

#### REPORT ON THE 2000 AND 2001 DIAMOND DRILL PROGRAM SEPARATION LAKE, ONTARIO (52 L/8 SW)

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**CLAIMS** 

K 1178296,

**CLAIM SHEETS** 

Paterson Lake G-2634

TANTALUM MINING CORPORATION OF CANADA LIMITED P.O. BOX 200, LAC DU BONNET, MANITOBA, R0E 1A0 / (204) 884-2400

CAREY GALESCHUK, B.Sc, P. Geo PROJECT GEOLOGIST OCTOBER 10<sup>TH</sup>, 2001 BERNIC LAKE, MANITOBA 2.22278





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PATERSON LAKE

#### TABLE OF CONTENTS

Introduction
Claim Group1
Location and Access
Previous Work
Regional Geology5
Local Geology6
2000-2001 Diamond Drill Program Results and Interpretation
DDH 00-SL-018
DDH 00-SL-0214
DDH 01-SL-0114
Conclusions and Recommendation
Report Disclaimer
References
Appendix A: Program Expenditures Separation Lake 2000-2001 DDH Program
Appendix B: Invoices
Appendix C: Diamond Drill logs
Appendix D: Bondar Clegg Laboratories-Downhole Lithogeochemical Assays
Appendix E: Analytical Methods
Appendix F: Statement of Qualifications
List of Tables:
Table 1: Claim List
Table 2: 00-SL-01 Downhole Lithogeochemistry Table9
Table 3: 00-SL-02 Downhole Lithogeochemistry Table
Table 4: 01-SL-01 Downhole Lithogeochemistry Table



52L07SE2010 2.222

PATERSON LAKE

Table 5: Separation Lake Project-2000/2001 DDH Pegmatite Summary
Table 3: Numeric System for Anomaly Rating
List of Figures:
Figure 1: Location Map of the Separation Lake Project
Figure 2: Separation Lake Claim Location Map
Figure 3: Geological Location of Separation Lake Area
Figure 4: DDH 00-SL-01 Downhole Lithogeochemical Plots Against Background 10
Figure 5: DDH 00-SL-02 Downhole Lithogeochemical Plots Against Background 11
Figure 6: DDH 01-SL-01 Downhole Lithogeochemical Plots Against Background 12
Map Pocket Report:
Map 1 of 2 Separation Lake 2000-2001 DDH Location Map
Map 2 of 2 Separation Lake Project 2000-2001 DDH Sections

#### INTRODUCTION

During the time span of December 4th to December 21<sup>st</sup>, 2000 and January 4<sup>th</sup> to January 18<sup>th</sup>, 2001, a diamond drill program was carried out by Tantalum Mining Corporation of Canada Limited (Tanco) in the Separation Lake region of northwest Ontario. Three diamond drill holes were completed to a total depth of 2371 feet (722.68 metres) by Thor Drilling of Kenora, Ontario. Anomalous areas were determined from the 1998 and 1999 Enzyme Leach soil survey as well as from lithogeochemical data collected by Tanco from 1996 to 1999. The target mineral commodity was tantalum-enriched pegmatites. When encountered, the pegmatites were sampled for Ta<sub>2</sub>O<sub>5</sub>, Li<sub>2</sub>0, Sn<sub>2</sub>0, and Cs<sub>2</sub>0. Down-hole lithogeochemistry was carried out on a interval bases and samples were sent to an outside laboratory to test for Li, Rb and Cs (the elements used for the surface lithogeochemical surveys).

The expenditures for this program may be viewed in Appendix A. (Program Expenditures for 1999).

#### **CLAIM GROUP**

The Separation Lake property is under a joint venture agreement between Gossan Resources Limited (Gossan Resources) of Winnipeg, Manitoba and Tantalum Mining Corporation of Canada Limited. At present, the property consists of 33 claims totaling 147 claim units (Table 1). All claims are held jointly with Tanco (operators) holding 50.1% and Gossan holding 49.9%.

The address and contact name for the holders of the claims are as follows:

Tantalum Mining Corporation of Canada Limited PO Box 2000 Lac du Bonnet, Manitoba R0E 1A0

Contact:
Peter Vanstone
Chief Geologist
(204) 884-2400 ext. 226

Gossan Resources Limited 52 Donald Street Winnipeg, Manitoba R3C 1L6

Contact: Jim Campbell President (204) 943-1990

#### LOCATION AND ACCESS

The property is situated approximately 75 kilometres north of Kenora, Ontario (Figure 1). The 33 claims (Table 1) are mainly situated north of the English River and to the northwest of Separation Lake (Figure 2).

Access to the area is via the English River Road, an all-weather gravel road. The English River Road turn-off is 24 kilometres north of the Trans-Canada Highway along Highway 566 to Reddit, Ontario. A network of abandoned secondary clay and sand based logging and drill roads

dissects the property. As well, the southern and central portions of the property are accessible by boat via the English River and the eastern portion by via Separation Lake.

Table 1: Separation lake claims

FERCI ENVIRED	CLAIM	Clan stail	NIS :	<u>PAUE</u>	PANE :	CPAM	
NUMBER	Marsheet and the second	AND SAME AND	NUMBER	The second secon	RECORDED		P# 3 7 (10 A 10 A 10 A 17
K 1178866	G-2651	Treelined Lake	52-L-8SW	11-Jan-97	13-Jan-97	32	2
K 1149772	G-2651	Treelined Lake	52-L-8SW	01-Sep-96	11-Sep-96	16	1
K 1178867	G-2651	Treelined Lake	52-L-8SW	11-Jan-97	13-Jan-97	32	2
K 1178575	G-2651	Treelined Lake	52-L-8SW	11-Jan-96	17-Jan-96	32	2
K 1178574	G-2651	Treelined Lake	52-L-8SW	11-Jan-96	17-Jan-96	64	4
K 1178787	G-2651	Treelined Lake	52-L-8SW	28-May-96	07-Jun-96	48	3
K 1178730	G-2634	Paterson Lake	52-L-7SE	02-May-96	05-May-96	48	3
K 1178295	G-2651	Treelined Lake	52-L-8SW	01-Jun-95	05-Jun-95	16	1
K 1178296	G-2634	Paterson Lake	52-L-7SE	01-Jun-95	05-Jun-95	256	16
K 1178690	G-2651	Treelined Lake	52-L-8SW	11-Apr-96	15-Apr-96	16	1
K 1178598	G-2651	Treelined Lake	52-L-8SW	29-Mar-96	10-Apr-96	32	2
K 1178689	G-2651	Treelined Lake	52-L-8SW	29-Mar-96	10-Apr-96	128	8
K 1178678	G-2634	Paterson Lake	52-L-7SE	29-Mar-96	10-Apr-96	208	13
K 1162991	G-2634	Paterson Lake	52-L-7SE	12-Dec-95	14-Dec-95	128	8
K 1178297	G-2634	Paterson Lake	52-L-7SE	02-Jun-95	05-Jun-95	96	6
K 1162990	G-2634	Paterson Lake	52-L-7SE	13-Dec-95	14-Dec-95	64	4
K 1149773	G-2634	Paterson Lake	52-L-7SE	01-Sep-96	11-Sep-96	32	2
K 1149776	G-2634	Paterson Lake	52-L-7SE	01-Sep-96	11-Sep-96	48	3
K 1149775	G-2634	Paterson Lake	52-L-7SE	01-Sep-96	11-Sep-96	16	1
K1162989	G-2634	Paterson Lake	52-L-7SE	13-Dec-95	14-Dec-95	96	6
K 1178437	G-2634	Paterson Lake	52-L-7SE	22-Sep-95	29-Sep-95	192	12
K 1149774	G-2634	Paterson Lake	52-L-7SE	27-Jul-96	07-Aug-96	96	6
K 1220538	G-2651	Treelined Lake	52-L-8SW	03-Jun-97	02-Jul-97	48	3
K 1220539	G-2634	Paterson Lake	52-L-7SE	04-Jun-97	02-Jul-97	48	3
K 1220540	G-2634	Paterson Lake	52-L-7SE	10-Jun-97	02-Jul-97	48	3
K 1220541	G-2651	Treelined Lake	52-L-8SW	05-Jun-97	02-Jul-97	64	4
K 1220542	G-2651	Treelined Lake	52-L-8SW	05-Jun-97	02-Jul-97	48	3
K 1220915	G-2651	Treelined Lake	52-L-8SW	09-Oct-99	29-Oct-99	16	1
K 1220669	G-2651	Treelined Lake	52-L-8SW	09-Oct-99	29-Oct-99	160	10
K 1133795	G-2651	Treelined Lake	52-L-8SW	09-Oct-99	29-Oct-99	32	2
K 1166804	G-2634	Paterson Lake	52-L-7SE	05-Apr-98	01-May-98	1	16
K 1220664	G-2634	Paterson Lake	52-L-7SE	02-Jul-99	16-Jul-99	1	16
K 1220596	G-2651	Treelined Lake	52-L-8SW	20-May-98	10-Jun-98	32	2
Total Claims :	33				Totals:	147	2 224

The physiography of the area is typical of the Precambrian shield with most overburden consisting of tills and clay. Much of the area has experienced blow downs and consequently, in these areas, the forest consists of small pines, alders and poplars. In isolated areas, mature spruce stands exist

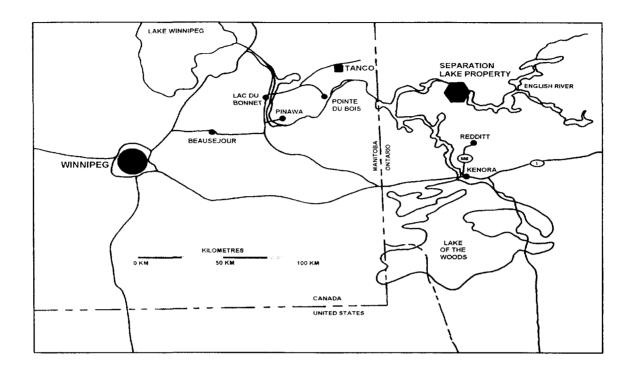


FIGURE 1: LOCATION MAP OF THE SEPARATION LAKE PROJECT

#### PREVIOUS WORK

The area has had a history of base and precious metals exploration with some work into its uranium and iron potential. Work since 1993, by the Ontario government has increased interest in the rare-element pegmatite potential of the area.

Records of mineral exploration in the Umfreville-Separation Lake area date back to the mid-1930s. The area's first work appears to be around Minaki, where work was conducted on the Minaki Pyrite Prospect on Vermillion Lake. Sporadic work for base metals was conducted near Redditt in 1956, by Stratmatt Limited and south of Patterson Lake in 1963, by the Canadian Nickel Company. Both programs consisted of diamond drilling.

The iron formations in the Separation Lake area were examined for their iron potential. W.S. Moore Company of Duluth conducted trenching and feasibility studies of the property in the period 1948-1955. Tombill Gold Mines and Glen Echo Mines Limited conducted work in 1957. Results of these studies indicated that the iron mineralization has excellent concentration characteristic, but does not occur in sufficient widths to apply open pit mining methods (Breaks et al, 1975).

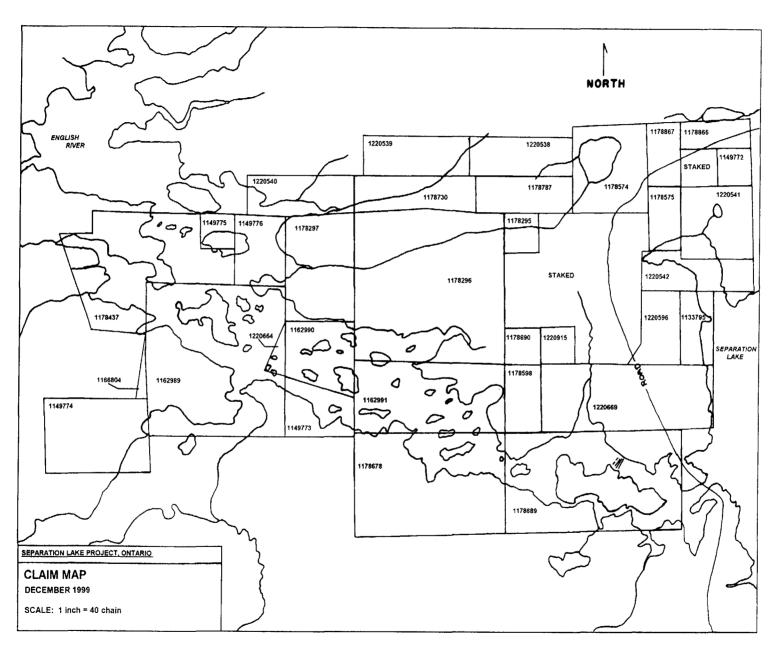


FIGURE 2: Separation Lake Claim Location Map

During the 1960's and into the 1970's, several companies explored in the region for uranium with much of the work being carried out by airborne scintillometer surveys with follow up groundwork. Some of the major work was carried out by Headvue Mines Limited (1967), Bralorne Resources Limited, and Can-Fer Mines Limited (1968-1971). These surveys encountered anomalous, but sporadic uranium mineralization associated with the pegmatites in the area (Breaks, et al, 1975).

Selco Mining Corporation, Sherritt Gordon Mines and Champion Bear Resources have conducted extensive exploration work in the area with numerous programs of mapping, sampling, geophysics and drilling. The main focus was on base metals with some work being done on precious metals.

The most recent government geological map covering the region is Open File Map 241 (Blackburn, et al, 1994). The Ontario Geological Survey has recently carried out numerous detailed programs on the pegmatite field in the Separation Lake/English River area. Dr. F.W. Breaks of the Mineral Field Services Section, Ontario Geological Survey, has carried out most of the work. This work has spawned great interest in the Separation Rapids pegmatite field. Several companies and individuals are actively exploring the rare-element potential of the area. These companies include Champion Bear Resources, Emerald Field Resources, Avalon Ventures, and the Tantalum Mining Corporation of Canada.

During 1996 to 1998, Tanco mapped and lithogeochemically sampled the entire claim area. The results for 1996 and 1997 have been filed for assessment.

Tanco has also completed two diamond drill programs in the area. In 1996, seven holes totaling 1872 feet (570.73 metres) were drilled to test the subsurface geological character of exposed pegmatites at depth with respect to mineralization, mineralogy and structure. The 1997 diamond drill program was a continuation of the 1996 diamond drill program, with emphasis placed on examining several other surface pegmatite exposures. This program consisted of ten holes totaling 2803 feet (854.35 metres). Both diamond drill reports have been filed for assessment.

In 1998 and 1999, Tanco carried out an extensive Enzyme Leach soil survey over the central portion of the claim group. At this time structural and petrology work was conducted. All material has been filed for assessment with the Ontario government.

#### REGIONAL GEOLOGICAL SETTING

The Separation Lake property occurs almost completely in the Separation Lake Greenstone Belt (Blackburn and Young, 1992). It is part of a package of metavolcanic rocks which occur discontinuously along the boundary of the English River and Winnipeg River subprovinces of the Archean Superior Province (Figure 3). The belt constitutes the boundary zone between the high grade, metasedimentary-dominant English River Subprovince to the north and the granite-tonalite-dominant Winnipeg River Subprovince to the south.

It has been suggested that the Separation Lake Greenstone Belt may represent an extension of the 2.74 Ga Bird River metavolcanic-metasedimentary belt to the west (Timmins et al, 1985). This belt is known to host other pegmatite fields such as the Greer Lake, Rush Lake and Bernic Lake pegmatitic fields (Cerny et al, 1986). The pegmatite field at Separation Lake is approximately seven kilometres long by three kilometres wide and trends in an east to west direction and is hosted by supracrustal rocks (Blackburn et al. 1992; Blackburn and Young, 1994). The area is predominantly underlain by mafic metavolcanic units and associated gabbroic units. Felsic volcanic and metasedimentary rocks exist to the north of the property and pinch out to the east. Most rock units are strongly deformed and metamorphosed to at least lower amphibolite facies (Blackburn and Young, 1992).

F.W. Breaks (1993) has described the Separation Rapids pegmatite field as divisible into two clusters that appear to be spatially related to the Separation Rapids pluton. Occurrences of petalite, cassiterite and tantalum bearing minerals have been reported in numerous locations within the Separation Lake Greenstone Belt. The pegmatites in this area would belong to the complex type, petalite subtype of the rare-element pegmatite class of Cerny (Cerny 1982).

#### LOCAL GEOLOGY

The Tanco/Gossan claim block lies within the Separation Lake greenstone belt. A detailed description of the rock types can be found in Report on 1996 and 1997 Litho-geochemistry and Geological Mapping Activity (Galeschuk, 1999). Following is a brief description of the local geology.

The predominant rock type in the area is a fine to medium grained, medium gray to black, well foliated mafic metavolcanic, possibly of basaltic composition. This unit comprises most of the central portion of the claim group. Coarse grained, dark colored gabbro has been mapped in the centre of the mafic metavolcanic unit. It appears to indicate a folding pattern. As well, narrow bands of chemical metasedimentry iron formation occur throughout the region. These iron formation units tend to display a highly gossaned appearance.

The mafic metavolcanic unit is bounded to the north and to the south by regional granitoid complexes, both contain granitic gneissic and pegmatitic units. Well exposed to the north is the Treelined Lake Granite, which is part of the English River Subprovince. The granitic unit to the south is part of the Winnipeg River Subprovince.

To the north of the property is exposed a unit of a felsic composition. This unit is in fault contact with the Treelined Granite. As well, clastic metasedimentary units are exposed to the northeast of the claim group.

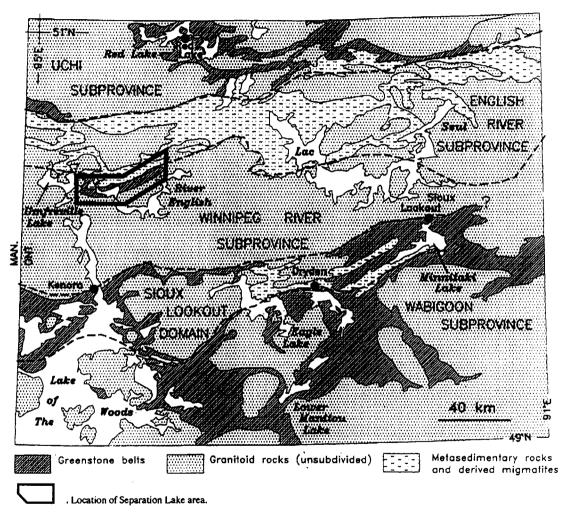


Figure 3: Geological Location of Separation Lake Area (from Breaks, F.W. and Tindle, A.G., 1997)

On the western flank of the property, the Separation Rapids Pluton is well exposed. The exposed area of the pluton, is a 4 square kilometres. It has been described as a fertile, peraluminous Stype granite (Breaks, 1993). Within this unit there is widespread layering of pegmatitic leucogranite, sodic aplite, potassic pegmatite and coarse grained granitic units.

Numerous pegmatites are exposed on surface. They vary in size and dimensions, as while as complexity. East to west tends to be the preferred orientation with many of the pegmatite bodies lying parallel to foliation.

#### 2000-2001 Diamond Drill Program Results and Interpretation

Three diamond drill holes were completed on claim K 1178296 for a total of 2371 feet (722.68 metres) during the time period of December 4th to December 21<sup>st</sup>, 2000 and January 4<sup>th</sup> to January 18<sup>th</sup>, 2001. The work was completed by Thor Drilling of Kenora Ontario (invoices in Apenndix B) on behalf of the Tantalum Mining Corporation of Canada Limited (Tanco). The work was supervised for the most part by the author of this report (Carey Galeschuk), however a contract person was employed from January 4<sup>th</sup> to January 18<sup>th</sup> to supervise the drilling. All core logging and interpretation was completed by the author of this report.

The drill holes were targeted on a strongly anomalous Enzyme Leach soil target (SLTA-1) that was determined from Tanco's work of 1998 and 1999 (Galeschuk, 2000). The Enzyme Leach anomalies for the area and the drill location plan can be viewed on Map 1 in the inserts at the back of the report.

The target mineral commodity was tantalum-enriched pegmatites. When encountered, the pegmatites were sampled for Ta<sub>2</sub>O<sub>5</sub>, Li<sub>2</sub>0, Sn<sub>2</sub>0, and Cs<sub>2</sub>0. Down-hole lithogeochemistry was carried out on an interval base and samples were sent to an outside laboratory to test for Li, Rb and Cs (the elements used in Tanco surface lithogeochemical surveys). A total of 49 samples were taken and sent to Bondar-Clegg in Vancouver. The downhole lithogeochemical plots are supplied in figure 6,7 and 8. The plots were constructed by dividing the lithogeochemical assays against the backgrounds for each rock type. The outcome is a downhole lithogeochemical plot against background were the response rate is plotted for the diamond drill hole for the elements Li, Rb, and Cs. The tables for these plots is provided in Tables 2,3, and 4. The backgrounds used were from Tanco's lithogeochemical work of 1996-1998 (Galeschuk, 1999). Lithogeochemical sampling down the hole was generally carried out at 25 foot intervals but this was subject to change depending on rock type and situation. 26 pegmatite samples were tested at Tanco.

#### DDH 00-SL-01

Diamond drill hole 00-SL-01 encountered a pegmatite swarm starting at 500.7 feet down the hole. This was a vertical hole collared or the strongest part of anomaly SLTA-1. It was a bedrock setup on top of a large oval shaped outcrop.

The pegmatite swarm has been dubbed the White Turtle Pegmatite swarm for reference purposes. In total, seven distinct pegmatite units were encountered from the smallest in width being 1 foot and the largest being 27.5 feet. These pegmatites were distinctly different mineralogical then

Table 2: 00-SL-01 Downhole Lithogeochemistry Table

Sample #	From (ft)	To (ft)	Length	Lithium (ppm)	Li/Background	Cesium (ppm)	Cs/Background	Rubdium (ppm)	Rb/Background	Rock Type
EX - 12937	16.50	16.80	0.3	40	1.123595506	1	0.294117647	5	0.069252078	Mafic Volcanic
EX - 12938	66.00	66.30	0.3	27	0.758426966	24	14.11764706	36	0.498614958	Mafic Volcanic
EX - 12939	115.00	115.30	0.3	17	0.47752809	2	1.176470588	5	0.069252078	Mafic Volcanic
EX - 12940	157.00	157.30	0.3	14	0.393258427	1	0.588235294	5	0.069252078	Mafic Volcanic
EX - 12941	192.00	192.30	0.3	15	0.421348315	2	1.176470588	5	0.069252078	Mafic Volcanic
EX - 12942	245.00	245.30	0.3	13	0.365168539	1	0.588235294	5	0.069252078	Mafic Volcanic
EX - 12943	282.00	282.30	0.3	30	0.842696629	47	27.64705882	23	0.318559557	Mafic Volcanic
EX - 12944	342.00	342.30	0.3	28	0.786516854	5	2.941176471	1 1	0.006925208	Mafic Volcanic
EX - 12945	382.00	382.30	0.3	49	1.065217391	13	3.095238095	15	0.506756757	Mafic Intrusive
EX - 12946	406.00	406.30	0.3	47	1.320224719	1	0.588235294	17	0.235457064	Mafic Volcanic
EX - 12947	450.00	450.30	0.3	109	3.061797753	1	0.294117647	11	0.152354571	Mafic Volcanic
EX - 12948	493.00	493.30	0.3	191	4.152173913	3	0.714285714	5	0.168918919	Mafic Intrusive
White Turtle Pegamtite No. 1	500.70	506.30		i i						Pegmatite
White Turtle Pegamtite No. 2	532.90	538.90		1			i	İ		Pegmatite
EX - 12949	570.00	570.50	0.5	267	7.5	5	2.941176471	1	0.013850416	Mafic Volcanic
White Turtle Pegamtite No. 3	589.30	591.00		1						Pegmatite
White Turtle Pegamtite No. 4	603.00	612.90						1		Pegmatite
White Turtle Pegmatite No. 5	618.90	636.20		i						Pegmatite
White Turtle Pegmatite No. 6	648.60	649.60	ĺ	1				ļ		Pegmatite
EX - 12950	661.50	662.00	0.5	288	8,08988764	1	0.294117647	5	0.069252078	Mafic Volcanic
White Turtle Pegmatite No. 7	681.00	708.50	1	1 -50	5.5556764	•	0.204177041	l	0.0002020	Pegmatite
EX - 12951	722.00	722.50	0.50	183	5.140449438	14	8.235294118	1 1	0.013850416	Mafic Volcanic

 Statistically derived background values
 Maffic Volcanic
 =
 35.6
 1.7
 72.2

 Maffic Intrusive
 =
 48.0
 4.2
 29.6

Table 3: 00-SL-02 Downhole Lithogeochemistry Table

Sample #	From (ft)	To (ft)	Length	Lithium (ppm)	LI/Background	Cesium (ppm)	Cs/Background	Rubdium (ppm)	Rb/Background	Rock Type
EX-12952	37.00	37.15	0.15	31	0.870786517	1	0.588235294	5	0.069252078	Mafic Volcanic Tuff
EX-12956	111.00	111.15	0.15	20	0.561797753	3	1.764705882	18	0.249307479	Mafic Volcanic Tuff
EX-12955	171.00	171.15	0.15	44	1.235955056	5	2.941176471	43	0.595567867	Alteration Zone
EX-12957	200.00	200.15	0.15	51	1.43258427	22	12.94117647	35	0.484764543	Mafic Volcanic Tuff
EX-12958	255.00	255.15	0.15	56	1.573033708	64	37.64705882	99	1.371191136	Mafic Volcanic Tuff
EX-12460	277.00	277.15	0.15	30	0.652173913	1	0.236095238	5	0.168918919	Gabbro
EX-12962	298.00	298.15	0.15	72	1.558441558	13	7.647058824	49	0.67867036	Mafic Volcanic
EX-12964	340.00	340.15	0.15	39	0.844155844	5	0.641025641	31	0.238278248	Iron Formation
EX-12968	398.00	398.15	0.15	297	6.456521739	7	0.897435897	18	0.138355111	Chert Horizon
EX-12969	414.00	414.15	0.15	22	1.325301205	1	0.166866667	5	0.065963061	Rhyodacite Tuff
EX-12792	452.00	452.15	0.15	96	2.086956522	1	0.238095238	5	0.168918919	Gabbro
EX-12973	466.00	466.15	0.15	131	3.579234973	14	2.592592593	13	0.078313253	Diorite
EX-12975	526.00	526.15	0.15	95	2.595628415	31	5.740740741	93	0.560240964	Diortte
EX-12976	576.00	576.15	0.15	33	0.926966292	1	0.294117647	5	0.069252078	Mafic Volcanic
EX-12977	628.00	628.15	0.15	37	1.039325843	1	0.294117647	5	0.069252078	Mafic Volcanic
EX-12978	679.00	679.15	0.15	42	1.179775281	5	2.941176471	5	0.069252078	Mafic Volcanic
EX-12979	728.00	728.15	0.15	146	4.101123596	7	4.117647059	30	0.415512465	Mafic Volcanic
EX-12984	802.00	802.15	0.15	130	3.651685393	1	0.294117647	13	0.180055402	Silicified Mafic Volcanic
EX-12985	868.00	868.15	0.15	38	1.06741573	3	1.764705882	5	0.069252078	Mafic Volcanic
EX-12986	916.00	916.15	0.15	34	0.95505618	1	0.588235294	5	0.069252078	Mafic Volcanic

LI (ppm) Cs (ppm) Rb (ppm) Mafic Volcanic 35.6 1.7 72.2 Statistically derived background values Mafic Intrusive 46.0 4.2 29.6 Chemical Sedimentary 130.1 Felsic Volcanic 16.6 3.0 75.8 Intermediate Intrusive 36.6 166.0

Table 4: 00-SL-02 Downhole Lithogeochemistry Table

Sample #	From (ft)	To (ft)	Length	Lithium (ppm)	Li/Background	Cesium (ppm)	Cs/Background	Rubdium (ppm)	Rb/Background	Rock Type
X-12987	12.00	12.15	0.15	2004	43.56521739	94	22.38095238	160	5.405405405	Mafic Intrusive
X-13234	14.00	19.70	5.70	1 1	0		0		0	Pegmatite
X-13235	19.7	25	5.30	1	0		0		0	Pegmatite
X-13236	25.00	29.10	4.10	1	0		0		0	Pegmatite
X-12988	32.00	32.15	0.15	225	6.147540984	2	0.37037037	15	0.090361446	Diorite
X-12989	82.00	82.15	0.15	157	3.413043478	23	5.476190476	71	2.398648649	Mafic Intrusive
X-12990	135.00	135.15	0.15	72	1.565217391	1	0.119047619	5	0.168918919	Martic Intrusive
X-12991	191.00	191.15	0.15	128	2.782608696	12	2.857142857	34	1.148648649	Mafic Intrusive
X-12992	250.00	250.15	0.15	105	2.949438202	6	3.529411765	8	0.110803324	Mafic Volcanic
X-12993	300.00	300.15	0.15	39	1.095505618	2	1.176470588	5	0.069252078	Mafic Volcanic
X-12996	350.00	350.15	0.15	119	3.342696629	29	17.05882353	41	0.567867036	Mafic Volcanic
X-12994	400.00	400.15	0.15	230	6.460674157	5	2.941176471	5	0.069252078	Mafic Volcanic
X-12995	450.00	450.15	0.15	137	3.848314607	1	0.294117647	5	0.069252078	Mafic Volcanic
X-12997	510.00	510.15	0.15	125	3.511235955	21	12.35294118	41	0.567867036	Mafic Volcanic
X-12998	563.00	563.15	0.15	80	2.247191011	1 1	0.294117647	5	0.069252078	Mafic Volcanic
X-13237	612.80	613.90	1.10	1 1	O	1	0	ł	0	Pegmatite
X-12999	658.00	658.15	0.15	44	1.235955056	1	0.294117647	5	0.069252078	Mafic Volcanic Tuff
X-13000	690.00	690.15	0.15	27	0.758426966	1 1	0.294117647	5	0.069252078	Mafic Volcanic Tuff

 Stalistically derived background values
 Mafic Volcanic
 =
 35.6
 1.7
 72.2

 Mafic Intrusive
 =
 46.0
 4.2
 29.6

 Intermediate Intrusive
 =
 36.6
 5.4
 166.0

Figure 4:DDH 00-SL-01 Down-hole Lithogeochemical Plots Against Background

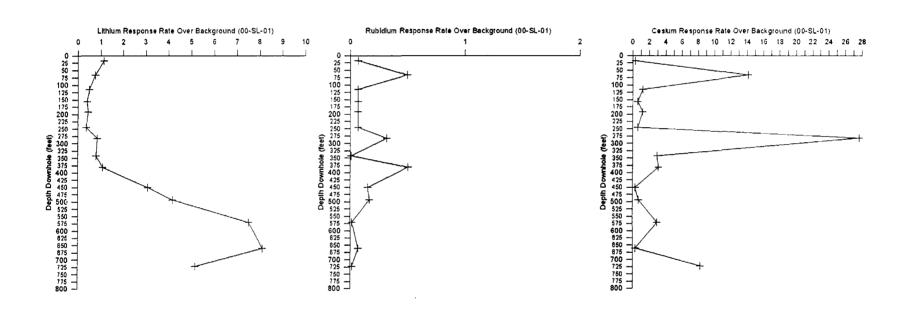


Figure 5: DDH 00-SL-02 Down-hole Lithogeochemical Plots Against Background

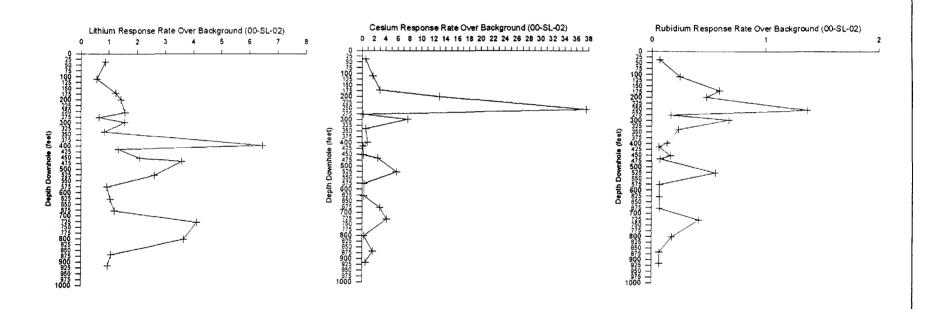
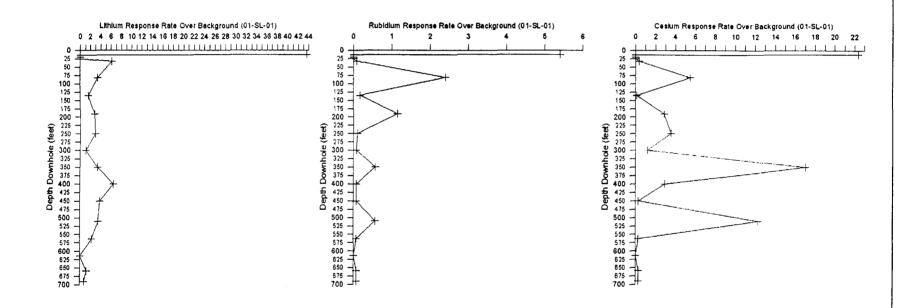


Figure 6:DDH 01-SL-01 Down-hole Lithogeochemical Plots Against Background



most other pegmatites encountered on the property. They might represent a pegmatite system not previously noted in the Separation Lake Greenstone Belt. Grey-colored potassium feldspar and sodic feldspars mineralogically dominate the White Turtle Pegmatites. As well, they have low to none existent Ta2O5, Li<sub>2</sub>O, and Sn<sub>2</sub>O values. The lack of these elements, especially lithium is strange for the area as so many of the pegmatites carry higher lithium contents. Table 5 provides a summary of the pegmatite results, as well the results are incorporated into the logs in Appendix C. Also interesting to note is that the cesium content, even though not high, is consistently present in the samples. Several of the pegmatites exhibited poor zoning.

Table 5: Separation Lake Project - 2000-2001 DDH Pegmatite Summary

Hole ID	Sample ID	From	То	Length	Ta2O5	SnO2	Li2O	Na2O	K20	P2O5	Cs2O
		(feet)	(feet)	(feet)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
00-SL-01	EX 13212	501.0	503.0	2.0	<0.002	<0.01	<0.02	4.26	6.50	<0.02	0.19
00-SL-01	EX 13213	503.0	506.0	3.0	<0.010	< 0.002	<0.02	4.53	4.07	<0.02	0.07
00-SL-01	EX 13214	532.9	534.0	1.1	<0.005	0.010	<0.02	3.89	4.25	<0.02	0.08
00-SL-01	EX 13215	535.0	538.7	3.7	<0.005	0.006	<0.02	4.21	4.08	<0.02	0.06
00-SL-01	EX 13216	587.5	591.0	3.5	<0.009	0.019	<0.02	4.50	0.34	<0.02	0.05
00-SL-01	EX 13217	603.2	606.0	2.8	<0.002	0.007	<0.02	4.21	6.64	<0.02	0.05
00-SL-01	EX 13218	606.0	609.0	3.0	<0.01	<0.01	<0.02	4.18	6.10	<0.02	0.06
00-SL-01	EX 13219	609.0	612.7	3.7	<0.006	0.007	<0.02	4.17	4.94	<0.02	0.07
00-SL-01	EX 13220	618.9	622.6	3.7	<0.002	< 0.002	<0.02	4.36	2.89	<0.02	0.04
00-SL-01	EX 13221	622.6	625.5	2.9	<0.01	0.010	0.02	3.19	7.35	<0.02	0.06
00-SL-01	EX 13222	625.5	628.5	3.0	<0.003	0.012	<0.02	4.05	5.67	<0.01	0.08
00-SL-01	EX 13223	628.5	631.2	2.7	<0.01	800.0	<0.02	2.89	8.40	<0.01	0.06
00-SL-01	EX 13224	631.2	634.1	2.9	<0.01	<0.01	<0.02	3.27	9.05	<0.01	0.10
00-SL-01	EX 13225	634.1	636.2	2.1	<0.005	0.010	0.02	4.46	4.39	<0.01	0.04
00-SL-01	EX 13226	648.6	649.6	1.0	<0.008	0.012	<0.01	4.72	0.21	<0.01	0.05
00-SL-01	EX 13227	681.0	682.5	1.5	<0.004	0.014	0.05	4.70	4.04	<0.01	0.06
00-SL-01	EX 13228	682.5	687.0	4.5	<0.01	< 0.002	0.05	3.84	9.66	<0.01	0.06
00-SL-01	EX 13229	687.0	692.0	5.0	<0.01	<0.01	0.05	3.78	9.75	<0.01	0.06
00-SL-01	EX 13230	692.0	697.0	5.0	<0.01	0.007	0.05	4.31	8.39	<0.01	0.08
00-SL-01	EX 13231	697.0	702.0	5.0	<0.002	0.008	0.07	4.52	6.14	<0.01	0.05
00-SL-01	EX 13232	702.0	706.0	4.0	<0.002	0.008	0.05	4.58	7.32	<0.01	0.06
00-SL-01	EX 13233	706.0	708.5	2.5	<0.01	<0.01	0.05	4.25	7.55	<0.01	0.06
											<u> </u>
00-SL-02	No peg	gmatite	interse	cted							
00-SL-03	EX 13234	14.0	19.7	5.7	0.024	0.018	0.140	2.97	1.80	0.17	0.18
00-SL-03	EX 13235	19.7	25.0	5.3	0.013	0.005	0.070	3.92	5.20	0.04	0.31
00-SL-03	EX 13236	25.0	29.1	4.1	<0.002	<0.01	0.050	3.53	6.45	<0.01	0.13
00-SL-03	EX 13237	612.8	613.9	1.1	<0.01	<0.01	<0.02	4.26	4.85	<0.02	0.06

The down-hole lithogeochemical plots for 00-SL-01 show lithium increasing in proximity to the pegmatites. The rubidium decreases as it approaches the pegmatites and cesium seems to be

inconclusive. The several cesium spikes may represent other pegmatites not encountered in the hole that may be of a different mineralogical composition.

#### DDH 00-SL-02

Diamond drill hole 00-SL-02 was collared to intersect the pegmatite swarm at depth and possibly intersect part of the Marko's Pegmatite which is situated on Champion Bear Resources property to the west. The drill hole encountered no pegmatite. This might be a function of faulting in the area or be relational to the emplacement of the iron formation that was encountered.

The down-hole lithogeochemical plot (Figure 7) indicates that anomalous areas do exist in the rock. This may indicate that pegmatites still may be in the area and that the location should be revisited. There are several interesting peaks in the 150 to 400 foot interval in Li, Rb, and Cs.

#### DDH 01-SL-01

Diamond drill hole 01-SL-01 was collared to intersect the pegmatite swarm to the west. It appears it failed to intersect the White Turtle Pegmatite swarm. However, did encounter a 15 foot (true width) pegmatite near the top of the hole. This pegmatite appears very different from the White Turtle Pegmatite swarm as potassium feldspar is pinker in color and the pegmatite carries significant amounts of mica. It is also possible that since this hole was collared at an angle, that it either went beneath or over the pegmatite.

The pegmatite is elevated in Ta<sub>2</sub>O<sub>5</sub>, Li<sub>2</sub>O, and Sn<sub>2</sub>O, however the assay values generally low. It is suggested that this pegmatite may be more representative of the Marko's Pegmatite system to the west.

The down-hole lithogeochemical plot in Figure 8 shows substantial elevations of Li, Rb, and Cs associated with the encountered pegmatite. This would is the expected norm in close proximity to a pegmatite. Most of the response rates fall away after the pegmatite intersection. It can be noted that lithium and cesium do become elevated again around the 300 foot to 425 foot interval. This suggests that there may be further pegmatites encountered that are offset from this hole. It would not appear from the down-hole lithogeochemistry that the lack of pegmatite was a function of the hole not being deep enough, however, this possibility always does exist.

#### **Conclusion and Recommendations**

Economically speaking the pegmatites encountered in this drill program were not favorable. However, it will be noted that the Enzyme Leach method appears to be a useable tool in the exploration of buried pegmatite deposits. This gives good merit to the other Enzyme Leach soil anomalies on the property.

It is proposed that diamond drilling follow-up work be continued on the Enzyme Leach targets derived from the 1998 and 1999 fieldwork. There remains six untested Enzyme Leach anomalous targets form the previous surveys completed on the Separation Lake property. At present, the only drilling for buried targets has been on the southeast corner of Enzyme Leach

soil anomaly SLTA-1. This drilling did uncover several buried pegmatites pass the five hundred-foot level in one drill hole. As well other small pegmatites were encountered in other drill holes.

For the SLTA-1 area it is recommended that diamond drilling be completed in order to test the whole anomaly and the potential of the Marko's Pegmatites extension to the south and east of the SLTA-1 area. This phase of the program would consist of three diamond drill holes for 800 feet or a total of 2100 feet.

For the targets SLTA-2 three drill holes should be completed to test this coincidental lithogeochemical and enzyme leach anomaly. Each hole would be scheduled for 800 feet. It is further suggested that one diamond drill holes be drilled in each of the enzyme leach anomalies SLTA-3 to SLTA-6. Each hole would be scheduled for 800 feet.

The recommended drilling in total would consist of 10 diamond drill holes of BQ size for a total footage of 8000 feet (2438 metres).

The cost breakdown for this program would be as follows:

Footage cost:	8000 feet @ \$30.00 a foot	\$2	231,000
Drill supervision:	50 days @ \$250.00 a day	\$	12,500
Transportation:	50 days @ \$50.00 a day	\$	2,500
Room and Board:	50 days @ \$80.00 a day	\$	4,000
Report work:	15 days @ \$250.00 a day	\$	3,750
Downhole lithogeochemistry:	300 samples @ \$23.00 a sample	\$	6,900

Estimated totals for the proposal \$260,650

It should be noted that these cost figures are only estimates and that any of the costs are subject to change depending on situation and best available prices.

Respectively submitted:

Carey R. Galeschuk, B.Sc, P.Geo

aleschuk

Project Geologist

Tantalum Mining Corporation of Canada Limited

October 10<sup>th</sup>, 2001

#### Report Disclaimer:

This report was prepared for the purposes of reporting work performed for assessment in accordance with the mining regulations as set forth by the Province of Ontario. All interpretations are based on my best judgement from the available information present at the time of the preparation of the report. Any use or reliance on this information or any part of the report or interpretation by a third party is that party's responsibility. I accept no responsibility or liability for damages or costs, if any, that may result from any actions or decisions undertaken by any individual, company, corporation or entity, as a result of any information contained within this report.

#### **REFERENCES**

- Blackburn, C.E. and Young, J.B., 1992. Geology of the Separation Lake Greenstone Belt; in Summary of Field Work and Other Activities 1993, Ontario Geological Survey, Miscellaneous Paper 160, pp 68-73.
- Blackburn, C.E., Young, J.B., Searcy, T.O. and Donohue, K. 1994. Precambrian Geology of the Separation Lake Greenstone Belt, west part; Ontario Geological Survey. Open File Map 241, scale 1:20 000.
- Blackburn, C.E. and Young, J.B., 2000. Precambrian Geology of the Separation Lake Area, Northwestern Ontario, Ontario Geological Survey, Open File Report 6001, 94 pages.
- Breaks, F.W., Bond, W.D., McWilliams, G.H., and Gower, G. 1975. Umfreville Separation lakes sheet, Operation Kenora-Sydney Lake: Ontario Division of Mines, Preliminary map1028 and marginal notes.
- Breaks, F.W., 1991, English River Subprovince. In: Geology of Ontario, Ontario Geological Survey. Special Volume 4, Part 1, pp 239-277.
- Breaks, F.W., 1993. Granite-Related Mineralization in Northwestern Ontario: I.
  Raleigh Lake and Separation Rapids (English River) Rare-Element Pegmatite
  Fields; in Summary of Field Work and Other Activities 1993, Ontario Geological
  Survey, Miscellaneous Paper 161, pp 104-110.
- Breaks, F.W., 1 and Tindle, A.G. 1997. Rare-metal exploration of the Separation Lake area: An emerging Target for Bikita-type Mineralization in the Superior Province of Ontario; Ontario Geological Survey, Open file Report 5966, 27p.
- Cerný. P., 1982, Anatomy and Classification of Granitic Pegmatites, In: MAC Short Course in Granitic Pegmatites in Science and Industry, Volume 8, p. 1-32
- Cerný, P., 1986. Exploration Strategy and Methods for Pegmatite Deposits of Tantalum., in Lanthanides, Tantalum and Niobium, Society for Geology Applied to Mineral Deposits, Spec. Publ. No. 7, pp 274 302
- Galeschuk, C.R., 1999. Report on 1996 and 1997 Lithogeochemistry and Geological Mapping Activity, Separation Lake, Ontario (52 L/8 SW), Summers 1996 and 1997, Ontario Assessment Files
- Galeschuk, C.R., 2000. Report on 1998 and 1999 Enzyme Leach Geochemical Soil Survey, Separation Lake, Ontario (52 L/8 SW), Summers 1998 and 1999, Ontario Assessment Files
- Timmins, E.A, Turek, A and Symons, D.T.A. 1985, U-Pb zrcon geochronolgy and paleomagnetism of the Bird River Greenstone Belt, Manitoba in: *Programs with Abstracts, Geological Association of Canada-Mineralogical Association of Canada*. Vol. 10, P. A62

### Appendix A:

# 2000-2001 DDH Program Expenditures

2000-2001 SEPARATION LAKE PR PROGRAM EXPENDITURES	ROJECT DDH P	ROGRAM		
WORK PERFORMED AND PERSONS RE	SPONSIBLE	COSTS AN	ID AMOUNTS	VALUE
Drill Supervision				
December 2000	(C. Galeschuk) (see timesheet)	14 days @	\$270	\$3,780.00
January 2001	(J. Regula) (see invoice)	13 days @	\$200	\$2,600.00
Core Logging	(C .Galeschuk)	5.5 days @	\$270	\$1,485.00
Report Writing/Logs/Sections	(C .Galeschuk)	9 days @ \$	\$270	\$2,430.00
<u>Diamond <b>Drilling</b></u> Thor Drilling Ltd. Kenora, Ontario	(see invoice)	2371 foot ( per foo	@ average of \$22.44 t	\$53,202.50
- <u>Shed Rental</u> John Palson, Hideaway Cabins Reddit, Ontario	(see invoice)			\$268.30
<u>Transportation</u> Mob/Demob			30 km @ 0.30 per km Tanco Minesite, return	\$498.00
Field Work			proprerty from Reddit 0.30 per km	\$378.00
<u>Cabìn Rental and Board</u> John Palson, Hideaway Cabins Reddit, Ontario	(C .Galeschuk) (see invoice)	\$500 per w	veek for 3 weeks	\$1,500.00
Drill-Site Room and Board Thor Drilling Separation Lake Camp	(J. Regula) (see invoice)			\$660.00
<u>Lithogeochemical Assay Analysis</u> Bondar Clegg N. Vancouver, British Columbia		49 sample	s @ \$20.75	\$1,016.75
Pegmatite Assay Analysis  Tanco Assay Labs  Tanco Minesite, Bernic Lake, Manitoba			s @ \$43.75 element determination)	\$1,137.50
Shipping				\$50.00
10/17/01			TOTAL	\$69,006.05
10/17/01 PR Moleschuk			GRAND TOTAL	\$69,006.05
		Rounde	d Off Submitted Total	\$69,006.00

All work was completed on claim K 1178296 (Paterson Lake G-2634)

## Appendix B:

### **Invoices and Timesheets**

BOX 2000  LAC DU BONNET, MANITOBA  ROE IAO  2020	TANTALUM MINING	CORP.	OF CAN	ADA
ROE IAO	BOX 2000			
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INVOICE

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FROM THOR DRILLING LTD.

P.O. BOX 2650

KENORA, ONTARIO

P9N 3X8

PH. (807) 548-1836

G.S.T. #86889 8685RT

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		RE: P.O	- #				
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00SL-01	0	500	500	21.50 23.50	10750.00 6039.50		
1	50 <b>0</b>	757	257	23.30			
00SL-02	0	366	366	21.50	7869.00		
			SI	UB TOTAL	24658.50		
			G	.S.T. @ 7%	1726.10	-	
			To	OTAL DUE			\$26,384
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TANTALUM MINING CORP. OF CANADA 117 BOX 2000 LAC DU BONNET, MANITOBA ROE IAO

2102 I. NOICE

January 27,2001 DATE

FROM THOR DRILLING LTD.

P.O. BOX 2650

KENORA, ONTARIO

P9N 3X8

Pil. (807) 548-1836

G.S.T. #86889 8685RT

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DATE	January 27,2001		G.S.T. #86889 8685RT

LE NO.	FROM	Or	FOOTAGE	UNIT PRICE	DEBIT	CREDIT	BALANCE
			SEPATARTION & BOARD	LAKE AREA			
		for Geo	ologist (Ja 30.00	son)	390.00		
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			SUB	TOTAL	660.00		-
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Invoice

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Date: Jan 22/01

Company: Tanco

Days Worked:

Jan 4<sup>th</sup>-Jan 16<sup>th</sup> Separation Lake Jan 15<sup>th</sup>- Jan 19<sup>th</sup> Bernic Lake

Total days:  $16 \times 200 = 3200.00$ 

Other Expenses:

Gas for rented truck

16305

= 1<del>53.00</del>-

**Total** 

\$ <del>3353.00</del> 3363.65

Jason G Regula

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P.O. 106325)

Tanco Timsheet for Galeschuk - Separation Lake Property

ID	Project Name	Performed By	Date Performed	Hours Spent	* Account#*	subLedger#
				Drilling-Office		
91888	SLP	CRG	10/10/01	8 Drill Report	551660.5150.52	.566043
				Drilling-Office		
91882	SLP	CRG	10/ 5/01	8 Drill Report	551660.5150.52	.566043
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91881	SLP	CRG	10/ 4/01	4 Drill Sections	551660.5150.52	.566043
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91879	SLP	CRG	10/ 3/01	8 Drill Sections	551660.5150.52	.566043
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91870	SLP	CRG	9/28/01	4 Drill Report	551660.5150.52	.566043
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91865	SIP	CRG	9/24/01	8 Drill report	551660.5150.52	.566043
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91859	CI D	CRG	9/18/01	8 Drill report	551660.5150.52	.566043
91009	SEF	CKG	3/10/01	Drilling-Office	331000.3130.32	.300043
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918 <b>58</b>	SLP	CRG	9/17/01	4 Drill logs and plots	551660.5150.52	.566043
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91642	SLP	CRG	6/14/01	8 Assessment report	551660.5150.52	.566043
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91538	SLP	SDM	5/ 6/01	4 Type drill logs	551660.5150.52	.566043
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91404	SLP	CRG	2/ 7/01	8 Logging Core	551660.5150.52	.566043
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91403	SLP	CRG	2/ 6/01	4 Logging core	551660.5150.52	.566043
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l				Drilling-Field		
91348	SLP	CRG	12/21/00	8 Christmas Demob	551660.5150.42	.566043
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91347	SLP	CRG	12/20/00	8 Drill Supervision	551660.5150.42	.566043
				Drilling-Field		A Charles Charles and Charles
91346	SLP	CRG	12/19/00	8 Drill Supervision	551660.5150.42	.566043
1				Drilling-Field		4
91345	SLP	CRG	12/18/00	1 -	551660.5150.42	.566043
1		<u>                                     </u>		Drilling-Field	<u> </u>	
91342	SLP	CRG	12/15/00	8 Drill Supervision	551660.5150.42	.566043
0.072	) ' · · · · · · · ·-	1	12.13/00	Drilling-Field		1.7000.0
91341	SI P	CRG	12/14/00	l • -	551660.5150.42	.566043
31341	J.F	Jones .	12/14/00	Drilling-Field	001000.0100.42	
04000	CI D	CBC	40/40/00	1 ~	EE1680 E180 10	E66042
91339	SLP	CRG	12/12/00	hat a construction of the	551660.5150.42	.566043
				Drilling-Field	554000 5450 15	5000.10
91338	SLP	CRG	12/11/00		551660.5150.42	.566043
1	1	1	1	Drilling-Field		
91337	SLP	CRG	12/10/00		551660.5150.42	.566043
1	1			Drilling-Field		
91336	SLP	CRG	12/ 9/00		551660.5150.42	.566043
[	T	1	]	Drilling-Field		
91334	SLP	CRG	12/ 7/00		551660.5150.42	.566043
1				Drilling-Field		
91333	SLP	CRG	12/ 6/00	1 "	551660.5150.42	.566043
1	I	· · · · = · · · · · · · · · · · · · · ·	1	Drilling-Office		1
91330	SIP	CRG	12/ 4/00	1 9	551660.5150.52	.566043
1 3 3 3 3 5	<u> </u>	101.0	12/4/00	Lithogeochemistry-Office	00 (000.0 (30.02	
01220	SI D	CRG	42/2/0/		551660 5160 52	566043
91328	JOLE	CRG	12/ 3/00	8 Interpretating SLP data	551660.5150.53	.566043

### **Appendix C:**

### **Diamond Drill Logs**

Drill	Grid Co	ordinates	UTM Co	ordinates	Hole Dir	ection	Hole	Casing	Core	Drillin	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo. Rules hut
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
00-SL-01	10340	9435	394857.9	5570745.3	-90°	N/A	757	5	BQ	12/7/00	12/16/00	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foo	tage		Sa	mple	· <del></del>		Pegmatit	e Assays		Lithog	eochemistry	(ppm)	Date Logged:	December 11th, 2000
From	То	Number	From	То	Length	% Ta <sub>2</sub> O <sub>5</sub>	% SnO₂	% Li₂O	% Cs₂O	Li	Rb	Cs	Rock Type	Geology
0.0	5.0												Casing	Bedrock Set-up
5.0	365.3	EX - 12937	16.50	16.80	0.3					40	<10	<1	Mafic Volcanic	Commonly pillowed with rims represented by biotite rich
]		EX - 12938	66.00	66.30	0.3					27	36	24		bands. Weak to moderate foliation @ 5 to 24° to core axis.
1		EX - 12939	115.00	115.30	0.3					17	<10	2		Bands have associated carbonate, garnet, and trace
ł		EX - 12940	157.00	157.30	0.3					14	<10	1		dessiminated pyrrhotite. Amphibole clots up to 2 cm is
1		EX - 12941 EX - 12942	192.00 245.00	192.30 245.30	0.3 0.3					15 13	<10 <10	2		noted in several sections. Unit is fine grained, of uniform texture and medium grey to black in color.
		EX - 12942 EX - 12943	282.00	282.30	0.3					30	23	47		291.9 albite/quartz vein, 2 cm, contacts @ 10° to core axis
]		EX - 12943	342.00	342.30	0.3					28	<10	<1		247.6 albite/quartz vein, 2 cm, contacts @ 14° to core axis
		LX - 12544	342.00	342.00	0.5									250.0 albite/quartz vein, 1 cm, contacts @ 14° to core axis
		]			1 1									Sharp lower contact @ 20° to core axis. Biotite rich.
365.3	385.8	EX - 12945	382.00	382.30	0.3					49	15	13	Gabbro	Medium grained unit with a mottled speckled texture of
1 1		ľ			i i					i				biotite and amphiboles. Possible shear zone. Moderate to
														strong tight foliation @ 20°. Dark gray to black and white.
					[ [				,	•				Quartz and garnet rich lower contact @ 26° to core axis.
1		1			) }									Rounded k-feldspar crystals in a deformed matrix of feldspar
					1						•			and albite. Albite occur as white wispy bands.
385.8	481.3	EX - 12946	406.00	406.30	0.3					47	17	1	Mafic Volcanic	Commonly pillowed with rims represented by biotite rich
1		EX - 12947	450.00	450.30	0.3					109	11	<1		bands. Moderate foliation @ 18 to 22° to core axis. Bands
ľ		i i			i i					ĺ				locally exhibit weak enrichment of albite, calcite and quartz.
] ]		<b>j</b>			; ]		j							Unit is fine grained with a biotite dominant texture. Medium
481.3	500.7	EV 12048	493.00	493.30	0.3					191	<10	3	Gabbro	grey to black in color Fine to medium grained. Coarsely crystalline. Possible flow.
401.3	500.7	EX - 12948	493.00	493.30	0.5					191	10	J	Gabbio	Silica decreases downhole with biotite increasing. Contacts
					1			:						are @ 24° to cax Weak foliation @ 23-25° to cax.
500.7	506.3	EX - 13212	501.00	503.00	2.00	<0.002	<0.01	<0.02	0.19				Pegmatite	White Turtle Pegamtite No. 1
		EX - 13213	503.00	506.00	3.00	<0.010	<0.002	<0.02	0.07				<b>3</b>	Upper contact @ 35° to cax, lower contact @ 28° to cax.
														Contacts are sharp and irregular. Biotite enrichment in host
]		)				İ								at contact. Unit is grey to pink, 1% mica, no garnets, diss.
														aspy. K-feldspar (grey), pockets of smokey quartz. Uniform
1		1			}									coarse grain texture. No zoning.
506.3	513.0									!			Gabbro	Medium grained. Coarsely crystalline. Possible flow. Grey to
<b>i</b> (														black. Sharp but irregular lower contact @ 28° to cax. Mod
]				:	]	ļ	j				]			foliation @ 35° to cax.
513.0	532.9												Mafic Volcanic	Appears basaltic in composition. Dull grey, fine to medium
<u> </u>						ļ		i						grained. Uniform texture. Weak foliation@ 26° to cax. Biotite
	<b>500.0</b>		500.00	504.00	,,,	.0.005	204	-0.00	0.00				D	rich. Sharp lower contact @ 23° to cax
532.9		EX - 13214	532.90	534.00	1.10	<0.005	0.01	<0.02	0.08				Pegmatite	White Turtle Pegamtite No. 2
		EX - 13215	534.00	538.70	4.70	<0.005	0.006	<0.02	0.06					Sugary albite and k-feldspar rich. Feldspar tends to be grey.
		t l			L		[							continued

### Tantalum Mining Corporation of Canada Exploration Diamond Drill Log

Drill	Grid Co	ordinates	UTM Co	ordinates	Hole Di	rection	Hole	Casing	Core	Drillin	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo.
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
00-SL-01	10340	9435	394857.9	5570745.3	-90°	N/A	757	5	BQ	12/7/00	12/16/00	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foo	otage		Sa	mple			Pegmatit	e Assays	I	Litho	geochemistry	/ (ppm)	Date Logged:	December 11th, 2000
From	То	Number	From	To	Length	% Ta₂O₅	% SnO <sub>2</sub>	% Li₂O	% Cs₂O	Li	Rb	Cs	Rock Type	Geology
538.9	589.3	Ex-12949	570.00	570.50	0.50					267	<10	1	Mafic Volcanic	Quartz content approx. 15%, 10% silver to golden colored mica. Alligns with host foliation. Localized graphic texture. Trace black opaque specks. Overall color of the unit is white. No garnets present.  Biotite enriched which appears to be in association with the emplacemnet of pegmatites. Moderate foliation @ 20-25° to core axis. Foliation steepening downhole. Fine grained, grey to black.
589.3	591.0	EX - 13216	587.50	591.00	3.50	<0.009	0.019	<0.02	0.05				Pegmatite	49.2-49.7 Aplite - cross cuts foliation @ 24° to cax  White Turtle Pegamtite No. 3  Sharp upper contact @ 28° to cax. Lower contact @ 40°  Overal grey in color. Crude zoning. Centre a mottled kspar and albite(white). Very low mica, maninly biotite. Overall grey
591.0	603.0	EX-13217	603.20	606.00	2.80	<0.002	0.007	<0.02	0.05				Mafic Volcanic	in color.  Basaltic in composition. Well foliated @ 39-43° to the cax.  Sharp lower contact @ 30°. Grey to black, fine grained,
603.0		EX-13218 EX-13219	606.00 609.00	609.00 612.70	3.00 3.70	<0.01 <0.006	<0.01 0.007	<0.02 <0.02	0.06 0.07				Pegmatite	biotite rich.  White Turtle Pegamtite No. 4  Feldspar pegmatite, unzoned. Comprised of K-feldsapr and albite. Pink garnets, biotite clot, 2% silver to green mica, 4%  Trace pyrites and 1% oxides. Small xtls of green mineral @ the upper contact, apatite. Overall colour a greyish white.
612.9	618.9												Mafic Volcanic	Mica rich shapr lower @ 42° to cax along foliation.  Well foliation @ 40-42°. Sharp lower contact parallel to fol'n @50°, fine grain dk to bk. Increase in biotite, quartz and albite towards pegmatite contact.  Rare garnet associated with the quartz.
618.9	:	EX-13220 EX-13221 EX-13222 EX-13223 EX-13224 EX-13225	618.90 622.60 625.50 628.50 631.20 634.10	622.60 625.50 628.50 631.20 634.10 636.20	3.70 2.90 3.00 2.70 2.90 2.10	<0.002 <0.01 <0.003 <0.01 <0.01 <0.005	<0.002 0.010 0.012 0.008 <0.01 0.010	<0.02 0.02 <0.02 <0.02 <0.02 <0.02	0.04 0.06 0.08 0.06 0.10 0.04				Pegmatite	White Turtle Pegmatite No. 5 Overall white to grey. Crude zoning. 618.9-622.6 Albite zone with 5% silver to gn mica, 0.5% pk gnts, 1% bk specs, 15% qtz. Moderate foliation @ 45-50° 622.6-633.8 K-spar and Petalite zone. Mod breccia and secondary enrichment. Xtls present, mica and albite filling fractures with qtz. Small pockets of bio., may represent the digestion of hot material. No visible foliation. 8-10% secondary mica. Rare garnets present. 1% black specs. 633.8-636.2 Aplite, albite contact, white. 2-3% black specs. Foliation @ 35° cax. Associated gnts accessory irregular way lower contact underterminedcontinued

### Tantalum Mining Corporation of Canada Limited

Exploration Diamond Drill Log

Drill	Grid Co	ordinates	UTM Co	ordinates	Hole Dir	rection	Hole	Casing	Core	Drillin	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo.
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
00-SL-01	10340	9435	394857.9	5570745.3	-90°	N/A	757	5	BQ	12/7/00	12/16/00	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foot	tage		Sa	mple			Pegmatit	e Assays		Lithog	eochemistry	y (ppm)	Date Logged:	December 11th, 2000
From	То	Number	From	То	Length	% Ta₂O₅	% SnO₂	% Li <sub>2</sub> O	% Cs₂O	Li	Rb	Cs	Rock Type	Geology
636.2	681.0												Mafic Volcanic	Moderate foliation 637.0 @ 40°, 642 @ 30°, 647 @ 40°.
		EX-13226 EX-12950	648.60 661.50	649.60 662.00	1.00 0.50	<0.008	0.0	<0.01	0.05	288	<10	<1	Mafic Volcanic	Biotite rich along foliation near pegmatite. Occasional albite stringers along foliation.  White Turtle Pegmatite No. 6 (648.6-649.6)  Moderate foliation @38, irregular contacts. 3-4% bk specs.  Biotite rich, grey to black, fg, strong foliation @37° to cax
681.0	708.5	EX-13227	681.00	682.50	1.50	<0.004	0.0	0.05	0.06				Pegmatite	Occasional apatite rich sections. Sharp bio rich lower ct.  @ 58° to cax, this parallels the foliation orientation.  White Turtle Pegmatite No. 7  Overall grey white. K-spar and petalite. 1-2% larger clots of
		EX-13228 EX-13229 EX-13230 EX-13231 EX-13232	682.50 687.00 692.00 697.00 702.00	687.00 692.00 697.00 702.00 706.00	4.50 5.00 5.00 5.00 4.00	<0.01 <0.01 <0.001 <0.002 <0.002	<0.002 <0.01 0.0 0.0 0.0	0.05 0.05 0.05 0.05 0.07 0.05	0.06 0.06 0.08 0.05 0.06					silvery mica with occasional pale pk gnts along the contact. Small section of sheared material. K-spar is chewed. @681-682.5, 683.9-684.2, 693.9-694.6. Several large biotite and garnet clts @ 683.6-683.9 & 693.9 May represent digested host rk associated with pale wh to
		EX-13233	706.00	708.50	2.50	<0.01	<0.01	0.05	0.06					yellow alternated mineral.  @ 686.6 qtz filled tension fracture alligned along cax. K-sp perpendicular to cax. Sharp lower ct @ 50° to cax alligned parallel to foliation orientation.  Middle section contains randomly oriented biotite, wh, silved green and yellow mica which are foliated.
708.5	757.0	EX-12951	722.00	722.50	0.50					183	14	1	Mafic Volcanic	Well foliated @32° to 40° with decrease downhole. Appea tuffaceous, probable deformed pillow basalts. Small pegmatied (wh sugary albite and k-spar grey) oriente along foliation associated with enriched biotite. The biotite is more predominant on footwall. 724-724.9 K-sp pegmatite along foliation
757.0														ЕОН
														Note: No Acid Tests
			·										,	

#### Tantalum Mining Corporation of Canada Exploration Diamond Drill Log

Drill	Grid Co	ordinates	UTM Cod	ordinates	Hole Dir	rection	Hole	Casing	Core	Drillin	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo. ( Rusleschuk
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
00-SL-02	10435	9320	392684.1	5569411.7	-55°	334°	917	10	BQ	12/18/00	1/12/01	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foot	age		Sa	mple			Pegmatit	e Assays		Lithog	eochemistry	y (ppm)	Date Logged:	January 30th, 2001
From	То	Number	From	То	Length	% Ta₂O₅	% SnO <sub>2</sub>	% Li₂O	% Cs₂O	Li	Rb	Cs	Rock Type	Geology
0.0 10.0	10.0 159.3	EX-12952	37.00	37.15	0.15					31	<10	1	Casing Mafic Volcanic Tuff	Overburden -Volcanic debris Biotite rich cax-12' @ 48°. Mod to strong foliation @ 16' Homogeneous grey unit, biotite eich and increasing in sulphide-rich bands after 65'. Wk foliation 60' @ 35° to cax. 66.5-120.4 Sulfide Mineralization Intermittent silicification weak to moderate, mod to strong
400.4		EX-12956	111.00	111.15	0.15					20	18	3	Ciliais d Massa	foliation. 70' @35°, 81' @ 41°, 96' @ 46°, 100' @48° Silicification along foliation, py and po mineralization along foliation plane, rare magnetite, asp & qtz and albite veinlets parallel to foliation.
120.4	159.3												Silicified Mafic Volcanic Tuff	Silicified, finely laminated, medium to strong folding, mod silicification with local more strongly silicified section.  Silicification decreases towards garnet/ biotite alteration, is a possible displacement due to biotite.  137.8' biotite starts to enrich, and isolated bands of possible grunerite. @ 124' highly silicified MMVT., Stockwork qtz \veinlets, moderate foliation @ 42° to cax.
159.3	176.4	EX-12955	171.00	171.15	0.15					44	43	1 1	Garnet/Biotite Alteration Zone	30-35% pale pink garnet, average 2mm to 2cm. Foliation is Moderate to strong @ 50-56° to cax. Biotite rich matrix Intermittend bands of silicified tuff. 0.5% po mineralization along foliation rare cpy. 0.5-1% +/_ asp.
176.4		EX-12957	200.00	200.15	0.15					51	35	1 1	Mafic Volcanic	Silicification increase away from garnet and biotite alteration
		EX-12958	255.00	255.15	0.15					56	99	64	Tuff	zone with 3-5% brown mica. Well foliated @ 50-54° cax. 192.5-193.8 fault gouge.
256.2	285.6	EX-12460	277.00	277.15	0.15					30	<10	1	Gabbro	Medium grain, grey in colour, begins finer grained. trace py. Spotty silicified sections weak foliation @ 40° to cax. Sharp upper @ 63° to cax gradational lower contact.
285.6	301.7	EX-12962	298.00	298.15	0.15			Ì		72	49	13	Mafic Volcanic	Fine grain grey, massive, intermittent gabbro
301.7	322.8											·	Intermediate Volcanic	Sharp lower contact @ 26° to the cax.  Andesitic in composition. Fine grain to medium grain mod silicification, 1-2% sulfides, asp and po. 2-3% po, cpy and asp along foliation with several po rich semi-massive sections containing biotite, chlorite and garnets.  Pale pink gernets, 1mm to 15mm, with associated grunerite.  Moderate to strong foliation.  306' @ 30°, 320' @ 35°, and 330' @ 48° to cax.  Bed slumping present, movement may be due to sulfides.  Semi massive po, cpy and asp. 10% garnet with biotite and chlorite continued

### Tantalum Mining Corporation of Canada Exploration Diamond Drill Log

Drill	Grid Co	ordinates	UTM Co	ordinates	Hole Dir	rection	Hole	Casing	Core	Drilling	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo. CRMelinchuk
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
00-SL-02	10435	9320	392684.1	5569411.7	-55°	334°	917	10	BQ	12/18/00	1/12/01	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foo	tage		Sa	mple			Pegmatit	e Assays		Lithog	eochemistr	/ (ppm)	Date Logged:	January 30th, 2001
From	То	Number	From	То	Length	% Ta₂O₅	% SnO <sub>2</sub>	% Li₂O	% Cs₂O	Li	Rb	Cs	Rock Type	Geology
327.8 362.8	362.8 372.8	EX-12964	340.00	340.15						39	31	5	Iron Formation	Silicified Iron formation Sharp upper ct @ 43° to cax. Well banded with chert and magnetite, highly mag. Grunerite present along band rims. Localized garnet accumulation. 0.5% diss po and py with local asp up to 2%. Wisps of albite present, bands @ 48-50° to cax. Silicified Mineralized
														10-15% asp and po with minor cpy. Mineral orientation is along foliation. Occassional garnets, possible tuffaceous, bed slumping.
372.8	396.7	EX-12968	398.00	398.15						297	18	7		Chlorotized in part rhyolitic. 10% x-cutting fractures, 15% magnetitic bands with garnet. Mod to strong foliation @ 46° to cax. Lt grey with green and black bands, fine to very fine grained. Weak mineralization associated with the magnetite and garnet bands. Clots of black and green amphibole, occasional grunerite.
396.7	448.0	EX-12969	414.00	414.15						22	<10	<1	Rhyodacite Tuff	Well foliated, bedded @ 45-50° to the cax. Angles increase downhole 6-8% po + py +/- asp +/- cpy. Mineralization is oriented along foliation. Colour is dk grey and fine grained. Generally moderately magentic due to the po content. Sharp lower content @ 70° to cax. Component of BIF tends to be unmineralized.
448.0	459.1	EX-12792	452.00	452.15						96	<10	1	Gabbro	15-20% coarse homblend. Medium to coarse grain green to grey. Tr asp. Tight mod foliation @ 55-60° to cax Gradational lower contct chilled.
459.1		EX-12973	466.00	466.15						131	13			Medium grained, grey with specs of mafic and felsic. 3-5% biotite disseminated enrichment, trace py minerals, tight
530.0	769.7	EX-12975 EX-12976 EX-12977	526.00 576.00 628.00	526.15 576.15 628.15						95 33 37	93 <10 <10	31 <1 <1		mod foln. 470 @ 60°, 480 @ 63°, 507 @ 60° & 526 @ 64°.  Mafic meta volcanics and meta volcanic tuffs 530-573- Intermittent rafts of dioritic. Numerous biotite
	į į	EX-12978	679.00	679.15						42	<10	5		bands with occasional po. Mod foliation @ 58-64° to cax Possibility of a marine deposition all environment, due to the discontinuous nature of the bands, thus a mudstone or a tuff. A mafic tuff of basaltic composition in a marine environment, mud influence as suggested by the biotite enrichment. Several clasts, fine grain to very fine grained with foliation. Bio bands decrease downhole, rare after 630' and increase again after 678'.

Tantalum Mining Corporation of Canada Limited Exploration Diamond Drill Log

Drill		ordinates	<del> </del>	ordinates	Hole Di	rection	Hole	Casing	Соге	Drillin	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo. Release hack
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
00-SL-02	10435	9320	392684.1	5569411.7	-55°	334°	917	10	BQ	12/18/00	1/12/01	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foo	tage		Sa	mple			Pegmatit	e Assays	······	Lithog	jeochemistr	y (ppm)	Date Logged:	January 30th, 2001
From	То	Number	From	То	Length	% Ta₂O₅	% SnO₂	% Li <sub>2</sub> O	% Cs₂O	Li	Rb	Cs	Rock Type	Geology
769.7	864.1	EX-12979	728.00 802.00	728.15 802.15						130	13	<1	Silicified Mafic Volcanic	623.7-627.4 Mineralization bands@ 54° to cax5% dis. Po with a preferred orientation aoing foliation. 658 foln @ 58°, 680 foln @ 65°, 700 foln @ 68°, 720 foln @ 65°, 740 foln @ 58°750 foln @ 60°, 756 foln @ 56° 678-683 several quartz and albite flooding parallel to banding 685-758.3 numerous f silica flooding. Commonly 15-20% po mineralization associated with silica flooding as well as occasional small garnets, quartz, albite and K-spar. Biotite bands not as numerous. Trace to 0.5% po and asp Mineralization tends to be pervassive. 758.3-760.5 mineralized zone 3-5% po along foliation tight foliation @ 55° to cax, but appears variable. Generally silicified with zones of mineralization 769.7-778.4 Semi-massive zone, high silica, weak breccia, moderated to well banded. 50-60% py +po+/- cpy +/- asp. 772-high silica. 778.4-777.7 no silica or sulfides, moderate foliation @ 55° to cax. 770-784.8 mod silicification, 1-2% py+po+/- asp, along foln. 784.8-786.1 Semi massive py+po 786.1-796.2 Mod silicified mafic volcanics. 0.5-1% po+py+/cpy+/-asp to cax @ 64°. Small irregular veinlets of K-spar. Green silicification, 1-2% po in clots. 797.5-807.9 wk silica mod biotite, trace po +py. 807.9-817.5 moderate to high Sil. 8-10% po+py+cpy +/- asp, along foln. Cax @ 52° x-cutting fractures. Mod biotite enrichment up to 6% @ 812'. 817.5-822 weak silica and foliation controlled by po+py. 822-831.3 Mod silica. 0.5% sulfides, accumul in small segments 1-2% to cax. 10-15%, biot alteration. 831.3-832.4 simple peg Ksp rich, brecciated, ground and missing contacts. 2-3% sulfides of po and asp. Silver mica and smokey quartz. 843.4-848.9 moderate silicification, tr sulfides 10-15% biot enrichment cax @ 66° 848.9-864.1 wk silicified silica, 1% garnets alteration along foliation. Sil tends to
864.1		EX-12985 EX-12986	868.00 916.00	868.15 916.15						38 34	<10 <10	3 1		be banded, occasional clasts. Fine grain grey, tight wk foln @ 890 @ 63° and 915 @70° Biotite rich, possibly tuffaceous
917.0				* *		ı								EOH Acid Test @ 207 = 55.5° Acid Test @ 407 = 50° Acid Test @ 917 = 41°

## Tantalum Mining Corporation of Canada Exploration Diamond Drill Log

Drill	Grid Co	ordinates	UTM Cod	ordinates	Hole Di	rection	Hole	Casing	Core	Drillin	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo. Roleschuk
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
01-SL-01	10425	9200	392700.8	5569528.2	-75°	334°	697	10	BQ	1/13/01	1/17/01	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foo	tage		Sa	mple			Pegmatit	e Assays		Lithogeochemistry (ppm)		Date Logged:	February 4th, 2001	
From	То	Number	From	То	Length	% Ta₂O₅	% SnO <sub>2</sub>	% Li <sub>2</sub> O	% Cs₂O	Li	Rb	Cs	Rock Type	Geology
0.0 10.0	10.0 14.0	EX-12987	12.00	12.15	0.15					2004	160	94	Casing Mafic Intrusive	Gabbroic, moderately chewed up and gossan along broken planes.
14.0	29.1	EX-13234 EX-13235 EX-13236	14.00 19.7 25.00	19.70 25 29.10	5.70 5.30 4.10	0.024 0.013 <0.002	0.018 0.005 <0.01	0.14 0.07 0.05	0.18 0.31 0.13					Micaceous and destroyed upper ct, lower ct ground away Host at lower ct K-spar disseminated along foliation planes, Planes have mod foliation @ 60° to cax. 14-19.7 Ksp,mica quartz, albite. Breccia 15-20% x-cut fractures filled. Books of mica (15-20%). 19.7-24.1 Kspar zone, 1-2% diss mica Kspar, quartz and mica, clots of yellow mica. Granitic texture.
29.1	45.3	EX-12988	32.00	32.15	0.15					225	15	2	Diorite	Med grain, dark greyish green amphibolite x-tals, interwoven with quartz and feldspar. Xenoliths of the diorite are found in lower gabbroic unit. Sharp lower contact @65° to cax.
45.3 213		EX-12989 EX-12990 EX-12991	82.00 135.00 191.00	82.15 135.15 191.15 250.15	0.15 0.15 0.15 0.15					157 72 128 128	71 <10 34	1	Mafic Volcanic	Medium grained gabbroic unit, greyish-green amphibole. Hypidiomorphic. Possible coarse flow. Weak foliation. Unit is very uniform, rare sulfides in the x-cutting fractures. 47.9-50.5 K-spar pegmatite, whitish-grey with tr of po clots. Upper contact @ 55° to cax. Contact @ 78° to cax. Increase in foliation around 197' @ 30° to cax. Grad and highly foliated lower contact @ 30° cax, biotite rich bands. Wkly to modified silicification. Moderate banding/foliation @
		EX-12993 EX-12996 EX-12994 EX-12995 EX-12997	300.00 350.00 400.00 450.00 510.00	300.15 350.15 400.15 450.15 510.15	0.15 0.15 0.15 0.15 0.15					39 119 230 137 125	<10 41 <10 <10 41	2 29 5 <1 21		237@36°, 257 @ 35°, 360@40°, 282@35°, 326@35°, 520@45°, 530@43°, 550@40°. Several albite veinlets along foliation. 230-240 weakly mineralized zone. 0.5% po along foliation. 252.1-252.3 coarse grain well foliated, albite and biotite veinlets @ 46° to cax. Contact is slightly oblique to foliation @ 34° to the cax. 262-262.4 broken core, calcite. core, small fragments mica-rich some albite, quartz weak to moderate rust. Sulfide content and quartz stringers with associated po + cpy and silicification increas down the hole associated white quartz secondary enrichment. 512-513.5 broken core, chloritic broken ends. 515 - 551.8 , x-cutting blakc line, healed faults. Offset noted from 1 cm to greater, on the northside up reverse faults, orientated @ 20-25° to cax Another x-cutting set with cax @ 50° shows greater than measurable displacements.
						İ								continu

Drill	Grid Co	ordinates	UTM Co	ordinates	Hole Di	rection	Hole	Casing	Core	Drillin	g Dates	Claim	Logged By:	Carey Galeschuk, P.Geo. Releated
Hole I.D.	Easting	Northing	Easting	Northing	Inclination(°)	Azimuth(°)	Length(ft)	Depth(ft)	Size	Start	Finish	Number	Drilled By:	Thor Drilling
01-SL-01	10425	9200	392700.8	5569528.2	-75°	334°	697	10	BQ	1/13/01	1/17/01	K 1178296	Core Storage:	Tanco Minesite, Bernic Lake, Manitoba
Foo	otage		Sa	mple			Pegmatit	e Assays		Lithog	eochemistry	y (ppm)	Date Logged:	February 4th, 2001
From	То	Number	From	То	Length	% Ta <sub>2</sub> O <sub>5</sub>	% SnO₂	% Li₂O	% Cs <sub>2</sub> O	Li	Rb	Cs	Rock Type	Geology
551.8 555.5 565.6	555.5 565.6 579.6	EX-12998	563.00	563.15	0.15					80	<10	<1	Mafic Volcanic	Sulfide rich iron formation. Well banded @ 52°, some weak bed slumping. 5-6% po + py with clots of aspy.  Sulphides alligned aling banding planes.  Fine grey, grey to black, with numerous biotite bands orientated at 42°-45° to the cax  Moderate to highly silicified, 15-20% po +/-py+/-cpy+/-aspy
579.7 593.8	593.8 620.9												Mafic Volcanic Gabbro	cax 50-55°. Sharp lower contact @ 50° paralle to foliation. Upper contact @ 45° slightly oblique to foliation and cuts it, not cross cuts. Fine grey, grey to black, with numerous biotite bands, non-silicified, occasional bands of sulfides (po) biotite and quartz, @ 58-60° to cax. Silicification increases as does sulfides. Gradational lower contact. Dark, medium grained, possible coarse volcanic flow. Small clasts of volcanics up to 1cm. Gradational lower
620.9	643.2	EX-13237	612.80	613.90	1.10	<0.01	<0.002	<0.02	0.06				Mafic Volcanic	lower contact. 612.8-613.9 simple pegmatite. K-spar (white and pink) qtz +/- po. Sharp upper ct @ 72°, Sharp lower contact @ 60°. Tight foliation @ 50° to cax Fine grained with medium grained section. Grey in colour. Weak to moderate banding. Tight foliation @ 50° to cax Sharp lower contact @ 48° 621.8-622.2 Simple Pegmatite Upper contact @ 78° x-cuts foliation, lower contact @ 60° to cax and x-cuts foliation
643.2 697.0		EX-12999 EX-13000	658.00 690.00	658.15 690.15	0.15 0.15					44 27	<10 <10	<1 <1	Mafic Volcanic Tuff	Tuffaceous unit, fine grained and grainy, medium grey Fragments controlled by bedding. 2-3% garnets up to 2mm 1% diseminated po along bedding. Occasional fragments of biotite bands, rare to occasional convulute beds, texture appears to be varve like(not consistant). Several sections up to 20cm of silicification (highly) with bands of 1 % po+py mineralization.
091.0	ì									. '				E.O.H.  Acid Test @ 10 ft = -74.5°  Acid Test @ 357 ft = -68°  Acid Test @ 697 Ft = -64°

### Appendix D:

# **Bondar-Clegg Laboratories**

# **Downhole Lithogeochemical Assays**





### Geochemical Lab Report

		NONE	UM MINING CORPORAT GIVEN	TON OF CANADA LID.		IVED: 20-MAR-01		BY: UNKNOWN PRINTED: 3-APR-01
DATE	OF	DER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION	LIMIT EXTRACTION		METHOD
010402	! 1	Li	Li - GA30	49	1 PPM	HF-HNO3-HCLO	4-HCL	ATOMIC ABSORPTION
010402	2	cs cs	NA40 Subcontra	actor 49	1 PPM			NEUTRON ACTIVATION
010402	3	RB	Rb-NA40Subcont	ractor 49	10 PPM			NEUTRON ACTIVATION
	SAM	IPLE TY	PES NUM	IBER SIZE F	RACTIONS	NUMBER	SAMPLE	PREPARATIONS NUMBER

REPORT COPIES TO: MR. CAREY GALESCHUK

INVOICE TO: MR. CAREY GALESCHUK

This report must not be reproduced except in full. The data presented in this report is specific to those samples identified under "Sample Number" and is applicable only to the samples as received expressed on a dry basis unless otherwise indicated

Bondar Clegg Canada Limited 130 Pemberton Avenue, North Vancouver, BC, V7P 2R5, Canada Tel: (604) 985-0681, Fax: (604) 985-1071





Geochemical Lab Report

CLIENT: TANTA	0508.0 ( COMPLETE )				VED: 20-MAR-01	PROJECT: NONE GIVEN DATE PRINTED: 3-APR-01 PAGE 1 OF 3				
SAMPLE	ELEMENT	Li	CS	RB	SAMPLE	ELEMENT	Li	CS	RB	
NUMBER	UNITS	PPM	PPM	PPM	NUMBER	UNITS	PPM	PPM	PPM	
D2 EX-12937		40	<1	<10	D2 EX-12992	***************************************	105	6	18	
D2 EX-12938		27	24	36	D2 EX-12993		39	2	<10	
D2 EX-12939		17	2	<10	D2 EX-12994		230	5	<10	
D2 EX-12940		14	1	<10	D2 EX-12995		137	<1	<10	
D2 EX-12941		15	2	<10	D2 EX-12996		119	29	41	
D2 EX-12942	***************************************	13	1	<10	D2 EX-12997		125	21	41	
D2 EX-12943		30	47	23	D2 EX-12998		80	<1	<10	
D2 EX-12944		28	<1	<10	D2 EX-12999		44	<1	<10	
D2 EX-12945		49	13	15	D2 EX-13000		27	<1	12	
D2 EX-12946		47	1	17						
D2 EX-12947	******************************	109	<1	11						
D2 EX-12948		191	3	<10						
D2 EX-12949		267	1	<10						
D2 EX-12950		288	<1	<10						
D2 EX-12951	***************************************	183	1	14						
D2 EX-12952		31	1	<10	•••••••••••••••••••••••••••••••••••••••				***************************************	
D2 EX-12955		44	5	43						
D2 EX-12956		20	3	18						
D2 EX-12957		51	22	35						
D2 EX-12958		56	64	99		,				
D2 EX-12960		30	1	<10						
D2 EX-12962		72	13	49						
D2 EX-12964		39	5	31						
D2 EX-12968		297	7	18						
D2 EX-12969		22	<1	<10						
D2 EX-12972		96	1	<10						
D2 EX-12973		131	14	13						
D2 EX-12975 D2 EX-12976		95 33	31	93 <10						
D2 EX-12976 D2 EX-12977		33 37	<1 <1	<10						
UZ EX-12977										
D2 EX-12978		42	5	<10						
D2 EX-12979		146	7	30						
D2 EX-12984		130	<1 -	13						
D2 EX-12985		38	3	<10						
D2 EX-12986		34	1	<10						
D2 EX-12987		2004	94	160	.,					
D2 EX-12988		225	2	15						
D2 EX-12989		157	23	71						
D2 EX-12990		72	<1	<10						





### Geochemical Lab Report

CLIENT: TANTA	LUM MINING C	PROJECT: NONE GIVEN								
REPORT: VO1-0	00508.0 ( COM	PLETE )		DATE RECEIVE	ED: 20-MAR-01	DATE PRINTED:	3-APR-01	-01 PAGE 2 OF 3		
STANDARD NAME	ELEMENT UNITS	Li PPM	CS PPM	RB PPM	STANDARD NAME	ELEMENT UNITS	Li PPM	CS PPM	RB PPM	
S2 Sulphide F	eldspar	-	<1	<10						
Number of Ana	alyses	-	1	1						
Mean Value		-	0.5	5.0						
Standard Devi	ation	-	-	-						
Accepted Valu	je	_	-	-						
CANMET LKSD-2		24								
Number of Ana		1	_	-						
Mean Value	11,303	23.8	_	-						
Standard Devi	ation	-	_							
Accepted Valu		-	-	-						
	***************************************									
ANALYTICAL BL		<1	-	-						
ANALYTICAL BL		<1	-	-						
Number of Ana	ılyses	2	-	-						
Mean Value		0.5	-	-						
Standard Devi	ation	0.00						.,		
Accepted Valu	 le	<1	<1	<1						
GS91-1		33	1	40						
Number of Ana	lyses	1	1	1						
Mean Value		33.3	1.2	40.0						
Standard Devi	ation	-	-	-						
Accepted Valu	ie	32	-	-						



CLIENT: TANTALUM MINING CORPORATION OF CANADA LTD.



PROJECT: NONE GIVEN

### Geochemical Lab Report

		00508.0 ( COM				D: 20-MAR-01	DATE PRINTED:			3 OF 3
SAMI		ELEMENT	Li	cs	RB	SAMPLE	ELEMENT	Li	CS	RB
NUME		UNITS	PPM	PPM	PPM	NUMBER	UNITS	PPM	PPM	PPM
EX-	12945		49	13	15					
Dupl	licate		58							
EX-	12946		47	1	17					
Dupl	licate	***************************************		1	<10					
EX-1	12972		96	1	<10	······································				*****
Dupl	licate		86							
EX-1	12997		125	21	41					
Dupl	licate		134							

# Appendix E:

# **Analytical Methods**



Please find below our analytical techniques for Neutron Activation Analysis and "Atomic Absorption."

#### **NEUTRON ACTIVATION ANALYSIS**

Procedure: A sample of material is exposed to (irradiated in) a flux of neutrons, usually by inserting it into the core of a nuclear reactor. Most of the elements in the sample become radioactive and begin to emit radiation in the form of penetrating gamma-rays whose energies (or wavelengths) are characteristic of particular elements. The sample is removed from the neutron flux and placed close to a gamma-ray detector, which is commonly a germanium crystal held at liquid nitrogen temperature. The gamma-rays radiate continuously and the interaction of these with the detector produces discrete voltage pulses which are proportional in height to the incident gamma-ray energies. Our specially developed multichannel analyzers sort out the voltage pulses from the detector according to size and digitally constructs a spectrum of gamma-ray energies versus intensities. By comparing spectral peak positions and areas with library standards, the elements constituting the sample are qualitatively and quantitatively identified. The concentration of the elements are then computed and the data reports prepared.

### ATOMIC ABSORPTION SPECTROSCOPY

Following the dissolution of the sample with aqua regia. AAS is an instrumental method of analysis in which a sample that has been put into an aqueous solution is aspirated into the flame of the instrument for measurement of the concentration of the element(s) of interest. A light source emits light at the wave length of the element to be measured in a beam that passes through the flame. The atoms of the element in the flame absorb the light in proportion to the concentration of the element in the sample solution. This absorption is compared to those measured when a series of standard solutions has been aspirated in order to estimate the concentration of the element in the sample solution.

Should you need additional information, please contact me at (604) 985-0681.

Sincerely,

Rick McCaffrey

Manager, Geochem Department

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# Appendix F:

# **Statement of Qualifications**

#### Statement of Qualification:

I, Carey R. Galeschuk, reside at the following address:

Box 427 16 Aberdeen Street Pinawa, Manitoba R0E 1L0

Telephone: (204) 753-2022

I hereby state that I am the person responsible for the preparation of this report and the supervision of the work performed as mentioned. I am currently employed by the Tantalum Mining Corporation of Canada Limited as a Project Geologist, and have been since January 30<sup>th</sup>, 1996.

Following is my employer's address:

Tantalum Mining Corporation of Canada Limited PO Box 2000
Lac du Bonnet, Manitoba
R0E 1A0
Teler

Telephone: (204) 884-2400 extension 230

Fax: (204) 884-2211

I am a 1988 graduate of the University of Saskatchewan in Saskatoon, Saskatchewan with a Bachelor of Science (Advanced) degree in Geological Sciences. I have practiced my profession as a geologist since my graduation for numerous companies involved in the exploration of industrial, base and precious metals in Canada.

I am a registered Professional Geoscientist in the provinces of Saskatchewan and Manitoba. As well, I am a Fellow member with the Geological Association of Canada and the Society of Economic Geologists. I also hold memberships in the Association of Professional Geoscientists of Ontario, Association of Exploration Geochemists, Manitoba Prospectors and Developers Association , and the CIM (Winnipeg Chapter and National member).

My Ontario Prospecting License Number is H 13984

C.R. Galeschuk, B.Sc., P.Geo.

Project Geologist October 10<sup>th</sup>, 2001



### **Work Report Summary**

Transaction No:

W0110.30954

Status: APPROVED

Recording Date:

2001-OCT-22

Work Done from: 2000-DEC-04

Approval Date:

2001-NOV-16

to: 2001-JAN-18

Client(s):

138329

GOSSAN RESOURCES LIMITED

199962

TANTALUM MINING CORPORATION OF CANADA LIMITED

Survey Type(s):

**ASSAY** 

**PDRILL** 

Cla	aim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
ĸ	1133795	\$0	\$0	\$1,600	\$1,600	\$0	0	\$0	\$0	2003-OCT-29
K	1178296	\$69,006	\$69,006	\$6,400	\$6,400	\$13,165	13,165	\$49,441	\$49,441	2003-JUN-05
K	1178574	\$0	\$0	\$1,401	\$1,401	\$0	0	\$0	\$0	2003-JAN-17
K	1178575	\$0	\$0	\$564	\$564	\$0	0	\$0	\$0	2003-JAN-17
Κ	1178866	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2003-JAN-20
Κ	1220669	\$0	\$0	\$8,000	\$8,000	\$0	0	\$0	\$0	2003-OCT-29
Κ	1220915	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2003-OCT-29
		\$69,006	\$69,006	\$19,565	\$19,565	\$13,165	\$13,165	\$49,441	\$49,441	-

Status of claim is based on information currently on record.



PATERSON LAKE

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Date: 2001-NOV-19



GEOSCIENCE ASSESSMENT OFFICE 933 RAMSEY LAKE ROAD, 6th FLOOR SUDBURY, ONTARIO P3E 6B5

TANTALUM MINING CORPORATION OF CANADA L P.O. BOX 2000 LAC DU BONNET, MANITOBA R0E 1A0 CANADA

Tel: (888) 415-9845 Fax:(877) 670-1555

Dear Sir or Madam

Submission Number: 2.22278 Transaction Number(s): W0110.30954

#### **Subject: Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact LUCILLE JEROME by email at lucille.jerome@ndm.gov.on.ca or by phone at (705) 670-5858.

Yours Sincerely,

Ron Gashinski

Supervisor, Geoscience Assessment Office

mc codin

Cc: Resident Geologist

Carey Rus Galeschuk

(Agent)

Assessment File Library

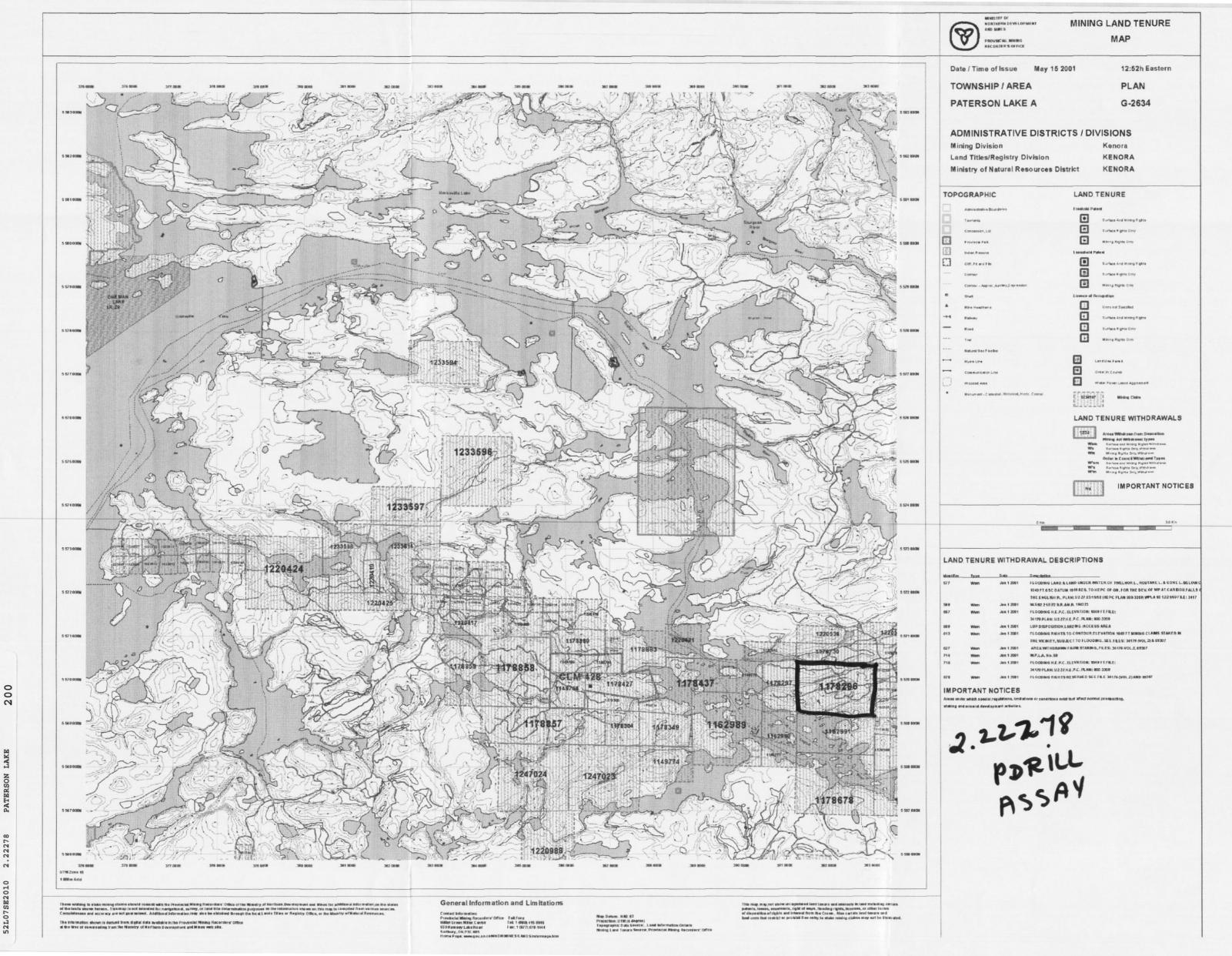
Gossan Resources Limited

(Claim Holder)

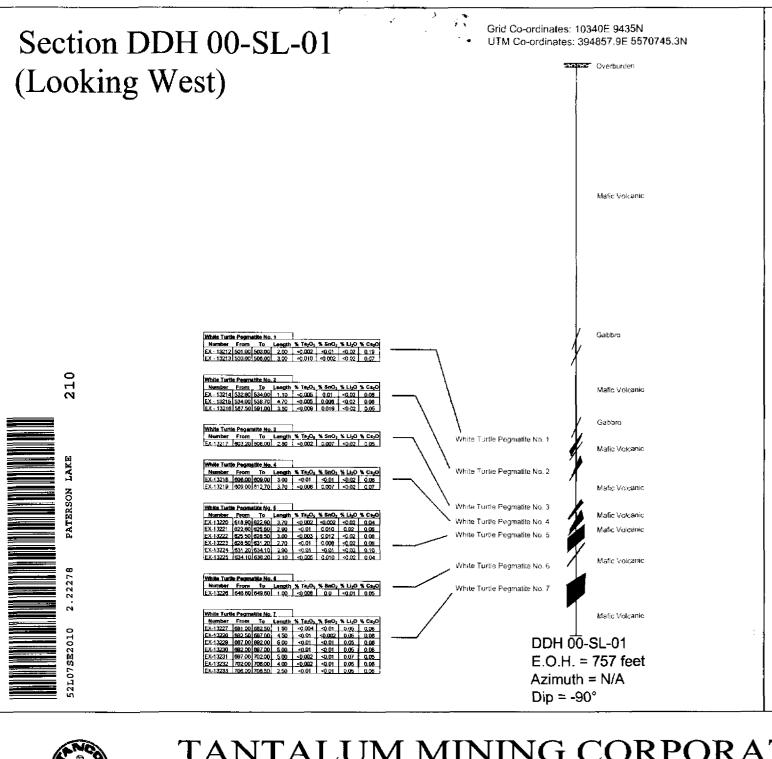
Tantalum Mining Corporation Of Canada Limited Tantalum Mining Corporation Of Canada Limited

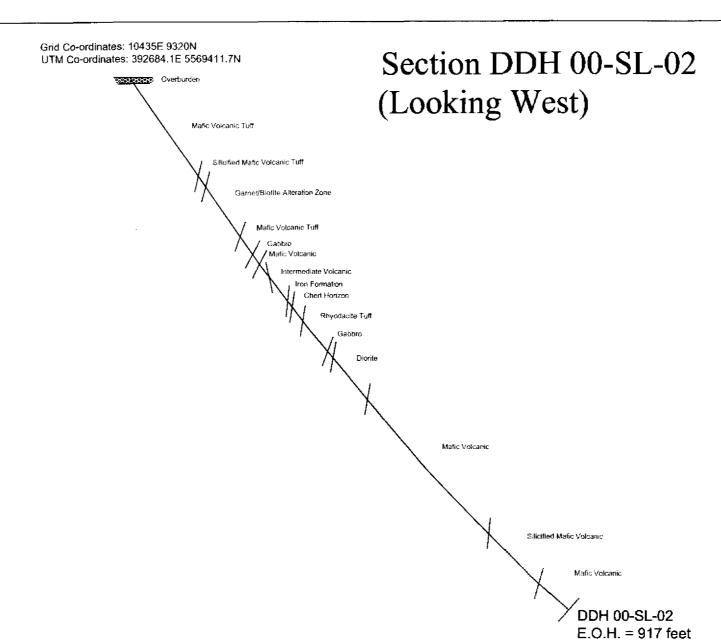
(Claim Holder)

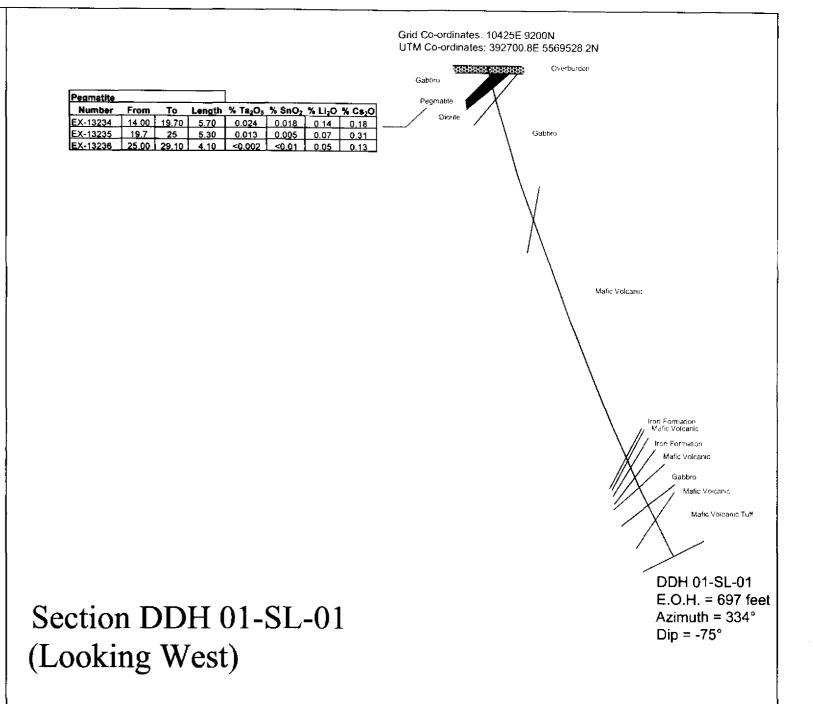
(Assessment Office)



2.2278 PATERSON LAK









# TANTALUM MINING CORPORATION OF CANADA LIMITED

# SEPARATION LAKE PROJECT

Diamond Drill-hole Sections (DDH 2000-2001)

### **DRAWN BY**

CAREY GALESCHUK, PROJECT GEOLOGIST

### DATE DRAWN

October 10th, 2001

#### LOCATION

SEPARATION LAKE, NW ONTARIO

### **NTS SHEETS**

 $Dip = -55^{\circ}$ 

Azimuth = 334°

52L/7

### **CLAIM NUMBER**

K 1178296 (PATERSON LAKE G-2634)

### MAP NUMBER

MAP 2 0F 2

