433056 54-D 16 02

COBEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 1 OF 4

11E/11B Dup. available

Gulf

Gulf Minerals Canada Limited

433056 54-D 16 02

COBEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 1 OF 4

11E/11B Dup. available

A REPORT ON

GEOCHEMISTRY

GEOLOGICAL MAPPING

PROSPECTING

DIAMOND DRILLING

11E/011A

11E/11B

11E/11C

433056 54-D 16 02

TABLE OF CONTENTS

PART I

I INTRODUCTION
- A) SUMMARY
- B) PERSONNEL

II GEOCHEMISTRY
- A) SOILS
- B) ROCK GEOCHEMISTRY

III GEOLOGY
- A) INTRODUCTION
- B) GENERAL GEOLOGY
- C) ROCK UNITS
- D) STRUCTURE

IV PROSPECTING

PART II

DIAMOND DRILLING PROGRAMME

ILLUSTRATIONS

FIGURE 1	MAP OF CANADA
FIGURE 2	LOCATION MAP
FIGURE 3	STRATIGRAPHIC UNITS
TABLE I	LAND STATUS
APPENDIX I	ASSAYS
	A) WHOLE ROCK
	B) SOILS

MAPS ENCLOSED IN POCKETS

PART 3

Plate ✓25 E g	Geological Compilation	1 in. = 1/4 mile
✓26 E g	Geological Compilation	1 in. = 1/4 mile
✓27 E g	Geological Compilation	1 in. = 1/4 mile
Plate ✓26 D gb	Prospecting	1 in. = 1/4 mile
✓26 E gb	Prospecting	1 in. = 1/4 mile
✓27 D gb	Prospecting	1 in. = 1/4 mile
✓27 E gb	Prospecting	1 in. = 1/4 mile

PART 4

Plate ✓111 g	Geological Compilation	1 in. = 400 feet
✓111 gb	Prospecting	1 in. = 400 feet
	Geochemical Sampling	
Plate ✓111 f	Sample Location	1 in. = 400 feet
✓111 fb	Values Uranium A & C	1 in. = 400 feet

WDY

Gulf Minerals Canada Limited

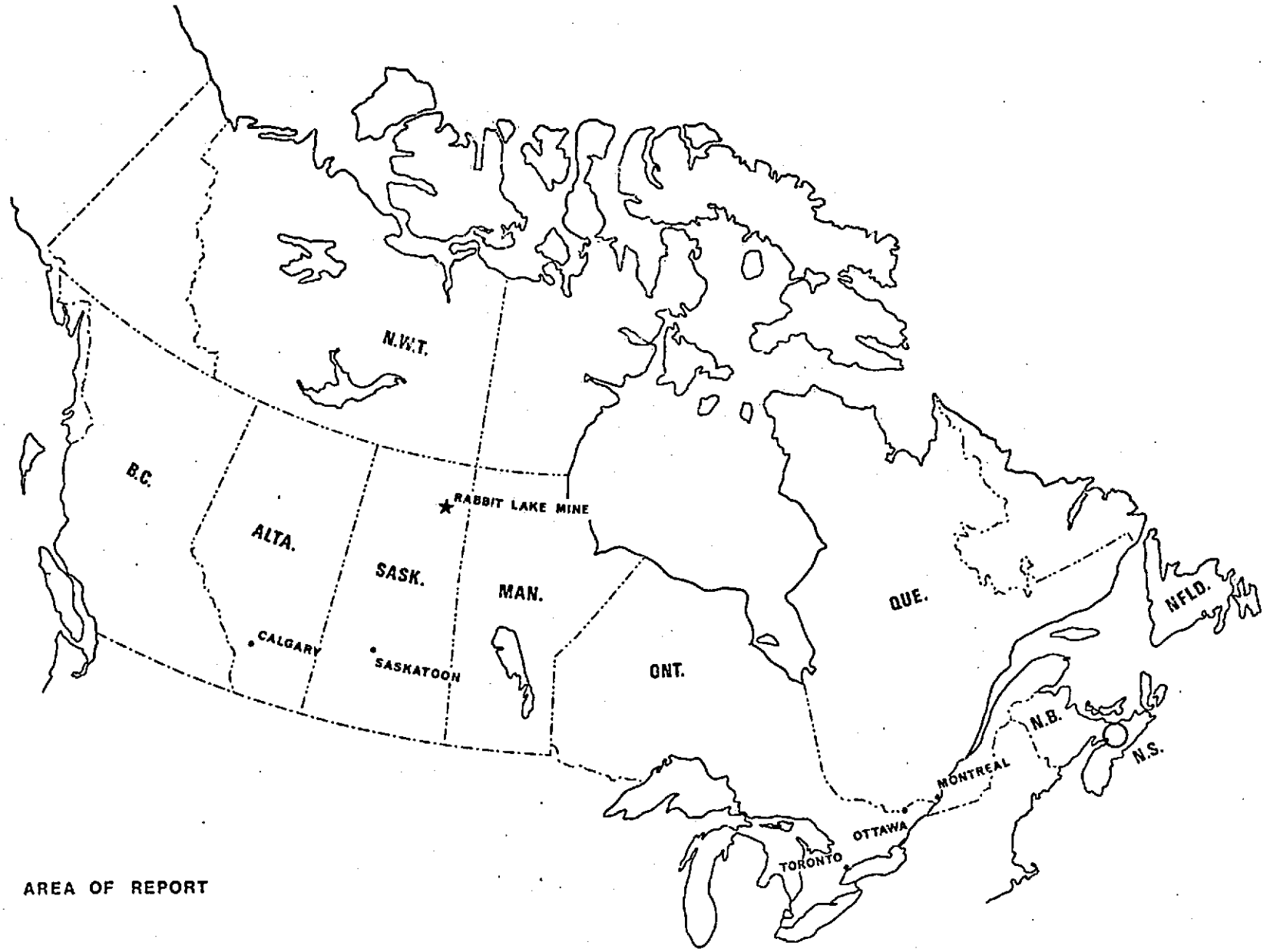
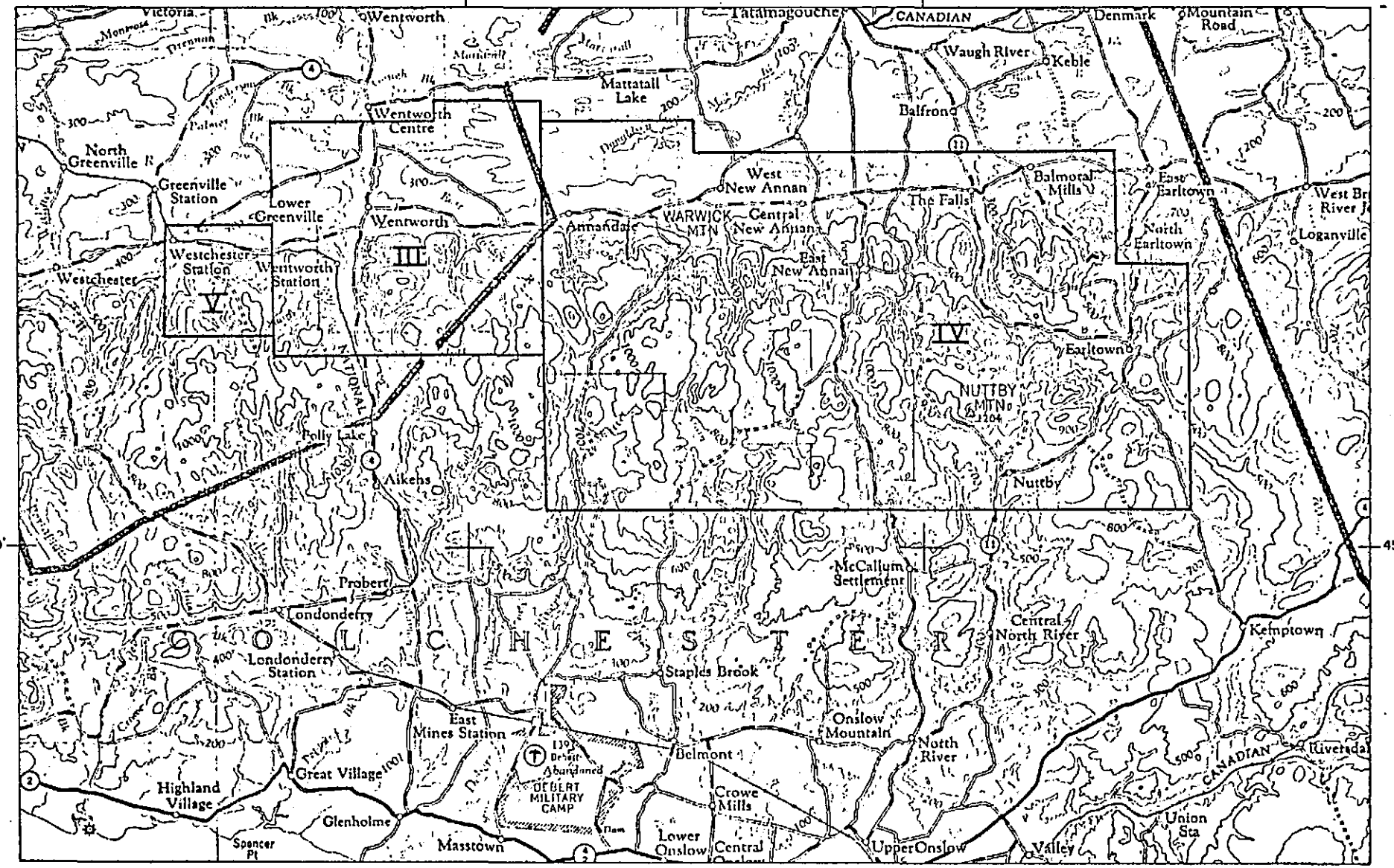


FIGURE 1



COBEQUID URANIUM CLAIM BLOCKS III, IV & V

Figure - 2

COBEQUID IV EXPLORATION PROGRAM
1977

I INTRODUCTION

A) SUMMARY

On December 14, 1976, Gulf Minerals acquired 2,688 claims centered on Byers Lake, Colchester County, Nova Scotia. This block of land has been referred to as Cobequid IV. Table I lists the claim blocks and exploration licenses retained by Gulf for the 1979 season.

Early in May 1977, helicopter-borne radiometric, magnetic and electromagnetic surveys were conducted over the property. This was followed by prospecting, geological mapping, geochemistry and ground geophysics. A diamond drilling program was initiated in early November. On the basis of work carried in 1977, Gulf Minerals retained 1,854 claims for future work.

During the period of December, 1977 to February, 1978, Gulf undertook a diamond drilling program near Annandale to investigate the unconformity between carboniferous Boss Point sediments and Devonian River John basalt. The program was also to evaluate a magnetic low. During the field season reconnaissance prospecting continued on the block. Regional and detailed geological mapping and whole rock sampling continued from the 1977 program on a scale of 1 in. to 1/4 mi. and i in. to 400 ft. A soil sampling program was initiated on the Sawn Brook grid in early July. The 1977 Debert Lake diamond drilling program was continued during September and October. An evaluation of results from the 1978 program is currently underway but is greatly limited by lack of assays returned from the labs.

COBEQUID IV

LAND RETAINED FOR 1979

MAP	LICENCE NO.	TRACTS	CLAIMS
11E 11C	1327	31, 32, 33, 34	A-Q
11E 11C	1328	15, 16, 17, 18, 19	A-Q
11E 11C	1329	5	A-Q
11E 11C	1330	6, 7, 8, 9, 10	A-Q
11E 11C	1331	20	A-Q
11E 11A	1334	37	A-Q
11E 11A	1335	60	A-Q
11E 11A	1336	61	A-H
11E 11B	1348	26	N-O
11E 11B	1348	27	N-Q
11E 11B	1350	44, 45, 46, 47	A-Q
11E 11B	1350	48	J-Q
11E 11B	1351	49, 50, 51, 52, 53	A-Q
11E 11B	1352	68, 69, 70, 71	A-Q
11E 11B	1352	72	A-H, L-O
11E 11B	1353	75	A-H
11E 11B	1353	76, 77	A-Q
11E 11B	1354	92	A-Q
11E 11B	1355	101	A-Q
11E 11B	1356	39, 40, 41, 42, 43	A-Q
11E 11B	1357	54, 55, 56, 57, 58	A-Q
11E 11B	1358	63, 64, 65, 66, 67	A-Q
11E 11B	1359	78, 79, 80, 81, 82	A-Q
11E 11B	1360	87, 88, 89, 90, 91	A-Q
11E 11B	1361	102, 103, 104, 105, 106	A-Q

B) PERSONNEL

For the 1978 field season Gulf personnel employed on the property were:

M. Adshade	Bull Cook
S. Barnhill	Junior
S. Barron	Junior
V. Bergeron	Junior
J. Bigauskas	Junior
G. Black	Prospector
A. Brown	Prospector
L. Cameron	Cook
J. Chadillon	Cook
M. Chaisson	Junior
M. Cullen	Senior Geologist
R. Cote	Geologist
G. Davison	Junior
J. DeBriske	Prospector
M. DeBriske	Geophysist
N. Downey	Project Geologist
W. France	Prospector
M. Fraser	Junior
B. Geddes	Pliestocene Geologist
B. Germundson	Junior
P. Gertzbien	Junior
D. Gower	Junior
J. Halonen	Prospector
J. Harper	Senior Geologist
H. Kenty	Prospector
K. Horan	Logging Technician
J. Kunz	Junior
B. Kotila	Geologist
J. MacIntosh	Geologist
K. MacNeil	Geologist
J. McNeil	Prospector
N. Matheson	Junior

C. Ricks	Junior
R. Rintami	Prospector
R. Sanders	Geologist
A. Seifried	Junior
A. Seguin	Prospector
R. Smith	Prospector
J. Stirling	Mineralogist
M. Strazdins	Geologist
G. Tupper	Prospector
M. Weber	Logging Supervisor
A. Workman	Drill Geologist

Contractors employed on the property were:

Atlantic Groundwater and Geophysics Ltd., - Fredericton, N.B.
St. Lambert Drilling Co. Ltd., - Valleyfield, P.Q.
C. Weatherbee, backhoe operator - Wentworth, N.S.

All work was under the supervision of Mr. C. R. Burkhart and Mr. G. I. Pearson of Gulf's Toronto office.

II GEOCHEMISTRY

A) SOILS

From May 24, 1978, to the end of July, Gulf personnel carried out a soil sampling program over a portion of the Swan Brook grid as follow-up to the 1977 program. Samples were collected at 100 foot intervals along lines 400 feet apart. At each location "A" and "C" zone samples were collected.

All analytical services were performed by X-Ray Assay Laboratories, Don Mills, Ontario. The minus 80 mesh fraction was assayed for copper, lead, silver, zinc and uranium. Uranium was detected by delayed neutron activation with a minimum detection limit of 0.4 ppm. The base metals and silver were determined fluorimetrically at minimum detection limits of 5 ppm and 1 ppm respectively. Assay results are attached in Appendix I.

RESULTS

The mean uranium assay value for the area, taken from the C horizon values, is 3.6 ppm with a standard deviation of 1.38 ppm. The anomalous threshold determined from the formula mean + 1 standard deviation yields a value of 5.1 ppm. Values equal to or exceeding the threshold account for 8.6% of the survey results. A Horizon samples were sporatic with the standard deviation greater than the mean.

Base metal values show no apparent relationships either among themselves or with uranium. The suspected association between silver and uranium has proven to be negligable. Additional interpretation of the data is required before the 1979 field season.

CONCLUSION

The soil sampling program in the Cobequid IV area has been successful in locating isolated uranium anomalies. The occurrence of uranium concentrations appears to be independent of other geochemical associations, i.e. the base metals and silver.

Further study of the anomalous areas is currently under consideration. A detailed statistical analysis relating geochemistry to rock types is planned. The geochemical data will be used to plan the 1979 Exploration program.

WHOLE ROCK GEOCHEMISTRY

Rock samples collected from outcrop, boulders and core were analyzed for major oxides and trace elements (U, Th, Sn, F-, W, Ca, Zn, Ag). The results are tabulated in Appendix A. The purpose of the whole rock geochemical program is to identify alteration patterns, to select samples for geochronology, to help match boulders with bedrock, and to develop genetic models for concentration of U.

METHOD

The samples collected were analyzed for major oxides and trace elements (u, Th, Sn, F-, W, Cu, Pb, Zn, Ag). The major oxides and W were analyzed by a fully automated sequential x-ray spectrometer using a poured glass disc sample preparation method. U and Th were determined by neutron activation. Cu, Pb, Zn and Ag were extracted by a hot acid method, and their concentration determined by Atomic Absorption. Sn was analyzed by ommission spectrometry. A specific ion electrode method was used for the F- analyses. A hot acid digestion and titration method was used to determine Fe^{+2}. Total iron is reported as FeO. The contribution of total iron to the sum is calculated as Fe_2O_3.

IV GEOLOGY

A) INTRODUCTION

Geological mapping was conducted by two-man crews consisting of a geologist and a junior assistant or a prospector. All personnel were equipped with a Scintrex BGS-1SL scintillometer for measuring radioactivity. Mapping was mainly confined to stream valleys, road cuts and the Swan Brook grid. Air photos at a scale of 4 inches to 1 mile and 6 inches to 1 mile were used for control. Results were plotted on 1/4 mile to the inch Dept. of Lands and Forests base maps. Results from the Swan Brook grid were plotted on 1 inch to 400 foot base maps.

All outcrops shown on the geological compilation maps were examined in the field by Gulf personnel. Geological survey of Canada maps by Fletcher and work by Wallace and Donohoe reported in Nova Scotia Department of Mines publication 77-1 were used as reference for field work and interpretation.

B) GENERAL GEOLOGY

The Cobequid Mountains form a resistant upland ridge feature trending east-west across north central Nova Scotia for over 200 km. Gulf Minerals Canada Limited's Cobequid IV property occupies the central region of this upland and extends from near Folly Lake in the west to the Earltown in the east.

The mountains are formed by variably deformed volcanic and sedimentary sequences which have been affected by numerous stages of granitic and dioritic intrusion. The oldest intrusive body in the area if the Jeffers Brook Pluton near Parrsboro which has been dated as late Precambrian to early Cambrian in age (Wanless et al, 1972). The youngest intrusives are diabasic dykes probably associated with basaltic volcanic activity in the Triassic.

TABLE II

LEGEND - COBEQUID PROJECT

(after Wallace & Donohoe, 1977)

MESOZOIC	XVIII	Triassic	
PALAEOZOIC	XVII	Permian	
			Pennsylvanian
	XVI		Pictou Group
	XV		Cumberland Group
			Riversdale Group
	XIV		Boss Point Formation - alternating sequences of red to green sandstone, grey to red conglomerate, silstone and mudstone, in part calcareous (undivided)
	XIII		Clairmont Formation
			Mississippian
	XII		Middleborough Formation
	XI		Windsor Group
	X		Nuttby Sequences - grey to red siltstone to argillite, reddish-grey lithic wackes and green conglomerates
			Devonian
	IX		River John Group (Upper) - purple to red conglomerates
	VIII		River John Group (Lower) - black to green basalt, grey, red, to black siltstones, argillites and mudstones; red, grey and green wackes and green conglomerates
	VII		Non-foliated Plutonic Rock
			a) granite b) diorite
	VI		Foliated Plutonic Rock
			a) granite
			Silurian to Devonian
	V		Portapique Parrsboro Succession
	IV		Earltown Sequence
			a) dark grey to black siltstone to argillite b) red, pink, green to grey rhyolite and rhyolite porphyry, agglomerate, rhyolite and dacite tuffs c) grey-green dacites, pink to grey rhyolites, green quartz wackes, shale and mudstone with interbedded dacitic to rhyolite tuffs and argillite
PALAEOZOIC OR OLDER			Silurian or Older
	III		Gran. Gneiss - of Bass River Complex
	II		Bass River Complex - green metavolcanics, grey to white quartzite, dark green to black argillites, quartz-feldspar biotite gneiss and pink granite
	I		Mt. Thom Complex
			Cambrian or Older
			Jeffers Brook Pluton

At present, exploration efforts are being concentrated upon the Siluro-Devonian volcanic-sedimentary rocks of the Earltown Sequence.

Structural and lithologic discontinuities within the highland prevent widespread correlation of stratigraphic or lithologic units and locally result in complex and/or ambiguous relationships between sequences.

Interpretation of data presently available indicates that poly-deformed sedimentary and volcanic sequences such as the Bass River Complex may represent the basement material of the highland that predates the known late Precambrian near Parrsboro. Since all occurrences of this material are fault bounded, the true stratigraphic relationship of the Silurian and older rocks to it is unknown.

Multiple intrusions of granitic and dioritic bodies into the sedimentary and volcanic sequences probably coincided with the waning stages of the Late-Mid Devonian Acadian Orogeny and these now form a core system to the highland. A distinction among these intrusives is the presence or absence of a tectonic fabric which thusly defines relative age relationships. Recent age dating indicates that some degree of granitic intrusive activity continued into lower Mississippian times (See Wallace & Donohoe 1977, pp. 174).

Late Devonian basaltic volcanics outcrop in the eastern highlands and are associated with conglomeratic terrestrial red beds. Subsequent sedimentation was confined generally to the basins skirting the upland on the north and south with the Cobequids supplying clastic material in response to continued erosion.

UNIT: II BASS RIVER COMPLEX

Unit II consists of a metavolcanic-metasedimentary sequence which has been intensely deformed by at least two deformational events. Dating of the unit is somewhat vague and has resulted in its designation as Silurian or older in age. Generally, the unit is composed of dark green, very fine grained metavolcanics, dark grey to white, fine grained quartzite, dark green to black, well foliated argillitic metasediment (phyllitic to schistose), well foliated quartz-feldspar-biotite gneiss and fine to coarse grained, pink deformed granite. Minor acidic volcanics are also present.

UNIT: IV EARLTOWN SEQUENCE

The Earltown Sequence, Unit IV, of Silurian age is made up of three mapable sub-units, briefly described as follows:

a) Located near Wentworth Station is the oldest unit (Unit IVa) in this sequence dated at Middle to Upper Llandoverian age (Wallace and Donohoe, 1977). This unit consists of dark grey to black fine grained, well laminated, fossiliferous siltstone to argillite with minor amounts of green conglomerate and greywacke.

b) Overlying Unit IVa are mainly red, pink, green to grey, aphanitic rhyolite, rhyolite agglomerate and rhyolite porphyry. Banding is evident in places with abundant hematite staining and epidote occurring along fracture surfaces. Minor amounts of rhyolitic to dacitic tuffs, spherulitic rhyolite, argillite and basalt are also present.

c) This unit is made up of grey-green dacites, pink to grey flow-banded rhyolites with minor concentrations of massive sulphides (pyrite, chalcopyrite), green quartz wacke and fine grained laminated shale and mudstone with interbedded dacitic to rhyolitic tuffs. In the northern section, well foliated argillitic metasediments (phyllite) predominate. These metasediments have been labelled as Unit IV 10.

They are believed to be older than the Silurian volcanics. The volcanic sequence to the south has been termed Unit IV 8. Lack of outcrop prevents any determination of the nature of the contact between the two units. However, topography would suggest fault blocks.

UNIT: VI FOLIATED GRANITE

Map Unit VI is composed of fine to coarse grained white to pink foliated hornblende granite. Along Shatter Brook, quartz and orthoclase crystals are stretched and aligned along a strong foliation (Cataclasis?).

UNIT: VII NON-FOLIATED PLUTONIC ROCKS

This unit is composed of diorites and granitic rocks. Small dioritic intrusions are common throughout the Silurian Earltown Sequence. Large bodies occur in the area of Folly Lake and Sugarloaf Mountain.

Intrusive into the diorites are non-foliated hornblende granites of Lower Middle Devonian age (Donohoe and Wallace, 1977) which are, for the most part, fine to coarse grained and pink in colour. Numerous dark red aphanitic rhyolitic phases of the granite are exhibited.

Fine grained, black diabase dykes, some exhibiting good texture and glossy margins, are very common within the highland proper. More than one generation of diabase must be present as some are deformed while others are relatively fresh. The fresh undeformed diabase dykes may be of Triassic age.

UNIT: VIII RIVER JOHN GROUP - LOWER UNIT

Map Unit VIII is the lower unit of the Devonian River John Group. It consists of fine grained to aphanitic, black to dark green vesicular to amygdaloidal basalt with calcite and zeolite infillings. Calcite, epidote stringers and traces of disseminated sulphides are evident. The unit appears to be younging north with individual flows distinguishable in some localities by the presence of red, brecciated (fragmental?) basalt occurring at the flow interfaces. Interbedded with the basalts are dark grey, red to black, fine grained siltstones, argillites and mudstones; red, green and grey wackes with abundant volcanic fragments and well bedded, grey conglomerates.

UNIT: IX RIVER JOHN GROUP - UPPER UNIT

Map Unit IX is the upper unit of the River John Group and consists of purple to red conglomerates carrying fragments of basic volcanics, grey quartzite and rhyolite. The fragments are 0.5 mm. - 150 mm. in size, poorly sorted and well bedded with numerous carbonate stringers.

UNIT: X NUTTBY SEQUENCE

The Nuttby Sequence, Map Unit X of Late Devonian to Early Mississippian age is composed of grey to red, foliated siltstone to argillite, reddish grey lithic wackes and green to red conglomerates. The conglomerates are typified by subrounded to subangular fragments of rhyolite, granite, phyllite and tuff in a fine to medium grained silty matrix.

UNIT: XIV BOSS POINT FORMATION

Map Unit XIV is the Pennsylvanian Boss Point Formation, consisting of alternating sequences of red, white to green sandstones, grey to red conglomerate, red siltstone and red to grey mudstone, in part calcareous. The sandstones encountered varied from red, greenish-red to white, commonly feldspathic to arkosic with interbedded lenses of grey calcerous conglomerate. Numerous green reduction zones, variable organics, fine laminations and trough cross-bedding, and limonitic-specks are also prevelant. Locally, organic trach and plant remains accumulate in the depressions in cross-beds, often with black carbonaceous material (coal). Minor copper (malachite) and radioactivity may also be present.

D) STRUCTURE

The southern extreme of Cobequid IV is underlain by highly deformed metasedimentary and volcanic rocks of the Bass River Complex. Wallace and Donohoe (1977) have tentatively dated these as Silurian or Preo-Silurian in age, making them the oldest encountered on the property. Compositional banding trends generally E-W with minor folds being recorded in a number of localities. Regional fold geometry was not discerned from the exposures mapped on Cobequid IV.

Foliated granite is known to intrude the Bass River Complex and is exposed on both the Chiganois River and West North River, as well as on Farm Lake Road.

Wallace and Donohoe (1977) cite a late Mid-Devonian date for the deformation of these rocks with a possible correlation of the second folding phase to fold geometrics seen in the Pennsylvanian Londonderry Sequence of the southern Cobequids.

Silurian volcanics and interbedded sediments of the Earltown Sequence have been mapped in the eastern property area and also occur along the western boundary. The western exposures are predominantly rhyolitic in nature with some andesite whereas the eastern zone has a higher percentage of sedimentary and tuffaceous volcanic units. Some folding has been mapped in the tuffs and sediments with a synform above the main rhyolitic sequence on Bailey Brook being the largest structure identified. Geometry of the folding is unclear but the axis is trending approximately East-West and plunging to the east.

A large south westerly trending block of Lower River John Group, dated as Devonian (Gillis 1964 in Wallace and Donohoe 1977) transects the Earltown sequence and is known to be in unconformable contact with the volcanics. These rocks are predominantly basaltic flows and interbedded sediments believed to be younging to the north.

The Balmoral Brook fault displaces the Silurian and Devonian sequences of the central property area with the River John Group to the east of the fault consisting of primarily fanglomerate deposits dipping to the north and coarse clastic sediments. Good sections of these Upper River John are exposed on Balmoral Brook and also on the Waugh River.

A second south-easterly trending fault has been proposed based upon interpretation of airborne geophysical data. Magnetic signatures define a movement zone between Farm Lake and the Chiganois River which has been tentatively termed the Chiganois Fault.

Definition of the Chiganois fault on the ground has been inconclusive as a result of overburden.

Devonian undeformed hornblende granite intrudes the volcanic pile in the western property area. Granites of the same granitic complex also intrude the Earltown Sequence in the southerly extent of Cobequid III claim block.

The Nuttby Sequence of fine to coarse clastic sediments is known to be Mississippian in age based upon palynological data.

The units of this sequence are exposed south of Farm Lake, in good sections on the Chiganois River, in the Gain Brook area and along the West North River.

A synform has been mapped in Nuttby sediments on the McCallum Settlement Road with an ENE trending axis plunging to the east. A low angle southerly dipping thrust fault cuts this structure in the closure zone but its importance is to the overall fold geometry or regional geology is minimal. The fault trace is defined by a topographic lineament for a short distance in the form of a stream valley.

Riversdale Group and possibly Pictou Group sediments of Pennsylvanian age occupy the northern property extremes adjoining the Cobequid Highland proper. Boss Point sediments predominate although in the north eastern property corner some sediments have been tentatively mapped as Pictou Group.

Structure within these bedded sequences is generally north dipping at a relatively low angle (30°), this being controlled somewhat by the basement rise to the upland and the Claremount Synclinal structure to the north. This major syncline trends generally east-west and plunges to the southwest but its axial trace and closure zone is not covered by the Cobequid IV claim group.

The nature of the Carboniferous contact with the highland complex in this area is believed to be unconformable but exposures in a definitive section have not been found. Further to the west, near Westchester, on Caldwell Brook this contact is clearly an unconformity.

REGIONAL PROSPECTING - BLOCK IV

During the 1978 field season, four prospecting crews were involved in an extensive evaluation program in the Cobequid IV claim block. This effort yielded sufficient information to justify dropping a large portion of that area staked in December 1976.
Investigation of the property was guided by airborne radiometrics maps and geological information compiled through the 1977 regional mapping program. No areas os significantly anomalous radioactivity were outlined byt a higher background radiation level was found to typify the east extension of the Wentworth rhyolite belt.

A large portion of the claim block is occupied by the River John Group basalt and conglomerates which exhibit a very low level of background radioactivity. Similarly, very low background radiation levels characterise the sedimentary rocks of the Nuttby Sequence.

To the west of the West North River background radiation levels in the volcanic sequence are markedly higher than in the eastern most area and sulphide-bearing (pyrite and very minor chalcopyrite) boulders were discovered in two areas near Clear Lake. These volcanics form an eastern extension of the Wentworth-Byers Lake rhyolite belt presently being investigated by Gulf and should receive further attention in the 1979 field program.

Results of the 1978 prospecting program indicate that further work in the River John Group, Nuttby Sequence, and the eastern subunits of the Earltown Sequence should not be considered as a high priority.

APPENDIX I

SECTION A

WHOLE ROCK

BLOCK IV

NAME										
SAMPLE #	C6721	C6722	C6723	C6724	C6725	C6726	C6727	C6728	C6729	C6730
SiO_2	77.1	75.5	57.1	78.5	59.1	70.3	81.6	77.3	77.7	
Al_2O_3	12.4	13.9	16.3	11.4	18.5	14.3	9.54	12.2	11.7	
CaO	0.20	0.34	6.20	0.44	4.52	0.98	0.52	0.24	0.11	
MgO	0.00	0.60	1.50	0.12	1.05	0.31	0.52	0.19	0.05	
Na_2O	0.46	0.22	7.72	0.32	3.72	2.66	1.94	0.31	0.29	
K_2O	9.00	7.91	0.74	7.65	6.80	7.17	3.68	8.36	8.99	
FeO	0.64	1.26	8.19	1.39	4.78	3.21	1.84	1.18	1.12	
MnO	0.04	0.04	0.12	0.03	0.08	0.06	0.06	0.02	0.01	
TiO_2	0.09	0.11	1.63	0.17	1.22	0.80	0.24	0.15	0.10	
P_2O_5	0.02	0.07	0.48	0.03	0.29	0.15	0.05	0.01	0.01	
LOI	0.68	1.25	0.52	0.65	1.32	0.88	0.59	0.92	0.76	
TOTAL	99.6	100.4	97.7	100.3	98.4	100.3	100.3	101.4	100.4	
U	5	5	6	5	2	5	2	5	4	
Th	23	30	8	23	8	19	13	26	23	
Cu	9	6	6	12	5	12	13	18	11	
Zn	23	50	28	40	64	58	73	31	15	
Ag	1	1	1	1	1	1	1	1	1	
Pb	15	10	5	25	5	5	10	10	10	
F-	270	430	1100	350	820	640	380	350	230	
Sn	3	3	3	3	3	3	3	3	3	
W	20	20	20	20	20	20	20	20	20	
Qtz	39.56	42.47	0.00	46.17	2.43	25.12	54.34	42.65	41.19	
Cor	1.61	4.52		1.80		0.71	1.52	2.26	1.27	
Or	53.20	46.71	4.36	45.18	39.95	42.28	21.73	49.36	53.11	
Ab	3.85	1.87	59.39	2.72	31.27	22.45	16.33	2.64	2.44	
An	0.89	1.21	7.51	2.01	13.49	3.90	2.27	1.12	0.50	
Ne			2.98							
Di			5.14		2.38					
He			11.83							
Wo			0.04		3.42					
En		1.44		0.26	0.05	0.24	0.95	0.44	0.11	
Fs		0.07		0.04	0.08	0.68	0.44	0.04	0.02	
Fo										
Fa										
Mt			4.59		3.99	1.47	0.34			
Il	0.09	0.08	3.07	0.06	2.30	1.52	0.46	0.04	0.03	
Hm	0.71	1.40		1.54	0.00	1.30	1.51	1.31	1.24	
Ap	0.04	0.16	1.10	0.07	0.67	0.34	0.11	0.02	0.02	
Ru	0.04	0.06		0.14				0.13	0.08	

BLOCK IV

NAME									
SAMPLE #	C6781	C6782	C6783	C6784	C6785	C6786	C6787	C6788	C6789	C6790
LOCATION										
SiO_2		78.4	79.6	84.5	69.8	83.7	67.3	79.4	84.2	79.7
Al_2O_3		11.2	10.6	7.63	15.8	7.97	15.4	11.0	8.22	11.1
CaO		0.12	0.17	0.07	0.44	1.29	0.83	0.14	0.39	0.10
MgO		0.02	0.07	0.03	1.93	0.73	0.58	0.16	0.03	0.00
Na_2O		0.16	0.52	0.00	2.23	2.68	0.99	0.00	0.16	0.08
K_2O		8.97	7.92	5.61	5.52	1.07	9.39	8.01	6.34	8.38
FeO		0.85	0.93	1.94	3.84	2.31	4.19	1.20	0.54	0.56
MnO		0.01	0.02	0.02	0.09	0.05	0.14	0.02	0.02	0.02
TiO_2		0.17	0.16	0.19	0.30	0.16	0.94	0.09	0.07	0.09
P_2O_5		0.02	0.02	0.01	0.07	0.01	0.30	0.01	0.00	0.01
LOI		0.41	0.38	0.48	1.90	0.94	0.97	0.75	0.24	0.69
TOTAL		100.3	99.0	99.8	98.3	98.8	98.7	100.9	99.7	100.8
U		6	6	18	3	14	2	10	6	7
Th		22	25	15	28	67	10	23	19	21
Cu		8	10	7	6	20	13	12	12	13
Zn		22	25	22	150	190	76	47	16	15
Ag		1	1	1	1	1	1	1	1	1
Pb		10	20	40	5	230	10	5	20	5
F-		210	180	280	610	4300	730	290	460	210
Sn		3	3	3	5	8	3	3	3	3
W		20	20	20	20	20	20	40	20	20
Qtz		42.85	45.76	62.71	31.00	60.00	23.51	48.13	58.15	46.86
Cor		1.07	0.94	1.44	5.45	0.07	2.75	2.06	0.40	1.70
Or		52.99	46.77	33.14	32.51	6.29	55.27	47.29	37.47	49.53
Ab		1.39	4.39	0.00	18.77	22.59	8.35	0.65	1.31	0.71
An		0.48	0.68	0.29	1.74	6.35	2.15		1.90	0.46
Ne										
Di										
He										
Wo										
En		0.03	0.16	0.01	3.85	1.10	0.53	0.38	0.05	
Fs		0.02	0.03	0.09	3.27	0.92	1.38	0.03	0.02	
Fo										
Fa										
Mt				0.82	2.69	2.19	3.59			
Il		0.02	0.05	0.35	0.57	0.30	1.78	0.04	0.03	0.04
Hm		0.95	1.04	1.13		0.17		1.33	0.60	0.62
Ap		0.04	0.05	0.03	0.16	0.01	0.69	0.01	0.01	0.02
Ru		0.16	0.13					0.07	0.05	0.06

BOULDERS

NAME							
SAMPLE #	C6382	C6384	C6339	C6344	C6345	C6353	C6354
FIELD #	78S76	78S78	78S33	78S39	78S40	78S54	78S55
SiO_2	86.5	90.6	83.7	67.7	76.6	73.2	80.5
Al_2O_3	8.03	4.32	9.27	15.7	12.8	14.0	6.86
CaO	0.18	0.60	0.29	0.72	0.14	1.10	4.86
MgO	0.19	0.29	0.58	0.37	0.16	0.46	0.36
Na_2O	0.00	0.11	0.68	0.10	0.00	4.31	0.00
K_2O	2.16	1.66	3.00	10.6	7.74	4.58	0.58
FeO	2.51	2.22	1.68	3.49	2.22	1.92	6.15
MnO	0.02	0.05	0.08	0.07	0.04	0.06	0.11
TiO_2	0.29	0.18	0.77	0.94	0.31	0.37	0.63
P_2O_5	0.07	0.01	0.00	0.26	0.01	0.07	0.00
LOI	2.69	0.52	1.88	2.75	1.88	1.42	1.75
TOTAL	99.5	99.4	99.5	98.4	100.6	100.7	93.8
U	2500	370	1200	200	26	40	170
Th	10	10	3	21	14	5	880
Cu	17	41	11	52	9	18	350
Zn	1560	420	75	520	120	48	87
Ag	7	11	3	2	5	3	4
Pb	580	120	100	230	150	190	130
F-	440	200	230	520	240	240	14900
Sn	3	3	15	3	3	3	740
W	X	X	20	20	20	20	20
Qtz	77.58	81.60	66.62	24.90	46.37	27.63	66.47
Cor	5.51	1.26	4.38	3.33	4.14	0.08	
Or	12.74	9.80	17.68	62.61	45.66	26.99	3.40
Ab	0.00	0.95	5.72	0.87	0.00	36.39	0.00
An	0.43	2.88	0.41	1.89	0.59	5.00	16.96
Ne							
Di							0.74
He							5.47
Wo							
En	0.13	0.30	1.33	0.31	0.12	0.84	0.26
Fs	0.45	0.56	0.14	0.79	0.35	0.38	2.24
Fo							
Fa							
Mt	1.93	1.85		1.43	1.05		3.28
Il	0.56	0.33	0.18	1.77	0.59	0.59	
Hm	0.51	0.42	1.86	1.51	1.11	1.88	1.19
Ap	0.15	0.03	0.01	0.59	0.03	0.16	
Ru			0.68			0.06	

NAME							
SAMPLE #	C6355	C6357	C6358	C6359	C6360	C6361	C6362
FIELD #	78S56	78S58	78S59	78S60	78S61	78S62	78S63
SiO_2	77.4	79.1	71.7	85.4	92.6	88.8	93.6
Al_2O_3	9.98	11.5	6.62	8.71	4.00	6.05	3.57
CaO	1.44	0.15	1.92	0.22	0.10	0.21	0.08
MgO	0.39	0.14	0.73	0.27	0.14	0.09	0.11
Na_2O	0.47	0.16	0.00	0.23	0.13	0.00	0.00
K_2O	5.64	7.45	0.17	2.51	1.17	2.68	1.08
FeO	1.59	1.26	17.6	1.89	1.67	2.00	1.39
MnO	0.06	0.03	0.12	0.07	0.03	0.02	0.02
TiO_2	3.03	0.13	1.14	0.72	0.16	0.17	0.12
P_2O_5	0.02	0.04	0.00	0.01	0.01	0.02	0.02
LOI	1.75	1.19	3.12	1.92	1.05	1.64	1.37
TOTAL	98.8	100.5	91.6	101.7	100.9	100.3	100.3
U	3200	950	350	600	230	370	610
Th	10	17	3000	4	13	8	10
Cu	32	23	110	15	22	11	19
Zn	310	42	120	110	55	60	100
Ag	15	1	1	2	10	4	22
Pb	210	100	490	110	65	80	300
F-	990	170	820	320	170	220	150
Sn	8	3	980	8	3	3	3
W	20	20	20	20	20	20	20
Qtz	49.31	49.15	55.06	73.37	86.81	77.80	89.04
Cor	0.52	2.99	2.93	5.22	2.37	2.81	2.29
Or	33.30	44.01	1.02	14.83	6.89	15.84	6.36
Ab	4.01	1.31	0.00	1.93	1.08	0.00	0.00
An	6.98	0.53	9.52	1.03	0.42	0.90	0.30
Ne							
Di							
He							
Wo							
En	0.89	0.31	1.55	0.60	0.19	0.05	0.25
Fs	0.10	0.05	23.62	0.11	0.20	0.22	0.04
Fo							
Fa							
Mt		4.15		0.16	1.09		
Il	0.12	0.07	2.15	0.15	0.31	0.31	0.05
Hm	1.76	1.40		2.10	1.55	0.94	1.55
Ap	0.05	0.08		0.02	0.04	0.04	0.04
Ru	2.96	0.10		0.65			0.10

SECTION B

SOILS

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1001A	12	18	30	0	3.3
K1001C	15	39	45	0	2.3
K1002A	16	63	70	0	2.0
K1002C	25	140	70	0	1.7
K1004A	7	32	53	0	3.6
K1004C	19	89	80	0	2.3
K1005A	6	53	60	0	2.3
K1005C	7	78	60	0	2.6
K1006A	6	18	20	0	2.8
K1006C	10	69	50	0	2.2
K1007A	10	45	50	0	3.2
K1007C	12	100	55	0	3.5
K1008C	20	100	60	0	3.0
K1009A	17	58	50	0	2.1
K1009C	17	130	95	0	4.5
K1010A	15	75	70	0	3.0
K1010C	62	140	70	0	2.7
K1011A	10	62	60	0	2.1
K1011C	16	100	95	0	2.8
K1012A	8	19	40	0	2.9
K1014A	7	32	100	0	3.7
K1014C	8	58	100	0	3.5
K1015A	6	36	90	0	2.7
K1015C	11	80	120	0	2.9
K1016A	5	22	40	0	2.6
K1016C	18	130	110	0	3.0
K1017A	7	28	55	0	2.9
K1017C	6	62	60	0	2.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1081C	13	43	25	0	5.2
K1082A	6	5	5	0	10.4
K1082C	18	71	55	0	2.7
K1083A	18	38	70	0	2.3
K1083C	14	51	80	0	3.6
K1084A	15	70	110	0	3.5
K1084C	23	160	210	0	3.0
K1085A	9	28	35	0	3.5
K1085C	27	140	130	0	3.0
K1086C	23	190	380	0	6.7
K1087A	18	93	90	0	3.9
K1087C	20	150	110	0	3.3
K1089A	8	15	10	0	3.4
K1089C	12	42	60	0	3.9
K1090A	25	35	30	0	0.0
K1090C	20	110	100	0	2.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1190A	6	9	20	0	3.9
K1190C	12	52	50	0	2.7
K1191A	6	22	45	0	3.5
K1191C	12	44	50	0	3.1

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1229A	12	34	35	—	2.5
K1229C	10	80	40	—	5.7
K1230A	17	99	50	—	8.3
K1230C	14	61	50	—	5.9
K1231A	9	36	35	—	2.1
K1231C	8	60	50	—	4.5
K1232A	32	88	30	—	10.9

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1449C	18	84	65	—	1.9
K1450A	17	50	100	—	1.0
K1450C	23	90	85	—	2.8
K1451A	12	37	80	—	1.8
K1451C	12	65	35	—	2.9
K1452A	19	47	120	—	0.6
K1452C	21	100	40	—	2.2
K1453A	16	43	120	—	0.9
K1453C	17	59	55	—	1.9
K1454A	22	42	150	—	0.7
K1454C	13	39	50	—	3.1
K1455A	23	51	130	—	0.0
K1455C	28	100	60	—	2.1
K1456A	17	66	70	—	1.6
K1456C	16	91	40	—	2.3
K1457A	20	36	170	—	0.5
K1457C	23	110	80	—	2.0
K1458A	20	54	160	—	0.6
K1458C	28	130	95	—	1.9
K1459A	18	56	45	—	0.4
K1459C	25	130	80	—	2.5
K1460A	16	33	55	—	1.3
K1460C	17	84	55	—	2.7

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1461A	6	23	50	—	0.4
K1461C	10	67	55	—	2.9
K1462A	17	43	80	—	1.3
K1462C	13	82	60	—	2.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1508A	12	46	70	—	0.6
K1508C	17	120	70	—	3.5
K1509A	10	35	70	—	2.1
K1509C	11	100	60	—	4.4
K1510A	11	23	70	—	1.7
K1510C	12	94	60	—	4.9
K1511A	10	43	60	—	2.6
K1511C	10	79	60	—	5.2
K1512A	15	42	70	—	2.5
K1512C	17	130	65	—	4.3
K1513A	16	43	100	—	1.0
K1513C	10	72	40	—	3.7
K1514A	19	39	90	—	1.2
K1514C	17	69	30	—	3.1
K1515A	15	50	80	—	2.0
K1515C	7	54	30	—	3.2
K1516A	13	37	75	—	2.1
K1516C	11	62	45	—	3.8
K1517A	19	46	115	—	0.6
K1517C	11	98	40	—	3.1
K1518A	11	33	75	—	3.4
K1518C	17	96	50	—	2.9
K1519A	13	44	70	—	2.0
K1519C	16	83	45	—	3.0
K1520A	22	48	120	—	0.7
K1521C	13	110	45	—	2.6
K1522A	10	53	50	—	2.0
K1522C	10	93	40	—	3.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1570A	13	53	80	—	1.3
K1570C	15	98	50	—	2.4
K1571A	14	58	75	—	1.9
K1571C	14	94	45	—	2.7
K1572A	17	63	130	—	1.3
K1572C	14	110	50	—	2.1
K1573A	23	74	100	—	0.0
K1573C	11	110	60	—	2.5
K1574A	18	75	100	—	0.0
K1574C	18	190	90	—	2.9
K1575A	21	80	190	—	1.0
K1575C	15	130	100	—	2.3
K1576A	10	38	30	—	2.3
K1576C	11	96	70	—	3.7
K1577A	13	43	85	—	3.5
K1577C	12	150	180	—	3.3
K1578A	16	55	110	—	1.1
K1578C	15	100	50	—	2.2
K1579A	22	58	60	—	0.6
K1579C	11	95	60	—	3.3
K1580A	12	46	75	—	2.2
K1580C	14	70	75	—	2.6
K1581A	15	58	70	—	0.5
K1581C	15	110	70	—	3.5
K1582A	16	38	60	—	0.8
K1582C	13	100	110	—	2.4
K1583A	20	88	120	—	0.4
K1583C	18	140	60	—	2.7

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1614A	30	94	85	—	1.2
K1614C	12	100	70	—	2.2
K1615A	14	71	85	—	1.8
K1615C	20	140	110	—	2.1
K1616A	14	60	150	—	1.6
K1616C	17	150	90	—	2.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1727C	27	47	70	—	3.2
K1728A	18	38	90	—	2.1
K1728C	13	47	50	—	3.7
K1729A	12	68	65	—	0.7
K1729C	14	34	40	—	2.5
K1730A	13	53	50	—	0.0
K1730C	12	38	50	—	3.8
K1731A	10	48	25	—	0.0
K1731C	19	99	65	—	2.6
K1732A	16	79	45	—	0.0
K1732C	8	51	30	—	3.1
K1733A	18	53	110	—	0.5
K1733C	18	130	80	—	2.9
K1734A	18	110	100	—	0.0
K1734C	18	80	20	—	1.3
K1735A	16	200	70	—	0.0
K1735C	15	120	100	—	2.6
K1736A	23	92	80	—	0.0
K1736C	13	65	75	—	4.1
K1737A	15	120	35	—	0.0
K1737C	22	260	180	—	2.1

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1767A	19	83	140	—	0.6
K1767C	14	50	55	—	2.4
K1768A	15	35	60	—	1.5
K1768C	18	79	60	—	2.6
K1769A	16	89	90	—	0.8
K1769C	15	42	80	—	2.3
K1770A	18	84	80	—	0.5
K1770C	12	51	85	—	3.5
K1771A	16	74	50	—	0.6
K1771C	15	38	70	—	3.5
K1772A	13	46	60	—	1.5
K1772C	12	41	40	—	4.1
K1773A	20	110	80	—	2.6
K1773C	14	81	50	—	3.3
K1774A	10	92	50	—	0.0
K1774C	13	110	50	—	0.7
K1775A	13	120	50	—	0.5
K1775C	17	120	80	—	3.5
K1776A	12	83	55	—	0.4
K1776C	9	72	55	—	2.6
K1777A	10	68	40	—	0.4
K1777C	14	130	80	—	3.3
K1778A	14	40	50	—	0.5
K1778C	11	96	80	—	3.4
K1779A	12	67	70	—	0.0
K1779C	14	57	70	—	2.2

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1781A	22	52	83	—	1.9
K1782A	12	40	45	—	2.3
K1782C	17	63	60	—	3.0
K1783A	17	100	90	—	1.1
K1783C	25	170	80	—	3.6
K1784A	15	69	75	—	0.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1928A	22	80	50	—	1.9
K1928C	15	130	55	—	2.3
K1929A	16	34	80	—	0.5
K1929C	19	170	60	—	3.2
K1930A	12	61	60	—	2.8
K1930C	15	130	50	—	3.0
K1931A	22	70	120	—	2.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1989C	11	71	110	—	2.8
K1990A	10	72	105	—	1.1
K1990C	8	42	40	—	2.2
K1991A	9	41	65	—	0.9
K1991C	9	60	70	—	2.3
K1993A	8	95	35	—	0.0
K1993C	10	59	70	—	4.0
K1994A	12	83	80	—	0.6
K1994C	16	350	160	—	5.2
K1997A	11	80	55	—	0.5
K1997C	7	58	75	—	2.7
K1998A	8	55	30	—	0.5
K1998C	11	120	100	—	2.1
K1999A	10	56	70	—	1.1
K1999C	13	68	85	—	3.2
K2000A	11	45	60	—	0.7
K2000C	15	130	90	—	2.3
K2001A	13	75	110	—	1.0
K2001C	11	83	75	—	3.9
K2002A	34	210	300	—	6.1
K2002C	55	620	220	—	6.1
K2003A	15	57	70	—	1.2
K2003C	17	95	90	—	3.5
K2004A	10	60	60	—	3.3
K2004C	15	170	110	—	3.3
K2005A	43	150	330	—	10.9
K2005C	10	76	60	—	2.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1931C	31	320	340	—	2.0
K1932A	18	100	150	—	1.5
K1932C	17	130	60	—	3.4
K1933A	12	100	80	—	0.9
K1933C	12	110	60	—	4.0
K1934A	18	86	130	—	0.5
K1934C	17	260	90	—	3.6
K1935A	22	140	100	—	0.9
K1935C	43	360	200	—	2.8
K1936A	12	29	25	—	1.2
K1936C	10	85	50	—	3.1
K1937A	13	60	60	—	2.2
K1937C	12	130	50	—	3.0
K1938A	11	53	60	—	0.0
K1938C	10	68	60	—	3.4
K1939A	8	100	25	—	1.8
K1939C	13	120	60	—	2.7
K1940A	12	76	80	—	2.1
K1940C	13	110	50	—	2.0
K1941A	47	160	100	—	2.2
K1941C	12	100	60	—	3.1
K1942A	12	130	35	—	0.9
K1942C	15	85	60	—	3.3
K1943A	9	44	65	—	1.5
K1943C	12	110	90	—	2.8
K1944A	8	72	60	—	0.4
K1944C	12	90	45	—	2.1
K1945A	17	66	90	—	0.9
K1945C	9	90	55	—	3.9

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1946A	17	59	160	—	1.6
K1946C	13	68	60	—	2.3
K1947A	12	90	30	—	2.5
K1947C	10	44	50	—	3.0
K1948A	11	47	60	—	2.1
K1948C	17	110	65	—	3.5
K1949A	7	54	40	—	0.7
K1949C	9	67	50	—	2.9
K1950A	8	30	30	—	0.4
K1950C	11	94	60	—	3.1
K1951A	11	90	110	—	0.0
K1951C	8	48	50	—	4.3
K1952A	30	160	115	—	4.7
K1952C	30	170	80	—	4.5
K1953A	12	140	85	—	0.7
K1953C	16	100	95	—	3.0
K1954A	15	110	30	—	0.0
K1954C	8	120	90	—	2.5
K1955A	10	110	80	—	3.4
K1955C	11	82	95	—	3.2
K1956A	8	130	70	—	2.4
K1956C	12	170	130	—	2.5
K1957A	42	95	130	—	9.0
K1957C	54	160	150	—	14.5
K1958A	10	26	40	—	0.4
K1958C	12	180	150	—	3.4
K1959A	13	97	90	—	1.1
K1959C	11	91	120	—	3.0
K1960A	10	75	70	—	0.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1960C	8	53	70	—	4.9
K1961A	15	73	160	—	4.5
K1961C	20	250	130	—	6.7
K1962A	13	65	110	—	2.5
K1962C	15	110	130	—	3.3
K1963A	10	53	60	—	2.3
K1963C	33	340	160	—	3.3
K1964A	11	74	70	—	3.0
K1964C	13	110	85	—	3.1
K1965A	11	140	110	—	1.5
K1965C	18	160	90	—	2.7
K1966A	10	80	90	—	2.9
K1966C	18	220	110	—	5.4
K1967A	11	46	90	—	2.1
K1967C	18	83	60	—	3.1
K1968A	17	54	170	—	2.5
K1968C	15	110	40	—	2.5
K1969A	14	100	95	—	0.5
K1969C	11	110	35	—	2.6
K1970A	18	58	170	—	1.5
K1970C	12	70	40	—	3.3
K1971A	14	30	100	—	3.5
K1971C	14	100	50	—	2.7
K1972A	16	28	120	—	3.3
K1972C	13	120	40	—	2.5
K1973A	11	51	140	—	4.4
K1973C	13	110	40	—	2.7
K1974A	13	67	140	—	4.4
K1974C	10	57	50	—	3.6

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K1975A	12	55	100	—	2.6
K1975C	13	64	35	—	2.2
K1976A	15	54	120	—	1.7
K1976C	14	100	50	—	2.9
K1977A	18	55	210	—	1.4
K1977C	11	66	45	—	2.9
K1978A	13	65	100	—	2.9
K1978C	14	120	60	—	3.0
K1979A	18	54	220	—	3.4
K1979C	11	67	50	—	3.1
K1980A	8	23	50	—	7.8
K1980C	18	120	60	—	2.9
K1981A	8	44	60	—	1.0
K1981C	11	72	50	—	2.5
K1982A	7	26	30	—	1.8
K1982C	10	65	45	—	3.2
K1983A	9	58	60	—	1.2
K1983C	12	110	65	—	3.3
K1984A	12	130	70	—	0.5
K1984C	9	100	55	—	2.6
K1985A	16	160	205	—	0.0
K1985C	8	55	50	—	3.8
K1986A	9	42	40	—	0.6
K1986C	22	120	70	—	2.7
K1987A	14	58	85	—	0.9
K1987C	11	73	30	—	1.5
K1988A	13	55	95	—	0.6
K1988C	10	94	70	—	3.3
K1989A	8	43	50	—	0.4

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2006A	41	75	80	—	0.5
K2006C	44	71	45	—	5.9
K2007A	24	76	85	—	0.7
K2007C	18	27	20	—	8.9
K2008A	20	82	85	—	0.0
K2008C	18	34	20	—	5.5
K2011A	22	74	40	—	4.2
K2011C	19	46	55	—	0.5
K2012A	23	24	35	—	1.5

13-DEC-78

X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2012C	20	44	35	—	3.3
K2013A	16	46	35	—	3.5
K2013C	19	54	30	—	4.6
K2014A	18	54	25	—	2.1
K2014C	29	59	25	—	4.3
K2015A	16	79	30	—	0.8
K2015C	14	20	10	—	5.6
K2016A	30	120	50	—	0.4
K2016C	14	27	20	—	3.5
K2017A	15	54	65	—	0.4
K2017C	17	43	25	—	3.5
K2018A	18	110	70	—	0.0
K2018C	12	21	25	—	3.3
K2019A	13	53	60	—	0.0
K2019C	13	34	20	—	4.5
K2020A	16	79	70	—	0.4
K2020C	75	34	25	—	4.4
K2021A	13	48	65	—	0.8
K2021C	16	17	20	—	4.2
K2022A	12	56	60	—	0.4

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2022C	12	18	10	—	5.0
K2023A	14	79	80	—	0.0
K2023C	9	10	10	—	10.0
K2024A	20	53	130	—	0.4
K2024C	11	18	10	—	7.6
K2025A	15	56	75	—	0.5
K2025C	9	9	5	—	3.9
K2026A	20	56	75	—	1.0
K2026C	13	35	20	—	4.5
K2027A	13	73	50	—	0.4
K2027C	13	20	5	—	7.0
K2028A	15	55	70	—	3.5
K2028C	18	59	15	—	7.3
K2029A	13	46	25	—	2.5
K2029C	18	110	40	—	6.8
K2030A	12	50	60	—	0.4
K2030C	12	23	25	—	6.1
K2031A	12	18	10	—	4.7
K2031C	13	74	40	—	0.5
K2032A	10	55	30	—	1.7
K2032C	22	66	50	—	3.2
K2033A	9	14	10	—	4.7
K2033C	17	39	55	—	4.0
K2034A	13	83	55	—	0.4
K2034C	9	20	20	—	4.6
K2035A	14	64	50	—	0.4
K2035C	13	46	30	—	3.5
K2036A	18	39	50	—	0.9
K2036C	10	24	20	—	3.7

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2037A	12	20	35	—	2.4
K2037C	12	24	25	—	5.4
K2038A	17	60	55	—	0.4
K2038C	10	15	10	—	8.1
K2039A	13	24	20	—	1.6
K2039C	15	17	15	—	2.7
K2040A	12	17	15	—	4.2
K2041A	12	70	45	—	0.9
K2041C	15	68	40	—	2.3
K2042A	13	65	90	—	1.1
K2042C	8	18	10	—	3.8
K2043A	12	52	10	—	1.3
K2043C	6	39	30	—	3.7
K2044A	7	22	40	—	1.0
K2044C	8	34	30	—	2.3
K2045A	12	28	35	—	1.9
K2045C	11	60	30	—	3.7
K2046A	11	22	30	—	4.7
K2046C	8	28	25	—	5.6
K2047A	10	19	30	—	4.5
K2047C	17	88	55	—	1.9
K2048A	8	58	60	—	0.5
K2048C	8	55	40	—	2.6
K2049A	11	31	50	—	0.5
K2049C	10	30	50	—	3.2
K2050A	7	46	60	—	0.0
K2050C	12	46	40	—	4.2
K2051A	11	20	30	—	2.3
K2051C	10	43	45	—	5.1

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2052A	9	24	40	—	0.7
K2052C	9	25	40	—	2.1
K2053A	10	25	45	—	2.3
K2053C	12	100	35	—	4.1
K2054A	7	66	90	—	0.0
K2054C	8	54	30	—	4.5
K2055A	7	63	60	—	0.5
K2055C	4	20	20	—	4.6
K2056A	6	66	60	—	1.1
K2056C	3	15	15	—	4.7
K2057A	10	43	60	—	0.4
K2057C	5	20	30	—	0.5
K2058A	9	83	65	—	0.0
K2058C	6	53	30	—	3.0
K2059A	7	52	80	—	0.0
K2059C	12	70	45	—	4.2
K2060A	4	58	15	—	0.0
K2060C	6	35	30	—	3.3
K2061A	7	43	40	—	3.1
K2061C	11	83	75	—	4.9
K2062A	5	67	35	—	0.0
K2062C	5	30	30	—	4.7
K2063A	8	28	45	—	3.2
K2063C	6	16	25	—	7.8
K2064A	8	35	45	—	2.1
K2064C	8	46	45	—	4.1
K2065A	12	76	120	—	0.6
K2065C	4	20	35	—	4.9
K2066A	7	40	60	—	0.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2066C	9	48	25	—	4.3
K2067A	5	90	55	—	0.0
K2067C	9	66	25	—	2.1
K2068A	8	47	60	—	0.4
K2069A	9	68	75	—	0.0
K2069C	7	31	30	—	5.8
K2070A	9	75	90	—	0.4
K2070C	9	46	25	—	3.3
K2071A	14	54	50	—	0.4
K2071C	19	38	40	—	12.8
K2072A	9	68	65	—	0.4
K2072C	9	59	20	—	4.2
K2073A	4	17	25	—	2.1
K2073C	8	67	20	—	3.2
K2074A	13	96	75	—	1.5
K2074C	8	60	30	—	3.0
K2075A	7	37	40	—	2.3
K2075C	14	75	25	—	2.7
K2076A	10	36	55	—	1.2
K2076C	6	30	20	—	3.1
K2077A	6	34	45	—	3.0
K2077C	17	59	50	—	2.5
K2078A	8	43	60	—	0.6
K2078C	6	37	25	—	3.3
K2079A	8	55	50	—	2.4
K2079C	5	23	15	—	4.7
K2080A	7	22	25	—	1.3
K2080C	12	22	15	—	7.3
K2082A	9	33	35	—	1.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2082C	6	51	15	—	3.1
K2084A	9	48	60	—	0.9
K2084C	12	58	25	—	3.7
K2085A	9	48	80	—	0.7
K2085C	4	6	0	—	5.4
K2086A	5	41	50	—	0.7
K2086C	4	9	5	—	7.0
K2087A	7	71	60	—	1.1
K2087C	17	24	240	—	7.1
K2088A	10	37	65	—	1.0
K2088C	14	17	150	—	3.8
K2089A	7	29	60	—	2.9
K2089C	5	12	15	—	5.4
K2090A	14	58	130	—	0.5
K2090C	8	28	35	—	5.1
K2091A	9	46	75	—	0.8
K2091C	9	27	35	—	3.6
K2092A	13	31	70	—	1.2
K2092C	2	6	5	—	5.1
K2093A	11	31	85	—	1.0
K2093C	4	6	5	—	5.8
K2094A	8	20	90	—	2.4
K2094C	7	21	25	—	5.8
K2095A	8	20	50	—	4.5
K2095C	7	27	90	—	5.4
K2096A	12	42	95	—	2.1
K2096C	5	20	30	—	5.3
K2097A	12	33	110	—	1.0
K2097C	10	19	30	—	8.6

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2098A	17	29	70	—	2.7
K2098C	17	36	75	—	8.2
K2099C	3	9	10	—	4.5
K2100A	8	54	70	—	0.0
K2100C	10	50	45	—	4.2
K2101A	7	75	75	—	0.0
K2101C	5	20	25	—	2.5
K2102A	10	65	70	—	0.4
K2102C	3	8	5	—	7.9
K2103A	7	55	40	—	0.0
K2103C	3	11	5	—	6.5
K2104A	8	64	95	—	0.0
K2104C	7	32	20	—	6.6
K2105A	12	30	70	—	4.7
K2105C	4	12	20	—	5.2
K2106A	9	79	65	—	0.0
K2106C	5	21	20	—	6.4
K2107A	7	87	35	—	0.0
K2107C	11	20	20	—	5.3
K2108A	6	47	40	—	2.8
K2108C	3	9	10	—	9.3
K2109A	5	54	70	—	0.0
K2109C	15	17	15	—	7.3
K2110A	15	91	150	—	5.0
K2110C	5	35	20	—	10.7
K2111A	8	59	70	—	0.6
K2111C	4	10	10	—	5.0
K2112A	7	67	30	—	1.1
K2112C	6	27	20	—	5.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2113A	4	24	15	—	0.6
K2113C	10	45	35	—	3.9
K2114A	9	63	70	—	1.3
K2114C	6	23	20	—	4.9
K2115A	8	48	65	—	0.5
K2115C	6	33	25	—	3.6
K2116A	9	58	80	—	0.3
K2116C	4	17	20	—	6.6
K2117A	15	32	40	—	1.6
K2117C	12	69	60	—	3.8
K2118A	11	48	90	—	3.2
K2118C	7	58	50	—	7.3
K2119A	7	92	80	—	0.9
K2119C	8	15	35	—	4.5
K2120A	7	37	80	—	2.0
K2120C	10	29	50	—	2.4
K2121A	7	46	65	—	0.6
K2121C	7	33	50	—	3.5
K2122A	8	69	75	—	1.0
K2122C	7	33	20	—	3.4
K2123A	5	20	20	—	4.1
K2123C	4	15	20	—	3.8
K2125A	8	59	120	—	0.4
K2125C	8	34	35	—	2.7
K2126A	9	18	35	—	2.4
K2126C	46	130	25	—	4.8
K2127A	8	61	60	—	1.3
K2127C	13	29	30	—	4.6
K2128A	9	59	65	—	0.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2128C	9	45	35	---	3.7
K2129A	12	27	60	---	0.0
K2129C	8	39	35	---	3.6
K2130A	14	30	120	---	1.9
K2130C	13	56	65	---	4.1
K2131A	11	45	120	---	1.3
K2131C	10	40	30	---	4.2
K2132A	12	63	55	---	0.5
K2132C	8	44	40	---	3.8
K2133A	12	60	45	---	1.5
K2133C	10	41	30	---	4.4
K2134A	7	21	40	---	2.1
K2134C	11	39	35	---	4.4
K2135A	8	77	45	---	3.5
K2135C	7	48	30	---	4.5
K2136A	7	62	65	---	0.0
K2136C	3	11	15	---	6.4
K2137A	7	59	65	---	0.2
K2137C	4	17	10	---	5.8
K2138A	12	77	95	---	1.4
K2138C	13	75	30	---	4.1
K2139A	11	94	65	---	0.2
K2139C	8	57	60	---	5.4
K2140A	11	35	65	---	2.2
K2140C	7	47	60	---	7.6
K2141A	10	41	40	---	0.5
K2141C	6	31	25	---	4.7
K2142A	10	54	75	---	0.4
K2142C	11	62	40	---	6.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2143A	7	83	55	—	0.3
K2143C	5	20	15	—	10.5
K2144A	12	26	65	—	2.2
K2144C	7	53	35	—	6.9
K2145A	7	72	65	—	0.5
K2145C	9	82	50	—	5.0
K2146A	13	44	55	—	0.6
K2146C	12	55	35	—	5.3
K2147A	7	53	50	—	0.6
K2147C	4	13	15	—	6.8
K2148A	12	56	35	—	0.4
K2148C	6	27	20	—	5.8
K2149A	8	70	75	—	0.3
K2149C	7	20	15	—	5.9
K2150A	7	61	45	—	1.4
K2150C	3	8	10	—	5.9
K2151A	6	39	30	—	1.1
K2151C	9	46	15	—	5.6
K2152A	10	58	75	—	0.3
K2152C	5	23	15	—	4.2
K2153A	12	57	65	—	0.0
K2153C	10	37	25	—	3.9
K2154A	35	110	80	—	0.4
K2154C	6	8	5	—	5.5
K2155A	12	34	65	—	0.4
K2155C	6	31	20	—	3.7
K2156A	10	47	60	—	0.5
K2156C	6	42	20	—	4.0
K2157A	8	49	75	—	0.2

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2157C	7	42	35	—	3.2
K2158A	10	47	20	—	0.9
K2158C	8	42	20	—	3.3
K2159A	13	82	120	—	2.0
K2159C	5	19	20	—	7.5
K2160A	15	66	60	—	0.4
K2160C	5	11	5	—	7.7
K2161A	10	87	65	—	0.8
K2161C	7	48	15	—	3.8
K2162A	9	39	40	—	3.8
K2162C	8	41	30	—	3.6
K2163A	6	76	25	—	1.8
K2163C	5	27	15	—	3.6
K2164A	17	160	90	—	2.5
K2164C	10	42	25	—	3.4
K2165A	14	50	30	—	6.2
K2165C	14	70	35	—	4.0
K2166A	15	75	40	—	4.9
K2166C	13	80	40	—	5.1
K2167A	8	34	55	—	0.5
K2167C	9	33	25	—	3.6
K2168A	12	46	40	—	0.6
K2168C	10	53	40	—	3.8
K2169A	17	25	70	—	0.2
K2169C	12	68	65	—	4.2
K2170A	12	32	40	—	0.7
K2170C	6	58	35	—	3.2
K2171A	14	43	50	—	1.5
K2171C	11	56	40	—	4.1

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2172A	8	46	50	---	0.9
K2172C	5	29	15	---	2.9
K2173A	10	51	55	---	0.8
K2173C	12	46	20	---	3.2
K2174A	9	46	65	---	3.4
K2174C	10	34	30	---	5.3
K2175A	11	64	75	---	0.5
K2175C	11	54	35	---	5.3
K2176A	8	44	60	---	1.7
K2176C	10	49	30	---	5.0
K2177A	11	42	80	---	0.0
K2177C	11	53	40	---	6.5
K2178A	11	69	70	---	1.4
K2178C	27	63	65	---	4.0
K2179A	12	35	55	---	0.6
K2179C	6	33	45	---	6.0
K2180A	10	55	50	---	0.3
K2180C	18	90	35	---	5.2
K2181A	12	80	95	---	0.4
K2182C	7	20	15	---	5.6
K2183A	14	23	45	---	4.8
K2183C	11	31	50	---	5.2
K2184A	11	87	35	---	0.0
K2184C	21	48	120	---	6.4
K2185A	8	57	75	---	1.9
K2185C	10	32	35	---	7.7
K2186A	12	67	70	---	1.1
K2186C	11	84	55	---	6.6
K2187A	16	70	80	---	0.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2187C	9	34	30	—	4.8
K2188A	8	58	45	—	0.0
K2188C	6	7	5	—	5.9
K2189A	8	64	50	—	0.6
K2189C	8	21	25	—	7.5
K2190A	9	28	55	—	2.0
K2190C	7	22	20	—	5.6
K2191A	11	70	55	—	0.4
K2191C	10	46	25	—	4.6
K2192A	7	80	40	—	0.0
K2192C	7	27	20	—	5.6
K2193A	6	50	30	—	0.0
K2193C	4	9	5	—	7.2
K2194A	9	92	30	—	0.7
K2194C	11	27	10	—	7.0
K2195A	8	65	60	—	0.5
K2195C	6	23	20	—	5.9
K2196A	8	78	70	—	0.0
K2196C	9	41	20	—	3.6
K2197A	11	45	95	—	0.6
K2197C	5	16	15	—	4.6
K2198A	10	77	60	—	0.5
K2198C	7	42	25	—	3.4
K2199A	12	63	220	—	0.0
K2199C	10	55	20	—	8.1
K2200A	7	88	50	—	0.4
K2200C	3	11	5	—	7.5
K2201A	15	48	40	—	5.5
K2201C	4	20	5	—	6.4

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2202A	18	120	110	—	0.0
K2202C	5	3	0	—	6.9
K2203A	5	20	20	—	4.1
K2203C	4	19	15	—	3.9
K2204A	18	79	75	—	0.0
K2204C	11	20	15	—	4.0
K2206A	11	56	70	—	0.0
K2206C	2	9	15	—	3.6
K2207A	18	84	95	—	0.0
K2207C	5	27	20	—	4.0
K2208A	10	63	95	—	1.0
K2208C	5	35	30	—	3.9
K2209A	15	59	110	—	0.0
K2209C	6	42	15	—	3.2
K2210A	12	76	140	—	0.0
K2210C	1	8	0	—	6.0
K2211A	7	70	70	—	0.0
K2211C	2	10	5	—	4.5
K2212A	8	55	75	—	0.5
K2212C	6	30	15	—	3.4
K2213A	10	26	110	—	3.7
K2213C	16	31	170	—	6.5
K2214A	6	32	45	—	1.6
K2214C	7	38	25	—	3.3
K2215A	10	44	75	—	3.1
K2215C	7	46	25	—	4.0
K2216A	10	47	80	—	1.2
K2216C	7	34	30	—	5.2
K2217A	6	36	55	—	1.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2217C	8	43	35	—	5.1
K2218A	10	77	40	—	0.9
K2218C	7	34	30	—	3.9
K2219A	7	90	80	—	0.6
K2219C	7	35	25	—	3.0
K2220A	7	20	40	—	3.3
K2220C	5	12	10	—	4.9
K2221A	5	39	45	—	0.0
K2221C	7	27	25	—	5.5
K2222A	12	80	110	—	0.7
K2222C	13	56	45	—	8.5
K2223A	15	83	80	—	1.0
K2223C	8	33	20	—	6.6
K2224A	7	54	45	—	2.5
K2224C	10	41	50	—	6.8
K2225A	11	71	50	—	0.6
K2225C	12	47	35	—	5.8
K2226A	6	56	55	—	0.6
K2226C	13	62	35	—	4.9
K2227A	7	54	60	—	0.0
K2227C	8	21	15	—	5.0
K2228A	9	62	65	—	0.4
K2228C	7	42	30	—	4.0
K2229A	7	41	40	—	2.5
K2229C	18	80	65	—	7.1
K2230A	11	46	70	—	0.7
K2230C	5	12	15	—	5.8
K2231A	8	69	15	—	1.3
K2231C	12	41	120	—	8.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2232A	7	50	30	—	0.0
K2232C	5	22	15	—	5.4
K2233A	9	67	55	—	0.0
K2233C	5	7	5	—	5.4
K2234A	7	59	40	—	1.4
K2234C	8	34	25	—	5.3
K2235A	16	110	200	—	0.6
K2235C	9	15	15	—	4.8
K2236A	9	180	95	—	0.9
K2236C	6	20	10	—	6.8
K2237A	10	22	30	—	6.6
K2237C	9	41	20	—	3.9
K2238A	14	48	45	—	3.9
K2238C	9	22	30	—	6.5
K2239A	13	97	20	—	11.3
K2239C	17	39	60	—	3.1
K2240A	16	49	40	—	2.8
K2240C	11	50	30	—	4.7
K2241A	10	55	50	—	0.4
K2241C	10	49	20	—	4.5
K2242A	10	55	55	—	0.6
K2242C	5	15	15	—	6.4
K2243A	14	39	70	—	9.6
K2243C	13	87	75	—	12.2
K2244C	10	57	25	—	4.9
K2245A	11	95	60	—	0.0
K2245C	8	27	20	—	7.3
K2246A	10	50	80	—	0.0
K2246C	4	17	10	—	5.6

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2247A	12	39	50	—	3.7
K2247C	8	47	35	—	8.1
K2248A	10	71	65	—	0.5
K2248C	5	12	15	—	7.9
K2249A	10	51	70	—	0.7
K2249C	4	15	20	—	6.8
K2250A	22	55	60	—	11.8
K2250C	20	58	50	—	13.8
K2251A	10	51	50	—	5.2
K2251C	20	61	50	—	14.3
K2254A	12	85	90	—	0.7
K2254C	3	13	10	—	3.2
K2258A	40	82	90	—	0.6
K2258C	9	30	55	—	3.3
K2259A	10	24	45	—	1.5
K2259C	10	31	20	—	4.3
K2260A	7	16	30	—	2.4
K2260C	12	40	120	—	6.0
K2261A	12	95	60	—	0.7
K2261C	8	36	20	—	4.0
K2262A	8	14	30	—	2.9
K2262C	7	30	20	—	3.2
K2263A	8	43	40	—	1.2
K2263C	7	42	20	—	2.9
K2264A	6	30	65	—	0.0
K2264C	10	41	25	—	2.7
K2265A	8	66	35	—	1.3
K2265C	9	28	30	—	7.7
K2266A	5	31	50	—	1.1

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2266C	11	36	30	—	5.0
K2267A	6	70	55	—	0.4
K2267C	8	40	20	—	4.8
K2268A	9	72	40	—	0.0
K2268C	7	47	25	—	4.3
K2269A	9	94	60	—	0.8
K2269C	5	22	20	—	8.3
K2270A	7	80	30	—	0.5
K2270C	4	25	10	—	7.5
K2271A	10	67	70	—	2.3
K2271C	5	38	10	—	2.5
K2272A	5	35	15	—	0.8
K2272C	6	36	20	—	6.2
K2273A	5	55	40	—	1.1
K2273C	4	15	15	—	5.0
K2274A	7	92	55	—	0.0
K2274C	7	54	40	—	4.4
K2275A	8	91	55	—	0.0
K2275C	18	84	25	—	11.7
K2276A	4	53	50	—	0.0
K2276C	7	30	20	—	4.6
K2277A	7	57	100	—	1.4
K2277C	1	6	5	—	5.9
K2278A	6	53	40	—	0.0
K2278C	3	10	15	—	5.9
K2279A	6	62	50	—	0.0
K2279C	5	17	10	—	4.3
K2280A	6	80	60	—	1.2
K2280C	3	18	15	—	5.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2281A	8	66	65	—	2.2
K2281C	3	30	20	—	5.3
K2282A	9	46	60	—	1.8
K2282C	7	54	20	—	3.1
K2283A	12	66	30	—	0.5
K2283C	10	35	40	—	5.4
K2284A	14	61	20	—	2.9
K2284C	11	58	15	—	3.0
K2285A	6	21	20	—	2.5
K2285C	8	30	15	—	2.5
K2286A	6	20	25	—	2.1
K2286C	5	24	30	—	4.0
K2287A	12	60	70	—	0.0
K2287C	5	22	20	—	3.3
K2288A	12	100	100	—	0.6
K2288C	9	26	15	—	2.5
K2289A	11	58	70	—	0.5
K2289C	2	7	0	—	4.9
K2290A	12	66	70	—	0.5
K2290C	11	27	25	—	3.1
K2291A	6	74	60	—	0.0
K2291C	3	15	5	—	3.6
K2292A	8	43	50	—	0.7
K2292C	9	46	30	—	3.7
K2293A	11	54	100	—	0.4
K2293C	5	22	15	—	4.6
K2294A	2	33	20	—	2.9
K2294C	3	18	20	—	3.9
K2295A	5	56	65	—	0.6

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2295C	2	20	5	—	3.9
K2296A	8	67	50	—	1.2
K2296C	3	18	15	—	4.0
K2297A	6	36	55	—	2.4
K2297C	27	99	40	—	3.0
K2298A	8	40	55	—	1.4
K2298C	3	22	10	—	3.3
K2299A	5	20	15	—	2.6
K2299C	3	22	15	—	3.5
K2300A	7	30	30	—	2.1
K2300C	7	43	20	—	2.8
K2301A	9	54	70	—	0.0
K2301C	10	60	30	—	1.8
K2302A	6	43	45	—	3.7
K2302C	15	90	45	—	3.0
K2303A	8	69	55	—	0.0
K2303C	20	94	55	—	3.0
K2304A	18	41	85	—	2.1
K2304C	11	87	55	—	5.6
K2305A	7	58	20	—	1.4
K2305C	8	52	40	—	3.0
K2306A	8	53	20	—	0.7
K2306C	7	45	25	—	3.3
K2307A	10	72	65	—	4.3
K2307C	8	36	30	—	1.1
K2308A	10	70	65	—	3.1
K2308C	10	40	30	—	3.6
K2309A	6	72	55	—	1.7
K2309C	8	38	30	—	3.4

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2310A	5	38	25	—	1.7
K2310C	9	40	15	—	7.9
K2311A	15	110	40	—	0.4
K2311C	14	64	20	—	2.6
K2312A	16	92	80	—	0.0
K2312C	4	15	10	—	5.2
K2313A	10	110	65	—	0.4
K2313C	7	20	15	—	5.1
K2314A	5	95	50	—	0.0
K2314C	12	57	20	—	3.9
K2315A	8	60	40	—	0.0
K2315C	11	35	15	—	3.6
K2316A	6	64	80	—	3.3
K2316C	2	12	5	—	5.5
K2317A	9	58	40	—	0.4
K2317C	5	20	15	—	3.6
K2318A	8	100	90	—	1.2
K2318C	18	120	30	—	16.5
K2319A	8	42	20	—	3.0
K2319C	8	46	20	—	3.3
K2320A	8	42	50	—	2.2
K2320C	8	56	10	—	2.6
K2321A	7	82	50	—	0.0
K2321C	4	17	10	—	5.3
K2322A	11	110	70	—	0.6
K2322C	9	61	25	—	2.3
K2323A	6	63	45	—	1.4
K2323C	8	52	20	—	4.3
K2324A	5	30	30	—	2.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2324C	7	28	20	—	3.1
K2325A	8	54	50	—	1.2
K2325C	5	27	15	—	3.7
K2326A	5	30	40	—	2.7
K2326C	5	35	20	—	3.6
K2327A	10	130	60	—	1.0
K2327C	5	30	15	—	3.5
K2328A	11	35	50	—	2.5
K2328C	12	64	20	—	3.1
K2329A	7	28	35	—	3.5
K2329C	12	58	20	—	2.6
K2330A	8	53	80	—	0.5
K2330C	8	29	20	—	4.7
K2331A	10	78	75	—	0.0
K2331C	10	50	25	—	2.7
K2332A	13	59	40	—	0.0
K2332C	15	56	20	—	2.3
K2333A	14	72	80	—	0.0
K2333C	7	20	20	—	3.2
K2334A	10	100	30	—	0.4
K2334C	9	39	30	—	2.8
K2335A	11	62	60	—	0.7
K2335C	11	34	30	—	2.7
K2336A	10	70	40	—	0.9
K2336C	12	43	35	—	3.2
K2337A	16	21	30	—	1.1
K2337C	14	43	40	—	3.2
K2338A	14	28	50	—	0.9
K2338C	11	38	30	—	3.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2339A	11	63	100	—	0.0
K2339C	6	11	25	—	3.3
K2340A	8	54	40	—	0.0
K2340C	12	42	25	—	3.6
K2341A	12	34	50	—	2.0
K2341C	15	62	60	—	4.2
K2342A	14	30	50	—	2.3
K2342C	12	54	40	—	4.8
K2343A	11	62	50	—	1.2
K2343C	15	40	30	—	3.9
K2344A	22	190	130	—	2.9
K2344C	20	78	120	—	8.8
K2345A	13	98	70	—	0.0
K2345C	16	55	70	—	2.6
K2346A	23	120	120	—	0.0
K2346C	13	23	35	—	2.9
K2347A	14	99	55	—	0.0
K2347C	16	55	50	—	3.3
K2348A	13	46	60	—	0.5
K2348C	18	58	60	—	3.4
K2349A	18	110	50	—	0.5
K2349C	22	95	65	—	2.9
K2350A	12	150	40	—	0.0
K2350C	18	75	65	—	3.5
K2351A	14	120	70	—	1.9
K2351C	20	100	70	—	6.0
K2352A	25	120	25	—	1.3
K2352C	32	78	50	—	4.8
K2353A	100	74	75	—	9.6

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2353C	160	210	190	—	13.1
K2358A	20	67	40	—	0.0
K2358C	20	55	30	—	4.8
K2359A	21	62	20	—	0.0
K2359C	21	47	20	—	4.1
K2360A	19	66	50	—	0.0
K2360C	23	63	20	—	2.9
K2361A	28	77	20	—	3.1
K2361C	24	120	55	—	0.0
K2362A	24	86	30	—	3.2
K2362C	29	54	10	—	3.1
K2363A	25	82	60	—	1.0
K2363C	27	48	10	—	4.1
K2364A	26	91	35	—	0.0
K2364C	32	70	30	—	4.0
K2365A	23	56	60	—	0.0
K2365C	25	68	15	—	3.1
K2366A	23	71	40	—	1.3
K2366C	27	79	25	—	2.9
K2367A	12	54	60	—	1.7
K2367C	10	48	20	—	3.2
K2368A	11	49	55	—	0.4
K2368C	12	51	20	—	2.4
K2369A	13	57	40	—	0.0
K2369C	12	58	20	—	3.4
K2370A	9	88	50	—	0.7
K2370C	17	60	25	—	2.1
K2371A	11	72	40	—	0.0
K2371C	10	28	25	—	2.1

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2372A	16	60	130	—	1.3
K2372C	12	42	30	—	2.5
K2373A	9	33	45	—	1.8
K2373C	7	25	20	—	3.8
K2374A	12	72	40	—	0.0
K2374C	14	50	25	—	2.8
K2375A	11	27	40	—	1.9
K2375C	11	38	20	—	2.6
K2376A	8	18	40	—	2.6
K2376C	8	22	30	—	3.5
K2377A	8	20	20	—	2.0
K2377C	8	12	20	—	3.1
K2378A	12	58	50	—	0.0
K2378C	12	40	30	—	1.8
K2379A	13	36	45	—	1.8
K2379C	12	44	20	—	2.2
K2380A	18	66	50	—	0.0
K2380C	12	24	30	—	2.4
K2381A	11	59	55	—	0.0
K2381C	13	54	20	—	2.7
K2382A	10	29	50	—	0.6
K2382C	10	40	20	—	2.4
K2383A	11	43	55	—	0.0
K2383C	8	20	30	—	2.3
K2384A	6	16	20	—	2.7
K2384C	14	46	50	—	0.4
K2385A	15	78	50	—	0.0
K2385C	7	17	30	—	3.0
K2386A	15	44	50	—	0.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2386C	13	24	35	—	3.2
K2387A	12	44	70	—	0.0
K2387C	12	40	30	—	4.7
K2388A	12	22	40	—	2.7
K2388C	10	25	30	—	5.2
K2389A	11	25	65	—	1.3
K2389C	10	31	35	—	5.1
K2390A	9	30	40	—	2.8
K2390C	12	50	40	—	4.7
K2391A	14	91	100	—	0.4
K2391C	15	42	40	—	4.4
K2392A	13	72	80	—	2.0
K2392C	8	22	30	—	5.5
K2393A	14	25	50	—	1.3
K2393C	16	60	40	—	3.5
K2394A	12	77	50	—	4.1
K2394C	11	41	30	—	4.5
K2395A	27	42	40	—	3.2
K2395C	35	62	40	—	4.2
K2396A	20	92	100	—	0.5
K2396C	36	34	15	—	4.2
K2397A	20	38	45	—	2.4
K2397C	16	27	5	—	3.1
K2398A	27	78	75	—	0.0
K2398C	22	41	40	—	3.8
K2399A	32	54	80	—	0.6
K2399C	39	66	35	—	3.6
K2400A	21	44	55	—	2.5
K2400C	28	45	40	—	4.3

13-DEC-78

X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2401A	33	46	40	—	1.5
K2401C	23	35	30	—	3.5
K2402A	24	35	50	—	1.3
K2402C	25	45	30	—	3.5
K2403A	28	70	65	—	2.1
K2403C	28	66	45	—	3.2
K2404A	30	68	75	—	2.5
K2404C	29	83	70	—	3.6
K2405A	29	61	60	—	0.0
K2405C	37	94	50	—	3.9
K2406A	23	87	90	—	0.0
K2406C	29	110	90	—	0.9
K2407A	19	89	60	—	0.0
K2407C	34	115	95	—	4.9
K2408A	23	85	45	—	0.0
K2408C	49	73	120	—	9.4
K2409A	29	60	45	—	2.6
K2409C	26	85	65	—	3.4
K2410A	19	84	95	—	0.5
K2410C	30	86	45	—	3.4
K2411A	29	120	100	—	0.0
K2411C	28	110	50	—	2.5
K2412A	27	120	110	—	3.5
K2412C	23	110	50	—	4.1
K2413A	19	95	55	—	1.8
K2413C	19	52	30	—	2.9
K2414A	38	56	60	—	6.3
K2414C	33	89	60	—	6.4
K2415A	39	100	100	—	5.9

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2415C	35	150	85	—	5.8
K2416A	21	48	75	—	3.7
K2416C	27	110	75	—	2.9
K2417A	16	100	75	—	1.1
K2417C	23	62	60	—	2.3
K2418A	25	65	150	—	1.4
K2418C	15	76	45	—	2.6
K2419A	18	86	160	—	0.7
K2419C	15	87	60	—	3.6
K2420A	16	80	55	—	1.4
K2420C	18	67	50	—	1.7
K2421A	23	100	45	—	4.6
K2421C	44	170	35	—	10.0
K2422A	15	180	55	—	0.4
K2422C	21	75	65	—	2.6
K2423A	35	73	20	—	0.0
K2423C	22	59	60	—	3.1
K2424A	33	76	110	—	0.0
K2424C	5	34	30	—	4.5
K2425A	4	32	20	—	3.6
K2425C	2	59	75	—	0.4
K2428A	8	77	80	—	1.5
K2429A	37	95	130	—	0.0
K2429C	16	8	5	—	6.9
K2430A	13	49	70	—	0.4
K2430C	2	12	5	—	4.9
K2431A	33	60	40	—	0.4
K2431C	13	34	30	—	5.4
K2432A	9	56	45	—	1.6

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2432C	14	18	20	—	5.8
K2433A	13	41	60	—	1.9
K2433C	17	54	30	—	2.9
K2434A	15	63	100	—	0.4
K2434C	13	31	25	—	4.4
K2435A	22	43	80	—	0.0
K2435C	19	64	40	—	3.5
K2436A	21	51	60	—	0.0
K2436C	18	66	75	—	3.4
K2437A	18	32	35	—	1.6
K2437C	17	68	65	—	2.7
K2438A	14	49	35	—	0.0
K2438C	14	44	50	—	2.3
K2439A	12	51	65	—	1.0
K2439C	22	72	60	—	3.5
K2440A	12	63	50	—	0.7
K2440C	17	40	60	—	3.3
K2441A	20	86	50	—	2.1
K2441C	19	78	45	—	4.1
K2442A	22	51	45	—	7.0
K2442C	26	110	35	—	7.3
K2443A	17	123	70	—	0.4
K2443C	40	170	130	—	1.6
K2444A	16	77	50	—	0.0
K2444C	22	65	30	—	2.1
K2445A	26	65	55	—	0.0
K2445C	22	53	55	—	4.8
K2446A	16	63	135	—	0.8
K2446C	22	74	55	—	5.2

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2447A	17	66	70	—	1.1
K2447C	22	75	65	—	5.4
K2448A	15	34	60	—	1.4
K2448C	20	90	35	—	4.1
K2449A	15	40	45	—	2.5
K2449C	14	62	45	—	4.0
K2450A	19	75	70	—	0.5
K2450C	19	66	35	—	4.2
K2451A	20	76	120	—	1.4
K2451C	16	54	30	—	2.8
K2452A	21	61	65	—	0.4
K2452C	19	70	60	—	7.2
K2453A	20	92	80	—	1.6
K2453C	17	84	35	—	2.3
K2454A	22	99	50	—	1.9
K2454C	26	160	180	—	5.1
K2455A	16	69	60	—	0.0
K2455C	20	95	80	—	2.5
K2456A	14	56	50	—	0.0
K2456C	16	46	30	—	3.0
K2457A	19	48	50	—	0.0
K2457C	21	65	50	—	4.1
K2458A	22	46	80	—	1.3
K2458C	14	48	30	—	3.0
K2459A	22	43	80	—	1.6
K2459C	20	58	30	—	3.0
K2460A	20	58	80	—	0.0
K2460C	15	64	30	—	3.2
K2461A	36	130	105	—	2.0

13-DEC-78

X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2461C	18	130	50	—	3.5
K2462A	26	140	70	—	1.8
K2462C	20	140	75	—	3.0
K2463A	22	49	35	—	6.6
K2463C	15	70	45	—	3.2
K2464A	19	36	40	—	0.5
K2464C	20	110	60	—	2.9
K2465A	22	78	65	—	1.5
K2465C	19	70	60	—	2.5
K2466A	21	91	105	—	0.0
K2466C	22	59	50	—	3.4
K2467A	20	100	110	—	0.0
K2467C	16	94	85	—	3.1
K2468A	17	100	85	—	0.7
K2468C	16	67	45	—	4.8
K2469A	19	120	55	—	1.9
K2469C	22	80	60	—	4.8
K2470A	25	74	145	—	1.9
K2470C	27	160	90	—	3.3
K2471A	22	67	80	—	0.9
K2471C	26	120	90	—	2.8
K2472A	23	67	75	—	0.0
K2472C	30	110	60	—	3.0
K2473A	21	110	120	—	1.2
K2473C	19	110	45	—	4.3
K2474A	21	41	40	—	0.0
K2474C	22	100	50	—	4.4
K2475A	21	72	50	—	2.0
K2475C	28	150	70	—	3.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2476A	18	44	75	—	1.8
K2476C	14	56	30	—	5.2
K2477A	24	42	45	—	3.1
K2477C	28	91	65	—	4.5
K2478A	34	50	160	—	4.7
K2478C	28	125	70	—	4.4
K2479A	20	60	65	—	1.3
K2479C	20	69	30	—	2.6
K2480A	18	27	50	—	4.2
K2480C	16	28	40	—	3.9
K2481A	22	43	70	—	1.6
K2481C	19	74	40	—	2.5
K2482A	22	34	100	—	0.6
K2482C	30	66	85	—	5.7
K2483A	20	40	60	—	1.7
K2483C	19	44	40	—	3.7
K2484A	15	52	105	—	1.7
K2484C	25	60	70	—	7.3
K2485A	24	29	35	—	2.1
K2485C	30	49	50	—	4.0
K2486A	27	34	50	—	2.5
K2486C	18	59	30	—	2.4
K2487A	21	51	75	—	2.2
K2487C	18	31	30	—	4.0
K2488A	16	36	115	—	2.1
K2488C	18	40	210	—	5.3
K2489A	19	54	155	—	5.1
K2489C	25	66	175	—	9.2
K2490A	18	48	55	—	0.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2490C	22	20	25	—	4.4
K2491A	19	22	50	—	0.0
K2491C	19	29	40	—	4.9
K2492A	17	42	50	—	0.0
K2492C	14	27	20	—	4.1
K2493A	20	31	105	—	6.7
K2493C	25	70	105	—	12.2
K2494A	22	40	30	—	0.0
K2494C	17	15	15	—	5.0
K2495A	18	71	65	—	0.0
K2495C	22	49	30	—	3.3
K2496A	27	42	75	—	0.0
K2496C	15	13	5	—	3.7
K2497C	12	9	5	—	6.4
K2499A	22	580	50	—	0.0
K2499C	19	22	22	—	4.7
K2501A	27	58	85	—	0.0
K2501C	22	43	30	—	2.3
K2502A	48	180	85	—	6.9
K2502C	16	46	30	—	3.5
K2503A	34	150	45	—	0.6
K2503C	22	110	80	—	3.3
K2504A	21	51	90	—	0.9
K2504C	23	130	160	—	3.5
K2505A	18	58	135	—	0.0
K2505C	13	110	65	—	3.0
K2506A	12	48	75	—	1.4
K2506C	13	47	65	—	5.3
K2507A	58	160	170	—	7.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2507C	18	130	105	—	2.8
K2508A	14	83	115	—	0.0
K2508C	9	35	105	—	4.4
K2509A	13	67	75	—	0.4
K2509C	10	77	65	—	3.9
K2510A	17	50	105	—	0.6
K2510C	8	53	30	—	5.1
K2511A	12	44	80	—	3.1
K2511C	10	60	50	—	4.2
K2512A	16	91	115	—	0.7
K2512C	12	120	80	—	3.9
K2513A	24	44	70	—	2.8
K2513C	12	74	50	—	3.5
K2514A	14	78	105	—	0.7
K2514C	10	23	30	—	5.4
K2515A	15	58	105	—	1.9
K2515C	8	46	25	—	3.0
K2516A	23	65	115	—	0.9
K2516C	12	77	50	—	2.4
K2517A	26	46	110	—	0.0
K2517C	16	120	55	—	4.1
K2518A	20	48	55	—	0.0
K2518C	14	35	35	—	2.8
K2519A	27	56	75	—	0.0
K2519C	31	46	60	—	4.8
K2520A	21	34	65	—	2.6
K2520C	24	45	60	—	6.6
K2521A	20	22	80	—	4.7
K2521C	19	38	70	—	8.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2522A	31	31	55	—	2.0
K2522C	27	26	65	—	8.7
K2523A	21	42	40	—	0.0
K2523C	9	17	35	—	4.2
K2524A	15	20	35	—	1.8
K2524C	19	19	15	—	4.7
K2525A	30	66	70	—	0.0
K2525C	22	32	25	—	2.2
K2526A	21	65	35	—	0.5
K2526C	19	24	15	—	3.9
K2527A	30	67	50	—	0.0
K2527C	24	27	35	—	3.8
K2528A	16	62	55	—	0.5
K2528C	23	46	40	—	4.7
K2529A	23	34	60	—	2.6
K2529C	21	39	55	—	5.1
K2530A	30	73	75	—	0.0
K2530C	20	23	10	—	4.8
K2531A	15	50	60	—	0.0
K2531C	22	46	20	—	2.7
K2532A	18	60	60	—	0.0
K2532C	17	37	25	—	4.1
K2533A	18	54	60	—	0.0
K2533C	9	8	5	—	4.8
K2534A	18	62	60	—	0.0
K2534C	15	26	20	—	4.1
K2535A	17	52	50	—	0.0
K2535C	15	24	25	—	4.2
K2536A	22	62	75	—	0.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2552C	16	32	40	—	3.0
K2553A	20	43	60	—	3.2
K2553C	15	60	55	—	4.4
K2554A	11	35	80	—	2.5
K2554C	11	44	45	—	3.1
K2555A	30	47	120	—	0.9
K2555C	20	130	65	—	5.7
K2556A	13	22	60	—	3.3
K2556C	20	130	60	—	4.9
K2557A	16	27	55	—	1.6
K2557C	14	36	40	—	5.1
K2558A	18	25	65	—	2.7
K2558C	15	29	25	—	6.2
K2559A	20	39	120	—	0.9
K2559C	19	90	50	—	3.7
K2560A	13	19	65	—	1.1
K2560C	12	46	35	—	3.4
K2561A	14	74	65	—	0.0
K2561C	14	24	35	—	2.9
K2562A	19	22	50	—	1.0
K2562C	19	22	40	—	5.9
K2563A	17	56	55	—	0.0
K2563C	25	36	30	—	0.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2536C	7	7	10	—	5.7
K2537A	17	74	65	—	0.5
K2537C	8	5	5	—	6.2
K2538A	14	47	55	—	0.0
K2538C	5	3	0	—	3.6
K2540A	16	63	50	—	0.7
K2540C	17	21	20	—	3.9
K2541C	14	6	5	—	5.6
K2542A	21	100	100	—	0.6
K2542C	21	80	60	—	3.2
K2543A	12	22	35	—	4.8
K2543C	12	130	75	—	2.6
K2544A	10	27	50	—	2.5
K2544C	19	90	60	—	7.9
K2545A	17	41	60	—	1.9
K2545C	15	100	70	—	6.9
K2546A	10	25	50	—	3.1
K2546C	20	90	75	—	8.8
K2547A	17	15	60	—	0.0
K2547C	4	16	40	—	4.0
K2548A	12	72	65	—	1.0
K2548C	19	77	40	—	2.5
K2549A	7	15	65	—	2.6
K2549C	11	46	50	—	2.7
K2550A	19	16	45	—	3.6
K2550C	18	65	70	—	4.8
K2551A	16	32	45	—	1.1
K2551C	21	90	45	—	3.6
K2552A	23	36	95	—	1.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2732A	11	67	50	—	1.7
K2732C	19	160	80	—	2.9
K2733A	11	58	25	—	0.0
K2733C	11	59	70	—	2.3
K2734A	12	49	60	—	1.9
K2734C	15	39	45	—	4.9
K2735A	11	42	50	—	2.7
K2735C	11	61	50	—	3.0
K2736A	19	40	80	—	1.6
K2736C	17	120	70	—	2.3
K2737A	15	59	90	—	1.3
K2737C	9	67	60	—	3.2
K2738A	16	46	60	—	1.1
K2738C	10	98	50	—	3.6
K2739A	8	29	50	—	1.6
K2739C	14	130	50	—	3.3
K2740A	7	46	45	—	0.0
K2740C	7	23	10	—	6.9
K2741A	7	46	40	—	0.0
K2741C	20	49	40	—	2.5
K2742A	9	69	70	—	0.0
K2742C	10	60	30	—	2.3
K2743A	12	27	30	—	1.5
K2743C	8	39	15	—	4.3
K2744A	11	54	60	—	0.0
K2744C	8	44	20	—	3.6
K2745A	8	46	25	—	0.0
K2745C	6	32	10	—	4.1
K2751A	9	60	60	—	0.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2751C	11	41	20	—	3.2
K2752A	16	56	70	—	0.0
K2752C	18	88	25	—	2.9
K2753A	14	58	80	—	0.0
K2753C	7	16	0	—	9.8
K2757A	12	52	65	—	0.0
K2757C	15	80	10	—	2.5
K2758A	11	64	60	—	0.5
K2758C	11	50	15	—	4.4
K2759A	8	28	20	—	3.5
K2759C	9	30	15	—	4.1
K3001A	19	77	100	—	1.1
K3001C	8	75	50	—	2.2
K3002A	16	45	90	—	0.0
K3002C	13	130	60	—	2.7
K3003A	10	52	70	—	1.4
K3003C	12	110	40	—	2.3
K3004A	8	35	80	—	3.1
K3004C	14	150	60	—	2.3
K3005A	7	35	55	—	2.9
K3005C	7	47	40	—	2.7
K3006A	17	46	45	—	0.0
K3006C	10	110	45	—	2.4
K3007A	8	31	65	—	1.9
K3007C	10	110	50	—	3.0
K3008A	7	52	75	—	2.3
K3008C	10	110	45	—	2.9
K3009A	6	22	40	—	3.4
K3009C	11	110	45	—	3.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2760C	10	55	25	—	3.9
K2761A	11	50	85	—	1.1
K2761C	8	41	30	—	3.8
K2762A	5	59	55	—	0.0
K2762C	5	24	20	—	5.7
K2763A	10	26	75	—	1.6
K2763C	7	39	30	—	3.9
K2764A	12	36	80	—	1.7
K2765A	7	51	70	—	1.5
K2765C	7	40	30	—	2.6
K2766C	7	46	60	—	1.6
K2767A	10	79	85	—	2.5
K2767C	10	110	80	—	2.7
K2768A	6	34	55	—	1.2
K2768C	22	220	145	—	7.4
K2769A	11	76	80	—	0.5
K2769C	10	90	65	—	3.0
K2770A	7	90	70	—	0.0
K2770C	13	120	85	—	2.5
K2771A	16	120	30	—	0.4
K2771C	9	49	60	—	3.1
K2772A	10	85	40	—	0.0
K2772C	17	130	95	—	2.9
K2773A	7	290	30	—	0.4
K2773C	7	66	60	—	2.7
K2774A	25	130	90	—	16.4
K2774C	15	110	65	—	3.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2775A	11	92	80	—	0.5
K2775C	17	110	55	—	3.9
K2776A	10	95	55	—	0.9
K2776C	11	84	50	—	3.5
K2777A	11	130	120	—	0.4
K2777C	11	99	70	—	2.6
K2778A	11	100	60	—	0.4
K2778C	10	85	40	—	4.2
K2779A	8	53	25	—	0.0
K2779C	20	87	50	—	2.7
K2780A	8	150	35	—	0.0
K2782A	11	150	70	—	0.4
K2782C	12	98	50	—	3.8
K2783A	11	51	70	—	1.8
K2783C	15	130	25	—	2.8
K2784A	9	45	50	—	0.0
K2784C	8	56	15	—	2.7
K2785A	13	58	40	—	0.0
K2785C	5	16	5	—	9.0
K2786A	9	56	80	—	0.0
K2786C	11	90	30	—	3.2
K2787A	10	65	65	—	1.4
K2787C	6	44	25	—	3.3
K2788A	10	52	80	—	1.6
K2788C	6	39	20	—	5.7
K2789A	15	100	70	—	2.9
K2789C	7	35	35	—	6.2
K2790A	11	32	45	—	1.8
K2790C	10	58	35	—	4.7

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2791A	11	39	55	—	4.1
K2791C	10	70	40	—	4.3
K2792A	11	34	40	—	6.3
K2792C	10	36	35	—	3.6
K2793A	9	97	100	—	2.3
K2793C	6	36	25	—	4.1
K2794A	11	92	65	—	0.7
K2794C	9	51	35	—	3.8
K2795A	8	76	50	—	3.4
K2795C	7	70	45	—	3.1
K2796A	10	50	80	—	7.0
K2796C	10	70	70	—	3.0
K2797A	17	92	110	—	1.6
K2797C	14	80	75	—	3.0
K2798A	11	47	50	—	0.4
K2798C	12	35	55	—	5.0
K2799A	7	42	30	—	2.6
K2799C	11	68	50	—	2.7
K2800A	11	160	80	—	0.5
K2800C	13	65	25	—	3.1
K2801A	16	67	80	—	0.4
K2801C	71	61	55	—	3.2
K2802A	11	36	50	—	0.0
K2802C	13	82	55	—	0.0
K2803A	17	120	65	—	1.6
K2803C	13	72	55	—	5.1
K2804A	12	35	30	—	2.7
K2804C	11	77	35	—	1.8
K2805A	15	100	70	—	3.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2805C	11	160	75	—	4.1
K2806A	15	49	90	—	2.6
K2806C	7	26	40	—	5.0
K2807A	9	31	70	—	2.2
K2807C	14	100	70	—	3.3
K2808A	11	48	95	—	2.5
K2808C	23	200	120	—	2.9
K2809A	15	140	65	—	0.9
K2809C	7	75	50	—	3.3
K2810A	11	120	60	—	0.0
K2810C	13	74	80	—	3.3
K2811A	12	34	55	—	0.0
K2811C	12	65	60	—	2.3
K2812A	21	83	120	—	0.5
K2812C	11	95	55	—	3.4
K2813A	12	62	65	—	0.8
K2813C	14	110	75	—	2.7
K2814A	13	120	75	—	1.6
K2814C	23	170	120	—	2.1
K2815A	10	42	50	—	2.6
K2815C	12	71	65	—	3.0
K2816A	10	120	60	—	2.2
K2816C	11	88	65	—	3.5
K2817A	14	44	110	—	1.1
K2817C	15	120	65	—	2.7
K2818A	13	120	85	—	1.8
K2818C	12	97	85	—	3.1
K2819A	10	70	90	—	3.3
K2819C	23	69	40	—	1.9

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2820A	15	100	95	—	0.5
K2820C	13	94	100	—	4.4
K2821A	12	84	50	—	0.5
K2821C	11	88	50	—	3.0
K2822A	15	75	160	—	3.1
K2822C	22	130	210	—	9.7
K2823A	12	32	85	—	2.6
K2823C	12	73	30	—	2.6
K2824A	17	63	65	—	2.2
K2824C	6	11	25	—	4.1
K2825A	17	36	55	—	1.0
K2825C	8	29	40	—	3.8
K2826A	12	55	70	—	2.8
K2826C	8	31	35	—	4.0
K2827A	12	31	60	—	3.1
K2827C	12	37	60	—	3.6
K2828A	7	50	35	—	3.2
K2828C	10	59	30	—	3.7
K2829A	13	75	90	—	1.5
K2829C	16	46	110	—	6.9
K2830A	7	36	50	—	1.5
K2830C	9	34	35	—	4.2
K2831A	12	35	40	—	1.7
K2831C	8	24	20	—	4.5
K2832A	12	47	60	—	1.9
K2832C	15	75	35	—	4.4
K2833A	13	23	40	—	2.0
K2833C	11	55	35	—	3.0
K2834A	12	80	165	—	1.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2834C	9	46	25	—	4.7
K2835A	11	42	35	—	2.7
K2835C	13	26	40	—	7.8
K2836A	11	48	45	—	5.3
K2836C	14	53	95	—	0.5
K2837A	12	61	45	—	0.5
K2837C	13	82	40	—	3.9
K2838A	10	61	80	—	1.3
K2838C	14	69	35	—	5.0
K2839A	12	43	40	—	3.9
K2839C	10	38	30	—	5.5
K2840A	15	42	70	—	5.2
K2840C	15	42	85	—	5.0
K2842A	9	81	65	—	0.4
K2842C	10	50	75	—	2.5
K2843A	8	34	45	—	2.4
K2843C	10	70	80	—	2.7
K2844A	8	56	50	—	0.8
K2844C	8	52	65	—	3.2
K2845A	11	53	50	—	0.9
K2845C	11	33	40	—	2.0
K2846A	11	78	90	—	0.0
K2846C	10	44	50	—	3.7
K2847A	7	28	45	—	2.2
K2847C	17	100	45	—	3.1
K2848A	7	34	45	—	0.7
K2848C	12	95	45	—	2.8
K2849A	8	47	35	—	0.0
K2849C	13	120	70	—	2.7

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2850A	11	88	100	—	0.6
K2850C	14	87	120	—	2.8
K2851A	8	130	60	—	0.0
K2851C	9	80	50	—	2.7
K2852A	12	100	70	—	3.3
K2852C	6	49	65	—	3.4
K2853A	12	120	90	—	3.4
K2853C	9	62	60	—	2.5
K2854A	14	93	80	—	2.8
K2854C	10	140	120	—	4.0
K2855A	20	180	140	—	3.4
K2855C	14	89	70	—	3.1
K2856A	12	71	80	—	0.5
K2856C	15	120	80	—	2.7
K2857A	12	74	70	—	0.0
K2857C	9	57	50	—	3.1
K2858A	10	31	20	—	0.0
K2858C	11	58	80	—	2.3
K2859A	11	59	100	—	0.6
K2859C	7	47	60	—	3.8
K2860A	9	56	40	—	0.0
K2860C	13	75	50	—	3.9
K2861A	28	87	200	—	3.8
K2861C	12	94	60	—	2.7
K2862A	11	100	55	—	2.0
K2862C	11	110	70	—	2.2
K2863A	17	100	80	—	0.6
K2863C	8	68	65	—	2.4
K2864A	12	70	130	—	1.7

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2864C	14	100	50	—	2.8
K2865A	8	27	40	—	5.0
K2865C	7	33	35	—	8.5
K2866A	17	49	90	—	0.6
K2866C	8	47	50	—	4.5
K2867A	11	81	60	—	0.7
K2867C	8	35	60	—	8.0
K2868A	11	100	50	—	0.7
K2868C	14	58	40	—	1.8
K2869A	11	57	55	—	2.9
K2869C	7	21	20	—	5.8
K2870A	12	93	85	—	0.5
K2870C	10	42	35	—	3.7
K2871A	27	60	40	—	0.0
K2871C	11	43	50	—	3.1
K2872A	11	30	45	—	2.3
K2872C	11	42	40	—	4.1
K2873A	5	22	55	—	4.2
K2873C	9	30	30	—	4.1
K2874A	12	32	55	—	1.8
K2874C	7	15	20	—	4.0
K2875A	14	65	60	—	0.8
K2875C	8	25	45	—	3.3
K2876A	8	68	60	—	0.8
K2876C	9	42	40	—	2.9
K2877A	13	93	90	—	0.4
K2877C	7	20	30	—	3.9
K2878A	16	38	140	—	3.2
K2878C	14	70	50	—	4.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2879A	9	34	75	—	2.7
K2879C	13	44	40	—	5.2
K2880A	12	42	70	—	0.8
K2880C	8	22	50	—	5.3
K2881A	8	14	30	—	3.7
K2881C	11	32	120	—	4.5
K2882A	15	40	160	—	0.7
K2882C	12	76	55	—	4.2
K2883A	11	40	100	—	2.5
K2883C	10	110	40	—	2.5
K2884A	7	48	80	—	2.1
K2884C	12	86	55	—	3.4
K2885A	7	48	90	—	1.0
K2885C	12	110	45	—	3.2
K2886A	12	74	55	—	1.3
K2886C	13	120	50	—	3.7
K2887A	10	47	110	—	0.5
K2887C	10	83	50	—	2.7
K2888A	9	52	50	—	0.6
K2888C	9	68	40	—	3.1
K2889A	11	70	75	—	0.8
K2889C	8	72	45	—	2.6
K2890A	18	96	95	—	0.0
K2890C	9	75	45	—	3.1
K2891A	10	52	60	—	0.7
K2891C	8	53	50	—	2.9
K2892A	13	110	80	—	0.4
K2892C	11	72	45	—	2.9
K2893A	12	150	95	—	0.4

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2893C	15	85	70	—	2.4
K2894A	9	110	60	—	1.2
K2694C	8	120	45	—	3.2
K2895A	11	73	70	—	0.5
K2895C	11	140	50	—	3.1
K2896A	12	53	55	—	1.4
K2896C	14	80	65	—	3.0
K2897A	11	150	100	—	0.6
K2897C	10	82	70	—	2.3
K2898A	8	83	80	—	3.4
K2898C	13	150	50	—	3.1
K2899A	11	70	110	—	0.7
K2899C	9	56	60	—	3.2
K2900A	13	78	100	—	1.4
K2900C	8	24	50	—	3.3
K2901A	9	64	50	—	0.0
K2901C	6	25	25	—	4.3
K2902A	9	82	35	—	0.0
K2902C	10	59	55	—	3.1
K2903A	8	48	55	—	0.0
K2903C	15	170	60	—	2.4
K2904A	8	48	45	—	0.0
K2904C	11	68	45	—	3.1
K2905A	8	54	60	—	1.8
K2905C	9	85	55	—	2.1
K2906A	15	100	110	—	2.3
K2906C	17	54	55	—	2.5
K2907A	8	53	45	—	2.6
K2907C	12	42	40	—	3.1

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2908A	18	55	110	—	3.8
K2908C	15	55	70	—	4.2
K2909A	11	140	50	—	3.0
K2909C	7	60	50	—	3.4
K2910A	9	150	80	—	1.2
K2910C	9	74	70	—	2.6
K2911A	13	130	90	—	0.9
K2911C	9	80	70	—	3.3
K2912A	9	38	55	—	1.3
K2912C	15	86	60	—	2.7
K2913A	10	92	70	—	1.5
K2913C	7	37	40	—	3.5
K2914A	6	45	90	—	1.0
K2914C	8	40	60	—	2.7
K2915A	6	53	45	—	2.1
K2915C	5	22	25	—	3.9
K2916A	13	62	95	—	1.1
K2916C	15	67	80	—	4.4
K2917A	6	45	70	—	2.5
K2917C	11	46	105	—	4.3
K2918A	11	130	70	—	0.0
K2918C	5	45	35	—	2.0
K2919A	11	51	105	—	1.0
K2919C	14	58	60	—	3.3
K2920A	8	75	95	—	0.0
K2920C	14	50	80	—	2.7
K2921A	8	43	140	—	2.0
K2921C	10	42	50	—	1.1
K2922A	20	62	250	—	0.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2922C	12	88	50	—	3.1
K2923A	16	53	180	—	1.5
K2923C	12	79	40	—	3.4
K2924A	7	23	70	—	3.4
K2924C	10	73	45	—	3.3
K2925A	14	62	95	—	0.8
K2925C	9	48	45	—	3.6
K2926A	7	20	55	—	3.5
K2926C	13	110	40	—	3.6
K2927A	14	41	80	—	1.5
K2927C	9	70	40	—	2.6
K2928A	9	36	120	—	2.8
K2928C	9	62	50	—	3.4
K2929A	11	50	90	—	1.1
K2929C	14	120	55	—	3.3
K2930A	16	35	80	—	0.6
K2930C	12	95	55	—	3.6
K2931A	16	42	85	—	0.6
K2931C	16	49	50	—	3.1
K2932A	11	67	80	—	1.5
K2932C	12	85	40	—	3.4
K2933A	7	40	75	—	2.5
K2933C	17	130	60	—	3.6
K2934A	6	65	85	—	2.9
K2934C	14	90	45	—	3.1
K2935A	13	62	160	—	0.0
K2935C	11	100	45	—	2.8
K2936A	7	52	40	—	0.8
K2936C	7	36	45	—	2.6

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2937A	7	63	85	—	1.6
K2937C	8	46	40	—	3.7
K2938A	14	18	80	—	0.0
K2938C	11	73	60	—	2.1
K2939A	13	94	80	—	0.0
K2939C	9	93	60	—	1.5
K2940A	7	56	55	—	0.0
K2940C	13	46	70	—	3.6
K2941A	10	87	90	—	0.0
K2941C	13	77	80	—	2.3
K2942A	8	72	45	—	0.4
K2942C	11	65	60	—	1.9
K2943A	9	53	35	—	2.3
K2943C	7	35	45	—	0.6
K2946A	14	170	45	—	0.6
K2946C	8	60	55	—	2.4
K2947A	9	90	60	—	0.0
K2947C	10	69	35	—	0.7
K2948A	7	84	85	—	1.0
K2948C	11	100	75	—	2.9
K2949A	23	64	100	—	4.6
K2949C	20	60	95	—	3.8
K2950A	21	58	160	—	3.8
K2950C	34	130	160	—	7.2
K2951A	31	46	60	—	1.2
K2951C	12	100	65	—	3.0
K2952A	19	97	105	—	1.4
K2952C	20	93	85	—	4.3
K2953A	12	70	70	—	1.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2953C	18	69	120	—	5.1
K2954A	18	77	165	—	1.7
K2954C	30	93	170	—	9.2
K2955A	9	160	60	—	0.0
K2955C	11	70	65	—	2.4
K2956A	12	150	70	—	0.0
K2956C	8	84	45	—	3.3
K2957A	8	77	60	—	0.6
K2957C	11	65	70	—	3.1
K2958A	9	80	65	—	2.8
K2958C	8	35	35	—	3.4
K2959A	7	64	60	—	0.0
K2959C	7	47	45	—	1.6
K2960A	18	85	110	—	0.6
K2960C	21	91	70	—	3.3
K2961A	8	44	65	—	1.6
K2961C	11	53	45	—	3.1
K2962A	9	35	75	—	2.0
K2962C	12	82	40	—	2.9
K2963A	22	37	65	—	1.5
K2963C	11	30	30	—	2.9
K2964A	16	62	245	—	0.0
K2964C	10	54	30	—	1.7
K2965A	8	57	80	—	1.7
K2965C	10	82	40	—	2.6
K2966A	9	23	45	—	2.4
K2966C	10	95	40	—	2.6
K2967A	13	62	115	—	1.3
K2967C	14	100	50	—	3.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2968A	5	18	50	—	3.8
K2968C	8	75	30	—	2.6
K2969A	13	23	70	—	0.9
K2969C	16	140	40	—	3.7
K2970A	11	53	85	—	1.2
K2970C	14	110	45	—	2.8
K2971A	16	44	50	—	1.7
K2971C	9	42	45	—	3.7
K2972A	9	46	90	—	1.3
K2972C	11	87	45	—	3.4
K2973A	15	66	155	—	0.8
K2973C	10	100	30	—	2.4
K2974A	13	95	110	—	0.0
K2974C	6	35	35	—	2.6
K2975A	12	100	85	—	1.1
K2975C	10	110	40	—	2.7
K2976A	15	95	160	—	0.5
K2976C	9	52	40	—	2.3
K2977A	7	65	105	—	0.0
K2977C	6	70	40	—	2.5
K2978A	10	46	70	—	0.5
K2978C	4	19	25	—	3.6
K2979A	6	42	30	—	0.0
K2979C	8	62	50	—	1.9
K2980A	19	40	30	—	0.0
K2980C	10	120	55	—	3.1
K2981A	7	58	70	—	2.1
K2981C	5	42	40	—	3.9
K2982A	12	48	35	—	0.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K2982C	8	49	45	—	2.0
K2983A	7	60	50	—	0.4
K2983C	8	67	30	—	2.9
K2984A	6	76	60	—	0.0
K2984C	8	67	60	—	3.1
K2985A	6	88	40	—	0.0
K2985C	5	45	45	—	3.5
K2986A	7	57	65	—	1.0
K2986C	13	110	70	—	2.7
K2987A	9	70	60	—	0.0
K2987C	7	70	50	—	1.6
K2988A	7	63	45	—	0.0
K2988C	23	110	85	—	2.5
K2995A	6	78	85	—	0.0
K2995C	17	110	80	—	2.1
K2996A	9	70	95	—	0.6
K2996C	9	93	75	—	2.6
K2997A	13	46	75	—	0.6
K2997C	10	62	70	—	2.5
K2998A	17	67	110	—	0.7
K2998C	10	100	80	—	2.7
K2999A	9	41	115	—	3.1
K2999C	16	130	105	—	4.1
K3000A	8	38	80	—	3.2
K3000C	11	100	80	—	2.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3010A	10	42	100	—	1.6
K3010C	11	110	40	—	2.5
K3011A	15	42	80	—	1.1
K3011C	10	86	40	—	2.4
K3012A	10	46	100	—	0.9
K3012C	8	69	45	—	2.8
K3013A	6	34	70	—	2.3
K3013C	11	110	60	—	3.3
K3014A	11	88	40	—	1.5
K3014C	9	84	45	—	3.3
K3015A	8	32	60	—	2.3
K3015C	11	82	45	—	2.6
K3016A	10	46	75	—	1.0
K3016C	8	45	30	—	4.3
K3017A	14	42	100	—	0.6
K3017C	8	75	50	—	2.3
K3018A	7	38	40	—	1.5
K3018C	8	61	40	—	3.3
K3019A	7	78	45	—	0.0
K3019C	17	140	80	—	2.3
K3020A	8	41	50	—	0.7
K3020C	9	31	30	—	2.3
K3021A	11	56	80	—	0.6
K3021C	8	89	40	—	2.6
K3022A	8	100	70	—	0.9
K3022C	6	67	60	—	3.7
K3023A	13	62	85	—	0.0
K3023C	8	90	65	—	3.0
K3024A	11	64	70	—	0.4

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3024C	5	43	30	—	3.3
K3025A	6	55	50	—	1.6
K3025C	9	93	45	—	3.0
K3026A	11	50	85	—	0.4
K3026C	7	48	50	—	3.3
K3027A	10	230	30	—	0.4
K3027C	10	79	50	—	2.1
K3028A	6	83	40	—	1.3
K3028C	8	86	55	—	3.2
K3029A	12	180	55	—	0.0
K3029C	35	76	100	—	1.8
K3030A	11	130	65	—	0.0
K3030C	9	79	80	—	2.8
K3031A	7	25	45	—	2.2
K3031C	8	51	35	—	3.3
K3032A	7	28	80	—	2.6
K3032C	8	71	40	—	2.6
K3033A	10	32	70	—	3.9
K3033C	11	120	40	—	2.2
K3034A	12	35	85	—	1.8
K3034C	8	36	20	—	3.0
K3035A	17	41	40	—	0.9
K3035C	11	99	40	—	2.1
K3036A	10	46	85	—	2.1
K3036C	10	89	30	—	2.8
K3037A	11	41	100	—	1.8
K3037C	9	34	50	—	2.7
K3038A	6	30	60	—	3.0
K3038C	8	54	40	—	2.4

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3039A	11	75	65	—	2.4
K3039C	9	110	45	—	2.5
K3040A	10	29	70	—	2.5
K3040C	11	96	40	—	2.6
K3041A	10	27	85	—	1.3
K3041C	17	150	55	—	2.4
K3042A	13	34	100	—	2.1
K3042C	12	120	55	—	2.8
K3043A	8	29	50	—	3.4
K3043C	12	98	60	—	3.3
K3044A	7	57	80	—	0.8
K3044C	10	83	30	—	2.1
K3045A	11	71	65	—	0.0
K3045C	10	86	55	—	2.2
K3046A	12	59	85	—	0.4
K3046C	12	120	40	—	2.4
K3047A	16	52	120	—	0.5
K3047C	7	75	40	—	4.3
K3048A	8	58	80	—	1.1
K3048C	10	93	60	—	2.3
K3049A	8	50	70	—	1.2
K3049C	8	71	75	—	2.9
K3050A	11	110	75	—	0.0
K3050C	6	43	35	—	4.0
K3051A	11	130	70	—	0.0
K3051C	12	120	60	—	2.5
K3052A	7	58	55	—	1.0
K3052C	11	110	60	—	2.4
K3053A	6	67	40	—	0.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3053C	8	91	60	—	2.5
K3054A	22	150	150	—	2.1
K3054C	20	240	55	—	2.9
K3055A	19	160	160	—	0.7
K3055C	32	380	180	—	3.6
K3056A	11	80	80	—	2.0
K3056C	9	80	70	—	2.5
K3057A1	22	160	150	—	1.6
K3057C1	22	290	135	—	3.4
K3057A2	9	70	130	—	1.6
K3057C2	5	31	65	—	3.7
K3058A	11	60	90	—	0.0
K3058C	10	65	55	—	2.3
K3059A	7	44	90	—	1.7
K3059C	11	85	80	—	2.5
K3060A	6	73	90	—	2.1
K3060C	11	100	80	—	3.4
K3061A	7	35	70	—	1.0
K3061C	10	110	75	—	2.9
K3062A	9	39	60	—	0.7
K3062C	7	68	60	—	3.3
K3063A	10	63	70	—	0.0
K3063C	8	76	75	—	3.1
K3064A	11	90	100	—	0.7
K3064C	6	43	70	—	3.3
K3065A	9	150	90	—	0.0
K3065C	5	40	60	—	4.3
K3066A	12	35	50	—	0.0
K3066C	13	170	80	—	2.9

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3067A	9	95	60	—	1.4
K3067C	11	120	90	—	2.8
K3068A	14	73	85	—	0.8
K3068C	8	72	75	—	4.1
K3069A	8	55	80	—	1.8
K3069C	12	130	85	—	2.8
K3070A	16	110	180	—	0.4
K3070C	10	150	160	—	3.2
K3071A	19	88	110	—	0.7
K3071C	13	180	90	—	3.6
K3072A	10	59	110	—	0.0
K3072C	11	100	80	—	2.6
K3073A	13	56	140	—	1.4
K3073C	9	48	70	—	1.9
K3074A	15	150	165	—	1.0
K3074C	12	140	70	—	3.0
K3075A	15	83	215	—	1.8
K3075C	11	100	75	—	3.5
K3076A	14	68	110	—	0.9
K3076C	13	110	90	—	3.7
K3077A	10	120	80	—	0.6
K3077C	12	90	80	—	2.8
K3078A	15	100	70	—	0.4
K3078C	11	70	70	—	3.6
K3082A	11	70	100	—	0.0
K3082C	11	58	70	—	1.0
K3083A	12	82	80	—	0.5
K3083C	13	93	80	—	3.1
K3084A	7	25	50	—	3.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3084C	12	100	70	—	2.7
K3085A	12	53	60	—	3.1
K3085C	17	150	90	—	2.8
K3086A	14	39	110	—	1.2
K3086C	15	130	70	—	2.5
K3087A	19	58	150	—	0.6
K3087C	15	130	80	—	2.7
K3088A	22	54	70	—	1.1
K3088C	15	150	80	—	2.7
K3089A	12	77	80	—	1.4
K3089C	15	110	70	—	2.8
K3090A	12	46	100	—	1.7
K3090C	14	110	65	—	2.6
K3091A	15	56	80	—	2.8
K3091C	16	110	70	—	3.3
K3092A	19	38	80	—	1.5
K3092C	22	150	110	—	3.3
K3093A	15	29	65	—	3.5
K3093C	18	68	60	—	2.8
K3094A	25	54	100	—	1.1
K3094C	13	55	60	—	3.5
K3095A	10	35	85	—	1.4
K3095C	18	140	90	—	3.0
K3096A	12	94	75	—	0.0
K3096C	13	100	85	—	2.9
K3097A	16	46	80	—	0.0
K3097C	12	130	85	—	2.8
K3098A	8	41	90	—	2.1
K3098C	11	75	70	—	2.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3099A	13	67	110	—	2.8
K3099C	14	120	90	—	3.3
K3100A	17	62	90	—	0.4
K3100C	14	110	80	—	2.4
K3101A	18	80	120	—	1.9
K3101C	9	48	80	—	3.6
K3102A	13	69	95	—	2.5
K3102C	17	110	95	—	3.6
K3103A	11	72	120	—	1.8
K3103C	14	92	170	—	4.1
K3104A	18	95	110	—	0.4
K3104C	8	51	50	—	2.8
K3105A	19	95	60	—	0.4
K3105C	13	49	60	—	2.9
K3106A	18	58	90	—	1.2
K3106C	22	89	85	—	3.0
K3107A	15	51	125	—	1.0
K3107C	19	130	75	—	2.8
K3108A	17	98	120	—	0.6
K3108C	10	50	80	—	3.6
K3109A	18	65	100	—	2.0
K3109C	12	100	70	—	4.0
K3110A	15	100	150	—	1.2
K3110C	10	68	70	—	3.4
K3111A	14	120	90	—	1.4
K3111C	7	66	70	—	4.0
K3112A	13	30	80	—	0.0
K3112C	15	110	55	—	3.3
K3113A	22	42	110	—	0.5

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3113C	22	83	105	—	3.9
K3114A	17	100	75	—	1.0
K3114C	11	74	80	—	3.4
K3115A	12	85	100	—	1.6
K3115C	11	46	50	—	3.3
K3116A	10	36	70	—	2.8
K3116C	12	54	60	—	3.0
K3117A	19	46	130	—	0.7
K3117C	15	140	80	—	3.0
K3118A	16	68	160	—	0.8
K3118C	5	25	170	—	6.3
K3119A	8	37	35	—	2.2
K3119C	12	130	45	—	3.9
K3120A	8	28	60	—	3.3
K3120C	10	53	50	—	3.2
K3121A	12	35	60	—	1.1
K3121C	7	63	45	—	3.7
K3122A	12	35	55	—	0.0
K3122C	8	72	45	—	2.6
K3123A	8	39	50	—	3.3
K3123C	9	59	60	—	3.1
K3124A	14	78	70	—	1.1
K3124C	11	100	180	—	2.6
K3125A	20	160	70	—	1.2
K3125C	12	130	80	—	2.6
K3126A	12	35	90	—	2.6
K3126C	13	130	75	—	3.2
K3127A	12	49	90	—	1.3
K3127C	12	92	60	—	2.9

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3128A	13	93	100	—	0.0
K3128C	12	110	75	—	2.6
K3129A	12	64	80	—	0.0
K3129C	8	31	40	—	3.4
K3130A	8	28	40	—	3.6
K3130C	15	130	85	—	2.7
K3131A	14	54	60	—	3.4
K3131C	7	27	50	—	4.0
K3132A	16	48	80	—	3.5
K3132C	9	70	50	—	2.1
K3133A	8	22	50	—	4.9
K3133C	12	100	80	—	2.6
K3134A	11	32	110	—	2.7
K3134C	9	69	75	—	3.0
K3135A	21	68	130	—	0.4
K3135C	13	90	50	—	3.4
K3136A	11	38	70	—	1.6
K3136C	12	110	50	—	3.5
K3137A	19	38	95	—	0.6
K3137C	20	78	60	—	2.2
K3138A	13	35	85	—	2.0
K3138C	7	38	40	—	3.3
K3139A	10	54	75	—	2.9
K3139C	11	70	40	—	2.9
K3140A	10	26	95	—	2.5
K3140C	11	110	30	—	2.5
K3141A	11	38	60	—	2.4
K3141C	10	56	50	—	2.9
K3142A	12	36	50	—	0.8

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3142C	18	74	60	—	2.6
K3143A	16	25	70	—	0.8
K3143C	27	32	50	—	4.0
K3144A	16	40	65	—	2.1
K3144C	11	31	45	—	3.5
K3145A	13	55	120	—	1.7
K3145C	13	72	45	—	2.9
K3146A	11	31	90	—	2.7
K3146C	11	44	50	—	3.7
K3147A	11	21	50	—	0.0
K3147C	6	37	50	—	3.3
K3148A	12	32	80	—	1.7
K3148C	6	35	45	—	3.9
K3149A	14	41	80	—	1.7
K3149C	8	41	50	—	3.3
K3150A	13	66	150	—	1.8
K3150C	10	110	60	—	3.1
K3151A	17	45	95	—	0.9
K3151C	8	52	50	—	3.1
K3152A	10	34	50	—	1.5
K3152C	12	61	70	—	3.4
K3153A	8	35	95	—	2.2
K3153C	15	82	65	—	2.9
K3154A	14	50	150	—	1.3
K3154C	17	120	60	—	2.9
K3155A	14	47	120	—	1.0
K3155C	18	70	100	—	3.1
K3156A	19	330	145	—	4.0
K3156C	22	280	90	—	4.7

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3157A	12	39	50	—	3.0
K3157C	8	63	70	—	4.8
K3158A	12	47	75	—	0.0
K3158C	13	66	65	—	1.9
K3159A	6	32	80	—	1.8
K3159C	15	94	70	—	2.5
K3160A	21	39	75	—	1.0
K3160C	15	94	55	—	2.4
K3161A	15	100	80	—	0.7
K3161C	15	110	65	—	2.2
K3162A	11	93	90	—	1.4
K3162C	11	82	45	—	3.2
K3163A	20	62	60	—	0.9
K3163C	14	87	60	—	2.2
K3164A	18	32	70	—	1.6
K3164C	13	100	35	—	2.3
K3165A	13	36	60	—	1.7
K3165C	14	130	60	—	2.7
K3166A	17	65	200	—	0.0
K3166C	15	140	65	—	3.0
K3167A	23	50	95	—	0.5
K3167C	12	100	50	—	2.5
K3168A	26	26	85	—	0.7
K3168C	7	63	45	—	2.4
K3169A	22	58	160	—	0.7
K3169C	15	85	40	—	2.4
K3170A	25	130	220	—	0.7
K3170C	15	130	70	—	2.7
K3171A	12	110	80	—	0.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3171C	15	97	50	—	2.3
K3172A	25	78	95	—	0.0
K3172C	8	68	50	—	3.7
K3173A	20	61	120	—	0.0
K3173C	11	66	45	—	2.9
K3174A	13	66	90	—	1.1
K3174C	16	94	35	—	3.0
K3175A	19	44	120	—	0.6
K3175C	18	140	45	—	3.0
K3176A	15	45	85	—	1.8
K3176C	15	89	40	—	2.9
K3177A	16	43	110	—	3.4
K3177C	13	87	45	—	3.7
K3178A	12	54	90	—	2.2
K3178C	16	85	40	—	3.0
K3179A	18	34	80	—	1.5
K3179C	15	65	45	—	3.0
K3180A	13	47	60	—	2.9
K3180C	14	70	40	—	2.6
K3181A	14	39	80	—	0.5
K3181C	10	36	30	—	3.7
K3182A	15	32	95	—	0.0
K3182C	12	43	40	—	3.5
K3183A	8	82	60	—	0.5
K3183C	11	18	30	—	2.9
K3184A	10	31	55	—	1.5
K3184C	10	52	40	—	3.4
K3185A	11	86	75	—	0.0
K3185C	18	81	45	—	3.0

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3186A	18	56	85	—	0.6
K3186C	8	37	40	—	4.1
K3187A	9	54	110	—	1.7
K3187C	13	71	45	—	2.6
K3188A	21	33	75	—	1.9
K3188C	14	89	45	—	4.5
K3189A	13	42	65	—	2.4
K3189C	14	46	45	—	4.0
K3190A	14	39	60	—	1.9
K3190C	25	72	40	—	3.2
K3191A	18	39	90	—	1.9
K3191C	15	94	40	—	3.2
K3192A	27	100	180	—	0.0
K3192C	15	75	45	—	2.6
K3193A	18	47	95	—	0.0
K3193C	15	110	55	—	3.3
K3194A	21	56	100	—	0.0
K3194C	15	130	50	—	2.3
K3195A	13	63	90	—	1.4
K3195C	13	130	45	—	2.8
K3196A	27	63	130	—	0.6
K3196C	17	92	35	—	3.0
K3197A	18	34	70	—	2.6
K3197C	7	62	35	—	3.0
K3198A	30	94	140	—	0.4
K3198C	10	86	35	—	2.9
K3199A	45	69	160	—	0.7
K3199C	17	48	40	—	2.1
K3200A	12	24	40	—	2.3

13-DEC-78 X-RAY ASSAY LABORATORIES

SAMPLE	CU	ZN	PB	AG	U
K3200C	11	84	35	—	2.7
K3201A	21	39	130	—	0.4
K3201C	10	75	35	—	2.6
K3202A	15	52	90	—	0.4
K3202C	14	82	40	—	2.1
K3203A	17	35	130	—	1.5
K3203C	7	31	30	—	2.7
K3204A	13	46	80	—	0.8
K3204C	8	47	30	—	2.8
K3205A	15	24	40	—	3.0
K3205C	12	82	35	—	2.2
K3206A	11	31	55	—	1.8
K3206C	10	48	30	—	2.8
K3207A	12	27	50	—	2.3
K3207C	5	43	25	—	3.3
K3208A	11	36	85	—	1.9
K3208C	10	63	35	—	2.2
K3209A	15	37	75	—	1.9
K3209C	10	73	30	—	2.5
K3210A	22	43	55	—	1.3
K3210C	14	50	30	—	2.1
K3211A	30	45	75	—	0.4
K3211C	14	79	30	—	3.1
K3212A	11	34	50	—	3.2
K3212C	14	120	40	—	2.9

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CODEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 2 OF 4

483056

Gulf

Gulf Minerals Canada Limit

433056 54-D 16 02

CODEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 2 OF 4 433056

A REPORT ON

GEOCHEMISTRY

GEOLOGICAL MAPPING

PROSPECTING

DIAMOND DRILLING

433056 54-D 16 02

TABLE OF CONTENTS

(Part 2)

	Page No.
INTRODUCTION	1
DL-ZONE DIAMOND DRILLING	7
ANNANDALE DIAMOND DRILLING	20
DOWN-HOLE LOGGING	25
CONCLUSIONS	26
APPENDIX I - LITHOLOGY LOGS	27
Section A: DL-Zone	
Section B: Annandale	
APPENDIX II - DOWN THE HOLE LOGGING	
Section A: DL-Zone	
Section B: Annandale	

LIST OF FIGURES

FIGURE 1 -	Map of Canada	i
FIGURE 2 -	Property Map	ii
FIGURE 3 -	DL-Zone Drill Hole Locations	3
FIGURE 4 -	Annandale Drill Hole Locations	5

LIST OF TABLES

TABLE I -	DL-Zone Drill Holes	4
TABLE II -	Annandale Drill Holes	6

Gulf Minerals Canada Limited

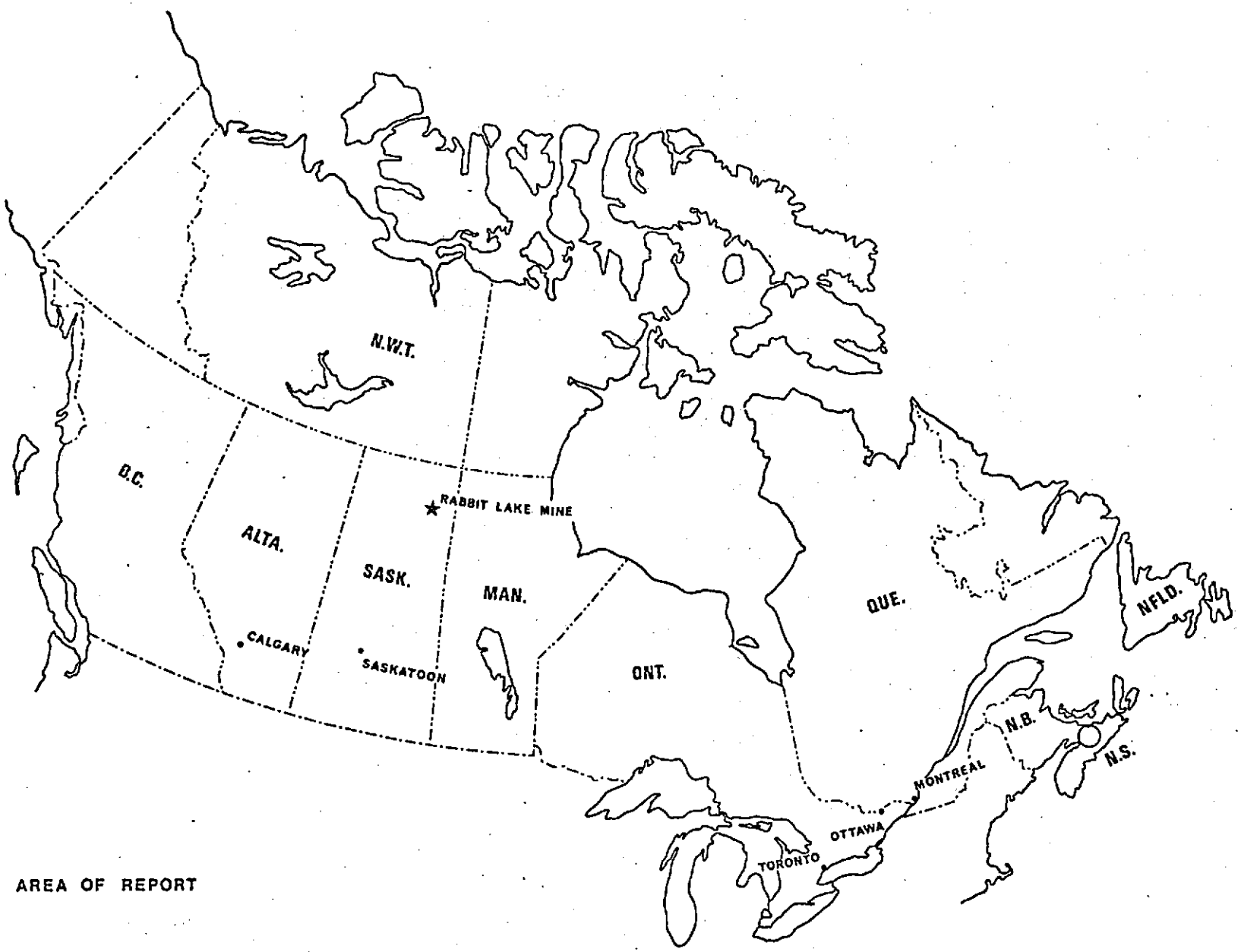
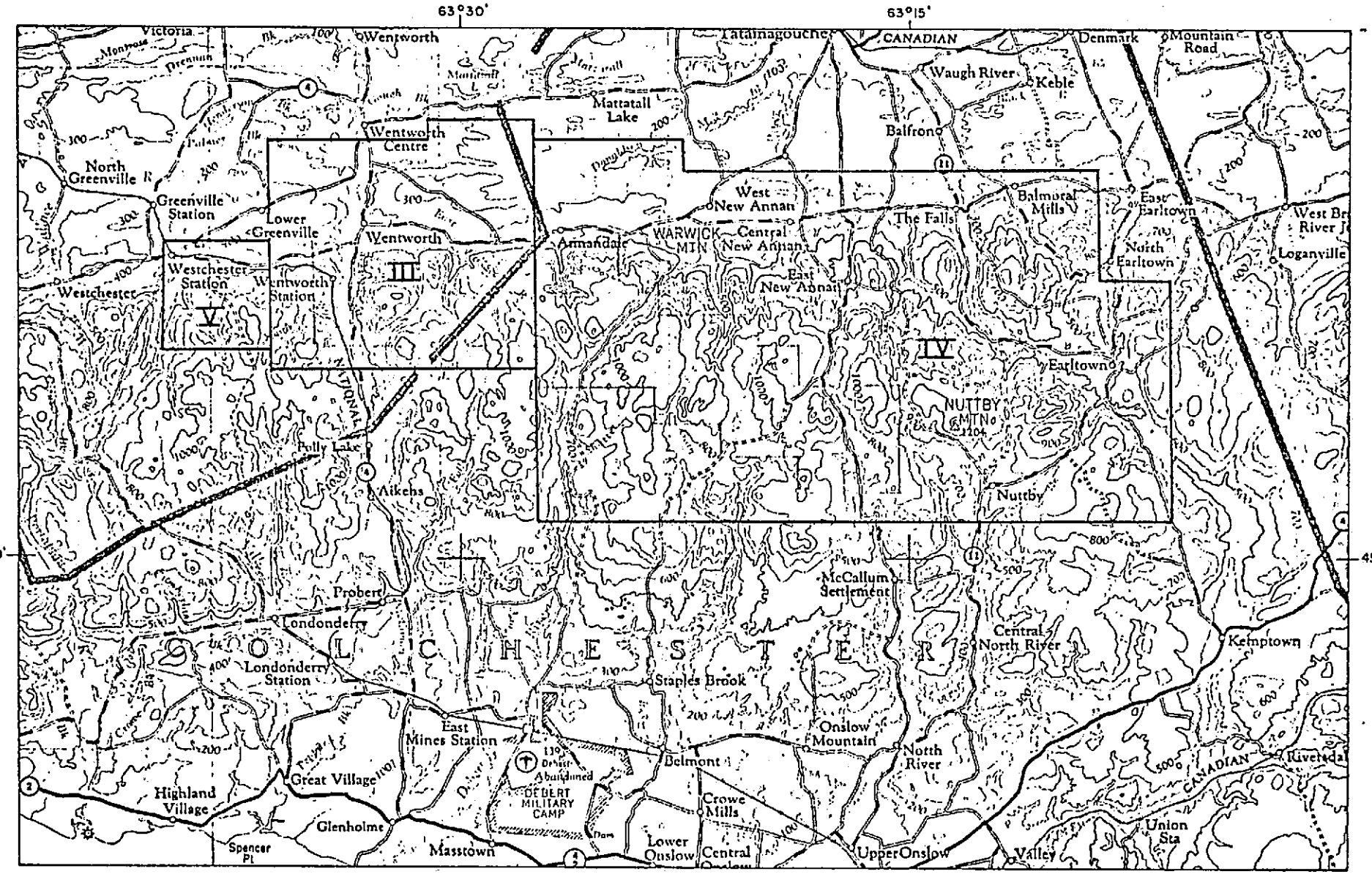


FIGURE 1



COBEQUID URANIUM CLAIM BLOCKS III, IV & V

0 5 10

Miles

Figure - 2

DIAMOND DRILLING PROGRAMME: 1978

I INTRODUCTION

A) SUMMARY

Renewed geological mapping and prospecting during 1978, in the Debert Lake area of the Cobequid IV property, was rewarded by the finding of radioactive boulders. On the basis of these boulders, and as a follow-up to 1977 diamond drilling, a core drilling programme was planned for the DL-Zone. As a follow-up to an airborne magnetic survey, diamond drilling during the months December, 1977, to February, 1978, probed a strong magnetic low near Annandale.

Eighteen holes totalling 7,940.4' have been completed in the DL-Zone. These holes were located on line 96+00E. and between lines 100E. and 104E. on the 10225E. section. Figure 3 shows the locations of all holes. Data concerning the drilling of each hole is given in Table I.

The Annandale drilling bored four holes totalling 2,185'. Figure 4 shows the locations of holes. Data on each hole is given in Table II.

B) PERSONNEL

For the 1978 diamond drilling programme, Gulf personnel employed on the property were:

N. Downey	Project Geologist
K. Horan	Downhole Logging Technician
A. Seifried	Downhole Logging Technician
A. Workman	Drill Geologist

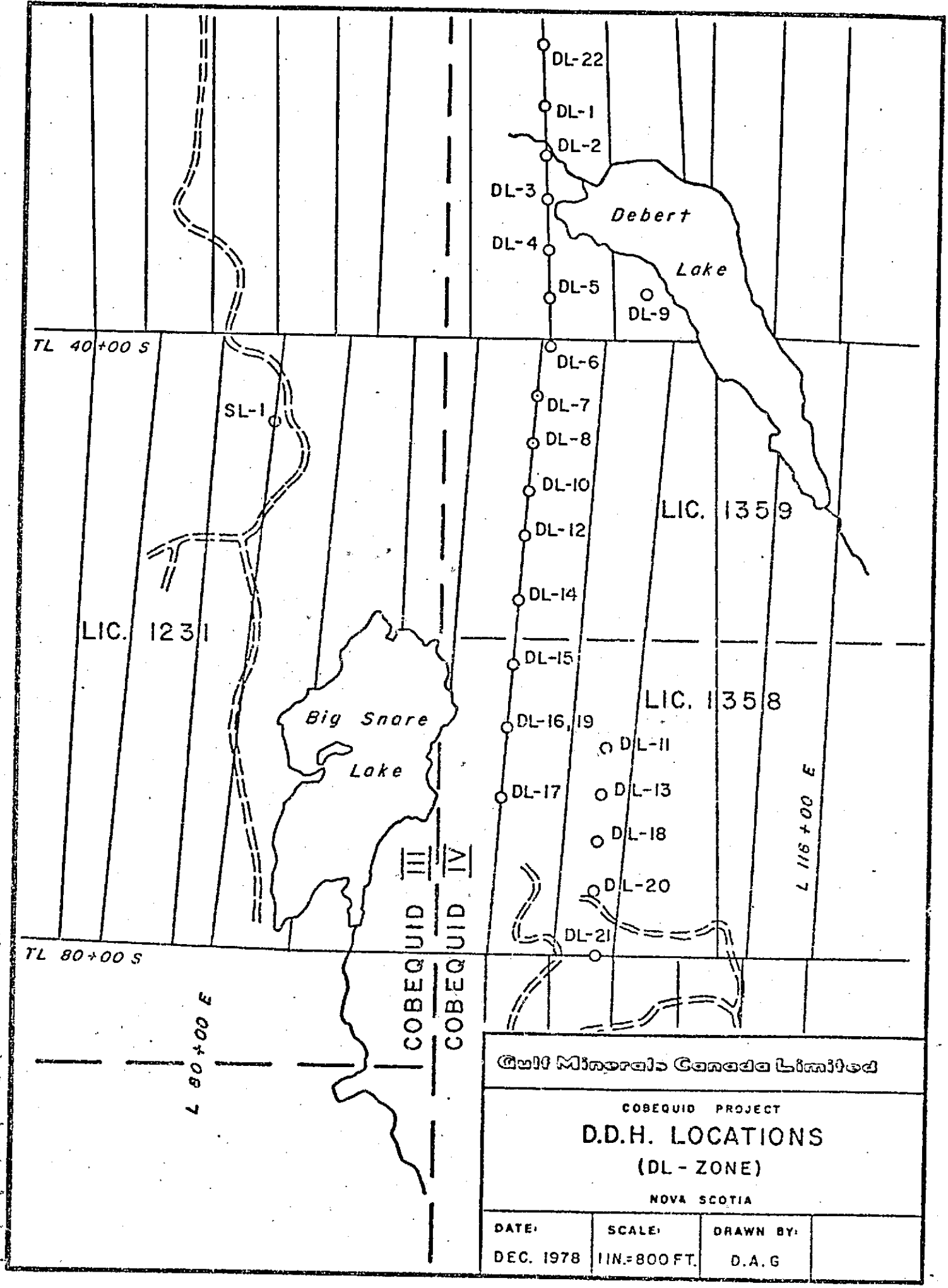
Additional Gulf personnel included:

S. Barron	Geologist
M. Holleman	Drill Geologist
J. Stirling	Geologist
M. Strazdins	Geologist
M. Weber	Downhole Logging Supervisor

Contractors employed on the property were:

Atlantic Groundwater and Geophysics Ltd. - Fredericton, N.B.
St. Lambert Drilling Co. Ltd. - Valleyfield, P.Q.

Diamond drilling was under the supervision of Mr. C. R. Burkhart and Mr. G. I. Pearson of Gulf's Toronto office.


DL-22
DL-1
DL-2
DL-3
DL-4
DL-5
DL-9
Debert
Lake
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DL-6
DL-7
DL-8
DL-10
DL-12
DL-14
SL-1
LIC. 1359
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DL-15
LIC. 1358
Big Snare
Lake
DL-16, 19
DL-11
DL-17
DL-13
DL-18
DL-20
DL-21
L 116+00 E
TL 80+00 S
COBEQUID III
COBEQUID IV
L 80+00 E
Gulf Minerals Canada Limited
COBEQUID PROJECT
D.D.H. LOCATIONS
(DL - ZONE)
NOVA SCOTIA
DATE: DEC. 1978
SCALE: 1 IN. = 800 FT.
DRAWN BY: D.A.G

DEBERT LAKE (DL-ZONE) DIAMOND DRILLING PROGRAMME 1978

HOLE	SECTION	LOCATION	BEARING (TRUE)	DIP	FOOTAGE	DATE STARTED	DATE COMPLETED
DL-5	9600E	36+00S 96+00E	180°	-45°	412.7'	7 Sept., 1978	11 Sept., 1978
DL-6	9600E	39+00S 96+00E	180°	-45°	444'	12 Sept., 1978	16 Sept., 1978
DL-7	9600E	42+00S 96+00E	180°	-45°	453.7'	15 Sept., 1978	20 Sept., 1978
DL-8	9600E	45+00S 96+00E	180°	-45°	414.4'	20 Sept., 1978	23 Sept., 1978
DL-9	10225E	34+85S 102+00E	180°	-45°	387.2'	22 Sept., 1978	25 Sept., 1978
DL-10	9600E	48+00S 96+00E	180°	-45°	503'	24 Sept., 1978	27 Sept., 1978
DL-11	10225E	63+88S 102+23E	180°	-45°	415'	26 Sept., 1978	1 Oct., 1978
DL-12	9600E	50+83S 96+00E	180°	-45°	453.8'	27 Sept., 1978	1 Oct., 1978
DL-13	10225E	66+88S 102+23E	180°	-45°	533.1'	2 Oct., 1978	13 Oct., 1978
DL-14	9600E	54+83S 96+00E	180°	-45°	432.1'	1 Oct., 1978	4 Oct., 1978
DL-15	9600E	58+83S 96+00E	180°	-45°	434'	4 Oct., 1978	7 Oct., 1978
DL-16	9600E	62+80S 96+00E	180°	-48°	472.4'	8 Oct., 1978	11 Oct., 1978
DL-17	9600E	67+17S 96+00E	180°	-45°	256.9'	12 Oct., 1978	13 Oct., 1978
DL-18	10225E	69+82S 102+23E	180°	-45°	474.1'	14 Oct., 1978	21 Oct., 1978
DL-19	9600E	62+80S 96+00E	180°	-70°	453.7'	13 Oct., 1978	16 Oct., 1978
DL-20	10225E	72+97S 102+20E	180°	-45°	532.5'	16 Oct., 1978	20 Oct., 1978
DL-21	10225E	77+30S 102+96E	180°	-45°	299.2'	20 Oct., 1978	22 Oct., 1978
DL-22	9600E	20+20S 96+00E	180°	-45°	568.6'	24 Oct., 1978	28 Oct., 1978
					7,940.4' (TOTAL)		

TABLE I

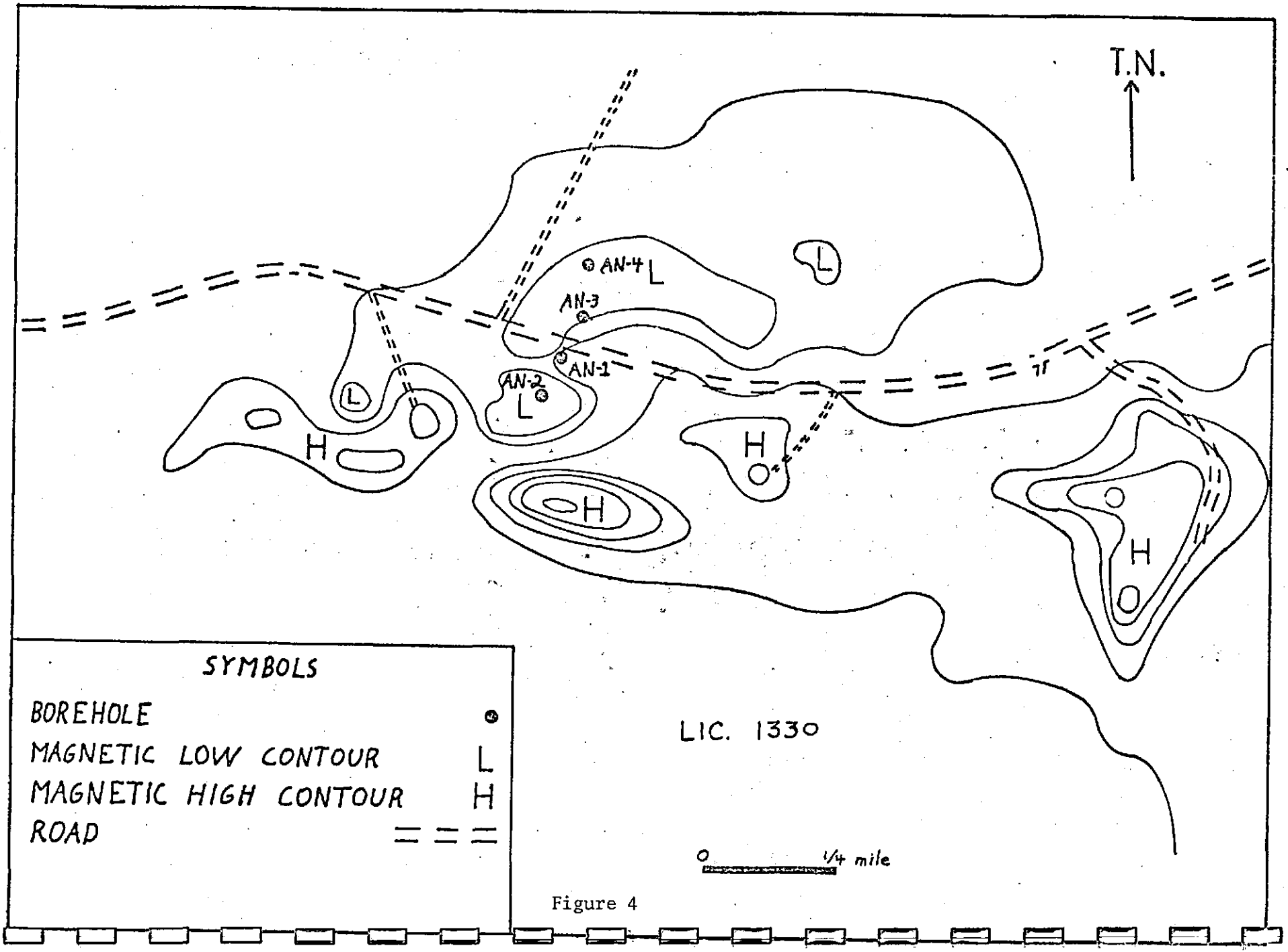

T.N.
AN-4
AN-3
AN-1
AN-2
L
H
SYMBOLS
BOREHOLE
MAGNETIC LOW CONTOUR L
MAGNETIC HIGH CONTOUR H
ROAD
LIC. 1330
0 1/4 mile

Figure 4

ANNANDALE DIAMOND DRILLING PROGRAMME

Dec., 1977 - Feb., 1978

HOLE	LOCATION		BEARING (TRUE)	DIP	FOOTAGE	RADIOACTIVITY
AN-1	0+00N	0+00E	203°	-70°	468'	none above normal
AN-2	3+72S	1+60E	203°	-57°	347'	none above normal
AN-3	3+72N	1+60E	145°	-50°	570'	none above normal
AN-4	10+70N	0+85E	166°	-50°	800'	391' - 392': 100 cps (270 cps)
					2185'	

Table II

II) DL-ZONE DIAMOND DRILLING

The DL-Zone, or Debert Lake Zone, is located in the area surrounding Debert Lake in Colchester County. Two north-south striking sections were drilled along the west side of Debert Lake in an area where a strong VLF conductor runs up Debert Lake and several discontinuous conductors cut through the surrounding area. No outstanding magnetic anomalies were delineated with the exception of one near the 80S TL and line 100E.

A diamond drilling programme was planned to: (i) explore the potential of mineralization related to the conductors; and, (ii) provide geological information on the acid volcanics, mafic intrusives and granite which might facilitate better interpretation of geophysical surveys in the Cobequid Highlands.

The drilling programme probed the volcanic units and the intrusives which cut them. The volcanics are made up to roughly equal quantities of rhyolite flow, ignimbrite and pyroclastic. The latter variety is mostly felsic agglomerate but also includes some ash-fall and lapilli tuff. A small amount of vesicular mafic flow, probably andesitic in composition, is present locally. These volcanics are intruded by dioritic stockworks. The diorite and volcanics are in turn intruded by a large granitic mass which in turn in intruded by a complex swarm of diabase dykes. The volcanics are Silurian in age, whereas the diorite and granite are thought to be Devonian.

Rhyolite flow rocks are pink and red to grey in colour but are often green locally. They are generally aphanitic and most are porphyritic with round quartz phenocrysts up to 2 mm. in size and euhedral, cream coloured feldspar phenocrysts up to 4 mm. in size. Flow banding is found in approximately half of the flows. It is generally regular and evenly spaced. Laminations are 1-2 mm. in thickness. Some rhyolite flows are spherulitic. These growths, often nucleated on phenocrysts, average 0.5-1.0 cm. in size but spherulites up to 3 cm. have been observed locally (e.g. DL-6, 235'). Spherulites often have a green colour which may encompass the groundmass as well. This is probably attributable to chlorite alteration. Locally some serpentinization is evident in spherulitic zones.

Ignimbrite sheets encompass a wide variety of textural types. The most easily recognized variety is flow banded. However, unlike the regular banding of normal rhyolites, ignimbrite laminations are rippled, lensitic (i.e. they pinch and swell), and discontinuous. Occasionally, a fiammi, or flattened pumice fragment may be observed within a banded sequence. Within the same sequence, ignimbrites may have a mesh like arrangement of indistinct bands which are continuous for less than 2 cm. Often these rocks will have a mottled appearance rather than banded. Locally, it appears that the upper parts of an ignimbrite sheet is more massive in texture and appearance. Ignimbrites are usually red to reddish-grey in colour although cream and grey varieties are known. They may or may not be porphyritic with quartz and feldspar phenocrysts of similar size to those found in other felsic volcanics. The phenocrysts and perhaps, the occasional angular lithic fragment may be found to have settled within individual flow laminations. Ignimbrites are consistently aphanitic.

Agglomerates differ greatly in colour. Green and grey varieties are most common. Well rounded fragments up to 8 cm. in size may be either sharply defined or partially absorbed by the surrounding magma. These fragments include all varieties of felsic volcanic including massive and flow banded rhyolite, ignimbrite and other felsic agglomerate. The groundmass is aphanitic and usually porphyritic and may be flow banded. Banding, however, is almost always poorly developed and locallized. Tuffs vary from aphanitic to fine grained. Some varieties (lapilli) contain angular lithic fragments up to 4 cm. in size. Some tuffs are well bedded and load casts locally indicate that sequences are overturned. Both crystal tuffs and lithic tuffs are represented but the latter is the more prevalent.

Mafic flow rocks are dark green, fine to very fine grained and show very little grain size variation. They are vesicular and contain abundant partially absorbed felsic volcanic xenoliths. Vesicules are up to 1 cm. in size and are strongly chloritized. Few flowage features are observed.

The diorite is present as narrow dykes (less than 5') and as massive 200'-300' wide stockworks. The rock is fine to medium grained occasionally becoming coarse grained. Feldspar phenocrysts are euhedral and light green in colour. They are found in almost all diorite dykes over ten feet in thickness.

Granite intrudes all the beforementioned rocks. It is red in colour and has a varying mafic content. It is generally medium grained but both fine and coarse grained varieties are common. Quartz is interstitial to feldspar. Up to 15% hornblende is found locally - usually in the most southern part of the DL-Zone. The granite is fresh with very little alteration. Because of its low thermal energy, little alteration is also observed in rocks in contact with the granite.

All rocks are intruded by a dark green, fine grained diabase dyke swarm. It causes some reddening of the granite near intrusive contacts. A similar reddening is often observed when diabase intrudes the felsic volcanics.

It is possible that a porphyritic felsic intrusive is found in the DL-Zone. The rock is similar to one observed possibly cutting north-south through the DF-Zone. The Debert Lake variety is reddish-brown to burgundy-red in colour and strongly porphyritic. It also carries mafic fragments, often dioritic in composition, up to 2 cm. in size. It may be a dyke rock related to the granite temporally and genetically. One such intersection is found in the top of hole DL-7.

Indications are, from load casting and the positioning of xenoliths within intrusives that the volcanic rocks in the DL-Zone are overturned. This probably occurred at about the same time as the intrusion of the diorite and the granite. Dips measured on flow banding within felsic volcanic sequence seem to indicate that the volcanics dip steeply north. Strikes from surface mapping average east-west. Mafic dyke rocks, however, have a complex cross-cutting geometry.

The following section gives a description of each drill hole bored during the 1977-78 assessment period:

DL-5

The first hole in the 1978 programme for the DL-Zone intersected grey, aphanitic and strongly porphyritic rhyolite to a depth of 61.2'. At this point, a diorite dyke was intersected which continues to 85.1'. It is followed from 85.1'-151.2' by a rhyolite unit with minor ignimbrite sections. Diorite dykes cut the zone at 100.4'-105.6', 126.3'-133' and 137.6'-148.1'. From 151.2'-311.7', a diabase dyke was intersected. It carries a section of rhyolite, possibly as a xenolith, from 242.7'-276.9'. From 311.7' to the base of the hole at 412.7', rhyolite was intersected. It is porphyritic and alternates from green to pink in colour over several sections.

No uranium mineralization was found in this drill hole.

DL-6

This diamond drill hole intersected diorite to a depth of 25.1'. Below this, an andesitic flow as cored to a depth of 59.6'. This rock contrasts with mafic intrusives in that it is uniformly fine grained and very hard. It is dark green in colour and carries abundant pink angular rhyolite fragments. Below the andesite, from 59.6'-69.9' is what may be a light green intrusive rock. It is porphyritic with both quartz and feldspar phenocrysts. It is followed by 21.7' of diorite dyke to a depth of 91.6', which in turn is followed by rhyolite. The flow contains several tuffaceous horizons which contain dark green, angular devitrified glass shards. From 116.8'-155.3' is diorite. Beneath this, to a depth of 207.3', is a pink, porphyritic locally flow banded rhyolite unit. Diorite has been intruded at 207.3'-222.8'. A spherulitic rhyolite unit was intersected between 222.8' and 336.9'. Spherulites have developed in zines separated by intervals of poorly developed spherulitic rhyolite or intervals of non-spherulitic rhyolite. Some individual spherulites up to 3 cm. in size are found locally (230'-247.8'). This unit is well flow banded. A diorite dyke is located at 336.9'-347.1'. An ignimbrite unit extending to 382.7' underlies the diorite. Below this is 18.4' of non-banded mottled rhyolite which may also be ignimbritic. This is followed by 36.5' of pink to reddish-pink, weakly porphyritic banded ignimbrite which continues to the base of the drill hole at 437.6'.

No uranium mineralization was found in this drill hole.

DL-7

In the top of this hole is a reddish-pink to red, strongly porphyritic massive rhyolite unit which may be intrusive. It carries abundant chloritized mafic fragments. It extends to 71.7' where a diorite dyke was intersected. The dyke's lower contact is at 95.1'. It intrudes a grey aphanitic, porphyritic rhyolite unit which was cored to a depth of 138.6'. From this depth to 181.1', a spherulitic rhyolite zone was intersected. Spherulites are up to 5 mm. in size. It is followed down the hole by 24.4' of ignimbrite.

This unit is well banded locally and tectonically brecciated. From 205.5'-252.5' is dioritic intrusive. It is followed by 8.8' of rhyolite flow and from 261.3'-292.7' is ignimbrite. Flow banding is better developed above 280'. From 292.7'-334.1' is another ignimbrite unit. Below 329.5', the rock is only weakly flow laminated. Rhyolite agglomerate was intersected between 334.1' and 394.9'. The rock is waxy green and contains a wide variety of rhyolite fragments. Massive rhyolite flow extends from the base of the agglomerate to 423.9', below which is 25.3' of rhyolitic agglomerate. From 449.2' to the base of the hole at 453.7' is diabase.

No uranium mineralization was found in this drill hole.

DL-8

This diamond drill hole is located on an esker and cased through 44.4' of overburden, and then 18.8' of diorite. From 63.2'-76.1' is rhyolitic agglomerate. The rock is light green and weakly porphyritic. It carries red and green rhyolite fragments. At 76.1'-84' is a diabase dyke. Below this is 99.6' of massive, porphyritic rhyolite. A diabase dyke is located at 183.6'-192' and is followed by another 15.5' of massive porphyritic rhyolite flow. From 207.5'-212.2' is diabase and from 212.2'-257' is a greenish-pink, aphanitic, porphyritic rhyolite. It is flow banded locally and weakly spherulitic. A diorite dyke is found at 257'-387.4' which is itself intruded by diabase at 312.2'-314.5', 348'-350.7' and 380.6'-385.8'. Another diabase cuts across the base of the diorite from 387.4'-402.2'. From 402.2'-414.4' is pinkish-red porphyritic rhyolite which becomes greenish-pink away from the intrusive contact.

No uranium mineralization was found in this drill hole.

DL-9

The ninth diamond drill hole intersected tuff to a depth of 44.4'. The rock is grey and is aphanitic to medium grained. It contains some rock fragments up to 4 cm. in size. Below this is 8.6' of diabase followed by red, porphyritic rhyolite flow from 53'-145.2'. It is followed by 6.2' of dioritic intrusive. An ignimbrite sequence including some agglomerate is located at 151.4'-230'. Some fragments of rhyolite up to 4 cm. are found in an unbanded agglomerate horizon. The ignimbrite contains fiammi up to 5 cm. in length and 1 cm. in thickness. Diabase is found at 230'-242.5' followed by ignimbrite from 242.5'-296.9'. Another diabase dyke is located at 296.9'-354.3'. Beneath the intrusive is an ignimbrite unit which becomes less flow banded and more massive towards the base of the hole at 387.1'.

No uranium mineralization was found in this drill hole.

DL-10

An ignimbrite is found in the top of this drill hole and continues to a depth of 35.1'. It is followed by a lapilli tuff horizon from 35.1'-48.5'. Angular lithic (rhyolite) fragments up to 4 cm. in size comprise 30-40% of the rock volume. Below this unit is 10.9' of ignimbrite which is porphyritic and contains some fiammi. From 59.4'-107.3' is reddish-brown, strongly porphyritic rhyolite. It contains some mafic fragments up to 2 cm. in size. This unit may be intrusive. From 107.3'-165.2' is diorite. Below this is a rhyolitic agglomerate which is frequently intruded by mafic dyke rocks. The volcanic is greenish-grey to waxy-green and contains rounded fragments up to 5 cm. in size. Intrusives of dioritic composition are located at 186.6'-222', and 264.8'-304'. A diabasic intrusive is located at 309.2'-342.7'. The base of the agglomerate is at 365.2'. From this point, to a depth of 417.3', is ignimbrite. The rock is well flow banded at 50° to 80° to the core axis. Below this is rhyolite agglomerate which extends to the base of the hole at 503'. Fragments are rhyolitic and average 2-4 cm. in size although a few up to 8 cm. are found locally.

Diorite intrudes this unit at 428.4'-459.5'.

No uranium mineralization was found in this drill hole.

DL-11

Diorite was intersected in this hole to a depth of 70.5'. It is followed by 4.3' of massive red porphyritic rhyolite and then by 6.6' of diabase (dioritic?) dyke. From 81.4'-127.7' is grey, porphyritic and weakly spherulitic rhyolite. Diorite is found at 127.7'-149.4'. Below this is 125.1' of rhyolite to a depth of 274.5'. It is intruded at 191.4'-203.9' by diabase, and is cut off at 274.5'-301.3' by another diabase dyke. Below this is 19.9' of dark red, porphyritic rhyolite which contains abundant mafic (dioritic) fragments up to 4 cm. in size. This zone may be intrusive. Below this, at 321.2'-326.1' is diabase. From 326.1' to the end of the borehole at 415', is reddish-grey, porphyritic and locally flow banded rhyolite.

No uranium mineralization was found in this drill hole.

DL-12

This hole intersected diorite to a depth of 35.4'. It is followed by pinkish-red, massive porphyritic rhyolite to a depth of 63.7'. It is intruded at 52.8'-60.2' by diorite, which is also found at 63.7'-73.6'. An ignimbrite was intersected between 73.6' and 210.4'. This unit is reddish-pink, porphyritic and well flow banded. It is intruded by diorite at 83'-92', and by diabase at 137.3'-140.4' and 167.9'-170.0. Another dioritic intrusive is located at 210.4'-257.9'. It is underlain by 23.5' of rhyolitic agglomerate to a depth of 281.4'. At this point it is cut off by diorite which extends to 354.7. This in turn is cut at 354.7'-388.1' by diabase. From 388.1'-396.7' is flow banded, weakly porphyritic ignimbrite. From the base of the volcanic to the base of the drill hole at 453.7' is diorite. It is cut at 396.7'-404.3' and 428.9'-450.8' by diabase.

No uranium mineralization was found in this drill hole.

DL-13

This drill hole intersected light green, weakly porphyritic and crudely flow banded rhyolite to a depth of 55.7'. It is intruded at 32.5'-43.1' by diabase. From 55.7' to 186.5' is grey, aphanitic porphyritic rhyolite. It is locally flow banded and is intruded by diabase at 148'-153.8'. From 186.5'-254.3' is rhyolitic agglomerate. Rounded fragments up to 2 cm. in size increasing to 8 cm. locally, represent massive rhyolite and ignimbrite units. Diorite was intersected at 254.3'-265' and below this to a depth of 288.2' is ignimbrite. Diabase is found at 288.2'-324.7'. Below this, from 324.7'-372.0', is a brownish-red, aphanitic and strongly porphyritic intrusive of approximately rhyolite composition. It carries abundant chloritized dioritic fragments up to 3 cm. in size. At 372', this unit seems to grade into the underlying diorite unit which then continues to a depth of 412.1'. From 412.1'-432.2' is a massive, porphyritic rhyolite unit. Below this, extending to the base of the hole at 533.1', is pinkish-red granite. It has incorporated some diorite at 492.5'-500.1' and 511.2'-513.5'.

No uranium mineralization was found in this drill hole.

DF-14

This hole intersected a diabase dyke which extended down the hole to 44.8'. At this depth, an ignimbrite horizon was intersected. The rock in this zone is red, aphanitic and porphyritic and in addition it is well banded above 60'. From 60' to the base of the unit at 80.1', it is poorly flow laminated. A diabase dyke intrudes the ignimbrite at 73'-77'. A diorite cuts off the volcanic unit at 80.1' and extends to a depth of 234.1'. From this point to 271.1' is a rhyolitic agglomerate horizon. The flow contains rounded ignimbrite and rhyolite fragments up to 5 cm. in size. It is cut off at 271.1' by diorite which extends to 314.5'. This is followed by 55.9' of tectonically brecciated rhyolite.

From 370.4'-401.3' is a rhyolitic agglomerate unit in which rhyolite fragments are not well defined. From the base of this volcanic to the base of the hole at 432.1', a diabase dyke was intersected.

No uranium mineralization was found in this drill hole.

DL-15

The eleventh hole of the 1978 diamond drilling programme intersected rhyolitic agglomerate to a depth of 147.6'. Rounded ignimbrite and rhyolite fragments up to 4 cm. are set in a porphyritic aphanitic groundmass. It is frequently intruded by mafic dykes and seams at 46.8'-47.7', 65.4'-68.1', 70.4'-71.0' and 120.3'-129.8'. From 147.6'-207.6' is diorite dyke. From the lower contact to 275.6' is found a brownish-red, strongly porphyritic rhyolite. It is cut off at 275.6' by 4' of diabase dyke. A rhyolitic agglomerate unit extends from 279.6'-298.4' and is cut off by diorite which was intersected to a depth of 306.3'. A spherulitic rhyolite unit was intersected from 306.3'-316.3'. Spherulites up to 1 cm. in size are found in a locally porphyritic groundmass. Beneath this is 53.1' of rhyolitic agglomerate, followed by more spherulitic rhyolite from 369.4' to the base of the hole at 434.1'.

No uranium mineralization was found in this drill hole.

DL-16

This diamond drill hole intersected massive porphyritic rhyolite to a depth of 22.6' followed by diabase to 34.4'. From this point, the drill hole cored rhyolitic agglomerate to a depth of 110.9'. Fragments are rounded and up to 2 cm. in size. From 110.9'-268.2' is reddish-pink, porphyritic, well banded ignimbrite. It is cut at 124.3'-143.9' by diorite, and at 165.3'-172.6' by diabase. A rhyolite which may in fact be ignimbrite is found at 268.2'-296'. It is followed by rhyolitic agglomerate to a depth of 403.7'.

The agglomerate contains rhyolite fragments up to 2 cm. in size but they are not well defined. A diorite dyke is located at 356.6'-383.1', and another cuts across the base of the agglomerate at 403.7'-414.5'. Below this is 34.3' of massive, porphyritic rhyolite. A flow brecciated rhyolite extends from 448.8' to the base of the hole at 472.4'. Below 468.5', the rock is more massive.

The interval 211'-212' grades 0.113% thorium (elemental). The zone from 210.2'-214' averages 0.057% Th and the zone from 217'-220' averages 0.030% thorium. No accompanying uranium mineralization was detected.

DL-17

This drill hole intersected massive rhyolite to a depth of 8.7'. The rock is brownish-pink, aphanitic and porphyritic. From 8.7' to the base of the hole at 256.9' is red, medium to coarse grained hornblende granite. It has stoped diorite and a block of the mafic was intersected at 188'-223.3'.

No uranium mineralization was found in this drill hole.

DL-18

This drill hole intersected diorite to a depth of 136.2'. It is intruded by diabase at 114.8'-116.6'. From 136.2'-189.4' is rhyolitic agglomerate. Rhyolite fragments are red and grey in colour, and rounded to sub-angular. The groundmass is aphanitic and porphyritic. From 189.4'-199.8' is diorite. It is followed below by 27.2' of ignimbrite. Below this, from 227'-313.8' is massive porphyritic rhyolite. It is intruded at 265.4'-303.4' by diorite. Ignimbrite is found at 313.8'-395.8'. This unit is well banded and is locally tectonically brecciated. From 395.8'-421.9' is grey, massive rhyolite and it is followed at 421.9'-457.0' by ignimbrite. From 457.0'-474.1' is massive, red, non-porphyritic rhyolite.

No uranium mineralization was found in this drill hole.

DL-19

This hole intersected rhyolite in the upper 2.5' followed by 7' of diabase dyke. From 15.4'-189.1' is a poorly banded rhyolitic ignimbrite unit. Intruding this at 87.8'-104.9' is diorite. A diabase dyke is found at 189.1'-194.7'. Below this, from 194.7'-217.7', is pink porphyritic rhyolite. It is intruded by diorite at 217.7'-236.2'. Pink ignimbrite was intersected at 236.2'-266.1'. It is strongly porphyritic and weakly flow banded. Diorite is found at 266.1'-276.9' and is followed down the hole by 48.9' of mixed tectonic and flow breccia. It is cut by a diorite at 294.8'-308.1'. Diabase cuts off the breccia at 325.8'-328.8'. Below this is a red, medium grained granite dyke which is intersected to a depth of 357.6'. Below it is 1.8' of massive rhyolite followed by 3.1' of diorite. From 362.5'-410.4', an ignimbrite unit was intersected. It is intruded at 391.1'-396.8' and at 400.5'-410.4' by diorite. Ignimbrite was cored from the base of the diorite at 410.4' to the base of the hole at 453.7'.

No uranium mineralization was found in this drill hole.

DL-20

This hole intersected diorite to a depth of 13.8'. From the base of the intrusive to a depth of 288.7', the drill hole intersected a well banded, grey coloured ignimbrite. The rock is porphyritic and is composed of abundant tectonically brecciated zones. It is intruded by diorite at 49.8'-56.6' and 183.1'-189.2'. The ignimbrite is cut off at 288.7'-366.1' by diorite. From the lower intrusive contact to 406.6' is ignimbrite. It is not as well banded as the upper zone. From 406.6'-520' is mafic flow. This rock is very fine grained to aphanitic and dark charcoal grey in colour. The rock is vesicular and contains some rhyolite xenoliths. From the base of the mafic flow to the end of the hole at 532.5' is red, hornblende granite.

No uranium mineralization was found in this drill hole.

DL-21

This diamond drill hole intersected mafic flow to a depth of 67.3'. This zone is the same as the unit at 406.6'-520' in hole DL-20. Beneath this is 56.4' of rhyolitic agglomerate. It is porphyritic and carries poorly defined rhyolite fragments. It is cut by diorite at 78.3'-88.4' and at 121.7'-123.7'. At the lower contact of the second diorite, a granitic dyke is found.. It extends to a depth of 143'. From 143'-171.1' is grey porphyritic ignimbrite. It carries a few 1-2 cm. rounded rhyolite fragments. From 171.1' to the base of the hole at 299.2' is red hornblende granite. It is intruded by diabase at 200.5'-213.5' and 258.1'-262'.
No uranium mineralization was found in this drill hole.

DL-22

The last drill hole in the 1978 programme, intersected granite to a depth of 99.7'. From this point to 100.9' a fault zone was intersected. It consists of an intensely epidotized mylonite zone containing rhyolitic and granitic fragments. Below this is an additional 5.6' of granite - possibly a fault block. At 106'-106.8', a diabase dyke was intersected. Below this, to a depth of 302.7', is rhyolitic ignimbrite. It is well banded but flow laminations are obscured by intense fracturing. The volcanic is intruded by diorite dykes at 114.2'-126.5', 131.5'-141.9', 170.1'-174.6', 209.5'-223.6', 234.6'-245.6' and 267.8'-272.5'. An additional diorite cuts the base of the ignimbrite at 302.7'-323.9'. Below this intrusive, the rhyolite is too strongly fractured for specific determination but seems to be of a massive porphyritic variety. It is intruded by numerous diorite dykes at 345.5'-335.8', 360.2'-372.5', and 381.6'-400.6'. From 451.1' to 488.8', ignimbrite was intersected. The rock is dark red, porphyritic and well banded. It is cut at 488.8'-491.8' by diabase followed by massive porphyritic rhyolite to a depth of 510.1'. Below this, to the base of the hole at 568.6', an ignimbrite was intersected. It is burgundy-red, porphyritic and well flow banded.

No uranium mineralization was found in this drill hole.

III) AN (ANNANDALE) DIAMOND DRILLING

The Annandale area is situated near the Devonian-Carboniferous unconformity(?) at the base of the Cobequid Highlands. The area drilled is characterized by a very strong magnetic low within the Carboniferous sedimentary sequence.

A diamond drilling programme was planned to:

1) explore the potential for mineralization related to the possible unconformity;

2) locate the cause of the intense magnetic low.

The drilling programme probed the Carboniferous sediments, intersected the contact and cored into the River John basalts. The basalts may be Devonian in age.

The sequence intersected in the drilling consists of 264 feet of grey sandstone with minor grey mudstone, 179 feet of grey sandstone, brown siltstone and brown mudstone, 189 feet of brown siltstone and brown mudstone, 167-175 feet of cyclic sedimentation consisting of repetitions of siltstone grading down to conglomerate, 22 to 48 feet of brown paraconglomerate, 5 to 24 feet of brown mudstone and brown siltstone and then basalt. The stratigraphic section below this is uncertain and variable as indicated by the presence of 114 feet of sediment below the 30 feet of basalt in borehole AN-1 and the 184 feet of basalt with no sediment below it in borehole AN-2.

The rapid lithological change between the mudstone and siltstone directly above the basalt and the conglomerates above the siltstone and mudstone suggests that there is a disconformity at the base of the brown paraconglomerate. From previous work by the company, Wallace and Donohoe (1976) and Bell (1944), the basalt and the sediment below it would appear to belong to the Devonian Lower River John Group.

The grey sandstone with coaly fragments at the top of the sequence looked similar to the Pennsylvanian sandstone in the area. The thin intervals containing abundant limestone clasts suggests that the sediment belongs to the Riversdale Group, Boss Point Formation. The red mudstone and siltstone underlying it could be equivalent to the Mississippian Middleborough Formation or possibly the Pennsylvanian Millsville Formation. The rhyolite conglomerates just above the disconformity may be equivalent to the Mississsippian Nutby Sequence; however, the Nutby sequence is only known to occur five to six miles south of the area so this age is only a guess.

The provenance for the material above the base of the brown paraconglomerate up to the base of the upper grey sandstone was probably the Cobequid Highlands as the rhyolite fragments are similar to those rhyolites in the Silurian Earltown Sequence. The sequence outcrops on the hill half a mile south of the drilling. The following section gives a description of each diamond drill hole.

AN-1

Borehole AN-1 is located approximately 50 feet south of the center of the Florida road in the northeast corner of R. Campbell's pasture. The hole was drilled to a final depth of 468 feet. The borehole intersected six major descriptive units excluding overburden. The thicknesses noted are corrected for the dip. The upper unit is at least 45 feet thick and occurred between the 20 and 70 foot depths. It consists of interbedded brown mudstone and siltstone, with the siltstone making up only 2/5 of the sequence. This is underlain by 175 feet of sediment. It consists of 34 cycles of green grey rhyolite pebble conglomerate grading upward into a brown siltstone. The rhyolite pebbles are generally light brown, angular, up to 5 cm in size and average about 2 cm in size. Below this there is 34 feet of brown paraconglomerate. It has mainly rhyolite and mafic pebbles, and it has

brown mud and silt for matrix. This is underlain by 24 feet of brown mudstone and siltstone with the siltstone making up 2/3 of the unit. Below this there is 30 feet of brown grey basalt situated between the 332 and 366 foot marks. The upper section is highly weathered. Below this there is at least 114 feet of interbedded mudstone, siltstone and sandstone. The mudstone makes up approximately half of the sequence. The sandstone has 20% mudstone and siltstone fragments. The section has calcite stringers and concretions. There is no anomalous radioactivity in this hole.

AN-2

Borehole AN-2 is located at 3+72S 1+60W. The hole was drilled at -57° on an azimuth of 203° to a final depth of 347 feet. It intersects four major descriptive units excluding overburden. The upper unit is at least 87 feet thick and occurs between the 20 and 117 foot depths. It consists of nine cycles of a green grey rhyolite pebble conglomerate grading up into a brown siltstone. The pebbles are generally angular and up to 6 cm in size. The underlying descriptive unit consists of 22 feet of brown paraconglomerate with brown clay between the clasts. It has up to 20% sedimentary clasts. The other clasts are mafic and felsic volcanics. This is underlain by six feet of brown mudstone. Below this there is 184 feet of dark grey to brown and, in part, highly altered and weathered basalt. It occurs from the 147 foot depth to the bottom of the hole. There is no anomalous radioactivity in this hole, but there is an intersection of malachite between the 77 and 79 foot mark and the 86 and 90 foot mark.

AN-3

Borehole AN-3 was located at 3+72N, 1+60E. It was drilled at -50° at an azimuth of 145° to a final depth of 570 feet. The borehole

intersects six major descriptive units excluding overburden. The upper unit consists of 245 feet of interbedded brown mudstone and brown siltstone. It occurs between the 20 and 284 foot marks. The mudstones are generally shaly and made up about 60% of the unit. The siltstones are finely laminated and crossbedded. This is underlain by 165 feet of cyclic sedimentation. There are at least 23 repetitions of a green grey rhyolite pebble conglomerate grading up to a brown siltstone. 15-30% of the pebbles are mafic. These are usually altered to some degree, whereas the rhyolite pebbles are not. The green colouration is due to the clay content. The next unit consists of 48 feet of brown paraconglomerate and occurs between the 463 and 515 foot depths. It contains felsic and mafic pebbles as the conglomerates above it do, but it also contains 20% siltstone pebbles. This is underlain by five feet of black mudstone, probably derived from the basalt below. The basalt occurs from the 520 foot mark to the end of the borehole at 570 feet. There is no radioactive anomaly in this hole.

AN-4

Borehole AN-4 was drilled at -50° on an azimuth of 166° and was located at 10+70N, 0+85E. It intersected five major units excluding the overburden. The top unit is located between the 16 and 291 foot depths. It consists of grey, fine-grained sandstone interbedded with thin grey mudstone. The mudstone makes up 17% of the sequence. The sandstone has a minor amount of organics. This is underlain by 175 feet of brown siltstone, brown mudstone and grey sandstone. This is a transitional unit between the one just described and the next one to be described. The sandstone makes up 25% and the mudstone makes up 33% of the sequence. Below this there is 189 feet of interbedded brown mudstone and brown siltstone. The mudstone makes up 40% of the sequence. This is underlain by 68 feet of cyclic sedimentation. There are nine cycles of a brown uniform siltstone grading down to a brown to green grey paraconglomerate. The paraconglomerate has angular pebbles up to a maximum size of 4 cm. There is also minor mafic and siltstone pebbles. The following sequence lies between the 730 to

the 800 foot marks, consists of 69 feet of cyclic sedimentation similar to the above but differing in that the conglomerates are green grey, have less clay, have less sedimentary fragments, are more porous and have minor amounts of calcite and a white clay mineral (kaolinite) in the vugs. There are six cycles. There are no significant anomalies in this hole, although there is a thin peak of 270 cps between the 391 and 392 foot marks. The average background in this section is approximately 100 cps, and it occurs in a fine-grained sandstone with rhyolite pebbles.

IV) Down-Hole Logging

From July 1 to August 15, Atlantic Groundwater Geophysics Ltd. of Fredericton, N.B., conducted down-hole spectral logs using a McPhar Spectra 44. The probe of 1 1/4 inch diameter used a 3/4 by 3 inch crystal and a single-channel analog recorder. Curves run were: Total Count, Potassium, Uranium and Thorium.

From August 15 to November 1 the logging was done by Gulf personnel. The McPhar Spectra 44 was used as a manual system until September 15. At that time it was replaced with a Spectra 44D Digital Acquisition system with motorized winch. Data was collected on a cassette tape as well as a single-channel analog strip. The probe size was 1 1/4 inches and a 1 1/2 inch probe was made available; the crystal sizes were 3/4 by 3 and 1 by 3 inches respectively. Curves recorded on cassette were: Total Count, Potassium, Uranium and Thorium.

Electric Logs were run with Gearhart-Owen equipment. The logs gave self-potential, 16 and 32 inch apparent resistivity analog recordings.

The spectral logs were run at five to seven feet per minute inside drill rods, the Electric Log being run in open hole at 20 to 25 feet per minute.

V) CONCLUSIONS

Diamond drilling has indicated the presence of ore grade uranium mineralization. As yet, mineralization in sufficient quantity to be economic has not been intersected. Further diamond drilling is needed to fully evaluate all possible modes of mineralization.

APPENDIX I

DIAMOND DRILL HOLE
LITHOLOGY LOGS

SECTION A: DL-ZONE
SECTION B: ANNANDALE

SECTION A FOLLOWS...

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-1
SHEET 1 OF 6

PROPERTY Cobequid
LATITUDE 24+00S
LONGITUDE L 96E
ELEVATION

BEARING—TRUE 180° AZ
DIP -45°
FINAL DEPTH 462'
CORE SIZE BQ

DATE STARTED 9 November 1977
DATE COMPLETED 17 November 1977
DRILLED BY St. Lambert
LOGGED BY A. Workman

DATE: 19 November 1977 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	22		Overburden				ACID DIP TEST
22 -	36		Diabase	Dark to very dark green, fine grained, moderately chloritized and possibly serpentinized. Strongly epidotized fractures are common. The intrusive is frequently micro-faulted at various angles and amounts of displacement are unknown (e.g. 25.5'). It is weakly to moderately magnetic and the basal zone contains abundant rhyolite xenoliths, 1 - 1.5 cm in size, from 32' - 36'.			100' -45° 300' -48° 462' -47°
	(14)			29 - 30.5': in this zone the diabase is intruded by a felsic, possibly granitic, pink, equigranular, medium grained dyke. The contacts are indistinct and some feldspar-flooding of the mafic rock has occurred. It contains numerous magnetic diabase xenoliths up to 3 cm in size.			
36 -	166.5		Rhyolite -trachytic?	Dark pink to reddish pink becoming greyer and darker hued with depth. Minor orange alteration zones are found locally. The rock is aphanitic and porphyritic. Quartz-eyes, probably quartz phenocrysts, are roundish and 1 - 2 mm in size. These quartz growths are frequently surrounded by thin, light pink to orange reaction rims, indicating transport after formation. Flow laminations are uncommon but are found locally to consist of alternating 1-3 mm grey and pink bands which frequently wrap around quartz phenocrysts. Flow banding cuts the core axis at 50° - 70°. Near diabase dykes, the rhyolite (which may be trachytic in composition) is a deeper red hue and is frequently strongly fractured in these zones. Typically, the fractures are moderately to strongly epidotized. Weak chloritization of fractures adjacent to diabase is common. Some fractures are filled with quartz and white carbonate.			
	(130.5)						

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-1

SHEET 2 OF 6

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
36 -	166.5		Rhyolite	continued...			
	(130.5)			No primary brecciation is apparent in the upper hole but several zones occur below 115'. As a whole, the rock is relatively fresh near surface but at 127.5' some degree of kaolinization of feldspar may be present. The degree of alteration increases with depth. Some silification and hematization is also widespread in this zone. Numerous diabase dykes are present. They are typically dark green, fine to medium grained, moderately chloritized and possibly serpentinized. They are equigranular, and weakly to locally moderately magnetic.			
				36 - 43': moderately to strongly laminated zone. Flow banding cuts the core axis at 65° - 70°, and the zone is cut off at 43' by diabase.	42'	flow lamination	65° to the C/A
				43 - 51': Diabase			
				53.5 - 54.5': orange altered rhyolite - finely fractured, possibly weakly kaolinized, silicified.			
				57 - 80': Diabase			
				80 - 94': vaguely laminated zone - dark greyish red to dark greyish pink - flow banding cuts the core axis at 45° - 50°	90'	flow lamination	50° to the C/A
				83.5 - 84.5': Diabase			
				94 - 100': Diabase - contains an intensely fractured and epidotized rhyolite xenolith at 94.5 - 95'			
				100 - 106': reddish pink rhyolite, porphyritic: quartz eyes have reddish reaction rims giving zone its colour - actually a grey rhyolite zone is well laminated at 106 - 107'.	106'	flow lamination	50° to the C/A
				107 - 110': grey rhyolite			
				110 - 112': reddish-pink zone			
				112 - 122.5': rhyolite is greyish to greyish-pink, locally porphyritic with 1-3 mm quartz eyes, and possibly coarsely laminated locally. Intense tectonic brecciation occurs at 118 to 119' and 120 to 121'.			
				122.5 - 127.5': Diabase: lower contact is highly altered and fractured - small fault is located at 127' cutting the core axis at 70° with 2" displacement.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-1

SHEET 3 OF 6

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
36 -	166.5		Rhyolite	continued...			
	(130.5)			127.5 - 147.5': light pinkish grey, aphanitic, porphyritic locally with some intensely tectonically brecciated rock locally. Some degree of clay alteration (kaolinization) of feldspar is present. Fractures are chloritized or epidotized.			
				147.5 - 166.5': Diabase - fractures are epidotized, chloritized and hematized.			
166.5 -	254.5		Alteration	Reddish-pink to reddish-brown to grey, aphanitic and finely fractured.			
	(88.0)		Zone	At edges of the zone, the alteration consists primarily of epidotization, chlorite development and irregular hematization along fractures. The rhyolite itself may also be weakly hematized in the more reddish zones. The centre section of the zone is more intensely fractured and in addition to the other alteration, the rhyolite is moderately and possibly strongly kaolinized. Degree of clay alteration may vary according to feldspar content, the more strongly altered zones being trachytic in composition. The rhyolite is also commonly porphyritic; quartz-eyes and occasional feldspar phenocrysts are present. Several diabase dykes cut this zone. They are typically fine to medium grained and moderately to strongly chloritized.			
				166.5 - 174.5': alteration is fracture controlled - epidote and hematite.			
				174.5 - 176': Diabase			
				176 - 186': pink to reddish rhyolite, moderately to strongly kaolinized, weakly to moderately hematized locally weakly porphyritic - 1-2 mm. quartz. phenocrysts locally.			
				186 - 192.5': Diabase			
				192 - 221.5': pink rhyolite near diabase contact, becoming greyer with depth - the zone is intensely tectonically brecciated, weakly silicified, hematized, kaolinized and epidotized. Fracturing frequently becomes mylonitic.			
				221.5 - 225.5': Diabase - very highly chloritized and contains abundant altered rhyolite xenoliths. Intrusive contacts are intensely altered.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-1

SHEET 4 OF 6

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
166.5	- 254.5 (88)		Alteration zone	continued...			
				225.5 - 230': rhyolite is highly fractured and altered			
				230 - 252': rhyolite is mylonitic, intensely kaolinized, and hematized locally. It is porphyritic and abundant breccia is present in several quartz carbonate filled fracture zones. Numerous diabase dykes are present.			
				233 - 234.5: Diabase - highly chloritized.			
				237 - 238': Diabase			
				239 - 242': very mafic zone - possibly near a diabase contact.			
				252 - 254.5': rhyolite becomes less intensely fractured. Several diabase stringers are present and 4" - 6" zones of moderate hematization surround them. The zone is porphyritic 1-2 mm quartz phenocrysts are common.			
254.5	- 305.5 (51)		Rhyolite -trachyte?	Dark red to dark reddish-brown becoming reddish green at base, aphanitic and porphyritic. The rock is flow laminated locally at varying angles to the core axis. Frequently the bands wrap around the 1-2 mm. quartz phenocrysts. Generally the zone is not intensely fractured and only weakly to moderately hematized. Numerous diabase dykes are found. They are dark green and fine to medium grained, and are usually weakly magnetic.			
				254.5 - 257': dark red, porphyritic, few fractures, highly hematized locally.			
				257 - 272': Diabase - possibly mafic gabbro - dark green with olive-green mottling, fine to medium grained, and the pyroxene crystals may be weakly uralitized. The rock is weakly magnetic locally and contacts are moderately chloritized. Contains some rhyolite xenoliths up to 10" in size (e.g. 269'-270')			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-1

SHEET 5 OF 6

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
254.5	305.5		Rhyolite	continued.....			
	(51)			272 - 298': Dark red to dark reddish brown, porphyritic, finely to coarsely laminated locally. Phenocrysts of quartz and possibly feldspar are present. Few fractures.	272.5	flow lam.	45° to the C/A
				After 287.5' the rock becomes more strongly porphyritic and more irregularly altered. Some weak hematization and kaolinization is present.	291	flow lam.	75° to the C/A
				296.5 - 297.5': possible chloritized fault zone			
				298 - 299.5': Diabase			
				299.5 - 305.5': Rhyolite becomes reddish green and then greenish at lower boundary.			
305.5	330.5		Mottled	Dark red with irregular hazy light olive green patches, aphanitic			
	(24.5)		Rhyolite	and porphyritic with 1-2 mm. phenocrysts of quartz and feldspar common.			
				Olive green patches probably reflect some form of irregular alteration.			
				These zones increase in occurrence and size towards 330'. Several			
				dark green, fine grained diabase dykes cut this zone.			
				305.5 - 309': Diabase - numerous quartz filled fractures.			
				309 - 310': Rhyolite			
				310 - 311': Diabase			
				311 - 313': Rhyolite			
				313 - 315': Diabase			
				315 - 330.5': Rhyolite			
330.5	364.5		Hybrid	Dark green, aphanitic and very hard. Some minor rusty red zones appear			
	(34.5)		Rhyolite	in the lower half of the zone. Some olive green "alteration" patches			
				persist from the 305' to 330' zone to 336'. This zone is moderately			
				prophyritic. Quartz phenocrysts 1-2 mm. in size are fairly common.			
				Some feldspar phenocrysts of similar size may be present below 345'.			
				These phenocrysts are hazy in outline and dark pink in colour. The base			
				of this zone becomes fragmental with 1-2 cm. fragments of varying			
				composition. The rock is indistinctly laminated locally at about 60°			
				to the core axis			
				360 - 364.5': this zone may be diabase or possibly an altered zone as the result of the lower diabase dyke. Numerous epidotized zones cut at 50° to the core axis.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-1

SHEET 6 OF 6

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
364.5	- 401.5		Diabase	Dark green, fine to medium grained, moderately chloritized at contacts; numerous lighter green zones are located throughout the dyke - possibly spotty epidotization. The intrusive contains some rhyolite fragments, (e.g. 391' - 391.5' and 392' - 393').			
	(37)						
401.5	- 427		Conglomerate	Light to dark grey-green, fine to very fine grained with pebbles and granules up to 1 cm. in size. These larger fragments are well rounded and an abundance of red, possibly volcanic, types is common. A number of the pebbles are weakly epidotized. The matrix is fine sand and silt. Locally, the zone is foliated and some pebbles are oriented along the laminations. Dip averages 45° to the core axis. Some alteration occurs locally. Moderate hematization is present at 417' - 417.5' and a strongly epidotized zone is located at 425'.	423'	foliation 45° to the C/A	
	(25.5)						
427	- 462		Hybrid Intrusive	Dark green becoming very dark green, medium grained becoming finer grained with depth. The upper zone 427' - 428' is highly chloritized and resembles an intrusive contact. The zone, 428' - 432' is porphyritic and the rock remains more vaguely porphyritic to 440'. Numerous epidote-filled fractures are found in this unit and towards the base of the hole, alteration consists of spotty epidotization and weak chloritization. This causes the core to appear mottled light green on dark green ground mass. Minor chalcopyrite is found locally as a fine dissemination.			
	(35)						
462				END OF HOLE			

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

DDH. NO. DL-2
SHEET 1 OF 4

PROPERTY COBEQUID
LATITUDE 27+00S
LONGITUDE L. 96+00E
ELEVATION

BEARING—TRUE 130° AZ.
DIP -45°
FINAL DEPTH 435'
CORE SIZE BO

DATE STARTED November 18, 1977
DATE COMPLETED November 22, 1977
DRILLED BY St. Lambert
LOGGED BY A. Workman

DATE: November 25, 1977 SIGNED A. Workman

DEPTH FEET	FTAGE CORED	FTAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0	- 45		Overburden				ACID DIP TESTS
	(0)						100' -44°
							300' -44°
45	- 120		Rhyolite	Dark pink to pinkish red becoming greenish red locally and aphanitic.			435' -45°
	(75)		brachytic	This zone is predominately intensely tectonically brecciated and it is			
				moderately kaolinized. Clay alteration of feldspar is stronger in the			
				zone 104-120'. Below 120' the rock is frequently mylonitic and very			
				finely brecciated. Fragments are angular and up to 2 cm. in size. The			
				matrix to the fragments is very fine breccia and silica cement, which is			78-80': core ground and
				weakly epidotized and chloritized. Chlorite is common near diabase			lost.
				intrusives. These dykes are common in the unit and are dark green, fine			91-94.5: core ground and
				grained, weakly magnetic and chloritized.			lost
				70.5-76' - Diabase - strongly to moderately chloritized.			
				97.5-103.5' - Diabase - contains rhyolite fragment at 99-100'.			
				108.5-115' - Diabase - contacts are intensely chloritized and ground -			
				rhyolite fragments at 110-111' and 112.5'-114'.			
120	- 141.5		Rhyolite	Brick red, aphanitic and porphyritic with 1-2 mm. quartz and feldspar			
	(21.5)			phenocrysts. The zone is highly brecciated and fractured. The rock is			
				moderately to strongly hematized and in the zone 120-132.5', it is			
				strongly kaolinized. Alteration decreases in intensity with depth.			
				Few diabase dykes are present.			
				132'-136.5' - diabase - moderately chloritized			
				136.5-139' - rhyolite mixed with diabase			
141.5	- 142.5		Diabase	Dark green, intensely chloritized.			
	(1)						
142.5	- 144		Siliceous	Dark pink, aphanitic and finely fractured. Numerous epidote stringers			
	(3.5)		Sediment	along fracture networks.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-2

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
144	- 146 (2)		Diabase	Dark green, intensely chloritized, some uralitization of pyroxene crystals.			
146	- 162.5 (16.5)		Conglomerate	Light grey and pink, with a fine sandy matrix surrounding 1-4 cm. pebbles of varying composition. The pebbles are rounded and a red variety is common, (possibly hematized volcanic). Some fragments are epidotized. A foliation is present and dips 35° on the core axis. Elongated pebbles foliated minerals are weakly chloritized.	161'	foliation	35° to the c/a
162.5	- 176 (13.5)		Siltstone	Brick red, and pale green to greenish-pink, fine to very fine grained and moderately hematized. In darker red zones, hematization may be quite strong. Some epidotization of fractures occurs and spotty epidote alteration gives the core a mottled appearance locally. Some micro-faulting is present at 168' dipping 60° to the core axis. A diabase is present at 166'-168'. An alteration zone of unknown type is located at 174-176'.			
176	- 178 (2)		Diabase	Strongly chloritized.			
178	- 180 (2)		Rhyolite Flow Breccia (?)	Orange altered zone - moderately kaolinized. Rock appears to consist of rounded fragments in a thinly laminated matrix. Fragments are 1-1.5 cm in size. Foliation dips 30° on the core axis. Some epidotization of fractures has occurred. 178.5-179 - diabase			
180	- 191.5 (11.5)		Rhyolite (?)	Pink with black mottling, fine grained to aphanitic. Black mottling may be chloritized amygdules. Rock becomes more strongly mottled and becomes medium grained towards the base of the unit. At the base, the texture is granitic.			
191.5	- 195.5 (4)		Porphrytic Intrusive	Pink to reddish-pink, aphanitic and porphyrtic with 1-2 mm. quartz eyes. A fragmental zone is present at the contact. Mafic fragments, 1-5 mm. in size are present in this zone.			
195.5	- 218.5 (23)		Diabase	Dark green, fine grained and weakly to moderately chloritized. At 200' the rock is weakly laminated and more highly chloritized. Some spotty epidote alteration is also present.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-2

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				196.5-197' - xenolith of altered, mafic, porphyritic medium grained rock			
				200-217.5' - amygdaloidal zone: dark green with light green to white mottling, fine to medium grained (locally). Mottling is the result of chlorite and white carbonate filling amygdules. They are up to 1.5 cm. in size. Some are elongated along a weak foliation, which cuts the core axis at 80°. The rock is moderately to strongly chloritized. Mottling is weaker and less distinct below 210'. The rock may become porphyrtic at 213.5'.			
				217.5-218.5 - dark green, fine grained ophitic texture.			
218.5	- 232 (13.5)		(?)	Dark pink to pinkish-red mottled with dark grey hazy patches, fine grained to aphanitic.			
232	- 269 (37)		Porphyritic Intrusive	Dark green with white to pale pink 1-5 mm. feldspar phenocrysts. Composition is probably diabasic. Contact zones are non-porphyritic. The rock is foliated locally at 40° to the core axis:	233'	folia-tion	40° to the c/a
				232'-234' - foliated - porphyritic			
				263'-269' - foliated - non-porphyr			
				Numerous epidotized fracture zones are present and the rock is moderately chloritized overall.			
269	- 273 (4)		(?)	Pale green to greenish orange alteration zone. The rock is well laminated and highly brecciated, silicified and epidotized. Fracture planes are weakly chloritized and hematized.			
273	- 280 (7)		(?)	Brick red with some dark green banding, aphanitic, well laminated at 45° to the core axis at the upper boundary. Grey-green bands increase in number and thickness towards the base. Some light green and orange alteration bands occur at 275.5 and 276.5'. A conglomerate xenolith or fragment (boulder) is located at 279'-279.5'.			
280	- 323 (43)		Conglomerate Sandstone & Siltstone	Conglomerate matrix is light grey with dark green and red pebbles and granules up to 3 cm. in size. The matrix is slightly epidotized. Siltstone and sandstone are alternating light grey and yellow or pink in colour. Some fine red grains may be seen in the sandstone. Banding cuts the core axis at 45-60°.			
				280'-282' - conglomerate			
				282-288.5' - diabase			
				288.5-290' - siltstone and sandstone			
				290-292' - conglomerate	290'	folia-tion	45° to the c/a

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-2

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				292-293' - diabase - several conglomerate xenoliths			
				293-294.5' - conglomerate - very mafic matrix			
				294.5-296' - sandstone and siltstone			
				296'-300' - diabase			
				300'-304.5' - alternating 1-2 cm. bands of siltstone and fine sandstone.			
				304.5-306.5' - fine conglomerate and conglomeratic sandstone	305	foliation	60° to the c/a
				309'-311' - alteration zone - medium grey, fine to aphanitic, laminated chloritized - abundant 1-2 mm. pyrite cubes.			
				311'-319' - diabase			
				319-319.5 - siltstone and sandstone			
				319.5-323 - fine sandstone and silty - sandstone			
323	- 340.5 (17.5)		Diabase	Dark green with light green mottling, fine to medium grained. Amygdaloidal - amygdules are epidotized to produce the mottling. The rock is moderately epidotized and chloritized overall.			
340.5	- 366 (25.5)		Sandstone & Siltstone	Dark brick red becoming dark green at 353'. Greenish rock has minor orange altered bands. The rock is foliated or thinly banded throughout at 50-60° to the core axis. The red zones are moderately hematized. Minor conglomerate occurs locally (361.5-363) and pebbles up to 1.5 cm are present. Numberous quartz veins also are found at 344'-345', 346-347', 347.5-347.6' and 348-348.5'. They are typically surrounded by orange or green alteration halos.	348'	foliation	50° to the c/a
					360'	foliation	60° to the c/a
				363-366' - contact zone - dark green with light green mottling, strongly chloritized.			
366	- 435' (69)		Fragmental Intrusive flow?	Pale green-grey with darker mottling becoming pink with dark green mottling. Fine grained to aphanitic. Flow(?) laminated in the upper zone is non-laminated in the pinkish zone. Fragments are stretched along the foliation and are moderately to strongly chloritized. Abundant pyrite is found finely disseminated in the rock locally.			
				366-406' - pale green-grey, dark green mottling, aphanitic	405'	flow lamination	40° to the c/a
				406-435' - increasingly pink coloured and grain size increasing - becomes granitic textured			
				410-420' - diabase - 1-5 mm amygdules.			
				435' END OF HOLE			

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-3
SHEET 1 OF 3

PROPERTY COBEQUID
LATITUDE 29+80S.
LONGITUDE L. 96+00E.
ELEVATION

BEARING—TRUE 180° AZ.
DIP -45°
FINAL DEPTH 450'
CORE SIZE BQ

DATE STARTED November 23, 1977
DATE COMPLETED November 25, 1977
DRILLED BY St. Lambert
LOGGED BY A. Workman

DATE: November 29, 1977 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0	- 17		Overburden	Blocky, bouldery sand: casing reamed from 15-17'.			ACID DIP TESTS
	(0)						100': -45°
17	- 33		Sandstone	Light grey-green, fine grained with some granules up to 2 mm. in size. Composition of the grains is variable as indicated by different colour-			300': -44°
	(16)			ation - green, grey and red. The unit becomes pink and cherty at 31.5'.			450': -42°
33	- 44.5		Conglomerate	Light to medium grey becoming beige coloured with light green and pink rounded pebbles up to 3 cm. in size. The matrix is typically fine sand.			
	(11.5)			Colour difference between grey and beige sections may indicate different beds as break is quite sharp at . The "contact" is chloritized and possibly weakly hematized.			
44.5	- 67.5		Mafic Intru-	Dark green with light green alteration zones locally and some black chloritized amygdules throughout the unit, particularly at 52'-55'. The			
	(23)		sive	rock is fine grained and overall is weakly chloritized. Alteration may be strong locally. Some epidote alteration is present in strongly amygdaloidal zones. Some sedimentary rock xenoliths are located at 57-58' and 63'.			
67.5	- 77		Fine Sand-	Light green and pink, fine to very fine grained. The unit is thinly			
	(9.5)		stone & Silt-	foliated or bedded at 75° to the core axis. It is frequently irregular, rippley and convolute. Beds are commonly graded, micro-faulted and some	69'	foliat-	75° to the c/a
			stone	load casts or flame structures may be observed locally. Minor amounts of fine conglomerate are found within some beds.		ion of	
				70.25'-71.25': chloritized mafic intrusive		bedding	
77	- 84		Mafic	Dark green, fine grained, moderately chloritized with abundant finely			
	(7)		Intrusive	disseminated pyrite.			
84	- 90		Siltstone??	Dark green to dark grey-green, fine grained to aphanitic. Some pink			
	(6)			fragments or pebbles (?) up to 2 cm. in size. Laminated locally. Some round quartz grains (phenocrysts?) up to 2 mm. in size may be observed in the zone.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. 81-3

SHEET 2 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
90	- 120.5		Porphyritic	Light to medium grey becoming grey-green with depth. Red mottling is			
	(30.5)		Siliceous	common and may reflect feldspathic or weakly hematized zones. The rock			
			Flow ?	is fine grained to aphanitic. Rounded quartz phenocrysts, 1-2 mm. in			
				size are found throughout the unit. The rock is weakly epotized locally.			
120.5	- 163.5		Mafic	Medium to dark green, aphanitic and well foliated. Wispy, indistinct			
	(43)		Intrusive	light and dark green bands curving around elongated, 1-5 mm. pink, felsic			
			(foliated)	patches make up the laminations. Numerous pink and light green, round			
				xenoliths up to 3 cm. in size dot the unit. The foliation generally			
				wraps around these fragments. The rock becomes more massive and less			
				foliated below 135'. The unit is weakly to moderately chloritized, and			
				some 6" epidotized patches occur locally. Minor finely disseminated			
				pyrite blebs may be present over short intervals.			
163.5	- 215.5		Rhyolite	Greyish-pink, aphanitic and porphyritic locally. Round, 1-2 mm. quartz			
	(52)			phenocrysts and 1-3 mm. pink, euhedral feldspar phenocrysts are located			
				throughout the zone but can be observed best near the upper contact.			
				The rock is strongly tectonically brecciated locally and is highly			
				silicified. Matrix to the breccia fragments is strongly epidotized.			
				Some zones in this unit appear more mafic in composition. Chloritized	184'	flow	40° to the c/a
				mafics are concentrated along a weakly developed foliation, (eg. 183').		foliat-	
				Flow foliation is very poorly developed and vaguely outlined. The rock		ion	
				becomes weakly amygdaloidal at 180'. Chloritized 1-5 mm. amygdules are			
				elongated along the foliation. Finely disseminated pyrite and chalco-			
				pyrite is common locally.			
215.5	- 280		Rhyolite	A dark reddish-brown unit which grades into the upper unit (163.5-215.5')			
	(64.5)			without apparent contact. It is aphanitic and porphyritic. Quartz			
				phenocrysts up to 3 mm. in size are common and fine cream coloured speck-			
				les probably indicate kaolinized feldspar crystals. Some zones may be			
				spherulitic, but individual grains are very hazy and indistinct. The			
				rock is non-brecciated, generally non-fractured and very massive.			
				Alteration, if present may consist of weak to moderate hematization and			
				silicification. The rock carries a 1.5 cm. rounded sediment (?) fragment	268'	flow	45° to the c/a
				at 265'. Below 250' some vague flow lamination can be observed to cut		laminat-	
				the core axis at 45°. This unit gradesdown into the next rock formation.		ion	

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-3

SHEET 3 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
280	- 403 (123)		Rhyolite	Reddish-brown to pink locally, aphanitic and porphyritic. Feldspar phenocrysts are 1-2 mm. in size and they are epidotized and/or kaolinized. In addition, 1-3 mm. quartz phenocrysts are common. Chloritized, 1-2 mm. amygdules are found throughout the unit. The rock is vaguely laminated at 50°-60° to the core axis. Abundant narrow epidotized seams locally follow the laminations. Some flow breccia(?) is located in a zone below 340' and consists of rounded, 1.5 cm. fragments very close in composition to the matrix rock. This zone is poorly laminated. Below 330', the fragments increase in number and diversity of rock type. They are olive green, dark green and red in colour. At 348', the flow lamination is very fine but moderately well developed. In this zone, the rock is non-porphyritic and very deep red coloured. Below 355', there are few fragments and the rock is weakly amygdaloidal locally. Throughout the zone, numerous diabase dykes occur. They are located at: 280.5' -281' - strongly chloritized. 282' -285.5' 305' -308' 311.5-312.5' 359.5'-363'.5 Chalcopyrite and pyrite with minor graphite occurs locally as a fine dissemination or as plates along the foliation planes. Size of individual grains is seldom more than 1-2 mm.	348'	flow laminat-ion	40° to the c/a
					400'	flow laminat-ion	35° to the c/a
403	- 423 (20)		Rhyolite	Deep red with dark green banding, aphanitic and porphyritic. The bands are of varying width and they reflect some form of alteration. Kaolinized and/or epidotized, 1-2 mm. feldspar phenocrysts are common. The rock is strongly epidotized and weakly hematized. Epidotized zones are usually surrounded by dark pinkish-red halos. The banding dips at 45° to the core axis.	415'	flow laminat-ion	45° to the c/a
					418'	flow laminat-ion	50° to the c/a
423	- 450 (27)		Mafic Intrusive	Dark green, fine to medium grained and generally finer at the base of the hole. The rock is weakly porphyritic with some 1-2 mm. light green saussauritized feldspar phenocrysts. 423'- 425.5' - contact zone - abundant 1-2 cm. volcanic fragments in a dark green fine rock. 442' - rock becomes glomeroporphyritic - 1-2 cm. saussauritized feldspar phenocrysts in a fine grained moderately chloritized matrix. 450' END OF HOLE			

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-4
SHEET 1 OF 2

PROPERTY Cobequid
LATITUDE 33+00S
LONGITUDE L96+00E
ELEVATION

BEARING — TRUE 180° Az
DIP -45°
FINAL DEPTH 350'
CORE SIZE BQ

DATE STARTED 26 November 1977
DATE COMPLETED 29 November 1977
DRILLED BY St. Lambert
LOGGED BY A. Workman

DATE: 3 December 1977 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0	- 34		Overburden	Blocky, bouldery sand.			ACID DIP TESTS
							100' - 38°
34	- 197		Quartz-	Dark pink to reddish-pink with orange and white mottling grading			350' - 41°
	(163)		Feldspar	to greyish-pink at 70' and grey below 73'. The rock is aphanitic			
			porphyry Flow-	and porphyritic. The mottling represents 1-2 mm. quartz phenocrysts			
			Rhyolite ?	and 1-3 mm. euhedral feldspar phenocrysts. Some quartz phenocrysts			
				are surrounded by thin, orange coloured reaction halos. The rock is			
				generally equigranular and locally may approach a granitic texture.			
				The unit is generally massive but some epidotized fractures occur			
				locally. Abundant finely disseminated pyrite and minor chalcopyrite			
				are found throughout the rock. Numerous dark green, fine to medium			
				grained diabase dykes cut this unit. They are typically, weakly			
				magnetic and moderately chloritized. Where many diabase dykes are			
				present, the flow rocks are more intensely fractured and silicified.			
				80.5' - 81.5': Diabase			
				92.5 - 95': Diabase - includes volcanic xenolith from 93' to 93.5'			
				148.5' - 167': Diabase - a volcanic xenolith is located at			
				151 - 151.5 and the zone 152.5 and 153.5.			
				is a very dark grey-green intrusive within the diabase.			
				- the diabase is surrounded by a pink alteration halo			
				in the porphyry.			
				186' - 195': Diabase			
197	- 273.5		Quartz-	Medium to dark grey, aphanitic and porphyritic. Quartz and feldspar	202	Flow	60° to C/A
	(176.5)		Feldspar	phenocrysts are up to 3 mm. in size and overall texture is similar		banding	
			Porphyry Flow	to the upper unit. The rock is weakly to moderately laminated by			
			Rhyolite	flowage and some dark pink banding occurs locally. From 204' -			
				215', the rock is fragmental. Blocks up to 3 cm. in size are common.			
				They are round to sub-round in outline.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-4

SHEET 2 OF 2

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				240': unit becomes paler coloured and slighly pinker			
				255': rock is medium grey, and moderately to strongly chloritized abundant finely disseminated pyrite and minor chalcopyrite are found in this zone.			
273.5	282 (8.5)		Hybrid Agglomerate	Medium green mottling on a dark green and white background. The mottling consists of mafic growths, possibly spherulites, which occurs as 3-7 mm. individual round balls set in a medium to coarse grained, moderately chloritized, porphyritic matrix. Quartz and feldspar phenocrysts up to 3 mm. in size are common. Minor disseminated pyrite is common locally as intergranular blebs.			
282	315 (33)		Rhyolite -trachytic	Dark pink and brick red with some light pink mottling, aphanitic. The rock is highly feldspathic and probably trachytic, and the mottling is due to 1-2 mm. feldspar phenocrysts. The unit is highly fractured, silicified and chloritized. Chlorite is found on fracture surfaces.			
315	316 (1)		Diabase	Dark green, fine grained, moderately chloritized.			
316	350 (34)		Mafic flow	Dark green, fine to medium grained and carrying rounded fragments up to 1 cm. in size. The rock is locally laminated at 50° to the core axis. The unit is finely fractured. The wider fractures are quartz-carbonate filled. Abundant finely disseminated pyrite and minor chalcopyrite occur along the laminations and throughout the rock. Weak to moderate chloritization is widespread.	338.5	flow lamination	50° to the C/A.
350				END OF HOLE			

GMC 1051.(09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-5
SHEET 1 OF 4

PROPERTY Cobequid IV
LATITUDE 36 + 00 S.
LONGITUDE L 96 + 00 E.
ELEVATION

BEARING — TRUE 180° Az.
DIP -45°
FINAL DEPTH 412.7'
CORE SIZE BQ

DATE STARTED 7 September 1978
DATE COMPLETED 11 September 1978
DRILLED BY St. Lambert Drilling Co.
LOGGED BY A. W. Workman

DATE: 12 September 1978 SIGNED A. W. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	18.7		Overburden				ACID DIP TESTS
18.7'-	61.2' (42.5')		Rhyolite	The rock is greenish-grey becoming pinkish-grey locally, aphanitic and strongly porphyritic with 1-3 mm. round quartz phenocrysts and 1-4 mm. light green, epidotized feldspar phenocrysts. A few 1-4 mm. black, chloritized glass shards are found locally. Some weak foliation, possibly flow banding is found locally near 35.8'. It is generally lensitic and discontinuous, and may contain porphyritic rhyolite fragments up to 1 cm. locally, (eg. 46.8'). Up to 1% disseminated pyrite blebs is common. The rock is weakly fractured becoming moderately fractured near mafic intrusives. Some fractures are strongly chloritized with light green secondary patches.			100': -41° 296': -42.5° 412.7': -43°
				18.7' - 22': strongly to moderately chloritized 22' - 61.2': fresh to weakly chloritized locally	46.8'	flow banding	80° to the core axis
					52.2'	"	75° to the C/A.
61.2'-	85.1' (23.9')		Diorite	Dark green, fine to medium grained abundant light green 0.5 - 2.0 cm. epidotized rhyolite xenoliths near the contacts. These zones are located at 61.7' - 64.6' and 82.8' - 85.1'. The intrusive becomes gradually porphyritic at 74.5' - 82.8'. Abundant 1-2 mm. black chloritized glass shards are found throughout the zone. The rock is weakly to moderately fractured with epidote and white carbonate fracture fillings. It carries a 7 cm. red rhyolite xenolith at 83.5'.			

GMC 1016

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-5

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
85.1'-	151.2' (66.1')		Rhyolite & Ignimbrite	Dark red to greenish-red and porphyritic with abundant 1-2 mm. quartz phenocrysts and 1-3 mm. epidotized feldspar phenocrysts. The matrix is weakly laminated locally. The bands are frequently lensitic with red terminated bands set in a green matrix, (eg. 121') Abundant fiammi are located at 93.5'. To a depth of 100.4', the fractures are open and white carbonate filled. Fracturing is weak to moderate but is strong locally especially near zone of tectonically brecciated and mylonitic rock (e.g. 95.0' and 95.5').			
				96.9' - 97.6': the rock is strongly tectonically brecciated with minor mylonite. The rhyolite fragments are angular and set in a carbonated matrix.			
				100.4' - 105.6': Diorite - dark green, strongly chloritized, weakly porphyritic with minor graphite. It carries some altered rhyolite xenoliths.			
				105.6' - 126.3': the rock is a strongly fractured, frequently mylonitic (105.6'-108.3') equivalent of the zone from 96.9' - 100.4'. Up to 2% finely disseminated pyrite is common. Fragments are angular and up to 3 cm. in size. They are set in a light green, epidotized, possibly kaolinized finely ground matrix. Some fault planes are located at 111.3' and 115.2' which are sub-parallel to the core axis. Slickensides pitch at 5° across the fault planes.	121'	flow banding	75'-80° to the core axis
					124.7'	flow banding	75-80° to the core axis
				126.3' - 133': Diorite - dark green, fine grained and porphyritic with feldspar phenocrysts.			
				133' - 137.6': rhyolite resembles broken brecciated units above.			
				137.6' - 148.1': Diorite - faults are sub-parallel to the core axis - rock is porphyritic			
				148.1' - 151.2': brick red rhyolite with grey bands and carrying rhyolite fragments. IGNIMBRITE			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-5

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
151.2'	- 311.7' (160.5')		Diabase	The rock is dark green, fine grained, moderately to strongly chloritized with abundant epidotized rhyolite fragments up to 1 cm. in size. Numerous fine, black specks up to 2 mm. dot the core. They are probably strongly chloritized glass shards. Epidote is found rimming the shards as well as on fractures, which are weakly developed. Below a contact at 185', the rock is moderately to strongly fractured ans strongly epidotized.			
				226.4': a 10" epidotized rhyolite xenolith			
				237' - 242.7': the rock becomes strongly fragmental with zones epidotized rhyolite xenoliths averaging 1-2 cm. in size. Zonation is a result of rim alteration.			
				242.7' - 276.9': rhyolite is light green becoming pinkish-green locally and grading to a green tinted variety at 274.1'. The rock is aphanitic and porphyritic with 1-2 mm. quartz phenocrysts and 1-5 mm. red fractured feldspar crystals. Abundant pyrite is found in clots up to 1 cm. in size. The rock is well laminated locally (e.g. 252.8'). It is weakly epidotized and silicified and as mafic intrusives are approached, the rhyolite becomes darker green and more strongly fractured.	242.7 252.8	contact flow banding	foliation at 35° to the core axis 55-60° to the core axis
				276.9' - 277.9': chloritized mafic intrusive			
				277.9' - 280.6': reddish-green rock - same as 242.7' - 276.9'.			
				280.6' - 282.1': chloritized mafic intrusive			
				282.1' - 283.9': chloritized red rhyolite as zone 277.9' - 280.6'.			
				283.9' - 286.7': chloritized mafic intrusive			
				286.7' - 289.5': rhyolite chloritized close to intrusives			
				289.5' - 294.3': light yellow-green to white rhyolite, strongly epidotized and fractured. Abundant pinkish-red felsic seams. It is tectonically brecciated strongly.			
				294.3' - 297.9': chloritized mafic intrusive with 10" rhyolite xenolith			
				297.9' - 307.1': same as zone 289.5' - 294.3'			
				307.1' - 311.7': chloritized Diorite - rhyolite xenoliths.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-5

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
311.7'	412.7' (101')		Rhyolite	The rock consists of alternating light green and pink to pinkish-red zones. The light green zones frequently have dark green mottling. Pink zones are porphyritic with 1-3 mm. round quartz phenocrysts and minor 1-2 mm. light pink, euhedral feldspar phenocrysts.			
				311.7' - 366.3': light green, mottled becoming pink locally, fine grained and possibly spherulitic locally (e.g. 316.3'). It is massive and unfractured becoming weakly fractured locally. Fractures are chloritized. Feldspar grains may show variable epidotization locally. The degree of fracturing increases below 330.6' as well as the degree of alteration. Some magnetite seams are present below 340.6'. At 332' and 334' are several oppositely dipping flow contacts.			
				366.3' - 390.7': rhyolite sharply becomes pinkish-red and aphanitic			
				390.7' - 400.5': greenish-pink zone becoming redder with depth. The rhyolite is strongly fractured and moderately chloritized. Abundant pyrite seams up to 1 cm. Numerous chloritized tectonic breccia zones are found locally, (e.g. 398').			
				400.5' - 412.7': the rhyolite is brick red, aphanitic and porphyritic			
				412.7': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-6
SHEET 1 OF 4.

PROPERTY COBEQUID IV
LATITUDE 39 + 00 S. *
LONGITUDE L 96 + 00 E.
ELEVATION

BEARING—TRUE 180° Az
DIP -45°
FINAL DEPTH 444'
CORE SIZE BQ

DATE STARTED 12 September, 1978
DATE COMPLETED 16 September, 1978
DRILLED BY St. Lambert Drilling Co. Ltd.
LOGGED BY A. W. Workman

* Note: line 96E. intersects the 40 S. Tie Line at 38 + 45 S. and 96 + 85 E. DL-6 is 55' south of this point.

DATE: 21 September, 1978 SIGNED J. A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	21'		Overburden				ACID DIP TESTS
21.0'-	25.1' (4.1')		Diorite	The rock is fine to medium grained, dark green and weakly chloritized. It is weakly magnetic and fractured weakly to moderately. The fractures are epidotized and voids are filled with white carbonate. Near the lower contact, the rock is chloritized.			98': -43.5° 295': -43° 444': -43.5°
25.1'-	59.6' (34.5')		Andesite?	The rock is dark green, fine grained and very hard. It carries abundant pink angular rhyolite fragments up to 2 cm. in size. The rock is weakly fractured and weakly chloritized. Alteration is moderate locally. Locally, the rock is foliated. This structure may be attributable to flow banding, (eg. 43.3'). Abundant disseminated pyrite is observed as 1-2 mm. blebs and in amounts up to 2%. The lower contact at 59.6' is chloritized and epidotized and dips at 20° to the core axis. 53.1' - 56.3': epidotized fractured rhyolite xenolith.	40'	foliation	50° to the C/A.
					43.3'	"	45° to the C/A.
					59.6'	contact	20° to the C/A
49.6'-	69.9' (10.3')		intrusive	The rock is light green, aphanitic and porphyritic with 1-3 mm. round, quartz phenocrysts and occasional 1-2 mm. light pink, euhedral feldspar phenocrysts. Abundant chloritized, elongated flecks parallel a crude foliation (eg. 65'). The rock contains abundant finely disseminated blebs of pyrite most concentrated along the foliation in granular plates as well as disseminated throughout the rock.	65'	foliation	50° to the C/A.
69.9'-	91.6' (21.7')		Diorite	The rock is dark green, fine grained and porphyritic with light green, euhedral fractured feldspar phenocrysts up to 2 cm. in size. A few 1-2 mm. glass shards are found locally.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-6

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
91.6'-	116.8' (25.2')		Rhyolite	The rock is light pink, fine to aphanitic and porphyritic with 1-3 mm. light pink feldspar crystals and 1-2 mm. quartz phenocrysts. The zone from 91.6' to 93.7' contains dark green angular shards of divitrifed glass. These may represent thin tuff horizons within the flow sequence. These horizons are located at 97.9' - 99.6', 105.4' - 105.8', 107.6' - 108.1', 108.9' - 109.1', 109.3' - 109.7' and 111.8' - 112.5'. Abundant chloritized seams are found below 98.4'.	105.4' 109.7' 112.5'	bedding contact bedding	45° to the C/A. 30° to the C/A. 40° to the C/A.
116.8'-	155.3' (38.5')		Diorite	The rock is dark green, fine to medium grained and porphyritic with light green, euhedral feldspar phenocrysts up to 2 cm. in size. Some clumping of phenocrysts into aggregates up to 3 cm. are common. A rhyolite xenolith is located at 121.4' - 122.9'. The lower contact dips at 15° to the core axis.	155.3'	contact	15° to the C/A.
155.3'-	207.3' (52')		Rhyolite	The rock is pink to light pink becoming brick red locally, and dark grey below 192.6'. It is aphanitic and porphyritic. Light pink feldspar phenocrysts are up to 2 mm. in size and round quartz phenocrysts are 1-3 mm. in size. The rock is weakly flow banded locally (eg. 159.4'). Some fragmetns of dark green rock are observed. They are sub-round to sub-angular and very hard. The surrounding rhyolite is depleted in quartz phenocrysts and redder in colour within a narrow margin of the fragments, (eg. 160.8'). Some mottled epidotization is present locally and fractures are moderately epidotized. The rock around 180' also contains some vague rhyolitic fragments up to 5 cm. The zone from 182.2' to 192.6' is reddish pink and more strongly flow banded. The rock below 192.6 is dark grey with pink bands becoming grey-green locally. In this zone are numerous dark green fine grained fragments (?)	159.4' 191.9' 199.5' 207.2'	flow banding " " "	45° to the C/A. 65° to the C/A. 60° to the C/A. 50° to the C/A
207.3'-	222.8' (15.5')		Diorite	The rock is dark green, fine to medium grained and it carries abundant epidotized porphyritic rhyolite xenoliths up to 8 mm. in size. At 212', it grades sharply to a waxy-green fine grained serpentinized rock with abundant dark green mafic bands.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-6

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
222.8'-	336.9' (114.1')		Rhyolite	This unit consists of variably developed spherulites set in a green altered groundmass which grades to a white spherulitic zone at 225.9' and then to pink at 230.8'. The pink zone is more strongly spherulitic than the two upper zones. Spherulites average 1 cm. in size over much of the pink zone becoming up to 3 cm. locally. Some voids which appear as growth lines in the spherulites are strongly chloritized. A gross flow banding is observed locally which becomes more apparent at 253.6' and again at 261.8'. Spherulite become smaller and less well developed below 257.1'.	261.8'	flow banding	45° to the C/A.
					266.4	"	45° to the C/A.
					267.4	"	35-40° to the C/A.
				222.8' - 225.9': green altered spherulitic zone			
				225.9' - 230.8': white chloritized spherulites			
				230.8' - 247.8': pink, strongly spherulitic zone - growths up to 3 cm.			
				247.8' - 266.1': green, chloritized spherulitic zone - the average spherulite size decreases to less than 1 cm. at 257.1'.			
				266.6': the rock is pink with weakly to moderately developed spherulites which are found in zones alternating with 2'-5' flow banded sections. At 288.1', the rhyolite becomes more strongly fractured and locally tectonically brecciated. In this zone spherulites are weakly developed. Fractures are chloritized and epidotized. The zone 312.7' - 313.6' is strongly chloritized.	274.1'	flow banding	50° to the C/A.
					307.3'	"	30° to the C/A.
					314.1	"	45° to the C/A.
				324.1' - 336.9': the rock is strongly flow banded with few spherulites. Banding consists of alternating reddish-pink and grey-pink bands. Some 1-2 mm. pink feldspar phenocrysts dot the zone.	324.8'	"	60-65° to the C/A
					329.6	"	45° to the C/A.
336.9'-	347.1' (10.2')		Diorite	The intrusive is dark green, fine to medium grained and porphyritic with light green fractured feldspar phenocrysts up to 2 cm. in size. Some pyrite is found locally as cubes up to 2 mm. in size. The rock is weakly chloritized becoming moderately altered at the contacts.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-6

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
347.1'-	382.7' (35.6')		Rhyolite Ignimbrite	The rock is pink to reddish-pink aphanitic and moderately to strongly flow banded. Minor 1-2 mm. feldspar phenocrysts are found locally.	351.4'	flow Banding	60° to the C/A.
				The flow banding is often lensitic and discontinuous as well as rippled and convolute.	355.5'	"	65° to the C/A.
				355.7' - 361.5': Diorite - dark green, fine to medium and porphyritic same as zone 336.9' - 347.1'.			
				361.5' - 382.7': light to dark pink, aphanitic, weakly spherulitic locally, with minor porphyry - 1-2 mm. feldspar phenocrysts. Flow banding is strongly developed below 113.4'. This zone is very similar to the zone at 324.1' - 336.9'.	372'	flow banding	40° to the C/A.
					375.7'	"	30° to the C/A.
					378.5'	"	45° to the C/A
					379.4'	"	35-40° to the C/A.
382.7'-	389.9' (7.2')		Rhyolite ?	The rock is light to dark green and strongly chloritized with relatively minor pink zones. It is fine to aphanitic and very hard.			
389.9'-	401.1' (11.2')		Rhyolite	The rock is pink to red with dark green mottling caused by numerous chloritized clots and amygdules. It is aphanitic and porphyritic with 1-3 mm. cream, euhedral feldspar phenocrysts and 1 mm. round quartz phenocrysts. The rock contains some dark red "micro-mottling" which may represent an ignimbritic origin. The unit also contains some light green, rounded fragments (?) up to 4 cm. in size throughout the zone.			
401.1'-	437.6' (36.5')		Rhyolite Ignimbrite	The rock is pink to reddish-pink, aphanitic and strongly flow banded. The laminations are lensitic discontinuous and irregular. It contains light green fragments of rhyolite which are well rounded and up to 6 cm. in size. At 411.3' the unit becomes grey-green and more weakly flow banded. Below 421.3' the rhyolite is strongly fragmental with fragments similar to those above. The matrix is often well banded but may be extremely disturbed by the fragments.	406.8'	flow banding	35° to the C/A.
					411.7'	"	45° to the C/A.
				444': END OF HOLE			

GMC 1051 (09/78)

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-7
SHEET 1 OF 5

PROPERTY COBEQUID IV
LATITUDE 42 + 00 S. *
LONGITUDE L 96 + 00 E.
ELEVATION

BEARING—TRUE 180° Az
DIP -45°
FINAL DEPTH 453.7'
CORE SIZE BQ

DATE STARTED 15 September, 1978
DATE COMPLETED 20 September, 1978
DRILLED BY St. Lambert Drilling Co. Ltd.
LOGGED BY A. W. Workman

* NOTE: line 96E. intersects the 40S. tie line at 38 + 45 S. and corrected to 96 + 00 E. DL-7 is 355' south of this point.

DATE: 23 September, 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 - 21.3'			Overburden				ACID DIP TESTS:
21.3'	- 71.7' (50.4')		Rhyolite	The rock is reddish-pink to pinkish-red and strongly porphyritic. Light pink, 1-3 mm. feldspar phenocrysts and 1-2 mm. round quartz phenocrysts are set in an aphanitic groundmass. This unit carries abundant dark green, sub-round to sub-angular chloritized fragments (andesite?), up to 2 cm. in size. The rock is moderately fractured. Fractures are epidotized and chloritized.			-98': -42° -295': -40.5° -454': -44°
				65.9' - 71.7': the rock is strongly broken and chloritized in the zone bordering the mafic intrusive.			
71.7'	- 95.1' (23.4')		Diorite	The rock is dark green, medium grained and fresh to weakly chloritized. The contacts are fine grained and moderately altered. The zone 76.4' - 89.2' is porphyritic with abundant light green, euhedral feldspar phenocrysts up to 2.5 cm. in size. Abundant finely disseminated pyrite is found through the intrusive. Fracturing is weakly to moderately developed and cracks are epidotized. More open cavities along fractures are filled with white carbonate.			
95.1'	- 138.6' (43.5')		Rhyolite	This unit is light grey with pink mottling, aphanitic and weakly porphyritic with 1-2 mm. round quartz phenocrysts. Pink mottling is found along flow banded zones and along silicified fractures. These fractures are open and filled with quartz phenocrysts and both rhyolitic and mafic rock fragments up to 2 cm. in size. Phenocrysts are commonly penetrated by the matrix. Minor tectonic breccia, possibly kaolinized, is found locally. Chloritized mafic intrusives are located at 111.5', 112.7' & 117.1'-118.4'. Fracturing increases with depth, particularly near intrusives. With the fracturing, the rock becomes redder in colour. Flow laminations or a flow contact is located at 127.2'. A quartz vein is located at 140.1' to 142'.	127.2'	contact	70° to the core axis

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-7

SHEET 2 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
138.6' - 181.1'	(42.5')		Rhyolite spherulitic	Zones of pink spherulitic rhyolite alternate with brecciated fragmental horizons. Spherulites are up to 5 mm. in size but may be up to 1 cm. locally. The breccia is tectonic in origin and fragments are similar in type and composition. The spherulitic horizons are located at 142.9' - 147.5', 150.1' - 151.7' and 160.9' - 163.5'. The zone from 165.7' to 181.1' is moderately to strongly spherulitic and is less fractured. Minor amounts of chloritized tectonic breccia is present locally (e.g. 167.3' - 173.9'). Fractures and breccia have minor amounts of dark blue fluorite present locally, (e.g. 180.4').			
181.1' - 205.5'	(24.4')		Rhyolite Ignimbrite	The rock is grey-red to grey-pink, aphanitic, and strongly fractured, with tectonic breccia found locally. Fragments up to 2 cm. are common. Some flow banding may be observed locally. It is lensitic and irregular - ignimbrite. Strongly epidotized fractures and chloritized breccia increase in number with depth. Some white carbonate is found filling voids.	184.4'	flow banding	45° to the core axis
					186.6'		60° to the core axis
205.5' - 252.5'	(47')		Diorite	The intrusive is dark green, fine to medium grained with abundant 1-2 mm. black, devitrified glass shards. The zone 209.3' - 212.3' is porphyritic with light green, euhedral feldspar phenocrysts up to 1.5 cm. in size. The rock grades to fine grained at 215.2'. Two fault planes, at 215.2' and 216.1' cut the core axis at 40° and sharply change the grain size. In the zone below the faults (216.1' - 252.5'), the rock is fine grained and non-porphyritic. The occasional feldspar phenocrysts may be found locally.			
252.5' - 261.3'	(8.8')		Rhyolite	This zone is one of tectonically brecciated, flow brecciated rhyolite with rounded red to pinkish-red fragments set in an often strongly chloritized, finely fragmental matrix. Some grey fragments are found in a pink matrix. Fragments have altered rims.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-7

SHEET 3 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
261.3' - 292.7'	(31.4')		Rhyolite and Ignimbrite	Light grey, rounded fragments up to 2 cm. with red rims are set in a light pinkish-red, aphanitic, locally, well laminated groundmass. A few scattered quartz and feldspar phenocrysts up to 2 mm. in size are found locally.	261.5	flow banding	35° to the core axis
					263.9	flow banding	55-60° to the core axis
				265.3': minor purple fluorite in a weakly fractured zone.			
				270.8': the rhyolite becomes sharply greyer at this point to at least 50% grey. Minor pink fragmental material is found locally. It is weakly flow banded but becomes more strongly laminated with depth. The rock is more strongly porphyritic below 275.6'.	274.5	flow banding	80° to the core axis
					275.6	flow	60-70° to the core axis
				288.7' - 292.7': the rock grades from grey to light pink.			
292.7' - 334.1'	(41.4')		Rhyolite and Ignimbrite	The rock is light pink, aphanitic and weakly porphyritic locally. At 302.8' the zone grades to a light grey section. Rounded to sub-rounded, rhyolite fragments up to 2 cm. in size, are set in a matrix of similar colour to the fragments. The groundmass is often flow banded and may be moderately porphyritic. Minor amounts of dark red (flow breccia?) may be found locally (e.g. 301.6'). This fragmental becomes better developed and more porphyritic with depth. At 329.5', the unit becomes weakly flow laminated. Some intervals of tectonic breccia are found at 319.1' - 323' and 329.6' - 330.8'. The matrix to the breccia is often epidotized with white carbonate filling the voids.	301.6	flow banding	45° to the core axis
					308.7	flow banding	35° to the core axis
					312	flow banding	55° to the core axis
					316.5	flow banding	45-55° to the core axis
					324.5	flow banding	55° to the core axis

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-7

SHEET 4 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
334.1' - 394.9'	(60.8')		Felsic Agglomerate	Brick red, light to dark green, and burgundy fragments up to 1 cm. in size are located in a medium (waxy) green, aphanitic and locally, weakly porphyritic groundmass. Round quartz phenocrysts are up to 1 mm. in size. The matrix is weakly epidotized. Fragments up to 4 cm. are found locally and represent flow banded and porphyritic varieties (e.g. 358.4'). Below 367.5', a few 8 cm. fragments are found, and the matrix becomes dark green in colour. The unit is weakly fractured. Open cracks are white carbonate filled. Some foliation is observed locally (e.g. 352.7'). Fracturing and a pale green to cream coloured alteration increase below 355.8'.	389.3	foliation 50-55° to the c/a	
				359.6': 10" chloritized mafic intrusive 370.6' - 373.1': spherulitic rhyolite (xenolith?) 386.3' - 387': foliated dark green, epidotized rhyolite xenolith			
394.9' - 423.9'	(29')		Rhyolite	The rock is light waxy green, with some pink zones often with dark green seams. The rhyolite is aphanitic and weakly porphyritic. Feldspar phenocrysts 1-3 mm. in size and quartz phenocrysts up to 2 mm. increase in number below 413.4'. Feldspars are light green, euhedral and many are strongly epidotized. At 416.7' to 423.9' the rock is cut by abundant tectonically brecciated zones. Fragments are angular to sub-angular and are in contact with each other. Little matrix is found. Epidotized mylonitic material fills voids between fragments.			
423.9' - 449.2'	(25.3')		Felsic Agglomerate	The rock is light green, well foliated and moderately to strongly epidotized. It carries abundant very fine fragments which increase in number at 429.3'. At this point are light green rhyolite fragments up to 1 cm. in size. The unit is porphyritic with pink 1-3 mm. euhedral feldspar phenocrysts and 1-2 mm. round quartz phenocrysts. Rock texture and colour are extremely variable across sharp contacts. Minor zones of tectonic breccia are found over short intervals (e.g. 442.9' - 443.6'). Minor amounts of pink rhyolite are found in the vicinity of the lower intrusive at 449.2'.	428.5	foliation 65° to the core axis	

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-7

SHEET 5 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
449.2' - 453.7'	(4.5')		Diabase (Diorite?)	The rock is dark green, fine to medium grained and moderately to strongly chloritized. Abundant 1-2 mm. black specks dot the rock. These are probably devitrified glass shards. The rock is weakly fractured. Epidotization of fractures is widespread, cavities also being filled with white carbonate.			
				453.7': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL - 8
SHEET 1 OF 3

PROPERTY COBEQUID 1V
LATITUDE 45+00 S
LONGITUDE L. 96+00 E.
ELEVATION

BEARING—TRUE 180° Az.
DIP -45°
FINAL DEPTH 414.4'
CORE SIZE BQ

DATE STARTED 20 SEPTEMBER, 1978
DATE COMPLETED 23 SEPTEMBER, 1978
DRILLED BY ST. LAMBERT DRILLING CO. LTD
LOGGED BY A.W. WORKMAN

DATE: 25 SEPTEMBER, 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0-44.4	0		Overburden	esker complex - sandy			
44.4'-63.2'	18.8'		Diorite	The intrusive is dark green, fine to medium grained and prophyritic with 1-3 mm. light green euhedral feldspar phenocrysts. The rock is weakly to moderately fractured. Breaks are strongly epidotized and some shears are chloritized. Voids and cavities are white carbonate filled. Pink rhyolite xenoliths are located at 51.9' - 55.5', 58.1', 58.9' - 59.6' and 62.2' - 62.9'.			ACID DIP TESTS 98': -42° 295': -38° 414': -37°
63.2' - 76.1'	12.9'		Rhyolite Agglomerate	The rock is light green, aphanitic and very weakly porphyritic with 1 mm. quartz phenocrysts. Light green to red, rhyolitic fragments of varying composition are found in several tectonic breccia and agglomerate zones. The agglomerate fragments are up to 3 cm. in size. The breccia fragments are angular and smaller on the average. The matrix to breccia fragments is dark green.			
76.1-84'	7.9'		Diabase (diorite?)	The rock is dark green with 1-2 mm. black blebs, fine grained and moderately to strongly chloritized. The black specks are probably glass fragments. 78.2' - 80.1' : dark red, porphyritic rhyolite fragment from the zone at 84' - 144'.			
84'-183.6'	99.6'		Rhyolite	The rock is reddish - pink to red, aphanitic and moderately to strongly porphyritic. Pink to cream, 1-3 mm. euhedral, locally epidotized feldspar phenocrysts and 1-2 mm. round quartz phenocrysts are common. The rock is massive and non-banded. It is weakly to moderately fractured becoming intensely fractured and mylonitic locally. Epidote and minor chlorite coat most fracture surfaces. Near mafic intrusives chloritization is stronger.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL - 8

SHEET 2 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
84'-183.6'			Rhyolite	Cont'd.....			
				94.5'-95.1' : chloritized diabase seam			
				130.4' : 4 cm. diabase(?) seam - intensely chloritized			
				144'-152.2' : DIABASE - dark green, fine to medium grained with black specks up to 3 mm. and moderately chloritized			
				152.2'-165.4': strongly to intensely fractured rhylolite- mylonitic locally - chloritized seams are located at 157.2'-157.8', 159.8'-160.1' and 160.4'-161.7'			
				165.4'-172.1': DIABASE - dark green, fine to medium grained and moderately chloritized with black blebs.			
				172.1'-177.5' : Same as 152.2'-165.4' - intensely fractured, mylonitic and strongly epidotized.			
				177.5'-181.1' : DIABASE - strongly chloritized.			
				181.1'-183.6' : strongly epidotized mylonitic rhyolite (xenolith?)			
183.6-192'	8.4		Diabase	The rock is moderately epidotized and chloritized.			
192-207.5	15.5'		Rhyolite	The rock is shattered, dark green, medium grained as a result of brecciation and silicification, and is intensely chloritized. Locally the rock is mylonitic. Feldspar phenocrysts have partially survived brecciation and alteration but quartz phenocrysts are undisturbed.			
				202.1'-203.2' : mylonitic rhyolite			
				203.2'-205.9' : DIABASE - dyke cuts along the core axis			
				205.9'-207.5' : epidotized, mylonitic rhyolite.			
207.5-212.2'	4.7'		Diabase	The rock is dark green, fine grained with moderately to strongly developed chloritized and epidotized fracture systems.			
212.2-257'	44.8'		Rhyolite	The rock is greenish-pink to reddish-green with white mottling. Free quartz, often found as 1-4 mm. bands is causing the mottled appearance. The rock is weakly flow banded locally (eg. 226.4'). Quartz and feldspar phenocrysts up to 2 mm. in size are common. It is weakly spherulitic. Spherulites are up to 1 cm. in size, and are often nucleated on phenocrysts. At 226.4', the rock becomes fragmental locally, as a result of tectonic brecciation. Angular rhyolite fragments are up to 4 cm. in size.	226.4'	flow banding	45° to the core axis

GMC 1078

DIAMOND DRILL RECORD—CONTINUATION SHEET

DDH. NO. DL-8

SHEET 3 OF 3

DEPTH FEET	FOOTAGE CORED	FOOTAGE RECD	FORMATION	DESCRIPTION	DEPTH	BEDDG & FOLIA	REMARKS SAMPLES ETC.
312.7'	.257' ((44.8'))		Rhyolite	228.2' - 230.1': Diabase - dark green fine grained and strongly chloritized.			
				240' - 241': The rock is weakly flow banded and contains some dark spherulitic growths up to 1 cm. in size.	240.5'	flow banding	40° to the C/A.
257' -	387.4' ((130.4'))		Diorite	The intrusive is dark green, medium grained becoming fine at the upper and lower contacts. It is moderately to strongly porphyritic with light green, euhedral feldspar phenocrysts up to 6 mm. in size. It is massive to weakly fractured becoming moderately fractured locally. Fractures are epidote and white carbonate filled. Some wider fractures up to 2 cm. are quartz-carbonate filled. Some localized zones of feldspar enrichment in the matrix are observed to contain pink feldspar up to 50% of the rock volume, ((eg. 292')).			
				Diabase Dykes are located at 312.2' - 314.5', 348' - 350.7', 374.9' - 375.8', 380.6' - 385.8'. These are intrusive into the diorite and are dark green, fine grained and weakly chloritized. They contain minor pyrite blebs up to 3 mm. in size.			
387.4' -	402.2' ((14.8'))		Diabase	Similar to the above diabase swarm, - fine grained weakly chloritized to moderately altered at the contacts.			
402.2' -	414.4' ((12.2'))		Rhyolite	The rock is pinkish-red at the contact becoming waxy-green at 406.2'. It is porphyritic with quartz phenocrysts up to 2 mm. and euhedral pink feldspar crystals of similar size, which are set in an aphanitic matrix. The rock is moderately to strongly epidotized.			
				411.1': a 2 cm. calcite stringer contains a few galena crystals up to 3 mm. in size and 1-2 mm. chalcopyrite blebs.			
				414.4': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-9
SHEET 1 OF 3

PROPERTY COBEQUID IV
LATITUDE 34+85 S. *
LONGITUDE 102+00 E. *
ELEVATION

BEARING—TRUE 180° Az
DIP -45°
FINAL DEPTH 387.2'
CORE SIZE BQ

DATE STARTED 22 SEPTEMBER, 1978
DATE COMPLETED 25 SEPTEMBER, 1978
DRILLED BY ST. LAMBERT DRILLING CO
LOGGED BY A.W. WORKMAN
S. BARRON

* tied in at line 100 E. 34+00 S. picket

DATE: 27, SEPT, 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0-21.3	Ø		Overburden				
21.3'-44.4'	23.1		Tuff	The rock is medium grey to grey-green with green bands, aphanitic to medium grained and contains fragments up to 4 cm. in size locally. The rock fragments are of rhyolitic composition. Most grains are in the sand size category. Fractures are weakly developed and filled with white carbonate and quartz.			ACID DIP TESTS 98': -43° 295': -44.5°
44.4'-53'	8.6'		Diabase	The intrusive unit is dark to very dark greyish-green, fine grained and weakly to moderately fractured. Locally the unit contains fragments of volcanic rock up to 2 cm. in size. These fragments are strongly epidotized. Above 50.6' the rock is moderately epidotized and chloritized. Below this point alteration is weaker. Spotty epidote alteration is prevalent in the lower section. The rocks are weakly fractured. Fractures are white carbonate and epidote filled.			
53'-145.2'	92.2'		Rhyolite	The rock is red, very fine grained to aphanitic and porphyritic with 1-3 mm. euhedral orange feldspar phenocrysts and 1-2 mm. round quartz phenocrysts. The rhyolite is massive and non-structured. Locally, it is moderately fractured. Fracture surfaces are epidotized. Near the lower contact, the rhyolite is less reddish coloured; feldspar phenocrysts are less euhedral and become weakly epidotized. Diabase dykes are located at 66'-72.9', 84.6'-86.5', and 115'-120'. These intrusives are dark grey-green fined grained and weakly to moderately chloritized. They are weakly to moderately fractured.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-9

SHEET 2 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
145.2' - 151.4	6.2'		Diorite(?)	The rock is dark greyish-green and fine grained with epidotized feldspar phenocrysts up to 2 mm. in size. The phenocrysts (?) are rounded instead of the normal euhedral variety. Some banding within the unit is found locally - possibly as a segregation formed at the time of intrusion. Devitrified glass blebs are common in the unit. Fractures are moderately hematized.			
151.4' - 230'	148.6'		Rhyolite-Ignimbrite & Agglomerate	The rock is greenish-grey to pink becoming dark grey locally. It is aphanitic but contains minor zones of porphyritic rhyolite. Some sections contain angular and rounded fragments up to 4 cm. in size. These zones are non-banded and unfoliated agglomerate but grade into zones of thinly banded, ignimbrite. These bands are rippled, discontinuous and contain fiammi up to 5 cm. in length and 1 cm. in thickness, (eg. 223'). Ignimbrite is also porphyritic. Zones of epidotized tectonic breccia are found locally. The rock is weakly fractured. Fractures are epidotized with white carbonate filling voids.	223'	fiammi	45° to the core axis
				205.9'-208.8' : DIORITE - dark green, fine to medium grained and porphyritic with 1-2 mm. epidotized feldspar phenocrysts.			
230.0' - 242.5'	12.5'		Diabase	The rock is greyish-green, fine grained and weakly to moderately fractured. The intrusive is moderately chloritized and fractures are strongly epidotized. Chloritized amygdules or vessicules increase in size and number towards the base of the unit indicating an overturned structure.			
242.5' - 296.9'	54.4'		Rhyolite-Ignimbrite	The rock is light to medium waxy green and fine to medium grained. The unit is similar to the section at 151.4'-230' except that it contains no agglomerate. The rock is strongly porphyritic and contains a few fiammi and rhyolite fragments locally. Fiammi are found with flow laminated sequences (eg. 295'). Pyrite is found locally filling voids up to 2 cm. in size.	268'	flow banding	45° to the core axis
					274'	"	50° to the core axis
					283'	"	50° to the core axis

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL -9

SHEET 3 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
296.9'-354.3'	57.4'		Diabase	The rock is greyish-green, medium grained becoming fine grained locally. It contains abundant 1-2 mm. black chloritized glass shards which increase in number towards the contacts. Pyrite is found on some fractures as thin plates and occurs as 1-2 mm. blebs throughout the unit.			
354.3'-387.1'	32.8		Rhyolite Ignimbrite	The section is dark grey to greenish-grey, aphanitic and strongly porphyritic with vague 1-3 mm. quartz and feldspar phenocrysts. The rock contains some fiammi locally but the lower part of the unit may be rhyolite flow. The rock is weakly fractured. Fractures are epidotized with some chlorite near mafic intrusives.			
				380.6' - 384.7': pinkish, aphanitic, well banded section with minor feldspar phenocrysts. Phenocrysts have settled within the laminations producing load casts. However, tops determinations from point to point are contradictory. (eg. 383')			
				387.1' END OF HOLE			

GMC 1051 (09/78)

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-10
SHEET 1 OF 4

PROPERTY COBEQUID IV
LATITUDE 48+00S
LONGITUDE L96+00E
ELEVATION

BEARING—TRUE 180° Az
DIP -45°
FINAL DEPTH 503'
CORE SIZE BQ

DATE STARTED 24 September 1978
DATE COMPLETED 27 September 1978
DRILLED BY St. Lambert Drilling Co.Ltd.
LOGGED BY A. W. Workman
S. Barron

DATE: 9 October, 1978 SIGNED A. W. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 - 21.3'	Ø		Overburden				ACID DIP TESTS:
21.3'	- 35.1' (13.8')		Rhyolite Ignimbrite	The rock is brownish-orange and light green, aphanitic and porphyritic with euhedral feldspar phenocrysts up to 3 mm. and round quartz phenocrysts up to 2 mm. in size. The unit is well banded, pink and grey, and the individual laminations are lensitic and discontinuous. The rock is weakly to moderately fractured with epidote and locally hematite on the fracture surfaces. Minor zones of tectonic brecciation are strongly epidotized.			98': -42° 295': -42° 502.9': -39°
35.1'	- 48.5' (13.4')		Lapilli Tuff	The rock is light greenish-grey, aphanitic to fine grained with 30-40% by volume composed of angular lithic fragments encompassing a wide range of rhyolitic compositions. These fragments are grey, black and red and may be up to 3 cm. in size. Some feldspar crystal-fragments up to 1 cm. in size are found locally. The rock is weakly fractured with hematite and limonite on breakage surfaces.			
48.5'	- 59.4' (10.9')		Rhyolite Ignimbrite	The rock is reddish-brown, aphanitic and strongly porphyritic with euhedral pink feldspar phenocrysts up to 4 mm. and 1-3 mm. round quartz phenocrysts. Minor fiammi up to 2 cm. are present locally. Local zones of tectonic brecciation are strongly epidotized. Angular breccia fragments are often red in colour. The lower content zone is weakly chloritized.			
59.4'	- 107.3' (47.9')		Rhyolite	The rock is red to reddish-brown and strongly porphyritic with euhedral, orange to pink feldspar phenocrysts up to 5 mm. and round quartz phenocrysts up to 3 mm. in size. It carries abundant mafic clots, possibly fragments? They are moderately to strongly chloritized with indistinct boundaries. Some contain quartz phenocrysts within their borders. The rock is weakly fractured becoming moderately fractured locally. Fractures are epidotized with minor limonite. The basal zone from 104'-107.3' is mylonitic. This zone is green and strongly altered with chlorite and epidote.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-10

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
107.3'	- 165.2' (57.9')		Diorite	The rock is dark green, medium grained becoming fine grained locally and is generally porphyritic with light green feldspar phenocrysts up to 2 cm. locally. The rock is weakly chloritized and fractures are filled by epidote and white carbonate. Shear surfaces are strongly chloritized. Minor amounts of finely disseminated pyrite in blebs up to 2 mm. is common.			
				115.5' - 122.2': porphyritic with light green epidotized feldspar phenocrysts up to 2 cm.			
				122.2': the rock becomes sharply fine grained at this point and then slowly grades back to a medium grained porphyritic variety the same as 115.5'-112.2'.			
165.2'	- 365.2' (200')		Felsic Agglomerate	The rhyolite agglomerate unit is greenish-grey to light waxy green with several pinkish sections. It is locally porphyritic and short sections may be well flow laminated. A small amount of ignimbrite may be found locally. Agglomerate fragments are typically representive of several rhyolitic lithologies including massive porphyritic rhyolite and banded ignimbrite, and, may average 3-6 cm. in size, although larger and smaller fragments have been observed. These fragments are usually well rounded to sub-round. The unit is frequently intruded by diabase and diorite dykes. The former variety may locally intrude the diorite as well.			
				165.2' - 186.6': Rhyolite agglomerate - greenish-grey, weakly fractured with ignimbrite and rhyolite fragments up to 5 cm. The lower 4' may be tuffaceous.			
				186.6' - 222': Diorite - the unit is dark green to dark greyish-green, fine to medium grained and weakly to moderately fractured. Epidote and white carbonate are found in fractures. Traces of disseminated pyrite are found locally.			
				222' - 264.8': Rhyolite agglomerate - light waxy green, with rhyolite and ignimbrite fragments up to 5 cm. Most fragments are rounded and retain sharp boundaries. The rock is weakly fractured with epidotized fracture surfaces.			
				236.3' - 238.4': Diabase dyke - chloritized.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-10

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
165.2'	- 365.2'	continued		264.8' - 304': Diorite - dark green, fine to medium grained - coarser grain sizes are found in the upper half. The intrusive is weakly fractured with epidote and white carbonate fracture filling. It is intruded by Diabase at 268.3' - 270.9'.			
				304' - 309.2': Rhyolite agglomerate - the rock is green with more larger fragments than tge agglomerate horizons above. Fragments are sub-round to round and up to 5 cm. in size. The rock is weakly fractured.			
				309.2' - 342.7': Diabase - greyish-green, fine grained and weakly fractured with white carbonate and epidote veining. 327.6' - 329.5': brecciated rhyolite xenolith.			
				342.7' - 365.2': Rhyolite agglomerate - dark green becoming orange locally with a few 5-8 cm. rhyolite flow fragments. The rock is fresh to very weakly altered.			
365.2'	- 417.3' (52.1')		Rhyolite Ignimbrite	The rock is light pinkish-green, and moderately porphyritic with 1-2 mm. quartz and epidotized feldspar phenocrysts. The upper contact dips at 20° to the core axis. The ignimbrite is well banded and the individual laminations intersect sharply with this contact. Bands are discontinuous and locally may be lensitic or rippled. At 395.2', feldspar phenocrysts are 1-3 mm. in size, strongly epidotized and, are more common. A diabase stringer is located at 395.8' - 396.2'.	365.2'	contact	A contact between agglomerate and ignimbrite units dips at 20° to the core axis.
					365.8'	banding	80° to the core axis
					373.4'	"	70° to the core axis
					380.9'	"	50° to the core axis
417.3'	- 428.4' (11.1')		Rhyolite Agglomerate	The rock is light waxy green and aphanitic with 4-5 cm. rounded fragments of various lithic types. The rock is non-laminated.			
428.4'	- 459.5' (31.1')		Diorite	The intrusive is dark green, fine to medium grained with feldspar phenocrysts up to 7 mm. in size. These crystals are light green and euhedral. The rock is weakly to moderately fractured. White carbonate and epidote are found on fracture surfaces. A rhyolite xenolith is located at 433' - 434.5'.			
495.5'	- 503' (43.5')		Rhyolite Agglomerate	The rock is green with generally greenish fragments but acquires reddish fragments with depth. Generally, fragments are sub-round up to 8 cm. in size and represent porphyritic rhyolite and ignimbrite varieties of volcanic. Some fragments are strongly epidotized. Tectonic breccia is found locally, particularly towards the base of the hole.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-10

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
495.5'	- 503'		continued	474.8' - 475.3': Diabase - dark green, fine to medium grained, moderately chloritized.			
				487' - 500.5': Diabase stringer.			
				503': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-11
SHEET 1 OF 3

PROPERTY Cobequid IV
LATITUDE 63+88S
LONGITUDE 102+23E
ELEVATION

BEARING—TRUE 180° Az
DIP -45°
FINAL DEPTH 415'
CORE SIZE BQ

DATE STARTED 26 September 1978
DATE COMPLETED 1 October 1978
DRILLED BY St. Lambert Drilling Co.
LOGGED BY A. W. Workman
S. Barron

DATE: 11 October, 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0	- 17.3		Overburden				Acid Dip Tests
							98' - 44°
17.3	- 70.5'		Diorite	The rock is dark green, medium grained becoming fine grained at the			295' - 43.5°
	(53.2)			contact, and weakly porphyritic with scattered light green 1-3 mm.,			415' - 43°
				euhedral feldspar phenocrysts. The intrusive is weakly to moderately			
				fractured with epidote and white carbonate fillings.			
70.5	- 74.8'		Rhyolite	The rock is greyish-red and red, aphanitic and porphyritic with 1-3 mm.			
	(4.3)			white to pink feldspar phenocrysts and round quartz phenocrysts up to			
				2 mm. The rock is massive and non-structured. The unit is weakly			
				fractured with epidote coating and filling fractures. Some white			
				carbonate is found near mafix intrusives.			
74.8	- 81.4'		Diabase	The intrusive is dark green, fine grained, strongly fractured and highly			
	(6.6)			chloritized. Some shearing is apparent. Fractures are epidote-			
				carbonate filled.			
81.4	- 127.7'		Rhyolite	The rock is pinkish-grey, aphanitic and porphyritic. Feldspar phenocrysts			
	(46.3)			are pink and up to 3 mm in size. Quartz phenocrysts are 1-2 mm. in size.			
				The zone becomes reddish-pink at 91.2' and remains porphyritic. Round			
				spherulitic growths, 1-2 mm. in size give the rock its colour. The			
				zone becomes greyer and locally becomes crudely banded at 108.3'.	108.3	banding	35° to the core axis
				109.1': diabase stringer - strongly chloritized			
				111.4 - 112': diabase dyke - strongly chloritized, epidote and			
				white carbonate in fractures.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-11

SHEET 2 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
127.7	- 149.4' (21.7)		Diorite	The intrusive is dark green, fine to medium grained and strongly porphyritic. Light green, euhedral feldspar phenocrysts up to 1 cm. in size are common throughout the dyke. The rock is weakly fractured with white carbonate and minor epidote in fractures.			
149.4	- 191.4' (42)		Rhyolite	The volcanic is red to pinkish red becoming pink at the upper contact and aphanitic with round quartz phenocrysts up to 3 mm in size. These crystals are frequently penetrated by the ground-mass. Feldspar phenocrysts are not apparent. At the lower contact the rock is greyish-red with minor purple fluorite in some fractures. The unit is weakly to moderately fractured. Diabase stringers are found locally.			
191.4	- 203.9' (12.5)		Diabase	The intrusive unit is dark green and fine grained. It is weakly to moderately fractured with epidote and minor white carbonate as a fracture filling. Where highly fractured locally, the rock is strongly epidotized. The rock is weakly chloritized.			
203.9	- 274.5' (70.6)		Rhyolite	The rock is grey with red mottling and contains abundant 1-3 mm. round quartz phenocrysts set in an aphanitic ground-mass. Feldspar phenocrysts are not distinguishable. The rock is moderately fractured with minor locallized zones of tectonic brecciation. Breaks are strongly epidotized and cavities are white carbonate filled.			
274.5	- 301.3' (26.8)		Diabase	The rock is dark green, fine grained and moderately chloritized. Fractures are moderately developed and are epidote and white carbonate filled.			
301.3	- 321.2' (19.9)		Rhyolitic Intrusive	The rock is dark red to greyish-red aphanitic and porphyritic with euhedral pink feldspar phenocrysts up to 3 mm. and round quartz phenocrysts up to 4 mm. in size. The unit is unstructured but contains abundant mafic fragments up to 4 cm. in size. They are typically dark green, chloritized, fine grained and may be porphyritic with light green feldspar phenocrysts up to 3 mm. The fragments are especially noticed below 312'. The rock is weakly to moderately fractured. Fractures are epidotized. The contact with the underlying intrusive is very broken and carbonate filled cavities are common.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-11

SHEET 3 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
321.2 -	326.1'		Diabase	The rock is dark green, fine grained and moderately to highly fractured.			
	(4.9)			Breaks are strongly epidotized with minor white carbonate and chlorite.			
326.1 -	415'		Rhyolite	The rock is reddish-grey with red mottling, very fine grained and			
	(88.9)			porphyritic with round quartz grains up to 2 mm. and euhedral feldspar			
				phenocrysts up to 3 mm. in size. Some spherulites may be nucleated on			
				quartz phenocrysts. The rock is moderately fractured. Fractures			
				often have red reaction halos and are commonly epidotized. The rock	351'	Flow	45° to the core axis
				becomes less fractured towards the base of the hole. The rhyolite		banding	
				becomes indistinctly flow banded at 350.2' and may include some ignim-	396'	"	40° to the core axis
				brite locally (e.g. 372.4').	414'	"	35° to the core axis
				415': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-12
SHEET 1 OF 4

PROPERTY Cobequid IV
LATITUDE 50+83S.
LONGITUDE L.96+00E
ELEVATION

BEARING—TRUE 180° Az.
DIP -45°
FINAL DEPTH 453.8'
CORE SIZE BQ

DATE STARTED 27 September 1978
DATE COMPLETED 1 October 1978
DRILLED BY St. Lambert Drilling Co.
LOGGED BY A. W. Workman
S. Barron

DATE: 8 Oct. 78 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 - 6.7'			Overburden				ACID DIP TESTS
6.7' - 35.4'	(28.7')		Diorite	The intrusive is dark greyish-green, fine to medium grained and porphyritic with scattered light green feldspar phenocrysts up to 4 mm. Feldspars are euhedral as are most grains. The rock is weakly fractured and breaks are epidotized, locally chloritized and cavities as well as wider fractures may be white carbonate filled. Some fractures are limonite coated. A massive pink rhyolite xenolith is located at 29.1' - 31.0'. It is strongly fractured and epidotized.			98': -45.5° 295': -46° 453.8': -45.5°
35.4' - 63.7'	(28.3')		Rhyolite	The rock is pinkish-grey to dark pinkish-red locally, aphanitic and porphyritic with cream to pink, euhedral feldspar phenocrysts up to 4 mm. in size and a few quartz phenocrysts up to 1 mm. The rock is massive and non-structured. It is moderately to highly fractured with limonite and epidote on fracture surfaces. Some fluorite is noticed near 63.7' in fractured rhyolite. 52.8' - 60.2': Diorite - dark green, fine grained and porphyritic with feldspar phenocrysts up to 1 cm. It contains an epidotized rhyolite xenolith at 54.2' - 55.4'.			
63.7' - 73.6'	(9.9')		Diorite	The intrusive rock is dark greyish-green, medium grained and porphyritic with euhedral, light green feldspar phenocrysts up to 1 cm. in size. It is weakly to moderately fractured with white carbonate and epidote found in fractures.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-12

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
73.6'	- 210.4' (136.8')		Rhyolite Ignimbrite	The rock is reddish-pink with grey bands and laminations, aphanitic and porphyritic. The bands are lensitic, rippled and often discontinuous. No fiammi were observed. A few quartz phenocrysts up to 2 mm. in size are observed in the upper part of the zone but below 140.4', pink euhedral feldspar phenocrysts up to 3 mm. as well as abundant quartz phenocrysts may be observed. Phenocrysts have typically settled within laminations producing load casts. A few massive to poorly banded zones are found locally. Angular to sub-angular, pink rhyolitic fragments up to 1 cm. are found throughout the zone. Typically, they are set in an aphanitic grey matrix. Often the fragments may be surrounded by cream-coloured reaction rims. The rock is weakly to moderately fractured. Locally, zones of tectonic brecciation are common. Fractures and breccia matrix are epidotized. Below 140.8' some increase in fracturing and fragment size may be observed.	74.1'	flow banding	35°-40° to the C/A.
22.4	- 01				81.7'	"	45°-50° to the C/A
				83.0'-92.0': Diorite - dark green, fine to medium grained porphyritic with euhedral to anhedral, light green, feldspar phenocrysts up to 6 mm. in size.			
				109': abundant tectonic breccia around this point.	123'	flow banding	50°-55° to the C/A.
				135.7' - 136.2': chloritized diabase - diorite dips along the core axis.			
				137.3' - 140.4': diabase - dark green, fine to medium grained, highly fractured and epidotized.	145.7'	"	90° to the C/A.
					150.9'	"	45° to the C/A
				158.6' - 167.9': ignimbrite breccia - angular ignimbrite fragments are set in a light grey quartz matrix - may be genetically related to intrusive at 167.9'	155.8'	"	30° to the C/A.
				167.9' - 170.0': Diabase - dark green, fine grained, weakly fractured			
				170.0' - 178.0': the volcanic rock appears to carry abundant light red to pink rhyolite fragments.			
				178.0' - 210.4': light pinkish-red rhyolite and ignimbrite fragments are set in a light grey siliceous groundmass. The rock is weakly banded locally. It carries abundant cream, euhedral feldspar phenocrysts up to 3 mm. in size.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-12

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
210.4' -	257.9' (47.5')		Diorite	The rock is dark green, medium to coarse grained with black chloritized glass shards up to 4 mm. and euhedral, light green feldspar phenocrysts up to 7 mm. The rock is weakly fractured with epidote and white carbonate fracture filling. A rhyolite xenolith is located at 215.4'. The fragment is strongly fractured and epidotized.			
257.9' -	281.4' (23.5')		Rhyolite Agglomerate	The rock is greenish-grey with dark grey and pink rhyolite fragments. These fragments are rounded, up to 3 cm. in size, and represent both ignimbrite and rhyolite units. The zone is weakly fractured with minor epidotized tectonic breccia locally. Below 276.9' is a spherulitic zone. Spherulites are olive green, round and up to 1 cm. in size.			
				272.2' - 276.9': Diorite - the rock is dark greyish-green, fine to medium grained with 1-2 mm. black chloritized glass shards. Pyrite is found as 1-2 mm. blebs scattered throughout the zone.			
281.4' -	354.7' (73.3')		Diorite	The intrusive is dark green, medium to coarse grained and weakly to moderately fractured. White carbonate with minor epidote fills fractures and openings. Minor disseminated pyrite is found in the unit. The rock is moderately chloritized.			
				309.6' - 313.6': Diabase - dark green, fine to medium grained, moderately chloritized			
				330.5' - 336.3': Diabase - same as above			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-12

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
354.7'	- 388.1' (33.4')		Diabase	The rock is dark green, fine grained, moderately chloritized with minor finely disseminated pyrite as 1-2 mm. blebs.			
388.1'	- 396.7' (8.6')		Rhyolite Ignimbrite	The rock is dark red to reddish-brown and banded. Individual laminations are rippled and discontinuous. A few phenocrysts of quartz and feldspar are observed - up to 2 mm. in size, and are set in an aphanitic matrix. The unit is highly fractured. Fractures are strongly epidotized. Minor tectonic breccia is found locally. The rock is redder in colour towards 396.7'.			
396.7'	- 404.3' (7.6')		Diabase	The intrusive is dark green, fine grained and moderately fractured. Epidote and white carbonate fill openings and coat fractures. Overall, the rock is moderately chloritized.			
404.3'	- 428.9' (24.6')		Diorite	The rock is dark green, medium to coarse grained and weakly to moderately fractured. Fractures are epidotized with white carbonate filling cavities. Abundant disseminated pyrite is found as 1-2 mm. blebs and occasional clots up to 1.5 cm. The intrusive is weakly chloritized.			
428.9'	- 450.8' (21.9')		Diabase	Same as 396.7'- 404.3'.			
450.8'	- 453.7' (2.9')		Diorite	Same as 404.3'- 428.9'			
				453.7' END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-13
SHEET 1 OF 4

PROPERTY Cobequid IV
LATITUDE 66+88S
LONGITUDE 102+23E
ELEVATION

BEARING—TRUE 180° Az.
DIP -45°
FINAL DEPTH 533.1'
CORE SIZE BQ

DATE STARTED 2 October, 1978
DATE COMPLETED 13 October, 1978
DRILLED BY St. Lambert Drilling
LOGGED BY A. W. Workman

DATE: 13 October, '78 SIGNED A. W. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
							ACID DIP TESTS
0 -	1.6'		Overburden				
							98': - 44°
1.6'-	55.7'		Rhyolite	The rock is light green to light greyish-green becoming pinkish-green			295': - 43°
	(54.1')			or dark grey locally (eg 24.6'). It is weakly porphyritic with			533.1': - 40°
				1-2 mm. round quartz phenocrysts, often surrounded by red halos. With			
				depth is found an increase in the number of feldspar phenocrysts.			
				The zone is crudely and coarsely flow banded locally (eg. 3.6'-7.4')	6.6'	flow	35-40° to the C/A.
				and at 9.8' the zone carries several rounded rhyolitic fragments up		banding	
				to 2 cm. in size. In the lowermost 2' are several coarsely			
				porphyritic green zones which are strongly chloritized.			
				32.5' - 43.1': Diabase - the intrusive is dark green to black, fine			
				grained, moderately fractured and weakly to			
				moderately chloritized	55.7'	flow	-45° to the C/A.
						contact	
55.7'-	186.5'		Rhyolite	The rhyolite is dark to medium grey and aphanitic. Over short			
	(130.8')			intervals the colour may be greenish-grey with pink mottling			
				(eg. 63-70') or reddish pink (eg. 80.4' - 87.9' and 103.7' - 109.8').			
				It becomes porphyritic at 74.6' with euhedral pink feldspar phenocrysts			
				up to 4 mm and round quartz phenocrysts up to 2 mm. Fracturing			
				is variable but is usually silicified with minor epidote and, locally			
				white carbone filling. Minor very finely disseminated pyrite			
				is found throughout the zone.			
				105.6': chloritized seam			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-13

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				112.7' - 115.2': the rock becomes granular in appearance, is greenish-grey in colour and is porphyritic with mostly quartz phenocrysts			
				120.1' - 126.8': the rock grades sharply to grey at 120.1' and then back to pink at 126.8'			
				126.8': the rock is more highly fractured and develops a weak flow banding which is coarse and crude at best.	134.2'	flow banding	40° to the C/A.
				148' - 153.8': Diabase - dark green, fine grained and weakly chloritized. Weakly developed fracturing is epidotized and cavities are carbonate filled.			
				153.8' - 172.4': the rhyolite is grey to reddish-grey and appears to be fragmental (agglomeratic?). Hazy patches which resemble fragments are common and usually very similar in colour to the matrix. The groundmass is weakly porphyritic becoming moderate with depth. Round quartz phenocrysts up to 2 mm. and pink euhedral 1-3 mm. feldspar phenocrysts are common. The rock is flow banded locally and development of laminations is poor to fair.	164.4'	flow banding	70° to the C/A.
					174.5'	flow banding	40° to the C/A.
				172.4' - 186.5': generally pink in colour - possible flow contact at 186.5'.			
186.5'-	254.3' (67.8')		Felsic Agglomerate	The rock is grey, aphanitic with abundant round to sub-round red, pink and grey fragments. These fragments are representative of rhyolite flow and ignimbrite units and are up to 2 cm. in size set in an aphanitic groundmass. Fragment size increases down the hole and some up to 8 cm. are observed below 209'. Fracturing is weakly developed but increases with depth, particularly below 212.6'. Below this point the rock becomes moderately and then strongly fractured with increasing tectonic brecciation. Tectonic breccia is composed of bright red, angularly fractured and shattered agglomerate fragments set in an aphanitic grey very siliceous matrix, (eg. 217').	225.9'	flow banding	40° to the C/A.

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-13

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				A green, weakly chloritized and possibly sericitized zone is located at 222.9' - 223.7'.			
				At approximately 246', the agglomerate unit may grade to an ignimbrite. Because of brecciation and the presence of ignimbrite fragments in the agglomerate, the exact contact is not apparent.			
254.3' -	265' (10.7')		Diorite	The rock is dark green, fine to medium grained and fresh to weakly chloritized. Fracguring is weakly developed. Cracks are epidotized with minor white carbonates.			
265' -	288.2' (23.2')		Rhyolite Ignimbrite	The rock is bright red and aphanitic. Where strongly tectonically brecciated, angular red fragments are set in a grey matrix. The rock is well banded locally but brecciation has confused and masked it. Some laminations are convolute and recumbantly folded (eg. 283.8'). The rock is intensely broken and fractured along the intrusive contact at 265'. Overall, the rock is moderately fractured with epidote and locally, carbonate on fracture surfaces.	275.3'	flow banding	30° to the C/A.
288.2' -	324.7' (36.5')		Diabase	The rock is dark green, fine grained and weakly chloritized. Abundant 1-2 mm. black devitrified glass shards are found throughout the intrusive. Rhyolite xenoliths are found at 289.1', 290.8' - 293.1' and 294.1' - 295.2'. They are strongly fractured and epidotized. The diabase contains abundant 1-2 mm. blebs of pyrite.			
324.7' -	372' (47.3')		Rhyolitic Intrusive	The rock is red to brownish-red, apahanitic and strongly porphyritic with 1-3 mm. quartz phenocrysts and 1-2 mm. euhedral pink feldspar phenocrysts. The rock is massive and unstructured and carries abundant chloritized dioritic (?) fragments up to 3 cm. in size. The fragments are well rounded but not sharply defined. The unit is weakly to moderately fractured. Fractures are strongly epiodotized. The rock becomes greyish-pink near 372' at which point it seems to grade into the underlying diorite. This may be a result of re-melting at the contact. Abundant finely disseminated pyrite is found locally.			

CMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-13

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
372'	412.1' (40.1')		Diorite	The rock is dark green, fine to medium grained and porphyritic. It is strongly fractured - frequently becoming mylonitic. Epidotization of fractures is prevalent with minor white carbonate. A rhyolite xenolith is located at 410.8' - 412.1'.			
412.1'	432.2' (20.1')		Rhyolite	The rock is red to reddish-pink aphanitic and moderately porphyritic with 1-2 mm. quartz phenocrysts and 1 mm. red feldspar phenocrysts. The rock is moderately to strongly fractured (eg. 412.1 - 412.6') locally with chlorite found in fractures near mafic intrusives. Epidote is also common on breaks. The rock is mylonitic and very strongly epidotized locally, (eg 428.1').			
432.2'	533.1' (100.9')		Granite	The rock is red to pinkish red, medium to coarse grained and is composed of 20-30% quartz, up to 80% feldspar and minor amounts of hornblende, magnetite and chlorite. Feldspar grains are dark red. Quartz grains are interstitial to the feldspar. The rock is moderately to strongly fractured. Fractures are weakly epidotized and coated with limonite. Specular hematite is the dominant fracture filling mineral. Minor pyrite and white carbonate are found in fractures.			
				492.5' - 500.1': Diorite - dark green, fine grained and porphyritic with light green, sausauritized feldspar phenocrysts up to 6 mm. in size. The intrusive is cut by a granite stringer at 497.2' - 497.6'.			
				511.2' - 513.5': Diorite - as above - feldspar phenocrysts up to 1 cm. in size.			
				513.5': feldspar grains are weakly kaolinized below this point.			
				533.1': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-14
SHEET 1 OF 3

PROPERTY Cobequid IV
LATITUDE 54+83S.
LONGITUDE L96+00E
ELEVATION

BEARING—TRUE 180° Az.
DIP -45°
FINAL DEPTH 432.1'
CORE SIZE BQ

DATE STARTED 1 October 1978
DATE COMPLETED 4 October 1978
DRILLED BY St. Lambert Drilling Co.Ltd.
LOGGED BY A. W. Workman

DATE: 10 October 78 SIGNED A. W. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	20.7'		Overburden				ACID DIP TESTS
20.7 -	44.8' (24.1')		Diabase	The intrusive is dark green, fine grain and moderately to highly fractured. Fractures are epidotized and cavities are white carbonate filled. The rock is moderately sheared and chloritized.			295': -42°
44.8' -	80.1' (35.3')		Rhyolite-Ignimbrite	The rock is red to pinkish-red, aphanitic with euhedral, pink to orange feldspar phenocrysts up to 2 mm. and round quartz phenocrysts of similar size. The rock is well banded, pink and grey to a depth of 60'. The bands are lensitic, rippled and discontinuous. The rock is moderately to highly fractured with minor zones of tectonic brecciation. Below 60', the ignimbrite is non-banded to locally banded and becomes increasingly brecciated and fractured. Below 70.5' the rock is less intensely broken.	48.5'	Flow banding	40° to the C/A
					78'	Flow banding	45° to the C/A
				67.7' - 69.7': chloritized, dark green diabase dyke 70.3' - 70.4': chloritized seam 73' - 77': chloritized, dark green diabase dyke			
80.1' -	234.1' (154')		Diorite	The intrusive rock is dark green, fine to medium grained and porphyritic with euhedral, light green feldspar phenocrysts up to 1 cm. in size. Minor zones of pink bladed feldspar crystals are found over short intervals. The rock is weakly fractured with epidote and white carbonate fracture fillings. Locally, fracturing may be quite strong with an increase in epidote alteration. Minor disseminated pyrite is found locally.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-14

SHEET 2 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
80.1'	- 234.1'	continued		86' - 133.4': Diabase - dark green, fine grained and weakly to moderately fractured with epidote fracture filling. The rock is moderately chloritized. Some blue stain (chlorite?) in fractures at 88.6'.			
				223.2' - 225.7': rhyolite xenolith - strongly fractUred and epidotized.			
234.1'	- 271.7' (37.6')		Felsic Agglomerate	The rock is composed of pink and grey ignimbrite and rhyolite fragments up to 5 cm. in size and generally well rounded to sub-angular set in a predominately grey aphanitic groundmass. The rock is porphyritic with pink euhedral feldspar phenocrysts up to 3 mm in size. The agglomerate is moderately to highly fractured.			
271.7'	- 314.5' (42.8')		Diorite	It is dark green, medium grained, and weakly to moderately fractured. White carbonate and epidote are found in fractures. The intrusive is weakly chloritized.			
				311.4' - 314.5': a zone of up to 50% rhyolite xenoliths dips along the core axis.			
314.5'	- 342.8' (28.3')		Rhyolite	The rock is composed of (up to 50% of rock volume), reddish-pink to grey, angular rhyolite fragments in a hard, greenish-grey possibly silicified, aphanitic groundmass. The matrix is frequently cut by chloritized seams. The rock is moderately to strongly fractured. Fractures are chlorite and epidote filled As a whole this unit is tectonically brecciated rhyolite flow.			
				327.9' - 331.2': Diabase - dark green, fine grained, chloritized contains abundant intensely fractured rhyolite xenoliths.			
342.8'	- 370.4' (27.6')		Rhyolite	The rock is pink and aphanitic with abundant light green tectonically brecciated and mylonitic zones. Mylonite zones are strongly epidotized. The rock is strongly fractured but becomes less fractured below 355'. Fractures are stronly epidotized.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-14

SHEET 3 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
370.4'	- 401.3' (30.9')		Felsic Agglomerate	The rock is composed of red to pink and minor grey ignimbrite and rhyolite fragments set in a pinkish-grey groundmass. The fragments are vaguely outlined, and are probably well rounded. Fragments may be up to several centimeters in size. The zone is weakly tectonically brecciated and fractured. The rock is redder towards the lower contact.			
401.3'	- 432.1' (30.8')		Diabase	The intrusive is dark green, fine to medium grained and moderately chloritized. Fracturing is weakly developed becoming moderate locally. Epidote and white carbonate fill fractures.			
				432.1': END OF HOLE			

GMC 1051 (09/78)

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-15
SHEET 1 OF 4

PROPERTY Cobequid IV
LATITUDE 58+83S.
LONGITUDE L96+00E.
ELEVATION

BEARING—TRUE 180° Az.
DIP 45°
FINAL DEPTH 434'
CORE SIZE BQ

DATE STARTED 4 October 1978
DATE COMPLETED 7 October 1978
DRILLED BY St. Lambert Drilling Co. Ltd.
LOGGED BY A. W. Workman

DATE: 13 October 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
							ACID DIP TESTS
0 -	7.5'		Overburden				
							98': -45°
7.5' -	147.6'		Felsic	The rock is light to medium waxy green, becoming pinkish red			433': -35.5°
	(112.8')		Agglomerate	to red near mafic intrusives, and is aphanitic with rhyolite			
2.3 -	45.0			and ignimbrite fragments up to 4 cm. The fragments are			
				generally rounded and encompass a wide range in colour and texture.			
				Locally, the groundmass is porphyritic with 1-4 mm. pink			
				feldspar phenocrysts and 1-2 mm. round quartz phenocrysts. Over			
				short intervals the matrix may be weakly flow banded (eg. 7.5'-	8.7'	foliation 50° to the C/A.	
				9.5'). The zone is weakly fractured becoming moderately and		or flow	
				strongly fractured below 51' - probably due to the mafic		banding	
				intrusive at 67'.			
				Blue fluorite is found filling fractures at 59.5' and 58.6'. Epidote			
				is the dominate fracture filling.			
			12.6 - 12.8	41.3' - 42': chloritized seam			
			14.3 - 14.5	46.8' - 47.7': Diorite - dark green, fine grained, light green			
				feldspar phenocrysts, moderately chloritized,			
				highly fractured.			
			15.3 - 15.5	50.2' - 50.9': chloritized seam			
				58.6' - 65.4': agglomerate becomes pink with an increase in			
				fracturing and minor tectonic brecciation.			
			17.9 - 20.8	65.4' - 68.1': Diabase - dark green, fine grained, moderately			
				chloritized and fractured - breaks are			
				epidotized.			
			20.8 - 21.0	68.1' - 68.9': the agglomerate is red to pinkish-red			
			21.5 - 21.6	70.4' - 71.0': Diabase seam - strongly chloritized.			
			26.5 - 26.8	87' - 87.9': chloritized seam - intrusive (?) - contains			
				angular rhyolite fragments.			
			34.0 - 36.0	111.7' - 118': the felsic volcanic becomes non-fragmental but the			
				groundmass remains the same as higher in the hole			
				light greenish-grey.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-15

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				118.7': the rock contains an 8 cm. reddish-pink, porphyritic rhyolite fragment. It is well rounded and is found with several small angular chips which originated as part of the larger block. (36.2)			
				120.3' - 129.8': Diorite - the intrusive is dark green, fine to medium grained and weakly porphyritic with light green euhedral feldspar phenocrysts up to 3 mm. in size. The rock is moderately to strongly fractured and is sheared locally. Epidote coats fractures and shear surfaces are strongly chloritized. Below 129' are abundant rhyolite fragments. (36.7 - 39.6)	129.8'	intrusive contact	15° to the C/A.
				129.8' - 140.6': the rock is light grey with reddish-pink mottling and minor red fragments. It is porphyritic with 1-3 mm. pink feldspar phenocrysts and 1-2 mm. quartz phenocrysts. The agglomerate is moderately to strongly fractured. (39.6 - 42.9)			
				140.6' - 147.6': rhyolite is dark grey and aphanitic with pink, red and grey rounded fragments up to 2 cm. in size. Fragments are massive porphyritic and ignimbrite. The groundmass is frequently porphyritic with 1-2 mm. cream feldspar phenocrysts and 1 mm. round quartz phenocrysts. The matrix is mixed locally with pink fine grained material (eg. 139.1'). The rock is weakly to moderately fractured. Fragments are redder towards the intrusive at 147.6'. (42.9 - 45.0)	140.6'	flow banding	30° to the C/A
147.6' (45.0)	207.6' (60') (63.3)		Diorite	The intrusive is dark green, fine to medium grained with minor coarse grained pinkish-green feldspathic zones, (eg. 160.1' - 161.3'). The rock is weakly to moderately porphyritic with scattered 1-5 mm. light green sausauritized feldspar phenocrysts. The unit is weakly to moderately fractured becoming highly broken locally. Epidote and minor white carbonate are found as fracture fillings. Dark green diabase seams cut the core axis at 159.4', 159.6' and 159.9'. This is the same seam in each case. It has been faulted at 85° to the core axis. The upper fault has a displacement of 1 cm. The lower fault displaces the seam 3-4 cm.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-15

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
207.6'	- 275.6'		Rhyolite	The rock is pinkish-red to brownish-red, aphanitic and strongly			
	(68')			porphyritic with 1-2 mm. round quartz phenocrysts which have			
63.3 -	84.0			frequently been penetrated by the groundmass. Feldspar phenocrysts			
				up to 4 mm. are pink and euhedral. The rock becomes greyish-red			
				at the upper intrusive contact and also in zones at 260.8' - 263.5'			
				and 267.6' - 271'. The rock is weakly to moderately fractured, but			
				locally fracturing may be strong. Epidotization of fractures			
				is prevalent.			
				At 273' the rock becomes darker with more chloritized fractures.			
275.6'	- 279.6'		Diabase	The intrusive is dark green, fine grained and contains abundant			
	(4.0')			1-2 mm. black, chloritized glass shards. It is weakly fractured			
84.0 -	85.2			with white carbonate as a fracture filling.			
279.6'	- 298.4'		Felsic	The rock is dark grey-green, aphanitic to fine grained and carries			
	(18.8')		Agglomerate	rounded fragments up to 1 cm. in irregular zones. The groundmass			
85.2 -	90.9			is porphyritic locally with 1-2 mm. quartz phenocrysts and may be			
				well flow banded (eg. 283.6').	283.6'	flow	50° - 55° to the C/A
				Abundant chloritized amygdules dot the zone. Those are		banded	
				typically surrounded by reddish reaction halos.			
298.4'	- 306.3'		Diorite	The intrusive is dark green, fine grained and weakly porphyritic with			
	(7.9')			scattered light green euhedral feldspar phenocrysts up to 1 cm.			
90.9 -	93.4			Phenocrysts are concentrated in the centre of the dykes. The rock is			
				weakly to moderately fractured with epidote and white carbonate filling			
				breaks. Generally, the rock is weakly to moderately chloritized.			
306.3'	- 316.3'		Rhyolite	The rock is light to medium grey and pink, and fine grained. The zone			
	(10.0')		(Spherulitic)	is porphyritic locally with 1 mm. quartz phenocrysts. Pink, round but			
93.4 -	98.4			distorted spherulites are found throughout the zone. They are up to			
				1 cm. in size and give the rock a pink colour. The zone is weakly			
				fractured becoming moderately fractured locally.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-15

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
316.3'	- 369.4'		Felsic	The rock is medium to dark grey, becoming pink locally, fine grained			
	(53.1')		Agglomerate	with a few rounded fragments up to 3 cm. Scattered quartz and feldspar			
96.4	- 112.6		(?)	phenocrysts are up to 2 mm. in size. Towards the base of the unit,			
				the rock is redder and more strongly porphyritic. Fractures are weakly			
				developed and epidotized. Some fractures are surrounded by red reac-			
				tion halos. At 343.2' the rock becomes pink to reddish-pink.			
369.4'	- 434.1'		Rhyolite	The rock is pinkish-grey, frequently mottled grey and pink, aphanitic,			
	(64.7')		(Spherulitic)	and contains pink and green spherulites up to 1 cm. in size. Quartz			
112.6	- 132.3			and feldspar phenocrysts are 1-2 mm. in size. The rhyolite is weakly			
				to moderately fractured. Epidote fills fractures. Minor intensely			
				broken, epidotized zones are found locally, (e.g. 375.7'). Below			
				404.9', spherulite size increases and occurrences up to 3 cm. in dia-			
				meter are observed locally (e.g. 407.3'). The rock is weakly spheru-			
				litic below 416.7'.			
				434.1': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-16
SHEET 1 OF 5

PROPERTY COBEQUID IV
LATITUDE 62 + 80 S.
LONGITUDE 96 + 00 E.
ELEVATION

BEARING — TRUE 180° Az
DIP -45°
FINAL DEPTH 472.4'
CORE SIZE BQ

DATE STARTED 8 October, 1978
DATE COMPLETED 11 October, 1978
DRILLED BY St. Lamberts Drilling Co. Ltd.
LOGGED BY A. W. Workman

DATE: 14 October, 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 - 6.9'			Overburden				ACID DIP TESTS:
6.9' -	22.6' (15.7')		Rhyolite	The rock is pinkish-red, aphanitic and porphyritic with 1-2 mm. quartz phenocrysts and minor 1 mm. feldspar phenocrysts. The rock is massive and unstructured. It is moderately fractured becoming strongly shattered locally with limonite and epidote on fracture surfaces.			98': -40.5° 295': -43.7° 472.4': -43°
22.6'	- 34.4' (11.8')		Diabase	The intrusive is dark green, fine grained, weakly to moderately chloritized and fractured with epidote and minor carbonate on fractures.			
34.4'	- 110.9' (76.5')		Felsic Agglomerate	The volcanic is pink to greyish-pink and aphanitic with 1-2 mm. quartz phenocrysts and 1 mm. feldspar phenocrysts. The rock is weakly agglomeratic locally with rounded porphyritic rhyolite fragments up to 2 mm. in size. The fragments are very similar in composition to the groundmass. A 5 cm. rhyolite fragment is located at 65.1'. Generally, fragments are not sharply defined. The rock is moderately fractured becoming strongly fractured at 57.4' - 69.9'. Below 74.5', are numerous chloritized fractures and patches which are usually moderately magnetic. Below 94.3', the rock is a darker greyish-red and carries small chloritized mafic fragments up to 2 cm. in size as well as abundant grey rhyolite fragments.			
110.9'	- 124.3' (13.4')		Rhyolite Ignimbrite	The rock is reddish-pink becoming pinkish-red with depth, aphanitic and porphyritic. Round, quartz phenocrysts up to 2 mm. in size and 1 mm. strongly epidotized feldspar phenocrysts are common.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-16

SHEET 2 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				The rock is weakly to moderately flow laminated and contains a few rounded grey rhyolite fragments up to 2 cm. in size. The zone is weakly fractured. Epidotization of fractures is prevalent except close to mafic intrusives where chloritized fractures are common.	115.6'	flow banding	35° to the C/A.
					119.1'	"	30° to the C/A.
					121.7'	"	30° to the C/A.
124.3'	143.9' (19.6')		Diorite	The intrusive is dark green, fine to medium grained and contains a pinkish-green, feldspathic central zone. This zone is medium grained and contains abundant fine grained mafic seams and fragments. The feldspathic zone is a result of segregation within the intrusive. The dark green border phases are porphyritic with 1-5 mm. light green euhedral feldspar phenocrysts.			
				131.8' - 135.1': rhyolite xenolith- dark red, intensely broken and epidotized.			
143.9'	268.2' (124.3')		Rhyolite Ignimbrite	The rock is dark pinkish red, aphanitic and porphyritic with 1 mm. quartz phenocrysts and 2 mm. fractured epidotized feldspar phenocrysts. Phenocrysts are commonly surrounded by red to pink reaction rims. The unit is weakly flow banded becoming well laminated locally. Bands are irregular and lensitic, frequently discontinuous and consist of alternating red and grey laminations. The rock is weakly to moderately fractured. Breaks are silicified and epidotized.	148'	flow banding	35° - 45° to C/A.
				158.1' - 165.3': highly fractured, moderately to strongly chloritized ignimbrite with several chloritized seams (eg. 164.2').			
				165.3' - 172.6': Diabase - dark green, fine grained, moderately to strongly developed fractures are epidotized with minor white carbonate. Rhyolite xenoliths are located at 166.1' - 166.3' and 167.9' - 168.1.			
				172.6' - 204.5': pinkish-grey as a result of pink halos around fractures, moderately porphyritic with moninately quartz phenocrysts and weakly banded locally becoming moderately banded at 200.1'. A chloritized seam is located at 197.9'.	189.7'	flow banding	85° to the C/A.

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-16

SHEET 3 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				204.5': Fault - cuts the core axis at 55°.	200.8'	flow	45° to the C/A.
				204.5' - 208.7': bright red moderately well banded ignimbrite	211.1'	banding	45° to the C/A.
				207.7': 5 cm. fine grained, red, granite stringer	211.9'	flow	35° to the C/A
				208.7': the rock becomes redder in colour and flow banding is well developed locally. Fracturing is more pronounced below 208.7' and they are surrounded by reddish halos.		banding	
					213.4'	flow	45° to the C/A.
				The rock is moderately porphyritic with 1-2 mm. quartz phenocrysts and 1-3 mm. epidotized feldspar phenocrysts.		banding	
				214' - 217.5': Diorite - the intrusive is dark green, fine grained and porphyritic with light green euhedral feldspar phenocrysts up to 4 mm. in size. The rock is weakly to moderately fractured with epidote and white carbonate filling fractures.			
				217.5' - 217.7': rhyolite xenolith similar to rhyolite at 226'.			
				217.7' - 219.2': mixed chloritized intrusive, granite and rhyolite fragments.			
				220.4' - 221.7': strongly chloritized diabase			
				219.2' - 244.9': bright red grading to pinkish-grey, aphanitic and moderately to strongly porphyritic with 1-2 mm quartz penocrysts and 1-3 mm. feldspar phenocrysts well flow banded with bands up to 1 cm. in thickness - possibly ignimbrite. The zone is weakly to moderately fractured.	226.5'	flow banding	40° to the C/A.
					231.1'	"	75° to the C/A.
				244.9' - 247': pinkish grey, moderately porphyritic and very well flow banded locally (eg. 250.8' and 262.2'). Banding is irregular. Abundant chloritized seams are found in fracture zones - generally magnetic.	253.1'	flow banding	35° to the C/A.
					254.8'	"	45° to the C/A.

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-16

SHEET 4 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
268.2'	296' (27.8')		Rhyolite (Ignimbrite?)	The rock is grey with red sinues surrounding grey aphanitic patches. These patches are reounded and form 80 - 90% of the rock volume. They may reflect pseudo flow brecciation. Generally the rock is porphyritic with 1-2 mm. quartz phenocrysts and a flow feldspar phenocrysts. The zone is weakly to moderately fractured. Below 293' the rock is highly fractured. Fractures are silicified and surrounded by red halos. Minor tectonic breccia is found locally (eg. 295.8' - 296.6').			
296'	356.6' (60.6')		Felsic Agglomerate	The rock is pinkish-grey becoming pink locally, aphanitic and porphyritic. Quartz phenocrysts up to 2 mm. are common. A few chloritized and epidotized feldspar phenocrysts are found. Below 324.8' are found abundant 1-2 cm. green rounded, chloritized fragments and greyish rhyolite fragments (eg. 330.2'). Abundant chloritized vugs are observed which may be fragments as well. The rock is weakly fractured becoming moderately fractured locally. Epidote is the major fracture filling. 329.1': a fault zone with abundant epidotized mylonite dips along the core axis at 5° - 10°.			
356.6'	383.1' (26.5')		Diorite	The intrusive is dark green, fine to medium grained and porphyritic with scattered light green, euhedral feldspar phenocrysts up to 5 mm. in size. The rock is weakly to moderately fractured. Epidote and minor white carbonate fill fractures.	356.6	intrusive contract	30° to the C/A.
383.1'	403.7' (20.6')		Rhyolite Agglomerate?	The rock is dark red with grey mottling and aphanitic. It is porphyritic with 1-2 mm. round quartz phenocrysts. The flow contains a few rounded grey and light pink rhyolitic fragments up to 2 cm. in size. They are not generally well defined. 392.2' - 393.9': chloritized seams in fractures, with chloritized mylonite - fault zone? 399.9' - 401.9': chloritized fractures 383.9' - 384.4', 386.3' - 387', 389.5' - 390.4': - chloritized dykes			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-16

SHEET 5 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
403.7'	- 414.5' (10.8')		Diorite	The rock is dark green, fine grained and porphyritic with a few light green, euhedral 1-3 mm. feldspar phenocrysts. The intrusive is weakly fractures becoming strongly broken locally. Epidote and white carbonate are found in fractured. Shear surfaces are strongly chloritized with minor graphite.			
414.5'	- 448.8' (34.3')		Rhyolite	The rock is pinkish-red grading to pink and then to greyish-pink away from the overlying intrusive. The zone contains abundant chloritized clots and seams up to 3 cm. in size. The rock is weakly fractured becoming moderately shattered locally. Fractures are silicified and epidotized.			
448.8'	- 472.4' (23.6')		Rhyolite Flow Breccia?	The rock consists of pink to pinkish-red, aphanitic rhyolite fragments set in a black to dark grey, fine grained to aphanitic, hard groundmass . The fragments are rounded and up to 4 cm. in size. The rock becomes more massive with less fragmental at 468.5'. It is porphyritic with quartz feldspar phenocrysts up to 2 mm. in size. Some weak flow banding is observed locally. The volcanic flow is intruded locally by granite stringers and dykes, (e.g. 452.9' - 454.1'. 462.8' - 463', 496.3' - 469.5') The granite is pinkish-red, fine grained and very fresh.	468.7 452.9 454.1	flow banding intrusive contacts	45° to the core axis 45° to the core axis 45° to the core axis
				472.4': END OF HOLE			

GMC 1051 (09/78)

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-17
SHEET 1 OF 2

PROPERTY Cobequid IV
LATITUDE 67 + 17 S.
LONGITUDE 96 + 00 E.
ELEVATION

BEARING—TRUE 180° Az
DIP -45°
FINAL DEPTH 256.9'
CORE SIZE BQ

DATE STARTED 12 October, 1978
DATE COMPLETED 13 October, 1978
DRILLED BY St. Lambert Drilling Co. Ltd.
LOGGED BY A. W. Workman
S. Barron

DATE: 17 October, 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 - 5.2'			Overburden				ACID DIP TESTS:
5.2' -	8.7' (3.5')		Rhyolite	The rock is brownish-pink and cream coloured, aphanitic and porphyritic with anhedral, light pink feldspar phenocrysts up to 4 mm. and 3 mm. round quartz phenocrysts. The rock is weakly fractured. Breaks are chloritized locally with minor epidote.			98': -43° 256.9': -42.5°
8.7' -	188' (179.3')		Granite	The rock is red to pinkish-red, medium to coarse grained and is composed of 20-30% quartz, 60-70% feldspar and 5-15% hornblende. Quartz grains up to 2 cm. are interstitial to feldspar. Feldspar grains are very red in colour and display good cleavage. Hornblende crystals up to 1.5 cm. are euhedral to anhedral. Fracturing is weakly developed becoming moderate locally. Epidote and limonite coat fracture surfaces. Diorite xenoliths are located at 30' - 30.5' and 178.5' - 179'. They are dark green, fine to medium grained and weakly to moderately porphyritic.			
188' -	223.3' (35.3')		Diorite	The rock is dark green, fine grained and porphyritic with light green, euhedral feldspar phenocrysts up to 4 mm. The rock is weakly to moderately fractured with epidote and white carbonate filling breaks and cavities. The intrusive is weakly chloritized. Abundant granite stringers of varying grain size are located at: 211.5' - 214.7', 220.6' - 221.1' and 222.3'. A 1.5 cm. wide stringer runs along the core axis at 198' - 199.4'.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-17

SHEET 2 OF 2

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
223.3'	- 256.9' (33.6')		Granite	The plutonic rock is red to pinkish red, fine to medium grained and is similar in composition to the upper granite unit. Hornblende content is 1-3% however with the balance being made up mostly by feldspar. Quartz content is 25-30%.			
				256.9': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-18
SHEET 1 OF 4

PROPERTY Cobequid IV
LATITUDE 69 + 82 S.
LONGITUDE 102 + 20E.
ELEVATION

BEARING—TRUE 180° Az.
DIP -45°
FINAL DEPTH 474.1'
CORE SIZE BQ

DATE STARTED 14 October 1978
DATE COMPLETED 21 October 1978
DRILLED BY St. Lambert Drilling Co.
LOGGED BY A. W. Workman

* measured from L 96 E. at 70 + 00 S. picket

DATE: 25 Oct., 1978 SIGNED A. W. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	9.4'		Overburden				ACID DIP TESTS
9.4' -	136.2' (126.8')		Diorite	The rock is dark green, fine to medium grained and weakly porphyritic with a few scattered light green feldspar phenocrysts up to 4 mm. in size. Fractures are weakly to moderately developed with epidote and white carbonate found on all fracture surfaces. Locallized shear planes are strongly chloritized. Overall, the rock is weakly to moderately chloritized and good dioritic texture is exhibited only locally (eg. 97.1'). Weak uralitization of pyroxene is evident. Spotty epidote alteration is common below 99.7'. Round epidotized amygdules are up to 5 mm. in size. Minor finely disseminated pyrite as well as blebs up to 2 mm are common.			98': -45.5° 295': -45° 474': -44°
				114.8' - 116.6': Diabase - dark green, fine grained and strongly chloritized; the rock is weakly fractured.			
136.2' -	189.4' (53.2')		Felsic Agglomerate	The rock is medium to dark grey with red, pink and grey rounded to sub-angular rhyolite fragments. The fragments are up to 5 cm. in size and are set in an aphanitic groundmass. The matrix is weakly porphyritic with a few 1-2 mm. quartz phenocrysts. The fragments represent massive rhyolite and ignimbrite lithologies. The larger fragments are better rounded. Many smaller, more angular fragments appear to have been broken from larger fragments. The rock is weakly fractured becoming moderately fractured locally. Epidote is the pervasive fracture filling mineral. Locally the matrix to fragments is weakly chloritized.	136.2'	intrusive contact	40° to the C/A

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-18

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
136.2'-	189.4'	continued....		179.6' - 181.3': non-fragmental chloritized zone			
				180.1' weakly and irregularly flow banded			
				187.8' - 188.3': chloritized intrusive - seam			
189.4'-	199.8		Diorite	The intrusive is dark green, fine to medium grained and porphyritic			
	(10.4')			with 1-4 mm. light green and pink feldspar phenocrysts. Rhyolite			
				xenoliths up to 4 cm. in size are located at 189.5', 189.8' and			
				190.2'. The diorite is weakly fractured with epidote and white			
				carbonate in fractures.			
199.8'-	227'		Rhyolite	The rock is pinkish-grey to grey, aphanitic and porphyritic with 1-2 mm.			
	(27.2')		Ignimbrite	quartz phenocrysts. The rock is well flow banded locally. The			
				individual laminations are irregular, rippled, discontuous and	212.8'	flow banding	80°-90° to the C/A.
				locally lensitic. The rock contains numerous partly absorbed			
				and poorly defined rhyolitic fragments up to 1 cm. in size.	213.3'	"	50°-55° to the C/A.
				Structure suggestive of ignimbrite become more poorly defined	219'	"	45° to the C/A
				towards the base of this section.	226.2'	"	50° to the C/A
				214.1' - 221.5': Diorite - dark green, medium grained and non-			
				porphyritic. The intrusive contains abundant			
				1-2 mm. black blebs - chloritized glass.			
227' -	265.4'		Rhyolite	The rock is generally pinkish-grey but is frequently pink or waxy-			
	(38.4')			green. It is aphanitic, massive and unstructured. A vague grey			
				mottling is apparent locally. This may be the result of brecciation			
				and re-melting. The rhyolite may contain 3-5 cm. rounded fragments	258.1'	flow(?) banding	40-45° to the C/A
				at 261.5'. The rock is weakly to moderately fractured. Epidote			
				fills many fractures and many are silicified or poorly cemented.			
				The more strongly fractured zones are often pinkish-red to brick			
				red.			
				249.2' - 251': Diabase (?) - the rock is dark green, fine grained			
				and strongly chloritized. A rhyolite xenolith is			
				located at 250.2' - 250.5'.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-18

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
265.4' -	303.4 (38')		Diorite	The intrusive rock is dark greyish-green, medium to coarse grained and porphyritic with light green, sausauritized feldspar phenocrysts up to 1 cm. in size. Abundant 1-2 mm. chloritized glass blebs dot the zone. The rock is weakly fractured with epidote and white carbonate on fracture surfaces. The rock is weakly chloritized, weakly sausauritized and uralitized.			
				287.9' - 292.2': Rhyolite - xenolith of rock similar to the zone at 227' - 265.4'.			
				292.2' - 303.4': non-porphyritic diorite			
303.4' -	313.8' (10.4')		Rhyolite	The rock is pinkish-grey to grey with pink mottling. This zone is the same as the zone above 265.4'. It is generally unstructured with no distinct recognizable features. Fracturing is weakly to moderately developed with either epidote or chlorite on fractures. At 303.4', the rhyolite is locally stopped by the diorite.			
313.8' -	395.8' (82')		Rhyolite Ignimbrite	The rock is light grey to pinkish-grey becoming dark grey and red with depth. It is porphyritic with 1-2 mm. quartz and pink feldspar phenocrysts set in an aphanitic groundmass. The zone is well flow banded. Individual laminations are irregular, discontinuous and rippled. Flow banding is frequently obscured by tectonic brecciation. The breccia fragments are angular and set in a white silicified matrix. Fragments average 1.5 cm. but some up to 3 cm. are found locally. Well developed tectonic breccia is found locally (eg 344.8' - 347.4'). Below 347.4', the rock has undergone general tectonic brecciation weak to moderate in strength. At 369.1', the rock becomes brick red where broken. The rock is chloritized locally (eg 393.4' - 394.3')	318.4'	flow banding	30° to the C/A.
					322.3'	"	35-40° to the C/A.
					335.1'	"	40-45° to the C/A.
					336.3'	"	60° to the C/A
					342.0'	"	35-40° to the C/A.
					343.1'	"	65° to the C/A
					348.3'	flow banding	55° to the C/A.
					356.3'	"	45°-50° to the C/A
					372.0'	"	50°-60° to the C/A
				394.3': Fault - epidotized mylonite zone - 1 cm. thick, at 40° to the core axis.	394.3'	Fault	40° to the C/A.

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-18

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
395.2' -	421.9 (26.7')		Rhyolite	The rock is dark grey to greenish-grey, aphanitic and non-structured. It carries occasional pink to red, sub-round to sub-angular fragments of rhyolite. Minor widespread chloritization of the rock has produced an overall greenish hue. The rock is weakly fractured. Fractures are epidotized and chloritized. Some are silicified. Abundant disseminated chalcopyrite locally on fractures.			
421.9' -	457.0' (35.1')		Rhyolite Ignimbrite	The zone is medium to light grey, aphanitic and weakly porphyritic with 1-2 mm. quartz phenocrysts. The ignimbrite is weakly to moderately flow banded. Laminations are irregular and discontinuous, and are not usually well developed. One well developed, recognizable band may be observed every 3-5 cm. The rock contains occasional angular red rhyolitic fragments up to 2 cm. in size. The rock is weakly chloritized becoming strong locally (eg. 430.4' - 431.3'). The degree of chloritization of the groundmass may increase towards the base of this unit.	426'	flow banding	45° to the C/A.
					427.7'	"	35°-40° to the C/A.
					448.9'	"	30°-35° to the C/A.
				441.9' - 447.9': 449.5' - 457': tectonic breccia zones - red angular rhyolite and ignimbrite fragments up to 3 cm. in a light grey to white matrix.			
457' -	474.1' (17.1')		Rhyolite	The rock is grey with numerous pink and reddish pink zones. Colouration locally is closer to mottling than to separate distinct zones. The rock is aphanitic and non-porphyritic. It is non-structured and massive. Fracturing is moderately to strongly developed. Fractures are poorly cemented with epidote and chlorite. Cavities along some fractures are strongly chloritized. The rock is generally weakly chloritized.			
				474.1': END OF HOLE			
				NOTE: In this hole, ignimbrite units appear to grade down hole into unstructured, generally massive rhyolitic units. The point of gradation is typically strongly tectonically brecciated. The underlying ignimbrite begins at a well defined point although sharp contacts are absent.			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-19
SHEET 1 OF 5

PROPERTY Cobequid IV
LATITUDE 62 + 80 S.
LONGITUDE 96 + 00 E.
ELEVATION

BEARING—TRUE 180° Az
DIP -70°
FINAL DEPTH 453.7'
CORE SIZE BQ

DATE STARTED 13 October, 1978
DATE COMPLETED 16 October, 1978
DRILLED BY St. Lambert Drilling Co. Ltd
LOGGED BY A. W. Workman

DATE: 20 October, 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
							ACID DIP TESTS
0 -	5.9'		Overburden				
							98': -70°
5.9'-	8.4'		Rhyolite	The rock is pink to reddish-pin, aphanitic and porphyritic with 1-2 mm.			295': -66.5°
	(2.5')			round quartz phenocrysts and 1 mm. euhedral cream coloured feldspar			452.8': - 67.5°
				phenocrysts. The rock is massive and unstructured. It is			
				moderately fractured. Near mafic intrusives, the rhyolite is			
				strongly broken with epidote, chlorite and white carbonate on fractures.			
8.4'-	15.4'		Diabase	The intrusive is dark green, fine grained and weakly to moderately			
	(7')			chloritized. Fracturing is weakly developed but becomes moderate			
				to strong locally with epidote and minor carbonate in fractures.			
15.4'-	87.8'		Rhyolite	The rock is grey to pinkish-grey becoming red locally, (eg. near			
	(72.4')		Ignimbrite?	mafic intrusives), aphanitic and weakly to moderately porphyritic			
				with 1-2 mm. quartz phenocrysts and minor 1-3 mm. pink clots which			
				may represent cumulative feldspar growths. Rounded greyish patches			
				appear to be similar to those found as pseudo-fragments in			
				ignimbrite units, (eg. 30.9'). Locally, the rock is very weakly	46.3'	flow	15° to the C/A.
				flow banded, (eg. 20.8' and 46.3'). Alteration consists of chloritiza-		banding	
				tion of small 1 mm. blebs - possibly glass shards, and epidotization			
				of some feldspar phenocrysts. The rock is epidotized along			
				weakly to moderately developed fracture systems. Some fluorite			
				is found locally in fractures (eg. 40').			
				64.1' - 66.2': epidotized, carbonated tectonic breccia zone -			
				possible fault zone			
				79.3' - 79.9': chloritized seam			
				83.3': the rhyolite becomes greyish-pink, then pinkish red as the			
				intrusive contact at 87.8' is approached. The rock is more			
				strongly fractured and epidotized.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-19

SHEET 2 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
87.8'-	104.9'		Diorite	The intrusive is dark green, fine grained and weakly porphyritic with			
	(17.1')			light green, euhedral feldspar phenocrysts up to 1.5 c m. in size.			
				The central zone is feldspathic and pinkish-green. This zone			
				contains mafic fragments of the border phases of the intrusive.			
				90.2' - 102.3': medium grained feldspathic zone.			
104.9'-	189.1'		Rhyolite Ignimbrite	The rock is grey to greyish-pink and red locally, aphanitic and weakly			
	(84.2')			to moderately porphyritic with 1-2 mm. quartz and minor 1-2 mm.			
				epidotized feldspar phenocrysts. The rock is very weakly flow			
				banded locally, and contains rounded pseudo-fragments similar to			
				the zone at 15.4' - 87.8'. Fractures are weakly to moderately			
				developed and are epidotized and chloritized. Vugs are chloritized			
				as are many blebs up to 2 mm. in size. The rock may be generally			
				chloritized as it has an overall greenish hue. A 10 cm. chloritized			
				seam is located at 187'.			
189.1'-	194.7'		Diabase	The intrusive is dark green and fine grained. It is epidotized			
	(5.6')			along weakly developed fractures and is chloritized weakly overall.			
				Minor finely disseminated pyrite is found locally.			
194.7'-	217.7'		Rhyolite	The rock is pinkish-grey becoming pink with depth, aphanitic and			
	(23')			moderately porphyritic with 1-3 mm. quartz and minor epidotized			
				feldspar phenocrysts. The rock is weakly to moderately fractured.			
				Breaks are epidotized and near mafic intrusives, they are strongly			
				chloritized. Several chloritized seams are surrounded by red			
				reaction halos.			
217.7'-	236.2'		Diorite	The intrusive unit is dark green, fine to medium grained and moderately			
	(18.5')			to strongly fractured. Epidote and minor white carbonate are			
				found in fractures. The rock is weakly to moderately chloritized.			
				Abundant mylonitic zones are intensely epidotized, probably along			
				shear zones, (eg 226.4')			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-19

SHEET 3 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
236.2'-	266.1'		Rhyolite	The rock is pink to pinkish-red, aphanitic and moderately to strongly			
	(29.9')		Ignimbrite	porphyritic with 1-2 mm. quartz and 1-3 mm fractured feldspar			
				phenocrysts. The rock is weakly flow banded locally. Single			
				lamination tend to be discontinuous. The rock is weakly			
				ignimbritic locally with some pseudo-fragments which are			
				probably an indistinct micro-zonation of the groundmass to produce			
				rounded greyish patches (eg. 259.2'). Fractures are strongly			
				developed and are epidote and chlorite filled. The more strongly			
				fractured zones are light pink in colour.			
266.1'-	276.9'		Diorite	The rock is dark green, fine grained and weakly porphyritic with a			
	(10.8')			few scattered light green, euhedral, sausauritized feldspar			
				phenocrysts up to 6 mm. in size. The groundmass is weakly			
				chloritized.			
276.9'-	325.8'		Rhyolite	The rock is red with abundant grey zones, aphanitic and porphyritic			
	(48.9')		breccia	with 1-3 mm. quartz phenocrysts. The grey material is restricted			
				to an aphanitic groundmass which surrounds sub-round to sub-angular			
				red rhyolite fragments. The matrix is very hard and siliceous.			
				The fragments tend to be ignimbritic but lack any conclusive			
				evidence. The fragments were formed through combination of tectonic			
				brecciation followed by some flow brecciation. The zone is strongly			
				fractured. Fractures are strongly epidotized with minor white			
				carbonate.			
				278.1' - 278.9': chloritized stringer			
				294.8' - 308.1': Diorite - dark green, fine grained and porphyritic			
				with scattered light green feldspar phenocrysts			
				up to 5 mm. in size. The intrusive is weakly			
				fractured.			
				321.5' - 325.8': rock is weakly tectonically brecciated locally,			
				and is moderately to strongly fractured.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-19

SHEET 4 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
325.8'	- 328.8' (3.0')		Diabase	The intrusive is dark green, fine grained and weakly fractured. The rock is moderately chloritized. Fractures are weakly to strongly chloritized and epidotized.			
328.8'	- 357.6' (28.8')		Granite	The rock is reddish-pink to pinkish-red, and is fine to medium grained. Quartz grains are up to 2 mm. in size. Cream coloured euhedral, often accicular, feldspar grains up to 5 mm. are common. Rock has a general porphyritic appearance due to the interstitial nature of the quartz. Abundant fluorite is found on fractures at 355.3'. The granite carries several rounded fragments of diorite in a 1' zone bordering the upper contact.			
357.6'	- 359.4' (1.8')		Rhyolite	This zone is the same as the zone below 362.5'. It is cut by several granite stringers.			
359.4'	- 362.5' (3.1')		Diorite	The intrusive is dark green, fine grained and very weakly porphyritic with scattered 1-3 mm. light green, sausauritized feldspar phenocrysts. The unit contains a 3'cm. fractured rhyolite xenolith at 361'. A granite stringer is located at 359.6'			
362.5'	-410.4' (47.9')		Rhyolite Ignimbrite	The volcanic rock is grey to pinkish-grey, aphanitic and porphyritic with 1-3 mm. quartz phenocrysts and 1-2 mm. feldspar phenocrysts. The rock contains dark grey rounded and indistinct pseudo-fragmental patches up to 1 cm. in size. They are surrounded by wispy pink zones similar to the rock at 104' - 189'. Fractures are weakly developed becoming moderately developed locally. Epidote is found as a pervasive fracture filling. 391.1' - 296.8': Diorite - dark green, fine grained, weakly chloritized and weakly fractured with epidote and white carbonate fracture filling. 396.8' - 400.5': brick red, aphanitic rhyolite with 1-2 mm. quartz and feldspar phenocrysts. Contains hazy grey patches - ignimbrite.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-19

SHEET 5 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				400.5' - 410.4': Diorite - as diorite above - weakly to moderately porphyritic with light green, sausauritized feldspar phenocrysts.			
410.4'	- 453.7' (43.3')		Rhyolite Ignimbrite	The rock is brick red at the intrusive contact at 410.4' but turns greyish-pink and then pinkish-grey to grey at 415.4'. The rock becomes bright red locally and exhibits a fragmental texture similar to fragmental zones within some ignimbrites. These fragments are masked in the greyer rock but are apparent in red zones near minor intrusives. The rock is moderately to strongly fractured. Fractures are epidotized and chloritized with minor white carbonate.			
				437.3' - 438.5': Granite - pinkish-red, medium grained, massive.			
				453.7': END OF HOLE			

GMC 1051 (09/78)

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-20
SHEET 1 OF 5

PROPERTY Cobequid IV
LATITUDE 72 + 97 S.
LONGITUDE 102 + 20 E. *
ELEVATION

BEARING — TRUE 180° Az.
DIP -45°
FINAL DEPTH 532.5'
CORE SIZE BQ

DATE STARTED 16 October 1978
DATE COMPLETED 20 October 1978
DRILLED BY St. Lambert Drilling Co
LOGGED BY A.W. Workman

* measured from L96E at 73+00S. picket and tied in to hole DL-18

DATE: 21 October 1978 SIGNED A.W. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	10.3'		Overburden				ACID DIP TESTS
10.3' -	13.8'		Diorite	The intrusive rock is dark green, fine to medium grained and porphyritic			98': -42.5°
	(3.5')			with light green, euhedral feldspar phenocrysts up to 1 cm. in size.			295': -41°
				The rock is weakly fractured. Epidote is found in fractures with			522': -40°
				minor white carbonate. The rock is weakly chloritized and feldspars			
				are sausauritized.			
13.8' -	288.7'		Rhyolite	The rock is medium grey with pink fractured zones occasionally cream			
	(274.9')		Ignimbrite	coloured and frequently brick red near mafic intrusives. The			
				volcanic is aphanitic and porphyritic with 1-2 mm. round quartz			
				phenocrysts and occasional 1-2 mm. chloritized feldspar phenocrysts.			
				The rock is well flow banded. Individual laminations are usually	22.6'	flow banding	30° to the C/A.
				red in colour, and are discontinuous, locally lensitic and may be			
				rippled. In the upper zone above 49.8', the laminations are more			
				regular and continuous. Locally, the rock becomes very dark to			
				charcoal grey and flow banding is present but indistinct. Abundant			
				zones of tectonic brecciation are found throughout the unit. These			
				zones consist of angular, red, ignimbrite fragments set in an			
				aphanitic grey siliceous matrix. These fragments are usually			
				2-4 cm. in size but a few up to 6 cm. are found locally. Fracturing			
				of the rock is varied from weak to strong. Fractures are epidotized			
				and may be chloritized near mafic intrusives. Chloritized			
				fractures are surrounded by red reaction halos. Near these			
				intrusives, the rock is softer and a chloritized aureole is evident.			
				The intrusives are generally dioritic although narrow seams are			
				too strongly chloritized to make identification possible. The			
				diorite is dark green, fine to medium grained and is frequently			
				porphyritic with sausauritized feldspar phenocrysts.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-20

SHEET 2 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				23.6' - 33.1': tectonically brecciated ignimbrite	34.4'	flow	5° - 15° to the C/A.
				35.4' - 49.8': tectonically brecciated ignimbrite		banding	
				44.8' - 46.1': strongly chloritized seam			
				49.8' - 56.6': Diorite - euhedral light green feldspar phenocrysts			
				up to 1.5 cm. and abundant 1-2 mm. black			
				chloritized specks. The intrusive is weakly			
				fractured with chlorite epidote and white carbonate			
				in fractures.			
				56.6' - 72.4': tectonically brecciated ignimbrite - red near intrusive			
				at 55'.	73.8'	"	30° to the C/A.
				88.9' - 91.1': dark charcoal grey, aphanitic, flow banded	78.7'	"	35° to the C/A.
				ignimbrite	81.0'	"	45° to the C/A.
				99.4' - 99.7': tectonically brecciated ignimbrite	83.3'	"	50° to the C/A.
				104' - 106': flow banding is folded and convolute	87.3'	"	45° to the C/A.
				118.1': several epidotized and chloritized rhyolite			
				fragments: up to 2 cm in size	92.2'	"	50°-55° to the C/A.
				122' - 126.6': tectonically brecciated ignimbrite	108.3'	"	40°-45° to the C/A.
				132.2': rhyolite fragments'	110.6'	"	15° to the C/A.
				132.7' - 134.5': tectonically brecciated ignimbrite	114.2'	"	25°-30° to the C/A.
				134.5': fault plane at 35° to the core axis - sharply	116.5'	"	40° to the C/A.
				defined; 1 cm. wide, mylonitic and epidotized	120.1'	"	45° to the C/A.
					128.8'	"	60° to the C/A.
				139.1' - 141.1': irregular, poorly banded zone - weakly brecciated	138.8'	"	60° to the C/A.
				143.7' - 149.8', 151.1' - 153.9', 154.5' - 156.2': tectonically	148.6'	"	60° to the C/A.
				brecciated ignimbrite	149.9'	"	65°- 70° to the C/A.
				156.9': load casting and settling of small fragments	157.5'	"	85° to the C/A.
				(Phenocrysts?) within laminations suggests that this	158.5'	"	50° to the C/A.
				sequence is overturned.			
				159.1' - 183.1': the ignimbrite is strongly brecciated with			
				accompanying silicification, and the rock is weakly			
				to moderately fractured. Epidote is found to coat			
				most fracture surfaces. Most fragments are brick			
				red and angular. The groundmass is aphanitic and grey.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-20

SHEET 3 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				162.9' - 163.4': chloritized seam			
				169.1' - 170.1': a chloritized dyke dips along the core axis at 30°			
				171.1' - 171.5': chloritized seam			
				177 - 179.7': chloritized diorite - minor 1-2 mm. pyrite blebs			
				183.1' - 189.2': Diorite - dark green, fine to medium grained with light green feldspar phenocrysts up to 1 cm. in size. weakly to moderately fractured.			
				189.2' - 193.9': tectonically brecciated ignimbrite - same as zone 159.1' - 183.1'			
				193.9' - 195.6': massive, well banded ignimbrite	194.6'	flow banding	40° to the C/A.
				195.6' - 211.5': tectonically brecciated ignimbrite			
		211.5 - 221.6		211.5' - 246.9': tectonically brecciated ignimbrite - fragments are strongly silicified and show little flow banding	246.6'	"	40° - 45° to the C/A.
		massive flow		246.9' - 251.1': chloritized zone, possibly intrusive; the lower contact is sharp and epidotized			
				266.6' - 278.5': the rock is brick red, aphanitic and exhibits no flow banding.			
				278.5': fault zone - the rock is mylonitic, and strongly epidotized over a 10 cm. width.			
				278.5' - 288.7': tectonically brecciated ignimbrite with brick red angular ignimbritic fragments in a grey aphanitic matrix. The fragments are well banded locally and weakly porphyritic with occasional 1-2 mm. quartz phenocrysts.			
288.7'	366.1' (77.4')		Diorite	The intrusive is dark green, fine to medium grained and weakly porphyritic. Feldspar phenocrysts are light green, euhedral and up to 1 cm. in size. The rock is weakly fractured with epidote and minor white carbonate in fractures. The rock is weakly chloritized and carries occasional grey, well rounded, silicified rhyolite fragments. The diorite carries minor finely disseminated pyrite.			

GMC 1018

DIAMOND DRILL RECORD — CONTINUATION SHEET

D.D.H. NO. DL-20

SHEET 4 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				353.1' - 360.2': rhyolite, possibly ignimbrite - brick red, aphanitic, strongly broken and epidotized.			
				360.2' - 362.4': Diorite - chloritized and non-porphyritic			
				362.4' - 364.6': rhyolite - as zone 353.1' - 360.2'			
				364.6' - 366.1': Diorite - chloritized moderately to strongly and non-porphyritic.			
366.1'-	406.6' (40.5')		Rhyolite Ignimbrite	The rock is light to medium grey, aphanitic and contains abundant angular to sub-angular, pink aphanitic fragments. Some fragments are well flow banded but most are massive. They may be up to 5 cm. in size but average 2-3 cm. The matrix to the fragments is aphanitic and very weakly porphyritic locally with 1 mm. quartz phenocrysts. Fragments occur up to 50% of the rock volume. Locally fragments may comprise 75% of the rock volume, (eg. 389.4' - 391.4'). Locally, the rock is well flow banded, (eg. 398'). The rock becomes redder in colour below 394', possibly due to a chloritized stringer which partly cuts the core axis at 394.7' - 395'. The zone from 399.6' to 406.6' is strongly broken and chloritized.	398'	flow banding	50° to the C/A.
					402.9'	"	45° to the C/A.
406.6'-	520' (113.4')		Mafic flow	The rock is dark charcoal grey to black, very fine grained to aphanitic and weakly chloritized locally. It is primarily equigranular with little textural change between contacts. Near the contacts, there are abundant strongly fractured and epidotized rhyolitic fragments. There are also abundant light pinkish, glassy zones which may represent absorbed xenoliths or chill margin material possibly related to pillow formation. The rock is vessicular with abundant light green, frequently epidotized rounded vessicules up to 2 cm. in size. Often, they are oblate in shape. Some banding, perhaps related to flowage, is observed locally (eg. 455.4'). The zone from 403.9' to 467.8' is free of xenoliths. It contains a few 1-2 mm. pyrite cubes locally. The rock is weakly to moderately fractured. Fractures are coated with blue and green chlorite with minor white carbonate and epidote. Granite stringers are located at 482' - 482.4', 493.1' and 496.7'.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-20

SHEET 5 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
520'-	532.5'		Granite	The rock is medium to coarse grained and reddish-pink to red.			
	(12.5')			Composition is approximately 60 - 70% feldspar, 25-35% quartz and 10%			
				hornblende with up to 15% hornblende locally. The rock is weakly			
				fractured with minor epidote along some fractures. A chloritized			
				diabase dyke is located at 529.2' - 529.7'.			
				532.5': END OF HOLE			

GMC 1051 (09/78)

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-21
SHEET 1 OF 3

PROPERTY Cobequid IV
LATITUDE 77 + 30 S. (at 80 S.Tie Line)*
LONGITUDE 102 + 96 E.
ELEVATION

BEARING — TRUE 180° Az.
DIP -45°S.
FINAL DEPTH 299.2'
CORE SIZE BQ

DATE STARTED 20 October 1978
DATE COMPLETED 22 October 1978
DRILLED BY St. Lambert Drilling Co
LOGGED BY A. W. Workman

* latitude used with respect to line 100E.
hole is 435' south and 34' east of DL-20.

DATE: 27 October 1978 SIGNED A. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	10.8'		Overburden				ACID DIP TESTS
10.8'-	67.3'		Mafic flow	The rock is dark grey to greenish-grey and aphanitic to very fine			98': -42°
	(56.5')			grained. Abundant vessicules are found throughout the zone and			299': -40°
				are commonly round to oblong and weakly chloritized. Minor			
				poorly developed flow banding is found locally. The rock is			
				moderately fractured and weakly chloritized. The lower contact			
				is sharp.	67.3'	flow	30° to the C/A.
						contact	
				52.7' - 53.6': narrow, unaltered, granite dyke			
				54.4': 2 cm. granite stringer			
67.3'-	123.7'		Felsic	The rock is greenish-grey and aphanitic. Abundant brick-red altered			
	(56.4')		Agglomerate	zones are found associated with strongly fractured zones. The zone			
				carries rounded, indistinct, light grey fragments. They are			
				rhyolitic in composition and are partially absorbed by the			
				groundmass. The rock is porphyritic locally becoming more strongly			
				porphyritic with depth. Quartz phenocrysts are up to 2 mm. in size.			
				Feldspar phenocrysts are up to 4 mm. in size, euhedral and usually			
				pink to cream in colour. The rock is weakly flow banded locally.			
				The zone is weakly to moderately fractured with abundant			
				chloritized amygdules.			
				73.2' - 75.1': pronounced fracturing parallel to the core axis.			
				74.1', 75.5': fine to medium grained granite stringers			
				106.2' - 106.6': coarse grained granite.			
				78.3' - 88.4': diorite - dark green, fine grained and porphyritic with			
				1.5 cm. feldspar phenocrysts; - weakly fractured			
				and moderately chloritized			
				121.7' - 123.7': Diorite - same as 78.3' - 88.4' weakly porphyritic.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-21

SHEET 2 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
123.7'-	143' (19.3')		Granite	The rock is medium to coarse grained and redish-pink to red in colour. Composition is about 60-70% feldspar, 25-35% quartz and up to 15% hornblende. The rock is weakly fractured with minor epidote and hematite along some fractures.			
143' -	171.1' (28.1')		Rhyolite Ignimbrite	The zone is light to medium grey and aphanitic with 1-2 mm. quartz phenocrysts and minor 1 mm. feldspar phenocrysts. The rock carries a few 1-2 cm. rounded rhyolite fragments. Locally, the rock is well flow banded (eg. 153.4' - 155.3'). Abundant very finely disseminated pyrite is found throughout the zone. The rock is weakly fractured becoming moderately broken locally. It is moderately chloritized along most fracture surfaces.	155'	flow banding	45° to the C/A.
				159.4': the rock becomes greyish-pink to reddish-pink			
				161.4' - 171.1': Diorite - the intrusive is dark green, fine to medium grained and weakly fractured with abundant 1-2 mm. chloritized glass blebs. The intrusive is cut by granite stringers at 162.2' and 168.6'.			
171.1'-	299.2' (128.1')		Granite	The rock is pinkish-red becoming pink locally, medium to coarse grained. Composition is variable but approximately 55 - 70% feldspar 25 - 40% quartz and 10-15% hornblende. The rock is weakly fractured becoming moderately fractured near mafic intrusives. Fractures are carbonate and chlorite filled locally.			
				200.5' - 213.5': Diabase- the intrusive is dark green, fine to medium grained and weakly to moderately fractured. Fractures are carbonate filled. A 1.5 cm. granite xenolith is located at 209.1'. Abundant 1-2 mm. pyrite blebs dot the intrusive.			
				257.2': narrow chloritized seam.			
				257.2' - 258.1': strongly fractured and chloritized granite			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-21

SHEET 3 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				258.1' - 262': Diabase - dark green, fine grained weakly to moderately chloritized and fractured.			
				273.3' - 286.1': the granite is strongly fractured locally. The fractures are well cemented with silica and specular hematite with minor magnetite.			
				285.6': a 10 cm. chloritized seam - granite is strongly fractured and chloritized with sperular hematite in fractures.			
				299.2': END OF HOLE			

GMC 1051 (09/78)

Gulf

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. DL-22
SHEET 1 OF 5

PROPERTY Cobequid IV
LATITUDE 20 + 20 S
LONGITUDE 96 + 00 E.
ELEVATION

BEARING—TRUE 180° Az
DIP -45°
FINAL DEPTH 568.6'
CORE SIZE BQ

DATE STARTED 24 October 1978
DATE COMPLETED 28 October 1978
DRILLED BY St. Lambert Drilling Co.
LOGGED BY A. W. Workman

DATE: 29 October 1978 SIGNED A. W. Workman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0 -	13.1'		Overburden				ACID DIP TESTS
13.1'-	99.7' (86.6')		Granite	The rock is pinkish-red, fine to medium grained becoming coarse grained locally and composition is approximately 10-15% quartz, up to 85% feldspar and less than 1% hornblende and other accessories. Grain boundaries are often indistinct. The granite is moderately to strongly fractured. Fractures are epidotized.			98': - 42° 295': - 39° 558': - 39°
				75.3' - 83.8': Diabase - the intrusive is dark green fine grained, strongly chloritized and moderately to strongly fractured. A granite xenolith is located at 80.5' - 80.9'.			
				89.6' - 99.7': the granite becomes darker in colour and becomes locally mylonitic.			
99.7'-	100.9' (1.2')		Fault zone	The rock is light green, with angular mylonitic rhyolite, granite and mafic intrusive fragments. The matrix is intensely chloritized.			
100.9'-	106' (5.1')		Granite	The rock is red and fine to medium grained, the same as the uppermost section in this hole. It is intensely fractured to mylonitic.			100.9'-106': possible fault block
106' -	106.8' (0.8')		Diabase	The intrusive is dark green, fine grained and strongly fractured. The rock is strongly chloritized. Fractures resemble shear planes and are strongly chloritized.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-22

SHEET 2 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
106.8'-	114.2'		Rhyolite	The rock is dark burgundy red, aphanitic and porphyritic with 1-2 mm.			
	(7.4')		Ignimbrite	quartz phenocrysts. Locally, the rock is well flow banded. Single			
				laminations are lensitic and irregular. Flow banding is often			
				obscured by fracturing which may locally be very strong. Darkening			
				of the rock near mafic intrusives also hides flow structures.			
114.2'-	126.5'		Diorite	The rock is dark green, fine to medium grained and weakly			
	(12.3')			porphyritic with 1-2 mm. light green feldspar phenocrysts. The			
				intrusive is weakly to moderately fractured. Breaks are epidote			
				filled with minor white carbonate.			
126.5'-	131.5'		Rhyolite	The rock is brick red, aphanitic, strongly fractured. Fractures			
	(5')		Ignimbrite	are strongly epidotized and a mylonitic zone at 126.5' - 127.8'			
				is strongly epidotized and chloritized.			
131.5'-	141.9'		Diorite	The intrusive is dark green, fine grained and essentially the			
	(10.4')			same as the unit at 114.2' - 126.5'.			
141.9'-	209.5'		Rhyolite	The rock is brick red to dark burgundy red, aphanitic and	145.6'	flow	35° to the C/A.
	(67.6')		Ignimbrite	weakly flow banded locally. The rock is moderately to strongly		banding	
				fractured. Epidote and minor chlorite are found on fracture surfaces.	158.5'	"	30° to the C/A.
				Locally, the rhyolite is mylonitic (eg. 174.6' - 175.2'). Towards			
				mafic intrusives the rock is darker in colour.	176.0'	"	30° to the C/A.
				170.1' - 174.6': Diorite - the intrusive is fine to medium grained with			
				generally pink unaltered feldspar. The mafic			176.4'-178.2' ground
				minerals are uralitized and chloritized.			core-20% recovery
				176.3': the rhyolite becomes medium grey in colour and is weakly flow			178.2'-188': 50%
				banded locally.			core recovery
							188 - 197' 70% recovery
209.5'-	223.6'		Diorite	The intrusive is dark green, fine to medium grained and moderately			
	(14.1')			chloritized. The rock is weakly to moderately fractured. Chlorite			
				and epidote with minor white carbonate are found in fractures.			
				219.7' - 220.5': flow banded rhyolite xenolith			
				220.8' - 221.3': Diabase dyke - fine grained			
				222.4' - 223.6': zone of abundant rhyolite xenoliths.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-22

SHEET 3 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
223.6'-	302.7'		Rhyolite	The rock is pinkish-red, aphanitic and moderately to strongly			
	(79.1')		Ignimbrite	porphyritic with 1 mm. feldspar and 2 mm. quartz phenocrysts.	224.1'	flow	80° to the C/A.
				The rock is well flow banded but becomes more weakly flow banded		banding	
				with depth. Fracturing is extremely variable.	225.7'	"	80° to the C/A.
				231.1' - 232.9': Diorite - The intrusive is dark green, fine to	227.7'	"	70° to the C/A.
				medium grained and weakly porphyritic with a few			
				3-4 mm. light green feldspar phenocrysts. The rock			
				is weakly to moderately fractured.	264.4'	"	15-20° to the C/A.
				232.9' - 234.6': rhyolite - possible xenolith in surrounding diorite			
				234.6' - 245.6': Diorite - same as zone at 231.1' - 232.9'			
				contains a number of rhyolite xenoliths at			
				243.7', 245.6' - 246.4' and 246.9'.	283.8'	"	30° to the C/A
				245.6' - 261.8': greyish-pink rhyolite - strongly to intensely			
				fractured - minor chloritized mylonite.			
				267.8' - 272.5': Diorite - non-porphyritic equivalent of above			
				intrusives at 232' and 240'.			
				275.6': flow banding in rhyolite is indistinct but appears			
				to be at 10° to 15° to the core axis.			
				289.7' - 290.7': mafic intrusive - diorite or diabase			
				301.6' - 301.9': narrow chloritized seams.			
302.7'-	323.9'		Diorite	The intrusive is dark green, fine to medium grained and moderately			
	(21.2')			to intensely fractured. The rock is strongly chloritized. Fractures			
				are hematized and locally epidotized.			
323.9'-	345.5'		Rhyolite	The rock is red, aphanitic and porphyritic with 1-2 mm. quartz			
	(21.6')			phenocrysts. It is intensely fractured and mylonitic. Structure			
				is not determinable.			
345.5'-	355.8'		Diorite	The rock is dark green, fine grained and mylonitic to intensely			
	(10.3')			fractured. The intrusive is strongly chloritized.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-22

SHEET 4 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
355.8'-	360.2' (4.4')		Rhyolite	A mylonitic zone is found here similar to the rhyolite at 323.9' - 345.5'.			
360.2'-	372.5' (12.3')		Diorite	Dark green, fine grained, strongly fractured and chloritized intrusive rock.			
372.5'-	381.6' (9.1')		Rhyolite	The rock is reddish-pink to greyish-pink, aphanitic and porphyritic with quartz phenocrysts up to 2 mm. in size. The rock is strongly fractured and locally mylonitic.			
381.6'-	400.6' (19')		Diorite	The rock is dark green, fine to medium (?) grained and contains abundant 1-3 mm. rhyolite xenoliths. Larger xenoliths are found at 400.8' - 401.7'. The rock is intensely fractured and mylonitic. Epidotization and chloritization are moderate to strong.			
400.6'-	451.1 (50.5')		Rhyolite	The rock is redish-pink and aphanitic. Quartz and feldspar phenocrysts are found scattered throughout the zone. The rhyolite is intensely fractured and mylonitic. Fractures and ground rock are epidotized and chloritized. Abundant hematite is found on fractures 433.2' - 435.7' chloritized intrusive 447.8' - 451.1' chloritized intrusive - 30-40% xenoliths			434.1'-443.9' core lost 45% recovery
451.1'-	488.8' (37.7')		Rhyolite Ignimbrite	The rock is dark burgundy red and aphanitic with abundant 1-3 mm. quartz and orange feldspar phenocrysts. It is well flow banded. Individual flow laminations are lensitic and irregular - often discontinuous. The rock is weakly to moderately fractured. Locally the rock may be strongly fractured with chlorite on the fracture surfaces (eg. 476.4' - 478.5' and 479.5' - 485.3')	449.8' 466.5' 474.1' 488.4'	flow banding " " "	60°-70° to the C/A. 45°-50° to the C/A. 50° to the C/A. 35° to the C/A.
488.8'-	491.8' (3.0')		Diabase	The intrusive is dark green, fine grained and moderately chloritized. It is weakly to moderately fractured with epidote and carbonate in fractures.			
491.8'-	510.1' (18.3')		Rhyolite	The rock is light green, becoming pinkish-green with depth, and aphanitic. It is porphyritic with 1-3 mm. quartz phenocrysts, commonly penetrated by the groundmass. The rock is dotted with abundant 1-3 mm. chloritized blebs possibly devitrified volcanic glass.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. DL-22

SHEET 5 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				Below 502', feldspar phenocrysts are observed. They are generally			
				orange-pink and euhedral. They average 2 mm. in size. Abundant			
				finely disseminated pyrite is found throughout the zone. Some			
				weak flow banding is observed locally which becomes better developed	504.6	flow	60-80° to the C/A.
				with depth.		banding	
				510.1': possible flow contact at 30° to the core axis			
510.1'-	568.6'		Rhyolite	The flow is burgundy red, with olive green flow laminations and becomes			
	(58.5')		Ignimbrite	light pink locally. It is aphanitic in the groundmass but strongly	510.5'	flow	65-70° to the C/A.
				porphyritic with 1-2 mm. quartz phenocrysts and 1-3 mm. orange feldspar		banding	
				phenocrysts. Flow banding is lensitic and irregular. Abundant	512.8'	"	45-55° to the C/A.
				lensitic features are observed below 531.5'. The rock is moderately	521.2'	"	65° to the C/A.
				fractured with chlorite and white carbonate in fractures. Fracturing			
				is stronger below 539.7'. Abundant finely disseminated pyrite is	531.4'	"	65-70° to the C/A.
				found throughout the zone. The rock is very similar to the	554.5'	"	70-75° to the C/A.
				ignimbrite at 451.1' - 488.8'.	561.7'	"	75-80° to the C/A.
					568'	"	60° to the C/A.
				568.6': END OF HOLE			

SECTION B

LITHOLOGY LOGS

ANNANDALE

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. AN1
SHEET 1 OF 5

PROPERTY Cobequid IV
LATITUDE 0+00
LONGITUDE 0+00
ELEVATION

BEARING—TRUE
DIP -70°
FINAL DEPTH 468'
CORE SIZE NQ

DATE STARTED Dec. 13, 1977
DATE COMPLETED Dec. 15, 1977
DRILLED BY St. Lambert
LOGGED BY M. Holleman

DATE: 19 December, 1977 SIGNED: M. Holleman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
0			Overburden				Acid Dip Tests 0' - 70° 100' - 70° 468' - 72.5°
20			Mudstone	Shaly, brown, brecciated, possibly part of the overburden.			
20.5			Siltstone	Brown becoming green at 21', slightly calcareous		Dip 26° (Apparent)	
21.5			Mudstone	Contains miner amount of siltstone, brown, minor green, 25-27.5' brecciated and shaly			
35			Siltstone	Brown, minor green, argillaceous			
38			Mudstone	Brown, shaly, minor green mottling, 40-43 brecciated 42.4-42.6 siltstone brown			
43			Siltstone	Reddish, crossbedding indicates the core is right side up, argillaceous, minor sericite, minor green mottling, 48-51' minor amount of small, 2 cm. green reduction centers with black centers, 58' becomes coarser, contains fragments of mudstone up to 1 cm. 61'-61.3', 20% of the fragments are over 2 mm but less than 3 cm., the fragments are composed of rhyolite, 64' becomes more argillaceous.			
70			Mudstone Siltstone Conglomerate	Cycles of sedimentation The siltstones are usually brown and fairly uniform they grade downward into a green grey conglomerate, usually over a distance of a few feet. There is usually a sharp erosional contact at the base of the conglomerate, with the silt-conglomerate cycle below it.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN-1

SHEET 2 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				The compositions of these conglomerates are similar. 60-80% porphoritic, banded or uniform rhyolite, 15-40% diabase, 1-10% sandy and silty matrix. The diabase and possibly other mafic fragments are usually highly altered to green clay. The conglomerates also contain a small quantity, i.e. lower 1%, of an unidentified white mineral which occurs in the pore spaces but doesn't necessarily fill them. The crystals are clear, 1/50 mm in size, have a platy cleavage, not soluble in water or dilute hydrochloric acid, soft, can be crushed between fingers, feels like talc, has no unusual taste, occurs in aggregates.			
				The sequence of bedding is upright.		Dip 30° Apparent	
				70' siltstone, slightly shaly, grading down to a conglomerate with poorly rounded fragments, the largest fragment is 3 cm.			
				84.2' siltstone grading down to a conglomerate which is cross bedded, the top 2 cm. of the siltstone is green grey.			
				85' siltstone grading down to a conglomerate at 87'			
				87.5' siltstone, minor green sandstone 92-92.5 and 94.4-94.8		Dip 20° Apparent	
				97.5' conglomerate, maximum clast size 5 cm., sharp contact at top and bottom			
				100' siltstone grading down to a conglomerate at 101'			
				109' siltstone grading down to a conglomerate at 112'			
				113.5' siltstone grading down to a conglomerate at 116'			
				117' Sandstone, pebbly grading down to a conglomerate at 117.5, high porosity.			
				118.5' siltstone grading down to a conglomerate with high porosity at 119			
				123.5' siltstone grading down to a conglomerate at 124.5'			
				132' siltstone grading down to a conflomerate at 133, sharp upper contact			
				135' siltstone grading down to a conglomerate at 136'			
				137.8' siltstone grading down to a conglomerate at 139' sharp upper contact			
				140' siltstone grading down to a conglomerate at 141'			
				147' siltstone grading down to a conglomerate at 150', maximum clast size is 11 cm, composed of folded banded rhyolite; high porosity, a few 1 cm dogtooth spar calcite crystals			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN-1

SHEET 3 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				161' siltstone grading down to a conglomerate at 163', pebbly			
				165' siltstone, pebbly, grading down to a conglomerate at 165.4', sharp upper contact.			
				169' siltstone, grading down to a conglomerate at 171'			
				177.5' siltstone, pebbly, grading down to a conglomerate at 178'			
				179.5 siltstone changing rapidly to a conglomerate at 180'			
				184' siltstone, pebbly, changing rapidly to a conglomerate at 184.5', sharp upper contact			
				187' siltstone, pebbly, grading down to a conglomerate at 188'			
				192' siltstone, pebbly, grading down to a conglomerate at 194'			
				199.5' siltstone, pebbly, grading down to a conglomerate at 200.5'			
				202.6' siltstone, pebbly, grading down to a conglomerate at 205', sandstone, lithic wacke 207.6'-208.1'			
				208.5' siltstone, pebbly, grading down to a conglomerate at 209', sharp upper contact.			
				213' siltstone grading down to a pebbly siltstone at 215' and conglomerate at 216'			
				220' siltstone grading down to conglomerate at 230', largest clast 5 cm, contains two smaller siltstone - conglomerate cycles			
				232' siltstone, pebbly, grading down to a conglomerate at 233'			
				237' siltstone, pebbly, grading down to a conglomerate at 243', sharp upper contact.			
				247' siltstone grading down to a conglomerate at 248'			
				255.5' siltstone grading down to a conglomerate at 256.5'			
				257' siltstone grading down to a conglomerate at 258'			
				263' siltstone, grading down to a green grey conglomerate at 266', sharp upper contact.			
267'			Para conglomerate	Brown, friable, has brown mud and silt for matrix, has a few more percent matrix than the green grey conglomerates above it, the fragments have a similar composition and roundness and size as in the conglomerates above it, it doesn't contain the white unidentified mineral that was in the conglomerates above it, rubbly from 288-297 and 300-305 maximum clast is a 20 cm, trachyte-latite boulder at 302'.			

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN-1

SHEET 4 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
305			Mudstone	brown, brecciated			
308			Siltstone	brown becoming reddish at 318', brecciated from 309'-314' and 315.5'-316', minor green mottling		Dip 27° Apparent	
328			Mudstone	brown, uniform			
332.5			Basalt	brown, highly weathered, clayey, contains small green anygdules of weathered heulandite?, rubbly in top foot, becomes dark grey and massive at 335', few irregular calcite stringers; black, rubbly, amygdaloidal starting at 337'.			
339			Mudstone	brown, well indurated, contains a fragment of amygdaloidal basalt.			
341			Basalt	brown grey, weathered, only slightly amygdaloidal and decreasing downward, a few irregular calcite stringers, becomes dark grey and less altered at 348', the basal foot has white calcite amygdules increasing in size from 1/2 cm. to 2 cm. upwards, it also contains dark green amygadules.			
366			Mudstone	to fine siltstone, brown, irregular fracture, has scattered round, white 2 cm size calcite concretion, the core becomes reddish at 371' and the concretions become more abundant below this.			
389			Siltstone	brown, uniform, calcite concretions, minor cross bedding		Dip 20° Apparent	
400			Sandstone	brown, fine, crossbedded in part, few calcite filled vugs			
408			Mudstone	brown, minor calcite filled vugs			
423			Sandstone	brown to light grey, fine grained, slightly cross bedded, a few calcite stringers, cross bedding indicates core is upright, composition 40-50% Quartz, 20% silt and mud fragments, 20% feldspar, 10% matrix, lower 1% mafics		Dip 28° Apparent	

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN-1

SHEET 5 OF 5

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
435			Mudstone	brown, minor calcite filled vugs			
446			Siltstone	siltstone, brown, becoming reddish at 452', minor fine grained, laminated sandstone at 453', few green grey calcareous spots some having black organic? centers.			
455			Mudstone	reddish, fewer green grey reduction spots and they are non calcareous.			
462			No core				
475?			Mudstone	similar to previous			
476?			Sandstone	brown, crossbedded.		Dip 25° Apparent	
479?			Mudstone	similar to previous			
480?			End of Hole				
				NOTE: According to x-ray analysis the white, secondary, greasy, talc like mineral in the green grey conglomerates is kaolinite.			

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. AN2
SHEET 1 OF 3

PROPERTY Cobequid IV
LATITUDE 3+72S
LONGITUDE 1+60W
ELEVATION 400' South (203°) of AN 1

BEARING—TRUE 203°
DIP -57°
FINAL DEPTH 347 feet
CORE SIZE NQ

DATE STARTED December 17th, 1977
DATE COMPLETED December 19th, 1977
DRILLED BY St. Lambert
LOGGED BY M. Holleman

DATE: January 17, 1978 SIGNED M. Holleman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
	0 - 20'		Overburden				Acid Dip Tests
							0' - 57°
	20 - 21.5		Siltstone	Brown, argillaceous, contains a few rhyolite pebbles.			100' - 57°
	(1.5')						300' - 57°
	21.5 - 33		Conglomerate	Gradational contact with the above, light green becoming green grey at			
	(11.5')			28', content consists of 60-80% light brown to red felsic volcanics			
				including quartz porphoritic rhyolite, 15-40% mafic fragments including very			
				finely crystalline and finely crystalline diabase, matrix is mainly			
				siltstone and sandstone with only a minor amount of green clay, the core			
				is rubbly, largest clast 6 cm., numerous small less than ½ mm. round			
				flat brown manganese? Coatings, minor amount less than ½% of white unidentified			
				probably clay mineral			
	33 - 42		Siltstone &	Brown, green in top two cm., sharp upper contact, pebbly with rhyolite			
	(9')		Conglomerate	pebbles, grades into a green grey conglomerate similar to that at 22'.			
				There is only two feet of core between 37 and 47 feet so the base at the			
				conglomerate is set at 42'.			
	42 - 50		Siltstone &	Brown, pebbly, grades into a green grey conglomerate at 49' that is	49'	Dip 25°	
	(8')		Conglomerate	similar to the above conglomerate, largest clast is 6 cm. consisting of		(apparent)	
				a grey feldspar porphoritic rhyolite.			
	50 - 54		Siltstone &	Pebbly, brown, grading into green grey conglomerate, this conglomerate			
	(4')		Conglomerate	and the ones below it contain more green clay than the previous			
				conglomerates, the basal 6" is sandstone.			
	54 - 62		Siltstone &	Brown, top 6" green, pebbly siltstone to para conglomerate in top foot			
	(8')		Conglomerate	grading down to siltstone, grades into a green grey conglomerate at 60°.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN2

SHEET 2 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
	62 - 75.5		Siltstone &	Brown, variable clay content, minor green grey conglomerate at 63.5 - 64		Dip 22°	
	(13.5')		Conglomerate	pebbly from 64-67', sandy from 69'-71', grades into green grey conglomerate		Apparent	
				at 73', non calcareous cement, poorly sorted, poorly rounded.			
	75.5 - 77		Siltstone &	Sharp upper contact, core rubbly from 75.5-77', conglomerate rubble contains			
	(1.5')		Conglomerate	light grey galena? in a small fracture.			
	77 - 79		Siltstone &	Pebbly, brown, grading down to a green grey conglomerate at 78°, abundant			
	(2')		Conglomerate	brown manganese? Coatings, white clay like mineral 1-5%, approximately			
				1% bright green malicite in part associated with a black carbonaceous			
				looking material which may be an oxide of copper.			
	79 - 117		Siltstone &	Brown, sharp upper contact, uniform, grading down to a pebbly siltstone			
	(38')		Conglomerate	at 81' and to a green grey conglomerate at 83', largest clast 7 cm.,			
				similar to the other green grey conglomerates, minor black manganese?			
				in places, obvious malacite 86-90', traces of galena at 87', 91', 92', 97',			
				at 91' occurs with pyrite or calcopyrite, minor brown silt 103-104', very			
				minor amount of calcite in some former cavities, the basal 5' is more			
				clayey, rubble in the basal foot.			
	117 - 141		Para	Brown, brown mud between clasts, felsic volcanic clasts 60%, mafic clasts			
	(24')		Conglomerate	10%, sedimentary clasts 20%, maximum size clasts 7 cm, consisting of			
				porphoritic quartz, banded rhyolite, no white clay like mineral as found			
				in the green grey conglomerates.			
	141 - 147		Mudstone	Dark brown, brecciated.			
	(6')						
	147 - 177		Basalt	Dark brown to dark grey, highly weathered, similar to mudstone on			
	(30')			fractured surface, slicken siding on some fractures oriented 76°, slightly			
				less altered below 156', contains minor amounts of soft greasy massive			
				mineral.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN2

SHEET 3 OF 3

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
	177 - 207 (30')		Breccia	Basalt, dark grey, 2" of red hematite rich rock at 183', mudstone in part, minor amount of green massive greasy mineral, fault zone.			
	207 - 231 (24')		Basalt	Dark grey, brecciated, has abundant white calcite in vugs and as fracture filling, chlorite on some fractures.			
	231 - 259 (28')		Basalt	Dark grey, massive, minor calcite in fractures and vugs, chlorite in fractures, brown and amygdaloidal in basal 3 feet, has a small amount of siltstone mixed in with it, siltstone probably wasn't indurated at the time of basalt deposition.			
	259 - 260 (1')		Siltstone	Brown uniform, few calcite stringers.			
	260 - 347 (87')		Basalt	Amygdaloidal, brown, minor siltstone inclusions which probably occur as fracture filling, amygdules are calcite and chlorite, at 261 the core becomes dark grey, highly fractured with calcite filling the fractures, at 264' the core is uniform, highly chloritized, few fractures with calcite, minor amount of red massive soft mineral on some fractures with the chlorite.			
	347			End of hole			
				NOTE: According to x-ray analysis the white, secondary, greasy, talc like mineral in the green grey conglomerates is kaolinite.			

Gulf Minerals Canada Limited
DIAMOND DRILL RECORD

D.D.H. NO. AN3
SHEET 1 OF 4

PROPERTY Cobequid IV
LATITUDE 3+72N
LONGITUDE 1+60E
ELEVATION 400 ft. North of ANI (23°)

BEARING—TRUE 145° down hole
DIP - 50°
FINAL DEPTH 570'
CORE SIZE NQ

DATE STARTED January 26, 1978
DATE COMPLETED January 28, 1978
DRILLED BY St. Lambert
LOGGED BY M. Holleman

DATE: Feb. 1, 1978 SIGNED R. Holleman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
	0 - 20		Overburden				Acid Dip Tests
	20 - 284						0' - 50°
	(264')		Mudstone &	20' Mudstone, brown, brecciated, shaly			100' - 50°
			Siltstone	21' Siltstone, brown, sharp upper contact, cross bedded minor mudstone from 22' to 23'			300' - 48°
				27' Mudstone, uniform, brecciated, dark brown, shaly		20° Apparent	500' - 50°
				30' Siltstone, cross bedded, slightly calcareous, brown			
				40' Mudstone, dark brown, uniform			
				45' Siltstone, brown, non calcareous, cross bedded			
				46' Mudstone, uniform, brecciated			
				47' Siltstone			
				48' Mudstone, shaly			
				51' Siltstone, non calcareous			
				54' 56' Mudstone		30° Apparent	
				55' 57' Siltstone			
				58' Mudstone, silty, uniform, minor reduction zones			
				70' Siltstone, finely cross bedded, minor mudstone at 80', brown, green grey 83'-85'			
				85' Mudstone, green grey in the top 6 inches, sharp upper contact, finely laminated in the top 6", small 1 millimeter calcite concretions (shells?) oriented along bedding		18° Apparent	
				98' Siltstone, brown, cross bedded grading down to mudstone			
				102' Mudstone, finely laminated, brecciated, shaly, minor reduction zones siltstone from 117-118.5, 126-127, 135-136			
				138' Siltstone, finely laminated and cross bedded.			
				152' Mudstone, calcite concretions from 160-162, 1 inch maximem size		20° Apparent	
				162' Siltstone, brown, cross bedded, uniform, finely laminated, minor mudstone with calcite concretions at 171-172, minor mudstone 178-179			
				181' Siltstone, coarse, light brown			
				182' Mudstone, shaly, calcite concretions from 192-199			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN3

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				199' Siltstone, brown, finely laminated to uniform			
				207' Mudstone, shaly, uniform, minor calcite concretions			
				210' Siltstone, cross bedded, non calcareous			
				213' Siltstone, grey, coarse, non calcareous, sharp upper contact,			
				214' Mudstone, brown, uniform to finely cross bedded to shaly, calcite concretions to 220', minor siltstone from 225'-227', 232'-233', 235'-236', 246'-247'.		20° Apparent	
				249' Siltstone, brown and green grey, cross bedded with mudstone.			
				253' Mudstone, dark brown, uniform, indistinctly cross bedded, grades down to siltstone			
				256' Siltstone, reddish brown, uniform, lacks distinct cross bedding, minor small green spherical reduction zones inpart containing black, non calcareous, probably carbon centers; non calcareous cement, minor mudstone at base.			
				273' Siltstone, dark brown, cross bedded, minor mudstone.		0°-20° Apparent	
	284-286 (2')		Paraconglomerate	Brown, abundant pink rhyolite pebbles in a siltstone matrix, sharp upper contact, grades down to a green grey coarse sandstone with little matrix,			
	286-463 (177')		Siltstone & Conglomerate	Cycles of sedimentation The siltstones are usually brown and fairly uniform and non calcareous. They grade downward into a green grey conglomerate usually over a distance of a few feet. There is usually a sharp erosional contact at the base of the conglomerate, with the silt-conglomerate below it. The compositions of the conglomerates are similar; 60-80% porphoritic, banded or uniform rhyolite, 15-30% mafics, 1-10% sandy and silty matrix, the mafic material is often altered to green clay. The conglomerates also contain a small quantity of an unidentified massive but crystalline greasy talc like minerals. The sequence of bedding is upright. The conglomerates are poorly sorted and the pebbles are angular. The maximum fragment size varies from 2 to 10 cm.			
				286' Brown siltstone grading down to a green grey conglomerate.			
				287' Siltstone with irregular shaped and fractured concretions from 292'-294', minor mudstone 293-296', grades down to a brown para conglomerate at 298' and a green grey ortho conglomerate at 301'.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN3

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				305' Siltstone grading down to conglomerate at 306', sharp upper contact			
				310' Pebbly siltstone grading down to a conglomerate at 312' sharp upper contact		20° Apparent	on contact
				316' Pebbly siltstone grading down to a conglomerate at 318'			
				321' Pebbly siltstone, core rubbly, contact uncertain.			
				322' Conglomerate			
				339' Pebbly siltstone grading down to a conglomerate at 342'			
				344' Pebbly siltstone, sharp upper and lower contact, minor conglomerate at 347'-348'.			
				350' Conglomerate, quite porous			
				360' Siltstone becoming a conglomerate at 365', sharp upper contact			
				371' Pebbly siltstone becoming conglomerate at 373'			
				374' Siltstone becoming conglomerate at 375', highly porous around 380'.			
				383' Siltstone becoming conglomerate at 384' sharp upper contact.			
				386' Pebbly siltstone becoming conglomerate at 387'.			
				390' Pebbly siltstone grading down to a conglomerate at 397' sharp upper contact.			
				399' Pebbly siltstone becoming conglomerate at 400', sharp upper contact.			
				401' Pebbly siltstone grading down to a conglomerate at 405', sharp upper contact.			
				406' Pebbly siltstone grading down to a conglomerate at 407'			
				407' Pebbly siltstone grading down to a conglomerate at 411'.			
				415' Pebbly siltstone grading down to a conglomerate at 416'			
				420' Pebbly siltstone with a few thin conglomerate lenses			
				438' Conglomerate			
				441' Siltstone becoming pebbly siltstone at 442' which becomes conglomerate at 449'			
				455' Pebbly siltstone becoming conglomerate at 456'			
				458' Pebbly siltstone becoming conglomerate at 460'.			
	463 - 515 (52')		Paraconglom-erate	Brown, pebbles not in contact, mud matrix 5-10%, felsic volcanics 70%, mafics 10%, siltstone pebbles 20%, angular and poorly sorted fragments, longest clast 8 cm., non calcareous, minor amounts of massive, greasy, green talc like mineral, rubbly in the basal 5 feet.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN3

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
	515 - 520 (5')		Mudstone	Breccia, black with fragments of brown siltstone.			
	520 - 534 (14')		Basalt	Dark brown, highly altered, solid-not crumbly, few vugs and stringers filled with dolomite, thin layers of specularite on some fractures.			
	539 - 570 (36')		Basalt	Boxes containing core from 539'-570' were upset so the sequence is uncertain. 539-558' has 10' of basalt, grey, uniform, abundant small green chlorite amygdules (?), minor dolomite stringers, slightly altered; 3' of basalt with calcite amygdules and chlorite amygdules (?), dark grey; 3' of basalt, dark grey, green chlorite amygdules (?), 3' of basalt, brown grey, altered, amygdaloidal. 558'-570' has 8' of basalt, dark grey, few fine calcite stringers, abundant chlorite amygdules (?) or porphoroblasts; 4' of basalt, brown, small calcareous stringers, also minor quartz on fractures, mud on some fractures.			
	570			End of Hole			
				NOTE: According to x-ray analysis the white, secondary, greasy, talc like mineral in the green grey conglomerates is kaolinite.			
				NOTE: According to x-ray analysis the white, secondary, greasy, talc like mineral in the green grey conglomerates is kaolinite.			

Gulf Minerals Canada Limited

DIAMOND DRILL RECORD

D.D.H. NO. AN-4
SHEET 1 OF 4

PROPERTY Cobequid IV
LATITUDE 10+70N
LONGITUDE 0+85E
ELEVATION
696' 354° N of AN-3

BEARING—TRUE 166° Downhole
DIP Collar 50°
FINAL DEPTH 800'
CORE SIZE NQ

DATE STARTED January 30, 1978
DATE COMPLETED February 8, 1978
DRILLED BY St. Lambert
LOGGED BY M. Holleman

DATE: February 9, 1978 SIGNED R. Holleman

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
.0			Overburden				Acid Dip Tests
							100' -49°
16	- 291		Sandstone &	Mainly grey coarse sediments. 16' sandstone, grey, very fine, well			300' -50°
			Mudstone	sorted, interbedded with grey mudstone at 21-22', 23-25.5', 34-36', non-			500' -50°
				calcareous cement except from 36-37' which has a calcite vein, upper and	21	14°	
				lower contacts of mudstone are sharp.		Apparent	
				37' - mudstone grey uniform, 1 pyrite crystal at 42'.	30	21°	
				48' - sandstone, very fine, light grey, calcareous cement to 55', few		Apparent	
				fine black organic laminae along bedding, abundant at 50-50.5,			
				minor pyrite with organics, pebbly sandstone 52-53', pebbles are			
				light grey limestone, maximum clast 2 cm., minor mudstone 55-56',			
				57-58'	59	15°	
				60' - sandstone, uniform, very minor organic laminae consisting of		Apparent	
				coalified reed remains judging by the hallow centers, slightly			
				calcareous 69-70, composition: 90% quartz, 5% rock fragments.			
				84' - mudstone grey			
				91' - sandstone, moderate organics from 98-104', contains limestone			
				pebbles 105-106', 113-114'.			
				108'- Mudstone, brown, shaly fracture			
				114'- Sandstone, uniform, calcareous cement 97-135', minor mudstone,			
				grey, 122-124', 141-142' laminated from 125-127', contains lime-			
				stone pebbles 136-141', almost a conglomerate			
				143'- sandstone, fine grained, distinctly cross bedded, non calcareous,			
				minor mudstone, 147-148°	145	7°	
				173'- sandstone,uniform, minor mudstone 195.5-196, 206-207; pebbly		Apparent	
				sandstone with grey mudstone and light grey limestone pebbles,			
				variably calcareous, pebbly 192.5-193, 196-198.			
				208'- Sandstone, non calcareous, finely laminated and cross bedded,			
				generally finer grained than the uniform sandstone above, minor	213	10°	
				pyrite rich pods		Apparent	

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN-4

SHEET 2 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				215' - Sandstone, light grey, uniform, minor organics at 217', pebbly in basal 3" with limestone, and mudstone pebbles; minor organics.			
				219' - Mudstone, uniform, grey to dark grey, non calcareous			
				228' - Sandstone, fine grained, light grey, cross bedded and laminated.			
				232' - Sandstone, light grey, generally uniform, minor dark grey mudstone at 235-235.5, 262-263, 265-266, 289-290, indistinctly laminated 238-240, 244-246, minor organics and pyrite at 236-237, 243-244, variably calcareous, pebbly with limestone pebbles at 286-287, 288-289, 290-291.	285	10° Apparent	
291	- 470		Siltstone & Sandstone	Mainly brown siltstone and mudstone and grey sandstone			
				291 - mudstone, grey in top 6" then brown grading down to light brown coarse silt, variably calcareous, crossbedded at 293', erosional upper and lower contact.			
				299 - Mudstone, brown, non calcareous, grading down to siltstone at 311, crossbedded, irregular calcite concretions at 308-310, 1 cm. size maximum, also at 314-315.			
				325 - Sandstone, grey, fine grained, uniform, minor crossbedding, indistinctly laminated, brown mudstone at 335-340.			
				345.5 - siltstone, brown, non calcareous, erosional upper contact.			
				361 - mudstone, brown, non calcareous, sharp upper contact, minor silt, minor calcareous concretions, 366-370.			
				376 - sandstone, very fine grained, laminated and crossbedded, silt 384-386, non calcareous except 388-389, 394-395, basal 5 feet has about 50% pink feldspar or rhyolite fragments.	380	9° Apparent	
				395 - mudstone, brown, sharp upper contact, grades down to a siltstone at 397'.			
				399.5 - mudstone, brown, grading down to a siltstone at 400.5, sharp upper contact, minor sericite, slightly calcareous 402-403.5, specularite on fracture at 400'.			
				407 - mudstone, sharp upper contact			
				412 - siltstone, grey, crossbedded, non calcareous			
				417 - sandstone, grey, crossbedded, 1% muscovite, 30% lithic fragments, 70% quartz.			
				421 - siltstone, brown grey, crossbedded, minor sericite, becoming grey and coarser at 436', abundant lithic fragments, some limestone, mafics green clay, similar to conglomerates further down			
				444 - mudstone, brown, friable, minor siltstone			
				460 - siltstone, grey, minor mudstone, calcite concretions in top 2 feet.			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN-4

SHEET 3 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
470	- 661		Mudstone & Siltstone	Mainly brown siltstone and brown mudstone.			
				470 - mudstone, brown, non calcareous, calcite concretions at 474-475, 485-488, 496-499, 503-505, minor brown siltstone at 489-491, 499-500. Abundant (5%) black semi-metallic irregular shaped grains ? mm in size, non magnetic, appear to be detrital, at 492-494.			
				518 - siltstone, brown, calcite concretions 519-520, crossbedded, non calcareous			
				537 - mudstone, sharp upper contact			
				545 - siltstone, brown, indistinctly crossbedded, non calcareous, minor small irregular concretions throughout			
				565 - mudstone with minor siltstone, brown, non calcareous, 2 cm calcite concretions, abundant at 569-573.	564	8°	
				576 - siltstone, brown, indistinctly crossbedded, sericite on some fractures, minor mudstone 595-596, 597-599, 602-603, minor green reduction zones, 1-2 cm spheres with carbon centres.		Apparent	
				616 - siltstone, maroon coloured, appears highly fractured though solid, few calcite veinlets, non calcareous			
				625 - mudstone, brown, minor small reduction spheres, non calcareous			
				635 - siltstone, brown, minor mudstone 639-640, non calcareous			
				643 - pebbly siltstone with porphoritic rhyolite, altered mafics, granite non calcareous			
				645 - siltstone, non calcareous, mudstone in the basal foot			
				653 - pebbly siltstone and para conglomerate, argillaceous			
661	- 730		Siltstone & Paraconglom-erate	Cycles of sedimentation. The siltstones are usually brown and uniform. They grade downward to a brown to green grey paraconglomerate, the pebbles are 80% banded and quartz porphoritic rhyolite, 10% mafics, 70% sediments, maximum clast size is 4 cm.			
				661 - siltstone grading down to conglomerate at 662			
				665 - siltstone grading down to conglomerate at 666, sharp upper contact			
				672 - siltstone grading down to conglomerate at 673			
				676 - siltstone grading down to conglomerate at 680			
				698 - siltstone grading down to congloemrate at 702			
				704 - siltstone grading down to conglomerate at 706			
				710 - siltstone grading down to conglomerate, sharp upper contact			
				719 - siltstone grading down to conglomerate at 726			
				727 - siltstone grading down to conglomerate at 728			
730	- 800		Siltstone & Conglomerate	The sedimentary cycles are similar to the above sequence but the conglomerates are green grey, have less clay, are more porous, have less sedimentary fragments, has minor calcite in the vugs, has minor talc like mineral, seems more altered probably due to the ground water			

GMC 1018

DIAMOND DRILL RECORD—CONTINUATION SHEET

D.D.H. NO. AN-4

SHEET 4 OF 4

DEPTH FEET	F'TAGE CORED	F'TAGE REC'D	FORMATION	DESCRIPTION	DEPTH	BED'G & FOLIA	REMARKS SAMPLES ETC.
				movement.			
				730 - siltstone grading down to conglomerate at 732, quite porous.			
				736 - siltstone grading down to conglomerate at 740			
				744 - siltstone grading down to conglomerate at 748			
				750 - siltstone grading down to conglomerate at 760			
				abundant calcite in pores.			
				766 - siltstone grading down to conglomerate at 770, porous			
				771 - siltstone with minor conglomerate lenses, sharp upper contact			
				796 - conglomerate			
				799.5 - siltstone, sharp upper contact.			
800				END OF HOLE, HOLE STOPPED BECAUSE OF WATER SUPPLY PROBLEMS			
				NOTE: According to x-ray analysis the white, secondary, greasy, talc			
				like mineral in the green grey conglomerates is kaolinite.			

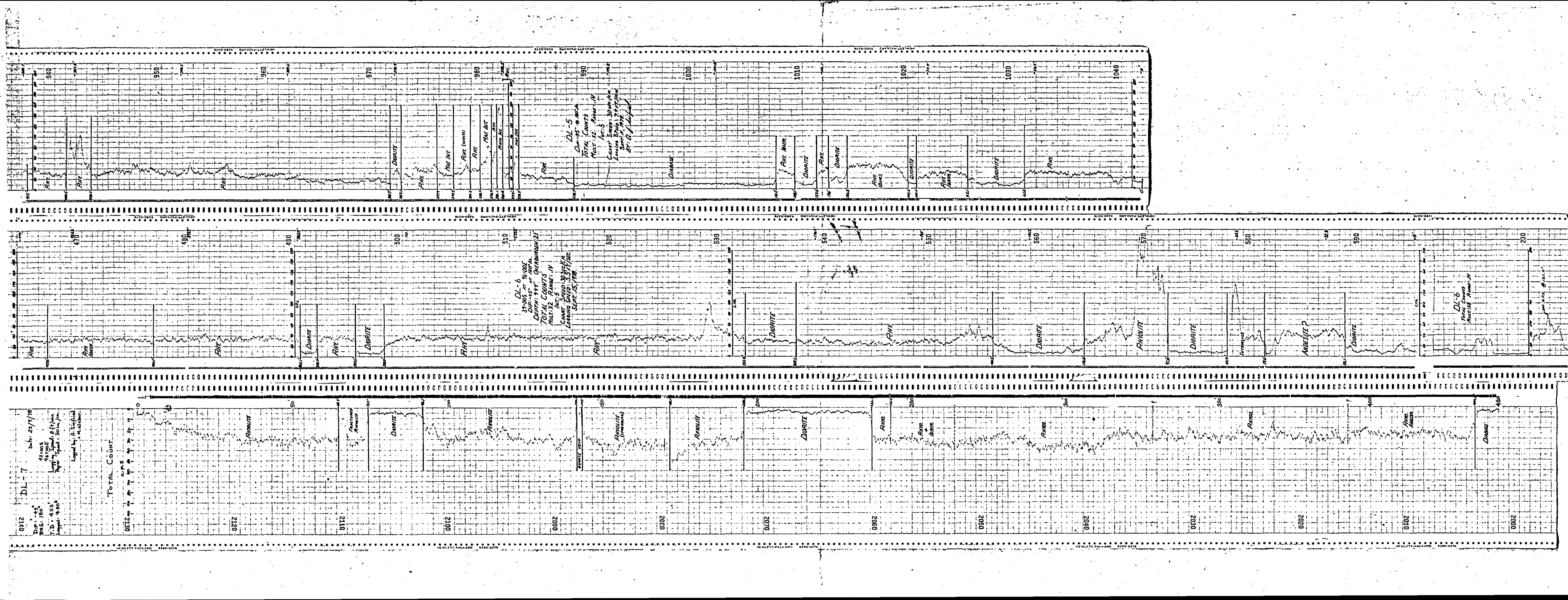
APPENDIX II

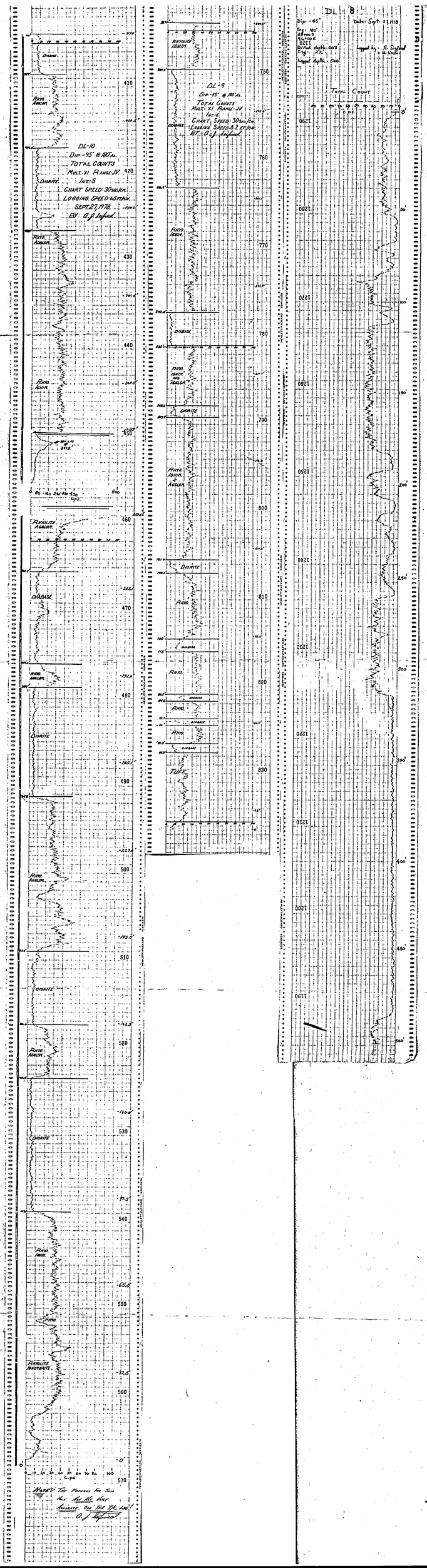
DOWN THE HOLE LOGGING

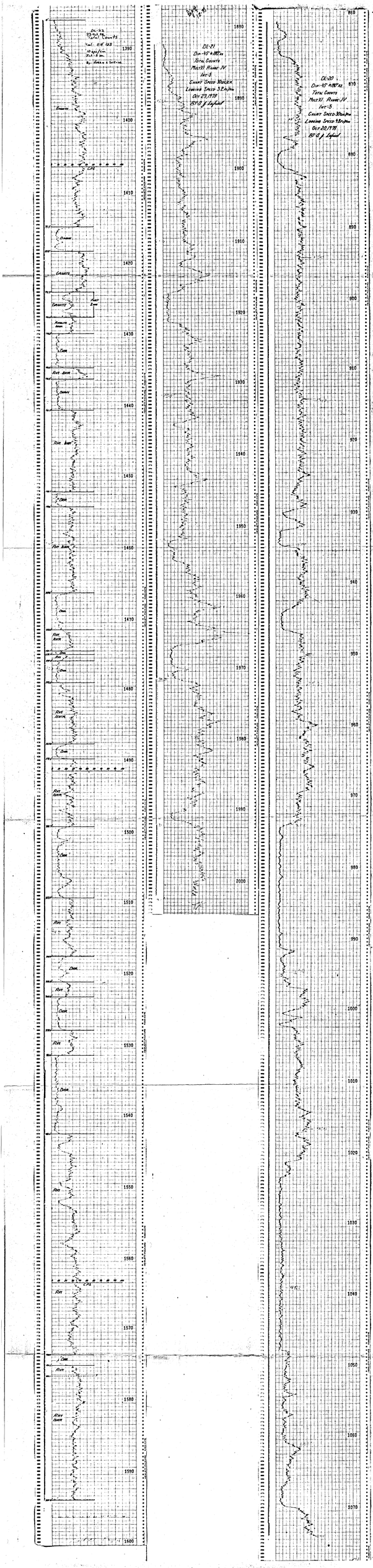
SECTION A: DL-ZONE

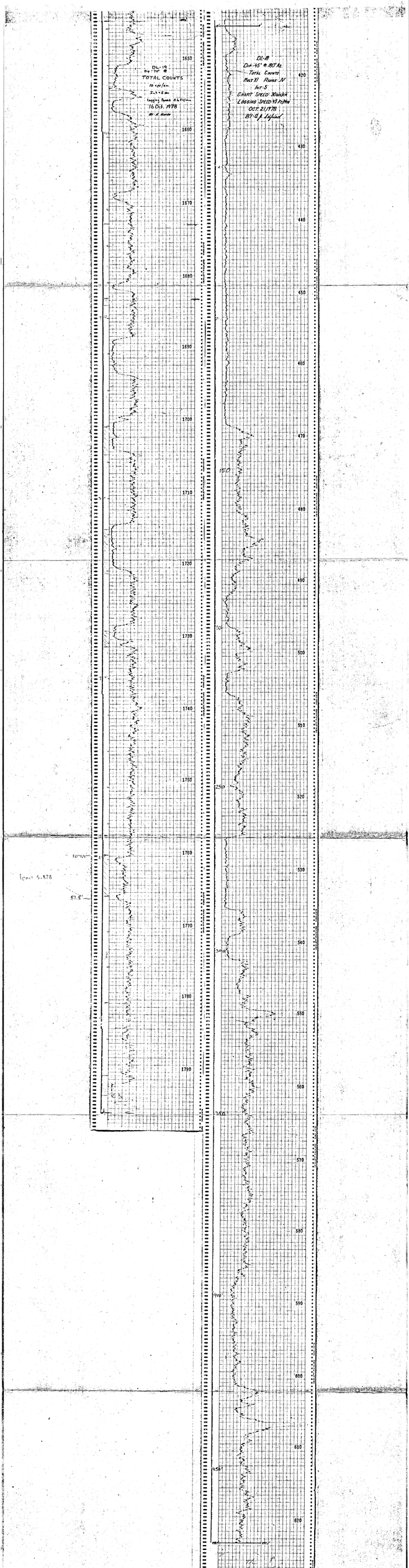
SECTION B: ANNANDALE

SECTION A FOLLOWS...


DL-7
Date 23/1/18
Dip: 145°
Brg: 180°
T.D: 453'
Total Count
Diorite
Pegmatite
Aplite
Fault
Fractured Fault
Fine Grained Mafic Rock
Dyke
Sheared Zone
Quartz Vein
Mafic Xenolith
Fine Grained Mafic Rock
Fault Zone


DL-8
Dip -45°
Date: Sept. 27, 1918
Bg: 180°
48000 S
96000 E
0021
Divide depth: 503
Csg: 22
Logged depth: 500
Logged by: A. Sigfried
H. Weber
TOTAL COUNT
DL-9
DIP -45° @ 180° AL
TOTAL COUNTS
MULT: XI RANGE: JV
INT: 5
CHART SPEED: 30 sec/cm
LOGGING SPEED: 5.2 FT/MIN
BY: A. J. Sigfried
DL-10
DIP -45° @ 180° AL
TOTAL COUNTS
MULT: XI RANGE: JV
INT: 5
CHART SPEED: 30 sec/cm
LOGGING SPEED: 5.5 FT/MIN
SEPT. 27, 1918
BY: A. J. Sigfried
DIABASE
RHYO. AGGLOM.
DIORITE
RHYO. IGNIM.
RHYOLITE AGGLOM.
RHYOLITE IGNIM.
RHYO. IGNIM. AND AGGLOM.
TUFF
RHYOLITE MAGNIFERITE
PYRO.
C.P.S.
NOTE: THE PRESSURE FOR THIS HOLE ARE ALL VERY ACCURATE ON THE T.K. LOG
A. J. Sigfried


DL-22
Dip-45° ±180° Az
Total Counts
Mult. Rings IV
Int. 5
Chart Speed 30 in/hr
Logging Speed 32 in/hr
Oct. 23, 1978
BY: O. J. Infant
DL-21
Dip-45° ±180° Az
Total Counts
Mult. Rings IV
Int. 5
Chart Speed 30 in/hr
Logging Speed 32 in/hr
Oct. 23, 1978
BY: O. J. Infant
DL-20
Dip-45° ±180° Az
Total Counts
Mult. Rings IV
Int. 5
Chart Speed 30 in/hr
Logging Speed 48 in/hr
Oct. 20, 1978
BY: O. J. Infant
Granite
Dark
Rock Bank
Rock Bank
Dark
Rock Bank
Dark
Rock Bank
Dark
Rock Bank
Dark
Rock
Dark
Rock
Dark
Rock
Dark
Rock
Dark
Rock
Dark
Rock
Rock Bank
1390
1400
1410
1420
1430
1440
1450
1460
1470
1480
1490
1500
1510
1520
1530
1540
1550
1560
1570
1580
1590
1600
1880
1890
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
860
870
880
890
900
910
920
930
940
950
960
970
980
990
1000
1010
1020
1030
1040
1050
1060
1070


DL-19
TOTAL COUNTS
16 Oct. 1978
DL-18
DIA-45° @ 180° Az
TOTAL COUNTS
MULT XI RANGE IV
INT-5
CHART SPEED 30 SEC/CM
LOGGING SPEED 45 FT/MIN
OCT. 21, 1978
BY: D.J. Lafond
1650
1660
1670
1680
1690
1700
1710
1720
1730
1740
1750
1760
1770
1780
1790
420
430
440
450
460
470
480
490
500
510
520
530
540
550
560
570
580
590
600
610
620
150
250
300
350
400
450

SECTION B

DOWN THE HOLE LOGGING

ANNANDALE

Gulf Minerals Canada Limited

HOLE NO.	AN-1
PROJECT	Cobequid IV
PROVINCE	Nova Scotia
Bearing	203°
Dip	70°
Casing depth	80 ft
Total depth	466 ft
Surface elev.	ft
Coordinates	0° 00' 05" 0° 00' 00" W

GAMMA LOG (Total Count)

Date	Dy 1 6 Mo 12 yr 7 7
Logged depth	445 ft
Logging speed	10 ft/min
Crystal size	1 in. x 4 in.
Time constant	1 sec.
Probe No.	547
Detector No.	1-111
Track 1 RMM	207 #125
Track 2 RMM	207 #131

ELECTRIC LOG

Date	Dy 1 6 Mo 12 yr 7 7
Logged depth	450 ft
Logging speed	25 ft/min.
Probe size (dia)	1¼ in.
Borehole medium	MUD / WATER
Res. between grids	200 Ω
Normal spacings	16" & 32"
Truck No.	EASTERN PROJECTS
Logged By	MARK F. WEBER
Logger's Comments	

GAMMA FACTORS

	Track 1	Track 2
Detector K factor	0000	0000
Instrument dead time	μ sec.	μ sec.
Calibration standard (cps)	184 K	186 K
Fluid factor	t. 1.059	
Casing factor	t. 1.480	

REMARKS correlated by

GAMMA (cps)
0 1K Track 1
0 100 Track 2

SELF POTENTIAL (millivolts)
-ve ← → +ve
1 25

APPARENT RESISTIVITY (ohm meters)
0 100
long normal
short normal

0'
50'
CSG.
100'
150'
200'
250'
300'
365'
400'
445'
450'

HOLE NO.	AN-4
PROJECT	CARBOUD 32
PROVINCE	NOVA SCOTIA
Bearing	
Dip	
Casing depth	N.W. 2 0/0 ft
Total depth	8 0/0 ft
Surface elev.	
Coordinates	

GAMMA LOG (Total Count)

Date	15	08	1974
Logged depth		7	8 ft
Logging speed		10	0 ft/min
Crystal size		1	0 in
Time constant			sec.
Probe No.	547		
Detection No.	1113		
Track 1 HIGH	201	1125	
Track 2 HIGH	201	1131	

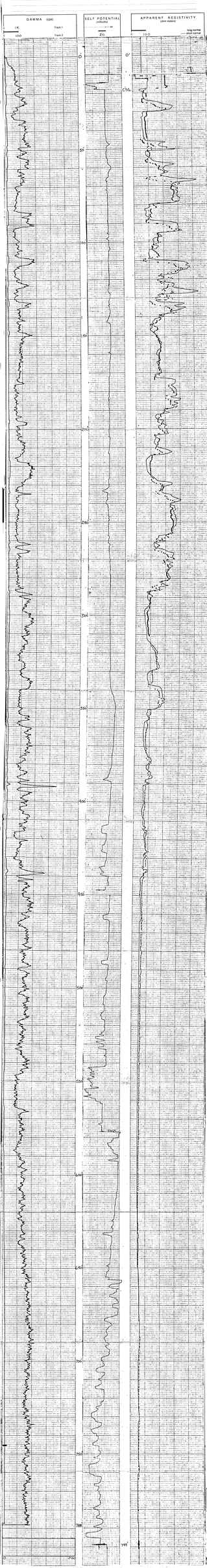
ELECTRIC LOG

Date	15	08	1974
Logged depth		7	8 ft
Logging speed		30	0 ft/min
Probe size (dia)		1	5 in
Borehole medium	Running water		
Res. between pots		24	0
Normal spacings	16" & 64"		
Truck No.	Eastern Prospects		
Logged By	M. C. Kilman		
Logger's Comments			

GAMMA FACTORS

	Track 1	Track 2
Detection K factor	0000	0000
Instrument dead time	μ sec	μ sec
Calibration standard (cps)	204K	194K
Factor		
Casing factor		

REMARKS correlated by



HOLE NO.	AN-3
PROJECT	Cobequid IV
PROVINCE	Nova Scotia
Bearing	145 °
Dip	50 °
Casing depth	N.W. 30 ft
Total depth	570 ft
Surface elev.	ft
Coordinates	3 : 72 N
	1 : 60 E

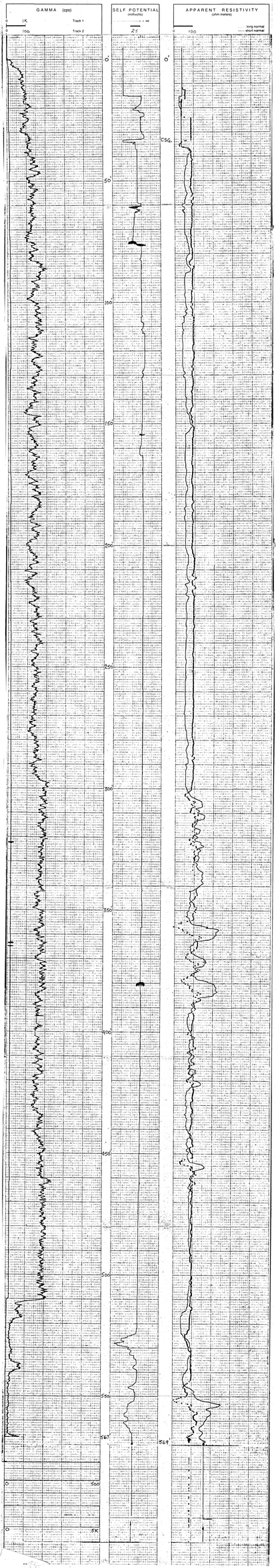
GAMMA LOG (Total Count)	
Date	Dy 28 Mo 3 Ap yr 78
Logged depth	567 ft
Logging speed	10 ft/min
Crystal size	1 in x 4 in
Time constant	1 sec
Probe No.	547
Detector No.	1-1-1
Track 1 RMM	207 # 125
Track 2 RMM	207 # 131

ELECTRIC LOG	
Date	Dy 28 Mo 3 Ap yr 78
Logged depth	569 ft
Logging speed	30 ft/min
Probe size (dia)	1 1/4 in
Borehole medium	Mud
Res. between grids	3K "
Normal spacings	16 " & 32 "

GAMMA FACTORS	Track 1	Track 2
Detector K factor	0000	0000
Instrument dead time	μ sec	μ sec
Calibration standard (cps)	19.5K	19.8K
Fluid factor	1.059	
Casing factor	1.480	

Truck No. Eastern Prospects
Logged By Mark F. Weber
Logger's Comments
S.P. - flat - possible coarse salt water in bore hole

REMARKS correlated by



Gulf Minerals Canada Limited

HOLE NO.	AN-2
PROJECT	Cobequid IV
PROVINCE	Nova Scotia
Bearing	203°
Dip	-57°
Casing depth	26 ft.
Total depth	348 ft.
Surface elev.	ft.
Coordinates	3+72S, 1+60W

GAMMA LOG (Total Count)

Date	Dy 11 Mo Dec yr 77
Logged depth	345 ft.
Logging speed	10 ft/min.
Crystal size	1 in x 4 in.
Time constant	1 sec.
Probe No.	547
Detector No.	1-1-1
Track 1 RMM	207 # 125
Track 2 RMM	207 # 131

ELECTRIC LOG

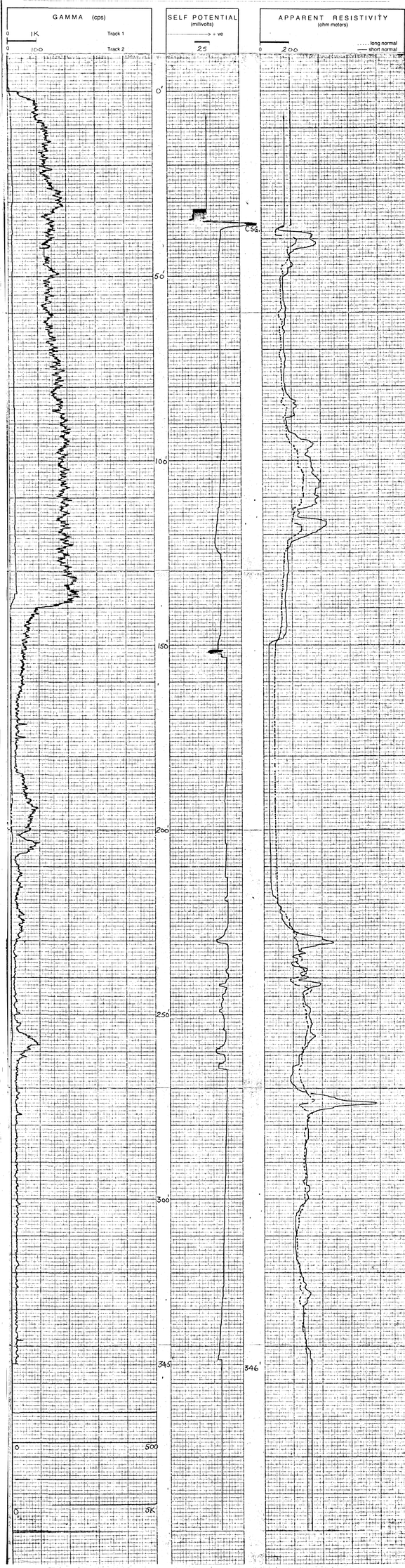
Date	Dy 19 Mo Dec yr 77
Logged depth	346 ft.
Logging speed	30 ft/min.
Probe size (dia)	1 3/4 in.
Borehole medium	WATER
Res. between gnds	600 A
Normal spacings	16" & 32"

Truck No. Eastern Projects
Logged By Mark F. Weber
Logger's Comments

GAMMA FACTORS

	Track 1	Track 2
Detector K factor	0000	0000
Instrument dead time	μ sec.	μ sec.
Calibration standard (cps)	19.1K	19.3K
Fluid factor	1.059	
Casing factor	1.480	

REMARKS correlated by



433056 54-D 16 02

COBEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 3 OF 4

433056

Gulf

433056 54-D 16 02

COBEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 3 OF 4 433056

A REPORT ON

GEOCHEMISTRY

GEOLOGICAL MAPPING

PROSPECTING

DIAMOND DRILLING

MAPS ENCLOSED IN POCKETS

PART 3 ✓

Plate 25 E g ✓	Geological Compilation	1 in. = 1/4 mile
26 E g ✓	Geological Compilation	1 in. = 1/4 mile
27 E g ✓	Geological Compilation	1 in. = 1/4 mile
Plate 26 D gb ✓	Prospecting	1 in. = 1/4 mile
26 E gb ✓	Prospecting	1 in. = 1/4 mile
27 D gb ✓	Prospecting	1 in. = 1/4 mile
27 E gb ✓	Prospecting	1 in. = 1/4 mile

PART 4

Plate 111 g	Geological Compilation	1 in. = 400 feet
111 gb	Prospecting	1 in. = 400 feet

Geochemical Sampling

Plate 111 f	Sample Location	1 in. = 400 feet
111 fb	Values Uranium A & C	1 in. = 400 feet

11/E - 11WEST

63°30'00" — 45°37'30" — E 1,265,000 — E 1,280,000 — E 1,285,000 — 63°22'30"

N 16,580,000 — N 16,575,000 — N 16,570,000 — N 16,565,000 — N 16,560,000 — N 16,555,000 — N 16,550,000 — N 16,545,000 — N 16,540,000

45°30'00"

63°30'00" — 29' — 28' — 27' — 26' — 25' — 24' — 23' — 63°22'30"

21 22 23 24 25 26 27 28 29

SYMBOLS

- Geological contact (definite, indefinite)
- Bedding (horizontal, vertical, inclined, overturned)
- Schistosity, Gneissosity, Foliation (vertical, inclined, dip unknown)
- Fault (definite, indefinite)
- Anticline, Syncline (with plunge)
- Outcrop, area of outcrop
- Diamond drill hole
- Lineation (trend and plunge)

Note: For legend see plate: E-26g

KEY

C
D
E
F
64°00' — 63°00' — 45°30'

Gulf Minerals Canada Limited

COBEQUID PROJECT

483056 54-D 16 02

GEOLOGICAL COMPILATION

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: E-25g
NOV. 1977	1IN. = 1/4 MI.		NTS. 11E/11 PT.

To accompany "Cobequid III & IV Report" Dec. 1978

II/E-11 WEST

63° 22' 30" — 22 — 21 — 20 — 19 — 18 — 17 — 16 — 63° 15' 00"

45° 37' 30"

N 16,580,000

N 6,575,000

N 16,570,000

N 16,565,000

N 16,555,000

N 16,550,000

N 16,545,000

N 16,540,000

45° 30' 00"

IV-8 IV-10 IV-8

VIII VIII VIII VIII

IVb IVb IVb IVb IVb IVb

VII VII

II II II

X X X X

VI VI VI VI

EAST NEW ANNAN

French Brook

Munroe Brook

Sutherland Brook

West Branch

Cavanagh Brook

Porter Brook

River

Whippey Lake

Clear Lake

Black Lake

Little Lake

Johnston Lake

Farm Lake

Gaff Brook

Chiganois River

North River

No Outcrop

Gravel Pit

GP

LEGEND

MESOZOIC	XVIII	TRIASSIC	VII	Non-foliated Granite
PALAEOZOIC	XVII	PERMIAN	VI	Foliated Granite
		PENNSYLVANIAN		SILURIAN to DEVONIAN
	XVI	Pictou Group	V	Portapique Parrsboro Succession
	XV	Cumberland Group	IV	Earlton Sequence (a,b,c)
		Riversdale Group	PALAEOZOIC	SILURIAN or OLDER
	XIV	Boss Point Formation	OR OLDER III	Granite Gneiss - Bass River Complex
	XIII	Clairmont Formation	II	Bass River Complex
		MISSISSIPPIAN	I	Mt. Thom Complex
	XII	Middleborough Formation		
	XI	Windsor Group		
	X	Nuttby Sequence		
		DEVONIAN		
	IX	River John Group (Upper)		
	VIII	River John Group (Lower)		

LEGEND - LITHOLOGIC

11 Intrusives : (a) granite (b) diorite, diabase (c) gabbro, ultramafic

10 Sediments : (a) argillite, shale (b) quartzite (c) conglomerate (d) sandstone (e) siltstone (f) mudstone (g) limestone

9 Pyroclastics – Aglomerates (Mx) mafic fragments in mafic matrix (Fx) felsic fragments in felsic matrix (M) mixed

8 Felsic Volcanics : dacites - rhyolites

7 Mafic Volcanics : basalts andesites (P) pillowed (T) tuffaceous (B) brecciated (Ph) porphyritic (S) sheared - deformed

Note: For symbols see plate: E-25g

KEY

21 22 23 24 25 26 27 28 29

C D E F

64° 00' 63° 00' 45° 30'

Gulf Minerals Canada Limited

COBEQUID PROJECT

433056 54-D 16 02

GEOLOGICAL COMPILATION

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: E-26g
NOV 1977	1 IN. = 1/4 MI.		NTS. 11E/11 PT.

To accompany "Cobequid IV Report" Dec. 1978

II/E-11EAST

Note : For legend and symbols see plates : E-25g, E-26g

KEY

Gulf Minerals Canada Limited

COBEQUID PROJECT

433056 54-D 16 02

GEOLOGICAL COMPILATION

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: E-27g
NOV. 1978	1 IN. = 1/4 MI.		NTS. 11E/11PT.

To accompany "Cobequid IV Report" Dec. 1978

11/E-11 West

63°22'30" 22' E1,295,000 21' E1,300,000 20' E1,305,000 19' E1,310,000 18' E1,315,000 17' 16' 63°15'00"

45°45'00"

N16,625,000

44'

N16,620,000

43'

N16,615,000

42'

N16,610,000

41'

N16,605,000

40'

N16,600,000

39'

N16,595,000

38'

N16,590,000

N16,585,000

45°37'30"

Dobson Ck

TATAMAGOUCHE BAY

Barachois Harbour

SANDVILLE

BAYHEAD

Millard Creek

BLOCKHOUSE POINT

HYDROGRAPHIC "BLOCK 1"

HYDROGRAPHIC "MHD 15"

TOPOGRAPHIC "POST 89"

Brook

TOPOGRAPHIC "POST 88"

Blockhouse Brook

Smelt Brook

TATAMAGOUCHE

C1046 C1045 C1044 C1047 C1042 C104

PROVINCIAL PICNIC PARK

TOPOGRAPHIC "POST 77"

C1049

Tatamagouche River

Mattatall Brook

Donaldson River

French River

OLIVER

BEACON HILL

TOPOGRAPHIC "POST 90"

C1077 C1078 C1073 C1079 C1075 C1076 C1074

C1061 C1063 C1060 C1066 C1064 C1065 C1068

C1080 C1081 C1085 C1082 C1084 C1083

WEST NEW ANNAN

TOPOGRAPHIC "POST 91"

CENTRAL NEW ANNAN

BAILEY BROOK

ra 80 grey phyllite

Falls

C-6801, 6802

ra 80, phyllite

ra 70, 90

ra 450 max.

minor Qtz. vein

ra 90

ra 75 rhyolite

Gravel Pit

ra 30, 40, basalt

ra 40, basalt

ra 50, basalt

21 22 23 24 25 26 27 28 29

C D E F

45°30'

64°00' 63°00'

KEY

LEGEND

- Major traverse
- Boulder, area of boulders
- Outcrop, area of outcrop
- Fault zone
- 80/60 ra 50 — Radioactivity (ra) in counts per second – high / background, spot reading
- Airborne anomaly

Gulf Minerals Canada Limited

COBEQUID PROJECT

433056 54-D 16 02

PROSPECTING

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: D-26gb
DEC 1978	1 IN. = 1/4 MI.		NTS. 11E/11 PT.

To accompany "Cobequid IV Report" Dec 1978

11/E-11 WEST

63° 22' 30" — 22' E 1,290,000 — 21' E 1,295,000 — 20' E 1,300,000 — 19' E 1,305,000 — 18' E 1,310,000 — 17' E 1,315,000 — 16' — 63° 15' 00"

45° 37' 30" — N 16,580,000 — 37' — N 16,575,000 — 36' — N 16,570,000 — 35' — N 16,565,000 — 34' — N 16,560,000 — 33' — N 16,555,000 — 32' — N 16,550,000 — 31' — N 16,545,000 — N 16,540,000 — 45° 30' 00"

ra 150 rhyolite
ra 40, 50
ra 150 rhyolite
ra 30, 40 basalt
ra 40, 50 basalt
ra 120 rhyolite
ra 170 rhyolite
ra 150 rhyolite
ra 150 rhyolite
French Brook
Sutherland Brook
Basalt Rhyolite
Gravel Pit
GP
Gravel Pit
ra 80 gray sediment
EAST NEW ANNAN
basalt
ra 40 basalt
ra 40 basalt
ra 40 quarry basalt
ra 30, 40 basalt
ra 30, 40 basalt
Munroe Brook
Porter Brook River
ra 150, rhyolite
ra 250, rhyolite
ra 150 rhyolite
ra 90, 100 rhyolite
Basalt Rhyolite
Cavanagh Brook
ra 80, 90 rhyolite
ra 30, 40 basalt
ra 30, 40, basalt
ra 40 basalt
ra 200 rhyolite
Whippey Lake
ra 90, 100 rhyolite
ra 150 rhyolite
ra 100, 120 rhyolite
sulphide bearing boulders rhyolite
Clear Lake
ra 20, 40, basalt
ra 90, 100 rhyolite
sulphide bearing boulders of rhyolite
E-170
ra 40, 60
Black Lake
ra 90, 100 rhyolite
ra 90, 100 rhyolite
ra 150 rhyolite
Little Lake
Johnston Lake
ra 90, 100 granite
E-164 ra 400
sediment
E 161, 162 ra 250, rhyolite
West Branch of Cavanagh River
ra 300 rhyolite
C-1168
C-1169
C-1170
C-1171
C-1172
C-1173
340
339
341
342
343
ra 30, 40 basalt
ra 30, 40 basalt
ra 150 rhyolite
ra 90, 100 granite
ra 100, 150, granite
ra 90, 100 granite
E 165, ra 300
E 166, ra 220
rhyolite
ra 90, 100 granite
ra 100, 130 granite
ra 100, 150 granite
Farm Lake
ra 90, 100 granite
ra 90, 100 granite
ra 90, 100 granite
North River
347
347
ra 120, 140
ra 100, 120 granite
granite
ra 120, 140 granite cgl.
Chiganois River
Gain Brook
ra 100, 120 granite
280
281
282
LIMIT OF PROSPECTING
LIMIT OF PROSPECTING

LEGEND

- Major traverse
- Boulder, area of boulders
- Outcrop, area of outcrop
- Fault zone
- 80/60 ra 50 — Radioactivity (ra) in counts per second - high/background, spot reading
- Airborne anomaly

21 22 23 24 25 26 27 28 29

C
D
E
F

45° 30'
64° 00'
63° 00'

KEY

Gulf Minerals Canada Limited

COBEQUID PROJECT

433056 54-D 16 02

PROSPECTING

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: E-26 gb
DEC. 1978	1 IN. = 1/4 MI.		NTS. 11E/11 PT.

To accompany "Cobequid IV Report" Dec. 1978

11/E-11EAST

Barachois Harbour

HYDROGRAPHIC POST NO. 2

Brule Harbour

HYDROGRAPHIC SOIL POST

Cemetery

BRULE

PICTOU COLCHESTER

C-1053
C-1054
C-1052
C-1051
C-1059
C-1058
C-1057
C-1055
C-1056

Kennedy Lake

C-1050

COUNTY COUNTY

DENMARK

RIVER JOHN ROAD

Biz

Brook

Waugh

Block

River

TOPOGRAPHIC ROCK POST NO.80

WAUGH RIVER

Yellow

River

Brook

THE FALLS

BALMORAL MILLS

Pit

ra 50, 80
red cgl. with minor qtz. vein

ra 70, conglomerate

ra 70, occassional red conglomerate

ra 80
red conglomerate

Gravel Pit

ra 110, rhyolite

B 3660, 3661, 3662
Qtz vein bearing sulphides (dyrite, minor chalcopyrite)
Flooded shaft.

TOPOGRAPHIC ROCK POST NO.81

MCBEAN CORNER

ra 40
red conglomerate and sandstone

ra 60, conglomerate

ra 50, 70 scattered conglomerate

red conglomerate

63°15'00" 14' 13' 12' 11' 10' 09' 08' 63°07'30"
45°45'00" 44' 43' 42' 41' 40' 39' 38' 45°37'30"

21 22 23 24 25 26 27 28 29
C D E F
45° 30'
64°00' 63°00'
KEY

LEGEND

- Major traverse
- Boulder, area of boulders
- Outcrop, area of outcrop
- Fault zone
- 80/60 ra 50 — Radioactivity (ra) in counts per second - high / background, spot reading
- Airborne anomaly

Gulf Minerals Canada Limited

COBEQUID PROJECT

433056 54-D 16 02

PROSPECTING

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: D-27gb
DEC. 1978	1IN. = 1/4 MI.		NTS. 11E/11 PT.

To accompany "Cobequid IV Report" Dec. 1978

11/E-11EAST

63°15'00" E 1,320,000 14' E 1,325,000 13' E 1,330,000 12' E 1,335,000 11' E 1,340,000 10' E 1,345,000 09' 08' E 1,350,000 63°07'30"

45°37'30" N 16,580,000 37' N 16,575,000 36' N 16,570,000 35' N 16,565,000 34' N 16,560,000 33' N 16,555,000 32' N 16,550,000 31' N 16,545,000 45°30'00" N 16,540,000

SPIDELL HILL

NORTH EARLTOWN

EARLTOWN

NUTTBY MOUNTAIN

NUTTBY

Balmoral Brook

ra 60, 70 red conglomerate

ra 140

ra 200 red sediment

Grave

soil test site

Brook

ra 120

ra 100

ra 100

ra 100

Gravel Pit

Vamey Brook

ra 40, basalt flows

Hough

River

311

gravel

abandoned house

RK-300

ra 40, 50, basalt

ra 40, basalt

ra 40

Brook

ra 70 gravel

farm

gravel minor red sandstone

Brook

TOPOGRAPHIC "POST 82"

ra 100, gravel

gravel

ra 150, gravel

McKays Mill

Bailey's Brook

Ferguson Brook

log cabin

McDonald Brook

326

Basalt Unit Rhyolite River John Group Earltown Sequence

TOPOGRAPHIC "POST NO.83"

Gravel

Earltown Lake

Gravel

ra 100, overburden

ra 120 rhyolite

Microwave Tower

Radio Tower

Fire Tower

GEODETIC "NUTTBY"

ra 75, 90 rhyolite

gray sediment

ra 100, felsic volcanics?

ra 70

ra 70 gray sediment

ra 150

ra 100

Low

Gravel

farm

farm

farm

ra 90, 100 overburden

ra 100

abandoned farm

ra 100, siltstone

farm

farm

ra 50

CLEARED LAND

fence

stone

ra 90, 100

Middle River

ra 120, sediment

ra 100, sediment

ra 60, sediment

McGill Brook

ra 90, gray siltstone

ra 70, 80 gravel

ra 100, 150 overburden

ra 100, overburden

ra 80, 90 overburden

ra 100, overburden

North River

ra 60, 70 overburden

311

ra 100, granite

ra 60, 70 overburden

365

farm ra 60, 70

ra 80, 90 overburden

ra 100 overburden

Gravel Pit

21 22 23 24 25 26 27 28 29

C D E F

45°30'

64°00' 63°00'

KEY

LEGEND

- Major traverse
- Boulder, area of boulders
- Outcrop, area of outcrop
- Fault zone
- 80/60 ra 50 — Radioactivity (ra) in counts per second – high / background, spot reading
- Airborne anomaly

Gulf Minerals Canada Limited

COBEQUID PROJECT

483056 54-D 16 02

PROSPECTING

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: E-27gb
DEC. 1978	1IN. = 1/4 MI.		NTS. 11E/11 PT.

To accompany "Cobequid IV Report" Dec. 1978

433056 54-D 16 02

COBEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 4 OF 4

433056

Gulf

433056 54-D 16 02

COBEQUID IV

EXPLORATION PROGRAM 1977-78

ON PARTS OF 11E 11A, B, C, AND D

PART 4 OF 4 433056

A REPORT ON

GEOCHEMISTRY

GEOLOGICAL MAPPING

PROSPECTING

DIAMOND DRILLING

MAPS ENCLOSED IN POCKETS

PART 3

Plate 25 E g	Geological Compilation	1 in. = 1/4 mile
26 E g	Geological Compilation	1 in. = 1/4 mile
27 E g	Geological Compilation	1 in. = 1/4 mile
Plate 26 D gb	Prospecting	1 in. = 1/4 mile
26 E gb	Prospecting	1 in. = 1/4 mile
27 D gb	Prospecting	1 in. = 1/4 mile
27 E gb	Prospecting	1 in. = 1/4 mile

PART 4

Plate 111 g ✓	Geological Compilation	1 in. = 400 feet
111 gb ✓	Prospecting	1 in. = 400 feet
	Geochemical Sampling	
Plate 111 f ✓	Sample Location	1 in. = 400 feet
111 fb ✓	Values Uranium A & C	1 in. = 400 feet

63°28' 27' 26' 63°25'
45°37'30"
37'
36'
35'
45°34'
L - 80 + 00 E
L - 100 + 00 E
L - 120 + 00 E
L - 140 + 00 E
L - 160 + 00 E
L - 180 + 00 E
TL - 72 + 00 N
TL - 30 + 00 N
BL - 0 + 00
TL - 40 + 00 S
TL - 80 + 00 S
TL - 120 + 00 S
Ridge
esker
esker ?
crevasse ?
Cliff
Debert Lake
Big Snare Lake
Little Snare Lake
TRAIL
JS-7862 200/100 8d,ph 13c
JS-7863 C-6677
JS-7865 C-6678
JS-7869 C-6680 12a
JS-7885 C-6685
JS-7872
JS-7871 C-6681
JS-78159 C-6606
JS-78112 C-6698
JS-7811
C-6680
C-6680,4 JS-7859 C-6676
JS-7656
JS-7854 C-6672
C-6679 JS-7864 200/100
JS-7857 C-6674
JS-7858 C-6675
JS-7855 C-6780
JS-78116 C-6601
C-6800
C-6796
C-6797
C-6794
C-6795
C-6792
DL-1
DL-2
DL-3
DL-4
DL-5
DL-6
DL-7
DL-8
DL-9
DL-10
DL-11
DL-12
DL-13
DL-14
DL-15
DL-16
DL-17
DL-18
DL-19
DL-20
DL-21
DL-22
K-1 K-2 K-3 K-4 K-5 K-6 K-7 K-8 K-9 K-10 K-11 K-12 K-13 K-14 K-15 K-16 K-17 K-18 K-19 K-20 K-21 K-22 K-23 K-24 K-25 K-26 K-27 K-28 K-29 K-30 K-31 K-32 K-33 K-34 K-35 K-36 K-37 K-38 K-39 K-40 K-41 K-42 K-43 K-44 K-45 K-46 K-47 K-48 K-49 K-50 K-51 K-52 K-53 K-54 K-55 K-56 K-57 K-58 K-59 K-60 K-61 K-62 K-63 K-64 K-65 K-66 K-67 K-68 K-69 K-70 K-71 K-72 K-73 K-74 K-75 K-76 K-77 K-78
NOTE : For legend see sheet 2
KEY
1 2 3 4
63°34'00" 63°22'00"
45°37'30" 45°34'00"
433056 54-D 16 02
Gulf Minerals Canada Limited
COBEQUID PROJECT
GEOLOGICAL COMPILATION
NOVA SCOTIA
DATE: DECEMBER 1978
SCALE: 1 INCH = 400 FEET
DRAWN BY: D.A.G
PLATE: IIIg
N.T.S. 11E/11 PT.
To accompany "Cobequid III & IV Report" Dec. 1978

63°28' 27' 26' 63°25'
45°37'30"

37'

36'

35'

45°34'

63°28' 27' 26' 63°25'

L - 80 + 00 E

L - 100 + 00 E

L - 120 + 00 E

L - 140 + 00 E

L - 160 + 00 E

L - 180 + 00 E

TL - 72 + 00 N

TL - 30 + 00 N

BL - 0 + 00

TL - 40 + 00 S

TL - 80 + 00 S

TL - 120 + 00 S

Debert Lake

Big Snare Lake

Little Snare Lake

ro 400
C-6368

SL-82
SL-81
C-6330

C-6382
SL76
ro 9000
S34
S40
S33
S60
S38
S37
S36
S39
S56
S58
ro 1000
C-6354
C-6365
C-6353
S63
S62
S54
C-6360
ro 2000
C-6384
ro 2500
SL78
S59
S55
ro 3000
S35
12e

ro 250
ro 300
ro 400

NOTE : For legend see sheet 2

63°34'00" 63°22'00"
45°37'30"
45°34'00"

1	2	3	4

KEY

433056 54-D 16 02

Gulf Minerals Canada Limited

COBEQUID PROJECT

PROSPECTING

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: III gb
DECEMBER 1978	1 INCH = 400 FEET	D.A.G	N.T.S. 11E/11 PT.

To accompany "Cobequid III & IV Report" Dec. 1978

63°28' 27' 26' 63°25'

45°37'30"

37'

36'

35'

45°34'

L - 80 + 00 E

L - 100 + 00 E

L - 120 + 00 E

L - 140 + 00 E

L - 160 + 00 E

L - 180 + 00 E

TL - 72 + 00 N

TL - 30 + 00 N

BL - 0 + 00

TL - 40 + 00 S

TL - 80 + 00 S

TL - 120 + 00 S

Debert Lake

Big Snare Lake

Little Snare Lake

K1692 K1732 K1771 K1868 K1869 K1928 K1967 K2962 K3031 K3001 K3095 K3134 K3173 K3212

K1870 K1930 K1970 K3090 K3130 K3170 K3210

K1700 K1740 K1779 K1860 K1781 K1857 K1880 K1940 K1980 K2970 K3040 K3010 K3082 K3120 K3160 K3200

K1710 K1750 K1790 K1850 K1927 K1890 K1950 K1990 K1991 K1993 K1994 K2980 K3050 K3020 K3078 K3110 K3150 K3190

K1720 K1760 K1800 K1920 K1900 K1960 K1997 K2000 K2988 K3056 K2995 K3030 K3070 K3060 K3100 K3140 K3180

K1730 K1731 K1770 K1809 K1910 K1908 K1907 K1966 K2005 K3000 K3057 K3096 K3135 K3174

K2687 K2648 K2608 K2584 K2582 K2542 K2502 K2463 K2462 K2842 K2882 K2922

K2690 K2650 K2610 K2590 K2580 K2550 K2510 K2470 K2460 K2423 K2420 K2810 K2850 K2890 K2930

K2660 K2620 K2700 K2704 K2600 K2564 K2563 K2560 K2520 K2480 K2440 K2410 K2450 K2820 K2860 K2900 K2940 K2943 K2946

K2670 K2630 K2607 K2400 K2490 K2530 K2830 K2870 K2910 K2950

K2680 K2681 K2640 K2720 K2684 K2686 K2725 K2647 K2496 K2498 K2538 K2500 K2540 K2501 K2424 K2425 K2430 K2428 K2390 K2840 K2841 K2880 K2881 K2920 K2921 K2258 K2360 K2361 K2301 K2344

K2006 K2008 K2048 K2050 K2090 K2132 K2174 K2216 K2260

K2011 K2220 K2180 K2140 K2350 K2353 K2310 K2100 K2270 K2060 K2230 K2358 K2360 K2020 K2190 K2150 K2320 K2110 K2280 K2070 K2030 K2240 K2200 K2370 K2160 K2203 K2330 K2290 K2205 K2120 K2080 K2123 K2040 K2125 K2250 K2251 K2210 K2380 K2254 K2170 K2340 K2130 K2131 K2089 K2173 K2215 K2300 K2343 K2386 K2047

LEGEND

o Soil Sample Location

o K2070 "K" Series, 1978 Samples

Sample numbers are consecutive unless otherwise noted.

63°34'00" 63°22'00"

45°37'30" 45°34'00"

1 2 3 4

KEY

43056 54-D 16 02

Gulf Minerals Canada Limited

COBEQUID PROJECT

GEOCHEMICAL SURVEY

(SAMPLE LOCATION AND NUMBER)

CLAIM BLOCK III, IV

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: III f
OCTOBER 1978	1 INCH = 400 FEET		N.T.S. 11E/11 PT.

TO ACCOMPANY "COBEQUID IV REPORT," DEC. '78.

63°28' 27' 26' 63°25'

45°37'30"

37'

36'

35'

45°34'

L - 80 + 00 E

L - 100 + 00 E

L - 120 + 00 E

L - 140 + 00 E

L - 160 + 00 E

L - 180 + 00 E

TL - 72 + 00 N

TL - 30 + 00 N

TL - 40 + 00 S

TL - 80 + 00 S

TL - 120 + 00 S

BL - 0 + 00

Debert Lake

Big Snare Lake

Little Snare Lake

LEGEND

° Soil sample location

6/4 "A" Horizon value in p.p.m. / "C" Horizon value in p.p.m.

– Assay value < 0.1 p.p.m.

NOTE: Sample values are X 10

ie : 1.8 = 18

63°34'00" 63°22'00"

45°37'30" 1 2 3 4 45°34'00"

KEY

483056 54-D 16 02

Gulf Minerals Canada Limited

COBEQUID PROJECT

GEOCHEMICAL SURVEY

(SAMPLE LOCATION AND VALUE)

URANIUM

CLAIM BLOCK III, IV

NOVA SCOTIA

DATE:	SCALE:	DRAWN BY:	PLATE: III fb
OCTOBER 1978	1 INCH = 400 FEET		N.T.S. 11E/11 PT.

To accompany "Cobequid III & IV Report" Dec. 1978