DIAMOND DRILLING

TWP/AREA Cody

REPORT NO. #38

WORK PERFORMED FOR: Royal Oaks Mines Inc.

RECORDED HOLDER: SAME AS ABOVE [X]
: OTHER [ ]

CLAIM NO.	HOLE NO.	FOOTAGE	DATE	NOTE
P15603/P333172	NHM 92-1	650'	Sept 92	(1)
P9898/P333172	NHM 92-2	726'	Sept 92	(1)
P15603	NHM 92-3	800'	Sept 92	(1)
P9898/P333172	NHM 92-4	731'	Oct 92	(1)
P9898/P333172	NHM 92-5	856'	Oct 92	(1)
P9898	NHM 92-6	500'	Oct 92	(1)
P333172/P15603	NHM 92-7	1576'	Oct 92	(1)
P1394/P8356	NP 92-1	956'	Sept 92	(1)
P8357	NP 92-2	626'	Sept 92	(1)

NOTES:

1. Report of work #W9360.00103

FILEDJune 24/93

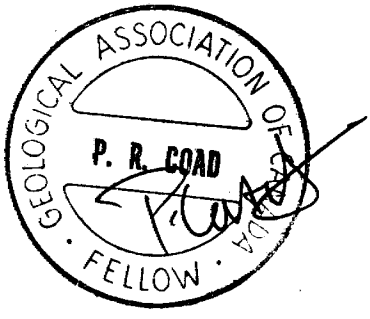
ROYAL OAK MINES INC.

DIAMOND DRILL REPORT

CODY AND MACKLEM TOWNSHIP

ASSESSMENT REPORT

PORCUPINE MINING DIVISION



PAUL R. COAD
ROYAL OAK MINES INC.
MAY 5, 1993

SUMMARY

Nine diamond drill holes (7421') were completed by NDS Drilling on the Nighthawk Lake Project [Hydra Property (patent claims) + P333172 (leased claim)] 100% owned by Royal Oak Mines Inc., between September 23 and October 21, 1992. This $136,802 of work is being applied to contiguous unpatented claims in the Nighthawk Lake Project. Three holes were targeted to expand the dimensions of the Ramp Zone and stratigraphy to the north of the zone, three holes were targeted to test the down plunge and depth extent of the North Zone, one hole was targeted to provide definition information on the No. 4 Zone and two holes were located on "grassroots" targets located approximately 1200 and 5500 feet to the northeast of the Ramp Zone area. **Ore grade-type** intersections were returned in two holes drilled to extend the western limits of the Ramp Zone (ie. NHM92-1: .162 opt Au/20' and NHN92-3: .145 opt Au/10'). Although the North Zone failed to return ore grade-type intersections, the alteration package with associated gold "noise" was encountered. Future work should be concentrated in the vicinity of the Ramp Zone to further define its lateral extent, near surface extensions and depth extent.

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APPENDICES

INTRODUCTION AND WORK DONE

A total of nine diamond drill holes, for a total of 7421 BQ feet, were completed between September 23 and October 21, 1993 by NDS Drilling using a Longyear 38 machine. All holes were drilled on the Nighthawk Lake "Hydra" property (owned by Royal Oak Mines) to test for the extension of known mineralized zones or to test for new areas of possible mineralization. See attached figures for the various property and drill hole locations etc.

The results for each hole are reported separately with a location plan map, detailed cross section, summary log, detailed field log and geological legend. Selected specimen intervals were sawed in the respective holes and fire assayed for gold (1 A.T.) with an atomic absorption finish or specimens were grabbed, with "buttons" of core selected over a specified interval for fire assaying and A.A. finish, using the previously mentioned parameters. All assay results are reported in the detailed logs and assay certificates attached to the respective logs. All assay results are also plotted on the respective sections. Analytical work was performed by Royal Oak Mines Inc.'s assay laboratory in Schumacher, Ontario. The drill core and rejects are stored at Royal Oak Mines core logging facilities in Schumacher, Ontario.

Note-this drill program was completed by Peter Harvey (South Porcupine) and supervised by Jacques Houle (Royal Oak Mines-Timmins). The writer has compiled the information prepared by P. Harvey and extracted various figures and data from internal company reports to prepare this assessment report.

PROPERTY

The work was performed on the Hydra Property which consists of 13 claims, 4 licenses of occupation and 1 mining lease totalling 2303 acres, as listed in Table 1. Portions of holes NHM92-1 (304'), NHM92-2 (535'), NHM92-4 (577'), NHM92-5 (355'), NHM92-7 (1076') were drilled on contiguous claim P333172 (leased claim). See Drilling Plan Map. This property is part of a much larger parcel of land in and around Nighthawk Lake, all owned by Royal Oak Mines Inc. either outright or through 5 separate mining agreements.

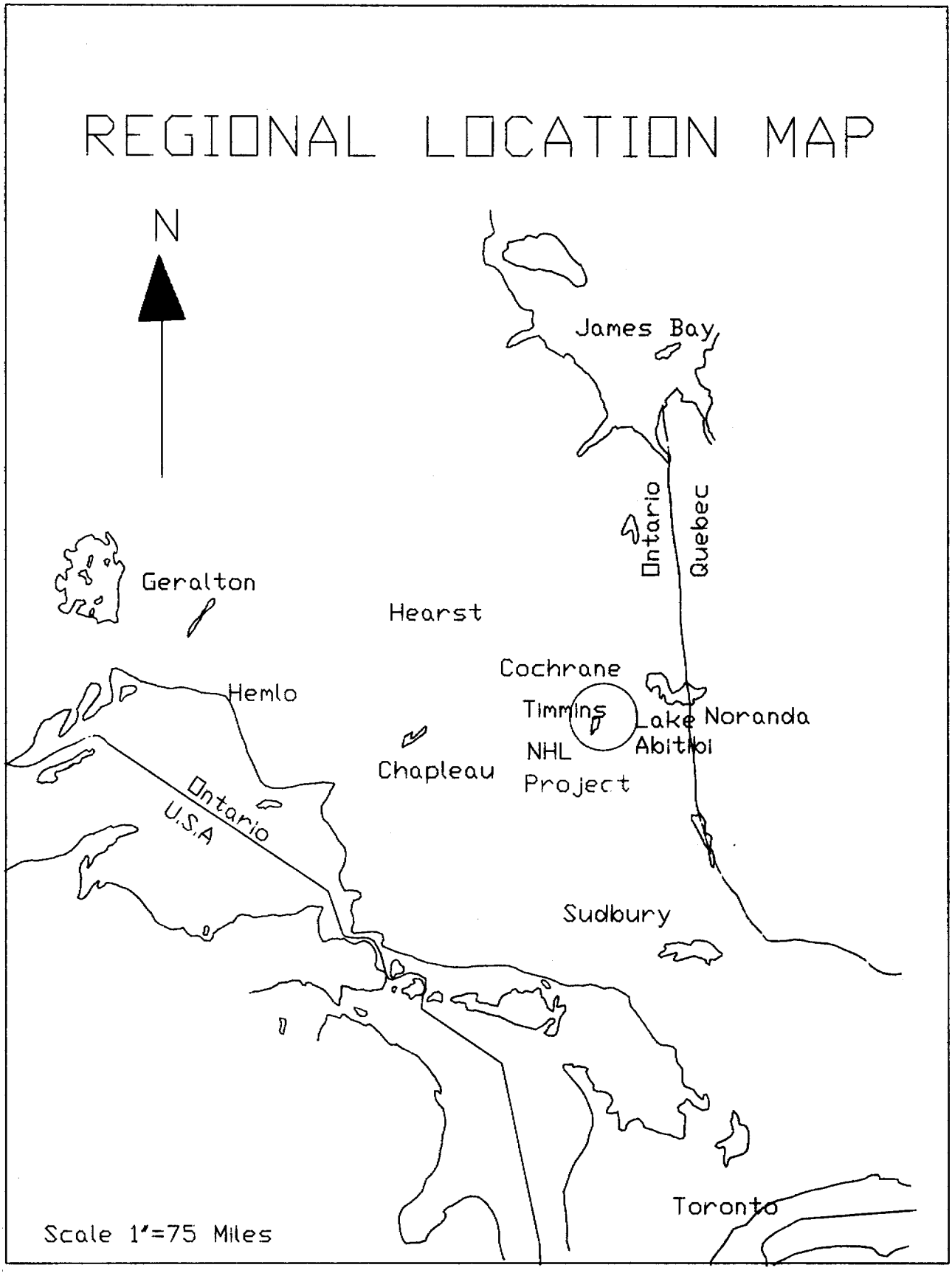
LOCATION AND ACCESS

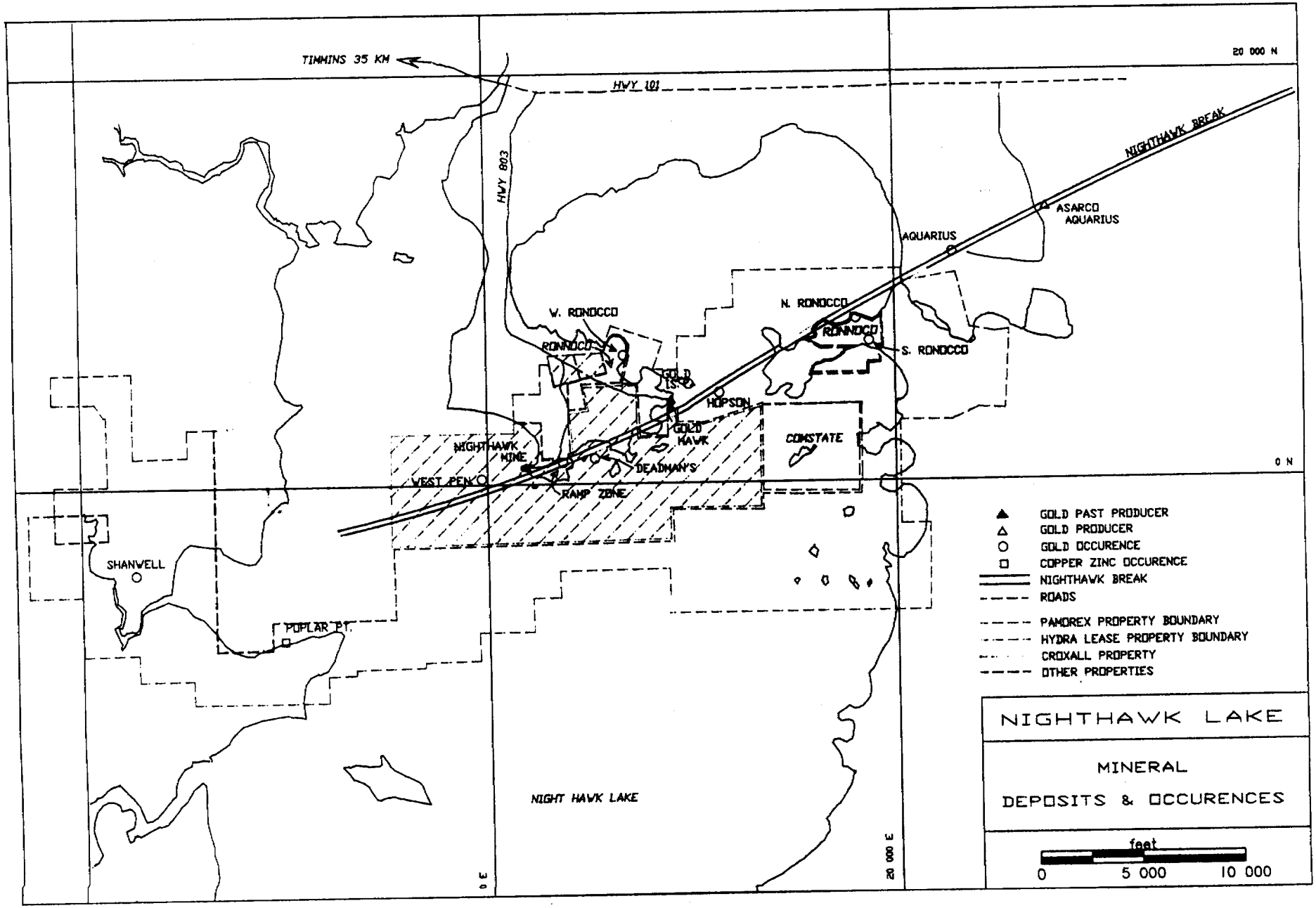
The Nighthawk Lake mine is located on the North Peninsula of Nighthawk Lake in Cody Township approximately 35 km east of Timmins, Ontario. It is accessed by Highway 101 (paved), 12.2 km east of Pamour No. 1 Mine and then south on Provincial Road 803 (gravel all weather) 6.2 km to the site.

STATUS OF PROPERTY

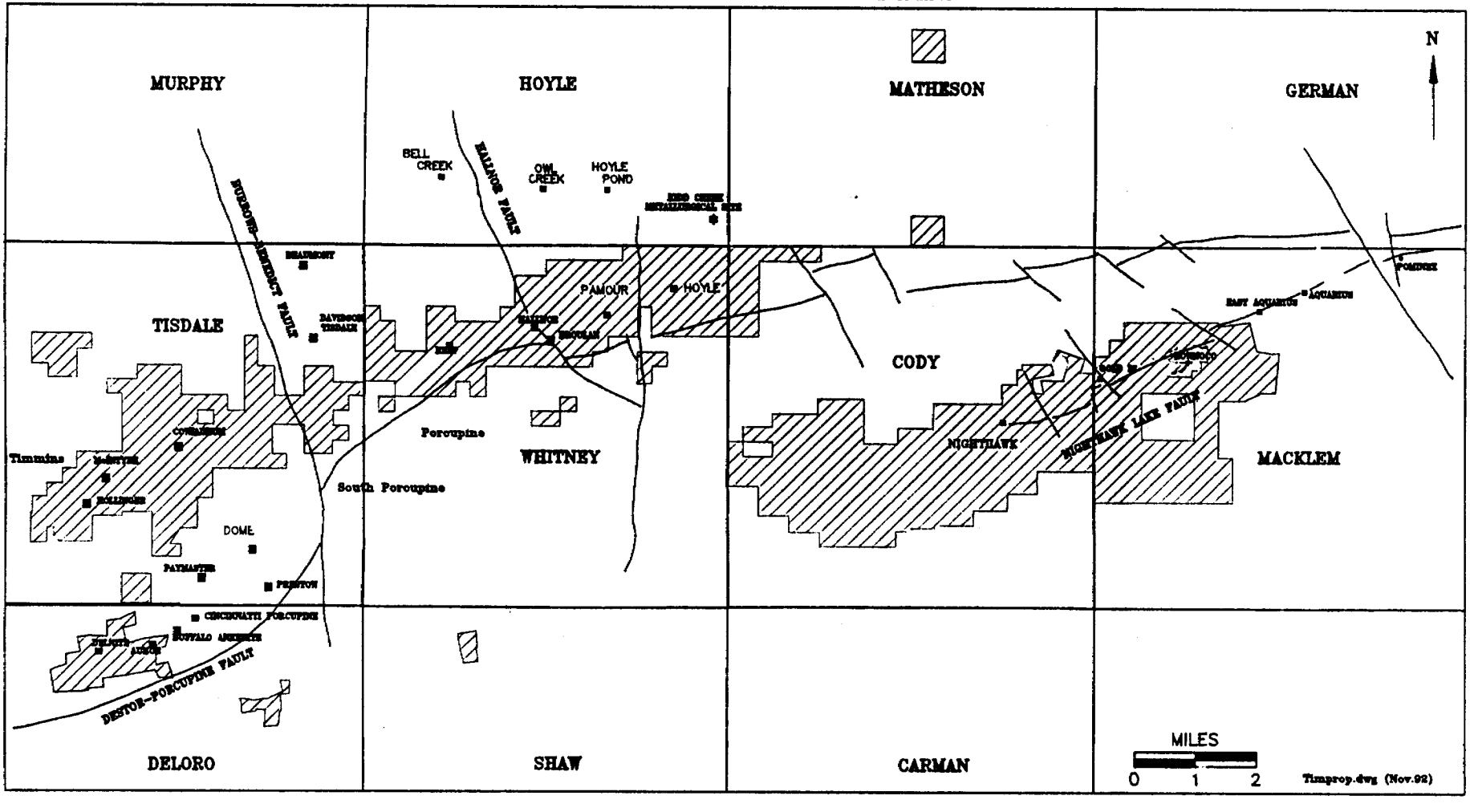
In good standing with respect to all Government regulations and agreement commitments.

REGIONAL LOCATION MAP

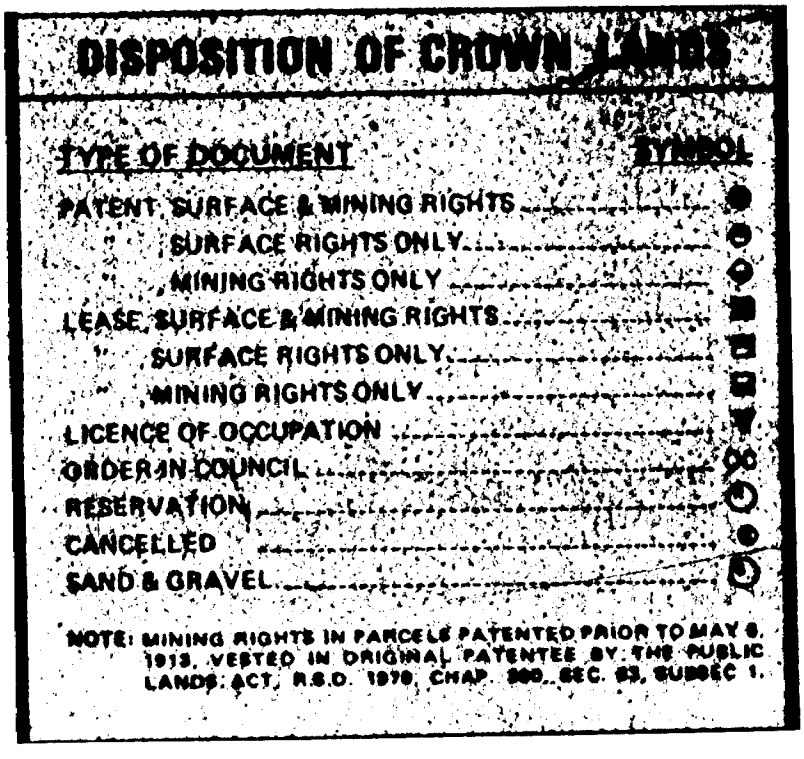



TIMMINS 35 KM
HWY 101
HWY 803
20 000 N
0 N
NIGHTHAWK BREAK
ASARCO
AQUARIUS
AQUARIUS
W. RONDOCCO
RONNOCCO
N. RONDOCCO
RONNOCCO
S. RONDOCCO
GOLD
ISLE
HOPSON
GOLD
HAWK
COMSTATE
NIGHTHAWK
MINE
DEADMAN'S
WEST PEN
RAMP ZONE
SHANWELL
POPLAR PT.
NIGHT HAWK LAKE
30 E
20 000 E
GOLD PAST PRODUCER
GOLD PRODUCER
GOLD OCCURENCE
COPPER ZINC OCCURENCE
NIGHTHAWK BREAK
ROADS
PAMOREX PROPERTY BOUNDARY
HYDRA LEASE PROPERTY BOUNDARY
CROXALL PROPERTY
OTHER PROPERTIES
NIGHTHAWK LAKE
MINERAL
DEPOSITS & OCCURENCES
feet
0
5 000
10 000

ROYAL OAK MINES INC.
TIMMINS PROPERTIES



LEGEND TO ACCOMPANY FOLLOWING CLAIM MAPS



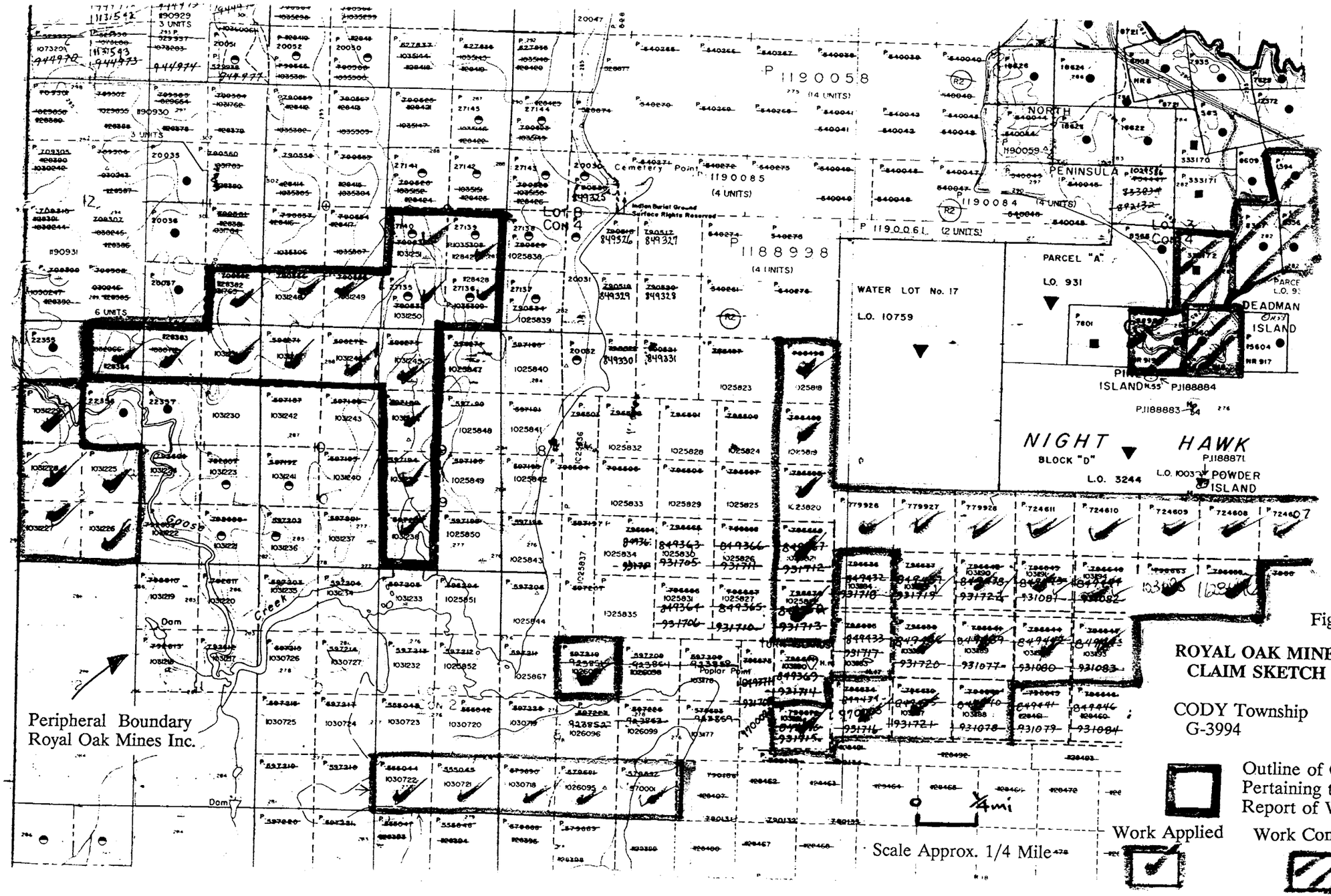


Figure A

ROYAL OAK MINES INC.
CLAIM SKETCH MAP

CODY Township
G-3994

Outline of Claims Pertaining to Attached Report of Work

Work Applied

Work Completed

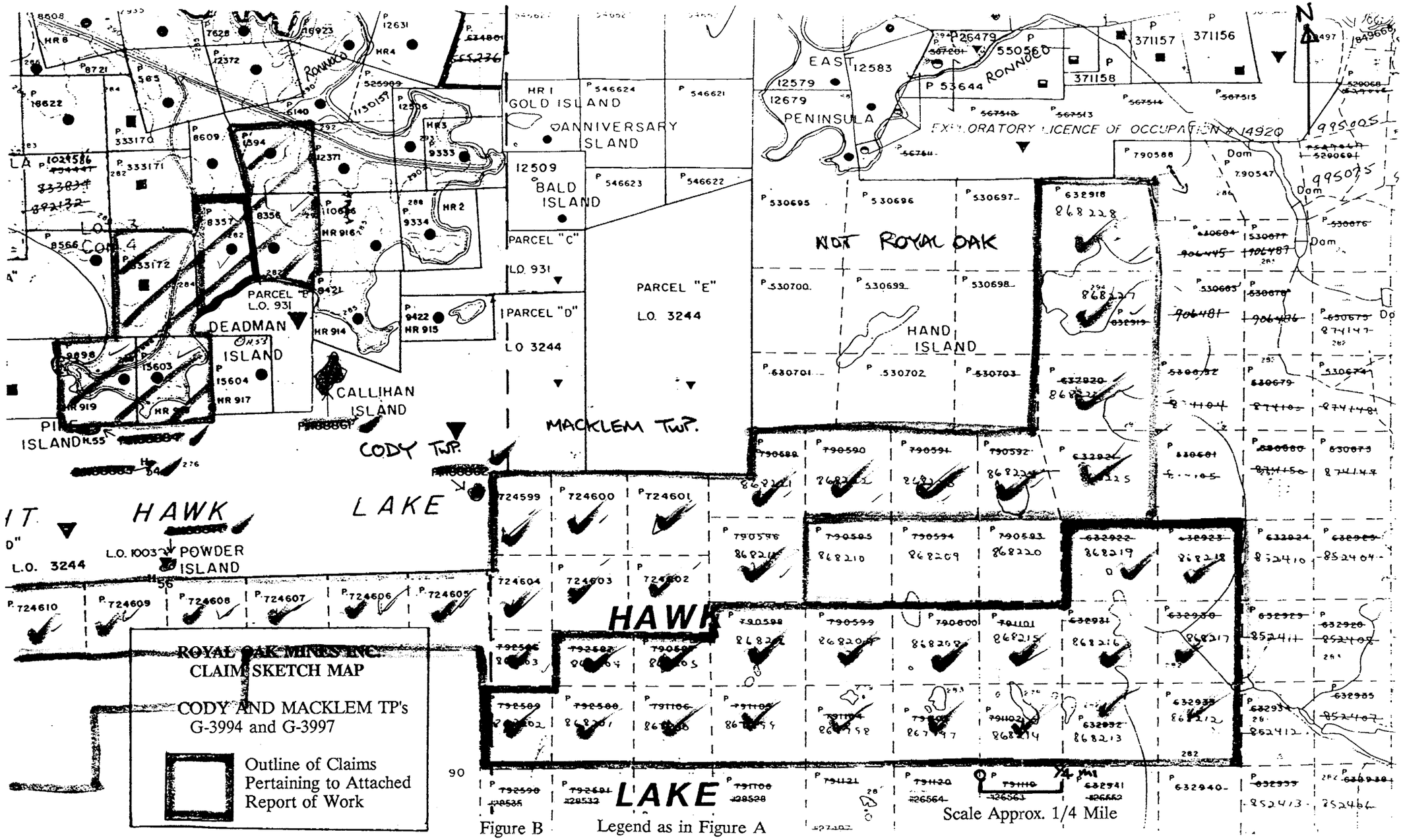


Figure B Legend as in Figure A Scale Approx. 1/4 Mile

TABLE 1

HYDRA PROPERTY
CLAIMS LIST

CLAIM RECORD #	PARCEL NUMBER	CLAIMS STATUS	MINING RIGHTS	SURFACE RIGHTS	RESERVATIONS
HR914	896 SEC	PATENTED	45.00	45.00	SL,R(ONTC,P
HR915	901 SEC	PATENTED	26.00	26.00	P,SL
HR916	903 SEC	PATENTED	41.50	41.50	SL,R(ONTC),P
HR917	1221 SEC	PATENTED	28.75	28.75	P
HR918	1220 SEC	PATENTED	42.50	42.50	P
HR919	905 SEC	PATENTED	42.25	42.25	SL,R(ONTC),P
LO 17	10759 LO	LIC.OCCUP.	456.00	1.00	SR
LO 56	1003 LO	LIC.OCCUP.	0.00	1.00	MR
P12371	1021 SEC	PATENTED	36.69	36.69	SL,P
P12372	1019 SEC	PATENTED	36.49	36.49	P,SL
P1394	1020 SEC	PATENTED	34.77	34.77	P,SL
P565	1022 SEC	PATENTED	42.78	41.24	P,MTC(1.54sro)
P7801	22 LC	10 YR. LEASE	40.00	0.00	SR
P8356	2685 SEC	PATENTED	37.50	37.50	0(1chn.sro),T
P8357	2686 SEC	PATENTED	42.00	42.00	0(1chn.sro),T
P8566	3371 SEC	PATENTED	27.00	27.00	R(HYDRO),T
LO 3244	3244 LO	LIC.OCCUP.	1,001.80	0.00	SR,H51,52,54-56
LO 931	931 LO	LIC.OCCUP.	248.00	0.00	SR
			2,229.03	482.69	

SL = Shoreline Reservation
R = Right-of-way or Easement Restriction
P = Pine Trees
SR = Surface Rights Reserved
MR = Mining Rights Reserved
MTC = Ministry Transportation + Communications (Road Reservation)
O = Other
T = Timber
H51,52,54-56 = Islands in Nighthawk Lake Reserved
ONTC = Ontario Northland Transportation Commission
chn = Chain (66 feet)
sro = Surface Rights Only

MINERAL INVENTORY

The Nighthawk Mine deposit, as well as the Ramp and Deadmans Island zones, have a total diluted mineral inventory of 1, 593,627 tons at an average grade of .167 opt Au in several zones between surface and the 1000' level of the underground workings of the former Porcupine Peninsular Mine, using a minimum wall cutoff grade of .10 opt Au and a grade cut factor of .50 opt Au. From the probable ore category of the Nighthawk Mine, a mining reserve of 610,000 tons @ .18 opt Au has been established for the purposes of a financial analysis.

WORK HISTORY

The property at Nighthawk Lake has seen sporadic exploration activity since gold was first discovered on Gold Island of the Goldhawk property in 1907. From 1924 to 1927, 27,354 ounces of gold were produced from 99,688 tons grading .274 opt Au from underground workings at the Porcupine Peninsula Mine. From 1945 to 1948, further underground exploration work was carried out by Porcupine Peninsula Mines. In 1977, a 750' ramp was driven into the 80-88 Zone, or the present Ramp Zone, and 28 shore holes were drilled. Pamour Porcupine Mines Limited acquired additional properties in the Nighthawk Lake area and up to 1986 conducted limited mining operations from an open pit on the adjacent Goldhawk property.

WORK DONE

HISTORY

1907	Gold discovered on Gold Island in Nighthawk Lake and claims staked by Charles Auer
1909	Level of Nighthawk Lake artificially lowered exposing outcrop on No. 1 vein
1917	No. 1 Shaft sunk to 90 ft. on No. 1 Vein. Shaft deepened to 180'
1922	Property acquired by Nighthawk Peninsula Mines
1923	200 t.p.d. mill installed
1924-27	Production of 99,688 tons at .274 opt and 17,000' of diamond drilling
1933	Property optioned by Anglo Huronian Mine, dewatered and 30,000' drilled
1947-48	No. 2 winze sunk and 1000 level driven with 15,000' of underground drilling

1973	Pamour Porcupine Mines optioned property. 80-88 (Ramp Zone)zone drilled; 8 holes, 7,596'
1977	Driving of 750' long ramp (80-88 Zone). 28 short holes drilled fdrom ramp totalling 3,035'
1986-87	Mine dewatering to 625 level. U/G drilling 84 holes, 15,219'. Entry of all drill data into Norcomp computer system.
1988	Conversion of data to Lynx Geomin system. Pamorex completed 53 surface holes for 27,880'
1989	Mine dewatering to 1000 level and 95 holes drilled underground for 18,514'. Six surface holes for 1,501' completed in mine area. An additional 35 surface holes on four separate targets for 26,741'. Deadmans Is. target stripped, mapped and chip sampled. Underground mapping, partial chip sampling, surveying, bulk sampling and reserve calculation and positive financial analysis completed. Dynatec demobilized the from property and mine allowed to flood in October of 1989. Mine renamed to Nighthawk Lake Mine.
1990-91	No work performed
1992	Necessary applications made to secure permitting for underground mining. Eight surface holes drilled on North Zone, Ramp Zone and North Penn targets, plus one hole in No.4 Zone area for a total of 7421' **(work reported in this assessment report).**

REGIONAL GEOLOGY

The rocks which underlie the Nighthawk Lake area are of Precambrian age (Leahy, 1971). The area is dominated by mafic volcanic rocks with minor felsic volcanic flows. Sedimentary rocks conformably overlie the volcanics and consist primarily of greywackes with interbedded argillites. Ultramafic rocks intrude the mafic volcanics and are comprised of serpentinized peridotites and highly carbonatized ultramafics. Felsic intrusive rocks comprise quartz-feldspar porphyry, feldspar porphyry, syenite, aplite and felsite. The youngest of all rock types consist of a porphyritic diabase and aphyric diabase (Leahy, 1971).

The Destor Porcupine Fault (DPF) crosses the north end of the northeast bay of the lake striking east-west and separating highly altered volcanics and sediments of the Deloro Group to the south with younger sedimentary rocks of the Tisdale Group to the north (Pyke, 1971). The Nighthawk Lake Break lies south of the DPF striking approximately N70E and has been delineated from west of the Peninsula land mass eastward to convergence with the DPF in Stock Twp. Several significant gold occurrences and deposits

Major folding has been interpreted along a N70E axis through the area. This interpretation is supported by structural measurements of bedding attitudes, flow tops and general stratigraphy (Leahy, 1971). In areas of extensive volcanics, structural measurements may not support the interpreted fold model (Leahy, 1971).

LOCAL GEOLOGY

Local mine geology is complexly dragfolded against subparallel splays to the NHL "Break" and this local tight folding results in local "blow-outs" in the ore outline on certain sections. The protolith in the main mine area is dominated by variably carbonated, sericitized and fuchsite altered ultramafics and mafic volcanics. Silicification and albitization is also important on a local scale.

RESULTS OF 1992 DIAMOND DRILL PROGRAM

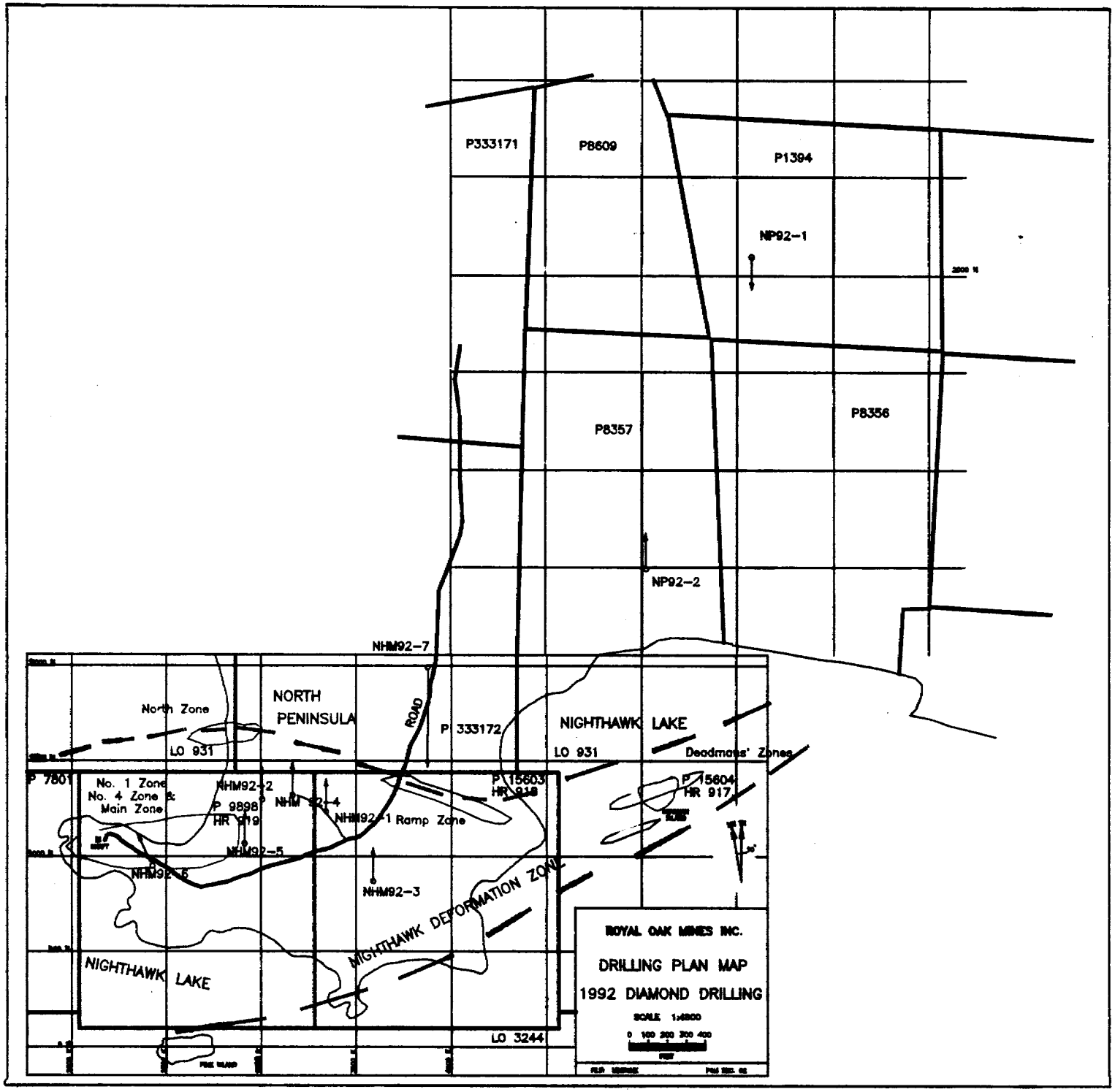
The results of the 9 hole (7421' BQ) program are compiled separately in Appendix A. The program proved to be most successful in the vicinity of the Ramp Zone. Results of the entire program are tabulated in table 2.

FUTURE WORK

It is recommended that the above work be incorporated into the Cody Twp. compilation and that future diamond drill efforts be concentrated in the vicinity of the Ramp Zone.

NIGHTHAWK LAKE AREA-1992 DRILLING TABLE NO. 2

HOLE NO.	NORTH	EAST	AZ.	DIP	LENGTH	TARGET	PURPOSE	RESULTS
NHM92-1	1200	3350	5	-50	650	Ramp	To test for westward extension of Ramp Zone	Intersected .162 opt Au/20' and extended significant mineralization 100' to the southwest
NMH92-2	1300	3000	360	-52	726	North Zone	To test North Zone down plunge to the east.	Intersected .014 opt Au/11' Other interesting "sniffs" in stratigraphy to south of North Zone
NHM92-3	900	3600	360	-55	800	Ramp	To test westward extension of Ramp Zone	intersected .145 opt Au/10; also cut pyritized QFP (best .013/7' south of above intersection.
NHM92-4	1335	3150	360	-60	731	North Zone	To test North Zone down plunge to east	Intersected .06 opt Au/8.5'
NHM92-5	1092	2851	360	-50	856	North Zone	To test North Zone at depth and test secondary targets as well.	North Zone plane of stratigraphy returned .08 opt Au/5'(missed plunge?) Ore grade intersections picked up
NHM92-6	979	2437	330	-45	500	No. 4 Zone	To drill midway between two surface holes 100' apart [PP89-5 (.231/32') and PP89-6(.27/20')]	Cored chloritic and graphitic fault gouge (93') at target depth (.041 opt Au/20'in grab)
NHM92-7	2000	3895	180	-61	1576	Ramp	To test stratigraphy north of Ramp Zone	Intersected .045 opt Au/5' at 596-602' with bleaching/sericitization in seds (496-642') .024/10'&.027/5'on south volc/sed ct below 1000'L
NP92-1	4150	5550	180	-45	956	Geol.& Struct.	To test 150' to east of NP88-4 which returned good alter. and gol noise" on in-contact of syenite	No syenite intersected(fault??) 2" of msv py at 869.8-870' in chert (869.8-871') in seds (796-904'); see log
NP92-2	2500	5000	360	-45	626	Geophy	Magnetic-low 1500' north of Deadmans Island	Anomaly not explained. Possible shadow to "bulls-eye" near Deadmans Is.? Best: .13 opt Au/4.5' in mafic volc.


P333171
P8609
P1394
NP92-1
P8357
P8356
NP92-2
NHM92-7
North Zone
NORTH
PENINSULA
ROAD
P 333172
NIGHTHAWK LAKE
LO 931
LO 931
Deadmans' Zones
P 7801
No. 1 Zone
No. 4 Zone &
Main Zone
NHM92-2
P 9898
HR 919
NHM92-4
NHM92-1 Ramp Zone
P 15603
HR 918
P 15604
HR 917
NHM92-5
NHM92-6
NHM92-3
NIGHTHAWK DEFORMATION ZONE
NIGHTHAWK LAKE
LO 3244
ROYAL OAK MINES INC.
DRILLING PLAN MAP
1992 DIAMOND DRILLING
SCALE 1:4800
0 100 200 300 400
FEET

REFERENCES

Leahy, E.J. (1971) Geology of the Night Hawk Lake Area, District of Cochrane, Ontario, ODM, GR 96, Col. map 2222.

Pyke, D.R. (1982) Geology of the Timmins Area, District of Cochrane, Ontario, OGS Report No. 219.

Statement of Qualifications

I, Paul R. Coad, of the City of Timmins, Province of Ontario, do hereby certify that:

1) I received an Hon. B.Sc. degree in Geology, from the University of Western Ontario in 1974 and a M.Sc. in Geology from the University of Toronto in 1976.

2) I am a Fellow of the Geological Association of Canada.

3) I have been employed as a geologist by various mining companies since graduation in 1976.

4) I am author of this report.

5) I have no direct interest in this property or any surrounding properties.

Dated this 5th day of May, 1993, Timmins, Ontario

Paul, R. Coad

APPENDIX A

RESULTS OF DIAMOND DRILLING

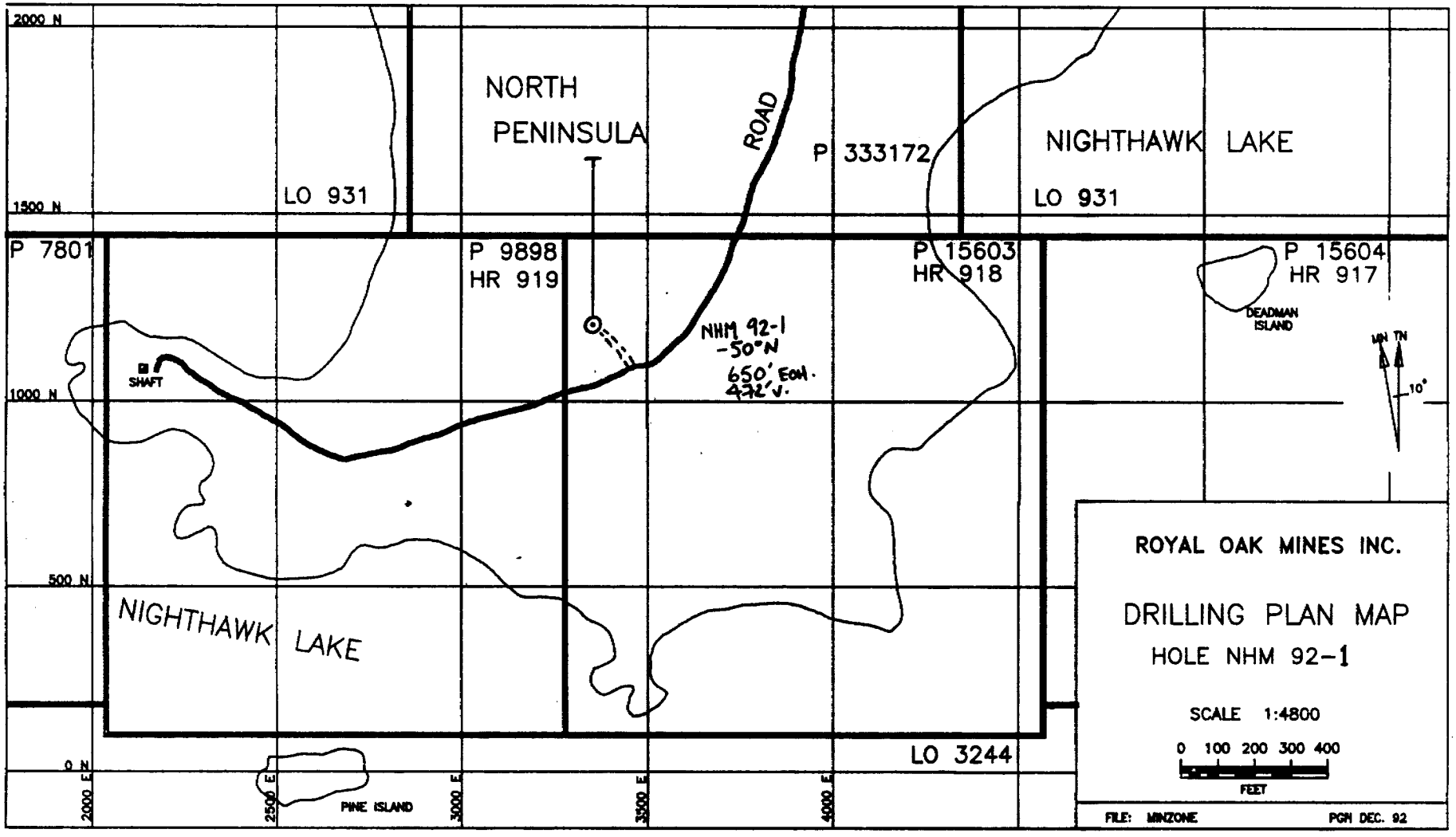
SUMMARY LOG

Hole Number:	NHM92-1
Claim No., Twp.:	P 15603, P 333172, Cody
Date Drilled:	September 14-16, 1992 (24 hrs/day)
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	1200N, 3350E, El 10932, Azimuth 360°, -50° dip
Directional Data:	250': Az. 005, -50° dip; 500': Az. 008, -44° dip; 650': Az. 008, -40° dip
Length:	650 feet BQ
Casing, Overburden:	36 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	Sept. 19, 1992

COMMENTS

The hole cored grey and brown carbonate rock to 366.0', sediments (tuff and argillite) to 573' and mafic volcanics to EOH.

The interval 316.0'-336.0' was mineralized and returned .162 opt Au/20.0' including .264 opt Au/10.0' from 316.0'-326.0'.


2000 N
1500 N
1000 N
500 N
0 N
2000 E
2500 E
3000 E
3500 E
4000 E
NORTH PENINSULA
ROAD
P 333172
NIGHTHAWK LAKE
LO 931
LO 931
P 7801
P 9898
HR 919
P 15603
HR 918
P 15604
HR 917
DEADMAN ISLAND
SHAFT
NHM 92-1
-50°N
650' EOH.
472' V.
MN TN
10°
NIGHTHAWK LAKE
LO 3244
PINE ISLAND
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NHM 92-1
SCALE 1:4800
0 100 200 300 400
FEET
FILE: MINZONE
PGN DEC. 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

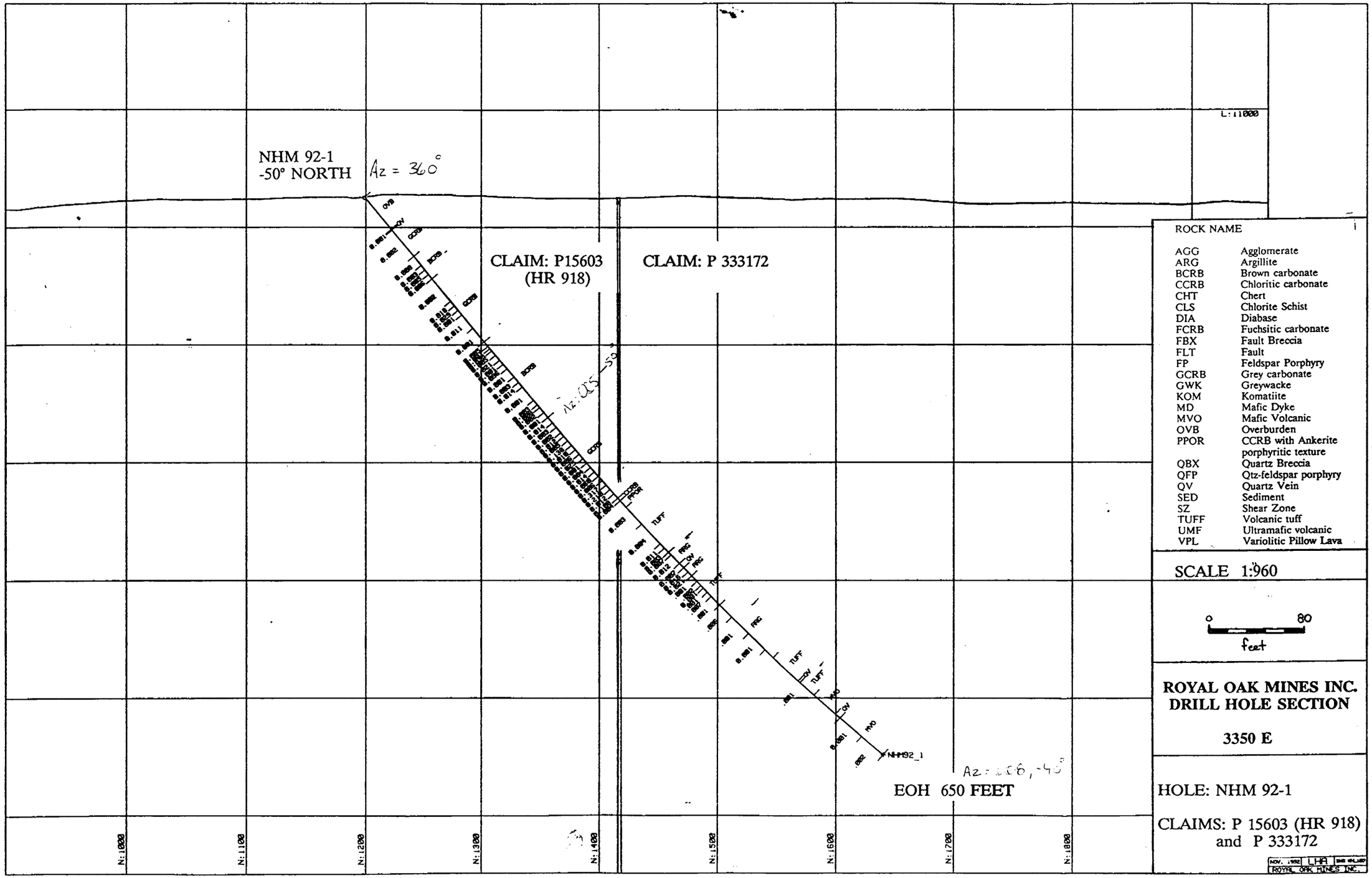
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava

SCALE 1:960

0 80
feet

ROYAL OAK MINES INC.
DRILL HOLE SECTION

3350 E

HOLE: NHM 92-1

CLAIMS: P 15603 (HR 918)
and P 333172

NOV. 1992 LHA
ROYAL OAK MINES INC.

PAMOREX

PROJE[ct]: NIGHTHAWK MINE   Logged By: P. Harvey   AAR   CAT: P   Date: 9/16/1992
Claim No's: HR 916; P 333172   PAGE 1   Page 1 of 7

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NHM 92-1 P-15603 P-333172	1200	3350 E	10932	650.0				

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	360	50												
250	005	50												
500	008	44												
650	008	40												

Peter Harvey

Purpose:- To test for westward extension of ramp zone (zone on volc./sediment contact [south contact]. Results:- intersected .162 opt Au/20' and extend signif. mineralization 100' to SW. Casing (BW) left in hole

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	A%	B%	C%	METALLIC Py	D%	E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
36.0							OVB																		
37.0							QV												.001		13751			Irreg milky white qtz vein(?) Nil Sulphides	in mix of Grey Fuch Carb
66.0						CHL	GCRB		10				5						.002		752			Tectonite: Mottled grey-carb and well foliated at low angle to CA. 5% <cm filled along folia.	scattered qv's; Chloritic
76.0						SER	BCRB						5						.008		753			Subtle change to Weak Ser altd mm scale. Minor cm qv's with fuchsitic margins	Brown Carb. Mottled on cm flat qv at 73
81.0						SER	BCRB		30				5						.003		754			Mottled brown carb weak Sericite, 5% cm qtz veining	chloritic folia sfc
86.0				FLT		SER	BCRB						5				.5		.005		755			Fault- Rubble core 81.0-82.0 Tr-.5% fg diss pyrite.	BCRB as above
91.0						SER	BCRB		20				5				.5		.006		756			Weak mixed BCRB as above.	

PAMOREX

PAGE 2

DRILL HOLE NHM 92-1

Page 2 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
96.0				FLT		CHL	GCRB						5						.5			.002		13757			Transition to Grey Carb ; blocky - FLT at 93-94	chloritic seams define foliation
116.0						CHL	GCRB		20				1									.002		758			Chloritic mottled, seams; foliation at low angle	
121.0						CHL	GCRB						20									.018		759			Banded qtz veining 118-119	s at 80-90° CA.
126.0				FLT		CHL	GCRB		0				5									.029		760			Foliation at 0° CA ; FLT, rubble	core
131.0						CHL	GCRB															.001		761			QV at 0° CA 126-127.5	
146.0						CHL	GCRB		30													.011		762			Inc chloritic content, carb ↔	above
161.0				CONT		CHL	GCRB															.001		763			Chloritic Grey Carb - to Chloritic carb by 156	
166.0						SER	BCRB						1						.5			.005		764			Transition to brown carb;	dk - brown → ser alt'n.
168.5						SER	BCRB						2						.5			.001		765			Chloritic seams; pyrite	
171.0	★			BX		SER	BCRB						2						3			.038		766	2.5		Reasonably well mineralized sed ↔ or chloritic seams	brown carb ; 3% diss py on mm scale
176.0				BX		SER	BCRB						1						1			.005		767			Bxd texture ; mm chloritic in siliceous brown carb	seams fill fractures
181.5				BX		SER	BCRB						2						2			.021		768			Bxd to mod fold'd at 50° CA ; well mixed with 1-5% py	irreg glassy qtz veining in 0 intervals
186.0				CONT		CHL	BCRB						5						.5			.001		769			Chloritic seams at 0-20° CA	
191.0				CONT		SIL	BCRB						2						1			.096		770			Siliceous pale grey-brown carb	

PAMOREX

DRILL HOLE NHM 92-1

DIST	Id	Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	Ai	J/F J	A2	MINERALS GANGUE Qtz	c%	B%	C%	METALLIC Py	D%	E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
196.0				CONT		SIL	BCRB		20				5				.5		.001		13771			Siliceous as above	
200.0						SIL	BCRB						30						.001		772			As 196, irreg milky qtz veins	2-12" wide
206.0						SER	BCRB						10						.003		773			Brown-Grey Carb; wispy brown	ser on cont folth.
211.0						SER	BCRB						3						.014		774			As 206 minor late carb	qv's; [illegible] tr py
216.0				CONT		SER	BCRB						20						.001		775			1×4"; 1×10" milky qtz veining; carb along vein margins	Brown [illegible]
221.0				CONT		SER	BCRB		20				5						.001		776			Strong SER altd along cont Amygdules? throughout ≅10% 1×2" milky qv - flat - at	folth, gen at 0-20°CA of total 217.5
226.0				CONT		SER	BCRB						5						.001		777			As 221	
231.0				FRAG		SER	BCRB						5						.003		778			Transition to fragmental; 1-	2" sized QP Rhy fragments
234.0				FRAG		SER	BCRB						5						.008		779			As 231	
239.5				Bx		SER	BCRB						1				.5		.002		780			[illegible] diss py in weak [illegible]	bd brown - Ank - alt carb
245.0				Bx		SER	BCRB						3				.5		.001		781			As 239.5	
251.0				FLT		SER	GCRB						10						.014		782			Subtle change to grey carb, 245-246.5; oxidized.	blocky chloritic core.
256.0				BND		SER	GCRB		55				10				.5		.003		783			Well banded on cm scale, pale [illegible] banding. Irreg veining	grey carb; [illegible] < 2".
262.0				FLT			GCRB						10				1		.002		784			Oxidized fault, blocky core. as w chl seams	Irreg qv's; diss py

PAMOREX

PAGE 2

DRILL HOLE NHM 92-1

Page 4 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
266.0				Bx		CHL	GCRB						2						.5			.012		13785			Pale grey, chl filled fracts,	mottled; tr fg. Py
271.0				Bx		CHL	GCRB						5						.5			.005		786			Weak bx'd	
276.0				Bx		CHL	GCRB						2						.5			.138		787			Tr fg. Py	
281.0						CHL	GCRB		50				2						.5			.010		788			Weak foli'd - bxd text	
286.0						SER	GCRB															.006		789			Stg sericite 282-284;	contorted chl fractures
291.0						SIL	GCRB						2						.5			.025		790			Siliceous; chl-py fracts -	ie 286-287
296.0						SIL	GCRB		40				2						.5			.001		791			fracs; Bx - locally well foli'd	at 40°; irreg + anast qv's
301.0				CONT		SIL	GCRB						1						.5			.004		792				
306.0							GCRB						5						1.0			.014		793			Irreg qv's	
311.0				CONT			GCRB		90													.060		794			Cont - locally well foli'd at 90°,	defined by talc-chl.
																											Tr mg. magnetite peppered in	interval; Zebra Rock.
316.0				CONT			GCRB						5						.5			.006		795			Cont foli'n; minor clear qtz vein	s. <cm
321.0						CHL	GCRB						5						3		.264/10	.317		796	5.0		Chloritic banded 319-321.	w 3-5% Py.
326.0				BND		CHL	GCRB						3						5		.162/30	.210		797	5.0		Chloritic/Ser banded m-cm scale,	well mix'd
331.0						SER	GCRB						3						1			.012		798	5.0		Minor chl, minor bx'd	
336.0						SER	GCRB						20						2			.108		799	5.0		333-334 Milky QV - talc-chl	margins at 50° CA
339.0						CHL	CCRB						1						1			.004		800			Chloritic; w frags of BCRB	

PAMOREX

DRILL HOLE NHM 92-1

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nom	STRUCT. B/S B	Ai	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
346.5				MOT		CHL	PPOR		50				1									.003		13801			Carb Por Mottled text,	banded at ≈50°
366.0				BND		SER	TUFF		55				1						1			.003		802			Faulted? contact at ≈10° scale weak chl-ser alt'd med gr py scattered throughout	into well banded on mm tuff; locally ser banded,
389.0				BND		SER	TUFF		50				1						1			.004		803			Mod Ser Alt'd; well banded Intercalated w ARG 376-377;	tuff - locally Arg size frags. 384-384.5
394.0				BND		SER	TUFF						1						1			.011		804			As 389	
399.0				BND		SER	TUFF		50										3			.003		805			As 389 w 3% py as 1-5 Agglm size frags occassionally.	mm bands + dll seams.
402.0				CONT		GRA	ARG															.007		806			Sharp contact into graphitic Argillite; contorted folln + microfolds Folln varies 0-90° CA in unit	
412.0				CONT		GRA	ARG						2									.012		807			As 402: 2×2" QVs	
417.0	*						QV						30						3			.007		808			Irreg qv's 1-10" along core, Cutting Argillite.	rimmed w micas + talc + py
422.0				CONT		GRA	ARG		20				20						2	.01%		.016		809	5.0		Folln at 0-20° in Arg. Qtz Veining 421-422 - irreg; as	at 417
426.5				CONT		GRA	ARG						5						1			.021		810	5.5		2×3" 'Flat' QV's; talcy	
433.0	*					SER	TUFF						20						2			.001		811			Sharp contact at 20° into Sericitic Cut by 6 2-4" irreg qv's several <1" irreg qv's.	tuff with ANK Porphs with micas + py and
438.0				BND		SER	TUFF						1						.5			.002		812			Well banded tuff; Sericitic	w ANK porphs. FISSILE.

PAMOREX

PAGE 2

DRILL HOLE NHM 92-1

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DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
441.0				BND		SER	TUFF						1						1			.001		13813			As 438	
446.0				BND		SER	TUFF		40				1						.5			.001		814			As 438; folds minor	folds; gen at 40° CA.
451.0				BND		SER	TUFF						.5						.5			.007		815			As 438	
456.0				BND		SER	TUFF						1						.5			.001		816			As 438	
461.5				BND		SER	TUFF						1						1			.001		817			As 438	
476.0						GRA	ARG		45				3						.5			.006		818			Faulted? contact at 461.5 at 10° CA	
																											Argillite; less graphitic, more chloritic comp to unit at 402, etc	
496.0						GRA	ARG		35													.001		819			Fissile - blocky graphitic Argillite.	
516.0				FLT		GRA	ARG															.001		820			Broken blocky core	
526.0						GRA	ARG															.001		821			Intercalated w chloritic Mafic	Volc
555.0						ANK	TUFF		60				1									.001		822			Fissile ANK porph banded tuff 526. Minor irreg qv's	FLTed low angle contact at
557.0							QV						30									.001		823			QV's cnt to folds at ≈ 60-70°	Barren.
573.0						ANK	TUFF		70				3									.001		824			As 555. Intercalated with towards 573.	6-12" Graph Arg sections
597.0			fg			QC	MVO															.001		825			Sharp contacts into chloritic Massive Mafic. Tr py	lacey q-calcite veined

PAMOREX

PAGE 2

DRILL HOLE NHM 92-1

Page 7 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
602.0							QV						20						1			.001		13826			Irreg qtz veining + minor	coarse py
626.0			fg.			ANK	MVO						1									.001		827			Fine gr chloritic MVO with	ANK porphs
																											Minor laceq qtz veinlets	Minor wispy ser.
650.0						CHL	MVO															.002		828			Transits to more chloritic	patchy hematite
END																												

NHM 92-1

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 5600-1602

DATE: SEPT 22/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13751	<.001	<35					
2	52	.002	70					
3	53	.008	275					
4	54	.003	105					
5	55	.005	170					
6	56	.006	205					
7	57	.002	70					
8	58	.002	70					
9	59	.018	615					
10	60	.029	995					
11	61	<.001	<35					
12	62	.011	375					
13	63	.001	35					
14	64	.005	170					
15	65	.001	35					
16	66	.038	1300					
17	67	.005	170					
18	68	.021	720					
19	69	<.001	<35					
20	70	.096	3290					
21	71	<.001	<35					
22	D-13772	<.001	<35					
23								
24								

Lab16

Chief Chemist: [signature]

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

NMH-92-1

DATE: SEPT 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13773	.003	105					
2	74	.014	480					
3	75	.001	35					
4	76	.001	35					
5	77	.001	35					
6	78	.003	105					
7	79	.008	275					
8	80	.002	70					
9	81	<.001	<35					
10	82	.014	480					
11	83	.003	105					
12	84	.002	70					
13	85	.012	410					
14	86	.005	170					
15	87	.138	—					
16	88	.010	340					
17	89	.006	205					
18	90	.025	855					
19	91	.001	35					
20	92	.004	135					
21	93	.014	480					
22	D-137 94	.060	2060					
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

NHM-92-1

DATE: Sept 29/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13795	.006	205					
2	96	.317	-					
3	97	.210	-					
4	98	.012	410					
5	99	.108	-					
6	13800	.004	135					
7	01	.003	105					
8	02	.003	105					
9	03	.004	135					
10	04	.011	375					
11	05	.003	105					
12	06	.007	240					
13	07	.012	410					
14	08	.007	240					
15	09	.016	550					
16	D-13710	.021	720					
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: [signature]

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-1

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: SEPT 30/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13811	.001	35					
2	12	.002	70					
3	13	.001	35					
4	14	<.001	<35					
5	15	.007	240					
6	16	.001	35					
7	17	.001	35					
8	18	.006	205					
9	19	.001	35					
10	20	<.001	<35					
11	21	.001	35					
12	22	.001	35					
13	23	.001	35					
14	24	<.001	<35					
15	25	<.001	<35					
16	26	.001	35					
17	27	.001	35					
18	D-13828	.002	70					
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: _____

SUMMARY LOG

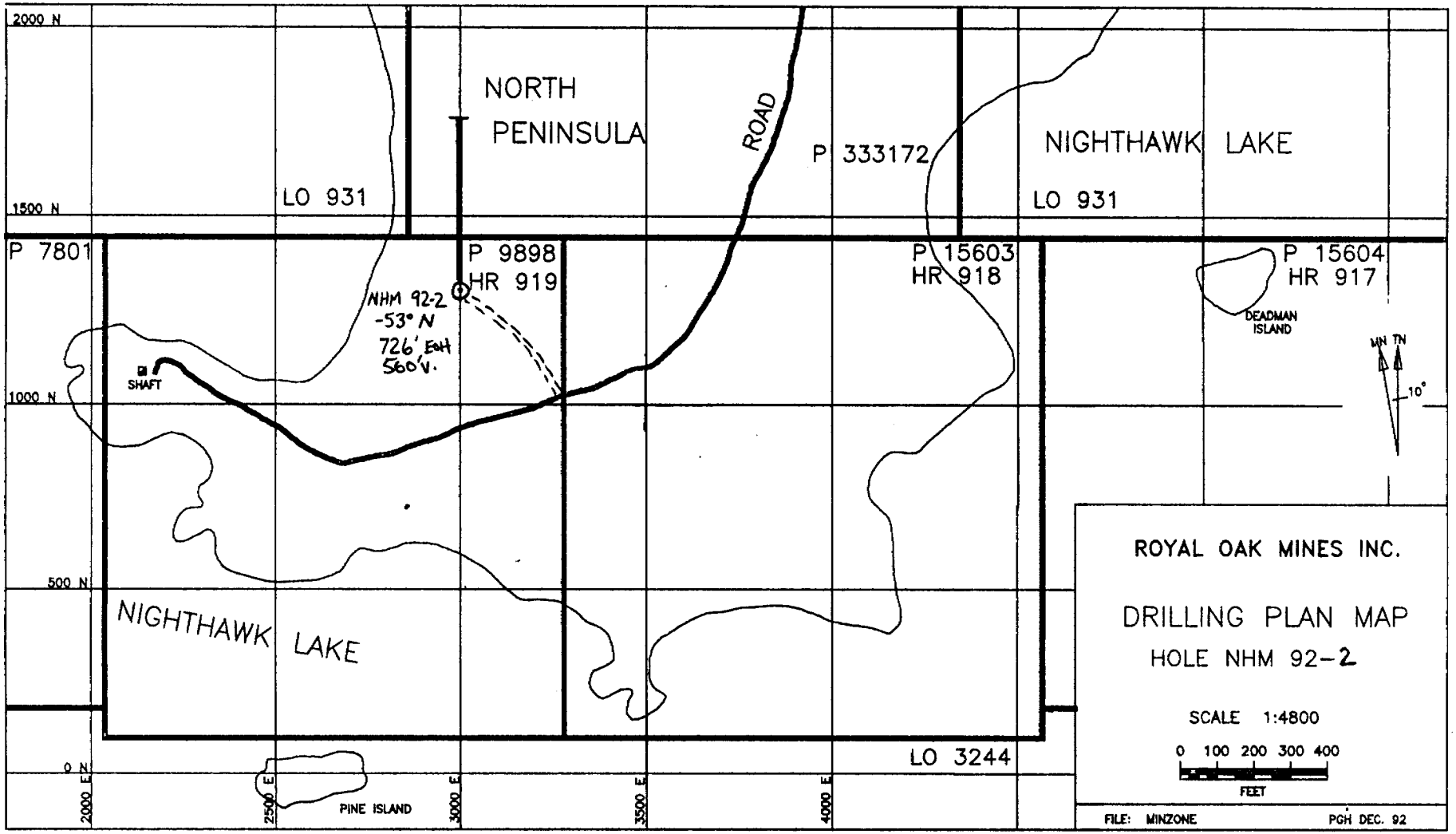
Hole Number:	NHM92-2
Claim No., Twp.:	P 9898, P 333172, Cody
Date Drilled:	September 17-19, 1992 (24 hrs/day)
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	1300N, 3000E, El 10914, Azimuth 360°, -53° dip
Directional Data:	100': Az. 360, -52° dip; 300': Az. 360, -51° dip; 500': Az. 360, -50° dip; 700': Az. 003, -51° dip
Length, Core Size:	726 feet BQ
Casing, Overburden:	58 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	Sept. 22, 1992

COMMENTS

The hole cut talc altered komatiite to 151.0'; carbonate rock to 291.0'; sheared mafic volcanics to 411.0'; tuff to 471.0'; fuchsite and grey carbonate rock to 597.2'; graphitic and sericitic tuff to 680.0'; and ended in mafic volcanics.

Quartz breccia within tuffs with diffuse mineralization occurred from 614.0' to 656.0', and assays were .014 opt Au/11.0' from 614.0-625.0' and .011 opt Au/19.0' from 637.0' to 656.0'.

In addition, carb rock assayed .060 opt Au/10.0' from 151.0-161.0', and sheared mafics assayed .208 opt Au/5.0' from 386.0'-391.0'.


2000 N
1500 N
1000 N
500 N
0 N
2000 E
2500 E
3000 E
3500 E
4000 E
NORTH PENINSULA
ROAD
P 333172
NIGHTHAWK LAKE
LO 931
LO 931
P 7801
P 9898
HR 919
P 15603
HR 918
P 15604
HR 917
NHM 92-2
-53° N
726' EoH
560' V.
SHAFT
DEADMAN ISLAND
MN TN
10°
NIGHTHAWK LAKE
LO 3244
PINE ISLAND
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NHM 92-2
SCALE 1:4800
0 100 200 300 400
FEET
FILE: MINZONE
PGH DEC. 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

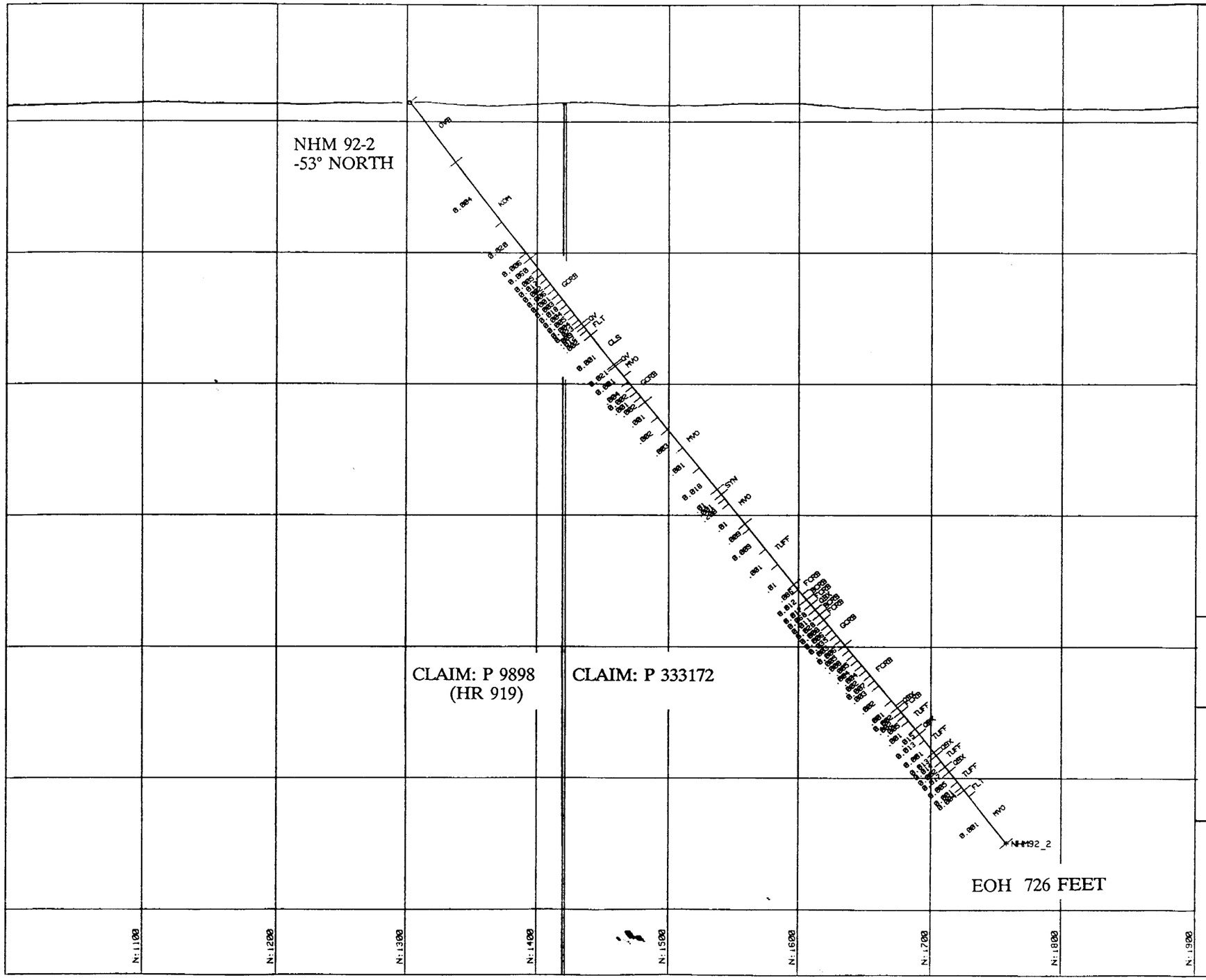
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava

0 80
feet

SCALE 1:960

ROYAL OAK MINES INC.
DRILL HOLE SECTION

3000 E

HOLE: NHM 92-2

CLAIMS: P 9898 (HR 919)
and P 333172

NOV. 1992 LHA DWG #4.188
ROYAL OAK MINES INC.

PAMOREX

PROJECT: NIGHTHAWK
Claim No HR919; P 333172

Logged By: P. Harris

PAGE 1

AAR

CATEGORY

Date: 9/18/1992
Page 1 of 7

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NHM 92-2 P-9898	1300	3000	10914	726				

P-333172

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	360	53	700	003	51									
100	360	52												
300	360	51												
500	360	50												

Peter Harris

DIST	Id	ROCK DESCRIPTION						STRUCT. B/S		STRUCT. J/F		MINERALS GANGUE						MINERALS METALLIC						Spl #	Wdth	T
		Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	A%		B%		C%	Py	D%		E%	opt Au	F%			
58.0							OVB																			
86.0		SS		Bx	BK	talc	KOM		60													.004		13829		
116.0		SS		Bx	BK	talc	KOM															.004		830		
146.0		SS		Bx	BK	talc	KOM		60													.020		831		
151.0						Chl	KOM						5									.006		832		
156.0		S		BND	GY	ANK	GCRB		40				1						.5			.060		833		
																				.06/10						
161.0		S		BND	GY	ANK	GCRB						5						1			.060		834		
166.0		SS		FLT	GY	ANK	GCRB						10						1			.005		835		
171.0		S		BND	GY	ANK	GCRB						3						.5			.017		836		
176.0		S		FLT	GY	ANK	GCFS						5						1			.002		837		

COMMENTS 1	COMMENTS 2
Purpose - to test down plunge to east	North Zone
Results - intersected .014 opt Au/11.0	
Other "sniffs" higher up in hole.	
(Casing left in hole)	
talc alt komatiite; weak w. carb porphs <mm	brd texture; mottled RQD <50
As 86; slightly more chloritic.	
Chloritic towards 146; locally	well banded at 50-60
transition to Carb; irreg <2"	QV's
Zebra striped carb rock; banding apparent on cm scale.	
Rusty FLTs at 152 and 153	
Milky irreg qv's <1" ass w.	tr-1% Py.
As 156; Chloritic Fault rubble	and rusty 161-162.5
Milky <2" qv's irreg cut vns;	minor Py; Py ass w. chl FLT
As 156. Rusty FLT at 169	
Chloritic FLT Rubble 171-171.5	
Irreg <1" qv's.	

PAMOREX

PAGE 2

DRILL HOLE NHM 92-2
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DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
181.0		S		BND	GY	ANK	GCRB						5						1			.006		13838			Banded grey carb; chloritic slips	at 179 + 180
																											diss py = carb + ass w late	qv's ; minor talc rims qv's.
186.0									60				2						.5			.001		839			chl seams define banded text	as 156 etc
191.0									60				1						.5			.003		840			As 156	
196.0													5						1			.018		841			As 156, minor local contorted	
201.0									65				2						.5			.004		842			Rusty FLT at 200	
206.0									50				3						.5			.005		843				
211.0													2						.5			.004		844			Minor late qtz veining, esp. towards	212.0
214.5		S		BND	GY	ANK	GCRB						5						.5			.023		845				
217.5				BX			QV						50						.5			.009		846			Qtz veining - ribbon texted at ≈ 50°	, and sections of Qtz vein
																											breccia	
221.0		SSS				CHL	FLT															.012		847			Chloritic Fault rubble and	gouge - RQD = 0
226.0		SSS				CHL	FLT															.002		848			Chloritic Fault Rubble.	
231.0		S		BX		CHL	CLS						20									.001		849			Chlorite schist injected w	irreg qtz veins + boudins
																											1 - 4" wide. Chloritic Mafic	Volcanic.
254.5				FRAG			CLS						20									.001		850			Chloritic schist, cut by irreg qv's	- contains <1" size
																											hetro frags - are sm hematite	stained - syen frags?
																											and Mafic Volc frags	
256.0							QV						70						3			.021		851			Irreg 1-3" qtz veining; py	in chl schist wall

PAMOREX

PAGE 2

DRILL HOLE NHM 92-2

Page 3 of 7

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
261.0				SHD		CHL	MVO						2						1			.001		13852			Chloritic-calcite sheared throughout as at 254.5.	Mafic Volc; fragments Locally contorted.
266.0				FRAG		CHL	MVO						1						.5			.001		853			As 261; more sheared + frag- <1"	mental; hetro fragments
271.0						CHL	GCRB		60				1						.5			.001		854			Transition to grey carb as at sheared at 60, locally cont.	156 etc, dominantly chloritic,
276.0		S		BND	GY	ANK	GCRB						2						.5			.004		855			Banded Grey Carb as 156. Tr Minor < 1" QV's	diss py = 'Zebra Rock'.
281.0		S		BND	GY	ANK	GCRB						10						.5			.002		856			6" QV at 278, CLS 280-281	
286.0		S		BND	GY	ANK	GCRB		55				2						.5			.001		857			Inc chloritic contents as seams	on foltn - locally contorted
291.0		S		BND	GY	ANK	GCRB						2						.5			.002		858			As 286.	
306.0		SS		SHD		CC	MVO						5						1			.001		859			Sharp contact at 30° into Massive Mafic Volc. 5%	Chlorite-Calcite alt'd lacey q-c veinlets
318.0		SS		SHD		CC	MVO						10						1			.002		860			More intensly sheared from scattered through; total 2-	306; <1" Syenite frags -5% of total; cont foltn.
336.0				SHD		CC	MVO						3						.5			.003		861			Typical CC MVO - lack SYN veinlets. Chloritic slips at 50° Weak sheared → massive by	frags of 318; lacey q-c = interval. Rare mg py cubes 336'
356.0		S				CC	MVO		50				3						.5			.001		862			Massive - weak folt'd at 50	
377.0		S				CC	MVO						5						1			.018		863			As 336 etc	

PAMOREX

PAGE 2

DRILL HOLE NHM 72-2

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DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
382.0		M	Mg		RD		SYN						3						1			.010		13864			Dark red syenite; contacts at 50°; lacey qtz veinlets
																											1% fg diss. pyrite; massive. Dyke-like.
386.0				SHD		CHL	MVO						1						1			.001		865			Sheared volcanic/tuff; banded, rare ser bands; tr py
391.0				SHD		CHL	MVO						1						1			.208	X!	866			diss and banded, lacey qtz veinlets
396.0				SHD		CHL	MVO		50				1						1			.010		867			As 386.
411.0				SHD		CHL	MVO						1						1			.010		868			As 386.
416.0						SER	TUFF						2						1			.009		869			Transition to Tuff; ser banded
436.0						SER	TUFF		60				1						1			.009		870			Ser banded tuff, mottled text. diss mg py.
451.0		SS		CONT		SER	TUFF		45										1			.001		871			Well banded on mm-cm scale; locally contorted.
471.0		SSS		CONT		GRA	TUFF															.010		872			Contorted + variable foltn 0-90°; graphitic bands in 1-2' intervals; alternate with sericitic bands. Blocky.
476.0				BX			FCRB						10						.5			.086		873			Faulted contact at 471 into weak-mod Fuchsitic Calc injected w 10% irreg <2" milky qtz breccia 471-472. qtz's; tr. fg. py.
481.0							FCR3						10						1			.012		874			FCRC to BCRB by 481. V. blocky RQD=0. FLT gouge 477 Qtz breccia 476-477. Cont + brd. Fg py in matrix.
486.0							BCR3						10						2			.012		875			Bmm - FCAR3 by 486. Rubble; RQD=0. Injected w <2" clear qtz veining; stn sericite.

PAMOREX

DRILL HOLE NHM 92-2

Page 5 of 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
491.0				Bx			FCRB						10						1			.017		13876			Brd FCRB w 6" milky qv with offset <1" irreg veins throughout.	py on margin at 489; and
496.0	✱			Bx			QBX						70						5			.068		877			Qtz breccia within BCRB	flooded w late glassy qtz
																											veining, chloritic seams and	pyrite. Fg diss py; py as
501.0	✱			Bx			BCRB						50						5			.011		878			coarse seams ±1/4"	
																											Qtz flooded BCRB at 496.	Coarse py seams + chl in bx.
506.0				Bx			FCRB						20						.5			.028		879			F-GCRB w 1-6" clear-milky qv's.	
511.0				Bx			GCRB						20						.5			.008		880			F-GCRB, clear 1-6" QV's;	tr-½% py
516.0				Bx			GCRB						5						.5			.006		881			G-FCRB: brd + banded	
521.0				Bx			GCRB						5						.5			.035		882			Gray with fuch seams; grey-	clear qv's 1-3"
526.0				BND			GCRB						5						.5			.003		883			Banded-weak Brd	
531.0				BND			GCRB	60					10						.5			.006		884			Banded Grey with minor sericite	+ fuch seams
																											Minor <1" qv's; 10" milky 'flat'	at 530-531.
536.0		M		BND			FCRB						5						.1			.005		885			Transition to contorted Fuch Carb;	cut by milky, barren qv's
541.0													20						.1			.008		886			Weak BND Brd; Nil-trace py.	2-5% glassy qv's
546.0													25						.1			.005		887			Milky qv's 1-12"; are generally	at ± 90° CA - Flats?
551.0													20						.1			.004		888			Milky qv's 1-4"	
556.0													25						.1			.004		889			Milky qv's 1-6"	

PAMOREX

DRILL HOLE NHM 92-2

Page 6 7

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
561.0		M		BND			FCRB						10						.1			.002		13890			Glassy + milky qv's 1-4"	
566.0		↓		BND			FCRB						10						.1			.007		891			"	
571.0		↓		↓			↓						10						.1			.003		892			"	
576.0		↓		↓			↓		65				15						.1			.002		893			"	
581.0		↓		↓			↓						10						.1			.002		894			"	
586.0		↓		↓			↓						10						.1			.002		895			F-BCRB	
591.0		M		BND			FCRB						10						.1			.001		896			F-BCRB; bands of Ser	
593.0				BX			QBX						90						.1			.001		897			Grey qtz veining bx'd to 1"	frags infilled w chl.
597.2				BND			FCRB						40						.1			.002		898			Glassy qtz flooding.	
601.0		S		CONT		GRA	TUFF		55				10						.1			.002		899			Graphitic tuff intercalated w contorted.	FCRB, folt'd at 55; locally
606.0		S		CONT		GRA	TUFF		55				2						.1			.005		900			As 601	
611.0		S		CONT		GRA	TUFF						2						.1			.001		901			As 601	
614.0		S		CONT		GRA	TUFF		55				3						.1			.001		902			As 601	
619.0	*			BX			QBX						70						3			.015		903			Qtz flooded + bx'd Zone - BCRB; py ass w chl filled fractures.	diss py throughout
625.0		SSS		CONT		GRA	TUFF		10				20						1			.013		904			Contorted to generally foln at Fissile Rubble core. Glassy qv's	0-20° graphitic tuff amongst rubble <6".

PAMOREX

DRILL HOLE NHM 92-2

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DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	Ai	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
		ROCK DESCRIPTION						STRUCT. B/S		STRUCT. J/F		MINERALS: GANGUE						MINERALS: METALLIC										
630.0		SSS				GRA	TUFF		20				20						.1			.001		13905			As 625; Minor Ser banded.	
637.0		SSS				GRA	TUFF		20				10						.1			.001		906			As 625 - Fuch Rubble [illegible]	tuff.
640.0							QBX						90						3			.013		907	3.0		Qtz Breccia injected w chl	+ py in fractures
646.0		SSS				SER	TUFF		20				10						1			.014		908	6.0		Sericitic w rare gra[illegible]	[illegible]; <1" qv's on folt[illegible]
651.0		SSS				SER	TUFF		20				10						1			.002		909	5.0		As 646	
656.0							QBX						90						2			.017		910	5.0		Qtz Breccia within Ser Tuff	, fracts filled w chl+py.
661.0		SSS				SER	TUFF		20				1						.1			.005		911			As 646	
666.0		SSS				SER	TUFF						20						1			.005		912			Tuff with Qtz bx rubble.	
671.0		SSS				SER	TUFF						10						1			.001		913				
674.0		SSS				SER	TUFF		60				1						.1			.004		914			Uniform Sericitic tuff; well	foliated
680.0		SS				GRA	FLT															.001		915			Fault zone; graphitic gouge at qtz gouge elsewhere; intercalated	676; sheared + chloritic- with tuffs.
685.0		SS		SHD		CC	MVO						3									.001		916			Flt contact into sheared MVO - Chloritic + calcite amys. Shearing	[illegible] amys throughout at 20° CA; [illegible]
706.0		SS		SHD		CC	MVO						3									.001		917			As 696	
726.0		SS		SHD		CC	MVO						3									.001		918			As 696	
END																												

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

NHM 92-2

EXPLORATION 1602

DATE: SEPT 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13829	.004	135					
2	30	.004	135					
3	31	.020	685					
4	32	.006	205					
5	33	.060	2060					
6	34	.060	2060					
7	35	.005	170					
8	36	.017	585					
9	37	.002	70					
10	38	.006	205					
11	39	.001	35					
12	40	.003	105					
13	41	.018	615					
14	42	.004	135					
15	43	.005	170					
16	44	.004	135					
17	D-13845	.023	790					
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY NHM 92-2

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: SEPT 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13846	.009	310					
2	47	.012	410					
3	48	.002	70					
4	49	<.001	<35					
5	50	<.001	<35					
6	51	.021	720					
7	52	.001	35					
8	53	.001	35					
9	54	.001	35					
10	55	.004	135					
11	56	.002	70					
12	57	.001	35					
13	58	.002	70					
14	59	.001	35					
15	60	.002	70					
16	61	.003	105					
17	62	.001	35					
18	63	.018	615					
19	64	.010	340					
20	65	.001	35					
21	66	.208	—					
22	67	.010	340					
23	68	.010	340					
24	D-13869	.009	310					

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY NHM 92-2

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: SEPT 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13870	.009	310					
2	71	.001	35					
3	72	.010	340					
4	D-138 73	.086	2950					
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: _____

NHM 92-2

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: SEPT 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13874	.012	410					
2	75	.012	410					
3	76	.017	585					
4	77	.068	2330					
5	78	.011	375					
6	79	.028	960					
7	80	.008	275					
8	81	.006	205					
9	82	.035	1200					
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY NHM 92-2

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: SEP 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13883	.003	105					
2	84	.006	205					
3	85	.005	170					
4	86	.008	275					
5	87	.005	175					
6	88	.004	135					
7	89	.004	135					
8	90	.002	70					
9	91	.007	240					
10	92	.003	105					
11	93	.002	70					
12	94	.002	70					
13	95	.002	70					
14	96	.001	35					
15	97	.001	35					
16	98	.002	70					
17	99	.002	70					
18	13900	.005	170					
19	01	.001	35					
20	02	.001	35					
21	D-13903	.015	515					
22								
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

NHM 92-2 + 92-3

EXPLORATION 1602

DATE: SEPT 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13904	.013	445					
2	05	.001	35					
3	06	.001	35					
4	07	.013	445					
5	08	.014	480					
6	09	.002	70					
7	10	.017	585					
8	11	.005	170					
9	12	.005	170					
10	13	.001	35					
11	14	.004	135					
12	15	<.001	<35					
13	16	<.001	<35					
14	17	<.001	<35					
15	92-2 ↑ 18	.001	35					
16	↓ 92-3 19	<.001	<35					
17	20	.004	135					
18	21	.003	105					
19	22	.013	445					
20	23	.008	275					
21	24	.040	1370					
22	25	.001	35					
23	D-13926	.001	35					
24								

Lab16

Chief Chemist: [signature]

SUMMARY LOG

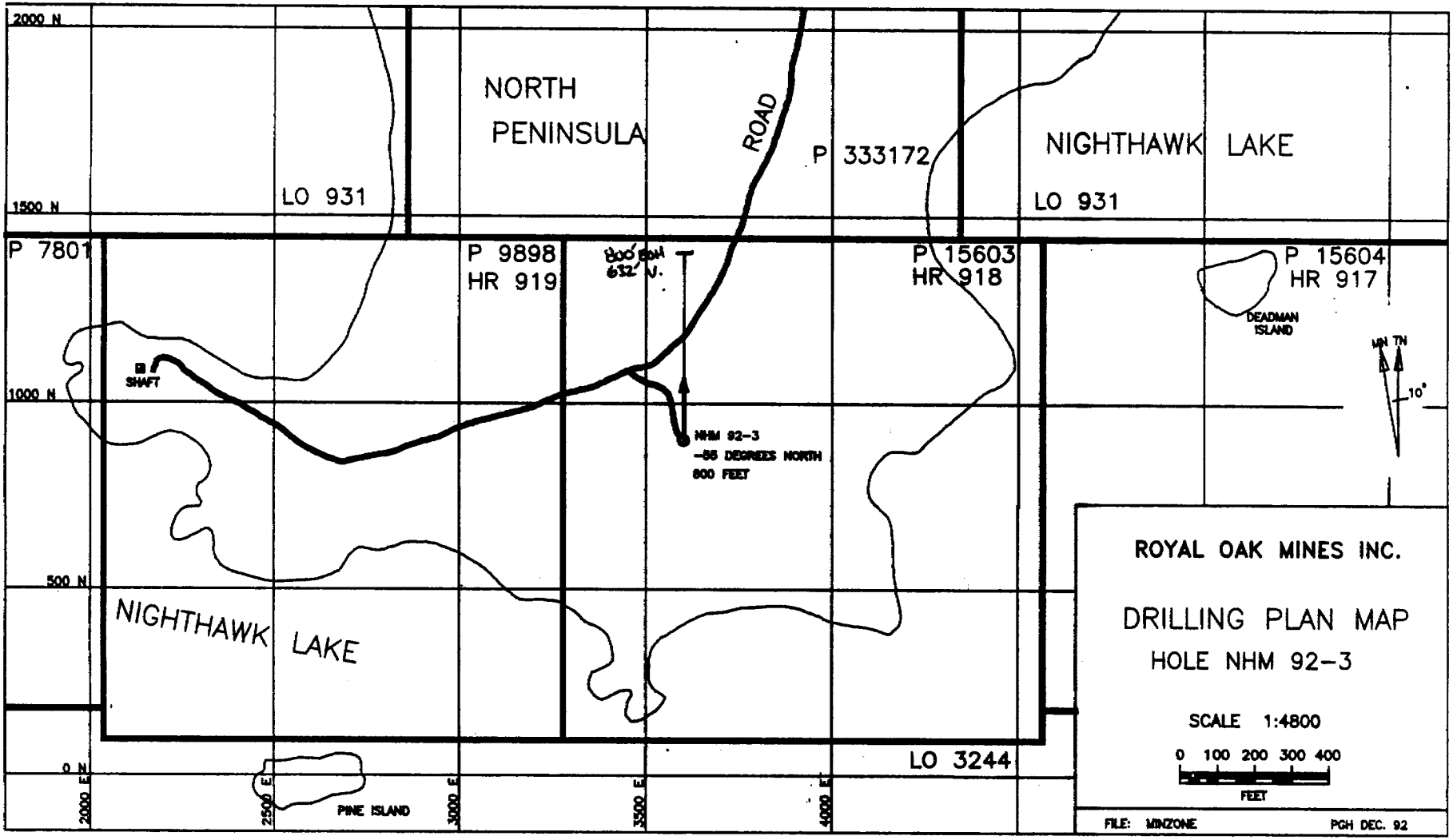
Hole Number:	NHM92-3
Claim No., Twp.:	P 15603, Cody
Date Drilled:	September 19-22, 1992
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	900N, 3600E, El 10935, Azimuth 360°, -55° dip
Directional Data:	100': Az. 358, -52° dip; 300': Az. 360, -52° dip; 500': Az. 360, -52° dip; 700': Az. 360, -52° dip
Length, Core Size:	800 feet BQ
Casing, Overburden:	66 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	September 24, 1992

COMMENTS

The hole cored mafic volcanics, ultramafics and tuffs to 406.0', then a fault bounded QFP unit from 406.0 to 514.0'. This porphyry was not anticipated and is very siliceous and well mineralized with 1-2% pyrite throughout. Below the QFP was carbonate rock to 611.0' and tuffs, argillites and agglomerate to the end of the hole at 800 feet. Barren quartz-albite veins occur within the argillite from 763.5-779.0'.

Quartz veining was encountered and returned .225 opt Au/5.0' from 611.0'-616.0', which is part of a larger interval of .145 opt Au/10.0' from 606.0'-616.0'.

In addition, higher in the hole, grey carbonate returned .106 opt Au/10.0' from 561.0'-571.0'. The QFP unit carried only slightly elevated gold, the best interval being .013 opt Au/7.0' from 471.0'-478.0'.


2000 N
1500 N
1000 N
500 N
0 N
2000 E
2500 E
3000 E
3500 E
4000 E
NORTH
PENINSULA
ROAD
P 333172
NIGHTHAWK LAKE
LO 931
LO 931
P 7801
P 9898
HR 919
P 15603
HR 918
P 15604
HR 917
DEADMAN ISLAND
SHAFT
NHM 92-3
-55 DEGREES NORTH
800 FEET
MN TN
10°
NIGHTHAWK LAKE
LO 3244
PINE ISLAND
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NHM 92-3
SCALE 1:4800
0 100 200 300 400
FEET
FILE: MINZONE
PGH DEC. 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

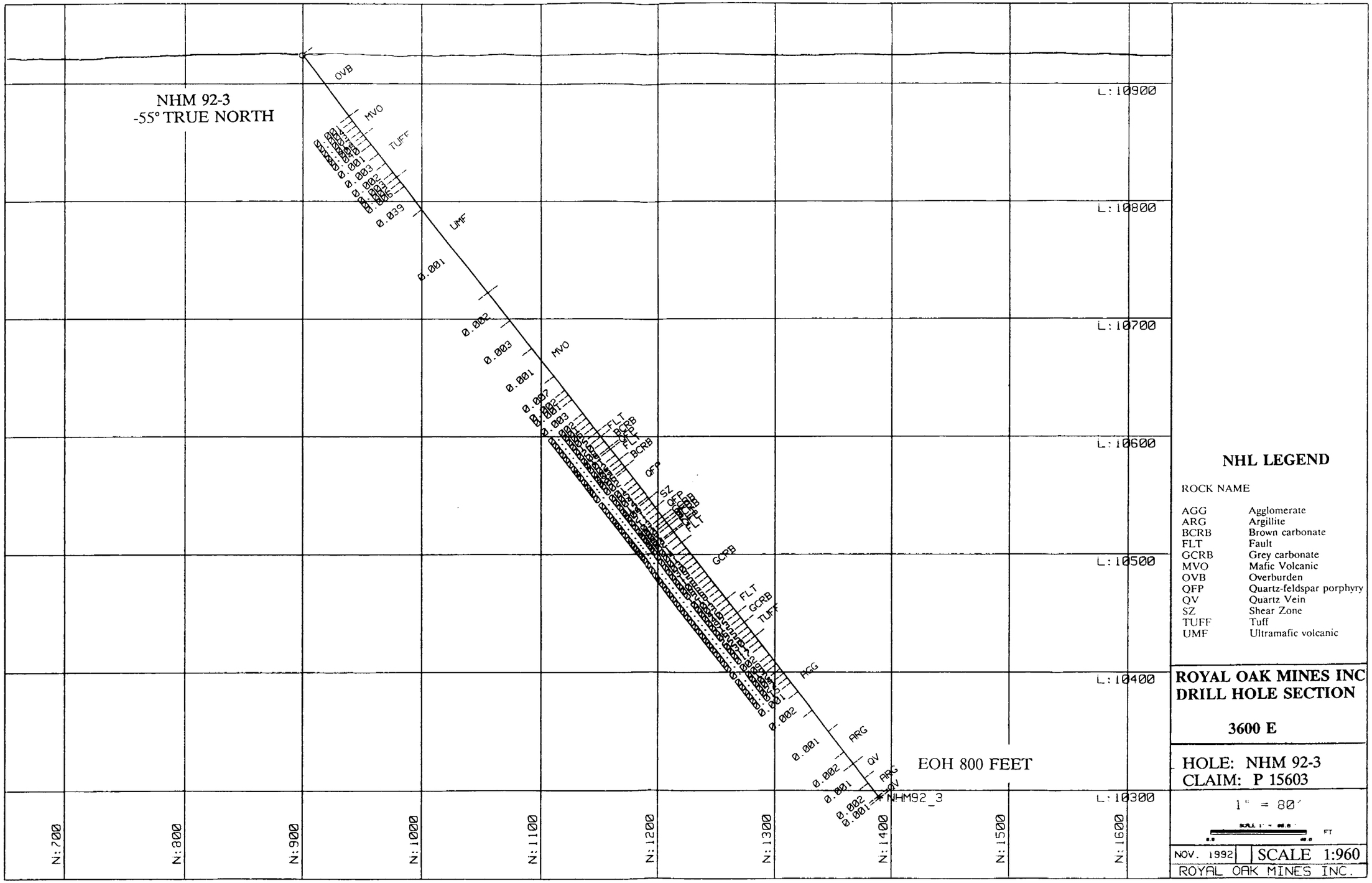
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



NHL LEGEND

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
FLT	Fault
GCRB	Grey carbonate
MVO	Mafic Volcanic
OVB	Overburden
QFP	Quartz-feldspar porphyry
QV	Quartz Vein
SZ	Shear Zone
TUFF	Tuff
UMF	Ultramafic volcanic

ROYAL OAK MINES INC
DRILL HOLE SECTION

3600 E

HOLE: NHM 92-3
CLAIM: P 15603

1" = 80'

FT

NOV. 1992 | SCALE 1:960

ROYAL OAK MINES INC.

PAMOREX

PRO[redacted]T: NHL
Claim # P 15603

Logged By: Peter Ha[redacted]

PAGE 1

CA[redacted]P

Date: 9/22/1992
Page 1 of __

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NHM 92-3	900	3600	10935	800				[redacted]

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	360	55	700	360	52									
100	358	52												
300	360	52												
500	360	52												

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz A%	B%	C%	METALLIC Py D%	E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
																						PURPOSE- TO test	
																						Down the westerly plunge	of the Ramp Zones
																						defined by holes 88-41,	88-3 etc.
																						Results - intersected .145	opt Au / 10.0
																						near volc/sedi. contact.	Also - QFP unit in
																						hole @ 406-514' (best	.03 opt Au / 7.0)
66.0							OVB															Overburden casing (BW) left	in hole.
71.0		M		MOT		ANK	MVO					5					.001		13919			Mottled text str ANK- mod	SER alt MVO. Scattered
																						<1" irreg glassy qv's	
76.0		M		MOT		ANK	MVO					1					.004		920			As 71	
82.0	✗	M		MOT		ANK	MVO					20			3		.003		921			Series of 1-3" irreg glassy qv's	and 3x4" qv's at 60° CA
																						lined with py; py through wall	± 6" from veins
86.0		M		MOT		ANK	MVO					5			1		.013		922			<1" glassy qv's irreg throughout	
90.0		S		BND		SER	TUFF		60			5					.008		923			MVO transition to tuff; ser	bands
96.0		S		BND		SER	TUFF					20			.5		.040		924			Mn. [illegible] converted; 6"	qv at 90° foltn; <1" scattered
																						qv's throughout.	
101.0		S		BND		SER	TUFF		60			5					.001		925			Well banded tuff; irreg. <2"	qtz veining [illegible]
106.0		S		BND		SER	TUFF		70			10			.5		.001		926			Well banded; 6" ribbon text qv	at 104
111.0		S		BND		SER	TUFF					10			3		.003		927			3" irreg qtz at 109 w 5% mg	py.
116.0		S		BND		SER	TUFF		65			5			2		.003		928			2x3" qv's with 5% mg py	cut irreg banded tuff

PAMOREX

DRILL HOLE NHM 92-3

DIST	Id	ROCK DESCRIPTION: Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S: B	A1	J/F: J	A2	MINERALS: GANGUE: Qtz	C%		B%		C%	METALLIC: Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
121.0				FLT			TUFF						20						2			.002		13929			Faulted; oxidized interval;	12" milky qtz vein at 119
																											fq. diss py locally	
126.0		SS		SHD			TUFF		20				5									.002		930			Remnants of Se tuff mixed	with talc KOM
																											Foltn at 20° CA; Local rubble core.	
131.0		S				talc	TUFF						20									.003		931			Tuff + KOM [illegible] as 126	. [illegible] qtz veining
																											126-127; blocky breccia	
136.0		S		Bx		talc	UMF						10									.002		932			Talc KOM breccia [illegible]	[illegible]
141.0		S		BND		talc	UMF						5									.006		933			As 136; banded text.	
166.0				Bx		talc	UMF		70													.039		934			Typically banded - locally bx	textured talc KOMATIITE
																											Calc [illegible] [illegible]. Soft	[illegible] blocky. [illegible] qtz-talc
																											veining.	
196.0				Bx		talc	UMF															.001		935			As 166	
216.0				Bx		talc	UMF															.001		936			As 166	
256.0				Bx		CHL	UMF															.001		937			Transition to more chloritic	altd KOM: Bx'd text +
																											irreg <1" q-c-talc veining.	
286.0		M		MOT	GN	CC	MVO						3						1			.002		938			Typ chlorite-calcite altd massive	Mafic Volc
																											Lacey q-c veinlets + ass m-cg	[illegible] pyrite
316.0		M		MOT	GN	CC	MVO															.003		939			As 286	
346.0		M		MOT	GN	CC	MVO															.001		940			As 286	
361.0		M		MOT	GN	CC	MVO						2									.007		941			As 286; chloritic-transition	to ANK altd, pale grey
																											colour	

PAMOREX

DRILL HOLE NHM 92-3

Page 3 [illegible] 8

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	Ai	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
366.0		M		MOT	Gy	ANK	MVO						10						1			.002		13942			Irreg < 1" qtz veins ; py ass Mod- inc stronger ANK	w chl seams
371.0		M		MOT		ANK	MVO						10						1			.001		943			Clear + milky qv's	
376.0		M		MOT		ANK	MVO						5									.003		944				
381.0		M		MOT		ANK	MVO						1						.1			.003		945			Tr. [illegible]	
386.0		M		MOT		ANK	MVO						5						.1			.003		946			Sparse 1" qv's	
391.0		M		MOT		ANK	MVO						5						.1			.002		947				
396.0		M		MOT		ANK	MVO						20						2			.001		948			Glassy-milky qv's lined w py Cherty 394.5-396.	along core axis 391-392
401.0				SHD		ANK	MVO						15						1			.005		949			Weakly sheared : irreg qv's :	
406.0				SHD		ANK	MVO						10						1			.002		950			As 401	
411.0						CHL	FLT		60				5						.5			.012		951			Shear/Fault zone ; chlorite frags <1". Milky <1" qv's	fills between volc + BCRB.
416.0				BX			BCRB						10						5			.020		952			Qtz flooded and bx'd brown carb; qtz veining <½" throughout; [illegible]	well minzed w fg diss py. chl filled fracts
422.5				BX			BCRB						5						2			.008		953			As 416; less veining + py; more	chloritic fractures + zones
424.5		M		BX		SIL	QFP						10						3			.019		954	2.0		Glassy [illegible] siliceous qtz flooded [illegible] fract's throughout. Diss py	qtz-felds po, bx'd w hairline (?) through parts. Pale brown colour.
431.0				FLT		QV	FLT						60						1			.001		955			Qtz veined, chloritic fault zone;	frags brown carb within.
436.0				FLT		QV	FLT						40						1			.002		956			As 431	

PAMOREX

DRILL HOLE NHM 92-3

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
440.0		M		BX		QV	BCRB						10						5			.005		13957			Flooded w <½" clear qv's; QV's irreg; 1 speck cpy in	minz'd w diss py throughout vein at 443
444.0		M		SHD		QV	BCRB						10						5			.022		958			Shear'd; bxd Qtz flooded BCRB w py.	as 440; BCRB often banded
446.0		M		FRAC		SIL	QFP						5						2			.006		959			Grey-brown, massive Very siliceous <mm; case of contacts; 20- phenos throughout. Incipient fracts throughout. Well dissem throughout. 2-5% random cut unit. As at	QFP. Tr-5% qtz crystals 30% mm-2mm white felds, bxd - hairline chlorite mnrzd: 1-2% vfg py late glassy-milky qv's <1" 424.5'.
451.0		M		FRAC		SIL	QFP						5						2			.002		960			As 446. Sheared around	late qv's.
456.0		M		FRAC		SIL	QFP						5						2			.002		961			As 446.	
461.0		M		FRAC		SIL	QFP						5						2			.001		962			As 446	
466.0		M		FRAC		SIL	QFP						8						2			.005		963			As 446. 464-466 more	BCRB
471.0		M		FRAC		SIL	QFP						2						2			.004		964			As 446. Chl seam 468	
476.0		M		FRAC		SIL	QFP						2						2			.014		965			As 446	
																				.013/1								
478.0		M		FRAC		SIL	QFP						2						2			.012		966			As 446.	
483.0							SZ						10						.5			.004		967			Sheared mix of VM and BCRB;	qtz veined ≤1"
487.5				BX			SZ						3						1			.021		968			As 483; stronger sheared.	

PAMOREX

DRILL HOLE NHM 92-3

DIST	Id	Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
492.5		M		FRAC		SIL	QFP						5						2			.011		13,969			Well minz'd qfp as 446.	
497.5		M		FRAC		SIL	QFP						5						2			.003		970			As 446	
501.0				BND			GCRB		50				1						.5			.001		971			Mottled grey carb- well folt'd locally.	; probably UM (fg mgt)
504.0		M		FRAC		SIL	QFP						5						1			.003		972			As 446	
507.0				BND			GCRB		60				3						2			.006		973			Banded brown carb; py on bands.	
512.5						CHL	FLT						10						1			.001		974			Chloritic fault zone; mixed	w GCRB.
514.0		M		FRAC		SIL	QFP						5						3			.003		975			As 446	
519.0						CHL	FLT						2						1			.002		976			Chloritic fault zone, injected	qtz veining
525.0						CHL	FLT						20						1			.001		977			As 519; inc qv's; more talc	ass w chl
531.0				BND			GCRB		30				10						1			.004		978			Poorly banded at 20-40°CA; through suggest UM proto.	irreg qv's, tr fg mgt peppered
536.0				BND			GCRB						2						3			.001		979			As 531	
541.0				Bx			GCRB						2						1			.003		980			As 531; bxd w chl filled fracts.	
546.0						LEUX	GCRB						10						2			.030		981			Leucox bearing - proto Fe Thol	? Well minz'd esp 545-546
551.0						LEUX	GCRB						5						2			.019		982			As 546. Well veined + minz'd	
556.0						LEUX	GCRB						5						5			.015		983			As 546	
561.0						LEUX	GCRB						5						2			.008		984			As 546	

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
566.0						LEUX	GCRB						3						5			.086		13985			Well minz'd mg py + masses	>1" throughout
																				.106/10								
571.0				Bx		LEUX	GCRB						2						5			.126		986			As 566; w chl fracts.	
576.0				FLT			GCRB						2						2			.018		987			As 546: chl Fault 571-572	
581.0				Bx		SIL	GCRB						2						.5			.001		988			More siliceous + lacks ~~LEUX~~	~~LE~~ LEUX
586.0				Bx		SIL	GCRB						2						.5			.003		989			As 581.	
591.0				Bx		GRA	FLT						10						.1			.042		990			Graphitic Fault Breccia. in graphitic matrix. 588-	Qtz + carb frags ≤1" floating 591 Raft of GCRB.
596.0				Bx		GRA	FLT						2						1			.040		991			Graphitic Fault Rubble; RQD=10%.	Pyritic + leux throughout
601.0				Bx		GRA	FLT						5						3			.092		992	5.0		As 596. Py through GRAPHITE	portion of interval
606.0				BND			GCRB						40						1			.013		993	5.0		Banded grey carb-Zebra Rock. generally barren; tr-1% diss Oxidized FLT at 604.	Cut by abundant milky qv's, py ≈ GCRB. Veins 2-12"
																								.099/20				
611.0				BND			GCRB						20						2			.065		994	5.0		Less veining ≤1"; no sulphides.	
																				.195/10								
616.0						GRA	TUFF		35				10									.225		995	5.0		Transition to sediments - mg sections, 6" QV; ribbon text	banded tuff; graphitic at 614.
																				RP-2?								
621.0				BND		SER	TUFF		40				3						1			.025		996	5.0		Tuff-Agglomerate. Gen sericitic clast; fractured + tightly packed Minor veining; diss py.	<cm clasts; rare 1-3cm in graphitic chl matrix
626.0				BND		SER	TUFF						3						5			.030		997			As 621; more Agg; frags >1" diss pyrite. Mod sericite; Ser wispy ser defn foltn.	[illegible], well mineralized w/ alt QFP frags and
631.0				BND		SER	AGG						1						3			.011		998			As 626. prog to Agg. Well	mined w diss py.

PAMOREX

PAGE 2

DRILL HOLE NHM 92-3

Page 7 8

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nom	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
636.0		S				SER	AGG		30				1						3			.017		13999			Sericitic agglomerate - well foliated,	well mixed w diss py.
																										Minor graph in foliation planes	
641.0		S				SER	AGG		30				3						2			.002		14000			Wispy ser in foliation; wide q-c	at 90° foliation - Diss py
																								CM			
646.0		S				SER	AGG						2						2			.002		14751			Well foliated fgg - As 636.	Lacks graph.
651.0		S				SER	AGG		35				1						2			.009		752			As 646.	
656.0		S				SER	AGG						1						2			.019		753			As 646	
661.0		S				SER	AGG						1						2			.002		754			As 646	
666.0		S				SER	AGG						1						2			.004		755			As 646 - Locally chloritic	
671.0		S				SER	AGG						1						2			.027		756			As 646	
676.0		SS				SER	AGG						1						1			.015		757			As 646; fissile	
681.0		SS				SER	AGG						1						1			.001		758				
686.0		SS				SER	AGG						1						1			.001		759			Good type example of Agg;	lenticular frags 1-3" of
																										QFP in sericitic matrix; minor	chl + diss py.
706.0		SS				SER	AGG		45				1						1			.002		760			As 646 etc.	
726.0		SS				SER	AGG															.001		761			Transitional to sericitic tuff	intercalated w
																										gradational to 711-712;	721-722
729.0		SS				SER	AGG															.001		762			Sericitic tuff/AGG; number cores	textured
																										Contact into ARG marked by	QV 728.6-729

PAMOREX

DRILL HOLE NHM 92-3

Page 8 8

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
751.0		SSS		CONT	BK	GRA	ARG															.001		14763			Black to banded graphitic argillite. Bedding locally contorted, generally at 60° CA. Coarse cubic py throughout. 4" barren qv at 738.5. Intercalated w ser Tuff as above unit; ie 745-747. Asymmetric minor folds within indicate flat plunge.
756.0		SS				GRA	ARG		35				10						3			.002		764			As 751. 1-4" QV's w py at 0 and 90° to foliation.
761.0		SS				GRA	ARG						20						2			.002		765			As 751
763.5		SS				GRA	ARG		40				10						1			.002		766			As 751
766.0							QV						80						2			.001		767			Irreg milky qtz-alb veining to >12" long; lined w tale +py
771.0							QV						80						2			.001		768			Qtz flooded in 1-3" veins.
776.0							QV						60						2			.001		769			Irreg 1-4" glassy and milky QVs in ARG. Coarse py
779.0							QV						50						2			.001		770			As 776.
784.0						GRA	ARG		35				1						2			.001		771			Banded Argillite w ser tuff. 780-780.5
798.0		SS		BND		GRA	ARG		30				1						1			.002		772			Banded argillite; Asymmetric plunge; axial planar cleavage 80-90° CA minor folds indicate horizontal locally well developed
800.0							QV						50									.001		773			Irreg barren qtz veining in argillite and sericitic tuff from 799-800
END																											

Nolan Hawley

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

NHM 92-2 + 92-3

EXPLORATION 1602

DATE: SEPT 25/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13404	.013	445					
2	05	.001	35					
3	06	.001	35					
4	07	.013	445					
5	08	.014	480					
6	09	.002	70					
7	10	.017	585					
8	11	.005	170					
9	12	.005	170					
10	13	.001	35					
11	14	.004	135					
12	15	<.001	<35					
13	16	<.001	<35					
14	17	<.001	<35					
15	92-2 ↑ 18	.001	35					
16	↓ 92-3 19	<.001	<35					
17	20	.004	135					
18	21	.003	105					
19	22	.013	445					
20	23	.008	275					
21	24	.040	1370					
22	25	.001	35					
23	D-13926	.001	35					
24								

Lab16

Chief Chemist: [signature]

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-3

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: SEPT 29/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13927	.003	105					
2	28	.003	105					
3	29	.002	70					
4	30	.002	70					
5	31	.003	105					
6	32	.002	70					
7	33	.006	205					
8	34	.039	1340					
9	35	.001	35					
10	36	<.001	<35					
11	37	.001	35					
12	38	.002	70					
13	39	.003	105					
14	40	<.001	<35					
15	D-13941	.007	240					
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS NHM 92-3

EXPLORATION 1602

DATE: SEPT 30/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13942	.002	70					
2	43	.001	35					
3	44	.003	105					
4	45	.003	105					
5	46	.003	105					
6	47	.002	70					
7	48	.001	35					
8	49	.005	170					
9	50	.002	70					
10	51	.012	410					
11	52	.020	685					
12	53	.008	275					
13	54	.019	650					
14	55	.001	35					
15	56	.002	70					
16	57	.005	170					
17	58	.022	755					
18	D-13959	.006	205					
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: [signature]

NHM 92-3

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Sept 30/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13960	.002	70					
2	61	.002	70					
3	62	.001	35					
4	63	.005	170					
5	64	.004	135					
6	65	.014	480					
7	66	.012	410					
8	67	.004	135					
9	68	.021	720					
10	69	.011	375					
11	70	.003	105					
12	71	<.001	<35					
13	72	.003	105					
14	73	.006	205					
15	74	<.001	<35					
16	75	.003	105					
17	76	.002	70					
18	77	.001	35					
19	78	.004	135					
20	79	<.001	<35					
21	80	.003	105					
22	81	.030	1030					
23	82	.019	650					
24	D-13983	.015	515					

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-3

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: SEPT 30/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13984	.008	275					
2	85	.086	2950					
3	86	.126	-					
4	87	.018	615					
5	88	<.001	<35					
6	89	.003	105					
7	90	.042	1440					
8	91	.040	1370					
9	92	.092	3150					
10	D-13993	.013	445					
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-3

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 1/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-13994	.065	2230					
2	95	.225	-					
3	96	.025	855					
4	97	.030	1030					
5	98	.011	375					
6	99	.017	585					
7	14000	.002	70					
8	14751	.002	70					
9	52	.009	310					
10	53	.019	650					
11	54	.002	70					
12	55	.004	135					
13	56	.027	925					
14	57	.015	515					
15	58	.001	35					
16	59	.001	35					
17	60	.002	70					
18	61	.001	35					
19	62	.001	35					
20	63	.001	35					
21	64	.002	70					
22	65	.002	70					
23	66	.002	70					
24	D-14767	.001	35					

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-3

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 1/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14768	<.001	<35					
2	69	<.001	<35					
3	70	<.001	<35					
4	71	<.001	<35					
5	NHM 92-3 ↑ 72	.002	70					
6	73	.001	35					
7	↓ NP 92-1 74	.004	135					
8	75	.013	445					
9	76	.004	135					
10	77	.001	35					
11	78	.001	35					
12	79	<.001	<35					
13	80	.025	855					
14	81	.002	70					
15	82	.001	35					
16	83	.004	135					
17	84	.005	170					
18	85	.005	170					
19	86	<.001	<35					
20	87	<.001	<35					
21	88	<.001	<35					
22	89	<.001	<35					
23	90	<.001	<35					
24	D-14791	<.001	<35					

Lab16

Chief Chemist:

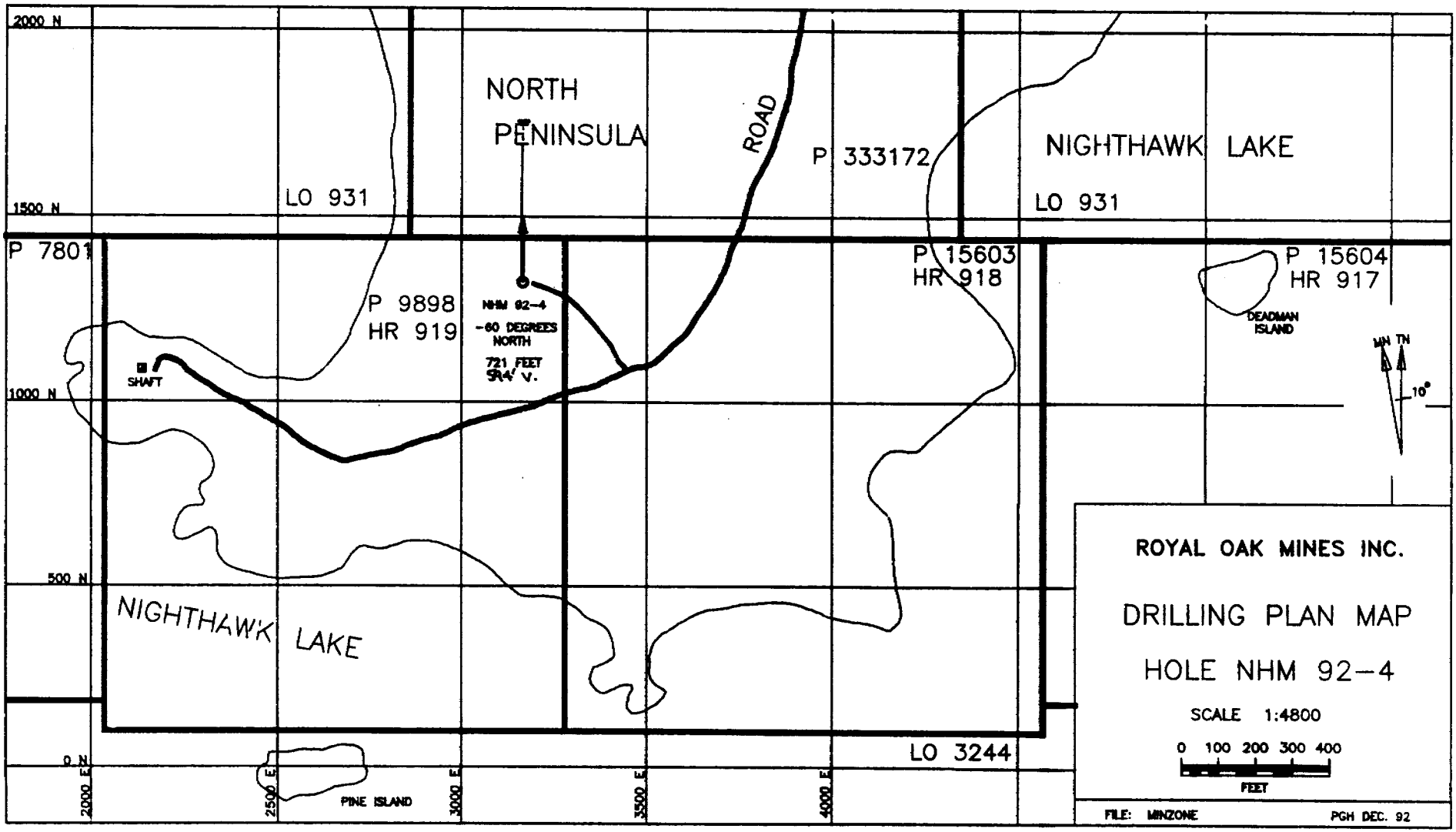
SUMMARY LOG

Hole Number:	NHM92-4
Claim No., Twp.:	P 9898, P 333172, Cody
Date Drilled:	September 28-30, 1992
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	1335N, 3150E, El 10915, Azimuth 360°, -60° dip
Directional Data:	100': Az. 360, -57° dip; 300': Az. 360, -55° dip; 500': Az. 360, -52° dip; 700': Az. 360, -53° dip
Length, Core Size:	731 feet BQ
Casing, Overburden:	72 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	October 3, 1992

COMMENTS

The hole cored ultramafics to 150.0', chloritic-grey carbonate to 289.0', tuffs and argillite to 412.0', calcitic ultramafic to 546.0', agglomerate to 611.5', fuchsitic-brown carbonate to 721.0', and ended at 731.0 in ultramafic volcanics.

Weak mineralization was encountered in the hole, the best assay was within grey carbonate at 286.0 to 289.0, which returned .093 opt Au over 3.0 feet.


2000 N
1500 N
1000 N
500 N
0 N
2000 E
2500 E
3000 E
3500 E
4000 E
NORTH PENINSULA
ROAD
LO 931
P 333172
NIGHTHAWK LAKE
LO 931
P 7801
P 9898
HR 919
NHM 92-4
-60 DEGREES
NORTH
721 FEET
SHAFT
P 15603
HR 918
P 15604
HR 917
DEADMAN ISLAND
MN
TN
10°
NIGHTHAWK LAKE
LO 3244
PINE ISLAND
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NHM 92-4
SCALE 1:4800
0 100 200 300 400
FEET
FILE: MINZONE
PGH DEC. 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

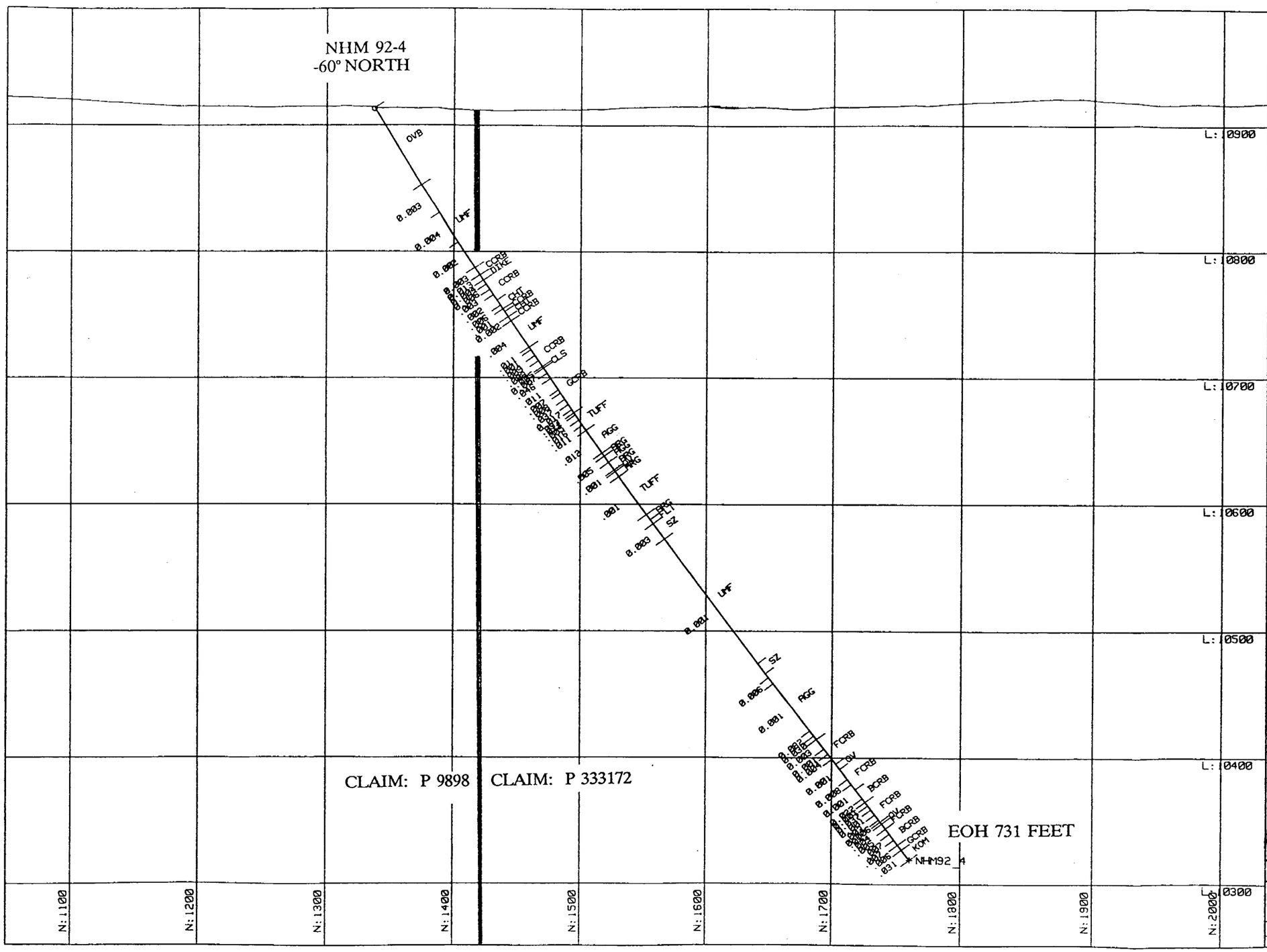
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



ROYAL OAK MINES INC.
DRILL HOLE SECTION

3150E

HOLE: NHM92-4
CLAIM: P 9898,P 333172

NHL LEGEND

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
FCRB	Fuchsitic carbonate
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
QFP	Quartz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic

SCALE 1:960

0 1" = 80' 80'

NOV. 1992 | LHA | DWG NHL184

ROYAL OAK MINES INC.

PAMOREX

PROJECT: NHL
Claims P9898 and P 333172

Logged By: P. Harvey

PAGE 1

AAR

CAT

Date: 10/1/1992
Page 1 of

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NHM 92-4	1335	3150	10915	731.0				

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	360	60	700	360	53									
100	360	57												
300	360	55												
500	360	52												

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	A%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T
72.0							OVB																			
98.0						TALC	UMF														.003			14905		
126.0						CHL	UMF														.004			906		
150.0						CHL	UMF														.002			907		
157.0		S		BND		CHL	CCRB		50												.003			908		
162.0				FRAC	BK		DYKE											3			.013			909		
166.0				BND		CHL	CCRB		60									3			.004			910		
171.0				BND		CHL	CCRB											1			.006			911		
176.0				BND		CHL	CCRB											1			.003			912		
181.0						CHL	CCRB											3			.002			913		

COMMENTS 1	COMMENTS 2
To test:	
Down 50° E plunge of NHM 92-4	North Zone from
Results - intersected .06 opt Au/8.5; good alteration assoc sighted nearby.	
Casing (BW) left in ground.	
Dark green-black, weak-mod talc-chl altd KOM	talc-chl altd KOM
weak Bx text. Blocky; 5'	grind 86-96
As 98: more chloritic	
As 126	
Transition to chloritic carb	-v. weak carb; well banded
Mafic dyke? Graphitic on slips; fg diss Py. Fractured.	slips; black; vfg, w 2-3% Dyke or Xenolith?
Talc/chlorite banded UMF	- carb; diss + py seams
Fault gouge at 162 and 166.	Zebra Calc tect.
As 166	
As 166	
As 166	
Massive black chlorite 176-178	

PAMOREX

DRILL HOLE NHM 92-4

DIST	Id	ROCK DESCRIPTION: Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S: B	A1	J/F: J	A2	MINERALS: GANGUE: Qtz	C%		B%		C%	METALLIC: Py	D%		E%	oz Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
186.0		M		Bx	WH	CHL	CHT						90									.002		14914			Massive chert - glassy milky white, within. Contact at 181 Tr py within chl + talc frags.	chl + talc frags scattered at 20° CA.
189.5		M		BX	WH	CHL	CHT						90									.006		915			As 186; contact at 189.5	at 20°.
192.0						TALC	CCRB		20													.001		916			Talc - chl Carb - UMF as	166.
197.0		M		Bx	WH	CHL	CHT						90									.001		917			Massive chert as 186.	
201.0						TALC	CCRB															.002		918			As 192	
226.0				BND		TALC	UMF															.004		919			More talcose than 192;	but essentially same
228.5				BND		TALC	CCRB															.011		920			As 192	
234.0				CONT		TALC	CCRB															.001		921			Chloritic - talc UMF - Carb Rock. and contorted.	Well foliated on cm scale
239.0				CONT		TALC	CCRB															.009		922			As 234 Talc banded.	
244.5				BND		TALC	CCRB		80													.008		923			As 234	
246.0							CLS		50										5			.005		924			Chloritic schist w py bands	
251.0				BND			GCRB		40													.007		925			Transitional to grey carb chl/talc band alt w carb on	zebra rock. mm - cm scale.
256.0				BND			GCRB						1									.046		926			As 251.	

PAMOREX

PAGE 2

DRILL HOLE NHM 92-4

Page 3 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	ppt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
261.0				BND			GCRB						3						1			.011		14927			Typ grey carb-zebra rock.	Clear <1" qv's irreg; tr-1% py
																										ass w veins	
267.0				BND			GCRB						5						.5			.011		928			As 261	
270.0				BND			GCRB		0				1						1			.007		929			As 261; foltn warps i generally	at 0-10° CA.
																										Mixed w vfg diss py	
276.0	A					ANK	GCRB						10						2			.008		930			Irreg milky qv's + 1-2% vfg	diss py; lacks any talc
																										which occurs in mm bands	to = 270.
281.0	A					ANK	GCRB						10						2			.037		931			As 276 vfg diss py.	
286.0	A					ANK	GCRB						10						2			.017		932			As 276. clear + milky qv's	1-6"
289.0	A					ANK	GCRB						20						2			.093		933			Transition to sds by ≒288	
																										Ribbon text qv 287.4-288	
291.0				BX			TUFF															.011		934			Carb frags tightly packed in	graphitic matrix
296.0				CONT		GRA	TUFF						3						1			.005		935			As 291; more regular bedding	locally contorted.
301.0				BED		GRA	TUFF		45													.016		936			Tuff-Agglomerate; reg bedded	at 45.
																										Rhythmic fine-coarser intervals	
306.0				BED		GRA	TUFF															.011		937			Tuff as 301; minor argillite	interbeds.
328.0						SER	AGG															.012		938			Well foliated sericitic agglomerate	intercalated w graphitic
																										argillite in 1-18" long intervals.	
																										Folding common in Argillite;	as are broken disrupted
																										beds	
331.0						GRA	ARG		30																		Well bedded graphitic argillite.	

PAMOREX

DRILL HOLE NHM 92-4

Page 4 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
337.0		S				SER	AGG		20													.005				Well foliated; stg. sericitic >2" long. Folth 0-40° CA	agglomerate; F Volc frags
344.5		SSS				GRA	ARG																			Graphitic Argillite	
346.0						GRA	QV						80						1			.001		940			Milky ribbon text. qtz vein	with argillite.
351.0		SSS				GRA	ARG																			Argillite w Ser Agg 348-349	
366.0		SS				SER	TUFF		60				5									.001		941			Well bedded w mm scale; ash tuff. Barren irreg qv's.	sericitic - locally graphitic
388.0		SS				SER	TUFF		90				3						1			.001		942			As 366; grading toward slate beds <1" 383-388. Irreg <1" qv's; 381-381.5	GWK w intercalated Tops down hole!? AKA Hoyle 6" irreg qv's; barren.
393.0		SSS				GRA	ARG						3													Black graphitic argillite; irreg	qv's + cg Py
397.0							FLT		50																	Rubble and fault gouge at	50° in UM breccia as below
412.0				FRAG		HEM	SZ		30													.003		943			Shear/breccia zone; 50% stained blocks scattered in sheared at 20-50 CA.	angular <1" hematite tale-chl matrix well
436.0				CONT	GY	CAL	UMF		30				3						2			.001		944			Weak-mod. pervasive tale massive, competent well To 436 unit is veined with Calcite altd - pervasive - stg	through grey-green foliated UMF; stg pervasive Cal 3x type g-c veining. reaction w HCl.
466.0				CONT	GY	CAL	UMF						1						2			.001		945			As 436; vfg diss py	throughout; lesser qv's
496.0				CONT	GY	CAL	UMF						1						1			.001		946			As 436. Folth variable.	
536.0				CONT	GY	CAL	UMF						1						1			.001		947			As 436. 1-2% vfg py.	

PAMOREX

PAGE 2

DRILL HOLE NHM 92-4

Page 5 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	oct Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
541.0						CHL	SZ						2						2			.001		14948			Chloritic shear zone - through tuff/agglom
																											Irreg. qvs + boudins fg-cg qtz clusters.
546.0						CHL	SZ						2						3			.001		949			Fault/ Shear zone . ~~chaotic~~ chaotic as 541.
																											mass py bands to <1" Spec galena at 544!
550.0				FLT		CHL	AGG		50				3						1			.001		950			Chloritic agglomerate, with ch-ser-py fault breccia +
																											qtz boudins. Locally sericitic and well foliated.
556.0		SS		SHD		CHL	AGG						10						5			.006		951			As 550; fg dyke 550-551; 1" mass py 552.5;
																											Qtz vein 553-554; lined w. bio + py
561.0		SS		SHD		CHL	AGG		40				1									.001		952			Sheared agglomerate
566.0		SS		SHD		CHL	AGG						2						2			.001		953			2" chert at 564; chl fault gouge at 50° at 565
571.0		SS		SHD		CHL	AGG						5						1			.001		954			Barren qv's 570.5 - 571.0 Prog less chloritic
586.0		SS		SHD		CHL	AGG		50				2									.001		955			Sheared agglomerate; chloritic bands; w ass. leuxi;
																											Irreg qv's boudins + random tour laths.
603.0		SS				SER	AGG						1						1			.001		956			Transition chl-sericitic pale brown matrix.
608.0		S				SER	AGG		45				1						2	.08%Au	NZ	.082		957	5.0		Good type example agg - lensoidal frags ≤1" in ser
																											matrix with diss pyrite throughout.
611.5		SS				SER	AGG						1						2			.030		958			As 608
616.0		S		FOL			FCRB						2									.003		959			Well foliated FcR3; bx'd 611.5 - 613.0
621.0		S		FOL			FCR3						1						.5			.003		960			Minor qtz-alb ± py veining.
626.0		S		FOL			FCRB						5									.001		961			3x1" qtz-alb veins. barren.

PAMOREX

PAGE 2

DRILL HOLE NHM 92-4

Page 6 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	-ve Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
631.0				MASS			FCRB															.004		14962			Transitn to massive; at ~90° CA and weak foltn	4 x ½-2" qtz-alb veins at high angles. -Flats
636.0				M			FCRB															.001		963			3 < 2" Flats; as 631.	
641.0							QV						30									.001		964			Barren, milky qtz-alb 6-12"	at 70-80° CA.
646.0				Bx			FCRB															.001		965			Bxd texture	
651.0				Bx			FCRB						10									.001		966			Series of 1-6" barren milky	qtz-alb veining at ~80° CA
656.0				FOL			FCRB		55				5						1			.008		967			F-zones of GREY Carb;	barren qtz-alb 655.5-656
661.0				Bx			FCRB						5									.001		968			Barren 1" qtz veining	
666.0				FOL			BCRB						5									.001		969			Glassy <1" qtz veins.	
670.0				FOL			BCRB		50				2									.001		970			Foltd brown carbs; minor veining.	
673.5	M			Bx			BCRB						10						3			.022		971			Contacts at 20° CA to well minzd siliceous BCRB	glassy qtz floated and breccia. Blocky; chl on fracts
677.0				FOL			FCRB															.001		972			Fdiated - locally contorted	
681.0				FLT			FCRB						5						3			.037		973			Well minzd; chl-graph FLT 677-677.5; balance carb	gouge at 30° CA breccia.
686.0				Bx			FCRB						10									.001		974			Glassy-chert type vein 684-685. Barren.	
691.0				FOL			FCRB		30				2									.003		975			Well foltd B-FCRB	
693.0				FOL			FCRB		30		"		2									.006		976			As 691	

PAMOREX

DRILL HOLE NHM 92-4

Page 7 7

DIST	Id	ROCK DESCRIPTION: Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S: B	A1	J/F: J	A2	MINERALS – GANGUE: Qtz	C%		B%		C%	METALLIC: Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
695.0	X						QV						99						5			.010		14977			Well mixed glassy- chert	like qv.; pale brown,
																											chl fracts w py	
700.0				FOL			FCRB															.004		978			Foliated; w qtz and bx	697-698 F-BCRB
705.0				FOL			BCRB		35				20						1			.005		979			Well foliated BCRB; locally	contorted.
																											703-704 Qtz veined - cherty	type as 695.
711.0				FOL			BCRB						5									.007		980			4" barren milky qv at 710.	
716.0				FOL			BCRB						5									.007		981			to grey carb by 716. -	w glassy qv's
721.0				Bx			GCRB															.006		982			Grey carb- folt'd - bx'd;	chl banded; intercalated
																											w talc KOM Bx -	
731.0				Bx		TALC	KOM															.031		983			Black talc - KOM - Breccia	- weak folt'd at 50°
END																												

ROYAL OAK ANALYTICAL LABORATORY NHM 92-4

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 6/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14905	.003	105					
2	06	.004	135					
3	07	.002	70					
4	08	.003	105					
5	09	.013	445					
6	10	.004	135					
7	11	.006	205					
8	12	.003	105					
9	13	.002	70					
10	14	.002	70					
11	15	.006	205					
12	16	.001	35					
13	17	<.001	<35					
14	18	.002	70					
15	19	.004	135					
16	20	.011	375					
17	21	.001	35					
18	22	.009	310					
19	23	.008	275					
20	24	.005	170					
21	D-14925	.007	240					
22								
23								
24								

Lab16

Chief Chemist: _____

NHM 92-4

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

Exploration 1602

DATE: Oct 7/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14926	.046	1580					
2	27	.011	375					
3	28	.011	375					
4	29	.007	240					
5	30	.008	275					
6	31	.037	1270					
7	32	.017	585					
8	33	.093	3190					
9	34	.011	375					
10	35	.005	170					
11	36	.016	550					
12	37	.011	375					
13	38	.012	410					
14	39	.005	170					
15	40	.001	35					
16	D-14941	.001	35					
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: [signature]

NMM 92-4

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 6/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14942	.001	35					
2	43	.003	105					
3	44	<.001	<35					
4	45	<.001	<35					
5	46	<.001	<35					
6	47	<.001	<35					
7	48	<.001	<35					
8	49	<.001	<35					
9	50	<.001	<35					
10	51	.006	205					
11	52	<.001	<35					
12	53	<.001	<35					
13	54	<.001	<35					
14	55	<.001	<35					
15	56	<.001	<35					
16	57	.082	2810					
17	58	.030	1030					
18	D-14959	.003	105					
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: _____

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-4

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 7/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14960	.003	105					
2	61	<.001	<35					
3	62	.004	135					
4	63	<.001	<35					
5	64	<.001	<35					
6	65	<.001	<35					
7	66	<.001	<35					
8	67	.008	275					
9	68	.001	35					
10	69	<.001	<35					
11	70	<.001	<35					
12	71	.022	755					
13	72	<.001	<35					
14	73	.037	1270					
15	74	<.001	<35					
16	75	.003	105					
17	D-14976	.006	205					
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-4

CERTIFICATE OF ANALYSIS

Exploration 1602

DATE: Oct 7/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14977	.010	340					
2	78	.004	135					
3	79	.005	170					
4	80	.007	240					
5	81	.007	240					
6	82	.006	205					
7	D-14983	.031	1060					
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

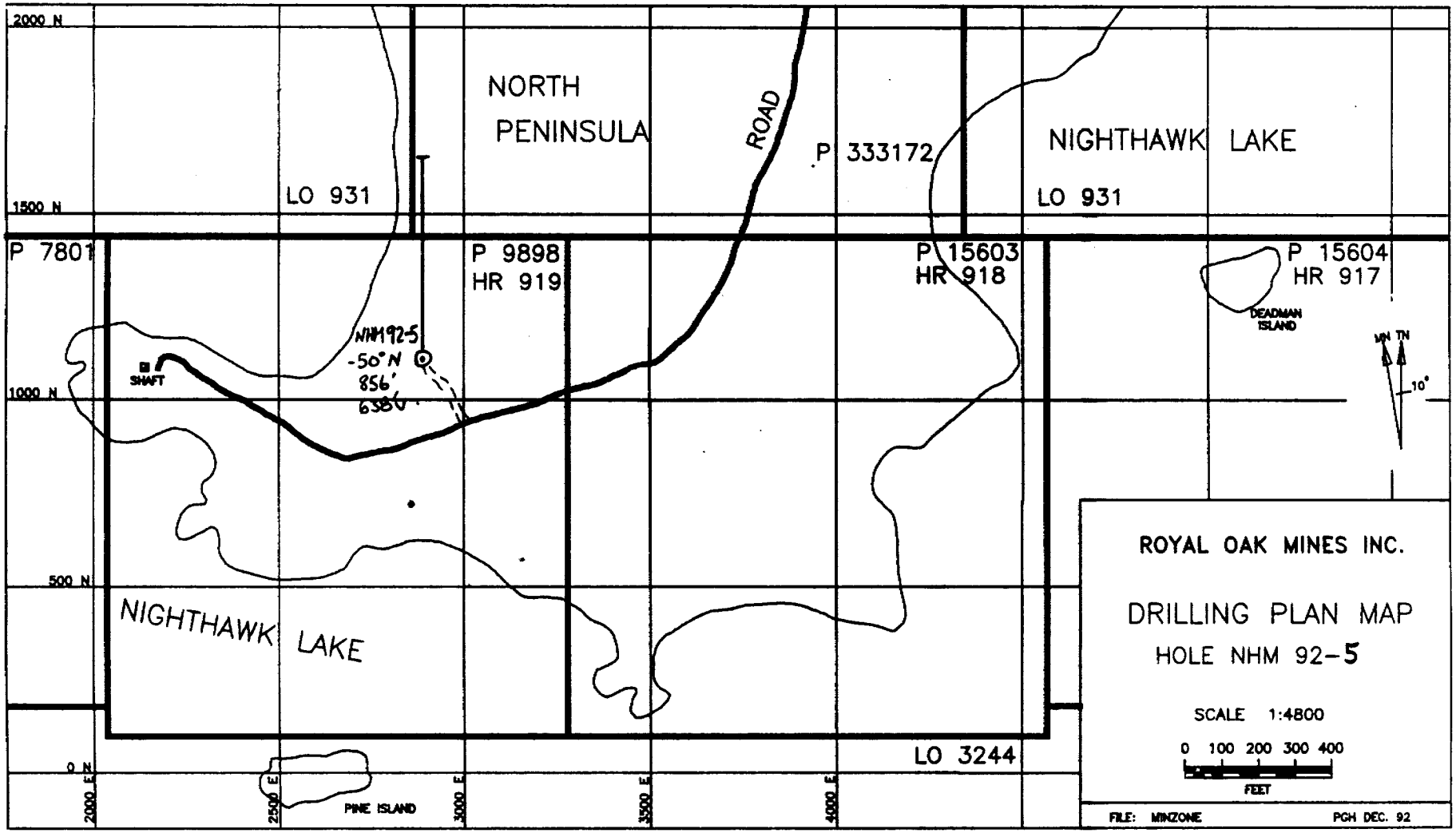
SUMMARY LOG

Hole Number:	NHM92-5
Claim No., Twp.:	P 9898, P 333172, Cody
Date Drilled:	Oct. 1-2, and deepened Oct 19-21, 1992
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	1092N, 2851E, El 10921, Azimuth 360°, -50° dip
Directional Data:	100': Az. 355, -49° dip; 300': Az. 360, -48° dip; 500': Az. 358, -48° dip; 700': Az. 358, -48° dip
Length, Core Size:	856 feet BQ
Casing, Overburden:	70 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	October 22, 1992

COMMENTS

The hole cored brown and grey carbonate rock to 461', then chloritic carbonate to 727', then sediments (tuff, agglomerate and argillite) to the end of the hole at 856 feet.

Scattered intersections were returned from the the brown and chloritic carbonate rock between 451.0'-491.0', with assays of .189 opt Au/5.0' from 451.0'-456.0', .062 opt Au/10.0' from 471.0'-481.0', and .122 opt Au/5.0' from 486.0'-491.0'.


2000 N
1500 N
1000 N
500 N
0 N
2000 E
2500 E
3000 E
3500 E
4000 E
NORTH PENINSULA
ROAD
P 333172
NIGHTHAWK LAKE
LO 931
LO 931
P 7801
P 9898
HR 919
P 15603
HR 918
P 15604
HR 917
DEADMAN ISLAND
NHM92-5
-50°N
856'
6380'
SHAFT
MN TN
10°
NIGHTHAWK LAKE
LO 3244
PINE ISLAND
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NHM 92-5
SCALE 1:4800
0 100 200 300 400
FEET
FILE: MINZONE
PGH DEC. 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

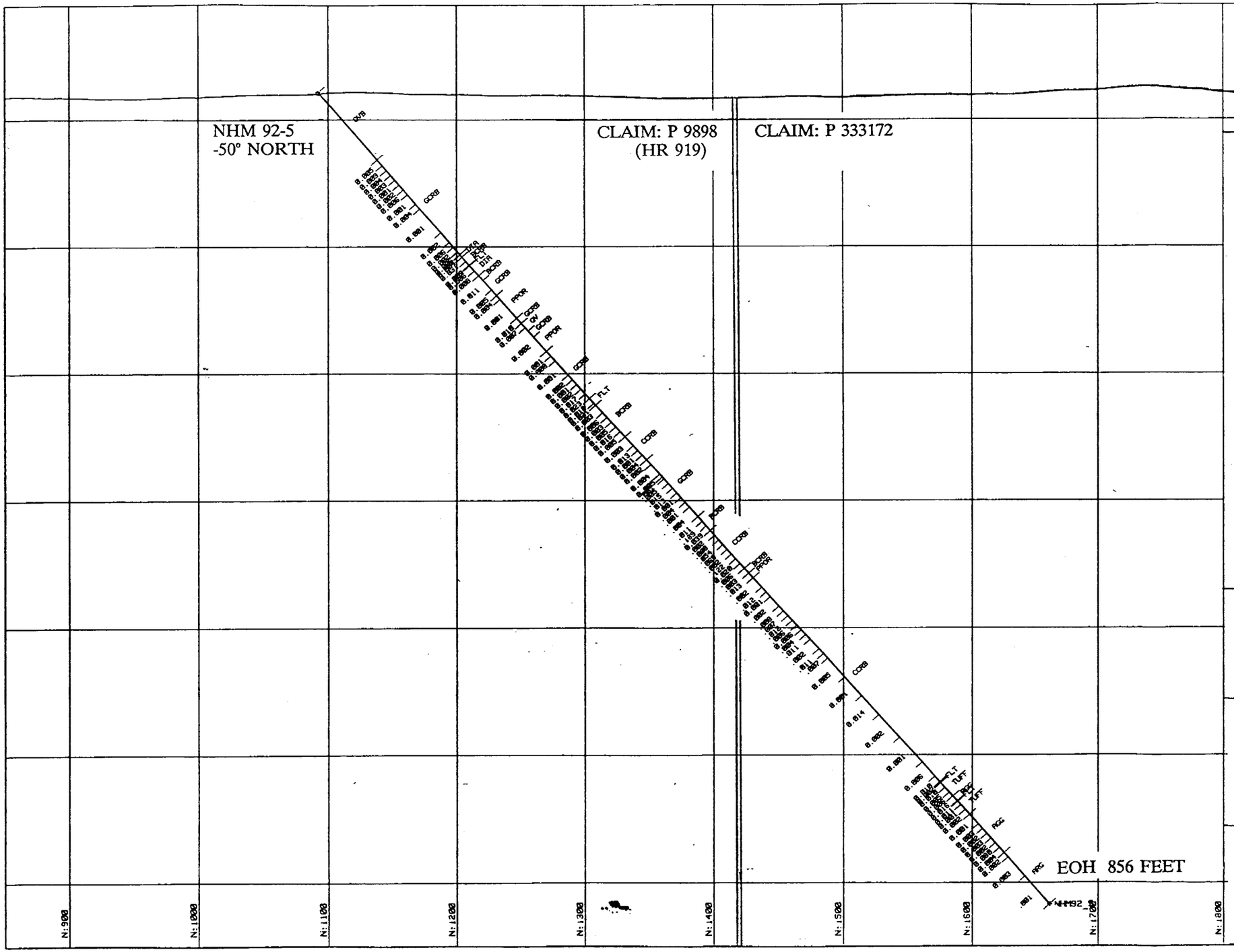
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava

0 80
feet

SCALE 1:960

ROYAL OAK MINES INC.
DRILL HOLE SECTION

2850E

HOLE: NHM 92-5

CLAIMS: P 9898 (HR 919)
and P 333172

NOV. 1992 | LHA | DWG #L188
ROYAL OAK MINES INC.

PAMOREX

PROJECT: NIGHTHAWK
Claims HR 919 ; P 333172

Logged By: P Harvey

PAGE 1 AAR

CAZ

Date: 10/5/1992
Page 1 of 4

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NHM 92-5	1100	2850	10920	856.0				

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	360	50	700	358	48												
100	355	49															
300	360	48															
500	358	48															

Peter Harvey

CASING (Gw) left in.

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	A%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T
70.0							OVB																	14984		
76.0		M		CONT			GCRB						5						1			.005				
81.0				BND			GCRB		70				1						.1			.009		985		
86.0				BND			GCRB						1						.1			.004		986		
91.0				CONT			GCRB						1						.1			.003		987		
96.0				CONT			GCRB						1						.1			.001		989		
101.0				CONT			GCRB						20						.1			.002		989		
106.0				CONT			GCRB						5						.5			.006		990		
111.0				CONT			GCRB						5						.5			.001		991		
116.0				CONT			GCRB						10						.1			.001		992		
121.0				FLT			GCRB						5						.1			.004		993		
126.0				CONT			GCRB						3						.1			.001		994		

COMMENTS 1	COMMENTS 2
Purpose - To test North zone at depth and secondary targets.	
Result - intersected 89.0pt/55.0 451-456, .062/10.0 471-481., .122/5.0 486-499.0 .058/5.0 791-796. (North Zone)	
Typ. banded - contorted grey	carb. chl. bands w tr-2% py
As 76. - req banded.	
As 76.	
As 76	
As 76	
Irreg chl-talc rimmed milky	qtz.
As 76; irreg milky qtz's.	
chl/talc bands define cont folds	
As 76.	
Breccia/FLT at 45° 115-116	
Sericite banded. Oxidized.	FLT at 45° at 121.9

PAMOREX

PAGE 2

DRILL HOLE NHM 92-5

Page 2 4

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
131.0		M		CONT			GCRB						2						.1			.001		14995			Banded at 50 - locally contorted typ. grey carb.
136.0		"		CONT			GCRB						5						.1			.001		996			Irreg <1" qv's.
141.0		M		CONT			GCRB						5						.1			.001		997			Chl. on fract.
146.0		S					GCRB						20						.1			.001		998			Ser/Chl bands; blocky 141-142 Milky qtz-alb 142-142.5.
151.0		M		BND			GCRB		40				5						.5			.002		999			½% diss py in banded carb.
156.0		M					GCRB						10						.1			.002		15000			Chl-talc 153-154; qtz-alb 155.5-156
161.0		S					GCRB						10						.1			.006		UK 1751			Chl-talc sections <1" bot lg
166.0		M		BND			GCRB		40				5						.1			.002		752			well banded.
169.0		M		BND			GCRB						10									.006		753			As 166.
171.5		M					DIA															.004		754			Vfg; chl rubble contacts to weak mag Diabase
176.0				BX			BCRB						5						3			.031		755			well bx'd brown carb; qtz veins + frags; matrix well mix'd.
180.0				Bx			BCRB						2						1								As 176.
180.5							FLT		50				1									.009		756			Chl fault w gouge
186.0							DIA															.006		757			Vfg. weak mgt diabase
191.0							DIA															.008		758			As 186
196.0				BX			BCRB						20						.1			.011		759			Chloritic rubble through grey-brown Carb; Milky qv 193.5-194.5
201.0				FLT			GCRB		60										.5			.011		760			Foltd-bx'd-chloritic; QV 197.5-198.

PAMOREX

DRILL HOLE NHM 92-5

Page 3 4

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
206.0				Bx			GCRB						20						.1			.011		1761			Irreg veined; blocky core;	bxd.
212.0				Bx			GCRB						30						.1			.005		762			QV 207-208.	
216.0		M					PPOR		50													.004		763			Weak foliated talc-chl kom	w eq bnk porphs.
236.0		M					PPOR															.001		764			As 216.	
241.5		M					GCRB						1						2			.010		765			PPOR grades to Grey Carb	
246.0		M			GY		QV		30				95						1	Po	2	.007		766			Grey cherty qtz vein; fault'd filled fractures.	contacts at 30°, chl+Py+Po
249.5		M			GY		QV						95						1		1	.002		767			As 246.	
256.0		S					GCRB						10						.1			.002		768			Grey-brown carb - qtz-alb talc-kom by 256	254-255 - grades to
271.0		S		FOL			PPOR		50				5									.002		769			Well folt'd talc-chl kom w	ank porphs:
276.0		SS		FOL			GCRB						10									.001		770			Transition to well foliated QV's 275-276	GCRB - chl-talc defn foltn
281.0		S		FOL			GCRB						10						.1			.008		771			Well foliated; ser-chl defn	foltn; 1-2" qtz-alb veins.
286.0		S		FOL			GCRB		60				5						.1			.001		772			As 281. locally cont.	
291.0		M		FOL			GCRB						10						.1			.001		773			As 281	
296.0		M		Bx			GCRB						10						.1			.001		774			As 281 Irreg <1" qv's	
301.0				CONT			GCRB						10						.1			.002		775			As 281; 1-2" QV's	
306.0				Bx			GCRB						20						.1			.001		776			1-4" QVs.	
311.0				Bx			GCRB						20						.1			.002		777			1-4" QVs.	

PAMOREX

DRILL HOLE NHM 92-5

Page 4

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
316.0				CONT			GCRB						5						.1	.017				1778	5.0		Chl - seams	
321.0				CONT			GCRB						5						.1			.023		79	5.0		Chl seams	
326.0				BX		CHL	FLT													.020 .17		.018		80	5.0		Fault gouge + breccia -	Chl - graphite
328.0				BX		CHL	FLT															.021		81	2.0		As 326	
331.0				BX			BCRB						2						.1			.003		82			Ser banded	
336.0				BX			BCRB						5						.5			.003		83			Sericitic banded brown carb;	
341.0				BX			BCRB						5						.5			.006		84			Bx'd; 1-2" qv's	
346.0				BX			BCRB						5						1			.003		85			1% diss py	
351.0				CONT			BCRB						3						.5			.005		86				
356.0				CONT			BCRB						3						.1			.016		87				
361.5				CONT			BCRB						5						.1			.005		88			Lower contact in Chl Fault	at 70
366.0		SS		CONT			CCRB						3						.1			.003		89			Banded, contorted, chloritic	carb
371.0				CONT			CCRB						3						.1			.003		90				
376.0				CONT			CCRB						25						1.0			.013		91			Well veined; lined w py irreg	1-3" qtz-alb.
381.0				CONT			CCRB						1						.1			.001		92				
386.0				CONT			CCRB						10						.1			.004		93			Veining 385-386	
391.0				CONT			GCRB						10						.1			.002		94			Transition to grey carb. Barren	1" veins on foliation
396.0				CONT			GCRB						20						.1			.004		95			Gray QV's	
401.0				CONT			GCRB						20						1.0			.004		96			Diss fg py	
404.0				CONT			GCRB						20						1.0			.005		97			Milky qv 402.0 - 402.5;	diss py

PAMOREX

PAGE 2

DRILL HOLE NHM 92-5

Page 5

DIST	Id	Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
406.0		M		CONT			GCRB						5						.5			.001			1962		Grey-brown carb. Mg mottled fracts chlorite filled.	text; incipient bx text;
411.0		M		CONT			GCRB						5						0.5			.005			1963		As 406. Incipient bx texture.	
416.0		M		CONT			GCRB						5						.5			.015			1964		As 406	
421.0		M		CONT			GCRB						5						.5			.013			1965		As 406	
426.0		M		CONT			GCRB						5						.5			.001			1966		As 406	
431.0		M		CONT			GCRB						20						.5			.004			1967		Injected w milky and grey qtz	veining.
436.0		M		CONT			GCRB						10						.5			.001			1968		Grey + milky qtz veins.	
441.0		M		CONT			GCRB						5						.5			.004			1969		As 406	
446.0		M		CONT			GCRB						5						.5			.004			1970		As 406	
451.0	*	M		BND			BCRB		20				10						3			.011			1971		Carb or chert, pale brown - 20° hairline chl fill fractures	fine laminated texture, at w/ ass py. Proto-chert layer
456.0	*	M		BND			BCRB						10						5			.189			1972		Med gr diss pyrite ≈5% through veinlets and 6" clear qv at text - proto-tuff?	entire interval; fine qtz 452.5. Banded
461.0		M		BND			BCRB						5						1			.039			1973		Transition to calcitic Carb.	
466.0		M		PPOR			CCRB															.002			1974		Chloritic; fine <mm PPOR text.	
471.0		M		PPOR			CCRB						1						.1			.008			1975		As 466	
476.0		M		BND			CCRB												1.0			.054			1976		Mix of CCRB and pyritic BCRB	a/a 456

PAMOREX

DRILL HOLE NHM 92-5

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
481.0		M		BND			CCRB						5						2			.069			1977		CCRB mixed with banded	Brown Carb; pyritic
486.0		M		PPOR			CCRB						1									.002			1978		Fine mm PPOR text	
491.0		M		PPOR			CCRB		40				1						1			.122			1979		As 481	
496.0		M		PPOR			CCRB						3						1			.020			1980		As 481; BCRB weak mixed	
501.0		M		PPOR			CCRB						2						1			.006			1981		Generally massive chloritic	PPOR
506.0		M		CONT			BCRB						10						2			.003			1982		Banded + brecciated brown carb; milky qtz veined 504-506.	
511.0		M					PPOR						1									.013			1983		Blocky chloritic f-mg Pseudo-porphyry.	
516.0		M		CONT			CCRB						1									.002			1984		3 mm scale banded; contorted	Chloritic carb. N:1-tr py.
521.0		M		CONT			CCRB						1									.002			1985		As 516	
526.0													3									.012			1986		As 516	
531.0													10									.001			1987		Irreg 1" qtz-alb veining.	
536.0													5									.002			1988		As 516; irreg 1" qv's.	
541.0													2									.002			1989		As 516	
546.0													2									.008			1990		As 516.	
551.0													2									.007			1991		As 516	
556.0													2									.012			1992		As 516	
561.0		M		CONT			CCRB						1									.006			1993		As 516	
566.0		M		CONT			CCRB															.006			1994		As 516	

PAMOREX

PAGE 2

DRILL HOLE NHM 92-5

Page 7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
571.0		M		CONT			CCRB						3						0-5			.004		1995			As 516
576.0																								96			As 516
581.0													1						0-1			.011		97			Clear <1" qtz veining w m-cg. py.
586.0													5						1-0			.002		98			Chloritic Rubble Fault zone 584-586
591.0													2									.002		99			
596.0													2									.011		2000			As 516
616.0				BND			CCRB						2									.007		14601			As 516
636.0		SS		BND			CCRB		55				2									.005		602			Scattered <1/2" barren qv's. transition to banded texture with weak PPOR text.
656.0		SS		BND			CCRB		50				2									.001		603			As 616; 1-2" barren qv's conformable to foltn.
680.0		SS		CONT			CCRB						2									.014		604			As 616; irreg q-c veinlets 646-652; bleached margins.
686.0		S		BND			CCRB		60				2									.002		605			Chloritic blocky core; contorted foltn.
706.0		S		BND			CCRB						10									.001		606			Mod foltd; barren 1-6" qv's
721.0		S		CONT			CCRB						2									.001		607			As 616
727.0		S		CONT			CCRB						2									.006		608			As 616
728.0							FLT		60				3									.010		609			Fault w gouge at 60°
733.0				BND		BLD	TUFF						5									.002		610			Bleached, sericitic finely laminated tuff; sericitic planes. Blocky; on poorly defd foltn. Minzed w ±1% fg py.
																			1			.011					

PAMOREX

DRILL HOLE NHM 92-5

Page 8

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
738.0				BND		BLD	Tuff						1						1			.005		14611			As 733. V blocky RQD=	0
742.0				BND		BLD	TUFF						5						2			.006		612			As 733; mg py; transition	to Agglomerate
747.0				SHD		BLD	AGG						5						1			.016		613			Sheared tuff/Agg.; clear	<½" qv's
747.5							FLT																				Gravel gouge. Non-consolidated	
751.0		M				BLD	TUFF						2						.5			.011		614			Tuff as 733 etc. RQD= Nil - tr py	90%; bleached pale grey,
756.0		M				BLD	TUFF		50				2						.5			.001		615			As 751; intermixed with	Agg 754.5-756.
761.0		M				BLD	TUFF						2						1			.002		616			As 751; transition to Agg	w inc frag size
766.0		M				BLD	AGG						1						3			.001		617			Agglomerate. Widely scattered accross ~~sec~~ in bleached Well mixed w pyrite ass Py not dissem; rather as within fracts.	QFP frags up to 12" pale grey, fg matrix w chlorite filled fracts. clusters up to 1" long
771.0		M				BLD	AGG						1						3			.001		618			As 766; Qtz-alb filled	Fault at 20° CA 770.
776.0		M				BLD	AGG						1						2			.003		619			As 766.	
781.0		M				BLD	AGG						1						1			.002		620			As 766. 12" QFP frag example of unit.	780-781. Good typ
786.0		M				BLD	AGG						2						2			.003		621			As 766	
791.0		M				BLD	AGG						2						2			.002		622			As 766; coarse py in frags	
796.0		M				BLD	AGG						2						2			.080		623	N2		As 766	
801.5		M				BLD	AGG						3						2			.004		624			As 766	

PAMOREX

DRILL HOLE NHM 92-5

Page 9

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
806.0						GWK	ARG		65													.002		14625			Faulted contact at 30°	to graphitic argillite
																											intercalated w fg Grey	wake.
																											Well laminated at 65° CA	
826.0						GWK	ARG															.003		626			As 806; ±10% gwk interbeds.	
856.0						GWK	ARG		20													.001		627			As 806; blocky core; bedding	at 20°
																											[illegible]	
																											Graphitic fault gouge 821;	blocky 822-826
END																												

NHM 92-5

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 7/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14984	.005	170					
2	85	.009	310					
3	86	.004	135					
4	87	.003	105					
5	88	.001	35					
6	89	.002	70					
7	90	.006	205					
8	91	.001	35					
9	92	.001	35					
10	93	.004	135					
11	94	.001	35					
12	95	.001	35					
13	96	<.001	<35					
14	97	.001	35					
15	98	.001	35					
16	99	.002	70					
17	D-15000	.002	70					
18	D-1751	.006	205					
19	52	.002	70					
20	53	.006	205					
21	D-1754	.004	135					
22								
23								
24								

Lab16

Chief Chemist: [signature]

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 9/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D- 1755	.031	1060					
2	56	.009	310					
3	57	.006	205					
4	58	.008	275					
5	59	.011	375					
6	60	.011	375					
7	61	.011	375					
8	62	.005	170					
9	63	.004	135					
10	64	.001	35					
11	65	.010	340					
12	66	.007	240					
13	67	.002	70					
14	68	.002	70					
15	69	.002	70					
16	70	.001	35					
17	71	.008	275					
18	72	<.001	<35					
19	73	.001	35					
20	74	.001	35					
21	75	.002	70					
22	D- 1776	.001	35					
23								
24								

Lab16

Chief Chemist: _____

NHM 92-5

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 7/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-1777	.002	70					
2	78	.017	585					
3	79	.023	790					
4	80	.018	615					
5	81	.021	720					
6	82	.003	105					
7	83	.003	105					
8	84	.006	205					
9	85	.003	105					
10	86	.005	170					
11	87	.016	550					
12	88	.005	170					
13	89	.003	105					
14	90	.003	105					
15	91	.013	445					
16	92	.001	35					
17	93	.004	135					
18	94	.002	70					
19	95	.004	135					
20	96	.004	135					
21	D-1797	.005	170					
22								
23								
24								

Lab16

Chief Chemist:

NHM 92-5

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 27/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-1962	.001	35					
2	63	.005	270					
3	64	.015	515					
4	65	.013	445					
5	66	<.001	<35					
6	67	.004	135					
7	68	.001	35					
8	69	.004	135					
9	70	.004	135					
10	71	.011	375					
11	72	.189	-					
12	73	.039	1340					
13	74	.002	70					
14	75	.008	275					
15	76	.054	1850					
16	77	.069	2370					
17	78	.002	70					
18	79	.122	-					
19	80	.020	685					
20	81	.006	205					
21	82	.003	105					
22	D-1983	.013	445					
23								
24								

Lab16

Chief Chemist: [signature]

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

NHM 92-5

EXPLORATION 1602

DATE: Oct 27/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-1984	.002	70					
2	85	.002	70					
3	86	.012	410					
4	87	.001	35					
5	88	.002	70					
6	89	.002	70					
7	90	.008	275					
8	91	.007	240					
9	92	.012	410					
10	93	.006	205					
11	94	.006	205					
12	95	.004	135					
13	96	.011	375					
14	97	.002	70					
15	98	.002	70					
16	99	.011	375					
17	D-2000	.007	240					
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: _____

4106 - 1962
596 - 2000

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-5

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 29/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14601	.005	170					
2	02	.001	35					
3	03	.014	480					
4	04	.002	70					
5	05	.001	35					
6	06	.001	35					
7	07	.006	205					
8	08	.010	340					
9	09	002	70					
10	10	.011	375					
11	11	.005	170					
12	12	.006	205					
13	13	.016	550					
14	14	.011	375					
15	15	.001	35					
16	16	.002	70					
17	17	<.001	<35					
18	18	<.001	<35					
19	19	.003	105					
20	20	.002	70					
21	21	.003	105					
22	22	.002	70					
23	23	.080	2740					
24	D-14624	.004	135					

Lab16

Chief Chemist:

NHM 92-5

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 29/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14625	.002	70					
2	26	.003	105					
3	D-14627	.001	35					
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: [signature]

SUMMARY LOG

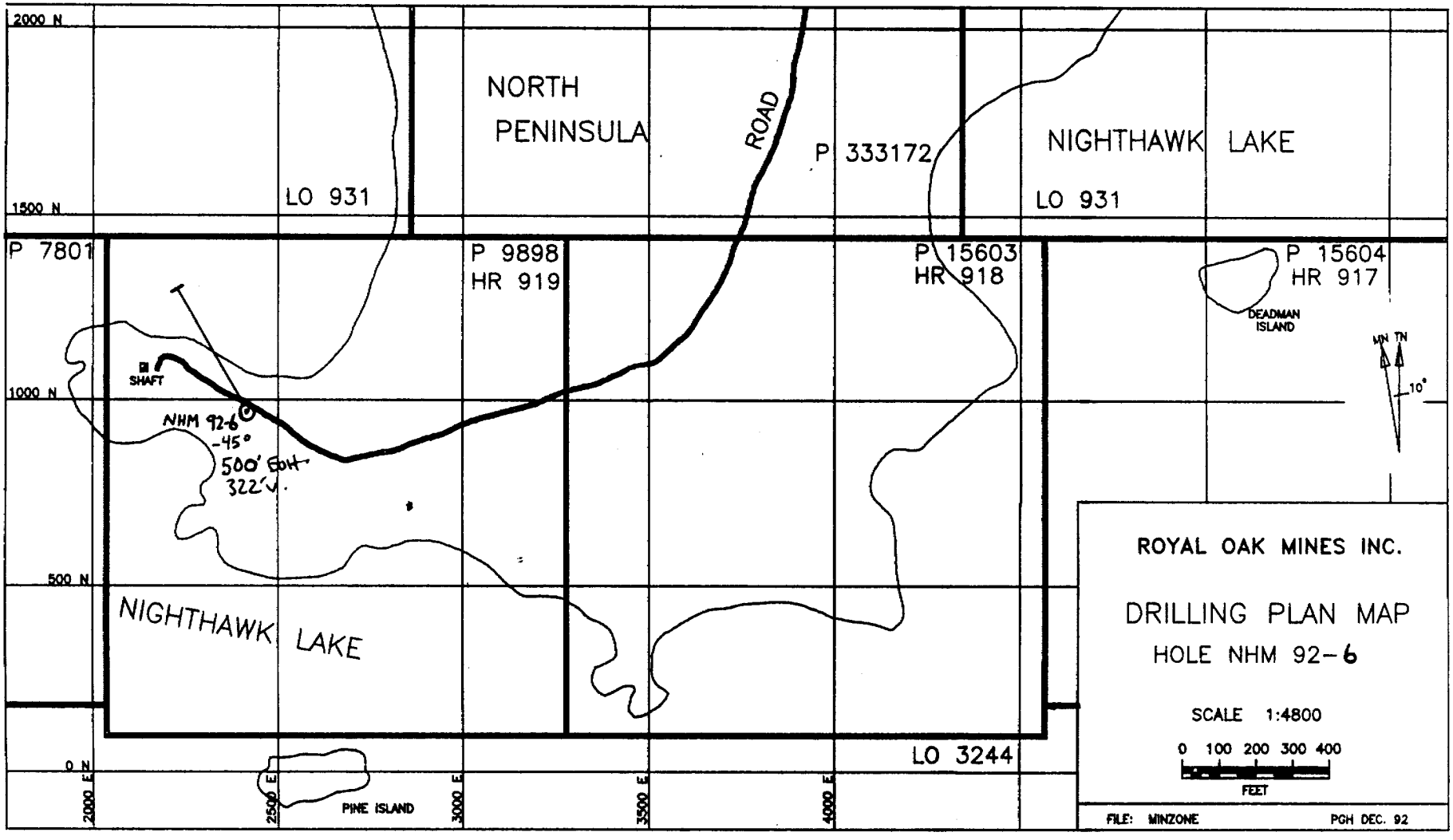
Hole Number:	NHM92-6
Claim No., Twp.:	P 9898, Cody
Date Drilled:	October 3-4, 1992
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	979N, 2437E, El 10930, Azimuth 330°, -45° dip
Directional Data:	100': Az. 333, -45° dip; 300': Az. 340, -45° dip; 500': Az. 330, -44° dip;
Length, Core Size:	500 feet BQ
Casing, Overburden:	63 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	October 6, 1992

COMMENTS

The hole cored mafic volcanics to 164.0', brown and grey carbonate to 320.0', fault breccia to 417.0', and ended in chloritic carbonate and komatiite at 500 feet.

Chloritic and graphitic fault breccia and rubble was cored for 93', the hole likely drilled through a fault structure sub-parallel to the hole.

No significant assays were returned from the hole.


2000 N
1500 N
1000 N
500 N
0 N
2000 E
2500 E
3000 E
3500 E
4000 E
NORTH PENINSULA ROAD
P 333172
NIGHTHAWK LAKE
LO 931
LO 931
P 7801
P 9898
HR 919
P 15603
HR 918
P 15604
HR 917
DEADMAN ISLAND
SHAFT
NHM 92-6
-45°
500' EOH
322°
MN
TN
10°
NIGHTHAWK LAKE
LO 3244
PINE ISLAND
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NHM 92-6
SCALE 1:4800
0 100 200 300 400
FEET
FILE: MINZONE
PGH DEC. 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

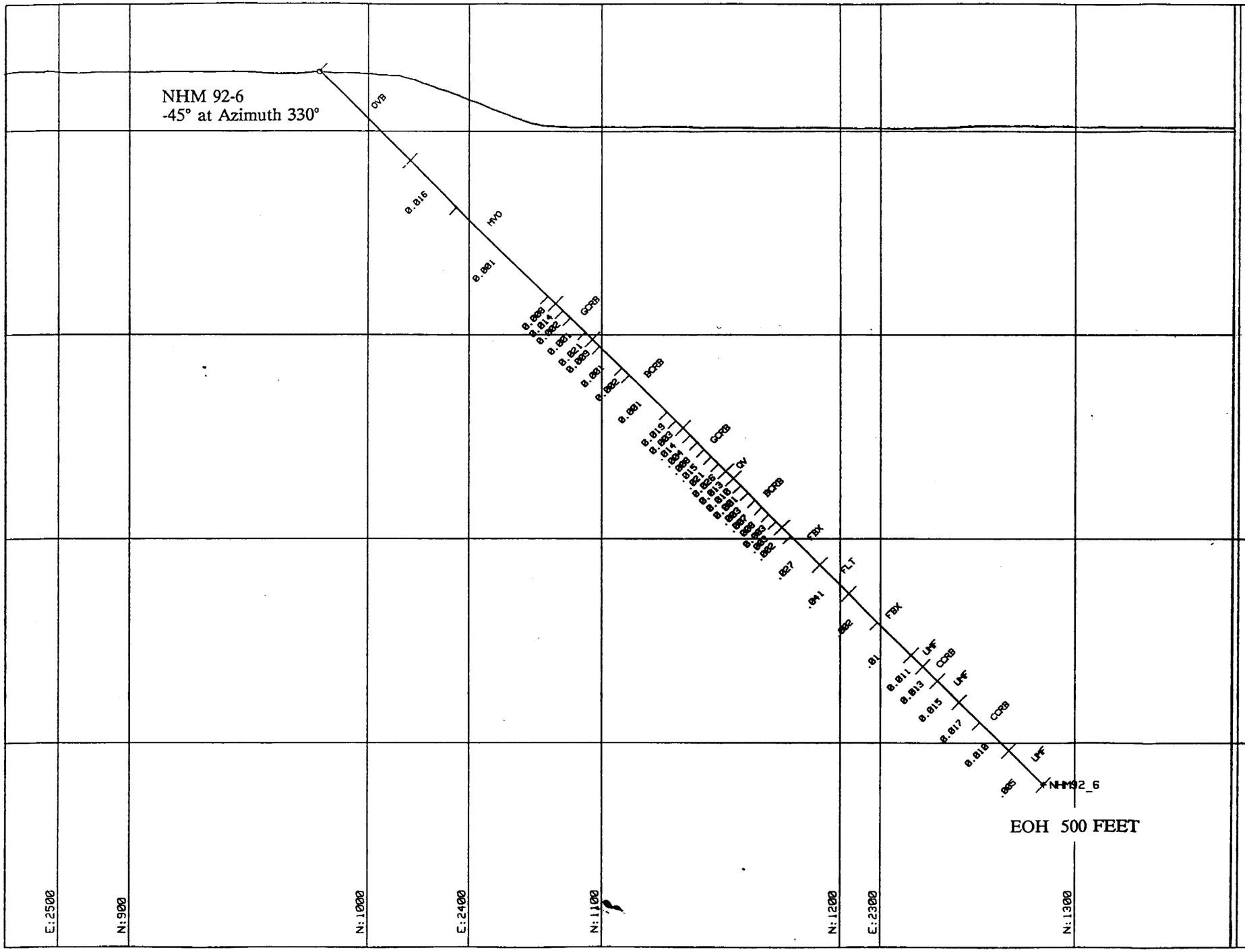
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava

0 50
feet

SCALE 1:600

ROYAL OAK MINES INC.
DRILL HOLE SECTION

2350E

HOLE: NHM 92-6

CLAIM: P 9898 (HR 919)

PAMOREX

PROJECT: NIGHTHAWK
Claim HR 919

Logged By: P Harvey

PAGE 1

AIR

CA

Date: 10/6/1992
Page 1 of 4

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NHM 92-6	980	2437	10925	500.0				

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	330	45															
100	333	44															
300	340	45															
500	330	44															

Peter Harvey

(CASING left in hole)

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	A%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T
63.0							OVB																			
96.0		M		LEUX	GN	CC	MVO						1						.1			.016		1798		
116.0		M		LEUX	GN	CC	MVO						1						.1			.001		799		
136.0		M		LEUX	GN	CC	MVO						3						.5			.001		800		
159.0		M		LEUX	GN	CC	MVO						1						.1			.001		801		
164.0		M				BLD	MVO						1						.1			.008		802		
169.0				BND			GCRB						5						.5			.014		803		
174.0				BX			GCRB						5						1.0			.002		804		
179.0				BND			GCRB						3						.5			.001		805		
184.0				BND			GCRB						3						.5			.001		806		
189.0							GCRB						1						.5			.021		807		

COMMENTS 1	COMMENTS 2
Purpose - to test midway between two surface holes (100' apart [PP89-5 (-231/32') and PP89-6 (-227/20')] No. 4 zone	
Results - intersected chlorite/graphite fault gouge @ target depth (-041/20' - Grab).	
Typ. chlorite-calcite leucox bearing massive Mafic Volc	
<1' foot intervals qtz-sheer zones - vtg:	
88' - Chl slip at 60°	
Lucox q-c; tr py	
As 96; 50° slip at 96.2	
Q-C veinlets; tr diss cpy's	
Prog bleached towards 159	
Bleached to pale grey; transitional to grey carb.	
Typ grey carb; minor chl in matrix; qv's brn/dk brown sericite	
Irreg. glassy <1" qv's; + py;	ghosts of leucox; chloritic.
Chl banded; diss mg py;	glassy qv's
As 179	
Transition to brown carb.	

PAMOREX

PAGE 2

DRILL HOLE NHM 92-6

Page 2 4

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
194.0				Bx			BCRB						2						1.0			.009		1808			Minor qv's; diss. py; irreg.	bxd; folth locally 0° CA.
199.0				FOL		SER	BCRB		20				1						.1			.001		809			Well foliated at ≈20° CA;	stg sericitic
204.0				FOL		SER	BCRB						2						.1			.001		810			Clear < 1/2" qv's; tr. py.	
209.0				FOL		SER	BCRB						2						.1			.001		811			As 204.0	
214.0				FOL		SER	BCRB						5						1.0			.002		812			As 204; chloritic Bx w	5% py 211-212
219.0				FOL		SER	BCRB						2						.1			.001		813			As 204	
224.0				FOL		SER	BCRB						2						.1			.001		814			As 204	
229.0				FOL		SER	BCRB						2						.1			.001		815			As 204	
234.0				FOL		SER	BCRB						2						.1			.001		816			As 204	
240.0				CONT		SER	BCRB						1						.1			.001		817			As 204; contorted.	
246.0						SER	BCRB						3						.5			.019		818				
251.0				BND		SER	BCRB						2						.1			.003		819			Chl-ser banded; transitn	to Grey Carb.
256.0				Bx			GCRB						1						.5			.014		820				
261.0				FOL			GCRB						1						.1			.004		821			Foliated. Locally bxd.	
266.0				FOL			GCRB						3						.1			.008		822			Foliated. contorted; interval PPOR	263-264
271.0							GCRB						3						.5			.015		823			As 266. PPOR 268-269.	

PAMOREX

PAGE 2

DRILL HOLE NHM 92-6

Page 3 [illegible] 4

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
276.0		M		CONT			GCRB						2						.1			.021		1824			Clear 1" qtz vein at 271.2;	tr-½% diss py
281.0	☆	M		Bx			GCRB						10						3.0			.026		825			Minor qtz flooding clear	1-2" irreg veins
286.0	☆	M					QV						80						.5			.013		826			Clear-milky qtz veining mirz'd.	1-18" long intervals. Poorly
291.0				BX			BCRB						10						1.0			.010		827			Milky qv's irreg in grey carb.	
296.0				Bx			BCRB						5						.5			.001		828			Milky qtz-alb vein at 20°CA qtz	at 293, minor, other irreg
301.0				Bx			BCRB						1						.1			.003		829			Frag- bx texts.	
306.0				Bx			BCRB						3						.5			.007		830			Brown-grey carb; tr vfg py	
311.0				Bx			BCRB						5						.1			.008		831			Brown w chlorite interval	306.5-307.5
316.0				Bx			BCRB						10						.1			.003		832			Bx'd irreg folt'd subparallel 313.5-314.0	to CA. barren milky qtz-alb
320.0		M		Bx			BCRB						5						.1			.003		833			As 316; Faulted lower contact barren qv's in interval.	at 326 at 30° CA. Irreg
326.0		SSS				GRA	FBx												.1			.002		834		S	Graphitic Fault breccia; Qtz, carb banding <½" in graphitic	RQD=0; rubble. breccia.
346.0		SSS		BX		GRA	FBX												.1			.027		835		G	Continuation of FLT breccia on big scale, RQD=20; Contorted	as 326; FLT-8low Zone-. Graphite-chlorite matrix.
366.0		SSS					FLT						30						.1			.041		836		G	Mega fault rubble core through ground core. Drilled qtz vein Barren.	entire interval with 3 feet at 0° CA 356-366.
386.0		SSS		SHD		GRA	FBX						5						.1			.002		837		G	Graphitic-sericitic matrix to as 346. 1-2" late qv's; barren	Fault breccia zone Tr cg py in matrix.
409.0		SSS		SHD		GRA	FBX		50				1						.1			.010		838			As 386; Fault gouge 304-	307

PAMOREX

DRILL HOLE NHM 92-6

Page 4 of 4

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
417.0		SS		BX	BK	CHL	UMF												.5			.011		1839			chl-talc alt'd massive black Fault gouge scattered in interval	KoM; mild bx'd text. .
427.0		SSS		BND		CHL	CCRB						10						.1			.013		840			Chloritic- Grey Carb; banded text w <½" q-c define Folt'n.	
442.0		SS		BX	BK	CHL	UMF												.5			.015		841			As 417; also w fault gouge	RQD = 70
456.0		SSS		FOL		CHL	CCRB		70				1						.1			.017		842			Well foliated + v. fissile Chloritic Minor fault gouge in interval	carb. Bio bands 1-3" at ≈60°. RQD: 20.
476.0		SS		CONT		CHL	CCRB						5						.1			.010		843			As 456. Locally contorted	RQD=20.
500.0				BND		CHL	UMF						2						.1			.005		844			Transition to talc-carb alt'd RQD= 50%. Minor CONT common	w foliated KoM. [illegible] Gouge [illegible]
END																												

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-6

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 13/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-1798	.016	550					
2	99	<.001	<35					
3	1800	<.001	<35					
4	01	<.001	<35					
5	02	.008	275					
6	03	.014	480					
7	04	.002	70					
8	05	<.001	<35					
9	06	<.001	<35					
10	07	.021	720					
11	08	.009	310					
12	09	<.001	<35					
13	10	<.001	<35					
14	11	<.001	<35					
15	12	.002	70					
16	13	<.001	<35					
17	14	<.001	<35					
18	15	<.001	<35					
19	16	.001	35					
20	17	.001	35					
21	18	.019	650					
22	D-1819	.003	105					
23								
24								

Lab16

Chief Chemist: _____

ROYAL OAK ANALYTICAL LABORATORY NHM 92-6

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 15/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-1820	.014	480					
2	21	.004	135					
3	22	.008	275					
4	23	.015	515					
5	24	.021	720					
6	25	.026	890					
7	26	.013	445					
8	27	.010	340					
9	28	.001	35					
10	29	.003	105					
11	30	.007	240					
12	31	.008	275					
13	32	.003	105					
14	33	.003	105					
15	34	.002	70					
16	35	.027	925					
17	36	.041	1410					
18	37	.002	70					
19	38	.010	340					
20	39	.011	375					
21	40	.013	445					
22	41	.015	515					
23	42	.017	585					
24	D 1843	.010	340					

Lab16

Chief Chemist: _____

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-6

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 15/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-1844	.005	170					
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: _____

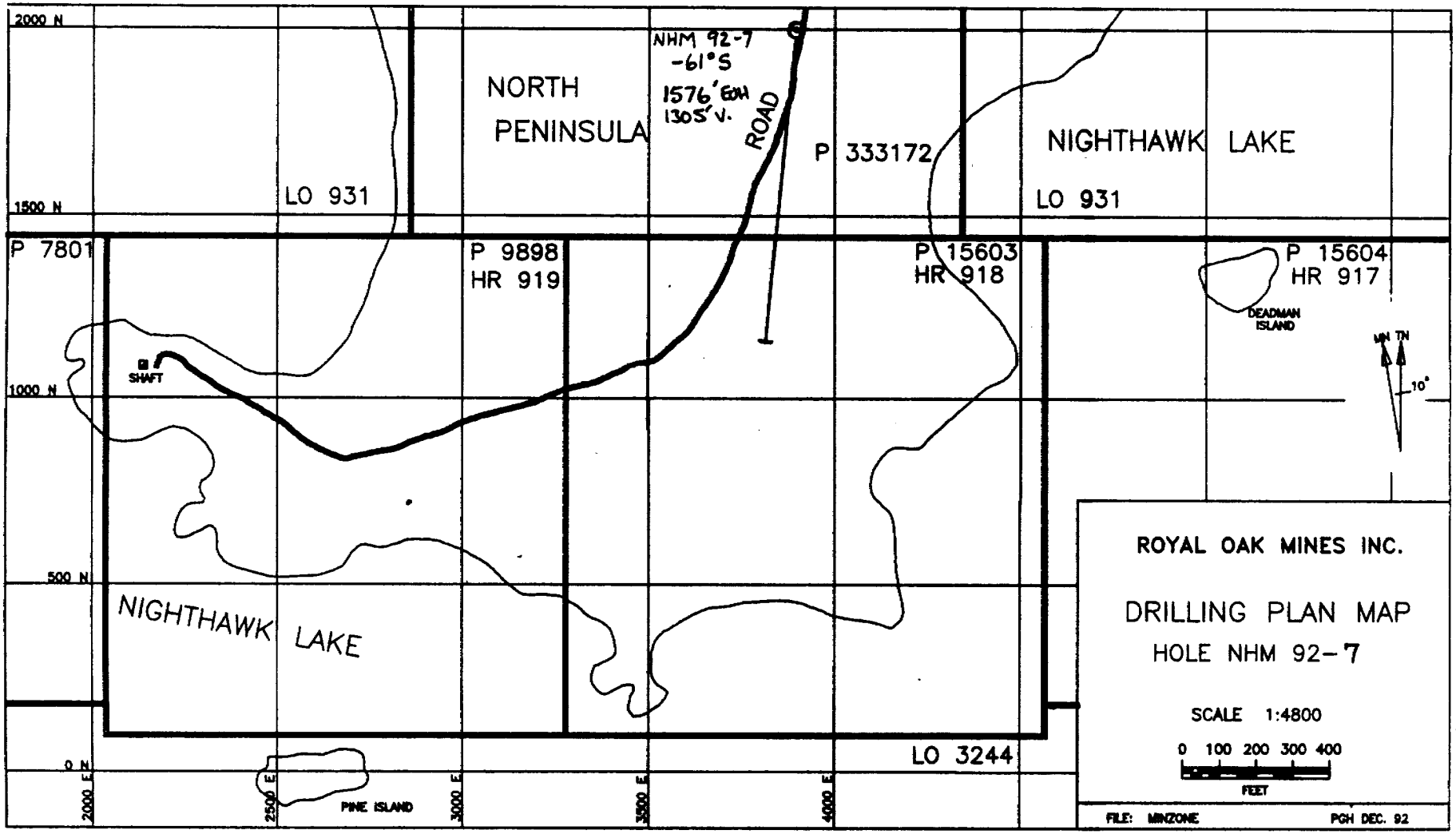
SUMMARY LOG

Hole Number:	NHM92-7
Claim No., Twp.:	P 333172, P 15603, Cody
Date Drilled:	October 13-19, 1992
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	2000N, 3895E, El 10913, Azimuth 180°, -61° dip
Directional Data:	100': Az. 190, -60° dip; 300': Az. 190, -58° dip; 500': Az. 193, -58° dip; 700': Az. 193, -56° dip; 900': Az. 193, -55° dip; 1100': Az. 198, -54° dip; 1300': Az. 202, -54° dip; 1500': Az. 198, -53° dip.
Length, Core Size:	1576 feet BQ
Casing, Overburden:	60 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	October 25, 1992

COMMENTS

The hole cored chloritic, variolitic pillow lavas to 321.0', diabase to 367.5', tuffs to 447.0', diabase to 470.0, agglomerate to 496.0', bleached and sericitic agglomerate and tuff to 642.0', argillite to 712.0', mafic volcanics to 950.0', tuff to 998.0', greywacke and argillite to 1229.0', agglomerate and tuff to 1361.0', brown carbonate to 1439.0' and talc-chlorite ultramafics to the end of the hole at 1576 feet.

The interval of tuff and agglomerate from 496.0'-642.0' was characterized by moderate bleaching and sericite alteration, 0.5% pyrite, and scattered 1/2" flat quartz veining. The best assay from the interval was 0.045 opt Au/5.0' from 596.0'- 601.0'. No other significant mineralization was encountered in the hole.


2000 N
1500 N
1000 N
500 N
0 N
2000 E
2500 E
3000 E
3500 E
4000 E
NORTH PENINSULA
NHM 92-7
-61°S
1576' EOH
1305' V.
ROAD
P 333172
NIGHTHAWK LAKE
LO 931
LO 931
P 7801
P 9898
HR 919
P 15603
HR 918
P 15604
HR 917
DEADMAN ISLAND
SHAFT
MN TN
10°
NIGHTHAWK LAKE
LO 3244
PINE ISLAND
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NHM 92-7
SCALE 1:4800
0 100 200 300 400
FEET
FILE: MINZONE
PGH DEC. 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

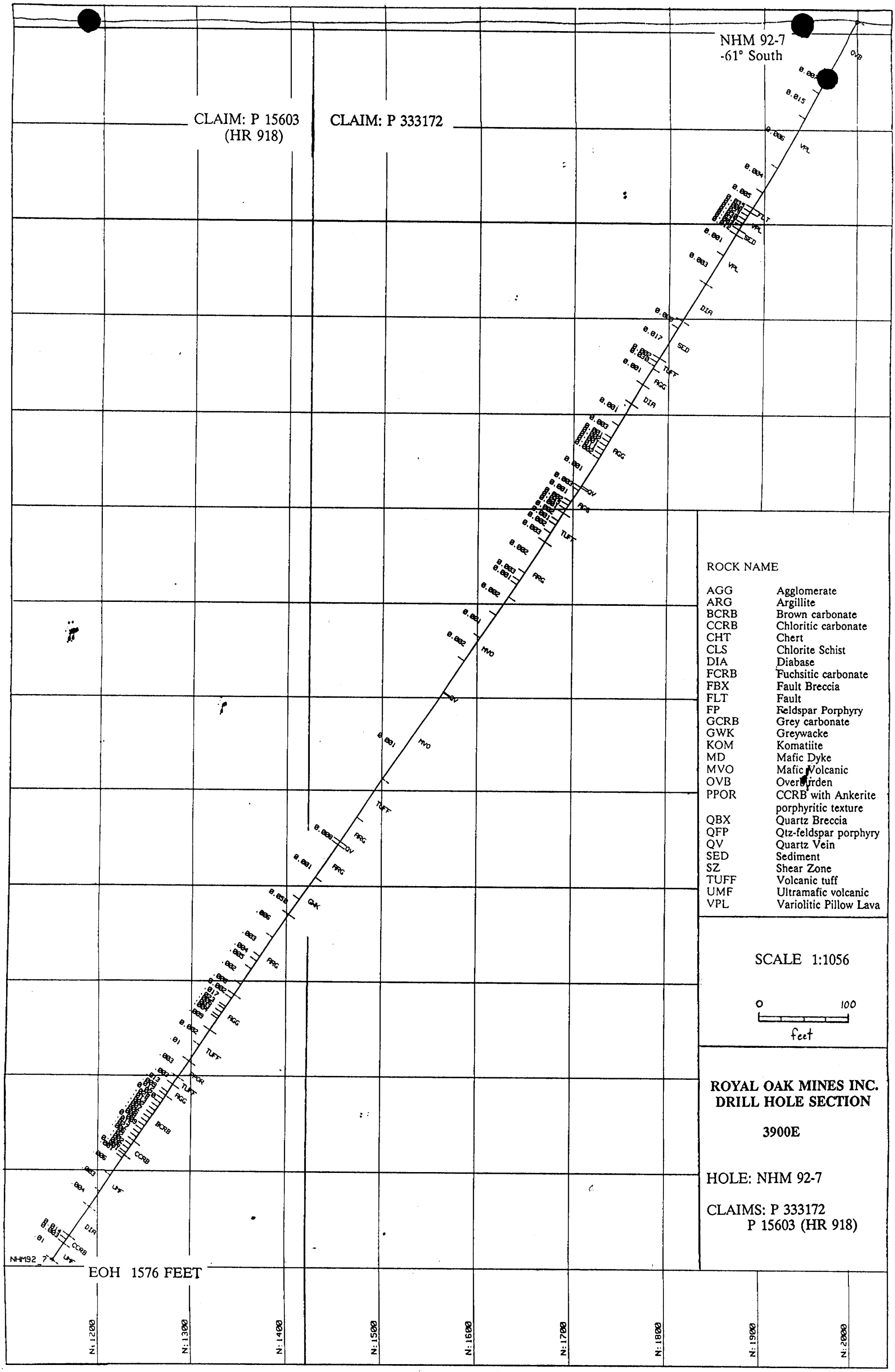
ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava

CLAIM: P 15603
(HR 918)

CLAIM: P 333172

NHM 92-7
-61° South



ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava

SCALE 1:1056

0 100
feet

ROYAL OAK MINES INC.
DRILL HOLE SECTION

3900E

HOLE: NHM 92-7

CLAIMS: P 333172
P 15603 (HR 918)

PAMOREX

PRO[illegible]T : NIGHTHAWK
Claims P333172 ; HR 918

Logged By : P. Harvey

PAGE 1

CA[illegible]

Date : 10/14/1992
Page 1 of __

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NHM 92-7	2000	3900	109/3	1576				

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	180	61	700	193	56	1500	198	53						
100	190	60	900	193	55									
300	190	58	1100	198	54									
500	193	58	1300	202	54									

Peter Harvey

Casing (BW) left in hole.

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz A%	B%	C%	METALLIC Py D%	E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
																						Purpose – to test stratigraphy north of ramp zone & ramp zone at depth. Result – intersected .045/5' @ 596-602' in area of bleaching/sericitization in seds (496-642'); .024/10' and .027/5' in south contact zone (Ramp Zone) below 1000' L.	
60.0							OVB																
86.0		M			GN	CC	VPL					2					.007		1845			Variolitic Pillow Lava; V8- often coalesce to amorphous chl matrix. foltn ≈20-30°;	type; varioles mm-cm scale; blobs - in dark green soft pervasive calcite altn
116.0		M			GN	CC	VPL		25			2					.015		846	30'		As 86; Fault w hematite stained at 86-90	and gouge at 20°
146.0		M			GN	CC	VPL					2					.006		847	30'		As 86; red hematite stained qtz-cal veinlets	fracts + slips ass w lacey
176.0		M			GN	CC	VPL		25			2					.006		848	30'		As 86; hem stained; qtz-epi	patches.
206.0		M			GN	CC	VPL					5					.004		849	30'		As 86; inc q-c veinlets;	tr cg py clusters.
226.0		M			GN	CC	VPL		30								.005		850	20'		As 86; prog sheared towards	226.
231.0							FLT					10					.035		851	5'		Fault zone in sheared VPL; barren qtz-cal.	1-4" qv's at 30° 230-231
236.0		SS		SHD		CC	VPL		45			5					.008		852	5'		Well foliated / Sheared VPL. Banded on mm-cm scale 2" barren q-c vein at 235.	
241.0		SS		SHD		CC	VPL		45			1					.023		853	5'		As 236. Fissile.	
246.0		SS		SHD		CC	VPL					1					.030		854	5'		As 241.0	

DRILL HOLE NHM 92-7

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PAMOREX

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
249.0		SS		SHD		CC	VPL		40				50						1			.033		1855	3'		Irreg qtz-cal veining; oxidized; w 1% py through interval
254.0		SS		SHD		CC	VPL						50									.007		856			As 249. Irreg 1-4" q-c veining; oxidized.
260.0		M					SED						2									.012		857			Sediment? - white - glassy grey fg matrix w 50% 5mm dk spots throughout. Contacts at 35°
286.0		SS		SHD		CC	VPL		40				5									.001		858			VPL as 86 etc; but is locally mod-well foliated at 40°
321.0		SS		SHD		CC	VPL						3									.003		859			VPL as 86 etc - mottled calcite alt'n w mm spots Prog inc sheared + blocky
367.5							DIA																				Blocky; RQD = 20%; dark brown dike w 20% euhedral plag Contacts 50°
376.0		SS		BND		CC	SED		60				2									.009		860			Bedded on mm scale; fissile mafic sediment.
414.0		S				CC	SED															.017		861			Angular fragments to ≈380, 260.0 - white-pale green fg spots + 1-5mm chlorite matrix. Blocky RQD = 0
419.0				BND		CC	TUFF		55				10									.002		862			Rhythmically banded chloritic of 414. Irreg q-c veining 1-2" throughout
424.0				BND		CC	TUFF						10									.030		863			As 419. Barren veining.
427.0				BND		CC	TUFF						30									.001		864			As 419.
447.0						CC	AGG		55													.001		865			Tuff as 419 grades to Agglomerate loosely packed in dk matrix.

COMMENTS 1	COMMENTS 2
balance of interval similar to 260.0 - white-pale green fg spots + 1-5mm chlorite matrix. Blocky RQD = 0	matrix w mm calcite spots in well foliated 386 - 398
Rhythmically banded chloritic of 414. Irreg q-c veining 1-2" throughout	sediment. Lacks calcite spots
As 419. Barren veining.	"
As 419.	
Tuff as 419 grades to Agglomerate loosely packed in dk matrix.	by 436; 1" felsic frags

PAMOREX

DRILL HOLE NHM 92-7

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
470.0		M					DIA																				Diabase dyke; contacts ±	70°; as w dike at 367.5
																											but is not as blocky.	
496.0		S			GN	CC	AGG		50				2					.1			.001		1866		Good type example; felsic frags - cg, porph, text - elliptical	
																											1-4" long, widely scattered in chloritic matrix.	
																											Scattered tr cg py.	
501.0		S				BLD	AGG						2								.003		867		Transition to sericitic matrix. Lacey q-c veinlets.	
																											Bleached - pale grey - weak.	
506.0		S				BLD	AGG						5								.003		868		Prog increased Bleaching.	2" barren q-c
511.0		S		CONT		BLD	AGG						5					1.0			.003		869		Tr-1% py; block core, locally	contorted.
516.0		S				BLD	AGG		40				30								.001		870		Qtz vein 511.5-513. Barren.	
521.0		S				BLD	AGG		35				2					1.0			.002		871		Tr-1% diss py - m-cg	
526.0		S				BLD	AGG						1					1.0			.001		872		diss py - mg; blocky core	
531.0		S		BND		BLD	AGG		25				1					1.0			.011		873		Fewer large clasts Tuff-Agg -	banded tuff w 10% Agg
																											size clasts; Well bleached.	
536.0		S		BND		BLD	AGG						3					1.0			.002		874		As 531; 1% m-cg diss py	
541.0		S		BND		BLD	AGG						5					.5			.001		875		As 531	
546.0		S		BND		BLD	AGG						5					2.0			.001		876		As 531; 1% qv-flt at 90° FoH	at 542 w BLD margins
551.0		S		BND		BLD	AGG						2					1.0			.001		877		1/4" Flats; diss py.	
556.0		S		BND		BLD	AGG						2					0.5			.001		878		As 531	
561.0		S		BND		BLD	AGG						5					0.5			.001		879		As 531	

PAMOREX

PAGE 2

DRILL HOLE NHM92-7

Page 4 9

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
566.0		S		BND		BLD	AGG						5						.5			.001		1880			Well bleached Tuff-Agg <1/4" scattered flats	as 531 etc
570.0		S		BND		BLD	AGG						5						.5			.001		81				
572.0		S					QV						90						1.0			.001		82			Irreg. milky qtz-carb vein; talc	margins tr-1% py.
576.0		S		BND		BLD	AGG						5						.1			.003		83			As 531; flats <1/2" wr	BLD margins
581.0		S		BND		BLD	AGG		30				5						.1			.001		84			As 531; BLD flats	
586.0		S		BND		BLD	AGG						5						.1			.001		85			As 531	
591.0		S		BND		BLD	AGG						10						.5			.001		86			As 531; 2" q-c vein +	<1/2" flats.
596.0		S		BND		BLD	AGG						3						.1			.002		87			As 531	
601.0		SS		BND		BLD	AGG						2						.1			.045		88			Fissile; Ser banded;	As 531
606.0		SS		BND		BLD	AGG		30				1						.5			.001		89			Prog stronger sericitic; transit to tuff; assoc >1" clasts diss py	
611.0		S		BND		BLD	TUFF						2						.5			.002		90			Sericitic banded well bleached tuff; diss mg py	
616.0		S		BND		BLD	TUFF						2						.5			.002		91			As 611	
621.0		S		BND		BLD	TUFF						3						.5			.001		92			As 611; scattered <1/2"	Flat qv's.
626.0		S		BND		BLD	TUFF						5						.5			.002		93			As 611	
631.0		S		BND		BLD	TUFF						2						.5			.002		94				
636.0		S		BND		BLD	TUFF						1						.5			.003		95				
642.0		S		BND		BLD	TUFF		30				5						.5			.003		96				

PAMOREX

PAGE 2

DRILL HOLE NHM 92-7

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DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
681.0		SS				GRA	ARG		20													.002		1897			Faulted ?! Contact into Graphitic Argillite Greywacke
																											Foliation in GA at 20°; contact perpendicular to foltn!
																											Greywacke beds ±12" scattered through otherwise typical
																											laminated graphitic argillite -
686.0		SS				GRA	ARG						10						2			.003		98			Greywacke w. 2 x 4" QV's	684-685 ; cpy in org
691.0		SS				GRA	ARG						10						2			.003		99			1 x 4" QV	
696.0		SS				GRA	ARG		20				10						2			.001		1900			Irreg. 1" QV's	
712.0		SS				GRA	ARG						5						1			.002		1901			Contact at 90° CA at 712	
																											Fault and gouge 703-704
736.0		M				CC	MVO		45				2									.002		902			Mafic- UM; v weak talc	to 736 ; is mod
																											pervasive calcite in	pale green chloritic
																											matrix. Lacey q-c. Locally	foltn at 45
766.0		M				CC	MVO						2									.001		903			As 736; grades to leux	bearing MVO by 766
796.0		M		LEUX		CHL	MVO						5									.002		904			Typ dk leux bearing MVO; barren 786-792	1-6" qtz-cal veining
816.0		M		LEUX		CHL	MVO						3									.001		905			As 796; q-c veining 807-810	
835.0		M				CHL	MVO						2									.001		906			Mafic Volc- UM - mottled text -	talc on fracts
																											Weak pervasive Calcite.
836.0							QV						50						5			.001		907			2" QV + minor veinlets; vein is	well mnzd w. s.l. coarse
																											py + po.
850.0		S		SHD		CHL	MVO		35				3									.001		908			Sheared, chloritic well foliated.	MVO. Barren veining.
868.0		M		MAS		CHL	MVO						5									.001		909			Massive, mg mottled text; barren	qtz-mica veins w.
																											epidote rims.

PAMOREX

DRILL HOLE NHM 92-7

Page 6 9

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Width	T	COMMENTS 1	COMMENTS 2
896.0		M		FOL		CC	MVO						3									.001		1910			Massive-weakly foliated	chlorite-calcite altd
																										MVO; minor lacey q-c	veinlets;
																										Interval 868-871 blocky	VPL
926.0		S		FOL		CC	MVO						3									.001		911			As 896; well foliated.
950.0		S		FOL		CC	MVO						2									.001		912			As 926; ~~tr~~ transition to	bleached at 950
976.0				FOL		BLD	TUFF		35				1									.001		913			Bleached; sericitic banded tuff; well	
																										foliated at 35; banded at 1-3 cm frags; sty	
																										sericitic; intercalated w	MVO as above; but BLD-
998.0				FOL		BLD	TUFF						3									.001		914			As 976; blocky-FLT	981-984.
																										Barren veining 986-998	
1029.0		S		BND		GWK	ARG		30				2					1				.001		915			Rhythmically bedded graphitic	argillite; intercalated
																										w 6-12" greywacke beds;	coarse py veins tr-1%
1033.0							QV						50									.008		916			Scattered 1-3" qtz-carb veining through Arg.	
1076.0		SSS				GWK	ARG		25				10									.001		917			As 1029; core v. fissile;	more graphitic, 1 veg 2"
																										qv's 1050-1051; 1057-1058	
1106.0		S					GWK		40				2									.001		918			F-mg GWK intercalated with	<10% slate interbeds
																										Well banded at 40°. 2"	QV at 1102.
1126.0							GWK						2									.050		919			As 1106 tops conflicting.	Not unlike P-1/Huyle N Sds.
1156.0		SSS		BND		GWK	ARG		50				2					1				.006		920			As 1029; barren 2" qv's	; tr [redacted] cg py
1180.0		S		BND		GWK	ARG						2					1				.003		921			As 1029, w tr cg py carbs	in matrix

PAMOREX

PAGE 2

DRILL HOLE NHM 92-7

Page 7 9

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
1186.0		SS		BND		GRA	ARG						20						2			.004		1922			Series 1-4" qv's in interval w coarse Py	
																										Weakly graphitic.	
1196.0		SS		BND		GRA	ARG						5						1								
																						.005		1923		Scattered 1-4" qv's	
1216.0		SS		BND		GRA	ARG						20						1			.002		1924			As 1186 - Irreg qv's and graph argillite;
1229.0		SSS				GRA	ARG						10						1			.005		1925			As 1186
1234.0		SSS				SER	AGG		45				2						3			.002		1926			Transition to Sericitic Agglomerate; minor graphitic foliation. Matrix pyritic.
1245.0		SS				GRA	AGG						1						1			.017		1927			Agglom. type clasts w graph matrix. Tr sg Py.
1248.0		SS				GRA	AGG						30						1			.023		1928			Scattered 1-2" qv's in foliation
1253.0		SS				GRA	AGG						20						1			.006		1929			As 1248; 1-4" qv's.
1258.0		S				GRA	AGG		45				2									.003		1930			Graphitic Sericitic matrix - transition to chl matrix
1261.0						ANK	AGG						1									.004		1931			Transition to PPOR text.
1276.0		S		PPOR		ANK	AGG						2									.009		1932			Agglom. continues; matrix is texture - interval alternates	ANK altd with PPOR w MVdc - PPOR.
																						~~.002~~					
1296.0		S		PPOR		ANK	TUFF						2									.002		1933		Transition to ~~----~~ tuff; Pale brown colour in matrix;	PPOR ank text as 1276; portions of Agglomerate.
1316.0		S		PPOR		ANK	TUFF						2									.010		1934			As 1296 - transition to chloritic matrix - PPOR persists.
1337.0		M				ANK	PPOR						1									.003		1935			Good example of typ PPOR - 30-50 % mm Ank porphs in massive chl matrix. Tr-1% mg Py. Mafic tuff units.
1347.0		S		PPOR		ANK	TUFF						1									.003		1936			As 1316.0

PAMOREX

DRILL HOLE NHM 92-7

Page 8 9

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
1357.0						GRA	AGG															.013		1937			Agglom clasts within graphitic matrix; intercalated w <1/2" sericitic and PPBR	matrix; intercalated w intervals;
1361.0				Bx			AGG															.009		1938			Transition to Brown Carb	
1366.0		M		Bx			BCRB						10					0.5				.012		1939			Brown-grey carb breccia; qtz veining; flooding; tr-1% py. Chaotic by texture.	veining; flooding; tr-1% py.
1371.0		S		BND			BCRB		60				10					1.0				.020		1940			As 1366. Inc Pyrite; Sericite zones.	banded dkt w qtz flooding
																					.024/10						
1376.0		S		BND			BCRB						10					1.0				.028		1941			Banded-brecciated; qtz injected; 1% py = matrix.	
1381.0		S		BND			BCRB						5					1.0				.013		1942			Banded-bx'd.	
1386.0		S		BND			BCRB						5					1.0				.002		1943			Chl banded as above; blocky.	
1391.0				Bx			BCRB						5					1.0				.007		1944			Brecciated banded sections.	
1396.0				BND			BCRB						5					1.0				.006		1945			Chl banded, blocky.	
1401.0				Bx			BCRB						5					1.0				.008		1946			Chl banded and bx'd.	
1406.0				BND			BCRB		35				5					0.5				.009		1947			Chl banded.	
1411.0				BND			BCRB						10					1.0				.015		1948			Banded w chl filled bx., py	ass w. chl.
																			.084/								
1416.0				Bx			BCRB						10					0.5	19			.027		1949			Bx'd; qtz injected; chl Fault	gouge 1414.
1421.0				Bx			BCRB						10					.5				.006		1950			Blocky	
1426.0				Bx			CCRB						5					.5				.020		1951			Transition to Chloritic carb.	
1431.0				Bx			CCRB						3					1.5				.002		1952				

PAMOREX

DRILL HOLE NHM 92-7

DIST	Id	Rock Description: Com	Grs	Text	Co	Alt	Nam	Struct. B/S: B	Ai	J/F: J	A2	Minerals – Gangue: Qtz C%		B%		C%	Metallic: Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
1436.0				BX			CCRB					10					/	.5			.006		1953			Chloritic carb; fault gouge	in interval
1439.0				CONT			CCRB					5						.1			.001		1954			Contorted foltn in banded	CCRB - ; nil - tr py.
1443.0		M		BND		CHL	UMF					1									.001		1955			Faulted contact at 1439	at 50° to chloritic -
																										weak talc KOM. [illegible]	[illegible] foliated -
1466.0		M		BND		CHL	UMF														.006		1956			Transition [illegible] to talc	UMF
1486.0				BX		TALC	UMF		60												.003		1957			Talc alt'd mod. foliated	to locally brecciated
																										dark green-black Ultramafic	.
																										Lamp dyke 1478-1479.	Fault gouge at 70° 1470-
1506.0				BX		TALC	UMF														.004		1958			Bx'd - locally contorted UMF	as 1486. Bio banded
																										6" intervals.	
1544.0		M					DIA																			Typ [illegible]; minor blocky core,	f-mg, weak [illegible]
1549.0						BND	CCRB					2						1			.014		1959			CCRB banded UMF; <1" qtz	[illegible]
																										Blocky 1546-1547.	
1554.0						BND	CCRB					2						1			.003		1960			As 1549	
1576.0				BX		TALC	UMF														.010		1961			Talc Kommatite breccia	as 1486
END																											

ROYAL OAK ANALYTICAL LABORATORY

NHM 92-7

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 20/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D 1845	.007	240					
2	46	.015	515					
3	47	.006	205					
4	48	.006	205					
5	49	.004	135					
6	50	.005	170					
7	51	.035	1200					
8	52	.008	275					
9	53	.023	790					
10	54	.030	1030					
11	55	.033	1130					
12	56	.007	240					
13	57	.012	410					
14	58	.001	35					
15	59	.003	105					
16	60	.009	310					
17	61	.017	585					
18	D 1862	.002	70					
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: M Peterson

ROYAL OAK ANALYTICAL LABORATORY NHM 92-7

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 22/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D1863	.030	1030					
2	64	<.001	<35					
3	65	<.001	<35					
4	66	<.001	<35					
5	67	.003	105					
6	68	.003	105					
7	69	.003	105					
8	70	<.001	<35					
9	71	.002	70					
10	72	<.001	<35					
11	73	.011	375					
12	74	.002	70					
13	75	<.001	<35					
14	76	<.001	<35					
15	77	<.001	<35					
16	78	<.001	<35					
17	79	<.001	<35					
18	80	<.001	<35					
19	81	<.001	<35					
20	82	<.001	<35					
21	83	.003	105					
22	D 18 84	<001	<35					
23								
24								

Lab16

Chief Chemist: M. Pelletier

ROYAL OAK ANALYTICAL LABORATORY NHM 92-7

CERTIFICATE OF ANALYSIS

Exploration 1602

DATE: OCT 22/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D1885	<.001	<35					
2	86	<.001	<35					
3	87	.002	70					
4	88	.045	1540					
5	89	<.001	<35					
6	90	.002	70					
7	91	.002	70					
8	92	.001	35					
9	93	.002	70					
10	94	.002	70					
11	95	.003	105					
12	96	.003	105					
13	97	.002	70					
14	98	.003	105					
15	1899	.003	105					
16	1900	.001	35					
17	01	.002	70					
18	1902	.002	70					
19	03	<.001	<35					
20	04	.002	70					
21	05	<.001	<35					
22	06	.001	35					
23	07	.001	35					
24	D1908	<.001	<35					

Lab16

Chief Chemist: M. Pelletier

ROYAL OAK ANALYTICAL LABORATORY NHM 92-7

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 22/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D1989	<.001	<35					
2	10	<.001	<35					
3	11	<.001	<35					
4	12	<.001	<35					
5	13	<.001	<35					
6	14	<.001	<35					
7	15	<.001	<35					
8	16	.008	275					
9	17	<.001	<35					
10	D1918	<.001	<35					
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: M. Pelletier

NHM 92-7

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

Exploration 1602

DATE: Oct. 23/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D1919	.050	1710					
2	20	.006	205					
3	21	.003	105					
4	22	.004	135					
5	23	.005	170					
6	24	.002	70					
7	25	.005	170					
8	26	.002	70					
9	27	.017	585					
10	28	.023	790					
11	29	.006	205					
12	30	.003	105					
13	31	.004	135					
14	32	.009	310					
15	33	.002	70					
16	34	010	340					
17	35	.003	105					
18	36	.003	105					
19	37	.013	445					
20	38	.009	310					
21	39	.012	410					
22	40	.020	685					
23	41	.028	960					
24	D 1942	.013	445					

Lab16

Chief Chemist: [signature]

ROYAL OAK ANALYTICAL LABORATORY NHM 92-7

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 23/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	1943	.002	70					
2	44	.007	240					
3	45	.006	205					
4	46	.008	275					
5	47	.009	310					
6	48	.015	515					
7	49	.027	925					
8	50	.006	205					
9	51	.020	685					
10	52	.002	70					
11	53	.006	205					
12	54	<.001	<35					
13	55	<.001	<35					
14	56	.006	205					
15	57	.003	105					
16	58	.004	135					
17	59	.014	480					
18	60	.003	105					
19	D 1961	.010	340					
20								
21								
22								
23								
24								

Lab16

Chief Chemist: M Watkins

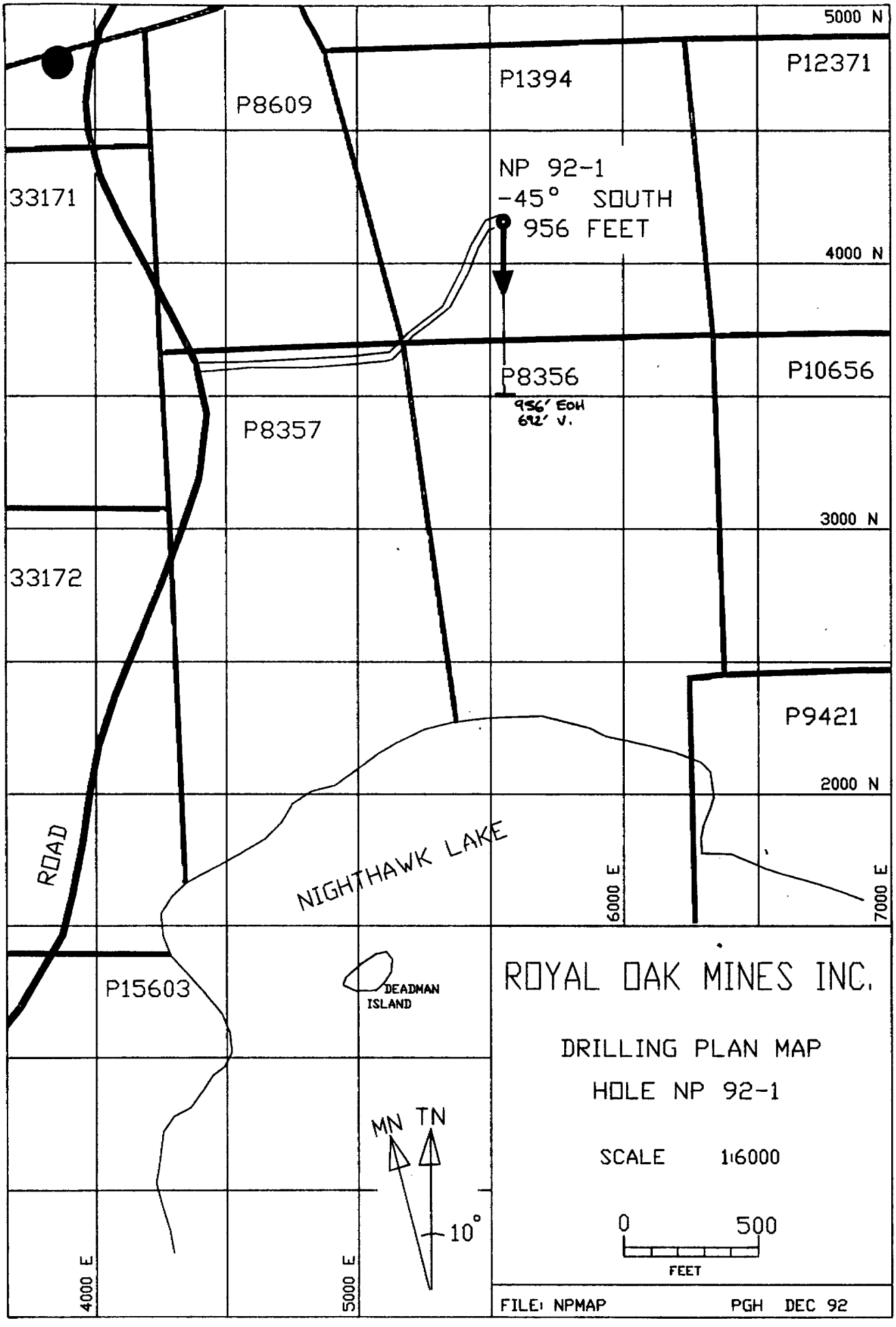
SUMMARY LOG

Hole Number:	NP92-1
Claim No., Twp.:	P 1394, P 8356, Cody
Date Drilled:	September 23-26, 1992
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	4150N, 5550E, El 10910, Azimuth 180°, -45° Local Grid: 1450 W; 750 S.
Directional Data:	100': Az. 185, -46° ; 300': Az. 190, -46° ; 500': Az. 190, -46° ; 700': Az. 190, -48° ; 900': Az. 185, -50°
Length, Core Size:	956 feet BQ
Casing, Overburden:	20 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	September 28, 1992

COMMENTS

The hole cored talcose komatiite with minor local carbonate alteration to 617.0', a series of faults to 631.0', then well foliated chloritic mafic volcanics to 867.5'. From 867.5 to 904.0', the hole cut pyritic cherty sediments intercalated with chloritic tuff, with 2" of massive pyrite at 870.0'. The hole then cored QFP from 904.0' to 921.0', and ended in masive mafic volcanics.

No significant assays were returned from the hole. All assays obtained from the hole are listed in the drill log, included here.


5000 N
P12371
P1394
P8609
NP 92-1
-45° SOUTH
956 FEET
33171
4000 N
P8356
P10656
956' EOH
692' V.
P8357
3000 N
33172
P9421
2000 N
ROAD
NIGHTHAWK LAKE
6000 E
7000 E
P15603
DEADMAN ISLAND
MN TN
10°
4000 E
5000 E
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NP 92-1
SCALE 1:6000
0 500
FEET
FILE: NPMAP PGH DEC 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

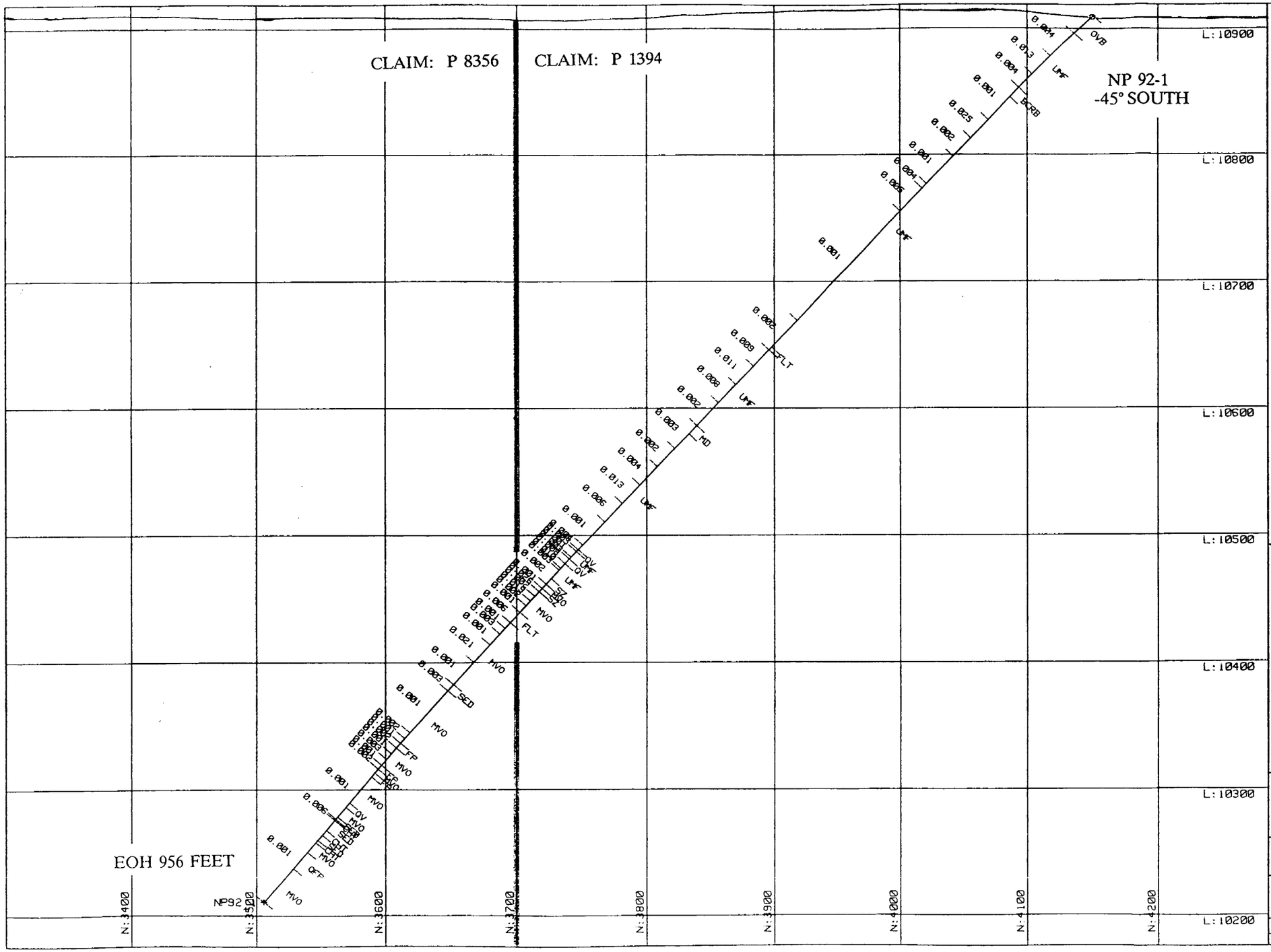
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



SCALE 1:960

NHL LEGEND

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CHT	Chert
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
QFP	Quartz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Tuff
UMF	Ultramafic volcanic

ROYAL OAK MINES INC.
DRILL HOLE SECTION

5600 E

HOLE: NP 92-1
CLAIM: P 1394, P 8356

1" = 80' 80'

NOV. 1992 | LHA | DWG NHL105

ROYAL OAK MINES INC.

PAMOREX

PR…CT : [illegible] P8356 Logged By : P. Harv…
Local Grid : 14+50W ; 7+50S

PAGE 1 AAR

CA…P Date : 9/25/1992 Page 1 of 8

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NP 92-1	41+50N	55+50	10910	956				

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	180	45	700	190	48									
100	18[illegible]	46	900	185	50									
300	190	46												
500	[illegible]	46												

Peter Harvey
(20' BW casing left in hole)

DIST	Id	Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S (B, A1)	J/F (J, A2)	GANGUE Qtz A%	B%	C%	METALLIC Py D%	E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
																				Hole drilled to cut 070° of Syenite in NP 88-4	Fault; and down-dip
																	and 150' E			Results - no syenite	intersected and no
																				signif. results.	
20.0							OVB														
46.0		S		Bx	GN	TALC	UMF			2			.5		.004		14774			Generally weak-moderate typ bx'd texture infilled w Weak mottled ANK; Recovery [illegible] Scattered frags + zones 6-24' frags - weak ANK-SER alt. Tr mg py cubes throughout.	tlc-chl alt KOMATIITE 30-50% q-c veining ≤ ½" [illegible] RQD = 60%-70% [illegible] of mottled breccia 2% late milky qv's; irreg. <1"
66.0		S		BX	GN	TALC	UMF			2			.5		.013		775			As 46 55-62 - Moderate ANK-mottled	text.
81.0		S		Bx	GN	TALC	UMF			5			.5		.004		776			As 46	
86.0		M			BN	ANK	BCRB			2			.1		.001		777			Section massive mottled ANK alt. in + out of interval	; [illegible]
91.0		M			BN	ANK	BCRB			3			.1		.001		778			As 86.	
116.0		S		Bx	GN	TALC	UMF			2			.5		.001		779			As 46; prog increased talc content	toward 116
136.0		S		Bx	GN	TALC	UMF			5			1		.025		780			As 46; 1-4" milky qtz-alb 131- Coarse mottled ank.	136
156.0		S		Bx	GN	TALC	UMF			2			1		.002		781				

PAMOREX

PAGE 2

DRILL HOLE NP 92-1

Page 2

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
186.0		S		Bx	GN	TALC	UMF															.001		14782			As 46. Blocky-Cream talc kom	Bx. Oxidized FLT 175
191.0		M		Bx	BN	ANK	UMF						1						2			.004		783			Contact occ 2-3' to UMF frags as 46 otc	brown ANK alt'd. Bx text
196.0		M		Bx	BN	ANK	UMF						1						2			.005		784			As 191	
216.0		S		Bx	GN	TALC	UMF						3						1			.005		785			Talc xcut Bx as 46; Rocks	brown frags; higher talc content
236.0		S		Bx	GN	TALC	UMF						1						1			.001		786			As 216	
256.0		S		Bx	GN	TALC	UMF						1						1			.001		787			As 216	
276.0		S		Bx	GN	TALC	UMF						1						1			.001		788			As 216	
296.0		S		Bx	GN	TALC	UMF						1						1			.001		789			As 216; chloritic 276-281	
316.0		S		Bx	GN	TALC	UMF						1						1			.001		790			As 216 weak foln ~60°;	less bx texture
336.0		S		Bx	GN	TALC	UMF						1						1			.001		791			As 216. Coarse mottled tgt.	
365.0		S		Bx	GN	TALC	UMF						5						1			.002		792			Well bxd	
368.0		SSS					FLT		20													.002		793			Graphitic, chloritic fault; loosely cemented gouge - qtz	low angle to CA 0-20°; veined + qv frags.
386.0		S		Bx	GN	TALC	UMF						5						1			.009		794			Chl-tic-talc UMF Bx; as	216 etc.
406.0		S		Bx	GN	CHL	UMF						2						1			.011		795			Transitio to dominantly chloritic	minor talc-alt'd UMF
426.0		S		Bx	GN	CHL	UMF						3						1			.008		796			As 406	
451.0		S		Bx	GN	CHL	UMF						3						1			.002		797			As 406	

PAMOREX

DRILL HOLE NP 92-1

Page [illegible]

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
460.0				MOT	GN		MD						.5						.5			.003		14798			Mafic Dyke - UM dyke; - at 30° CA, massive, cg mottled	Talcose; intrusive type contacts text. Purple-olivine? grains
496.0		5		Bx	GN	CHL	UMF						10						.5			.002		799			Chlorite UMF breccia; cut 4-12", esp 470-472.	by milky qtz-alb veins Barren. Spotted hem? altd.
~~[illegible]~~		~~5~~		~~Bx~~	~~[illegible]~~	~~[illegible]~~	~~UMF~~		~~40~~				~~5~~						~~.5~~			~~.002~~		~~797~~			~~As 476 vein 484-485~~	~~[illegible]~~
516.0		5		Bx	GN	CHL	UMF						1						.5			.004		800			As 496; well hematite stained	512-516. sg chloritic.
536.0		55		Bx	GN	CHL	UMF						3						.5			.013		801	✓		V. chloritic, schistose. Talc	lined qtz-alb veins
556.0		55		Bx	GN	CHL	UMF						3						.5			.006		802			As 536	
581.0		55		SHD	GN	CHL	UMF		25				1									.001		803			[illegible] sheared towards 571-572 barren milky qv	581 [illegible] at 0° CA.
586.0				SHD	GY		UMF		25				1									.004		804			Sheared [illegible] pale grey	[illegible]
588.0							QV		20											CPY	.5	.005		805			Milky qtz-alb vein; tr - ½% Chl talc margins + frags. Low	mg cpy; bx'd text, angle CA.
594.0				SHD		CARB	UMF															.001		806			Sheared + carb'd UM. Pale brown-	grey carb altd.
596.0				SHD		CARB	UMF						20									.003		807			Irreg milky qtz-alb veining.	[illegible] %
601.0							QV						50									.008		808			[illegible]	[illegible]
606.0				SHD		CARB	UMF		25				20									.010		809			Sheared UM [illegible] Blocky RQD = 20!	[illegible]
608.0				SHD		CARB	UMF						20									.003		810			As 606. Blocky.	
613.0				SHD		CARB	UMF						10						2			.002		811			As 606; blocky. Glassy qtz veins, 612.5-613	margins chloritic; w cg py

PAMOREX

DRILL HOLE NP 92-1

Page 5[illegible]

DIST	Id	ROCK DESCRIPTION: Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S: B	A1	J/F: J	A2	MINERALS – GANGUE: Qtz	C%		B%		C%	METALLIC: Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
617.0						CHL	UMF												2			.002		14812			Chloritic UMF-MVO; stg	chloritic; 2-5% diss py
623.0		SS				CHL	SZ		20													.002		813			Sheared chloritic rubble at Fault gouge at 20° at	[illegible] < 1"; chloritic [illegible]
627.5		M			GN	CHL	MVO															.001		814			[illegible]	[illegible]
631.0						CARB	SZ						10						3			.026		815			Carb[illegible] qtz-[illegible] flooded qtz veining.	[illegible] 2 [illegible] < 1"
636.0		S		SHD		CHL	MVO		45				10									.002		816			Stg chloritic, sheared;	minor qtz-alb 632-633
641.0		S		SHD		CHL	MVO						20						3			.019		817			Qtz-alb-ser flooded w cg	py 637-639
646.0		S		SHD		CHL	MVO		30													.002		818			Stg chloritic	
651.0		S		SHD		CHL	MVO															.001		819			MVO - [illegible] - spotted Banded [illegible]	LEUX [illegible]
653.0		S		SHD		CHL	MVO						10									.001		820			As 651; 1" QV at [illegible]	[illegible]
664.0		SSS				CHL	FLT		0													.006		821			Late chloritic rubble fault at	0°CA; gouge, blocky.
670.0		S		SHD		CC	MVO						20						.5			.001		822			Leucox [illegible] MVO; [illegible] CA with cg [illegible]	[illegible] veins at [illegible]
676.0		S		SHD		CC	MVO						20						.5	CP	.5	.003		823			As 670 - LEUX!	
681.0		S		SHD		CC	MVO						2									.001		824			As 670	
687.5		S		SHD		CC	MVO						20						1			.001		825			Prg less sheared → massive Irreg qtz-alb veining 685-	by 688. 687.5

PAMOREX

PAGE 2

DRILL HOLE NP 92-1

Page 5

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
706.0				SHD	GN	CC	MVO						5						1			.021		14826			Weakly sheared LEUCOX and py. Shearing conc in text as 736	MVO - Minor [illegible] qv's 6-12" zones banded tuff
729.5		S			GN	CC	MVO						3									.001		827			Dark green [illegible] Leux MVO Lacey <1" qtz veining.	. Mottled tex.
736.0		S		CONT	GN	CC	SED						3						1			.003		828			Mafic Volc - Sediment - [illegible] beds at 734. Interflow sediment.	[illegible]
766.0		S		BND		CC	MVO		55				3						1			.001		829			Well banded chlorite mafic volc uniform at 55° CA; flattended veinlets = mm size define foltn	- possibly chloritic tuff - amygs + alternating calcite
780.0		S		BND		CHL	MVO		60										1			.001		830			Chloritic, leucox bearing and [illegible] at 60°	Mafic Volc [illegible] mottled texture
786.0		S		BND		CHL	SED		60				3						2			.002		831			Tuff/Sed, bedding at 60; qv's < [illegible]	1" [illegible] as 736
791.0				BND		CHL	SED						1						1			.001		832			Banded chloritic tuff / MVO.	
796.0		M			RD		FP												.5			.002		833			Feldspar Porphyry intercalated Porph in [illegible] intervals 2-18" wide [illegible] Tr-½% diss py in FP.	with banded Chl Tuff. long; is pale red-brown [illegible]
802.0				BND		CHL	SED		60				3						1			.001		834			As 786	
808.0				BND		CHL	SED		60				1						.5			.003		835			As 786	
814.0				BND		CHL	SED		55				3						.5			.001		836			As 786 clear qv at 30° CA at	814

PAMOREX

PAGE 2

DRILL HOLE NP 92-1

Page 6

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	Ai	J	A2	Qz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
818.0		M	CG	POR	BN	SER	FP						5						.5			.002		14837			Pale brown felds porphyry; cut w tr-½% fg diss py in pale green sericitic ? CHL felds phenos + <10% glassy fg ser massive matrix	by late irreg milky qv's <1" matrix. Pale brown patchy filled fracts. 50-70% [illegible] qz widely spaced [illegible]
822.0		S		BND		CHL	SED						2						.5			.001		838			Well foli[illegible]	786 etc
826.0		M	CG	POR	RD	CHL	FP															.001		839			Composition as 818, but dark red-brown stained well foliated chloritic matrix	[illegible] felds phenos, set in
831.0		S		BND		CHL	SED															.001		840			As 786	
836.0																						.001		841			As 786	
841.0																						.001		842			As 786; coarser portion; carb	porphs
846.0																						.001		843			As 786 coarser; carb porphs	
851.0				CONT																		.001		844			As 786; contorted	
853.0		S		BND		CHL	SED															.001		845			As 786	
857.5						CHL	QV						70						.5			.001		846			Milky qv's; ribbon text; chl; at 853 - 854.5; 855.5 - 857	[illegible] margins, [illegible] 20-60° CA - [illegible]
862.5		S		BND		CHL	SED															.001		847			As 786	
867.5		S		BND		CHL	SED															.001		848			As 786. minor contorted	

PAMOREX

DRILL HOLE NP 92-1

Page 7

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz	C%		B%		C%	Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
								STRUCT. B/S		J/F		MINERALS GANGUE						METALLIC										
869.8		S		BND		CHL	SED						5						3			.001		14 849			Contact zone into sulphide Chloritic; well banded on mm. carb b[illegible] [illegible] a few mm thick.	rich sediment - similar to 786 etc cm scale sediment with [illegible] pyrite as beds
871.0		S		BND		PY	CHT		60				50						20			.006		850			2" of massive (>90%) pyrite [illegible] chert [illegible] a few mm [illegible] 50% chert	78[illegible] [illegible] [illegible] by [illegible]
876.0		S		BND		CHL	SED						5						2			.001		851			5 1-2" beds of chert/py as	871
881.3		S		BND		CHL	SED						2						.5			.001		852			1 × 2" [illegible] py bed	
886.3						PY	CHT						25						5			.001		853			Chl Sed intermixed w pyritic Pyritic chert 881.4 - 881.5;	[illegible] 88[illegible].0 - 886.3
891.5						CHL	SED						5						2			.001		854			Few scattered mm pyritic sediment.	beds in typ ~~[illegible]~~ chloritic
894.0						PY	CHT		65				20						1			.001		855			White sugary [illegible] 1-3" chloritic sed [illegible] pyrite	[illegible] beds
899.0						CHL	SED						1						.5			.001		856			Typ chl sed	
904.0						CHL	SED						1						.5			.001		857			Typ chl sed.	

PAMOREX

PAGE 2

DRILL HOLE NP 92-1

Page 8 8

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
908.0		M	MG	PORP	BD	CHL	QFP						1						.5			.001		858			Red - hematite? - stained	Mg QFP; contact at
																											904 at 30° CA; as w. 826.	Tr diss py
911.0		M	MG	PORP	BN	SER	QFP						2						1			.001		859			Subtle change to pale tan	grown sericitic matrix.
																											½-1% fg. diss py. Chl	frags + seams.
916.0		M	MG	PORP	BN	SER	QFP						2						1			.001		860			As 859	
921.0		M	MG	PORP	BN	SER	QFP						2						1			.001		861			As 859. Contact at 921	Chloritic at 80° CA.
926.0		M		MOT		CHL	MVO						1						.5			.001		862			Mottled carb altd stg	Chloritic massive
																											mafic Volcanic. ANK - weak	alt'n.
																											5% diss mg p	
956.0		M		MOT		CHL	MVO						1						.5			.001		863			As 926.	
END																												

Peter Harvey

NP 92-1

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 1/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14792	.002	70					
2	93	.002	70					
3	94	.009	310					
4	95	.011	375					
5	96	.008	275					
6	97	.002	70					
7	98	.003	105					
8	99	.002	70					
9	14800	.004	135					
10	01	.013	445					
11	02	.006	205					
12	03	.001	35					
13	04	.004	135					
14	05	.005	170					
15	06	.001	35					
16	07	.003	105					
17	08	.008	275					
18	09	.010	340					
19	10	.003	105					
20	11	.002	70					
21	12	.002	70					
22	13	.002	70					
23	14	.001	35					
24	D-14815	.026	890					

Lab16

Chief Chemist: _____

NP 92-1

ROYAL OAK ANALYTICAL LABORATORY

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 1/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14816	.002	70					
2	17	.019	650					
3	18	.002	70					
4	19	.001	35					
5	20	.001	35					
6	21	.006	205					
7	22	.001	35					
8	23	.003	105					
9	24	.001	35					
10	25	.001	35					
11	26	.021	720					
12	27	.001	35					
13	28	.003	105					
14	29	.001	35					
15	D-14830	<.001	<35					
16								
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

ROYAL OAK ANALYTICAL LABORATORY

NP 92-1

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 2/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14831	.002	70					
2	32	.001	35					
3	33	.002	70					
4	34	.001	35					
5	35	.003	105					
6	36	.001	35					
7	37	.002	70					
8	38	<.001	<35					
9	39	<.001	<35					
10	40	<.001	<35					
11	41	<.001	<35					
12	42	<.001	<35					
13	43	<.001	<35					
14	44	<.001	<35					
15	45	<.001	<35					
16	46	<.001	<35					
17	47	<.001	<35					
18	D-14848	<.001	<35					
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: _____

ROYAL OAK ANALYTICAL LABORATORY

NP 92-1

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 2/92

	SAMPLE NUMBER	Au oz/ton	Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	
1	D-14849	.001	35	2.2	139.	95.	12.	
2	50	.006	205	4.4	85.	22.	30.	
3	51	.001	35	2.0	115.	80.	15.	
4	52	<.001	<35	2.1	125.	86.	16.	
5	53	<.001	<35	2.7	110.	40.	24.	
6	54	<.001	<35	2.1	153.	87.	16.	
7	55	<.001	<35	3.8	145.	25.	28.	
8	56	<.001	<35					
9	57	<.001	<35					
10	58	<.001	<35					
11	59	<.001	<35					
12	60	<.001	<35					
13	61	<.001	<35					
14	62	<.001	<35					
15	D-14863	<.001	<35					
16		END						
17								
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist:

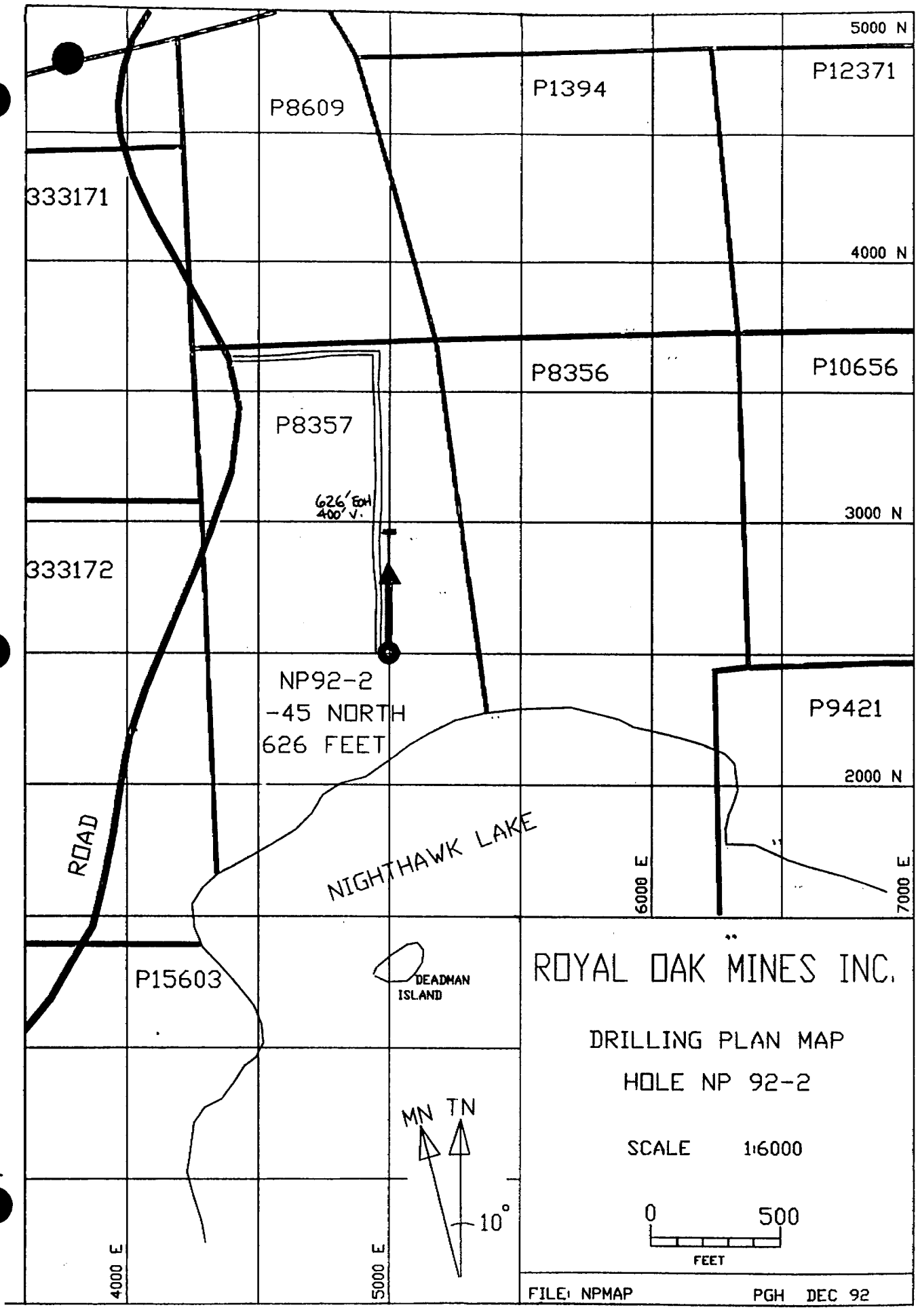
SUMMARY LOG

Hole Number:	NP92-2
Claim No., Twp.:	P 8357
Date Drilled:	September 26-28, 1992
Contractor:	NDS Drilling
Equipment:	Longyear 38
Property:	NHL - Hydra
Co-ordinates:	2500N, 5000E, El 10910, Azimuth 360°, -45° dip Local Grid: 2000 W; 2400 S
Directional Data:	116': Az. 355, -44° dip; 300': Az. 350, -40° dip; 500': Az. 352, -36° dip;
Length, Core Size:	626 feet BQ
Casing, Overburden:	104 feet BW (left in hole)
Logged by:	P. Harvey
Core Storage:	Hollinger Property Core Storage Facility
Log Completed:	Sept. 30, 1992.

COMMENTS

The hole cored ash-lapilli tuffs to 216 feet, chloritic mafic volcanics to 587.5 feet, QFP to 607 feet, and ended in chloritic mafic volcanics at 626 feet.

The highest value for the hole came from the mafic volcanics at the contact with the QFP, 583.0'-587.5' assayed 0.130 opt Au/4.5 feet.


5000 N
P12371
P1394
P8609
333171
4000 N
P8356
P10656
P8357
626' EOH
400' V.
3000 N
333172
NP92-2
-45 NORTH
626 FEET
P9421
2000 N
ROAD
NIGHTHAWK LAKE
6000 E
7000 E
P15603
DEADMAN
ISLAND
MN TN
10°
4000 E
5000 E
ROYAL OAK MINES INC.
DRILLING PLAN MAP
HOLE NP 92-2
SCALE 1:6000
0 500
FEET
FILE: NPMAP PGH DEC 92

NHL LEGEND

ROCK DESCRIPTION

COMPETENCE (Com)

M	Massive
S	Weakly Schistose
SS	Moderately Schistose
SSS	Very Schistose

TEXTURE (Text)

BED	Bedded
BND	Banded
Bx	Brecciated
CONT	Contorted
FLT	Faulted
FRAC	Fractured
LEUX	Leucoxene-bearing
MOT	Mottled
PILL	Pillowed
POR	Porphyritic
SHD	Sheared

COLOUR (Co)

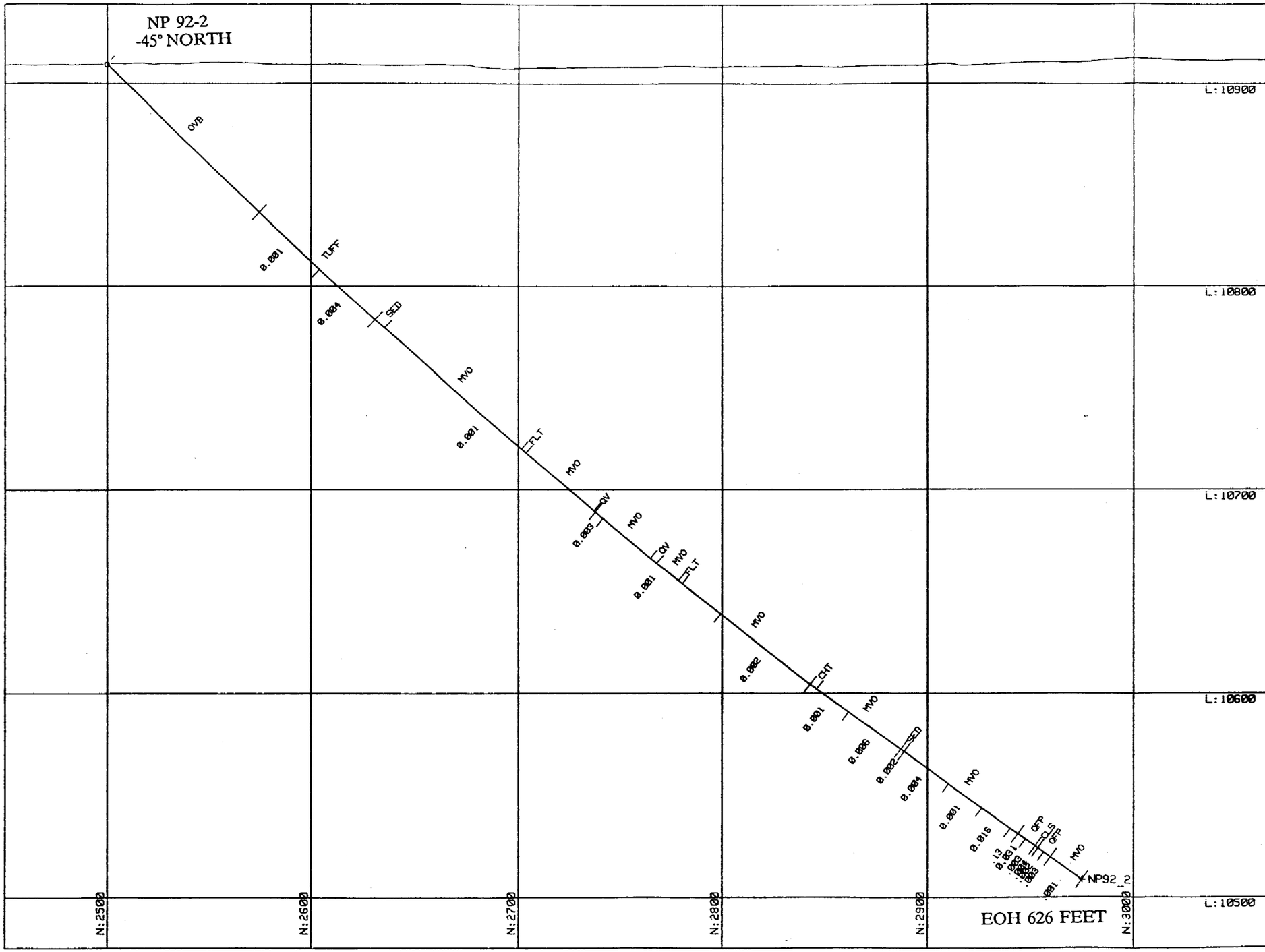
BK	Black
BN	Brown
GN	Green
GY	Grey
RD	Red
WH	White

ALTERATION (Alt)

ANK	Ankerite
BLD	Bleached
CAL	Calcite
CARB	Carbonatized
CC	Chlorite-Calcite
CHL	Chlorite
GRA	Graphite
LEUX	Leucoxene-bearing
OX	Oxidized
QC	Quartz-calcite veinlets
QV	Quartz-veined
SER	Sericite
SIL	Silica
TALC	Talc

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CCRB	Chloritic carbonate
CHT	Chert
CLS	Chlorite Schist
DIA	Diabase
FCRB	Fuchsitic carbonate
FBX	Fault Breccia
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
GWK	Greywacke
KOM	Komatiite
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
PPOR	CCRB with Ankerite porphyritic texture
QBX	Quartz Breccia
QFP	Qtz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Volcanic tuff
UMF	Ultramafic volcanic
VPL	Variolitic Pillow Lava



SCALE 1:600

ROCK NAME

AGG	Agglomerate
ARG	Argillite
BCRB	Brown carbonate
CHT	Chert
CLS	Chlorite Schist
FLT	Fault
FP	Feldspar Porphyry
GCRB	Grey carbonate
MD	Mafic Dyke
MVO	Mafic Volcanic
OVB	Overburden
QFP	Quartz-feldspar porphyry
QV	Quartz Vein
SED	Sediment
SZ	Shear Zone
TUFF	Tuff
UMF	Ultramafic volcanic

ROYAL OAK MINES INC.
DRILL HOLE SECTION

5000 E

HOLE: NP 92-2
CLAIM: P 8357

0 1" = 50' 50'

NOV. 1992 | LHA | DWG NHL186

ROYAL OAK MINES INC.

PAMOREX

PROJECT: NHL Claim P 8357 North Pon Grid ±2000W; 2400S — Logged By: P Harvey — PAGE 1 — AAR — CAT — Date: 9/29/1992 — Page 1 of 4

DRILL HOLE	NORTHING	EASTING	ELEVATION	LENGTH	OBI	OBE	INC	LEASE
NP 92-2	2500	5000	10910	626.0				

DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP	DIST	AZIM	DIP
0	360	45												
116	355	44												
306	350	40												
506	352	36												

(10' BW casing left in hole)

DIST	Id	Com	Grs	Text	Co	Alt	Nam	B	A1	J	A2	Qtz A%	B%	C%	Py D%	E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
																			Purpose–			Hole drilled to test Airborne	Mag Low
																			Results–			Anomaly not explained; .13/ton on mafic/QFP contact	at 583'
105.0							OVB															20' Grind 105-146.	
146.0		SSS		BED		OX	TUFF		50								.001		14864			Ash-Lapilli Tuff. Oxidized rubble + Wxd out carb to 144. Blocky-rubble core to 144'; Hetro dominantly mafic lensoidal frags 2-10mm; frags scattered within chloritic	casing to 105' ≤10% felsic vtg matrix. 2×6" Sections GRAPH
182.0		S		CONT	GN	CHL	TUFF										.004		865			Ash-Lap Tuff as 146. Hematite stained 144-156. Bedding locally contorted.	
188.0		S		BED		CAL	SED		40			5			5		.001		866			Pyritic-carbonate sediment; w/ chl mafic material. Carb Py beds 1-2mm scattered through. Also cross-cutting carb veining	bedded on cm scale beds often vuggy 1-10 mm;
216.0		M		MOT	GN	ANK	MVO					2					.001		867			Massive mafic Volcanic; stg plenos scattered through. 1-2% lacey q-c veining, m-cg	chloritic with mottled ANK diss py in matrix.
246.0		M		LEUX		CC	MVO					2			1		.001		868			Chlorite-calcite leucox bearing weak foltn ~60°, 2-3% lacey Occasional section blocky core	Massive Mafic Volc. q-c veinlets
278.0		M		LEUX		CC	MVO					2			1		.001		869			As 246.	

PAMOREX

DRILL HOLE NP 92-2

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Q+z	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
281.0							FLT		20													.001		14870			Chloritic rubble + gouge at 20°	20° CA; 1-3 mm qv's at
306.0		M		LEUX		CHL	MVO						2									.001		871			Massive Chl-Calcite MVO w stained.	Leux as 246 · Hematite
321.0		M		LEUX		CHL	MVO						2									.001		872			As 306; 6" barren qv at	40° at 319
325.2		M		LEUX		CHL	MVO						5									.001		873			As 306;	
326.0						CHL	QV						90									.001		874			Milky white qv w chl margins	+ fringe; at 50° CA.
331.0				MOT		BLD	MVO		40				1					3				.003		875			Bleached pale grey-tan; foliated locally (327-328)	mottled ANK text. Well - sediment w py beds
336.0				MOT		BLD	MVO						3									.001		876			As 331; lacks py seds.	Rusty FLT at 333
341.0				MOT		BLD	MVO						3					1				.001		877			As 331; tr-1% py seams.	
346.0				MOT		BLD	MVO						2					.5				.001		878			As 331	
351.0				MOT		BLD	MVO						3					2				.001		879			As 331; diss mg py, 4"	QV at 351 band w py
356.0				MOT		BLD	MVO						1					.5				.001		880			As 331	
362.0				PILL		BLD	MVO						5					.2				.001		881			V. stg bleached tan-green selvs. pyritic.	colour; pass pill selvs,
366.0							FLT						3					.5				.001		882			Blocky rubble core; As 331 etc	
371.0				MOT		BLD	MVO						1					3				.001		883			Pale grey bleached ANK MVO as and speck py.	331; fracts + seams w py
376.0				MOT		BLD	MVO						2					2				.001		884			As 371	
399.5				MOT		BLD	MVO						2					2				.001		885			As 371	

PAMOREX

DRILL HOLE NP 92-2

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
382.0						CHL	FLT		30				10									.001		14886			Milky qtz veining and at ± 10-30° CA	chloritic rubble and gouge
406.0		M		Q-C	GN	CC	MVO						5						.5			.001		887			Chlorite-calcite alt'd Massive late fractures w hematite Lacks leucox + mottled tex text perrasive silicified.	Mafic Volc; q-c filled staining. of MVO at 246 etc, weak
436.0		M		QC	GN	CC	MVO						3						.5			.002		888			As 406.	
463.0		S		QC	GN	CC	MVO						5						.5			.002		889			As 406. Prog inc foltd towards 463 Hematite stained 441-442.	
467.0							CHT		55				90						5			.001		890			Sugar text recryst chert w 55° CA; gen chloritic bands 1- band 1-3 mm = interval.	sediment bands within at 3 cm; rare massive py
486.0		S		QC	GN	CC	MVO		55				5						.5			.001		891			Well foliated chl-Calcite	mafic Volcanic; as 406 etc
517.0		S		QC	GN	CC	MVO						5									.006		892			As 486	
519.0						CHL	SED						3						1			.002		893			Well foliated Mafic Volc - poss w sugary chert as at 467 Irreg q-c veining cuts balance	sediment - esp 517-518 and 2-3% py in interval of interval
546.0		M		QC		CC	MVO						5						.5			.004		894			Chloritic massive Mafic Volc as Barren, irreg q-c veins <1"	406 etc from 529-536
566.0				QC		CC	MVO						2						.5			.001		895			Typ MVO as 406 etc. Hem stained fractures common.	
583.0				QC		CC	MVO						2						.5			.016		896			As 566; with LEUCOXENE	

PAMOREX

DRILL HOLE NP 92-2

Page 4 4

DIST	Id	ROCK DESCRIPTION Com	Grs	Text	Co	Alt	Nam	STRUCT. B/S B	A1	J/F J	A2	MINERALS GANGUE Qtz	C%		B%		C%	METALLIC Py	D%		E%	opt Au	F%	Spl #	Wdth	T	COMMENTS 1	COMMENTS 2
587.5						CC	MVD		60				5						2			.130		14897	4.5		MVD as above; poppated w	Leucox; well foltd
																											Scattered <1" clear qv's;	2% diss + clusts of py
592.0		M	CG	PORP	WH	CHL	QFP						3						3			.031		898			Intrusive contact at 60% into	coarse grained qtz-felds
																											porphyry; ≈80% mm sized	white-pink felds phenos
																											loosely packed w ≈10-20%	clear qtz in vfg chl-ser
																											schistose matrix. Well	mineral w 2-3% diss fg
																											py diss throughout.	
597.8		M	CG	PORP	WH	CHL	QFP						5						3			.003		899			As 592; late <½" qv's	
599.5							CLS						2					.5				.004		900			Chloritic schist = Fault zone	1 mafic vole xenolith.
603.0		M	CG	PORP	WH	CHL	QFP						1						1			.002		901			As 592; more chloritic +	nil-1% vein qtz + lesser py
607.0		M	CG	PORP	WH	CHL	QFP						1						1			.003		902			As 603, bleached lower	contact at 606.5-607
																											at 60	
612.0		S				CHL	MVD						3					.5				.001		903			Stg Chloritic Mafic vole.	Well foltd; locally contorted
																											Weak mottled Ank. text.	
626.0		S				CHL	MVD						2					.5				.001		904			As 612. Chl gouge Fault	at 615.5
																											Barren 4" qv at 616.5	
END																												

COMMENTS 1	COMMENTS 2
MVD as above; poppated w	Leucox; well foltd
Scattered <1" clear qv's;	2% diss + clusts of py
Intrusive contact at 60% into	coarse grained qtz-felds
porphyry; ≈80% mm sized	white-pink felds phenos
loosely packed w ≈10-20%	clear qtz in vfg chl-ser
schistose matrix. Well	mineral w 2-3% diss fg
py diss throughout.	
As 592; late <½" qv's	
Chloritic schist = Fault zone	1 mafic vole xenolith.
As 592; more chloritic +	nil-1% vein qtz + lesser py
As 603, bleached lower	contact at 606.5-607
at 60	
Stg Chloritic Mafic vole.	Well foltd; locally contorted
Weak mottled Ank. text.	
As 612. Chl gouge Fault	at 615.5
Barren 4" qv at 616.5	

ROYAL OAK ANALYTICAL LABORATORY

NP 92-2

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: Oct 5/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14864	<.001	<35					
2	65	.004	135					
3	66	<.001	<35					
4	67	<.001	<35					
5	68	<.001	<35					
6	69	<.001	<35					
7	70	<.001	<35					
8	71	<.001	<35					
9	72	<.001	<35					
10	73	<.001	<35					
11	74	<.001	<35					
12	75	.003	105					
13	76	<.001	<35					
14	77	<.001	<35					
15	78	<.001	<35					
16	79	<.001	<35					
17	80	<.001	<35					
18	81	<.001	<35					
19	82	<.001	<35					
20	83	<.001	<35					
21	84	<.001	<35					
22	85	<.001	<35					
23	86	<.001	<35					
24	D-14887	<.001	<35					

Lab16

Chief Chemist: [signature]

ROYAL OAK ANALYTICAL LABORATORY

NP 92-2

CERTIFICATE OF ANALYSIS

EXPLORATION 1602

DATE: OCT 5/92

	SAMPLE NUMBER	Au oz/ton	Au ppb					
1	D-14888	.002	70					
2	89	.002	70					
3	90	<.001	<35					
4	91	.001	35					
5	92	.006	205					
6	93	.002	70					
7	94	.004	135					
8	95	.001	35					
9	96	.016	550					
10	97	.130	-	?				
11	98	.031	1060					
12	99	.003	105					
13	14900	.004	135					
14	01	.002	70					
15	02	.003	105					
16	03	<.001	<35					
17	D-14904	.001	35					
18								
19								
20								
21								
22								
23								
24								

Lab16

Chief Chemist: _____

ASSM'T FILES PAGE

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9360.00103

Personal information collected on this form is obtained under the authority of the Min this collection should be directed to the Provincial Manager, Mining Lands, Minist Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

42A07NW8463 38 CODY

900

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s): ROYAL OAK MINES Inc.		Client No. 136226
Address: P.O. BAG 2010, Timmins, Ont, P4N 7X7		Telephone No. 705-360-1141
Mining Division: PORCUPINE	Township/Area: CODY / MACKLEM	M or G Plan No.: G-3994
Dates Work Performed: From: Sept 23, 1992	To: Oct. 21, 1992	

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	
✓	Physical Work, Including Drilling	Diamond drilling
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

ONTARIO GEOLOGICAL SURVEY
GIS - ASSESSMENT FILES
JUN 04 1993
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Total Assessment Work Claimed on the Attached Statement of Costs $ 136,802.00 PRC

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

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

Name	Address
Peter Harvey	P.O. Box 1555, South Porcupine, Ont P0N 1H0
NDS Drilling	P.O. Box 2180, Timmins, Ont. P4N 7X8
Paul Coad	528 Murray St., Timmins, Ont., P4N 7A9

(attach a schedule if necessary)

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

	Date	Recorded Holder or Agent (Signature)
I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	May 5, 1993	Paul COAD

Certification of Work Report

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

Name and Address of Person Certifying: Paul COAD 528 Murray St, Timmins, Ont, P4N 7A9

Telepone No.	Date	Certified By (Signature)
705-360-264-1806	May 5, 1993	COAD

ASSOCIATION OF CANADA · FELLOW

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
$ 136,802.00	MAY 5TH /93		PORCUPINE MINING DIVISION RECEIVED MAY 5 1993 AM. (c) 9:30
	Deemed Approval Date: AUG. 3RD /93	Date Approved	
	Date Notice for Amendments Sent		

0241 (03/91)

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	P9898	1	24,813.00 PRC		12,824.00 PRC	11,989.00 PRC
	P15603	1	30,343.00 PRC		12,726.00	17,617.00 PRC
	P333172	1	52,483.00 PRC		17,120.00 PRC	35,363.00 PRC
	P1394	1	11,982.00 PRC		10,535.00 PRC	1447.00 PRC
	P8356	1	5641.00 PRC		5641.00 PRC	0 PRC
	P8357	1	11,540.00 PRC		11,540.00 PRC	0
	P1188861	1		$ 1986.00 PRC		
	P1188884	1		$ 2000.00		
	P1188883	1		"		
	P1188871	1		"		
	P1188862	1		"		
	868219	1		$ 800		
	868218	1		"		
	868204	1		"		
	868205	1		"		
	868206	1		"		
	868207	1		"		
	17		$ 136,802.00		70,386.00 PRC	66,416.00 PRC
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

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

1. ☒ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

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

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

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

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Signature [signature] Date May 5, 1993

ASSOCIATION OF CANADA P. R. COAD 07039 FELLOW

0241 (03/91)

Numéro de rapport sur les travaux exécutés pour l'affectation de la réserve	Numéro de claim	Nombre d'unités	Valeur des travaux d'évaluation exécutés sur ce claim	Valeur affectée à ce claim	Valeur transférée de ce claim	Réserve : travaux à réclamer à une date ultérieure
	868 208	1		800		
	868 215	1				
	868 216	1				
	868 217	1				
	868 202	1				
	868 201	1				
	867800	1				
	1031185	1				
	1031190	1				
	1031191	1				
	1031194	1				
	1031195	1				
	1128446	1				
	1031186	1				
	1031189	1				
	1031192	1				
	1031193	1				
	17	Nombre total de claims	Valeur totale des travaux exécutés	Valeur totale des travaux qui a été affectée	Total transféré	Réserve totale

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Receipt

Les crédits que vous réclamez dans le présent rapport peuvent être réduits. Afin de diminuer les conséquences défavorables de telles réductions, veuillez indiquer l'ordre dans lequel vous désirez qu'elles soient appliquées à vos claims. Veuillez cocher (✓) l'une des options suivantes :

1. ☐ Les crédits doivent être réduits en commençant par le dernier claim sur la liste.
2. ☐ Les crédits doivent être réduits également entre tous les claims figurant dans le présent rapport.
3. ☐ Les crédits doivent être réduits selon l'ordre donné en annexe.

Si vous n'avez pas choisi d'option, la première sera appliquée.

Note 1 : Examples d'intérêts bénéficiaires : cessions non enregistrées, ententes sur des options, protocoles d'entente, etc. relatifs aux claims.

Note 2: Si des travaux ont été exécutés sur un terrain faisant l'objet de lettres patentes ou d'un bail, veuillez remplir ce qui suit:

Je certifie que le titulaire enregistré possédait un intérêt bénéficiaire sur le terrain faisant l'objet de lettres patentes ou d'un bail, au moment où les travaux ont été exécutés.

Signature

Date

0241 (05/91)

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
	867799	1
	867798	1
	867797	1
	868214	1
	868213	1
	868212	1
	1031181	1
	970003	1
	1031187	1
	1031188	1
	1030722	1
	1030721	1
	1030718	1
	1026095	1
	970001	1
	1026097	1
	1128427	1
	17	
	Total Number of Claims	

Value of Assessment Work Done on this Claim	Value Applied to this Claim
	800
	800
Total Value Work Done	Total Value Work Applied

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
Total Assigned From	Total Reserve

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I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Signature: [signature]

Date: May 5/93

ASSOCIATION OF CANADA · GEOLOGICAL · P.R. COAD

0241 (03/91)

Numéro de rapport sur les travaux exécutés pour l'affectation de la réserve	Numéro de claim	Nombre d'unités	Valeur des travaux d'évaluation exécutés sur ce claim	Valeur affectée à ce claim	Valeur transférée de ce claim	Réserve : travaux à réclamer à une date ultérieure
	1128428	1		$800		
	1031251	1				
	1031250	1				
	1031245	1				
	1031244	1				
	1031239	1		$800		
	1031238	1				
	1031249	1				
	1031246	1				
	1031248	1				
	1031247	1				
	1128382	1				
	1031231	1				
	1128383	1				
	1128384	1				
	1031225	1				
	1031226	1		$800		
	17					
	Nombre total de claims		Valeur totale des travaux exécutés	Valeur totale des travaux qui a été affectée	Total transféré	Réserve totale

RECORDED
MAY - 5 1993
Receipt _____

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Note 2: Si des travaux ont été exécutés sur un terrain faisant l'objet de lettres patentes ou d'un bail, veuillez remplir ce qui suit: ✓

Je certifie que le titulaire enregistré possédait un intérêt bénéficiaire sur le terrain faisant l'objet de lettres patentes ou d'un bail, au moment où les travaux ont été exécutés.

Signature

Date

0241 (05/91)

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	1031229	1		$800		
	1031228	1		$800		
	1031227	1		$800		
	1025818	1		$400		
	1025819	1		400		
	1025820	1		$400		
	1025821	1				
	1025822	1				
	779926	1				
	779927	1				
	779928	1				
	724611	1				
	724610	1				
	724609	1				
	724608	1				
	724607	1				
	724606	1		$400.00		
	17					
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

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MAY - 5 1993
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Date May 5/93

Signature [illegible]

ASSOCIATION OF CANADIAN GEOLOGISTS P. R. GOAD

0241 (03/91)

Numéro de rapport sur les travaux exécutés pour l'affectation de la réserve	Numéro de claim	Nombre d'unités	Valeur des travaux d'évaluation exécutés sur ce claim	Valeur affectée à ce claim	Valeur transférée de ce claim	Réserve : travaux à réclamer à une date ultérieure
	724605			$400 ↓		
	724604					
	724603					
	724602					
	724601					
	724600			↓		
	724599			$400 ↓		
	868221					
	868222					
	868223					
	868224					
	868225					
	868226					
	868227					
	868228					
	868211			↓		
	868203		136,802.00	$400 PRC	PRC	PRC
	17		$136,802.00	$70,386.00	70,263.00	66,416.00
	Nombre total de claims		Valeur totale des travaux exécutés PRC	Valeur totale des travaux qui a été affectée	Total transféré	Réserve totale

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Receipt

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Note 1 : Exemples d'intérêts bénéficiaires : cessions non enregistrées, ententes sur des options, protocoles d'entente, etc. relatifs aux claims.

Note 2 : Si des travaux ont été exécutés sur un terrain faisant l'objet de lettres patentes ou d'un bail, veuillez remplir ce qui suit :

Je certifie que le titulaire enregistré possédait un intérêt bénéficiaire sur le terrain faisant l'objet de lettres patentes ou d'un bail, au moment où les travaux ont été exécutés.

Date: May 5/93

Signature: [signature]

ASSOCIATION OF CANADA GEOLOGICAL FELLOW P. R. [illegible]

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction: W9360.00103

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

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

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		[illegible]
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type ddh	80,350.00	
	Survey	1087.00	
	Assays	8250.00	[illegible]
Supplies Used Fournitures utilisées	Type Computer	68.00	
	Core storage	571.00	
			[illegible]
Equipment Rental Location de matériel	Type		
			[illegible]
	Receipt _____ **Total Direct Costs Total des coûts directs**		[illegible]

RECORDED MAY - 5 1993

2. Indirect Costs/Coûts indirects

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

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type vehicle lease	1504.00	
	fuel	791.00	
			[illegible]
Food and Lodging Nourriture et hébergement	office rent	799.00	[illegible]
Mobilization and Demobilization Mobilisation et démobilisation			[illegible]
	Sub Total of Indirect Costs Total partiel des coûts indirects		[illegible]
	Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)		[illegible]
	Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs) **Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)**		[illegible]

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

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

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.

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

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Remises pour dépôt

PORCUPINE MINING DIVISION RECEIVED MAY 5 1993

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.

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

Valeur totale du crédit d'évaluation	Evaluation totale demandée
× 0,50 =	

Certification Verifying Statement of Costs

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

that as Senior Project Geologist (Recorded Holder, Agent, Position in Company) I am authorized

to make this certification

Attestation de l'état des coûts

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

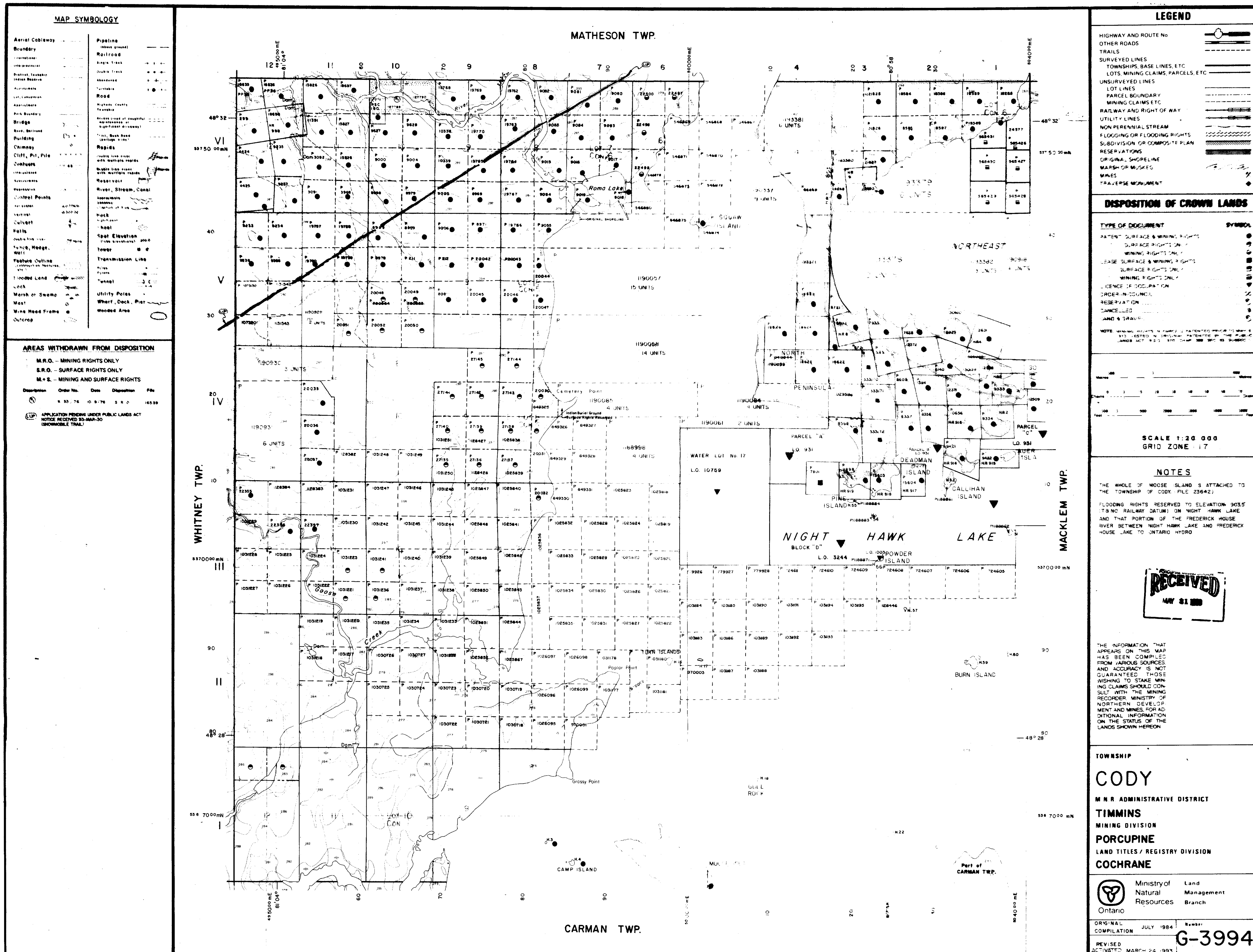
Et qu'à titre de P. R. COAD (titulaire enregistré, représentant, poste occupé dans la compagnie) je suis autorisé

à faire cette attestation.

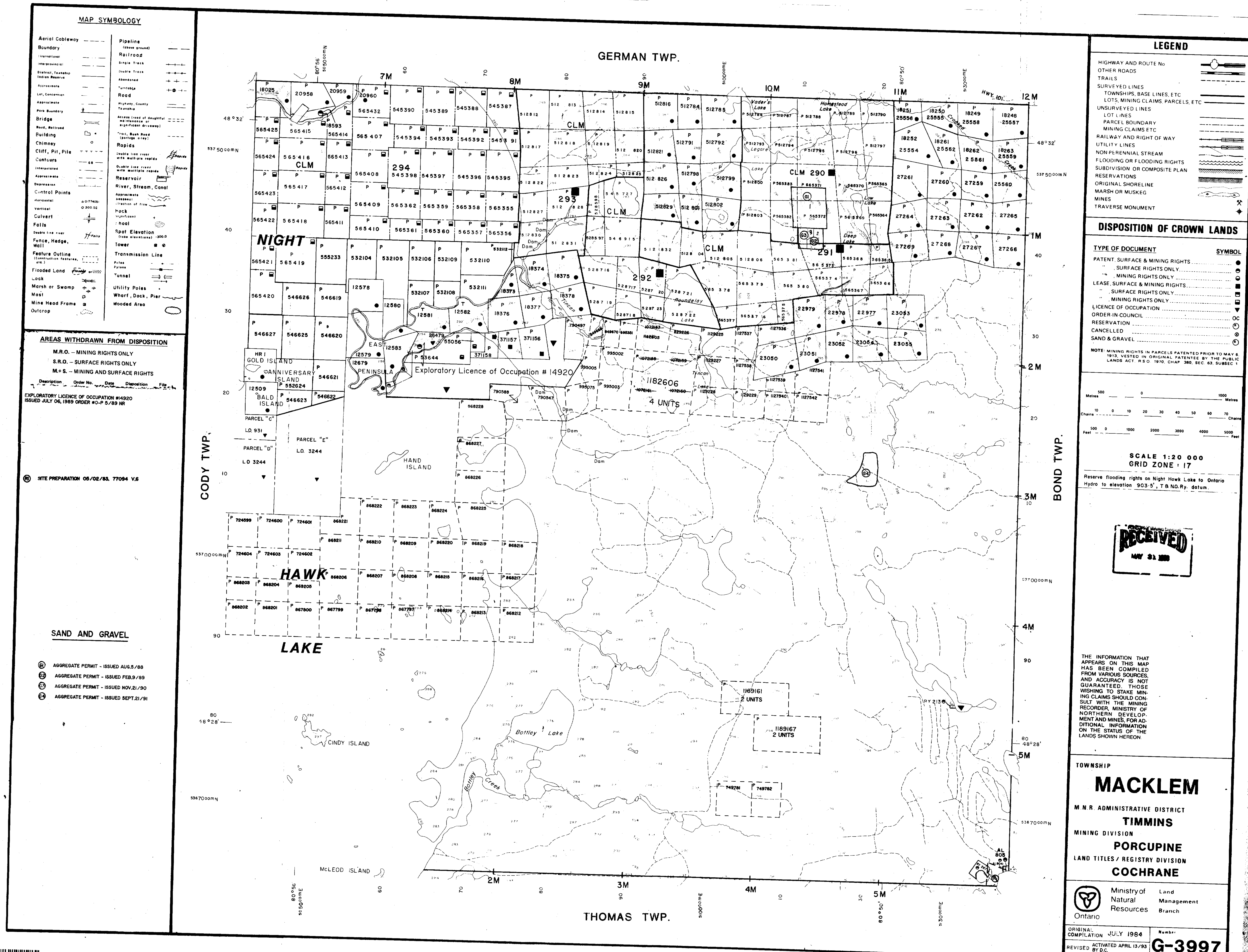
Signature	Date
[signature]	May 5, 1993

0212 (04/91)

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


MAP SYMBOLOGY
AREAS WITHDRAWN FROM DISPOSITION
M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+S. – MINING AND SURFACE RIGHTS
MATHESON TWP.
CARMAN TWP.
WHITNEY TWP.
MACKLEM TWP.
NIGHT HAWK LAKE
NORTH PENINSULA
NORTHEAST
DEADMAN ISLAND
CALLIHAN ISLAND
PINE ISLAND
POWDER ISLAND
BURN ISLAND
CAMP ISLAND
Romo Lake
Cemetery Point
Grassy Point
Poplar Point
Goose Creek
WATER LOT No. 17
L.O. 10759
PARCEL "A"
PARCEL "C"
BLOCK "D"
L.O. 3244
Part of CARMAN 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
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.& N.O. 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
RECEIVED
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
Ontario
Ministry of Natural Resources
Land Management Branch
ORIGINAL COMPILATION JULY 1984
Number
G-3994
REVISED
ACTIVATED MARCH 24, 1993

200


MAP SYMBOLOGY
AREAS WITHDRAWN FROM DISPOSITION
M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS
EXPLORATORY LICENCE OF OCCUPATION #14920 ISSUED JULY 06, 1989 ORDER #O-P 5/89 NR
SITE PREPARATION 06/02/83, 77094 V.6
SAND AND GRAVEL
AGGREGATE PERMIT - ISSUED AUG.5/88
AGGREGATE PERMIT - ISSUED FEB.9/89
AGGREGATE PERMIT - ISSUED NOV.21/90
AGGREGATE PERMIT - ISSUED SEPT.21/91
GERMAN TWP.
CODY TWP.
BOND TWP.
THOMAS TWP.
NIGHT HAWK LAKE
Exploratory Licence of Occupation # 14920
Bottley Lake
Bottley Creek
Roundelay Lake
Tincan Lake
Homestead Lake
Vader's Lake
Deep Lake
Low Lake
HAND ISLAND
CINDY ISLAND
McLEOD ISLAND
GOLD ISLAND
ANNIVERSARY ISLAND
BALD ISLAND
EAST PENINSULA
PARCEL "C" L.O. 931
PARCEL "D" L.O. 3244
PARCEL "E" L.O. 3244
CLM 290
CLM 291
CLM 292
CLM 293
CLM 294
1182606 4 UNITS
1169161 2 UNITS
1189167 2 UNITS
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
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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
Reserve flooding rights on Night Hawk Lake to Ontario Hydro to elevation 903.5', T & N.O.Ry. datum.
RECEIVED
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
MACKLEM
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 APRIL 13/93 BY D.C.
Number
G-3997

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