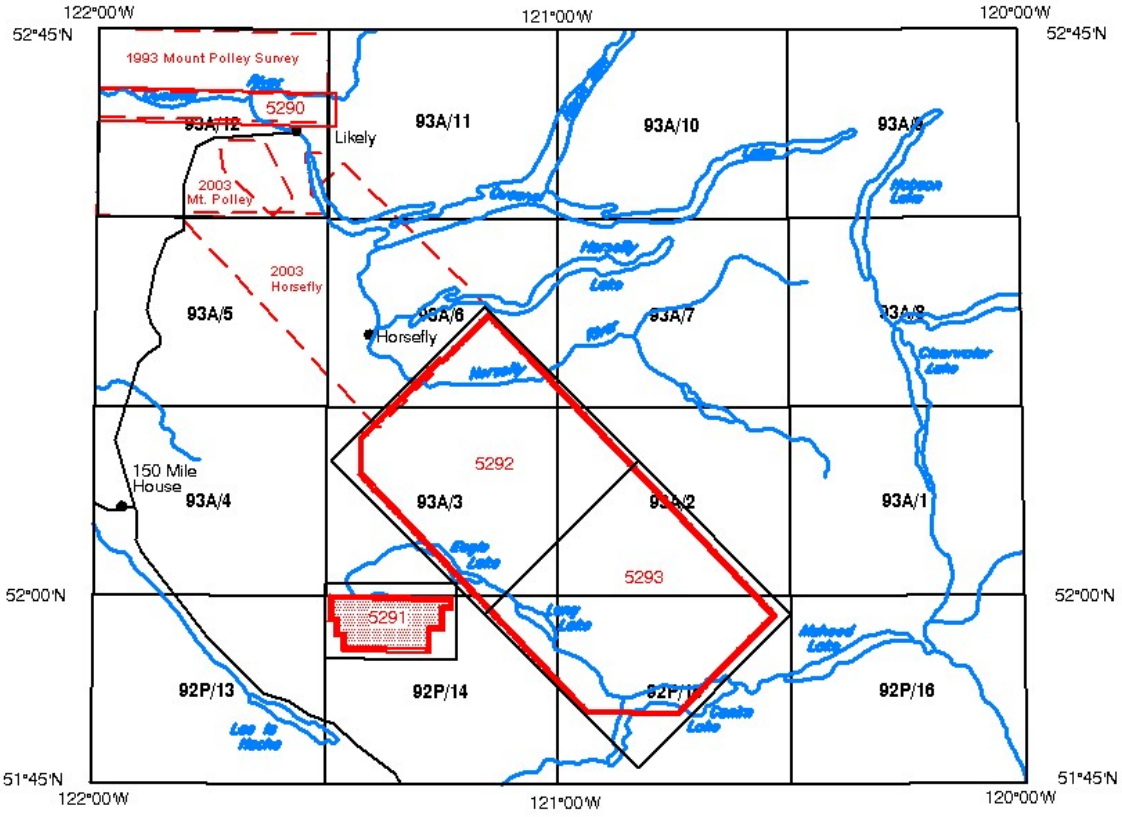
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Figure 2-D
Location/Index Map of Blocks D and F, Tisdale Lake and Horsefly-Canim Lake Block



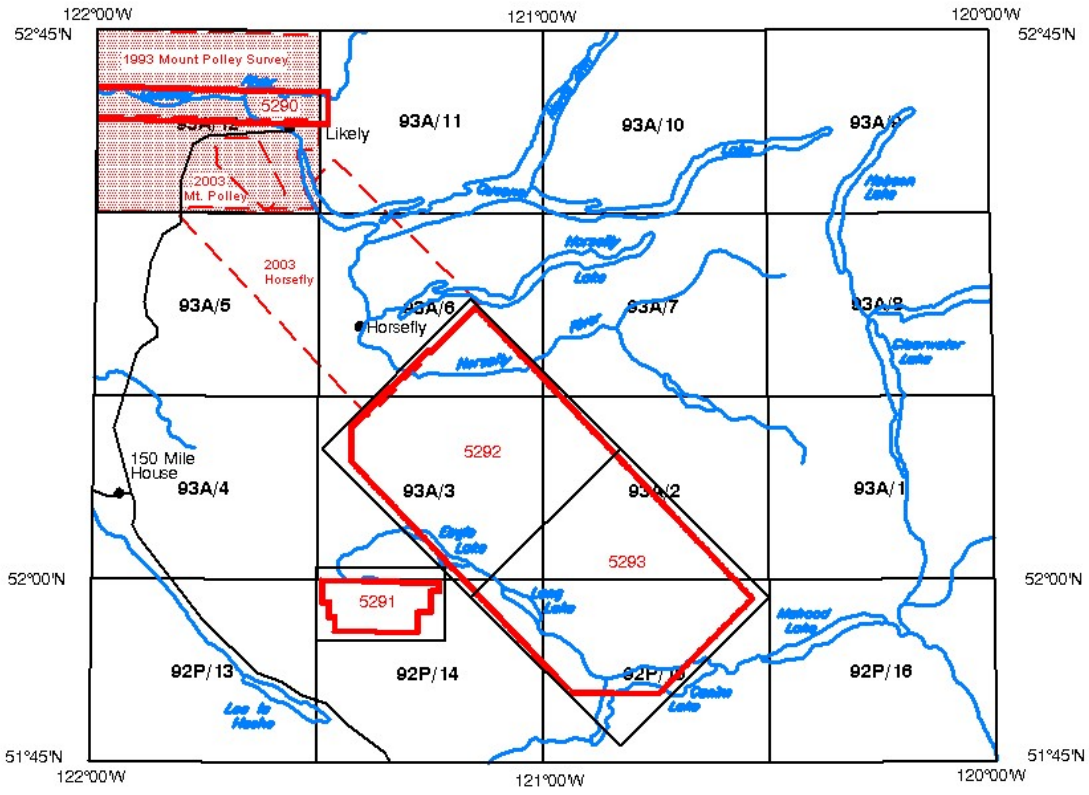
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Figure 2-E
Location/Index Map of Block E, Murphy Lake Block



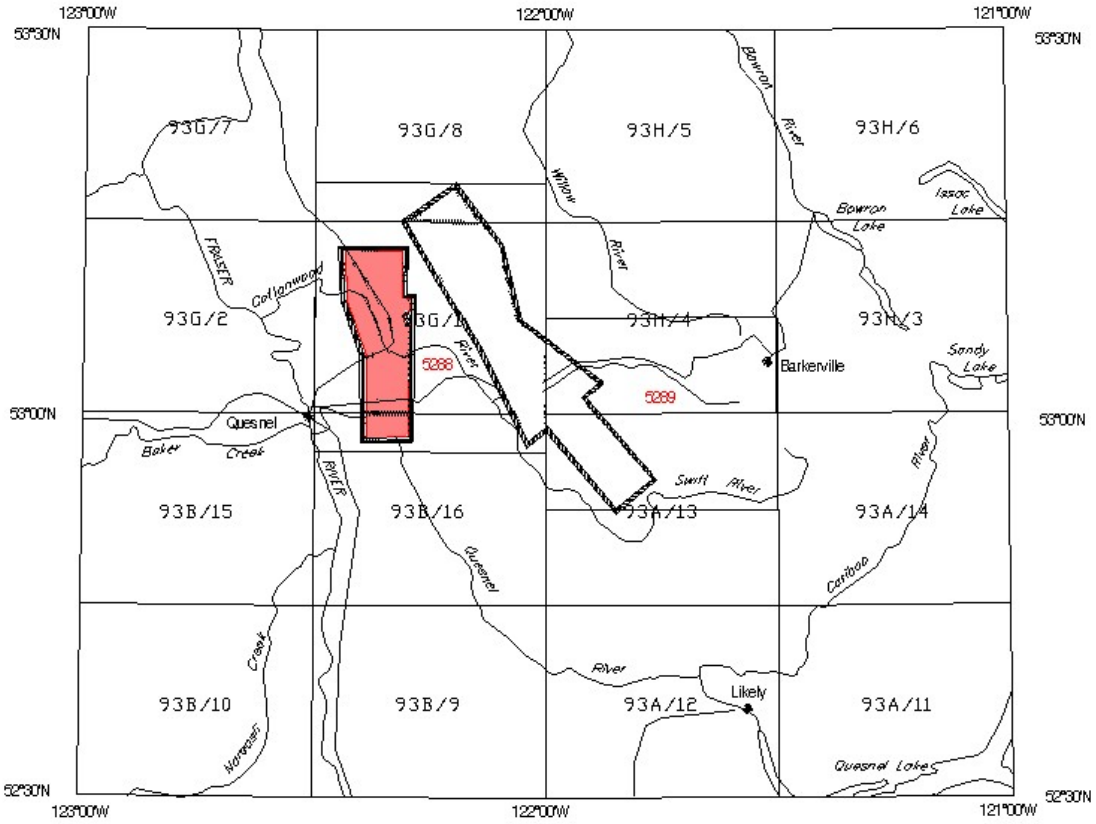
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Figure 2-F
Location/Index Map of Block G, Mt. Polley infill Block



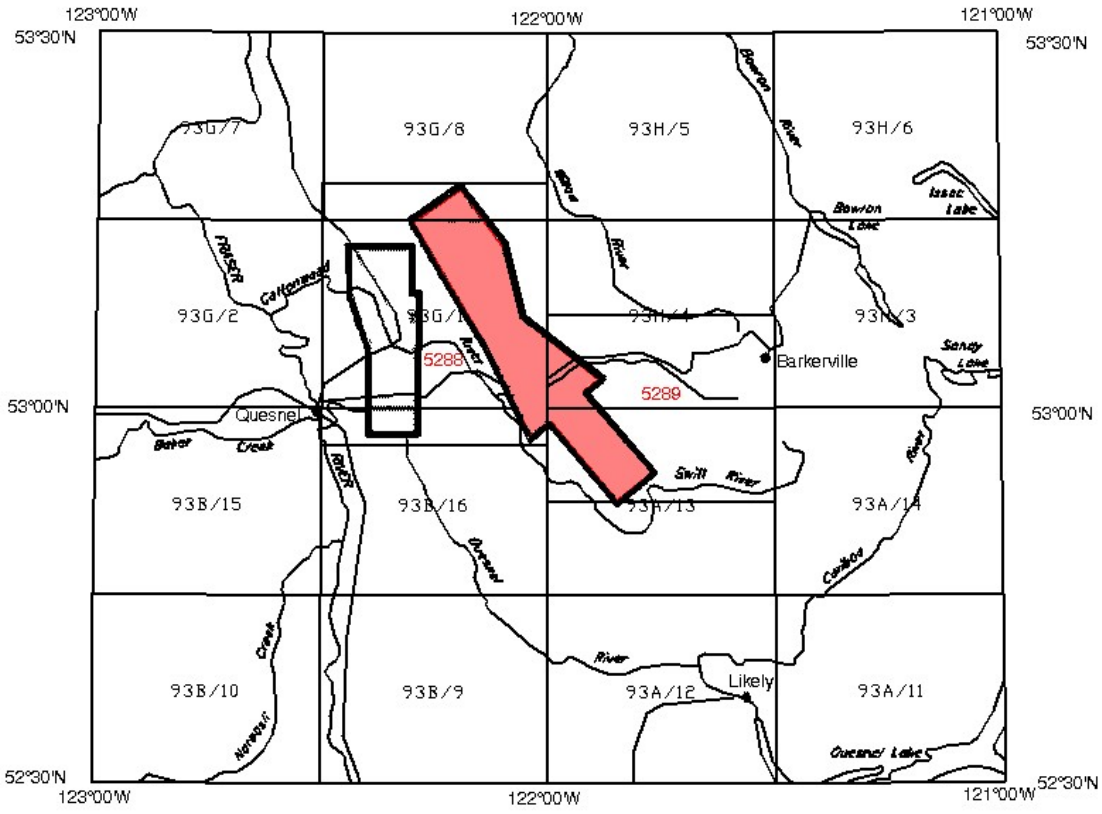
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Figure 2-G
Location/Index Map of Blocks H-J, Mouse Mountain, Abhau and Abhau infill Blocks



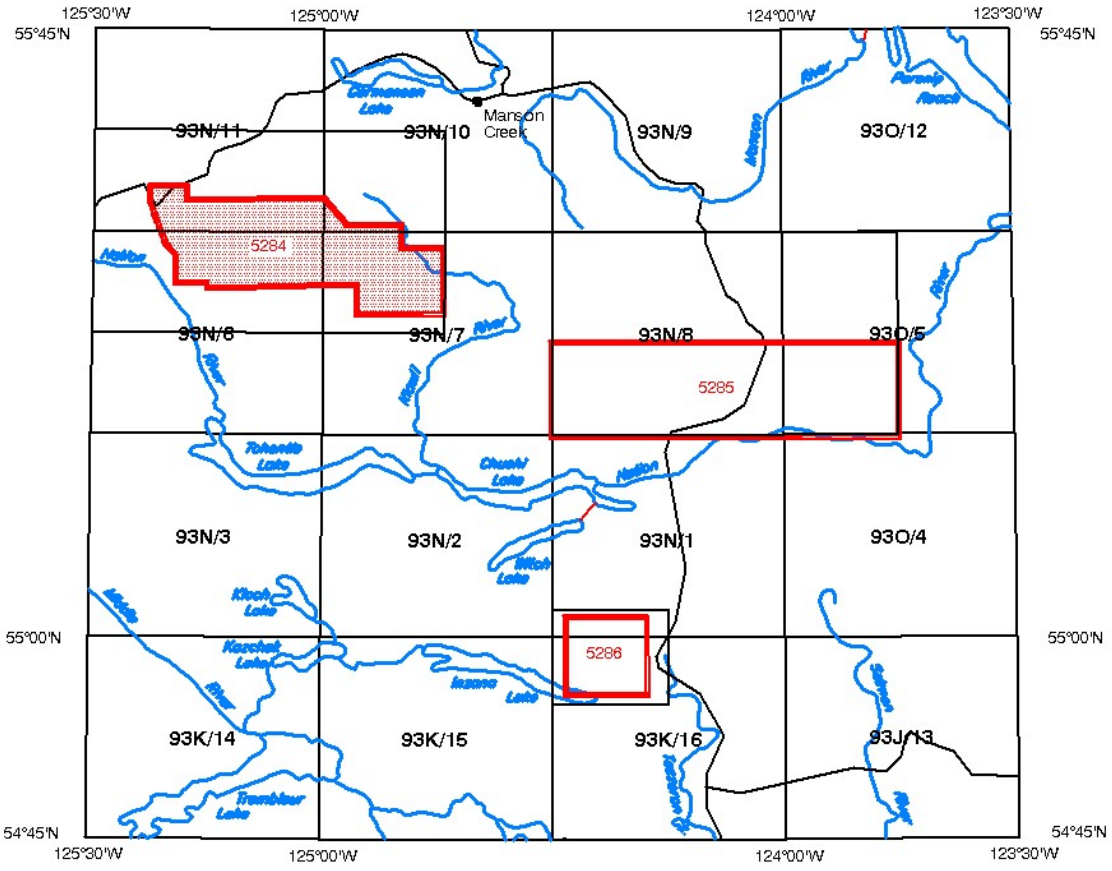
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Figure 2-H
Location/Index Map of Blocks K - N, Mostique, Atis, Ahbau Lake and Umiti Creek Blocks



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Figure 2-I
Location/Index Map of Block AA, Fraser Lake



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Table 2-1
British Columbia Survey Block Specifications
(Nad83 Utm Zone 10)

Block A Mount Sylvester Block: British Columbia and Yukon Chamber of Mines

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	500 m
Tie line direction	0° azimuth
Tie line spacing	4000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	120 m
Mag sensor mean terrain clearance	120 m

Nad83 Utm Zone 10

04078-1	404648	6123637
Block A	404888	6137264
	452443	6136496
	452323	6122868

Block B Fran Property: Yankee Hat Minerals Ltd.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	150 m
Tie line direction	0° azimuth
Tie line spacing	2000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10

04078-2	405900	6088200
Block B	405900	6098200
	416900	6098200
	416900	6088200

Block C Helene Lake Block: Yekooche First Nations

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	200 m
Tie line direction	0° azimuth
Tie line spacing	2000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10

04078-3	362296	6025500
Block C	374724	6025500
	374724	6012650
	362296	6012650

Block D Tisdale Lake Block: Amarc Resources Ltd.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	45° azimuth
Traverse line spacing	250 m
Tie line direction	135° azimuth
Tie line spacing	2500 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	120 m
Mag sensor mean terrain clearance	120 m

Nad83 Utm Zone 10

04078-4	662200	5754600
Block D	619700	5796800
	626200	5803700
	668800	5761300

Block E Murphy Lake Block: GWR Resources Inc.

The survey specifications were as follows:

Parameter	Specifications

Traverse line direction	90° azimuth
Traverse line spacing	200 m
Tie line direction	0° azimuth
Tie line spacing	2000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm zone 10

04078-5	603900	5762025
Block E	621600	5762025
	621600	5760825
	621600	5760825
	620350	5760825
	620350	5757625
	618450	5757625
	618450	5754425
	605900	5754425
	605900	5756425
	604900	5756425
	604900	5758625
	603900	5758625

Block F Horsefly-Canim Lake Block: British Columbia & Yukon Chamber of Mines

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	45° azimuth
Traverse line spacing	500 m
Tie line direction	135° azimuth
Tie line spacing	4000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	120 m
Mag sensor mean terrain clearance	120 m

04078-6	607681	5785517
Block F	618939	5797415
	662735	5753928
	655353	5746127
	641922	5746127
	607681	5780127

Block G Mt. Polley infill Block: British Columbia and Yukon Chamber of Mines

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	500 m
Tie line direction	0° azimuth
Tie line spacing	4000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	120 m
Mag sensor mean terrain clearance	120 m

Nad83 Utm Zone 10

04078-7	566500	5831200
Block G	566500	5836200
	602600	5836200
	602600	5831200

Block H Mouse Mountain Block: Richfield Ventures Corp.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	150 m
Tie line direction	0° azimuth
Tie line spacing	1500 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10

04078-8	540325	5880957
Block H	547702	5881034
	547694	5880434
	547606	5880433
	547755	5868584
	540554	5868509
	540400	5880749

Block I Ahbau Block: Richfield Ventures Corp.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	150 m
Tie line direction	0° azimuth
Tie line spacing	1500 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10		
04078-9	537079	5896374
Block I	546704	5896474
	546603	5889573
	547805	5889586
	547792	5888523
	537515	5888428

Block J Ahbau infill Block: Richfield Ventures Corp.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	300 m
Tie line direction	0° azimuth
Tie line spacing	3000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10		
04078-10	537633	5888431
Block J	547792	5888523
	547702	5881034
	540325	5880957

Block K Mostique Block: Richfield Ventures Corp.

The survey specifications were as follows:

Parameter	Specifications

Traverse line direction	50° azimuth
Traverse line spacing	200 m
Tie line direction	140° azimuth
Tie line spacing	2000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10		
04078-11	557537	5881901
Block K	562878	5886512
	575179	5877314
	564567	5868155

Block L Atis Block: Richfield Ventures Corp.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	50° azimuth
Traverse line spacing	200 m
Tie line direction	140° azimuth
Tie line spacing	2000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10		
04078-12	567295	5870509
Block L	572657	5875137
	583028	5863482
	577554	5858757

Block M Ahbau Lake Block: Richfield Ventures Corp.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	55° azimuth
Traverse line spacing	300 m
Tie line direction	145° azimuth

Tie line spacing	3000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10		
04078-13	546187	5900329
Block M	553596	5905673
	560295	5897188
	551763	5891035

Block N Umiti Creek Block: Richfield Ventures Corp.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	55° azimuth
Traverse line spacing	300 m
Tie line direction	145° azimuth
Tie line spacing	3000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10		
04078-14	551763	5891035
Block N	560180	5897105
	563447	5885468
	557825	5881413

Block AA Fraser Lake: Serengeti Resources Inc.

The survey specifications were as follows:

Parameter	Specifications
Traverse line direction	90° azimuth
Traverse line spacing	250 m
Tie line direction	0° azimuth
Tie line spacing	4000 m
Sample interval	10 Hz, 3.0 m @ 90 km/hr
Aircraft mean terrain clearance	90 m
Mag sensor mean terrain clearance	90 m

Nad83 Utm Zone 10		
04078-15	350000	6159138
Block AA	355069	6159138
	355069	6157005
	373848	6157005
	377053	6153029
	384526	6153029
	384526	6149755
	390000	6149755
	390000	6140704
	378129	6140704
	378129	6144948
	357591	6144948
	357591	6145792
	353232	6145792
	353232	6149715
	351986	6151085
	350000	6156792

Summary of Total Kilometres Flown per Survey Block:

BLOCK	Traverse Lines (km)	Control Lines (km)	Total Kilometres (km)	Industry Sponsor
Block A	1243.6	169	**1412.6**	
Block B	799	67.2	**866.2**	**Yankee Hat Industries**
Block C	302.4	34.8	**337.2**	**Yekooche First Nations**
Block D	2353.4	366	**2726**	**Amarc Resources Ltd.**
Block E	1262.5	143.3	**1407**	**GWR Resources Inc.**
Block F	2589.6	467.7	**3051**	
Block G	363	50	**413**	
Block H	598.3	75.6	**691**	**Richfield Ventures Corp.**
Block I	495.6	63.7	**564**	**Richfield Ventures Corp.**
Block J	218.6	30.6	**277**	**Richfield Ventures Corp.**
Block K	790.4	109.8	**903**	**Richfield Ventures Corp.**
Block L	558.4	62.4	**623**	**Richfield Ventures Corp.**
Block M	353.8	65	**426**	**Richfield Ventures Corp.**
Block N	328.7	57.5	**388**	**Richfield Ventures Corp.**
Block AA	1780.1	133.7	**1914**	**Serengeti Resources Inc.**

3. SURVEY EQUIPMENT

The instrumentation was installed in both an Aerospatiale AS350B3 and a AS350B2 turbine helicopter (Registrations C-GECL and C-FGSC respectively), provided by Questral Helicopters and Great Slave Helicopters Ltd. Respectively. The helicopter was equipped with an emergency locator transmitter (ELT), a satellite phone, a VHF communications system, and all necessary emergency survival equipment. All field personnel were briefed on safety measures and SAR and emergency procedures.



Figure 3-A: Airborne Survey System

A brief description of the geophysical instruments used to acquire the survey data follows:

Geophysical Flight Control System

Type: HeliDAS

The HeliDAS controls, monitors and records the operation of all the geophysical and ancillary sensors. Input from the various sensors is monitored every 0.01 seconds for precise coordination of geophysical and positional measurements. GPS positional coordinates and terrain clearance is presented to the pilot by means of a LCD touch screen

display and optional pilot indicator. The magnetometer response, 4th difference, altimeter profile and profiles of the radiometric windows are also shown on the LCD touch screen display for real-time monitoring of equipment performance.

Magnetometer

2004:
Model: Geometrics 822
Type: Optically pumped cesium vapour
Sensitivity: 0.01 nT
Sample rate: 10 per second

2005:
Model: Scintrex CS-2
Type: Optically pumped cesium vapour
Sensitivity: 0.01 nT
Sample rate: 10 per second

The magnetometer was mounted in a forward facing stinger configuration on the helicopter. The Larmor frequency output was processed by the magnetometer counter board that provides a resolution, without filtering, of 10 (ten) times per second (in a magnetic field of 50,000 nT this resolution is equivalent to 0.005 nT).

Magnetic Base Station

PRIMARY (CF1)
Model: Scintrex CS-3
Type: Digital recording cesium vapour
Sensitivity: 0.01 nT
Sample rate: 1 per second

SECONDARY
Model: GEM Systems GSM-19T
Type: Digital recording proton precession
Sensitivity: 0.10 nT
Sample rate: 0.1 per second

A digital recorder is operated in conjunction with the base station magnetometer to record the diurnal variations of the earth's magnetic field. The clock of the base station is synchronized with that of the airborne system to permit subsequent removal of diurnal drift.

Magnetic Compensation

Type:	RMSAADC
Sensitivity:	.01

The proximity of the helicopter to the magnetic sensors creates a measurable anomalous response as a result of the helicopter movement. The orientation of the aircraft with respect to the sensors and the motion of the aircraft through the earth's magnetic field are contributing factors to the strength of this response. A special calibration flight is flown to record the information necessary to remove these effects.

The maneuvers consist of flying a series of calibration lines at high altitude to gain information in each of the required line directions. During this procedure, the pitch, roll and yaw of the aircraft are varied. Each variation is conducted in succession (first vary pitch, then roll, then yaw). This provides a complete picture of the effects of the aircraft at designated headings in all orientations. A three-axis fluxgate magnetometer measures the orientation and rates of change of the magnetic field as measured at the aircraft, away from localized terrestrial magnetic anomalies. The digital compensation algorithm is applied to generate a correction factor to compensate for permanent, induced and eddy current magnetic responses generated by the aircraft movement.

The RMSAADC compensation system allows the geophysicist to derive a set of coefficients for all line directions and for each magnetometer sensor. Once determined, the coefficients are applied real-time.

Spectrometer

Manufacturer:	Exploranium
Model:	GR-820
Type:	256 multi-channel, Thorium stabilized
Accuracy:	1 count/sec.
Update:	1 integrated sample/sec.

The GR-820 Airborne Spectrometer is connected to eight downward looking crystals (33.6 litres) and one upward looking crystal (4.2 litres). The downward crystals record the radiometric spectrum from 410 KeV to 3 MeV over 256 discrete energy windows, as well as a cosmic ray channel that detects photons with energy levels above 3.0 MeV. From these 256 channels, the standard Total Count, Potassium, Uranium and Thorium channels are extracted. The upward crystal is used to measure and correct for Radon.

The shock-protected Sodium Iodide (Thallium) crystal package is unheated and is automatically stabilized with respect to the Thorium peak. The GR-820 provides raw or

Compton stripped data that has been automatically corrected for gain, base level, ADC offset and dead time.

The system is calibrated before and after each flight using three accurately positioned hand-held sources. Additionally, tests are carried out to determine if there are any differences in background. This procedure allows corrections to be applied to each survey flight to eliminate any differences that might result from changes in temperature or humidity.

Radar Altimeter

Manufacturer:	Sperry
Model:	RT220/RT330
Indicator:	TRI 30
Type:	Single antenna, FMCW
Range:	40 to 2500 feet
Accuracy:	40 to 100 feet, ±5 feet
	100 to 500 feet, ±5%
	500 to 2500 feet, ±7%

Laser Altimeter

2005 only:

Manufacturer:	Optech
Model:	G150
Type:	Fixed pulse repetition rate of 2 kHz
Sensitivity:	±5 cm from 10ºC to 30ºC
	±10 cm from -20ºC to +50ºC
Sample rate:	2 per second

The laser altimeter is mounted underneath the helicopter, and measures the distance from the helicopter to ground, except in areas of very dense tree cover.

Barometric Pressure

Manufacturer:	Rosemount
Model:	1241M B2
Output:	VDC
Accuracy:	±5.1 feet @ sea level
	±6.9 feet @ 10,000 feet

Digital Data Acquisition System

Manufacturer:	Fugro Airborne Surveys
Model:	HeliDAS
Recorder:	IBM Microdrive

The output data is recorded digitally on a flashcard and internal hard drive ten times per second and then downloaded to the field workstation PC at the survey base for verification, backup and preparation of in-field products.

Video Flight Path Recording System

Camera:	Sony DXC-101
Type:	Panasonic VHS Video Recorder (NTSC)
Model:	AG 720

Information overlain on the video image includes flight number, line number, DOS time, GPS week second, and latitude and longitude. The videotapes were manually labeled with the flight number and date for external identification.

Navigation (Global Positioning System)

Airborne Receiver:

Model:	NovAtel Millenium
Type:	twelve-channel L1,L2 PC GPScard
Accuracy:	±2 metres post-processed

Base Station:

Model:	NovAtel Millenium
Type:	twelve-channel L1,L2 GPScard
Accuracy:	0.75 metres real-time differential
	±2 metres post-processed

For the central British Columbia survey, there were several bases of operation and therefore base station locations. They are summarized below:

2004
Blocks A and B

Mackenzie , B.C.	55° 18’ 15.656” N 123° 08’ 05.632” W 596.34m

Block D

Minac , B.C.	51° 51' 33.254" N 120° 51' 38.338" W 775.19m

2005

Blocks H - N

Quesnel Airport	53° 01' 39.612" N 122° 30' 29.880" W 528.07m
Quesnel – survey area	53° 05' 11.040" N 122° 34' 02.748" W 486.17m
Quesnel 2	53° 06' 50.076" N 122 14' 37.176" W 768.59m
Quesnel GSC	53° 01' 39.612" N 122° 12' 39.600" W 893.58m
Quesnel Novatel	53° 00' 48.420" N 122° 18' 08.532" W 539.00m

Blocks E and F

108 Mile House	51° 26' 34.116" N 121° 12' 02.844" W 943.41m

Block C

Fraser Lake	54° 02' 06.720" N 124° 31' 51.132" W 663.03m

Block AA

Germansen Landing	55° 28' 15.096" N 124° 25' 13.476" W 752.00m

The GPS records data in WGS84 coordinates, which are relative to the GRS80 ellipsoid, which is the basis of the revised North American Datum (NAD83).

Barometric Pressure and Temperature Sensors – Base Station

Model:	DIGHEM D 1300
Type:	Motorola MPX4115AP analog pressure sensor AD592AN high-impedance remote temperature sensors
Sensitivity:	Pressure: 150 mV/kPa Temperature: 100 mV/°C or 10 mV/°C (selectable)
Sample rate:	10 per second

The D1300 circuit included one barometric sensor (1 KPA) and one temperature sensor (3 TDC). The two sensors were used to monitor pressure and external operating temperatures.

The pressure data are used to correct the radar altimeter data to effective altitude in the radiometric data processing. The barometric altimeter data can also be used to confirm the GPSZ elevations and to produce approximate terrain maps by subtraction of the radar altimeter data. The barometric base station data can be used to estimate changes in air pressure throughout the survey flight.

Field Data Verification System

Manufacturer:	Fugro
Type:	Pentium IV Laptop PC
Software:	Geosoft Oasis Montaj + Atlas proprietary software

A portable PC-based field workstation was used at the survey base to process the data, to verify data quality and completeness, and to confirm that all data were within the stated specifications. Data checks were carried out at the end of every survey day. Flight data were transferred to the PC hard drive to permit the creation of a database. This process allowed the field operators to display both the positional (flight path) and geophysical data on a screen or printer.

4. SURVEY LOGISTICS, CALIBRATION AND FIELD PROCESSING

Survey Field Operations

The survey was flown over two seasons, from September 18 to November 17, 2004 using AS350B3 helicopter C-GECL and then from June 15 to August 8, 2005 using first C-GECL followed by the AS350B2, C-FGSC. Survey operations were flown out of several bases throughout each season. Personnel are listed in Appendix A. Aircraft ground speed was maintained at approximately 90 km/hr for the survey. A mean terrain clearance of either 90 or 120 metres, depending on the survey block and consistent with the safety of the aircraft and crew, was achieved although terrain clearance was highly variable throughout the survey block.

Survey results were compiled and inspected daily. Preliminary field plots were produced in order to monitor data production, completeness and quality. The daily checks enabled those responsible for quality control to determine which lines, if any, did not meet the technical specifications. Any lines or line segments that did not meet the stipulated criteria could be reflown the following day, while the survey crew was still in the immediate area.

For the surveys, the primary GPS station locations were summarized as follows:

2004

Blocks A and B

Mackenzie , B.C.	55° 18’ 15.656” N	123° 08’ 05.632” W	596.34m

Block D

Minac , B.C.	51° 51’ 33.254” N	120° 51’ 38.338” W	775.19m

2005

Blocks H - N

Quesnel Airport	53° 01’ 39.612” N	122° 30’ 29.880” W	528.07m
Quesnel – survey area	53° 05’ 11.040” N	122° 34’ 02.748” W	486.17m
Quesnel 2	53° 06’ 50.076” N	122 14’ 37.176” W	768.59m
Quesnel GSC	53° 01’ 39.612” N	122° 12’ 39.600” W	893.58m
Quesnel Novatel	53° 00’ 48.420” N	122° 18’ 08.532” W	539.00m

Blocks E and F

108 Mile House	51° 26’ 34.116” N	121° 12’ 02.844” W	943.41m

Blocks C

Fraser Lake	54° 02’ 06.720” N	124° 31’ 51.132” W	663.03m

Block AA

Germansen Landing	55° 28’ 15.096” N	124° 25’ 13.476” W	752.00m

At each setup, the basestation magnetometers (CF1) were setup near the GPS base. The first production flight was on September 18, 2004 and survey operations were concluded in 2004 on November 17. Surveying restarted in 2005 on June 15. The last survey flight was completed on August 8, 2005 and the crew demobilized on August 10, 2005. Test flights and system calibrations were carried out over the Meanook test site on September 29, 2004 and June 5, 2005 and a test range established by the Geological Survey of Canada (GSC) in Quesnel, British Columbia on July 12, 2005. The results of these tests were accepted by the Geological Survey of Canada's technical authority as valid calibrations, for acceptance of the change over to the AS350B2 helicopter and for the determination of coefficients for conversion of radiometric count rates to equivalent ground concentrations. These tests also determined the spectrometer system response and magnetic lag/heading corrections.



Figure 4-A: CF1 Base Station in Quesnel, BC



Figure 4-B: CF1 Base Station in 108 Mile House, BC



Figure 4-C: CF1 Base Station in 108 Mile House, BC



Figure 4-D: CF1 Base Station in Germansen Landing, BC

Field Inspections

Field inspection by the Geological Survey of Canada Technical Authorities was carried out in July, 2005 by John Carson, Radiometric Data Analysis Expert and Regis Dumont, Magnetic Data Analysis Expert. Data was reviewed routinely by the Technical Authorities throughout the period of data acquisition. The purpose of this review was to ensure that operational and processing procedures were being followed according to the survey specifications

Navigation

The HeliDAS acquisition unit was operated in conjunction with an Ashtech GG24 GPS system to provide navigational guidance to the programmed flight plan.

Pre-Survey Spectrometer Calibrations

Pre-survey calibrations and testing of the GR820 airborne gamma-ray spectrometry system were carried out on July 13, 2005. For these calibrations and tests a Eurocopter AS 350 B2 helicopter, registration C-FGSC, owned by Great Slave Helicopters, was mobilized in survey configuration. The installed equipment and configurations were selected to conform to contract technical specifications.

Calibration of the spectrometer system is a vital process to airborne radiometrics or airborne gamma-ray spectrometry. The calibration of the spectrometer system involved three tests which enabled the conversion of airborne data to ground concentration of natural radioactive elements. These tests included:

- **Calibration Pad** measurements which were used to determine the "spectral overlap" (Compton scattering) coefficients.
- **Cosmic Flight Test**, which was used to determine the aircraft background values and cosmic coefficients,
- **Ground-Airborne Test,** including the ***dynamic calibration range (dcr)*** measurements, which determined the altitude attenuation coefficients and the radio-element sensitivity of the airborne spectrometer system.

Measurements were made in accordance with Fugro Airborne Surveys procedures for airborne gamma-ray spectrometry (AGS) data acquisition, which were designed in accordance with IAEA technical report series No. 323, "Airborne Gamma Ray Spectrometer Surveying", and AGSO Record 1995/60, "A Guide to the Technical Specification for Airborne Gamma-Ray Surveys".

Spectrometer System

For the GSC flying, the spectrometer crystal packs and console were installed and calibrated in both C-GECL and C-FGSC. The Calibration Pad Test was carried out on C-GECL. For both machines, one crystal pack was installed on the floor of the passenger compartment. The other was installed in a basket on the left skid.

Gamma Ray Detectors	Downward: 33.6 litres NaI (Tl) Upward 4.2 litres NaI (Tl)	
Spectrometer Analyzer	Exploranium GR-820	

Gamma Peak Positions

Fugro Airborne Surveys configures the GR-820 spectrometer so that the energy versus channel number intercept equals zero. The spectrometer is kept stable in the energy range of interest (400 – 3000keV) in order to maintain constant gamma peak positions. The most important peaks and their corresponding channel numbers are as follows:

Source Name	Peak Energy (keV)	Position (channel no.)
Cs-137	662	55.5
K(potassium/K-40)	1460	121.7
U(uranium/Bi-214)	1764	147.0
Th(thorium/Tl-208)	2615	217.5

Energy Windows

The airborne radiometric technique requires measurement of count rates for specific energy regions or windows in the natural gamma-ray spectrum. The standard energy regions (in accordance with IAEA 323) and their corresponding channel limits are:

Downward Spectrometer Energy Windows				
Designation	**Energy Limit (keV)**		**Channel Limit (inclusive)**	
			Unit Values	
	Lower	**Upper**	**Lower**	**Upper**

Total Count	=TC	410	2810	32	234
Potassium	=K	1370	1570	114	131
Uranium	=U	1660	1860	138	155
Thorium	=Th	2410	2810	201	234
Upward U	=Uranup	1660	1860	138	155
Cosmic	=Cosmic	3200	infinity		

Calibration Pad Test

The GR-820 spectrometer consists of eight downward looking crystals and one upward looking crystal, each with a volume of 256 cubic inches, recording regions of interest (ROI's) once per second. These ROI's are written to five channels: Total Count (TC), Potassium (K), Uranium (U), Thorium (Th), and Uranup (upward facing U). In addition, Livetime and Cosmic channels are recorded. The total count window refers to the sum of all counts within the 0.4 to 2.8 keV energy window, while the K, U and Th windows refer to spectral peaks within the total count window. Some of the counts in the K, U, and Th windows originate from gamma rays from other isotopes. Removal or "stripping" of this spectral overlap in the survey data is achieved using the Compton stripping coefficients or ratios calculated from the calibration pad test data.

In June, 2005 the calibration pad test was conducted at the Sander Geophysics hangar in Ottawa, Ontario using aircraft C-GECL. This test required a total of four transportable 1mx1m concrete slabs, which were provided by the Geological Survey of Canada and manufactured under the supervision of Dr. R.L. Grasty. Reference:

"Transportable Calibration Pads for Ground and Airborne Gamma-Ray Spectrometers" by R.L. Grasty, P.B. Holman and Y.B. Blanchard. Geological Survey of Canada paper 90-23.

Three of the concrete slabs contained higher concentrations of potassium, uranium and thorium respectively, while the fourth slab (the background slab) contained lower concentrations of the radioelements. The calibration pad concentrations, as provided by the Geological Survey of Canada, were as follows:

Test Pad Designation	**Radio-Element Concentration**		
	Potassium (%)	Uranium (ppm)	Thorium (ppm)
B	1.34 +/- 0.01	1.05 +/- 0.03	2.10 +/- 0.06
K	6.74 +/- 0.03	2.24 +/- 0.10	5.89 +/- 0.67
U	1.25 +/- 0.01	53.33 +/- 0.39	3.20 +/- 0.09
Th	1.34 +/- 0.02	2.52 +/- 0.07	122.9 +/- 0.71

Setup Procedure

Upon arriving at the test site, the helicopter was positioned away from any surrounding traffic where it remained undisturbed throughout the course of the test. All hand sources (thorium, uranium, cesium, etc.) and transportable concrete slabs were placed approximately 50m from the helicopter and spectrometer system. The initial positions of each of the concrete slabs and hand sources were marked, and therefore returned to their respective positions after each measurement was taken. As well, the exact position of the spectrometer unit was marked in the helicopter and matched to the position that would be used during survey flights.

Power was consistently applied to the spectrometer units for a minimum of 12 hours prior to the calibration pad measurements to ensure that the crystals were stable.

Measurement Procedure

1. The spectrometer unit was stabilized on cesium and thorium following standard stabilizing procedures with the hand sources. In order to maintain consistency, a jig was used. The jig consisted of a 2" x 4" piece of wood with cut-outs at each end of the board in the shape of the helicopter skid tubes, which allowed the jig to be placed against the helicopter skids to give a constant placement of the jig for all measurements. The hand sources were placed on an established marker on the jig under the spectrometer pack, for precise measurement location.
2. Once the spectrometer unit was stabilized, the jig was removed and the background block was placed under the helicopter, with the crystal pack over its centre.
3. Digital survey data were then recorded for 60 seconds.
4. Steps 2-3 were then repeated for the potassium, uranium, thorium and background block. By completing the series of block tests with the background block, it could be confirmed that the background had remained constant, thus improving the statistics for background determination.
5. Using standard procedures with the jig described in step 1, the thorium source test was undertaken again to ensure consistency of the results between the pre-test and post-test.

Results from Calibration Pad Test

The measured count rates (downward crystal) were corrected for spectrometer livetime and averaged.

John Carson, Radiometric Data Analysis Expert of the Geological Survey of Canada analyzed the collected data and calculated the stripping ratios using the program "ZPADWIN". The program ZPADWIN was developed at RISO National Laboratory, Denmark. It uses non-linear statistical techniques to extract the Compton stripping coefficients and estimated errors (standard deviations) from test pad data. Reference: "Pad Facility for the Calibration of Gamma-Ray Measurements on Rock", RISO-R-454 (1981) by L.Lovborg et al. The following is the result of the program.

Stripping Ratios	Spectrometer Unit	Ideal Values
Th into U (alpha = a23/a33)	0.224	0.250
Th into K (beta = a13/a33)	0.375	0.400
U into K (gamma = a12/a22)	0.714	0.810
U into Th (a = a32/a22)	0.053	0.060
K into Th (b = a31/a11)	-0.001	0.000
K into U (g = a21/a11)	0.000	0.003

Comparison of the coefficients obtained and the "ideal" coefficients calculated by the manufacturer (Exploranium) shows that the values were well within an acceptable range.

Cosmic Flight Test

In each of the spectral windows, the radiation increases exponentially with height due to radiation of cosmic origin. As well, the aircraft itself contributes a constant background to the count rate. By completing a series of flights over a range of altitudes above sea level, these backgrounds can be determined.

Setup Procedure

Throughout the course of the cosmic flight test, the spectrometer was operated with very few counts to the stabilization peak. In order to ensure that the detectors were stable prior to take off, the crystals were stabilized on the ground for at least 2 hours. During the test, the stabilizer was turned off.

Prior to the cosmic flight test, the spectrometer unit remained powered for at least 12 hours. This ensured that the crystals were stable.

Measurement Procedure

1. A source check was completed at the helicopter base using the jig described previously (calibration pad test).
2. Once the aircraft reached the desired altitude of 8,000 feet, survey data were recorded for 20 minutes.
3. Step 2 was then repeated at altitudes of 9000, 10000, 11000, and 12,000 feet.
4. After the cosmic flight test was completed, the spectrometer unit was stabilized on thorium at the helicopter base. After this, a post-flight thorium source test was completed. The

values obtained were found to be within 3% of the pre-flight source test. The collected data are summarized below.

	Cosmic Test Flight Data (measured corrected counts)					
Altitude (ft)	Cosmic	K	U	Th	TC	Uranup
12000.0	560.7	41.4	29.8	35.3	681.5	3.6
11000.0	493.2	38.6	26.9	31.7	618.2	2.9
10000.0	410.7	33.8	23.2	27.7	535.3	2.5
9000.0	349.8	30.7	19.9	24.4	480.3	2.5
8000.0	298.2	27.9	18.0	21.8	433.3	2.1

Results from Cosmic Flight Test

At each altitude, the data for the five windows of interest (Th, K, U, TC and Uranup) were evaluated for quality and corrected for livetime. The mean values were then extracted and plotted against the cosmic window. The result is a linear trend where the slope and intercept represent the cosmic stripping ratio and the aircraft background respectively. The results from the five graphs are summarized below.

	Cosmic Flight Test Result	
	Cosmic stripping	Aircraft background
K	0.0523	12.393
U	0.0457	4.258
Th	0.0512	6.554
TC	0.9500	148.315
Uranup	0.0053	0.499

Ground Calibration Test

The ground calibration site was used to calibrate the height attenuation and sensitivity parameters of the spectrometer system by flying a series of passes over a line of known, uniform radioelement ground concentration. The ideal calibration ranges are located adjacent to bodies of water. This permits accurate background corrections for the acquired data.

This calibration was completed on July 13, 2005 with aircraft C-FGSC in AGS survey configuration, over a test strip established near Dragon Lake, Quesnel, B.C.. The test range

was flown by acquiring data on a series of 7 passes over a fixed length, at constant ground clearances ranging from 100 to 600 feet. These passes alternated between the land and adjacent fresh water sections of the range.

Radiometric Ground Concentrations

The radiometric ground concentration was measured using a calibrated portable spectrometer (Exploranium GR-320) on the same day as the airborne measurements. Thirty-two 100-second measurements were taken over the length of the calibration range. The sensor was positioned one metre above the soil and away from the operators' body. Four 300-second measurements were taken over the adjacent water to serve as background for the portable spectrometer. The resulting mean radiometric equivalent ground concentrations for the calibration range on July 13, 2005 were as follows:

Radio Element	Ground Concentration
Potassium	1.39 %
Equivalent Uranium	1.1 ppm
Equivalent Thorium	5.16 ppm
Total	37.24 nGy/h

Results from the Dynamic Calibration Range Test

The airborne data from the calibration range were checked for quality, edited and divided into lines for each pass. All AGS windows were corrected for livetime. Mean values were calculated for each pass over water. The radiometric windows were then corrected for background (aircraft, cosmic and radon) by subtracting the over water mean values from the corresponding over land data values. After averaging the data for each line, the natural logs of the four windows of interest (K, U, Th, and total count) were plotted against the altimeter in order to obtain the height attenuation and sensitivity parameters. The results were obtained using a linear regression where the slope represents the attenuation coefficient and the intercept represents the counts at 0 feet. Using the ground concentrations noted previously, and the intercept, the sensitivity coefficients were obtained.

	Spectrometer Unit – 2005 System	
	Height Attenuation cps/m	Sensitivity @ 120 m
K	-0.009297	56.9544 cps/%
U	-0.008396	8.3733 cps/ppm
Th	-0.007610	3.6791 cps/ppm
TC	-0.007455	20.6605 cps/nGy/h

The correction coefficients used in processing the radiometric data are given in Appendix B.

Meanook Test Range

Prior to commencement, the Meanook, Alberta test site was used to determine the heading error and calibrate the system for the C-GECL, the AS350B3 which originally started data collection in both 2004 and 2005 in British Columbia. A cloverleaf pattern of lines was flown at 500 feet in the cardinal directions (North, South, East, and West) over the Meanook observatory with a centre point of 347759.2, 6054576.2. These tests were flown September 29, 2004 and June 6, 2005. The tests used the Magnetic Observatory Monitor to allow for the correction of diurnal variations. The electronic navigation system was also checked at Meanook. These tests complied with GSC contract specifications. The Meanook tests also included a determination of the heading error, by flying at the specified altitude in two (2) directions. Magnetic verification checks of the replacement AS350B2 helicopter, C-FGSC, were made when it was deployed in mid-July 2005. These checks were made in Quesnel, B.C. to verify consistency with the data from the original helicopter. Acceptance of this procedure was given by the Technical Authority for the Geological Survey of Canada prior to commencing any further survey acquisition on the BC blocks with the replacement helicopter.

Radon Calibration

Throughout the survey, repeat test lines were flown twice daily to monitor the system operation and atmospheric radon variations. This information was used to monitor the upward looking crystal coefficients for this system.

Field Survey Monitor Tests

During the field survey, data quality and instrument tests were completed as follows:

Airborne Magnetometer

The airborne magnetic data were monitored in the aircraft by means of a fourth difference calculation which was displayed on the airborne acquisition system display. Where the fourth difference exceeded the allowable specification, that portion of the flight line was reflown.

The fourth difference is defined as:

$$FD_i = X_{i+2} - 4x_{i+1} + 6x_i - 4x_{i-1} + X_{i-2}$$

where X_i is the i^{th} total field sample. The fourth difference in this form has units of nT. High frequency noise should be such that the fourth differences divided by 16 are generally less than ± 0.1 nT.

A test of the measurement platform's compensation system was made before starting the survey. This measures the ability of the system to remove the effects of aircraft motion on the magnetic measurement. The results of the FOM test were measured as less than 2.0 nT with an average noise envelope of 0.1 nT and are presented in Appendix E.

Magnetic Base Station Data Verification

The ground stations were monitored to ensure that the diurnal variation was within the peak to peak envelope of 3.0 nT from a long chord distance equivalent to a period of one minute. Where reflights were necessary, the reflown portions of lines began and ended at control lines.

Flight Path

The GPS mobile data were differentially corrected using the base station data, on a daily basis. The flight path video was used to confirm the fiducial locations with respect to visible features on the map. Preliminary flight path maps and magnetic maps were plotted and updated, to monitor coverage of the survey area.

5. DATA PROCESSING AND PRESENTATION

Base Maps

The topographic base data were supplied as digital files by Geomatics Canada, Natural Resources Canada and were used in the map production. The digital topography was supplied in NAD83.

Flight Path

The mobile GPS data were differentially corrected post-survey, using the GPS base station data. The results were inspected in the field and edited to remove any noise spikes, offsets, or gaps in coverage. The preliminary flight path maps displayed fiducial increments which are tied to the UTC time. Each tick mark on the 1:50000 scale maps represents 10 seconds, with numerical labels every 100 seconds. Each tick mark on the 1:20000 scale maps represents 5 seconds, with numerical labels every 50 seconds.

The WGS84 latitude/longitude coordinates were converted to NAD83 UTM coordinates for Zone 10N, with a central meridian of 123º West. All final maps display Lat/Long coordinates. The data archives also contain the xy coordinates in UTM NAD83. As the GRS80 ellipsoid forms the basis of the NAD83 datum no datum shifts were required.

After confirming the accuracy of the flight path, the ends of the survey lines were trimmed to the survey boundary, leaving an over fly of approximately 100 meters. Each line or line segment shown on the map sheets carries a unique line number.

Magnetic Data

Magnetic Levelling

The raw magnetic data were checked for spikes, using the 4^{th} difference calculation as a flag. Obvious spikes were checked and then manually removed. As a result of the unpredictable activity of an engine cooling fan on the helicopter, the raw magnetic data contains a number of offsets throughout the flight data. The locations of these events are clearly identified by the 4^{th} difference trace. Corrections to the raw magnetic data were made on a flight basis to ensure consistency of the magnetic signal from one flight line to the next. After correcting for the offsets, the compensated magnetics were lagged according to the lag determined from the lag test. The long wavelength diurnal component was then removed from the lagged traverse and control line data. Diurnal corrections were made after appropriate base level removals from the diurnal field for each block.

The total field strength of the International Geomagnetic Reference Field (IGRF) was calculated for every data point, based on the spot values of Latitude, Longitude and GPS altitude, using appropriated Epochs for each block. These are as follows:

Block A Mount Sylvester Block	October 3, 2004
Block B Fran Block	October 19, 2004
Block C, Helene Lake Block	August 2, 2005
Block D, Tisdale Lake Block	November 17, 2004
Block E, Murphy Lake Block	July 22, 2005
Block F, Horsefly-Canim Block	July 25, 2005
Block G, Mt. Polley infill Block	July 20, 2005
Block H – J, Mouse Mountain, Ahbau and Abhau infill Blocks	June 20, 2005
Block K – N, Mostique, Atis, Ahbau Lake and Umiti Creek Blocks	July 17, 2005
Block AA, Fraser Lake Block	August 6, 2005

This IGRF was removed from the measured survey data on a point by point basis.

A survey line/control line network was created in order to determine differences in the diurnally corrected, IGRF removed, magnetic field at the line intercepts. The differences were calculated and tabulated, and were used to guide subsequent manual levelling on any lines or line segments which required adjustments. After the initial and subsequent network corrections interim grids and maps, were submitted to the Technical Inspector for approval, prior to generating the final 50 m grids and maps.

In order to check the quality of the levelling process, a first vertical derivative grid was calculated from the corrected total field data. This product helped to locate subtle differences between lines that were not evident on the total field data. There was no microlevelling applied

The final IGRF removed magnetic field data were gridded using a minimum curvature method with a grid cell size of 50 metres.

Calculated Vertical Gradient

The vertical gradient grids were calculated from the magnetic grid, using 2-D FFT algorithms.

Radiometric Data

All radiometric data reductions followed the procedures described in the IAEA Technical Report[1] and AGSO Record 1995/60[2].

All processing of radiometric data was undertaken at the natural sampling rate of the spectrometer, i.e., one second. The archived data were interpolated to match the fundamental 0.1 second interval of the database.

The following sections describe each step in the process.

Pre-filtering

The radar altimeter data were processed with a 15-point median filter to remove spikes.

Reduction to Standard Temperature and Pressure

The radar altimeter data were converted to effective height (h_e) in feet using the acquired temperature and pressure data, according to the following formula:

$$h_e = h * \frac{273.15}{T + 273.15} * \frac{P}{1013.25}$$

where: h is the observed radar altitude in metres
T is the measured air temperature in degrees Celsius
P is the barometric pressure in millibars

Live Time Correction

The spectrometer, an Exploranium GR-820, uses the notion of "live time" to express the relative period of time the instrument was able to register new pulses per sample interval. This is the opposite of the traditional "dead time", which is an expression of the relative period of time the system was unable to register new pulses per sample interval.

The GR-820 measures the live time electronically, and outputs the value in milliseconds. The live time correction is applied to the total count, potassium, uranium, thorium, upward uranium and cosmic channels. The formula used to apply the correction is as follows:

$$C_{lt} = C_{raw} * \frac{1000.0}{L}$$

where: C_{lt} is the live time corrected channel in counts per second
C_{raw} is the raw channel data in counts per second
L is the live time in milliseconds

---

[1] Exploranium, I.A.E.A. Report, Airborne Gamma-Ray Spectrometer Surveying, Technical Report No. 323, 1991.

[2] AGSO Record 1995/60, "A Guide to the Technical Specifications for Airborne Gamma-Ray Surveys".

Intermediate Filtering

Two parameters were filtered, but not returned to the database:

- Radar altimeter was smoothed with a 7-point Hanning filter (h_{ef}).
- The Cosmic window was smoothed with a 9-point Hanning filter (Cos_f).

Aircraft and Cosmic Background

Aircraft background and cosmic stripping corrections were applied to the total count, potassium, uranium, thorium and upward uranium channels using the following formula:

$$C_{ac} = C_{lt} - (a_c + b_c * \mathrm{Cos}_f)$$

where: C_{ac} is the background and cosmic corrected channel
C_{lt} is the live time corrected channel
a_c is the aircraft background for this channel
b_c is the cosmic stripping coefficient for this channel
Cos_f is the filtered cosmic channel

Radon Background

The determination of calibration constants that enable the stripping of the effects of atmospheric radon from the downward-looking detectors through the use of an upward-looking detector is divided into two parts:

1) Determine the relationship between the upward- and downward-looking detector count rates for radiation originating from the ground.
2) Determine the relationship between the upward- and downward-looking detector count rates for radiation due to atmospheric radon.

The procedures to determine these calibration factors are documented in IAEA Report #323 on airborne gamma-ray surveying. The calibrations for the first part were determined as outlined in the report.

The latter case normally requires many over-water measurements where there is no contribution from the ground. Where this is not possible, it is standard procedure to establish a test line over which a series of repeat measurements are acquired. From these repeat flights, any change in the downward uranium window due to variations in radon background would be directly related to variations in the upward window and the other downward windows.

The validity of this technique rests on the assumption that the radiation from the ground is essentially constant from flight to flight. Inhomogeneities in the ground, coupled with deviations in the flight path between test runs, add to the inaccuracy of the accumulated

results. Variations in flying heights and other environmental factors also contribute to the uncertainty.

The use of test lines is a solution for a fixed-wing acquisition platform. The ability of rotary wing platforms to hover at a constant height over a fixed position would appear to eliminate a number of the variations which degrade the accuracy of the results required for this calibration.

One test line was established in the survey area. Test flights were carried out daily. Data were acquired over a four-minute period at the nominal survey altitude (120 m). The data were then corrected for livetime, aircraft background and cosmic activity.

Once the survey was completed, the relationships between the counts in the downward uranium window and in the other four windows due to atmospheric radon were determined using linear regression for the test site. The equations solved for were:

$$u_r = a_u Ur + b_u$$
$$K_r = a_K U_r + b_K$$
$$T_r = a_T U_r + b_T$$
$$I_r = a_I U_r + b_I$$

where: u_r is the radon component in the upward uranium window
K_r, U_r, T_r and I_r are the radon components in the various windows of the downward detectors; the various "a" and "b" coefficients are the required calibration constants

In practice, only the "a" constants were used in the final processing. The "b" constants are normally near zero for over-water calibrations. The values of a_I, a_K, a_T and a_u are summarized in Appendix D1.

The thorium, uranium and upward uranium data for each line were copied into temporary arrays, then smoothed with 21, 21 and 51 point Hanning filters to product Th_f, U_f, and u_f respectively. The radon component in the downward uranium window was then determined using the following formula:

$$U_r = \frac{u_f - a_1 * U_f - a_2 * Th_f + a_2 * b_{Th} - b_u}{a_u - a_1 - a_2 * a_{Th}}$$

where: U_r is the radon component in the downward uranium window
u_f is the filtered upward uranium
U_f is the filtered uranium
Th_f is the filtered thorium
a_1, a_2, a_u and a_{Th} are proportionality factors and
b_u and b_{Th} are constants determined experimentally

The effects of radon in the downward uranium are removed by simply subtracting U_r from U_{ac}. The effects of radon in the total count, potassium, thorium and upward uranium are then removed based upon previously established relationships with U_r. The corrections are applied using the following formula:

$$C_{rc} = C_{ac} - (a_c * U_r + b_c)$$

where: C_{rc} is the radon corrected channel
C_{ac} is the background and cosmic corrected channel
U_r is the radon component in the downward uranium window
a_c is the proportionality factor and
b_c is the constant determined experimentally for this channel

Compton Stripping

Following the radon correction, the potassium, uranium and thorium are corrected for spectral overlap. First α, β, and γ the stripping ratios, are modified according to altitude. Then an adjustment factor based on a, the reversed stripping ratio, uranium into thorium, is calculated. (Note: the stripping ratio altitude correction constants are expressed in change per metre. A constant of 0.3048 is required to conform to the internal usage of height in feet):

$$\alpha_h = \alpha + h_{ef} * 0.00049$$

$$\beta_h = \beta + h_{ef} * 0.00065$$

$$\gamma_h = \gamma + h_{ef} * 0.00069$$

where: α, β, γ are the Compton stripping coefficients
α_h,β_h,γ_h are the height corrected Compton stripping coefficients
h_{ef} is the height above ground in metres

The stripping corrections are then carried out using the following formulas:

$$\alpha_r = \frac{1}{1 - a\alpha_h - g\gamma_h + ag\beta_h}$$

$$Th_c = ((1 - g\gamma_h)Th_{rc} - aU_{rc} + agk_{rc}) * \alpha_r$$

$$U_c = (Th_{rc}(g\beta_h - \alpha_h) + U_{rc} - K_{rc}^{g}) * \alpha_r$$

$$K_c = (Th_{rc}(a\alpha_h - \beta_h) + U_{rc}(a\beta_h - \gamma h) + K_{rc}(1 - a\alpha_h)) * \alpha_r$$

where: U_c, Th_c and K_c are corrected uranium, thorium and potassium
$\alpha_h,\beta_h,\gamma_h$ are the height corrected Compton stripping coefficients
U_{rc}, Th_{rc} and K_{rc} are radon-corrected uranium, thorium and potassium
α_r is the backscatter correction
a is the reverse stripping ratio U into Th
g is the reverse stripping ratio K into uranium

Attenuation Corrections

The total count, potassium, uranium and thorium data are then corrected to a nominal survey altitude, in this case 110 m (361 ft). This is done according to the equation:

$$C_a = C * e^{\mu(h_{ef} - ho)}$$

where: C_a is the output altitude corrected channel
C is the input channel
μ is the attenuation correction for that channel
h_{ef} is the effective altitude, usually in m
h_0 is the nominal survey altitude used as datum

Conversion to Apparent Radioelement Concentrations

At this point the corrections are complete. The final step is to convert the corrected potassium, uranium and thorium to apparent radioelement concentrations using the following formula:

$$eE = C_{cor} / s$$

where: eE is the element concentration K(%) and equivalent element concentration of U(ppm) & Th(ppm)
s is the experimentally determined sensitivity
C_{cor} is the fully corrected channel

Finally, the natural air absorption dose rate is determined using the following formula:

$$E = 13.08 * K + 5.43 * eU + 2.69 * eTh$$

where: E is the absorption dose rate in nG/h
K is the concentration of potassium (%)
eU is the equivalent concentration of uranium (ppm)
eTh is the equivalent concentration of thorium (ppm)

A description of how most of the constants were determined can be found in: Exploranium, I.A.E.A. Report, Airborne Gamma-Ray Spectrometer Surveying, Technical Report No. 323, 1991.

Radiometric Ratios

The procedure to calculate the radiometric ratios follows the guidelines in the IAEA report. Due to statistical uncertainties in the individual radioelement measurements, some care was taken in the calculation of the ratio in order to obtain statistically significant values. Following IAEA guidelines, the method of determining ratios of the eU/eTh, eU/K and eTh/K was as follows:

1. Any data points where the potassium concentration was less than 0.15 were neglected.
2. The element with the lowest corrected count rate was determined.
3. The element concentrations of adjacent points on either side of each data point were summed until they exceeded a certain threshold value. This threshold was set to be equivalent to 100 counts of the element with the lowest count rate. Additional minimum thresholds of 1.0% for Potassium, 5 ppm for thorium, and 5 ppm for uranium were set up to insure meaningful ratios in this low count survey area.
4. The ratios were calculated using the accumulated sums.

With this method, the errors associated with the calculated ratios will be similar for all data points.

Radioelement Ternary Maps

The radioelement ternary map was produced by creating separate grids for each of the three radioelements and assigning a specific colour to each radioelement. Cyan represents thorium, yellow represents uranium, and magenta represents potassium. The relative concentrations of the three radioelements are represented by the mixing of the three colours. For example, equal concentrations of potassium and uranium would yield a red, grading through orange, towards yellow as the relative concentration of uranium increases.

Each of the normalized radioelement concentrations and the exposure rate are then non-linearly quantized using histogram equalization. The radioelement concentrations are quantized into 49 levels, and the exposure rate into five levels. The three quantized radioelement concentrations were normalized once more by the sum of their components and assigned cyan (Th), magenta (K) and yellow (U) values according to their relative amounts. The final colour intensities were then modulated by the quantized exposure rate, with five representing high intensity and one being low intensity.

The triangular icon which appears on the ternary radioelement maps shows the colours associated with each radioelement and their combinations at full intensity exposure rate.

This scale is not linear, and accounts for approximately 90% of the data in the survey area. This facilitates the recognition of colours that would otherwise fall within a very small range on a linear scale diagram.

6. DELIVERABLES

Map Products

Preliminary line/grid data archives were created during the data processing phase and supplied via FTP transfer to the Geological Survey of Canada and industry client offices, so that checks could be carried out. Final map proofs were also submitted for inspection and approval prior to printing the final copies

The map products were presented on a digital topographic base that showed NAD83 coordinates.

Final Products

Maps

FOR BLOCKS AA, A, DF, G, H-N

Colour maps at 1:50,000 scale (in 5 copies):

- total magnetic field
- calculated vertical gradient
- natural air absorbed dose rate
- potassium concentration
- equivalent Uranium
- equivalent Thorium
- eU/eTH ratio
- eTH/K ratio
- eU/K
- radiometric ternary

FOR BLOCKS B,C and E

Colour maps at 1:20,000 scale (in 5 copies):

- total magnetic field
- calculated vertical gradient
- natural air absorbed dose rate
- potassium concentration
- equivalent Uranium
- equivalent Thorium
- eU/eTH ratio
- eTH/K ratio
- eU/K

- radiometric ternary

COMPILATION : Mt. Polley

Colour maps at 1:250,000 scale (in 5 copies):

- total magnetic field
- calculated vertical gradient
- natural air absorbed dose rate
- potassium concentration
- equivalent Uranium
- equivalent Thorium
- eU/eTH ratio
- eTH/K ratio
- eU/K
- radiometric ternary

Digital Data Archives

1) Digital archive of all gridded data in Geosoft format at 50 m grid cell size:
    - Residual magnetic field
    - Calculated vertical gradient (first vertical magnetic derivative)
    - Natural air absorbed dose rate
    - % Potassium
    - Equivalent uranium
    - Equivalent thorium
    - eTh/K ratio
    - eU/eTh ratio
    - eU/K ratio

2) Digital line data in GDB format of all gamma-ray magnetic and radiometric data presented at 10 times per second.

3) Maps: Digital map files of all final products in both Postscript and PDF format

The raw, and final processed digital data, including both the profile/line and the gridded data were presented on DVD

Operational Reports

Two (2) copies of the Operational Report.

7. SUMMARY

This report describes the logistics of the survey, equipment used, field procedures, data acquisition and presentation of results.

The various maps included with this report display the magnetic and radiometric properties of the survey area. It is recommended that the survey results be reviewed in detail, in conjunction with all available geophysical, geological and geochemical information.

The information content of the data is greater than can be presented on the maps alone. Further processing of the data may enhance subtle features that can be of importance for exploration purposes.

It is also recommended that image processing of existing geophysical data be considered, in order to extract the maximum amount of information from the survey results. Current software and imaging techniques often provide valuable information on structure and lithology, which may not be clearly evident on the contour and colour maps. These techniques can yield images which define subtle, but significant, structural details.

Respectfully submitted,
FUGRO AIRBORNE SURVEYS

Emily Farquhar
Geophysicist

APPENDIX A

LIST OF PERSONNEL

APPENDIX A

LIST OF PERSONNEL

The following personnel were involved in the acquisition, processing, interpretation and presentation of data, relating to an airborne geophysical survey carried out for Geological Survey of Canada and their Industry Partners, Fugro Airborne Surveys job #04078

David Miles	Manager, Helicopter Operations
Emily Farquhar	Project Manager/Geophysicist
Duane Griffith	Operations Manager
Yuri Mironenko	Geophysical Operator
John Douglas	Geophysical Operator
Darcy Blouin	Geophysical Operator
Lesley Minty	Geophysicist/Processor (Field) (2005)
Amanda Heydorn	Geophysicist/Processor (Field) (2005)
Chris Sawyer	Geophysicist/Processor (Field) (2004)
Brett Robinson	Supervisor Field Geophysicists (2005)
Glen Charbonneau	Pilot (Great Slave Helicopters)
Greg Charbonneau	Pilot (Great Slave Helicopters)
Craig Cable	AME (Great Slave Helicopters)
Jeff Fullerton	Pilot (Questral Helicopters)
Wally Zec	Pilot (Questral Helicopters)
Ashley Stotts	AME (Questral Helicopters)
Mark April	AME (Questral Helicopters)
Lyn Vanderstarren	Drafting Supervisor

With the exception of the pilots and mechanics, all personnel were employees of Fugro Airborne Surveys.

APPENDIX B

RADIOMETRIC COEFFICIENTS

APPENDIX B

RADIOMETRIC COEFFICIENTS

FOR AS350B2 Installation in C-FGSC

```
////////////////////////////////////////////////
// Atlas Control/Workspace File
// # or // for commment
////////////////////////////////////////////////

CONTROL_BEGIN

 PROGRAM  = AGSCorrection
 VERSION  = 1.4.0

  ### Input data source type ###
     InputLineDataType = Survey Line

  ### Corrections to apply ###
     CorrectionType = Yes   Filtering
     CorrectionType = Yes  LiveTimeCorrection
     CorrectionType = Yes  CosmicAircraftBGRemove
     CorrectionType = Yes  CalcEffectiveHeight
     CorrectionType = Yes  RadonBGRemove
     CorrectionType = Yes  ComptonStripping
     CorrectionType = Yes  HeightCorrection
     CorrectionType = Yes  ConvertToConcentration


  ### Main I/O settings ###
     MainChannelIO|TC       = tc_down --> tc_down_Cor
     MainChannelIO|K        = k_down  --> k_down_Cor
     MainChannelIO|U        = u_down  --> u_down_Cor
     MainChannelIO|Th       = th_down --> th_down_Cor
     MainChannelIO|UpU      = U_UP       --> U_UP_COR
     MainChannelIO|Cosmic   = COSMIC     --> COSMIC_COR
     MainChannelIO|Spectrum =            -->

  ### Control Channel I/O settings ###
     ControlChannel|RadarAltimeter     = ALTM_F      [metres]
     ControlChannel|Pressure/Barometer = ALTB_KPA    [kPa]
     ControlChannel|Temperature        = TEMP


  ### Pre-filtering settings ###
     Filtering|TC      = 0
     Filtering|K       = 0
     Filtering|U       = 0
     Filtering|Th      = 0
     Filtering|UpU     = 0
     Filtering|Cosmic  = 9
     Filtering|RadarAltimeter     = 7
     Filtering|Pressure/Barometer = 9
     Filtering|Temperature        = 3
```

Live-time correction settings
LiveTimeChannel = LIVE_TIME
LiveTimeUnits = mili-seconds
ApplyDTCorrToUpU = Yes
ApplyDTCorrToSpectrum = No

Cosmic correction settings
CosmicCorrParam|TC = 0.950089, 148.290000
CosmicCorrParam|K = 0.052280, 12.391300
CosmicCorrParam|U = 0.045686, 3.257250
CosmicCorrParam|Th = 0.051165, 6.552490
CosmicCorrParam|UpU = 0.005280, 0.498797

Effective-Height settings
EffectiveHeightOutputChannel = EFFECTIVEHEIGHT
EffectiveHeightOutputUnits = metres

Radon correction settings
RadonCorrMethod = UpU
RadonCorrParam_Filter = 3
RadonOutputChannel = RADON
RadonCorrParam_UgInUpU(A1) = 0.002000
RadonCorrParam_ThInUpU(A2) = 0.009700
RadonCorrParam|TC = 14.180000, 0.000000
RadonCorrParam|K = 0.930000, 0.000000
RadonCorrParam|Th = 0.080000, 0.000000
RadonCorrParam|UpU = 0.121000, 0.000000

Special Stripping (Compton Stripping)
ComptonCorrParam_Stripping_Alpha = 0.224000
ComptonCorrParam_Stripping_Beta = 0.375000
ComptonCorrParam_Stripping_Gamma = 0.714000
ComptonCorrParam_AlphaPerMetre = 0.000000
ComptonCorrParam_BetaPerMetre = 0.000000
ComptonCorrParam_GammaPerMetre = 0.000000
ComptonCorrParam_GrastyBackscatter_a = 0.053000
ComptonCorrParam_GrastyBackscatter_b = -0.001000
ComptonCorrParam_GrastyBackscatter_g = 0.000010

Height Correction settings
SurveyHeightDatum = 120.000000
HeightCorrParam|TC = -0.007454, 300.000000
HeightCorrParam|K = -0.009297, 300.000000
HeightCorrParam|U = -0.008396, 300.000000
HeightCorrParam|Th = -0.007610, 300.000000

Concentration settings
ConcentrationParam|K = CONCENTRATION_K, 56.9544
ConcentrationParam|U = CONCENTRATION_U, 8.37329
ConcentrationParam|Th = CONCENTRATION_TH, 3.67909
AirAbsorbedDoseRateParam = DOSERATE, 20.6605
NaturalAirAbsorbedDoseRateParam = NATURALDOSERATE, 13.08, 5.43, 2.69

CONTROL_END

FOR AS350B3 Installation in C-GECL

```
////////////////////////////////////////////////
// Atlas Control/Workspace File
// # or // for commment
////////////////////////////////////////////////

CONTROL_BEGIN

 PROGRAM  = AGSCorrection
 VERSION  = 1.4.0

  ### Input data source type ###
     InputLineDataType = Survey Line

  ### Corrections to apply ###
     CorrectionType = Yes   Filtering
     CorrectionType = Yes  LiveTimeCorrection
     CorrectionType = Yes  CosmicAircraftBGRemove
     CorrectionType = Yes  CalcEffectiveHeight
     CorrectionType = Yes  RadonBGRemove
     CorrectionType = Yes  ComptonStripping
     CorrectionType = Yes  HeightCorrection
     CorrectionType = Yes  ConvertToConcentration


  ### Main I/O settings ###
     MainChannelIO|TC       = tc_down --> tc_down_Cor
     MainChannelIO|K        = k_down  --> k_down_Cor
     MainChannelIO|U        = u_down  --> u_down_Cor
     MainChannelIO|Th       = th_down --> th_down_Cor
     MainChannelIO|UpU      = U_UP       --> U_UP_COR
     MainChannelIO|Cosmic   = COSMIC     --> COSMIC_COR
     MainChannelIO|Spectrum =            -->

  ### Control Channel I/O settings ###
     ControlChannel|RadarAltimeter     = ALTM_F      [metres]
     ControlChannel|Pressure/Barometer = ALTB_KPA    [kPa]
     ControlChannel|Temperature        = TEMP


  ### Pre-filtering settings ###
     Filtering|TC      = 0
     Filtering|K       = 0
     Filtering|U       = 0
     Filtering|Th      = 0
     Filtering|UpU     = 0
     Filtering|Cosmic  = 9
     Filtering|RadarAltimeter     = 7
     Filtering|Pressure/Barometer = 9
     Filtering|Temperature        = 3
```

```
  ### Live-time correction settings ###
     LiveTimeChannel            = LIVE_TIME
     LiveTimeUnits              = mili-seconds
     ApplyDTCorrToUpU           = Yes
     ApplyDTCorrToSpectrum      = No

  ### Cosmic correction settings ###
     CosmicCorrParam|TC      = 0.790590,  119.070000
     CosmicCorrParam|K       = 0.045590,  11.970000
     CosmicCorrParam|U       = 0.035800,  5.190000
     CosmicCorrParam|Th      = 0.042610,  3.140000
     CosmicCorrParam|UpU     = 0.004530,  0.420000

  ### Effective-Height settings ###
     EffectiveHeightOutputChannel = EFFECTIVEHEIGHT
     EffectiveHeightOutputUnits   = metres

  ### Radon correction settings ###
     RadonCorrMethod            = UpU
     RadonCorrParam_Filter      = 3
     RadonOutputChannel         = RADON
     RadonCorrParam_UgInUpU(A1) = 0.002000
     RadonCorrParam_ThInUpU(A2) = 0.009700
     RadonCorrParam|TC      = 14.180000,  0.000000
     RadonCorrParam|K       = 0.930000,  0.000000
     RadonCorrParam|Th      = 0.080000,  0.000000
     RadonCorrParam|UpU     = 0.121000,  0.000000

  ### Special Stripping (Compton Stripping) ###
     ComptonCorrParam_Stripping_Alpha     = 0.224000
     ComptonCorrParam_Stripping_Beta      = 0.375000
     ComptonCorrParam_Stripping_Gamma     = 0.714000
     ComptonCorrParam_AlphaPerMetre       = 0.000000
     ComptonCorrParam_BetaPerMetre        = 0.000000
     ComptonCorrParam_GammaPerMetre       = 0.000000
     ComptonCorrParam_GrastyBackscatter_a = 0.053000
     ComptonCorrParam_GrastyBackscatter_b = -0.001000
     ComptonCorrParam_GrastyBackscatter_g = 0.000010

  ### Height Correction settings ###
     SurveyHeightDatum     = 120.000000
     HeightCorrParam|TC      = -0.007772, 300.000000
     HeightCorrParam|K       = -0.009459, 300.000000
     HeightCorrParam|U       = -0.009038, 300.000000
     HeightCorrParam|Th      = -0.008274, 300.000000

  ### Concentration settings ###
    ConcentrationParam|K       = CONCENTRATION_K,  58.3163
     ConcentrationParam|U       = CONCENTRATION_U,  7.80133
     ConcentrationParam|Th      = CONCENTRATION_TH,  3.71105
     AirAbsorbedDoseRateParam   = DOSERATE,  20.7825
     NaturalAirAbsorbedDoseRateParam = NATURALDOSERATE,  13.08, 5.43, 2.69

CONTROL_END
```

COSMIC CORRECTION

$$C_{ac} = C_{lt} - (a_c + b_c * \mathrm{Cos}_f)$$

where: C_{ac} is the background and cosmic corrected channel
C_{lt} is the live time corrected channel
a_c is the aircraft background for this channel
b_c is the cosmic stripping coefficient for this channel
Cos_f is the filtered cosmic channel

TC	$a_{TC=}$0.950089 $b_{TC=}$148.290000
K	$a_{K=}$0.052280 $b_{K=}$12.391300
U	$a_{U=}$0.045686 $b_{U=}$4.257250
Th	$a_{Th=}$0.051165 $b_{Th=}$6.552490
U_Up	$a_{Th=}$0.005280 $b_{Th=}$0.498797

RADON REMOVAL

$$U_r = \frac{u_f - a_1 * U_f - a_2 * Th_f + a_2 * b_{Th} - b_u}{a_u - a_1 - a_2 * a_{Th}}$$

where: U_r is the radon component in the downward uranium window
u_f is the filtered upward uranium
U_f is the filtered uranium
Th_f is the filtered thorium
a_1, a_2, a_u and a_{Th} are proportionality factors and
b_u and b_{Th} are constants determined experimentally

a1 = 0.0020
a2 = 0.0097

This correction is applied using the following formula:

$$C_{rc} = C_{ac} - (a_c * U_r + b_c)$$

where: C_{rc} is the radon corrected channel

C_{ac} is the background and cosmic corrected channel
U_r is the radon component in the downward uranium window
a_c is the proportionality factor and
b_c is the constant determined experimentally for this channel

TC	$a_{Tc,}\ b_{Tc}$	= 14.18, 0.000000
K	$a_{K,}\ b_{K}$	= 0.930, 0.000000
Th	$a_{Th,}\ b_{Th}$	= 0.080, 0.000000
UpU	$a_{UpU,}\ b_{UpU}$	= 0.121, 0.000000

COMPTON STRIPPING

where: $\alpha_h, \beta_h, \gamma_h$ are the height corrected Compton stripping coefficients
α_r is the backscatter correction
a is the reverse stripping ratio U into Th
g is the reverse stripping ratio K into uranium

α_h = 0.224
β_h = 0.375
γ_h = 0.714
α_r = 0.000
a = 0.053
g = 0.0001

ATTENUATION CORRECTION

$$C_a = C * e^{\mu(h_{ef} - ho)}$$

where: C_a is the output altitude corrected channel
C is the input channel
μ is the attenuation correction for that channel
h_{ef} is the effective altitude, usually in m
h_0 is the nominal survey altitude used as datum

TC	μ_{TC} = -0.007454
K	μ_K = -0.009297
U	μ_U = -0.008396
Th	μ_{Th} = -0.007610

CONVERSION TO APPARENT RADIOELEMENT CONCENTRATIONS

At this point the corrections are complete. The final step is to convert the corrected potassium, uranium and thorium to apparent radioelement concentrations using the following formula:

$$eE = C_{cor} / s$$

where: eE is the element concentration K(%) and equivalent element concentration of U(ppm) & Th(ppm)
s is the experimentally determined sensitivity
C_{cor} is the fully corrected channel

TC	s_{TC} = 20.6605 at 120 metres
K	s_K = 56.9544 at 120 metres
U	s_U = 8.3733 at 120 metres
Th	s_{Th} = 3.6791 at 120 metres

APPENDIX C

RADIOMETRIC SOURCE CHECKS

RADIOMETRIC SOURCE CHECKS

Date	AM / PM	U Cnts	U Ave	U % Dev	Th Cnts	Th Ave	Th % Dev	Cs Peak	Cs Res
6-Jun-05	AM	14095	-	-	18641	-	-	54.8	7.5%
6-Jun-05	PM	13990	14043	-0.37	18794	18718	0.41	54.9	7.5%
7-Jun-05	AM	13905	13997	-0.65	18953	18796	0.84	54.7	7.5%
7-Jun-05	PM	13960	13988	-0.20	19016	18851	0.88	54.9	7.6%
Date	**AM / PM**	**U Cnts**	**U Ave**	**U % Dev**	**Th Cnts**	**Th Ave**	**Th % Dev**	**Cs Peak**	**Cs Res**
11-Jun-05	AM	14356	-	-	19796	-	-	54.7	7.5%
15-Jun-05	AM	14680	14518	1.12	19872	19834	0.19	54.6	7.6%
15-Jun-05	PM	14287	14441	-1.07	19344	19671	-1.66	54.8	7.6%
17-Jun-05	AM	13729	14263	-3.74	19254	19567	-1.60	54.6	7.6%
17-Jun-05	PM	14262	14263	-0.01	19434	19540	-0.54	54.6	7.7%
19-Jun-05	AM	14253	14261	-0.06	19824	19587	1.21	54.5	7.6%
19-Jun-05	PM	13820	14198	-2.66	18720	19463	-3.82	54.7	7.6%
20-Jun-05	AM	13724	14139	-2.93	18637	19360	-3.74	54.7	7.6%
20-Jun-05	PM	14126	14137	-0.08	19127	19334	-1.07	54.8	7.6%
21-Jun-05	AM	14046	14128	-0.58	19382	19339	0.22	54.6	7.7%
28-Jun-05	AM	14165	14132	0.24	19117	19319	-1.04	55.0	7.5%
28-Jun-05	PM	13842	14108	-1.88	18790	19275	-2.51	54.8	7.6%
7-Jul-05	AM	14190	14114	0.54	19866	19320	2.82	54.9	7.5%
11-Jul-05	AM	14767	14161	4.28	19937	19364	2.96	54.6	7.6%
11-Jul-05	PM	14743	14199	3.83	19794	19393	2.07	54.7	7.6%
12-Jul-05	AM	14600	14224	2.64	20001	19431	2.93	54.9	7.5%
13-Jul-05	AM	13705	14194	-3.44	18427	19372	-4.88	55.0	7.4%
13-Jul-05	PM	14117	14190	-0.51	19014	19352	-1.75	55.2	7.7%
14-Jul-05	AM	14069	14183	-0.81	19126	19340	-1.11	54.7	7.5%
14-Jul-05	PM	14071	14178	-0.75	19078	19327	-1.29	54.8	7.6%
16-Jul-05	AM	14111	14174	-0.45	18929	19308	-1.96	54.8	7.4%
17-Jul-05	AM	14128	14172	-0.31	18903	19290	-2.00	54.8	7.6%
17-Jul-05	PM	14116	14170	-0.38	19136	19283	-0.76	54.8	7.5%
18-Jul-05	AM	14298	14175	0.87	19114	19276	-0.84	54.8	7.5%
18-Jul-05	PM	13975	14167	-1.36	19212	19273	-0.32	54.8	7.6%
19-Jul-05	AM	13819	14154	-2.37	19165	19269	-0.54	54.6	7.6%
19-Jul-05	PM	13722	14138	-2.94	18719	19249	-2.75	54.8	7.6%
20-Jul-05	AM	13657	14121	-3.28	18569	19225	-3.41	54.7	7.5%
20-Jul-05	PM	13957	14115	-1.12	18894	19213	-1.66	54.9	7.5%

Date	AM / PM	U Cnts	U Ave	U % Dev	Th Cnts	Th Ave	Th % Dev	Cs Peak	Cs Res
22-Jul-05	AM	13745	-	-	18794	-	-	54.5	7.6%
22-Jul-05	PM	13657	13701	-0.32	18836	18815	0.11	54.9	7.6%
23-Jul-05	AM	13763	13722	0.30	18830	18820	0.05	54.6	7.6%
24-Jul-05	AM	13575	13685	-0.80	18696	18789	-0.49	54.7	7.5%
24-Jul-05	PM	13601	13668	-0.49	18694	18770	-0.40	54.8	7.6%
25-Jul-05	AM	13651	13665	-0.10	18815	18778	0.20	54.6	7.6%
25-Jul-05	PM	13394	13627	-1.71	18637	18757	-0.64	54.7	7.6%
26-Jul-05a	AM	13545	13616	-0.52	18726	18754	-0.15	54.6	7.6%
26-Jul-05b	AM	13559	13610	-0.37	18609	18737	-0.69	54.8	7.5%
26-Jul-05b	PM	13357	13585	-1.68	18570	18721	-0.80	54.8	7.6%
27-Jul-05	AM	13457	13573	-0.86	18454	18696	-1.30	54.6	7.6%
27-Jul-05	PM	13598	13575	0.17	18690	18696	-0.03	0.0	0.0%
28-Jul-05	AM	13549	13573	-0.18	18693	18696	-0.01	54.6	7.6%
29-Jul-05	AM	13354	13558	-1.50	18892	18710	0.97	54.6	7.6%
29-Jul-05	PM	13407	13547	-1.04	18599	18702	-0.55	54.7	7.6%
2-Aug-05	AM	13799	13563	1.74	19300	18740	2.99	54.5	7.6%
2-Aug-05	PM	13692	13571	0.89	19159	18764	2.10	54.7	7.6%
3-Aug-05	AM	13986	13594	2.88	19327	18796	2.83	54.5	7.6%
3-Aug-05	PM	13870	13608	1.92	19027	18808	1.17	54.6	7.6%

Date	AM / PM	U Cnts	U Ave	U % Dev	Th Cnts	Th Ave	Th % Dev	Cs Peak	Cs Res
5-Aug-05	AM	13702	-	-	19211	-	-	54.6	7.6%
5-Aug-05	PM	13742	13722	0.15	18901	19056	-0.81	0.0	0.0%
6-Aug-05	AM	13679	13708	-0.21	18950	19021	-0.37	54.5	7.6%
6-Aug-05	PM	13708	13708	0.00	19020	19021	0.00	54.8	7.5%
7-Aug-05	AM	13514	13669	-1.13	19085	19033	0.27	54.5	7.6%
7-Aug-05	PM	13664	13668	-0.03	18699	18978	-1.47	0.0	0.0%
8-Aug-05	AM	13560	13653	-0.68	18906	18967	-0.32	54.5	7.6%
8-Aug-05	PM	13627	13650	-0.16	18569	18918	-1.84	54.5	7.6%

APPENDIX D

MAGNETIC COMPENSATION TEST

Compensation Calibration

Date Test Conducted: 07 Jun, 2005

Figure of Merit: 1.4

Compensation of magnetic readings is required when the magnetometers are mounted on, or in close proximity to, the aircraft. The aircraft with its metallic parts and surfaces creates secondary magnetic fields while the aircraft moves through the earth's magnetic field. Therefore the compensation calibration test is flown to calculate the effects of the aircraft and its control surfaces on the magnetic field. The test is flown at high altitude, outside the effect of geology on the magnetic readings. The aircraft flies in each of the survey directions performing a series of manoeuvres (pitch, roll and yaw) that moves the aircraft along each of its three axis of rotation. The aircraft's affect on the magnetic data is calculated and then subtracted from the magnetic data collected during the survey. The raw uncompensated total magnetic field (TF1U) is shown in green and the compensated total magnetic field (TF1C) is shown in red. The effect of the aircraft is clearly removed from the total field. The residual values are shown in blue which is the difference between the compensated mag and the filtered mag.

This test must be repeated when moving more than 100 km and for each survey line direction.

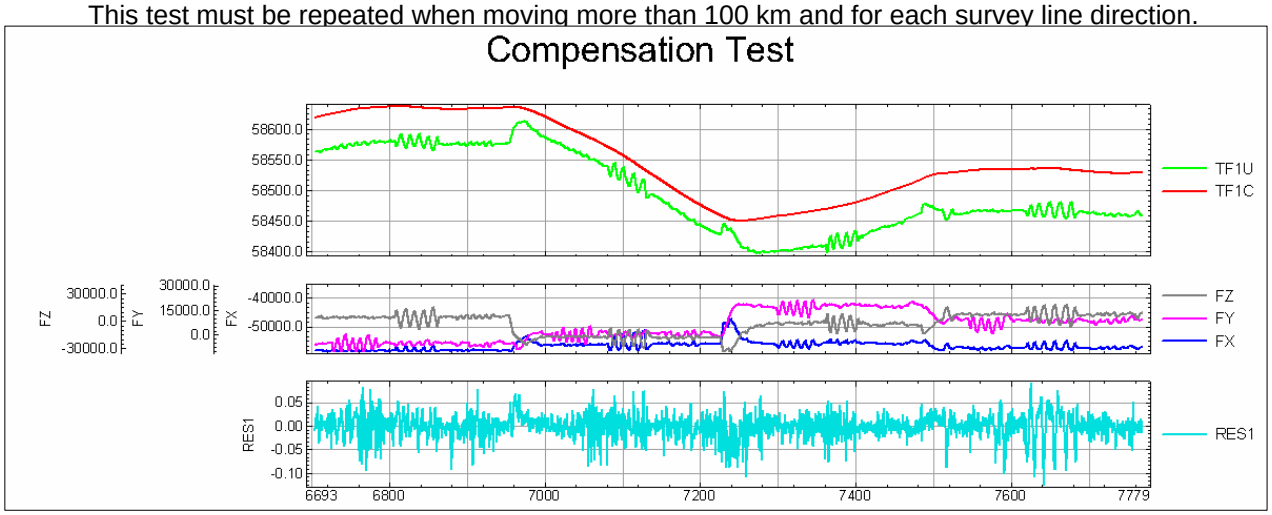


Figure 20: Compensation Calibration Results (Figure of Merit)

The figure of merit (FOM) is then calculated by summing the amplitude of the residual for each maneuver and is found to be 1.4 which is acceptable. The amplitudes chosen for the FOM calculation are shown in the following table.

Chart 2: Compensation Calibration Results (Figure of Merit)

Direction	Maneuver	Peak to Peak of Residual			Amplitude
N	Pitch	0.0364	-0.0473		0.0837
N	Roll	0.0533	-0.0761		0.1294
N	Yaw	0.0388	-0.0308		0.0696
E	Pitch	0.0453	-0.0297		0.0750
E	Roll	0.0768	-0.1259		0.2027
E	Yaw	0.0314	-0.0496		0.0810
S	Pitch	0.0823	-0.0939		0.1762
S	Roll	0.0473	-0.0561		0.1034

S	Yaw	0.0781	-0.0823	0.1604
W	Pitch	0.0328	-0.0518	0.0846
W	Roll	0.0748	-0.0509	0.1257
W	Yaw	0.0381	-0.0461	0.0842

The compensation test was repeated for the survey blocks in the Quesnel area with line directions E-W and N-S on June 13, 2005

Date Test Conducted: 13 Jun, 2005

Figure of Merit: 1.6

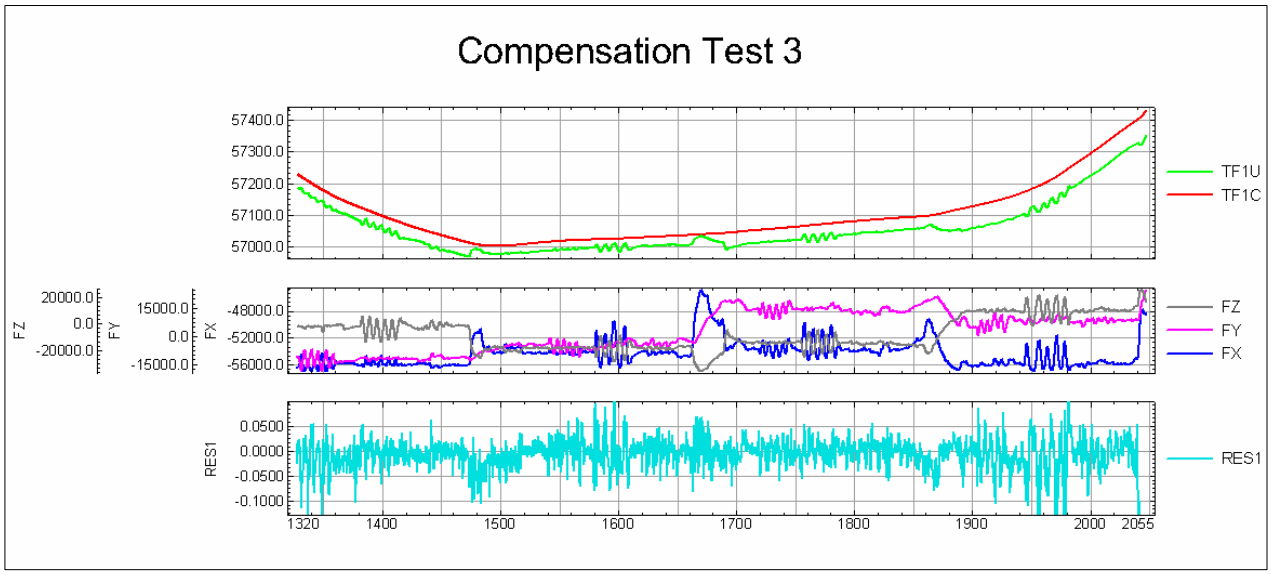


Figure 21: Compensation Calibration Results (Figure of Merit)

Chart 3: Compensation Calibration Results (Figure of Merit)

Direction	Maneuver	Peak to Peak of Residual			Amplitude
S	Pitch	0.0539	-0.14		-0.14
S	Roll	0.0414	-0.0658		-0.0658
S	Yaw	0.063	-0.0435		-0.0435
W	Pitch	0.0674	-0.0579		-0.0579
W	Roll	0.0466	-0.0783		-0.0783
W	Yaw	0.0367	-0.0589		-0.0589
N	Pitch	0.0478	-0.0583		-0.0583
N	Roll	0.0552	-0.0423		-0.0423
N	Yaw	0.078	-0.04		-0.04
E	Pitch	0.0742	-0.1055		-0.1055

E	Roll	0.0546	-0.2025	-0.2025
E	Yaw	0.0381	-0.0907	-0.0907

The compensation test was repeated for the survey blocks in the Quesnel area with line directions E-W and N-S on June 26, 2005 due to crew change and helicopter maintenance

Date Test Conducted: 25 Jun, 2005

Figure of Merit: 1.0

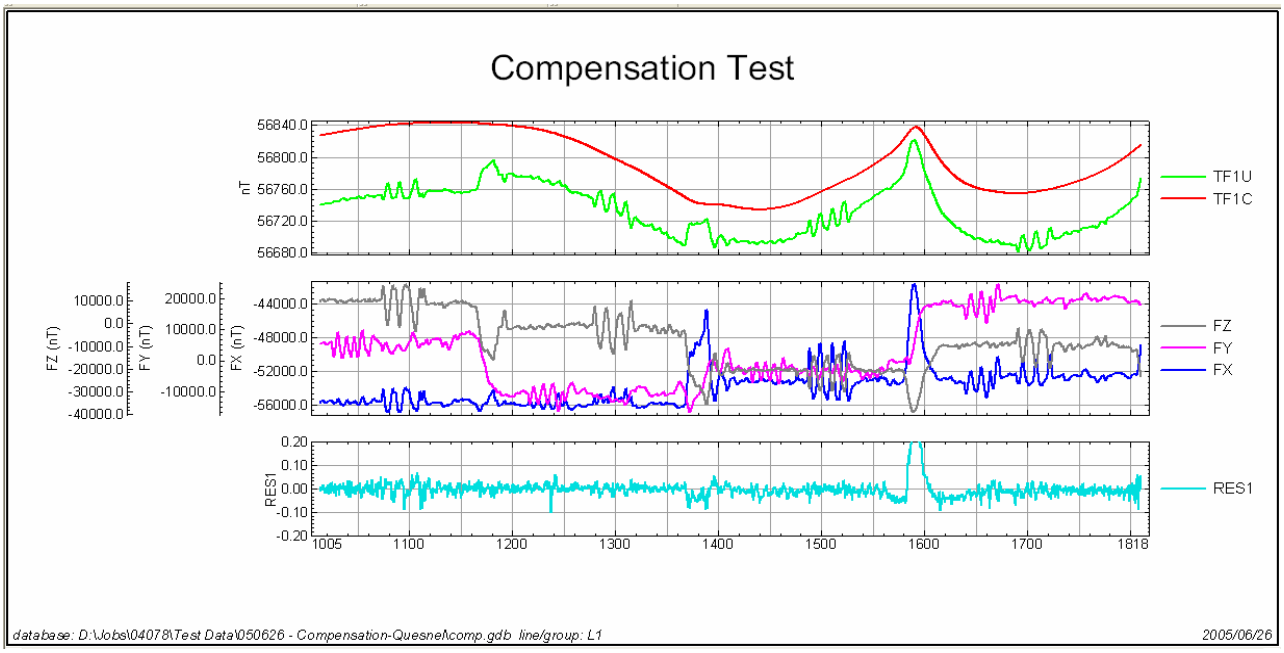


Figure 21: Compensation Calibration Results (Figure of Merit)

Chart 3: Compensation Calibration Results (Figure of Merit)

Direction	Maneuver	Peak to Peak of Residual		Amplitude
90	Pitch	0.0539	-0.14	-0.14
90	Roll	0.0414	-0.0658	-0.0658
90	Yaw	0.063	-0.0435	-0.0435
180	Pitch	0.0674	-0.0579	-0.0579
180	Roll	0.0466	-0.0783	-0.0783
180	Yaw	0.0367	-0.0589	-0.0589
270	Pitch	0.0478	-0.0583	-0.0583
270	Roll	0.0552	-0.0423	-0.0423
270	Yaw	0.078	-0.04	-0.04
360	Pitch	0.0742	-0.1055	-0.1055
360	Roll	0.0546	-0.2025	-0.2025

360	Yaw	0.0381	-0.0907	-0.0907

The compensation test was repeated for the survey blocks in the Quesnel area with line directions 050-230 and 140-320 on June 26, 2005

Date Test Conducted: 26 Jun, 2005

Figure of Merit: 1.1

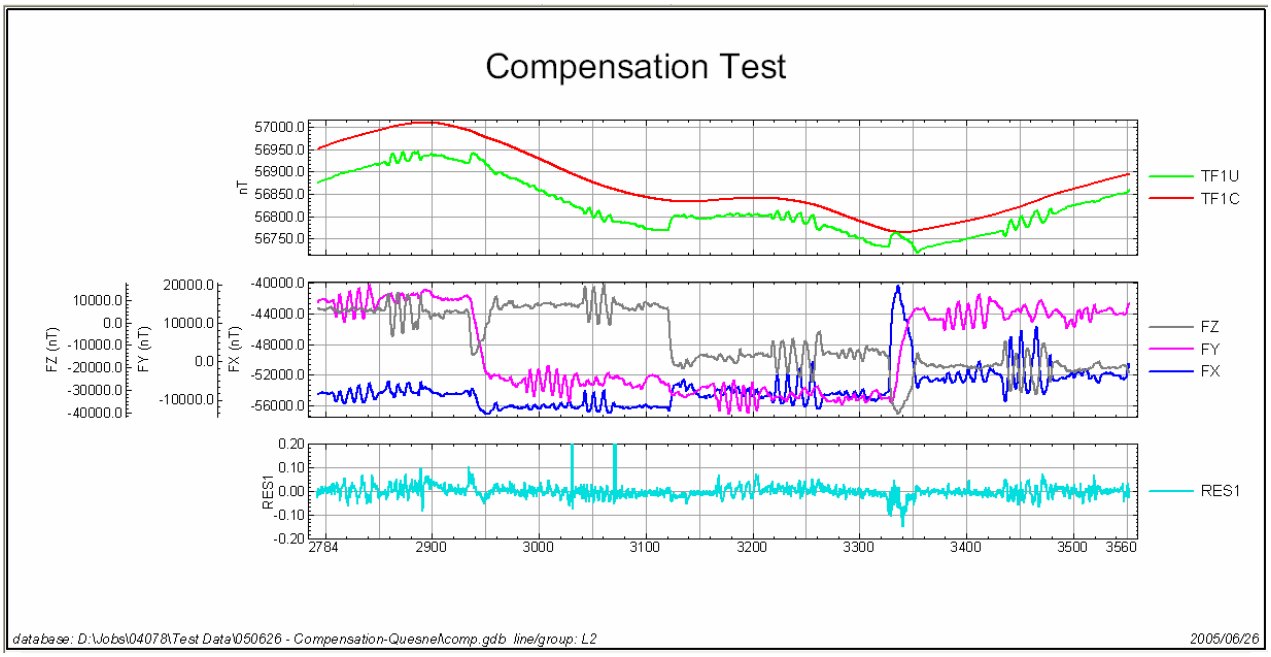


Figure 21: Compensation Calibration Results (Figure of Merit)

Chart 3: Compensation Calibration Results (Figure of Merit)

Direction	Maneuver	Peak to Peak of Residual		Amplitude
50	Pitch	0.0697	-0.059	0.1287
50	Roll	0.0731	-0.0371	0.1102
50	Yaw	0.038	-0.0178	0.0558
140	Pitch	0.0469	-0.04	0.0869
140	Roll	0.0329	-0.0477	0.0806
140	Yaw	0.0149	-0.0292	0.0441
230	Pitch	0.0729	-0.0457	0.1186
230	Roll	0.0517	-0.0291	0.0808
230	Yaw	0.0304	-0.0352	0.0656
320	Pitch	0.0468	-0.0327	0.0795
320	Roll	0.0734	-0.0677	0.1411
320	Yaw	0.0694	-0.0515	0.1209

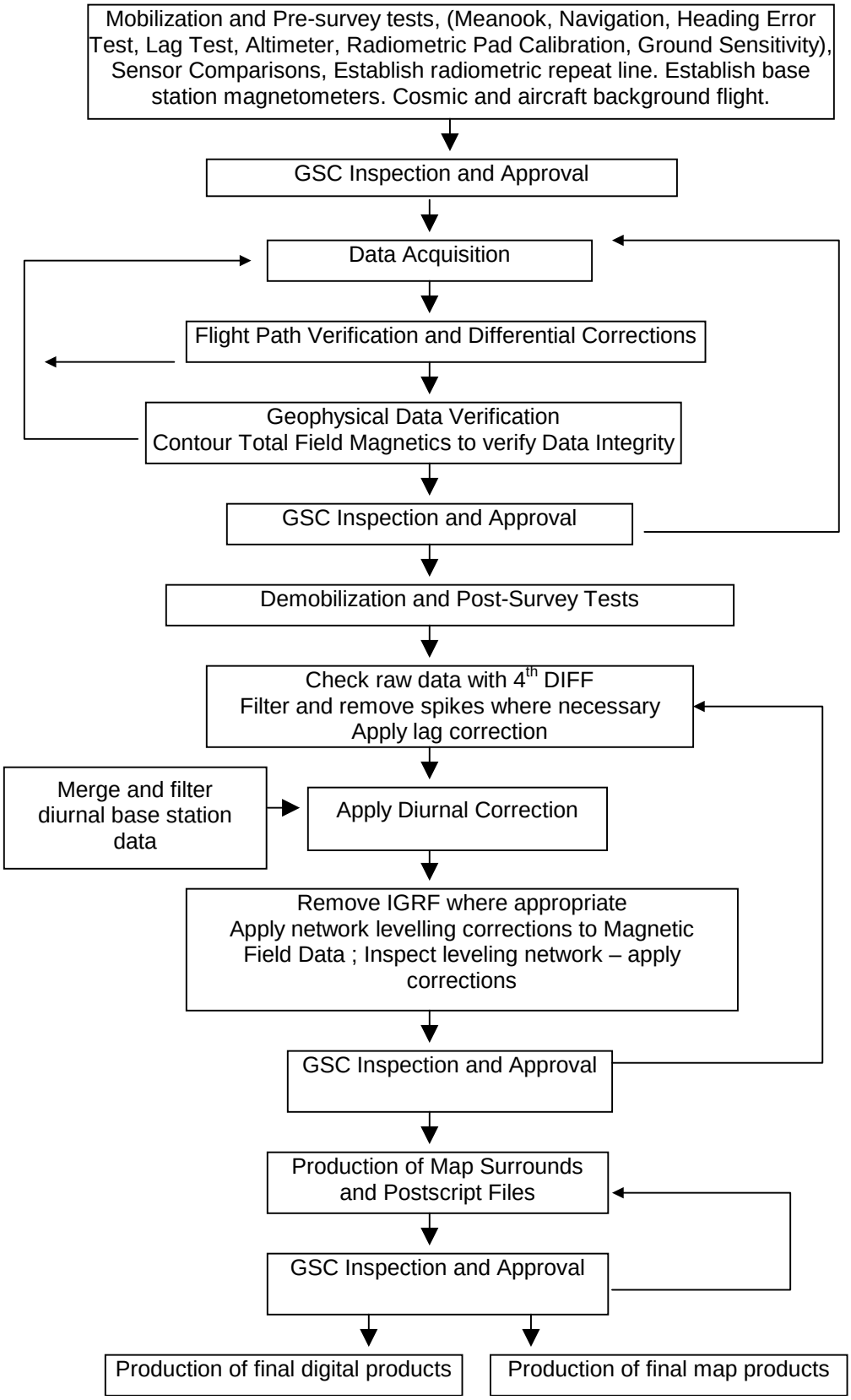
APPENDIX E

PROCESSING FLOW CHARTS

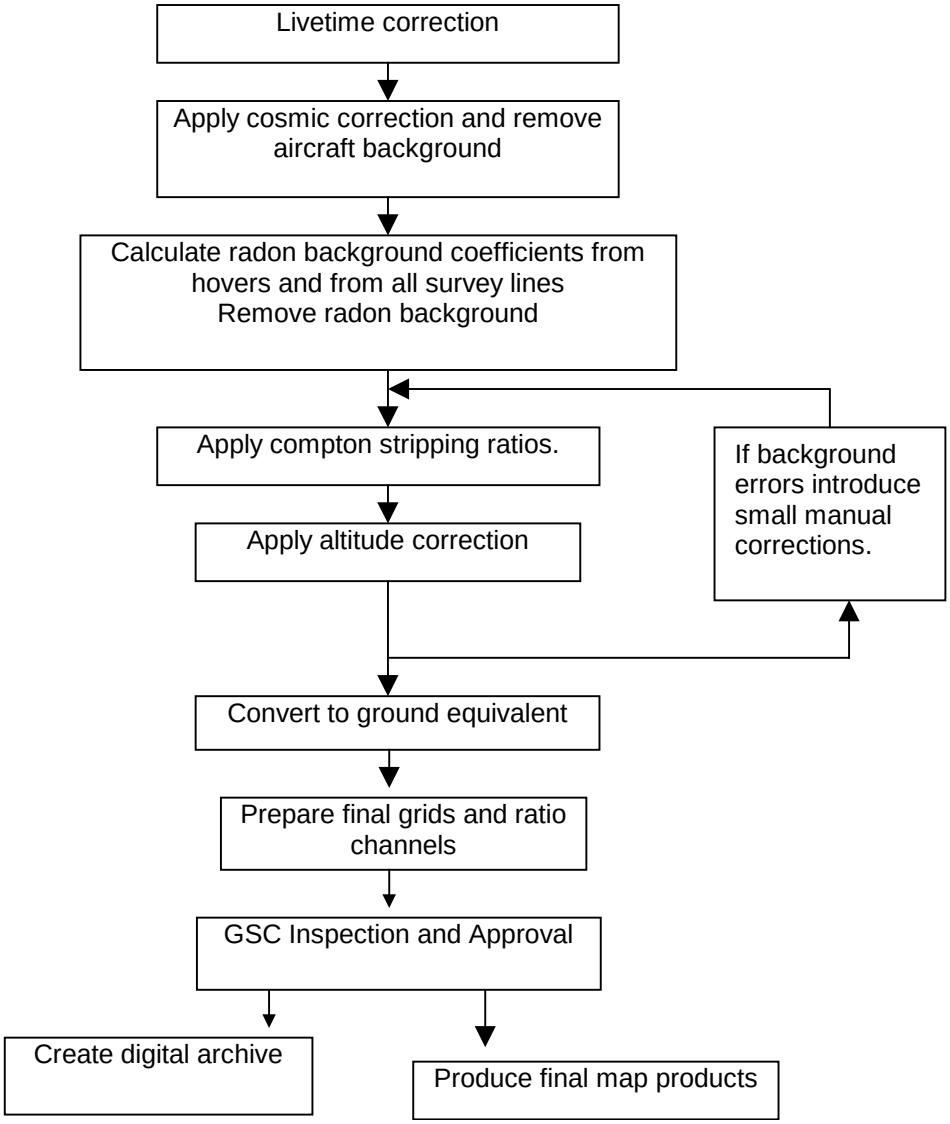
APPENDIX E

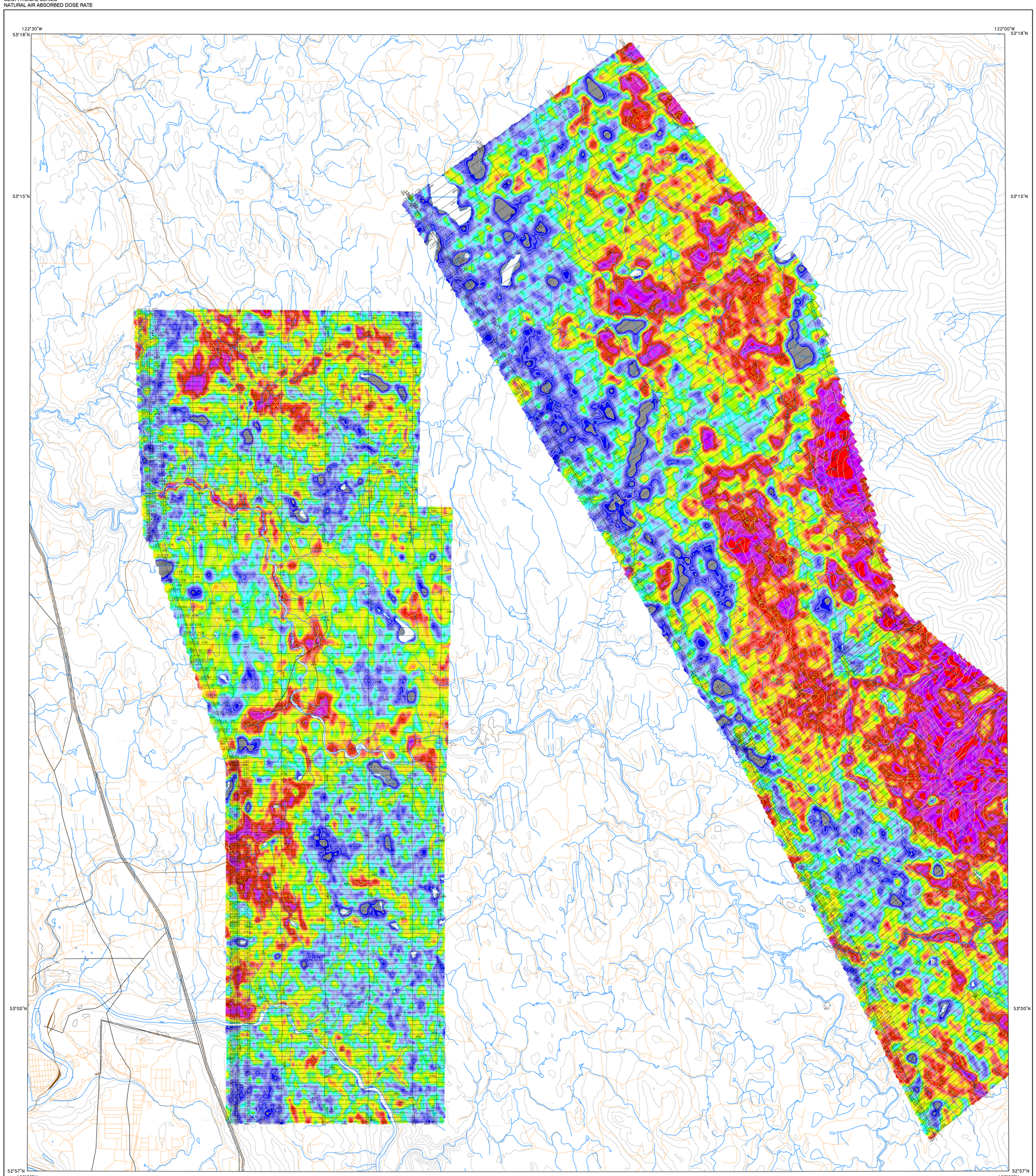
PROCESSING FLOW CHARTS

Survey Procedures and Magnetic Processing



Spectrometer Processing





GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

High Sensitivity Airborne Gamma-Ray Spectrometric and Aeromagnetic Surveys
Central British Columbia, 2004 - 2005

In 2004 and 2005, Fugro Airborne Surveys completed nine multi-sensor airborne geophysical surveys in the central region of British Columbia for the Geological Survey of Canada, the British Columbia and Yukon Chamber of Mines, Yekooche First Nation, and five industry partners, including Serengeti Resources Inc., Yankee Hat Minerals Ltd.,Richfield Ventures Corp.,GWR Resources Inc., and Amarc Resources Ltd. The Geological Survey of Canada provided survey supervision and quality control. The purpose of the surveys was to obtain quantitative gamma-ray spectrometric and aeromagnetic data. The surveys were flown over two seasons, from September 18 to November 17, 2004 and June 15 to August 8, 2005 using AStar 350-B2 and 350-B3 helicopters, C-GECL and C-FGSC.

Gamma-ray Spectrometric Data

The airborne gamma-ray measurements were made with an Exploranium GR820 gamma-ray spectrometer using nine 102 x 102 x 406 mm NaI (Tl) crystals. The main detector array consisted of eight crystals (total volume 33.6 litres). One crystal (total volume 4.2 litres), shielded by the main array, was used to detect variations in background radiation caused by atmospheric radon. The system constantly monitored the natural potassium peak for each crystal, and using a Gaussian least squares algorithm, adjusted the gain for each crystal.

Potassium is measured directly from the 1460 keV gamma-ray photons emitted by 40K, whereas uranium and thorium are measured indirectly from gamma-ray photons emitted by daughter products (214Bi for uranium and 208Tl for thorium). Although these daughters are far down their respective decay chains, they are assumed to be in equilibrium with their parents; thus gamma-ray spectrometric measurements of uranium and thorium are referred to as equivalent uranium and equivalent thorium, i.e. eU and eTh. The energy windows used to measure potassium, uranium and thorium are:

Potassium (^{40}K) 1360 - 1560 keV
Uranium (^{214}Bi) 1660 - 1860 keV
Thorium (^{208}Tl) 2410 - 2810 keV

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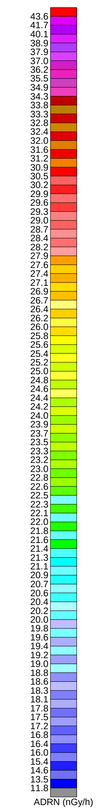
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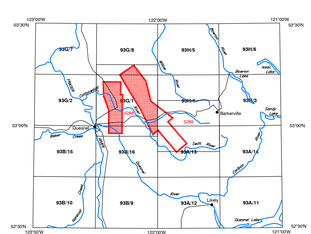
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Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < / 42500



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

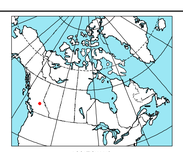
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NATURAL AIR ABSORBED DOSE RATE

COTTONWOOD
BRITISH COLUMBIA

93G/1, 93G/8, 93B/16

This airborne geophysical survey and the production of this map were funded by Richfield Ventures Corp.


LOCATION MAP

GEOPHYSICAL SERIES - NTS 93G/1, 93G/8 AND 93B/16 - COTTONWOOD
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NATURAL AIR ABSORBED DOSE RATE

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilometres

NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
North American Datum 1983
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Projection universel transverse de Mercator
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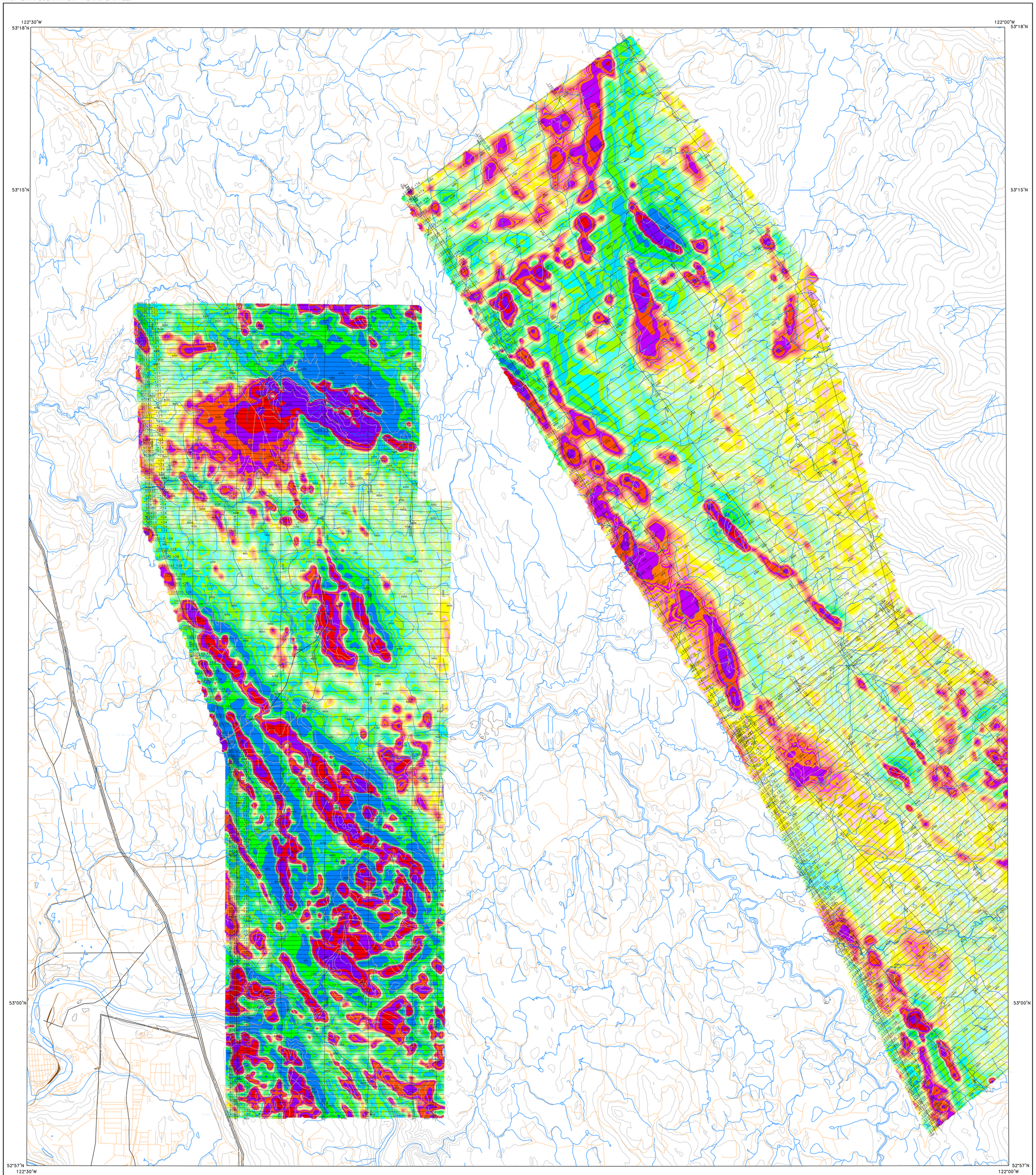
Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

OPEN FILE
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5288
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GEOPHYSICAL SERIES
FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD



GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

High Sensitivity Airborne Gamma-Ray Spectrometric and Aeromagnetic Surveys
Central British Columbia, 2004 - 2005

In 2004 and 2005, Fugro Airborne Surveys completed nine multi-sensor airborne geophysical surveys in the central region of British Columbia for the Geological Survey of Canada, the British Columbia and Yukon Chamber of Mines, Yekooche First Nation, and five industry partners, including Serengeti Resources Inc., Yankee Hat Minerals Ltd.,Richfield Ventures Corp.,GWR Resources Inc., and Amarc Resources Ltd. The Geological Survey of Canada provided survey supervision and quality control. The purpose of the surveys was to obtain quantitative gamma-ray spectrometric and aeromagnetic data. The surveys were flown over two seasons, from September 18 to November17, 2004 and June 15 to August 8, 2005 using AStar 350-B2 and 350-B3 helicopters, C-GECL and C-FGSC.

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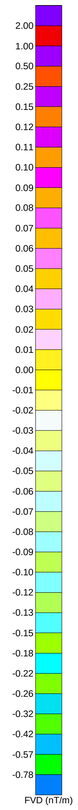
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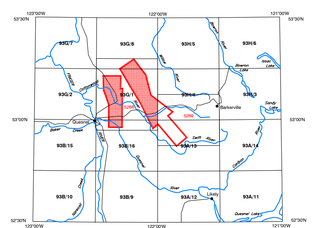
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FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD

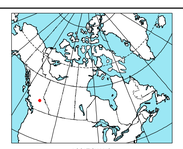
COTTONWOOD
BRITISH COLUMBIA

93G/1, 93G/8, 93B/16

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RICHFIELD

Natural Resources Canada / Ressources naturelles Canada
Canada



LOCATION MAP

GEOPHYSICAL SERIES - NTS 93G/1, 93G/8 AND 93B/16 - COTTONWOOD
BRITISH COLUMBIA

FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilometres

NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
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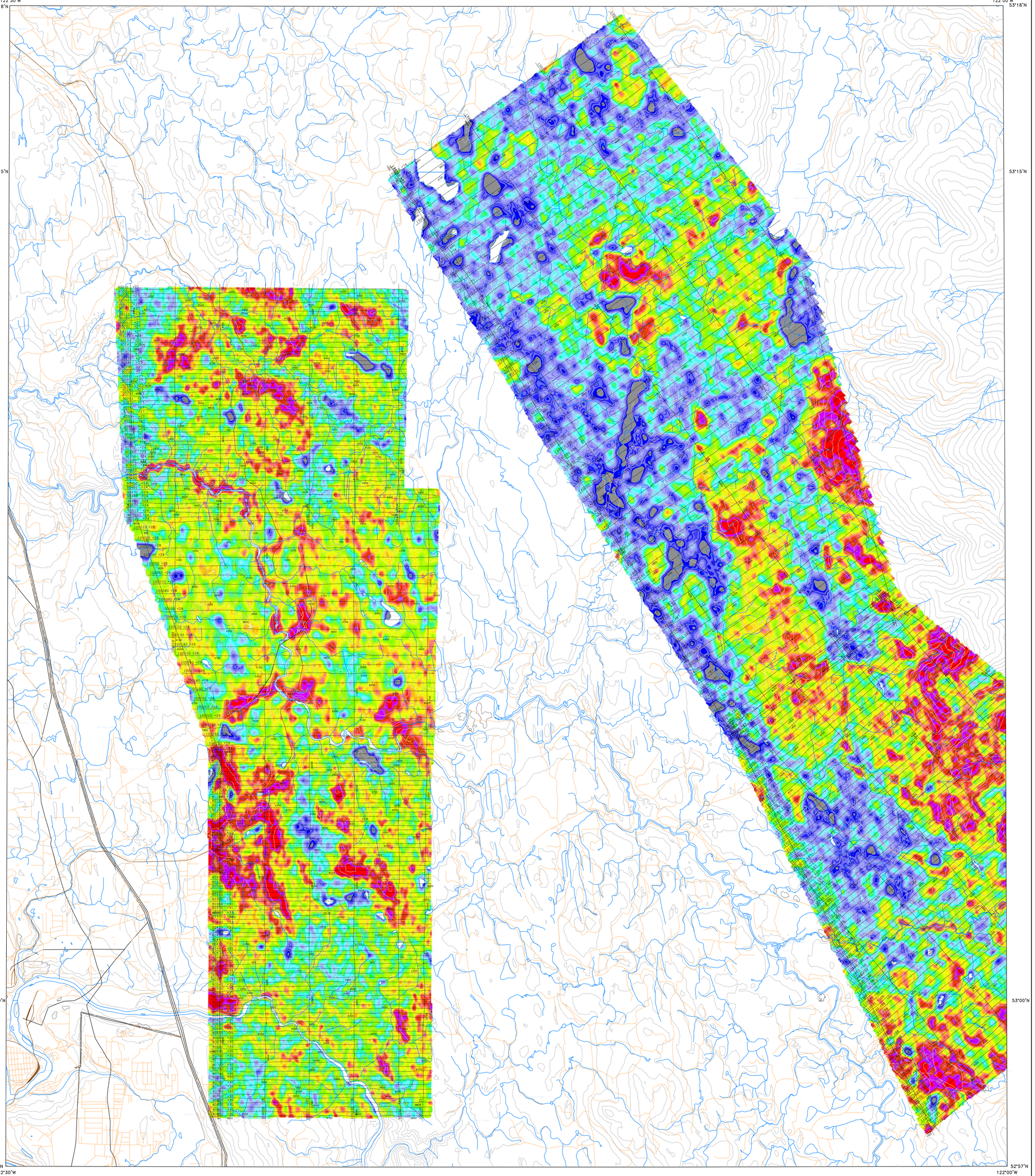
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GEOPHYSICAL SERIES
POTASSIUM

122°30'W
122°00'W
53°18'N
53°15'N
53°00'N
52°57'N



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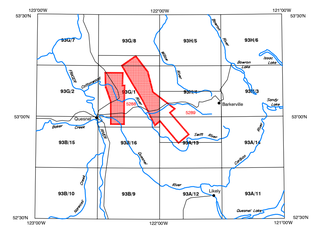
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Planimetric Symbols

Topographic Contour
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RICHFIELD

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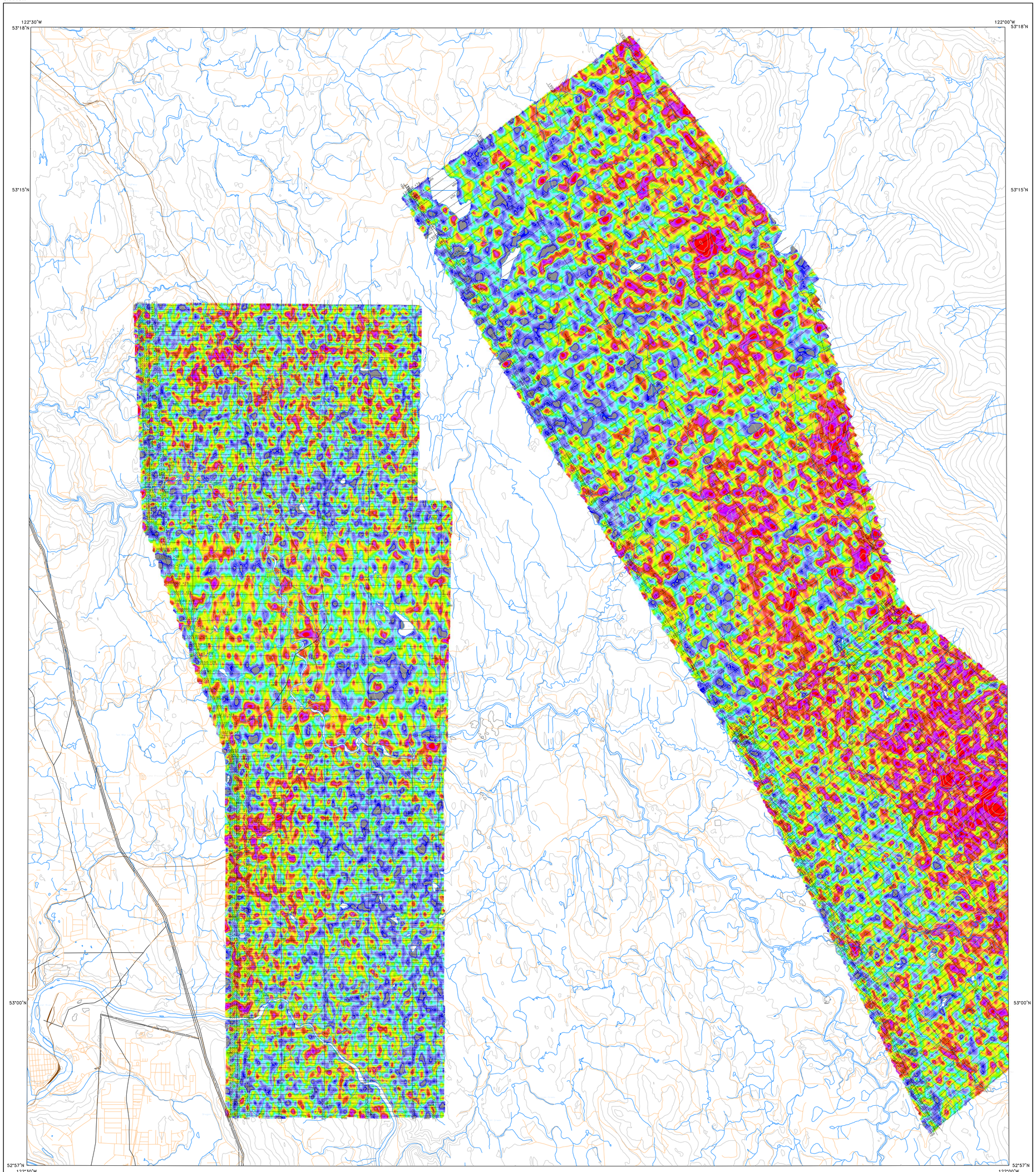
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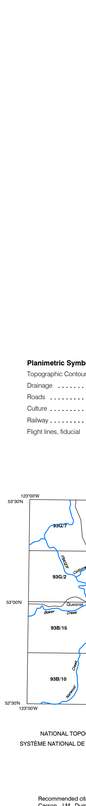
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GEOPHYSICAL SERIES
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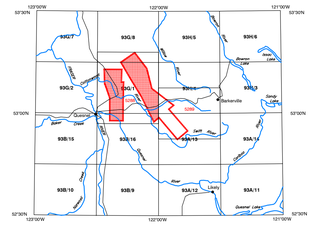
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URANIUM

COTTONWOOD
BRITISH COLUMBIA

93G/1, 93G/8, 93B/16

This airborne geophysical survey and the production of this map were funded by Richfield Ventures Corp.

RICHFIELD

Natural Resources Canada / Ressources naturelles Canada
Canada


LOCATION MAP

GEOPHYSICAL SERIES - NTS 93G/1, 93G/8 AND 93B/16 - COTTONWOOD
BRITISH COLUMBIA

URANIUM

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilomètres

NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada 2006

Projection universel transverse de Mercator
Système de référence géodésique nord-américain, 1983
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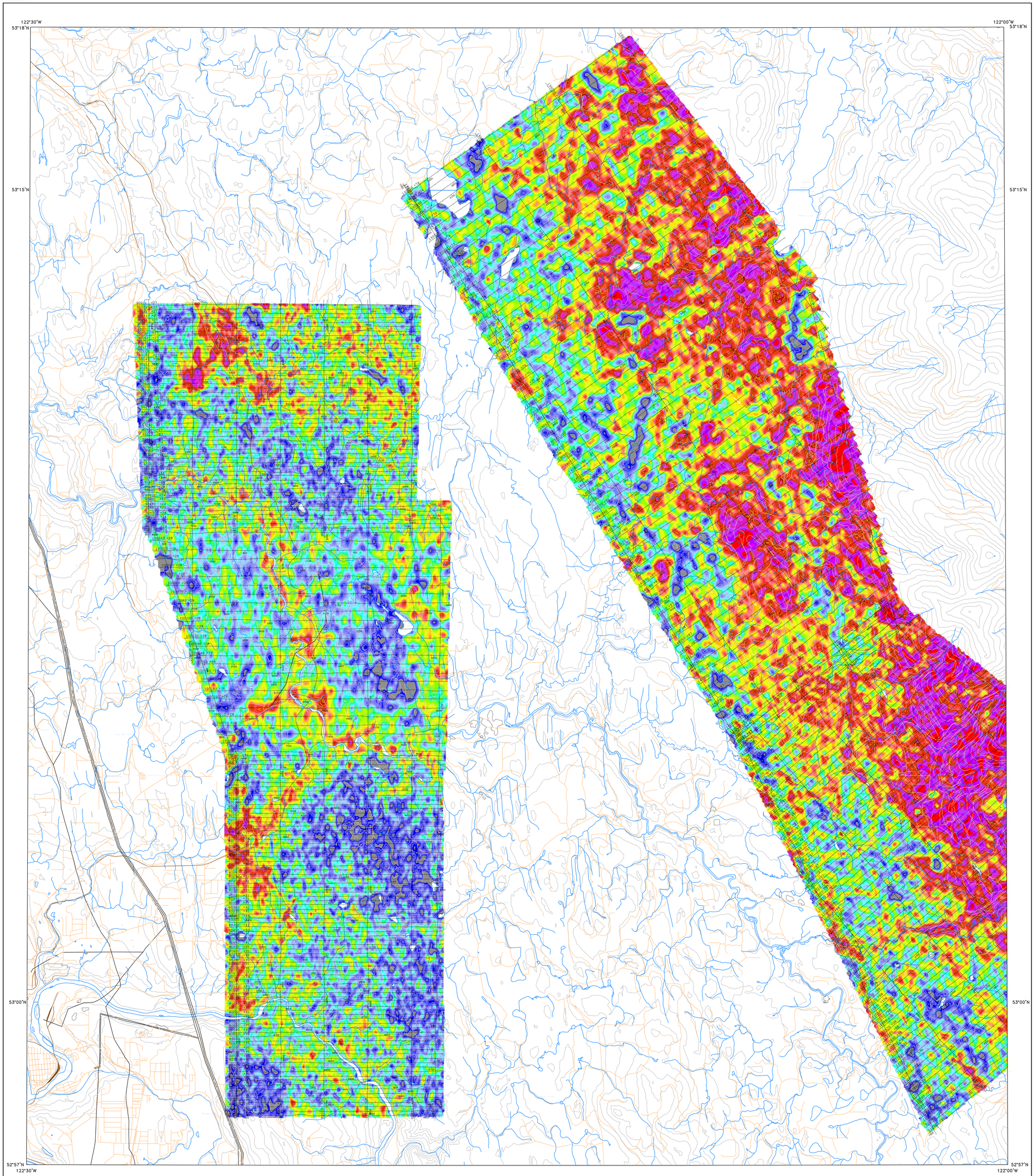
Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

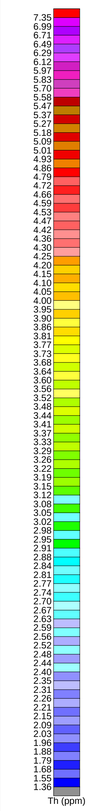
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5288
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2006
SHEET 3 OF 10
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GEOPHYSICAL SERIES
THORIUM





GEOLOGICAL SURVEY OF CANADA — COMMISSION GÉOLOGIQUE DU CANADA

High Sensitivity Airborne Gamma-Ray Spectrometric and Aeromagnetic Surveys
Central British Columbia, 2004 - 2005

In 2004 and 2005, Fugro Airborne Surveys completed nine multi-sensor airborne geophysical surveys in the central region of British Columbia for the Geological Survey of Canada, the British Columbia and Yukon Chamber of Mines, Yekooche First Nation, and five industry partners, including Serengeti Resources Inc., Yankee Hat Minerals Ltd.,Richfield Ventures Corp.,GWR Resources Inc., and Amarc Resources Ltd. The Geological Survey of Canada provided survey supervision and quality control. The purpose of the surveys was to obtain quantitative gamma-ray spectrometric and aeromagnetic data. The surveys were flown over two seasons, from September 18 to November17, 2004 and June 15 to August 8, 2005 using AStar 350-B2 and 350-B3 helicopters, C-GECL and C-FGSC.

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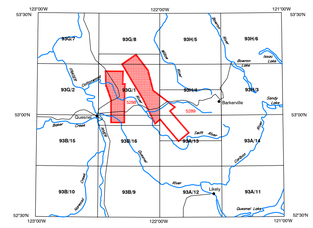
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Data Presentation

Colour levels and contours were calculated for each grid and combined with map surround information to create postscript plot files, which were plotted using HP DesignJet colour plotters.

Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < … 42500



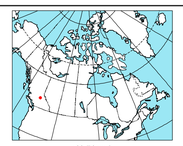
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
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RICHFIELD

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THORIUM

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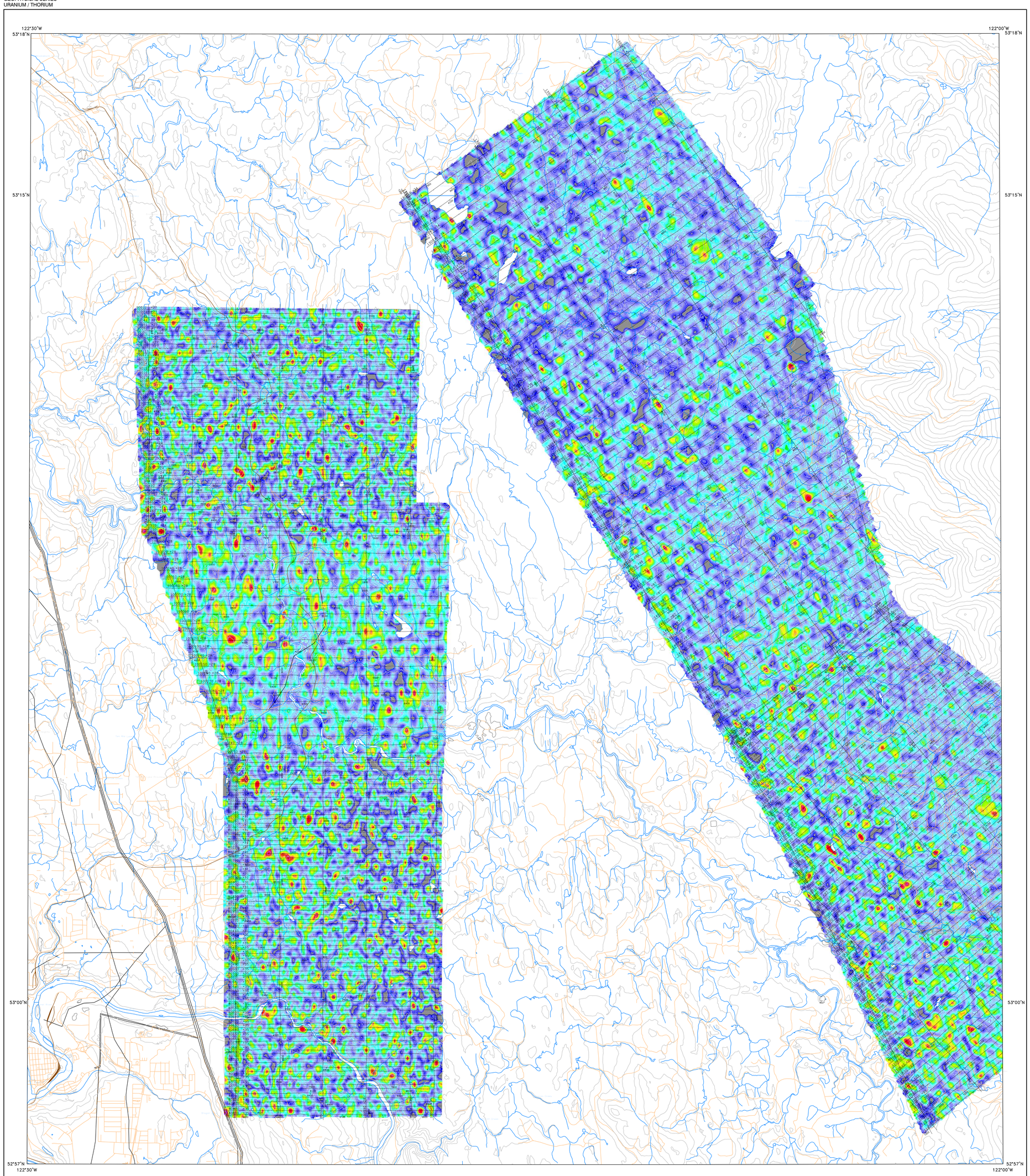
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THORIUM

COTTONWOOD
BRITISH COLUMBIA

93G/1, 93G/8, 93B/16

GEOPHYSICAL SERIES
URANIUM / THORIUM



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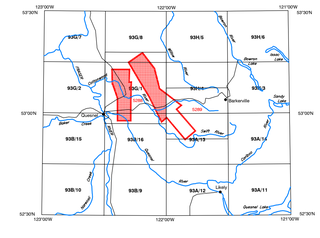
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Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < — 42500



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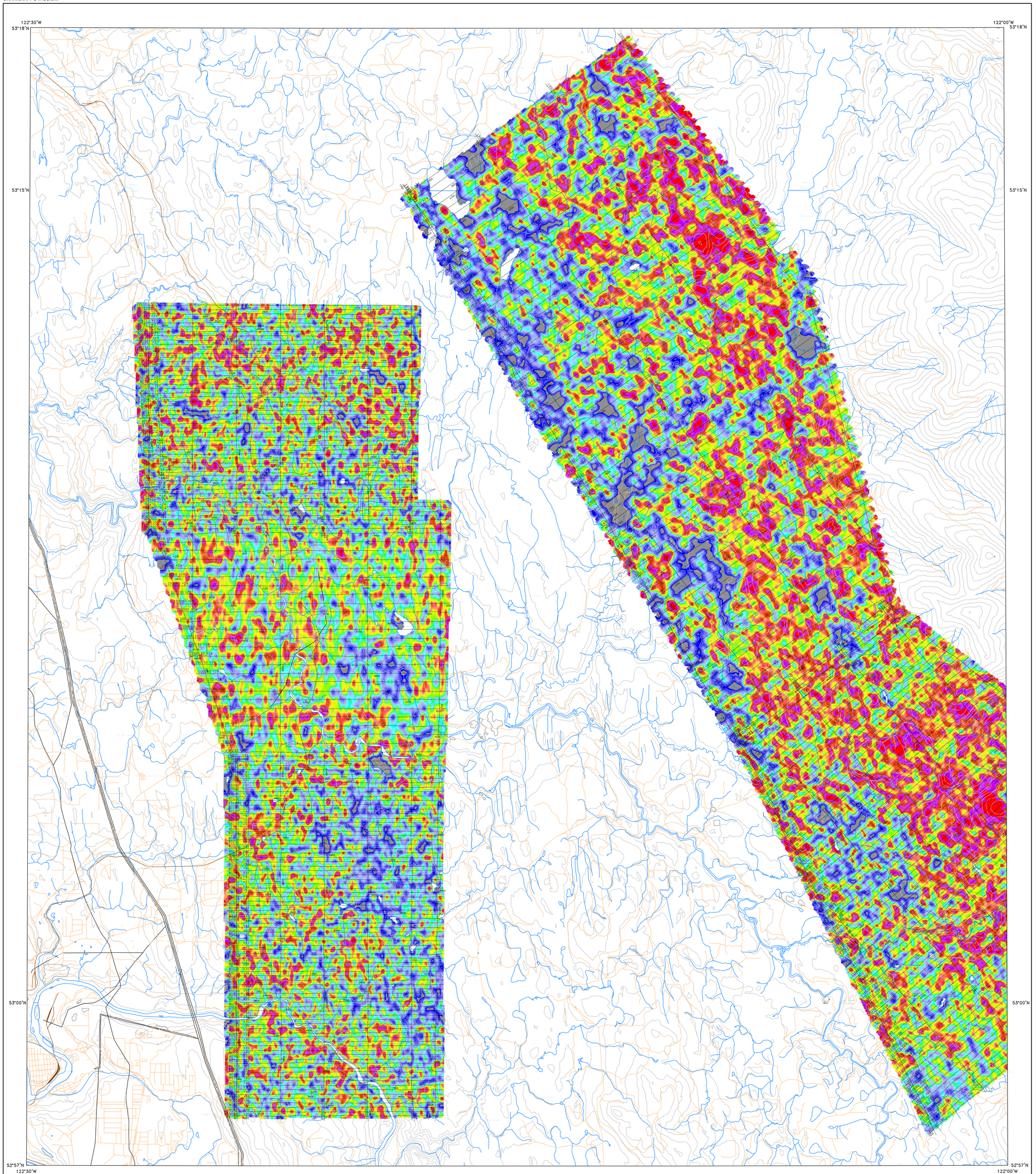
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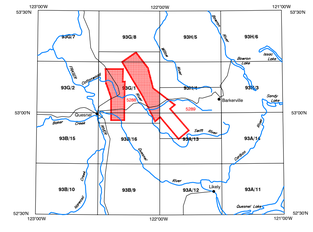
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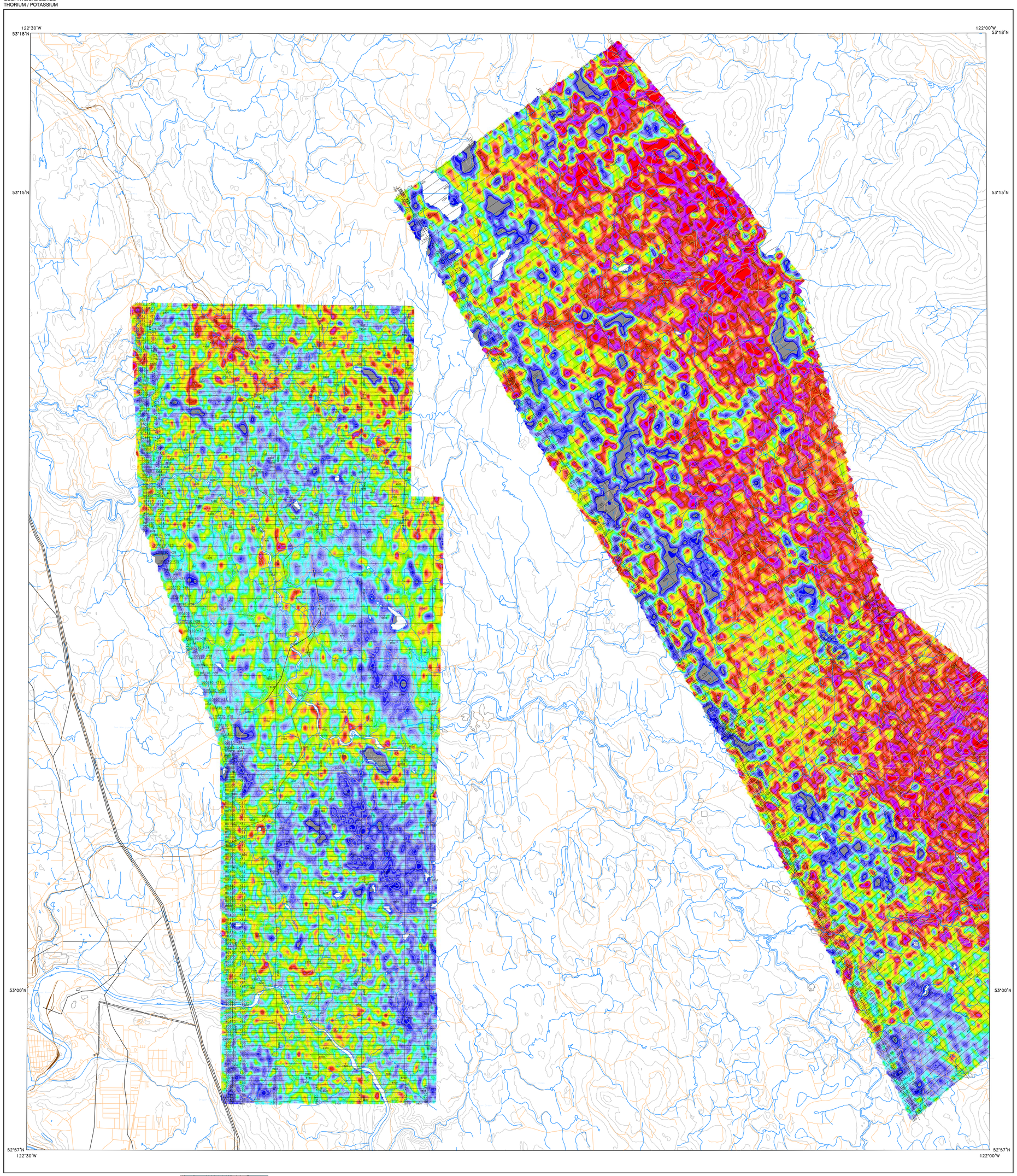
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Roads
Culture
Railway
Flight lines, fiducial — 10100 < — 42500


122°30'W
122°00'W
121°30'W
53°30'N
53°00'N
52°30'N
93G/7
93G/8
93H/5
93H/6
93G/2
93G/1
93G/16
93H/3
93B/15
93B/14
93A/13
93A/14
93B/10
93B/9
93A/12
93A/11
Blackwater Lake
Quesnel Lake
Barkerville
Mount Murray
Mount Tom
Mount Agnes
Mount Sheba
Mount Dunn
Mount Bowman
Mount Lowe
Mount Ball
Mount Hedley
Mount Lawrence
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Positional Data

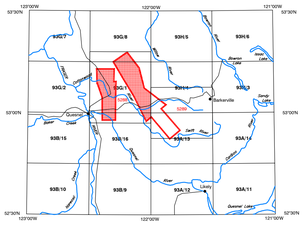
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Colour levels and contours were calculated for each grid and combined with map surround information to create postscript plot files, which were plotted using HP DesignJet colour plotters.

Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < / 4550



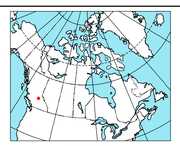
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

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This airborne geophysical survey and the production of this map were funded by Richfield Ventures Corp.

RICHFIELD

Natural Resources Canada / Ressources naturelles Canada
Canada


LOCATION MAP

GEOPHYSICAL SERIES - NTS 93G/1, 93G/8 AND 93B/16 - COTTONWOOD BRITISH COLUMBIA

THORIUM / POTASSIUM

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilomètres

NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada 2006

Projection universel transverse de Mercator
Système de référence géodésique nord-américain, 1983
© Sa Majesté la Reine du chef du Canada 2006

Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

OPEN FILE
DOSSIER PUBLIC
5288
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2006
SHEET 7 OF 10
FEUILLET 7 DE 10

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THORIUM / POTASSIUM

COTTONWOOD
BRITISH COLUMBIA

93G/1, 93G/8, 93B/16

122°30'W
53°18'N
122°00'W
53°18'N
53°15'N
53°15'N
53°00'N
53°00'N
52°57'N
122°30'W
52°57'N
122°00'W

GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

High Sensitivity Airborne Gamma-Ray Spectrometric and Aeromagnetic Surveys
Central British Columbia, 2004 - 2005

In 2004 and 2005, Fugro Airborne Surveys completed nine multi-sensor airborne geophysical surveys in the central region of British Columbia for the Geological Survey of Canada, the British Columbia and Yukon Chamber of Mines, Yekooche First Nation, and five industry partners, including Serengeti Resources Inc., Yankee Hat Minerals Ltd.,Richfield Ventures Corp.,GWR Resources Inc., and Amarc Resources Ltd. The Geological Survey of Canada provided survey supervision and quality control. The purpose of the surveys was to obtain quantitative gamma-ray spectrometric and aeromagnetic data. The surveys were flown over two seasons, from September 18 to November17, 2004 and June 15 to August 8, 2005 using AStar 350-B2 and 350-B3 helicopters, C-GECL and C-FGSC.

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The airborne gamma-ray measurements were made with an Exploranium GR820 gamma-ray spectrometer using nine 102 x 102 x 406 mm NaI (Tl) crystals. The main detector array consisted of eight crystals (total volume 33.6 litres). One crystal (total volume 4.2 litres), shielded by the main array, was used to detect variations in background radiation caused by atmospheric radon. The system constantly monitored the natural potassium peak for each crystal, and using a Gaussian least squares algorithm, adjusted the gain for each crystal.

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Thorium (^{208}Tl) 2410 - 2810 keV

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Uranium 6.7 cps/ppm (2004) 8.4 cps/ppm (2005)
Thorium 3.6 cps/ppm (2004) 3.7 cps/ppm (2005)

Corrected data were filtered and interpolated to a 100m grid for the 1:250 000 scale maps and to a 50m grid for the 1:20 000 and 1:50 000 scale maps. The results of an airborne gamma-ray spectrometer survey represent the average surface concentrations that are influenced by varying amounts of outcrop, overburden, vegetation cover, soil moisture and surface water. As a result the measured concentrations are usually lower than the actual bedrock concentration. The total air absorbed dose rate in nanograys per hour was produced from measured counts between 410 and 2810 keV.

Magnetic Data

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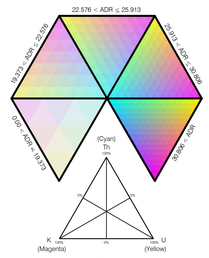
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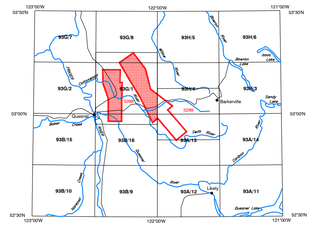
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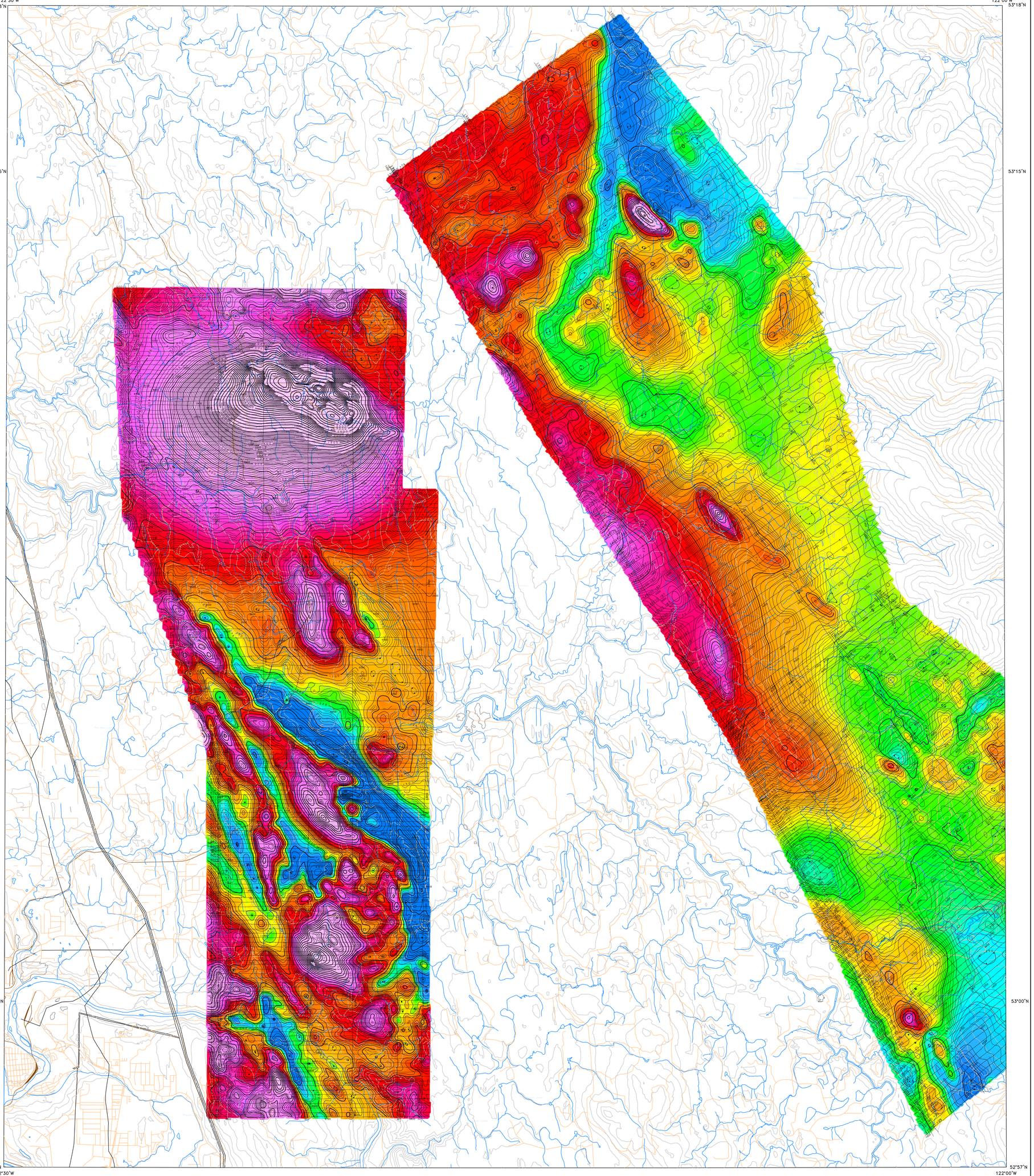
Relative Concentrations
Absorption Dose Rate (ADR) = 13.1 * K(%) +
5.67 * eU(ppm) +
2.49 * eTh(ppm)

Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < / 42500


93G/7
93G/8
93H/5
93H/6
93G/2
93G/1
93H/4
93H/3
Fraser Lake
Nechako River
Endako River
Francois Lake
Burns Lake
Babine Lake
Babine River
Babine Mountains
Fulton River
Tahtsa Lake
Tahtsa Reach
Ootsa Lake
Whitesail Lake
Tahtsa Range
Houston
Telkwa
Smithers
Bulkley River
Morice River
Morice Lake
Owen Lake
Ootsa Lake
Nechako Reservoir
Nechako River
Kenney Dam
Kemano
Kitimat
Kitimat Arm
Kitimat River
Kitimat Range
Kemano River
Kemano Bay
Gardner Canal
Gardner Inlet
Gardner Lake
Whitesail River
Whitesail Lake
93B/15
93B/16
93A/14
93B/10
93B/9
93A/12
93A/11
Lakes
Summer Lakes
Tahtsa Lake
Tahtsa Reach
Ootsa Lake
Whitesail Lake
Tahtsa Range
Houston
Telkwa
Smithers
Bulkley River
Morice River
Morice Lake
Owen Lake
Ootsa Lake
Nechako Reservoir
Nechako River
Kenney Dam
Kemano
Kitimat
Kitimat Arm
Kitimat River
Kitimat Range
Kemano River
Kemano Bay
Gardner Canal
Gardner Inlet
Gardner Lake
Whitesail River

GEOPHYSICAL SERIES
RESIDUAL TOTAL MAGNETIC FIELD



GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

High Sensitivity Airborne Gamma-Ray Spectrometric and Aeromagnetic Surveys
Central British Columbia, 2004 - 2005

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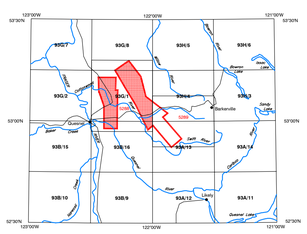
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Isomagnetic Lines

100 nT
25 nT
5 nT
Magnetic low

Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < 42500



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

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RESIDUAL TOTAL MAGNETIC FIELD

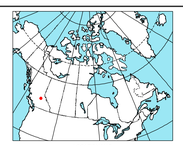
COTTONWOOD
BRITISH COLUMBIA

93G/1, 93G/8, 93B/16

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RICHFIELD VENTURES CORP.

Natural Resources Canada / Ressources naturelles Canada
Canada


LOCATION MAP

GEOPHYSICAL SERIES - NTS 93G/1, 93G/8 AND 93B/16 - COTTONWOOD
BRITISH COLUMBIA

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Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilometres
NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
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© Her Majesty the Queen in Right of Canada 2006

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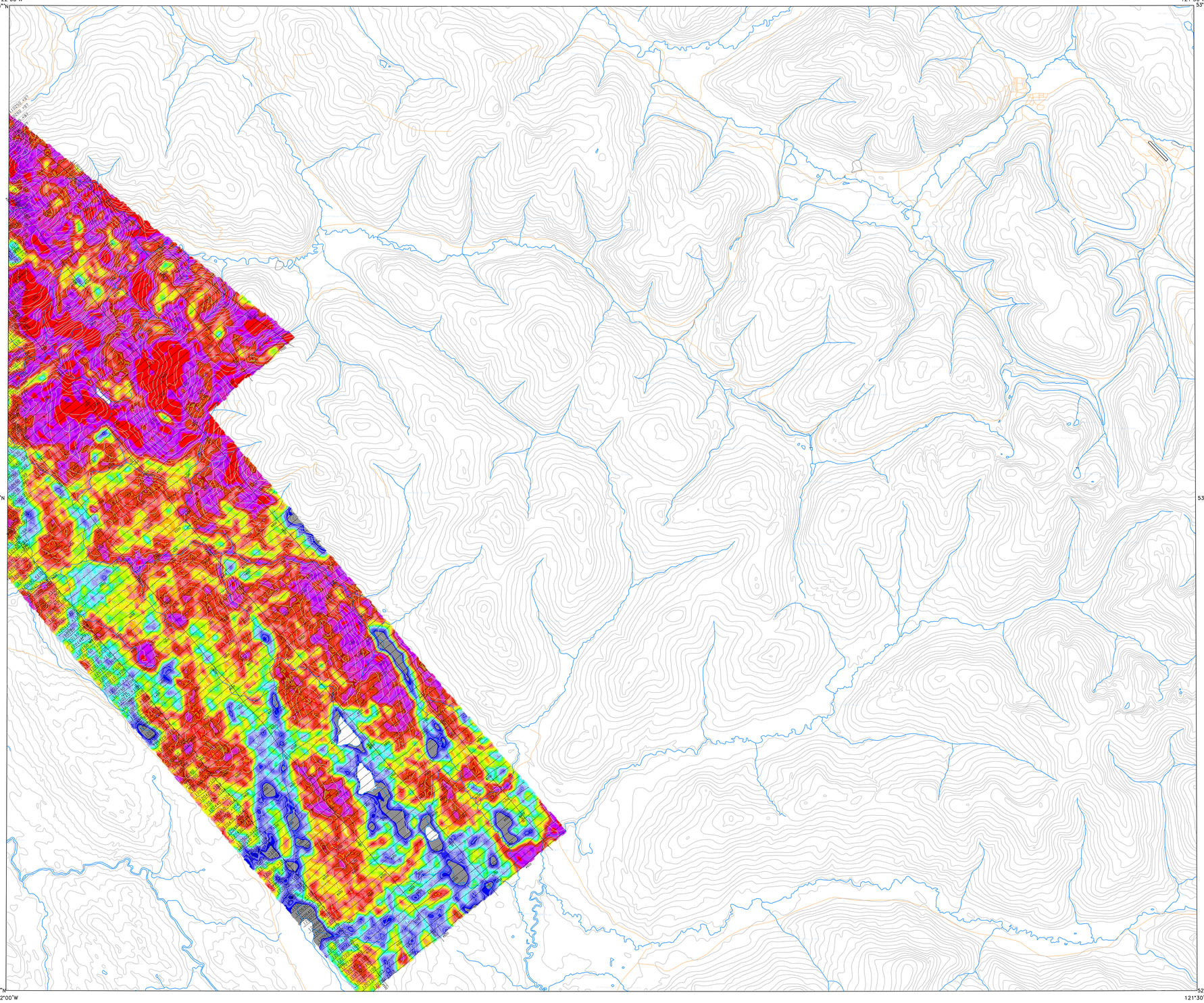
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GEOPHYSICAL SERIES
NATURAL AIR ABSORBED DOSE RATE

122°00'W
121°30'W
53°07'30"N
53°00'N
52°52'30"N



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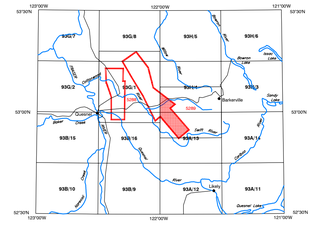
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Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < — 42500



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RICHFIELD

Natural Resources Canada / Ressources naturelles Canada
Canada


LOCATION MAP

GEOPHYSICAL SERIES - NTS 93H/4, 93A/13 - WELLS
BRITISH COLUMBIA

NATURAL AIR ABSORBED DOSE RATE

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilometres
NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada 2006

Projection universel transverse de Mercator
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Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

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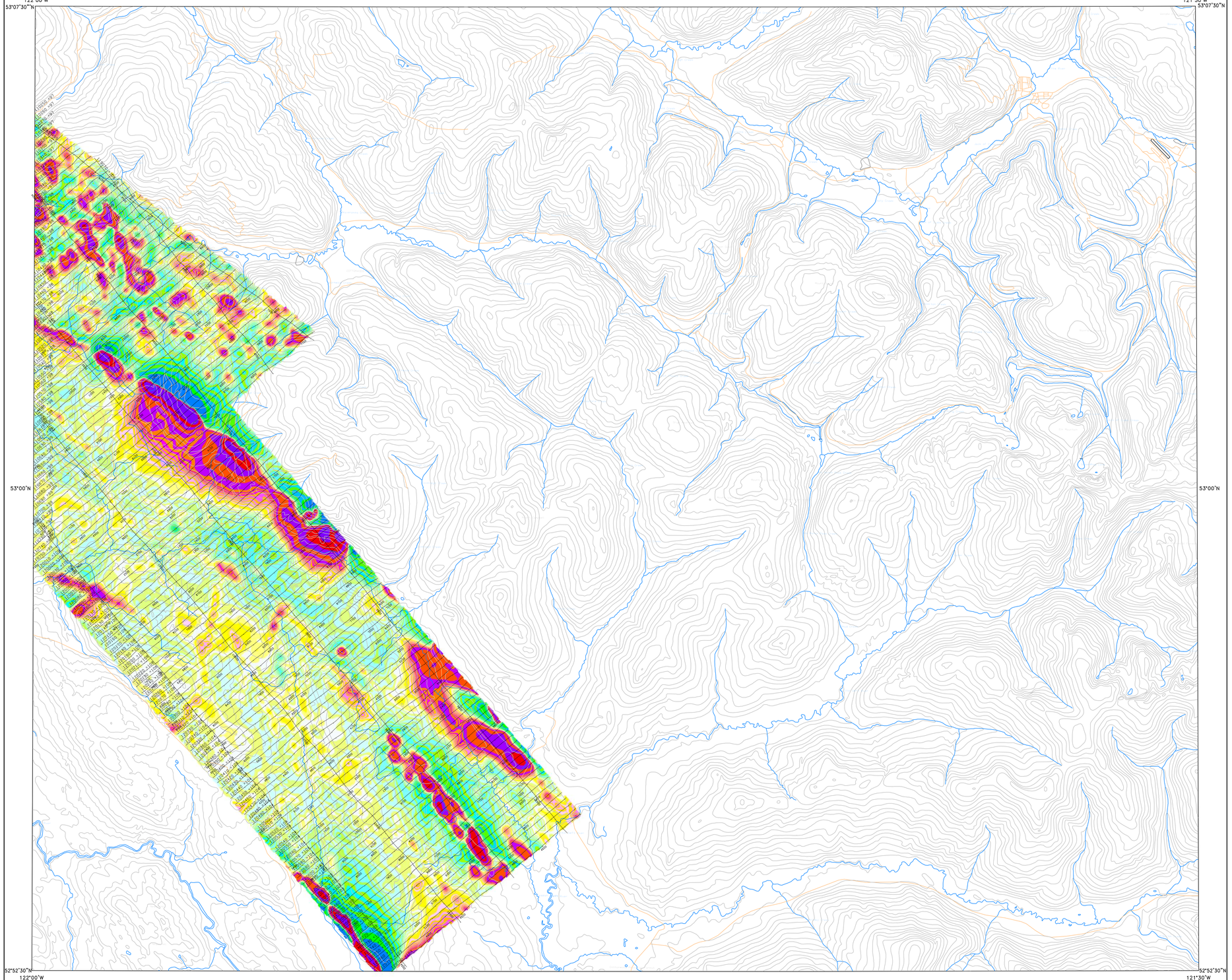
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WELLS
BRITISH COLUMBIA

93H/4, 93A/13

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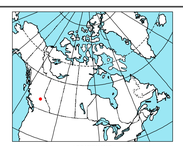


2.00
1.00
0.50
0.25
0.15
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.12
-0.13
-0.15
-0.18
-0.22
-0.26
-0.32
-0.42
-0.57
-0.78
FVD (nT/m)

This airborne geophysical survey and the production of this map were funded by Richfield Ventures Corp.

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Natural Resources Canada | Ressources naturelles Canada
Canada



GEOPHYSICAL SERIES - NTS 93H/4, 93A/13 - WELLS
BRITISH COLUMBIA

FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD

Scale 1:50 000 - Échelle 1/50 000

Kilometres 1 0 1 2 3 4 Kilomètres

NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada 2006

Projection universel transverse de Mercator
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Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

OPEN FILE
DOSSIER PUBLIC
5289
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2006

SHEET 10 OF 10
FEUILLET 10 DE 10

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GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

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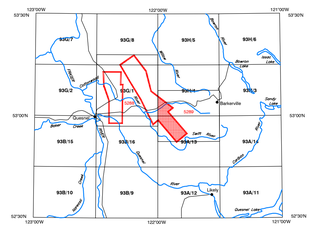
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Planimetric Symbols

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Roads
Culture
Railway
Flight lines, fiducial — 10100 < 42500



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

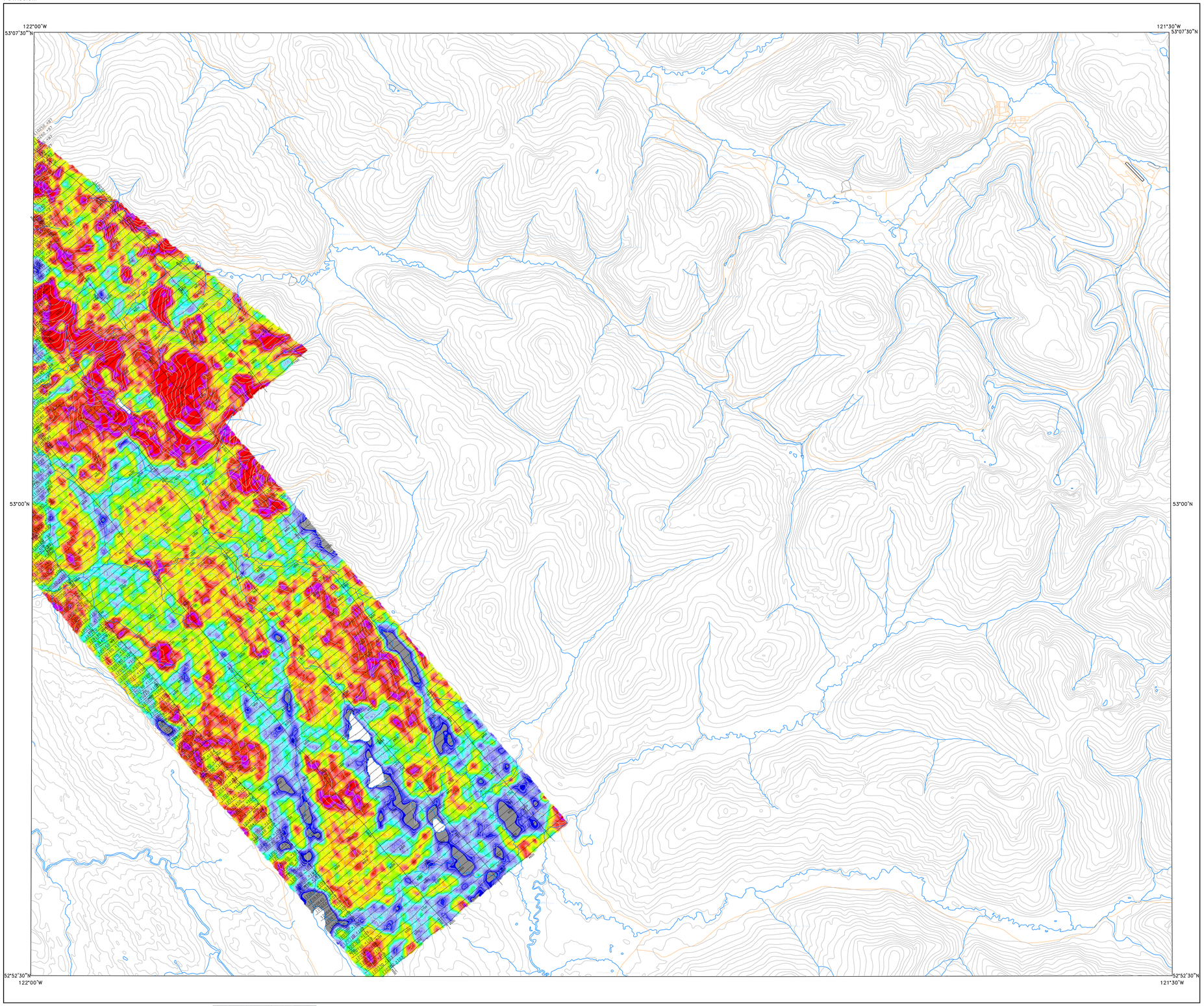
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FIRST VERTICAL DERIVATIVE OF THE MAGNETIC FIELD

WELLS
BRITISH COLUMBIA

93H/4, 93A/13

GEOPHYSICAL SERIES
POTASSIUM





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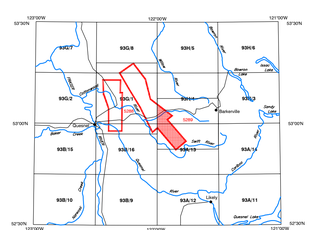
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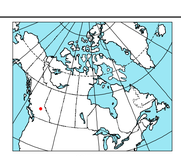
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RICHFIELD

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LOCATION MAP

GEOPHYSICAL SERIES - NTS 93H/4, 93A/13 - WELLS
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Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilomètres
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Universal Transverse Mercator Projection
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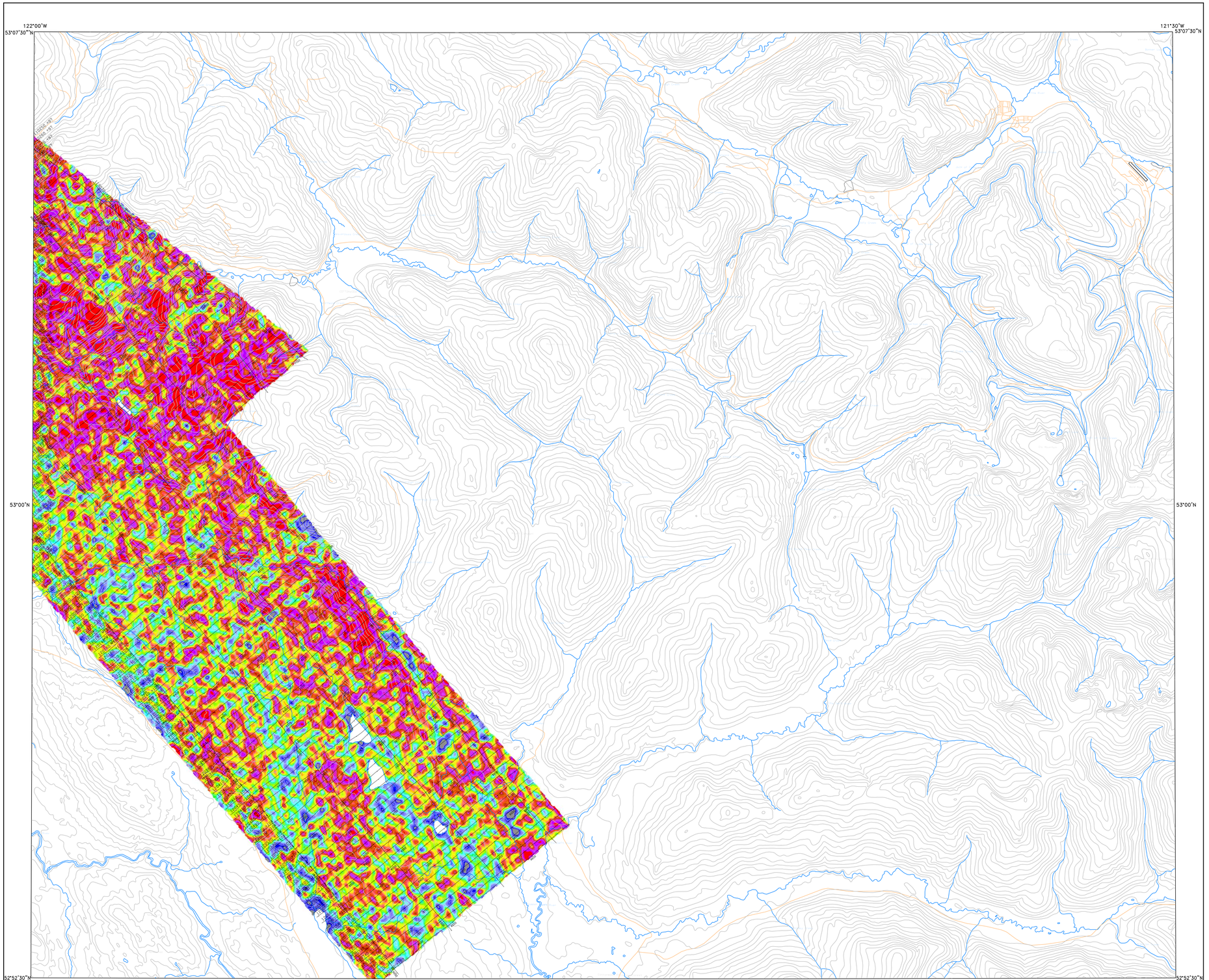
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POTASSIUM

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93H/4, 93A/13

GEOPHYSICAL SERIES
URANIUM



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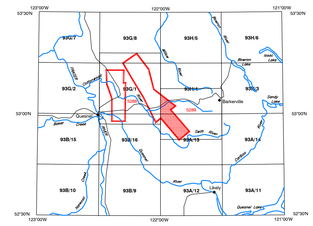
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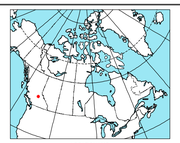
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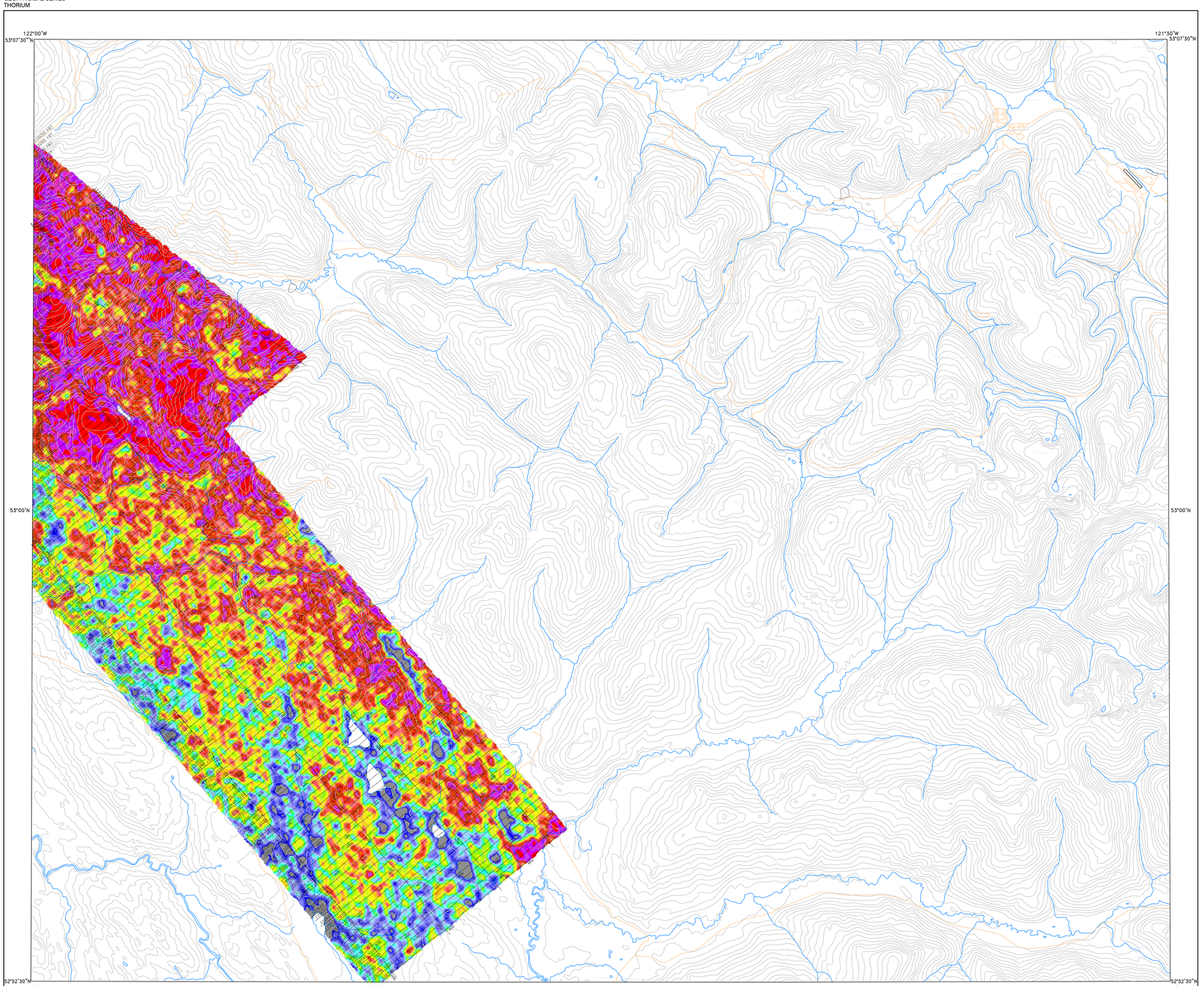
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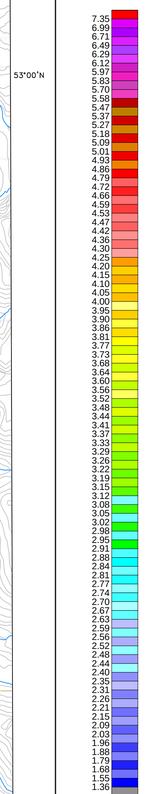
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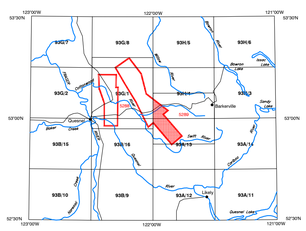
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Data Presentation

Colour levels and contours were calculated for each grid and combined with map surround information to create postscript plot files, which were plotted using HP DesignJet colour plotters.

Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < 42500



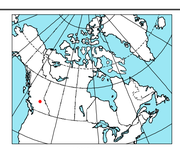
NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

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RICHFIELD

Natural Resources Canada / Ressources naturelles Canada
Canada



LOCATION MAP

GEOPHYSICAL SERIES - NTS 93H/4, 93A/13 - WELLS
BRITISH COLUMBIA

THORIUM

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilometres

NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada 2006

Projection universel transverse de Mercator
Système de référence géodésique nord-américain, 1983
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OPEN FILE
DOSSIER PUBLIC
5289
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2006
SHEET 4 OF 10
FEUILLET 4 DE 10

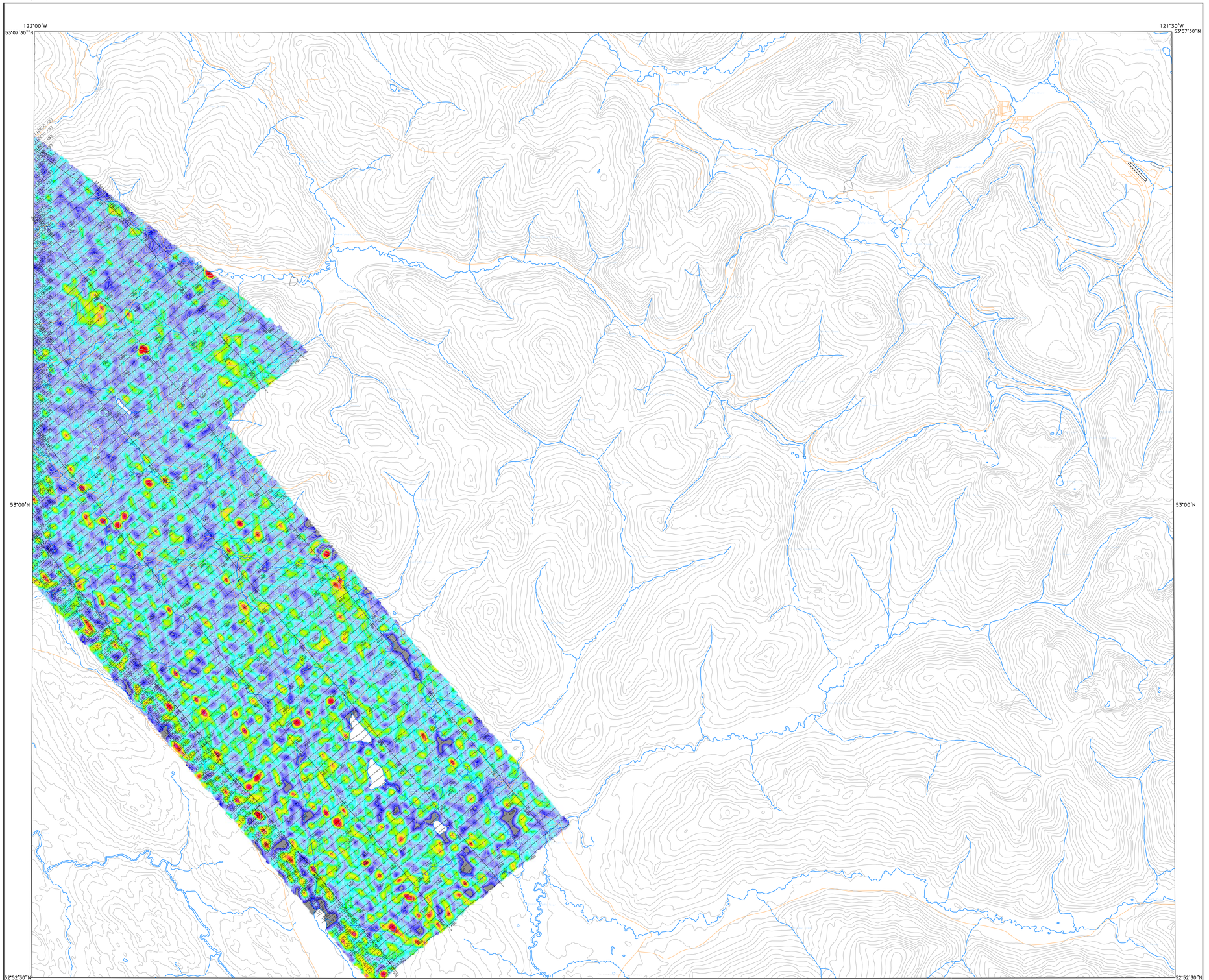
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THORIUM

WELLS
BRITISH COLUMBIA

93H/4, 93A/13



0.90
0.89
0.88
0.87
0.86
0.85
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0.09
0.08
0.07
0.06
0.05
0.04
0.03
U/Th

GEOLOGICAL SURVEY OF CANADA — COMMISSION GÉOLOGIQUE DU CANADA

High Sensitivity Airborne Gamma-Ray Spectrometric and Aeromagnetic Surveys
Central British Columbia, 2004 - 2005

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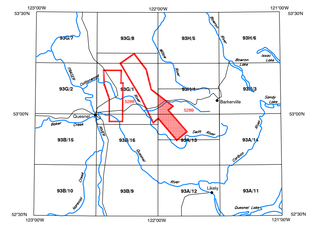
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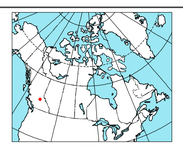
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RICHFIELD

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URANIUM / THORIUM

Scale 1:50 000 - Échelle 1/50 000
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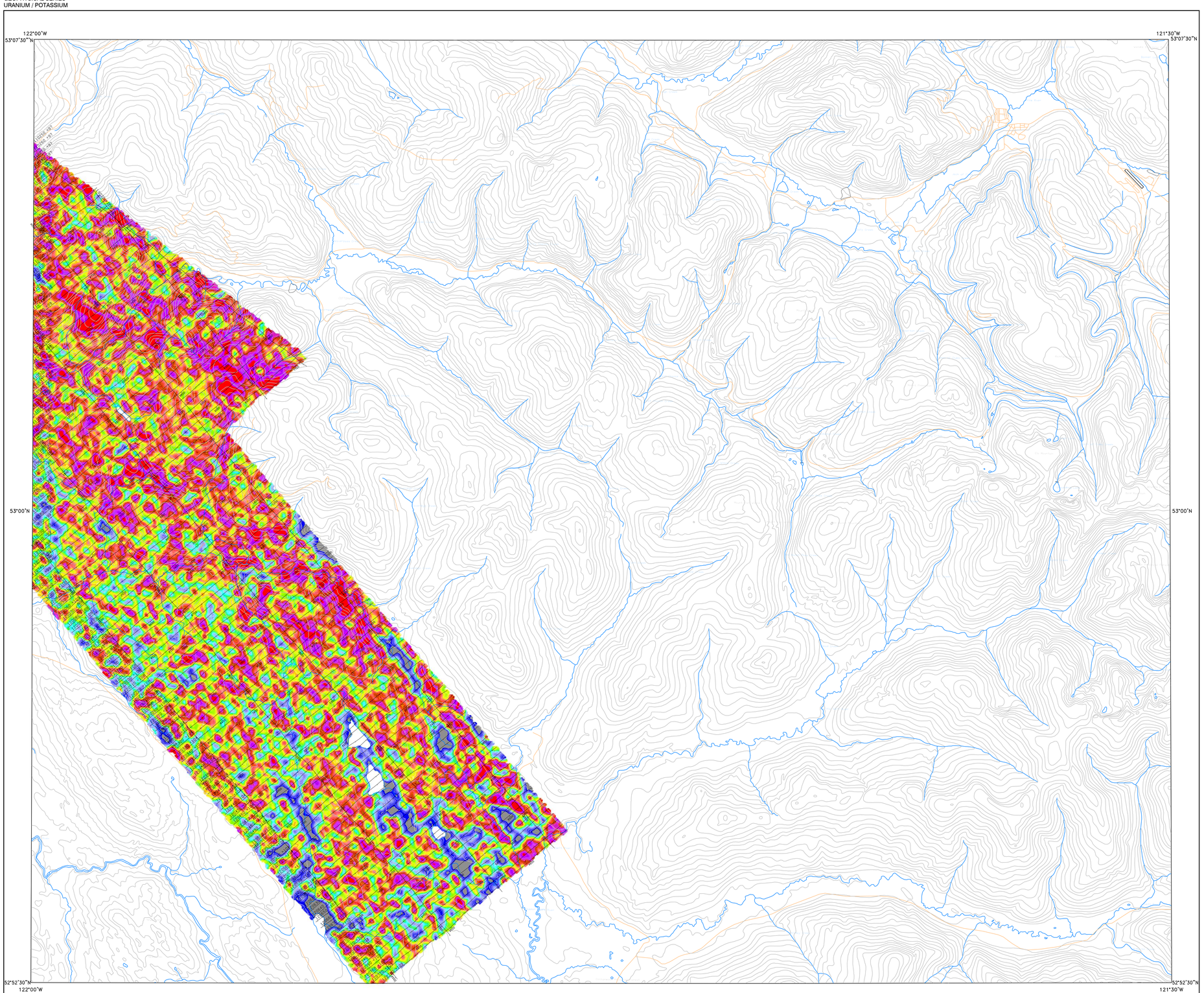
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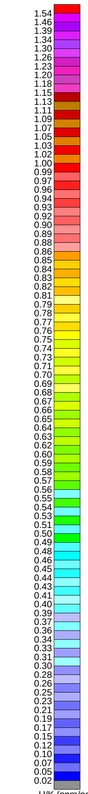
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URANIUM / THORIUM

WELLS
BRITISH COLUMBIA

93H/4, 93A/13





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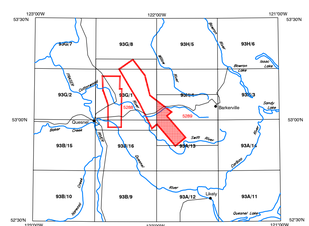
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Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < 42500



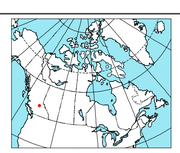
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SYSTEME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

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RICHFIELD

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GEOPHYSICAL SERIES - NTS 93H/4, 93A/13 - WELLS
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URANIUM / POTASSIUM

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilometres

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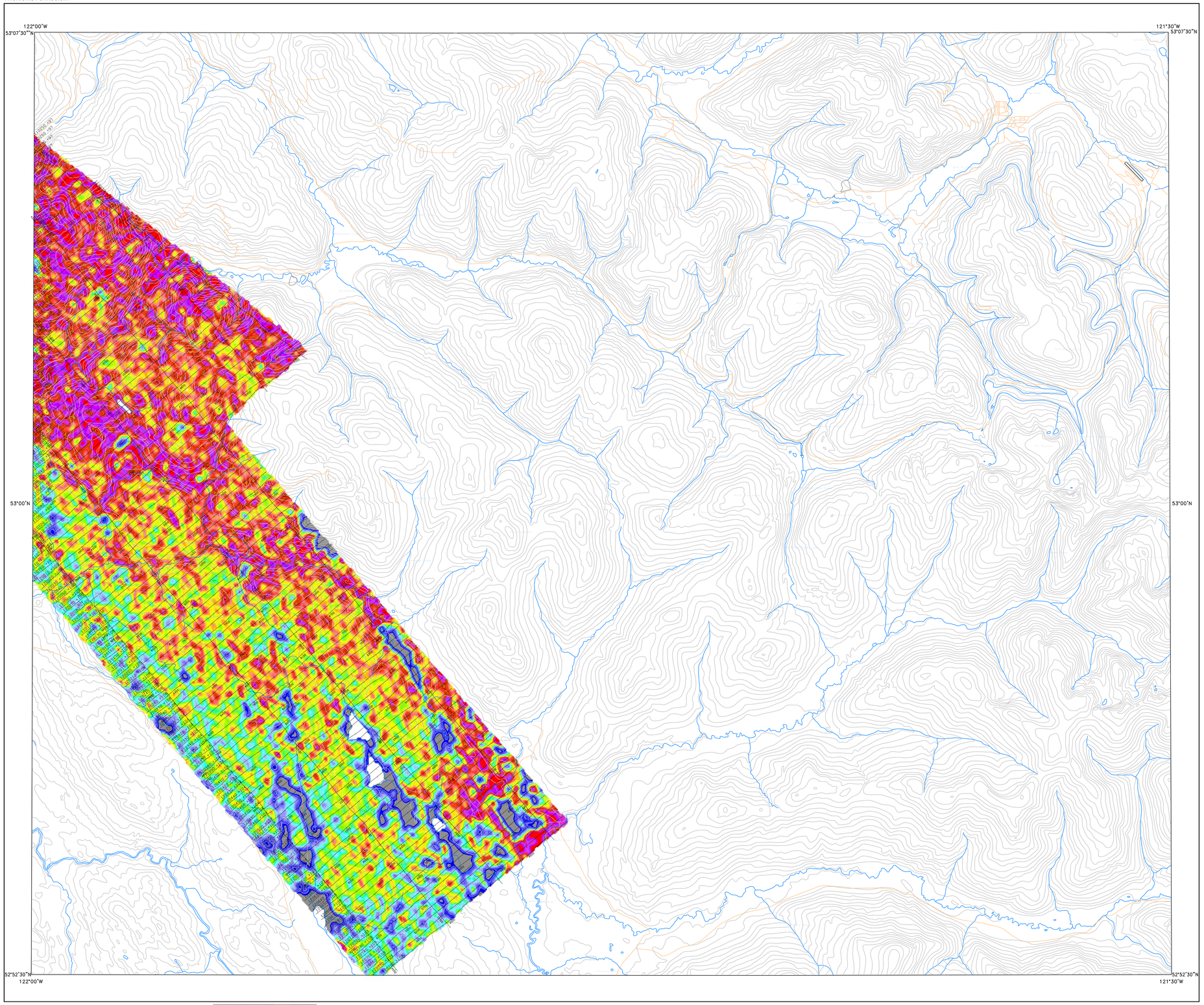
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URANIUM / POTASSIUM

WELLS
BRITISH COLUMBIA

93H/4, 93A/13

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THORIUM / POTASSIUM



7.18
6.90
6.68
6.52
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6.24
6.14
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2.46
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2.32
2.24
2.16
2.06
1.98
1.86
1.74
1.58
1.40
1.16
0.86
0.48
Th/K (ppm/pct)

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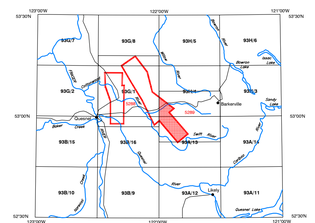
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Culture
Railway
Flight lines; fiducial — 10100 < — 42500



NATIONAL TOPOGRAPHICAL SYSTEM REFERENCE AND GEOPHYSICAL MAP INDEX
SYSTÈME NATIONAL DE RÉFÉRENCE CARTOGRAPHIQUE ET INDEX DES CARTES GÉOPHYSIQUES

Recommended citation:
Carson, J.M., Dumont, R., Potvin, J., Shives, R.B.K., Harvey, B.J.A. and Buckle, J.L. 2006: Geophysical Series - NTS 93H/4, 93A/13 - Wells, British Columbia; Geological Survey of Canada, Open File 5289, scale 1:50 000.

This airborne geophysical survey and the production of this map were funded by Richfield Ventures Corp.

RICHFIELD

Natural Resources Canada / Ressources naturelles Canada
Canada

LOCATION MAP

GEOPHYSICAL SERIES - NTS 93H/4, 93A/13 - WELLS
BRITISH COLUMBIA

THORIUM / POTASSIUM

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 — 0 1 2 3 — 4 Kilometres

NAD 83 / UTM Zone 10N

Universal Transverse Mercator Projection
North American Datum 1983
© Her Majesty the Queen in Right of Canada 2006

Projection universel transverse de Mercator
Système de référence géodesique nord-americain, 1983
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Digital Topographic Data provided by Geomatics Canada, Natural Resources Canada

OPEN FILE
DOSSIER PUBLIC
5289
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2006
SHEET 7 OF 10
FEUILLET 7 DE 10

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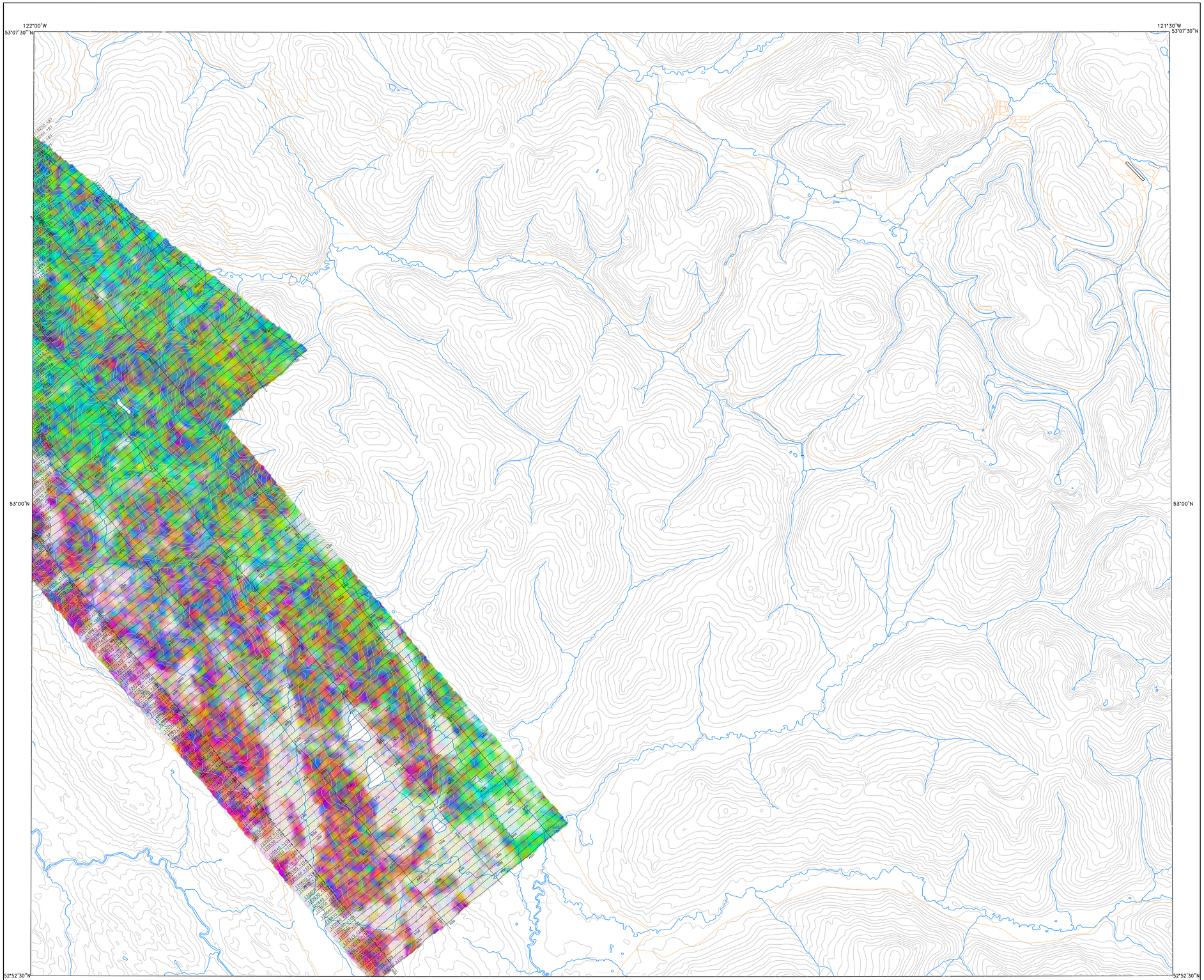
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THORIUM / POTASSIUM

WELLS
BRITISH COLUMBIA

93H/4, 93A/13

GEOPHYSICAL SERIES
TERNARY RADIOELEMENT IMAGE



GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

High Sensitivity Airborne Gamma-Ray Spectrometric and Aeromagnetic Surveys
Central British Columbia, 2004 - 2005

In 2004 and 2005, Fugro Airborne Surveys completed nine multi-sensor airborne geophysical surveys in the central region of British Columbia for the Geological Survey of Canada, the British Columbia and Yukon Chamber of Mines, Yekooche First Nation, and five industry partners, including Serengeti Resources Inc., Yankee Hat Minerals Ltd.,Richfield Ventures Corp.,GWR Resources Inc., and Amarc Resources Ltd. The Geological Survey of Canada provided survey supervision and quality control. The purpose of the surveys was to obtain quantitative gamma-ray spectrometric and aeromagnetic data. The surveys were flown over two seasons, from September 18 to November17, 2004 and June 15 to August 8, 2005 using AStar 350-B2 and 350-B3 helicopters, C-GECL and C-FGSC.

Gamma-ray Spectrometric Data

The airborne gamma-ray measurements were made with an Exploranium GR820 gamma-ray spectrometer using nine 102 x 102 x 406 mm NaI (Tl) crystals. The main detector array consisted of eight crystals (total volume 33.6 litres). One crystal (total volume 4.2 litres), shielded by the main array, was used to detect variations in background radiation caused by atmospheric radon. The system constantly monitored the natural potassium peak for each crystal, and using a Gaussian least squares algorithm, adjusted the gain for each crystal.

Potassium is measured directly from the 1460 keV gamma-ray photons emitted by 40K, whereas uranium and thorium are measured indirectly from gamma-ray photons emitted by daughter products (214Bi for uranium and 208Tl for thorium). Although these daughters are far down their respective decay chains, they are assumed to be in equilibrium with their parents; thus gamma-ray spectrometric measurements of uranium and thorium are referred to as equivalent uranium and equivalent thorium, i.e. eU and eTh. The energy windows used to measure potassium, uranium and thorium are:

Potassium (^{40}K) 1360 - 1560 keV
Uranium (^{214}Bi) 1660 - 1860 keV
Thorium (^{208}Tl) 2410 - 2810 keV

Gamma-ray spectra were recorded at one-second intervals at a planned terrain clearance of 120m or 90m depending on the survey area and an air speed of 125km/h. The total, potassium, uranium and thorium window counts were derived from the recorded 256 channel spectra. During processing, the spectra were energy calibrated, and counts were accumulated into the windows described above. Counts from the radon detectors were recorded in a 1660 - 1860 keV window and radiation at energies greater than 3000 keV was recorded in the cosmic window. The window counts were corrected for dead time, and for background activity from cosmic radiation, the radioactivity of the aircraft and atmospheric radon decay products. The window data were then corrected for spectral scattering in the ground, air and detectors. Corrections for deviations of altitude from the planned terrain clearance and for variation of temperature and pressure weremade prior to conversion to ground concentrations of potassium, uranium and thorium, using factors determined from flights over a calibration range near Ottawa.

Potassium 57.3 cps/% (2004) 56.9 cps/% (2005)
Uranium 6.7 cps/ppm (2004) 8.4 cps/ppm (2005)
Thorium 3.6 cps/ppm (2004) 3.7 cps/ppm (2005)

Corrected data were filtered and interpolated to a 100m grid for the 1:250 000 scale maps and to a 50m grid for the 1:20 000 and 1:50 000 scale maps. The results of an airborne gamma-ray spectrometer survey represent the average surface concentrations that are influenced by varying amounts of outcrop, overburden, vegetation cover, soil moisture and surface water. As a result the measured concentrations are usually lower than the actual bedrock concentration. The total air absorbed dose rate in nanograys per hour was produced from measured counts between 410 and 2810 keV.

Magnetic Data

The helicopter was equipped with a Scintrex CS-2 cesium vapour magnetic sensor mounted in a HM1 high-resolution single sensor stinger mounted system. The system recorded readings every 0.1 seconds with a noise level of less than 0.01 nT. Magnetic interferences caused by aircraft manevuers were compensated using an RMS AADC® Magnetic compensator. Diurnal variations and GPS fluctuations were recorded using a Fugro CF1 base station.

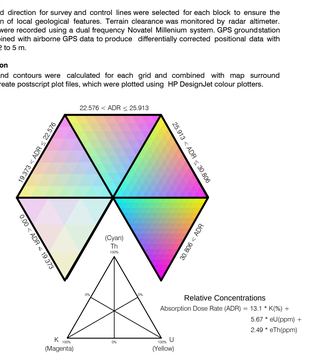
After editing the survey data, the intersections of traverse and control lines were determined and the differences in the magnetic values were computed, analyzed and manually verified to obtain the leveling network. The International Geomagnetic Reference Field was calculated and removed using a fixed date of June 20, 2005 for western blocks and July 17, 2005 for eastern blocks and an altitude of the differentially corrected GPS height for each data point. The corrected magnetic data was interpolated to a 50m grid using a minimum curvature algorithm. The first vertical derivative grid was calculated from the corrected total magnetic intensity grid using a FFT based frequency domain filtering algorithm.

Positional Data

Line spacing and direction for survey and control lines were selected for each block to ensure the best intersection of local geological features. Terrain clearance was monitored by radar altimeter. Positional data were recorded using a dual frequency Novatel Millenium system. GPS groundstation data were combined with airborne GPS data to produce differentially corrected positional data with an accuracy of 2 to 5 m.

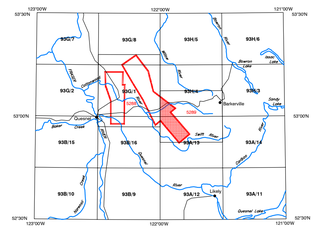
Data Presentation

Colour levels and contours were calculated for each grid and combined with map surround information to create postscript plot files, which were plotted using HP DesignJet colour plotters.



Planimetric Symbols

Topographic Contour
Drainage
Roads
Culture
Railway
Flight lines, fiducial — 10100 < > 42500



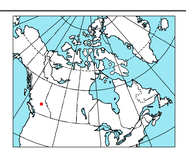
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RICHFIELD

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LOCATION MAP

GEOPHYSICAL SERIES - NTS 93H/4, 93A/13 - WELLS
BRITISH COLUMBIA

TERNARY RADIOELEMENT IMAGE

Scale 1:50 000 - Échelle 1/50 000
Kilometres 1 0 1 2 3 4 Kilometres

NAD 83 / UTM Zone 10N

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North American Datum 1983
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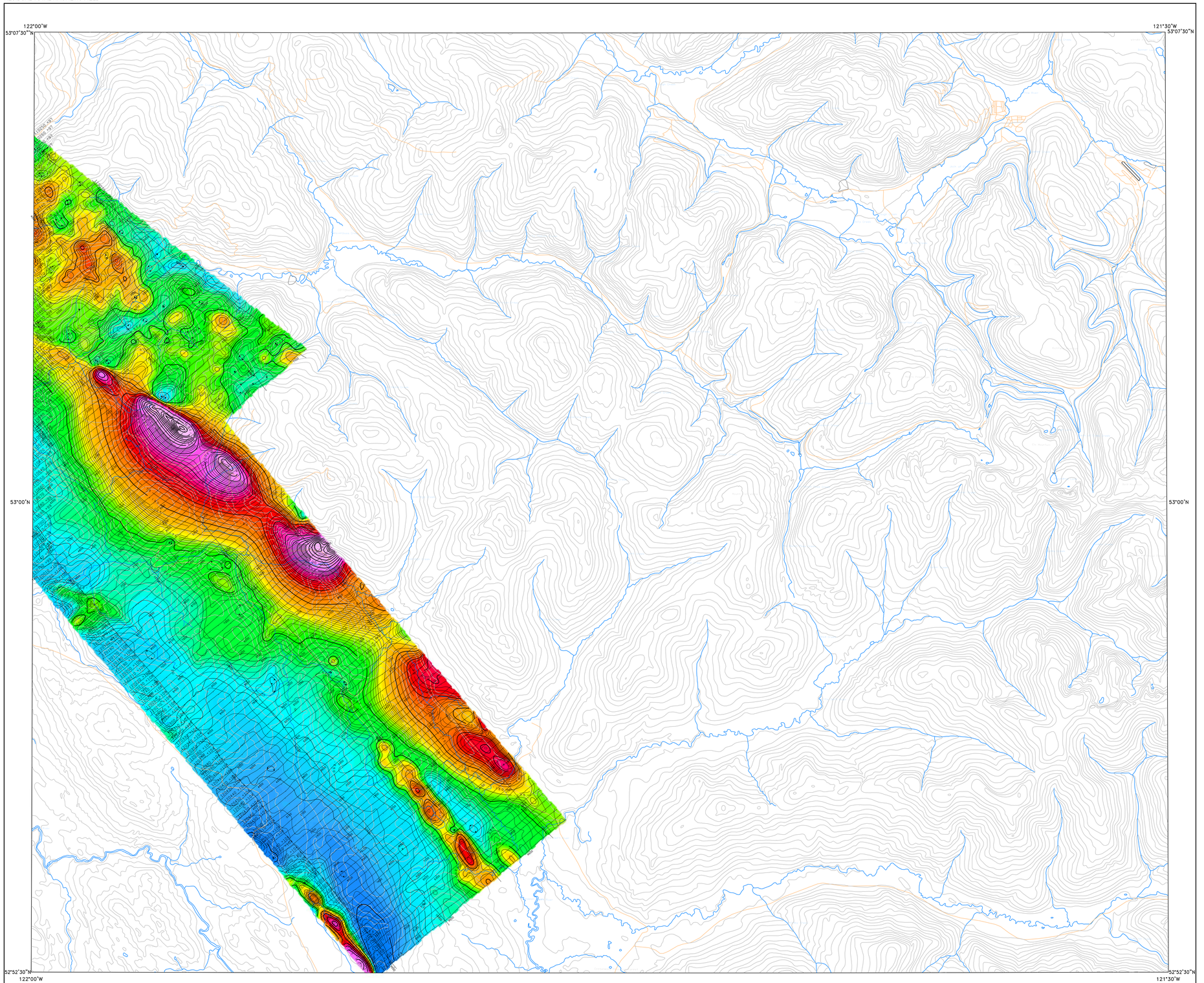
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TERNARY RADIOELEMENT IMAGE

WELLS
BRITISH COLUMBIA

93H/4, 93A/13

GEOPHYSICAL SERIES
RESIDUAL TOTAL MAGNETIC FIELD


122°00'W
121°30'W
53°07'30"N
53°00'N
52°52'30"N
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