GEOLOGICAL BRANCH ASSESSMENT REPORT

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ASSESSMENT REPORT

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TRAC MINERAL GROUP

KAMLOOPS MINING DIVISION

Latitude: 50° 49' N Longitude: 121° 31 E

NTS 92 I/13E & 92 I/14W

BY

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SUMMARY

The mineral claims TRAC 1 to 4 were located in 1987 to cover an area of the Trachyte Hills with anomalous heavy mineral gold values. The TRAC 5 was located in 1988 to cover additional drainage in the western slope of these hills. The claims were grouped in 1989 to form the TRAC claim group.

The claim group covers Cretaceous bedded pebble conglomerate and wacke in the southern part of the Bonaparte Graben. The conglomerate is well to moderate sorted with subrounded pebbles. These rocks are exposed in the southern, western and northern part of the claim group. The sediments are believed to represent an intermediate to distal alluvial fan facies from a northern source. They dip E and W from a central core of Nicola Group volcanics and serpentinite, which are exposed in the northeast corner of the claim group. The sediments are interpreted to be deposited as plane beds in alluvial channels by continuous sediment transport in the Upper Flow Regime.

An Eccene quartz latite lava dome is located in the central and eastern part of the claim group, and extends east beyond the claim boundary.

The area is covered by thick glacial overburden, in excess of six feet. Soil development in the glacial till is poor, and leaching is deep.

Thirty nine rock sample were collected on the claim group. They were analyzed for gold by fire assay with atomic absorption finish, and for 32 additional elements by ICP. All of the samples returned background gold values.

Previous anomalous heavy mineral gold values in creeks draining the Trachyte Hills were follow up by eighteen heavy mineral samples at 500 m spacing up stream. The -150 mesh fraction of the samples was separated into magnetic, para-magnetic and non-magnetic fractions by C.F. Minerals in Kelowna. The -150 mesh non-magnetic fraction was analyzed for gold and 33 elements by neutron activation. Five elements were also by acid digestion analyzed and atomic absorbtion. The samples defines a gold anomaly at the peak of the Trachyte Hills. The anomalous gold values are associated with silver, antimony and arsenic.

The gold anomaly is believed to be related to the quartz latite lava dome underlying the peak of the hills.

A 75 km geophysical survey with magnetometer and two transmitter stations VLF-EM were completed on the TRAC grid to assist mapping. The magnetic survey located three areas with possible shallow wide dykes or alteration zones associated to the quartz latite. VLF-EM located three directions of conductors (N-S, NE-SW & NW-SE) which are all believed to reflect shallow to intermediate <u>structures</u>.

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INTRODUCTION

The TRAC claim group is located in the central interior of B.C. within the Kamloops Mining Division. It is composed of five modified grid claims containing 90 units which cover about 2,250 hectares.

The claims are under option from Technigen Corporation. Teck Corporation has an option to earn 70% interest in the claims by funding exploration on the property.

The claim group covers the central part of the Trachyte Hills in the southern end of the Bonaparte Graben. The graben is filled with Cretaceous alluvial fan sediments, which might be correlated with part of the Pasayten Group of the Tyaughton-Methow Terrane to the SW. The alluvial fan sediments are unconformably overlain by a coarse arid cobble conglomerate in the southwest.

To the west, the sediments are in contact with massive limestone of the Permian to Triassic Marble Canyon Formation (Central belt of the Cache Creek Complex). To the northeast and southwest, the graben is bounded by schist of the Pennsylvanian to Triassic Eastern belt of the Cache Creek Complex. In the south and east, the sediments are in contact with volcanics of the Triassic to Jurassic Nicola Group. The graben sediments are intruded by Eocene guartz latite and rhyolite lava domes, stocks and dykes.

Previous exploration in this extensively overburden covered area has been concentrated east and west of the Bonaparte Graben. Cominco's Maggie Porphyry Cu-Mo Deposit is located 13 km to the northeast, while B.C. Hydro's Hat Creek Coal Deposit is located 9 km to the southwest.

Sporadic exploration for gold has been done since the turn of the century. The majority of the work was done in the Maiden Creek drainage, 16 km north of the claim group.

Heavy mineral sampling in the Bonaparte Graben in 1987 and 1988 by Discovery Consultants, located anomalous gold values in creeks draining the Trachyte Hills.

This report summarises geological, heavy mineral sampling and geophysical work on the claim group in 1990.

LOCATION, ACCESS, PHYSIOGRAPHY

The TRAC claim group is located about 90 km west of Kamloops, 220 km northeast of Vancouver and 12 km west of Cache Creek in south central B.C. (Figure 1). The claims cover the peak of the Trachyte Hills at latitude 50° 49' N and longitude 121° 31' W on NTS map sheets 92 I/13E and 92 I/14W.

Access to the claim group is provided by the 4500 Forest Roads west from Provincial Highway 97 south of Cache Creek, or by the 4600 Forest Roads east from Hat Creek and Provincial Highway 12. Several old logging roads north from the Forest Access Roads straddles the claim group. The central part of the claim group is accessible by foot only (Figure 2).

The property is located in an upland plateau region with subdued topography, and an elevation ranging from 3,000 to 5,100 feet. Vegetation consists of predominantly coniferous trees ranging from mature timber to second generation growth following intermittent logging. Minor deciduous trees and sage brushes are mixed with the coniferous trees in a semi arid climate. Temperature is high in the summer and moderate in the winter, which allows for year round exploration.

CLAIM DATA

The TRAC claim group consists of five modified grid claims (Table 1). The group which has 90 units and cover 2,250 hectares, is located in the Kamloops Mining Division, NTS 92 I/13E and 92 I/14W (Figure 2).

			T. CL.	ABLE 1 AIM DATA		
Claim	n	Units	Record No.	Staked/ Recorded	Current Expiry	Assessment Pending
TRAC	1	18	7127	6/19/87	6/24/91	6/24/94
TRAC	2	18	7128	6/20/87	6/24/91	6/24/94
TRAC	3	18	7129	6/21/87	6/24/91	6/24/95
TRAC	4	18	7130	6/21/87	6/24/91	6/24/94
TRAC	5	18	7928	7/08/88	7/14/91	7/14/94



HISTORY

To the southwest B.C. Hydro conducted intense exploration for coal between 1970 and 1982. A large coal deposit estimated to contain between 10 and 15 billion tons of coal was outlined 9 km southwest of the claim group. A high grade section of 350 million tons of subbituminnous/lignite coal has been delineated as feed for B.C. Hydro's planned thermal electrical plant. The project has been on hold since 1983, and commercial production is still pending.

Porphyry copper exploration by Cominco east of the Bonaparte Graben in the 70's, located the Maggie Deposit which contains 181 million tons of .28% Cu and .029% Mo. The deposit is located adjacent to the eastern graben boundary, 13 km northeast of the claim group.

Small amounts of placer gold have been found in the area since the turn of the century. Bedrock gold mineralization was reported in 1901 when a sample of quartz conglomerate from the lower extent of Maiden Creek, 18 km north of the claim group, assayed about .19 oz/ton gold.

Most of the work since then has been done in the Maiden Creek drainage, about 16 km north of the claim group.

In 1980 Cominco explored the Trachyte Hills. However, the results of their activity are unknown.

A regional heavy mineral program for the Bonaparte Graben was initiated in 1987 by Discovery Consultants. Minor follow up work with closer spaced sampling on selected anomalies was done in 1988 and 1989. The heavy mineral samples were separated into magnetic, para-magnetic and non-magnetic fractions. Experience has shown Discovery that gold is located in the -150 mesh non-magnetic fraction.

Heavy mineral samples from the creeks draining the peak of the Trachyte Hills range between 3,100 ppb (0.09 oz/ton) and 54,000 ppb (1.58 oz/ton) gold in the -150 mesh non-magnetic fraction. Some of these gold values are associated with anomalous As, Ba or Hg. In the west gold values are also associated with semi anomalous Mo or Cu values.

This heavy mineral anomaly (A in Figure 5) is believed to be associated with the Eocene quartz latite lava dome underlying the peak of the Trachyte Hills.

OBJECTIVE OF THE CURRENT PROGRAM

Prospecting and mapping of the limited outcrops were done to locate bedrock mineralization on the claim group. Rock samples were collected to located mineralization and trace element distribution.

Eighteen heavy mineral samples were collected on the claim group to delineate the gold anomaly. The samples were collected from one drainage in the north and one in the west. Two drainages in the south were also sampled (Figures 6 & 7). Due to the lack of significant drainages in the east no samples were collected here.

Geophysical magnetometer and VLF-EM surveys were completed on the TRAC grid to assist the mapping around the quartz latite lava dome.

REGIONAL GEOLOGY

The TRAC claim group is located in the allochtonous Intermontane Belt (Figure 3). This is a superterrane composed of two oceanic terranes (Slide Mountain and Cache Creek), and two island arc terranes (Quesnel and Stikine). The claim group covers an area in the southeastern part of the Cache Creek Terrane along the boundary of the Quesnel Terrane. The location is about 20 km east of the Fraser River Fault system (Figure 4).

The Bonaparte Graben is part of the Cache Creek Terrane. The graben is filled by Cretaceous alluvial fan sediments of unknown thickness (Figure 5). They might be correlated with sediments of the Pasayten Group in the Tyaughton-Methow Terrane along the Fraser Fault System to the SW. The alluvial fan are bedded coarsening upwards coarse clastic sediments. They dip to the W and E from a central core of the western volcanic facies of the late Triassic to early Jurassic Nicola Group.

The sediments were deposited on a Triassic paleosurface of Nicola Group volcanics. There is a northern proximal fan facies (coarse cobble to boulder conglomerate), and a southern distal fan facies (wacke and fine pebble conglomerate). This indicates a northern source for the sediments, which are deposited as plane beds in alluvial channels by continuous sediment transport in the Upper Flow Regime. Minor sericite and carbonate alteration of the sediments can be identified in thin sections.

The alluvial fan sediments are unconformably overlain in the southwest by an arid cobble conglomerate. This conglomerate is deposited by mudflows or debris flows from a western source.





In the west the graben is bounded by the Permian to Triassic Marble Canyon Formation. Massive limestone is interbedded with minor ribbon chert, argillite, tuffs and volcanic flows. This is part of the Central Belt of the Cache Creek Complex.

To the northeast and southwest, the graben is bounded by the middle Pennsylvanian to late Triassic Eastern Belt of the Cache Creek Complex. It is composed of chert, phyllite, schist, argillite, basalts and minor carbonate. This belt host the Maggie Porphyry Cu-Mo Deposit in the northeast.

In the south and east, the graben is bounded by the western and central volcanic facies of the late Triassic to early Jurassic Nicola Group of the Quesnel Terrane. These facies are composed of pyroclastics and flows of andesitic to dacitic composition, argillite and sandstone. The volcanic breccia and lapilli tuff of the lower part of the facies (possible subaerial origin) changes into fine grained volcaniclastics and massive limestone in the upper facies (possible subaqueous origin). Amygdaloidal basaltic pillow lavas in the north are believed to be part of the Nicola Group underlying the Cretaceous sediments.

The sediments were intruded by Eocene quartz latite and rhyolite bodies ranging in size from narrow dykes to large lava domes. These rocks have patchy argillic alteration.

Post Eocene compression formed a northwest striking anticline in the graben. Subsequent erosion has exposed the Nicola Group volcanics in the core of this anticline. The presence of serpentinite along the northeastern part of this core suggest a tectonic origin of the block. However, the absence of other structural evidence and the present dip of the alluvial fan sediments, indicates that the serpentinite could be part of an ultramafic sequence (opholite) in the Nicola Group rather than structural controlled intrusions. The folding is also supported by the presence of coeval north trending synclines and anticlines in the Hat Creek Valley 9 km to the southwest.

The post Eocene deformation formed large and small scale faults throughout the graben.

The area is covered by extensive glacial overburden from at least one episode of Pleistocene glaciation.

CLAIM GROUP GEOLOGY

The claim group covers a six km strike length of the Bonaparte Graben (Figure 5). It is underlain by Cretaceous alluvial fan sediments which are intruded by a large, semicircular Eocene quartz latite lava dome extending east beyond the claim group (Figures 6 & 7). In the northeast the claim group is underlain by volcanics of the Nicola Group in the core of the anticline (Figure 6). None of the contacts are exposed in this area.

The northern, western and southern part is underlain by bedded polymictic pebble conglomerate and wacke (Figures 6 & 7). Strike is generally NW-SE with a gentle SW dip $(15-20^{\circ})$. Limited outcrops indicate there is more conglomerate than wacke in the east, while it is mainly wacke with minor conglomerate in the west. The wacke in the west reflects a deeper erosion level of the alluvial fan sequence than the conglomerate in the east.

The conglomerate is moderately sorted in the coarser parts and well sorted in the finer parts. It is mainly matrix supported (40-80% matrix) with subangular to rounded fragments (quartz, tuff, chert, siltstone, wacke, andesite and basalt) of 5 to 50 mm, averaging 10 mm.

The wacke is medium to coarse grained, well to very well sorted with 60% quartz and feldspar, 25% subrounded rock fragments (chert, argillite, tuff and siltstone), 10% clay-carbonate and 5% limonite. There are up to 5% subrounded pebbles to 15 mm in the wacke.

The texture and composition of the sediments suggest plane bed deposition in alluvial fan channels by continuous sediment transport in the Upper Flow Regime.

The quartz latite is located in the central eastern part of the claim group. It is fine grained equigranular to porphyritic with up to 5 mm euhedral to subhedral quartz and amphibole phenocrysts. The groundmass is composed of K-feldspar, plagioclase, biotite, hematite and quartz. Alteration is patchy with replacement of K-feldspar by clay. The presence of secondary quartz and iron oxides indicating that it is an argillic alteration assemblage. The iron oxides may be the product of oxidation of pyrite. The quartz latite is sheared, isoclinal folded and flow banded on a local scale.

In the northeast the claim group covers andesite of the western volcanic facies of the Nicola Group. The andesite is fine grained equigranular and intense fractured. Calcite/siderite is present as veins and along fractures. The fractures can also be coated by limonite staining. This is part of the core of the anticline.

The property is covered by extensive glacial overburden with very poor soil development. Road cuts indicate deep leaching of the soil.

MINERALIZATION

Only minor disseminated pyrite has been identified in the Bonaparte Graben. This mineralization is hosted by the western facies of the Nicola Group volcanics in the core of the anticline 3 km N of the claim group.

Thirty eight rock samples were collected on the claim group (Figures 6 & 7). The samples were sent to Chemex Labs Ltd. in North Vancouver, where they were analyzed for gold by standard fire assay and atomic absorption finish. Determination for an additional 32 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Ti, Tl, U, V, W, and Zn) were done by a nitric-aqua-regia digestion and analyzing by inductively coupled plasma spectroscopy (Appendix 2).

All the samples returned background gold values (<5 ppb) without any significant trace elements.

The rock samples can be divided into four groups. The largest group is the quartz-latite with 33 samples. These rocks are depleted in Al, Ca, Co, Cu, Fe and Ni. The surrounding sediments (three samples) are elevated in Al, Ca, Co, Cr, Cu, Fe, Ni, P and V. Along the contact is a silicified quartz-latite (one sample) which is enriched in Al, Ca, Co, Cu, Fe, Mn, Mg, Ni, P, Sr, V and Zn. The enrichment of these elements is believed to be due to allochemical contact metamorphism between the sediments and the quartz-latite. Andesite from the Nicola Group (one sample) is elevated in Cu and Sr; and depleted in Cr compared to the overlying sediments.

HEAVY MINERAL SAMPLING

Eighteen heavy mineral samples were collected on the claim group by Discovery Consultants of Vernon (Figures 6 & 7). The samples follow up the anomalous gold values in creeks draining the Trachyte Hills from previous years. The samples were collected in four creeks at 500 m spacing or in their tributaries. Eight samples were collected from a northern drainage, and seven were collected from a western drainage. Both the southern and eastern area of the claim group is poorly drained, and only three samples were collected from two drainages close to the southern claim group boundary. The heavy mineral method employed on the property is a method developed by Discovery Consultants. An approximately ten kilogram sample of -20 mesh material was collected from gravel in the stream at each sample location. The -20 mesh material was sent to C.F. Minerals Ltd. in Kelowna B.C. where a combination of magnetic and liquid techniques were employed to separate the samples into magnetic, para-magnetic and non-magnetic fractions.

Based on their extensive experience with heavy mineral sampling, both in B.C. and the U.S., the -150 mesh non-magnetic fractions (-150 HN) were selected and sent to Activation Laboratories in Ontario for non-destructive analysis. Analysis of the samples was done by neutron activation for Au, Ag, As, Ba, Br, Ca, Ce, Co, Cr, Cs, Eu, Fe, Hf, Hg, Ir, La, Lu, Mo, Na, Nd, Ni, Rd, Sb, Sc, Se, Sm, Sr, Ta, Tb, Th, U, W, Yb, and Zn. Determination for Ag, Cu, Pb and Zn were done by hot HNO_3 -HCl extraction and for Hg by HNO_3 extraction, and atomic absorbtion by Barringer Lab. in Calgary, Alberta (Appendix 2).

Although the results are only for the -150 HN fraction, experience has shown that these values are valid for geochemical exploration purposes. They are repeatable and can be followed up.

For gold, Discovery Consultants, calculate the number of micrograms (ug) of gold in an ideal initial sample of 10 kg based on the gold content in the -150 HN fraction. This procedure could aid the interpretation of the results by removing variance between samples. However, the weight of the -20 mesh fraction for <u>all</u> the heavy mineral samples collected from the Bonaparte Graben varies between 18.1 kg and 4.2 kg. This represent a variation of 139% from the ideal sample, and it reflects variation in the stream sediments, slope of the drainage and water flow. Calculation of such an inhomogeneous population is believed to introduce a bias rather than remove it.

Interpretation has been done on the original analytical results (Appendix 2), and the gold value in ppb is plotted on Figure 6 & 7.

The sample returned gold values ranging between 3,510 ppb (0.10 oz/ton) and 204,000 ppb (5.95 oz/ton). There is a general decrease in gold values down stream, with the highest value of 204,000 ppb close to the peak of the hills. The highest gold values are associated with anomalous Ag, while anomalous Ba generally is associated with lower gold values. Most of the samples returned anomalous As and Sb with or without Hg. This association of gold and trace elements indicate proximity to the source.

GEOPHYSICAL SURVEY

Total Field Magnetometer and Very Low Frequency Electro-Magnetic (VLF-EM) surveys were carried out on the 75 km TRAC grid, which covers the peak of the Trachyte Hills. The grid lines runs east-west at 100 m spacing from a baseline along the eastern boundary of the claim group. The lines extend 2.5 km west from the baseline and have 25 m station spacing (Figure 7). Both magnetic and VLF-EM measurements were collected on 25 m station spacing along the grid lines.

A Scintrex Integrated Portable Geophysical System (IGS-2) was used for the surveys. This is a combined total field magnetics and a VLF-EM (IGS-2/MP4/VLF-4) system. A Scintrex MP-3 unit was used as base station magnetometer for diurnal correction of the magnetic data. Base station readings were taken in two locations, either at the south or at the north end of the grid, which are about 3 km apart. The change in base station location might have introduced a bias to the diurnal corrected magnetic readings. However, if the bias do exist, it is believed to be minor and without significance in locating geological contacts.

The magnetic data has a generally narrow range of about 200 gammas (Figures 8). The Eocene quartz latite has a subtle magnetic low of about 100 gammas compared to the surrounding Cretaceous sediments. The contact is better defined in the west due to thinner overburden cover.

A string of magnetic lows (I in Figure 8), to 2,000 gammas below background, are located along the southern contact of the quartz latite. The narrow width and spotty character of these lows, indicated that they are caused by a wide shallow dyke or alteration zone. The maximum depth is believed to be 25 metres. Similar strings of magnetic lows are located inside the quartz latite and adjacent to the northern contact (II & III in Figure 8). These responses are not of the same magnitude, but they are believed to reflect similar geology.

The VLF-EM survey utilizes the primary electromagnetic fields generated by the U.S. Navy's VLF-EM marine communication stations, which transmit at frequencies between 15 and 25 kHz. Because these stations have a vertical antenna current, they produce a horizontal primary magnetic field. Successful use of VLF-EM requires that the strike of the conductors are located in the direction of the transmitter to be cut by the magnetic field. The anomalies primarily reflect current channelling. The primary field generates currents which flows weakly in rocks and overburden, and these tend to be channelled by low-resistivity zones. Such zones may be due to massive sulphides, shears, unconformities or topographic effects.

Limited knowledge of the direction of conductors in this area prompted the survey to use readings from two VLF-EM stations with transmitter direction approximately perpendicular to each other. The NLK Seattle, Washington transmitter (24.8 kHz) is located to the south, while the NSS Annapolis, Maryland transmitter (21.4 kHz) is located to the east.

The VLF-EM data is presented as line profiles (Figures 9A & 10A). Algorithm is used to phase shift VLF-EM data spatially to permit contouring. This filtering (Fraser Filter) of the data greatly diminishes sharp irregular and long rolling responses. It also accentuates crossovers and inflections into positive peaks. The interpretation of filter plots is qualitative, and large responses can be equated with large and/or highly conductive zones. Contoured Fraser Filter is presented for both transmitter stations (Figures 9B & 10B).

The results indicate that the majority of the conductors (C to G in Figures 9A, 9B, 10A & 10B) have a strike oblique to <u>both</u> transmitter stations. This greatly reduce the effectiveness of the survey.

Two approximately N-S conductors were located by the Seattle transmitter (Figure 9A & 9B). Conductor "A" across the western part of the grid reflects a shallow source close to the western contact of the guartz latite. Conductor "B" across the central part of the grid reflects a shallow to intermediate source underneath the peak of the Trachyte Hills. Both conductors are highly conductive, and they are believed to reflect structural sources.

All the remaining conductors located by the two transmitters have either NE-SW or NW-SE strikes (Figures 9A, 9B, 10A & 10B). Due to the oblique angle to the transmitter stations these conductors have irregular patterns. Conductor "C" and its splay "C1" are believed to reflect a shallow structural source with moderate conductivity. The "D" conductor to the west reflects a highly conductive structural zone.

The three conductors "E", "F" and "G" are poorly defined shallow moderately conductors reflecting structural sources.

CONCLUSIONS AND RECOMMENDATIONS

The heavy mineral sampling narrowed the source area of the gold anomaly to the peak of the Trachyte Hills. This area is underlain by a felsic Eocene quartz latite lava dome which has intruded the Cretaceous sediments in the Bonaparte Graben. The quartz latite is fresh with minor patchy argillic alteration. To date no mineralization or gold related trace elements have been located in outcrops of quartz latite or sediments. The source of the heavy mineral gold anomaly is believed to be associated with buried alteration zones or structures along the quartz latite/sediment contact.

The magnetic survey located three areas with possible extensive alteration along the quartz latite contact or within it. The VLF-EM located three directions of conductors, which are all believed to be related to post quartz latite structures.

The area is covered by extensive overburden. A terrain analysis is required to determine the nature of this overburden. Due to the dry, warm climate the leaching of the overburden is extensive, and an orientation survey is needed to determine the depth of the unleached B-horizon.

A geochemical soil survey is required to reduce the potential source area of the gold anomaly from the present 9 square km. The geochemical results should be evaluated with the geophysical results to locate trenching targets.

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CERTIFICATE

I, Tor Bruland, of the city of White Rock, Province of British Columbia, do hereby certify:

- I am a Consulting Geologist with Cascade Geological Services, 16126 12A Avenue, White Rock, B.C. V4A 6V9 on contract with Teck Exploration Ltd., 960-175 Second Avenue, Kamloops, B.C. V2C 5W1.
- I am a graduate of the University of Bergen, Norway, with a Cand. Mag. (B.Sc.) degree in Geology (1977), and a Cand. Real. (M.Sc.) degree in Geology (1980).
- 3. I am a Professional Geologist licensed in the Province of Alberta with The Association of Professional Engineers, Geologists and Geophysicists of Alberta.
- 4. I am a registered Fellow of the Geological Association of Canada.
- 5. I have been practising my profession for 14 years, in Norway between 1977 and 1980, and since 1980 in British Columbia, Yukon and the western U.S.
- This report is based on my own observations and the observations of people under my supervision on the TRAC mineral claim group between July 1, 1990 and December 31, 1990.
- 7. I have no direct or indirect interest, nor do I expect to receive any interest, directly or indirectly, in the property or securities of Teck Corporation or Teck Exploration Ltd. or any of its affiliates.
- 8. I give my consent to the use of my name and this report for qualification requirements but not for advertising purposes.

British umbila DATED at White Rock, this /Ca - 15th day of August, 1991. MISC., BRUILAND. ₽.Geol., FGAC

STATEMENT OF COSTS

APPENDIX 1

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STATEMENT OF COSTS

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Salaries: F. Daley, District Manager, supervision T. Bruland, Project geologist 63¼ days @ \$196/day T. Berger, Geologist 2 days @ \$181.25/day G. Lovang, Geotechnican 20%days @ \$205/day G. May, Geophysical assist. 23 days @ \$175/day	\$ 362.56 12,397.00 362.50 4,253.75 4,025.00	
	\$21,400.81	\$21,400.81
Room and board 79% mandays @ \$55/manday		4,351.88
Transportation 54% days @ \$60/day		3,247.50
Drafting		446.53
Field equipment		617.05
Communication etc.		17.80
Computer rental		729.46
Equipment rental		4,024.16
Petrography study		879.48
Analytical cost: 18 heavy mineral samples @ \$125.50/samples 38 rock samples @\$16.58	\$2,259.00 <u>630.04</u> \$2,889.04	2,889.04
Consulting charges: Silver Standard Resources, geophysical drafting Discovery Consultants, supervision Discovery Consultants, labour Discovery Consultants, room & board Discovery Consultants, transportation Discovery Consultants, data comp. & drafting TOTAL	\$1,470.00 518.00 2,276.74 286.12 558.15 <u>262.61</u> \$5,371.62	<u>5,371.62</u> <u>\$43,975.33</u>

APPENDIX 2

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ASSAY CERTIFICATES; HEAVY MINERALS AND ROCK SAMPLES

Date of Report: 16-Oct-90

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Project 245

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Heavy Mineral Results for -150HN Fraction 1990

Reference: ALL90-2073 (CFM90-809, all90-2192)

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2578292292	275223222	12222222	122282222	12222223	122362221	12522223	0323232	22222	22233253	Textes:	222221	192 23 23	273232	=====	112512	52222
Sample ID	-20 mesh veight	-150HN Weight	-150HP Weight	-150HM Weight	Total -150H Weight	Au	Ag	As	8a	Br	Ĉa	Ce	Co	Cr	Cu	Cs
	kg	g	g	9	g	ppb	ppe	pp=	ppm	ppm	Z	ppm	ppe	<u>p</u> pa	ppa	ppm
TR-01	5.3	0.63	4.38	1.24	5.25	22600	1.2	10	(200	45	·	1100	14	310	 t <i>a</i>	 زم
TR-02	7.1	0.77	5.78	1.71	8.26	3510	(0.2	20	1900	49	11	690	24 24	780	35	12
TR-03	6.8	1.34	7,79	2.58	11.71	78100	3.3	11	2100	44	(3	920	27	260	41	27
TR-04	4,2	0.14	0.87	0.64	1.65	6630	0.2	25	44000	160	4	1400	33	380	135	(3
TR-05	9.7	0.45	2.57	1,69	4.72	116000	13.2		2300	49	2	1200	to	340	24	22
TR-06	9.0	2.79	5,10	3.33	11.22	75600	4.9	12	8800	51	(2	840	17	520	29	(2
TR-07	8.1	1.66	3.36	2.05	7.08	20300	1.5	<2	14000	39	(3	970	13	390	23	(2
TR-08	5.1	0.53	2.55	1.51	4.59	22700	7.7	24	16000	68	16	1200	19	410	32	<2
TR-09	9.4	3.32	0.92	0.37	4.51	5240	0.3	5	370000	47	<2	260	5	700	16	<2
TR-12	7.3	0.14	1.04	0.37	1.55	149000	11.0	<3	2500	100	(5	2700	(5	510	21	<2
TR-13	5.9	1.57	2.35	0.61	4.53	5250	0.9	4	730	26	<1	200	8	200	12	<2
TR-14	6.2	0.14	0.95	0.81	1.91	25400	2.8	21	(390	130		1500	(5	380	36	<2
TR-15	5.6	0.29	0.63	0.30	1.22	73100	8.0	22	8600	110	<4	1200	32	450	73	<2
TR-16	9.2	2.20	5.94	4.39	12.53	20900	2.9	11	640	68	9	640	21	400	30	<2
TR-17	5.2	0.42	3.84	3.39	7.65	28300	2.0	11	(260	72	<3	1400	12	230	27	(2
TR-18	4.7	1.00	3.83	1.67	6.30	33800	5.3	8	820	42	(1	490	6	100	18	<2
TR-19	7.7	0.72	3.32	1.01	5.05	132000	6.5	13	1100	30	{1	960	20	340	12	<2
TR-20	4,6	0.09	1.06	0.75	1.90	204000	7.8	3	3500	140	(5	1900	17	300	21	

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120201212229	ample ID Eu Fe Hf Ho Ir La Lu No Na Nd Hi Pb Rb													
Sample ID	Eu	Fe	Hf	Xg	Ir	La	Ĺu	No	Na	Nd	Ni	Pb	Rb	
	ppe	Ľ	ppa	ppb	ppn	ppm	ppe	<u>ppm</u>	ppa	ppa	ppa	ppa	pp#	
TR-01	15	3,85	980	75	<40	650	13	<20	8570	720	<200	14	<50	
TR-02	12	8.46	760	55	(4 0	390	10	<20	6070	410	<200	10	<50	
TR-03	13	5.58	1100	2900	(40	570	11	<20	6380	620	<210	14	<50	
TR-04	20	7.53	1100	70	<40	740	17	<20	3960	890	<280	62	<50	
TR-05	23	3.59	1800	150	<40	860	19	(20	4700	820	<200	13	(50	
TR-06	13	5,70	960	16700	{40	550	10	<20	8770	470	<200	15	(50	
TR-07	290	4.00	910	38500	<40	540	9	<20	7480	500	(200	9	<50	
TR-08	15	3.72	1300	180	{4 0	720	17	<20	7010	710	(200	12	(5)	
TR-09	<1	1.67	250	20	(40	190	3	<20	5890	120	<200	5	<50	
TR-12	42	3.89	3000	125	(40	1700	49	<20	4610	860	<240	15	(50	
TR-13	3	2.04	460	30	<40	120	3	<20	10500	130	<200	12	(50	
TR-14	18	8.07	3700	170	<40	810	38	<20	5650	1000	<300	23	<50	
TR-15	17	9.75	1800	28500	<40	67 0	19	<20	4560	760	<250	30	<50	
TR-16	11	7.00	590	40	{4 0	430	8	{20	5570	440	<200	i 5	(50	
TR-17	21	3.34	1800	70	<40	780	23	<20	9350	880	<210	13	<50	
TR-18	9	1.88	820	1900	{40	330	9	<20	12600	300	<200	7	<50	
TR-19	14	6.30	1100	18400	<40	620	11	<20	3330	580	<200	13	<50	
TR-20	24	4.98	2600	Ò	(4 0	1000	29	(20	6950	970	(380	17	<65	

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********		292248	k ji za za za	******	a2222255	122222	222222	== = ===	*= *===	122223	222225	225#22
Sample ID	Sb	Ŝc	Se	Sa	Sr	Ta	Tb	Th	U	N	Yb	Zn
****	ppe	ppa	opa	pp n	ppe	ppa	ppn	ppm	ppm	ppe	ppa	ppa
TR-01	5.1	52	<20	100	<0.2	16	12	170	8 B	37	77	33
TR-02	5.6	57	{20	62	<0.2	15	10	98	63	21	57	39
TR-03	5.9	54	<21	79	<0.2	5	9	130	67	22	50	35
TR-04	7.6	68	<20	110	<0.2	24	18	200	110	64	92	90
TR-05	6.7	32	(20	160	<0.2	27	9	210	110	22	53	29
TR-05	4.5	54	(20	65	<0.2	8	10	130	59	23	57	34
TR-07	3.9	53	<20	77	(0.2	11	11	140	6 2	{4	49	25
TR-08	5.0	69	<20	98	<0.2	23	12	180	110	46	90	39
TR-09	0.8	14	<20	15	(0.2	4	<2	49	15	<4	15	16
TR-12	4.8	87	<23	340	(0.2	33	29	520	330	470	247	19
TR-13	2.3	30	<20	17	<0.2	11	3	33	22	6	16	18
TR-14	6.6	79	<21	110	<0.2	32	15	300	240	100	218	69
TR-15	7.5	8i	<22	9B	(0.2	18	13	160	120	53	105	83
TR-16	5.2	53	25	57	(0.2	12	7	99	54	25	42	44
TR-17	5.2	52	<20	120	<0.2	27	18	290	160	69	130	56
TR-18	2.3	28	<20	48	<0.2	10	6	88	58	<4	42	25
TR-19	5.5	58	<20	84	(0.2	15	5	130	84	34	54	27
TR-20	6.4	73	<42	150	(0.2	41	27	420	240	91	162	23

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Date of Report: 16-Oct-90

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Project 245

Heavy Mineral Results for -150HN Fraction 1990

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Sample ID	-20 eesh veight	-150HN Weight	Total -150H Weight	Au	Åg	Å5	Ba	Cu	Fe	Hg	Pb	Sb	Th	W	Zn
	kg	9	9	ug	ពពី	ug	ag	nĝ	ag	ug	ug	üğ	nд	រេថ្ង	ug
TP-Af		53 N	6.25	 73			 A	 ì /		A 1	*******	EE	170		
TP-02	7 1	0.77	8.26	4	1	10	v 2	14 30	37	01	14	6	106	37 25	33 49
TR-03	5.8	1.34	11.71	154	6	22	2 4	90 81	110	5.7	20	12	256	. 20	76
TR-04	4.2	0.14	1.65	2	Ó	8	15	45	25	0.0	20	4	£7	71 21	30
TR-05	9.7	0.45	4.72	55	Å.	Å	1	11	17	0.0	6	3	49	10	14
18-05	9.0	2.79	11.22	234	15	37	27	90	177	51.8	47	14	403	71	105
TR-07	8.1	1.66	7.08	42	3	- 24	29	47	82	78.7	18	8	285	(R	51
TR-08	5.1	0.53	4.59	23	8	25	17	33	38	0.7	12	5	186	48	40
TR-09	9.4	3.32	4.61	22	ť	18	1308	57	59	0.1	19	3	173	<14	57
TR-12	7.3	0.14	1.55	29	2	<1	0	4	8	0.0	3	1	101	91	4
TR-13	5.9	1.57	4.53	14	2	11	2	32	54	0.1	32	6	88	16	48
TR-14	6.2	0.14	1.91	6	ī	5	ō	8	18	0.0	5	ī	65	22	15
TR-15	5.6	0.29	1.22	38	4	12	5	38	51	15.0	16	4	84	28	44
TR-16	9.2	2,20	12.53	50	7	26	2	72	167	0.1	36	12	235	50	105
TR-17	5.2	0.42	7.65	23	2	9	0	22	27	0.1	10		234	56	45
TR-18	4.7	1.00	5.50	72	11	17	2	38	40	4.1	15	5	188	(9	53
TR-19	7.7	0.72	5.05	123	6	12	1	11	59	17.2	12	5	121	32	25
TR-20	4,6	0.09	1.90	42	2	1	ī	4	10	0.0	3	1	86	19	5

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To: TECK EXPLORATION LTD.

960 - 175 2ND AVE. KAMLOOPS, BC V2C 5W1 Page Number : 1-A Total Pages : 1 Invoice Date: 28-JUL-90 Invoice No. : I-9019295 P.O. Number : 26104

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Chemex Labs Ltd. Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

Project : MAIDEN CREEK 1397 Comments: ATTN: FRED DALEY CC: TOR BRULAND

CERTIFICATE OF ANALYSIS A9019295 SAMPLE PREP Au ppb λg **A1** ٨s Ba Be Bi Ca Cđ Co Cr Cu Fe Ga K Mg Bg La Mn CODE DESCRIPTION FA+AA ppa ppa **pp** ppa ppm \$ ppa ppa ppa ppa \$ ppa ppa 4 8 ppa ppm 473737 205 294 < 5 < 0.2 1.10 < 5 110 < 0.5 < 2 0.15 < 0.5 < 1 29 2 0.61 < 10 < 1 0.15 < 10 0.19 150

CERTIFICATION:

To: TECK EXPLORATION LTD.

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960 - 175 2ND AVE. KAMLOOPS, BC V2C 5W1

Page Number : 1-B Total Pages : 1 Invoice Date: 28-JUL-90 Invoice No. : I-9019295 P.O. Number : 26104

				- 114						CE	RTIF	CATE	OF A	NALY	'SIS	A9019295
SAMPLE DESCRIPTION	PREP CODE	No ppm	Na t	Ni pp n	P ppa	Pb ppa	Sb ppa	Sc ppm	Sr pp n	Ti ¥	T1 ppa	U P pa	V PP n	W P Pa	Zn ppa	
473737	205 294	1	0.06	< 1	50	6	< 5	1	18 <	0.01	< 10	< 10	. 2	< 10	30	

CERTIFICATION:

agl



Chemex Labs Ltd. Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

To: TECK EXPLORATION LTD.

960 - 175 2ND AVE. KAMLOOPS, BC V2C 5W1

Page Number : 1-A Total Pages : 1 Invoice Date: 16-OCT-90 Invoice No. : I-9024586 P.O. Number : 26121

Project : 1399 Comments: ATTN: FRED DALEY CC: TOR BRULAND

											CE	RTIFI	CATE	OF A	NAL	YSIS		49024	586		
SAMPLE DESCRIPTION	PR CO	ep De	Au ppb FA+AA	Ag pp n	Al ¥	As ppa	Ba ppm	Be pp a	Bi ppm	Ca ¥	Cd. ppm	Co ppm	Cr ppm	Cu ppa	Fe %	Ga ppm	Bg ppa	K ł	La ppa	Mg %	Mn ppm
473743 473744 473745 473746 473746 473747	205 205 205 205 205	294 294 294 294 294	<pre>< 5 < 5</pre>	0.2 0.2 0.2 0.2 < 0.2	1.97 0.69 0.55 0.66 0.61	<pre>< 5 < 5 < 5 < 5 < 5 < 5 < 5</pre>	60 60 50 60	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 2	1.20 0.07 0.03 0.09 0.06	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	33 1 1 < 1 < 1 < 1	43 58 92 42 57	25 1 1 < 1 < 1 < 1	6.84 0.61 0.56 0.48 0.51	10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.16 0.15 0.15 0.12 0.15	20 < 10 < 10 < 10 < 10 < 10	2.80 0.10 0.06 0.10 0.08	1035 195 90 260 125
473748 473749 473750 489551 489552	205 205 205 205 205 205	294 294 294 294 294	<pre>< 5 5 < 5</pre>	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	0.42 0.31 0.37 0.50 0.44	< 5 < 5 < 5 < 5 < 5 < 5	40 50 50 160 40	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.05 0.02 0.04 0.06 0.02	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 1 < 1 < 1 < 1 < 1 < 1	42 52 54 53 49	< 1 < 1 < 1 1 < 1	0.57 0.61 0.58 0.48 0.53	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.12 0.13 0.13 0.12 0.11	< 10 < 10 < 10 < 10 < 10 < 10	0.06 0.06 0.07 0.09 0.06	95 275 245 105 140
489553 489554 489555 489556 489556 489557	205 205 205 205 205 205	294 294 294 294 294	<pre>< 5 < 5</pre>	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	0.49 0.45 0.36 0.50 0.54	< 5 < 5 < 5 < 5 < 5 < 5	80 90 70 70 40	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2	0.03 0.05 0.04 0.07 0.07	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	1 < 1 < 1 < 1 < 1 < 1	45 49 63 53 32	< 1 < 1 < 1 < 1 < 1 < 1	0.56 0.57 0.60 0.54 1.08	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.13 0.13 0.13 0.12 0.09	< 10 < 10 < 10 < 10 < 10 < 10	0.06 0.07 0.08 0.07 0.07	895 590 355 215 285
489558 489559 489560 489561	205 205 205 205	294 294 294 294	< 5 < 5 < 5 < 5	< 0.2 < 0.2 < 0.2 < 0.2	0.52 0.60 0.74 0.75	<pre> 5 5 5 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7</pre>	60 30 50 50	< 0.5 0.5 0.5 0.5	< 2 2 < 2 < 2	0.09 0.09 0.08 0.07	< 0.5 < 0.5 < 0.5 < 0.5	< 1 < 1 < 1 < 1	55 51 38 57	< 1 < 1 < 1 < 1	0.49 0.45 0.44 0.29	< 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1	0.12 0.11 0.11 0.12	< 10 10 < 10 < 10	0.07	385 65 160 305
											<u> </u>			(CERTIFIC			В	<u> </u>		Į.



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Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

960 - 175 2ND AVE. KAMLOOPS, BC V2C 5W1

Page Number : 1-B Total Pages : 1 Invoice Date: 16-OCT-90 Invoice No. : I-9024586 P.O. Number : 26121

Project : 1399 Comments: ATTN: FRED DALEY CC: TOR BRULAND

										CERTIFICATE OF ANALYSIS				SIS		A90245	586			
SAMPLE DESCRIPTION	PRI COI	er De	Mo	Na t	Ni ppm	P ppm	Pb ppm	Sb ppa	Sc ppm	Sr pp n	Ti %	Tl ppm	D D	V Ppm	M M	Zn pp n	Se ppa	Te pp a	-	
473743 473744 473745 473746 473747	205 205 205 205 205 205	294 294 294 294 294 294	< 1 < 1 < 1 < 1 < 1 < 1	0.27 0.06 0.08 0.05 0.06	48 1 < 1 < 1 < 1	1400 60 20 50	< 2 < 2 < 2 < 2 < 2	< 5 < 5 < 5 < 5 < 5	2 1 1 1	119 0 12 < 0 18 0 13 < 0 15 < 0	0.36 0.01 0.01 0.01 0.01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	99 2 1 < 1 < 1	< 10 < 10 < 10 < 10 < 10 < 10	106 44 32 36 36	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05		
473748 473749 473750 489551 489552	205 205 205 205 205 205	294 294 294 294 294	< 1 < 1 < 1 < 1 < 1 < 1 < 1	0.05 0.05 0.05 0.04 0.05	< 1 1 < 1 < 1 < 1	20 20 20 30 30	< 2 < 2 < 2 < 2 < 2 2	< 5 < 5 < 5 < 5 < 5 < 5	1 1 1 1	10 < 0 6 0 8 < 0 14 < 0 5 0	0.01 0.01 0.01 0.01 0.01	< 10 < 10 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 1	< 10 < 10 < 10 < 10 < 10 < 10	30 30 32 28 32	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05		
489553 489554 489555 489556 489557 489557	205 205 205 205 205	294 294 294 294 294	1 < 1 < 1 < 1 < 1	0.05 0.05 0.05 0.05 0.04	< 1 < 1 < 1 < 1 < 1 < 1	30 30 10 30 30	< 2 6 2 < 2 < 2	< 5 < 5 < 5 < 5 < 5 < 5	1 1 1 1	8 0 10 < 0 9 0 13 < 0 10 < 0).01).01).01).01).01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	1 1 < 1 < 1 < 1 < 1	< 10 < 10 < 10 < 10 < 10 < 10	34 38 32 24 30	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05		
489558 489559 489560 489561	205 205 205 205	294 294 294 294	< 1 < 1 < 1 < 1	0.05 0.04 0.04 0.04	< 1 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	20 20 30	< 2 < 2 4	< 5 < 5 < 5 < 5	1 1 1	13 < 0 12 < 0 16 < 0 12 < 0	0.01 0.01 0.01 0.01	10 < 10 < 10 < 10	< 10 < 10 < 10 < 10	1 1 < 1	< 10 < 10 < 10 < 10	26 26 46 24	< 0.2 < < 0.2 < < 0.2 < < 0.2 < < 0.2 < < 0.2 <	< 0.05 < 0.05 < 0.05 < 0.05		
L	I							<u> </u>						c	ERTIFIC	ATION:		B.	Ca	ŗ!



Chemex Labs Ltd. Analytical Chemists ' Geochemists ' Registered Assayers

ID: TECK EXPLOHATION LTD,

960 - 175 2ND AVE. KAMLOOPS, BC V2C 5W1 Page Number : 1-B Total Pages : 1 Invoice Date: 28-OCT-90 Invoice No. : I-9025393 P.O. Number : 26124

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

Project : 1399-TRAC Comments: ATTN: FRED DALEY CC: TOR BRULAND

SMPL2 PRD DESCRIPTION No Na Ni P Ppa Ppa <t< th=""><th></th><th colspan="5"></th><th></th><th colspan="6">CERTIFICATE OF ANALYSIS A9025393</th><th></th></t<>								CERTIFICATE OF ANALYSIS A9025393													
18952 205 204 <1 0.08 <1 90 8 <5 <1 13 <0.01 <10 10 <10 10 <th>SAMPLE DESCRIPTION</th> <th>PRI COI</th> <th>ep De</th> <th>Mo ppm</th> <th>Na</th> <th>n N 8 pp</th> <th>i P na ppan</th> <th>Pb Ppm</th> <th>Sb ppa</th> <th>Sc ppm</th> <th>Sr ppm</th> <th>Ti %</th> <th>Tl ppm</th> <th>pbu A</th> <th>bba A</th> <th>W Ppm</th> <th>2n ppn</th> <th>Se ppm</th> <th>Te ppa</th> <th>-</th> <th></th>	SAMPLE DESCRIPTION	PRI COI	ep De	Mo pp m	Na	n N 8 pp	i P na ppan	Pb Ppm	Sb pp a	Sc ppm	Sr ppm	Ti %	Tl ppm	pb u A	bba A	W Ppm	2n pp n	Se ppm	Te ppa	-	
489567 205 294 < 1	189562 189563 189564 189565 189566	205 205 205 205 205 205	294 294 294 294 294 294	< 1 1 3 1 2	0.00		1 80 1 50 1 130 1 60 1 30	8 8 10 6 4	<pre>< 5 < 5 < 5 < 5 < 5 < 5 < 5</pre>	< 1 1 < 1 1	13 < 12 < 15 < 20 < 17 <	0.01 0.01 0.01 0.01 0.01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	1 < 1 < 1 < 1 < 1 < 1	< 10 < 10 < 10 < 10 < 10 < 10	36 28 50 34 28	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05		
449572 205 294 <1	489567 489568 489569 489570 489571	205 205 205 205 205	294 294 294 294 294	< 1 < 1 1 1 < 1	0.01	3 < 3 4 7 < 7 < 5 <	1 30 8 620 1 20 1 40 1 20	4 6 4 6	< 5 < 5 < 5 < 5 < 5	1 7 1 1 < 1	12 < 31 < 10 < 11 < 15 <	0.01 0.01 0.01 0.01 0.01	< 10 < 10 < 10 < 10 < 10 < 10	< 10 < 10 10 < 10 < 10 < 10	< 1 91 1 < 1 < 1	< 10 < 10 < 10 < 10 < 10 < 10	14 78 24 24 16	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05 < 0.05		
489577 205 294 11 0.01 39 280 < 2	489572 489573 489574 489575 489576	205 205 205 205 205	294 294 294 294 294	< 1 < 1 < 1 < 1 < 1 < 1	0.0	5 < 6 < 5 < 5 3 5 <	1 20 1 30 1 10 3 360 1 30	2 < 2 < 2 < 2 2	< 5 < 5 < 5 < 5 < 5 < 5	1 < 1 < 1 5 < 1	11 < 13 < 15 < 64 < 15 <	0.01 0.01 0.01 0.01 0.01	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10 < 10	< 1 1 < 1 51 1	< 10 < 10 < 10 < 10 < 10 < 10	28 34 32 58 32	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2	< 0.05 < 0.05 < 0.05 < 0.05 < 0.05		
	189577 189579 189580	205	294 294 294	11	0.0	l 3 5 < 1 1	9 280 1 50 8 240	< 2	< 5 < 5 < 5	8 < 1 2	192 < 16 < 21 <	0.01 0.01 0.01	< 10 < 10 < 10	< 10 < 10 < 10	54 1 34	< 10 < 10 < 10	60 32 36	< 0.2 < 0.2 < 0.2	< 0.05 < 0.05 < 0.05		

CERTIFICATION:

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Project : 1399-TRAC Comments: ATTN: FRED DALEY CC: TOR BRULAND

CERTIFICATE OF ANALYSIS A9025393

SAMPLE DESCRIPTION	PRE	P B	ли ррб Гл+лл	Ag ppm	А1 ¥	As ppm	Ba pp n	Be ppm	Bi ppm	Ca %	Cd ppn	Co ppm	Cr ppm	Cu ppm	Fe t	Ga ppm	Hg PP m	K K	La . ppm	Mg	Mn ppm
489562 489563 489564 489565 489565	205 205 205 205 205	294 294 294 294 294	<pre>< 5 < 5 < 5 < 5 < 5 < 5</pre>	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2	0.53 0.52 0.72 0.53 0.56	<pre>< 5 < 5 < 5 < 5 < 5 < 5</pre>	60 60 120 150 70	< 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2	0.11 0.08 0.11 0.08	< 0.5 < 0.5 < 0.5 < 0.5	< 1 < 1 1 1	76 63 66 49	6 5 5 4	0.53 0.28 0.56 0.60	< 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1	0.19 0.19 0.21 0.17	< 10 < 10 < 10 < 10 < 10	0.08 0.06 0.08 0.07	140 110 430 1125
489567 489568 489569 489570 489571	205 205 205 205 205 205	294 294 294 294 294 294	< 5 < 5 < 5 < 5 < 5 < 5 < 5	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	0.63 1.93 0.47 0.49 0.75	<pre>< 5 < 5</pre>	60 160 60 70 80	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2 < 2 < 2	0.10 0.34 0.05 0.05 0.09	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 1 16 < 1 < 1 1	78 183 73 87 47	2 15 4 2 3	0.54 0.65 3.29 0.43 0.78 0.25	< 10 < 10 < 10 < 10 < 10 < 10	<1 <1 <1 <1 <1 <1	0.19 0.18 0.26 0.15 0.17 0.16	< 10 < 10 < 10 < 10 < 10	0.08	105 375 110 85
489572 489573 489574 489575 489575 489576	205 205 205 205 205 205	294 294 294 294 294	<pre>< 5 < 5</pre>	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	0.61 0.61 0.70 1.02 0.78	< 5 < 5 < 5 < 5 < 5 < 5	80 70 70 110 40	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 2 < 2 < 2 < 2 < 2 < 2	0.06 0.08 0.12 1.24 0.13	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 1 < 1 < 1 7 < 1	34 46 33 173 33	2 7 5 6 2	0.33 0.42 0.77 3.46 0.45	< 10 < 10 < 10 < 10 < 10 < 10	< 1 < 1 < 1 < 1 < 1 < 1	0.14 0.15 0.13 0.26 0.15	< 10 < 10 < 10 < 10 10 < 10	0.07 0.07 0.08 0.16 0.10	930 730 615 240 75
489577	205	294	< 5	< 0.2	1.19	15	450	1.0	< 2	2.63	< 0.5	7	37	47	2.72	< 10	< 1	0.10	< 10	0.70	820
489579 489580	205	294 294	< 5 < 5	0.2	0.91 0.57	< 5 10	70 120	< 0.5 1.0	< 2 < 2	0.12	< 0.5 < 0.5	< 1 5	32 204	1 13	0.45	< 10 < 10	< 1 < 1	0.17 0.13	< 10 < 10	0.11 0.03	280 310











		L19,500N
<u>k</u>		L19,400N
i		L19,300N
i		L19,200N
		L19,100N
		L19,000N
	<u></u>	L18,900N
	<u></u>	L18,800N
	i	L18,700N
		L18,600N
	ś	L18,500N
i		L18,400N
	ŝ	L18,300N
		L18,200N
		L18,100N
		L18,000N
		L17,900N
		L17,800N
		L17,700N
/		L17,600N
		L17,500N
		L17,400N
i	d	L17,300N
		L17,200N
	k	L17,100N
i		L17,000N
<u>i</u>		L16,900N
i		L16,800N
		L16,700N
		L16,600N

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LEGEND

2 B	Argillic alter Quartz Latite
2 A	Quartz Latite
ПВ	Wacke
1 A	Conglomerate ·
_ <u></u>	Grid lines
\bigcirc	Outcrop
	Discontineous outcrop
	Estimated geological contact
+	Float
$\mathbf{A} = \mathbf{TR} - 12$	Heavy mineral sample location
■ 473749	Rock Sample location
4737 37	Float Sample location
-ه	shear zone
-ل	bedding
A	fractures
\downarrow	plunging fold axis



0 50 icc i50 200 300 3

TECK EXPLORATION LTD TRAC PROJECT NTS-921/13E,14W TRAC GRID GEOLOGY

and SAMPLE LOCATIONS

Date:November, 1990

Revised: July 1991

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FIGURE 7

Scale-1:5.000 Data:T.Bruland Drawn by:P.H.

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				A CONTRACTOR OF THE OWNER
~	7500 E 7750 E	8000 E	8250 E	8500 E
19500 N	2346.6 2347.9 2346.6 2347.9 2347.9 2347.6 23	+2269.1 +2275.8 +2277.0 +2277.0 +2277.0 +2277.0 +2270.9 +2290.9 +2305.2 +2305.2 +2329.6	72219.8 +2219.8 +2235.3 +2273.8 +2253.5 +2259.2 +2259.2 +2258.2 +2270.7	+2207.3 +2199.3 +2199.3 +2234.0 +2225.0 +22172.6 +22172.6 +22172.6
	2358,8 -236,7 -2384,2 -2384	-22624 -2272.7 -2272.7 -2272.7 -2286.5 -2286.5 -2286.5 -2285.0 -2285.0 -2285.0 -2285.0 -2285.0 -2285.0	-2234 -22234 -22234 -22431 -2241 -22643 -2275.5 -2275.5 -2275.5	-2221. -22196. -2217. -2217. -2217. -2217.
	-2336 -2356 -236 -2356 -	+228 +228 +228 +228 +228 +228 +228 +228	1228	-225
19250 N		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	397778 399.5	299.8 302-9 33577 33577 33577 314.2 314.2 3130 2 3130 2 3130 2 3130 2 3130 2 3130 2 3130 2 3130 2 3130 2 3130 2 3130 2 3130 2 9 3130 2 9 31577 31770	286.7 286.7 294(1 294(1 286.2 295.4 312.9 312.9 312.9 312.9	285.2 285.2 285.2 206.6 309.1 309.1 309.1 309.1 309.1 296.1
19000 N	+23224 +2352 +2352 +2352 +2376 +2376 +2376 +2376 +2363 +2365 +2365 +2365 +2365 +2365 +2365 +2359	+2327.6 +2327.6 +2327.6 +2347.1 +2347.1 +2303.1 +2303.1 +2302.3 +2302.3 +2302.3 +2304.6 +2304.6	-2293.1 -2291.8 -2291.8 -2298.4 -2313.3 -2306.5 -2306.5 -2316.2	-2295.0 -2295.0 -2293.4 -2293.4 -2293.7 -2293.7 -2293.7 -2293.7
	2373.9 2373.9 2373.9 2360.1 2360.1 2384.7 2394.2 2394.2 2394.2 2394.2 2394.2 2388.6 2 2 2388.6 2 2 2 2 2 2 2 2 2 2 2 2 2	2301.8 +2302.8 +2308.0 +2314.0 +2316.9 +2328.6 +2328.6 +2359.5 +2359.5	12269.9 12275.8 12275.9 1.4	+2280.2 +2280.2 +2283.8 -2292.1 -2292.1 -22268.7 -22271.0 +22266.2 +22264.2 +22264.2
			+22 +22 +22 +22 +22 +22 +22 +22 +22 +22	+224 +225 +225 +225 +228
18750 N	44803.5 2467.395.3 2452401.9 2472401.9 24724040.5 2472400.5 24724000.5 24724000.5 24724000.5 247240000000000000000000000000000000000	11623124.1 1192626.5 1192626.5 1392626.5 13926267.8 13922667.8 13922667.8 13922667.8 13922667.8 13922667.8	52.42267.6 53.72269.3 60-12273.4 774-42272.3 84-42276.2 874-42276.2 874-42276.2 874-42276.2 874-42276.2 874-42276.2 874-42276.2 874-42276.2	4.92243.8 6.52257.7 1. 22258.1 1. 72270.3 3.72273.9 3.72273.9 4.92272.8 1.4.92272.8
			+228 +228 +228 +228 +228 +228 +228	+226 +225 +225 +227 +227 +227 +227 +227
	101.1 192.1 192.1 192.1 192.1 192.1 193.5 199.5 12 199.5 12 199.5 12 12 12 12 12 12 12 12 12 12 12 12 12	90.9 90.9 10.3	$\begin{array}{c} 14.5 \\ 1220 \\ 14.0 \\ 1220 \\ 14.0 \\ 1220 \\ 14.4 \\ 1220 \\ 14.4 \\ 1220 \\ 11.2 \\ 1220 \\ 11.2 \\ 1220 \\ 12$	$\begin{array}{c} 9.5 \\ 1.2 \\ 2.9 \\ 1.2 \\$
18500 N	339.0 339.1 340.1	06.8 05.0 05.0 12.5 12.5 26.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.8 226.0 206.0 200.0 206.0 200.0 200.00	97.8 97.8	$-\frac{1}{2}$
	2328.4 24027.4 24027.4 2407.4 2407.4 2407.4 2407.4 2407.4 2407.4 2407.4	23304,9 23304,9 23304,9 22334,7 2334,7 2334,7 2334,7 2334,7 2334,7 2334,7 2334,7 2334,7 2334,7 2334,7 2427,9 24400,7 2427,9 247,9 2427,9 2427,9 247	282.3 282.3 282.4 289.4 297.6 295.9 295.9 2295.9 2295.9 2295.9 2295.9 2295.9 2295.9 2295.9 2295.9 2295.9 2295.9 2295.9 2295.1 2295.9 2295.1 22	264.5 264.5 266.2 266.9 270.9 266.4 2262.4 2262.4 2262.4 2265.4 200.4 200.4 200.4 200.4 200.4 200.4 200.4 2
	100 100 100 100 100 100 100 100 100 100	287.0 12 296.8 2 284.6 12 284.6 12 284.6 12 317.1 12 317.1 12 3317.1 12 3317.1 12 3317.1 12 3317.1 12 3317.1 12 3329.1 12 3329.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12 3392.2 12	307.3 294.9 294.9 295.7 205.7	448.9 +22 246.5 +22 263.8 +22 275.1
18250 N	3385.1 3385.1 3385.1 414.9 378.3 378.7 378.7	295.6 300.0 311.0 315.8 317.9 317.7	330.3 306.8 310.9 317.5 317.5	242.0 239.5 240.8 240.8 247.2 247.2 247.2 263.6 347.0
	2397.1 2415.1 2415.1 2415.1 2415.1 2415.1 2415.3 2415.1 2415.1 2415.4 2415.1	+2255.0 -2295.0 -2295.0 -2295.0 -2295.0 -22395.1 -2315.1 -2315.1 -2315.1 -23320.5 -2338.9 -2338.9 -2338.9 -23366.1	-2286.2 -2272.2 -2325.8 -2300.9 -2289.6 -2294.0 -2294.0 -2294.0 -227767	+2241.3 +2252.2 +2256.1 +2255.0 +2255.0 +2258.9 +2258.9
10000 11	2404.3 2399.5 2399.5 2399.7 2401.2 2401.2 2407.0 2412.6 2407.0 2409.5 2407.0 2409.5 2400.4 2400.4	-2298.8 -2298.8 -2298.8 -2306.0 -2306.0 -2306.0 -2351.4 -2367.1 -2367.9 -2367.9 -2367.9	-2261.7 -2260.2 -2253.3 -2283.2 -2283.2 -2284.2 -2284.2 -2286.2	-2249.7 -2239.0 -2239.0 -2239.3 -2245.5 -2279.7 -2269.2 -2269.2
18000 N	2373 2375	22306.5 22306.5 22306.4 22386.4 22385.4 22385.7 22385.7 22385.7 22385.7 22385.7	+2268.9 +2240.9 +2237.9 +2237.9 +22247.0 +22247.0 +22241.0 +22261.5	-2221.3 -2221.2 +2259.6 +2259.6 +2259.8 +2256.8
	-2445.6 +2443.9 +2416.1 +2416.	-2337.6 -2337.6 -2337.6 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -23327.4 -2337.6	-2298.0 -2290.1 -2291.6 -2274.8 -2313.9 -2324.5	-2265.8 -2282.9 -2275.0 -2275.0 -2275.1 -2287.2 -2287.2 -2281.8 -2281.8
17750 N	+2415 +2422 +2422 +2415 +2422 +2415 +2422 +24 +24	+2322 +2323 +2323 +2343 +22343 +22365 +22365 +22366	+2286 -2286 -2287 -2287 -2287 -2287 -2308 -2314 -2308	+2237.8 +2289.1 +2271.5 +2270.4 +2270.4 +2275.7 +2275.7 +22275.7
*2	9 +2412.9 4 4 +2412.8 4 12412.8 4 12412.8 4 12412.8 4 12412.2 6 12412.2 4 12412.2 4 12412.4	0 +2329.1 2 +2334.4 9 +2349.0 0 +2372.5 6 +2372.5 7 + 2382.4 9 +2382.4 1 + 2382.5 1 + 2385.5 1 + 242885 1 + 24885 1 + 24885	9 +2274.5 6 +2273.2 6 +2285.5 6 +2285.5 6 +2278.3 6 +2278.3 6 +2278.3 7 +2295.9 1 +2295.9 1 +2295.9	2265.6 1 +2275.5 1 +2275.5 1 +2288.6 1 +2288.6 1 +2288.5 1 +2285.1 1 +2262.7 1 +2262.7 1 +2262.7 1 +2263.1 2 +2253.9
			1	
17500 N	3380.3 - 2374 3380.3 - 2374 3393.9 - 2415 414.1 - 2415 414.1 - 2413 414.1 - 2413 410.2 - 2413 402.3 - 2412 407.0 - 2413 3398.9 - 2410 2405.4 - 2413 2405.4 - 2410 2404.8 - 2410 2404.8 - 2410	120.7 -2327 124.5 -2327 1255.3 -2359 1403.2 -2359 1403.2 -2309 1403.2 -2309 1366.8 -2391 1366.8 -2386 1564.1 -2386 1564.1 -2386	71.8 (2257 91.8 2287 91.8 2287 93.2 2297 93.2 2294 93.2 2294 172.5 2306 172.5 2306 172.5 2306 172.5 2306 172.5 2306 172.5 2307	59.5 +2247 59.2 +2245 54.8 +2250 57.5 +2259 62.4 +2262 64.4 +2262 61.5 +2255 61.0 -2268
				5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	2395.4 2395.2 2 2395.2	235,49 22393.8 22420.8 22401.5 22401.5 22392.0 -2392.7 -2395.7 -2395.7 -2398.2	2274.8 -2274.8 -2288.2 -2288.2 -2306.7 00 -2310.0 -23113.3 -23145.9 -23345.9	+2251.8 -2238.6 -2254.6 -2245.0 -2261.9 -2261.9 -2255.8 -2255.8 -2255.4 -2255.4 -2255.4
17250 N	2402.2 2408.9 2408.9 2408.9 2405.5 2405.5 2405.5 2405.5 2405.2	2427.7 2427.7 2427.7 2427.7 2422.4 2422.4 2403.2 2403.2 2405.7 2405.7 2405.7 2405.7 2405.7 2423.7 2423.7 2423.7 222423.7 22224323.7 2222423.7 2222423.7 2222432.7 2222432.7 2222432.7 2222432.7 2222432.7 2222432.7 2222432.7 2222432.7 2222432.7 2222432.7 2222432.7 222242.7 2222423.7 222242.7 222242.7 222242.7 222242.7	2273356 2288,7 2288,7 230,47 230,47 231,57 2334,7 2231,57 2231	2259.7 2277.9 2267.8 2267.8 2267.8 2258.3 2258.3 2254.6 22254.6 22254.6 22254.6 22271.5 2271.5 2271.5 2271.5 2271.5 2271.5 2271.5 2271.9
	992.9 992.9 902.4 903.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 998.7 995.4 998.7 995.4	4117.6 432.3 432.3 432.3 432.3 432.3 435.7 410.7	1021 311.1 312.6 312.6 312.6 312.6 312.6 312.6 312.6 312.6 312.6 312.6	2236.2 2259.8 2264.5 2266.1 2266.1 274.7 275.2 277.6 277.6
	2346.4 2350.5 2350.5 2350.5 2350.5 2350.5 2350.5 2350.5 2346.4 2346.4 2346.4 2346.4 2340.1 2350.5 2340.1 2350.5 2340.1 2350.5 2340.1 2350.5 23	+2375.0 +2375.0 +2375.0 +2375.0 +2386.3 +2389.2 +2394.3 +2393.8 +2393.8 +2387.5 +2383.4 +2383.4	-2285.0 -2286.1 -2286.1 -2295.5 -230/.5 -230/.5 -2347.6	-2262.1 -2263.0 -2263.0 -2263.0 -2256.1 -2256.1 -2256.1 -2256.1 -2256.1
17000 N	-2367.9 -2367.9 -2340.4 -2346.8 -2346.8 -2346.8 -2346.8 -2346.8 -2346.7 -2360.7 -2360.7 -2360.7 -2360.7	+2370.2 +2370.7 +2375.0 +2371.9 +2371.6 +2372.6 +2375,5	2379.3 -2379.3 -2379.3 -2374.5 -2374.5 -2352.5 -2352.5	+2268.9 +2268.9 +2283.9 +2292.5 +2292.5 +2292.5
	+2327,5 +2336.6 +2336.6 +2336.7 +2316.4 +2316.4 +2316.4 +23287.4 +23287.4 +23287.4 +23286.9 +23267.4 +23267.4 +23267.5 +23267.5 +23267.5 +23267.5 +23267.5 +23267.5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2327,5 +2336.6 +2336.7 +236.7 +23	-2373.8 -2373.8 -2373.2 -2363.5 -2363.5 -2363.5 -2363.5 -2383.6 -2383.6 -2383.6 -2383.6 -2383.6 -2383.6	-2347.3 -2368.4 -2353.5 -2334.9 -23340.9	-2229.4 -2229.4 -2231.2 -2231.2 -2234.9 -2234.9 -2234.9
16750 N				
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Direction to NLK Seattle transmitter station Scale 1:5000 (metres) FIGURE 9B TECK EXPLORATION LTD. VLF-EM SURVEY TRAC GROUP Fraser Filter, NLK Seattle, Wash. 24.8 kHz NTS 92I/13E & 92I/14W 10000 E ASSE SSMENT_D R FMORT Drawn: TB

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