

84-#481(a) - #12391

ASSESSMENT REPORT

SUMMARY OF DIAMOND DRILLING ✓

ON THE SASK 43-45 MINERAL CLAIMS ✓

OMINECA AND ~~CARIBOO~~ MINING DIVISIONS ✓

NTS 93K/16 ~~E 93/13~~

54° 52'

124° 03.5'

B.P. EXPLORATION CANADA LTD

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,391**

R. Farmer

C.M. Rebagliati

May, 1984

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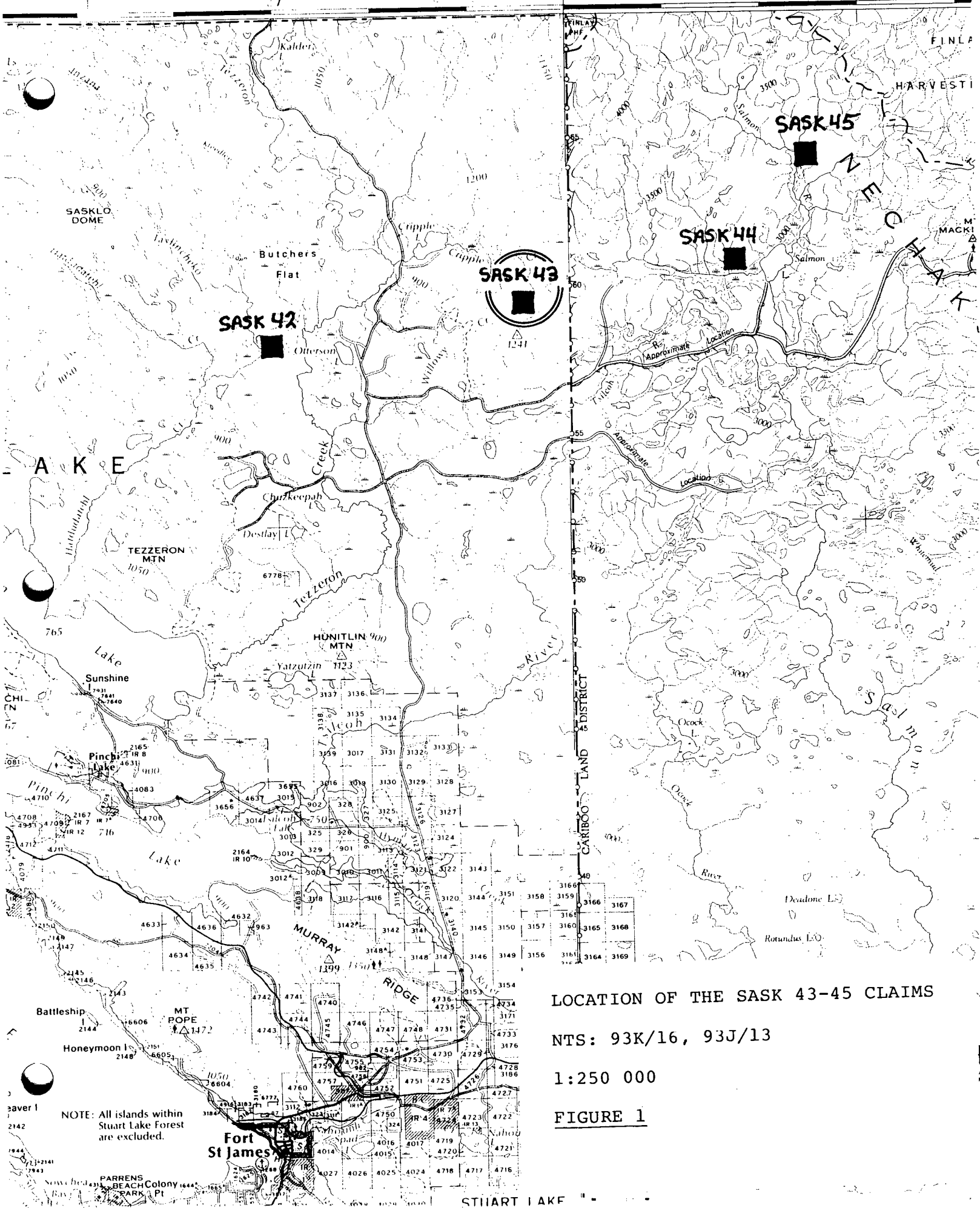
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RESUME

During October 1983 three 100 metre NQ diamond drill holes were drilled on the Sask 43, 44, 45 mineral claims to test ground EM conductors. Two holes did not penetrate bedrock, and sheared, graphitic argillite was found to be the cause of the conductor in the third hole.

INTRODUCTION

During October 1983 three diamond drill holes were drilled to test ground electromagnetic conductors on the Sask 43-45 mineral claims, located on NTS map sheets 93K/16 and 93J/13 (Fig. 1). A total of 301.8 metres were drilled.



LOCATION OF THE SASK 43-45 CLAIMS

NTS: 93K/16, 93J/13

1:250 000

FIGURE 1

LOCATION AND ACCESS

The Sask 43-45 mineral claims are located approximately 50 kilometers north of Fort St. James, B.C. on NTS map sheets 93K/16 and 93J/13, Omineca and Cariboo Mining Divisions.

Access is provided by the Mansen Creek highway north from Fort St. James, then eastwards along forest access roads to the claims. The Sask 45 claim is reached via helicopter north from Salmon Lake.

CLAIMS

The following table summarizes the claim statistics.

TABLE 1

<u>CLAIM</u>	<u>NO. OF UNITS</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY</u>	<u>MINING DIVISION</u>
Sask 43	6	5488	July 8/83	Omineca
Sask 44	6	5046	July 8/83	Cariboo
Sask 45	6	5047	July 8/83	Cariboo

The area has not been staked previously.

DIAMOND DRILLING

During October 1983, J.T. Thomas Diamond Drilling Ltd., of Smithers, B.C. was contracted to drill three 100 metre NQ diamond drill holes for a total of 301.8 metres. The drill hole locations are shown on Figures 2, 3, and 4.

Detailed descriptions are provided in the drill logs in the back pocket and in Table 2, but generalized results are as follows:

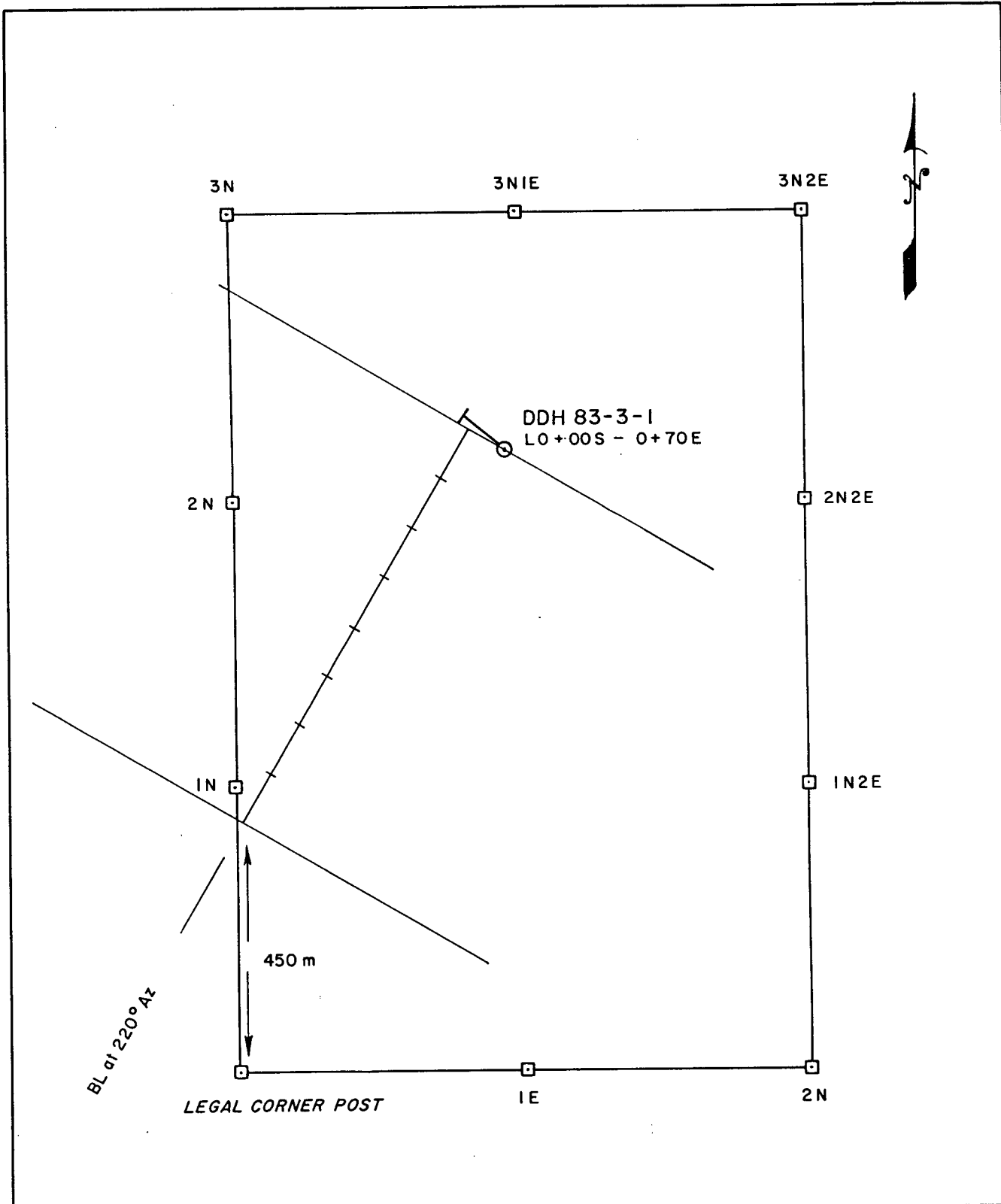
HOLE 83-3-1 (Figure 5) revealed 17 metres of overburden underlain by 70 metres of argillite which in places is intensely sheared. A water saturated fault zone between 35 and 60 metres is the cause of the EM conductor. The final 14 metres of the hole consists of alkaline andesite.

HOLE 83-4-1 did not penetrate bedrock. Clay is the likely cause of the conductor.

HOLE 83-6-1 did not penetrate bedrock. Clay (68-88 metres) is the likely cause of the EM conductor.

All core recovered is stored on the Sask 1-4 claim near Cripple Lake.

There are no known outcrops located in the area of drilling.



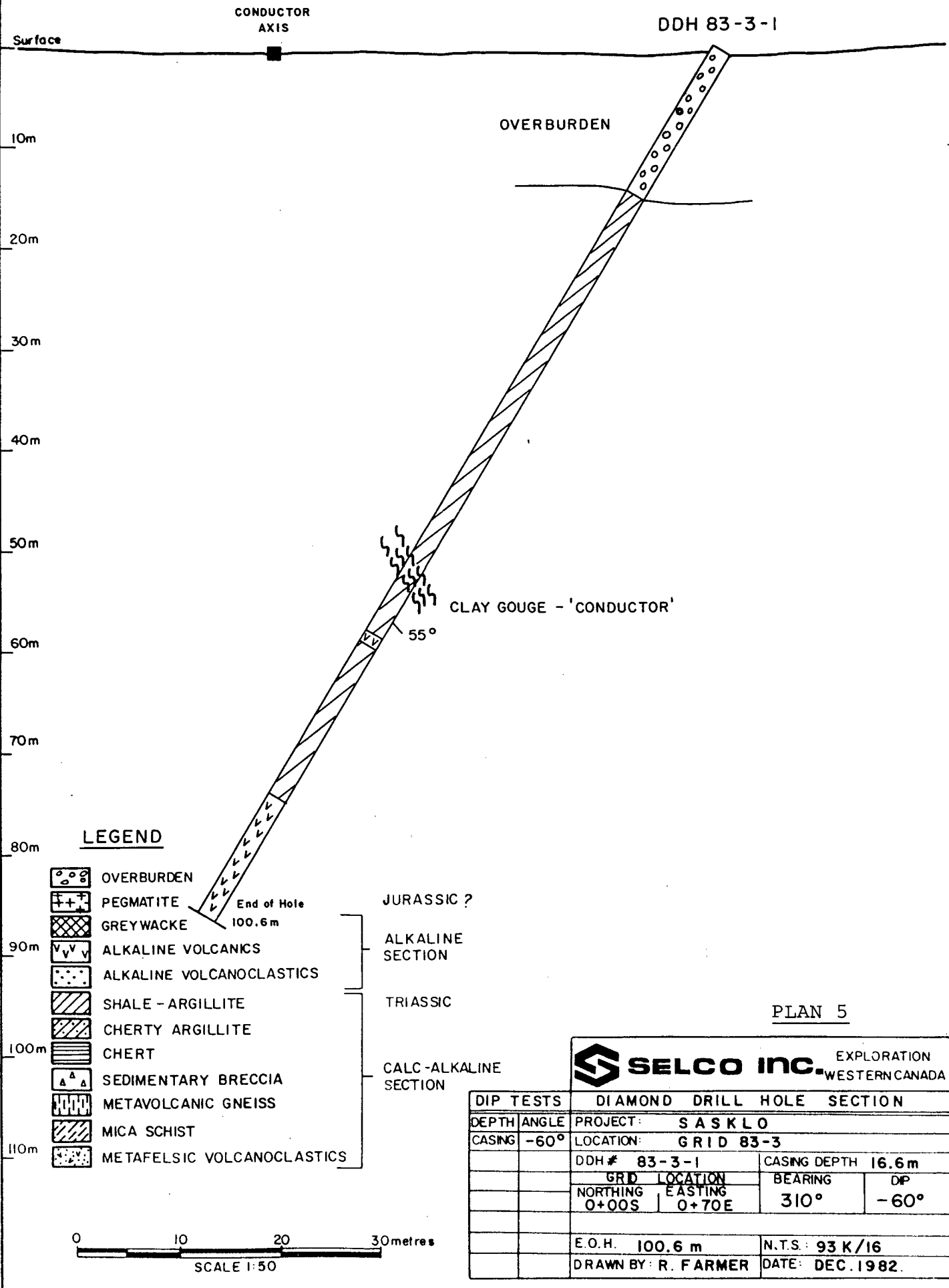
**SELCO INC.** EXPLORATION  
WESTERN CANADA

SASKLO PROJECT  
DIAMOND DRILL HOLE LOCATION  
SASK 43 - GRID 83-3

DRAWN BY R.F.	DATE MARCH 1984	N.T.S. 93 K/16	PLAN 2
TRACED BY L.G.	DATE APRIL 1984		



0+00    0+10E    0+20E    0+30E    0+40E    0+50E    0+60E    0+70E    0+80E    LOS



**LEGEND**

- OVERBURDEN
- PEGMATITE
- GREYWACKE
- ALKALINE VOLCANICS
- ALKALINE VOLCANOCLASTICS
- SHALE - ARGILLITE
- CHERTY ARGILLITE
- CHERT
- SEDIMENTARY BRECCIA
- METAVOLCANIC GNEISS
- MICA SCHIST
- METAFELSIC VOLCANOCLASTICS

JURASSIC ?  
 ALKALINE SECTION  
 TRIASSIC  
 CALC-ALKALINE SECTION

**PLAN 5**

**SELCO INC.** EXPLORATION WESTERN CANADA

DIP TESTS		DIAMOND DRILL HOLE SECTION		
DEPTH	ANGLE	PROJECT:	SASKLO	
CASING	-60°	LOCATION:	GRID 83-3	
		DDH #	83-3-1	CASING DEPTH 16.6m
		GRID LOCATION		BEARING
		NORTHING	EASTING	DIP
		0+00S	0+70E	310°
		E.O.H.	100.6 m	N.T.S.: 93 K/16
		DRAWN BY:	R. FARMER	DATE: DEC. 1982.

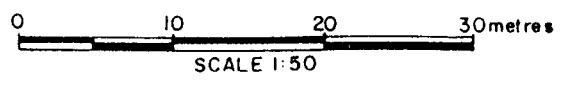


TABLE 2

DRILL HOLE SUMMARY

HOLE	AZIMUTH/DIP	DEPTH	OVERBURDEN DEPTH	CONDUCTOR	DEPTH TO CONDUCTOR	COMMENTS
✓ <u>83-3-1</u>	310°/-60°	100.6 m	16.6 m	WATER SATURATED FAULT ZONE	35-58 m	COULD NOT CORE THROUGH CONDUCTOR TRICONED AND COLLECTED SLUDGE SAMPLES
83-4-1	035°/-66°	100.6 m	100.6 m	CLAY	-	HOLE DID NOT REACH BEDROCK
83-6-1	090°/-60°	100.6 m	100.6 m	CLAY	-	HOLE DID NOT REACH BEDROCK

CONCLUSIONS AND RECOMMENDATIONS

Three NQ holes were drilled for a total of 301.8 metres. Two of the holes did not penetrate bedrock, and sheared, graphitic argillite was found to be the cause of the EM response for the third hole.

No further work is recommended for the Sask 43-45 claims at this time due to the disappointing results.

COST STATEMENT1. Diamond Drilling (J.T. Thomas Diamond Drilling)

October 7-16, 1983

Sask 43

100.6 metres @ \$253.54 per metre \$25,506.12

Sask 44

100.6 metres @ \$253.54 per metre 25,506.12

Sask 45

100.6 metres @ \$253.54 per metre 25,506.12

2. Drill Supervision - October 6-19, 1983

1 Geologist

14 days @ \$100 per day \$ 1,400.00

Accommodation

14 days @ \$35 per day 490.00

Food

14 days @ \$25 per day 350.00

Transportation

14 days @ \$20 per day 280.00

Truck Rental

2 weeks @ \$100 per week 200.00

SUBTOTAL DRILLING \$79,238.36

Analytical Costs - Chemex Labs Ltd.

Sask 43

27 samples (Cu, Pb, Zn, Ag, Au, Hg) @ \$15.95 each \$ 430.65

TOTAL COST \$79,659.00

=====

APPORTIONED TO SASK 43 # 26 843.44

COST BREAKDOWN

Sask 43 - 6 Units

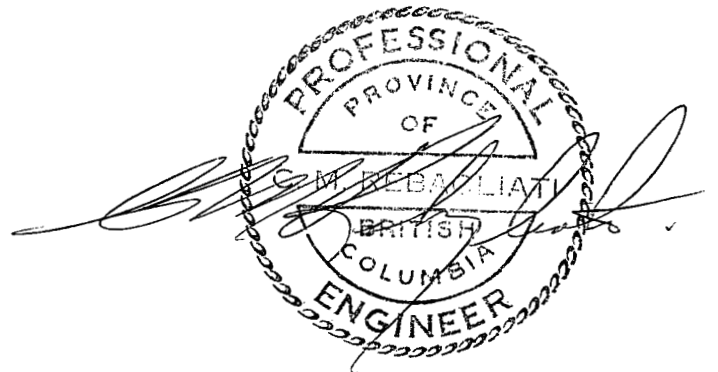
Drilling	\$ 26,412.79
Analytical	<u>430.65</u>
TOTAL	\$ 26,843.44 ✓

Sask 44 - 6 Units

Drilling	<u>\$ 26,412.65</u>
TOTAL	\$ 26,412.65

Sask 45 - 6 Units

Drilling	<u>\$ 26,412.65</u>
TOTAL	\$ 26,412.65

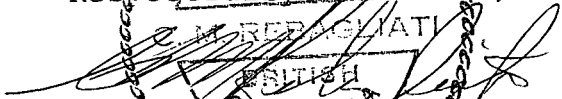


CERTIFICATE

I, C.M Rebagliati, of Vancouver, in the Province of British Columbia, hereby certify the following:

1. That I am a registered Professional Engineer in the Province of British Columbia.
2. That I have practised my profession since graduation from the Haileybury School of Mines of Ontario in 1966 and from the Michigan Technological University in 1969 with a B.Sc. degree in Geological Engineering.
3. That I am presently employed by Selco - A Division of BP Exploration Canada Limited in Vancouver as Senior Geologist.
4. That I personally examined the property to confirm and evaluate the exploration program.

Respectfully submitted,

  
C. M. Rebagliati P. Eng.

Vancouver, B.C.  
May, 1984

# DRILL LOG

DRILLING CO. J.T. Thomas Drilling Ltd.	LOCATION SKETCH 	DEPTH	TESTS DIP ANGLE	AZIMUTH	DATE STARTED: October 7, 1983	PROJECT: Sask1o (Claim Sask 43)
		COLLAR	60°	310°	DATE COMPLETED: October 11, 1983	N.T.S.: 93K/16
					COLLAR ELEV.:	LOCATION: 58 km NE of Fort St. James
					NORTHING: 0+00S (Grid position)	- turn eastward onto road approx.
					EASTING: 0+70E (Grid position)	5 km south of Cripple Lake
					AZIMUTH: 310	
					DEPTH: 100.6 m	DATE LOGGED: October 13, 1983
HOLE TYPE DDH				CORE SIZE: NQ	LOGGED BY: J. Conway	

INTERVAL		ROCK TYPE	DESCRIPTION							STRUCTURE	REMARKS
FROM	TO		COLOUR	GRAIN SIZE	TEXTURE	ALTERATION	ORE MINERALS	FRACTURES PER METRE	(FRACTURES, FAULTS, FOLDING, BEDDING, ETC)	MINERALIZATION, TYPE, AGE RELATIONS	
0	16.6	Overburden	-	-	-	-	-	-			
16.6	35.7	Argillite	Light grey to black	Very fine	Coarse clastic	(See Remarks)	-	-		- clastic texture with no preferred bedding	- highly friable - variable carbonaceous component-grading in and out of zones where this carbonaceous character is predominant - clastic breccia nature is composed of carbonaceous clasts in the light grey to grey felsic(?) material and vice versa - brecciation also within each component

# DRILL LOG

INTERVAL		ROCK TYPE	DESCRIPTION						STRUCTURE	REMARKS
FROM	TO		COLOUR	GRAIN SIZE	TEXTURE	ALTERATION	ORE MINERALS	FRACTURES PER METRE	(FRACTURES, FAULTS, FOLDING, BEDDING, ETC):	MINERALIZATION, TYPE, AGE RELATIONS
16.6	35.7	Argillite				See Page 1				Alteration
										- extensive apparent hydro-thermal alteration of varying intensity
										- all the core is friable enough to be broken by hand manipulation
										- from 16.6 m to 35.7 m core is highly broken with clay (illite montmorillonite carbon) gouge pervasive from 16.6 m to 19.4 m
										- clay material remains a component in the highly broken core to 35.7 m
										- hydrothermal origin is derived from highly altered zones which retain their clastic texture
										- numerous discontinuous barren calcite veins intruding indiscriminately





# DRILL LOG

INTERVAL		ROCK TYPE	DESCRIPTION						STRUCTURE	REMARKS
FROM	TO		COLOUR	GRAIN SIZE	TEXTURE	ALTERATION	ORE MINERALS	FRACTURES PER METRE	(FRACTURES, FAULTS, FOLDING, BEDDING, ETC):	MINERALIZATION, TYPE, AGE RELATIONS
16.6	35.7	Argillite				See Page 1				- disseminated fine to rarely coarse-grained pyrite. Appears to be preferential to the more carbonaceous component.
35.7	58.5	Argillite (assumed)								Remarks - Difficulty in continuing hole therefore triconed to 58.5 m. Collected sludge in 3 m intervals. See Chemex Lab. Samples #1804D - 1810D.
58.5	67.4	Argillite	Grey to black	Very fine	Clastic	(See Remarks)	-	-		Structure - increasing brecciation (late stage) - attitudes taken from orientation of wispy bands indicate 50-65° relative to core axis with occasional steepening to 25-30° relative to core axis. Probable fault at 60.9 m to 62.0 m - clay gouge dipping 55-60° relative to core axis. Remarks - grey clasts to carbonaceous component ratio is approx. 1:1 with the thickness of wispy bands no greater than 15 cm generally less. - numerous discontinuous calcite veinlets; quartz and feldspar pods - hydrothermal alteration pervasive with the introduction of feldspar, quartz and to a lesser degree chloritic "film". Chlorite noted sporadically in light grey-green clay matrix



# DRILL LOG

INTERVAL		ROCK TYPE	DESCRIPTION						STRUCTURE	REMARKS
FROM	TO		COLOUR	GRAIN SIZE	TEXTURE	ALTERATION	ORE MINERALS	FRACTURES PER METRE	(FRACTURES, FAULTS, FOLDING, BEDDING, ETC)	MINERALIZATION, TYPE, AGE RELATIONS
58.5	67.4	Argillite				See Page 3				- pyrite mineralization is finely disseminated preferentially in the black carbonaceous components particularly in the clay gouge at 60.9 m to 62.0 m, less than 5%. Below 62.0 m is the introduction of feldspar porphyry clasts and the disappearance of the grey argillite.
67.4	68.5	Dacite porphyry	Green-brown	Fine	Pyro-clastic	(See Remarks)	-	-		Structure - orientated 72° relative to core axis - 15 cm gouge contact (upper and lower) - upper contact sharp; lower contact gradational over 20 cm Remarks - gouge contains minor pyrite along thin fractures and is also disseminated within the gouge itself
68.5	86.3	Argillite	Black to light grey	Fine	Clastic	(See Remarks)				Structure - numerous gouge seams composed of clay minerals (74.0 m to 76.0 m; 80.0 m to 86.3 m - possible faults); rare attitudes in gouge only give apparent results of 45 to 50° relative to core axis - not trusted. - the remaining portions of sequence are clastic with no preferred orientation. Remarks - very limy - locally a brecciated limestone, sometimes a brecciated limestone breccia (i.e. Box 8 around 78.8 m) - around 85.0 m to 88.0 m - green andesite lapilli to Bx. - sedimentary (reworked) clasts somewhat rounded and is bedded - very chloritic, minor epidote

# DRILL LOG

INTERVAL		ROCK TYPE	DESCRIPTION							STRUCTURE	REMARKS
FROM	TO		COLOUR	GRAIN SIZE	TEXTURE	ALTERATION	ORE MINERALS	FRACTURES PER METRE	(FRACTURES, FAULTS, FOLDING, BEDDING, ETC):	MINERALIZATION, TYPE, AGE RELATIONS	
68.5	86.3	Argillite	-----	-----	-----	See Page 4	-----	-----		<ul style="list-style-type: none"> <li>- some white coloured clasts</li> <li>- colouration due to carbonate</li> <li>- shaley component is the dominant matrix with approx. 50% clasts of unaltered feldspar porphyry</li> <li>- gouge zones have retained their clastic nature but numerous thin (15 cm) seams with these zones have been reduced to a fine grey-black sand with fine-grain fragments</li> <li>- due to the more shaley components of this sequence fine-grain disseminated pyrite is noted throughout particularly in the gouge.</li> </ul>	
86.3	100.6	Andesite	Green	Fine	Phorphyritic to tuffaceous	(See Remarks)				<p>Massive to slightly porphyritic to occasional tuffaceous Andesite</p> <ul style="list-style-type: none"> <li>- tuffaceous nature exhibited from 91.7 m to 94.1 m</li> <li>- ~ 92.3 - 93.8 m. appears to have been a pyroxene porphyritic andesite</li> <li>- phenos now chlorite and matrix highly calcareous</li> </ul> <p><u>Structure</u></p> <p>Upper contact gradational over 45 cm. Contact is a zone of mixture of basal argillite gouge and andesite gouge. Apparent contact trend is approx. 60° relative to core axis.</p> <ul style="list-style-type: none"> <li>- bands of hematite also present throughout</li> <li>- numerous barren calcite veinlets</li> <li>- pyrite disseminated throughout the sequence. Occasionally found along edges of closed carbonate veins</li> <li>- relative increase in pyrite ( 5% ) from 86.0 to 95.4 m.</li> </ul>	

# DRILL LOG

INTERVAL		ROCK TYPE	DESCRIPTION							STRUCTURE	REMARKS
FROM	TO		COLOUR	GRAIN SIZE	TEXTURE	ALTERATION	ORE MINERALS	FRACTURES PER METRE	(FRACTURES, FAULTS, FOLDING, BEDDING, ETC):	MINERALIZATION, TYPE, AGE RELATIONS	
86.3	100.6	Andesite	----	-----	-----	See Page 5	----	-----	----	- package of sedimentary rocks seems to consist of: <ul style="list-style-type: none"> <li>1) limy argillites, locally graphitic</li> <li>2) grey limestone and limestone breccia (dirty).</li> </ul> - significant alteration consists of <ul style="list-style-type: none"> <li>1) mafic minerals to chlorite</li> <li>2) considerable carbonate (fracture and pervasive)</li> <li>3) minor epidote.</li> </ul>	

# DRILL LOG

## sample data

S A M P L E					C O R E   R E C O V E R Y		V I S U A L   E S T I M A T E S ( % O R E M I N E R A L S )	A S S A Y   R E S U L T S					
N U M B E R	F R O M	T O	T O T A L M E T R E S	S p . G r	%	A M T . L O S T		C u p p m	P b p p m	Z n p p m	A g p p m	A u p p b	H g p p b
1811D	16.6	19.6	3.0		90	10%	Zero	88	5	96	0.3	5	170
1812D	19.6	22.6	3.0		50	50%	Zero	92	7	131	1.0	40	170
1813D	22.6	25.6	3.0		50	50%	Zero	112	2	93	0.7	25	130
1814D	25.6	28.6	3.0		25		Zero	95	7	91	0.7	15	90
1815D	28.6	31.6	3.0		40		Zero	118	5	106	0.6	5	120
1816D	31.6	35.7	4.1		37		Zero	135	10	98	2.0	10	110
1804D	35.7	40.0	4.3			Sludge sample	Zero	90	21	112	0.7	20	140
1805D	40.0	43.1	3.0			Sludge sample	Zero	80	13	100	0.5	10	120
1806D	43.1	46.1	3.0			Sludge sample	Zero	205	14	217	0.5	5	110
1807D	46.1	49.2	3.0			Sludge sample	Zero	153	31	176	0.5	5	90
1808D	49.2	52.3	3.0			Sludge sample	Zero	100	28	140	0.4	10	90
1809D	52.3	55.4	3.0			Sludge sample	Zero	118	11	134	0.4	10	90
1810D	55.4	58.4	3.0			Sludge sample	Zero	114	53	160	0.6	25	100
1817D	58.4	61.5	3.0		100		Zero	85	3	97	0.5	<5	150
1818D	61.5	64.6	3.0		100		Zero	72	5	94	2.2	<5	40
1819D	64.6	67.7	3.0		100		Zero	80	6	90	1.5	<5	40
1820D	67.7	70.8	3.0		100		Zero	90	3	93	0.5	<5	40
1821D	70.8	73.8	3.0		100		Zero	80	4	92	0.2	<5	30
1822D	73.8	76.9	3.0		100		Zero	95	4	92	0.3	20	30
1823D	76.9	80.0	3.0		100		Zero	97	3	91	0.3	25	30
1824D	80.0	83.1	3.0		100		Zero	110	6	100	0.5	5	40
1825D	83.1	86.1	3.0		100		Zero	98	2	92	0.3	5	320
1826D	86.1	89.2	3.0		100		Zero	115	5	64	0.4	5	80
1827D	89.2	92.3	3.0		100		Zero	155	15	62	0.3	5	20
1828D	92.3	95.4	3.0		100		Zero	90	1	71	0.1	5	20
1829D	95.4	98.5	3.0		100		Zero	128	5	76	0.4	<5	10

# DRILL LOG

## sample data

S A M P L E				C O R E   R E C O V E R Y		V I S U A L   E S T I M A T E S (% O R E M I N E R A L S)	A S S A Y   R E S U L T S						
N U M B E R	F R O M	T O	T O T A L M E T R E S	S p . G r	%		A M T . L O S T	C u   p p m	P b   p p m	Z n   p p m	A g   p p m	A u   p p b	H g   p p b
1830D	98.5	100.6	2.1		100		Zero	98	2	91	0.3	<5	10