SUMMARY REPORT

on the

COOK-DECKER PROPERTY

of

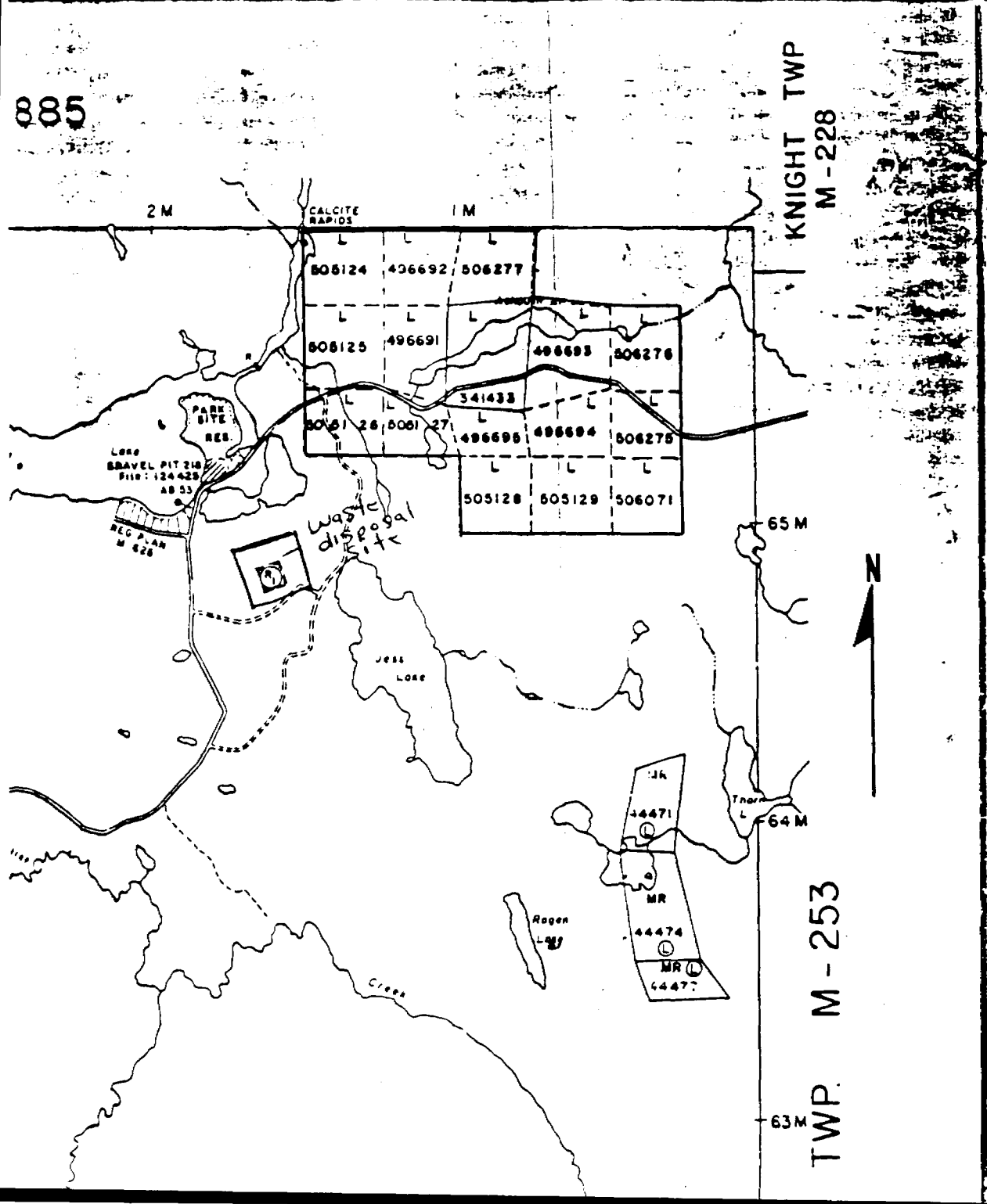
ORCANA RESOURCES LIMITED

MacMurchy Township
Ontario

November 18, 1987

J.E. Mountjoy

MOUNTJOY EXPLORATION AND CONSULTING SERVICES



THE TOWNSHIP OF

MACMURCHY

DISTRICT OF SUDBURY

LARDER LAKE MINING DIVISION

SCALE· 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O
MINING RIGHTS ONLY	M.R.O
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED PATENTED S.R.O.	

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INTRODUCTION

During the period from July 15, 1987 to August 25, 1987 a grass-roots exploration program was undertaken on the ORCANA RESOURCES LIMITED property in MacMurchy Township. The exploration program consisted of linecutting, geophysical and geological surveys as well as a limited diamond drilling program.

The linecutting, geophysical and geological surveys were carried out and reported on by Phantom Exploration Services Ltd. of Thunder Bay, Ontario under the direct supervision of R.D. Middaugh. The diamond drilling was supervised and reported on by the author.

PROPERTY, LOCATION AND ACCESS

The Cook-Decker Property consists of 14 staked claims and one leased claim situated in the northeast corner of MacMurchy approximately 18 miles west of Gowganda, Ontario and 19 kilometers east of Shining Tree, Ontario. The claims are numbered L. 341433 (leased), L. 496691 to 95 inclusive, L. 505124 to 29 inclusive, L. 506271 and L. 506275 to 77 inclusive.

Access to the property is best afforded by highway #560 which traverses the property. This all weather gravel road runs from Gowganda to Shining Tree and points beyond.

PREVIOUS WORK

The earliest recorded work carried out on the claim group was done so by Mr. G.L. Holbrooke of Erie Canadian Mines Limited in June 1939 when check sampling on apparently pre-existing trenches was carried out.

A reported assay of 18.4 dwt (.92 ozs Au/t) and a number of lower assays convinced Erie Canadian Mines to option the property from Mr. Claude Cook. From July 11, 1939 to July 22, 1939 Erie Canadian Mines Ltd. drilled three holes in a southwesterly direction for a total footage of 674.2 feet. The drilling encountered values ranging from trace to 0.11 ounces of gold per ton over 4.8 feet. Given the price of gold at $35.00 per ounce the results discouraged Erie Canadian Mines Limited from extending their option and the claims were returned to Mr. Cook.

Between August 6, 1952 and October 14, 1952 the Bessey Mining Syndicate drilled eight holes to test the general showing area previously tested by Erie Canadian Mines. The evaluation of the showing was continued subsequent to Tenendo Mining Corporation acquiring an option to purchase an interest in the property. Between January 10, 1953 and August 11, 1953 Tenendo completed the drilling of 11 holes bringing the combined Tenendo/Bessey drill footage to 8,139 feet. Despite encountering anomalous gold values (see table #1) no further work was recorded or known to have been carried out until 1972 when the claims were staked by Mr. A. Decker of Gowganda, Ontario.

During the period from November 1972 to Janaury 1978 Mr. Decker carried out a variety of work including: trenching, plugger work, stripping and power stripping. On March 16, 1978 survey plans were received and subsequently approved in order to bring claim L. 341433 to lease.

The next work known to have been carried out on the property was a 101 foot long drill hole. The hole was drilled in October of 1984 by Mr. Albert Decker. The hole was drilled into the main gold showing however no assay values were made available to the author. No other work is known to have been carried out prior to Orcana's work of the past summer.

GENERAL GEOLOGY

The Cook-Decker Property is underlain by an incompletely understood sequence of intermediate ? to ultramafic flows which have been intruded by porphyry dykes, mafic dykes, and quartz diabase dykes. The sequence is at least in part capped by orthoconglomerate of the Gowganda Formation. It has also been suggested that remnants of Nipissing - type mafic intrusive rocks are present within the claim area (Carter, 1971).

During the summer of 1971 the geology of MacMurchy and Tyrrell Townships was mapped by M.W. Carter and assistants for the Ontario Division of Mines.

The property geology was mapped by R.D. Middaugh during the summer of 1987. The results of his survey may be found in Appendix A of this report.

Based on the results of the drilling program and limited whole rock analysis the following geological picture has developed in the vicinity of the gold showing.

TABLE #1
Significant Assay Results 1939 - 1953

Hole #	Interval	Width	Assay (Au OZs/Ton)	Remarks
ERIE #1	227.3'-228.2'	0.9'	0.11	Porphyry adj to basalt
ERIE #2	147'-149'	2'	0.10	Qtz adj to diabase
ERIE #3	16.5'-18.5'	2'	0.05	Veined basalt, Dy
BESSEY #1	61'-64.2'	3.2'	0.09	Veined basalt, py
BESSEY #1	95'-100'	5'	0.145	Veined basalt py, asp
BESSEY #1	155'-160'	5'	0.09	Adj to diabase
BESSEY #2	81'-83.5'	2.5	0.13	Veined basalt
BESSEY #2	85'-87'	2'	0.61	Veined basalt
BESSEY #2	112'-125'	13'	0.11	Veined basalt
BESSEY #3	115'-120'	5'	0.13	Veined basalt, py
BESSEY #4	145'-150'	5'	0.06	Veined basalt
BESSEY #4	150'-155'	5'	4.05	Porphyry
BESSEY #5	52.5'-57.5'	5'	0.07	Veined basalt
BESSEY #5	152'-156'	4'	0.10	Veined basalt, py
BESSEY #5	198'-200'	2'	0.10	Porphyry? adj to diabase
BESSEY #6	39'-42'	3'	0.25	Veined basalt, py, po
BESSEY #6	80'-83'	3'	0.12	Veined basalt, py
BESSEY #6	170'-175'	5'	0.12	Veined basalt, py
BESSEY #6	195'-210'	15'	0.167	Porphyry adj to diabase
BESSEY #7	335'-340'	5'	0.22	Porphyry adj to diabase
BESSEY #7	340'-345'	5'	0.11	Porphyry adj to diabase
BESSEY #7	345'-350'	5'	0.05	Porphyry adj to diabase
TENENDO #9	608.9'-613.9'	5'	0.14	Brecciatted adj to diabase
TENENDO #10	482'-484.6'	2.6'	0.12	Qtz+gf adj to diabase
TENENDO #12	775'-785.5'	10.5'	0.13	Veined basalt py
TENENDO #14	130'-133'	3'	0.11	Veined basalt
TENENDO #14	233'-242'	9'	0.183	Porphyry adj to diabase
TENENDO #14	249'-258'	9'	0.255	Porphyry adj to diabase
TENENDO #15	205'-210'	5'	0.22	Veined basalt, py
TENENDO #15	224'-229'	5'	0.13	Porphyry adj to diabase

From southwest to northeast a complex sequence of yellow grey to putty coloured calc-alkaline basaltic flows were found intercalated with yellow green to light grey green basaltic komatiite flows.

These flows were generally found in direct contact with a steeply dipping Matachewan-Type quartz diabase dyke. However, in the southeastern portion of the drill area these flows were found in contact with dark grey green mafic volcanic material of possibly intrusive origin. It is believed that the flows strike roughly 140° azimuth while the quartz diabase trends at about 135° azimuth and dips steeply southwest.

While all of the holes drilled encountered quartz diabase a number of holes penetrated a lens of sheared and altered mafic metavolcanic material situated within the quartz diabase. In all of the holes, (excepting #13) the drill encountered variably altered mafic metavolcanic material. The sheared lens as well as the crosscutting relationship observed in the southeastern portion of the drill area suggests that the quartz diabase is the youngest rock type thereby ruling out the possibility that the dark grey green mafic metavolcanic material is Nippissing-Type mafic material as the Nippissing-Type diabase is considered to be younger than the Matachewan-Type diabase (Carter, 1971).

The yellow grey to putty coloured flows presently logged as Calc-Alkaline Basalt were previously logged as rhyolite and or andesite presumably due to the intense alteration. This putty grey yellow unit is somewhat silicified, strongly ankeritic and moderately to well brecciatted. Infrequently, poorly preserved evidence of pillows were observed in these flows. Given the intensity of the alteration it is not inconceivable that these flows are in fact Mg-rich Thoeliitic Basalts. Interflow graphite is quite common and carbonaceous material as well as quartz and sulphides occur throughout these strongly to moderately brecciatted flows as fracture filling effectively healing this unit.

Intercalated with the putty coloured basalts are intensely altered flows of Basaltic komatiite. These flows vary from yellow to olive green to green in colour, are strongly ankeritic, moderately silicified and typically well veined with up to 50% quartz - ankerite veining. These flows tend to have a distinctive mottled texture, are occasionally fuchsitic, and are moderately to well brecciatted. Infrequently, primary, spinifex texture was observed.

The quartz diabase is typical Matachewan-Type, dark grey, moderately magnetic and generally massive. When the diabase is fractured, envelopes of epidote alteration are common surrounding such healed fractures.

The mafic metavolcanic material northeast of the diabase is possibly the most perplexing unit. Despite the fact that it appears to be the least altered, no primary fratures were observed. Of four samples submitted for whole rock analysis; two fell within the basaltic komatiite field, one fell within the magnesium rich theoliitic basalt field and the fourth sample plotted as a calc-alkaline basalt using the Jensen Cation Plot. As previously mentioned no evidence of primary features such as intrusive contacts or flow tops were observed, however, in his report M.W. Carter notes that flow structures were observed on the south shore of Ashburn Lake in what he has mapped as a Nippissing-Type mafic intrusive (1971, p.23).

Southwest of the quartz diabase extremely altered porphyries are present intruding both calc-alkaline basalts, and basaltic komatiites. The porphyries which are light to very dark grey or black are strongly siliceous with only a few phenocrysts still visible. The porphyries have been subsequently sheared and fractured with wisps of sericite, and secondary veining being developed while many of the phenocrysts have been destroyed.

A few mafic (lamprophyre) dykes were also observed intruding the flows southwest of the diabase.

In summary, the sequence of events in the vicinity of the gold showing is interpreted as follows: 1) the deposition of ultramafic volcanic flows intercalated with mafic volcanic flows and interflow graphitic tuffs, 2) the development of a significant shear zone resulting in the intense brecciation observed in the calc-alkalic basalts, and basaltic komatiitic flows, 3) the development of this shear has produced a plumbing system which has allowed for the intrusion of the porphyries and lamprophyre dykes, 4) subsequent movements produced the shearing in the porphyries and allowed for subsequent stockworking, carbonatization and sulphidization as well as gold concentration and/or introduction, 5) the emplacement of the Matachewan-Type quartz diabase dyke and additional local gold concentration.

GNETIC/ELECTROMAGNETIC SURVEY RESULTS

The details regarding the instrumentation, scope and method used as well as the results of the surveys and recommendations for further work are reported on and included as Appendix B of this report.

DIAMOND DRILL RESULTS

The drill program was initiated to confirm the presence of the previously reported gold values and to evaluate the geological potential of the area. The location of the drill holes are illustrated on the drill hole location plan (see Appendix C). The drilling was carried out over a strike length of 530' and totaled 5,016 feet in the vicinity of the original gold showing.

During the geological survey Mr. Middaugh sampled a recently uncovered sulphide burn. The sulphide burn is locally capped by conglomerate of the Gowganda Formation. This area is located 200' - 300' south of the east end of Ashburn Lake. After it was learned that the sulphide rich mafic metavolcanics were anomalous in gold, one drill hole was designed to test the showing. Hole ORC-13-87 was drilled on an azimuth of 104° and was spotted 100' west southwest of the sulphide burn. The total length of the drill hole was 257'.

The results of the diamond drilling are included in Appendix C where a summary of the significant (i.e. $\geq$ 0.03 ounces Au per ton) assay intersections are tabulated in Table #2 (see following page).

The results of the whole rock analysis eluded to in the General Geology section of this report are included in Appendix F along with the appropriate certificates.

CONCLUSIONS/RECOMMENDATIONS

The presence of anomalous gold values were confirmed in the vicinity of the historic "Cook Showing". Gold was discovered near the east end of Ashburn Lake.

Gold values were found in a variety of geological settings. The highest values, for example in holes ORC-3-87 and ORC-5-87 where values of 0.496 and 0.42 ounces of gold per ton respectively, over 3 foot core lengths were found in sections of calc-alkalic basalts. The sections were typically well brecciated, putty coloured

TABLE #2
Significant Assay Results 1987

Hole #	Interval	Width	Assay (Au OZs/Ton)	Remarks
ORC-1-87	33'-38'	5'	0.085	Veined basalt
ORC-1-87	88'-98'	10'	0.031	Veined basalt
ORC-1-87	173'-176'	3'	0.054	Porphyry
ORC-1-87	186'-193'	7'	0.119	Porphyry adj to diabase
ORC-1-87	253'-255'	2'	0.05	Adj to diabase
ORC-2-87	212'-222'	10'	0.108	Veined basalt
ORC-2-87	235'-237'	2'	0.09	Veined basalt
ORC-2-87	240'-242'	2'	0.124	Veined basalt
ORC-2-87	243'-249'	6'	0.036	Porphyry contact
ORC-2-87	261'-269'	8'	0.06	Porphyry
ORC-2-87	277'-280'	3'	0.057	Porphyry
ORC-2-87	283'-288'	5'	0.054	Porphyry
ORC-2-87	308'-311'	3'	0.094	Porphyry adj to diabase
ORC-3-87	124'-129'	5'	0.049	Veined basalt
ORC-3-87	183'-186'	3'	0.496	Veined basalt
ORC-3-87	213'-218'	5'	0.05	Veined basalt
ORC-3-87	265'-268'	3'	0.058	Veined basalt
ORC-3-87	283'2"-286'8"	3'6"	0.044	Graphitic tuff
ORC-3-87	299'-303'	4'	0.042	Porphyry
ORC-3-87	327'-331'6"	4'6"	0.08	Porphyry
ORC-3-87	342'-344'	2'	0.032	Porphyry
ORC-4-87	66'-69'	3'	0.07	Veined basalt
ORC-4-87	93'-102'	9'	0.144	Veined basalt
ORC-4-87	118'-125'6"	7'6"	0.101	Porphyry contact
ORC-4-87	151'-152'10"	1'10"	0.052	Veined basalt
ORC-4-87	158'10"-161'	2'2"	0.145	Adj to diabase
ORC-5-87	36'-39'	3'	0.42	Veined basalt
ORC-5-87	49'-53'	4'	0.08	Veined basalt
ORC-5-87	193'-196'	3'	0.11	Veined basalt
ORC-5-87	314'-316'1"	2'1"	0.084	Adj to diabase
ORC-6-87	106'6"-108'	1'6"	0.09	Contact Zone
ORC-6-87	139'6"-150'	10'6"	0.083	Veined basalt
ORC-6-87	207'-209'	2'	0.06	Veined basalt
ORC-6-87	305'-306'5"	1'5"	0.06	Porphyry Contact
ORC-6-87	353'-363'	10'	0.122	Porphyry
ORC-6-87	433'-439'	6'	0.04	Adj to diabase
ORC-6-87	493'-498'	5'	0.052	Mafic volcanic
ORC-7-87	18'-20'	2'	0.03	Graphite
ORC-7-87	62'-64'	2'	0.06	Veined basalt
ORC-7-87	111'-113'	2'	0.08	Veined basalt
ORC-7-87	121'-123'	2'	0.09	Veined basalt
ORC-7-87	151'-156'7"	5'7"	0.084	Contact Zone
ORC-8-87	162'-166'	4'	0.041	Veined basalt
ORC-8-87	200'-203'	3'	0.039	Veined basalt
ORC-8-87	203'-204'	1'	0.122	Veined basalt
ORC-8-87	250'-258'	8'	0.037	Porphyry
ORC-8-87	264'6"-265'6"	1'	0.08	Porphyry
ORC-8-87	269'8"-273'11"	4'3"	0.059	Porphyry/Volcanic
ORC-8-87	276'-278'	2'	0.12	Porphyry/Volcanic
ORC-8-87	280'5"-282'5"	2'	0.05	Adj to diabase

TABLE #2 Continued
Significant Assay Results 1987

Hole #	Interval	Width	Assay (Au OZs/Ton)	Remarks
ORC-9-87	102'-104'3"	2'3"	0.04	Veined basalt
ORC-9-87	160'-161'6"	1'6"	0.04	Adj to diabase
ORC-9-87	166'-169'	3'	0.04	Adj to diabase
ORC-9-87	169'-173'	4'	0.10	Adj to diabase
ORC-9-87	173'-174'10"	1'10"	0.03	Adj to diabase
ORC-10-87	145'-148'	3'	0.031	Adj to diabase
ORC-10-87	231'3"-233'	2'9"	0.035	Adj to diabase
ORC-10-87	243'3"-248'	4'9"	0.20	Porphyry/Qtz veining
ORC-10-87	243'3"-253'	9'9"	0.124	Porphyry/Qtz veining
ORC-10-87	403'-407'	4'	0.08	Veined basalt
ORC-10-87	470'-473'	3'	0.04	Veined basalt
ORC-11-87	409'-413'	4'	0.03	Adj to diabase
ORC-12-87	98'-99'6"	1'6"	0.062	Contact Zone
ORC-12-87	102'-104'	2'	0.236	Contact Zone/Qtz Vein
ORC-13-87	168'-172'	4'	0.038	Calcitic basalt
ORC-13-87	244'4"-248'	3'8"	0.028	Calcitic hematized
ORC-13-87	248'-256'	8'	0.117	Pyritic Basalt
ORC-13-87	256'-257'	1'	0.032	Graphitic

basalt which was moderately veined and mineralized with perhaps 2-3% fine disseminated pyrite. The second important association is exemplified in hole ORC-6-87 where a 10 foot section of porphyry assayed 0.122 ounces of gold per ton. This section of porphyry was light grey to beige, locally sericitic and fuchsitic, moderately brecciatted and mineralized with ≤ 2% disseminated pyrite. It must be noted that this example was situated close to the diabase dyke and it is felt that the dyke has played a significant role in concentrating the gold. Many of the other porphyry intersections contained anomalous gold but of lower concentrations. A good example of this can be seen in hole ORC-2-87 where from 261' - 269', 277' - 280', and from 283' - 288' gold values of 0.06, 0.057 and 0.054 ounces of gold per on respectively where encountered in porphyry however, from 308' - 311', 0.094 ounces of gold per ton was encountered within one foot of the diabase dyke.

Another example of the concentration of gold adjacent to the diabase dyke can be seen in the mafic metavolcanics. In hole ORC-5-87 gold is found concentrated adjacent to the diabase dyke within the lens of sheared mafic metavolcanic material. From 314' - 316'1" the core assayed 0.084 ounces of gold per ton. Similarily enriched gold values were found within the narrow lens of mafic metavolcanic material in holes ORC-1-87, ORC-4-87, ORC-6-87, ORC-8-87 and ORC-10-87.

Mineralization associated with enriched gold values is primarily restricted to pyrite and although pyrrhotite and arsenopyrite have historically been noted little or no pyrrhotite and or arsenopyrite was observed by the author.

In conclusion the enriched gold values within the lens of sheared mafic metavolcanic does not appear to provide a significant future exploration target.

There are however a number of other exploration targets. The carbonated calc-alkalic basalts have been shown to contain significant gold values and as this unit is believed to extend for a considerable distance southwest of the present drilling this area is felt to provide excellent exploration potential.

The major structural zone which appears to provide the plumbing system for the mafic and felsic intrusives and potentially significant gold mineralization should be explored along strike and possibly down dip.

recently discovered gold mineralization near the east end of Ashburn Lake should also be followed up as part of the integrated exploration program which follows.

Recommended future work includes linecutting, at least in part, oriented at 45° azimuth in the vicinity of the shear zone.

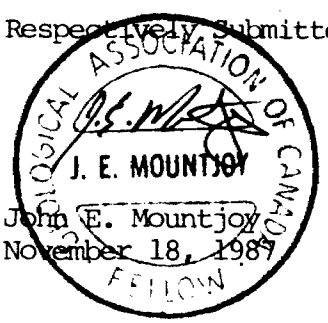
A suitable soil or humus sampling survey could also be useful, as the lateritic soil over the aforementioned sulphide burn was actually found to be significantly enriched in gold.

As there is a large gap in the magnetic survey coverage, Ashburn Lake and the surrounding wetlands should be surveyed during the winter months.

As the best gold values so far encountered on the property have been associated with sulphide mineralization, a detailed induced polarization survey may prove very enlightening and is recommended.

Further drilling is also warranted however, the above recommended work should in the author's opinion take precedent with drill targets contingent on the results of the above work.

Respectively Submitted,



John E. Mountjoy
November 18, 1987

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Assessment files, Resident Geologist's Office, Cobalt, Ontario.

STATEMENT OF QUALIFICATIONS

I, John E. Mountjoy, of Timmins, Ontario do hereby certify that:

1) I hold a bachelor of Science Degree (1980) in Geology from Brock University, St. Catharines, Ontario.

2) I have practised my profession in Northern Ontario since March 1981, working for Hollinger Argus Ltd. and Labrador Mining and Exploration Company Ltd. until September 1985 when Mountjoy Exploration and Consulting Services was registered.

3) I am a member in good standing of the Canadian Institute of Mining and Metallurgy, The Prospectors and Developers Association of Canada and I am a Fellow of the Geological Association of Canada.

4) I have based the conclusions and recommendations found in this report on my training and experience working in Northern Ontario.

5) I hold no interest in the properties or securities of ORCANA RESOURCES LIMITED nor do I expect to receive or acquire any notwithstanding professional compensation.

November 27, 1987
Timmins, Ontario

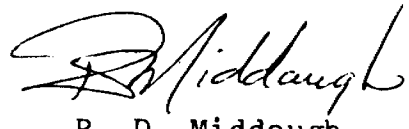
GEOLOGICAL ASSOCIATION OF CANADA
J. E. MOUNTJOY

John E. Mountjoy, B.Sc.

Qualifications

I, R. D. Middaugh of 736 Alice Avenue, R.R. #14 Thunder Bay, Ontario do hereby certify that:

1. I am a consulting Geologist, with Phantom Exploration Services Ltd. with offices at Suite 103 - 79 North Court Street, Thunder Bay, Ontario.
2. I graduated from Lakehead University in 1969 with a B. Sc. in Geology
3. I have practiced my profession since 1970.
4. I am a fellow of the Geological Association of Canada.
5. I have no interest whatsoever, directly or indirectly in the securities or properties of Orcana Resources Limited and do not expect to receive any.
6. I personally conducted and/or supervised the present work on the Orcana Resources property as described in this report.
7. The basis for this report and the opinions contained therein consists of a study of available historical and current data which include published documents on file with the Ministry of Northern Development & Mines, Province of Ontario and the results of the 1987 field work.



November 23, 1987.
Thunder Bay, Ontario

R. D. Middaugh
B.Sc. F.G.A.C.

A P P E N D I X A

Geology Survey

Cook Decker Project

Phantom Exploration Services Ltd.

September, 1987

R. D. Middaugh

INTRODUCTION

Orcana Resources Limited of Toronto, Ontario contracted Phantom Exploration Services Ltd. of Thunder Bay, Ontario to conduct a geological survey on their Cook Decker Project during the summer of 1987.

LOCATION, ACCESS AND GRID

The survey area is located approximately 19 km east of Shining Tree, Ontario in McMurchey Township. The area is protected by 16 unpatented mining claims numbered L 341433, L 496691-95 inclusive, L 505124-29 inclusive, L 506071 and L 506275-77 inclusive which are located in the Larder Lake mining division.

Access to the general area via highway #560 is excellent all year round, as is access to the property since it straddles the highway.

The grid was established by Phantom Exploration personnel. Approximately 8.0 miles of line were cut, chained and picketted at 100 foot intervals. The base line was orientated north south. The east west wing lines were cut every 400 feet along the base line except between line 0+00 and 16+00S where the interval was 200 feet.

PERSONNEL

The day to day work and the overall supervision of the geological survey was carried out by R. D. Middaugh of Phantom Exploration Services Ltd.

PREVIOUS WORK

The first work done on the property was carried out in 1939 by Sylvanite Gold Mines Limited. Subsequently Bessey Mining Syndicate and Tenendo Mining Corporation Limited examined the property during the period 1952-53. A total of 22 drill holes were completed by these three for a total footage of 8,161 feet (Resident Geologist's Files Ontario Ministry of Northern Development and Mines Cobalt, Ontario).

GENERAL GEOLOGY

The area is underlain by a Precambrian sequence of metavolcanics that seemingly becomes more felsic in the south west quarter of the survey area. This may, however, be due to silification accompanying emplacement of a feldspar porphyry located in the same portion of the property. These volcanics have been intruded by north west trending diabase dikes (Matachewan-type).

Thin remnants of the bottom of the Gowganda Formation are found within the survey area. These sediments unconformably overlay the the above mentioned rocks.

M. W. Carter of the Ministry in his Geoscience Report #152 has mapped Nipissing-Type diabase that lies directly on the volcanics. This relationship was not observed and at least macroscopically the so called diabase located appeared to be indistinquishable from the mafic volcanics. The volcanics do contain thin horizons that appear to be gabbroic in nature and perhaps this is the cause of the apparent geological discrepency.

MAFIC METAVOLCANICS

These rocks are medium to fine grained and dark green to black in colour. For the most part they lack any structural features although good pillow structures were observed in one outcrop. Thin horizons of gabbroic material occur within these rocks. Since no definative contacts were seen, whether the rock in question represent intrusive dikes or meerly cooling features of thicker flows is not known.

FELSIC METAVOLCANICS

These rocks span the spectrum from andesites to rhyolites. The andesites are aphanitic to fine grained, green in colour and marginally harder than the mafic volcanics. The rhyolites are aphanitic, quite hard and are usually coloured pastel shades of tan, pink and/or light green.

Although silification was a definite factor affecting the composition of these rocks, the nature of the rhyolites indicate they were originally felsic volcanics.

TRACHYTIC METAVOLCANICS

This volcanic sequence of rocks is found in the north east portion of the property. They are fine to medium grained, porphyritic, green and reddish coloured and exhibit pyroclastic features. The "pieces" are the reddish coloured portion of the rocks.

The relationship between the trachytic and non-trachytic volcanics has not been determined as no contacts features were observed.

MATACHEWAN-TYPE DIABASE

The diabase dikes are fresh looking, medium grained, black coloured and massive. They exhibit typical blocky fracture patterns and are mildly magnetic.

The only dike mapped on the property strikes north west and seems to occupy the east or foot wall side of a shear zone located along the mafic-felsic volcanic contact.

FELDSPAR PORPHYRY

One small outcrop of this rock type was located on east side of a small lake situated in the south west part of the property. The rock is medium grained, pinkish red in colour and contains distinct penocrysts of feldspar.

METASEDIMENTS

The sediments consist of the basal portion of the Gowganda Formation namely polymictic conglomerates and coarse grained arkosic grits. They exist on the property as thin erosional remnants of the more extensive sequence located 5 miles to the east.

IRON FORMATION

The iron formation which seems to be associated with the mafic volcanics is oxide facies and consists of dark brown chert banded with hematite and minor magnetite. The formation is only mildly magnetic reflecting the hematite-magnetite content.

FAULTS

Field evidence is sparse to say the least, but the showing area seems to be located along a shear zone that is more or less coincident with the felsic-mafic contact. Whether the shear associated with the original mineralization is an early minor shear due to some limited movement within the volcanic pile or a much later more extensive fault, is not known. In either case this zone of weakness was re-activated at the time of the emplacement of the diabase dike. Other faults located on the accompanying map are meerly suggested by topographic and/or geophysical information. All of these faults if indeed they do exist may be related to the major Jess Lake fault located just west of the property.

CONCLUSIONS

The property is underlain for the most part by a north to north west trending sequence of volcanics that grade from east to west in composition from gabbroic basalts to rhyolites. The north east portion of the survey area is underlain by trachytic pyroclastic volcanics. The relationship between the two suites of rocks is not understood. These rocks have been intruded by both feldspar porphyries and diabase dikes and subsequently unconformably overlain by sediments of the Gowganda Formation which exist today as thin erosional remnants.

The gold mineralization which to date is the only economic interest in the property, is closely associated with a quartz carbonate rich shear that is located along the contact between the mafic and felsic volcanics. A north west trending diabase dike located on the east or foot wall side of this shear zone seems to have remobilized the mineralization to some extent. It is interesting to note that virtually no gold values have been obtained on the mafic side of the dike. This may indicate more displacement involved with the shear than was suggested by the somewhat limited geophysical data. The orientation of Ashburn Lake relative to the regional geologic trend and the lithologic distribution in the area would also support the hypothesis that major block faulting and shearing have taken place.

RECOMMENDATIONS

Geophysical data covering Ashburn Lake would help in evaluating the area and may aid in resolving some of the structural problems of the area. This would involve extending the grid during the winter months.

Since the diabase dike is intimately associated with the gold mineralization, detailed magnetic vertical gradiometer work could pinpoint its location and extent along strike to the north and south.

More extensive and detailed mapping coupled with complete geochemical analysis of the various rock types would aid in understanding the total geologic picture.

Since the overburden is on the average relatively thin, a geochemical survey of suitable nature should be considered to define gold bearing horizons not located to date. Subsequent to the evaluation of results of the recommendations and the present drilling program, more drilling should be considered to test any favourable targets located.

Submitted by

Phantom Exploration Services Ltd

R. D. Middaugh

Geologist

APPENDIX

Map 1. Location Map

Map 2. Geology Map

Qualifications

I, R. D. Middaugh of 736 Alice Avenue, R.R. #14 Thunder Bay, Ontario do hereby certify that:

1. I am a consulting Geologist, with Phantom Exploration Services Ltd. with offices at Suite 103 - 79 North Court Street, Thunder Bay, Ontario.
2. I graduated from Lakehead University in 1969 with a B. Sc. in Geology
3. I have practiced my profession since 1970.
4. I am a fellow of the Geological Association of Canada.
5. I have no interest whatsoever, directly or indirectly in the securities or properties of Orcana Resources Limited and do not expect to receive any.
6. I personally conducted and/or supervised the present work on the Orcana Resources property as described in this report.
7. The basis for this report and the opinions contained therein consists of a study of available historical and current data which include published documents on file with the Ministry of Northern Development & Mines, Province of Ontario and the results of the 1987 field work.

November 23, 1987.
Thunder Bay, Ontario

R. D. Middaugh
B.Sc. F.G.A.C.

A P P E N D I X B

Proton Magnetometer
and
VLF Electromagnetic
Surveys

Cook Decker Project

NTS 41-P-11

Phantom Exploration Services Ltd.

September, 1987

R. D. Middaugh

INTRODUCTION

Orcana Resources Limited of Toronto, Ontario contracted Phantom Exploration Services of Thunder Bay, Ontario to conduct magnetic and electromagnetic surveys on their Cook Decker Project during the summer of 1987.

LOCATION, ACCESS AND GRID

The survey area is located approximately 19 km east of Shining Tree, Ontario in McMurchey Township. The area is protected by 16 unpatented mining claims numbered L 341433, L 496691-95 inclusive, L 505124-29 inclusive, L 506071 and 506275-77 inclusive which are located in the Larder Lake mining division.

Access to the general area via highway #560 is excellent all year round, as is access to the property since it straddles the highway.

The grid was established by Phantom Exploration personnel. Approximately 8.0 miles of line were cut, chained and picketted at 100 foot intervals.

PERSONNEL

The day to day work and the overall supervision of the geophysical program was carried out by R. D. Middaugh of Phantom Exploration Services Ltd.

INSTRUMENTATION

Magnetic

A proton precession magnetometer (model omni IV) manufactured by EDA Instruments of Toronto, Ontario was used for this survey. The total field was read with a resolution of one gamma and all the field values were corrected for diurnal variations using another omni IV magnetometer in the base station mode. Readings were recorded at 50 foot intervals on the grid lines.

Electromagnetic

A VLF EM-16 unit manufactured by Geonics Limited of Mississauga, Ontario was used for this survey. Both in and out of phase components were recorded at 50 foot intervals on the grid lines. The transmitter station used was Annapolis, Maryland with a frequency of 21.4 KHz.

DISCUSSION OF RESULTS

Magnetic

The grid area is presented in plan form at a scale of 1 inch = 200 feet. The corrected magnetic data is plotted on this map and contoured at 100 and 500 gamma intervals where feasible.

Although no regional gradient is evident, the magnetic data does indicate a sequence of rocks that exhibit a north south regional trend. The data from the south west portion of the survey area suggests the regional trend is a little more north west south east.

Intimately associated magnetic high and lows such as located on line 8+00N at approximately 10+00W are probably due to dipole effects.

The large high located in the north eastern portion of the survey area would seem to represent what M. W. Carter has called mafic trachytic metavolcanics in geoscience report #152.

The far less extensive magnetic highs located throughout the remainder of the grid area would seem to represent, at least in part, diabase dikes such as located on lines 6+00S and 8+00S at 9+00W and 8+00W respectively.

The lack of data due to Ashburn lake makes postulation about any east west faulting in this area highly speculative although the orientation of the

lake (east west) relative to the regional trend of the underlying rocks is suggestive.

Electromagnetic

The survey area is presented in plan form at a scale of 1 inch = 200 feet with a vertical scale set at 1 inch = 20% for the EM profiles.

All of the conductive trends located within the survey area are characterized by short or discontinuous strike lengths and very poor conductivity which is typical of responses due to topographic features such as low swampy areas.

While all the anomalies conform to the regional magnetic trend and at times seem to be related to specific magnetic features, this phenomenon is due to a rather unique situation reflected in the formation of the present day topographic features.

The regional strike of the underlying rocks is generally north south which is coincident with the glacial ice movement direction. The resulting topographic features produced by differential erosional characteristics of the rocks are therefore parallel to the strike of the underlying formations.

CONCLUSIONS AND RECOMMENDATIONS

The survey area is underlain by a near vertical dipping, north south trending sequence of magnetically heterogeneous volcanic rocks. This sequence has been intruded by several diabase dikes which is reflected in narrow magnetic high features which for the most part conform to the regional magnetic trend.

Lack of data due to the presence of Ashburn lake precludes any conclusive comments about any east west faulting based on the magnetic survey results.

Detailed mapping and prospecting should be carried out in order to better evaluate the geophysical results and the economic potential of the area. Since the main economic interest on the property is gold mineralization, a geochemical survey of a suitable nature may better define gold bearing horizons not necessarily outlined by the geophysical methods used to date.

Subsequent to the above recommendations, a drill program should be considered to test any resulting target areas.

Submitted by

Phantom Exploration Services Ltd

R. D. Middaugh

Geologist

APPENDIX

Map 1.	Location Map
Map 2.	VLF Survey Profiles
Map 3.	Magnetometer Survey

Qualifications

I, R. D. Middaugh of 736 Alice Avenue, R.R. #14 Thunder Bay, Ontario do hereby certify that:

1. I am a consulting Geologist, with Phantom Exploration Services Ltd. with offices at Suite 103 - 79 North Court Street, Thunder Bay, Ontario.
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7. The basis for this report and the opinions contained therein consists of a study of available historical and current data which include published documents on file with the Ministry of Northern Development & Mines, Province of Ontario and the results of the 1987 field work.

R. D. Middaugh

November 23, 1987.
Thunder Bay, Ontario

R. D. Middaugh
B.Sc. F.G.A.C.

A P P E N D I X F

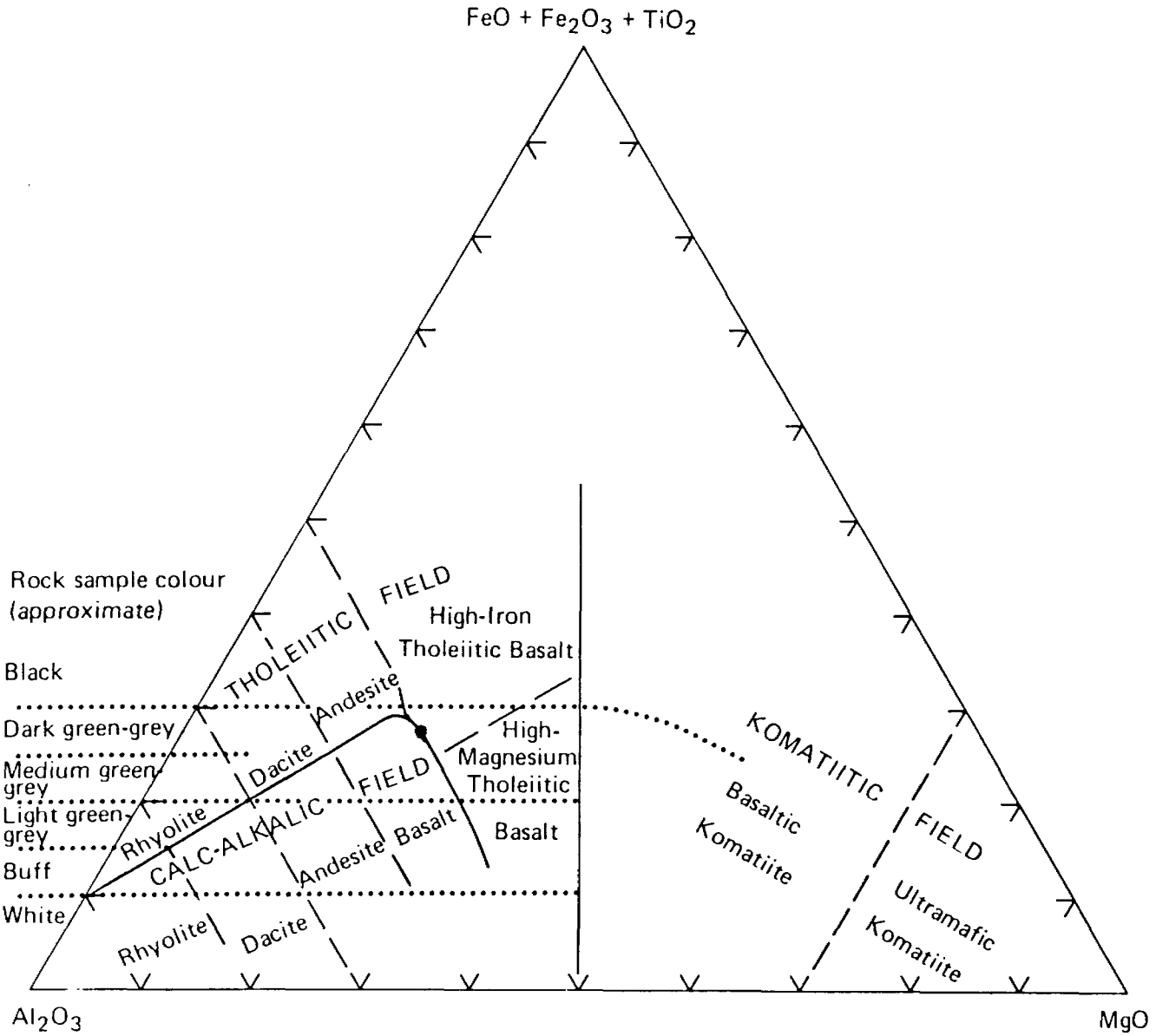

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

312

ORC-1-87

98'-99'

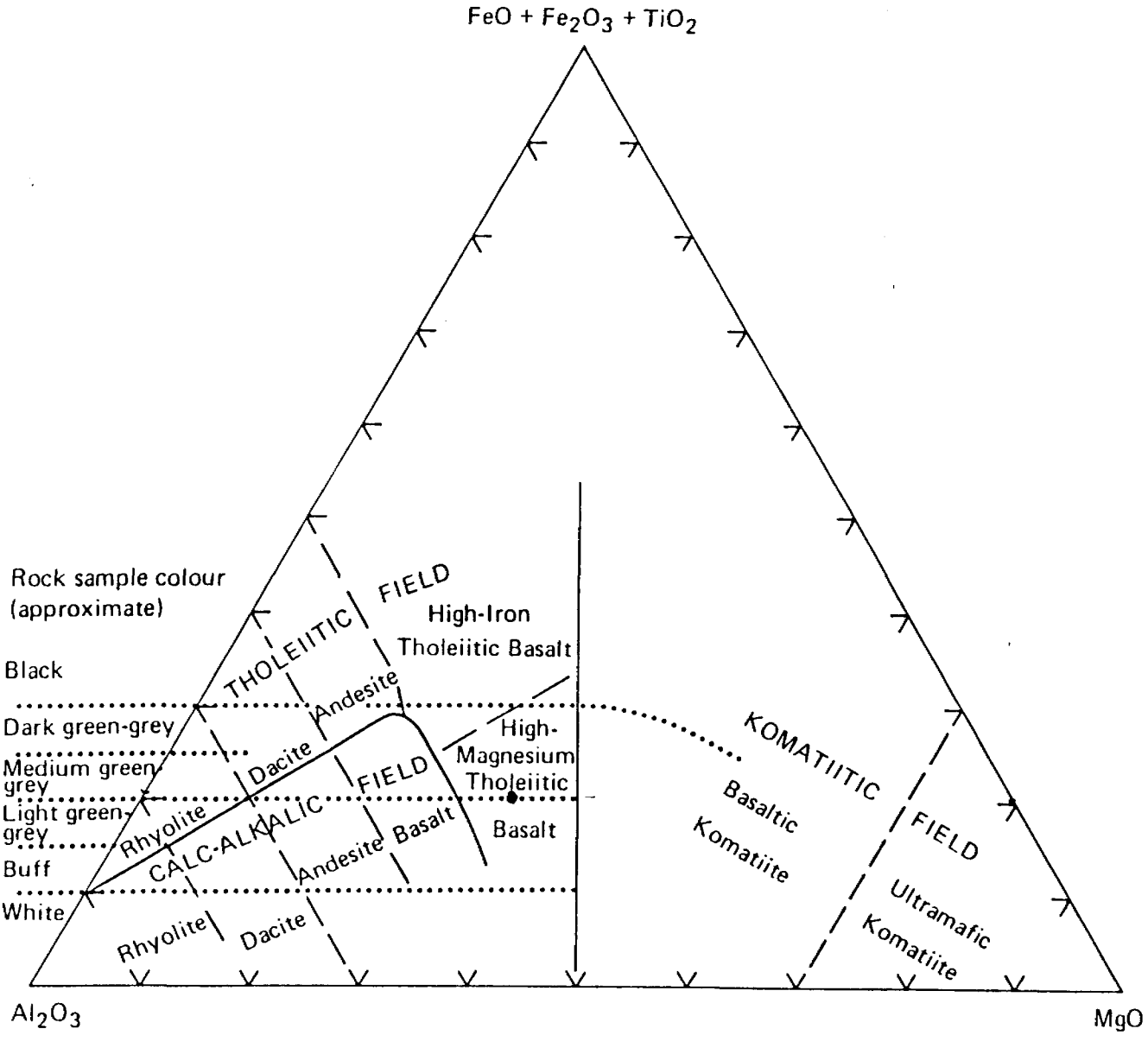

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, $FeO + Fe_2O_3 + TiO_2$, and MgO.

2580

ORC-2-87

430.5'-431.5'

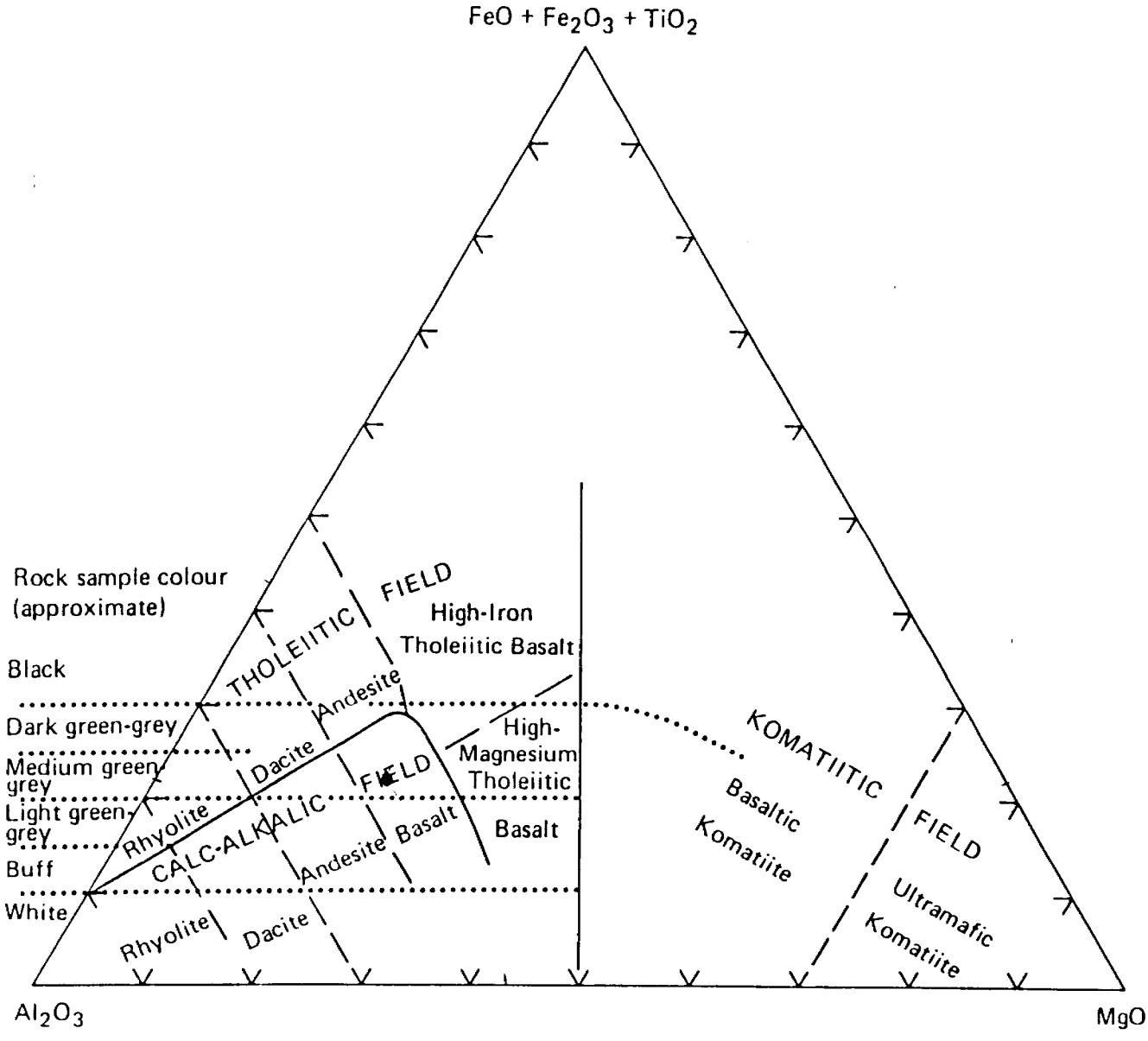

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, $FeO + Fe_2O_3 + TiO_2$, and MgO.

31142C

ORC-9-87

88'-88'7"

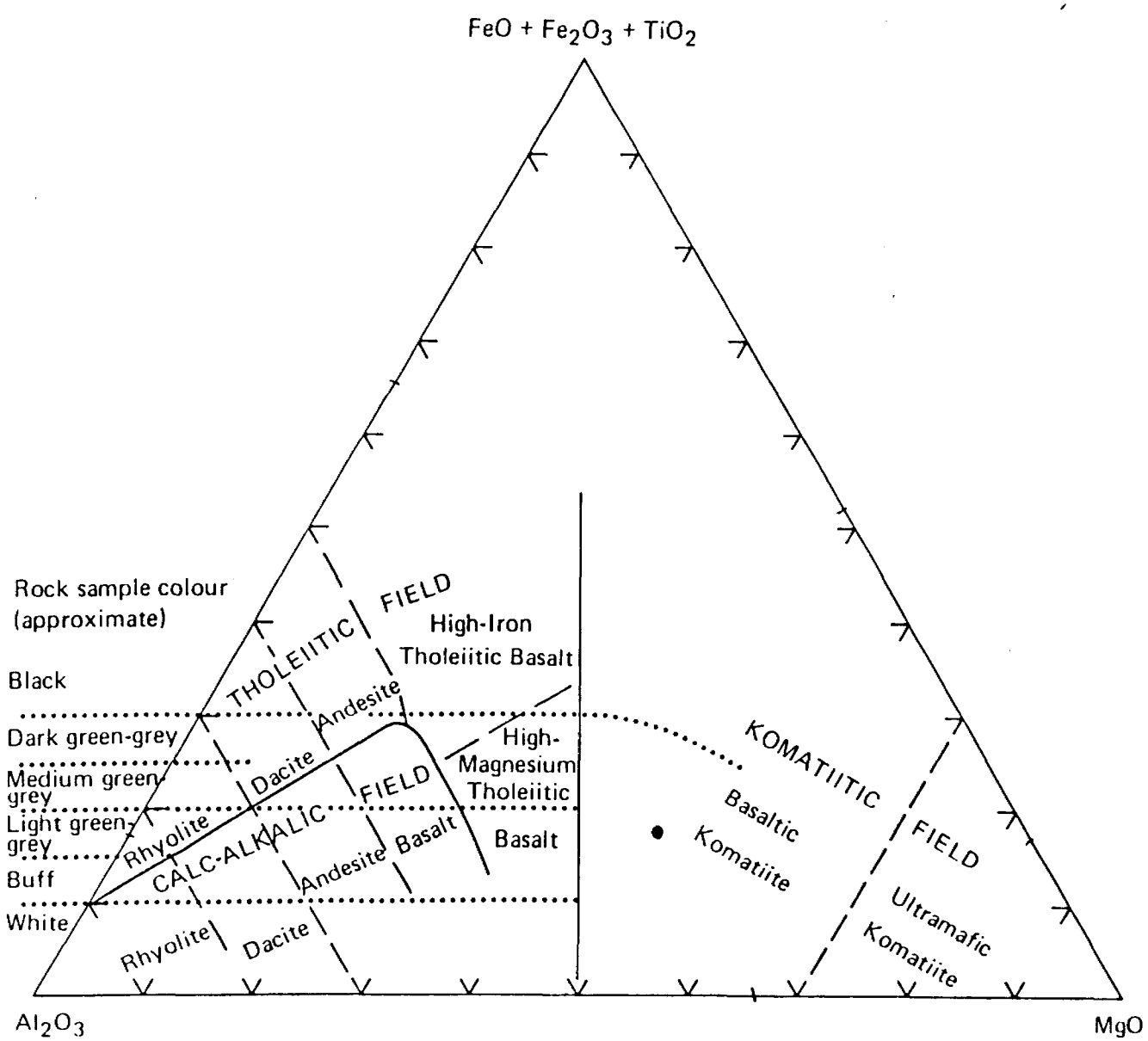

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

31254C

ORC-7-87

329'-330'

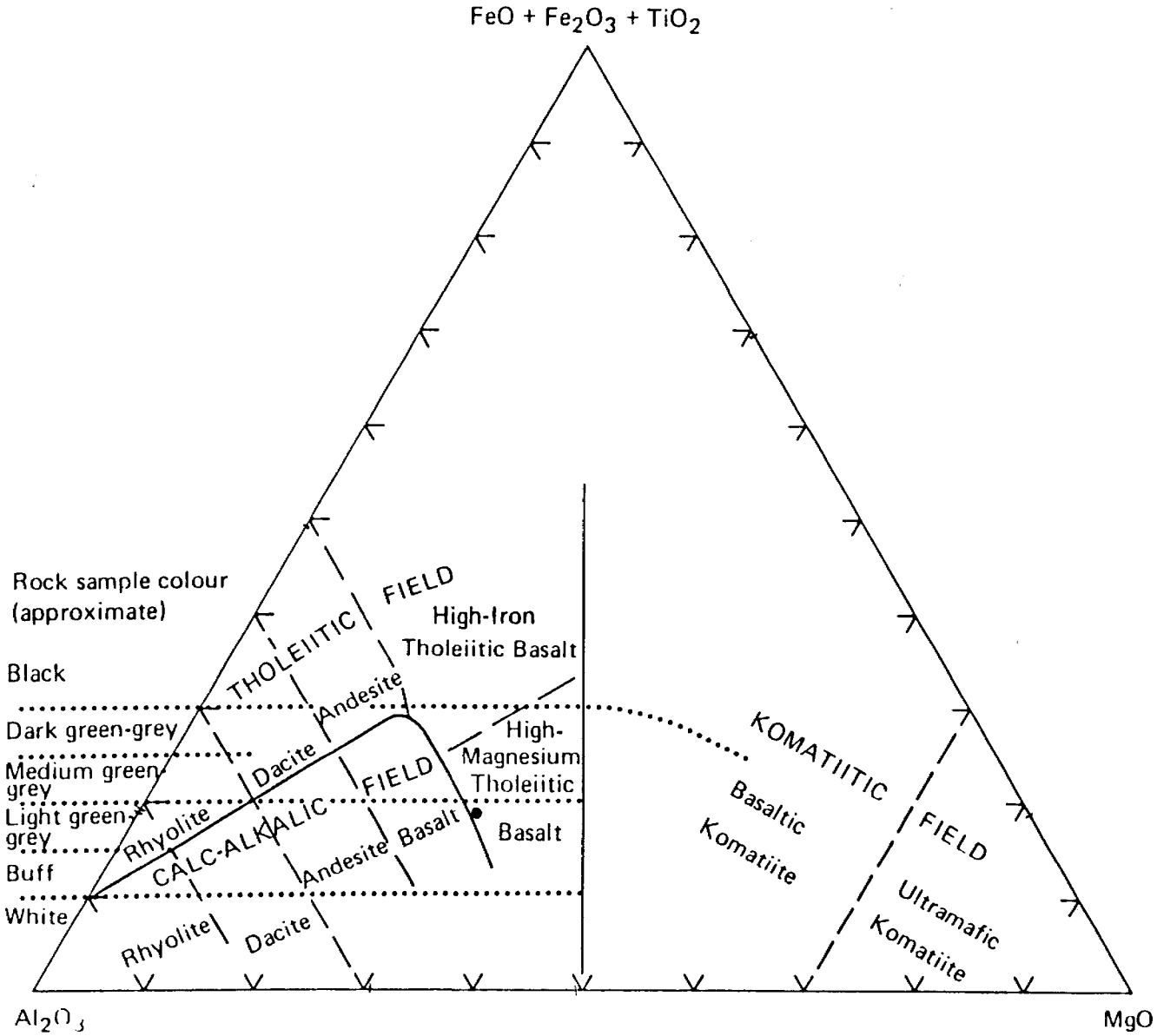

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

31156C

ORC-9-87

143'6"-144'1"

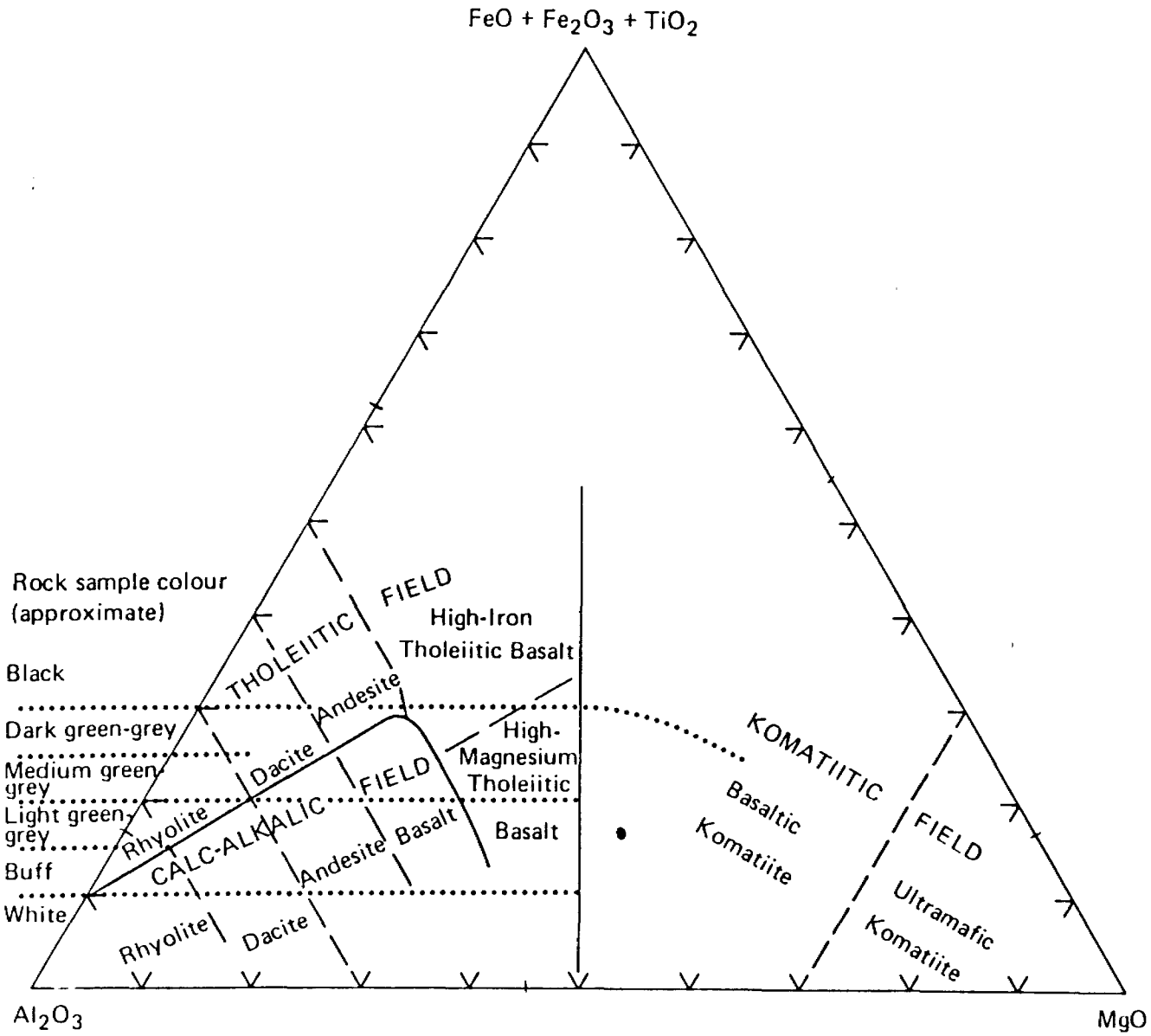

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

31174C

ORC-9-87

269'5"-270'

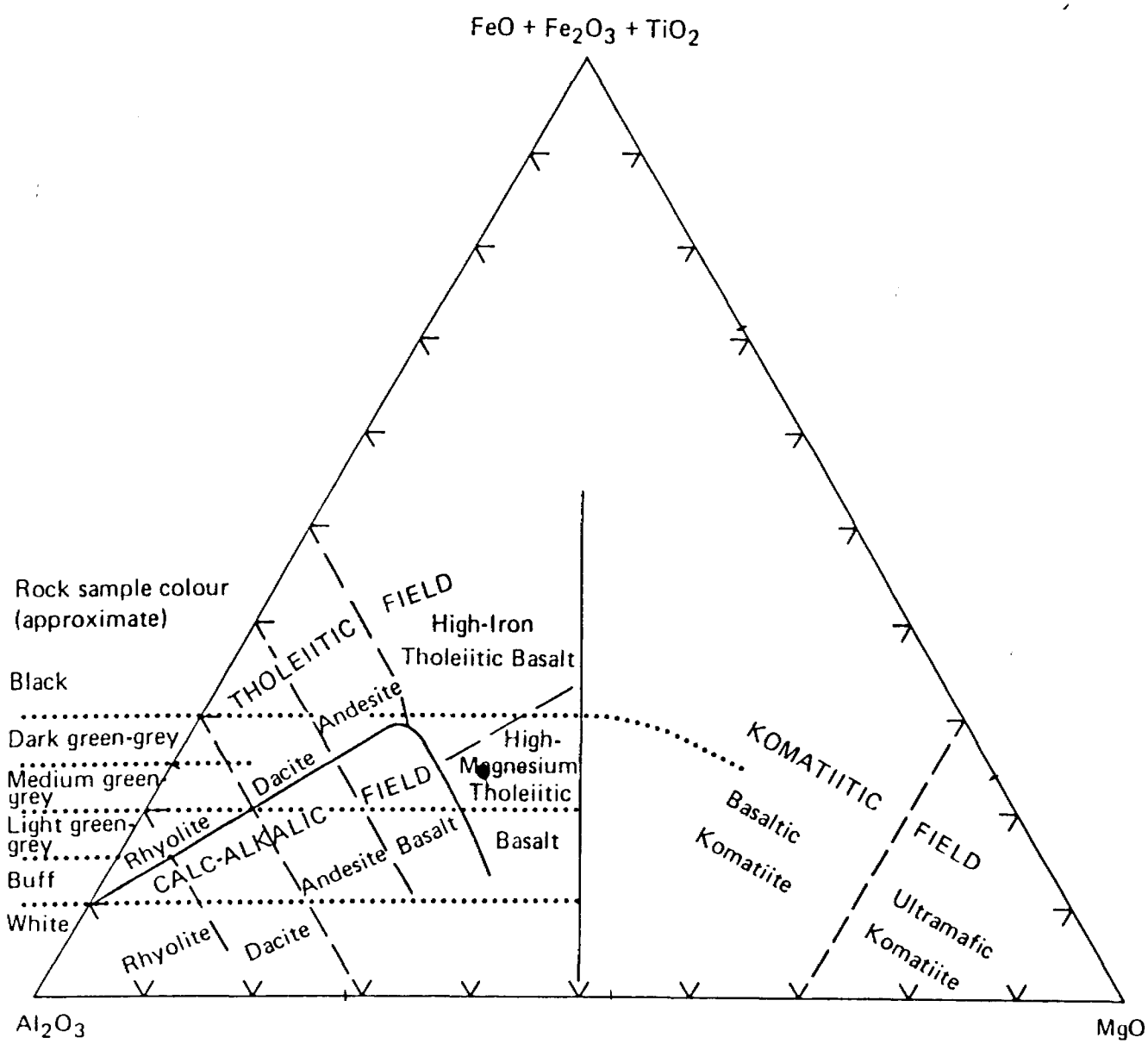

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

461B

ORC-10-87

419'9"-420'6"

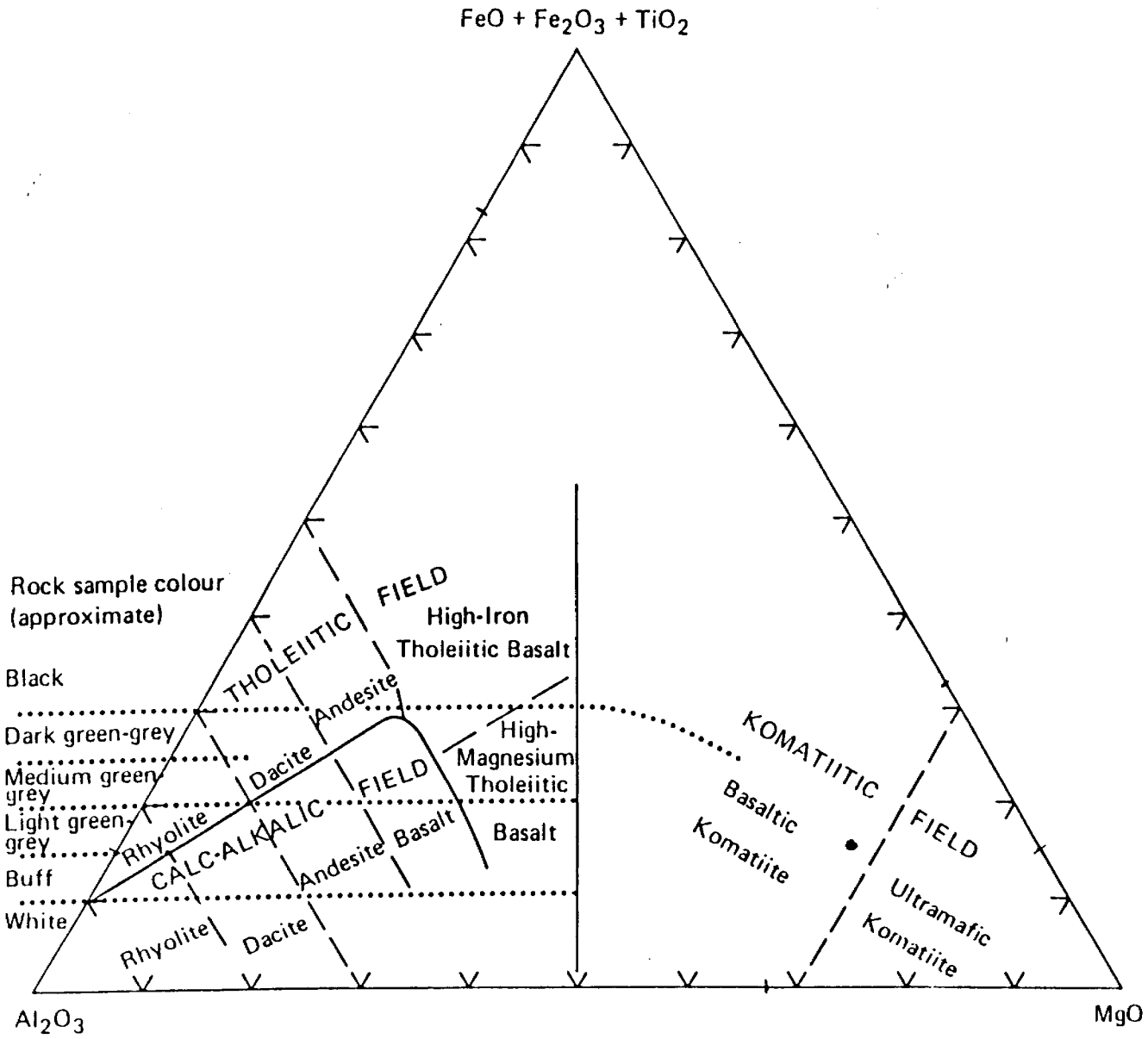

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

476B

ORC-10-87

503'-504'

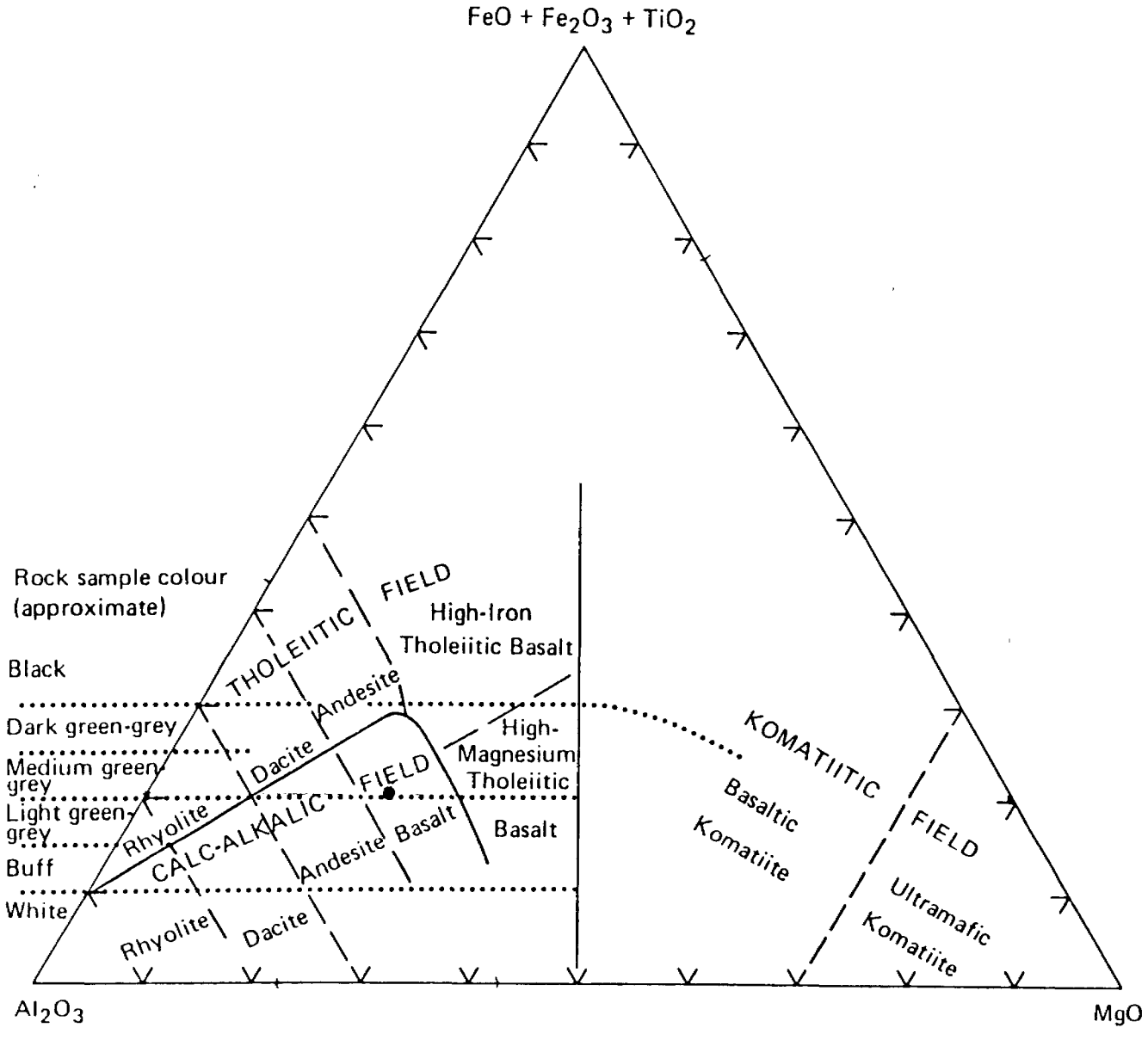

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

31118C

ORC-10-87

653'-653'6"

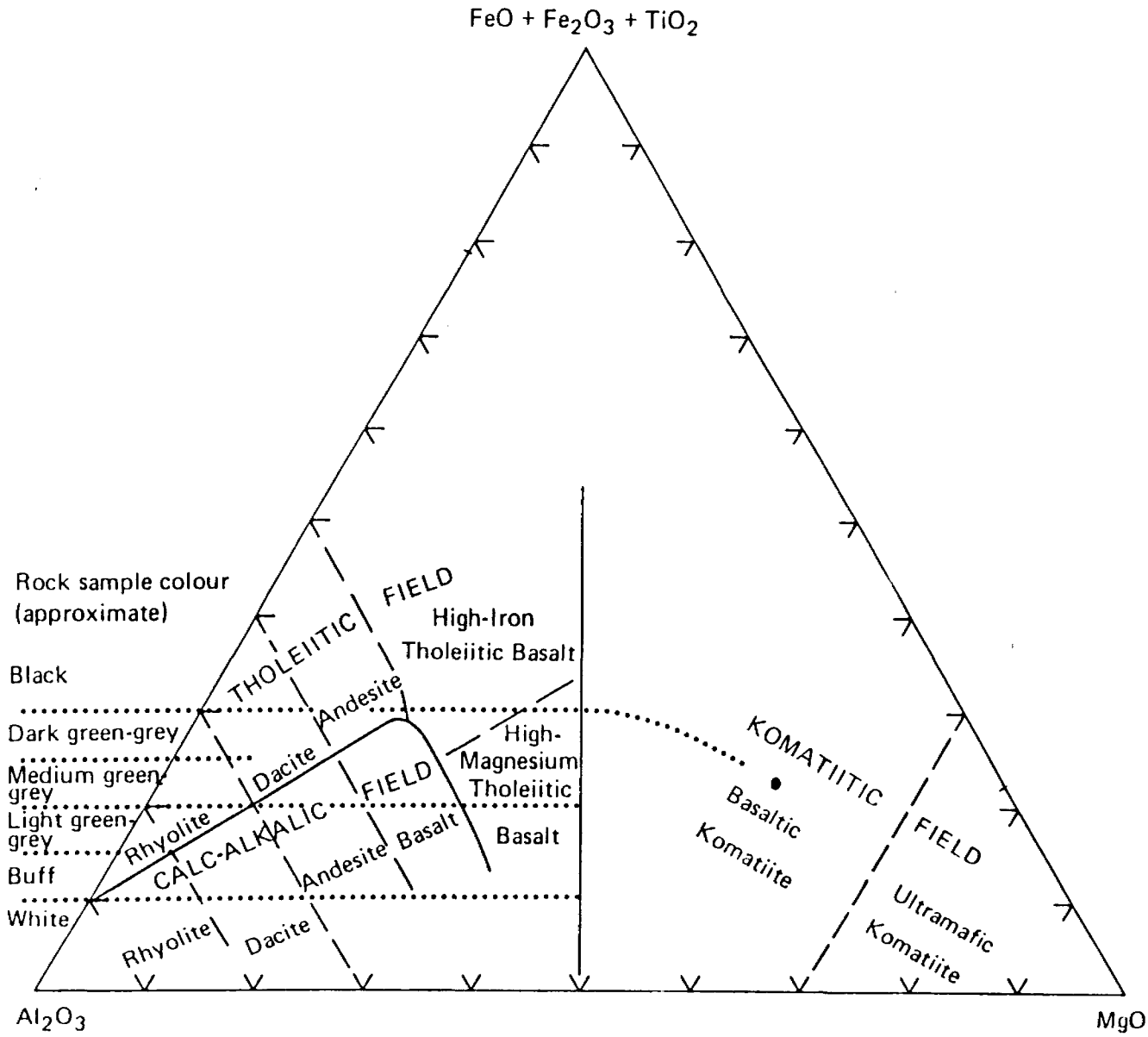

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

2586

ORC-12-87

38'9"-39'4"

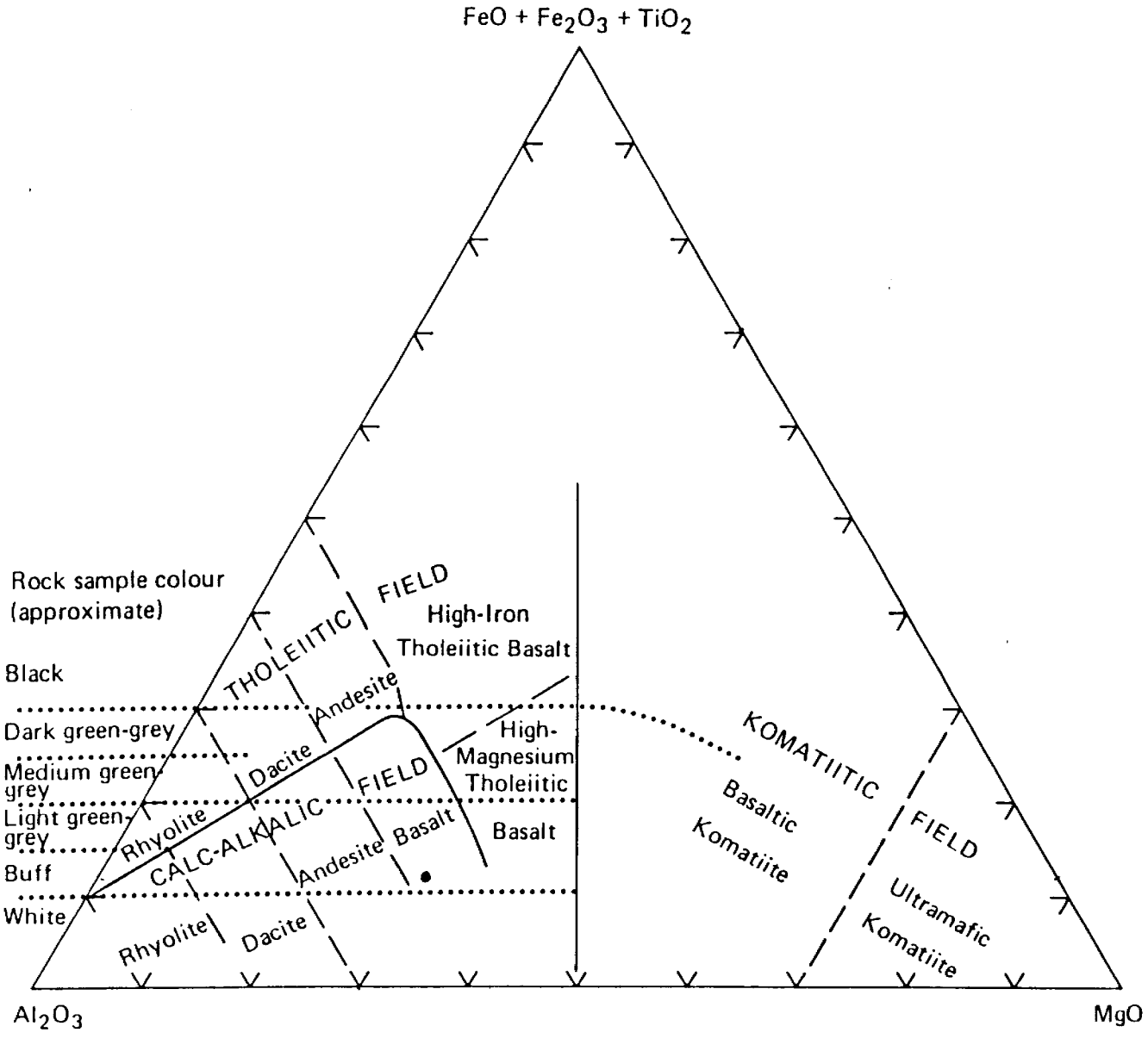

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

2617

ORC-12-87

300'-300.5'

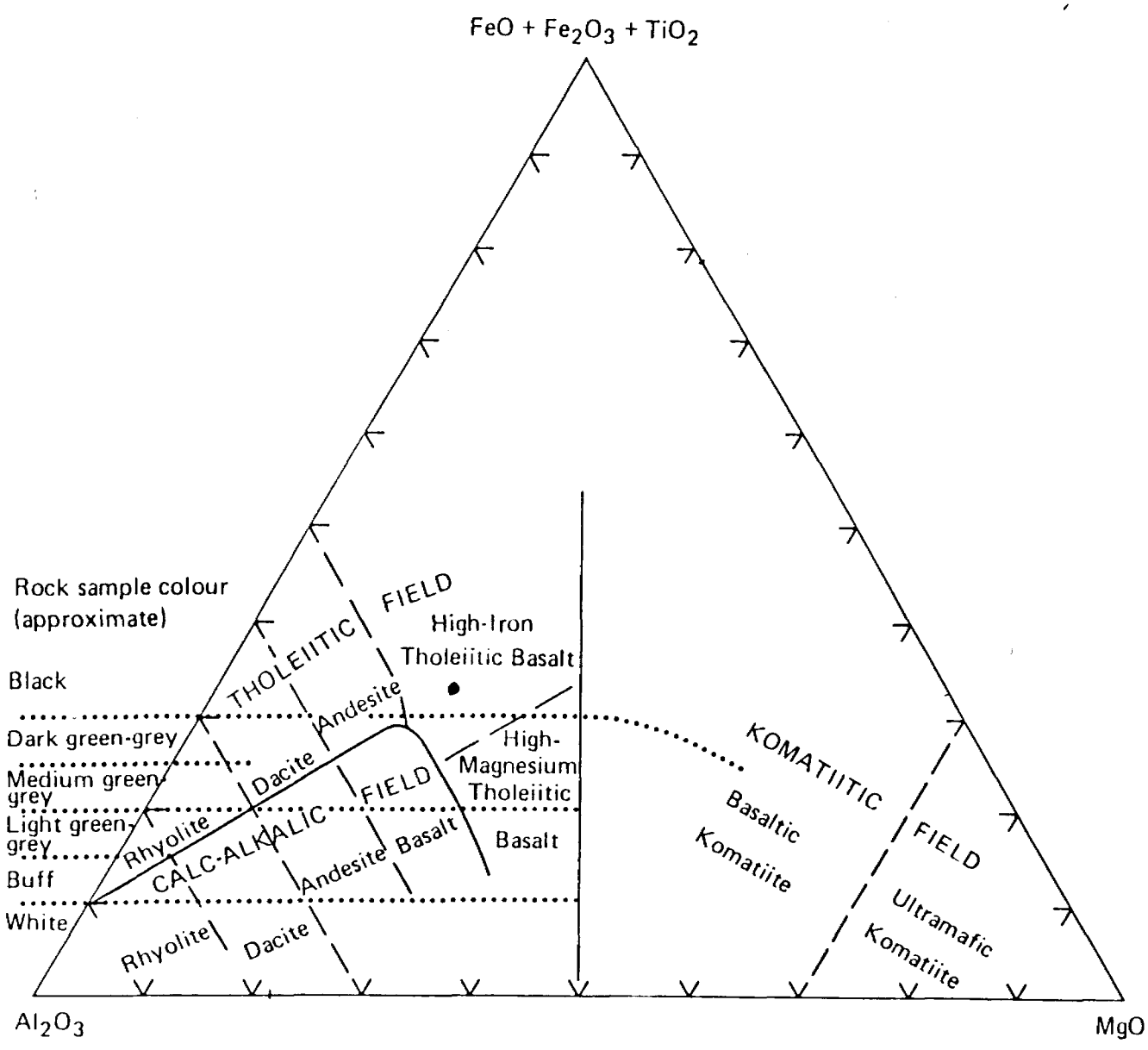

Figure 1 — Jensen Cation Plot involving the cation percentages of Al_2O_3, FeO + Fe_2O_3 + TiO_2, and MgO.

2625

ORC-13-87

147'-147'5"

MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2

PHONE: (604) 980-5814 OR (604)988-4524 TELEX:VIA USA 7601067

CERTIFICATE OF ASSAY

COMPANY: MOUNTJOY EXPL. & CONS.
PROJECT: ORCANA
ATTENTION: J. MOUNTJOY

FILE: 72-898
DATE: SEPT 11, 1987
TYPE: WHOLE ROCK ANALYSIS

We hereby certify the following assay results for samples submitted.

SAMPLE NUMBER		312	2580	2586	2617	2635
AL2O3	%	13.05	16.94	6.39	20.20	13.51
BA	%	.013	.011	.005	.010	.016
CAO	%	8.87	4.17	6.67	9.48	5.13
FE2O3	%	9.79	11.07	10.31	6.26	13.31
K2O	%	1.36	.37	.02	.52	.46
MGO	%	4.40	9.84	13.52	8.22	5.14
MNO2	%	.34	.28	.33	.17	.29
NA2O	%	1.41	3.74	.05	3.09	3.52
P2O5	%	.10	.13	.08	.10	.27
TIO2	%	43.21	43.34	37.35	45.59	48.00
SR	%	.01	.02	.01	.01	.01
TIO2	%	.97	.59	.33	.30	2.08
LOI	%	12.20	5.70	19.80	3.40	4.40
S	%	.12	.41	.20	.36	.73

Certified by _____

MIN-EN LABORATORIES LTD.

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE:(604)980-5814 OR (604)988-4524 TELEX:VIA USA 7601067 UC

Certificate of GEOCHEM

Company:MOUNTJOY EXPL.& CONS.
Project:ORCANA
Attention:J. MOUNTJOY

File:72-898/P1
Date:SEPT 11/87
Type:ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	AU-FIRE PPB
312	1
2580	2
2586	1
2617	1
2625	3

Certified by

MIN-EN LABORATORIES LTD.

COMPANY: MOUNTJOY EXPLORATION — MINERAL LABS (CP) REPORT — ACT:F26 PAGE 1 OF 2

PROJECT NO: — 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 — FILE NO: 82-614

ATTENTION: J.MOUNTJOY — (604)980-5814 OR (604)988-4524 — * WHOLE ROCK ANALYSIS * — DATE:OCT 22, 1982

VALUES IN %	AL2O3	BA	CAO	FE2O3	K2O	MGO	MNO2	NA2O	P2O5	SIO2	SR	TIO2
461-B	15.13	.046	5.10	12.48	.59	7.23	.25	2.72	.12	46.73	.00	.94
476-2	4.58	.002	14.66	8.53	.09	14.99	.29	.01	.10	37.14	.01	.21
31:16-C	15.47	.015	9.02	8.55	1.60	4.71	.24	1.29	.10	49.82	.01	.81
[illegible]	[illegible]	[illegible]	[illegible]	9.93	[illegible]	4.44	.33	2.66	.14	47.13	.01	1.17
[illegible]	[illegible]	.017	8.12	10.19	[illegible]	7.85	.22	1.84	.12	42.80	.00	.56
221 #2	15.46	.001	4.99	11.84	.03	14.64	.24	1.99	.15	38.10	.00	.25
31:14-C	14.10	.009	7.59	12.18	.05	15.67	.26	.39	.13	41.33	.01	.21

MIN-EN LABS ICP REPORT
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

(VALUES IN %)	LOI	S
451-B	3.50	.12
476-B	6.60	.20
31118-C	3.00	.13
31142-C	3.00	.22
3115a-C	3.50	.14
3114-C	5.50	.08
3123-C	4.10	.05

*** Certificate of [illegible] ***

Company: [illegible] EXPLORATION
Project:
Attention: [illegible]

File: [illegible]
Date: SEPT [illegible]
Type: ROCK [illegible]

We hereby certify the following results for samples submitted.

Sample Number	AU FIRE PPB
[illegible]	5
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible] 4	[illegible]
[illegible]	[illegible]

Certified by [signature]

[illegible] LABORATORIES [illegible]

BELL - WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187. HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. 2902 (Page 1 of 2) DATE: August 25, 1987

SAMPLE(S) OF: Core (55) RECEIVED: August 1987

SAMPLE(S) FROM: Orcana Resources

Sample No.	Au ppb	Au oz.	Ag ppm
18'-23'	18		
23'-28'	51		
28'-33'	40		
33'-38'		0.085 **	
38'-43'	395		
43'-48'	36		
48'-53'	293		
53'-58'	23		
58'-63'	32		
63'-64'9"	19		
64'9"-68'	45		
68'-73'	48		
73'-78'	54		
78'-83'	118		
83'-88'	217		
88'-93'		0.032 **	
93'-98'		0.030 **	
99'-104'	21		
104'-108'	12		
108'-113'	23		
113'-118'	11		
118'-123'	243		
123'-128'	47		
128'-132'6"	274		
132'6"-133'3"	107		
133'3"-136'	45		
136'-138'	122		
138'-141'	152		
141'-144'3"	84		
144'3"-146	75		

** Checked

IN ACCORDANCE WITH LONG ESTABLISHED NORTH AMERICAN CUSTOM UNLESS IT IS SPECIFICALLY STATED OTHERWISE, GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAIN OCCURRENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER

BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. 2902

DATE: August 25, 1987

SAMPLE(S) OF: Core (55)

RECEIVED: August 1987

SAMPLE(S) FROM: Orcana Resources

Sample No.	Au ppb	Au oz.	Ag ppm
146'-147'	73		
147'-148'	228		
148'-149'	621		
149'-152'	237		
152'-153'	193		
153'-156'	167		
156'-158'	152		
158'-161'	437		
161'-164'	363		
164'-167'	514		
167'-168'	435		
168'-170'	507		
170'-173'	233		
173'-176'		0.054 **	
176'-178'	191		
178'-180'5"	346		
180'5"-184'		0.039 **	
184'-186'		0.085 **	
186'-188'		0.119 **	
188'-193'		0.119 **	
193'-194'		0.038 **	
10901	102		N.D.
10902		0.553 **	1.2
10903	237		0.8
10904	8		0.8

** Checked

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER [signature]

BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187, HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

SEP 3 RECD

NO. 2955 DATE: August 31, 1987

SAMPLE(S) OF: Core (35) RECEIVED: August 1987

SAMPLE(S) FROM: Orcana Resources Ltd.

Sample No.	Gold ppb	Oz. Gold
ORC-1-87 253-255		0.050**
255-258	47	
258-261	64	
261-264-7	14	
285.6-288	4	
288-290	3	
290-295	7	
295-300	4	
300-305	3	
305-308	6	
26-3-87 33-38	4	
38-39-6	4	
39-6-41	3	
41-44	3	
44-47	2	
42-49	3	
49-52.6	3	
52.6-56	2	
56-61	3	
61-65	15	
65-69	70	
69-74	4	
74-79	3	
79-84	4	
84-89	3	
89-94	2	
74-99	6	
99-102	6	
102-105.5	12	
105.6-110	274	
110-115	10	
115-118	7	
118-120.5	71	
120.5-124	44	
124-129		0.049**

** Checked

IN ACCORDANCE WITH THE LONG ESTABLISHED NORTH AMERICAN CUSTOM UNLESS OTHERWISE SPECIFICALLY STATED OTHERWISE, GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND VARIATION INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER

BELL - WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187. HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. 3045

DATE: September 8, 1987

SAMPLE(S) OF: Core (49)

RECEIVED: September 1987

SAMPLE(S) FROM: Orcana Resources Ltd.

Sample No.	Au ppb	Au oz.
146-148	15	
148-151	23	
151-154	36	
154-158	8	
165-168	200	
8-170.5	14	
0.5-173.5	262	
3.5-177.5	332	
183-186		0.496**
198-201	30	
208-213	40	
213-218		0.050**
218-222	78	
222-225.5	19	
231-233	15	
233-238	23	
238-242	12	
265-268		0.058**
268-271	388	
271-273	93	
273-278	454	
278-281.5	53	
1.5-283.2	960**	
3.2-285.8		0.044**
285.8-290	239	
290-291.5	754**	
291.5-296	723**	
296-299	7	
299-303		0.042**
303-308	137	
308-311	152	
311-316	388	
316-321	413	
321-325	823**	
325-327	494	
327-328		0.110**
328-329.6	823**	
329.5-331.5		0.106**
331.5-335	400	
335-337	478	
337-340	589**	
340-342	206	
342-344		0.032**
344-348	361	
348-352	319	
352-353	18	
417-421	27	
421-425	15	
425-428	14	

Checked

IN ACCORDANCE WITH LONG ESTABLISHED NORTH AMERICAN PRACTICE UNLESS OTHERWISE SPECIFICALLY STATED THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187. HAILEYBURY. ONTARIO TEL: 672-3107

Certificate of Analysis

NO. 3110 DATE: September 15, 1987

SAMPLE(S) OF: Core (123) RECEIVED: September 1987

SAMPLE(S) FROM: Orcana Resources Inc.

Sample No.	Gold ppb
2501	4
2	6
3	4
4	8
5	4
6	7
7	4
8	3
9	4
2510	7
1	10
2	12
3	8
4	11
5	10
6	11
7	25
8	14
9	12
2520	2
[illegible]	2
2	41
3	25
4	18
5	213
6	33
7	80
8	104
9	317
2530	111
1	345

Sample No.	Gold ppb	Oz. Gold
2532	191	
3	34	
4	15	
5	12	
6	43	
7	237	
8	59	
9		0.034**
2540	186	
1	21	
2	96	
3	58	
4	19	
5	322	
6	967**	
7		0.048**
8		0.096**
9		0.163**
2550	53	
1		0.090**
2		0.124**
3		0.040**
4		0.032**
5	355	
6	562	
7	640	
8		0.038**
9		0.061**
2560		0.144**
1	639	
2	536	

** Checked

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER: _____

BELL-WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187. HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. 3110 DATE: September 15, 1987

SAMPLE(S) OF: Core (123) RECEIVED: September 1987

SAMPLE(S) FROM: Orana Resorces Inc.

Sample No.	Gold ppb	Oz. Gold
2563		0.057**
4	572	
5		0.049**
6		0.062**
7	631**	
8	713**	
9	234	
2570	362	
1	698**	
2	891**	
3		0.094**
4	222	
5	12	
6	22	
7	27	
8	6	
9	8	
2581	11	
2	12	
3	22	
4	10	
5	12	
2587	17	
8	12	
9	36	
2590	86	
1	22	
2	23	
3		0.062**
4	221	
5		0.236**

Sample No.	Gold ppb
2596	207
7	91
8	55
9	53
2600	74
1	38
2	25
3	29
4	52
5	33
6	21
7	23
8	21
9	36
2610	73
1	18
2	606**
3	469
4	241
2619	144
2620	60
2	267
3	36
2626	110
2628	141
2631	377
3	489
458-463	40
458-468	49
458-473	8

** Checked

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187. HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. 3193 DATE: September 1987

SAMPLE(S) OF: Core (130) RECEIVED: September 1987

SAMPLE(S) FROM: Orcana Resources Ltd.

Sample No.	Au ppb	Au oz.		Sample No.	Au ppb	Au oz.
B 301	22			B 390	77	
2	26			1	27	
B 306	8			B 394		0.033**
B 316	12			5	123	
B 319	10			B 400		0.057**
B 320	5			B 406	994**	
B 325	7			7	22	
B 328	19			8	11	
9	51			9	8	
B 330	130			B 410	6	
B 334	48			1	7	
5	12			2	15	
6	47			3	8	
B 338	45			4	11	
B 348	21			5	10	
B 351	64			6	12	
2	12			7	17	
B 354	18			8	152	
B 361	8			9		0.031**
2	15			B 420	78	
B 369	34			1		0.035**
B 370	33			2	84	
1	44		ORC-10-87	236-239	58	
B 374	15			236-241	617	
5	11			236-243.3	285	
6	185			236-245		0.246**
7	106			6		0.287**
8	21			236-248		0.120**
9	78			236-250		0.059**
B 380		0.041**		236-253		0.044**
B 382	40			236-256.4	823	
3	70			236-258	324	
B 385		0.039**		236-260	346	
6		0.122**		236-263	71	

** Check

IN ACCORDANCE WITH LONG ESTABLISHED NORTH AMERICAN CUSTOM UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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BELL - WHITE ANALYTICAL LABORATORIES LTD.
P.O. BOX 187. HAILEYBURY, ONTARIO TEL: 672-3107

Certificate of Analysis

NO. 3193 DATE: September 24, 1987

SAMPLE(S) OF: Core (130) RECEIVED: September 1987

SAMPLE(S) FROM: Orcana Resources Ltd.

Sample No.	Au ppb	Au oz.	Sample No.	Au ppb	Au oz.
236-265	89		2663	154	
236-268	51		4	106	
236-271	115		5	32	
236-273	32		6	25	
236-275	891		7		0.052**
236-278	78		2669	115	
236-281	17		2670	108	
236-283	56		1	754	
236-285	36		2		0.145**
236-288	38		2674	754	
236-291	37		5	549	
236-293	14		6	115	
36-294.6	41		7	56	
236-296	137		8	14	
236-298	130		2681	15	
236-302	36		2	40	
2615	7		2684	228	
2618	14		5	12	
2621	58		2687	3	
2624	18		8	2	
2627	23		9	7	
2629	123		2690	15	
2630	278		1	18	
2632		0.038**	2	43	
2634	960		3	44	
2636		0.239**	4	29	
7		0.099**	5	25	
8		0.032**	6	23	
2653		0.143**	2698	22	
2654	754		9	40	
5		0.085**	2700	138	

** Checked

IN ACCORDANCE WITH ESTABLISHED NORTH AMERICAN CUSTOM UNLESS OTHERWISE SPECIFICALLY STATED OTHERWISE, GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.
FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-1 | PAGE NO. A

DRILLING COMPANY: J.T Thomas		COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 308'	DIP OF HOLE AT: collar 45	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug. 10/87	DATE COMPLETED: Aug. 11/87	DATE LOGGED: Aug. 11,1987	LOGGED BY: J.E. Mountjoy		148 ft 43		CLAIM NO.: L.34 1433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA		DATE SUBMITTED:	SUBMITTED BY (Signature):		288 ft 42		LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 0+00/1+25sw
					ft		PROPERTY NAME: Cook-Decker

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS * Au oz/t	CORE REC
			SUMMARY LOG							
0	8	CASING								
8'	132.5'	Calc Alkaline Basalt	Light grey - putty coloured, strongly breccatted. From 63' - 64'9" lamprophyre dyke			33'	38'	5'	.085	
						88'	98'	10'	.031	
132.5'	133'3"	Mafic TrapDyke "Porphyry?"	Very dark grey, siliceous, 2% v. fine py							
133'3"	144'3"	Porphyry	Strongly sheared, 25% qtz. ankerite veining, siliceous							
144'3"	167	Calc Alkaline Basalt	Light grey to putty coloured, strongly brecciatted 1-2%py							
167'	169'6"	Porphyry	Siliceous, well developed phenocrysts, 2% py							
169'6"	193'8"	Porphyry	Strongly sheared, sericitic, siliceous, minor assimilated well rock.			173'	176'	3'	.054	
						180.5'	194'	13.5'	.087	
193'8	253'	Quartz Diabase	Medium grey, moderately magnetic			186'	193'	7'	.119	
253'	264'7"	Mafic Volcanic	Dark grey, strongly sheared with splotches of green carbonate?			253'	255'	2'	.05	
264'7"	285'6"	Quartz Diabase	Medium grey, moderately magnetic							
285'6"	308	Mafic Intrusive	Strongly brecciatted, 20% qtz calcite veining, chloritic							
			END OF HOLE @ 308'							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.
FILL IN ON EVERY PAGE

HOLE NO. ORC-1-87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 308'	DIP OF HOLE AT: collar | -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug. 10/87	DATE COMPLETED: Aug 11/87	DATE LOGGED: Aug. 11/87	LOGGED BY: J.E. Mountjoy	148 ft | -43°		CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA	DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	288 ft | -42°			LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy; Section 0+00/1+25sw
			ft |			PROPERTY NAME: Cook Decker
			ft |			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION (Colour, grain size, texture, minerals, alteration, etc.)	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC
	8	Casing									
8	63'	Calk Alkaline Basalt	The colour is light grey to putty coloured. The core is aphanitic but strongly brecciated with a mixture of qtz. serpentine chlorite and graphite? The fragments are very angular. The core is also well veined with roughly 10% milky white qtz. and minor chlorite. The black matrix filling makes up roughly 15% of the core. The core is moderately-strongly ankeritic while the core is pervasively calcitic and weakly silicified. The rhydite may be a Basalt which has been bleached. The veining appears to be @ 60% to the C.A.			18'	23'	5	18		
						23'	28'	5	51		
						28'	23'	5	40		
						33'	38'	5	-	.085	
						38'	43'	5	395		
						43'	48'	5	36		
						48'	53'	5	293		
						53'	58'	5	23		
				60"		58'	63'	5'	32		
			Mineralization! Only minor pyrite was observed, particularily @ 51' where it is associated with the graphite.								
			Contact: Sharp @ 60°								
63'	64'9"	Lamprophyre Dyke	The core is fine grained - med grained with black books of of mica? The core is massive with minor qtz/calcite micro veins(3%) The core is medium grey and very strongly calcitic and ankeritic/			63'	64'9	1'9"	19		
			Mineralization little or no visible sulphides.								
			Contact: Sharp @ 35° to the C.A.								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but first three portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO.	PAGE NO.
ORC-1-87	2

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC
0	132'6"	Calc Alkaline Basalt	The core in this interval is putty grey in colour and aphanitic. The core is moderately ankeritic pervasively calcitic including the stringers (very strongly calcitic) The core is moderately brecciatted with 5-10% qtz. carb strs. and stockwork. There are at least two generations of qtz veining. This unit has previously been mapped as a rhyolite			64'9	68'	3'3"	45		
						68'	73'	5'	48		
						73'	78'	5'	54		
						78'	83'	5'	118		
						83'	88'	5'	217		
						88'	93'	5'	-	0.32	
						93'	98'	5'	-	.030	
					312B	98'	99'	1'	Whole rock anal.		
			Mineralization: Only minor<1% py, except @ 97' where 3% py is associated with a 5" vein			99'	104	5'	21		
			Contact: Sharp @ 55' to the C.A.			104'	108	4'	12		
						108'	113	5'	23		
						113'	118'	5'	11		
						118'	123'	5'	243		
						123'	128'	5'	47		
						128'	1321/6"	4.5'	274		
132'6"	133'3"	Mafic Trap Dyke	The Dyke is very dark grey and cut by 15% fine ankerite and some calcite Sts. The core is very fine grained to aphanitic with a massive texture. The core is not pervasively carbonatized but is siliceous and contains possible feldspar phenocrysts.			132'6"	133'3"	9"	107		
			Mineralization: The core is well mineralized with 2% very fine pyrite and possibly some arsenopyrite?								
			Contact: sharp but seperated @ 45° to the C.A. The core is weakly veined but not significantly mineralized.								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. CRC-1-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
					collar			
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft °		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft °			
					ft °		PROPERTY NAME	
					ft °			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb			CORE REC.
133'3"	144'3"	Porphyry	The core is strongly shearred with well defined to remnant quartz phenocrysts. The core is something of a quartz stock work with roughly 25% qtz. ankerite stringers and calcite stringers. The core is fairly well silicified and is strongly calcitic throughout. At the upper contact and locally elsewhere traces of fuchsite were observed. Mineralization: overall <1% py was observed but @ 137'2" wk bands or lenses of pyrite were present running semi-concurrent to the foliation.	FO=40°		133'3	136'	2'9"	45			
						136'	138'	2'	122			
						138'	141'	3'	152			
						141'	144'3	3'3	84			
			Contact: Sharp @ 70° to the C.A. It is veined with barren quartz carbonate over 1.5".									
144'3	167'	Calc Alkaline Basalt	The core is light grey - putty coloured and aphanitic. The core is well veined with qtz. -stockworking. and calcite strs. The core is pervasively ankeritic. The first two feet is somewhat brecciatted and pervasively calcitic but lower only the stringers are calcitic. Overall there is roughly 10-15% qtz carbonate veining and the core is very siliceous Notable feature: 144'3" - 145'3" severely brecciatted rhyolite as in first unit of hole. From 147' -148 ½" is 75% qtz stockworking 148'4" - 165 core is fairly massive med. grey-light grey in colour. 165' - 167' the core is badly broken From 151'7 - 151'11" is good porphyry with gradational contacts therefore this could all be altered porphyry.		144'3"	146'	1'9"	75			
						146'	147'	1.0'	73			
						147'	148'	1.0'	228			
						148'	149'	1.0'	621			
						149'	152'	3'	237			
						152'	153'	1.0'	193			
						153'	156'	3'	167			
						156'	158'	2'	152			
						158'	161'	3'	437			
						161'	164'	3'	363			
						164'	167'	3'	514			
			Mineralization: Overall 1-2% py in local concentrations along fractures. Minor fuchsite and pyrrhotite may be present in trace amounts.									
			Contact: Broken									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-1-87 | PAGE NO. 4

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC
167'	169'6	Porphyry	The core has some well developed phenocrysts and quite a bit of qtz veining (20%) The core is siliceous moderately ankeritic and strongly calcitic. The first foot is 90% qtz carb. veining At about 169' chloritic (black) fractures are very prevalent Mineralization: the core contains roughly 2% fine disseminated pyrite.			167'	168'	1.0'	435		
						168'	170'	2.0'	507		
			Contact: Sharp @ 60° to the C.A.								
169'6"	193'8"	Porphyry	This selection is strongly sheared with locally well developed sericite (tan) This siliceous unit is moderately to strongly ankeritic with only the stringers being calcitic but @ 179'11" is a ½" wide vein or interflow section of almost pure. Calcite This unit is highly variable with assimilated volcanics, section of silicified graphite and 5-10% qtz-carb microveins, as well as 10% sericite. The graphitic sections are found @ 170'11" 171'7" 179'8", from 180'6 - 182' and @ 184'			170'	173'	3'	233		
						173'	176'	3'	-	.054	
						176'	178'	2'	191		
						178'	180.5'	2.5'	346		
						180.5'	184'	3.5'	-	.039	
				Foliation		184'	186'	2.0'	-	.085	
				45°		186'	188'	2.0'	-	.119	
						188'	193'	5.0'	-	.119	
						193'	194'	1.0'	-	.038	
			Mineralization: ≤ 2% v. fine diss py, with some strs of py possibly some pyrrhotite and minor poorly developed fuchsite.								
			Contact: sharp @ 49° to theC.A. The contact is well mineralized with 3-5% py								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.
FILL IN ON EVERY PAGE

HOLE NO. ORC-1-87 | PAGE NO. 5

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft		LOCATION (Tp., Lot, Con. OR Lat. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auoz s/t	Core Rec
193'8"	253	Quartz Diabase	The core is medium grey with some green epidote staining locally. The core is quite massive fine grained and weakly moderately magnetic with minor fractures. The core is not ankeritic orcalcitic with the micro fractures being calcitic and locally epidotized. Mineralization: little or no sulphides. Contact: Sharp @ 20° to the C.A.			253'	255'	2'	-	0.05	
253'	264'7"	Sheared Mafic Volcanic	This short interval is strongly sheared dark grey and aphanitic -fine grained with clots of green feldspar and 15% qtz. - calcite. The core is non ankeritic. This unit is possibly a sheared Nipissing diabase? At about 261' is some fault gouge. Mineralization: little or no visible sulphides.			255' 258' 261'	258' 261' 264'7"	3' 3' 3'7"	47 64 14		
264'7"	285'6"	Quartz Diabase	This unit is very similar to that from 193'8" - 253' Mineralization: minor disseminated pyrite. (<1%). Contact: Broken								
285'6"	308	Mafic Intrusive?	This unit is strongly brecciatted and microveined with 20% qtz. calcite. The core is very calcitic. and chloritic. This unit is a possibly brecciatted Nipissing diabase or gabbro. Mineralization : little or no visible sulphides but @ 290' is a 2" qtz. vein with minor py or cpy? End of HOle @ 308'			285'6" 288' 290' 295' 300' 305'	288 290 295 300 305 308	2'6" 2' 5' 5' 5' 3'	4 3 7 4 3 6		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. ORC-2-87 | PAGE NO. A

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J. T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 458'	DIP OF HOLE AT: collar -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 11/87	DATE COMPLETED: Aug. 12/87	DATE LOGGED: Aug. 27/87	LOGGED BY: J. E. Mountjoy	150 ft -43°	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J. E. Mountjoy	278 ft -45°	CLAIM NO.: L. 341433
				458 ft -40°	LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 0+00/2+25 SW
				ft	PROPERTY NAME: Cook - Decker

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	CORE REC
			SUMMARY LOG							
0	10'	Casing								
10'	14'	Calc Alkaline Basalt	Light greenish beige to putty coloured, weakly brecciatted, sericitc, carbonatized.							
14'	15'	Quartz Porphyry	Light grey, badly broken, very siliceous							
15'	38'1"	Graphitic Schist	Dark grey to black minor assimilated basalt.							
38'1	57'10"	Porphyry	Medium grey 1-2% very fine diss. py							
57'10"	79'6"	Basaltic Komatiite	Light green 20-30% qtz-carbonate veining, well brecciatted.							
79'6"	102'6"	Porphyry	Medium light grey, well developed phenocrysts							
102'6"	112"	Basaltic Komatiite	Light green15-20% qtz. - carbonate veining							
112'	114'9"	Graphitic Breccia	Mottled black and white, v. well brecciatted,							
114'9"	152'10"	Calc Alkaline Basalt	Light grey - putty coloured, well brecciatted,			116'	117'	1'	.034	
152'10"	155'	Arkose	Fine grained, light grey.							
155'	246'	Calc Alkaline Basalt	Light grey-grey green and putty coloured, well brecciatted			212'	222'	10'	.108	
246'	307'3"	Pophyry	Highly variable, stroungly brecciatted, locally, graphitic.			235'	237'	2'	.09	
307'3"	312	Sheared Porphyry	Strongly sericitic, 30-40% qtz carbonate.			240'	242'	2'	.124	
312'	412	Quartz Diabase	Medium grey, moderately magnetic.			243'	249'	6'	.036	
412'	458'	Mafic Intrusive	Dark grey green, mottled, very chloritic.			261'	269'	8'	.06	
						277'	280'	3'	.057	
						283'	288'	5'	.054	
						308'	311'	3'	.094	
			END OF HOLE @ 458'							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO. QRC-2-87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas		COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 458'	DIP OF HOLE AT: collar | -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 11/87	DATE COMPLETED: Aug. 12/87	DATE LOGGED: Aug.27/87	LOGGED BY: John E. Mountjoy		150 ft | -43°	
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy		278 ft | -45	
					458 ft | -40	
					ft |	

MAP REFERENCE NO.: 41 P 11 | CLAIM NO.: L.341433

LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 0+00/2+25 SW

PROPERTY NAME: Cook - Decker

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auoz/t	Core Rec.
0	10'	Casing									
10'	14'	Calc Alkaline Basalt	The core is putty coloured to light greenish beige. It is aphanitic, weakly brecciatted and contains 3% qtz-carbonate veining. The core is strongly ankeritic and weakly calcitic The core is very sericitic and is believed to be a sericitized and carbonatized basalt. Mineralization: little or no visible suplhides Contact: broken		2508	10'	14'	4'	3		
14'	15'	Quartz Porphyry	The core is badly broken and this interval may be slightly larger or smaller due to ground core. The core is light grey to rusty due to minor limonite. This unit is very siliceous with small (≤1/8" in dia.) white qtz. phenocrysts. The porphyry has been fractured and contains chloritic slips or fracture filling. This unit is moderately ankeritic and weakly - not calcitic. Mineralization: little or no visible sulphides Contact: broken, ground?		2509	14'	15'	1'	4		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new hole, but omit this portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-2-87 | PAGE NO. 2

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb			CORE REC.
15'	38'1	Graphitic Schist	This unit may be a graphitic tuff or argillite. The core is black to dark grey, aphanitic and very badly broken. The schistosity/bedding is at a low angle to the core axis. The core is veined with 3% quartz ankerite veins. The bulk of the unit is non ankeritic and not calcitic. The core appears to contain minor sections of basalt		2510	15	20	3'rec.	7			
					2511	20'	25'	5'	10			
					2512	25'	30'	5	12			
					2513	30'	33'	3	8			
					2514	33	38'	5	11			
			Mineralization: minor banded py., overall ≤ 1% py Contact: broken									
38'1"	57'10"	Porphyry	This unit is medium grey in colour, fine grained to aphanitic with the odd very small qtz phenocryst particularly @ 52'. The core is cut by 3-5% qtz ankerite stringers. The unit is strongly ankeritic but not calcitic. The core is weakly brecciatted to massive. This unit is moderately silicified and may be a basalt? or at least have inclusions of basalt.		2515	38'	42'	4'	10			
					2516	42'	45'	3'	11			
					2517	45'	50'	5'	25			
					2518	50'	54'	4'	14			
					2519	54'	58'	4'	12			
			Mineralization: overall 1-2% very fine disseminated pyrite. Contact: broken									
57'10"	79'6"	Basaltic Komatiite	The core is light green with 20-30% milky white quartz ankerite and calcites stringers. The core is aphanitic -fine grained and well foliated to brecciatted. The core is moderately to strongly ankeritic and weakly - moderately calcitic. Locally wisps of sericite are present. The core is moderately chloritic. From 65'2 - 66" is a barren qtz vein with 20% chlorite, from 78'2" - 78'6" minor porphyry.		2520	58'	63'	5'	2			
					2521	63'	66'	3'	2			
					2522	66'	70'	4'	41			
					2523	70'	74'	4'	25			
					2524	74'	78'	4'	18			
					2525	78'	79.5'	1.5'	213			
			Mineralization: overall ≤ 1% cs. py Contact: sharp @ 60° to the C.A.									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new hole, [illegible] portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-2-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au ppb			CORE REC.
79'6	102'6"	Porphyry	The core is medium - light grey with white phenocrysts up to 3/16 of an inch in diameter. The core is veined with 3-5% brecciatted quartz. The core is moderately ankeritic particulary with the quartz fragments or stringers. The core is not calcitic from 97'6" -98'4" may be an inclusion of basalt		2526	79.5'	83'	3.5'	33			
					2527	83'	86'	3'	8			
					2528	86'	89'	3'	104			
					2529	89	93'	4'	317			
					2530	93'	96.5'	3.5'	111			
					2531	96.5'	100'	3.5'	345			
					2532	100'	102'6"	2.5'	191			
			Mineralization: overall ≤ 1% py in fractures Contact: broken									
102'6"	112'	Basaltic Komatiite	The core is light green with 15-20% white qtz. veins or fragments. The core is aphanitic and moderately brecciatted The core is strongly ankeritic with some calcite in the qtz stringers. The core is weakly chloritic. Mineralization: little or no visible sulphides. Contact: Sharp but broken @ 80° to the C.A.		2533	102'6"	105'6"	3'	34			
					2534	105'6"	108'	2.5'	15			
					2535	108'	111'	3'	12			
					2536	111'	112'	1'	43			
					2537	112'	114'9"	2'9"	237			
112'	114'9"	Graphitic Breccia	This unit is mottled black and white. is V. well brecciatted with 30 - 35% white qtz. fragments and a 1.5 inch wide vein @ 114' which is immediately followed by 2" of graphitic fault gouge. Associatted with the quartz is a fair amount of ankerite and minor calcite. Mineralization: Locally heavy py is found associated with the qtz ankerite fragments, overall ≤ 1% Contact: Broken									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO.	PAGE NO.
ORC 2-87	4

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
				ft			
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	Core Rec.
14'9"	152'10"	Calc Alkaline Basalt	This unit is putty coloured - light grey. The core is aphanitic and well brecciatted with dark grey graphite/chlorite filling the fractures as well as qtz-carbonate which makes up about 10% of core, strongly ankeritic, calcitic strs. Mineralization: little or no sulphides from 116' -117' black silicieous v. fine py ≤2% Contact: Sharp @ 50° to the C.A.		2538	114'9"	116'	1'3"	59		
					2539	116'	117'	1'	-	.034	
					2540	117'	122'	5	186		
					-	154'7"	154'9"	Thin section			
152'10"	155'	Arkose?Porphyry? Lamprophyre?	The core in this unit is fine grained, light grey in coulour with 3% white qtz/carbonate stringers. The core is strongly ankeritic and calcitic. The core is massive and somewhat silicieous. Mineralization: minor diss. py. Contact: sharp @ 50° to the C.A.		2541	152'10"	154'	1'2"	-	-	
155'	246'	Calc Alkaline Basalt	The core varies in colour from light grey to grey green and putty coloured. The core is aphanitic and well-moderately brecciatted. Locally the core is strongly silicified but from 173' - 183' the core is somewhat fuchsitic with green wisps and from 183' - 185' the core has considerable leucoxene present. from 192' - 194' graphite is present in fractures. FØ 50° Overall the core is cut by 10% qtz carbonate and is strongly ankeritic and wkly calcitic with calcite strs. Mineralization: local concentrations of py, overall ≤ 1 % py Contact: Sharp @ 80° to the C.A.	50°	2542	164'	168'	4'	96		
					2543	173'	176'	3'	58		
					2544	176'	179'	3'	19		
					2545	179'	183'	4'	322		
					2546	191'	195'	4'	967		
					2547	212'	215'	3'	-	.048	
					2548	215'	218'	3'	-	.096	
					2549	218'	222'	4'	-	.163	
					2550	224'	226'	2'	53		
					2551	235'	237'	2'	-	.090	
					2552	240'	242'	2'		.124	
					2553	243'	246'	3'	-	.040	

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-2-87 | PAGE NO. 5

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Aupph	ASSAYS + Auozs/t	CORE REC.
46'	307'3"	Phorphyry	This wide zone is highly variable due to alteration. The core varies from black-brown-light grey.								
			Generally the core is aphanitic, moderately to well brecciatted with 20-25% qtz carbonate veining. The core is weakly ankeritic		2554	246'	249'	3	-	.032	
			c with calitic stringers and gradationally becoming		2555	249'	252'	3'	355		
			strongly calcitic from weakly calcitic near the beginning of		2556	252'	256'	4'	562		
			the interval.		2557	256'	261'	5'	640		
					2558	261'	265'	4'	-	.038	
			The notable features are as follows:		2559	265'	268'	3'	-	.061	
					2560	268'	269'	1'	-	.144	
			246 - 248 sil, grey, brown, porphyry		2561	269'	273'	4'	639		
			248'-248'5" graphitic		2562	273'	277	4'	536		
			248'5 - 252' as from 246' - 248'		2563	277'	280'	3'	.057	.057	
			252' - 253' graphite, fragments of qtz.		2564	280'	283'	3'	572		
			253' - 254' porphyry and graphite		2565	283'	286'	3'	-	.049	
			254' - 256' sil graphitic tuff BD 65°	65°	2566	286'	288'	2'	-	.062	
			256' - 266'4" brown light grey phorphyry phenos 1/8 diam.		2567	288'	291'	3'	631		
			266'4" - 267'1" qtz vein ~ 10% chlorite or gf fractures		2568	291'	295'	4'	713		
			267'1" - 268' lt grey porph. poss basalt		2569	295'	299'	4'	234		
			268' - 268'8" Sil gf bx		2570	299'	302'	3'	362		
			268'8" - 271'6" as from 267'1" - 268'		2571	302'	305'	3'	698		
			271'6" - 274'6" cs porph ~ gf over 1" at befinning and e.d		2572	305'	308'	3'	891		
			274'6" - 278' as from 267'1" - 268" some sil gf								
			278' - 280' predominantly sil gf.								
			280' -286'4" as from 267'1 - 268'								
			286'4" - 287'2" qtz vein some gf/								
			287'2" - 288" qtz + gf.								
			288' - 300'1" cser grey porph some gf fractures								
			300'1" - 301'2" porph 50% gf.								
			301'2" - 306'3" sil grey porph, wisp of sericite								
			306'3" - 307'3" porph with fuchsite and sericite wisps.								
			Mineralization: overall 2-3% py with local concentrations to 5%								
			Contact: gradational								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO.	PAGE NO.
ORC-2-87	6

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH / TOTAL FOOTAGE	DIP OF HOLE AT collar / ft / ft / ft	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO. / CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY			LOCATION (Tp., Lot, Con. OR Lat. and Long.)
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)			PROPERTY NAME

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC.
307'3"	312'	Sheared Porhryry (Sericite Schist)	This unit is dark green - greenish brown due to wisps of sericite. The core is aphanitic, very silicious and veined with 30-40% qtz carbonate and calcite strs. The core is weakly-moderately ankeritic and due to the stringers is strongly calcitic. The core is strongly brecciatted and locally foliated 50° @ 311'6" is a 4" qtz vein ū little or no py. Mineralization: overall ≪ 1% py. Contact: very sharp at 70° to the C.A.	50°	2573	308	311	3'	-	.094	
					2574	311	312	1'	222		
312'	412'	Quartz Diabase	This unit is dark grey, fine grained-aphanitic, moderately magnetic and very massive. Where the unit is fractured epidote envelopes are common. Mineralization: little or no visible sulphides. Contact: Sharp but broken @ 45° to the C.A.								
412'	458'	Mafic Intrusive?	The core in this unit is dark grey green in colour fine grained mottled and very chloritic. The core is veined by about 5% qtz. carbonate. The core is very weakly ankeritic and locally very calcitic due to calcite stringers. This unit is also quite talcase suggesting a possible ultramafic composition.		2575	412'	416'	4'	12		
					2576	423'	428'	5'	22		
					2577	438'	441'	3'	27		
					2578	447'	450'	3'	6		
					2579	454	458	4'	8		
					2580	430.5'	431.5	1'	2	WHOLE ROCK ANAL	
			Mineralization: little or no visible sulphides.								
			END OF HOLE @ 458'								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new hole, etc. ... portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-3-87 | PAGE NO. A

DRILLING COMPANY: J. T. Thomas		COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 508'	DIP OF HOLE AT: collar | -45	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug. 12/87	DATE COMPLETED: Aug. 14/87	DATE LOGGED: Ajg. 26/87	LOGGED BY: J.E. Mountjoy		258 ft | -41		CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy		428 ft | -38		LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+00/2+25SW
					ft |		PROPERTY NAME: COOK-DECKER
					ft |		

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + AUOZS/T			Core Rec.
			SUMMARY LOG									
0	33'	CASING										
33'	44'	Porphyry	Light grey, siliceous, weakly developed phenocrysts.									
44'	49'	Mafic Lava	Aphanitic-medium grained 7% qtz-carbonate veining.									
49'	52'6	Lamprophyre	Fine grained, light grey with flakes of biotite.									
52'6"	105'5"	Basaltic Komatiite	Grey green-greenish yellow, strongly brecciatted, well veined									
105'5"	110'	Porphyry	Medium to dark grey, <1% py									
110'	120'6"	Basaltic Komatiite	Pale green 40% qtz-carbonate veining									
120'6"	124'	Graphitic Breccia	Black with 15-20% white qtz veining, strongly brecciatted									
124'	209'3"	Calc Alkaline Basalt	Putty coloured, 3-5% qtz - carbonate veining, moderately brecciatted.			124'	129'	5'	.049			
						183'	186'	3'	.496			
209'3"	222'	Calc Alkaline Basalt with Leucoxene	Putty coloured to grey with pink - yellowish flecks of leucoxene, 5-7% qtz - carbonate veining.			213'	218'	5'	.05			
222'	281'5"	Calc Alkaline Basalt	Putty to tan in colour 3-5% qtz-carbonate veining well brecciatted			265'	268'	3'	.058			
						283'2	286'2	3'6"	.044			
281'5"	283'2"	Porphyry	Light grey - greyish brown, sericitic, siliceous			299'	303'	4'	.042			
283'2"	286'8"	Graphitic Tuff	Dark grey-black, graphite interlayered with porphyry			327'	331'6	4.5'	.08			
286'8"	344'	Porphyry	Light grey-dark grey, locally sericitic, siliceous			342'	344'	2'	.032			
344'	352'9	Silicified Basalt	Dark green, extremely silicified, locally brecciatted									
352'9"	417'	Quartz Diabase	Dark grey, moderately magnetic									
417'	428'	Mafic Volcanic	Dark green, very chloritic 10% qtz-carbonate veining									
428'	458'3	Quartz Diabase	Dark grey, moderately magnetic									
458'3"	508'	Mafic Intrusive?	Dark green, mottled due to coarse leucoxene									
			END OF HOLE @ 508'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO. ORC-3-87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 508'	DIP OF HOLE AT: collar | -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 12/87	DATE COMPLETED: Aug. 14/87	DATE LOGGED: Aug.26/87	LOGGED BY: J. E. Mountjoy	258 ft | -41°	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES	DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	428 ft | -38°		CLAIM NO.: L341433
			ft |		LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+00 NW/2+25 SW
			ft |		PROPERTY NAME: COOK- DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb			CORE REC.
0	33'	Casing										
33'	44'	Porphyry	The core is aphanitic to fine grained, siliceous and light grey in colour. The core is locally brecciatted. The core has weakly developed phenocrysts, which are only locally recognizable as most appear to have been destroyed. The core is veined with roughly 7% qtz ankerite and minor calcite. The core is stronly ankeritic. From 39'6" - 40' is an inclusion fo mafic lava			33'	38'	5'	4			
						38'	39'6"	1'6"	4			
						39'6	41'	1'6"	3			
						41'	44'	3'	3			
			Mineralization: minor disseminated pyrite (1%) Contact: Broken but veined.									
44'	49'	Mafic Lava	The core is moderately brecciatted, medium grained- very fine grained, and may be an intrusive. The core is veined with 7% qtz carbonate. The core is moderately chloritic with possibly some fuchsite. The core is very strongly ankeritic but not calcitic.			44'	47'	3'	2			
						47'	49'	2'	3			
						49'	52'6"	3'6"	3			
			Mineralization: little or no visible sulphides. Contact: Broken									
49'	52'6"	Lamprophyre	The core is fine grained light grey in colour with flakes of biotite? The core is weakly-moderately calcitic and moderately ankeritic with 3% qtz carbonate stringers micro-veins. The core is quite massive.									
			Mineralization: little or no visible sulphides. Contact: Sharp @ 50°									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-3-87 | PAGE NO. 2

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + AUPPB			CORE REC.
2'6"	105'5"	Basaltic Komatiite	The core is grey green-greenish yellow in colour. The rock is strongly brecciatted and sealed by qtz and chlorite. The core is locally heavily veined ie. from 54' - 69'=20% milky white qtz from 94' - 105.5' =30% milky white qtz. Locally the core appears exhalitive but is so strongly altered it is difficult to tell for sure. The core is very chloritic and possibly epidotized. The core is strongly ankeritic and weakly-not calcitic. At 102.1' is a 1" wide porphyry dikelet. Mineralization: little or no visible sulph. Contact: broken but sharp @ 45° to the C.A.			52'6"	56'	3.5'	2			
						56'	61'	5'	3			
						61'	65'	4'	15			
						65'	69'	4'	70			
						69'	74'	5'	4			
						74'	79'	5'	3			
						79'	84'	5'	4			
						84'	89'	5'	3			
						89'	94'	5'	2			
						94'	99'	5'	6			
						99'	102'	3'	6			
						102'	105.5'	3.5'	12			
105'6"	110"	Porphyry	The core is med- dark grey in colour with white ghost like phenocrysts of qtz and or Feldspar? The core is strongly ankeritic and weakly calcitic. The core is aphanitic-fine grained and quite silicieous, as well as being badly broken up. Mineralization: minor diss. py (<1%) Contact: some veining (milky white) @ 75° to the C.A.			10..5'	110'	4.5'	274			
110'	120'6"	Basaltic Komatiite	The core is pale green and well veined with 40% milky white qtz. Strongly ankeritic and weakly calcitic. Minor fuchsite and gf. @ 11°	45°		110'	115'	5'	10			
						115'	118'	3'	7			
						118'	120.5'	2.5'	71			
			Mineralization: very minor py associatted with gf @ 119' Contact: Sharp but broken @ 75° to the C.A.									
120'6	124'	Graphitic Breccia	The core is 15% -20% qtz. in an aphanitic black matrix. The core is mottled black and white due to strong brecciation. The core is weakly-moderately ankeritic and not calcitic. The core is badly broken. Mineralization: little or no visible sulphides. Contact: Sharp but broken @ 75° to the C.A. Just below contact is 1 % py			120.5'	124'	3.5'	44			

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for each hole. Fill in portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-3-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lat. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + AUPPB	ASSAYS + AUOZS/T	CORE REC.
124'	209'3"	Calc Alkaline Basalt	The core is putty coloured aphanitic and moderately brecciatted This unit is often referred to as rhyolite but is simply sericitized and carbonitized. The fractures are filled by qtz. chlorite and some py locally. Overall 3-5% qtz and 5% chlorite. This unit may have been pillowed. The core is strongly ankeritic and very strongly calcitic.. Mineralization: overall ≤ 1 % py associatted with breccia matrix (pillow selvagi es?)			124'	129'	5'	-	.049	
						146'	148'	2'	15		
						148'	151'	3'	23		
						151'	154'	3'	36		
						154'	158'	4'	8		
						165'	168'	3'	200		
						168'	170.5'	2.5'	14		
						170.5'	173.5'	3'	262		
						173.5'	177.5'	4'	332		
			Contact: The contact is very sharp but broken @ 90° to the C.A.			183'	186'	3'	-	.496	
						198'	201'	3'	30		
						208'	213'	5'	40		
						213'	218'	5'	-	.050	
						218'	222'	4'	78		
209'3	222'	Calc Alkaline Basalt With Leucoxene	The core is slightly darker in colour ie. putty coloured - grey with pink yellowish flecks of leucoxene. The core is massive to weakly foliated and brecciatted with 5%-7% white Qtz. The core is strongly ankeritic and has calcitic stringers.		31329	177'6	180'	2'6"	TR		
					31330	180'	183'	3'	TR		
					31331	186'	188'	2'	TR		
			Mineralization: overall ≤ 1% py Contact: Gradational								
222'	281'5	Calc Alkaline	The core is aphanitic, putty to tan in colour with 3-5% qtz veining. The core is strongly calcitic and ankeritic. The core is sericitic and moderately to well brecciatted with qtz and chlorite as well as carbonate and graphite in the fractures			222'	225.5'	3.5'	19		
						231'	233'	2'	15		
						233'	238'	5'	23		
						238'	242'	4'	12		
						265'	268'	3'	-	.058	
			Mineralization: generally localized in fractures overall ≤ 1% py Contact: very sharp @ 70° to the C.A.			268'	271'	5'	388		
						271'	273'	2'	93		
						273'	278'	5'	454		
						278'	281'5*	3.5'	53		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.
FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-3-87 | PAGE NO. 4

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC.
281'5"	283'2"	Porphyry	The core is light grey-greyish brown due to sericite. The core is aphanitic with small white qtz phenocrysts. This unit is ankeritic and some microstringers are weakly calcitic. This unit is very siliceous with a graphitic component in the fractures @ 282'5" This interval is weakly foliated.	45°		281'5"	283'2"	1'7"	960		
			Mineralization: overall 1% py in local concentrations Contact: sharp but broken			283'2"	286'8"	3.5'	-	.044	
283'2"	286'8"	Graphitic Tuff	This unit is dark grey- black with interbedded graphite and qtz or porphyry. The core is aphanitic and well foliated The core is cut by qtz/ankerite and calcite stringers.	55°							
			Mineralization: overall 1-2% py in local concentrations. Contact: Gradational								
286'8"	344'	Porphyry	The core in this interval is aphanitic - fine grained with small qtz. and or feldspar phenocrysts. The core varies from light grey-dark grey, with local concentrations of brown sericite and black graphite. The core is weakly ankeritic particularly in qtz carbonate strs. The core is similarily calcitic. The core is quite siliceous with 7-10% qtz-carbonate stringers.			286'8"	290'	3'4"	290		
						290'	291.5'	1.5'	754		
						291.5'	296	4.5'	723		
						296'	299'	3.0'	7		
						299'	303'	4.0'	-	.042	
						303'	308'	5.0'	137		
						308'	311'	3'	152		
			Mineralization: overall ≤ 1% py, disseminated and in local concentrations.			311'	316'	5'	388		
			Contact: sharp @ 70° to the C.A.			316'	321'	5'	413		
						321'	325'	5'	823		
						325'	327'	2'	494		
						327'	328'	1'	-	.110	
						328'	329'6"	1.5'	822	.024	
						329'6"	331'6"	2.0'	-	.106	
						331'6"	335'	3.5'	400		
						335'	337'	2.0'	478		
						337'	340'	3'	589		
						340'	342'	2'	206		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for each hole. Complete portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC 3-87 | PAGE NO 5

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	Core Rec.
36'8"	344'	Continued				342'	344'	2'	-	.032	
						344'	348'	4'	361		
						348'	352'	4'	319		
						352'	353'	1'	18		
344'	352'9"	Silicified Basalt	The core is aphanitic, dark green strongly siliceous, foliated, chloritic and very strongly calcitic non ankeritic. The core is essentially, qtz. calcite chlorite and some pink calcite From 350' - 351'2" is a qtz breccia?								
			Mineralization: only very minor disseminated pyrite.								
			Contact: chilled, sharp @ 70° to the C.A.								
352'9"	417'	Quartz Diabase	The core is dark grey, fine grained to aphanitic massive to weakly fractured with epidote enveloping numerous fractures. The core is moderately magnetic, non ankeritic and only the fractures are calcitic.								
			Mineralization: little or no visible sulphides.								
			Contact: sharp @ 70° to the C.A.								
417'	428'	Mafic Volcanic	The core is aphanitic, dark green in colour with numerous (10%) white calcite stringers. The core is non ankeirtic and only the stringers are strongly calcitic. The core is quite massive but micro fractured at no preferred angle to the C.A. This unit is very chloritic and is very weakly magnetic (possibly an ultramafic)			417'	421'	4'	27		
						421'	425'	4'	15		
						425'	428'	3'	14		
						458'	463'	5'	40		
						463'	468'	5'	49		
			Mineralization: little or no visible sulphides.			468'	473'	5'	8		
			Contact: sharp @ 60° to the C.A.		2501	473'	478'	5'	4		
					2502	478'	483'	5'	6		
					2503	483'	488'	5'	4		
					2504	488'	493'	5'	8		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO. ORC3-87 | PAGE NO. 6

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb			Core Rec
417'	428'	continued			2505	493'	498'	5'	4			
					2506	498'	503'	5'	7			
					2507	503'	508'	5'	4			
428'	458'3"	Quartz Diabase	as from 352'9-417'									
			Mineralization: little or no visible sulphides									
			Contact: sharp but somewhat intercalated from 456'6" - 458'3", @ 60° to the C.A.									
458'3"	508'	Mafic Intrusive	The core is dark green with a mottled texture. The grains size is medium to coarse with lighter green coloured feldspars. The core is very massive, very weakly ankeritic and very weakly calcitic. However, the core is cut by 3% qtz-calcite stringers.									
			Mineralization: only very minor py (<1%)									
			END OF HOLE @ 508'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. ORC-4-87 | PAGE NO. A

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 308'	DIP OF HOLE AT: collar | 45 ; 158 ft | 44 ; 308 ft | 42 ; ft | ; ft |	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 14/87	DATE COMPLETED: Aug. 15/87	DATE LOGGED: Sept. 1/87	LOGGED BY: J.E. Mountjoy		
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy		

MAP REFERENCE NO.: 41 P 11

CLAIM NO.: L341433

LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp Section 1+00NW/2+25 SW

PROPERTY NAME:

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	CORE REC
			SUMMARY LOG							
0	10'	Casing								
10'	58'10"	Calc Alkaline Basalt	Putty coloured, well brecciatted, quite sericitic							
58'10"	59'11"	Lamprophyre	Medium grained grey, granular texture, calcitic							
59'11"	125'5"	Calc Alkaline Basalt	Light grey green- putty coloured moderately brecciatted			66'	69'	3'	.07	
						93'	102'	9'	.144	
125'5"	141'	Porphyry	Light grey - brown very siliceous, 1-2% py			118'	125'6"	7.5'	.101	
141'	152'10"	Calc Alkaline Basalt	Light green - putty coloured, good pillow selvage @ 147'7"			151	152'10"	1'10"	.052	
						158'10"	161'	2'2"	.145	
152'1="158'10"		Silicified Basalt	Dark green - black , extremely silicified 1-2% py							
158'10"161'		Calc Alkaline Basalt	Light green - putty coloured							
161'	225'1"	Quartz Diabase	Dark grey, moderately magnetic							
225'1"	236'5"	Sheared Mafic Lava	Dark green, chloritic, very strongly sheared							
236'5	267'	Quartz Diabase	Dark grey, moderately magnetic							
267'	308'	Mafic Intrusive	Medium green, splotches of light green carbonate.							
			END OF HOLE @ 308'							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

portion of form only on first page for each hole.

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DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO. ORC4 -87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 308'	DIP OF HOLE AT: collar | 45	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 14/87	DATE COMPLETED: Aug. 15/87	DATE LOGGED: Sept.1/87	LOGGED BY: J.E. Mountjoy	~~158~~ ft | 44	
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	308 ft | 42	
				ft |	
				ft |	

MAP REFERENCE NO.: 41 P 11

CLAIM NO.: L341433

LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+00NW/0+75 SW

PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	Core Rec
0	10'	OVERBURDEN									
10'	58'10"	Calc Alkaline Basalt	The core in this unit is putty coloured - light grey green. The core is well brecciatted, aphanitic - fine grained with leucoxene present to 23'. The core is veined with 5-10% qtz. carbonate 5-10% graphite, chlorite. The core is moderately ankeritic and only locally calcitic in strs. This unit is quite sericitic and probably pillowed, the best evidence is @ 32' Mineralization: little or no visible sulphides. Contact: shrp but broken @ 60° to the C.A.		2639 2640 2641 2642	11.5' 26' 33' 48'	16' 28' 37' 52'	4.5' 2' 4' 4'		TR TR TR TR	
58'10"	59'11"	Lamprophyre (Porphyry?) (Arkose?)	The core is med grey in colour, fine grained and very massive. The core is strongly ankeritic and weakly calcitic. The core has small black bocks of mica? and small qtz phenocrysts giving the core a granular texture. Mineralization: Very minor py < 1% Contact: sharp but broken @ 55° to the C.A.		2643	59'9"	60'2"	5"		Thin section	
59'11"	125'6"	Calc Alkaline Basalt	This unit is putty grey - light grey green in colour moderately brecciatted and moderately silicified and sericitized. The core is strongly ankeritic and locally calcitic. The core is cut by 10-15% qtz carbonate veins. From 70'3" - 71'3" is a small section of qtz porphyry Minor fuchsite is present @ 95.5' and @ 118'. Mineralization: ≤ 1% py in local concentrations.		2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656	66' 69' 73' 77' 80' 83' 93' 95' 96' 98' 114' 118' 122'	69' 73' 77' 80' 83' 87' 95' 96' 98' 102' 118' 122' 125.5'	3' 4' 4' 3' 3' 4' 2' 1' 2' 4' 4' 4' 3.5'	 - 754 - -	.07 TR .02 TR TR TR .10 .12 .20 .143 .02 .085 .12	

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC 4-87 | PAGE NO. 2

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS † Aupph	ASSAYS † Auozs/t	Core Rec.
125.5'	141'	Porphyry	The core varies from light grey-brown- dark grey. The core is aphanitic with small qtz phenocrysts up to 1/8" in diam. The core is very siliceous, non ankeritic and non calcitic with the exception of the fine calcite strs. (fracture filling) The core is veined by 5% white qtz calcite. This unit is locally quite sericitic.		2657	125.5'	128'	2.5'	-	.02	
					2658	128'	131'	3'	-	.02	
					2659	131'	133'	2'	-	TR	
					2660	133'	136'	3'			
					2661	136'	138'	2'	-	TR	
					2662	138'	139'	1'	-	TR	
					2663	139'	141'	2'	154		
			Mineralization: This unit is mineralized with 1-2% very fine diss. py								
			Contact: Broken								
141'	152'10"	Calc Alkaline Basalt	This unit is putty coloured-light green in colour with dark green black pillow selvages. This unit is quite silicified, well brecciatted and locally schistose ie. @ 152' The core is not ankeritic becoming very weakly so. The core is strongly calcitic but becomes weakly so. The core is aphanitic - fine grained. Good evidence of a pillow is present @ 147'7"	50°	2664	141'	144'	3'	106		
					2665	144'	148'	4'	32		
					2666	148'	151'	3'	25		
					2667	151'	152'10"	1'10"	-	.052	
			Mineralization: only minor very fine diss. py (< 1%)								
			Contact: Broken								
152'10"	158'10"	Silicified Basalt	The core in this unit is extremely silicified dark green-black in colour and well veined with light grey quartz calcite This unit is non ankeritic but strongly calcitic due to the numerous fine stringers. The core is locally chloritic with a weak foliation	55°	2668	152'10"	154'	1'2"			
					2669	154'	156'	2'	115		
					2670	156'	158'	2'	108		
					2671	158'	158'10"	10"	754		
			Mineralization: py is associatted with qtz calcite strs. -overall 1-2%								
			Contact: Broken								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new hole, but this top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC 4-87 | PAGE NO. 3

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
				ft			
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC.
158'10"	161'	Calc Alkaline Basalt	as from 141' - 152'10"		2672	158'10"	161'	2'2"		.145	
			This section is very badly broken with a little bit of graphite								
			Mineralization: little or no visible sulphides								
			Contact: broken								
161'	225'1"	Quartz Diabase	This unit is aphanitic - fine grained and dark grey in colour The core is weakly moderately magnetic, massive to weakly fractured with epidote enveloping many fractures. The core is not ankeritic and locally calcitic.								
			Mineralization: little or no visible sulphides.								
			Contact: broken but sharp @ 55° to the C.A.								
225'1"	236'5"	Sheared Mafic	The core is very dark green with 10% white Qtz - calcite veining		2673	225'1	228'	2'11"		TR	
			along with some light green talc. The core is aphanitic and	70°	2674	228'	231'	3'	754		
			strongly sheared. The core is very cloritic and may be called		2675	231'	234'	3'	549		
			a chlorite schist or talc chlorite schist. The core is not		2676	234'	236'5"	2'5"	115		
			ankeritic and not calcitic with the exception of the stringers which are strongly calcitic								
			Mineralization: little or no visible sulphides								
			Contact: broken but sharp @ 70°								
236'5"	267'	Quartz Diabase	As from 161' - 225'1"								
			Mineralization: little or no visible sulphides.								
			Contact: sharp @ 58° to the C.A.								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO.	PAGE NO
ORC 4-87	4

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
					collar			
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft			
					ft		PROPERTY NAME	
					ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS † Auppb	ASSAYS † Auosz/t	CORE REC
267'	308'	Mafic Intrusive	This unit is med green in colour with splotches of lighter green		2677	267'	271'		56		
			The core is aphanitic - fine grained. The core is non ankeritic		2678	271'	275'		14		
			very strongly calcitic and quite massive. From 267' - 271		2679	275'	278'		-	TR	
			The core is silicified and sericitic, grey brown in colour		2680	281'	285'		-	TR	
			with some leucoxene. From 271' - 279' the core has leucoxene		2681	285'	287'		15		
			and is quite chloritic..		2682	287'	291'		40		
			279'-280.5' weakly magnetic qtz diabase		2683	291'	294'				
			280.5' - 286' mottled light green leucoxene basalt								
			286' - 286'3" qtz. diabase		2684	304'	308'		228		
			286'3" - 304' mottled as from 280.5' - 286'								
			304' - 307'10" somewhat more siliceous ū good leucoxene								
			307'10" - 308' mottled as from 280.5' - 286'								
			Mineralization: little or no visible sulphides								
			END OF HOLE @ 308'								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. ORC-5-87 | PAGE NO. A

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas		COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 338'	DIP OF HOLE AT: collar 48°; 158 ft 48°; 338 ft 43°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 15/87	DATE COMPLETED: Aug.16/87	DATE LOGGED: Sept. 10/87	LOGGED BY: J.E. Mountjoy			
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy			

MAP REFERENCE NO.: 41 P 11

CLAIM NO.: L341433

LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 2+00NW/1+25SW

PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS † Auozs/t	CORE REC.
			SUMMARY LOG							
0	12'	Casing								
12'	196'	Calc Alkaline Basalt	Putty grey in colour, weakly to strongly brecciatted			36'	39'	3'	.42	
196'	202'3"	Graphitic Breccia Quartz Breccia and Porphyry	Variable, primarily graphite and qtz with a trace of porphyry, well brecciatted.			49'	53'	4'	.08	
						193'	196'	3'	.11	
202'3"	242'7"	Calc Alkaline Basalt	Putty grey green, moderately brecciatted becoming chloritic and silicified, probably pillowed.							
242'7"	244'	Quartz Breccia	Quartz and assimilated wall rock, dark grey-green 1% py moderately brecciatted.							
244'	314'	Quartz Diabase	Dark grey, massive, moderately magnetic							
314'	318'	Sheared Mafic Lava	Very dark green, strongly silicified, brecciatted			314'	316'1"	2'1"	.084	
318'	338'	Quartz Diabase	Dark grey, massive, moderately magnetic							
			END OF HOLE @ 338'							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new hole, but this portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-5-87 | PAGE NO. 1

DRILLING COMPANY: J.T. THOMAS		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE	DIP OF HOLE AT: collar | 48	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM
DATE HOLE STARTED: Aug. 15/87	DATE COMPLETED: Aug. 16/87	DATE LOGGED: Sept. 10/87	LOGGED BY: J. E. Mountjoy		158 ft | 48	
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy		338 ft | 43	
					ft |	
					ft |	

MAP REFERENCE NO.: 41 P 11 | CLAIM NO.: L.341433

LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 2+00NW/1+25SW

PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au oz/t	Core Rec.
	12'	OVERBURDEN								
12'	196'	Calc Alkaline BAsalt	This unit is putty grey in colour with white qtz carbonate, chlorite and graphite filling the fracture. The core is aphanitic but wkly-strongly brecciatted. The core is very sericitized, moderately silicified, moderately-strongly ankeritic and locally strongly calcitic ie. fracture filling From 92'6" - 93'8" is a black (porphyry?) dyke which is very siliceous and well mineralized (≤ 7% py) The lower dyke contact is @ 65° At ground 133' The core takes on a slight green hue due to chlorite. This wide unit was more than likely pillowed prior to brecciation.		31176	18'	23'	5	TR	
					31177	36'	39'	3	.42	
					31178	49'	53'	4'	.08	
					31179	65'	68'	3'	TR	
					31180	75'	78'	3'	TR	
					31181	83'	85'	2'	TR	
					31182	92'	94'	2'	TR	
					31183	99'	103'	4'	TR	
					31184	13.5.'	138'	3	TR	
					31185	193'	196'	3'	.11	
			Contact: sharp @ 35° to theC.A.							
			Mineralization: overall ≤ 1% py dyke 7-10% py (92'6"-93'8")							
196'	202'3"	Graphite Breccia Quartz Breccia Porphyry and Graphitic Tuff	This variable zone is primarily graphite qtz. porphyry and sulphides							
					187	196'	198'		TR	
			From 196'-197'1" graphic tuff 10% qtz calcite veining non ankeritic there are two generations of veining core is wkly brecciatte d py ≤1%							
			Contact: @ 85°							
			From 197'1" - 197'2.5" felsic dyke (porphyry? 3-5% py							
			Contact: @ 85°							
			From 197'2.5" - 198' graphitic qtz breccia , 1% py							
			Contact: broken							
			From 198'-198'4" felsic dyke as from 97'1"-97'2.5"		188	198'	198'4"	4"	TR	
			Contact: @ 50°		189	198'4"	200,6"	1'2"	TR	
			From 198'4" -199; graphitic qtz breccia as from 197'2 "-198'		190	200'6"	202'3"	1'9"	TR	
			Contact: irregular @ 40° or less							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC5-87 | PAGE NO. 2

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT collr.	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
					ft			
					ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS † Auozs/t			Core Rec.
196'	202'3"	continued	From 199'-200'6" qtz. porphyry, bx grey brown almost qtz breccia minor sericite; 1% py, wkly ankeritic.									
			Contact: sharp @ 40° to the C.A. strongly calcitic									
			From 200'6" - 201'5" graphitic tuff with 30% semi concurrent to concurrent qtz calcite veining as from 196'-197'1"	60°								
			1-2% py .									
			Contact: Sharp @ 10° to the C.A.									
			201'5" - 202'3" graphite and qtz breccia 60% , 40% angular fragments of qtz this section represents the latest movement apparent in this zone but it may also be the result of the porphyry intrusion. No visible sulphides, contact: sharp @ 40° to the C.A.									
202'3"	242'8"	Calc Alkaline Basalt	The core is essentially the same as that from 12'-196' however the alteration (silicification) increases towards the diabase dyke. The core is also more chloritic, decreasingly ankeritic and increasingly calcitic to 237' where intense silification is predominant. The core is moderately brecciatted. From 228'-228'9" is calcitic pillow servage with 3% py.		191	202'3"	206'	3'9"	TR			
					192	206'	208'	2'	.02			
					193	213'	217'	4'	TR			
					194	223'	228'	5'	TR			
					195	228'	229'	1'	TR			
					196	229'	233'	4'	TR			
					197	233'	238'	5'	TR			
					198	238'	240'8"	2'8"	TR			
			Mineralization: overall <1% py									
			Contact: broken @ 45°		199	240'8"	242'8"	2'	.02			
242'8"	244'	Quartz Breccia	This section is essentially qtz and chlorite (altered basalt)									
			The core is dark grey green - dk green. The core is non ankeritic not calcitic except the last 6' of altered basalt which is strongly calcitic (stringers). The core is aphanitic, brecciatted weakly foliated @ 60°	60°	200	242'8"	244'	1'4"	.02			
			Mineralization: overall 1% py concentrated in the first 9"of qtz bx.									
			Contact: sharp @ 65°									
244'	314'	Quartz Diabase	This unit is dark grey, aphanitic to fine grained, moderately magnetic non ankeritic and only calcitic along the minor fractures which are locally enveloped by epidote									
			Mineralization: little or no visible sulphides. Contact:Broken									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

portion of form only on first page for each hole.

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DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO.	PAGE NO.
ORC 5-87	3

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lat. and Long.)	
				ft			
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au oz/t	Core Rec.
314'	318'	~~Sheared Mafic~~ Java	This silicified and brecciatted section is very dark green with grey qtz from 314'10" - 316'1". The qtz. as well as the remainder of the unit is strongly brecciatted non ankeritic but strongly calcitic where later stringers cut the core. The core is aphanitic with fragments of qtz in the last 6" from 317'6" - 310"		201	314'	314'10"	10'	.12	
					202	314'10"	316'1"	1'3"	.06	
					203	316'1"	318'	11"	TR	
			Mineralization: little or no visible sulphides. Contact: broken @ 55° to the C.A.							
318'	338'	Quartz Diabase	as from 244' - 314' Mineralization: little or no visible sulphides							
			END OF HOLE @ 338'							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. ORC6-87 | PAGE NO. A

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas		COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 548'	DIP OF HOLE AT: collar 45	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug 16/87	DATE COMPLETED: Aug 17/87	DATE LOGGED: Sept.13/87	LOGGED BY: J. E. Mountjoy		288 ft | 41		CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy		548 ft | 39		LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 2+00NW/2+25 SW
					ft |		PROPERTY NAME: COOK - DECKER
					ft |		

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t			Core Rec.
			SUMMARY LOG									
0	5'	Cassing										
5'	106'6	Basaltic Komatiite	Medium-pale green, moderately to well brecciatted, 10-15% qtz carbonate veining,									
106'6"	108'	Contact Zone	Quartz veining and interflow graphite, strongly brecciatted.			106'6"	108'	1'6"	.09			
108'	306'5"	Calc Alkaline Basalt	Putty grey, moderately brecciatted, strongly ankeritic, pillowed			139'6"	150'	10'6"	.083			
						207'	209'	2'	.06			
306'5"	333'5"	Porphyry	Tan-grey , siliceous, locally very dark grey due to graphite ≤2% py			205'	306'5"	1'5"	.06			
333'5"	351'6"	Calc Alkaline	Putty grey to dark grey, well brecciatted, pillowed									
351'5	353'	Graphitic Tuff Breccia	Light grey black, brecciatted, 2% py									
353'	364'6	Porphyry	Light grey-beige, locally sericitic and fuchsitic, brecciatted ≤2% py.			353	363'	10'	.122			
364'6"	427'8"	Quartz Diabase	Dark grey, massive, and moderately magnetic									
427'8'	442'6"	Mafic Volcanic	Dark green 35% qtz calcite veining, little or no sulphides			433'	439'	6'	.04			
442'6"	474'3"	Quartz Diabase	Dark grey, massive, moderately magnetic									
474'3"	548'	Mafic Intrusive	Dark green, becoming coarser grained away from the contact			493'	498'	5'	.052			
			END OF HOLE @ 548'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-6-87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 548	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 16/87	DATE COMPLETED: Aug. 17/87	DATE LOGGED: Sept. 13/87	LOGGED BY: J.E. Mountjoy	~~288~~ ft | 41	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	548 ft | 39	CLAIM NO.: L341433
				ft |	LOCATION (Tp., Lot, Con. OR Lat. and Long.): MacMurchy Twp Section 2+00NW/225'SW
				ft |	PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + AUOZ/T			CORE REC.
0	5'	OVERBURDEN										
5'	106'6"	Basaltic Komatiite	This unit is med-pale green due to chloritization. The core is moderately brecciatted, to well brecciatted. The core is well veined with 10-15% qtz ankerite. The core is strongly ankeritic and not calcitic. The core is wkly sericitic. At 74'6" is some gf qtz bx. From 96'4" - 97'7" is a felsic dyke (almost pink in colour) which has been brecciatted and contains black (chlorite) fractures. The core is wkly ankeritic and wkly calcitic contacts are sharp @ 45° Mineralization ≤1% very fine diss. py Mineralization: little or no visible sulphides. Contact: veined.		31256	18'	21'	3'	TR			
					31257	21'	24"	3"	TR			
					31258	28'	31'	3'	TR			
					31259	39'	43'	4'	TR			
					31260	43'	47'	4'	TR			
					31261	47'	52'	5'	TR			
					31262	71'	73'	2'	TR			
					31263	73'	75'	2 '	TR			
					31264	75'	78'	3'	TR			
					31265	78'	82'	4'	TR			
					31266							
					31267	84'	87'	3''	TR			
106'6"	108'	Contact Zone	This zone is made up of qtz veining and interflow graphite which has locally been strongly brecciatted. The core is black and white The core is aphanitic and well brecciatted with fragments of qtz ankerite. The core is ankeritic with the qtz and is not calcitic. Mineralization: little or no visible sulphides. Contact: broken		31268	96'4	97'7	1'3	TR			
					31269	103'	106'5"	3.5'	TR			
					31270	106.5'	108'	1.5'	.09			
					271	108'	112'	4'	TR			
					272	120'	123'	3'	TR			
					273	136'6"	139'6"	3'	.02			
108'	306'5"	Calc Alkaline Basalt	This unit is putty grey in colour aphanitic, moderately brecciatted with graphite and qtz carbonate filling the fractures. The core is strongly ankeritic not calcitic and is veined with 3% qtz carbonate. Evidence of pillows were observed @ 111' Mineralization: overall ≤ 1% py in graphitic breccia filling. Contact: Broken @ 85° to the C.A.		274	139'6"	143'	3'6"	.10			
					275	143'	147'	4'	.04			
					276	147'	150'	3'	.12			
					277	158'	163'	5'	TR			
					278	174'	178'	4'	TR			
					279	196'	198'	2'	.02			
					280	198'	200'	2'	TR			
					281	200	203'	3'	TR			
					282	203'	207'	4'	TR			

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC 6-87 | PAGE NO. 2

DIAMOND DRILLING LOG — GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH / TOTAL FOOTAGE	DIP OF HOLE AT collar / ft / ft / ft / ft	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		MAP REFERENCE NO. / CLAIM NO.
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		LOCATION (Tp., Lot, Con. OR Lat. and Long.) / PROPERTY NAME

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	Core Rec.
108'	306'5"	continued			283	207'	209'	2'	.06	
306'5	333'5	Porphyry	The core is very siliceous tan-grey in colour to locally very dark grey because of graphitic fracture filling. The core is veined with 10% qtz ankerite stringers. The core is wkly moderately ankeritic and is locally calcitic ie. stringers The core is very siliceous and moderately sericitic. Mineralization: overall ≤ 2% py generally more abandant beyond 320' where graphite is more common. Contact: Sharp @ 50° to the C.A.		284	211'	213'	2'	TR	
					285	216'	218.5'	2.5	TR	
					286	242'	245'	3'	TR	
					287	248'	250'	2'	TR	
					288	250'	253'	3'	TR	
					289	253'	255'	2'	TR	
					290	267	269'	2'	TR	
					291	276'	278'	2'	TR	
333'5	351'6"	Calc Alkaline Basalt	This unit varies from putty grey-dark grey, is aphanitic, moderately well brecciatted is veined with ≤ 1% qtz carbonate. The core is moderately ankeritic and very strongly calcitic. This unit shows weak evidence of pillows. Mineralization: minor diss. py < 1% Contact:: irregular but sharp foliated along the C.A.		292	278'	282'	4'	TR	
					293	288'	291'	3'	TR	
					294	302'	305'	3'	TR	
					295	305'	306'5"	1'5"	.06	
					296	306'5	309'	2'7"	TR	
					297	309'	313'	4'	TR	
					298	313'	317'	4'	.02	
					299	317'	320'6"	3.5'	TR	
351'6"	353'	Graphitic Tuff Breccia	This unit is light grey-black aphanitic, moderately brecciatted to foliated (bedded?) The core is non ankeritic but locally calcitic. Mineralization: ≤ 2% py. Contact: broken	70°	300	320'6"	322'	1.5'	TR	
					301	322'	325	3'	TR	
					302	325'	328'	3'	TR	
					303	328	331'	3'	TR	
					304	331'	333'5"	2'5"	tr	
					305	333'5"	337'	3'7"	TR	
353'	364'6"	Porphyry	This unist is light grey - light beige, aphanitic-fine grained with phenocrysts up to 1/8" and in diameter. The core is locally sericitic and locally fuchsitic ie. @ 334'. The core is non ankertic but moderately to strongly calcitic. The core is moderately - well brecciatted. Mineralization: overall ≤ 2% diss. py Contact: brecciatted with some assimilation.		306	337'	340'	3'	TR	
					307	340'	343'	-	TR	
					308	343'	350'	-	TR	
					309	347'	350'	-	TR	
					310	350'	351'6"	-	TR	
					311	351'6"	353'	1'6"	TR	
					312	353'	355'	2'	.36	
					313	355'	358'	3'	.10	
					314	358'	361'	3'	TR	
					315	361'	363'	2'	.10	
					316	363'	364'6"	1'6	.02	

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO. ORC 6-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lat. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au oz/t			Core Rec.
364'6	427'8"	Quartz Diabase	The core is aphanitic-fine grained dark grey in colour, massive and only weakly fractured. The core is moderately magnetic, non ankeritic and only locally calcitic ie. fractures. The fractures are commonly enveloped by epidote. Mineralization: little or no visible sulphides. Contact: sharp but broken @ 85°									
427'8"	442'6"	Mafic Volcanic	The core is dark green, aphanitic and very well veined with 35% qtz calcite stringers. The core is non ankeritic and strongly calcitic. Mineralization: little or no visible sulphides. Contact: sharp @ 70° to the C.A.		31317 318 319 320 321	427'8 430' 433' 437' 439'	430' 433' 437' 439' 442'6"	2'4" 3' 4' 2' 3'6"	TR TR .04 .04 TR			
442'6"	474'3"	Quartz Diabase	as from 364'6 - 427'8" Mineralization: little or no visible sulphides									
474'3"	548'	Mafic Intrusive	as from 427'8"-442'6" however the core is less well veined, is greener in colour and appears coarser grained away from the contact. The calcite content decreases away from the diabase whereas it becomes wkly ankeritic near @ 535' Mineralization: little or no visible sulphides.		322 323 324 325 326 327	474'3" 493' 495' 498' 508' 546'	478' 495' 498' 501' 511' 548'	3'9" 2' 3' 3' 3' 2'	.02 .04 .06 TR TR TR			
			END OF HOLE @ 548'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. ORC-7-87 | PAGE NO. A

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE:	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug.17/87	DATE COMPLETED: Aug.18/87	DATE LOGGED: Spt.10/87	LOGGED BY: J.E. Mountjoy	168 ft | 42°		CLAIM NO.: L.341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	338 ft | 39.5°		LOCATION (Tp., Lot, Con. OR Lat. and Long.): MacMurchy Twp. Section 1+30SE/1+25SW
				ft |		PROPERTY NAME: COOK - DECKER
				ft |		

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t			CORE REC.
			SUMMARY LOG									
0	5'	Casing										
5'	17'8	Basaltic Komatiite	Light grey-green, 5-10% qtz-carbonate veining, moderately brecciatted, little or no visible sulphides.									
17'8	22'8	Contact Zone	Interflow graphite, qtz breccia, silicified graphite and or porphyry, ≤ 1% py.			18'	20'	2'	.03			
22'8	125'3"	Calc Alkaline Basalt	Putty grey, well brecciatted, < 1% py.			62'	64'	2'	.06			
125'3"	128'	Porphyry	Medium grey, massive, siliceous, < 1% py			111'	113'	2'	.08			
128'	155'3"	Blotchy Calc-Alkaline Basalt	Grey with green splotches of calcite? Possible ultramafic 15-20% qtz-carbonate veining.			121'	123'	2'	.09			
155'3"	156'7"	Quartz Stockwork	Quartz with trace of fuchsite chlorite and graphite 2-3% py			151'	156'7"	5'7"	.084			
156'7"	157'	Felsic Dyke	Light grey green, massive, trace fuchsite									
157'	158'2	Quartz Breccia	Black and white with graphite filling fractures, strongly brecciatted									
158'2"	165'5"	Porphyry	Light grey, very siliceous, with milky white phenocrysts									
165'5"	173'	Silicified Basalt	Dark greenish grey, very siliceous, foliated									
173'	181'	Porphyry	Light grey-brown, very siliceous, sericitic, foliated									
181'	183'	Silicified Basalt	Dark greenish grey, very siliceous, foliated, trace pyrrhotite									
183'	268'10	Quart Diabase	Dark grey, massive, moderately magnetic.									
268'10	358'	Mafic Intrusive	Dark green to greenish black, massive, little or no visible sulphides.									
			END OF HOLE @ 338'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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HOLE NO. ORC-7-87 | PAGE NO. 1

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 338'	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 17/87	DATE COMPLETED: Aug. 18/87	DATE LOGGED: Sept. 10/87	LOGGED BY: J.E. Mountjoy	~~168' ft | 42°~~	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	338 ft | 39.5°	CLAIM NO.: L341433
				ft |	LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+30'SE 1+25 SW
				ft |	PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	CORE REC.
0	5'	Casing								
5'	17'8"	Basaltic Komatiite	The core is light grey-green in colour and is veined with 5-10% qtz ankerite. The core is strongly ankeritic and wkly calcitic. The core is aphanitic fine grained with dendritic pyralusite? Locally the shears or fractures are limonitic The core is wkly-moderately brecciatted. Mineralization: little or no visible sulphides. Contact: broken		31204	5'	9'	4'	TR	
					205	15'	18'	3'	TR	
					31266	9'	15'	6'	RECOVERY 3-4'	
17'8	22'8"	Interflow Graphite and Quartz Breccia with silicified graphite or porphyry	The core in this unit is dark grey-black, aphanitic- fine grained locally strongly brecciatted and locally massive (dyke) From 17'8"-20' the core is brecciatted while from 20'-22'8" it is more dyke like. Both are cut by 3% qtz ankerite strs. The core is weakly - not calcitic Mineralization: overall ≤ 1% py in local concentrations. Contact: sharp @ 60° to the C.A.		31206	18'	20'	2'	.03	
					31207	20'	22'8"	2'8"	TR	
					31208	22'8"	25'	2'4"	TR	
					209	27'	29'	2'	TR	
					210	29'	33'	4'	TR	
22'8"	125'3"	Calc Alkaline Basalt	This unit is putty grey in colour with black (graphite) filling the numerous fractures as the unit is well brecciatted. This unit is aphanitic, strongly ankeritic and only locally calcitic (stringers) The core is veined by 3% qtz carbonate (calcite and ankerite) The brecciation increases gradationally with very strong brecciation @ 98° Mineralization: overall ≤ 1% py associated with black graphite		211	33'	37'	4'	TR	
					212	37'	40'	3'	TR	
					213	48'	51'	3'	TR	
					214	51'	53'	2'	.02	
					215	53	56'	3'	TR	
					216	56'	58'	2'	TR	
					217	58'	62'	4'	TR	
					218	62'	64'	2'	.06	
					219	72'	75'	3'	TR	
					220	93'	96'	3'	TR	
					221	96'	99'	3'	TR	
					222	99'	103'	4'	TR	
					223	103'	107'	4'	TR	
					224	107'	111'	4'	TR	

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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HOLE NO.	PAGE NO.
ORC-7-87	2

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
				collar			
DATE HOLE STARTED / DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		ft		PROPERTY NAME	
				ft			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	Core Rec
125'3"	128'	Porphyry	This unit is massive med grey with minor tan coloured sericite		225	111'	113'	2'	.08	
			This unit only has a few small (<1/8" in diameter) white phenocrysts and is veined by 2 generations of qtz carbonate.		226	113'	117'	4'	TR	
			The core is strongly ankeritic with qtz ankerite and qtz		227	117'	121'	4'	TR	
			calcite strs. overall ≤ 4%.		228	121'	123'	2'	.09	
					229	123'	125'3"	2'3"	TR	
			Mineralization: minor diss py < 1%		230	125'3"	128'	2'9"	TR	
			Contact: sharp @ 30° to the C.A.							
128'	155'3"	Blotchy Calc Alkaline Basalt	The core in this unit is grey with green splotches of calcite		231	128	130	2'	TR	
			and or fuchsite. The core is well veined with 15-20% milky		232	130'	133'	3'	TR	
			white qtz ankerite. The core is aphanitic with the exception		233	133'	137'	4'	TR	
			of the calcite rosettes? (green splotches). The core is		234	137'	141'	4'	TR	
			moderately ankeritic with the veining being strongly ankeritic		235	141'	145'	4'	TR	
			Aside from the green splotches the core contains 1% good		236	145'	148'	3'	TR	
			fuchsite. The core is only wkly calcitic, particularly on the		237'	148'	151'	3'	.02	
			fractures.		238	151'	153'	2'	.10	
					239	153'	155'3"	2'3"	.06	
			Mineralization: little or no visible sulphides From 152'-							
			152'6" small massive felsic dyke.							
			Contact: sharp @ 60° to the C.A.							
155'3"	156'7"	Quartz Stockwork	The core is aphanitic white- light grey with green fuchsite		240	155'3"	156'7"	1'4"	.10	
			dark grey chlorite ± graphite and sulphides. The core is	60°						
			foliated to brecciatted. The core is only wkly- non ankeritic							
			but is strongly calcitic.							
			Mineralization: overall 2-3% py in local fractures.							
			Contact: sharp @ 70° to the C.A.							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-7-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au oz/t			Core Rec.
156'7"	157'	Felsic Dyke	The core is massive light grey green with 1% fuchsite the core is weakly veined(1%) and is wkly ankeritic and strongly calcitic. Unit is similar to that from 152'-152'6" Mineralization: overall ≤ 1% py Contact: broken									
157'	158'2	Graphitic Quartz BRECCIA	The core is black and white aphanitic strongly brecciatted with some chlorite wkly- non ankeritic Mineralization: little or no visible sulphides Contact: broken		241	156'7"	158'2"	1'	TR			
158'2	165'5"	Porphyry	The core is very siliceous with a light grey colour spotted with tiny milky white phenocrysts. The core is veined with 5% qtz calcite strs. The core is strongly calcitic and non ankeritic but somewhat sericitic (tan) Mineralization: trace pyrite Contact: gradational due to silicification + shearing @ 50°		242 243 244	158'2" 161' 163'	161' 163' 165'5		TR TR TR			
165'5"	173'	Silicified Basalt	The core is very siliceous dark greenish grey in colour with some beige sericite and or leucoxene. The core is moderately veined particularily near the contacts. The core is foliated, non ankeritic but moderately-strongly calcitic. The notable features are as follows: 167'-167'4" porphyry 167'4" - 168'3" qtz stockwork there is also a trace of fuchsite locally Mineralization: Trace py <1% Contact: sharp @ 65°	65°	245 246 247	165'5" 167' 169'	167' 169' 173'		TR TR TR			

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO. ORC-7-87 | PAGE NO. 4

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au oz/t	CORE REC.
173'	181'	PORPHYRY	as from 158'2"-165'5"		248	173'	177'	4'	TR	
			This unit appears to be slightly more sheared @ 75° to the C.A. and correspondingly has more sericite giving the core a brown colour locally. ie. @ 180'		249	177'	181'	4'	TR	
					250	181'	183'	2'	TR	
			Mineralization: little or no visible sulphides							
			Contact: Sharp @ 75° to the C.A.							
181'	183'	Silicified Basalt	as from 165'5" - 173'							
			Mineralization: little or no visible py, trace py, and pyrrhotite @ 182'8"							
			Contact: broken							
183'	268'10"	Quartz Diabase	The core is dark grey aphanitic-fine grained, moderately magnetic, massive, non ankeritic, locally calcitic (ie. stringers) and exhipits locally good epidote.							
			Mineralization: little or no vis sulphides							
			Contact: sharp @ 45° to the C.A.							
268'10"	358'	Mafic Intrusive	The core is dark green-greenish black the core is aphanitic fine grained wkly ankeritic and strongly calcitic becoming less so away from the diabase. The core is massive with 10-15% qtz and calcite strs again decreasing away from the diabase.		251	268'10"	272'	3'2"	TR	
					252	296'	298	2'	TR	
					253	315'6"	318'	2.5'	TR	
					254	329'	330'	1'	3ppb Whole rock Anal	
			Mineralization: little or no visible sulphides		255	336'	338'	2'	TR	
			END OF HOLE							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-8-87 | PAGE NO. A

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 458'	DIP OF HOLE AT: collar | 45	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 18/87	DATE COMPLETED: Aug.19/87	DATE LOGGED: Sept.4/87	LOGGED BY: J.E. Mountjoy	328 ft | 37	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy	458 ft | 36	CLAIM NO.: L.341433
				ft |	LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+30SE/214'6"SW
				ft |	PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t			CORE REC.
			SUMMARY LOG									
0	17'6	Casing										
17'6	65'	Calc Alkaline Basalt	Putty coloured to grey green, moderately brecciatted									
65'	86'	Porphyry	Black to light grey brown, siliceous, some graphite									
86'	92'	Basaltic Komatiite	Dark green, 50% qtz-carbonate veining, spinifex texture @ 91'2"									
92'	113'6"	Porphyry	Light grey with white phenocrysts, trace pyrite			162'	166'	4'	.041			
113'6"	119'	Basaltic Komatiite	Pale yellow-green, 35% qtz carbonate veining			200'	203'	3'	.039			
119'	248'7"	Calc Alkaline Basalt	Putty grey, Putty grey green, well brecciatted, ≤ 1% py			203'	204'	1'	.122			
						250'	258'	8'	.037			
248'7"	264'6"	Porphyry	Grey brown, with tiny white phenocrysts, siliceous, ≤2% py			264'6"	265'6"	1'	.08			
264'6"	282'10"	Sheared Mafic Lava/Porphyry	Variable, grey to grey brown, few section of porphyry were recognized, minor fuchsite, ≤2% py			269'8" 276'	273'11" 278	4'3" 2'	.059 .12			
282'10"	383'7"	Quartz Diabase	Dark grey, massive, moderately magnetic			280'5"	282'5"	2'	.05			
383'7"	458;	Mafic Intrusive	Dark green, massive to weakly sheared									
			END OF HOLE @ 458'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-8-87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 458'	DIP OF HOLE AT: collar | 45 °	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 18/87	DATE COMPLETED: Aug.19/87	DATE LOGGED: Sept. 4/87	LOGGED BY: J.E. Mountjoy	328' ft | 37 °	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy	458 ft | 36°	CLAIM NO.: L341433
				ft |	LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+30S E/214'6"SW
				ft |	PROPERTY NAME: COOK-DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	Core Rec.
0	17'6"	OVERBURDEN									
17'6	65'	Calc Alkaline Basalt	This unit is putty coloured to grey green in colour, aphanitic and moderately brecciatted. The core is moderately - strongly ankeritic and only locally calcitic ie. stringers. The putty colour is a result of pervasive sericitization and carbonatization.		358	23'	26'	3'	-	TR	
					359	37'	39'	2'	-	TR	
			Mineralization: little or no visible sulphides. Contact: broken but sharp @ 50° to the C.A.								
65'	86'	Porphyry	This zone varies from black to light grey brown. The zone is a mixture of porphyry 70% graphite 25% and 8" of putty coloured basalt from 70'-70'8". The core is locally ankeritic ie. fractures and weakly-not calcitic. Phenocrysts are up to 1/8" in diameter.		360	65'	69'	4'	-	TR	
					361	69'	73'	4'	8		
					362	73'	77'	4'	15		
					363	77'	80'	3'	-	TR	
					364	80'	83'	3'	-	TR	
					365	83'	96'	3'	-	TR	
			Mineralization: only minor pyrite was observed < 10%								
			Contact: broken								
86'	92'	Basaltic Komatiite	This unit is dark green with 50% white quartz predominantly @ 60° to the C.A. The core is aphanitic with spinifex texture @ 91'2" The core is moderately to strongly ankeritic and not calcitic		366	86'	88'	2'	-	TR	
					367	88'	92'	4'	-	TR	
			Mineralization: little or no visible sulphides								
			Contact: broken								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO.	PAGE NO.
ORC-8-87	2

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lat. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	Core Rec.
92'	113.5'	Porphyry	This unit is light grey with white phenocrysts up to 3/16" in		368	92'	96'	4'		TR	
			diameter. The core is aphanitic and badly broken from 102'6"		369	96'	100'	4'	34		
			104' is a second dyke of lamprophyre of altered pophyry		370	100'	103'	3'	33		
			the contact @ 102'6" is very sharp @ 70° to the C.A. This		371	103'	108'	5'	44		
			section is dark grey with green qtz? phenocrysts. Overall		372	108'	111'	3'		TR	
			the core is not calcitic but is wkly-moderately ankeritic.		373	111'	113.5	2.5'		TR	
			Mineralization: only very minor diss py was observed. << 1%								
			Contact: sharp but broken, there appears to be 3" of secondary								
			or altered porphyry at the contact								
113.5'	119'	Basaltic Komatiite	This section is pale-yellow green with 35% milky white qtz.		374	113.5'	117'	3.5'	15		
			The core is aphanitic to fg. strongly ankeritic not calcitic.		375	117'	119'	2'	11		
			Mineralization: little or no visible sulphides								
			Contact: broken but mineralized + graphitic								
119'	248'7"	Calc Alkaline Basalt	This unit is putty grey-putty grey green. The core is modera-		376	119'	121'	2'	185		
			tely- well brecciatted with graphitic fracture filling being		377	129.5'	131'	1.5'	106		
			quite common. The core is aphanitic strongly sericitized and		378	148'	152'	4'	21		
			carbonitized. The core is strongly ankeritic and locally		379	159'	162'	4'	78		
			calcitic ie. calcite and qtz calcite stringers		380	162'	166'	4'	-	.041	
			The notable features in this wide unit are as follows:		381	166'	170'	4'	-	TR	
			From 129'6"-131" is an interflow graphitic tuff		382	170'	174'	4'	40		
			From 158'-176' the core is strongly brecciatted with 10% qf.		383	178'	182'	4'	70		
			and 1% py associatted with the graphite		384	197'	200'	3'	-	TR	
			196'9"-198' leucoxene is present		385	200'	203'	3'	-	.039	
			202'9- 204' is a qtz vein u 2% py		386	203'	204'	1'	-	.122	
			229'-248'7" the core is less brecciatted and more foliated with 80°		387	204'	208'	4'	-	TR	
			minor fuchsite @ 239.5' and brecciatted qtz.		388	220'	222'	2'	-	TR	
					389	239'	243'	4'	-	TR	
			Mineralization: Overall ≤ 1% py in local concentrations.		390	243'	247'	4'	77		
					391	247'	248'7"	1'7"	27		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-8-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT collar / ft / ft / ft	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY				LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC.
248'7"	264'6"	Porphyry	This unit is grey brown in colour with very small phenocrysts. The core is aphanitic to fine grained, very siliceous with some sericite and 3% graphite particularily near the upper contact. The core is very weakly ankeritic, and moderately to strongly calcitic. This unit is veined with 5% white qtz.		392	248'7"	250'	1'5"		.02	
					393	250'	254'	4'		.04	
					394	254'	258'	4'		.033	
					395	258'	262'	4'	123		
					396	262'	264'6"	2'6"	-	.02	
			Mineralization: overall ≤2% very fine diss. py								
			Contact: the contact is veined and rather gradational								
264'6"	282'10"	Sheared Mafic Lava with sections of Sheared Porphyry	This unit is quite variable in that a few sections of recognizable porphyry are present but other sections are sheared volcanics (basalt?) The unit is grey-grey brown due to sericite. The core is aphanitic-fine grainded and veined with 15% qtz which is commonly brecciatted. Locally fuchsite is present. Generally the core is non-ankeritic-weakly ankeritic but is strongly calcitic particularily in the stringers. The notable features are as follows:		397	264.5'	265.5'	1'		.08	
					398	265.5'	269'8"	4'2"		TR	
					399	269'8"	271'4"	1'8		.06	
					400	271'4"	273'4"	2'		.057	
					401	273'4"	273'11"	7'		.06	
					402	273'11"	276'	2'1"		TR	
					403	276'	278'	2'		.12	
					404	278'	280'5"	2'5"		.02	
					405	280'5"	282'10"	2'5		.05	
			264'6" - 265'6" qtz breccia ū fuchsite <1% py								
			265'6" - 269'8" sheared volc. 10 % qtz. leucoxece and some fuchsite 1% py								
			269'8" - 271'4" sheared porphyry some fuchsite, 5-10% qtz 3% fine py.								
			271'4" - 273'4" sheared volc. 3% fine py, fair fuchsite								
			273'4" - 273'11" grey porph. lamprophyre? no py								
			273'11" - 278'1" sheared volc 30-40% qtz bx. 2% ±po								
			278'1 - 280'5" Porphyry sericitic 2% py								
			280'5" - 282'10" Sericite schist, ≤1% py 10% qtz bx								
			Mineralization: overall ≤ 2% py								
			Contact: Sharp @ 45° to the C.A.								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

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HOLE NO.	PAGE NO.
ORC-8-87	4

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS † Auppb	ASSAYS † Auozs/t	CORE REC.
282'10"	383'7"	Quartz Diabase	This unit is dark grey, massive, aphanitic-fine grained and moderately magnetic. The core is non ankeritic and locally calcitic. Epidote envelopes some fractures. Mineralization: little or no visible sulphides Contact: sharp @ 40° to the C.A.								
383'7"	458'	Mafic Intrusive	The core in this unit is dark green aphanitic- medium grained. The core is massive to weakly schistose. The core is somewhat talcose and veined with 3-5% qtz calcite. The core is non ankeritic and only locally calcitic. Mineralization: little or no visible sulphides		406 407 408 409 410 411	383'7" 386' 393' 413' 438' 455'	386' 390' 398' 418' 443' 458'	2'5" 4' 5' 5' 5' 3'	994 22 11 8 6 7		
			END OF HOLE @ 458'								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-9-87 | PAGE NO. A

DRILLING COMPANY: J.T. Thomas		COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 278'	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug. 19/87	DATE COMPLETED: Aug.20/87	DATE LOGGED: Sept. 9/87	LOGGED BY: J.E. Mountjoy		148 ft | 39		CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy		278 ft | 39		LOCATION (Tp., Lot, Con. OR Lat. and Long.): MacMurchy Twp. Section 2+30 SE/1+25SW
					ft |		PROPERTY NAME:
					ft |		

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION (Colour, grain size, texture, minerals, alteration, etc.)	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS Auozs/t	CORE REC.
			SUMMARY LOG							
0	7'7"	Casing								
7'7"	27'8	Porphyry	Grey-grey brown massive to weakly brecciatted siliceous, recognizable phenocrysts, 1%py							
27'8	54'	Basaltic Komatiite	Grey green to medium green, moderately brecciatted, 20% qtz-carbonate veining							
54'	113'5"	Calc Alkaline Basalt	Putty coloured, well brecciatted, ankeritic, 1-2% py			102'	104'3"	2'3"	.04	
113'5"	128'4"	Leucoxene Basalt	Dark grey green with yellow flcks of leucoxene							
128'4"	154'6"	Blotchy Mafic Volcanic	Medium green with light green splotches, 3-5% qtz-carbonate veining							
154'6	155'5	Felsic Dyke	Grey, with very fine green splotches, massive, 1-2% very fine py.							
155'5"	174'10"	Silicified Volcanic Qtz Breccia/Stockwork	White and grey qtz with wisps of tan-brown sericite, locally foliated, non ankeritic, 2-3% py			160	161'6"	1'6"	.04	
						166	169'	3'	.04	
						169	173'	4'	.10	
174'10"	230'2	Quartz Diabase	Dark grey, massive, moderately magnetic			173	174'10"	1'10"	.03	
230'2	234'5	Mafic Volcanic	Medium-dark green, very chloritic, somewhat brecciatted.							
234'5	249'8	Quartz Diabase	Dark grey, massive, moderately magnetic							
249'8	278'	Mafic Intrusive	Very dark green, massive, 260'10"-262' Quartz diabase.							
			END OF HOLE @ 278'							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 278'	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug. 19/87	DATE COMPLETED: Aug.20/87	DATE LOGGED: Sept.9/87	LOGGED BY: J.E. Mountjoy	148 ft | 39°		CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	278 ft | 39°		LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 2+30SE/1+25SW
				ft |		PROPERTY NAME: COOK - DECKER
				ft |		

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au oz/t			CORE REC.
0	7'	Casing										
7'	7'7"	Boulder	This rock could be bedrock but it is doubtfull as it is massive, dark green, aphanitic and not veined. The core is moderately ankeritic and wkly calcitic. Mineralization: 1% large cubes of py Contact: broken									
7'7	27'8"	Porphyry	The core is massive to wkly brecciatted but badly broken. The core is grey-grey brown with white phenocrysts up to 3/16" in diameter. The core is weakly ankeritic but is veined by 2% qtz. ankerite strs. The core is not calcitic but is very siliceous. Mineralization: 1% very fine disseminated Contact: broken @ 60° to the C.A.		31121	7'7"	10'?	2'3"?	TR			
					122	10'	18'	8'?	TR	Recovery	4-5'	
					123	18'	23'	5'	TR			
					124	23'	27'	4'	TR			
					125	27'	28'	1'	TR			
27'8	54'	Basaltic Komatiite	This unit is grey green-med green in colour. The core is moderately brecciatted with 20% qtz ankerite veining. The core is strongly calcitic. The core is fairly chloritic and silicified. Mineralization: little or no visible sulphides Contact: sharp but broken @ 40° to the C.A. the contact is graphitic and veined.		126	28'	33'	5	TR			
					127	33'	38'	5'	TR			
					128	47'	50'	3'	TR			
					129	50'	54'	4'	TR			

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-9-87 | PAGE NO. 2

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	ASSAYS + Auppb	Core Rec.
54'	113'5"	Calc Alkaline Basalt	This unit is putty coloured with black (graphite) fracture filling. The core is aphanitic, well brecciatted moderately ankeritic and not calcitic. The core is locally veined (2-3%) with qtz ankerite and @ 77'9" is a 4" wide grey qtz vein. From 86'-91' the core is weakly to non brecciatted. The core has been strongly sericitized throughout. From 104'3"-113'5" core is more chloritic and wkly fractured. Mineralization: overall 1-2% py in local concentrations with the black graphite fracture filling Contact: gradational		130	54'	56'	2'	TR		
					131	56'	58'	2'	TR		
					132	58'	61'6"	3'6"	TR		
					133	61'6"	64'	2'6"	TR		
					134	64'	67'	3'	TR		
					135	67'	69'	2'	TR		
					136	69'	73'	4'	TR		
					137	73'	77'	4'	TR		
					138	77'	78'	1'	TR		
					139	78'	82'	4'	TR		
					140	82'	85'	3'	TR		
					141	85'	88'	3'	TR		
113'5"	128'4"	Leucoxene Basalt	This interval is dark grey- grey green, with yellow flecks of leucoxene. The core is massive to wkly brecciatted and aphanitic. The core is strongly carbonated with both calcite and ankerite, 5% qtz carbonate. Mineralization: little or no visible py contact: gradational		142	88'	88'7"	7'	8	Whole rock Anal.	
					143	88'7	91'	2'5"	TR		
					144	91'	93'	2'	TR		
					145	93'	95'6"	2'6"	TR		
					146	95'6"	100'	4'6"	TR		
					147	100'	102'	2'	TR		
					148	102'	104'3"	2'3"	.04		
					149	104'3"	108'	3'9	TR		
128'4"	154'6"	Blotchy Volcanic Flow(carbonate zone)	This unit is med green with pale green splotches of calcite?? The core is aphanitic very massive with 3-5% qtz ankerite , core is moderately ankeritic and strongly calcitic. Mineralization: Trace py Contact: very sharp @ 60° to the C.A.		150	108'	112'	3'	TR		
					151	112'	116'	4'	TR		
					152	116'	118'	2'	TR		
					153	124'	126'	2'	TR		
					154	126'	129'	3'	TR		
					155	129'	132'	3'	TR		
					156	143'6"	144'1"	7"	3	Whole rock Anal.	
154'6"	155'5"	Felsic Dyke	This dyke is grey in colour with very fine but discirnable green splotches of calcite?? The core is aphanitic, very massive weakly ankeritic and very strongly calcitic. Mineralization: 1-2% very fine diss. py Contact: very sharp @ 75° to the C.A.		157	147'	150'	3'	TR		
					158	152'	154'6"	2'6"	TR		
					159	154'6"	155'5"	11'	TR		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. orc-9-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT collar	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft °		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft °		PROPERTY NAME	
					ft °			
					ft °			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS † Auoz/t	ASSAYS † Auppb	CORE REC.
155'5"	174'10"	Silicified Basalt Quartz Stockwork	This unit is predominantly qtz (both grey+white) with wisps		160	155'5"	158'	2'7"	TR		
			of sericite (tan-brown) chlorite and possibly minor fuchsite.		161	158'	160'	2'	TR		
			The core is aphanitic with a local foliation . There seems to	80°	162	160'	161'6	1'6"	.04		
			be some folding as @ 159' the foliation is @ 0° to the C.A.	15°	163	161'6	163'	1'6"	.02		
			The core is non ankeritic and is extremely calcitic as well		164	163'	166'	3'	TR		
			as being silicified.		165	166'	169'	3'	.04		
					166	169'	171'	2'	.10		
			Mineralization: overall 2-3% py from 160'-161'7"		167	171'	173'	2'	.10		
			Contact: Sharp but broken		168	173'	174'10"	1'10"	.03		
174'10"	230'2"	Quartz Diabase	The core is dark grey, aphanitic-fine grained massive, modera-								
			tely magnetic, locally calcitic (ie. stringers) and non ankeritic								
			Epidote is present enveloping fractures with calcite.								
			Mineralization: little or no py								
			Contact: Broken								
230'2"	234'5"	Mafic Volcanic	The core is dark green, very chloritic somewhat brecciatted,		31169	230'2"	234'5"	4'3"	TR		
			aphanitic and wkly ankeritic but strongly calcitic. The core								
			is veined with 2% qtz calcite.								
			Mineralization: trace py with purple calcite								
			Contact: sharp @ 70° to the C.A.								
234'5"	249'8"	Quartz Diabase	as from 174'10" - 230'2"								
			Mineralization: little or no pyrite								
			Contact: sharp ° 70° to the C.A.								
249'8"	278'	Mafic Intrusive	This section is very dark green with 5% white qtz calcite. The		170	249'8"	253'	3'4	TR		
			is aphanitic to fine grained and quite massive. The core		171	253'	257'	4'	TR		
			is not ankeritic or calcitic however the fracture filling is		172	257'	260'10"	3'10"	TR		
			pervasively calcite. The core appears to be somewhat talcose		173	262'	267'	5'	TR		
			and may be ultramafic lava. From 260'10" - 262' qtz diabase.		174	269'5	270'	7"		9	
			Mineralization: little or no visible sulphides. ie 1%py		175	276'	278'	2'	TR		
			END OF HOLE @ 278'								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new claim, etc. Complete portion of form only on first page for each hole.

FILL IN ON EVERY PAGE — HOLE NO. ORC-10-87 | PAGE NO. A

DRILLING COMPANY	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
J.T. Thomas		225°	658'	collar | 45°		41 P 11	L341433

DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		LOCATION (Tp., Lot, Con. OR Lot. and Long.)
Aug. 20/87	Aug. 22/87	Sept.5/87	J. E. Mountjoy	288 ft | 43	MacMurchy Twp. Section 1+30SE/1+67NE

EXPLORATION CO., OWNER OR OPTIONEE	DATE SUBMITTED	SUBMITTED BY (Signature)		PROPERTY NAME
ORCANA RESOURCES		J.E. Mountjoy	518 ft | 38 658 ft | 37 ft |	COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	Core Rec.
			SUMMARY LOG							
0	5'	Casing								
5'	88'9	Mafic Intrusive	Dark green, chloritic, 3-5% qtz calcite strs., massive locally talcose.							
88'9	142'	Quartz Diabase	Dark grey, massive, moderately magnetic.							
142	148'	Sheared Mafic Lava	Dark green, 35% qtz-calcite, strongly schistose, locally talcose			145'	148'	3'	.031	
148'	230'9	Quartz Diabase	Dark grey, massive, moderately magnetic							
230'9	233'	Quartz Breccia	Dark grey brown, silicified, sericitic, schistose ≤ 2% py			231'3"	233'	2.9'	.035	
233'	243'3"	Porphyry	Tawny brown, sericitized, siliceous, brecciatted and sheared small white phenocrysts, 2% py.							
243'3	256'4	Quartz Storkwork	Grey-white with wisps of sericite and chlorite			243'3"	248'	4'9"	.20	
256'4	296'	Porphyry	Dark grey-black, siliceous, weakly graphitic, 2% py			243'3"	253'	9'9"	.124	
296'	389'6"	Calc Alkaline Basalt	Putty coloured, moderately brecciatted, strongly ankeritic							
389'6	485'3"	Thoeliitic Basalt	Light-medium green, locally coarse leucoxene, locally green splotches, massive to weakly brecciatted, intrusive?			403' 470'	407' 473'	4' 3'	.08 .04	
485'3"	486'9"	Porphyry	Dark grey to brown, small phenocrysts, ≤1% diss. py							
486'9	495'10"	Amygdaloidal Basalt	Medium grey small white qtz filled amygdules or phenocrysts moderately siliceous, moderately ankeritic <1% py							
495'10	515'3	Basaltic Komatiite	Yellow green-medium green, 20% qtz-ankeritic veining.							
515'3	518'6	Porphyry	Light grey, small white phenocrysts, very siliceous							
518'6	526'	Calc Alkaline Basalt	Beige to putty coloured, massive							
526'	534'6"	Porphyry	Pale-tan grey, smallwhite phenocrysts, very siliceous							
534'6	539'1"	Calk Alkaline Basalt	Putty grey; moderately brecciatted, sericitic							
539'1	546'11	Graphitic Tuff Porphyry	Dark grey to black 10% light grey porphyry sections							
546'	583'6"	Calc Alkaline Basalt	Light green - putty coloured, moderately-well brecciatted							
583'6"	585'3	Graphitic Breccia	Graphite, 40% qtz carbonate, and assimilated basalt.							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but [illegible] portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. ORC-10-87 | PAGE NO. B

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT collar ° / ft ° / ft ° / ft °
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature) J.E. [illegible]		

LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM

MAP REFERENCE NO. | CLAIM NO.

LOCATION (Tp., Lot, Con. OR Lat. and Long.)

PROPERTY NAME

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS +			CORE REC.
585'3	586'10"	Porphyry	Grey brown, fractured, well brecciatted, with graphite.									
586'10	624'	Breccia Zone	Brecciatted graphite (40%), basalt (40%), qtz ankerite (20%).									
624'	658'	Calc Alkaline Basalt	Putty coloured, weakly brecciatted to massive, ankeritic - little or no sulphides.									
			END OF HOLE @ 658'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

DIAMOND DRILLING LOG — GOLDEN SHIELD RESOURCES LTD.

HOLE NO. ORC-10-87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 225°	TOTAL FOOTAGE:	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 20/87	DATE COMPLETED: Aug. 22/87	DATE LOGGED: Sept. 5/87	LOGGED BY: J. E. Mountjoy	288 ft | 43	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	518 ft | 38	CLAIM NO.: L341433
				678 ft | 37	LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+30SE/1+67'NE
				ft |	PROPERTY NAME: COOK - Decker

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION (Colour, grain size, texture, minerals, alteration, etc.)	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC.
0	5'	Casing									
5'	88'9"	Mafic Intrusive?	The core in the unit is dark green aphanitic-med grained. The core is quite chloritic and is cut by 3-5% qtz calcite strs. The core is massive non ankeritic-very wkly ankeritic and locally (stringers) very strongly calcitic. The core is locally talcose as well.		412	18'	23'	5'	15		
					413	28'	33'	5'	8		
					414	48'	53'	5'	11		
					415	68'	73'	5'	10		
					416	83'	86'	3'	12		
					417	86'	88'9"	2'9"	17		
			Mineralization: little or no visible sulphides. Contact: Sharp @ 50° to the C.A.								
88'9"	142'	Quartz Diabase	This unit is dark grey, massive aphanitic to fine grained and moderately magnetic. The core is not ankeritic but is locally calcitic ie. strs. The fractures are occasionally enveloped by epidote.								
			Mineralization: little or no visible sulphides. Contact: Sharp @ 60° to the C.A. some interfingering.								
142'	148'	Sheared Mafic Volcanic	This unit is very dark green with 35% calcite and qtz calcite strs. The core is aphanitic, non ankeritic but strongly calcitic schistosity is @ 50° to the C.A. The core is strongly chloritic and locally talcose		418	142'	145'	3'	152		
					419	145'	148'	3'	-	.031	
			Mineralization: little or no sulphides Contact: sharp @ 50° to the C.A.								
148'	230'9"	Quartz Diabase	As from 88'9"-142' Mineralization: only minor py < 1% Contact: sharp @ 80° to the C.A.								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every ... portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-10-872 | PAGE NO.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS Auppb	ASSAYS Auozs/t	Core Rec
~~230'9"~~	233'	Quartz Diabase	The first 6" of this dark grey brown unit is more of a silici-		420	230'9	231'3	6"	78		
			fied sericite schist with possibly some assimilated diabase.		421	231'3"	233"	2'9"	-	.035	
			The remainder of this section is typified by fragments of qtz								
			and wisps of sericite and black chlorite. The core is aphanitic								
			non ankeritic, and only weakly calcitic in the tiny fractures								
			This unit may be a brecciatted and veined phase of the next								
			unit.								
			Mineralization: overall ≤ 2% py but locally the pyrite								
			occurs coating hairline fractures.								
			Contact: brokne but it appears to be at a low angle to the								
			C.A.								
~~233'~~	~~243'3"~~	Porphyry	This unit is a tawny brown colour due to extensive sericitiza-		422	233'	236'	3'	84		
			tion however the unit is locally weakly brecciatted and sheared		423	236'	239'	3'	58		
			with black chlorite and or graphite filling the fractures. The		424	239'	241'	2'	617		
			core is aphanitic with small (1/16" in diameter) white pheno-		425	241'	243'3	2'3"	285		
			crysts. The core is also non ankeritic or calcitic.								
			Mineralization: overall 2% py in local concentrations.								
			Contact: Sharp @ 80° to the C.A.								
243'3"	256'4"	Quartz Stockwork	This section is made up of grey and white qtz veining with		426	243'3"	245'	1'9"	-	.246	
			streaks or wisps of sericite chlorite sulphides and some minor		427	245'	246'	1'	-	.287	
			fuchsite. Minor leucoxene is also present @ 254'6". The core		428	246'	248'	2'	-	.120	
			is aphanitic and wkly- non ankeritic . At about 248' the qtz.	40°	429	248'	250'	2'	-	.059	
			changes from predominantly grey and non ankeritic to whiter and		430	250'	253'	3'	-	.044	
			wkly ankeritic. The core is very strongly, calcitic throughout	52°	431	253'	256'4"	3'4"	823		
			The schistosity is variable from 10° to 52° with grey section								
			being generally at the lower angle.								
			Mineralization; overall ≤ 2% py in local concentrations.								
			Contact: very sharp @ 45° to the C.A.								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for each ... portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-10-87 | PAGE NO 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS † Auppb	ASSAYS † Auozs/t	CORE REC
256'4"	296'	Porphyry	This unit is dark grey - black in colour probably due to graphite which is present, but also in the siliceous section as well. The core is aphanitic very siliceous wkly-moderately ankeritic and locally calcitic. The core is cut by 5% qtz-carbonate strs. and 7-10% graphite. Mineralization: overall 2% py in local concentrations and finely disseminated throughout. Contact: The contact is very graphitic and brecciatted but at at low angle to the C.A. of 45°? or less		432	256'4"	258'	1'8"	324		
					433	258'	260'	2'	346		
					434	260'	263'	3'	71		
					435	263'	265'	2'	89		
					436	265'	268'	3'	51		
					437	268'	271'	3	115		
					438	271'	273'	2'	32		
					439	273'	275'	2'	891		
					440	275'	278'	3'	78		
					441	278'	281'	3'	17		
					442	281'	283'	2'	56		
296'	389'6"	Calc Alkaline Basalt	This unit is putty coloured aphanitic wkly-moderately brecciated and veined. The core also becomes slightly green in colour due to chlorite. The core is strongly sericitized and ankeritic as well as strongly calcitic locally 5% qtz veining overall This unit was likely pillowed prior to the brecciation event. Mineralization: only minor pyrite <1% in local concentrations Contact: Sharp @ 75° to the C.A.		443	283'	285'	2'	36		
					444	285'	288'	3'	38		
					445	288'	291'	3'	37		
					446	291'	293'	2'	14		
					447	293'	294'6"	1.5'	41		
					448	294'6	296'	1.5'	137		
					449	296'	298'	2'	130		
					450	298'	302'	4'	36		
					451	302'	306'	4'	–	TR	
					452	306'	310'	4'	–	TR	
					453	316'	321'	5'	–	TR	
					454	340'	344'	4'	–	TR	
					455	357'	362'	5'	–	TR	
					456	369'	372'	3'	–	TR	
					457	388'	389'6"	1.5'	–	TR	

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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HOLE NO.	PAGE NO.
ORC-10-87	4

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH / TOTAL FOOTAGE	DIP OF HOLE AT: collar ° / ft ° / ft ° / ft °	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		

MAP REFERENCE NO.	CLAIM NO.
LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC.
389'6"	485'3"	Magnesium Rich Thoeliitic Basalt (Mafic Intrusive)	The core in this wide unit varies from light-med green to med-dark green in colour. This unit is veined with 10% qtz-ankerite. The core is aphanitic-fg. with locally coarse grained leucoxene and local green splotches of calcite? The core is strongly ankeritic throughout but is not calcitic The core is massive-wkly brecciatted. The notable features are as follows: 389'6"-401' massive Basalt u cs leucoxene giving the core an intrusive texture (foot wall) 401'-402' qtz ankerite 402'-406' sericitic approaching putty coloured 406'-443' core is more massive med green in colour wkly bx 443'-459' fg. leucoxene basalt 443'-444' qt ankerite with talc fuchsite? 459- 485'3" wkly developed green splotches dk-med green colour. Mineralization: only very minor py was observed (<<1%) Contact: Sharp but ground.		458	389'6	392'	2'6"	-	TR	
					459	400'	403'	3'	-	.02	
					460	403'	407'	4'	-	.08	
					461	419'9"	420'6"	9'	3	- Whole rock Anal.	
					462	435'	438'	3'	-	TR	
					463	438'	440'	2'	-	TR	
					464	440'	442'	2'	-	TR	
					465	442'	445²	3²	-	TR	
					466	445'	448'	3'	-	TR	
					467	470'	473'	3'		.05	
					468	480'	483'	3'	-	TR	
					469	483'	485'3"	2'3"	-	TR	
485'3"	486'9"	Porphyry	The core is dark grey with a very light brownish hue. The core is aphanitic with small (1/16 of an inch in diameter) phenocrysts. The core is very siliceous and is veined by 2-3% qtz ankerite. The core is wkly ankeritic and wkly-non calcitic. Mineralization: ≤ 1% very fine disseminated py. Contact: very Sharp @ ° to the C.A.		470	485'3"	486'9	1.5'		TR	
486'9"	495'10"	Amygdaloidal Basalt (Altered Porphyry)	This unit is medium grey with small white (< 1/16" in diam.) quartz filled amygdules or qtz phenocrysts. The core is generally aphanitic and slightly less siliceous than the previous unit of porphyry. The core is wkly -moderately ankeritic and is veined with 2% qtz ankerite. The core is wkly - non calcitic with the amygdules being wkly calcitic. Mineralization: only minor pyrite < 1% Contact: Sharp @ 70° to the C.A.		471	486'9	490'	3'3"		TR	
					472	490'	493'	3'		TR	
					473	493'	495'10"	2'10"		TR	

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for each hole. Fill in this portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-10-87 | PAGE NO. 5

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lat. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs	ASSAYS + Auppb		Core Rec.
495'10"	515'3	Basaltic Komatiite	The core is pale yellow green- med green and is well veined with 20% qtz ankerite. The core is aphanitic - fine grained strongly ankeritic and only moderately calcitic from 503' - 508' where the core is light green in colour. While this section is called an ultramatic, no visible spinifex texture was observed. Mineralization: little or no visible PY. Contact: Sharp but strongly veined @ 35° to the C.A.		474	495'10	500'	4'2				
					475	500'	503'	3'	TR			
					476	503'	504'	1'	-	5	Whole	Rock Anal.
					477	504²	508²	4'	TR			
					478	508'	512'	4'	TR			
					479	512'	515'3"	3'3"	TR			
515'3	518'6	Porphyry	The core is very light grey in colour and aphanitic while white phenocrysts up to 1/8" in diameter. The core is very siliceous with minor tan coloured sericite. The core is strongly ankeritic, non calcitic and veined with 25% qtz ankerite. Mineralization: only very minor py 1% Contact: broken @ 20° to the C.A.		480	515'3	518'6	3'3	TR			
518'6	526'	Calc Alkaline Basalt	The core is pale beige - putty coloured, aphanitic and quite massive with strs of chlorite along fractures. The core is strongly ankeritic and not calcitic. Mineralization: little or no visible sulphides. Contact: broken and veined.		481	518'6"	522'	3'5"	TR			
					482	522	526'	4'	.02			

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-10-876 | PAGE NO.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH / TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY	collar ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)			PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au oz/t	CORE REC.
526'	534'6	Porphyry	The core is pale tan-pale grey in colour with white phenocrysts		483	526'	528'	2'	TR	
			up to 1/4" in diameter. The core is veined with 10% qtz. The		484	528'	531'	3'	TR	
			core is moderately ankeritic and not clacitic. The veining		485	531'	533'	2'	TR	
			is very wkly ankeritic. The core is very siliceous and fractured		486	533'	534'6	1.5'	TR	
			with sericite and chlorite, running at very low angles to the C.A.							
					~~487~~	~~534'6~~	~~536'~~	~~1.6'~~	~~TR~~	
			Mineralization: Overall 1% py as very finely diss. and long		488	536'	539'1	3'1	TR	
			fractures							
			Contact: veined but sharp @ ° to the C.A.							
534'6	539'1	Calc Alkaline	This intervalis putty grey coloured, moderately brecciatted							
		Basalt	with graphite ± black chlorite. The core is aphanitic,							
			strongly ankeritic and locally calcitic ie. stringers. The							
			core is strongly sericitized and wkly silicified.							
			Mineralization: overall 1% py in local concentrations.							
			with the gf.							
			Contact: irregular @ 10° to the C.A.							
539'1	546'11"	Graphitic Tuff	The core is dark grey to black with 10% light grey sections of		489	539'11	541'	1'11"	TR	
		and Porphyry	porphyry. The core is aphanitic to very fine grained. The		490	541'	543'	2'	TR	
			core is foliated/bedded at very low angles to the C.A. and		491	543'	545'	2'		
			appears to be folded or at least slumped. The core has 5%	10°	492	545'	546'	1'	TR	
			qtz ankerite veining. The core is non ankeritic aside from the		493	546'	548'	2'	TR	
			afore-mentioned veining. The core is not calcitic.							
			Mineralization: overall ≤1% in local concentrations							
			with the porphyry.							
			Contact: Broken @ 60° to the C.A.							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but this portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-10-87 | PAGE NO. 7

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	CORE REC.
46'11	583'6"	Calc Alkaline Basalt	The core is light green-putty coloured moderately-well brecciatted with qtz-carbonate and chlorite filling the fractures. The core is strongly ankeritic qtz carbonate veining. The core is aphanitic.		494	548'	552'	4'	TR	
					495	557'	561'	4'	TR	
					496	565'	568'	3'	TR	
					497	577'	580'	3'	TR	
					498	580'	583'5	3.5'	TR	
			Mineralization: overall < 1% py in local concentrations							
			Contact: interfingered-gradational.							
583'6'	585'3	Graphitic Breccia	This section is essentially a mixture of graphite 40% qtz carbonate and assimilated putty coloured basalt. The core is strongly brecciatted with a slight foliation. The core is strongly ankeritic and not calcitic. The graphite is not carbonatized.	40°	499	583'6"	585'3"	1.9"	TR	
			Mineralization: little or no visible sulphides.							
			Contact: sharp @ 40° to the C.A.							
585'3	586'10"	Porphyry	The core is grey brown with fractures which have been filled with graphite and or black chlorite. The core is well brecciat-ted and phenocrysts up to 1/8 inch in diameter. The core is strongly ankeritic and only very wkly calcitic.		500	585'3	586'10	1'7"	TR	
			Mineralization: only very minor py in local concentrations							
			Contact: sharp @ 60° to the C.A.							
586'10	624'	Breccia Zone	This wide interval is made up of brecciatted: graphite 40%, basalt40% and 20% qtz ankerite? Therefore, the core varies from putty coloured to light green-black. The core is very well brecciatted, with more fragments of qtz/ankerite than a actual veining with the exception of the graphite the core is ankeritic(strongly) throughout but is only very weak calcitic. The core is aphanitic.							

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO.	PAGE NO.
ORC-10-87	8

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH / TOTAL FOOTAGE	DIP OF HOLE AT: collar	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY	ft	MAP REFERENCE NO. / CLAIM NO.
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)	ft	LOCATION (Tp., Lot, Con. OR Lot. and Long.)
				ft	PROPERTY NAME
				ft	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t	ASSAYS + Auppb	Core Rec.
586'10	624	continued	The notable features are as follows:		31101	586'10"	590'	3'2"	TR		
			586'10"-590' graphite + qtz bx		31102	590'	593'	3'	TR		
			590'-593'6" basalt and qtz bx		103	593'	596'	3'	TR		
			593'6"-593'7" gf. and qtz.		104	596'	599'	3'	TR		
			593'7"-599'6 carbonated volcanic possible ultramafic 30% qtz.		105	599'	601'	2'	TR		
			599'6" - 599'8" gf + qtz.		106	601'	603'	2'	TR		
			599'8-602'10" beige basalt mod bx		107	603'	607'	4'	TR		
			@ 600'2"-600'5" gf. + qtz.		108	607'	610'	3'	TR		
			602'10"-613' predominantly gf + qtz ankerite		109	610'	613'	3'	TR		
			613'-619'7" predominantly putty coloured basalt + qtz.		110	613'	617'	4'	TR		
			619'7"-623" perdominantly gf. + qtz.		111	617'	619.5	2.5'	TR		
			623'=624 minor gf, basalt and qtz.		112	619.5'	622'	2.5'	TR		
					113	622'	624'	2'	TR		
			Mineralization: little or no sulphides								
			Contact: gradational								
624'	658'	Calc Alkaline Basalt	The core is putty coloured, massive-wkly bx putty coloured and strongly ankeritic with minor qtz ankerite veining (3%) The core is very sericitic and not strongly silicified.		114	624'	628'	4'	TR		
					115	640'	642.5	2.5	TR		
					116	649'	652'	3'	TR		
					117	652'	653'	1'	TR		
			Mineralization: little or no sulphides		118	653'	653.5'	6'	-	24	
					119	653.5'	656'	2.5	TR		
					120	656'	658'	2'	TR		
			END OF HOLE @ 658'								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-11-87 | PAGE NO. A

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas		COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 500'	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Au.g 21/87	DATE COMPLETED: Aug. 22/87	DATE LOGGED: Sept.2/87	LOGGED BY: J.E. Mountjoy		338 ft | 37°		CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy		500 ft | 37°		LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+70SE/377'6"SW
					ft |		PROPERTY NAME: COOK - Decker
					ft |		

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auoz/t			CORE REC.
0	5'	Cassing	SUMMARY LOG									
5'	85'	Mafic Lava	Medium green to reddish green (hematized) or tan (sericitized) Massive to micro fracture, non ankeritic, few sulphides.									
85'	124'5	Brecciatted Mafic Lava	Medium green, 30% brecciatted qtz, trace fuchsite									
124'5	237'7	Calc Alkaline Basalt	Medium green-light green-putty coloured, moderately brecciatted The chlorite sections are calcitic, the sericitic sections are ankeritic.									
237'7	241'	Graphitic Quartz Breccia	Strongly brecciatted quartz and graphite, minor assimilated basalt. Little or no visible sulphides.									
241'	256'5'	Calc Alkaline Basalt	Putty coloured, well veined, well brecciatted, few sulphides.									
256'5	260'6	Basaltic Komatiite	Olive green, 25% qtz-carbonate veining, moderately brecciatted									
260'6	262'6	Felsic Dyke	Light to medium grey, massive, little or no sulphides									
262'6	326'3	Basaltic Komatiite	Medium-dark green to olive green and light grey, possible spinifex, weakly-moderately brecciatted.									
326'6	327'3	Porphyry	Light grey, massive, ankeritic, 1% py									
327'3	352'9	Basaltic Komatiite	light green, weakly brecciatted, weakly veined, trace fuchsite									
352'9	409'5	Blotchy Mafic Volcanic	Light grey- medium green with emeral green splotches 30% qtz-carbonate veining, minor fuchsite.									
409'5	464'5	Mafic Intrusive	Dark green with light grey to tan leucoxene, calcitic increases down hole as ankerite decreases.			409'	413'	4'	.03			
						418'	422'	4'	.02			
464'5	500'	Quartz Diabase	Dark grey, massive and moderately magnetic, epidote envelopes fractures.									
			END OF HOLE @ 500'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. ORC-11-87 | PAGE NO. 1

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 500'	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY	338 ft | 37°	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. [illegible]	500 ft | 37	CLAIM NO.: L341433
				ft |	LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. Section 1+70SE/377'6 SW
				ft |	PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION (Colour, grain size, texture, minerals, alteration, etc.)	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	CORE REC.
0	5'	Casing									
5'	85'	Mafic Lava	The core varies from medium green to reddish green (hematization) to tan (sericitization) The core is moderately silicified, and massive with numerous microfractures filled with calcite The core is non ankeritic. The core is aphanitic. From 95'-97' sericitized and hematized schist. minor qtz. Mineralization: little or no visible sulphides. Contact: sharp but broken		2685	15'	18'	3'	12'		
					2686	28'	32'	4'	-	TR	
					2687	42'	46'	4'	3'		
					2688	55.5'	59.5'	4'	2'		
					2689	74'	78'	4'	7'		
					2690	82'	85'	3'	15		
85'	124'5	Brecciatted Mafic Lava	This unit could also be called a qtz breccia in a chlorite schist. The core is med green with 30% brecciatted qtz, locally giving the core a porphyritic-mottled texture. The core is aphanitic, foliated and contains chlorite sericite, qtz, and fuchsite as well as minor graphite. From 123'-124'5 is essentially qtz breccia with fuchsite and some gf. The core is moderately ankeritic and only locally calcitic. Mineralization: little or no visible sulphides. Contact: sericitized + broken	55°	2691	85'	89'	4'	18		
					2692	89'	93'	4'	43		
					2693	93'	97'	4'	44		
					2694	97'	101'	4'	29		
					2695	101'	105'	4'	25		
					2696	105'	109'	4'	23		
					2697	109'	113'	4'	-	TR	
					2698	113'	117'	4'	22		
					2699	117'	121'	4'	40		
					2700	121'	124'	3'	138		
					2301	124'	125'6	1.5'	22		
124'5	237'7	Calc Alkaline Basalt	This wide unit is generally med green in colour becoming light green then putty coloured with a light green cast @ 213'. The core is wkly-moderately brecciatted and veined with 3-5% qtz-carbonate. The core is aphanitic, chloritic and at the beginning is moderately ankeritic, becoming wkly-non ankeritic then @ 213' the core becomes moderately-strongly ankeritic coinciding with the putty coloured sericitization. Interestingly the calcite content is inversely proportional to the ankerite content ie. the chloritic section is strongly calcitic while the sericitic section is not calcitic. Mineralization: little or no visible sulphides. Contact: Sharp @ 55° to the C.A.		302	125.5'	128'	2.5'	26		
					303	137'	140'	3'	-	TR	
					304	158'	162'	4'	-	TR	
					305	167'	170'	3'	-	TR	
					306	178.5	181'	2.5'	8	-	
					307	190'	194'	4.	-	TR	
					308	211'	215'	4'	-	TR	
					309	315'	219'	4'	-	TR	
					310	230'	234'	4'		TR	
					311	234'	238'	4'		TR	

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE ▶ | HOLE NO. ORC-11-87 | PAGE NO. 2

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH / TOTAL FOOTAGE	DIP OF HOLE AT collar / ft / ft / ft	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO. / CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY			LOCATION (Tp., Lot, Con. OR Lot. and Long.)
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)			PROPERTY NAME

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auoz/t	ASSAYS + Aupph	CORE REC.
237'7	241'	Graphitic Quartz	The core is black and white in colour and is comprised of graphite and quartz which has been strongly brecciatted .A minor amount of putty coloured basalt is also present @ 238'4". The core is aphanitic, strongly ankeritic and not calcitic.		313	238'	241'	3'	TR		
			Mineralization: little or no visible sulphides. Contact: Sharp @ 70° to the C.A.								
241'	256'5	Calc Alkaline	The core is putty coloured with good veining and minor graphite								
			The core is well brecciatted and moderately to well veined		314	241'	244'	3'	TR		
			with qtz carbonate. The core is moderately to strongly ankeri-		315	244'	248'	4'	TR		
			tic but not calcitic. The core is quite sericitic.		316	248'	250'	2'	—	12	
					317	250'	253'	3'	TR		
			Mineralization: little or no visible sulphides		318	253'	256'5	3.5'	TR		
			Contact: graphitic + veined but broken								
256'6	260'6	Basaltic Komatiite	This section is olive green and white due to the extensive		319	256'6	260'6	4'	—	10	
			qtz veining (25%) The core is aphanitic, moderately brecciatted strongly ankeritic and not calcitic. The core has some								
			possible spinifex @ 257'6"		320	260'6	261'9	1'3	—	5	
			Mineralization: little or no visible sulphides. Contatt: Broken								
260'6	262'6	Felsic Dyke	This unit is light-med grey, massive aphanitic and not well veined (2%) This unit could be a small flow or dyke. The core is moderately ankeritic and not calcitic.								
			MIneralization: little or no visible sulphides Contact: Sharp @ 75° to the C.A.								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-11-87 | PAGE NO. 3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs. t	ASSAYS + Auppb		CORE REC.
262'6	326'3	Basaltic Komatiite	This wide unit varies from med or dark green-olive green and light grey in colour. Generally the core is aphanitic and well veined, overall (25%). Possible spinifex was observed @ 269', 273' 307' and from 312'-318'. The core is weakly-moderately brecciatted with possible polysuturing from 323'-326'3" The core is locally talcose, strongly ankeritic throughout and not calcitic.		321	261'9	264'	2'3	TR			
					322	270.5'	274.5'	4'	TR			
					323	274.5'	278.5'	4'	TR			
					324	278.5'	283'	4.5'	TR			
					325	283'	285'	2'	—	7		
					326	294'	297'	4'	TR			
					327	297'	300'	3'	TR			
					328	300'	303'	3'	-	19		
			Mineralization: only minor pyrhotite and very minor py		329	303'	304'	1'	-	51		
			Contact: Sharp @ 65° to the C.A.		330	308'	312'	4'	—	130		
					331	323'	326'3	3'3	TR			
326'3	327'3	Porphyry	The core is fine grained, light grey in colour and quite massive. The core is strongly ankeritic and wkly calcitic. The core is not signifcantly altered or sheared.		332	326'3	327'3	1'	TR			
			Mineralization: Overall 1% diss. py									
			Contact: Sharp @ 70° to the C.A.									
327'3	352'9	Basaltic Komatiite	This unit is similar to that from 262'6-326'3. This unit is slightly less veined light green in colour and more massive, with some fuchsite. Overall 15% qtz carbonate veining. The core is strongly ankeritic and wkly becoming moderately calcitic.		333	327'3	331	3'9	TR			
					334	331	334'	3'	-	48		
					335	334'	338'	4'	—	12		
					336	338'	343'	5'	-	47		
					337	343'	351'	3'	-	45		
			Mineralization: only very little py << 1%		338	348'	351'	3'	-	45		
			Contact: sharp but broken @ 58° to the C.A.		339	351'	352'9	1'9	—			

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

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HOLE NO. ORC-11-87 | PAGE NO. 4

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH / TOTAL FOOTAGE	DIP OF HOLE AT collar / ft / ft / ft	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		MAP REFERENCE NO. / CLAIM NO.
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		LOCATION (Tp., Lot, Con. OR Lat. and Long.) / PROPERTY NAME

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + AuOZS/T			CORE REC.
352'9	409'5	Blotchy Mafic Volcanic	This wide unit varies from light grey-med green, with emerald green splotches. This unit is well veined ie. 20% qtz carbonate often the qtz is brecciatted. Minor fuchsite was also observed. The core is strongly ankeritic and not calcitic The notable features are as follows: 352'9-361' The core has green splotches of fuchsite?? 361' - 387'5 very well veined 30% qtz ankerite and some leucoxene. @ 387'5 minor putty coloured material.		340	352'9	357'	4'3	TR			
					341	361'	364'	3'	.02			
					342	364'	368'	4'	TR			
					343	375'	378'	3'	TR			
					344	378'	381'	3'	TR			
					345	388'	391'	3'	TR			
					346	399'	402'	3'	TR			
					347	402'	406'	4'	TR			
					348	406'	409'	3'	-	21		
			Mineralization: very minor py < 1%									
			Contact: brokne graphitic.									
409.5'	464'5	Mafic Intrusive?	This unit is very dark green in colour with light grey-tan leucoxene similar to the footwall material in earlier hole. #12 to some degree. The core is veined with 5-10% grey qtz and some pink calcite. The core is quite silicified, ankeritic, at the beginning becoming non ankeritic and in inverse proportion the beginning is not calcitic becoming strongly so @ 424'		349	409'	413'	4'	.03			
					350	418'	422'	4'	.02			
					351	427'	430'	3'	-	64		
					352	430'	434'	4'	-	12		
					353	448'	453'	5'	TR			
					354	453'	457'	4'	-	18		
					355	457'	460'	3'	TR			
			Mineralization: Overall < 1% py		356	460'	463'	3'	TR			
			Contact: sharp, veined @ 85° to the C.A.		357	463'	464'6	1.5'	TR			
464'5	500	Quartz Diabase	This unit is fine grained dark grey, massive and moderately magnetic. The core is non ankeritic and is locally calcitic. The core has epidote envelopes around fractures.									
			Mineralization: little or no visible sulphides									
			END OF HOLE @ 500'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE | HOLE NO. ORC-12-87 | PAGE NO. A

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 308'	DIP OF HOLE AT: collar | 45 ; 158 ft | 44 ; 308 ft | 42.5 ; ft | ; ft |	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 23/87 — DATE COMPLETED: Aug.24/87	DATE LOGGED: Aug.31/87	LOGGED BY: J.E. Mountjoy			MAP REFERENCE NO.: 41 P 11 — CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES	DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy			LOCATION (Tp., Lot, Con. OR Lot. and Long.): MACMURCHY TWP. Section 3+30SE/1+50SW
					PROPERTY NAME: COOK-DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs./t			Core Rec.
			Summary Log									
0	5'	Casing										
5'	99'6	Basaltic Komatiite	Light medium green, 15-25% qtz carbonate veining wkly-moderately brecciatted , 38'-48', spinifex texture			98'	99'6	1'6"	.062			
99'6	104'	Quartz Vein	White with fracture filled with black chlorite and fuchsite two generations of veining, older has 1% py and po in fractures			102'	104'	2'	.236			
104'	132'6	Basaltic Komatiite	Medium green , moderately bracciatted, 25% qtz -carbonate.									
132'6	141'	Porphyry?	Dark grey, massive, black phenocrysts?, not calcitic.									
141'	156'4	Basaltic Komatiite	Medium green 25-30% qtz-carbonate veining, moderately to strongly ankeritic, little or no sulphides.									
156'4	192	Mafic Intrusive	Medium-dark green, local splotches of green, coated with coarse leucoxene? giving a coarse looking texture									
192'	253'	Quartz Diabase	Dark grey, massive, moderately magnetic.									
253'	308'	Mafic Intrusive	Light to dark green, locally well veined with 15-20% calcite stringers, similar leucoxene? coating producing coarse textured appearance.									
			END OF HOLE @ 308'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO. ORC-12-87 | PAGE NO. 1

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 045°	TOTAL FOOTAGE: 308'	DIP OF HOLE AT: collar | 45	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug. 23/87	DATE COMPLETED: Aug. 24/87	DATE LOGGED: Aug.31/87	LOGGED BY: J.E. Mountjoy	158 ft | 44	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	308 ft | 42.5	CLAIM NO.: L341433
				ft |	LOCATION (Tp., Lot, Con. OR Lot. and Long.): MACMURCHY TWP. Section 3+30SE/1+50SW
				ft |	PROPERTY NAME: COOK-DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION (Colour, grain size, texture, minerals, alteration, etc.)	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	Core Rec.
0	5'	Casing									
5'	99'6	Basaltic Komatiite	The core is light - medium green in colour, aphanitic fine grained. The core is well veined with 15-25% milky white qtz. veining. The core is weakly-moderately brecciatted and locally well foliated. The core is moderately chloritic, strongly ankeritic, and wkly-not calcitic. From 38'-48' the core has potential spinifex texture suggesting it may be a carbonitized and bleached ultramafic @ 72' the core appears to be polysutured and or this could be a ropy flow top. From 85'=87'5 is a fg. aphanitic, dark grey flow with 1% py and is massive with a few qtz carbonate strs. Mineralization: little or no visible sulphides but @ 99'-99'3 core is 15% banded py, some po Contact: Sharp @ 50° to the C.A.	50°	2581	5'	10'	5'	11		
					582	18'	20'	2'	12		
					583	20'	24'	4'	22		
					584	24'	28'	4'	10		
					585	33'	34.5	1.5'	12		
					586	38'9	39'4	7'	1 Whole rock anal.		
					587	54'	58'	4'	17		
					588	58'	63'	5'	12		
					589	63'	68'	5'	36		
					590	85'	87.5'	2.5'	86		
					591	92'	95'	3'	22		
					592	95'	98'	3'	23		
					593	98'	99.5'	1,5'	–	.062	
99'6	104'	Quartz Vein	This vein is white with dark fractures filled with black chlorite and emerald green fuchsite. The core is aphanitic and weakly moderately brecciatted. The core is moderately-strongly ankeritic but not calcitic, There are at least two generations of veining. Mineralization: overall 1% py ± po associatted with fractures, the younger veining is barren. Contact: sharp @ 70° to the C.A. but this is younger veining over the last inch.		594	99'6	102'	2.5'	221		
					595	102'	104'	2.0	–	.236	
104'	132.5'	Basaltic Komatiite	The core in this unit varies from med green to a small amount of putty coloured @ 110' The core is aphanitic moderately brecciatted with up to 25% qtz veining . The core is strongly ankeritic becoming strongly calcitic. From 104'-113' the core is not well veined and is putty coloured (Calc Alkaline Basalt)		596	104'	106'	2'	207		
					597	118'	122'	4'	91		
					598	125'	128'	3'	55		
					599	128'	130'	2'	53		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-12-87 | PAGE NO. 2

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		collar ft ft ft ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)				PROPERTY NAME	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb			CORE REC.
104'	132.5'	continued	@ 105.5' is some qtz bx and fuchsite. @ 124' is definate spinifex texture. Mineralization: little or no visible sulphides. Contact: broken									
132.5	141	Porphyry? Lamprophyre?	The core is dark grey, massive, aphanitic with black phenocrysts up to 1/16" in diameter. The core is cut by 3% qtz -carbonate veining. The core is non ankeritic and only the veining is calcitic. Mineralization: minor py ~1% Contact: broken		2600	138'	141'	3'	74			
141'	156'4	Basaltic Komatiite	This unit is similar to that from 104'-132.5 it is medium green in colour and very well veined with 25-30% qtz carbonate veining. The core is aphanitic, moderately-strongly ankeritic and locally is strongly calcitic. Mineralization: little or no visible sulphides Contact: sharp @ 40° to the C.A.		601 602 603 604 605	141' 144' 148' 151' 155'	144' 148' 151' 155' 157'	3' 4' 3' 4' 2'	38 25 29 52 33			
156'4	192'	Mafic Intrusive	This unit is aphanitic-med grained med-dk green in colour with splotches of lighter green. The core is very weakly ankeritic and strongly calcitic from 156'4-168' splotches of fuchsite and or epidote are present but @ 168' = 183' the core appears to be coated with leucoxene? giving the core a coarse grained texture, from 183'-192' The core is very siliceous with qtz and deep purple calcite cutting the core. Minor leucoxene is also present. Mineralization: little or no visible sulphides. Contact: veined and silicified.		606 607 608 609 610 611 612	157' 160' 162' 178' 182' 185' 188'	160' 162' 166' 182' 185' 188' 192'	3' 2' 4' 4' 3' 3' 4'	21 24 21 36 73 18 606			

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

HOLE NO.	PAGE NO.
ORC-12-87	3

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.
					collar			
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft °		LOCATION (Tp., Lot, Con. OR Lat. and Long.)	
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft °			
					ft °		PROPERTY NAME	
					ft °			

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t		Core Rec.
'	253'	Quartz Diabase	The core is aphanitic-fine grained dark grey in colour, non ankeritic but locally calcitic. The unit is massive and moderately magnetic locally epidote envelopes fractures. Mineralizaiton: little or no visible sulphides. Contact: sharp @ 70° to the C.A.									
253'	308'	Mafic Intrusive	? From 253'-271. The core is aphanitic to fine grained, dark green and well veined with 15-20% calcite stringers. From 271'-308' the core is very light green and coarse grained. The core is not ankeritic but is locally calcitic particularily from 253'-271' From 271'-308' appears to be coarse grained flow as the change appears to be gradational. locally the core is fine grained and siliceous.		613	253'	258'	5'	469			
					614	258'	263'	5'	241			
					615	263'	268'	5'	7			
					616	296'	299'	3'	-	TR		Whole Rock
					617	300'	300.5'	.5	1			Anal
					618	305	308'	3'	14			
			END OF HOLE @ 308'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-13-87 | PAGE NO. A

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 104°	TOTAL FOOTAGE: 257'	DIP OF HOLE AT: collar | 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:
DATE HOLE STARTED: Aug.24/87	DATE COMPLETED: Aug.24/87	DATE LOGGED: Sept.1/87	LOGGED BY: J.E. Mountjoy	~~257'~~ ft | ~~45.5~~ °	MAP REFERENCE NO.: 41 P 11
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES	DATE SUBMITTED:	SUBMITTED BY (Signature): J.E. Mountjoy	ft | °		CLAIM NO.: L341433
			ft | °		LOCATION (Tp., Lot, Con. OR Lot. and Long.): MacMurchy Twp. South east of the east of Ashburn Lake
			ft | °		PROPERTY NAME: COOK - DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auozs/t			Core Rec
			summary log									
0	5'	Casing										
5'	45'7	Quartz Diabase	Dark grey, massive, moderately magnetic									
45'7	175'6	Iron Rich Thoeliitic Basalt	Dark-medium grey, massive to badly broken, locally brecciatted some graphite and hematite, moderately-strongly calcitic 2% py in local concentrations.			168	172	4'	.038			
175'6	244'4	Quartz Diabase	Dark grey, massive, moderately magnetic									
244'4	257'	Iron Rich Thoeliitic Basalt	Dark green to reddish grey, moderately to well brecciatted Locally well mineralized, graphitic and silicified Overall ≤ 2% py in local concentrations.			244'4	248'	3'8	.028			
						248'	256'	8'	.117			
						256'	257'	1'	.032			
			END OF HOLE @ 257'									

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-13-87 | PAGE NO. 1

DIAMOND DRILLING LOG

GOLDEN SHIELD RESOURCES LTD.

DRILLING COMPANY: J.T. Thomas	COLLAR ELEVATION:	BEARING OF HOLE FROM TRUE NORTH: 104°	TOTAL FOOTAGE: 257'	DIP OF HOLE AT: collar 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM:	MAP REFERENCE NO.: 41 P 11
DATE HOLE STARTED: Aug. 24/87	DATE COMPLETED: Aug.24/87	DATE LOGGED: Sept.1/87	LOGGED BY: J.E. Mountjoy	257' ft 45.5°		CLAIM NO.: L341433
EXPLORATION CO., OWNER OR OPTIONEE: ORCANA RESOURCES		DATE SUBMITTED	SUBMITTED BY (Signature): J.E. Mountjoy			LOCATION (Tp., Lot, Con. OR Lat. and Long.): MacMurchy Twp. South East of East end of Ashburn Lake.
						PROPERTY NAME: COOK-DECKER

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Auppb	ASSAYS + Auozs/t	Core Rec.
0	5'	Casing									
5'	45'7	Quartz Diabase	The core is very dark grey, aphanitic-fine grained and moderately magnetic. The core is massive with a few fractures. The fractures are commonly enveloped by epidote alteration. The core is non ankeritic and not calcitic. Mineralization: little or no visible sulphides. Contact: sharp but subtle @ 20° to the C.A.								
45'7	175'6	Iron Rich Thoeliitic Basalt	The core in this unit is very dark-medium grey in colour and is aphanitic. Generally the core is quite massive although badly broken. However the core is locally brecciatted with graphite, calcite, and hematized calcite filling the fractures. The core is quite chloritic but not silicified and in fact is quite soft. The core is no ankeritic but is moderately-strongly calcitic. The notable features in this unit are as follows: @ 45'8" is a clot of semi massive py 47'-59' core has 5% hematized calcite 63'-64'3" 25% py 68.5'-75' 2% hematized calcite 78'-79 somewhat silicified 127'-130' 3-5% hematized calcite 158'-168'1 -2%hematized calcite 168'-172' core is strongly calcitic. 174'6"-175'6" minor hematization 2% py Mineralization: Overall 2% py in local concentrations up to 25% over 3" (ie. @ 64'2")		2619	45.5	48'	2.5'			
					2620	53'	57'	4'			
					2621	63'	65'	2'	58		
					2622	72'	77'	5'			
					2623	78'	82'	4'			
					2624	96.5'	98'	1.5'	18		
					2625	147'	147.5'	5'	3 Whole rock Anal.		
					2626	127'	130'	3'			
					2628	151'	153'	2'			
					2629	158'	161'	3'	123		
					2630	161'	164'	3'	278		
					2631	164'	168'	4'			
					2632	168'	172'	4'	-	.038	
					2633	172'	175.5	3.5'			
					2627	93'	96.5'	3.5'	23		

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

DIAMOND DRILLING LOG

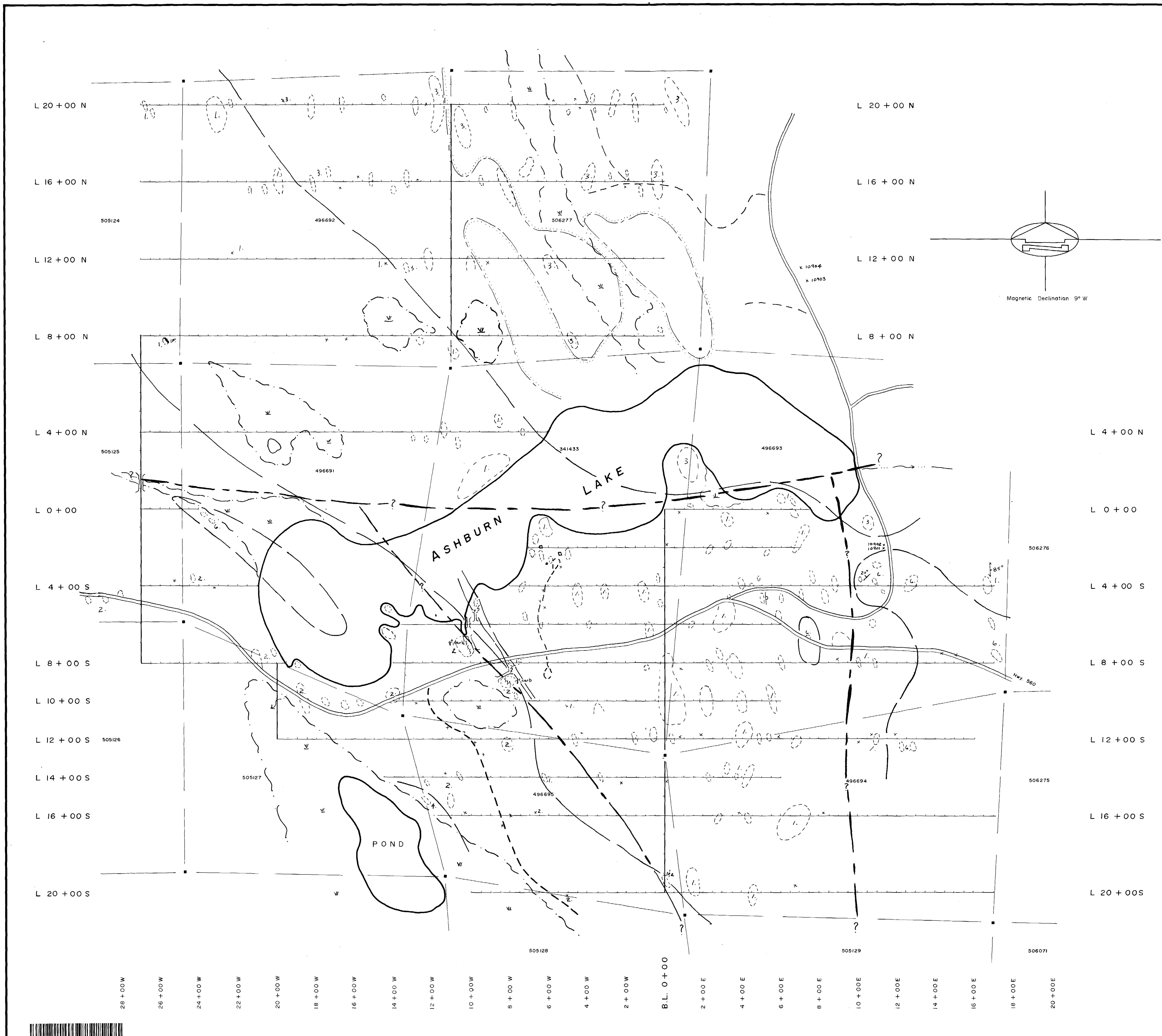
GOLDEN SHIELD RESOURCES LTD.

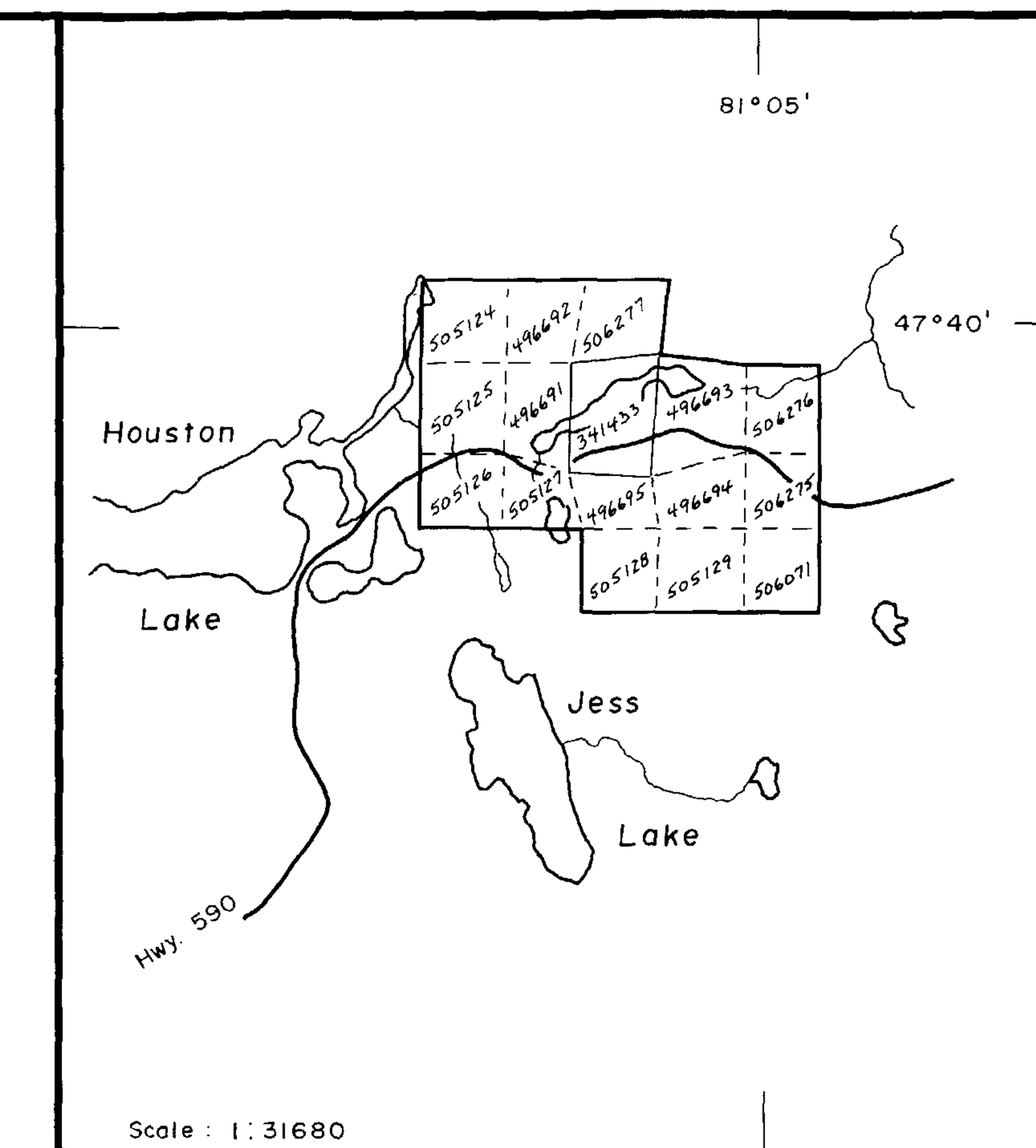
FILL IN ON EVERY PAGE ▶ HOLE NO. ORC-13-87 | PAGE NO. 2

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT collar	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft	MAP REFERENCE NO. / CLAIM NO.
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft / ft / ft	LOCATION (Tp., Lot, Con. OR Lot. and Long.) / PROPERTY NAME

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + Au ppb	ASSAYS + Au ozs/t	CORE REC.
175'6	244'4"	Quartz Diabase	The core is very dark grey, aphanitic-fine grained, very massive-wkly fractured. The fractures appear to be filled with graphite, no epidote appears to be present. The core is non ankeritic and only locally calcitic. The core is moderately magnetic. Mineralization; no visible sulphides Contact: broken								
244'4	257'	Iron Rich Thoeliitic Basalt	This unit varies from dark grey to reddish grey, The core is aphanitic, locally silicified and hematized. The core is generally moderately- well brecciatted, non ankeritic and strongly calcitic.		2634	244'4	248'	3'8	960	.028	
					2635	248'	250'	2'	-	.10	
					2636	250'	251'	1'	-	.239	
					2637	251'	256'	5'	-	.099	
					2638	256'	257'	1'	-	.032	
			The notable features are as follows: 244'4-249' the core is 20% qtz calcite 40% hematite @ 250' is locally heavy py (nodular) 255'-256' core is silicified dark grey 256'-256'11" broken and graphitic 256'11"-257' qtz calcite minor py								
			Mineralization: 2% py in local concentrations.								
			END OF HOLE @ 257'								

* For features such as foliation, bedding, schistosity, measured from the long axis of the core.





LEGEND

GOWGANDA FORMATION

6	METASEDIMENTS

— Unconformity —

MAFIC INTRUSIVE ROCKS

5	DIABASE

— Intrusive Contact —

FELSIC INTRUSIVE ROCKS

4	FELDSPAR PORPHYRY

— Intrusive Contact —

METAVOLCANICS

3	TRACHYTIC METAVOLCANICS

— Contact Indeterminate —

2	FELSIC METAVOLCANICS Andesites – Rhyolites
1	MAFIC METAVOLCANICS Basalts (gabbroic)
I.F.	IRON FORMATION

SYMBOLS

- pillow structure
- bedding and dip
- foliation and dip
- qtz. carbonate veinlets
- outcrop (large, small)
- sample location & number
- geological boundary
- trench
- possible fault

TOPOGRAPHY

- CLAIM POST
- SHORELINE
- STREAM
- SWAMP & BOUNDARY
- ROAD
- OLD BUILDING
- SLASH BOUNDARY

63.5109

ORCANA RESOURCES LIMITED

COOK DECKER PROJECT

MACMURCHY TWP.

GEOLOGICAL MAP

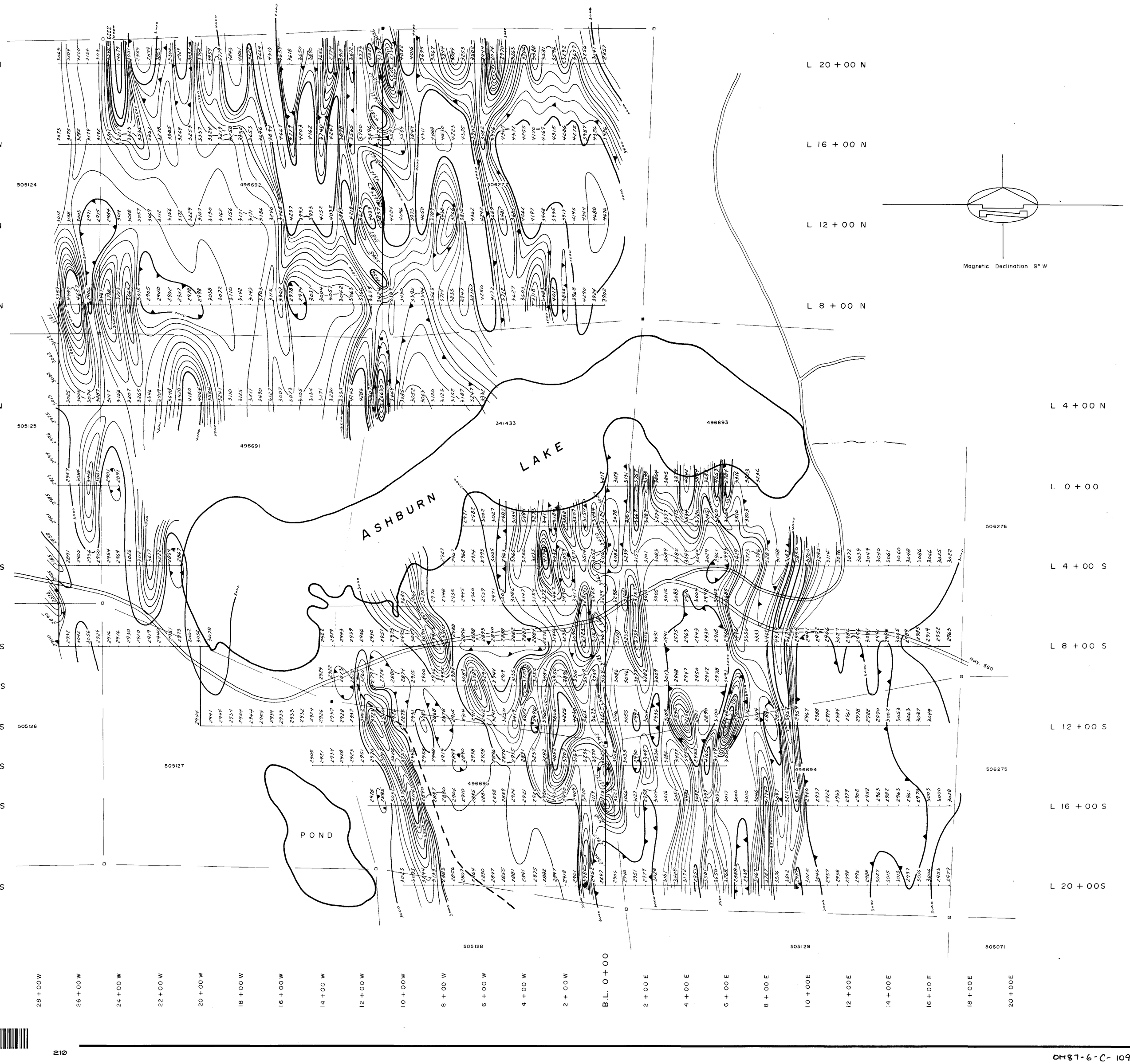
Date: JULY, 1987	Scale: 1" = 200 ft.	N.T.S. 41-P-11

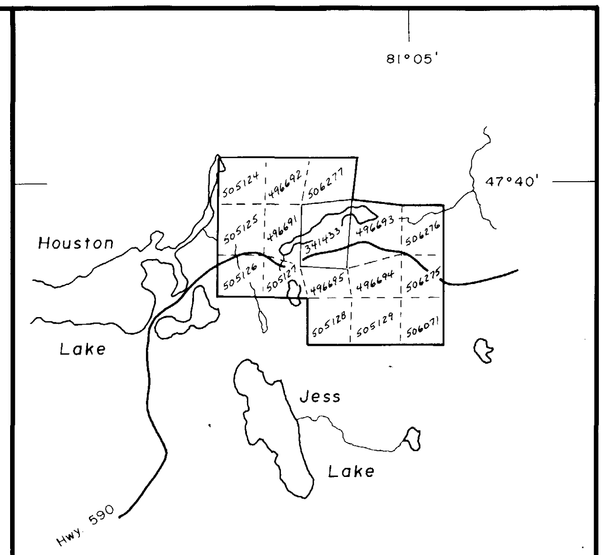
PHANTOM EXPLORATION SERVICES LTD.

200

41P11NE0458 63.5109 MACMURCHY

0487-6-C-109





MAGNETOMETER SURVEY

INSTRUMENT : EDA OMNI IV MAG
REFERENCE FIELD : 61000 ɣ
DATUM : 58000 ɣ
CONTOUR INTERVAL : < 4000 at 100 ɣ ;
MAGNETIC LOW : > 4000 at 500 ɣ

BASE STATION RECORDER INFORMATION

INSTRUMENT : EDA OMNI IV
RECORDING INTERVAL : 10 SEC

VLF SURVEY

INSTRUMENT : GEONICS EM-16
TRANSMITTING STATION : ANNAPOLIS , MD.
OPERATOR FACING
DIP ANGLE :
QUADRATURE :
PROFILE SCALE : 1" = 20%
CONDUCTOR AXIS :
POSITIVE READINGS : EAST OF LINE

TOPOGRAPHY

CLAIM POST
SHORELINE
STREAM
SWAMP
ROAD

63.5109

ORCANA RESOURCES LIMITED

COOK DECKER PROJECT

MACMURCHY TWP.

MAGNETOMETER SURVEY

Date : JULY , 1987	Scale : 1" = 200 ft.	N.T.S. 41-P-11

PHANTOM EXPLORATION SERVICES LTD.

OM87-6-C-109

L 20 + 00 N
L 16 + 00 N
L 12 + 00 N
L 8 + 00 N
L 4 + 00 N
L 0 + 00
L 4 + 00 S
L 8 + 00 S
L 10 + 00 S
L 12 + 00 S
L 14 + 00 S
L 16 + 00 S
L 20 + 00 S

505124 496692 506277
505125 496691 341433 496693 506276
505126 505127 496695 496694 506275
505128 505129 506071

LAKE
ASHBURN
POND
Hwy 560

28 + 00 W 26 + 00 W 24 + 00 W 22 + 00 W 20 + 00 W 18 + 00 W 16 + 00 W 14 + 00 W 12 + 00 W 10 + 00 W 8 + 00 W 6 + 00 W 4 + 00 W 2 + 00 W B.L. 0 + 00 2 + 00 E 4 + 00 E 6 + 00 E 8 + 00 E 10 + 00 E 12 + 00 E 14 + 00 E 16 + 00 E 18 + 00 E 20 + 00 E

Magnetic Declination 9° W

81°05'
47°40'
Houston
Lake
Jess
Lake
Hwy 655
Scale 1 : 31,680

MAGNETOMETER SURVEY
INSTRUMENT ESA OMNI IV MAG
REFERENCE FIELD 61000 γ
DATUM 58000 γ
CONTOUR INTERVAL
MAGNETIC LOW

BASE STATION RECORDER INFORMATION
INSTRUMENT ESA OMNI IV
RECORDING INTERVAL 10 SEC

VLF SURVEY
INSTRUMENT GEONICS EM-16
TRANSMITTING STATION ANNAPOLIS, MD.
OPERATOR FACING
TILT ANGLE
QUADRATURE
PROFILE SCALE 1" = 20%
CONDUCTOR AXIS
POSITIVE READINGS EAST OF LINE

TOPOGRAPHY
CLAIM POST
SHORELINE
STREAM
SWAMP
ROAD

63.5109

ORCANA RESOURCES LIMITED

COOK DECKER PROJECT
MACMURCHY TWP.

VLF PROFILE MAP

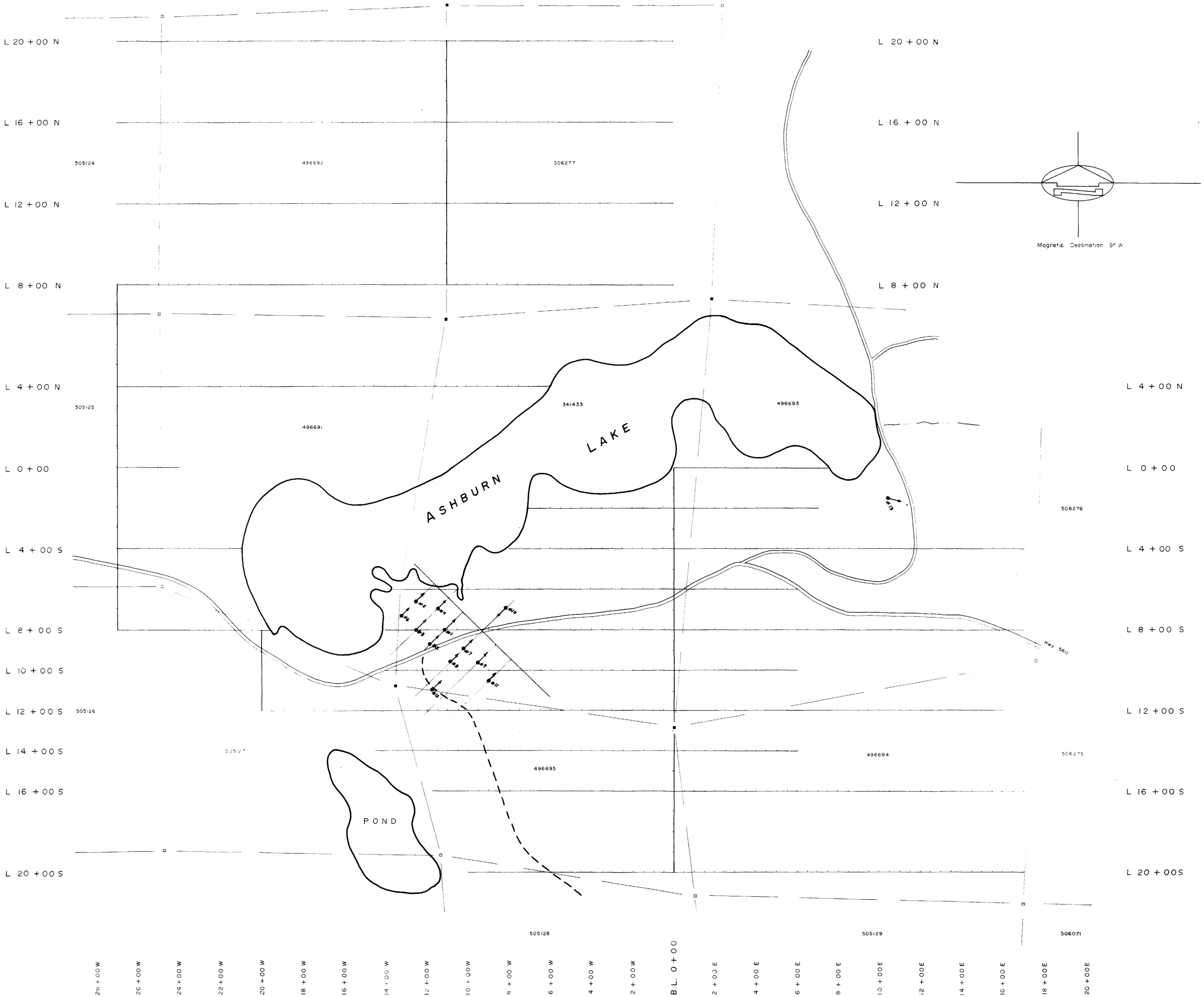
Date JULY, 1987	Scale 1" = 200 ft.	N.T.S. 41-P-11

PHANTOM EXPLORATION SERVICES LTD.

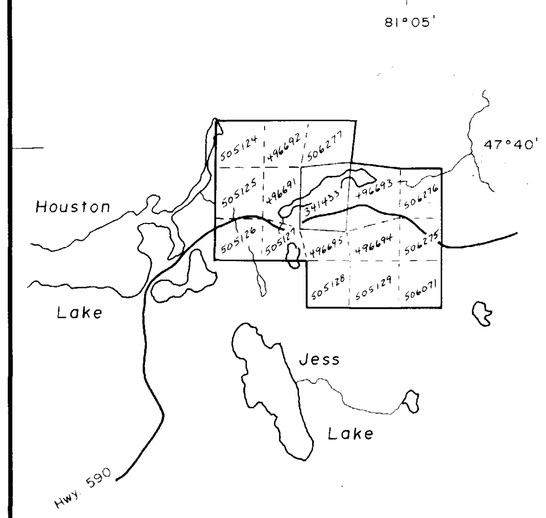
41P11NE0450 63.5109 MACMURCHY

220

OM87-6-C-109



Magnetic Declination 9° W



MAGNETOMETER SURVEY
INSTRUMENT : EDA OMNI IV MAG
REFERENCE FIELD : 61000 γ
DATUM : 58000 γ
CONTOUR INTERVAL :
MAGNETIC LOW :

BASE STATION RECORDER INFORMATION
INSTRUMENT : EDA OMNI IV
RECORDING INTERVAL : 10 SEC.

VLF SURVEY
INSTRUMENT : GEONICS EM-16
TRANSMITTING STATION : ANNAPOLIS, MD.
OPERATOR FACING :
DIP ANGLE :
QUADRATURE :
PROFILE SCALE : 1" = 20%
CONDUCTOR AXIS :
POSITIVE READINGS : EAST OF LINE

TOPOGRAPHY
CLAIM POST
SHORELINE
STREAM
SWAMP
ROAD

GEOLOGICAL ASSOCIATION OF CANADA
J. E. MOUNTJOY
FELLOW

ORCANA RESOURCES LIMITED

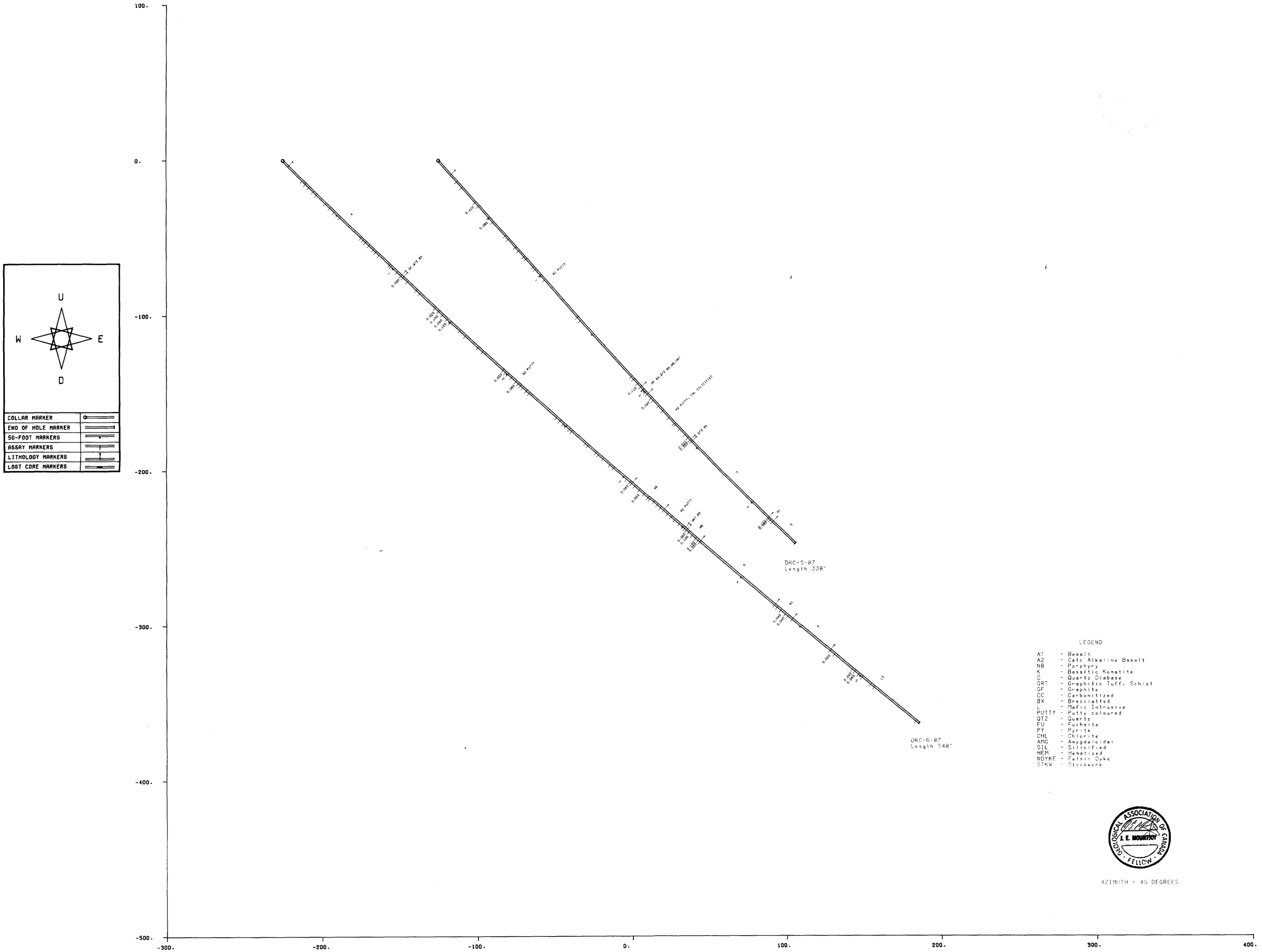
COOK DECKER PROJECT
MACMURCHY TWP. 63.5109

DRILL HOLE LOCATION PLAN

Date : JULY, 1987 | Scale : 1" = 200 ft. | N.T.S. 41-P-11

PHANTOM EXPLORATION SERVICES LTD.

OM87-6-C-109



GEOLOGICAL ASSOCIATION OF CANADA · J. E. MOUNTJOY · FELLOW

Dated:	4-DEC-87
Surv'd by:	
Appr'd by:	
Ckd'd by:	
Drw'n by:	NORTHERN GEOTECH

MOUNTJOY EXPL.

AND CONSULTING SERVICES

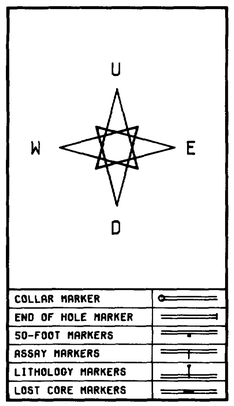
For:	ORCANA RESOURCES
Project:	COOK-DECKER PROPERTY
Survey type:	Au (oz/tn)
	SECTION 2+00 NW

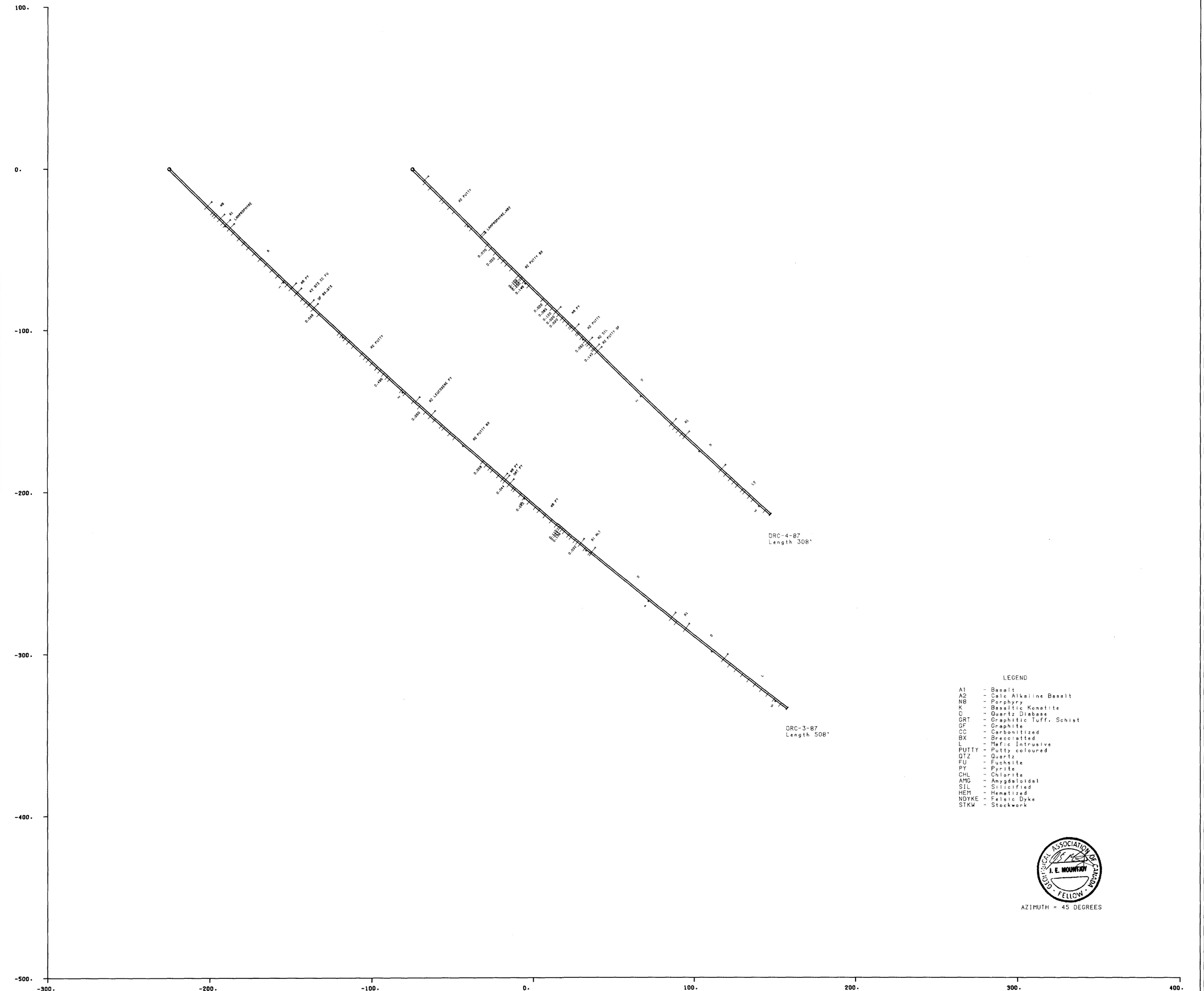
Scale:	1" = 25'
File loc:	
Dwg no:	63.5109

41P11NE0450 63.5100 MACHURCHY

240

OM87-6-C-109





LEGEND

A1	- Basalt
A2	- Calc Alkaline Basalt
N8	- Porphyry
K	- Basaltic Komatiite
Q	- Quartz Diabase
GRT	- Graphitic Tuff, Schist
GF	- Graphite
CC	- Carbonitized
BX	- Brecciated
L	- Mafic Intrusive
PUTTY	- Putty coloured
QTZ	- Quartz
FU	- Fuchsite
PY	- Pyrite
CHL	- Chlorite
AMG	- Amygdaloidal
SIL	- Silicified
HEM	- Hematized
NDYKE	- Felsic Dyke
STKW	- Stockwork

GEOTECHNICAL ASSOCIATION OF CANADA · J. E. MOUNTJOY · FELLOW ·

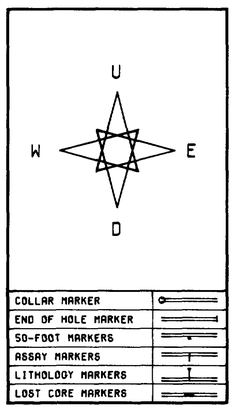
AZIMUTH = 45 DEGREES

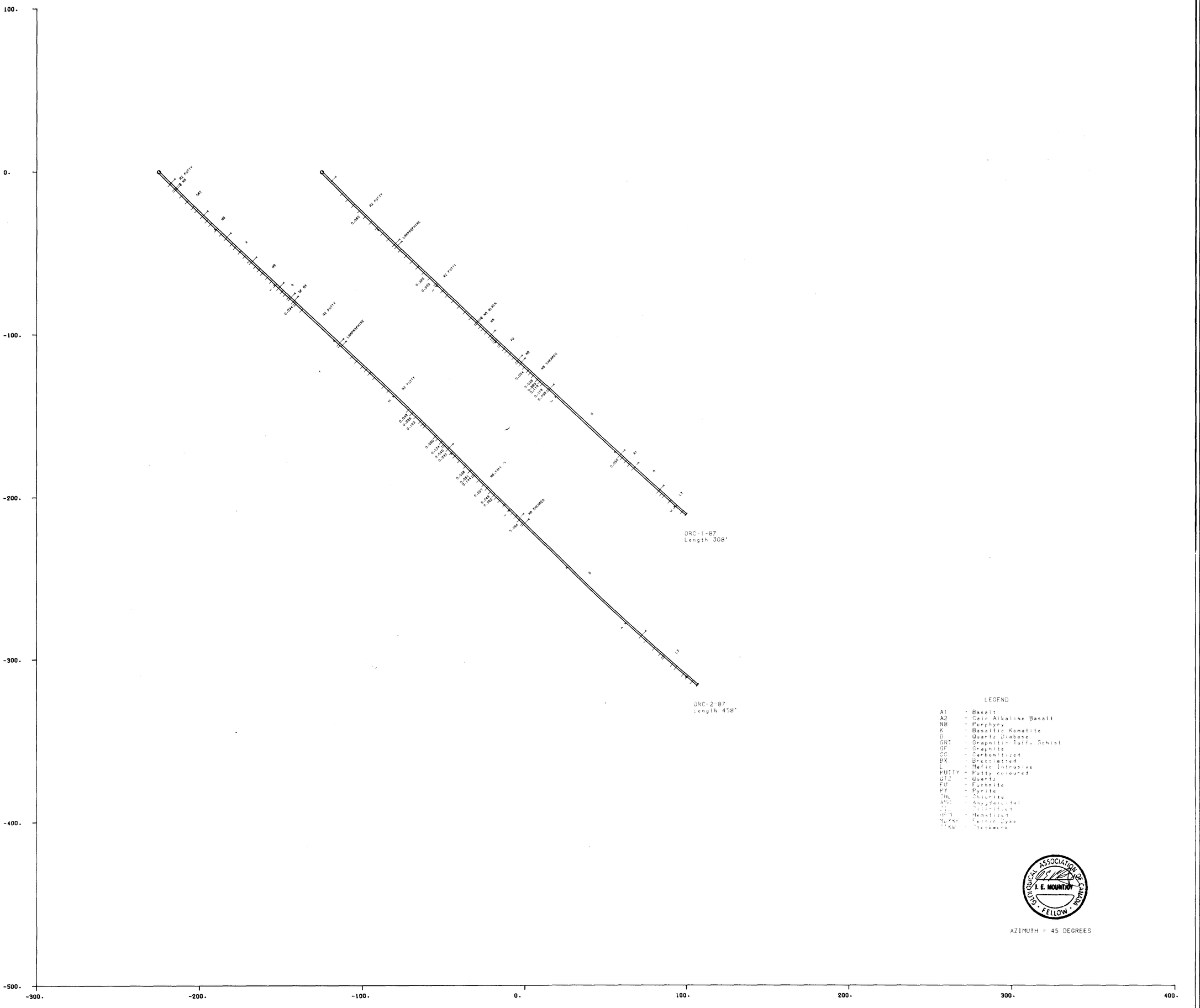
Date:	4-DEC-87	MOUNTJOY EXPL. AND CONSULTING SERVICES	For: ORCANA RESOURCES	Scale: 1" = 25'
Surv'd by:			Project: COOK-DECKER PROPERTY	File loc:
Appr'd by:			Survey type: Au (oz/tn) SECTION 1+00 NW	Dwg no: 63.5109
Chk'd by:				
Drw'n by:	NORTHERN GEOTECH			

41P11NE8458 63.5109 MACMURCHY

250

OM 87-6-C-109





LEGEND

A1 - Basalt
A2 - Calc Alkaline Basalt
N8 - Porphyry
K - Basaltic Komatite
D - Quartz Diabase
GRT - Graphitic Tuff, Schist
GF - Graphite
CC - Carbonitized
BX - Brecciated
L - Mafic Intrusive
PUTTY - Putty coloured
QTZ - Quartz
FU - Fuchsite
PY - Pyrite
CHL - Chlorite
AMD - Amygdaloidal
SI - Silicified
HEM - Hematized
FELSIC - Felsic Dyke
STKWK - Stockwork

GEOLOGICAL ASSOCIATION OF CANADA
J. E. MOUNTJOY
FELLOW

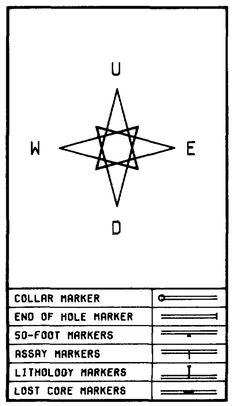
AZIMUTH = 45 DEGREES

Date:	4-DEC-87	MOUNTJOY EXPL. AND CONSULTING SERVICES	For: ORCANA RESOURCES	Scale:	1" = 25'
Srvy'd by			Project: COOK-DECKER PROPERTY	File loc:	
Appv'd by			Survey type: Au (oz/tn) SECTION 0+00	Dwg no:	63.5109
Chk'd by					
Dra'n by	NORTHERN GEOTECH				

41P11NE0458 63.5109 MACMURCHY

260

OM87-6-C-109



100.
0.
-100.
-200.
-300.
-400.
-500.
-400.
-300.
-200.
-100.
0.
100.
200.
300.

ORC-7-87
Length 338'

ORC-8-87
Length 458'

ORC-11-87
Length 500'

LEGEND

A1 - Basalt
A2 - Calc Alkaline Basalt
NB - Porphyry
K - Basaltic Komatiite
Q - Quartz Diabase
GRT - Graphitic Tuff, Schist
GF - Graphite
CC - Carbonitized
BX - Brecciated
L - Mafic Intrusive
PUTTY - Putty coloured
QTZ - Quartz
FU - Fuchsite
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CHL - Chlorite
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SIL - Silicified
HEM - Hematized
NDYKE - Felsic Dyke
STKW - Stockwork

GEOLOGICAL ASSOCIATION OF CANADA · J. E. MOUNTJOY · FELLOW

AZIMUTH = 45 DEGREES

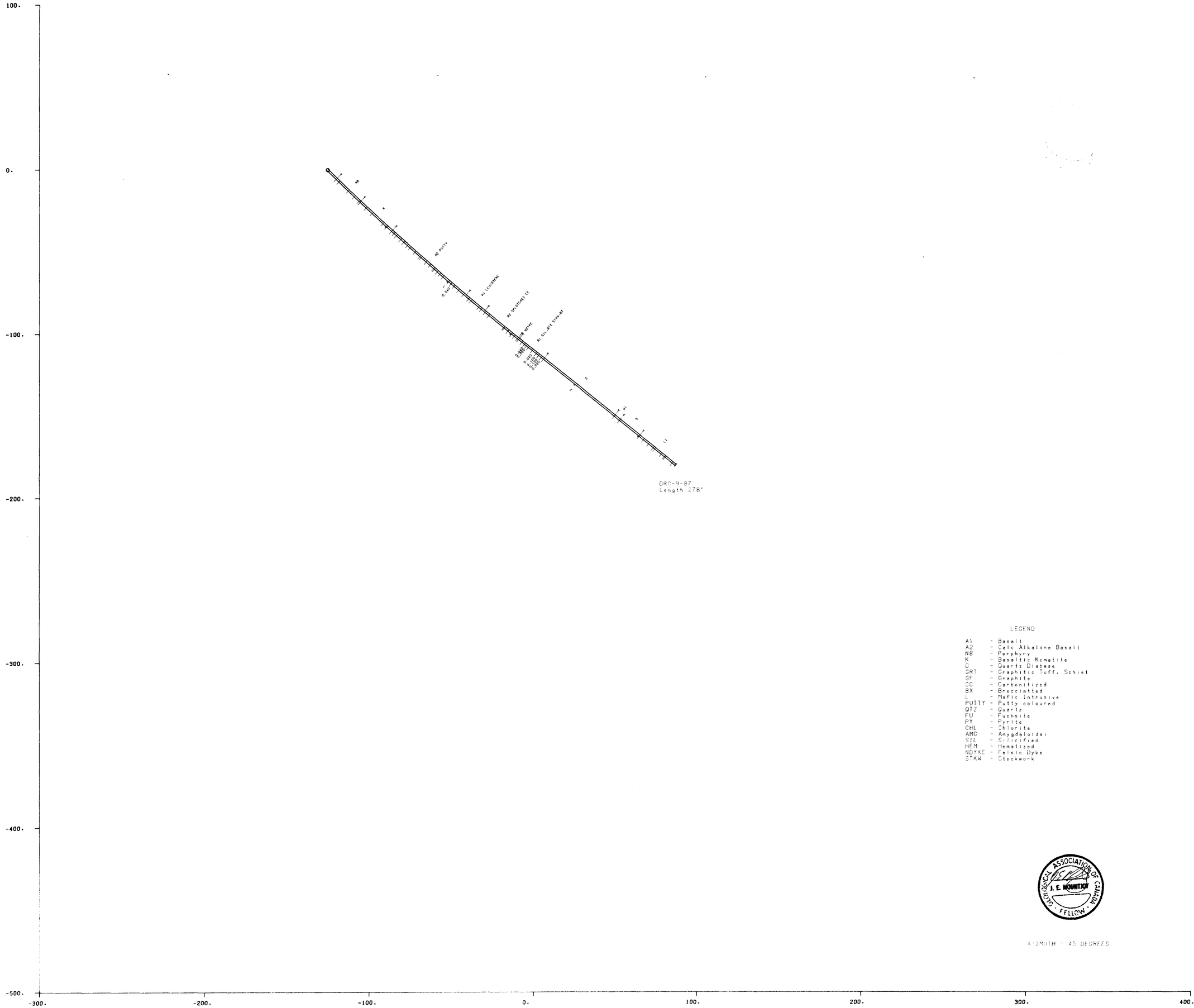
Date:	4-DEC-87
Surv'd by:	
Apprv'd by:	
Chk'd by:	
Drw'n by:	NORTHERN GEOTECH

MOUNTJOY EXPL.
AND CONSULTING SERVICES

For:	ORCANA RESOURCES
Project:	COOK-DECKER PROPERTY
Survey type:	Au (oz/tn) SECTION 1+30 SE
Scale:	1" = 25'
File loc:	
Dwg no:	63.5109

41P11NE8458 63.5109 MACMURCHY

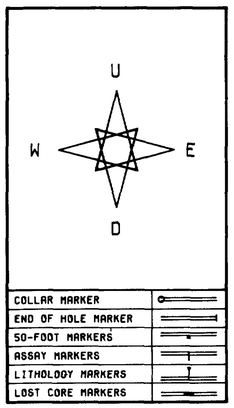
OMB7-G-C-109

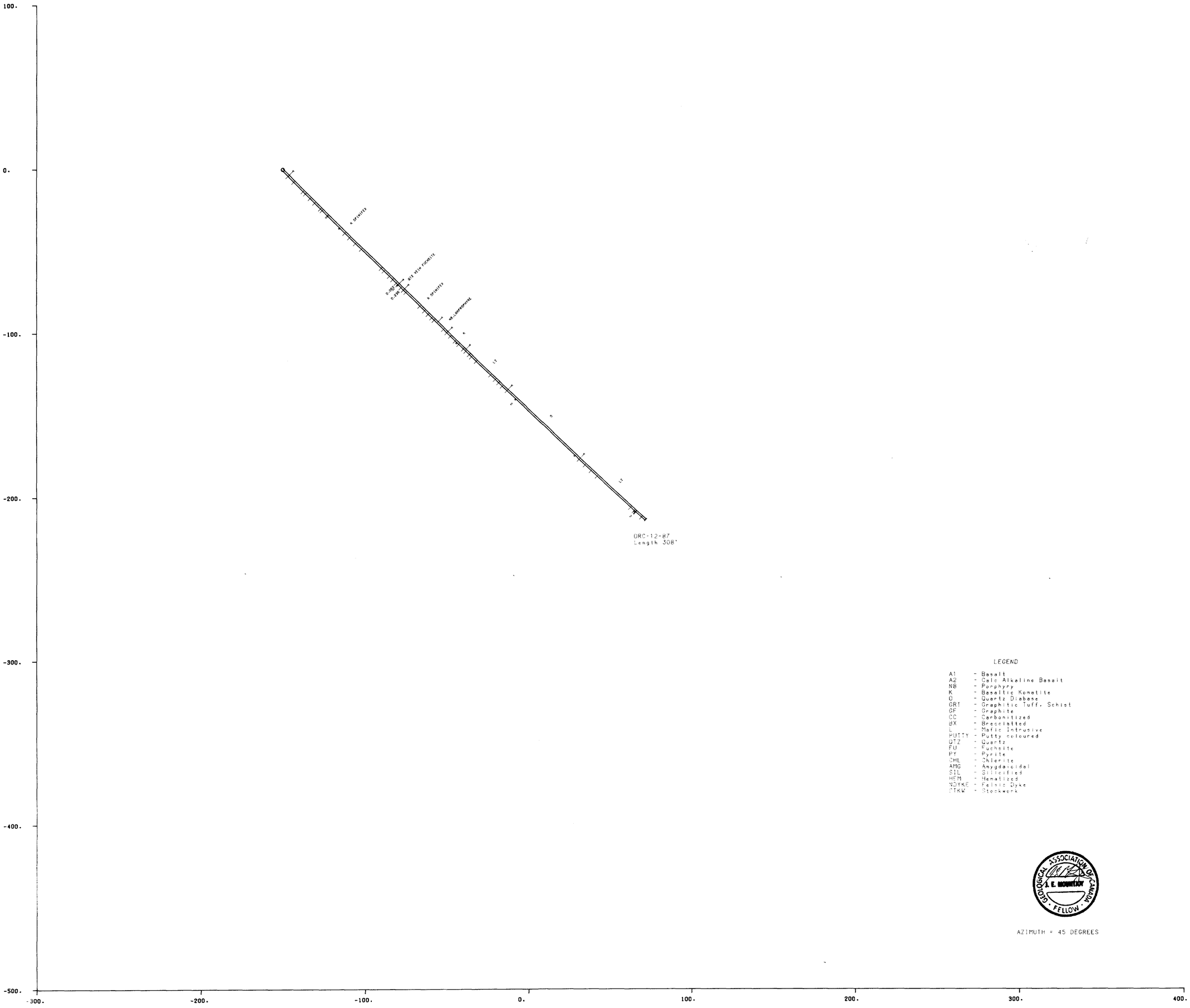


GEOLOGICAL ASSOCIATION OF CANADA · J. E. MOUNTJOY · FELLOW ·

Date:	4-DEC-87	MOUNTJOY EXPL. AND CONSULTING SERVICES	For: ORCANA RESOURCES	Scale:	1" = 25'
Surv'd by:			Project: COOK-DECKER PROPERTY	File loc:	
Appr'd by:			Survey type: Au (oz/tn) SECTION 2+30 SE	Dwg no:	63.5109
Chk'd by:					
Drw'n by:	NORTHERN GEOTECH				

OM87-6-C-109





LEGEND

A1	- Basalt
A2	- Calc Alkaline Basalt
NB	- Porphyry
K	- Basaltic Komatiite
Q	- Quartz Diabase
GRT	- Graphitic Tuff, Schist
GF	- Graphite
CC	- Carbonitized
BX	- Brecciatited
L	- Matic Intrusive
PUTTY	- Putty coloured
QTZ	- Quartz
FU	- Fuchsite
PY	- Pyrite
CHL	- Chlorite
AMG	- Amygdaloidal
SIL	- Silicified
HEM	- Hematized
FDYKE	- Felsic Dyke
STKW	- Stockwork

GEOLOGICAL ASSOCIATION OF CANADA · J. E. MOUNTJOY · FELLOW ·

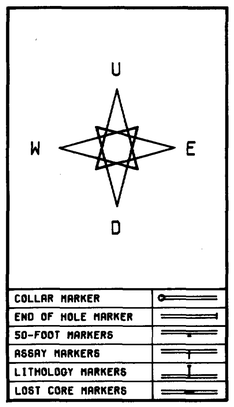
AZIMUTH = 45 DEGREES

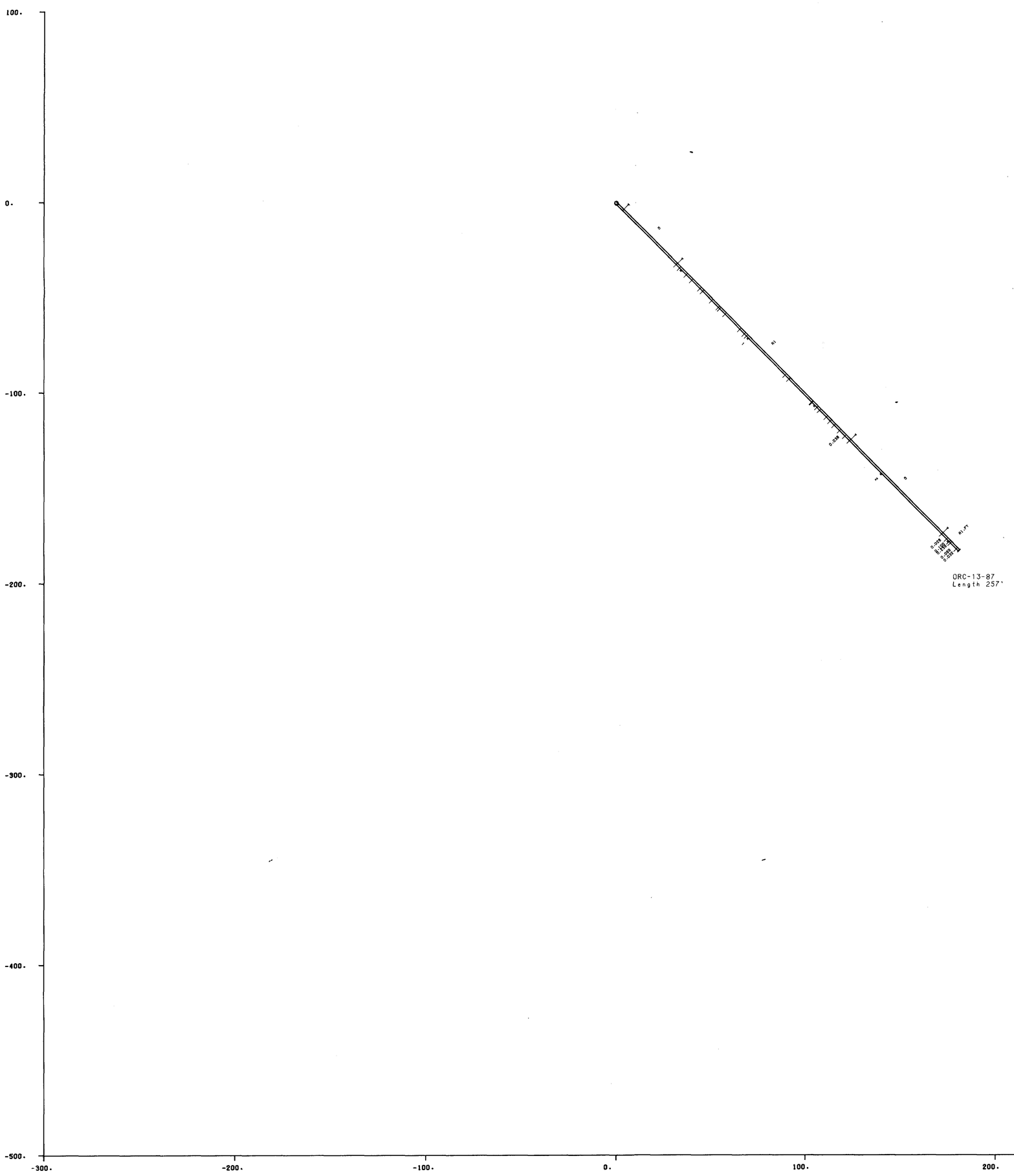
Date:	4-DEC-87	MOUNTJOY EXPL. AND CONSULTING SERVICES	For: ORCANA RESOURCES	Scale: 1" = 25'
Surv'd by:			Project: COOK-DECKER PROPERTY	File loc:
Appr'd by:			Survey type: Au (oz/tn) SECTION 3+30 SE	Dwg no: 63.5109
Ck'd by:				
Drw'n by:	NORTHERN GEOTECH			

41P11NE0458 63.5109 MACMURCHY

290

OM87-6-C-109





LEGEND

A1	- Basalt
A2	- Calc Alkaline Basalt
N8	- Porphyry
K	- Basaltic Komatite
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GRT	- Graphitic Tuff, Schist
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HEM	- Hematized
NDYKE	- Felsic Dyke
STKW	- Stockwork

GEOLOGICAL ASSOCIATION OF CANADA
J. E. MOUNTJOY
FELLOW

AZIMUTH = 104 DEGREES

Date:	4-DEC-87
Srvy'd by	
Appv'd by	
Chk'd by	
Dre'n by	NORTHERN GEOTECH

MOUNTJOY EXPL.
AND CONSULTING SERVICES

Part: ORCANA RESOURCES
Project: COOK-DECKER PROPERTY
Survey type: Au (oz/tn)

Scale: 1" = 25'
File text:
Dwg no: 63.5109

41P11NE0450 63.5109 MACMURCHY

300

OM87-6-C-109