575114

CRA Exploration Pty. Limited - Diamond drill core log				Hole No: DD97BC9
Tenement: EL 4/94, Tasmania			**Map Ref.:** SK 5503, Burnie	
Collar R.L.: 200m		Co-ordinates: 324340E, 5429635N	Hole Orientation: 55° towards 050	Logged by: TJG
From	**To**	**Geological Desciption**	**Special Features**	**Core Orientation**
0	3.5	No core.		
3.5	4	Broken chloritic metasiltstone.		
4	6.8	Chloritic metasiltstone. Breccia zone @ 5.9m containing minor clay and silica.	Cleavage sub-parallel to bedding (40-50° to LCA).	
6.8	8.3	Clay, puggy zone possibly associated with a fault. Occasional chloritic siltstone with minor Si veining.		
8.3	12.8	Very chloritic siltstone. Minor pyrite, often associated with quartz veins.	Bedding/cleavage @ 45° to LCA. Occasional folds evident in quartz veins.	
12.8	14	Light brown-green weathered fine-grained siltstone. Contains up to 1% pyrite. Contact with chloritic siltstone marked by a clay puggy zone, containing fragmented brecciated quartz. Breccia zone pyrite-rich.		
14	17.5	Chloritic metasiltstone. Irregular silica veining with crystalline pyrite. Washed out zones in core may have been after sulphides. @ 17.4 m green and greyish bands have sharp contacts. Below 15m patchy pyrite evident.	Possible younging evidence @ 15.7m suggests fining downwards ie. younging down-core.	
17.5	17.9	Clay altered, puggy, fragmented zone. Occasional pyrite crystals.		
17.9	25.7	Greenish siltstone with strong cleavage in places. Pyrite contained with silica veins around 18.5m as well as in patches within the siltstone. Si veining common around 24.0m, and there is an associated increase in pyrite.	Si veins generally sub-parallel to cleavage, however some appear to be ptygmatically folded.	
25.7	28.4	Fairly monotonous greyish siltstone. Gradational contact with unit above. Scattered patchy pyrite.		
28.4	33.9	Fine planar laminated siltstone with cleavage sub-parallel to bedding. Occasional 1 to 2cm pyrite clasts, with finer grained disseminated pyrite throughout. Small diamond-shaped porphyroblasts in darker units (?choritoid).	Fining upwards, bedding right way up.	
33.9	35.2	Laminated siltstone though not as well defined as unit above. Unit characterised by fine pyrite + ?Si bands, cross-cutting lamination.	Bedding @ 40° to LCA. Veins @ 80 to 90°.	

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35.2	35.8	Planar laminated unit. Si + pyrite veing common, as well as fine-grained disseminated pyrite. Pyrite clasts also common. Contact with unit below appears to be an absence of lamination. ?Chloritoid porphyroblasts evident.		
35.8	39.3	Monotonous siltstone with disseminated fine-grained pyrite. Pyrite appears as porphyroblasts in places. Occasional Si veins steep, and folded about cleavage.	Boudinaged pink Si veins @ 37.1m.	
39.3	44	Planar laminated unit. Pyrite shows a strong association with Si. 50cm zone of unlaminated siltstone from 42.1m.	Occasional pyrite veins at 90° to LCA. Bedding @ 40° to LCA. @ 40.6m smallscale brittle fault @ 15° to LCA, which has apparent normal movement.	
44	46	Zone of significant core loss. Dark brown sandy sericitic material. Possibly a fault. Some minor laminated siltstone.		
46	51.4	Highly deformed laminated siltstone. Numerous silica + pyrite veins generally at a high angle to the LCA though some shallower. Bedding often disrupted by Si veins, as well as later pervasive deformation. Fine-grained disseminated pyrite throughout.	Bedding @ 45° to LCA, and appears to be the major control on cleavage angle. Possible cross bedding @ 48.3m suggests right way up.. Scour channel structure @ 49.2 consistent.	
51.4	52.2	Zone of some core loss. Quartz blow / fault zone in dark chloritic laminated siltstone. Contains around 1% pyrite and up to 0.5% chalcopyrite.		
52.2	55.4	Fairly planar laminated and strongly cleaved (sub-parallel to bedding) siltstone. Pyrite associated with cross-cutting Si veins and Si bands in core.	Bedding/cleavage at 45° to LCA.	
55.4	59.6	Quartz zone possibly associated with a fault. Contains semi-massive zones (2-3cm) of chalcopyrite and pyrite. Initially some minor puggy clay zones and green chloritic schist, often brecciated. Dolomite patchy within quartz, becoming more common @ 57.1m.		
59.6	60.3	Significant core loss between 59.5 and 60.2m. Intensely chlorite altered, green metasiltstone. Pyrite crystals common. Clayey and puggy in parts and brecciated.		

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Collar R.L.: 200m		Co-ordinates: 324340E, 5429635N	Hole Orientation: 55° towards 050	Logged by: TJG
60.3	61.1	Quartz-dolomite zone with patchy chalcopyrite, and stringers (up to 2%). Pyrite relatively minor. Some brecciation evident.		
61.1	62	Relatively siliceous (veined) chloritic metasiltstone. Up to 2% disseminated pyrite. Brecciated.		
62	62.7	Quartz-dolomite with minor chalcopyrite and pyrite (<1%). Essentially replaced chloritic metasiltstone. Upper and lower contacts grade into siltstone as quartz drops off. Dolomite dominant (70%).		
62.7	63.35	Green chloritic metasiltstone. Contains numerous Si veins + pyrite and possibly some chalcopyrite. Veins deformed by bedding parallel cleavage. Siltstone monotonous but occasional planar laminations evident.	Cleavage/bedding @ 40° to LCA.	
63.35	66.9	Quartz-dolomite containing patchy sparsely disseminated chalcopyrite (patches up to 2cm). Pyrite becoming dominant around 64.0m. Initially dolomite patchy, dominated by quartz till 65.4m then mostly dolomite. 20cm of chloritic siltstone from 65.1m.		
66.9	70.3	Grey-green chloritic metasiltstone, finely laminated. Contact with quartz marked by a clay puggy zone. Up to 1% chalcopyrite till 67.5m, but pyrite dominant associated with Si veins. Minor dolomite with pyrite around 69.2m.	Lamination variable but generally 0-10° to LCA. Cleavage @ 35 to 40° to LCA, clearly visible below 69.6m.	
70.3	71.1	Quart-dolomite, minor chalcopyrite to 70.7m then dominated by crystalline pyrite. Fragments of chloritic metasiltstone throughout. Dolomite initially patchy, then dominant from 70.6m (60%).		
71.1	72.2	Unit dominated by quartz but up to 50% green chloritc siltstone to 71.7m. Siltstone Si veined with only minor pyrite. Massive quartz from 71.7m, with semi-massive chalcopyrite (up to 7%). Pyrite common associated with chalcopyrite.		

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72.2	73.7	Green chloritic metasiltstone. Si veins common often deformed, cross-cutting lamination.Pyrite throughout locally up to 1%. Dolomitic between 72.2 and 72.6m, then fairly patchy.	Lamination and sub-parallel cleavage runs sub-parallel to LCA, though contorted.	
73.7	76.3	Quartz-dolomite. Quartz till 74.35m then 80 to 90% dolomite. Thin band of chloritic schist up to 2cm throughout. Crystalline pyrite throughout (<1%). Washed-out zones around 76.1m may have contained sulphides.		
76.3	80	Chloritic metasiltstone. Si veining common. Cubic pyrite throughout and some blebby pyrite associated with Si veins.	Cleavage @ 45° to LCA.	
80	81.1	Quartz-dolomite unit. Occasional thin bands of chloritic schist. Pyrite generally around 1%, but locally up to 6% in 10cm zones. Rarer blebby chalcopyrite evident.		
81.1	82.2	Chloritic metasiltstone, Si-dolomite veining prominent towards 82.1m. 1% pyrite throughout, up to 2% associated with Si veins.	Lamination at low angle to LCA but variable. Cleavage @ 40 to 50° to LCA.	
82.2	83.5	Quartz-dolomite unit, 80 to 90% dolomite till 82.9m. Blebby chalcopyrite till 83.4m. Pyrite dominant from 82.9m occurring in bands and as clusters throughout. Contact with unit below marked by a brecciated chloritic unit, containing quartz and pyrite.		
83.5	89.5	Unit dominated by quartz. Disseminated chalcopyrite up to 85.0m. Numerous schist fragments below 86.0m.		
89.5	90	Pyritic dolomite, containing 10cm of chloritic schist.		
90	108	Largely chloritic schist, sometimes pyritic (up to 1%) but variable.		
108	129.6	Laminated chloritic schist, with minor silica and dolomite veins. Disseminated pyrite throughout. 30cm zone of quartz-dolomite from 112.4m containing disseminated pyrite and minor chalcopyrite. Minor chalcopyrite in quartz around 117.7m.	Numerous small soft-sediment filled cracks.	

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Collar R.L.: 200m		Co-ordinates: 324340E, 5429635N	Hole Orientation: 55° towards 050	Logged by: TJG
129.6	158.55	Grey banded siltstone. Poorly defined blebby pyrite layers scattered throughout. Occasional vuggy quartz veining from 140.6m to 145m. Only minor sulphide. Slightly coarser bands appear porphyroblastic (?chloritoid).	Soft-sediment-filled cracks indicate younging down-core (133.7m). Banding at 30° to LCA. Cross bedding @ 139.3m indicates younging down-core. Cross-bedding @ 158.8 indicates younging down-core.	
158.55	159.25	Very green chlorite-altered unit. Minor blebby pyrite appear as porphyroblasts, with Si pressure fringes. Lighter bands contain porphyroblasts.	Bedding/cleavage @ 40 to 50° to LCA.	
159.25	162.3	Slightly less chlorite-altered unit. More greenish bands have a porphyroidal texture. Contact with unit above marked by a 2cm quartz vein, containing minor pyrite. Blebby pyrite throughout unit. Unit becomes grey around 162m with some minor Si-dol veins.		
162.3	162.5	Clay breccia zone containing fragmented quartz and only minor pyrite.		
162.5	165.75	Greyish laminated siltstone, with interbanded pale green porphyroidal units. Minor cross-cutting quartz dolomite bands. Pyrite throughout.	Younging evidence not conclusive but appears to be younging down-core, as indicated by graded bedding and sediment-filled cracks.	
165.75	166.5	laminated green chloritic unit. Pyrite locally in poorly defined bands. Grey to black porphyroblasts around 166.4m.		
166.5	169.8	Largely grey laminated siltstone with occasional spotted pyritic zones up to 40cm in width. These zones contain some thin pyritic bands. Coarser units generally porphyroidal, becoming more chloritic down-hole.	Small sediment-filled cracks in fine-grained grey units suggest younging down-core.	
169.8	179.9	Greenish laminated chloritic unit. Fine-grained with a porphyroidal texture. Occasional black porphyroblasts around 177m. Blebby and crystalline pyrite becoming more common with depth.		

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Collar R.L.: 200m		Co-ordinates: 324340E, 5429635N	Hole Orientation: 55° towards 050	Logged by: TJG
179.9	183.25	Grey-green chlorite-altered laminated unit. Lighter coarser units have porphyroidal appearance. Occasional Si-dolomite veins. Pyrite generally minor, crystalline and as fine irregular stringers.	Inconsistent younging directions. Lamination @ 40-45° to LCA.	
183.25	185.1	Similar to unit above but slightly coarser in appearance, and more green in colour. Tends to grey around 183.9m. Minor pyrite and occasional fine quartz-dolomite veins.	Lamination @ 35° to LCA.	
185.1	187.7	Grey-green laminated unit. Coarser units are spotted with dark grey porphyroblasts. Minor pyrite.	Lamination @ 45° to LCA. Younging down-core @ 187.9 as indicated by sediment-filled cracks and channels.	
187.7	189.1	Silicified siltstone. Occasional pyrite clasts and some fine Si veinlets. Minor dolomite.		
189.1	196.1	Laminated chloritic unit. Some spotted coarser units with ?chloritoid porphyroblasts. Very minor pyrite.	Lamination and cleavage @ 45° to LCA.	
196.1	196.9	Grey coloured unit intensely Si-veined. Minor pyrite and rare fine-grained pyrite.		
196.9	206.7	Finely laminated siltstone. Pyrite in clusters and crystalline pyrite throughout. Minor quartz veining. Two very chloritic zones from 201.2 and 201.9m, 10 and 20cm respectively.	Sediment-filled cracks indicate younging down-core.	
206.7	212.5	Interbanded fine-grained laminated siltstone with coarser chloritic, porphyroidal units. Disseminated fine-grained pyrite throughout. @ 210.6m, 20cm zone of silicification. Dolomite veining from 210.3m for 1.9m.		
212.5	213.3	Zone of fairly intense silicification, associated with minor dolomite veining. Generally only minor pyrite around 213.4m.		
213.3	218.5	Interbanded green-grey, laminated siltstone and psammite. Initially 1.3m of the coarser porphyroidal unit. Silicified for 60cm from 214m, below this laminated siltstone with occasional porphyroidal coarser units. Pyrite generally rare.	Banding and cleavage @ 35 to 45° to LCA.	

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Collar R.L.: 200m		Co-ordinates: 324340E, 5429635N	Hole Orientation: 55° towards 050	Logged by: TJG
218.5	224.3	Highly silicified zone comprising quartz and silicified schist. Patchy dolomite evident though generally minor. Pyrite as irregular stringers and blebs throughout, <1%.		
224.3	227.5	Coarser grained partially silicified chloritic schist. Disseminated pyrite throughout. @ 226m a 1cm wide chloritic shear zone, containing brecciated quartz. Surrounding wall rock pyritic. Contact with lower unit gradational as Si veining intensifies.	Chloritic shear @ 15cm to LCA.	
227.5	233	Highly silicified zone. Quartz to 229.8m, initially quite pyritic. 1.1m zone of silicified schist from 229.8, up to 1% pyrite. Quartz veins common. Quartz to 233m with a 40cm zone of clay-altered chloritic psammite from 232m.	Quartz vein @ 227.7m @ 0° to LCA.	
233	250.4	Wavy laminated siltstone. Pyrite minor, though occasional bands contain blebby pyrite. Occasional quartz veins evident some folded about fabric. A few contain minor dolomite. Laminations have wavy appearance due to late-stage kinking and folding.	Cleavage @ 40 to 45° to LCA. Bedding occasionally folded about cleavage.	
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