



42B01NW0044 49 KEITH

010

DIAMOND DRILLING

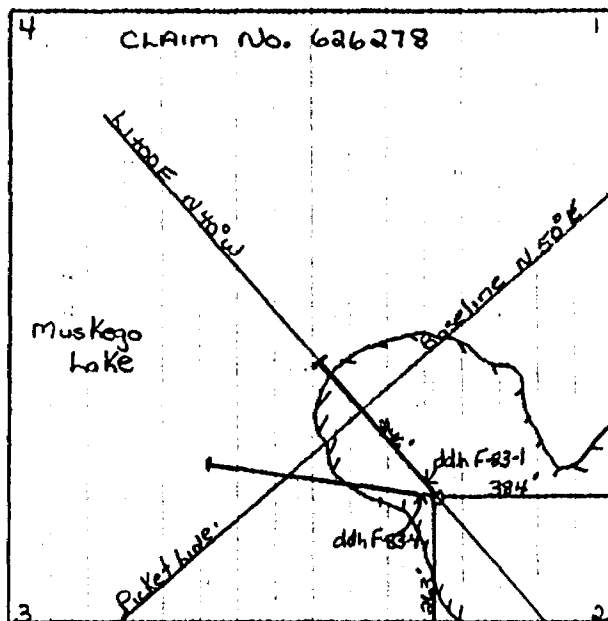
TOWNSHIP: Keith

REPORT No.: 49

WORK PERFORMED BY: Hudbay Mining Ltd.

<u>CLAIM No.</u>	<u>HOLE No.</u>	<u>FOOTAGE</u>	<u>DATE</u>	<u>NOTE</u>
P 626278	F83-1	750	July/83	(1)
P 636495	F83-2	481	July/83	(1)
P 636494	F83-3	436	July/83	(1)
P 641573	F83-4	803	Aug/83	(1)

NOTES: (1) #54-84



Location Sketch - Diamond Drill Holes F-83-1, F-83-4

Scale 1:5000



*George E. Chabot*  
November, 1983

# DIAMOND DRILL RECORD

PROPERTY Foley Project - Muskego Group

HOLE No. F-83-1

DIP TEST		
Footage	Angle	
	Reading	Corrected
140' (42.67m)	60.7°	52.5°
314' (95.71m)	59°	51°
550' (167.64m)	56°	48°
750' (228.60m)	55°	46.7°

Hole No. F-83-1 Sheet No. 1 Lat. ....  
 Section L1+00E, O+755 Dep. ....  
 Date Begun July 25, 1983 Bearing 323°, -55°  
 Date Finished July 31, 1983 Elev. Collar. ....

Total Depth 750' (228.60m)  
 Logged By G. Chabot  
 Claim 626278  
 Core Size BQ

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
0-140f (0-42.67M)	Overburden					
140-332 ft (42.67-101.19m)	Intermediate to Felsic Tuffs - grey to greenish grey in color - moderately hard to locally hard - fine grained - from 245-332 ft core has a spotted texture formed by sub-round calcite blebs <1 in. in diameter - locally, the calcite gives the core a streaky appearance - quartz-calcite veins <6 in. wide and containing fragments of the country rock are observed eg 201' & 297' - locally the core is strongly fractured and the hairline cracks are filled by chlorite and/or calcite - the core is generally not mineralized - the quartz calcite vein at 201 ft contains very very minor cpy					
332-427 ft (101.19-130.15m)	Rhyolite Lapilli Tuff - at 332 ft the contact is apparently sharp and is marked by a chlorite-calcite vein 2" wide at 20° TCA - however, there are some fragments of the overlying unit					

# DIAMOND DRILL RECORD

PROPERTY .. Foleyet Project .. Muskego Group .....

HOLE No. F-83-1 .....

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 2 ..... Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	adjacent to the contact						
	- very hard, fine grained						
	- consists of rhyolite lapilli < 1/16 in in diameter						
	in a calcite matrix - commonly, the matrix is chloritized with a brown						
	colored chlorite occurring as streaks and small pods						
	- contains numerous thin calcite filled fractures at						
	varying orientations						
	- from 400-404 ft core is badly broken and rubbly						
	- interval is not mineralized						
427-465 ft	Felsic Tuff						
(130.15-141.73m)	- upper contact is sharp but somewhat irregular ~30° TCA						
	- core is medium grey to locally greenish grey						
	- core is hard although the alteration makes it appear soft						
	- very fine grained						
	- consists of very fine tuffaceous fragments in a						
	calcite cement						
	- commonly, the tuff is chloritic						
	- the core is cut by a myriad of fine calcite veinlets						
	at varying orientations						
	- from 461.5-465, the core is a light greenish grey in						



# DIAMOND DRILL RECORD

PROPERTY Foley Project - Muskego Group

HOLE No. F-83-1

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. .... Sheet No. 4 ..... Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
	- the sericite is greenish in color and appears to be streaky					
	- calcite is present as very, thin veinlets which locally crosscut the bands and offsets them, particularly the sericite					
	- very small orange brown blebs and streaks (probably sphalerite) are observed within the bands, particularly, from 465-466 ft where the bands are strongly disrupted by calcite veinlets and pods, sphalerite is most abundant (<.5%)					
	- the section contains <5% pyrrhotite					
	- at 465 ft a chloritic section has some gouge along a fracture					
<u>468.8-473 ft</u> <u>(142.89-144.17m)</u>	<u>Felsic Tuff</u> similar to 461.5 to 465 ft					
	- locally pseudo banded, particularly at the upper contact					
	- shows evidence of shearing parallel TCA					
	- strongly sericitic					
	- less calcite veined and much less sulphide rich					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 5 ..... Lot. .... Total Depth. ....  
 Section ..... Dep. .... Logged By. ....  
 Date Begun ..... Bearing ..... Claim .....  
 Date Finished ..... Elev. Collar. .... Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE					
	- contains black disseminated, very fine grained mineral							
	- at 471 ft, chalcopryite is observed along a calcite slip plane							
	- at 471.75 ft, a .75 in wide massive pyrrhotite band with small pods of calcite is observed							
<b>473-750 ft</b> (144.17-228.6m)	<b>Intermediate to Felsic Tuffs</b>							
	- similar to 140-332 ft							
	- from 473-585 ft the section is strongly disturbed by calcite veinlets and quartz-calcite veins <1" wide locally, the rock adjacent to the veins is brecciated and cemented by calcite							
	485-498 ft - interval contains <1% pyrrhotite with minor pyrite in thin discontinuous bands and as fine disseminations							
<b>750 ft</b>	<b>END OF HOLE</b>							

*George Chalbot*  
27/01/84

# DIAMOND DRILL RECORD

PROPERTY Foley Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected
200' (60.96m)	56.5°	48.5°
380' (45.82m)	53.25°	45°
481' (146.61m)	52.5°	44°

Hole No. F-83-2 Sheet No. 1 Lot.....  
 Section L6+00W, 3+50N Dep.....  
 Date Begun July 20, 1983 Bearing 190° -55°  
 Date Finished..... Elev. Collar.....

Total Depth 481 ft (146.61m)  
 Logged By G. Chabot  
 Claim 636495  
 Core Size BQ

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
0 - 22 ft (0-6.71m)	Overburden - casing was tri-coned to 22 feet although bedrock was encountered at approximately 16 feet					
22-87 ft (6.71-26.52m)	Mafic Tuff - core is medium to dark grey in color - medium hardness - generally fine grained - commonly has a spotted texture comprised of calcite blebs - locally there is an apparent bedding of 70° TCA - narrow calcite veinlets < .5 in. wide are common and although their attitude varies, they appear to average 45° TCA - the core is commonly calcareous - calcite is observed as permeations along fractures and tiny cracks					
87-107 ft (26.52-32.61m)	Mafic to Intermediate Tuff with Argillite - the tuff is medium green and the argl. is dark grey to black					



# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 2 Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	- the tuff is fine grained with irregular shards and may be a lappilli tuff - the tuff commonly contains thin argillaceous bands						
	- argillite is observed as thin bands $\leq$ .25 in. wide and as larger $\leq$ 1 ft. interbeds						
	- calcite is a common alteration in stringers, as blebs, as permeations and in $\leq$ 1 in. irregular, nebulous bands						
	- locally, sharp bedding contacts are observed between the argillite and tuff at $\sim 40^\circ$ TCA						
	- the argillite is the most strongly mineralized with $\leq 1\%$ pyrrhotite with pyrite and locally (eg. 95 ft) minor chalcopyrite						
	- the mineralization is commonly associated with the nebulous calcite bands as rims, blebs and stringers						
	- very fine pyrrhotite is observed in the argillite						
	- locally, the tuff contains fine pyrrhotite stringers associated with calcite veinlets at $50^\circ$ TCA and as very fine disseminations and patches						
	- graphite is not observed associated with the argillite						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 3 Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE					
	- mineralization is generally discontinuous but locally is weakly to moderately conductive over widths of .25 in.							
	- 102-107 ft.-mainly intermixed argillite with tuff							
	- < 1% pyrrhotite as fine disseminations throughout and as blebs, and pods along fractures							
	- section is strongly calcareous							
107-149ft. (32.61-45.41m)	Mafic Tuff - similar to 22 to 87 ft							
149-152 (45.41-46.32m)	Altered Mafic Metavolcanic - light grey in color - medium hardness - fine grained to aphanitic - has a well developed foliation but it shows no preferred orientation - the foliation is accentuated by thin (<.5 in) olive green bands and to a lesser extent orange-red bands and inclusions - also thin black streaks give it a foliation - calcite veins and fracture fillings are common							

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. .... Sheet No. 4 Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collor. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
152-153 (46.32-46.63m)	Banded Argillite - medium to light grey - moderately hard - consists of 1 to 2 inch light and dark muddy bands (beds?) at 60° TCA - bands are locally discontinuous - contains minor disseminated pyrite					
153-158 (46.63-48.16m)	Altered Mafic Metavolcanic - similar to 149 to 152 ft					
158-172 (48.16-52.42m)	Banded Argillite - similar to 152-153 - medium to light grey in color - medium hardness - bands are well defined with sharp contacts - bands are oriented to 45° to 50° TCA - locally (167.3ft) thin banded argillite is deformed so that it has a folded appearance with a fold axis @ 10° TCA - section is strongly calcareous with calcite observed as veinlets and pods along bedding planes - irregular bands < 3" wide of calcareous material					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 5 ..... Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
	are observed roughly along bedding planes - also, calcite stringers and blebs are locally present					
	- the section is mineralized with pyrrhotite as thin <.1 in. continuous bands which locally(162.5 ft) contain m.cpy					
	- the sulphide mineralization is commonly found parallel to bedding planes and also associated with calcite - very fine pyrrhotite is observed disseminated throughout the argillite					
172-172.3 (52.42-52.52m)	Argillite - black in color - aphanitic - in sharp irregular contact with adjacent rock units					
172.3-180 (52.52-54.86m)	Mafic to Intermediate Tuff - similar to unit from 87-107 ft without the argillite - fine grained greenish grey in color - thin chertitic bands are common - calcite is common as stringers and fracture fillings					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 6 ..... Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
180-189 (54.86-57.61m)	Mafic Tuff - similar to 22 - 87 ft. - v. fine pyrrhotite is disseminated throughout the unit					
189-238 (57.61-72.54m)	Altered Mafic Metavolcanic - similar to 149-152 - foliation is moderately well developed at 70-80° TCA - foliation defined by thin dark streaks - locally, a scaly texture is observed - minor sulphides, pyrrhotite and pyrite are present as disseminations and thin bands locally parallel to the foliation					
238-241 (72.54-73.46m)	Mafic to Intermediate Tuff - similar to 87-107 feet					
241-245 (73.46-74.68m)	Altered Mafic Metavolcanic - similar to 149-152 feet					
245-262 (74.68-79.86m)	Mafic to Intermediate Tuff - similar to 87-107 feet					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 7 Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
262-263 (79.86-80.16m)	Quartz-Carbonate Unit - oriented at ~ 10° TCA - contains minor sericite and disseminated pyrrhotite						
263-297 ft (80.16-90.52m)	Mafic to Intermediate Tuff - 264-266 - highly disturbed by calcite veinlets, stringers and blebs						
297-363 (90.52-110.64m)	Mafic Tuff - similar to 22-87 feet - locally contains narrow chloritic bands - very fine pyrrhotite is commonly observed disseminated throughout this unit - at 360.5 ft. pyrrhotite and chlorite and calcite form narrow (.1 in) semi-continuous bands at 70-80° TCA and interconnected networks - the pyrrhotite contains very minor chalcopyrite						
363-366 (110.64-111.56m)	Argillite - similar to 152-153 ft - bedding at ~ 70° TCA						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

8

Hole No. ....	Sheet No. ....	Lot. ....	Total Depth. ....
Section. ....	Dep. ....	Bearing. ....	Logged By. ....
Date Begun. ....	Elev. Collar. ....	Claim. ....	Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	AU oz/T	Ag ppm	Zn ppm
	- discontinuous pyrrhotite found along bedding planes					
366-387 ft (111.56-117.96m)	Altered Mafic Metavolcanic - similar to 189-238 feet - foliation @ ~ 75° TCA - contains disseminated pyrrhotite and minor pyrite - from 388-391 section is strongly calcareous with veins and blebs					
387-391 (117.96-119.18m)	Altered Mafic Tuff - similar to 22-87 ft - strongly carbonatized with numerous irregular quartz-carbonate veins and bands - also, blebs of pyrrhotite /c minor chalcopyrite are common (<1%) - blebs are conductive but are discontinuous, consequently conductivity is limited	15807	387-391	NIL	0.2	167
391-395 (119.18-120.40m)	Argillite - black hard, aphanitic - strongly calcareous with thin calcareous bands	15808	391-395	NIL	1.1	3500

# DIAMOND DRILL RECORD

PROPERTY ..... Foleyet Project - Carbonate GROUP

HOLE No. .... F-83-2 .....

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. .... Sheet No. **9** ..... Lat. .... Total Depth .....

Section ..... Dep. .... Logged By .....

Date Begun ..... Bearing ..... Claim .....

Date Finished ..... Elev. Collar ..... Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	AU oz/T	AG ppm	Zn ppm
	commonly parallel to bedding at 40-50° TCA					
	- section is strongly mineralized-mineralization					
	consists of bands < 2 in. wide which are irregular					
	with continuous rims and are filled by disseminated					
	blebs of pyrrhotite and minor pyrite					
	- section contains < 3% sulphides					
	- rims are commonly conductive					
395-403.75	Altered Mafic Tuff	15809	395-400	NIL	0.2	84
(120.40-123.06m)	- similar to 387-391	15810	400-403.75	NIL	0.2	79
403.75-406.5	Argillite	15811	403.75-407.5	.001	1.0	3800
(123.06-124.21m)	- similar to 391-395 ft					
	- sulphides associated with calcite bands					
	- contains minor cpy					
407.5-409.5	Altered Mafic Tuff	15812	407.5-409.5	NIL	0.5	648
(124.21-124.82m)	- similar to 387-391					
409.5-414	Argillite	15813	409.5-414	0.001	1.2	3900
(124.82-126.19m)	- similar to 391-395					



# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83 2

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. .... Sheet No. 10 Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	AU oz/T	Ag ppm	Zn ppm
	- more carbonate alteration in the form of veins					
	- also pyrrhotite pods with calcite rims as well as banded mineralization					
414-425 (126.19-129.54m)	Altered Mafic Tuff - similar to 387-391	15814	414-419	NIL	0.4	239
425-426 (129.54-129.84m)	Argillite - similar to 391-395					
426-439 (129.84-133.81m)	Mafic to Intermediate Tuff - similar to 870107 ft - green to greenish grey in color - cut by numerous calcite veins < 2 in wide which are locally cross-cutting - minor disseminated sulphides					
439-440 (133.81-134.11m)	Argillite - similar to 391-395					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. ....	Sheet No. <u>11</u> .....	Lot.....	Total Depth.....
Section.....	Dep.....	Bearing.....	Logged By.....
Date Begun.....	Elev. Collar.....	Claim.....	Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
440-472 (134.11-143.86m)	Mafic to Intermediate Tuff - similar to 426-439 ft. 457-472 ft - less strongly veined					
472-481 (143.86-146.61m)	Mafic Tuff - similar to 22-87					
481 (146.61m)	END OF HOLE					

*George Chabot*

27/01/84

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-3

DIP TEST		
	Angle	
Footage	Regding	Corrected
76' (23.16m)	53°	45°
436' (132.80m)	49.9°	41°

Hole No. F-83-3 Sheet No. 1  
 Section L6+00W, 1+20N  
 Date Begun July 15, 1983  
 Date Finished July 20, 1983

Lot.....  
 Dep.....  
 Bearing 190°--50°  
 Elev. Collar.....

Total Depth 436' (132.89m)  
 Logged By G. Chabot  
 Claim 636494  
 Core Size BQ

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
0-70' (0.-21.34m)	Overburden - large boulders in gravel - casing broke twice before the drill was able to penetrate the overburden					
70-436' (21.34-132.89m)	Mafic Metavolcanic - core is medium grey to greenish grey in color - generally, medium hardness with local soft areas - fine grained to aphanitic - commonly finely fractured with fractures filled with calcite - quartz and quartz carbonate veins are observed locally - locally, fractures have narrow (<.5 in) alteration halos - halos are commonly light grey and/or red in color					
76 - 82 ft	- greenish grey alteration halos are observed along calcite veinlets which are oriented 30°-50° TCA					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project, Carbonate Group

HOLE No. F-83-3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 2 ..... Lot..... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing ..... Claim .....  
 Date Finished..... Elev. Collar..... Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
84-84.5 ft	- quartz veins and fragments are observed roughly interbedded with soft, medium green material						
	- roughly oriented at 50° TCA						
92.5 ft	- quartz carbonate vein, 1" wide oriented at 15° TCA						
98.5 ft	- 3" wide vein oriented at ~45° TCA						
	- consists of anhedral pink quartz in a green, black and cream colored calcareous matrix						
145 ft	- 1" wide band oriented @45° TCA of disseminated pyrrhotite blebs						
	-moderately conductive - cut by thin calcite veinlet						
152 ft	- 3" section of disseminated pyrrhotite blebs						
	- weakly conductive						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 3 ..... Lat. .... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
154-164 ft	- strongly altered section containing reddish brown alteration rims and halos - commonly associated with calcite veinlets but are also observed as halos around darker colored volcanic material					
191-191.5 ft	- quartz vein @15°TCA and approximately 1" wide - fracture filled by calcite - not mineralized					
195-201 ft	- section is more strongly altered with several cream colored carbonate with quartz veins and stringers - commonly, there is disseminated sulphides associated with the calcite					
208 ft	- small, calcareous pod (<u>1</u>" long) contains fine disseminated pyrrhotite & minor chalcopyrite					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. ....	Sheet No. <u>4</u>	Lat. ....	Total Depth. ....
Section. ....	Dep. ....	Logged By. ....	
Date Begun. ....	Bearing. ....	Claim. ....	
Date Finished. ....	Elev. Collar. ....	Core Size. ....	

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
210-216 ft	- core is permeated by calcite in thin veinlets and discontinuous stringers					
226 ft	- 4" breccia zone healed by calcite - probably minor shear					
270 ft	- 8" calcite vein (locally pink)-fracture at 20° TCA chloritic					
275-276 ft	- calcite vein with quartz - contains discontinuous pyrrhotite stringers with minor chalcopryite, also 1% disseminated pyrrhotite is observed					
310-311 ft	- strongly fractured zone - fractures are commonly rimmed by red and to a lesser extent, pale green alterations					

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Carbonate Group

HOLE No. F-83-3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 5 Lat. .... Total Depth .....

Section ..... Dep. .... Logged By .....

Date Begun ..... Bearing ..... Claim .....

Date Finished ..... Elev. Collar ..... Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			
352.5-354 ft	- irregular quartz veins with calcite rims, contain < 1% pyrrhotite with minor pyrite as thin stringers and as disseminations related to the veining					
354-396 ft	- section is strongly fractured and calcareous - reddish brown and green alteration rims are very common along fractures - also, reddish, nebulous masses are observed; possibly sphalerite					
415-424 ft	- section is strongly calcareous - core exhibits a honeycomb texture composed of calcite filled fractures					
436 ft	END OF HOLE					
<div style="position: relative; height: 100px;"> <span style="font-size: 2em; font-family: cursive; display: block; margin-left: auto; margin-right: auto;">George Chalot</span> <span style="font-size: 1.5em; font-family: cursive; display: block; margin-left: auto; margin-right: auto;">27/01/84</span> </div>						
COMMENT: Although the hole intersected weakly conductive sulphides, these do not appear to represent the target conductor.						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected
140' (42.67m)	63	55°
300' (91.44m)	63	55°
436' (132.89m)	58°	50°
600' (182.88m)	56°	47.5°
803' (244.75m)	50°	41.5°

Hole No. F-83-4 Sheet No. 1  
 Section L1+00E, 0+75S  
 Date Begun August 1, 1983  
 Date Finished August 7, 1983

Lat. ....  
 Dep. ....  
 Bearing 282° - 55°  
 Elev. Collar. ....

Total Depth 803' (244.75m)  
 Logged By G. Chabot  
 Claim 626278  
 Core Size BQ

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-142 ft (0-43.28m)	Overburden - sand with esker gravels						
142-225.75 ft (43.28-68.81m)	Intermediate to Felsic Tuff - core is greenish grey to grey in color - appears to be mainly Felsic however, the alteration makes it difficult to be certain - varies from moderately hard to hard - texturally, there is considerable local variation - much of the core exhibits an altered tuffaceous texture - locally, the most common texture is a banded one at 15% TCA - it is formed by very thin dark bands, probably chlorite e.g. 214 ft and by thicker bands (.5 in) of chlorite and calcite e.g. 203 ft, 207 ft - bands vary from 10-45° TCA but appear to have a preferred orientation of 10-15° TCA - another local feature, e.g. 162-3 ft and 102-3 ft appears to be a possible altered agglomerate - it consists of stretched, black fragments in a greenish grey matrix - both the matrix and the fragments have						



# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 2 ..... Lot..... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	a spotted texture						
	- quartz eyes are common as are quartz inclusions						
	- at 162.5ft a grain of cpy is observed within a quartz						
	eye -these sections appear strongly deformed and also						
	have a banded appearance						
	- at 179 ft the core exhibits a wavy texture formed by						
	thin chlorite streaks						
	- at 224 ft a band of anhedral quartz clusters (<.5in)						
	is observed						
	- the entire section is strongly chloritized giving						
	the tuff a felty texture and largely obscuring the						
	felsic nature of the tuff						
	- locally, the core is moderately to strongly calcareous						
	- the section is poorly mineralized with very fine disse-						
	minated sulphides being observed in a few locations						
	- however, at 206.3 ft minor cpy is observed within a						
	green and white thin banded siliceous vein (<.01%)						
225.75-228 ft	Zone of Black Material with Calcite Crystal Aggregates						
(68.81-69.49m)	- upper and lower contacts are sharp and at 15°TCA						
	- consists of round to sub-round crystal aggregates						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 3 Lot..... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	<p>∅.1 in diameter of white with pink calcite in a moderately hard, aphanitic, black ground mass - locally, some of the crystal aggregates have overgrowths of tourmaline</p> <p>- section contains very fine disseminated pyrite and pyrrhotite (&lt;.5%)</p> <p>- almost a porphyroblastic texture</p>						
228-403 ft (69.49-122.83m)	<p>Intermediate to Felsic Tuffs</p> <p>- similar to 142 - 222.75 ft</p> <p>- increase in quartz-calcite veining, especially from 330-403 ft</p> <p>- there are a number of zones of "gash" veins composed principally of quartz with calcite and a soft black material with a brown streak (Chlorite?)</p> <p>- the veins are irregular and locally, brecciate the country rock and locally incorporates fragments of country rock</p> <p>- locally, the black stringers and quartz veinlets exhibits strong deformation (ptygmatic folding)</p> <p>- sulphides particularly cpy, are associated with the veins, and in particular, the black material in</p>						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 4 ..... Lot..... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collor..... Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	stringers, as vein rims, and as disseminations within the quartz itself						
	- cpy is the most common sulphide (<.1%) however, there is very minor py and pyrh.						
	- these veins are observed at 331, 347 to 349, 351 to 353, 367 and 368 to 371 ft.						
	- at 393 to 394 ft and 400 to 401 ft milky quartz veins with round to angular, tan colored inclusions (ankerite?) are observed in sharp contact at angles from 0° to 45° TCA						
	- from 391 to 403 ft. there is definite increase in quartz as stringers and veinlets						
403-414 ft (122.83-126.19m)	Altered Intermediate to Felsic Tuffs						
	- pale green with cream colored bands						
	- moderately hard, fine grained						
	- contains irregular cream colored bands <1" wide which are commonly discontinuous						
	- banding is at 25° TCA						
	- section is calcareous						
	- at 407.5 ft an irregular shear at 10-15° TCA offsets						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 5 Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	the bands						
	- no observed mineralization						
414-479 ft (126.19-145.99m)	Rhyolite Lapilli Tuff						
	- similar to unit in F-83-1-possible marker horizon						
	- medium grey in color, fine grained lappilli are $\leq .1$ "						
	- lappilli are in a calcite with chlorite matrix						
	- locally contains thin quartz veins						
	- generally, not mineralized						
	- 414-419 ft - section is strongly fractured						
	- fractures are filled by black material and commonly carry pyrrhotite ( $\leq .5\%$ )						
	- 421-422.5 ft - section is cut by a boudinaged quartz vein parallel TCA - it varies up to 1.5" wide						
	- the entire section is strongly mineralized with pyrrhotite ( $\leq 3\%$ )						
	- pyrrhotite is observed along the vein walls, associated with bright green fragments within the vein, along fracture fillings and in the chloritic gangue						
	- locally, the pyrrhotite carries pyrite cubes which						

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 6 ..... Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing .... Claim ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Cu ppm	Pb ppm	Zn ppm	AU oz/T	AG ppm
	appear to have an exsolution texture							
	- within the country rock pyrrhotite fills the myriad of small fractures - no cpy is observed							
479-496.5 ft (145.99-151.18m)	Andesite							
	- the upper contact is sharp at 53°TCA	15485	491.25 496.5	49	64	122	NIL	NIL
	- the lower contact is gradational							
	- the unit is medium green, moderately soft and fine grained							
	- the unit is generally massive, however, the lower half is cut by numerous thin calcite veinlets							
	- the unit is not mineralized							
	- 494-496.5 ft transition zone - at 494', the andesite takes on a speckled texture with the appearance of black spots							
	- the andesite becomes more selicified with numerous quartz stringers							
	- locally, the black mineral comprise <25% of the rock							
	- pyrite (<1%) with pyrrhotite and very minor cpy is common and is associated with the quartz stringers, along fractures and as disseminations							

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 7 Lot..... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Cu ppm	Pb ppm	Zn ppm	Au oz/T	Ag ppm
496.5-503 ft	Rhyolite Lapilli Tuff							
(151.18-153.31m)	- similar to 414 to 479	15486	496.5-501.25	11	29	85	NIL	NIL
	- more fractured and chloritic	15487	501.25-506	48	48	368	NIL	0.2
	- contains disseminated pyrrhotite							
	- 501-503 ft, more silicified and fractured and contains thin quartz veinlets							
503-523.25 ft	Sulphide Banded Rhyolite							
(153.31-159.49m)	- section is light grey in color with sulphide bands up to 2 " wide	15488	506-511	73	43	302	NIL	0.3
		15489	511-516	70	50	520	NIL	0.3
	- the grey colored sections are very hard and are very fine grained to aphanitic	15490	516-521	91	54	340	NIL	0.3
		15491	521-523.25	64	37	182	NIL	0.2
	- the unit has a distinct banded appearance - bands are oriented from 30° to 75° TCA but have a preferred orientation of 45 - 50° TCA							
	- the major components of the unit are sulphides (35%, rhyolite 40%, black mineral 10% and quartz 5%)							
	- the sulphides consist of ~20% pyrite and ~15% pyrrhotite							
	- the pyrite tends to occur as larger grains <1 in. in diameter and are commonly fractured							

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 8 Lot..... Total Depth.....  
 Section..... Dep..... Logged By.....  
 Date Begun..... Bearing..... Claim.....  
 Date Finished..... Elev. Collar..... Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Cu ppm	Ph ppm	Zn ppm	Au oz/T	Ag ppm
	- the pyrite is surrounded by fine disseminated pyrrhotite which forms irregular bands							
	- commonly associated with the sulphides are discrete grains (<.2 in) and streaks of the black mineral							
	- the sulphides pyrrhotite with pyrite and the black mineral are also observed as very thin veinlets oriented approximately parallel to the larger bands							
	- sulphides also occur as tiny blebs and streaks throughout the rhyolite							
	- the rhyolite has been strongly invaded by the sulphides and it is common to observe rhyolite lenses in the sulphide bands							
	- quartz occurs as discontinuous bands (<.5 in) parallel to the sulphide bands and commonly contain sulphide blebs							
	- the section is strongly conductive over lengths of up to 1 foot							
523.25-525 ft (159.49-160.02m)	Speckled Rhyolite - apparent sharp contact @35° TCA - unit consists of ~ 30% irregular black grains which occur as irregular shaped grains <.1 in diameter	15492	523.25-525	58	39	251	NIL	NIL

# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 9 Lot. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Cu ppm	Pb ppm	Zn ppm	Au oz/T	Ag ppm
	- narrow $\leq .1$ in wide quartz stringers are observed at $45^\circ$ TCA							
	- section contains $\leq 5\%$ pyrrhotite as blebs and minor sericite enhances the speckled streaks texture							
525-540 ft (160.02-164.59m)	Sulphide Banded Rhyolite							
	- somewhat similar to 503-523.5 ft	15493	525-526	66	35	92	NIL	NIL
	- this section has many similarities to the previous section, however, the sulphides are much less abundant and the banding is much less distinct	15494	526-531	69	32	383	NIL	0.2
		15495	531-535	102	51	385	NIL	0.3
		15496	535-540	71	140	502	NIL	0.2
	- the rhyolite has a pale green color							
	- the sulphides are more localized, occurring over lengths of $\leq 2$ ft with sections of disseminated mineralized rhyolite in between							
	- while the sulphides have a pseudo banding at $\sim 45^\circ$ TCA they tend to be more discontinuous occurring in patches which may or may not be connected by sulphide stringers							
	- overall, sulphides comprise $\sim 10\%$ of the section with the sulphides occurring in much the same manner as in the previous interval with disseminated pyrrhotite surrounding larger pyrite grains							



# DIAMOND DRILL RECORD

PROPERTY Foleyet Project - Muskego Group

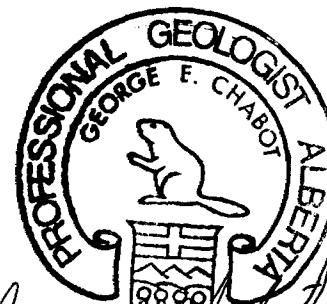
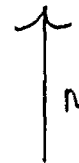
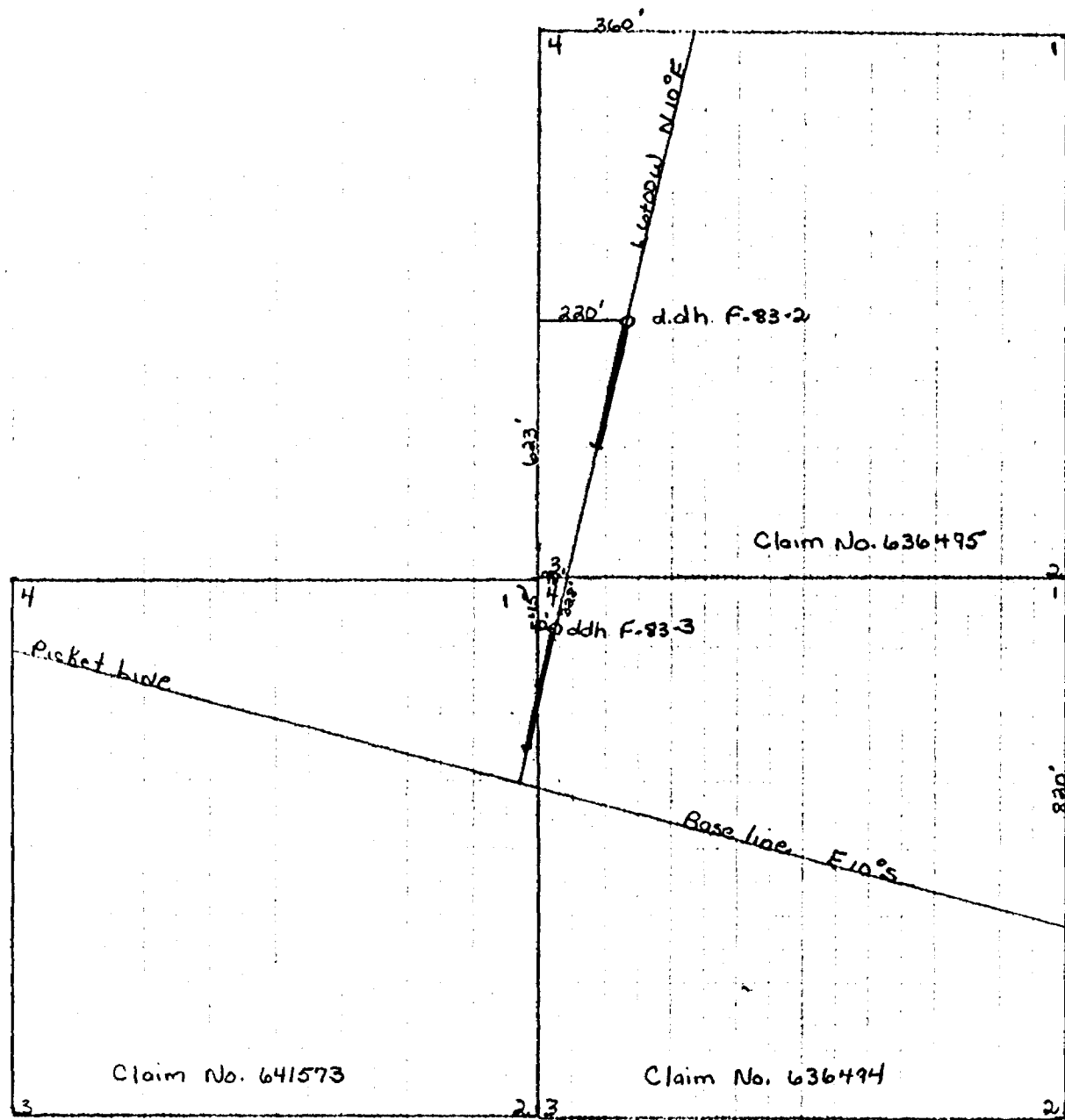
HOLE No. F-83-4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. .... Sheet No. 10 Lat. .... Total Depth. ....  
 Section. .... Dep. .... Logged By. ....  
 Date Begun. .... Bearing. .... Claim. ....  
 Date Finished. .... Elev. Collar. .... Core Size. ....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Cu ppm	Pb ppm	Zn ppm	Au oz/t	Ag ppm
	- one major difference is the almost total absence of black mineral and a more intimate association of the sulphides with quartz stringers							
	- fine disseminated blebs of pyrrhotite are common in the rhyolite							
	- locally, the sulphide zones are strongly conductive							
540-803 ft (164.59-244.75m)	Intermediate to Felsic Tuffs							
	- similar to 142-225.75 ft	15497	540-545	40	23	103	NIL	NIL
	- from 540-695, the core is pale green to grey in color and from 695-803 the core is medium to light grey in color	15498	545-550	77	29	233	NIL	NIL
	- core is moderately hard to hard							
	- fine grained							
	- contains a myriad of quartz-calcite stringers							
	- locally white and buff quartz veins < 1" wide are observed at 45-50° TCA e.g. 553'							
	- locally quartz eyes and lenses are observed e.g. 597-600 ft							
	- also quartz "gash" veins are observed locally							
	- from 540-560ft. pyrrhotite patches and stringers are common (<3%)							





*George Chabot*  
November 3, 1983

Location Sketch: Diamond Drill Holes F-83-2, F-83-3

Scale 1:5000



42B01NW0044 49 KE1TH

Name and Postal Address of Recorded Holder  
**Hudbay Mining Ltd.**  
 Box 200, Calgary, Alberta T2P 2H5

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed <del>1882</del> 2470	Mining Claim			Mining Claim			Mining Claim		
	Prefix	Number	Work Days Cr.	Prefix	Number	Work Days Cr.	Prefix	Number	Work Days Cr.
For Performance of the following work. (Check one only) <input type="checkbox"/> Manual Work <input type="checkbox"/> Shaft Sinking Drifting or other Lateral Work. <input type="checkbox"/> Compressed Air, other Power driven or mechanical equip. <input type="checkbox"/> Power Stripping <input checked="" type="checkbox"/> Diamond or other Core drilling <input type="checkbox"/> Land Survey	P	626278 ✓	200	P	626293 ✓	49	P	641574 ✓	86
		626279 ✓	200		626294 ✓	42		641575 ✓	86
		626280 ✓	200		636492 ✓	86			
		626281 ✓	200		636493 ✓	86			
		626289 ✓	109		636494 ✓	86			
		626290 ✓	96		636495 ✓	86			
		626291 ✓	49		641572 ✓	86			
	626292 ✓	49		641573 ✓	86				

All the work was performed on Mining Claim(s): P626278, P636494, P636495, P641573

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

- BBS 17A diamond drill owned and operated by  
 Bradley Bros. Limited,  
 P.O. Box 367  
 Noranda, QUEBEC

- work was performed by: Chevron Canada Resources Limited,  
 1900-1055 West Hastings,  
 Vancouver, B.C.

**RECORDED**  
 1 JAN 27 1984  
 Receipt No. Cf.

**RECEIVED**  
 MAR 16 1984

**RECEIVED**  
 PORCUPINE MINING DIVISION  
 MAR 27 1984  
 P.M.  
 7181001112112101410

Date of Report: November 10/83  
 Recorded Holder or Agent (Signature): G. Chabot

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying  
**George Chabot, 310-1214 Riverside DR.**  
 Timmins, Ontario P4R 1A4

Date Certified: November 10/83  
 Certified by (Signature): G. Chabot

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific information per type	Other information (Common to 2 or more types)	Attachments
Manual Work	Nil	Names and addresses of men who performed manual work /operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Shaft Sinking, Drifting or other Lateral Work			
Compressed air, other power driven or mechanical equip.	Type of equipment	Names and addresses of owner or operator together with dates when drilling/stripping done.	Work Sketch (as above) in duplicate
Power Stripping	Type of equipment and amount expended. Note: Proof of actual cost must be submitted within 30 days of recording.		
Diamond or other core drilling	Signed core log showing; footage, diameter of core, number and angles of holes.	Nil	Nil
Land Survey	Name and address of Ontario land surveyor.		



The Mining Act

Name and Postal Address of Recorded Holder <b>Hudbay Mining Ltd.</b>	Prospector's Licence No. <b>T-300</b>
<b>Box 200, Calgary, Alberta T2P 2H5</b>	

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed <del>500</del>	Mining Claim			Work Days Cr.	Mining Claim			Work Days Cr.
	Prefix	Number			Prefix	Number		
for Performance of the following work. (Check one only) <input type="checkbox"/> Manual Work <input type="checkbox"/> Shaft Sinking Drifting or other Lateral Work. <input type="checkbox"/> Compressed Air, other Power driven or mechanical equip. <input type="checkbox"/> Power Stripping <input checked="" type="checkbox"/> Diamond or other Core drilling <input type="checkbox"/> Land Survey	P	648306	✓	49	P	648314	✓	49
		648307	✓	49		648315	✓	49
		648308	✓	49		648316	✓	49
		648309	✓	49		648317	✓	49
		648310	✓	49				
		648311	✓	49				
		648312	✓	49				
	648313	✓	49					

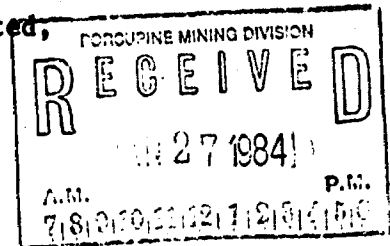
All the work was performed on Mining Claim(s): P626278, P636494, P636495, P641573

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

- BBS 17A diamond drill owned and operated by:

Bradley Bros. Limited,  
P.O. Box 367,  
Noranda, QUEBEC

- work was performed by: Chevron Canada Resources Limited,  
1900-1055 West Hastings,  
Vancouver, B.C.



Date of Report <b>November 10 /83</b>	Recorded Holder or Agent (Signature) <b>G. Chabot</b>
--	--

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying  
**George Chabot, 310-1214 Riverside Drive,**

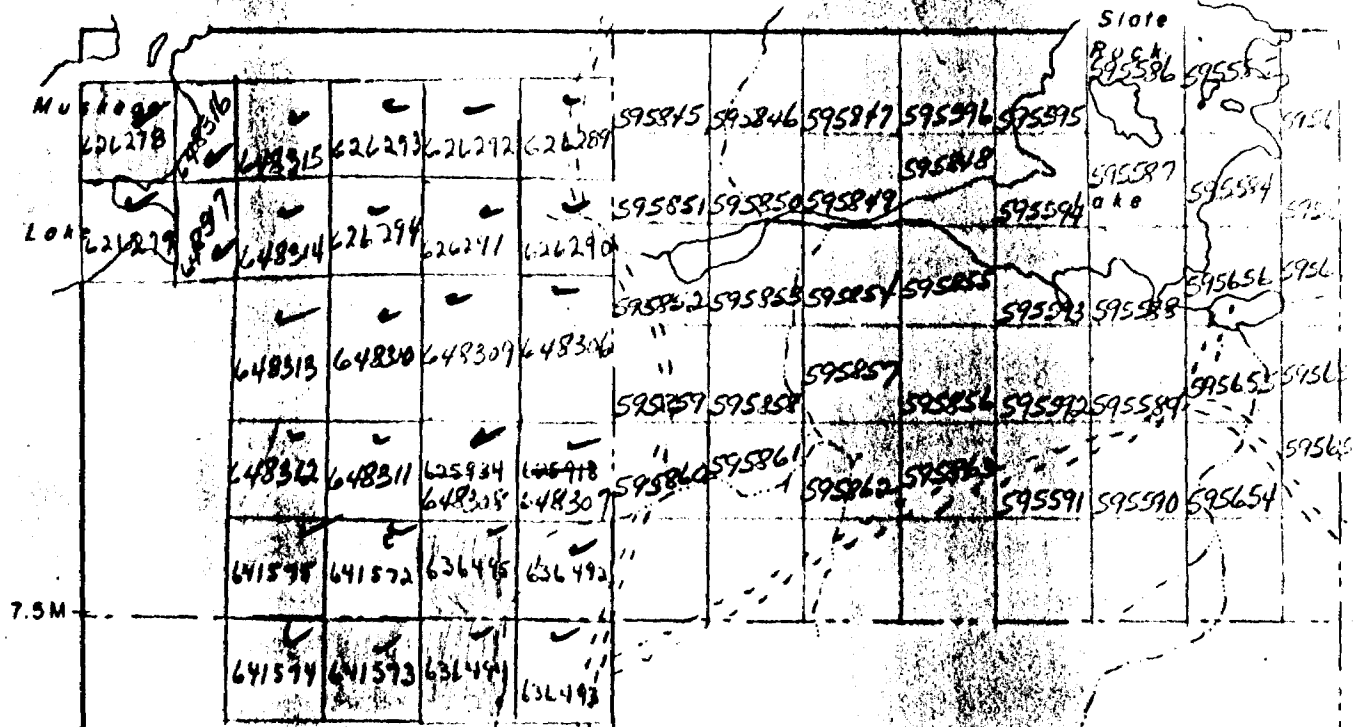
**Timmins, Ontario P4R 1A4**

Date Certified <b>November 10 /83</b>	Certified by (Signature) <b>G. Chabot</b>
--	--

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific Information per type	Other information (Common to 2 or more types)	Attachments
Manual Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Shaft Sinking, Drifting or other Lateral Work			
Compressed air, other power driven or mechanical equip.	Type of equipment	Names and addresses of owner or operator together with dates when drilling/stripping done.	Work Sketch (as above) in duplicate
Power Stripping	Type of equipment and amount expended. Note: Proof of actual cost must be submitted within 30 days of recording.		
Diamond or other core drilling	Signed core log showing; footage, diameter of core, number and angles of holes.	Nil	Nil
Land Survey	Name and address of Ontario land surveyor.		

Keith map M-962



393733	393732	625919	625920	625921
292731	393732	625919	625920	625921
107956	C	107948	C	
107927				