

2 . 17832

**ROYAL OAK MINES INC.
NIGHTHAWK LAKE MINE
1997 ASSESSMENT REPORT
DIAMOND DRILLING**

Submitted by:

S. G. Harding
Geologist
Eastern Canada Exploration
Royal Oak Mines Inc.

May 1997

\\nh\assess97.rpt



42A07NW0029 2.17832 CODY

CONTENTS

| | Page |
|--|-------------|
| 1.0 Introduction and Summary | 1 |
| 2.0 Property Location and Access | 1 |
| Figure 1 Nighthawk Lake Mine - Location Map | 2 |
| 3.0 Past Work | 3 |
| 4.0 Geology | 3 |
| 4.1 Regional Geology | 3 |
| 4.2 Local Geology | 4 |
| 5.0 1997 Drill Program | 4 |
| 6.0 Conclusions and Recommendations | 5 |
| List of References | 6 |
| Statement of Qualifications | |

APPENDICES

| | |
|------------|-----------------------------------|
| Appendix 1 | Drill Logs and Assay Certificates |
| Appendix 2 | Drilling Plan Map (in Pocket) |
| Appendix 3 | Drill Hole Sections (in Pocket) |



1.0 Introduction and Summary

The Nighthawk Lake Mine has been brought back into commercial production by Royal Oak Mines Inc. (Timmins Division). Prior gold production from the property occurred between 1924 and 1927 when 99,628 tons of ore at a grade of 0.32 opt Au was mined out by underground methods.

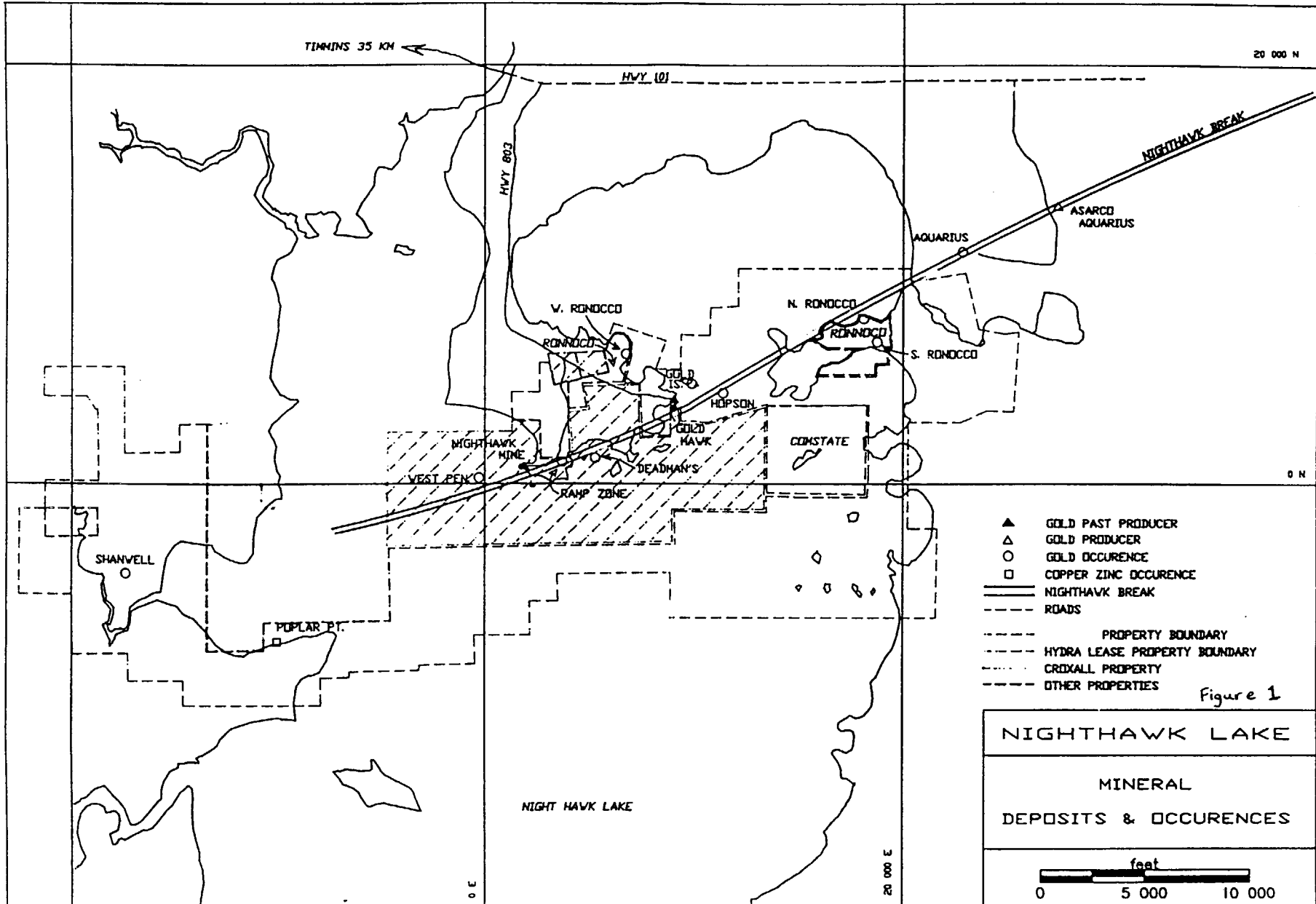
During early 1997, Royal Oak completed a series of 16 holes, totalling 10,781 feet, to test the Ramp Zone as outlined by prior drill programs. These holes were between 500 and 900 feet in length and covered a strike length of about 600 feet.

All of the holes yielded significant assays, with holes RP97-6 to RP97-15 containing the best intersections.

The results of this drilling program indicate that the Ramp Zone Target shows good continuity and contains significant zones of economic importance.

2.0 Property Location and Access

The Nighthawk Lake Mine is located on the North Peninsula of Nighthawk Lake in Cody Township, about 35 km east of Timmins, Ontario. It is accessed via Provincial Road 803. The mine property is part of a larger parcel of land in the Nighthawk Lake area controlled by Royal Oak Mines Inc. (Figure 1).



2

3.0 Past Work

The Nighthawk Lake area has been the site of gold exploration since 1907 when gold was first discovered on Gold Island. The Nighthawk Lake Mine (originally called the Porcupine Peninsular Mine) was discovered in 1909 when the water level in the lake was lowered, which exposed the No. 1 Vein. Subsequent underground mining and exploration activity has occurred at the site between 1909 and the present.

Work by Pamour/Pamorex between 1973 and 1989 in the area of the Mine included a series of surface drill programs, as well as driving a 750 foot long ramp from surface on the Ramp Zone in 1977. Major underground exploration and ore definition drilling programs were undertaken at the site by Pamorex in 1984 and 1989. At the end of the 1989 program, a mineral inventory outlining 869,000 tons of material at a grade of 0.17 opt Au was calculated. Between 1989-1994, a few short drill programs were completed at the mine, including a program of 2,369 feet of drilling to define near surface mineralization at the Ramp Zone in 1993. The top portion of the Ramp Zone was mined by open pit methods in the latter portion of 1994.

Drilling by Royal Oak Mines in 1995 indicated that no significant zones of economic mineralization existed between 1200 and 2000 feet below surface at the mine. Underground mining and drilling was started in 1995 and continues to the present day.

4.0 Geology

4.1 Regional Geology

The Nighthawk Lake area is underlain by Archean mafic volcanics with a minor amount of felsic volcanics. Sediments which overlie the volcanics to the north consist primarily of greywackes and interbedded argillites. Ultramafic rocks intrude the volcanics and are comprised of serpentized peridotites and carbonatized komatiites. Felsic intrusives are common and consist of quartz-feldspar porphyry, feldspar porphyry, syenite, aplite and felsite. All rocks are cut by late diabase dikes (Leahy, 1971).

The Destor-Porcupine Fault crosses the north end of Northeast Bay of Nighthawk Lake. The Nighthawk Break lies to the south, and has been traced from west of the Nighthawk Lake Mine area eastward (at a strike of 070°) through to its convergence with the Destor-Porcupine Fault in Stock Township. Several significant gold occurrences and deposits lie along the Nighthawk Break, as it has acted as a gold localizing feature of the area.

4.2 Local Geology

The rocks of the mine area are variably altered (carbonate, sericite, silica and fuchsite) mafic and ultramafic volcanics. These units are complexly dragfolded along sub-parallel splays to the Nighthawk Break. Brown sericite, silica flooding and 2-3% pyrite are good indicators for elevated gold values.

Deadman Island, which lies about 2,500 feet east of the Mine and contains similar geology, was studied by the O.G.S. in 1992 (Siragusa, G.M., 1992). Siragusa shows the complex geology of the Nighthawk Break, as well as the fact that elevated gold values occur in areas of alteration and veining adjacent to sub-parallel splays (areas of high strain) off the Nighthawk Break.

5.0 1997 Drill Program

Sixteen holes totalling 10,781 feet were drilled immediately south of the Nighthawk Lake Mine Open Pit to further define the Ramp Zone (Map, Appendix 2).

The holes were targeted to cover a 600 foot strike length, testing to a depth of about 300 to 650 feet vertical.

These holes cored weakly altered mafic and ultramafic volcanics followed by strongly carbonate, sericite, and fuchsite altered ultramafics. The holes ended in a tuffaceous sediment/argillite sequence.

The first four holes (RP97-1-4) failed to intersect the Ramp Zone and yielded weak assays over relatively short (7-20 feet) widths. The best intersection from these holes was 0.150opt Au/20.0' from hole RP97-1.

The remaining twelve holes all intersected the Ramp Zone and yielded significant assays over 10.0-82.5 foot widths both in and around the zone. Some of the more significant intersections include:

| | |
|---------|-------------------------|
| RP97-8 | 0.162/42.7'@525.3-568.0 |
| RP97-9 | 0.111/59.7'@628.3-688.0 |
| RP97-10 | 0.181/82.5'@595.5-678.0 |

The gold mineralization occurs primarily in zones of strong carbonate/sericite alteration with quartz veins/flooding and pyrite content of 3-10%.

Holes 97-7, 97-14, and 97-16 also encountered zones of weaker gold mineralization in the tuffaceous sediments. The best intersection from this setting was from RP97-16 which returned 0.055 opt Au/50.0' from 613.0-663.0 feet.

6.0 Conclusions and Recommendations

The results of the winter 1997 drilling program at the Nighthawk Lake Mine confirmed significant gold mineralization in the Ramp Zone. A number of smaller intersections were also encountered both above and below the Ramp Zone.

It is recommended that additional drilling at the Nighthawk Lake Mine be done to test the continuity and extent of this gold mineralization.

LIST OF REFERENCES

- Leahy, E.J. (1971) **Geology of the Night Hawk Lake Area, District of Cochrane, Ontario, O.D.M., GR 96, col. map 2222**
- Siragusa, G.M. (1992) **Precambrian Geology, Gold Mineralization in the Northern Night Hawk Lake Area of the Abitibi Belt, Ontario Geological Survey, Open File Map 201**

STATEMENT OF QUALIFICATIONS

I, Stephen G. Harding, of the City of Timmins, Province of Ontario, do hereby certify that:

1. I received a B.Sc. degree (Honours) in Geology from the University of Western Ontario, London Ontario, in 1987.
2. I have been employed as a geologist by various mining companies in Ontario since 1987.
3. I am the author of this report.
4. 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 9th day of April 1997, Timmins, Ontario.

Stephen G. Harding
Stephen G. Harding
Geologist
Eastern Canada Exploration
Royal Oak Mines Inc.

APPENDICIES

APPENDIX 1

DRILL LOGS AND ASSAY CERTIFICATES



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS PROJECT: NIGHT HAWK LAKE LOGGED BY: S. HARLING DATE LOGGED: JAN 30/97 DRILL HOLE NO: RP-97-1

Surface Grid: NORTHING 1090.69 EASTING 3360.09 ELEVATION 10928.01 LENGTH 628' SECTION 3350 E LEVEL _____

Engineering Grid: _____

S. Harling

1 of 7

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 48 | | | | | | | | | | | | |
| 200 | 355 | 46 | | | | | | | | | | | | |
| 400 | 360 | 47 | | | | | | | | | | | | |
| 628 | 360 | 46 | | | | | | | | | | | | |

START DATE: Jan 27 1997

FINISH DATE: Jan 30 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENDIT

PURPOSE: TEST RAMP ZONE

RESULTS: _____

WHY HOLE TERMINATED: TARGET INTERSECTED

BORE SIZE: BQ

CASING: 48.7' Pulled

BORE CEMENTED: Yes

NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

BORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch

ft
 m

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|----|----------|-------|-------|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | Py | Po | | | | | |
| 48.7 | | - | - | - | - | - | CAS | | | | | | | | | | | | | 0-48.7: CASING |
| 55.0 | | M | F | MSV | GY | ANK | MVD | V | 45 | | | 1 | | Tr | | AX42501 | 6.3 | C.001 | | 48.7-65.0- MPIL VOLC, WK ANK ALT N, MN |
| 60.0 | | M | F | MSV | GY | ANK | MVD | | | | | 2 | | Tr | | 42502 | 5.0 | C.001 | | LIM STAINING, Tr-1% QZ/ANK STGS, 56.3-870 |
| 65.0 | | M | F | MSV | GY | ANK | MVD | | | | | Tr | | Tr | | 42503 | 5.0 | C.001 | | GGCRB FRAG., INCREASING ANK ALT N AT EN |
| 69.0 | | M | F | FOL | GG | ANK | GCRB | V | 25 | V | 60 | 15 | | Tr | | 42504 | 4.0 | C.001 | | - QZ/ANK VEINS/VLCTS < 5" WIDE, GROWN CORE / 1" VLET AT CONTACT |
| 74.0 | | M | F | FOL | GG | ANK | GCRB | V | 70 | | | 3 | | Tr | | 42505 | 5.0 | C.001 | | - QZ/ANK STGS/VLCTS < 1" WIDE |
| 79.0 | | M | F | FOL | GG | ANK | GCRB | | | | | 1 | | Tr | | 42506 | 5.0 | C.001 | | |
| 82.0 | | M | F | MSV | GY | SIL | FEL | V | 20 | | | 1 | | 6 | | 42507 | 3.0 | C.009 | * | 79.0-89.0- SIL CARB/FELSITE?, 1% QZ/ANK |
| 86.0 | | M | F | MSV | GY | SIL | FEL | V | 30 | | | 2 | | 4 | | 42508 | 4.0 | C.007 | | STGS, VF-MG SUB-EUH PY, CHL BLEBS, |
| 89.0 | | M | F | MSV | GY | SIL | FEL | | | | | 4 | | 5 | | 42509 | 3.0 | C.002 | | - 82.0 Tr PY IN STG - FINER GRAINED / MORE MSV THAN SURROUNDING CARB SPARK CONTACTS, POSS DYKE |
| 94.0 | | M | F | FOL | GG | ANK | GCRB | V | 40 | | | 3 | | Tr | | 42510 | 5.0 | C.001 | | - FOL - WKLY COT |
| 99.0 | | M | F | FOL | GG | ANK | GCRB | V | 50 | | | 5 | | 1 | | 42511 | 5.0 | C.001 | | - 3" QZ/ANK VLET, MORE CHL |
| 21.0 | | M | F | FOL | GG | ANK | GCRB | V | 50 | | | 1 | | Tr | | 42512 | 22.0 | G.001 | | - QZ/ANK VLCTS/STGS < 1" WIDE, WKLY COT/BX |
| 26.0 | | M | F | COT | GG | ANK | GCRB | | | | | 40 | | Tr | | 42513 | 5.0 | C.001 | | - APPROX 2.2' COT/BX QZ/ANK VEINING, RARE PY |
| 31.0 | | M | F | MSV | GG | ANK | GCRB | | | | | 13 | | Tr | | 42514 | 5.0 | C.001 | | - IRR QZ/ANK VEINING < 0.5' WIDE |
| 136.0 | | M | F | FOL | GG | ANK | CCFB | V | 70 | | | 7 | | Tr | | 42515 | 5.0 | C.001 | | - 4" QZ/ANK VLET, MORE CHL, FOL/WKLY COT |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----|----|---|--------|----|----------|----|----------|-------|---|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | Py | Po | | | | | |
| 140.6 | | m | F | MSX | GG | ANK | GCRB | | | | | 7 | | Tr | | 42516 | 4.6 | C | .001 | - IRR QZ/ANK VLETS |
| 144.6 | | m | F | MSX | GY | SIL | FEL | | | | | 7 | | 3 | | 42517 | 4.0 | C | .003 | * - SIMILAR TO PREVIOUS ZONE, POSS MORE MARC? IN ORIGIN, WKLY SIL, IRR QZ/ANK VLETS/STGS, VF FG DISSEM + SUB/EUH PY, LESS CHL BLEBS, RELATIVELY SHARP CONTACTS |
| 149.3 | | m | F | MSX | GG | ANK | GCRB | V | 50 | | | 10 | | Tr | | 42518 | 4.7 | C | .001 | - 4" FEESITE? PATCH WITH VF6 DISSEM PY - 5" QZ/ANK VLET |
| 153.3 | | m | F | MSX | GY | SIL | FEL | | | | | 12 | | 3 | | 42519 | 4.0 | C | .004 | * 149.3-161.7 - GYCRS/FEL DYKE?, FINER |
| 157.7 | | m | F | MSX | GY | SIL | FEL | | | | | 12 | | 3 | | 42520 | 4.4 | C | .004 | GRAINED, MORE MSV/LESS COT, QZ/ANK VLETS/STGS |
| 161.7 | | m | F | MSX | GY | SIL | FEL | | | | | 12 | | 3 | | 42521 | 4.0 | C | .001 | < 3" WIDE, VF-FG PY, BLOCKY CORE AT TOP CONTACT |
| 166.0 | | m | F | FOL | GG | ANK | GCRB | F | 5 | | | Tr | | 2 | | 42522 | 4.3 | C | .001 | - FOL 0-5" TCA, F.M.G SUB/EUH PY |
| 171.0 | | m | F | FOL | GG | ANK | GCRB | V | 20 | | | 2 | | Tr | | 42523 | 5.0 | C | .001 | |
| 176.0 | | m | F | FOL | GG | ANK | GCRB | | | | | 4 | | Tr | | 42524 | 5.0 | C | .001 | - 1.5" QZ/ANK VLET |
| 181.0 | | m | F | FOL | GG | ANK | GCRB | | | | | 2 | | Tr | | 42525 | 5.0 | C | .001 | - FOL/WKLY COT |
| 186.0 | | m | F | FOL | GG | ANK | GCRB | | | | | 2 | | Tr | | 42526 | 5.0 | C | .001 | - Tr SUCH |
| 191.0 | | m | F | COT | GG | ANK | GCRB | V | 45 | | | 12 | | Tr | | 42527 | 5.0 | C | .001 | - COT QZ/ANK VEINING, VLETS < 2" WIDE |
| 194.0 | | m | F | MSX | GG | ANK | GCRB | | | | | 2 | | 1 | | 42528 | 3.0 | C | .022 | * - 191.0 - 220.0 - CARBS/MARC VOLC?, FINER |
| 198.0 | | m | F | MSX | GG | SIL | GCRB | | | | | 1 | | 2 | | 42529 | 4.0 | C | .026 | GRAINED, MORE MSV, WKLY SIL IN PLACES, QZ |
| 203.0 | | m | F | MSV | GG | CHL | GCRB | | | | | 2 | | 2 | | 42530 | 5.0 | C | .018 | STGS, WKLY CHL, 98.4 - Tr (PY) IN STG |
| 208.0 | | m | F | MSX | GY | SIL | GCRB | | | | | 3 | | 2 | | 42531 | 5.0 | C | .140 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|----|--------|----|----------|----|----------|-------|------|--------------------|----------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | B | A1 | J | A2 | Qz | Py | | | | | | Po |
| 212.5 | | M | F | MSY | GG | CHL | GCRB | mvd? | | | | | 2 | | MN | | 42532 | 4.5 | c | .014 | - Tr CPY IN STG |
| 216.0 | | M | F | MSY | GY | SIL | GCRB | mvd? | | | | | 6 | | Tr | | 42533 | 3.5 | c | .014 | - Tr CPY IN STG, WR-MOD SIL |
| 220.0 | | M | F | MSY | GY | SIL | GCRB | mvd? | | | | | 3 | | I | | 42534 | 4.0 | c | .027 | - Tr CPY IN STG, MOD-STR SIL |
| 225.5 | | M | F | COT | GG | ANK | GCRB | | | | | | 5 | | Tr | | 42535 | 5.5 | c | .001 | - IRR QZ/ANK VEINING, 0.5' BLOCKY CORE |
| 229.0 | | M | F | MSY | GY | SIL | GCRB | FEL? | | | | | 15 | | Tr | | 42536 | 3.5 | c | .001 | - MOD-STR SIL, VLETS/STGS < 1" WIDE, DYKE? |
| 233.0 | | M | F | COT | GG | CHL | GCRB | | | | | | 10 | | Tr | | 42537 | 4.0 | c | .001 | - COT/FOL, IRR VEINING |
| 238.0 | | M | F | COT | GG | ANK | GCRB | | | | | | 7 | | Tr | | 42538 | 5.0 | c | .001 | - COT/FOL/BX |
| 243.0 | | M | F | FOL | GG | CHL | GCRB | | V | 4S | | | 4 | | MN | | 42539 | 5.0 | c | .001 | |
| 248.0 | | M | F | COT | GG | CHL | GCRB | | | | | | 5 | | Tr | | 42540 | 5.0 | c | .001 | |
| 273.0 | | M | F | FOL | GG | ANK | GCRB | | | | | | 2 | | Tr | | 42541 | 25.0 | G | .001 | - LT GREY/GREEN, LESS CHL, VLETS < 1" WIDE |
| 278.0 | | M | F | FOL | GG | ANK | GCRB | | | | | | 3 | | Tr | | 42542 | 5.0 | c | .001 | |
| 283.0 | | M | F | FOL | GG | ANK | GCRB | | V | 6S | | | 2 | | Tr | | 42543 | 5.0 | c | .001 | |
| 288.0 | | M | F | FOL | GG | ANK | GCRB | | | | | | 5 | | Tr | | 42544 | 5.0 | c | .001 | - IRR QZ/ANK VLETS, UP-FG DISSEM PY |
| 293.0 | | M | F | COT | GG | ANK | GCRB | | F | S | | | 2 | | Tr | | 42545 | 5.0 | c | .001 | - MORE CHL |
| 298.0 | | M | F | COT | GG | ANK | GCRB | | | | | | 6 | | Tr | | 42546 | 5.0 | c | .001 | |
| 303.0 | | M | F | COT | GG | ANK | GCRB | | | | | | 3 | | Tr | | 42547 | 5.0 | c | .001 | |
| 308.0 | | M | F | FOL | GG | ANK | GCRB | | | | | | 1 | | Tr | | 42548 | 5.0 | c | .001 | |
| 313.0 | | M | F | FOL | GG | ANK | GCRB | | | | | | 1 | | Tr | | 42549 | 5.0 | c | .001 | |
| 318.0 | | M | F | BX | GG | ANK | GCRB | | V | 70 | | | 3 | | Tr | | 42550 | 5.0 | c | .001 | - COT/BX |
| 323.0 | | M | F | BX | GG | SIL | GCRB | | V | 15 | | | 10 | | Tr | | 42551 | 5.0 | c | .001 | - 1.0' WHLY FUCH, 2' QZ/ANK VLET, Tr LIM |
| 328.0 | | M | F | BX | GY | SIL | GCRB | | | | | | 3 | | Z | | 42552 | 5.0 | c | .001 | - 3.0' BX DICE? WITH V.FG DISSEM PY |

418.0-438.0
.150/20.0'

DRILL HOLE NO. RP-97-1

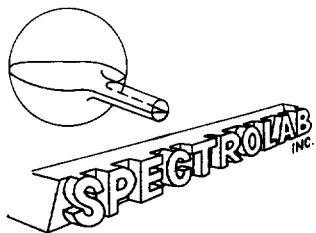
PAGE 5 OF 7

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|------|---|--------|----|----------|----|----------|-------|---|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | PD | | | | | |
| 333.0 | | M | F | BX | GY | SIL | GCRB | | | | | 4 | | 1 | | 42553 | 5.0 | C | .008 | BX/COT WITH MORE FOL PATCHES |
| 338.0 | | M | F | COT | GG | ANK | GCRB | | | | | 6 | | Tr | | 42554 | 5.0 | C | .001 | |
| 343.0 | | M | F | COT | GG | ANK | GCRB | | | | | 2 | | Tr | | 42555 | 5.0 | C | .001 | |
| 348.0 | | M | F | COT | GG | ANK | GCRB | | | | | 1 | | Tr | | 42556 | 5.0 | C | .001 | |
| 353.0 | | M | F | BX | GG | ANK | GCRB | | | | | 2 | | Tr | | 42557 | 5.0 | C | .001 | |
| 358.0 | | M | F | BX | GY | ANK | GCRB | | | | | 3 | | Tr | | 42558 | 5.0 | C | .001 | |
| 363.0 | | M | F | BX | GG | ANK | GCRB | | | | | 1 | | Tr | | 42559 | 5.0 | C | .001 | |
| 368.0 | | M | F | BX | GG | ANK | GCRB | | | | | 2 | | Tr | | 42560 | 5.0 | C | .001 | |
| 373.0 | | M | F | BX | GG | ANK | GCRB | | | | | 1 | | Tr | | 42561 | 5.0 | C | .001 | |
| 378.0 | | M | F | BX | GY | ANK | GCRB | | | | | 2 | | Tr | | 42562 | 5.0 | C | .001 | |
| 383.0 | | M | F | BX | GG | ANK | GCRB | | | | | 2 | | Tr | | 42563 | 5.0 | C | .001 | |
| 388.0 | | M | F | BX | GG | ANK | GCRB | | | | | 4 | | Tr | | 42564 | 5.0 | C | .001 | |
| 393.0 | | M | F | BX | GG | ANK | GCRB | | | | | Tr | | Tr | | 42565 | 5.0 | C | .001 | - mod-well BX |
| 398.0 | | M | F | BX | GG | ANK | GCRB | | | | | 2 | | Tr | | 42566 | 5.0 | C | .001 | |
| 403.0 | | M | F | BX | GY | ANK | GCRB | | | | | 3 | | Tr | | 42567 | 5.0 | C | .022 | |
| 408.0 | | M | F | BX | GY | ANK | GCRB | | | | | 3 | | 1 | | 42568 | 5.0 | C | .024 | - FC PY IN TRAIL S/SINK |
| 413.0 | | M | F | FOL | GY | ANK | GCRB | | | | | 3 | | Tr | | 42569 | 5.0 | C | .023 | - BX / CEN FOL |
| 416.0 | | M | F | COT | GY | SIL | GCRB | | | V 45 | | 5 | | Tr | | 42570 | 3.0 | C | .003 | - 1.5" QZ/ANK VLET QZ FLOODING |
| 418.0 | | M | F | BX | GY | SIL | QV | | | | | 50 | | 2 | | 42571 | 2.0 | C | .006 | - 1.0' QZ/ANK VEIN, FL DISSEM PY IN 4 BCRB |
| 423.0 | | M | F | FOL | GY | SIL | GCRB | | | | | 3 | | 3 | | 42572 | 5.0 | C | .238 | - FOL/BX, 16 PY ALONG FOL, Tr PY IN STG |
| 428.0 | | M | F | FOL | GY | ANK | GCRB | | | | | 1 | | 3 | | 42573 | 5.0 | C | .216 | - 30 PY IN S ₂ , VE-FC DISSEM PY |
| 433.0 | | M | F | FOL | BN | ANK | BCRB | | | F 60 | | 1 | | 4 | | 42574 | 5.0 | C | .083 | |
| 438.0 | | M | F | FOL | BN | ANK | BCRB | | | | | 2 | | 3 | | 42575 | 5.0 | C | .064 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|------|------|-----|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | Qz | PY | | | | | | |
| 443.0 | | M | F | FOL | GG | ANK | TUF | LAP TH | F 30 | | | 2 | | 1 | | 42576 | 5.0 | C | .010 | - FOL - m BX |
| 448.0 | | M | F | FOL | GG | CHL | TUF | | | | | 1 | | 4 | | 42577 | 5.0 | C | .001 | - Tr CPT in Qz/ANK VLGT |
| 453.0 | | M | F | MBX | GG | CHL | GCRB | | | | | 3 | | mn | | 42578 | 5.0 | C | .001 | - 448.0 - 498.0 - CARDS WITH INTERBEDDED |
| 458.0 | | M | F | MBX | GG | CHL | GCRB | | | | | 1 | | Tr | | 42579 | 5.0 | C | .001 | LAP. TUFF / TUFF SEDS, MORE MARL |
| 463.0 | | M | F | FOL | GG | CHL | TUF | | | | | 1 | | 1 | | 42580 | 5.0 | C | .001 | - F - CG SUB-CAL PY |
| 468.0 | | M | F | FOL | GG | CHL | GCRB | | F 60 | | | 1 | | Tr | | 42581 | 5.0 | C | .001 | |
| 473.0 | | M | F | FOL | GG | CHL | GCRB | | | | | Tr | | Tr | | 42582 | 5.0 | C | .001 | - wk FOL - m BX |
| 478.0 | | M | F | FOL | GG | CHL | GCRB | | | | | 2 | | Tr | | 42583 | 5.0 | C | .001 | |
| 483.0 | | M | F | FOL | GG | CHL | GCRB | | | | | 1 | | Tr | | 42584 | 5.0 | C | .001 | |
| 488.0 | | M | F | FOL | GG | CHL | GCRB | | | | | 1 | | Tr | | 42585 | 5.0 | C | .001 | |
| 493.0 | | M | F | MBX | GG | ANK | GCRB | | | | | 2 | | Tr | | 42586 | 5.0 | C | .001 | |
| 498.0 | | M | F | MBX | GG | ANK | TUF | | | | | 1 | | 2 | | 42587 | 5.0 | C | .001 | - F - CG PY |
| 503.0 | | S | F | FOL | GY | GRAPH | ARG | | | | | 3 | | 1 | | 42588 | 5.0 | C | .001 | - mn LOT FOL, Qz/ANK VLGTs // FOL 20% TUFF SEDS |
| 508.0 | | M | F | FOL | GG | CHL | TUF | | | | | 1 | | Tr | | 42589 | 5.0 | C | .001 | - 503.0 - 538.0 - TUFF SEDS WITH INTERBEDDED |
| 513.0 | | M | F | FOL | GG | CHL | TUF | | | | | 2 | | Tr | | 42590 | 5.0 | C | .001 | GRAPH ARGILLITE, WK ANK ALTN, WELL |
| 518.0 | | M | F | FOL | GG | CHL | TUF | | V 30 | | | 2 | | Tr | | 42591 | 5.0 | C | .001 | FOL WITH SOME LOT FOL, VARIOUS FOL ANGLES |
| 523.0 | | M | F | FOL | GG | CHL | TUF | | | | | 1 | | Tr | | 42592 | 5.0 | C | .001 | - 512.0 - 514.0 - GRAPH ARG. |
| 528.0 | | S | F | FOL | GY | GRAPH | ARG | | F 70 | F 90 | | 2 | | Tr | | 42593 | 5.0 | C | .001 | - 25% TUFF SEDS, RQP = 65% |
| 533.0 | | M | F | FOL | GG | CHL | TUF | | | | | 2 | | 1 | | 42594 | 5.0 | C | .001 | |
| 538.0 | | M | F | FOL | GG | CHL | TUF | | | | | 1 | | 1 | | 42595 | 5.0 | C | .001 | - 40% GRAPH ARG., 536.5 - 538.5 - FAULT ZONE, 4" GAUGE |

543.0-570.0 .079/27.0
558-570 .103/12.0

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|----------|----|----|--------|----|----------|--|----------|-------|---|--------------------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J | A2 | QZ | PY | | | | | | |
| 543.0 | | M | F | FOL | BN | ANK | TUF | | | | | | Tr | 1 | | 42596 | 5.0 | C | .026 | - 538.5 - 570.0 - LT GREY/TAN TUFF SSQS |
| 548.0 | | B | F | COT | BN | ANK | TUF | GCRB | | | | | 4 | 3 | | 42597 | 5.0 | C | .144 | WITH ANK/GCRB, MOD ANK ALT N, FOL WITH |
| 553.0 | | M | F | FOL | GY | ANK | TUF | | | | | | 3 | 2 | | 42598 | 5.0 | F | .032 | BX CARB SECTIONS, 543.0-548.0 - RQD=50% |
| 558.0 | | m | F | FOL | GY | ANK | TUF | | F 60 | V | 45 | | 4 | 1 | | 42599 | 5.0 | C | .005 | TRCPY INSTG, FOL-COT |
| 563.0 | | M | F | BX | BN | ANK | BGRB | | | | | | 1 | 3 | | 42600 | 5.0 | C | .089 | - Tr CPY IN STG |
| 567.0 | | m | F | BX | GY | ANK | GCRB | | | | | | 1 | 3 | | 42601 | 4.0 | C | .150 | - VF-FG DISSEM PY IN TRACS/STNK |
| 570.0 | | B | F | BX | GY | ANK | GCRB | | | | | | 1 | 1 | | 42602 | 3.0 | C | .064 | - RQD = 30% |
| 573.0 | | SS | F | FOL | GY | ANK | TUF | | | | | | Tr | Tr | | 42603 | 3.0 | C | .018 | - RQD = 10%, FOL/CREN FOL |
| 578.0 | | SS | F | FOL | GG | ANK | TUF | | F 65 | | | | 2 | 1 | | 42604 | 5.0 | C | .022 | - RQD = 0%, QZ/ANK UETS, TR GRAPH ARG |
| 583.0 | | SS | F | FOL | GG | ANK | TUF | | | | | | 4 | Tr | | 42605 | 5.0 | C | .058 | - RQD = 25%, MOD-STR ANK ALT N |
| 588.0 | | SS | F | FOL | GG | ANK | TUF | | F 70 | | | | Tr | MN | | 42606 | 5.0 | C | .002 | - RQD = 0% |
| 591.5 | | SS | F | FOL | GY | ANK | TUF | | | | | | 1 | 1 | | 42607 | 3.5 | C | .002 | - RQD = 0% |
| 596.0 | | S | F | FOL | GY | GRAPH | ARG | | | | | | 1 | 3 | | 42608 | 4.5 | C | .019 | - 591.5 - 618.0 - BLACK GRAPH ARG WITH MN |
| 600.5 | | S | F | FOL | GY | GRAPH | ARG | | | | | | 3 | 1 | | 42609 | 4.5 | C | .040 | GREY TUFF SELS, WELL FOL, MN COT FOL |
| 605.0 | | S | F | FOL | BK | GRAPH | GQS | | F 70 | | | | 6 | Tr | | 42610 | 4.5 | C | .001 | RQD=15% FOR UNIT, 591.5-600.5 - 35% TUFF SELS |
| 608.0 | | S | F | FOL | BK | GRAPH | GQS | | | | | | 12 | 1 | | 42611 | 3.0 | C | .001 | - QZ/ANK UETS L 3" WIDE, // FOL, MN COT |
| 613.0 | | SS | F | FOL | BK | GRAPH | GQS | | | | | | 3 | 1 | | 42612 | 5.0 | C | .004 | - QZ STGS // FOL |
| 618.0 | | SS | F | FOL | BK | GRAPH | GQS | | | | | | 6 | Tr | | 42613 | 5.0 | C | .001 | - 3" QZ/ANK ULET |
| 623.0 | | SS | F | FOL | GY | GRAPH | TUF | | F 75 | | | | 2 | Tr | | 42614 | 5.0 | C | .001 | - 15% GRAPH ARG, RQD=15% |
| 628.0 | | SS | F | FOL | GY | GRAPH | TUF | | | | | | 2 | Tr | | 42615 | 5.0 | C | .001 | - 30% GRAPH ARG, RQD=20% |
| 628.0 | | | | | | | | | | | | | | | | | | | | - EOH |



SPECTROLAB INC.

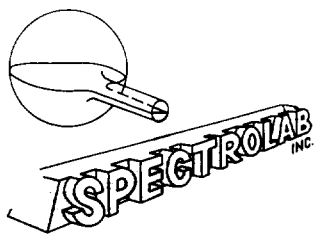
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1272-A DATE: 25/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42501 | 0.001 | |
| AX42502 | 0.001 | |
| AX42503 | 0.001 | |
| AX42504 | 0.001 | |
| AX42505 | 0.001 | |
| AX42506 | 0.001 | |
| AX42507 | 0.009 | |
| AX42508 | 0.007 | |
| AX42509 | 0.002 | |
| AX42510 | 0.001 | 0.001 |
| AX42511 | 0.001 | |
| AX42512 | 0.001 | |
| AX42513 | 0.001 | |
| AX42514 | 0.001 | |
| AX42515 | 0.001 | |
| AX42516 | 0.001 | |
| AX42517 | 0.003 | |
| AX42518 | 0.001 | |
| AX42519 | 0.004 | |
| AX42520 | 0.004 | 0.003 |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

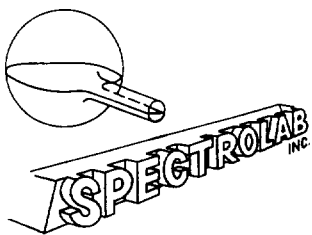
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1272-B DATE: 25/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42521 | 0.001 | |
| AX42522 | 0.001 | |
| AX42523 | 0.001 | |
| AX42524 | 0.001 | |
| AX42525 | 0.001 | |
| AX42526 | 0.001 | |
| AX42527 | 0.001 | |
| AX42528 | 0.022 | |
| AX42529 | 0.026 | |
| AX42530 | 0.016 | 0.021 |
| AX42531 | 0.140 | |
| AX42532 | 0.014 | |
| AX42533 | 0.014 | |
| AX42534 | 0.027 | |
| AX42535 | 0.001 | |
| AX42536 | 0.001 | |
| AX42537 | 0.001 | |
| AX42538 | 0.001 | |
| AX42539 | 0.001 | |
| AX42540 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout Bz.



SPECTROLAB INC.

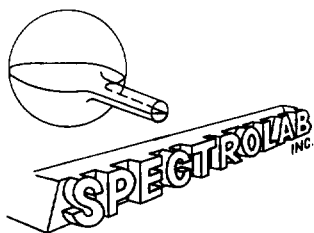
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1272-C DATE: 25/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42541 | 0.001 | |
| AX42542 | 0.001 | |
| AX42543 | 0.001 | |
| AX42544 | 0.001 | |
| AX42545 | 0.001 | |
| AX42546 | 0.001 | |
| AX42547 | 0.001 | |
| AX42548 | 0.001 | |
| AX42549 | 0.001 | |
| AX42550 | 0.001 | 0.001 |
| AX42551 | 0.001 | |
| AX42552 | 0.001 | |
| AX42553 | 0.008 | |
| AX42554 | 0.001 | |
| AX42555 | 0.001 | |
| AX42556 | 0.001 | |
| AX42557 | 0.001 | |
| AX42558 | 0.001 | |
| AX42559 | 0.001 | |
| AX42560 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

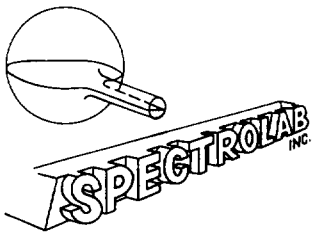
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1272-D DATE: 25/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX42561 | 0.001 | | |
| AX42562 | 0.001 | | |
| AX42563 | 0.001 | | |
| AX42564 | 0.001 | | |
| AX42565 | 0.001 | | |
| AX42566 | 0.001 | | |
| AX42567 | 0.022 | | |
| AX42568 | 0.024 | | |
| AX42569 | 0.023 | | |
| AX42570 | 0.003 | 0.002 | |
| AX42571 | 0.006 | | |
| AX42572 | 0.238 | | 0.258 |
| AX42573 | 0.216 | | 0.179 |
| AX42574 | 0.083 | | |
| AX42575 | 0.064 | | |
| AX42576 | 0.010 | | |
| AX42577 | 0.001 | | |
| AX42578 | 0.001 | | |
| AX42579 | 0.001 | | |
| AX42580 | 0.001 | 0.001 | |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

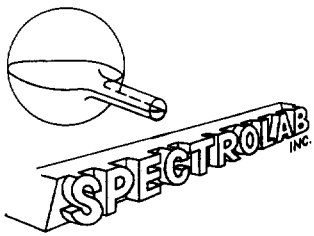
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1272-E DATE: 25/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42581 | 0.001 | |
| AX42582 | 0.001 | |
| AX42583 | 0.001 | |
| AX42584 | 0.001 | |
| AX42585 | 0.001 | |
| AX42586 | 0.001 | |
| AX42587 | 0.001 | |
| AX42588 | 0.001 | |
| AX42589 | 0.001 | |
| AX42590 | 0.001 | 0.001 |
| AX42591 | 0.001 | |
| AX42592 | 0.001 | |
| AX42593 | 0.001 | |
| AX42594 | 0.001 | |
| AX42595 | 0.001 | |
| AX42596 | 0.026 | |
| AX42597 | 0.144 | |
| AX42598 | 0.032 | |
| AX42599 | 0.005 | |
| AX42600 | 0.086 | 0.092 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1272-F DATE: 25/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 15 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42601 | 0.150 | |
| AX42602 | 0.064 | |
| AX42603 | 0.018 | |
| AX42604 | 0.022 | |
| AX42605 | 0.058 | |
| AX42606 | 0.002 | |
| AX42607 | 0.002 | |
| AX42608 | 0.019 | |
| AX42609 | 0.040 | |
| AX42610 | 0.001 | 0.001 |
| AX42611 | 0.001 | |
| AX42612 | 0.004 | |
| AX42613 | 0.001 | |
| AX42614 | 0.001 | |
| AX42615 | 0.001 | |

ANALYSTE: Mira Gélbont BSc



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK LAKE

LOGGED BY: S. HARDING

DATE LOGGED: FEB 4 / 97

DRILL HOLE NO: RP-97-2

1 of 6

Surface Grid: NORTHING 1096.97

EASTING 3452.59

ELEVATION 10928.00

LENGTH 600'

SECTION 3450E

LEVEL

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 50 | | | | | | | | | | | | |
| 200 | 360 | 48 | | | | | | | | | | | | |
| 400 | 360 | 47 | | | | | | | | | | | | |
| 600 | 360 | 47 | | | | | | | | | | | | |

START DATE: JAN 30 1997

FINISH DATE: FEB 1 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENDIT

PURPOSE: TEST RAMP ZONE

RESULTS: _____

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 40', Pulled

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

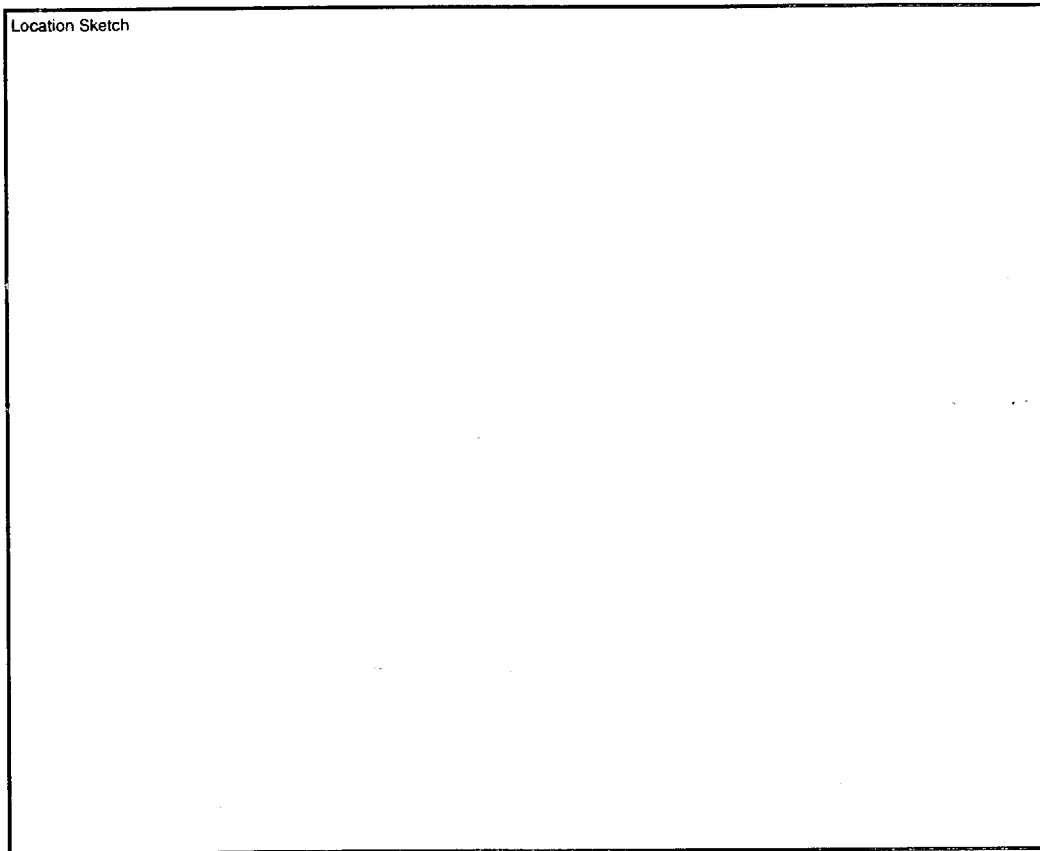
REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

ft

m

Location Sketch



| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----|----|---|--------|----|----------|--|----------|-------|-------|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 40.0 | | - | - | - | - | - | CAS | | | | | | | | | | | | | - 0 - 40.0 - CASING |
| 68.0 | | m | Fm | FOL | GG | ANK | GCRB | | | | | 1 | | Tr | | AX 42616 | 28.0 | G.001 | | - 40.0 - 83.0 - CARB - GREY/GREEN - GREY, |
| 73.0 | | m | F | FOL | GG | ANK | GCRB | | | | | 1 | | Tr | | 17 | 5.0 | <.001 | | PBLASTS OF ANK, Tr-1% QZ/ANK VLETS < 2" |
| 78.0 | | m | F | FOL | GG | ANK | GCRB | | | | | 2 | | Tr | | 18 | 5.0 | <.001 | | WIDE, WKLY FOL - MBX |
| 83.0 | | m | Fm | PBX | GG | ANK | GCRB | | | | | 2 | | Tr | | 19 | 5.0 | <.001 | | - QZ/ANK VEINING AT CONTACT |
| 88.0 | | m | F | MBX | GG | CHL | MVD | | | | | 15 | | 1 | | 42620 | 5.0 | <.010 | | - 83.0 - 118.0 - MAFIC VOLC - IRR QZ/ ANK VEINS/VLETS UP TO 1.0' WIDE, Tr CPY IN SOME VLETS, F.M.G SUB-GNH PY, WK ANK ALTN |
| 92.0 | | m | F | MBX | GG | CHL | MVD | | | | | 30 | | 1 | | 42621 | 4.0 | <.007 | | - 1.5' MBX QZ/ANK VEIN, Tr CPY, Tr-1% PY |
| 95.0 | | m | F | MBX | GG | CHL | MVD | V | 10 | | | 30 | | 1 | | 22 | 3.0 | <.007 | | - 2" LOW ANGLE VEIN, Tr CPY |
| 99.0 | | m | F | MBX | GG | CHL | MVD | | | | | 12 | | AN | | 23 | 4.0 | <.012 | | - Tr CPY IN 3" VLET |
| 103.0 | | m | F | MBX | GG | CHL | MVD | V | 35 | | | 4 | | 1 | | 24 | 4.0 | <.008 | | - IRR QZ STGS, WKLY FOL. |
| 108.0 | | m | F | MBX | GG | CHL | MVD | | | | | 20 | | 2 | | 25 | 5.0 | <.011 | | - VLETS/STG < 2" WIDE, Tr CPY/PY IN QZ |
| 113.0 | | m | F | MBX | GG | CHL | MVD | | | | | 7 | | 2 | | 26 | 5.0 | <.019 | | - QZ/ANK STGS, RARE CPY |
| 118.0 | | m | F | MBX | GG | CHL | MVD | | | | | 15 | | 2 | | 27 | 5.0 | <.006 | | - VLETS < 3" WIDE, RARE CPY |
| 123.0 | | m | F | MSV | GR | CHL | MVD | | | | | 3 | | Tr | | 28 | 5.0 | <.003 | | - 118.0 - 148.0 - MAFIC VOLC, PERY. LEU ALTN |
| 128.0 | | m | F | MSV | GR | CHL | MVD | | | | | 2 | | Tr | | 29 | 5.0 | <.001 | | MORE CHL, SLIGHTLY COARSER GRAINED |
| 133.0 | | m | F | MSV | GR | CHL | MVD | | | | | 2 | | Tr | | 30 | 5.0 | <.001 | | |
| 138.0 | | m | F | MSV | GR | CHL | MVD | V | 60 | | | 6 | | Tr | | 31 | 5.0 | <.001 | | - VLETS/STGS < 1" WIDE |
| 143.0 | | m | F | MBX | GR | CHL | MVD | | | | | 3 | | Tr | | 32 | 5.0 | <.001 | | |
| 148.0 | | m | F | MSV | GR | CHL | MVD | | | | | 3 | | 1 | | 33 | 5.0 | <.006 | | - 1.0' BLOCKY/GROUND CORE |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----|----|---|--------|----|----------|--|----------|-------|-------|--------------------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 153.0 | | M | F | MBX | GG | CHL | MVD | | | | | | 6 | Z | | AX42634 | 5.0 | C.020 | | -148.0-175.5 - MAFIC VOLC - INCREASING |
| 158.0 | | M | F | MBX | GG | CHL | MVD | | | | | | 2 | Tr | | 35 | 5.0 | C.002 | | ANK ALT'N, WHITE ANK PBLASTS, LEW ALT'N |
| 163.0 | | M | F | MBX | GG | CHL | MVD | | | | | | 3 | Tr | | 36 | 5.0 | C.001 | | AT TOP OF UNIT, 148.6 - Tr CPY IN ULET |
| 168.0 | | M | F | MSV | GG | ANK | MVD | V | 50 | | | | 5 | Tr | | 37 | 5.0 | C.001 | | -160.0-161.0 - WK SIL PATCH |
| 173.0 | | M | F | MSV | GG | CHL | MVD | V | 40 | | | | 2 | I | | 38 | 5.0 | C.001 | | |
| 175.5 | | M | F | MSV | GG | CHL | MVD | | | | | | 1 | Tr | | 39 | 2.5 | C.001 | | |
| 179.0 | | M | F | MBX | GG | CHL | CCRB | | | | | | 1 | Tr | | 42640 | 3.5 | C.001 | | -175.5-204.0 - CHL RICH CARB WITH |
| 204.0 | | M | F | MBX | GG | CHL | CCRB | | | | | | AN | Tr | | 42641 | 25.0 | G.001 | | WHITE ANK PBLASTS, MBX-FOL |
| 209.0 | | M | F | COT | GG | CHL | CCRB | | | | | | 30 | Tr | | 42642 | 5.0 | C.001 | | -204.0-234.0 - CHL RICH CARB, COT QZ/ANK |
| 214.0 | | M | F | COT | GG | CHL | CCRB | | | | | | 10 | Tr | | 42643 | 5.0 | C.001 | | VEINING/IRR ULETS, WK-MOD ANK ALT'N |
| 219.0 | | M | F | COT | GG | CHL | CCRB | | | | | | 25 | I | | 42644 | 5.0 | C.001 | | -COT/IRR QZ/ANK VEINING |
| 224.0 | | M | F | BX | GG | CHL | CCRB | | | | | | 10 | Tr | | 42645 | 5.0 | C.001 | | |
| 229.0 | | M | F | BX | GG | CHL | CCRB | | | | | | 2 | Tr | | 42646 | 5.0 | C.001 | | |
| 234.0 | | M | F | MBX | GG | CHL | CCRB | | | | | | 6 | Tr | | 42647 | 5.0 | C.001 | | |
| 239.0 | | M | F | MBX | GG | CHL | CCRB | | | | | | 2 | Tr | | 42648 | 5.0 | C.001 | | -234.0-295.0 - CHL CARB, MBX - WKLY |
| 285.0 | | M | F | BX | GG | CHL | CCRB | | | | | | 1 | Tr | | 42649 | 46.0 | G.001 | | FOL IN PLACES, ANK PBLASTS, 1% STGS/ULETS |
| 290.0 | | M | F | MBX | GG | CHL | CCRB | | | | | | 2 | Tr | | 42650 | 5.0 | C.021 | | |
| 295.0 | | M | F | BX | GG | CHL | CCRB | | | | | | 8 | Tr | | 42651 | 5.0 | C.001 | | -IRR QZ/ANK ULETS 2.2" WIDE |
| 300.0 | | M | F | COT | GG | CHL | CCRB | | | | | | 15 | Tr | | 42652 | 5.0 | C.001 | | |
| 304.5 | | B | F | COT | GG | CHL | CCRB | | | | | | 8 | I | | 42653 | 4.5 | C.001 | | -2.0' BLOCKY/BROKEN CORE, 1.0' LOST CORE |

313.0 400.7
0.095/1.7

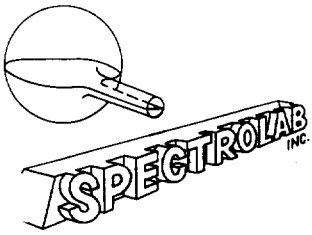
DRILL HOLE NO: RP-97-2

PAGE 4 OF 6

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | | | | |
|-------|----|------------------|----|------|----|-----|--------|-----------|-----|----|-----|--------|-----|----------|--|----------|-------|---|--------------------|----------|-----|---|------|--|
| | | Com | Gr | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QTZ | PY | | | | | | | | | | |
| 308.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 15 | | | | AX42654 | 3.5 | C | .002 | - 304.5 - 404.5 - GYCRB / BN GRB, QZ FLOODING |
| 313.0 | | M | F | COT | GY | S/L | GCRB | | | | | | | | | 10 | | | | 55 | 5.0 | C | .003 | STNK, S/L ALT'N, COT/BX/FOL IN PLACES, IRR |
| 318.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 7 | | | | 56 | 5.0 | C | .001 | QZ/ANK VEINING/VLGTS, VF-FG DISSEM PY |
| 323.0 | | M | F | COT | GY | S/L | GCRB | | | | | | | | | 10 | | | | 57 | 5.0 | C | .001 | |
| 328.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 10 | | | | 58 | 5.0 | C | .001 | |
| 333.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 8 | | | | 59 | 5.0 | C | .003 | |
| 338.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 6 | | | | 60 | 5.0 | C | .004 | |
| 343.0 | | M | F | MBX | BN | S/L | BGRB | DYKE? | | | | | | | | 7 | | | | 61 | 5.0 | C | .001 | - 339.0 - 346.0 - DYKE? - BN, MORE MSV, |
| 346.0 | | M | F | MBX | BN | S/L | BGRB | DYKE? | V | 40 | | | | | | 2 | | | | 62 | 3.0 | C | .003 | LESS QZ VEINING, CHL LOWER CONTACT |
| 351.0 | | M | F | BX | GY | S/L | GCRB | | | | | | | | | 2 | | | | 63 | 5.0 | C | .001 | |
| 356.0 | | M | F | BX | BN | S/L | BGRB | DYKE? | | | | | | | | 2 | | | | 64 | 5.0 | C | .014 | - 352.0 - 360.0 - DYKE? - SIMILAR TO ABOVE, |
| 360.0 | | M | F | BX | BN | S/L | BGRB | DYKE? | V | 45 | | | | | | 4 | | | | 65 | 4.0 | C | .006 | CHL, RELATIVELY SHARP LOWER CONTACT |
| 363.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 4 | | | | 66 | 3.0 | C | .001 | |
| 368.0 | | M | F | COT | GY | S/L | GCRB | | | | | | | | | 7 | | | | 67 | 5.0 | C | .003 | |
| 373.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 4 | | | | 68 | 5.0 | C | .006 | |
| 378.0 | | M | F | COT | GG | CHL | CCR | | | | | | | | | 10 | | | | 69 | 5.0 | C | .009 | - COT - FOL, PY ALONG FRACS / FOL |
| 383.0 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 7 | | | | 70 | 5.0 | C | .041 | - Tr FUCH |
| 388.0 | | M | F | COT | GG | S/L | GCRB | | | | | | | | | 10 | | | | 71 | 5.0 | C | .004 | - 386.0 - 393.0 - Tr - WKLY FUCH |
| 393.0 | | M | F | COT | GG | FA | GCRB | | | | | | | | | 7 | | | | 72 | 5.0 | C | .003 | |
| 398.0 | | M | F | COT | GG | CHL | CCR | | | | | | | | | 3 | | | | 73 | 5.0 | C | .122 | - 394.3 - 395.2 - DYKE? PINK/GREY, BROKEN CORE |
| 400.7 | | M | F | COT | GY | ANK | GCRB | | | | | | | | | 5 | | | | 74 | 2.7 | C | .046 | AT CONTACTS, PY RICH, COT/FOL |
| 404.5 | | M | F | FOL | BN | ANK | BGRB | | | | | | | | | Tr | | | | 42675 | 3.8 | C | .047 | - FOL - MBX, VF-FG DISSEM PY |
| 407.3 | | M | F | FOL | PK | ANK | MD | | | | | | | | | 2 | | | | 42676 | 2.8 | C | .002 | - PORPH DYKE?, FOL + GREY PINK AT MARGINS |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|----|----------|-------|---|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | Py | | | | | | |
| | | | | | | | | | | | | | | | | | | | | - MORE MSV + PINK IN MIDDLE, SHARP LOWER CONTACT, 3' CHL TUFF SED BAND IN MIDDLE |
| 412.0 | | S | F | FOL | GG | CHL | TUF | | F | 60 | | | 1 | | Tr | AX42677 | 4.7 | C | .004 | - 407.3 - 436.0 - INTERBEDDED TUFF SEDS/ CARB, GREY/GREEN - GREY, MOD-WELL FOL WITH BX SECTIONS, MOD CHL WITH ANK PBLASTS AT TOP, 408.7 - 409.7 - CARB / DYKE? |
| 417.0 | | M | F | FOL | GG | CHL | TUF | ARG | | | | | 2 | | 1 | 42678 | 5.0 | C | .003 | |
| 422.0 | | M | F | FOL | GY | ANK | TUF | CARB | | | | | 1 | | 1 | 79 | 5.0 | C | .001 | |
| 427.0 | | S | F | FOL | GY | ANK | TUF | | | | | | 2 | | 1 | 80 | 5.0 | C | .001 | |
| 432.0 | | M | F | MBX | GY | ANK | GCRB | | | | | | 1 | | 1 | 81 | 5.0 | C | .001 | |
| 436.0 | | M | F | MBX | GY | ANK | GCRB | | | | | | 2 | | Tr | 82 | 4.0 | C | .001 | |
| 441.0 | | S | F | FOL | GY | ANK | TUF | | F | 25 | | | 1 | | 1 | 42683 | 5.0 | C | .001 | - ROD=50% - 436.0 - 461.0 - VF-FG TUFF |
| 446.0 | | S | F | FOL | GG | ANK | TUF | | | | | | 1 | | Tr | 84 | 5.0 | C | .001 | SEDS, WELL FOL 25' - 45' TCA, |
| 451.0 | | S | F | FOL | GG | ANK | TUF | | F | 45 | | | 1 | | 1 | 85 | 5.0 | C | .001 | INTERBEDDED GRAPH ARG |
| 456.0 | | S | F | FOL | GG | ANK | TUF | | | | | | 1 | | 1 | 86 | 5.0 | C | .001 | - 15% GR. ARG |
| 461.0 | | B | F | FOL | GG | ANK | TUF | | | | | | 2 | | 1 | 87 | 5.0 | C | .001 | - ROD=20% , 25% GR. ARG |
| 466.0 | | S | F | FOL | GY | GRA | GQS | | F | 25 | | | 4 | | 1 | 42688 | 5.0 | C | .001 | - 461.0 - 508.0 - GRAPH/QZ SCHIST / ARG, GREY - BLACK, MOD-WELL FOL, SOME CUT FOL QZ/ANK VEINS/UGTS, F-CG SUB PY |
| 471.0 | | S | F | FOL | BK | GRA | GQS | | | | | | 15 | | 1 | 42689 | 5.0 | C | .005 | - 0.5' QZ/ANK VEIN, 1.0' BROKEN CORE, ROD=70% |
| 476.5 | | S | F | FOL | BK | GRA | ARG | | F | 35 | | | 3 | | Tr | 42690 | 5.5 | C | .001 | - BLOCKY CORE AT END, CUT FOL, STR GRAPH |
| 478.0 | | - | - | - | - | - | LC | | | | | | | | | - - - | 1.5 | | | - 1.5' LOST CORE |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|----|----------|---------|------|--------------------|----------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | | |
| 483.0 | | S | F | FOL | BK | GRA | GQS | | F | 40 | | | 14 | | Tr | | AX42691 | 5.0 | C | .001 | - 0.5' QZ/ANK VGIN |
| 487.0 | | S | F | FOL | BK | GRA | ARG | | | | | | 5 | | I | | 92 | 4.0 | C | .001 | |
| 491.0 | | S | F | FOL | BK | GRA | GQS | | | | | | 10 | | I | | 93 | 4.0 | C | .001 | - QZ/ANK VLETS < 2.5" WIDE |
| 494.0 | | S | F | FOL | BK | GRA | GQS | | F | 45 | | | 15 | | I | | 94 | 3.0 | C | .001 | - 5% CHL FRAGS |
| 498.0 | | S | F | FOL | BK | GRA | GQS | | V | 65 | | | 25 | | Tr | | 95 | 4.0 | C | .001 | - 0.5' VGIN, VLETS < 2" WIDE, 1.0' CARB DYKE? |
| 503.0 | | S | F | FOL | GY | GRA | GQS | | | | | | 20 | | Tr | | 96 | 5.0 | C | .001 | - VGIN/VLETS < 0.5' WIDE, MN TUFF SGDS |
| 508.0 | | S | F | FOL | BK | GRA | ARG | | F | 25 | F | 40 | 7 | | I | | 97 | 5.0 | C | .001 | - COF FOL IN PLACES, 15% T.S. |
| 513.0 | | S | F | FOL | GY | ANK | TUF | | F | 40 | | | 1 | | Tr | | 42698 | 5.0 | C | .001 | - 508.0 - 568.0 - TUFF SEDS, WTC-UWK |
| 518.0 | | S | F | FOL | GG | ANK | TUF | | | | | | | | Tr | | 42699 | 5.0 | C | .002 | ANK ALT'N, TINY WHITE ANK GRAINS, PINK FRAG |
| 523.0 | | S | F | FOL | GG | ANK | TUF | | | | | | 1 | | Tr | | 42700 | 5.0 | C | .001 | - 15% ARG |
| 553.0 | | SS | F | FOL | GY | ANK | TUF | | F | 40 | | | | | Tr | | 42701 | 30.0 | G | .001 | - 15% ARG, RQD = 35% |
| 558.0 | | S | F | FOL | GY | ANK | TUF | | | | | | | | Tr | | 42702 | 5.0 | C | .001 | - MN ARG |
| 563.0 | | S | F | FOL | GY | ANK | TUF | | | | | | 1 | | Tr | | 42703 | 5.0 | C | .001 | - RQD = 75% |
| 568.0 | | S | F | FOL | GY | ANK | TUF | | | | | | 7 | | Tr | | 42704 | 5.0 | C | .001 | - QZ/ANK VLETS < 2" WIDE, RQD = 25% |
| 573.0 | | S | F | FOL | GY | GRA | ARG | | F | 50 | | | 2 | | I | | 42705 | 5.0 | C | .002 | - 568.0 - 600.0 - GRAPH ARG RQD = 35% |
| 578.0 | | S | F | FOL | BK | GRA | ARG | | | | | | 1 | | Tr | | 06 | 5.0 | C | .001 | - RQD = 50% |
| 583.0 | | SS | F | FOL | BK | GRA | ARG | | | | | | 2 | | Tr | | 07 | 5.0 | C | .001 | - RQD = 50% |
| 588.0 | | S | F | FOL | BK | GRA | ARG | | | | | | 2 | | Tr | | 08 | 5.0 | C | .001 | - RQD = 50% |
| 593.0 | | SS | F | FOL | BK | GRA | ARG | | F | 55 | | | 1 | | Tr | | 09 | 5.0 | C | .001 | - RQD = 30% |
| 597.0 | | SS | F | FOL | GY | GRA | ARG | | | | | | 1 | | Tr | | 10 | 4.0 | C | .001 | - RQD = 15% |
| 600.0 | | SS | F | FOL | GY | GRA | ARG | | | | | | 1 | | Tr | | 11 | 3.0 | C | .001 | - RQD = 20% |
| 600.0 | | | | | | | | | | | | | | | | | | | | | - EOH. |



SPECTROLAB INC.

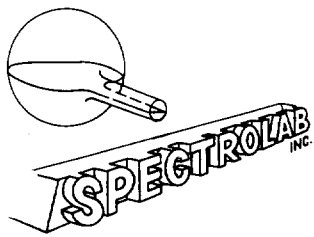
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1276-A DATE: 26/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42616 | 0.001 | |
| AX42617 | 0.001 | |
| AX42618 | 0.001 | |
| AX42619 | 0.001 | |
| AX42620 | 0.010 | |
| AX42621 | 0.007 | |
| AX42622 | 0.007 | |
| AX42623 | 0.012 | |
| AX42624 | 0.008 | |
| AX42625 | 0.011 | 0.011 |
| AX42626 | 0.019 | |
| AX42627 | 0.006 | |
| AX42628 | 0.003 | |
| AX42629 | 0.001 | |
| AX42630 | 0.001 | |
| AX42631 | 0.001 | |
| AX42632 | 0.001 | |
| AX42633 | 0.006 | |
| AX42634 | 0.020 | |
| AX42635 | 0.001 | 0.002 |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

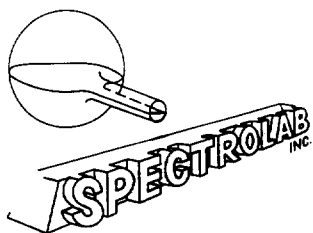
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1276-B DATE: 26/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42636 | 0.001 | |
| AX42637 | 0.001 | |
| AX42638 | 0.001 | |
| AX42639 | 0.001 | |
| AX42640 | 0.001 | |
| AX42641 | 0.001 | |
| AX42642 | 0.001 | |
| AX42643 | 0.001 | |
| AX42644 | 0.001 | 0.001 |
| AX42645 | 0.001 | |
| AX42646 | 0.001 | |
| AX42647 | 0.001 | |
| AX42648 | 0.001 | |
| AX42649 | 0.001 | |
| AX42650 | 0.021 | |
| AX42651 | 0.001 | |
| AX42652 | 0.001 | |
| AX42653 | 0.001 | |
| AX42654 | 0.002 | |
| AX42655 | 0.003 | 0.002 |

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

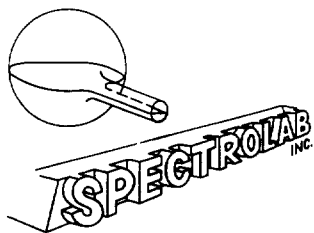
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1276-C DATE: 26/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Ref. 1602
Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42656 | 0.001 | |
| AX42657 | 0.001 | |
| AX42658 | 0.001 | |
| AX42659 | 0.003 | |
| AX42660 | 0.004 | |
| AX42661 | 0.001 | |
| AX42662 | 0.003 | |
| AX42663 | 0.001 | |
| AX42664 | 0.014 | |
| AX42665 | 0.007 | 0.005 |
| AX42666 | 0.001 | |
| AX42667 | 0.003 | |
| AX42668 | 0.006 | |
| AX42669 | 0.009 | |
| AX42670 | 0.041 | |
| AX42671 | 0.004 | |
| AX42672 | 0.003 | |
| AX42673 | 0.122 | |
| AX42674 | 0.046 | |
| AX42675 | 0.044 | 0.050 |

ANALYSTE: Mira Godbout BS



SPECTROLAB INC.

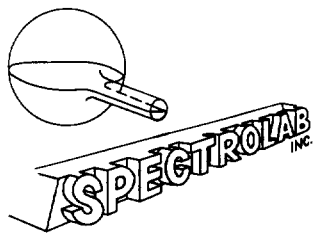
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1276-D DATE: 26/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Ref. 1602
Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42676 | 0.002 | |
| AX42677 | 0.004 | |
| AX42678 | 0.003 | |
| AX42679 | 0.001 | |
| AX42680 | 0.001 | |
| AX42681 | 0.001 | |
| AX42682 | 0.001 | |
| AX42683 | 0.001 | |
| AX42684 | 0.001 | |
| AX42685 | 0.001 | 0.001 |
| AX42686 | 0.001 | |
| AX42687 | 0.001 | |
| AX42688 | 0.001 | |
| AX42689 | 0.005 | |
| AX42690 | 0.001 | |
| AX42691 | 0.001 | |
| AX42692 | 0.001 | |
| AX42693 | 0.001 | |
| AX42694 | 0.001 | |
| AX42695 | 0.001 | 0.001 |

ANALYSTE: Mira Guelbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1276-E DATE: 26/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 17 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | |
|---------|--------------|------------------|--------|
| AX42696 | 0.001 | | |
| AX42697 | 0.001 | | |
| AX42698 | 0.001 | | |
| AX42699 | 0.002 | | |
| AX42700 | 0.001 | | |
| AX42701 | 0.001 | | |
| AX42702 | 0.001 | | |
| AX42703 | 0.001 | | |
| AX42704 | 0.001 | | |
| AX42705 | 0.002 | 0.001 | |
| AX42706 | 0.001 | | |
| AX42707 | 0.001 | | |
| AX42708 | 0.001 | | |
| AX42709 | 0.001 | | |
| AX42710 | 0.001 | | RP97-2 |
| AX42711 | 0.001 | | |
| AX42712 | 0.001 | 0.001 | RP97-3 |

ANALYSTE: Mira Gœlbout BSc.



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK LAKE

LOGGED BY: S. HARDING

DATE LOGGED: Feb 6/97

DRILL HOLE NO: RP-97-3

1 OF 7

Surface Grid: NORTHING 1096.97

EASTING 3452.59

ELEVATION 10928.00

LENGTH 700'

SECTION 3450 E

LEVEL

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 60 | | | | | | | | | | | | |
| 200 | 357 | 58 | | | | | | | | | | | | |
| 400 | 360 | 58 | | | | | | | | | | | | |
| 700 | 005 | 56 | | | | | | | | | | | | |

START DATE: FEB 1 1997

FINISH DATE: FEB 3 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: _____

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 30.0'; Pulled

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

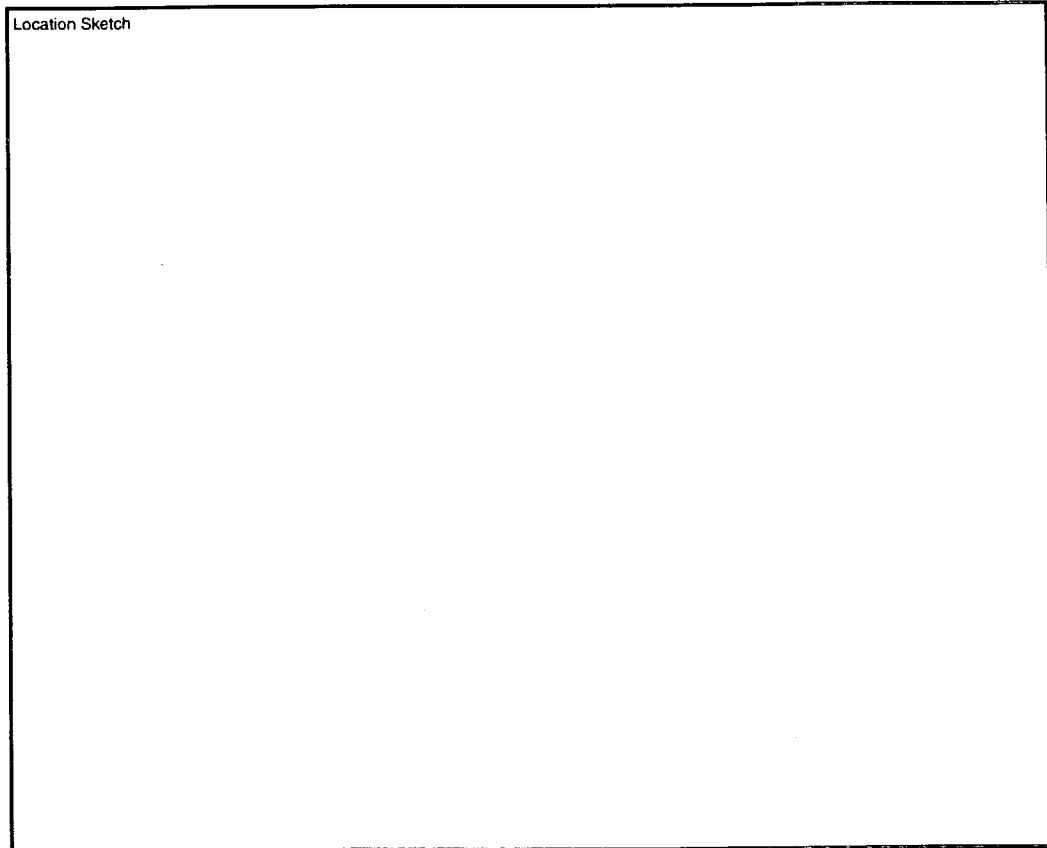
NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch



ft
 m

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|------|--------|----|----------|--|----------|-------|-------|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 30.0 | | - | - | - | - | - | CAS | | | | | | | | | | 30.0 | | | - 0-30.0 - CASING |
| 35.0 | | M | F | FOL | GG | ANK | GCRB | | | | | 1 | 1 | | | 42712 | 5.0 | C.001 | | - 30.0 - 106.0 - CARB - GREY/GREEN, CHL/ANK ALTIN, PBLASTS OF ANK, FOL-MBX |
| 39.5 | | M | F | COT | GG | CHL | GCRB | | | | | 12 | Tr | | | 42713 | 4.5 | C.001 | | - COT QZ/ANK VEINING |
| 41.0 | | M | F | BX | GY | SIL | FEL | SYRE | | | | 8 | 4 | | | 42714 | 1.5 | C.001 | | - SHARP CONTACTS, QZ/ANK STGS, F-MG SUB- EUK PY, RARE CPY IN STG |
| 46.0 | | M | F | MBX | GG | CHL | CCRB | | | | | 3 | Tr | | | 42715 | 5.0 | C.001 | | - MBX-FOL |
| 51.0 | | M | F | MBX | GG | CHL | CCRB | | | | | 3 | Tr | | | 16 | 5.0 | C.001 | | - MN LIM STAINING IN PBLASTS |
| 94.0 | | M | F | MBX | GG | CHL | CCRB | | | | | Tr | Tr | | | 17 | 43.0 | G.001 | | - PBLASTS OF ANK, Tr QZ STGS/VLETS |
| 99.0 | | M | F | MBX | GG | CHL | CCRB | | | | | 1 | Tr | | | 18 | 5.0 | C.001 | | |
| 104.0 | | M | F | BX | GG | CHL | CCRB | | | | | 4 | Tr | | | 19 | 5.0 | C.001 | | |
| 106.0 | | M | F | MBX | GG | CHL | CCRB | | | | V 70 | 25 | Tr | | | 20 | 2.0 | C.001 | | - 0.5' QZ/ANK/CHL VEIN AT CONTACT |
| 110.0 | | M | F | MBX | GG | ANK | MVD | | | | | 1 | 2 | | | 42721 | 4.0 | C.002 | | - 106.0 - 235.0 - MAFIC VOLCS: Tr CPY IN STG |
| 114.0 | | M | F | BX | GG | CHL | MVD | | | | | 10 | 2 | | | 42722 | 4.0 | C.012 | | - QZ/ANK VLETS < 2" WIDE, RARE CPY, F-MG PY, Tr - 1% PY IN SOME VLETS |
| 118.0 | | M | F | MBX | GN | CHL | MVD | | | | V 25 | V 65 | 10 | 3 | | 42723 | 4.0 | C.021 | | - 3' VLET WITH 2% FG PY, Tr CPY IN STG |
| 123.0 | | M | F | MBX | GN | CHL | MVD | | | | | 2 | 2 | | | 24 | 5.0 | C.005 | | - 3" GREY SIL PATCH |
| 128.0 | | M | F | MBX | GN | CHL | MVD | | | | | 1 | 1 | | | 25 | 5.0 | C.005 | | |
| 133.0 | | M | F | BX | GG | CHL | MVD | | | | | 1 | 3 | | | 26 | 5.0 | C.021 | | - 1.5' GREY SIL PATCH OF MAFICS, Tr CPY IN STG |
| 138.0 | | M | F | MBX | GN | CHL | MVD | | | | | 1 | 2 | | | 27 | 5.0 | C.005 | | - Tr CPY IN STG |
| 143.0 | | M | F | MBX | GN | CHL | MVD | | | | | 2 | Tr | | | 28 | 5.0 | C.001 | | |
| 148.0 | | M | F | MBX | GN | CHL | MVD | | | | | 3 | Tr | | | 29 | 5.0 | C.001 | | - WHLY SIL AROUND 2" QZ/ANK VEINING |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | Py | | | | | | |
| 168.0 | | M | F | MSV | GN | CHL | MVD | | | | | 1 | | Tr | | AX42730 | 20.0 | G | .001 | - QZ/ANK VLETS < 2" WIDE |
| 173.0 | | M | F | MSV | GN | CHL | MVD | | | | | 2 | | 1 | | 31 | 5.0 | C | .001 | |
| 178.0 | | M | F | MBX | GN | CHL | MVD | | | | | 1 | | 2 | | 32 | 5.0 | C | .001 | - F-MG SUB-6MH PY ALONG FRAC/STWK |
| 183.0 | | M | F | MSV | GN | CHL | MVD | | | | | 2 | | 1 | | 33 | 5.0 | C | .020 | - 181.0 - 189.0 - WHITE ANK PBLASTS |
| 188.0 | | M | F | MSV | GN | ANK | MVD | | | | | 12 | | 1 | | 34 | 5.0 | C | .003 | - 0.7' ANK/QZ VEINING |
| 193.0 | | M | F | MBX | GN | CHL | MVD | | | | | 1 | | 1 | | 35 | 5.0 | C | .003 | - 1.0' GREY SIL PATCH |
| 198.0 | | M | F | MBX | GN | CHL | MVD | | | | | 3 | | 1 | | 36 | 5.0 | C | .004 | - 10% SIL PATCHES |
| 203.0 | | M | F | MBX | GG | CHL | MVD | | | | | 2 | | 1 | | 37 | 5.0 | C | .001 | - Tr CPY IN 2 STGS |
| 208.0 | | M | F | MBX | GN | CHL | MVD | | | | | 3 | | 1 | | 38 | 5.0 | C | .003 | - Tr CPY IN STGS |
| 213.0 | | M | F | MSV | GN | CHL | MVD | | | | | 1 | | Tr | | 39 | 5.0 | C | .001 | |
| 218.0 | | M | F | MBX | GG | CHL | MVD | | | | | 3 | | 1 | | 40 | 5.0 | C | .003 | |
| 223.0 | | M | F | MBX | GN | CHL | MVD | | | | | 3 | | Tr | | 41 | 5.0 | C | .007 | |
| 228.0 | | M | F | MSV | GN | CHL | MVD | | | | | 3 | | 1 | | 42 | 5.0 | C | .001 | |
| 232.0 | | M | F | MBX | GN | CHL | MVD | | | | | 4 | | Tr | | 43 | 4.0 | C | .002 | - Tr CPY IN VLET |
| 235.0 | | M | F | MBX | GG | ANK | MVD | | | | | 4 | | 1 | | 44 | 3.0 | C | .003 | - Tr CPY IN VLET |
| 238.0 | | M | F | COT | GY | ANK | GCRB | | | | | 1 | | Tr | | 42745 | 3.0 | C | .001 | - 1.0' BEARB DYKE? |
| 243.0 | | M | F | COT | GY | ANK | GCRB | | | | | 6 | | Tr | | 42746 | 5.0 | C | .001 | - COT QZ/ANK VLETS |
| 248.0 | | M | F | BX | BN | SIL | BCRB | | | | | 6 | | 1 | | 42747 | 5.0 | C | .002 | - 244.0 - 273.0 - BEARB /DYKE?, BROWN-GREY, BX-COT, IRR/COT QZ/ANK VLETS, WK-MOD SIL, FG DISSEM/SUBS PY |
| 253.0 | | M | F | COT | GY | SIL | BCRB | | | | | 7 | | 3 | | 42748 | 5.0 | C | .005 | - Tr CPY IN QZ STGS |
| 258.0 | | M | F | COT | GY | SIL | BCRB | | V | 45 | | 30 | | 3 | | 42749 | 5.0 | C | .025 | - 1.0' QZ/ANK VEINING |
| 263.0 | | M | F | BX | BN | SIL | BCRB | | V | 45 | | 12 | | 2 | | 42750 | 5.0 | C | .002 | - VLETS < 1.5" WIDE |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|----|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 268.0 | | M | F | BX | BN | SIL | BGRB | | | | | 5 | 1 | | | AX42751 | 5.0 | | c.002 | - Tr CPY IN FRAC |
| 273.0 | | M | F | BX | BN | SIL | BGRB | | | | | 4 | 1 | | | 42752 | 5.0 | | c.002 | - RQD = 70% , Tr CPY IN STG |
| 278.0 | | M | F | COT | GY | SIL | GCRB | V | 30 | | | 7 | Tr | | | 42753 | 5.0 | | c.001 | - 273.0 - 444.0 - GCRB - COT - BX WITH FOL SECTIONS , ANK/SIL ALTN |
| 283.0 | | M | F | COT | GY | ANK | GCRB | | | | | 7 | 1 | | | 42754 | 5.0 | | c.007 | - 0.5' BROKEN CORE |
| 288.0 | | M | F | COT | GY | ANK | GCRB | | | | | 4 | Tr | | | 55 | 5.0 | | c.001 | |
| 293.0 | | M | F | BX | GY | SIL | GCRB | V | 65 | | | 6 | 1 | | | 56 | 5.0 | | c.003 | - QZ/ANK VLETS < 1" WIDE |
| 298.0 | | M | F | COT | GY | SIL | GCRB | V | 40 | | | 3 | Tr | | | 57 | 5.0 | | c.001 | |
| 303.0 | | M | F | MBX | GY | SIL | GCRB | | | | | 6 | Tr | | | 58 | 5.0 | | c.002 | |
| 308.0 | | M | F | BX | GY | ANK | GCRB | | | | | 4 | Tr | | | 59 | 5.0 | | c.001 | |
| 313.0 | | M | F | BX | GY | ANK | GCRB | V | 70 | | | 3 | Tr | | | 60 | 5.0 | | c.002 | - Tr FUCH AROUND 1" VLET |
| 318.0 | | M | F | BX | GY | ANK | GCRB | V | 35 | V | 45 | 6 | Tr | | | 61 | 5.0 | | c.001 | - Tr FUCH , QZ/ANK VLETS < 2" WIDE |
| 323.0 | | M | F | BX | GY | ANK | GCRB | | | | | 3 | Tr | | | 62 | 5.0 | | c.001 | |
| 328.0 | | M | F | BX | GY | ANK | GCRB | V | 70 | | | 2 | Tr | | | 63 | 5.0 | | c.001 | |
| 333.0 | | M | F | COT | GY | ANK | GCRB | V | 50 | | | 10 | Tr | | | 64 | 5.0 | | c.001 | - Tr FUCH IN 4" QZ/ANK VLET |
| 338.0 | | M | F | COT | GY | ANK | GCRB | V | 60 | | | 12 | Tr | | | 65 | 5.0 | | c.001 | - 4" VLET , VLETS/STGS < 1" WIDE , Tr FUCH |
| 343.0 | | M | F | BX | GY | ANK | GCRB | V | 20 | V | 60 | 15 | Tr | | | 66 | 5.0 | | c.001 | - VLETS < 3" WIDE , Tr FUCH |
| 348.0 | | M | F | BX | GY | ANK | GCRB | | | | | 12 | Tr | | | 67 | 5.0 | | c.002 | - IRR VLETS < 3" WIDE , Tr CPY IN 1 VLET |
| 353.0 | | M | F | BX | GY | ANK | GCRB | V | 75 | | | 6 | Tr | | | 68 | 5.0 | | c.004 | - 2.5" VLET , RARE FUCH |
| 358.0 | | M | F | BX | GY | ANK | GCRB | V | 75 | | | 12 | Tr | | | 69 | 5.0 | | c.003 | - VLETS < 3" WIDE |
| 363.0 | | M | F | BX | GY | ANK | GCRB | V | 55 | | | 8 | Tr | | | 70 | 5.0 | | c.028 | - 2 x 3" VLETS |
| 368.0 | | M | F | BX | GY | SIL | GCRB | | | | | 4 | Tr | | | 71 | 5.0 | | c.055 | - CARB / QZ BY |
| 373.0 | | M | F | COT | GY | SIL | GCRB | | | | | 5 | Tr | | | 72 | 5.0 | | c.007 | |
| 378.0 | | M | F | COT | GY | SIL | GCRB | | | | | 2 | AN | | | 73 | 5.0 | | c.006 | |

444.0-451.0
 $\frac{.149}{7}$

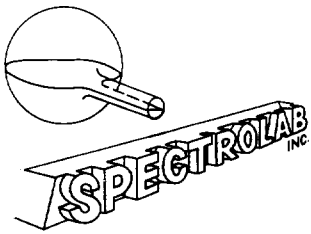
DRILL HOLE NO: RP-97-3

PAGE 5 OF 7

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|-----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | |
| 383.0 | | m | F | COT | GY | ANK | GCRB | | | | | 2 | | Tr | | AX42774 | 5.0 | c | .004 | - Tr CPY IN QZ FILLED FRACS |
| 388.0 | | m | F | MBX | GY | ANK | GCRB | | | | | 3 | | Tr | | 75 | 5.0 | c | .002 | |
| 393.0 | | m | F | COT | GY | SIL | GCRB | | | | | 3 | | Tr | | 76 | 5.0 | c | .001 | |
| 398.0 | | m | F | COT | GY | SIL | GCRB | | | | | 3 | | MN | | 77 | 5.0 | c | .003 | |
| 401.0 | | m | F | COT | GY | ANK | GCRB | | | | | 10 | | 1 | | 78 | 3.0 | c | .020 | - VLGTS < 2" WIDE |
| 405.0 | | m | F | SND | GY | ANK | TCS | | | | | 2 | | Tr | | 42779 | 4.0 | c | .043 | - 401.0 - 408.0 - TAIL/CHL SCHIST, MOD-WORK |
| 408.0 | | m | F | SND | GY | ANK | TCS | | | | | 3 | | Tr | | 42780 | 3.0 | c | .004 | SND/FOL, WK ANK BLT'N |
| 413.0 | | m | F | COT | GY | ANK | GCRB | | | | | 20 | | Tr | | 42781 | 5.0 | c | .002 | - IRG/COT QZ/ANK VEINING |
| 418.0 | | m | F | COT | GY | ANK | GCRB | | | | | 20 | | Tr | | 42782 | 5.0 | c | .001 | |
| 423.0 | | m | F | COT | GY | ANK | GCRB | | | | | 10 | | Tr | | 42783 | 5.0 | c | .007 | |
| 428.0 | | m | F | SND | GY | ANK | TCS | | | | | 3 | | Tr | | 42784 | 5.0 | c | .016 | 421.5 - 427.5 - TAIL/CHL SCHIST, WK-MOD SND |
| 433.0 | | m | F | COT | GY | ANK | GCRB | V | 25 | | | 8 | | MN | | 42785 | 5.0 | c | .020 | |
| 438.0 | | m | F | COT | GY | ANK | GCRB | V | 30 | | | 10 | | 1 | | 42786 | 5.0 | c | .028 | - VLGTS < 1.5" WIDE |
| 442.0 | | m | F | BX | GY | ANK | GCRB | | | | | 6 | | 1 | | 42787 | 4.0 | c | .011 | - BX - WKLY FOL |
| 444.0 | | m | F | BX | GY | ANK | GCRB | | | | | 4 | | 1 | | 42788 | 2.0 | c | .025 | |
| 446.0 | | m | F | BX | BNJ | SIL | BGRB | | | | | 1 | | S | | 42789 | 2.0 | c | .397 | - BX-FOL, VF-FG PY ALONG FRAC/STWK |
| 447.5 | | m | F | COT | GY | SIL | GCRB | | | | | 30 | | Tr | | 42790 | 1.5 | c | .005 | |
| 451.0 | | m | F | FOL | GY | SIL | GCRB | | | | | 4 | | 4 | | 42791 | 3.5 | c | .069 | - DYRE?, FOL/BX |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | |
| 455.0 | | S | F | FOL | GY | CHL | TUF | | | | | 3 | MN | | | 42792 | 4.0 | C | .011 | Tuffaceous Sediment |
| 458.5 | | S | F | FOL | GY | ANK | TUF | | | | | 7 | | | | 42793 | 3.5 | C | .001 | - 30% GCRB, VLETS < 1" WIDE |
| 463.0 | | M | F | BX | GY | ANK | GCRB | | | | | 3 | Z | | | 42794 | 4.5 | C | .003 | - VF-FG DISSEM PY, Tr CPY IN STG |
| 467.0 | | M | F | BX | GY | ANK | GCRB | | | | | 2 | Z | | | 42795 | 4.0 | C | .009 | |
| 472.0 | | M | F | FOL | GG | CHL | TUF | F 40 | | | | 1 | MN | | | 42796 | 5.0 | C | .001 | - WK-MOD ANK ALT'N, ANK PBLASTS |
| 473.5 | | M | F | MSV | GY | ANK | GCRB | DIYKE? | | | | 3 | S | | | 42797 | 1.5 | C | .001 | - QZ/ANK STGS, VF-MG PY |
| 478.0 | | S | F | FOL | GG | CHL | TUF | F 45 | | | | 1 | | | | 42798 | 4.5 | C | .001 | - 473.5-573.0 - TUFFSEDS, WGLL FOL, CHL |
| 483.0 | | S | F | FOL | GY | ANK | TUF | | | | | 2 | | | | 42799 | 5.0 | C | .001 | WK ANK ALT'N, MN SIL PATCHES |
| 488.0 | | S | F | FOL | GG | CHL | TUF | | | | | 3 | MN | | | 42800 | 5.0 | C | .001 | |
| 493.0 | | SS | F | FOL | GG | CHL | TUF | F 40 | | | | 5 | | | | 42801 | 5.0 | C | .002 | - RQD = 55% |
| 498.0 | | S | F | FOL | GG | CHL | TUF | | | | | 2 | Tr | | | 42802 | 5.0 | C | .001 | |
| 503.0 | | S | F | FOL | GG | CHL | TUF | | | | | 2 | | | | 42803 | 5.0 | C | .001 | - CHL/CC ALT'N |
| 523.0 | | S | F | FOL | GG | CHL | TUF | | | | | Tr | Tr | | | 42804 | 20.0 | G | .001 | - Tr QZ/CC STGS |
| 528.0 | | S | F | FOL | GG | CHL | TUF | | | | | 1 | Tr | | | 42805 | 5.0 | C | .001 | |
| 533.0 | | S | F | FOL | GG | CHL | TUF | | | | | 6 | | | | 42806 | 5.0 | C | .001 | - 1.0' QZ/CC VEINING IN GR ARG |
| 538.0 | | S | F | FOL | GG | CHL | TUF | F 40 | | | | 1 | Tr | | | 42807 | 5.0 | C | .001 | - CC STGS, 5% GR ARG |
| 543.0 | | S | F | FOL | GG | CHL | TUF | | | | | 1 | MN | | | 42808 | 5.0 | C | .001 | |
| 548.0 | | S | F | FOL | GG | CHL | TUF | | | | | 1 | | | | 42809 | 5.0 | C | .001 | - 25% INTERBEDDED GR ARG, F-MG PY IN ARG |
| 553.0 | | S | F | FOL | GG | CHL | TUF | | | | | Tr | Tr | | | 42810 | 5.0 | C | .001 | - MN GR ARG |
| 558.0 | | S | F | FOL | GG | CHL | TUF | | | | | Tr | Tr | | | 42811 | 5.0 | C | .001 | - WK ANK ALT'N |
| 563.0 | | S | F | FOL | GG | CHL | TUF | F 40 | | | | 1 | MN | | | 42812 | 5.0 | C | .001 | - QZ/CC STGS, 10% GR ARG |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | Gr | Py | | | | | | |
| 568.0 | | S | F | FOL | GY | GRA | TUF | | | | | | | | | AX42813 | 5.0 | C | .001 | - 45% GR ARG, QZ/CL VLETS < 1" WIDE |
| 573.0 | | S | F | FOL | GY | ANK | TUF | V | SP | F | 3S | 10 | | 2 | | 42814 | 5.0 | C | .002 | - 5% GR ARG, 0.5' QZ/CL VEIN WITH PY AT CONTACT |
| 578.0 | | S | F | FOL | GY | GRA | ARG | F | SP | | | | 2 | Tr | | 42815 | 5.0 | C | .001 | - 573.0 - 700.0 - GRAPH. ARG / GQS |
| 583.0 | | S | F | FOL | BK | GRA | ARG | | | | | | 6 | 1 | | 16 | 5.0 | C | .001 | - QZ/ANK VLETS |
| 588.0 | | SS | F | FOL | BK | GRA | ARG | | | | | | 7 | 1 | | 17 | 5.0 | C | .001 | - RQD = 30% |
| 593.0 | | S | F | FOL | GY | GRA | ARG | | | | | | 2 | Tr | | 18 | 5.0 | C | .001 | - RQD = 60%, 40% TUFF SGDS |
| 598.0 | | S | F | FOL | BK | GRA | ARG | | | | | | 2 | 1 | | 19 | 5.0 | C | .001 | - RQD = 45% |
| 603.0 | | S | F | FOL | BK | GRA | GQS | F | 40 | | | | 6 | 1 | | 20 | 5.0 | C | .001 | - RQD = 60%, QZ/CL/ANK VEINING |
| 605.0 | | S | F | FOL | BK | GRA | GQS | | | | | | 3 | Tr | | 21 | 2.0 | C | .001 | - RQD = 25%, POSS ERROR IN FOOTAGE BLOCKS |
| 608.0 | | - | - | - | - | - | CC | | | | | | | | | | 3.0 | | | - 3.0' LOST CORE |
| 613.0 | | S | F | FOL | BK | GRA | GQS | | | | | | 12 | Tr | | 42822 | 5.0 | C | .001 | - RQD = 40%, QZ/ANK VLETS < 4" WIDE |
| 618.0 | | S | F | FOL | BK | GRA | ARG | F | 30 | | | | 2 | Tr | | 23 | 5.0 | C | .001 | - RQD = 35% |
| 623.0 | | S | F | FOL | BK | GRA | GQS | F | Q | F | 30 | | 8 | 1 | | 24 | 5.0 | C | .001 | - RQD = 30%, COT FOL, VLETS < 3" WIDE |
| 628.0 | | S | F | FOL | GY | GRA | GQS | | | | | | 7 | Tr | | 25 | 5.0 | C | .003 | - IRR QZ/ANK VLETS |
| 633.0 | | S | F | FOL | BK | GRA | GQS | F | 20 | | | | 12 | Tr | | 26 | 5.0 | C | .001 | - 0.8' BX QZ/ANK VEINING |
| 638.0 | | S | F | FOL | BK | GRA | ARG | | | | | | 3 | 1 | | 27 | 5.0 | C | .001 | - MN COT FOL |
| 643.0 | | S | F | FOL | BK | GRA | ARG | | | | | | 1 | Tr | | 28 | 5.0 | C | .001 | |
| 673.0 | | S | F | FOL | BK | GRA | ARG | F | 30 | | | | Tr | Tr | | 29 | 30.0 | G | .001 | - RQD = 40%, MN TUFF SGDS |
| 700.0 | | S | F | FOL | BK | GRA | ARG | | | | | | MN | MN | | 30 | 27.0 | G | .001 | - RQD = 70% |
| 700.0 | | | | | | | | | | | | | | | | | | | | ECH. |



SPECTROLAB INC.

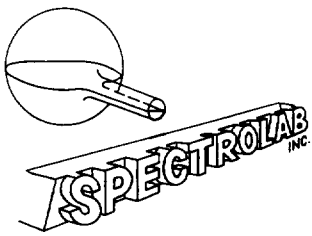
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1278-A DATE: 27/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 14/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42713 | 0.001 | |
| AX42714 | 0.001 | |
| AX42715 | 0.001 | |
| AX42716 | 0.001 | |
| AX42717 | 0.001 | |
| AX42718 | 0.001 | |
| AX42719 | 0.001 | |
| AX42720 | 0.001 | |
| AX42721 | 0.002 | |
| AX42722 | 0.012 | 0.011 |
| AX42723 | 0.021 | |
| AX42724 | 0.005 | |
| AX42725 | 0.005 | |
| AX42726 | 0.021 | |
| AX42727 | 0.005 | |
| AX42728 | 0.001 | |
| AX42729 | 0.001 | |
| AX42730 | 0.001 | |
| AX42731 | 0.001 | |
| AX42732 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

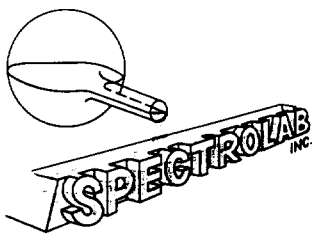
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1278-B DATE: 27/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Ref. 1602
Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42733 | 0.020 | |
| AX42734 | 0.003 | |
| AX42735 | 0.003 | |
| AX42736 | 0.004 | |
| AX42737 | 0.001 | |
| AX42738 | 0.003 | |
| AX42739 | 0.001 | |
| AX42740 | 0.003 | |
| AX42741 | 0.007 | |
| AX42742 | 0.001 | 0.001 |
| AX42743 | 0.002 | |
| AX42744 | 0.003 | |
| AX42745 | 0.001 | |
| AX42746 | 0.001 | |
| AX42747 | 0.002 | |
| AX42748 | 0.005 | |
| AX42749 | 0.025 | |
| AX42750 | 0.002 | |
| AX42751 | 0.002 | |
| AX42752 | 0.002 | 0.001 |

ANALYSTE: Mira Goulbout BSc



SPECTROLAB INC.

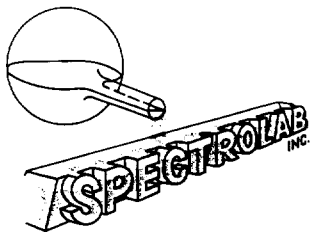
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1278-C DATE: 27/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42753 | 0.001 | |
| AX42754 | 0.007 | |
| AX42755 | 0.001 | |
| AX42756 | 0.003 | |
| AX42757 | 0.001 | |
| AX42758 | 0.002 | |
| AX42759 | 0.001 | |
| AX42760 | 0.002 | |
| AX42761 | 0.001 | |
| AX42762 | 0.001 | 0.001 |
| AX42763 | 0.001 | |
| AX42764 | 0.001 | |
| AX42765 | 0.001 | |
| AX42766 | 0.001 | |
| AX42767 | 0.002 | |
| AX42768 | 0.004 | |
| AX42769 | 0.003 | |
| AX42770 | 0.028 | |
| AX42771 | 0.055 | |
| AX42772 | 0.007 | 0.007 |

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

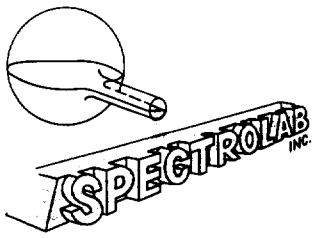
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1278-D DATE: 27/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX42773 | 0.006 | | |
| AX42774 | 0.004 | | |
| AX42775 | 0.002 | | |
| AX42776 | 0.001 | | |
| AX42777 | 0.003 | | |
| AX42778 | 0.020 | | |
| AX42779 | 0.043 | | |
| AX42780 | 0.004 | | |
| AX42781 | 0.002 | | |
| AX42782 | 0.001 | 0.001 | |
| AX42783 | 0.007 | | |
| AX42784 | 0.016 | | |
| AX42785 | 0.020 | | |
| AX42786 | 0.028 | | |
| AX42787 | 0.011 | | |
| AX42788 | 0.025 | | |
| AX42789 | 0.354 | | 0.440 |
| AX42790 | 0.005 | | |
| AX42791 | 0.069 | | |
| AX42792 | 0.011 | 0.010 | |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

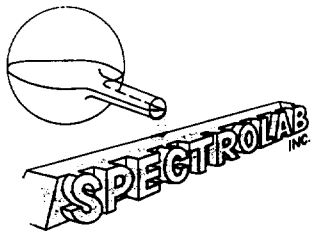
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1278-E DATE: 27/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42793 | 0.001 | |
| AX42794 | 0.003 | |
| AX42795 | 0.009 | |
| AX42796 | 0.001 | |
| AX42797 | 0.001 | |
| AX42798 | 0.001 | |
| AX42799 | 0.001 | |
| AX42800 | 0.001 | |
| AX42801 | 0.002 | |
| AX42802 | 0.001 | 0.001 |
| AX42803 | 0.001 | |
| AX42804 | 0.001 | |
| AX42805 | 0.001 | |
| AX42806 | 0.001 | |
| AX42807 | 0.001 | |
| AX42808 | 0.001 | |
| AX42809 | 0.001 | |
| AX42810 | 0.001 | |
| AX42811 | 0.001 | |
| AX42812 | 0.001 | 0.002 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1278-F DATE: 27/02/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 16 Date reçu: 14/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42813 | 0.001 | |
| AX42814 | 0.002 | |
| AX42815 | 0.001 | |
| AX42816 | 0.001 | |
| AX42817 | 0.001 | |
| AX42818 | 0.001 | |
| AX42819 | 0.001 | |
| AX42820 | 0.001 | |
| AX42821 | 0.001 | |
| AX42822 | 0.001 | 0.001 |
| AX42823 | 0.001 | |
| AX42824 | 0.001 | |
| AX42825 | 0.003 | |
| AX42826 | 0.001 | |
| AX42827 | 0.001 | |
| AX42828 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BS



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK LAKE MINE LOGGED BY: S. HARDING

DATE LOGGED: Feb 9/97

DRILL HOLE NO: RP-97-4

Surface Grid: NORTHING EASTING ELEVATION LENGTH SECTION LEVEL
 1055.63 3549.65 10923.81 580.2 3550 E _____
 Engineering Grid: _____ _____ _____ _____ _____ _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 59 | | | | | | | | | | | | |
| 200 | 003 | 56 | | | | | | | | | | | | |
| 400 | 005 | 56 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

START DATE: FEB 3 1997
 FINISH DATE: FEB 6 1997
 TOWNSHIP: CODY
 CLAIM NO.: P 15603 (HR 918)
 DRILLING CONTRACTOR: BENOIT
 PURPOSE: TEST RAMP ZONE
 RESULTS: _____
 WHY HOLE TERMINATED: TARGET INTERSECTED
 CORE SIZE: BQ
 CASING: 545', Pulled
 HOLE CEMENTED: Yes
 NO. OF ASSAYS: _____
 NO. OF ICP: _____
 NO. OF WRA: _____
 REJECTS/PULPS SAVED: _____
 CORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch

ft
 m

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|-------|--|-------------------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 54.5 | | - | - | - | - | - | CAS | | | | | | | | | | 54.5 | | | - 0-54.5 - CASING |
| 78.0 | | M | F | MBX | GG | CHL | CCRB | | | | | 1 | | Tr | | AX42831 | 23.5 | G.001 | - CHL CARB, WK ANK ALT N, 2X 1.0' MARK DYKES? | |
| 83.0 | | M | F | COT | GG | CHL | CCRB | | V | 50 | | 5 | | Tr | | 42832 | 5.0 | C.001 | - IRR QZ/ANK VLETS < 1" WIDE | |
| 88.0 | | M | F | COT | GG | CHL | CCRB | | | | | 4 | | Tr | | 33 | 5.0 | C.001 | | |
| 93.0 | | M | F | COT | GG | CHL | CCRB | | | | | 4 | | Tr | | 34 | 5.0 | C.001 | | |
| 98.0 | | M | F | COT | GG | CHL | CCRB | | | | | 5 | | Tr | | 35 | 5.0 | C.001 | | |
| 101.0 | | M | F | BX | GG | CHL | CCRB | | | | | 10 | | Tr | | 36 | 3.0 | C.001 | - 0.6' BX QZ/ANK VEINING | |
| 104.5 | | M | F | BX | GG | CHL | CCRB | | | | | 3 | | Tr | | 37 | 3.5 | C.001 | | |
| 107.0 | | M | F | MSY | GY | CHL | MD | | V | 60 | | 7 | | Z | | 42838 | 2.5 | C.001 | - MAFIC DYKE?, 20% BLOCKY CORE, VLETS < 0.5" WIDE, F-MG PY, SHARP CONTACTS | |
| 112.0 | | M | F | MBX | GG | CHL | CCRB | | | | | 8 | | Tr | | 42839 | 5.0 | C.001 | - QZ/ANK VLETS < 2" WIDE | |
| 157.0 | | M | F | MBX | GG | CHL | CCRB | | | | | | | Tr | | 42840 | 45.0 | G.001 | - Tr VLETS < 1" WIDE, @ 134.2 Tr COPY IN VLET, Tr GREY SIL PATCHES | |
| 162.0 | | M | F | MBX | GG | CHL | CCRB | | | | | 1 | | Tr | | 42841 | 5.0 | C.001 | | |
| 166.3 | | M | F | MBX | GG | CHL | CCRB | | | | | 12 | | F | | 42842 | 4.3 | C.001 | - 0.8' BX VEINING, QZ STGS | |
| 168.3 | | M | VF | BX | GY | SIL | MVO | | | | | 15 | | Z | | 42843 | 2.0 | C.001 | - SIL MAFICS?, Tr COPY IN VLET, QZ/ANK VLETS AT CONTACTS | |
| 172.5 | | M | F | MBX | WP | SIL | QV | | | | | 55 | | Tr | | 42844 | 4.2 | C.001 | - 1.3' + 1.0' QZ/ANK VEINS, Tr PY IN VEINS, CARB AT ENDS OF VEINS WITH MARK FRAGS IN VEINS | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|-------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | | | | | | |
| 175.0 | | m | F | BX | GY | SIL | QV | | | | | | 45 | 1 | | AX42845 | 2.5 | c | .001 | - 2 X 0.5' VEINS, MAFIC FRAGS IN VEINS, 1% PY IN MAFICS AROUND VEINS, Tr CPY IN FRAC |
| 178.0 | | m | F | MBX | GY | ANK | MVD | | | | | | 1 | 1 | | 42846 | 3.0 | c | .001 | - 175.0 - 316.7 - MAFIC VOLCS, MOD-STR ANK |
| 183.0 | | m | F | MBX | GY | ANK | MVD | | | | | | Tr | Tr | | 47 | 5.0 | c | .001 | AT TOP OF UNIT, INCREASING CHL DOWN UNIT |
| 188.0 | | m | F | MBX | GY | ANK | MVD | | | | | | Tr | 1 | | 48 | 5.0 | c | .001 | - 184.0 - 190.0 - ANK PBLASTS / STGS |
| 193.0 | | m | F | MBX | GG | ANK | MVD | | | | | | 1 | 1 | | 49 | 5.0 | c | .001 | - Tr CPY IN FRAC |
| 198.0 | | m | F | MBX | GN | CHL | MVD | | | | | | Tr | Tr | | 50 | 5.0 | c | .001 | |
| 233.0 | | m | F | MSV | GN | CHL | MVD | | | | | | 1 | Tr | | 51 | 35.0 | G | .001 | - MN LEN. ALTIN |
| 238.0 | | m | F | MSV | GN | CHL | MVD | | | | | | Tr | Tr | | 52 | 5.0 | c | .001 | - LEN ALTIN |
| 243.0 | | m | F | MBX | GN | CHL | MVD | | | | | | 1 | 1 | | 53 | 5.0 | c | .001 | |
| 248.0 | | m | F | MBX | GG | CHL | MVD | | V | 25 | V | 70 | 6 | 2 | | 54 | 5.0 | c | .002 | - VLETS < 1.5" WIDE, Tr CPY IN VLET |
| 253.0 | | m | F | MBX | GN | CHL | MVD | | V | 70 | | | 3 | 2 | | 55 | 5.0 | c | .010 | - Tr CPY IN STGS, 3" SIL MAFICS, 10% BX FLOW? |
| 257.0 | | m | F | MSV | GN | CHL | MVD | | | | | | 2 | 2 | | 56 | 4.0 | c | .005 | - Tr CPY IN STG |
| 259.2 | | m | F | MSV | GN | CHL | MVD | | | | | | 3 | 2 | | 57 | 2.2 | c | .022 | - Tr CPY IN STG |
| 264.0 | | m | VF | MSV | GY | SIL | MVQ | | V | 50 | | | 7 | 1 | | 42858 | 4.8 | c | .009 | - V. STR SIL MAFICS, ALMOST CHERTY, QZ VLETS < 1" WIDE, Tr CPY IN STGS/FRACS, F-MG PY ALONG FRACS/STWK, SHARP CONTACTS |
| 268.0 | | m | F | MSV | GN | CHL | MVD | | | | | | 1 | 1 | | 42859 | 4.0 | c | .003 | |
| 273.0 | | m | F | MSV | GN | CHL | MVD | | V | 60 | | | 2 | Tr | | 60 | 5.0 | c | .001 | |
| 278.0 | | m | F | MSV | GN | CHL | MVD | | | | | | MW | Tr | | 61 | 5.0 | c | .001 | - Tr CPY IN QZ FILLED FRAC |
| 283.0 | | m | F | MBX | GN | CHL | MVD | | V | 45 | | | 2 | 1 | | 62 | 5.0 | c | .002 | - Tr CPY IN VLET |
| 303.0 | | m | FM | PBLAS | GG | ANK | MVD | | | | | | 1 | Tr | | 63 | 20.0 | c | .001 | - WHITE ANK PBLASTS |

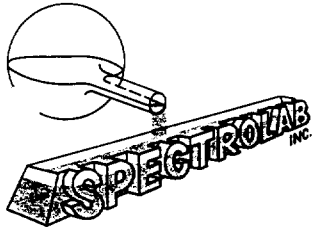
| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 308.0 | | m | Fm | PBL | GG | ANK | MVD | | | | | 1 | Tr | | | AX42864 | 5.0 | c | .001 | |
| 313.0 | | m | F | MBX | GG | ANK | MVD | | | | | 1 | MN | | | 65 | 5.0 | c | .002 | - MOD ANK ALT N |
| 316.7 | | m | F | BX | GG | ANK | MVD | | | | | 2 | Tr | | | 66 | 3.7 | c | .001 | |
| 319.0 | | m | F | MSY | GG | CHL | CCRB | V | 50 | | | 12 | Tr | | | 42867 | 2.3 | c | .001 | - 4" QZ/ANK VEINING AT CONTACT |
| 324.0 | | m | F | FOL | GG | CHL | CCRB | | | | | Tr | MN | | | 68 | 5.0 | c | .001 | - MN COT FOL/MBX |
| 329.0 | | m | F | COT | GG | ANK | GCRB | | | | | 2 | Tr | | | 69 | 5.0 | c | .001 | - COT/FOL |
| 334.0 | | m | F | COT | GG | ANK | GCRB | | | | | 3 | Tr | | | 70 | 5.0 | c | .001 | |
| 339.0 | | m | F | COT | GY | ANK | GCRB | | | | | 6 | Tr | | | 42871 | 5.0 | c | .001 | - COT/FOL, VLETS < 1" WIDE |
| 344.0 | | m | F | COT | GY | ANK | GCRB | | | | | 6 | I | | | 42872 | 5.0 | c | .001 | - VLETS < 2" WIDE |
| 349.0 | | m | F | FOL | GG | ANK | GCRB | | | | | 5 | Tr | | | 42873 | 5.0 | c | .001 | - 345.5 - 346.5 - CHL MAFIC DYKE? WITH 1% PY |
| 352.0 | | m | F | MBX | GY | SIL | MD | | | | | 3 | I | | | 42874 | 3.0 | c | .001 | - SIL MAFIC DYKE, 0.6' CHL CARB |
| 356.3 | | m | F | BX | GY | SIL | MD | V | 60 | | | 3 | I | | | 42875 | 4.3 | c | .001 | - 352.0 - 374.7 - STR SIL MAFIC DYKE/VOLC? |
| 358.3 | | m | F | COT | GG | CHL | MD | | | | | 3 | Tr | | | 76 | 2.0 | c | .001 | WELL FRAC/BX, VLETS < 2" WIDE, VF- |
| 363.0 | | m | F | BX | GY | SIL | MD | V | 35 | | | 4 | I | | | 77 | 5.0 | c | .001 | FG PY, CHL FRACS. |
| 368.0 | | m | F | BX | GY | SIL | MD | | | | | 3 | I | | | 78 | 5.0 | c | .002 | - 356.3 - 356.6 + 357.2 - 358.3 - CHL CARB |
| 372.0 | | m | F | BX | GY | SIL | MD | V | 50 | | | 2 | I | | | 79 | 4.0 | c | .001 | |
| 374.7 | | m | F | BX | GY | SIL | | | | | | 2 | I | | | 80 | 2.7 | c | .002 | |
| 377.7 | | m | F | FOL | GG | CHL | CCRB | V | 40 | | | 3 | Tr | | | 42881 | 3.0 | c | .001 | - FOL/COT, 1" QZ/ANK VLET |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|-----|----------|----|----------|----------|-----|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QTZ | PY | | | | | | |
| 380.0 | | m | F | MSX | GY | SIL | MD | | V | SP | | | 4 | | 1 | | AX 42882 | 2.3 | C.002 | - 377.7-378.4 - SIMILAR TO PREVIOUS DYKE, 378.4 |
| 383.0 | | m | F | COT | GG | SIL | MD | | | | | | 3 | | 2 | | 42883 | 3.0 | C.001 | 383.0 - LOSS SIL GREY/GREEN, CARB? |
| 387.0 | | m | F | FOL | GG | ANK | GCRB | | | | | | 5 | | 1 | | 42884 | 4.0 | C.001 | - 384.0-385.2 & 386.5-387.0 - SIL DYKES? - 1% PY IN DYKES + CARB |
| 390.0 | | m | F | SAB | GY | ANK | GCRB | | | | | | 3 | | Tr | | 42885 | 3.0 | C.001 | - CARB SCHIST?, GREY/BROWN, WELL FOL/SAB |
| 392.2 | | m | F | FOL | GG | CHL | GCRB | | | | | | 1 | | 2 | | 42886 | 2.2 | C.003 | - MOD-WELL FOL, BROKEN CORE AT CONTACTS |
| 397.0 | | m | F | BSX | GY | SIL | MD | | | | | | 3 | | 1 | | 42887 | 4.8 | C.001 | - STR SIL DYKE, 2 X 0.5' CHL CARB |
| 401.0 | | m | F | COT | GY | ANK | GCRB | | | | | | 2 | | Tr | | 42888 | 4.0 | C.001 | - 0.5' SIL DYKE |
| 405.0 | | m | F | COT | GY | ANK | GCRB | | | | | | 5 | | Tr | | 42889 | 4.0 | C.001 | |
| 410.0 | | m | F | COT | GY | ANK | GCRB | | V | 60 | F | 40 | 12 | | Tr | | 42890 | 5.0 | C.001 | - 5" QZ/ANK VEIN, VLETS < 2' WIDE, COT-FOL |
| 414.3 | | m | F | MSX | GG | CHL | MD | | | | | | 2 | | 2 | | 42891 | 4.3 | C.052 | - CHL DYKE?, 2% F-CG SUB/EUH PY, 0.5' FOL GCRB |
| 418.0 | | m | F | COT | GY | ANK | GCRB | | | | | | 3 | | Tr | | 42892 | 3.7 | C.006 | - RQD = 55% |
| 423.0 | | m | F | COT | GY | SIL | GCRB | | | | | | 4 | | Tr | | 93 | 5.0 | C.002 | - 0.5' CHL DYKE? |
| 428.0 | | m | F | COT | GY | ANK | GCRB | | | | | | 6 | | Tr | | 94 | 5.0 | C.004 | - RQD = 50% |
| 433.0 | | m | F | COT | GY | ANK | GCRB | | V | 75 | | | 7 | | 1 | | 95 | 5.0 | C.048 | - VLETS < 1.5' WIDE |
| 438.0 | | m | F | BSX | GY | SIL | GCRB | | | | | | 6 | | 2 | | 96 | 5.0 | C.180 | - 2.0' SIL BSX DYKE WITH 2% PY |
| 443.0 | | m | F | BSX | GY | ANK | GCRB | | | | | | 15 | | Tr | | 97 | 5.0 | C.016 | - VLETS < 3" WIDE |
| 447.0 | | m | F | BSX | GY | ANK | GCRB | | | | | | 3 | | 2 | | 98 | 4.0 | C.049 | - POSS SIL DYKE, Tr CPY INFRACS |

428-438 .114/10.0'

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|---|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 451.5 | | M | F | BX | GY | SIL | MD | | | | | 1 | | 3 | | AX42879 | 4.5 | | <.067 | - STR SIL DYKE, MN GCRB |
| 454.5 | | M | F | FOL | GG | SER | GCRB | | | | | 1 | | 2 | | 42900 | 3.0 | | <.023 | - MOD-STR SER? ALT'N, MOD FOL |
| 457.3 | | M | F | FOL | PK | ANK | SYN | POR? | F | 40 | | 1 | | 2 | | 42901 | 2.8 | | <.004 | - FG SYN/POR DYKE, CHL/SER? ALT'N AT CONTACTS, VF-FG PY, WKLY FOL - MSU IN MIDDLE OF DYKE |
| 460.8 | | M | F | FOL | GG | CHL | TUF | | | | | 1 | | 1 | | 42902 | 3.5 | | <.001 | - CHL TUFF SEGS? |
| 465.8 | | M | F | MSV | PK | SER | SYN | POR? | | | | 1 | | 2 | | 42903 | 5.0 | | <.004 | - DYKE?, SIMILAR TO PREVIOUS SYN, MOD-STR SER? ALT'N AT END OF DYKE |
| 470.0 | | S | F | FOL | GG | CHL | TUF | | F | 50 | | 1 | | 1 | | 42904 | 4.2 | | <.001 | - RBD = 25%, MN CARB |
| 475.0 | | S | F | FOL | GG | ANK | GCRB | TS | V | 35 | | 3 | | 2 | | 42905 | 5.0 | | <.003 | - INTERBEDDED CARB/TS, MOD-STR FOL, 1.5" PINK/WHITE QZ/CC VLET |
| 479.0 | | S | F | FOL | GG | ANK | GCRB | | | | | 3 | | 2 | | 42906 | 4.0 | | <.001 | - QZ/CC VLETS/STGS |
| 482.5 | | S | F | FOL | GG | ANK | GCRB | | V | 50 | | 6 | | 2 | | 42907 | 3.5 | | <.001 | - 2" QZ/CC VLET |
| 485.0 | | S | F | FOL | GG | ANK | TUF | | | | | 3 | | 3 | | 42908 | 2.5 | | <.001 | - TS?/CARB, FOL-BX, QZ/CC STGS, VF-FG DISSEM PY |
| 487.5 | | M | F | FOL | GG | ANK | GCRB | | V | 35 | | 8 | | 5 | | 42909 | 2.5 | | <.005 | - 1" QZ/ANK VLET, FOL-BX, Tr CPY IN STG |
| 490.0 | | M | F | FOL | GG | ANK | GCRB | | V | 40 | | 12 | | 3 | | 42910 | 2.5 | | <.002 | - VLETS < 2" WIDE |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | Py | | | | | | |
| 494.0 | | S | F | FOL | GG | CHL | GCRB | | F | 50 | | | 1 | 3 | | 42911 | 4.0 | | 0.001 | - TS? WITH MN CARB |
| 498.0 | | S | F | FOL | GG | CHL | GCRB | | | | | | 3 | 2 | | 42912 | 4.0 | | 0.001 | - F-MG SUB/EUH PY, RQD = 60% |
| 503.0 | | S | F | FOL | GG | ANK | GCRB | | | | | | 2 | 3 | | 42913 | 5.0 | | 0.002 | |
| 507.0 | | M | F | MSX | GY | ANK | GCRB | | | | | | 5 | 3 | | 42914 | 4.0 | | 0.012 | - QZ/ANK STG S /FRAC, MSX-FOL-MSU |
| 510.0 | | M | F | FOL | GY | ANK | GCRB | | | | | | 2 | 1 | | 15 | 3.0 | | 0.006 | |
| 513.0 | | M | F | BY | GY | ANK | GCRB | | | | | | 1 | 3 | | 16 | 3.0 | | 0.001 | - WKLY SIL |
| 516.0 | | M | F | MSX | GY | ANK | GCRB | | | | | | 1 | 1 | | 17 | 3.0 | | 0.001 | |
| 519.0 | | M | F | BY | GY | ANK | GCRB | | | | | | 1 | 4 | | 18 | 3.0 | | 0.001 | - F-MG PY |
| 523.0 | | S | F | FOL | GG | ANK | TUF | CARB | | | | | 3 | Tr | | 42919 | 4.0 | | 0.001 | - 519.0 - 568.0 TUFF SEDS? WITH MN INTERBEDDED |
| 528.0 | | S | F | FOL | GG | ANK | TUF | | F | 40 | | | 2 | Tr | | 20 | 5.0 | | 0.001 | CARB, WK-MOD CHL, MOD-WELL FOL |
| 533.0 | | S | F | FOL | GG | ANK | TUF | CARB | | | | | 1 | Tr | | 21 | 5.0 | | 0.001 | - MN BX SECTIONS |
| 538.0 | | S | F | FOL | GG | CHL | TUF | | | | | | 1 | Tr | | 22 | 5.0 | | 0.001 | |
| 543.0 | | S | F | FOL | GG | CHL | TUF | | | | | | 1 | Tr | | 23 | 5.0 | | 0.001 | |
| 548.0 | | S | F | FOL | GG | CHL | TUF | | | | | | Tr | Tr | | 24 | 5.0 | | 0.007 | |
| 553.0 | | S | F | FOL | GY | ANK | TUF | CARB | | | | | 1 | Tr | | 25 | 5.0 | | 0.002 | |
| 558.0 | | S | F | FOL | GY | ANK | TUF | | | | | | 1 | MN | | 26 | 5.0 | | 0.001 | - 553.0 - 568.0 - 20% INTERBEDDED ARG |
| 563.0 | | S | F | FOL | GY | ANK | TUF | CARB | | | | | 1 | 1 | | 27 | 5.0 | | 0.001 | - 1.0' SIL DYKE? |
| 568.0 | | B | F | FOL | GY | ANK | TUF | | | | | | 1 | 1 | | 28 | 5.0 | | 0.001 | - RQD = 10% |
| 571.0 | | S | F | FOL | GY | GRA | ARG | | | | | | 3 | Tr | | 42929 | 3.0 | | 0.010 | - 568.0 - 580.2 - GRAPN ARG/GQS - GREY-BLACK, MOD FOL, QZ/ANK VENS/ VLETS, F-CG SUB PY |



SPECTROLAB INC.

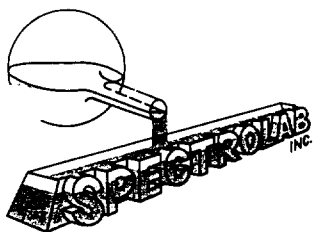
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1351-A DATE: 11/03/97

Client: ROYAL OAK MINES LTD. Échantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42829 | 0.001 | |
| AX42830 | 0.001 | |
| AX42831 | 0.001 | |
| AX42832 | 0.001 | |
| AX42833 | 0.001 | |
| AX42834 | 0.001 | |
| AX42835 | 0.001 | |
| AX42836 | 0.001 | |
| AX42837 | 0.001 | |
| AX42838 | 0.001 | 0.001 |
| AX42839 | 0.001 | |
| AX42840 | 0.001 | |
| AX42841 | 0.001 | |
| AX42842 | 0.001 | |
| AX42843 | 0.001 | |
| AX42844 | 0.001 | |
| AX42845 | 0.001 | |
| AX42846 | 0.001 | |
| AX42847 | 0.001 | |
| AX42848 | 0.001 | 0.001 |

ANALYSTE: Miras Godbout BSc.



SPECTROLAB INC.

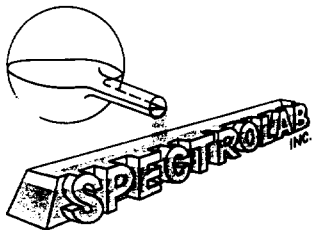
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1351-B DATE: 11/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Ref. 1602
Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42849 | 0.001 | |
| AX42850 | 0.001 | |
| AX42851 | 0.001 | |
| AX42852 | 0.001 | |
| AX42853 | 0.001 | |
| AX42854 | 0.002 | |
| AX42855 | 0.010 | |
| AX42856 | 0.005 | |
| AX42857 | 0.022 | |
| AX42858 | 0.009 | 0.008 |
| AX42859 | 0.003 | |
| AX42860 | 0.001 | |
| AX42861 | 0.001 | |
| AX42862 | 0.002 | |
| AX42863 | 0.001 | |
| AX42864 | 0.001 | |
| AX42865 | 0.002 | |
| AX42876 | 0.001 | |
| AX42877 | 0.001 | |
| AX42878 | 0.002 | 0.001 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

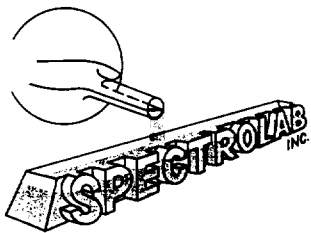
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1279 DATE: 26/02/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 10 Ref. 1602
Reçu de: Au Limite de détection: 0.001 Date reçu: 14/02/97
Éléments: Au Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42866 | 0.001 | |
| AX42867 | 0.001 | |
| AX42868 | 0.001 | |
| AX42869 | 0.001 | |
| AX42870 | 0.001 | |
| AX42871 | 0.001 | |
| AX42872 | 0.001 | |
| AX42873 | 0.001 | |
| AX42874 | 0.001 | |
| AX42875 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

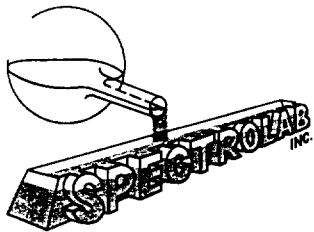
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1351-C DATE: 11/03/97

Client: ROYAL OAK MINES LTD. Échantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42879 | 0.001 | |
| AX42880 | 0.002 | |
| AX42881 | 0.001 | |
| AX42882 | 0.002 | |
| AX42883 | 0.001 | |
| AX42884 | 0.001 | |
| AX42885 | 0.001 | |
| AX42886 | 0.003 | |
| AX42887 | 0.001 | |
| AX42888 | 0.001 | 0.001 |
| AX42889 | 0.001 | |
| AX42890 | 0.001 | |
| AX42891 | 0.052 | |
| AX42892 | 0.006 | |
| AX42893 | 0.002 | |
| AX42894 | 0.004 | |
| AX42895 | 0.048 | |
| AX42896 | 0.180 | |
| AX42897 | 0.016 | |
| AX42898 | 0.048 | 0.050 |

ANALYSTE: Mira Godbout Bto



SPECTROLAB INC.

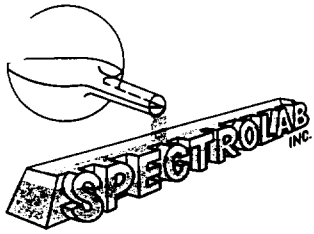
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1351-D DATE: 11/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42899 | 0.067 | |
| AX42900 | 0.023 | |
| AX42901 | 0.004 | |
| AX42902 | 0.001 | |
| AX42903 | 0.004 | |
| AX42904 | 0.001 | |
| AX42905 | 0.003 | |
| AX42906 | 0.001 | |
| AX42907 | 0.001 | |
| AX42908 | 0.001 | 0.001 |
| AX42909 | 0.005 | |
| AX42910 | 0.002 | |
| AX42911 | 0.001 | |
| AX42912 | 0.001 | |
| AX42913 | 0.002 | |
| AX42914 | 0.012 | |
| AX42915 | 0.006 | |
| AX42916 | 0.001 | |
| AX42917 | 0.001 | |
| AX42918 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1351-E DATE: 11/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 14 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42919 | 0.001 | |
| AX42920 | 0.001 | |
| AX42921 | 0.001 | |
| AX42922 | 0.001 | |
| AX42923 | 0.001 | |
| AX42924 | 0.007 | |
| AX42925 | 0.002 | |
| AX42926 | 0.001 | |
| AX42927 | 0.001 | |
| AX42928 | 0.001 | 0.001 |
| AX42929 | 0.010 | |
| AX42930 | 0.009 | |
| AX42931 | 0.001 | |
| AX42932 | 0.001 | |

ANALYSTE: Mira Godbout BSc.

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|------|--------|-----------|----|----|---|--------|----|----------|----|----------|---------|------|--------------|---------------------------------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | Py | | | | | | | |
| 94.5 | | - | - | - | - | - | GAS | | | | | | | | | | 94.5 | | | - 0-94.5 - CHSING in OVERBURDEN | |
| 123.0 | | m | F | MBX | GG | CHL | CCRB | | | | | | | | | | AX42933 | 28.5 | G | .001 | - CHL-RICH CARB, MBX WITH FOL SECTIONS MN CHL DYKES?, RQD = 60%, Tr-1/8 QZ STGS/VLETS |
| 128.0 | | m | F | FOL | GG | CHL | CCRB | | | | | | 15 | | | | 42934 | 5.0 | C | .001 | - IRR QZ/ANK VLETS < 3" WIDE, FOL-COT |
| 133.0 | | m | F | MBX | GN | CHL | MD | | | | | | 12 | | Z | | 42935 | 5.0 | C | .015 | - CHL RICH DYKE?, IRR/FAC VLETS < 2" WIDE, F-MG SUB/CH PY, RELATIVELY SHARP CONTACTS |
| 138.0 | | m | F | COT | GN | CHL | CCRB | V | 30 | | | | 20 | | I | | 42936 | 5.0 | C | .002 | - 5" VEIN, VLETS < 2" WIDE, 1.0' CHL DYKE? AT END OF SAMPLE WIT 2/6 PY |
| 143.0 | | m | F | COT | GG | CHL | CCRB | | | | | | 6 | | Tr | | 42937 | 5.0 | C | .001 | - COT-FOL, VLETS/STGS < 0.5" WIDE |
| 148.0 | | m | F | MBX | GG | CHL | CCRB | | | | | | 3 | | MN | | 38 | 5.0 | C | .027 | - CARB/MVO, CHL-RICH |
| 153.0 | | B | F | COT | GN | CHL | CCRB | V | 20 | | | | 15 | | Tr | | 39 | 5.0 | C | .004 | - MN MVO, QZ/ANK VEINING < 0.5', RQD = 50% |
| 158.0 | | B | F | COT | GN | CHL | CCRB | | | | | | 15 | | Tr | | 40 | 5.0 | C | .002 | - RQD = 50% |
| 163.0 | | m | F | COT | GN | CHL | CCRB | | | | | | 20 | | Tr | | 41 | 5.0 | C | .001 | - IRR/COT QZ/ANK VLETS, COT-FOL |
| 168.0 | | m | F | COT | GG | CHL | CCRB | V | 70 | | | | 20 | | Tr | | 42 | 5.0 | C | .001 | - COT-FOL |
| 173.0 | | m | F | FOL | GG | CHL | CCRB | F | 15 | | | | 7 | | Tr | | 43 | 5.0 | C | .001 | - WK-MOD FOL |
| 175.2 | | m | F | FOL | GG | CHL | CCRB | | | | | | 2 | | Tr | | 44 | 2.2 | C | .001 | |
| 180.0 | | m | F | MBX | GY | ANK | UMF | | | | | | 1 | | Tr | | 42945 | 4.8 | C | .001 | - 175.2 - 222.3 - TALL-RICH U.MAFICS |
| 218.0 | | m | F | MBX | GY | TALC | UMF | | | | | | Tr | | Tr | | 42946 | 38.0 | G | .001 | GRET, MBX - ALMOST MSU, WK ANK ALTN |
| 222.3 | | m | F | MBX | GG | CHL | UMF | | | | | | Tr | | Tr | | 42947 | 4.3 | C | .001 | AT TOP OF UNIT, CHL AT END OF UNIT |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|----|----------|-------|-------|--------------------|----------|------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | | | |
| 225.5 | | M | F | MSX | RG | HEM | CLRB | | | | | | | Tr | MN | | | 42948 | 3.2 | C | .001 | - CHL/HEM ALTERED MAFICS, Tr-1% PY, CC STGS |
| 228.0 | | M | F | MSV | GN | CHL | UMF | | | | | | | Tr | Tr | | | 42949 | 2.5 | C | .001 | - CHL RICH U.MAFICS, Tr CC STGS |
| 252.0 | | M | F | MSV | GN | CHL | UMF | | | | | | | Tr | Tr | | | 42950 | 24.0 | C | .001 | - CHL RICH U.MAFICS, ^{WK} PERV. CC ALT'N, 242.0 - 243.5 - WHLY HEM STAINED MAFICS - 1% PY |
| 256.4 | | M | F | MSX | GN | CHL | UMF | | | | | | | Tr | Tr | | | 42951 | 4.4 | C | .001 | - CC STGS, 4' MAFIC DYKE? |
| 260.0 | | M | F | MSV | GN | CHL | MVO | | | | | | | 1 | 1 | | | 42952 | 3.6 | C | .001 | - 256.4 - 268.0 - CHL/HEM BASALT, Tr-1% |
| 263.0 | | M | F | MSX | RG | HEM | CLRB | | | | | | | Tr | 1 | | | 42953 | 3.0 | C | .001 | QZ/CC STGS, F-CG SUB PY |
| 268.0 | | M | F | MSX | RG | HEM | CLRB | | | | | | | Tr | 1 | | | 42954 | 5.0 | C | .001 | |
| 273.0 | | M | F | MSX | GN | CHL | UMF | | | | | | | 1 | Tr | | | 42955 | 5.0 | C | .001 | - Tr HEM ALT'N, CC STGS |
| 278.0 | | M | F | MSX | GN | CHL | UMF | | | | | | | Tr | Tr | | | 42956 | 5.0 | C | .001 | - MSX-MSV |
| 282.0 | | M | F | MSX | GN | CHL | UMF | | | | | | | Tr | Tr | | | 42957 | 4.0 | C | .001 | |
| 287.0 | | M | F | MSV | GN | CHL | MVO | | | | | | | 1 | 1 | | | 42958 | 5.0 | C | .001 | - 2 x 0.5' GY SIL PATCHES |
| 291.5 | | M | F | MSV | GN | CHL | MVO | | | | | | | 1 | 1 | | | 42959 | 4.5 | C | .001 | |
| 296.0 | | M | F | COT | GN | CHL | CCRB | | | | | | | 4 | Tr | | | 42960 | 4.5 | C | .001 | - COT QZ/MNK VEINING |
| 301.0 | | M | F | BY | GN | CHL | CCRB | | | | | | | 5 | Tr | | | 42961 | 5.0 | C | .001 | |
| 331.0 | | M | F | FOL | GY | ANK | UMF | | | | | | | 1 | Tr | | | 42962 | 30.0 | G | .002 | - TALC-RICH, WK-MOD ANK ALT'N, FOL/SUB - |
| 361.0 | | M | F | MSX | GG | ANK | UMF | | | | | | | 1 | Tr | | | 42963 | 30.0 | G | .001 | RX, 349.0-361.0 - CHL U M, MN COT VEINING |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----|----|----|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 366.0 | | M | F | BX | GG | ANK | UMF | | | | | 2 | | Tr | | AX42964 | 5.0 | | c.001 | - CHL/ANK U. MARIES, BX-COT-FOL |
| 371.0 | | M | F | FOL | GC | CHL | UMF | F | 30 | | | Tr | | Tr | | 42965 | 5.0 | | c.001 | - WELL FOL, POSS MARIES? |
| 373.0 | | M | F | MSV | PK | ANK | SYN | | | | | 3 | | 3 | | 42966 | 2.0 | | c.001 | - FG, PINK SYN/POR DYKE, QZ VLET/STGS c. 0.5" WIDE, VF-FG DISSEM PY, CHL AT CONTACTS |
| 378.0 | | M | F | FOL | GN | CHL | CCRB | | | | | 3 | | MN | | 42967 | 5.0 | | c.001 | - FOL-COT, MOD ANK ALT'N, 2" SYN FRAG 276.7-278.0 - WELL FOL, PK/GN, POSS DYKE |
| 383.0 | | M | F | COT | GN | CHL | CCRB | | | | | 1 | | Tr | | 42968 | 5.0 | | c.001 | - COT-BX/FOL |
| 387.0 | | M | F | FOL | GN | CHL | CCRB | | | | | 1 | | Tr | | 42969 | 4.0 | | c.001 | |
| 390.0 | | M | F | FOL | GN | CHL | MD | | | | | 2 | | Tr | | 42970 | 3.0 | | c.001 | - CHL/FOL SYN DYKE?, MN PINK PATCHES, RELATIVELY SHARP CONTACTS |
| 395.0 | | M | F | COT | GN | CHL | CCRB | | | | | 7 | | 1 | | 42971 | 5.0 | | c.001 | - COT QZ/ANK VLETS, FG DISSEM/SURS PY |
| 400.0 | | M | F | COT | GN | CHL | CCRB | | | | | 5 | | Tr | | 42972 | 5.0 | | c.001 | - COT-FOL |
| 403.0 | | M | F | BX | GN | CHL | CCRB | | | | | 6 | | MN | | 42973 | 3.0 | | c.002 | - BX-COT |
| 406.0 | | M | F | COT | GN | CHL | CCRB | V | 30 | F | 25 | 20 | | MN | | 42974 | 3.0 | | c.001 | - 1" GY SYN? BAND, 0.6' COT VEINING |
| 409.5 | | M | F | FOL | PK | ANK | SYN | F | 30 | | | 20 | | 1 | | 42975 | 3.5 | | c.001 | - FOL-MSV PINK SYN? DYKE, 1% QZ STGS, VF-FG PY, CHL ALONG FOL PLANES - 407.0 - 407.6 - QZ/MN ANK VEIN - 408.5 - 408.8 + 409.0 - 409.5 - CHL CARBS - 409.5 - 411.3 - SIMILAR TO PREV. DYKE - 411.3 - 413.5 - BX/FOL SYN/CHL CARBS WITH |
| 413.5 | | M | F | FOL | GY | ANK | SYN | F | 35 | | | 12 | | 1 | | 42976 | 4.0 | | c.001 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----|----|----|--------|----|----------|--|----------|-------|---|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | Py | | | | | | |
| | | | | | | | | | | | | | | | | | | | | COT QZ/ANK VLETS, CHL ALONG FOL PLANES |
| 418.0 | | M | F | FOL | GY | ANK | UMF | | | | | 3 | | Tr | | AX42977 | 4.5 | C | .001 | - 2.0' COT CARB, 2.5' GY TALL/ANK U.MAFICS |
| 434.0 | | M | F | FOL | GY | ANK | UMF | | | | | | | Tr | | 42978 | 16.0 | G | .001 | - TALL-RICH U.MAFICS, WK-MOD ANK ALT'N, FOL-MBX |
| 438.0 | | M | F | COT | GY | ANK | GCRB | V | 50 | F | 50 | 8 | | Tr | | 42979 | 4.0 | C | .010 | - QZ/ANK VLETS < 2" WIDE, MN LIM STAINING, FOL-COT |
| 443.0 | | M | F | COT | GY | ANK | GCRB | | | | | 12 | | Tr | | 42980 | 5.0 | C | .005 | - Tr FUCH IN LOWER 1.0', 10% LIM STAINING |
| 448.0 | | M | F | COT | GY | SIL | GCRB | | | | | 5 | | Tr | | 81 | 3.0 | C | .015 | - Tr-MN FUCH |
| 453.0 | | M | F | BX | GG | FU | GCRB | | | | | 7 | | Tr | | 82 | 5.0 | C | .016 | - Tr-WKLY FUCH, 5% LIM STAINING |
| 457.0 | | M | F | COT | GG | FU | GCRB | V | 50 | | | 10 | | Tr | | 83 | 4.0 | C | .013 | - WKLY FUCH, QZ/ANK VLETS/STGS < 1" WIDE |
| 460.0 | | M | F | COT | GG | FU | GCRB | | | | | 40 | | Tr | | 84 | 3.0 | C | .008 | - 0.8' QZ/ANK VEINING, WKLY FUCH |
| 463.0 | | M | F | BX | GY | ANK | GCRB | | | | | 8 | | I | | 42985 | 3.0 | C | .038 | - DYKE?, FINEGRAINED, BX-COT-FOL, Tr FUCH, 1% VF-FG PY |
| 466.4 | | M | F | MAX | GN | FU | FGRB | V | 30 | | | 12 | | Tr | | 42986 | 3.4 | C | .005 | - FUCH CARB, MBX-FOL, VLETS/STGS < 0.5" |
| 470.0 | | M | F | BX | GY | SIL | MD | | | | | 1 | | I | | 42987 | 3.6 | C | .022 | - SIL DYKE? BX WITH FOL SECTIONS, 0.5' FUCH CARB IN MIDDLE OF DYKE, RQD = 65% |
| 474.0 | | M | F | FOL | GG | ANK | GCRB | | | | | 4 | | I | | 42988 | 4.0 | C | .014 | - WKLY FUCH, FOL-COT, 470.0-471.0 - GY SIL DYKE? WITH 2% PY |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 478.0 | | m | F | BX | GY | ANK | GCRB | | | | | 2 | | Tr | | AX42989 | 4.0 | c | .002 | - 474.0 - 496.6 - WELL FOL/SND GCRB, MN |
| 483.0 | | m | F | FOL | GY | ANK | GCRB | F | 50 | | | 1 | | Tr | | 90 | 5.0 | c | .001 | CHL BANDS, Tr STGS |
| 488.0 | | m | F | FOL | GY | ANK | GCRB | | | | | 1 | | Tr | | 91 | 5.0 | c | .002 | |
| 493.0 | | S | F | FOL | GY | ANK | GCRB | F | 50 | | | 2 | | Tr | | 92 | 5.0 | c | .002 | |
| 496.6 | | S | F | FOL | GY | ANK | GCRB | | | | | 2 | | Tr | | 93 | 3.6 | c | .002 | - MN LIM STAINING |
| 499.3 | | m | F | BX | GG | ANK | GCRB | | | | | 2 | | 1 | | 42994 | 2.7 | c | .009 | - BX-COT, Tr FUCH |
| 502.3 | | m | F | BX | GG | ANK | | | | | | 2 | | Tr | | 42995 | 3.0 | c | .001 | - Tr FUCH |
| 504.7 | | m | F | MBX | GN | FU | FCRB | | | | | 2 | | Tr | | 42996 | 2.4 | c | .002 | - 502.3 - 548.0 - FUCH CARB, GREEN, MBX-BX, 1% QZ STGS, Tr-1% F-m GPY |
| 505.7 | | m | F | MBX | GN | SIL | MD | | | | | 2 | | 2 | | 42997 | 1.0 | c | .065 | - FEL? DYKE, VF-FG, MBX-BX, VF-FG PY, SHARP CONTACTS |
| 509.0 | | m | F | BX | GN | FU | FCRB | | | | | 2 | | Tr | | 42998 | 3.3 | c | .011 | |
| 513.0 | | m | F | BX | GN | FU | FCRB | | | | | 2 | | Tr | | 42999 | 4.0 | c | .005 | |
| 518.0 | | m | F | BX | GN | FU | FCRB | | | | | 2 | | 1 | | 43000 | 5.0 | c | .018 | |
| 523.0 | | m | F | MBX | GN | FU | FCRB | | | | | 3 | | 1 | | 43251 | 5.0 | c | .008 | |
| 528.0 | | m | F | BX | GN | FU | FCRB | V | 45 | | | 4 | | 1 | | 43252 | 5.0 | c | .013 | |
| 533.0 | | m | F | MBX | GN | FU | FCRB | | | | | 1 | | Tr | | 43253 | 5.0 | c | .009 | - Tr CPY IN GREY QZ STG |
| 538.0 | | m | F | MBX | GN | FU | FCRB | | | | | 2 | | Tr | | 43254 | 5.0 | c | .012 | |
| 543.0 | | m | F | MBX | GN | FU | FCRB | | | | | 2 | | MN | | 43255 | 5.0 | c | .008 | |
| 548.0 | | m | F | MBX | GN | FU | FCRB | V | 35 | | | 4 | | MN | | 43256 | 5.0 | c | .006 | |
| 552.0 | | m | F | BX | GG | FU | GCRB | | | | | 3 | | Tr | | 43257 | 4.0 | c | .001 | - MOD WRLY FUCH |
| 556.0 | | m | F | COT | GG | ANK | GCRB | | | | | 2 | | Tr | | 43258 | 4.0 | c | .005 | - Tr FUCH |

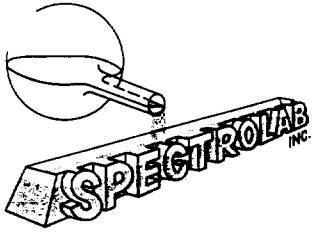
570.5-589.0
 $\frac{.133}{18.5}$

DRILL HOLE NO: RP-97-5

PAGE 7 OF 8

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|----|----------|----------|-----|--------------------|----------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | | |
| 560.0 | | M | F | FOL | GG | ANK | GCRB | | F | 20 | | | 1 | | Tr | | AX 43259 | 4.0 | c | .001 | - 0.5' BROKEN CORE, RQD = 70% |
| 564.0 | | M | F | FOL | GG | ANK | GCRB | | | | | | 25 | | MN | | 43260 | 4.0 | c | .001 | - 1.5' QZ/ANK VLET // CA, 1.0' BLOCKY CORE, MIN LIM STAINING |
| 568.0 | | M | F | BX | GG | ANK | GCRB | | | | | | 2 | | Tr | | 43261 | 4.0 | c | .006 | |
| 570.5 | | M | F | BX | GG | FU | GCRB | | | | | | 3 | | 1 | | 43262 | 2.5 | c | .048 | - Tr - WKLY FUCH, BX - COT |
| 574.0 | | M | F | MBX | GY | SIL | QTZ | BCRB | | | | | 80 | | 3 | | 43263 | 3.5 | c | .174 | - 570.5-589.0 - SIL BCRB, APPROX 80% QZ |
| 577.0 | | M | F | MBX | BN | SIL | QTZ | BCRB | V | 30 | | | 70 | | 3 | | 43264 | 3.0 | c | .077 | MBX WITH FOL PATCHES, Tr FUCH AT TOP, |
| 580.0 | | M | F | MBX | BN | SIL | QTZ | BCRB | | | | | 80 | | 3 | | 43265 | 3.0 | c | .183 | VF-FG DISSEM + SMSV PY IN FRAC/STWK |
| 583.0 | | M | F | MBX | GY | SIL | QTZ | BCRB | | | | | 85 | | 2 | | 43266 | 3.0 | c | .063 | - 575.6-576.6 - QZ VENT, RARE PY |
| 586.0 | | M | F | MBX | BN | SIL | QTZ | BCRB | | | | | 80 | | 1 | | 43267 | 3.0 | c | .160 | |
| 589.0 | | M | F | BX | BN | SIL | QTZ | BCRB | | | | | 70 | | 2 | | 43268 | 3.0 | c | .134 | - MORE BX, BLOCKY/GROUND CORE AT END, RQD = 70% |
| 592.0 | | M | F | FOL | GG | ANK | GCRB | | | | | | 1 | | MN | | 43269 | 3.0 | c | .006 | - BLOCKY CORE AT TOP, RQD = 50%, APPROX 1.0' LOST CORE |
| 595.0 | | M | F | FOL | GG | ANK | GCRB | | F | 40 | | | 1 | | 1 | | 43270 | 3.0 | c | .008 | |
| 598.5 | | M | F | FOL | GG | ANK | GCRB | | | | | | 1 | | 2 | | 43271 | 3.5 | c | .007 | - FOL - BX, F.M.G PY |
| 601.0 | | M | F | FOL | GY | SIL | GCRB | | | | | | 2 | | 2 | | 43272 | 2.5 | c | .001 | - FINER GRAINED THAN ABOVE, FOL - BX |
| 604.0 | | M | F | BX | GY | SIL | GCRB | | | | | | 1 | | 2 | | 43273 | 3.0 | c | .001 | |
| 607.0 | | M | F | FOL | GY | SIL | GCRB | | | | | | 2 | | 3 | | 43274 | 3.0 | c | .001 | |
| 609.3 | | M | F | FOL | GY | SIL | GCRB | | | | | | 3 | | 2 | | 43275 | 2.3 | c | .001 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|----|----------|---------|-----|--------------------|----------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | VG | | | | | | |
| 611.3 | | S | F | FOL | GY | GRA | ARG | | F | 60 | | | 3 | | 2 | VG | AX43276 | 2.0 | C | 0.066 | - 1 (POSS 2) POINTS VG IN FRAC, IRR QZ/ ANK VLETS, F-CG SUB-EH PY, Tr CPY IN VLETS |
| 613.3 | | S | F | FOL | BK | GRA | GQS | | | | | | 20 | | 2 | VG | 43277 | 2.0 | C | 0.030 | - 1 SPECK VG WITH PY ON EDGE OF 2" QZ/ ANK VLET, VLETS < 2" WIDE APPROX // FOL, Tr CPY IN STGS |
| 616.0 | | S | F | FOL | BK | GRA | ARG | | F | 60 | | | 3 | | 2 | | 43278 | 2.7 | C | 0.002 | - IRR VLETS/STGS // FOL, BROKEN CORE AT END OF SAMPLE |
| 619.0 | | - | - | - | - | - | LC | | | | | | | | | | | 3.0 | | | ≈ 3.0' LOST CORE? |
| 622.0 | | S | F | FOL | BK | GRA | ARG | | F | 75 | | | 2 | | 2 | | 43279 | 3.0 | C | 0.001 | - RQD = 50%, Tr CPY IN STGS |
| 627.0 | | SS | F | FOL | BK | GRA | ARG | | F | 70 | | | 1 | | 1 | | 43280 | 5.0 | C | 0.001 | - RQD = 15%, F-CG PY |
| 632.0 | | SS | F | FOL | GY | GRA | ARG | | | | | | 5 | | 1 | | 43281 | 5.0 | C | 0.001 | - RQD = 40%, 3" VLET |
| 636.0 | | S | F | FOL | BK | GRA | GQS | | F | 60 | | | 25 | | Tr | | 43282 | 4.0 | C | 0.001 | - RQD = 50%, 0.6' VEIN, VLETS < 2" WIDE |
| 639.0 | | SS | F | FOL | BK | GRA | ARG | | | | | | 10 | | 1 | | 43283 | 3.0 | C | 0.001 | - RQD = 25%, VLETS < 2" WIDE |
| 644.0 | | SS | F | FOL | BK | GRA | ARG | | F | 70 | | | 2 | | Tr | | 43284 | 5.0 | C | 0.001 | - RQD = 30% |
| 648.0 | | S | F | FOL | GY | GRA | ARG | | | | | | 2 | | Tr | | 43285 | 4.0 | C | 0.001 | - RQD = 70% |
| 648.0 | | | | | | | | | | | | | | | | | | | | | - GOH. |



SPECTROLAB INC.

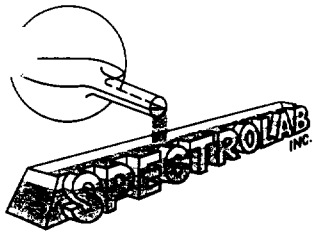
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1352-A DATE: 12/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1502
Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42933 | 0.001 | |
| AX42934 | 0.001 | |
| AX42935 | 0.015 | |
| AX42936 | 0.002 | |
| AX42937 | 0.001 | |
| AX42938 | 0.027 | |
| AX42939 | 0.004 | |
| AX42940 | 0.002 | |
| AX42941 | 0.001 | |
| AX42942 | 0.001 | 0.001 |
| AX42943 | 0.001 | |
| AX42944 | 0.001 | |
| AX42945 | 0.001 | |
| AX42946 | 0.001 | |
| AX42947 | 0.001 | |
| AX42948 | 0.001 | |
| AX42949 | 0.001 | |
| AX42950 | 0.001 | |
| AX42951 | 0.001 | |
| AX42952 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BS



SPECTROLAB INC.

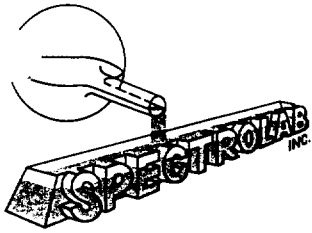
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1352-B DATE: 12/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ret. 1602
27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42953 | 0.001 | |
| AX42954 | 0.001 | |
| AX42955 | 0.001 | |
| AX42956 | 0.001 | |
| AX42957 | 0.001 | |
| AX42958 | 0.001 | |
| AX42959 | 0.001 | |
| AX42960 | 0.001 | |
| AX42961 | 0.001 | |
| AX42962 | 0.002 | 0.003 |
| AX42963 | 0.001 | |
| AX42964 | 0.001 | |
| AX42965 | 0.001 | |
| AX42966 | 0.001 | |
| AX42967 | 0.001 | |
| AX42968 | 0.001 | |
| AX42969 | 0.001 | |
| AX42970 | 0.001 | |
| AX42971 | 0.001 | |
| AX42972 | 0.001 | 0.001 |

ANALYSTE: Mira Godelout BSc.



SPECTROLAB INC.

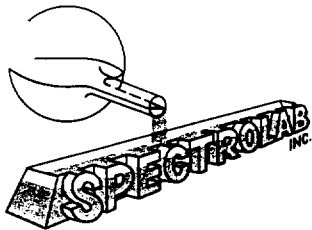
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1352-C DATE: 12/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1502
Éléments: Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42973 | 0.002 | |
| AX42974 | 0.001 | |
| AX42975 | 0.001 | |
| AX42976 | 0.001 | |
| AX42977 | 0.001 | |
| AX42978 | 0.001 | |
| AX42979 | 0.010 | |
| AX42980 | 0.005 | |
| AX42981 | 0.015 | |
| AX42982 | 0.013 | 0.019 |
| AX42983 | 0.013 | |
| AX42984 | 0.008 | |
| AX42985 | 0.038 | |
| AX42986 | 0.005 | |
| AX42987 | 0.022 | |
| AX42988 | 0.014 | |
| AX42989 | 0.002 | |
| AX42990 | 0.001 | |
| AX42991 | 0.002 | |
| AX42992 | 0.002 | 0.002 |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

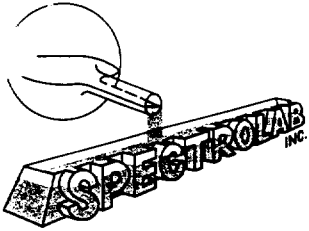
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1352-D DATE: 12/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX42993 | 0.002 | |
| AX42994 | 0.009 | |
| AX42995 | 0.001 | |
| AX42996 | 0.002 | |
| AX42997 | 0.065 | |
| AX42998 | 0.011 | |
| AX42999 | 0.005 | |
| AX43000 | 0.018 | |
| AX43251 | 0.008 | |
| AX43252 | 0.013 | 0.012 |
| AX43253 | 0.009 | |
| AX43254 | 0.012 | |
| AX43255 | 0.008 | |
| AX43256 | 0.006 | |
| AX43257 | 0.001 | |
| AX43258 | 0.005 | |
| AX43259 | 0.001 | |
| AX43260 | 0.001 | |
| AX43261 | 0.006 | |
| AX43262 | 0.044 | 0.052 |

ANALYSTE: Mira Gorbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

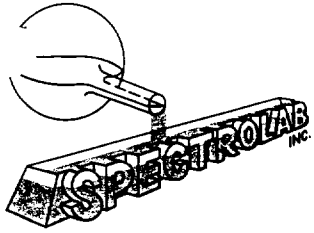
CERTIFICAT D'ANALYSES N°: IG-1352-E DATE: 12/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|-----------|--------------|------------------|
| AX43263 | 0.174 | |
| AX43264 | 0.077 | |
| AX43265 | 0.183 | |
| AX43266 | 0.063 | |
| AX43267 | 0.160 | |
| AX43268 | 0.134 | |
| AX43269 | 0.006 | |
| AX43270 | 0.008 | |
| AX43271 | 0.007 | |
| AX43272 | 0.001 | 0.001 |
| AX43273 | 0.001 | |
| AX43274 | 0.001 | |
| AX43275 | 0.001 | |
| AX43276** | 0.066 | |
| AX43277** | 0.030 | |
| AX43278 | 0.002 | |
| AX43279 | 0.001 | |
| AX43280 | 0.001 | |
| AX43281 | 0.001 | |
| AX43282 | 0.001 | 0.001 |

**VISIBLE GOLD

ANALYSTE: Mira Godbout Bx



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1352-F DATE: 12/03/97

Client: ROYAL OAK MINES LTD. Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 3 Date reçu: Ref. 1602
27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton |
|---------|--------------|
| AX43283 | 0.001 |
| AX43284 | 0.001 |
| AX43285 | 0.001 |

ANALYSTE: Mira Godbout B.Sc.



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK
RAMP ZONE

LOGGED BY: R. MAASS

DATE LOGGED: FEB 17/97 DRILL HOLE NO: RP-97-6

Surface Grid: NORTHING 904.55 EASTING 3896.83 ELEVATION 10925.35 LENGTH 850.0' SECTION 3900E LEVEL

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 60 | | | | | | | | | | | | |
| 200 | 003 | 56 | | | | | | | | | | | | |
| 400 | 005 | 52 | | | | | | | | | | | | |
| 600 | 010 | 52 | | | | | | | | | | | | |
| 850 | 010 | 50 | | | | | | | | | | | | |

START DATE: FEB 12 1997

FINISH DATE: FEB 15 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: .029/4.6 @ 780-826
.072/9.0 @ 556.3-565.3 incl. 111/4.2 @ 561.1-565.3
.156/25.0 @ 610-635.0 incl. 177/14.3 @ 610-624.3
.124/22.1 @ 645.9-668.0

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 71.0' ; pulled

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

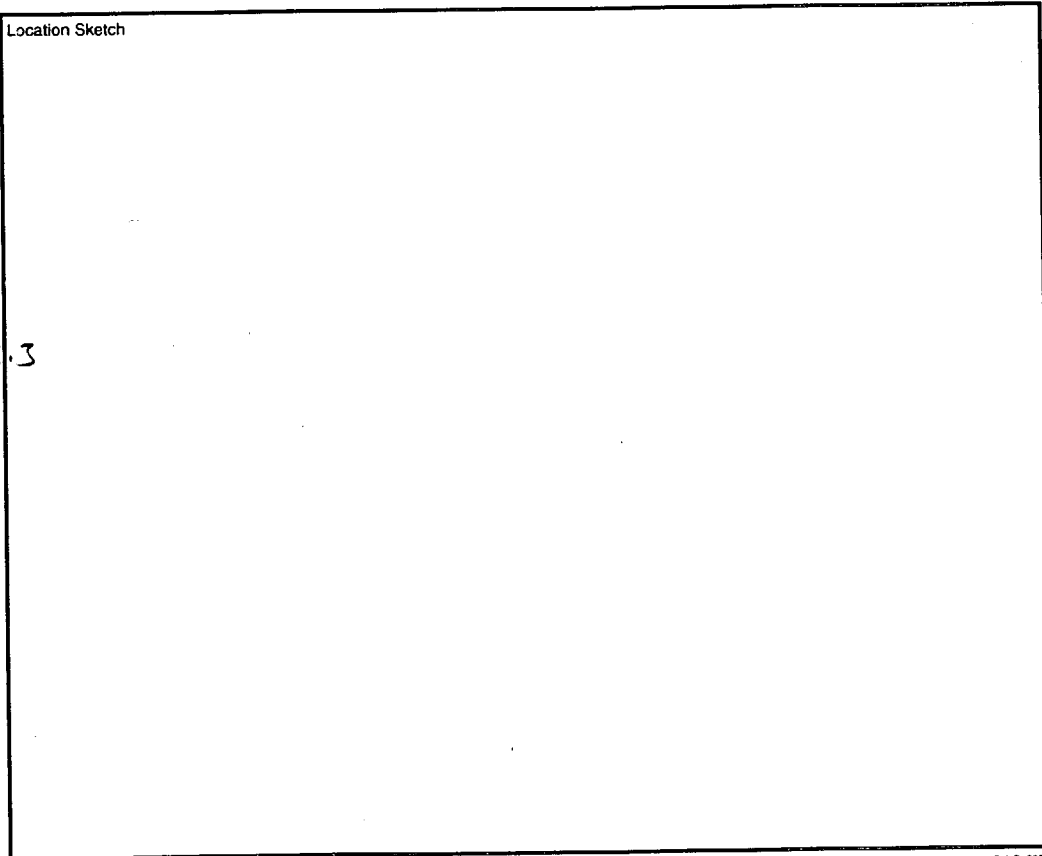
NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch



ft
 m

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | | METALLIC | | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|-----|----|----------|---------|------|----------|-------|---|--|----------|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | PO | AS | | | | | | |
| 71.0 | | | | | | | CAS | | | | | | | | | | | | | | (0-71.0) OVERBURDEN | |
| 75.0 | | M | F | MSV | GY | BLZ | BAS | | | | | .1 | .1 | - | - | AX38001 | 4.0 | c | .001 | | (71.0-88.9) BASALT - GY, F.G. | |
| 77.0 | | | | | | | | | | | | .1 | .1 | - | - | 002 | 2.0 | c | .001 | | MSV WITH 1% F. PY. FROM 78-82.6 | |
| 78.0 | | | | | | | LC | | | | | | | | | | | | | | | |
| 79.2 | | B | F | MSV | GY | BLZ | BAS | | | | | .1 | .05 | - | - | 003 | 1.2 | c | .027 | | | |
| 82.6 | | M | | | | | | | | | | .1 | 1.0 | - | - | 004 | 3.4 | c | .029 | | | |
| 84.8 | | B | F | FOL | GY | TLC | YMF | F 70 | | | | .1 | 0.5 | - | - | 005 | 2.2 | c | .002 | | (82.6-114.1) ULTRAMAFICS - DK. GY. | |
| 88.9 | | B | | | | | | | | | | 20 | .1 | - | - | 006 | 4.1 | c | .002 | | TALC/CHLORITE RICH, F.G., WEN | |
| 114.1 | | M | | | | | | | | | | .1 | .1 | - | - | 007 | 35.2 | G | .001 | | FOLIATED, SOFT + EASY TO SCRATCH WITH A KNIFE | |
| | | | | | | | | | | | | | | | | | | | | | 84.8-88.9 20% WH. QZ/ANK VEINING | |
| 119.1 | | M | F | MSV | GY | BLZ | BAS | | | | | .1 | 1.0 | - | - | 008 | 5.0 | c | .001 | | (114.1-124.5) BASALT - GY, F.G. | |
| 122.1 | | | | | | | | | | | | .1 | | - | - | 009 | 3.0 | c | .001 | | MSV, 1/4" WH. QZ/ANK STRGS. | |
| 124.5 | | | | | | | | | | | | .1 | | - | - | 010 | 2.4 | c | .001 | | 1% F. DIS. PY. | |
| 129.5 | | M | F | MSV | GY | TLC | YMF | | | | | .1 | .1 | - | - | 011 | 5.0 | c | .001 | | (124.5-138.6) ULTRAMAFICS - DK. GY. | |
| 134.5 | | | | | | | | | | | | .1 | | - | - | 012 | 5.0 | c | .001 | | TALC/CL. RICH, F.G., CONTORTED | |
| 138.6 | | | | | | | | | | | | .1 | | - | - | 013 | 4.1 | c | .001 | | FOLIATION, NUMEROUS WH. QZ/ANK STRGS. AND VEINS, MNR. F. PY. | |
| 142.2 | | M | F | POR | GY | SIL | QEP | | | | | .1 | .5 | - | - | 014 | 3.6 | c | .001 | | (138.6-144.8) QEP/DYKE - GY, F.G., WITH | |
| 144.8 | | | | | | | | | | | | .1 | .5 | - | - | 015 | 2.6 | c | .001 | | WH. ANK. PHENOS., F. CUBIC PY. MSU. AND NON-FOL. 1/4" - 1/2" WH. QZ/ANK STRGS. | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | | METALLIC | | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|-----|----|----------|-----|---------|----------|-------|---|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | Po | As | | | | | | |
| 146.8 | | M | F | MSV | GY | CHL | | CCRB | | | | | .1 | .1 | - | - | AX38016 | 2.0 | c | .001 | (146.8-179.6) GREY ANK. ALTERED | |
| 177.6 | | | | | | | | | | | | | 5 | .1 | - | - | 017 | 30.8 | G | .001 | ULTRAMAFICS, WH. QZ/ANK | |
| 179.6 | | | | | | | | | | | | | 5 | .5 | - | - | 018 | 2.0 | c | .001 | STRGS AND VEINLETS, STRONG ANK.; CHLORITIC | |
| | | | | | | | | | | | | | | | | | | | | | (179.6-200.8) BROWN CARB. ROCK | |
| | | | | | | | | | | | | | | | | | | | | | - TAN COLOR, HARD + SILICEOUS, | |
| | | | | | | | | | | | | | | | | | | | | | - CHL. FILLED FRACT., | |
| | | | | | | | | | | | | | | | | | | | | | - CUT BY NUMEROUS WH. QZ/ANK | |
| | | | | | | | | | | | | | | | | | | | | | STRGS. AND VEINS | |
| 181.7 | | M | F | ROM | WH | SIL | | QV | V | 80 | | 90 | .1 | - | - | 019 | 2.1 | c | .010 | 179.6-181.7 WH. QZ/ANK VEIN | | |
| 183.7 | | M | F | MSV | BN | ANK | | BCRB | | | | 10 | .1 | - | - | 020 | 2.0 | c | .001 | - CHL. FILLED FRACT. | | |
| 186.7 | | | | | | | | | | | | 10 | .1 | - | - | 021 | 3.0 | c | .001 | 186.7-188.7 WH. QZ/ANK FLOODING | | |
| 188.7 | | | | | | | | | | | | 50 | .1 | - | - | 022 | 2.0 | c | .001 | 197.5-198.3 CHL. CARB. | | |
| 191.8 | | | | | | | | | | | | 10 | .1 | - | - | 023 | 3.1 | c | .001 | | | |
| 195.8 | | | | | | | | | | | | 10 | .1 | - | - | 024 | 4.0 | c | .001 | | | |
| 200.8 | | | | | | | | | | | | 20 | .1 | - | - | 025 | 5.0 | c | .001 | | | |
| 235.2 | | M | F | MSV | GY | CHL | | CCRB | | | | 5 | .1 | - | - | 026 | 34.4 | G | .001 | (200.8-237.2) CHL. ANK. ALT. | | |
| 237.2 | | I | I | I | I | I | | | | | | 20 | .5 | - | - | 027 | 2.0 | c | .001 | ULTRAMAFICS, NUMEROUS CONTACTED WH. QZ/ANK STRGS AND VEINLETS | | |
| | | | | | | | | | | | | | | | | | | | | | GN. TALL SECTIONS, MNR. F. PY. | |
| 239.2 | | M | F | MSV | GY | CHL | | CCRB | | | | | | | | 028 | 2.0 | c | .001 | (237.2-239.2) WH. QZ/ANK VEIN | | |
| | | | | | | | | | | | | | | | | | | | | | - CHL. FILLED FRACT. | |
| 240.8 | | M | F | MSV | GY | CHL | | CCRB | | | | 5 | 2.0 | - | - | 029 | 1.6 | c | .006 | (239.2-240.8) CHL. /SER ALT. UMF | | |
| | | | | | | | | | | | | | | | | | | | | | - 2% F. DIS. PY. | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | | METALLIC | | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----|----------|----|---------|----------|-------|------|-------------------------------------|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | Py | Ps | As | | | | | | |
| 243.4 | | M | F | MSV | GY | CHL | | CCRB | | | | | 10 | .1 | - | - | AX38030 | 2.6 | c | .001 | (240.8-272.5) CHL./ANK. ALT. | |
| 248.0 | | | | | | | | | | | | | 10 | .5 | - | - | 031 | 4.6 | c | .002 | ULTRAMAFICS, NUMEROUS | |
| 252.2 | | | | | | | | | | | | | 5 | .1 | - | - | 032 | 4.2 | c | .001 | WH. QTZ/ANK STRGS. AND | |
| 254.2 | | | | | | | | | | | | | 2 | .1 | - | - | 033 | 2.0 | c | .001 | VEINS, F. DIS. PY. + CUBIC PY. | |
| 258.0 | | | | | | | | | | | | | 50 | .1 | - | - | 034 | 3.8 | c | .004 | (243.4-248.0) F. + C. DIS. PY. | |
| 263.0 | | | | | | | | | | | | | 50 | .1 | - | - | 035 | 5.0 | c | .006 | INFILING FRACTURES | |
| 268.0 | | | | | | | | | | | | | 30 | .1 | - | - | 036 | 5.0 | c | .002 | (254.2-268.0) WH. QZ/ANK FLOODING | |
| 272.5 | | | | | | | | | | | | | 10 | .1 | - | - | 037 | 4.5 | c | .001 | MNR. F. DIS. PY. | |
| 277.5 | | M | F | MSV | GY | TLC | | YMF | | | | | .1 | .1 | - | - | AX38038 | 5.0 | c | .002 | (272.5-474.0) ULTRAMAFICS | |
| 328.0 | | | | | | | | | | | | | .1 | .1 | - | - | 039 | 50.5 | G | .001 | - DK. GY, TALC/CHL RICH, SOFT | |
| 361.0 | | | | | | | | | | | | | .1 | .1 | - | - | 040 | 33.0 | G | .001 | + EASILY SCRATCHED WITH KNIFE, | |
| 363.0 | | M | F | MSV | GY | TLC | | YMF | | | | | .1 | .1 | - | - | 041 | 2.0 | c | .001 | - LT. GN. TALC SECTIONS, MNR | |
| 368.0 | | | | | | | | | | | | | 50 | .1 | - | - | 042 | 5.0 | c | .001 | WH. QZ/ANK STRGS. | |
| 371.0 | | | | | | | | | | | | | 50 | .1 | - | - | 043 | 3.0 | c | .001 | (363-371) WH. LOW ANGLE QZ/ANK | |
| 373.0 | | | | | | | | | | | | | .1 | .1 | - | - | 044 | 2.0 | c | .001 | VEIN, MNR. F. DIS. PY. | |
| 423.0 | | | | | | | | | | | | | .1 | .1 | - | - | 045 | 50.0 | G | .001 | | |
| 474.0 | | | | | | | | | | | | | .1 | .1 | - | - | 046 | 51.0 | G | .001 | | |
| 515.0 | | M | F | MSV | GY | ANK | | CCRB | | | | | .1 | .1 | - | - | 047 | 41.0 | G | .001 | (474.0-525.0) ANK. ALT. ULTRAMAFICS | |
| 520.0 | | | | | | | | | | | | | .1 | .1 | - | - | 048 | 5.0 | c | .004 | - GY COLOR, F. G., STRONG ANK. | |
| 525.0 | | | | | | | | | | | | | .1 | .1 | - | - | 049 | 5.0 | c | .001 | ALT., FINELY CRYSTALLINE TEXT., | |
| | | | | | | | | | | | | | | | | | | | | | HARD + NOT EASILY SCRATCHED | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | | METALLIC | | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|-----|----------|----|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | Qz | Px | Py | As | | | | | | |
| 527.0 | | M | F | MSV | GY | CHL | | CCRB | | | | | .5 | 1.0 | | | | AX38050 | 2.0 | c | .001 | (521-527) CAL. CARB. WITH F. DIS. PY., WH. QZ/ANK FRAGS. |
| 530.0 | | M | F | STK | GY | ANK | | GERB | | | | | 10 | .5 | - | - | | 051 | 3.0 | c | .016 | (527-546.7) GREY ANK. ALT. ULTRAMAFIC |
| 533.0 | | | | | | | | | | | | | 5 | .5 | - | - | | 052 | 3.0 | c | .010 | - WH. QZ/ANK STOCK WORK |
| 538.0 | | | | | | | | | | | | | 20 | .5 | - | - | | 053 | 5.0 | c | .035 | - F. DIS. PY., FRACT. INFILLED |
| 543.0 | | | | | | | | | | | | | 10 | .5 | - | - | | 054 | 5.0 | c | .018 | WITH CHL., TAN SER. AND GN. |
| 546.7 | | | | | | | | | | | | | 30 | .5 | - | - | | 055 | 3.7 | c | .051 | Fu. SECTIONS, HARD + SILIC. |
| 551.3 | | M | F | MSV | GN | Fu | | FCRB | | | | | 2 | .1 | - | - | | 056 | 4.6 | c | .003 | (546.7-551.3) GREEN Fu. CARB. - CHL. INFILLING FRACT., MNR WH. QZ/ANK VEINLETS |
| 556.3 | | M | F | FOL | BN | SER | | BCRB | F50 | | | | 10 | 5 | - | - | | 057 | 5.0 | c | .026 | (551.3-561.1) BROWN CARB |
| 561.1 | | | | | | | | | | | | | 5 | 5 | - | - | | 058 | 4.8 | c | .037 | - TAN SER. WISPS, CHL. INFILLED FRACT., F. DIS. PY., WH. QZ/ANK VEINLETS, SILICEOUS AND VERY HARD TO SCRATCH, WELL FOL. |
| 565.3 | | M | F | HOM | BN | SIL | | FEL | | | | | 70 | 10 | - | - | | 059 | 4.2 | c | .111 | (561.1-565.3) FELSITE DYKE - BUFF COLOR, HARD + SILIC., - 70-80% QZ, TN. SER., BK. CHL. AND F. DIS. PY. INFILLING FRACT. |

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | | | GANGUE | | | METALLIC | | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|-----------|--------|-----|----|--------|----|----|----------|----|----|----------|-------|---|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | Po | As | | | | | |
| 569.5 | | M | F | FOL | GN | Fm | | F | CRB | | | | 5 | .1 | - | - | AX38060 | 4.2 | C | .011 | (565.3-569.5) GREEN F4. CARB. - CHL. INFILL FRACT., WH. QZ/ANK VEINLETS CROSS CUT FOL., MNR. F. DIS. PY. |
| 571.5 | | M | F | FOL | GY | ANK | | G | CRB | F | SO | | .1 | .1 | - | - | AX38061 | 2.0 | C | .014 | (569.5-592.5) GY. CARB. |
| 573.0 | | | | | | | | | | | | | | | | | 062 | 1.5 | C | .004 | - WELL FOL., CHL. INFILLED |
| 578.0 | | | | | | | | | | | | | | | | | 063 | 5.0 | C | .004 | FRACT., MNR. F. DIS. PY., MNR |
| 583.0 | | | | | | | | | | | | | | | | | 064 | 5.0 | C | .005 | WH. QZ/ANK STRINGERS |
| 588.0 | | | | | | | | | | | | | | | | | 065 | 5.0 | C | .004 | |
| 590.5 | | | | | | | | | | | | | | | | | 066 | 2.5 | C | .002 | |
| 592.5 | | | | | | | | | | | | | | | | | 067 | 1.5 | C | .006 | |
| 593.6 | | M | F | HON | WH | SIL | | | | | | 90 | .1 | - | - | | 068 | 1.1 | C | .002 | (592.5-593.6) WH. QZ/ANK VEIN - CHL. FRAGS., NO VIS. SULPHIDES |
| 595.6 | | M | F | MSV | GG | CHL | | | | | | 2 | .1 | - | - | | 069 | 2.0 | C | .009 | (593.6-600.8) CHL. CARB. |
| 600.8 | | | | | | | | | | | | 2 | .1 | - | - | | 070 | 5.2 | C | .015 | - DK GY./BN COLOR WITH WH. QZ/ANK STOCK WORK, MNR F. DIS. PY. |
| 605.0 | | M | F | MSV | GN | Fm | | | | | | 2 | .1 | - | - | | 071 | 4.2 | C | .010 | (600.8-610) GREEN F4. CARB |
| 610.0 | | | | | | | | | | | | 2 | .1 | - | - | | 072 | 5.0 | C | .002 | - MSV WITH MNR WH. QZ/ANK VLNES. |
| 615.0 | | M | F | HON | BN | SIL | BCRB | QZ | | | | 80 | 5 | - | - | | 073 | 5.0 | C | .188 | (610-621.3) BROWN CARB. |
| 619.0 | | | | | | | | | | | | 80 | 3 | - | - | | 074 | 4.0 | C | .227 | - HARD, SILIC. WITH TAN SER., CHL. |
| 621.3 | | | | | | | | | | | | 90 | 1 | - | - | | 075 | 2.3 | C | .091 | INFILL. FRACT., F. DIS. PY., MSV |

610.0-635

DRILL HOLE NO. RP-97-6

PAGE 7 OF 10

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | | METALLIC | | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----|----------|----|--|----------|-------|---|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | Qz | Px | Po | As | | | | | | |
| 624.3 | | M | F | MSV | BN | SER | | BCRB | | | | | 10 | | 2 | | | AX38076 | 3.0 | C | .158 | (621.3-624.3) BROWN CARB - TAN SER. WISPS, GN. Fy, CHL. INFILL. FRACT., 29% F. DIS. PY., LESS SILIC. THAN PREVIOUS SECTIONS |
| 625.3 | | M | F | HOM | WH | SIL | | FEL | | | | | 90 | | 1 | | | AX38077 | 1.0 | C | .023 | (624.3-625.3) FELSITE DYKE - HARD, EXTREMELY SILIC., FRACT. WITH GN. Fy, CHL. INFILLING MNR F. DIS. PY. |
| 628.0 | | M | F | MSV | BN | SIL | | QTZ | | | | | 80 | | 2 | | | AX38078 | 2.7 | C | .1260 | (625.3-630.4). BROWN CARB |
| 630.4 | | | | | | | | | | | | | 80 | | 2 | | | 079 | 2.4 | C | .057 | TN. SER. WISPS, HARD + SILIC. F. DIS. PY. |
| 635 | | M | F | MSV | BN | SER | | BCRB | | | | | 10 | | 1 | | | 080 | 4.6 | C | .107 | (630.4-635) AS ABOVE - WITH BK. CHL., TN. SER., GN. Fy. INFILL. FRACT., F. DIS. PY. |
| 637.7 | | M | F | MSV | GN | Fy | | FCRB | | | | | .1 | | .1 | | | 081 | 2.7 | C | .004 | (635-637.7) GREEN Fy. CARB. - MNR WH. QZ/ANK STRGS AND PY. |
| 640.2 | | M | F | FOL | BN | SER | | BCRB | | | | | 2 | | .1 | | | 082 | 2.5 | C | .001 | (637.7-643.2) BROWN CARB. |
| 643.2 | | | | | | | | | | | | | 2 | | .1 | | | 083 | 3.0 | C | .001 | - TAN SER. WISPS, MNR WH. QZ/ANK STRGS., MNR F. PY. |
| 645.9 | | M | F | MSV | GN | Fy | | FCRB | | | | | .1 | | .1 | | | 084 | 2.7 | C | .008 | (643.2-645.9) GREEN Fy. CARB - MNR QZ STRGS. AND PY. |

645.9-668.0

DRILL HOLE NO: RP-97-6

PAGE 8 OF 10

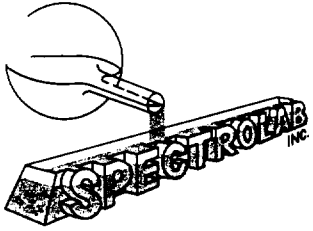
| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|-----|----------|----------|-----|--------------------|----------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | | | | | | | |
| 64.8 | | M | F | FOL | BN | SER | | BCRB | F | 50 | | | 10 | | 2 | | AX38.085 | 2.1 | c | .197 | (645.9-651.6) BROWN CARB. |
| 651.6 | | | | | | | | | | | | | 5 | | 2 | | 086 | 3.6 | c | .109 | - WELL FOL., BK. CHL., TN. SER. WISPS, HARD + SILIC. - F. DIS. PY. |
| 654.8 | | M | F | MSV | GN | Fu | | FCRB | | | | | .1 | | .1 | | 087 | 3.2 | c | .002 | (651.6-654.8) GREEN Fu. CARB - MSV, F.G., MNR WH. QZ. STRGS. |
| 658.2 | | M | F | HM | WH | SIL | | QV | | | | | 90 | | .1 | | 088 | 3.4 | c | .076 | (654.8-658.2) WH. QZ/ANK VEIN - 90% QZ, BK. CHL., GN. Fu. INFL. FRACTURES, MNR F. DIS. PY. |
| 663.0 | | M | F | FOL | BN | SER | | BCRB | | | | | 10 | | 1 | | 089 | 4.6 | c | .181 | (658.2-676.9) BROWN CARB. |
| 668.0 | | | | | | | | | | | | | 5 | | 2 | | 090 | 5.0 | c | .161 | - TAN SER. WISPS, BK CHL. INFILL. |
| 673.0 | | | | | | | | | | | | | 10 | | 1 | | 091 | 5.0 | c | .004 | FRACT., HARD + SILIC., WELL FOL |
| 676.9 | | | | | | | | | | | | | 10 | | 1 | | 092 | 3.9 | c | .005 | SECTIONS, F. DIS. PY. |
| 680.0 | | M | F | MSV | GY | CHL | | CCRB | | | | | 5 | | .1 | | 093 | 3.1 | c | .002 | (676.9-680) CHLORITIC CARB - OK. GY., CHL., WITH NARROW BN. CARB SECTIONS, SOFT + EASY TO SCRATCH WITH KNIFE |
| 685 | | M | F | POR | GY | SIL | | FP | | | | | | | 1.0 | | 094 | 5.0 | c | .002 | (680-701.7) QFP DYKE |
| 690 | | | | | | | | | | | | | | | | | 095 | 5.0 | c | .001 | - GY TO GY/BN COLOR, HARD, |
| 695 | | | | | | | | | | | | | | | | | 096 | 5.0 | c | .001 | SILIC. AND NOT EASY TO SCRATCH, |
| 700 | | | | | | | | | | | | | | | | | 097 | 5.0 | c | .001 | - WH. FELDSPAR PHENOS |
| 701.7 | | | | | | | | | | | | | | | | | 098 | 1.7 | c | .001 | - F. TO C. DIS. PY. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|-------|-----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 705.0 | | M | F | FOL | BN | SIL | | BCRB | F | 20 | | | 2 | .1 | | AX38099 | 3.3 | c | .001 | (701.7-709.8) BN. CARB. |
| 709.8 | | | | | | | | | | | | | 2 | .1 | | 100 | 4.8 | c | .002 | - F.G., FOL., HARD + SILIC. - MNR. F. DIS. PY. + WH. QZ/ANK VEINLETS |
| 713 | | M | F | BEDGY | BLZ | | | ARG | R | 40 | | | .1 | .1 | | AX38101 | 3.2 | c | .002 | (709.8-807.7) ARGILLITE |
| 718 | | | | | | | | | | | | | .1 | .1 | | 102 | 5.0 | c | .003 | - DK. GY. CHLORITIC, WELL |
| 723 | | B | | | | | | | | | | | 5 | .5 | | 103 | | c | .007 | BEDDED SEDIMENTS, F.G., |
| 728 | | M | | | | | | | | | | | 30 | .5 | | 104 | | c | .001 | WELL BEDDED, COARSE CUBIC |
| 733 | | | | | | | | | | | | | 20 | .5 | | 105 | | c | .001 | PY., SECTIONS WITH WH. QZ/ |
| 738 | | | | | | | | | | | | | .1 | .1 | | 106 | | c | .001 | ANK VEINING, SOFT AND EASILY |
| 743 | | | | | | | | | | | | | | | | 107 | | c | .006 | SCRATCHED WITH A KNIFE |
| 748 | | | | | | | | | | | | | | | | 108 | | c | .001 | (718-733) 1/4" - 3" WH. QZ/ANK |
| 753 | | | | | | | | | | | | | | | | 109 | | c | .001 | VEINS, C. CUBIC PY. IN ARGILL. W.R. |
| 758 | | | | | | | | | | | | | | | | 110 | | c | .001 | (763-773) 1/4" - 2" WH. QZ/ANK |
| 763 | | | | | | | | | | | | | | | | 111 | | c | .001 | VEINS, C. CUBIC PY. IN WR. |
| 768 | | | | | | | | | | | | | | | | 112 | | c | .004 | |
| 773 | | | | | | | | | | | | | 20 | .5 | | 113 | | c | .001 | |
| 778 | | | | | | | | | | | | | .1 | .1 | | 114 | | c | .001 | |
| 783 | | | | | | | | | | | | | | | | 115 | | c | .001 | |
| 788 | | | | | | | | | | | | | | | | 116 | | c | .001 | |
| 793 | | | | | | | | | | | | | | | | 117 | | c | .001 | |
| 798 | | | | | | | | | | | | | | | | 118 | | c | .001 | |
| 803 | | | | | | | | | | | | | | | | 119 | | c | .001 | |
| 808 | | | | | | | | | | | | | | | | 120 | | c | .001 | |

DRILL HOLE NO: RP-97-6

PAGE 10 OF 10

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|------|--------------------------------------|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 813 | | M | F | MSV | GY | BLZ | | ARG | F | 40 | | | .1 | .1 | | AX38.121 | 5.0 | .001 | (807.7-839.3) SER. SEDIMENTS | |
| 818 | | | | | | | | | | | | | | | | 122 | 5.0 | .001 | - LT. GY., F.G., MSU WITH MNR | |
| 823 | | | | | | | | | | | | | | | | 123 | 5.0 | .002 | WH. QZ / ANK STRGS., MNR F. | |
| 828 | | | | | | | | | | | | | | | | 124 | 5.0 | .001 | CUBIC PY., NARROW CHL. | |
| 833 | | | | | | | | | | | | | | | | 125 | 5.0 | .001 | ARGILLITE BEDS, WK. FOL. | |
| 838 | | | | | | | | | | | | | | | | 126 | 5.0 | .001 | (839.3-850) ARGILLITE | |
| 843 | | M | F | BED | GY | BLZ | | ARG | B | 40 | | | | | | 127 | 5.0 | .001 | - DK. GY. CHL. SEDIMENTS | |
| 848 | | | | | | | | | | | | | | | | 128 | 5.0 | .001 | - F.G., WELL-BEDDED, MNR | |
| 850 | | | | | | | | | | | | | | | | 129 | 5.0 | .001 | WH. QZ / ANK STRGS., C. CUBIC PY. | |
| 850 | | | | | | | | | | | | | | | | | | | EOH = 850' | |



SPECTROLAB INC.

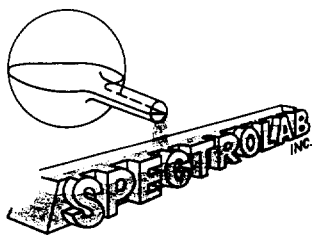
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1359-A DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38001 | 0.001 | |
| AX38002 | 0.001 | |
| AX38003 | 0.027 | |
| AX38004 | 0.029 | |
| AX38005 | 0.002 | |
| AX38006 | 0.002 | |
| AX38007 | 0.001 | |
| AX38008 | 0.001 | |
| AX38009 | 0.001 | |
| AX38010 | 0.001 | 0.001 |
| AX38011 | 0.001 | |
| AX38012 | 0.001 | |
| AX38013 | 0.001 | |
| AX38014 | 0.001 | |
| AX38015 | 0.001 | |
| AX38016 | 0.001 | |
| AX38017 | 0.001 | |
| AX38018 | 0.001 | |
| AX38019 | 0.010 | |
| AX38020 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

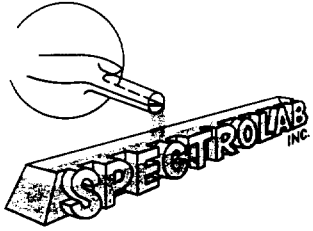
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1359-B DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38021 | 0.001 | |
| AX38022 | 0.001 | |
| AX38023 | 0.001 | |
| AX38024 | 0.001 | |
| AX38025 | 0.001 | |
| AX38026 | 0.001 | |
| AX38027 | 0.001 | |
| AX38028 | 0.001 | |
| AX38029 | 0.006 | |
| AX38030 | 0.001 | 0.001 |
| AX38031 | 0.007 | |
| AX38032 | 0.001 | |
| AX38033 | 0.001 | |
| AX38034 | 0.004 | |
| AX38035 | 0.006 | |
| AX38036 | 0.002 | |
| AX38037 | 0.001 | |
| AX38038 | 0.002 | |
| AX38039 | 0.001 | |
| AX38040 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout B.S.



SPECTROLAB INC.

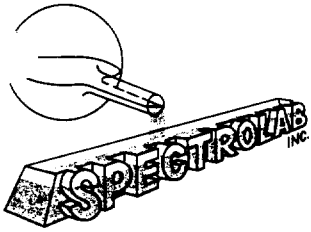
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1359-C DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38041 | 0.001 | |
| AX38042 | 0.001 | |
| AX38043 | 0.001 | |
| AX38044 | 0.001 | |
| AX38045 | 0.001 | |
| AX38046 | 0.001 | |
| AX38047 | 0.001 | |
| AX38048 | 0.004 | |
| AX38049 | 0.001 | |
| AX38050 | 0.001 | 0.001 |
| AX38051 | 0.016 | |
| AX38052 | 0.010 | |
| AX38053 | 0.035 | |
| AX38054 | 0.018 | |
| AX38055 | 0.051 | |
| AX38056 | 0.003 | |
| AX38057 | 0.026 | |
| AX38058 | 0.037 | |
| AX38059 | 0.111 | |
| AX38060 | 0.011 | |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

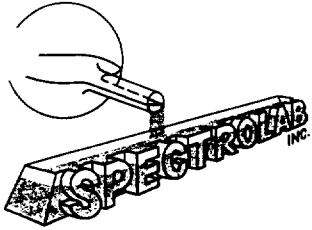
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1359-D DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX38061 | 0.014 | | |
| AX38062 | 0.004 | | |
| AX38063 | 0.004 | | |
| AX38064 | 0.005 | | |
| AX38065 | 0.004 | | |
| AX38066 | 0.002 | | |
| AX38067 | 0.006 | | |
| AX38068 | 0.002 | | |
| AX38069 | 0.009 | | |
| AX38070 | 0.015 | 0.014 | |
| AX38071 | 0.010 | | |
| AX38072 | 0.002 | | |
| AX38073 | 0.188 | | |
| AX38074 | 0.234 | | 0.220 |
| AX38075 | 0.091 | | |
| AX38076 | 0.158 | | |
| AX38077 | 0.023 | | |
| AX38078 | 0.243 | | 0.276 |
| AX38079 | 0.057 | | |
| AX38080 | 0.111 | 0.102 | |

ANALYSTE: Mira Godbout B.S.



SPECTROLAB INC.

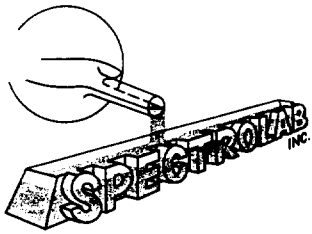
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1359-E DATE: 13/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38081 | 0.004 | |
| AX38082 | 0.001 | |
| AX38083 | 0.001 | |
| AX38084 | 0.008 | |
| AX38085 | 0.197 | |
| AX38086 | 0.109 | |
| AX38087 | 0.002 | |
| AX38088 | 0.076 | |
| AX38089 | 0.181 | |
| AX38090 | 0.169 | 0.153 |
| AX38091 | 0.004 | |
| AX38092 | 0.005 | |
| AX38093 | 0.002 | |
| AX38094 | 0.002 | |
| AX38095 | 0.001 | |
| AX38096 | 0.001 | |
| AX38097 | 0.001 | |
| AX38098 | 0.001 | |
| AX38099 | 0.001 | |
| AX38100 | 0.002 | 0.002 |

ANALYSTE: Miras Godbout B.Sc.



SPECTROLAB INC.

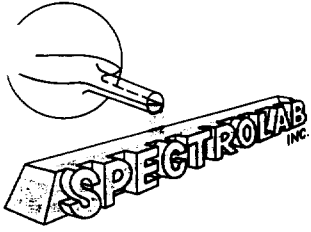
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1359-F DATE: 13/03/97

Client: ROYAL DAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38101 | 0.002 | |
| AX38102 | 0.003 | |
| AX38103 | 0.007 | |
| AX38104 | 0.001 | |
| AX38105 | 0.001 | |
| AX38106 | 0.001 | |
| AX38107 | 0.006 | |
| AX38108 | 0.001 | |
| AX38109 | 0.001 | |
| AX38110 | 0.001 | 0.001 |
| AX38111 | 0.001 | |
| AX38112 | 0.004 | |
| AX38113 | 0.001 | |
| AX38114 | 0.001 | |
| AX38115 | 0.001 | |
| AX38116 | 0.001 | |
| AX38117 | 0.001 | |
| AX38118 | 0.001 | |
| AX38119 | 0.001 | |
| AX38120 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1359-G DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 9 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38121 | 0.001 | |
| AX38122 | 0.001 | |
| AX38123 | 0.002 | |
| AX38124 | 0.001 | |
| AX38125 | 0.001 | |
| AX38126 | 0.001 | |
| AX38127 | 0.001 | |
| AX38128 | 0.001 | |
| AX38129 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc.



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK LAKE

LOGGED BY: R. MAASS

DATE LOGGED: FEB 21 1997

DRILL HOLE NO: RP-97-7

Surface Grid: NORTHING 1026.89

EASTING 3854.15

ELEVATION 10927.98

LENGTH 600

SECTION 3850 E

LEVEL

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 53 | | | | | | | | | | | | |
| 200 | 005 | 49 | | | | | | | | | | | | |
| 400 | 005 | 48 | | | | | | | | | | | | |
| 600 | 010 | 43 | | | | | | | | | | | | |

START DATE: FEB 15 1997

FINISH DATE: FEB 17 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: .039/8.5 @ 368-376.5
.16/4.8 @ 457.9-462.7
.056/27.5 @ 481-508.5 incl. .053/6.6 @ 481-487.6
.082/12.5 @ 495.6-508.5 (buff/uds)

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 59.6' ; pulled

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

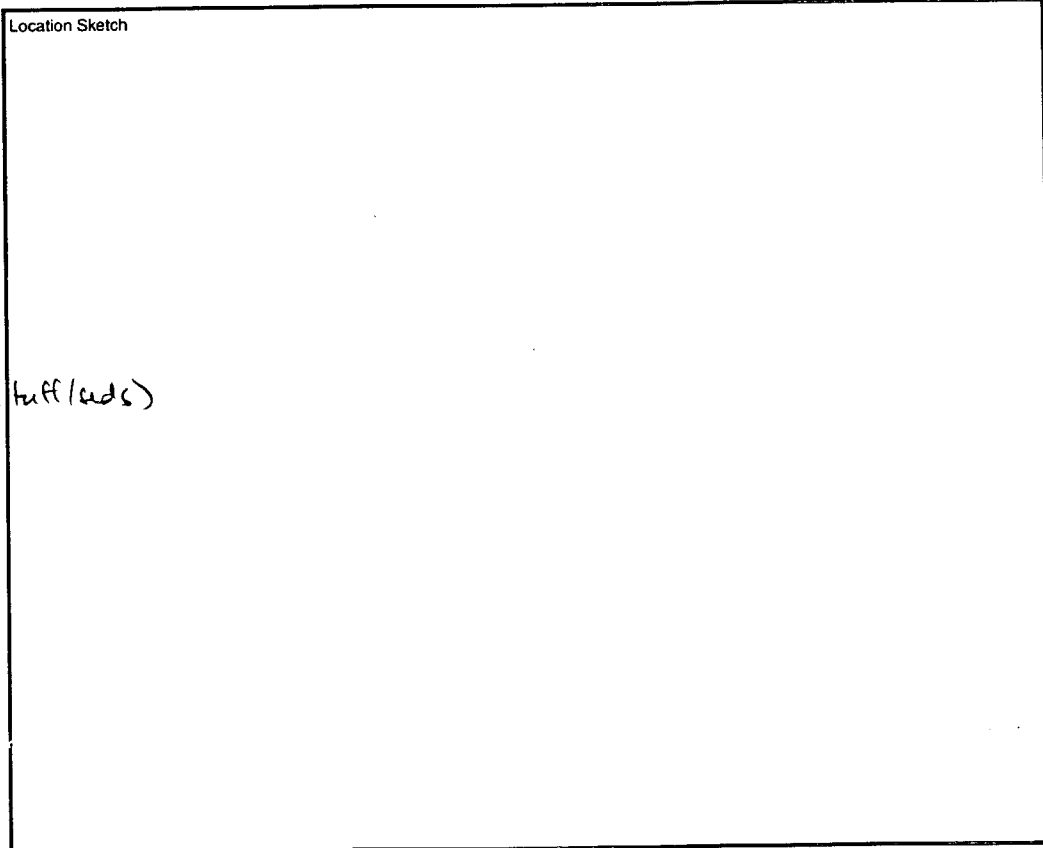
NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDES

ft
 m



DRILL HOLE NO: RP-97-7

PAGE 2 OF 7

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 59.6 | | | | | | | CAS | | | | | | | | | | | | | (0-59.6) CASING |
| 68.9 | | M | F | MSV | GY | CHL | UMF | | | | | .1 | .1 | | | AX38130 | 9.3 | G | .026 | (59.6-113.7) ULTRAMAFICS |
| 71.6 | | | | | | | UMF | | | | | 2 | .5 | | | 131 | 2.7 | C | .002 | - DOMINANTLY DK. GN. CHL. U.M. WITH |
| 72.6 | | | | | | | QV | V | 80 | | | 90 | .5 | | | 132 | 1.0 | C | .001 | NARROW SECTIONS OF DK. GY. TALC/CHL |
| 75.0 | | | | | | | UMF | | | | | .1 | .5 | | | 133 | 2.4 | C | .002 | U.M., SOFT + EASILY SCRATCHED |
| 78.0 | | | | | | | | | | | | .1 | .5 | | | 134 | 3.0 | C | .013 | - INTERSECTED BY NUMEROUS WH. QZ/ |
| 80.5 | | | | | | | | | | | | .1 | .5 | | | 135 | 2.5 | C | .001 | ANK. VEINS, F.G., MSV, F.OIS. PY. |
| 81.5 | | | | | | | QV | V | 80 | | | 90 | .5 | | | 136 | 1.0 | C | .001 | (69-69.2, 71.6-72.6, 80.5-81.5) |
| 83.5 | | | | | | | UMF | | | | | .1 | .1 | | | 137 | 2.0 | C | .001 | WH. QZ/ANK VEINS WITH F.OIS. PY. |
| 113.7 | | | | | | | | | | | | .1 | .1 | | | 138 | 50.2 | G | .001 | (75-80.5) WH. QZ/ANK STOCKWORK, F. PY. |
| 158.0 | | M | F | MSV | GG | BLZ | MVO | | | | | .1 | .1 | | | 139 | 44.3 | G | .001 | (113.7-205.8) MAFIC VOLCANICS |
| 205.8 | | | | | | | | | | | | .1 | .1 | | | 140 | 47.8 | G | .001 | - DK. TO LT. GN., F.G., MSV WITH |
| | | | | | | | | | | | | | | | | | | | | MNR WH. QZ/CC VEINS, HARD |
| | | | | | | | | | | | | | | | | | | | | + NOT EASY TO SCRATCH WITH |
| | | | | | | | | | | | | | | | | | | | | A KNIFE, DK. GY. SECTIONS ARE |
| | | | | | | | | | | | | | | | | | | | | CHLORITIC AND LT. GN. SECT. ARE CHERY |
| | | | | | | | | | | | | | | | | | | | | - MNR CUBIC PY. |
| 298 | | M | F | MSV | GG | CHL | UMF | | | | | .1 | .1 | | | 141 | 92.2 | G | .001 | (205.8-343) ULTRAMAFICS |
| 332.4 | | | | | | | | | | | | .1 | .1 | | | 142 | 34.4 | G | .001 | - DK. GREEN CHLORITE - RICH U.M. |
| | | | | | | | | | | | | | | | | | | | | - SOFT + EASY TO SCRATCH |
| | | | | | | | | | | | | | | | | | | | | - NUMEROUS WH. QZ/ANK UNLETS |
| | | | | | | | | | | | | | | | | | | | | - MNR F. PY., FOL. IS CONTORTED |
| 348 | | M | F | MSV | GY | TLC | UMF | | | | | .1 | .1 | | | 143 | 15.6 | G | .002 | (332.4-348) DK. GY. TALC/CHL RICH U.M. |
| | | | | | | | | | | | | | | | | | | | | (343-346.7) BLOCKY RUBBLY CORE RQD 1098 A.P. 35362 |

DRILL HOLE NO: RP-97-7

PAGE 3 OF 7

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|-----|----------------|--------|-----------|------|----|---|--------|----|----------|--|----------|-------|---|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 353 | | M | F | STNK | GY | ANK | | CCRB | | | | | 30 | .1 | | AX38144 | 4.5 | c | .005 | (348-378.5) CHLORITIC CARB. |
| 358 | | | | | | | | | | | | | 10 | | | 145 | 5.0 | c | .006 | - DK. GY. CHL. ANK. ALT. Y.M. |
| 363 | | | | | | | | | | | | | 20 | | | 146 | 5.0 | c | .028 | WITH WH. QZ/ANK STOCKWORK |
| 368 | | | | | | LIM | | | | | | | | | | 147 | 5.0 | c | .016 | - MNR F. DIS. PY., HARD, SILIC., |
| 373 | | | | | | ANK | | | | | | | | | | 148 | 5.0 | c | .048 | NOT EASY TO SCRATCH WITH KNIFE |
| 376.5 | | | | | | | | | | | | | | | | 149 | 3.5 | c | .027 | BLOCKY CORE 348-355 50% RQD |
| 378.5 | | | | | | | | | | | | | | | | 150 | 2.0 | c | .014 | (358-363) OR. LIM. FILLED FRACT. |
| 380.5 | | B | F | MSV | SIL | ANK | | BCRB | | | | | 5 | .1 | | 151 | 2.0 | c | .016 | (378.5-380.5) BROWN CARB |
| | | | | | | | | | | | | | | | | | | | | - TAN, SILIC., HARD, F.G., MNR. F. PY. |
| | | | | | | | | | | | | | | | | | | | | - CHL. FILLED FRACT., BLOCKY 50% RQD |
| 385 | | M | F | MSV | GN | F ₄ | | FCRB | | | | | 5 | .1 | | 152 | 4.5 | c | .016 | (380.5-388) GREEN F ₄ CARB |
| 388.0 | | | | | | | | | | | | | 5 | .1 | | 153 | 3.0 | c | .005 | - MSV, MNR WH. QZ/ANK VULETS, MNR |
| | | | | | | | | | | | | | | | | | | | | F. PY., TAN SER. WISPS (381.6-382) GR. CARB 19% PY. |
| 393 | | B | F | MSV | GY | ANK | | GCRB | | | | | 5 | .1 | | 154 | 5.0 | c | .008 | (388-394.3) GREY CARB |
| 398 | | M | | | | | | | F 40 | | | | .1 | .1 | | 155 | 5.0 | c | .014 | - LT. GY., SILIC., MSV, MNR F. PY. |
| | | | | | | | | | | | | | | | | | | | | - MNR WH. QZ/ANK VEINS |
| | | | | | | | | | | | | | | | | | | | | - BLOCKY CORE |
| 402 | | M | F | MSV | GY | ANK | | GCRB | | | | | 5 | .1 | | 156 | 4.0 | c | .001 | (394.3-419.8) GREY CARB |
| | | | | | | | | | | | | | | | | | | | | - HARD, SILIC., WELL FOL. |
| | | | | | | | | | | | | | | | | | | | | - DK. GY CHL., TAN SER. BANDS |
| | | | | | | | | | | | | | | | | | | | | - MNR F. DIS. PY. - QZ/ANK STOCKWORK |
| | | | | | | | | | | | | | | | | | | | | (395.6-395.8) BROWN CARB., NO VIS. PY. |
| | | | | | | | | | | | | | | | | | | | | (403.1-403.7) BROWN CARB., 19% F. PY. |
| | | | | | | | | | | | | | | | | | | | | (402.6-402.9) 2" WH. QZ/ANK VEIN |
| 404.2 | | M | F | MSV | GY | ANK | | GCRB | V 60 | | | | 30 | .1 | | 157 | 2.2 | c | .001 | (403.7-404.9) 6" WH. QZ/ANK VEIN |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|-----|-----|--------|-----------|-----|-----|---|--------|---|----------|-----|----------|-------|---|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | B | A1 | J | A2 | Qz | | | | | |
| 406 | | M | F | MSU | GY | ANK | | GCRB | | | | | | 5 | .1 | AX38158 | 1.8 | c | .005 | |
| 408 | | | | | | | | | | | | | | | | 159 | 2.0 | c | .003 | |
| 413 | | | | | | | | | | | | | | | | 160 | 5.0 | c | .004 | |
| 418 | | | | | | | | | | | | | | | | 161 | 5.0 | c | .003 | |
| 419.8 | | | | | | | | | | | | | | | | 162 | 1.8 | c | .002 | |
| 424.8 | | M | F | MSU | GY | TLC | | UMF | | | | | | .1 | .1 | 163 | 5.0 | c | .001 | (419.8-428.6) ULTRAMAFICS |
| 428.6 | | | | | | | | | | | | | | .1 | .1 | 164 | 3.8 | c | .001 | - OK. GY. TALC/CHL RICH, SOFT + EASY TO SCRATCH, MNR WH. QTZ/ANK VEINLETS |
| 433.6 | | M | F | MSU | GN | FY | | FCRB | | | | | | 2 | .1 | 165 | 5.0 | c | .021 | (428.6-439.6) GR. FY. CARB |
| 438.0 | | | | | | | | | | | | | | | | 166 | 4.4 | c | .006 | - F.G. MSU, STRONG FY. |
| 439.6 | | | | | | | | | | | | | | | | 167 | 1.6 | c | .001 | - MNR WH. QZ/ANK VEINLETS, MNR FY. |
| | | | | | | | | | | | | | | | | | | | | (428.6-429.3) BLOCKY CORE 10% RGD |
| | | | | | | | | | | | | | | | | | | | | (438.9-439.6) BLOCKY CORE |
| 443 | | M | F | MSU | GBR | CHL | | CCRB | | | | | | .1 | .1 | 168 | 3.4 | c | .001 | (439.6-457.9) CHLORITIC CARB. |
| 448 | | | | | | | | | | | | | | | | 169 | 5.0 | c | .005 | - GY/BROWN COLOR, SOFT AND EASY |
| 453 | | | | | | | | | | | | | | | | 170 | 5.0 | c | .001 | SCRATCH, (OR. LIM. + BLOCKY 439.6-443) |
| 457.9 | | | | | | | | | | | | | | | | 171 | 4.9 | c | .002 | - MSU + WK. FOLIATED |
| 459.8 | | M | F | MSU | BN | SIL | | BCRB | | | | | | 10 | 1.0 | 172 | 1.9 | c | .034 | (457.9-462.7) BROWN CARB. |
| 462.7 | | | | | | | | | | | | | | 10 | 1.0 | 173 | 2.9 | c | .248 | - F.G. SILIC. NOT EASY TO SCRATCH |
| | | | | | | | | | | | | | | | | | | | | - LT. GY. CARB SECTIONS, WK. FOL. |
| | | | | | | | | | | | | | | | | | | | | - F. PY. AND PY. STRGS., CHL FILLED FRACT., WH. QZ/ANK VEINLETS |

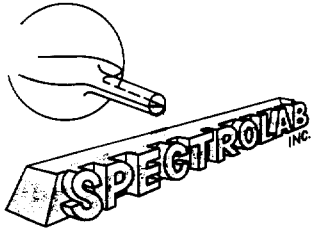
| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|----------------|--------|-----------|-----|----|---|--------|----|----------|---------|----------|-------|------|---|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 463.8 | | M | F | MSV | GN | F ₄ | | FCRB | | | | | 2 | .1 | AX38174 | 1.1 | c | .005 | (462.7-463.8) GN. F ₄ CARB | |
| 465.5 | | M | F | AM | WH | SIL | | CHT | | | | | 90 | .5 | 175 | 1.7 | c | .012 | (463.8-465.5) CHERTY DYKE - WH., CHERTY, VERY SILIC. - CHL. AND SER. FILLED FRACT. - EXTREMELY HARD - MNR F. DIS. PY. IN FRACT. | |
| 468.3 | | M | F | MSV | GN | F ₄ | | FCRB | | | | | 20 | .1 | 176 | 2.8 | c | .002 | (465.5-477.7) GN. F ₄ CARB | |
| 473.3 | | | | | | | | | | | | | 20 | .1 | 177 | 5.0 | c | .010 | - WH. QZ/ANK STOCK WORK | |
| 477.7 | | | | | | | | | | | | | 5 | .1 | 178 | 4.4 | c | .008 | - HARD + NOT EASILY TO SCRATCH - SILIC., GN. F ₄ IN FRACTURES - MNR F. DIS. PY. | |
| 481.0 | | M | F | MSV | BN | SER | | BCRB | | | | | 20 | 1.0 | 179 | 3.3 | c | .017 | (468-468.3) WH. QZ/ANK VEIN (477.7-481) BROWN CARB - MSV, SILIC., TAN SER. FILLED FRACT., 2" LOW ANGLE QZ/ANK VEINS, NON-FOL. | |
| 484.0 | | M | F | FOL | BN | SER | | BCRB | | | | | 5 | 1.0 | 180 | 3.0 | c | .076 | (481-487.6) BROWN CARB. | |
| 487.6 | | | | | | | | | | | | | 5 | 1.0 | 181 | 3.6 | c | .034 | - WELL FOL., SILIC., TAN SER. INFILL. FRACT., F. DIS. PY. - NUMEROUS WH. QZ/ANK STRGS. AND VEINS | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|---|--------------------|--------------------------------------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 490.6 | | M | F | LAM | GY | ANK | | TUF | F | 40 | | | 2 | .1 | | AX38182 | 3.0 | c | .005 | (487.6-506.1) TUFFACEOUS SEDS. |
| 495.6 | | | | | | | | | | | | | | | | 183 | 5.0 | c | .022 | -GY, WELL FOL. > MNR. F. CUBIC |
| 498 | | | | | | | | | | | | | | | | 184 | 2.4 | c | .092 | PY., HARD, SILIC. AND NOT EASY |
| 503 | | | | | | | | | | | | | | | | 185 | 5.0 | c | .002 | TO SCRATCH, NARROW BROWN |
| 506.1 | | | | | | | | | | | | | | | | 186 | 3.1 | c | .001 | CARB SECTIONS WITH TN. SER. & F. PY. |
| | | | | | | | | | | | | | | | | | | | | - WH. QZ EYES, THINLY LAMINATED |
| 508.5 | | B | F | BED | BK | GRAPH | | ARG | V | 60 | | | 30 | .1 | | 187 | 2.4 | c | .344 | (506.1-508.5) GRAPHITIC ARGILLITE |
| | | | | | | | | | | | | | | | | | | | | - BLACK, F.G., WELL-BEDDED |
| | | | | | | | | | | | | | | | | | | | | - SOFT AND EASY TO SCRATCH |
| | | | | | | | | | | | | | | | | | | | | - BK. GY CHL. AND GRAPHITE |
| | | | | | | | | | | | | | | | | | | | | BEDS, BLOCKY WITH 5" WH. |
| | | | | | | | | | | | | | | | | | | | | BX. QZ/ANK VEIN, MNR. C. PY. |
| 511.6 | | M | F | FOL | GY | ANK | | TUF | | | | | 5 | .1 | | 188 | 3.1 | c | .002 | (508.5-511.6) AS 487.6-506.1 |
| 515.6 | | S | F | BED | BK | GRAPH | | ARG | | | | | .1 | .1 | | 189 | 4.0 | c | .006 | (511.6-515.6) GRAPHITIC ARGILLITE |
| | | | | | | | | | | | | | | | | | | | | - F.G., WELL BEDDED, BEDS OF |
| | | | | | | | | | | | | | | | | | | | | BK. GRAPHITE AND CHLORITE |
| | | | | | | | | | | | | | | | | | | | | - CUBIC PY., 1" WH. QZ/ANK VEINS |
| 518 | | M | F | HOM | WH | SIL | | QV | V | 60 | | | 70 | .1 | | 190 | 2.4 | c | .005 | (515.6-518) 7" AND 1" WH. QZ/ANK |
| | | | | | | | | | | | | | | | | | | | | VEINS @ 60° TO C.A. |
| 521.5 | | S | F | BED | BK | GRAPH | | ARG | V | 40 | | | 30 | .1 | | 191 | 3.5 | c | .004 | (518-521.5) 4" AND 5" WH. QZ/ANK |
| | | | | | | | | | | | | | | | | | | | | VEINS @ 40° TO C.A. |

DRILL HOLE NO: RP-97-7

PAGE 7 OF 7

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|---|----|---|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | Qz | Px | | | | | | |
| S24.5 | | S | F | BED | BK | GRAPH | | ARG | B | 50 | | | .1 | .1 | AX38192 | 3.0 | c | .001 | (S21.5-S38) GRAPHITIC ARGILLITE | |
| S28 | | | | | | | | | | | | | | | 193 | 3.5 | c | .001 | - BK. GRAPH. AND CHL. BEDS | |
| S33 | | | | | | | | | | | | | | | 194 | 5.0 | c | .005 | - F.G., WELL FOLIATED | |
| S38 | | | | | | | | | | | | | 5 | | 195 | 5.0 | c | .002 | - COARSE CUBIC PY. - MNR WH. QZ/ANK VEINS - SOFT + EASY TO SCRATCH | |
| | | | | | | | | | | | | | | | | | | | (S26-S26.8) WH. QZ/ANK VEIN | |
| | | | | | | | | | | | | | | | | | | | (S35.6-S35.9) WH. QZ/ANK VEIN | |
| S43 | | S | F | BED | GY | SER | | TUF | B | 60 | | | .1 | .1 | 196 | 5.0 | c | .001 | (S38-S52.1) SER. SEDIMENT | |
| S48 | | | | | | | | | | | | | | | 197 | 5.0 | c | .006 | - GG COLOR, WELL FOLIATED, F.G. | |
| S52.1 | | | | | | | | | | | | | | | 198 | 4.1 | c | .001 | (S52.1-S54.1) GRAPH. ARGILLITE | |
| S54.1 | | S | F | BED | GY | GRAPH | | ARG | | | | | | | 199 | 2.0 | c | .001 | | |
| S55.3 | | M | F | MSV | WH | SIL | | QV | V | 60 | | | 60 | .1 | 200 | 1.2 | c | .001 | (S54.1-S55.3) WH. QZ/ANK VEIN | |
| S58 | | S | F | BED | GY | GRAPH | | ARG | | | | | .1 | .1 | 201 | 2.7 | c | .001 | - COARSE CUBIC PY. IN WALLROCK | |
| | | | | | | | | | | | | | | | | | | | (S55.3-600) GRAPHITIC ARGILLITE | |
| | | | | | | | | | | | | | | | | | | | - BK. GRAPH AND CHL. BEDS | |
| | | | | | | | | | | | | | | | | | | | - F.G., WELL BEDDED, COARSE | |
| | | | | | | | | | | | | | | | | | | | CUBIC PY., MNR WH. QZ/ANK | |
| S62.3 | | S | F | BED | GY | GRAPH | | ARG | | | | | .1 | .1 | 202 | 4.3 | c | .001 | STRGS., SOFT + EASY TO SCRATCH | |
| S64.8 | | M | F | MSV | GY | BLZ | | MVO | | | | | .1 | .1 | 203 | 2.5 | c | .001 | (S62.3-S64.8) MAFIC VOLC. | |
| | | | | | | | | | | | | | | | | | | | - GY., F.G., MSV, WH. QZ/CC STRGS | |
| 600.0 | | S | F | BED | GY | GRAPH | | ARG | | | | | .1 | .1 | 204 | 35.26 | c | .001 | - MNR F. PY. | |
| 600.0 | | | | | | | | | | | | | | | | | | | (S76.8-S78) MAFIC VOLC. AS ABOVE | |
| | | | | | | | | | | | | | | | | | | | EOH = 600' | |



SPECTROLAB INC.

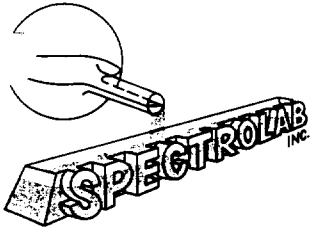
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1360-A DATE: 13/03/97

Client: ROYAL OAK MINES LTD. Ech. échantillons: Core Projet: NHL RAMP PROJECT
Peter Harvey Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38130 | 0.026 | |
| AX38131 | 0.002 | |
| AX38132 | 0.001 | |
| AX38133 | 0.002 | |
| AX38134 | 0.013 | |
| AX38135 | 0.001 | |
| AX38136 | 0.001 | |
| AX38137 | 0.001 | |
| AX38138 | 0.001 | |
| AX38139 | 0.001 | 0.001 |
| AX38140 | 0.001 | |
| AX38141 | 0.001 | |
| AX38142 | 0.001 | |
| AX38143 | 0.002 | |
| AX38144 | 0.005 | |
| AX38145 | 0.006 | |
| AX38146 | 0.028 | |
| AX38147 | 0.016 | |
| AX38148 | 0.048 | |
| AX38149 | 0.028 | 0.026 |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

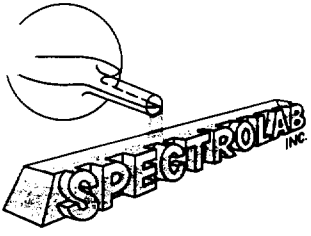
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1360-B DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38150 | 0.014 | |
| AX38151 | 0.016 | |
| AX38152 | 0.016 | |
| AX38153 | 0.005 | |
| AX38154 | 0.008 | |
| AX38155 | 0.014 | |
| AX38156 | 0.001 | |
| AX38157 | 0.001 | |
| AX38158 | 0.005 | |
| AX38159 | 0.002 | 0.004 |
| AX38160 | 0.004 | |
| AX38161 | 0.003 | |
| AX38162 | 0.002 | |
| AX38163 | 0.001 | |
| AX38164 | 0.001 | |
| AX38165 | 0.021 | |
| AX38166 | 0.006 | |
| AX38167 | 0.001 | |
| AX38168 | 0.001 | |
| AX38169 | 0.008 | 0.001 |

ANALYSTE: Mira Goulbourn



SPECTROLAB INC.

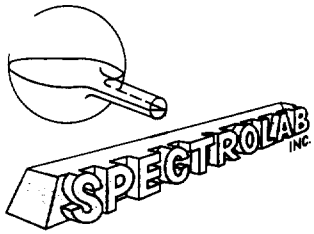
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1360-C DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
 Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 27/02/97
 Réf. 1602
 Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX38170 | 0.001 | | |
| AX38171 | 0.002 | | |
| AX38172 | 0.034 | | |
| AX38173 | 0.250 | | 0.245 |
| AX38174 | 0.005 | | |
| AX38175 | 0.012 | | |
| AX38176 | 0.002 | | |
| AX38177 | 0.010 | | |
| AX38178 | 0.008 | | |
| AX38179 | 0.017 | 0.017 | |
| AX38180 | 0.076 | | |
| AX38181 | 0.034 | | |
| AX38182 | 0.005 | | |
| AX38183 | 0.022 | | |
| AX38184 | 0.092 | | |
| AX38185 | 0.002 | | |
| AX38186 | 0.001 | | |
| AX38187 | 0.310 | | 0.377 |
| AX38188 | 0.002 | | |
| AX38189 | 0.005 | 0.007 | |

ANALYSTE: Mixa Godbout B.Sc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

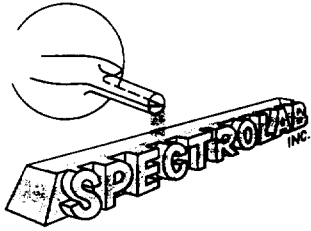
CERTIFICAT D'ANALYSES N°: IG-1360-C-2 DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Rejects Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 8 Date reçu: 27/02/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A.

| Sample | Au F.A. oz/ton | Au Cks oz/ton |
|---------|-------------------|------------------|
| AX38174 | No Reject | |
| AX38175 | 0.021 | |
| AX38176 | 0.001 | |
| AX38177 | 0.006 | |
| AX38178 | 0.005 | |
| AX38179 | 0.013 | |
| AX38180 | 0.077 | |
| AX38181 | 0.033 | 0.035 |

97-7

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1360-D DATE: 13/03/97

Client: ROYAL OAK MINES LTD. Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 14 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 27/02/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38190 | 0.005 | |
| AX38191 | 0.004 | |
| AX38192 | 0.001 | |
| AX38193 | 0.001 | |
| AX38194 | 0.005 | |
| AX38195 | 0.002 | |
| AX38196 | 0.001 | |
| AX38197 | 0.006 | |
| AX38198 | 0.004 | |
| AX38199 | 0.001 | |
| AX38200 | 0.001 | 0.001 |
| AX38201 | 0.001 | |
| AX38202 | 0.001 | |
| AX38203 | 0.001 | |

ANALYSTE: Mira Godbout BSc.



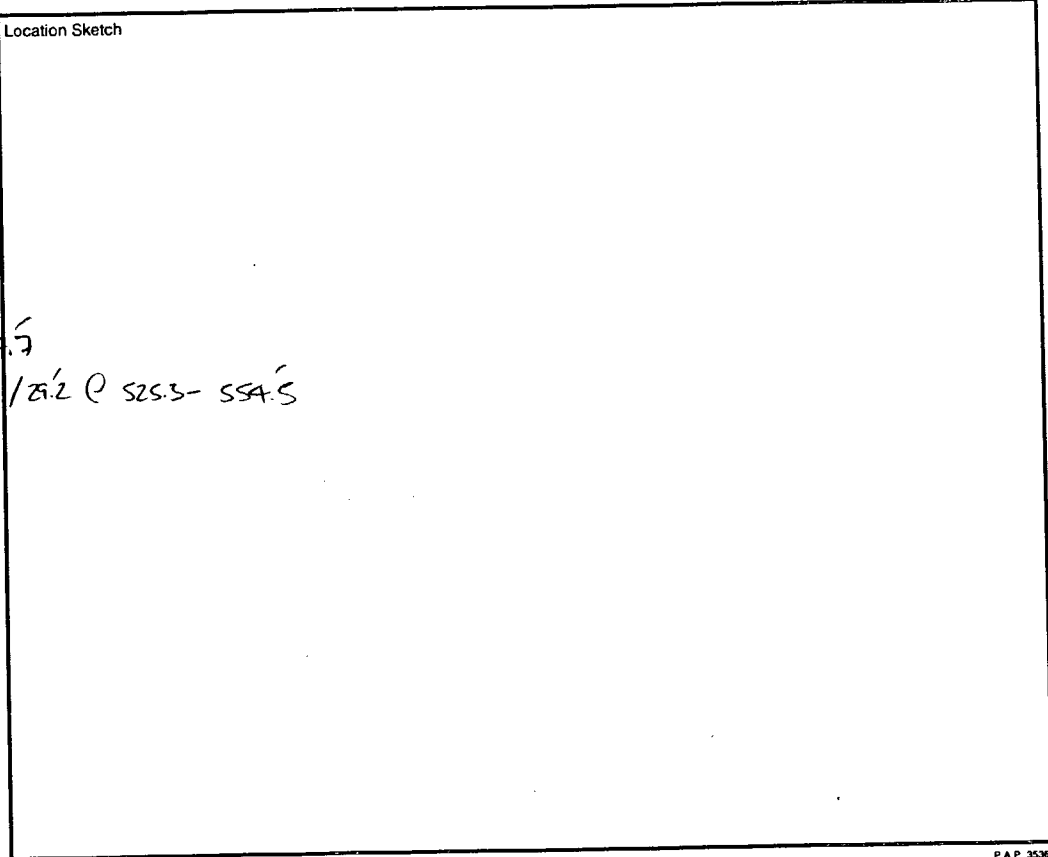
**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS PROJECT: NIGHTHAWK RAMP ZONE LOGGED BY: R. MAASS DATE LOGGED: FEB 20/97 DRILL HOLE NO: RP-97-8
 Surface Grid: NORTHING 1026.89 EASTING 3854.15 ELEVATION 10927.98 LENGTH 690 feet SECTION 3850 E LEVEL _____
 Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 63 | | | | | | | | | | | | |
| 200 | 360 | 61 | | | | | | | | | | | | |
| 400 | 005 | 59 | | | | | | | | | | | | |
| 690 | 008 | 58 | | | | | | | | | | | | |

START DATE: FEB 17 1997
 FINISH DATE: FEB 20 1997
 TOWNSHIP: CODY
 CLAIM NO.: P 15603 (HR 918)
 DRILLING CONTRACTOR: BENOIT
 PURPOSE: TEST RAMP ZONE
 RESULTS: .112 / 7.6 @ 433.6 - 441.2
.112 / 20.4 @ 452.2 - 472.6 incl. .14 / 15.5 @ 452.2 - 467.7
.132 / 0.9 @ 482.7 - 483.6 ; .156 / 42.7 @ 525.3 - 568, incl. .203 / 21.2 @ 525.3 - 554.5
 WHY HOLE TERMINATED: TARGET INTERSECTED
 CORE SIZE: BQ
 CASING: 62' Pulled
 HOLE CEMENTED: Yes
 NO. OF ASSAYS: _____
 NO. OF ICP: _____
 NO. OF WRA: _____
 REJECTS/PULPS SAVED: _____
 CORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch



ft
 m

DRILL HOLE NO: RP-97-8

PAGE 2 OF 12

| DIST | ID | ROCK DESCRIPTION | | | | | Name 1 | Name 2 | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|--------|-----------|----|-----|----|--------|----|----------|--------|----------|-------|------|---|----------|
| | | Com | GrS | Text | Co | Alt | | | B/S | A1 | J/F | A2 | QZ | PY | | | | | | | |
| 62.0 | | | | | | | CAS | | | | | | | | | | | | | (0-62.0) CASING | |
| 104.8 | | M | F | MSV | GN | CHL | MVO | | | | | | .1 | .1 | | AX8205 | 42.8 | G | .004 | (62.0-104.8) CHLORITIC MAFIC VOLCANICS - DK. GN., CHL., MSV, F.G. VOLCANICS - WR. FOL. SECTIONS, INTERSECTED BY NUMEROUS WH. QZ/CC STRGS. AND VEINS WITH ASSOC. MNR. PY. - CAN BE SCRATCHED WITH A KNIFE | |
| 163.8 | | M | F | MSV | GY | TLC | UMF | | | | | | .1 | .1 | | 206 | 59.0 | G | .001 | (104.8-163.8) ULTRAMAFICS - DK. GY., TALC/CHL RICH M.N., MSV, LT. GN. TALC VNLETS. - SOFT + EASILY SCRATCHED WITH A KNIFE, VERY MNR. QZ/ANK STRGS., MNR F. PY., NARROW MVO SECTIONS (148.8-149.7), (153.6-154) (163.8-211) CHLORITIC MAFIC VOLCANICS - DK. GN., CHL., F.G., MSV, MNR COARSE CUBIC PY, WH. AND PINK QZ/CC STRGS., CAN BE SCRATCHED WITH A KNIFE | |
| 176.9 | | M | F | MSV | GN | CHL | MVO | | | | | | .1 | .1 | | 207 | 13.1 | G | .001 | | |
| 178.9 | | | | | | | | | | | | | .1 | .1 | | 208 | 2.0 | C | .001 | (178.9-180.5) WHITE QUARTZ/CAULITE VEIN - CAL. FILLED FRACTURES, STRONG HCL REACTION, VERY MNR F. DIS. PY. | |
| 180.5 | | M | F | MSV | WH | SIL | QV | V30 | | | | | .1 | .1 | | 209 | 1.6 | C | .001 | | |
| 182.5 | | M | F | MSV | GN | CHL | MVO | | | | | | .1 | .1 | | 210 | 2.0 | C | .001 | | |
| 209.0 | | | | | | | | | | | | | | | | 211 | 26.5 | G | .001 | | |
| 211.0 | | | | | | | | | | | | | | | | 212 | 2.0 | C | .001 | | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|------|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 213.3 | | M | F | Por | GY | SIL | | QFP | | | | | 2 | .5 | | AX38213 | 2.3 | c | .001 | (211-213.3) QUARTZ/FELDSPAR PORPHYRY - LT. GY., SILIC. GROUNDMASS WITH WH. SUBHEDRAL FELDSPAR PHENOCRYSTS, F. DIS. PY., INTERSECTED BY NARROW 1/8" WH. QZ. STRGS. |
| 215.3 | | M | F | MSV | GN | CHL | | MVO | | | | | .1 | .1 | | 214 | 2.0 | c | .001 | (213.3-219.5) CHL. MAFIC VOLCANICS |
| 219.5 | | | | | | | | | | | | | .1 | .1 | | 215 | 4.2 | c | .001 | AS 163.8 - 211 - WITH WH. ANK. PORPHYROBLAST |
| 222.8 | | M | F | Por | GY | SIL | | QFP | | | | | 2 | .5 | | 216 | 3.3 | c | .001 | (219.5-222.8) QUARTZ/FELDSPAR PORPHYRY - LT. GY/BN, SILIC. GROUNDMASS WITH WH. SUBHEDRAL FELD. PHENOS., HARD SILIC., F. DIS. PY., CHL. FILLED FRACT. INTERSECTED BY 1/8" QZ STRGS. |
| 224.8 | | M | F | Fol | GY | SIL | | UMF | | | | | 20 | .1 | | AX38217 | 2.0 | c | .001 | (222.8-265.4) QUARTZ FLOODED ULTRAMAFICS |
| 228.0 | | | | | | | | | | | | | | | | 218 | 3.2 | c | .001 | |
| 233.0 | | | | | | | | | | | | | | | | 219 | 5.0 | c | .001 | - OK. GY/GN CHLORITIC UMF |
| 238.0 | | | | | | | | | | | | | | | | 220 | 5.0 | c | .001 | - INTERSECTED BY NUMEROUS WH. |
| 243.0 | | | | | | | | | | | | | | | | 221 | 5.0 | c | .001 | QZ/ANK UNLETS, CONTORTED |
| 248.0 | | | | | | | | | | | V 70 | | 50 | | | 222 | 5.0 | c | .001 | FOLIATION, PERVASIVE ANK. ALT. |
| 253.0 | | | | | | | | | | | | | 20 | | | 223 | 5.0 | c | .001 | (243.8-245.5) WELL VEINED SECTION |
| 258.0 | | | | | | | | | | | | | | | | 224 | 5.0 | c | .001 | WITH 70% WH. QZ/ANK VEINS |
| 259.4 | | | | | | | | | | | | | | | | 225 | 1.4 | c | .001 | (262-262.9) WHITE QZ/ANK VEIN |
| 261.4 | | | | | | | | | | | | | | | | 226 | 2.0 | c | .001 | - WITH CHL. FILLED FRACTURES |
| 263.4 | | | | | | | | | | | V 10 | | 70 | | | 227 | 2.0 | c | .001 | |
| 265.4 | | | | | | | | | | | | | 5 | | | 228 | 2.0 | c | .001 | |

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|-----------|--------|---|----|--------|----|----------|-----|----------|-------|---|--------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | |
| 268.0 | | M | F | FOL | GY | SIL | | UMF | F | 30 | | | 5 | 1.0 | AX38229 | 2.6 | c | .001 | (265.4-270) SILIC. FOLIATED UMF |
| 270.0 | | | | | | | | | | | | | 5 | 1.0 | 230 | 2.0 | c | .001 | - LT. GY / BN COLOR, WELL FOLIATED. - HARD + SILIC., INTERSECTED BY 1/4" WH. QZ / ANK STRGS., F. DIS. PY. DK. GY. CHL. INFILL. FRACT. |
| 275.0 | | M | F | MSV | GY | ANK | | GCRB | | | | | 5 | 5 | 231 | 5.0 | c | .007 | (270-279.8) GREY CARB. |
| 279.8 | | | | | | | | | | | | | 5 | 5 | 232 | 4.8 | c | .010 | - F.G., HARD + SILIC., LT. GY. COLOR, INTERSECTED BY 1/4" WH. QZ STRGS., CHL. FILLED FRACT. - F. DIS. PY., MSV AND NON-FOL. |
| 282.0 | | M | F | FOL | GY | SIL | | UMF | F | 40 | | | 5 | 1.0 | 233 | 2.2 | c | .001 | (279.8-282.0) SILIC. FOL. UMF - AS 265.4-270 |
| 285.0 | | M | F | FOL | GY | SIL | | UMF | | | | | 2 | 1.0 | 234 | 3.0 | c | .001 | (282.0-293) FOLIATED UMF |
| 288.0 | | | | | | | | | | | | | | | 235 | 3.0 | c | .001 | - DK. GY. CHL. RICH, WELL FOLIATED |
| 293.0 | | | | | | | | | | | | | | | 236 | 5.0 | c | .001 | - INTERSECTED BY NARROW TAN FELSITE DYKES, ASSOC. F. DIS. PY. - CRENNULATED, CONTORTED FOL ^U |
| 298.0 | | M | F | FOL | GY | SIL | | UMF | | | | | 40 | .1 | 237 | 5.0 | c | .001 | (293-302.6) QTZ FLOODED UMF |
| 302.6 | | | | | | | | | | | | | 60 | .1 | 238 | 4.6 | c | .004 | - DK. GN. CHL. UMF INTERSECTED BY NUMEROUS WH. QZ / ANK UNLETS - NUMEROUS LT. GN. TALC UNLETS - ALSO INTERSECTED BY NARROW TAN FELSITE DYKES WITH 5% ASSOC. F. DIS. PY. - CONTORTED FOLIATION |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|-------|-----|-----|--------|-----------|-----|----|---|--------|----|----------|-----|----------|-------|------|---|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 305.6 | | M | F | FOL | GN | SIL | | UMF | F | SO | | | | 2 | 1.0 | AX38239 | 3.0 | C | .010 | (302.6-308) FOLIATED SILIC. UMF |
| 308.0 | | | | | | | | | | | | | | Z | 1.0 | 240 | 2.4 | C | .002 | - DK. GN. CHL. UMF WITH NUMEROUS NARROW PINK QFP, TAN FEL., WH. QZ/ANK VNLETS, WELL FOLIATED - F. DIS. PY. (308-310.2) FOLIATED SILIC. UMF. - DK. GN. CHL., SILIC., WELL FOLIATED, WH. QZ/ANK STRGS, TAN-PURPLE FELSITE DYKES, F. DIS. PY. ASSOC. WITH DYKETS. |
| 310.2 | | M | F | MSUGY | TLC | | | UMF | | | | | .1 | .1 | 241 | 2.2 | C | .003 | (309.8-310.2) CHLORITIC MVO AT SILIC FOL UMF/TALC/CHL RICH UMF CONTACT | |
| 312.2 | | | | | | | | | | | | | | | 242 | 2.0 | C | .001 | (310.2-381.5) TALC/CHL RICH UMF | |
| 381.5 | | | | | | | | | | | | | | | 243 | 6.93 | G | .001 | - DK. GY., SOFT AND EASILY SCRATCHED WITH A KNIFE, MSU + NON-FOL. NUMEROUS LT. GN. TALC, WH. QZ/ ANK STRGS. (348.1-350.2) CHLORITIC MAFIC VOLCANICS | |
| 423 | | M | F | MSV | GY | ANK | | GCRB | | | | | .1 | .1 | 244 | 41.5 | G | .001 | (381.5-428) ANK. ALT. UMF | |
| 428 | | | | | | | | | | | | | .1 | .1 | 245 | 5.0 | C | .001 | - PERVASIVE ANKERITE, LT. GY., SILIC., HARD + NOT EASY TO SCRATCH, MSU + NON- FOLIATED, MNR F. PY., MNR WH. QZ STRGS. | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|----|----------|---------|-----|--------------|----------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | | |
| 432.6 | | M | F | MSV | GY | LIM | | CCRB | | | | | 5 | | .1 | | AX38246 | 4.6 | c | .001 | (428-432.6) AS 381.5-428 ANK ALT. YMF - WITH OR. LIM. ALONG FRACT. SURFACES - SEVERAL LOW ANGLE WH. QZ/ANK VEINS |
| 433.6 | | B | F | MSV | PL | HEM | | CLRB | | | | | 5 | | .1 | | 247 | 1.0 | c | .001 | (432.6-433.6) CHLORTIC RED BASALT - BROKEN BLOCKY CORE - BANDS OF BK. CHL. AND PURPLE HEM., OR. LIM. ALONG FRACT. SURFACES (FAULT ZONE) - WH. QZ/ANK UNLETS PARALLEL TO FOLIATION |
| 436.8 | | M | F | MSV | GY | SIL | | GCRB | | | | | 5 | | .1 | | 248 | 3.2 | c | .132 | (433.6-436.8) GREY CARB. - GY., SILIC., FRACT. WITH CHL. AND OR. LIM. INFILLING, OCCASIONAL WH. QZ/ANK STRGS, MNR. F. PY. |
| 437.8 | | B | F | BRX | BK | CHL | | CCRB | | | | | 2 | | 5 | | 249 | 1.0 | c | .356 | (436.8-437.8) CHLORTIC BRECCIA - DK. GY. CHL. RICH WITH 5% F. AN C. PY., WH. QZ/ANK ENCLOSING FRGS. |
| 441.2 | | M | F | MSV | | LIM | | GCRB | | | | | 2 | | .1 | | 250 | 3.4 | c | .021 | (437.8-445) GREY CARB. |
| 445 | | I | I | I | | ANK | | GCRB | | | | | 5 | | .1 | | AX38751 | 3.8 | c | .005 | - LT. GY., SILIC., MSV, ANK. ALT., - FRACTURES INFILLED BY CHL. - WK. FOL., MNR F. PY., OR. LIM. ALONG FRACT. SURFACES TO 441.2 - OCCASIONAL WH. QZ/ANK STRGS. 441.2-441.6 GN. Fu. CARB |

452.2-467.7

DRILL HOLE NO: RP-97-8

PAGE 7 OF 12

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 448.0 | | M | F | MSV | GN | Fu | | FCRB | | | | | 20 | .5 | AX38752 | 3.0 | c | .007 | (445-452.2) GN. Fu. CARB. | |
| 452.2 | | | | | | | | | | | | | 10 | .5 | 753 | 4.2 | c | .002 | - DOMINANTLY Fu CARB WITH SECTIONS OF BN. AND GY. CARB, WH. QZ/ANK STWK., CHL. INFILLING FRACT.; HARD, SILIC, STRONG ANK ALT. MNR F. PY. | |
| 454.4 | | M | F | STWK | BN | SER | | BCRB | | | | | 10 | 5 | 754 | 2.2 | c | .236 | (452.2-454.4) BROWN CARB. - BN. SER. RICH CARB WITH BK CHL. ALONG FRACT., WH. QZ/ANK STWK., 50% F. CUBIC PY. | |
| 455.8 | | M | F | STWK | GN | Fu | | FCRB | | | | | 5 | 2 | 755 | 1.4 | c | .076 | (454.4-455.8) MIX OF BN SER. CARB AND GN. Fu CARB., WH. QZ/ANK STWK., F. DIS. PY. ASSOC. WITH BN. CARB SECTIONS | |
| 460 | | M | F | STWK | BN | SER | | BCRB | | | | | 30 | 2 | 756 | 4.2 | c | .172 | (455.8-460) BN CARB BRECCIA ZONE - BN. SER. CARB WITH BK. ANGULAR CHL. FRAGS., WH. QZ/ANK STWK, F. DIS. PY. | |
| 463 | | M | F | MSV | BN | SER | | BCRB | | | | | 2 | 1 | 757 | 3.0 | c | .138 | (460-467.7) BN. SER. CARB. | |
| 467.7 | | | | | | | | | | | | | 1 | 1 | 758 | 4.7 | c | .086 | - HARD, SILIC., CHL. INFILL. FRACT. - TAN SER. WISPS, F. DIS. PY., OCCASIONAL WH. QZ/ANK STRGS. | |
| 471.2 | | M | F | STWK | GN | Fu | | FCRB | | | | | 10 | .1 | 759 | 3.5 | c | .010 | (467.7-476.4) GN. Fu. CARB. | |
| 472.6 | | | | | | | | | | | | | 2 | | 760 | 1.4 | c | .052 | - WH. QZ/ANK STOCKWORK, MNR. F. | |
| 476.4 | | | | | | | | | | | | | 20 | | 761 | 3.8 | c | .02 | DIS. PY., HARD, SILIC., BN. CARB SECTIONS | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|-----|----------|---------|-----|--------------------|----------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | | |
| 477.5 | | M | F | MSU | BN | SIL | | BCRB | | | | | 2 | | 1.0 | | AX38762 | 1.1 | c | .024 | (476.4-477.5) BROWN CARB. - TAN COLOR, MSU, HARD + SILIC. - CHL, Fu. IN FRACT., F. DIS. PY., - WH. QZ/ANK MICRO-VNLETS |
| 480.6 | | M | F | FOL | GG | CHL | | CCRB | F | 50 | | | 5 | | .1 | | 763 | 3.1 | c | .004 | (477.5-480.6) CHLORITIC CARB. - WELL FOLIATED, BK. CHL. ALONG FRACT., WH. QZ/ANK STRGS PARALLEL + CROSS CUTTING FOLIATION - F. DIS. PY., NARROW TN. SER. BANDS |
| 482.7 | | M | F | FOL | GN | Fu | | FCRB | F | 50 | | | 5 | | .1 | | 764 | 2.1 | c | .006 | (480.6-482.7) GN. Fu. CARB - WELL FOL., BK. CHL. ALONG FRACT. - WH. QZ/ANK VNLETS ALONG FOL. - F. DIS. PY. |
| 483.6 | | M | F | MSU | BN | SIL | | BCRB | | | | | 10 | | 1.0 | | 765 | 0.9 | c | .132 | (482.7-483.6) SILIC. BN. CARB. - CHL, Fu, F. DIS. PY. INFILLING FRACT. |
| 485.3 | | B | F | FOL | GN | Fu | | FCRB | F | 50 | | | 2 | | .1 | | 766 | 1.7 | c | .003 | (483.6-485.3) GN. Fu. CARB - BLOCKY, BROKEN CORE, WELL FOL. - AS 480.6-482.7 |
| 489 | | B | F | FOL | GG | CHL | | CCRB | F | 30 | | | 5 | | .1 | | 767 | 3.7 | c | .001 | (485.3-489) CHLORITIC CARB - WELL FOL., NUMEROUS WH. QZ/ ANK. VEINS, OR. LIM. ALONG FRACT. SURFACES, BLOCKY |
| 492.3 | | M | F | FOL | GN | Fu | | FCRB | F | 30 | | | 5 | | .1 | | 768 | 3.3 | c | .005 | (489-492.3) GN. Fu. CARB - WELL FOL., WH. QZ/ANK, CHL. ALONG FOL. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|-----|----------|-------|---------|--------------------|----------|------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | | | |
| 493.3 | | M | F | MSV | BN | SIL | | BCRB | | | | | 2 | | S | | | AX38769 | 1.0 | c | .044 | (492.3-493.3) BN. CARB - TAN COLOR, HARD + SILIC., MSV, - CHL. INFILL. FRACT., 27% F. PY. (493.3-493.7) FOL. GN. Fh. CARB |
| 494.9 | | M | F | MSV | BN | SIL | | BCRB | | | | | 2 | | S | | | 770 | 1.6 | c | .027 | (493.7-494.9) BN. CARB - AS 492.3-493.3 |
| 498 | | M | F | FOL | GN | Fh | | FGRB | F | S0 | | | 2 | | 1.0 | | | 771 | 3.1 | c | .002 | (494.9-502.2) GN. Fh. CARB |
| 502.2 | | | | | | | | | | | | | 2 | | 1.0 | | | 772 | 4.2 | c | .002 | - WELL FOL., NARROW TAN SER. BN. CARB DYKLETS, CHL. IN. FRACT. |
| 505 | | M | F | FOL | GG | CHL | | CCRB | | | | | 2 | | .1 | | | 773 | 2.8 | c | .085 | (502.2-517.3) FOL. CHL. CARB. |
| 508 | | | | | | | | | | | | | | | | | | 774 | 3.0 | c | .029 | - WELL FOL., STRONG FOL., BK. |
| 513 | | | | | | | | | | | | | | | | | | 775 | 5.0 | c | .003 | CHL. BANDS, WH. QZ/ANK STRGS |
| 517.3 | | | | | | | | | | | | | | | | | | 776 | 4.3 | c | .001 | (517.3-520.3) GY CARB. |
| 520.3 | | M | F | FOL | GY | CHL | | GCRB | F | 40 | | | 10 | | .1 | | | 777 | 3.0 | c | .017 | - WELL FOL., WH. QZ/ANK STWK., - NARROW CHL. BANDS, MNR F. PY. |
| 525.3 | | M | F | MSV | GN | Fh | | FGRB | | | | | 10 | | .1 | | | 778 | 5.0 | c | .020 | (520.3-525.3) GN. Fh. CARB - WH. QZ/ANK STWK., BLOCKY SECTIONS, - MNR. F. DIS. PY., MSV |
| 527.1 | | M | F | FOL | BN | SER | | BCRB | | | | | 80 | | .5 | | | 779 | 1.8 | c | .322 | (525.5-535.1) FOL. BN. CARB |
| 532.1 | | | | | | | | | | | | | 10 | | | | | 780 | 5.0 | c | .445 | - DOMINANTLY TAN SER. BANDS |
| 535. | | | | | | | | | | | | | 10 | | | | | 781 | 3.0 | c | .082 | - NARROW GN. Fh, GY. CHL. BANDS - WELL FOL., WH. QZ/ANK STRGS PARALLEL AND CROSS-CUTTING FOL. - MNR. F. DIS. PY. |

525.3-554.5

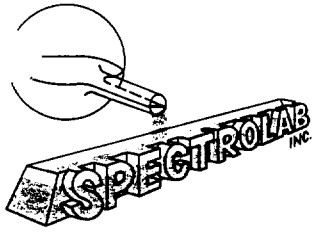
DRILL HOLE NO: RP-97-8

PAGE 10 OF 12

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|---------|-----|--------------------|----------|-------------------------------------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | | | | | | | |
| 539.8 | | M | F | MSV | BN | SIL | | QTZ | | | | | 90 | S | | | AX38182 | 4.7 | c | .288 | (535.1-561) SILICIFIED BROWN CARB. |
| 544.5 | | | | | | | | | | | | | | Z | | | 783 | 4.7 | c | .235 | - TAN, EXTREME SILIC., ALBITIZATION |
| 549.5 | | B | | | | | | | | | | | | .1 | | | 784 | 5.0 | c | .013 | - TAN SER. INFILLING FRACT. |
| 554.5 | | M | | | | | | | | | | | | .1 | | | 785 | 5.0 | c | .124 | - CHERTY SECTIONS, BK. CHL. |
| 559.5 | | | | | | | | | | | | | | .1 | | | 786 | 5.0 | c | .040 | ALSO INFILLING FRACT., F. DIS. PY. |
| 561 | | | | | | | | | | | | | | .1 | | | 787 | 1.5 | c | .054 | AND PY. STRGS, FRACT. INFILLINGS |
| | | | | | | | | | | | | | | | | | | | | | - MSU AND NON-FOL. |
| 564 | | M | F | FOL | BN | SER | | BCRB | F | 40 | | | Z | .1 | | | 788 | 3.0 | c | .104 | (561-568) WELL FOL. BN. CARB |
| 568 | | | | | | | | | | | | | Z | .1 | | | 789 | 4.0 | c | .034 | - BK. CHL., TN. SER. INFILLING |
| | | | | | | | | | | | | | | | | | | | | | FRACTURES, MNR WH. QZ/ANK |
| | | | | | | | | | | | | | | | | | | | | | STRGS AND F. DIS. PY. |
| 573 | | M | F | MSV | GN | Fy | | FCRB | | | | | | | | | 790 | 5.0 | c | .018 | (568-580.5) GN. Fy. CARB. |
| 575.3 | | | | | | | | | V | 60 | | | | | | | 791 | 2.3 | c | .001 | - MSV + NON FOL., WK. Fy. ACT., |
| 577.2 | | | | | | | | | | | | | | | | | 792 | 1.8 | c | .007 | - MNR WH. QZ/ANK STRGS, CHL. |
| 578.2 | | | | | | | | | V | 60 | | | | | | | 793 | 1.0 | c | .001 | INFILLING FRACT., MNR. F. DIS. PY. |
| 579.6 | | | | | | | | | | | | | | | | | 794 | 1.4 | c | .001 | |
| 580.5 | | | | | | | | | | | | | | | | | 795 | 0.9 | c | .002 | (574.8-575.3) 6" WH. QZ/ANK VEIN |
| | | | | | | | | | | | | | | | | | | | | | - NO VIS. SULPHIDES |
| | | | | | | | | | | | | | | | | | | | | | (577.4-578.2) 8" WH. QZ/ANK VEIN |
| | | | | | | | | | | | | | | | | | | | | | - BLOCKY, NO VIS. SULPHIDES |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | Py | | | | | | |
| 582.8 | | B | F | MSV | GY | CHL | | CCRB | | | | | .1 | .1 | AX38796 | 2.3 | c | .020 | (580.5-582.8) CHLORITIC CARB - CHL. INFILLING FRACT. - BROKEN, BLOCKY CORE - MNR WH. QZ/ANK STRGS. - NO VIS. SULPHIDES | |
| 584.6 | | M | F | HOM | BN | SIL | | BCRB | | | | | 2 | .1 | 797 | 1.8 | c | .020 | (582.8-584.6) BROWN CARB. - SILIC., HOM., CHL. INFILL. FRACT. - MNR WH. QZ/ANK STRGS., PY. AND SER. FILL FRACT. | |
| 587.6 | | B | F | MSV | GY | CHL | | CCRB | | | | | .1 | .1 | 798 | 3.0 | c | .010 | (584.6-589.9) CHLORITIC CARB | |
| 589.9 | | M | I | I | I | I | | I | | | | | .1 | .1 | 799 | 2.3 | c | .018 | - BLOCKY CORE TO 587.6' - BK. CHL. ALONG FRACT. - MNR WH. QZ/ANK STRGS., MNR. F. DIS. PY. | |
| 593 | | M | F | MSV | GY | ANK | | CCRB | | | | | .1 | .1 | 800 | 3.1 | c | .001 | (589.9-612.5) CHLORITIC CARB. | |
| 598 | | | | | | | | | | | | | .5 | | 801 | 5.0 | c | .001 | - ANK. AUT. IMF, WH. ANK. POR., | |
| 603 | | | | | | | | | | | | | .1 | | 802 | 5.0 | c | .001 | - MSU + NON-FOL., F. CUBIC PY., | |
| 608 | | | | FOL | | | | F 50 | | | | | 1 | | 803 | 5.0 | c | .001 | - MNR. WH. QZ/ANK STRGS. | |
| 612.5 | | | | MSV | | | | | | | | | 1 | | 804 | 4.5 | c | .007 | (606.6-608) WELL FOL. SECTION | |
| 617.5 | | M | F | BEN | BN | SER | | TUF | B | 40 | | | 2 | .5 | 805 | 5.0 | c | .002 | (612.5-623.7) THYFFACEOUS SEDIMENTS | |
| 622.5 | | | | | | | | | | | | | 1 | | 806 | 5.0 | c | .001 | - TN. COLOR, WELL FOL., SER. RICH, | |
| 623.7 | | | | | | | | | | | | | 1 | | 807 | 1.2 | c | .001 | - COARSE CUBIC PY., MNR WH. QZ/ANK VEINLETS, - THIN CHL. BEDS | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|-----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------|---------------------------------------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | |
| 628 | M | F | BED | BK | GRA | | ARG | | | | | 2 | .1 | | | AX38808 | 4.3 | c | .011 | (623.7-675.4) GRAPHITIC SEDIMENTS |
| 633 | B | | | | | | | | | | | 5 | | | | 809 | 5.0 | c | .001 | - BEDS OF GY QZ, BLACK CHL. |
| 638 | M | | | | | | | | | | | 2 | | | | 810 | 5.0 | c | .001 | AND BK. GRAPHITE, MNR COARSE |
| 643 | B | | | | | | | | | | | 2 | | | | 811 | 5.0 | c | .001 | CUBIC PY., NUMEROUS 1" - 6" |
| 648 | B | | | | | | | | V | 40 | | 30 | | | | 812 | 5.0 | c | .001 | WH. QZ/ANK VEINS, SOFT + EASY |
| 653 | M | | | | | | | | V | 40 | | 20 | | | | 813 | 5.0 | c | .001 | TO SCRATCH WITH A KNIFE |
| 658 | | | | | | | | | V | 40 | | 30 | | | | 814 | 5.0 | c | .001 | (628-628.5) WH. BK. QZ/ANK VEIN |
| 663 | | | | | | | | | | | | 2 | | | | 815 | 5.0 | c | .002 | (643-648) 3", 4", 6" WH. QZ/ANK VEINS |
| 668 | | | | | | | | | V | 40 | | 10 | | | | 816 | 5.0 | c | .001 | (648-653) 4", 7" WH. QZ/ANK VEINS |
| 673 | | | | | | | | | | | | 5 | | | | 817 | 5.0 | c | .005 | (653-658) 2-1", 2", 5", 6" WH. QZ/ANK |
| 675.4 | | | | | | | | | | | | 2 | | | | 818 | 2.4 | c | .001 | VEINS (656.9-657.5) TUFFACEOUS SECS |
| 678 | M | F | MSV | GG | ANK | | MVO | | | | | .1 | | | | 819 | 2.6 | c | .001 | (675.4-682.4) MAFIC VOLCANICS |
| 682.4 | | | | | | | | | | | | .1 | | | | 820 | 4.4 | c | .001 | - LT. GY/GN, MSV, MNR. WH. QZ/ |
| | | | | | | | | | | | | | | | | | | | | ANK. STRGS., MNR F. DIS. PY. |
| 687.4 | M | F | BED | GY | CHL | | ARG | | | | | 2 | .1 | | | 821 | 5.0 | c | .001 | (682.4-690) LT. GY. CHLORITIC |
| 690.0 | | | | | | | | | | | | 2 | .1 | | | 822 | 2.6 | c | .001 | SEDIMENTS, WELL BEDDED |
| | | | | | | | | | | | | | | | | | | | | 1/2" WH. QZ/ANK STRGS ALONG |
| | | | | | | | | | | | | | | | | | | | | BEDDING, F. CUBIC PY. |
| 690.0 | | | | | | | | | | | | | | | | | | | | EOT = 690 |



SPECTROLAB INC.

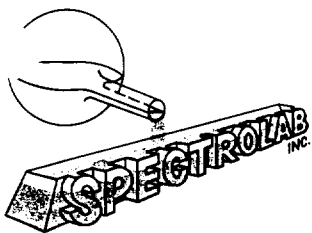
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1361-A DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | |
|---------|--------------|------------------|--------|
| AX38204 | 0.001 | | RP97-7 |
| AX38205 | 0.004 | | |
| AX38206 | 0.001 | | RP97-8 |
| AX38207 | 0.001 | | |
| AX38208 | 0.001 | | |
| AX38209 | 0.001 | | |
| AX38210 | 0.001 | | |
| AX38211 | 0.001 | | |
| AX38212 | 0.001 | | |
| AX38213 | 0.001 | 0.001 | |
| AX38214 | 0.001 | | |
| AX38215 | 0.001 | | |
| AX38216 | 0.001 | | |
| AX38217 | 0.001 | | |
| AX38218 | 0.001 | | |
| AX38219 | 0.001 | | |
| AX38220 | 0.001 | | |
| AX38221 | 0.001 | | |
| AX38222 | 0.001 | | |
| AX38223 | 0.001 | 0.001 | |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

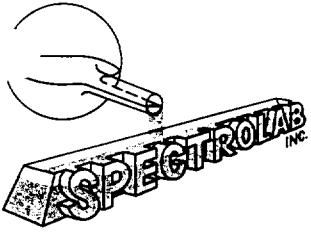
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1361-B DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38224 | 0.001 | |
| AX38225 | 0.001 | |
| AX38226 | 0.001 | |
| AX38227 | 0.001 | |
| AX38228 | 0.001 | |
| AX38229 | 0.001 | |
| AX38230 | 0.001 | |
| AX38231 | 0.007 | |
| AX38232 | 0.010 | |
| AX38233 | 0.001 | 0.001 |
| AX38234 | 0.001 | |
| AX38235 | 0.001 | |
| AX38236 | 0.001 | |
| AX38237 | 0.001 | |
| AX38238 | 0.004 | |
| AX38239 | 0.010 | |
| AX38240 | 0.002 | |
| AX38241 | 0.003 | |
| AX38242 | 0.001 | |
| AX38243 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

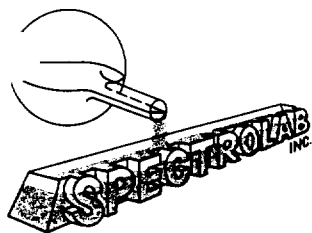
780, boul. de l'Université
 Rouyn-Noranda (Québec) J9X 7A5
 Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1361-C DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
 Réf. 1602
 Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX38244 | 0.001 | | |
| AX38245 | 0.001 | | |
| AX38246 | 0.001 | | |
| AX38247 | 0.001 | | |
| AX38248 | 0.132 | | |
| AX38249 | 0.366 | | 0.345 |
| AX38250 | 0.021 | | |
| AX38751 | 0.005 | | |
| AX38752 | 0.007 | | |
| AX38753 | 0.003 | 0.002 | |
| AX38754 | 0.256 | | 0.216 |
| AX38755 | 0.076 | | |
| AX38756 | 0.172 | | |
| AX38757 | 0.138 | | |
| AX38758 | 0.086 | | |
| AX38759 | 0.010 | | |
| AX38760 | 0.052 | | |
| AX38761 | 0.012 | | |
| AX38762 | 0.024 | | |
| AX38763 | 0.004 | 0.004 | |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

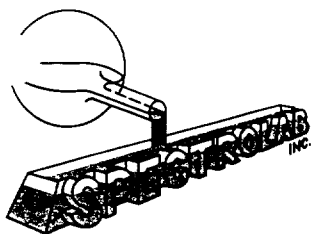
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1361-D DATE: 13/03/97

Client: ROYAL OAK MINES LTD Core NHL RAMP PROJECT
Echantillons: Core Projet: Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX38764 | 0.006 | | |
| AX38765 | 0.132 | | |
| AX38766 | 0.003 | | |
| AX38767 | 0.001 | | |
| AX38768 | 0.005 | | |
| AX38769 | 0.044 | | |
| AX38770 | 0.027 | | |
| AX38771 | 0.002 | | |
| AX38772 | 0.002 | | |
| AX38773 | 0.082 | 0.088 | |
| AX38774 | 0.029 | | |
| AX38775 | 0.003 | | |
| AX38776 | 0.001 | | |
| AX38777 | 0.017 | | |
| AX38778 | 0.020 | | |
| AX38779 | 0.318 | | 0.325 |
| AX38780 | 0.422 | | 0.467 |
| AX38781 | 0.082 | | |
| AX38782 | 0.288 | | 0.289 |
| AX38783 | 0.224 | 0.248 | 0.246 |

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

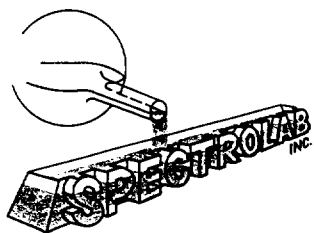
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1361-E DATE: 13/03/97

Client: ROYAL OAK MINES LTD. Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38784 | 0.013 | |
| AX38785 | 0.124 | |
| AX38786 | 0.040 | |
| AX38787 | 0.054 | |
| AX38788 | 0.104 | |
| AX38789 | 0.034 | |
| AX38790 | 0.018 | |
| AX38791 | 0.001 | |
| AX38792 | 0.007 | |
| AX38793 | 0.001 | 0.001 |
| AX38794 | 0.001 | |
| AX38795 | 0.002 | |
| AX38796 | 0.020 | |
| AX38797 | 0.020 | |
| AX38798 | 0.010 | |
| AX38799 | 0.018 | |
| AX38800 | 0.001 | |
| AX38801 | 0.001 | |
| AX38802 | 0.001 | |
| AX38803 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout B.S.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1361-F DATE: 13/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 19 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38804 | 0.007 | |
| AX38805 | 0.002 | |
| AX38806 | 0.001 | |
| AX38807 | 0.001 | |
| AX38808 | 0.011 | |
| AX38809 | 0.001 | |
| AX38810 | 0.001 | |
| AX38811 | 0.001 | |
| AX38812 | 0.001 | |
| AX38813 | 0.001 | 0.001 |
| AX38814 | 0.001 | |
| AX38815 | 0.002 | |
| AX38816 | 0.001 | |
| AX38817 | 0.005 | |
| AX38818 | 0.001 | |
| AX38819 | 0.001 | |
| AX38820 | 0.001 | |
| AX38821 | 0.001 | |
| AX38822 | 0.001 | |

ANALYSTE: Mira Godbout BSc.

DRILL HOLE NO: RP-97-9

PAGE 2 OF 9

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|-----|------|--------|-----------|----------|----|----------|--------|----|----------|--|----------|-------|---|--------------------|--------------------------------------|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J/F J | A2 | QZ | PY | | | | | | |
| 70.4 | | | | | | | CAS | | | | | | | | | | | | | 0-70.4 CASING |
| 71.4 | | M | F | MSV | GG | BLZ | MVO | | | | | 30 | | | | AX38823 | 1.0 | c | .001 | (70.4-100.5) MAFIC VOLCANICS |
| 73.0 | | | | | | | | | | | | .1 | | | | 824 | 1.6 | c | .013 | - LT. GG COLOR, MSV., NON-FOL. |
| 78.0 | | | | | | | | | | | | | | | | 825 | 5.0 | c | .004 | - HARD + NOT EASY TO SCRATCH |
| 81.6 | | | | | | | | | | | | | | | | 826 | 3.6 | c | .001 | WITH A KNIFE, LT. GN. BLEACHED |
| 85.2 | | | | | SIL | | | V | 10 | | | 50 | | 1.0 | | 827 | 3.6 | c | .016 | CHERTY SECTIONS, NUMEROUS |
| 88.0 | | | | | | | | | | | | 5 | | .5 | | 828 | 2.8 | c | .013 | WH. QZ/ANK VEINS WITH F. DIS. |
| 93.0 | | | | | | | | | | | | 2 | | | | 829 | 5.0 | c | .003 | PY., STRONG PERVASIVE ANK. ALT. |
| 98.0 | | | | | | | | | | | | | | | | 830 | 5.0 | c | .011 | (70.4-71.4) 4" WH. QZ/ANK VEIN |
| 100.5 | | | | | | | | | | | | | | 1.0 | | 831 | 2.5 | c | .132 | - CHL. FILLED FRACT., NO VIS. PY. |
| | | | | | | | | | | | | | | | | | | | | (81.6-85.2) 2-2" LOW ANGLE WH. QZ/ |
| | | | | | | | | | | | | | | | | | | | | ANK VEINS, F. DIS. PY. |
| | | | | | | | | | | | | | | | | | | | | (85.2-100.5) LT. GG CHERTY MVO |
| | | | | | | | | | | | | | | | | | | | | - WITH .5-1% F. DIS. PY. |
| 102.5 | | M | F | MSV | G4 | TLC | MMF | | | | | 5 | | .1 | | 832 | 2.0 | c | .040 | (100.5-188.9) ANK. ALT. MMF |
| 104.1 | | | | BRX | | | | | | | | 25 | | 1.0 | | 833 | 1.6 | c | .122 | - DK. G4., TALC/CHL RICH, SOFT |
| 108.0 | | B | | MSV | | | | | | | | .1 | | .1 | | 834 | 3.9 | c | .013 | + EASY TO SCRATCH WITH KNIFE |
| 188.9 | | M | F | MSV | G4 | TLC | MMF | | | | | .1 | | .1 | | 835 | 80.9 | G | .002 | (100.5-102.5) 1/2" WH. QZ/ANK STRGS. |
| | | | | | | | | | | | | | | | | | | | | (102.5-104.1) BRX WITH WH. QZ/ANK |
| | | | | | | | | | | | | | | | | | | | | FRAGS, F. DIS. PY. |
| 249.0 | | M | F | MSV | GN. | CHL. | MVO | | | | | | | | | 836 | 60.1 | G | .001 | (188.9-249) CHLORITIC MAFIC VOLC. |
| | | | | | | | | | | | | | | | | | | | | - DK. GN. CHL. RICH MVO |
| | | | | | | | | | | | | | | | | | | | | - NUMEROUS WH. ANK PORPHYROBLASTS |
| | | | | | | | | | | | | | | | | | | | | - HARD + NOT EASY TO SCRATCH |
| | | | | | | | | | | | | | | | | | | | | - MNR F. DIS. PY. AND QZ/ANK STRGS. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|---|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 252 | | M | F | FOL | GY | TLC | | UMF | V | 60 | | | 10 | .1 | | AX38838 | 3.0 | c | .001 | (249-265.6) FOLIATED ULTRAMAFICS |
| 251 | | | | | | | | | | | | | .1 | | | 839 | 5.0 | c | .001 | - DK. GY. CHL. RICH UMF, SOFT |
| 261.2 | | | | | | | | | | | | | | | | 840 | 4.2 | c | .001 | + EASILY SCRATCHED WITH KNIFE |
| 262.5 | | | | MSU | GY | ANK | | GCRB | | | | | | | | 841 | 1.3 | c | .001 | - NUMEROUS WH. QZ/ANK VNLETS. |
| 265.6 | | | | FOL | | | | UMF | F | 30 | | | | | | 842 | 3.1 | c | .001 | - MNR F. PY. |
| | | | | | | | | | | | | | | | | | | | | (249-252) 1/4" - 2" WH. QZ/ANK VEINS |
| | | | | | | | | | | | | | | | | | | | | (261.2-262.5) GY. CARB |
| | | | | | | | | | | | | | | | | | | | | - MNR CUBIC PY. |
| | | | | | | | | | | | | | | | | | | | | (265.6-286.8) MAFIC VOLCANICS |
| | | | | | | | | | | | | | | | | | | | | - DK. GN. CHL. RICH MVO WITH |
| | | | | | | | | | | | | | | | | | | | | NUMEROUS WH. QZ/ANK VEINS |
| | | | | | | | | | | | | | | | | | | | | CONTAINING F. DIS. PY. |
| 270.6 | | M | F | MSU | GN | CHL | | MVO | V | 30 | | | 30 | 1.0 | | 843 | 5.0 | c | .001 | (265.6-270.6) 7", 2-3" WH. QZ/ANK VEINS |
| | | | | | | | | | | | | | | | | | | | | - F. DIS. PY. |
| 275.6 | | M | F | FOL | GN | CHL | | MVO | F | 50 | | | 2 | .1 | | 844 | 5.0 | c | .001 | (270.6-275.6) BLEACHED ANK AUT. MVO |
| | | | | | | | | | | | | | | | | | | | | - 1% F. DIS. PY., WELL FOL. |
| 280.6 | | B | F | FOL | GN | CHL | | MVO | V | 30 | | | 20 | 1.0 | | 845 | 5.0 | c | .001 | (275.6-280.6) 1/4" - 2" WH. QZ/ANK VEINS |
| 285.6 | | M | | | | | | | F | 20 | | | 10 | 5.0 | | 846 | 5.0 | c | .003 | (280.6-285.6) 1/4" - 1/2" WH. QZ/ANK STRGS. |
| 286.8 | | | | | | | | | | | | | 5 | 1.0 | | 847 | 1.2 | c | .001 | - 5% F. DIS. AND CUBIC PY. IN WR. |
| | | | | | | | | | | | | | | | | | | | | (285.6-286.8) 1" LOW ANGLE WH. |
| | | | | | | | | | | | | | | | | | | | | QZ/ANK VEIN, CUBIC PY. IN WR. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|-----|----------|---------|------|--------------|----------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | Qz | Py | | | | | | | |
| 306.7 | | M | F | FOL | GY | TLC | | UMF | F | 20 | | | .1 | | .1 | | AX38848 | 19.9 | 6 | .002 | (286.8-306.7) ULTRAMAFICS - DK. GY., TALC/CHL. RICH UMF - SOFT + EASY TO SCRATCH - WELL FOLIATED - LT. GN. TALC AND WH. QZ IANK VN LETS |
| 309.0 | | B | F | MSV | GN | CHL | | MVO | | | | | 20 | | .1 | | 849 | 2.3 | c | .003 | (306.7-309) CHLORTIC MAFIC VOLCANICS - DK. GN, BROKEN, BLOCKY CORE, SOFT + EASY TO SCRATCH, NUMEROUS WH. QZ IANK VEINS, CUBIC PY. |
| 313.3 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | | .1 | | 850 | 4.3 | c | .017 | (309-315.3) ULTRAMAFICS |
| 315.3 | | I | I | I | I | I | | I | | | | | .1 | | .1 | | 851 | 2.0 | c | .002 | - DK. GY. TALC/CHL RICH UMF, MINOR WH. QZ/IANK STRGS. |
| 318.0 | | M | F | MSV | GY | SIL | | UMF | | | | | 30 | | .1 | | 852 | 2.7 | c | .002 | (315.3-327.3) MIX OF DK. GY. UMF AND LT. GN. MVO WITH QZ/IANK FLOODING |
| 322.2 | | | | | | | | | | | | | 50 | | | | 853 | 4.2 | c | .001 | |
| 324.2 | | | | | | | | | | | | | 30 | | | | 854 | 2.0 | c | .017 | (327.3-331.1) FOLIATED MAFIC VOLCANICS |
| 327.3 | | | | | | | | | | | | | 20 | | .5 | | 855 | 3.1 | c | .001 | - LT. GN. CHL. RICH WITH QZ/IANK STRG. |
| 331.1 | | M | F | FOL | GN | CHL | | MVO | F | 30 | | | 5 | | 1.0 | | 856 | 3.8 | c | .002 | - F. DIS. PY. |
| 344.7 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | | .1 | | 857 | 13.6 | G | .003 | (331.1-344.7) ULTRAMAFICS - DK. GY., TALC/CHL RICH, F. DIS. MT. |
| 351.0 | | M | F | MSV | GN | CHL | | MVO | | | | | .1 | | .1 | | 858 | 6.3 | G | .001 | (344.7-351) MIX OF DK. GY UMF AND DK. GN. MVO |

DRILL HOLE NO: RP-97-9

PAGE 5 OF 9

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 398 | | M | F | FOL | GY | TLC | | UMF | F | 30 | | | .1 | .1 | AX38859 | 47.0 | G | .003 | (351-401.8) ULTRAMAFICS | |
| 401.8 | | | | | | | | | | | | | | | 860 | 3.8 | c | .007 | - WELL FOL., DK. GY., TAN/CHL RICH | |
| 405.4 | | M | F | FOL | GN | HEM | | MVO | F | 30 | | | 20 | 1.0 | 861 | 3.6 | c | .005 | (401.8-409) MAFIC VOLCANICS | |
| 409 | | | | | | | | | | | | | | | 862 | 3.6 | c | .001 | - NARROW RED HEM., TAN QZ/ANK BANDS, F. DIS. PY. | |
| 413 | | M | F | MSV | GY | SIL | | UMF | | | | | 20 | .1 | 863 | 4.0 | c | .004 | (409-417.8) QZ/ANK FLOODED ULTRAMAFICS | |
| 417.8 | | | | | | | | | | | | | | | 864 | 4.8 | c | .003 | - DK. GY., TAN/CHL RICH, NUMEROUS QZ/ANK AND QZ UNLETS | |
| 420 | | M | F | FOL | GN | CHL | | MVO | | | | | 5 | .1 | 865 | 2.2 | c | .002 | (417.8-436.7) FOLIATED MAFIC VOLCANICS | |
| 423 | | | | | | | | | | | | | | | 866 | 3.0 | c | .001 | - LT. GN., WELL FOL., CHL. RICH | |
| 428 | | | | | | | | | | | | | | | 867 | 5.0 | c | .001 | - WH. QZ/ANK STRGS PARALLEL TO FOL. | |
| 433 | | | | | | | | | | | | | | | 868 | 5.0 | c | .001 | - F. DIS. PY. | |
| 436.7 | | | | | | | | | | | | | | | 869 | 3.7 | c | .001 | (436.7-459.1) ULTRAMAFICS | |
| 459.1 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | .1 | 870 | 12.4 | G | .001 | (459.1-464.2) MAFIC VOLCANICS | |
| 464.2 | | M | F | MSV | GN | CHL | | MVO | | | | | .1 | .1 | 871 | 5.1 | c | .001 | (464.2-(516.1) ULTRAMAFICS | |
| 516.1 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | .1 | 872 | 51.9 | G | .001 | (516.1-533.4) GY. CARB. | |
| 518.0 | | M | F | FOL | GY | ANK | | GCRB | F | 60 | | | 20 | .5 | 873 | 1.9 | c | .001 | - GG, WELL FOL., QZ/ANK STWK. | |
| 523.0 | | | | | | | | | | | | | 20 | .1 | 874 | 5.0 | c | .001 | - CHL. INFILLING FRACT. | |
| 528.0 | | B | | MSV | | | | | | | | | 30 | .1 | 875 | 5.0 | c | .001 | - WK. Fy. AVT., HARD, SILC | |
| 531.7 | | M | | | | | | | | | | | 30 | .1 | 876 | 3.7 | c | .001 | (533.4-540.6) BROWN CARB | |
| 533.4 | | | | | | | | | | | | | 30 | .1 | 877 | 1.7 | c | .006 | - TAN COLOR, SER. RICH, MSV, | |
| 538.4 | | | | | | SER | | BCRB | | | | | .1 | .1 | 878 | 5.0 | c | .001 | CHL. INFILL FRACT., NR WH. | |
| 540.6 | | B | | | | | | | | | | | .1 | .1 | 879 | 2.2 | c | .006 | QZ/ANK STRGS., DR. LIN. PATCHES | |
| | | | | | | | | | | | | | | | | | | | START @ 536.2 | |
| | | | | | | | | | | | | | | | | | | | (538.4-540.6) BLOCKY, BROKEN CORE | |

DRILL HOLE NO: RP-97-9

PAGE 6 OF 9

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|-----|----------|---------|-----|--------------------|----------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | | |
| 543 | | M | F | HOM | WH | SIL | | QV | | | | | 90 | | .1 | | AX38880 | 2.4 | c | .002 | (540.6-543) WH. QZ/ANK VEIN, CHL. INFILL. FRACT., NO VIS. SULPHIDES |
| 546.3 | | M | F | MSV | GY | ANK | | GCRB | | | | | 20 | | .1 | | 881 | 3.3 | c | .008 | (543-547.8) GY. CARB. |
| 547.8 | | I | I | I | I | I | | I | | | | | 1 | | 1 | | 882 | 1.5 | c | .002 | - WH. QZ/ANK STWK |
| 549 | | B | F | BX | OR | LIM | | FZ | | | | | 5 | | .1 | | 883 | 1.2 | c | .002 | (547.8-549) FAULT ZONE |
| | | | | | | | | | | | | | | | | | | | | | - PERVASIVE OR. LIM. ALT., WH. QZ/ANK FRAGS., BROKEN, BLOCKY CORE |
| 552.6 | | M | F | HOM | WH | SIL | | QV | | | | | 90 | | 1.0 | | 884 | 3.6 | c | .015 | (549-552.6) SILICIFIED ZONE OR QV - DK. GN. CHL. FILLED FRACT. - F. DIS. PY. |
| 557.6 | | B | F | MSV | GY | LIM | | GCRB | | | | | 20 | | .1 | | 885 | 5.0 | c | .002 | (552.6-562) GY CARB |
| 562 | | I | I | I | I | I | | I | | | | | 1 | | 1 | | 886 | 4.4 | c | .001 | - WITH OR. LIM. ALONG FRACT. SURFACES, WH. QZ/ANK STWK |
| 564.7 | | M | F | MSV | GY | ANK | | GCRB | | | | | 5 | | .1 | | 887 | 2.7 | c | .029 | (562-567.7) GY CARB. |
| 567.7 | | I | I | I | I | I | | I | | | | | 1 | | 1 | | 888 | 3.0 | c | .003 | - WH. QZ/ANK STOCK WORK |
| 571.6 | | M | F | MSV | GN | Fu | | FCRB | | | | | 1 | | 1 | | 889 | 3.9 | c | .001 | (567.7-571.6) GN. Fu. CARB - WH. QZ/ANK STWK |
| 574.8 | | M | F | HOM | WH | SIL | | QV | V50 | | | | 90 | | .1 | | 890 | 3.2 | c | .001 | (571.6-574.8) WH. QZ/ANK VEIN - CHL., Fu. INFILL FRACT. |
| 577.4 | | M | F | MSV | BN | SIL | | BCRB | | | | | 5 | | .5 | | 891 | 2.6 | c | .014 | (574.8-577.4) BROWN CARB. - TN COLOR, SER. RICH, SILIC. - BK CHL. FILLED FRACT. - F. DIS. PY., NARROW WH. QZ/ANK STRGS. |

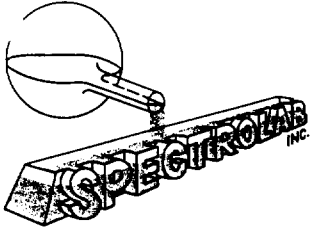
DRILL HOLE NO: RP-97-9

PAGE 7 OF 9

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|-----------|--------|-----|-----|--------|----|----------|----|----------|---------|-----|--------------|----------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | B | A1 | J | A2 | | | | | | QZ |
| 578.2 | | M | F | MSV | GN | Fu | | FCRB | | | | | | .1 | .1 | AX38892 | 0.8 | c | .020 | (577.4-578.2) GN. Fu. CARB - F. DIS. PY. |
| 581 | | B | F | FOL | BN | SER | | BCRB | F | 40 | | | | 5 | 1.0 | 893 | 2.8 | c | .536 | (578.2-581) BN. SER RICH CARB - FOL., F. DIS. PY., QZ STRGS. ALONG FOL. |
| 583.3 | | M | F | MSV | BN | SIL | | BCRB | | | | | | .1 | 2.0 | 894 | 2.3 | c | .444 | (581-583.3) SILIC. BN. SER. CARB - QZ/ANK INFIL. FRACT., F. AND C. DIS. PY. |
| 585.4 | | M | F | COT | GN | Fu | | FCRB | | | | | | 10 | .1 | 895 | 2.1 | c | .028 | (583.3-585.4) GN. Fu. CARB. - CONTORTED FOL., CHL. FILLED FRACT. |
| 588 | | M | F | MSV | BN | SIL | | BCRB | | | | | | .1 | 2.0 | 896 | 2.6 | c | .070 | (585.4-588) AS 581-583.3 |
| 593 | | B | F | FOL | BN | SER | | BCRB | F | 30 | | | | .1 | 2.0 | 897 | 5.0 | c | .128 | (588-597.6) FOL. SILIC. BN. SER. CARB |
| 597.6 | | M | F | FOL | GY | CHL | | CCRB | | | | | | .1 | .1 | 898 | 4.6 | c | .050 | (597.6-606.9) FOL. CHL. CARB |
| 602 | | B | | | | | | | F | 50 | | | | | | 899 | 4.4 | c | .007 | (606.9-607.9) FOL. GN. Fu. CARB |
| 606.9 | | M | | | | | | | | | | | | | | 900 | 4.9 | c | .018 | (607.9-616) FOL. CHL. CARB |
| 607.9 | | M | F | FOL | GN | Fu | | FCRB | | | | | | 5 | .1 | 901 | 1.0 | c | .004 | - WITH TN. BN. CARB BANDS |
| 612 | | M | F | FOL | GY | CHL | | CCRB | F | 50 | | | | 2 | 1.0 | 902 | 4.1 | c | .036 | (616-618.5) GY. CHL. CARB |
| 616 | | | | | | | | | | | | | | | | 903 | 4.0 | c | .024 | - WITH NUMEROUS WH. QZ/ANK VEINS |
| 618.5 | | | | | | | | | | | | | | | | 904 | 2.5 | c | .001 | (618.5-628.3) BN. CARB. - MNR F.A. |
| 623.5 | | M | F | MSV | BN | SER | | BCRB | | | | | | .1 | .5 | 905 | 5.0 | c | .001 | - SER. RICH, WH. QZ/ANK VNLETS |
| 626.7 | | | | | | | | | | | | | | | | 906 | 3.2 | c | .012 | - WK. FOL., CHL. FIL. FRACT. |
| 628.3 | | | | | | | | | | | | | | | | 907 | 1.6 | c | .012 | (628.3-655.2) GN. Fu. CARB. |
| 633 | | M | F | MSV | GN | Fu | | FCRB | | | | | | 5 | .1 | 908 | 4.7 | c | .192 | - MSV TO WK. FOL. |
| 638 | | | | | | | | | | | | | | | | 909 | 5.0 | c | .018 | - CHL. INFILLING FRACT. |
| 643 | | | | | | | | | | | | | | | | 910 | 5.0 | c | .022 | - MNR WH. QZ/ANK STRGS. |
| 648 | | | | | | | | | | | | | | | | 911 | 5.0 | c | .034 | |

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|-----------|--------|------|----|--------|----|----------|----|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | |
| 653 | | M | F | MSV | GN | F4 | | FCRB | | | | 5 | .1 | | AX38912 | 5.0 | c | .024 | |
| 655.2 | | | | | | | | | | | | 1 | | | 913 | 2.2 | c | .012 | |
| 659.9 | | M | F | HOM | GY | SIL | | GCRB | | | | 60 | 2.0 | | 914 | 4.7 | c | .282 | (655.2-659.9) SILICIFIED GREY CARB. - LT. GY, HARD, SILIC., CHL., FN. AND SER. INFILLING FRACTURES, PY. IS F. DIS. AND OCCURS AS STRGS. |
| 663 | | M | F | FOL | BN | SER | | BCRB | F 30 | | | 5 | 2.0 | | 915 | 3.1 | c | .282 | (659.9-688) BROWN CARB |
| 668 | | | | | | | | | | | | 2 | | | 916 | 5.0 | c | .250 | - TAN, SER. RICH, WELL FOL., THIN |
| 673 | | | | | | | | | | | | 5 | | | 917 | 5.0 | c | .088 | GREY QZ / ANK STRGS PARALLEL |
| 678 | | | | | | | | | | | | 2 | | | 918 | 5.0 | c | .084 | TO FOL., F. DIS. PY., SER. AND |
| 683 | | | | | | | | | F 20 | | | | 1.0 | | 919 | 5.0 | c | .046 | CHL. FRACT. INFILLING, PY. STRGS. |
| 688 | | | | | | | | | | | | | | | 920 | 5.0 | c | .124 | |
| 693 | | M | F | MSV | GY | SIL | | GCRB | | | | 5 | .1 | | 921 | 5.0 | c | .022 | (688-703.7) GY. CARB |
| 698 | | | | | | | | | | | | | | | 922 | 5.0 | c | .004 | - LT. GY, HARD + SILIC., MNR WH. |
| 701.7 | | | | | | | | | | | | | | | 923 | 3.7 | c | .006 | QZ / ANK VNLETS, CHL. FRACT. INFILL. |
| 703.7 | | | | | | | | | | | | | | | 924 | 2.0 | c | .013 | MSV + NON. FOL., MNR. F. DIS. PY. |
| 707 | | M | F | BRX | GY | CHL | | CCRB | | | | .1 | .1 | | 925 | 3.3 | c | .089 | (703.7-709) CHLORITIC CARB |
| 709 | | | | | | | | | | | | .1 | .1 | | 926 | 2.0 | c | .010 | - BRECCIATED, TAN QZ / ANK FRAGS SURROUNDED BY DK. GY. CHL., CONTORTED FOL. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | IT | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|----|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 714.0 | | M | F | FOL | GY | CHL | | CCRB | F | 30 | | | .1 | .1 | | AX38927 | 5.0 | | .011 | (709-725) CHLORITIC CARB - WELL FOLIATED, DK. GY. AND CHL. RICH UMF, STRONG ANK. ALT., SILIC. WITH CHL. INFIL FRACT., HARD + NOT EASY TO SCRATCH, MNR. F. DIS. PY. |
| 768.0 | | M | F | MSV | GY | CHL | | UMF | | | | | .1 | .1 | | 928 | 54.0 | G | .006 | (725-798) ANK. ALT. ULTRAMAFICS |
| 798.0 | | 1 | 1 | 1 | 1 | 1 | | 1 | | | | | .1 | .1 | | 929 | 30.0 | G | .006 | - DK. GY. CHL. RICH UMF WITH PERVASIVE ANK, ALT., MSV AND WELL FOL. SECTIONS, MNR. F. DIS. PY. AND PY. RIMMING QZ/ANK UNLETS |
| 798.0 | | | | | | | | | | | | | | | | | | | | EOH = 798' |



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

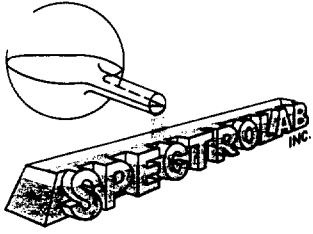
CERTIFICAT D'ANALYSES N°: IG-1362-A DATE: 17/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38823 | 0.001 | |
| AX38824 | 0.013 | |
| AX38825 | 0.004 | |
| AX38826 | 0.001 | |
| AX38827 | 0.016 | |
| AX38828 | 0.013 | |
| AX38829 | 0.003 | |
| AX38830 | 0.011 | |
| AX38831 | 0.132 | |
| AX38832 | 0.040 | 0.037 |
| AX38833 | 0.122 | |
| AX38834 | 0.013 | |
| AX38835 | 0.002 | |
| AX38836 | 0.001 | |
| AX38837 | 0.004 | |
| AX38838 | <0.001 | |
| AX38839 | <0.001 | |
| AX38840 | 0.001 | |
| AX38841 | 0.001 | |
| AX38842 | <0.001 | 0.001 |

97-9

ANALYSTE: Maria Godbout BSc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

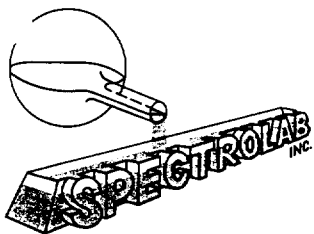
CERTIFICAT D'ANALYSES N°: IG-1362-B DATE: 17/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38843 | 0.001 | |
| AX38844 | <0.001 | |
| AX38845 | <0.001 | |
| AX38846 | 0.003 | |
| AX38847 | 0.001 | |
| AX38848 | 0.002 | |
| AX38849 | 0.003 | |
| AX38850 | 0.017 | |
| AX38851 | 0.002 | |
| AX38852 | 0.002 | 0.002 |
| AX38853 | 0.001 | |
| AX38854 | 0.017 | |
| AX38855 | 0.001 | |
| AX38856 | 0.002 | |
| AX38857 | 0.003 | |
| AX38858 | 0.001 | |
| AX38859 | 0.003 | |
| AX38860 | 0.007 | |
| AX38861 | 0.005 | |
| AX38862 | 0.001 | 0.001 |

97-9

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

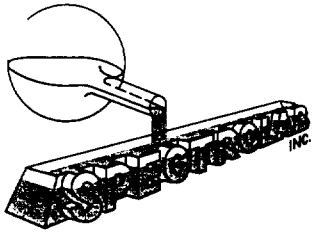
CERTIFICAT D'ANALYSES N°: IG-1362-C DATE: 17/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38863 | 0.004 | |
| AX38864 | 0.003 | |
| AX38865 | 0.002 | |
| AX38866 | <0.001 | |
| AX38867 | <0.001 | |
| AX38868 | <0.001 | |
| AX38869 | <0.001 | |
| AX38870 | 0.001 | |
| AX38871 | <0.001 | |
| AX38872 | 0.001 | 0.001 |
| AX38873 | 0.001 | |
| AX38874 | 0.001 | |
| AX38875 | <0.001 | |
| AX38876 | 0.001 | |
| AX38877 | 0.006 | |
| AX38878 | 0.001 | |
| AX38879 | 0.006 | |
| AX38880 | 0.002 | |
| AX38881 | 0.008 | |
| AX38882 | 0.002 | 0.003 |

97-9

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

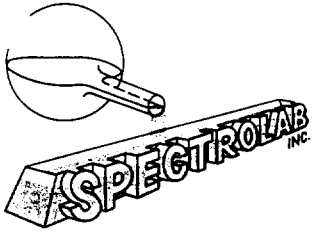
CERTIFICAT D'ANALYSES N°: IG-1362-D DATE: 17/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 19 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX38883 | 0.002 | | |
| AX38884 | 0.015 | | |
| AX38885 | 0.002 | | |
| AX38886 | 0.001 | | |
| AX38887 | 0.029 | | |
| AX38888 | 0.003 | | |
| AX38889 | 0.001 | | |
| AX38890 | <0.001 | | |
| AX38891 | 0.014 | | |
| AX38892 | 0.020 | 0.019 | |
| AX38893 | 0.496 | | 0.575 |
| AX38894 | 0.492 | | 0.396 |
| AX38895 | 0.028 | | |
| AX38896 | 0.070 | | |
| AX38897 | 0.128 | | |
| AX38898 | 0.050 | | |
| AX38899 | 0.007 | | |
| AX38900 | 0.018 | | |
| AX38901 | 0.004 | | |

97-9

ANALYSTE: Mirav Godbout BSc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

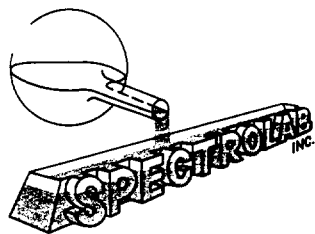
CERTIFICAT D'ANALYSES N°: IG-1362-E DATE: 17/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 04/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX38902 | 0.036 | | |
| AX38903 | 0.024 | | |
| AX38904 | <0.001 | | |
| AX38905 | <0.001 | | |
| AX38906 | 0.012 | | |
| AX38907 | 0.012 | | |
| AX38908 | 0.192 | | |
| AX38909 | 0.018 | | |
| AX38910 | 0.022 | | |
| AX38911 | 0.034 | 0.034 | |
| AX38912 | 0.024 | | |
| AX38913 | 0.012 | | |
| AX38914 | 0.292 | | 0.272 |
| AX38915 | 0.294 | | 0.279 |
| AX38916 | 0.256 | | 0.243 |
| AX38917 | 0.088 | | |
| AX38918 | 0.084 | | |
| AX38919 | 0.046 | | |
| AX38920 | 0.124 | | |
| AX38921 | 0.022 | 0.023 | |

97-9

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1362-F DATE: 17/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 8 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 04/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38922 | 0.004 | |
| AX38923 | 0.006 | |
| AX38924 | 0.013 | |
| AX38925 | 0.009 | |
| AX38926 | 0.010 | |
| AX38927 | 0.011 | |
| AX38928 | 0.006 | |
| AX38929 | 0.005 | 0.007 |

97-9

ANALYSTE: Mira Godbout BS



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS PROJECT: NIGHTHAWK RAMP ZONE LOGGED BY: R. MAASS DATE LOGGED: FEB 26/97 DRILL HOLE NO: RP-97-10

Surface Grid: NORTHING 873.50 EASTING 3897.00 ELEVATION 10926.00 LENGTH 899.0 SECTION 3900 E LEVEL SFZ

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | -63 | 899 | 015 | 51 | | | | | | | | | |
| 200 | 003 | 58 | | | | | | | | | | | | |
| 400 | 003 | 57 | | | | | | | | | | | | |
| 600 | 010 | 55 | | | | | | | | | | | | |
| 800 | 010 | 53 | | | | | | | | | | | | |

START DATE: FEB 23 1997

FINISH DATE: FEB 26 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE including

RESULTS: .181/82.5 uncut } @ 595.5-678 → .494
.112/82.5 cut } .559
.111/73.8 @ 694.2-768 RAMP ZONE } .156

WHY HOLE TERMINATED: TARGET INTERSECTED → includes .137

CORE SIZE: NQ TO 61.2 BQ 61.2 - EOH .112

CASING: 58.5' Pulled

HOLE CEMENTED: Yes.

NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch

.10.5 @ 595.5-606 uncut
.13.8 @ 618-631.8 "
.5.6 @ 672.4-678 "
.41.3 @ 694.2-735.5
.15.5 @ 752.5-768.0

ft
 m

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | Qz | PY | | | | | | |
| 58.5 | | | | | | | CAS | | | | | | | | | | | | | (0-58.5) CASING |
| 79 | | M | F | MSU | GG | CHL | MVO | | | | | | | .1 | | AX38930 | 20.5 | 6 | .002 | (58.5-79) CHLORITIC MAFIC VOLCANICS - DK. GG COLOR WITH MNR WH. QZ/ CL VEINS AND STRGS. MSU + NON-FOL. MNR. F. PY. |
| 135.1 | | M | F | FOL | GY | TLC | UMF | F | 60 | | | | | .1 | | 931 | 56.1 | 6 | .001 | (79-135.1) FOLIATED ULTRAMAFICS - OK. GY. TALC/CHL. RICH UMF WITH WH. QZ/ANK VNLETS PARALLEL TO FOL. SOFT + EASY TO SCRATCH |
| 149.5 | | M | F | MSU | GY | TLC | UMF | | | | | | | .1 | | 932 | 14.4 | 6 | .003 | (135.1-149.5) AS ABOVE, NON-FOL |
| 196.4 | | M | F | MSU | GY | TLC | UMF | | | | | | | | | 933 | 46.9 | 6 | .002 | (149.5-196.4) ULTRAMAFICS - DK. GY. TALC/CHL. RICH MSU |
| 238 | | M | F | FOL | GY | SIL | UMF | | | | | 20 | | .1 | | 934 | 41.6 | 6 | .002 | (196.4-240.7) FOLIATED ULTRAMAFICS - NUMEROUS WH. QZ/ANK VNLETS |
| 240.7 | | | | | | | | | | | | | | | | 935 | 2.1 | c | .002 | - CONTORTED FOL. TALC/CHL/ANK RICH, MNR F. DIS. PY. |
| 243 | | M | F | HOM | WH | SIL | QTZ | | | | | 90 | | .1 | | 936 | 2.3 | c | .032 | (240.7-277) QUARTZ ZONE |
| 245.1 | | | | | | | QTZ | | | | | 90 | | | | 937 | 2.1 | c | .001 | - 50% - 90% WH. BULK QTZ. |
| 248.8 | | | | | | | QTZ | | | | | 20 | | | | 938 | 3.7 | c | .001 | WITH CHL INFILLING FRACT. |
| 253.3 | | | | | | | QTZ | | | | | 90 | | | | 939 | 4.5 | c | .001 | MNR FN, SER. IN FRACT. |
| 257.8 | | | | | | | QTZ | | | | | 70 | | | | 940 | 4.5 | c | .002 | - SECTIONS OF GY, BROWN SILC. |
| 260.6 | | | | | | | BCRB | | | | | 20 | | | | 941 | 2.8 | c | .003 | CARB. MNR. F. DIS. PY. |
| 264.9 | | | | | | | QTZ | | | | | 90 | | | | 942 | 4.3 | c | .001 | (245.1-248.8) GY CARB |
| 268 | | | | | | | QTZ | | | | | 80 | | | | 943 | 3.1 | c | .001 | (257.8-260.6) BROWN CARB |
| 272 | | | | | | | QTZ | | | | | 60 | | | | 944 | 4.0 | c | .002 | (273.8-275.3) GN. FN. CARB |
| 277 | | | | | | | | | | | | 70 | | | | 945 | 5.0 | c | .002 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | |
| 281.1 | | M | F | STWK | GY | ANK | | GCRB | | | | | 40 | .1 | | AX38946 | 4.1 | c | .004 | (277-281.1) GY. CARB - WH. QZ/ANK STWK., HARD, SILIC., COT FOL., MNR. F. PY. |
| 282.1 | | M | F | STWK | GN | Fu | | FCRB | | | | | 20 | .1 | | 947 | 1.0 | c | .001 | (281.1-282.1) GN. Fu. CARB. - WH. QZ/ANK STWK |
| 285 | | M | F | STWK | GY | ANK | | GCRB | | | | | 30 | .1 | | 948 | 2.9 | c | .001 | (282.1-298) GY. CARB - MSV, SILIC. |
| 288 | | | | | | | | | | | | | | | | 949 | 3.0 | c | .001 | - WH. QZ/ANK STWK., MNR F. PY. |
| 293 | | | | | | | | | | | | | | | | 950 | 5.0 | c | .001 | (298-329.7) SILIC. ULTRAMAFICS |
| 298 | | | | | | | | | | | | | | | | 951 | 5.0 | c | .001 | - DK. GY. TALC/CHL. RICH, NUMEROUS |
| 303 | | M | F | MSV | GY | SIL | | UMF | | | | | 20 | .1 | | 952 | 5.0 | c | .001 | WH. QZ/ANK STRGS. ALONG FOL. |
| 308 | | | | | | | | | | | | | | | | 953 | 5.0 | c | .001 | (329.7-) ULTRAMAFICS |
| 313 | | | | | | | | | | | | | | | | 954 | 5.0 | c | .001 | - DK. GY., TALC/CHL RICH, SOFT |
| 318 | | | | | | | | | | | | | | | | 955 | 5.0 | c | .001 | + EASY TO SCRATCH, MNR WH. |
| 323 | | | | | | | | | | | | | | | | 956 | 5.0 | c | .001 | QZ/ANK STRGS., WK. FOL., MNR. |
| 326 | | | | | | | | | | | | | | | | 957 | 3.0 | c | .001 | F. PY. |
| 329.7 | | | | | | | | | | | | | | | | 958 | 3.7 | c | .002 | (360.1-360.9) DK. GN., CHL., MVO |
| 370 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | .1 | | 959 | 40.3 | G | .009 | (370-372.1) DK. GN. CHL., MVO, BROKEN, BLOCKY CORE RQD=30% |
| 373 | | B | F | MSV | GN | CHL | | MVO | V | 60 | | | 20 | .1 | | 960 | 3.0 | c | .002 | (372.1-373) WH. QZ/ANK VEIN |
| 378 | | M | F | STWK | GY | ANK | | GCRB | | | | | 30 | .1 | | 961 | 5.0 | c | .002 | (373-411.5) GY. CARB |
| 383 | | | | | | | | | | | | | | | | 962 | 5.0 | c | .002 | - LT. GY. COLOR WITH WH. QZ, AND |
| 388 | | | | | | | | | | | | | | | | 963 | 5.0 | c | .003 | TAN QZ/ANK STWK., MSV + NON-FOL. |
| 393 | | | | | | | | | | | | | 10 | .1 | | 964 | 5.0 | c | .002 | - PERVASIVE ANK. ALT., HARD, SILIC |
| 398 | | | | | | | | | | | | | 20 | | | 965 | 5.0 | c | .006 | + NOT EASY TO SCRATCH, F. DIS. PY. |
| 403 | | | | | | | | | | | | | 40 | | | 966 | 5.0 | c | .002 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|----|------|----|-----|--------|-----------|-----|-----|---|--------|---|----------|-----|----------|-------|---|--------------------|--|
| | | Com | Gr | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | B | A1 | J | A2 | QZ | | | | | |
| 408 | | M | F | STWK | GY | ANK | | GCRB | | | | | | 40 | .1 | AX38967 | 5.0 | c | .003 | |
| 411.5 | | | | | | | | | | | | | | | | 968 | 3.5 | c | .001 | |
| 413.0 | | | | | | | | | | | | | | 70 | .5 | 969 | 1.5 | c | .004 | (411.5-412.1) WH. QZ/ANK VEIN - DK. GN., CHL. FRAGS., F. DIS. PY. (412.1-413) GY. CARB - CHL. FILLED FRACT., F. DIS. PY. - QZ/ANK AND QZ STOCKWORK |
| 416.3 | | M | F | STWK | GY | ANK | | GCRB | | | | | | 20 | .5 | 970 | 3.3 | c | .001 | (413-416.3) AS ABOVE |
| 419 | | M | F | MSV | GN | CHL | | MVO | | | | | | 10 | 2.0 | 971 | 2.7 | c | .004 | (416.3-419) CHLORITIC MAFIC VOLCANICS - TAN SER. WISPS, RED K-FELDSPAR DYKELETS, 2% F. DIS. PY. |
| 423 | | M | F | STWK | GY | ANK | | GCRB | | | | | | 50 | .5 | 972 | 4.0 | c | .002 | (419-423) QUARTZ FLOODED YMF - QZ, QZ/ANK STOCKWORK - F. DIS. PY. IN CHL. FILLED FRACT. |
| 428 | | M | F | FOL | GY | TLC | | YMF | | | | | | 10 | .1 | 973 | 5.0 | c | .002 | (423-428) FOLIATED YMF - COT FOL., QZ, QZ/ANK STWK |
| 430.6 | | M | F | MSV | GY | TLC | | YMF | | | | | | .1 | .1 | 974 | 2.6 | c | .003 | (428-430.6) TALC/CHL RICH YMF |
| 432.8 | | M | F | FOL | GN | CHL | | MVO | | | | | | 20 | .1 | 975 | 2.2 | c | .002 | (430.6-437.2) FOLIATED MVO |
| 437.2 | | | | | | | | | | | | | | 40 | .1 | 976 | 4.4 | c | .001 | - COT FOL., QZ, QZ/ANK STWK |
| 440.9 | | M | F | MSV | GY | TLC | | YMF | | | | | | 5 | .1 | 977 | 2.8 | c | .002 | (437.2-519.6) ULTRAMAFICS |
| 498 | | M | F | MSV | GY | TLC | | YMF | | | | | | .1 | .1 | 978 | 57.1 | G | .002 | - DK. GY., TALC/CHL. RICH YMF |
| 519.6 | | | | | | | | | | | | | | .1 | .1 | 979 | 21.6 | G | .004 | - SOFT + EASY TO SCRATCH - MSV TO WK. FOL., MNR WH. QZ/ANK STRGS., MNR F. PY. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----------------|-----|--------|-----------|-----|----|---|--------|----|----------|-------|----------|-------|---|--------------|----------|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 547.6 | M | F | FOL | GN | CHL | | MMF | F | 40 | | | .1 | .1 | AX38980 | 28.0G | .002 | | (519.6-547.6) ULTRAMAFICS - DK. GN., CHL. MMF, MNR WH. QZ/ ANK VNLETS, WELL FOL. | | |
| 586 | M | F | MSV | GY | TLC | | MMF | | | | | .1 | .1 | 981 | 38.4G | .011 | | (547.6-586) TALC/CHL RICH MMF | | |
| 588 | M | F | COT | GY | TLC | | MMF | | | | | .1 | .5 | 982 | 2.0C | .002 | | (586-595.5) ULTRAMAFICS | | |
| 593 | | | | | | | | | | | | .1 | .5 | 983 | 5.0C | .007 | | - EXTREMELY COT FOL. | | |
| 595.5 | | | | | | | | | | | | .1 | .5 | 984 | 2.5C | .005 | | - THIN QZ STRGS WITH ASSOC. F. PY. | | |
| 596.7 | M | F | ADM | WH | SIL | | QTZ | | | | | 90 | .1 | 985 | 1.2C | .103 | | (595.5-596.7) WH QZ/ANK VEIN - CHL FILLED FRACT. | | |
| 598 | B | F | BX | OR | LIM | | FZ | | | | | 30 | .1 | 986 | 1.3C | .006 | | (596.7-598) FAULT ZONE - BROKEN, BLOCKY CORE RQD=5% - OR. LIM. SURROUNDING WH. QZ/ ANK FRAGS., CHL. IN FRACT. (598-618) SILICIFIED ZONE - MIX OF CHL. CARB AND F ₄ CARB - HIGHLY FRACT. WITH F. PY. INFILLING, QZ FLOODING, CHL. AND F ₄ ALONG FRACT., COT FOL. | | |
| 599.2 | M | F | MSV | GN | F ₄ | | FCRB | | | | | 50 | .5 | 987 | 1.2C | .004 | | (598-599.2) SILICIFIED F ₄ . CARB - CHL., F ₄ . ALONG FRACT. | | |
| 603 | B | F | BX | GY | SIL | | CCRB | | | | | 50 | 10 | 988 | 3.8C | .773 | | (599.2-606) QUARTZ/CHL. BRECCIA | | |
| 606 | M | F | BX | GY | SIL | | CCRB | | | | | 50 | 10 | 989 | 3.0C | .704 | | - BROKEN, BLOCKY TO 603' - WELL MINERALIZED WITH 10% F. CUBIC PY., WH. QZ. FRAGS. | | |
| 607.5 | M | F | MSV | GN | F ₄ | | FCRB | | | | | 30 | .5 | 990 | 1.5C | .016 | | (606-607.5) SILIC. F ₄ CARB | | |

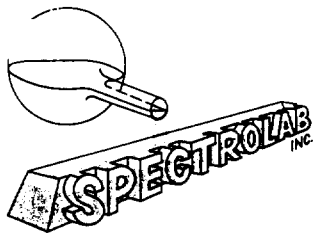
| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | | METALLIC | | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|----|--------|----|----|----------|----|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | B | A1 | J | A2 | QZ | | PY | | | | | | |
| 612.2 | | B | F | BX | GY | SIL | | CCRB | | | | | 50 | | 2 | | AX38991 | 4.7 | c | .10 | (607.5-612.2) QUARTZ/CHL. BRECCIA - BROKEN, BLOCKY CORE WITH CHL.; F. CUBIC PY (290) INFILL. FRACT., WH. QZ/ANK FRAGS | |
| 616 | | B | F | MSV | GN | F4 | | FCRB | | | | | 50 | | .5 | | 992 | 3.8 | c | .008 | (612.2-618) GN. F4. CARB. | |
| 618 | | B | F | MSV | GN | F4 | | FCRB | | | | | 30 | | .5 | | 993 | 2.0 | c | .010 | - CHL. AND F4. INFILLING FRACT. - BROKEN, BLOCKY CORE - WH. QZ/ANK STWK. | |
| 620.9 | | M | F | MSV | GY | SIL | | CCRB | | | | | 50 | | 1.0 | | 994 | 2.9 | c | .278 | (618-620.9) CHL. CARB - NUMEROUS WH. QZ/ANK VEINS - 1% F. DIS. PY. | |
| 623 | | M | F | MSV | GY | SIL | | CCRB | | | | | 50 | | 1.0 | | 995 | 2.1 | c | .06 | (620.9-623) CHL. CARB - FRACT. INFILL. BY CHL., SER. F4., 1% F. DIS. PY. | |
| 624.8 | | M | F | FOL | BN | SIL | | BCRB | F | 40 | | | 50 | | 10 | | 996 | 1.8 | c | 1.54 | (623-628) SILICIFIED BROWN CARB | |
| 628 | | I | I | I | I | SIL | | BCRB | | | | | 1 | | 1 | V6 | 997 | 3.2 | c | 1.10 | - QUARTZ FLOODING, TAN SER. RICH, WELL FOLIATED, MINERALIZED WITH 10% F. CUBIC PY. - PY., SER., CHL., MNR F4. INFILL. FRACT., V6. ASSOC. W. QZ STKG. | |
| 629.8 | | M | F | MSV | GY | ANK | | GCRB | | | | | 5 | | .1 | | 998 | 1.8 | c | .128 | (628-629.8) GY. CARB - CHL. INFILLING FRACT. - WK. GN. F4. ALT. IN SECTIONS | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|--|----------|-------|---|--------------|-------------------------------------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 631.8 | | M | F | MSV | GN | Fu | | FCRB | | | | | 5 | .1 | | AX38999 | 2.0 | c | .010 | (629.8-643.6) GN. Fu. CARB |
| 636.3 | | | | | | | | | | | | | 10 | | | 39000 | 4.5 | c | .013 | - 5-10% WH. QZ/ANK STRGS. |
| 639.0 | | | | | | | | | | | | | 10 | | | AX39751 | 2.7 | c | .044 | - MNR. F. PY. MSV TO WK. |
| 643.6 | | M | F | FOL | | | | | F | 50 | | | 5 | .5 | | 752 | 4.6 | c | .012 | FOL. CHL. INFILLING FRACT. |
| 648 | | M | F | FOL | GY | ANK | | GCRB | | | | | 10 | .5 | | 753 | 4.4 | c | .012 | (643.6-663) FOLIATED GY. CARB. |
| 653 | | | | | | | | | | | | | 5 | .5 | | 754 | 5.0 | c | .005 | - LT. GY. COLOR WITH THIN BN. CARB |
| 658 | | | | | | | | | | | | | 10 | .5 | | 755 | 5.0 | c | .008 | BANDS, SILIC. STRONG ANK. ALT. |
| 663 | | | | | | | | | F | 40 | | | 2 | .5 | | 756 | 5.0 | c | .003 | F. DIS. PY. ASSOC. WITH WH. QZ |
| 668 | | M | F | STWK | GN | Fu | | FCRB | | | | | 2 | .1 | | 757 | 5.0 | c | .005 | (663-672.4) GN. Fu. CARB |
| 672.4 | | | | | | | | | | | | | 2 | .1 | | 758 | 4.4 | c | .008 | - WH. QZ/ANK STWK. MNR. F. PY. |
| 673.6 | | M | F | MSV | BN | SER | | BCRB | | | | | 5 | 1.0 | | 759 | 1.2 | c | .577 | (672.4-673.6) BROWN CARB. |
| 678 | | M | F | MSV | GN | Fu | | FCRB | | | | | 5 | .1 | | 760 | 4.4 | c | .040 | - TAN, SER. RICH. PY. IS F. DIS. |
| 683 | | | | | | | | | | | | | | | | 761 | 5.0 | c | .010 | AND INFILLS FRACT. |
| 688 | | M | F | MSV | BN | SER | | BCRB | | | | | 2 | | | 762 | 5.0 | c | .002 | (673.6-683) GN. Fu. CARB |
| 690 | | | | | | | | | | | | | | | | 763 | 2.0 | c | .001 | - WH. QZ/ANK STWK. MNR. F. PY. |
| 694.2 | | M | F | FOL | BN | SER | | BCRB | F | 40 | | | | | | 764 | 4.2 | c | .001 | (683-694.2) BROWN CARB. |
| 698 | | M | F | FOL | WH | SIL | BCRB | QTZ | | | | | 80 | .1 | | 765 | 3.8 | c | .068 | - SER. RICH. WK. FOL. MNR |
| 703 | | | | | | | | | | | | | | | | 766 | 5.0 | c | .092 | QTZ/ANK STRGS + F. PY. |
| 708 | | | | | | | | | F | 40 | | | | | | 767 | 5.0 | c | .066 | (690-694.2) WELL FOLIATED |
| 713 | | | | | | | | | | | | | | | | 768 | 5.0 | c | .096 | (694.2-728.8) SILICIFIED BROWN CARB |
| 718 | | | | | | | | | | | | | 70 | .1 | | 769 | 5.0 | c | .367 | - INTENSE SILIC. AND ALBITIZATION |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|-----|----------|---|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QTZ | PY | B | | | | | |
| 718 | | M | F | Fol | BN | SER | BCRB | QTZ | | | | | 70 | .5 | | AX39769 | 5.0 | c | | (728.0-737) BROWN CARB |
| 723 | | | | | | | | | F | 30 | | | 60 | | | | 5.0 | c | .194 | - WELL FOL. SER. RICH, |
| 728 | | M | F | Hom | | SIL | | | | | | | 90 | | | | 5.0 | c | .056 | SILICIFIED, ALTERNATE BANDS |
| 733 | | M | F | Fol | BN | SER | | | | | | | 50 | .5 | | | 5.0 | c | .110 | OF TAN SER. AND WH. QZ/ANK. |
| 735.5 | | | | | | | | | | | | | | | | | 2.5 | c | .196 | - PY. IS F. DIS. AND INFILL FRACT. |
| 737 | | | | | | | | | | | | | | | | | 1.5 | c | .022 | (737-738.7) GN. Fm. CARB |
| 738.7 | | M | F | MSV | GN | Fm | FCRB | | | | | | 2 | .1 | | | 1.7 | c | .014 | - MNR. WH. QZ/ANK STRGS |
| 743 | | M | F | Hom | BN | SIL | BCRB | | | | | | 90 | .5 | | | 4.3 | c | .118 | (738.7-747.3) SILICIFIED BROWN CARB |
| 747.3 | | | | | | | | | | | | | | | | | 4.3 | c | .054 | - INTENSE SILIC. AND ALBITIZATION |
| | | | | | | | | | | | | | | | | | | | | - TAN SER. BK. CHL. PY. INFILLING FRACT. |
| 749.3 | | M | F | MSV | GN | Fm | FCRB | | | | | | 30 | .5 | | | 2.0 | c | .011 | (747.3-752.5) GN. Fm. CARB |
| 752.5 | | | | | | | | | | | | | 5 | .1 | | | 3.2 | c | .064 | - WITH WH. QZ/ANK STRGS. |
| | | | | | | | | | | | | | | | | | | | | (748.7-749.3) SILICIFIED BROWN CARB |
| | | | | | | | | | | | | | | | | | | | | - TAN SER. INFILLING FRACT. |
| | | | | | | | | | | | | | | | | | | | | - MNR. F. DIS. PY. |
| 756 | | B | F | MSV | BN | SIL | BCRB | | | | | | 50 | .5 | | | 3.5 | c | .13 | (752.5-769.2) BROWN CARB |
| 758 | | M | F | Fol | BN | SER | | | | | | | 2 | | | | 2.0 | c | .02 | - WELL FOLIATED, SER. RICH, CHL. |
| 763 | | M | F | MSV | BN | SIL | BCRB | | | | | | 40 | | | | 5.0 | c | .132 | AND SER. INFILLING FRACT., F. DIS. |
| 768 | | M | F | Fol | BN | SER | | | | | | | 50 | 1.0 | | | 5.0 | c | .116 | PY. SILIC. SECTIONS |
| 769.2 | | M | F | BX | BN | SER | | | | | | | 20 | .5 | | | 1.2 | c | .008 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|----|------|----|-------|--------|-----------|----------|----|---|-----------|----|----------|----|----------|---------|------|--------------------|----------|--|
| | | Com | Gr | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J | J/F A2 | QZ | PY | | | | | | | |
| 801.4 | | S | F | FOL | BN | SER | | TUF | F | 50 | | | | .1 | .1 | | AX39785 | 32.2 | G | 1.00 | (769.2-801.4) TYFFACEOUS SEDIMENTS - TAN, SER. RICH SED., WELL FOL., F.G., SOFT + EASY TO SCRATCH WITH A KNIFE, MNR. PY, COARSE CUBIC PY. |
| 805.3 | | S | F | BED | BK | GRAPH | | ARG | B | 50 | | | | .1 | .1 | | 786 | 3.9 | G | 1.00 | (801.4-805.3) GRAPHITIC ARGILLITE - BLACK, WELL FOL., SOFT + EASY TO SCRATCH, MNR WH. QZ/ANK VNLETS, COARSE CUBIC PY. |
| 811.4 | | S | F | FOL | BN | SER | | TUF | F | 50 | | | | .1 | .1 | | 787 | 6.1 | G | 1.00 | (805.3-811.4) TYFFACEOUS SEDIMENTS - TAN, SER. RICH, WELL FOL., PY. STRGS, MNR. QZ STRGS. |
| 848 | | S | F | BED | BK | GRAPH | | ARG | B | 50 | | | | .1 | .1 | | 788 | 36.6 | G | 1.00 | (811.4-848) GRAPHITIC ARGILLITE - AS 801.4-805.3 - MNR WH. QZ/ANK AND PINK QZ/CC STRGS., COARSE CUBIC PY. |
| 853 | | S | F | BED | BK | GRAPH | | ARG | | | | | | 20 | .1 | | 789 | 5.0 | C | 1.00 | (848-858) GRAPHITIC ARGILLITE |
| 855.5 | | | | | | | | | | | | | | 5 | | | 790 | 2.5 | C | 1.00 | - WITH NUMEROUS WH. 1/4" - 1" WIDE |
| 858 | | | | | | | | | | | | | | 40 | | | 791 | 2.5 | C | 1.00 | WH. QZ/ANK VNLETS ALONG FOL. |
| 861 | | M | F | HOM | WH | SIL | | QV | V | 40 | | | | 80 | | | 792 | 3.0 | C | 1.00 | (858-861) 1.9' WH. QZ/ANK VEIN |
| 863 | | S | F | BED | BK | GRAPH | | ARG | | | | | | .1 | | | 793 | 2.0 | C | 1.00 | - BK. GRAPH. AND GN CHL. FILLED FRACT. |
| 865 | | | | | | | | | | | | | | .1 | | | 794 | 2.0 | C | 1.00 | - MNR. F. PY. |
| 868 | | | | | | | | | | | | | | 30 | | | 795 | 3.0 | C | 1.00 | (861-870.8) GRAPHITIC ARGILLITE |
| 870.8 | | | | | | | | | | | | | | .1 | | | 796 | 2.8 | C | 1.00 | - NUMEROUS 1/4" - 1" WH. QZ/ANK VNLETS. |
| 872.2 | | | | | GY | BL3 | | ARG | | | | | | 5 | | | 797 | 1.4 | C | 1.00 | (870.8-872.2) LT. GY. BLEACHED SED |
| 873.3 | | M | F | HOM | WH | SIL | | QV | V | 40 | | | | 90 | | | 798 | 1.1 | C | 1.00 | (872.2-873.3) WH. QZ/ANK VEIN |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|----|------|----|-------|--------|-----------|----------|----|----------|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | Gr | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J/F J | A2 | QZ | PY | | | | | | |
| 891 | | S | F | BED | BK | GRAPH | | ARG | | | | | .1 | .1 | AX39799 | 17.7 | G | .001 | (873.3-891) GRAPHITIC ARGILLITE - WELL FOL.; F. CUBIC PY., MNK WH. QZ/ANK STRGS | |
| 894.5 | | S | F | BED | BK | GRAPH | | ARG | V | 50 | | | 30 | .1 | 800 | 3.5 | C | .001 | (891-894.5) GRAPHITIC ARGILLITE - WITH 1/4"-3" WH. QZ/ANK VEINS - CUBIC PY. IN WALL ROCK | |
| 899.0 | | S | F | BED | BK | GRAPH | | ARG | | | | | .1 | .1 | 801 | 4.5 | G | .001 | (894.5-899) GRAPHITIC ARGILLITE - AS 873.3-891 | |
| 899.0 | | | | | | | | | | | | | | | | | | | E0H = 899' | |



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

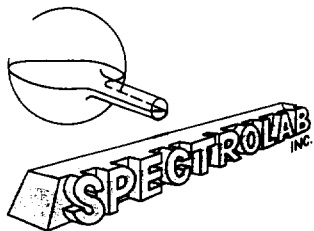
CERTIFICAT D'ANALYSES N°: IG-1413-A DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38930 | 0.002 | |
| AX38931 | 0.001 | |
| AX38932 | 0.003 | |
| AX38933 | 0.002 | |
| AX38934 | 0.002 | |
| AX38935 | 0.002 | |
| AX38936 | 0.032 | |
| AX38937 | 0.001 | |
| AX38938 | 0.001 | |
| AX38939 | 0.001 | 0.001 |
| AX38940 | 0.002 | |
| AX38941 | 0.003 | |
| AX38942 | 0.001 | |
| AX38943 | 0.001 | |
| AX38944 | 0.002 | |
| AX38945 | 0.003 | |
| AX38946 | 0.004 | |
| AX38947 | 0.001 | |
| AX38948 | 0.001 | |
| AX38949 | 0.001 | 0.001 |

97-10

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

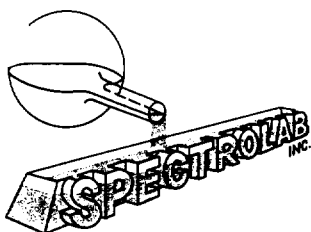
CERTIFICAT D'ANALYSES N°: IG-1413-B DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 12/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX38950 | 0.001 | |
| AX38951 | 0.001 | |
| AX38952 | 0.001 | |
| AX38953 | 0.001 | |
| AX38954 | 0.001 | |
| AX38955 | 0.001 | |
| AX38956 | 0.001 | |
| AX38957 | 0.001 | |
| AX38958 | 0.002 | |
| AX38959 | 0.006 | 0.011 |
| AX38960 | 0.002 | |
| AX38961 | 0.002 | |
| AX38962 | 0.002 | |
| AX38963 | 0.003 | |
| AX38964 | 0.002 | |
| AX38965 | 0.006 | |
| AX38966 | 0.002 | |
| AX38967 | 0.003 | |
| AX38968 | 0.001 | |
| AX38969 | 0.003 | 0.005 |

97-10

ANALYSTE: Mira Godbout Bex



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

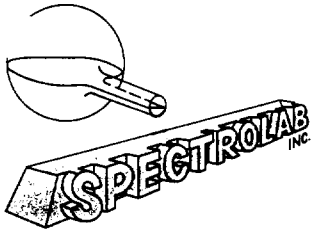
CERTIFICAT D'ANALYSES N°: IG-1413-C DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX38970 | 0.001 | | |
| AX38971 | 0.004 | | |
| AX38972 | 0.002 | | |
| AX38973 | 0.002 | | |
| AX38974 | 0.003 | | |
| AX38975 | 0.002 | | |
| AX38976 | 0.001 | | |
| AX38977 | 0.002 | | |
| AX38978 | 0.002 | | |
| AX38979 | 0.003 | 0.004 | |
| AX38980 | 0.002 | | |
| AX38981 | 0.011 | | |
| AX38982 | 0.002 | | |
| AX38983 | 0.007 | | |
| AX38984 | 0.005 | | |
| AX38985 | 0.103 | | |
| AX38986 | 0.006 | | |
| AX38987 | 0.004 | | |
| AX38988 | 0.773 | | 0.774 |
| AX38989 | 0.663 | 0.781 | 0.669 |

97-10

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

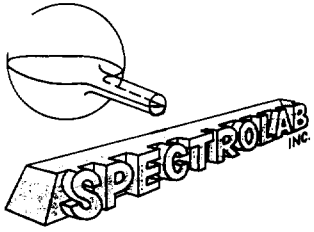
CERTIFICAT D'ANALYSES N°: IG-1413-D DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|------------|--------------|------------------|-----------------------|
| AX38990 | 0.016 | | |
| AX38991 | 0.100 | | |
| AX38992 | 0.008 | | |
| AX38993 | 0.010 | | |
| AX38994 | 0.316 | | 0.239 |
| AX38995 | 0.060 | | |
| AX38996 | 1.699 | | 1.376 |
| AX38997*** | 1.080 | | 1.128 |
| AX38998 | 0.128 | | |
| AX38999 | 0.010 | | |
| AX39000 | 0.016 | 0.010 | |
| AX39751 | 0.044 | | |
| AX39752 | 0.012 | | |
| AX39753 | 0.012 | | |
| AX39754 | 0.005 | | |
| AX39755 | 0.008 | | |
| AX39756 | 0.003 | | |
| AX39757 | 0.005 | | |
| AX39758 | 0.008 | | |
| AX39759 | 0.560 | 0.594 | No Reject |

***Visible Gold

ANALYSTE: Mira Godbout B.S.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

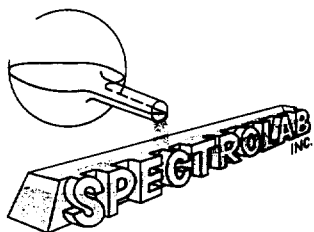
CERTIFICAT D'ANALYSES N°: IG-1413-E DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX39760 | 0.040 | | |
| AX39761 | 0.010 | | |
| AX39762 | 0.002 | | |
| AX39763 | 0.001 | | |
| AX39764 | 0.001 | | |
| AX39765 | 0.068 | | |
| AX39766 | 0.092 | | |
| AX39767 | 0.066 | | |
| AX39768 | 0.096 | | |
| AX39769 | 0.386 | 0.354 | 0.360 |
| AX39770 | 0.194 | | |
| AX39771 | 0.056 | | |
| AX39772 | 0.110 | | |
| AX39773 | 0.196 | | |
| AX39774 | 0.022 | | |
| AX39775 | 0.014 | | |
| AX39776 | 0.118 | | |
| AX39777 | 0.054 | | |
| AX39778 | 0.011 | | |
| AX39779 | 0.004 | | |

97-10

ANALYSTE: Mira Godbout BS



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

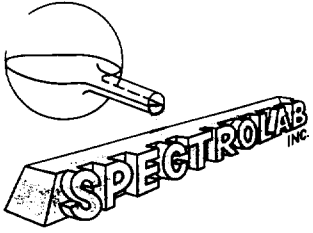
CERTIFICAT D'ANALYSES N°: IG-1413-F DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39780 | 0.130 | |
| AX39781 | 0.020 | |
| AX39782 | 0.132 | |
| AX39783 | 0.116 | |
| AX39784 | 0.008 | |
| AX39785 | 0.001 | |
| AX39786 | 0.001 | |
| AX39787 | 0.001 | |
| AX39788 | 0.001 | |
| AX39789 | 0.001 | 0.001 |
| AX39790 | 0.007 | |
| AX39791 | 0.001 | |
| AX39792 | 0.001 | |
| AX39793 | 0.001 | |
| AX39794 | 0.001 | |
| AX39795 | 0.001 | |
| AX39796 | 0.001 | |
| AX39797 | 0.001 | |
| AX39798 | 0.001 | |
| AX39799 | 0.001 | 0.001 |

97-10

ANALYSTE: Mira Godbout Bx



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1413-G DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 2 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton |
|---------|--------------|
| AX39800 | 0.001 |
| AX39801 | 0.001 |

97-10

ANALYSTE: Mira Godbout BS



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK
RAMP ZONE

LOGGED BY: R. MAASS

DATE LOGGED: FEB 28/97

DRILL HOLE NO: RP-97-11

Surface Grid: NORTHING 990.50

EASTING 3949.74

ELEVATION 10931.57

LENGTH 628.0'

SECTION 3950E

LEVEL

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | -56 | | | | | | | | | | | | |
| 200 | 360 | -54 | | | | | | | | | | | | |
| 530 | 002 | -52 | | | | | | | | | | | | |
| 628 | 010 | -48 | | | | | | | | | | | | |

START DATE: FEB 26 1997

FINISH DATE: FEB 28 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: 074/21.0 @ 510-551.0.

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 79.2' Pulled

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

ft
 m

Location Sketch

DRILL HOLE NO: RP-97-11

PAGE 2 OF 6

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----------|----|----------|--------|-----|----------|---------|----------|-------|------|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J/F J | A2 | QZ | PY | | | | | | |
| 79.2 | | | | | | | CAS | | | | | | | | | | | | | (0-79.2) CASING |
| 123 | | M | F | MSV | GY | TLC | UMF | | | | | .1 | .1 | | AX39802 | 53.8 | G | .001 | | (79.2-123) ULTRAMAFICS - DK.GY., TALC/CHL RICH, SOFT & EASY TO SCRATCH, MNR WH. QZ/ANK STRGS., MNR F. PY. |
| 202.3 | | M | F | MSV | GN | CHL | MVO | | | | | .1 | .1 | | 803 | 78.7 | G | .001 | | (123-202.3) MAFIC VOLCANICS - DK.GN., MSV + NON-FOL, CHL. FILLED FRACT., MNR. WH. QZ/CC STRGS., MNR. F. PY. |
| 248 | | M | F | MSV | GY | TLC | UMF | | | | | .1 | .1 | | 804 | 45.7 | G | .001 | | (202.3-284.9) ULTRAMAFICS |
| 284.9 | | | | | | | | | | | | | | | 805 | 36.9 | G | .001 | | AS 79.2-123 - CONTORTED FOL. STARTING @ 273' |
| 287.8 | | M | F | FOL | GY | HEN | UMF | | | | | 10 | .5 | | 806 | 2.9 | C | .001 | | (284.9-287.8) FOLIATED UMF - CONTORTED FOL., PINK K-FELDSPAR DYKLETS, MNR. F. DIS. PY. |
| 288.7 | | M | F | HOM | GN | SIL | QV | V 30 | | | | 90 | .5 | | 807 | 0.9 | C | .001 | | (287.8-288.7) LT. GN. QTZ/ANK VEIN - F. PY. INFILING FRACT., WK. Fu. ANK. |
| 293 | | M | F | FOL | GY | TLC | UMF | | | | | 20 | .1 | | 808 | 4.3 | C | .001 | | (288.7-298.6) FOLIATED ULTRAMAFICS |
| 296.6 | | | | | | | | | | | | | | | 809 | 3.6 | C | .001 | | - NUMEROUS WH. QZ/ANK STRGS. |
| 298.6 | | | | | | | | | | | | | | | 810 | 2.0 | C | .001 | | (298.6-301.4) BROWN CARB., QZ/ANK STRGS. |
| 301.4 | | M | F | MSV | BN | SIL | BCRB | | | | | 10 | 1.0 | | 811 | 2.8 | C | .037 | | - BK. CHL., GN. Fu. INFIL. FRACT., F. DIS. PY., UMF SECTIONS |
| 306.4 | | M | F | MSV | GN | Fu | FCRB | | | | | 50 | 1.0 | | 812 | 5.0 | C | .003 | | (301.4-311) MIX OF GN Fu CARB, BROWN CARB AND TALC/CHL RICH UMF |
| 311.0 | | | | | | | | F 60 | | | | | | | 813 | 4.6 | C | .009 | | - QTZ/ANK FLOODING |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|------|----|---|--------|----|----------|--|----------|-------|---|--------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 314 | | M | F | FOL | GN | Fu | | FCRB | | | | | 10 | .1 | | AX 39814 | 3.0 | c | .001 | (311-317.7) GN. Fu. CARB |
| 317.7 | | | | | | | | | F 50 | | | | 10 | .1 | | 815 | 3.7 | c | .001 | - WELL FOL., NARROW BN. CARB BANDS, 1/4" QZ/ANK STRGS, OR. LIM. |
| 320.1 | | M | F | MSV | GY | ANK | | GCRB | | | | | 10 | .1 | | 816 | 2.4 | c | .001 | (317.7-320.1) GY. CARB - MSV, OR. LIM., QZ/ANK STWK |
| 321.6 | | M | F | MSV | GN | Fu | | FCRB | | | | | 50 | .1 | | 817 | 1.5 | c | .001 | (320.1-326.6) GN. Fu. CARB |
| 326.6 | | | | | | | | | | | | | 30 | .1 | | 818 | 5.0 | c | .001 | - CHL. INFIL. FRACT., QZ AND QZ/ANK STOCKWORK |
| 328.6 | | M | F | MSV | BN | SER | | BCRB | | | | | 10 | .5 | | 819 | 2.0 | c | .001 | (326.6-328.6) BROWN CARB - QZ AND QZ/ANK STWK., MNR. F. DIS. PY. |
| 329.8 | | M | F | MSV | BN | SIL | | BCRB | | | | | 80 | .1 | | 820 | 1.2 | c | .024 | (328.6-329.8) QZ FLOODED BROWN CARB - CHL., TAN SER. INFIL. FRACT. - MNR F. DIS. PY. |
| 331.9 | | M | F | MSV | GY | SIL | | UMF | | | | | 40 | .1 | | 821 | 2.1 | c | .002 | (329.8-331.9) QZ FLOODED UMF - BK. CHL. INFILLING FRACT. - OR. LIM. ALONG FRACT. SURFACES |
| 334 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | .1 | | 822 | 2.1 | c | .001 | (331.9-362.1) ULTRAMAFICS |
| 338 | | | | | | | | | | | | | | | | 823 | 4.0 | c | .001 | - OK. GY., TALC/CHL. RICH, WH. |
| 358 | | | | | | | | | | | | | | | | 824 | 20.0 | G | .001 | QTZ/ANK, GN TALC UNLETS |
| 362.1 | | | | FOL | | | | | F 50 | | | | | | | 825 | 4.1 | c | .001 | - WELL FOL. 361-362.1 (362.1-363.6) GY. CARB |
| 363.6 | | M | F | MSV | GY | ANK | | GCRB | | | | | 20 | .1 | | 826 | 1.5 | c | .004 | - QZ, QZ/ANK STOCKWORK - MNR F. DIS. PY. |

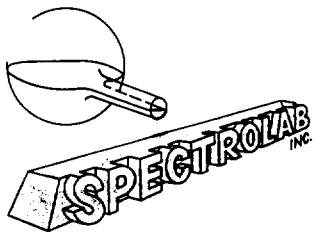
DRILL HOLE NO: RP-97-11

PAGE 4 OF 6

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | Py | | | | | | |
| 368 | | M | F | STWK | GY | ANK | | UMF | | | | | 50 | .1 | | AX39827 | 4.4 | c | .005 | (363.6-369) QZ FLOODED UMF - DR GY. TALC/CHL. RICH UMF WITH WH. QZ/ANK STWK |
| 371 | | M | F | STWK | GY | ANK | | GCRB | | | | | 20 | .1 | | 828 | 3.0 | c | .006 | (369-371) GY. CARB - CONTORT. FOL., CHL. INFILL. FRACT. |
| 375.2 | | B | F | STWK | GY | LIM | | GCRB | | | | | 30 | .1 | | 829 | 4.2 | c | .016 | (371-375.2) GY CARB - BROKEN, BLOCKY CORE WITH OR. LIM. ALONG FRACT., 3", 6" WH. QZ/ ANK VEINS WITH 1% ASSOC. PY. |
| 378 | | M | F | STWK | GY | ANK | | GCRB | | | | | 5 | .1 | | 830 | 2.8 | c | .001 | (375.2-386.5) GREY CARB |
| 383 | | | | | | | | | | | | | 20 | .1 | | 831 | 5.0 | c | .003 | - WITH GN. Fu. CARB SECTIONS |
| 386.5 | | | | | | | | | | | | | 20 | .1 | | 832 | 3.5 | c | .001 | - BK. CHL., TAN SER. INFILL. FRACT. - WH. QZ/ANK STWK |
| 389.7 | | M | F | STWK | GN | Fu | | FCRB | | | | | 5 | .5 | | 833 | 3.2 | c | .016 | (386.5-403.7) GN. Fu. CARB |
| 393 | | | | | | | | | | | | | 5 | .5 | | 834 | 3.3 | c | .060 | - DR. GN. WITH WH. QZ/ANK STWK. |
| 398 | | | | | | | | | | | | | 20 | .1 | | 835 | 5.0 | c | .010 | - GY. CHL. SECTIONS WITH ASSOC. F. |
| 400 | | | | | | | | | | | | | 5 | .5 | | 836 | 2.0 | c | .011 | DIS. PY., LT. GN. CHERTY SECTIONS |
| 403.7 | | | | | | LIM | | | | | | | 20 | .1 | | 837 | 3.7 | c | .003 | (401.1-401.4) OR. LIM. BAND |
| 408 | | M | F | MSU | AG | Fu | | FCRB | | | | | 2 | .5 | | 838 | 4.3 | c | .036 | (403.7-415.5) GN. Fu. CARB |
| 413 | | | | | | | | | | | | | 2 | .1 | | 839 | 5.0 | c | .008 | - APPLE GN. COLOR WITH MNR. WH. |
| 415.5 | | | | | | | | | | | | | 2 | .1 | | 840 | 2.5 | c | .018 | QZ/ANK STRGS., F.G., MSU, NON-FOL |
| 418.2 | | M | F | STWK | GN | Fu | | FCRB | | | | | 20 | .1 | | 841 | 2.7 | c | .009 | (415.5-418.2) GN. Fu. CARB - AS 386.5-403.7 |

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | | | |
|-------|----|------------------|-----|------|----|-----|-----------|--------|--------|----|----------|----|----------|-------|---|--------------|----------|----|------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J/F J | A2 | | | | | | QZ | PY | |
| 421.5 | | M | F | MSV | GY | CHL | | CCRB | | | | | 20 | .1 | | AX39842 | 3.3 | c | .021 | (418.2-421.5) CHLORITIC CARB - DK. GY. WITH WH. QZ/ANK STOCKWORK - F. DIS. PY. |
| 426.5 | | M | F | FOL | GY | ANK | | GCRB | | | | | 2 | .1 | | 843 | 5.0 | c | .002 | (421.5-446.2) GY. CARB |
| 430.4 | | | | | | | | | | | | | | | | 844 | 3.9 | c | .001 | - WELL FOLIATED WITH COT FOL. |
| 432 | | | | COT | | | | | | | | | | | | 845 | 1.6 | c | .003 | FROM 426.5-432, NARROW GY. CHL. |
| 436.3 | | | | FOL | | | | | F | 40 | | | | | | 846 | 4.3 | c | .003 | BANDS, OR. LIM. FROM 436.3-437.3 |
| 438.3 | | | | | | LIM | | | | | | | | | | 847 | 2.0 | c | .005 | - MNR WH. QZ/ANK STRGS, MNR F. PY. |
| 440.9 | | | | | | ANK | | | | | | | | | | 848 | 2.6 | c | .005 | (446.2-508) GN. Fy. CARB |
| 444 | | | | | | | | | | | | | | | | 849 | 3.1 | c | .003 | - LT. GN. WITH STRONG Fy. ALT. |
| 446.2 | | | | | | | | | | | | | | | | 850 | 2.2 | c | .003 | - MSV AND NON-FOL., MNR. WH. QZ |
| 448 | | M | F | MSV | GN | Fy | | FGRB | | | | | 5 | .1 | | 851 | 1.8 | c | .001 | ANK. STRGS., MNR. F. PY. |
| 453 | | | | | | | | | | | | | | | | 852 | 5.0 | c | .003 | (483.6-485.3) WH. QZ/ANK VEIN |
| 458 | | | | | | | | | | | | | | | | 853 | 5.0 | c | .003 | (487.3-488.3) WH. QZ/ANK VEIN |
| 463 | | | | | | | | | | | | | | | | 854 | 5.0 | c | .005 | (489-489.5), (498.9-499.2) OR. LIM. ALT. |
| 468 | | | | | | | | | | | | | | | | 855 | 5.0 | c | .002 | |
| 473 | | | | | | | | | | | | | | | | 856 | 5.0 | c | .018 | |
| 478 | | | | | | | | | | | | | | | | 857 | 5.0 | c | .015 | |
| 483 | | | | | | | | | | | | | | | | 858 | 5.0 | c | .015 | |
| 485.3 | | | | | | | | | | | | | | | | 859 | 2.3 | c | .007 | |
| 487.3 | | | | | | | | | | | | | 50 | .1 | | 860 | 2.0 | c | .019 | |
| 488.3 | | B | F | HOM | WH | SIL | | QV | V | 40 | | | 90 | .1 | | 861 | 1.0 | c | .003 | (488.3-490 LOST CORE) |
| 493.9 | | M | F | MSV | GN | Fy | | FGRB | | | | | 5 | .1 | | 862 | 4.7 | c | .008 | |
| 498 | | | | | | | | | | | | | | | | 863 | 5.0 | c | .025 | |
| 503 | | | | | | | | | | | | | | | | 864 | 5.0 | c | .005 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|---|----|---|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 513 | | M | F | FOL | BN | SER | | BCRB | F | 40 | | | .1 | .1 | AX39866 | 5.0 | c | .002 | (508-530) BROWN CARB | |
| 518 | | | | | | | | | | | | | | | 867 | 5.0 | c | .001 | - WELL FOL., SER-RICH, MNR | |
| 523 | | | | | | | | | | | | | | | 868 | 5.0 | c | .001 | WH. QZ / ANK STRGS., MNR. F. PY. | |
| 528 | | | | | | | | | | | | | | | 869 | 5.0 | c | .002 | - CAN BE SCRATCHED WITH A KNIFE | |
| 530 | | | | | | | | | | | | | | | 870 | 2.0 | c | .002 | (530-551) SILIC. BROWN CARB | |
| 533 | | M | F | HOM | BN | SIL | | QTZ | | | | | 90 | .1 | 871 | 3.0 | c | .120 | - STRONG SILIC. AND ALBITIZATION | |
| 538 | | | | | | | | | | | | | | | 872 | 5.0 | c | .090 | - FRACTURES INFILLED BY TAN | |
| 543 | | | | | | | | | | | | | | | 873 | 5.0 | c | .066 | SER., MNR. CHL. AND F.Y. | |
| 548 | | | | BX | GG | | | | | | | | | .5 | 874 | 5.0 | c | .052 | - PY. IS F. DIS. AND IN FILLS | |
| 551 | | | | HOM | I | | | | | | | | | .1 | 875 | 3.0 | c | .054 | FRACT., LT. BN. OVERALL COLOR | |
| 553 | | M | F | FOL | GY | SER | | TUF | | | | | 2 | .1 | 876 | 2.0 | c | .021 | (551-577.3) TUFFACEOUS SEDIMENTS | |
| 558 | | | | | | | | | F | 40 | | | | | 877 | 5.0 | c | .003 | - LT. TDR. GY. COLOR WITH THIN TAN | |
| 563 | | | | | | | | | | | | | | | 878 | 5.0 | c | .009 | SER. BEDS, WELL FOLIATED | |
| 568 | | | | | | | | | | | | | | | 879 | 5.0 | c | .028 | - SILIC. SECTIONS WITH ASSOC. | |
| 573 | | | | | | | | | | | | | 5 | 1.0 | 880 | 5.0 | c | .016 | F. DIS. PY. (568-573) COARSE CUBIC PY. | |
| 577.3 | | | | | | | | | | | | | 2 | .1 | 881 | 4.3 | c | .002 | (577.3-628) GRAPHITIC ARGILLITE | |
| 581 | | S | F | BED | BK | GRAPH | | ARG | V | 40 | | | 20 | .5 | 882 | 3.7 | c | .006 | - WELL FOLIATED, COARSE CUBIC | |
| 583.1 | | | | | | | | | B | 50 | | | 2 | .1 | 883 | 2.1 | c | .001 | PY., SOFT + EASY TO SCRATCH | |
| 586 | | | | | | | | | | | | | 10 | .1 | 884 | 2.9 | c | .001 | - BK. COLOR WITH MNR WH. QZ / ANK | |
| 588 | | | | | | | | | | | | | 10 | .1 | 885 | 2.0 | c | .002 | VEINS | |
| 608 | | | | | | | | | | | | | .1 | .1 | 886 | 20.0 | G | .001 | (578-578.6) 7" WH. QZ / ANK VEIN | |
| 609.3 | | M | F | HOM | WH | SIL | | QV | V | 40 | | | 60 | .1 | 887 | 1.3 | c | .002 | (580.2-580.7) 6" WH. QZ / ANK VEIN | |
| 611.3 | | S | F | BED | BK | GRAPH | | ARG | | | | | 5 | .1 | 888 | 2.0 | c | .001 | (583-588) ARGILLITE WITH 1/4" - 2" | |
| 628 | | | | | | | | | B | 60 | | | .1 | .1 | 889 | 16.7 | G | .001 | WH. QZ / ANK VEINS | |
| | | | | | | | | | | | | | | | | | | | (608.6-609.4) 8" WH. QZ / ANK VEIN | |



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

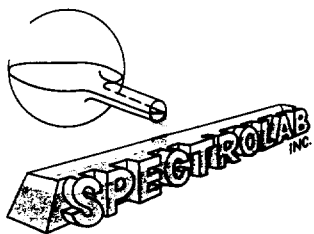
CERTIFICAT D'ANALYSES N°: IG-1414-B DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Ref. 1602
Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39822 | 0.001 | |
| AX39823 | 0.001 | |
| AX39824 | 0.001 | |
| AX39825 | 0.001 | |
| AX39826 | 0.004 | |
| AX39827 | 0.005 | |
| AX39828 | 0.006 | |
| AX39829 | 0.016 | |
| AX39830 | 0.001 | |
| AX39831 | 0.003 | 0.002 |
| AX39832 | 0.001 | |
| AX39833 | 0.016 | |
| AX39834 | 0.060 | |
| AX39835 | 0.010 | |
| AX39836 | 0.011 | |
| AX39837 | 0.003 | |
| AX39838 | 0.036 | |
| AX39839 | 0.008 | |
| AX39840 | 0.018 | |
| AX39841 | 0.011 | 0.007 |

97-11

ANALYSTE: Mira Guelbout BSc.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

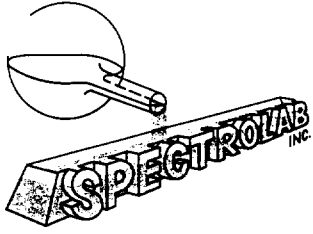
CERTIFICAT D'ANALYSES N°: IG-1414-C DATE: 21/03/97

Client: ROYAL OAK MINES LTD. Échantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39842 | 0.021 | |
| AX39843 | 0.002 | |
| AX39844 | 0.001 | |
| AX39845 | 0.003 | |
| AX39846 | 0.003 | |
| AX39847 | 0.005 | |
| AX39848 | 0.005 | |
| AX39849 | 0.003 | |
| AX39850 | 0.003 | |
| AX39851 | 0.001 | 0.001 |
| AX39852 | 0.003 | |
| AX39853 | 0.003 | |
| AX39854 | 0.005 | |
| AX39855 | 0.002 | |
| AX39856 | 0.018 | |
| AX39857 | 0.015 | |
| AX39858 | 0.015 | |
| AX39859 | 0.007 | |
| AX39860 | 0.019 | |
| AX39861 | 0.003 | 0.004 |

97-11

ANALYSTE: Mira Godbout B.S.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

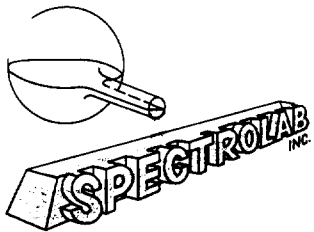
CERTIFICAT D'ANALYSES N°: IG-1414-D DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39862 | 0.008 | |
| AX39863 | 0.025 | |
| AX39864 | 0.005 | |
| AX39865 | 0.006 | |
| AX39866 | 0.002 | |
| AX39867 | 0.001 | |
| AX39868 | 0.001 | |
| AX39869 | 0.002 | |
| AX39870 | 0.002 | |
| AX39871 | 0.096 | 0.144 |
| AX39872 | 0.090 | |
| AX39873 | 0.066 | |
| AX39874 | 0.052 | |
| AX39875 | 0.054 | |
| AX39876 | 0.021 | |
| AX39877 | 0.003 | |
| AX39878 | 0.009 | |
| AX39879 | 0.028 | |
| AX39880 | 0.016 | |
| AX39881 | 0.002 | 0.001 |

97-11

ANALYSTE: Mira Godbout BS



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

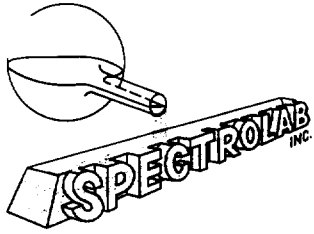
CERTIFICAT D'ANALYSES N°: IG-1414-E DATE: 21/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 8 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39882 | 0.006 | |
| AX39883 | 0.001 | |
| AX39884 | 0.001 | |
| AX39885 | 0.002 | |
| AX39886 | 0.001 | |
| AX39887 | 0.002 | |
| AX39888 | 0.001 | |
| AX39889 | 0.001 | 0.001 |

97-11

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1414-A DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39802 | 0.001 | |
| AX39803 | 0.001 | |
| AX39804 | 0.001 | |
| AX39805 | 0.001 | |
| AX39806 | 0.001 | |
| AX39807 | 0.001 | |
| AX39808 | 0.001 | |
| AX39809 | 0.001 | |
| AX39810 | 0.001 | |
| AX39811 | 0.037 | 0.038 |
| AX39812 | 0.003 | |
| AX39813 | 0.009 | |
| AX39814 | 0.001 | |
| AX39815 | 0.001 | |
| AX39816 | 0.001 | |
| AX39817 | 0.001 | |
| AX39818 | 0.001 | |
| AX39819 | 0.001 | |
| AX39820 | 0.024 | |
| AX39821 | 0.002 | 0.002 |

97-11

ANALYSTE: Mira Godbout B.Sc.



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK
RAMP ZONE

LOGGED BY: R. MAASS

DATE LOGGED: MAR 3/97

DRILL HOLE NO: RP-97-12

Surface Grid: NORTHING EASTING ELEVATION LENGTH SECTION LEVEL
 990.50 3949.74 10931.57 746.0' 3950E _____

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | 63 | | | | | | | | | | | | |
| 200 | 360 | 62 | | | | | | | | | | | | |
| 400 | 357 | 61 | | | | | | | | | | | | |
| 600 | 003 | 59 | | | | | | | | | | | | |
| 746 | 005 | 60 | | | | | | | | | | | | |

START DATE: FEB 28 1997

FINISH DATE: MAR 2 1997

TOWNSHIP: CODY

CLAIM NO.: P15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: _____

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 75', pulled

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

ft
 m

Location Sketch

DRILL HOLE NO: RP-97-12

PAGE 2 OF 7

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----------|----|----------|--------|----|----------|--|----------|--------|-------|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J/F J | A2 | QZ | PY | | | | | | |
| 75.0 | | | | | | | | | | | | | | | | | | | | (0-75) CASING |
| 111.5 | | M | F | MSV | GY | TLC | | | | | | | | | | AX39890 | 36.5 G | .001 | | (75-219.2) ULTRAMAFICS |
| 158. | | M | F | MSV | GN | CHL | | | | | | | | | | 891 | 46.5 G | .001 | | - DK GY, TALC/CHL RICH UMF TO |
| 219.2 | | | | | | | | | | | | | | | | 892 | 61.2 G | .003 | | 111.5, DK.GN. CHL. RICH UMF PAST THIS PT., SOFT + EASY TO SCRATCH |
| | | | | | | | | | | | | | | | | | | | | - MSV AND NON-FOL., MNR WH. QZ/ ANK UNLETS, MNR F. PY. |
| 249.2 | | M | F | MSV | GN | CHL | | | | | | | | | | 893 | 30.0 G | .001 | | (219.2-249.2) MAFIC VOLCANICS |
| | | | | | | | | | | | | | | | | | | | | - DK.GN. CHL. RICH MVO WITH MNR WH. QZ/CC UNLETS, CUBIC PY., |
| | | | | | | | | | | | | | | | | | | | | - MSV + NON-FOL., CHL. FILLED FRACT. |
| 266.3 | | M | F | MSV | GN | CHL | | | | | | | | | | 894 | 27.1 G | .001 | | (249.2-266.3) DK.GN. CHL. UMF |
| 289.4 | | M | F | MSV | GY | TLC | | | | | | | | | | 895 | 23.1 G | .001 | | (266.3-289.4) DK.GY. TALC/CHL UMF |
| 338.0 | | M | F | MSV | GN | CHL | | | | | | | | | | 896 | 48.6 G | .001 | | (289.4-313.2) DK.GN. CHL. UMF |
| 313.2 | | | | | | | | | | | | | | | | 897 | 35.2 G | .001 | | (313.2-317) RED HEN. UNLETS |
| 401.0 | | M | F | MSV | GY | TLC | | | | | | | | | | 898 | 27.8 G | .001 | | (313.2-401) DK. GY. TALC/CHL UMF |
| 406.5 | | M | F | MSV | GN | CHL | | | | | | | | | | 899 | 5.5 G | .001 | | (401-406.5) DK.GN. CHL. UMF |
| 438 | | M | F | MSV | GY | TLC | | | | | | | | | | AX39900 | 31.5 G | .001 | | (406.5-443.8) DK. GY. TALC/CHL UMF |
| 441.8 | | | | | | | | | | | | | | | | 901 | 3.8 C | .001 | | (443.8-452.9) GY. CARB |
| 443.8 | | | | | | | | | | | | | | | | 902 | 2.0 C | 0.018 | | - WITH WH. QZ/ANK STWK, MNR F. PY. |
| 448 | | M | F | STWK | GY | ANK | | | | | | | | | | 903 | 4.2 C | .004 | | (452.9-455.2) QZ FLOODED GY. CARB. |
| 452.9 | | | | | | | | | | | | | | | | 904 | 4.9 C | .036 | | - 50% WH. QZ/ANK STOCKWORK |
| 455.2 | | | | | | | | | | | | | | | | 905 | 2.3 C | .005 | | (455.2-458.6) WH. QZ/ANK VEIN |
| 458.6 | | M | F | HON | WH | SIL | | | | | | | | | | 906 | 3.4 C | .001 | | - GN. F4, BK. CHL. INFIL. FRACT. |

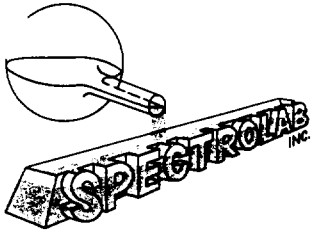
| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|-----|----------|--------|----------|-------|------|---|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | |
| | | | | | | | | | | | | | | | | | | | | (458.6-459.2) CHL. CARB - WITH TN. SER WISPS, WH. QZ/ANK STRGS. - DISSEN. COARSE CUBIC PY. |
| 462 | | M | F | MSV | GN | Fu | | FCRB | | | | 10 | .1 | | AX3907 | 3.4 | c | .038 | (459.2-462) GN. CARB - WITH BN. CARB SECTIONS, WH. QZ/ ANK STWK, BK. CHL. INFILLING FRACT, SER. WISPS, F. DIS. AND CUBIC PY. | |
| 463.7 | | M | F | HM | WH | SIL | | QV | V | 70 | | 60 | .1 | | 908 | 1.7 | c | .003 | (462-463.7) WH. QZ/ANK VEIN. - BK CHL., GN. Fu. FILLED FRACT. - MNR. F. DIS. PY. | |
| 466 | | M | F | FOL | GN | Fu | | FCRB | F | 40 | | 2 | .1 | | 909 | 2.3 | c | .009 | (463.7-471.8) GN. CARB | |
| 468 | | | | | | | | | | | | 2 | .1 | | 910 | 2.0 | c | .010 | - WELL FOL., WK. Fu. ALT., GY. CARB | |
| 471.8 | | | | | | | | | | | | 5 | .1 | | 911 | 3.8 | c | .011 | SECTIONS, MNR. WH. QZ/ANK STRGS | |
| 473.7 | | M | F | FOL | GY | ANK | | GCRB | F | 60 | | 5 | 2.0 | | 912 | 1.9 | c | .324 | (471.8-473.7) BN. CARB. - WELL FOL., SILIC., TN. SER. OCCURS AS WISPS + BANDS, ASSOC. F. DIS. PY. | |
| 478 | | M | F | MSV | GN | Fu | | FCRB | | | | 2 | .1 | | 913 | 4.3 | c | .032 | (473.7-480.4) GN. CARB | |
| 480.4 | | | | | | | | | | | | 2 | .1 | | 914 | 2.4 | c | .004 | - WITH GY CHL. CARB SECTIONS - MNR WH. QZ/ANK STRGS. | |
| 483.1 | | M | F | MSV | BN | ANK | | BCRB | | | | 2 | .1 | | 915 | 2.7 | c | .474 | (480.4-488.1) BN. SER. RICH CARB | |
| 488.1 | | | | | | | | | | | | 2 | .1 | | 916 | 5.0 | c | .060 | - WITH GN. Fu CARB SECTIONS - BK. CHL INFILL. FRACT. - WK. FOL. | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | Au opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 493 | | M | F | FOL | GY | ANK | | GCRB | | | | | 20 | .1 | | AX39917 | 4.9 | c | .010 | (488.1-518.7) GY. CARB |
| 498 | | | | | | | | | | | | | 2 | .1 | | 918 | 5.0 | c | .003 | - WEN FOL., CHL. FILLED FRACT. |
| 503 | | | | | | | | | | | | | 2 | .1 | | 919 | 5.0 | c | .004 | - MNR. WH. QZ/ANK STRGS AND |
| 508 | | | | | | | | | | | | | 2 | .1 | | 920 | 5.0 | c | .001 | F. DIS. PY. |
| 513 | | | | | | | | | | | | | 20 | .1 | | 921 | 5.0 | c | .004 | |
| 516.7 | | | | | | | | | | | | | 2 | .1 | | 922 | 3.7 | c | .005 | |
| 518.7 | | | | | | | | | | | | | 2 | .1 | | 923 | 2.0 | c | .008 | |
| 521.6 | | M | F | FX | GY | ANK | | GCRB | | | | | 2 | .1 | | 924 | 2.9 | c | .006 | (518.7-521.6) BRECCIATED GY CARB - WH. QZ/ANK STRGS. |
| 523.2 | | M | F | MSU | GN | Fy | | FCRB | | | | | .1 | .1 | | 925 | 1.6 | c | .003 | (521.6-533.6) GN. CARB |
| 528 | | | | | | | | | | | | | | | | 926 | 4.8 | c | .007 | - MSU. WITH MNR WH. QZ/ANK STRGS |
| 531.6 | | | | | | | | | | | | | | | | 927 | 3.6 | c | .007 | (533.6-535.1) GN. CARB |
| 533.6 | | | | | | | | | | | | | | | | 928 | 2.0 | c | .005 | - FRACT. WITH INFIL. BY. CHL. |
| 535.1 | | | | FX | | | | | | | | | | | | 929 | 1.5 | c | .010 | (535.1-540.9) SILIC. BROWN CARB |
| 538 | | M | F | HON | BN | SIL | | QZ | | | | | 80 | .1 | | 930 | 2.9 | c | .074 | - INTENSE SILIC. AND ALBITIZATION |
| 540.9 | | | | | | | | | | | | | 80 | .1 | | 931 | 2.9 | | .164 | - DOMINANTLY TN. SER BUT LESSER BK. CHL. INFILLING FRACT., - MNR F. DIS. PY. |
| 543 | | B | F | MSU | BN | ANK | | BCRB | | | | | .1 | .1 | | 932 | 2.1 | c | .311 | (540.9-546.7) BROWN CARB |
| 546.7 | | M | | | | | | | | | | | .1 | .1 | | 933 | 3.7 | c | .207 | - SER. RICH, MSU + NON-FOL. - SILIC. SECTIONS, GN. FN. SECTIONS |
| 550 | | M | F | MSU | GN | Fy | | FCRB | | | | | 2 | .1 | | 934 | 3.3 | c | .002 | (546.7-552) GN. CARB |
| 552 | | | | | | | | | | | | | 1 | 1 | | 935 | 2.0 | c | .001 | - MSU, MNR WH. QZ/ANK STRGS. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AO <input type="checkbox"/> opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|---|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | | | | | | |
| 555 | | M | F | Hom | GY | SIL | | QTZ | | | | | 95 | .1 | | AX39936 | 3.0 | c | .036 | (552-558.7) SILICIFIED ZONE |
| 558.7 | | | | | | | | | | | | | 95 | .1 | | 937 | 3.7 | c | .012 | - INTENSE SILICIFICATION, GY. OVERALL COLOR DUE TO CHL. IN FRACT., MNR TAN SER. FRAGS. - MNR. F. DIS. PY., CHERTY APPEARANCE |
| 561 | | M | F | FOL | BN | SER | | BCRB | | | | | 50 | .1 | | 938 | 2.3 | c | .028 | (558.7-561) SILICIFIED BROWN CARB - TN. SER. INFILLING FRACT. - MNR F. PY., WK. FOL. |
| 563 | | M | F | FOL | GY | CHL | | CCRB | | | | | .1 | .1 | | 939 | 2.0 | c | .001 | (561-575.7) CHLORITIC CARB |
| 568 | | | | | | | | | | | | | | | | 940 | 5.0 | c | .001 | - DK. GY/BN CHL. RICH |
| 573 | | | | | | | | | | | | | | | | 941 | 5.0 | c | .001 | - MSU TO WK. FOL., MNR QZ/ANK STRGS |
| 575.7 | | | | | | | | | | | | | | | | 942 | 2.7 | c | .001 | (575.7-578) BRECCIATED BN. CARB |
| 578 | | M | F | BX | BN | SER | | BCRB | | | | | 60 | .1 | | 943 | 2.3 | c | .078 | - TAN SER. AND MNR. BK. CHL. SURROUNDING WH. QZ/ANK FRAGS |
| 580.7 | | M | F | BX | GN | Fu | | FCRB | | | | | 30 | .1 | | 944 | 2.7 | c | .032 | (578-580.7) BRECCIATED GN. Fu. CARB - TAN SER., MNR. BK. CHL. SURROUNDING GN. Fu., WH. QZ/ANK FRAGS |
| 583 | | M | F | Hom | BN | SIL | | QTZ | | | | | 90 | .1 | | 945 | 2.3 | c | .007 | (580.7-600.4) SILICIFIED BN. CARB. |
| 588 | | | | | | | | | | | | | | | | 946 | 5.0 | c | .090 | - STRONG SILIC. AND ALBITIZATION |
| 593 | | | | | | | | | | | | | | | | 947 | 5.0 | c | .110 | - DOMINANTLY TN. SER., MNR. BK. |
| 598 | | | | | | | | | | | | | | | | 948 | 5.0 | c | .112 | CHL. INFILLING FRACT., CHERTY |
| 600.4 | | | | | | | | | | | | | | | | 949 | 5.0 | c | .016 | APPEARANCE, MNR. F. DIS. PY. AND PY. ALSO INFILLS FRACT. |
| | | | | | | | | | | | | | | | | | | | | (592.6-593.3) GN. Fu. CARB |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|-----|----|---|--------|-----|----------|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 604.1 | | M | F | MSV | GY | ANK | | GCRB | | | | | .1 | .1 | AXS9950 | 3.7 | c | .001 | (600.4-606.1) GY. CARB | |
| 606.1 | | | | | | | | | | | | | | | 951 | 2.0 | c | .001 | - WITH GN. FN. BK. CHL. INFILLING FRACT. WH. QZ/ANK STOCKWORK | |
| 609.2 | | B | F | HOM | WH | SIL | | QTZ | V | 70 | | | 80 | .1 | 952 | 3.1 | c | .001 | (606.1-609.2) WH. QZ/ANK VEIN - BROKEN, BLOCKY CORE, BK. CHL. ALONG FRACT. | |
| 613 | | M | F | MSV | GY | ANK | | GCRB | | | | | .1 | .1 | 953 | 3.8 | c | .001 | (609.2-623) GY. CARB | |
| 618 | | | | | | | | | | | | | | | 954 | 5.0 | c | .001 | - BK. CHL. TN. SER. INFILL. | |
| 623 | | | | | | | | | | | | | | | 955 | 5.0 | c | .008 | FRACT. MNR. WH. QZ/ANK STRGS. | |
| 628 | | M | F | MSV | GY | ANK | | CCRB | F | 50 | | | .1 | .1 | 956 | 5.0 | c | .001 | (623-645.4) ANK. ALT. ULTRAMAFICS | |
| 633 | | | | | | | | | | | | | 2 | | 957 | 5.0 | c | .001 | - DK. GY. WITH WH. ANK PORPHYRO- | |
| 638 | | | | | | | | | | | | | 2 | | 958 | 5.0 | c | .001 | BLASTS, WELL FOLIATED, WH. QZ/ | |
| 643 | | | | | | | | | | | | | 2 | | 959 | 5.0 | c | .001 | ANK VEINS, MNR. F. PY. HARD, SILIC. AND NOT EASY TO SCRATCH | |
| 648 | | M | F | BED | GY | SER | | TUF | B | 30 | | | .1 | .1 | 960 | 5.0 | c | .003 | (645.9-653) TUFFACEOUS SEDIMENTS | |
| 653 | | | | | | | | | | | | | 1.0 | .1 | 961 | 5.0 | c | .001 | - GY/BN SER. RICH SEDS, WELL BEDDED, MNR. WH. QZ/ANK STRGS. CUBIC PY. | |
| 658 | | M | F | BED | BK | GRAPH | | ARG | B | 30 | | | .1 | .1 | 962 | 5.0 | c | .003 | (653-659.5) GRAPHITIC ARGILLITE | |
| 659.5 | | | | | | | | | | | | | | | 963 | 1.5 | c | .001 | - BLACK, SOFT + EASY TO SCRATCH, - WELL BEDDED, COARSE CUBIC PY., MNR. WH. QZ/ANK STRGS. | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|----------|----|----------|--------|-----|----------|------|----------|-------|---|--------------------|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J/F J | A2 | QZ | Py | | | | | | |
| 663.1 | | M | F | FOL | GG | SER | | TUF | F | 30 | | .1 | .1 | AX39964 | 3.6 | C | .001 | (659.5-663.1) TUFFACEOUS SEDIMENTS - GY/GRN SER. RICH SEDIMENTS, WELL FOLIATED, 1/8" WH. QZ/ANK STRGS. | | |
| 667.8 | | M | F | BED | BK | GRAPH | | ARG | B | 30 | | .1 | .1 | 965 | 4.7 | C | .001 | (663.1-667.8) GRAPHITIC ARGILLITE - BLACK, WELL BEDDED, SOFT + EASY TO SCRATCH, CUBIC PY. - CONTORTED FOL. | | |
| 672 | | M | F | FOL | GG | SER | | TUF | F | 40 | | .1 | .1 | 966 | 4.2 | C | .001 | (667.8-673.7) TUFFACEOUS SEDIMENTS | | |
| 673.1 | | | | | | | | | | | | .1 | .1 | 967 | 1.7 | C | .001 | - GY/GRN, SER. RICH SEDIMENTS, WELL FOLIATED, MNR. PY. STRGS AND F. CUBIC PY. | | |
| 693 | | B | F | BED | BK | GRAPH | | ARG | B | 40 | | .1 | .1 | 968 | 19.3 | G | .002 | (673.7-693) GRAPHITIC ARGILLITE - AS 663.1-667.8, BLOCKY, BROKEN SECT. | | |
| 698 | | M | F | BED | BK | GRAPH | | ARG | B | 40 | | .5 | .1 | 969 | 5.0 | C | .001 | (693-700.7) GRAPHITIC ARGILLITE | | |
| 700.7 | | | | | | | | | | | | .1 | .1 | 970 | 2.7 | C | .001 | - WITH 1/8" - 1" WH. QZ/ANK VEINS - CUBIC PY. IN WR. | | |
| 703.2 | | M | F | MSV | GY | ANK | | GCRB | | | | 10 | .1 | 971 | 2.5 | C | .001 | (700.7-703.2) 10" WH. QZ/ANK VEIN FOLLOWED BY 1.5' OF GY. CARB | | |
| 708 | | M | F | BED | BK | GRAPH | | ARG | B | 40 | | | 1.0 | 972 | 4.8 | C | .001 | (703.2-708) GRAPHITIC ARGILLITE - 1% F. CUBIC PY. | | |
| 710 | | M | F | BED | BK | GRAPH | | ARG | B | 40 | | .5 | .1 | 973 | 2.0 | C | .001 | (708-710) GRAPHITIC ARGILLITE | | |
| 721 | | | | | | | | | | | | .1 | .1 | 974 | 11.0 | G | .001 | - WITH 2-2" WH. QZ/ANK VEINS | | |
| 724 | | | | | | | | | | | | .20 | .1 | 975 | 3.0 | C | .001 | (710-746) GRAPHITIC ARGILLITE | | |
| 746 | | | | | | | | | | | | .1 | .1 | 976 | 22.0 | G | .001 | (721-746) 1/4"-3" WH. QZ/ANK VEINS COR - 1461 | | |



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

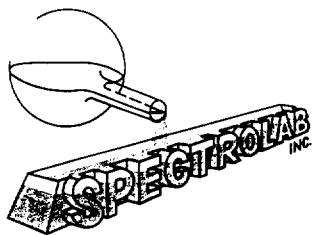
CERTIFICAT D'ANALYSES N°: IG-1415-A DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 12/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39890 | 0.001 | |
| AX39891 | 0.001 | |
| AX39892 | 0.003 | |
| AX39893 | 0.001 | |
| AX39894 | 0.001 | |
| AX39895 | 0.001 | |
| AX39896 | 0.001 | |
| AX39897 | 0.001 | |
| AX39898 | 0.001 | |
| AX39899 | 0.001 | 0.001 |
| AX39900 | 0.001 | |
| AX39901 | 0.001 | |
| AX39902 | 0.018 | |
| AX39903 | 0.004 | |
| AX39904 | 0.036 | |
| AX39905 | 0.005 | |
| AX39906 | 0.001 | |
| AX39907 | 0.038 | |
| AX39908 | 0.003 | |
| AX39909 | 0.009 | 0.010 |

97-12

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

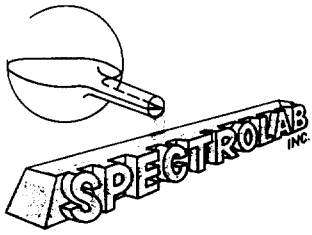
CERTIFICAT D'ANALYSES N°: IG-1415-R DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 12/03/97
Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX39910 | 0.010 | | |
| AX39911 | 0.011 | | |
| AX39912 | 0.342 | | 0.306 |
| AX39913 | 0.032 | | |
| AX39914 | 0.004 | | |
| AX39915 | 0.424 | | 0.524 |
| AX39916 | 0.060 | | |
| AX39917 | 0.010 | | |
| AX39918 | 0.003 | | |
| AX39919 | 0.004 | 0.004 | |
| AX39920 | 0.001 | | |
| AX39921 | 0.004 | | |
| AX39922 | 0.005 | | |
| AX39923 | 0.008 | | |
| AX39924 | 0.006 | | |
| AX39925 | 0.003 | | |
| AX39926 | 0.007 | | |
| AX39927 | 0.007 | | |
| AX39928 | 0.005 | | |
| AX39929 | 0.010 | 0.011 | |

97-12

ANALYSTE: Mira Godbout B.S.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

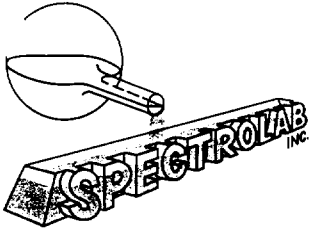
CERTIFICAT D'ANALYSES N°: IG-1415-C DATE: 21/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 12/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX39930 | 0.074 | | |
| AX39931 | 0.164 | | |
| AX39932 | 0.318 | | 0.303 |
| AX39933 | 0.204 | | 0.209 |
| AX39934 | 0.002 | | |
| AX39935 | 0.001 | | |
| AX39936 | 0.036 | | |
| AX39937 | 0.012 | | |
| AX39938 | 0.028 | | |
| AX39939 | 0.001 | 0.001 | |
| AX39940 | 0.001 | | |
| AX39941 | 0.001 | | |
| AX39942 | 0.001 | | |
| AX39943 | 0.078 | | |
| AX39944 | 0.032 | | |
| AX39945 | 0.007 | | |
| AX39946 | 0.090 | | |
| AX39947 | 0.110 | | |
| AX39948 | 0.112 | | |
| AX39949 | 0.016 | 0.016 | |

97-12

ANALYSTE: Mira Godbout Bx



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

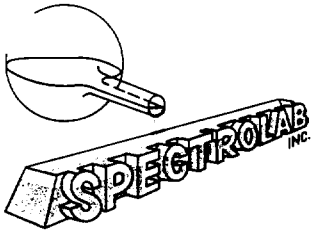
CERTIFICAT D'ANALYSES N°: IG-1415-D DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1502
Éléments: Au Limite de détection: 0.001 Méthode: 12/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39950 | 0.001 | |
| AX39951 | 0.001 | |
| AX39952 | 0.001 | |
| AX39953 | 0.001 | |
| AX39954 | 0.001 | |
| AX39955 | 0.008 | |
| AX39956 | 0.001 | |
| AX39957 | 0.001 | |
| AX39958 | 0.001 | |
| AX39959 | 0.001 | 0.001 |
| AX39960 | 0.003 | |
| AX39961 | 0.001 | |
| AX39962 | 0.003 | |
| AX39963 | 0.001 | |
| AX39964 | 0.001 | |
| AX39965 | 0.001 | |
| AX39966 | 0.001 | |
| AX39967 | 0.001 | |
| AX39968 | 0.002 | |
| AX39969 | 0.001 | 0.001 |

97-12

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1415-E DATE: 21/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 7 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 12/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39970 | 0.001 | |
| AX39971 | 0.001 | |
| AX39972 | 0.001 | |
| AX39973 | 0.001 | |
| AX39974 | 0.001 | |
| AX39975 | 0.001 | |
| AX39976 | 0.001 | 0.001 |

97-12

ANALYSTE: Mira Godbout BSc.



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS PROJECT: NIGHTHAWK RAMP ZONE LOGGED BY: R. MAASS DATE LOGGED: MAR 4 1997 DRILL HOLE NO: RP-97-13

Surface Grid: NORTHING 990.50 EASTING 3949.74 ELEVATION 10931.57 LENGTH 618.0' SECTION 3950 LEVEL _____

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | -50 | | | | | | | | | | | | |
| 200 | 360 | 51 | | | | | | | | | | | | |
| 400 | 005 | 48 | | | | | | | | | | | | |
| 618 | 010 | 43 | | | | | | | | | | | | |

START DATE: MAR 2 1997

FINISH DATE: MAR 4 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: .1089 / 11.9' @ 3861-398 .152 / 17.8' @ 486.4-504.2
.032 / 14' @ 443-457

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 76.0' Pulled

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

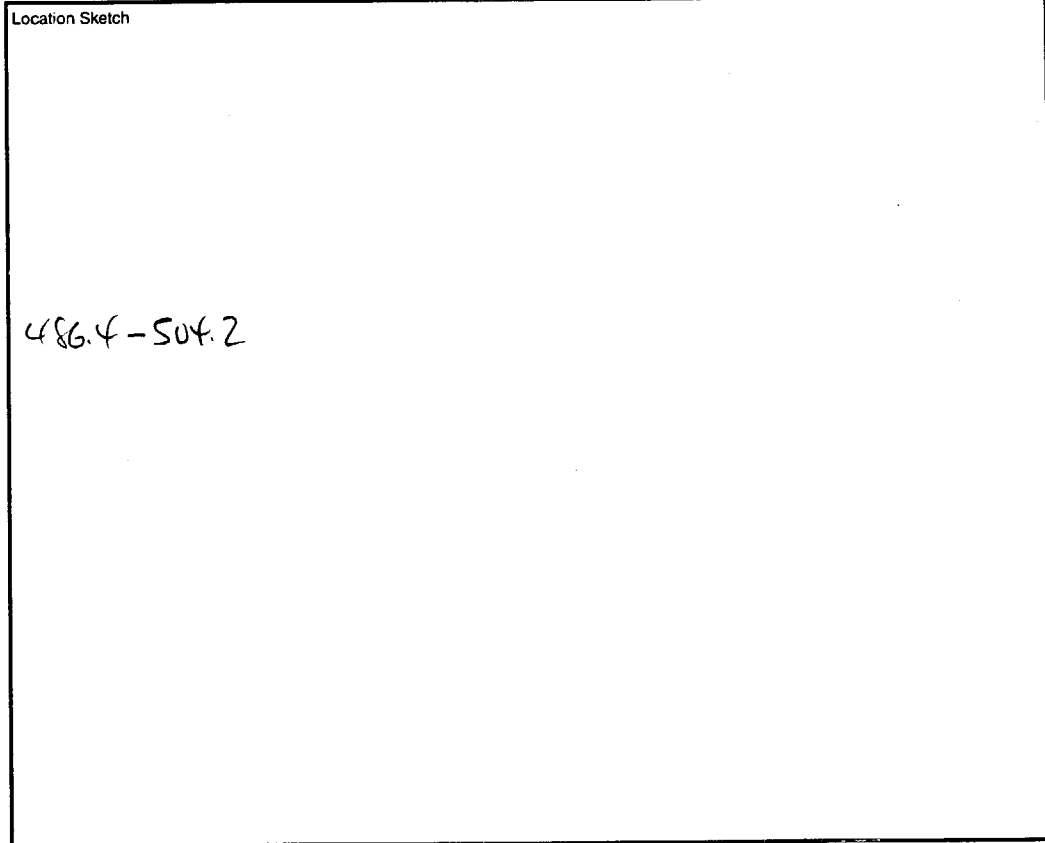
NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch



ft
 m

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|------|----------|--|----------|---------|------|--------------------|-----------------|--|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | | |
| 76.0 | | | | | | | | | | | | | | | | | | | | (0-76.0) CASING | |
| 112.0 | | M | F | MSV | GY | TLC | | | | | | | .1 | .1 | | | AX39977 | 46.0 | G | .001 | (76.0-112.0) ULTRAMAFICS -DK. GY., TALC/CHL. RICH UMF -MNR. GN. TALC + WH. QZ/ANK STRGS, SOFT + EASY TO SCRATCH WITH A KNIFE, MSV + NON-FOL. (96.5-101.7) CHLORITIC MAFIC VOLCANICS |
| 168 | | M | F | MSV | GN | CHL | | | | | | | .1 | .1 | | | 978 | 56.0 | G | .001 | (112-189.9) CHLORITIC MAFIC VOLCANICS |
| 189.9 | | | | | | | | | | | | | | | | | 979 | 21.9 | G | .001 | -DK. GN., CHL-RICH, MSV + NON-FOLIATED, SOFT + EASY TO SCRATCH WITH A KNIFE, MNR WH. QZ/CC STRGS. |
| 238 | | M | F | MSV | GY | TLC | | | | | | | .1 | .1 | | | 980 | 48.1 | G | .001 | (189.9-276.7) ULTRAMAFICS |
| 268 | | | | | | | | | | | | | | | | | 981 | 30.0 | G | | -DK. GY., TALC/CHL. RICH, NUMEROUS |
| 272 | | | | | | | | | | | | | | | | | 982 | 4.0 | C | | WH. QZ/ANK STRGS, SOFT + EASY |
| 276.7 | | | | | | | | | | | | | | | | | 983 | 4.7 | C | | TO SCRATCH WITH A KNIFE CONTORTED FOL. 253-276.7 (276.6-276.1) BN. CARB -WH. QZ/ANK STWK, F. DIS. PY. |
| 278.7 | | M | F | STWK | GN | Fy | | | | | | | 30 | .1 | | | 984 | 2.0 | C | | (276.7-285.6) GN. Fy. CARB |
| 283 | | | | | | | | | | | | | | .5 | | | 985 | 4.3 | C | | -WITH QZ FLOODING, CHL. FILLED |
| 285.6 | | | | FOL | | | | | | | | | F 30 | .1 | | | 986 | 2.6 | C | ✓ | FRACT., MSV TO WK. FOL., |
| 288 | | M | F | FOL | BN | SER | | | | | | | 10 | .5 | | | 987 | 24 | C | .002 | (285.6-291) BROWN CARB. |
| 291 | | | | | | | | | | | | | F 30 | .5 | | | 988 | 3.0 | C | .010 | -WELL FOL., GN. Fy. AND BK. CHL. FILLED FRACTURES, NUMEROUS WH. QZ/ANK STRGS. AND VEINS, F. PY. |

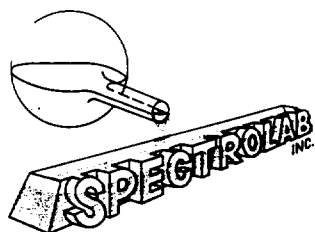
| ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|---------|----------|-------|------|--|----------|
| | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| | M | F | FOL | GN | Fu | | FCRB | | | | | 2 | .1 | AX39989 | 2.0 | c | .001 | (291-297.1) GN. Fu. CARB | |
| | | | | | | | | F | 50 | | | 10 | | 990 | 4.1 | c | .001 | - WELL FOL.; BK. CHL. ALONG FRACT.; WH. QZ/ANK STRGS | |
| | M | F | FOL | BN | SER | | BCRB | F | 40 | | | 2 | .5 | 991 | 3.9 | c | .016 | (297.1-301) BN. CARB - WITH GN. Fu. CARB SECTIONS - WELL FOL.; CHL. ALONG FRACT. - MNR F. DIS. PY. | |
| | M | F | FOL | GN | Fu | | FCRB | F | 40 | | | 2 | .1 | 992 | 2.0 | c | .010 | (301-303) FOL. GN. Fu. CARB | |
| | | | STWK | | | | | | | | | 40 | .1 | 993 | 3.0 | c | .002 | (303-306) GN Fu CARB - WH. QZ/ANK STWK; BK. CHL. ALONG FRACT. (306-309.9) GY. CARB. - WH. QZ/ANK STWK; CHL. IN FRACT. | |
| | M | F | STWK | GY | ANK | | GCRB | V | 20 | | | 40 | .1 | 994 | 4.4 | c | .001 | (309.9-310.4) WH. QZ/ANK VEIN - OR. LIM. PATCH IN WR | |
| | M | F | MNV | GY | CHL | | CCRB | | | | | 2 | .1 | 995 | 1.4 | c | .009 | (310.4-311.8) CHL. CARB | |
| | M | F | FOL | GY | TLC | | UMF | | | | | .1 | .1 | 996 | 2.0 | c | .002 | - WH. QZ/ANK FRAGS; F. DIS. PY. | |
| | | | | | | | | | | | | | | 997 | 4.2 | c | .001 | (311.8-328) TAL/CHL. ULTRANAFICS | |
| | | | | | | | | | | | | | | 998 | 5.0 | c | .001 | | |
| | | | | | | | | | | | | | | 999 | 5.0 | c | .004 | | |
| | M | F | COT | GY | ANK | | GCRB | | | | | 2 | .1 | AX40000 | 5.0 | c | .002 | (328-343) GY. CARB | |
| | | | | | | | | | | | | 5 | | AX407S1 | 5.0 | c | .003 | - WELL FOL. WITH COT. FOL. | |
| | | | | | | | | | | | | 20 | | 752 | 5.0 | c | .001 | - NUMEROUS WH. QZ/ANK STRGS AND VEINS; WK. Fu. ALT.; CHL. ALONG FRACT.; ANR. OR. LIM. SECTIONS | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------|---|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 345.6 | | M | F | BX | GG | Fu | | F | CRB | | | | 5 | .1 | | AX 40153 | 2.6 | c | .003 | (343-345.6) GG Fu. CARB - WK. Fu. ALT., BX. WITH WH. QZ/ANK FRAGS ENCLOSED BY Fu. CARB |
| 350.2 | | B | F | BX | OR | LIM | | F | CRB | | | | 5 | .1 | | 754 | 4.6 | c | .007 | (345.6-350.2) GN. Fu. CARB - PERSUASIVE OR. LIM. ALT. - BX WITH WH. QZ/ANK FRAGS ENCLOSED BY OR. LIM. |
| 351.6 | | M | F | STWK | GN | Fu | | F | CRB | | | | 5 | .1 | | 755 | 1.4 | c | .001 | (350.2-351.6) GN. Fu. CARB. - WH. QZ/ANK STWK. |
| 353.4 | | M | F | STWK | GY | ANK | | G | CRB | | | | 10 | .1 | | 756 | 1.8 | c | .003 | (351.6-353.4) GY. CARB - WITH WH. QZ/ANK STWK. - MNR. F. DIS. PY. |
| 358 | | M | F | STWK | GY | ANK | | G | CRB | | | | 10 | .1 | | 757 | 4.6 | c | .007 | (353.4-354.3) OR. LIM. ALT. GY. CARB (354.3-360.7) GY. CARB - WITH WH. QZ/ANK STWK. - MNR. F. DIS. PY. |
| 363 | | M | F | STWK | GN | Fu | | F | CRB | | | | 10 | .1 | | 758 | 5.0 | c | .004 | (360.7-386.1) GN. Fu. CARB |
| 368 | | | | | | | | | | | | | | | | 759 | 5.0 | c | .001 | - MSU. TO WK. FOL. WITH WH. QZ |
| 373 | | | | | | | | | | | | | | | | 760 | 5.0 | c | .001 | ANK STWK TO 378', PAST THIS |
| 378 | | | | | | | | | | | | | | | | 761 | 5.0 | c | .005 | PT. GN CARB IS FOLIATED, MNR. |
| 383 | | | | | | | | | | | | | 2 | | | 762 | 5.0 | c | .006 | F. DIS. PY. |
| 386.1 | | B | | | | | | | | | | | 5 | | | 763 | 3.1 | c | .006 | (386.1-403) BROWN CARB |
| 388.5 | | M | F | MSU | BN | SER | | B | CRB | | | | 2 | .5 | | 764 | 2.4 | c | .020 | - TAN COLOR WITH BK. CHL. IN FRAGT. |
| 393 | | | | | | | | | | | | | | | | 765 | 4.5 | c | .045 | - SER. RICH WITH MNR F. DIS. AND |
| 398 | | | | | | | | | | | | | | | | 766 | 5.0 | c | .081 | STRG. PY., MNR QZ/ANK STRGS |
| 402 | | | | | | | | | | | | | | | | | | | | - MNR. F. DIS. PY. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|-----|----------|-----|----------|---------|-----|--------------------|----------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | | |
| 408 | | M | F | FOL | BN | ANK | | BCRB | F | 50 | | | 2 | | .1 | | AX40768 | 5.0 | c | .010 | (403-418) MIX OF BN CARB, GY. CARB |
| 413 | | | | | | | | | | | | | | | | | 769 | 5.0 | c | .002 | AND CHL. CARB. |
| 418 | | | | | | | | | | | | | | | | | 770 | 5.0 | c | .003 | - ALTERNATING BAND, WELL FOL. WITH COT SECTIONS, MNR. WH. QZ/ANK STRGS, MNR. F. PY. |
| 423 | | M | F | MSV | BN | SER | | BCRB | | | | | 2 | | .1 | | 771 | 5.0 | c | .002 | (418-424.4) BN. CARB. - MSV + NON-FOL., MNR Fy. CARB SECTIONS, MNR. WH. QZ/ANK, Fu. STRGS. |
| 428 | | M | F | MSV | GN | Fy | | FCRB | | | | | 1.0 | | .1 | | 772 | 5.0 | c | .002 | (424.4-457) GN. Fy. CARB |
| 433 | | | | | | | | | | | | | 5 | | | | 773 | 5.0 | c | .007 | - MNR. WH. QZ/ANK STRGS., MNR. |
| 438 | | | | | | | | | | | | | 5 | | | | 774 | 5.0 | c | .011 | F. DIS. PY. |
| 443 | | | | | | | | | | | | | 7 | | | | 775 | 5.0 | c | .005 | (457-457.6) BN. CARB |
| 448 | | | | | | | | | | | | | 2 | | | | 776 | 5.0 | c | .010 | - WITH 190 F. DIS. PY. |
| 453 | | | | | | | | | | | | | 2 | | | | 777 | 5.0 | c | .022 | (457.6-458) GN. Fy. CARB. |
| 457 | | | | | | | | | | | | | 2 | | | | 778 | 4.0 | c | .020 | - WITH 190 F. DIS. PY. |
| 458 | | M | F | MSV | BN | SER | | BCRB | | | | | 2 | | 1.0 | | 779 | 1.0 | c | .058 | (458-463) GN. Fy. CARB. |
| 463 | | M | F | MSV | GN | Fy | | FCRB | | | | | 2 | | 1.0 | | 780 | 5.0 | c | .012 | - WK. FOL. WITH GY. CHL. INFILLING FRACTURES, MNR WH. QZ/ANK STRGS. |
| 468 | | M | F | MSV | BN | SER | | BCRB | | | | | .1 | | .1 | | 781 | 5.0 | c | .001 | (463-485.3) BN. CARB |
| 473 | | | | | | | | | | | | | | | | | 782 | 5.0 | c | .001 | - WITH CHL. CARB SECTIONS |
| 478 | | | | | | | | | | | | | | | | | 783 | 5.0 | c | .003 | - WELL FOLIATED, MNR WH. QZ/ ANK STRGS., MNR. F. DIS. PY., |
| 483 | | | | | | | | | | | | | | | | | 784 | 5.0 | c | .001 | |
| 485.3 | | M | F | MSV | GG | Fy | | FCRB | | | | | | | | | 785 | 2.3 | c | .006 | - WH. ANK. POR PHYROBLASTS - MNR GN. Fy. CARB SECTIONS |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | Qz | PY | | | | | | |
| 486.4 | | M | F | MSV | GN | Fu | | FCRB | | | | | 2 | .1 | | AX40786 | 1.1 | c | .001 | (485.3-486.4) GN. Fu. CARB. (486.4-486.8) GN. Fu. CARB. |
| 487.7 | | M | F | MSV | BN | SER | | BCRB | | | | | 2 | 1.0 | | 787 | 1.3 | c | .132 | (486.8-487.7) BN. SER. RICH CARB - 19% F. DIS. PY. |
| 489.7 | | M | F | HOM | BN | SIL | | QTZ | | | | | 90 | .5 | | 788 | 2.0 | c | .182 | (487.7-489.7) SILIC. BN. CARB - STRONG SILIC. AND ALBITIZATION - FRACTURES INFILLED WITH TAN SER., MNR CHL, PY. |
| 491.2 | | M | F | FOL | BN | SER | | BCRB | | | | | 5 | .5 | | 789 | 1.5 | c | .451 | (489.7-491.2) BN CARB - TAN SER. RICH, WELL FOL., GN. Fu. + WH. QZ/ANK STRGS., MNR F. DIS. PY. |
| 494.4 | | M | F | HOM | BN | SIL | | QTZ | | | | | 90 | .5 | | 790 | 3.2 | c | .118 | (491.2-494.4) SILIC. BN. CARB - STRONG SILIC. AND ALBITIZATION - FRACTURES INFILLED BY TAN SER., MNR. GN. Fu, CHL., MNR. F. DIS. PY. |
| 498 | | M | F | HOM | BN | SIL | BCRB | QTZ | | | | | 90 | 1.0 | | 791 | 3.6 | c | .126 | (494.4-500.6) SILIC. BN CARB |
| 500.6 | | | | | | | BCRB | QTZ | | | | | 90 | 1 | | 792 | 2.6 | c | .076 | - STRONG SILIC. AND ALBITIZATION - FRACTURES INFILLED WITH TAN SER., CHL. AND PY. (19%) |
| 504.2 | | M | F | FOL | BN | SER | | BCRB | | | | | 20 | 1.0 | | 793 | 3.6 | c | .130 | (500.6-504.2) BROWN CARB. - WITH NARROW SILIC., ALBIT. SECTIONS - THIN BANDS OF TAN SER. - STRGS AND F. DIS. PY. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|---|----|---|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | Qz | PY | | | | | | |
| 508 | | M | F | HOM | BN | SIL | BCRB | QTZ | | | | | 90 | .5 | AX40794 | 3.8 | c | .066 | (504.2-510) SILIC. BN. CARB | |
| 510 | | | | | | | | | | | | | 1 | 1 | 795 | 2.0 | c | .088 | - STRONG SILIC. + ALBITIZATION - FRACTURES INFILLED BY TAN SER., MNR CHL., PY. | |
| 513.1 | | M | F | FOL | BN | SER | BCRB | F50 | | | | | 2 | .1 | 796 | 3.1 | c | .082 | (510-513.1) BROWN CARB - WELL FOL., MNR. WH. QZ/ANK AND GN. Fy. STRGS., TN. SER IN FRACT. | |
| 518 | | M | F | BED | GY | SER | TUF | B50 | | | | | 5 | .5 | 797 | 4.9 | c | .003 | (513.1-534.4) TUFFACEOUS SEDIMENTS | |
| 521.4 | | | | | | | | | | | | | | | 798 | 3.4 | c | .032 | - ALTERNATING BANDS OF TAN SER. AND BK CHL., MNR WH. QZ/ ANK. STRGS., F. DIS. PY. | |
| 526.4 | | | | | | | | | | | | | | | 799 | 5.0 | c | .001 | | |
| 530.4 | | | | | | | | | | | | | | | AX40800 | 4.0 | c | .001 | | |
| 534.4 | | | | | | | | | | | | | | | 801 | 4.0 | c | .006 | - MNR GN. Fy., WELL BEDDED | |
| 538 | | S | F | BED | BK | GRAPH | ARG | | | | | | .1 | .1 | 802 | 3.6 | c | .002 | (534.4-618) GRAPHITIC ARGILLITE | |
| 543 | | | | | | | | | | | | | .1 | .1 | 803 | 5.0 | c | .002 | - WELL BEDDED WITH COARSE CHL | |
| 548 | | | | | | | | | V | 70 | | | 30 | .1 | 804 | 5.0 | c | .001 | PY., MNR GY. SER - RICH T.S. BEDS | |
| 618 | | | | | | | | | δ | 60 | | | | | 805 | 70.0 | c | .001 | - MNR WH. QZ/ANK VEINS + STRGS (543-548) GRAPHITIC ARGILLITE - WITH 3-1", 2", 7" WH. QZ/ANK VEINS | |
| 618 | | | | | | | | | | | | | | | | | | | EOH = 618' | |



SPECTROLAB INC.

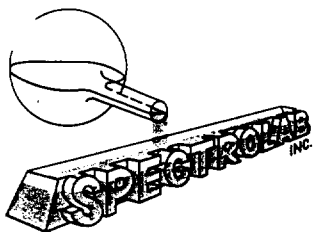
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1423-A DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39977 | 0.001 | |
| AX39978 | 0.001 | |
| AX39979 | 0.001 | |
| AX39980 | <0.001 | |
| AX39981 | <0.001 | |
| AX39982 | 0.001 | |
| AX39983 | 0.001 | |
| AX39984 | 0.001 | |
| AX39985 | 0.001 | |
| AX39986 | 0.001 | 0.001 |
| AX39987 | 0.002 | |
| AX39988 | 0.010 | |
| AX39989 | 0.001 | |
| AX39990 | 0.001 | |
| AX39991 | 0.016 | |
| AX39992 | 0.010 | |
| AX39993 | 0.002 | |
| AX39994 | 0.001 | |
| AX39995 | 0.009 | |
| AX39996 | 0.002 | 0.002 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

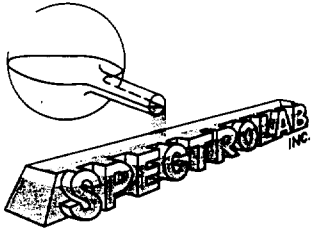
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1423-B DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX39997 | 0.001 | |
| AX39998 | 0.001 | |
| AX39999 | 0.004 | |
| AX40000 | 0.002 | |
| AX40751 | 0.003 | |
| AX40752 | 0.001 | |
| AX40753 | 0.003 | |
| AX40754 | 0.007 | |
| AX40755 | 0.001 | |
| AX40756 | 0.003 | 0.003 |
| AX40757 | 0.007 | |
| AX40758 | 0.004 | |
| AX40759 | 0.001 | |
| AX40760 | 0.001 | |
| AX40761 | 0.005 | |
| AX40762 | 0.006 | |
| AX40763 | 0.006 | |
| AX40764 | 0.020 | |
| AX40765 | 0.045 | |
| AX40766 | 0.078 | 0.084 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

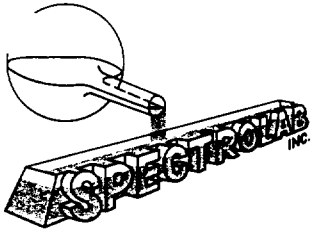
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1423-C DATE: 25/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40767 | 0.118 | |
| AX40768 | 0.010 | |
| AX40769 | 0.002 | |
| AX40770 | 0.003 | |
| AX40771 | 0.002 | |
| AX40772 | 0.002 | |
| AX40773 | 0.007 | |
| AX40774 | 0.011 | |
| AX40775 | 0.005 | |
| AX40776 | 0.010 | 0.009 |
| AX40777 | 0.022 | |
| AX40778 | 0.020 | |
| AX40779 | 0.058 | |
| AX40780 | 0.012 | |
| AX40781 | 0.001 | |
| AX40782 | <0.001 | |
| AX40783 | 0.003 | |
| AX40784 | 0.001 | |
| AX40785 | 0.006 | |
| AX40786 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout Bér



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1423-D DATE: 25/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 19 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX40787 | 0.132 | | |
| AX40788 | 0.182 | | |
| AX40789 | 0.406 | | 0.495 |
| AX40790 | 0.118 | | |
| AX40791 | 0.126 | | |
| AX40792 | 0.076 | | |
| AX40793 | 0.130 | | |
| AX40794 | 0.066 | | |
| AX40795 | 0.038 | | |
| AX40796 | 0.002 | 0.002 | |
| AX40797 | 0.003 | | |
| AX40798 | 0.032 | | |
| AX40799 | 0.001 | | |
| AX40800 | 0.001 | | |
| AX40801 | 0.006 | | |
| AX40802 | 0.002 | | |
| AX40803 | 0.002 | | |
| AX40804 | 0.001 | | |
| AX40805 | 0.001 | | |

ANALYSTE: Mira Godbout Btu



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS

PROJECT: NIGHTHAWK
RAMP ZONE

LOGGED BY: R. MAASS

DATE LOGGED: MAR 6/97

DRILL HOLE NO: RP-97-14

Surface Grid: NORTHING 1092.44

EASTING 3750.94

ELEVATION 10923.77

LENGTH 498.0'

SECTION 3750E

LEVEL

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | -58 | | | | | | | | | | | | |
| 200 | 360 | 57 | | | | | | | | | | | | |
| 400 | 005 | 55 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

START DATE: MAR 4 1997

FINISH DATE: MAR 5 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: intersected .033 / 20.3 @ 363-383.3
.134 / 19.6 @ 417.2-436.8 and .033 / 10.0 @ 458.0-468.0

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 52.0' ; PULLED

HOLE CEMENTED: Yes

NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

ft
 m

Location Sketch

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|-----------|--------|-----|-----|--------|----|----------|----|----------|-------|---|--------------------|------------------------------------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | A1 | A2 | QZ | PY | | | | | |
| 52 | | | | | | | CAS | | | | | | | | | | | | (0-52.0) CASING |
| 118 | | M | F | FOL | GY | TLC | UMF | F | 20 | | | 2 | .1 | | AX 40806 | 66.0 | G | .001 | (52.0-128) ULTRAMAFICS |
| 122.8 | | M | F | FOL | GG | SIL | UMF | F | 20 | | | 20 | .5 | | 807 | 4.8 | C | .001 | - OK. GY., TALC / CHL. RICH, SOFT |
| 124.8 | | | | | | | | | | | | 1 | | | 808 | 2.0 | C | .014 | + EASY TO SCRATCH WITH A |
| 125.8 | | M | F | HOM | WH | SIL | QU | V | 50 | | | 90 | .1 | | 809 | 1.0 | C | .001 | KNIFE, CONTORTED FOLIATION, |
| 128 | | M | F | FOL | GG | SIL | UMF | F | 20 | | | 20 | .5 | | 810 | 2.2 | C | | NUMEROUS WH. QZ/ANK VEINS |
| 133 | | | | | | | | | | | | | | | 811 | 5.0 | C | | AND VEINLETS, MKR F. DIS. PY. |
| 138 | | | | | | | | | | | | | | | 812 | 5.0 | C | | (124.8-125.8) WH. QZ/ANK VEIN |
| 143 | | | | | | | | | | | | | | | 813 | 5.0 | C | | - CHL. INFILLING FRACTURES, |
| 148 | | | | | | | | | | | | | | | 814 | 5.0 | C | .003 | (128-218.6) SILICIFIED ULTRAMAFICS |
| 153 | | | | | | | | | | | | | | | 815 | 5.0 | C | .002 | - LT. GY TO GG COLOR, SILIC. UMF |
| 158 | | | | | | | | | | | | | | | 816 | 5.0 | C | .004 | - WITH NUMEROUS WH. QZ AND QZ/ |
| 163 | | | | | | | | | | | | | | | 817 | 5.0 | C | .002 | ANK STRGS., F. DIS. AND CUBIC PY. |
| 168 | | | | | | | | | | | | | | | 818 | 5.0 | C | .003 | HARD + NOT EASY TO SCRATCH WITH |
| 173 | | | | | | | | | | | | | | | 819 | 5.0 | C | .003 | A KNIFE, CONT. FOLIATION |
| 178 | | | | | | | | | | | | | | | 820 | 5.0 | C | .020 | |
| 183 | | | | | | | | | | | | | | | 821 | 5.0 | C | .009 | |
| 188 | | | | | | | | | | | | | | | 822 | 5.0 | C | .004 | |
| 193 | | | | | | | | | | | | | | | 823 | 5.0 | C | .002 | |
| 198 | | | | | | | | | | | | | | | 824 | 5.0 | C | .002 | |
| 203 | | | | | | | | | | | | | | | 825 | 5.0 | C | .003 | |
| 208 | | | | | | | | | | | | | | | 826 | 5.0 | C | .002 | |
| 213 | | | | | | | | | | | | | | | 827 | 5.0 | C | .003 | |
| 216.6 | | | | | | | | | | | | | | | 828 | 3.6 | C | .001 | |
| 218.6 | | | | | | | | | | | | | | | 829 | 2.0 | C | .002 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|----|----------|---------|----------|-------|--|---------------------------|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QZ | PY | | | | | | |
| 238.6 | | M | F | FOL | GY | TLC | | UMF | F | 20 | | | | | AX40830 | 20.0 | G | .002 | (218.6-243.6) ULTRAMAFICS | |
| 243.6 | | M | F | RX | GG | CHL | | MVO | | | | .1 | .1 | 831 | 5.0 | C | .005 | - AS J2.0-128.0 | | |
| 248 | | | | | | | | | | | | | | 832 | 4.4 | C | .001 | (243.6-250.8) MAFIC VOLCANICS | | |
| 250.8 | | | | | | | | | | | | | | 833 | 2.8 | C | .001 | - DK. GG, CHL. MVO, WITH LT. GN. EP. AND OR. K-FELDSPAR FRAGS - MNR. CUBIC PY., MNR WH. QZ/ANK VNLETS, MSU TO WK. FOL. | | |
| 253 | | M | F | FOL | GG | SIL | | UMF | | | | 20 | .5 | 834 | 2.2 | C | .003 | (250.8-279.3) SILIC. ULTRAMAFICS | | |
| 258 | | | | | | | | | | | | | | 835 | 5.0 | C | .002 | (279.3-281.3) ULTRAMAFICS | | |
| 263 | | | | | | | | | | | | | | 836 | 5.0 | C | .002 | - DK. GY., TALC/CHL RICH, 1% F. DIS. PY. | | |
| 268 | | | | | | | | | | | | | | 837 | 5.0 | C | .002 | | | |
| 273 | | | | | | | | | | | | | | 838 | 5.0 | C | .003 | | | |
| 278 | | | | | | | | | | | | | | 839 | 5.0 | C | .009 | | | |
| 279.3 | | | | | | | | | | | | | | 840 | 1.3 | C | .003 | | | |
| 281.3 | | ↓ | ↓ | ↓ | ↓ | ↓ | | ↓ | | | | ↓ | ↓ | 841 | 2.0 | C | .050 | | | |
| 328 | | M | F | MSV | BK | TLC | | UMF | | | | .1 | .1 | 842 | 46.7 | G | .001 | (281.3-331) ULTRAMAFICS | | |
| 331 | | | | | | | | | | | | | | 843 | 5.0 | C | .001 | - DK. GY., TALC/CHL RICH UMF - SOFT + EASY TO GOUGE WITH A KNIFE, MNR WH. QZ/ANK STRGS, NUMEROUS LT. GN. TALC STRGS, MSU TO WK. FOL., EXTREMELY MAGNETIC DUE TO F. DIS. MT. | | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----------|-----------|--------|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S B | J/F A1 | J J | A2 | QZ | PY | | | | | | |
| 333.5 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | .1 | | AX40844 | 2.5 | c | .01 | (331-333.5) ULTRAMAFICS - OK. GY., TALC/CHL RICH UMF, SILIC UMF SECTIONS, NUMEROUS WH. QZ ANK UNLETS, MNR F. PY. |
| 338 | | M | F | FOL | GG | CHL | | CCRB | | | | | .1 | .1 | | 845 | 4.5 | c | .001 | (333.5-350) CHLORITIC ANK ALT. |
| 343 | | | | | | | | F 60 | | | | | | | | 846 | 5.0 | c | | ULTRAMAFICS |
| 348 | | | | | | | | | | | | | | | | 847 | 5.0 | c | | - GG COLOR WITH NUMEROUS WH. |
| 350 | | | | | | | | | | | | | | | | 848 | 2.0 | c | | QZ/ANK STRGS, WELL FOLIATED, CHLORITIC, WITH PERVASIVE ANK ALT., COT SECTION 345-350' |
| 353 | | B | F | MSV | BK | TLC | | UMF | | | | | .1 | .1 | | 849 | 3.0 | c | | (350-353) TALC/CHL. RICH UMF WITH 4" CHL. CARB. SECTION - BROKEN, BLOCKY CORE |
| 355.9 | | M | F | MSV | GY | ANK | | GCRB | | | | | 20 | .5 | | 850 | 2.9 | c | ✓ | (353-355.9) TALC/CHL RICH UMF |
| 358.0 | | | | | | | | | | | | | | | | 851 | 2.1 | c | .004 | (355.9-358) GY. CARB - WITH 1" REDDEN BAND, CHL INFIL. FRACT., COT FOL. |
| 363 | | M | F | FOL | GY | ANK | | GCRB | | | | | 20 | .5 | | 852 | 5.0 | c | .005 | (358-367) GY. CARB |
| 367 | | | | | | | | | | | | | | | | 853 | 4.0 | c | .098 | - WITH GN FN, TN. BN. CARB, AND CHL. CARB SECTIONS - TN. BN. CARB SECTIONS ARE FRACT. WITH F. DIS. PY. INFILLING - WELL FOL. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|----------|-----------|--------|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | GrS | Text | Co | All | Name 1 | Name 2 | B/S B | J/F A1 | J J | A2 | QZ | PY | | | | | | |
| 372 | | M | F | MSV | GN | Fu | | FCRB | | | | | 2 | .1 | | AX40854 | 5.0 | c | .009 | (367-378.5) GN. Fu. CARB |
| 376.5 | | | | | | | | | | | | | | | | 855 | 4.5 | c | .008 | - WITH FRACTURES INFILLED BY CHL. |
| 378.5 | | | | | | | | | | | | | | | | 856 | 2.0 | c | .010 | BX WITH WH. QZ/ANK FRAGS. SURROUND BY GN. Fu. |
| 380.2 | | M | F | MSV | BN | ANK | | BCRB | | | | | 10 | .5 | | 857 | 1.7 | c | .044 | (378.5-380.2) BN. CARB - FRACT. INFILLED BY TAN SER. AND BK. CHL. |
| 383.3 | | M | F | FOL | BN | SER | | TUF | F 60 | | | | 2 | 1.0 | | 858 | 3.1 | c | .034 | (380.2-397) TUFFACEOUS SEDIMENTS |
| 388 | | | | | | | | | | | | | | | | 859 | 4.7 | c | .008 | - ALTERNATING BANDS OF TAN SER. |
| 393 | | | | | | | | | | | | | | | | 860 | 5.0 | c | .007 | AND GY. CHL., FRAGMENTAL SECTIONS |
| 397 | | B | | | | | | | | | | | | | | 861 | 4.0 | c | .015 | CONSISTING OF GY. CHL. MATRIX ENCLOSED TAN SER. FRAGS, F. DIS. PY. (393-397) EXTREMELY BROKEN, BLOCKY CORE, COT FOL., BK. CHL. ENCLOSED WH. QZ/ANK FRAGS. AND SER. FRAGS |
| 398 | | M | F | FOL | BN | SER | | BCRB | | | | | 30 | .5 | | 862 | 1.0 | c | .006 | (397-413) FOLIATED BN. CARB |
| 403 | | | | | | | | | | | | | 5 | | | 863 | 5.0 | c | .007 | - NUMEROUS WH. QZ/ANK VEINS |
| 408 | | | | COT | | | | | | | | | 10 | | | 864 | 5.0 | c | .002 | - SEVERAL EXTREMELY COT SECTIONS |
| 413 | | | | FOL | | | | | F 60 | | | | 5 | | | 865 | 5.0 | c | .001 | - DOMINANTLY BN. SER. RICH CARB WITH GY. CHL. CARB SECTIONS - MNR F. DIS. PY. |
| 417.2 | | B | M | MSV | GN | Fu | | FCRB | | | | | 20 | .1 | | 866 | 4.2 | c | .002 | (413-417.2) GN. Fu. CARB - BROKEN, BLOCKY CORE - NUMEROUS WH. QZ/ANK STRGS. |

417.2-436.8

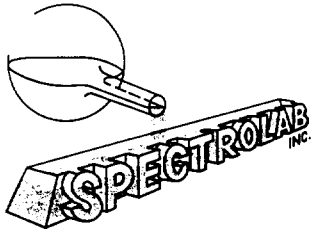
DRILL HOLE NO: RP-91-14

PAGE 6 OF 7

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|---|----|---|--------|-----|----------|--|----------|-------|---|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B | A1 | J | A2 | QTZ | PY | | | | | | |
| 420 | | M | F | MSV | BN | SIL | | BCRB | | | | | 20 | .5 | | AX40867 | 2.7 | c | .190 | (411.3-423) SILIC. BN. CARB. |
| 423 | | I | I | I | I | I | | I | | | | | I | I | | 868 | 3.0 | c | .132 | - MSV, FRACT. INFILLED BY TAN SER., HARD + SILIC., MNR. F. PY. - BROWN COLOR |
| 428 | | M | F | BX | BN | SIL | | BCRB | | | | | 50 | .5 | | 869 | 5.0 | c | .072 | (423-428) QTZ FLOODED BN. CARB - NUMEROUS WH. QTZ/ANK VEINS SURROUNDED BY WISPS OF TAN SER., 1' GN. Fu. CARB SECTION (427.5-428) BX. SECTION CONSISTING OF WH. QZ/ANK IN A TAN SER/BKCHU MATRIX, MNR. F. PY. |
| 431 | | M | F | BX | BN | SIL | | BCRB | | | | | 50 | 2.0 | | 870 | 3.0 | c | .212 | (428-432.8) QTZ FLOODED BN. CARB. |
| 432.8 | | I | I | I | I | I | | I | | | | | I | I | | 871 | 1.8 | c | .103 | - TAN AND BN. SER. ENCLOSING WH. QZ/ANK FRAGS, F. DIS. AND STRG. PY., NUMEROUS WH. QZ/ANK VEINS, MNR. GN. Fu. IN FRACT. |
| 436.8 | | M | F | MSV | BN | SIL | | BCRB | | | | | 50 | 1.0 | | 872 | 4.0 | c | .162 | (432.8-436.8) SILIC. BN. CARB. - DOMINANTLY SILIC. BN. SER. RICH CARB WITH 1' TAN SER. SECTION CONTAINING WH. QZ/ANK VEINS, GN. Fu. IN FRACT., F. DIS. PY. |
| 437.8 | | M | F | MSV | GN | Fu | | BCRB | | | | | 10 | .1 | | 873 | 1.0 | c | .006 | (436.8-437.8) GN. Fu. CARB. - WITH TAN SER., GN. Fu. INFIL. FRACT. |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|------|--------|-----------|-----|----|-----|--------|-----|----------|-----|----------|-------|-----|--------------|---|--------------------------------------|
| | | Com | GrS | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | Py | CPY | | | | | | |
| 439.8 | | M | F | MSV | GN | Fu | | FCRB | V | 50 | | | 1.0 | .1 | | AX40874 | 2.0 | c | .003 | (437.8-439.8) GN. Fu. CARB - WITH 3" WH. QZ/ANK VEIN - GN. Fu. INFILL FRACT. | |
| 443 | | M | F | MSV | GN | Fu | | FCRB | V | 40 | | | 1.0 | .1 | | 875 | 3.2 | c | .014 | (439.8-443) GN Fu. CARB - WITH 4" WH. QZ/ANK VEIN, GN. Fu., MNR. OR. LIM. IN FRACT. | |
| 448 | | M | F | MSV | GN | Fu | | FCRB | V | 30 | | | 2 | .5 | | 876 | 5.0 | c | .007 | (443-448) GN Fu. CARB, ^{1/2"} WH. QZ/ANK VEIN - BROKEN, BLOCKY, CORE WITH GN. Fu., MNR OR. LIM. ALONG FRACT. SURFACES, 1.5' BN. SER. RICH SILIC. CARB SECTION WITH ASSOC. F. DIS. PY. | |
| 453 | | M | F | STW | GY | ANK | | GCRB | | | | | 20 | .5 | | 877 | 5.0 | c | .017 | (448-453) GY CARB - WITH WH. QZ/ANK STOCKWORK | |
| 458 | | M | F | FIL | BN | SER. | | TUF | | | | | | .1 | .5 | | 878 | 5.0 | c | .009 | - MNR OR. LIM. ALONG FRACT. SURFACES |
| 463 | | | | | | | | | | | | | | | | 879 | 5.0 | c | .024 | BLOCKY SECTIONS, BN. SIL. SER. | |
| 468 | | | | | | | | | | | | | | .1 | | 880 | 5.0 | c | .042 | RICH CARB SECTIONS WITH F. PY. | |
| 473 | | | | | | | | F 45 | | | | | | | | 881 | 5.0 | c | .002 | (453-498) TUFFACEOUS SEDIMENTS | |
| 478 | | | | | | | | | | | | | | | | 882 | 5.0 | c | .001 | - ALTERNATING BANDS OF TAN SER, | |
| 483 | | | | | | | | | | | | | | | | 883 | 5.0 | c | .001 | AND BK CHL. RICH SEDS, SECTIONS OF MSV, | |
| 488 | | | | | | | | | | | | | | | | 884 | 5.0 | c | .001 | SER. RICH SEDS., F. DIS., CUBIC AND | |
| 493 | | | | | | | | | | | | | 20 | .5 | | 885 | 5.0 | c | .001 | STRG. PY., MNR WH. QZ/ANK STRGS. | |
| 498 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | F 45 | | | | | .1 | .1 | | 886 | 5.0 | c | .001 | (488-493) WH. QZ/ANK STOCK WORK F. DIS. PY., MNR CPY. | |

C 24 = 4401



SPECTROLAB INC.

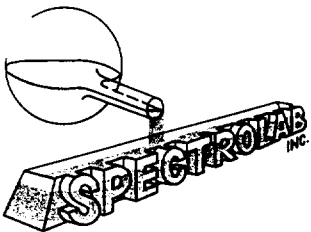
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1424-A DATE: 25/03/97

Client: ROYAL OAK MINES LTD L'Échantillon: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40806 | 0.001 | |
| AX40807 | 0.001 | |
| AX40808 | 0.014 | |
| AX40809 | 0.001 | |
| AX40810 | 0.001 | |
| AX40811 | 0.001 | |
| AX40812 | 0.001 | |
| AX40813 | 0.001 | |
| AX40814 | 0.003 | |
| AX40815 | 0.002 | 0.002 |
| AX40816 | 0.004 | |
| AX40817 | 0.002 | |
| AX40818 | 0.003 | |
| AX40819 | 0.003 | |
| AX40820 | 0.070 | |
| AX40821 | 0.009 | |
| AX40822 | 0.004 | |
| AX40823 | 0.002 | |
| AX40824 | 0.002 | |
| AX40825 | 0.003 | 0.004 |

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

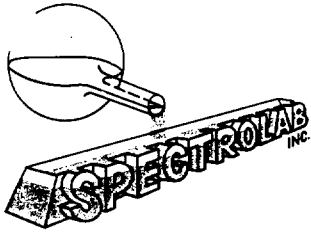
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1424-B DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40826 | 0.002 | |
| AX40827 | 0.003 | |
| AX40828 | 0.001 | |
| AX40829 | 0.002 | |
| AX40830 | 0.002 | |
| AX40831 | 0.005 | |
| AX40832 | 0.001 | |
| AX40833 | 0.001 | |
| AX40834 | 0.003 | |
| AX40835 | 0.002 | 0.002 |
| AX40836 | 0.002 | |
| AX40837 | 0.002 | |
| AX40838 | 0.003 | |
| AX40839 | 0.009 | |
| AX40840 | 0.003 | |
| AX40841 | 0.050 | |
| AX40842 | 0.001 | |
| AX40843 | 0.001 | |
| AX40844 | 0.001 | |
| AX40845 | 0.001 | <0.001 |

ANALYSTE: Mira Godbout BSc.



SPECTROLAB INC.

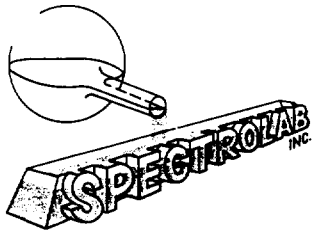
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1424-C DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40846 | <0.001 | |
| AX40847 | <0.001 | |
| AX40848 | <0.001 | |
| AX40849 | 0.001 | |
| AX40850 | <0.001 | |
| AX40851 | 0.004 | |
| AX40852 | 0.005 | |
| AX40853 | 0.098 | |
| AX40854 | 0.009 | |
| AX40855 | 0.008 | 0.008 |
| AX40856 | 0.010 | |
| AX40857 | 0.044 | |
| AX40858 | 0.034 | |
| AX40859 | 0.008 | |
| AX40860 | 0.007 | |
| AX40861 | 0.015 | |
| AX40862 | 0.006 | |
| AX40863 | 0.007 | |
| AX40864 | 0.002 | |
| AX40865 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout Bto.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1424-D DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 21 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX40866 | 0.002 | | |
| AX40867 | 0.190 | | |
| AX40868 | 0.132 | | |
| AX40869 | 0.072 | | |
| AX40870 | 0.222 | | 0.202 |
| AX40871 | 0.030 | | |
| AX40872 | 0.162 | | |
| AX40873 | 0.006 | | |
| AX40874 | 0.003 | | |
| AX40875 | 0.015 | 0.012 | |
| AX40876 | 0.007 | | |
| AX40877 | 0.017 | | |
| AX40878 | 0.009 | | |
| AX40879 | 0.024 | | |
| AX40880 | 0.042 | | |
| AX40881 | 0.002 | | |
| AX40882 | 0.001 | | |
| AX40883 | 0.001 | | |
| AX40884 | 0.001 | | |
| AX40885 | 0.001 | | |
| AX40886 | 0.001 | <0.001 | |

ANALYSTE: Mira Godbout B.S.



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS PROJECT: NIGHTHAWK RAMP ZONE LOGGED BY: R. MAASS DATE LOGGED: MAR 10/96 DRILL HOLE NO: RP-97-15

Surface Grid: NORTHING 1092.44 EASTING 3750.94 ELEVATION 10923.77 LENGTH 598.0 SECTION 3750 E LEVEL _____

Engineering Grid: _____

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | -67 | | | | | | | | | | | | |
| 200 | 360 | 66 | | | | | | | | | | | | |
| 400 | 008 | 64 | | | | | | | | | | | | |
| 600 | 006 | 64 | | | | | | | | | | | | |

START DATE: MAR 6 1997

FINISH DATE: MAR 8 1997

TOWNSHIP: CODY

CLAIM NO.: P 15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: intersected .457/13.2 @ 471.8-485 uncut
.162/13.2 cut

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 46 feet, pulled

HOLE CEMENTED: Yes.

NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS

Location Sketch

+ .039/12'.0 @ 551-563'

ft
 m

DRILL HOLE NO: RP-97-15

PAGE 2 OF 6

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|-----|---|--------|---|----------|----|----------|-------|------|---|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | B | A1 | J | A2 | QZ | | | | | |
| 46 | | | | | | | CAS | | | | | | | | | | | | | (0-46) CASING |
| 53 | | M | F | MSV | GY | CHL | MVO | F | 50 | | | | | .1 | .1 | AX40887 | 7.06 | 1001 | (46-53) CHLORITIC MAFIC VOLCANICS - DK. GY., MSV, F.G., 1/4" - 1" WH. QZ/ANK VEINS, MNR F. DIS. PY. ALONG VH. MARGINS, WK. FOL. | |
| 104 | | M | F | MSV | GY | TLC | UMF | | | | | | | .1 | .1 | 888 | 51.06 | 1001 | (53-104) ULTRAMAFICS - DK. GY., TALC/CHL. RICH UMF WITH MNR WH. QZ/ANK UNLETS, SOFT + EASY TO SCRATCH WITH A KNIFE, NONMAGNETIC, MSV TO FOL. | |
| | | | | | | | | | | | | | | | | | | | | (60-63) 1/2" WH. QZ/ANK STRGS AT LOW ANGLE TO C.A. (10°), COT. FOL. (93-104) NUMEROUS WH. QZ/ANK UNLETS, COT FOL. |
| 106.8 | | M | F | MSV | GY | TLC | UMF | | | | | | | 2 | .1 | AX40889 | 2.8 | 1003 | (104-106.8) TALC/CHL. RICH UMF WITH 2-1" WH. QZ/ANK VEINS | |
| 109.4 | | M | F | HOM | WH | SIL | QV | | | | | | | 80 | .1 | 890 | 2.6 | 1001 | (106.8-109.4) 2' WH. QZ/ANK VEIN - WITH BK. CHL. FILLED FRACTURES | |
| 113.5 | | M | F | MSV | GY | TLC | UMF | | | | | | | .1 | .1 | 891 | 4.1 | 1002 | (109.4-116) TALC/CHL RICH UMF | |
| 116 | | | | | | | | | | | | | | .1 | .1 | 892 | 2.5 | 1002 | (116-122.6) WH. QZ/ANK VEIN | |
| 118 | | M | F | HOM | WH | SIL | QV | | | | | | | 95 | .1 | 893 | 2.0 | 1001 | - WITH CHL. FILLED FRACTURES | |
| 122.6 | | | | | | | | | | | | | | | | 894 | 4.6 | 1001 | | |

DRILL HOLE NO: RP-97-15

PAGE 3 OF 6

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|----|------|----|-----|-----------|--------|-----|-----|--------|----|----------|-----|----------|--------|------|---------------------------------------|----------|
| | | Com | Gr | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | B | A1 | J | A2 | | | | | |
| 124.6 | | M | F | MSV | GY | TLC | | UMF | F | 50 | | | .1 | .1 | AX40895 | 2.0 c | | (122.6-136) TALL/CHL RICH ULTRAMAFICS | |
| 128 | | | | | | | | | | | | | | | 896 | 3.4 c | | (136-160.9) GY. CARB | |
| 133 | | | | | | | | | | | | | | | 897 | 5.0 c | | - LT. GY. COLOR WITH WH. QZ/ANK | |
| 136 | | | | | | | | | | | | | | | 898 | 3.0 c | ✓ | STWK, HARD + SILIC., F. DIS. PY., | |
| 138 | | M | F | STWK | GY | ANK | | GCRB | | | | | 20 | .5 | 899 | 2.0 c | .001 | MNR OR. LH. RIMMING QZ/ANK VNLETS, | |
| 143 | | | | | | | | | | | | | | | AX40900 | 5.0 c | .003 | MSV + NON-FOL., STRONG ANK. ALT. | |
| 148 | | | | | | | | | | | | | | | 901 | 5.0 c | .001 | | |
| 153 | | | | | | | | | | | | | | | 902 | 5.0 c | .001 | | |
| 158 | | | | | | | | | | | | | | | 903 | 5.0 c | .003 | | |
| 160.9 | | | | | | | | | | | | | | | 904 | 2.9 c | .013 | | |
| 196.7 | | M | F | STWK | GY | TLC | | UMF | | | | | 10 | .1 | 905 | 35.8 G | .009 | (160.9-198.7) ULTRAMAFICS | |
| 198.7 | | | | | | | | | | | | | | | 906 | 2.0 c | .006 | - TALL/CHL RICH, NUMEROUS WH. QZ/ | |
| | | | | | | | | | | | | | | | | | | ANK. VNLETS, SOFT + EASY TO SCRATCH, | |
| | | | | | | | | | | | | | | | | | | - MNR F. DIS. PY., MSV TO WK. FOL., | |
| | | | | | | | | | | | | | | | | | | WK. ANK. ALT. | |
| 202.2 | | M | F | MSV | GN | CHL | | MVO | | | | | 5 | 1.0 | 907 | 3.5 c | .010 | (198.7-202.2) MAFIC VOLCANICS | |
| | | | | | | | | | | | | | | | | | | - DK. GN., CHL. RICH, SEVERAL WH. | |
| | | | | | | | | | | | | | | | | | | QZ/ANK VEINS, MSV + NON FOL., | |
| | | | | | | | | | | | | | | | | | | 19% F. DIS. PY. | |
| 204.2 | | M | F | STWK | GY | TLC | | UMF | | | | | 10 | .1 | 908 | 2.0 c | .002 | (202.2-292.6) ULTRAMAFICS | |
| 258 | | | | | | | | | | | | | | | 909 | 53.8 G | .02 | - SAME AS 160.9-198.7 | |
| 292.6 | | | | | | | | | | | | | | | 910 | 34.6 G | .002 | (292.6-315.8) ULTRAMAFICS | |
| 315.8 | | | | | | | | | | | | | | | 911 | 23.2 G | .004 | - AS ABOVE WITH NUMEROUS GN. CHL. | |
| | | | | | | | | | | | | | | | | | | SECTIONS, BROKEN, BLOCKY CORE | |
| | | | | | | | | | | | | | | | | | | - WELL FOLIATED | |

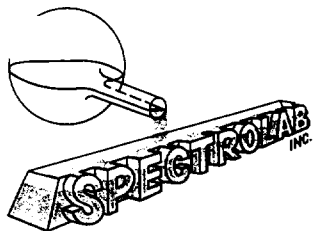
| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS | |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|-----|----------|---------|------|--------------------|----------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | CPY | | | | | | |
| 327.5 | | M | F | STW | GY | TLC | | UMF | | | | | 10 | | .1 | | AX40912 | 11.7 | G | .003 | (315.8-327.5) ULTRAMAFICS |
| 378 | | | | | | | | | | | | | | | | | 913 | 50.5 | G | .002 | - MS 202.2 - 292.6 |
| 428 | | | | | | | | | | | | | | | | | 914 | 50.0 | G | .002 | (327.5-443.5) TALL/CHL RICH UMF |
| 443.5 | | | | | | | | | | | | | | | | | 915 | 15.5 | G | .002 | (443.5-448.5) ULTRAMAFICS |
| 448.5 | | M | F | MSV | GY | TLC | | UMF | | | | | .1 | | .1 | | 916 | 5.0 | C | .001 | - DK. GY., MSV, TALL/CHL RICH, - STRONGLY MAGNETIC, SOFT + EASY TO SCRATCH, WH. QZ/ ANK AND LT. GN. TALL STRGS. |
| 452.6 | | B | F | MSV | OR | LIM | | UMF | | | | | .1 | | .1 | | 917 | 4.1 | C | .006 | (448.5-452.6) OR. STRONG LIM ALT. ULTRAMAFICS - BROKEN, RUBBLY CORE - POSSIBLE FAULT ZONE |
| 455 | | M | F | STW | GY | ANK | | GCRB | | | | | 10 | | .1 | | 918 | 2.4 | C | .003 | (452.6-469.8) GY. CARB |
| 458 | | | | | | | | | | | | | | | | | 919 | 3.0 | C | .002 | - LT. GY COLOR WITH WH. QZ/ANK |
| 463 | | B | | | | | | | | | | | | | | | 920 | 5.0 | C | .003 | STW, CHL. FILLED FRACT., |
| 468 | | B | | | | | | | | | | | | | | | 921 | 5.0 | C | .003 | MSV + NON-FOL., HARD + SILC., |
| 469.8 | | M | | | | | | | | | | | | | | | 922 | 5.0 | C | .002 | - OR. LIM. SECTIONS, SEVERAL BROKEN, BLOCKY SECTIONS |
| 471.8 | | M | F | BX | GY | ANK | | CCRB | | | | | 10 | | .5 | | 923 | 2.0 | C | .007 | (469.8-471.8) BX. ULTRAMAFICS - WH. ANGULAR QZ/ANK FRAGS IN CHL. MATRIX, TAN SER., F. PY. IN FRACT. |
| 475 | | B | F | BX | WH | SIL | | QV | V | 30 | | | 80 | | 1.0 | .1 | 924 | 3.2 | C | .008 | (471.8-475) BX QZ/ANK VEIN - CHL., TAN SER., F. PY. IN FRACT., - ANGULAR FRAGS IN CHL. MATRIX |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|-----|----------|---------|------|--------------------|---|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | Py | | | | | | |
| 478 | | B | F | BX | WH | SIL | | QV | | | | | 50 | | 10 | VG | AX40925 | 3.0c | 1.80 | (475-478) QZ/ANK/CHL. BRECCIA - WH. ANGULAR QZ/ANK FRAGS IN CHL. MATRIX, 10% F. DIS. PY. ENCLOSE FRAGS, VG SPECKS IN FRACT., TAN SER. WISPS |
| 480 | | B | F | BX | WH | SIL | | QV | | | | | 80 | | 1.0 | | 926 | 2.0c | .115 | (478-480) BX. QZ/ANK VEIN - CHL., PY., SER. INFILL FRACT. - WH. QZ/ANK FRAGS IN CHL. MATRIX |
| 485 | | B | F | FOL | GG | CHL | | CCRB | F | 40 | | | .1 | | .1 | | 927 | 5.0c | .038 | (480-488.2) FOL. CHL. CARR |
| 488.2 | | | | | | | | | | | | | .1 | | .1 | | 928 | 3.2c | .014 | - NUMEROUS WH. QZ/ANK STRGS., F. DIS. PY., CHL. IN FRACT. |
| 491 | | M | F | MSV | GG | SIL | | SYN | | | | | .1 | | .5 | | 929 | 2.8c | .007 | (488.2-494) SYENITE DYKE |
| 494 | | I | I | I | PK | SIL | | SYN | | | | | .1 | | .5 | | 930 | 3.0c | .003 | - GG TO PINK COLOR WITH CHL IN FRACT., MNR F. PY., THIN WH. QZ/ANK STRGS. |
| 496 | | B | F | FOL | GG | CHL | | CCRB | F | 50 | | | .1 | | .1 | | 931 | 2.0c | .002 | (494-496) FOL. CHL. CARR - ALTERNATING BANDS OF GN. CHL., SYENITE, QZ/ANK., MNR. F. PY. |
| 498 | | M | F | MSV | GG | SIL | | SYN | | | | | .1 | | .5 | | 932 | 2.0c | .016 | (496-502) SYENITE DYKE |
| 502 | | I | I | I | PK | SIL | | SYN | | | | | .1 | | .5 | | 933 | 4.0c | .001 | - GG TO PINK COLOR WITH CHL. IN FRACT., THIN QZ/ANK STRGS. |

NOTE:
AX 40936-937 NOT IN
SAMPLE TICKET BOOK

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-------|--------|-----------|----------|----|----------|--------|----|----------|----|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S B | A1 | J/F J | A2 | QZ | PY | | | | | | |
| 507 | | R | F | FOL | GG | CHL | | CCRB | F | 30 | | | .1 | | .1 | AX40934 | 5.0 | c | .003 | (502-539.9) FOLIATED CHL. CARB |
| 512 | | | | BX | | | | | | | | | | | | 935 | 5.0 | c | .001 | - WELL FOL., CHL. IN FILL. FRACT. |
| 515.3 | | | | | | | | | | | | | | | | 938 | 3.3 | c | .004 | - BLOCKY, BROKEN CORE, MNR. F. |
| 519 | | M | | MSV | | | | | | | | | 5 | | | 939 | 3.7 | c | .012 | DIS. PY., SEVERAL BX. SECTIONS |
| 524 | | | | FOL | | | | F | 30 | | | | .1 | | | 940 | 5.0 | c | .007 | MNR WH. QZ IANK STRGS + VEINS |
| 528 | | | | | | | | | | | | | | | | 941 | 4.0 | c | .001 | (515.3-519) 1", 2" PK. QZ IANK VEINS |
| 531 | | | | | | | | | | | | | | | | 942 | 3.0 | c | .001 | |
| 534.9 | | | | | | | | | | | | | | | | 943 | 3.9 | c | .007 | |
| 539.9 | | | | | | | | F | 50 | | | | | | | 944 | 5.0 | c | .036 | |
| 541 | | M | F | MSV | GN | Fy | | F | CRB | | | | 2 | | .1 | 945 | 1.1 | c | .002 | (539.9-546) GN. Fy. CARB |
| 546 | | | | | | | | | | | | | | | | 946 | 5.0 | c | .002 | - CHL. FILLED FRACT., MNR WH. QZ IANK STRGS., MNR TAN SER. |
| 551 | | M | F | MSV | GY | CHL | | CCRB | | | | | 2 | | .1 | 947 | 5.0 | c | .004 | (546-551) FOL. CHL. CARB. |
| 554 | | M | F | MSV | GY | ANK | | G | CRB | | | | 1 | | | 948 | 3.0 | c | .023 | (551-586) GY. CARB. |
| 558 | | | | STWK | | | | | | | | | 10 | | | 949 | 4.0 | c | .016 | - MSV WITH WH. QZ IANK STWK |
| 563 | | | | MSV | | | | | | | | | 2 | | | 950 | 5.0 | c | .067 | SECTIONS, OTHER SECTIONS CONTAIN |
| 568 | | | | | | | | | | | | | | | | 951 | 5.0 | c | .002 | PORPHYROBLASTS OF ANK., F. DIS. PY. |
| 573 | | | | | | | | | | | | | | | | 952 | 5.0 | c | .001 | HARD + SILIC., STRONG ANK. ALT. |
| 578 | | | | | | | | | | | | | | | | 953 | 5.0 | c | | |
| 583 | | | | | | | | | | | | | | | | 954 | 5.0 | c | | (586-598) GRAPHITIC ARGILLITE |
| 586 | | | | | | | | | | | | | | | | 955 | 3.0 | c | | - DK. GY., WELL BANDED, COARSE |
| 588 | | S | F | BND | GY | GRAPH | | ARG | B | 30 | | | | | | 956 | 2.0 | c | ✓ | CUBIC PY., SOFT + EASY TO SCRATCH |
| 593 | | | | | | | | | | | | | | | | 957 | 5.0 | c | .003 | WH. QZ IANK VNLETS PARALLEL |
| 598 | | | | | | | | | | | | | | | | 958 | 5.0 | c | .001 | FOL. |

EOH = 598'



SPECTROLAB INC.

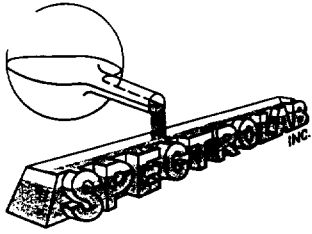
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: 16-1425-A DATE: 25/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40887 | 0.001 | |
| AX40888 | 0.001 | |
| AX40889 | 0.003 | |
| AX40890 | 0.001 | |
| AX40891 | 0.002 | |
| AX40892 | 0.002 | |
| AX40893 | 0.001 | |
| AX40894 | 0.001 | |
| AX40895 | 0.001 | |
| AX40896 | 0.001 | 0.001 |
| AX40897 | 0.001 | |
| AX40898 | 0.001 | |
| AX40899 | 0.001 | |
| AX40900 | 0.003 | |
| AX40901 | 0.001 | |
| AX40902 | 0.001 | |
| AX40903 | 0.003 | |
| AX40904 | 0.013 | |
| AX40905 | 0.009 | |
| AX40906 | 0.006 | 0.005 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

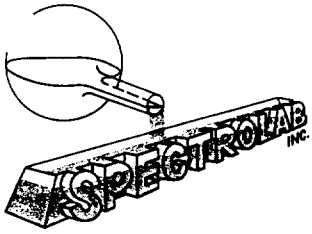
CERTIFICAT D'ANALYSES N°: IG-1425-B DATE: 25/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.
Ref. 1602

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|------------|--------------|------------------|-----------------------|
| AX40907 | 0.010 | | |
| AX40908 | 0.002 | | |
| AX40909 | 0.020 | | |
| AX40910 | 0.002 | | |
| AX40911 | 0.004 | | |
| AX40912 | 0.003 | | |
| AX40913 | 0.002 | | |
| AX40914 | 0.002 | | |
| AX40915 | 0.002 | | |
| AX40916 | 0.001 | 0.002 | |
| AX40917 | 0.006 | | |
| AX40918 | 0.003 | | |
| AX40919 | 0.002 | | |
| AX40920 | 0.003 | | |
| AX40921 | 0.003 | | |
| AX40922 | 0.002 | | |
| AX40923 | 0.007 | | |
| AX40924 | 0.068 | | |
| AX40925 ** | 1.170 | | 2.432 |
| AX40926 | 0.122 | 0.108 | |

**VISIBLE GOLD - ORANGE TAG

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

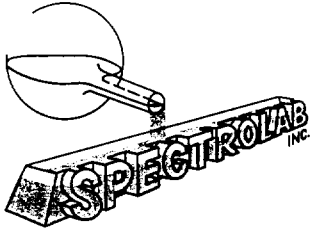
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1425-C DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40927 | 0.038 | |
| AX40928 | 0.014 | |
| AX40929 | 0.007 | |
| AX40930 | 0.003 | |
| AX40931 | 0.002 | |
| AX40932 | 0.016 | |
| AX40933 | 0.001 | |
| AX40934 | 0.003 | |
| AX40935 | 0.001 | |
| AX40938 | 0.004 | 0.004 |
| AX40939 | 0.012 | |
| AX40940 | 0.007 | |
| AX40941 | 0.001 | |
| AX40942 | 0.001 | |
| AX40943 | 0.007 | |
| AX40944 | 0.036 | |
| AX40945 | 0.002 | |
| AX40946 | 0.002 | |
| AX40947 | 0.004 | |
| AX40948 | 0.024 | 0.023 |

ANALYSTE: Mira Godbout B.S.



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1425-D DATE: 25/03/97

Client: ROYAL DAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 10 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40949 | 0.016 | |
| AX40950 | 0.067 | |
| AX40951 | 0.002 | |
| AX40952 | 0.001 | |
| AX40953 | 0.001 | |
| AX40954 | 0.001 | |
| AX40955 | 0.001 | |
| AX40956 | 0.001 | |
| AX40957 | 0.003 | |
| AX40958 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc



**ROYAL OAK
MINES INC.**

DIVISION: TIMMINS PROJECT: NIGHTHAWK RAMP ZONE LOGGED BY: R. MAASS DATE LOGGED: MAR 13/97 DRILL HOLE NO: RP-97-16

Surface Grid: NORTHING 1000 N EASTING 3750 ELEVATION 10924 LENGTH 700.0' SECTION 3750 LEVEL _____

Engineering Grid: Hole Not Surveyed as of Mar 15 '97

| DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP | DIST | AZIM | DIP |
|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 0 | 360 | -65 | | | | | | | | | | | | |
| 200 | 360 | 64 | | | | | | | | | | | | |
| 400 | 005 | 63 | | | | | | | | | | | | |
| 600 | 010 | 62 | | | | | | | | | | | | |
| 700 | 010 | 62 | | | | | | | | | | | | |

START DATE: MAR 8 1997

FINISH DATE: MAR 10 1997

TOWNSHIP: CODY

CLAIM NO.: P15603 (HR 918)

DRILLING CONTRACTOR: BENOIT

PURPOSE: TEST RAMP ZONE

RESULTS: .125/12.2 @ 593 - 605.2 Ramp Zone
1055/50.0 @ 613 - 663' (in Tuffs)

WHY HOLE TERMINATED: TARGET INTERSECTED

CORE SIZE: BQ

CASING: 66 feet, pulled.

HOLE CEMENTED: Yes

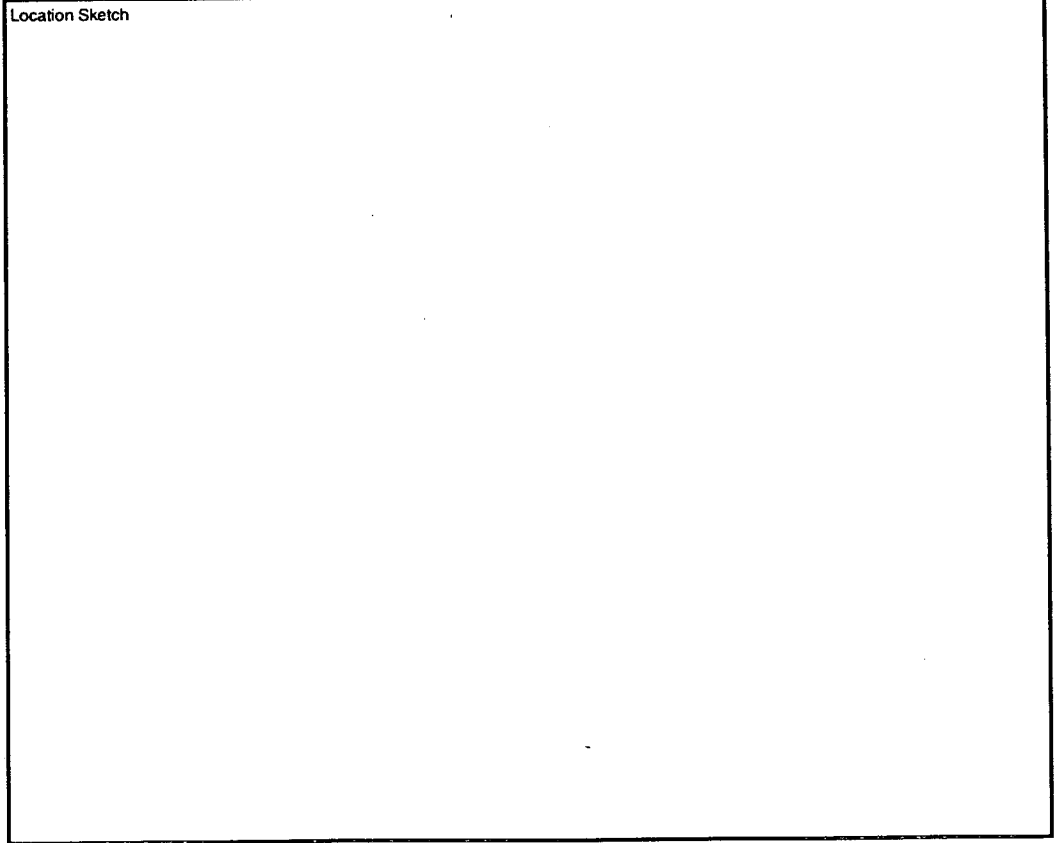
NO. OF ASSAYS: _____

NO. OF ICP: _____

NO. OF WRA: _____

REJECTS/PULPS SAVED: _____

CORE STORED (LOCATION): HOLLINGER CORESHEDS



ft
 m

| DIST | ID | ROCK DESCRIPTION | | | | | STRUCTURE | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|-----------|--------|--------|-----|----------|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | QZ | PY | | | | | |
| 66.0 | | | | | | | | | | | | | | | | (0-66) CASING | |
| 126.1 | | M | F | MSU | GY | TLC | | | | | | AX40959 | 60.1 | G | .001 | (66-126.1) ULTRAMAFICS - DK. GY., TALC/CHL RICH UMF - WITH NUMEROUS WH. QZ/ANK STRGS, SOFT + EASY TO SCRATCH WITH A KNIFE, MSU + NON-FOL. - MNR GN. TALL VNLETS | |
| 128 | | M | F | MSU | GG | ANK | MVO | V | 20 | 10 | .5 | 960 | 1.9 | C | .001 | (126.1-158) ANK. ALT. MAFIC VOLCANICS | |
| 133 | | | | | | | | | | 2 | .1 | 961 | 5.0 | C | | - STRONG ANK ALT., GY/BN BLEACHED | |
| 138 | | | | | | | | | | 2 | | 962 | 5.0 | C | | SECTIONS, NUMEROUS 1"-2" WH. | |
| 143 | | | | | | | | | | 5 | | 963 | 5.0 | C | | QZ/ANK VEINS, F. DIS. + CUBIC PY | |
| 148 | | | | | | | | | | 5 | | 964 | 5.0 | C | | ASSOC. WITH BLEACHED SECTIONS, | |
| 153 | | | | | | | | | | 5 | | 965 | 5.0 | C | | HARD, SILIC. + NOT EASY TO SCRATCH | |
| 158 | | | | | | | | | | 2 | | 966 | 5.0 | C | | F.G., MSU, CHL FILLED FRACT. | |
| 163 | | | | | | | | | | 2 | | 977 | 5.0 | C | ✓ | (126.1-128) 2" WH. QZ/ANK VEIN CUBIC PY. IN W.R. | |
| 205.2 | | M | F | MSU | GN | CHL | MVO | | | 2 | .1 | 978 | 47.2 | G | .002 | (158-210.2) MAFIC VOLCANICS | |
| 210.2 | | | | | | | | | | 5 | .5 | 979 | 5.0 | C | .001 | - WK. ANK ALT., DK. GN. AND CHL., F.G., MSU, MNR WH. QZ/ANK VEINS, MNR F. CUBIC PY. (205.2-210.2) MVO WITH 1/4"-1" WH. QZ/ANK VNLETS, F. CUBIC PY. IN WR | |

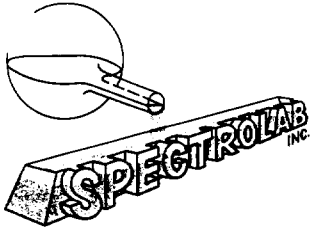
| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|---------|----------|-------|------|---|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | |
| 240. | | M | F | FOL | GY | TLC | | YMF | | | | | .1 | .1 | AX40970 | 29.8 | G | .001 | (210.2-253) ULTRAMAFICS | |
| 243 | | | | | | | | | | | | | 5 | | 971 | 3.0 | c | | - DK. GY., TALC / CHL RICH YMF | |
| 248 | | | | | | | | | | | | | 5 | | 972 | 5.0 | c | | - SOFT + EASY TO SCRATCH | |
| 253 | | | | | | | | | | | | | 2 | | 973 | 5.0 | c | ✓ | - WELL FOLIATED, MNR WH. QZ / ANK STRGS., @ 240' INCREASE IN QZ / ANK VEINING | |
| 258 | | M | F | MSV | GG | CHL | | YMF | | | | | 10 | .1 | 974 | 5.0 | c | .001 | (253-258) ULTRAMAFICS - AS ABOVE, WITH GG CHL. YMF SECTIONS, NUMEROUS WH. QZ / ANK UNLETS, ASSOC. F. DIS. PY. | |
| 262.5 | | M | F | STWK | GY | ANK | | GCRB | | | | | 10 | 1.0 | 975 | 4.5 | c | .001 | (258-262.5) GY. CARB-QZ / ANK STWK - WITH DK GY. CHL. MAFIC VOLCANIC SECTIONS WITH 19% ASSOC. F. PY. - GY. CARB SECTIONS ARE HARD, SILIC STRONG ANK. AVT., F. DIS. PY. - BROKEN, BLOCKY SECTIONS | |
| 266.2 | | M | F | FOL | GN | CHL | | CCRB | | | | | 5 | .1 | 976 | 3.7 | c | .001 | (262.5-266.2) CHL. CARB - GN. CHL. CARB WITH MNR WH. QZ / ANK STRGS. | |
| 271 | | M | F | COT | GN | CHL | | CCRB | | | | | 20 | .1 | 977 | 4.8 | c | .001 | (266.2-271) CHL. CARB - CONTORTED FOL., NUMEROUS WH. QZ / ANK STRGS, MNR F. DIS. PY. | |
| 275.8 | | M | F | STWK | GY | ANK | | GCRB | | | | | 20 | .1 | 978 | 4.8 | c | .003 | (271-275.8) GY. CARB - WH. QZ / ANK STWK, CHL., MNR SER. | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|--|----------|-------|---|--------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | | | | | | |
| 279 | | B | F | MSU | GY | CHL | | MVO | | | | 2 | | 1.0 | | AX40979 | 3.2 | c | .008 | (275.8-279) BROKEN, BLOCKY CHL. MAFIC VOLCANICS, MNR F. PY. |
| 282.4 | | M | F | STWK | GY | ANK | | GCRB | | | | 20 | | .1 | | 980 | 3.4 | c | .001 | (279-282.4) GY. CARB - WH. QZ/ANK STWK, CHL. FILLED FRACT., F. DIS. PY. |
| 285.4 | | M | F | BR | GY | CHL | | MVO | | | | 2 | | 5 | | 981 | 3.0 | c | .010 | (282.4-288) BRX CHL. MAFIC VOLCANICS |
| 288 | | | | | | | | | | | | 1 | | 1 | | 982 | 2.6 | c | .011 | - GY. QZ/ANK FRAGS. SURROUNDED BY CHL. MATRIX, 5% F. DIS. PY. |
| 293 | | M | F | STWK | GY | ANK | | GCRB | | | | 20 | | .1 | | 983 | 5.0 | c | .002 | (288-348) GY. CARB |
| 298 | | | | | | | | | | | | | | | | 984 | 5.0 | c | .003 | - WITH WH. QZ/ANK STWK, HARD. |
| 303 | | | | | | | | | | | | | | | | 985 | 5.0 | c | .001 | SILIC. + NOT EASY TO SCRATCH |
| 308 | | | | | | | | | | | | | | | | 986 | 5.0 | c | .001 | MNR F. DIS. PY., CHL. INFIL. FRACT. |
| 313 | | | | | | | | | | | | | | | | 987 | 5.0 | c | .003 | MSU + NON-FOL., MNR TAN. SER. |
| 318 | | | | | | | | | | | | | | | | 988 | 5.0 | c | .001 | (348-350.5) BN. CARB |
| 323 | | | | | | | | | | | | | | | | 989 | 5.0 | c | .001 | - SER. RICH, WH. QZ/ANK STWK |
| 328 | | | | | | | | | | | | | | | | 990 | 5.0 | c | .002 | - MNR F. DIS. PY., MNR OR. LTH. |
| 333 | | | | | | | | | | | | | | | | 991 | 5.0 | c | .054 | (350.5-353) BN. CARB BRECCIA |
| 338 | | | | | | | | | | | | | | | | 992 | 5.0 | c | .021 | - WELL MINERALIZED BN CARB FRAGS |
| 343 | | | | | | | | | | | | | | | | 993 | 5.0 | c | .001 | ENCLOSED BY CHL., WH. QZ/ANK |
| 348 | | | | | | | | | | | | | | | | 994 | 5.0 | c | .011 | STWK, 5% F. DIS. PY. ASSOC. WITH FRAGS |
| 350.5 | | M | F | MSV | BN | SER | | BCRB | | | | 5 | | .1 | | 995 | 2.5 | c | .002 | |
| 353 | | M | F | BR | BN | SER | | BCRB | | | | 20 | | 5 | | 996 | 2.5 | c | .002 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | Au opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|-----|--------|----|----------|----|----------|---------|--------|--------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J/F | A2 | QZ | PY | B | | | | | |
| 358 | | M | F | STWK | GY | ANK | | GCRB | | | | | 20 | | .5 | | AX40997 | 5.0 c | .001 | (353-375.6) GY. CARB. |
| 363 | | | | | | | | | | | | | | | | | 998 | 5.0 c | .001 | - WELL FOL., WH. QZ/ANK STWK, HARD |
| 368 | | | | | | | | | | | | | | | | | 999 | 5.0 c | .010 | + SILIC., MNR F. DIS. PY, MNR TAN |
| 373 | | | | | | | | | | | | | | | | | AX41000 | 5.0 c | .025 | SER., CHL. IN FRACT., COT FOL. |
| 375.6 | | | | | | | | | | | | | | | | | AX41751 | 2.6 c | .003 | |
| 378 | | M | F | FOL | GY | SIL | | YMF | | | | | 20 | | .1 | | 752 | 2.4 c | .009 | (375.6-448) QTZ FLOODED ULTRAMAFICS |
| 428 | | | | | | | | | | | | | | | | | 753 | 50.0 G | .002 | - GY COLOR WITH WH. QZ/ANK VNLETS, |
| 448 | | | | | | | | | | | | | | | | | 754 | 20.0 G | .006 | GN. TALC VNLETS, WK. ANK ALT., |
| | | | | | | | | | | | | | | | | | | | | MNR F. DIS. PY., WELL FOL. |
| 453 | | M | F | FOL | GY | SIL | | YMF | | | | | 20 | | .5 | | 755 | 5.0 c | .005 | (448-453) AS ABOVE |
| | | | | | | | | | | | | | | | | | | | | - WITH 1' CHL. BAND WITH 190 F. |
| | | | | | | | | | | | | | | | | | | | | DIS. PY. |
| 458 | | M | F | FOL | GY | SIL | | YMF | | | | | 20 | | .5 | | 756 | 5.0 c | .001 | (453-467.6) QTZ FLOODED ULTRAMAFICS |
| 463 | | | | | | | | | | | | | | | | | 757 | 5.0 c | .004 | - F. DIS. PY. IN FRACTURES, AND ASSOC |
| 467.6 | | | | | | | | | | | | | | | | | 758 | 4.6 c | .007 | WITH WH. QZ/ANK BANDS |
| 488 | | M | F | FOL | GY | TLC | | YMF | | | | | 10 | | .1 | | 759 | 20.4 G | .004 | (467.6-498) FOL. TALC/CHL RICH ULTRAMAFICS |
| 493 | | | | | | | | | | | | | | | | | 760 | 5.0 c | .001 | (498-518) SILIC. ULTRAMAFICS |
| 498 | | | | | | | | | | | | | | | | | 761 | 5.0 c | .003 | - LT. GY. COLOR, MSV, HARD |
| 503 | | M | F | MSV | GY | SIL | | YMF | | | | | 10 | | .1 | | 762 | 5.0 c | .001 | SILIC., MNR WH. QZ/ANK STRGS., MNR |
| 508 | | | | | | | | | | | | | | | | | 763 | 5.0 c | .001 | F. DIS. PY. |
| 513 | | | | | | | | | | | | | | | | | 764 | 5.0 c | .003 | (518-518.7) GN. FN. CARB. |
| 517 | | | | | | | | | | | | | | | | | 765 | 4.0 c | .001 | - MNR QZ STRGS. |
| 518.7 | | M | F | MSV | GN | FN | | FCRB | | | | | 2 | | .1 | | 766 | 1.7 c | .002 | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|-----|---|--------|----|----------|---------|----------|-------|------|--|----------|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | J/F | B | A1 | J | A2 | QZ | | | | | |
| 522.5 | | M | F | BX | BK | CHL | | CCR.B | | | | | 10 | 1.0 | AX41767 | 3.8 | c | .004 | (518.7-522.5) CHL. BRECCIA - WH. QZ AND QZ/ANK FRAGS ENCLOSED BY CHL. MATRIX, TAN SER. WISPS, F. DIS. PY. | |
| 524.8 | | M | F | MSV | GN | Fu | | FCRB | | | | | 2 | .1 | 768 | 2.3 | c | .001 | (522.5-524.8) GN. Fu. CARB - CHL. INFILL. FRACT., BROKEN, BLOCKY CORE | |
| 526.6 | | M | F | STWK | BN | SER | | BCRB | | | | | 5 | .1 | 769 | 1.8 | c | .001 | (524.8-526.6) BN. SER. CARB - WH. QZ/ANK STOCKWORK - SEVERAL BROKEN, BLOCKY SECTIONS | |
| 528 | | M | F | MSV | BN | SER | | BCRB | | | | | .1 | .1 | 770 | 1.4 | c | .001 | (526.6-535.6) BN. SER. CARB | |
| 533 | | B | | | | | | | | | | | | | 771 | 5.0 | c | | - AS ABOVE | |
| 535.6 | | B | | | | | | | | | | | | | 772 | 2.6 | c | | (530.4-533) RUBBLY CORE | |
| 538 | | M | F | STWK | GY | ANK | | GCRB | | | | | 10 | .1 | 773 | 2.4 | c | .002 | (534.2-535) RUBBLY CORE | |
| 543 | | | | | | | | | | | | | | | 774 | 5.0 | c | .003 | (535.6-574) GY. CARB | |
| 548 | | | | | | | | | | | | | | | 775 | 5.0 | c | .003 | - WH. QZ/ANK STWK, HARD AND | |
| 553 | | | | | | | | | | | | | | | 776 | 5.0 | c | .001 | SILIC., MNR F. DIS. PY., MSV | |
| 558 | | | | | | | | | | | | | | | 777 | 5.0 | c | .002 | (574-574.5) WH. QZ/ANK VEIN | |
| 563 | | | | | | | | | | | | | | | 778 | 5.0 | c | .006 | (574.5-583) GY. CARB | |
| 568 | | | | | | | | | | | | | | | 779 | 5.0 | c | .006 | - WITH SEVERAL BX SECTIONS | |
| 572 | | | | | | | | | | | | | | | 780 | 4.0 | c | .003 | CONSISTING OF WH. ANGULAR QZ. | |
| 574 | | | | | | | | | | | | | | | 781 | 2.0 | c | .003 | FRAGS IN CHL. MATRIX, BROKEN, BLOCKY | |

| DIST | ID | ROCK DESCRIPTION | | | | | | STRUCTURE | | | | GANGUE | | METALLIC | | SAMPLE # | WIDTH | T | AU opt grams | COMMENTS |
|-------|----|------------------|-----|------|----|-----|--------|-----------|-----|----|---|--------|----|----------|--|----------|-------|---|--------------------|--|
| | | Com | Grs | Text | Co | Alt | Name 1 | Name 2 | B/S | A1 | J | A2 | QZ | PY | | | | | | |
| 578 | | M | F | FX | GY | ANK | | GCRB | | | | 10 | | .5 | | AX41782 | 4.0 | c | .003 | |
| 583 | | B | | | | | | | | | | | | | | 783 | 5.0 | c | .008 | |
| 586.7 | | M | F | FOL | GY | ANK | | GCRB | | | | | | | | 784 | 3.7 | c | .007 | (583-593) GY CARB |
| 588.6 | | | | | | | | | | | | | | | | 785 | 1.9 | c | .006 | - WELL FOL. WITH WH. QZ/ANK |
| 590 | | | | | | | | | | | | | | | | 786 | 1.4 | c | .024 | STRGS. AND VEINS, CHL., MNR. |
| 593 | | | | | | | | | | | | | | | | 787 | 3.0 | c | .011 | LIM. ALONG FRACT. |
| 596.2 | | M | F | MSU | GY | CHL | | MVO | | | | .1 | | 1.0 | | 788 | 3.2 | c | .212 | (593-596.2) CHLORITIC MAFIC VOLCANICS - DK. GY, MSU, 1% F. DIS. PY. |
| 599.8 | | M | F | MSU | GY | ANK | | GCRB | | | | 10 | | .1 | | 789 | 3.6 | c | .006 | (596.2-599.8) GY. CARB. - MSU AND WELL FOL. SECTIONS - WH. QZ/ANK STWK, MNR F. PY. - PERVASIVE ANK ALTERATION |
| 602.8 | | S | F | FOL | BN | SER | | BCRB | | | | 10 | | 1.0 | | 790 | 3.0 | c | .232 | (599.8-605.2) BN. SER. CARB |
| 605.2 | | | | | | | | | | | | | | | | 791 | 2.4 | c | .052 | - ALTERNATING BANDS OF TAN SER. AND QZ/ANK. QZ STRGS PARALLEL TO FOL. STRGS OF F. PY. AND CHL. INFIL FRACT. |



SPECTROLAB INC.

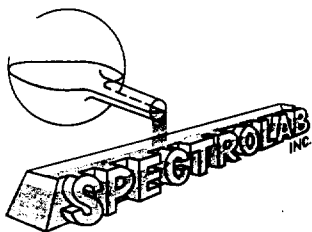
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1433-A DATE: 25/03/97

Client: ROYAL OAK MINES LTD L&P Antillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40959 | 0.001 | |
| AX40960 | 0.001 | |
| AX40961 | <0.001 | |
| AX40962 | 0.001 | |
| AX40963 | 0.001 | |
| AX40964 | <0.001 | |
| AX40965 | 0.001 | |
| AX40966 | <0.001 | |
| AX40967 | 0.001 | |
| AX40968 | 0.002 | 0.002 |
| AX40969 | 0.001 | |
| AX40970 | <0.001 | |
| AX40971 | <0.001 | |
| AX40972 | 0.001 | |
| AX40973 | <0.001 | |
| AX40974 | <0.001 | |
| AX40975 | 0.001 | |
| AX40976 | <0.001 | |
| AX40977 | <0.001 | |
| AX40978 | 0.003 | 0.003 |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

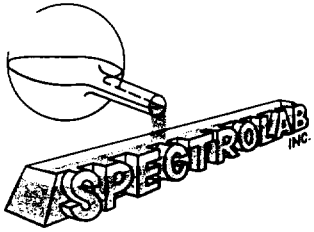
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1433-B DATE: 25/03/97

Client: ROYAL DAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Ref. 1602
Reçu de: PETER HARVEY Nombre d'analyses: 20 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40979 | 0.008 | |
| AX40980 | 0.001 | |
| AX40981 | 0.010 | |
| AX40982 | 0.011 | |
| AX40983 | 0.002 | |
| AX40984 | 0.003 | |
| AX40985 | 0.001 | |
| AX40986 | 0.001 | |
| AX40987 | 0.003 | |
| AX40988 | 0.001 | 0.001 |
| AX40989 | 0.001 | |
| AX40990 | 0.002 | |
| AX40991 | 0.054 | |
| AX40992 | 0.021 | |
| AX40993 | 0.001 | |
| AX40994 | 0.001 | |
| AX40995 | 0.002 | |
| AX40996 | 0.002 | |
| AX40997 | 0.001 | |
| AX40998 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout B.Sc.



SPECTROLAB INC.

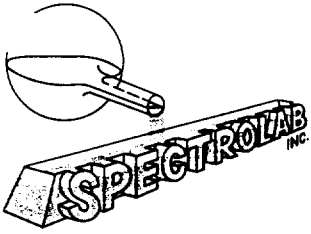
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1433-C DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton |
|---------|--------------|------------------|
| AX40999 | 0.010 | |
| AX41000 | 0.025 | |
| AX41751 | 0.003 | |
| AX41752 | 0.009 | |
| AX41753 | 0.002 | |
| AX41754 | 0.006 | |
| AX41755 | 0.005 | |
| AX41756 | 0.001 | |
| AX41757 | 0.004 | |
| AX41758 | 0.006 | 0.008 |
| AX41759 | 0.004 | |
| AX41760 | 0.001 | |
| AX41761 | 0.003 | |
| AX41762 | 0.001 | |
| AX41763 | 0.001 | |
| AX41764 | 0.003 | |
| AX41765 | 0.001 | |
| AX41766 | 0.002 | |
| AX41767 | 0.004 | |
| AX41768 | 0.001 | 0.001 |

ANALYSTE: Mira Godbout BSc



SPECTROLAB INC.

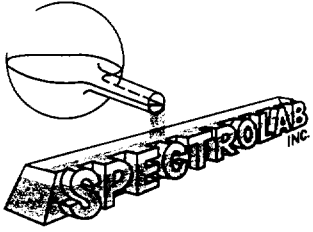
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1433-D DATE: 25/03/97

Client: ROYAL DAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: 17/03/97
Éléments: Au Limite de détection: 0.001 Méthode: F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX41769 | <0.001 | | |
| AX41770 | 0.001 | | |
| AX41771 | 0.001 | | |
| AX41772 | 0.001 | | |
| AX41773 | 0.002 | | |
| AX41774 | 0.003 | | |
| AX41775 | 0.003 | | |
| AX41776 | 0.001 | | |
| AX41777 | 0.002 | | |
| AX41778 | 0.006 | 0.006 | |
| AX41779 | 0.006 | | |
| AX41780 | 0.003 | | |
| AX41781 | 0.003 | | |
| AX41782 | 0.003 | | |
| AX41783 | 0.008 | | |
| AX41784 | 0.007 | | |
| AX41785 | 0.006 | | |
| AX41786 | 0.024 | | |
| AX41787 | 0.011 | | |
| AX41788 | 0.220 | 0.218 | 0.199 |

ANALYSTE: Mira Godboet BSc



SPECTROLAB INC.

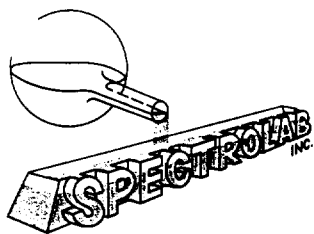
780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: 16-1433-E DATE: 25/03/97

Client: ROYAL OAK MINES LTD Échantillons: Core Projet: NHL RAMP PROJECT
PETER HARVEY Nombre d'analyses: 20 Date reçu: Ref. 1602
Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton | Au Cks oz/ton | Au Cks F.A. oz/ton |
|---------|--------------|------------------|-----------------------|
| AX41789 | 0.008 | | |
| AX41790 | 0.228 | | 0.235 |
| AX41791 | 0.052 | | |
| AX41792 | 0.020 | | |
| AX41793 | 0.012 | | |
| AX41794 | 0.034 | | |
| AX41795 | 0.054 | | |
| AX41796 | 0.092 | | |
| AX41797 | 0.012 | | |
| AX41798 | 0.024 | 0.020 | |
| AX41799 | 0.038 | | |
| AX41800 | 0.052 | | |
| AX41801 | 0.060 | | |
| AX41802 | 0.102 | | |
| AX41803 | 0.084 | | |
| AX41804 | 0.005 | | |
| AX41805 | 0.004 | | |
| AX41806 | 0.098 | | |
| AX41807 | 0.002 | | |
| AX41808 | 0.001 | 0.001 | |

ANALYSTE: Mira Godelout BSc



SPECTROLAB INC.

780, boul. de l'Université
Rouyn-Noranda (Québec) J9X 7A5
Tél.: (819) 797-4653 - Fax: (819) 797-4501

CERTIFICAT D'ANALYSES N°: IG-1433-F DATE: 25/03/97

Client: ROYAL OAK MINES LTD Echantillons: Core Projet: NHL RAMP PROJECT
Reçu de: PETER HARVEY Nombre d'analyses: 3 Date reçu: Ref. 1602
Éléments: Au Limite de détection: 0.001 Méthode: 17/03/97
F.A./A.A.

| Sample | Au oz/ton |
|---------|--------------|
| AX41809 | 0.003 |
| AX41810 | 0.006 |
| AX41811 | 0.001 |

ANALYSTE: Mira Godbout BSc

Personal information Mining Act, the inform Questions about this 933 Ramsey Lake Rd



66(3) of the Mining Act. Under section 8 of the work and correspond with the mining land holder. Northern Development and Mines, 6th Floor,

900

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240. - Please type or print in ink.

2.17832

1. Recorded holder(s) (Attach a list if necessary)

Form with fields for Name, Address, Client Number, Telephone Number, and Fax Number. Handwritten entry: ROYAL OAK MINES INC, P.O. BAG 2010, TIMMINS, ONT P4N 7X7. Client Number: 136226, Telephone Number: 360-1141, Fax Number: 360-1532.

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

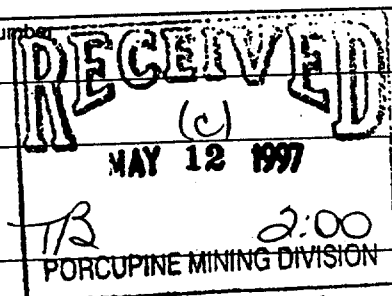
Geotechnical: prospecting, surveys, assays and work under section 18 (regs) [] Physical: drilling, stripping, trenching and associated assays [✓] Rehabilitation []

Work Type: Diamond Drilling. Office Use: [] Commodity: [] Total \$ Value of Work Claimed: 189,688. Dates Work Performed: From 8/1/97 To 12/5/97. Township/Area: G-39 CODY. Mining Division: Porcupine. Resident Geologist District: Timmins.

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required; - provide proper notice to surface rights holders before starting work; - complete and attach a Statement of Costs, form 0212; - provide a map showing contiguous mining lands that are linked for assigning work; - include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Form with fields for Name, Address, Telephone Number, and Fax Number. Handwritten entry: Steve Harding, 90 Royal Oak Mines - address above. Telephone Number: 360-1141, Fax Number: 360-1532.



4. Certification by Recorded Holder or Agent

I, Peter Harvey, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent: Peter Harvey. Date: 5/12/97. Agent's Address: P.O. Bag 2010 Timmins Ont P4N 7X7. Telephone Number: 360-1141. Fax Number: 360-1532.

Received Aug. 10/97

the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form. W9760.00640

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date. |
|---|--|---|--------------------------------------|--|---|
| eg TB 7827 | 16 ha | \$26,825 | N/A | \$24,000 | \$2,825 |
| eg 1234567 | 12 | 0 | \$24,000 | 0 | 0 |
| eg 1234568 | 2 | \$8,892 | \$4,000 | 0 | \$4,892 |
| 600005 P15603 | 17.2 ha | \$189,688 | 0 | \$24,000 | \$165,688 |
| 2 1031229 | 1 | | \$400 | | |
| 3 1031228 | 1 | | \$400 | | |
| 4 1031227 | 1 | | \$400 | | |
| 5 1031225 | 1 | | \$400 | | |
| 6 1031226 | 1 | | \$400 | | |
| 7 1031224 | 1 | | \$400 | | |
| 8 1031222 | 1 | | \$400 | | |
| 9 1031219 | 1 | | \$400 | | |
| 10 1031218 | 1 | | \$400 | | |
| 11 1031231 | 1 | | \$400 | | |
| 12 1031230 | 1 | | \$400 | | |
| 13 1031223 | 1 | | \$400 | | |
| 14 1031221 | 1 | | \$400 | | |
| 15 1031220 | 1 | | \$400 | | |
| Continued Column Totals | | | 5,600 | | |

2.17832

I, _____, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing _____ Date _____

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

| | | |
|---|---|--------------------------------|
| Received Stamp RECEIVED (e) MAY 12 1997 TR 2:00 PORCUPINE MINING DIVISION | Deemed Approved Date | Date Notification Sent |
| | Date Approved | Total Value of Credit Approved |
| | Approved for Recording by Mining Recorder (Signature) | |

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form. W9760.00640

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date. |
|---|--|---|--------------------------------------|--|---|
| eg TB 7827 | 16 ha | \$26,825 | N/A | \$24,000 | \$2,825 |
| eg 1234567 | 12 | 0 | \$24,000 | 0 | 0 |
| eg 1234568 | 2 | \$8,892 | \$4,000 | 0 | \$4,892 |
| 16 7 1031217 | 1 | | \$400 | ✓ | |
| 17 7 1031248 | 1 | | \$400 | ✓ | |
| 18 7 1031247 | 1 | | \$400 | ✓ | |
| 19 7 1031242 | 1 | | \$400 | ✓ | |
| 20 7 1031241 | 1 | | \$400 | ✓ | |
| 21 7 1031236 ¹²³⁶ PH | 1 | | \$400 | ✓ | |
| 22 7 1031235 | 1 | | \$400 | ✓ | |
| 23 7 1030726 | 1 | | \$400 | ✓ | |
| 24 7 1030725 | 1 | | \$400 | ✓ | 20178832 |
| 25 10 1031249 | 1 | | \$400 | ✓ | |
| 26 13 1031246 | 1 | | \$400 | ✓ | |
| 27 12 1031243 | 1 | | \$400 | ✓ | |
| 28 13 1031240 | 1 | | \$400 | ✓ | |
| 29 14 1031237 | 1 | | \$400 | ✓ | |
| 30 15 1031234 | 1 | | \$400 | ✓ | |
| Continued | Column Totals | | 6,000 | | |

I, _____, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing _____ Date _____

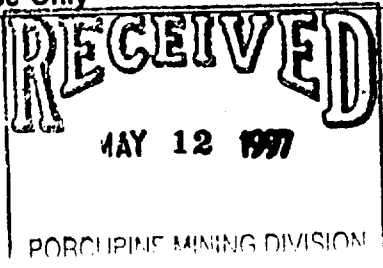
6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp

 PORCUPINE MINING DIVISION

| | |
|---|--------------------------------|
| Deemed Approved Date | Date Notification Sent |
| Date Approved | Total Value of Credit Approved |
| Approved for Recording by Mining Recorder (Signature) | |

5. Work to be recorded and distributed. Work can only be assigned to contiguous claims on the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form. W9760.00640

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date. |
|---|--|---|--------------------------------------|--|---|
| eg TB 7827 | 16 ha | \$26,825 | N/A | \$24,000 | \$2,825 |
| eg 1234567 | 12 | 0 | \$24,000 | 0 | 0 |
| eg 1234568 | 2 | \$8,892 | \$4,000 | 0 | \$4,892 |
| 31 1030727 | 1 | | \$400 | / | |
| 32 1030724 | 1 | | \$400 | / | |
| 33 1031251 | 1 | | \$400 | / | |
| 34 1031250 | 1 | | \$400 | / | |
| 35 1031245 | 1 | | \$400 | / | |
| 36 1031244 | 1 | | \$400 | / | |
| 37 1031239 | 1 | | \$400 | / | |
| 38 1031238 | 1 | | \$400 | / | |
| 39 1031233 | 1 | | \$400 | / | |
| 40 1031232 | 1 | | \$400 | / | 2.17832 |
| 41 1030723 | 1 | | \$400 | / | |
| 42 1030722 | 1 | | \$400 | / | |
| 43 1030720 | 1 | | \$400 | / | |
| 44 1030721 | 1 | | \$400 | / | |
| 45 1030719 | 1 | | \$400 | / | |
| Continued | Column Totals | | 6,000 | | |

I, _____, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

| | |
|---|------|
| Signature of Recorded Holder or Agent Authorized in Writing | Date |
|---|------|

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

| | | |
|---|---|--------------------------------|
| Received Stamp RECEIVED MAY 12 1997 PORCUPINE MINING DIVISION | Deemed Approved Date | Date Notification Sent |
| | Date Approved | Total Value of Credit Approved |
| | Approved for Recording by Mining Recorder (Signature) | |

5. Work to be recorded and distributed. Work can only be done on the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form. W9760.00640

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date. |
|---|---------|--|---|--------------------------------------|--|---|
| eg | TB 7827 | 16 ha | \$26,825 | N/A | \$24,000 | \$2,825 |
| eg | 1234567 | 12 | 0 | \$24,000 | 0 | 0 |
| eg | 1234568 | 2 | \$8,892 | \$4,000 | 0 | \$4,892 |
| 46 # | 1030718 | 1 | | \$400 ✓ | | |
| 47 # | 1026097 | 1 | | \$400 ✓ | | |
| 48 # | 1026096 | 1 | | \$400 ✓ | | |
| 49 # | 1026095 | 1 | | \$400 ✓ | | |
| 50 # | 1026098 | 1 | | \$400 ✓ | | |
| 51 # | 1026099 | 1 | | \$400 ✓ | | |
| 52 # | 970001 | 1 | | \$400 ✓ | | |
| 53 # | 1031178 | 1 | | \$400 ✓ | | |
| 54 # | 1031177 | 1 | | \$400 ✓ | | |
| 55 # | 970002 | 1 | | \$400 ✓ | | 20188 |
| 56 # | 1031180 | 1 | | \$400 ✓ | | |
| 57 # | 1031181 | 1 | | \$400 ✓ | | |
| 58 # | 1031184 | 1 | | \$400 ✓ | | |
| 59 # | 1031183 | 1 | | \$400 ✓ | | |
| 60 # | 970003 | 1 | | \$400 ✓ | | |
| continued | | Column Totals | | 6,000 | | |

I, _____, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing _____ Date _____

6. Instructions for cutting back credits that are not approved.

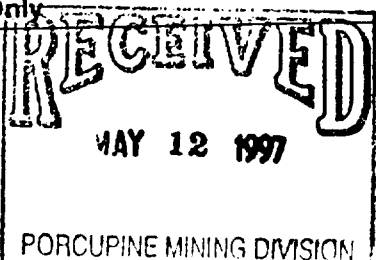
Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp



0241 (02/96)

| | |
|---|--------------------------------|
| Deemed Approved Date | Date Notification Sent |
| Date Approved | Total Value of Credit Approved |
| Approved for Recording by Mining Recorder (Signature) | |

5. Work to be recorded and distributed must be performed on the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W9760.00640

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date. |
|---|--|---|--------------------------------------|--|---|
| eg TB 7827 | 16 ha | \$26,825 | N/A | \$24,000 | \$2,825 |
| eg 1234567 | 12 | 0 | \$24,000 | 0 | 0 |
| eg 1234568 | 2 | \$8,892 | \$4,000 | 0 | \$4,892 |
| 61 1031185 | 1 | | \$400 ✓ | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| Column Totals | | \$189,688 | \$24,000 | | \$165,688 |

I, Peter Harvey (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

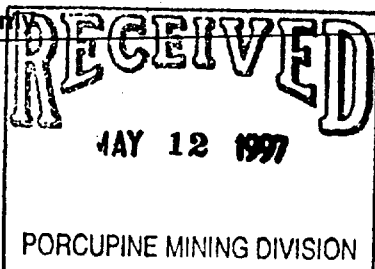
Signature of Recorded Holder or Agent Authorized in Writing: Peter Harvey Date: 5/12/97

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only
 Received Stamp

 PORCUPINE MINING DIVISION

| | |
|---|--------------------------------|
| Deemed Approved Date | Date Notification Sent |
| Date Approved | Total Value of Credit Approved |
| Approved for Recording by Mining Recorder (Signature) | |

Ministry of
Northern Development
and Mines,
November 24, 1997

Ministère du
Développement du Nord
et des Mines

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9846
Fax: (705) 670-5863

Peter Harvey
ROYAL OAK MINES INC.
PO BAG 2010
TIMMINS, ONTARIO
P4N 7X7

Dear Sir or Madam:

Submission Number: 2.17832

Status

Subject: Transaction Number(s): W9760.00640 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. **WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.**

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

Please note any revisions must be submitted in **DUPLICATE** to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Lucille Jerome by e-mail at jerome_l@torv05.ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,



ORIGINAL SIGNED BY
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Work Report Assessment Results

Submission Number: 2.17832

Date Correspondence Sent: November 24, 1997

Assessor: Lucille Jerome

| Transaction Number | First Claim Number | Township(s) / Area(s) | Status | Approval Date |
|---------------------------|---------------------------|------------------------------|-----------------|----------------------|
| W9760.00640 | 6000050 | CODY | Deemed Approval | August 10, 1997 |

Section:
16 Drilling PDRILL

Correspondence to:
Resident Geologist
South Porcupine, ON

Recorded Holder(s) and/or Agent(s):
Peter Harvey
ROYAL OAK MINES INC.
TIMMINS, ONTARIO

Assessment Files Library
Sudbury, ON

2.17832

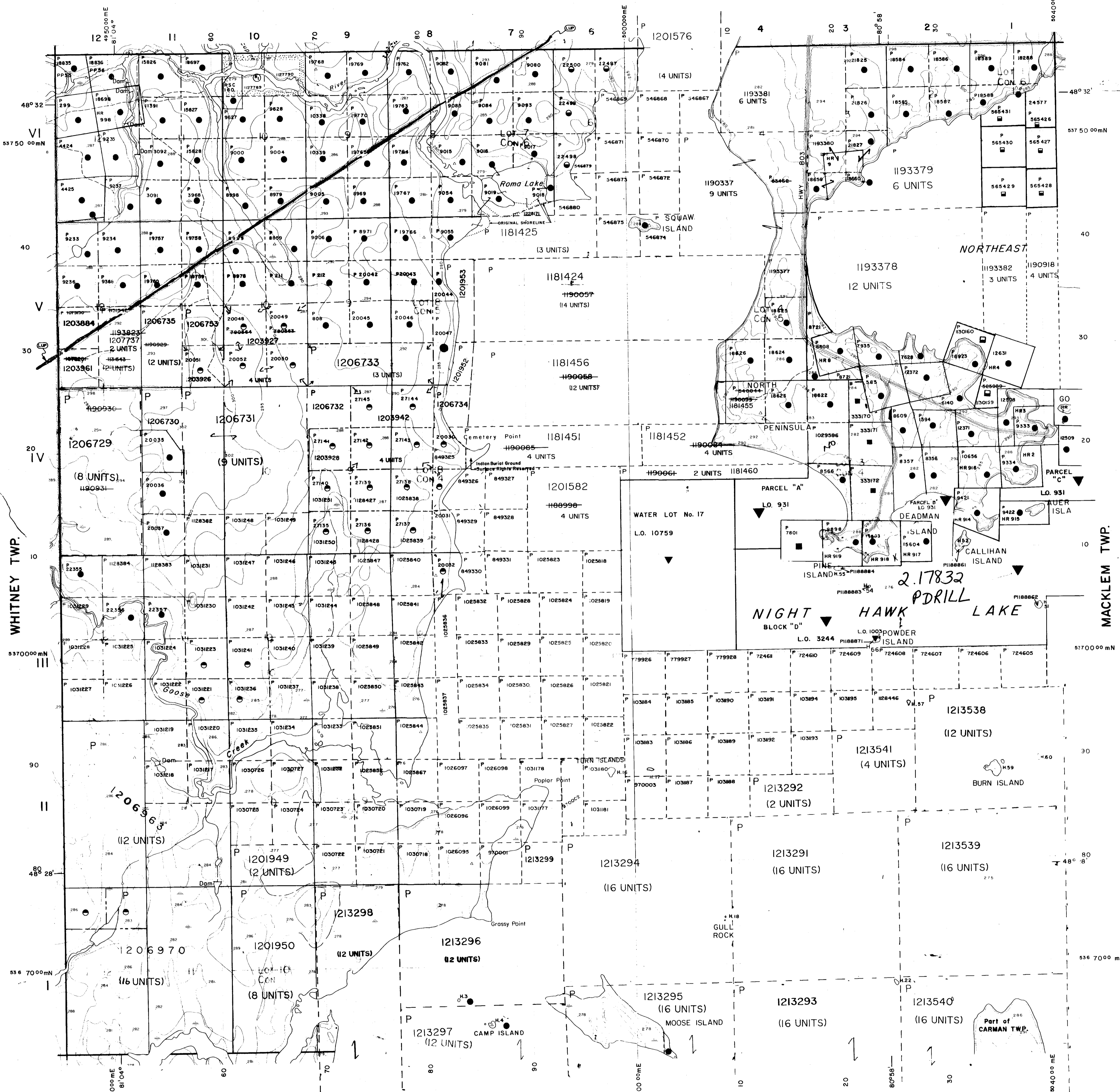
MAP SYMBOLOGY

| | |
|--|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

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 |
| W. 53/76 | 10/9/76 | S.R.O. | 16539 | |
| APPLICATION PENDING UNDER PUBLIC LANDS ACT NOTICE RECEIVED 83-MAR-30 (SNOWMOBILE TRAIL) | | | | |
| THIS TWP. IS SUBJECT TO FOREST ACTIVITY IN 1994/96 FURTHER INFORMATION AVAILABLE ON FILE. | | | | |

MATHESON TWP.



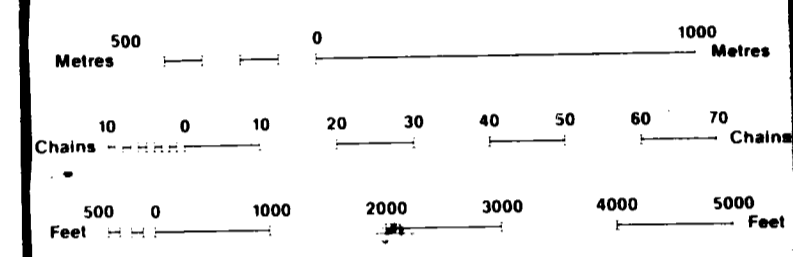
LEGEND

| | |
|--|------------------------------------|
| | HIGHWAY AND ROUTE No. |
| | OTHER ROADS |
| | TRAILS |
| | SURVEYED LINES |
| | TOWNSHIPS, BASE LINES, ETC. |
| | LOTS, MINING CLAIMS, PARCELS, ETC. |
| | UNSURVEYED LINES |
| | 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 | SYMBOL |
|---------------------------------|--------|
| 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 | |

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1.



SCALE 1:20 000
GRID ZONE 17

NOTES

THE WHOLE OF MOOSE ISLAND IS ATTACHED TO THE TOWNSHIP OF CODY. (FILE 23642)

FLOODING RIGHTS RESERVED TO ELEVATION 903.5' (T.M. NO RAILWAY DATUM) ON NIGHT HAWK LAKE AND THAT PORTION OF THE FREDERICK HOUSE RIVER BETWEEN NIGHT HAWK LAKE AND FREDERICK HOUSE LAKE TO ONTARIO HYDRO

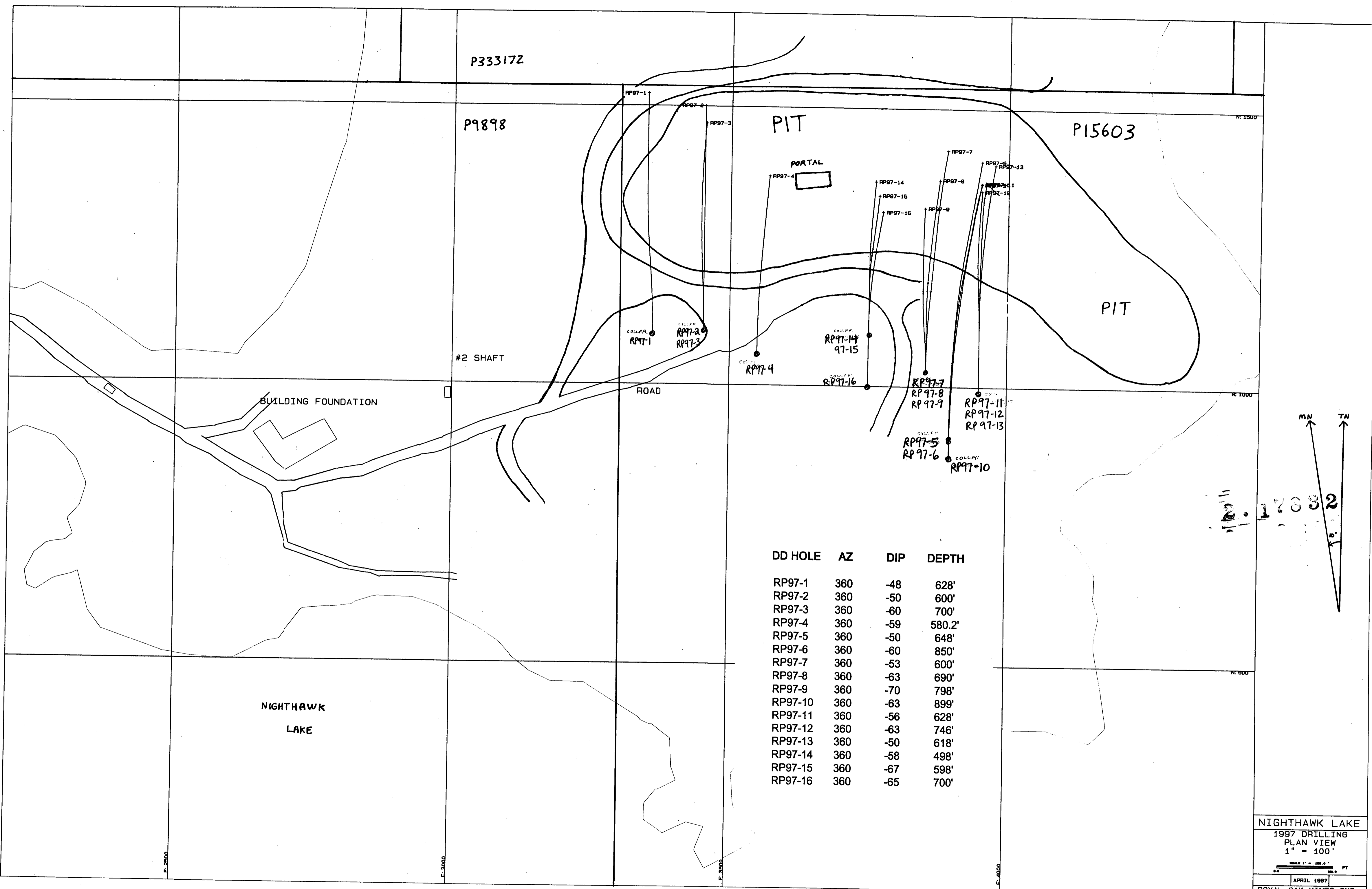
THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

TOWNSHIP
CODY
M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

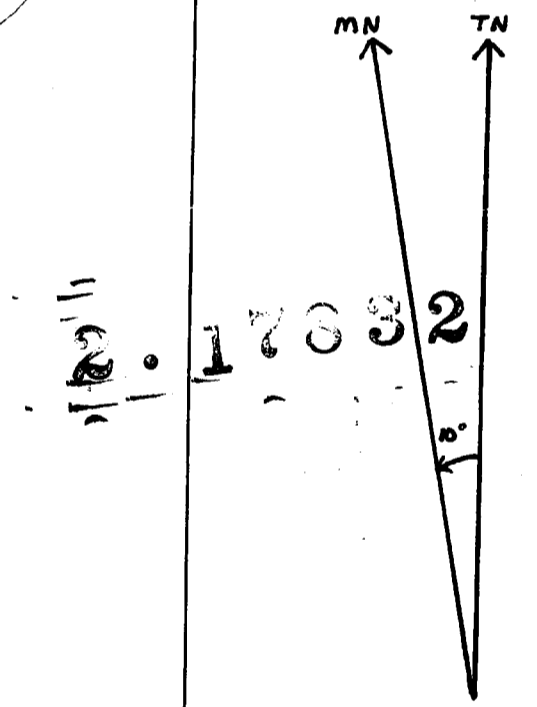
Ministry of Natural Resources
Land Management Branch
Ontario

ORIGINAL COMPILATION JULY 1984
REVISED ACTIVATED MARCH 24, 1993
Number: **G-3994**





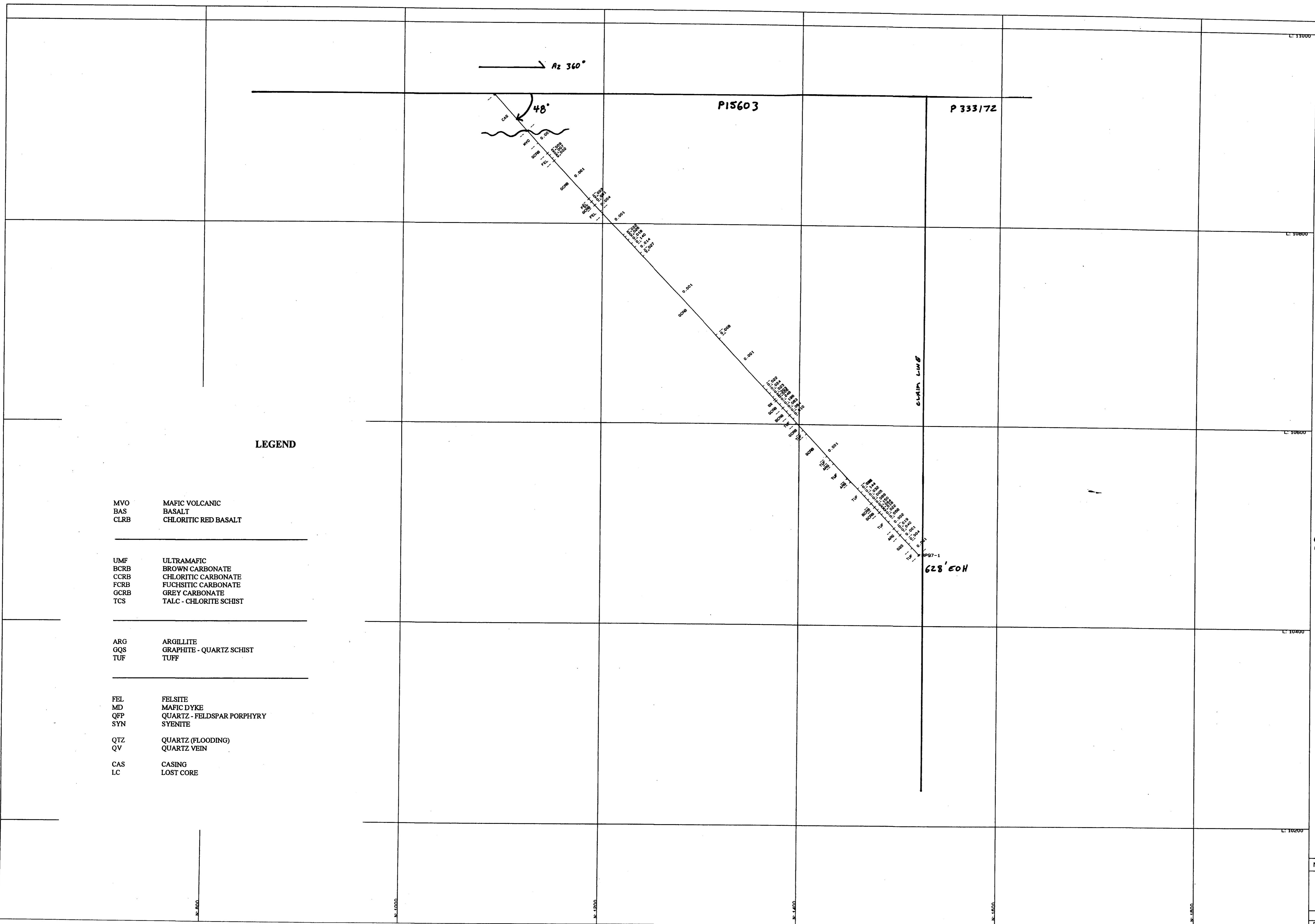
| DD HOLE | AZ | DIP | DEPTH |
|---------|-----|-----|--------|
| RP97-1 | 360 | -48 | 628' |
| RP97-2 | 360 | -50 | 600' |
| RP97-3 | 360 | -60 | 700' |
| RP97-4 | 360 | -59 | 580.2' |
| RP97-5 | 360 | -50 | 648' |
| RP97-6 | 360 | -60 | 850' |
| RP97-7 | 360 | -53 | 600' |
| RP97-8 | 360 | -63 | 690' |
| RP97-9 | 360 | -70 | 798' |
| RP97-10 | 360 | -63 | 899' |
| RP97-11 | 360 | -56 | 628' |
| RP97-12 | 360 | -63 | 746' |
| RP97-13 | 360 | -50 | 618' |
| RP97-14 | 360 | -58 | 498' |
| RP97-15 | 360 | -67 | 598' |
| RP97-16 | 360 | -65 | 700' |



NIGHTHAWK LAKE
 1997 DRILLING
 PLAN VIEW
 1" = 100'
 SCALE 1" = 100.0' FT
 APRIL 1997
 ROYAL OAK MINES INC.



42A07NW0029 2.17832 CODY



LEGEND

- | | |
|-------|----------------------------|
| MVO | MAFIC VOLCANIC |
| BAS | BASALT |
| CLRB | CHLORITIC RED BASALT |
| <hr/> | |
| UMF | ULTRAMAFIC |
| BCRB | BROWN CARBONATE |
| CCRB | CHLORITIC CARBONATE |
| FCRB | FUCHSITIC CARBONATE |
| GCRB | GREY CARBONATE |
| TCS | TALC - CHLORITE SCHIST |
| <hr/> | |
| ARG | ARGILLITE |
| GQS | GRAPHITE - QUARTZ SCHIST |
| TUF | TUFF |
| <hr/> | |
| FEL | FELSITE |
| MD | MAFIC DYKE |
| QFP | QUARTZ - FELDSPAR PORPHYRY |
| SYN | SYENITE |
| QTZ | QUARTZ (FLOODING) |
| QV | QUARTZ VEIN |
| CAS | CASING |
| LC | LOST CORE |

2.17832

NIGHTHAWK LAKE MINE
 1997 DRILLING
 DDH RP97-1
 1" = 50'
 SCALE 1" = 50.0 FT
 APRIL 1997
 ROYAL OAK MINES INC.

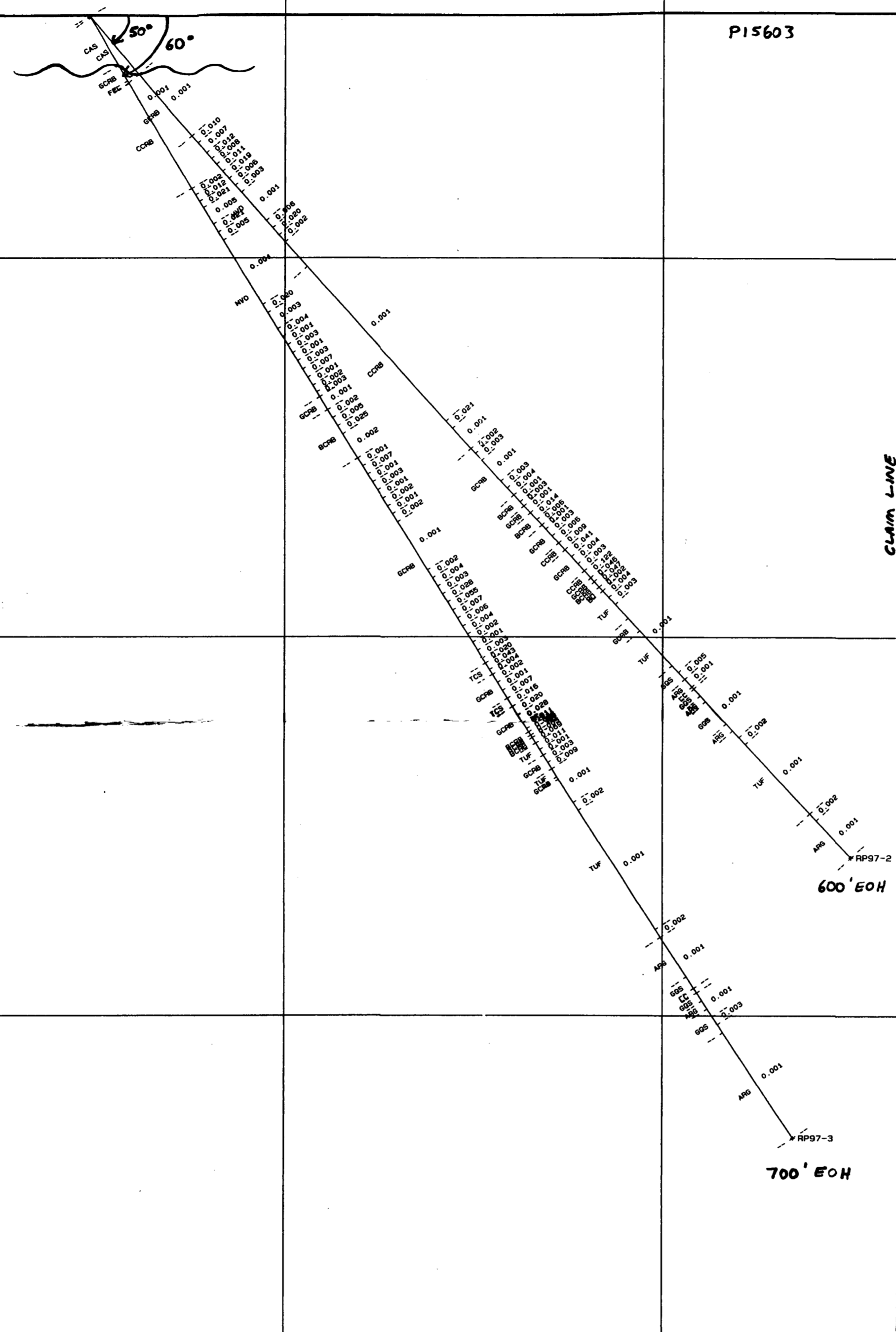


L: 11000
L: 10800
L: 10600
L: 10400
L: 10200

Az 360°

P15603

P333172



LEGEND

MVO MAFIC VOLCANIC
BAS BASALT
CLRB CHLORITIC RED BASALT

UMF ULTRAMAFIC
BCRB BROWN CARBONATE
CCRB CHLORITIC CARBONATE
FCRB FUCHSITIC CARBONATE
GCRB GREY CARBONATE
TCS TALC - CHLORITE SCHIST

ARG ARGILLITE
GQS GRAPHITE - QUARTZ SCHIST
TUF TUFF

FEL FELSITE
MD MAFIC DYKE
QFP QUARTZ - FELDSPAR PORPHYRY
SYN SYENITE

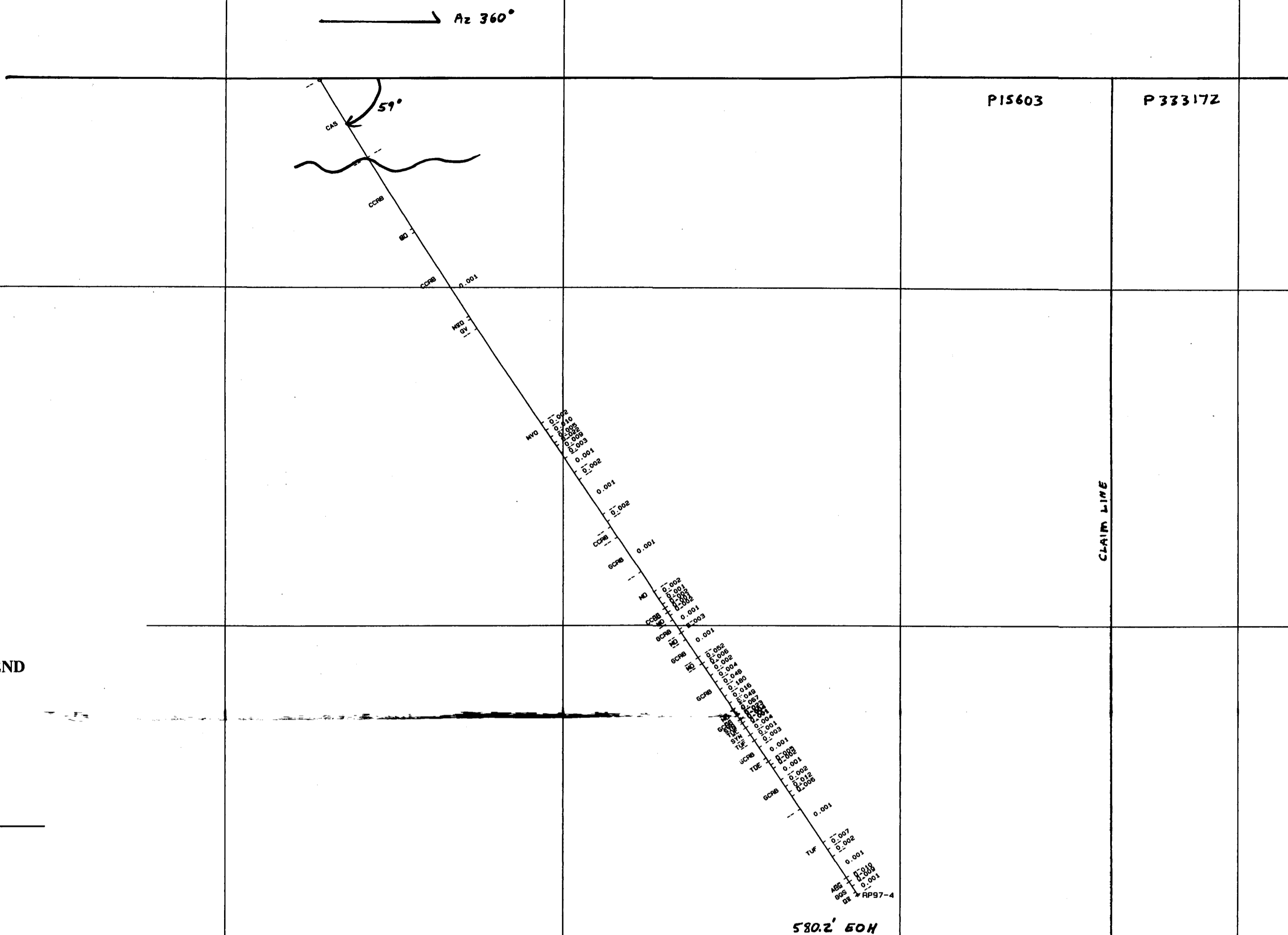
QTZ QUARTZ (FLOODING)
QV QUARTZ VEIN

CAS CASING
LC LOST CORE

2 17832

NIGHTHAWK LAKE MINE
1997 DRILLING
DDH's RP97-2, 3
1" = 50'
SCALE 1" = 50.0' FT
APRIL 1997
ROYAL OAK MINES INC.





LEGEND

MVO MAFIC VOLCANIC
 BAS BASALT
 CLRB CHLORITIC RED BASALT

UMF ULTRAMAFIC
 BCRB BROWN CARBONATE
 CCRB CHLORITIC CARBONATE
 FCRB FUCHSITIC CARBONATE
 GCRB GREY CARBONATE
 TCS TALC - CHLORITE SCHIST

ARG ARGILLITE
 QQS GRAPHITE - QUARTZ SCHIST
 TUF TUFF

FEL FELSITE
 MD MAFIC DYKE
 QFP QUARTZ - FELDSPAR PORPHYRY
 SYN SYENITE

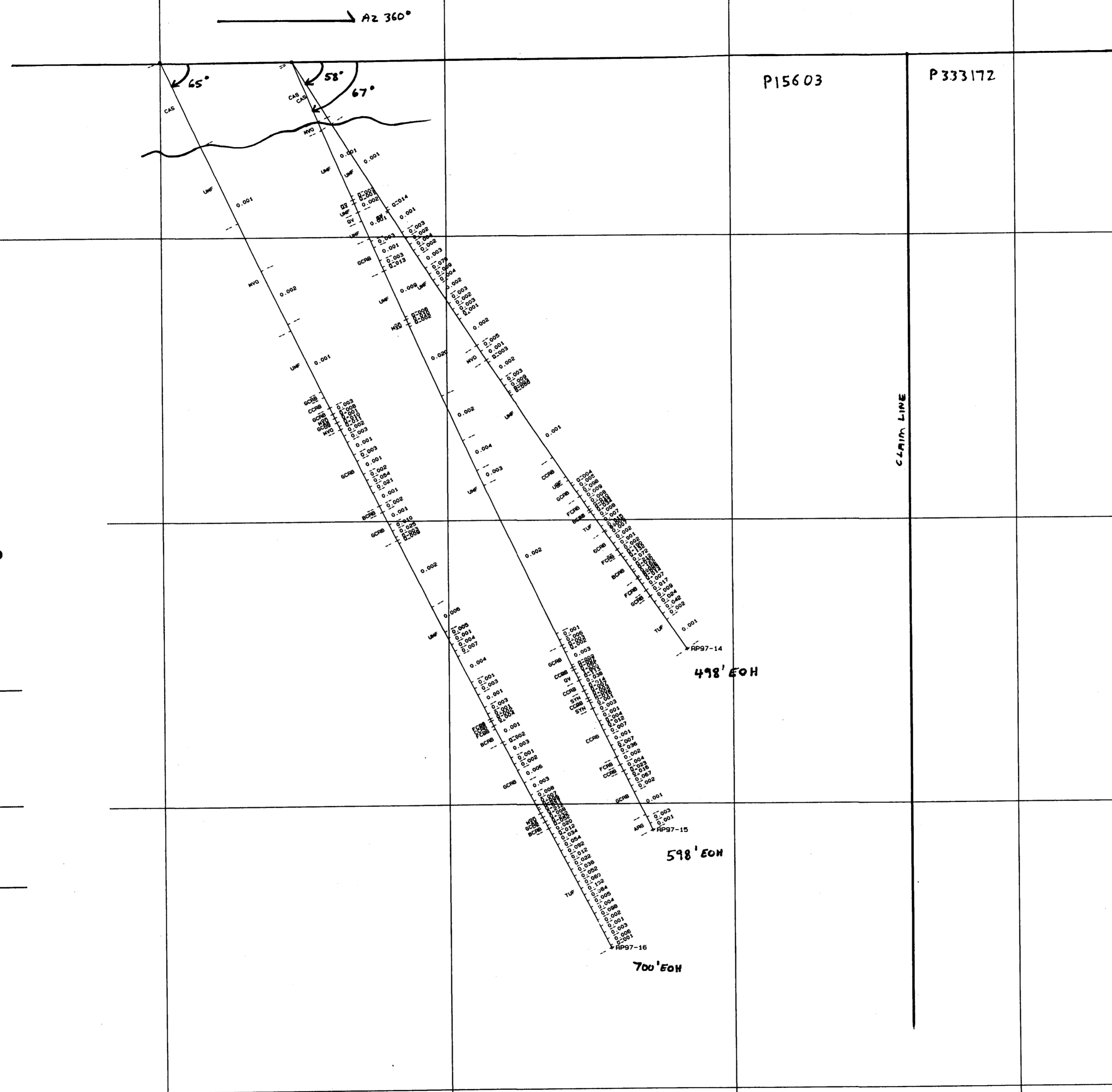
QTZ QUARTZ (FLOODING)
 QV QUARTZ VEIN

CAS CASING
 LC LOST CORE

2.17832

NIGHTHAWK LAKE MINE
 1997 DRILLING
 DDH RP97-4
 1" = 50'
 SCALE 1" = 50.0' FT
 APRIL 1997
 ROYAL OAK MINES INC.





LEGEND

MVO MAFIC VOLCANIC
 BAS BASALT
 CLRB CHLORITIC RED BASALT

UMF ULTRAMAFIC
 BCRB BROWN CARBONATE
 CCRB CHLORITIC CARBONATE
 FCRB FUCHSITIC CARBONATE
 GCRB GREY CARBONATE
 TCS TALC - CHLORITE SCHIST

ARG ARGILLITE
 GQS GRAPHITE - QUARTZ SCHIST
 TUF TUFF

FEL FELSITE
 MD MAFIC DYKE
 QFP QUARTZ - FELDSPAR PORPHYRY
 SYN SYENITE

QTZ QUARTZ (FLOODING)
 QV QUARTZ VEIN

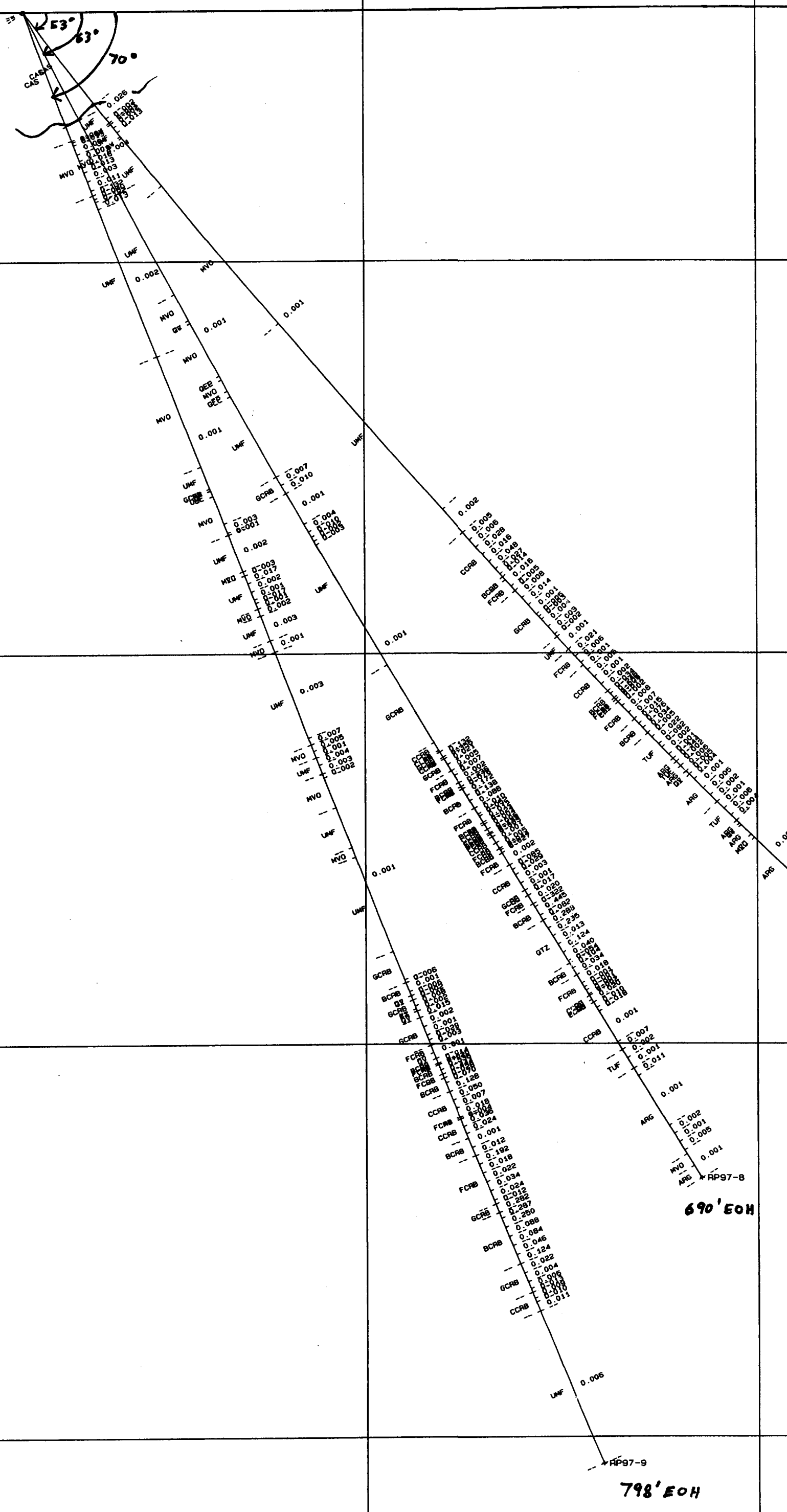
CAS CASING
 LC LOST CORE

2. 17032

NIGHTHAWK LAKE MINE
 1997 DRILLING
 DDH's RP97-14, 15, 16
 1" = 50'
 SCALE 1" = 50.0' FT
 APRIL 1997
 ROYAL OAK MINES INC.



Az 360°



P15603

P33172

CLAIM LINE

600' EOH

690' EOH

798' EOH

LEGEND

MVO MAFIC VOLCANIC
 BAS BASALT
 CLRB CHLORITIC RED BASALT

UMF ULTRAMAFIC
 BCRB BROWN CARBONATE
 CCRB CHLORITIC CARBONATE
 FCRB FUCHSITIC CARBONATE
 GCRB GREY CARBONATE
 TCS TALC - CHLORITE SCHIST

ARG ARGILLITE
 GQS GRAPHITE - QUARTZ SCHIST
 TUF TUFF

FEL FELSITE
 MD MAFIC DYKE
 QFP QUARTZ - FELDSPAR PORPHYRY
 SYN SYENITE

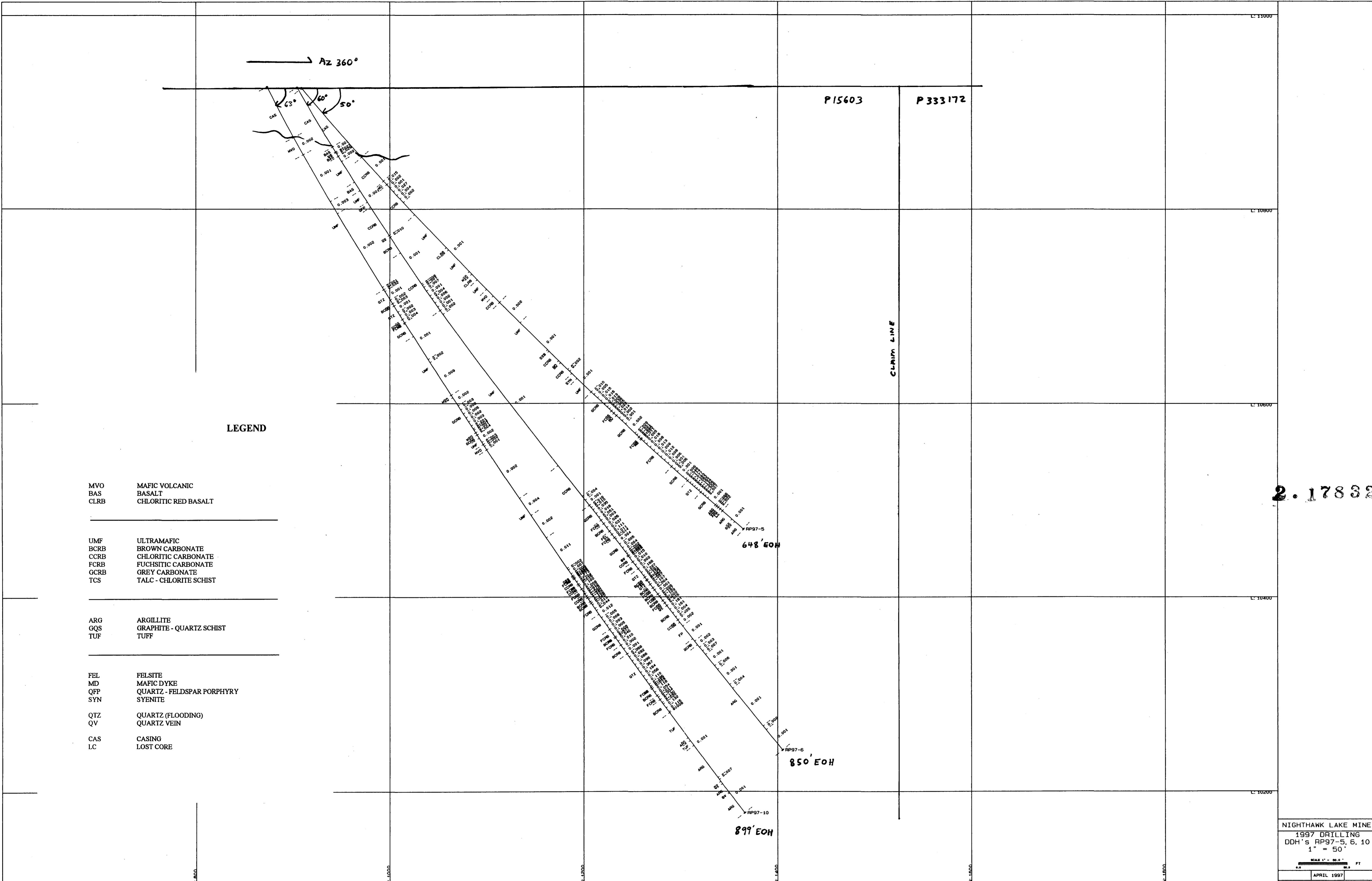
QTZ QUARTZ (FLOODING)
 QV QUARTZ VEIN

CAS CASING
 LC LOST CORE

2.17032

NIGHTHAWK LAKE MINE
 1997 DRILLING
 DDH's RP97-7, RP97-8, RP97-9
 1" = 50'
 SCALE 1" = 50.0' FT
 APRIL 1997
 ROYAL OAK MINES INC.





LEGEND

MVO MAFIC VOLCANIC
 BAS BASALT
 CLRB CHLORITIC RED BASALT

UMF ULTRAMAFIC
 BCRB BROWN CARBONATE
 CCRB CHLORITIC CARBONATE
 FCRB FUCHSITIC CARBONATE
 GCRB GREY CARBONATE
 TCS TALC - CHLORITE SCHIST

ARG ARGILLITE
 GQS GRAPHITE - QUARTZ SCHIST
 TUF TUFF

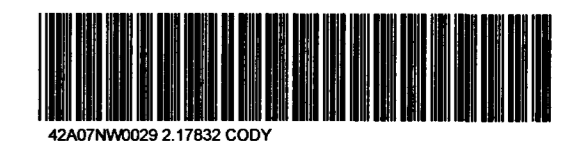
FEL FELSITE
 MD MAFIC DYKE
 QFP QUARTZ - FELDSPAR PORPHYRY
 SYN SYENITE

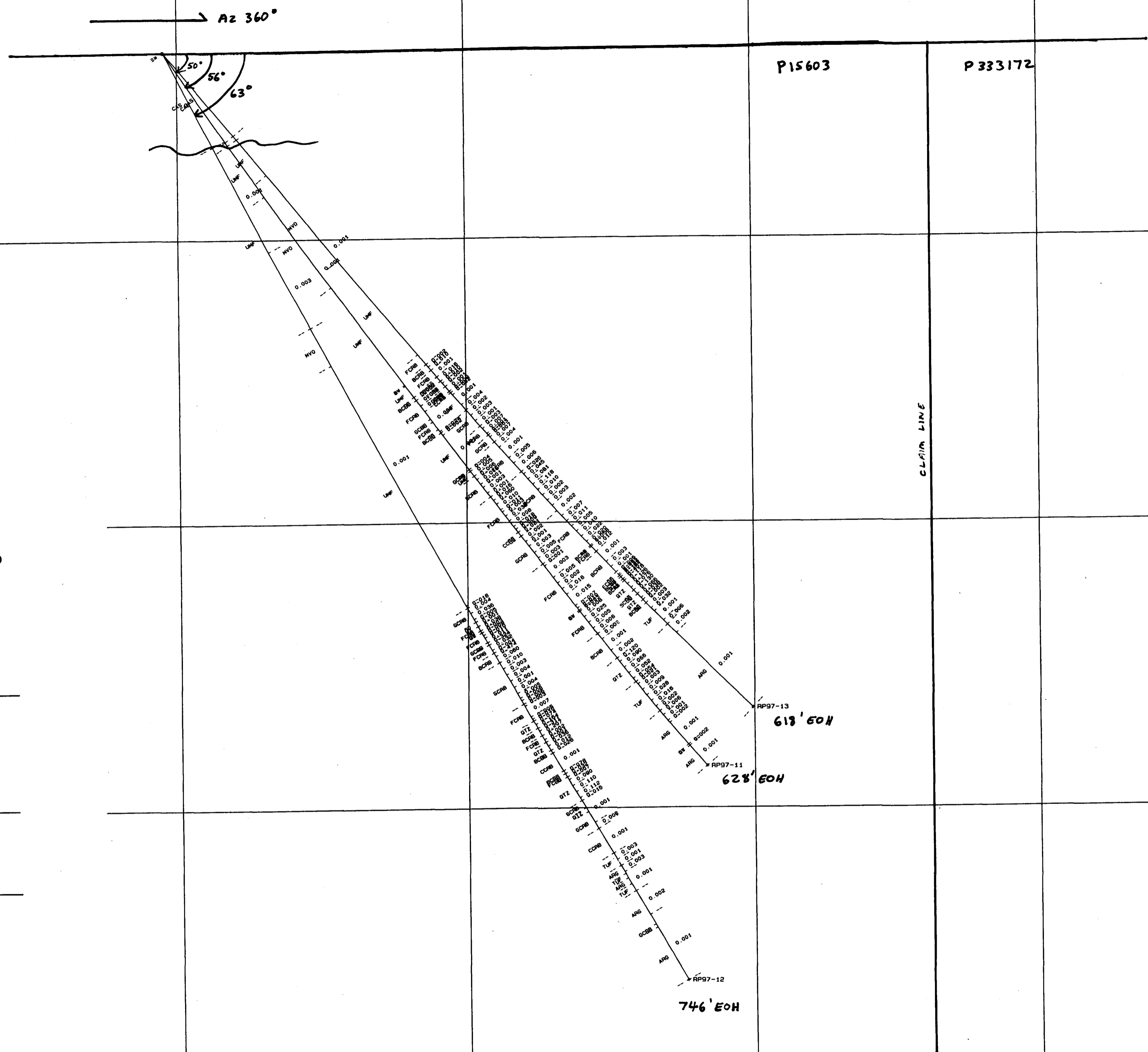
QTZ QUARTZ (FLOODING)
 QV QUARTZ VEIN

CAS CASING
 LC LOST CORE

2.17832

NIGHTHAWK LAKE MINE
 1997 DRILLING
 DDH's RP97-5, 6, 10
 1" = 50'
 SCALE 1" = 50.0' FT
 APRIL 1997
 ROYAL OAK MINES INC.





LEGEND

MVO MAFIC VOLCANIC
 BAS BASALT
 CLRB CHLORITIC RED BASALT

UMF ULTRAMAFIC
 BCRB BROWN CARBONATE
 CCRB CHLORITIC CARBONATE
 FCRB FUCHSITIC CARBONATE
 GCRB GREY CARBONATE
 TCS TALC - CHLORITE SCHIST

ARG ARGILLITE
 QQS GRAPHITE - QUARTZ SCHIST
 TUF TUFF

FEL FELSITE
 MD MAFIC DYKE
 QFP QUARTZ - FELDSPAR PORPHYRY
 SYN SYENITE

QTZ QUARTZ (FLOODING)
 QV QUARTZ VEIN

CAS CASING
 LC LOST CORE

2 17832

NIGHTHAWK LAKE MINE
 1997 DRILLING
 DDH's RP97-11, 12, 13
 1" = 50'
 SCALE 1" = 50.0' FT
 APRIL 1997
 ROYAL OAK MINES INC.

