



32E13NE0115 20 LOWER DETOUR LAKE

010

Diamond Drilling

Area of LOWER DETOUR LAKE

Report No 20

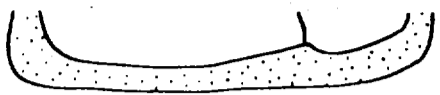
Work performed by: AMOCO CANADA PETROLEUM CO. LTD.

Claim No	Hole No	Footage	Date	Note
P 400999	18-1	741.0'	Feb/76	(1)
P 400998	18-2	608.0'	Feb/76	(1)

Notes:

(1) #96-76

AMOCO CANADA PETROLEUM COMPANY LTD.
 SUITE 2010 - 65 QUEEN ST. WEST
 TORONTO 1, ONTARIO

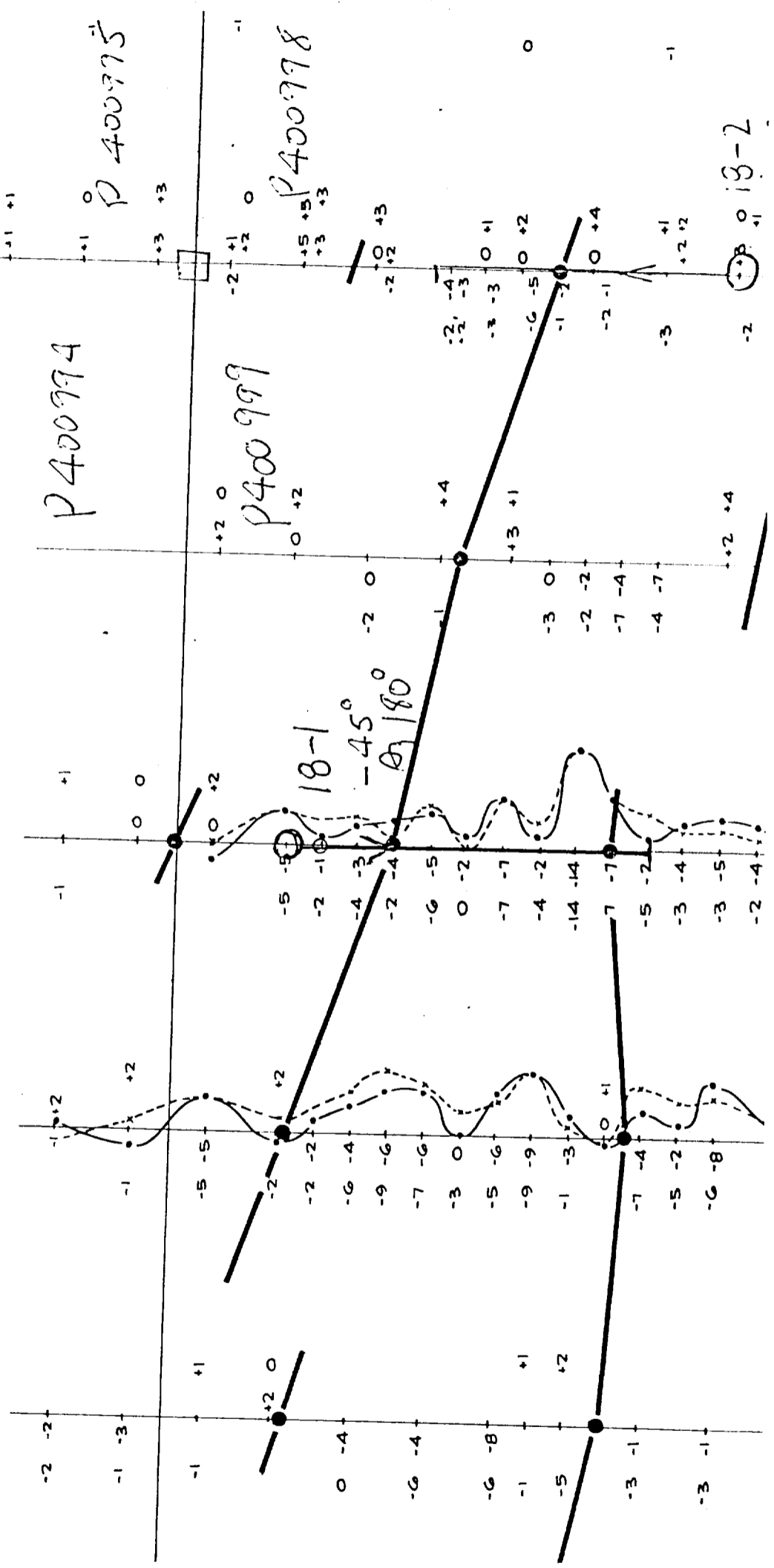


1" = 200'
 L4+00W

M00+917

L12+00W

M00+87



ASSAY DATA SHEET

AMOCO CANADA PETROLEUM CO. LTD.

PROJECT Atkinson Lake
 COMPLETED BY W. Melnyk

HOLE No. 18-1
 DATE Feb 21, 1976

SAMPLE No.	FROM	TO	WIDTH	Au.	Ag.	Cu.	Zn.	Pb.	Ni.
A 1601	500	505	5.0	T	.03	.01	.005		
A 1602	540	545	5.0	T	.03	.03	.006		
A 1603	560	565	5.0	T	.03	.01	.007		
A 1604	585	590	5.0	T	.03	.02	.006		
A 1605	590	595	5.0	T	.03	.01	.008		
A 1606	595	600	5.0	T	.02	.01	.005		
A 1607	620	625	5.0	N	.02	.01	.009		
A 1608	635	640	5.0	N	.02	.01	.007		
A 1609	640	645	5.0	N	.02	.01	.008		
A 1610	645	650	5.0	N	.01	.009	.006		
A 1611	650	655	5.0	N	.01	.009	.007		
A 1612	655	660	5.0	N	.01	.01	.007		
A 1613	660	665	5.0	N	.01	.01	.007		
A 1614	665	670	5.0	N	.03	.01	.008		
A 1615	670	675	5.0	N	.04	.003	.006		
A 1616	680	685	5.0	N	.01	.003	.005		
A 1617	690	695	5.0	N	.01	.001	.007		
A 1618	700	705	5.0	N	.02	.01	.007		
A 1619	705	710	5.0	T	.03	.01	.01		
A 1620	710	715	5.0	T	.01	.01	.007		

ASSAY DATA SHEET

AMOCO CANADA PETROLEUM CO. LTD.

PROJECT *Afikinson Lake*

COMPLETED BY *W. McLaughlin*

HOLE NO. *18-2*

DATE *Feb. 25, 1976*

SAMPLE No.	FROM	TO	WIDTH	Au.	Ag.	Cu.	Zn.	Pb.	Ni.
A1621	165	163	3	N	.09	.22	.23		
A1622	185	190	5	N	.01	.01	.008		
A1623	210	215	5	N	.02	.01	.005		
A1624	225	230	5	T	.01	.01	.01		
A1625	230	235	5	T	.01	.01	.01		
A1626	235	240	5	T	.02	.02	.033		
A1627	240	245	5	T	.02	.04	.016		
A1628	245	250	5	T	.01	.04	.008		
A1629	250	255	5	T	.01	.01	.009		
A1630	255	260	5	N	.02	.01	.008		
A1631	270	275	5	N	.04	.01	.006		
A1632	285	290	5	N	.01	.02	.004		
A1633	310	315	5	N	.04	.01	.012		
A1634	322	327	5	N	.03	.03	.013		
A1635	370	375	5	N	.02	.01	.007		
A1636	375	380	5	N	.02	.02	.009		
A1637	415	420	5	T	.02	.01	.006		
A1638	460	465	5	T	.02	.01	.006		
A1639	515	520	5	T	.01	.01	.006		
A1640	582	587	5	T	.02	.002	.005		

PROPERTY	HOLE NO.	BEARING	DIP-COLLAR	LATITUDE	LONGITUDE	STARTED	FINISHED	LENGTH	LOGGED BY	Microfines %	DIP TEST		FOOTAGE		SAMPLE NO.	FOOTAGE		ASSAYS		
											Footage	Corrected	From	To		Length				
Atkinson Lake 76.001	18-1	180°	- 45°	L 800 W	1 805 S	Feb. 11, 1916	Feb. 19, 1916	741 feet	W. Meloyk		Footage	Corrected	From	To <td>600'</td> <td>40 1/2</td> <td></td> <td></td>	600'	40 1/2				
				DEPARTURE	ELEVATION															
				SECTION																
116.0				Casing																
120.0				Mafic Flow																
				A surface jointed, light green, siliceous, well fractured and very much mineralized in disseminated pyrite and pyrrhotite. This rock is thoroughly fractured and many of the fractures are filled with carbonate. The rock is ultimately chloritized. Carbonate veins are at 50'-60' W.C.A. Some contain very small amounts of pyrite and pyrrhotite. Hardness: 4.5-5.0 113.5 - 2' siliceous tuff contacts at 50' W.C.A.																
129.1				Felsic lapilli Tuff																
				This is a siliceous, friable, dark grey unit whose prominent features are the lack of sufficient mineralization and scattered white fragments ranging in size to 2 cm. The rock is also characterized by quartz, zircon (to 2 mm) and some brown, black, barite also to 2 cm in size. This unit has been fractured but the post-fracturing has been subsequently filled by carbonate material with associated chlorite. Bottom contact is at 50' W.C.A.																
129.1				Mafic Flow																
				A consistent sequence of fine to coarse grained mafic flows - andesite to basaltic in composition. Rock is similar to dark green in color and is often chloritized. Siliceous mineralization is very poor consisting of minor pyrite and pyrrhotite mainly in association with carbonate. Fracture facies fracturing runs from 45°-50° W.C.A. 205.0' - Intermittent small % of pyrite pyrrhotite at 60' W.C.A.																

From	To	FOOTAGE	DESCRIPTION	PROPERTY		SAMPLE NO.	FOOTAGE		ASSAYS
				%	Maceralites		From	To	
			272.6' : 1/2" quartz vein with pyrite, pyrobitite and trace of chalcopyrite.						
			215.0-218.0' : This section contains a great deal of brown bitite, and was apparently a result of pyrite and pyrobitite. This section had low substitution.						
308.0	313.1		<p>Expos. Lignite. Left</p> <p>This unit is similar to the previous lignite unit, in that it is siliceous, gray and very finely granular. Fragments are a dark gray, white, finely lumpy, shaly and commonly 3 mm in size.</p> <p>1-1/2" are chloritized fragments of this unit in association with pyrobitite and pyrite.</p> <p>The rock outcrop contains minute flakes of brown bitite and green chlorite, resulting in a greenish-brown hue.</p> <p>Budding is not 30' wide. This unit has not been subjected to folding as the matrix flows but showing a common wave fracture.</p> <p>Bottom contact is not 35'-40' W.C.B.</p>						
			311.0' : 3' inclusion of matrix material						
313.1	678.2		<p>Matrix Flows</p> <p>Similar to 1291-3880. Predominantly coarse grained chloritized flows. They were mineralized with disseminated pyrobitite. The composition of the flows does not vary much, their physical appearance and texture being typically display a swelling in grain size towards the center of the flow and also is evident that the contact is not a large angle with the matrix - 60°-68°.</p> <p>There is no quartz vein and only minor amount of carbonate in matrix.</p> <p>Carbonate filled fractures are generally at 45°-88° with the core axis.</p> <p>Older specks of chalcopyrite are present and appear to increase in percentage beyond 500 feet. The chalcopyrite is invariably associated with pyrobitite and chlorite. Chalcopyrite is present in the core of pyrobitite blocks.</p> <p>From 520-585 flows are interbedded with matrix filled with carbonate. Majority of fractures are at 60° W.C.B.</p> <p>544.0' : 2' of fractures infilled with carbonate, quartz, pyrobitite, chalcopyrite and pyrite.</p> <p>Rock remains dry until 645.5' where the sulfate contact increases somewhat with the presence of pyrobitite, chalcopyrite and pyrite in quartz-carbonate veins.</p>						

FOOTAGE		DESCRIPTION	PROPERTY	SAMPLE NO.	FOOTAGE		ASSAYS
From	To				From	To	
		611.0 : 1/8" veinlet consisting of pyrite, siderite and some chloropyrite; at 20° w.c.s.a.					
		645.5 : 3/4" veinlet qtz-cs; p.p.g.s.f. at 30°.					
		648.0 : 1/2" veinlet qtz-cs; p.p.g.s.f. at 35°.					
		649.0 : 3/4" veinlet qtz-cs; p.p.g.s.f.					
		at 645.5 and 649.0: some qtz-cs; siderite, kinked fracture that are very nearly sub-parallel with the course.					
678.0	696.5	Fine, Tuff A light green siliceous, fine grained, soft cement-like tuff, abundant but decreasing in depth. At the top of this tuff fragments are minute whitish quartz, white at depth they appear as white blotches about 2mm in diameter. The ground part of the rock is clear to make flecks of chlorite in the siliceous matrix. Fracturing is common in this unit and for the most part these fractures are filled with black bitite, chlorite, hematite or a layer of that carbonate. Solid contact is oil in this unit. Base top and bottom contacts are at 25° w.c.s.a. 689.0 : 3" of bitite material containing scattered pyrite cubes. May be an outcrop.					
696.5	705.0	Mafic Flow Similar to above mafic flows. This short zone of flows is bounded considerably over most of the footwall and ends are filled with carbonate. There is an order of increase in the abundance of the fractures although 45° w.c.s.a. is common. Sulfide mineralization is nil.					
725.0	739.5	Intermediate Flow A distinct intermediate unit characterized by its block, fine grained, siliceous bitite-rich matrix, finely or thoroughly homogeneous, consisting of white, phenocrysts of plagioclase. The matrix is composed of bitite and brown bitite, some phenocrysts of chlorite and quartz. These contacts are fine grained but have rounded to sub-rounded white phenocrysts of bitite, generally about 2-3mm in length. Top and bottom contacts are at 45° w.c.s.a.					
739.5	741.0	Mafic Flow A green fine grained, bitite-rich, basaltic flow similar to those immediately above.					
		741.0					
		END of Hole					

PROPERTY	Alkansa Lake	LATITUDE	L0700		STARTED	Feb 20		FOOTAGE	Corrected	FOOTAGE	Corrected
			DEPARTURE	ELEVATION		FINISHED	LENGTH				
MOLE NO.	13-7		7150.5					200'	43°		
BEARING	360°							400'	42°		
DIP-COLLAR	- 45°							600'	43°		
LOGGED BY	W. Meloyk										
FOOTAGE	From To										
122.0	122.0	Caing									
131.0	131.0	Major Flows									
135.0	135.0	Cherty Micardiment									
140.5	140.5	Major Flows									
140.5	140.5	Cherty Tuff									

A cherty light brownish medium-grained limestone - low in calcite - is present in the lower part of the section. It is a fossiliferous limestone and contains many small shells. The fossils are mostly small brachiopods and bryozoans. The matrix is a fine-grained limestone with a high degree of porosity. The fossils are preserved in the matrix.

A cherty micardiment consisting of a light brown chert (1/2" - 2") set in a greenish-brown matrix of cherty micardiment and limestone. The micardiment contains many small shells and is a fossiliferous limestone. The fossils are mostly small brachiopods and bryozoans. The matrix is a fine-grained limestone with a high degree of porosity. The fossils are preserved in the matrix.

A sequence of fine-grained green matrix flows - possibly pillowed - is present in the rock. It is a cherty micardiment and the fossils are mostly small brachiopods and bryozoans. The matrix is a fine-grained limestone with a high degree of porosity. The fossils are preserved in the matrix.

A cherty sediment having interlayering of thin laminae of white chert (1/2" - 1/4" thick) separated by bands of dark gray to black micardiment. The micardiment is a fossiliferous limestone and the fossils are mostly small brachiopods and bryozoans. The matrix is a fine-grained limestone with a high degree of porosity. The fossils are preserved in the matrix.

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FOOTAGE From To	DESCRIPTION	% Materialization	SAMPLE NO.	FOOTAGE		ASSAYS
				From	To	
160.8 - 167.5	Sectional The bedding is excellent at 70° W.C.A. although over the latter bedding is at 90° W.C.A.					
175.5	Mafic Pillared Layer This is the typical for gneiss, contains biotite, hornblende, and quartz. Early - contacte interface of pillow					
176.4 - 176.4	3" section of quartz - carbonate containing approximately 2% p.p. and trace of iron. This section also contains abundant up-hole and host of biotite.					
175.5 - 183.0	Mafic Tuff (Mafic Tuff) This unit is a mixture of Mafic Tuff separated by alternating light and dark siliceous beds and light, quartziferous, and calcareous in the form of thin, discontinuous layers, occasionally containing fragments of biotite. Shown a distinct It will diff. in color and texture, being sandy for the bottom of the section. through the diff. of quartziferous sandy, calcareous Bedding at 177.5 - 70° W.C.A. Bedding of good top of diff. consistent at 55° W.C.A.					
185.0 - 234.7	Mafic Flood A sequence of fine to coarse grained gneiss, medium to coarse grained, calcareous, and siliceous. It is calcareous to the south and biotite, hornblende, and quartziferous at 234.0' where the bed would be 70° W.C.A. Diagrams Minor quartz veins in this section 195.0' - 1/2" x 1/2" area located at 30° 197.0' - 1/2" x 1/2" area at 30° 210.5' - 1/2" x 1/2" area at 30° 217.0' - 1/2" x 1/2" area at 30° 224.0' - 1/2" x 1/2" area at 30°					
241.7 - 241.0	Mafic Tuff A fairly consistent unit of gneiss, very dark, bedded and thin, containing siliceous, calcareous, and quartziferous. The top of unit of this unit is 241.0'.					
244.0 - 251.0	This section contains features of biotite, hornblende, and quartziferous. The top of unit of this unit is 251.0'.					

FOOTAGE From To	DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE		ASSAYS
				From	To	
234.2 - 246.0	Continued					
	234.2 - 242.5' : Tuff near top well with sand and silt (H. 2.5-3.6). Tuff with silty matrix and silty clay (about 2.1). It is at approximately 70' from surface. Silty matrix is commonly associated with silicification.					
	242.5 - 246.0' : Silt. Tuff in upper Tuff zone is determined by silty matrix of silty fragments which is sand with silty matrix of the rock.					
	246.0 - 251.0' : Silt. silicification decrease significantly following silty sand matrix of sand & silt.					
	251.0 - 256.0' : Bottom contact is indistinct.					
261.5 - 325.0	Mafic Dykes A homogeneous unit which appears very much like conglomerate in nature but is agglomerated to silty fragments of silt and sand with scattered fragments of silt and sand. The unit is oxidized. Weathering is extensive and some sand matrix is visible in outcrops. and where present, fossils are found with poorly preserved chert. Silty mineralization is abundant, related to the calcareous matrix.					
	272.0' : 1/2" silt. matrix. Luster 45°					
	301.2' : 3/4" silt. matrix. Luster 75°					
	313.4' : 3/4" silt. matrix. Luster 30°					
	316.0' : 1/2" silt. matrix. P. Pe. Tuff 45°					
	316.0' : 1/2" silt. matrix. P. Pe. Tuff 28°					
	322.0' : 1/4" calcareous matrix. P. Pe. Tuff 28°					
325.0 - 330.8	Mafic Tuff A typical mafic tuff zone with silty matrix. Budding is evident and consistent at 70' from surface. Matrix is silty and is thin bedded. The block of pyroclastic material is approximately 3-5 ft. thick.					
330.5 - 331.5	Felsic Tuff A typical felsic tuff zone with silty matrix. Budding is evident and consistent at 70' from surface. Matrix is silty and is thin bedded. The block of pyroclastic material is approximately 3-5 ft. thick. Upper contact at 70'. Bottom contact is grey.					

FOOTAGE		DESCRIPTION	PROPERTY	FOOTAGE		ASSAYS
From	To			From	To	
331.5	335.7	Melanite This is a delicate white crystalline material of black biotite, quartz and calcite, with minor amount of chlorite and pyrite. The salt is dissolved and a white residue of quartz, calcite and biotite. This residue is soluble in hydrofluoric acid. The residue is insoluble in hydrofluoric acid.	% Mineralization			
335.7	336.7	Melanite This melanite is common and occurs in a thin layer of biotite. The melanite is fine-grained and is associated with biotite and quartz. The melanite is associated with biotite and quartz. The melanite is associated with biotite and quartz.				
337.7	340.0	Fluorite This section also contains pyrite to some extent. Although generally this rock is pyritic, the amount of pyrite is small. The amount of pyrite is small.				
342.0	343.0	Melanite Same as 335.7 - 338.7				
343.0	345.0	Fluorite Same as 336.7 - 340.0 contains at approx 70%				
345.0	349.0	Melanite Similar to 325.0 - 330.8. This melanite is well preserved and at 70% C.A. This melanite contains approx 2% calcite and 1% quartz. The melanite is associated with biotite and quartz.				
349.0	441.0	Melanite This melanite is of typical brown composition with some physical characteristics as brown melanite. It is associated with biotite and quartz. The melanite is associated with biotite and quartz. The melanite is associated with biotite and quartz.				

FOOTAGE From To	DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE		ASSAYS
				From	To	
4410 5042	<p>3470-4510 (continued) 1/2" x 1/2" x 1/2" (continued) of pyrite, chlorite and trace amounts of chlorite. Quantity very low, but not easily detectable.</p> <p>Make Flats Fine medium ground, green, fine (1/2" - 1/4") throughout length of hole. Pyrite occurring as disseminated cubes. This will be thin, light, fibrous. The matrix is by numerous fibrous carbonate minerals, most of which are 1/4" - 1/2" thick and are present at a few spots with the commonest effect. To 2 feet or generally border thickness: 3.5 - 4.5</p>					
5033 5261	<p>Make Flats This is an irregular, thin, laminated hematite containing about quartz, calcite, the latter conformable with the fissures. This hematite is usually associated with disseminated pyrite. E.S. bedding is very well pronounced and at least A. thickness: 4.0</p>					
5261 5765	<p>Make Flats Similar to 3470 C - 4410 This ultrabasic fine is characterized by being very coarse and rather irregular in shape. The matrix is a dark green to black, with a thin, dark green to black, fibrous texture. The matrix is very coarse. Except for the top of the specimen, quartz is generally in small amounts. The pyrite crystals have been replaced by the fibrous magnetite. Octahedral, massive, cubic, irregular of fine grains are also present. The hematite is a fine ground matrix of fibrous, chlorite, magnetite, pyrite, and traces of disseminated pyrite. thickness: 4.5 Pattern contact is at 450' W.S.P.</p>					
5765 5774	<p>Pelitic Tuff This is a fine grained, siliceous, dark green, white matrix of white, porous, rounded fragments. The matrix is size but is 1-2 mm in diameter. The dark green matrix is due to an upper matrix matrix of hematite but the matrix is an upper matrix. Matrix dissemination of pyrite was common through this unit.</p>					

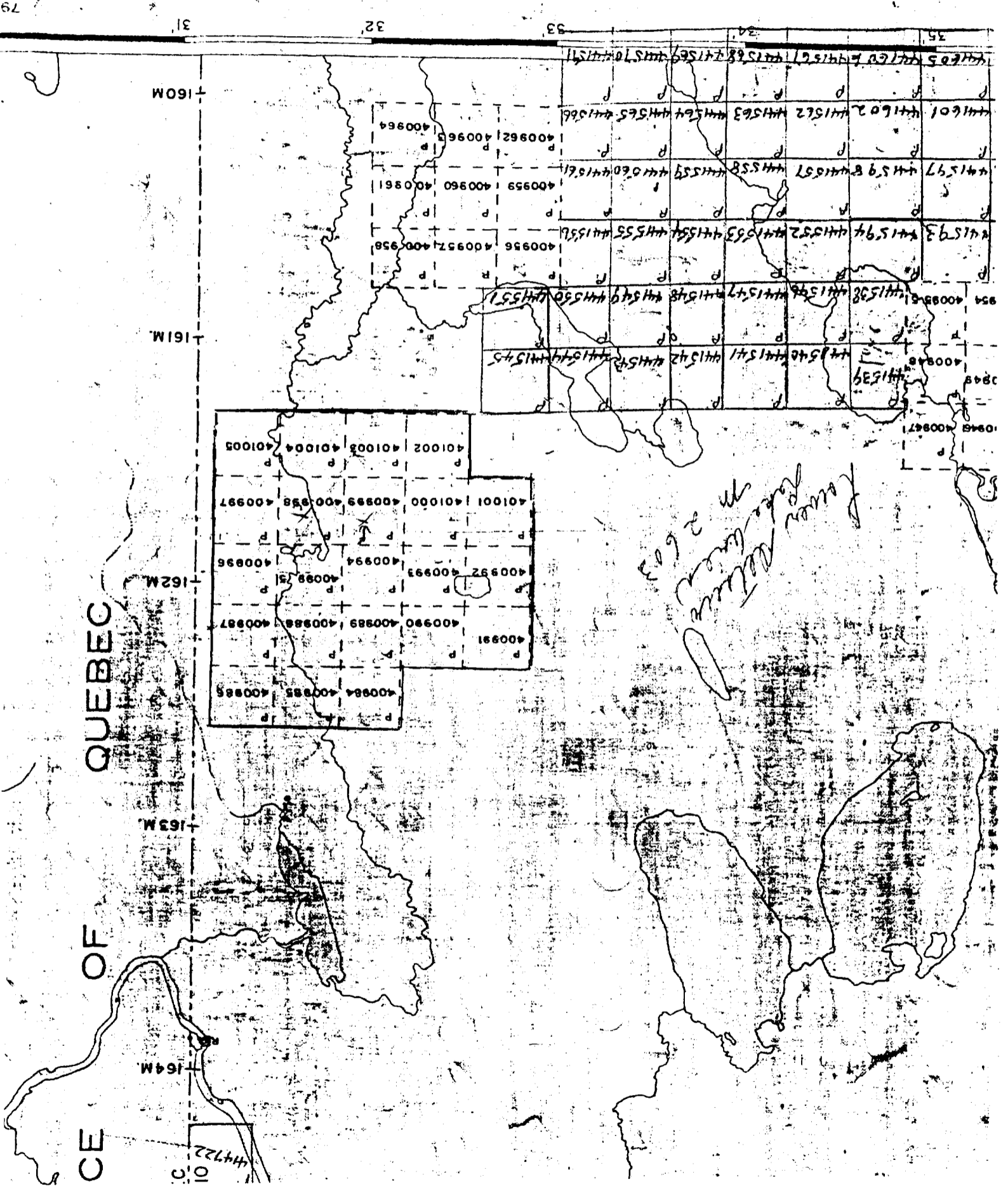
A.C.P.C.L. - MINING DIVISION - D.D.H. RECORD

#96

MOLE NO. 18-2

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FOOTAGE		DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE		ASSAYS
From	To				From	To	
577.6	581.2	Material in cut - Make Test This unit is probably a mixture of fine coarse buff material and a clay fragment. The top half portion of the unit is a black bituminous and highly bedded shale at depth the fine grained to identify individual constituents except for high siliceous and carbonate content of pyrite. Sulfide mineralization consists of disseminated -15% w.s.a. Bulky is resistant through the interval at Hardness 130					
581.5	587.8	False Test Same as 576.5-577.6 Contact no. at 45° W.S.A.					
587.8	608.0	Make Flow Same as 581.1-586.5					
		End of Hole					



#96-76
 Lower Detour Lk.