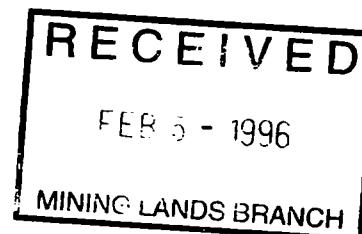




010

**REPORT OF WORK  
GEOCHEMICAL SURVEY  
WHITE LAKE PROJECT (2000)**

**2.163 94**



**Submitted by:**

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Royal Oak Mines Inc.

Timmins, Ontario  
December 1995



010C

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## 1.0) Summary

A geochemical sampling program of both the humus and "B" horizon soils was conducted on the White Lake property on the east side of the White Lake narrows during the summer of 1995. A total of 1,165 humus horizon and 281 "B" horizon soil samples were collected. The humus horizon was very consistent throughout the property. The "B" horizon, however, was very inconsistent. It was not possible to get a "B" horizon sample in some locations, and colour and texture of samples varied widely from location to location.

Analysis of the samples revealed anomalous values in Au and other elements in both humus and "B" horizon material, but especially in humus horizon soil. Values of up to 707 ppb Au were returned from humus. The highest "B" horizon sample analysis was 12 ppb Au.

This geochemical survey was very successful in finding areas of anomalous mineralization in soils. Additional field work is required to further delineate and uncover the source of these anomalies.

## 2.0) Introduction

The White Lake property was optioned from T. Carroll and D. MacDougall by Royal Oak Mines Inc. in January 1995. During the summer of 1995, a grid was cut and ground magnetics and VLF-EM geophysical surveys, humus and "B" horizon soil sampling and mapping were carried out on the land portion of the property. This report documents the soil geochemistry program.

## 3.0) Property Location and Access

The property is located 32 km west of the town of White River and 26 km east of Hemlo in the Thunder Bay Mining Division (Figure 1). It includes portions of White Lake and surrounding land just north of Highway 17. The property consists of 134 claim units in 13 contiguous unpatented claim blocks (Figure 2). An inventory of claims is found in Appendix A.

Access to the property is via Highway 17 to the boat launch on the west side of White Lake and then by boat to the property.

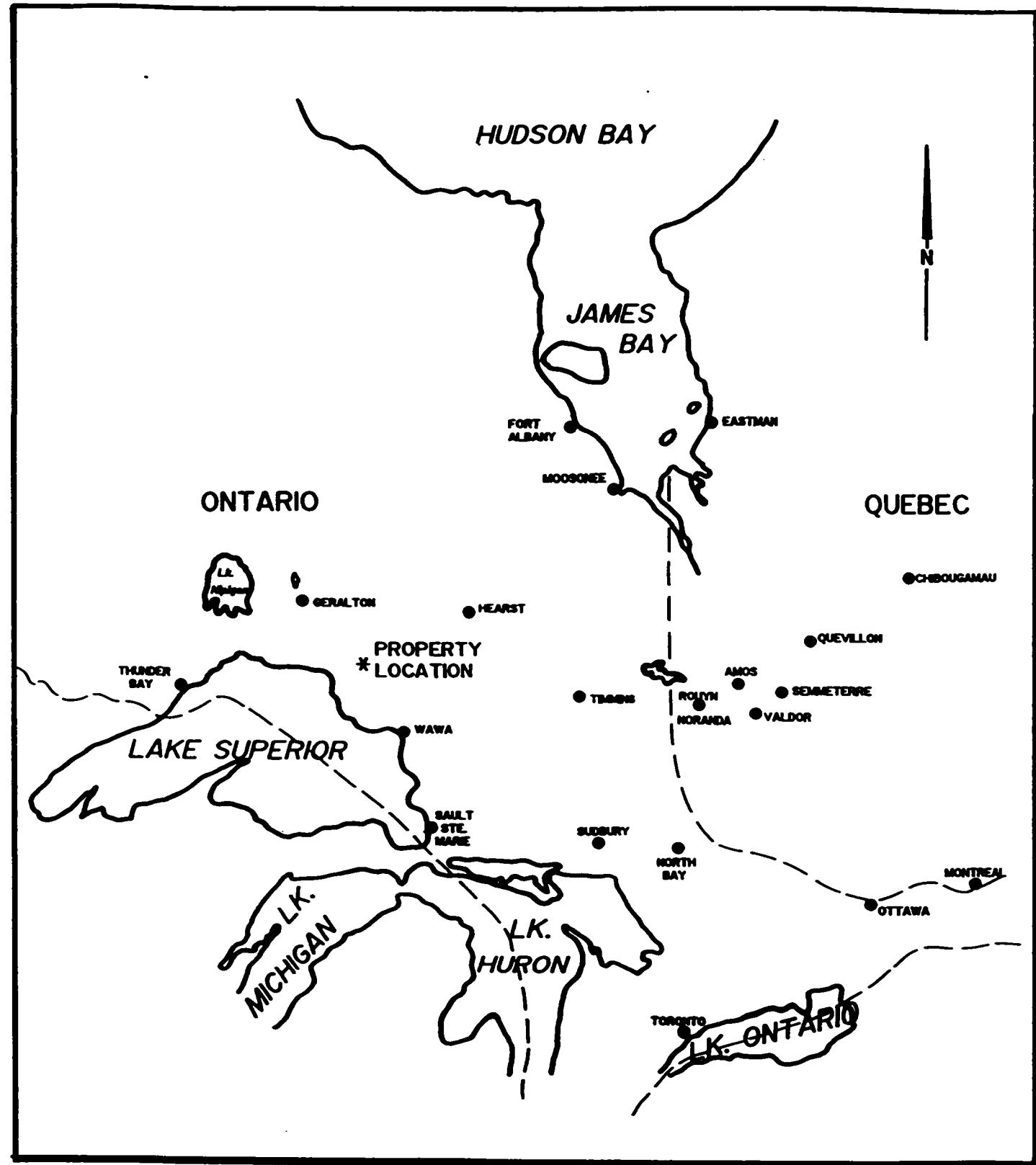


Figure 1: Location Map

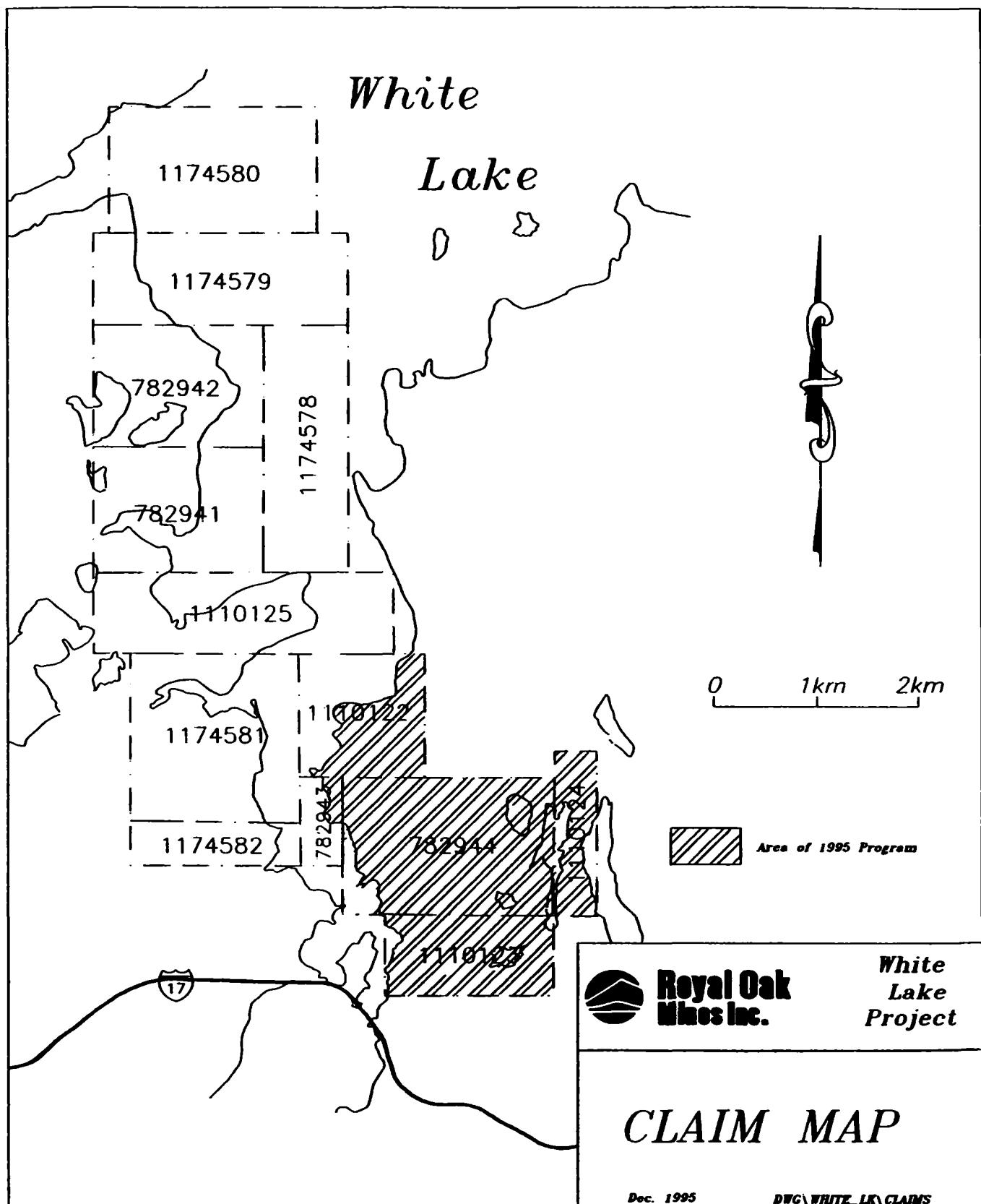


Figure 2: Claim Map

#### **4.0) Topography and Vegetation**

The majority of the property is comprised of claims in White Lake. The land portions of the property consist of rolling hills rising from the lake and generally ending in cliffs of 2-30m. The maximum relief is approximately 50m. Swampy and flat terrain is also prevalent. A few smaller lakes and ponds are contained within the property.

The higher areas are covered by large poplar, birch and spruce, and smaller fir and spruce trees with local undergrowth of scrub maple and tag alder. Low lying areas contain cedar, tag alders and black spruce. Locally spruce budworm has devastated the trees and areas of deadfall are common.

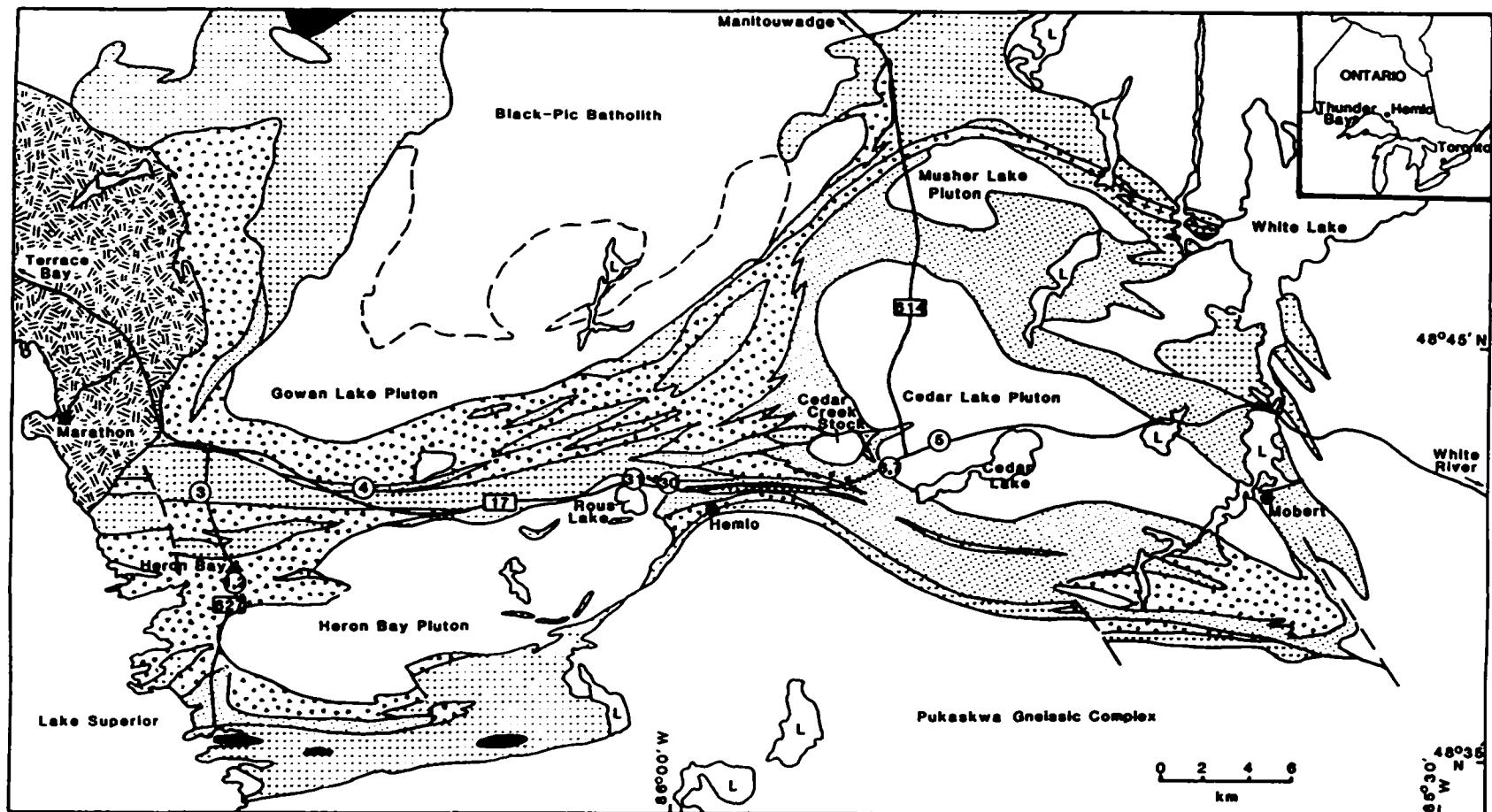
#### **5.0) Regional Geology**

The White River property lies within the Heron Bay-Hemlo portion of the Schreiber-Hemlo greenstone belt in the Wawa subprovince of the Superior Province (Muir, 1983). This greenstone belt is composed of Archean metavolcanic and metasedimentary rocks surrounded by the regional granitic rocks and runs approximately east-west (Figure 3). The property region is underlain by tholeiitic and mafic metavolcanics and metasediments with intermediate and felsic intrusives. Late intrusives consist of lamprophyre and diabase dikes. The metamorphic grade ranges from greenschist to amphibolite facies. A dominant north-northwest schistosity is found in this area.

#### **6.0) Previous Work**

From March 2 to June 14, 1983, Aerodat Ltd. conducted airborne (helicopter) magnetic, HEM and VLF-EM geophysical surveys over the Hemlo region, including the White Lake property. Golden Terrace Resources Corp., Dunes Exploration Corp., and Brass Ring Resources Ltd. purchased sections of the data over the property and submitted them for assessment work.

During 1982 and 1983, Transpacific Asbestos Inc. and Consolidated Reactor Uranium Mines Ltd. cut a grid on the land portion of their property, overlapping a part of the present property. In the fall of 1983, a "B" horizon soil survey was conducted. In the winter of 1983-1984, a grid was laid out over the lake. Using this grid, they completed 9.9 km of I.P. and property magnetic and VLF-EM geophysical surveys.



Archean  
Mafic Metavolcanics

Intermediate to Felsic Metavolcanics and Related Metasediments

Metasediments

Archean  
Granitoids

Mafic Intrusions

Ultramafic Intrusions

Proterozoic  
Coldwell Complex (alkaline)

Field Trip Stop (numbers 8 to 20 not shown for clarity; see Figure 6)

Headframe: Hemlo Deposit

Lake

**Figure 3: Regional Geology (Muir et al., 1995)**

Golden Shield Resources Ltd. completed exploration in 1983 and 1984 on their property, which is located in the east-central region of the land portion of the White Lake property. They conducted geological mapping, VLF-EM and magnetic geophysical surveys and a "B" horizon soil survey.

During the summer and fall of 1984, Golden Terrace Resources Corp. conducted exploration of their property, which overlaps the southern part of the present property. Work included geological mapping, humus horizon soil sampling and hand stripping.

## 7.0) 1995 Soil Survey

### 7.1) Linecutting

A total of 32.1 km of gridline was cut between June 14 and July 2, 1995. Baselines and tielines are orientated at 341°, with lines at 241°. Lines were cut every 200m, except for a northern portion of the grid where they were cut 100m apart. All grid lines are chained at 25m intervals and labelled with metal tags.

### 7.2) Regional Surficial Geology

The last major glacial advance in the Hemlo region was from the north-northeast (Geddes and Kristjansson, 1986). It deposited two main tills. The lowermost till represents the early erosion of local bedrock. The calcareous, exotic till present above the local till represents glacial melt and deposition of distantly transported and reworked glacial debris. Geddes and Kristjansson (1986) divide the area into three surficial terrain types. Type 1 has a thin layer of glacial drift mainly locally derived. Type 2 has a thick and complex sequence of tills. The base till is discontinuous and sporadic and is mainly locally derived. This is overlain by a thick calcareous exotic till. The alkaline nature of this till inhibits metal transport and masks underlying mineralization. The top till of the type 2 sequence is a reworked blend of tills of local and exotic sources. Type 3 terrain consists of glaciolacustrine deposits. The White Lake property is underlain by type 1 and 2 terrains. Gleeson and Sheehan (1987) found that at the Williams Mine at Hemlo humus was more effective at delineating the deposit. The humus had anomalous values in Au over the ore zone while the exotic calcareous till prevented an anomalous mineralization in the "B" horizon. They consider that humus sampling for Au in the Hemlo region is effective over terrains underlain by up to 5m of permeable overburden, while "B" horizon sampling is only effective where less than 1m of till occurs. They also found that Au in the soils was more useful than other elements in finding the ore zones.

### 7.3) Humus Horizon Soil Survey

From July 4 to August 3, 1995, 1,165 humus horizon soil samples were collected along the cut grid at 25m intervals. Samples were taken by hand at depth from 5-50cm and within 1m of the picket location. The humus horizon was commonly thick and consistent, and usually uniform except in grassy regions under the hydro line where humus was deeper and difficult to reach due to grass roots, and near to White Lake where beach sand was dominant. Samples locations are shown in Figure 4.

The samples were shipped to Chemex Labs Ltd. in Mississauga. There they were dried and sieved to -80 mesh and digested using nitric aqua-regia. Au was fire assayed with a neutron activation finish. Thirty-two other elements were analyzed using inductively coupled plasma atomic emission spectrometry. Results of the analysis are found in Appendix B.

Threshold values were found for all elements using the average plus twice the standard deviation (Table 1). While this method only approximates the threshold value in normal populations, it was felt to be suitable for most elements. The Au analysis results form at least two populations and the calculated threshold value appears to be too high. Au values were plotted and contoured using a visually chosen threshold (Figure 5). Anomalous values for all other elements are plotted on Figure 6.

### 7.4) "B" Horizon Soil Survey

From July 21 to August 3, 1995, 281 "B" horizon soil samples were collected at 25m spacings along a northern portion of the grid. On line 1000N, a 125m section of the line was sampled at a 12.5m spacing. Samples were taken using a grubhoe at depths of 10-80cm. The "B" horizon is inconsistent and samples could not always be collected. The samples also varied greatly in colour and texture. Sample locations are plotted on Figure 7.

The samples were shipped to Chemex Labs Ltd. in Mississauga. There they were dried and sieved to -80 mesh and digested using nitric aqua-regia. Au was fire assayed with a neutron activation finish. Thirty-two other elements were analyzed using inductively coupled plasma atomic emission spectrometry. Results of the analysis are found in Appendix C.

Threshold values were calculated by the same method used for the humus sample results and are found in Table 1. Au values are plotted and contoured in Figure 8 and anomalous values for all other elements are plotted on Figure 9.

## 8.0) Conclusions

The geochemical survey has been successful at delineating a number of zones of anomalous mineralization in soil. The humus horizon survey returned two very high Au values of 707 and 616 ppb. These very high results have skewed the calculated threshold to a higher value. It is probably more realistic to use a threshold of approximately 10 ppb Au. Eleven of the samples were greater than this value and should be followed up.

The highest results from the "B" horizon survey were 11 ppb and 12 ppb Au. These occur as two anomalies with other elevated Au samples nearby.

The multi-element analysis also returned many anomalous values from both humus and "B" horizon soils. It should be noted that samples taken near the powerline running through the property may be contaminated. Many of these samples show elevated metal values. These samples were used to calculate thresholds and may have caused these values to be elevated.

## 9.0) Recommendations

Additional field work is required to find the source of the anomalous soil mineralization. Mechanical stripping of these areas would help to identify the source of the anomalies while allowing more of the underlying geology to be observed.

## References

- Geddes, R.S. and Kristjansson, F.J., 1986, Quaternary geology of the Hemlo area: Constraints on mineral exploration; Canadian Geology Journal of the CIM, v. 1, no. 1 p.5-8
- Gleeson, C.F. and Sheehan, D.G., 1987, Humus and till geochemistry over the Doyon, Bousquet and Williams gold deposits; CIM Bulletin, v. 80, p.58-66
- Muir, T.L., 1983, Geology of the Hemlo-Heron Bay Area; in The geology of gold in Ontario, Ontario Geological Survey, Misc. Paper 110, p.230-239
- Muir, T.L., Schnieders, B. R. and Smyk, M.C. (compilers and editors), 1995, Geology and Gold Deposits of the Hemlo Area: Geological Association of Canada - Toronto '91, Hemlo Field Trip Guidebook, 120 p

### Assessment Files

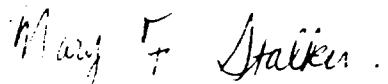
42C13SE0027 & 42C12NE0014	Transpacific Asbestos Inc. & Consolidated Reactor Uranium Mines Ltd.
42C13SE0020	Golden Shield Resources Ltd.
42C12NE0007	Golden Terrace Resources Corp.

### Statement of Qualifications

I, Mary F. Stalker, of Timmins, Ontario, do hereby certify that:

1. I am currently employed as a project geologist by Royal Oak Mines Inc.
2. I am a graduate of the University of Waterloo with an honours B.Sc. in earth science (1986), and a graduate of McGill University with a M.Sc.A. in mineral exploration (1992).
3. I have been employed as a geologist by various exploration, mining and consulting companies since 1983.
4. I am directly responsible for the work outlined in this report and was present on the property when the work was performed.
5. I have no direct interest, nor do I have any shares of any company exploring the properties described in this report, nor on any adjacent or surrounding properties.

Dated this 21st day of December, 1995, Timmins, Ontario.



M. F. Stalker  
Project Geologist  
Eastern Canada Exploration  
Royal Oak Mines Inc.

## **APPENDIX A**

### **Inventory of Claims**

## **WHITE LAKE PROJECT (2000)**

### **INVENTORY OF CLAIMS**

<b>Claim No.</b>	<b>Units</b>	<b>Area</b>
TB782941	12	White Lake (North) (G-0622)
TB782942	12	White Lake (North) (G-0622)
TB782943	2	White Lake (South) (G-0623)
TB782944	15	White Lake (South) (G-0623)
TB1110122	9	White Lake (North) (G-0622)
TB1110123	8	White Lake (South) (G-0623)
TB1110124	3	White Lake (South) (G-0623)
TB1110125	14	White Lake (North) (G-0622)
TB1174578	12	White Lake (North) (G-0622)
TB1174579	12	White Lake (North) (G-0622)
TB1174580	15	White Lake (North) (G-0622)
TB1174581	16	White Lake (North) (G-0622)
TB1174582	4	White Lake (South) (G-0623)

## **APPENDIX B**

### **Humus Horizon Geochemical Analysis Certificates**



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
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 P4N 7X7

Page Num.: 1-A  
 Total Pages: 4  
 Certificate Date: 21-AUG-95  
 Invoice No.: 1952298  
 P.O. Number:  
 Account: JWW

Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A952298

SAMPLE	PREP CODE		Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17468	217	229	1 < 0.2	0.34	< 2	170	< 0.5	< 2	1.25	1.5	2	21	18	0.36	< 10	< 1	0.15	< 10	0.18	1470		
17469	217	229	< 1	0.2	0.39	2	280	< 0.5	< 2	1.04	1.0	1	32	13	0.42	< 10	< 1	0.13	< 10	0.13	810	
17470	217	229	< 1 < 0.2	0.36	2	220	< 0.5	< 2	0.69	0.5	1	40	10	0.35	< 10	< 1	0.10	< 10	0.09	270		
17471	217	229	2 < 0.2	0.14	2	60	< 0.5	< 2	1.05	< 0.5	< 1	9	6	0.15	< 10	< 1	0.10	< 10	0.11	210		
17472	217	229	< 1 < 0.2	0.23	4	70	< 0.5	< 2	2.27	0.5	1	8	7	0.21	< 10	< 1	0.04	< 10	0.22	545		
17473	217	229	< 1 < 0.2	0.19	6	60	< 0.5	< 2	0.62	< 0.5	< 1	8	7	0.16	< 10	< 1	0.05	< 10	0.05	35		
17474	217	229	< 1 < 0.2	0.30	4	130	< 0.5	< 2	1.65	1.0	1	9	12	0.27	< 10	< 1	0.11	< 10	0.12	155		
17475	217	229	< 1 < 0.2	0.64	2	170	< 0.5	< 2	1.07	1.0	10	72	34	0.78	< 10	< 1	0.09	< 10	0.16	765		
17476	217	229	< 1 < 0.2	0.40	< 2	140	< 0.5	< 2	2.87	1.0	2	10	44	0.26	< 10	< 1	0.08	20	0.19	400		
17477	217	229	4 < 0.2	0.64	< 2	110	< 0.5	< 2	3.12	1.0	4	13	68	0.33	< 10	< 1	0.10	30	0.28	685		
17478	217	229	1 < 0.2	0.22	2	130	< 0.5	< 2	2.26	1.0	1	7	15	0.20	< 10	< 1	0.09	< 10	0.20	800		
17479	217	229	< 1 0.2	0.73	2	170	< 0.5	< 2	1.39	1.0	9	19	24	0.55	< 10	< 1	0.09	10	0.13	1635		
17480	217	229	2 0.2	0.70	< 2	140	< 0.5	< 2	1.27	1.0	9	57	15	0.66	< 10	< 1	0.12	10	0.19	1720		
17481	217	229	1 0.2	0.35	< 2	400	< 0.5	< 2	1.15	1.5	3	21	17	0.33	< 10	< 1	0.11	< 10	0.10	2870		
17482	217	229	< 1 < 0.2	0.48	4	240	< 0.5	< 2	0.61	0.5	2	44	10	0.63	< 10	< 1	0.07	< 10	0.08	940		
17483	217	229	< 1 < 0.2	0.39	6	70	< 0.5	< 2	0.61	1.0	1	10	9	0.31	< 10	< 1	0.10	< 10	0.08	130		
17484	217	229	< 1 < 0.2	0.36	< 2	190	< 0.5	< 2	0.90	< 0.5	2	15	11	0.33	< 10	< 1	0.13	< 10	0.10	655		
17485	217	229	1 < 0.2	0.27	< 2	320	< 0.5	< 2	1.26	2.0	2	28	12	0.29	< 10	< 1	0.13	< 10	0.15	3500		
17486	217	229	< 1 < 0.2	0.31	2	310	< 0.5	< 2	0.84	1.0	1	40	11	0.31	< 10	< 1	0.12	< 10	0.10	2400		
17487	217	229	< 1 0.2	0.33	< 2	510	< 0.5	< 2	1.77	3.0	1	15	14	0.32	< 10	1	0.16	< 10	0.13	3830		
17488	217	229	< 1 < 0.2	0.53	2	400	< 0.5	< 2	1.66	2.0	3	53	11	0.48	< 10	< 1	0.19	< 10	0.17	3560		
17489	217	229	4 < 0.2	0.35	< 2	270	< 0.5	< 2	1.31	1.0	1	14	12	0.33	< 10	< 1	0.18	< 10	0.12	1465		
17490	217	229	1 0.2	0.56	< 2	580	< 0.5	< 2	1.92	3.0	5	38	12	0.60	< 10	< 1	0.18	< 10	0.18	3890		
17491	217	229	1 < 0.2	0.97	2	360	< 0.5	< 2	1.51	3.0	11	19	28	0.62	< 10	< 1	0.13	30	0.19	3920		
17492	217	229	1 < 0.2	0.14	< 2	280	< 0.5	< 2	1.70	1.0	2	7	13	0.15	< 10	< 1	0.13	< 10	0.13	1285		
17493	217	229	1 0.2	0.33	< 2	610	< 0.5	< 2	1.94	3.0	4	13	14	0.30	< 10	< 1	0.22	< 10	0.18	4750		
17494	217	229	< 1 0.4	0.38	< 2	180	< 0.5	< 2	0.87	0.5	1	49	9	0.33	< 10	< 1	0.11	< 10	0.10	500		
17495	217	229	< 1 < 0.2	0.23	2	210	< 0.5	< 2	1.66	1.0	1	8	13	0.22	< 10	< 1	0.10	< 10	0.16	330		
17496	217	229	< 1 < 0.2	0.29	< 2	210	< 0.5	< 2	1.77	1.0	3	9	13	0.24	< 10	< 1	0.10	< 10	0.13	1045		
17497	217	229	3 < 0.2	0.37	< 2	250	< 0.5	< 2	1.00	1.5	2	13	12	0.34	< 10	< 1	0.17	< 10	0.11	2500		
17498	217	229	3 < 0.2	0.41	< 2	410	< 0.5	< 2	1.25	1.5	3	13	14	0.37	< 10	< 1	0.20	< 10	0.11	4850		
17499	217	229	2 < 0.2	0.26	< 2	290	< 0.5	< 2	0.91	1.5	2	8	14	0.24	< 10	< 1	0.15	< 10	0.09	1395		
17500	217	229	1 < 0.2	0.51	< 2	250	< 0.5	< 2	1.09	1.0	6	40	13	0.47	< 10	< 1	0.13	< 10	0.12	1325		
17668	217	229	1 < 0.2	0.34	< 2	230	< 0.5	< 2	0.70	1.0	2	12	12	0.33	< 10	< 1	0.13	< 10	0.07	2870		
17669	217	229	< 1 < 0.2	0.22	< 2	70	< 0.5	< 2	0.63	0.5	1	14	12	0.24	< 10	< 1	0.11	< 10	0.07	895		
17670	217	229	8 < 0.2	0.38	2	190	< 0.5	< 2	1.24	0.5	2	11	14	0.36	< 10	< 1	0.13	< 10	0.10	1245		
17671	217	229	1 0.2	0.41	< 2	330	< 0.5	< 2	0.68	1.5	6	15	15	0.38	< 10	< 1	0.19	< 10	0.09	3410		
17672	217	229	2 0.2	0.46	< 2	210	< 0.5	< 2	1.08	1.0	10	13	12	0.37	< 10	< 1	0.15	< 10	0.10	1860		
17673	217	229	1 < 0.2	0.20	< 2	50	< 0.5	< 2	2.30	0.5	< 1	8	26	0.13	< 10	< 1	0.10	10	0.26	415		
17674	217	229	< 1 < 0.2	0.15	< 2	90	< 0.5	< 2	2.15	0.5	6	19	10	0.31	< 10	< 1	0.09	< 10	0.19	2310		

CERTIFICATION: Hart Becker



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Project : 2000  
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Page Numt : 1-8  
 Total Pages : 4  
 Certificate Date: 21-AUG-95  
 Invoice No. : 19522928  
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## CERTIFICATE OF ANALYSIS A9522928

SAMPLE	PREP CODE		Mo ppm	Na %	Mi ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
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17469	217	229	1	< 0.01	7	1190	56	< 2	< 1	47	0.01	< 10	< 10	10	< 10	110
17470	217	229	1	< 0.01	5	810	48	< 2	< 1	44	0.02	< 10	< 10	10	< 10	78
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17473	217	229	< 1	< 0.01	1	540	30	< 2	< 1	25	< 0.01	< 10	< 10	4	< 10	44
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17477	217	229	< 1	0.01	11	1310	48	< 2	< 1	36	< 0.01	< 10	< 10	8	< 10	88
17478	217	229	< 1	< 0.01	3	1090	56	< 2	< 1	37	< 0.01	< 10	< 10	5	< 10	96
17479	217	229	1	< 0.01	6	1060	42	< 2	1	37	0.01	< 10	< 10	12	< 10	98
17480	217	229	1	0.01	8	970	64	< 2	1	46	0.03	< 10	< 10	17	< 10	110
17481	217	229	< 1	< 0.01	4	1190	70	< 2	< 1	55	0.01	< 10	< 10	8	< 10	244
17482	217	229	< 1	0.01	4	590	32	< 2	1	34	0.03	< 10	< 10	20	< 10	136
17483	217	229	< 1	< 0.01	3	740	62	< 2	< 1	23	< 0.01	< 10	< 10	7	< 10	70
17484	217	229	1	< 0.01	4	1180	66	< 2	< 1	35	< 0.01	< 10	< 10	8	< 10	88
17485	217	229	< 1	< 0.01	4	1330	40	< 2	< 1	55	0.01	< 10	< 10	9	< 10	358
17486	217	229	1	< 0.01	4	1310	64	< 2	< 1	43	0.01	< 10	< 10	8	< 10	126
17487	217	229	< 1	< 0.01	4	1520	98	< 2	< 1	50	< 0.01	< 10	< 10	8	< 10	418
17488	217	229	1	0.01	5	1350	88	< 2	< 1	56	0.02	< 10	< 10	12	< 10	200
17489	217	229	< 1	< 0.01	4	1370	70	< 2	< 1	51	0.01	< 10	< 10	9	< 10	144
17490	217	229	1	0.01	6	1190	110	< 2	1	68	0.02	< 10	< 10	15	< 10	252
17491	217	229	1	0.01	12	1810	84	< 2	< 1	62	< 0.01	< 10	< 10	12	< 10	172
17492	217	229	< 1	< 0.01	3	1250	40	< 2	< 1	68	< 0.01	< 10	< 10	3	< 10	194
17493	217	229	1	< 0.01	6	1450	74	< 2	< 1	79	< 0.01	< 10	< 10	8	< 10	470
17494	217	229	< 1	< 0.01	4	1020	48	< 2	< 1	33	0.02	< 10	< 10	10	< 10	84
17495	217	229	1	0.01	3	1180	58	< 2	< 1	43	< 0.01	< 10	< 10	5	< 10	116
17496	217	229	< 1	< 0.01	3	1200	62	< 2	< 1	58	< 0.01	< 10	< 10	6	< 10	136
17497	217	229	< 1	< 0.01	4	1360	86	< 2	< 1	40	< 0.01	< 10	< 10	9	< 10	150
17498	217	229	1	< 0.01	6	1500	88	< 2	< 1	48	< 0.01	< 10	< 10	9	< 10	284
17499	217	229	< 1	< 0.01	4	1290	66	< 2	< 1	54	< 0.01	< 10	< 10	6	< 10	218
17500	217	229	< 1	< 0.01	7	1080	82	< 2	< 1	64	0.01	< 10	< 10	11	< 10	118
17668	217	229	1	< 0.01	5	1230	76	< 2	< 1	29	< 0.01	< 10	< 10	8	< 10	108
17669	217	229	1	0.01	4	1190	76	< 2	< 1	21	< 0.01	< 10	< 10	6	< 10	154
17670	217	229	< 1	< 0.01	6	1790	72	< 2	< 1	43	0.01	< 10	< 10	9	< 10	146
17671	217	229	1	< 0.01	6	1510	80	< 2	< 1	50	0.01	< 10	< 10	10	< 10	200
17672	217	229	< 1	< 0.01	6	1310	50	< 2	< 1	54	< 0.01	< 10	< 10	9	< 10	164
17673	217	229	1	0.01	8	870	24	< 2	< 1	39	< 0.01	< 10	< 10	8	< 10	52
17674	217	229	< 1	< 0.01	6	900	28	< 2	< 1	42	< 0.01	< 10	< 10	3	< 10	46

CERTIFICATION:



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Certificate Date: 21-AUG-95  
 Invoice No. :19522928  
 P.O. Number :  
 Account :JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9522928

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17675	217 229	< 1	0.6	0.30	< 2	150	< 0.5	< 2	0.57	0.5	6	149	13	0.91	< 10	< 1	0.09	< 10	0.36	260
17676	217 229	< 1	0.2	0.40	6	310	< 0.5	< 2	1.12	1.0	3	12	10	0.35	< 10	< 1	0.14	< 10	0.10	2200
17677	217 229	< 1	0.2	0.36	4	210	< 0.5	< 2	0.63	0.5	2	21	11	0.38	< 10	< 1	0.09	< 10	0.10	210
17678	217 229	2	0.2	0.37	2	180	< 0.5	< 2	0.52	0.5	2	22	8	0.36	< 10	< 1	0.12	< 10	0.10	470
17679	217 229	3	< 0.2	0.59	< 2	170	< 0.5	< 2	0.36	< 0.5	3	23	13	0.44	< 10	< 1	0.09	< 10	0.09	85
17680	217 229	3	< 0.2	0.26	< 2	240	< 0.5	< 2	0.74	1.0	2	29	13	0.30	< 10	< 1	0.09	< 10	0.13	2480
17681	217 229	4	0.2	0.38	2	450	< 0.5	< 2	0.75	1.0	2	25	11	0.39	< 10	< 1	0.11	< 10	0.10	1355
17682	217 229	3	0.2	0.31	< 2	410	< 0.5	< 2	0.96	1.5	17	9	20	0.32	< 10	< 1	0.11	< 10	0.16	3040
17683	217 229	< 1	0.2	0.75	< 2	550	< 0.5	< 2	0.75	1.5	73	43	29	0.73	< 10	< 1	0.14	10	0.19	4890
17684	217 229	< 1	< 0.2	0.46	< 2	150	< 0.5	< 2	0.25	0.5	4	44	12	0.44	< 10	< 1	0.11	< 10	0.10	135
17685	217 229	< 1	< 0.2	0.63	< 2	90	< 0.5	< 2	0.18	< 0.5	3	61	13	0.79	< 10	< 1	0.07	< 10	0.14	210
17686	217 229	< 1	< 0.2	0.37	4	160	< 0.5	< 2	0.77	0.5	1	12	10	0.32	< 10	< 1	0.14	< 10	0.10	430
17687	217 229	< 1	< 0.2	0.50	< 2	180	< 0.5	< 2	0.96	0.5	33	18	44	0.51	< 10	< 1	0.07	10	0.15	505
17688	217 229	< 1	< 0.2	0.44	4	180	< 0.5	< 2	0.74	0.5	1	43	14	0.39	< 10	< 1	0.06	< 10	0.08	145
17689	217 229	< 1	< 0.2	0.38	2	80	< 0.5	< 2	0.61	0.5	1	57	7	0.39	< 10	< 1	0.09	< 10	0.07	380
17690	217 229	1	< 0.2	0.37	4	80	< 0.5	< 2	0.46	0.5	1	13	8	0.33	< 10	< 1	0.12	< 10	0.08	505
17691	217 229	1	< 0.2	0.22	4	90	< 0.5	< 2	0.46	< 0.5	1	10	8	0.23	< 10	< 1	0.12	< 10	0.08	155
17692	217 229	< 1	0.2	0.38	2	200	< 0.5	< 2	0.70	0.5	1	23	13	0.38	< 10	< 1	0.09	< 10	0.08	695
17693	217 229	3	< 0.2	0.22	< 2	230	< 0.5	< 2	1.00	0.5	1	17	11	0.24	< 10	< 1	0.10	< 10	0.10	1870
17694	217 229	< 1	0.2	0.25	< 2	330	< 0.5	< 2	0.79	1.0	2	8	12	0.25	< 10	< 1	0.10	< 10	0.07	1885
17695	217 229	3	< 0.2	0.33	< 2	170	< 0.5	< 2	0.77	0.5	2	16	19	0.33	< 10	< 1	0.09	< 10	0.09	780
17696	217 229	< 1	0.2	0.41	2	210	< 0.5	< 2	0.59	0.5	2	20	12	0.43	< 10	< 1	0.13	< 10	0.10	595
17697	217 229	< 1	0.2	0.42	2	280	< 0.5	< 2	0.70	0.5	2	19	12	0.40	< 10	< 1	0.10	< 10	0.11	1490
17698	217 229	1	0.6	0.35	< 2	260	< 0.5	< 2	0.70	0.5	2	13	17	0.35	< 10	< 1	0.14	< 10	0.10	565
17699	217 229	2	0.2	0.49	2	240	< 0.5	< 2	0.88	0.5	1	15	12	0.51	< 10	< 1	0.11	< 10	0.11	890
17700	217 229	< 1	0.4	0.26	< 2	180	< 0.5	< 2	0.98	0.5	< 1	11	10	0.29	< 10	< 1	0.11	< 10	0.09	645
17701	217 229	4	0.2	0.39	< 2	290	< 0.5	< 2	0.80	1.0	3	17	10	0.41	< 10	< 1	0.15	< 10	0.11	3470
17702	217 229	< 1	< 0.2	0.35	4	310	< 0.5	< 2	0.94	1.0	3	19	10	0.38	< 10	< 1	0.16	< 10	0.10	2760
17703	217 229	1	< 0.2	0.29	4	100	< 0.5	< 2	0.73	0.5	< 1	19	9	0.30	< 10	< 1	0.10	< 10	0.07	260
17704	217 229	< 1	0.2	0.52	4	140	< 0.5	< 2	2.12	1.0	3	14	25	0.46	< 10	< 1	0.10	10	0.24	1400
17705	217 229	< 1	< 0.2	0.20	< 2	120	< 0.5	< 2	2.09	1.5	1	9	14	0.20	< 10	< 1	0.09	< 10	0.26	515
17706	217 229	< 1	< 0.2	0.22	< 2	70	< 0.5	< 2	2.06	< 0.5	1	7	12	0.21	< 10	< 1	0.08	< 10	0.23	520
17707	217 229	3	< 0.2	0.07	< 2	70	< 0.5	< 2	2.09	< 0.5	< 1	13	9	0.10	< 10	< 1	0.08	< 10	0.22	530
17708	217 229	< 1	< 0.2	0.18	2	70	< 0.5	< 2	2.15	0.5	< 1	7	11	0.20	< 10	< 1	0.08	< 10	0.22	380
17709	217 229	< 1	< 0.2	0.10	< 2	70	< 0.5	< 2	2.03	< 0.5	< 1	5	12	0.11	< 10	< 1	0.06	< 10	0.21	260
17710	217 229	4	< 0.2	0.11	< 2	60	< 0.5	< 2	1.71	< 0.5	< 1	5	10	0.12	< 10	< 1	0.09	< 10	0.19	165
17711	217 229	< 1	< 0.2	0.17	4	60	< 0.5	< 2	1.55	< 0.5	< 1	7	10	0.15	< 10	< 1	0.04	< 10	0.19	95
17712	217 229	< 1	< 0.2	0.12	< 2	40	< 0.5	< 2	1.74	< 0.5	< 1	5	9	0.13	< 10	< 1	0.05	< 10	0.22	115
17713	217 229	4	< 0.2	0.17	< 2	150	< 0.5	< 2	2.03	0.5	1	7	19	0.18	< 10	< 1	0.08	< 10	0.26	675
17714	217 229	< 1	< 0.2	0.40	< 2	230	< 0.5	< 2	1.47	0.5	9	7	20	0.35	< 10	< 1	0.06	10	0.16	1300

CERTIFICATION: Frank S. Johnson



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Account : JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522928

SAMPLE	PREP CODE		Mo ppm	Na %	Mg ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17675	217	229	2	0.04	26	470	24	< 2	1	32	0.02	< 10	< 10	17	< 10	64
17676	217	229	< 1	< 0.01	7	1060	62	< 2	< 1	48	< 0.01	< 10	< 10	9	< 10	176
17677	217	229	< 1	< 0.01	9	880	54	< 2	< 1	30	0.02	< 10	< 10	10	< 10	52
17678	217	229	1	0.01	7	990	70	< 2	< 1	23	0.01	< 10	< 10	9	< 10	88
17679	217	229	< 1	< 0.01	12	960	50	< 2	< 1	30	0.01	< 10	< 10	9	< 10	42
17680	217	229	< 1	0.01	9	1010	52	< 2	< 1	20	0.02	< 10	< 10	8	< 10	184
17681	217	229	< 1	< 0.01	6	1070	62	< 2	< 1	34	0.01	< 10	< 10	10	< 10	136
17682	217	229	< 1	< 0.01	19	1420	68	< 2	< 1	44	< 0.01	< 10	< 10	8	< 10	236
17683	217	229	< 1	< 0.01	36	1090	94	< 2	< 1	50	0.01	< 10	< 10	15	< 10	140
17684	217	229	< 1	< 0.01	9	840	60	< 2	< 1	23	0.02	< 10	< 10	11	< 10	56
17685	217	229	< 1	0.01	7	660	34	< 2	1	11	0.08	< 10	< 10	26	< 10	58
17686	217	229	< 1	< 0.01	4	890	46	< 2	< 1	29	< 0.01	< 10	< 10	9	< 10	104
17687	217	229	< 1	< 0.01	30	960	26	< 2	< 1	44	< 0.01	< 10	< 10	6	< 10	56
17688	217	229	1	0.01	6	630	38	< 2	< 1	30	0.02	< 10	< 10	11	< 10	84
17689	217	229	< 1	0.01	3	760	54	< 2	< 1	24	0.02	< 10	< 10	9	< 10	52
17690	217	229	1	< 0.01	3	990	60	< 2	< 1	15	0.01	< 10	< 10	8	< 10	88
17691	217	229	< 1	< 0.01	3	970	50	< 2	< 1	26	< 0.01	< 10	< 10	4	< 10	46
17692	217	229	1	< 0.01	4	1180	82	< 2	< 1	30	0.01	< 10	< 10	9	< 10	108
17693	217	229	< 1	< 0.01	4	1110	56	< 2	< 1	39	< 0.01	< 10	< 10	5	< 10	188
17694	217	229	1	< 0.01	3	1240	48	< 2	< 1	39	< 0.01	< 10	< 10	5	< 10	146
17695	217	229	< 1	< 0.01	6	1400	76	< 2	< 1	29	< 0.01	< 10	< 10	7	< 10	134
17696	217	229	< 1	< 0.01	7	1270	74	< 2	< 1	27	0.01	< 10	< 10	10	< 10	96
17697	217	229	1	< 0.01	7	1200	80	< 2	< 1	38	0.01	< 10	< 10	10	< 10	126
17698	217	229	< 1	< 0.01	7	1680	80	< 2	< 1	50	< 0.01	< 10	< 10	8	< 10	106
17699	217	229	1	< 0.01	6	1280	84	< 2	< 1	51	0.01	< 10	< 10	11	< 10	106
17700	217	229	< 1	< 0.01	4	1040	70	< 2	< 1	43	< 0.01	< 10	< 10	6	< 10	120
17701	217	229	< 1	< 0.01	5	1350	96	< 2	< 1	36	0.01	< 10	< 10	10	< 10	122
17702	217	229	< 1	< 0.01	4	1010	68	< 2	< 1	39	0.01	< 10	< 10	9	< 10	132
17703	217	229	1	0.01	3	1040	72	< 2	< 1	30	< 0.01	< 10	< 10	7	< 10	50
17704	217	229	< 1	< 0.01	7	980	88	< 2	1	39	0.01	< 10	< 10	15	< 10	116
17705	217	229	< 1	0.01	3	780	50	< 2	< 1	32	< 0.01	< 10	< 10	6	< 10	170
17706	217	229	< 1	0.01	3	650	38	< 2	< 1	35	< 0.01	< 10	< 10	6	< 10	52
17707	217	229	< 1	0.01	2	710	10	< 2	< 1	31	< 0.01	< 10	< 10	2	< 10	42
17708	217	229	< 1	0.01	3	720	62	< 2	< 1	33	< 0.01	< 10	< 10	5	< 10	58
17709	217	229	< 1	0.01	2	710	32	< 2	< 1	31	< 0.01	< 10	< 10	3	< 10	56
17710	217	229	< 1	0.01	1	610	32	< 2	< 1	28	< 0.01	< 10	< 10	3	< 10	40
17711	217	229	< 1	0.01	2	550	26	< 2	< 1	28	< 0.01	< 10	< 10	4	< 10	26
17712	217	229	< 1	0.01	2	660	34	< 2	< 1	29	< 0.01	< 10	< 10	3	< 10	30
17713	217	229	2	0.01	6	1100	42	< 2	< 1	47	< 0.01	< 10	< 10	4	< 10	76
17714	217	229	1	< 0.01	6	1140	38	< 2	< 1	46	< 0.01	< 10	< 10	6	< 10	90

CERTIFICATION: *Hans Becker*



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
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## CERTIFICATE OF ANALYSIS A9522928

SAMPLE	PREP CODE	Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17715	217 229	< 1	< 0.2	1.25	2	180	< 0.5	< 2	1.45	0.5	19	72	21	1.69	< 10	< 1	0.11	10	0.60	1955	
17716	217 229	< 1	< 0.2	0.32	< 2	340	< 0.5	< 2	0.73	1.0	1	37	10	0.38	< 10	< 1	0.09	< 10	0.12	805	
17717	217 229	2	< 0.2	0.18	2	60	< 0.5	< 2	2.44	1.0	1	13	12	0.19	< 10	< 1	0.09	< 10	0.14	320	
17718	217 229	5	< 0.2	0.23	< 2	190	< 0.5	< 2	1.76	1.0	2	12	10	0.23	< 10	< 1	0.14	< 10	0.11	1855	
17719	217 229	4	< 0.2	0.16	< 2	230	< 0.5	< 2	1.98	1.0	1	8	12	0.18	< 10	< 1	0.15	< 10	0.12	1890	
17720	217 229	3	< 0.2	0.32	< 2	530	< 0.5	< 2	2.17	2.5	1	15	13	0.31	< 10	< 1	0.19	< 10	0.15	4670	
17721	217 229	1	< 0.2	0.47	< 2	400	< 0.5	< 2	2.24	1.5	2	32	14	0.53	< 10	< 1	0.15	< 10	0.17	2050	
17722	217 229	1	< 0.2	0.15	< 2	220	< 0.5	< 2	2.42	1.5	1	6	13	0.16	< 10	< 1	0.15	< 10	0.16	1175	
17723	217 229	3	< 0.2	0.39	< 2	410	< 0.5	< 2	1.54	1.5	1	20	14	0.38	< 10	< 1	0.12	< 10	0.12	3640	
17724	217 229	3	< 0.2	0.37	< 2	700	< 0.5	< 2	1.79	3.0	1	8	13	0.32	< 10	< 1	0.13	< 10	0.12	6260	
17725	217 229	1	0.2	0.49	< 2	490	< 0.5	< 2	1.60	2.0	2	37	16	0.49	< 10	< 1	0.16	< 10	0.18	5410	
17726	217 229	1	< 0.2	0.36	2	170	< 0.5	< 2	0.69	0.5	2	21	12	0.34	< 10	< 1	0.09	< 10	0.08	360	
17727	217 229	1	0.4	0.70	4	160	< 0.5	< 2	0.53	0.5	3	28	15	0.79	< 10	< 1	0.11	< 10	0.10	275	
17728	217 229	3	0.6	0.41	< 2	150	< 0.5	< 2	0.63	0.5	1	15	10	0.37	< 10	< 1	0.18	< 10	0.12	515	
17729	217 229	< 1	0.2	0.46	2	230	< 0.5	< 2	0.91	0.5	2	20	11	0.44	< 10	< 1	0.12	< 10	0.10	365	
17730	217 229	2	0.2	0.43	2	440	< 0.5	< 2	1.91	2.0	6	11	13	0.39	< 10	< 1	0.15	< 10	0.13	2720	
17731	217 229	2	0.2	0.27	< 2	480	< 0.5	< 2	2.14	2.0	4	10	16	0.27	< 10	< 1	0.11	< 10	0.13	2450	
17732	217 229	1	< 0.2	0.11	< 2	140	< 0.5	< 2	1.07	< 0.5	19	7	45	0.14	< 10	< 1	0.17	< 10	0.19	185	
17733	217 229	< 1	0.2	0.30	4	250	< 0.5	< 2	1.18	0.5	1	9	12	0.29	< 10	< 1	0.17	< 10	0.11	605	
17734	217 229	1	0.2	0.57	2	260	< 0.5	< 2	1.33	0.5	13	12	50	0.67	< 10	< 1	0.09	20	0.20	860	
17735	217 229	1	0.4	0.34	2	240	< 0.5	< 2	1.04	0.5	< 1	9	10	0.32	< 10	< 1	0.09	< 10	0.08	840	
17736	217 229	2	0.2	0.40	< 2	180	< 0.5	< 2	1.21	0.5	1	16	12	0.37	< 10	< 1	0.13	< 10	0.12	1005	
17737	217 229	< 1	0.6	0.48	4	280	< 0.5	< 2	1.19	1.0	1	17	11	0.44	< 10	< 1	0.13	< 10	0.11	1285	
17738	217 229	1	< 0.2	0.41	2	180	< 0.5	< 2	1.23	0.5	1	9	40	0.35	< 10	< 1	0.08	10	0.18	295	
17739	217 229	< 1	< 0.2	0.23	< 2	140	< 0.5	< 2	1.32	0.5	8	6	46	0.36	< 10	< 1	0.15	10	0.17	655	
17740	217 229	< 1	0.2	0.42	4	190	< 0.5	< 2	0.90	0.5	1	11	12	0.37	< 10	< 1	0.10	< 10	0.08	280	
17741	217 229	2	0.2	0.58	< 2	200	< 0.5	< 2	0.57	0.5	1	15	9	0.39	< 10	< 1	0.18	< 10	0.10	2940	
17742	217 229	1	0.4	0.40	2	350	< 0.5	< 2	1.08	1.0	1	19	12	0.38	< 10	< 1	0.16	< 10	0.15	3990	
17743	217 229	1	0.2	0.36	< 2	340	< 0.5	< 2	0.85	1.0	1	31	11	0.36	< 10	< 1	0.14	< 10	0.11	3210	
17744	217 229	2	0.2	0.40	< 2	300	< 0.5	< 2	1.05	0.5	2	40	12	0.40	< 10	< 1	0.14	< 10	0.11	1215	
17745	217 229	< 1	0.2	0.39	2	440	< 0.5	< 2	2.39	1.0	2	28	11	0.46	< 10	< 1	0.13	< 10	0.15	2650	
17746	217 229	< 1	0.2	0.39	2	330	< 0.5	< 2	1.72	1.0	2	17	14	0.36	< 10	< 1	0.13	< 10	0.14	1320	
17747	217 229	3	0.2	0.52	2	250	< 0.5	< 2	1.35	1.0	3	46	13	0.50	< 10	< 1	0.12	< 10	0.15	615	
17748	217 229	< 1	< 0.2	0.57	4	180	< 0.5	< 2	2.98	1.0	4	12	21	0.46	< 10	< 1	0.10	10	0.33	500	
17749	217 229	1	< 0.2	0.30	2	110	< 0.5	< 2	2.26	1.0	2	10	14	0.25	< 10	< 1	0.09	< 10	0.26	655	
17750	217 229	2	0.2	0.75	2	130	< 0.5	< 2	1.23	0.5	9	30	14	0.60	< 10	< 1	0.15	10	0.22	925	
19251	217 229	3	< 0.2	0.37	< 2	150	< 0.5	< 2	2.12	0.5	3	7	21	0.32	< 10	< 1	0.13	10	0.18	1335	
19252	217 229	1	0.2	0.43	< 2	390	< 0.5	< 2	1.86	1.5	4	18	18	0.40	< 10	< 1	0.15	< 10	0.15	1285	
19253	217 229	3	< 0.2	0.30	< 2	190	< 0.5	< 2	2.24	1.0	3	7	23	0.24	< 10	< 1	0.09	10	0.13	1080	
19254	217 229	3	< 0.2	0.32	2	370	< 0.5	< 2	1.42	1.5	1	26	12	0.31	< 10	< 1	0.16	< 10	0.14	2560	

CERTIFICATION: \_\_\_\_\_



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Certificate Date: 21-AUG-95  
 Invoice No. : 19522928  
 P.O. Number :  
 Account : JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522928

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17715	217	229	< 1	0.02	14	1600	34	< 2	2	41	0.08	< 10	< 10	38	< 10	84
17716	217	229	< 1	0.01	3	900	46	< 2	< 1	30	0.03	< 10	< 10	10	< 10	150
17717	217	229	< 1	< 0.01	2	850	36	< 2	< 1	33	< 0.01	< 10	< 10	4	< 10	98
17718	217	229	< 1	0.01	2	1290	50	< 2	< 1	32	< 0.01	< 10	< 10	6	< 10	74
17719	217	229	< 1	< 0.01	2	1390	50	< 2	< 1	40	< 0.01	< 10	< 10	4	< 10	164
17720	217	229	< 1	< 0.01	4	1660	80	< 2	< 1	46	< 0.01	< 10	< 10	7	< 10	284
17721	217	229	< 1	< 0.01	4	1180	90	< 2	< 1	38	0.01	< 10	< 10	11	< 10	276
17722	217	229	< 1	0.01	2	1410	48	< 2	< 1	43	< 0.01	< 10	< 10	3	< 10	350
17723	217	229	< 1	< 0.01	3	1450	94	< 2	< 1	38	< 0.01	< 10	< 10	9	< 10	248
17724	217	229	< 1	< 0.01	4	1540	98	< 2	< 1	50	< 0.01	< 10	< 10	8	< 10	426
17725	217	229	< 1	< 0.01	6	1460	110	< 2	< 1	52	0.01	< 10	< 10	11	< 10	250
17726	217	229	1	0.01	7	880	70	< 2	< 1	30	0.01	< 10	< 10	9	< 10	76
17727	217	229	1	0.01	8	1250	44	< 2	1	32	0.02	< 10	< 10	15	< 10	86
17728	217	229	< 1	< 0.01	5	1390	68	< 2	< 1	28	0.01	< 10	< 10	9	< 10	172
17729	217	229	< 1	0.01	7	990	60	< 2	< 1	48	0.01	< 10	< 10	10	< 10	120
17730	217	229	1	0.01	8	1370	98	< 2	< 1	74	< 0.01	< 10	< 10	9	< 10	220
17731	217	229	< 1	0.01	9	1350	62	< 2	< 1	85	< 0.01	< 10	< 10	8	< 10	350
17732	217	229	< 1	0.01	59	920	10	< 2	< 1	37	< 0.01	< 10	< 10	2	< 10	40
17733	217	229	1	0.01	6	1030	58	< 2	< 1	51	< 0.01	< 10	< 10	8	< 10	136
17734	217	229	1	0.01	49	1100	36	< 2	1	57	0.01	< 10	< 10	9	< 10	66
17735	217	229	< 1	< 0.01	3	840	68	< 2	< 1	52	< 0.01	< 10	< 10	8	< 10	132
17736	217	229	1	< 0.01	4	1110	74	< 2	< 1	38	0.01	< 10	< 10	10	< 10	190
17737	217	229	1	< 0.01	5	1120	88	< 2	< 1	37	0.01	< 10	< 10	11	< 10	134
17738	217	229	1	0.01	35	880	42	< 2	< 1	51	< 0.01	< 10	< 10	7	< 10	46
17739	217	229	< 1	0.01	26	1010	18	< 2	< 1	47	< 0.01	< 10	< 10	4	< 10	46
17740	217	229	1	0.01	3	930	68	< 2	< 1	36	0.01	< 10	< 10	9	< 10	104
17741	217	229	< 1	0.01	4	1500	68	< 2	< 1	29	< 0.01	< 10	< 10	10	< 10	104
17742	217	229	< 1	< 0.01	4	1210	68	< 2	< 1	66	0.01	< 10	< 10	10	< 10	176
17743	217	229	< 1	0.01	4	1060	56	< 2	< 1	55	0.02	< 10	< 10	10	< 10	200
17744	217	229	< 1	0.01	4	1210	66	< 2	< 1	59	0.01	< 10	< 10	9	< 10	138
17745	217	229	1	0.01	7	1020	64	< 2	< 1	88	0.02	< 10	< 10	11	< 10	222
17746	217	229	< 1	< 0.01	4	1270	72	< 2	< 1	51	0.01	< 10	< 10	9	< 10	198
17747	217	229	< 1	0.01	4	860	58	< 2	1	43	0.03	< 10	< 10	14	< 10	76
17748	217	229	< 1	0.01	7	1020	62	< 2	< 1	59	0.01	< 10	< 10	10	< 10	66
17749	217	229	< 1	0.01	3	1060	50	< 2	< 1	42	< 0.01	< 10	< 10	7	< 10	96
17750	217	229	1	0.01	6	1150	78	< 2	1	43	0.01	< 10	< 10	14	< 10	66
19251	217	229	1	0.01	8	1510	26	< 2	< 1	55	< 0.01	< 10	< 10	6	< 10	50
19252	217	229	< 1	< 0.01	6	1220	90	< 2	< 1	62	0.01	< 10	< 10	10	< 10	162
19253	217	229	< 1	0.01	9	1190	62	< 2	< 1	74	< 0.01	< 10	< 10	6	< 10	82
19254	217	229	< 1	< 0.01	5	1130	52	< 2	< 1	59	0.01	< 10	< 10	8	< 10	236

CERTIFICATION: *[Signature]*



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Total Pages : 4  
 Certificate Date: 21-AUG-95  
 Invoice No. : 19522928  
 P.O. Number :  
 Account : JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9522928

SAMPLE	PREP CODE		Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19255	217	229	1	0.2	0.56	< 2	250	< 0.5	< 2	0.83	0.5	3	61	15	0.64	< 10	< 1	0.13	< 10	0.19	535	
19256	217	229	2	0.2	0.25	2	440	< 0.5	< 2	1.57	1.5	4	25	13	0.26	< 10	< 1	0.15	< 10	0.13	3150	
19257	217	229	2	0.2	0.46	4	420	< 0.5	< 2	1.18	1.5	3	33	17	0.46	< 10	< 1	0.18	< 10	0.14	2330	
19258	217	229	< 1	0.4	0.47	2	280	< 0.5	< 2	0.82	0.5	1	107	10	0.47	< 10	< 1	0.10	< 10	0.08	310	
19259	217	229	1	0.2	1.43	6	400	0.5	< 2	1.21	1.5	318	56	102	1.44	< 10	< 1	0.15	30	0.29	6300	
19260	217	229	4	0.2	0.55	< 2	310	< 0.5	< 2	1.23	1.0	4	51	15	0.62	< 10	< 1	0.13	< 10	0.16	1445	
19261	217	229	< 1	0.2	0.34	2	190	< 0.5	< 2	1.23	0.5	3	12	11	0.32	< 10	< 1	0.16	< 10	0.11	370	
19262	217	229	< 1	0.2	0.46	4	240	< 0.5	< 2	0.76	1.0	1	25	9	0.41	< 10	< 1	0.12	< 10	0.08	375	
19263	217	229	2	< 0.2	0.81	4	230	< 0.5	< 2	1.33	0.5	14	16	51	0.59	< 10	< 1	0.17	20	0.23	1415	
19264	217	229	1	< 0.2	1.14	2	220	< 0.5	< 2	1.40	1.0	12	69	74	1.15	< 10	< 1	0.11	30	0.32	1815	
19265	217	229	3	0.4	0.39	< 2	340	< 0.5	< 2	1.54	1.5	7	17	15	0.35	< 10	< 1	0.13	< 10	0.14	3330	
19266	217	229	4	0.2	0.24	< 2	520	< 0.5	< 2	1.88	2.0	3	19	16	0.25	< 10	< 1	0.10	< 10	0.13	2640	
19267	217	229	< 1	0.2	0.52	< 2	480	< 0.5	< 2	1.17	2.5	4	50	14	0.50	< 10	< 1	0.13	< 10	0.13	3750	
19268	217	229	3	0.2	0.43	4	390	< 0.5	< 2	1.51	2.5	3	14	17	0.41	< 10	< 1	0.13	< 10	0.11	7630	
19269	217	229	< 1	< 0.2	0.41	2	520	< 0.5	< 2	1.80	1.5	4	34	12	0.45	< 10	< 1	0.13	< 10	0.14	3530	
19270	217	229	1	0.2	0.51	< 2	570	< 0.5	< 2	1.24	1.5	6	32	17	0.58	< 10	< 1	0.14	< 10	0.19	6950	
19271	217	229	< 1	0.2	0.55	< 2	210	< 0.5	< 2	0.76	0.5	1	45	8	0.49	< 10	< 1	0.16	< 10	0.11	180	
19272	217	229	1	< 0.2	0.58	2	280	< 0.5	< 2	1.01	1.0	2	63	9	0.57	< 10	< 1	0.16	< 10	0.15	2030	
19273	217	229	1	< 0.2	0.47	2	310	< 0.5	< 2	1.37	1.0	3	41	13	0.48	< 10	< 1	0.13	< 10	0.12	3310	
19274	217	229	1	< 0.2	0.51	2	150	< 0.5	< 2	0.76	1.0	1	32	8	0.47	< 10	< 1	0.13	< 10	0.10	570	
19275	217	229	< 1	0.2	0.39	< 2	310	< 0.5	< 2	2.10	2.5	3	13	11	0.36	< 10	< 1	0.13	< 10	0.16	3430	
19276	217	229	1	0.2	0.41	2	380	< 0.5	< 2	0.65	1.0	3	47	12	0.39	< 10	< 1	0.10	< 10	0.08	755	
19277	217	229	1	< 0.2	0.29	< 2	170	< 0.5	< 2	2.18	0.5	2	11	12	0.27	< 10	< 1	0.10	< 10	0.22	1240	
19278	217	229	< 1	0.2	0.46	6	140	< 0.5	< 2	0.84	0.5	2	17	11	0.44	< 10	< 1	0.13	< 10	0.10	260	
19279	217	229	2	0.6	0.54	< 2	280	< 0.5	< 2	0.93	0.5	4	15	13	0.46	< 10	< 1	0.17	< 10	0.11	1425	
19280	217	229	< 1	0.2	0.60	4	330	< 0.5	< 2	1.08	1.0	3	39	10	0.60	< 10	< 1	0.12	< 10	0.10	795	
19281	217	229	< 1	< 0.2	0.22	< 2	90	< 0.5	< 2	1.56	0.5	1	9	10	0.22	< 10	< 1	0.12	< 10	0.14	300	
19282	217	229	1	< 0.2	0.38	< 2	120	< 0.5	< 2	2.67	3.0	1	22	17	0.38	< 10	< 1	0.11	< 10	0.28	440	
19283	217	229	4	< 0.2	0.33	< 2	80	< 0.5	< 2	2.38	1.0	1	13	39	0.28	< 10	< 1	0.11	< 10	0.17	425	
19284	217	229	< 1	< 0.2	0.78	< 2	160	< 0.5	< 2	0.51	0.5	3	22	21	0.57	< 10	< 1	0.09	< 10	0.07	85	
19285	217	229	1	< 0.2	0.40	< 2	220	< 0.5	< 2	0.73	0.5	1	23	12	0.38	< 10	< 1	0.11	< 10	0.09	980	
19286	217	229	< 1	< 0.2	0.34	2	280	< 0.5	< 2	0.81	0.5	< 1	11	11	0.29	< 10	< 1	0.11	< 10	0.09	605	
19287	217	229	1	0.4	0.35	2	320	< 0.5	< 2	1.71	1.0	2	57	13	0.38	< 10	< 1	0.14	< 10	0.15	1485	
19288	217	229	4	0.2	0.51	2	260	< 0.5	< 2	1.33	1.0	3	33	12	0.48	< 10	< 1	0.13	< 10	0.14	1375	
19289	217	229	1	0.2	0.27	< 2	500	< 0.5	< 2	2.35	2.5	2	12	14	0.25	< 10	< 1	0.10	< 10	0.10	2080	
19290	217	229	3	< 0.2	0.27	< 2	190	< 0.5	< 2	2.16	1.0	1	9	16	0.25	< 10	< 1	0.11	< 10	0.24	530	
19291	217	229	1	< 0.2	0.30	< 2	380	< 0.5	< 2	2.79	2.0	2	22	16	0.30	< 10	< 1	0.12	< 10	0.18	1275	
19292	217	229	3	< 0.2	0.40	< 2	510	< 0.5	< 2	1.92	1.5	3	39	11	0.39	< 10	< 1	0.18	< 10	0.16	2650	
19293	217	229	3	0.2	0.52	< 2	440	< 0.5	< 2	1.30	1.5	6	26	13	0.48	< 10	< 1	0.19	< 10	0.14	4370	
19294	217	229	< 1	< 0.2	0.61	< 2	290	< 0.5	< 2	0.89	1.0	5	77	10	0.62	< 10	< 1	0.16	< 10	0.14	2300	

CERTIFICATION:



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ROYAL OAK MINES INC.  
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A9522928

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19255	217	229	< 1	0.03	7	970	62	< 2	1	50	0.03	< 10	< 10	19	< 10	154
19256	217	229	< 1	< 0.01	8	1230	62	< 2	< 1	56	< 0.01	< 10	< 10	6	< 10	220
19257	217	229	1	0.01	9	1510	90	< 2	< 1	45	0.01	< 10	< 10	12	< 10	182
19258	217	229	1	0.01	7	810	64	< 2	< 1	35	0.01	< 10	< 10	11	< 10	88
19259	217	229	2	0.01	120	1740	82	< 2	1	77	0.01	< 10	< 10	21	< 10	98
19260	217	229	< 1	0.01	8	1140	86	< 2	1	65	0.03	< 10	< 10	15	< 10	166
19261	217	229	< 1	< 0.01	6	1070	64	< 2	< 1	70	< 0.01	< 10	< 10	8	< 10	96
19262	217	229	< 1	< 0.01	4	960	70	< 2	< 1	37	0.01	< 10	< 10	11	< 10	110
19263	217	229	1	0.01	46	1810	38	< 2	< 1	68	< 0.01	< 10	< 10	9	< 10	60
19264	217	229	< 1	0.01	48	1500	24	< 2	3	50	0.03	< 10	< 10	24	< 10	78
19265	217	229	1	< 0.01	6	1520	82	< 2	< 1	75	< 0.01	< 10	< 10	9	< 10	216
19266	217	229	< 1	0.01	4	1380	58	< 2	< 1	110	< 0.01	< 10	< 10	7	< 10	498
19267	217	229	1	0.01	6	1320	88	< 2	< 1	67	0.01	< 10	< 10	13	< 10	310
19268	217	229	< 1	< 0.01	7	1620	92	< 2	< 1	75	0.01	< 10	< 10	10	< 10	454
19269	217	229	< 1	0.01	6	1200	66	< 2	< 1	105	0.02	< 10	< 10	11	< 10	244
19270	217	229	< 1	0.01	8	1250	74	< 2	< 1	65	0.03	< 10	< 10	16	< 10	234
19271	217	229	< 1	< 0.01	4	960	70	< 2	1	51	0.02	< 10	< 10	13	< 10	68
19272	217	229	< 1	< 0.01	6	940	106	< 2	1	53	0.02	< 10	< 10	13	< 10	100
19273	217	229	< 1	< 0.01	4	1220	100	< 2	< 1	55	0.01	< 10	< 10	13	< 10	118
19274	217	229	1	< 0.01	4	990	88	< 2	< 1	33	0.01	< 10	< 10	12	< 10	92
19275	217	229	< 1	< 0.01	5	1170	78	< 2	< 1	58	< 0.01	< 10	< 10	9	< 10	196
19276	217	229	< 1	< 0.01	3	900	62	< 2	< 1	38	0.01	< 10	< 10	9	< 10	184
19277	217	229	< 1	< 0.01	3	1000	64	< 2	< 1	40	< 0.01	< 10	< 10	7	< 10	94
19278	217	229	< 1	< 0.01	6	1120	82	< 2	< 1	30	0.01	< 10	< 10	11	< 10	58
19279	217	229	1	0.01	6	1280	86	< 2	< 1	49	0.01	< 10	< 10	12	< 10	114
19280	217	229	1	0.01	6	1160	78	< 2	1	60	0.02	< 10	< 10	13	< 10	56
19281	217	229	< 1	0.01	2	820	50	< 2	< 1	47	< 0.01	< 10	< 10	6	< 10	84
19282	217	229	< 1	0.01	6	1170	62	< 2	< 1	43	0.01	< 10	< 10	9	< 10	138
19283	217	229	< 1	0.01	13	930	68	< 2	< 1	41	< 0.01	< 10	< 10	9	< 10	76
19284	217	229	< 1	0.01	10	1190	46	< 2	1	29	0.01	< 10	< 10	10	< 10	66
19285	217	229	< 1	< 0.01	4	1110	76	< 2	< 1	40	0.01	< 10	< 10	10	< 10	136
19286	217	229	< 1	< 0.01	4	990	50	< 2	< 1	36	< 0.01	< 10	< 10	7	< 10	132
19287	217	229	< 1	< 0.01	4	1190	62	< 2	< 1	62	0.01	< 10	< 10	9	< 10	220
19288	217	229	1	< 0.01	5	1290	64	< 2	< 1	45	0.01	< 10	< 10	12	< 10	94
19289	217	229	< 1	< 0.01	3	1140	66	< 2	< 1	55	< 0.01	< 10	< 10	6	< 10	378
19290	217	229	< 1	0.01	5	1390	60	< 2	< 1	52	< 0.01	< 10	< 10	7	< 10	82
19291	217	229	< 1	< 0.01	4	1290	62	< 2	< 1	82	< 0.01	< 10	< 10	7	< 10	276
19292	217	229	< 1	< 0.01	6	1520	78	< 2	< 1	81	0.01	< 10	< 10	10	< 10	238
19293	217	229	1	< 0.01	6	1440	112	< 2	< 1	63	0.01	< 10	< 10	13	< 10	156
19294	217	229	1	0.01	6	1170	100	< 2	1	45	0.02	< 10	< 10	16	< 10	108

CERTIFICATION: Stan Bechle



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ROYAL OAK MINES INC.  
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 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Invoice No. :19521978  
 P.O. Number :P211451  
 Account :JWW

Project : 2000  
 Comments: ATN: M. STALKER

## CERTIFICATE OF ANALYSIS A9521978

SAMPLE	PREP CODE	Au	NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
		ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
16751	217 229	< 1	0.6	0.51	6	430	< 0.5	< 2	0.74	0.5	29	115	14	0.79	< 10	< 1	0.10	10	0.12	6570	
16752	217 229	1	0.2	0.56	4	280	< 0.5	2	0.77	0.5	7	125	12	0.52	< 10	< 1	0.15	10	0.11	905	
16753	217 229	1	0.6	0.65	4	270	< 0.5	< 2	0.58	0.5	29	81	10	0.94	< 10	< 1	0.10	< 10	0.13	4280	
16754	217 229	1	0.4	0.55	4	250	< 0.5	< 2	1.39	0.5	4	43	11	0.51	< 10	< 1	0.09	10	0.14	745	
16755	217 229	1	< 0.2	0.21	6	100	< 0.5	< 2	2.99	0.5	6	11	6	0.44	< 10	< 1	0.03	< 10	0.22	1335	
16756	217 229	< 1	0.2	0.26	4	180	< 0.5	< 2	3.69	< 0.5	3	14	6	0.48	< 10	< 1	0.03	< 10	0.30	3290	
16757	217 229	< 1	0.2	0.16	2	100	< 0.5	< 2	2.38	0.5	2	54	6	0.26	< 10	< 1	0.06	< 10	0.25	2680	
16758	217 229	< 1	0.2	0.16	2	120	< 0.5	< 2	2.69	0.5	4	25	7	0.26	< 10	< 1	0.06	< 10	0.27	3110	
16759	217 229	1	< 0.2	0.29	4	90	< 0.5	< 2	1.53	< 0.5	2	9	10	0.29	< 10	< 1	0.04	10	0.19	210	
16760	217 229	< 1	0.6	0.99	12	210	< 0.5	< 2	2.20	0.5	21	40	121	0.89	10	< 1	0.04	120	0.22	4090	
16761	217 229	4	< 0.2	0.30	6	80	< 0.5	< 2	1.07	0.5	1	11	11	0.28	< 10	< 1	0.04	< 10	0.14	45	
16762	217 229	1	< 0.2	0.20	8	150	< 0.5	< 2	0.98	0.5	1	8	10	0.19	< 10	< 1	0.06	< 10	0.09	35	
16763	217 229	< 1	0.6	0.99	8	280	< 0.5	< 2	1.69	0.5	16	46	76	0.80	10	< 1	0.12	120	0.28	2080	
16764	217 229	1	< 0.2	0.49	12	360	< 0.5	4	1.51	1.0	7	92	50	0.51	< 10	< 1	0.14	10	0.16	170	
16765	217 229	2	0.2	0.43	8	180	< 0.5	< 2	0.56	0.5	3	93	9	0.56	< 10	< 1	0.08	< 10	0.10	230	
16766	217 229	< 1	< 0.2	0.40	6	120	< 0.5	< 2	0.40	< 0.5	1	75	7	0.43	< 10	< 1	0.07	< 10	0.08	250	
16767	217 229	< 1	0.2	0.73	4	120	< 0.5	4	0.57	< 0.5	3	85	20	0.71	< 10	< 1	0.08	10	0.17	315	
16768	217 229	< 1	1.4	1.68	14	250	< 0.5	< 2	1.08	0.5	63	102	111	2.61	20	< 1	0.07	90	0.25	9920	
16769	217 229	2	0.2	0.34	8	200	< 0.5	< 2	1.03	0.5	2	14	13	0.31	< 10	< 1	0.08	10	0.10	60	
16770	217 229	2	0.2	1.73	10	140	< 0.5	< 2	1.31	< 0.5	17	130	67	1.91	10	< 1	0.08	60	0.55	1495	
16771	217 229	< 1	0.2	1.11	4	160	< 0.5	2	2.19	1.0	9	54	54	0.86	10	< 1	0.07	60	0.35	1915	
16772	217 229	< 1	0.4	1.26	16	160	< 0.5	2	0.53	< 0.5	58	109	33	1.78	< 10	< 1	0.12	10	0.31	1070	
16773	217 229	< 1	< 0.2	0.36	6	120	< 0.5	< 2	0.46	< 0.5	2	72	13	0.40	< 10	< 1	0.06	< 10	0.10	60	
16774	217 229	< 1	0.2	0.63	4	130	< 0.5	< 2	0.55	0.5	8	47	15	0.57	< 10	< 1	0.11	10	0.12	130	
16775	217 229	< 1	< 0.2	0.90	4	70	< 0.5	< 2	0.40	< 0.5	7	96	21	0.94	< 10	< 1	0.08	10	0.20	220	
16776	217 229	< 1	0.2	0.91	10	130	< 0.5	< 2	1.75	0.5	9	22	32	0.70	< 10	< 1	0.08	30	0.21	1280	
16777	217 229	1	0.2	0.73	2	120	< 0.5	< 2	2.59	1.0	3	18	34	0.42	< 10	< 1	0.06	20	0.28	400	
16778	217 229	< 1	< 0.2	0.18	4	170	< 0.5	< 2	1.32	0.5	1	6	8	0.18	< 10	< 1	0.06	< 10	0.08	240	
16779	217 229	1	0.4	0.29	8	160	< 0.5	4	0.78	0.5	1	27	11	0.31	< 10	< 1	0.12	< 10	0.09	125	
16780	217 229	< 1	0.2	0.38	6	170	< 0.5	< 2	0.49	0.5	2	93	12	0.44	< 10	< 1	0.08	< 10	0.07	170	
16781	217 229	2	0.4	1.09	4	90	< 0.5	2	2.26	< 0.5	3	18	46	0.64	10	< 1	0.06	90	0.30	345	
16782	217 229	2	0.2	1.10	4	100	< 0.5	< 2	0.85	< 0.5	9	61	18	1.02	< 10	< 1	0.13	20	0.26	425	
16783	217 229	< 1	0.4	0.86	8	90	< 0.5	2	1.11	0.5	5	58	21	0.72	10	< 1	0.11	60	0.22	505	
16784	217 229	< 1	0.2	0.41	8	130	< 0.5	< 2	0.74	0.5	1	73	7	0.45	< 10	< 1	0.13	< 10	0.08	305	
16785	217 229	1	< 0.2	0.04	< 2	150	< 0.5	< 2	1.35	1.0	3	9	35	0.11	< 10	< 1	0.13	< 10	0.33	2370	
16786	217 229	2	< 0.2	0.61	2	140	< 0.5	2	0.60	0.5	2	52	10	0.50	< 10	< 1	0.11	< 10	0.10	365	
16787	217 229	< 1	< 0.2	0.41	2	240	< 0.5	< 2	0.67	1.0	2	58	14	0.43	< 10	< 1	0.09	< 10	0.09	390	
16788	217 229	1	0.2	0.37	4	170	< 0.5	< 2	0.98	0.5	1	31	10	0.36	< 10	< 1	0.13	< 10	0.10	435	
16789	217 229	< 1	0.2	0.41	4	210	< 0.5	< 2	0.70	0.5	1	84	6	0.40	< 10	< 1	0.11	< 10	0.09	1995	
16790	217 229	1	0.2	0.35	4	350	< 0.5	< 2	1.37	2.0	2	44	10	0.33	< 10	< 1	0.12	< 10	0.10	3280	

CERTIFICATION: *Janice Beinler*



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3: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATN: M. STALKER

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## CERTIFICATE OF ANALYSIS A9521978

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Tl %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16751	217 229	1	0.02	8	790	42	2	1	43	0.05	< 10	10	21	< 10	118
16752	217 229	< 1	0.01	6	720	68	< 2	1	39	0.02	< 10	< 10	13	< 10	68
16753	217 229	< 1	0.01	7	780	42	< 2	1	34	0.04	< 10	10	21	< 10	100
16754	217 229	< 1	0.01	7	880	44	< 2	1	61	0.02	< 10	< 10	12	< 10	104
16755	217 229	< 1	0.01	6	800	24	2	< 1	48	< 0.01	< 10	< 10	4	< 10	14
16756	217 229	< 1	0.01	5	1150	20	2	< 1	57	< 0.01	< 10	10	3	< 10	40
16757	217 229	< 1	0.01	4	790	30	< 2	< 1	38	< 0.01	< 10	10	4	< 10	52
16758	217 229	< 1	0.01	4	800	30	< 2	< 1	42	< 0.01	< 10	10	4	< 10	64
16759	217 229	< 1	0.01	6	510	16	< 2	< 1	36	< 0.01	< 10	< 10	4	< 10	58
16760	217 229	1	0.01	39	730	28	< 2	6	56	< 0.01	10	< 10	16	< 10	40
16761	217 229	< 1	0.01	8	540	50	< 2	< 1	30	< 0.01	< 10	< 10	6	< 10	30
16762	217 229	1 < 0.01	11	570	38	< 2	< 1	35	< 0.01	< 10	< 10	3	< 10	12	
16763	217 229	1	0.01	36	850	38	< 2	4	44	0.02	10	< 10	18	< 10	22
16764	217 229	1	0.02	22	920	40	2	1	57	0.04	< 10	< 10	14	< 10	38
16765	217 229	< 1	0.01	7	650	44	< 2	1	26	0.03	< 10	< 10	15	< 10	34
16766	217 229	< 1	0.01	4	490	28	< 2	1	20	0.04	< 10	< 10	14	< 10	36
16767	217 229	< 1	0.02	9	800	22	2	1	29	0.06	< 10	< 10	19	< 10	40
16768	217 229	3	0.01	29	1220	28	4	5	37	0.02	< 10	10	51	10	44
16769	217 229	< 1	0.01	6	820	48	2	1	35	< 0.01	< 10	< 10	6	< 10	28
16770	217 229	1	0.02	63	1510	12	2	6	43	0.05	< 10	< 10	35	< 10	56
16771	217 229	< 1	0.01	31	1340	38	< 2	2	57	0.01	< 10	< 10	16	< 10	60
16772	217 229	1	0.01	20	680	44	< 2	2	28	0.09	< 10	< 10	59	< 10	68
16773	217 229	< 1	0.01	7	410	34	< 2	1	23	0.04	< 10	< 10	12	< 10	22
16774	217 229	< 1	0.01	9	1130	36	< 2	1	34	0.02	< 10	< 10	11	< 10	54
16775	217 229	< 1	0.02	12	580	12	2	2	24	0.06	< 10	< 10	21	< 10	26
16776	217 229	< 1	0.01	12	1030	50	< 2	1	57	< 0.01	< 10	< 10	12	< 10	56
16777	217 229	< 1	0.01	11	960	24	2	1	69	< 0.01	< 10	< 10	7	< 10	46
16778	217 229	< 1 < 0.01	3	750	34	< 2	< 1	44	< 0.01	< 10	< 10	4	< 10	78	
16779	217 229	< 1 < 0.01	6	900	56	< 2	< 1	39	0.01	< 10	< 10	7	< 10	70	
16780	217 229	< 1	0.01	7	770	76	< 2	1	29	0.01	< 10	< 10	11	< 10	54
16781	217 229	< 1	0.01	13	870	22	2	3	55	0.01	10	< 10	11	< 10	22
16782	217 229	1	0.01	12	610	36	< 2	2	36	0.06	< 10	< 10	25	< 10	56
16783	217 229	< 1	0.01	9	830	46	2	2	40	0.03	< 10	< 10	17	< 10	60
16784	217 229	< 1	0.01	6	710	56	< 2	1	35	0.02	< 10	< 10	11	< 10	84
16785	217 229	< 1	0.01	5	2500	6	< 2	< 1	59	< 0.01	< 10	< 10	1	< 10	304
16786	217 229	< 1	0.01	6	940	42	< 2	1	41	0.02	< 10	< 10	11	< 10	76
16787	217 229	< 1	0.01	7	860	48	< 2	< 1	49	0.02	< 10	< 10	11	< 10	106
16788	217 229	< 1 < 0.01	6	910	56	< 2	< 1	67	0.01	< 10	< 10	8	< 10	78	
16789	217 229	< 1	0.01	4	680	42	< 2	< 1	42	0.01	< 10	< 10	10	< 10	72
16790	217 229	< 1 < 0.01	5	790	54	< 2	< 1	60	0.01	< 10	< 10	8	< 10	194	

CERTIFICATION:



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J: ROYAL OAK MINES INC.  
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## CERTIFICATE OF ANALYSIS

A9521978

SAMPLE	PREP CODE	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
16791	217 229	2	0.4	0.34	2	220	< 0.5	< 2	0.93	0.5	2	34	11	0.36	< 10	< 1	0.13	< 10	0.09	955
16792	217 229	< 1	0.2	0.36	6	170	< 0.5	< 2	0.60	0.5	1	80	7	0.40	< 10	< 1	0.09	< 10	0.10	1500
16793	217 229	< 1	0.2	0.38	4	150	< 0.5	< 2	0.77	0.5	1	31	9	0.37	< 10	< 1	0.13	< 10	0.09	450
16794	217 229	< 1	< 0.2	0.34	2	110	< 0.5	< 2	0.63	0.5	< 1	61	6	0.34	< 10	< 1	0.08	< 10	0.07	225
16795	217 229	< 1	0.2	0.65	< 2	100	< 0.5	< 2	0.65	0.5	2	52	8	0.52	< 10	< 1	0.09	10	0.13	115
16796	217 229	< 1	0.2	0.63	2	190	< 0.5	< 2	0.54	0.5	2	23	14	0.57	< 10	< 1	0.14	< 10	0.11	295
16797	217 229	1	0.4	0.56	< 2	170	< 0.5	2	0.60	0.5	3	44	10	0.51	< 10	< 1	0.11	10	0.10	425
16798	217 229	< 1	0.2	0.56	< 2	220	< 0.5	< 2	0.93	1.0	2	29	12	0.51	< 10	< 1	0.16	< 10	0.12	1170
16799	217 229	1	0.8	0.56	2	260	< 0.5	< 2	0.94	0.5	1	45	10	0.51	< 10	< 1	0.16	< 10	0.12	720
16800	217 229	< 1	0.2	0.38	6	90	< 0.5	< 2	2.54	1.0	2	15	26	0.32	< 10	< 1	0.11	10	0.27	995
16801	217 229	< 1	0.4	0.35	2	140	< 0.5	< 2	3.25	2.0	14	10	22	0.48	< 10	< 1	0.07	10	0.32	5080
16802	217 229	< 1	0.2	0.59	4	140	< 0.5	< 2	0.59	0.5	3	23	12	0.50	< 10	< 1	0.10	< 10	0.08	175
16803	217 229	< 1	0.2	0.36	4	140	< 0.5	< 2	1.07	0.5	2	15	9	0.34	< 10	< 1	0.11	< 10	0.15	495
16804	217 229	< 1	< 0.2	0.32	6	170	< 0.5	< 2	0.65	0.5	1	56	10	0.38	< 10	< 1	0.13	< 10	0.08	1030
16805	217 229	1	0.2	0.47	4	100	< 0.5	< 2	0.36	0.5	3	14	8	0.36	< 10	< 1	0.07	< 10	0.08	40
16806	217 229	< 1	< 0.2	0.41	6	80	< 0.5	< 2	0.28	< 0.5	1	35	7	0.43	< 10	< 1	0.08	< 10	0.06	35
16807	217 229	< 1	< 0.2	0.27	2	160	< 0.5	2	0.40	1.0	1	14	11	0.27	< 10	1	0.10	< 10	0.06	200
16808	217 229	1	< 0.2	0.46	< 2	150	< 0.5	< 2	0.40	0.5	1	29	11	0.61	< 10	< 1	0.12	< 10	0.07	215
16809	217 229	< 1	< 0.2	0.36	4	160	< 0.5	< 2	0.52	0.5	1	16	11	0.35	< 10	< 1	0.15	< 10	0.08	280
16810	217 229	< 1	0.6	0.45	2	140	< 0.5	2	0.69	0.5	3	48	11	0.40	< 10	< 1	0.12	< 10	0.10	750
16811	217 229	< 1	< 0.2	0.33	6	170	< 0.5	< 2	0.50	0.5	4	89	18	0.35	< 10	< 1	0.09	< 10	0.07	160
16812	217 229	< 1	0.2	0.39	4	120	< 0.5	2	0.31	< 0.5	3	81	8	0.58	< 10	< 1	0.06	< 10	0.07	75
16813	217 229	< 1	0.4	0.39	2	190	< 0.5	< 2	0.49	0.5	4	55	14	1.34	< 10	< 1	0.11	< 10	0.15	235
16814	217 229	< 1	0.2	0.50	2	110	< 0.5	< 2	0.43	< 0.5	4	68	32	0.81	< 10	< 1	0.07	< 10	0.12	230
16815	217 229	1	0.2	0.36	2	160	< 0.5	< 2	0.72	0.5	2	48	10	0.40	< 10	1	0.14	< 10	0.13	630
16816	217 229	< 1	0.4	0.48	6	160	< 0.5	< 2	0.64	0.5	3	78	9	0.65	< 10	< 1	0.10	< 10	0.14	1030
16817	217 229	5	0.4	0.49	4	120	< 0.5	< 2	1.59	0.5	5	20	20	0.40	< 10	< 1	0.08	10	0.22	275
16818	217 229	< 1	0.2	0.42	4	150	< 0.5	< 2	0.58	< 0.5	2	100	8	0.54	< 10	< 1	0.10	< 10	0.10	605
16819	217 229	1	0.2	0.96	< 2	130	< 0.5	< 2	1.90	0.5	8	25	36	0.78	10	< 1	0.06	140	0.26	255
16820	217 229	< 1	< 0.2	0.22	6	70	< 0.5	< 2	0.89	< 0.5	< 1	9	7	0.21	< 10	< 1	0.07	< 10	0.10	40
16821	217 229	< 1	< 0.2	0.28	4	100	< 0.5	< 2	1.60	0.5	2	26	18	0.30	< 10	< 1	0.05	10	0.18	635
16822	217 229	< 1	< 0.2	0.39	< 2	120	< 0.5	< 2	1.89	0.5	2	14	32	0.32	< 10	< 1	0.03	30	0.21	470
16823	217 229	< 1	< 0.2	0.49	2	120	< 0.5	< 2	2.64	0.5	4	21	28	0.49	< 10	< 1	0.03	20	0.25	660
16824	217 229	< 1	< 0.2	0.25	2	100	< 0.5	< 2	2.56	0.5	2	8	14	0.26	< 10	1	0.03	10	0.21	1155
16825	217 229	< 1	< 0.2	0.49	2	80	< 0.5	< 2	2.52	1.0	2	23	33	0.35	< 10	< 1	0.08	10	0.16	510
16826	217 229	< 1	< 0.2	0.60	< 2	110	< 0.5	< 2	0.38	0.5	2	74	11	0.56	< 10	< 1	0.07	< 10	0.10	210
16827	217 229	< 1	0.2	0.51	6	70	< 0.5	< 2	0.37	< 0.5	2	44	9	0.43	< 10	< 1	0.07	< 10	0.06	40
16828	217 229	< 1	0.2	0.44	4	110	< 0.5	< 2	0.42	0.5	1	58	10	0.42	< 10	< 1	0.09	< 10	0.08	190
16829	217 229	< 1	< 0.2	0.51	6	140	< 0.5	< 2	0.58	0.5	1	83	11	0.62	< 10	< 1	0.09	< 10	0.15	290
16830	217 229	1	0.4	0.43	< 2	210	< 0.5	< 2	0.71	0.5	2	26	7	0.36	< 10	< 1	0.12	< 10	0.09	485

CERTIFICATION:

*Walter Bechler*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
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 PHONE: 905-624-2806 FAX: 905-624-6163

TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATN: M. STALKER

Page Num.: 2-B  
 Total Pages: 3  
 Certificate Date: 30-JUL-95  
 Invoice No.: I9521978  
 P.O. Number: P211451  
 Account: JWW

## CERTIFICATE OF ANALYSIS

A9521978

SAMPLE	PREP CODE	No ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16791	217 229	< 1	< 0.01	4	1110	66	2	< 1	42	< 0.01	< 10	< 10	9	< 10	72
16792	217 229	< 1	0.01	3	590	42	< 2	< 1	41	0.02	< 10	< 10	10	< 10	78
16793	217 229	< 1	0.01	4	1040	42	< 2	< 1	42	0.01	< 10	< 10	8	< 10	86
16794	217 229	< 1	0.01	3	580	40	< 2	< 1	26	0.02	< 10	< 10	9	< 10	56
16795	217 229	< 1	0.01	5	660	40	< 2	1	33	0.02	< 10	< 10	12	< 10	36
16796	217 229	< 1	< 0.01	6	1120	44	< 2	< 1	36	0.01	< 10	< 10	12	< 10	92
16797	217 229	< 1	0.01	4	920	42	< 2	< 1	37	0.01	< 10	< 10	11	< 10	60
16798	217 229	< 1	0.01	6	1130	74	< 2	1	40	0.01	< 10	< 10	13	< 10	122
16799	217 229	< 1	0.01	6	1040	82	< 2	1	36	0.01	< 10	< 10	13	< 10	104
16800	217 229	< 1	0.01	6	900	58	< 2	< 1	46	< 0.01	< 10	< 10	8	< 10	58
16801	217 229	< 1	0.01	8	1330	50	2	< 1	52	< 0.01	< 10	10	9	< 10	128
16802	217 229	< 1	0.01	6	1070	28	2	1	36	0.01	< 10	< 10	8	< 10	46
16803	217 229	< 1	< 0.01	4	1040	58	< 2	< 1	52	< 0.01	< 10	< 10	8	< 10	86
16804	217 229	< 1	0.01	4	830	60	< 2	< 1	37	0.01	< 10	< 10	9	< 10	62
16805	217 229	< 1	0.01	8	930	58	< 2	< 1	41	< 0.01	< 10	< 10	8	< 10	26
16806	217 229	< 1	< 0.01	6	700	50	2	< 1	28	0.01	< 10	< 10	10	< 10	34
16807	217 229	< 1	< 0.01	8	860	70	2	< 1	25	< 0.01	< 10	< 10	5	< 10	72
16808	217 229	< 1	< 0.01	4	980	78	< 2	< 1	26	0.03	< 10	< 10	23	< 10	64
16809	217 229	< 1	< 0.01	6	1200	64	< 2	< 1	29	< 0.01	< 10	< 10	8	< 10	72
16810	217 229	< 1	0.01	8	940	42	< 2	< 1	39	0.01	< 10	< 10	11	< 10	72
16811	217 229	< 1	0.01	13	680	34	2	< 1	47	0.01	< 10	< 10	9	< 10	56
16812	217 229	< 1	0.01	7	500	24	2	< 1	31	0.08	< 10	< 10	22	< 10	90
16813	217 229	< 1	0.02	11	680	46	2	1	32	0.08	< 10	< 10	46	< 10	34
16814	217 229	< 1	0.02	12	510	28	< 2	1	27	0.07	< 10	< 10	28	< 10	22
16815	217 229	< 1	0.01	8	1040	58	< 2	< 1	37	0.02	< 10	< 10	10	< 10	80
16816	217 229	< 1	0.01	8	790	54	< 2	1	33	0.04	< 10	< 10	18	< 10	58
16817	217 229	< 1	0.01	14	690	52	2	1	53	< 0.01	< 10	< 10	9	< 10	32
16818	217 229	< 1	0.01	6	590	38	< 2	1	30	0.03	< 10	< 10	15	< 10	58
16819	217 229	< 1	0.01	34	730	20	< 2	3	65	0.01	20	< 10	10	< 10	16
16820	217 229	< 1	< 0.01	4	570	34	< 2	< 1	34	< 0.01	< 10	< 10	4	< 10	24
16821	217 229	< 1	0.01	15	730	44	< 2	< 1	45	< 0.01	< 10	< 10	7	< 10	32
16822	217 229	< 1	0.01	24	560	34	< 2	1	54	< 0.01	< 10	< 10	7	< 10	38
16823	217 229	< 1	0.01	19	840	24	2	1	56	< 0.01	< 10	< 10	8	< 10	28
16824	217 229	< 1	0.01	10	580	32	< 2	< 1	49	< 0.01	< 10	< 10	6	< 10	42
16825	217 229	< 1	0.01	11	810	42	2	1	36	< 0.01	< 10	< 10	10	< 10	28
16826	217 229	< 1	0.02	6	620	36	2	1	19	0.03	< 10	< 10	15	< 10	54
16827	217 229	< 1	0.01	6	860	24	< 2	< 1	22	0.01	< 10	< 10	6	< 10	22
16828	217 229	< 1	0.01	4	680	40	2	< 1	23	0.02	< 10	< 10	12	< 10	60
16829	217 229	< 1	0.01	6	710	54	2	1	31	0.04	< 10	< 10	18	< 10	80
16830	217 229	< 1	< 0.01	6	1140	46	< 2	< 1	40	0.01	< 10	< 10	8	< 10	36

CERTIFICATION: *Wentz Becker*



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TO: ROYAL OAK MINES INC.  
TIMMINS DIVISION  
P.O. BOX 2010  
TIMMINS, ON  
P4N 7X7

Project : 2000  
Comments: ATN: M. STALKER

Page Num : 3-A  
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Certificate Date: 30-JUL-95  
Invoice No. : 19521978  
P.O. Number : P211451  
Account : JWW

## CERTIFICATE OF ANALYSIS

A9521978

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
16831	217   229	< 1	0.4	0.27	2	190	< 0.5	< 2	0.81	0.5	1	20	9	0.23	< 10	< 1	0.10	< 10	0.09	470

CERTIFICATION:



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## CERTIFICATE OF ANALYSIS

A9521978

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16831	217   229	< 1	0.01	3	940	56	< 2	< 1	42	< 0.01	< 10	< 10	6	< 10	78

CERTIFICATION: Hans Bechler



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O: ROYAL OAK MINES INC.  
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 Certificate Date: 03-AUG-95  
 Invoice No.: 19521980  
 P.O. Number: P211451  
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## CERTIFICATE OF ANALYSIS A9521980

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17021	217	229	< 1	0.02	6	890	66	< 2	< 1	24	0.04	< 10	< 10	17	< 10	62
17022	217	229	< 1	< 0.01	10	750	42	2	< 1	40	0.01	< 10	< 10	6	< 10	34
17023	217	229	< 1	< 0.01	6	730	58	< 2	< 1	48	0.02	< 10	< 10	10	< 10	22
17024	217	229	< 1	< 0.01	2	700	46	< 2	< 1	34	< 0.01	< 10	< 10	4	< 10	42
17025	217	229	< 1	0.01	4	640	42	< 2	< 1	62	0.02	< 10	< 10	9	< 10	72
17026	217	229	< 1	0.01	3	830	46	< 2	< 1	31	0.02	< 10	< 10	8	< 10	36
17027	217	229	< 1	0.01	4	660	44	< 2	1	41	0.02	< 10	< 10	8	< 10	20
17028	217	229	< 1	0.01	7	850	54	< 2	1	52	0.04	< 10	< 10	14	< 10	52
17029	217	229	< 1	0.02	7	880	64	< 2	1	33	0.04	< 10	< 10	16	< 10	64
17030	217	229	< 1	0.01	7	500	22	< 2	< 1	15	0.03	< 10	< 10	11	< 10	42
17031	217	229	< 1	0.01	9	700	50	< 2	1	36	0.04	< 10	< 10	13	< 10	78
17032	217	229	< 1	< 0.01	8	1000	72	< 2	< 1	41	0.01	< 10	< 10	7	< 10	68
17033	217	229	< 1	0.06	8	770	28	< 2	2	36	0.10	< 10	< 10	31	< 10	66
17034	217	229	< 1	0.01	5	800	48	< 2	1	28	0.02	< 10	< 10	10	< 10	46
17035	217	229	< 1	< 0.01	6	940	60	< 2	1	33	0.03	< 10	< 10	10	< 10	54
17036	217	229	1	0.02	9	680	34	< 2	2	28	0.07	< 10	< 10	31	< 10	30
17037	217	229	< 1	0.01	4	750	28	< 2	1	37	0.02	< 10	< 10	9	< 10	54
17038	217	229	< 1	0.01	27	600	32	< 2	1	18	0.08	< 10	< 10	19	< 10	50
17039	217	229	< 1	< 0.01	7	830	48	< 2	1	31	0.01	< 10	< 10	10	< 10	50
17040	217	229	1	< 0.01	9	1100	56	< 2	1	48	0.01	< 10	< 10	38	< 10	30
17041	217	229	< 1	< 0.01	7	1070	70	< 2	< 1	39	0.01	< 10	< 10	8	< 10	48
17042	217	229	< 1	< 0.01	6	1160	48	< 2	< 1	41	0.01	< 10	< 10	7	< 10	88
17043	217	229	< 1	< 0.01	4	970	60	< 2	< 1	35	0.01	< 10	< 10	9	< 10	46
17044	217	229	< 1	< 0.01	4	970	70	< 2	< 1	24	< 0.01	< 10	< 10	7	< 10	58
17045	217	229	< 1	< 0.01	7	860	54	< 2	< 1	37	0.02	< 10	< 10	12	< 10	94
17046	217	229	< 1	0.01	15	510	14	< 2	1	32	0.04	< 10	< 10	14	< 10	64
17047	217	229	< 1	< 0.01	7	1050	66	< 2	< 1	26	0.01	< 10	< 10	6	< 10	84
17048	217	229	< 1	< 0.01	9	810	54	< 2	< 1	27	0.01	< 10	< 10	7	< 10	48
17049	217	229	< 1	0.01	8	760	44	< 2	1	34	0.04	< 10	< 10	14	< 10	52
17050	217	229	< 1	< 0.01	5	850	48	2	< 1	55	< 0.01	< 10	< 10	6	< 10	46
17051	217	229	1	< 0.01	8	1070	78	< 2	< 1	14	0.01	< 10	< 10	13	< 10	66
17052	217	229	< 1	< 0.01	7	960	56	< 2	< 1	30	0.01	< 10	< 10	8	< 10	40
17053	217	229	1	0.01	5	780	56	< 2	1	38	0.05	< 10	< 10	13	< 10	50
17054	217	229	< 1	< 0.01	7	1140	48	< 2	< 1	56	< 0.01	< 10	< 10	7	< 10	100
17055	217	229	< 1	< 0.01	6	1000	46	< 2	< 1	40	< 0.01	< 10	< 10	6	< 10	46
17056	217	229	< 1	< 0.01	6	800	52	< 2	< 1	37	0.02	< 10	< 10	9	< 10	42
17057	217	229	< 1	0.01	6	1090	62	< 2	< 1	36	0.02	< 10	< 10	10	< 10	86
17058	217	229	5	0.01	13	1880	56	< 2	1	29	0.03	< 10	< 10	57	< 10	42
17059	217	229	< 1	< 0.01	5	920	56	< 2	< 1	56	0.01	< 10	< 10	6	< 10	174
17060	217	229	< 1	< 0.01	5	1180	70	< 2	< 1	51	0.01	< 10	< 10	8	< 10	176

CERTIFICATION:



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ROYAL OAK MINES INC.  
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Project: 2000  
 Comments: ATN: M. STALKER

## CERTIFICATE OF ANALYSIS A9521980

SAMPLE	PREP CODE	Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17021	217 229	< 1	< 0.2	0.62	2	50	< 0.5	< 2	0.38	0.5	2	40	13	0.73	< 10	< 1	0.11	< 10	0.14	150	
17022	217 229	< 1	< 0.2	0.46	2	210	< 0.5	< 2	0.45	0.5	2	14	13	0.35	< 10	< 1	0.05	10	0.05	130	
17023	217 229	< 1	< 0.2	0.36	2	110	< 0.5	< 2	0.36	0.5	1	47	7	0.42	< 10	< 1	0.06	< 10	0.08	120	
17024	217 229	< 1	< 0.2	0.24	2	90	< 0.5	< 2	0.38	0.5	1	9	20	0.26	< 10	< 1	0.09	< 10	0.07	50	
17025	217 229	1	< 0.2	0.27	2	190	< 0.5	< 2	0.90	0.5	1	27	7	0.35	< 10	< 1	0.09	< 10	0.09	640	
17026	217 229	< 1	< 0.2	0.31	2	90	< 0.5	< 2	0.57	0.5	1	24	8	0.37	< 10	< 1	0.12	< 10	0.11	830	
17027	217 229	< 1	< 0.2	0.35	2	90	< 0.5	< 2	0.45	0.5	1	40	8	0.33	< 10	< 1	0.08	< 10	0.09	65	
17028	217 229	< 1	< 0.2	0.46	2	180	< 0.5	< 2	0.63	0.5	2	55	8	0.55	< 10	< 1	0.12	< 10	0.16	370	
17029	217 229	2	< 0.2	0.53	2	100	< 0.5	< 2	0.41	0.5	3	42	11	0.61	< 10	< 1	0.11	< 10	0.14	140	
17030	217 229	4	< 0.2	0.32	2	60	< 0.5	< 2	0.39	0.5	1	66	5	0.44	< 10	< 1	0.06	< 10	0.11	295	
17031	217 229	2	< 0.2	0.42	2	180	< 0.5	< 2	0.86	0.5	7	68	9	0.50	< 10	< 1	0.09	< 10	0.13	1115	
17032	217 229	1	< 0.2	0.33	2	190	< 0.5	< 2	0.54	1.0	2	23	15	0.33	< 10	< 1	0.10	< 10	0.10	370	
17033	217 229	< 1	< 0.2	0.70	2	100	< 0.5	< 2	0.77	< 0.5	7	53	16	1.28	< 10	< 1	0.21	10	0.47	455	
17034	217 229	< 1	< 0.2	0.37	2	150	< 0.5	< 2	0.44	0.5	1	63	10	0.45	< 10	< 1	0.11	< 10	0.08	110	
17035	217 229	< 1	< 0.2	0.34	2	150	< 0.5	< 2	0.79	0.5	2	29	11	0.41	< 10	< 1	0.10	< 10	0.10	505	
17036	217 229	< 1	< 0.2	0.84	2	100	< 0.5	< 2	0.38	< 0.5	6	63	14	1.18	< 10	< 1	0.09	10	0.21	240	
17037	217 229	< 1	< 0.2	0.50	2	130	< 0.5	< 2	0.47	0.5	1	62	10	0.48	< 10	< 1	0.07	10	0.08	180	
17038	217 229	< 1	< 0.2	0.67	2	80	< 0.5	< 2	0.26	< 0.5	3	133	9	0.78	< 10	< 1	0.10	< 10	0.34	90	
17039	217 229	< 1	< 0.2	0.46	2	140	< 0.5	< 2	0.38	< 0.5	2	51	9	0.44	< 10	< 1	0.12	< 10	0.08	270	
17040	217 229	< 1	< 0.2	0.71	4	210	< 0.5	< 2	1.29	0.5	25	36	11	2.81	< 10	1	0.10	10	0.16	5910	
17041	217 229	< 1	0.4	0.34	2	180	< 0.5	< 2	0.59	0.5	2	23	8	0.38	< 10	< 1	0.10	< 10	0.10	645	
17042	217 229	< 1	0.2	0.32	2	140	< 0.5	< 2	0.59	0.5	2	26	11	0.34	< 10	< 1	0.17	< 10	0.11	835	
17043	217 229	< 1	0.2	0.39	2	270	< 0.5	< 2	0.40	0.5	1	29	10	0.39	< 10	< 1	0.11	< 10	0.08	190	
17044	217 229	< 1	< 0.2	0.31	2	150	< 0.5	< 2	0.38	0.5	1	12	7	0.30	< 10	< 1	0.11	< 10	0.07	145	
17045	217 229	< 1	< 0.2	0.28	2	190	< 0.5	< 2	0.61	0.5	1	54	8	0.42	< 10	< 1	0.08	< 10	0.08	295	
17046	217 229	< 1	< 0.2	0.55	2	100	< 0.5	< 2	0.83	< 0.5	5	57	17	0.63	< 10	< 1	0.06	20	0.19	325	
17047	217 229	4	< 0.2	0.27	2	190	< 0.5	< 2	0.45	0.5	1	15	11	0.31	< 10	< 1	0.11	< 10	0.08	215	
17048	217 229	1	< 0.2	0.38	2	120	< 0.5	< 2	0.34	0.5	1	32	9	0.33	< 10	< 1	0.10	< 10	0.06	105	
17049	217 229	< 1	0.2	0.54	6	110	< 0.5	< 2	0.43	< 0.5	1	74	10	0.57	< 10	< 1	0.13	10	0.13	180	
17050	217 229	< 1	< 0.2	0.34	2	190	< 0.5	< 2	0.74	0.5	1	13	10	0.33	< 10	< 1	0.16	< 10	0.12	285	
17051	217 229	< 1	< 0.2	0.63	2	90	< 0.5	< 2	0.22	< 0.5	2	48	13	0.71	< 10	< 1	0.11	< 10	0.08	80	
17052	217 229	1	< 0.2	0.50	2	90	< 0.5	< 2	0.31	< 0.5	2	18	9	0.43	< 10	< 1	0.09	10	0.07	60	
17053	217 229	< 1	0.2	0.46	6	180	< 0.5	< 2	0.51	< 0.5	2	75	13	0.55	< 10	< 1	0.12	10	0.09	205	
17054	217 229	1	< 0.2	0.40	2	190	< 0.5	< 2	0.85	0.5	4	18	15	0.45	< 10	< 1	0.16	10	0.14	1195	
17055	217 229	1	0.2	0.33	2	200	< 0.5	< 2	0.63	0.5	1	17	10	0.31	< 10	< 1	0.10	< 10	0.10	160	
17056	217 229	1	0.2	0.48	2	290	< 0.5	< 2	0.43	0.5	2	66	7	0.47	< 10	< 1	0.10	< 10	0.07	105	
17057	217 229	< 1	0.2	0.40	2	160	< 0.5	< 2	0.46	0.5	2	72	12	0.40	< 10	< 1	0.14	< 10	0.08	485	
17058	217 229	< 1	0.4	1.20	6	110	< 0.5	< 2	0.35	< 0.5	171	55	24	3.15	< 10	< 1	0.10	20	0.17	4950	
17059	217 229	< 1	0.4	0.31	4	370	< 0.5	< 2	1.01	0.5	3	32	16	0.31	< 10	< 1	0.12	< 10	0.10	3010	
17060	217 229	< 1	0.4	0.35	2	270	< 0.5	< 2	0.89	1.0	3	30	12	0.39	< 10	< 1	0.16	< 10	0.10	3040	

CERTIFICATION: *Hart, Bechler*



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATN: M. STALKER

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 Account :JWW

## CERTIFICATE OF ANALYSIS

A9521980

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17061	217 229	< 1 < 0.01	6	1000	66	< 2	< 1	48	0.01	< 10	< 10	9	< 10	104	
17062	217 229	< 1 < 0.01	2	600	34	< 2	< 1	35	0.01	< 10	< 10	7	< 10	80	
17063	217 229	< 1 < 0.01	4	1080	64	< 2	< 1	49	< 0.01	< 10	< 10	7	< 10	98	
17064	217 229	< 1 < 0.01	4	800	68	< 2	< 1	50	0.01	< 10	< 10	8	< 10	76	
17065	217 229	< 1 < 0.01	3	630	42	< 2	< 1	30	0.01	< 10	< 10	8	< 10	46	
17066	217 229	< 1 < 0.01	3	1020	54	< 2	< 1	47	< 0.01	< 10	< 10	6	< 10	120	
17067	217 229	< 1 0.01	7	1030	54	< 2	1	42	0.02	< 10	< 10	12	< 10	58	
17068	217 229	< 1 < 0.01	3	780	68	< 2	< 1	39	0.01	< 10	< 10	7	< 10	80	
17069	217 229	< 1 0.01	6	730	48	< 2	1	56	0.03	< 10	< 10	12	< 10	108	
17070	217 229	< 1 0.01	9	650	52	< 2	< 1	29	0.03	< 10	< 10	10	< 10	78	
17071	217 229	< 1 < 0.01	3	840	68	< 2	< 1	34	< 0.01	< 10	< 10	5	< 10	54	
17072	217 229	< 1 < 0.01	2	460	14	< 2	< 1	45	< 0.01	< 10	< 10	3	< 10	18	
17073	217 229	< 1 < 0.01	3	580	40	< 2	< 1	33	< 0.01	< 10	< 10	6	< 10	24	
17074	217 229	< 1 < 0.01	7	590	40	< 2	< 1	26	< 0.01	< 10	< 10	15	< 10	44	
17075	217 229	< 1 0.01	8	980	42	< 2	1	31	0.03	< 10	< 10	15	< 10	48	
17076	217 229	< 1 < 0.01	3	910	54	< 2	< 1	48	0.02	< 10	< 10	8	< 10	88	
17077	217 229	< 1 0.01	6	980	94	< 2	1	53	0.01	< 10	< 10	11	< 10	94	
17078	217 229	< 1 < 0.01	3	1150	68	< 2	< 1	56	0.01	< 10	< 10	8	< 10	148	
17079	217 229	< 1 < 0.01	2	1280	50	< 2	< 1	50	< 0.01	< 10	< 10	6	< 10	104	
17080	217 229	< 1 < 0.01	2	1230	60	< 2	< 1	52	< 0.01	< 10	< 10	4	< 10	84	
17081	217 229	< 1 < 0.01	4	1580	48	< 2	< 1	42	< 0.01	< 10	< 10	4	< 10	76	
17082	217 229	< 1 < 0.01	4	1000	80	< 2	< 1	61	0.01	< 10	< 10	7	< 10	76	
17083	217 229	< 1 0.03	13	540	30	< 2	2	60	0.09	< 10	< 10	23	< 10	52	
17084	217 229	< 1 < 0.01	5	1170	58	< 2	< 1	60	< 0.01	< 10	< 10	5	< 10	86	
17085	217 229	1 0.01	8	1190	56	< 2	1	38	0.04	< 10	< 10	16	< 10	66	
17086	217 229	< 1 0.01	6	1090	68	< 2	< 1	44	0.02	< 10	< 10	10	< 10	82	
17087	217 229	< 1 0.01	5	800	56	< 2	< 1	35	0.01	< 10	< 10	10	< 10	74	
17088	217 229	< 1 0.01	6	500	46	< 2	< 1	38	0.03	< 10	< 10	10	< 10	60	
17089	217 229	1 0.01	8	1670	144	< 2	1	82	0.02	< 10	< 10	15	< 10	170	
17090	217 229	1 0.01	15	1000	74	< 2	1	33	0.03	< 10	< 10	13	< 10	42	
17091	217 229	1 0.05	9	780	60	< 2	4	21	0.14	< 10	< 10	42	< 10	46	
17092	217 229	1 0.01	10	760	64	< 2	1	36	0.02	< 10	< 10	12	< 10	56	
17093	217 229	1 < 0.01	7	890	80	< 2	1	31	0.01	< 10	< 10	11	< 10	104	
17094	217 229	1 0.02	7	660	48	< 2	2	20	0.04	< 10	< 10	24	< 10	46	
17095	217 229	< 1 0.02	3	620	46	< 2	< 1	22	< 0.01	< 10	< 10	13	< 10	58	
17096	217 229	1 0.01	10	700	66	< 2	< 1	30	< 0.01	< 10	< 10	9	< 10	20	
17097	217 229	< 1 < 0.01	3	650	52	< 2	< 1	23	< 0.01	< 10	< 10	6	< 10	48	
17098	217 229	< 1 0.01	10	520	52	< 2	1	19	0.04	< 10	< 10	18	< 10	26	
17099	217 229	< 1 0.01	3	900	62	< 2	< 1	24	0.02	< 10	< 10	10	< 10	62	
17100	217 229	< 1 < 0.01	4	850	70	< 2	1	30	< 0.01	< 10	< 10	8	< 10	40	

CERTIFICATION: *Hannan*



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 TIMMINS DIVISION  
 P.O. BOX 2010  
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## CERTIFICATE OF ANALYSIS A9521980

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17061	217 229	< 1	< 0.2	0.38	2	300	< 0.5	< 2	0.58	1.0	3	43	8	0.46	< 10	< 1	0.14	< 10	0.09	1285
17062	217 229	< 1	0.4	0.27	2	190	< 0.5	< 2	0.48	0.5	1	34	7	0.30	< 10	< 1	0.08	< 10	0.06	600
17063	217 229	3	0.2	0.28	2	170	< 0.5	< 2	0.65	0.5	1	21	9	0.31	< 10	< 1	0.15	< 10	0.09	590
17064	217 229	< 1	0.8	0.36	2	240	< 0.5	< 2	0.62	0.5	1	30	9	0.34	< 10	< 1	0.09	< 10	0.08	255
17065	217 229	< 1	0.2	0.27	2	100	< 0.5	< 2	0.39	< 0.5	1	23	6	0.31	< 10	< 1	0.13	< 10	0.09	325
17066	217 229	7	0.2	0.26	2	150	< 0.5	< 2	0.81	0.5	1	12	10	0.29	< 10	< 1	0.10	< 10	0.12	820
17067	217 229	< 1	0.6	0.51	2	240	< 0.5	< 2	0.50	0.5	3	43	12	0.56	< 10	< 1	0.15	10	0.12	305
17068	217 229	2	< 0.2	0.34	2	330	< 0.5	< 2	0.57	0.5	1	34	10	0.36	< 10	< 1	0.11	< 10	0.07	660
17069	217 229	< 1	< 0.2	0.41	2	250	< 0.5	< 2	1.02	0.5	2	62	9	0.54	< 10	< 1	0.16	< 10	0.17	770
17070	217 229	< 1	0.2	0.36	2	170	< 0.5	< 2	0.60	0.5	1	43	17	0.42	< 10	< 1	0.08	10	0.12	185
17071	217 229	1	< 0.2	0.21	2	160	< 0.5	< 2	0.89	0.5	< 1	12	9	0.24	< 10	< 1	0.11	< 10	0.09	100
17072	217 229	< 1	< 0.2	0.19	2	90	< 0.5	< 2	1.61	< 0.5	< 1	9	17	0.20	< 10	< 1	0.02	10	0.15	20
17073	217 229	< 1	< 0.2	0.25	2	30	< 0.5	< 2	2.99	0.5	1	9	18	0.29	< 10	< 1	0.04	< 10	0.29	50
17074	217 229	< 1	< 0.2	0.35	2	20	< 0.5	< 2	2.72	1.0	2	11	20	0.55	< 10	< 1	0.01	< 10	0.23	20
17075	217 229	< 1	< 0.2	0.61	2	100	< 0.5	< 2	0.54	< 0.5	5	74	14	0.84	< 10	< 1	0.08	10	0.17	395
17076	217 229	1	0.4	0.33	2	260	< 0.5	< 2	0.71	0.5	1	31	10	0.36	< 10	< 1	0.11	< 10	0.10	690
17077	217 229	1	< 0.2	0.48	2	250	< 0.5	< 2	0.67	0.5	3	63	9	0.49	< 10	< 1	0.17	< 10	0.10	975
17078	217 229	1	0.2	0.35	2	290	< 0.5	< 2	0.94	1.0	2	34	11	0.33	< 10	< 1	0.13	10	0.10	1355
17079	217 229	< 1	< 0.2	0.27	2	150	< 0.5	< 2	1.35	0.5	1	27	12	0.26	< 10	< 1	0.17	< 10	0.15	1030
17080	217 229	1	< 0.2	0.21	2	240	< 0.5	< 2	1.61	1.0	2	17	11	0.23	< 10	< 1	0.13	< 10	0.13	1820
17081	217 229	3	< 0.2	0.21	2	170	< 0.5	< 2	1.22	0.5	2	37	10	0.25	< 10	< 1	0.18	< 10	0.16	2750
17082	217 229	< 1	0.2	0.35	2	310	< 0.5	< 2	0.96	1.0	2	33	13	0.36	< 10	< 1	0.13	< 10	0.12	915
17083	217 229	< 1	< 0.2	0.63	2	190	< 0.5	< 2	0.71	0.5	5	80	9	0.88	< 10	< 1	0.16	10	0.35	465
17084	217 229	< 1	< 0.2	0.25	2	180	< 0.5	< 2	0.82	0.5	2	15	11	0.27	< 10	< 1	0.11	< 10	0.13	715
17085	217 229	< 1	< 0.2	0.83	2	150	< 0.5	< 2	0.44	0.5	3	66	9	0.88	< 10	< 1	0.12	10	0.13	245
17086	217 229	2	< 0.2	0.37	2	150	< 0.5	< 2	0.63	0.5	3	24	11	0.44	< 10	< 1	0.13	< 10	0.12	495
17087	217 229	< 1	< 0.2	0.41	2	170	< 0.5	< 2	0.57	0.5	1	27	10	0.47	< 10	< 1	0.11	< 10	0.09	510
17088	217 229	1	< 0.2	0.43	2	170	< 0.5	< 2	0.33	0.5	2	66	7	0.42	< 10	< 1	0.10	10	0.07	140
17089	217 229	1	0.4	0.71	2	580	< 0.5	< 2	1.16	1.5	7	35	20	0.72	< 10	< 1	0.17	10	0.15	3770
17090	217 229	< 1	< 0.2	0.49	2	150	< 0.5	< 2	0.40	0.5	2	48	12	0.54	< 10	< 1	0.11	< 10	0.13	140
17091	217 229	< 1	< 0.2	0.94	2	90	< 0.5	< 2	0.82	0.5	4	82	53	1.41	< 10	< 1	0.09	10	0.21	390
17092	217 229	< 1	< 0.2	0.49	2	260	< 0.5	< 2	0.48	1.0	2	52	12	0.55	< 10	< 1	0.11	< 10	0.10	70
17093	217 229	< 1	< 0.2	0.44	6	210	< 0.5	< 2	0.72	1.0	1	21	13	0.45	< 10	< 1	0.15	< 10	0.10	155
17094	217 229	1	< 0.2	0.52	6	80	< 0.5	< 2	0.43	0.5	3	39	17	1.05	< 10	< 1	0.08	< 10	0.12	300
17095	217 229	< 1	< 0.2	0.22	2	80	< 0.5	< 2	0.39	0.5	1	16	6	0.70	< 10	< 1	0.06	< 10	0.08	135
17096	217 229	< 1	< 0.2	0.33	2	120	< 0.5	< 2	0.40	0.5	2	16	9	0.52	< 10	< 1	0.12	< 10	0.07	85
17097	217 229	< 1	< 0.2	0.30	2	100	< 0.5	< 2	0.49	0.5	1	15	7	0.33	< 10	< 1	0.07	< 10	0.06	130
17098	217 229	< 1	< 0.2	0.57	2	60	< 0.5	< 2	0.34	< 0.5	2	91	9	0.84	< 10	< 1	0.07	< 10	0.13	85
17099	217 229	< 1	< 0.2	0.41	2	100	< 0.5	< 2	0.37	< 0.5	1	24	10	0.45	< 10	< 1	0.10	< 10	0.08	140
17100	217 229	< 1	0.2	0.41	2	100	< 0.5	< 2	0.37	0.5	1	21	8	0.40	< 10	< 1	0.09	< 10	0.08	45

CERTIFICATION: \_\_\_\_\_



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o: ROYAL OAK MINES INC.  
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A9521980

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm		
17101	217 229	< 1	0.01	6	710	72	< 2	< 1	30	0.02	< 10	< 10	12	< 10	44		
17102	217 229	< 1	0.01	27	970	46	< 2	1	47	0.01	< 10	< 10	10	< 10	38		
17103	217 229	1	0.01	7	950	16	< 2	1	29	0.03	< 10	< 10	15	< 10	26		
17104	217 229	< 1	0.04	6	590	20	< 2	2	23	0.12	< 10	< 10	44	< 10	30		
17105	217 229	1	0.01	9	1070	40	2	1	68	0.02	< 10	< 10	21	< 10	34		
17106	217 229	< 1	0.01	6	640	60	< 2	< 1	26	0.02	< 10	< 10	11	< 10	40		
17107	217 229	< 1 < 0.01	3	800	50	< 2	< 1	33 < 0.01	< 10	< 10	5	< 10	62				
17108	217 229	1	0.01	8	1440	24	< 2	< 1	40	0.01	< 10	< 10	6	< 10	34		
17109	217 229	1 < 0.01	5	960	70	< 2	< 1	43	0.01	< 10	< 10	10	< 10	66			
17110	217 229	< 1 < 0.01	3	610	44	< 2	< 1	35	0.01	< 10	< 10	9	< 10	58			
17111	217 229	2	0.01	9	700	36	< 2	< 1	45	0.01	< 10	< 10	7	< 10	62		
17112	217 229	1	0.01	13	1180	62	< 2	1	44	0.02	< 10	< 10	20	< 10	92		
17113	217 229	< 1 < 0.01	5	980	62	< 2	< 1	34 < 0.01	< 10	< 10	9	< 10	132				
17114	217 229	1 < 0.01	4	770	52	< 2	1	32	0.02	< 10	< 10	11	< 10	58			
17115	217 229	< 1 < 0.01	6	800	36	2	< 1	38	0.01	< 10	< 10	7	< 10	50			
17116	217 229	< 1 < 0.01	13	970	58	< 2	< 1	34	0.02	< 10	< 10	13	< 10	52			
17117	217 229	< 1 < 0.01	7	820	40	< 2	< 1	29	0.01	< 10	< 10	8	< 10	58			
17118	217 229	< 1 < 0.02	21	470	44	< 2	1	19	0.05	< 10	< 10	18	< 10	48			
17119	217 229	< 1 < 0.01	11	670	50	< 2	< 1	20	0.02	< 10	< 10	10	< 10	46			
17120	217 229	< 1 < 0.01	13	1270	30	< 2	< 1	29 < 0.01	< 10	< 10	9	< 10	52				
17121	217 229	< 1 < 0.01	15	1040	52	< 2	< 1	53	0.01	< 10	< 10	8	< 10	112			
17122	217 229	< 1 < 0.01	8	640	30	< 2	1	29	0.04	< 10	< 10	16	< 10	96			
17123	217 229	1	0.01	12	940	88	2	< 1	28	0.01	< 10	< 10	18	< 10	180		
17124	217 229	1 < 0.01	11	890	66	< 2	< 1	29 < 0.01	< 10	< 10	10	< 10	118				
17125	217 229	1	0.02	20	1050	20	< 2	2	34	0.05	< 10	< 10	23	< 10	78		
17126	217 229	< 1 < 0.01	3	350	44	< 2	< 1	30	0.03	< 10	< 10	15	< 10	28			
17127	217 229	< 1 < 0.01	7	830	42	< 2	< 1	36	0.02	< 10	< 10	10	< 10	56			
17128	217 229	< 1 < 0.01	7	1230	48	< 2	< 1	88 < 0.01	< 10	< 10	4	< 10	198				
17129	217 229	< 1 < 0.01	6	1260	44	< 2	< 1	100	0.01	< 10	< 10	8	< 10	438			
17130	217 229	1	0.01	10	1090	62	< 2	1	46	0.03	< 10	< 10	22	< 10	78		
17131	217 229	< 1 < 0.01	6	1090	64	< 2	1	39	0.02	< 10	< 10	12	< 10	58			
17132	217 229	< 1 < 0.01	7	1150	60	2	< 1	47 < 0.01	< 10	< 10	7	< 10	154				
17133	217 229	< 1 < 0.01	9	990	44	< 2	< 1	43	0.01	< 10	< 10	8	< 10	62			
17134	217 229	< 1 < 0.01	8	620	38	< 2	< 1	39 < 0.01	< 10	< 10	5	< 10	68				
17135	217 229	< 1 < 0.01	5	950	46	< 2	< 1	32 < 0.01	< 10	< 10	4	< 10	64				
17136	217 229	< 1 < 0.01	12	1290	54	< 2	< 1	36	0.01	< 10	< 10	10	< 10	80			
17137	217 229	< 1 < 0.01	14	1230	70	< 2	< 1	39 < 0.01	< 10	< 10	8	< 10	60				
17138	217 229	1 < 0.01	6	910	58	< 2	< 1	32	0.01	< 10	< 10	9	< 10	116			
17139	217 229	1 < 0.01	4	1020	54	< 2	< 1	37	0.01	< 10	< 10	7	< 10	112			
17140	217 229	1 < 0.01	4	910	40	< 2	< 1	31	0.01	< 10	< 10	9	< 10	68			

CERTIFICATION:

*[Signature]*



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 P.O. Number: P211451  
 Account: JWW

## CERTIFICATE OF ANALYSIS A9521980

SAMPLE	PREP CODE	Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17101	217 229	< 1	< 0.2	0.47	2	150	< 0.5	< 2	0.29	1.0	2	45	11	0.57	< 10	< 1	0.10	< 10	0.08	90	
17102	217 229	< 1	< 0.2	0.61	2	130	< 0.5	< 2	0.41	0.5	9	25	19	0.64	< 10	< 1	0.12	10	0.15	80	
17103	217 229	< 1	< 0.2	0.68	2	60	< 0.5	< 2	0.28	0.5	3	30	13	1.05	< 10	< 1	0.10	< 10	0.13	55	
17104	217 229	< 1	< 0.2	0.78	2	40	< 0.5	< 2	0.45	< 0.5	3	47	15	1.70	< 10	< 1	0.09	< 10	0.29	125	
17105	217 229	< 1	0.2	1.28	2	120	< 0.5	< 2	1.26	0.5	44	26	48	1.54	< 10	< 1	0.10	40	0.25	855	
17106	217 229	< 1	< 0.2	0.50	2	90	< 0.5	< 2	0.48	< 0.5	2	33	11	0.55	< 10	< 1	0.08	< 10	0.07	100	
17107	217 229	4	< 0.2	0.23	2	80	< 0.5	< 2	0.44	< 0.5	1	7	8	0.26	< 10	< 1	0.10	< 10	0.07	135	
17108	217 229	< 1	< 0.2	0.34	2	60	< 0.5	< 2	1.15	0.5	6	20	11	0.77	< 10	< 1	0.09	< 10	0.17	110	
17109	217 229	< 1	< 0.2	0.46	2	220	< 0.5	< 2	0.83	0.5	1	11	11	0.49	< 10	1	0.11	< 10	0.11	425	
17110	217 229	< 1	< 0.2	0.38	2	120	< 0.5	< 2	0.48	0.5	1	17	8	0.42	< 10	< 1	0.06	< 10	0.09	110	
17111	217 229	< 1	< 0.2	0.39	2	240	< 0.5	< 2	0.56	1.0	2	40	18	0.39	< 10	< 1	0.07	< 10	0.07	65	
17112	217 229	< 1	0.2	0.84	2	230	< 0.5	< 2	1.02	1.0	52	31	24	1.13	< 10	< 1	0.14	10	0.24	2520	
17113	217 229	< 1	< 0.2	0.33	2	340	< 0.5	< 2	1.33	1.0	2	12	11	0.34	< 10	< 1	0.12	< 10	0.10	2110	
17114	217 229	< 1	< 0.2	0.45	2	170	< 0.5	< 2	0.67	0.5	< 1	42	9	0.46	< 10	< 1	0.11	< 10	0.09	425	
17115	217 229	< 1	< 0.2	0.29	2	140	< 0.5	< 2	0.94	1.0	2	26	12	0.32	< 10	< 1	0.11	< 10	0.10	245	
17116	217 229	< 1	< 0.2	0.36	2	400	< 0.5	< 2	0.61	1.0	8	25	52	0.53	< 10	1	0.10	< 10	0.11	1030	
17117	217 229	< 1	< 0.2	0.23	2	150	< 0.5	< 2	0.77	0.5	4	24	10	0.33	< 10	< 1	0.09	< 10	0.09	755	
17118	217 229	< 1	< 0.2	0.43	2	80	< 0.5	< 2	0.39	0.5	6	114	13	0.81	< 10	< 1	0.07	< 10	0.34	440	
17119	217 229	< 1	< 0.2	0.34	2	140	< 0.5	< 2	0.47	0.5	2	35	12	0.48	< 10	< 1	0.08	< 10	0.12	215	
17120	217 229	< 1	< 0.2	0.63	2	180	< 0.5	< 2	0.45	0.5	4	25	27	0.82	< 10	< 1	0.09	< 10	0.10	190	
17121	217 229	4	< 0.2	0.46	2	290	< 0.5	< 2	1.30	1.0	18	19	20	0.41	< 10	1	0.10	10	0.18	2130	
17122	217 229	< 1	< 0.2	0.69	2	170	< 0.5	< 2	0.62	0.5	3	52	13	0.80	< 10	< 1	0.07	< 10	0.18	425	
17123	217 229	< 1	< 0.2	0.58	2	190	< 0.5	< 2	0.52	1.5	4	29	48	0.77	< 10	< 1	0.11	< 10	0.13	815	
17124	217 229	< 1	< 0.2	0.43	2	150	< 0.5	< 2	0.63	1.0	3	45	21	0.59	< 10	< 1	0.12	< 10	0.13	650	
17125	217 229	< 1	< 0.2	0.84	2	110	< 0.5	< 2	1.00	0.5	13	122	19	1.40	< 10	< 1	0.08	10	0.37	1575	
17126	217 229	< 1	< 0.2	0.46	2	60	< 0.5	< 2	0.21	0.5	1	38	10	0.54	< 10	< 1	0.06	< 10	0.07	100	
17127	217 229	1	< 0.2	0.52	2	130	< 0.5	< 2	0.40	0.5	1	31	14	0.44	< 10	< 1	0.09	< 10	0.08	535	
17128	217 229	1	< 0.2	0.20	2	250	< 0.5	< 2	1.43	1.0	5	7	17	0.33	< 10	< 1	0.16	< 10	0.17	1205	
17129	217 229	2	0.2	0.33	2	350	< 0.5	< 2	2.07	2.5	6	18	16	0.35	< 10	< 1	0.17	< 10	0.13	1900	
17130	217 229	< 1	0.4	0.77	2	210	< 0.5	< 2	0.50	1.0	54	43	17	0.98	< 10	< 1	0.16	20	0.15	2960	
17131	217 229	< 1	< 0.2	0.53	2	190	< 0.5	< 2	0.46	0.5	2	53	11	0.52	< 10	< 1	0.19	< 10	0.09	335	
17132	217 229	2	< 0.2	0.31	2	250	< 0.5	< 2	0.80	1.0	2	9	11	0.31	< 10	1	0.09	< 10	0.07	2440	
17133	217 229	< 1	< 0.2	0.46	2	160	< 0.5	< 2	0.37	0.5	3	23	10	0.41	< 10	< 1	0.12	< 10	0.07	175	
17134	217 229	< 1	< 0.2	0.30	2	150	< 0.5	< 2	0.53	0.5	1	14	8	0.28	< 10	< 1	0.07	< 10	0.05	80	
17135	217 229	< 1	< 0.2	0.20	2	110	< 0.5	< 2	0.58	0.5	1	7	8	0.23	< 10	< 1	0.11	< 10	0.07	350	
17136	217 229	< 1	< 0.2	0.55	2	170	< 0.5	< 2	0.52	0.5	3	18	13	0.52	< 10	< 1	0.12	< 10	0.09	280	
17137	217 229	< 1	< 0.2	0.46	2	240	< 0.5	< 2	0.46	0.5	2	18	13	0.44	< 10	1	0.12	< 10	0.09	210	
17138	217 229	< 1	< 0.2	0.29	2	180	< 0.5	< 2	0.65	0.5	1	27	10	0.38	< 10	< 1	0.11	< 10	0.09	980	
17139	217 229	< 1	< 0.2	0.36	2	180	< 0.5	< 2	0.69	0.5	1	36	12	0.40	< 10	< 1	0.13	< 10	0.11	270	
17140	217 229	< 1	< 0.2	0.40	2	200	< 0.5	< 2	0.63	0.5	< 1	27	6	0.37	< 10	< 1	0.11	< 10	0.09	340	

CERTIFICATION: \_\_\_\_\_



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATN: M. STALKER

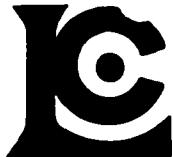
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## CERTIFICATE OF ANALYSIS

A9521980

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17141	217 229	< 1	< 0.01	3	910	38	< 2	< 1	57	0.01	< 10	< 10	7	< 10	50
17142	217 229	< 1	0.01	10	630	44	< 2	< 1	20	0.04	< 10	< 10	14	< 10	46
17143	217 229	< 1	< 0.01	7	810	60	2	< 1	53	0.01	< 10	< 10	11	< 10	90
17144	217 229	< 1	< 0.01	3	1040	40	< 2	< 1	53	0.01	< 10	< 10	5	< 10	40
17145	217 229	< 1	0.01	< 1	670	26	< 2	< 1	22	< 0.01	< 10	< 10	1	< 10	86
17146	217 229	< 1	< 0.01	6	1280	46	< 2	< 1	31	0.01	< 10	< 10	9	< 10	42
17147	217 229	< 1	< 0.01	8	1570	56	< 2	< 1	63	< 0.01	< 10	< 10	11	< 10	110
17148	217 229	1	0.01	12	950	70	6	< 1	52	0.01	< 10	< 10	12	< 10	54
17149	217 229	< 1	< 0.01	11	1380	62	< 2	< 1	63	0.01	< 10	< 10	11	< 10	96
17150	217 229	1	0.01	8	1610	94	4	< 1	53	0.02	< 10	< 10	24	< 10	176
17151	217 229	< 1	0.01	5	960	64	< 2	< 1	53	0.02	< 10	< 10	11	< 10	96
17152	217 229	1	< 0.01	3	1260	62	2	< 1	74	< 0.01	< 10	< 10	8	< 10	118
17153	217 229	< 1	< 0.01	4	990	76	< 2	< 1	59	0.02	< 10	< 10	12	< 10	122
17154	217 229	1	< 0.01	4	1120	70	< 2	< 1	63	0.01	< 10	< 10	8	< 10	200
17155	217 229	< 1	< 0.01	5	1150	70	4	< 1	48	0.01	< 10	< 10	11	< 10	224
17156	217 229	< 1	< 0.01	4	1190	86	< 2	< 1	56	0.02	< 10	< 10	13	< 10	198
17157	217 229	< 1	< 0.01	4	1440	88	< 2	< 1	81	0.02	< 10	< 10	12	< 10	218
17158	217 229	< 1	< 0.01	6	1060	100	< 2	< 1	53	0.01	< 10	< 10	12	< 10	198
17159	217 229	< 1	< 0.01	4	1000	50	2	< 1	57	< 0.01	< 10	< 10	8	< 10	120
17160	217 229	< 1	< 0.01	3	1080	60	< 2	< 1	118	< 0.01	< 10	< 10	6	< 10	464
17161	217 229	< 1	< 0.01	5	1230	82	< 2	< 1	61	0.01	< 10	< 10	10	< 10	162
17162	217 229	< 1	< 0.01	8	1270	54	2	< 1	70	< 0.01	< 10	< 10	8	< 10	136
17163	217 229	< 1	< 0.01	6	1260	86	< 2	< 1	77	0.01	< 10	< 10	9	< 10	228
17164	217 229	< 1	< 0.01	6	1350	90	< 2	< 1	65	0.01	< 10	< 10	12	< 10	204
17165	217 229	< 1	< 0.01	6	1290	72	< 2	< 1	82	0.01	< 10	< 10	10	< 10	232
17166	217 229	< 1	< 0.01	5	1290	74	< 2	< 1	72	< 0.01	< 10	< 10	8	< 10	112
17167	217 229	< 1	< 0.01	3	1200	56	2	< 1	83	0.01	< 10	< 10	7	< 10	256
17168	217 229	< 1	0.01	5	1410	64	< 2	< 1	74	0.01	< 10	< 10	12	< 10	176
17169	217 229	< 1	< 0.01	3	1030	60	< 2	< 1	51	0.01	< 10	< 10	7	< 10	180
17170	217 229	< 1	< 0.01	3	1040	56	2	< 1	39	0.01	< 10	< 10	7	< 10	112
17171	217 229	< 1	< 0.01	4	1180	76	2	< 1	39	< 0.01	< 10	< 10	8	< 10	52
17172	217 229	< 1	< 0.01	2	1320	76	< 2	< 1	86	0.01	< 10	< 10	8	< 10	158
17173	217 229	< 1	< 0.01	4	1360	70	2	< 1	64	0.01	< 10	< 10	8	< 10	144
17174	217 229	< 1	< 0.01	1	830	50	< 2	< 1	52	< 0.01	< 10	< 10	6	< 10	88
17175	217 229	1	< 0.01	3	910	58	< 2	< 1	47	0.01	< 10	< 10	9	< 10	100
17176	217 229	< 1	< 0.01	2	910	56	< 2	< 1	32	< 0.01	< 10	< 10	7	< 10	32
17177	217 229	< 1	< 0.01	6	960	28	< 2	1	31	0.02	< 10	< 10	12	< 10	26
17178	217 229	1	< 0.01	4	1180	64	< 2	< 1	36	0.01	< 10	< 10	12	< 10	204
17179	217 229	1	0.01	5	860	50	2	< 1	31	0.03	< 10	< 10	14	< 10	150
17180	217 229	1	< 0.01	5	1110	104	< 2	< 1	45	0.01	< 10	< 10	12	< 10	220

CERTIFICATION:



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TO: ROYAL OAK MINES INC.  
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## CERTIFICATE OF ANALYSIS A9521980

SAMPLE	PREP CODE	Au	NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
		ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
17141	217 229	< 1	< 0.2	0.35	2	110	< 0.5	< 2	0.78	< 0.5	1	13	6	0.30	< 10	< 1	0.11	< 10	0.10	200	
17142	217 229	2	< 0.2	0.43	2	80	< 0.5	< 2	0.37	< 0.5	2	71	7	0.55	< 10	< 1	0.07	< 10	0.13	245	
17143	217 229	2	0.2	0.45	2	250	< 0.5	< 2	0.70	0.5	1	54	10	0.50	< 10	< 1	0.09	< 10	0.09	415	
17144	217 229	2	0.2	0.20	2	120	< 0.5	< 2	0.63	< 0.5	< 1	25	9	0.23	< 10	< 1	0.10	< 10	0.08	125	
17145	217 229	< 1	< 0.2	0.07	2	100	< 0.5	< 2	0.23	0.5	1	6	4	0.08	< 10	< 1	0.11	< 10	0.06	200	
17146	217 229	1	0.2	0.51	2	130	< 0.5	< 2	0.40	< 0.5	12	21	12	0.54	< 10	< 1	0.11	< 10	0.10	850	
17147	217 229	< 1	0.8	0.54	2	210	< 0.5	< 2	0.72	0.5	6	20	14	0.49	< 10	< 1	0.17	< 10	0.12	850	
17148	217 229	< 1	0.6	0.45	2	190	< 0.5	< 2	0.49	0.5	4	45	16	0.48	< 10	< 1	0.13	< 10	0.10	705	
17149	217 229	5	0.4	0.66	2	270	< 0.5	< 2	0.68	1.0	9	40	15	0.49	< 10	< 1	0.13	< 10	0.13	1020	
17150	217 229	< 1	0.8	0.60	2	440	< 0.5	< 2	0.57	1.5	98	53	13	1.04	< 10	< 1	0.14	< 10	0.15	>10000	
17151	217 229	< 1	0.6	0.48	2	350	< 0.5	< 2	0.60	0.5	4	44	9	0.40	< 10	< 1	0.10	< 10	0.09	1580	
17152	217 229	1	0.4	0.38	2	200	< 0.5	< 2	0.80	< 0.5	2	15	11	0.37	< 10	< 1	0.12	< 10	0.08	295	
17153	217 229	< 1	0.2	0.50	2	330	< 0.5	< 2	0.78	0.5	3	41	11	0.48	< 10	< 1	0.14	< 10	0.11	4100	
17154	217 229	2	< 0.2	0.34	2	320	< 0.5	< 2	1.02	0.5	1	16	10	0.35	< 10	< 1	0.13	< 10	0.12	3930	
17155	217 229	< 1	0.4	0.46	2	390	< 0.5	< 2	0.85	1.5	3	16	12	0.46	< 10	< 1	0.18	< 10	0.12	5450	
17156	217 229	< 1	0.2	0.52	2	420	< 0.5	2	0.86	0.5	3	25	12	0.54	< 10	< 1	0.13	< 10	0.10	4000	
17157	217 229	1	0.6	0.48	2	420	< 0.5	< 2	1.15	1.0	2	25	16	0.48	< 10	< 1	0.19	< 10	0.15	5130	
17158	217 229	< 1	0.6	0.52	2	460	< 0.5	< 2	0.89	2.0	6	15	13	0.54	< 10	< 1	0.15	< 10	0.11	5200	
17159	217 229	1	1.0	0.39	2	260	< 0.5	< 2	0.79	< 0.5	2	17	7	0.37	< 10	< 1	0.09	< 10	0.08	595	
17160	217 229	< 1	0.2	0.25	2	410	< 0.5	< 2	1.52	1.0	2	8	9	0.27	< 10	< 1	0.09	< 10	0.12	1265	
17161	217 229	< 1	0.4	0.41	2	390	< 0.5	< 2	0.78	1.0	4	27	12	0.43	< 10	< 1	0.15	< 10	0.13	4000	
17162	217 229	< 1	0.4	0.38	2	440	< 0.5	< 2	0.79	0.5	3	18	11	0.41	< 10	< 1	0.14	< 10	0.11	2420	
17163	217 229	1	0.4	0.36	2	500	< 0.5	< 2	0.98	1.0	3	13	12	0.39	< 10	< 1	0.13	< 10	0.12	4820	
17164	217 229	1	0.4	0.45	2	580	< 0.5	< 2	0.75	1.0	7	38	10	0.51	< 10	< 1	0.15	< 10	0.12	7760	
17165	217 229	2	0.8	0.37	2	480	< 0.5	2	1.00	1.0	4	35	11	0.41	< 10	< 1	0.16	< 10	0.13	4880	
17166	217 229	< 1	0.6	0.34	2	380	< 0.5	< 2	0.72	1.0	3	20	12	0.38	< 10	< 1	0.12	< 10	0.09	1075	
17167	217 229	< 1	0.4	0.25	2	380	< 0.5	< 2	1.13	1.5	2	22	11	0.31	< 10	< 1	0.27	< 10	0.16	3040	
17168	217 229	1	0.2	0.41	2	290	< 0.5	2	1.18	0.5	2	25	11	0.49	< 10	< 1	0.21	< 10	0.18	1810	
17169	217 229	1	0.2	0.27	2	290	< 0.5	2	1.09	0.5	2	44	9	0.32	< 10	< 1	0.11	< 10	0.10	2530	
17170	217 229	< 1	0.2	0.24	2	160	< 0.5	< 2	0.78	0.5	1	26	10	0.29	< 10	< 1	0.12	< 10	0.10	690	
17171	217 229	1	0.4	0.34	2	130	< 0.5	< 2	1.04	0.5	1	22	11	0.35	< 10	< 1	0.14	< 10	0.12	350	
17172	217 229	1	0.2	0.33	2	290	< 0.5	< 2	2.03	1.0	4	32	12	0.33	< 10	< 1	0.16	< 10	0.15	1705	
17173	217 229	< 1	0.2	0.30	2	310	< 0.5	< 2	1.42	1.0	3	15	13	0.33	< 10	< 1	0.14	< 10	0.15	3330	
17174	217 229	2	0.8	0.24	2	190	< 0.5	2	1.18	< 0.5	3	8	9	0.26	< 10	< 1	0.08	< 10	0.10	1085	
17175	217 229	6	0.6	0.32	2	230	< 0.5	< 2	1.10	< 0.5	2	22	10	0.37	< 10	< 1	0.11	< 10	0.12	2180	
17176	217 229	< 1	0.2	0.27	2	100	< 0.5	< 2	1.41	< 0.5	2	15	9	0.30	< 10	< 1	0.09	< 10	0.12	335	
17177	217 229	1	< 0.2	0.55	2	50	< 0.5	2	2.40	< 0.5	2	22	20	0.83	< 10	< 1	0.09	< 10	0.30	475	
17178	217 229	< 1	0.2	0.49	2	280	< 0.5	< 2	1.10	1.0	3	21	11	0.51	< 10	< 1	0.11	< 10	0.15	1950	
17179	217 229	< 1	< 0.2	0.44	2	260	< 0.5	2	0.88	1.0	3	78	8	0.58	< 10	< 1	0.10	< 10	0.13	2050	
17180	217 229	< 1	0.4	0.48	2	520	< 0.5	< 2	1.03	2.0	9	27	17	0.55	< 10	< 1	0.13	< 10	0.11	4800	

CERTIFICATION: *[Signature]*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
 Ontario, Canada L4W 2S3  
 PHONE: 905-624-2806 FAX: 905-624-6163

ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATN: M. STALKER

Page Num :5-A  
 Total Pages :5  
 Certificate Date: 03-AUG-95  
 Invoice No. :19521980  
 P.O. Number :P211451  
 Account :JWW

## CERTIFICATE OF ANALYSIS

A9521980

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17181	217 229	2 < 0.2	0.42	2	570 < 0.5	< 2	1.95	1.5	6	28	15	0.44	< 10	< 1	0.10	< 10	0.12	3670		
17182	217 229	1 0.2	0.63	2	550 < 0.5	< 2	1.54	1.5	7	34	17	0.76	< 10	< 1	0.19	< 10	0.21	3570		
17183	217 229	< 1 < 0.2	0.55	2	220 < 0.5	< 2	0.62	0.5	7	62	13	0.60	< 10	< 1	0.11	< 10	0.11	2230		
17184	217 229	< 1 0.2	0.39	2	210 < 0.5	< 2	0.59	< 0.5	2	82	6	0.36	< 10	< 1	0.07	< 10	0.08	950		
17185	217 229	< 1 0.2	0.31	2	270 < 0.5	< 2	1.11	0.5	10	21	11	0.31	< 10	< 1	0.14	< 10	0.12	1915		
17186	217 229	1 0.2	0.79	2	300 < 0.5	2	0.89	0.5	26	42	11	0.80	< 10	< 1	0.13	10	0.16	5860		
17187	217 229	< 1 < 0.2	0.43	2	140 < 0.5	< 2	0.52	< 0.5	10	19	4	0.43	< 10	< 1	0.07	< 10	0.09	3450		
17188	217 229	< 1 < 0.2	0.43	2	480 < 0.5	2	1.51	3.0	4	13	11	0.42	< 10	< 1	0.10	< 10	0.10	4680		
17189	217 229	1 < 0.2	0.46	2	230 < 0.5	2	0.80	0.5	1	19	14	0.46	< 10	< 1	0.10	< 10	0.09	1780		
17190	217 229	1 < 0.2	0.17	2	130 < 0.5	< 2	1.47	1.0	1	17	11	0.19	< 10	< 1	0.08	< 10	0.12	420		
17191	217 229	< 1 < 0.2	0.08	2	60 < 0.5	< 2	0.15	< 0.5	1	14	1	0.10	< 10	< 1	0.01	< 10	0.03	590		
17192	217 229	1 < 0.2	0.07	2	40 < 0.5	< 2	0.13	< 0.5	< 1	12	1	0.08	< 10	< 1	0.01	< 10	0.03	520		
17193	217 229	3 < 0.2	0.06	2	40 < 0.5	< 2	0.02	< 0.5	< 1	10	< 1	0.07	< 10	< 1	< 0.01	< 10	0.02	105		
17194	217 229	< 1 0.2	0.29	2	360 < 0.5	< 2	1.41	1.0	1	16	10	0.30	< 10	< 1	0.16	< 10	0.10	1430		
17195	217 229	< 1 < 0.2	0.41	2	350 < 0.5	2	1.45	1.0	1	38	9	0.47	< 10	< 1	0.13	< 10	0.15	1840		
17196	217 229	< 1 < 0.2	0.70	2	230 < 0.5	2	1.88	0.5	4	13	20	0.54	< 10	< 1	0.16	40	0.22	2480		
17197	217 229	< 1 < 0.2	0.42	2	160 < 0.5	< 2	0.64	< 0.5	2	86	6	0.54	< 10	< 1	0.10	10	0.12	780		
17198	217 229	4 0.2	0.40	2	210 < 0.5	< 2	0.85	0.5	2	47	11	0.49	< 10	< 1	0.10	< 10	0.10	1005		
17199	217 229	3 0.2	0.47	2	150 < 0.5	< 2	0.57	< 0.5	2	63	8	0.53	< 10	< 1	0.14	< 10	0.09	615		
17200	217 229	< 1 < 0.2	0.41	2	160 < 0.5	< 2	1.12	< 0.5	1	17	8	0.41	< 10	< 1	0.14	< 10	0.11	760		
17201	217 229	3 < 0.2	0.21	2	130 < 0.5	< 2	0.96	< 0.5	1	10	11	0.21	< 10	< 1	0.11	< 10	0.09	280		
17202	217 229	4 < 0.2	0.26	2	70 < 0.5	< 2	2.44	1.0	1	9	12	0.30	< 10	< 1	0.07	< 10	0.17	505		

CERTIFICATION: *[Signature]*



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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
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 P4N 7X7

Project: 2000  
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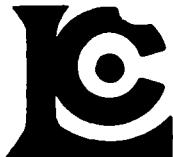
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## CERTIFICATE OF ANALYSIS

A9521980

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17181	217 229	< 1	< 0.01	6	1200	72	< 2	< 1	63	0.01	< 10	< 10	10	< 10	466
17182	217 229	1	0.01	7	1400	78	< 2	< 1	57	0.02	< 10	< 10	17	< 10	426
17183	217 229	< 1	< 0.01	6	1000	72	< 2	1	27	0.02	< 10	< 10	15	< 10	98
17184	217 229	< 1	0.01	3	560	26	< 2	< 1	26	0.03	< 10	< 10	10	< 10	114
17185	217 229	< 1	< 0.01	2	1330	54	< 2	< 1	36	0.01	< 10	< 10	10	< 10	146
17186	217 229	< 1	0.01	7	1000	70	< 2	1	43	0.03	< 10	< 10	22	< 10	98
17187	217 229	1	< 0.01	2	440	40	< 2	< 1	22	0.01	< 10	< 10	9	< 10	44
17188	217 229	1	< 0.01	6	930	64	< 2	< 1	56	< 0.01	< 10	< 10	9	< 10	358
17189	217 229	< 1	< 0.01	4	1330	82	< 2	< 1	23	< 0.01	< 10	< 10	10	< 10	182
17190	217 229	< 1	< 0.01	2	940	30	< 2	< 1	35	< 0.01	< 10	< 10	4	< 10	160
17191	217 229	< 1	< 0.01	< 1	90	6	< 2	< 1	6	< 0.01	< 10	< 10	2	< 10	28
17192	217 229	< 1	< 0.01	< 1	80	4	< 2	< 1	5	< 0.01	< 10	< 10	1	< 10	22
17193	217 229	< 1	< 0.01	< 1	70	6	< 2	< 1	1	< 0.01	< 10	< 10	1	< 10	16
17194	217 229	< 1	< 0.01	3	1320	66	< 2	< 1	55	< 0.01	< 10	< 10	7	< 10	120
17195	217 229	< 1	< 0.01	3	1020	60	< 2	< 1	46	0.02	< 10	< 10	11	< 10	176
17196	217 229	< 1	< 0.01	10	1480	72	2	1	50	< 0.01	< 10	< 10	11	< 10	74
17197	217 229	< 1	0.01	4	720	36	2	< 1	36	0.05	< 10	< 10	14	< 10	70
17198	217 229	< 1	< 0.01	6	730	46	< 2	< 1	39	0.03	< 10	< 10	13	< 10	106
17199	217 229	< 1	< 0.01	4	930	70	2	< 1	27	0.02	< 10	< 10	13	< 10	72
17200	217 229	< 1	< 0.01	4	1150	66	4	< 1	43	0.01	< 10	< 10	10	< 10	74
17201	217 229	< 1	< 0.01	3	1040	46	< 2	< 1	23	< 0.01	< 10	< 10	4	< 10	54
17202	217 229	< 1	< 0.01	3	750	68	< 2	< 1	30	< 0.01	< 10	< 10	7	< 10	84

CERTIFICATION: Hector Butler



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 Invoice No. : 19522666  
 P.O. Number : P211451  
 Account : JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9522666

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17573	217 229	5	0.6	0.26	< 2	170	< 0.5	< 2	0.71	0.5	1	16	8	0.29	< 10	< 1	0.14	< 10	0.08	505
17574	217 229	1	0.2	0.41	< 2	160	< 0.5	< 2	0.66	0.5	3	64	11	0.50	< 10	< 1	0.23	< 10	0.28	480
17575	217 229	1	< 0.2	0.39	4	150	< 0.5	< 2	0.75	0.5	< 1	12	8	0.38	< 10	< 1	0.11	< 10	0.09	50
17576	217 229	< 1	< 0.2	0.16	2	70	< 0.5	2	2.33	0.5	1	6	7	0.21	< 10	< 1	0.08	< 10	0.24	755
17577	217 229	1	< 0.2	0.24	< 2	110	< 0.5	< 2	2.57	1.0	1	9	7	0.25	< 10	< 1	0.11	< 10	0.17	715
17578	217 229	1	< 0.2	0.09	< 2	170	< 0.5	2	2.19	0.5	3	6	4	0.19	< 10	< 1	0.07	< 10	0.22	3850
17579	217 229	1	< 0.2	0.16	2	60	< 0.5	< 2	1.91	0.5	1	8	4	0.19	< 10	< 1	0.06	< 10	0.19	100
17580	217 229	< 1	< 0.4	0.43	4	170	< 0.5	< 2	0.52	0.5	2	33	7	0.47	< 10	< 1	0.14	< 10	0.09	230
17581	217 229	1	0.2	0.51	8	180	< 0.5	2	1.23	0.5	4	38	10	0.58	< 10	< 1	0.09	< 10	0.17	885
17582	217 229	< 1	< 0.2	0.22	4	140	< 0.5	< 2	0.94	0.5	1	6	8	0.23	< 10	< 1	0.11	< 10	0.06	115
17583	217 229	1	< 0.2	0.19	< 2	110	< 0.5	2	2.35	1.0	4	8	9	0.30	< 10	< 1	0.09	< 10	0.24	3100
17584	217 229	< 1	< 0.2	0.11	2	60	< 0.5	2	2.37	< 0.5	1	6	6	0.17	< 10	< 1	0.07	< 10	0.22	515
17585	217 229	< 1	< 0.2	0.12	2	70	< 0.5	2	2.34	0.5	2	8	8	0.38	< 10	< 1	0.06	< 10	0.23	770
17586	217 229	3	< 0.2	0.06	< 2	70	< 0.5	2	1.98	< 0.5	2	4	6	0.15	< 10	< 1	0.15	< 10	0.22	950
17587	217 229	< 1	< 0.2	0.13	4	70	< 0.5	2	2.44	< 0.5	1	6	8	0.18	< 10	< 1	0.08	< 10	0.23	530
17588	217 229	< 1	< 0.2	0.19	4	90	< 0.5	< 2	2.96	< 0.5	1	7	14	0.35	< 10	< 1	0.03	< 10	0.24	140
17589	217 229	3	< 0.2	0.25	< 2	150	< 0.5	2	2.18	0.5	1	36	8	0.36	< 10	< 1	0.13	< 10	0.15	1080
17590	217 229	3	< 0.2	0.15	2	230	< 0.5	< 2	2.35	1.0	1	6	11	0.20	< 10	< 1	0.09	< 10	0.12	700
17591	217 229	3	0.2	0.34	< 2	240	< 0.5	< 2	1.40	2.0	3	39	13	0.43	< 10	< 1	0.11	< 10	0.11	1765
17592	217 229	< 1	0.4	0.30	4	380	< 0.5	< 2	1.87	1.5	3	13	13	0.34	< 10	< 1	0.17	< 10	0.13	2830
17593	217 229	< 1	0.4	0.44	< 2	430	< 0.5	< 2	1.31	1.5	6	47	9	0.50	< 10	< 1	0.16	10	0.13	3180
17594	217 229	< 1	0.6	0.43	2	420	< 0.5	< 2	1.37	1.5	4	30	12	0.47	< 10	1	0.15	10	0.15	2230
17595	217 229	2	0.2	0.65	2	290	< 0.5	< 2	0.64	0.5	8	22	15	0.52	< 10	< 1	0.14	20	0.11	445
17596	217 229	1	0.6	0.38	< 2	180	< 0.5	< 2	0.67	0.5	3	11	10	0.38	< 10	< 1	0.13	10	0.10	310
17597	217 229	1	< 0.2	0.31	4	270	< 0.5	< 2	0.87	1.5	3	10	13	0.29	< 10	< 1	0.13	< 10	0.09	870
17598	217 229	2	< 0.2	0.21	2	80	< 0.5	< 2	0.41	0.5	2	8	9	0.24	< 10	< 1	0.09	< 10	0.07	100
17599	217 229	< 1	< 0.2	0.26	4	100	< 0.5	< 2	0.34	0.5	1	10	8	0.28	< 10	< 1	0.08	< 10	0.08	80
17600	217 229	< 1	< 0.2	0.37	4	80	< 0.5	< 2	0.30	0.5	2	6	9	0.38	< 10	< 1	0.13	< 10	0.05	65
17601	217 229	1	0.2	1.17	16	120	< 0.5	2	1.30	1.0	18	93	20	2.45	< 10	1	0.14	10	0.33	2520
17602	217 229	< 1	< 0.2	0.28	10	80	< 0.5	< 2	0.38	0.5	1	15	7	0.28	< 10	< 1	0.13	< 10	0.04	115
17603	217 229	< 1	< 0.2	0.41	< 2	120	< 0.5	< 2	0.38	< 0.5	2	8	10	0.53	< 10	< 1	0.08	< 10	0.05	80
17604	217 229	1	< 0.2	0.92	6	80	< 0.5	< 2	1.26	0.5	9	87	26	1.04	< 10	< 1	0.10	20	0.29	530
17605	217 229	1	0.2	0.75	12	100	< 0.5	2	1.36	1.0	13	53	24	1.47	< 10	< 1	0.11	20	0.25	1270
17606	217 229	< 1	< 0.2	0.26	4	100	< 0.5	< 2	0.49	0.5	1	30	7	0.34	< 10	< 1	0.11	< 10	0.07	185
17607	217 229	< 1	< 0.2	0.29	12	110	< 0.5	< 2	0.53	0.5	< 1	15	9	0.30	< 10	< 1	0.10	< 10	0.06	120
17608	217 229	3	< 0.2	0.29	4	100	< 0.5	< 2	0.43	0.5	2	38	10	0.36	< 10	< 1	0.16	< 10	0.08	265
17609	217 229	< 1	< 0.2	0.28	4	180	< 0.5	< 2	0.66	1.0	3	15	12	0.31	< 10	< 1	0.11	< 10	0.06	585
17610	217 229	1	< 0.2	0.68	4	190	< 0.5	< 2	0.63	0.5	6	49	12	0.61	< 10	< 1	0.17	10	0.11	475
17611	217 229	< 1	0.4	1.08	2	120	0.5	< 2	0.44	1.0	53	52	28	2.07	< 10	< 1	0.14	30	0.13	1640
17612	217 229	3	0.4	0.71	< 2	190	< 0.5	2	0.68	0.5	11	40	20	0.67	< 10	< 1	0.20	10	0.18	850

CERTIFICATION: *Barb Bechler*



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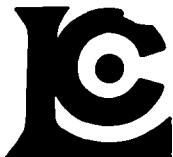
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SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17573	217 229	< 1	< 0.01	3	1100	48	2	< 1	37	< 0.01	< 10	< 10	6	< 10	70
17574	217 229	< 1	0.01	15	930	44	2	< 1	33	0.03	< 10	< 10	11	< 10	82
17575	217 229	< 1	0.01	2	810	76	< 2	< 1	44	< 0.01	< 10	< 10	8	< 10	60
17576	217 229	< 1	0.01	3	750	36	2	< 1	35	< 0.01	< 10	< 10	3	< 10	26
17577	217 229	< 1	0.01	2	960	52	2	< 1	45	< 0.01	< 10	< 10	4	< 10	106
17578	217 229	1	< 0.01	2	970	36	2	< 1	36	< 0.01	< 10	< 10	1	< 10	72
17579	217 229	< 1	0.01	1	890	38	2	< 1	33	< 0.01	< 10	< 10	3	< 10	50
17580	217 229	< 1	0.01	3	980	40	2	1	30	0.02	< 10	< 10	9	< 10	60
17581	217 229	< 1	0.01	4	1000	36	2	1	44	0.03	< 10	< 10	11	< 10	48
17582	217 229	< 1	0.01	4	950	56	2	< 1	28	< 0.01	< 10	< 10	4	< 10	76
17583	217 229	< 1	0.01	4	1200	40	2	< 1	38	< 0.01	< 10	< 10	4	< 10	58
17584	217 229	< 1	0.01	2	850	38	2	< 1	38	< 0.01	< 10	< 10	2	< 10	26
17585	217 229	1	0.01	5	1100	28	< 2	< 1	39	< 0.01	< 10	< 10	2	< 10	24
17586	217 229	< 1	0.01	2	980	22	2	< 1	33	< 0.01	< 10	< 10	1	< 10	36
17587	217 229	< 1	0.01	4	830	24	2	< 1	38	< 0.01	< 10	< 10	3	< 10	32
17588	217 229	< 1	0.01	6	660	14	2	< 1	43	< 0.01	< 10	< 10	3	< 10	20
17589	217 229	< 1	< 0.01	4	970	42	< 2	< 1	32	0.01	< 10	< 10	7	< 10	112
17590	217 229	< 1	0.01	3	1210	58	2	< 1	40	< 0.01	< 10	< 10	3	< 10	158
17591	217 229	< 1	< 0.01	4	1160	118	< 2	< 1	40	< 0.01	< 10	< 10	8	< 10	110
17592	217 229	< 1	< 0.01	6	1610	94	< 2	< 1	78	< 0.01	< 10	< 10	6	< 10	192
17593	217 229	< 1	< 0.01	6	1280	80	< 2	< 1	63	0.01	< 10	< 10	10	< 10	182
17594	217 229	< 1	0.01	6	1140	62	< 2	< 1	84	0.02	< 10	< 10	9	< 10	202
17595	217 229	< 1	0.01	9	1570	78	< 2	1	59	0.01	< 10	< 10	11	< 10	124
17596	217 229	< 1	< 0.01	7	1380	70	2	< 1	54	0.01	< 10	< 10	8	< 10	64
17597	217 229	< 1	< 0.01	6	1330	54	< 2	< 1	58	< 0.01	< 10	< 10	6	< 10	226
17598	217 229	< 1	0.02	9	620	50	< 2	< 1	36	< 0.01	< 10	< 10	4	< 10	40
17599	217 229	< 1	0.01	6	590	52	2	< 1	21	< 0.01	< 10	< 10	5	< 10	40
17600	217 229	< 1	0.01	9	880	28	< 2	1	21	< 0.01	< 10	< 10	6	< 10	32
17601	217 229	< 1	0.02	39	1100	38	2	2	39	0.08	< 10	< 10	36	< 10	92
17602	217 229	< 1	0.01	3	680	54	2	< 1	18	< 0.01	< 10	< 10	5	< 10	48
17603	217 229	< 1	0.01	7	1000	38	< 2	1	27	< 0.01	< 10	< 10	6	< 10	42
17604	217 229	< 1	0.02	31	1070	22	2	2	37	0.03	< 10	< 10	20	< 10	64
17605	217 229	1	0.01	29	1310	22	2	1	40	0.01	< 10	< 10	14	< 10	80
17606	217 229	< 1	< 0.01	6	720	52	2	< 1	24	0.01	< 10	< 10	8	< 10	52
17607	217 229	1	0.01	5	780	50	< 2	< 1	36	< 0.01	< 10	< 10	6	< 10	50
17608	217 229	< 1	0.01	5	1340	48	2	< 1	39	0.02	< 10	< 10	8	< 10	46
17609	217 229	< 1	0.01	6	1310	70	2	< 1	37	< 0.01	< 10	< 10	6	< 10	118
17610	217 229	< 1	0.01	8	1250	54	< 2	1	46	0.02	< 10	< 10	15	< 10	74
17611	217 229	2	0.01	17	1530	38	2	2	34	0.01	< 10	< 10	36	< 10	40
17612	217 229	< 1	0.02	35	1650	58	< 2	1	51	0.01	< 10	< 10	12	< 10	62

CERTIFICATION: *Hart Bickler*



# Chemex Labs Ltd.

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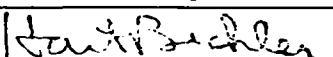
ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

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 Invoice No. : 19522666  
 P.O. Number : P211451  
 Account : JWW

## CERTIFICATE OF ANALYSIS A9522666

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17613	217 229	2 < 0.2	0.15	4	180 < 0.5	< 2	0.65	0.5	2	18	13	0.20	< 10	< 1	0.15	< 10	0.09	510		
17614	217 229	< 1 < 0.2	0.28	4	100 < 0.5	< 2	0.49	0.5	2	13	8	0.27	< 10	< 1	0.10	< 10	0.07	135		
17615	217 229	< 1 < 0.2	0.40	< 2	80 < 0.5	2	0.43	< 0.5	3	87	8	0.45	< 10	< 1	0.08	< 10	0.15	95		
17616	217 229	1 < 0.2	0.40	< 2	90 < 0.5	< 2	0.44	< 0.5	4	54	8	0.46	< 10	< 1	0.12	< 10	0.21	50		
17617	217 229	1 < 0.2	0.26	6	100 < 0.5	2	0.70	0.5	2	34	9	0.37	< 10	< 1	0.12	< 10	0.13	65		
17618	217 229	< 1 0.2	0.32	< 2	170 < 0.5	< 2	0.96	1.0	9	40	17	0.58	< 10	< 1	0.14	< 10	0.22	705		
17619	217 229	1 0.2	0.37	8	470 < 0.5	< 2	1.48	1.5	4	30	13	0.45	< 10	< 1	0.19	< 10	0.15	4000		
17620	217 229	< 1 < 0.2	0.13	< 2	90 < 0.5	2	0.31	0.5	2	12	8	0.18	< 10	< 1	0.11	< 10	0.09	125		
17621	217 229	< 1 < 0.2	0.25	< 2	60 < 0.5	< 2	0.23	0.5	2	11	7	0.27	< 10	< 1	0.12	< 10	0.07	120		
17622	217 229	< 1 < 0.2	0.20	4	130 < 0.5	< 2	0.47	0.5	1	10	9	0.22	< 10	< 1	0.10	< 10	0.07	80		
17623	217 229	< 1 < 0.2	0.50	< 2	170 < 0.5	< 2	0.58	0.5	6	16	10	0.44	< 10	< 1	0.13	< 10	0.12	255		
17624	217 229	< 1 < 0.2	0.29	4	150 < 0.5	< 2	0.52	0.5	6	41	9	0.46	< 10	< 1	0.11	< 10	0.19	430		
17625	217 229	1 < 0.2	0.23	< 2	80 < 0.5	< 2	0.51	0.5	9	14	11	0.31	< 10	< 1	0.19	< 10	0.20	185		
17626	217 229	< 1 < 0.2	0.39	2	260 < 0.5	< 2	0.69	1.0	3	45	13	0.47	< 10	< 1	0.12	< 10	0.10	1770		
17627	217 229	2 < 0.2	0.35	6	110 < 0.5	< 2	0.47	< 0.5	2	43	7	0.42	< 10	< 1	0.14	< 10	0.15	210		
17628	217 229	< 1 < 0.2	0.44	< 2	80 < 0.5	< 2	0.57	0.5	3	86	8	0.66	< 10	< 1	0.25	< 10	0.29	725		
17629	217 229	< 1 < 0.2	0.20	4	150 < 0.5	< 2	0.91	0.5	2	12	10	0.22	< 10	< 1	0.21	< 10	0.14	755		
17630	217 229	< 1 < 0.2	0.28	6	170 < 0.5	< 2	0.77	0.5	6	37	9	0.45	< 10	< 1	0.10	< 10	0.23	525		
17631	217 229	< 1 < 0.2	0.31	2	80 < 0.5	< 2	0.82	1.0	1	12	9	0.34	< 10	< 1	0.17	< 10	0.14	145		
17632	217 229	< 1 < 0.2	0.27	2	120 < 0.5	< 2	0.74	0.5	4	26	9	0.40	< 10	< 1	0.12	< 10	0.14	745		
17633	217 229	1 0.2	0.25	4	230 < 0.5	< 2	0.79	0.5	1	20	8	0.27	< 10	< 1	0.13	< 10	0.08	565		
17634	217 229	2 < 0.2	0.10	2	60 < 0.5	< 2	1.68	0.5	2	9	10	0.14	< 10	< 1	0.09	< 10	0.19	1480		
17635	217 229	4 0.2	0.51	8	160 < 0.5	< 2	1.73	0.5	112	15	20	2.02	< 10	< 1	0.16	< 10	0.25	6210		
17636	217 229	< 1 < 0.2	0.21	6	120 < 0.5	< 2	0.71	0.5	1	8	10	0.23	< 10	< 1	0.14	< 10	0.09	425		
17637	217 229	3 0.2	0.51	12	140 < 0.5	< 2	0.52	< 0.5	14	40	18	0.67	< 10	< 1	0.13	< 10	0.23	325		
17638	217 229	< 1 < 0.2	0.25	2	150 < 0.5	< 2	0.62	0.5	4	8	11	0.30	< 10	< 1	0.15	< 10	0.10	540		
17639	217 229	1 < 0.2	0.37	2	120 < 0.5	< 2	0.50	0.5	6	32	12	0.42	< 10	< 1	0.15	< 10	0.11	165		
17640	217 229	2 < 0.2	0.32	6	150 < 0.5	< 2	0.74	0.5	1	16	10	0.34	< 10	< 1	0.12	< 10	0.10	645		
17641	217 229	< 1 < 0.2	0.23	4	190 < 0.5	< 2	0.60	0.5	2	35	12	0.34	< 10	< 1	0.10	< 10	0.07	720		
17642	217 229	3 < 0.2	0.09	< 2	210 < 0.5	< 2	1.47	1.0	1	7	10	0.11	< 10	< 1	0.11	< 10	0.09	1455		
17643	217 229	1 0.2	0.25	6	250 < 0.5	< 2	1.07	0.5	1	16	10	0.29	< 10	< 1	0.15	< 10	0.08	2200		
17644	217 229	< 1 0.2	0.18	6	250 < 0.5	< 2	1.61	1.5	2	8	12	0.21	< 10	< 1	0.12	< 10	0.11	2080		
17645	217 229	< 1 0.2	0.16	< 2	280 < 0.5	< 2	1.93	1.5	2	13	13	0.19	< 10	< 1	0.15	< 10	0.15	2040		
17646	217 229	1 0.2	0.43	4	220 < 0.5	< 2	0.81	1.5	11	88	12	0.58	< 10	< 1	0.14	< 10	0.11	2800		
17647	217 229	< 1 0.2	0.40	< 2	280 < 0.5	< 2	0.87	1.5	3	68	12	0.47	< 10	< 1	0.12	< 10	0.10	1445		
17648	217 229	2 0.4	0.36	< 2	130 < 0.5	< 2	0.57	0.5	2	19	10	0.35	< 10	< 1	0.11	< 10	0.08	270		
17649	217 229	< 1 < 0.2	0.40	4	270 < 0.5	< 2	0.82	0.5	3	46	10	0.42	< 10	< 1	0.11	< 10	0.09	1705		
17650	217 229	3 0.2	0.35	2	210 < 0.5	< 2	0.68	0.5	1	36	9	0.33	< 10	< 1	0.15	< 10	0.10	1630		
17654	217 229	1 < 0.2	0.39	4	100 < 0.5	< 2	1.84	1.0	2	12	13	0.35	< 10	< 1	0.05	< 10	0.18	720		

CERTIFICATION: 



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
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 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

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 P.O. Number : P211451  
 Account : JWW

## CERTIFICATE OF ANALYSIS A9522666

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17613	217	229	< 1	0.01	4	1230	52	< 2	< 1	40	< 0.01	< 10	< 10	3	< 10	74
17614	217	229	< 1	0.01	7	760	42	< 2	< 1	30	< 0.01	< 10	< 10	4	< 10	60
17615	217	229	< 1	0.02	15	720	20	< 2	< 1	28	0.02	< 10	< 10	7	< 10	26
17616	217	229	< 1	0.02	19	690	26	< 2	< 1	27	0.01	< 10	< 10	8	< 10	22
17617	217	229	< 1	0.01	13	650	44	< 2	< 1	34	< 0.01	< 10	< 10	6	< 10	48
17618	217	229	< 1	0.01	43	950	74	2	1	63	< 0.01	< 10	< 10	8	< 10	80
17619	217	229	< 1	0.01	11	1270	102	2	< 1	69	0.01	< 10	< 10	8	< 10	354
17620	217	229	< 1	< 0.01	8	600	54	< 2	< 1	11	< 0.01	< 10	< 10	2	< 10	32
17621	217	229	< 1	0.01	4	760	66	2	< 1	13	< 0.01	< 10	< 10	4	< 10	50
17622	217	229	< 1	0.01	3	610	46	< 2	< 1	20	< 0.01	< 10	< 10	4	< 10	56
17623	217	229	1	0.01	26	1130	42	2	1	41	< 0.01	< 10	< 10	7	< 10	64
17624	217	229	< 1	0.01	24	1040	46	2	< 1	26	< 0.01	< 10	< 10	6	< 10	72
17625	217	229	< 1	0.01	25	1120	30	2	< 1	33	< 0.01	< 10	< 10	4	< 10	68
17626	217	229	< 1	0.01	11	1080	78	2	< 1	31	0.01	< 10	< 10	9	< 10	108
17627	217	229	1	0.01	11	1070	70	< 2	< 1	28	0.01	< 10	< 10	9	< 10	44
17628	217	229	< 1	0.02	10	850	46	2	1	26	0.06	< 10	< 10	16	< 10	52
17629	217	229	< 1	0.01	9	1260	52	< 2	< 1	53	< 0.01	< 10	< 10	4	< 10	86
17630	217	229	< 1	0.01	22	880	48	< 2	< 1	42	< 0.01	< 10	< 10	7	< 10	48
17631	217	229	1	0.01	5	1070	80	2	< 1	20	< 0.01	< 10	< 10	7	< 10	74
17632	217	229	< 1	0.01	10	1130	82	2	< 1	23	< 0.01	< 10	< 10	8	< 10	86
17633	217	229	< 1	< 0.01	5	1060	54	2	< 1	49	0.01	< 10	< 10	7	< 10	104
17634	217	229	< 1	0.01	9	880	34	< 2	< 1	37	< 0.01	< 10	< 10	3	< 10	46
17635	217	229	1	0.01	31	1270	70	< 2	< 1	48	< 0.01	< 10	< 10	19	< 10	68
17636	217	229	< 1	0.01	7	1240	58	2	< 1	32	< 0.01	< 10	< 10	4	< 10	60
17637	217	229	< 1	0.01	40	1190	52	2	1	30	< 0.01	< 10	< 10	8	< 10	44
17638	217	229	< 1	0.01	10	1170	64	2	< 1	27	< 0.01	< 10	< 10	6	< 10	66
17639	217	229	< 1	0.01	16	1040	68	< 2	< 1	29	< 0.01	< 10	< 10	8	< 10	44
17640	217	229	< 1	0.01	6	1190	80	2	< 1	27	< 0.01	< 10	< 10	7	< 10	96
17641	217	229	< 1	0.01	4	930	60	2	< 1	29	0.01	< 10	< 10	8	< 10	66
17642	217	229	< 1	0.01	2	1230	38	2	< 1	47	< 0.01	< 10	< 10	1	< 10	150
17643	217	229	< 1	< 0.01	5	1330	68	2	< 1	48	< 0.01	< 10	< 10	5	< 10	126
17644	217	229	< 1	0.01	3	1400	50	2	< 1	70	< 0.01	< 10	< 10	3	< 10	194
17645	217	229	1	0.01	3	1330	62	2	< 1	75	< 0.01	< 10	< 10	2	< 10	434
17646	217	229	1	0.01	6	1070	76	< 2	< 1	41	0.02	< 10	< 10	11	< 10	152
17647	217	229	1	0.01	6	910	60	2	< 1	44	0.01	< 10	< 10	10	< 10	128
17648	217	229	< 1	0.01	5	1220	46	< 2	< 1	40	< 0.01	< 10	< 10	5	< 10	72
17649	217	229	1	0.01	4	1170	44	< 2	< 1	50	0.01	< 10	< 10	7	< 10	106
17650	217	229	1	0.01	5	1260	52	< 2	< 1	40	0.01	< 10	< 10	7	< 10	108
17654	217	229	< 1	0.01	6	1020	38	< 2	< 1	51	< 0.01	< 10	< 10	6	< 10	54

CERTIFICATION: \_\_\_\_\_



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9522929

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19295	217 229	2	0.2	0.53	4	640	< 0.5	< 2	1.61	2.0	7	36	13	0.55	< 10	< 1	0.18	< 10	0.15	5350
19296	217 229	< 1	0.4	0.42	2	640	< 0.5	< 2	1.83	3.0	3	10	14	0.37	< 10	< 1	0.15	< 10	0.12	6970
19297	217 229	< 1	0.2	0.44	2	310	< 0.5	< 2	1.05	1.0	2	12	12	0.40	< 10	< 1	0.14	< 10	0.10	2400
19298	217 229	< 1	< 0.2	0.49	4	420	< 0.5	< 2	1.56	1.5	1	45	11	0.41	< 10	< 1	0.14	< 10	0.12	2980
19299	217 229	2	< 0.2	0.46	2	250	< 0.5	< 2	1.62	1.0	1	101	12	0.49	< 10	< 1	0.15	< 10	0.11	1395
19300	217 229	< 1	< 0.2	0.35	2	400	< 0.5	< 2	1.83	1.5	1	29	12	0.32	< 10	1	0.12	< 10	0.10	2570
19301	217 229	5	< 0.2	0.24	4	150	< 0.5	< 2	1.61	1.0	< 1	16	11	0.26	< 10	< 1	0.10	< 10	0.10	905
19302	217 229	4	< 0.2	0.20	< 2	50	< 0.5	< 2	1.76	0.5	1	10	11	0.24	< 10	< 1	0.11	< 10	0.11	315
19303	217 229	1	< 0.2	0.39	4	30	< 0.5	< 2	3.55	< 0.5	1	27	18	0.53	< 10	< 1	0.09	< 10	0.29	190
19304	217 229	1	< 0.2	0.10	2	50	< 0.5	< 2	2.91	0.5	< 1	4	12	0.11	< 10	< 1	0.08	< 10	0.26	170
19305	217 229	2	< 0.2	0.26	2	140	< 0.5	< 2	1.19	1.0	1	8	11	0.24	< 10	< 1	0.14	< 10	0.10	420
19306	217 229	1	0.2	0.33	< 2	260	< 0.5	< 2	1.25	1.0	1	14	12	0.31	< 10	< 1	0.11	< 10	0.08	1465
19307	217 229	1	0.2	0.40	4	210	< 0.5	< 2	0.82	1.0	1	34	7	0.44	< 10	< 1	0.10	< 10	0.07	1645
19308	217 229	1	0.2	0.50	2	140	< 0.5	< 2	0.68	0.5	1	12	10	0.41	< 10	< 1	0.17	< 10	0.09	170
19309	217 229	< 1	< 0.2	0.27	2	90	< 0.5	< 2	2.96	0.5	2	7	10	0.25	< 10	< 1	0.08	< 10	0.30	945
19310	217 229	< 1	< 0.2	0.10	< 2	60	< 0.5	< 2	2.14	< 0.5	< 1	4	8	0.11	< 10	< 1	0.09	< 10	0.19	410
19311	217 229	616	0.2	0.35	2	570	< 0.5	< 2	2.07	2.5	9	31	20	0.36	< 10	< 1	0.09	< 10	0.13	1135
19312	217 229	< 1	< 0.2	0.47	< 2	160	< 0.5	< 2	0.96	1.0	2	20	12	0.49	< 10	< 1	0.13	< 10	0.09	285
19313	217 229	4	< 0.2	0.34	< 2	160	< 0.5	< 2	1.09	1.0	2	11	13	0.33	< 10	< 1	0.14	< 10	0.08	365
19314	217 229	3	0.2	0.56	6	390	< 0.5	< 2	1.09	2.5	8	16	14	0.54	< 10	< 1	0.15	< 10	0.10	2930
19315	217 229	2	< 0.2	0.63	2	350	< 0.5	< 2	1.02	1.0	3	37	13	0.54	< 10	< 1	0.08	< 10	0.21	770
19316	217 229	2	< 0.2	0.43	< 2	300	< 0.5	< 2	1.74	1.0	7	24	14	0.38	< 10	< 1	0.14	< 10	0.13	1625
19317	217 229	< 1	< 0.2	0.39	< 2	300	< 0.5	< 2	0.88	1.0	6	15	19	0.33	< 10	< 1	0.16	< 10	0.10	2290
19318	217 229	< 1	< 0.2	0.38	< 2	240	< 0.5	< 2	0.76	1.0	1	36	12	0.37	< 10	< 1	0.19	< 10	0.13	1745
19319	217 229	3	< 0.2	0.28	2	150	< 0.5	< 2	0.70	0.5	1	21	9	0.28	< 10	< 1	0.13	< 10	0.08	790
19320	217 229	< 1	< 0.2	0.39	2	310	< 0.5	< 2	1.11	1.0	1	11	12	0.37	< 10	< 1	0.18	< 10	0.11	3590
19321	217 229	< 1	0.2	0.96	2	220	< 0.5	< 2	0.88	0.5	18	50	17	1.03	< 10	< 1	0.12	20	0.18	2230
19322	217 229	1	0.2	0.70	2	260	< 0.5	< 2	1.11	1.0	30	50	15	0.81	< 10	< 1	0.15	10	0.17	2940
19323	217 229	< 1	0.2	0.47	4	470	< 0.5	< 2	1.76	1.0	2	25	13	0.42	< 10	< 1	0.14	< 10	0.10	1140
19324	217 229	1	0.4	0.35	4	340	< 0.5	< 2	2.83	3.0	2	10	13	0.33	< 10	< 1	0.26	< 10	0.21	1715
19325	217 229	3	0.4	0.38	2	190	< 0.5	< 2	1.41	0.5	1	16	10	0.39	< 10	< 1	0.17	< 10	0.15	555
19326	217 229	2	< 0.2	0.51	8	130	< 0.5	< 2	2.43	0.5	12	22	18	1.09	< 10	< 1	0.09	20	0.25	2230
19327	217 229	1	< 0.2	0.36	4	120	< 0.5	< 2	1.06	0.5	< 1	10	5	0.33	< 10	< 1	0.09	< 10	0.10	125
19328	217 229	4	0.2	0.47	< 2	390	< 0.5	< 2	1.04	1.5	4	24	12	0.51	< 10	< 1	0.12	< 10	0.14	4040
19329	217 229	< 1	0.2	0.47	< 2	360	< 0.5	< 2	1.07	1.0	3	21	13	0.52	< 10	< 1	0.14	< 10	0.13	2980
19330	217 229	< 1	0.2	0.38	< 2	510	< 0.5	< 2	1.78	2.0	6	18	14	0.40	< 10	< 1	0.21	< 10	0.18	5550
19331	217 229	5	< 0.2	0.36	2	380	< 0.5	< 2	1.82	1.0	4	15	14	0.38	< 10	< 1	0.16	< 10	0.18	2060
19332	217 229	1	< 0.2	0.43	2	500	< 0.5	< 2	2.31	2.0	8	17	18	0.44	< 10	< 1	0.19	< 10	0.26	3650
19333	217 229	1	0.2	1.12	4	250	< 0.5	< 2	0.96	0.5	48	34	19	1.22	< 10	< 1	0.14	30	0.21	3600
19334	217 229	3	< 0.2	0.37	2	40	< 0.5	< 2	2.61	0.5	2	11	16	0.48	< 10	< 1	0.10	< 10	0.27	645

CERTIFICATION: *[Signature]*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATTN: M. STALKER

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 Invoice No.: 19522929  
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 Account: JWW

## CERTIFICATE OF ANALYSIS A9522929

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Tl %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19295	217 229	1	0.01	7	1310	90	< 2	< 1	78	0.01	< 10	< 10	14	< 10	214
19296	217 229	< 1	< 0.01	7	1390	96	< 2	< 1	75	< 0.01	< 10	< 10	10	< 10	332
19297	217 229	< 1	< 0.01	4	1360	70	< 2	< 1	44	0.01	< 10	< 10	10	< 10	148
19298	217 229	< 1	< 0.01	5	1030	72	< 2	< 1	46	0.01	< 10	< 10	11	< 10	166
19299	217 229	1	0.01	5	1140	94	< 2	< 1	42	0.01	< 10	< 10	10	< 10	162
19300	217 229	< 1	0.01	3	1190	66	< 2	< 1	56	< 0.01	< 10	< 10	7	< 10	170
19301	217 229	< 1	< 0.01	3	1190	56	< 2	< 1	33	< 0.01	< 10	< 10	6	< 10	110
19302	217 229	< 1	< 0.01	2	780	58	< 2	< 1	27	< 0.01	< 10	< 10	6	< 10	80
19303	217 229	< 1	< 0.01	4	770	40	< 2	< 1	33	0.01	< 10	< 10	11	< 10	22
19304	217 229	< 1	0.01	1	770	40	< 2	< 1	32	< 0.01	< 10	< 10	4	< 10	82
19305	217 229	< 1	0.01	2	1000	48	< 2	< 1	35	< 0.01	< 10	< 10	6	< 10	116
19306	217 229	< 1	0.01	3	970	68	< 2	< 1	49	0.01	< 10	< 10	7	< 10	206
19307	217 229	< 1	< 0.01	5	1010	68	< 2	< 1	41	0.01	< 10	< 10	10	< 10	100
19308	217 229	< 1	< 0.01	4	1420	38	< 2	< 1	37	0.01	< 10	< 10	9	< 10	68
19309	217 229	< 1	0.01	4	860	48	< 2	< 1	40	< 0.01	< 10	< 10	8	< 10	66
19310	217 229	< 1	0.01	2	1010	22	< 2	< 1	33	< 0.01	< 10	< 10	2	< 10	38
19311	217 229	< 1	0.01	11	960	54	< 2	< 1	82	0.01	< 10	< 10	8	< 10	362
19312	217 229	< 1	0.01	5	1210	74	< 2	< 1	32	0.02	< 10	< 10	12	< 10	124
19313	217 229	< 1	0.01	4	1090	68	< 2	< 1	30	0.01	< 10	< 10	8	< 10	114
19314	217 229	1	0.01	8	1260	110	< 2	1	38	0.01	< 10	< 10	14	< 10	168
19315	217 229	< 1	0.03	10	650	38	< 2	1	38	0.03	< 10	< 10	13	< 10	260
19316	217 229	1	0.01	7	1410	68	< 2	< 1	89	0.01	< 10	< 10	9	< 10	152
19317	217 229	< 1	< 0.01	7	1680	62	< 2	< 1	59	0.01	< 10	< 10	8	< 10	176
19318	217 229	< 1	< 0.01	4	1410	60	< 2	< 1	47	0.01	< 10	< 10	9	< 10	172
19319	217 229	< 1	< 0.01	4	1250	52	< 2	< 1	43	0.01	< 10	< 10	6	< 10	108
19320	217 229	< 1	< 0.01	4	1550	84	< 2	< 1	49	< 0.01	< 10	< 10	9	< 10	222
19321	217 229	< 1	0.01	9	1370	68	< 2	1	42	0.03	< 10	< 10	21	< 10	72
19322	217 229	1	0.01	8	1410	78	< 2	< 1	44	0.02	< 10	< 10	17	< 10	120
19323	217 229	1	0.01	6	990	58	< 2	< 1	62	0.01	< 10	< 10	11	< 10	166
19324	217 229	< 1	0.01	4	1280	70	< 2	< 1	60	< 0.01	< 10	< 10	8	< 10	214
19325	217 229	< 1	< 0.01	4	1180	64	< 2	< 1	33	0.01	< 10	< 10	9	< 10	96
19326	217 229	< 1	0.01	9	1710	44	< 2	1	48	< 0.01	< 10	< 10	11	< 10	46
19327	217 229	< 1	< 0.01	2	840	64	< 2	< 1	27	< 0.01	< 10	< 10	9	< 10	48
19328	217 229	< 1	< 0.01	6	1220	84	< 2	< 1	57	0.02	< 10	< 10	13	< 10	256
19329	217 229	1	< 0.01	6	1290	94	< 2	< 1	53	0.01	< 10	< 10	12	< 10	124
19330	217 229	< 1	< 0.01	6	1580	102	< 2	< 1	88	0.01	< 10	< 10	11	< 10	332
19331	217 229	1	< 0.01	5	1550	64	< 2	< 1	84	0.01	< 10	< 10	9	< 10	254
19332	217 229	< 1	< 0.01	6	1420	82	< 2	< 1	107	0.01	< 10	< 10	12	< 10	316
19333	217 229	< 1	0.01	10	1310	82	< 2	1	49	0.03	< 10	< 10	23	< 10	70
19334	217 229	< 1	0.01	4	890	60	< 2	< 1	29	0.01	< 10	< 10	11	< 10	36

CERTIFICATION: \_\_\_\_\_



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ROYAL OAK MINES INC.  
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 P.O. Number :P211451  
 Account :JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522929

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19335	217 229	4	0.2	0.20	< 2	280	< 0.5	< 2	1.30	1.5	3	9	16	0.22	< 10	< 1	0.13	< 10	0.11	2620
19336	217 229	< 1	0.4	0.42	2	240	< 0.5	< 2	1.25	1.0	3	17	15	0.40	< 10	< 1	0.13	< 10	0.11	1270
19337	217 229	3	0.2	0.49	< 2	390	< 0.5	< 2	1.24	2.0	6	24	19	0.47	< 10	< 1	0.18	< 10	0.17	2950
19338	217 229	4	< 0.2	0.51	2	240	< 0.5	< 2	1.35	1.0	3	18	22	0.49	< 10	< 1	0.12	10	0.16	1385
19339	217 229	2	0.2	1.13	6	350	< 0.5	< 2	1.42	2.0	12	54	23	1.12	< 10	< 1	0.19	10	0.29	3840
19340	217 229	< 1	0.2	0.38	2	440	< 0.5	< 2	1.40	2.0	4	10	15	0.36	< 10	< 1	0.15	< 10	0.14	4380
19341	217 229	6	0.4	0.39	2	240	< 0.5	< 2	0.91	1.0	4	15	19	0.42	< 10	< 1	0.17	< 10	0.14	1845
19342	217 229	< 1	< 0.2	0.34	2	840	< 0.5	< 2	3.71	2.5	8	6	22	0.28	< 10	< 1	0.09	10	0.12	2950
19343	217 229	3	0.6	0.42	2	390	< 0.5	< 2	0.89	2.0	3	15	12	0.40	< 10	< 1	0.14	< 10	0.11	4160
19344	217 229	< 1	0.2	0.65	< 2	200	< 0.5	< 2	0.48	1.0	6	10	19	0.65	< 10	< 1	0.20	10	0.10	1355
19345	217 229	2	0.2	0.40	< 2	210	< 0.5	< 2	0.92	0.5	3	16	14	0.47	< 10	< 1	0.21	< 10	0.15	1430
19346	217 229	2	0.2	0.64	2	280	< 0.5	< 2	0.69	0.5	7	26	12	0.53	< 10	< 1	0.15	< 10	0.12	2010
19347	217 229	< 1	< 0.2	0.43	2	190	< 0.5	< 2	0.92	0.5	1	17	10	0.42	< 10	< 1	0.17	< 10	0.13	930
19348	217 229	4	0.4	0.45	4	240	< 0.5	< 2	1.05	0.5	3	16	14	0.47	< 10	< 1	0.14	< 10	0.13	795
19349	217 229	< 1	0.2	0.53	< 2	310	< 0.5	< 2	1.70	2.0	8	44	16	0.58	< 10	< 1	0.15	< 10	0.15	1645
19350	217 229	< 1	0.4	0.67	2	310	< 0.5	< 2	1.71	1.5	10	22	27	0.64	< 10	< 1	0.16	10	0.17	2680
19351	217 229	< 1	0.2	0.47	< 2	400	< 0.5	< 2	2.14	1.5	3	24	12	0.53	< 10	< 1	0.18	< 10	0.23	1885
19352	217 229	45	0.2	0.48	2	410	< 0.5	< 2	2.10	2.0	3	15	15	0.44	< 10	< 1	0.16	< 10	0.12	2420
19353	217 229	3	0.2	0.60	2	240	< 0.5	< 2	1.24	1.0	2	25	12	0.56	< 10	< 1	0.22	< 10	0.17	1415
19354	217 229	4	< 0.2	0.39	6	150	< 0.5	< 2	2.18	1.0	2	11	14	0.39	< 10	< 1	0.13	< 10	0.15	800
19355	217 229	3	< 0.2	0.76	2	40	< 0.5	< 2	2.07	< 0.5	4	42	21	1.25	< 10	< 1	0.08	10	0.37	350
19626	217 229	1	0.2	0.55	2	400	< 0.5	< 2	1.59	2.0	10	40	18	0.56	< 10	< 1	0.13	10	0.18	4140
19627	217 229	3	0.2	0.43	2	340	< 0.5	< 2	1.20	1.0	1	32	15	0.39	< 10	< 1	0.19	< 10	0.14	2850
19628	217 229	3	0.4	0.68	2	310	< 0.5	< 2	0.95	1.0	22	23	19	0.73	< 10	1	0.18	10	0.14	4340
19629	217 229	4	0.2	0.33	< 2	230	< 0.5	< 2	0.80	0.5	1	35	12	0.38	< 10	< 1	0.12	< 10	0.12	1125
19630	217 229	< 1	0.2	0.40	2	230	< 0.5	< 2	1.00	0.5	1	27	9	0.38	< 10	< 1	0.10	< 10	0.11	365
19631	217 229	< 1	0.2	0.35	2	170	< 0.5	< 2	0.85	0.5	2	23	10	0.37	< 10	< 1	0.16	< 10	0.12	320
19632	217 229	1	0.2	0.46	2	190	< 0.5	< 2	1.88	1.0	3	23	20	0.50	< 10	< 1	0.15	< 10	0.20	1745
19633	217 229	< 1	< 0.2	0.31	4	190	< 0.5	< 2	2.83	1.0	1	13	12	0.31	< 10	< 1	0.11	< 10	0.26	1445
19634	217 229	1	0.2	0.35	4	120	< 0.5	< 2	0.97	0.5	1	10	9	0.30	< 10	< 1	0.08	< 10	0.13	120
19635	217 229	< 1	< 0.2	0.13	< 2	40	< 0.5	< 2	2.77	< 0.5	< 1	6	8	0.13	< 10	< 1	0.07	< 10	0.34	160
19636	217 229	< 1	< 0.2	0.20	4	20	< 0.5	< 2	0.67	0.5	< 1	11	6	0.20	< 10	< 1	0.08	< 10	0.10	25
19637	217 229	< 1	< 0.2	0.13	2	90	< 0.5	< 2	1.58	< 0.5	< 1	4	7	0.13	< 10	< 1	0.08	< 10	0.16	395
19638	217 229	< 1	< 0.2	0.67	< 2	120	< 0.5	< 2	0.68	< 0.5	7	78	11	0.95	< 10	< 1	0.10	< 10	0.24	1160
19639	217 229	< 1	0.2	0.39	2	180	< 0.5	< 2	0.88	0.5	2	8	12	0.35	< 10	< 1	0.11	< 10	0.11	680
19640	217 229	1	0.2	0.69	< 2	200	< 0.5	< 2	0.60	0.5	1	42	11	0.44	< 10	< 1	0.11	< 10	0.11	225
19641	217 229	2	< 0.2	0.33	2	110	< 0.5	< 2	2.05	1.0	3	12	32	0.25	< 10	< 1	0.10	20	0.19	720
19642	217 229	4	0.2	0.67	2	250	< 0.5	< 2	0.99	1.0	3	16	17	0.45	< 10	< 1	0.14	< 10	0.13	1105
19643	217 229	3	0.2	0.48	2	330	< 0.5	< 2	1.06	1.0	7	17	14	0.45	< 10	< 1	0.17	< 10	0.14	3140
19644	217 229	4	< 0.2	0.31	< 2	210	< 0.5	< 2	1.27	1.0	5	10	16	0.30	< 10	< 1	0.22	< 10	0.17	2790

CERTIFICATION: \_\_\_\_\_



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TO: ROYAL OAK MINES INC.  
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## CERTIFICATE OF ANALYSIS A9522929

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19335	217 229	< 1 < 0.01	3	1590	50	< 2	< 1	55	< 0.01	< 10	< 10	6	< 10	206	
19336	217 229	< 1 < 0.01	4	1200	90	< 2	< 1	34	0.01	< 10	< 10	10	< 10	122	
19337	217 229	< 1 < 0.01	6	1480	92	< 2	1	50	0.01	< 10	< 10	14	< 10	196	
19338	217 229	< 1 0.01	7	1550	40	< 2	< 1	49	0.01	< 10	< 10	10	< 10	180	
19339	217 229	< 1 0.01	13	2050	118	< 2	1	62	0.03	< 10	< 10	24	< 10	200	
19340	217 229	< 1 < 0.01	6	1670	78	< 2	< 1	63	< 0.01	< 10	< 10	9	< 10	266	
19341	217 229	< 1 < 0.01	6	1550	56	< 2	< 1	47	0.01	< 10	< 10	10	< 10	152	
19342	217 229	< 1 < 0.01	7	1160	40	< 2	< 1	132	< 0.01	< 10	< 10	6	< 10	682	
19343	217 229	1 < 0.01	6	1420	72	< 2	< 1	52	0.01	< 10	< 10	10	< 10	280	
19344	217 229	< 1 < 0.01	7	2150	46	< 2	< 1	37	< 0.01	< 10	< 10	10	< 10	116	
19345	217 229	1 < 0.01	7	1730	86	< 2	< 1	49	0.01	< 10	< 10	11	< 10	178	
19346	217 229	< 1 < 0.01	9	1390	76	< 2	< 1	47	0.01	< 10	< 10	13	< 10	134	
19347	217 229	< 1 < 0.01	6	1370	70	< 2	< 1	48	0.01	< 10	< 10	11	< 10	144	
19348	217 229	1 < 0.01	10	1430	72	< 2	< 1	43	0.01	< 10	< 10	11	< 10	172	
19349	217 229	< 1 0.01	8	1150	74	< 2	1	53	0.02	< 10	< 10	16	< 10	222	
19350	217 229	1 < 0.01	12	1410	120	< 2	1	48	0.01	< 10	< 10	15	< 10	124	
19351	217 229	< 1 < 0.01	7	1270	70	< 2	< 1	60	0.03	< 10	< 10	13	< 10	176	
19352	217 229	< 1 < 0.01	4	1480	100	< 2	< 1	62	0.01	< 10	< 10	12	< 10	236	
19353	217 229	1 < 0.01	5	1260	68	< 2	1	48	0.02	< 10	< 10	14	< 10	152	
19354	217 229	< 1 < 0.01	4	1100	68	< 2	< 1	42	0.01	< 10	< 10	10	< 10	88	
19355	217 229	< 1 0.02	11	670	20	< 2	2	27	0.06	< 10	< 10	30	< 10	18	
19626	217 229	< 1 0.01	7	1270	100	< 2	1	73	0.02	< 10	< 10	13	< 10	238	
19627	217 229	< 1 < 0.01	6	1570	74	< 2	< 1	66	0.01	< 10	< 10	10	< 10	140	
19628	217 229	1 0.01	8	1910	82	< 2	< 1	50	0.01	< 10	< 10	16	< 10	136	
19629	217 229	< 1 < 0.01	6	1240	52	< 2	< 1	39	0.02	< 10	< 10	10	< 10	100	
19630	217 229	< 1 < 0.01	7	1080	58	< 2	< 1	64	0.01	< 10	< 10	9	< 10	82	
19631	217 229	< 1 0.01	7	1110	28	152	< 1	58	0.01	< 10	< 10	9	< 10	66	
19632	217 229	< 1 0.01	6	1240	100	< 2	< 1	56	0.01	< 10	< 10	12	< 10	92	
19633	217 229	< 1 0.01	3	970	54	< 2	< 1	62	< 0.01	< 10	< 10	8	< 10	120	
19634	217 229	< 1 0.01	3	790	72	< 2	< 1	34	< 0.01	< 10	< 10	8	< 10	54	
19635	217 229	< 1 0.01	1	770	32	< 2	< 1	32	< 0.01	< 10	< 10	3	< 10	30	
19636	217 229	< 1 0.01	2	670	72	< 2	< 1	14	< 0.01	< 10	< 10	5	< 10	34	
19637	217 229	< 1 0.01	1	840	26	< 2	< 1	31	< 0.01	< 10	< 10	3	< 10	54	
19638	217 229	< 1 0.01	9	840	44	< 2	1	25	0.07	< 10	< 10	27	< 10	58	
19639	217 229	< 1 < 0.01	5	1170	48	< 2	< 1	27	< 0.01	< 10	< 10	8	< 10	118	
19640	217 229	1 < 0.01	5	1140	72	< 2	< 1	24	0.01	< 10	< 10	12	< 10	94	
19641	217 229	< 1 0.01	9	1290	24	< 2	< 1	40	< 0.01	< 10	< 10	7	< 10	78	
19642	217 229	< 1 < 0.01	4	1500	84	< 2	< 1	43	< 0.01	< 10	< 10	11	< 10	144	
19643	217 229	< 1 < 0.01	6	1590	110	< 2	< 1	53	0.01	< 10	< 10	11	< 10	146	
19644	217 229	< 1 0.01	5	1940	80	< 2	< 1	64	< 0.01	< 10	< 10	8	< 10	122	

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SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19645	217 229	< 1	< 0.2	0.32	< 2	110	< 0.5	< 2	0.73	0.5	1	9	8	0.31	< 10	< 1	0.18	< 10	0.08	285
19646	217 229	1	0.2	0.23	< 2	140	< 0.5	< 2	0.84	0.5	1	9	11	0.24	< 10	< 1	0.13	< 10	0.09	970
19647	217 229	3	0.2	0.36	2	220	< 0.5	< 2	1.21	1.0	3	23	12	0.38	< 10	< 1	0.16	< 10	0.14	2840
19648	217 229	1	0.2	0.73	< 2	170	< 0.5	< 2	1.01	0.5	13	22	21	0.63	< 10	< 1	0.08	10	0.17	1700
19649	217 229	1	0.2	0.26	< 2	320	< 0.5	< 2	1.19	1.0	1	23	11	0.26	< 10	< 1	0.11	< 10	0.11	1605
19650	217 229	3	0.2	0.32	2	330	< 0.5	< 2	1.22	1.0	2	14	11	0.33	< 10	< 1	0.16	< 10	0.11	2470
19651	217 229	5	< 0.2	0.17	< 2	20	< 0.5	< 2	1.60	< 0.5	1	118	6	0.32	< 10	< 1	0.06	< 10	0.12	220
19652	217 229	4	< 0.2	0.22	< 2	140	< 0.5	2	1.49	1.0	< 1	12	9	0.24	< 10	< 1	0.12	< 10	0.13	805
19653	217 229	< 1	< 0.2	0.36	< 2	140	< 0.5	2	1.38	1.5	2	34	9	0.37	< 10	< 1	0.13	< 10	0.10	880
19654	217 229	< 1	0.2	0.30	< 2	210	< 0.5	2	1.75	2.0	1	11	13	0.29	< 10	< 1	0.10	< 10	0.11	865
19655	217 229	< 1	0.2	0.23	4	780	< 0.5	2	2.93	1.0	1	51	17	0.26	< 10	< 1	0.07	< 10	0.08	1030
19656	217 229	< 1	< 0.2	0.23	2	240	< 0.5	< 2	2.07	1.5	1	8	10	0.22	< 10	< 1	0.10	< 10	0.09	560
19657	217 229	3	< 0.2	0.28	2	190	< 0.5	< 2	1.27	0.5	1	10	11	0.27	< 10	< 1	0.18	< 10	0.10	770
19658	217 229	3	0.4	0.46	4	340	< 0.5	< 2	1.40	1.0	6	31	11	0.49	< 10	< 1	0.17	< 10	0.15	2480
19659	217 229	5	< 0.2	0.07	< 2	140	< 0.5	< 2	2.66	0.5	< 1	6	7	0.08	< 10	< 1	0.12	< 10	0.12	260
19660	217 229	< 1	0.2	0.47	2	130	< 0.5	< 2	2.51	1.5	4	13	21	0.42	< 10	< 1	0.13	< 10	0.21	1310
19661	217 229	< 1	0.4	0.56	2	340	< 0.5	< 2	1.19	1.5	4	21	12	0.56	< 10	< 1	0.15	< 10	0.14	2410
19662	217 229	2	0.6	0.56	2	450	< 0.5	< 2	1.09	1.0	9	29	12	0.63	< 10	< 1	0.18	< 10	0.14	3990
19663	217 229	< 1	0.2	0.29	< 2	410	< 0.5	< 2	1.31	1.0	2	15	13	0.33	< 10	< 1	0.12	< 10	0.14	1600
19664	217 229	1	0.6	0.44	< 2	410	< 0.5	< 2	1.26	2.0	6	25	14	0.40	< 10	< 1	0.15	< 10	0.15	4220
19665	217 229	< 1	0.4	0.39	2	410	< 0.5	< 2	1.98	2.5	6	13	18	0.36	< 10	< 1	0.13	< 10	0.18	3150
19666	217 229	3	0.2	0.31	2	410	< 0.5	< 2	1.26	3.0	3	25	15	0.32	< 10	< 1	0.13	< 10	0.13	2910
19667	217 229	2	0.2	0.89	< 2	220	< 0.5	< 2	0.96	1.0	21	31	20	1.04	< 10	< 1	0.13	10	0.22	3080
19668	217 229	< 1	0.2	0.36	2	300	< 0.5	< 2	0.96	1.0	2	11	9	0.33	< 10	< 1	0.14	< 10	0.12	605
19669	217 229	2	0.2	0.31	< 2	300	< 0.5	< 2	1.17	1.5	2	9	12	0.32	< 10	< 1	0.17	< 10	0.13	3550
19670	217 229	3	1.0	0.38	4	220	< 0.5	< 2	0.66	0.5	2	12	11	0.36	< 10	< 1	0.12	< 10	0.08	620
19671	217 229	2	0.2	0.53	4	230	< 0.5	< 2	1.50	1.0	7	12	53	0.42	< 10	< 1	0.11	60	0.22	1335
19672	217 229	1	< 0.2	0.20	4	190	< 0.5	2	1.43	0.5	< 1	7	19	0.19	< 10	< 1	0.10	10	0.16	405
19673	217 229	< 1	0.6	0.40	< 2	370	< 0.5	< 2	1.17	1.5	2	16	13	0.42	< 10	< 1	0.10	< 10	0.13	2290
19674	217 229	1	0.8	0.50	< 2	340	< 0.5	< 2	1.02	1.0	14	24	15	0.55	< 10	< 1	0.11	10	0.15	3860
19675	217 229	2	0.2	0.40	4	240	< 0.5	< 2	1.20	1.0	4	20	14	0.37	< 10	< 1	0.15	< 10	0.15	1510

CERTIFICATION:



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

Page Num : 3-B  
 Total Pages : 3  
 Certificate Date: 08-AUG-95  
 Invoice No. : 19522929  
 P.O. Number : P211451  
 Account : JWW

## CERTIFICATE OF ANALYSIS

A9522929

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19645	217 229	< 1	< 0.01	2	1100	60	< 2	< 1	27	< 0.01	< 10	< 10	7	< 10	90
19646	217 229	< 1	< 0.01	2	1370	46	< 2	< 1	28	< 0.01	< 10	< 10	6	< 10	80
19647	217 229	< 1	0.01	4	1260	68	< 2	< 1	38	0.01	< 10	< 10	10	< 10	178
19648	217 229	< 1	0.01	7	1320	42	< 2	< 1	40	0.01	< 10	< 10	10	< 10	52
19649	217 229	< 1	0.01	3	960	34	< 2	< 1	44	0.01	< 10	< 10	8	< 10	150
19650	217 229	< 1	< 0.01	4	1370	72	< 2	< 1	52	0.01	< 10	< 10	9	< 10	186
19651	217 229	< 1	0.01	2	520	18	< 2	< 1	19	0.01	< 10	< 10	6	< 10	26
19652	217 229	< 1	0.01	2	1030	56	< 2	< 1	29	< 0.01	< 10	< 10	6	< 10	162
19653	217 229	< 1	< 0.01	2	990	78	< 2	< 1	27	< 0.01	< 10	< 10	8	< 10	96
19654	217 229	< 1	< 0.01	3	1130	84	< 2	< 1	36	< 0.01	< 10	< 10	7	< 10	174
19655	217 229	< 1	0.01	3	840	24	< 2	< 1	87	< 0.01	< 10	< 10	6	< 10	246
19656	217 229	< 1	0.01	2	1010	58	< 2	< 1	53	< 0.01	< 10	< 10	6	< 10	248
19657	217 229	< 1	< 0.01	3	1230	62	< 2	< 1	51	< 0.01	< 10	< 10	6	< 10	96
19658	217 229	1	0.01	5	1340	110	< 2	< 1	50	0.01	< 10	< 10	13	< 10	112
19659	217 229	< 1	0.01	1	890	14	< 2	< 1	46	< 0.01	< 10	< 10	2	< 10	106
19660	217 229	< 1	0.01	6	1220	96	2	< 1	36	0.01	< 10	< 10	12	< 10	116
19661	217 229	< 1	0.01	6	1200	106	< 2	1	39	0.01	< 10	< 10	14	< 10	166
19662	217 229	1	0.01	4	1350	108	< 2	1	44	0.02	< 10	< 10	18	< 10	126
19663	217 229	< 1	0.01	4	980	40	< 2	< 1	53	0.01	< 10	< 10	9	< 10	202
19664	217 229	1	0.01	4	1470	108	< 2	< 1	61	0.01	< 10	< 10	11	< 10	196
19665	217 229	1	< 0.01	6	1240	72	< 2	< 1	84	0.01	< 10	< 10	10	< 10	302
19666	217 229	< 1	0.01	4	1290	68	< 2	< 1	50	0.01	< 10	< 10	8	< 10	394
19667	217 229	1	0.01	9	1420	40	2	1	38	0.03	< 10	< 10	20	< 10	108
19668	217 229	< 1	0.01	3	840	48	2	< 1	52	< 0.01	< 10	< 10	8	< 10	80
19669	217 229	< 1	< 0.01	4	1510	74	< 2	< 1	50	< 0.01	< 10	< 10	8	< 10	248
19670	217 229	< 1	0.01	7	1050	72	< 2	< 1	48	0.01	< 10	< 10	9	< 10	66
19671	217 229	< 1	0.01	35	1260	40	< 2	1	66	< 0.01	< 10	< 10	8	< 10	58
19672	217 229	< 1	0.01	11	1000	36	2	< 1	57	< 0.01	< 10	< 10	5	< 10	118
19673	217 229	< 1	0.01	4	1140	66	< 2	< 1	62	0.02	< 10	< 10	12	< 10	180
19674	217 229	1	0.01	5	1180	56	< 2	< 1	57	0.02	< 10	< 10	15	< 10	142
19675	217 229	< 1	< 0.01	4	1470	84	< 2	< 1	52	0.01	< 10	< 10	9	< 10	172

CERTIFICATION: \_\_\_\_\_



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Page Num : 1-A  
 Total Pages : 4  
 Certificate Date: 30-JUL-95  
 Invoice No. : 19521979  
 P.O. Number : P211451  
 Account : JWW

Project : 2000  
 Comments: ATN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9521979

SAMPLE	PREP CODE	Au	NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
		ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
16832	217 229	< 1	< 0.2	0.44	< 2	110	< 0.5	< 2	0.29	0.5	2	33	17	0.45	< 10	< 1	0.08	10	0.10	50	
16833	217 229	1	< 0.2	0.74	2	140	< 0.5	< 2	0.40	0.5	4	15	24	0.71	< 10	< 1	0.12	< 10	0.09	65	
16834	217 229	3	< 0.2	0.44	4	130	< 0.5	< 2	0.54	0.5	1	9	12	0.44	< 10	< 1	0.12	< 10	0.08	140	
16835	217 229	5	< 0.2	0.38	2	120	< 0.5	< 2	0.55	< 0.5	1	13	7	0.39	< 10	< 1	0.06	< 10	0.08	60	
16836	217 229	< 1	< 0.2	0.51	< 2	70	< 0.5	< 2	0.25	0.5	2	40	15	0.64	< 10	< 1	0.04	< 10	0.06	80	
16837	217 229	1	0.2	0.41	< 2	140	< 0.5	< 2	0.59	0.5	2	12	13	0.48	< 10	< 1	0.09	< 10	0.06	155	
16838	217 229	2	< 0.2	0.46	< 2	110	< 0.5	< 2	0.45	0.5	3	9	17	0.42	< 10	< 1	0.09	< 10	0.07	120	
16839	217 229	1	0.2	0.49	< 2	80	< 0.5	< 2	0.34	0.5	4	85	9	0.64	< 10	< 1	0.07	< 10	0.33	95	
16840	217 229	< 1	< 0.2	0.14	< 2	30	< 0.5	< 2	0.42	0.5	3	5	6	0.27	< 10	< 1	0.09	< 10	0.11	40	
16841	217 229	1	< 0.2	0.16	< 2	40	< 0.5	< 2	0.40	0.5	1	5	6	0.31	< 10	< 1	0.11	< 10	0.12	80	
16842	217 229	< 1	< 0.2	0.18	2	50	< 0.5	< 2	0.59	< 0.5	1	5	5	0.26	< 10	< 1	0.03	< 10	0.10	20	
16843	217 229	< 1	< 0.2	0.23	< 2	70	< 0.5	< 2	1.62	0.5	4	7	3	0.29	< 10	< 1	0.04	< 10	0.18	435	
16844	217 229	4	< 0.2	0.74	< 2	90	< 0.5	< 2	0.34	0.5	1	8	11	0.73	< 10	< 1	0.10	< 10	0.07	195	
16845	217 229	2	< 0.2	0.36	< 2	130	< 0.5	< 2	0.67	0.5	1	7	11	0.36	< 10	< 1	0.09	< 10	0.08	280	
16846	217 229	2	0.2	0.42	< 2	160	< 0.5	< 2	0.58	0.5	1	10	10	0.41	< 10	< 1	0.09	< 10	0.08	140	
16847	217 229	2	0.4	0.48	< 2	60	< 0.5	< 2	2.01	0.5	2	10	19	0.67	10	< 1	0.01	100	0.24	45	
16848	217 229	< 1	< 0.2	0.42	< 2	170	< 0.5	< 2	0.49	0.5	1	11	11	0.41	< 10	< 1	0.08	< 10	0.07	105	
16849	217 229	4	0.2	0.50	< 2	110	< 0.5	< 2	0.50	0.5	3	11	11	0.51	< 10	< 1	0.13	< 10	0.10	165	
16850	217 229	2	0.2	0.44	< 2	150	< 0.5	< 2	0.78	0.5	1	7	8	0.42	< 10	< 1	0.07	< 10	0.07	115	
16851	217 229	1	< 0.2	0.40	< 2	190	< 0.5	< 2	0.98	0.5	1	8	11	0.41	< 10	< 1	0.09	< 10	0.12	120	
16852	217 229	2	0.2	0.49	2	160	< 0.5	< 2	0.42	0.5	3	17	14	0.48	< 10	< 1	0.11	< 10	0.10	115	
16853	217 229	5	< 0.2	0.40	6	180	< 0.5	< 2	0.83	0.5	1	10	9	0.38	< 10	< 1	0.11	< 10	0.09	290	
16854	217 229	3	< 0.2	0.59	< 2	80	< 0.5	< 2	0.31	0.5	5	17	17	0.63	< 10	< 1	0.11	< 10	0.10	50	
16855	217 229	2	0.2	0.39	< 2	190	< 0.5	< 2	0.79	0.5	2	7	15	0.38	< 10	< 1	0.08	< 10	0.10	295	
16856	217 229	< 1	< 0.2	0.66	< 2	40	< 0.5	< 2	0.28	< 0.5	4	42	15	0.99	< 10	< 1	0.07	< 10	0.23	375	
16857	217 229	< 1	< 0.2	0.40	< 2	210	< 0.5	< 2	0.53	1.0	1	14	14	0.38	< 10	< 1	0.09	< 10	0.07	270	
16858	217 229	4	< 0.2	0.73	< 2	110	< 0.5	< 2	0.42	0.5	2	9	13	0.69	< 10	< 1	0.13	< 10	0.08	135	
16859	217 229	< 1	< 0.2	0.38	4	120	< 0.5	< 2	0.33	< 0.5	1	9	7	0.41	< 10	< 1	0.10	< 10	0.06	130	
16860	217 229	2	< 0.2	0.31	2	180	< 0.5	< 2	0.57	0.5	1	10	12	0.34	< 10	< 1	0.08	< 10	0.05	110	
16861	217 229	< 1	0.4	0.66	6	140	< 0.5	< 2	0.61	0.5	9	12	14	0.60	< 10	< 1	0.13	< 10	0.12	215	
16862	217 229	3	0.2	0.40	2	220	< 0.5	< 2	0.70	1.0	2	12	14	0.43	< 10	< 1	0.14	< 10	0.11	1805	
16863	217 229	1	0.2	0.42	2	170	< 0.5	< 2	0.72	0.5	1	21	10	0.54	< 10	< 1	0.12	< 10	0.10	2390	
16864	217 229	< 1	< 0.2	0.25	< 2	80	< 0.5	< 2	0.42	0.5	1	19	7	0.28	< 10	< 1	0.09	< 10	0.06	160	
16865	217 229	1	0.4	0.41	< 2	120	< 0.5	< 2	0.57	< 0.5	1	8	8	0.40	< 10	< 1	0.09	< 10	0.09	210	
16866	217 229	< 1	0.2	0.69	6	120	< 0.5	< 2	0.28	0.5	2	14	11	0.53	< 10	< 1	0.09	< 10	0.08	65	
16867	217 229	< 1	0.2	0.76	< 2	70	< 0.5	< 2	0.19	< 0.5	2	25	11	0.72	< 10	< 1	0.09	< 10	0.09	50	
16868	217 229	4	0.2	0.37	< 2	220	< 0.5	< 2	0.64	1.0	2	17	9	0.39	< 10	< 1	0.11	< 10	0.08	940	
16869	217 229	< 1	0.2	0.38	< 2	170	< 0.5	< 2	0.66	0.5	2	13	16	0.38	< 10	< 1	0.12	< 10	0.13	345	
16870	217 229	< 1	0.2	0.55	< 2	130	< 0.5	< 2	0.37	0.5	4	35	11	0.70	< 10	< 1	0.12	< 10	0.14	660	
16871	217 229	1	0.2	0.28	< 2	130	< 0.5	< 2	0.43	0.5	2	25	9	0.45	< 10	< 1	0.09	< 10	0.08	435	

CERTIFICATION:



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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
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Project: 2000  
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Page Num.: 1-B  
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## CERTIFICATE OF ANALYSIS

A9521979

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16832	217 229	< 1	0.01	13	450	44	< 2	< 1	31	0.02	< 10	< 10	8	< 10	26
16833	217 229	1 < 0.01	20	1040	30	< 2	1	36	0.01	< 10	< 10	9	< 10	46	
16834	217 229	1 < 0.01	8	900	56	< 2	< 1	34	< 0.01	< 10	< 10	7	< 10	56	
16835	217 229	1 < 0.01	8	720	62	< 2	< 1	36	< 0.01	< 10	< 10	8	< 10	20	
16836	217 229	< 1	0.01	8	500	40	< 2	< 1	18	0.03	< 10	< 10	13	< 10	30
16837	217 229	< 1 < 0.01	6	730	74	< 2	< 1	27	0.01	< 10	< 10	10	< 10	50	
16838	217 229	< 1 < 0.01	8	770	42	< 2	< 1	28	< 0.01	< 10	< 10	7	< 10	64	
16839	217 229	< 1 0.01	22	510	56	< 2	1	16	0.03	< 10	< 10	15	< 10	56	
16840	217 229	< 1 < 0.01	12	710	24	< 2	< 1	25	< 0.01	< 10	< 10	2	< 10	40	
16841	217 229	< 1 0.01	10	990	22	< 2	< 1	21	< 0.01	< 10	< 10	2	< 10	40	
16842	217 229	< 1 < 0.01	8	610	32	< 2	< 1	30	< 0.01	< 10	< 10	3	< 10	28	
16843	217 229	1 0.01	4	690	32	< 2	< 1	45	< 0.01	< 10	< 10	5	< 10	32	
16844	217 229	1 < 0.01	4	1360	50	< 2	< 1	22	< 0.01	< 10	< 10	9	< 10	54	
16845	217 229	< 1 < 0.01	4	950	52	< 2	< 1	33	< 0.01	< 10	< 10	7	< 10	72	
16846	217 229	< 1 < 0.01	4	840	72	< 2	< 1	33	0.01	< 10	< 10	8	< 10	50	
16847	217 229	< 1 < 0.01	6	370	16	< 2	3	65	< 0.01	10	< 10	6	< 10	16	
16848	217 229	< 1 < 0.01	3	620	62	< 2	< 1	29	0.01	< 10	< 10	7	< 10	38	
16849	217 229	< 1 < 0.01	5	1050	42	< 2	< 1	26	0.01	< 10	< 10	10	< 10	46	
16850	217 229	< 1 < 0.01	4	870	38	< 2	< 1	45	< 0.01	< 10	< 10	7	< 10	48	
16851	217 229	2 < 0.01	3	820	64	2	< 1	44	< 0.01	< 10	< 10	8	< 10	98	
16852	217 229	1 0.01	11	910	66	< 2	1	38	0.01	< 10	< 10	11	< 10	40	
16853	217 229	< 1 < 0.01	10	940	60	< 2	< 1	37	0.01	< 10	< 10	8	< 10	88	
16854	217 229	< 1 < 0.01	16	1130	28	< 2	1	25	0.01	< 10	< 10	8	< 10	34	
16855	217 229	< 1 < 0.01	8	940	48	< 2	< 1	53	0.01	< 10	< 10	7	< 10	94	
16856	217 229	< 1 0.01	9	470	14	< 2	1	18	0.07	< 10	< 10	22	< 10	136	
16857	217 229	< 1 < 0.01	7	940	54	< 2	< 1	50	0.01	< 10	< 10	7	< 10	74	
16858	217 229	< 1 < 0.01	10	1950	44	< 2	< 1	36	0.01	< 10	< 10	9	< 10	66	
16859	217 229	< 1 < 0.01	6	990	50	< 2	< 1	28	< 0.01	< 10	< 10	7	< 10	38	
16860	217 229	1 < 0.01	8	830	66	< 2	< 1	36	0.01	< 10	< 10	7	< 10	34	
16861	217 229	< 1 < 0.01	11	1200	46	< 2	1	42	0.01	< 10	< 10	10	< 10	70	
16862	217 229	< 1 < 0.01	6	1330	66	< 2	< 1	47	0.01	< 10	< 10	10	< 10	142	
16863	217 229	< 1 < 0.01	5	1110	70	< 2	< 1	34	0.01	< 10	< 10	13	< 10	134	
16864	217 229	< 1 < 0.01	2	760	48	< 2	< 1	22	0.01	< 10	< 10	7	< 10	42	
16865	217 229	< 1 < 0.01	5	920	42	< 2	< 1	41	0.01	< 10	< 10	8	< 10	46	
16866	217 229	1 < 0.01	7	1050	82	< 2	1	35	0.01	< 10	< 10	11	< 10	40	
16867	217 229	< 1 < 0.01	6	920	18	< 2	< 1	20	0.02	< 10	< 10	13	< 10	36	
16868	217 229	< 1 < 0.01	8	970	72	2	< 1	46	0.01	< 10	< 10	8	< 10	88	
16869	217 229	< 1 0.01	6	1150	60	< 2	< 1	53	0.01	< 10	< 10	8	< 10	82	
16870	217 229	< 1 < 0.01	10	890	54	< 2	1	28	0.03	< 10	< 10	17	< 10	46	
16871	217 229	< 1 < 0.01	7	700	40	< 2	< 1	29	0.02	< 10	< 10	11	< 10	52	

CERTIFICATION:



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATN: M. STALKER

Page Num: :2-A  
 Total Pages: :4  
 Certificate Date: 30-JUL-95  
 Invoice No.: 19521979  
 P.O. Number: P211451  
 Account: JWW

## CERTIFICATE OF ANALYSIS A9521979

SAMPLE	PREP CODE	Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
16872	217 229	< 1	0.2	0.60	< 2	100	< 0.5	< 2	0.38	0.5	3	12	13	0.64	< 10	< 1	0.09	< 10	0.09	370	
16873	217 229	11	0.2	0.41	< 2	230	< 0.5	< 2	0.59	1.0	4	29	13	0.49	< 10	< 1	0.09	< 10	0.14	2180	
16874	217 229	2	0.6	1.65	< 2	150	< 0.5	< 2	0.60	0.5	96	44	48	2.82	< 10	< 1	0.16	30	0.23	3130	
16875	217 229	1	0.4	0.48	< 2	120	< 0.5	< 2	0.41	0.5	9	13	16	0.64	< 10	< 1	0.08	10	0.10	290	
16876	217 229	4	0.2	0.41	< 2	140	< 0.5	< 2	0.83	0.5	11	11	22	0.73	< 10	< 1	0.07	50	0.13	510	
16877	217 229	1	0.4	0.41	< 2	200	< 0.5	< 2	2.27	0.5	12	11	22	0.99	< 10	< 1	0.09	< 10	0.21	3650	
16878	217 229	< 1	0.2	0.40	< 2	170	< 0.5	< 2	0.65	1.0	2	12	12	0.46	< 10	< 1	0.15	< 10	0.10	800	
16879	217 229	1	0.2	0.40	< 2	220	< 0.5	< 2	0.85	1.0	3	14	13	0.44	< 10	< 1	0.14	< 10	0.11	625	
16880	217 229	< 1	0.4	0.39	< 2	200	< 0.5	< 2	1.29	1.0	4	15	13	0.45	< 10	< 1	0.17	< 10	0.14	965	
16881	217 229	< 1	0.4	0.27	< 2	200	< 0.5	< 2	1.21	1.0	3	7	10	0.31	< 10	< 1	0.08	< 10	0.10	1005	
16882	217 229	< 1	0.2	0.32	< 2	150	< 0.5	< 2	1.19	0.5	2	32	10	0.47	< 10	< 1	0.12	< 10	0.15	760	
16883	217 229	3	< 0.2	0.14	< 2	30	< 0.5	< 2	2.36	0.5	1	6	10	0.19	< 10	< 1	0.05	< 10	0.18	305	
16884	217 229	< 1	< 0.2	0.34	< 2	50	< 0.5	< 2	2.05	0.5	2	21	15	0.61	< 10	< 1	0.07	< 10	0.23	550	
16885	217 229	14	< 0.2	0.28	< 2	80	< 0.5	< 2	0.78	0.5	2	33	5	0.49	< 10	< 1	0.06	< 10	0.12	350	
16886	217 229	2	< 0.2	0.15	< 2	110	< 0.5	< 2	1.79	1.0	3	16	14	0.22	< 10	< 1	0.10	< 10	0.22	660	
16887	217 229	< 1	< 0.2	0.25	< 2	100	< 0.5	< 2	1.06	0.5	1	8	9	0.27	< 10	< 1	0.07	< 10	0.10	75	
16888	217 229	< 1	< 0.2	0.38	< 2	110	< 0.5	< 2	2.42	0.5	1	6	25	0.35	< 10	< 1	0.07	20	0.26	370	
16889	217 229	6	< 0.2	0.88	2	150	< 0.5	4	2.08	0.5	9	35	38	1.65	< 10	< 1	0.09	30	0.32	2050	
16890	217 229	< 1	< 0.2	0.22	< 2	100	< 0.5	< 2	1.54	0.5	< 1	4	9	0.21	< 10	< 1	0.05	< 10	0.15	45	
16891	217 229	1	0.4	0.21	< 2	190	< 0.5	< 2	0.79	1.0	1	14	11	0.23	< 10	< 1	0.10	< 10	0.09	145	
16892	217 229	1	< 0.2	0.28	< 2	70	< 0.5	< 2	1.92	0.5	3	11	13	0.28	< 10	< 1	0.06	< 10	0.22	120	
16893	217 229	< 1	< 0.2	0.35	4	110	< 0.5	< 2	2.54	0.5	2	12	21	0.30	< 10	< 1	0.06	10	0.26	170	
16894	217 229	1	0.4	0.70	6	220	< 0.5	< 2	1.76	1.5	28	13	27	0.84	< 10	< 1	0.11	30	0.21	6220	
16895	217 229	< 1	< 0.2	0.25	< 2	100	< 0.5	< 2	1.84	0.5	2	6	11	0.26	< 10	< 1	0.07	< 10	0.18	335	
16896	217 229	2	0.4	0.90	6	200	< 0.5	< 2	1.83	1.0	34	30	41	1.24	< 10	< 1	0.08	40	0.23	5050	
16897	217 229	4	0.2	0.34	< 2	200	< 0.5	< 2	0.78	1.0	1	12	10	0.39	< 10	< 1	0.11	< 10	0.08	710	
16898	217 229	< 1	1.0	0.33	2	260	< 0.5	< 2	0.69	0.5	2	6	8	0.36	< 10	< 1	0.08	< 10	0.09	425	
16899	217 229	< 1	< 0.2	0.64	< 2	220	< 0.5	< 2	0.86	1.0	102	95	33	1.52	< 10	< 1	0.12	10	0.70	2870	
16900	217 229	< 1	< 0.2	0.33	2	130	< 0.5	< 2	0.47	0.5	2	53	8	0.55	< 10	< 1	0.10	< 10	0.13	360	
16901	217 229	< 1	< 0.2	0.35	< 2	180	< 0.5	< 2	0.58	0.5	5	173	8	1.16	< 10	< 1	0.11	< 10	0.22	625	
16902	217 229	5	< 0.2	0.28	2	150	< 0.5	< 2	0.35	0.5	2	16	6	0.33	< 10	< 1	0.08	< 10	0.07	60	
16903	217 229	1	< 0.2	0.70	< 2	120	< 0.5	< 2	1.85	1.5	4	10	18	0.45	< 10	< 1	0.08	10	0.24	1345	
16904	217 229	1	0.2	1.93	6	170	< 0.5	< 2	1.55	2.0	72	22	25	2.08	< 10	< 1	0.06	20	0.19	4170	
16905	217 229	1	< 0.2	0.35	2	210	< 0.5	< 2	0.80	0.5	1	24	8	0.38	< 10	< 1	0.08	< 10	0.08	285	
16906	217 229	< 1	< 0.2	0.34	2	80	< 0.5	< 2	2.39	1.0	2	6	11	0.27	< 10	< 1	0.06	< 10	0.22	600	
16907	217 229	1	< 0.2	0.40	< 2	120	< 0.5	< 2	2.05	1.5	2	9	15	0.37	< 10	< 1	0.07	< 10	0.20	845	
16908	217 229	< 1	0.2	0.66	< 2	160	< 0.5	< 2	0.89	0.5	6	28	11	0.65	< 10	< 1	0.11	10	0.16	3360	
16909	217 229	< 1	< 0.2	0.43	< 2	160	< 0.5	< 2	0.91	0.5	2	44	10	0.52	< 10	< 1	0.11	< 10	0.11	2150	
16910	217 229	1	< 0.2	0.48	2	170	< 0.5	< 2	0.52	0.5	1	28	9	0.48	< 10	< 1	0.12	< 10	0.09	320	
16911	217 229	< 1	< 0.2	0.30	2	130	< 0.5	< 2	1.51	0.5	1	8	7	0.24	< 10	< 1	0.04	< 10	0.19	45	

CERTIFICATION: *Heidi Bechler*



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

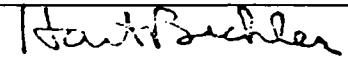
Project : 2000  
 Comments: ATN: M. STALKER

Page Num. :2-B  
 Total Pages :4  
 Certificate Date: 30-JUL-95  
 Invoice No. :19521979  
 P.O. Number :P211451  
 Account :JWW

## CERTIFICATE OF ANALYSIS

A9521979

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16872	217 229	< 1 < 0.01	7	1300	44	< 2	< 1	25	< 0.01	< 10	< 10	8	< 10	72	
16873	217 229	1 < 0.01	8	1010	56	< 2	< 1	35	0.01	< 10	< 10	11	< 10	136	
16874	217 229	1 0.01	27	2270	50	2	2	45	0.02	< 10	< 10	26	< 10	54	
16875	217 229	< 1 < 0.01	9	1060	44	< 2	< 1	33	0.01	< 10	< 10	10	< 10	44	
16876	217 229	< 1 < 0.01	14	1180	24	< 2	1	62	0.01	< 10	< 10	6	< 10	44	
16877	217 229	1 0.01	8	1180	70	< 2	< 1	51	< 0.01	< 10	10	13	< 10	70	
16878	217 229	1 < 0.01	4	1250	74	< 2	< 1	41	0.01	< 10	< 10	10	< 10	124	
16879	217 229	< 1 < 0.01	6	1020	74	< 2	< 1	59	0.01	< 10	< 10	9	< 10	104	
16880	217 229	< 1 < 0.01	4	1240	82	< 2	< 1	62	0.01	< 10	< 10	10	< 10	92	
16881	217 229	< 1 < 0.01	3	930	60	< 2	< 1	39	< 0.01	< 10	< 10	6	< 10	84	
16882	217 229	< 1 < 0.01	4	720	50	< 2	< 1	28	0.02	< 10	< 10	11	< 10	58	
16883	217 229	< 1 < 0.01	2	610	46	< 2	< 1	25	< 0.01	< 10	< 10	4	< 10	44	
16884	217 229	< 1 < 0.01	4	710	34	< 2	< 1	26	0.01	< 10	< 10	11	< 10	26	
16885	217 229	< 1 < 0.01	3	420	30	< 2	< 1	19	0.02	< 10	< 10	11	< 10	36	
16886	217 229	< 1 < 0.01	3	980	38	< 2	< 1	35	< 0.01	< 10	< 10	4	< 10	146	
16887	217 229	< 1 < 0.01	4	650	50	< 2	< 1	29	< 0.01	< 10	< 10	6	< 10	28	
16888	217 229	< 1 < 0.01	17	700	32	2	< 1	56	< 0.01	< 10	< 10	4	< 10	48	
16889	217 229	1 0.01	28	1030	20	2	2	54	0.01	< 10	< 10	22	< 10	62	
16890	217 229	< 1 < 0.01	6	470	32	< 2	< 1	44	< 0.01	< 10	< 10	5	< 10	58	
16891	217 229	< 1 < 0.01	3	660	26	< 2	< 1	35	0.01	< 10	< 10	6	< 10	64	
16892	217 229	1 < 0.01	8	630	40	< 2	< 1	49	< 0.01	< 10	< 10	9	< 10	28	
16893	217 229	1 < 0.01	15	530	28	< 2	< 1	62	< 0.01	< 10	< 10	7	< 10	24	
16894	217 229	2 < 0.01	26	660	76	< 2	1	49	< 0.01	< 10	< 10	14	< 10	80	
16895	217 229	< 1 < 0.01	7	480	42	< 2	< 1	50	< 0.01	< 10	< 10	6	< 10	62	
16896	217 229	1 0.01	33	1380	20	< 2	2	51	< 0.01	< 10	< 10	14	< 10	68	
16897	217 229	< 1 < 0.01	4	910	78	< 2	< 1	36	0.01	< 10	< 10	9	< 10	144	
16898	217 229	< 1 < 0.01	6	880	50	< 2	< 1	43	< 0.01	< 10	< 10	7	< 10	68	
16899	217 229	3 0.01	211	780	54	< 2	2	58	0.02	< 10	< 10	24	< 10	68	
16900	217 229	1 0.01	10	700	64	< 2	1	18	0.01	< 10	< 10	11	< 10	66	
16901	217 229	1 0.01	23	690	74	< 2	1	23	0.01	< 10	< 10	18	< 10	68	
16902	217 229	< 1 < 0.01	12	570	64	< 2	< 1	28	< 0.01	< 10	< 10	6	< 10	34	
16903	217 229	< 1 < 0.01	7	750	54	< 2	< 1	55	< 0.01	< 10	< 10	8	< 10	82	
16904	217 229	2 0.01	11	1210	50	2	2	57	0.01	< 10	< 10	25	< 10	90	
16905	217 229	1 < 0.01	4	810	48	< 2	< 1	34	0.01	< 10	< 10	8	< 10	98	
16906	217 229	< 1 < 0.01	3	850	50	< 2	< 1	43	< 0.01	< 10	< 10	6	< 10	100	
16907	217 229	1 < 0.01	3	900	56	< 2	< 1	43	< 0.01	< 10	< 10	8	< 10	110	
16908	217 229	1 0.01	5	930	66	< 2	1	30	0.02	< 10	< 10	14	< 10	64	
16909	217 229	1 0.01	4	800	60	< 2	< 1	46	0.02	< 10	< 10	13	< 10	104	
16910	217 229	< 1 < 0.01	4	910	72	< 2	1	36	0.01	< 10	< 10	11	< 10	74	
16911	217 229	< 1 0.01	3	560	38	< 2	< 1	58	< 0.01	< 10	< 10	5	< 10	10	

CERTIFICATION: 



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
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Page Num.: 3-A  
 Total Pages: 4  
 Certificate Date: 30-JUL-95  
 Invoice No.: I9521979  
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 Account: JWW

## CERTIFICATE OF ANALYSIS A9521979

SAMPLE	PREP CODE	Au	NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
		ppb	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
16912	217 229	< 1	0.2	1.25	4	150	< 0.5	< 2	2.01	0.5	4	29	18	0.68	10	< 1	0.08	100	0.25	1510	
16913	217 229	2	< 0.2	0.38	< 2	140	< 0.5	< 2	0.86	1.0	1	21	12	0.48	< 10	< 1	0.13	< 10	0.11	1155	
16914	217 229	< 1	< 0.2	0.49	< 2	150	< 0.5	< 2	0.82	0.5	1	10	10	0.48	< 10	< 1	0.12	< 10	0.10	360	
16915	217 229	2	< 0.2	0.32	6	210	< 0.5	< 2	1.57	0.5	2	15	9	0.33	< 10	< 1	0.12	< 10	0.11	2100	
16916	217 229	1	0.2	0.51	< 2	120	< 0.5	< 2	0.72	0.5	1	23	8	0.47	< 10	1	0.12	10	0.10	320	
16917 - 16921	217 229	2	0.2	0.38	2	250	< 0.5	< 2	1.20	1.5	2	15	12	0.39	< 10	< 1	0.17	< 10	0.14	3420	
	217 229	4	0.2	0.87	2	120	< 0.5	< 2	0.71	0.5	18	26	20	1.17	< 10	< 1	0.11	10	0.18	970	
	217 229	< 1	< 0.2	0.77	2	90	< 0.5	< 2	0.63	0.5	8	17	18	1.12	< 10	< 1	0.09	10	0.14	305	
	217 229	< 1	< 0.2	1.20	2	130	< 0.5	< 2	1.06	1.0	20	27	26	1.65	< 10	< 1	0.10	30	0.20	1335	
	217 229	< 1	< 0.2	0.40	2	110	< 0.5	< 2	0.53	0.5	1	21	9	0.41	< 10	< 1	0.09	< 10	0.08	185	
	217 229	2	< 0.2	0.62	4	100	< 0.5	2	0.78	0.5	9	31	15	0.65	< 10	1	0.14	10	0.16	625	
16922	217 229	1	< 0.2	0.69	< 2	80	< 0.5	< 2	1.18	0.5	20	22	13	0.78	< 10	1	0.09	10	0.19	1790	
16923	217 229	< 1	< 0.2	0.57	2	140	< 0.5	< 2	0.55	0.5	1	24	9	0.50	< 10	< 1	0.11	< 10	0.09	205	
16924	217 229	< 1	0.2	0.45	2	270	< 0.5	< 2	1.13	1.0	1	28	13	0.44	< 10	1	0.12	< 10	0.11	1830	
16925	217 229	< 1	0.2	0.38	2	200	< 0.5	< 2	0.69	0.5	3	17	13	0.44	< 10	1	0.10	< 10	0.10	240	
16926	217 229	< 1	0.4	0.32	2	200	< 0.5	< 2	0.88	0.5	1	10	9	0.32	< 10	< 1	0.09	< 10	0.09	260	
16927	217 229	2	0.2	0.63	< 2	100	< 0.5	< 2	2.09	0.5	3	10	28	0.83	< 10	< 1	0.04	40	0.25	1110	
16928	217 229	1	< 0.2	0.50	< 2	100	< 0.5	< 2	2.04	0.5	1	8	19	0.37	< 10	< 1	0.02	20	0.20	100	
16929	217 229	< 1	< 0.2	0.66	< 2	110	< 0.5	< 2	2.15	0.5	2	12	28	0.42	< 10	< 1	0.03	30	0.22	215	
16930	217 229	1	< 0.2	0.72	< 2	80	< 0.5	< 2	2.31	1.0	8	14	31	0.63	< 10	< 1	0.05	10	0.28	1115	
16931	217 229	< 1	< 0.2	0.38	2	210	< 0.5	< 2	0.55	1.0	1	20	12	0.36	< 10	< 1	0.10	< 10	0.09	200	
16932	217 229	< 1	< 0.2	0.70	2	120	< 0.5	< 2	0.57	< 0.5	32	32	14	1.55	< 10	< 1	0.11	< 10	0.15	1335	
16933	217 229	< 1	< 0.2	0.56	2	110	< 0.5	< 2	0.44	1.0	3	17	10	0.56	< 10	1	0.13	< 10	0.13	110	
16934	217 229	< 1	< 0.2	0.51	< 2	90	< 0.5	< 2	0.55	0.5	3	36	15	0.51	< 10	< 1	0.08	10	0.14	70	
16935	217 229	< 1	< 0.2	0.32	< 2	70	< 0.5	< 2	0.59	0.5	4	28	8	0.31	< 10	< 1	0.07	< 10	0.15	50	
16936	217 229	< 1	< 0.2	0.80	8	250	< 0.5	< 2	0.62	0.5	2	134	19	0.88	< 10	< 1	0.22	< 10	0.16	125	
16937	217 229	< 1	< 0.2	0.64	4	130	< 0.5	< 2	0.33	0.5	6	22	16	0.69	< 10	< 1	0.10	< 10	0.11	75	
16938	217 229	< 1	< 0.2	0.32	4	200	< 0.5	< 2	0.76	0.5	3	47	11	0.43	< 10	< 1	0.09	< 10	0.09	495	
16939	217 229	< 1	< 0.2	0.47	4	220	< 0.5	< 2	0.61	0.5	2	74	7	0.79	< 10	< 1	0.10	< 10	0.18	195	
16940	217 229	< 1	< 0.2	0.44	4	150	< 0.5	< 2	0.47	0.5	3	70	10	0.61	< 10	< 1	0.09	< 10	0.08	55	
16941	217 229	< 1	< 0.2	0.53	2	100	< 0.5	< 2	0.31	1.0	1	41	10	0.58	< 10	< 1	0.10	< 10	0.09	115	
16942	217 229	< 1	< 0.2	0.37	2	210	< 0.5	< 2	0.74	0.5	2	15	9	0.38	< 10	< 1	0.08	< 10	0.09	90	
16943	217 229	< 1	< 0.2	0.57	2	80	< 0.5	< 2	0.25	0.5	4	33	14	0.66	< 10	< 1	0.08	< 10	0.10	40	
16944	217 229	< 1	< 0.2	0.70	2	130	< 0.5	< 2	0.42	0.5	6	26	30	0.81	< 10	< 1	0.11	10	0.14	80	
16945	217 229	< 1	< 0.2	0.63	4	120	< 0.5	< 2	0.44	0.5	4	82	13	0.60	< 10	< 1	0.10	< 10	0.13	460	
16946	217 229	< 1	< 0.2	0.49	2	230	< 0.5	< 2	0.47	1.5	4	81	20	0.51	< 10	< 1	0.13	< 10	0.08	455	
16947	217 229	< 1	< 0.2	1.24	2	90	< 0.5	< 2	0.40	< 0.5	29	99	23	1.29	< 10	< 1	0.08	20	0.23	720	
16948	217 229	2	< 0.2	0.54	2	90	< 0.5	< 2	0.59	< 0.5	6	231	15	0.99	< 10	< 1	0.11	< 10	0.38	890	
16949	217 229	< 1	0.2	0.81	2	120	< 0.5	< 2	0.45	0.5	7	229	9	1.12	< 10	< 1	0.13	< 10	0.22	955	
16950	217 229	< 1	< 0.2	0.63	4	120	< 0.5	< 2	0.44	0.5	4	82	13	0.60	< 10	< 1	0.10	< 10	0.13	460	
16951	217 229	< 1	< 0.2	0.49	2	230	< 0.5	< 2	0.47	1.5	4	81	20	0.51	< 10	< 1	0.13	< 10	0.08	455	

CERTIFICATION:



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATN: M. STALKER

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 Account : JWW

## CERTIFICATE OF ANALYSIS

A9521979

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16912	217	229	1	0.01	7	1090	32	< 2	2	64	0.01	< 10	< 10	13	< 10	32
16913	217	229	< 1	< 0.01	4	1130	68	< 2	< 1	42	0.02	< 10	< 10	11	< 10	88
16914	217	229	< 1	< 0.01	4	950	66	< 2	1	35	0.01	< 10	< 10	11	< 10	66
16915	217	229	1	< 0.01	3	870	62	< 2	< 1	54	< 0.01	< 10	< 10	7	< 10	80
16916	217	229	< 1	0.01	5	870	50	< 2	1	40	0.01	< 10	< 10	9	< 10	28
16917	217	229	< 1	0.01	5	1330	68	< 2	< 1	64	< 0.01	< 10	< 10	9	< 10	174
16918	217	229	< 1	0.01	7	1180	34	< 2	1	38	0.02	< 10	< 10	21	< 10	52
16919	217	229	< 1	< 0.01	5	1350	32	< 2	< 1	38	0.01	< 10	< 10	12	< 10	40
16920	217	229	< 1	0.01	8	1170	38	< 2	2	53	0.01	< 10	< 10	21	< 10	42
16921	217	229	< 1	0.01	4	750	54	< 2	< 1	32	0.02	< 10	< 10	10	< 10	72
16922	217	229	< 1	0.01	4	1020	42	< 2	1	36	0.03	< 10	< 10	14	< 10	62
16923	217	229	1	0.01	5	1370	54	< 2	1	42	0.01	< 10	< 10	14	< 10	38
16924	217	229	< 1	0.01	5	1040	48	< 2	1	36	0.01	< 10	< 10	11	< 10	50
16926	217	229	< 1	< 0.01	5	1020	58	< 2	< 1	67	0.01	< 10	< 10	10	< 10	126
16927	217	229	< 1	0.01	4	900	40	< 2	< 1	48	0.02	< 10	< 10	9	< 10	44
16928	217	229	< 1	< 0.01	4	890	46	2	< 1	52	< 0.01	< 10	< 10	7	< 10	36
16929	217	229	< 1	0.01	7	680	38	< 2	1	47	< 0.01	< 10	< 10	8	< 10	44
16930	217	229	< 1	0.01	4	610	14	< 2	1	53	< 0.01	< 10	< 10	4	< 10	40
16931	217	229	< 1	0.01	7	780	12	< 2	1	47	< 0.01	< 10	< 10	6	< 10	52
16932	217	229	1	< 0.01	8	740	60	< 2	1	44	< 0.01	< 10	< 10	10	< 10	54
16933	217	229	1	< 0.01	5	710	48	< 2	< 1	35	0.01	< 10	< 10	8	< 10	158
16934	217	229	4	0.01	8	750	34	2	1	28	0.05	< 10	< 10	65	< 10	46
16935	217	229	1	0.01	8	1000	50	< 2	1	27	0.01	< 10	< 10	12	< 10	64
16936	217	229	1	0.01	12	720	36	< 2	1	30	0.03	< 10	< 10	10	< 10	30
16937	217	229	< 1	0.01	11	570	22	< 2	< 1	24	0.01	< 10	< 10	6	< 10	28
16938	217	229	2	0.01	15	1290	108	< 2	1	55	0.03	< 10	< 10	18	< 10	56
16939	217	229	1	< 0.01	32	1080	42	< 2	< 1	29	0.02	< 10	< 10	10	< 10	50
16940	217	229	1	< 0.01	14	860	52	2	< 1	30	0.01	< 10	< 10	7	< 10	68
16941	217	229	1	0.01	15	770	64	< 2	1	30	0.01	< 10	< 10	14	< 10	70
16942	217	229	< 1	< 0.01	18	730	48	< 2	< 1	26	0.01	< 10	< 10	10	< 10	44
16943	217	229	1	0.01	7	870	70	< 2	1	21	0.01	< 10	< 10	12	< 10	84
16944	217	229	< 1	< 0.01	8	830	44	< 2	< 1	58	0.01	< 10	< 10	7	< 10	30
16945	217	229	1	< 0.01	28	900	34	< 2	< 1	27	0.01	< 10	< 10	10	< 10	34
16946	217	229	1	< 0.01	38	1480	26	< 2	< 1	38	0.01	< 10	< 10	9	< 10	46
16947	217	229	1	0.01	48	1080	22	< 2	1	30	0.03	< 10	< 10	15	< 10	42
16948	217	229	1	0.01	26	720	10	< 2	1	29	0.06	< 10	< 10	24	< 10	40
16949	217	229	1	0.03	19	830	6	< 2	1	25	0.04	< 10	< 10	20	< 10	128
16950	217	229	1	0.02	14	700	30	< 2	1	26	0.05	< 10	< 10	25	< 10	146
16951	217	229	< 1	0.01	11	870	42	< 2	< 1	30	0.03	< 10	< 10	14	< 10	70
16952	217	229	1	0.01	13	1190	80	< 2	< 1	36	0.01	< 10	< 10	10	< 10	90

CERTIFICATION: *[Signature]*



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATN: M. STALKER

Page Num. : 4-A  
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 Certificate Date: 30-JUL-95  
 Invoice No.: 19521979  
 P.O. Number: P211451  
 Account: JWW

## CERTIFICATE OF ANALYSIS

A9521979

SAMPLE	PREP CODE	Au	NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
		ppb	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
16953	217 229	< 1	< 0.2	0.59	< 2	200	< 0.5	< 2	0.61	0.5	6	57	15	0.57	< 10	< 1	0.13	< 10	0.13	1305	
16954	217 229	3	< 0.2	0.50	< 2	170	< 0.5	< 2	0.46	0.5	1	108	10	0.63	< 10	< 1	0.11	< 10	0.17	2640	
16955	217 229	3	< 0.2	0.62	4	60	< 0.5	< 2	0.55	0.5	5	234	11	1.24	< 10	< 1	0.08	< 10	0.32	270	
16956	217 229	2	< 0.2	0.31	< 2	120	< 0.5	< 2	0.47	0.5	< 1	17	8	0.32	< 10	< 1	0.09	< 10	0.08	225	
16957	217 229	1	< 0.2	0.54	< 2	90	< 0.5	< 2	0.35	0.5	1	15	9	0.47	< 10	< 1	0.08	< 10	0.08	115	
16958	217 229	< 1	< 0.2	0.36	< 2	160	< 0.5	< 2	0.54	0.5	1	48	13	0.44	< 10	< 1	0.07	< 10	0.07	185	
16959	217 229	2	< 0.2	0.60	4	140	< 0.5	< 2	0.48	< 0.5	3	54	11	0.62	< 10	< 1	0.09	< 10	0.09	115	
16960	217 229	< 1	0.4	0.50	4	200	< 0.5	< 2	0.61	0.5	5	58	16	0.56	< 10	< 1	0.11	< 10	0.12	315	
16961	217 229	< 1	< 0.2	0.35	< 2	190	< 0.5	< 2	0.76	1.0	4	31	12	0.49	< 10	< 1	0.09	< 10	0.09	535	
16962	217 229	< 1	0.4	0.25	4	160	< 0.5	< 2	0.69	< 0.5	1	10	6	0.23	< 10	< 1	0.08	< 10	0.07	135	
16963	217 229	1	< 0.2	0.93	2	110	< 0.5	< 2	1.29	< 0.5	15	76	38	1.18	< 10	< 1	0.06	30	0.29	1490	
16964	217 229	< 1	< 0.2	0.42	< 2	110	< 0.5	< 2	1.86	0.5	5	15	23	0.37	< 10	< 1	0.05	20	0.20	1370	
16965	217 229	< 1	0.2	0.39	< 2	210	< 0.5	< 2	0.73	0.5	< 1	16	10	0.35	< 10	< 1	0.11	< 10	0.09	825	
16966	217 229	< 1	< 0.2	0.44	< 2	170	< 0.5	< 2	0.68	0.5	1	18	9	0.40	< 10	< 1	0.14	< 10	0.10	685	
16967	217 229	< 1	0.2	0.36	< 2	280	< 0.5	< 2	1.11	1.0	4	31	13	0.42	< 10	< 1	0.11	< 10	0.12	1490	
16968	217 229	1	0.2	0.35	< 2	230	< 0.5	< 2	0.72	1.0	1	27	10	0.33	< 10	< 1	0.14	< 10	0.09	715	
16969	217 229	1	< 0.2	0.30	< 2	60	< 0.5	< 2	2.44	0.5	2	14	12	0.36	< 10	< 1	0.10	< 10	0.23	650	
16970	217 229	11	0.2	0.37	< 2	260	< 0.5	2	0.97	1.0	2	72	10	0.46	< 10	< 1	0.11	< 10	0.12	1590	
16971	217 229	< 1	0.2	0.35	< 2	200	< 0.5	< 2	0.88	0.5	2	81	9	0.46	< 10	< 1	0.11	< 10	0.13	1115	
16972	217 229	< 1	0.2	0.67	< 2	180	< 0.5	< 2	2.30	0.5	9	31	42	1.06	< 10	< 1	0.04	40	0.25	2200	
17001	217 229	< 1	< 0.2	0.67	< 2	70	< 0.5	< 2	0.62	0.5	3	117	9	1.09	< 10	< 1	0.04	< 10	0.15	95	
17002	217 229	< 1	< 0.2	0.35	< 2	110	< 0.5	< 2	0.39	0.5	4	17	6	0.31	< 10	< 1	0.07	< 10	0.09	45	
17003	217 229	8	< 0.2	0.37	< 2	100	< 0.5	< 2	0.43	0.5	2	16	9	0.35	< 10	< 1	0.07	< 10	0.08	75	
17004	217 229	< 1	< 0.2	0.47	4	90	< 0.5	< 2	0.39	0.5	2	24	11	0.57	< 10	< 1	0.10	< 10	0.10	70	
17005	217 229	< 1	< 0.2	0.35	2	100	< 0.5	< 2	0.10	1.0	2	36	7	0.31	< 10	< 1	0.08	< 10	0.09	20	
17006	217 229	< 1	< 0.2	0.59	2	100	< 0.5	< 2	0.47	0.5	4	17	18	0.52	< 10	< 1	0.11	< 10	0.10	665	
17007	217 229	< 1	< 0.2	0.42	2	110	< 0.5	< 2	0.46	0.5	3	39	9	0.59	< 10	< 1	0.08	< 10	0.16	100	
17008	217 229	< 1	< 0.2	0.44	8	80	< 0.5	< 2	0.44	< 0.5	1	17	9	0.44	< 10	< 1	0.12	< 10	0.09	85	
17009	217 229	< 1	< 0.2	0.29	< 2	130	< 0.5	< 2	0.30	< 0.5	1	126	6	0.38	< 10	< 1	0.06	< 10	0.07	125	
17010	217 229	< 1	1.2	1.42	4	160	< 0.5	< 2	0.29	0.5	274	135	16	4.74	10	< 1	0.12	10	0.39	>10000	
17011	217 229	< 1	< 0.2	0.32	4	200	< 0.5	< 2	1.12	0.5	8	18	11	0.40	< 10	< 1	0.15	< 10	0.15	1440	
17012	217 229	< 1	0.4	0.70	2	160	< 0.5	< 2	0.52	< 0.5	8	25	14	0.52	< 10	< 1	0.13	10	0.13	320	
17013	217 229	< 1	< 0.2	0.49	2	90	< 0.5	< 2	0.31	< 0.5	5	90	17	0.60	< 10	< 1	0.08	10	0.10	135	
17014	217 229	< 1	< 0.2	0.39	< 2	170	< 0.5	< 2	0.47	1.0	3	54	17	0.44	< 10	< 1	0.07	< 10	0.06	185	
17015	217 229	< 1	< 0.2	0.55	2	180	< 0.5	< 2	0.32	0.5	3	62	9	0.47	< 10	< 1	0.07	< 10	0.07	130	
17016	217 229	< 1	0.4	0.91	4	100	< 0.5	< 2	0.44	0.5	21	44	48	1.24	< 10	< 1	0.10	40	0.14	595	
17017	217 229	< 1	< 0.2	0.58	2	60	< 0.5	< 2	0.32	< 0.5	3	110	8	0.74	< 10	< 1	0.07	< 10	0.19	140	
17018	217 229	< 1	< 0.2	0.42	< 2	130	< 0.5	< 2	0.63	0.5	2	27	12	0.56	< 10	< 1	0.09	< 10	0.13	405	
17019	217 229	< 1	< 0.2	0.38	4	290	< 0.5	< 2	0.54	0.5	3	23	9	0.40	< 10	< 1	0.09	< 10	0.08	85	
17020	217 229	< 1	< 0.2	0.41	2	120	< 0.5	< 2	0.47	0.5	2	21	14	0.42	< 10	< 1	0.12	< 10	0.07	160	

CERTIFICATION:



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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Page Num.: 4-B  
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## CERTIFICATE OF ANALYSIS

A9521979

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16953	217 229	< 1	0.01	11	1250	48	< 2	1	41	0.02	< 10	< 10	13	< 10	98
16954	217 229	< 1	0.02	8	790	60	< 2	1	26	0.02	< 10	< 10	15	< 10	106
16955	217 229	1	0.01	77	600	34	< 2	1	18	0.03	< 10	< 10	21	< 10	80
16956	217 229	< 1 < 0.01	4	750	62	< 2	< 1	22	< 0.01	< 10	< 10	< 10	7	< 10	66
16957	217 229	< 1 < 0.01	8	950	60	< 2	< 1	18	< 0.01	< 10	< 10	< 10	8	< 10	48
16958	217 229	< 1 < 0.01	6	770	38	< 2	< 1	31	0.01	< 10	< 10	8	< 10	68	
16959	217 229	< 1 0.01	10	930	52	< 2	1	36	0.02	< 10	< 10	14	< 10	42	
16960	217 229	< 1 0.01	14	990	46	2	< 1	46	0.02	< 10	< 10	12	< 10	84	
16961	217 229	< 1 < 0.01	8	1010	48	< 2	< 1	42	0.01	< 10	< 10	9	< 10	90	
16962	217 229	< 1 < 0.01	3	640	40	2	< 1	34	< 0.01	< 10	< 10	4	< 10	22	
16963	217 229	< 1 0.01	24	1040	2	< 2	3	34	0.03	< 10	< 10	18	< 10	48	
16964	217 229	1 < 0.01	16	650	34	< 2	1	45	< 0.01	< 10	< 10	7	< 10	44	
16965	217 229	< 1 < 0.01	4	910	62	< 2	< 1	35	0.01	< 10	< 10	8	< 10	136	
16966	217 229	< 1 < 0.01	5	1020	60	< 2	< 1	36	0.01	< 10	< 10	9	< 10	128	
16967	217 229	1 < 0.01	7	930	68	< 2	< 1	58	0.01	< 10	< 10	9	< 10	164	
16968	217 229	< 1 < 0.01	4	1060	64	< 2	< 1	39	0.01	< 10	< 10	8	< 10	94	
16969	217 229	< 1 < 0.01	3	700	46	< 2	< 1	31	< 0.01	< 10	< 10	8	< 10	30	
16970	217 229	< 1 0.01	3	660	52	< 2	< 1	34	0.03	< 10	< 10	11	< 10	114	
16971	217 229	< 1 0.01	5	670	40	< 2	< 1	31	0.03	< 10	< 10	11	< 10	108	
16972	217 229	1 < 0.01	27	1380	16	2	1	59	< 0.01	< 10	< 10	15	< 10	42	
17001	217 229	< 1 0.01	11	330	18	< 2	1	28	0.06	< 10	< 10	18	< 10	26	
17002	217 229	< 1 < 0.01	14	640	40	< 2	< 1	47	< 0.01	< 10	< 10	6	< 10	20	
17003	217 229	< 1 < 0.01	10	630	34	< 2	< 1	40	< 0.01	< 10	< 10	7	< 10	32	
17004	217 229	< 1 < 0.01	8	750	40	< 2	< 1	30	0.01	< 10	< 10	12	< 10	34	
17005	217 229	< 1 < 0.01	7	520	38	< 2	< 1	41	0.01	< 10	< 10	7	< 10	42	
17006	217 229	< 1 < 0.01	11	1150	36	< 2	< 1	30	0.01	< 10	< 10	7	< 10	58	
17007	217 229	< 1 0.02	9	580	30	< 2	1	37	0.03	< 10	< 10	13	< 10	18	
17008	217 229	1 < 0.01	5	740	54	< 2	< 1	32	0.01	< 10	< 10	9	< 10	48	
17009	217 229	1 0.01	6	280	14	< 2	< 1	27	0.03	< 10	< 10	10	< 10	28	
17010	217 229	3 0.02	21	650	30	2	2	24	0.13	< 10	20	123	10	48	
17011	217 229	< 1 < 0.01	7	1070	48	< 2	< 1	68	< 0.01	< 10	< 10	9	< 10	76	
17012	217 229	< 1 < 0.01	27	1060	32	< 2	< 1	50	0.01	< 10	< 10	7	< 10	34	
17013	217 229	< 1 0.01	14	570	36	< 2	1	27	0.02	< 10	< 10	12	< 10	42	
17014	217 229	1 < 0.01	12	690	52	< 2	< 1	38	< 0.01	< 10	< 10	8	< 10	32	
17015	217 229	< 1 < 0.01	10	560	30	< 2	< 1	42	0.01	< 10	< 10	10	< 10	38	
17016	217 229	2 0.01	22	1110	28	< 2	1	35	0.01	< 10	< 10	16	< 10	32	
17017	217 229	1 0.01	10	520	38	< 2	1	27	0.05	< 10	< 10	20	< 10	28	
17018	217 229	< 1 0.01	7	730	32	< 2	< 1	48	0.03	< 10	< 10	13	< 10	52	
17019	217 229	< 1 < 0.01	8	700	60	< 2	< 1	42	0.01	< 10	< 10	9	< 10	38	
17020	217 229	< 1 0.01	6	770	60	< 2	< 1	37	0.01	< 10	< 10	8	< 10	56	

Kent Beirer

CERTIFICATION:



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATTN: M. STALKER

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 Invoice No.: 19522665  
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 Account: JWW

## CERTIFICATE OF ANALYSIS A9522665

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17341	217 229	5	0.4	0.30	2	250	< 0.5	< 2	1.15	0.5	3	52	11	0.38	< 10	< 1	0.07	< 10	0.14	1560
17342	217 229	4	0.2	0.43	2	220	< 0.5	< 2	0.94	0.5	7	39	22	0.49	< 10	< 1	0.13	< 10	0.14	1085
17343	217 229	< 1	0.4	1.26	< 2	140	< 0.5	< 2	0.53	0.5	49	105	21	2.80	< 10	< 1	0.10	< 10	0.35	1950
17344	217 229	< 1	0.2	0.15	< 2	200	< 0.5	< 2	1.56	1.5	1	13	14	0.17	< 10	< 1	0.07	< 10	0.10	145
17345	217 229	4	0.2	0.67	< 2	290	< 0.5	< 2	0.86	1.5	9	99	12	0.78	< 10	< 1	0.12	< 10	0.18	2910
17346	217 229	1	0.2	0.24	2	480	< 0.5	< 2	1.88	3.0	6	16	15	0.26	< 10	< 1	0.09	< 10	0.10	2700
17347	217 229	< 1	0.2	1.08	< 2	480	< 0.5	< 2	1.79	3.5	15	186	106	2.34	< 10	< 1	0.21	< 10	0.32	2490
17348	217 229	1	0.4	0.94	< 2	160	< 0.5	< 2	0.59	0.5	17	73	15	0.96	< 10	< 1	0.10	< 10	0.19	1155
17349	217 229	< 1	0.2	0.26	< 2	490	< 0.5	< 2	1.25	1.5	2	15	17	0.25	< 10	< 1	0.12	< 10	0.11	3070
17350	217 229	< 1	0.4	0.66	< 2	370	< 0.5	< 2	0.94	1.5	13	36	20	0.59	< 10	< 1	0.14	< 10	0.15	2020
17351	217 229	1	0.4	0.33	< 2	340	< 0.5	< 2	2.08	2.0	2	18	15	0.34	< 10	< 1	0.14	< 10	0.18	2230
17352	217 229	< 1	< 0.2	0.14	4	340	< 0.5	< 2	2.14	1.5	1	11	17	0.17	< 10	< 1	0.08	< 10	0.15	615
17353	217 229	1	0.4	0.38	2	240	< 0.5	< 2	1.39	1.0	2	24	15	0.41	< 10	< 1	0.27	< 10	0.13	440
17354	217 229	2	< 0.2	0.27	2	360	< 0.5	< 2	2.20	1.5	2	12	14	0.30	< 10	< 1	0.11	< 10	0.15	1105
17355	217 229	2	< 0.2	0.33	2	230	< 0.5	< 2	2.35	1.0	3	17	12	0.39	< 10	< 1	0.08	< 10	0.16	1040
17356	217 229	2	< 0.2	0.19	< 2	40	< 0.5	< 2	1.48	< 0.5	1	26	13	0.81	< 10	< 1	0.05	< 10	0.11	190
17357	217 229	< 1	< 0.2	0.32	< 2	130	< 0.5	< 2	0.78	0.5	1	24	9	0.34	< 10	< 1	0.07	< 10	0.12	230
17358	217 229	1	< 0.2	0.36	2	140	< 0.5	< 2	0.77	0.5	1	93	9	0.43	< 10	< 1	0.13	< 10	0.14	920
17359	217 229	6	< 0.2	0.55	< 2	100	< 0.5	< 2	0.40	0.5	1	35	13	0.63	< 10	< 1	0.18	< 10	0.14	215
17360	217 229	1	< 0.2	0.30	2	170	< 0.5	< 2	0.65	0.5	5	14	13	0.24	< 10	< 1	0.10	< 10	0.09	135
17361	217 229	< 1	< 0.2	0.54	2	120	< 0.5	< 2	0.40	0.5	3	12	13	0.47	< 10	< 1	0.12	< 10	0.07	90
17362	217 229	< 1	< 0.2	0.44	2	150	< 0.5	< 2	0.38	0.5	1	17	7	0.41	< 10	< 1	0.09	< 10	0.08	95
17363	217 229	< 1	< 0.2	0.18	< 2	80	< 0.5	< 2	0.34	0.5	1	8	8	0.20	< 10	< 1	0.12	< 10	0.07	325
17364	217 229	< 1	< 0.2	0.45	4	240	< 0.5	< 2	0.59	0.5	< 1	25	4	0.47	< 10	< 1	0.08	< 10	0.05	80
17365	217 229	< 1	0.2	0.40	2	130	< 0.5	< 2	0.50	0.5	1	33	10	0.44	< 10	< 1	0.10	< 10	0.07	225
17366	217 229	2	< 0.2	0.70	< 2	110	< 0.5	< 2	0.66	0.5	4	20	22	0.73	< 10	< 1	0.14	10	0.10	200
17367	217 229	1	< 0.2	0.69	2	90	< 0.5	< 2	0.37	< 0.5	2	90	23	0.92	< 10	< 1	0.13	< 10	0.20	320
17368	217 229	< 1	0.2	0.37	2	250	< 0.5	< 2	0.82	1.0	2	26	17	0.37	< 10	< 1	0.12	< 10	0.10	600
17369	217 229	1	0.4	0.64	< 2	190	0.5	< 2	0.77	0.5	7	38	45	0.54	< 10	< 1	0.14	20	0.12	280
17370	217 229	1	< 0.2	0.40	2	120	< 0.5	< 2	0.53	0.5	1	44	9	0.44	< 10	< 1	0.11	< 10	0.09	430
17371	217 229	< 1	< 0.2	0.29	4	80	< 0.5	< 2	0.47	1.0	< 1	19	12	0.31	< 10	< 1	0.15	< 10	0.08	275
17372	217 229	< 1	< 0.2	0.19	< 2	90	< 0.5	< 2	0.66	0.5	1	15	10	0.22	< 10	< 1	0.14	< 10	0.07	340
17373	217 229	1	< 0.2	0.23	< 2	190	< 0.5	< 2	0.64	1.0	1	9	14	0.26	< 10	< 1	0.12	< 10	0.08	740
17374	217 229	< 1	0.2	0.83	4	230	0.5	< 2	0.58	0.5	5	17	20	0.54	< 10	< 1	0.18	10	0.08	290
17375	217 229	< 1	0.2	0.89	6	210	< 0.5	< 2	0.59	0.5	4	19	14	0.55	< 10	< 1	0.16	10	0.09	370
17376	217 229	1	< 0.2	0.48	< 2	110	< 0.5	< 2	0.41	0.5	4	18	15	0.51	< 10	< 1	0.16	< 10	0.07	260
17377	217 229	< 1	0.4	0.48	< 2	150	< 0.5	< 2	0.60	1.0	2	52	39	1.74	< 10	< 1	0.08	< 10	0.08	360
17378	217 229	1	< 0.2	0.34	< 2	100	< 0.5	< 2	0.51	0.5	1	18	12	0.35	< 10	< 1	0.13	< 10	0.08	150
17379	217 229	< 1	< 0.2	1.05	6	60	< 0.5	< 2	0.21	0.5	3	59	35	0.90	< 10	< 1	0.11	< 10	0.11	70
17380	217 229	8	< 0.2	0.39	< 2	140	< 0.5	< 2	0.44	0.5	2	33	14	0.43	< 10	< 1	0.13	< 10	0.09	285

CERTIFICATION: *Hart Bechler*



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SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17341	217 229	< 1	< 0.01	4	880	60	< 2	< 1	53	0.02	< 10	< 10	9	< 10	136
17342	217 229	< 1	0.01	7	1300	60	< 2	< 1	51	0.01	< 10	< 10	10	< 10	74
17343	217 229	1	0.01	16	1360	22	< 2	2	26	0.11	< 10	< 10	60	< 10	72
17344	217 229	< 1	< 0.01	5	1020	30	< 2	< 1	61	< 0.01	< 10	< 10	3	< 10	164
17345	217 229	< 1	0.02	9	1120	92	< 2	1	34	0.03	< 10	< 10	24	< 10	196
17346	217 229	< 1	< 0.01	5	1080	66	< 2	< 1	72	< 0.01	< 10	< 10	6	< 10	484
17347	217 229	1	0.02	26	2000	72	< 2	4	56	0.04	< 10	< 10	63	< 10	464
17348	217 229	< 1	0.02	12	950	42	< 2	1	29	0.04	< 10	< 10	23	< 10	100
17349	217 229	< 1	0.01	5	1470	48	< 2	< 1	47	< 0.01	< 10	< 10	6	< 10	340
17350	217 229	< 1	0.01	9	1400	102	< 2	< 1	43	0.01	< 10	< 10	13	< 10	184
17351	217 229	< 1	< 0.01	5	1380	64	< 2	< 1	58	0.01	< 10	< 10	8	< 10	362
17352	217 229	< 1	< 0.01	3	1070	42	< 2	< 1	43	< 0.01	< 10	< 10	4	< 10	260
17353	217 229	< 1	< 0.01	4	1030	46	< 2	< 1	36	0.01	< 10	< 10	9	< 10	112
17354	217 229	< 1	< 0.01	4	1400	74	< 2	< 1	52	< 0.01	< 10	< 10	7	< 10	180
17355	217 229	1	< 0.01	4	1000	66	< 2	< 1	39	< 0.01	< 10	< 10	8	< 10	54
17356	217 229	< 1	< 0.01	3	980	32	< 2	< 1	22	< 0.01	< 10	< 10	8	< 10	16
17357	217 229	1	< 0.01	9	810	40	< 2	< 1	60	0.01	< 10	< 10	8	< 10	40
17358	217 229	< 1	0.01	6	940	56	< 2	< 1	53	0.02	< 10	< 10	11	< 10	94
17359	217 229	< 1	< 0.01	7	1230	80	< 2	< 1	38	0.02	< 10	< 10	13	< 10	68
17360	217 229	< 1	0.01	8	1050	42	< 2	< 1	62	< 0.01	< 10	< 10	5	< 10	56
17361	217 229	< 1	0.01	7	990	52	< 2	1	26	< 0.01	< 10	< 10	9	< 10	50
17362	217 229	< 1	< 0.01	6	610	68	< 2	< 1	44	0.01	< 10	< 10	9	< 10	24
17363	217 229	< 1	< 0.01	3	800	40	< 2	< 1	18	< 0.01	< 10	< 10	4	< 10	100
17364	217 229	< 1	< 0.01	6	630	76	< 2	< 1	39	0.01	< 10	< 10	11	< 10	46
17365	217 229	1	< 0.01	5	880	78	< 2	< 1	35	0.01	< 10	< 10	9	< 10	48
17366	217 229	1	0.01	7	1190	42	< 2	< 1	40	0.01	< 10	< 10	9	< 10	56
17367	217 229	< 1	0.01	9	960	58	< 2	< 1	16	0.06	< 10	< 10	20	< 10	58
17368	217 229	< 1	< 0.01	10	1040	66	< 2	< 1	52	< 0.01	< 10	< 10	8	< 10	100
17369	217 229	1	0.01	16	1370	66	< 2	< 1	68	0.01	< 10	< 10	11	< 10	52
17370	217 229	< 1	0.01	5	880	58	< 2	< 1	36	0.02	< 10	< 10	10	< 10	58
17371	217 229	< 1	< 0.01	5	850	58	< 2	< 1	23	0.01	< 10	< 10	6	< 10	62
17372	217 229	< 1	< 0.01	3	990	56	< 2	< 1	31	< 0.01	< 10	< 10	4	< 10	72
17373	217 229	< 1	< 0.01	4	1090	62	< 2	< 1	38	< 0.01	< 10	< 10	5	< 10	176
17374	217 229	< 1	< 0.01	14	1530	50	< 2	< 1	55	< 0.01	< 10	< 10	7	< 10	76
17375	217 229	< 1	0.01	13	1680	74	< 2	< 1	49	0.01	< 10	< 10	11	< 10	88
17376	217 229	< 1	0.01	8	1440	56	< 2	< 1	29	0.01	< 10	< 10	12	< 10	124
17377	217 229	1	0.01	12	830	60	< 2	< 1	30	0.03	< 10	< 10	29	< 10	146
17378	217 229	< 1	0.01	6	1000	66	< 2	< 1	27	0.01	< 10	< 10	7	< 10	70
17379	217 229	1	0.01	11	1250	76	< 2	< 1	9	0.02	< 10	< 10	22	< 10	60
17380	217 229	< 1	0.01	7	1060	56	< 2	< 1	27	0.02	< 10	< 10	11	< 10	84

CERTIFICATION: *[Signature]*



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SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17381	217 229	5 < 0.2	0.35	4	70 < 0.5	< 2	0.39 < 0.5	1	54	10	0.40	< 10	< 1	0.08	< 10	0.07	65			
17382	217 229	< 1 < 0.2	0.15	< 2	100 < 0.5	< 2	0.56 < 0.5	< 1	15	10	0.17	< 10	< 1	0.08	< 10	0.07	265			
17383	217 229	3 < 0.2	0.62	6	90 < 0.5	< 2	0.32 < 0.5	1	17	10	0.36	< 10	< 1	0.07	< 10	0.06	50			
17384	217 229	2 < 0.2	0.28	4	90 < 0.5	< 2	0.36 < 0.5	< 1	15	10	0.30	< 10	< 1	0.07	< 10	0.06	40			
17385	217 229	< 1 < 0.2	0.33	8	70 < 0.5	< 2	0.55 < 0.5	< 1	21	9	0.31 < 10	< 1	0.10	< 10	0.09	35				
17386	217 229	< 1 0.2	0.73	8	110 < 0.5	< 2	0.38 < 0.5	3	13	12	0.64	< 10	< 1	0.09	10	0.07	65			
17387	217 229	5 < 0.2	0.33	6	150 < 0.5	< 2	0.78 < 0.5	< 1	11	10	0.33	< 10	< 1	0.09	< 10	0.07	280			
17388	217 229	1 < 0.2	0.26	2	140 < 0.5	< 2	0.82 < 0.5	1	14	9	0.30	< 10	< 1	0.10	< 10	0.09	860			
17389	217 229	1 < 0.2	0.28	4	150 < 0.5	< 2	0.55 < 0.5	1	10	8	0.28	< 10	< 1	0.08	< 10	0.08	155			
17390	217 229	2 0.2	0.38	< 2	280 < 0.5	< 2	0.52 < 0.5	3	31	15	0.48 < 10	< 1	0.13	< 10	0.09	2220				
17391	217 229	< 1 0.2	0.22	6	240 < 0.5	< 2	0.71 < 0.5	1	8	10	0.21	< 10	< 1	0.09	< 10	0.08	490			
17392	217 229	2 < 0.2	0.22	4	250 < 0.5	< 2	0.96 < 0.5	1	16	11	0.25	< 10	< 1	0.15	< 10	0.12	1440			
17393	217 229	< 1 0.2	0.47	8	140 < 0.5	< 2	0.47 < 0.5	1	57	9	0.45	< 10	< 1	0.09	10	0.08	245			
17394	217 229	< 1 < 0.2	0.43	14	130 < 0.5	< 2	0.77 < 0.5	3	35	13	0.59	< 10	< 1	0.12	10	0.18	600			
17395	217 229	< 1 0.2	0.34	4	40 < 0.5	< 2	0.24 < 0.5	1	83	6	0.46 < 10	< 1	0.08	< 10	0.11	115				
17396	217 229	3 < 0.2	0.21	8	180 < 0.5	< 2	0.79 0.5	2	9	15	0.27 < 10	< 1	0.12	< 10	0.08	515				
17397	217 229	1 0.2	0.35	14	270 < 0.5	< 2	0.86 0.5	4	26	13	0.41 < 10	< 1	0.11	< 10	0.14	955				
17398	217 229	< 1 < 0.2	0.52	8	420 < 0.5	< 2	0.74 1.0	17	73	10	0.64 < 10	< 1	0.12	10	0.17	2900				
17399	217 229	< 1 < 0.2	0.38	8	300 < 0.5	< 2	0.81 0.5	3	49	9	0.63 < 10	< 1	0.14	< 10	0.18	675				
17400	217 229	< 1 < 0.2	0.40	12	180 < 0.5	< 2	1.05 0.5	21	192	10	1.62 < 10	< 1	0.08	< 10	1.45	1585				
17401	217 229	< 1 < 0.2	0.17	4	80 < 0.5	< 2	0.53 0.5	1	9	8	0.20 < 10	< 1	0.11	< 10	0.10	110				
17402	217 229	< 1 0.2	0.39	8	90 < 0.5	< 2	0.64 0.5	16	274	9	1.86 < 10	< 1	0.07	< 10	1.15	875				
17403	217 229	2 < 0.2	0.20	4	140 < 0.5	< 2	0.65 < 0.5	1	11	9	0.24 < 10	< 1	0.12	< 10	0.07	950				
17404	217 229	< 1 < 0.2	0.16	6	90 < 0.5	< 2	0.59 0.5	< 1	11	6	0.18 < 10	< 1	0.05	< 10	0.10	50				
17405	217 229	< 1 < 0.2	0.19	6	130 < 0.5	< 2	0.72 0.5	< 1	9	8	0.23 < 10	< 1	0.06	< 10	0.05	180				
17406	217 229	1 0.2	0.23	2	190 < 0.5	< 2	1.02 0.5	1	11	10	0.25 < 10	< 1	0.10	< 10	0.10	980				
17407	217 229	2 0.2	0.46	2	170 < 0.5	< 2	0.53 0.5	2	37	23	0.54 < 10	< 1	0.15	< 10	0.13	540				
17408	217 229	3 0.4	0.31	2	260 < 0.5	< 2	0.99 1.0	2	23	14	0.34 < 10	< 1	0.11	< 10	0.10	1725				
17409	217 229	1 0.2	0.34	2	190 < 0.5	< 2	0.79 0.5	1	47	9	0.39 < 10	< 1	0.12	10	0.11	1330				
17410	217 229	2 0.2	0.43	2	170 < 0.5	< 2	0.64 0.5	2	54	9	0.58 < 10	< 1	0.11	< 10	0.16	285				
17411	217 229	< 1 < 0.2	0.08	< 2	40 < 0.5	< 2	1.03 < 0.5	< 1	8	5	0.12 < 10	< 1	0.07	< 10	0.14	230				
17412	217 229	< 1 < 0.2	0.18	4	90 < 0.5	< 2	0.88 < 0.5	< 1	10	4	0.18 < 10	< 1	0.07	< 10	0.09	140				
17413	217 229	2 < 0.2	0.07	< 2	80 < 0.5	< 2	1.02 0.5	1	5	10	0.11 < 10	< 1	0.13	< 10	0.13	120				
17414	217 229	< 1 < 0.2	0.25	6	140 < 0.5	< 2	1.02 < 0.5	2	10	10	0.25 < 10	< 1	0.09	< 10	0.09	735				
17415	217 229	1 < 0.2	0.24	4	150 < 0.5	< 2	0.75 0.5	1	9	9	0.25 < 10	< 1	0.11	< 10	0.08	545				
17416	217 229	1 < 0.2	0.33	6	120 < 0.5	< 2	0.52 0.5	1	11	9	0.36 < 10	< 1	0.10	< 10	0.08	575				
17417	217 229	< 1 < 0.2	0.27	4	140 < 0.5	< 2	0.32 0.5	1	79	4	0.34 < 10	< 1	0.08	< 10	0.05	140				
17418	217 229	4 < 0.2	0.22	2	80 < 0.5	< 2	0.74 0.5	< 1	11	10	0.24 < 10	< 1	0.11	< 10	0.10	145				
17419	217 229	4 < 0.2	0.28	8	80 < 0.5	< 2	0.85 0.5	1	17	9	0.32 < 10	< 1	0.13	< 10	0.08	265				
17420	217 229	< 1 0.2	0.20	8	120 < 0.5	< 2	0.58 0.5	1	14	8	0.22 < 10	< 1	0.24	< 10	0.07	960				

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 Account: JWW

## CERTIFICATE OF ANALYSIS

A9522665

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17381	217 229	< 1	0.01	7	820	44	< 2	< 1	47	0.01	< 10	< 10	8	< 10	44
17382	217 229	< 1	< 0.01	2	620	42	< 2	< 1	52	< 0.01	< 10	< 10	3	< 10	54
17383	217 229	< 1	0.01	3	790	52	< 2	< 1	39	0.01	< 10	< 10	6	< 10	34
17384	217 229	< 1	0.01	3	750	88	< 2	< 1	40	< 0.01	< 10	< 10	6	< 10	56
17385	217 229	< 1	< 0.01	3	850	70	2	< 1	55	0.01	< 10	< 10	7	< 10	36
17386	217 229	< 1	0.01	7	1200	40	< 2	< 1	45	< 0.01	< 10	< 10	7	< 10	44
17387	217 229	< 1	< 0.01	4	860	56	2	< 1	50	< 0.01	< 10	< 10	7	< 10	86
17388	217 229	1	< 0.01	2	860	54	2	< 1	39	< 0.01	< 10	< 10	6	< 10	94
17389	217 229	1	< 0.01	5	880	50	< 2	< 1	47	< 0.01	< 10	< 10	5	< 10	52
17390	217 229	1	< 0.01	9	1320	80	< 2	< 1	44	0.01	< 10	< 10	9	< 10	98
17391	217 229	1	< 0.01	7	1060	40	< 2	< 1	57	< 0.01	< 10	< 10	4	< 10	68
17392	217 229	< 1	< 0.01	7	1480	58	< 2	< 1	75	< 0.01	< 10	< 10	5	< 10	86
17393	217 229	< 1	0.01	4	990	36	< 2	< 1	62	0.02	< 10	< 10	9	< 10	52
17394	217 229	1	0.01	9	840	52	< 2	< 1	72	0.04	< 10	< 10	14	< 10	52
17395	217 229	1	0.01	6	510	38	< 2	< 1	22	0.07	< 10	< 10	16	< 10	34
17396	217 229	< 1	< 0.01	9	1130	62	2	< 1	60	< 0.01	< 10	< 10	6	< 10	112
17397	217 229	1	< 0.01	16	1330	68	2	< 1	63	< 0.01	< 10	< 10	8	< 10	112
17398	217 229	1	0.01	25	650	106	< 2	1	61	0.02	< 10	< 10	13	< 10	102
17399	217 229	< 1	0.01	18	860	70	< 2	1	52	0.01	< 10	< 10	11	< 10	102
17400	217 229	< 1	0.03	89	620	56	< 2	1	51	0.01	< 10	< 10	13	< 10	142
17401	217 229	< 1	< 0.01	8	650	52	< 2	< 1	25	< 0.01	< 10	< 10	3	< 10	62
17402	217 229	< 1	0.05	79	480	44	< 2	2	22	0.01	< 10	< 10	16	< 10	84
17403	217 229	< 1	< 0.01	4	960	56	< 2	< 1	27	< 0.01	< 10	< 10	5	< 10	102
17404	217 229	< 1	0.01	3	560	28	< 2	< 1	22	< 0.01	< 10	< 10	3	< 10	46
17405	217 229	< 1	< 0.01	3	620	46	< 2	< 1	27	< 0.01	< 10	< 10	4	< 10	96
17406	217 229	< 1	0.01	4	890	64	< 2	< 1	28	< 0.01	< 10	< 10	5	< 10	116
17407	217 229	< 1	0.01	9	1100	84	2	2	25	0.01	< 10	< 10	13	< 10	74
17408	217 229	< 1	< 0.01	5	1230	80	< 2	< 1	52	0.01	< 10	< 10	7	< 10	134
17409	217 229	< 1	< 0.01	6	880	52	< 2	< 1	39	0.01	< 10	< 10	9	< 10	96
17410	217 229	< 1	0.02	6	710	56	< 2	1	35	0.05	< 10	< 10	18	< 10	64
17411	217 229	< 1	0.01	2	690	30	< 2	< 1	25	< 0.01	< 10	< 10	2	< 10	30
17412	217 229	< 1	0.01	2	460	34	< 2	< 1	41	< 0.01	< 10	< 10	3	< 10	36
17413	217 229	< 1	0.01	3	670	28	< 2	< 1	29	< 0.01	< 10	< 10	1	< 10	76
17414	217 229	< 1	0.01	4	960	50	< 2	< 1	51	< 0.01	< 10	< 10	4	< 10	80
17415	217 229	< 1	< 0.01	4	900	50	< 2	< 1	38	< 0.01	< 10	< 10	4	< 10	80
17416	217 229	< 1	0.01	4	1120	58	< 2	< 1	28	< 0.01	< 10	< 10	7	< 10	84
17417	217 229	< 1	0.01	4	640	46	< 2	< 1	24	0.01	< 10	< 10	7	< 10	56
17418	217 229	< 1	0.01	3	720	52	< 2	< 1	21	< 0.01	< 10	< 10	5	< 10	72
17419	217 229	< 1	0.01	3	640	76	< 2	< 1	18	< 0.01	< 10	< 10	8	< 10	78
17420	217 229	< 1	0.01	3	1180	52	< 2	< 1	30	< 0.01	< 10	< 10	4	< 10	82

CERTIFICATION: *[Signature]*



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ROYAL OAK MINES INC.  
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 TIMMINS, ON  
 P4N 7X7

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 Certificate Date: 06-AUG-95  
 Invoice No. : I9522665  
 P.O. Number : P211451  
 Account : JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522665

SAMPLE	PREP CODE		Au NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
			ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
17421	217	229	4	0.4	0.29	8	200	< 0.5	< 2	0.71	0.5	1	24	8	0.29	< 10	< 1	0.15	< 10	0.08	955
17422	217	229	< 1	< 0.2	0.59	2	50	< 0.5	< 2	0.27	< 0.5	2	101	9	0.82	< 10	< 1	0.09	< 10	0.10	100
17423	217	229	5	< 0.2	0.13	< 2	120	< 0.5	< 2	1.56	0.5	< 1	9	7	0.15	< 10	< 1	0.13	< 10	0.10	380
17424	217	229	13	0.2	0.20	6	260	< 0.5	< 2	0.94	0.5	1	53	9	0.23	< 10	< 1	0.11	< 10	0.06	485
17425	217	229	12	0.2	0.46	6	200	< 0.5	< 2	0.79	0.5	3	58	10	0.44	< 10	< 1	0.12	10	0.13	785
17426	217	229	707	0.2	0.59	8	240	< 0.5	< 2	1.10	0.5	6	28	11	0.62	< 10	1	0.11	10	0.13	955
17427	217	229	7	< 0.2	1.64	2	130	< 0.5	< 2	0.74	< 0.5	10	118	19	1.57	10	< 1	0.10	30	0.33	1075
17428	217	229	< 1	< 0.2	0.31	8	100	< 0.5	< 2	0.20	0.5	2	16	6	0.31	< 10	< 1	0.11	< 10	0.08	45
17429	217	229	< 1	< 0.2	0.28	2	130	< 0.5	< 2	0.63	0.5	1	14	8	0.29	< 10	< 1	0.12	< 10	0.09	165
17501	217	229	3	< 0.2	0.25	< 2	40	< 0.5	< 2	2.65	0.5	2	21	13	0.37	< 10	< 1	0.08	< 10	0.27	230
17502	217	229	5	< 0.2	0.12	< 2	60	< 0.5	< 2	0.36	0.5	< 1	18	7	0.16	< 10	< 1	0.16	< 10	0.05	70
17504	217	229	1	< 0.2	0.59	20	110	< 0.5	< 2	0.72	< 0.5	4	87	73	0.73	< 10	< 1	0.19	10	0.30	685
17505	217	229	< 1	< 0.2	0.41	4	100	< 0.5	< 2	0.36	< 0.5	2	74	10	0.46	< 10	< 1	0.15	10	0.11	445
17506	217	229	1	0.6	0.45	< 2	2330	< 0.5	4	12.55	1.0	7	22	68	0.30	< 10	< 1	0.35	< 10	0.68	8230
17507	217	229	2	0.2	0.06	< 2	330	< 0.5	< 2	2.44	2.0	1	10	16	0.09	< 10	< 1	0.11	< 10	0.16	670
17508	217	229	< 1	< 0.2	0.51	4	220	< 0.5	< 2	0.84	1.5	5	44	17	0.81	< 10	< 1	0.31	10	0.22	1580
17509	217	229	1	< 0.2	0.65	4	80	< 0.5	2	0.93	< 0.5	7	87	22	1.25	< 10	< 1	0.13	10	0.29	580
17510	217	229	< 1	< 0.2	0.48	4	110	< 0.5	< 2	0.56	< 0.5	4	128	9	0.74	< 10	< 1	0.16	10	0.22	825
17511	217	229	1	< 0.2	0.45	8	130	< 0.5	< 2	0.52	< 0.5	3	85	20	0.76	< 10	< 1	0.14	10	0.17	935
17512	217	229	< 1	< 0.2	0.47	< 2	140	< 0.5	< 2	0.62	< 0.5	3	93	9	0.66	< 10	< 1	0.13	10	0.17	610
17513	217	229	< 1	< 0.2	0.48	< 2	110	< 0.5	< 2	0.57	0.5	3	103	6	0.76	< 10	< 1	0.13	10	0.17	550
17514	217	229	< 1	0.4	1.38	4	210	< 0.5	< 2	1.94	< 0.5	10	96	49	1.19	10	1	0.12	70	0.34	2070
17515	217	229	< 1	< 0.2	0.49	2	90	< 0.5	< 2	0.77	0.5	4	120	19	0.83	< 10	< 1	0.16	10	0.28	330
17516	217	229	1	< 0.2	0.26	< 2	330	< 0.5	< 2	1.30	1.5	2	50	13	0.38	< 10	< 1	0.13	< 10	0.21	1475
17517	217	229	2	< 0.2	0.22	4	100	< 0.5	< 2	1.67	0.5	1	21	11	0.27	< 10	< 1	0.11	< 10	0.12	310
17518	217	229	1	< 0.2	0.30	< 2	50	< 0.5	< 2	2.45	0.5	2	23	16	0.68	< 10	< 1	0.09	10	0.29	150
17519	217	229	< 1	< 0.2	0.25	2	80	< 0.5	< 2	2.18	1.0	2	11	10	0.24	< 10	< 1	0.09	< 10	0.19	585
17520	217	229	4	0.2	0.34	2	120	< 0.5	< 2	0.80	0.5	1	18	13	0.34	< 10	< 1	0.13	< 10	0.08	400
17521	217	229	2	0.2	0.17	< 2	230	< 0.5	< 2	1.08	0.5	2	22	10	0.21	< 10	< 1	0.19	< 10	0.13	2380
17522	217	229	< 1	0.2	0.44	2	140	< 0.5	< 2	0.41	0.5	1	19	11	0.51	< 10	< 1	0.13	< 10	0.09	455
17523	217	229	< 1	0.2	0.31	6	240	< 0.5	< 2	0.60	< 0.5	1	54	8	0.37	< 10	< 1	0.11	10	0.07	985
17524	217	229	< 1	< 0.2	0.38	6	170	< 0.5	< 2	0.75	0.5	3	8	10	0.37	< 10	< 1	0.11	10	0.10	465
17525	217	229	1	< 0.2	0.37	2	120	< 0.5	< 2	0.69	0.5	2	71	7	0.43	< 10	< 1	0.16	10	0.09	420
17526	217	229	3	0.2	0.38	4	120	< 0.5	< 2	0.61	0.5	2	65	9	0.43	< 10	< 1	0.15	10	0.09	185
17527	217	229	< 1	0.2	0.69	< 2	130	< 0.5	2	0.95	1.0	13	38	16	0.68	< 10	< 1	0.11	30	0.15	1900
17528	217	229	2	0.2	0.36	4	250	< 0.5	< 2	1.15	0.5	2	17	10	0.35	< 10	< 1	0.16	10	0.14	2330
17529	217	229	1	< 0.2	0.58	8	200	< 0.5	< 2	0.42	< 0.5	2	15	9	0.51	< 10	< 1	0.13	10	0.07	170
17530	217	229	< 1	< 0.2	0.67	< 2	90	< 0.5	2	2.32	0.5	2	11	17	0.43	< 10	< 1	0.07	30	0.26	390
17531	217	229	< 1	0.2	0.28	< 2	190	< 0.5	< 2	1.66	1.0	2	11	10	0.31	< 10	< 1	0.15	< 10	0.12	705
17532	217	229	< 1	< 0.2	0.32	4	150	< 0.5	2	2.08	1.0	2	7	13	0.26	< 10	< 1	0.10	20	0.21	980

CERTIFICATION: Hart Becker



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D: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

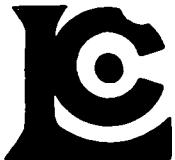
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## CERTIFICATE OF ANALYSIS

A9522665

SAMPLE	PREP CODE		Mo ppm	Na %	Mg ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17421	217	229	< 1	< 0.01	2	770	40	2	< 1	39	< 0.01	< 10	< 10	6	< 10	78
17422	217	229	< 1	0.02	4	790	46	< 2	1	16	0.04	< 10	< 10	24	< 10	38
17423	217	229	< 1	0.01	3	1020	44	2	< 1	102	< 0.01	< 10	< 10	3	< 10	82
17424	217	229	< 1	0.01	3	700	30	< 2	< 1	65	0.01	< 10	< 10	5	< 10	132
17425	217	229	1	0.01	4	1010	48	2	< 1	60	0.02	< 10	< 10	11	< 10	74
17426	217	229	1	0.01	6	850	34	4	1	54	0.02	< 10	< 10	13	< 10	76
17427	217	229	< 1	0.02	14	870	28	< 2	3	31	0.07	< 10	< 10	30	< 10	54
17428	217	229	< 1	0.01	7	840	50	< 2	< 1	29	< 0.01	< 10	< 10	6	< 10	24
17429	217	229	< 1	< 0.01	4	1050	52	< 2	< 1	39	< 0.01	< 10	< 10	6	< 10	64
17501	217	229	< 1	0.01	5	880	34	< 2	< 1	35	0.02	< 10	< 10	9	< 10	58
17502	217	229	< 1	0.01	2	710	36	< 2	< 1	16	< 0.01	< 10	< 10	2	< 10	66
17504	217	229	< 1	0.02	9	1180	12	< 2	1	26	0.04	< 10	< 10	16	< 10	552
17505	217	229	< 1	0.02	6	720	20	< 2	< 1	22	0.04	< 10	< 10	12	< 10	62
17506	217	229	< 1	0.01	8	>10000	22	2	< 1	407	0.01	< 10	< 10	5	< 10	894
17507	217	229	< 1	< 0.01	< 1	1290	18	2	< 1	69	< 0.01	< 10	< 10	1	< 10	512
17508	217	229	< 1	0.01	7	1400	56	2	< 1	40	0.03	< 10	< 10	14	< 10	236
17509	217	229	1	0.06	9	740	4	< 2	3	26	0.07	< 10	< 10	37	< 10	104
17510	217	229	< 1	0.02	8	640	12	2	1	28	0.06	< 10	< 10	16	< 10	68
17511	217	229	< 1	0.01	6	570	18	< 2	1	25	0.06	< 10	< 10	20	< 10	82
17512	217	229	< 1	0.01	4	650	14	< 2	1	31	0.06	< 10	< 10	16	< 10	92
17513	217	229	< 1	0.02	8	590	12	< 2	1	24	0.06	< 10	< 10	18	< 10	70
17514	217	229	< 1	0.01	15	930	12	2	4	32	0.03	< 10	< 10	27	< 10	40
17515	217	229	< 1	0.02	10	740	14	< 2	1	19	0.06	< 10	< 10	19	< 10	60
17516	217	229	< 1	0.01	4	990	50	2	< 1	34	0.01	< 10	< 10	7	< 10	166
17517	217	229	< 1	< 0.01	3	820	46	2	< 1	27	< 0.01	< 10	< 10	6	< 10	94
17518	217	229	< 1	0.03	6	1060	28	2	< 1	25	0.01	< 10	< 10	8	< 10	22
17519	217	229	1	0.01	3	830	48	2	< 1	45	< 0.01	< 10	< 10	4	< 10	46
17520	217	229	1	0.01	3	940	72	< 2	< 1	40	< 0.01	< 10	< 10	8	< 10	64
17521	217	229	< 1	< 0.01	3	1420	42	2	< 1	50	< 0.01	< 10	< 10	3	< 10	146
17522	217	229	< 1	0.01	5	1250	70	< 2	< 1	34	0.01	< 10	< 10	17	< 10	100
17523	217	229	< 1	0.01	4	1040	70	< 2	< 1	49	0.01	< 10	< 10	8	< 10	76
17524	217	229	< 1	0.01	5	1670	40	< 2	< 1	51	< 0.01	< 10	< 10	5	< 10	112
17525	217	229	< 1	0.01	4	830	50	< 2	< 1	45	0.02	< 10	< 10	11	< 10	98
17526	217	229	< 1	0.01	7	900	70	< 2	< 1	40	0.01	< 10	< 10	9	< 10	74
17527	217	229	1	0.01	7	1450	50	< 2	1	46	0.01	< 10	< 10	9	< 10	62
17528	217	229	< 1	0.01	6	1050	46	2	< 1	46	0.01	< 10	< 10	7	< 10	122
17529	217	229	< 1	< 0.01	6	1160	60	2	< 1	37	< 0.01	< 10	< 10	9	< 10	74
17530	217	229	< 1	0.01	6	1090	24	2	< 1	49	< 0.01	< 10	< 10	6	< 10	44
17531	217	229	< 1	< 0.01	3	1050	74	2	< 1	51	< 0.01	< 10	< 10	6	< 10	144
17532	217	229	< 1	0.01	3	1320	46	2	< 1	49	< 0.01	< 10	< 10	4	< 10	86

CERTIFICATION: *[Signature]*



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## CERTIFICATE OF ANALYSIS

A9522665

SAMPLE	PREP CODE	Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17533	217 229	1 < 0.2	0.22	< 2	140	< 0.5	< 2	0.57	0.5	1	8	10	0.23	< 10	< 1	0.17	< 10	0.07	435		
17534	217 229	1 < 0.2	0.33	2	160	< 0.5	< 2	0.77	0.5	1	10	9	0.35	< 10	< 1	0.17	10	0.10	710		
17535	217 229	1 0.4	0.33	8	220	< 0.5	2	0.83	0.5	1	11	9	0.33	< 10	< 1	0.13	< 10	0.09	560		
17536	217 229	< 1 < 0.2	0.28	6	70	< 0.5	< 2	1.57	0.5	1	10	10	0.28	< 10	< 1	0.10	< 10	0.19	340		
17537	217 229	< 1 0.2	0.37	< 2	110	< 0.5	< 2	2.39	1.5	12	7	14	0.35	10	< 1	0.09	20	0.26	3790		
17538	217 229	2 < 0.2	0.19	< 2	90	< 0.5	2	2.35	1.0	1	7	13	0.18	< 10	< 1	0.09	< 10	0.25	650		
17539	217 229	< 1 < 0.2	0.20	4	120	< 0.5	2	2.74	1.0	1	6	15	0.19	< 10	< 1	0.08	< 10	0.28	475		
17540	217 229	< 1 < 0.2	0.13	< 2	240	< 0.5	< 2	1.37	1.0	2	12	9	0.21	< 10	< 1	0.16	< 10	0.14	970		
17541	217 229	1 0.2	0.35	2	570	< 0.5	2	1.77	2.0	4	22	10	0.32	< 10	< 1	0.20	< 10	0.14	3280		
17542	217 229	3 0.4	0.32	2	300	< 0.5	< 2	1.03	1.0	1	13	11	0.33	< 10	< 1	0.16	< 10	0.11	1860		
17543	217 229	< 1 0.4	0.35	6	280	< 0.5	< 2	0.95	0.5	2	26	14	0.36	< 10	< 1	0.12	10	0.12	1305		
17544	217 229	4 < 0.2	0.28	2	240	< 0.5	2	1.23	0.5	2	49	9	0.39	< 10	< 1	0.12	< 10	0.13	1305		
17545	217 229	1 0.2	0.34	4	230	< 0.5	< 2	2.00	1.5	8	13	15	0.36	< 10	< 1	0.16	10	0.23	2260		
17546	217 229	1 0.2	0.19	6	170	< 0.5	< 2	1.85	0.5	1	8	15	0.23	< 10	< 1	0.12	< 10	0.18	485		
17547	217 229	< 1 < 0.2	0.13	4	190	< 0.5	< 2	1.98	0.5	1	8	17	0.16	< 10	< 1	0.10	10	0.18	715		
17548	217 229	< 1 < 0.2	0.26	4	460	< 0.5	< 2	2.02	1.5	3	13	13	0.29	< 10	< 1	0.18	< 10	0.17	2580		
17549	217 229	2 < 0.2	0.38	4	220	< 0.5	< 2	1.98	1.5	16	15	27	0.57	< 10	< 1	0.12	40	0.33	2030		
17550	217 229	< 1 0.6	0.82	18	340	< 0.5	< 2	1.26	0.5	167	141	37	6.97	10	< 1	0.09	20	0.46	7850		
17551	217 229	< 1 0.2	0.43	6	220	< 0.5	< 2	0.94	1.0	3	34	14	0.44	< 10	< 1	0.14	< 10	0.13	505		
17552	217 229	< 1 0.2	0.41	2	330	< 0.5	< 2	1.64	1.0	58	15	39	0.37	< 10	< 1	0.09	20	0.22	2450		
17553	217 229	1 0.2	0.33	4	220	< 0.5	< 2	0.69	0.5	8	40	16	0.37	< 10	< 1	0.12	10	0.12	1250		
17554	217 229	< 1 0.4	0.37	< 2	330	< 0.5	< 2	0.89	0.5	7	21	15	0.37	< 10	< 1	0.15	< 10	0.11	1320		
17555	217 229	1 0.4	0.84	6	180	< 0.5	< 2	0.51	< 0.5	27	35	25	0.73	< 10	< 1	0.15	20	0.14	530		
17556	217 229	1 0.2	0.30	2	240	< 0.5	< 2	1.40	1.0	3	18	11	0.40	< 10	< 1	0.15	< 10	0.13	1600		
17557	217 229	2 < 0.2	0.35	2	200	< 0.5	< 2	0.71	0.5	3	29	9	0.35	< 10	< 1	0.15	< 10	0.09	1100		
17558	217 229	2 < 0.2	0.40	2	260	< 0.5	< 2	0.59	0.5	2	38	10	0.37	< 10	< 1	0.16	< 10	0.09	1230		
17559	217 229	2 0.2	0.49	4	230	< 0.5	< 2	0.72	0.5	5	61	12	0.76	< 10	< 1	0.16	< 10	0.19	1820		
17560	217 229	1 < 0.2	0.38	4	210	< 0.5	< 2	0.79	0.5	2	20	10	0.38	< 10	< 1	0.16	10	0.11	1055		
17561	217 229	1 0.2	0.43	4	220	< 0.5	< 2	0.80	0.5	10	21	12	0.39	< 10	< 1	0.14	10	0.10	770		
17562	217 229	< 1 0.2	0.34	8	210	< 0.5	< 2	1.59	0.5	3	12	16	0.36	< 10	< 1	0.12	10	0.18	780		
17563	217 229	< 1 0.2	0.51	8	210	< 0.5	< 2	1.22	0.5	3	21	20	0.47	< 10	< 1	0.12	20	0.14	450		
17564	217 229	< 1 0.4	0.87	2	190	< 0.5	2	1.19	0.5	18	43	46	1.51	< 10	< 1	0.12	40	0.21	1940		
17565	217 229	< 1 0.4	1.01	< 2	240	< 0.5	2	1.17	2.0	41	51	52	1.46	10	1	0.13	40	0.26	4830		
17566	217 229	2 < 0.2	0.33	< 2	270	< 0.5	< 2	1.52	1.5	13	15	27	0.34	< 10	< 1	0.09	20	0.18	2950		
17567	217 229	< 1 < 0.2	0.29	< 2	150	< 0.5	< 2	2.45	1.5	4	11	26	0.25	< 10	< 1	0.07	10	0.26	510		
17568	217 229	< 1 < 0.2	0.24	< 2	260	< 0.5	< 2	1.05	1.0	2	43	8	0.31	< 10	< 1	0.14	< 10	0.10	655		
17569	217 229	2 0.2	0.34	< 2	250	< 0.5	< 2	1.08	1.0	1	32	10	0.41	< 10	< 1	0.18	< 10	0.12	1305		
17570	217 229	< 1 0.2	0.50	4	350	< 0.5	< 2	0.84	1.0	4	25	10	0.53	< 10	< 1	0.18	10	0.12	2490		
17571	217 229	< 1 < 0.2	0.36	6	190	< 0.5	< 2	0.94	0.5	1	18	8	0.36	< 10	< 1	0.12	< 10	0.09	410		
17572	217 229	2 0.2	0.35	< 2	200	< 0.5	< 2	1.26	0.5	1	14	10	0.35	< 10	< 1	0.14	< 10	0.11	1170		

CERTIFICATION: Stantz Beckley



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Invoice No. 19522665  
 P.O. Number P211451  
 Account JWW

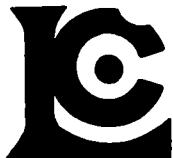
Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9522665

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17533	217 229	< 1	< 0.01	4	1060	44	< 2	< 1	36	< 0.01	< 10	< 10	5	< 10	108
17534	217 229	< 1	< 0.01	4	1270	44	2	< 1	38	< 0.01	< 10	< 10	6	< 10	138
17535	217 229	< 1	< 0.01	4	1260	66	2	< 1	47	< 0.01	< 10	< 10	7	< 10	102
17536	217 229	< 1	0.01	3	800	62	2	< 1	39	< 0.01	< 10	< 10	6	< 10	52
17537	217 229	4	0.01	6	1270	74	2	< 1	43	< 0.01	< 10	< 10	6	< 10	76
17538	217 229	1	0.01	2	1220	46	2	< 1	38	< 0.01	< 10	< 10	4	< 10	154
17539	217 229	< 1	0.01	3	1250	46	2	< 1	50	< 0.01	< 10	< 10	4	< 10	120
17540	217 229	< 1	0.01	6	1230	28	2	< 1	81	< 0.01	< 10	< 10	2	< 10	182
17541	217 229	< 1	0.01	6	1190	68	2	< 1	87	< 0.01	< 10	< 10	7	< 10	230
17542	217 229	< 1	< 0.01	5	1350	74	< 2	< 1	48	< 0.01	< 10	< 10	7	< 10	134
17543	217 229	< 1	0.01	7	1070	58	2	< 1	39	< 0.01	< 10	< 10	7	< 10	90
17544	217 229	< 1	< 0.01	6	1280	36	< 2	< 1	47	0.01	< 10	< 10	8	< 10	156
17545	217 229	1	0.01	6	1550	72	2	< 1	57	< 0.01	< 10	< 10	8	< 10	208
17546	217 229	< 1	0.01	3	1390	58	2	< 1	57	< 0.01	< 10	< 10	5	< 10	124
17547	217 229	< 1	0.01	4	1200	38	2	< 1	62	< 0.01	< 10	< 10	3	< 10	144
17548	217 229	< 1	< 0.01	6	1250	68	2	< 1	69	< 0.01	< 10	< 10	6	< 10	284
17549	217 229	< 1	0.01	54	1400	72	2	< 1	68	< 0.01	< 10	< 10	8	< 10	88
17550	217 229	2	0.02	98	2000	22	2	3	52	0.04	< 10	< 10	43	< 10	102
17551	217 229	< 1	0.01	7	1050	64	2	1	43	0.03	< 10	< 10	12	< 10	168
17552	217 229	< 1	0.01	36	1120	52	2	1	68	< 0.01	< 10	< 10	3	< 10	154
17553	217 229	< 1	0.01	12	1080	56	< 2	< 1	38	0.02	< 10	< 10	8	< 10	70
17554	217 229	< 1	0.01	7	1200	76	< 2	< 1	42	0.01	< 10	< 10	9	< 10	60
17555	217 229	< 1	0.01	13	1310	30	2	1	31	0.02	< 10	< 10	13	< 10	46
17556	217 229	< 1	0.01	6	1090	60	2	< 1	38	0.01	< 10	< 10	10	< 10	120
17557	217 229	< 1	< 0.01	4	1210	60	< 2	< 1	31	0.01	< 10	< 10	8	< 10	92
17558	217 229	< 1	0.01	5	1140	56	< 2	< 1	38	0.01	< 10	< 10	9	< 10	94
17559	217 229	< 1	0.01	12	1260	68	< 2	1	39	0.03	< 10	< 10	20	< 10	112
17560	217 229	< 1	0.01	6	1200	50	< 2	< 1	54	0.01	< 10	< 10	8	< 10	144
17561	217 229	< 1	0.01	7	1470	54	< 2	< 1	51	0.01	< 10	< 10	8	< 10	90
17562	217 229	1	0.01	7	1110	98	2	< 1	52	< 0.01	< 10	< 10	8	< 10	134
17563	217 229	1	0.01	9	1100	46	2	1	47	0.01	< 10	< 10	8	< 10	86
17564	217 229	2	0.01	20	1600	36	< 2	2	46	0.01	< 10	< 10	30	< 10	62
17565	217 229	2	0.02	32	1510	38	< 2	2	47	0.03	< 10	< 10	25	< 10	88
17566	217 229	1	0.01	19	1330	44	< 2	< 1	57	< 0.01	< 10	< 10	4	< 10	122
17567	217 229	< 1	0.01	44	980	38	2	< 1	48	< 0.01	< 10	< 10	5	< 10	156
17568	217 229	< 1	< 0.01	8	890	36	2	< 1	39	0.01	< 10	< 10	6	< 10	116
17569	217 229	< 1	< 0.01	6	1240	72	2	< 1	51	0.01	< 10	< 10	9	< 10	142
17570	217 229	1	0.01	8	1400	108	< 2	1	51	0.01	< 10	< 10	11	< 10	112
17571	217 229	< 1	0.01	3	930	52	2	< 1	50	0.01	< 10	< 10	8	< 10	76
17572	217 229	< 1	< 0.01	4	1080	68	2	< 1	65	0.01	< 10	< 10	7	< 10	102

CERTIFICATION: *Hans Bechler*



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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Page Num.: 1-A  
 Total Pages: 2  
 Certificate Date: 08-AUG-95  
 Invoice No.: 19522667  
 P.O. Number:  
 Account: JWW

Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522667

SAMPLE	PREP CODE	Au ppb	NAA ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
16995	217 229	< 1	0.2	0.31	< 2	180	< 0.5	< 2	0.63	0.5	1	49	11	0.35	< 10	< 1	0.12	< 10	0.09	400	
16996	217 229	1	< 0.2	0.35	2	240	< 0.5	< 2	1.01	0.5	1	63	12	0.40	< 10	< 1	0.12	< 10	0.13	875	
16997	217 229	< 1	0.2	0.26	4	190	< 0.5	2	1.00	0.5	1	22	12	0.27	< 10	< 1	0.11	< 10	0.09	200	
16998	217 229	1	< 0.2	0.31	2	190	< 0.5	< 2	1.00	0.5	< 1	19	9	0.33	< 10	< 1	0.11	< 10	0.09	1035	
16999	217 229	< 1	< 0.2	0.36	4	130	< 0.5	< 2	0.62	0.5	< 1	24	10	0.39	< 10	1	0.09	< 10	0.09	225	
17000	217 229	2	< 0.2	0.19	< 2	150	< 0.5	< 2	0.54	0.5	< 1	13	8	0.21	< 10	1	0.11	< 10	0.06	235	
17430	217 229	2	< 0.2	0.20	< 2	60	< 0.5	2	1.22	0.5	< 1	12	10	0.22	< 10	< 1	0.09	< 10	0.12	170	
17431	217 229	< 1	< 0.2	0.27	2	140	< 0.5	2	1.41	0.5	< 1	13	11	0.26	< 10	< 1	0.09	< 10	0.13	380	
17432	217 229	2	< 0.2	0.12	< 2	120	< 0.5	< 2	0.89	0.5	< 1	9	12	0.15	< 10	< 1	0.08	< 10	0.08	75	
17433	217 229	< 1	< 0.2	0.17	6	90	< 0.5	< 2	1.51	0.5	< 1	11	9	0.19	< 10	1	0.07	< 10	0.12	240	
17434	217 229	< 1	< 0.2	0.14	6	70	< 0.5	< 2	1.36	< 0.5	< 1	9	7	0.17	< 10	< 1	0.07	< 10	0.13	160	
17435	217 229	< 1	< 0.2	0.09	2	70	< 0.5	< 2	2.09	< 0.5	8	6	11	0.16	< 10	< 1	0.09	< 10	0.19	875	
17436	217 229	< 1	0.6	0.32	4	220	< 0.5	< 2	0.64	0.5	1	15	8	0.31	< 10	< 1	0.13	< 10	0.08	615	
17437	217 229	2	0.2	0.45	< 2	220	< 0.5	< 2	0.70	0.5	1	36	9	0.46	< 10	< 1	0.14	< 10	0.10	715	
17438	217 229	2	< 0.2	0.20	2	150	< 0.5	< 2	1.84	1.0	2	11	13	0.17	< 10	< 1	0.10	10	0.18	1795	
17439	217 229	< 1	0.2	0.45	< 2	140	0.5	< 2	1.49	0.5	2	20	18	0.33	< 10	< 1	0.06	40	0.21	665	
17440	217 229	< 1	< 0.2	0.76	< 2	160	0.5	< 2	1.28	0.5	6	62	14	0.82	< 10	1	0.10	10	0.29	1310	
17441	217 229	7	< 0.2	0.07	< 2	240	< 0.5	< 2	2.04	1.0	< 1	6	13	0.10	< 10	< 1	0.09	< 10	0.16	605	
17442	217 229	< 1	0.2	0.24	6	540	< 0.5	< 2	2.30	2.0	2	12	17	0.25	< 10	< 1	0.09	< 10	0.14	3250	
17443	217 229	< 1	0.2	0.25	2	370	< 0.5	< 2	1.46	1.5	6	8	14	0.22	< 10	< 1	0.10	< 10	0.11	3190	
17444	217 229	42	0.2	0.31	2	210	< 0.5	< 2	0.69	0.5	2	17	12	0.31	< 10	< 1	0.15	< 10	0.08	1100	
17445	217 229	2	0.2	0.43	< 2	160	< 0.5	< 2	0.68	0.5	2	76	11	0.50	< 10	< 1	0.12	< 10	0.14	1080	
17446	217 229	< 1	< 0.2	0.41	4	180	< 0.5	< 2	0.62	< 0.5	1	50	10	0.45	< 10	< 1	0.10	< 10	0.09	470	
17447	217 229	2	< 0.2	0.45	4	140	< 0.5	< 2	0.55	< 0.5	2	42	11	0.42	< 10	< 1	0.15	< 10	0.10	920	
17448	217 229	1	< 0.2	0.30	2	230	< 0.5	< 2	0.78	1.5	2	29	10	0.34	< 10	< 1	0.13	< 10	0.10	2610	
17449	217 229	2	0.2	0.60	6	310	0.5	< 2	1.96	1.0	9	44	26	0.57	< 10	< 1	0.11	10	0.19	2280	
17450	217 229	< 1	0.2	0.59	< 2	160	0.5	< 2	0.72	0.5	6	64	14	0.72	< 10	< 1	0.11	10	0.16	1020	
17451	217 229	2	< 0.2	0.27	2	190	< 0.5	2	0.75	0.5	< 1	17	10	0.26	< 10	< 1	0.10	< 10	0.10	985	
17452	217 229	1	0.2	0.51	6	230	0.5	< 2	1.49	0.5	4	21	19	0.45	< 10	< 1	0.11	10	0.18	1505	
17453	217 229	1	< 0.2	0.16	< 2	150	< 0.5	< 2	1.07	1.0	1	9	14	0.19	< 10	< 1	0.12	< 10	0.12	635	
17454	217 229	< 1	0.4	0.32	< 2	160	< 0.5	< 2	1.13	0.5	2	44	9	0.43	< 10	< 1	0.09	< 10	0.11	575	
17455	217 229	2	0.2	0.24	2	250	< 0.5	< 2	1.51	1.5	2	13	13	0.26	< 10	< 1	0.10	< 10	0.11	1545	
17456	217 229	< 1	0.2	0.46	< 2	180	0.5	< 2	0.72	1.0	11	69	13	0.72	< 10	< 1	0.12	< 10	0.20	3090	
17457	217 229	1	0.2	0.34	6	380	< 0.5	< 2	1.21	0.5	1	30	11	0.33	< 10	< 1	0.10	< 10	0.10	2040	
17458	217 229	< 1	0.2	0.50	6	150	< 0.5	< 2	0.66	0.5	1	21	11	0.46	< 10	1	0.13	< 10	0.09	330	
17459	217 229	< 1	0.2	0.44	< 2	290	< 0.5	< 2	0.96	1.5	4	49	11	0.45	< 10	< 1	0.13	< 10	0.12	2560	
17460	217 229	< 1	< 0.2	0.45	2	70	< 0.5	< 2	0.52	< 0.5	1	35	12	0.48	< 10	< 1	0.08	< 10	0.09	95	
17461	217 229	< 1	0.4	0.24	2	160	< 0.5	< 2	0.47	< 0.5	< 1	34	5	0.23	< 10	< 1	0.07	< 10	0.05	100	
17462	217 229	< 1	< 0.2	0.39	2	190	< 0.5	2	0.75	0.5	2	38	10	0.45	< 10	< 1	0.08	< 10	0.09	1370	
17463	217 229	< 1	< 0.2	0.56	< 2	190	0.5	< 2	0.58	0.5	2	33	13	0.67	< 10	< 1	0.11	< 10	0.09	565	

CERTIFICATION: *L.T. Becker*



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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

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## CERTIFICATE OF ANALYSIS

A9522667

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16995	217 229	< 1	0.01	5	900	48	< 2	< 1	44	0.01	< 10	< 10	7	< 10	64
16996	217 229	< 1 < 0.01	4	990	68	< 2	< 1	58	0.01	< 10	< 10	9	< 10	108	
16997	217 229	< 1 < 0.01	4	950	52	< 2	< 1	67	< 0.01	< 10	< 10	5	< 10	98	
16998	217 229	< 1 < 0.01	3	1060	60	< 2	< 1	39	< 0.01	< 10	< 10	8	< 10	92	
16999	217 229	< 1 < 0.01	4	810	72	< 2	< 1	40	0.01	< 10	< 10	8	< 10	76	
17000	217 229	< 1 < 0.01	3	840	44	< 2	< 1	16	< 0.01	< 10	< 10	4	< 10	52	
17430	217 229	< 1 < 0.01	3	580	56	< 2	< 1	30	< 0.01	< 10	< 10	5	< 10	66	
17431	217 229	< 1 0.01	6	550	64	< 2	< 1	39	< 0.01	< 10	< 10	7	< 10	102	
17432	217 229	< 1 < 0.01	3	570	40	< 2	< 1	33	< 0.01	< 10	< 10	4	< 10	76	
17433	217 229	< 1 < 0.01	2	660	44	< 2	< 1	38	< 0.01	< 10	< 10	4	< 10	62	
17434	217 229	< 1 0.01	1	600	40	< 2	< 1	30	< 0.01	< 10	< 10	4	< 10	66	
17435	217 229	< 1 0.01	7	740	20	< 2	< 1	35	< 0.01	< 10	< 10	4	< 10	40	
17436	217 229	< 1 < 0.01	5	1030	60	< 2	< 1	35	0.01	< 10	< 10	7	< 10	96	
17437	217 229	< 1 < 0.01	5	1020	72	2	< 1	44	0.01	< 10	< 10	11	< 10	106	
17438	217 229	< 1 0.01	4	1290	36	< 2	< 1	59	< 0.01	< 10	< 10	5	< 10	102	
17439	217 229	< 1 0.01	11	1090	24	< 2	< 1	48	< 0.01	< 10	< 10	6	< 10	56	
17440	217 229	< 1 0.01	7	640	24	< 2	1	31	0.06	< 10	< 10	19	< 10	84	
17441	217 229	< 1 < 0.01	1	1050	24	10	< 1	42	< 0.01	< 10	< 10	2	< 10	230	
17442	217 229	< 1 < 0.01	4	1090	58	2	< 1	54	< 0.01	< 10	10	6	< 10	380	
17443	217 229	< 1 < 0.01	4	1310	50	< 2	< 1	61	< 0.01	< 10	10	6	< 10	188	
17444	217 229	< 1 < 0.01	4	1270	50	< 2	< 1	35	< 0.01	< 10	< 10	7	< 10	138	
17445	217 229	< 1 0.01	4	940	46	< 2	1	35	0.03	< 10	< 10	16	< 10	102	
17446	217 229	< 1 0.01	4	820	58	< 2	1	29	0.02	< 10	< 10	13	< 10	60	
17447	217 229	< 1 0.01	4	1190	66	< 2	< 1	29	0.01	< 10	< 10	11	< 10	72	
17448	217 229	< 1 < 0.01	4	1130	70	< 2	< 1	28	0.01	< 10	< 10	8	< 10	136	
17449	217 229	1 0.01	13	1190	60	2	1	52	0.01	< 10	< 10	13	< 10	170	
17450	217 229	< 1 0.01	7	900	52	< 2	1	27	0.04	< 10	< 10	19	< 10	64	
17451	217 229	< 1 < 0.01	3	1000	52	< 2	< 1	27	< 0.01	< 10	< 10	6	< 10	108	
17452	217 229	< 1 0.01	5	1330	70	2	1	43	0.01	< 10	< 10	10	< 10	98	
17453	217 229	< 1 0.01	3	1250	48	< 2	< 1	30	< 0.01	< 10	< 10	4	< 10	128	
17454	217 229	< 1 < 0.01	4	960	46	< 2	< 1	39	0.02	< 10	< 10	9	< 10	66	
17455	217 229	< 1 < 0.01	3	1330	62	< 2	< 1	46	< 0.01	< 10	< 10	6	< 10	206	
17456	217 229	1 0.02	9	810	60	< 2	1	26	0.03	< 10	< 10	21	< 10	90	
17457	217 229	< 1 < 0.01	4	1060	48	< 2	< 1	42	0.01	< 10	< 10	8	< 10	98	
17458	217 229	< 1 < 0.01	4	1200	64	< 2	1	28	0.01	< 10	< 10	11	< 10	70	
17459	217 229	1 0.01	6	1050	66	< 2	< 1	46	0.01	< 10	< 10	11	< 10	150	
17460	217 229	< 1 0.01	3	950	30	< 2	1	22	0.03	< 10	< 10	12	< 10	46	
17461	217 229	< 1 0.01	2	690	24	< 2	< 1	19	0.02	< 10	< 10	6	< 10	24	
17462	217 229	< 1 < 0.01	5	790	42	< 2	< 1	33	0.02	< 10	< 10	12	< 10	110	
17463	217 229	< 1 0.01	5	960	92	2	1	31	0.02	< 10	< 10	17	< 10	96	

CERTIFICATION: 



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Account :JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9522667

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17464	217 229	2 < 0.2	0.33	< 2	160	< 0.5	2	0.86	0.5	< 1	12	12	0.31	< 10	< 1	0.15	< 10	0.11	595	
17465	217 229	2 0.4	0.23	< 2	170	< 0.5	< 2	1.61	1.5	3	23	17	0.24	< 10	< 1	0.64	< 10	0.28	980	
17466	217 229	1 < 0.2	0.74	2	40	0.5	< 2	1.50	< 0.5	3	58	15	1.05	< 10	< 1	0.13	10	0.41	320	
17467	217 229	< 1 < 0.2	0.65	2	50	0.5	2	2.36	< 0.5	1	51	16	1.08	< 10	< 1	0.09	10	0.33	325	
✓ 17651	217 229	< 1 < 0.2	0.35	4	90	< 0.5	< 2	0.38	1.0	2	18	14	0.36	< 10	< 1	0.09	< 10	0.08	100	
✓ 17652	217 229	< 1 < 0.2	0.29	8	180	< 0.5	2	0.90	< 0.5	1	40	11	0.32	< 10	< 1	0.07	< 10	0.09	650	
17653	217 229	< 1 < 0.2	0.30	< 2	140	< 0.5	2	0.58	0.5	1	49	11	0.34	< 10	< 1	0.11	< 10	0.10	380	
17655	217 229	1 < 0.2	0.41	2	240	< 0.5	2	0.52	0.5	1	79	11	0.38	< 10	< 1	0.08	< 10	0.07	215	
17656	217 229	1 < 0.2	0.31	4	100	< 0.5	2	0.48	< 0.5	< 1	23	9	0.34	< 10	< 1	0.11	< 10	0.08	105	
17657	217 229	1 < 0.2	0.42	4	130	< 0.5	< 2	0.54	< 0.5	2	34	7	0.42	< 10	< 1	0.09	< 10	0.09	360	
17658	217 229	2 0.2	0.42	< 2	190	< 0.5	< 2	0.52	0.5	1	32	11	0.40	< 10	< 1	0.15	< 10	0.09	640	
17659	217 229	3 0.4	0.26	< 2	180	< 0.5	< 2	1.00	0.5	1	16	11	0.26	< 10	< 1	0.14	< 10	0.11	1060	
17660	217 229	2 < 0.2	0.33	2	160	< 0.5	2	1.10	0.5	1	41	10	0.34	< 10	< 1	0.11	< 10	0.10	630	
17661	217 229	2 0.4	0.61	< 2	140	0.5	< 2	0.74	< 0.5	2	25	10	0.51	< 10	< 1	0.11	< 10	0.13	415	
17662	217 229	1 < 0.2	0.37	6	260	< 0.5	< 2	1.22	1.5	1	19	11	0.32	< 10	< 1	0.16	< 10	0.13	2690	
17663	217 229	1 < 0.2	0.21	4	40	< 0.5	< 2	0.92	< 0.5	< 1	9	6	0.22	< 10	< 1	0.07	< 10	0.11	80	
17664	217 229	< 1 < 0.2	0.34	4	100	< 0.5	2	0.46	< 0.5	< 1	48	6	0.31	< 10	< 1	0.07	< 10	0.07	55	
17665	217 229	1 < 0.2	0.26	2	90	< 0.5	< 2	0.41	0.5	< 1	24	9	0.28	< 10	< 1	0.11	< 10	0.06	75	
17666	217 229	2 < 0.2	0.20	2	60	< 0.5	< 2	0.84	< 0.5	< 1	8	12	0.20	< 10	< 1	0.08	< 10	0.11	75	
17667	217 229	< 1 0.6	0.19	< 2	200	< 0.5	< 2	0.55	1.0	< 1	17	13	0.22	< 10	< 1	0.16	< 10	0.07	415	

CERTIFICATION:



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J: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

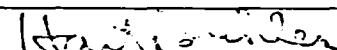
Project: 2000  
 Comments: ATTN: M. STALKER

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 Certificate Date: 08-AUG-95  
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 P.O. Number:  
 Account: JWW

## CERTIFICATE OF ANALYSIS

A9522667

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17464	217 229	< 1	< 0.01	4	1300	60	< 2	< 1	43	< 0.01	< 10	< 10	7	< 10	74
17465	217 229	< 1	< 0.01	3	1250	38	< 2	< 1	71	< 0.01	< 10	< 10	6	< 10	214
17466	217 229	< 1	0.02	15	960	38	2	2	25	0.04	< 10	< 10	21	< 10	28
17467	217 229	< 1	0.01	8	1010	20	2	1	32	0.03	< 10	< 10	17	< 10	18
17651	217 229	< 1	0.01	10	690	40	< 2	< 1	25	< 0.01	< 10	< 10	6	< 10	30
17652	217 229	< 1	0.01	7	620	34	< 2	< 1	40	0.01	< 10	< 10	7	< 10	40
17653	217 229	< 1	0.01	7	710	52	< 2	< 1	37	0.01	< 10	< 10	8	< 10	48
17655	217 229	< 1	0.01	9	590	38	< 2	< 1	38	0.01	< 10	< 10	8	< 10	34
17656	217 229	< 1	0.01	4	990	54	< 2	< 1	24	0.01	< 10	< 10	8	< 10	44
17657	217 229	< 1	0.01	5	820	36	< 2	< 1	39	0.01	< 10	< 10	8	< 10	54
17658	217 229	< 1	0.01	4	1160	62	< 2	< 1	43	0.01	< 10	< 10	10	< 10	74
17659	217 229	< 1	0.01	2	1250	54	< 2	< 1	54	< 0.01	< 10	< 10	6	< 10	96
17660	217 229	< 1	0.01	3	830	60	< 2	< 1	62	0.01	< 10	< 10	8	< 10	76
17661	217 229	< 1	0.01	4	1130	44	< 2	1	40	0.02	< 10	< 10	12	< 10	42
17662	217 229	< 1	0.01	4	1100	42	< 2	< 1	50	< 0.01	< 10	< 10	8	< 10	158
17663	217 229	< 1	0.01	2	670	48	< 2	< 1	23	< 0.01	< 10	< 10	5	< 10	34
17664	217 229	< 1	0.01	3	740	54	< 2	< 1	30	< 0.01	< 10	< 10	6	< 10	36
17665	217 229	< 1	0.01	2	870	64	< 2	< 1	26	0.01	< 10	< 10	6	< 10	70
17666	217 229	< 1	0.01	2	730	46	2	< 1	41	< 0.01	< 10	< 10	4	< 10	20
17667	217 229	< 1	0.01	2	820	40	< 2	< 1	33	0.01	< 10	< 10	5	< 10	118

CERTIFICATION: 



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522664

SAMPLE	PREP CODE	Au	NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
		ppb	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
16973	217 229	6	0.8	1.49	8	270	1.0	< 2	0.73	< 0.5	145	63	39	2.74	10	6	0.11	60	0.44	8520	
16974	217 229	35	0.2	1.23	< 2	170	1.0	< 2	0.69	< 0.5	89	39	27	1.48	10	2	0.15	40	0.28	4090	
16975	217 229	2	< 0.2	0.32	6	170	< 0.5	< 2	0.90	0.5	4	10	12	0.37	< 10	1	0.10	< 10	0.09	520	
16976	217 229	3	0.4	0.91	< 2	140	< 0.5	< 2	0.75	< 0.5	14	69	24	1.08	10	2	0.10	30	0.36	1010	
16977	217 229	2	< 0.2	0.68	< 2	150	< 0.5	< 2	0.46	0.5	6	44	13	0.55	< 10	< 1	0.09	10	0.10	200	
16978	217 229	1	0.2	0.33	< 2	200	< 0.5	< 2	0.59	0.5	4	22	10	0.32	< 10	< 1	0.09	< 10	0.09	350	
16979	217 229	3	< 0.2	0.37	< 2	180	< 0.5	< 2	0.66	0.5	6	61	12	0.51	< 10	< 1	0.11	< 10	0.12	605	
16980	217 229	< 1	< 0.2	0.23	2	110	< 0.5	< 2	1.83	0.5	< 1	10	10	0.25	< 10	1	0.07	< 10	0.20	120	
16981	217 229	1	< 0.2	0.20	4	110	< 0.5	< 2	1.88	0.5	1	9	15	0.20	< 10	< 1	0.07	10	0.17	115	
16982	217 229	< 1	0.2	0.30	< 2	440	< 0.5	< 2	1.64	2.5	4	26	12	0.31	< 10	2	0.10	< 10	0.11	1970	
16983	217 229	1	0.4	0.28	2	350	< 0.5	< 2	1.48	1.5	3	18	11	0.30	< 10	1	0.17	< 10	0.13	3090	
16984	217 229	2	0.4	0.35	2	240	< 0.5	< 2	0.79	0.5	1	34	10	0.43	< 10	< 1	0.18	< 10	0.10	1630	
16985	217 229	4	< 0.2	0.36	4	380	< 0.5	< 2	1.25	1.0	2	22	10	0.37	< 10	2	0.12	< 10	0.10	2330	
16986	217 229	2	0.2	0.40	4	410	< 0.5	< 2	1.29	1.0	4	32	10	0.48	< 10	< 1	0.15	< 10	0.12	2690	
16987	217 229	1	0.2	0.37	< 2	290	< 0.5	< 2	1.41	1.0	2	47	11	0.55	< 10	2	0.11	< 10	0.13	2100	
16988	217 229	3	< 0.2	0.31	2	240	< 0.5	< 2	0.94	1.0	2	28	11	0.39	< 10	1	0.14	< 10	0.12	1690	
16989	217 229	< 1	0.2	0.37	< 2	260	< 0.5	< 2	0.96	1.0	3	18	11	0.40	< 10	1	0.17	< 10	0.09	950	
16990	217 229	1	< 0.2	0.38	4	280	< 0.5	< 2	0.69	0.5	4	35	9	0.43	< 10	< 1	0.10	< 10	0.07	935	
16991	217 229	2	0.2	0.29	< 2	310	< 0.5	< 2	1.02	0.5	3	17	10	0.37	< 10	1	0.16	< 10	0.10	970	
16992	217 229	2	< 0.2	0.18	< 2	220	< 0.5	< 2	1.16	1.0	1	9	11	0.22	< 10	< 1	0.12	< 10	0.10	850	
16993	217 229	1	< 0.2	0.39	2	280	< 0.5	< 2	0.95	1.0	2	14	12	0.44	< 10	1	0.11	< 10	0.10	1170	
16994	217 229	1	< 0.2	0.39	< 2	200	< 0.5	< 2	0.67	0.5	3	61	11	0.58	< 10	1	0.09	< 10	0.10	785	
17203	217 229	2	< 0.2	0.56	2	170	< 0.5	< 2	0.75	0.5	4	24	16	0.47	< 10	1	0.11	10	0.10	230	
17204	217 229	1	< 0.2	0.46	< 2	80	< 0.5	2	0.58	< 0.5	1	96	8	0.46	< 10	1	0.09	< 10	0.09	310	
17205	217 229	< 1	< 0.2	0.37	4	160	< 0.5	< 2	1.26	0.5	2	12	13	0.29	< 10	< 1	0.11	< 10	0.13	550	
17206	217 229	1	< 0.2	0.38	< 2	240	< 0.5	< 2	1.87	2.0	3	42	13	0.37	< 10	3	0.12	< 10	0.19	1450	
17207	217 229	< 1	< 0.2	0.45	2	220	< 0.5	< 2	2.08	2.0	4	28	17	0.46	< 10	< 1	0.13	10	0.24	1740	
17208	217 229	< 1	0.2	0.37	< 2	200	< 0.5	< 2	1.41	1.0	2	9	17	0.23	< 10	< 1	0.08	80	0.13	1195	
17209	217 229	2	< 0.2	0.29	< 2	310	< 0.5	< 2	1.60	1.5	4	38	10	0.31	< 10	2	0.11	< 10	0.12	1775	
17210	217 229	2	0.2	0.55	2	400	< 0.5	< 2	1.13	1.0	5	39	13	0.56	< 10	3	0.12	< 10	0.12	2770	
17211	217 229	< 1	0.2	0.38	< 2	350	< 0.5	< 2	1.33	1.5	4	36	10	0.43	< 10	1	0.11	< 10	0.12	2360	
17212	217 229	< 1	0.2	0.25	< 2	290	< 0.5	< 2	1.53	2.0	5	16	15	0.30	< 10	< 1	0.13	< 10	0.13	1135	
17213	217 229	7	< 0.2	0.13	< 2	200	< 0.5	< 2	2.37	1.0	2	10	25	0.17	< 10	< 1	0.12	< 10	0.20	455	
17214	217 229	< 1	< 0.2	0.39	4	140	< 0.5	< 2	1.72	1.5	4	28	17	0.46	< 10	< 1	0.09	< 10	0.16	295	
17215	217 229	< 1	< 0.2	0.35	2	140	< 0.5	2	2.78	1.0	1	9	51	0.24	< 10	< 1	0.07	20	0.28	210	
17216	217 229	1	< 0.2	0.31	8	180	< 0.5	< 2	1.58	1.0	2	12	12	0.34	< 10	< 1	0.10	< 10	0.13	300	
17217	217 229	1	0.2	0.68	< 2	180	< 0.5	< 2	3.14	1.0	4	47	67	0.58	< 10	< 1	0.08	40	0.33	335	
17218	217 229	1	< 0.2	0.32	4	180	< 0.5	< 2	1.17	1.0	< 1	16	10	0.33	< 10	1	0.12	< 10	0.09	65	
17219	217 229	< 1	0.2	0.21	< 2	120	< 0.5	< 2	0.95	0.5	< 1	11	14	0.23	< 10	< 1	0.12	< 10	0.10	90	
17220	217 229	3	< 0.2	0.15	< 2	70	< 0.5	< 2	1.13	0.5	1	10	9	0.18	< 10	< 1	0.09	< 10	0.09	85	

CERTIFICATION: *[Signature]*



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A9522664

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Tl %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
16973	217 229	3	0.01	32	1240	68	2	3	51	0.06	< 10	10	45	< 10	90
16974	217 229	2	0.01	21	1100	42	< 2	2	47	0.05	< 10	< 10	27	< 10	62
16975	217 229	< 1	0.01	5	1170	62	< 2	< 1	51	< 0.01	< 10	< 10	8	< 10	150
16976	217 229	1	0.02	20	910	30	< 2	1	48	0.04	< 10	< 10	22	< 10	50
16977	217 229	1	0.01	11	880	40	< 2	1	40	0.03	< 10	< 10	13	< 10	56
16978	217 229	< 1	0.01	6	900	44	< 2	< 1	41	0.01	< 10	< 10	8	< 10	68
16979	217 229	< 1	0.01	10	1060	50	< 2	< 1	45	0.02	< 10	< 10	13	< 10	82
16980	217 229	< 1	0.01	4	680	50	< 2	< 1	41	< 0.01	< 10	< 10	6	< 10	74
16981	217 229	< 1	0.01	3	850	36	< 2	< 1	49	< 0.01	< 10	< 10	7	< 10	58
16982	217 229	< 1 < 0.01	3	1030	54	< 2	< 1	78	< 0.01	< 10	< 10	8	< 10	214	
16983	217 229	1 < 0.01	3	1480	62	< 2	< 1	64	< 0.01	< 10	< 10	8	< 10	246	
16984	217 229	1 < 0.01	3	1400	60	2	< 1	40	0.01	< 10	< 10	10	< 10	140	
16985	217 229	1 < 0.01	6	1160	66	< 2	< 1	57	0.01	< 10	< 10	9	< 10	108	
16986	217 229	< 1 < 0.01	5	1300	72	2	< 1	62	0.01	< 10	< 10	12	< 10	124	
16987	217 229	< 1 < 0.01	4	1110	64	< 2	< 1	65	0.03	< 10	< 10	14	< 10	176	
16988	217 229	< 1 < 0.01	6	1220	64	< 2	< 1	47	0.01	< 10	< 10	10	< 10	132	
16989	217 229	1	0.01	5	1260	96	< 2	< 1	44	0.01	< 10	< 10	9	< 10	128
16990	217 229	1	0.01	6	920	46	< 2	< 1	30	0.01	< 10	< 10	9	< 10	54
16991	217 229	1 < 0.01	3	1330	70	< 2	< 1	52	< 0.01	< 10	< 10	8	< 10	84	
16992	217 229	< 1 < 0.01	3	1060	48	< 2	< 1	54	< 0.01	< 10	< 10	4	< 10	186	
16993	217 229	1 < 0.01	6	1130	68	2	< 1	39	0.01	< 10	< 10	10	< 10	156	
16994	217 229	< 1	0.01	4	930	44	< 2	< 1	33	0.03	< 10	< 10	14	< 10	116
17203	217 229	1	0.01	7	1130	36	< 2	< 1	50	0.01	< 10	< 10	10	< 10	80
17204	217 229	< 1	0.01	3	720	30	< 2	< 1	38	0.03	< 10	< 10	12	< 10	44
17205	217 229	< 1	0.01	7	1400	46	2	< 1	70	< 0.01	< 10	< 10	6	< 10	46
17206	217 229	< 1 < 0.01	4	1200	72	2	< 1	73	0.01	< 10	< 10	9	< 10	132	
17207	217 229	< 1	0.01	5	1370	92	< 2	1	57	0.01	< 10	< 10	11	< 10	118
17208	217 229	< 1	0.01	6	1150	40	2	< 1	76	< 0.01	< 10	< 10	4	< 10	66
17209	217 229	< 1	0.01	3	960	68	2	< 1	72	0.01	< 10	< 10	8	< 10	170
17210	217 229	1	0.01	5	920	72	< 2	1	55	0.02	< 10	< 10	15	< 10	166
17211	217 229	< 1 < 0.01	4	960	70	2	< 1	63	0.02	< 10	< 10	12	< 10	192	
17212	217 229	< 1	0.01	4	1230	82	2	< 1	59	< 0.01	< 10	< 10	7	< 10	218
17213	217 229	< 1	0.01	7	1230	40	2	< 1	49	< 0.01	< 10	< 10	4	< 10	140
17214	217 229	< 1	0.01	6	1080	70	< 2	1	42	0.01	< 10	< 10	14	< 10	148
17215	217 229	< 1	0.01	40	1010	22	< 2	< 1	55	< 0.01	< 10	< 10	7	< 10	56
17216	217 229	< 1	0.01	6	800	68	< 2	< 1	40	< 0.01	< 10	< 10	8	< 10	174
17217	217 229	< 1	0.01	41	1170	10	< 2	1	62	0.02	< 10	< 10	13	< 10	82
17218	217 229	1	0.01	6	680	44	< 2	1	31	0.01	< 10	< 10	7	< 10	58
17219	217 229	< 1 < 0.01	2	810	48	2	< 1	28	< 0.01	< 10	< 10	6	< 10	82	
17220	217 229	< 1 < 0.01	2	750	28	< 2	< 1	24	< 0.01	< 10	< 10	4	< 10	28	

CERTIFICATION:



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Certificate Date: 06-AUG-95  
 Invoice No.: 19522664  
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 Account: JWW

Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522664

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17221	217 229	< 1	< 0.2	0.22	< 2	70	< 0.5	< 2	1.60	< 0.5	1	100	13	0.37	< 10	< 1	0.06	< 10	0.18	200
17222	217 229	< 1	< 0.2	0.19	< 2	90	< 0.5	< 2	2.60	0.5	< 1	9	13	0.22	< 10	< 1	0.08	< 10	0.24	160
17223	217 229	< 1	< 0.2	0.29	< 2	40	< 0.5	< 2	1.09	< 0.5	2	129	10	0.45	< 10	< 1	0.04	< 10	0.16	180
17224	217 229	< 1	< 0.2	0.17	4	80	< 0.5	< 2	2.01	0.5	2	9	10	0.20	< 10	< 1	0.09	< 10	0.17	305
17225	217 229	3	0.2	0.35	6	140	< 0.5	< 2	0.67	0.5	< 1	16	13	0.29	< 10	< 1	0.08	< 10	0.06	95
17226	217 229	2	< 0.2	0.35	2	160	< 0.5	< 2	0.75	0.5	< 1	11	11	0.33	< 10	< 1	0.09	< 10	0.08	360
17227	217 229	3	< 0.2	0.64	2	200	< 0.5	< 2	0.53	0.5	3	16	18	0.59	< 10	< 1	0.14	< 10	0.12	115
17228	217 229	< 1	< 0.2	0.55	< 2	370	< 0.5	< 2	0.95	0.5	14	48	23	0.71	< 10	< 1	0.11	< 10	0.19	145
17229	217 229	1	0.6	0.35	< 2	180	< 0.5	< 2	0.54	0.5	2	60	14	0.42	< 10	< 1	0.11	< 10	0.13	145
17230	217 229	< 1	0.6	0.41	< 2	220	< 0.5	< 2	0.56	0.5	3	35	13	0.43	< 10	< 1	0.15	< 10	0.19	80
17231	217 229	< 1	< 0.2	0.36	2	150	< 0.5	< 2	0.57	< 0.5	1	19	11	0.40	< 10	< 1	0.10	< 10	0.10	125
17232	217 229	< 1	0.6	0.35	< 2	300	< 0.5	< 2	0.89	0.5	3	29	15	0.47	< 10	< 1	0.13	< 10	0.15	710
17233	217 229	2	0.2	0.38	2	380	< 0.5	< 2	0.85	0.5	9	32	13	0.50	< 10	1	0.10	< 10	0.15	1010
17234	217 229	< 1	0.2	0.51	< 2	210	< 0.5	< 2	0.59	0.5	6	57	14	0.57	< 10	< 1	0.09	< 10	0.14	830
17235	217 229	< 1	< 0.2	0.45	2	340	< 0.5	< 2	1.08	2.0	7	14	23	0.44	< 10	< 1	0.11	< 10	0.11	3300
17236	217 229	1	0.2	0.45	8	270	< 0.5	< 2	1.43	0.5	4	14	27	0.44	< 10	< 1	0.10	< 10	0.11	1165
17237	217 229	< 1	< 0.2	0.49	< 2	30	< 0.5	< 2	0.45	0.5	2	66	18	0.53	< 10	< 1	0.02	< 10	0.07	80
17238	217 229	< 1	< 0.2	0.50	2	130	< 0.5	< 2	0.54	0.5	2	35	16	0.49	< 10	< 1	0.08	< 10	0.08	105
17239	217 229	< 1	< 0.2	0.41	2	250	< 0.5	< 2	0.81	1.0	2	63	12	0.50	< 10	< 1	0.08	< 10	0.08	490
17240	217 229	3	< 0.2	0.48	2	230	< 0.5	< 2	0.70	1.0	1	12	11	0.45	< 10	< 1	0.10	< 10	0.09	695
17241	217 229	3	< 0.2	0.24	2	140	< 0.5	< 2	0.91	0.5	3	10	13	0.26	< 10	< 1	0.13	< 10	0.09	375
17242	217 229	< 1	< 0.2	0.64	< 2	30	< 0.5	< 2	1.50	< 0.5	4	45	16	1.31	< 10	1	0.07	10	0.35	295
17243	217 229	1	< 0.2	0.46	< 2	150	< 0.5	< 2	2.53	1.0	3	18	38	0.40	< 10	< 1	0.11	70	0.29	915
17244	217 229	1	< 0.2	0.27	< 2	190	< 0.5	< 2	2.98	0.5	1	7	52	0.18	< 10	< 1	0.08	20	0.28	365
17245	217 229	1	< 0.2	0.72	< 2	190	< 0.5	< 2	2.56	0.5	6	17	85	0.47	< 10	< 1	0.08	30	0.27	470
17246	217 229	< 1	< 0.2	0.85	< 2	200	< 0.5	< 2	2.79	0.5	3	24	103	0.58	< 10	< 1	0.08	40	0.32	380
17247	217 229	< 1	1.0	0.19	< 2	210	< 0.5	< 2	1.05	1.0	< 1	7	14	0.22	< 10	< 1	0.10	< 10	0.11	160
17248	217 229	2	0.2	0.60	< 2	280	< 0.5	< 2	0.93	0.5	3	54	8	0.83	< 10	< 1	0.12	< 10	0.15	1305
17249	217 229	2	0.2	0.50	2	660	< 0.5	< 2	1.20	3.0	11	34	15	0.58	< 10	< 1	0.17	< 10	0.13	8660
17250	217 229	2	0.2	0.49	< 2	420	< 0.5	< 2	0.78	1.5	4	50	14	0.55	< 10	< 1	0.13	< 10	0.11	2630
17251	217 229	2	0.2	0.31	< 2	230	< 0.5	< 2	0.79	0.5	1	18	13	0.35	< 10	< 1	0.10	< 10	0.10	665
17252	217 229	1	0.2	0.28	< 2	210	< 0.5	< 2	1.22	1.0	1	12	18	0.32	< 10	< 1	0.10	< 10	0.11	690
17253	217 229	1	< 0.2	0.59	< 2	200	< 0.5	< 2	0.59	0.5	2	23	12	0.56	< 10	< 1	0.14	< 10	0.11	140
17254	217 229	1	0.2	0.47	2	220	< 0.5	< 2	0.65	1.0	1	37	12	0.51	< 10	1	0.11	< 10	0.07	620
17255	217 229	3	0.2	0.27	4	110	< 0.5	< 2	0.55	< 0.5	2	9	9	0.25	< 10	< 1	0.13	< 10	0.09	210
17256	217 229	< 1	< 0.2	0.32	< 2	120	< 0.5	< 2	2.16	1.0	4	9	22	0.28	< 10	< 1	0.11	< 10	0.20	980
17257	217 229	< 1	< 0.2	0.19	4	60	< 0.5	< 2	2.14	0.5	< 1	6	9	0.20	< 10	< 1	0.08	< 10	0.25	185
17258	217 229	2	< 0.2	0.14	< 2	70	< 0.5	< 2	2.13	0.5	< 1	7	8	0.17	< 10	< 1	0.08	< 10	0.26	515
17259	217 229	1	< 0.2	0.18	2	130	< 0.5	< 2	2.85	0.5	3	6	13	0.38	< 10	1	0.06	< 10	0.28	2730
17260	217 229	< 1	< 0.2	0.08	< 2	60	< 0.5	< 2	2.20	< 0.5	1	6	7	0.13	< 10	< 1	0.04	< 10	0.22	635

CERTIFICATION: *Hans Beckler*



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATTN: M. STALKER

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 Total Pages : 4  
 Certificate Date: 06-AUG-95  
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 P.O. Number :  
 Account : JWW

## CERTIFICATE OF ANALYSIS

A9522664

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17221	217 229	< 1	0.01	6	650	14	< 2	< 1	34	0.03	< 10	< 10	8	< 10	34
17222	217 229	< 1	< 0.01	6	670	54	< 2	< 1	53	< 0.01	< 10	< 10	5	< 10	62
17223	217 229	< 1	0.01	7	350	6	< 2	< 1	29	0.02	< 10	< 10	8	< 10	20
17224	217 229	< 1	< 0.01	3	820	40	< 2	< 1	35	< 0.01	< 10	< 10	4	< 10	58
17225	217 229	< 1	0.01	5	830	62	< 2	< 1	21	< 0.01	< 10	< 10	7	< 10	64
17226	217 229	< 1	< 0.01	6	1050	56	< 2	< 1	25	< 0.01	< 10	< 10	7	< 10	112
17227	217 229	< 1	0.01	14	1390	54	< 2	< 1	35	0.01	< 10	< 10	9	< 10	76
17228	217 229	< 1	0.01	39	960	16	< 2	< 1	58	0.06	< 10	< 10	16	< 10	40
17229	217 229	< 1	0.01	11	910	54	< 2	< 1	28	0.03	< 10	< 10	11	< 10	68
17230	217 229	< 1	< 0.01	22	1180	62	< 2	< 1	29	0.01	< 10	< 10	9	< 10	50
17231	217 229	< 1	< 0.01	12	950	44	< 2	< 1	30	0.01	< 10	< 10	7	< 10	54
17232	217 229	< 1	0.01	12	1270	68	< 2	< 1	41	0.01	< 10	< 10	11	< 10	94
17233	217 229	< 1	0.01	21	1100	76	< 2	< 1	43	0.01	< 10	< 10	10	< 10	90
17234	217 229	< 1	0.01	17	1020	42	< 2	< 1	32	0.02	< 10	< 10	14	< 10	68
17235	217 229	< 1	0.01	14	1440	58	< 2	< 1	43	< 0.01	< 10	< 10	9	< 10	210
17236	217 229	5	0.01	12	1440	82	< 2	< 1	49	< 0.01	< 10	< 10	10	< 10	74
17237	217 229	< 1	0.02	4	280	14	< 2	< 1	14	0.07	< 10	< 10	19	< 10	24
17238	217 229	< 1	0.01	11	990	50	< 2	< 1	27	0.01	< 10	< 10	10	< 10	54
17239	217 229	< 1	0.01	7	850	52	< 2	< 1	44	0.02	< 10	< 10	10	< 10	90
17240	217 229	< 1	0.01	7	1150	96	< 2	< 1	40	< 0.01	< 10	< 10	10	< 10	72
17241	217 229	< 1	0.01	4	1180	48	< 2	< 1	38	< 0.01	< 10	< 10	6	< 10	74
17242	217 229	< 1	0.04	6	580	8	< 2	< 1	27	0.09	< 10	< 10	28	< 10	22
17243	217 229	< 1	0.01	12	1400	76	< 2	< 1	73	< 0.01	< 10	< 10	10	< 10	66
17244	217 229	< 1	0.01	27	1280	38	< 2	< 1	74	< 0.01	< 10	< 10	6	< 10	70
17245	217 229	< 1	< 0.01	61	1450	28	< 2	< 1	63	< 0.01	< 10	< 10	8	< 10	36
17246	217 229	< 1	0.01	79	1490	20	< 2	< 1	71	0.01	< 10	< 10	9	< 10	50
17247	217 229	< 1	< 0.01	9	1030	54	< 2	< 1	37	< 0.01	< 10	< 10	4	< 10	58
17248	217 229	< 1	0.01	8	960	68	< 2	< 1	43	0.04	< 10	< 10	20	< 10	94
17249	217 229	< 1	0.01	11	1460	152	< 2	< 1	73	0.01	< 10	< 10	13	< 10	288
17250	217 229	< 1	< 0.01	7	1280	102	< 2	< 1	54	0.01	< 10	< 10	12	< 10	182
17251	217 229	< 1	< 0.01	4	1110	62	< 2	< 1	55	0.01	< 10	< 10	8	< 10	60
17252	217 229	< 1	0.01	4	1240	74	< 2	< 1	45	< 0.01	< 10	< 10	6	< 10	146
17253	217 229	< 1	0.01	6	1590	74	< 2	< 1	34	0.01	< 10	< 10	11	< 10	84
17254	217 229	< 1	< 0.01	5	1070	94	< 2	< 1	37	0.01	< 10	< 10	12	< 10	102
17255	217 229	< 1	< 0.01	6	1180	52	< 2	< 1	39	< 0.01	< 10	< 10	6	< 10	36
17256	217 229	< 1	0.01	7	830	56	< 2	< 1	56	< 0.01	< 10	< 10	8	< 10	78
17257	217 229	< 1	0.01	3	810	48	< 2	< 1	40	< 0.01	< 10	< 10	4	< 10	30
17258	217 229	< 1	0.01	3	740	40	< 2	< 1	46	< 0.01	< 10	< 10	3	< 10	36
17259	217 229	< 1	0.01	7	790	46	< 2	< 1	52	< 0.01	< 10	< 10	4	< 10	58
17260	217 229	< 1	0.01	2	710	26	< 2	< 1	41	< 0.01	< 10	< 10	2	< 10	26

CERTIFICATION: John B. Stalker



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O: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Page Nur. :3-A  
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 Invoice No. :19522664  
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Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9522664

SAMPLE	PREP CODE	Au NAA	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
		ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm
17261	217 229	< 1	0.2	0.20	< 2	260	< 0.5	< 2	0.94	0.5	< 1	6	10	0.21	< 10	< 1	0.08	< 10	0.10	170
17262	217 229	1	0.4	0.43	< 2	270	< 0.5	< 2	0.96	0.5	3	24	13	0.45	< 10	< 1	0.10	< 10	0.14	240
17263	217 229	2	< 0.2	0.39	< 2	600	< 0.5	< 2	1.48	1.5	10	61	15	0.57	< 10	< 1	0.11	< 10	0.23	3290
17264	217 229	1	< 0.2	0.44	< 2	640	< 0.5	< 2	1.27	2.0	7	44	12	0.52	< 10	< 1	0.12	< 10	0.15	6450
17265	217 229	2	< 0.2	0.41	< 2	650	< 0.5	< 2	1.55	2.0	12	27	16	0.48	< 10	< 1	0.17	< 10	0.16	7550
17266	217 229	2	0.4	0.44	< 2	270	< 0.5	< 2	0.69	0.5	6	49	13	0.46	< 10	< 1	0.12	< 10	0.13	1445
17267	217 229	1	0.2	0.46	2	560	< 0.5	< 2	1.01	3.0	8	28	17	0.53	< 10	1	0.14	< 10	0.12	5220
17268	217 229	< 1	< 0.2	0.89	< 2	280	< 0.5	< 2	1.01	0.5	7	90	11	1.22	< 10	< 1	0.13	< 10	0.34	1675
17269	217 229	2	0.4	0.51	< 2	380	< 0.5	< 2	1.08	0.5	14	40	20	0.46	< 10	< 1	0.10	< 10	0.15	1585
17270	217 229	< 1	0.2	0.36	< 2	260	< 0.5	< 2	1.12	0.5	3	49	8	0.46	< 10	< 1	0.11	< 10	0.14	1210
17271	217 229	1	0.4	0.43	< 2	380	< 0.5	< 2	1.31	1.5	6	31	12	0.40	< 10	< 1	0.15	< 10	0.11	2910
17272	217 229	< 1	0.6	0.25	< 2	450	< 0.5	< 2	2.17	1.5	3	12	15	0.28	< 10	< 1	0.14	< 10	0.12	2200
17273	217 229	< 1	0.2	0.74	< 2	210	< 0.5	< 2	0.62	0.5	6	35	27	0.80	< 10	< 1	0.09	< 10	0.13	220
17274	217 229	< 1	0.2	0.53	2	330	< 0.5	< 2	1.01	0.5	4	35	17	0.69	< 10	< 1	0.11	< 10	0.17	460
17275	217 229	< 1	0.2	0.65	4	340	< 0.5	< 2	0.60	1.0	10	23	38	0.80	< 10	< 1	0.11	< 10	0.12	505
17276	217 229	1	0.2	0.47	4	420	< 0.5	< 2	1.02	0.5	7	16	21	0.55	< 10	< 1	0.11	< 10	0.13	945
17277	217 229	< 1	0.4	0.80	< 2	260	< 0.5	< 2	0.60	0.5	338	38	88	1.32	< 10	< 1	0.11	10	0.35	4030
17278	217 229	2	0.4	0.50	< 2	330	< 0.5	< 2	0.76	0.5	4	26	11	0.53	< 10	< 1	0.11	< 10	0.11	900
17279	217 229	1	0.4	0.37	2	530	< 0.5	< 2	2.16	2.0	5	15	16	0.43	< 10	< 1	0.11	< 10	0.15	1895
17280	217 229	1	0.4	0.44	2	200	< 0.5	< 2	0.84	0.5	1	12	13	0.43	< 10	< 1	0.12	< 10	0.12	320
17281	217 229	1	< 0.2	0.43	4	240	< 0.5	< 2	0.89	0.5	1	26	12	0.45	< 10	< 1	0.08	< 10	0.09	480
17282	217 229	< 1	0.2	0.89	6	210	< 0.5	< 2	0.88	0.5	3	18	18	0.62	< 10	< 1	0.19	< 10	0.12	275
17283	217 229	< 1	0.4	1.05	4	270	< 0.5	< 2	0.84	0.5	87	31	30	1.03	< 10	< 1	0.14	20	0.17	4620
17284	217 229	1	0.4	0.56	4	460	< 0.5	< 2	1.12	2.0	7	21	14	0.57	< 10	< 1	0.61	< 10	0.19	3130
17285	217 229	< 1	0.2	0.69	2	270	< 0.5	< 2	0.87	0.5	9	56	20	0.72	< 10	< 1	0.12	10	0.18	925
17286	217 229	1	0.2	0.26	2	270	< 0.5	< 2	1.69	1.0	2	8	13	0.27	< 10	< 1	0.13	< 10	0.12	1305
17287	217 229	5	0.4	0.18	< 2	280	< 0.5	< 2	1.29	1.0	1	11	10	0.20	< 10	< 1	0.12	< 10	0.12	875
17288	217 229	3	0.6	0.33	2	280	< 0.5	< 2	1.84	1.0	3	11	15	0.33	< 10	< 1	0.12	< 10	0.12	790
17289	217 229	< 1	< 0.2	0.07	< 2	200	< 0.5	< 2	5.78	1.5	2	28	18	0.08	< 10	< 1	0.04	< 10	0.15	365
17290	217 229	2	< 0.2	0.23	< 2	220	< 0.5	< 2	2.26	2.0	1	7	24	0.22	< 10	< 1	0.09	< 10	0.21	275
17291	217 229	1	0.2	0.34	< 2	730	< 0.5	< 2	2.26	3.0	3	13	17	0.36	< 10	< 1	0.15	< 10	0.14	3950
17292	217 229	1	0.4	0.29	< 2	600	< 0.5	< 2	1.86	2.0	3	7	13	0.31	< 10	< 1	0.14	< 10	0.14	3590
17293	217 229	1	0.4	0.50	2	460	< 0.5	< 2	1.51	1.5	6	25	11	0.53	< 10	< 1	0.13	< 10	0.14	4110
17294	217 229	2	0.2	0.37	2	280	< 0.5	< 2	2.49	1.0	2	12	14	0.37	< 10	< 1	0.15	< 10	0.16	685
17295	217 229	5	< 0.2	0.51	4	60	< 0.5	< 2	3.18	< 0.5	3	40	31	0.91	< 10	< 1	0.14	10	0.37	435
17296	217 229	< 1	0.4	0.42	2	270	< 0.5	< 2	0.77	0.5	3	77	11	0.58	< 10	< 1	0.14	< 10	0.18	620
17297	217 229	< 1	0.2	0.65	< 2	200	< 0.5	< 2	0.46	0.5	3	108	10	0.82	< 10	< 1	0.13	< 10	0.31	325
17298	217 229	< 1	< 0.2	0.34	2	210	< 0.5	< 2	2.67	1.0	1	15	18	0.32	< 10	< 1	0.08	< 10	0.18	1025
17299	217 229	< 1	< 0.2	0.16	< 2	140	< 0.5	< 2	3.00	0.5	< 1	15	13	0.19	< 10	< 1	0.07	< 10	0.18	655
17300	217 229	17	< 0.2	0.31	4	160	< 0.5	< 2	2.18	0.5	2	10	20	0.31	< 10	< 1	0.07	10	0.26	875

CERTIFICATION:



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

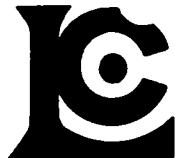
Page Num. 3-B  
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 P.O. Number  
 Account JWW

## CERTIFICATE OF ANALYSIS

A9522664

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17261	217 229	< 1	< 0.01	3	820	54	< 2	< 1	36	< 0.01	< 10	< 10	4	< 10	60
17262	217 229	< 1	0.01	29	1130	44	< 2	< 1	81	0.01	< 10	< 10	10	< 10	44
17263	217 229	< 1	0.01	34	1370	70	< 2	< 1	91	0.01	< 10	< 10	11	< 10	312
17264	217 229	1	< 0.01	10	1310	108	< 2	< 1	69	0.02	< 10	< 10	12	< 10	466
17265	217 229	< 1	< 0.01	12	1680	92	< 2	< 1	82	< 0.01	< 10	< 10	12	< 10	430
17266	217 229	< 1	0.01	11	1080	70	< 2	< 1	43	0.01	< 10	< 10	11	< 10	116
17267	217 229	< 1	< 0.01	10	1380	72	< 2	< 1	53	0.01	< 10	< 10	12	< 10	244
17268	217 229	< 1	0.02	14	1050	30	< 2	< 1	51	0.09	< 10	< 10	30	< 10	102
17269	217 229	< 1	0.01	15	840	46	< 2	< 1	62	0.03	< 10	< 10	13	< 10	80
17270	217 229	< 1	0.01	4	870	38	< 2	< 1	44	0.03	< 10	< 10	11	< 10	74
17271	217 229	< 1	< 0.01	4	1170	74	< 2	< 1	48	0.01	< 10	< 10	10	< 10	132
17272	217 229	< 1	0.01	4	1530	74	< 2	< 1	65	< 0.01	< 10	< 10	7	< 10	184
17273	217 229	4	0.01	14	1230	70	< 2	< 1	30	0.02	< 10	< 10	19	< 10	52
17274	217 229	1	< 0.01	11	1020	66	< 2	< 1	46	0.02	< 10	< 10	16	< 10	80
17275	217 229	1	< 0.01	16	1120	114	< 2	< 1	32	0.01	< 10	< 10	16	< 10	50
17276	217 229	1	< 0.01	11	1210	84	< 2	< 1	51	0.01	< 10	< 10	12	< 10	76
17277	217 229	< 1	0.02	17	910	36	< 2	2	29	0.11	< 10	< 10	37	< 10	46
17278	217 229	< 1	< 0.01	7	1000	78	< 2	< 1	41	0.02	< 10	< 10	14	< 10	52
17279	217 229	< 1	0.01	6	1230	86	< 2	< 1	85	0.01	< 10	< 10	10	< 10	246
17280	217 229	< 1	< 0.01	5	1260	72	< 2	< 1	43	0.01	< 10	< 10	10	< 10	82
17281	217 229	< 1	< 0.01	6	890	56	< 2	< 1	49	0.01	< 10	< 10	10	< 10	102
17282	217 229	6	< 0.01	7	1540	44	< 2	< 1	42	0.01	< 10	< 10	12	< 10	76
17283	217 229	1	0.01	13	1630	78	< 2	< 1	40	0.01	< 10	< 10	17	< 10	68
17284	217 229	1	0.01	7	1250	92	< 2	1	58	0.02	< 10	< 10	15	< 10	228
17285	217 229	< 1	0.01	13	1030	56	< 2	1	54	0.04	< 10	< 10	17	< 10	78
17286	217 229	< 1	< 0.01	4	1210	62	< 2	< 1	52	< 0.01	< 10	< 10	6	< 10	188
17287	217 229	< 1	< 0.01	3	1040	38	< 2	< 1	43	< 0.01	< 10	< 10	4	< 10	148
17288	217 229	< 1	< 0.01	4	1260	68	< 2	< 1	49	< 0.01	< 10	< 10	8	< 10	152
17289	217 229	< 1	< 0.01	6	1100	6	< 2	< 1	55	< 0.01	< 10	< 10	3	< 10	128
17290	217 229	< 1	0.01	5	1280	58	< 2	< 1	51	< 0.01	< 10	< 10	4	< 10	252
17291	217 229	< 1	< 0.01	5	1630	100	< 2	< 1	66	0.01	< 10	< 10	9	< 10	444
17292	217 229	< 1	< 0.01	4	1460	74	< 2	< 1	59	< 0.01	< 10	< 10	8	< 10	252
17293	217 229	1	< 0.01	5	1120	104	< 2	< 1	45	0.01	< 10	< 10	13	< 10	132
17294	217 229	< 1	< 0.01	7	1080	70	< 2	< 1	71	0.01	< 10	< 10	9	< 10	58
17295	217 229	< 1	0.01	8	1000	30	< 2	1	38	0.02	< 10	< 10	14	< 10	26
17296	217 229	< 1	0.01	9	830	56	< 2	< 1	45	0.06	< 10	< 10	15	< 10	76
17297	217 229	< 1	0.01	18	640	74	< 2	1	28	0.09	< 10	< 10	24	< 10	66
17298	217 229	< 1	0.01	6	760	58	< 2	< 1	63	< 0.01	< 10	< 10	8	< 10	118
17299	217 229	< 1	0.01	3	680	54	< 2	< 1	64	< 0.01	< 10	< 10	4	< 10	108
17300	217 229	< 1	0.01	12	730	44	< 2	< 1	55	< 0.01	< 10	< 10	7	< 10	62

CERTIFICATION: Hart Bichler



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

Page Num : 4-A  
 Total Pages : 4  
 Certificate Date: 06-AUG-95  
 Invoice No. : 19522664  
 P.O. Number :  
 Account : JWW

## CERTIFICATE OF ANALYSIS A9522664

SAMPLE	PREP CODE	Au NAA ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
17301	217 229	2 < 0.2	0.22	4	190 < 0.5	< 2	1.10	0.5	< 1	10	10	0.22	< 10	< 1	0.09	< 10	0.10	65		
17302	217 229	< 1 < 0.2	0.24	4	100 < 0.5	< 2	2.61	0.5	1	9	9	0.26	< 10	< 1	0.08	< 10	0.27	1320		
17303	217 229	< 1 < 0.2	0.20	2	70 < 0.5	< 2	2.08	< 0.5	1	8	3	0.25	< 10	< 1	0.04	< 10	0.17	100		
17304	217 229	< 1 < 0.2	0.28	2	40 < 0.5	< 2	1.07	< 0.5	< 1	11	7	0.26	< 10	< 1	0.09	< 10	0.09	35		
17305	217 229	1 < 0.2	0.21	2	70 < 0.5	< 2	2.18	0.5	< 1	10	8	0.22	< 10	< 1	0.07	< 10	0.10	160		
17306	217 229	< 1 < 0.2	0.25	2	240 < 0.5	< 2	0.98	0.5	< 1	21	12	0.27	< 10	< 1	0.12	< 10	0.10	280		
17307	217 229	1 < 0.2	0.91	< 2	220 < 0.5	< 2	1.15	1.0	20	28	25	0.66	< 10	< 1	0.09	20	0.16	1590		
17308	217 229	< 1 0.2	0.94	< 2	130 < 0.5	< 2	0.59	< 0.5	8	103	19	1.03	< 10	< 1	0.10	10	0.23	755		
17309	217 229	4 0.4	0.40	< 2	200 < 0.5	< 2	0.82	0.5	2	58	12	0.40	< 10	< 1	0.13	< 10	0.11	340		
17310	217 229	1 0.2	0.29	< 2	200 < 0.5	< 2	0.90	0.5	1	66	16	0.42	< 10	< 1	0.17	< 10	0.16	830		
17311	217 229	2 < 0.2	0.36	< 2	290 < 0.5	< 2	1.01	1.0	3	54	11	0.57	< 10	< 1	0.13	< 10	0.13	2950		
17312	217 229	1 0.2	0.24	< 2	510 < 0.5	< 2	1.01	1.5	2	11	11	0.25	< 10	< 1	0.13	< 10	0.07	3340		
17313	217 229	2 0.2	0.40	< 2	150 < 0.5	< 2	0.61	0.5	2	13	15	0.38	< 10	< 1	0.15	< 10	0.08	315		
17314	217 229	< 1 < 0.2	0.46	2	80 < 0.5	< 2	0.51	0.5	2	12	10	0.28	< 10	< 1	0.03	< 10	0.07	55		
17315	217 229	1 0.2	0.45	< 2	260 < 0.5	< 2	0.62	0.5	2	86	10	0.61	< 10	< 1	0.10	< 10	0.13	1035		
17316	217 229	1 0.2	0.52	< 2	320 < 0.5	< 2	1.19	1.0	8	62	14	0.63	< 10	< 1	0.09	< 10	0.18	2280		
17317	217 229	3 0.6	0.33	< 2	210 < 0.5	< 2	0.80	0.5	2	20	14	0.36	< 10	< 1	0.15	< 10	0.12	910		
17318	217 229	1 0.2	0.37	2	260 < 0.5	< 2	0.91	1.0	3	20	14	0.39	< 10	< 1	0.16	< 10	0.11	1535		
17319	217 229	< 1 < 0.2	0.38	< 2	220 < 0.5	< 2	0.60	0.5	2	69	10	0.44	< 10	< 1	0.11	< 10	0.10	1110		
17320	217 229	2 0.4	1.06	2	150 < 0.5	< 2	0.53	0.5	33	43	28	1.23	< 10	< 1	0.13	10	0.16	1630		
17321	217 229	1 0.4	1.09	< 2	160 < 0.5	< 2	0.58	< 0.5	11	69	28	1.07	< 10	1	0.16	20	0.23	375		
17322	217 229	2 0.2	0.43	< 2	320 < 0.5	< 2	0.93	1.0	1	31	11	0.44	< 10	< 1	0.13	< 10	0.12	1495		
17323	217 229	1 0.2	1.04	< 2	280 < 0.5	< 2	1.04	1.0	30	98	32	1.55	< 10	1	0.13	10	0.32	2890		
17324	217 229	< 1 < 0.2	0.20	< 2	580 < 0.5	< 2	1.89	4.0	4	9	19	0.20	< 10	< 1	0.09	< 10	0.13	2870		
17325	217 229	1 < 0.2	0.74	2	240 < 0.5	< 2	1.01	1.0	32	35	33	0.66	< 10	< 1	0.11	30	0.14	1755		
17326	217 229	2 2.6	0.47	< 2	340 < 0.5	< 2	0.98	1.0	4	26	16	0.45	< 10	< 1	0.14	< 10	0.12	580		
17327	217 229	< 1 0.2	0.36	4	530 < 0.5	< 2	1.87	3.0	2	15	17	0.36	< 10	< 1	0.43	< 10	0.31	2130		
17328	217 229	< 1 < 0.2	0.98	2	150 < 0.5	< 2	1.06	0.5	8	80	36	1.12	< 10	< 1	0.10	30	0.41	450		
17329	217 229	< 1 0.4	0.26	2	260 < 0.5	< 2	1.50	1.5	2	11	13	0.29	< 10	< 1	0.15	< 10	0.12	615		
17330	217 229	< 1 0.2	0.26	< 2	260 < 0.5	< 2	1.77	1.0	4	31	12	0.46	< 10	< 1	0.12	< 10	0.22	945		
17331	217 229	< 1 0.2	0.39	< 2	310 < 0.5	< 2	1.44	1.0	7	17	32	0.56	< 10	< 1	0.16	< 10	0.17	1465		
17332	217 229	1 0.4	0.20	< 2	300 < 0.5	< 2	2.20	2.0	2	11	13	0.23	< 10	< 1	0.41	< 10	0.12	1530		
17333	217 229	1 0.6	0.36	< 2	240 < 0.5	< 2	1.10	1.0	2	16	13	0.38	< 10	< 1	0.15	< 10	0.12	1785		
17334	217 229	3 < 0.2	0.44	< 2	240 < 0.5	< 2	0.56	0.5	1	69	9	0.50	< 10	< 1	0.08	< 10	0.09	345		
17335	217 229	< 1 0.2	0.35	< 2	300 < 0.5	< 2	0.80	1.0	2	41	13	0.52	< 10	< 1	0.09	< 10	0.11	375		
17336	217 229	< 1 < 0.2	0.94	4	60 < 0.5	< 2	2.74	< 0.5	13	40	31	1.38	< 10	< 1	0.12	10	0.42	620		
17337	217 229	< 1 < 0.2	0.40	2	140 < 0.5	< 2	0.44	0.5	1	81	6	0.44	< 10	1	0.08	< 10	0.08	360		
17338	217 229	2 < 0.2	0.42	< 2	200 < 0.5	< 2	0.88	0.5	1	59	12	0.49	< 10	< 1	0.14	< 10	0.15	1055		
17339	217 229	3 < 0.2	0.44	< 2	170 < 0.5	< 2	0.74	0.5	1	57	8	0.56	< 10	< 1	0.12	< 10	0.13	900		
17340	217 229	2 1.0	0.73	2	190 < 0.5	< 2	0.67	0.5	8	28	17	0.59	< 10	< 1	0.16	10	0.12	580		

CERTIFICATION: *[Handwritten Signature]*



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Page Num. : 4-B  
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 Certificate Date: 06-AUG-95  
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Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9522664

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
17301	217 229	< 1	0.01	3	560	52	< 2	< 1	54	< 0.01	< 10	< 10	6	< 10	54
17302	217 229	< 1	0.01	6	980	50	< 2	< 1	50	< 0.01	< 10	< 10	5	< 10	58
17303	217 229	< 1	0.01	3	610	24	< 2	< 1	43	< 0.01	< 10	< 10	4	< 10	18
17304	217 229	< 1	0.01	2	710	50	< 2	< 1	30	< 0.01	< 10	< 10	6	< 10	26
17305	217 229	< 1 < 0.01	2	660	38	< 2	< 1	39	< 0.01	< 10	< 10	5	< 10	40	
17306	217 229	< 1 < 0.01	2	1020	42	< 2	< 1	32	0.01	< 10	< 10	6	< 10	78	
17307	217 229	< 1	0.01	9	1640	46	< 2	< 1	55	0.01	< 10	< 10	10	< 10	74
17308	217 229	< 1	0.01	9	1000	32	< 2	1	30	0.06	< 10	< 10	26	< 10	46
17309	217 229	< 1	0.01	5	1140	66	< 2	1	40	0.02	< 10	< 10	11	< 10	82
17310	217 229	< 1	0.01	4	1360	32	< 2	< 1	40	0.03	< 10	< 10	12	< 10	104
17311	217 229	< 1 < 0.01	5	1240	56	< 2	< 1	43	0.02	< 10	< 10	17	< 10	154	
17312	217 229	< 1 < 0.01	3	1390	54	< 2	< 1	40	< 0.01	< 10	< 10	5	< 10	174	
17313	217 229	< 1	0.01	5	1660	34	< 2	< 1	33	< 0.01	< 10	< 10	7	< 10	62
17314	217 229	1 < 0.01	5	740	16	< 2	1	30	< 0.01	< 10	< 10	7	< 10	28	
17315	217 229	< 1	0.01	7	820	68	< 2	1	35	0.03	< 10	< 10	16	< 10	70
17316	217 229	1 < 0.01	8	970	68	< 2	< 1	42	0.02	< 10	< 10	15	< 10	132	
17317	217 229	< 1 < 0.01	4	1400	78	< 2	< 1	40	< 0.01	< 10	< 10	8	< 10	98	
17318	217 229	< 1 < 0.01	5	1490	82	< 2	< 1	53	< 0.01	< 10	< 10	9	< 10	136	
17319	217 229	< 1	0.01	7	1070	62	< 2	< 1	38	0.02	< 10	< 10	11	< 10	56
17320	217 229	< 1	0.01	9	1470	32	< 2	< 1	33	0.02	< 10	< 10	18	< 10	56
17321	217 229	1	0.01	11	1170	28	< 2	1	35	0.04	< 10	< 10	23	< 10	44
17322	217 229	< 1	0.01	5	1250	72	< 2	< 1	49	0.01	< 10	< 10	10	< 10	154
17323	217 229	< 1	0.01	23	1310	84	< 2	1	54	0.06	< 10	< 10	34	< 10	136
17324	217 229	< 1	0.01	6	1200	64	< 2	< 1	67	< 0.01	< 10	< 10	4	< 10	396
17325	217 229	< 1	0.01	10	1580	60	< 2	1	60	0.01	< 10	< 10	11	< 10	132
17326	217 229	< 1 < 0.01	7	1420	76	< 2	< 1	52	0.01	< 10	< 10	11	< 10	120	
17327	217 229	< 1 < 0.01	10	1240	52	< 2	< 1	80	< 0.01	< 10	< 10	8	< 10	404	
17328	217 229	< 1	0.01	28	1100	22	< 2	1	39	0.06	< 10	< 10	25	< 10	68
17329	217 229	< 1 < 0.01	4	1390	84	< 2	< 1	55	< 0.01	< 10	< 10	6	< 10	188	
17330	217 229	< 1	0.02	6	840	40	< 2	< 1	59	0.03	< 10	< 10	13	< 10	214
17331	217 229	< 1 < 0.01	8	1390	86	< 2	< 1	52	0.02	< 10	< 10	14	< 10	124	
17332	217 229	< 1	0.01	4	1220	54	< 2	< 1	68	< 0.01	< 10	< 10	4	< 10	272
17333	217 229	< 1 < 0.01	4	1580	74	< 2	< 1	43	< 0.01	< 10	< 10	8	< 10	174	
17334	217 229	< 1	0.01	5	660	46	< 2	< 1	30	0.03	< 10	< 10	12	< 10	66
17335	217 229	< 1	0.01	6	880	36	< 2	< 1	45	0.06	< 10	< 10	14	< 10	76
17336	217 229	< 1	0.01	15	920	30	< 2	1	35	0.03	< 10	< 10	21	< 10	40
17337	217 229	< 1	0.01	4	690	42	< 2	< 1	27	0.03	< 10	< 10	13	< 10	52
17338	217 229	< 1 < 0.01	5	1330	54	< 2	< 1	53	0.02	< 10	< 10	13	< 10	60	
17339	217 229	< 1 < 0.01	5	1000	42	< 2	< 1	43	0.03	< 10	< 10	17	< 10	92	
17340	217 229	< 1	0.01	10	1490	46	< 2	< 1	56	0.01	< 10	< 10	12	< 10	66

CERTIFICATION: \_\_\_\_\_



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

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 Account JWW

## CERTIFICATE OF ANALYSIS A9524909

SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19882	201 229	2	0.4	0.40	2	230	< 0.5	2	0.62	0.5	4	8	11	0.45	< 10	2	0.07	< 10	0.09	980
19883	201 229	2	0.6	0.44	< 2	390	< 0.5	< 2	1.05	1.5	11	7	12	0.49	< 10	3	0.08	10	0.11	3130
19884	201 229	2	0.2	0.28	< 2	240	< 0.5	< 2	1.93	1.5	4	8	26	0.35	< 10	2	0.08	20	0.17	1500
19885	201 229	< 1	0.2	0.31	< 2	260	< 0.5	< 2	2.39	3.0	4	7	23	0.38	< 10	1	0.07	< 10	0.25	1295
19886	201 229	2	0.2	1.13	< 2	140	0.5	< 2	1.21	< 0.5	4	28	69	0.94	< 10	1	0.07	60	0.32	250
19887	201 229	4	0.2	0.40	< 2	160	< 0.5	< 2	1.87	1.0	3	22	25	0.36	< 10	< 1	0.07	20	0.21	615
19888	201 229	< 1	0.8	0.45	4	300	0.5	< 2	1.03	1.5	12	8	22	0.51	< 10	< 1	0.08	10	0.11	2870
19889	201 229	< 1	0.2	0.36	4	180	< 0.5	2	0.75	0.5	2	10	12	0.45	< 10	1	0.08	< 10	0.08	605
19890	201 229	1	0.2	0.30	< 2	220	< 0.5	< 2	0.46	0.5	1	6	12	0.33	< 10	1	0.08	< 10	0.06	140
19891	201 229	3	0.2	0.36	< 2	180	< 0.5	2	0.40	0.5	< 1	7	7	0.41	< 10	1	0.08	< 10	0.08	85
19892	201 229	< 1	< 0.2	0.20	< 2	150	< 0.5	2	0.39	0.5	1	8	8	0.24	< 10	< 1	0.04	< 10	0.05	105
19893	201 229	2	< 0.2	0.19	< 2	70	< 0.5	< 2	1.56	< 0.5	< 1	14	8	0.22	< 10	< 1	0.07	< 10	0.15	80

CERTIFICATION: Hart Bickler



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A9524909

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19882	201 229	1 < 0.01	6	630	60	< 2	< 1	37	0.01	< 10	< 10	10	< 10	62	
19883	201 229	1 < 0.01	9	910	84	2	< 1	61	0.01	< 10	< 10	10	< 10	68	
19884	201 229	< 1 < 0.01	8	1100	68	2	1	59 < 0.01	< 10	< 10	< 10	8	< 10	120	
19885	201 229	< 1 < 0.01	6	1170	60	2	< 1	57 < 0.01	< 10	< 10	< 10	7	< 10	214	
19886	201 229	< 1 0.01	31	1240	8	< 2	2	39 0.03	10	< 10	< 10	19	< 10	40	
19887	201 229	< 1 0.01	11	910	32	2	< 1	57 0.01	< 10	< 10	< 10	7	< 10	88	
19888	201 229	1 < 0.01	5	1050	52	2	< 1	47 0.01	< 10	< 10	< 10	11	< 10	112	
19889	201 229	< 1 < 0.01	3	840	48	2	< 1	39 0.02	< 10	< 10	< 10	12	< 10	60	
19890	201 229	< 1 < 0.01	6	850	60	< 2	< 1	37 0.01	< 10	< 10	< 10	8	< 10	58	
19891	201 229	< 1 < 0.01	6	750	78	< 2	< 1	33 0.02	< 10	< 10	< 10	10	< 10	28	
19892	201 229	< 1 < 0.01	5	380	26	< 2	< 1	23 0.04	< 10	< 10	< 10	9	< 10	24	
19893	201 229	< 1 0.01	3	780	44	2	< 1	29 < 0.01	< 10	< 10	< 10	4	< 10	38	

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## **APPENDIX C**

### **“B” Horizon Geochemical Analysis Certificates**



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Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9524348

SAMPLE	PREP CODE		Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19446	201 229		< 1	0.2	1.81	< 2	120	< 0.5	< 2	0.50	< 0.5	8	47	20	1.58	10	< 1	0.07	20	0.33	295
19447	201 229		< 1	< 0.2	0.19	4	10	< 0.5	< 2	0.08	< 0.5	1	7	2	0.21	< 10	< 1	0.01	< 10	0.02	100
19448	201 229		< 1	< 0.2	0.23	2	10	< 0.5	< 2	0.06	< 0.5	< 1	5	2	0.22	< 10	< 1	0.01	< 10	0.02	30
19449	201 229		< 1	< 0.2	0.47	4	20	< 0.5	< 2	0.13	< 0.5	1	18	8	0.92	< 10	< 1	0.02	< 10	0.11	55
19450	201 229		< 1	< 0.2	0.60	< 2	10	< 0.5	< 2	0.13	< 0.5	3	16	9	1.04	< 10	< 1	0.03	< 10	0.14	60
19451	201 229		< 1	< 0.2	0.42	2	10	< 0.5	< 2	0.16	< 0.5	2	11	6	0.65	< 10	< 1	0.03	< 10	0.14	50
19452	201 229		< 1	< 0.2	0.68	< 2	40	< 0.5	< 2	0.30	< 0.5	6	70	8	0.93	< 10	< 1	0.03	< 10	0.40	220
19453	201 229		< 1	< 0.2	0.61	2	10	< 0.5	< 2	0.22	< 0.5	2	19	9	0.80	< 10	< 1	0.02	< 10	0.24	85
19454	201 229		< 1	< 0.2	0.62	< 2	20	< 0.5	< 2	0.23	< 0.5	4	18	6	0.82	< 10	< 1	0.02	< 10	0.21	105
19455	201 229		< 1	< 0.2	0.89	4	30	< 0.5	< 2	0.11	< 0.5	2	15	3	1.28	< 10	< 1	0.03	< 10	0.10	70
19456	201 229		< 1	< 0.2	2.73	< 2	30	< 0.5	< 2	0.13	< 0.5	8	45	21	2.46	< 10	< 1	0.03	10	0.26	95
19457	201 229		< 1	< 0.2	0.33	2	10	< 0.5	< 2	0.10	< 0.5	< 1	6	3	0.35	< 10	< 1	0.01	< 10	0.06	30
19458	201 229		< 1	< 0.2	0.45	4	20	< 0.5	< 2	0.14	< 0.5	1	11	5	0.51	< 10	< 1	0.02	< 10	0.11	50
19459	201 229		< 1	< 0.2	0.97	4	30	< 0.5	< 2	0.12	< 0.5	3	22	5	1.35	< 10	< 1	0.04	10	0.12	50
19460	201 229		< 1	< 0.2	1.14	< 2	40	< 0.5	< 2	0.11	< 0.5	2	23	5	2.23	< 10	< 1	0.04	< 10	0.15	60
19461	201 229		< 1	< 0.2	0.83	< 2	30	< 0.5	< 2	0.29	< 0.5	7	40	19	1.36	< 10	< 1	0.03	10	0.35	90
19462	201 229		< 1	0.2	0.97	4	60	< 0.5	< 2	0.31	< 0.5	6	23	15	1.27	< 10	< 1	0.04	10	0.29	225
19463	201 229		< 1	< 0.2	0.64	6	20	< 0.5	< 2	0.20	< 0.5	4	17	12	0.98	< 10	< 1	0.03	10	0.24	75
19464	201 229		< 1	< 0.2	0.52	< 2	20	< 0.5	< 2	0.18	< 0.5	2	12	9	0.75	< 10	< 1	0.03	< 10	0.16	55
19465	201 229		< 1	< 0.2	0.30	6	20	< 0.5	< 2	0.17	< 0.5	< 1	8	3	0.39	< 10	< 1	0.03	10	0.05	50
19466	201 229		< 1	< 0.2	0.81	4	30	< 0.5	< 2	0.19	< 0.5	4	19	15	1.38	< 10	< 1	0.03	< 10	0.18	125
19467	201 229		< 1	< 0.2	0.83	6	20	< 0.5	< 2	0.19	< 0.5	2	21	14	1.21	< 10	< 1	0.03	10	0.20	65
19468	201 229		< 1	< 0.2	1.14	< 2	30	< 0.5	< 2	0.21	< 0.5	7	25	20	1.44	< 10	< 1	0.03	< 10	0.43	95
19469	201 229		< 1	< 0.2	1.82	< 2	20	< 0.5	< 2	0.14	< 0.5	2	29	12	1.99	< 10	< 1	0.02	< 10	0.15	55
19470	201 229		< 1	< 0.2	1.57	< 2	20	< 0.5	< 2	0.22	< 0.5	7	27	21	1.79	< 10	< 1	0.04	10	0.45	80
19471	201 229		< 1	< 0.2	0.98	< 2	30	< 0.5	< 2	0.28	< 0.5	6	23	20	1.15	< 10	< 1	0.04	10	0.29	95
19472	201 229		3	0.2	1.02	< 2	30	< 0.5	< 2	0.44	< 0.5	11	28	29	1.37	< 10	< 1	0.05	10	0.50	190
19473	201 229		< 1	0.2	0.88	2	70	< 0.5	< 2	0.34	< 0.5	22	27	36	1.36	< 10	< 1	0.08	10	0.41	675
19474	201 229		< 1	0.2	1.54	12	80	< 0.5	< 2	0.23	< 0.5	7	28	8	1.86	< 10	< 1	0.08	10	0.21	95
19475	201 229		< 1	< 0.2	1.12	2	40	< 0.5	< 2	0.23	< 0.5	3	19	26	1.51	< 10	< 1	0.05	< 10	0.17	60
19476	201 229		< 1	< 0.2	1.02	4	40	< 0.5	< 2	0.23	< 0.5	4	37	10	1.85	< 10	< 1	0.07	< 10	0.31	125
19477	201 229		< 1	< 0.2	0.90	< 2	30	< 0.5	< 2	0.22	< 0.5	2	30	16	1.70	< 10	< 1	0.05	10	0.26	75
19478	201 229		< 1	< 0.2	0.53	6	30	< 0.5	< 2	0.19	< 0.5	2	13	10	0.81	< 10	< 1	0.04	< 10	0.13	50
19479	201 229		< 1	< 0.2	0.76	< 2	60	< 0.5	< 2	0.18	< 0.5	2	19	8	1.32	< 10	< 1	0.04	< 10	0.20	90
19480	201 229		< 1	< 0.2	0.96	< 2	60	< 0.5	< 2	0.16	< 0.5	2	19	4	1.11	< 10	< 1	0.06	10	0.13	165
19481	201 229		< 1	< 0.2	1.17	< 2	30	< 0.5	< 2	0.13	< 0.5	1	20	4	1.56	< 10	< 1	0.03	< 10	0.11	50
19482	201 229		< 1	< 0.2	1.09	6	40	< 0.5	< 2	0.14	< 0.5	6	122	19	1.46	< 10	< 1	0.03	10	0.38	85
19483	201 229		< 1	< 0.2	0.90	2	60	< 0.5	< 2	0.30	< 0.5	3	17	6	0.90	< 10	< 1	0.04	< 10	0.24	190
19484	201 229		< 1	< 0.2	1.03	2	30	< 0.5	< 2	0.17	< 0.5	4	21	7	1.51	< 10	< 1	0.03	< 10	0.16	70
19485	201 229		2	< 0.2	1.80	2	40	< 0.5	< 2	0.15	< 0.5	6	27	8	1.85	< 10	< 1	0.03	< 10	0.19	65

CERTIFICATION: *[Signature]*



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## CERTIFICATE OF ANALYSIS A9524348

SAMPLE	PREP CODE		Mo ppm	Na %	Mg ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19446	201	229	< 1	< 0.01	50	520	4	< 2	2	18	0.09	< 10	< 10	34	< 10	44
19447	201	229	< 1	< 0.01	4	80	2	< 2	< 1	7	0.08	< 10	< 10	11	< 10	2
19448	201	229	< 1	< 0.01	1	70	4	< 2	< 1	6	0.07	< 10	< 10	13	< 10	4
19449	201	229	< 1	< 0.01	5	180	4	< 2	< 1	6	0.07	< 10	< 10	38	< 10	12
19450	201	229	< 1	< 0.01	6	190	2	< 2	1	5	0.08	< 10	< 10	33	< 10	12
19451	201	229	< 1	< 0.01	5	120	< 2	< 2	1	8	0.07	< 10	< 10	21	< 10	10
19452	201	229	< 1	< 0.01	19	230	4	< 2	1	9	0.09	< 10	< 10	23	< 10	26
19453	201	229	< 1	< 0.01	9	300	2	< 2	1	8	0.08	< 10	< 10	21	< 10	16
19454	201	229	< 1	< 0.01	8	140	2	< 2	1	9	0.10	< 10	< 10	26	< 10	20
19455	201	229	< 1	< 0.01	7	210	6	< 2	1	7	0.07	< 10	< 10	30	< 10	12
19456	201	229	< 1	< 0.01	18	740	6	< 2	3	7	0.10	< 10	< 10	49	< 10	48
19457	201	229	< 1	< 0.01	3	80	4	< 2	< 1	6	0.09	< 10	< 10	16	< 10	8
19458	201	229	< 1	< 0.01	4	180	6	< 2	< 1	9	0.12	< 10	< 10	19	< 10	20
19459	201	229	< 1	< 0.01	9	380	6	< 2	1	9	0.09	< 10	< 10	33	< 10	14
19460	201	229	< 1	< 0.01	9	270	< 2	< 2	1	10	0.12	< 10	< 10	53	< 10	18
19461	201	229	< 1	0.01	20	440	6	< 2	1	12	0.10	< 10	< 10	32	< 10	20
19462	201	229	< 1	0.01	12	520	< 2	< 2	1	13	0.08	< 10	< 10	28	< 10	40
19463	201	229	< 1	0.01	9	280	2	< 2	1	9	0.10	< 10	< 10	28	< 10	22
19464	201	229	< 1	< 0.01	7	280	4	< 2	1	8	0.09	< 10	< 10	24	< 10	12
19465	201	229	< 1	< 0.01	2	140	8	< 2	1	9	0.11	< 10	< 10	20	< 10	10
19466	201	229	< 1	< 0.01	12	550	4	< 2	1	8	0.09	< 10	< 10	35	< 10	18
19467	201	229	< 1	< 0.01	10	400	4	< 2	1	9	0.09	< 10	< 10	39	< 10	14
19468	201	229	< 1	< 0.01	14	160	2	< 2	1	7	0.16	< 10	< 10	43	< 10	32
19469	201	229	< 1	< 0.01	6	310	12	< 2	2	7	0.13	< 10	< 10	49	< 10	16
19470	201	229	< 1	0.01	29	420	4	< 2	2	9	0.14	< 10	< 10	46	< 10	20
19471	201	229	< 1	0.01	15	420	< 2	< 2	2	12	0.11	< 10	< 10	30	< 10	22
19472	201	229	< 1	0.01	17	860	2	< 2	1	16	0.11	< 10	< 10	35	< 10	36
19473	201	229	< 1	0.01	20	640	< 2	< 2	1	14	0.11	< 10	< 10	35	< 10	34
19474	201	229	< 1	< 0.01	21	560	6	< 2	2	14	0.10	< 10	< 10	37	< 10	16
19475	201	229	< 1	< 0.01	12	420	2	< 2	1	11	0.08	< 10	< 10	31	< 10	16
19476	201	229	< 1	< 0.01	16	890	4	< 2	1	11	0.10	< 10	< 10	41	< 10	22
19477	201	229	< 1	< 0.01	12	410	6	< 2	1	12	0.14	< 10	< 10	51	< 10	22
19478	201	229	< 1	< 0.01	12	240	< 2	< 2	1	10	0.08	< 10	< 10	24	< 10	14
19479	201	229	< 1	< 0.01	14	510	2	< 2	1	11	0.09	< 10	< 10	30	< 10	22
19480	201	229	< 1	< 0.01	8	510	4	< 2	1	11	0.07	< 10	< 10	25	< 10	24
19481	201	229	< 1	< 0.01	6	870	8	< 2	1	11	0.08	< 10	< 10	35	< 10	18
19482	201	229	< 1	< 0.01	33	250	4	< 2	1	9	0.11	< 10	< 10	33	< 10	38
19483	201	229	< 1	< 0.01	10	230	6	< 2	1	10	0.06	< 10	< 10	18	< 10	24
19484	201	229	< 1	< 0.01	9	500	4	< 2	1	9	0.07	< 10	< 10	31	< 10	22
19485	201	229	< 1	< 0.01	14	480	4	< 2	2	7	0.08	< 10	< 10	30	< 10	20

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19486	201 229	< 1 < 0.2 1.07	4	20	< 0.5	< 2	0.14	< 0.5	3	30	8	1.50	< 10	< 1	0.03	10	0.23	70		
19487	201 229	< 1 < 0.2 1.32	< 2	30	< 0.5	< 2	0.15	< 0.5	5	29	13	1.93	< 10	< 1	0.03	< 10	0.22	65		
19488	201 229	< 1 < 0.2 1.24	< 2	40	< 0.5	< 2	0.17	< 0.5	4	20	6	1.25	< 10	< 1	0.04	10	0.14	55		
19489	201 229	< 1 < 0.2 0.82	< 2	90	< 0.5	< 2	0.24	< 0.5	11	185	13	1.66	< 10	1	0.06	< 10	0.78	130		
19490	201 229	< 1 < 0.2 1.14	< 2	40	< 0.5	< 2	0.17	< 0.5	6	42	9	1.61	< 10	< 1	0.04	< 10	0.28	160		
19491	201 229	< 1 < 0.2 2.06	< 2	40	< 0.5	< 2	0.18	< 0.5	3	25	10	2.05	10	1	0.08	< 10	0.15	130		
19492	201 229	< 1 < 0.2 0.83	< 2	30	< 0.5	< 2	0.17	< 0.5	2	23	11	1.11	< 10	1	0.03	< 10	0.18	65		
19493	201 229	< 1 < 0.2 0.64	2	20	< 0.5	< 2	0.10	< 0.5	2	15	5	1.15	< 10	< 1	0.02	< 10	0.11	50		
19494	201 229	< 1 < 0.2 1.03	< 2	50	< 0.5	< 2	0.29	< 0.5	8	31	18	1.47	< 10	2	0.05	10	0.30	420		
19495	201 229	< 1 0.2 0.73	< 2	30	< 0.5	< 2	0.19	< 0.5	5	12	28	0.75	< 10	< 1	0.03	10	0.15	60		
19496	201 229	< 1 < 0.2 0.61	< 2	30	< 0.5	< 2	0.20	< 0.5	2	17	9	1.25	< 10	< 1	0.04	< 10	0.17	65		
19497	201 229	< 1 < 0.2 0.65	6	20	< 0.5	< 2	0.17	< 0.5	1	10	2	0.87	< 10	1	0.03	10	0.10	55		
19498	201 229	< 1 < 0.2 1.65	8	20	< 0.5	< 2	0.54	< 0.5	26	117	206	3.06	10	< 1	0.08	10	0.96	205		
19499	201 229	< 1 < 0.2 0.27	< 2	10	< 0.5	< 2	0.15	< 0.5	1	7	3	0.33	< 10	< 1	0.02	10	0.05	35		
19500	201 229	< 1 < 0.2 1.01	< 2	60	< 0.5	< 2	0.28	< 0.5	4	20	6	1.37	< 10	< 1	0.06	10	0.24	125		
19726	201 229	< 1 < 0.2 0.57	< 2	90	< 0.5	< 2	0.30	< 0.5	4	14	6	1.00	< 10	< 1	0.13	< 10	0.26	560		
19727	201 229	< 1 < 0.2 0.56	4	40	< 0.5	< 2	0.33	< 0.5	3	14	12	1.07	< 10	< 1	0.07	10	0.26	105		
19728	201 229	< 1 0.2 0.50	< 2	60	< 0.5	< 2	0.25	< 0.5	2	8	4	0.59	< 10	1	0.04	10	0.11	105		
19729	201 229	< 1 0.2 0.60	< 2	30	< 0.5	< 2	0.22	< 0.5	3	12	12	1.04	< 10	< 1	0.06	10	0.20	115		
19730	201 229	< 1 0.2 1.35	< 2	140	< 0.5	< 2	1.78	< 0.5	21	33	114	2.66	< 10	< 1	0.24	10	1.13	385		
19731	201 229	< 1 < 0.2 0.31	< 2	10	< 0.5	< 2	0.30	< 0.5	1	175	3	0.56	< 10	< 1	0.04	< 10	0.14	65		
19732	201 229	< 1 < 0.2 0.42	< 2	20	< 0.5	< 2	0.16	< 0.5	1	211	5	0.60	< 10	< 1	0.06	< 10	0.10	70		
19733	201 229	< 1 < 0.2 0.22	< 2	10	< 0.5	< 2	0.14	< 0.5	< 1	181	2	0.35	< 10	< 1	0.04	< 10	0.04	115		
19734	201 229	< 1 < 0.2 0.41	< 2	30	< 0.5	< 2	0.26	< 0.5	1	16	4	0.84	< 10	< 1	0.06	10	0.11	145		
19735	201 229	< 1 < 0.2 0.55	2	30	< 0.5	< 2	0.33	< 0.5	2	204	6	1.26	< 10	< 1	0.07	10	0.19	395		
19736	201 229	< 1 < 0.2 1.12	< 2	30	< 0.5	< 2	0.28	< 0.5	8	27	14	1.73	< 10	< 1	0.07	10	0.30	135		
19737	201 229	< 1 < 0.2 1.29	2	40	< 0.5	< 2	0.22	< 0.5	4	22	9	1.82	< 10	< 1	0.06	10	0.17	80		
19738	201 229	< 1 < 0.2 1.23	6	50	< 0.5	< 2	0.20	< 0.5	7	33	15	2.18	< 10	< 1	0.05	10	0.25	90		
19739	201 229	< 1 < 0.2 1.37	< 2	80	< 0.5	< 2	0.65	< 0.5	8	36	39	1.66	< 10	< 1	0.08	20	0.47	250		
19740	201 229	< 1 < 0.2 1.22	< 2	60	< 0.5	< 2	0.43	< 0.5	8	29	27	1.60	10	< 1	0.07	10	0.39	195		
19741	201 229	< 1 < 0.2 1.68	< 2	70	< 0.5	< 2	0.17	< 0.5	6	22	8	1.96	< 10	< 1	0.05	10	0.16	70		
19742	201 229	< 1 < 0.2 1.24	< 2	70	< 0.5	< 2	0.18	< 0.5	10	16	17	2.49	< 10	< 1	0.09	< 10	0.32	300		
19743	201 229	< 1 < 0.2 1.33	12	60	< 0.5	< 2	0.18	< 0.5	6	21	12	1.85	< 10	< 1	0.04	< 10	0.21	95		
19744	201 229	< 1 < 0.2 0.88	< 2	40	< 0.5	< 2	0.14	< 0.5	3	18	6	1.18	< 10	< 1	0.02	< 10	0.13	55		
19745	201 229	< 1 0.2 1.62	< 2	90	< 0.5	< 2	0.20	< 0.5	10	22	33	1.35	10	< 1	0.06	20	0.22	945		
19746	201 229	1 < 0.2 1.44	< 2	30	< 0.5	< 2	0.24	< 0.5	10	23	23	2.16	< 10	< 1	0.04	< 10	0.39	145		
19747	201 229	< 1 < 0.2 1.55	8	70	< 0.5	< 2	0.31	< 0.5	11	32	20	1.83	10	2	0.06	10	0.40	395		
19748	201 229	11 < 0.2 0.95	< 2	30	< 0.5	< 2	0.15	< 0.5	3	12	6	0.93	< 10	1	0.03	10	0.12	70		
19749	201 229	7 < 0.2 0.99	< 2	20	< 0.5	< 2	0.15	< 0.5	1	21	12	1.47	10	< 1	0.03	10	0.16	65		
19750	201 229	< 1 < 0.2 1.00	2	20	< 0.5	< 2	0.15	< 0.5	2	20	9	1.39	< 10	1	0.02	10	0.14	60		

CERTIFICATION:

19524348



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

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 Invoice No. : 19524348  
 P.O. Number : P211451  
 Account : JWW

## CERTIFICATE OF ANALYSIS A9524348

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19486	201 229	< 1 < 0.01	11	290	4	< 2	1	8	0.10	< 10	< 10	31	< 10	14	
19487	201 229	< 1 < 0.01	13	260	4	2	1	9	0.12	< 10	< 10	43	< 10	12	
19488	201 229	< 1 < 0.01	24	340	4	< 2	1	11	0.09	< 10	< 10	28	< 10	12	
19489	201 229	< 1 < 0.01	77	820	8	< 2	1	15	0.08	< 10	< 10	34	< 10	46	
19490	201 229	< 1 < 0.01	22	1630	4	< 2	1	9	0.08	< 10	< 10	33	< 10	44	
19491	201 229	< 1 < 0.01	14	1510	10	< 2	2	9	0.09	< 10	< 10	40	< 10	46	
19492	201 229	< 1 < 0.01	16	350	4	< 2	1	9	0.09	< 10	< 10	29	< 10	18	
19493	201 229	< 1 < 0.01	6	770	< 2	< 2	1	6	0.07	< 10	< 10	28	< 10	24	
19494	201 229	< 1 < 0.01	19	1120	6	< 2	1	13	0.08	< 10	< 10	32	< 10	30	
19495	201 229	< 1 < 0.01	18	240	4	< 2	1	10	0.09	< 10	< 10	19	< 10	18	
19496	201 229	< 1 < 0.01	8	680	2	2	1	10	0.07	< 10	< 10	30	< 10	14	
19497	201 229	< 1 < 0.01	4	310	6	< 2	1	9	0.07	< 10	< 10	23	< 10	10	
19498	201 229	< 1 < 0.01	136	170	4	< 2	2	11	0.28	< 10	< 10	77	< 10	40	
19499	201 229	< 1 < 0.01	2	40	2	< 2	< 1	9	0.08	< 10	< 10	15	< 10	2	
19500	201 229	< 1 < 0.01	9	640	2	4	1	13	0.09	< 10	< 10	35	< 10	14	
19726	201 229	< 1 < 0.01	6	420	2	2	1	13	0.10	< 10	< 10	26	< 10	24	
19727	201 229	< 1 < 0.01	8	530	4	2	1	15	0.11	< 10	< 10	31	< 10	22	
19728	201 229	< 1 < 0.01	4	330	4	< 2	1	14	0.08	< 10	< 10	17	< 10	20	
19729	201 229	< 1 < 0.01	7	340	< 2	< 2	1	12	0.10	< 10	< 10	29	< 10	24	
19730	201 229	< 1 < 0.04	32	2350	2	< 2	2	34	0.12	< 10	< 10	66	< 10	68	
19731	201 229	< 1 < 0.03	6	110	< 2	< 2	1	13	0.03	< 10	< 10	11	< 10	6	
19732	201 229	< 1 < 0.03	5	120	2	< 2	1	12	0.03	< 10	< 10	13	< 10	24	
19733	201 229	< 1 < 0.03	3	50	2	< 2	< 1	11	0.02	< 10	< 10	8	< 10	4	
19734	201 229	< 1 < 0.01	3	220	4	2	1	10	0.08	< 10	< 10	24	< 10	18	
19735	201 229	< 1 < 0.03	8	340	< 2	< 2	2	17	0.07	< 10	< 10	26	< 10	20	
19736	201 229	< 1 < 0.01	13	660	2	< 2	2	12	0.11	< 10	< 10	51	< 10	26	
19737	201 229	< 1 < 0.01	10	790	2	< 2	2	13	0.13	< 10	< 10	54	< 10	28	
19738	201 229	< 1 < 0.01	14	630	< 2	2	2	10	0.12	< 10	< 10	50	< 10	24	
19739	201 229	< 1 < 0.01	18	380	6	4	4	16	0.13	< 10	< 10	40	< 10	52	
19740	201 229	< 1 < 0.01	18	410	2	2	2	12	0.12	< 10	< 10	43	< 10	36	
19741	201 229	< 1 < 0.01	12	430	2	< 2	2	10	0.09	< 10	< 10	45	< 10	28	
19742	201 229	< 1 < 0.01	12	1140	< 2	2	2	6	0.09	< 10	< 10	75	< 10	72	
19743	201 229	< 1 < 0.01	11	930	2	2	1	7	0.07	< 10	< 10	40	< 10	40	
19744	201 229	< 1 < 0.01	9	350	2	4	1	7	0.07	< 10	< 10	30	< 10	14	
19745	201 229	< 1 < 0.01	31	670	6	< 2	2	11	0.05	< 10	< 10	26	< 10	164	
19746	201 229	< 1 < 0.01	17	880	2	2	2	7	0.14	< 10	< 10	54	< 10	48	
19747	201 229	< 1 < 0.01	18	540	8	< 2	2	14	0.11	< 10	< 10	42	< 10	72	
19748	201 229	< 1 < 0.01	7	200	6	< 2	1	9	0.08	< 10	< 10	25	< 10	24	
19749	201 229	< 1 < 0.01	9	820	2	2	1	8	0.08	< 10	< 10	35	< 10	20	
19750	201 229	< 1 < 0.01	9	610	2	4	1	8	0.09	< 10	< 10	35	< 10	26	

CERTIFICATION: \_\_\_\_\_



# Chemex Labs Ltd.

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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

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 Certificate Date: 22-AUG-95  
 Invoice No.: 19524348  
 P.O. Number: P211451  
 Account: JWW

Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9524348

SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19751	201 229	< 1	< 0.2	1.30	2	30	< 0.5	< 2	0.14	< 0.5	4	19	6	1.26	< 10	< 1	0.03	10	0.13	85
19752	201 229	< 1	< 0.2	0.95	< 2	20	< 0.5	< 2	0.10	< 0.5	1	16	4	1.53	< 10	< 1	0.02	10	0.09	40
19753	201 229	< 1	< 0.2	0.93	< 2	30	< 0.5	< 2	0.24	< 0.5	3	22	11	1.30	< 10	< 1	0.03	10	0.19	70
19754	201 229	< 1	< 0.2	1.36	2	40	< 0.5	< 2	0.26	< 0.5	6	25	17	1.64	< 10	< 1	0.03	10	0.26	80
19755	201 229	< 1	< 0.2	1.04	2	40	< 0.5	< 2	0.27	< 0.5	4	29	17	1.09	< 10	< 1	0.03	10	0.28	75
19756	201 229	< 1	< 0.2	0.77	2	30	< 0.5	< 2	0.20	< 0.5	2	12	4	1.49	< 10	< 1	0.02	< 10	0.09	45
19757	201 229	< 1	< 0.2	1.17	4	30	< 0.5	< 2	0.16	< 0.5	4	16	6	1.44	< 10	< 1	0.03	10	0.16	275
19758	201 229	< 1	< 0.2	1.07	2	40	< 0.5	< 2	0.20	< 0.5	4	20	13	1.67	< 10	< 1	0.04	10	0.22	135
19759	201 229	< 1	< 0.2	0.83	< 2	30	< 0.5	< 2	0.26	< 0.5	3	23	16	1.27	< 10	< 1	0.04	10	0.19	85
19760	201 229	< 1	< 0.2	0.99	< 2	50	< 0.5	< 2	0.30	< 0.5	9	32	23	2.00	< 10	< 1	0.05	10	0.36	325
19761	201 229	< 1	< 0.2	0.74	< 2	30	< 0.5	< 2	0.13	< 0.5	1	10	2	0.90	< 10	< 1	0.02	10	0.07	85
19762	201 229	< 1	< 0.2	1.35	< 2	40	< 0.5	< 2	0.19	< 0.5	6	18	9	2.10	< 10	< 1	0.06	< 10	0.16	85
19763	201 229	< 1	0.2	0.95	2	30	< 0.5	< 2	0.23	< 0.5	6	27	13	1.25	< 10	< 1	0.03	10	0.29	135
19764	201 229	< 1	< 0.2	1.08	4	40	< 0.5	< 2	0.26	< 0.5	4	22	10	1.27	< 10	< 1	0.04	10	0.29	130
19765	201 229	< 1	0.2	0.64	2	30	< 0.5	< 2	0.19	< 0.5	2	15	3	0.68	< 10	< 1	0.03	< 10	0.16	60
19766	201 229	< 1	< 0.2	0.26	< 2	20	< 0.5	< 2	0.14	< 0.5	< 1	8	1	0.29	< 10	< 1	0.03	< 10	0.04	30
19767	201 229	< 1	< 0.2	1.31	< 2	90	< 0.5	< 2	0.31	< 0.5	6	34	11	1.96	< 10	< 1	0.08	< 10	0.30	140
19768	201 229	< 1	0.4	0.68	2	30	< 0.5	< 2	0.19	< 0.5	3	22	8	1.25	< 10	< 1	0.03	< 10	0.21	100
19769	201 229	< 1	< 0.2	0.39	< 2	20	< 0.5	< 2	0.23	< 0.5	2	16	6	0.82	< 10	< 1	0.04	< 10	0.13	60
19770	201 229	< 1	< 0.2	0.93	< 2	20	< 0.5	< 2	0.12	< 0.5	1	18	6	1.51	< 10	< 1	0.03	< 10	0.14	50
19771	201 229	5	< 0.2	1.52	< 2	30	< 0.5	< 2	0.14	< 0.5	4	26	7	1.72	< 10	< 1	0.03	< 10	0.17	55
19772	201 229	< 1	< 0.2	0.89	< 2	30	< 0.5	2	0.17	< 0.5	7	41	10	1.17	< 10	< 1	0.03	< 10	0.37	145
19773	201 229	< 1	3.0	0.53	< 2	30	< 0.5	< 2	0.13	< 0.5	1	10	4	0.54	< 10	< 1	0.02	< 10	0.10	45
19774	201 229	< 1	< 0.2	0.62	< 2	20	< 0.5	< 2	0.13	< 0.5	1	14	4	0.84	< 10	< 1	0.03	< 10	0.12	45
19775	201 229	< 1	< 0.2	0.61	< 2	30	< 0.5	< 2	0.19	< 0.5	2	14	6	0.76	< 10	< 1	0.03	< 10	0.19	55
19776	201 229	< 1	< 0.2	0.56	2	20	< 0.5	< 2	0.21	< 0.5	1	12	4	0.65	< 10	< 1	0.03	< 10	0.18	55
19777	201 229	< 1	< 0.2	1.06	< 2	50	< 0.5	< 2	0.20	< 0.5	3	21	3	1.67	< 10	< 1	0.05	< 10	0.22	120
19778	201 229	< 1	< 0.2	1.07	< 2	40	< 0.5	< 2	0.33	< 0.5	4	22	8	1.26	< 10	< 1	0.04	10	0.26	135
19779	201 229	< 1	< 0.2	1.03	< 2	40	< 0.5	< 2	0.19	< 0.5	2	21	4	1.36	< 10	< 1	0.05	< 10	0.18	80
19780	201 229	< 1	< 0.2	0.60	2	30	< 0.5	< 2	0.20	< 0.5	2	14	3	0.75	< 10	< 1	0.03	< 10	0.18	90
19781	201 229	< 1	< 0.2	1.34	< 2	30	< 0.5	< 2	0.17	< 0.5	6	68	9	1.55	< 10	< 1	0.03	< 10	0.30	60
19782	201 229	< 1	< 0.2	1.01	2	20	< 0.5	< 2	0.18	< 0.5	2	21	4	1.54	< 10	< 1	0.03	< 10	0.15	55
19783	201 229	< 1	< 0.2	0.88	< 2	30	< 0.5	< 2	0.15	< 0.5	2	24	4	1.62	< 10	< 1	0.04	< 10	0.21	75
19784	201 229	< 1	< 0.2	1.43	2	50	< 0.5	< 2	0.25	< 0.5	4	19	4	1.43	< 10	< 1	0.04	10	0.18	175
19785	201 229	< 1	< 0.2	0.67	2	30	< 0.5	< 2	0.26	< 0.5	2	16	2	0.80	< 10	< 1	0.03	< 10	0.20	65
19786	201 229	< 1	< 0.2	0.63	< 2	30	< 0.5	< 2	0.27	< 0.5	3	18	4	0.83	< 10	1	0.03	< 10	0.24	70
19787	201 229	< 1	0.4	0.79	< 2	20	< 0.5	< 2	0.15	< 0.5	3	19	8	0.94	< 10	< 1	0.02	< 10	0.20	70
19788	201 229	< 1	0.4	0.71	< 2	10	< 0.5	< 2	0.21	< 0.5	3	18	9	0.94	< 10	< 1	0.02	< 10	0.27	75
19789	201 229	< 1	< 0.2	0.74	< 2	30	< 0.5	< 2	0.14	< 0.5	1	16	4	0.97	< 10	< 1	0.02	< 10	0.11	40
19790	201 229	1	< 0.2	0.86	< 2	40	< 0.5	< 2	0.19	< 0.5	3	28	14	1.05	< 10	< 1	0.03	< 10	0.20	90

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A9524348

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19751	201	229	< 1	< 0.01	10	490	4	< 2	1	9	0.07	< 10	< 10	24	< 10	22
19752	201	229	< 1	< 0.01	3	270	6	< 2	1	7	0.08	< 10	< 10	39	< 10	10
19753	201	229	< 1	< 0.01	10	410	4	< 2	1	12	0.10	< 10	< 10	31	< 10	16
19754	201	229	< 1	< 0.01	15	560	4	< 2	2	10	0.09	< 10	< 10	32	< 10	18
19755	201	229	1	< 0.01	17	470	2	< 2	1	11	0.08	< 10	< 10	25	< 10	18
19756	201	229	< 1	< 0.01	4	310	8	< 2	1	12	0.08	< 10	< 10	43	< 10	20
19757	201	229	< 1	< 0.01	8	540	6	< 2	1	9	0.10	< 10	< 10	32	< 10	38
19758	201	229	< 1	< 0.01	10	550	6	< 2	1	9	0.12	< 10	< 10	41	< 10	24
19759	201	229	< 1	< 0.01	11	910	4	< 2	1	13	0.09	< 10	< 10	30	< 10	20
19760	201	229	< 1	0.01	15	970	4	< 2	2	12	0.08	< 10	< 10	47	< 10	34
19761	201	229	< 1	< 0.01	2	640	4	< 2	1	9	0.08	< 10	< 10	24	< 10	18
19762	201	229	< 1	< 0.01	9	560	8	< 2	1	10	0.10	< 10	< 10	45	< 10	34
19763	201	229	< 1	< 0.01	13	280	4	< 2	1	10	0.10	< 10	< 10	30	< 10	34
19764	201	229	< 1	< 0.01	11	330	8	< 2	1	12	0.11	< 10	< 10	28	< 10	48
19765	201	229	< 1	< 0.01	5	170	4	< 2	1	11	0.09	< 10	< 10	19	< 10	22
19766	201	229	< 1	< 0.01	1	120	4	< 2	< 1	9	0.07	< 10	< 10	11	< 10	8
19767	201	229	< 1	< 0.01	17	660	4	< 2	2	14	0.11	< 10	< 10	43	< 10	30
19768	201	229	< 1	< 0.01	9	360	4	< 2	1	10	0.10	< 10	< 10	34	< 10	14
19769	201	229	< 1	< 0.01	6	140	2	< 2	1	9	0.08	< 10	< 10	27	< 10	12
19770	201	229	< 1	< 0.01	7	820	6	< 2	1	7	0.06	< 10	< 10	33	< 10	22
19771	201	229	< 1	< 0.01	13	610	4	< 2	1	8	0.07	< 10	< 10	35	< 10	20
19772	201	229	< 1	< 0.01	18	420	8	< 2	2	9	0.13	< 10	< 10	42	< 10	34
19773	201	229	< 1	< 0.01	4	140	6	< 2	< 1	9	0.07	< 10	< 10	18	< 10	14
19774	201	229	< 1	< 0.01	6	320	4	< 2	1	9	0.08	< 10	< 10	27	< 10	8
19775	201	229	< 1	< 0.01	5	330	6	< 2	1	11	0.10	< 10	< 10	23	< 10	18
19776	201	229	< 1	< 0.01	5	340	2	< 2	1	11	0.07	< 10	< 10	17	< 10	14
19777	201	229	< 1	< 0.01	8	570	6	< 2	1	11	0.09	< 10	< 10	33	< 10	30
19778	201	229	< 1	< 0.01	12	680	4	< 2	1	16	0.09	< 10	< 10	27	< 10	22
19779	201	229	< 1	< 0.01	9	620	6	< 2	1	11	0.08	< 10	< 10	29	< 10	22
19780	201	229	< 1	< 0.01	5	260	6	< 2	1	13	0.09	< 10	< 10	22	< 10	16
19781	201	229	< 1	< 0.01	27	780	6	< 2	1	12	0.09	< 10	< 10	35	< 10	26
19782	201	229	< 1	< 0.01	7	470	6	< 2	1	11	0.11	< 10	< 10	35	< 10	14
19783	201	229	< 1	< 0.01	11	740	6	< 2	1	10	0.10	< 10	< 10	42	< 10	20
19784	201	229	< 1	< 0.01	11	350	6	< 2	1	9	0.08	< 10	< 10	30	< 10	22
19785	201	229	< 1	< 0.01	8	140	4	< 2	1	9	0.07	< 10	< 10	19	< 10	12
19786	201	229	< 1	< 0.01	8	260	4	< 2	1	11	0.08	< 10	< 10	20	< 10	16
19787	201	229	< 1	< 0.01	9	190	8	< 2	1	8	0.10	< 10	< 10	28	< 10	24
19788	201	229	< 1	< 0.01	10	310	4	< 2	1	9	0.09	< 10	< 10	27	< 10	18
19789	201	229	< 1	< 0.01	5	210	8	< 2	1	9	0.10	< 10	< 10	30	< 10	16
19790	201	229	< 1	< 0.01	11	280	10	< 2	1	10	0.12	< 10	< 10	35	< 10	22

CERTIFICATION: \_\_\_\_\_



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ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

Page Num. : 4-A  
 Total Pages : 4  
 Certificate Date: 22-AUG-95  
 Invoice No. : 19524348  
 P.O. Number : P211451  
 Account : JWW

## CERTIFICATE OF ANALYSIS

A9524348

SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19791	201 229	< 1	< 0.2	0.92	< 2	20	< 0.5	< 2	0.17	< 0.5	2	17	6	1.17	< 10	< 1	0.02	< 10	0.16	90
19792	201 229	< 1	< 0.2	1.64	< 2	50	0.5	< 2	0.27	< 0.5	6	27	19	1.99	< 10	< 1	0.04	< 10	0.34	130
19793	201 229	1	< 0.2	0.73	< 2	30	< 0.5	< 2	0.28	< 0.5	3	24	18	0.90	< 10	< 1	0.02	< 10	0.25	80
19794	201 229	< 1	< 0.2	0.80	< 2	60	< 0.5	< 2	0.28	< 0.5	3	25	6	1.46	< 10	< 1	0.04	< 10	0.24	80
19795	201 229	< 1	< 0.2	0.53	< 2	30	< 0.5	< 2	0.21	< 0.5	1	14	4	0.61	< 10	< 1	0.01	< 10	0.18	80
19796	201 229	< 1	< 0.2	0.79	< 2	30	< 0.5	< 2	0.26	< 0.5	3	18	6	0.95	< 10	< 1	0.02	< 10	0.28	75
19797	201 229	2	< 0.2	0.42	< 2	20	< 0.5	< 2	0.07	< 0.5	1	8	6	0.70	< 10	< 1	0.02	< 10	0.07	20
19798	201 229	< 1	< 0.2	0.73	< 2	20	< 0.5	< 2	0.13	< 0.5	2	19	3	1.31	< 10	< 1	0.03	< 10	0.14	75
19799	201 229	2	< 0.2	0.63	< 2	20	< 0.5	< 2	0.17	< 0.5	1	11	1	0.75	< 10	< 1	0.02	< 10	0.14	50
19800	201 229	< 1	< 0.2	1.13	< 2	40	< 0.5	< 2	0.28	< 0.5	4	22	4	1.26	< 10	< 1	0.03	< 10	0.18	105
19801	201 229	< 1	< 0.2	0.20	< 2	20	< 0.5	< 2	0.15	< 0.5	< 1	4	1	0.20	< 10	< 1	0.02	< 10	0.04	60
19802	201 229	< 1	< 0.2	1.32	< 2	80	< 0.5	< 2	0.26	< 0.5	3	22	3	1.86	< 10	< 1	0.04	< 10	0.17	145
19803	201 229	< 1	< 0.2	1.47	2	60	< 0.5	< 2	0.18	< 0.5	4	22	4	1.78	< 10	1	0.05	< 10	0.18	170
19804	201 229	< 1	< 0.2	1.63	< 2	60	< 0.5	< 2	0.14	< 0.5	4	24	3	1.87	< 10	< 1	0.04	< 10	0.17	85
19805	201 229	< 1	< 0.2	1.10	< 2	40	< 0.5	< 2	0.15	< 0.5	3	24	3	1.77	< 10	< 1	0.03	< 10	0.18	125
19806	201 229	< 1	< 0.2	0.74	< 2	30	< 0.5	< 2	0.15	< 0.5	3	17	6	1.46	< 10	< 1	0.04	< 10	0.15	160
19807	201 229	< 1	< 0.2	0.85	< 2	40	< 0.5	< 2	0.13	< 0.5	7	13	10	1.61	< 10	< 1	0.04	< 10	0.20	355
19808	201 229	< 1	< 0.2	1.24	2	70	< 0.5	< 2	0.22	< 0.5	4	22	5	1.61	< 10	< 1	0.08	< 10	0.24	165
19809	201 229	< 1	< 0.2	0.59	< 2	20	< 0.5	< 2	0.13	< 0.5	1	11	1	0.96	< 10	< 1	0.03	< 10	0.11	65
19810	201 229	< 1	< 0.2	0.32	< 2	10	< 0.5	< 2	0.11	< 0.5	< 1	8	1	0.55	< 10	< 1	0.02	< 10	0.06	35
19811	201 229	< 1	< 0.2	0.35	< 2	40	< 0.5	< 2	0.26	< 0.5	< 1	9	3	0.48	< 10	< 1	0.03	< 10	0.04	85
19812	201 229	1	< 0.2	0.16	< 2	10	< 0.5	< 2	0.09	< 0.5	< 1	2	1	0.16	< 10	< 1	0.01	< 10	0.01	15
19813	201 229	< 1	< 0.2	0.67	< 2	20	< 0.5	< 2	0.28	< 0.5	3	346	6	1.10	< 10	< 1	0.07	< 10	0.25	80
19814	201 229	< 1	< 0.2	0.77	< 2	20	< 0.5	< 2	0.46	< 0.5	2	270	22	1.20	< 10	< 1	0.06	< 10	0.30	90

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 TIMMINS, ON  
 P4N 7X7

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 Certificate Date: 22-AUG-95  
 Invoice No. 19524348  
 P.O. Number P211451  
 Account JWW

Project : 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9524348

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19791	201	229	< 1 < 0.01	7	350	4	< 2	1	9	0.08	< 10	< 10	27	< 10	14	
19792	201	229	< 1 < 0.01	15	740	6	< 2	2	14	0.11	< 10	< 10	40	< 10	42	
19793	201	229	< 1 < 0.01	13	260	4	< 2	1	13	0.09	< 10	< 10	23	< 10	18	
19794	201	229	< 1 < 0.01	9	570	4	< 2	1	14	0.10	< 10	< 10	34	< 10	20	
19795	201	229	< 1 < 0.01	6	190	2	< 2	1	9	0.07	< 10	< 10	16	< 10	14	
19796	201	229	< 1 < 0.01	8	200	4	< 2	1	10	0.10	< 10	< 10	24	< 10	22	
19797	201	229	1 < 0.01	2	280	6	< 2	< 1	4	0.13	< 10	< 10	33	< 10	12	
19798	201	229	< 1 < 0.01	7	480	4	< 2	1	6	0.07	< 10	< 10	29	< 10	14	
19799	201	229	< 1 < 0.01	4	200	4	< 2	1	8	0.06	< 10	< 10	19	< 10	12	
19800	201	229	< 1 < 0.01	11	710	4	< 2	1	10	0.06	< 10	< 10	24	< 10	26	
19801	201	229	< 1 < 0.01	1	80	2	< 2	< 1	7	0.04	< 10	< 10	7	< 10	6	
19802	201	229	< 1 < 0.01	10	740	8	< 2	1	12	0.07	< 10	< 10	35	< 10	22	
19803	201	229	< 1 < 0.01	11	1000	6	< 2	1	10	0.07	< 10	< 10	35	< 10	26	
19804	201	229	1 < 0.01	12	610	4	< 2	1	8	0.07	< 10	< 10	36	< 10	22	
19805	201	229	< 1 < 0.01	11	1310	6	< 2	1	8	0.06	< 10	< 10	33	< 10	20	
19806	201	229	< 1 < 0.01	6	860	4	< 2	1	8	0.07	< 10	< 10	32	< 10	22	
19807	201	229	< 1 < 0.01	7	710	8	< 2	1	7	0.08	< 10	< 10	46	< 10	34	
19808	201	229	< 1 < 0.01	10	1130	6	< 2	1	12	0.08	< 10	< 10	33	< 10	28	
19809	201	229	< 1 < 0.01	3	270	4	< 2	1	9	0.07	< 10	< 10	26	< 10	12	
19810	201	229	< 1 < 0.01	1	140	2	< 2	< 1	6	0.05	< 10	< 10	14	< 10	8	
19811	201	229	< 1 < 0.01	1	160	4	< 2	< 1	12	0.04	< 10	< 10	14	< 10	14	
19812	201	229	< 1 < 0.01	< 1	40	2	< 2	< 1	4	0.02	< 10	< 10	5	< 10	4	
19813	201	229	< 1 0.06	10	120	14	< 2	1	18	0.05	< 10	< 10	20	< 10	14	
19814	201	229	< 1 0.04	10	90	2	< 2	2	17	0.07	< 10	< 10	24	< 10	12	

CERTIFICATION: \_\_\_\_\_



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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
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 TIMMINS, ON  
 P4N 7X7

Page Num.: 1-A  
 Total Pages: 3  
 Certificate Date: 21-AUG-95  
 Invoice No.: I9523672  
 P.O. Number: P211451  
 Account: JWW

Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS A9523672

SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19356	201 229	< 1	0.2	0.96	4	60	< 0.5	2	0.17	< 0.5	4	18	4	1.48	< 10	< 1	0.05	< 10	0.19	80
19357	201 229	< 1	< 0.2	1.12	< 2	60	< 0.5	4	0.24	< 0.5	6	22	24	1.53	< 10	< 1	0.05	10	0.26	95
19358	201 229	< 1	0.2	1.68	< 2	130	< 0.5	< 2	0.50	< 0.5	22	80	97	2.66	< 10	< 1	0.08	10	0.59	555
19359	201 229	2	< 0.2	1.34	6	70	< 0.5	< 2	0.17	< 0.5	12	49	36	1.82	< 10	< 1	0.06	< 10	0.25	110
19360	201 229	1	0.2	1.75	< 2	70	< 0.5	< 2	0.15	< 0.5	9	55	22	2.42	< 10	< 1	0.03	< 10	0.28	85
19361	201 229	1	< 0.2	2.32	< 2	60	< 0.5	< 2	0.12	< 0.5	10	37	16	1.91	< 10	< 1	0.03	< 10	0.16	90
19362	201 229	< 1	< 0.2	0.93	< 2	30	< 0.5	< 2	0.17	< 0.5	7	22	27	1.18	< 10	< 1	0.02	10	0.23	75
19363	201 229	< 1	< 0.2	1.76	< 2	20	< 0.5	< 2	0.21	< 0.5	6	38	24	2.27	< 10	< 1	0.03	10	0.32	110
19364	201 229	< 1	< 0.2	0.70	< 2	20	< 0.5	2	0.10	< 0.5	2	21	7	1.58	< 10	< 1	0.03	< 10	0.21	125
19365	201 229	< 1	0.2	1.77	< 2	40	< 0.5	2	0.37	< 0.5	15	55	58	2.87	10	< 1	0.04	10	0.90	285
19366	201 229	< 1	< 0.2	0.85	< 2	20	< 0.5	2	0.18	< 0.5	6	18	23	1.38	< 10	< 1	0.03	< 10	0.32	75
19367	201 229	1	0.2	0.62	2	20	< 0.5	2	0.14	< 0.5	5	17	10	0.93	< 10	< 1	0.01	< 10	0.22	105
19368	201 229	4	0.2	1.92	< 2	110	< 0.5	2	0.30	< 0.5	8	146	24	3.06	10	< 1	0.61	< 10	1.51	340
19369	201 229	< 1	< 0.2	0.62	< 2	10	< 0.5	< 2	0.20	< 0.5	4	16	9	0.79	< 10	1	0.02	< 10	0.25	70
19370	201 229	< 1	0.2	1.12	< 2	110	< 0.5	< 2	0.25	< 0.5	15	305	17	1.52	< 10	< 1	0.41	< 10	1.25	825
19371	201 229	< 1	< 0.2	0.90	< 2	20	< 0.5	< 2	0.33	< 0.5	10	38	39	1.70	< 10	< 1	0.02	< 10	0.46	160
19372	201 229	3	0.2	0.86	< 2	40	< 0.5	< 2	0.24	< 0.5	7	23	13	1.27	< 10	1	0.03	< 10	0.35	265
19373	201 229	< 1	0.2	0.75	< 2	30	< 0.5	< 2	0.28	< 0.5	7	19	16	1.08	< 10	< 1	0.02	< 10	0.24	80
19374	201 229	< 1	< 0.2	0.92	8	20	< 0.5	2	0.19	< 0.5	5	26	10	2.00	10	< 1	0.03	< 10	0.22	65
19375	201 229	1	< 0.2	1.97	< 2	40	< 0.5	< 2	0.16	< 0.5	6	30	15	2.23	< 10	< 1	0.04	10	0.19	90
19376	201 229	2	< 0.2	0.81	4	20	< 0.5	< 2	0.18	< 0.5	5	21	11	0.96	< 10	1	0.01	10	0.19	60
19377	201 229	< 1	< 0.2	0.96	< 2	30	< 0.5	< 2	0.23	< 0.5	5	23	11	1.33	< 10	< 1	0.01	10	0.25	70
19378	201 229	< 1	< 0.2	0.67	< 2	10	< 0.5	< 2	0.19	< 0.5	3	16	7	0.81	< 10	< 1	0.01	< 10	0.20	55
19379	201 229	2	< 0.2	1.09	< 2	30	< 0.5	< 2	0.26	< 0.5	8	21	12	1.39	< 10	< 1	0.02	10	0.32	95
19380	201 229	< 1	< 0.2	1.70	10	100	< 0.5	2	0.24	< 0.5	33	33	59	3.34	< 10	< 1	0.29	< 10	0.66	150
19381	201 229	< 1	< 0.2	0.87	2	40	< 0.5	< 2	0.27	< 0.5	4	26	16	1.11	< 10	1	0.03	10	0.28	115
19382	201 229	< 1	< 0.2	0.62	< 2	30	< 0.5	< 2	0.25	< 0.5	3	18	9	0.86	< 10	< 1	0.02	10	0.24	110
19383	201 229	< 1	< 0.2	0.87	2	30	< 0.5	< 2	0.20	< 0.5	7	19	6	1.03	< 10	< 1	0.02	< 10	0.50	85
19384	201 229	< 1	< 0.2	0.63	< 2	20	< 0.5	< 2	0.18	< 0.5	3	16	7	0.85	< 10	< 1	0.01	10	0.20	50
19385	201 229	< 1	< 0.2	0.67	2	20	< 0.5	< 2	0.12	< 0.5	2	12	8	0.84	< 10	< 1	0.01	< 10	0.15	55
19386	201 229	< 1	< 0.2	0.66	2	10	< 0.5	< 2	0.12	< 0.5	2	12	5	0.77	< 10	< 1	0.01	< 10	0.13	45
19387	201 229	2	< 0.2	1.03	< 2	20	< 0.5	< 2	0.16	< 0.5	5	21	13	1.59	< 10	< 1	0.02	10	0.17	55
19388	201 229	< 1	< 0.2	1.22	< 2	20	< 0.5	< 2	0.11	< 0.5	9	17	19	1.26	< 10	< 1	0.02	< 10	0.12	75
19389	201 229	< 1	< 0.2	1.00	< 2	40	< 0.5	< 2	0.18	< 0.5	6	21	18	1.25	< 10	< 1	0.02	10	0.22	70
19390	201 229	2	< 0.2	0.91	2	20	< 0.5	< 2	0.14	< 0.5	3	18	7	1.31	< 10	1	0.02	< 10	0.13	60
19391	201 229	< 1	< 0.2	1.54	< 2	20	< 0.5	< 2	0.13	< 0.5	3	29	13	1.77	< 10	< 1	0.02	< 10	0.18	55
19392	201 229	< 1	< 0.2	0.85	< 2	20	< 0.5	< 2	0.11	< 0.5	3	29	12	1.61	< 10	< 1	0.02	< 10	0.17	70
19393	201 229	< 1	< 0.2	1.49	12	20	< 0.5	< 2	0.20	< 0.5	10	45	34	1.86	< 10	< 1	0.04	10	0.38	120
19394	201 229	12	< 0.2	0.90	2	30	< 0.5	< 2	0.14	< 0.5	11	22	29	1.41	< 10	< 1	0.04	10	0.23	70
19395	201 229	1	< 0.2	1.22	< 2	30	< 0.5	< 2	0.13	< 0.5	4	49	12	3.11	< 10	< 1	0.03	< 10	0.29	85

CERTIFICATION: *Tony Buehler*



# Chemex Labs Ltd.

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o: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project: 2000  
 Comments: ATTN: M. STALKER

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 Invoice No.: 19523672  
 P.O. Number: P211451  
 Account: JWW

## CERTIFICATE OF ANALYSIS

A9523672

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19356	201 229	< 1	< 0.01	7	1070	2	< 2	1	8	0.05	< 10	< 10	27	< 10	18
19357	201 229	< 1	< 0.01	15	830	4	< 2	1	9	0.06	< 10	< 10	26	< 10	32
19358	201 229	< 1	0.01	62	960	2	2	2	13	0.11	< 10	< 10	44	< 10	166
19359	201 229	< 1	< 0.01	32	1480	6	2	1	6	0.07	< 10	< 10	38	< 10	58
19360	201 229	1	< 0.01	25	1160	4	< 2	1	6	0.09	< 10	< 10	49	< 10	46
19361	201 229	1	0.01	22	690	6	2	1	5	0.06	< 10	< 10	35	< 10	26
19362	201 229	< 1	< 0.01	16	500	2	< 2	1	7	0.07	< 10	< 10	25	< 10	20
19363	201 229	< 1	< 0.01	15	1010	4	< 2	1	8	0.10	< 10	< 10	47	< 10	42
19364	201 229	< 1	< 0.01	6	1030	6	< 2	< 1	6	0.11	< 10	< 10	42	< 10	28
19365	201 229	< 1	0.01	38	1720	6	4	2	13	0.14	< 10	< 10	60	< 10	72
19366	201 229	< 1	< 0.01	13	620	< 2	< 2	1	7	0.10	< 10	< 10	36	< 10	26
19367	201 229	< 1	< 0.01	9	210	4	< 2	1	6	0.08	< 10	< 10	29	< 10	26
19368	201 229	1	< 0.01	51	920	4	2	3	9	0.24	< 10	< 10	91	< 10	60
19369	201 229	< 1	< 0.01	9	390	2	2	1	7	0.07	< 10	< 10	20	< 10	18
19370	201 229	< 1	< 0.01	74	370	6	< 2	< 1	11	0.19	< 10	< 10	37	< 10	38
19371	201 229	< 1	< 0.01	24	690	4	< 2	1	9	0.08	< 10	< 10	36	< 10	26
19372	201 229	< 1	< 0.01	12	320	< 2	< 2	1	8	0.09	< 10	< 10	32	< 10	46
19373	201 229	< 1	0.01	16	600	4	< 2	1	9	0.07	< 10	< 10	26	< 10	16
19374	201 229	< 1	< 0.01	10	620	6	2	1	7	0.10	< 10	< 10	50	< 10	18
19375	201 229	1	< 0.01	12	960	8	< 2	2	7	0.09	< 10	< 10	46	< 10	20
19376	201 229	< 1	< 0.01	11	310	< 2	2	1	6	0.07	< 10	< 10	22	< 10	14
19377	201 229	< 1	< 0.01	12	540	2	< 2	1	8	0.08	< 10	< 10	30	< 10	14
19378	201 229	< 1	< 0.01	7	340	2	< 2	1	7	0.07	< 10	< 10	23	< 10	12
19379	201 229	< 1	0.01	12	320	2	< 2	1	9	0.10	< 10	< 10	38	< 10	32
19380	201 229	< 1	< 0.01	72	400	6	< 2	4	6	0.28	< 10	< 10	128	< 10	58
19381	201 229	< 1	< 0.01	14	410	< 2	< 2	1	9	0.06	< 10	< 10	23	< 10	22
19382	201 229	< 1	< 0.01	9	480	4	< 2	1	8	0.05	< 10	< 10	18	< 10	16
19383	201 229	< 1	< 0.01	27	240	2	< 2	< 1	6	0.07	< 10	< 10	24	< 10	14
19384	201 229	< 1	< 0.01	10	430	< 2	< 2	< 1	6	0.05	< 10	< 10	19	< 10	12
19385	201 229	< 1	< 0.01	7	260	< 2	< 2	< 1	4	0.04	< 10	< 10	19	< 10	14
19386	201 229	< 1	< 0.01	5	190	2	< 2	< 1	4	0.06	< 10	< 10	21	< 10	10
19387	201 229	< 1	< 0.01	11	480	4	< 2	1	6	0.07	< 10	< 10	37	< 10	12
19388	201 229	< 1	< 0.01	16	580	< 2	< 2	1	4	0.06	< 10	< 10	30	< 10	24
19389	201 229	< 1	< 0.01	14	540	2	< 2	1	8	0.08	< 10	< 10	30	< 10	18
19390	201 229	< 1	< 0.01	8	320	8	2	1	6	0.08	< 10	< 10	32	< 10	12
19391	201 229	1	< 0.01	10	470	6	< 2	1	6	0.10	< 10	< 10	41	< 10	18
19392	201 229	< 1	< 0.01	8	910	8	< 2	< 1	5	0.08	< 10	< 10	40	< 10	16
19393	201 229	< 1	< 0.01	23	610	4	< 2	2	7	0.12	< 10	< 10	42	< 10	26
19394	201 229	1	< 0.01	17	270	6	2	4	6	0.11	< 10	< 10	64	< 10	18
19395	201 229	< 1	< 0.01	14	690	6	< 2	1	6	0.15	< 10	< 10	80	< 10	26

CERTIFICATION: *[Signature]*



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J: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
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Page Num.: 2-A  
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Project: 2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9523672

SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19396	201 229	< 1	< 0.2	0.64	< 2	30	< 0.5	< 2	0.24	< 0.5	5	25	11	0.83	< 10	< 1	0.04	< 10	0.32	115
19397	201 229	< 1	< 0.2	1.05	< 2	40	< 0.5	< 2	0.22	< 0.5	10	31	22	1.52	< 10	< 1	0.04	10	0.31	185
19398	201 229	< 1	< 0.2	2.74	< 2	90	< 0.5	< 2	0.25	0.5	23	153	46	3.13	< 10	< 1	0.06	< 10	0.73	250
19399	201 229	< 1	< 0.2	1.12	< 2	60	< 0.5	< 2	0.17	< 0.5	6	41	9	1.40	< 10	< 1	0.02	< 10	0.23	115
19400	201 229	< 1	< 0.2	0.18	< 2	20	< 0.5	< 2	0.07	< 0.5	< 1	7	3	0.14	< 10	< 1	0.01	< 10	0.02	15
19401	201 229	< 1	< 0.2	1.09	< 2	40	< 0.5	< 2	0.16	< 0.5	14	40	15	1.40	< 10	< 1	0.03	< 10	0.48	495
19402	201 229	< 1	< 0.2	0.89	< 2	30	< 0.5	< 2	0.28	< 0.5	7	34	25	1.29	< 10	< 1	0.04	10	0.40	100
19403	201 229	< 1	< 0.2	0.54	< 2	30	< 0.5	< 2	0.15	< 0.5	2	11	6	0.57	< 10	< 1	0.02	< 10	0.11	40
19404	201 229	1	< 0.2	0.86	< 2	40	< 0.5	< 2	0.27	< 0.5	6	27	15	1.32	< 10	< 1	0.05	10	0.28	90
19405	201 229	< 1	< 0.2	1.17	< 2	40	< 0.5	< 2	0.18	< 0.5	8	89	19	2.13	< 10	< 1	0.03	< 10	0.25	110
19406	201 229	1	< 0.2	1.01	6	20	< 0.5	< 2	0.15	< 0.5	7	76	15	1.96	< 10	< 1	0.02	< 10	0.32	100
19407	201 229	< 1	< 0.2	0.82	< 2	30	< 0.5	< 2	0.44	< 0.5	8	22	11	1.18	< 10	< 1	0.03	< 10	0.44	125
19408	201 229	< 1	0.4	0.92	< 2	60	< 0.5	< 2	0.35	< 0.5	5	27	18	1.18	< 10	< 1	0.02	10	0.42	200
19409	201 229	< 1	< 0.2	0.84	< 2	40	< 0.5	< 2	0.35	< 0.5	5	20	11	0.96	< 10	< 1	0.04	10	0.29	155
19410	201 229	< 1	< 0.2	1.10	< 2	60	< 0.5	< 2	0.39	< 0.5	6	31	14	1.31	< 10	< 1	0.03	10	0.42	155
19411	201 229	< 1	< 0.2	0.92	< 2	60	< 0.5	< 2	0.26	< 0.5	7	16	15	0.98	< 10	1	0.02	10	0.31	235
19412	201 229	2	< 0.2	1.01	4	40	< 0.5	< 2	0.15	< 0.5	7	18	13	1.43	< 10	< 1	0.03	< 10	0.16	120
19413	201 229	1	< 0.2	0.29	2	20	< 0.5	< 2	0.10	< 0.5	2	9	4	0.39	< 10	< 1	0.02	< 10	0.07	40
19414	201 229	< 1	< 0.2	0.53	4	30	< 0.5	< 2	0.13	< 0.5	1	10	8	0.77	< 10	< 1	0.02	< 10	0.10	85
19415	201 229	< 1	< 0.2	0.94	2	20	< 0.5	< 2	0.15	< 0.5	5	20	18	1.44	< 10	< 1	0.02	< 10	0.21	55
19416	201 229	1	< 0.2	0.43	< 2	10	< 0.5	< 2	0.09	< 0.5	2	9	6	0.62	< 10	< 1	0.02	< 10	0.10	35
19417	201 229	< 1	< 0.2	1.89	4	80	< 0.5	< 2	0.35	< 0.5	9	39	20	1.50	10	1	0.03	10	0.29	160
19418	201 229	< 1	< 0.2	0.59	4	30	< 0.5	< 2	0.27	< 0.5	4	21	9	0.91	< 10	< 1	0.03	10	0.28	130
19419	201 229	2	< 0.2	0.59	2	30	< 0.5	< 2	0.21	< 0.5	1	16	8	0.82	< 10	1	0.04	10	0.21	85
19420	201 229	1	< 0.2	0.46	2	30	< 0.5	< 2	0.23	< 0.5	2	18	8	0.89	< 10	< 1	0.04	< 10	0.19	180
19421	201 229	< 1	< 0.2	0.26	4	70	< 0.5	< 2	0.47	< 0.5	< 1	10	6	0.58	< 10	< 1	0.02	< 10	0.07	160
19422	201 229	< 1	< 0.2	1.06	< 2	30	< 0.5	< 2	0.60	< 0.5	3	36	16	1.90	< 10	< 1	0.02	10	0.46	135
19423	201 229	< 1	< 0.2	0.71	2	20	< 0.5	< 2	0.14	< 0.5	2	16	13	1.04	< 10	< 1	0.02	< 10	0.18	50
19424	201 229	< 1	< 0.2	0.88	< 2	10	< 0.5	2	0.47	< 0.5	2	30	5	1.14	< 10	< 1	0.02	10	0.35	105
19425	201 229	< 1	< 0.2	1.23	2	30	< 0.5	2	0.16	< 0.5	2	34	10	1.89	< 10	1	0.02	< 10	0.17	70
19426	201 229	1	< 0.2	0.55	< 2	30	< 0.5	< 2	0.19	< 0.5	2	17	8	0.98	< 10	< 1	0.04	10	0.18	60
19427	201 229	< 1	< 0.2	0.56	< 2	20	< 0.5	4	0.22	< 0.5	2	14	9	0.77	< 10	< 1	0.03	10	0.19	65
19428	201 229	< 1	< 0.2	0.71	< 2	40	< 0.5	< 2	0.21	< 0.5	3	27	10	1.21	< 10	1	0.04	< 10	0.25	110
19429	201 229	< 1	< 0.2	0.26	< 2	50	< 0.5	< 2	0.28	< 0.5	2	7	4	0.38	< 10	< 1	0.07	< 10	0.12	185
19430	201 229	1	< 0.2	0.17	< 2	10	< 0.5	< 2	0.11	< 0.5	< 1	6	1	0.17	< 10	< 1	0.02	< 10	0.03	15
19431	201 229	2	< 0.2	1.10	8	60	< 0.5	2	0.47	< 0.5	8	49	40	1.52	10	< 1	0.04	20	0.51	190
19432	201 229	1	0.4	1.71	2	90	< 0.5	2	0.34	< 0.5	12	54	83	2.11	10	1	0.06	20	0.51	410
19433	201 229	2	< 0.2	0.79	2	40	< 0.5	< 2	0.16	< 0.5	2	20	7	1.36	10	< 1	0.04	< 10	0.19	60
19434	201 229	< 1	< 0.2	0.80	< 2	30	< 0.5	2	0.26	< 0.5	6	29	23	1.25	< 10	< 1	0.03	10	0.37	140
19435	201 229	1	< 0.2	1.24	< 2	40	< 0.5	< 2	0.32	< 0.5	7	31	25	1.55	10	< 1	0.04	10	0.47	180

CERTIFICATION: 



# Chemex Labs Ltd.

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TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
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SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19396	201	229	< 1	< 0.01	10	580	6	< 2	< 1	9	0.08	< 10	< 10	22	< 10	24
19397	201	229	< 1	< 0.01	21	750	4	2	1	9	0.07	< 10	< 10	32	< 10	42
19398	201	229	1	0.02	37	690	8	2	2	7	0.19	< 10	< 10	72	< 10	100
19399	201	229	< 1	< 0.01	16	360	4	< 2	1	7	0.08	< 10	< 10	33	< 10	60
19400	201	229	< 1	< 0.01	1	120	6	< 2	< 1	3	0.03	< 10	< 10	6	< 10	10
19401	201	229	< 1	< 0.01	23	310	6	< 2	1	7	0.11	< 10	< 10	30	< 10	104
19402	201	229	< 1	< 0.01	20	740	6	< 2	1	9	0.07	< 10	< 10	27	< 10	26
19403	201	229	< 1	< 0.01	6	560	2	< 2	< 1	7	0.05	< 10	< 10	13	< 10	24
19404	201	229	< 1	< 0.01	15	980	6	< 2	1	10	0.07	< 10	< 10	28	< 10	24
19405	201	229	< 1	< 0.01	23	720	6	< 2	1	7	0.09	< 10	< 10	39	< 10	26
19406	201	229	< 1	< 0.01	21	960	6	< 2	1	6	0.09	< 10	< 10	41	< 10	22
19407	201	229	< 1	0.01	11	680	6	< 2	1	12	0.10	< 10	< 10	31	< 10	26
19408	201	229	< 1	< 0.01	14	560	2	< 2	1	12	0.07	< 10	< 10	23	< 10	48
19409	201	229	< 1	< 0.01	10	230	4	< 2	1	10	0.06	< 10	< 10	19	< 10	42
19410	201	229	< 1	< 0.01	13	430	2	< 2	1	10	0.07	< 10	< 10	26	< 10	44
19411	201	229	< 1	< 0.01	9	280	6	< 2	1	9	0.04	< 10	< 10	21	< 10	46
19412	201	229	< 1	< 0.01	12	430	2	< 2	1	6	0.05	< 10	< 10	31	< 10	26
19413	201	229	< 1	< 0.01	2	230	4	< 2	< 1	4	0.10	< 10	< 10	20	< 10	14
19414	201	229	< 1	< 0.01	5	340	2	< 2	< 1	6	0.05	< 10	< 10	22	< 10	16
19415	201	229	< 1	< 0.01	12	400	2	< 2	1	6	0.07	< 10	< 10	34	< 10	12
19416	201	229	< 1	< 0.01	3	130	4	< 2	< 1	5	0.07	< 10	< 10	28	< 10	10
19417	201	229	< 1	< 0.01	22	420	< 2	< 2	2	12	0.09	< 10	< 10	32	< 10	44
19418	201	229	< 1	< 0.01	10	340	2	< 2	1	9	0.08	< 10	< 10	20	< 10	44
19419	201	229	< 1	< 0.01	9	250	< 2	< 2	1	8	0.07	< 10	< 10	17	< 10	18
19420	201	229	< 1	< 0.01	8	510	2	< 2	1	8	0.06	< 10	< 10	20	< 10	20
19421	201	229	< 1	< 0.01	1	230	8	< 2	< 1	11	0.06	< 10	< 10	16	< 10	16
19422	201	229	1	0.01	14	730	10	2	2	14	0.08	< 10	< 10	41	< 10	22
19423	201	229	< 1	< 0.01	9	290	2	< 2	1	7	0.09	< 10	< 10	28	< 10	14
19424	201	229	< 1	0.01	10	1000	< 2	< 2	2	13	0.07	< 10	< 10	30	< 10	16
19425	201	229	< 1	< 0.01	8	1220	2	< 2	1	7	0.08	< 10	< 10	43	< 10	20
19426	201	229	< 1	< 0.01	7	410	< 2	< 2	1	10	0.09	< 10	< 10	28	< 10	14
19427	201	229	< 1	< 0.01	7	370	< 2	< 2	1	9	0.08	< 10	< 10	20	< 10	18
19428	201	229	< 1	< 0.01	11	530	4	< 2	1	9	0.09	< 10	< 10	33	< 10	20
19429	201	229	< 1	< 0.01	2	170	< 2	< 2	< 1	11	0.10	< 10	< 10	15	< 10	16
19430	201	229	< 1	< 0.01	< 1	80	< 2	< 2	< 1	6	0.06	< 10	< 10	8	< 10	2
19431	201	229	< 1	0.01	31	740	< 2	< 2	2	15	0.09	< 10	< 10	33	< 10	60
19432	201	229	1	0.01	43	750	4	2	3	15	0.09	< 10	< 10	40	< 10	100
19433	201	229	< 1	< 0.01	8	1170	6	< 2	1	8	0.07	< 10	< 10	33	< 10	20
19434	201	229	< 1	0.01	14	430	2	< 2	1	11	0.10	< 10	< 10	32	< 10	36
19435	201	229	< 1	0.01	20	440	2	< 2	2	14	0.13	< 10	< 10	38	< 10	42

CERTIFICATION: *[Signature]*



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SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19436	201 229	1	0.2	3.79	12	80	< 0.5	< 2	0.37	< 0.5	30	76	111	3.31	10	< 1	0.04	30	0.49	475
19437	201 229	2	< 0.2	1.89	4	20	< 0.5	< 2	0.15	< 0.5	1	28	12	1.97	< 10	< 1	0.03	10	0.14	55
19438	201 229	1	< 0.2	1.14	< 2	50	< 0.5	2	0.27	< 0.5	4	23	24	1.10	< 10	< 1	0.04	10	0.33	110
19439	201 229	< 1	< 0.2	1.34	< 2	50	< 0.5	< 2	0.14	< 0.5	3	26	8	2.44	10	< 1	0.04	10	0.13	50
19440	201 229	< 1	< 0.2	0.98	< 2	30	< 0.5	< 2	0.25	< 0.5	4	21	22	1.11	< 10	< 1	0.04	10	0.30	105
19441	201 229	< 1	< 0.2	1.19	4	30	< 0.5	< 2	0.20	< 0.5	2	20	10	1.44	10	< 1	0.03	< 10	0.19	75
19442	201 229	< 1	< 0.2	1.12	4	30	< 0.5	< 2	0.22	< 0.5	7	57	19	1.61	10	1	0.09	< 10	0.60	145
19443	201 229	< 1	< 0.2	1.01	4	20	< 0.5	< 2	0.14	< 0.5	3	25	13	2.03	10	< 1	0.03	< 10	0.19	65
19444	201 229	5	< 0.2	1.70	< 2	30	< 0.5	2	0.15	< 0.5	4	32	15	1.73	< 10	< 1	0.03	10	0.20	60
19445	201 229	2	< 0.2	0.78	8	20	< 0.5	< 2	0.18	< 0.5	2	21	12	1.20	< 10	1	0.03	< 10	0.17	55

CERTIFICATION: Hans Bechler



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 5175 Timberlea Blvd., Mississauga  
 Ontario, Canada L4W 2S3  
 PHONE: 905-624-2806 FAX: 905-624-6163

o: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Project : 2000  
 Comments: ATTN: M. STALKER

Page Num : 3-B  
 Total Pages : 3  
 Certificate Date: 21-AUG-95  
 Invoice No. : 19523672  
 P.O. Number : P211451  
 Account : JWW

## CERTIFICATE OF ANALYSIS A9523672

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19436	201	229	1	0.01	67	1380	6	< 2	4	18	0.13	< 10	< 10	65	< 10	74
19437	201	229	< 1	< 0.01	9	770	< 2	2	2	9	0.09	< 10	< 10	42	< 10	22
19438	201	229	1	0.01	15	300	2	< 2	2	15	0.13	< 10	< 10	31	< 10	32
19439	201	229	1	< 0.01	11	490	4	< 2	1	9	0.13	< 10	< 10	77	< 10	12
19440	201	229	< 1	0.01	13	390	4	< 2	1	12	0.11	< 10	< 10	30	< 10	24
19441	201	229	< 1	0.01	9	340	2	2	2	10	0.12	< 10	< 10	36	< 10	24
19442	201	229	1	< 0.01	31	400	< 2	< 2	1	9	0.18	< 10	< 10	48	< 10	36
19443	201	229	< 1	< 0.01	11	380	2	< 2	1	9	0.14	< 10	< 10	58	< 10	18
19444	201	229	1	< 0.01	12	540	< 2	< 2	2	7	0.09	< 10	< 10	36	< 10	20
19445	201	229	11	< 0.01	8	470	2	< 2	1	8	0.09	< 10	< 10	36	< 10	18

CERTIFICATION: Mark Beale



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O: ROYAL OAK MINES INC.  
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Project : #2000  
 Comments: ATTN: M. STALKER

Page Num. : 1-A  
 Total Pages : 2  
 Certificate Date: 25-AUG-95  
 Invoice No. : 19524911  
 P.O. Number : P211451  
 Account : JWW

## CERTIFICATE OF ANALYSIS A9524911

SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19815	201 229	< 1	< 0.2	0.77	< 2	20	< 0.5	< 2	0.09	< 0.5	1	15	8	0.94	< 10	< 1	0.02	< 10	0.08	35
19816	201 229	< 1	< 0.2	1.24	< 2	20	< 0.5	< 2	0.13	< 0.5	3	25	15	1.36	< 10	< 1	0.02	10	0.15	50
19817	201 229	< 1	< 0.2	0.46	< 2	10	< 0.5	< 2	0.08	< 0.5	2	13	6	0.83	< 10	< 1	0.03	10	0.11	40
19818	201 229	< 1	< 0.2	0.70	2	20	< 0.5	< 2	0.14	< 0.5	3	16	4	1.03	< 10	< 1	0.03	10	0.15	55
19819	201 229	< 1	< 0.2	0.19	6	10	< 0.5	< 2	0.11	< 0.5	1	4	2	0.21	< 10	< 1	0.02	< 10	0.03	30
19820	201 229	< 1	< 0.2	0.56	2	10	< 0.5	< 2	0.10	< 0.5	2	12	7	1.17	< 10	< 1	0.02	< 10	0.16	60
19821	201 229	< 1	< 0.2	1.01	< 2	40	< 0.5	< 2	0.38	< 0.5	7	63	7	1.14	< 10	< 1	0.04	10	0.47	360
19822	201 229	< 1	< 0.2	0.63	4	30	< 0.5	< 2	0.21	< 0.5	3	16	4	0.83	< 10	< 1	0.03	10	0.19	65
19823	201 229	< 1	< 0.2	1.53	< 2	40	< 0.5	< 2	0.23	< 0.5	4	22	7	1.84	< 10	< 1	0.03	10	0.17	80
19824	201 229	< 1	< 0.2	1.70	2	100	< 0.5	< 2	0.60	< 0.5	7	30	18	1.61	< 10	< 1	0.07	20	0.45	155
19825	201 229	< 1	< 0.2	0.78	6	50	< 0.5	< 2	0.36	< 0.5	4	23	7	1.00	< 10	< 1	0.05	10	0.32	135
19826	201 229	< 1	< 0.2	0.40	< 2	20	< 0.5	< 2	0.15	< 0.5	1	10	2	0.54	< 10	< 1	0.03	10	0.13	45
19827	201 229	1	< 0.2	0.59	< 2	60	< 0.5	< 2	0.24	< 0.5	4	18	7	0.86	< 10	< 1	0.04	10	0.25	260
19828	201 229	< 1	< 0.2	0.57	< 2	30	< 0.5	< 2	0.16	< 0.5	3	15	3	0.78	< 10	< 1	0.04	10	0.22	65
19829	201 229	< 1	< 0.2	0.53	< 2	10	< 0.5	< 2	0.20	< 0.5	3	15	7	0.81	< 10	< 1	0.03	< 10	0.25	115
19830	201 229	< 1	< 0.2	0.72	2	20	< 0.5	2	0.20	< 0.5	3	24	11	1.48	< 10	< 1	0.04	10	0.29	115
19831	201 229	1	< 0.2	1.24	< 2	40	< 0.5	< 2	0.16	< 0.5	4	22	5	1.70	< 10	< 1	0.03	10	0.19	205
19832	201 229	2	< 0.2	1.56	< 2	30	< 0.5	< 2	0.13	< 0.5	4	25	8	1.69	< 10	< 1	0.04	10	0.19	80
19833	201 229	1	< 0.2	0.56	< 2	20	< 0.5	< 2	0.16	< 0.5	3	11	6	0.68	< 10	< 1	0.03	10	0.21	65
19834	201 229	< 1	< 0.2	0.18	< 2	10	< 0.5	< 2	0.10	< 0.5	< 1	4	1	0.14	< 10	< 1	0.01	10	0.02	30
19835	201 229	< 1	< 0.2	0.23	< 2	10	< 0.5	< 2	0.11	< 0.5	< 1	3	1	0.23	< 10	< 1	0.02	10	0.03	45
19836	201 229	< 1	0.2	1.00	< 2	30	< 0.5	< 2	0.15	< 0.5	2	15	3	1.81	< 10	< 1	0.03	10	0.13	55
19837	201 229	< 1	< 0.2	0.65	< 2	40	< 0.5	< 2	0.22	< 0.5	3	19	8	0.73	< 10	< 1	0.04	10	0.26	70
19838	201 229	< 1	< 0.2	0.17	< 2	10	< 0.5	< 2	0.08	< 0.5	< 1	2	< 1	0.17	< 10	< 1	0.02	10	0.02	15
19839	201 229	< 1	< 0.2	0.87	< 2	30	< 0.5	< 2	0.22	< 0.5	12	90	23	1.49	< 10	< 1	0.04	10	0.61	135
19840	201 229	< 1	< 0.2	0.79	< 2	40	< 0.5	< 2	0.11	< 0.5	4	37	3	1.81	< 10	< 1	0.04	< 10	0.18	125
19841	201 229	< 1	< 0.2	0.47	< 2	20	< 0.5	< 2	0.09	< 0.5	1	8	2	0.39	< 10	< 1	0.03	10	0.08	35
19842	201 229	< 1	< 0.2	0.39	< 2	10	< 0.5	< 2	0.06	< 0.5	< 1	7	1	0.25	< 10	< 1	0.02	10	0.04	15
19843	201 229	< 1	< 0.2	0.54	< 2	20	< 0.5	< 2	0.12	< 0.5	2	15	4	0.74	< 10	< 1	0.03	10	0.14	75
19844	201 229	< 1	< 0.2	0.26	< 2	10	< 0.5	< 2	0.08	< 0.5	1	57	6	0.98	< 10	< 1	0.02	< 10	0.11	30
19845	201 229	1	< 0.2	0.66	< 2	20	< 0.5	< 2	0.17	< 0.5	2	15	3	1.18	< 10	< 1	0.03	10	0.13	55
19846	201 229	1	< 0.2	0.74	< 2	40	< 0.5	< 2	0.28	< 0.5	4	21	8	1.05	< 10	< 1	0.03	10	0.28	140
19847	201 229	< 1	0.2	1.08	< 2	70	< 0.5	< 2	0.29	< 0.5	11	23	21	1.58	< 10	< 1	0.06	10	0.27	405
19848	201 229	< 1	< 0.2	0.40	< 2	10	< 0.5	< 2	0.13	< 0.5	1	9	3	0.48	< 10	< 1	0.02	10	0.12	35
19849	201 229	< 1	0.2	1.51	< 2	100	< 0.5	< 2	0.48	0.5	16	42	23	2.09	< 10	< 1	0.07	20	0.57	1005
19850	201 229	1	0.4	3.37	< 2	110	1.0	< 2	0.41	< 0.5	33	63	63	4.43	< 10	< 1	0.06	70	0.33	2660
19876	201 229	< 1	< 0.2	0.58	< 2	20	< 0.5	< 2	0.26	< 0.5	3	15	7	0.68	< 10	< 1	0.03	10	0.22	80
19877	201 229	< 1	< 0.2	0.21	< 2	10	< 0.5	< 2	0.08	< 0.5	< 1	7	< 1	0.18	< 10	< 1	0.02	10	0.02	15
19878	201 229	< 1	0.2	0.63	< 2	20	< 0.5	< 2	0.11	< 0.5	2	18	3	1.60	< 10	< 1	0.03	10	0.12	70
19879	201 229	< 1	< 0.2	0.54	< 2	20	< 0.5	< 2	0.08	< 0.5	1	15	4	1.19	< 10	< 1	0.02	< 10	0.11	60

CERTIFICATION: *Hans Bechler*



# Chemex Labs Ltd.

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 5175 Timberlea Blvd., Mississauga  
 Ontario, Canada L4W 2S3  
 PHONE: 905-624-2806 FAX: 905-624-6163

TO: ROYAL OAK MINES INC.  
 TIMMINS DIVISION  
 P.O. BOX 2010  
 TIMMINS, ON  
 P4N 7X7

Page Num : 1-B  
 Total Pages : 2  
 Certificate Date: 25-AUG-95  
 Invoice No. : 19524911  
 P.O. Number : P211451  
 Account : JWW

Project : #2000  
 Comments: ATTN: M. STALKER

## CERTIFICATE OF ANALYSIS

A9524911

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19815	201 229	< 1	< 0.01	5	330	4	< 2	< 1	6	0.07	< 10	< 10	25	< 10	14
19816	201 229	< 1	< 0.01	12	530	< 2	< 2	1	6	0.07	< 10	< 10	29	< 10	26
19817	201 229	< 1	< 0.01	5	150	2	< 2	< 1	5	0.07	< 10	< 10	23	< 10	20
19818	201 229	< 1	< 0.01	9	260	< 2	2	1	8	0.07	< 10	< 10	24	< 10	14
19819	201 229	< 1	< 0.01	1	100	< 2	< 2	< 1	4	0.08	< 10	< 10	15	< 10	4
19820	201 229	< 1	< 0.01	3	360	2	< 2	< 1	6	0.09	< 10	< 10	34	< 10	14
19821	201 229	< 1	< 0.01	24	230	4	< 2	1	11	0.09	< 10	< 10	24	< 10	30
19822	201 229	< 1	< 0.01	9	320	< 2	2	1	11	0.09	< 10	< 10	24	< 10	16
19823	201 229	< 1	< 0.01	10	410	< 2	2	1	11	0.09	< 10	< 10	32	< 10	30
19824	201 229	< 1	0.01	16	480	2	2	2	16	0.10	< 10	< 10	31	< 10	52
19825	201 229	< 1	0.01	9	350	< 2	2	1	12	0.08	< 10	< 10	22	< 10	26
19826	201 229	< 1	< 0.01	3	130	4	2	< 1	7	0.06	< 10	< 10	17	< 10	8
19827	201 229	< 1	< 0.01	10	490	2	< 2	1	9	0.06	< 10	< 10	21	< 10	16
19828	201 229	< 1	< 0.01	6	300	6	< 2	1	8	0.08	< 10	< 10	23	< 10	14
19829	201 229	< 1	< 0.01	7	600	2	< 2	< 1	8	0.06	< 10	< 10	19	< 10	18
19830	201 229	< 1	0.01	9	910	4	< 2	1	10	0.07	< 10	< 10	38	< 10	24
19831	201 229	< 1	< 0.01	10	910	2	2	1	9	0.07	< 10	< 10	33	< 10	22
19832	201 229	< 1	< 0.01	12	700	2	2	1	7	0.07	< 10	< 10	31	< 10	32
19833	201 229	< 1	< 0.01	22	220	6	< 2	1	8	0.08	< 10	< 10	18	< 10	16
19834	201 229	< 1	< 0.01	< 1	50	4	< 2	< 1	6	0.04	< 10	< 10	7	< 10	6
19835	201 229	1	< 0.01	1	100	8	< 2	< 1	7	0.07	< 10	< 10	11	< 10	8
19836	201 229	< 1	< 0.01	6	310	6	< 2	1	10	0.11	< 10	< 10	46	< 10	34
19837	201 229	< 1	0.01	8	280	8	2	1	16	0.10	< 10	< 10	18	< 10	26
19838	201 229	< 1	< 0.01	1	60	6	< 2	< 1	7	0.07	< 10	< 10	10	< 10	2
19839	201 229	1	0.01	60	460	6	< 2	1	14	0.07	< 10	< 10	24	< 10	22
19840	201 229	< 1	< 0.01	12	400	2	< 2	1	8	0.09	< 10	< 10	38	< 10	16
19841	201 229	< 1	< 0.01	6	100	6	< 2	< 1	7	0.07	< 10	< 10	14	< 10	8
19842	201 229	< 1	< 0.01	3	80	4	< 2	< 1	5	0.06	< 10	< 10	12	< 10	6
19843	201 229	< 1	< 0.01	6	140	14	< 2	< 1	7	0.11	< 10	< 10	34	< 10	20
19844	201 229	< 1	< 0.01	9	130	4	< 2	< 1	4	0.07	< 10	< 10	31	< 10	8
19845	201 229	< 1	< 0.01	7	250	8	< 2	< 1	7	0.06	< 10	< 10	24	< 10	12
19846	201 229	< 1	< 0.01	10	410	2	< 2	1	10	0.07	< 10	< 10	22	< 10	22
19847	201 229	< 1	0.01	20	240	2	< 2	2	9	0.10	< 10	< 10	42	< 10	56
19848	201 229	< 1	< 0.01	3	130	6	< 2	< 1	6	0.07	< 10	< 10	14	< 10	18
19849	201 229	< 1	< 0.01	18	860	18	< 2	2	17	0.11	< 10	< 10	49	< 10	78
19850	201 229	< 1	0.01	27	1590	6	2	6	18	0.08	< 10	< 10	56	< 10	82
19876	201 229	< 1	< 0.01	10	470	4	< 2	1	11	0.07	< 10	< 10	16	< 10	18
19877	201 229	< 1	< 0.01	1	80	6	< 2	< 1	6	0.09	< 10	< 10	12	< 10	2
19878	201 229	< 1	< 0.01	4	720	6	< 2	1	8	0.09	< 10	< 10	35	< 10	12
19879	201 229	< 1	< 0.01	2	670	8	< 2	< 1	5	0.08	< 10	< 10	33	< 10	18

CERTIFICATION: *Hans Bechler*



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 P.O. BOX 2010  
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Project : #2000  
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Page Num.: 2-A  
 Total Pages: 2  
 Certificate Date: 25-AUG-95  
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## CERTIFICATE OF ANALYSIS

A9524911

SAMPLE	PREP CODE	Au ppb EXT-AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
19880	201 229	< 1	< 0.2	0.13	< 2	10	< 0.5	< 2	0.06	< 0.5	< 1	4	< 1	0.09	< 10	< 1	0.01	10	0.01	10
19881	201 229	< 1	< 0.2	0.78	< 2	40	< 0.5	< 2	0.21	< 0.5	4	24	8	1.02	< 10	< 1	0.03	10	0.32	90
19894	201 229	< 1	< 0.2	0.55	< 2	40	< 0.5	< 2	0.29	< 0.5	3	19	8	0.94	< 10	< 1	0.03	10	0.19	115
19895	201 229	< 1	< 0.2	0.92	< 2	90	< 0.5	< 2	0.64	< 0.5	3	24	49	0.93	< 10	< 1	0.04	40	0.26	115
19896	201 229	< 1	< 0.2	0.34	< 2	30	< 0.5	< 2	0.19	< 0.5	1	11	1	0.53	< 10	< 1	0.03	10	0.11	110
19897	201 229	< 1	< 0.2	0.64	< 2	30	< 0.5	< 2	0.14	< 0.5	2	16	2	1.33	< 10	< 1	0.04	10	0.15	75
19898	201 229	< 1	< 0.2	0.88	< 2	30	< 0.5	< 2	0.14	< 0.5	3	16	4	1.05	< 10	< 1	0.03	10	0.18	60

CERTIFICATION:



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A9524911

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
19880	201 229	< 1	< 0.01	< 1	110	4	< 2	< 1	4	0.03	< 10	< 10	5	< 10	2
19881	201 229	< 1	< 0.01	14	400	4	< 2	1	8	0.06	< 10	< 10	20	< 10	24
19894	201 229	< 1	< 0.01	11	430	2	< 2	1	9	0.05	< 10	< 10	24	< 10	16
19895	201 229	< 1	< 0.01	26	900	< 2	2	1	20	0.03	< 10	< 10	19	< 10	26
19896	201 229	< 1	< 0.01	3	150	2	< 2	< 1	7	0.04	< 10	< 10	14	< 10	12
19897	201 229	< 1	< 0.01	7	730	2	< 2	1	7	0.06	< 10	< 10	26	< 10	14
19898	201 229	< 1	< 0.01	8	300	4	< 2	1	7	0.08	< 10	< 10	25	< 10	14

CERTIFICATION: Hans Bichler



Ministry of  
Northern Development  
and Mines

Ontario

# Report of Work Conducted After Recording Claim

Mining Act

Transaction Number

**w9540.331**

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 169 Cedar Street, Sudbury, Ontario, P3E 8A5, telephone (705) 670-7264.

- Instructions:**
- Please type or print and submit in duplicate.
  - Refer to the Mining Act and Regulations for requirements of mine assessment and work under the Mining Act.
  - A separate copy of this form must be completed.
  - Technical reports and maps must accompany it.
  - A sketch, showing the claims the work is assigned to, must be included.

**2 163 94**



42C13SE0069 2 16394 WHITE LAKE (NORTH)

900

016 Rush St Sault Ste Marie P6B 4C7		Work No. <b>116260 + 162098</b>
Recorded Holder(s) <b>(1) Thomas Carroll &amp; Daniel MacDougall optioned to Royal Oak Mines</b>		Telephone No. <b>(705) 360-1141</b>
Address <b>P.O. Box 2010, Timmins, Ont. P1N 7X7</b>		M or G Plan No. <b>G-0622 + G-0623</b>
Mining Division <b>Thunder Bay.</b>		Township/Area <b>White Lake</b>
Date Work Performed <b>From: July 4, 1995</b>	To: August 3, 1995	

**Work Performed (Check One Work Group Only)**

Work Group	<b>W10 GCHEM</b>	Type
<input checked="" type="checkbox"/> Geotechnical Survey	<b>Humus + B Horizon Geochemical Survey</b>	
<input type="checkbox"/> Physical Work, Including Drilling		
<input type="checkbox"/> Rehabilitation		
<input type="checkbox"/> Other Authorized Work		
<input type="checkbox"/> Assays		
<input type="checkbox"/> Assignment from Reserve		

Total Assessment Work Claimed on the Attached Statement of Costs \$ **40836**

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

**Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)**

Name	Address
<b>Mary F. Stalker / Royal Oak Mines</b>	<b>P.O. Box 2010, Timmins, Ont. P1N 7X7</b>
<b>RECEIVED</b>	
<b>FEB - 5 1996</b>	

(attach a schedule if necessary)  
**MINING LANDS BRANCH**

**Certification of Beneficial Interest \* See Note No. 1 on reverse side**

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date	Recorded Holder or Agent (Signature)
	<b>December 21, 1995</b>	<b>Mary F. Stalker</b>

**Certification of Work Report**

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying

<b>Mary Stalker</b>	<b>Royal Oak Mines Inc., P.O. Box 2010, Timmins, Ont. P1N 7X7</b>	
Telephone No. <b>(705) 360-1141</b>	Date <b>December 21, 1995</b>	Certified By (Signature) <b>Mary F. Stalker</b>

**For Office Use Only**

Total Value Cr. Recorded <b>40836</b>	Date Recorded	Mining Recorder <b>M. A. Weermeijer</b>	Received Stamp <b>82 DEC 56</b>
Deemed Approval Date <b>Mar 27/96</b>	Date Approved	Minist. Min. Reg. No. <b>101514</b>	Minist. Min. Reg. Date <b>1996-03-27</b>

Work Report Number for Applying Reserve	Claim Number (See Note 2)	Number of Claim Units	Value of Assessment Work Done on the Claim	Value Applied to the Claim	Value Assigned from the Claim	Reserve Work to be Claimed at Future Date
	1110122	9	11840	0	11840	
	782943	2	1230	0	1230	
	782944	15	19190	0	17734	1406
	1110124	3	2860	0	2860	770
	1110123	8	5716	630	5086	
	1110125	14	0	5600		
	782941	12	0	4800		
	782942	12	0	4800		
	1174578	12	0	4800		
	1174579	12	0	4800		
	1174580	15	0	6000		
	1174581	16	0	6400		
	1174582	4	0	1600		

Total Number of Claims	Total Value Work Done	Total Value Work Applied	Total Assigned from
134	40836	39430	3380046200

Total Assigned from	Total Reserve
	1406775

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

- Credits are to be cut back starting with the claim listed last, working backwards.
- Credits are to be cut back equally over all claims contained in this report of work.
- Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature	Date
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Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des mines

## Statement of Costs for Assessment Credit

## État des coûts aux fins du crédit d'évaluation

### Mining Act/Loi sur les mines

Transaction No./N° de transaction  
**W9540-331**

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

#### 1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'œuvre	11714	
	Field Supervision Supervision sur le terrain		11714
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil	Type Assaying	22270	
	Surveyor	308	
			22578
Supplies Used Fournitures utilisées	Type Field Supplies	1088	
		1088	
Equipment Rental Location de matériel	Type		
<b>Total Direct Costs Total des coûts directs</b>		<b>35380</b>	

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

#### 2. Indirect Costs/Coûts indirects

\* \* Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.  
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type Truck & Fuel	2337	
Food and Lodging Nourriture et hébergement	RECEIVED	2337	
	FEB 5 - 1996	3119	
Mobilization and Demobilization Mobilisation et démobilisation	MINING LANDS BRANCH		
<b>Sub Total of Indirect Costs Total partie des coûts indirects</b>			<b>5456</b>
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)			
Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)		Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)	<b>10836</b>

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

#### Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
	$\times 0.50 =$

#### Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Evaluation totale demandée
	$\times 0.50 =$

#### Certification Verifying Statement of Costs

I hereby certify:

that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Project geologist for Royal Oak Mines I am authorized  
(Recorded Holder, Agent, Position in Company)

to make this certification

#### Attestation de l'état des coûts

J'atteste par la présente :

que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de \_\_\_\_\_ je suis autorisé  
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature	Date
<i>Mary F. Staken</i>	Dec 21, 1995

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.



Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

April 17, 1996

Geoscience Approvals Office  
933 Ramsey Lake Rd., 6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (705) 670-5853  
Fax: (705) 670-5863

Mining Recorder  
Ministry of Northern Development and Mines  
Ste B003, 435 James St. South  
Thunder Bay, Ontario  
P7E 6E3

Our File: 2.16394  
Transaction #: W9540.331

Dear Mr Weirmeir:

RE: Approval of Assessment work submitted on Mining Claims 1110122 et al. in the Township(s) of White Lake.

This assessment work report was not assessed prior to the 90 day deemed approval date. Accordingly, as outlined in subsection 6(7) of the Mining Act Regulations, this Report of Work is deemed approved as of April 3, 1996.

If you have any questions regarding this correspondence please contact Blair Kite at (705) 670-5861.

Yours sincerely  
ORIGINAL SIGNED BY

Ron C. Gashinski  
Senior Manager, Mining Lands Section  
Mining and Land Management Branch

BK/bk

cc: Resident Geologist  
Assessment Files Office, Sudbury



**WHITE LAKE (south part) G-623**

**NOTES**

**AREAS WITHDRAWN FROM DISPOSITION**

M.R.O. - MINING RIGHTS ONLY  
S.R.O. - SURFACE RIGHTS ONLY  
M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
CROWN RESERVE	S.R.O.	16006 v.i.		
SEC.36/80 W.3/81 1/4/81	S.R.O.	18546		
SEC.36/80 W.8/81 1/4/81	S.R.O.	18546		
SEC.36/80 W.7/82 5/4/82	S.R.O.	18546		
SEC.36/80 W.10/82 7/4/82	S.R.O.	16006v.i.		
SEC.36/80 W.TB-12/91 1/10/91 M&S				
Pending application for Surface Rights PLA May 30, 1991				

**WHITE LAKE AREA (NORTH PART) G-622**  
*2.16394 geochem*

**WABIKOBA LAKE G-620**

**BRYANT TWP.**

**LABERGE TWP.** (FOR STATUS REFER TO TWP. PLAN)  
G-3174

**THUNDER BAY**

**DENIS LAKE AREA G-3766**

**BROTHERS TWP. G-3172**

**MC CRON TWP.**

**OSKABUKTA LAKE AREA G-3775**

**LEGEND**

- HIGHWAY AND ROUTE NO.
- OTHER ROADS
- TRAILS
- SURVEYED LINES: TOWNSHIPS, BASE LINES, ETC.
- UNSURVEYED LINES: LOTS, MINING CLAIMS, PARCELS, ETC.
- LOT LINES
- PARCEL BOUNDARY
- MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

**DISPOSITION OF CROWN LANDS**

**TYPE OF DOCUMENT**

- PATENT, SURFACE & MINING RIGHTS
- SURFACE RIGHTS ONLY
- MINING RIGHTS ONLY
- LEASE, SURFACE & MINING RIGHTS
- SURFACE RIGHTS ONLY
- MINING RIGHTS ONLY
- LICENCE OF OCCUPATION
- ORDER-IN-COUNCIL
- RESERVATION
- CANCELLED
- SAND & GRAVEL

**LAND USE PERMITS FOR COMMERCIAL TOURISM, OUTPOST CAMPS**

**SCALE: 1 INCH = 40 CHAINS**

**AREA WHITE LAKE (SOUTH PART)**

**M.N.R. ADMINISTRATIVE DISTRICT**  
**TERRACE BAY/WAWA**  
**MINING DIVISION**  
**THUNDER BAY/SAULT STE. MARIE**  
**LAND TITLES / REGISTRY DIVISION**  
**THUNDER BAY**

**2.16394**

**Ministry of Natural Resources Land Management Branch Ontario**

**RECEIVED**

**MINING LANDS BRANCH**

**AUGUST 1984**

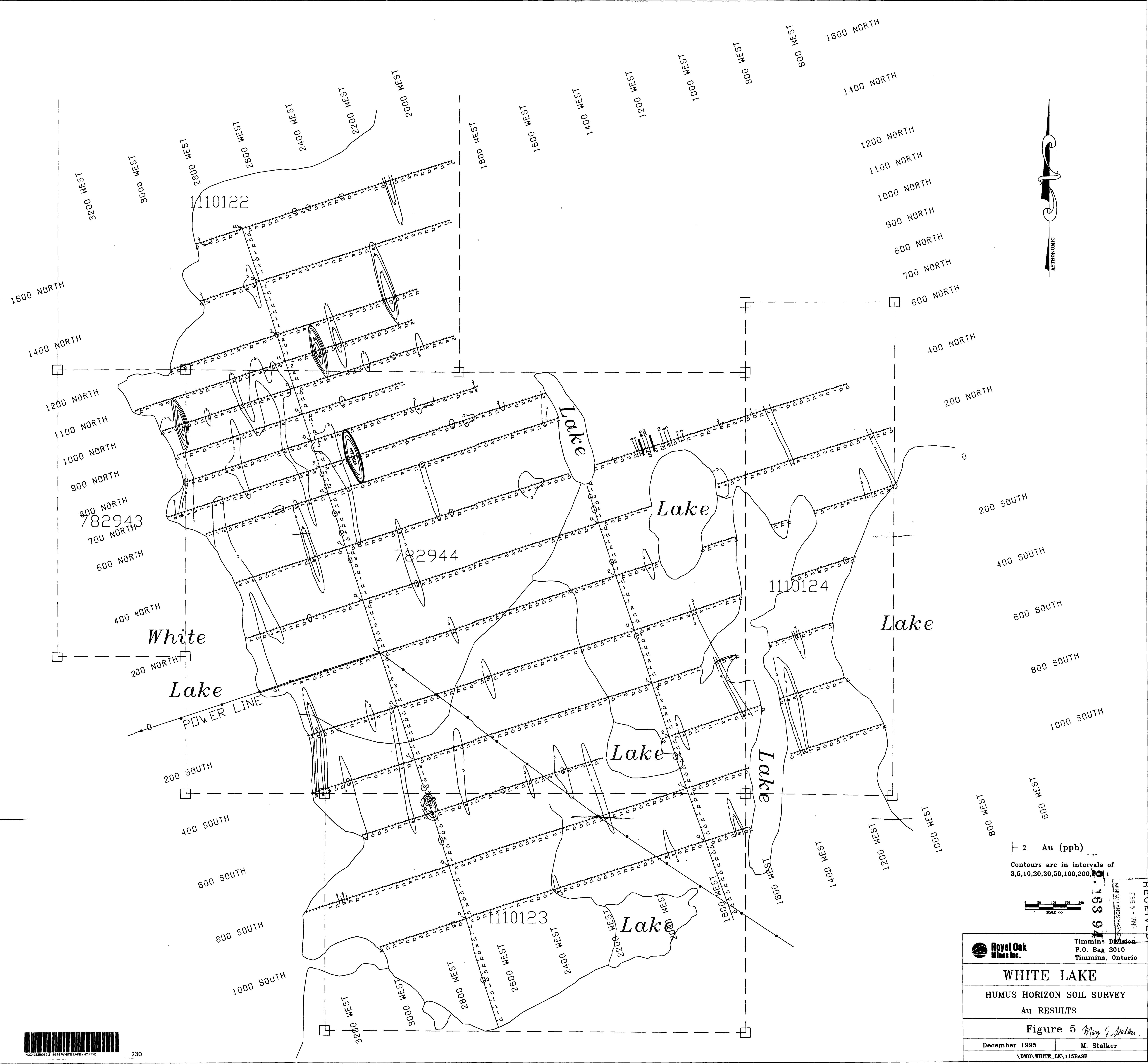
**G-623**



21

www.brown.edu/WWW/WWW/WWW.html





42C13SE0092 1638 WHITE LAKE (NORTH)

230



 **Royal Oak  
Mines Inc.**

Timmins Division  
P.O. Bag 2010  
Timmins, Ontario

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# WHITE LAKE

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## HUMUS HORIZON SOIL SURVEY

### MULTI-ELEMENT RESULTS

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Figure 6 May. 1 Stalker.

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December 1995	M. Stalker
\DWG\WHITE_LK\115BASE	

