

LOCATION	Bulgobac, North Pinnacles Area	Depth (m)	90	Direction	102.5° (true)	Dip.	-53°	Depth (m)		Direction		Dip.		COLLAR DIP.	-60°	TOTAL DEPTH	130.1m
OBJECTIVE	To test: a) I.P. anomaly 20-30m down hole and b) a geochemical anomaly 80-90m down hole													DIRECTION	90° True	HOLE SIZE	NQ 42.0m BQ 130.1m
RESULT	Trace sphalerite and galena occur between 83 and 95m, and between 108m and the end of the hole. No economic mineralisation intersected.													R.L.	559m	COMMENCED	11.1.'80
														COORDINATES		COMPLETED	25.1.'80
														Grid	5,387,300mN 378,440mE	LOGGED BY	A. Mollison J. Mill
														A.M.G.	5,387,296.1mN 378,424mE		

DEPTH (m)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm							CORE REC'D		
FROM	TO							Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	RUN	SHORT
0	16	<u>Banded Arkosic Sandstone, Siltstone & Shale</u> Orange-brown & grey, limonitic, consists of 90% sandstone; 35% siltstone & 15% shale	Pervasively limonite stained. Small quartz veins (up to 3mm wide) occur sporadically.	33010	0	5.0	5.0	5.0	265	240	40			4.20	145	0	
				011	5.0	10.0	5.0	5.0	295	125	20			2.35	230	6.1	-
				012	10.0	15.0	2.4	5.0	205	295	15			2.65	1000	10.6	2.4
		<u>Arkosic Sandstone:</u> orange, limonitic, friable and fine grained. Beds upto 0.3m wide. Constituents are: sub-rounded quartz and feldspar grains (up to 1mm) and sparse fragments of grey shale (up to 2cm long) sub-parallel with bedding.	No visible sulphide mineralisation													11.3	-
		<u>Siltstone & Shale:</u> grey to orange, laminated graded interbeds between the sandstone layers. Average width 1cm, up to 5cm.														11.7	-
		<u>Bedding to Core Axis Angles:</u> at 3.0m - 55° 5.3m - 45° 9.2m - 47° 11.4m - 53° 14.7m - 50°														13.1	-
																13.6	-
																14.6	0.2
																16.0	0.1
16	29	<u>Pale Grey Sandstone 90% & Laminated Grey Siltstone & Shale</u> <u>Arkosic Sandstone:</u> Pale grey, poorly bedded and consisting of: well rounded quartz grains up to 4mm diameter 35%; sub-rounded pink feldspar grains generally smaller than the quartz grains up to 4mm parallel to bedding up to 3cm long.	Pervasive limonite staining to 22m No visible mineralisation	33013	15.0	20.0	2.0	Chips at 20 cm intervals	140	505	145			2.35	3100	16.0	-
				014	20.0	25.0	2.0	5.0	120	370	10			1.75	1600	17.0	0.7
				015	25.0	30.0	2.7	Sample 100 intervals	100	240	10			1.90	3200	17.8	0.1
		<u>Laminated Siltstone & Shale:</u> bands approximately 30cm thick containing lamellae of siltstone and fine sandstones up to 1cm thick.														19.0	1.0
		<u>Bedding to Core Axis Angles</u> at 22m - 50°														20.5	1.4
																22.0	1.5
																24.0	1.6
																25.6	1.5
																27.5	1.5
																29.5	-

129

DEPTH (m)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm							CORE REC'D		
FROM	TO							Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	RUN	SHORT
20	41.5	<p>Interbedded, Siltstone Shale & Arkosic Sandstone</p> <p>Well bedded and laminated grey shale and pale-grey-cream feldspathic sandstone and siltstone. Thicker sandstone units occur between 33.4-34.1m, 36.7-36.9m, 38.8-39.0m, 40.3-40.5m and 41.0-41.5m.</p> <p>Sandstone: cream-pale grey feldspathic greywacke with a slightly calcareous groundmass. Well developed graded bedding occurs at 39.8m (fines toward collar)</p> <p>Siltstone and Shale Dark grey well laminated except where associated with coarse sandstone where slumping is common.</p> <p><u>Bedding to Core Axis Angles</u> at 29.5 - 50° 30.2 - 40° 31.3 - 55° 32.0 - 50° 34.5 - 55° 39.3 - 60° 40.0 - 55°</p>	<p>Minor carbonate veins, faint trace of disseminated Pyrite in sandstone with carbonate veins</p>	33016	30.0	35.0	5.0	5.0	190	540	15			3.20	2050	29.5	-
				017	35.0	40.0	4.9	5.0	205	545	15			3.40	2350	30.2	-
																32.0	-
																33.0	-
																34.0	-
																34.05	-
																34.9	-
																35.2	-
																35.7	-
																36.5	-
																37.3	-
																37.9	-
																39.3	-
																40.0	0.1
																40.8	-
																42.0	-
41.5	65.5	<p>Interbedded Grey Shale & Siltstone with Fine Grained to Coarse grained Arkosic Greywackes</p> <p>Arkosic Greywackes: pale grey with minor chloritisation. Constituents are : sub-rounded to euhedral feldspar grains up to 3mm diameter 40%; Shale matrix 30%; well rounded quartz grains 20%; shale fragments up to 5cm 10%.</p> <p>Shale & Siltstone: dark grey & generally well laminated. Shale is slumped & fragmented in association with coarse greywacke bands.</p> <p><u>Bedding to Core Axis Angles at:</u> 42.3 - 45° 58.7 - 50° 47.0 - 45° 60.5 - 47° 51.2 - 55° 64.4 - 55° 54.8 - 55°</p>	<p>Trace pyrite blebs & grains on joint plane and adjacent calcite veins. Calcite veins are common-up to 3 cm wide.</p>	33018	40.0	45.0	4.9	5.0	250	195	25			3.20	2450	41.5	-
				019	45.0	50.0	5.0	5.0	110	335	15			2.70	2300	42.0	-
				33020	50.0	55.0	5.0	5.0	50	220	15			2.60	2350	44.0	0.1
				021	55.0	60.0	5.0	5.0	70	150	15			2.90	2900	47.5	-
				022	60.0	65.0	5.0	5.0	70	205	10			3.15	2600	48.7	-
																50.0	-
																53.5	-
																55.6	-
																60.5	-
																62.5	-
																65.5	-

130

DEPTH (m)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm							CORE REC'D			
FROM	TO							Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	RUN	SHORT	
41.5	65.5	Graded bedding, coarsening down hole at 48.0m and 58.3m.																
65.5	78.5	Grey Water Lain Crystal, Lithic Vitric Tuff with Interclasts	Trace blebs of pyrite	33023	65.0	70.0	5.0	5.0	80	170	5			2.45	2350	65.5	-	
		The constituents are : a) irregular, elongated feldspar fragments up to 5mm long 20%		024	70.0	75.0	5.0	5.0	110	240	10			2.35	3450	68.5	-	
		b) irregular quartz grains up to 5mm diameter 20%		025	75.0	80.0	5.0	5.0	80	125	30			2.30	2050	71.5	-	
		c) green, chloritised shards after vitric material up to 1cm 10%														74.5	-	
		d) irregular shale fragments up to 10cm long frequently elongate and														77.4	-	
		e) a grey vitric matrix.														78.5	-	
		Thin section sample taken at 71.3m (No 29568) H.W. Fander describes this sample a Rhyolitic Ignimbrite.		29658	Thin Section Sample taken at 71.3m													
78.5	108.3	Well Laminated Shale, Siltstone & Arkosic Sandstone		33026	80.0	85.0	5.0	5.0	95	265	20			3.45	2150	80.5	-	
		Shale and siltstone: grey grades cyclically from fine to coarse downhole. Generally very well laminated but slump features common at sandstone-shale contacts.	Trace pyrite, sphalerite and galena occur in fine calcite veins up to 3mm wide.	027	85.0	90.0	5.0	5.0	565	1350	5			3.40	2550	83.5	-	
		Sandstone: reworked tuffaceous material consisting of feldspar, quartz and shale fragments up to 1mm diameter.	Calcite veins occur throughout this unit but are most frequent between 83 and 90m. Sphalerite and galena are therefore most common between 83 and 90m.	028	90.0	95.0	5.0	5.0	280	795	20			3.40	2500	85.9	-	
		Bedding to Core Axis Angle at		029	95.0	100.0	5.0	5.0	160	285	25			3.85	2150	89.0	-	
		80m - 65° 95m - 66°		33030	100.0	105.0	5.0	5.0	100	290	30			4.15	2250	92.0	-	
		83m - 65° 97m - 75°		031	105.0	110.0	5.0	5.0	100	170	15			3.85	1800	95.1	-	
		86m - 65° 101.5m - 60°														97.0	-	
		89m - 65° 104.5m - 65°														101.5	-	
		92.5m - 75°														104.5	-	
		Good examples of graded beds coarsening downhole occur at 80.5 and 96.4m														108.3	-	
		Thin section sample No 29661 taken at 92.9m is described by Fander as an arkosic psammopellite.														110.5	-	
																113.5	-	
																119.5	-	
																122.5	-	
																125.5	-	
																128.5	-	
																130.1	-	

131

DEPTH (m)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA						CORE REC'D			
FROM	TO							Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	RUN	SHORT
108.3	130.1	<p><u>Pale Grey Arkosic Sandstone, & Grey Shale</u></p> <p><u>Arkosic Sandstone:</u> pale grey, graded and bedded. Unit consists of: a) sub-rounded to irregular white feldspar grains 40% b) rounded quartz grains 30% c) rounded to irregular green chloritic fragments (after vitric shards) 10% and d) dark grey shale fragments. All grains generally less than 3mm.</p> <p><u>Shale & Siltstone:</u> well laminated bands up to 10cm wide less abundant than sandstone.</p> <p>There are minor carbonate veins, throughout this unit, which may be up to 2cm wide.</p> <p><u>Bedding to Core Axis Angle</u></p> <p>at 122.4m - 70° 125.0m - 60° 128.5m - 65°</p> <p>Thin section sample No 29659 was taken at 121.5m. Fander describes it as an arkosic sandstone with rhyolite clasts.</p>	<p>Very minor traces of pyrite and sphalerite occur in association with the carbonate veins in this unit</p>	33032	110.0	115.0	5.0	5.0	100	295	10			2.95	2100	110.5	-
															113.5	-	
															119.5	-	
															122.5	-	
															125.5	-	
															128.5	-	
															130.1	-	
																EOH	

132