BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1996/1997
REPORT #:	PAP 96-10
NAME:	WILLIAM WELSH

TECHNICAL REPORT

- FOR THE-

PROSPECTORS ASSISTANCE PROGRAM

COVERING: 1) Burchan, Vernon Mining Division,
MINFILE 082LSW091
NTS 82L/2W and 82L/3E
6 km SW of Lumby, B.C.

2) Lightning Peak, Vernon Mining Div.,
NTS 82E/15E and 82E/16W
74 km SE of Lumby, B.C.

BY:

William Welsh,
619 N. Fork Rd., R.R. #1,
Lumby, B.C., V0E 2G0

October 13, 1996

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations, section 15, 16 and 17.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (*see* section 16) required with this TECHNICAL REPORT.

Name WILLIAM WELSH Reference Number 96/97 P21

LOCATION/COMMODITIES

Project Area (as listed in Part A) BURCHAN / HARRIS CR. MINFILE No. if applicable 082LSW091 082LSE031

Location of Project Area NTS 082L/3E, 82L/2W Lat 50°-12'-07" Long 119°-00'-15"

Description of Location and Access HARRIS CREEK CAN BE ACCESSED VIA THE HARRIS CREEK FA. ROAD AND NICKLEN ROAD, OFF CREIGHTON VALLEY ROAD EAST OF LUMBY. BURCHAN CAN BE ACCESSED OFF DURE MEADOW RD. AND WHITEVALE RD. IN LUMBY.

Main Commodities Searched For PLACER Au

Known Mineral Occurrences in Project Area HARRIS CREEK PLACER
BURCHAN (URANIUM)

WORK PERFORMED

1. Conventional Prospecting (area) 11.5 km × 50 m = 57.5 Ha.
2. Geological Mapping (hectares/scale)
3. Geochemical (type and no. of samples)
4. Geophysical (type and line km)
5. Physical Work (type and amount) 3 TEST PITS ~ 1.5 m^3
6,. Drilling (no,. holes, size, depth in m, total m)
7. Other (specify) HAND PANNING AT NUMEROUS LOCATIONS

SIGNIFICANT RESULTS

Commodities Au Claim Name N/A

Location (show on map) Lat 50°-12'-07" Long 119°-00'-15" Elevation 560 m.

Best assay/sample type SAMPLE SITE # 1 (HARRIS CREEK CANYON)
SAMPLE SITE # 4 (DUTEAU CREEK)

Description of mineralization, host rocks, anomalies

COARSE GOLD, OF HIGH FINENESS, LOCATED WITHIN A WELL-DEFINED PALEOCHANNEL WHICH IS BOUNDED BY GNEISSIC RIM-ROCK OF DIORITIC TO GRANITIC COMPOSITION. GOLD FOUND IN DUTEAU CREEK LINKS BURCHAN TO THE HARRIS CREEK PLACER. THE PALEOCHANNEL CAN BE TRACED OVER 11.5 km.

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act.*

PROJECT 1 – BURCHAN / HARRIS CREEK

(a) Location and Access

This deposit consists of an auriferous paleochannel centred about 50°-12' Latitude, 119°-00'Longitude. The portion of the deposit located along the banks of Harris Creek from the canyon in Lumby to McAuley Creek (more than 7 kilometres to the southeast) is known as the Harris Creek Placer (MINFILE 082LSE031). The west extension of this paleochannel, which continues on strike with the Harris Creek Placer between Bessette (Harris) and Duteau (Jones) Creeks, is known as "Burchan" (MINFILE 082LSW091). The work carried out for this project established that these two MINFILE occurrences are most likely the same deposit.

The Burchan deposit can be accessed off Dure Meadow Road and Whitevale Road, just west of Lumby, and the auriferous paleochannel is exposed in the canyon occupied by Harris Creek immediately downstream from its confluence with Nicklen (Bessette) Creek on private land currently owned by Mr. Myron Smith of Horner Road in Lumby. Other exposures of the Harris Creek paleochannel can be accessed from the Harris Creek Forest Access Road.

(b) Methodology

Researching the literature on these two occurrences had already been completed prior to beginning work on the project, but considerable new information was provided by conversations with Mr. Myron Smith, a prospector who happens to own the property containing the old mine workings in the canyon on Harris Creek. Mr. Smith himself carried out some development work, consisting of a timbered adit, 38.4 metres long through gravel, to access the paleochannel where he believed it to be, off Nicklen Creek. He had also mined the banks of Harris Creek and recovered a small quantity of gold, before coming under criticism by a very aggressive environmental group from Salmon Arm. He subsequently ceased working the deposit.

Testing of the paleochannel gravels was carried out in the canyon by means of hand sluicing, to determine the approximate gold content and properties of the host gravel, and this was combined with the knowledge obtained from Mr. Smith's experience. Subsequently, the channel was

mapped both to the east and west, using its distinctive properties and the granitic unit which lies alongside it as a marker unit. Where exposed in the banks of the creeks, the paleochannel was tested by means of hand panning to determine either the presence or absence of gold. A gravel pit located along the base of the ridge hosting the Burchan deposit was also tested by means of hand sluicing.

(c) Results and Conclusions

The location of the paleochannel and results of testing are shown on the accompanying map. The paleochannel is well-cemented and competent, except in the west canyon wall, where it is overlain by clay and considerable water is flowing from it, and an adit in the canyon wall has collapsed, causing a large slump. In general, it is bounded on at least one edge, sometimes on both sides, by a competent diorite unit which forms a "rim-rock". The cobbles are subangular and represent the local geology -- gneiss, granitic rocks, minor greenstones, and andesite.

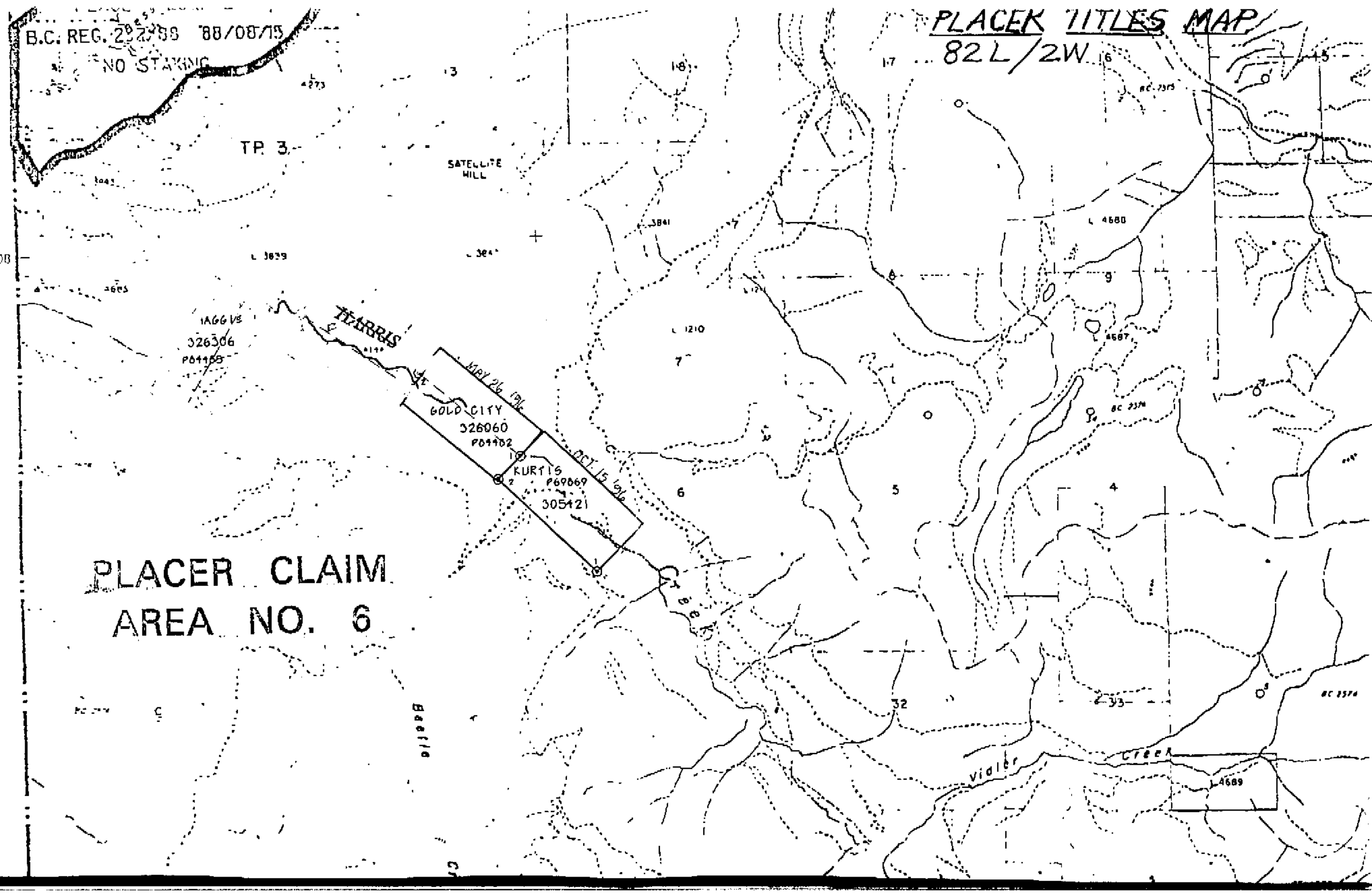
The gold ranges from very fine colours to quite coarse, but well-worn and flattened nuggets up to a few centimetres across. Many of the gold particles, in addition to being flattened, are also striated and some contain quartz particles. Purplish-red garnets though small, are plentiful, and black sand is abundant. The paleochannel is not auriferous over its entire height of 150 metres, and it appears to have been displaced by a near-vertical normal fault trending due north in the canyon, which may have at one time changed the course of Harris Creek. The adits in the west wall of the canyon are some 12 to 15 metres above those in the east wall.

In most places along Harris Creek, upstream from the canyon, the paleochannel has been eroded by glaciation as indicated by a broad, U-shaped valley, but in tighter, steeper sections it has been preserved as remnants. However, these remnants are overlain by 30 to 60 metres of till, and access is very difficult since the logging road has been de-activated. The unstable nature of the canyon wall makes it an environmentally sensitive location. A clear surface expression of the paleochannel exists to the west of Harris Creek (Burchan), as the gravel is clearly river-worn and bounded on either side by the same rim-rock seen in the canyon alongside the channel. This channel is exposed in the banks of Duteau (locally known as Jones) Creek, and gold was recovered from that point which has definite similarities to the gold recovered from Harris Creek. Therefore, it is likely

that the auriferous channel persists west of Harris Creek, but is buried by hundreds of metres of clay and detrital material. The west extension of the channel is located over its entirety on private land, and is occupied by homes.

A cobbly layer in the gravel pit located along the north edge of the ridge contained many very fine colours, but no coarse gold.

In the past, this channel was mined in the canyon by means of hydraulicking, whereby very large quantities of pay material could be moved economically, and significant gold was recovered. Today, these mining methods are not feasible. The paleochannel was tested in five locations along its length, and at no point was the grade found to be sufficient to compensate for the constraints on mining given the access problems, confined working areas, and environmental concerns. The two placer claims which still remain within this staking area do not appear to have been worked, and in fact lie within the area that the paleochannel appears to be absent.



PLACER TITLES MAP
82L/2W
B.C. REG. 282/88 88/08/15
NO STAKING
TP. 3
SATELLITE HILL
L 3839
L 3841
L 1210
L 4680
L 4687
L 4689
326306
HARRIS
MAY 26 1996
GOLD CITY
326060
KURTIS
P69869
305121
OCT 15 1996
Vidler
Creek
PLACER CLAIM
AREA NO. 6

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations, section 15, 16 and 17.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (*see* section 16) required with this TECHNICAL REPORT.

Name WILLIAM WELSH Reference Number 96/97 - P21

LOCATION/COMMODITIES (WINNIFRED CREEK)

Project Area (as listed in Part A) LIGHTNING PEAK MINFILE No. if applicable 082E NE018, 082E NE122, 123, 082E NE160, 161

Location of Project Area NTS 82E/15E, 16W Lat 49°-57' Long 118°-35'

Description of Location and Access WINNIFRED CREEK CAN BE ACCESSED VIA THE WINNIFRED CREEK F.A. ROAD, OFF THE KETTLE RIVER FOREST ACCESS ROAD, 8 km SOUTH OF SPRUCE GROVE ON HIGHWAY #6.

Main Commodities Searched For PLACER Au

PORPHYRY Cu-Mo ± Au

Known Mineral Occurrences in Project Area (See MINFILE #'s ABOVE)

ALSO PLACER GOLD IS KNOWN TO EXIST AT THE FALLS AT THE MOUTH OF WINNIFRED CREEK

WORK PERFORMED

1. Conventional Prospecting (area) 17 km × 400 m = 680 Ha.
2. Geological Mapping (hectares/scale)
3. Geochemical (type and no. of samples)
4. Geophysical (type and line km)
5. Physical Work (type and amount) 8 TEST PITS @ 1 m^3 = 8 m^3
6,. Drilling (no,. holes, size, depth in m, total m)
7. Other (specify) HAND PANNING AT ALL SAMPLE SITES.

SIGNIFICANT RESULTS

Commodities Au, Mo Claim Name N/A

Location (show on map) Lat 49°-56'-50" Long 118°-37'-45" Elevation

Best assay/sample type 8 PIECES OF GOLD FINER THAN 300 μm (SAMPLE SITE 4)

ANOMALOUS Mo RESULTS WERE OBTAINED FROM SAMPLE SITES 1, 3, 4, 5, AND 7

Description of mineralization, host rocks, anomalies

HOST ROCKS ARE PREDOMINANTLY GRANITE

ANOMALOUS Mo AT SAMPLE SITE #7 WARRANTS FURTHER INVESTIGATION.

ADDITIONAL PLACER POTENTIAL EXISTS ON WINNIFRED CREEK, ESPECIALLY AT SAMPLE SITES #4 & 5

Supporting data must be submitted with this TECHNICAL REPORT

PROJECT 2 – LIGHTNING PEAK

(a) Location and Access

Lightning Peak can be accessed from the southwest via the Winnifred Creek logging road, about 18 km. south of Spruce Grove along the Kettle River Forest Access Road from Highway #6. The prospected area comprises the watershed of Winnifred Creek and its tributaries, which lie immediately to the north of a new park created around the Granby River watershed (which appears meant to showcase high-extraction clear-cut logging in B.C.). The logging road which accesses Lightning Peak is exremely poor, having been built for winter logging, and has little or no drainage, and so activities were confined to Winnifred Creek.

(b) Methodology

The prospecting area was divided into catchment areas, each one being drained by a tributary of Winnifred Creek, and represented by a sample site located as close to the junction of the tributary with the main creek as possible. Sample locations were verified by means of a Garmin 40 G.P.S., and the coordinates stored for later map plotting. A total of ten sample sites were tested, initially by hand-panning, and then by means of sluicing where panning indicated the presence of indicator minerals (usually black sand). Two creeks were not sampled based on this criteria. The heavy mineral concentrate was removed from the sluice at each site, stored in plastic bags, and the sluice cleaned to prevent cross-contamination. Samples were then seived to - 50 mesh (Tyler series, or 300 μm) through a stainless steel mesh, and processed in a hydrocone separator to recover any fine gold particles. The + 50 mesh fraction was panned to recover coarser gold. The resultant - 50 mesh sample, with gold removed, was treated as a silt sample and sent out for a 30-element ICP. A fire assay for gold was done on sample No. 1 to check the efficiency of the hydrocone separator.

(c) Results and Conclusions

The two best sites for placer potential are Sample Sites 1 and 4. A placer title is already held at Sample Site 1, but number 4 also had significant gold and good access to the creek, as well as room for tailings. As well as the two sites that weren't sampled, only one other site had no gold, number 6.

Relative gold contents were as follows (in terms of number of colours):

	Number of Colours		
Sample No.	**+ 50 Mesh**	**- 50 Mesh**	**Comments**
WIN-001	2	6	very abundant black sand
WIN-002	0	1	abundant black sand
WIN-003	0	2	minor black sand
WIN-004	0	8	abundant black sand
WIN-005	0	3	good black sand
WIN-006	0	0	good black sand
WIN-007	0	2	abundant black sand
WIN-009	0	1	good black sand

ICP results were as follows:

	Lab	(ppm)												
Sample	**Sample**	**Ba**	**Bi**	**Cd**	**Co**	**Cr**	**Cu**	**Fe**	**Mo**	**Ni**	**Pb**	**V**	**Zn**	**Au**
WIN-001	17407	95	35	3	24	113	17	>15	22	6	<2	581	53	1.93
WIN-002	17408	50	5	<1	9	133	7	7.45	9	5	6	129	30	
WIN-003	17409	85	10	1	18	152	17	13.30	15	6	4	230	33	
WIN-004	17410	80	15	2	18	140	12	>15	16	6	<2	395	47	
WIN-005	17411	80	<5	<1	9	320	10	7.37	19	11	6	135	32	
WIN-006	17412	55	<5	<1	9	155	8	6.37	9	5	4	107	30	
WIN-007	17413	70	15	<1	14	242	15	11.50	14	8	2	215	35	
WIN-009	17414	55	<5	<1	9	100	13	5.13	6	6	8	85	36	
Standard:		**155**	**<5**	**<1**	**19**	**64**	**82**	**4.06**	**<1**	**22**	**18**	**83**	**70**	

From the perspective of placer mining, the most promising locations are at Sample Site 4 (on Winnifred Creek) and Sample Site 5 (just downstream from Dictator Creek, where 5 MINFILE occurrences are located, all gold-bearing).

From the perspective of mineral prospecting, the most interesting sites are #5 and #7 -- #5 for the reasons stated above, and #7 because of the elevated molybdenum levels and the fact that it represents an area having no known prospects, and which fortunately lies outside of the "no staking area" designated for the park. Followup prospecting revealed that the dominant rock is granite (unmineralized), but there was unusual iron staining in the soil. Additional geochemical or geophysical surveys would be appropriate for this area.

Eco-Tech
LABORATORIES LTD.

ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4 Phone (604) 573-5700
Fax (604) 573-4557

CERTIFICATE OF ASSAY AK 96-689

KETTLE RIVER VENTURES
619 NORTH FORK ROAD, R.R. #1
LUMBY, B.C.
V0E 2G0

25-Jul-96

ATTENTION: B.WELSH

No. of samples received:9
PROJECT #:NONE GIVEN
SHIPMENT #NONE GIVEN
P.O.#: NONE GIVEN
Samples submitted by:B.WELSH

ET #.	Tag #	Au (g/t)	Au (oz/t)
1	17406	1.93	0.06

QC DATA:

Repeat:

1	17406	2.21	0.06

Standard:

STD-M	3.30	0.10

per

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

XLS/96KMISC#4

4-Aug-96

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 604-573-5700
Fax : 604-573-4557

ICP CERTIFICATE OF ANALYSIS AK 96-689

KETTLE RIVER VENTURES
619 NORTH FORK ROAD, R.R. #1
LUMBY, BC
V0E 2G0

ATTENTION: B.WELSH

No. of samples received:9
PROJECT #:NONE GIVEN
SHIPMENT #NONE GIVEN
P.O.#: NONE GIVEN
Samples submitted by:B.WELSH

Values in ppm unless otherwise reported

Et #.	Tag #	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Tl %	U	V	W	Y	Zn
2	17407	<.2	0.34	<5	95	35	0.52	3	24	113	17	> 15	<10	0.10	606	22	0.03	6	960	<2	<5	<20	23	0.08	50	581	<10	<1	53
3	17408	<.2	0.59	<5	50	5	0.42	<1	9	133	7	7.45	10	0.21	314	9	0.06	5	560	6	<5	<20	34	0.09	<10	129	<10	1	30
4	17409	<.2	0.67	<5	85	10	0.50	1	18	152	17	13.30	20	0.24	371	15	0.08	6	770	4	<5	<20	41	0.07	<10	230	<10	<1	33
5	17410	<.2	0.48	<5	80	15	0.46	2	18	140	12	> 15	<10	0.13	545	16	0.05	6	640	<2	<5	<20	34	0.09	30	395	<10	<1	47
6	17411	<.2	0.85	<5	80	<5	0.42	<1	9	320	10	7.37	<10	0.16	388	19	0.10	11	350	6	<5	<20	45	0.10	<10	135	<10	4	32
7	17412	<.2	0.62	<5	55	<5	0.42	<1	9	156	8	6.37	10	0.20	309	9	0.07	5	530	4	<5	<20	38	0.10	<10	107	<10	2	30
8	17413	<.2	0.71	<5	70	15	0.58	<1	14	242	15	11.50	<10	0.16	463	14	0.10	8	470	2	<5	<20	52	0.18	<10	215	<10	5	35
9	17414	<.2	0.70	<5	55	<5	0.42	<1	9	100	13	5.13	10	0.30	353	6	0.06	6	570	8	<5	<20	37	0.08	<10	85	<10	<1	36
QC DATA:																													
Repeat:																													
2	17407	<.2	0.34	<5	90	25	0.52	2	25	114	17	> 15	<10	0.10	607	22	0.03	6	1010	<2	<5	<20	21	0.08	50	578	70	<1	53
Standard:																													
GEO'96		1.2	1.86	70	155	<5	1.82	<1	19	64	82	4.06	<10	0.99	707	<1	0.02	22	700	18	<5	<20	68	0.13	<10	83	<10	3	70

df/700r
XLS/96Kmisc#5

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

BCGS 82L.025 BCGS 82L.026

PROSPECTED AREA (PALEOCHANNEL)

TEST SITES

BURCHAN/HARRIS CREEK

SCALE 1:20,000

200 0 200 400 600 800 1000 1200 1400

METRES

TRIM MAPS 82L.016
82L.025
82L.026

96-10 D

LAVINGTON

SATELLITE HILL

Grozer Lake

Lily Pad Lakes

Nicklen Lake

Wicklich Creek

Gold Mountain Lake

Burchan Creek

Harris Creek

Lawson Creek

Duteau Creek

Bessette Creek

BCGS 82E.097
BCGS 82E.098
MIDWAY
MIDWAY
RANGE
KETTLE RIV
ACCESS ROAD
Winnifred Creek
Teepee Creek
Water Creek
082ENE061
082ENE022
082ENE023
082ENE060
082ENE018
082ENE039
MINFILE LOCATION: 082ENE022
SAMPLE SITE :
AREAS PROSPECTED:
WINNIFRED CREEK
B.C.G.S. 082E.097
082E.098
SCALE 1:20 000
200 0 200 400 600 800 1000 1200 1400
METRES