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The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

COMMERCE RESOURCES CORP.

**2001 MAGNETOMETER SURVEY
AND DIAMOND DRILLING
ON THE VERITY PROPERTY**

**NORTH OF BLUE RIVER, BRITISH COLUMBIA
(KAMLOOPS MINING DIVISION)**

**CLAIMS: Verity 1 to 13, Mara 1 to 7
Geographic Coordinates**

52° 24' N
119° 09' W

NTS Sheet 83 D/6

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Date Submitted: 2002 02 25

GEOLOGICAL SURVEY BRANCH

26,796

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1.

INTRODUCTION

Throughout this report the term Verity Property refers to the Verity 1 to 13 and the Mara 1 to 7 mineral claims, which encompass the tantalum-niobium-phosphate bearing Verity-Paradise Carbonatite Complex, about 40 km south of Valemount, British Columbia.

Between August 1 and October 26, 2001, Commerce Resources Corp. established about 10.55 line-km of grid and conducted approximately 10.44 line-km line of ground magnetic surveys. Also, in preparation for drilling of the Verity-Paradise Carbonatite Complex, about 3.6 km of old logging roads and skidder trails were rehabilitated to make them suitable for access by drill equipment and four-wheel-drive vehicles. During the month of August, five BQ-Thin Wall sized diamond drill holes, totalling 410 meters, were completed near the western end of the Verity-Paradise Carbonatite Complex. The work was authorized by Commerce Resources Corp.

As previous assessment reports (Dahrouge, 2001, and Dahrouge and Reeder, 2001) include descriptions of geographic setting, history of exploration and geology, most of these subjects are not repeated herein. New information bearing on these subjects is, however, included.

Throughout this report attitudes of bedding and other planar features are given as A°/B° SW, where A° is the azimuth of the strike and B° is the amount of dip in the direction indicated. A magnetic declination of $20\frac{1}{2}^{\circ}$ east was used.

1.1 GEOGRAPHIC SETTING

1.1.1 Location and Access

The Verity Property which encompasses a majority of the Verity-Paradise Carbonatite Complex (VPCC), is located in North Thompson River Valley of east-central B.C. (Fig. 1.1), within NTS map area 83 D/6. The VPCC is centred at about $52^{\circ} 24'$ north latitude between $119^{\circ} 05'$ to $119^{\circ} 09'$ longitude. A second carbonatite, Mill, is within the northwest part of the property.

The property is accessible from B.C. Highway 5 (Yellowhead South Highway) and is approximately 56 km south of Valemount, British Columbia and about 38 km north of Blue River. Limited supplies and accommodations are available at both locations. The main line of the Canadian National Railway passes through the western part of the property. The VPCC is accessible from Serpentine Creek logging road, which branches from Highway 5 about 35 km south of Valemount.

1.1.2 Topography, Vegetation, Climate and Geographic Names

The Verity Property is between 880 m and 2300 m elevation above sea level. It is located along the steep western slopes of the Monashee Mountains. The peak to the east of the Verity Property

attains an elevation of about 2725 m.

Several names have previously been applied to various components of the VPCC, which forms a crescent shaped body, open ended to the south. It has been traced by intermittent surface sampling and ground geophysics along a total strike length of about 7,000 m. Its western end, near the Specimen and Columbite Pits, has historically been termed the Verity Carbonatite Sill. To the east, near Paradise Lake, outcrops of both carbonatite and nepheline-syenite have been referred to as 'Paradise'. About 1,750 m southwest, along trend from the Paradise area, an exposure of carbonatite along Serpentine Creek logging road is termed 'Roadside'.

The slopes at the Verity Property are typically covered by thick undergrowth consisting of buckbrush, devil's club and huckleberry. Areas not affected by recent logging are covered by dense stands of hemlock, cedar, fir and white pine. Precipitation averages about 50 inches per year, and snowfall is generally heavy.

TABLE 1.1 LIST OF MINERAL CLAIMS

Claim Name	Tenure Number	Units/Claim	Record Date	Actual or Expected Expiry Date
Mara 1	380030	20	2011-08-16	2011-08-16
Mara 2	380031	8	2001-08-16	2011-08-16
Mara 3	380032	20	2001-08-16	2011-08-16
Mara 4	380033	8	2001-08-16	2011-08-16
Mara 5	380034	1	2001-08-16	2011-08-16
Mara 6	380035	1	2001-08-16	2011-08-16
Mara 7	380036	1	2001-08-16	2011-08-16
Verity 1	374654	1	2007-02-15	2007-02-15
Verity 2	374655	1	2007-02-15	2007-02-15
Verity 3	374556	1	2007-02-15	2007-02-15
Verity 4	374557	1	2007-02-15	2007-02-15
Verity 5	374558	1	2007-02-15	2007-02-15
Verity 6	374559	1	2007-02-15	2007-02-15
Verity 7	374560	1	2007-02-17	2007-02-17
Verity 8	374561	1	2007-02-17	2007-02-17
Verity 9	374562	1	2007-02-17	2007-02-17
Verity 10	382159	20	2001-10-28	2009-10-28
Verity 11	382160	12	2001-10-27	2008-10-27
Verity 12	382161	16	2001-10-27	2008-10-27
Verity 13	382162	20	2001-10-27	2008-10-27
	Totals	136		

1.2 PROPERTY

The property is held under 12 two-post mineral claims (Mara 5 to 7 and Verity 1 to 9) and eight four-post claims (Mara 1 to 4 and Verity 10 to 13) encompassing about 34 km², within Kamloops Mining Division. The claims are held 100 per cent by Commerce Resources Corp (Table 1.1).

1.3 HISTORY AND PREVIOUS INVESTIGATIONS

As a previous assessment reports by Dahrouge (2001) and Dahrouge and Reeder (2001) include detailed descriptions of prior exploration of the Verity Carbonatite and the Blue River area, that information is not repeated herein. Information of the geology of the Blue River area was published by Campbell (1968), Pell and Simony (1981) and Pell (1987).

Exploration of the Verity Carbonatite during the fall of 2000, by Commerce Resources Corp., included reconnaissance-scale examinations of the known carbonatites (Dahrouge, 2001). It resulted in the identification of the niobium- and tantalum-bearing mineral species at Verity. During the spring and summer of 2001, Commerce Resources Corp. conducted ground geophysical surveys, mapping and sampling to the east of the main Verity Sill. The exploration resulted in the discovery of a new carbonatite, termed 'Roadside'. It also confirmed that the Verity Carbonatite, carbonatites within the Paradise area, and the recently discovered Roadside Carbonatite were part of a much larger complex, termed the 'Verity-Paradise Carbonatite Complex (VPCC)'. Based on the foregoing exploration, the VPCC is thought to have a total strike length of about 7,000 meters.

1.4 PURPOSE OF SURVEY

The geophysical work described in this report was primarily undertaken to define the surface trace of the main carbonatite sill within the western most parts of the VPCC. Subsequent work, including diamond drilling was undertaken to confirm results previously reported by Anschutz (Canada) Mining Ltd. (Aquist 1982a and 1982b) and to provide additional information on the VPCC.

1.5 SUMMARY OF WORK

Between August 1 and October 26, 2001, Jeff Reeder, P.Geo. and Jody Dahrouge, B.Sc., P.Geol., supervised the exploration of the Verity Property. Work included the establishment of about 10.55 line-km of grid and the completion of about 10.44 line-km of ground magnetic surveys. Also, in preparation for drilling of the VPCC, about 3.6 km of old logging roads and skidder trails were rehabilitated to make them suitable for access by drill-equipment and four-wheel-drive vehicles.

Five BQ-Thin Wall sized diamond drill holes, totaling 410 meters, were completed between August 9 to 27. The work was authorized by Commerce Resources Corp.

1.6 FIELD OPERATIONS

Field work was conducted by a total of four personnel between August 1 and October 26, 2001. Personnel were based either at Summit River Lodge about 20 km northerly from the property or in a motel in Valemount; with transportation to the property by either two- or four-wheel-drive vehicle. Garmin hand-held 'GPS' instruments were used to provide generalized location information. Accuracy was primarily dependant on forest cover, but generally varied from a few to about 50 meters.

2. REGIONAL GEOLOGY

The Verity Property is within the Omineca Crystalline Belt of the Canadian Cordillera. The eastern flank of the Cordillera has previously been recognized as a locus of alkaline igneous activity (Currie, 1976). Pell (1987) has subdivided the Omineca Alkaline Province, within British Columbia, into three northwest trending belts:

- a) an eastern belt, east of the Rocky Mountain Trench and encompassing most of the Main and Western Ranges of the Rocky Mountains;
- b) a central carbonatite belt, which predominately encompasses the Rocky Mountain Trench and eastern part of the Omineca; and
- c) a western belt.

The central carbonatite belt generally hosts multiple deformed and metamorphosed sill-like bodies hosted by Late Precambrian to Early Cambrian metasedimentary rocks (Pell, 1987). This belt includes the Blue River area carbonatites: Fir, Verity and Paradise; Howard Creek; and Mud Lake-Blue River.

According to McCrea (2001, p.11)

"The Blue River Property encompasses upper amphibolite facies (kyanite to sillimanite) metasedimentary rocks of the Proterozoic Horsethief Creek Group of the Shuswap Metamorphic Complex within the Omineca Crystalline belt. These rocks were described by Campbell (1968) as: gritty feldspathic quartzite, phyllite, quartz-mica schist, garnet-staurolite and kyanite-mica schist, biotitic and/or hornblende quartz-feldspathic gneiss, minor marble and amphibolite and minor pegmatite with staurolite-kyanite schist. Immediately north of the property, along the north facing slope of Moonbeam Ridge, is an easterly trending mylonitic contact zone, with the highly deformed Malton Gneiss to the north.

Complex regional scale structures within this part of the Monashee Mountains include the mylonitic fault contact between Horsethief Creek Group rocks to the south and Malton Gneiss to the north; and a northerly

trending regional scale fault along the North Thompson River Valley, which Pell and Simony (1981) described as

"a major west side down normal fault, the North Thompson fault, forms a structural and metamorphic discontinuity between the Cariboo Mountains and the Monashee Mountains to the east." "

3. PROPERTY GEOLOGY

The following descriptions of the geology of the Verity Property (Sections 3.1 and 3.2) are taken from a previous assessment report by Dahrouge and Reeder, 2001. With information pertinent to the Verity Property repeated herein.

3.1 STRATIGRAPHY, STRUCTURE AND LITHOLOGY

The Verity Property is underlain by metasedimentary rocks and derived gneisses of the Proterozoic Horsethief Creek Group. Within the western parts of the Verity claims, the gneisses have a general strike of 300° and dip 15° to 30° SW (Aquist, 1982b). They are locally folded and cut by later faults. The Horsethief Creek rocks are intruded by sills of carbonatite. The carbonatite is either sovite (calcite-dominated) or beforsite (dolomite-dominated). Aquist (1982a) indicates that the most significant tantalum-niobium mineralization is confined to the beforsites. In general those carbonatite sills composed of sovite are thin and universally barren. Both rock types are medium- to coarse-crystalline. Most exposures display layering defined by varying quantities of accessory minerals.

The carbonatites contain accessory minerals including Na-amphibole, pyroxene, phyllogopite, olivine, magnetite, pyrite/pyrrhotite and apatite, as well as the niobium- and tantalum-bearing minerals. Amphibolite and glimmerite (biotite rock) are closely associated with the carbonatite bodies. Nepheline syenite has been found in the area (Aquist 1982b). Information recently acquired from Dr. Anthony Mariano indicates, that near Paradise Lake, an approximately 30 m thick sill of the VPCC, strikes northerly and dips at about 30° W (Mariano, 1982).

3.2 VERITY-PARADISE CARBONATITE COMPLEX

3.2.1 Geology

Based upon prior work, McCrea (2001) provided the following description of the geology of the VPCC (p. 16)

"Near the southwest end of the Verity-Paradise Carbonatite Complex, 30 drill holes were completed during

1980 and 1981, totalling 2,060 m, with 715 samples collected from split drill core and analyzed for tantalum, niobium and phosphate. In addition, numerous outcrops, pits and trenches have been mapped and sampled along a strike length exceeding 5,500 m. The carbonatite sills at the western end of the complex have historically been referred to as Verity, while those near the eastern end are referred to as Paradise. Based upon surface trenches, Mariano (1979) estimated that the main pyrochlore-carbonatite zone at Verity to be 60 m thick. Subsequent drilling near its western end showed that it is between 15 and 31 m thick, with an approximately orientation of $148^{\circ}/20^{\circ}$ to 30° SW. About 5,500 m along strike, at Paradise, its presumed eastern extension is about 30 m thick, with an approximately north-south strike and a dip of about 30° W (Mariano, 1982).

TABLE 3.1: SUMMARY OF SURFACE SAMPLE RESULTS AT THE VERITY-PARADISE CARBONATITE COMPLEX

Loaction ^o	Distance From Spec. Pit [*]	Samples	Ta ₂ O ₅ (g/t)		Nb ₂ O ₅ (g/t)		P ₂ O ₅ (%)
			Range	Av.	Range	Av.	Av.
Specimen Pit	0	26	50 - 490	193	180 - 5130	1674	2.11
Columbite Pit	180	7	79 - 464	194	460 - 3200	1694	4.53
Old Pit	720	4	33 - 183	106	400 - 500	425	2.79
Area I	1200	11	42 - 488	170	57 - 3133	659	-
Clearcut	1300	3	26 - 71	55	100 - 243	157	-
Upper Clearcut	1500	9	117 - 452	223	400 - 5300	1886	1.58
Area II	2040	13	17 - 427	126	129 - 2246	516	-
Switch Creek	2480	7	6 - 106	29	14 - 215	114	-
Area III	2740	12	21 - 2930	514	29 - 5722	1326	-
N. Switch Creek	3080	2	6 - 56	31	14 - 329	172	2.57
Paradise Creek	4000	2	6 - 183	95	29 - 358	193	-
Area IV	4450	26	11 - 659	171	14 - 3348	640	-
1630-D	4500	5	107 - 208	156	343 - 601	464	4.56
SS3721	4600	1	-	244	-	258	3.73
Area V	4600	11	15 - 366	110	57 - 529	313	-
SS3722	4900	1	-	78	-	114	3.29
Paradise Cirque	4900	6	6 - 20	13	7 - 315	196	-
Area VI	5270	6	6 - 6	6	14 - 14	14	-
East Paradise	5500	8	6 - 22	11	14 - 415	188	-
Paradise Peak	6000	3	6 - 6	6	14 - 29	19	-
Road Side Carbonatite	3950	3	34 - 176	90	234 - 779	452	2.73

^{*} The Specimen Pit is the western-most surface exposure of the Verity Carbonatite.

^o Samples included are those by Anschutz Mining (Canada) Ltd. and by Dahrouge.

According to Aaquist (1982b) the central part of the Verity Carbonatite Sill contains the best mineralization. Results of prior surface sampling are provided in Table 4.1.

The Verity Carbonatite is composed of beforite and tectonic beforite breccia. Layering of accessory minerals is commonly displayed in outcrops (Aaquist, 1982a). Aaquist (1982a, p.24) indicates that the thick beforite sill is interpreted to have formed from a series of magmatic pulses, each varying slightly in mineral content. In addition (Knox, 2000; p 14)

"The Verity upper carbonatite is reported to be disrupted by faulting (Aquist 1982b, p. 9). In two of the sections from the drilling report (50,120E and 49,950E; Aquist 1982a) the southern hole on each section is barren of carbonatite, whereas the holes further to the north (five holes and three holes respectively) in each section contain thick intersections of mineralized carbonatite.

It should be noted that the Specimen Pit, one of the discovery locations of the upper Verity carbonatite appears from present work to not lie within the upper Verity beforosite, but in an overlying band. The Specimen Pit has returned high values of niobium (up to 0.51% Nb₂O₅) and tantalum (up to 490 ppm Ta₂O₅).

3.2.2 Mineralization

According to Mariano (2001; p. 1),

"commodities that will directly follow as byproducts of Ta mining include Nb, U, and apatite. Other potential byproducts include zircon, magnetite, agricultural or cement application lime, nepheline syenites for ceramic uses, and vermiculite."

Detailed exploration work, including geochemical, mineralogical, and petrological studies by Dr. Anthony Mariano (1979, 1982, 2001) has shown the dominant tantalum-bearing phase at the VPCC to be pyrochlore. In addition, confined areas with massive concentrations of ferrocolumbite, fersmite and pyrochlore, are noted (eg. Columbite Pit; Mariano, 1982).

Microprobe analysis for the three types of pyrochlore at the Verity Carbonatite follow (Mariano, 1979):

<u>Constituent*</u> <u>(Wt. %)</u>	<u>Black</u> <u>Pyrochlore</u>		<u>Mahogany-Red</u> <u>Pyrochlore</u>		<u>Yellow-Amber</u> <u>Pyrochlore</u>	
	<u>Range</u>	<u>Average</u>	<u>Range</u>	<u>Average</u>	<u>Range</u>	<u>Average</u>
CaO	13.03 - 13.78	13.32	13.54 - 14.61	14.27	14.08 - 14.41	14.25
Na ₂ O	7.05 - 7.48	7.26	7.18 - 7.57	7.42	7.36 - 7.63	7.48
Nb ₂ O ₅	55.20 - 57.56	56.4	58.61 - 62.06	60.61	65.61 - 68.03	66.75
Ta ₂ O ₅	7.31 - 8.06	7.69	4.54 - 7.66	6.01	1.52 - 2.49	2.12
TiO ₂	2.85 - 3.07	2.97	2.09 - 2.56	2.4	1.34 - 1.52	1.43
UO ₂	4.82 - 5.70	5.16	1.52 - 1.71	1.59	0 - 0.35	0.25
Sum	94.06 - 96.69	95.44	92.13 - 95.34	93.74	91.89 - 93.19	92.55
<u>Nb₂O₅:Ta₂O₅</u>	6.8 - 7.9	7.4	7.7 - 10.9	10.5	26.6 - 44.8	31.5

* After Mariano (1979)

4. 2001 EXPLORATION AND FIELD WORK

4.1 GRID ESTABLISHMENT

In preparation for ground geophysical surveys and drilling, a grid was established at the Verity Property (Fig 3.1) and on the adjacent Mara Property (Dahrouge and Reeder, 2001). The grid was based on the UTM NAD 83 Grid System. GPS instrumentation aided in the placement of the grid.

At Verity, a cut baseline was located at 7500 North between 2900 East and 4200 East; it was corrected for variations in slope. The baseline was extended from the adjacent Mara Property onto the Verity Claims (Dahrouge and Reeder, 2001). In total 10.55 km of line was established. Including thirteen north-south survey lines, spaced 100-m apart, that vary in length from about 500 m to 2,515 m. The survey lines, were blazed and marked with flagging at 5-m intervals.

4.2 MAGNETOMETER GEOPHYSICAL SURVEYS

As the VPCC is known to contain significant concentrations of magnetite, the Verity grid was surveyed using ground magnetometer geophysical instrumentation. At 5-m stations along each cross-line, a magnetometer reading was collected using a GEM System GSM-19 integrated Overhauser effect proton precession magnetometer. The magnetic readings were corrected for terrestrial field magnetic variation using a stationary GSM-19 base station. The corrected magnetometer data (Appendix 2) was processed, gridded, contoured, and used to generate Fig. 3.2. About 10.44 line-km of ground magnetic surveys were completed at the Verity Property.

Based primarily on prior recommendations by Aaquist (1982b), the magnetic survey was extended to the west of the Specimen and Columbite Pit areas. The magnetic anomaly that coincides with the subcrop edge of the VPCC, terminates at about 3250 E, which is less than 50 m east of the lower logging road (3.2).

4.3 CONSTRUCTION AND IMPROVEMENTS TO ACCESS TRAILS

After soliciting and evaluating quotations and bids for rehabilitation of logging roads and skidder trails, the work was awarded to B&G Logging of Valemount, B.C. During the period from August 1 to October 26, the following equipment was used:

- chain saw and brush saw for clearing,
- low bed for transportation, and
- D-6 Bulldozer for rehabilitation of logging roads and skidder trails.

The D-6 Bulldozer was used intermittently during the above noted period to rehabilitate access trails

and construct drill pads, while the low bed was used for transportation of the D-6 Bulldozer to and from the property. The D-6 was also used for upgrading existing access trails and roads, ditching within wet and poorly drained areas, and for installing culverts where required.

A total of 4.8 km of road was rehabilitated, with about 2.2 km located within the Verity Property, and 2.7 km located to the east within the adjacent Mara Property (Fig. 3.1).

TABLE 4.1 LOCATIONS OF THE 2001 CORE HOLES

Drill Hole Number	Grid East	Grid North	Azimuth/Dip	Depth
VDH - 1	3500	7635	030°/-060°	105.77
VDH - 2	3590	7590	030°/-060°	124.36
VDH - 3	3930	7600	030°/-060°	57.61
VDH - 4	3815	7565	030°/-060°	87.80
VDH - 5	3600	3600	000°/-090°	28.35
			Totals	409.89

4.4 DIAMOND DRILLING, SAMPLING AND ANALYTICAL PROCEDURES

The diamond drilling was approved under reclamation permit MX-15-174, obtained during 2001. Five BQ-Thin Wall sized core holes (Table 4.1) totalling 410 m were diamond drilled between August 9 and 27, 2001. Core holes VDH-1, 2 and 5 were west of Serpentine Creek Logging Road, and core holes VDH-3 and 4 to the east. All holes were spotted within the limits of the ground magnetic anomaly, to avoid missing the Verity Carbonatite Sill. Drillhole collars were surveyed by topofilling relative to known points and by GPS instruments.

The diamond drilling was contracted to Aggressive Diamond Drilling based in Kelowna, B.C. The diamond drill, which was mounted on a trailer, was suitable for towing by four-wheel-drive vehicles. Access to the drill sites was along the Serpentine Creek logging road and rehabilitated cat trails. Water for drilling was obtained from nearby creeks draining the property.

The core was logged and split at Summit River Lodge. Core logging involved both geological and geotechnical. Geologic descriptions included lithology, mineralogy and structure. Geotechnical logging involved measured recoveries, Rock Quality Indexes (RQD's) and fracture densities. The core was photographed. After logging (Appendices 4A and 4B), the core was split with half of the core replaced in the core box. One half the core was bagged and numbered, and sent for analyses by ICP techniques to Acme Analytical Laboratories Ltd. in Vancouver (Appendix 3A) and by Neutron Activation techniques by Activation Laboratories Ltd. in Ancaster, Ontario (Appendix 3B).

The dominant rock types in core holes VDH-1 to 5 was an upper sill of rusty-weathered, coarse-grained, beforosite and a lower sill of light-grey sovite. All intersections of carbonatite were sampled at 2-metre intervals, as were the adjacent footwall and hanging contacts.

TABLE 4.2 **SUMMARY OF ANALYTICAL RESULTS**
FOR THE 2001 CORE HOLES *

Hole	From (m)	To (m)	Length (m)	Ta ₂ O ₅ (g/t)	Nb ₂ O ₅ (g/t)	P ₂ O ₅ (%)
VDH-1	34	58	24	141	794	2.96
(Including)	40	50	10	164	824	2.79
VDH-2	55	93	38	152	696	2.99
(Including)	75	81	6	208	873	3.16
(Including)	85	93	8	188	843	4.09
VDH-3	23.8	36	12.2	122	803	3.17
VDH-4	62	72	10	172	900	3.63
(Including)	64	70	6	212	1159	3.57
VDH-5	5.75	12	6.25	138	456	2.87
(Including)	7.5	12	4.5	156	493	3.46

* See Appendix 4A

4.4.1 Hole VDH - 1

Hole VDH-1 was completed as an in fill hole within the main Verity Deposit (Table 4.1). It was drilled from the same setup as holes 14 and 15 (Aaquist, 1982a), but drilled at an orientation of about 030°/-60°. This orientation is approximately perpendicular to the known Verity Sill, thus drill intersections are approximately representative of true thickness. The hole was collared within gneissic host rocks, and intersected two zones of carbonatite, before bottoming in gneiss (Appendix 4A).

The upper carbonatite sill is dolomitic (Beforsite) in composition. It is about 51.80 m thick and includes about 10 m of 164 g/t Ta₂O₅ from 40.00 to 50.00 m (Table 4.2). The lower carbonatite sill is dominantly calcitic (sovite) composition. It did not contain any significant mineralization. For comparative purposes, Hole 14 completed by Anschutz Mining (Canada) Ltd. intersected about 46.6 m of Beforsite within the upper sill. It included about 5.50 m of 270 g/t Ta₂O₅ from 30.50 to 36.00 m (Aaquist, 1982a).

4.5.2 Hole VDH - 2

Hole VDH-2 was located (Table 4.1) less than 25 m north of Hole 27 (Aaquist, 1982a). It tested

an area between holes 10 and 25 with no prior drilling. The hole was collared in gneissic rocks and intersected the thickest section of upper Verity Sill, to date. Beforsite was intersected from 37.19 m to 106.68 m, for a total thickness of 69.49 m. Between 55.00 m and 93.00 m it averaged 152 g/t Ta₂O₅, 696 g/t Nb₂O₅ and 2.99% P₂O₅.

TABLE 4.3 **SUMMARY OF CARBONATITE INTERSECTIONS
WITHIN THE 2001 CORE HOLES**

Hole	To (m)	From (m)	Description
VDH - 1	20.40	71.90	Beforsite (dolomite dominated)
and	90.50	100.30	Sovite (calcite dominated)
VDH - 2	37.19	106.68	Beforsite
VDH - 3	23.66	44.81	Beforsite
VDH - 4	55.80	62.00	Beforsite with pegmatite
and	62.00	80.00	Beforsite
VDH - 5	6.00	25.30	Beforsite with minor pegmatite

4.5.3 Hole VDH - 3

Hole VDH-3 was a step-out hole to the east. It tested an area near holes 29 and 30 (Aquist, 1982a). Holes 29 and 30, both had very poor core recoveries with no significant tantalum mineralization. Hole VDH-3 (Appendix 4A) intersected highly fractured and weathered beforsite carbonatite between 23.77 and 44.50 m, with 122 g/t Ta₂O₅, 803 g/t Nb₂O₅ and 3.17% P₂O₅, between 23.80 to 36.00 metres averaging.

4.5.4 Hole VDH - 4

Hole VDH-4 was a step out to the south of VDH - 3, within an area of no prior drilling. The hole intersected beforsite from 62.00 to 80.00 meters. Its upper contact with the overlying gneisses, is marked by a mixed section of pegmatite and carbonatite between 55.80 m to 62.00 m. From 62.00 to 72.00 m, it averaged 171 g/t Ta₂O₅, 900 g/t Nb₂O₅ and 3.63% P₂O₅.

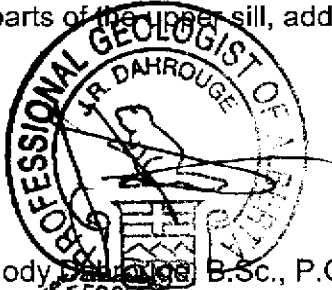
4.5.5. Hole VDH - 5

Hole VDH-5 was a vertical hole, near the subcrop edge. Beforsite was intersected from 6.10 to 25.39 m. The interval contained several thin zones of (presumably) anatectic pegmatite. Tantalum grades were generally low (Table 4.2).

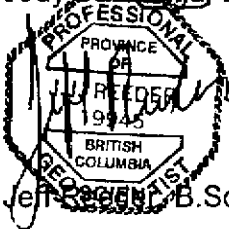
5. DISCUSSION AND CONCLUSIONS

Ground geophysical surveys completed during 2001 clearly demonstrate that the magnetic properties of the VPCC can be used to trace its subcrop edge, and to possibly locate new occurrences. The western extent of the magnetic anomaly which represents the east trending VPCC appears to terminate at about 3250 E, which is less than 50 m east of the lower logging road. The VPCC has been traced upslope and to the east by ground geophysics and other methods along a total strike length of about 7,000 m.

Drilling conducted during 2001 confirmed prior drill results reported by Anschutz Mining (Canada) Ltd. Although the higher grades of tantalum mineralization appear restricted to the central parts of the upper sill, additional drilling is warranted, to test the VPCC along strike to the east.



Jody Dahrouge B.Sc., P.Geol.



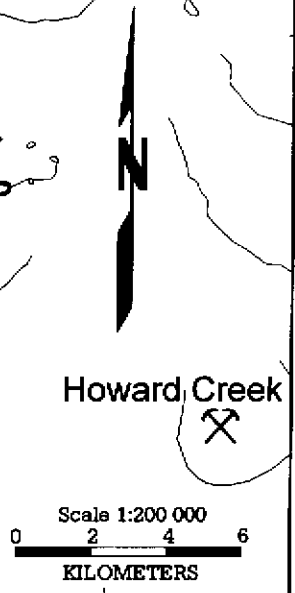
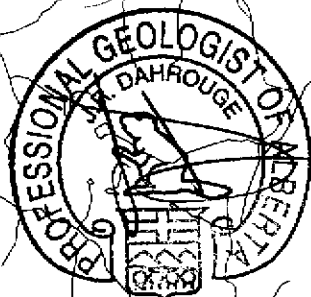
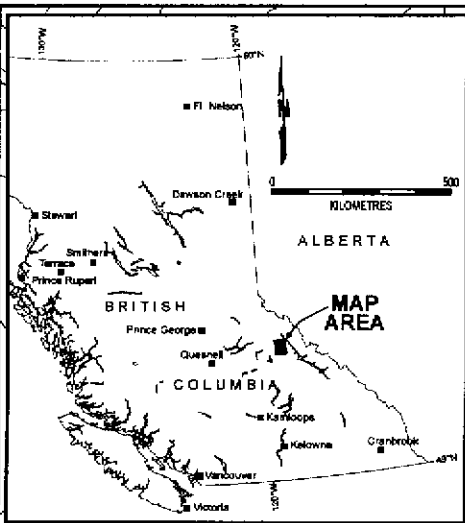
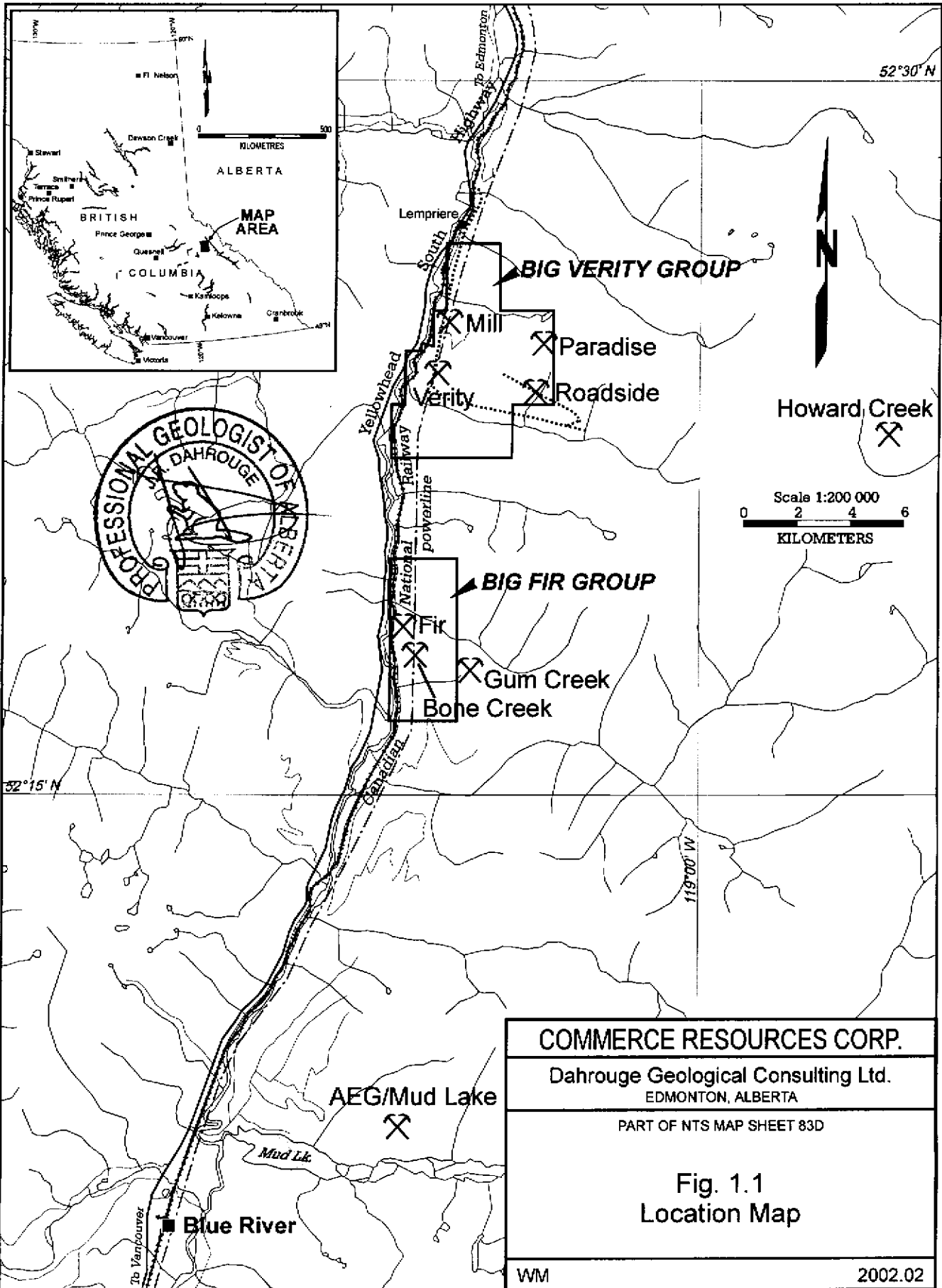
Jeff Reeder B.Sc., P.Geol.

Edmonton, Alberta
February 25, 2002

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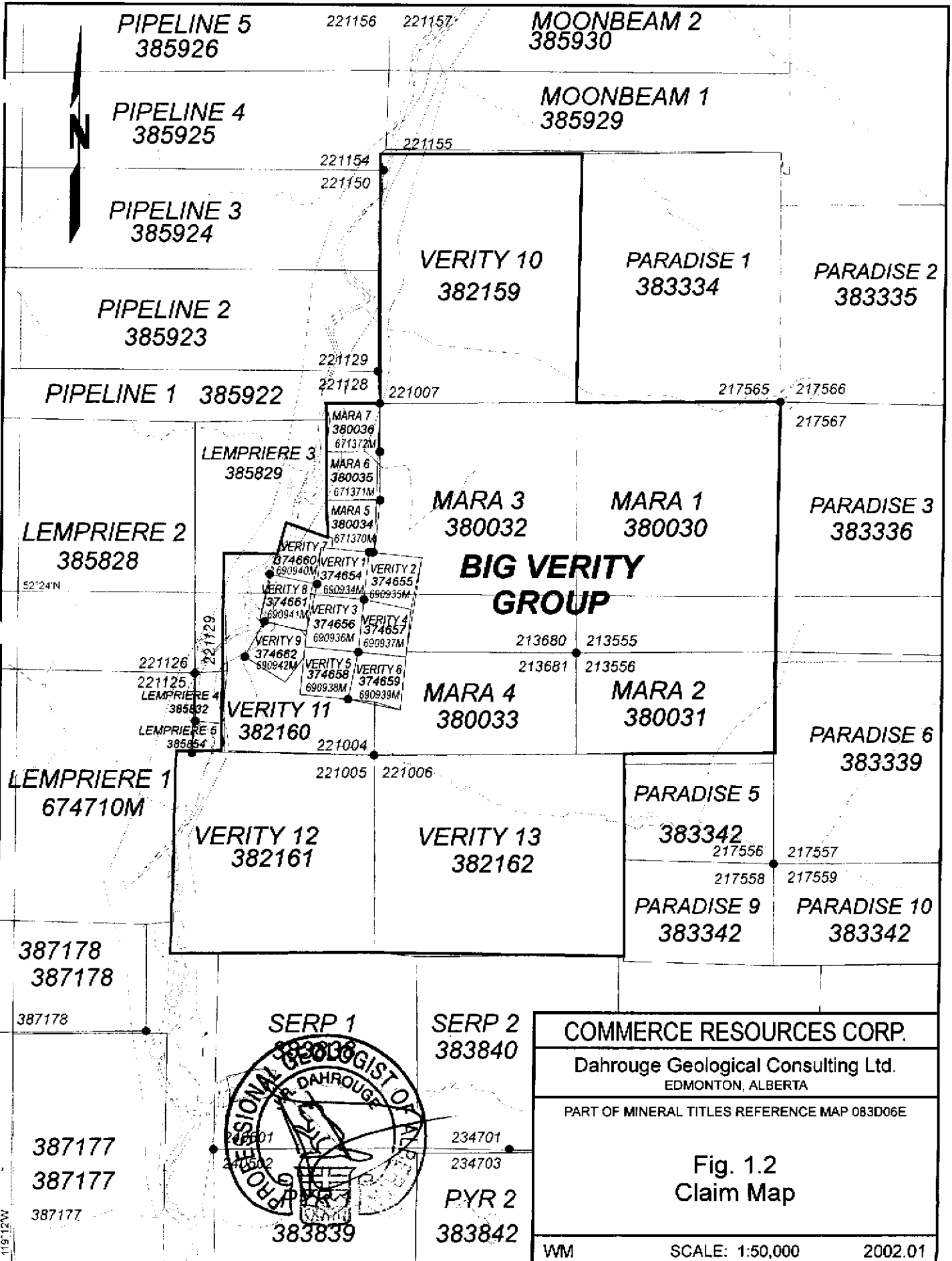
COMMERCE RESOURCES CORP.

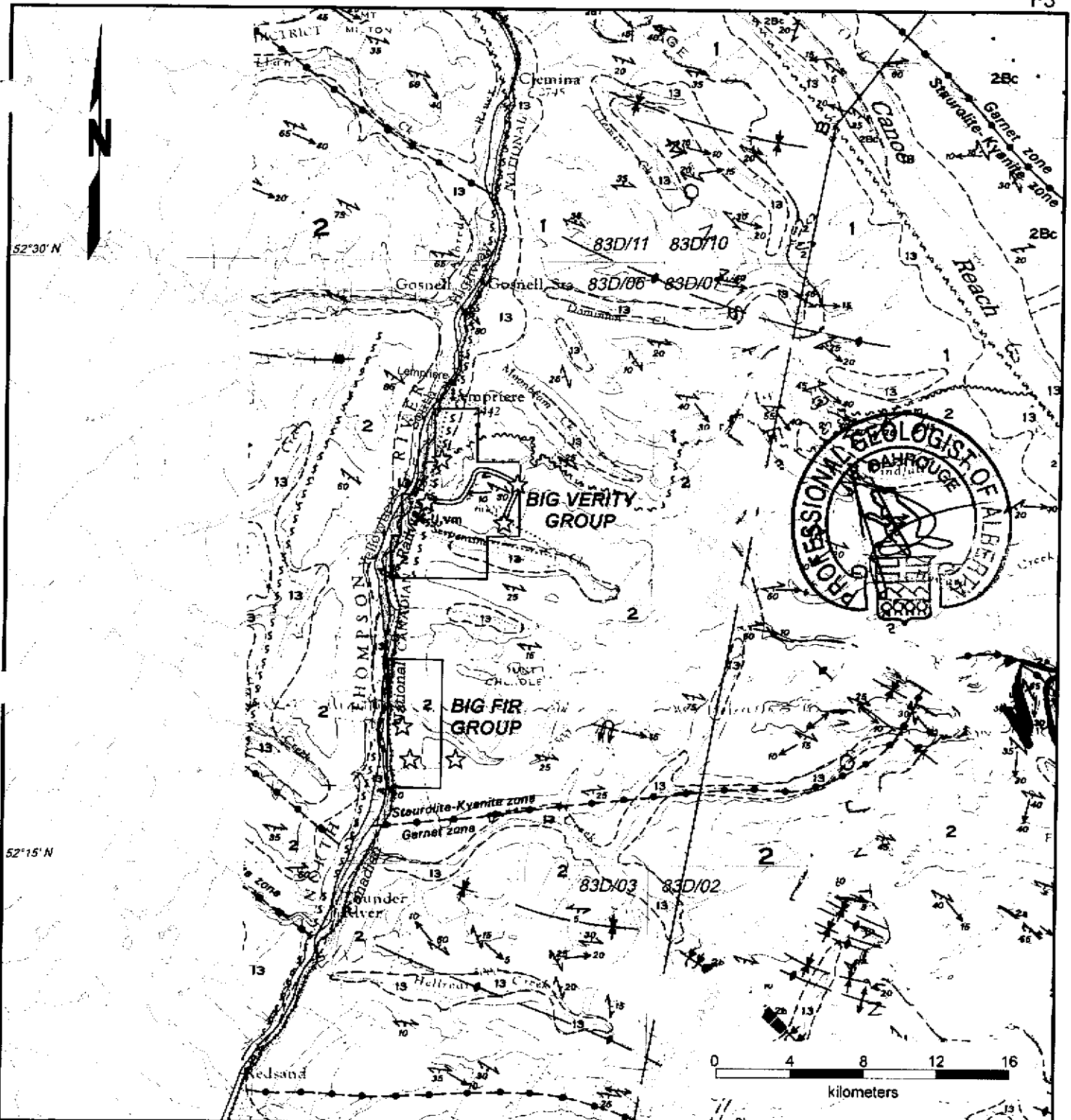
Dahrouge Geological Consulting Ltd.
 EDMONTON, ALBERTA

PART OF NTS MAP SHEET 83D

Fig. 1.1
Location Map

WM 2002.02





LEGEND AND SYMBOLS

PLEISTOCENE AND RECENT

13 Alluvium and glacial deposits

☆ Carbonatite (location approx.)

WINDERMERE

2 Horsethief Creek Group: quartzite, phyllite, schist, garnet, gneiss, 2a - marble, 2b - amphibolite

AGE UNKNOWN

1 Gneiss, amphibolite, schist, minor quartz

Geology after R.B.Campbell (1963-65).

COMMERCE RESOURCES CORP.

Dahrouge Geological Consulting Ltd.
EDMONTON, ALBERTA

BLUE RIVER AREA, BRITISH COLUMBIA

**Fig. 2.1
Regional Geology**

APPENDIX 1: ITEMIZED COST STATEMENT

a) Personnel

J. Dahrouge, geologist				
18.60	days	arrange for drill contractor, co-ordinate supplies, compile drill information, project supervision, and report preparation		
<u>18.60</u>	days	@ \$ 481.50	\$	8,955.90
J. Reeder, geologist				
23.50	days	prepare for field work, field work and travel August 8 to 28 supervise drilling, flag pads and trails, other		
5.00	days	compile information from field work and assist with report preparation		
<u>28.50</u>	days	@ \$ 428.00	\$	12,198.00
R. Grwyul, geologist				
28.50	days	prepare for field work, field work and travel August 1 to 28, geotechnical and lithologic drill logs		
<u>17.00</u>	days	data entry, compile field information, prepare maps		
45.50	days	@ \$ 267.50	\$	12,171.25
S. Cook, assistant				
24.00	days	field work and travel August 8 to 28, October 8 to 12, core splitting, assemble core racks and sort drill core		
<u>24.00</u>	days	@ \$ 176.55	\$	4,237.20
W. McGuire, draftsman				
14.70	days	compiling field data, drafting, preparing and plotting maps, preparing cross-sections, other		
<u>14.70</u>	days	@ \$ 406.60	\$	5,977.02
			\$	43,539.37

b) Food and Accommodation

49	man-days	@ \$ 90.84	accommodations and meals	\$	4,451.20
49	man-days	@ \$ 10.11	groceries and other	\$	495.58
				\$	4,946.78

c) Transportation

Bus:	Greyhound Bus Tickets (Edmonton - Valemount)	\$	-
Vehicles:	August, 1 SUV Truck, 4855 km @ 0.41	\$	1,974.04
	Vehicle Rental	\$	2,317.76
		\$	4,291.80

d) Instrument Rental - Subcontractors

	Radio rentals	\$	114.00
5	unit-days @ \$ 22.50	\$	112.50
10	unit-days @ \$ 64.20	\$	642.00
		\$	868.50

APPENDIX 1: CONTINUED

e) Drilling and Road Construction

Drilling (Aggressive Diamond Drilling; all inclusive - mob, demob,
moving, water, trucks, accommodation and meals, metrage)
403.89 meters @ \$ 71.52 per meter

\$ 28,892.18

Cat Work (B&G Logging; culverts and installation, drill pads,
mob/demob, road construction and rehabilitation)

\$ 14,892.14

\$ 43,784.32

f) Analyses

115 samples @ \$ 16.37 Drill Core: ICP analyses (Acme)

\$ 1,882.67

115 samples @ \$ 15.52 Drill Core: INAA analyses (Activation Laboratories)

\$ 1,784.23

110 samples @ \$ 4.28 Drill Core: Sample Preparation

\$ 470.80

\$ 4,137.69

g) Report

Report reproduction and assembly

\$ 218.51

\$ 218.51

h) Other

Courier and Shipping

\$ 377.21

Field Equipment and Supplies

\$ 683.97

Long distance telephone and facsimile charges

\$ 102.10

Maps, Plots and Reports

\$ 374.50

\$ 1,537.78

Total\$ 103,324.75

APPENDIX 2:

MAGNETOMETER READINGS FROM THE VERITY CLAIMS

Notes: The local grid is based on UTM Grid NAD 83. A Grid Easting/Easting of 3200, 7500 corresponds to UTM 353200, 5807500. Magnetic readings are Total Magnetic Intensity (TMI), with readings corrected for diurnal variation.

Grid Co-ordinates		TMI	Grid Co-ordinates		TMI	Grid Co-ordinates		TMI	Grid Co-ordinates		TMI
Easting	Northing	(nT)	Easting	Northing	(nT)	Easting	Northing	(nT)	Easting	Northing	(nT)
VERITY CARBONATITE (VPCC)											
Line 2900 East			Line 2900 East (cont.)			Line 2900 East (cont.)			Line 3000 East (cont.)		
2900	7500	57019.5	2900	7725	56970.8	2900	7950	56943.7	3000	7625	56991.3
2900	7505	57020.4	2900	7730	56972.4	2900	7955	56957.3	3000	7630	56983.3
2900	7510	57022.4	2900	7735	56981.4	2900	7960	56960.7	3000	7635	56976.4
2900	7515	57018.3	2900	7740	56985.2	2900	7965	56960.6	3000	7640	56977.0
2900	7520	57015.0	2900	7745	56989.7	2900	7970	56969.0	3000	7645	56963.7
2900	7525	57008.2	2900	7750	56994.2	2900	7975	56977.4	3000	7650	56965.7
2900	7530	57002.9	2900	7755	57001.6	2900	7980	56978.8	3000	7655	56966.6
2900	7535	56990.8	2900	7760	57005.5	2900	7985	56979.2	3000	7660	56968.8
2900	7540	56983.8	2900	7765	57010.7	2900	7990	56978.1	3000	7665	56967.5
2900	7545	56974.9	2900	7770	57014.7	2900	7995	56981.8	3000	7670	56971.5
2900	7550	56977.9	2900	7775	57022.0				3000	7675	56969.2
2900	7555	56975.7	2900	7780	57029.7	Line 3000 East			3000	7680	56966.8
2900	7560	56970.7	2900	7785	57037.2	3000	7460	57110.0	3000	7685	56965.3
2900	7565	56967.6	2900	7790	57045.0	3000	7465	57111.4	3000	7690	56958.9
2900	7570	56962.7	2900	7795	57056.4	3000	7470	57107.1	3000	7695	56957.3
2900	7575	56959.4	2900	7800	57069.1	3000	7475	57100.0	3000	7700	56959.7
2900	7580	56956.1	2900	7805	57086.2	3000	7480	57101.6	3000	7705	56962.8
2900	7585	56950.7	2900	7810	57103.7	3000	7485	57106.5	3000	7710	56961.7
2900	7590	56952.2	2900	7815	57120.4	3000	7490	57096.3	3000	7715	56960.8
2900	7595	56947.8	2900	7820	57127.8	3000	7495	57097.4	3000	7720	56964.2
2900	7600	56943.1	2900	7825	57140.4	3000	7500	57082.5	3000	7725	56966.4
2900	7605	56935.7	2900	7830	57153.1	3000	7505	57084.1	3000	7730	56970.0
2900	7610	56940.9	2900	7835	57166.7	3000	7510	57077.0	3000	7735	56971.4
2900	7615	56938.7	2900	7840	57176.3	3000	7515	57083.2	3000	7740	56972.0
2900	7620	56937.8	2900	7845	57190.4	3000	7520	57097.3	3000	7745	56972.8
2900	7625	56934.2	2900	7850	57211.4	3000	7525	57060.9	3000	7750	56974.3
2900	7630	56943.0	2900	7855	57215.7	3000	7530	57045.1	3000	7755	56978.1
2900	7635	56941.0	2900	7860	57220.3	3000	7535	57040.3	3000	7760	56979.9
2900	7640	56941.8	2900	7865	57212.8	3000	7540	57040.8	3000	7765	56981.6
2900	7645	56938.3	2900	7870	57199.4	3000	7545	57038.3	3000	7770	56980.6
2900	7650	56941.1	2900	7875	57184.0	3000	7550	57039.5	3000	7775	56986.8
2900	7655	56943.6	2900	7880	57174.6	3000	7555	57016.8	3000	7780	56991.0
2900	7660	56948.3	2900	7885	57174.7	3000	7560	57004.7	3000	7785	56995.6
2900	7665	56951.4	2900	7890	57166.8	3000	7565	57022.6	3000	7790	57002.4
2900	7670	56954.5	2900	7895	57157.3	3000	7570	57020.1	3000	7795	57015.8
2900	7675	56956.0	2900	7900	57137.7	3000	7575	57011.1	3000	7800	57024.9
2900	7680	56960.0	2900	7905	57126.7	3000	7580	56993.5	3000	7805	57032.2
2900	7685	56963.6	2900	7910	57102.2	3000	7585	56986.3	3000	7810	57041.5
2900	7690	56971.1	2900	7915	57089.2	3000	7590	56990.6	3000	7815	57056.2
2900	7695	56961.6	2900	7920	57072.4	3000	7595	56993.8	3000	7820	57079.0
2900	7700	56966.9	2900	7925	57056.8	3000	7600	56993.1	3000	7825	57079.3
2900	7705	56971.5	2900	7930	57028.9	3000	7605	56997.6	3000	7830	57094.9
2900	7710	56972.1	2900	7935	56994.1	3000	7610	57011.1	3000	7835	57115.5
2900	7715	56974.4	2900	7940	56967.9	3000	7615	56994.3	3000	7840	57142.6
2900	7720	56971.2	2900	7945	56956.4	3000	7620	56992.1	3000	7845	57164.9

APPENDIX 2:

CONTINUED

Grid Co-ordinates			Grid Co-ordinates			Grid Co-ordinates			Grid Co-ordinates		
Easting Northing		TMI (nT)	Easting Northing		TMI (nT)	Easting Northing		TMI (nT)	Easting Northing		TMI (nT)
<u>Line 3000 East (cont.)</u>			<u>Line 3100 East (cont.)</u>			<u>Line 3100 East (cont.)</u>			<u>Line 3200 East (cont.)</u>		
3000	7850	57184.1	3100	7580	57026.9	3100	7830	56929.2	3200	7575	57046.0
3000	7855	57188.8	3100	7585	57033.7	3100	7835	56928.6	3200	7580	57031.0
3000	7860	57195.1	3100	7590	57051.5	3100	7840	56927.8	3200	7585	57012.4
3000	7865	57199.4	3100	7595	57096.1	3100	7845	56936.7	3200	7590	56999.9
3000	7870	57189.9	3100	7600	57200.5	3100	7850	56947.8	3200	7595	56982.0
3000	7875	57189.1	3100	7605	57188.7	3100	7855	56947.6	3200	7600	56959.7
3000	7880	57184.8	3100	7610	56808.4	3100	7860	56952.5	3200	7605	56929.6
3000	7885	57181.0	3100	7615	56821.7	3100	7865	56959.9	3200	7610	56916.9
3000	7890	57173.0	3100	7620	56887.9	3100	7870	56967.5	3200	7615	56903.4
3000	7895	57167.1	3100	7625	56921.0	3100	7875	56969.0	3200	7620	56901.7
3000	7900	57156.9	3100	7630	56927.1	3100	7880	56974.1	3200	7625	56910.4
3000	7905	57145.9	3100	7635	56946.1	3100	7885	56974.9	3200	7630	56926.5
3000	7910	57129.3	3100	7640	56954.3	3100	7890	56979.7	3200	7635	56945.1
3000	7915	57110.0	3100	7645	56952.9	3100	7895	56991.6	3200	7640	56953.6
3000	7920	57112.1	3100	7650	56958.5	3100	7900	57003.8	3200	7645	57022.1
3000	7925	57083.6	3100	7655	56969.0	3100	7905	57003.4	3200	7650	57050.0
3000	7930	57070.1	3100	7660	56980.5	3100	7910	57006.6	3200	7655	56854.6
3000	7935	57056.9	3100	7665	56991.3	3100	7915	57015.2	3200	7660	56994.9
3000	7940	57024.0	3100	7670	56994.1	3100	7920	57024.6	3200	7665	57075.0
3000	7945	57008.2	3100	7675	56991.9	3100	7925	57033.2	3200	7670	57085.0
3000	7950	56987.5	3100	7680	57004.5	3100	7930	57048.7	3200	7675	57087.0
3000	7955	56975.4	3100	7685	57022.2	3100	7935	57053.0	3200	7680	57035.2
3000	7960	56966.0	3100	7690	57026.0	3100	7940	57059.0	3200	7685	56857.3
3000	7965	56961.3	3100	7695	57046.8	3100	7945	57072.2	3200	7690	56680.3
3000	7970	56960.7	3100	7700	57057.9	3100	7950	57077.8	3200	7695	56622.4
3000	7975	56962.9	3100	7705	57060.7	3100	7955	57073.9	3200	7700	56632.6
3000	7980	56969.5	3100	7710	57057.1	3100	7960	57063.0	3200	7705	56607.0
3000	7985	56971.0	3100	7715	57041.1	3100	7965	57056.7	3200	7710	56612.9
3000	7990	56976.3	3100	7720	57033.6	3100	7970	57046.0	3200	7715	56629.6
3000	7995	56976.6	3100	7725	57012.1	3100	7975	57042.6	3200	7720	56664.9
3000	8000	56978.7	3100	7730	56992.2	3100	7980	57051.3	3200	7725	56732.1
			3100	7735	56967.0	3100	7985	57037.7	3200	7730	56976.4
<u>Line 3100 East</u>			3100	7740	56952.6	3100	7990	57024.9	3200	7735	56841.8
3100	7495	57106.4	3100	7745	56951.7	3100	7995	57016.7	3200	7740	56849.9
3100	7500	57121.9	3100	7750	56952.5				3200	7745	56860.1
3100	7505	57142.6	3100	7755	56939.5	<u>Line 3200 East</u>			3200	7750	56889.0
3100	7510	57159.0	3100	7760	56948.2	3200	7505	57102.3	3200	7755	56907.0
3100	7515	57141.9	3100	7765	56964.1	3200	7510	57107.1	3200	7760	56902.0
3100	7520	57129.0	3100	7770	56961.7	3200	7515	57119.8	3200	7765	56927.3
3100	7525	57130.1	3100	7775	56961.3	3200	7520	57099.3	3200	7770	56919.0
3100	7530	57133.4	3100	7780	56951.8	3200	7525	57103.6	3200	7775	56917.6
3100	7535	57142.9	3100	7785	56941.6	3200	7530	57109.0	3200	7780	56921.7
3100	7540	57120.7	3100	7790	56927.9	3200	7535	57111.7	3200	7785	56897.8
3100	7545	57200.0	3100	7795	56921.0	3200	7540	57104.1	3200	7790	56901.8
3100	7550	57198.7	3100	7800	56916.2	3200	7545	57104.0	3200	7795	56899.1
3100	7555	56993.7	3100	7805	56914.9	3200	7550	57094.1	3200	7800	56901.1
3100	7560	57028.4	3100	7810	56902.2	3200	7555	57088.5	3200	7805	56926.2
3100	7565	57038.4	3100	7815	56896.2	3200	7560	57079.6	3200	7810	56908.5
3100	7570	57041.0	3100	7820	56902.5	3200	7565	57062.6	3200	7815	56914.5
3100	7575	57034.6	3100	7825	56916.9	3200	7570	57053.0	3200	7820	56920.3

APPENDIX 2:

CONTINUED

Grid Co-ordinates			Grid Co-ordinates			Grid Co-ordinates			Grid Co-ordinates		
Easting Northing		TMI (nT)	Easting Northing		TMI (nT)	Easting Northing		TMI (nT)	Easting Northing		TMI (nT)
<u>Line 3500 East</u>			<u>Line 3500 East (cont.)</u>			<u>Line 3500 East (cont.)</u>			<u>Line 3600 East (cont.)</u>		
3500	7500	56973.6	3500	7755	57724.5	3500	8010	56975.3	3600	7715	57129.6
3500	7505	56968.1	3500	7760	57927.8	3500	8015	56944.8	3600	7720	57081.6
3500	7510	57003.4	3500	7765	58026.5	3500	8020	56925.3	3600	7725	56972.9
3500	7515	57006.0	3500	7770	58169.5				3600	7730	56996.2
3500	7520	56965.0	3500	7775	56431.2	<u>Line 3600 East</u>			3600	7735	57046.4
3500	7525	56988.2	3500	7780	56549.5	3600	7475	57085.8	3600	7740	57279.8
3500	7530	57070.2	3500	7785	55734.9	3600	7480	57124.7	3600	7745	57320.5
3500	7535	57069.4	3500	7790	55283.9	3600	7485	57556.3	3600	7750	57281.4
3500	7540	57081.2	3500	7795	55660.3	3600	7500	57483.2	3600	7755	57198.1
3500	7545	57083.0	3500	7800	55979.6	3600	7505	58194.8	3600	7760	57031.6
3500	7550	57100.4	3500	7805	56038.8	3600	7510	57258.7	3600	7765	56982.4
3500	7555	57135.0	3500	7810	56223.6	3600	7515	56739.4	3600	7770	56909.9
3500	7560	57159.0	3500	7815	56825.8	3600	7520	56750.5	3600	7775	56972.1
3500	7565	57195.4	3500	7820	56879.6	3600	7525	56810.4	3600	7780	56712.8
3500	7570	57220.2	3500	7825	56728.5	3600	7530	56867.4	3600	7785	56133.5
3500	7575	57215.8	3500	7830	57035.4	3600	7535	56909.6	3600	7790	55883.3
3500	7580	57230.0	3500	7835	57247.8	3600	7540	56977.5	3600	7795	55835.1
3500	7585	57244.8	3500	7840	57157.3	3600	7545	56996.4	3600	7800	55835.9
3500	7590	57241.3	3500	7845	56806.6	3600	7550	57015.0	3600	7805	55903.1
3500	7595	57317.4	3500	7850	56556.6	3600	7555	57049.2	3600	7810	56487.7
3500	7600	57354.0	3500	7855	56126.4	3600	7560	57063.6	3600	7815	56628.7
3500	7605	57397.7	3500	7860	56033.5	3600	7565	57076.1	3600	7820	56525.3
3500	7610	57394.7	3500	7865	56364.9	3600	7570	57119.5	3600	7825	56558.2
3500	7615	57418.7	3500	7870	56500.6	3600	7575	57141.4	3600	7830	56617.3
3500	7620	57418.5	3500	7875	56668.6	3600	7580	57173.7	3600	7835	56647.7
3500	7625	57425.0	3500	7880	57035.9	3600	7585	57193.4	3600	7840	56724.2
3500	7630	57446.1	3500	7885	56960.8	3600	7590	57230.6	3600	7845	56875.6
3500	7635	57475.4	3500	7890	56638.1	3600	7595	57248.6	3600	7850	56922.9
3500	7640	57503.6	3500	7895	56632.3	3600	7600	57291.1	3600	7855	56925.2
3500	7645	57520.8	3500	7900	56806.6	3600	7605	57308.6	3600	7860	56732.7
3500	7650	57492.7	3500	7905	57053.6	3600	7610	57314.4	3600	7865	56890.1
3500	7655	57347.8	3500	7910	56695.8	3600	7615	57316.0	3600	7870	56861.7
3500	7660	57347.4	3500	7915	56783.7	3600	7620	57308.5	3600	7875	56994.5
3500	7665	57245.8	3500	7920	56911.2	3600	7625	57294.1	3600	7880	56973.7
3500	7670	57235.4	3500	7925	56934.5	3600	7630	57282.1	3600	7885	56787.3
3500	7675	57180.3	3500	7930	56919.8	3600	7635	57257.1	3600	7890	56791.7
3500	7680	57134.0	3500	7935	56907.9	3600	7640	57232.9	3600	7895	56832.0
3500	7685	57240.3	3500	7940	56912.2	3600	7645	57214.5	3600	7900	56869.9
3500	7690	57172.9	3500	7945	56906.9	3600	7650	57210.5	3600	7905	56916.3
3500	7695	57113.4	3500	7950	56849.3	3600	7655	57223.7	3600	7910	56865.7
3500	7700	57115.0	3500	7955	56904.5	3600	7660	57247.3	3600	7915	56714.0
3500	7705	57148.4	3500	7960	56935.4	3600	7665	57222.5	3600	7920	56853.7
3500	7710	57173.2	3500	7965	56941.2	3600	7670	57276.1	3600	7925	56925.8
3500	7715	57051.3	3500	7970	56922.9	3600	7675	57286.1	3600	7930	56950.9
3500	7720	57026.5	3500	7975	56934.0	3600	7680	57260.5	3600	7935	57069.2
3500	7725	56986.4	3500	7980	56955.3	3600	7685	57230.2	3600	7940	57069.1
3500	7730	56996.4	3500	7985	56942.7	3600	7690	57186.4	3600	7945	57002.0
3500	7735	57065.5	3500	7990	56946.4	3600	7695	57156.4	3600	7950	56940.4
3500	7740	57153.8	3500	7995	56936.8	3600	7700	57138.2	3600	7955	56942.2
3500	7745	57320.8	3500	8000	56965.9	3600	7705	57146.6	3600	7960	56890.0
3500	7750	57512.1	3500	8005	56979.7	3600	7710	57144.2	3600	7965	56944.8

APPENDIX 2:

CONTINUED

Grid Co-ordinates		TMI	Grid Co-ordinates		TMI	Grid Co-ordinates		TMI	Grid Co-ordinates		TMI
Easting	Northing	(nT)	Easting	Northing	(nT)	Easting	Northing	(nT)	Easting	Northing	(nT)
Line 3600 East (cont.)			Line 3700 East (cont.)			Line 3800 East (cont.)			Line 3800 East (cont.)		
3600	7970	56930.5	3700	7780	56800.5	3800	7625	57065.6	3800	7880	56782.4
3600	7975	56833.8	3700	7785	56618.5	3800	7630	57084.7	3800	7885	56792.0
3600	7980	56970.1	3700	7790	56590.9	3800	7635	57096.3	3800	7890	56810.1
3600	7985	56859.0	3700	7795	56439.2	3800	7640	57103.1	3800	7895	56810.0
3600	7990	56903.2	3700	7800	56498.6	3800	7645	57109.8	3800	7900	56899.2
3600	7995	56920.9	3700	7805	56601.0	3800	7650	57110.4	3800	7905	56897.3
3600	8000	56950.0	3700	7810	56787.2	3800	7655	57111.6	3800	7910	56888.0
			3700	7815	56864.8	3800	7660	57113.1	3800	7915	56866.3
			3700	7820	56875.6	3800	7665	57120.5	3800	7920	56848.6
Line 3700 East			3700	7825	56818.9	3800	7670	57137.7	3800	7925	56865.3
3700	7570	56961.3	3700	7830	56827.0	3800	7675	57355.5	3800	7930	56838.4
3700	7575	56965.6	3700	7835	56882.4	3800	7680	57469.3	3800	7935	56832.5
3700	7580	56964.7	3700	7840	56842.2	3800	7685	57248.8	3800	7940	56809.6
3700	7585	56959.5	3700	7845	56991.6	3800	7690	57058.0	3800	7945	56803.3
3700	7590	56962.1	3700	7850	57159.1	3800	7695	56955.3	3800	7950	56846.7
3700	7595	56967.9	3700	7855	57807.6	3800	7700	56912.2	3800	7955	56837.5
3700	7600	56985.1	3700	7860	56797.2	3800	7705	57341.3	3800	7960	56894.0
3700	7605	56987.6	3700	7870	57084.7	3800	7710	57286.9	3800	7965	56923.5
3700	7610	56996.0	3700	7875	53372.7	3800	7715	57291.8	3800	7970	56903.5
3700	7615	57007.5	3700	7880	57811.6	3800	7720	57054.7	3800	7975	56890.4
3700	7620	57019.5	3700	7885	56815.9	3800	7725	56716.9	3800	7980	56885.5
3700	7625	57032.7	3700	7890	57016.0	3800	7730	56712.4	3800	7985	56886.7
3700	7630	57047.6	3700	7895	57036.0	3800	7735	56803.5	3800	7990	56894.1
3700	7635	57058.6	3700	7900	56983.3	3800	7740	56943.1	3800	7995	56903.9
3700	7640	57087.7				3800	7745	57016.0	3800	8000	56895.9
3700	7645	57126.5	Line 3800 East			3800	7750	57222.7			
3700	7650	57175.9	3800	7500	57029.3	3800	7755	57272.6	Line 3900 East		
3700	7655	57205.2	3800	7505	57049.9	3800	7760	56821.1	3900	6500	56743.5
3700	7660	57226.2	3800	7510	57090.7	3800	7765	56162.0	3900	6505	56741.8
3700	7665	57285.8	3800	7515	56961.8	3800	7770	56173.7	3900	6510	56733.1
3700	7670	57320.9	3800	7520	56951.2	3800	7775	56315.4	3900	6515	56726.6
3700	7675	57383.8	3800	7525	56999.0	3800	7780	56394.8	3900	6520	56725.7
3700	7680	57386.6	3800	7530	56868.7	3800	7785	56539.4	3900	6525	56720.4
3700	7685	57283.0	3800	7535	56895.7	3800	7790	56719.4	3900	6530	56709.2
3700	7690	57281.2	3800	7540	56895.6	3800	7795	56658.0	3900	6535	56706.2
3700	7695	57346.8	3800	7545	56911.5	3800	7800	56665.3	3900	6540	56710.2
3700	7700	57049.7	3800	7550	56923.2	3800	7805	56802.6	3900	6545	56747.7
3700	7705	56974.0	3800	7555	56931.3	3800	7810	56789.3	3900	6550	56760.6
3700	7710	56813.5	3800	7560	56940.6	3800	7815	56704.8	3900	6555	56807.6
3700	7715	56937.1	3800	7565	56920.5	3800	7820	56771.3	3900	6560	56881.7
3700	7720	56996.7	3800	7570	56933.9	3800	7825	56767.1	3900	6565	57034.3
3700	7725	56922.4	3800	7575	56955.4	3800	7830	56835.6	3900	6570	57074.4
3700	7730	57075.9	3800	7580	56946.6	3800	7835	56840.9	3900	6575	56975.4
3700	7735	57149.0	3800	7585	56942.3	3800	7840	56811.7	3900	6580	56946.2
3700	7740	57065.0	3800	7590	56939.2	3800	7845	56736.4	3900	6585	56973.1
3700	7745	57077.7	3800	7595	56946.9	3800	7850	56760.2	3900	6590	56957.1
3700	7750	57040.5	3800	7600	56961.6	3800	7855	56803.2	3900	6595	56943.7
3700	7755	56990.6	3800	7605	56996.3	3800	7860	56882.3	3900	6600	56882.9
3700	7760	56888.2	3800	7610	57007.1	3800	7865	56960.8	3900	6605	56844.2
3700	7765	56785.6	3800	7615	57017.0	3800	7870	56973.8	3900	6610	56750.6
3700	7770	56738.1	3800	7620	57027.1	3800	7875	56910.9	3900	6615	56773.1
3700	7775	56969.4									

APPENDIX 2:

CONTINUED

Grid Co-ordinates			Grid Co-ordinates			Grid Co-ordinates			Grid Co-ordinates		
Easting Northing		TMI (nT)	Easting Northing		TMI (nT)	Easting Northing		TMI (nT)	Easting Northing		TMI (nT)
Line 3900 East (cont.)			Line 3900 East (cont.)			Line 3900 East (cont.)			Line 3900 East (cont.)		
3900	6620	56860.1	3900	6875	56767.4	3900	7130	56693.6	3900	7385	56857.8
3900	6625	56866.6	3900	6880	56770.3	3900	7135	56700.7	3900	7390	56805.9
3900	6630	56895.5	3900	6885	56766.4	3900	7140	56708.8	3900	7395	56751.1
3900	6635	56918.9	3900	6890	56762.4	3900	7145	56701.7	3900	7400	56751.2
3900	6640	56936.9	3900	6895	56751.0	3900	7150	56722.3	3900	7405	56858.8
3900	6645	56952.3	3900	6900	56735.7	3900	7155	56724.6	3900	7410	56827.4
3900	6650	56954.2	3900	6905	56733.8	3900	7160	56735.2	3900	7415	56811.1
3900	6655	56959.2	3900	6910	56731.2	3900	7165	56733.9	3900	7420	56863.9
3900	6660	56929.1	3900	6915	56737.0	3900	7170	56738.7	3900	7425	56815.9
3900	6665	56944.2	3900	6920	56741.4	3900	7175	56749.2	3900	7430	56809.4
3900	6670	56980.6	3900	6925	56752.8	3900	7180	56755.3	3900	7435	56804.2
3900	6675	56976.8	3900	6930	56754.5	3900	7185	56764.0	3900	7440	56803.1
3900	6680	56928.9	3900	6935	56770.6	3900	7190	56768.1	3900	7445	56808.2
3900	6685	56875.7	3900	6940	56776.2	3900	7195	56777.1	3900	7450	56813.8
3900	6690	56831.7	3900	6945	56789.7	3900	7200	56768.9	3900	7455	56815.7
3900	6695	56811.2	3900	6950	56797.0	3900	7205	56775.3	3900	7460	56811.1
3900	6700	56797.7	3900	6955	56798.7	3900	7210	56797.4	3900	7465	56811.2
3900	6705	56803.3	3900	6960	56796.7	3900	7215	56801.2	3900	7470	56827.0
3900	6710	56807.8	3900	6965	56801.7	3900	7220	56801.9	3900	7475	56853.7
3900	6715	56806.0	3900	6970	56818.1	3900	7225	56808.2	3900	7480	56894.5
3900	6720	56761.5	3900	6975	56840.1	3900	7230	56819.4	3900	7485	56945.7
3900	6725	56745.6	3900	6980	56858.2	3900	7235	56823.4	3900	7490	56798.2
3900	6730	56761.0	3900	6985	56888.4	3900	7240	56839.4	3900	7495	56728.8
3900	6735	56779.8	3900	6990	56905.1	3900	7245	56848.8	3900	7500	56666.1
3900	6740	56764.2	3900	6995	56929.2	3900	7250	56860.9	3900	7500	56882.1
3900	6745	56771.7	3900	7000	56934.0	3900	7255	56861.5	3900	7505	56879.8
3900	6750	56769.7	3900	7005	56950.8	3900	7260	56886.3	3900	7510	56951.9
3900	6755	56758.0	3900	7010	56980.7	3900	7265	56917.7	3900	7515	56972.2
3900	6760	56748.6	3900	7015	56996.2	3900	7270	56859.7	3900	7520	56959.7
3900	6765	56742.3	3900	7020	57007.8	3900	7275	56853.4	3900	7525	56963.8
3900	6770	56756.4	3900	7025	57022.6	3900	7280	56829.5	3900	7530	56913.2
3900	6775	56772.6	3900	7030	57051.5	3900	7285	56814.5	3900	7535	56892.1
3900	6780	56786.0	3900	7035	57060.6	3900	7290	56794.0	3900	7540	56899.9
3900	6785	56790.8	3900	7040	57022.9	3900	7295	56753.0	3900	7545	56887.7
3900	6790	56779.2	3900	7045	56986.0	3900	7300	56730.6	3900	7550	56843.5
3900	6795	56774.1	3900	7050	56961.7	3900	7305	56694.8	3900	7555	56932.0
3900	6800	56774.8	3900	7055	56937.8	3900	7310	56664.4	3900	7560	56938.7
3900	6805	56750.6	3900	7060	56973.7	3900	7315	56634.5	3900	7565	56895.8
3900	6810	56743.8	3900	7065	56895.5	3900	7320	56676.9	3900	7570	56906.7
3900	6815	56739.2	3900	7070	56851.0	3900	7325	56721.9	3900	7575	56914.5
3900	6820	56745.7	3900	7075	56933.2	3900	7330	56739.5	3900	7580	56927.5
3900	6825	56732.0	3900	7080	56916.0	3900	7335	56756.7	3900	7585	56942.0
3900	6830	56726.9	3900	7085	56963.6	3900	7340	56766.5	3900	7590	56957.3
3900	6835	56711.6	3900	7090	56932.8	3900	7345	56769.6	3900	7595	56963.0
3900	6840	56714.2	3900	7095	56769.7	3900	7350	56776.1	3900	7600	56970.9
3900	6845	56712.3	3900	7100	56663.1	3900	7355	56739.1	3900	7605	56974.5
3900	6850	56716.9	3900	7105	56627.4	3900	7360	56726.6	3900	7610	56976.1
3900	6855	56732.3	3900	7110	56661.6	3900	7365	56734.9	3900	7615	56962.0
3900	6860	56741.6	3900	7115	56670.4	3900	7370	56743.8	3900	7620	56949.4
3900	6865	56746.5	3900	7120	56671.8	3900	7375	56746.3	3900	7625	56936.0
3900	6870	56755.5	3900	7125	56678.4	3900	7380	56811.0	3900	7630	56930.4

APPENDIX 2:

CONTINUED

<u>Grid Co-ordinates</u>			<u>TMI</u>	<u>Grid Co-ordinates</u>			<u>TMI</u>	<u>Grid Co-ordinates</u>			<u>TMI</u>	<u>Grid Co-ordinates</u>			<u>TMI</u>
<u>Easting</u>		<u>Northing</u>	<u>(nT)</u>	<u>Easting</u>		<u>Northing</u>	<u>(nT)</u>	<u>Easting</u>		<u>Northing</u>	<u>(nT)</u>	<u>Easting</u>		<u>Northing</u>	<u>(nT)</u>
<u>Line 3900 East (cont.)</u>				<u>Line 3900 East (cont.)</u>				<u>Line 3900 East (cont.)</u>				<u>Line 3900 East (cont.)</u>			
3900	7635		56922.9	3900	7890		56792.8	3900	8145		56666.4	3900	8400		56761.0
3900	7640		56905.1	3900	7895		56802.9	3900	8150		56664.7	3900	8405		56752.3
3900	7645		56888.6	3900	7900		56802.3	3900	8155		56661.8	3900	8410		56749.5
3900	7650		56873.7	3900	7905		56792.2	3900	8160		56707.0	3900	8415		56775.2
3900	7655		56845.8	3900	7910		56793.9	3900	8165		56756.2	3900	8420		56777.4
3900	7660		56829.1	3900	7915		56816.7	3900	8170		56794.6	3900	8425		56779.0
3900	7665		56819.1	3900	7920		56841.6	3900	8175		56802.8	3900	8430		56769.3
3900	7670		56819.1	3900	7925		56847.6	3900	8180		56793.5	3900	8435		56754.8
3900	7675		56807.7	3900	7930		56856.8	3900	8185		56768.2	3900	8440		56749.9
3900	7680		56842.2	3900	7935		56851.0	3900	8190		56769.2	3900	8445		56742.7
3900	7685		56864.6	3900	7940		56870.1	3900	8195		56771.2	3900	8450		56742.4
3900	7690		56956.0	3900	7945		56872.9	3900	8200		56781.9	3900	8455		56744.0
3900	7695		57087.5	3900	7950		56871.2	3900	8205		56783.2	3900	8460		56755.1
3900	7700		57204.2	3900	7955		56878.3	3900	8210		56771.1	3900	8465		56754.0
3900	7705		57059.8	3900	7960		56889.2	3900	8215		56762.2	3900	8470		56770.1
3900	7710		56996.4	3900	7965		56889.9	3900	8220		56752.5	3900	8475		56790.8
3900	7715		56986.6	3900	7970		56878.5	3900	8225		56749.4	3900	8480		56782.1
3900	7720		57039.4	3900	7975		56893.3	3900	8230		56744.7	3900	8485		56769.6
3900	7725		57169.1	3900	7980		56866.1	3900	8235		56733.0	3900	8490		56759.8
3900	7730		57283.7	3900	7985		56868.1	3900	8240		56728.5	3900	8495		56757.9
3900	7735		57339.4	3900	7990		56889.4	3900	8245		56732.8	3900	8500		56756.6
3900	7740		57234.1	3900	7995		56909.6	3900	8250		56747.3	3900	8505		56762.3
3900	7745		57123.9	3900	8000		56883.1	3900	8255		56749.0	3900	8510		56778.7
3900	7750		56822.5	3900	8005		56871.7	3900	8260		56751.0	3900	8515		56774.0
3900	7755		56669.9	3900	8010		56873.0	3900	8265		56732.7				
3900	7760		56424.7	3900	8015		56644.9	3900	8270		56744.4	<u>Line 4000 East</u>			
3900	7765		56239.0	3900	8020		56652.0	3900	8275		56733.1	4000	7500		57211.1
3900	7770		56360.3	3900	8025		56709.6	3900	8280		56760.8	4000	7505		57328.0
3900	7775		56562.0	3900	8030		56729.6	3900	8285		56777.3	4000	7510		57160.0
3900	7780		56692.4	3900	8035		56762.6	3900	8290		56757.9	4000	7515		56947.1
3900	7785		56809.3	3900	8040		56697.6	3900	8295		56733.0	4000	7520		56929.4
3900	7790		56695.0	3900	8045		56683.3	3900	8300		56743.3	4000	7525		57003.8
3900	7795		56761.4	3900	8050		56665.7	3900	8305		56756.8	4000	7530		57042.8
3900	7800		56742.6	3900	8055		56694.0	3900	8310		56743.1	4000	7535		57054.6
3900	7805		56818.6	3900	8060		56710.3	3900	8315		56736.5	4000	7540		57080.2
3900	7810		57019.0	3900	8065		56719.1	3900	8320		56738.1	4000	7545		57087.5
3900	7815		56901.4	3900	8070		56739.6	3900	8325		56742.4	4000	7550		57129.3
3900	7820		56850.1	3900	8075		56675.9	3900	8330		56730.6	4000	7555		57174.5
3900	7825		56892.3	3900	8080		56703.4	3900	8335		56740.3	4000	7560		57205.1
3900	7830		56930.0	3900	8085		56717.2	3900	8340		56762.5	4000	7565		57252.5
3900	7835		56775.2	3900	8090		56597.9	3900	8345		56767.9	4000	7570		57259.4
3900	7840		56524.7	3900	8095		56641.3	3900	8350		56780.0	4000	7575		57248.5
3900	7845		56401.4	3900	8100		56674.4	3900	8355		56772.7	4000	7580		57276.1
3900	7850		56391.0	3900	8105		56680.6	3900	8360		56753.3	4000	7585		57357.6
3900	7855		56439.0	3900	8110		56664.2	3900	8365		56748.7	4000	7590		57464.4
3900	7860		56466.4	3900	8115		56707.0	3900	8370		56748.0	4000	7595		57266.1
3900	7865		56666.1	3900	8120		56708.0	3900	8375		56772.4	4000	7600		57195.8
3900	7870		56617.6	3900	8125		56721.4	3900	8380		56767.8	4000	7605		57204.2
3900	7875		56635.6	3900	8130		56764.9	3900	8385		56771.4	4000	7610		57242.7
3900	7880		56628.6	3900	8135		56717.5	3900	8390		56748.0	4000	7615		57372.9
3900	7885		56802.9	3900	8140		56670.6	3900	8395		56772.0	4000	7620		57483.7

APPENDIX 2:

CONTINUED

Grid Co-ordinates		TMI	Grid Co-ordinates		TMI	Grid Co-ordinates		TMI	Grid Co-ordinates		TMI
Easting	Northing	(nT)	Easting	Northing	(nT)	Easting	Northing	(nT)	Easting	Northing	(nT)
<u>Line 4000 East (cont.)</u>			<u>Line 4000 East (cont.)</u>			<u>Line 4100 East (cont.)</u>			<u>Line 4100 East (cont.)</u>		
4000	7625	57539.8	4000	7880	56768.9	4100	7615	57059.3	4100	7870	56608.1
4000	7630	57302.1	4000	7885	56782.4	4100	7620	57076.1	4100	7875	56616.4
4000	7635	57046.2	4000	7890	56797.8	4100	7625	57086.5	4100	7880	56610.2
4000	7640	56818.7	4000	7895	56823.3	4100	7630	57086.5	4100	7885	56637.5
4000	7645	56713.8	4000	7900	56853.3	4100	7635	57082.7	4100	7890	56622.4
4000	7650	56851.0	4000	7905	56830.8	4100	7640	57070.7	4100	7895	56626.0
4000	7655	57105.4	4000	7910	56831.6	4100	7645	57046.6	4100	7900	56648.9
4000	7660	57324.4	4000	7915	56842.2	4100	7650	57018.2	4100	7905	56632.2
4000	7665	57637.6	4000	7920	56869.2	4100	7655	56975.0	4100	7910	56622.3
4000	7670	57604.4	4000	7925	56881.7	4100	7660	56943.1	4100	7915	56647.1
4000	7675	57191.4	4000	7930	56873.4	4100	7665	56946.9	4100	7920	56661.8
4000	7680	56955.5	4000	7935	56858.2	4100	7670	56981.2	4100	7925	56692.9
4000	7685	56900.9	4000	7940	56901.3	4100	7675	57043.7	4100	7930	56680.8
4000	7690	57062.8	4000	7945	56876.2	4100	7680	57100.8	4100	7935	56685.3
4000	7695	57073.2	4000	7950	56861.4	4100	7685	57105.6	4100	7940	56691.6
4000	7700	56815.0	4000	7955	56873.9	4100	7690	57043.1	4100	7945	56764.2
4000	7705	56829.6	4000	7960	56891.3	4100	7695	56948.2	4100	7950	56734.3
4000	7710	56656.7	4000	7965	56857.4	4100	7700	56789.5	4100	7955	56691.2
4000	7715	56456.6	4000	7970	56855.4	4100	7705	56852.0	4100	7960	56668.2
4000	7720	56395.8	4000	7975	56870.0	4100	7710	56858.7	4100	7965	56656.8
4000	7725	56482.5	4000	7980	56862.3	4100	7715	56590.5	4100	7970	56664.2
4000	7730	56602.5	4000	7985	56912.4	4100	7720	56176.5	4100	7975	56677.0
4000	7735	56661.0	4000	7990	56945.8	4100	7725	56006.3	4100	7980	56683.7
4000	7740	56769.7	4000	7995	56913.9	4100	7730	56034.5	4100	7985	56691.6
4000	7745	56814.7	4000	8000	56839.0	4100	7735	56322.3	4100	7990	56706.0
4000	7750	56721.5	4000	8005	56837.6	4100	7740	56240.6	4100	7995	56706.1
4000	7755	56578.4				4100	7745	56245.2	4100	8000	56711.3
4000	7760	56702.7				4100	7750	56333.2			
4000	7765	56723.0	<u>Line 4100 East</u>			4100	7755	56386.9	<u>Line 4200 East</u>		
4000	7770	56729.0	4100	7500	56845.2	4100	7760	56421.0	4200	7500	57077.3
4000	7775	56711.3	4100	7505	56863.1	4100	7765	56497.6	4200	7505	57096.9
4000	7780	56683.4	4100	7510	56872.1	4100	7770	56530.2	4200	7510	57114.0
4000	7785	56693.0	4100	7515	56874.2	4100	7775	56379.1	4200	7515	57112.4
4000	7790	56730.7	4100	7520	56881.4	4100	7780	56352.2	4200	7520	57088.2
4000	7795	56809.6	4100	7525	56882.2	4100	7785	56350.7	4200	7525	57120.4
4000	7800	56932.6	4100	7530	56873.1	4100	7790	56401.0	4200	7530	57100.1
4000	7805	57153.6	4100	7535	56875.5	4100	7795	56408.3	4200	7535	57104.1
4000	7810	56852.7	4100	7540	56868.5	4100	7800	56408.3	4200	7540	57090.1
4000	7815	56697.1	4100	7545	56867.9	4100	7805	56448.7	4200	7545	57105.6
4000	7820	56627.9	4100	7550	56860.8	4100	7810	56480.1	4200	7550	57110.2
4000	7825	56612.3	4100	7555	56861.4	4100	7815	56511.2	4200	7555	57115.3
4000	7830	56634.8	4100	7560	56867.6	4100	7820	56545.6	4200	7560	57018.0
4000	7835	56555.2	4100	7565	56879.3	4100	7825	56578.8	4200	7565	57108.8
4000	7840	56578.6	4100	7570	56886.8	4100	7830	56559.4	4200	7570	57109.5
4000	7845	56611.6	4100	7575	56894.6	4100	7835	56612.4	4200	7575	57122.8
4000	7850	56712.2	4100	7580	56907.9	4100	7840	56615.5	4200	7580	57132.1
4000	7855	56672.4	4100	7585	56924.5	4100	7845	56669.3	4200	7585	57146.2
4000	7860	56672.3	4100	7590	56947.3	4100	7850	56601.3	4200	7590	57157.7
4000	7865	56752.6	4100	7595	56964.1	4100	7855	56584.1	4200	7595	57174.3
4000	7870	56763.8	4100	7600	56990.0	4100	7860	56647.3	4200	7600	57193.2
4000	7875	56765.9	4100	7605	57029.4	4100	7865	56629.2	4200	7605	57215.1
4000	7880	56765.9	4100	7610	57035.7	4100	7870	56629.2			

APPENDIX 2:

CONTINUED

Grid Co-ordinates			TMI	Grid Co-ordinates			TMI	Grid Co-ordinates			TMI	Grid Co-ordinates			TMI
Easting		Northing	(nT)	Easting		Northing	(nT)	Easting		Northing	(nT)	Easting		Northing	(nT)
Line 4200 East (cont.)				Line 4200 East (cont.)				Line 4200 East (cont.)				Line 4200 East (cont.)			
4200	7610		57228.4	4200	7710		57559.3	4200	7810		56725.3	4200	7910		57025.2
4200	7615		57274.0	4200	7715		57247.7	4200	7815		56728.8	4200	7915		57008.4
4200	7620		57307.3	4200	7720		57034.2	4200	7820		56726.6	4200	7920		56988.2
4200	7625		57387.9	4200	7725		56611.3	4200	7825		56964.2	4200	7925		57006.0
4200	7630		57420.1	4200	7730		56444.7	4200	7830		56996.7	4200	7930		57010.3
4200	7635		57376.0	4200	7735		56715.4	4200	7835		56791.3	4200	7935		57006.7
4200	7640		57300.1	4200	7740		57078.2	4200	7840		56893.1	4200	7940		57016.3
4200	7645		57217.2	4200	7745		57233.9	4200	7845		56894.1	4200	7945		57017.9
4200	7650		57106.7	4200	7750		57174.2	4200	7850		56905.7	4200	7950		57012.9
4200	7655		56932.3	4200	7755		57023.9	4200	7855		56904.5	4200	7955		57010.6
4200	7660		56812.0	4200	7760		56986.0	4200	7860		56968.3	4200	7960		56997.5
4200	7665		56782.1	4200	7765		56894.5	4200	7865		56971.9	4200	7965		56989.4
4200	7670		56853.4	4200	7770		56760.0	4200	7870		56988.0	4200	7970		56998.0
4200	7675		56965.3	4200	7775		56690.5	4200	7875		57045.9	4200	7975		57015.8
4200	7680		57066.9	4200	7780		56882.3	4200	7880		56997.6	4200	7980		57029.9
4200	7685		57117.3	4200	7785		56906.4	4200	7885		57011.5	4200	7985		57031.0
4200	7690		57214.0	4200	7790		56881.2	4200	7890		56928.1	4200	7990		57042.4
4200	7695		57298.9	4200	7795		56971.7	4200	7895		56968.9	4200	7995		57038.1
4200	7700		57286.7	4200	7800		56908.8	4200	7900		56950.0	4200	8000		57044.3
4200	7705		57346.8	4200	7805		56805.7	4200	7905		56959.6				

APPENDIX 3A:

ANALYTICAL REPORT BY ACME ANALYTICAL LABORATORIES LTD.
FOR CORE SAMPLES FROM THE VERITY CLAIMS*

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT																							
To Commerce Resources Corp.																							
Acme file # A102970 Page 1 Received: AUG 31 2001 * 126 samples in this disk file.																							
ELEMENT	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ba	Ni	Sr	Zr	Y	Nb	Sc	Ta	LOI	TOT/C	TOT/S	SUM
SAMPLES	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
15325 PULP	2.25	0.05	6.58	16.41	29.75	0.14	0.12	0.04	2.67	0.25	0.006	111	63	4052	< 10	17	745	16	78	41.1	11.47	0.08	99.98
15326	57.82	11.73	8.3	6.1	5.31	2.13	4.01	1.14	0.68	0.08	0.022	993	103	497	252	28	135	22	< 20	2.5	0.39	0.29	100.1
15327	3.26	0.21	8.52	15.07	31.24	0.05	0.09	0.1	5.35	0.19	0.002	62	53	2767	379	20	283	13	84	34.9	10	0.5	99.42
15328	2.51	0.11	6.34	16.29	31.19	0.01	0.05	0.04	3.91	0.2	< .001	73	< 20	3070	63	18	132	12	48	38.8	11.07	0.25	99.85
15329	3.15	0.2	5.66	16.39	30.78	0.02	0.06	0.02	2.57	0.22	0.002	88	31	3203	15	15	35	15	< 20	40.5	11.47	0.14	99.98
15330	3.15	0.1	6.86	16.03	30.81	0.04	0.05	0.06	3.39	0.21	0.001	80	40	3074	15	16	44	15	< 20	38.8	11.17	0.28	99.89
15331	2.61	0.09	6.66	15.92	31.32	0.06	0.07	0.04	3.79	0.22	< .001	75	42	3306	16	18	265	22	< 20	38.7	11.27	0.26	99.93
15332	2.71	0.07	6.8	16.13	30.51	0.07	0.06	0.04	3.07	0.23	< .001	81	25	3317	30	17	1337	27	37	39.6	11.27	0.42	99.9
15333	8.55	0.06	6.35	15.79	30.13	0.19	0.11	0.04	3.2	0.23	< .001	79	< 20	3305	< 10	19	746	27	30	34.8	10	0.25	99.96
15334	7.3	0.14	6.07	16.5	29.36	0.12	0.13	0.02	2.07	0.24	< .001	115	22	3767	< 10	16	667	16	70	37.4	10.68	0.24	99.91
15335	6.43	0.32	5.77	15.94	29.53	0.07	0.24	0.02	2.07	0.24	< .001	106	31	3552	21	16	443	17	48	38.5	10.88	0.15	99.63
15336	5.98	0.16	9.51	15.68	29.42	0.11	0.08	0.14	3.38	0.23	0.002	92	33	3757	< 10	19	1019	22	67	34.6	10.29	1.12	99.9
RE 15336	5.81	0.08	9.38	15.8	29.41	0.11	0.09	0.13	3.39	0.23	0.004	91	34	3662	23	20	963	22	83	34.6	10	1.06	99.63
RRE 15336	5.59	0.1	8.85	15.76	29.52	0.1	0.09	0.11	3.69	0.23	< .001	89	72	3712	16	19	911	21	74	35.2	10.29	1.04	99.83
15337	3.35	0.08	6.11	16.36	29.95	0.03	0.05	0.02	2.8	0.25	0.004	102	41	3859	< 10	15	927	23	84	40.3	11.76	0.06	99.91
15338	6.11	0.45	5.27	16.19	29.4	0.05	0.13	0.02	2.18	0.24	< .001	107	35	3712	16	18	380	15	54	39.2	11.07	0.1	99.76
15339	7.61	0.77	7.56	15.53	28.7	0.34	0.17	0.08	2.71	0.23	< .001	154	< 20	3606	10	20	661	19	93	35.5	10.39	0.4	99.75
15340	2.13	0.06	6.15	16.72	30.52	0.18	0.12	0.02	2.77	0.24	0.004	104	35	3905	< 10	17	410	15	81	40.5	11.86	0.27	99.95
15341	9.66	0.44	5.91	15.79	29.66	0.13	0.31	0.08	3.51	0.22	< .001	122	26	3209	86	20	500	15	74	33.6	9.48	0.32	99.79
15342	3.84	0.41	6.45	15.81	30.42	0.06	0.36	0.05	3.23	0.22	< .001	148	< 20	3289	111	17	258	14	44	38.6	11.27	0.29	99.91
15343	2.57	0.16	6.64	15.46	31.23	0.15	0.32	0.14	4.04	0.21	0.002	118	33	3032	148	19	500	20	29	38.6	11.07	0.21	99.99
15344	6.34	0.6	6.97	15.44	29.57	0.34	0.37	0.08	3.28	0.21	< .001	105	< 20	3182	31	18	496	20	55	36.2	10.58	0.27	99.87
15345	3.02	0.08	5.86	16.14	30.98	0.12	0.11	0.05	3.52	0.22	0.003	92	36	3241	10	18	400	20	73	39.4	11.27	0.14	99.96
15346	5.45	0.27	9.31	14.53	30.4	0.08	0.34	0.46	3.98	0.16	0.002	131	32	1949	707	19	109	14	28	34.3	9.75	0.2	99.65
15347	3.35	0.33	6.27	14.39	32.37	0.15	0.33	0.3	3.18	0.17	0.005	120	38	2001	146	19	41	22	< 20	38.8	11.37	0.1	99.93
15348	3.86	0.52	5.14	14.85	32.9	0.06	0.39	0.22	3.78	0.17	0.001	167	38	2136	125	18	11	13	< 20	38	10.98	0.08	100.2
RE 15348	3.78	0.5	5.1	14.78	32.72	0.06	0.41	0.22	3.79	0.17	< .001	167	< 20	2133	185	18	21	13	< 20	38.1	11.17	0.09	99.93
RRE 15348	3.74	0.52	5.14	14.66	32.75	0.05	0.43	0.2	3.98	0.17	< .001	167	29	2158	182	18	14	12	< 20	38.1	10.88	0.1	100.1
15349	4.38	0.25	9.35	15.63	30.43	0.01	0.24	0.19	5.8	0.15	0.015	80	120	1714	261	17	< 10	9	< 20	33.4	9.6	0.21	100.1
STANDARD SO-16/CSB	58.29	11.04	10.8	5.45	0.14	0.3	5.52	0.9	0.28	0.07	0.008	771	53	51	256	97	28	12	< 20	3.6	2.46	5.17	96.55

A12

* As-received by e-mail.

APPENDIX 3A:

CONTINUED

ELEMENT SAMPLES	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	Ta ppm	LOI %	TOT/C %	TOT/S %	SUM %
15350	4.1	0.34	6.54	15.03	31.85	0.08	0.48	0.33	2.98	0.15	0.017	172	99	1762	217	19	27	14	< 20	37.7	10.88	0.14	99.87
15351	4.09	0.26	5.35	12.25	36.09	0.07	0.37	0.78	1.38	0.14	< .001	304	< 20	1713	637	25	84	16	< 20	38.8	11.27	0.1	99.92
15352	3.98	0.36	5.81	9.44	39.23	0.06	0.4	0.96	0.22	0.13	< .001	350	< 20	1578	234	30	76	19	< 20	39.2	11.07	0.14	100.1
15353	59.94	12.45	8.03	5.52	4.4	2.09	3.52	1.16	0.47	0.07	0.014	1299	71	580	276	31	75	17	< 20	2.1	0.24	0.13	100
15376	63.13	10.57	6.65	4.85	6.41	2.98	2.7	0.73	0.71	0.12	0.009	791	51	582	257	38	179	17	< 20	0.9	0.16	0.22	99.99
15377	15.12	4.05	8.07	7.19	35.07	1.17	1.52	0.57	4.07	0.15	0.006	619	36	3142	316	54	117	10	< 20	22.3	6.65	0.32	99.8
15378	3.75	0.6	7.77	4.03	46.03	0.17	0.32	0.41	5.39	0.15	0.006	347	41	4095	401	75	34	4	< 20	30.8	9	0.32	100
15379	4.25	0.65	6.88	4.18	45.69	0.19	0.34	0.34	5.07	0.13	0.009	308	78	4084	506	74	22	4	< 20	31.4	9	0.35	99.74
15380	7.74	0.88	7.91	4.2	43.06	0.24	0.38	0.52	4.87	0.14	0.006	322	92	3838	818	72	36	3	< 20	29.2	8.37	0.23	99.77
15381	26.97	8.92	8.96	6.32	24.55	2.94	1.29	1.3	2.11	0.16	0.008	574	48	2059	279	45	124	16	25	16	3.99	0.36	99.9
15382	65.05	13.81	6.51	3.28	1.68	2.33	4.12	0.85	0.14	0.06	0.029	700	154	491	226	27	< 10	14	< 20	1.9	0.09	0.29	99.95
15383 PULP	2.15	0.05	6.65	16.89	29.27	0.17	0.1	0.04	2.71	0.25	0.008	115	85	4227	< 10	16	712	15	99	41	11.66	0.06	99.91
15384 PULP	2.14	0.05	6.62	16.98	29.41	0.2	0.11	0.03	2.68	0.26	0.005	116	29	4237	< 10	15	717	15	85	40.9	11.66	0.05	100
15385	50.95	15.35	9.26	6.65	5.03	3.78	5.02	1.28	0.73	0.09	0.023	1359	109	2230	394	41	278	22	< 20	1.2	0.11	0.03	99.89
15386	9.2	0.88	7.66	14.28	30.71	0.12	0.65	0.13	5.07	0.18	0.006	132	52	2501	279	18	280	11	61	30.5	8.84	0.34	99.78
15387	2.84	0.11	6.07	16.64	30.49	0.1	0.1	0.04	3.61	0.21	0.003	90	48	3385	84	16	102	13	33	39.2	11.37	0.03	99.86
15388	3.47	0.16	5.65	16.96	30.22	0.09	0.13	0.03	2.66	0.22	0.004	96	22	3395	17	14	15	12	< 20	39.8	11.66	0.11	99.82
RE 15388	3.52	0.17	5.69	17.05	30.21	0.11	0.12	0.03	2.68	0.22	0.008	97	43	3376	26	15	11	12	< 20	39.6	11.47	0.09	99.83
RRE 15388	3.41	0.17	5.79	17.12	30.38	0.1	0.12	0.03	2.59	0.23	0.002	95	< 20	3386	17	14	< 10	12	< 20	39.5	11.66	0.11	99.87
15389	1.69	0.14	6.26	16.84	30.9	0.1	0.1	0.03	3.55	0.22	0.002	95	21	3525	46	16	58	15	21	39.7	11.84	0.08	99.98
15390	2.25	0.09	5.73	17.04	30.86	0.12	0.13	0.03	3.33	0.22	< .001	92	< 20	3364	13	16	18	14	< 20	39.8	11.75	0.12	100
15391	1.97	0.22	6.53	16.34	30.75	0.23	0.14	0.05	4.12	0.21	0.006	94	59	3391	31	18	207	19	< 20	38.9	11.56	0.16	99.92
15392	2.32	0.06	6.29	16.49	30.52	0.31	0.14	0.04	3.62	0.24	< .001	97	< 20	3682	25	18	2304	31	61	38.9	11.28	0.29	99.72
15393	2.37	0.08	6.13	16.77	30.62	0.18	0.09	0.03	3.53	0.24	0.005	118	46	3866	12	18	525	18	20	39.4	11.47	0.21	100
15394	1.78	0.08	6.79	17.03	30.03	0.11	0.09	0.04	2.99	0.24	0.001	122	73	4167	52	17	677	14	37	40.2	11.75	0.21	100
15395	2.22	0.07	6.27	17.41	29.45	0.2	0.15	0.02	2.28	0.25	< .001	125	< 20	4237	< 10	14	587	15	76	41	12.03	0.2	99.92
15396	1.61	0.06	7.34	17.11	29.44	0.17	0.16	0.05	2.49	0.25	< .001	119	< 20	4039	< 10	14	473	15	68	40.6	11.66	0.32	99.85
15397	2.14	0.05	6.84	17.13	29.58	0.23	0.16	0.02	2.31	0.26	0.004	119	< 20	4381	< 10	13	360	17	40	40.7	12.03	0.35	100
15398	1.91	0.08	6.44	17.47	29.78	0.16	0.17	0.02	2.34	0.24	0.007	110	28	4093	< 10	13	309	12	58	40.7	12.03	0.41	99.87
15399	1.94	0.07	6.08	17.14	29.67	0.22	0.19	0.04	2.49	0.25	0.008	104	37	3936	< 10	14	675	19	61	41.2	11.84	0.17	99.88
15400	2.33	0.09	5.62	17.5	29.51	0.19	0.18	0.01	2.61	0.25	0.007	118	20	4156	< 10	15	535	15	64	41.2	12.31	0.14	100.1
RE 15400	2.24	0.05	5.6	17.48	29.44	0.18	0.19	0.01	2.63	0.25	< .001	119	< 20	4169	10	16	579	14	66	41.3	12.31	0.15	99.97
RRE 15400	2.28	0.08	5.67	17.62	29.52	0.17	0.18	0.02	2.52	0.25	< .001	119	< 20	4144	22	15	554	14	87	41	12.31	0.17	99.9
15401	2.15	0.07	5.46	17.77	29.4	0.11	0.09	0.01	2.15	0.25	0.001	122	< 20	4189	< 10	14	300	13	56	41.9	12.22	0.18	99.91
15402	4.2	0.1	5.65	17.5	29.9	0.09	0.08	0.01	2.94	0.24	< .001	114	< 20	4080	10	16	478	12	89	38.6	11.56	0.32	99.88
STANDARD SO-16/CSB	57.76	10.85	11.1	5.59	0.13	0.3	5.64	0.89	0.26	0.07	0.01	818	53	55	246	91	< 10	11	< 20	3.6	2.52	5.32	96.35

A13

APPENDIX 3A:

CONTINUED

ELEMENT	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ba	Ni	Sr	Zr	Y	Nb	Sc	Ta	LOI	TOT/C	TOT/S	SUM
SAMPLES	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
15403	5.09	0.35	5.61	17.35	29.37	0.12	0.26	0.02	2.25	0.24	< .001	134	< 20	3883	< 10	15	320	12	63	38.8	11.56	0.18	99.98
15404	3.65	0.12	5.71	16.97	29.87	0.19	0.15	0.02	3.38	0.23	0.004	137	29	4036	14	19	397	15	88	38.9	11.56	0.34	99.75
15405	2.69	0.05	6.39	16.94	30.16	0.26	0.14	0.04	3.52	0.24	0.003	142	< 20	4011	11	19	759	20	139	38.8	11.84	0.37	99.83
15406	9.63	0.39	8.56	16.26	28.07	0.31	0.35	0.1	2.97	0.23	0.003	148	< 20	3658	10	17	700	14	104	32.5	9.87	0.37	99.92
15407	6.88	0.25	5.81	16.93	29.68	0.2	0.23	0.02	3	0.24	0.003	132	< 20	3864	< 10	18	371	16	77	36.4	10.9	0.19	100.2
15408	9.29	0.27	5.57	17.25	28.69	0.22	0.19	0.01	2.14	0.25	0.001	136	39	3758	< 10	15	239	13	35	35.6	10.25	0.23	99.98
15409	2.6	0.14	6.09	16.61	29.87	0.16	0.17	0.06	3.68	0.24	< .001	126	61	3760	63	19	381	16	55	39.8	11.28	0.06	99.96
15410	10.97	2.19	6.21	14.57	27.89	0.51	0.49	0.09	3.77	0.21	0.003	297	56	3147	83	19	885	19	83	32.6	9.38	0.14	100.1
15411	13.35	2.61	5.39	14.22	25.76	0.57	1.31	0.04	3.14	0.2	< .001	439	37	3054	21	17	610	17	91	32.8	9.28	0.21	99.9
15412	2.43	0.11	7.39	16.11	30.1	0.22	0.12	0.08	4.47	0.21	0.003	111	38	3199	183	20	271	14	53	38.1	11	0.25	99.81
15413	2.15	0.09	7.24	15.77	30.05	0.22	0.15	0.09	4.96	0.21	< .001	102	51	3180	107	20	590	19	140	38.6	11	0.16	100
15414	3.01	0.23	8.86	14.81	30.28	0.18	0.41	0.48	3.25	0.18	0.005	206	68	2124	446	19	106	17	24	37.8	10.72	0.15	99.86
15415	6.91	2.22	5.71	13.44	30.15	0.67	0.33	0.29	3.73	0.16	< .001	240	30	2326	122	20	31	13	< 20	36.1	10.06	0.07	100
15416	11.67	3.44	4.98	13.8	27.58	1.04	0.51	0.19	3.39	0.16	< .001	215	40	2215	286	19	39	12	< 20	33	9.13	0.09	100.1
15417	1.41	0.15	6.86	15.44	31.81	0.11	0.12	0.15	5.51	0.17	0.001	117	23	2065	149	17	< 10	11	< 20	38	11	0.09	100
15418	2.9	0.25	7.36	16.08	30.71	0.08	0.23	0.1	5.54	0.16	0.01	87	71	1883	376	15	< 10	9	< 20	36.3	10.53	0.16	100
RE 15418	2.84	0.25	7.28	16.05	30.62	0.06	0.22	0.11	5.55	0.15	0.006	86	85	1862	326	17	< 10	10	< 20	36.4	10.43	0.16	99.82
RRE 15418	3.1	0.26	7.07	16.31	30.7	0.09	0.22	0.1	5.41	0.16	0.01	87	97	1875	381	16	< 10	10	< 20	36.2	10.43	0.15	99.93
15419	3.3	0.31	7.71	15.24	31.75	0.12	0.28	0.22	5.57	0.15	0.003	138	48	1822	245	18	10	11	< 20	35	10.15	0.21	99.93
15420	3.2	0.25	5.89	13.6	34.13	0.13	0.29	0.87	2.09	0.16	0.003	269	42	1851	1014	23	112	17	< 20	39	11	0.11	100
15421	75.78	8.73	5.06	2.84	2.29	1.55	1.71	0.66	0.12	0.05	0.012	663	144	182	193	19	< 10	10	< 20	1	0.05	0.08	99.94
15422 PULP	2.23	0.05	6.77	17.14	29.03	0.18	0.1	0.04	2.73	0.26	0.003	119	34	4186	< 10	17	738	16	76	40.7	11.84	0.08	99.85
15426	64.33	12.09	6.5	3.82	3.2	3.09	2.23	0.73	0.45	0.05	0.003	581	57	378	264	23	32	15	< 20	3.2	0.49	0.24	99.86
15427	65.09	13.9	3.49	2.74	3.56	5.07	2.14	0.29	0.47	0.04	0.002	360	57	668	69	18	38	6	< 20	3	0.57	0.08	99.94
15428	9.1	2.53	5.81	15.07	26.64	0.96	0.46	0.05	2.56	0.22	< .001	218	60	3775	14	17	424	14	52	36	10.72	0.31	99.95
15429	61.18	18.37	1.61	1.33	2.53	5.72	6.59	0.24	0.09	0.02	0.002	1134	72	1958	96	12	63	5	< 20	1.9	0.29	< .01	99.98
15430	55.23	15.42	2.4	3.22	5.56	3.38	8.12	0.19	0.81	0.05	< .001	2001	< 20	2083	66	13	215	6	38	5.1	1.19	0.02	99.99
15431	4.74	0.2	6.81	16.15	29.74	0.16	0.19	0.26	3.66	0.22	< .001	125	43	3271	112	19	452	14	66	37.4	10.9	0.18	100
15432	2.19	0.1	6.34	16.33	30.15	0.19	0.12	0.07	3.94	0.22	< .001	93	31	3454	109	19	681	15	103	39.7	11.56	0.21	99.89
15433	2.37	0.06	6.53	16.81	29.78	0.17	0.11	0.06	3.29	0.23	< .001	102	< 20	3739	14	18	1258	18	185	39.8	11.47	0.19	99.86
15434	2.42	0.08	6.48	16.84	29.67	0.19	0.12	0.05	3.49	0.22	0.003	107	32	3525	15	20	491	16	103	39.8	11.66	0.18	99.88
RE 15434	2.29	0.07	6.47	16.88	29.79	0.18	0.12	0.05	3.51	0.22	< .001	109	28	3576	< 10	21	466	17	111	39.9	11.56	0.17	99.99
RRE 15434	2.18	0.08	6.42	16.94	29.89	0.16	0.11	0.05	3.48	0.22	< .001	106	< 20	3552	28	20	358	16	86	40	11.75	0.17	100
15435	2.65	0.17	6.33	16.37	30.63	0.1	0.05	0.05	3.77	0.22	< .001	95	54	3008	63	18	264	18	71	39.2	11.37	0.17	99.97
15436	3.17	0.23	7.24	14.86	31.55	0.13	0.26	0.37	2.99	0.17	< .001	168	< 20	1989	410	19	94	14	< 20	38.5	11.28	0.12	99.8
STANDARD SO-16/CSB	57.89	10.89	11.11	5.6	0.12	0.3	5.83	0.89	0.27	0.07	0.009	825	56	51	221	95	< 10	11	< 20	3.6	2.49	5.28	96.73

A14

APPENDIX 3A:

CONTINUED

ELEMENT SAMPLES	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba ppm	Ni ppm	Sr ppm	Zr ppm	Y ppm	Nb ppm	Sc ppm	Ta ppm	LOI %	TOT/C %	TOT/S %	SUM %
15437	1.66	0.14	5.44	16.03	31.88	0.09	0.08	0.18	4.18	0.18	< .001	107	< 20	2086	406	17	19	12	< 20	39.7	11.66	0.02	99.88
15438	3.14	0.2	9.14	16.08	30.01	0.08	0.11	0.19	5.32	0.15	0.01	75	78	1752	246	16	< 10	9	< 20	35.2	10.25	0.09	99.89
15439	4.87	0.54	6.24	12.62	34.38	0.13	0.18	0.84	1.64	0.14	< .001	191	< 20	1625	243	23	88	15	< 20	38.1	11	0.12	99.95
15440	72.98	10.06	5.58	2.73	1.65	2.13	2.58	0.72	0.17	0.04	0.006	829	51	221	247	23	28	11	< 20	1.1	0.09	0.22	99.91
15441	46.8	8.57	3.74	7.94	13.43	2.27	2.53	0.06	1.35	0.1	< .001	373	< 20	1602	12	19	252	7	65	12.9	3.59	0.14	99.96
15442	5.79	0.24	7.75	16.02	29.93	0.12	0.11	0.07	3.44	0.22	0.001	86	26	3490	33	17	451	14	99	35.8	10.5	0.22	99.99
15443	3.89	0.18	8.6	15.57	29.49	0.13	0.05	0.09	3.49	0.21	0.008	73	37	3247	41	19	211	14	97	36.6	10.8	0.27	98.75
15444	25.03	4.89	4.91	11.17	21.65	1.35	1.75	0.07	2.85	0.13	0.006	267	35	2112	88	22	133	8	30	25.8	7.35	0.12	99.93
15445	60.27	12.14	4.48	5.05	5.91	3.33	2.96	0.38	0.66	0.08	0.011	443	37	754	128	17	102	9	< 20	4.5	1.11	0.06	99.95
15446	49.39	10.79	2.21	5.74	10.77	3.4	2.8	0.06	1.19	0.08	0.001	449	21	1535	< 10	18	160	9	34	13.3	3.57	0.03	99.99
15447	38	9.06	3.55	7.6	15.04	2.01	3.96	0.11	1.55	0.11	< .001	840	28	1827	19	13	153	10	40	18.6	5.17	0.1	99.94
15448	12.06	2.01	6.16	13.17	30.11	0.68	0.3	0.13	5.4	0.14	0.006	86	44	1749	146	20	< 10	10	< 20	29.4	8.62	0.15	99.81
15449	24.05	4.91	4.97	10.59	23.45	1.29	1.71	0.12	3.66	0.12	0.003	236	34	1501	35	17	< 10	7	< 20	24.9	7.04	0.11	99.99
15450	16.37	4.27	4.7	12.53	25.99	1.39	1.28	0.16	3.15	0.14	< .001	259	27	1804	174	15	12	11	< 20	30.1	8.55	0.06	100.4
15451	73.27	9.3	5.7	3.2	2.41	1.75	2.09	0.7	0.16	0.06	0.018	541	69	200	183	18	17	11	< 20	1.2	0.08	0.13	99.98
15452	69.94	9.59	5.83	3.2	2.95	1.27	2.32	0.97	0.26	0.06	0.012	625	70	319	220	26	63	12	< 20	3.4	0.51	0.06	99.96
15453	9.65	0.28	7.6	15.54	28.43	0.23	0.24	0.07	2.92	0.24	0.002	83	< 20	3383	< 10	15	1206	26	72	34.1	10.1	0.15	99.89
15454	4.62	0.09	5.57	17.05	29.3	0.17	0.12	0.01	2.01	0.25	0.003	105	37	4044	< 10	12	460	14	54	40.2	11.7	0.22	99.95
RE 15454	4.59	0.08	5.55	17.08	29.3	0.16	0.1	0.01	2	0.25	0.002	106	31	4019	< 10	14	551	16	67	40.3	11.5	0.23	100
RRE 15454	4.2	0.1	5.43	17.14	29.43	0.14	0.1	0.01	1.99	0.25	0.001	105	< 20	4040	< 10	13	454	15	45	40.4	11.8	0.23	99.75
15455	4.08	0.11	6.06	16.81	29.44	0.16	0.09	0.02	3.03	0.23	0.004	101	36	4045	< 10	16	631	11	101	39.1	11.4	0.42	99.72
15456	4.2	0.19	7.26	15.42	29.97	0.22	0.24	0.16	4.08	0.2	0.005	114	32	2896	104	19	286	14	41	37.4	10.5	0.15	99.77
15457	3.1	0.12	6.2	15.98	30.18	0.18	0.24	0.22	3.78	0.21	0.002	99	24	3278	65	19	314	17	37	39.2	11.3	0.15	99.87
15458	4.59	0.11	5.66	16.16	29.96	0.19	0.14	0.04	3.24	0.22	0.004	103	< 20	3409	< 10	17	405	17	94	39.1	11.1	0.09	99.89
15459	3.39	0.19	6.68	14.6	31.93	0.11	0.13	0.48	3.81	0.18	0.002	120	< 20	2265	223	18	114	13	< 20	38.2	11	0.02	100
15460	3.1	0.19	6.94	15.12	31.61	0.07	0.06	0.19	4.52	0.16	0.007	81	50	1966	128	16	< 10	10	< 20	37.8	10.8	< .01	100
15461	2.62	0.19	6.3	14.42	33.17	0.08	0.04	0.33	3.85	0.16	0.004	121	36	1865	141	17	15	11	< 20	38.6	11	0.01	100
15462	3.94	0.2	5.63	12.39	35.87	0.13	0.1	0.8	2.27	0.14	0.006	251	22	1743	254	25	50	15	< 20	38.3	11	0.02	100.1
15463	55.5	8.59	6.51	5.85	9.5	1.64	2.27	0.72	0.91	0.08	0.014	719	47	551	259	23	36	12	< 20	8.2	2.23	0.15	99.98
15464 PULP	2.24	0.05	6.63	16.76	29.46	0.2	0.1	0.04	2.64	0.25	0.003	112	< 20	4144	10	15	760	16	80	40.9	11.8	0.07	99.89
STANDARD SO-16/CSB	58.98	11.18	10.87	5.48	0.13	0.36	5.55	0.92	0.26	0.07	0.01	773	55	51	217	95	< 10	11	< 20	3.6	2.45	5.34	97.56

A15

APPENDIX 3B:

ANALYTICAL REPORT BY ACTIVATION LABORATORIES LTD.
FOR CORE SAMPLES FROM THE VERITY CLAIMS*

Sample ID	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sn	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	
	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
15325 PULP	6	-5	-0.5	450	-0.5	21	26	13	-1	5.54	6	-1	-5	-1	0.13	-43	-15	-0.1	24.3	-3	-0	0.7	160	3.1	68.9	-1	-50	174	303	120	21.1	6.1	1.7	1.8	0.2	30	
15326	12	-5	4.2	1100	-0.5	4	28	166	13	6.54	8	-1	-5	2	1.58	-43	180	-0.1	25	-3	-0	0.11	16	14.6	11	-1	94	83.1	141	54	10.7	2.7	1.6	2.7	0.46	30	
15327	11	-5	-0.5	100	-0.5	22	32	10	-1	6.99	10	-1	-5	-1	0.05	-42	-15	0.2	18.5	-3	-0	0.45	140	1.5	89.9	3	-50	164	286	140	22.4	6.9	2.1	1.6	0.2	30	
15328	2	-5	3	550	-0.5	26	21	-5	-1	4.78	2	-1	-5	-1	0.04	-38	-15	-0.1	15.8	-3	-0	0.48	82	2.1	55.7	-1	-50	148	264	120	19.9	5.7	2.3	1.4	0.21	30	
15329	2	-5	1.7	170	-0.5	21	18	-5	3	4.49	1	-1	-5	-1	0.04	-35	-15	-0.1	17.9	-3	-0	0.49	17	1.1	10.5	-1	54	134	237	110	17.6	4.9	1.5	0.8	0.15	30	
15330	4	-5	2.5	260	-0.5	24	21	-5	-1	5.45	2	-1	-5	-1	0.07	-37	-15	0.4	19.8	-3	-0	0.55	24	1.2	16.8	-1	-50	150	259	110	20.4	5.8	1.5	0.6	0.09	30	
15331	2	-5	-0.5	110	-0.5	24	25	-5	-1	5.1	4	-1	-5	3	0.06	-38	-15	-0.1	24.7	-3	-0	0.45	18	2.1	3.7	-1	-50	157	275	120	21.5	6.1	1.6	0.8	0.1	30	
15332	2	-5	-0.5	100	-0.5	24	34	-5	-1	5.23	5	-1	-5	-1	0.08	-41	-15	0.6	31.6	-3	-0	0.5	67	8.7	12.1	-1	-50	146	256	110	19.5	5.3	1.3	1.1	0.13	30	
15333	4	-5	-0.5	110	-0.5	20	28	9	-1	4.89	2	-1	-5	-1	0.16	-43	-15	0.3	33.1	-3	-0	0.45	55	3.3	13.6	-1	-50	168	290	120	21.5	5.8	1	1.1	0.17	30	
15334	3	-5	3.5	730	-0.5	19	30	-5	-1	4.62	2	-1	-5	-1	0.11	-40	-15	-0.1	21.9	-3	-0	0.65	110	2.4	45.5	-1	-50	146	258	120	18.3	5.3	1.5	1.9	0.2	30	
15335	2	-5	-0.5	690	-0.5	23	28	-5	-1	4.51	2	2	-5	-1	0.08	-39	-15	-0.1	23	-3	-0	0.55	110	1.9	45.7	-1	-50	130	219	86	16.3	4.9	1.2	1.5	0.2	30	
15336	2	-5	-0.5	590	-0.5	20	54	-5	2	6.85	1	-1	-5	-1	0.09	-37	-15	-0.1	26.4	-3	-0	0.55	120	3.8	36.3	4	-50	169	296	120	20.6	6	1.9	1.6	0.25	30	
15337	2	-5	-0.5	200	-0.5	21	26	-5	-1	4.63	2	-1	-5	-1	0.04	151	-15	-0.1	31.9	-3	-0	0.64	150	3.8	51.8	-1	-50	165	279	110	20.2	6.2	1.5	1.9	0.22	30	
15338	-2	-5	-0.5	350	-0.5	21	20	-5	-1	3.84	2	-1	-5	-1	0.07	-32	-15	-0.1	17.9	-3	-0	0.55	110	1.8	56.4	-1	-50	148	250	110	17.8	5.4	1.2	1.3	0.2	30	
15339	2	-5	-0.5	310	-0.5	21	32	-5	3	5.56	2	-1	-5	-1	0.25	-36	-15	0.4	24.4	-3	-0	0.57	150	2.7	48.2	-1	-50	150	254	93	18.1	5.2	1.1	1.6	0.22	30	
15340	2	-5	1	490	-0.5	20	29	-5	-1	4.7	1	-1	-5	-1	0.14	-35	-15	-0.1	20.4	-3	-0	0.6	130	2.5	58.1	-1	-50	162	278	110	19.3	5.8	1.7	1.3	0.19	30	
15341	2	-5	2.4	600	-0.5	18	28	-5	5	4.33	2	-1	-5	-1	0.11	-35	-15	-0.1	20.2	-3	-0	0.44	150	2	83.3	-1	-50	166	279	120	20.6	6.5	1.8	2	0.25	30	
15342	5	-5	-0.5	640	-0.5	24	26	8	3	4.78	4	-1	-5	-1	0.07	-31	36	-0.1	17.1	-3	-0	0.42	65	1.2	30.9	-1	-50	140	237	100	17.6	5	1.7	1.2	0.17	30	
15343	-3	-5	-0.5	310	-0.5	21	29	-5	-1	4.92	5	-1	-5	-1	0.13	-33	-15	-0.1	23.9	-3	-0	0.43	74	3.9	27.1	-1	-50	147	256	110	19.3	5.7	1.8	1.3	0.19	30	
15344	4	-5	1.3	400	-0.5	20	27	-5	3	5.33	1	-1	-5	-1	0.26	-35	39	-0.1	24.9	-3	-0	0.43	110	3.4	58.6	-1	-50	145	246	110	18.5	5.5	1.3	1.4	0.19	30	
15345	-2	-5	-0.5	530	-0.5	21	20	8	-1	4.36	1	-1	-5	-1	0.11	-36	-15	-0.1	27	-3	-0	0.51	150	3	76.9	-1	-50	155	278	120	20	6.6	2	1.5	0.17	30	
15346	-2	-5	-0.5	500	-0.5	24	26	22	-1	7.2	22	-1	-5	-1	0.09	-29	-15	-0.1	16	-3	-0	0.25	34	2.4	21.1	-1	-50	117	205	98	16.8	5	1.4	1.2	0.15	30	
15347	4	-5	-0.5	230	-0.5	22	21	8	3	4.95	5	-1	-5	-1	0.13	-29	-15	-0.1	25.2	-3	-0	0.29	16	1.6	9.3	-1	-50	119	209	87	16.3	4.9	1.6	0.9	0.18	30	
15348	-2	-5	1.4	330	-0.5	28	17	-5	3	4.15	5	-1	-5	-1	0.07	-26	-15	-0.1	15.1	-3	-0	0.35	7.2	1.3	1.9	-1	57	127	218	100	17.6	5.2	1.1	0.9	0.12	30	
15349	6	-5	2.5	260	-0.5	24	34	134	-1	7.72	8	-1	-5	-1	0.05	-26	-15	-0.1	10.5	-3	-0	0.22	3.1	1.8	-0.5	-1	65	117	208	93	17.6	5.2	1.2	0.7	0.12	30	
15350	-2	-5	1.8	320	-0.5	23	28	139	-1	5.12	7	-1	-5	-1	0.08	-26	-15	-0.1	15.4	-3	-0	0.36	8.2	1.4	3	-1	-50	107	188	90	15.2	4.4	1.6	1	0.14	30	
15351	6	-5	-0.5	460	-0.5	26	24	9	-1	4.32	20	-1	-5	3	0.09	-28	-17	-0.1	20.6	3	-0	0.3	19	1.2	4.3	-1	-50	127	216	100	17.1	5.3	1.6	1.8	0.24	30	
15352	-2	-5	-0.5	560	-0.5	30	28	12	-1	4.88	10	-1	-5	-1	0.08	-29	-15	-0.1	22.8	-3	-0	0.23	16	0.8	-0.5	-1	-50	133	222	100	18.5	5.9	1.6	2.2	0.29	30	
15353	-2	-5	-0.5	1300	-0.5	5	23	113	12	5.9	9	-1	-5	-1	1.42	-31	186	-0.1	19.2	-3	-0	-0.1	7	16.1	5.9	-1	64	84.9	135	58	10.7	2.7	1.8	3.2	0.45	30	
15376	7	-5	2.3	930	-0.5	4	16	107	5	4.97	7	-1	-5	3	2.08	-33	106	-0.1	17.8	-3	-0	-0.1	6.9	19.5	2.3	3	-50	98.6	173	79	14.7	3.7	1.8	3.7	0.61	30	
15377	4	-5	2.4	660	-0.5	30	20	23	2	6.19	6	-1	-5	-1	0.82	-35	-15	-0.1	13.2	-3	-0	0.47	40	10	24.1	-1	-50	251	433	200	36	10.5	3.4	3.7	0.56	30	
15378	2	-5	2.7	820	-0.5	34	17	-5	-1	5.83	7	-1	-5	11	0.1	-34	-15	-0.1	5.2	-3	-0	0.56	12	16.5	4	-1	-50	346	604	280	51.7	14.9	4.4	4.5	0.61	30	
15379	8	-5	2.6	520	-0.5	31	14	-5	-1	5.02	9	-1	-5	-1	0.11	-33	-15	-0.1	4.4	8	-0	0.45	8.4	10.6	4.5	-1	-50	331	583	270	50	15.5	4.3	4.6	0.64	30	
15380	4	-5	-0.5	620	-0.5	31	15	7	2	5.85	14	-1	-5	6	0.15	-29	-15	-0.1	3.7	-3	-0	0.49	12	16.9	3.2	-1	-50	288	509	250	46.9	13.9	4.4	4.2	0.51	30	
15381	6	-5	-0.5	570	-0.5	16	29	31	-1	6.28	6	-1	-5	-1	2	-33	-15	-0.1	19.3	-3	-0	0.26	23	9.3	15.8	-1	-50	157	265	110	22.7	6.7	1.7	3.3	0.51	30	
15382	-2	-5	-0.5	680	-0.5	1	18	121	10	4.28	7	-1	-5	-1	1.49	-25	162	-0.1	14.7	-3	-0	-0.21	3	11.9	4.1	-1	-50	45.2	80	32	6.5	1.4	1.1	2.8	0.46	30	
15383 PULP	9	-5	-0.5	320	-0.5	21	20	-5	-1	4.63	1	-1	-5	-1	0.11	-29	-15	0.3	21.3	-3	-0	0.66	140	2	58.5	-1	-50	150	259	120	18.1	5.3	1.5	1.4	0.25	30	
15384 PULP	-2	-5	-0.5	600	-0.5	19	22	-5	-1	4.65	2	-1	-5	-1	0.11	-30	-15	-0.1	21.2	-3	-0	0.69	140	2.4	60	-1	-50	154	263	120	18.2	5.5	1.1	1.2	0.25	30	
15385	4	-5	-0.5	1100	-0.5	4	27	113	24	6.34	11	-1	-5	-1	2.45	136	245	-0.1	24.5	-3	-0	0.44	15	17.7	5.3	-1	-50	93.5	157	61	12.9	3.3	1.5	4.2	0.65	30	
15386	3	-5	1.2	280	-0.5	20	22	10	2	5.26	7	-1	-5	-1	0.07	-27	-15	-0.1	15.7	-3	-0	0.27	97	1.8	51.1	-1	-50	135	238	100	18.4	5.3	1.6	1.3	0.17	30	
15387	-2	-5	-0.5	430	-0.5	21	17	-5	-1	4.27	2	-1	-5	-1	0.06	-26	-15	-0.1	16.1	-3	-0	0.49	66	0.8	43.5	-1	-50	143	251	97	18.7	5.6	1.5	1	0.14	30	
15388	3	-5	1.8	110	-0.5	22	17	-5	1	4.27	-1	-1	-5	-1	0.06	-23	-15	-0.1	14.7	-3	-0	0.49	12	-													

APPENDIX 3B:

CONTINUED

Sample ID	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sn	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	
	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
15391	5	-5	-0.5	140	-0.5	23	23	7	-1	5.1	-1	-1	-5	-1	0.14	-28	-15	-0.1	25.3	-3	-0	0.55	19	2.1	5.4	-1	-50	171	297	140	23.3	6.5	1.7	1.1	0.15	30	
15392	4	-5	-0.5	260	-0.5	21	29	-5	-1	4.79	-1	-1	-5	-1	0.22	-33	-15	-0.1	43	-3	-0	0.58	120	14.3	12.5	-1	-50	169	296	130	21.8	6	1.6	1.8	0.14	30	
15393	4	-5	1.5	160	-0.5	23	22	-5	-1	4.57	-1	-1	-5	-1	0.11	-28	-15	0.3	23.6	-3	-0	0.81	37	2.9	11.6	-1	-50	179	313	130	23	6.4	1.5	1.1	0.12	30	
15394	-2	-5	-0.5	480	-0.5	21	22	-5	-1	4.9	2	-1	-5	-1	0.08	-28	-15	-0.1	19.1	-3	-0	0.59	73	2.8	22.2	-1	-50	171	292	130	20.9	6	1.2	1.6	0.2	30	
15395	-2	-5	-0.5	320	-0.5	19	31	-5	-1	4.63	-1	-1	-5	-1	0.14	-29	-15	-0.1	22.7	-3	-0	0.63	130	1.3	54.9	-1	-50	148	256	110	17.9	5.3	1.4	1.5	0.2	30	
15396	-2	-5	-0.5	460	-0.5	20	34	-5	-1	5.57	-1	-1	-5	-1	0.13	-29	-15	-0.1	22.2	-3	-0	0.64	130	1.4	59.1	-1	-50	147	256	120	18	5	1.4	1.4	0.17	30	
15397	2	-5	-0.5	300	-0.5	21	39	-5	-1	4.96	-1	-1	-5	-1	0.15	-28	-15	-0.1	23.7	-3	-0	0.57	97	1	48.2	-1	-50	134	227	100	16	4.8	1.1	1.4	0.17	30	
15398	5	-5	1.8	210	-0.5	19	35	6	-1	4.75	-1	-1	-5	-1	0.1	-26	-15	0.1	16.5	-3	-0	0.57	72	1.4	29.7	-1	-50	132	225	99	16.2	4.6	1.4	1.2	0.14	30	
15399	-2	-5	-0.5	370	-0.5	22	25	-5	-1	4.63	-1	-1	-5	-1	0.13	-28	-15	-0.1	26.8	-3	-0	0.68	90	2.7	29.8	-1	-50	140	242	110	17.2	5.2	1.4	1.1	0.14	30	
15400	3	-5	-0.5	300	-0.5	23	23	-5	-1	4.2	-1	-1	-5	-1	0.12	-29	-15	-0.1	21.8	-3	-0	0.58	120	2.6	52.8	-1	-50	169	282	130	20.1	6.1	1.7	1.5	0.17	30	
15401	-2	-5	2	340	-0.5	20	28	-5	2	4.11	-1	-1	-5	-1	0.07	-27	-15	-0.1	19.8	-3	-0	0.65	98	1.1	52.5	-1	-50	146	243	110	17.6	5.4	1.6	1.6	0.2	30	
15402	6	-5	-0.5	570	-0.5	21	24	-5	-1	4.28	-1	-1	-5	-1	0.07	-28	-15	0.3	18.3	-3	-0	0.65	130	1.9	69.8	-1	-50	168	287	120	20.6	6.3	1.7	1.7	0.2	30	
15403	5	-5	-0.5	230	-0.5	19	26	-5	3	4.1	2	-1	-5	-1	0.09	-27	-15	-0.1	17.8	-3	-0	0.57	100	1.2	62.4	-1	-50	138	236	110	16.7	5.1	1.4	1.4	0.16	30	
15404	-2	-5	-0.5	490	-0.5	21	28	-5	-1	4.27	-1	-1	-5	-1	0.12	-30	-15	0.2	21.3	-3	-0	0.55	120	1.9	66.3	-1	-50	199	334	150	23.8	6.7	1.7	1.4	0.16	30	
15405	3	-5	-0.5	820	-0.5	22	28	-5	-1	4.36	-1	-1	-5	-1	0.17	-33	-15	-0.1	29.1	-3	-0	0.53	230	2.8	105	-1	-50	180	301	140	21	6.6	1.4	1.3	0.18	30	
15406	6	-5	-0.5	430	-0.5	19	30	-5	4	6.12	-1	-1	-5	-1	0.2	-30	-15	0.3	21.5	-3	-0	0.5	170	3	63.4	-1	-50	166	271	120	19.9	6	1.4	1.3	0.18	30	
15407	-2	-5	1.4	190	-0.5	23	24	5	2	4.24	-1	-1	-5	-1	0.12	-29	-15	0.2	23.1	-3	-0	0.58	140	2.7	68.4	-1	-50	171	283	120	20.5	6	1.2	1.3	0.15	30	
15408	-2	-5	-0.5	280	-0.5	21	30	-5	3	3.95	-1	-1	-5	-1	0.14	-24	-15	-0.1	15.8	-3	-0	0.49	77	1.1	44.8	-1	-50	114	197	91	14.1	4.1	0.9	1.1	0.13	30	
15409	-2	-5	2	430	-0.5	20	25	10	-1	4.42	4	-1	-5	-1	0.1	-27	-15	-0.1	19.5	-3	-0	0.54	100	2.2	46.9	-1	-50	157	268	110	19.9	5.7	1.4	1.8	0.2	30	
15410	9	-5	-0.5	310	-0.5	21	25	11	2	4.39	2	-1	-5	-1	0.33	-30	-15	-0.1	25	-3	-0	0.4	180	4.0	51.4	-1	-50	147	249	110	18.7	5.7	1.2	1.5	0.2	30	
15411	-2	-5	-0.5	500	-0.5	19	24	-5	2	3.81	2	-1	-5	-1	0.39	-30	-15	0.2	23.8	-3	-0	0.41	180	2.5	102	-1	-50	128	223	94	16.2	5.3	1.4	1.7	0.21	30	
15412	2	-5	3.1	330	-0.5	21	22	-5	-1	5.51	5	-1	-5	-1	0.13	-28	-15	-0.1	17.9	-3	-0	0.49	91	2.1	55	-1	-50	164	288	130	21.3	6.5	1.4	1.3	0.17	30	
15413	3	-5	3.5	560	-0.5	20	23	20	-1	5.35	2	-1	-5	-1	0.14	-68	-15	0.4	28.2	-3	-0	0.33	217	4.1	207	-1	-50	165	263	112	19.8	6.3	1.6	1.7	0.21	30	
15414	7	-5	-0.5	430	-0.5	20	32	23	-1	7.02	14	-1	-5	-1	0.12	-54	-15	-0.1	18.7	-3	-0	0.28	35.7	2.2	34.7	-1	-50	118	194	85	15.4	4.9	1.8	1.3	0.15	30	
15415	5	-5	2.2	430	-0.5	23	20	-5	-1	4.44	5	-1	-5	-1	0.46	276	-15	-0.1	15.5	-3	-0	0.25	10	1.4	7.2	-1	-50	115	194	81	15.4	4.7	1.3	1.2	0.14	30	
15416	-2	-5	-0.5	340	-0.5	18	18	-5	2	3.69	10	-1	-5	-1	0.69	-51	-15	-0.1	14.7	-3	-0	0.18	20.2	3.5	23	-1	96	101	168	74	13.4	4	1.1	1.3	0.15	30	
15417	3	-5	1.8	470	-0.5	23	21	17	-1	5.41	5	-1	-5	-1	0.08	-51	-15	0.2	13.8	-3	-0	0.16	8.7	2.9	8.6	-1	-50	122	221	96	17.4	5.2	1.3	0.9	0.12	30	
15418	-2	-5	2.1	630	-0.5	22	23	64	-1	5.55	11	-1	-5	-1	0.05	-47	-15	-0.1	10.8	-3	-0	0.21	3.4	1.7	3.1	-1	-50	97.3	177	75	14.3	4.3	1.2	1	0.1	30	
15419	-2	-5	2.8	630	-0.5	22	26	49	-1	5.65	8	-1	-5	-1	0.07	-48	-15	0.3	12.2	-3	-0	0.11	5	2.7	1.7	-1	-50	104	186	83	15.8	4.4	1.3	1	0.1	30	
15420	-2	-5	2.3	620	-0.5	23	24	21	-1	4.18	28	-1	-5	-1	0.08	-51	-15	-0.1	19.1	-3	-0	0.18	19.1	1	2.8	-1	-50	110	186	74	14.5	4.7	1.5	1.5	0.21	30	
15421	-2	-5	2.4	1000	-0.5	-1	17	95	5	3.62	6	-1	-5	-1	1.07	-41	111	0.3	11.6	-3	-0	-0.1	1.4	9.5	2.8	6	153	36.7	61	18	5	1.2	-0.5	2.2	0.36	30	
15422 PULP	2	-5	-0.5	750	-0.5	19	25	-5	-1	5.08	9	-1	-5	-1	0.13	-63	-15	-0.1	23	-3	-0	0.47	144	2.5	78.2	-1	-50	159	264	104	18.5	5.3	1.4	-0.2	-0.1	30	
15426	-2	-5	3	960	-0.5	2	15	69	3	4.43	9	-1	-5	-1	2.02	-53	-15	0.3	16.2	-3	-0	0.15	2.9	12.9	3.7	-1	-50	59.3	96	25	7.5	1.5	1.3	2.1	0.28	30	
15427	4	-5	1.8	610	-0.5	-1	6	16	3	2.07	3	-1	-5	-1	3.01	-44	98	-0.1	5.6	-3	-0	-0.1	5.3	4.8	4.6	-1	-50	27.3	44	21	4.4	1.1	-0.5	1.1	0.16	30	
15428	-2	-5	2	670	-0.5	17	23	-5	-1	3.95	-1	-1	-5	-1	0.59	333	-15	-0.1	17.4	-3	-0	0.42	97.4	2.3	51.9	-1	-50	128	208	78	14.6	4.5	1.2	1.4	0.17	30	
15429	-2	-5	1.5	1300	-0.5	3	2	19	4	1.09	4	-1	-5	-1	3.28	-43	107	-0.1	4.1	-3	-0	0.22	6.4	4.3	2.8	-1	-50	15.8	26	-5	2	1	-0.5	1.1	0.15	30	
15430	-2	-5	2.3	1700	2.7	2	8	20	5	1.39	2	-1	-5	-1	1.88	-42	186	-0.1	6.9	-3	-0	0.21	44	2.8	30.4	-1	-50	42.1	69	23	5.3	1.9	0.7	1	0.12	30	
15431	-2	-5	3.4	560	-0.5	16	21	7	-1	4.51	4	-1	-5	-1	0.1	-50	-15	-0.1	17.8	-3	-0	0.26	102	3	57.9	-1	-50	139	229	87	16.9	5.2	0.9	1.4	0.17	30	
15432	-2	-5	-0.5	100	-0.5	18	22	-5	-1	4.43	5	-1	-5	-1	0.11	-55	-15	-0.1	21.2	-3	-0	0.38	163	3.2	99.6	-1	-50	156	248	100	18.6	5.6	1.7	1.8	0.21	30	
15433	-2	-5	2.7	310	-0.5	19	23	-5	2	4.25	-1	-1	-5	-1	0.1	-58	-15	-0.1	25.9	-3	-0	0.42	255	5.5	134	-1	-50	146	227	82	16.2	5.2	1.6	1.6	0.2	30	
15434	2	-5	1.7	260	-0.5	16	21	11	-1	4.09	-1	-1	-5	-1	0.1	-55	-15	0.3	20.6	-3	-0	0.32	175	-0.2	129	-1	-50	157	253	100	18.1	5.4	1.4	1.4	0.17	30	
15435	-2	-5	-0.5	310	-0.5	19	21	-5	-1	4.23	4	-1	-5	-1	0.06	-51	-15	-0.1	22.8	-3	-0	0.27	104														

APPENDIX 3B:

CONTINUED

Sample ID	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sn	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	
	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	%	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
15440	-2	-5	2.2	960	-0.5	2	14	94	6	3.88	7	-1	-5	-1	1.36	-40	110	0.4	12.5	-3	-0	0.06	2.2	13	4	-1	125	50.2	76	26	6.2	1.5	0.8	2.6	0.39	30	
15441	20	-5	4.5	420	-0.5	6	11	-5	3	2.43	1	-1	-5	-1	1.37	-45	90	0.5	9.5	-3	-0	0.17	87.7	4.3	71.8	-1	-50	70.3	113	42	8.8	2.5	-0.5	2.3	0.3	30	
15442	3	-5	3.6	460	-0.5	17	28	-5	-1	5.45	3	-1	-5	-1	0.08	-52	-15	-0.1	18.6	-3	-0	0.37	161	2.1	122	-1	-50	141	228	98	17.4	5	1.1	1.4	0.17	30	
15443	4	-5	2	110	-0.5	18	27	7	-1	6.65	4	-1	-5	-1	0.06	-51	-15	-0.1	17.8	-3	-0	0.38	122	1.4	105	-1	-50	140	228	102	17.8	5.1	1	1.5	0.22	30	
15444	3	-5	-0.5	350	-0.5	12	13	27	2	3.35	3	-1	-5	-1	0.81	-44	54	-0.1	10.2	-3	-0	0.17	71.2	3.5	62.8	-1	-50	89.4	147	59	11.6	3.3	1.1	2.2	0.4	30	
15445	-2	-5	2.4	510	-0.5	5	12	45	7	2.95	4	-1	-5	-1	2.03	-45	121	0.3	10.9	-3	-0	-0.1	18.4	9.3	11.6	-1	113	69.8	107	46	8.2	1.9	-0.5	1.5	0.26	30	
15446	-2	-5	1.7	450	-0.5	5	7	12	2	1.64	2	-1	-5	-1	2.2	-46	-15	-0.1	10.6	-3	-0	0.15	57	4.3	47.1	-1	-50	66.2	108	38	8.2	2.1	-0.5	1.2	0.13	30	
15447	5	-5	-0.5	900	-0.5	8	13	-5	3	2.55	-1	-1	-5	-1	1.31	-43	102	-0.1	11.3	-3	-0	0.22	53.2	2.8	37	-1	-50	74.4	123	47	9.3	2.9	-0.5	0.9	0.12	30	
15448	8	-5	3	250	-0.5	21	17	17	3	4.34	5	-1	-5	-1	0.42	-41	-15	-0.1	9.9	-3	-0	0.18	3.8	3.1	2.2	-1	-50	94.7	175	73	13.9	4.2	1	1.4	0.17	30	
15449	-2	-5	-0.5	370	-0.5	15	13	24	3	3.49	3	-1	-5	-1	0.81	-38	67	-0.1	7.9	-3	-0	0.19	3.7	2.3	8.4	-1	-50	74.1	132	59	10.9	3.2	1.1	1.2	0.19	30	
15450	8	-5	-0.5	470	-0.5	16	15	8	3	3.36	7	-1	-5	4	0.88	163	28	-0.1	12.4	-3	-0	0.11	7.2	2	6.3	12	-50	83.4	149	63	11.6	3.6	0.8	0.7	0.15	30	
15451	-2	-5	-0.5	520	-0.5	-1	17	118	5	3.98	6	-1	-5	-1	1.11	-35	97	-0.1	11.8	-3	-0	-0.1	1.6	9.8	2.5	-1	94	38	65	18	4.9	1.1	-0.5	2.1	0.29	30	
15452	-2	-5	-0.5	710	-0.5	-1	17	75	4	4.02	7	-1	-5	-1	0.77	-34	87	-0.1	12.6	-3	-0	-0.1	3.1	10	3.9	-1	103	42.5	73	21	6	1.6	-0.5	2.7	0.41	30	
15453	-2	-5	-0.5	250	-0.5	18	26	10	-1	5.23	-1	-1	-5	-1	0.13	-52	-15	-0.1	30.9	-3	-0	0.29	130	5.7	56.3	-1	-50	139	232	87	15.9	4.9	1.2	1.3	0.15	30	
15454	-2	-5	-0.5	330	-0.5	18	25	9	-1	3.88	2	-1	-5	-1	0.09	-47	-15	-0.1	19.1	-3	-0	0.39	87.6	2.3	50.6	-1	-50	127	209	87	14.3	4.5	1	1.3	0.2	30	
15455	5	-5	-0.5	550	-0.5	16	30	-5	-1	3.95	2	-1	-5	-1	0.08	-50	-15	-0.1	16.9	-3	-0	0.41	156	2.9	100	-1	-50	146	237	95	16.9	5.1	-0.5	1.6	-0.1	30	
15456	6	-5	2.2	490	-0.5	18	24	14	-1	5.09	4	-1	-5	-1	0.13	-47	-15	-0.1	18.5	-3	-0	0.26	69.1	2.2	51.1	-1	-50	139	229	98	17.4	5.2	1	1.3	-0.1	30	
15457	-2	-5	-0.5	730	-0.5	17	24	8	-1	4.36	4	-1	-5	-1	0.11	-49	-15	-0.1	20.6	-3	-0	0.34	78.2	1.6	55.2	-1	91	155	247	99	18.6	5.7	1.1	1.2	-0.1	30	
15458	7	-5	3	630	-0.5	19	24	12	-1	4.15	-1	-1	-5	-1	0.13	-52	-15	0.5	23.2	-3	-0	0.29	150	2.1	123	-1	-50	150	244	96	16.9	5	-0.5	-0.2	-0.1	30	
15459	5	-5	3.1	860	-0.5	21	23	13	-1	4.81	8	-1	-5	-1	0.06	-43	-15	0.8	16	-3	-0	0.24	33.7	1.7	24.5	-1	79	117	189	83	15	4.7	1.2	1.1	-0.1	30	
15460	-2	-5	3.4	800	-0.5	23	22	34	-1	5.24	6	-1	-5	-1	0.07	-50	-15	-0.1	11.9	-3	-0	0.23	6.4	1.9	8.1	-1	193	104	188	82	14.6	4.2	1.3	1	0.14	30	
15461	-2	-5	3.1	800	-0.5	21	22	31	2	4.67	5	-1	-5	-1	0.05	-50	-15	0.4	13.7	-3	-0	0.26	6.4	2.4	-0.5	-1	177	103	188	83	15.5	4.3	-0.5	1	0.1	30	
15462	-2	-5	5.4	350	-0.5	24	25	14	-1	4.16	9	-1	-5	-1	0.07	-53	-15	0.7	18.1	-3	-0	0.18	11.6	1.2	-0.5	-1	197	119	196	84	16.7	4.9	1.8	1.5	0.19	30	
15463	-2	-5	4.2	890	-0.5	6	19	98	5	4.44	8	-1	-5	-1	1.02	-47	54	-0.1	13.7	-3	-0	-0.1	2.9	11.4	4.7	-1	283	61.6	103	38	8.1	2	-0.5	2.4	0.42	30	
15464 PULP	-3	-5	4.8	630	-0.5	20	26	16	-1	5.19	-1	-1	-5	-1	0.13	-71	-15	-0.1	23.4	-3	-0	0.52	145	3.3	83.6	-1	249	162	255	102	19.1	5.3	-0.5	1.8	-0.1	25	
DMMAS-18-2062	701	-5	2030	400	-0.5	6	64	143	2	8.71	3	-1	-5	-1	0.71	-53	35	12	21	-3	-0	-0.1		1.2	2.6	23	240	13.1	24	12	4.2	1.1	0.7	3.6	0.57	25.5	
DMMAS-18-2061	582	-5	1880	410	-0.5	6	62	139	2	8.5	4	-1	-5	-1	0.66	-42	40	13.1	20.5	-3	-0	-0.1		1.3	-0.5	21	285	12.9	24	13	4.2	1.4	0.8	3.3	0.59	25.8	
DMMAS-18-2060	627	-5	2000	370	-0.5	7	65	140	3	8.84	2	-1	-5	-1	0.7	-45	45	13.5	21.2	-3	-0	-0.1		2.2	-0.5	22	230	13.6	24	15	4.3	1.2	0.7	3.7	0.52	25.5	
DMMAS-18-2059	669	-5	1900	410	-0.5	6	62	140	3	8.43	3	-1	-5	-1	0.67	-45	32	13.7	20.1	-3	-0	-0.1		1.4	-0.5	22	248	13.2	23	17	4.2	1.2	0.7	3.5	0.5	25.1	
DMMAS-18-2058	685	-5	2120	500	7.7	6	68	150	2	9.06	4	-1	-5	-1	0.74	-53	37	14	22.3	-3	-0	-0.1		1.5	-0.5	23	278	13.5	24	13	4.5	1.4	0.5	3.8	0.58	25.1	
DMMAS-18-2057	670	-5	2020	370	-0.5	8	64	148	2	9.04	4	-1	-5	-1	0.75	-50	51	14	21.1	-3	-0	-0.1		1.4	-0.5	21	226	13	23	15	4.7	1.4	0.6	3.8	0.54	25	
DMMAS-18-2056	623	-5	2050	400	2.6	7	62	138	2	8.72	3	-1	-5	-1	0.75	-29	44	12.9	21.4	-3	-0	-0.1		1.4	-0.5	20	210	12.7	24	15	4.7	1.3	0.5	3.5	0.54	25.2	
DMMAS-18-2055	589	-5	1970	400	2.5	8	62	142	2	8.6	4	-1	-5	-1	0.73	-30	53	13	20.8	-5	-0	-0.1		1.3	-0.5	19	220	12.8	25	12	4.5	1.3	0.9	3.3	0.58	25.3	
DMMAS-18-2054	685	-5	2140	560	3.9	7	64	143	2	9.06	4	-1	-5	-1	0.75	-35	44	13.2	21.1	-3	-0	-0.1		1.6	-0.5	21	207	13.7	25	13	4.8	1.2	1	3.8	0.53	25.1	
DMMAS-18-2053	629	-5	2040	400	-0.5	8	63	155	3	8.65	4	-1	-5	-1	0.75	-35	44	13.2	21.1	-3	-0	-0.1		1.8	-0.5	20	215	13.3	23	11	4.6	1.5	0.5	3.7	0.53	25.3	
DMMAS-18-2052	796	-5	2190	550	-0.6	8	66	157	3	8.9	3	-1	-5	-1	0.78	-45	51	13.2	22.4	-3	-0	-0.1		2.1	-0.5	22	152	12.7	24	14	4.9	1.3	0.5	3.5	0.58	25	

A18

Accepted Value-DMN+-72 2020+-224 +-150 +-1.5 7+-2)+-15)+-20 8.05+-0.85 2+-1 0.74+-0.48 38+-10)+-3+-3.4 1.5+-0.5 19+-2)+-50 +-1.3)+-3)+-3)+-0.5 +-0.2 -0.35 +-0.6 -0.05

Notes: For CaO, MgO, Nb₂O₅, and P₂O₅ analytical results are by Acme Analytical Laboratories Ltd. (Appendix 3A). For Ta₂O₅ and U analytical results are by Activation Laboratories Ltd. (Appendix 3B). Nb is converted to Nb₂O₅ by dividing by 0.699. Ta is converted to Ta₂O₅ by dividing by 0.819.

Company: Commerce Resources Corp.		Date Started: 9-Aug-01	Core Size: NQ2									
Project: Verity		Date Finished: 11-Aug-01	Depth: 105.77									
Hole No.: VDH-1		Logged By: Ryan Grywul	Co-ordinates (UTM NAD83)									
		Bearing: 030°	Easting (m): 353,500									
		Inclination: -060°	Northing (m): 5,807,635									
From (m)	To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
0.00	20.30	Garnet-Biotite Gneiss , mottled dark-brown to black, alternating bands of coarse- and fine-grained intervals, garnet porphyblasts up to 3cm, quartz banding primarily at 85° to 90° to Core Axis (CA)										
	18.50 - 20.30	Fenite : questionable contact with carbonatite, amphibolitic, mottled lumps surrounding carbonatite, metasomatized gneiss	15326	18.50	20.30	1.80	29.8	16.4	20	1,066	11.0	2.67
20.30	71.85	Beforsite , white on fresh surfaces, orange to orange-brown on fractured surfaces; micro- to mega-crystalline with some mega-crystalline dolomite phenocrysts; microfractures parallel to subparallel to CA	15327	20.30	22.00	1.70	31.2	15.1	171	405	89.9	5.35
			15328	22.00	24.00	2.00	31.2	16.3	100	189	55.7	3.91
			15329	24.00	26.00	2.00	30.8	16.4	21	50	10.5	2.57
			15330	26.00	28.00	2.00	30.8	16.0	29	63	16.8	3.39
			15331	28.00	30.00	2.00	31.3	15.9	22	379	3.7	3.79
		22.80: slicken lines on fracture	15332	30.00	32.00	2.00	30.5	16.1	82	1,913	12.1	3.07
		24.37 - 24.44: chlorite, biotite rich	15333	32.00	34.00	2.00	30.1	15.8	67	1,067	13.6	3.20
		28.00 - 30.00: some sulfides along fractures, possible pyrochlore(?)	15334	34.00	36.00	2.00	29.4	16.5	134	954	45.5	2.07
			15335	36.00	38.00	2.00	29.5	15.9	134	634	45.7	2.07
		32.00 - 34.00: amphibole veins and veinlets, some intercrystalline magnetite and sulfide	15336	38.00	40.00	2.00	29.4	15.7	147	1,458	36.3	3.38
			15337	40.00	42.00	2.00	30.0	16.4	183	1,326	51.8	2.80
		36.00: amphibole bands at 45° CA	15338	42.00	44.00	2.00	29.4	16.2	134	544	56.4	2.18
		38.50 - 42.10: breccia with rust stain on fractures	15339	44.00	46.00	2.00	28.7	15.5	183	946	48.2	2.71
		43.50 tectonized (sheared) with abundant amphibole	15340	46.00	48.00	2.00	30.5	16.7	159	587	58.1	2.77
		45.60 - 48.16: orange-tan	15341	48.00	50.00	2.00	29.7	15.8	183	715	83.3	3.51
		48.16 - 50.00: white	15342	50.00	52.00	2.00	30.4	15.8	79	369	30.9	3.23
		50.20 - 50.50: large booklets of mica	15343	52.00	54.00	2.00	31.2	15.5	90	715	27.1	4.04
		50.00 - 55.00: orange-tan	15344	54.00	56.00	2.00	29.6	15.4	134	710	58.6	3.28
		59.00 - 59.60: abundant calcite and amphibole, biotite and amphibole along fractures with some coarse apatite,	15345	56.00	58.00	2.00	31.0	16.1	183	572	76.9	3.52
		magnetite, biotite, and dolomite	15346	58.00	60.00	2.00	30.4	14.5	42	156	21.1	3.98
			15347	60.00	62.00	2.00	32.4	14.4	20	59	9.3	3.18
		71.90: abundant amphibole near lower contact	15348	62.00	64.00	2.00	32.9	14.9	9	16	1.9	3.78

Hole No.: VDH-1												
From (m)	To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
			15349	64.00	66.00	2.00	30.4	15.6	4	nd	nd	5.80
			15350	66.00	68.00	2.00	31.9	15.0	10	39	3.0	2.98
			15351	68.00	70.00	2.00	36.1	12.3	23	120	4.3	1.38
			15352	70.00	71.85	1.85	39.2	9.4	20	109	nd	0.22
71.85	90.50	Feldspar Mica Gneiss , mottled white, grey, dark-grey, to brown appearance; fine- to medium-grained; banded, with quartz boudins and veinlets; upper contact fenitized with bands of dark biotite and minor chlorite	15353	71.85	74.00	2.15	4.4	5.5	9	107	5.9	0.47
		82.00 - 84.00: quartz veins to 10 cm, approximately parallel to CA										
		87.60: bands of chlorite										
		88.00 - 88.20 quartz vein, milky, at 85° CA										
90.50	100.30	Sovite , mottled white, dark-grey, black, apple-green, with abundant calcite and magnetite	15377	90.50	92.62	2.12	35.1	7.2	49	167	24.1	4.07
			15378	92.62	94.30	1.68	46.0	4.0	15	49	4.0	5.39
			15379	94.30	96.00	1.70	45.7	4.2	10	31	4.5	5.07
		100.30: lower contact fenitized, with abundant biotite and magnetite near contact	15380	96.00	98.00	2.00	43.1	4.2	15	52	3.2	4.87
			15381	98.00	100.50	2.50	24.6	6.3	28	177	15.8	2.11
100.30	105.77	Feldspar Mica Gneiss , mottled white, brown, green appearance, abundant biotite alteration near upper contact, quartz bands at 80° to 90° CA, gneissosity at 85° to 90° CA	15382	100.50	102.50	2.00	1.7	3.3	4	nd	4.1	0.14
	105.77	EOH										

From (m)		To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
0.00		5.49	Casing										
5.49		35.00	Feldspar Garnet Muscovite Biotite Gneiss , mottled grey, black, light- to dark-grey, generally coarse- to very coarse crystalline, some garnet porphyroblasts 9.00 - 10.00: bands of amphibolite, sheared quartz and biotite, layers 1 to 2 cm thick, foliation 75° to 90° CA 32.12 - 35.00: some alteration of gneiss marked by a decrease in grains size and a few quartz veinlets at 30° and 50° CA										
35.00		37.20	Fenitized Gneiss , sharp contact marked by post-foliation quartz and biotite, some amphibole, tectonized (sheared), foliation 80° to 90° CA; sharp lower contact with biotite and amphibole lined fractures	15385	35.00	37.20	2.20	5.0	6.7	18	398	5.3	0.73
37.20		106.68	Beforsite , light-grey to orange-brown, variable micro- to coarse-crystalline dolomite, abundant microfractures some lined with amphiboles, upper contact brecciated with abundant amphibole altered veins 40.00: gradual textural change, from cataclastic to mega-crystalline dolomite, abundant microfractures, some with amphibole alteration, some magnetite bands 43.20: brecciated 46.20: equant, coarse-crystalline dolomite and euhedral apatite 47.40 - 47.70: brecciated 47.40 - 66.00: amphiboles 2% to 15%, two distinct types (dark-green and blue), some layers to tectonic breccia, 68.00 - 79.00: amphiboles along microfractures and fractures, sugary appearance, some brecciation 84.00: few zones enriched in apatite, sugary to coarse-crystalline dolomite, abundant microfractures	15386	37.20	39.00	1.80	30.7	14.3	118	401	51.1	5.07
				15387	39.00	41.00	2.00	30.5	16.6	81	146	43.5	3.61
				15388	41.00	43.00	2.00	30.2	17.0	15	21	8.4	2.66
				15389	43.00	45.00	2.00	30.9	16.8	35	83	19.5	3.55
				15390	45.00	47.00	2.00	30.9	17.0	13	26	5.5	3.33
				15391	47.00	49.00	2.00	30.8	16.3	23	296	5.4	4.12
				15392	49.00	51.00	2.00	30.5	16.5	147	3,296	12.5	3.62
				15393	51.00	53.00	2.00	30.6	16.8	45	751	11.6	3.53
				15394	53.00	55.00	2.00	30.0	17.0	89	969	22.2	2.99
				15395	55.00	57.00	2.00	29.5	17.4	159	840	54.9	2.28
				15396	57.00	59.00	2.00	29.4	17.1	159	677	59.1	2.49
				15397	59.00	61.00	2.00	29.6	17.1	118	515	48.2	2.31
				15398	61.00	63.00	2.00	29.8	17.5	88	442	29.7	2.34
				15399	63.00	65.00	2.00	29.7	17.1	110	966	29.8	2.49
				15400	65.00	67.00	2.00	29.5	17.5	147	765	52.8	2.61
				15401	67.00	69.00	2.00	29.4	17.8	120	429	52.5	2.15
				15402	69.00	71.00	2.00	29.9	17.5	159	684	69.8	2.94
				15403	71.00	73.00	2.00	29.4	17.4	122	458	62.4	2.25

Hole No.: VDH-2												
From (m)	To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
		86.00: few zones of breccia, some magnetite blebs to 4 cm,	15404	73.00	75.00	2.00	29.9	17.0	147	568	66.3	3.38
		88.00 - 90.00: massive, cryptocrystalline dolomite, some	15405	75.00	77.00	2.00	30.2	16.9	281	1,086	105.0	3.52
		pyrhotite along fractures and as blebs, some	15406	77.00	79.00	2.00	28.1	16.3	208	1,001	63.4	2.97
		amphibole alteration	15407	79.00	81.00	2.00	29.7	16.9	171	531	68.4	3.00
		94.00: some blebby magnetite and pyrhotite to 4 cm	15408	81.00	83.00	2.00	28.7	17.3	94	342	44.8	2.14
		104.80 - 105.20: tectonized, 'gouged' carbonatite	15409	83.00	85.00	2.00	29.9	16.6	122	545	46.9	3.68
		105.20 - 106.68: equant, subhedral dolomite crystals, some	15410	85.00	87.00	2.00	27.9	14.6	195	1,266	51.4	3.77
		coarse magnetite blebs	15411	87.00	89.00	2.00	25.8	14.2	220	873	102.0	3.14
			15412	89.00	91.00	2.00	30.1	16.1	111	388	55.0	4.47
			15413	91.00	93.00	2.00	30.1	15.8	265	844	207.0	4.96
			15414	93.00	95.00	2.00	30.3	14.8	44	152	34.7	3.25
			15415	95.00	97.00	2.00	30.2	13.4	12	44	7.2	3.73
			15416	97.00	99.00	2.00	27.6	13.8	25	56	23.0	3.39
			15417	99.00	101.00	2.00	31.8	15.4	11	nd	8.6	5.51
			15418	101.00	103.00	2.00	30.7	16.1	4	nd	3.1	5.54
			15419	103.00	105.00	2.00	31.8	15.2	6	14	1.7	5.57
			15420	105.00	107.00	2.00	34.1	13.6	23	160	2.8	2.09
106.68	124.33	Feldspar, Biotite, Gneiss , upper few meters fenitized, some amphibole rich layers	15421	107.00	109.00	2.00	2.3	2.8	2	nd	2.8	0.12
		114.00: gneissosity at 87° CA										
		120.00: few intervals at 45° CA of phlogopite and amphibole										
	124.33	EOH										

From (m)		To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
0.00		10.67	Casing										
10.67		22.00	Feldspar Garnet Muscovite Biotite Quartz Gneiss , mottled light- to dark-grey with some green intervals, generally coarse- to very coarse crystalline, some intervals schistose 12.00 - 16.00: weak foliation at 62° to 75°CA 18.00 - 22.00: few rubble zones, rounded porphyblasts of quartz, minor fenitization (biotite and amphibole)										
22.00		23.86	Fenitized Gneiss , abundant feathery amphiboles and biotite, abundant fractures, foliation and quartz bands at 63° CA	15452	22.00	23.80	1.80	3.0	3.2	4	90	3.9	0.26
23.86		44.60	Beforsite , light-grey to orange-brown, variable micro- to coarse-crystalline, some dolomite saddle-shaped and some with sugary texture, abundant euhedral amphiboles, anhedral blebs of magnetite, upper contact brecciated with abundant microfractures, some thin and irregular zones of amphibole, very weak foliation at about 80° CA 26.00: mica-filled microfractures at 54°CA 28.00 - 34.00: brecciated and microfractured, some sugary textured dolomite, some coarse anhedral magnetite and phlogopite, weak foliation at 80°CA 34.00 - 36.00: abundant amphibole on fractures 36.00 - 40.00: brecciated, rubbly with abundant fractures, some phlogopite/biotite as euhedral blebs, some magnetite as anhedral blebs 40.00 - 42.00: coarse crystalline dolomite with banding at 83° CA 41.75 - 43.10: breccia with abundant microfractures, gneissosity at 72° CA	15453 15454 15455 15456 15457 15458 15459 15460 15461 15462	23.80 26.00 28.00 30.00 32.00 34.00 36.00 38.00 40.00 42.00	26.00 28.00 30.00 32.00 34.00 36.00 38.00 40.00 42.00	2.20 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.60	28.4 29.3 29.4 30.0 30.2 30.0 31.9 31.6 33.2 35.9	15.5 17.1 16.8 15.4 16.0 16.2 14.6 15.1 14.4 12.4	159 107 190 84 95 183 41 8 8 14	1,725 658 903 409 449 579 163 nd 21 72	56.3 50.6 100.0 51.1 55.2 123.0 24.5 8.1 nd nd	2.92 2.01 3.03 4.08 3.78 3.24 3.81 4.52 3.85 2.27

Hole No.: VDH-3												
From (m)	To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
44.60	46.00	Fenitized Gneiss , irregular and crosscutting foliation biotite enriched zones, few bands of green amphibole at 65°C	15463	44.60	46.00	1.40	9.5	5.9	4	52	4.7	0.91
46.00	46.65	Interlayered Beforsite and Amphibole , at 74° - 75°C										
46.65	57.61	Fenitized Amphibole Feldspar Biotite Quartz Gneiss , mottled light- to dark-grey with some greenish intervals, gneissosity is mottled, generally at 74° - 82°C 54.00: few irregular quartz veins at 0° - 25°C, few anhedral garnet porphyroblasts										
	57.61	EOH										

From (m)		To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
0.00		4.26	Casing										
4.26		50.00	Feldspar Garnet Muscovite Biotite Quartz Gneiss , mottled white-grey to light- and dark-grey, some red-stain along micro-fractures, prominent fractures and mica layers, some mafic layers of biotite and amphibole, some non-magnetic sulfides to 1% noted in amphibole layers, gneissosity from 63° - 81° CA 41.97 - 44.25: breccia / rubby zone										
50.00		54.00	Fenite, Quartz Amphibole Feldspar Phlogopite(?) Gneiss , some scattered sulfides, foliation is highly irregular with microfractures throughout, amphibole veins, few rubble zones, intense silification to base	15426	52.00	54.00	2.00	3.2	3.8	4	46	3.7	0.45
54.00		55.80	Pegmatite , white with clear and white quartz, abundant coarse biotite/phlogopite megacrysts to 3cm	15427	54.00	56.00	2.00	3.6	2.7	6	54	4.6	0.47
55.80		58.00	Beforsite , mottled white and light-grey with some orange patches; fine- to coarse-crystalline; mainly homogenous, sugary dolomite; sharp upper contact at 67°CA	15428	56.00	58.00	2.00	26.6	15.1	119	607	51.9	2.56
58.00		61.81	Amphibole Phlogopite Quartz Wollastonite Pegmatite , white with some light-grey mottles, upper contact broken lower contact sharp at 45°CA, some epidote along fractures 60.10 - 60.40: silicified biotite gneiss	15429 15430	58.00 60.00	60.00 62.00	2.00 2.00	2.5 5.6	1.3 3.2	8 54	90 308	2.8 30.4	0.09 0.81
61.81		79.50	Beforsite , white to light-bluish-grey to orange, fine- to coarse-crystalline, generally sugary anhedral dolomite, some brecciated broken intervals, apatite rich and poor zones (1 to 5%); magnetite, phlogopite and amphibole rich zones throughout; magnetite blebs throughout, abundant amphibole near lower contact	15431 15432 15433 15434 15435 15436 15437	62.00 64.00 66.00 68.00 70.00 72.00 74.00	64.00 66.00 68.00 70.00 72.00 74.00 76.00	2.00 2.00 2.00 2.00 2.00 2.00 2.00	29.7 30.2 29.8 29.7 30.6 31.6 31.9	16.2 16.3 16.8 16.8 16.4 14.9 16.0	125 199 311 214 127 45 9	647 974 1,800 702 378 134 27	57.9 99.6 134.0 129.0 82.3 37.1 5.6	3.66 3.94 3.29 3.49 3.77 2.99 4.18

Hole No.: VDH-4												
From (m)	To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
		66.00 - 70.00: visible pyrochlores, weak foliation at ~45°C	15438	76.00	78.00	2.00	30.0	16.1	3	nd	2.3	5.32
		70.00 - 72.00: breccia, few rubble zones, microfractures	15439	78.00	79.50	1.50	34.4	12.6	17	126	nd	1.64
79.50	87.80	Feldspar Quartz Biotite Gneiss , light- to dark-grey mottled, gneissosity at 42° - 68°C, top few meters fenitized with brown mica and amphibole layers	15440	79.50	81.00	1.50	1.7	2.7	3	40	4.0	0.17
	87.80	EOH										

From (m)		To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
0.00		3.96	Casing										
3.96		5.59	Feldspar Muscovite Biotite Gneiss , mottled light- and dark-grey with some red and orange stain, some fractures parallel to gneissosity, gneissosity at 78° CA										
5.59		6.26	Fenite - Amphibole Befsorsite , light-green, fine- to coarse-crystalline, sharp lower contact at 69° CA	15441	5.75	7.50	1.75	13.4	7.9	107	361	71.8	1.35
6.26		7.28	Biotite Wollastonite Quartz Pegmatite , with some olive-green micas, micas as euhedral books,										
7.28		13.38	Befsorsite , light-grey to orange-brown, variable micro- to coarse-crystalline, abundant microfractures some with amphibole, abundant amphibole at upper contact, several amphibole veins, some coarse magnetite blebs, several intervals brecciated, upper contact at 37° CA, amphibole veins and banding at 53° to 70° CA	15442	7.50	10.00	2.50	29.9	16.0	197	645	122.0	3.44
				15443	10.00	12.00	2.00	29.5	15.6	149	302	105.0	3.49
				15444	12.00	14.00	2.00	21.7	11.2	87	190	62.8	2.85
13.38		14.77	Amphibole Wollastonite Quartz Pegmatite , green with brittle microfractures throughout, some epidote (?) along fractures, minor biotite, microfractures mainly 41° - 46°CA with some 00° CA, amphibole altered xenolith near bottom contact	15445	14.00	16.00	2.00	5.9	5.1	22	146	11.6	0.66
14.77		15.60	Feldspar Quartz Biotite Gneiss , includes at 40 cm interval of amphibole (Fenite) carbonatite - glimmerite, coarse-crystalline, gneissosity at 37° CA, amphibole veins at 53° CA										
15.60		17.68	Amphibole Biotite Quartz Wollastonite Pegmatite , with some olive green mica, generally white, some broken sections, abundant microfractures with some epidote (?) and biotite along fractures	15446	16.00	18.00	2.00	10.8	5.7	70	229	47.1	1.19

A27

Hole No.: VDH-5												
From (m)	To (m)	Description	Sample	From (m)	To (m)	Length (m)	CaO (%)	MgO (%)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	U (ppm)	P ₂ O ₅ (%)
17.68	18.70	Beforsite , mottled white to orange, coarse-crystalline, some magnetite blebs and along fractures, upper contact at 72°C, lower contact at 43° CA	15447	18.00	20.00	2.00	15.0	7.6	65	219	37.0	1.55
18.70	19.86	Biotite Quartz Wollastonite Pegmatite , as above										
19.86	22.20	Beforsite , mottled white to orange, fine- to coarse-crystalline, microfractures with amphibole (Fenite) alteration, some magnetite blebs and clots 20.00 - 20.20: Fenite, amphibole altered carbonatite, minor quartz veining parallel to zone with a coarse almandine garnet, zone at 45° CA 20.60: ball quartz 20.73: small rubble zone	15448	20.00	22.00	2.00	30.1	13.2	5	nd	2.2	5.40
22.20	22.80	Biotite Quartz Wollastonite Pegmatite , white, crushed and fractured 22.80: epidote, calcite, quartz and biotite growth along fractures	15449	22.00	23.50	1.50	23.5	10.6	5	nd	8.4	3.66
22.80	23.00	Amphibole (Fenite) Altered Beforsite , fractured, with abundant magnetite, at 45°C										
23.00	23.30	Quartz Wollastonite Pegmatite , white, fractured with some magnetite along fractures										
23.30	25.30	Beforsite , mottled light-grey and orange-brown, coarse-crystalline, minor brecciation, some magnetite and phlogopite as blebs, irregular banding at 56°C, lower contact at 55°C	15450	23.50	25.30	1.80	26.0	12.5	9	17	6.3	3.15
25.30	28.35	Fenitized Gneiss , mottled black and grey, with abundant irregular foliated amphibole, foliation at 81°C 25.60: thin pegmatite with blebs of biotite	15451	25.30	27.00	1.70	2.4	3.2	2	24	2.5	0.16
	28.35	EOH										

APPENDIX 4B:

GEOTECHNICAL LOGS FOR DRILL HOLES VDH 1 TO VDH 5

Drill Hole	VDH-1
Date:	11-Aug-01
Logged by:	R. Grywul

page 1 of 1

To	From	Length of Interval	Measured Length	Number of Fractures	RQD	% Recovery	Remarks
0	2.43	2.43	0.97	33	-	39.9	loss of core due to start of hole
2.43	5.48	3.05	2.59	59	0.55	84.9	
5.48	8.53	3.05	2.98	41	1.15	97.7	
8.53	11.57	3.04	3.00	34	1.73	98.7	
11.57	14.62	3.05	3.11	36	0.87	102.0	
14.62	17.67	3.05	2.96	47	0.68	97.0	
17.67	20.72	3.05	2.81	49	0.46	92.1	
20.72	23.77	3.05	2.96	30	0.85	97.0	
23.77	26.82	3.05	2.87	33	1.05	94.0	
26.82	29.87	3.05	2.98	31	1.22	97.7	
29.87	32.92	3.05	2.68	19	1.71	87.9	
32.92	35.97	3.05	3.21	25	1.72	105.0	
35.97	39.01	3.04	2.77	32	0.87	91.1	
39.01	42.06	3.05	2.41	49	0.25	79.0	
42.06	45.11	3.05	3.12	40	1.24	102.0	
45.11	48.16	3.05	3.03	25	1.71	99.0	
48.16	51.21	3.05	3.04	18	1.77	99.7	continuous interval 1.01m
51.21	54.25	3.04	3.00	16	1.31	98.7	
54.25	57.30	3.05	2.87	16	1.34	94.1	
57.30	60.35	3.05	3.07	16	1.91	101.0	
60.35	63.40	3.05	2.88	49	0.78	94.4	
63.40	66.45	3.05	3.12	24	1.72	102.0	
66.45	69.49	3.04	2.88	22	2.11	94.7	
69.49	72.54	3.05	3.09	20	1.94	101.0	
72.54	75.59	3.05	2.95	25	1.63	96.7	
75.59	78.64	3.05	2.93	35	0.80	96.0	
78.64	81.69	3.05	2.89	40	1.52	94.8	
81.69	84.73	3.04	2.90	26	1.53	95.4	
84.73	87.78	3.05	2.97	38	1.56	97.4	
87.78	90.83	3.05	3.00	24	1.90	98.4	
90.83	93.88	3.05	3.10	21	20.20	+100	90.5 contact carbonite/schist
93.88	96.93	3.05	2.80	20	2.06	92.0	
96.93	99.97	3.04	2.64	26	1.02	87.0	
99.97	103.02	3.05	2.89	36	1.10	98.0	
103.02	105.77	2.75	2.20	+100	0.30	80.0	poor recovery/hole shut down
105.77	EOH	105.77	99.67				

APPENDIX 4B:

CONTINUED

Drill Hole	VDH-2
Date:	11-Aug-01
Logged by:	R. Grywul

To	From	Length of Interval	Measured Length	Number of Fractures	RQD	% Recovery	Remarks
5.49	8.53	3.04	2.80	45	0.52	92.1	
8.53	11.58	3.05	2.56	58	0.10	83.9	
11.58	14.63	3.05	2.88	76	-	94.4	
14.63	17.68	3.05	2.67	77	0.26	87.5	
17.68	20.73	3.05	2.95	65	0.67	96.7	
20.73	23.77	3.04	2.76	71	0.22	90.8	
23.77	26.82	3.05	2.83	57	0.59	92.8	
26.82	29.87	3.05	2.78	69	0.11	91.1	
29.87	32.92	3.05	2.92	44	0.75	95.7	
32.92	35.97	3.05	2.75	29	1.20	90.1	
35.97	39.01	3.04	3.03	25	0.64	99.7	
39.01	42.06	3.05	3.07	30	1.81	100.6	
42.06	45.11	3.05	3.06	38	1.43	100.0	
45.11	48.16	3.05	3.02	24	1.73	99.0	
48.16	51.21	3.05	3.03	25	1.57	99.3	
51.21	54.25	3.04	3.00	18	1.63	98.7	
54.25	57.30	3.05	2.70	67	0.28	88.5	
57.30	60.35	3.05	2.97	48	1.11	97.4	
60.35	63.40	3.05	3.15	41	0.98	103.0	
63.40	66.45	3.05	3.02	24	1.44	99.0	
66.45	69.49	3.05	3.20	41	0.82	105.0	
69.48	72.54	3.05	3.07	21	1.70	100.6	
72.54	75.59	3.05	3.20	22	1.80	104.9	
75.59	78.64	3.05	3.10	22	1.90	101.6	
78.64	81.69	3.05	2.92	13	2.50	95.7	
81.69	84.73	3.04	3.05	13	2.30	100.0	
84.73	87.78	3.05	2.90	18	2.10	98.0	
87.78	90.53	3.05	3.05	13	2.68	100.0	
90.53	93.88	3.05	3.03	16	2.47	99.3	
93.88	96.93	3.05	3.03	24	1.84	99.3	
96.93	99.97	3.04	3.03	13	2.66	99.7	
99.97	103.02	3.05	3.05	22	2.31	100.0	
103.02	106.07	3.05	2.90	28	2.02	95.0	gouge zone ~ 105m
106.07	109.12	3.05	2.85	63	0.56	93.4	
109.12	112.17	3.05	2.70	60	0.43	88.5	
112.17	115.21	3.04	2.65	48	0.63	87.2	
115.21	118.26	3.05	3.12	36	0.98	102.2	
118.26	121.31	3.05	2.81	35	1.48	92.1	
121.31	124.33	3.05	2.93	44	0.70	96.1	End of hole
124.33	EOH	118.88	114.54				

APPENDIX 4B:

CONTINUED

Drill Hole	VDH-3
Date:	18-Aug-01
Logged by:	J. Reeder

To	From	Length of Interval	Measured Length	Number of Fractures	RQD	% Recovery	Remarks
0	10.67				0.2		Overburden
10.67	11.58	0.91	0.00	+100		0.0	Poor recovery, rubble
11.58	14.63	3.05	3.01	45	0.76	98.7	Gneiss rock, banding ~60-70°aca
14.63	17.68	3.05	2.99	50	0.62	98.0	
17.68	20.73	3.05	+3.10	32	1.37	101.6	
20.73	23.77	3.04	2.80	52	1.00	92.1	
23.77	26.82	3.05	2.92	52	0.00	95.7	Strongly fractured carbonatite
26.82	29.87	3.05	2.90	58	0.22	95.1	Strongly fractured carbonatite
29.87	32.92	3.05	3.05	70	0.15	100.0	Strongly fractured carbonatite
32.92	35.97	3.05	3.00	36	1.33	98.4	Strongly fractured carbonatite
35.97	39.01	3.04	3.02	84	0.00	99.3	Strongly fractured carbonatite
39.01	41.76	2.75	2.60	+100	0.00	94.5	Gauge zones
41.76	42.98	1.22	0.90	27	0.10	73.8	Gauge zones, fractured carbonatite
42.98	46.02	3.04	2.94	47	0.75	96.7	Transition zone from carbon
46.02	48.16	2.14	1.95	33	0.83	91.1	Gneissic rocks, bands ~ 60-65°aca
48.16	51.21	3.05	3.05	28	1.86	100.0	Gneissic rocks, bands ~ 70°aca
51.21	53.34	2.15	2.10	35	0.37	97.7	Gneissic rocks, bands ~ 70°aca
53.34	54.25	0.49	0.89	6	0.47	181.6	Gneissic rocks, bands ~ 70°aca
54.25	55.47	1.22	1.13	12	0.89	92.6	
55.47	56.69	1.22	0.70	14	0.00	57.4	
56.69	57.61	0.98	0.89	13	0.10	90.8	
57.61	EOH	46.60	34.84				

APPENDIX 4B:

CONTINUED

Drill Hole	VDH-4
Date:	18-Aug-01
Logged by:	J. Reeder

To	From	Length of Interval	Measured Length	Number of Fractures	RQD	% Recovery	Remarks
0	5.49						
5.49	8.53	3.04	3.05	51	1.10	100.3	
8.53	11.58	3.05	27.00	43	0.92	885.2	
11.58	14.63	3.05	2.46	53	0.47	80.7	
14.63	17.68	3.05	2.75	63	0.58	90.2	
17.68	18.59	0.91	0.90	33	0.00	98.9	
18.59	20.73	2.14	2.03	24	0.81	94.9	
20.73	21.34	0.61	0.55	9		90.2	
21.34	23.16	1.82	1.78	31	0.12	97.8	
23.16	23.77	0.61	0.57	8	0.33	93.4	
23.77	25.30	1.53	1.35	24	0.53	88.2	
25.30	25.60	0.30	0.30	8	0.00	100.0	
25.60	26.82	1.22	0.93	17	0.12	76.2	
26.82	27.43	0.61	0.35	12	0.00	57.4	End of run, consists of rubble
27.43	28.35	0.92	0.30	40	0.00	32.6	Rubble
28.35	29.26	0.91	0.90	50	0.00	98.9	
29.26	29.88	0.62	0.63	9	0.12	101.6	Fractures along gneissic bands
29.88	31.09	1.21	1.00	14	0.34	82.6	
31.09	32.92	1.83	1.75	24	0.15	95.6	
32.92	33.53	0.61	0.35	15	0.00	57.4	
33.53	34.44	0.91	0.64	25	0.22	70.3	
34.44	35.05	0.61	0.35	14	0.00	57.4	
35.05	35.66	0.61	0.50	30	0.10	82.0	Broken core
35.66	36.27	0.61	0.50	12	0.00	82.0	
36.27	36.59	0.32	0.20	15	0.00	62.5	
36.59	37.49	0.90	0.70	30	0.00	77.8	
37.49	39.01	1.52	1.30	33	0.46	85.5	
39.01	40.84	1.83	1.80	44	0.00	98.4	
40.84	41.76	0.92	0.85	22	0.10	92.4	
41.76	42.37	0.61	0.60	30	0.00	98.4	
42.37	42.98	0.61	0.50	30	0.00	82.0	
42.98	43.59	0.61	0.20	+50	0.00	32.8	Rubble, broken core, fault?
43.59	44.20	0.61	0.20	+50	0.00	32.8	
44.20	45.11	0.91	0.60	+50	0.00	65.9	
45.11	45.72	0.61	0.60	17	0.15	98.4	
45.72	47.24	1.52	1.40	29	0.24	92.1	
47.24	48.16	0.92	0.90	16	0.19	97.8	
48.16	49.07	0.91	0.90	22	0.12	98.9	
49.07	49.99	0.92	0.70	22	0.12	76.1	
49.99	51.21	1.22	1.10	17	0.00	90.2	
51.21	51.82	0.61	0.35	+30	0.00	57.4	Rubble

APPENDIX 4B:

CONTINUED

Drill Hole	VDH-4
Date:	18-Aug-01
Logged by:	J. Reeder

To	From	Length of Interval	Measured Length	Number of Fractures	RQD	% Recovery	Remarks
51.82	52.73	0.91	0.90	+31	0.00	98.9	
52.73	54.24	1.51	1.31	20	0.35	86.8	
54.24	57.30	3.06	3.05	19	2.10	99.7	
57.30	60.35	3.05	2.96	25	1.30	97.0	
60.35	63.40	3.05	2.80	13	2.20	91.8	
63.40	66.45	3.05	2.93	26	1.82	96.1	
66.45	69.49	3.04	3.04	26	1.55	100.0	
69.49	72.54	3.05	2.97	60	0.72	97.4	Minor clay gouge
72.54	74.98	2.44	2.25	23	1.25	92.2	
74.98	77.11	2.13	1.71	18	0.75	80.3	
77.11	78.64	1.53	1.46	15	0.70	95.4	
78.64	81.68	3.04	2.95	39	1.18	97.0	
81.68	84.73	3.05	3.05	31	1.02	100.0	
84.73	87.78	3.05	3.05	25	1.38	100.0	
87.78	EOH	82.29	98.27				

APPENDIX 4B:

CONTINUED

Drill Hole	VDH-5
Date:	18-Aug-01
Logged by:	J. Reeder

To	From	Length of Interval	Measured Length	Number of Fractures	RQD	% Recovery	Remarks
0	3.24						Overburden, casing
3.24	5.49	2.25	0.80	+50		35.6	Rubble
5.49	8.53	3.04	2.75	+50	0.44	90.5	
8.53	11.58	3.05	2.80	+50	1.02	91.8	Rubble zones
11.58	14.33	2.75	2.75	28	1.10	100.0	
14.33	14.94	0.61	0.60	+15	0.00	98.4	
14.94	17.68	2.74	2.10	+40	1.07	76.6	
17.68	20.73	3.05	3.01	24	2.08	98.7	
20.73	22.25	1.52	1.30	15	0.47	85.5	Gouge, clay
22.25	23.77	1.52	1.20	22	0.53	78.9	
23.77	26.82	3.05	3.01	34	1.08	98.7	
26.82	28.36	1.54	1.85	30	0.74	120.1	
28.36	EOH	25.12	22.17				

APPENDIX 5: STATEMENT OF QUALIFICATIONS

The field work described in this report was supervised by Jeff Reeder and Jody Dahrouge.

Mr. Reeder is a geological consultant with Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. He obtained a degree in geology from the University of Alberta, Edmonton in 1988. He is registered as P. Geo. with the Association of Professional Engineers and Geoscientists of B.C. He has more than 13 years of experience in mineral exploration.

J.R. Dahrouge is a geological consultant with Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. He obtained degrees in geology and computing science from the University of Alberta, Edmonton in 1988 and 1994, respectively. He has more than 10 years of experience in mineral exploration. He is a member of the Canadian Institute of Mining and Metallurgy and is registered as P. Geol. with the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.



GEOLOGICAL SURVEY BRANCH
AN ACT OF PARLIAMENT

26,796

Approximate Mean Declination 1996
Decreasing 7.9" Annually



SYMBOLS

- Paved road
- Active logging road
- Deactivated logging road
- Deactivated skidder trail
- Upgraded access trail
- Railway
- Elevation contour (interval: 20 m)
- Power line
- Geophysical survey line, cut and flagged
- Geophysical survey line, flagged
- Boundary of claim group
- Boundary of mineral claim; name
- Legal claim post
- Location of corehole (2001)
- Location of corehole (1980,81)

NOTE

- 1) UTM grid is North American Datum, 1983 (NAD83).
- 2) Base map compiled from parts of B.C. TRIM maps 083D.035 and 083D.045.
- 3) Work conducted on lines 3900 E to 6100 E is the subject of a prior assessment report by Dahrouge and Reeder (2001).

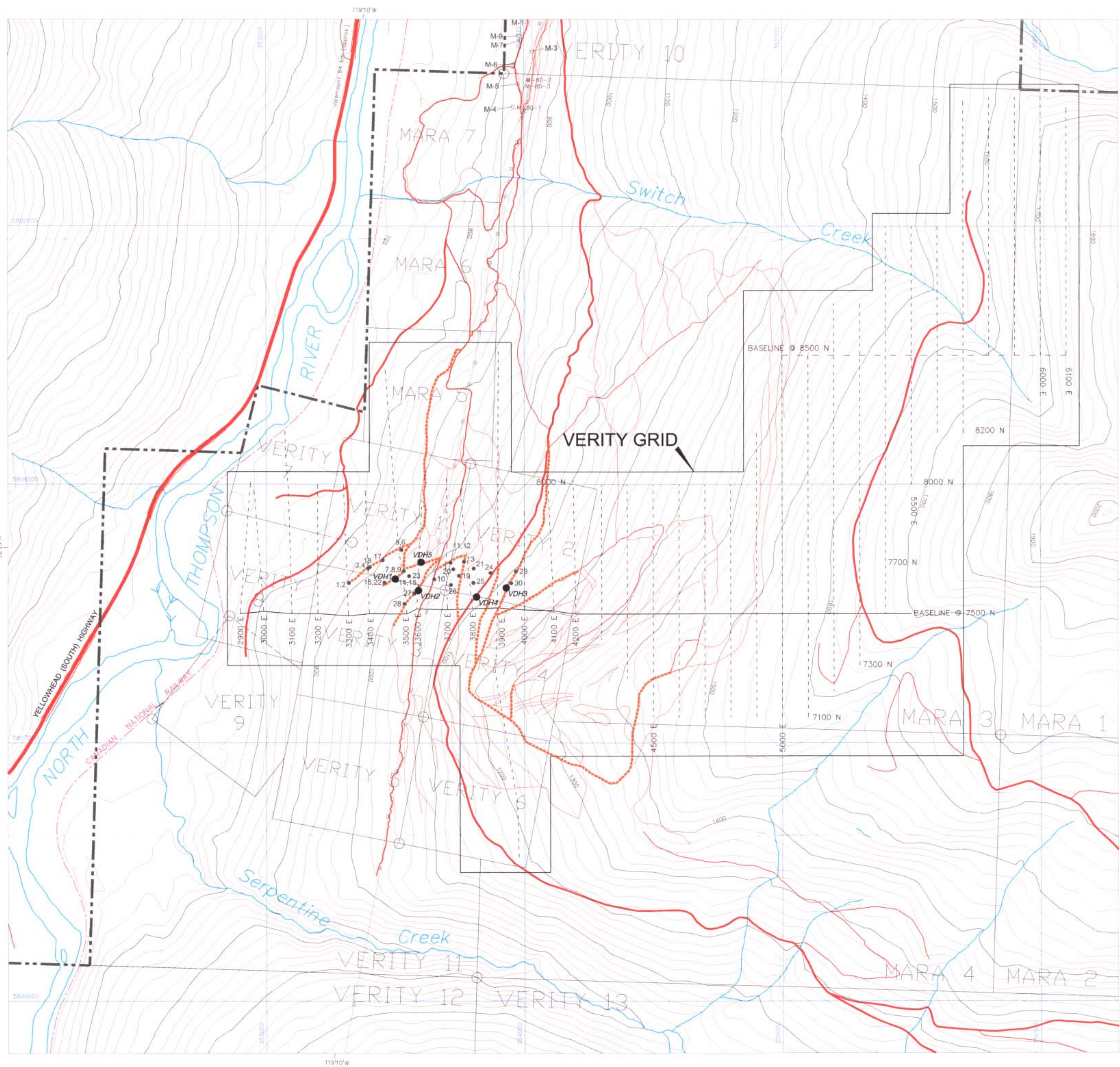
COMMERCE RESOURCES CORP.
Vancouver, British Columbia

BIG VERITY CLAIM GROUP, BLUE RIVER, BRITISH COLUMBIA

Fig 3.1
Locations of Drill Holes, Access Trails and Established Grid

0 400 800 m

WM Scale: 1:7500 2002.02





GEOLOGICAL SURVEY BRANCH

26,796



SYMBOLS

- Paved road
- Active logging road
- Deactivated logging road
- Deactivated skidder trail
- Upgraded access trail
- Railway
- Elevation contour (interval: 20 m)
- Power line
- Magnetic contour (interval = 200 nT)
- Survey station; total magnetic field reading (nT)
- Boundary of claim group
- Boundary of mineral claim; name
- Legal claim post

NOTE

- 1) UTM grid is North American Datum, 1983 (NAD83).
- 2) Base map compiled from parts of B.C. TRIM maps 083D.035 and 083D.045.
- 3) Work conducted on lines 3900 E to 6100 E is the subject of a prior assessment report by Dahrouge and Reeder (2001).

COMMERCE RESOURCES CORP.
Vancouver, British Columbia

BIG VERITY CLAIM GROUP, BLUE RIVER, BRITISH COLUMBIA

Fig 3.2 2
Contoured Ground Magnetic Data

