824471

1987 DRILLING REPORT

on the

CANA PROPERTY

NTS: 82M/4

by:
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for:
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A Division of Esso Resources Canada Limited
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January, 1988

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SUMMARY

Thirteen diamond drill holes (1600m) were drilled on the CANA claim group during 1987. The target is a precious-metal rich volcanogenic massive sulphide similar to, and occurring in the same stratigraphy as, the Minnova/Rea Gold Samatosum and Rea deposits. These deposits occur at a major volcanic-sediment contact which has good continuity along-strike and well defined stratigraphy. The 1987 drilling on the CANA property encountered lithologies which are very similar to those seen around the deposits, although the stratigraphy on the property its relationship to the Rea stratigraphy are still not known.

Two of the most important results from the 1987 drilling were the discovery of two zones of intensely sericite-altered tuff with interbedded cherts, and the presence of 20 to 30% pyrite in several of the holes. The sericitic tuff is lithologically similar to the host unit of the Rea and Samatosum deposits. Minnova has found that the pyrite content of the rocks decreases rapidly away from the ore body, a fact which places some significance on the abundant pyrite seen in the CANA drill holes.

For 1988, a 1500m drill program consisting of ten holes is recommended. In addition, a 1.8km shallow seismic survey is recommended in order to determine the thickness of the glacial overburden. This information will be used guide drill hole locations, and will also help to determine the reliability of geochemical and geophysical data. No soil geochemistry is recommended as this technique has not worked well in the past due to the highly variable thickness of the overburden. In most cases, anomalous values indicate shallow overburden rather than bedrock geochemical anomalies. The total cost of the proposed 1988 exploration program is $137,027.

1.0 INTRODUCTION

Two phases of drilling were carried out on the CANA claims in 1987. Phase I involved four holes (CAN1 - CAN4) totalling 474.3m and was completed on April 11, 1987 (Marr, Oliver; 1987). During Phase II, nine holes representing a total of 1124m were drilled between the 15th of October and the 7th of November, 1987. This report presents the results of the second phase of drilling on the CANA claims, offers a brief geological interpretation of the drilling to date, and provides recommendations for a third diamond drill project to be carried out in 1988.

2.0 LOCATION AND ACCESS

The CANA 2-25 two-post claims (see Map 1) are located in the Adams Plateau area of British Columbia, approximately 60km northeast of Kamloops and 4km west of Johnson Lake.

Access to the claims is provided by the Johnson Lake Forestry Road which connects to the Samatosum Forestry Road and then to the main Adams Lake trunk road. The Johnson Lake road is also connected to Sinmax Valley via the Silverspray Falls road up the valley's north side. Accommodation can be found at the Johnson Lake fishing camp, 7km by road from the property.

3.0 OWNERSHIP AND CLAIMS

The CANA 2-25 claims are owned by Shamrock Resources Inc. (formerly Yucana Resources Inc.) and operated by Esso Minerals Canada under the terms of an agreement signed on December 23, 1985. The claims were initially recorded on November 4, 1983.

Claim data is as follows:

Claim	Record	Units	Expiry
CANA 2-25	4889-4912	24	November 4, 1988

4.0 WORK HISTORY

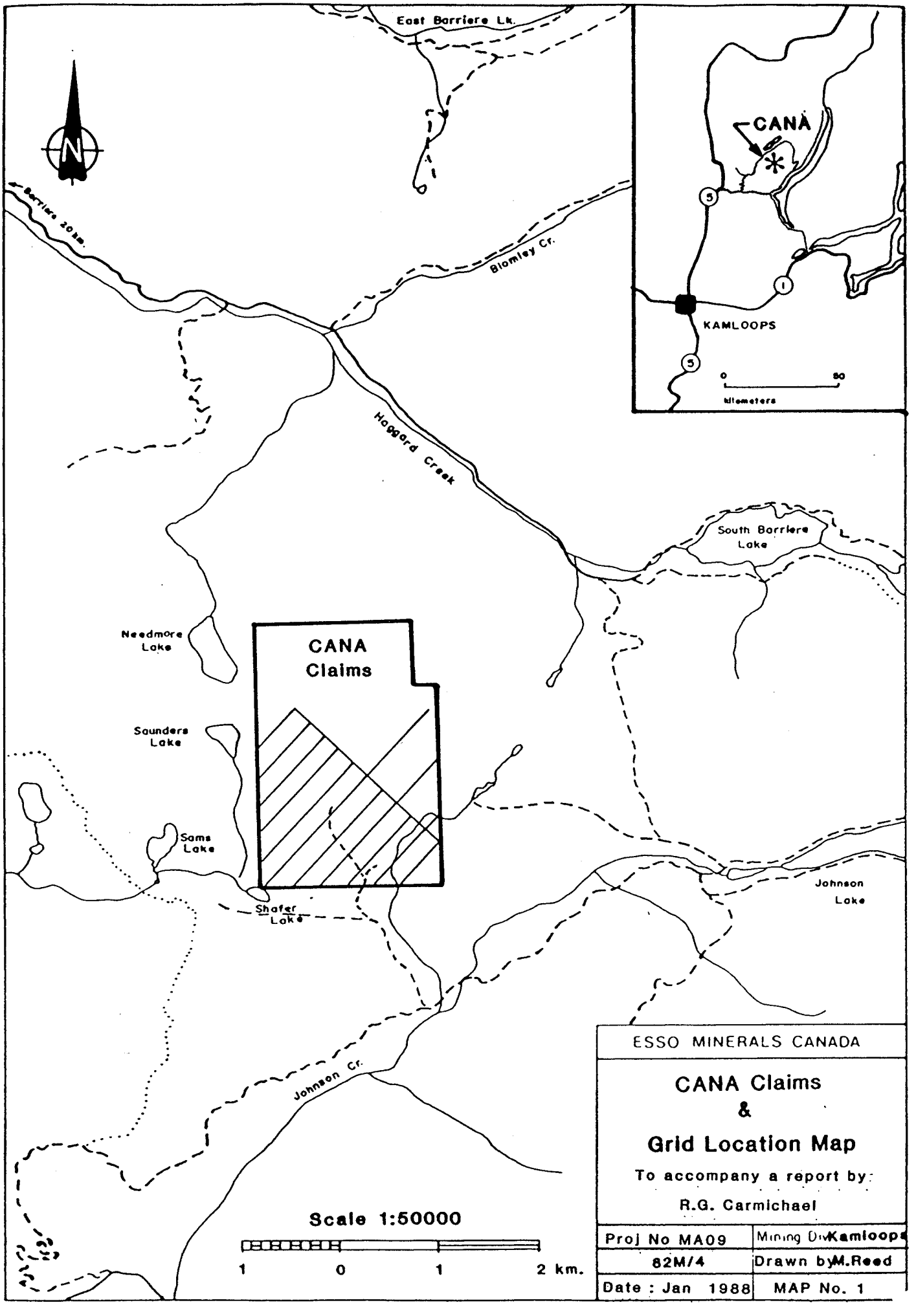
Prior to the EMC option agreement, a control grid had been established on the property although no sampling or survey work had been carried out. There are no known mineral occurrences within the claims or in their immediate vicinity.

1986

Work in 1986 was of a preliminary nature. The existing grid was mapped and prospected, indicating that there was no outcrop. 271 'B' horizon soil samples were collected at 50m intervals on lines spaced at 200m. A fixed-source GENIE electromagnetic survey was conducted over 8.9km of the grid. This work is documented in a report by Marr and Doborzynski (Assessment Report, December, 1986).

1987

A good geophysical anomaly and weak associated geochemistry prompted the drilling between March 27 and April 11 of four diamond drill holes (total 474.3m of NQ drilling). Although base and precious metal results were weak, parts of the sequence were found to be altered and significantly pyritized. Details of this drill program and its results can be found in a report by Marr and Oliver (Progress Report and Drill Proposal, July, 1987).


East Barriere Lk.
Barriere 20 km.
Blomley Cr.
Haggard Creek
South Barriere Lake
Needmore Lake
CANA Claims
Saunders Lake
Sams Lake
Shafer Lake
Johnson Lake
Johnson Cr.
CANA
KAMLOOPS
5
1
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80
kilometers
N
Scale 1:50000
1 0 1 2 km.
ESSO MINERALS CANADA
CANA Claims
&
Grid Location Map
To accompany a report by:
R.G. Carmichael
Proj No MA09
Mining Div Kamloops
82M/4
Drawn by M.Reed
Date : Jan 1988
MAP No. 1

In the month of June, additional surface work was done to upgrade target areas in advance of the Phase II drilling. Twelve km of VLF-EM, 15.5 km of magnetometer survey and 8 km of moving-source GENIE were completed. In addition, 256 soil samples were collected at intermediate points on existing lines and on flagged lines in between. This work is described in the report by Marr and Oliver (Progress Report and Drill Proposal, July, 1987). A portion of the property was logged during July, resulting in obliteration of some of the grid.

Phase II of the drilling (1124m of NQ) took place between October 15 and November 7 and was intended to follow up Phase I results and to investigate geophysical and geochemical targets identified by the June surveys. As with the Phase I drilling, no significant base or precious metal intersections were encountered. The drilling did indicate depth continuation of the pyritized zones discovered by the initial drilling and also provided some stratigraphic information.

Following the Phase Two drill program, a survey crew from McWilliam, Whyte, Goble and Associates of Kamloops spent one day surveying in all drill holes as well as the drill roads and isolated grid points.

5.0 GEOLOGY

5.1 Regional Geology and Significance

The sequence investigated in this area is part of the Eagle Bay Formation, a diverse and structurally complex Devono-Mississippian assemblage of sediments and volcanics which is known to outcrop from Clearwater to Shuswap Lake and hosts several volcanogenic-type prospects.

A report by Schiarizza and Preto (1984) describes the general geology of the area. Because of lack of outcrop, it is somewhat generalized in the Johnson Creek region. The primary exploration targets in the area are contact zones between mafic volcanics and sediments. These zones occur in a sequence consisting predominantly of mafic volcanics which is structurally overlain by the prominent Tshinakin Limestone.

This report also indicates that much of the area between Johnson Creek and Haggard Creek is capped by an outlier of Tertiary basalt. This basalt covers much of the CANA claims but is absent over most of the southern area which is currently being investigated by EMC.

The Quaternary geology indicates that the area was one of glacial outwash and consequently is covered by a variety of glacial deposits of widely varying thickness. Overburden depths ranging from 3m to 78m were encountered in drill holes on the CANA claims, creating difficult exploration conditions on some parts of the property.

The CANA claims are located on the northern boundary of the Rea Gold/Minnova HN and REA claim block, which covers the original "Discovery" Ag, Au, Pb, Zn, Ba lenses and the more recently explored "Samatosum Deposit". These volcanogenic massive sulphide lenses occur on the south side of Johnson Creek along two parallel northwesterly trending zones, known as the Rea and Silver zones, and are

situated 3km to the southeast of the CANA claims. Both zones are overturned volcanic/sediment transitions that host sporadically occurring stratiform mineralization, and their presence on the CANA claims is strongly suggested by the results of the 1987 drill program.

The most recent reserve estimates for the two deposits on Minnova's ground are listed in Table I.

TABLE I

Discovery Lenses (GCNL; April 21/87):

Tonnage	Ag	Au	Zn	Pb	Cu
242,876t (267,720T)	73.37g/t (2.14oz/T)	6.51g/t (~~.91~~ .19oz/T)	2.25%	2.14%	0.57%

Samatosum deposit (GCNL; Sept. 24/87)

600,000t (661,000T)	1100g/t (32.08oz/T)	1.78g/t (.052oz/T)	3.50%	1.70%	1.20%

5.2 Property Geology

Investigation of the property geology has been greatly hampered by the absence of bedrock outcrops on surface. All geological data has been collected from diamond drill holes or inferred from geophysical data. Lithologies can be identified and described but the property-scale geology suffers from a lack of information regarding large-scale structural features and spatial relationships between different units.

The rocks seen in drill core have been divided into four units based on lithology and inferred stratigraphic position. In a general sense, these units are similar to the ones used in the July 1987 report (Marr and Oliver, 1987), however, additional information from the Phase II drilling has made possible some changes. All of the Phase I drill holes have been re-logged to ensure that the terminology is consistent with the Phase II drilling. In addition, the original holes appear on the drill sections (Maps 3-6) allowing comparison with the original interpretation. No definitive facing directions have been identified in the drill core and the structural orientation (tops up or down) of the rocks is unknown. The unit numbers do not imply any age relationships, but serve only to differentiate units based on lithological changes.

Brief lithological descriptions of the units are given below.

Unit 1: Quartz-rich Clastic and Chemical Sediments

This unit is differentiated on the basis of being sediment-dominated and contains little or no volcanic input. Black, graphitic chert and argillite make up the bulk of the unit along with depositional chert breccias. Texturally, the most conspicuous feature is ribbon-banding; a chaotic and convoluted lamination of chert or interlamination of chert and argillite. This ribbon-banding is significant in that it is often seen in cherts associated with the Rea and Silver zones. Specific rock types include massive chert, chert breccia, ribbon-banded chert, ribbon banded argillite and chert and interbedded argillite and chert.

The thickness of this unit is unknown as all holes which intersected it also terminated within it, thus, no lower contact was observed. This unit is equivalent to Unit 4 of Marr and Oliver, 1987.

Unit 2: Carbonatized Mafic Pyroclastics

This unit represents a sequence of mafic tuffs, flows and possible debris flows and contains varying amounts of sedimentary input. The volcanics show moderate to intense (30-40%) carbonate alteration and generally light sericitization. In CAN6, this unit closely resembles the mafic volcanic sequence which forms the stratigraphic footwall to the Rea zone, although the characteristic intense sericitic alteration seen adjacent to the zone was not encountered.

The graphitic argillite component of this unit ranges from discreet argillite beds (Unit 2b) to argillite wisps and laminae mixed and interbedded with the mafic tuffs (Unit 2c).

This unit is generally equivalent to unit 3 from the 1987 report. It is differentiated here on the basis of the mafic volcanic sequence seen in holes CAN6, CAN7 and CAN8. The sedimentary component of this unit appears to increase up-dip and to the southeast. Thickness ranges from greater than 115m in CAN6 to 25m in CAN5.

Unit 3: Interbedded Graphitic Argillite, Carbonatized Mafic Tuff and Chert

This unit has a slightly greater volcanic than sedimentary component and tends to be quite heterogeneous in composition. The various sub-units are interbedded on a .5m to 5m scale and frequently occur mixed, rather than as separate beds. Again, carbonate (dolomite) is the

thickness in indeterminate at this stage as no where have both contacts been drilled. This unit occurs both at the extreme north and south of the area which has been drilled to date. It is not known how, if at all, the two occurrences are related.

6.0 DRILLING

Nine NQ diamond drill holes were completed between October 15 and November 7, 1987, bringing the total number of holes drilled to date on the property to thirteen. Hole data, including the Phase I holes, is as follows:

HOLE	NORTHING	EASTING	ELEVATION (m)	LENGTH (m)
CAN1	10+428	94+99	1168.89	106.7
CAN2	10+869	95+90	1217.29	161.6
CAN3	10+642	94+13	1181.99	84.1
CAN4	10+540	94+84	1174.46	121.9
CAN5	10+423	95+65	1172.47	151.2
CAN6	10+417	97+40	1167.12	185.6
CAN7	10+542	95+60	1168.41	148.1
CAN8	10+647	95+36	1179.79	135.9
CAN9	10+636	97+08	1185.19	152.7
CAN10	10+226	96+87	1166.98	78.0
CAN11	10+313	95+49	1159.31	37.2
CAN12	10+505	92+58	1176.20	120.7
CAN13	10+512	91+57	1177.82	114.6

NOTE:
All holes are drilled at -45° towards 225° except for CAN2 which is drilled at -70° towards 225°. Northings and eastings are based on survey data and are relative to CAN1.

Drilling was performed by Atlas Drilling Ltd. from Kamloops, B.C. using a Longyear Super 38 diamond drill and NQ diameter rods. Road construction was sub-contracted to Munsen Equipment Ltd. of Chase, B.C.

Direct charges from the drilling company totalled $58.41/meter. No significant drill-related technical problems were encountered in any of the holes.

The holes were logged on site by Bob Carmichael and were split and sampled by Ron Kruger and Donna Wilkinson. All assays were done by Eco-Tech Laboratories in Kamloops. The core is currently being stored in Mr. W. Huber's field in Sinmax Valley.

6.1 Geological Summary

The lithologies intersected in diamond drill holes on the CANA claims are very similar to those seen in drill holes which intersect the Rea and Silver zones to the southeast, although there are some significant differences.

The stratigraphy which defines the Rea zone is well known and appears to be fairly predictable along strike. The mineralized zone lies between a thick pile of variably altered mafic volcanics and a very distinct sedimentary package consisting of graphitic argillites and coarse wackes. The mineralized stratigraphy is marked by interbedded sericitic tuff, black to grey locally ribbon-banded chert, and graphitic argillite. Also present is a conspicuous pyritic siltite marker unit known as the "muddy tuff". The CANA drilling has identified all of these lithologies, with the possible exception of the "muddy tuff". The stratigraphic relationship of the units on the property, however, has not been well established and correlation with the Rea and Silver zone stratigraphy is difficult.

One of the more important results of the Phase I drill program was the discovery of abundant pyrite in three of the drill holes (CAN1, CAN3 and CAN4). The Phase II drilling tested the depth and strike extensions of these zones with reasonable success and encountered additional zones of 20 to 30% pyrite. Pyrite is present primarily in chert and altered volcanic rocks and occurs both as fine, sooty "layers" on foliation planes and as coarse, granoblastic masses in chert, argillite and altered volcanics. The presence of these pyritized intersections is very encouraging, as one of the characteristics of the massive sulphide lenses along the Rea and Silver zones is a rapid decrease in the net pyrite content of the rock as distance from the orebody increases.

An interpretation of bedrock geology in the immediate vicinity of the drill holes was constructed using surface projections of the geology from the drill sections (Map 2). Correlation between some of the sections is reasonably good (Sections 10+525N and 10+650N for example), however, there are some significant inconsistencies. The implication is that the structure of the rocks is not well known. In the drill core, numerous zones of fault gouge, crushed core and occasional slickensides suggest that faults are common, however, little orientation or offset information is available.

The geological interpretation indicates a strike azimuth of 152 degrees which is consistent with the strike observed along the Rea and Silver zones to the southwest but is 10 to 15 degrees greater than the interpreted strike of the geophysical conductors on the property. This discrepancy can possibly be explained by inaccuracies in the compassed grid affecting the relative positions of conductors on the ground. The holes indicate a moderate to steep northeasterly dip with some variation in individual holes. No definitive facing directions have yet been obtained. Foliation is strongly developed and, in most places, is parallel to compositional layering. In other areas, foliation is normal to compositional layering, indicating a strong degree of folding. This wide variation in fold intensity is thought to be a result of competency differences between the different lithologies. Thus, the argillite and chert beds will be intensely folded while adjacent, more competent volcanic rocks will not.

6.2 Discussion of Drill Sections

The four attached geological cross-sections (Maps 3-6) provide rock type names and show the percent pyrite content for the CANA drill holes. Drill sections through holes CAN10 and CAN11 were omitted as neither hole encountered bedrock. Drill hole CAN2 appears in Section 10+875N (Map 6) but is not discussed in detail here as it was presented in last summer's report (Marr & Oliver, 1987). All drill logs are listed as Appendix II.

6.2.1 Section 104+25N (Map 3): CAN1, CAN5, CAN 6

The lithology is a series of graphitic argillites and cherts with interbedded carbonatized mafic tuffs. A fault between CAN1 and CAN5 is interpreted based on the dip of the rocks and on a geophysical conductor at 95+00E. Contacts are generally gradational and the sedimentary component of the rock increases down dip. Facies changes tend to be abrupt, and a mix of volcanic and sedimentary source material is common. A pyritized chert member which lies between 35.4 and 40.4m in CAN1 and between 56.0 and 61.1m in CAN5 is a useful marker horizon and can tentatively be correlated to Section 105+25N. Assays from this chert member returned values of up to .58 g/t Au and 3.1 g/t Ag over 1.0m in CAN5 and .13 g/t Au and 2.6 g/t Ag over 1.5m in CAN1.

CAN6 was collared in a thinly interbedded series of graphitic argillite and greywacke. Beds average 5 - 10 cm thick and all contacts are razor sharp. A faulted sediment/volcanic contact occurs at 68.5m but no sense or magnitude of movement can be estimated. From 68.9m to end of hole at 185.6m, a thick sequence of mafic pyroclastics and flows, very similar to the stratigraphic footwall of the Rea zone, was intersected. This hole cannot be correlated with CAN5 or CAN1, indicating that a structural break must exist between CAN6 and CAN5.

6.2.2 Section 105+25N (Map 4): CAN4, CAN7, CAN12, CAN13

The four drill holes in this section may be divided into two pairs; CAN4 and CAN7, and CAN12 and CAN13, based on lithology.

CAN4 and CAN7 intersect a series of interbedded mafic pyroclastics, graphitic argillites and cherts which are similar to those encountered in drill holes CAN1 and CAN5. A good correlation can be achieved between CAN4 and CAN7. This section in turn may be correlated with Section 104+25N. In particular, the pyritized chert marker appears to thicken towards Section 105+25N; it is present in CAN4 from 5.8 to 35.2m and in CAN7 from 52.4 to 77.35m. Again, this member is anomalous in metals with values up to .11 g/t Au and 7.6 g/t Ag over 1.0m in CAN4 and .2 g/t Au and 3.5 g/t Ag over 1.0m in CAN7.

CAN7 was collared in a mixed interval containing interbedded pyritized black chert and chert breccia and very sericitic tuff. This interval is possibly correlative with the lower contact of the sericitic tuff interval seen at 82.05m in CAN9.

CAN12 and CAN13 intersect intensely sericitized intermediate to felsic (?) volcanic rocks with interbedded grey to blue-grey pyritized cherts. CAN12 was collared in interbedded sericitic tuff and chert and continues in very similar lithology

to the end of the hole at 120.7m. The chert carries significant (to 50%) pyrite in places and returned assays of 0.45 g/t Au and 0.6 g/t Ag over 1.0m. This hole was lost at 120.7m.

CAN13 was collared ahead of CAN12 in an attempt to drill through the sericitic chert. Unexpectedly, this hole penetrated 45.7m of overburden. Lithologies encountered consist of sericitic tuff and chert structurally underlain by carbonatized mafic volcanics. The contact occurs at a depth of 113.3m.

6.2.3 Section 106+50N (Map 5): CAN3, CAN8, CAN9

CAN9 was collared in an intensely carbonatized mafic tuff with interbedded chert. At 22.5m the hole passes into a sericitic tuff which is very similar to that seen in the Rea zone. From 37.3 to 38.85m the tuff contains thin (1cm) bands of very fine grained pyrite, arsenopyrite, galena, chalcopyrite and sphalerite. Assays over this section returned 0.47 g/t Au, 1.5 g/t Ag and 0.23% Zn over 1.1m. From 66.75 to 77.2m, the sericitic tuff grades into a pyritized chert which assayed .08 g/t Au, 5.7 g/t Ag and 0.58% Zn; .20 g/t Au and 4.3 g/t Ag, both over 40cm. This pyritized chert may be correlated with the pyritized chert and sericitic tuff seen at the collar of CAN7. The 10cm interval from 77.95m to 78.05m is a pyritic siltite very similar to the "muddy tuff". This interval may be wider than

indicated, due to minor lost core. At 82.05m the hole encounters an 85cm wide fault zone and then passes into a carbonatized mafic ash tuff.

CAN8 is collared in a sediment-dominated sequence containing graphitic argillite and ribbon-banded cherts. This hole intersects a barren quartz vein, 1.7m true thickness, at 39.0m and then enters a thick sequence of mafic pyroclastics devoid of any sedimentary input. Structurally below these volcanics, at 127.8m is a thin (1.7m) very distinct depositional chert breccia. This thin bed is significant in that it is also seen in CAN7 in the same stratigraphic position, immediately below a thick mafic volcanic sequence at 133.7m.

CAN3 is collared in a carbonatized mafic lapilli ash tuff, and continues through a series of ribbon-banded to massive cherts. The mafic volcanic sequence which dominates CAN8 is not intersected, suggesting a fault offset between CAN8 and CAN3.

7.0 RECOMMENDATIONS

7.1 Geophysics

One of the most significant barriers to exploration on the CANA property is the magnitude and variability of the overburden depth. A shallow seismic survey is recommended in order to define the depth of overburden covering the areas of interest.

This will allow the amount of overburden intersected in drill holes to be minimized and will also provide a measure of the reliability of geochemical and geophysical data. Three lines of 600m each are recommended to evaluate the depth of overburden covering areas to be drilled. Exact drill collar locations will be dependant on the results of this survey.

7.2 Drilling

One of the goals of the 1988 drill program on the CANA claims will be to determine the stratigraphy on the property and its relationship to the stratigraphy of the Rea and Silver zones to the southeast. The lithologies encountered in the CANA drill holes to date are similar to those seen in drill holes through the Rea and Silver zones, however, the characteristic stratigraphy which defines these zones has not been identified. This identification is the key to exploration on the CANA property.

Ten diamond drill holes totalling 1500m are recommended with collar locations as shown in Table II.

TABLE II

HOLE	NORTHING	EASTING
CAN14	105+25	93+25
CAN15	106+00	93+25
CAN16	103+50	92+75
CAN17	103+50	94+75
CAN18	107+50	95+75
CAN19	106+00	98+75
CAN20	107+00	96+50
CAN21	105+25	97+00
CAN22	116+00	97+50
CAN23	116+00	95+25

NOTE:
All holes to be 150m, drilled at -45° towards 225°
Three holes, CAN14, CAN15 and CAN16, are intended to investigate the along-strike extension of the southern sericitic tuff zone and to establish the nature of its upper contact. This zone is lithologically similar to the Rea zone.

Three holes, CAN19, CAN20 and CAN21, will explore the northern sericitic tuff zone, both down-dip and along-strike. This zone is important due to the possible pyritic siltite "muddy tuff" horizon intersected in CAN9.

The pyritized chert unit intersected in drill holes CAN4, CAN7 and CAN1 will be tested along strike in both directions by CAN17 and CAN18.

Drill holes CAN22 and CAN23 are proposed at the northwestern part of the grid. These holes will test coincident GENIE EM and geochemical anomalies.

8.0 PROPOSED BUDGET

Drilling (10 holes for 1500m)		
1500m x $60.00/m	$90,000	
Mobilization	$ 2,000	
Testing/boxes/tractor, etc.	$ 1,000	
Logging/site preparation	$ 2,000	
	$95,000	$ 95,000
Analytical		
10 lithos/hole at $20.00	$ 2,000	
10 assays/hole at $50.00	$ 5,000	
	$ 7,000	$ 7,000
Labour		
Core logging and report - 40 days x $150/day	$ 6,000	
Splitting/casual - 30 days x $110/day	$ 3,300	
Supervision - 4 days x $390/day	$ 1,560	
Drafting/secretarial	$ 780	
	$11,640	$ 11,640
Logistics		
Accommodation - 60 days x $40/day	$ 2,400	
Vehicles - 1 mo x $1500/mo	$ 1,500	
	$ 3,900	$ 3,900
Miscellaneous		
Supplies/freight/computer	$ 3,000	$ 3,000
Geophysics		
Seismic operator and equipment 3 days x $500/day	$ 1,500	
Helper - 3 days x $110/day	$ 330	
Blaster - 3 days x $500/day	$ 1,500	
Mob/demob	$ 700	
	$ 4,030	$ 4,030
SUB-TOTAL		$ 124,570
DSS 10%		$ 12,457
TOTAL		$ 137,027

9.0 REFERENCES

Marr, J.M. and Doborzynski, Z.B., 1986:
Assessment Report, Cana 2-25 Claims, December 1986

Marr, J.M. and Oliver, J.L., 1987:
Cana 2-25 Claims; Progress Report and Drill Proposal,
July 24, 1987

George Cross Newsletter, April 21, 1987;
September 24, 1987

APPENDIX I

ASSAY SHEETS

Eco-Tech LABORATORIES LTD.

ENVIRONMENTAL TESTING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ASSAYING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-5700
Telex: 048-8393

REISSUE FEBRUARY 2, 1988 TO CORRECT DESCRIPTION FOR #22.

November 18, 1987

CERTIFICATE OF ANALYSIS ETK 87-628

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ATTENTION: Bob Carmichael

SAMPLE IDENTIFICATION: 23 core samples received October 29, 1987

ETK #	Description	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)	As (%)
628 - 10	CAN 5 10.5 - 12.0	.07	2.1	.03	.01	.05	.07	.05
628 - 11	CAN 5 26.4 - 27.9	.07	1.2	.01	<.01	.01	.03	<.01
628 - 12	CAN 5 27.9 - 29.0	.06	1.3	<.01	<.01	.01	.02	<.01
628 - 13	CAN 5 56.7 - 57.7	.51	2.1	.01	.02	.03	.12	.12
628 - 14	CAN 5 57.7 - 58.7	.38	3.1	.01	.02	.02	.08	.25
628 - 15	CAN 5 58.7 - 59.7	.58	1.0	.01	.01	.03	.10	.10
628 - 16	CAN 5 59.7 - 60.7	.54	2.1	.01	.02	.04	.05	.20
628 - 17	CAN 5 111.5 - 112.	.04	<.1	<.01	<.01	.01	.03	.01
628 - 18	CAN 5 112.5 - 113.	.06	1.2	.03	.07	.13	.03	.02
628 - 19	CAN 5 113.5 - 114.	.06	2.0	.02	.03	.09	.05	.03
628 - 20	CAN 5 138.5 - 139.	.05	1.3	.01	<.01	.01	.12	.06
628 - 21	CAN 6 88.7 - 90.2	.06	<.1	.01	<.01	.02	.04	.09
628 - 22	CAN 6 159.5 - 160.5	.05	1.2	.01	<.01	.02	.02	.11
628 - 23	BC 1	.08	3.5	<.01	.01	.01	.04	.03

? 9 core samples. What was here??

NOTE: < = less than

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti A. Sc. T.
B.C. Certified Assayer

FJP/jmb

Eco-Tech LABORATORIES LTD.

ENVIRONMENTAL TESTING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ASSAYING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-5700
Telex: 048-8393

REISSUED FEBRUARY 2,1988 TO CORRECT DESCRIPTONS FOR #8,#10,#11,#14.

December 1, 1987

CERTIFICATE OF ANALYSIS ETK 87-685

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ATTENTION: Bob Carmichael

RE: PROJECT: C A N A

SAMPLE IDENTIFICATION: 14 rock samples received November 20, 1987

ETK #	Description			Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)	As (%)
685 - 1	CANA 8	81.7 -	82.8	.04	.6	.01	.01	.01	1.00	<.01
685 - 2		110.1 -	110.6	.03	.2	.01	.04	.06	.22	<.01
685 - 3	9	20.7 -	22.0	.07	1.2	<.01	.01	<.01	.20	<.01
685 - 4		36.8 -	37.8	.31	.5	.01	.05	.06	.41	.04
685 - 5		37.8 -	38.9	.47	1.5	.04	.08	.23	.30	.11
685 - 6		41.5 -	43.0	.06	.4	<.01	.02	<.01	.32	<.01
685 - 7		43.0 -	44.5	.39	.9	.01	.02	.05	.32	.07
685 - 8		79.7 -	81.6	.08	5.7	.10	.13	.58	.41	<.01
685 - 9		81.6 -	82.0	.20	4.3	.01	.02	.09	.50	<.01
685 - 10		82.0 -	82.9	.91	4.8	.03	.09	.09	.35	.12
685 - 11		77.7 -	79.7	.04	2.6	.01	.03	.04	.49	<.01
685 - 12		97.4 -	99.4	<.03	.7	<.01	<.01	<.01	.06	<.01
685 - 13	12	49.5 -	50.5	.45	.6	<.01	<.01	.01	.15	<.01
685 - 14		58.8 -	59.9	.10	1.6	.01	.01	.01	.74	<.01

NOTE: < = less than

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A. Sc. T.
B.C. Certified Assayer

FJP/jmb

APPENDIX II

DIAMOND DRILL LOGS

1813

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN1

PROJ IDEN : CANA | START DATE : 87/11/16 | COMPLETION DATE : | GEOLOGGED BY : RGC + JO
COLLAR NORTHING: 10428.00 | COLLAR EASTING : 9499.00 | COLLAR ELEVATION: 1168.89 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 106.70 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		

FK	LEY	A G	- INTERVAL - FROM	- TO	CORE RECOVERY (%)	% ROCK QUAL DESIG	MEM AGE	V	Q	TYPIFYING TM	TM	MAT	QAL MIN	TM	TEXTURES TX	TX	F	GRAIN CHARACS C	X	M	FRACTURE #	TK	STRUCTUR-1 T	ID	STK	DIP	KF	ALTERATION MINS H A	MU	CL	EP	HE	HA	ANY MIN	ORE-TYPE MINS H A	PR	MO	SL	HA	ANY MIN	SUMMARY
P	OVB		0.00	5.20			OVER																P																				
R	OVB		0.00	5.20			Casing.																																				
P			5.20	12.55	100.0		MLAT	CB	MS	LF2	FR	IL		2	7		P		FO		65										P4				D1				
L					10.0			KK	PY		FO		3	7	0																										
R			5.20	12.55			Carbonatized mafic lapilli tuff which is lightly sericitic.																																				
R			5.20	12.55			Fragment size and clastic input both increase towards the																																				
R			5.20	12.55			bottom of the interval.																																				
P			12.55	19.40	100.0		ARGR	GR	PY	GR4	<<				20		P				<1														GR	D=				
L					10.0			NN	CB	PY=					7																						P4					
R			12.55	19.40			Graphitic argillite with 30% mixed chert. Pyrite is found only																																				
R			12.55	19.40			in association with secondary quartz veins. Limited sericite																																				
R			12.55	19.40			development may form fine (<1cm) composition layers within the																																				
R			12.55	19.40			argillite.																																				
R	F/		15.70	16.30			Crushed core with fault gouge.																																				
N	F/		15.70	16.30			X FAUL.										N																								
P			19.40	30.80			MLAT	CB	MS	CB4	WB	FR		=	7	10	P		FO		60	()									P4				FU	D=				
L								KK		MS=	SP	FO	1	5	0	3			BD		40		$=												O*					
R			19.40	30.80			Khaki green mafic ash tuff with 1% lapilli. Wispy fragments of																																				
R			19.40	30.80			argillite are 5% and scattered chert fragments were observed.																																				
R			19.40	30.80			Carbonatization is both pervasive (30%) and spotted (10%) after																																				
R			19.40	30.80			volcanoclastic phenocrysts.																																				
P			30.80	42.20	100.0		IBCA	GR	PY	AR4	IB	RB					P		BD		70	<1													GR	R2				
L					80.0			1A		CH5	<<																										$2					
R			30.80	42.20			Mixed and interbedded graphitic argillite and chert. The																																				
R			30.80	42.20			argillite component decreases towards the bottom and grey,																																				
R			30.80	42.20			ribbon-banded cherts become more plentiful. Folded and																																				
R			30.80	42.20			convoluted quartz veins (1cm) occur in the upper argillaceous																																				
R			30.80	42.20			section.																																				
R			35.40	38.80			This interval is a very clean, blue-grey ribbon-banded chert.																																				
N			35.40	38.80			X B3CH	PY		PY2	RB						N																								02

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN1 (CONTINUED)

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   F    I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = FT)          RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E  A                        ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G  F R O M  -  T O      ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ---------  ---------  ----------- -- - ---- -- -- --- -- -- - - - - - -- -- - - - - - - - - - - - - - - - - - - - - - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A

L                                          BA
R       38.80      40.40        Semi-massive, coarse-grained secondary pyrite in black chert.
N       38.80      40.40             X CHER PY    PY7 GB XA              N                              R7

P       42.20      47.90              IBTA CL PY CL1 LM CH     * 7 10    P                              D*
L                                         KK    PY* FR    1 7   0 3                      $* P1
R       42.20      47.90        Sediments in this interval include argillites, siltstones and
R       42.20      47.90        cherts.  10% pervasive chlorite suggests mixed mafic
R       42.20      47.90        pyroclastic input.  Scattered chert fragments were noted.  This
R       42.20      47.90        unit is distinguishable from all previous members by the well
R       42.20      47.90        defined compositional layering, dull grey to black silty laters
R       42.20      47.90        and by soft sediment deformational features (eg. at 46.6m).
R       42.20      47.90        Pyrite averages less than 1%, sericite is weak and
R       42.20      47.90        carbonatization is absent.

P       47.90      49.70              MATF CB MS CB2 FR        1 7  8    P                    P2       D)
L                                         KK CL MS1       1 1   0 3                  P1 P1
R       47.90      49.70        Chloritic, sericitic carbonatized mafic ash tuff containing
R       47.90      49.70        scattered irregularly shaped fragments and laminae of argillite
R       47.90      49.70        and chert.

P       49.70      73.40              IBCA GR PY AR8 IB <<              P              <1       P=    GR D1
L                                         1A CB CH2                                  P=          $2
R       49.70      73.40        This interval is characterized by graphitic argillite with
R       49.70      73.40        interbedded grey cherts.  Compositional layering (1-2cm) is
R       49.70      73.40        visible throughout the interval with core axis angles ranging
R       49.70      73.40        from 0 to 90 degrees.  Alteration is extremely light sericite
R       49.70      73.40        and carbonate and is restricted to clastic layers.  Graphite in
R       49.70      73.40        this interval explains the E-M anomaly seen on surface.
R       64.30      64.90        A 60cm mafic ash tuff interbed which is intensely carbonatized.
R       64.30      64.90        Wispy graphitic bands occur in this bed.
N       64.30      64.90             X MATF CB CL CB4 WB              N                    P4    FU
L                                         KK    CL=                                P=          $*
R       69.20      73.40        Intraformal breccia, chert fragments supported by a fine
R       69.20      73.40        grained black clastic matrix.

P       73.40      76.30  100.0       IBTA GR CL AR6                 P    BD      70              GR D)
L                                         1A    TF4                                P1          P1
R       73.40      76.30        Chloritic phyllites and volcanoclastics are interbedded with
R       73.40      76.30        graphitic argillites plus or minus chert.  A well defined 5cm
R       73.40      76.30        clast rich section defines the lower contact.  This interval
R       73.40      76.30        represents transition beween the clastic dominated overlying
R       73.40      76.30        unit and the underlying volcanic dominated one.

P       76.30      90.40              IBTA CB CL TF8 IB VG           P                    P4    DO D)
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CANA

DRILLHOLE/TRAVERSE : CAN1 (CONTINUED)

K	L	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% M I	ROCK TYPE	TYPIFYING MINERALS TM 1	TM 2	QAL MIN MAT	TEXTURES TX 1	TX 2	F	GRAIN CHARACS F	C	% M	FRACTURE P	# TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	DIP KF	ALTERATION MINS H QZ	H BI	H CY	H CB	H MG	H ANY MIN XX	ORE-TYPE MINS H PY	H CP	H GL	H ANY MIN YY	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM 3 LC COL	QM2 3	TX 3	TX 4	S R R	R S N D	S O H P	DIP / C	F SML	I	T 2	ID	STK AZM	DIP RT	KF	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A		
L								7G	AR2														P=		U.								
R		76.30	90.40	Carbonatized mafic lapilli tuff and interbedded argillites.																													
R		76.30	90.40	This unit is characterized by its pale green color, frequent																													
R		76.30	90.40	narrow (1-2cm) clastic beds and locally fragment rich chert and																													
R		76.30	90.40	quartz injected segments. Quartz fragments typically appear																													
R		76.30	90.40	to be boudinaged quartz veins. The intense carbonatization of																													
R		76.30	90.40	the mafics is illustrated by the presence of vugs in the lower																													
R		76.30	90.40	half of this section. These vugs occur in the matrix, are																													
R		76.30	90.40	1-4cm across and contain drusy dolomite crystals. Clastic																													
R		76.30	90.40	content decreases with depth.																													
P		90.40	93.80	100.0	MATF	CB	MS	CB2	FR	SP	6	6	P										P2		D=							
L					KK	PY					7	5	0				P1															
R		90.40	93.80	Carbonatized mafic ash falls or possible crystal tuff. This																													
R		90.40	93.80	interval is highly distinctive in its grainy, potentially																													
R		90.40	93.80	phenocrystic appearance. Pale yellow-cream 1-2mm subrounded																													
R		90.40	93.80	grains occupy 60% of the rock volume. This unit could be																													
R		90.40	93.80	intepreted as a lightly reworked mafic ash fall.																													
P		93.80	103.80	100.0	MFVC	CB	QZ	CB4	FR	FD	2	7	P		FD		57	P2					P4		D=	+						
L					KK							0						$1														
R		93.80	103.80	A khaki colored, silicified, carbonate-rich pyritic mafic																													
R		93.80	103.80	volcanoclastic. Large quartz-carbonate rich fragments, 3-7cm																													
R		93.80	103.80	long axis, occupy 20% of the rock volume. Slump breccias																													
R		93.80	103.80	(eg.96.6m) suggest soft sediment depositional processes. The																													
R		93.80	103.80	foliation surface on this rock is formed by a dull green																													
R		93.80	103.80	chlorite-clay assemblage. Pyrite is consistently present																													
R		93.80	103.80	(6-8%). Quartz veins are present in two stages and traces of																													
R		93.80	103.80	galena may be noted.																													
P		103.80	106.70		RBAC				RB	FD			P												D*							
R		103.80	106.70	Ribbon-banded black argillite and grey chert with lesser fine																													
R		103.80	106.70	grained wacke interbeds. The well defined .25-1cm laminae of																													
R		103.80	106.70	this unit display pronounced deformational features. Polyphase																													
R		103.80	106.70	fold orientations are noted. Pyrite occurs in low levels																													
R		103.80	106.70	(<1%) as late stage porpyroblasts.																													
R		105.35	105.85	Chloritic siltite to wacke interbed. Medium grained with one																													
R		105.35	105.85	large (5-7cm) autolith.																													
N		105.35	105.85		X	CHWA	CL		CLI	FR			N										P1		FU							
L								YG										P1							D.							

Hel Fm?

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN2

PROJ. IDEN : CANA
COLLAR NORTHING: 10869.00
START DATE : 87/11/19
COLLAR EASTING : 9590.00
TOTAL LENGTH : 161.60
COMPLETION DATE :
COLLAR ELEVATION: 1217.29
CORE/HOLE SIZE : NQ
GEOLOGGED BY : RGC + JO
GRID AZIMUTH : 315.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-70.00		
001	80.00		225.00	-65.00		

KEY	FLAG	INTERVAL FROM (UNITS = FT)	INTERVAL TO	CORE RECOVERY (%)	% ROCK QUAL DESIG	TYPIFYING MINERAL TM1 TM2	ALTERATION MINERAL MAT QM1 QM2	TEXTURES TX1 TX2 TX3 TX4	GRAIN CHARACS F C P	% M	FRACTURE F C P # TK	STRUCTURE-1 / STRUCTURE-2	ALTERATION MINS H A BI CY CB MG XX	ORE-TYPE MINS H A PY CP GL YY	SUMMARY
P	OVB	0.00	4.90		OVER							P			
R	OVB	0.00	4.90		Casing.										
R	OVB	0.00	4.90		Casing.										
P	OV.	4.90	25.60		OVER							P			
R	OVB	4.90	25.60		Olivine basalt boulder till and talus with frequent clay rich silts.										
R	OVB	4.90	25.60		Olivine basalt boulder till and talus with frequent clay rich silts.										
P		25.60	56.10	100.0	BASL	OL PF	OL2 AM			P	FR 36	X1 X= PF		OL	
L						1G CB	CB1				FR 80	X2		X2	
R		25.60	56.10		This dark green-black medium to coarse grained basalt is the tertiary extrusive in the area. At its upper contact, the unit is moderately amygdaloidal with 10% by volume calcium carbonate interstitial fillings. Phenocrysts of olivine (20%), plagioclase (70%) and magnetite (5-8%) are readily identifiable. The unit has been unaffected by penetrative deformation, although two orthogonal fracture sets are noted. Grain size diminishes and overall color becomes slightly more grey-green towards the lower, unconformable contact. This change is noted from 44.9 to 56.1m. No sulphides are present.										
R		25.60	56.10		This dark green-black medium to coarse grained basalt is the tertiary extrusive in the area. At its upper contact, the unit is moderately amygdaloidal with 10% by volume calcium carbonate interstitial fillings. Phenocrysts of olivine (20%), plagioclase (70%) and magnetite (5-8%) are readily identifiable. The unit has been unaffected by penetrative deformation, although two orthogonal fracture sets are noted. Grain size diminishes and overall color becomes slightly more grey-green towards the lower, unconformable contact. This change is noted from 44.9 to 56.1m. No sulphides are present.										
P	UNC	56.10	56.50		UNCF							P			

TERT. BAS

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN2 (CONTINUED)

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  !   ·I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = FT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M           T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O     ( % )      X TYPE  1  2 QM1  1  2 F F C P  # TK     1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- -----.--   -----.--   ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F     T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I     2    AZM  RT        H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE       COL             R D P C            STRUCTUR-2           A  A  A  A  A  A  A  A

R UNC   56.10      56.50        Small chert pebbles and clays occur at the Tertiary-Devonian
R UNC   56.10      56.50        unconformity.  Devonian rocks immediately below this contact
R UNC   56.10      56.50        have a slightly rubbly or weathered appearance.
R UNC   56.10      56.50        Small chert pebbles and clays occur at the Tertiary-Devonian
R UNC   56.10      56.50        unconformity.  Devonian rocks immediately below this contact
R UNC   56.10      56.50        have a slightly rubbly or weathered appearance.

P       56.50      73.70     95.0       CHER PY QZ PY) LM FO          30    P     FO      65 P)               GR D)
L                            10.0            7A                        7                                       $)
R       56.50      73.70        This interval is occupied by a highly contorted, sulphide lean
R       56.50      73.70        chert unit which is distinguished by its 1-2cm cherty laminae
R       56.50      73.70        separated by narrow carbonaceous partings.  It is typically
R       56.50      73.70        unaltered with no evidence of sericitization and pyrite
R       56.50      73.70        averages less than 1%.  The component of fine grained black
R       56.50      73.70        clastics is limited to 5-10% of the rock volume.
R       56.50      73.70        Secondary silicification is the primary alteration feature, but
R       56.50      73.70        occurs at low levels and is not associated with sulphide
R       56.50      73.70        development.
R       56.50      73.70        This interval is occupied by a highly contorted, sulphide lean
R       56.50      73.70        chert unit which is distinguished by its 1-2cm cherty laminae
R       56.50      73.70        separated by narrow carbonaceous partings.  It is typically
R       56.50      73.70        unaltered with no evidence of sericitization and pyrite
R       56.50      73.70        averages less than 1%.  The component of fine grained black
R       56.50      73.70        clastics is limited to 5-10% of the rock volume.
R       56.50      73.70        Secondary silicification is the primary alteration feature, but
R       56.50      73.70        occurs at low levels and is not associated with sulphide
R       56.50      73.70        development.
R F/    68.00      73.70        An extremely friable tectonic chert breccia showing increased
R F/    68.00      73.70        graphite and carbonaceous material as well as rotation of
R F/    68.00      73.70        fragments.  This interval represents a major contact fault
R F/    68.00      73.70        zone.
R F/    68.00      73.70        An extremely friable tectonic chert breccia showing increased
R F/    68.00      73.70        graphite and carbonaceous material as well as rotation of
R F/    68.00      73.70        fragments.  This interval represents a major contact fault
R F/    68.00      73.70        zone.
N F/    68.00      73.70             X CHBR GR                          N                                      GR
L                                           NN                                                                 P2
N F/    68.00      73.70             X CHBR GR                          N                                      GR
L                                           NN                                                                 P2

P       73.70      81.10               IBTA CB MS TF7 IB IL             P     BD      81          P3       D=
L                                           KK    AR3 FO                      FO      70    $1
R       73.70      81.10        This strongly carbonatized light grey green mafic
R       73.70      81.10        volcanoclastic contains 30-35% interbedded argillite.
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ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN2 (CONTINUED)

K E Y	K E Y	F L G	INTERVAL (UNITS = FT) FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPIFYING MIN 1	TYPIFYING MIN 2	QAL MIN MAT QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	FRACTURE %	FRACTURE M	FRACTURE #	FRACTURE TK	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION H A QZ	ALTERATION H A BI	ALTERATION H A CY	ALTERATION H A CB	ALTERATION H A MG	MINS H ANY A MIN	ORE-TYPE H A XX	ORE-TYPE H A PY	ORE-TYPE H A CP	ORE-TYPE H A GL	MINS H ANY A YY	SUMMARY
K E Y	K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC- 3 COL	TM QM2	JX 3	TX 4	S R R D	R S P	S O C	DIP	F	SML I	T 2	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A		
R	R		73.70	81.10																														Carbonatetes within the volcanoclastic where a pervasive
R	R		73.70	81.10																														occurrence is demonstrated by a diffuse HCl response. Sericite
R	R		73.70	81.10																														is present in low amounts, subordinate to cabonate.
R	R		73.70	81.10																														Disseminated pyrite is quite strongly developed within this
R	R		73.70	81.10																														section, averaging 6-8%. The sulphide usually occurs as small
R	R		73.70	81.10																														aggregates (<.5cm) adjacent to the sericite and iron carbonate
R	R		73.70	81.10																														foliation surfaces. No vein-sulphide association was noted.
N	R	F/	73.70	75.40																														Strong shearing and local gouge development indicate this is
L	R	F/	73.70	75.40																														the continuation of the contact fault in the underlying
N	R	F/	73.70	75.40																														volcanics.
L	R		73.70	81.10																														This strongly carbonatized light grey green mafic
R	R		73.70	81.10																														volcanoclastic contains 30-35% interbedded argillite.
R	R		73.70	81.10																														Carbonate dominates within the volcanoclastic where a pervasive
R	R		73.70	81.10																														occurrence is demonstrated by a diffuse HCl response. Sericite
R	R		73.70	81.10																														is present in low amounts, subordinate to carbonate.
N	R		73.70	81.10																														Disseminated pyrite is quite strongly developed within this
L	R		73.70	81.10																														section, averaging 6-8%. The sulphide usually occurs as small
N	R		73.70	81.10																														aggregates (<.5cm) adjacent to the sericite and iron carbonate
L	R		73.70	81.10																														foliation surfaces. No vein-sulphide association was noted.
R	R	F/	73.70	75.40																														Strong shearing and local gouge development indicate this is
R	R	F/	73.70	75.40																														the continuation of the contact fault in the underlying
N	R	F/	73.70	75.40																														volcanics.
L	N	F/	73.70	75.40			X	FAUL									N																	
N	N	F/	73.70	75.40			X	FAUL									N																	
L																																		
R I	P		81.10	97.50	100.0			MLAT	CB	MS	CB3	FR	FO				P		FO		75	P)		P3		FU	W1						
R I	L				50.0				KK	PY	MS1	WB							BD		71		$1			O*							
N I	R		81.10	97.50																														Compositionally, the volcanic component of the preceeding unit
N I	R		81.10	97.50																														is equivalent to this section. Within this interval, the
	R		81.10	97.50																														fragment size (ash to sub-lapilli), occasional lithic fragment
P	R		81.10	97.50																														and weak compositional layering define a volcanic origin.
L	R		81.10	97.50																														Carbonate is again the principal alteration product (25%).
R	R		81.10	97.50																														Differences from the preceeding interval include elevation in
R	R		81.10	97.50																														both iron carbonate and sericite and very light silica
R	R		81.10	97.50																														addition. Pyrite is now present in small (.25cm) reticulated
R	R		81.10	97.50																														microveinlets and black clastics occupy less than 10% of the
R	R		81.10	97.50																														volume of the interval.
R	R		81.10	81.50																														Strong silicification is present as microveins and iron
R	R		81.10	81.50																														carbonate content is increased.
R	R		81.10	97.50																														Compositionally, the volcanic component of the preceeding unit
R	R		81.10	97.50																														is equivalent to this section. Within this interval, the
R	R		81.10	97.50																														fragment size (ash to sub-lapilli), occasional lithic fragment
R	R		81.10	97.50																														and weak compositional layering define a volcanic origin.
R	R		81.10	97.50																														Carbonate is again the principal alteration product (25%).

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN2 (CONTINUED)

K E Y	F L A G	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% MINI X	ROCK TYPE	TYPIFYING MINERALS 1	2	QAL MIN MAT	TEXTURES TX 1	TX 2	GRAIN CHARACS F	C	% M	FRACTURE P	# TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	MINS ANY MIN	ORE-TYPE H A PY	H A CP	H A GL	MINS ANY MIN	SUMMARY
K E Y	F L G	ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC-COL	TM 3	QM2 3	JX 4	TX 3	S O R	R N D	S H P	O / C	DIP SML	F I	T 2	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A
R		73.70	81.10																											Carbonatetes within the volcanoclastic where a pervasive
R		73.70	81.10																											occurrence is demonstrated by a diffuse HCl response. Sericite
R		73.70	81.10																											is present in low amounts, subordinate to cabonate.
R		73.70	81.10																											Disseminated pyrite is quite strongly developed within this
R		73.70	81.10																											section, averaging 6-8%. The sulphide usually occurs as small
R		73.70	81.10																											aggregates (<.5cm) adjacent to the sericite and iron carbonate
R		73.70	81.10																											foliation surfaces. No vein-sulphide association was noted.
R	F/	73.70	75.40																											Strong shearing and local gouge development indicate this is
R	F/	73.70	75.40																											the continuation of the contact fault in the underlying
R	F/	73.70	75.40																											volcanics.
R		73.70	81.10																											This strongly carbonatized light grey green mafic
R		73.70	81.10																											volcanoclastic contains 30-35% interbedded argillite.
R		73.70	81.10																											Carbonate dominates within the volcanoclastic where a pervasive
R		73.70	81.10																											occurrence is demonstrated by a diffuse HCl response. Sericite
R		73.70	81.10																											is present in low amounts, subordinate to carbonate.
R		73.70	81.10																											Disseminated pyrite is quite strongly developed within this
R		73.70	81.10																											section, averaging 6-8%. The sulphide usually occurs as small
R		73.70	81.10																											aggregates (<.5cm) adjacent to the sericite and iron carbonate
R		73.70	81.10																											foliation surfaces. No vein-sulphide association was noted.
R	F/	73.70	75.40																											Strong shearing and local gouge development indicate this is
R	F/	73.70	75.40																											the continuation of the contact fault in the underlying
R	F/	73.70	75.40																											volcanics.
N	F/	73.70	75.40				X FAUL									N														
N	F/	73.70	75.40				X FAUL									N														
P		81.10	97.50	100.0			MLAT	CB	MS	CB3	FR	FQ				P		FQ		75	P)		P3		FU	W1			
L				50.0				KK	PY	MS1	WB							BD		71		$1				0*			
R		81.10	97.50																											Compositionally, the volcanic component of the preceeding unit
R		81.10	97.50																											is equivalent to this section. Within this interval, the
R		81.10	97.50																											fragment size (ash to sub-lapilli), occasional lithic fragment
R		81.10	97.50																											and weak compositional layering define a volcanic origin.
R		81.10	97.50																											Carbonate is again the principal alteration product (25%).
R		81.10	97.50																											Differences from the preceeding interval include elevation in
R		81.10	97.50																											both iron carbonate and sericite and very light silica
R		81.10	97.50																											addition. Pyrite is now present in small (.25cm) reticulated
R		81.10	97.50																											microveinlets and black clastics occupy less than 10% of the
R		81.10	97.50																											volume of the interval.
R		81.10	81.50																											Strong silicification is present as microveins and iron
R		81.10	81.50																											carbonate content is increased.
R		81.10	97.50																											Compositionally, the volcanic component of the preceeding unit
R		81.10	97.50																											is equivalent to this section. Within this interval, the
R		81.10	97.50																											fragment size (ash to sub-lapilli), occasional lithic fragment
R		81.10	97.50																											and weak compositional layering define a volcanic origin.
R		81.10	97.50																											Carbonate is again the principal alteration product (25%).

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CANA

DRILLHOLE/TRAVERSE : CAN2 (CONTINUED)

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 F     I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = FT)          RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E  A                        ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O     ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK   1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- -----.--   -----.--  ----.- -- -- ---- -- -- --- -- -- - - - - -- -- - - -- --- --- -- -- -- -- -- -- -- -- -- --  - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F   T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I   2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C          STRUCTUR-2          A  A  A  A  A  A  A  A

R      81.10     97.50         Differences from the preceeding interval include elevation in
R      81.10     97.50         both iron carbonate and sericite and very light silica
R      81.10     97.50         addition.  Pyrite is now present in small (.25cm) reticulated
R      81.10     97.50         microveinlets and black clastics occupy less than 10% of the
R      81.10     97.50         volume of the interval.
R      81.10     81.50         Strong silicification is present as microveins and iron
R      81.10     81.50         carbonate content is increased.
N      81.10     81.50               X MLAT QZ    QZ4 <<                N                <4
L                                           KK
N      81.10     81.50               X MLAT QZ    QZ4 <<                N                <4
L                                           KK
R      81.70     82.20         Well developed wispy pyrite microveinlets (>.25cm) occur at 30
R      81.70     82.20         per meter.
R      81.70     82.20         Well developed wispy pyrite microveinlets (>.25cm) occur at 30
R      81.70     82.20         per meter.
N      81.70     82.20               X MLAT PY    PY1 WB                N                            W1
L                                           KK
N      81.70     82.20               X MLAT PY    PY1 WB                N                            W1
L                                           KK
R      84.10     88.00         Strong silicification and limited fuchsite development.
R      84.10     88.00         Strong silicification and limited fuchsite development.
N      84.10     88.00               X MLAT QZ FU QZ1                   N                P1         FU
L                                           KK    FU.                                               O.
N      84.10     88.00               X MLAT QZ FU QZ1                   N                P1         FU
L                                           KK    FU.                                               O.
R F/   96.20     96.30         Clay gouge indicates a minor fault.
R F/   96.20     96.30         Clay gouge indicates a minor fault.
N F/   96.20     96.30               X FAUL                             N
N F/   96.20     96.30               X FAUL                             N

P      97.50    131.00     100.0       IBTA CB MS TF6 IB                P    BD      45 <=             D=
L                                           PY AR4                                      $*
R      97.50    131.00         This sequence of volcanics and clastics is very similar to that
R      97.50    131.00         noted between 73.7 and 81.1m.  Black clastics have increased
R      97.50    131.00         slightly in overall volume (40-45%) and grey to black cherts
R      97.50    131.00         are typically 5-10%.  Pyrite is most evident within the pale
R      97.50    131.00         green volcanoclastics where it averages 6-7% and occurs
R      97.50    131.00         primarily as disseminations and secondly as wispy
R      97.50    131.00         microveinlets.  Both clastics and volcanoclastics are
R      97.50    131.00         carbonatized and limited iron carbonate and sericite occur
R      97.50    131.00         exclusively within the volcanoclastics.
R      97.50    100.30         This 2.8m bed is composed of argillite (70%) and chert (30%)
R      97.50    100.30         and contains 10% convoluted quartz microveins.
R      97.50    131.00         This sequence of volcanics and clastics is very similar to that
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CANA

DRILLHOLE/TRAVERSE : CAN2 (CONTINUED)

K	F L A G	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% MINERAL IX	ROCK TYPE	TYPIFYING MINERAL TM 1	TM 2	QAL MAT QM1	TEXTURES TX 1	TX 2	GRAIN CHARACS F	C	%	M	FRACTURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	ANY MIN	ORE-TYPE MINS H A PY	H A CP	H A GL	ANY MIN YY	SUMMARY
K	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC-3 COL	QM2	TX 3	TX 4	S O N R	R H D	S / P	O SML C	DIP I	F	T 2	ID	STK AZM	DIP RT	KF	MU	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
R		97.50	131.00																													noted between 73.7 and 81.1m. Black clastics have increased
R		97.50	131.00																													slightly in overall volume (40-45%) and grey to black cherts
R		97.50	131.00																													are typically 5-10%. Pyrite is most evident within the pale
R		97.50	131.00																													green volcanoclastics where it averages 6-7% and occurs
R		97.50	131.00																													primarily as disseminations and secondly as wispy
R		97.50	131.00																													microveinlets. Both clastics and volcanoclastics are
R		97.50	131.00																													carbonatized and limited iron carbonate and sericite occur
R		97.50	131.00																													exclusively within the volcanoclastics.
R		97.50	100.30																													This 2.8m bed is composed of argillite (70%) and chert (30%)
R		97.50	100.30																													and contains 10% convoluted quartz microveins.
N		97.50	100.30			X	IBCA	GR		AR7	IB	<<					N		CL		45	<1					GR				
L								NN		CH3																		P1				
N		97.50	100.30			X	IBCA	GR		AR7	IB	<<					N		CL		45	<1					GR				
L								NN		CH3																		P1				
R		100.30	103.00																													Moderately bleached, pale green mafic ash fall. Py to 8% and
R		100.30	103.00																													Black clastics less than 5%.
R		100.30	103.00																													Moderately bleached, pale green mafic ash fall. Py to 8% and
R		100.30	103.00																													Black clastics less than 5%.
N		100.30	103.00			X	MATF	CB	MS	CB2							N		CL		80				P2		D1				
L								KK	PY	MS=													$=									
N		100.30	103.00			X	MATF	CB	MS	CB2							N		CL		80				P2		D1				
L								KK	PY	MS=													$=									
R		119.00	122.30																													Carbonatized mafic ash fall.
R		119.00	122.30																													Carbonatized mafic ash fall.
N		119.00	122.30			X	MATF	CB	MS	CB2							N								P2		D1				
L								KK	PY	MS=													$=									
N		119.00	122.30			X	MATF	CB	MS	CB2							N								P2		D1				
L								KK	PY	MS=													$=									
R	F/	121.80	122.50																													Contact fault.
R	F/	121.80	122.50																													Contact fault.
N	F/	121.80	122.50			X	FAUL										N															
N	F/	121.80	122.50			X	FAUL										N															
R		122.30	131.00																													Interbedded clastics and mafic volcanoclastics. Clastic
R		122.30	131.00																													content is increased to 70% and pyrite decreases to 4-5%. This
R		122.30	131.00																													section also contains 20% black chert and is badly broken from
R		122.30	131.00																													124.2 to 128.4m.
R		122.30	131.00																													Interbedded clastics and mafic volcanoclastics. Clastic
R		122.30	131.00																													content is increased to 70% and pyrite decreases to 4-5%. This
R		122.30	131.00																													section also contains 20% black chert and is badly broken from
R		122.30	131.00																													124.2 to 128.4m.
N		122.30	131.00			X	IBTA			AR7							N											D=				
L								NN		TF3																						
N		122.30	131.00			X	IBTA			AR7							N											D=				
L								NN		TF3																						

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DRILLHOLE/TRAVERSE : CAN2 (CONTINUED)

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  F    I N T E R V A L -   CORE      %     TYPI- QAL  TEX-  GRAIN FRAC-        STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K L (UNITS = FT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                  H  H  H  H  H ANY H  H  H ANY
E A                         ERY      I      TM TM MAT TX TX F C % M            T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y G  F R O M  -  T O       ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK      1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- -----.--   -----.--  ----.- -- - ---- -- -- --- -- -- - - - - -- -- -   - -- --- --- -- -- -- -- -- -- -- -- -- --  - - - -
K F                        ROCK   FOR EN RT     TM QM2 TX TX S R S O DIP F     T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E L                        QUAL   MEM  V  Q LC- 3       3  4 O N H / SML I     2    AZM  RT       H  H  H  H  H  H  H  H
Y G                        DESIG  AGE      COL             R D P C             STRUCTUR-2          A  A  A  A  A  A  A  A

R       127.50     127.80        Quartz veined black graphitic argillite with up to 50%
R       127.50     127.80        porphyroblastic pyrite.
R       127.50     127.80        Quartz veined black graphitic argillite with up to 50%
R       127.50     127.80        porphyroblastic pyrite.
N       127.50     127.80            X ARGR PY GR PY4 GB <<             N             <2              GR R4
L                                           NN QZ GR2                                                 P2
N       127.50     127.80            X ARGR PY GR PY4 GB <<             N             <2              GR R4
L                                           NN QZ GR2                                                 P2

P       131.00     161.60  100.0       IBCA GR QZ AR7 IB RB             P    FO      72 <=            GR U)
L                           10.0            NN    CH3 << FO                  BD      60               P1
R       131.00     161.60        This definitive sedimentary sequence is formed from a well
R       131.00     161.60        bedded sequence of very fine grained black clastics.
R       131.00     161.60        Compositional layering is typically less than .5cm and is
R       131.00     161.60        locally ribbon-banded.  Principal lithological components
R       131.00     161.60        include siltites and argillites (65-70%), black and grey cherts
R       131.00     161.60        (30-35%) and quartz-pebble conglomerates.  Overall sulphide
R       131.00     161.60        development is very low, with porphyroblastic, euhedral pyrite
R       131.00     161.60        averaging < 3%.  Younging directions within the conglomerate
R       131.00     161.60        member (grading) suggest a down-hole younging direction.
R       131.00     161.60        This definitive sedimentary sequence is formed from a well
R       131.00     161.60        bedded sequence of very fine grained black clastics.
R       131.00     161.60        Compositional layering is typically less than .5cm and is
R       131.00     161.60        locally ribbon-banded.  Principal lithological components
R       131.00     161.60        include siltites and argillites (65-70%), black and grey cherts
R       131.00     161.60        (30-35%) and quartz-pebble conglomerates.  Overall sulphide
R       131.00     161.60        development is very low, with porphyroblastic, euhedral pyrite
R       131.00     161.60        averaging < 3%.  Younging directions within the conglomerate
R       131.00     161.60        member (grading) suggest a down-hole younging direction.
R       139.60     140.50        Broken core.
R       139.60     140.50        Broken core.
R F/    141.00     142.30        Broken core and development of quartz veins suggest a fault
R F/    141.00     142.30        zone.
R F/    141.00     142.30        Broken core and development of quartz veins suggest a fault
R F/    141.00     142.30        zone.
R       143.50     143.80        Polymictic quartz-pebble conglomerate.
R       143.50     143.80        Polymictic quartz-pebble conglomerate.
N       143.50     143.80            X CGCP       LF7 FR         7 7        N    CU       65 F7
L                                         YA                   5 7  C
N       143.50     143.80            X CGCP       LF7 FR         7 7        N    CU       65 F7
L                                         YA                   5 7  C
R       145.40     145.60        Polymictic quartz-pebble conglomerate.
R       145.40     145.60        Polymictic quartz-pebble conglomerate.
N       145.40     145.60            X CGCP       LF7 FR         7 7        N                 F7
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CANA

DRILLHOLE/TRAVERSE : CAN2 (CONTINUED)

KEY	FLAG	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% MINI X	ROCK TYPE	TYPIFYING MINERAL 1	TYPIFYING MINERAL 2	QUALIFIER MINERAL 1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	C	%	M	FRACTURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	H A ANY MIN	ORE-TYPE H A XX	H A PY	H A CP	H A GL	MINS H A ANY MIN YY	SUMMARY
K	F			ROCK	FOR	EN	RT		TM	QM2	TX	TX	S	R	S	O	DIP	F	T	ID	STK	DIP	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA	
E	L			QUAL	MEM	V	Q	LC-	3		3	4	O	N	H	/	SML	I	2		AZM	RT			H	H	H	H	H	H	H	H	
Y	G			DESIG	AGE			COL					R	D	P	C					STRUCTUR-2				A	A	A	A	A	A	A	A	
L								YA					5	7		C																	
N		145.40	145.60			X	CGCP		LF7	FR				7	7			N					F7										
L								YA					5	7		C																	
R		145.80	147.60	10% of this interval is white quartz-dolomite veins to 30cm.																														
R		145.80	147.60	10% of this interval is white quartz-dolomite veins to 30cm.																														
N		145.80	147.60			1	QDVN	QZ	DO	QZ8								N					M8						DO				
L								WW		DO2																				Q2			
N		145.80	147.60			1	QDVN	QZ	DO	QZ8								N					M8						DO				
L								WW		DO2																				Q2			
R		156.70	156.80	Polymictic quartz-pebble conglomerate.																														
R		156.70	156.80	Polymictic quartz-pebble conglomerate.																														
N		156.70	156.80			X	CGCP		LF7	FR				7	7			N					F7										
L								YA					5	7		C																	
N		156.70	156.80			X	CGCP		LF7	FR				7	7			N					F7										
L								YA					5	7		C																	

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN3

PROJ IDEN : CANA | START DATE : 87/11/19 | COMPLETION DATE : | GEOLOGGED BY : RGC + JO
COLLAR NORTHING: 10642.00 | COLLAR EASTING : 9413.00 | COLLAR ELEVATION: 1181.99 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 84.10 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	40.00		225.00	-47.00		

K E Y	F L A G	- INTERVAL - FROM	- TO	CORE RECOVERY (%)	% M I	ROCK TYPE	TYPIFYING MINERALS TM 1	TM 2	GANGUE MINERALS MAT 1	MAT 2	TEXTURES TX 1	TX 2	GRAIN CHARACS F	C	%	M	FRACTURE #	TK	STRUCTURE-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	H ANY MIN A XX	H A PY	H A CP	H A GL	H ANY MIN A YY	ORE-TYPE MINS SUMMARY
K	F			ROCK QUAL DESIG	FOR MEN AGE	EN V	RT Q	LC-COL	TM 3	QM2 3	TX 3	TX 4	S R D	S N P	O H C	DIP /	F SML	I	T 2	ID	STK AZM	DIP RT	KF	MU H	CL H	EP H	HE H	HA H	PR H	MO H	SL H	HA H	STRUCTUR-2 A A A A A A A A
P	OVB	0.00	9.10				OVER												P														
R	OVB	0.00	9.10				Casing.																											
P		9.10	18.70	75.0		MLAT	PY	MS	MS3	FO									P	FO		84							P2		D2	
L								5U	CB	PY2																							$3 P1
R		9.10	18.70	The extensive alteration of this brownish grey, fine to medium																														
R		9.10	18.70	grained volcanoclastic unit renders recognition of primary																														
R		9.10	18.70	textures difficult. The unit is characterized by pronounced																														
R		9.10	18.70	(25-30%) pyrite development, a potent sericitic foliation																														
R		9.10	18.70	surface (30%) and by the presence of hydrothermal chlorite.																														
R		9.10	18.70	The matrix has been pervasively carbonatized. Pyrite occurs																														
R		9.10	18.70	as foliation parallel laminae, which have been deformed into																														
R		9.10	18.70	small scale folds, and as disseminations throughout the matrix.																														
R		9.10	18.70	Silica addition is generally subordinate to other alteration																														
R		9.10	18.70	forms within this section.																														
P		18.70	24.90	100.0		CHTF	PY	MS	MS2				4	7					P													D1	
L								5A	CL	PY1			3	5	E	C																W2 $1	
R		18.70	24.90	Depositional chert breccias and sericitic ash falls. Pyrite																														
R		18.70	24.90	forms the principal feature of the chert breccia which is																														
R		18.70	24.90	polymictic with poorly sorted lithic fragments averaging .5 to																														
R		18.70	24.90	1.5cm. Black and cream chert and argillite fragments are most																														
R		18.70	24.90	common. Wispy sericite (20%) and moderate to strong pyrite are																														
R		18.70	24.90	the most important alteration minerals.																														
P	F/	24.90	26.30				FAUL	QZ		QZ1	BR	<<							P													<1	
L									NW																								
R	F/	24.90	26.30	Strongly silicified sediments, well developed strain facies at																														
R	F/	24.90	26.30	the structurally lower contact and local gouge development mark																														
R	F	24.90	26.30	this as a major fault. This fault is sub-parallel to the																														
R	F/	24.90	26.30	foliation.																														
P		26.30	50.00	100.0		RBCH	GR		GR1	RB	CH								P	FO		78	<=									GR D*	

HET FRAG?

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN3 (CONTINUED)

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   F   I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-        STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = FT)          RECOV-    M ROCK FYING MIN TURES CHARACS TURE                   H  H  H  H  H ANY H  H  H ANY
E  A                       ERY       I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O     ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- -----.--   -----.--  ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL           R D P C              STRUCTUR-2        A  A  A  A  A  A  A  A

L                                           NN      << FO                                 $.          P1
R       26.30      50.00          Ribbon-banded cream to black cherts and lesser argillite.  This
R       26.30      50.00          unit is outstandingly defined by the exceptionally well
R       26.30      50.00          developed 1-2cm compositional layers within the chert member.
R       26.30      50.00          Ribbon-banding also occurs in argillites with alternating grey
R       26.30      50.00          chert and black argillite making up the layers.  This unit is
R       26.30      50.00          not the same as the grey ribbon-banded chert seen in other
R       26.30      50.00          holes.  Alteration and sulphide development within this
R       26.30      50.00          section have decreased abruptly.  Sericite is present in trace
R       26.30      50.00          amounts, chlorite and carbonate are absent and pyrite is
R       26.30      50.00          present in disseminated form only at quantities well under 1%.

P       50.00      57.20   100.0       CHER                        P                           D=
L                                           1A
R       50.00      57.20          Dark grey, homogeneous chert.  Within this unit there is a
R       50.00      57.20          complete absence of compositional layering.  This appears to be
R       50.00      57.20          an exceptionally clean chert with very limited clastic input.
R       50.00      57.20          Depositional chert breccias occupy less than 5% of the column.
R       50.00      57.20          Net pyrite content is slightly elevated from the previous
R       50.00      57.20          section (3-4%) and it is present as fine disseminations and
R       50.00      57.20          coarse porpyroblasts.

P       57.20      59.00   100.0       MATF CB MS CB2 FR BR        P                     P2    D2
L                                           KK PY MS1                                 P1
R       57.20      59.00          Pyritic carbonatized mafic ash flow.  This dull grey-green unit
R       57.20      59.00          is characterized by pervasive carbonatization, light to
R       57.20      59.00          moderate sericite development and significantly elevated pyrite
R       57.20      59.00          (15-20%), present in disseminated form only.  This flow unit
R       57.20      59.00          has a well developed basal flow breccia at its structural upper
R       57.20      59.00          contact.  Texturally, the uniform, fine fragment size and well
R       57.20      59.00          developed penecontemporaneous crackle breccia are the principal
R       57.20      59.00          features.

P       59.00      66.10   100.0       CHER PY      MX HO          P   BD    73                    D)
L                                           NN      IB
R       59.00      66.10          Black chert and lesser quartzitic siltites.  Massive,
R       59.00      66.10          homogeneous, weakly altered, sulphide lean (2-3%) black cherts
R       59.00      66.10          characterize this interval.  Near the upper contact, over a 1m
R       59.00      66.10          interval, 2-6cm turbiditic quartz-rich interbeds are noted.
R       59.00      66.10          Pyrite is present in disseminated form, typically fine
R       59.00      66.10          grained with a 30% fracture association.

P       66.10      84.10   100.0       IBCA         CH5 IB CH      P   FO    65          P*        D=
L                                           NN      AR3 FO                            $* $*
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ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN3 (CONTINUED)

KEY	LAG	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	%M I X	ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN MAT QM1	TEXTURES TX 1	TEXTURES TX 2	GRAIN CHARACS F	C	%	M P	#	FRACTURE TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	H A XX	MINS ANY MIN	ORE-TYPE H A PY	H A CP	H A GL	MINS ANY YY	SUMMARY
KEY	FLAG			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	3	QM2	TX 3	TX 4	S R D	R N P	S H C	O /	DIP SML	F I	T	ID	STK AZM	DIP RT	KF	MU H	CL A	EP A	HE A	HA A	PR A	MO A	SL A	HA A	
R		66.10	84.10																													This section is made up of interbedded homogeneous black
R		66.10	84.10																													cherts (50-60%), fine grained black clastics (20-30%), and
R		66.10	84.10																													a highly enigmatic unit 'carbonatized chloritic epiclastics'
R		66.10	84.10																													(10-20%). The latter submember is characterized by an
R		66.10	84.10																													exceptionally well defined foliation surface highlighted by
R		66.10	84.10																													narrow (<1cm) foliation parallel carbonate infillings. Weak
R		66.10	84.10																													sericite provides a muddy grey-green cast to the unit and
R		66.10	84.10																													pyrite content averages 3-4%. Carbonate ovoids (2-4mm) are
R		66.10	84.10																													alsod. The primary lithology of this sub-unit is probably an
R		66.10	84.10																													argillite or siltite.
R		66.10	67.30																													Carbonatized chloritic epiclastic.
N		66.10	67.30			X	CCEP	CB	CL	CB2							N		FO		63					P2		D=		
L							KK	PY	CL=														$*	$=								
R		67.30	75.50																													Black massive chert with interbedded black argillite.
N		67.30	75.50			X	IBCA			CH6	IB						N														
L							NN			AR4																						
R		75.50	78.80																													Carbonatized chloritic epiclastic.
N		75.50	78.80			X	CCEP	CB	CL	CB2							N										P2		D=		
L							KK	PY	CL=														$*	$=								
R		78.80	82.50																													Finely bedded siltites and argillites, compositionally layered
R		78.80	82.50																													over 30% of the interval (laminated < 1cm).
R		82.50	84.10																													Heavily bleached and silicified (50%) clastic with 30%
R		82.50	84.10																													carbonate and limited sericite. Discordant pyrite is 3-4%.

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN4

PROJ. IDEN : CANA | START DATE : 87/11/18 | COMPLETION DATE : | GEOLOGGED BY : RGC + JG
COLLAR NORTHING: 10540.00 | COLLAR EASTING : 9484.00 | COLLAR ELEVATION: 1174.46 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 121.90 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	60.00		225.00	-52.00		

KEY	INTERVAL FROM	INTERVAL TO	CORE RECOVERY (%)	% MINERALIZATION	ROCK TYPE	TYPIFYING MINERAL 1	TYPIFYING MINERAL 2	QUALIFYING MATERIAL	TEXTURES 1	TEXTURES 2	GRAIN CHARACS	FRACTURE FREQ	FRACTURE COMP	FRACTURE % MINERALIZATION	FRACTURE MINERALIZATION	STRUCTURE-1 TYPE	STRUCTURE-1 ID	STRUCTURE-1 STRIKE AZM	STRUCTURE-1 DIP RT	ALTERATION HEMATITE QZ	ALTERATION HEMATITE BI	ALTERATION HEMATITE CY	ALTERATION HEMATITE CB	ALTERATION HEMATITE MG	ALTERATION HEMATITE ANY	ALTERATION MINS HEMATITE A	ALTERATION MINS HEMATITE A	ALTERATION MINS HEMATITE A	ALTERATION MINS HEMATITE A	ALTERATION MINS HEMATITE A	ALTERATION MINS HEMATITE ANY	ORE-TYPE MINS HEMATITE A	ORE-TYPE MINS HEMATITE A	ORE-TYPE MINS HEMATITE A	ORE-TYPE MINS HEMATITE ANY	SUMMARY
P OVB	0.00	5.80			OVER											P																				
R OVB	0.00	5.80			Overburden.																															
P	5.80	22.70	100.0		CHBR	PY	MS	LF7	FR	IB		7	7	8		P	BD		80																D3
L						1A			RB		1	3	C	3																						
R	5.80	22.70			Pyritic chert breccias, pyritic cherts, sericitic tuffaceous																																	
R	5.80	22.70			cherts and fragmentals. This exceptionally sulphide rich																																	
R	5.80	22.70			interval strongly resembles the lithology associated with the																																	
R	5.80	22.70			silver zone identified on Kamad 7. The unit consists of																																	
R	5.80	22.70			heterogeneous sulphide rich (30-40% py) chert and sericitic																																	
R	5.80	22.70			chert pebble conglomerates. Depositional chert breccias or																																	
R	5.80	22.70			conglomerates are typically polymicitic, containing 40% chert,																																	
R	5.80	22.70			20% black argillite, 10-15% sericitic tuff and usually 20-30%																																	
R	5.80	22.70			disseminated to semi-massive laminated pyrite.																																	
R	5.80	11.50			Section dominated by finely laminated dark grey cherts.																																	
R	5.80	11.50			Depositional breccias are less than 10% of this interval.																																	
N	5.80	11.50			X CHER			LM								N																				D2
L						3A																														
R	11.50	22.70			Pyritic depositional chert breccias. Occasional sericitic tuff																																	
R	11.50	22.70			interbed. Sulphide clasts and bedded sulphides (1-3cm bands of																																	
R	11.50	22.70			semi-massive pyrite) are common. Alteration is characterized																																	
R	11.50	22.70			by moderate sericitization, and disseminated, pinkish-orange																																	
R	11.50	22.70			carbonate.																															
R	16.70	16.80			Semi-massive (70%) pyrite over 10cm.																																	
N SMS	16.70	16.80			X SMPY	PY		PY7	GB							N																				D7
L						BR																														
R	20.35	20.65			A sericitic felsic tuff bed with wispy bands of dusty pyrite																																	
R	20.35	20.65			(10%). This thin bed is identical to lithologies in DDH's																																	
R	20.35	20.65			CAN9, CAN12 and CAN13. Contact evidence suggests tops down.																																	
N	20.35	20.65			X TUFF	MS	PY	MS4	WB							N																				W1
L						SY		PY1																												
P	22.70	35.20	100.0		CHER	PY	GR	PY2	RB	FG			5			P	CL		70																SR 12

Hot Frag

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN4 (CONTINUED)

K	F L A G	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% MINERAL X	ROCK TYPE	TYPIFYING MINERALS TM	TM	GANGUE MINERAL MAT	TEXTURES TX	TX	GRAIN CHARACTERISTICS F	F	C	%	M	FRACTURE P	#	TK	STRUCTURE-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	H ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	H ANY MIN YY	SUMMARY
K	F L G			ROCK QUAL DESIG	FOR MEN AGE	EN V	RT Q	LC COL	TM 3	QM2	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	TK	STRUCTURE-2 T	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
L								BA									2			FO		75								P=				
R		22.70	35.20	Blue-grey ribbon-banded chert. This unit is quite homogeneous																														
R		22.70	35.20	overall with one breccia bed from 25.0 to 25.8m. Graphite																														
R		22.70	35.20	increases down the hole and the structurally lower contact is																														
R		22.70	35.20	faulted.																														
P		35.20	89.60					MFVC	CB	MS	TF7	IB	WB				6		P								P2				D)			
L								KK			AR3	SP					3							P=										
R		35.20	89.60	Pyritic carbonatized mafic lapilli ash falls and lesser																														
R		35.20	89.60	interbedded black clastics and cherts. The contact between																														
R		35.20	89.60	this unit and the structurally overlying chert is sharp and																														
R		35.20	89.60	well defined. This interval correlates with the thick mafic																														
R		35.20	89.60	pyroclastic sequence in DDH's CAN7 and CAN8 but shows increased																														
R		35.20	89.60	clastic input. Visually, volcanic components are highly																														
R		35.20	89.60	distinctive based on buff grey-green color, lapilli to ash size																														
R		35.20	89.60	fragments obscured by alteration overprints and wispy clastic																														
R		35.20	89.60	contamination. Clastics within this interval typically contain																														
R		35.20	89.60	20% volcanoclastic components.																														
R		44.70	50.10	Quartz-injected graphitic argillite. Frequent ptygmatic quartz																														
R		44.70	50.10	veins indicate very early quartz addition.																														
N		44.70	50.10					X	ARGR	GR	QZ	GR1	<<				N					<1								GR	D=		
L									1A	PY	QZ1																				P1			
R		77.30	84.30	Graphitic argillite similar to the last interval but with																														
R		77.30	84.30	fewer veins. Some (30%) chert is mixed in.																														
N		77.30	84.30					X	ARGR	GR		AR7					N														GR	D1		
L									1A			CH3																			P1			
P		89.60	103.00					IBTA	CB		TF6	IB	FD				P			FD		70									D2		
L									KK			AR4																						
R		89.60	103.00	This interval is in effect a gradational contact, as the																														
R		89.60	103.00	volcanoclastic to clastic ratio decreases with depth.																														
R		89.60	103.00	Lithologies are as described in the last interval but the mix																														
R		89.60	103.00	is now 60% volcanoclastic, 40% clastic.																														
R		89.60	93.60	Quartz-injected black clastic, may have some chert input.																														
R		89.60	93.60	Disseminated pyrite as discordant microveinlets and																														
R		89.60	93.60	disseminations. NOT a stockwork.																														
R		93.60	95.50	Carbonatized mafic pyroclastic with up to 25% disseminated																														
R		93.60	95.50	pyrite.																														
N		93.60	95.50					X	MFVC	PY	CB						N										P2				D3			
R		95.50	97.80	Quartz-injected black clastic containing 15-20% pyrite.																														
N		95.50	97.80					X	ARGR	QZ	PY						N					<1									D2		
L									NN																								
P		103.00	121.90					RBAC	GR		AR6						P														<=			

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN4 (CONTINUED)

K	F L A G	INTERVAL (UNITS = FT) FROM - TO	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	GRAIN CHARACS M	FRACTURE P	FRACTURE #	FRACTURE TK	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION HA QZ	ALTERATION HA BI	ALTERATION HA CY	ALTERATION HA CB	ALTERATION HA MG	ALTERATION ANY MIN XX	ORE-TYPE HA PY	ORE-TYPE HA CP	ORE-TYPE HA GL	ORE-TYPE ANY MIN YY	SUMMARY
K	F L G		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC-COL	TM 3	QM2	TX 3	TX 4	S R O R	S N H D	S P C	DIP / SML	F I		STRUCTUR-2 T	STRUCTUR-2 ID	STRUCTUR-2 STK AZM	STRUCTUR-2 DIP RT	HA A	HA A	HA A	HA A	HA A		HA A	HA A	HA A		
L							1A	CH4																								
R		103.00	121.90	Ribbon-banded graphitic argillite and grey chert.																												
R		103.00	121.90	Ribbon-banding is formed by compositional layering (<.5cm) of																												
R		103.00	121.90	these two lithologies. Contortion and folding may be due to																												
R		103.00	121.90	soft sediment deformation. Foliation parallel pyrite																												
R		103.00	121.90	microveinlets and lamellae are 3-4% of the rock volume. The																												
R		103.00	121.90	overall level of alteration is low.																												
R		110.10	114.50	Elevated pyrite content, weak fuchsite development and 20%																												
R		110.10	114.50	silica addition in a ribbon-banded argillite and chert.																												
N		110.10	114.50		X	RBAC	PY	FU	PY=	<<	SP			N		BD		65	<2							FU	<=				
L							1A	QZ	QZ2																			0*					
R		114.50	121.90	Massive homogeneous black chert. Pyrite is less than 1% and no																												
R		114.50	121.90	alteration is apparent. A very quiet lithology.																												
N		114.50	121.90		X	CHER			MX					N																	<*	
L							NN																									

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN5

PRG . IDEN : CANA | START DATE : 87/10/20 | COMPLETION DATE : | GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10423.00 | COLLAR EASTING : 9565.00 | COLLAR ELEVATION: 1172.47 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 151.20 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	75.00		225.00	-50.00		

K E Y	F L A G	- INTERVAL - (UNITS = FT) FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPI-FYING TM 1	TM 2	QAL MIN MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F	F	C	%	M	FRAC-TURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	H A ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	H A ANY MIN YY	SUMMARY
K	F			ROCK	FOR	EN	RT		TM	QM2	TX	TX	S	R	S	O	DIP	F	T	ID	STK	DIP	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA	
E	L			QUAL	MEM	V	Q	LC-	3		3	4	O	N	H	/	SML	I	2		AZM	RT			H	H	H	H	H	H	H	H	
Y	G			DESIG	AGE			COL					R	D	P	C					STRUCTUR-2				A	A	A	A	A	A	A	A	
P	OVB	0.00	6.10					OVER										P															
R		0.00	0.00	The purpose of this hole is to test for Silver Zone lithology																														
R		0.00	0.00	and to provide information for a detailed section with CAN 1																														
R		0.00	0.00	and CAN 6.																														
R	G	0.00	6.10	Casing.																														
P		6.10	15.60	10.0				IBAW	QZ	GR	WA4	IB	WF					P					81								DO	R=		
L				5.0				AN			AR3	BR	<<																		81			
R		6.10	15.60	This interval is heavily microveined and quite heterogeneous.																														
R		6.10	15.60	The dominant lithology consists of interbedded graphitic																														
R		6.10	15.60	argillites and quartz-rich greywackes, with individual beds in																														
R		6.10	15.60	the order of 1-2 cm. The argillite is very graphitic (>10%)																														
R		6.10	15.60	and contains almost 10% pyrite, mostly as dusty, primary																														
R		6.10	15.60	pyrite, but also as porphyroblasts associated with late stage																														
R		6.10	15.60	quartz-carbonate stringers, which are common. The wackes are																														
R		6.10	15.60	carbonatized.																														
R		9.35	10.30	A sericitic ash tuff interbedded in the argillite-wacke																														
R		9.35	10.30	sequence. Bright green sericite occurs as sheetings, small																														
R		9.35	10.30	(<.5cm) massive spots and in quartz veins. Orange colored																														
R		9.35	10.30	ankerite occurs as spots. Coarse aggregates of pyrite crystals																														
R		9.35	10.30	ocur in quartz veins and as microveins in the tuff. The upper																														
R		9.35	10.30	contact is conformable with pyrite-rich argillite, the lower																														
R		9.35	10.30	contact is marked by a thick quartz-dolomite vein.																														
N		9.35	10.30					X	MATF	MS	AK	MS1	WF	<<				N		FO		75	<=	01								R1		
L									OA	PY	AK1	SP												$1										
R		10.55	12.80	A 2.25m mottled, grey quartz-dolomite veined interval. At																														
R		10.55	12.80	least three different stages of veining are present and																														
R		10.55	12.80	tetrahedrite is relatively abundant, occurring as small (<.5cm)																														
R		10.55	12.80	blebs. One large vug with several .8cm euhedral dolomite																														
R		10.55	12.80	crystals occurs at 11.2m. From 12.0 to 12.4m is a section of																														
R		10.55	12.80	silicified argillite and a 10cm section of a pyritic,																														
R		10.55	12.80	polymictic conglomerate containing a 4cm band of semi-massive,																														
R		10.55	12.80	coarse grained granoblastic pyrite.																														

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DRILLHOLE/TRAVERSE : CAN5 (CONTINUED)

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   H   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)         RECOV-    M ROCK FYING MIN TURES CHARACS TURE                  H  H  H  H  H ANY H  H  H ANY
E  A                       ERY       I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O     ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1   AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ---------  ---------  --------- -- - ---- -- -- --- -- -- - - - - - -- -- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F   T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I   2   AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C          STRUCTUR-2       A  A  A  A  A  A  A  A

N       10.55     12.80              9 QDVN QZ DO QZ4 << VG              N              M4            DO <(        TT
L                                       7A    DO4 EU BR                                 M*           U4           D*

P       15.60     19.55    10.0       RBAC QZ GR AR6 RB WF          8    P                           GR
L                          5.0              AN    WA4 CH            5                              $1
R       15.60     19.55         This unit is very confused and heterogeneous.  The dominant
R       15.60     19.55         lithology is a black and gray, ribbon-banded unit which
R       15.60     19.55         consists of tightly folded and microfaulted, laminated
R       15.60     19.55         argillite and quartz-rich wacke.  These laminae are 2mm thick
R       15.60     19.55         on average.  The argillite tends to be graphitic (10%) and the
R       15.60     19.55         grey-colored wackes are fine to very fine grained.
R V/    15.95     16.25         A quartz-dolomite vein composed of yellowish dolomite stringers
R V/    15.95     16.25         in a massive white quartz, apparently in a graphitic shear
R V/    15.95     16.25         zone, as indicated by a 5cm band of pure graphite immediately
R V/    15.95     16.25         adjacent to the vein.  Disseminated pyrite and tetrahedrite are
R V'    15.95     16.25         related to the later stage dolomite stringers.  This type of
R V/    15.95     16.25         veining is seen on a smaller scale throughout this PGI.
N V/    15.95     16.25              9 QDVN QZ DO QZ9 <<              N              M9            DO D(        TT
L                                       WW GR DO1                                               <1           D(
R V/    17.20     17.70         The upper contact of this quartz-dolomite vein is extremely
R V/    17.20     17.70         sharp and cross cuts both foliation and laminations.
R V/    17.20     17.70         Yellow dolomite stringers and cavity fillings occur with
R V/    17.20     17.70         sparse associated pyrite in a massive, white quartz vein.  An
R V/    17.20     17.70         excellent tetrahedrite occurrence with some chalcopyrite and
R V/    17.20     17.70         galena is at 17.5m.  This is associated with the dolomite.
N V/    17.20     17.70              9 QDVN QZ DO QZ9 << MX          N   CU     20 M9            DO D( D. D?  TT
L                                       WW    DO1                     CL     40               <1           D(

P       19.55     23.05    100.0       MLTF CB MS CB2 FR BD     4 7  7    P                        P2     D(    D.
L                          100.0            QA PY MS1       1 8 E 0 3                    $1
R       19.55     23.05         A sericitized and carbonatized lapilli tuff.  Orange-brown
R       19.55     23.05         sericite occurs as sheetings and carbonate is pervasive (20%).
R       19.55     23.05         Fragments are well rounded, slightly elongate and are not
R       19.55     23.05         sorted.  Bedding is apparent and tops up is suggested, but
R       19.55     23.05         not conclusive.  Fragments in a mixed tuff-argillite matrix
R       19.55     23.05         indicate a mixing of sediment sources.  Occasional argillite and
R       19.55     23.05         massive pyrite fragments are present.  Both contacts are
R       19.55     23.05         conformable and extremely sharp. 10% disseminated, coarse pyrite
R       19.55     23.05         occurs throughout and trace galena was noted.

P       23.05     34.65    100.0       RBAC QZ GR WA4 RB WF         10    P                           GR D1
L                          50.0             AN    GR2 CH           5                              $2
R       23.05     34.65         This is the ribbon banded unit as described previously.
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DRILLHOLE/TRAVERSE : CAN5 (CONTINUED)

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   F   - I N T E R V A L -  CORE      %      TYPI- GAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)         RECOV-    M ROCK FYING MIN TURES CHARACS TURE              H  H  H  H  H ANY H  H  H ANY
E  A                        ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O     ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ---------  ---------  ---------- -- - ---- -- -- --- -- -- - - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A

R        23.05     34.65        Graphite is abundant, disseminated pyrite is ubiquitous and
R        23.05     34.65        quartz veining and silicification are common.
R        23.35     23.85        Large (to 6cm) patches of white, massive quartz distinguish
R        23.35     23.85        this interval.  This quartz forms irregularly shaped patches
R        23.35     23.85        in the rock rather than discrete veins and contains yellowish
R        23.35     23.85        dolomite stringers and pale green patches of massive sericite.
R        23.35     23.85        Pyrite is abundant and some sphalerite was observed.
N        23.35     23.85             X RBAC QZ PY QZ5 PA <<              N              M5            DO D2
L                                        NW MS PY2                                    M*            <=       D.
R V/     25.20     25.75        Three quartz veins cut by dolomite stringers and carrying fine
R V/     25.20     25.75        grained pyrite, associated massive green sericite and
R V/     25.20     25.75        possible sphalerite.
N V/     25.20     25.75             8 QZVN DO PY QZ8 << PA              N              M8            DO R=
L                                        WW MS DO=                                    M=            <=       D?
R V/     26.35     29.00        A 2.65m quartz vein.  One 10cm massive pyrite band occurs at
R V/     26.35     29.00        26.5m and is associated with an increase in dolomite content.
R V/     26.35     29.00        No other sulphides were noted.  Patches of banded wall rock in
R V/     26.35     29.00        the vein have been intensely sericitized.
N V/     26.35     29.00             X QZVN QZ PY QZ9 MX PA              N    CL      20  9            DO M=
L                                        WW DO PY= VG                                                  Q=

P        34.65     36.10   100.0        MLTF CB MS CB2 FR BD     4 7  7    P                    P2       D(
L                                        OA PY MS1       1 8 E G 3                      $1
R        34.65     36.10        This interval is quite varied but dominantly a lapilli tuff
R        34.65     36.10        very similar to the one between 19.55 and 23.05m.
R        35.40     36.10        A fine grained, carbonatized mafic ash tuff.  Spots of orange
R        35.40     36.10        ankerite are conspicuous.  This 70cm bed is over- and underlain
R        35.40     36.10        by lapilli tuff.
N        35.40     36.10             X MATF AK DO AK1 SP FG              N                    01       DO D=
L                                        SA PY DO1                                                     P1

P        36.10     51.40   100.0        IBTA GR DO AR7 HT MI        10   P              <1            DO !1
L                          70.0              PY TF3 FR RB        5                                    P1
R        36.10     51.40        This interval is extremely heterogeneous and mixed.
R        36.10     51.40        Lithologies include ribbon banded argillite, coarse grained
R        36.10     51.40        grits and lapilli tuff.  Argillite fragments are common in
R        36.10     51.40        both the grits and tuffs.  Dusty pyrite occurs throughout.
R        36.10     51.40        The tuffaceous sections contain pervasive carbonate and the
R        36.10     51.40        argillaceous sections are very graphitic.  These different
R        36.10     51.40        lithologies occur mixed rather than as discreet units.
R        49.90     50.60        A dull green mafic ash tuff with patchy epidote and spots of
R        49.90     50.60        orange-brown ankerite.  Several pyrite-tetrahedrite bearing
R        49.90     50.60        quartz-dolomite microveins cut this unit.  The largest (30cm)
R        49.90     50.60        at the top of the interval carries disseminated galena.
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DRILLHOLE/TRAVERSE : CAN5 (CONTINUED)

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   F     I N T E R V A L -  CORE      %      TYPI- GAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)         RECOV-     M ROCK FYING MIN TURES CHARACS TURE            H  H  H  H  H ANY H  H  H ANY
E  A                        ERY       I      TM TM MAT TX TX F C % M         T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O     ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ---------  ---------  ----------- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C           STRUCTUR-2        A  A  A  A  A  A  A  A

N        49.90     50.60            X MATF CL EP CL1 FG SP            N                  0=       D*    D.TT
L                                       5G AK EP1 <<                                  $1 Q1            D.

P        51.40     87.85  100.0       ARGR QZ GR QZ3 << CH            P          63            GR !1    DO
L                         50.0            NN PY GR1                                          $1       <1
R        51.40     87.85      A black, graphitic argillite containing 10% dusty pyrite which
R        51.40     87.85      is cut by numerous quartz-dolomite stringers (<.5cm) and is
R        51.40     87.85      pervasively silicified in places.  This interval also contains
R        51.40     87.85      fine grained wackes and minor chert, but no volcanic rocks.
R V/     51.80     52.30      Two grey dolomite veins in an unusually pyritic section of
R V/     51.80     52.30      argillite.  These veins appear as more a pervasive
R V/     51.80     52.30      dolomitization than discreet veins, contacts are gradational,
R V/     51.80     52.30      and small fragments of argillite were noted.  Trace galena,
R V/     51.80     52.30      spalerite and tetrahedrite are present.
N V/     51.80     52.30           4 DOVN DO QZ DOB CG SP            N          J1            DO D=    D.TT
L                                       7A PY QZ1                                          R8       D. D.
R        53.00     55.70      Thin (2cm) beds of fine grained, quartz-rich greywacke
R        53.00     55.70      distinguish this interval.  These beds are cut by microfaults
R        53.00     55.70      and are tightly folded in places.  Two bands of almost massive
R        53.00     55.70      sericite at 53.9 and 54.7m are fault related, as indicated by
R        53.00     55.70      the presence of clay gouge.  The lower contact of this
R        53.00     55.70      interval is faulted.
N        53.00     55.70           X IBAW GR PY WA7 IB               N                  M*       GR !1
L                                       1A   AR3                                           $1
N        56.00     57.90           X ARGL PY GR PY4 GB <<            N          <=            GR R4    FC
L                                       NN   GR2                                           P2       +?
R        57.90     61.10      A very pyritic section.  The top 30cm are massive, coarse
R        57.90     61.10      grained pyrite and much of the remainder of the interval is up
R        57.90     61.10      to 50% pyrite.  The pyrite occurs in a grey chert with possible
R        57.90     61.10      tuffaceous interbeds.
N        57.90     61.10           X CHER PY   PY3 GB               N                        R3
L                                       5A
R V/     63.40     63.70      A white quartz vein carrying 10% coarsly crystalline pyrite.
N V/     63.40     63.70           X QZVN QZ PY QZ9                  N          M9            R1
L                                       WW   PY1
R F/     65.80     67.40      Crushed core and a graphitic fault breccia at 66.8m mark this
R F/     65.80     67.40      as a fault zone, possibly related to a fold hinge as suggested
R F/     65.80     67.40      by steepening compositional layering.
N F/     65.80     67.40           X FAUL                            N
R        71.75     72.45      Interlaminated grey chert and black argillite.  Laminae are not
R        71.75     72.45      well preserved and tend to be convoluted and chaotic.
N        71.75     72.45           8 CHER PY   PY1 CH IB             N                        D1
L                                       5A       <<
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DRILLHOLE/TRAVERSE : CAN5 (CONTINUED)

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   F      I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E  A                          ERY      I      TM TM MAT TX TX F C % M        T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O       ( % )    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ---------  ---------    -----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - - -
K  F                         ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                         QUAL   MEM  V  Q LC- 3     3  4 Q N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                         DESIG  AGE       COL           R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A

R V/      75.80     76.05          An economic sulphide bearing quartz-dolomite vein.  A central
R V/      75.80     76.05          barren quartz vein (2cm) is enveloped by a 5cm dolomite vein
R V/      75.80     76.05          carrying disseminated pyrite, chalcopyrite, galena, sphalerite
R V/      75.80     76.05          and tetrahedrite (1.5% total).  This vein is related to a fault
R V/      75.80     76.05          zone, indicated by crushed core and very high graphite content
R V/      75.80     76.05          of the surrounding rock, and dips steeply (30 degrees) to the
R V/      75.80     76.05          core axis.
N V/      75.80     76.05              X QDVN DO QZ DO7 CG                N  C U      30  M3          DO R1 R( R( TT
L                                          5A PY QZ3                                               M7       R( R(
R V/      78.35     78.90          A 55cm barren white quartz vein with vugs and scattered patches
R V/      78.35     78.90          of yellow dolomite.
N V/      78.35     78.90              X QZVN QZ    QZX MX VG                N              MX          DO
L                                          WW                                                      Q*

P         87.85     105.50    100.0      IBTA GR PY GR1 IB RB        10     P              <+          DO D+       GR
L                             70.0           1A DO PY+ << HT        5                    $(          <+          P1
R         87.85     105.50         Interbedded and mixed graphitic argillite and mafic ash tuff.
R         87.85     105.50         The tuffs are fine grained, grey and carry minor sericite and
R         87.85     105.50         ankerite.  They occur as distinct, homogeneous beds or are
R         87.85     105.50         mixedthe argillite.  The argillite contains abundant (>10%)
R         87.85     105.50         graphite and, in places, is interbedded (1-2cm) with grey,
R         87.85     105.50         fine grained dolomite-rich wackes.  Ribbon banding also occurs,
R         87.85     105.50         but rarely.  Grey, coarse grained quartz-dolomite veins
R         87.85     105.50         averaging 15cm and carrying 1% disseminated pyrite are about
R         87.85     105.50         5-10% of this interval.  Dusty, primary pyrite occurs
R         87.85     105.50         sporadically (1%) in the argillite.
R         87.85     89.05          A 1.2m mafic ash tuff bed which has been pervasively
R         87.85     89.05          carbonatized.  Minor orange sericite is present as sheetings.
N         87.85     89.05              X MATF CB MS CB2 FG                N                   P2
L                                          5A    MS=                                  $=
R V/      90.20     90.50          A typical (for this interval) quartz-dolomite vein.  Early
R V/      90.20     90.50          quartz veins are cut by later stage dolomite stringers.  .5%
R V/      90.20     90.50          disseminated pyrite is present.
N V/      90.20     90.50              X QDVN DO QZ DO5 IG <<             N              M5          DO D*
L                                          5A PY QZ5                                               <5
R         92.35     93.70          A carbonatized mafic ash tuff similar to that at 87.85m.  The
R         92.35     93.70          carbonate reacts with HCl only when powdered.
N         92.35     93.70              X MATF CB MS CB2 FG                N                   P2
L                                          5A    MS=                                  $=
R V/      93.75     94.05          A patchy quartz-dolomite vein.  Grey, coarse dolomite contains
R V/      93.75     94.05          white quartz patches and stringers and trace disseminated
R V/      93.75     94.05          pyrite and tetrahedrite.  These veins also occur at
R V/      93.75     94.05          94.6m, 95.3m, 95.6m, 96.0m, and a 40cm vein is at 97.0m.
N V/      93.75     94.05              X QDVN DO QZ DO6 PA <<             N              Q4          DO D.       TT
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DRILLHOLE/TRAVERSE : CAN5 (CONTINUED)

K	L	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% M I	ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN MAT	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	C	%	M	FRACTURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	MINS H ANY XX	ORE-TYPE H A PY	H A CP	MINS H ANY GL YY	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V Q	RT LC- COL	TM 3	QM2	TX 3	TX 4	S R O R	S N D	O H P	DIP / C	F SML	I	T 2	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA PR MO	SL HA			
L								5A	QZ4	CG																	M6		D.	
R		104.65	105.50				Excellent compositional layering parallel to the core axis at																								
R		104.65	105.50				104.65m and becoming perpendicular at 105.5m indicates a fold																								
R		104.65	105.50				hinge.																								
N		104.65	105.50			X	IBTA	DO	GR	DO1	IB							N	BD		0					DO		GR	
L								3A		GR1																	P1		P1	
P		105.50	109.50	100.0			MATF	CB	MS	CB2	FG							P							P2				
L				70.0				5A		MS=															$=					
R		105.50	109.50				A 4m mafic ash tuff bed.																								
P		109.50	111.60	100.0			ARGR	GR	QZ	GR2	BN	CH						P				82					GR			
L				60.0				NN		QZ2	<<																P2			
R		109.50	111.60				A section of graphitic argillite which becomes more siliceous																								
R		109.50	111.60				neat the bottom, as graphite content decreases. This unit																								
R		109.50	111.60				grades into a chert.																								
P		111.60	115.70	100.0			RBCH	GR	PY	GR=	RB							P									GR	D=		
L								7A		PY=																	$=			
R		111.60	115.70				A grey, pyritic ribbon-banded chert. Graphitic laminae																								
R		111.60	115.70				separate ribbon bands and coarse grained disseminated pyrite																								
R		111.60	115.70				occurs throughout. Small pod-shaped fragments of dusty,																								
R		111.60	115.70				primary pyrite were also noted.																								
P		115.70	137.85	100.0			RBAC	GR		GR1	RB							P									GR			
L				80.0				NA																			P1			
R		115.70	137.85				A distinctive unit due to its unique ribbon-banded texture.																								
R		115.70	137.85				Ribbon-bands of black, graphitic argillite and grey, siliceous																								
R		115.70	137.85				chemical or clastic sediments are micro faulted and folded.																								
R		115.70	137.85				This unit is quite homogeneous byut does show silicification																								
R		115.70	137.85				adjacent to quartz veins. The dip of the ribbon-banded																								
R		115.70	137.85				compositional layering varies from 0 degrees to 90 degrees to																								
R		115.70	137.85				the core axis. Some selected dips are: 120.4m - 0																								
R		115.70	137.85				123.5m - 35																								
R		115.70	137.85				124.3m - 45																								
R		121.70	122.30				This section shows uniform unfolded or faulted ribbon-bands																								
R		121.70	122.30				(lamninations) all dipping 70 degrees to the core axis.																								
N		121.70	122.30			X	RBAC											N	BD		70									
P		137.85	151.20	100.0			IBTA	GR	CB	GR/	HT	IB						P							P/		GR			
L									MS	CB/															P+		P/			
R		137.85	151.20				A very heterogeneous and lithologically mixed interval made																								
R		137.85	151.20				more confused by the abundant broken and shattered sections of																								
R		137.85	151.20				core. Components include graphitic argillite, carbonatized and																								

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DRILLHOLE/TRAVERSE : CAN5 (CONTINUED)

KEY	LAG	-INTERVAL- (UNITS = FT) FROM - TO	CORE RECOVERY (%)	% MINERAL X	ROCK TYPE	TYPIFYING MINERAL TM 1	TYPIFYING MINERAL TM 2	QUALIFYING MINERAL QM1	TEXTURES TX 1	TEXTURES TX 2	GRAIN CHARACS F	C	%	M	FRACTURE F	C	P	#	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A	H A	H A	H A	H A	ANY MIN	ORE-TYPE MINS H A	H A	H A	ANY MIN	SUMMARY
KEY	LAG		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC-COL	TM 3	QM2	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I			STRUCTUR-2 T	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
R		137.85 151.20																																sericitic tuffs, siltstones and fine grained wackes or
R		137.85 151.20																																quartzites. These lithologies do occur individually but are
R		137.85 151.20																																usually mixed. A well developed fold hinge occurs at 150m.

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DRILLHOLE/TRAVERSE : CAN6

PROJ. IDEN : CANA START DATE : 87/10/28 COMPLETION DATE : GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10417.00 COLLAR EASTING : 9740.00 COLLAR ELEVATION: 1167.12 GRID AZIMUTH : 315.00
TOTAL LENGTH : 185.60 CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	30.00		225.00	-47.00		
002	62.80		225.00	-45.00		
003	164.30		225.00	-44.00		

KEY	F/L/G	FROM - TO (UNITS = FT)	CORE RECOVERY (%)	%M ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN MAT QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %M	GRAIN CHARACS P	GRAIN CHARACS #	FRACTURE TK	STRUCTUR-1 / STRUCTUR-2	ALTERATION MINS H A BI	ALTERATION MINS H A CY	ALTERATION MINS H A CB	ALTERATION MINS H A MG	ALTERATION MINS H A ANY MIN XX	ORE-TYPE MINS H A PY	ORE-TYPE MINS H A CP	ORE-TYPE MINS H A GL	ORE-TYPE MINS H A ANY MIN YY	SUMMARY
P	OVB	0.00 - 27.10			OVER																					P
R	OVB	0.00 - 27.10			Casing through deep glacial cover. Cored overburden includes sections of ferracrete at 20m. A wide variety of lithologies, some obviously exotic, and smooth, rounded pebbles indicate the overburden is fluvioglacial in origin.																					
P		27.10 - 54.70	95.0		IBAW	GR	AR6	IB	LM			23	P		BD	80								GR	
L			5.0			NA	WA4					7												P1	
R		27.10 - 54.70	An extremely well preserved section of interbedded graphitic argillites and fine to coarse grained greywackes. Individual beds range from 1mm to 15cm and show no mixing; all contacts are very distinct. Soft sediment deformation features are visible and pyrite content is negligible. Grading is poorly developed but suggests tops up. Deformational features, however, suggest tops down. Some excellent clasts of dusty pyrite occur (30.6m) and <1% disseminated pyrite is present in the wacke beds. Micro-thrusting gives indication of structural shortening of this section.																					
P		54.70 - 68.90			IBAW	MS	QZ	MS1	IB	LM		23	P		BD	80 <=								GR	
L						NA	QZ=					7					P1							P1	
R		54.70 - 68.90	Quartz veins are associated with sericitic envelopes and pervasive sericitization. In general, sericite increases dramatically towards the lower sediment-volcanic contact.																					
R	V/	57.10 - 57.75	Yellowish dolomite patches occur in a white quartz vein which carries minor disseminated pyrite and has sericitic envelopes. Identical veins also occur at 59.95m (30cm), 62.8m (80cm), 66.5m (10cm), and 67.3m (10cm).																					
N	V/	57.10 - 57.75			X	QZVN	QZ	DO	QZ9	PA	MX				N		M9							DO	D*
L							WW	PY	DO1													E*		Q1	
R		64.70 - 64.85	Excellent graded bed fines upwards. Steepened dip of																					

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DRILLHOLE/TRAVERSE : CAN6 (CONTINUED)

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   F    I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)        RECOV-    M ROCK FYING MIN TURES CHARACS TURE              H  H  H  H  H ANY H  H  H ANY
E  A                       ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  - T O      ( % )    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT  QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ------.--  -----.--   ----.- -- - ---- -- -- --- -- -- - - - - - -- -- - - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 D N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C           STRUCTUR-2       A  A  A  A  A  A  A  A

R       64.70     64.85          conpositional layering suggests folding, perhaps drag folds
R       64.70     64.85          along the contact fault at 68.5m.  An unusual metallic mineral
R       64.70     64.85          (arsenopyrite?) occurs as coarse (.5cm) crystal aggregates in
R       64.70     64.85          this wacke bed ((1%).
N       64.70     64.85              X GWAC          <<                N   BD      50
R       68.50     68.90          Crushed core, a major lithological contact and intense
R       68.50     68.90          hydrothermal alteration suggest an important contact fault.
R       68.50     68.90          The thick mafic pyroclastic sequence below this fault has
R       68.50     68.90          absolutely no clastic input while the overlying sediments have
R       68.50     68.90          no volcanic component.
N F/    68.50     68.90              X FAUL                            N

P       68.90     86.15              MFVC MS CL MS5 BN CH        30    P            <1              D)
L                                        YG QZ CL1 << FO        8                    P5 $1
R       68.90     86.15          This interval represents a zone of intense alteration adjacent
R       68.90     86.15          to the volcanic-sediment contact.  Sericite is abundant and
R       68.90     86.15          original textures have been destroyed, preventing a specific
R       68.90     86.15          rock type identification, although a mafic tuff is most likely.
R       68.90     86.15          Throughout this interval, small (5cm) zones of fault gouge
R       68.90     86.15          indicate that this is a fault zone.  Dusty pyrite occurs
R       68.90     86.15          as small (<1cm) fragments and fine disseminations.  Alteration
R       68.90     86.15          decreases gradually away from the contact.
R       71.75     71.90          A 15cm section of lapilli tuff with fragments of chert, dusty
R       71.75     71.90          pyrite, tuff and argillite in a yellow, sericitic matrix.
N       71.75     71.90              X MLTF MS PY MS6 FR FO     4 7      N                          F1
L                                        5Y    PY1      3 9  0                      P6

P       86.15     110.10   95.0      MATF CB MS    SP <<              P                  P2       D)
L                          100.0          7Y PY                                  P1
R       86.15     110.10         Carbonatized mafic ash tuff shows patchy sericitic alteration
R       86.15     110.10         and 1% disseminated pyrite.  Carbonate (dolomite?) occurs
R       86.15     110.10         pervasively, as patches, or in microveins with quartz.  This
R       86.15     110.10         rock is very competent with individual core lengths to 1.3m.

P       110.10    153.80   100.0     BASL CB CL CB2 SP <<         3    P            <*      P2
L                           95.0          KK    CL2              2                  0* P2
R       110.10    153.80         Carbonate-replaced phenocrysts identify this as a basalt flow.
R       110.10    153.80         Chlorite is abundant (20%) and sericite occurs as scattered
R       110.10    153.80         patches ( <.5%).  Quartz-carbonate stringers are also apparent.
R       118.90    120.95         A section of lapilli tuff distinguished by the abundant lapilli
R       118.90    120.95         and sericitic alteration.
N       118.90    120.95             X MLTF MS CB MS1 FR SP     6 7      N                  P2
L                                        YG CL CB2 <<    1 7   C                    Q1 P1
R       127.40    133.00         This unit is distinguished by large ( ) core width) yellowish,
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DRILLHOLE/TRAVERSE : CAN6 (CONTINUED)

K E Y	L A G	- INTERVAL - (UNITS = FT) FROM - TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPI-FYING TM	QAL MIN TM	MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F	C	%	M	FRAC-TURE P	#	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS A QZ	A BI	A CY	A CB	A MG	A ANY MIN XX	ORE-TYPE MINS A PY	A CP	A GL	A ANY MIN YY	SUMMARY
K E Y	F L G		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S R D	R N P	S H C	O /	DIP SML	F I		T 2	ID	STK AZM	DIP RT	KF	MU	CL H	EP A	HE A	HA A	PR A	MG A	SL A	HA A	
R		127.40	133.00																													
R		127.40	133.00	sericitic, chlorite-spotted fragments. The matrix is green,																												
R		127.40	133.00	chloritic and very fine grained. A lapilli tuff or possible																												
R		127.40	133.00	debris flow.																												
N		127.40	133.00		X	MLTF	CL	CB	CL2	FR	<<		4	8		N											P2				
L							KK	MS	CB2	MT		1	7	0									P= P2								
R		138.00	143.00	A dramatic increase in sericite content suggests this is a																												
R		138.00	143.00	tuffaceous bed, however, the presence of numerous																												
R		138.00	143.00	quartz-dolomite veins indicateds the possibility of vein																												
R		138.00	143.00	related alteration.																												
N		138.00	143.00		X	MATF	MS	CB	MS2	<<	SP					N					<1			62			D*				
L							7Y	PY	CB3													P2									
P		153.80	185.60	95.0		MLTF	CL	CB	CL2	FR	<<		4	8		P											P2				
L				40.0			KK	MS	CB2	MT		1	7	0									P= P2								
R		153.80	185.60	The same unit as noted at 127.4m. The lower 23m is particulary																												
R		153.80	185.60	homogeneous and relatively unaltered. The upper 32m is heavily																												
R		153.80	185.60	fractured and cut by numerous quartz-carbonate veins.																												
R	V	160.00	160.10	A typical quartz-dolomite vein for this interval except for one																												
R	V/	160.00	160.10	small spot of galena.																												
N	V/	160.00	160.10		X	QDVN	QZ	DO	QZ7	PA	MX					N					M7						DO	D(		D(	
L							WW		DO3																			Q3				
R	V/	162.55	163.10	A 50cm wide quartz-dolomite vein.																												
N	V/	162.55	163.10		X	QDVN	QZ	DO	QZ8	MX	PA					N					M8						DO				
L							WW		DO2																			Q2				

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DRILLHOLE/TRAVERSE : CAN7

PRO: IDEN : CANA | START DATE : 87/11/ 9 | COMPLETION DATE : 87/11/17 | GEOLOGGED BY : RGC + DRH
COLLAR NORTHING: 10542.00 | COLLAR EASTING : 9560.00 | COLLAR ELEVATION: 1168.41 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 148.10 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	70.00		225.00	-45.00		

K	F L A G	- INTERVAL - FROM	TO	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING MINERAL	QAL TM 1	TEXTURES TM 2	TEXTURES MAT	TX 1	TX 2	GRAIN CHARACS F	C	% M	FRACTURE P	# TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	MINS H A ANY MIN	ORE-TYPE H A PY	H A CP	H A GL	MINS H A ANY MIN	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3		TX 3	TX 4	S R D	R	S N P	O H C	DIP /	F SML	T 2	ID	STK AZM	DIP RT	KF	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
P		0.00	6.10		OVER											P															
R		0.00	6.10		Casing																											
P		6.10	13.35				CHER	PY	MS	PY2	IB	FR		1	6	P														D2	
L				5.0				NN		MS2	RB				5			$2													
R		6.10	13.35		A mixed interval containing interbedded pyritic black chert and																											
R		6.10	13.35		chert breccia and very sericitic tuff. Pyrite content is up to																											
R		6.10	13.35		50% over 20cm and occurs mainly as coarse, recrystallized																											
R		6.10	13.35		aggregates which are mixed with dusty, primary pyrite. Four																											
R		6.10	13.35		thin (30cm) tuff beds have been completely sericitized and																											
R		6.10	13.35		carry 10% pyrite. The black cherts have a graphitic argillite																											
R		6.10	13.35		component and local ribbon-banding was noted.																											
P		13.35	17.15	80.0			SETF	MS	PY	MS4	FR			2	7	17	P													D1	
L				.0				5U		PY1			1	5	E	0 7		P4													
R		13.35	17.15		Sericitic lapilli ash tuff. Pyrite is concentrated in thin																											
R		13.35	17.15		(10cm) silica layers (chert interbeds?) and commonly accounts																											
R		13.35	17.15		for 50% of these siliceous sections. The tuff consists of																											
R		13.35	17.15		scattered fragments (20%) in a completely sericitized matrix																											
R		13.35	17.15		and contains sporadic mixed argillite.																											
P		17.15	21.55	100.0			ARGR	GR	PY	GR2	<<					P		<1												GR <1	
L				30.0				NN		PY1																				P2	
R		17.15	21.55		Black graphitic argillite with quartz-pyrite microveins. This																											
R		17.15	21.55		interval is homogeneous to 20.1m where it becomes increasingly																											
R		17.15	21.55		silica rich and tuffaceous.																											
R		20.10	21.55		Black graphitic chert with 15% dusty pyrite. This unit becomes																											
R		20.10	21.55		increasingly tuffaceous towards the bottom of the interval and																											
R		20.10	21.55		grades into a tuff at 21.55m.																											
N		20.10	21.55			B	CHER	PY	GR	PY2	IB	CH				N														GR D2	
L								NN		GR1																				$1	
P		21.55	37.70	100.0			MATF	CB	MS	CB/	<<					P								P/						D=	

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DRILLHOLE/TRAVERSE : CAN7 (CONTINUED)

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   F    - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)          RECOV-    M ROCK FYING MIN TURES CHARACS TURE              H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ---------  ---------  ---------- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 0 N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C          STRUCTUR-2       A  A  A  A  A  A  A  A

L                          70.0           5A    MS1                                  $1
R       21.55     37.70        The primary component of this interval is a grey, carbonatized
R       21.55     37.70        slightly sericitic ash tuff.  Carbonatization is intensive,
R       21.55     37.70        with carbonate accounting for almost 80% of the rock volume in
R       21.55     37.70        places.  Interbedded and mixed argillites are included in this
R       21.55     37.70        interval.
R       23.70     25.15        A section of graphitic argillite mixed in the tuff.  Pyrite is
R       23.70     25.15        disseminated (10%).
N       23.70     25.15             9 ARGR GR PY GR1 <<                N                    GR D1
L                                   NN MS PY1                                $=            P1
R       30.70     31.60        A coarse fragmental.  Tuff and argillite fragments occur with
R       30.70     31.60        sheeted sericite.  Tuffaceous fragments have been intensely
R       30.70     31.60        carbonatized and the lower 30cm of the interval is cut by two
R       30.70     31.60        conjugate quartz-dolomite veins.
N       30.70     31.60             6 MLTF CB MS LF8 FR       8 7      N                P/       D=
L                                   QA            1 7 E C                  $1
R       34.40     37.70        An intensely altered ash tuff.  Dolomite-quartz veins are
R       34.40     37.70        abundant and carbonatization of the tuff is intensive,
R       34.40     37.70        particularly adjacent to the veins.
N       34.40     37.70             X MATF CB MS CB/ <<                N                P/       D=
L                                   5A PY MS2                                $2

P       37.70     40.90     100.0      ARGR PY GR PY2 <<                P            83          GR R2      DQ
L                           80.0           NN QZ GR1                                            P1         <=
R       37.70     40.90        Black graphitic argillite which is cut by numerous quartz
R       37.70     40.90        stringers and pervasively silicified.  Pyrite is assocated with
R       37.70     40.90        the larger (2cm) quartz-dolomite veins.
R       39.40     40.90        The top 30cm of this interval is a carbonatized ash tuff.  The
R       39.40     40.90        lower meter is primarily dolomite with 40% pyrite and sparse
R       39.40     40.90        wispy graphite and white quartz-dolomite veins.
N       39.40     40.90             X MATF PY CB PY3 <<                N            <2      P6       R3
L                                   5A QZ CB6

P       40.90     47.20     100.0      MLAT CB MS LF1 FR <<     1 7     P                    P/
L                           90.0           QA            1 3   0                  $1
R       40.90     47.20        Sericitic and intensely carbonatized ash tuff with scattered
R       40.90     47.20        chert and argillite lapilli.  Sparse granoblastic pyrite ( <1%)
R       40.90     47.20        was also noted.  Sheeted orange-yellow sericite makes up 10% of
R       40.90     47.20        the rock.  Two white quartz-dolomite veins (2cm) occur at
R       40.90     47.20        46.5m.

P       47.20     52.40     100.0      MLTF CB MS LF6 FR       6 7      P                    P/
L                           10.0                         1 3   0                  $1
R       47.20     52.40        Compositionally, this interval is equivalent to the last.
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DRILLHOLE/TRAVERSE : CAN7 (CONTINUED)

K	L	INTERVAL (UNITS = FT) FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	C	%	M	FRACTURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	MINS H A ANY XX	ORE-TYPE H A PY	H A CP	H A GL	MINS H A ANY YY	SUMMARY
K	F			ROCK QUAL	FOR MEM	EN V	RT Q	TM LC-	3		3	TX	TX	S	R	S	O	DIP	F	T	ID	STK	DIP	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA	
E	L				AGE			COL				4	0	N	H	/	SML	I	2		AZM	RT			H	H	H	H	H	H	H	H		
Y	G			DESIG									R	D	P	C						STRUCTUR-2				A	A	A	A	A	A	A	A		
R		47.20	52.40		Fragments are more plentiful (60%) and are larger on average.																												
R		47.20	52.40		Grey chert fragments are the most common but argillite																												
R		47.20	52.40		fragments are also present. This unit may be a tuffaceous																												
R		47.20	52.40		depositional chert breccia.																												
R		48.40	49.00		This section indicates a period of clastic deposition forming																												
R		48.40	49.00		an argillaceous bed in the tuff. Silicification is pervasive																												
R		48.40	49.00		over this interval.																												
N		48.40	49.00		X	ARGR	GR	QZ	GR1	LM	CH							N				63					GR				
L							NN		QZ3																			P1				
R		49.00	50.60		Crushed core with scattered gouge and fault breccia along with																												
R		49.00	50.60		an increase in sericitization intensity indicates a fault zone.																												
N	F/	49.00	50.60		X	FAUL												N														
P		52.40	77.35	100.0		IBCA	GR	CB	CH6	IB	RB						10	P			<=		P1			GR	R=				
L				60.0			NN		AR3	HT	LM						5										P1					
R		52.40	77.35		A heterogeneous and chaotic interval composed primarily of																												
R		52.40	77.35		ribbon-banded to almost massive black and grey cherts, highly																												
R		52.40	77.35		graphitic argillites and thin (to 2m) tuffaceous beds. These																												
R		52.40	77.35		units are interbedded and frequently mixed. Pyrite content																												
R		52.40	77.35		increases markedly towards the lower contact and averages																												
R		52.40	77.35		about 5% of the interval. All tuffaceous beds show intense																												
R		52.40	77.35		carbonatization and are lightly to moderately sericitic.																												
R		52.40	53.50		A zone of crushed chert and argillite with abundant graphite																												
R		52.40	53.50		and six 10cm quartz-dolomite veins suggesting a fault zone.																												
N	F/	52.40	53.50		X	FAUL	QZ	GR	QZ3									N			<3		+=			GR					
L									GR2																		P2					
R		53.50	57.65		A thick section of laminated to ribbon-banded chert.																												
R		53.50	57.65		Quartz-carbonate veins are about 10% of the interval and																												
R		53.50	57.65		graphite occurs on fracture surfaces.																												
N		53.50	57.65		X	CHER	QZ	GR	QZ1	LM	RB							N			<1		++			GR					
L							NN		GR1	<<																	$1					
R		57.65	60.60		A mafic ash tuff with a 20cm quartz-dolomite vein at the upper																												
R		57.65	60.60		contact. The tuff is intensely carbonatized and contains about																												
R		57.65	60.60		10% sheeted sericite. A 50cm black chert bed splits this unit																												
R		57.65	60.60		into two separate beds.																												
N		57.65	60.60		8	MATF	CB	QZ	CB3	<<	FG							N		CL	75	<2		83			D*				
L							3G	MS	MS1														$1									
R		66.70	70.35		A series of dolomite veins up to 30cm wide. These are medium																												
R		66.70	70.35		grained, grey, patchy or mottled and contain scattered wisps of																												
R		66.70	70.35		dusty pyrite and graphite.																												
N	V/	66.70	70.35		4	DOVN	DO	QZ	DOB	MT	PA							N			J2					DO	N=				
L							5A	PY	QZ2																		M8					
R		73.00	73.80		Brecciated (depositional) ribbon-banded and massive grey and																												
R		73.00	73.80		black cherts. Dusty pyrite makes up 20% of the interval.																												

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DRILLHOLE/TRAVERSE : CAN7 (CONTINUED)

K E Y	L A G	- INTERVAL - (UNITS = FT) FROM	TO	CORE RECOV-ERY (%)	% M I	ROCK TYPE	TYPI-FYING	QAL MIN MAT	TEX-TURES	GRAIN CHARACS	FRAC-TURE	STRUCTUR-1 / STRUCTUR-2	ALTERATION MINS / ORE-TYPE MINS	SUMMARY
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V RT LC- COL	TM 1 2 QM1 / TM QM2 3	TX TX 1 4 3	S R S O N H D P / SML C	F C % M # TK DIP F I		T ID STK DIP A A A A A MIN H H H H H ANY / T ID STK DIP KF MU CL EP HE HA PR MO SL HA H H H H H H H H / STRUCTUR-2 A A A A A A A A		
N L		73.00	73.80			X CHBR	PY NW	PY2 BR MT				N	!2	
R		73.80	75.00				Two bands (10cm and 50cm) at the top and bottom of this							
R		73.80	75.00				interval are tuffaceous chert breccia. 50% chert fragments sit							
R		73.80	75.00				in a pale green carbonatized and sericitic tuffaceous matrix.							
R		73.80	75.00				The central section is black argillite with chert fragments.							
N L		73.80	75.00			X CHBR		BR HT	5 7 1 1	0		N		
R		76.60	77.35				A white quartz vein with sparse carbonate stringers, patches of							
R		76.60	77.35				green sericite, very thin chaotic graphite bands and minor							
R		76.60	77.35				disseminated pyrite and sphalerite.							
R		76.60	77.35				A very pyritic (30%) black and grey chert. Pyrite occurs as							
R		76.60	77.35				very fine grained granoblastic aggregates. The lower contact							
R		76.60	77.35				appears to be conformable.							
N L	V/	76.60	77.35			3 QZVN 9A	MS CB PY CB=	MS= CH MX				N CU 80 M9 <= D* CL 60 0= R.		
N L		76.60	77.35			7 CHER	PY 1A	PY3 GB CH				N CL 80 R3		
P L		77.35	125.90	100.0 70.0		MFVC	CB MS Y6 CL	CB2 FR MS1	4 7 4 1 3 0 3			P <* P2 P1 01 D.		
R		77.35	125.90				A relatively thick (48.55m) sequence of mafic tuffs and							
R		77.35	125.90				fragmentals. The entire interval has been intensely							
R		77.35	125.90				carbonatized and reacts with HCl when powdered. Sericitic							
R		77.35	125.90				alteration is pervasive and gives the rock its yellowish color.							
R		77.35	125.90				Chlorite appears as spots and sheetings. This interval is							
R		77.35	125.90				compositionally consistent; individual units vary only in							
R		77.35	125.90				fragment size and abundance, frequently show gradational							
R		77.35	125.90				contacts and in general are hard to differentiate.							
R		77.35	78.80				An intensely altered and pyritic (30%) section of lapilli tuff							
R		77.35	78.80				adjacent to a major sediment-volcanic contact. Sheeted							
R		77.35	78.80				ankerite and sericite separate chert and argillite fragments.							
R		77.35	78.80				Fine grained pyrite occurs between fragments as well.							
R		77.35	78.80				Fragments and irregular dolomite veins indicate the high							
R		77.35	78.80				carbonate content of this rock. A 30cm quartz-dolomite vein							
R		77.35	78.80				carrying trace galena and chalcopyrite occurs at the bottom							
R		77.35	78.80				contact, immediately above a 20cm zone of fault gouge.							
N L		77.35	78.80			X MLTF 50	PY MS CB CB3	PY3 FR GB	6 7 1 5 0			N F6 P3 FU R3 D. D. AK 01 !1		
R		78.60	78.80				A 20cm zone of clay fault gouge and fault breccia.							
N	F/	78.60	78.80			X GOUG		BR				N		
R		104.85	106.90				Yellow sericitic ash tuff contains scattered carbonatized							
R		104.85	106.90				fragments. In places, green chloritic ash sized fragments							

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DRILLHOLE/TRAVERSE : CAN7 (CONTINUED)

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   F    I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)        RECOV-    M ROCK FYING MIN TURES CHARACS TURE            H  H  H  H  H ANY H  H  H ANY
E  A                       ERY      I      TM TM MAT TX TX F C % M        T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O     ( % )    X TYPE  1  2 QM1  1  2 F F C P  # TK   1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ------.--  -----.--  ----.- -- - ---- -- -- --- -- -- - - - - -- -- - - -- --- --- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I   2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C           STRUCTUR-2        A  A  A  A  A  A  A  A

R       104.85    106.90         create a unique and conspicuous spotted texture, almost
R       104.85    106.90         mesh-like, against a yellow, sericitic background.
N       104.85    106.90              X MLAT MS CB MS2 FR SP     4 7       N                    P2
L                                         7Y    CB1 <<    1 3   0                      P2 01
R       106.90    108.60         Several quartz veins to 15cm carry patchy dolomite and sheeted
R       106.90    108.60         chlorite and sericite. Well developed slickensides on one
R       106.90    108.60         fracture face dip 50 degrees and plunge 30 degrees to core
R       106.90    108.60         axis. The presence of other faulted surfaces and fault gouge
R       106.90    108.60         indicate this interval is a fault zone and forms a faulted
R       106.90    108.60         contact between the overlying lapilli ash tuff and the
R       106.90    108.60         underlying chloritic, intensely cabonatized lapilli tuff.
N V/    106.90    108.60              3 QZVN QZ DO QZX MX PA              N    F/      50 MX            DO
L                                         MW                                    $) $)              Q)
R       112.10    112.30         Light purple, almost amethystine quartz has been injected into
R       112.10    112.30         a coarse dolomite vein forming a patchy quartz-dolomite vein.
R       112.10    112.30         Quartz microveins cut the dolomite patches indicating later
R       112.10    112.30         stage silicification. Slightly more than trace pyrite, galena
R       112.10    112.30         and tetrahedrite is disseminated in the vein. This is the
R       112.10    112.30         largest vein of theis type; others occur at 110.7m (5cm),
R       112.10    112.30         117.25m (3cm), 121.5m. In general, late stage purple quartz
R       112.10    112.30         veining is common throughout this PGI, usually as patchy
R       112.10    112.30         microveins and rarely as veins larger than 2cm.
N V/    112.10    112.30              X QDVN QZ DO QZ5 PA MT              N            M5          DO D-   D-
L                                         7P    DO5                                              Q5      D-

P       125.90    133.50  100.0       MATF CB MS CB3 HT CH         4    P                  P3      D*
L                          95.0            YG    MS2 PA           3                    $2 P=
R       125.90    133.50         This interval is characterized by bright yellow sericite and
R       125.90    133.50         purplish dolomite. Alteration , especially carbonatization, is
R       125.90    133.50         intense and original textures have been destroyed over much of
R       125.90    133.50         the interval. Sericite occurs as wispy sheetings, forming a
R       125.90    133.50         web-like texture which, combined with the unusual color, make
R       125.90    133.50         this interval visually conspicuous. The dolomite patches are
R       125.90    133.50         quartz rich, resulting in the purple color. The bottom of this
R       125.90    133.50         interval, at 133.5m, represents a major volcanic-sediment
R       125.90    133.50         contact and is faulted.

P       133.50    148.10  100.0       IBCA GR QZ AR6 IB RB         10   P            <1      +)   GR !.
L                          40.0            BW    CH4 << HT         5                             P1
R       133.50    148.10         Mixed and interbedded black and grey cherts and graphitic
R       133.50    148.10         argillites make up the balance of this interval. Thin (30cm)
R       133.50    148.10         mafic tuffs show up occasionally and, in some places, quartz
R       133.50    148.10         veining is intense. Ribbon-banding is a common texture in the
R       133.50    148.10         cherts and the argillite is commonly laminated. A conspicuous
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DRILLHOLE/TRAVERSE : CAN7 (CONTINUED)

K	F L	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% ROCK TYPE	TYPING 1	TYPING 2	MAT 1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	C	%	M	FRACTURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	MINS H A XX	ORE-TYPE H A PY	MINS H A CP	H A GL	MINS H A YY	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC COL	TM 3	QM2 3	TX 4	TX	S O N R	R H D	S / P	O SML C	DIP I	F	T 2	ID	STK AZM	DIP RT	KF MU H	CL EP A	HE A	HA A	PR A	MO A	SL A	HA A	
R		133.50	148.10	depositional breccia occurs at the top of this interval,																										
R		133.50	148.10	immediately below the volcanic contact. This unit shows up in																										
R		133.50	148.10	DDH CAN8 in the same stratigraphic position and may prove to be																										
R		133.50	148.10	a useful marker horizon. A 30cm band of massive grey chert																										
R		133.50	148.10	carrying 20% combined sulphides is present at 138.2m.																										
R		133.50	133.70	Chert fragments in a matrix of graphite mark the																										
R		133.50	133.70	volcanic-sediment contact fault.																										
N		133.50	133.70		X	BRFA	GR		GR6	BR		4	7		N										GR				
L							NN				1	1	0													#6				
R		133.70	134.20	A very unique, medium grained (1-20mm) depositional																										
R		133.70	134.20	chert-argillite breccia. Black, grey and ribbon-banded chert																										
R		133.70	134.20	fragments comprise 90% of the fragments, the remainder being																										
R		133.70	134.20	argillite. No massive sulphide clasts were noted. Sheeted																										
R		133.70	134.20	sericite separates fragments and disseminated pyrite is just																										
R		133.70	134.20	under 10%. This unit is a good marker horizon and can be																										
R		133.70	134.20	correlated to DDH CAN8.																										
N		133.70	134.20		8	CHBR	PY	MS	PY=	BR	FR		X	7		N								F-		D=				
L							3A		MS=	HT	WF	1	1	E C									$=							
R		135.20	135.50	The same breccia as between 133.7 and 134.2m but containing 10%																										
R		135.20	135.50	dusty pyrite clasts.																										
R		135.20	135.50	A mafic ash tuff or tuffaceous wacke.																										
N		135.20	135.50		5	CHBR	PY	MS	PY1	BR	FR		X	7		N	CL		30			F-		F1				
L							3A		MS=	HT	WF	1	1	E C			FO		78	$=									
N		135.20	135.50		5	MATF	MS	CL	MA2	FG						N	CL		70										
L							5G		CL2											P2	P2									
R		137.15	137.45	A 30cm band of silica containing 20% sulphides including																										
R		137.15	137.45	pyrite, galena and chalcopyrite. Sulphides are recrystallized																										
R		137.15	137.45	and form intergrown crystal aggregates.																										
N		137.15	137.45		X	CHER	PY	CP	QZ8	RX	XA					N	CL		70							R1	R=	R=	
L							5A	GL		IG																			
R		145.10	146.35	Mafic ash tuffs make up 70% of this interval.																										
N		145.10	146.35		7	MATF	MS	AK	MS/	FG	IB					N									AK				
L							5G		AK1											P/					P1				
R		147.40	147.70	Bedding is sub-parallel to the core axis at this point,																										
R		147.40	147.70	suggesting a fold hinge.																										
N		147.40	147.70		X	CHER	PY	GR	QZX	LM						N	BD		10						GR	D=			
L							NA																		P1				

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DRILLHOLE/TRAVERSE : CAN8

PROJ IDEN : CANA | START DATE : 87/11/ 1 | COMPLETION DATE : | GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10647.00 | COLLAR EASTING : 9536.00 | COLLAR ELEVATION: 1179.79 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 135.90 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	30.00		225.00	-46.00		
002	61.00		225.00	-44.00		

K	L	FROM - TO	CORE RECOVERY (%)	% M I	ROCK TYPE	TYPIFYING MINERALS 1	2	GANGUE MINERALS 1	2	TEXTURES F	C	GRAIN CHARACS %	M	FRACTURE #	TK	STRUCTURE-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H QZ	H BI	H CY	H CB	H MG	H XX	ANY MIN A	ORE-TYPE MINS H PY	H CP	H GL	ANY MIN A	SUMMARY
K	F		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC COL	TM 3	QM2 3	TX 4	TX 0	S R D	R S P	O C	DIP	F I	STRUCTURE-2 T	ID 2	STK AZM	DIP RT	KF	MU	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
P	OVB	0.00 - 3.00					OVER									P															
R	OVB	0.00 - 3.00					Casing to 3.0m.																								
P		3.00 - 12.20	50.0		IBTA	GR	MS	AR5	IB							P														GR	
L			.0			NN		TF5																						$1	
R		3.00 - 12.20	Broken, rubbly core with only 50% recovery. Lithology is a																												
R		3.00 - 12.20	series of interbedded graphitic argillites and mafic ash tuffs																												
R		3.00 - 12.20	with sparse ribbon-banded chert.																												
P		12.20 - 30.00	100.0		IBCA	GR	PY	CH6	IB	LM						P														GR	D2
L			20.0			NN		AR4	RB																					$2	
R		12.20 - 30.00	Interbedded graphitic argillites and black and grey, locally																												
R		12.20 - 30.00	ribbon-banded cherts. Pyrite averages 20% and is up to 40%																												
R		12.20 - 30.00	over a 15cm section. Texture is dusty, suggesting that the																												
R		12.20 - 30.00	pyrite is of primary origin. Argillite beds frequently have a																												
R		12.20 - 30.00	tuffaceous component, particularly towards the bottom of the																												
R		12.20 - 30.00	interval.																												
P		30.00 - 31.20	100.0		CHBR	CB	MS	LF5	FR	HT		5	7			P													P2		
L			40.0			7G					3	3	C																		
R		30.00 - 31.20	A tuffaceous depositional breccia with 50% mixed chert and																												
R		30.00 - 31.20	argillite fragments. This fragmental appears to fine upwards.																												
R		30.00 - 31.20	Fragments range in size from 1mm to 5cm.																												
P		31.20 - 39.00	100.0		IBTA	GR	MS	GR2	LM	RB			20			P														GR	D.
L			50.0			NN	QZ	MS=	<<				7																	$2	
R		31.20 - 39.00	Graphitic argillite becoming increasingly tuffaceous towards																												
R		31.20 - 39.00	the bottom of the interval. Weakly sericitized mafic tuff is																												
R		31.20 - 39.00	interlaminated with the argillite over the bottom 2m.																												
R		32.40 - 32.50	A thin (2cm) but very distinct lapilli tuff bed. Compositional																												
R		32.40 - 32.50	layering is not parallel to foliation and poorly developed																												
R		32.40 - 32.50	transposed bedding is evident.																												

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DRILLHOLE/TRAVERSE : CAN8 (CONTINUED)

K	L	- INTERVAL - (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% ROCK TYPE	TYPING 1	TM 2	QAL MIN MAT	TEXTURES 1	TX 2	GRAIN CHARACS F	C	%	M	FRACTURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS QZ	BI	CY	CB	MG	XX	ORE-TYPE MINS PY	CP	GL	YY	SUMMARY
N		32.40	32.50		5	MLTF	MS	PY LF4	FR	IB		4	7			N		BD	45							D*				
L							5G		FO		1	3	0					FO	75	P=										
R	V/	33.90	34.15		A quartz vein with dolomite stringers and sheeted sericite and																										
R	V/	33.90	34.15		graphite.																										
N	V/	33.90	34.15		X	QZVN	QZ	DO QZ9 <<								N		CU	60	M9				DO			GR			
L							WW	MS DO=										CL	90	$*				<=			$=			
R		36.20	37.30		Thin (10cm) beds of graphitic lapilli tuff make up 30% of this																										
R		36.20	37.30		interval. Fragments include chert, argillite and tuff and are																										
R		36.20	37.30		slightly elongate. The matrix is formed primarily by weakly																										
R		36.20	37.30		sericitic mafic tuff and secondarily by graphitic argillite.																										
N		36.20	37.30		3	MLTF	GR	MS LF5	FR			5	7			N								GR						
L							NN				1	5	E	0						P)				P=						
P	V/	39.00	44.10	85.0		QZVN	QZ	DO QZ9	MX	VG			30		P		CU		20	M9				DO			AS		
L				50.0			WW	MS DO=					7				CL		25	$*				Q=			U.		
R	V/	39.00	44.10		A 5m thick quartz vein (1.7m true thickness). Dolomite occurs																										
R	V.	39.00	44.10		as patches and is secondary, filling in vugs and fractures.																										
R	V/	39.00	44.10		Two bands (3cm) of sericitic tuff occur near the upper contact																										
R	V/	39.00	44.10		and a 5cm graphitic band containing euhedral crystals of																										
R	V/	39.00	44.10		arsenopyrite sits at 41.3m. No other sulphides were noted.																										
P		44.10	51.20	100.0		MLTF	CB	PY LF7	FR	MT		7	7	5		P							P4		D*					
L				95.0			QA	MS	WF		1	1	0	3						$=										
R		44.10	51.20		An intensely carbonatized fragmental.																										
R		44.10	51.20		Fragments of chert, tuff and massive dusty pyrite sit in a																										
R		44.10	51.20		carbonatized tuffaceous matrix. Sheeted orange-brown sericite																										
R		44.10	51.20		or ankerite is conspicuous. Pyrite is also present as euhedral																										
R		44.10	51.20		porphyroblasts.																										
R		44.10	44.50		A section of altered tuff adjacent to a large quartz vein.																										
R		44.10	44.50		Sericite and chlorite make up the bulk of the rock and																										
R		44.10	44.50		scattered spots of fuchsite were noted.																										
N		44.10	44.50		X	MATF	MS	CL MS5	FO							N									FU					
L							1G	FU	CL5												MS	MS		O)						
R		44.50	45.00		A section of tuffaceous, chloritic chert with less than 1%																										
R		44.50	45.00		pyrite and 3% dolomite stringers.																										
N		44.50	45.00		X	CHER	CL	DO CL3 <<		CH						N									DO	D(				
L							3A		DO=	BN												$3		<=						
R		50.80	51.20		Two white quartz veins (5cm & 10cm) dip steeply to the core																										
R		50.80	51.20		axis. Patches of yellowish dolomite occur as open space																										
R		50.80	51.20		fillings and some open vugs are present.																										
N	V/	50.80	51.20		9	QZVN	QZ	DO QZ9	VG	MX						N		CU		20	M9				DO					
L							WW		DO=	PA								CL		60					Q=					
P		51.20	58.40	100.0		TUFF	CB	CL C97	MT							P							P7		D)					

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DRILLHOLE/TRAVERSE : CAN8 (CONTINUED)

F K L E Y	A G	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% M I	ROCK TYPE	TYPING TM 1	TYPING TM 2	MAL MIN MAT	TEXTURES TX 1	TEXTURES TX 2	GRAIN CHARACS F	C	% M	FRACTURE P	# TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	H ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H ANY MIN GL	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC-COL	QM2 3	TX 3	TX 4	S R R	R S N	O H D	DIP / SML P	F I C	T 2	ID	STK AZM	DIP RT	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA
E	L																													
Y	G																		STRUCTUR-2											
L				90.0				5A PY																						
R		51.20	58.40	This rock has been almost completely carbonatized and all																										
R		51.20	58.40	original textures have been destroyed. Patches of chlorite																										
R		51.20	58.40	occur in a grey carbonate matrix giving a mottled appearance.																										
R		51.20	58.40	Pyrite granoblasts occur concentrated in 5cm bands of 30%																										
R		51.20	58.40	pyrite.																										
P		58.40	78.70	100.0			MFVC	CL MS	CL2 SP	ML		3		P																
L				98.0				YG CB	MS2			3																		
R		58.40	78.70	A medium altered mafic volcanic. Alteration has obliterated																										
R		58.40	78.70	original textures, making identification difficult, but this is																										
R		58.40	78.70	most likely a mafic flow. Yellow sericite is pervasive and, in																										
R		58.40	78.70	places, shows a distinctive mesh-like or webbed texture. White																										
R		58.40	78.70	carbonate spots are common and quartz-carbonate microveins are																										
R		58.40	78.70	10% of the rock volume.																										
R		62.00	62.20	Dusty pyrite occurs as very fine disseminations and massive																										
R		62.00	62.20	patches and is associated with a 4cm quartz-carbonate vein.																										
N		62.00	62.20			X	MFVC	PY	CL2 <<					N																
L								DY	MS2																					
R	V/	68.50	69.20	Patchy yellowish dolomite is cut by later stage bluish quartz.																										
R	V/	68.50	69.20	10% granoblastic pyrite is present.																										
N	V/	68.50	69.20			9	QDVN	DO QZ	DO6 PA <<					N	CU	55 <4														
L								WW PY	QZ4						CL	60														
P		78.70	88.90	80.0			CHTF	MS PY	TF7 LB	SP		10		P																
L				40.0				7G CB	CH3 HT			5																		
R		78.70	88.90	This interval is complicated and heterogeneous. The basic																										
R		78.70	88.90	lithology is mixed chert and mafic tuff which has been																										
R		78.70	88.90	pervasively carbonatized and shows medium sericitization. CHERT																										
R		78.70	88.90	occurs mixed with tuff and not as separate, distinct beds.																										
R		78.70	88.90	Pyrite is disseminated and granoblastic and is associated with																										
R		78.70	88.90	the chert-rich sections.																										
R		81.40	82.40	A very pyrite rich tuffaceous chert interval. Pyrite occurs as																										
R		81.40	82.40	dusty or granoblastic masses in the chert and is up to 50% over																										
R		81.40	82.40	10cm. Sericite and fuchsite mixed in the cherts indicate an																										
R		81.40	82.40	altered tuffaceous component. Euhedral crystals of																										
R		81.40	82.40	arsenopyrite were also noted.																										
N		81.40	82.40			X	CHTF	PY MS	CH7 MT					N																
L								YA FU	TF3																					
R	F/	88.60	88.90	Sericite-clay cemented fault breccia.																										
N	F/	88.60	88.90			X	BRFA							N																
P		88.90	127.80	100.0			MFVC	CB CL	CB2 FR LB			1 7 5		P																
L				90.0				5G MS	CL1 << MT 1 5			0 3																		

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN8 (CONTINUED)

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   F     I N T E R V A L -   CORE      %      TYPI- GAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L  (UNITS = FT)          RECOV-    M ROCK FYING MIN TURES CHARACS TURE              H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMARY
- --- ------.--  ------.--  ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 0 N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE       COL            R D P C           STRUCTUR-2       A  A  A  A  A  A  A  A

R        88.90     127.80
R        88.90     127.80      A relatively thick (39m) sequence of interbedded and mixed
R        88.90     127.80      mafic lapillli and ash tuffs and some possible flows.
R        88.90     127.80      Pervasive carbonate addition and weak to moderate
R        88.90     127.80      sericitization are characteristic alteration features.  Sparse
R        88.90     127.80      (.5%) disseminated pyrite occurs throughout and spots of
R        88.90     127.80      fuchsite were noted to be associated with areas of stronger
R        88.90     127.80      sericitization.  Trace galena is associated with pyrite in some
R        88.90     127.80      of the carbonate-rich sections.
R        88.90     127.80      These quartz-dolomite veins account for 5% of the interval.
R        88.90     127.80      They consist of grey dolomite and blue-grey quartz and carry
R        88.90     127.80      trace pyrite and very scarce galena.  Average width is 10cm and
R        88.90     127.80      both contacts commonly dip 65 degrees to the core axis.
N        88.90     127.80          = QDVN QZ DO QZ5 PP <<              N    CU     65 Q5          DO D.    D.
L                                      7A   DO5                        CL     65               Q5
R       110.10     110.60      A white quartz vein with patches of yellow dolomite dips almost
R       110.10     110.60      parallel to the core axis.  Trace galena and chalcopyrite
R       110.10     110.60      were noted.
N V/    110.10     110.60          X QDVN QZ DO QZ8 PA MX              N    CU     15 M8          DO +. +. +.
L                                      WW   DO2                        CL     10               Q2

P       127.80     129.50  100.0       CHBR PY MS LFB FR BD    8 7 12   P    BD     70               D1
L                          60.0            3A       <<   7 1   C 5        BD     70   #=
R       127.80     129.50      A very distinct chert-argillite depositional breccia.  Angular
R       127.80     129.50      chert (70%) and argillite (30%) fragments sit in a sericitic
R       127.80     129.50      matrix containing 10% disseminated pyrite.  This unit may be
R       127.80     129.50      correlated with an identical lithology at 133.7m in DDH CAN7.

P       129.50     132.90  100.0       MFVC CB CL LF2 FR LB    2 7  5   P                   P3
L                          90.0            5G MS          1 7  0                    P1 P1
R       129.50     132.90      A carbonatized mafic lapilli pyroclastic.  This is identical to
R       129.50     132.90      the interval ending at 127.8m.

P       132.90     135.90  100.0       IBTA GR MS AR7 IB LM        9   P                   GR
L                          60.0            GA   TF3             5                 P=        P=
R       132.90     135.90      A section of interbedded tuff (30%) and argillite (70%).  In
R       132.90     135.90      places the argillite is laminated with grey, fine grained
R       132.90     135.90      clastic sediments or cherts.  A 10cm bed of tuff with 40%
R       132.90     135.90      argillite fragments sits at 134.3m.
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Depositional?

ESSO Minerals Canada
CANA

DRILLHOLE/TRAVERSE : CAN9

PROJ .DEN : CANA | START DATE : 87/11/ 7 | COMPLETION DATE : | GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10636.00 | COLLAR EASTING : 9708.00 | COLLAR ELEVATION: 1185.19 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 152.70 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	30.00		225.00	-46.00		
002	61.00		225.00	-46.00		

K	F L (UNITS = FT)	- I N T E R V A L -	CORE RECOV- ERY	% M ROCK I	TYPI- FYING TM	QAL MIN MAT 1	TEX- TURES TX 1	TX 2	GRAIN CHARACS F C	FRAC- TURE % M P # TK	STRUCTUR-1 T ID STK DIP 1 AZM RT	ALTERATION MINS H H H H H ANY MIN QZ BI CY CB MG XX	ORE-TYPE MINS H H H ANY A A A MIN PY CP GL YY	SUMMARY
E	A				TM	QM1	1	2	F F					
Y	G	F R O M - T O	(%)	X TYPE	1 2		3	4						
K	F		ROCK	FOR EN RT	TM QM2	TX	TX	S R S	O DIP F		T ID STK DIP KF MU CL EP HE HA PR MO SL HA			
E	L		QUAL	MEM V Q	LC- 3	3	4	O N H	/ SML I		2 AZM RT H H H H H H H H			
Y	G		DESIG	AGE	COL			R D P	C		STRUCTUR-2 A A A A A A A A			
P	OVB	0.00 18.30			OVER					P				
R	OVB	0.00 18.30			Casing.									
P		18.30 22.50	100.0		CHTF MS PY	TF6 IB			7	P	BD 40	P3	D1	
L			90.0		YA CB	CH4 FD			5		BD 65	P1		
R		18.30 22.50	Lightly sericitic, intersely carbonatized mafic tuff which											
R		18.30 22.50	contains interbedded massive blue-grey pyritic chert.											
R	SPL	20.70 22.00	This is a 1.7m thick massive pyritic chert. Granoblastic											
R	SPL	20.70 22.00	pyrite accounts for 20% of the rock volume. Local ribbon-											
R	SPL	20.70 22.00	banding is apparent.											
N	SPL	20.70 22.00		X	CHER PY	PY2 MX MT				N			R2	
L					BA	GB RB								
R		22.10 22.50	A fragmental with well-rounded chert clasts in an almost black,											
R		22.10 22.50	fine grained pyritic matrix which contains sparse sericite.											
N		22.10 22.50		X	CGCP PY MS	LF4 FR			4 7	N	CU 50		D1	
L					1A			1 7	0		CL 90	P*		
P		22.50 52.30	100.0		SETF MS PY	MS4 LM IB			30	P	<=		W1 D. D.	
L			20.0		7Y CL	PY1 SP ((			7		P4 P)		D.	
R		22.50 52.30	The dominant lithology in this interval is an intensely											
R		22.50 52.30	sericitized (40%), pyritic (10%) ash tuff. Original textures											
R		22.50 52.30	are destroyed over much of the interval. The rock is											
R		22.50 52.30	distinctly yellow and has a spotty texture due to the pyrite.											
R		22.50 52.30	Local lapilli tuffs are present and quartz veins are quite											
R		22.50 52.30	frequent (3%).											
R	SPL	22.50 41.50	A fault zone is indicated by the presence of three white, trace											
R	SPL	22.50 41.50	galena-bearing quartz veins and by crushed core and fault											
R	SPL	22.50 41.50	gouge. Several of the crushed pieces of core contain galena,											
R	SPL	22.50 41.50	arsenopyrite and chalcopyrite.											
N	SPL	22.50 41.50	44.5	3	QIVN QZ DO	QZ9 MX PA				N	CU 80 M9	DO	D. D. AS	
L					WW MS DO=						CL 80 $=	Q=	Q.	
R		28.80 29.30	Foliation dips parallel to the core axis. This interval is											

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CAN9

DRILLHOLE/TRAVERSE : CAN9 (CONTINUED)

K	L	INTERVAL (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% M I	ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN MAT	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	C	%	M	FRACTURE P	#	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	MINS H A ANY MIN XX	ORE-TYPE H A PY	H A CP	H A GL	MINS H A ANY MIN YY	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q		QM2 3	TX 3	TX 4	S R D	R S P	O N C	H /	DIP SML	F I		T 2	ID	STK AZM	DIP RT	KF	MU	CL H	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
R		28.80	29.30																													adjacent to a fault, suggesting this steep foliation may
R		28.80	29.30																													indicate drag folding.
N		28.80	29.30			X	SETF	MS	PY	MS4	LM	WF					N		FD		0							W1			
L								7Y	CL	PY1	SP														P4							
R	F/	29.50	29.80																													Fault gouge, crushed core and a 10cm quartz vein mark this as a
R	F/	29.50	29.80																													fault.
N	F/	29.50	29.80			X	FAUL										N															
R	V/	35.50	36.00																													Trace galena occurs at the bottom contact of this 50cm white
R	V/	35.50	36.00																													quartz vein.
N	V/	35.50	36.00			X	QZVN	QZ	DO	QZ9	PA						N		CU		70	M9					DO			D.	
L								WW		DO=									CL		80						Q=					
R	SPL	37.30	38.85																													A typical example of sericitic tuff with one important
R	SPL	37.30	38.85																													difference. Thin (1cm) bands of very fine grained pyrite,
R	SPL	37.30	38.85																													arsenopyrite, galena, chalcopyrite and sphalerite occur
R	SPL	37.30	38.85																													throughout the section. These bands appear to be primary
R	SPL	37.30	38.85																													features.
N	SPL	37.30	38.85			X	SETF	MS	PY	MS4	LM	WF					N												W1	D.	D.	AS
L								7Y		PY1	FD														P4					D.	D.	
R		41.00	41.50																													Foliation parallel to the core axis indicates a possible fold
R		41.00	41.50																													hinge. Again, it may be related to an adjacent fault.
N		41.00	41.50			X	SETF	MS	PY	MS4	LM	WF					N		FD		0							W1			
L								7Y		PY1															P4							
R		50.20	50.60																													Some very well developed folds on a 10cm scale occur in the
R		50.20	50.60																													sericitic tuff. Argillaceous laminae provide very visible
R		50.20	50.60																													compositional layering which results in highly conspicuous
R		50.20	50.60																													folds.
P		52.30	55.00	100.0		ARGR	GR	MS	GR3	LM	FD		15		P												GR	D*			
L				40.0				NN		MS=			5												P=			P3				
R		52.30	55.00																													A tuffaceous graphitic argillite. Alternating sericitic tuff
R		52.30	55.00																													and graphitic argillite result in distinct laminae which show
R		52.30	55.00																													well developed parasitic folds. The lower contact is faulted.
R		52.30	55.00																													Voumetrically, this interval is 80% argillite and 20% tuff.
P		55.00	66.75	100.0		SETF	MS	PY	MS4	WF	SP		15		P		FD		75								71				
L				70.0				7Y	CL	PY1	FD		5												P4	S1						
R		55.00	66.75																													An extremely sericitic felsic tuff. The distinctive yellow
R		55.00	66.75																													color indicates the high sericite content. Pyrite occurs both
R		55.00	66.75																													as very small (<1mm) wispy microveins and as disseminated
R		55.00	66.75																													crystals. Chlorite is associated with the pyrite microveins as
R		55.00	66.75																													selveges. This interval is remarkably homogeneous.
R		55.40	55.80																													This grey microcrystalline quartz contains 20% spotted
R		55.40	55.80																													dolomite and 10% disseminated pyrite. The abundant dolomite
R		55.40	55.80																													indicate vein quartz rather than chert.

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DRILLHOLE/TRAVERSE : CAN9 (CONTINUED)

K	L	- INTERVAL - (UNITS = FT) FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPI-FYING TM 1	TM 2	QAL MIN MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F	C	% M	P	#	TK	FRAC-TURE T	ID	STRUCTUR-1 STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	H A ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	H A ANY MIN YY	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC- COL	TM 3	QM2	TX 3	TX 4	S O R	R N D	H P C	/	DIP SML	F I	T 2	ID	STRUCTUR-2 STK AZM	DIP RT	KF	MU CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A		
N		55.40	55.80			X	CHER	DO	PY	DO2	SP							N									DO	D1				
L								5A		PY1																		02					
P		66.75	77.20	80.0			IBTA	MS		TF5	IB	HT				40		P														
L				.0						AR3	RB					X															P=	
R		66.75	77.20	A very heterogeneous interval containing mixed sericitic tuff,																												
R		66.75	77.20	black argillite and chert. This represents a gradational																												
R		66.75	77.20	contact berween the structurally overlying sericitic tuff and																												
R		66.75	77.20	the underlying chert and argillite. The poor recovery and zero																												
R		66.75	77.20	RQD reflect the crushed nature of the core.																												
R		66.75	67.50	Folding is evident over this interval. Compositional layering																												
R		66.75	67.50	on a 1cm scale is well developed and clearly displays broad																												
R		66.75	67.50	(10cm) parasitic folds.																												
N		66.75	67.50			X	SETF	MS		MS2	FR	FD						N														
L								5A			FO	<<																			P2	
R		75.00	75.20	A thin section of grey ribbon-banded chert. The lower contact																												
R		75.00	75.20	with the sericitic tuff is very sharp and conformable.																												
N		75.00	75.20			X	CHER	PY		PY=	RB							N		CL		65						D=				
L								5A																								
P		77.20	82.90	95.0			CHER	PY	GR	PY2	LM	MT				15		P										GR	R2			
L				20.0				NW		GR1						5												P1			+.	
R		77.20	82.90	A very pyritic massive chert which contains interbedded																												
R		77.20	82.90	graphitic argillite. The chert is mottled black, white and																												
R		77.20	82.90	bluish-grey. 10cm bands containing 70% granoblastic pyrite																												
R		77.20	82.90	occur sporadically and disseminated honey-colored sphalerite is																												
R		77.20	82.90	present in vuggy white quartz veins.																												
R		77.95	78.05	This section is massive dusty pyrite and sheeted sericite (10%)																												
R		77.95	78.05	with spots of fuchsite. This thin interval is significant in																												
R		77.95	78.05	that it is very similar to the 'muddy tuff'. The upper contact																												
R		77.95	78.05	is faulted, the lower one coincides with the end of a drill run																												
R		77.95	78.05	and is not identifiable.																												
N		77.95	78.05			X	PYST	PY	MS	PYB	LM							N										FU	!8			
L								5U	FU	MS2																		0=				
R	SPL	79.60	82.05	A very pyritic chert with sphalerite-bearing quartz veins and																												
R	SPL	79.60	82.05	trace galena, chalcopyrite and tetrahedrite.																												
N	SPL	79.60	82.05			X	CHER	PY		PY2								N											R2	D.	D.	TT
L																														R(	D.	
R	F/	82.05	82.90	This interval of crushed core and intensely graphitic fault																												
R	F/	82.05	82.90	gouge represents a major contact fault which cuts the core at																												
R	F/	82.05	82.90	right angles.																												
N	F	82.05	82.90			X	FAUL	GR		GR9								N		F/		85										
P		82.90	89.80	100.0			MATF	CB	MS	CB4	LM	WF				7		P		FO		80			P4			DO	R)			

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CANA

DRILLHOLE/TRAVERSE : CAN9 (CONTINUED)

K	L	-INTERVAL- (UNITS = FT) FROM	TO	CORE RECOVERY (%)	% ROCK I	TYPE	TYPING TM 1	TYPING TM 2	QAL MIN MAT QM1	TEXTURES TX 1	TEXTURES TX 2	GRAIN CHARACS F	C	% M	FRACTURE P	# TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H QZ	H BI	H CY	H CB	H MG	H ANY XX	ORE-TYPE MINS H PY	H CP	H GL	H ANY YY	SUMMARY
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM QM2 LC-3 COL	TX 3	TX 4	S R D	R S N	O H P	DIP / C	F SML I		T	ID	STK AZM	DIP RT	KF	MU	CL H	EP H	HE H	HA H	PR H	MO H	SL H	HA H	
K	L																2						A	A	A	A	A	A	A	A	
Y	G																		STRUCTUR-2												
L				50.0				5U PY MS2	<<	HO				3																	<=	
R		82.90	89.80	An intensely carbonatized mafic tuff. Color is a medium brown,																												
R		82.90	89.80	caused by brown sericite. Grey dolomite veins are frequent and																												
R		82.90	89.80	some carry granoblastic pyrite. This interval is very																												
R		82.90	89.80	homogeneous and the bottom contact seems conformable with minor																												
R		82.90	89.80	faulting.																												
P		89.80	97.40	100.0				RBAC GR PY	GR2	RB	CH			10		P														GR	R)
L				60.0				1A PY)						5																P2	
R		89.80	97.40	This unit is made up of ribbon-bands of alternating graphitic																												
R		89.80	97.40	argillite (70%) and very fine grained siliceous chemical or																												
R		89.80	97.40	clastic sediments. The light and dark ribbon-bands lend it a																												
R		89.80	97.40	very distinctive appearance.																												
R	V/	93.00	93.20	A steeply dipping (with respect to the core axis) 4cm thick																												
R	V/	93.00	93.20	quartz vein.																												
N	V/	93.00	93.20			5		QZVN QZ	QZX							N			CU	30 MX										
L								WW											CL	30										
P	V/	97.40	99.40	100.0				QZVN QZ DO	QZ9	MX	VG					P			CU	55 M9									DO	
L				70.0				WW DO=											CL	40									Q=	
R	V/	97.40	99.40	A 1.6m wide white vuggy quartz vein. Fragments of																												
R	V/	97.40	99.40	ribbon-banded argillite and wacke appear throughout this vein																												
R	V/	97.40	99.40	which forms the contact between the RBAC and the ribbon-banded																												
R	V/	97.40	99.40	chert.																												
P		99.40	102.75					RBCH	CHX	RB	HO			5		P			CL	70										
L				50.0				3A	<<					3																	
R		99.40	102.75	A very homogeneous grey ribbon-banded chert. The lower contact																												
R		99.40	102.75	is conformable.																												
P		102.75	140.85	85.0				IBTA CB GR	AR4	IB	LM			15		P											P2			GR	D)
L				10.0				5A MS TP6	HT					7																P1	
R		102.75	140.85	This wide interval is very heterogeneous and confused.																												
R		102.75	140.85	Graphitic argillite and carbonatized mafic tuff occur as																												
R		102.75	140.85	separate monolithic beds or are mixed or interlaminated.																												
R		102.75	140.85	Volumetrically, it is 60% tuffs and 40% argillite. Sulphides																												
R		102.75	140.85	are minimal, although scarce (>5%) pyrite is disseminated																												
R		102.75	140.85	throughout, primarily in the tuffs.																												
R		129.60	130.80	Compositional layering parallel to the core axis indicates a																												
R		129.60	130.80	fold hinge.																												
N		129.60	130.80			X		MATF CB MS	CB6							N			BD	0						P6				
L								YA	MS1													$1									
R		133.40	135.30	A 1.9m mottled grey dolomite vein cut by quartz microveins.																												
N		133.40	135.30			X		DOVN DO	DOX	P4	<<					N				<=										DO	

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CANA

DRILLHOLE/TRAVERSE : CAN9 (CONTINUED)

F	INTERVAL -		CORE	%		TYPI-	QAL	TEX-	GRAIN	FRAC-		STRUCTUR-1	ALTERATION MINS					ORE-TYPE MINS				
K L	(UNITS = FT)		RECOV-	M	ROCK	FYING	MIN	TURES	CHARACS	TURE			H	H	H	H	H	ANY	H	H	H	ANY
E A			ERY	I		TM	TM	MAT	TX	TX	F C % M	T	ID	STK	DIP	A	A	A	A	A	MIN	A	A	A	MIN
Y G	FROM -	TO	(%)	X	TYPE	1	2	QM1	1	2	F F C P # TK	1		AZM	RT	QZ	BI	CY	CB	MG	XX	PY	CP	GL	YY	SUMMARY
K F			ROCK	FOR	EN	RT		TM	QM2	TX	TX S R S Q DIP F	T	ID	STK	DIP	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA	
E L			QUAL	MEM	V	Q	LC-	3		3	4 O N H / SML I	2		AZM	RT			H	H	H	H	H	H	H	H	
Y G			DESIG	AGE			COL				R D P C			STRUCTUR-2				A	A	A	A	A	A	A	A	
L								5A		MT											QX					
R	137.50	140.85	Laminated and ribbon-banded argillite and fine grained																							
R	137.50	140.85	siliceous sediment. This unit grades into mafic tuff over 40cm																							
R	137.50	140.85	at the bottom.																							
N	137.50	140.85		X	RBAC	GR		GR2	LM	RB		N									GR					
L								1A													P2					
P	140.85	152.70	100.0		MFVC	CL	CB	CL3	MT	SP	6	P							02						
L			80.0				5G	MS	CB2	<<	3							$1	P3						
R	140.85	152.70	Green mafic pyroclastics which are carbonatized and lightly																							
R	140.85	152.70	sericitic. This interval is the thick mafic sequence seen in																							
R	140.85	152.70	holes CAN6, CAN7 and CAN8.																							
R V/	150.50	151.00	A white, vuggy quartz vein containing patches of yellowish																							
R V/	150.50	151.00	dolomite (10%) and chlorite (20%).																							
N V/	150.50	151.00		X	QZVN	QZ	CL	QZ8	VG	PA		N		CU		20	M8				DO					
L							WG	DO	CL2					CL		20			+2		Q1					

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CANA

DRILLHOLE/TRAVERSE : CAN10

PROJ. IDEN : CANA
START DATE : 87/11/ 9
COMPLETION DATE :
GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10226.00
COLLAR EASTING : 9687.00
COLLAR ELEVATION: 1166.98
GRID AZIMUTH : 315.00
TOTAL LENGTH : 78.00
CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		

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CANA

DRILLHOLE/TRAVERSE : CAN11

PR[illegible]CT IDEN : CANA
START DATE : 87/11/ 9
COMPLETION DATE :
GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10313.00
COLLAR EASTING : 9549.00
COLLAR ELEVATION: 1159.31
GRID AZIMUTH : 315.00
TOTAL LENGTH : 37.20
CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		

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CANA

DRILLHOLE/TRAVERSE : CAN12

PROJ IDEN : CANA | START DATE : 87/11/ 9 | COMPLETION DATE : | GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10505.00 | COLLAR EASTING : 9258.00 | COLLAR ELEVATION: 1176.20 | GRID AZIMUTH : 315.00
TOTAL LENGTH : 120.70 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	30.00		225.00	-42.00		
002	61.00		225.00	-42.00		

F	- INTERVAL -	CORE	%	TYPI-	QAL	TEX-	GRAIN	FRAC-	STRUCTUR-1	ALTERATION MINS	ORE-TYPE MINS
K	L (UNITS = FT)	RECOV-	M	ROCK	FYING	MIN	TURES	CHARACS	TURE	H H H H H ANY	H H H ANY
E	A	ERY	I		TM TM	MAT	TX TX	F C % M		T ID STK DIP	A A A A A MIN	A A A MIN
Y	G FROM - TO	(%)	X	TYPE	1 2	QM1	1 2	F F C P # TK	1	AZM RT	QZ BI CY CB MG XX	PY CP GL YY	SUMMARY
K	F	ROCK	FOR	EN	RT	TM	QM2	TX TX	S R S O	DIP F	T ID STK DIP	KF MU CL EP HE HA	PR MO SL HA
E	I.	QUAL	MEM	V	Q	LC-	3	3 4	O N H /	SML I	2 AZM RT	H H H H H H	H H
Y	G	DESIG	AGE			COL		R D P C		STRUCTUR-2	A A A A A A	A A

P	OVB	0.00	27.10			OVER				P					
R	OVB	0.00	27.10	Overburden to 27.1m.											
P		27.10	42.90	90.0		CHTF MS PY MS5 BN RB		30	P		<*			GR W1	
L				5.0		YA GR PY1 FD WB		7				P5		$=	
R		27.10	42.90	This interval, and in fact this entire drill hole, is											
R		27.10	42.90	characterized by intense, pervasive sericitization (50%) giving											
R		27.10	42.90	the rock a distinctive yellow color. Wispy laminae (1mm) of											
R		27.10	42.90	graphitic argillite form about 5% of the volume. These											
R		27.10	42.90	laminae range from completely undeformed to tightly folded.											
R		27.10	42.90	All original textures have been obliterated, as has most											
R		27.10	42.90	evidence of original composition. The rock is fairly siliceous											
R		27.10	42.90	(20%) suggesting a felsic composition. This interval is											
R		27.10	42.90	shattered and incompetent. Pyrite occurs as wispy bands and											
R		27.10	42.90	increases in abundance towards the bottom of the interval.											
P		42.90	54.60	100.0		CHTF MS QZ MS3 WB		20	P		P4			W2	
L				50.0		9A PY QZ4		7				P3			
R		42.90	54.60	This interval indicates increased silica and pyrite content in											
R		42.90	54.60	the sericitic tuff. Increased amount of interbedded chert											
R		42.90	54.60	below this interval suggests this represents a mixed tuff and											
R		42.90	54.60	chert and is a gradational contact.											
R		49.50	50.50	Grey, massive chert wiht 15% pyrite and 5% arsenopyrite.											
R		49.50	50.50	Convoluted compositional layering is evident.											
N		49.50	50.50		X	CHER PY AS CHX BD			N	CU	45			AS R2	
L						3A				CL	50			R=	
P		54.60	58.80	80.0		CHER PY MS PY= MX SP		30	P	CU	90			DO W=	
L				50.0		5A DO		9				$)		O*	
R		54.60	58.80	Massive grey chert distinguished by spots (<1mm) of dolomite,											
R		54.60	58.80	wispy pyrite (7%) and an absence of compositional layering.											
P	F/	58.80	64.40	80.0		FAUL QZ MS QZ4 <<		99	P		<4			GR D1	

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CANA

DRILLHOLE/TRAVERSE : CAN12 (CONTINUED)

KEY	FROM	TO	CORE RECOVERY (%)	% ROCK	TYPIFYING MINERALS 1	TYPIFYING MINERALS 2	QAL MAT	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	GRAIN CHARACS M	FRACTURE #	FRACTURE TK	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION MINS H A QZ	ALTERATION MINS H A BI	ALTERATION MINS H A CY	ALTERATION MINS H A CB	ALTERATION MINS H A MG	ALTERATION MINS H A ANY MIN XX	ORE-TYPE MINS H A PY	ORE-TYPE MINS H A CP	ORE-TYPE MINS H A GL	ORE-TYPE MINS H A ANY MIN YY	SUMMARY
L			.0		5A	PY	MS3					X																		
R	F/ 58.80	59.90			Crushed and shattered core with abundant serecitic gouge																									
R	F/ 58.80	59.90			indicate a fault zone in the sericitic tuff and chert.																									
R	F/ 58.80	59.90			Graphite bands occur at the top of the interval.																									
R	V/ 58.80	59.90			Sphalerite-bearing quartz veins with patchy yellow dolomite.																									
N	V/ 58.80	59.90		5	QZVN	QZ	DO	QZ9	PA					N		CU		75	M9						DO					
L						WW		DO1								CL		75							Q1		R(			
P	64.40	68.50	75.0		CHER	PY	DO	PY1	MX	<<		7		P											DO	D1		GR		
L			10.0			3A	GR					5													O=			P)		
R	64.40	68.50			Massive grey to black dolomite spotted chert. The upper 40cm																									
R	64.40	68.50			are graphitic and very black.																									
P	68.50	74.50	95.0		CHTF	MS	PY	MS4	MT	<<		99		P												!=				
L			50.0			3A		PY=	FO			X																		
R	68.50	74.50			Crushed core makes most of this interval difficult to describe.																									
R	68.50	74.50			Generally it is a sericitic or tuffaceous chert containing 5%																									
R	68.50	74.50			dusty wisps of pyrite.																									
R	70.70	71.35			Steeply dipping foliation in an extremely sericitic tuff.																									
R	70.70	71.35			Greenish sericite makes up 70% of this interval.																									
N	70.70	71.35		X	SETF	MS	PY	MS7	FO					N		FO		10							D)					
L						3Y		PY)																						
P	74.50	80.80	100.0		CHER	PY	MS	PY2	RB	<<		7		P											GR	R2				
L			70.0			NN	GR	MS=				5													P=					
R	74.50	80.80			Grey to black massive to ribbon-banded pyritic and graphitic																									
R	74.50	80.80			chert with sporadic sheeted sericite. One section of 50%																									
R	74.50	80.80			pyrite occurs at 76m.																									
P	80.80	86.35	95.0		SETF	MS	PY	MS5	WL	<<		7		P					<1						GR	W2				
L			70.0			5Y	QZ	PY2				5													$(					
R	80.80	86.35			Intensely sericitic tuff with 20% wispy pyrite. Original																									
R	80.80	86.35			textures and composition are unrecognizable. This interval is																									
R	80.80	86.35			very distinct due to its yellow color and wispy pyrite																									
R	80.80	86.35			occurrence.																									
R	83.70	83.80			A 10cm band of chert.																									
N	83.70	83.80		X	CHER	PY		PY1	RB					N												!1				
L						5A																								
P	86.35	103.70	90.0		CHTF	MS	PY	CH7	IB			20		P												D)				
L			40.0			5Y		TF3				7																		
R	86.35	103.70			A very confused and complex interval consisting of interbedded																									
R	86.35	103.70			and mixed chert and sericitic tuff. A few distinct beds can be																									
R	86.35	103.70			discerned but for the most part, the two lithologies are mixed.																									

KEY	FROM	TO	CORE RECOVERY (%)	% ROCK	FOR MEM AGE	EN V	RT Q	LC- COL	TM 3	QM2	TX 3	TX 4	S R D	O N H P	DIP / SML C	F I	T 2	STRUCTUR-2 ID	STRUCTUR-2 STK AZM	STRUCTUR-2 DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A
K	F			ROCK	FOR	EN	RT		TM	QM2	TX	TX	S	R	S	O	DIP	F	T	ID	STK	DIP	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA
E	L			QUAL	MEM	V	Q	LC-	3		3	4	0	N	H	/	SML	I	2		AZM	RT			H	H	H	H	H	H	H	H
Y	G			DESIG	AGE			COL					R	D	P	C				STRUCTUR-2					A	A	A	A	A	A	A	A

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DRILLHOLE/TRAVERSE : CAN12 (CONTINUED)

KEY	LAG	-INTERVAL- FROM - TO (UNITS = FT)	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN MAT QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	GRAIN CHARACS M	FRACTURE #	FRACTURE TK	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION MINS H A QZ	ALTERATION MINS H A BI	ALTERATION MINS H A CY	ALTERATION MINS H A CB	ALTERATION MINS H A MG	ALTERATION MINS ANY H A XX	ORE-TYPE MINS H A PY	ORE-TYPE MINS H A CP	ORE-TYPE MINS H A GL	ORE-TYPE MINS ANY H A YY	SUMMARY
K	F		ROCK QUAL	FOR MEN	EN V	RT Q	TM LC- 3	QM2	TX 3	TX 4	S R	R D	S O	DIP P	F C		T 2	ID	STK AZM	DIP RT	KF	MU H	CL H	EP H	HE H	HA H	PR A	MO A	SL A	HA A	
E	L																														
Y	G		DESIG	AGE			COL				R	D	P	C					STRUCTUR-2			A	A	A	A	A	A	A	A	
R		86.35 88.40			Grey chert with folded bedding.																										
N		86.35 88.40		X	CHER		CHX	BD	FD						N																
L						3A																									
R		88.40 89.40			An intensely sericitic tuff bed.																										
N		88.40 89.40		X	SETF	MS	QZ	MS4	MT	<<					N						<1										
L						5Y		QZ1													P4										
R		102.20 103.70			Sericitic tuff with 20% wispy pyrite. This is identical to the																										
R		102.20 103.70			section between 80.8 and 86.35m.																										
N		102.20 103.70		X	SETF	MS	PY	MS5	WB						N		CU		50							W2				
L						5Y		PY2													P5										
P		103.70 107.85	100.0		CHBR			CH8	FR	CH		1	7	5	P																
L			30.0					WA2			1	3		0 3																	
R		103.70 107.85			A depositional chert breccea. Large (10cm) chert fragments sit																										
R		103.70 107.85			is a mediun grained greywacke. The lower contact is faulted.																										
P		107.85 120.70	100.0		CHTF	MS	PY	TF6	WB	IB			10		P															W=	
L								CH4					5							P3										
R		107.85 120.70			Interbedded sericitic tuff and chert.																										
R		107.85 108.80			Yellow sericitic tuff with 20% wispy pyrite.																										
N		107.85 108.80		X	SETF	MS	PY	MS5	WB						N															W2	
L						5Y		PY2													P5										
R		108.80 111.80			Heterolithic depositional breccia containing 80% chert																										
R		108.80 111.80			fragments and 20% tuff fragments. This fragmental occurs both																										
R		108.80 111.80			above and below a sericitic chert bed.																										
N		108.80 111.80		5	CHBR	MS		LF8	FR			8	7		N		CL		60											
L											1	3	C							P1										
R		111.80 113.40			Massive grey and white mottled chert.																										
N		111.80 113.40		X	CHER				MT						N																
R		119.20 120.00			Yellow sericitic tuff with 30% dusty pyrite in irregular																										
R		119.20 120.00			laminae.																										
N		119.20 120.00		X	SETF	MS	PY	MS5	MT						N		CL		50											13	
L						5Y		PY3													P5										

Het Frag.

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CANA

DRILLHOLE/TRAVERSE : CAN13

PRO. IDEN : CANA START DATE : 87/11/10 COMPLETION DATE : GEOLOGGED BY : RGC + RGC
COLLAR NORTHING: 10512.00 COLLAR EASTING : 9157.00 COLLAR ELEVATION: 1177.82 GRID AZIMUTH : 315.00
TOTAL LENGTH : 114.60 CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		225.00	-45.00		
001	45.00		225.00	-46.00		
002	91.50		225.00	-46.00		

K E Y	F L G	- INTERVAL - (UNITS = FT) FROM - TO	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING 1	TYPIFYING 2	QAL MIN QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	FRACTURE M	FRACTURE #	FRACTURE TK	STRUCTUR-1 1	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION MINS H A QZ	ALTERATION MINS H A BI	ALTERATION MINS H A CY	ALTERATION MINS H A CB	ALTERATION MINS H A MG	ALTERATION MINS H ANY MIN XX	ORE-TYPE MINS H A PY	ORE-TYPE MINS H A CP	ORE-TYPE MINS H A GL	ORE-TYPE MINS H ANY MIN YY	SUMMARY
K E Y	F L G		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	T 2	ID	STK AZM	DIP RT	STRUCTUR-2 KF		CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
P	OVB	0.00	45.70				OVER									P															
R	OVB	0.00	45.70				Casing to 45.7m.																								
P		45.70	69.50	78.0			CHTF	MS	PY	TF8	IB	WB		50	P		FO		80								W=			
L				.0			5Y	PY	CH2	FO	<<			9						P4											
R		45.70	69.50				This interval is difficult to intepret due to intense sericitic																									
R		45.70	69.50				alteration and crushed core. Sericite is very dominant, giving																									
R		45.70	69.50				the rock a distinctive yellow color. Grey sericitic chert is																									
R		45.70	69.50				mixed and interbedded, decreasing in volume towards the bottom																									
R		45.70	69.50				of the interval. Original textures and composition of the																									
R		45.70	69.50				volcanics are destroyed, although the abundant silica suggests																									
R		45.70	69.50				felsic protolith.																									
R		53.80	54.50				A grey sericitic chert. Sheeted sericite forms 20% of the rock																									
R		53.80	54.50				volume.																									
N		53.80	54.50				X	SECH	MS		MS2				N																
L								5A													$2										
R		54.50	54.80				Quartz vein with 10% disseminated pyrite.																									
N	V/	54.50	54.80				X	QZVN	PY	MS	PY1	MT			N														D1		
L																					$1										
R		61.60	63.70				Very rubbly core with 40% recovery.																									
R		65.30	66.40				A cream colored sericitic rhyolite flow. This rock is 20%																									
R		65.30	66.40				sericite and 80% silica with very thin (<1mm) wispy bands of																									
R		65.30	66.40				pyrite.																									
N		65.30	66.40				X	RHYL	MS		MS2	WB			N																
L								7Y													$2										
R	V/	68.00	68.60				Quartz veins containing 10% sheeted chlorite and 10% dusty																									
R	V/	68.00	68.60				pyrite make up 50% of this interval.																									
N	V/	68.00	68.60				5	QZVN	CL	PY	CL1				N																
L									WG		PY1											$1										
R		68.80	69.10				A thin (30cm) bed of pyritic sericitic lapilli tuff.																									
R		68.80	69.10				Lapilli are siliceous and make up 20% of the rock. The matrix																									
R		68.80	69.10				is 30% dusty pyrite and 30% sericite.																									

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DRILLHOLE/TRAVERSE : CAN13 (CONTINUED)

K E Y	L A G	- INTERVAL - (UNITS = FT) FROM - TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPIFYING MINERAL 1	TYPIFYING MINERAL 2	GANGUE MINERAL 1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	FRACTURE M	FRACTURE #	FRACTURE TK	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION MINS H A QZ	ALTERATION MINS H A BI	ALTERATION MINS H A CY	ALTERATION MINS H A CB	ALTERATION MINS H A MG	ALTERATION MINS H A ANY XX	ORE-TYPE MINS H A PY	ORE-TYPE MINS H A CP	ORE-TYPE MINS H A GL	ORE-TYPE MINS H A ANY YY	SUMMARY
K E Y	F L G		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC- COL	TM 3	QM2	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	T 2	ID	STK AZM	DIP RT	STRUCTUR-2	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
N		68.80	69.10		X	SETF	PY	MS	PY3	FR	BN		2	7		N					F2									!3	
L							5U		MS3			1	7	0							$3										
P		69.50	99.10	95.0		SETF	MS	PY	MS5	WB	HO			25		P		FO		80									W=	
L							7Y		PY=	FO				7							P5										
R		69.50	99.10	A thick (30m) section of sericitic felsic ash tuff with																												
R		69.50	99.10	scattered lapilli tuff interbeds. Sericitic alteration is																												
R		69.50	99.10	intense, giving the rock its distinctive yellow color. Wispy																												
R		69.50	99.10	bands of pyrite occur throughout the interval (3%). This																												
R		69.50	99.10	interval is very homogeneous.																												
R		76.50	80.60	Siliceous lapilli make up 30% of this rock which is otherwise																												
R		76.50	80.60	identical to the PGI.																												
N		76.50	80.60		B	SETF	MS	PY	MS5	FR	FO		3	7		N					F3									W=	
L							7Y	QZ	QZ3			1	7	0							P5										
R		83.50	85.10	The same lithology as at 76.5m. Two thin (1cm) graphitic bands																												
R		83.50	85.10	containing siliceous fragments occur at 84.6m.																												
N		83.50	85.10		X	SETF	MS	QZ	MS5	FR	FO		3	7		N		FO		80	F3								GR	W=
L							7Y	PY	QZ3			1	7	0							P5								L.		
R	V/	86.70	86.85	A 10cm quartz vein with sheeted chlorite (5%) and patchy																												
R	V/	86.70	86.85	dolomite (5%).																												
R		86.70	86.85	A 5cm pyritic and sericitic tuff band. It is distinct due to																												
R		86.70	86.85	its dark grey color caused by a high (20%) dusty pyrite																												
R		86.70	86.85	content.																												
N	V/	86.70	86.85		6	QZVN	QZ	CL	CL=							N					MX								DO	
L							WW	DO	DO=																				Q=		
N		86.70	86.85		4	SETF	MS	PY	MS4							N														!2	
L							3A		PY2												$4										
P		99.10	113.30	95.0		IBTA	MS	GR	TF6	LM	FO			30		P		FO		80									GR	D.
L				50.0			YN		AR4					7				BO		80	P4								$2	
R		99.10	113.30	This interval represents a mixing of the felsic ash tuff with																												
R		99.10	113.30	graphitic argillite. The two lithologies form separate																												
R		99.10	113.30	laminations (1-2cm) and also occur mixed. Compositional																												
R		99.10	113.30	layering is parallel to foliation. Pyrite content is noticably																												
R		99.10	113.30	reduced from the preceeding interval.																												
R		111.60	113.30	Dark grey quartz veins make up most of this interval of very																												
R		111.60	113.30	graphitic argillite. There is no tuffaceous component here,																												
R		111.60	113.30	only clastic sediment. This could represent a major contact																												
R		111.60	113.30	fault.																												
N		111.60	113.30		X	ARGR	QZ	GR	QZ5	<<						N					<5								GR		
L							1A		GR4																				P4		
P		113.30	114.60	100.0		MFVC	CB	MS	CB6					40		P								P6							

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DRILLHOLE/TRAVERSE : CAN13 (CONTINUED)

KEY	FL AG	INTERVAL (UNITS = FT) FROM - TO	CORE RECOVERY (%)	% MI X	ROCK TYPE	TYPIFYING TM 1	TYPIFYING TM 2	QAL MIN MAT QM1	TEXTURES TX 1	TEXTURES TX 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	GRAIN CHARACS M	FRACTURE P	FRACTURE #	FRACTURE TK	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION H A QZ	ALTERATION H A BI	ALTERATION H A CY	ALTERATION H A CB	ALTERATION H A MG	MINS ANY H A MIN	ORE-TYPE H A XX	ORE-TYPE H A PY	ORE-TYPE H A CP	MINS ANY H A GL	MINS ANY H A YY	SUMMARY
KEY	FL AG		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC-COL	TM 3	QM2	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	STRUCTUR-2 T	STRUCTUR-2 ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A		
L							OA	MS2				9																					
R		113.30	114.60																														
R		113.30	114.60																														
R		113.30	114.60																														
R		113.30	114.60																														

Intensely carbonatized mafic pyroclastic. This rock is similar to other carbonatized mafics seen in other CANA drill holes. Sheeted orange sericite occurs in an almost totally carbonate (dolomite) matrix.