RENISON LIMITED
DRILL CORE RECORD
HOLE NO. S1134

LOCATION	: OWEN MEREDITH AREA	LENGTH	: 819.00 m.
PURPOSE	: TO TEST NINE SEQUENCE AND FEDERAL	DATE COMMENCED	: 29/07/83
COLLAR RL	: 2176.60 m.	DATE COMPLETED	: 06/09/83
NORTHING	: 22083.40 m.	LOGGED BY	: D. KILPATRICK
EASTING	: 14816.63 m.	WATER LEVEL	:

HOLE SIZE

FROM	TO	SIZE
0.00	144.00	HQ
144.00	427.00	NQ
427.00	819.00	BQ

SIGNIFICANT CORE LOSS ZONES

FROM	TO	% LOSS

ORE ZONE GROUND CONDITIONS

ZONE	MECHANICAL STATE	HANGING WALL

COLLARED IN CCF H.W. OF OWEN MEREDITH - FEDERAL FAULT. INTERSECTED FEDERAL BETWEEN 384.8-386.1M ; MINERALISED. ?TRACHYTE BETWEEN 431.4 - 442.7M - SIMILAR TO THAT SEEN IN S370 AND S386 IN SAME AREA. A COMPLETE MINE SEQUENCE WAS ENCOUNTERED BETWEEN 515.9 - 751.2M INCLUDING 157M OF RRM. THE RRM INCORPORATES THE NO.2 DOLOMITE AT ITS BASE. NONE OF THE MINE SEQUENCE DOLOMITES WERE MINERALISED WITH THE EXCEPTION OF MINOR DISSEMINATED PYRITE IN ONE CHERTY HORIZON WITHIN THE LOWER NO.3.

POINTS OPEN TO INTERPRETATION INCLUDE TWO FAULTS BENEATH THE INFERRED FEDERAL (495.4M, 511.2M), AND THE RRM-LIKE CONGLOMERATE AT THE BASE OF THE ?TRACHYTE (442.7 - 444.0M)

ASSAY DATA SUMMARY

STRAT	FROM (M)	TO (M)	LENGTH (M)	Sn (%)	ANL Sn (%)	SOL Sn (%)	Cu (%)	Pb (%)	Zn (%)	Ag (G/T)	Bi (%)	As (%)	WO3 (%)	S (%)	Sb (%)
FED	385.00	386.80	1.80	<0.01		0.01	0.02	0.16	0.07	7.	0.009	<0.10	<0.01	0.40	

SURVEY DATA

SURVEY DEPTH (M)	BEARING (DEG)	GRID TYPE	DIP (DEG)	DIP TYPE	REMARKS
0.00	243.30	MINE	-75.30		
49.00	241.00	MINE	-75.60		
96.00	248.00	MINE	-74.30		
203.00	251.00	MINE	-74.10		
281.00	251.00	MINE	-74.20		
338.00	255.00	MINE	-70.50		
404.00	259.00	MINE	-68.20		
468.00	259.00	MINE	-66.10		
547.00	262.00	MINE	-63.70		
595.00	263.00	MINE	-61.70		
679.00	265.00	MINE	-58.10		
759.00	266.00	MINE	-55.90		
819.00	269.00	MINE	-53.00		

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FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
	21.00	6.00	28.6	RUBBLE	RUBBLE: disintegrates on wetting, gradational base. Additional features include: fussy, very broken. SILTSTONE: crimson, fine to coarse grained, lithic, tuffaceous, turbiditic, fine bedding, graded bedding.	CCF
	42.00	21.00	100.0	SANDSTONE AND SILTSTONE	SANDSTONE: crimson, medium to coarse grained, tuffaceous, lithic, broken, massive, gradational base. SILTSTONE irregularly interbedded: crimson, fine grained, bca top to base. 67,45,37.	CCF
	76.20	34.20	100.0	TUFF AND SILTSTONE	TUFF: crimson - purplish grey, medium to coarse grained, sandy, minor calcite veins, gradational base. SILTSTONE: crimson, fine grained. Additional features include: tuffaceous, graded bedding, minor lithic component. Repeated turbiditic graded sequences fine, laminated siltstones to coarse massive tuffaceous graywacke, repeated every 0.3-1.0m. Bands included bleached green fractured siltstone with quartz veins and infilling tension gashes. 45.8-46.4m, 64-67m. Bca top to base 43,49,53,38,46,38,41,43.	CCF
	101.60	25.40	100.0	GREYWACKE AND SILTSTONE	GREYWACKE: green - greenish grey, tuffaceous, lithic, massive, B.C.A.= 43 degrees, sharp planar base. SILTSTONE: crimson - greenish cream, fine bedding. Additional features include: turbiditic, graded bedding. MINERALISATION: quartz, sericite, chlorite veins, becoming more tuffaceous sandy with depth. Bca top to base 45,42,43,36,40 degrees.	CCF
	160.40	58.80	100.0	TUFF	TUFF: dark green - greenish grey, medium to coarse grained, lithic, calcareous, massive, fine bedding, becoming coarser towards the end of the unit, common calcite veins, fragments <10x3mm cream or orange brown cherty tabular subrounded to angular, becoming finer to base. Bands include - SILTSTONE near top of unit: green, fine grained, ?tuffaceous, cross bedding, bca top to base 43,49,38,48,49,38,34,54,58,55,60,55 degrees. Core becomes more massive toward base with dominant white flecks-lithic component with sparse coarser angular fragments. 135-138m coarse feathery diffuse cross bedding - 136.5-141m bands of dark grey core otherwise identical; fluid alteration?.	CCF
	160.60	0.20	100.0	SILTSTONE	SILTSTONE: black, carbonaceous, calcareous, slickensided fracture, common graphite.	CCF

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FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					MINERALISATION: common pyrite blebs as disseminations.	
	164.10	3.50	100.0	GREYWACKE	GREYWACKE: mottled green - greenish grey, ?tuffaceous, calcareous, fractured, medium bedding, locally abundant calcite intermixed, sharp planar base, common joints. MINERALISATION: common calcite on joints veins.	CCF
	164.50	0.20	50.0	?FAULT	?FAULT: black, ?tuffaceous, slickensided fracture, very broken, sheared, common calcite veins, base not recovered. Additional features include: brecciated, minor quartz veins.	CCFF
	197.80	33.30	100.0	SILTSTONE, GREYWACKE AND LITHIC TUFF	SILTSTONE (40%): dark greenish grey, fine grained, fractured, graded bedding, cross bedding alteration decreasing intensity towards end of unit. GREYWACKE (50%): green, tuffaceous, fragmented bedding, minor calcite bands. LITHIC TUFF near top of unit (10%): green. MINERALISATION: common chlorite alteration on joints bands intermixed, common calcite veins, bca top to base 44,38,44,53,61 degrees. Black to dark grey-green chloritic alteration on joints and bands enhances fractured appearance.	CCF
	276.60	78.80	100.0	TUFF, GREYWACKE AND SILTSTONE	TUFF (60%): greenish grey, medium to coarse grained, lithic, calcareous, gradational base, common joints. GREYWACKE interbedded (35%): greenish grey, minor calcite intermixed. SILTSTONE near top of unit (05%): green finely interbedded. MINERALISATION: common calcite veins throughout, common chlorite alteration on joints, some coarser agglomeratic tuffaceous zones in more massive zone in centre of unit. Bca top to base 32, 35,44,32,41,47,47,32,32,32,47,48 degrees. Appearance is similar to unit above but is coarser grained. 272.5 -272.6m possible rounded pebbles within tuff - may be alteration feature only. Unit is very altered at base chloritised.	CCF
	282.10	5.50	100.0	SHEARED ROCK	SHEARED ROCK: black, carbonaceous, calcareous, slickensided fracture, fissile, laminated, abundant graphite intermixed, subangular, prolate, broken in patches. Additional features include: agglomeratic fragments, fragments and clasts often calcareous sometimes siliceous from 1-15mm diameter.	CCFF?

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FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					MINERALISATION: common calcite veins, minor quartz veins, minor pyrite replacing clasts, minor pyrite veinlets blebs on joints, unit may be fault or shearing may be due to fissile graphitic matrix. Bands include - SILTSTONE: thickness 0.50 m., base at 277.10 m., greenish grey, laminated, fragmented beddings, sharp planar base, with agglomerate: brecciated.	
	289.10	7.00	100.0	AGGLOMERATE	AGGLOMERATE: dark grey, banded, minor graphite on joints, B.C.A.= 50 degrees, sharp planar base, with dark grey - black, siliceous, cherty fragments clasts, angular, prolate, with calcareous clasts, subrounded, equant, with dolomitic, calcareous cobbles, subrounded, tabular. MINERALISATION: common pyrite along grain boundaries replacing clasts cobbles, common calcite veins.	CCF
	294.90	5.80	100.0	SILTSTONE, TUFF AND GRIT	SILTSTONE (50%): dark grey, fine grained, calcareous, fine beddings, cross beddings, minor graphite on joints, B.C.A.= 55 degrees, sharp planar base. TUFF irregularly interbedded (45%): light grey - greenish grey, medium grained, calcareous, graded beddings, cross beddings. GRIT near base of unit (5%): mottled light grey, calcareous. MINERALISATION: minor pyrite as disseminations near top of unit.	CCF
	311.70	16.80	100.0	TUFF AND SILTSTONE	TUFF (80%): greenish grey, medium to coarse grained, lithic, calcareous, fine beddings, B.C.A.= 50 degrees, sharp planar base. SILTSTONE irregularly interbedded (20%): dark grey - greenish grey, cross beddings, fine beddings, some cyclic turbiditic sequences. Base faulted?. MINERALISATION: sparse pyrite blebs near base of unit. Bands include - SHALE near base of unit: black, carbonaceous, calcareous, common graphite intermixed, common pyrite blebs.	CCF
	324.50	12.80	100.0	SHALE, SANDSTONE AND LITHIC TUFF	SHALE (50%): black, fine grained, carbonaceous, calcareous, fine beddings, graded beddings, common pyrite blebs veins, B.C.A.= 54 degrees, gradational base. SANDSTONE interbedded (40%): light grey, medium to coarse grained, ?tuffaceous, calcareous, fine beddings, cross beddings, minor pyrite as disseminations. LITHIC TUFF (10%): light grey - dark grey, fine to coarse grained, calcareous, sparse pyrite as disseminations. MINERALISATION: common calcite veins on joints. Grades into less carbonaceous unit below. Shale is graphitic becoming less	CCF

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FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					so with depth.	
	365.10	40.60	100.0	SILTSTONE, SHALE AND LITHIC TUFF	SILTSTONE (50%): greenish cream - light grey, fine to medium grained, ?tuffaceous, calcareous, fine beddins, cross beddins, B.C.A.= 56 degrees, gradational base. SHALE irregularly interbedded (40%): dark greenish grey - dark grey, fine grained, fine beddins. LITHIC TUFF (10%): light grey, fine to coarse grained, calcareous. MINERALISATION: locally abundant calcite intermixed decreasing abundance towards end of unit, common calcite veins stringers veinlets. Additional features include: disturbed and disrupted beddins, slumpins and microfaultins near middle of unit.	CCF
	384.80	19.70	100.0	SILTSTONE, CARBONACEOUS SILTSTONE AND GRANULE CONGLOMERATE	SILTSTONE (75%): purplish grey - greenish cream, fine grained, banded, common calcite intermixed bands, B.C.A.= 52 degrees, faulted base. CARBONACEOUS SILTSTONE (20%): dark grey - light grey, fine to coarse grained, calcareous. GRANULE CONGLOMERATE (·5%): pink - greenish cream, medium to coarse grained, calcite granules, ?accretionary. Bands 2-5cm wide. Distinctive pebble- bed -like unit. Common calcite on bedding partings. Additional features include: sparse subrounded, calcareous cobbles clasts MINERALISATION: common calcite veins stringers on joints, minor pyrite blebs. Additional features include: sheared, fragmented beddins, carbonate veins near base of unit.	CCF
	386.40	1.60	100.0	FAULT	FAULT: calcareous, slickensided fracture, broken, sheared, common graphite throughout. Additional features include: brecciated near base of unit, macerated. MINERALISATION: abundant pyrite as disseminations near middle of unit, probable federal-owen meredith shear.	FEDFT
	402.50	16.10	100.0	SILTSTONE AND CARBONACEOUS SILTSTONE	SILTSTONE: green - greenish grey. CARBONACEOUS SILTSTONE interbedded: greenish grey - dark grey, calcareous microfaultins, intensely veined at base. MINERALISATION: common calcite veins stringers, minor rhodochrosite veins overprinting calcite stringers. Additional features include: fine beddins, irregular beddins, microfaultins, disturbed and disrupted beddins.	CCF

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FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					MINERALISATION: minor calcite pebbles fragments near base of unit, bca top to base 50,55,35,25 deg. Abundant fracturing and calcite veining at base.	
	421.80	19.30	100.0	SHALE AND GREYWACKE	SHALE: black - greenish grey, fine bedding, irregular bedding, common calcite, minor rhodochrosite on bedding planes veins. GREYWACKE bands: tuffaceous, calcareous, medium bedding. Additional features include: microfaulting, disturbed and disrupted bedding, beds become more disrupted sheared microfaulted to base.	CCF
					MINERALISATION: common calcite veins stringers, minor pyrite replacing, calcite blebs near base of unit, bca variable 15-60 degrees.	
	424.70	2.90	100.0	SILTSTONE	SILTSTONE: light grey - creamy grey, fine grained, fractured, contorted bedding, fragmented bedding, sharp planar base. Additional features include: slumping and microfaulting, bca irregular almost dolomitic stylolitic texture.	CCF
					MINERALISATION: abundant calcite intermixed near top of unit, common quartz veins infilling in fractures, sparse pyrite on joints veinlets.	
	431.40	6.70	100.0	SHALE	SHALE: black, agglomeratic, brecciated, common calcite veins, macerated, sharp planar base. Additional features include: sheared, massive, fragmented bedding.	CCF
					MINERALISATION: sparse pyrite intermixed on bedding planes, sparse pyrite replacing blebs. Bands include - VEIN: thickness 0.40 m., base at 426.50 m., massive, rhodochrosite, and, calcite infilling. SHEARED ROCK: thickness 0.20 m., base at 426.70 m., slickensided fracture abundant calcite intermixed, macerated. SHEARED ROCK: thickness 0.60 m., base at 428.60 m., quartzose, siliceous, abundant quartz veins. VEIN: thickness 0.10 m., base at 429.30 m., black, calcareous, sandy, fussy.	
	438.40	7.00	100.0	ROCK	ROCK: green, fine to medium grained, moderately soft, massive, abundant carbonate veins, accessory pyrite as disseminations, sharp planar base, possible ?basic intrusive. bright green = chlorite sericite serpentine with occasional wispy bands of harder cherty red or red brown material, occasional coarser bands show waxy serpentinous dark green mineral in cream ?feldspathic clayey matrix. One band 1.0m from base (3cm wide) contains white cherty nodules (av. 0.6cm diam.); ?accretionary about small nucleus. The white nodule has radiating strain and green ?chloritic	CCFT

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FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					alteration from rim inward-calcareous fine grained red-brown matrix. Minor shearing and slickensided fracture on joints. Appearance similar to unit described in s370 and s386 as trachyte.	
	442.50	4.10	100.0	ROCK	ROCK: red - crimson, moderately soft, massive, abundant calcite veins, B.C.A.= 40 degrees, sharp planar base, hematitic red colour fractured rock with three hard quartzite-like calcareous bands near top. Upper one has marble like birdseye texture similar to nodular zone in unit above. Calcite veins contain trace pyrite disseminations, minor chlorite alteration associated with calcite veining.	CCFT
	442.70	0.20	100.0	ROCK	ROCK: pink - green, agglomeratic, ?tuffaceous, laminated, fine beddins near top of unit, fine pink laminations 2.3mm contain subangular to rounded quartzose fragments 0.8mm and is dissected by calcite filled joints perpendicular to beddins. Below laminated horizon occurs a fragmented pebble conglomerate zone of pink cherty fragments in green chloritic matrix-moderately soft. Whole unit contains trace calcite intermixed and is partially replaced by large calcite vein. Similar to rrm.	CCFT
	443.50	0.80	100.0	PEBBLE CONGLOMERATE	PEBBLE CONGLOMERATE: cream - crimson, ?tuffaceous, hematitic, moderately soft, graded beddins, B.C.A.= 42 degrees, sharp planar base. Bands include - SILTSTONE: thickness 0.20 m., base at 443.30 m., red - crimson, hematitic, moderately soft, laminated, fine beddins, B.C.A.= 62 degrees, sharp planar base, conglomerate is bimodal. Clasts are 2-10cm and rather fine grained dark green ?basaltic or white ?feldspar and subrounded. The matrix is a lithic ?tuffaceous hematitic rock with fragments lenticular and angular oriented parallel to beddins. The pebble fragments are at the base of the two conglomerate horizons which are separated by the silty horizon. Similar to rrm.	CCFT
	444.00	0.50	100.0	PEBBLE CONGLOMERATE	PEBBLE CONGLOMERATE: cream - green, sharp planar base, large tabular blocks of ?basalt and ?quartz-feldspar in green to light-green mudstone matrix - large quartzose clasts are jointed and infilled by quartz. Similar to rrm.	CCFT
	444.35	0.35	100.0	VEIN	VEIN: quartz, carbonate, chlorite, sharp planar base, vein is itself veined by quartz and calcite with minor chloritic pyrite veinlets. Schlickensided basal contact dolomitic stilolite-like chlorite veining green sericite with calcite near top.	CCFVT
	446.00	1.65	100.0	MUDSTONE	MUDSTONE: light greenish grey, fine grained, ?tuffaceous, silicified increasing intensity towards end of unit, sharp planar base. Bands include - PEBBLE CONGLOMERATE: thickness 0.01 m., base at	CCF?

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					444.40 m., green fragments, rounded, with kaolin matrix. Second less distinct horizon beneath. Fragments are elongated ovoid, possibly volcanic.	
	457.00	10.70	97.3	SILTSTONE AND SANDSTONE	SILTSTONE (70%): dark grey - black, fine grained, laminated, fine bedding contorted bedding. SANDSTONE finely interbedded (30%): light grey, fine grained. MINERALISATION: sparse pyrite on joints, sparse pyrite blebs, occasional quartz filled tension gashes associated with arenaceous laminae. Bands include - BROKEN GROUND: thickness 0.90 m., base at 455.80 m., slickensided fracture, core loss.	CCFT
	458.70	1.70	100.0	DOLOMITE AND SILTSTONE	DOLOMITE (65%): white - light grey, stylolitic, sparse pyrite as disseminations finely interbedded. SILTSTONE irregularly interbedded (35%): grey - dark grey, laminated, fine bedding.	CCF?DO
	464.30	5.60	100.0	SILTSTONE AND SANDSTONE	SILTSTONE (80%): dark grey, fine grained, laminated, reworked, disturbed and disrupted bedding increasing intensity towards end of unit. SANDSTONE finely interbedded (15%): light grey, fine to medium grained, fragmented bedding. Bands include - SANDSTONE lenses (5%): light grey. Additional features include: turbiditic, cross bedding, fragmented bedding, brittle fragmented habit of arenaceous laminae gives agglomeratic appearance. Rare rounded ?dolomitic clasts minor quartz-carbonate filled tension gashes. MINERALISATION: sparse pyrite blebs.	CCF
	471.80	7.50	100.0	SILTSTONE AND AGGLOMERATE	SILTSTONE: light grey, moderately soft, muddy. AGGLOMERATE: dark grey - black, silty, interbanded ?turbiditic upward fining sequence of disturbed reworked agglomeratic siltstone fining to more lamellar siltstone or cross bedded sandy siltstone of massive fine light grey siltstone (?dolomitic) sequence is repeated about 8 times with intervals of 20cm to 3m. Unit above this is part of same repetition. The fine grained upper parts of the sequence is sometimes disturbed and reworked during deposition of overlying horizon. Bca irregular 28-54. MINERALISATION: minor pyrite as disseminations blebs.	CCF
	471.90	0.10	100.0	DOLOMITE	DOLOMITE: light grey, calcareous, laminated, minor chlorite alteration finely interbedded, B.C.A.= 49 degrees, sharp irregular base, dip is at 90	CCFDO

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					des to units above and below. May be erratic.	
	482.70	10.80	100.0	SILTSTONE	SILTSTONE: green - greenish cream, moderately soft, muddy, contorted beddins, disturbed and disrupted beddins, may be a turbiditic sequence similar to above (into which it appears to grade). Some zones appear more lamellar and less disturbed and may represent calmer period of deposition before the next depositional event. Green colour and occasional flesh pink cherty lenses and fragments reminiscent of the ?trachyte described above. Rare calcareous clasts (.E.G. 477.8m) with calcite chloritic filled radial fractures. MINERALISATION: sparse pyrite blebs. Bands include - SILTSTONE: thickness 0.60 m., base at 473.50 m., greenish grey. SILTSTONE bands: black, agglomeratic, similar to unit above 0.1m dolomite band.	CCF
	486.00	3.30	100.0	SILTSTONE	SILTSTONE: purple, agglomeratic, moderately soft, contorted bedding, slumped bedding, B.C.A.= 50 degrees, similar to unit above except for colour. Grades from disturbed contorted agglomeratic at base to lamellar fine irregular bedded at top. MINERALISATION: minor talc, chlorite alteration, accessory calcite intermixed, one calcareous clast with radial fractures (385.4m).	CCF
	488.10	2.10	100.0	SILTSTONE	SILTSTONE: green - buff, sandy, irregularly interbedded buff to light green or dark green ?chloritic siltstoe and mudstones and cherts, with agglomeratic ?tuffaceous horizons and dark green medium grained mottled ?basaltic-textured bands. MINERALISATION: common calcite clasts veins.	CCF
	490.20	2.10	100.0	SILTSTONE	SILTSTONE: red, ?tuffaceous, massive, fine bedding, B.C.A.= 48 degrees, intensely veined at base, with gritty pinkish cream clasts. MINERALISATION: common calcite, chlorite veins, hematitic colour. Contains clasts and bedded fragments of sandy ?tuffaceous material. Irregularly interbedded chloritic silty and ?basaltic sandy units with pink and red silty band minor pyrite blebs intermixed.	CCF
	495.40	0.90	17.3	?FAULT	?FAULT: chloritized, broken, sheared, abundant calcite veinlets, rock type is same as unit above.	CCFF?

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	507.20	11.80	100.0	SILTSTONE AND GREYWACKE	SILTSTONE (60%): red - purple, silty, disturbed and disrupted bedding, reworked, hematite. GREYWACKE irregularly interbedded (40%): green, chloritized, ?tuffaceous, sandy, strong hematitic purple red colouring. MINERALISATION: common calcite veins, trace chlorite, tourmaline alteration.	CCF
	511.20	4.00	100.0	?TUFF	?TUFF: green - creamy grey, silty, lithic, disturbed and disrupted bedding, B.C.A.= 60 degrees, possibly faulted base. Additional features include: broken, brecciated near top of unit, very similar to unit 471.9-482.7m, base is sharp planar at 32 deg to core axis with schlickensided fracture and distinct rock type change. Possible alternative federal-owen meredith fault.	CCF
	515.90	4.70	100.0	SILTSTONE AND SANDSTONE	SILTSTONE: black, fine grained, disturbed and disrupted bedding, trace chlorite alteration, B.C.A.= 48 degrees, possibly faulted base. SANDSTONE irregularly interbedded: light grey, fine grained, fragmented bedding, slumping and microfaulting. Bands include - SHEARED ROCK: thickness 1.40 m., base at 515.80 m., black fine grained, silty, lithic, slickensided fracture, brecciated. ?FAULT: thickness 0.10 m., base at 515.90 m., pugdy, brecciated, macerated. MINERALISATION: minor calcite veins increasing abundance towards end of unit, minor pyrite blebs decreasing abundance towards end of unit.	CCF
	523.60	7.70	100.0	DOLOMITE AND SILTSTONE	DOLOMITE (80%): light grey, stylolitic, abundant quartz veins. SILTSTONE irregularly interbedded (20%): dark grey - black, banded. Bands include - DOLOMITE: thickness 1.90 m., base at 517.80 m., fractured SILTSTONE: thickness 0.80 m., base at 518.60 m., light grey, dolomitic, banded, minor pyrite as disseminations finely interbedded, B.C.A.= 48 degrees, sharp irregular base. MINERALISATION: minor chlorite alteration in stylolites, base is sheared schlickensided graphitic.	1?
	527.20	3.60	100.0	SILTSTONE AND SANDSTONE	SILTSTONE (80%): dark grey, carbonaceous, sharp planar base. SANDSTONE irregularly interbedded (20%): light grey, fine grained. Bands include - DOLOMITE: thickness 0.20 m., base at 525.80 m. MINERALISATION: common pyrite blebs. Base is disconformable.	RRMT

No 1?

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FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
	530.80	3.60	100.0	SILTSTONE	SILTSTONE: green - pink, siliceous, cherty, hard, massive, fragmented bedding, microfaulting. Bands include - CONGLOMERATE: thickness 0.30 m., base at 527.70 m., yellow - green, chloritized. ?TUFF: light green - greenish grey, lithic. CONGLOMERATE: thickness 0.40 m., base at 530.80 m., green - pink, with quartzite clasts same as band at top of unit.	RRM?
	533.50	2.70	100.0	CHERT	CHERT: pink, massive. Additional features include: fractured, fine bedding near middle of unit, B.C.A.= 49 degrees, fine bedding near base of unit, B.C.A.= 62 degrees. Bands include - CHERT laminae: thickness 0.20 m., base at 533.10 m. in septarian cracks.	RRM?
	536.30	2.80	100.0	CHERT	CHERT: light grey, dolomitic, with small rassed calcareous ?clasts. Rare rounded pink cherty clasts. Rare stylolitic veins.	RRM?
	537.40	1.10	100.0	MUDSTONE AND PEBBLE CONGLOMERATE	MUDSTONE: greenish cream - cream, ?tuffaceous, irregular bedding, B.C.A.= 60 degrees, sharp planar base. PEBBLE CONGLOMERATE irregularly interbedded: green - greenish cream. Additional features include: cherty, quartzose fragments, poorly sorted, angular, calcareous, muddy fragments, subangular. MINERALISATION: trace calcite intermixed veinlets.	RRM?
	546.70	9.30	100.0	CONGLOMERATE, SILTSTONE AND SILTSTONE	CONGLOMERATE: gradational base. SILTSTONE: blue, carbonaceous. SILTSTONE: light grey, dolomitic, agglomeratic, brecciated. Conglomerate contains abundant subangular quartz chert and siliceous mudstone fragments in a variety of matrices from black carbonaceous mud to light grey tuffaceous or dolomitic material. MINERALISATION: minor pyrite nodules replacing fragments, grades to light grey siliceous quartzose siltstone at base.	RRM?
	550.80	4.10	100.0	SILTSTONE	SILTSTONE: light green, siliceous, muddy, banding, irregular bedding, sharp irregular base, no bed determinable. Base conformable against conglomerate below.	RRM?
	554.00	3.20	100.0	PEBBLE CONGLOMERATE	PEBBLE CONGLOMERATE: green - pink, common calcite veins throughout, gradational base. Additional features include: quartzose, silty, cherty clasts, subrounded. Bands include - QUARTZITE: thickness 1.20 m., base at 553.30 m.,	RRM?

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					asslomeratic, fractured, common calcite intermixed.	
	557.30	3.30	100.0	TUFF, MUDSTONE AND CHERT	TUFF (50%): greenish cream, lithic, asslomeratic, B.C.A.= 72 degrees. MUDSTONE finely interbedded (40%): greenish cream - green. CHERT irregularly interbedded (10%): red, basal 0.2m is calcareous breccia conglomerate. Base is sheared and chloritic ?faulted.	RRM
	567.90	10.60	100.0	MUDSTONE AND PEBBLE CONGLOMERATE	MUDSTONE (60%): light green - light grey, silty, becoming finer towards the end of the unit, B.C.A.= 65 degrees. PEBBLE CONGLOMERATE near top of unit (20%): dark grey - black, minor pyrite replacing. Additional features include: calcareous fragments, subrounded, black, silty fragments, subangular. MINERALISATION: minor calcite veins. The mudstone contains occasional rounded cherty fragments and some lithic horizons. Bca varies 45-70 degrees sparse pyrite finely interbedded. Broken zone 564.5-656.0m. Bedding more evenly laminated below broken section. Base 90 deg to core axis and marked by calcite chlorite vein.	RRM
	572.80	4.90	100.0	PEBBLE CONGLOMERATE AND SILTSTONE	PEBBLE CONGLOMERATE (70%): light grey - dark grey, carbonaceous, B.C.A.= 55 degrees. SILTSTONE irregularly interbedded (10%): light grey, laminated, irregular bedding, cross bedding. Conglomerate might be described as lithic siltstone since matrix is dominant. Fragments are subangular rarely with internal bedding. Fragments in some horizons elongated with bedding. Bca 45-65 degrees. MINERALISATION: sparse pyrite replacing clasts. Additional features include: sparse pyrite blebs, some bands have calcareous matrix and fragments more common near base. Some graphitic horizons.	RRM
	579.70	6.90	100.0	DOLOMITE, SILTSTONE AND AGGLOMERATE	DOLOMITE (85%): light grey, siliceous, fractured. SILTSTONE irregularly interbedded (10%): dark grey, fine bedding. AGGLOMERATE (05%): dolomitic, silty, dolomite contais occasional quartz clasts. Becomes less fragmented near base with more regular interbeds of siltstone. Bca 65-45 deg top to base. MINERALISATION: sparse pyrite veins near top of unit.	RRMDO
	582.90	3.20	100.0	SILTSTONE	SILTSTONE (90%): light grey - dark grey, ?tuffaceous, carbonaceous, moderately soft, fine bedding, indistinctly bedded, sharp planar base,	RRM

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					with dolomite bands (10%): light grey, siliceous. Bands include - SHEARED ROCK: thickness 0.10 m., base at 582.30 m.; quartzose, calcareous, minor pyrite as disseminations, arenaceous interbeds become common towards base show microfaulting. Bca variable 52,75,70,62 degrees. MINERALISATION: minor calcite veins.	
	585.80	2.90	100.0	MUDSTONE	MUDSTONE: light blue - greenish grey, silty, ?tuffaceous, moderately soft banded, fine bedding, B.C.A.= 64 degrees, gradational base.	RRM
	597.80	12.00	100.0	SILTSTONE, MUDSTONE AND CHERT	SILTSTONE: red - crimson, fine bedding, B.C.A.= 60 degrees, sharp irregular base. MUDSTONE interbedded. CHERT increasing abundance towards end of unit: red, sharp bedding planes not graded bedding. Becomes silified cherty near base. Chert is bright orange red.	RRM
	604.40	6.60	100.0	PEBBLE CONGLOMERATE	PEBBLE CONGLOMERATE: purple clasts, poorly sorted, some contact, subrounded, equant, with chert matrix: red - pink, silty, clasts are purple ?tuffaceous siltstone or smaller quartz cherty or mottled ?basic fragments. All could be derived from units below.	RRM
	606.30	1.90	100.0	SILTSTONE	SILTSTONE (70%): red, laminated, fine bedding, B.C.A.= 78 degrees, with pebble conglomerate bands (30%): purple - pink, conglomerate clasts same as for unit above.	RRM
	653.20	46.90	100.0	ROCK	ROCK: purple, silty, ?tuffaceous, fractured, sharp planar base. Additional features include: massive. MINERALISATION: abundant calcite veins increasing intensity towards end of unit, abundant calcareous chloritised foliated bands. This unit is conceivably a boulder conglomerate with calcareous matrix. The rock contains common to abundant intermixed calcite below 620m. Bleached to grey toward base. Green chloritic actinolite colour last metre.	RRM
	660.30	7.10	100.0	DOLOMITE	DOLOMITE: light grey, calcareous, siliceous, fractured, common quartz veins. Additional features include: conglomeratic near top of unit, with siltstone bands: dolomitic.	2?DO
	663.20	2.90	100.0	SILTSTONE, ?TUFF AND	SILTSTONE: light grey - pink, dolomitic, fractured. ?TUFF: light greenish grey, laminated, fine bedding, graded bedding,	2?

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
				CHERT	B.C.A.= 53 degrees. CHERT: pink, quartzose, silty. Additional features include: calcareous.	
	668.60	5.40	100.0	DOLOMITE	DOLOMITE: light grey, conglomeratic, fractured. Additional features include: abundant fragments, poorly sorted, angular, calcareous matrix.	2?
	674.60	6.00	100.0	SILTSTONE, CHERT AND TUFF	SILTSTONE near top of unit (50%): pink - greenish cream, siliceous, dolomitic, common calcite intermixed. CHERT near middle of unit (30%): pink, quartzose, laminated, fine beddins contorted beddins near base of unit, B.C.A.= 44 degrees. TUFF near base of unit (20%): white, ?flowbanded nodular fining upward.	RRM
	680.60	6.00	100.0	CONGLOMERATE	CONGLOMERATE: light grey - pink, clasts consist of subangular to subrounded quartz and laminated siliceous siltstone and dolomite as well as smaller angular silty fragments in moderately soft . Bands include - ?TUFF: thickness 0.40 m., base at 680.00 m., buff, agglomeratic fragments, well sorted, good contact, rounded, tabular, B.C.A.= 63 degrees, fragments are 0.4cm.	RRM
	681.70	1.00	90.9	DOLOMITE	DOLOMITE: silicified, broken, fractured. Additional features include: agglomeratic near top of unit near base of unit, stylolitic. MINERALISATION: abundant calcite intermixed near base of unit.	2?
	683.90	2.20	100.0	MUDSTONE, SILTSTONE AND LITHIC TUFF	MUDSTONE: light greenish grey - light grey, fine grained, becoming coarser towards the end of the unit. SILTSTONE finely interbedded: light grey - dark grey, fine grained, carbonaceous, ?tuffaceous. LITHIC TUFF: light greenish grey. Irregularly interbedded to massive mudstone-fine silt stone at top gives way to more regularly interbedded to finely inter-laminated black siltstone and coarser arenaceous siltstone. MINERALISATION: sparse pyrite blebs finely interbedded. Bands include - SILTSTONE: thickness 0.10 m., base at 681.80 m., calcareous, laminated, abundant pyrite as disseminations finely interbedded, bca 54,59,72,57,61 degrees.	RBM
	684.30	0.40	100.0	DOLOMITE, SILTSTONE AND	DOLOMITE. SILTSTONE near top of unit: dolomitic.	RBMDO

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
				SILTSTONE	SILTSTONE finely interbedded: black, carbonaceous.	
	685.70	1.40	100.0	SILTSTONE AND GREYWACKE	SILTSTONE: dark grey, fine grained, cross beddins, B.C.A.= 65 degrees, gradational base. GREYWACKE finely interbedded: cream - light grey, fine grained, fine interbeds separated by black carbonaceous lamellae average 0.2-0.5cm apart, arenaceous horizons show some scouring features. MINERALISATION: sparse pyrite finely interbedded near base of unit.	RBM
	698.60	12.90	100.0	SILTSTONE AND GREYWACKE	SILTSTONE: black, laminated, fine beddins, abundant graphite intermixed, B.C.A.= 60 degrees. GREYWACKE increasing abundance towards end of unit: light grey - dark grey, fine grained finely interbedded. MINERALISATION: common pyrite finely interbedded blebs increasing abundance towards end of unit. Bands include - BROKEN GROUND: thickness 6.00 m., base at 693.00 m., black, slickensided fracture, sheared, fragmented beddins, abundant graphite intermixed, abundant quartz, and, calcite veins, common calcite intermixed, minor quartz, chlorite, pyrite veins, minor pyrite finely interbedded, bca top to base 60,65,58,61,65,58.	RBM
	700.90	2.30	100.0	SILTSTONE	SILTSTONE: light grey, fine to coarse grained, fine beddins, B.C.A.= 61 degrees, sharp irregular base. Additional features include near base of unit: sandy, common chlorite alteration near base of unit. MINERALISATION: common quartz, carbonate, minor chlorite veins.	RBM
	709.00	8.10	100.0	DOLOMITE	DOLOMITE: light grey, calcareous, stylolitic, fragmented beddins. MINERALISATION: common quartz, carbonate veins, rhodochrosite rimmed silica filled veins common.	3
	714.70	5.70	100.0	SILTSTONE	SILTSTONE: green - greenish cream, fine grained, laminated, cross beddins intraformational folding. Additional features include: slumpins and microfaultins, minor chlorite alteration, gradational base, with chert finely interbedded: dark grey, quartzose decreasing abundance towards end of unit, accessory pyrite veinlets, bca top to base 82,69,49,62,60 degrees. Bands include - SANDSTONE: thickness 0.50 m., base at 709.50 m., cream grey, cherty, silicified, indurated, with siltstone finely interbedded:	RMU

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					green - greenish cream increasing abundance towards end of unit.	
	720.10	5.40	100.0	SILTSTONE AND GREYWACKE	SILTSTONE: dark grey - black, carbonaceous, becoming coarser towards the end of the unit, B.C.A.= 60 degrees. GREYWACKE finely interbedded: light grey, fine grained. Additional features include: cross beddins, slumpins and microfaultins. MINERALISATION: sparse pyrite blebs finely interbedded, unit becomes more arenaceous silicified to base. Bands include - DOLOMITE: thickness 0.30 m., base at 716.60 m., light grey, sandy, siliceous, stylolitic.	DMU
	751.20	31.10	100.0	DOLOMITE	DOLOMITE: light grey, stylolitic, abundant quartz veins near middle of unit. MINERALISATION: minor rhodochrosite intermixed. Bands include - SILTSTONE: thickness 1.80 m., base at 725.70 m., light greenish grey, dolomitic, cherty, minor pyrite as disseminations. Additional features include: minor chlorite alteration, one horizon at 724.5m contains siliceous ?carbonaceous nodules - pisolitic appearance - associated with common pyrite disseminations. Base of unit contains pinkish angular dolomite clasts - ?ripped from dolomite below. Bands include - BRECCIA: thickness 0.10 m., base at 729.40 m., black, quartzose, abundant fragments, angular, fragments include silty carbonaceous and dolomitic clasts. Trace pyrite stringers in dolomite.	3L
	753.00	1.80	100.0	SILTSTONE AND BROKEN GROUND	SILTSTONE: dark grey - light grey, fine to medium grained, turbiditic, disturbed and disrupted beddins, irregular beddins. BROKEN GROUND increasing intensity towards end of unit: black, quartzose, slickensided fracture, pussy, sheared, trace graphite intermixed.	DMU
	755.70	2.70	100.0	SILTSTONE, DOLOMITE AND SHALE	SILTSTONE: dark greenish grey - dark grey, reworked, disturbed and disrupted beddins, sharp irregular base. DOLOMITE intermixed: light grey, fine grained, brittle, fractured, trace calcite intermixed. SHALE near base of unit: black, laminated, trace graphite intermixed. Additional features include: minor pyrite finely interbedded. MINERALISATION: sparse pyrite as disseminations, base may be faulted. Lot of quartz veinins.	DMU
	759.00	3.30	100.0	SILTSTONE AND DOLOMITE	SILTSTONE: light greenish grey - grey, fine grained, irregular beddins, fine beddins.	DMU

FLAG	DEPTH	RECOVERED THICKNESS	% REC	ROCK TYPE	GEOLOGICAL DESCRIPTION OF STRATA	STRAT
					DOLOMITE bands: light grey, fine grained, brittle, fragmented beddings, reworked, trace calcite intermixed, dolomite is broken up and fragmented.	
	793.10	34.10	100.0	SILTSTONE AND GREYWACKE	SILTSTONE (60%): red - green, fine bedding, graded bedding. GREYWACKE irregularly interbedded (40%): green, ?tuffaceous, sandy, cross beddings, strong red colouration appears to be fluid alteration feature rather than orisinal colour. Bca 75-80 degrees.	DMU
	794.00	0.90	100.0	?TUFF	?TUFF: greenish grey, lithic, sandy, becoming coarser towards the end of the unit, fine beddins, trace calcite veins. Additional features include: agglomeratic near base of unit.	DMU
	800.00	6.00	100.0	SILTSTONE, GREYWACKE AND MUDSTONE	SILTSTONE: grey - greenish cream, fine beddins, becoming coarser towards the end of the unit. GREYWACKE: mottled greenish grey, ?tuffaceous, cross beddins. MUDSTONE: creams grey, massive, bca 60-70 degrees.	DMU
					MINERALISATION: common quartz veins.	
	800.10	0.10	100.0	VEIN	VEIN: sheared, abundant calcite, and, quartz, minor chlorite.	DMF
	819.00	18.90	100.0	QUARTZITE AND SILTSTONE	QUARTZITE: light greenish grey - light grey, massive, bandins. SILTSTONE: light yellow - greenish grey, quartzose, fine beddins, bca 60-70 degrees.	DM
					MINERALISATION: common chlorite veins, minor tourmaline alteration bands near base of unit, common carbonate, quartz veins, minor quartz, topaz ?fluorite veining near base.	

END OF HOLE at 819.00m.