

ITSI J.V. - ABBEY CLAIMS: LOG DDH 80-A1

Page 1 of 4

COORD S60AW, 4MBN DIP 60° AZIM. 035° ELEV. 137 M SIZE NQ STARTED Apr. 9/80 COMPLETED Apr. 10/80 LOGGED BY R.C. Cairne

VISUAL LOG	FOOTAGE		PRIMARY LITHOLOGY	SECONDARY INTERBEDS	% CORE ANGLE	PYRITE		BARITE		CO ₃	OTHER	ANALYSES					
	Inter-section	True Depth				Lam. %	Diss. %	Bed. %	Bleb. %			Type %	Description	%	% ppt	% ppt	% ppt
					Bedding W	Structure E	Thickness	Size	Thickness	Size	Size		Pb	Zn	Cu	Ag	Ba
		0.0	CASING														
		23.0	U. SIL. TO CHERTS, U. CALC BLE MASSIVE ARGL, U. CARB		70		LAM TR				VEN TR						
		40.0	SOS, VARIABLY CALC, NOW SLIGHTLY GRITTY		80		THIN SCATTERED				11 BDC 43cm						
		60.0	SOS NOW U. CALC, SLIGHTLY GRITTY		20		LAM TR				VEN TR						
		80.0	SOS MOD-U. CALC	THIN, MOD CALC, MIN-SL, U. CARB, SHAL INTERVALS < 2CM	10						VEN TR						
		100.0	SOS NOW, U. CALC U. SIL. TO CHERTS	SCATTERED < 2CM U. CALC MDSN	10						VEN TR						
		120.0	SOS AS ABOVE	SOS AS ABOVE	10	60					BRN 10						
		130.0	WEATHERS LAM TO MASSIVE U. SIL. TO CHERTS, MOD-U. CALC, BLK ARGL		30						BRN 05						
		150.0	SOS VARIABLY LOW-U. CALC		10						VEN TR						
		170.0	SOS AS ABOVE	CALC SLN RIP-UP (?) @ 173.0	TR	70					VEN 05						
		187.0	SOS AS ABOVE	U. SIL, U. CALC INTERBEDS DK GR U. ARGL RHYTHMIC	10	40					VEN TR						
		198.0									11 BDC						

CALCAREOUS MUDSTONE MEMBER - 10a7

ITSI J.V. - ABBEY CLAIMS: LOG DDH 80-A1

COORD _____ DIP _____ AZIM. _____ ELEV. _____ SIZE $NQ/8Q$ STARTED _____ COMPLETED _____ LOGGED BY R. C. Cox

VISUAL LOG	FOOTAGE		PRIMARY LITHOLOGY	SECONDARY INTERBEDS	% CORE ANGLE	PYRITE			BARITE		CO ₃	OTHER	ANALYSES						
	Inter-section	True Depth				Lam.	%	Diss. %	Bed. %	Bleb. %			Type %	Description	%	% ppm	% ppm	% ppm	oz. ppm
			BLOT DK GREY BRN, NON-SIL, NON-CALC SILTY MDSN	FLASER BED NON-CALC, NON-SILTY GRAY BLK SHAL			LAM Tr	DISC I											
	400.0		SOS	NON-SIL, SLIGHTLY CALC, GRAY BLK SHAL 2.0-8M	25	75	LAM Tr	DISC Tr					AB 5- A14.0, FEEDING BURROWS @ TOP SHAL BED						
	426.0		LOW-MOD. SIL, V. CARB, SLIGHTLY TO MOD CALC BLK SILTY MDSN	THIN FLASER BED, BIOTURB. DK GREY BRN SILTY MDSN	20			PATCH Tr			VEIN Tr								
	440.0		MOD. MOD. CALC MOD-V. SIL, GRAY BLK MDSN GRAD. CNT	SOS DEC. RADDS D/S	Tr	90		IRREG SCATTERED			VEIN Tr								
	457.8		LOW-MOD. SIL, NON-CALC, GRAY BLK SHALE	FLASER BED BRN-GREY SILTY MDSN, THIN IRREG BEDS	25	70					VEIN Tr								
	480.0		SOS	SOS IRREG LENS BODIES 2-20CM	30	90		PATCH Tr			VEIN Tr								
	500.6		NON-SIL, V. CARB VFG BLK SHALE, VARIABLY CALC	THIN LENS LAM 2MM	Tr	60	LAM Tr	MOD Tr			BRN Tr		BADLY GREENED NR TOP						
	522.5		V. SIL. TO CHERT, V. CALC, BLK MDSN	THIN LENS LAM 2MM	10	60	LAM Tr	IRREG DISCONT			VEIN Tr								
	525.8		V. SIL. TO CHERT, MOD CALC BLK SHAL	"BOUNDINED" (W/FT RED) BLK CHRT 1CM	05	45	LAM 02				VEIN Tr								
	540.0		SOS VARIABLY CALC	SOS	05	85	LAM 05				VEIN Tr								
	558.5		V. CALC. BLK VFG LOW-MOD SIL, V. CARB MDSN	THIN LENS LAM 2MM	15	90													
	560.6		MOD-V. SIL, SLIGHTLY GRAY BLK SHAL, SLIGHTLY CALC TO MOD CALC	BIOTURB. GRAY BRN SILTY MDSN 572.5-573.0	80		LAM 05						REDUCED TO REG @ 571.0'						
	580.0							PINSTRIP EV. 1 CM											

TRANS. 12 10 11

1001
Pyritic Silic. Spore

DRILL HOLE LOG

COORDINATES 56+04 W - 4+18 N
ELEVATION 4320 (1317 M)
DIP. 60°
AZIMUTH 035°
SCALE

CORE SIZE N9
HOLE STARTED APRIL 9, 80
HOLE COMPLETED APRIL 18, 80
LOGGED BY U. SCHMIDT

MINERALIZATION

FOOTAGE	DESCRIPTION	DIP
	(METRES)	
10		
20		
7	<u>ROAD RIVER Fm</u> 10a-2 <u>Calcareous mudstone mantle</u>	
	BLACK, GRAPHITIC, SILICEOUS, LIMY ARGILLITE LAMINATED MINOR MED GREY BANDS, PYRITE BANDS 1-3 mm REHABILIZED WHITE Ca 5-20 ⁴⁰ mm BEDDING <1mm IN HAIRLINE FRACTURES 50° TO X ON DIP FRACTURE UP TO 60° TO X 20° TO CORE	
30	31.5' GREY THINLY LAMINATED PYRITIC LIMY ARGILLITE BAND FROM 2-20 mm THICK, MAY BE DEFORMED BY SOFT SEDIMENTARY PROCESSES	
40	15mm Ca 70° 20° X 80° 20° X 60° - MED GRAY IRREG. LAMINATED, THIN BAND (2mm) DISS PY 10mm Ca 70° ⊥ 50° SAME STRIKE AS BEDDING 20° SE DIP JOINT	
40	Ca STRINGER 20 mm Ca " 40 mm Ca " 40 mm	
28	20/50 GRAPHITIC SLICKENSIDES 20° G.S. graphitic slickensides GS 40°	
50	Ca Ca	
60	50° Ca 25° 5mm med grey hard soft sed def. - dark grey lens - 15mm calcareous band dip 40°	

DRILL HOLE LOG

HOLE No. 80A1
PAGE 2 OF 11

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE NQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY

FOOTAGE	DESCRIPTION	DIP
00	ROAD RIVER Rd CONTINUED Ca 30° 30° X 20 G.S. 4 JOINTS / FT 30° I 15° II X G.S. BLACK, GRAPHITIC, SILICEOUS, LIMY ARGILLITE COMMONLY CUT BY WHITE CALCITE FILLED FRACTURES VARYING FROM < 1mm → 40 mm. striae of calcite stringers in 90° to bedding	
10	Ca 40° - same DIP JOINT 90° BEDDING STRIKE 15° also Ca bedding 2-3mm - ≈ 8 hairline Ca fractures / FT.	
70	- Ca vein to 0° to core - broken ground - curved bedding sub- to core	
73	11° strike joints 20° dip joint 40° to strike @ 30°	
73-80	Highly fractured core	
80	Ca 90° TO BEDDING Bedding sub core axis 2-5 mm DARK GREY AND BLACK COLOUR BANDS Bedding steepens 10° to core axis graphitic slickensides bedding Ca vein sub bedding ≈ 20 mm	
90	10° < 1mm sulphide bands ? py very fine py associated with darker bands 15° - colour banding up to 10 mm width. hairline calcite filled fractures	
100	graphitic slickensides - deformed calcite stringers - calcite stringers bedding slightly lighter than normal dark grey even coloured massive spotted hairline calcite filled fractures	
110	Ca 10 mm hairline calcite filled fractures graphitic slickensides ≈ 3 calcite filled fractures / ft 1-3 mm width 10mm Ca vein	
120		

DRILL HOLE LOG

HOLE No. 80A1
PAGE 3 OF 11

COORDINATES
ELEVATION
DIP
AZIMUTH 035°
SCALE

CORE SIZE NQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY

FOOTAGE	DESCRIPTION	DIP
120 (37)	Ca min 60° to core graphitic gouge highly fractured core 60°? penetrative cleavage at 20° disrupts columnar bedding and calcite to it 30° G.S. penetrative cleavage 20° calcite filled fractures both 80° - med grey laminations in dark grey host	
130 (40)	Calcite and graphitic slickensides HIGHLY FRACTURED CORE, ABUNDANT CALCITE FILLED FRACTURES AND GRAPHIC FAULT GOUGE	
140	Ca also in open space filled fractures	
150	20° G.S. - med grey laminations, 1mm sulphide band + grey brown, dull, soft 10° G.S. 60° highly fractured core	190 191 30° 1mm band of Sulphide sph? 40° - core Ca @ 20° ⊥ sulphides
160	STRONG PENETRATIVE CLEAVAGE @ 15° - intermittent hairline fractures filled c Ca @ 40° 90° from strike of bedding abundant Ca filled fractures	
170	Ca 10mm grey lenticled bed - pyritic black laminar, curved bedding, calcite vein and fracture filling 15mm → 20cm (51) fold narrow sulphide laminae	167
180	20° 20° ← grey lenticled laminated lens 50° penetrative cleavage at right angles to bedding 60° med grey carbonate laminations - 1mm ^{thin} elongated grains 70° Ca in fractures ⊥ Bedding	176 1mm sulphide band py sph? 60°

DRILL HOLE LOG

HOLE No. BDA1
PAGE 4 OF 11

COORDINATES
ELEVATION
DIP 60°
AZIMUTH 35
SCALE

CORE SIZE NQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY U. SCHMIDT

SULPHIDES

FOOTAGE	DESCRIPTION	SULPHIDES
180	Ra1 CONTINUED BLACK TO DARK GREY MASSIVE TO THINLY LAMINATED GRA PHTIC, SILICEOUS LITTY ARGILLITE, MED. GREY LAMINATIONS MORE COMMON SINCE 176 BEDDING MORE OBVIOUS	
190	SAND SEAM NO CORE	
190-200	40° } Ca vein // to horizontal Ca filled fractures 50° } 60° } 50° } also joint ⊥ Bedding	191.E 1MM SULPHIDE BAND 40° 1MM SULPHIDES BAND 40° deformed py lens < 1MM py 50° < 1MM py 50°
200	50° (62)	
200-210	60° intermittent Ca filled fractures 1-5mm 20° fractures 30° joint 90° strike of Bedding Broken ground	< 1mm py band 90°
210	Strong penetrative cleavage 30° ⊥ bedding Ca 30° (SEE JOINT) Bedding ⊥ 40°, G.S. JOINT ⊥ BEDDING 25° = penetrative cleavage cleavage ⊥ bedding look like stylolites	py band < 1mm
210-220	20° ⊥ 10°) attitude reversal Ca 20° // bedding ⊥ 20°	
220	80° Ca Ca in fractures 10° → 20° 10mm highly fractured zone	
220-230	Bedding undulates sub // to core axis Ca in fractures sub // core axis, also graphitic stichen sides which // bedding	
230	FRACTURED	
230-240	Ca Ca 20mm 1.28	
240	40°	

DRILL HOLE LOG

HOLE No. 80A1
PAGE 5 OF 11

COORDINATES
ELEVATION
DIP - 60
AZIMUTH 35°
SCALE

CORE SIZE NQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY U. SCHMIDT

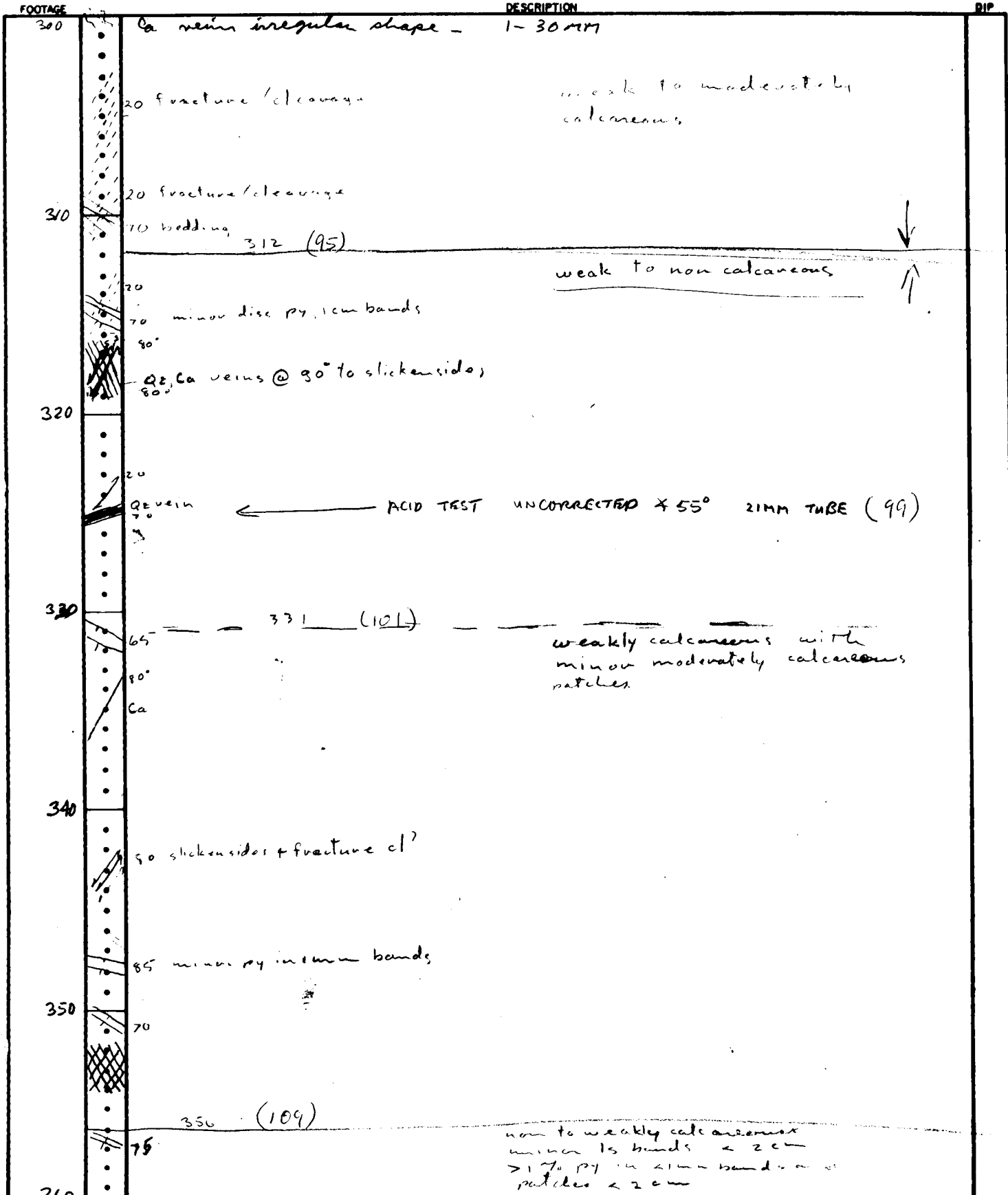
FOOTAGE	DESCRIPTION	DIP
240	<p>Ral continued abundant calcite filled fractures, sub core axis and at 50°</p> <p>NO CORE, Sand seam</p> <p>20° FAULT?</p> <p>Ca in fracture 10° 2-20 MM</p> <p>deformed sulphide bed mainly py</p>	
250	<p>10°</p> <p>70°</p> <p>BROKEN GROUND</p> <p>30°</p> <p>60° - graphitic stichensides common</p> <p>Ca in fracture - Broken ground - Breccia in calcite matrix</p> <p>intermittent Ca filled fractures 1-10MM WIDTH</p>	
260	<p>30-40°</p> <p>BROKEN GROUND</p> <p>5°</p> <p>QUARTZ-CALCITE VEIN - c 2 specs of Cpy 2mm diam - calcite in fractures and ⊥ bedding.</p>	
270	<p>50° (82) - Ca bedding 10mm also graphitic stichensides bedding</p> <p>Ca 50°</p> <p>50°</p> <p>Ca 20° 2-10 MM Ca - penetrative cleavage common, 90° to strike of Ca veins</p>	
280	<p>Ca</p> <p>- penetrative cleavage 30° ± Ca veins @ ± 40° deformed calcite filled fractures common</p> <p>10° Ca</p>	
290	<p>BROKEN CORE</p> <p>Breccia in calcite matrix</p> <p>50°</p> <p>calcite in hairline fractures 10° and 30°</p>	
300	<p>Ca - 10° c Qtz</p>	

DRILL HOLE LOG

HOLE No. 80A1
PAGE 6 OF 11

COORDINATES
ELEVATION
DIP 60
AZIMUTH 35
SCALE

CORE SIZE N9
HOLE STARTED
HOLE COMPLETED
LOGGED BY G Abbott



DRILL HOLE LOG

HOLE No. 80A1
PAGE 7 OF 11

COORDINATES
ELEVATION
DIP -60
AZIMUTH 35
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY G. ALBOTT

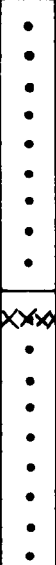


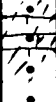


FOOTAGE	DESCRIPTION	DIP
360	360.5 (110) 20° cleavage 10° cavern w mica coarse sphalerite	
370	80° bedding (111) (112) 20° cleavage	
380		
390	60° 10° cleavage cl/bd < 90°	
400	massive grey limestone no pyrite thinly laminated to massive, dark grey non calcareous mudstone, > 1% py; grey, thin irregular, discontinuous laminations and oval "blebs" < 3mm across common pyrite in thin laminations, 2mm wide and sometimes up to 2cm across	
410	10a1 Pyritic Siliceous shale 75° bedding	
420		

DRILL HOLE LOG

HOLE No. 80A1
PAGE 8 OF 11

COORDINATES
ELEVATION
DIP - 60
AZIMUTH 35
SCALE

CORE SIZE NQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY G. ABBOTT

FOOTAGE	DESCRIPTION	DIP
420	<p style="text-align: center;"><u>HOOK SALT NOTES</u></p> <p>WISPY STRUCTURE DUE TO BIOTURBATION OR SLUMPING.</p> <p>411-421 426 457 461-471</p> <p>SEPARATED BY LIMY HORIZONS.</p>	
430		
440		
450		
460	 <p>90° bedding 40° fracture cl</p>	
470		
480		

DRILL HOLE LOG

HOLE No. 80 A1
PAGE 9 OF 11

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE
HOLE STARTED
HOLE COMPLETED
LOGGED BY G. ABBOTT

FOOTAGE	DESCRIPTION	DIP
480		
490	<p>35° cleavage.</p> <p>calcareous chickensides @ 35°/CA. pyritic fragments.</p>	
500	<p>90° bedding, thin laminations. 35° cleavage.</p>	
510	<p>5° or less chickensides.</p>	
520	<p>(159)</p> <p>massive pyritic (41%), graphitic black limestone.</p>	
530	<p>(160)</p> <p>non calcareous, black argillite around stone > 1% py. in 1 m - 1 cm laminations.</p> <p>45° bedding 45° cleavage bd/cl < 90°</p>	
600	<p>90° - 80° bedding</p>	

DRILL HOLE LOG

HOLE No. 80A1
PAGE 10 OF 11

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE NQ/BQ
HOLE STARTED
HOLE COMPLETED
LOGGED BY U. SCHMIDT

FOOTAGE	DESCRIPTION	DIP
540	Dark grey to black weathly to mm. calcareous pyritic mudstone.	
85°	bedding - pyritic concretions	
	- deformed py band 5mm	
550	py concretions and small shaly nodules in matrix along narrow sh. 2' x 1.2 mm	
560	masses in calcification with bands of filled nodules	
20°		
20° (171)		
20°	deformed limy pyritic bands on 5mm calc. nodules	
570	RECORDED TO 80' (174)	
60°	bedding of py band	
	red to light grey mottled very weathly calcareous mudstone nodules	
	like chippy mudstone	
	- py concretions	
580	- calcite concretions with pyritic core, also larger deformed pyritic band	
70°	red grey & black pyritic laminae in red. py., black beds up to 5mm thickness	
50°	light and med grey mottled weathly limy zone	
590	- py module	
70°		
80°	4cm of laminated py @ 80° laminated py up to 5"	
600		

DRILL HOLE LOG

HOLE No. 80A1
PAGE 11 OF 11

COORDINATES
ELEVATION
DIP
AZIMUTH
SCALE

CORE SIZE 39
HOLE STARTED
HOLE COMPLETED
LOGGED BY U. SCHMIDT

FOOTAGE	DESCRIPTION	DIP
600	FRAGMENTED, WEARLY TO NON-CALCAREOUS MUDSTONES CONTINUED	
10	light and dark grey mottled.	
80	30° 30° TO 33° TO TRACE OF BEDDING	
610	grey mottled non calcareous mudstone	
90°		
50°		
620	(189) med and light grey laminated calcareous mudstone white spotted and laminated, brecciated in part with calcite matrix	
	(191)	
630		
640	calcite in breccia matrix	
70 - 197		
650	40° (198) HOLE TIPS UNCORRECTED ACID TEST X 40° IN 21 MM TUBE	
	32° true dip	
	acid test footage corrected angle	
	325 47	
	651 33	
660		