

**LAKES OIL N.L.****CUTTINGS DESCRIPTIONS****WELL NAME:** LOY YANG No.2**DATE:** 06-03-2006**GEOLOGIST:** David Horner**PAGE:** 1

Interval (m)	%	Description
220-225	40	SANDSTONE: off white to light green grey, silty to fine, dominantly very fine, subangular to subrounded, moderately sorted, weak silica and calcareous cements, abundant white argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace black carbonaceous detritus, trace calcite lined fractures, friable to moderately hard, no visual porosity, no oil fluorescence.
	60	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly calcareous where arenaceous, slightly carbonaceous in part, trace black coal detritus, trace calcite lined fractures, firm, non fissile to slightly subfissile.
225-228	70	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant white argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace to common calcite and dolomite lined veins, moderately hard, no visual porosity, no oil fluorescence.
	30	CLAYSTONE: off white to medium green grey to dark brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous in part, trace black coal detritus, trace calcite lined fractures, firm, slightly subfissile.
228-231	90	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, trace dolomite cement, abundant white argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace to common calcite and dolomite lined veins, moderately hard, no visual porosity, no oil fluorescence.
	10	CLAYSTONE: as for 225-228m.
231-234	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace calcite lined veins, moderately hard, no visual porosity, no oil fluorescence.
	70	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous in part, trace black coal detritus, trace calcite lined fractures, moderately hard, slightly subfissile.
234-240	40	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, friable to moderately hard, no visual porosity, no oil fluorescence.
	60	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace black coal detritus, firm to moderately hard, slightly subfissile.
240-243	50	SANDSTONE: as for 234-240m.
	50	CLAYSTONE: as for 234-240m.

Interval (m)	%	Description	PAGE: 2
243-246	70	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace calcite lined veins, friable to moderately hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace black coal detritus, trace calcite lined veins, firm to moderately hard, slightly subfissile.	
246-255	80	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, friable to moderately hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, common black coal detritus, firm to moderately hard, slightly subfissile.	
255-264	90	SANDSTONE: as for 246-255m.	
	10	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace black coal detritus, firm to moderately hard, slightly subfissile.	
264-270	60	SANDSTONE: as for 246-255m.	
	40	CLAYSTONE: off white to medium green grey to dark brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace black coal detritus, firm to moderately hard, slightly subfissile.	
270-273	70	SANDSTONE: as for 246-255m.	
	30	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace black coal detritus, firm to moderately hard, slightly subfissile.	
273-276	90	SANDSTONE: off white to medium green grey, very fine to rarely fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, friable to moderately hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 270-273m.	
276-288	80	SANDSTONE: as for 273-276m.	
	20	CLAYSTONE: as for 270-273m.	
288-300	60	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, friable to moderately hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace to common black coal detritus, firm to moderately hard, slightly subfissile.	

Interval (m)	%	Description	PAGE: 3
300-303	80	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, moderately hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace black coal detritus, firm to moderately hard, slightly subfissile.	
303-306	90	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace vein calcite, moderately hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 300-303m.	
306-309	40	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace vein calcite, moderately hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: off white to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly carbonaceous in part, trace black coal detritus, trace vein calcite, firm to moderately hard, slightly subfissile.	
309-315	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, common vein calcite, moderately hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to dark grey to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly to occasionally moderately carbonaceous, trace black coal detritus, common vein calcite, firm to moderately hard, slightly subfissile.	
315-324	30	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace vein calcite, moderately hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: light to dark grey to medium green grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace vein calcite, firm to moderately hard, slightly subfissile.	
324-327	10	SANDSTONE: as for 315-324m.	
	90	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace vein calcite, moderately hard, slightly subfissile.	

Interval (m)	%	Description	PAGE: 4
327-330	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, common veining infilled with calcite and an orange-red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, common veining infilled with calcite and an orange-red mineral, moderately hard, slightly subfissile.	
330-336	10	SANDSTONE: as for 327-330m.	
	90	CLAYSTONE: as for 327-330m.	
336-345	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace to common veining infilled with calcite and an orange-red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace to common veining infilled with calcite and an orange-red mineral, moderately hard, slightly subfissile.	
345-348	10	SANDSTONE: as for 336-345m.	
	90	CLAYSTONE: as for 336-345m.	
348-351	40	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace black carbonaceous detritus, trace to common veining infilled with calcite and an orange-red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: as for 336-345m.	
351-357	80	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, trace strong dolomite cement, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace to common veining infilled with calcite and an orange-red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 336-345m.	
357-366	90	SANDSTONE: as for 351-357m.	
	10	CLAYSTONE: as for 336-345m.	
366-384	100	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, trace strong dolomite cement, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace to common veining infilled with calcite and an orange-red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 336-345m.	

Interval (m)	%	Description	PAGE: 5
384-387	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace veining infilled with calcite and an orange-red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, common veining infilled with calcite and occasionally an orange-red mineral, moderately hard, subfissile.	
387-390	30	SANDSTONE: as for 384-387m.	
	70	CLAYSTONE: as for 384-387m.	
390-393	20	SANDSTONE: as for 384-387m.	
	80	CLAYSTONE: as for 384-387m.	
393-396	80	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, trace strong dolomite cement, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, common calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, common calcite veining, moderately hard, subfissile.	
396-402	90	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, trace strong dolomite cement, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, common calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 393-396m.	
402-415	100	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 393-396m.	

Interval (m)	%	Description	PAGE: 6
CORE No.1		<p>Core No.1 415.0-423.6m, Cut 8.6m, Recovered 2.0m (23.3%).</p> <p>415.0-417.0m.</p> <p>Massive Sandstone (100%) with minor detrital fragments of Coal (Trace), with best detrital coal development at 415.60-415.66m and 415.73-415.82m.</p> <p>SANDSTONE: medium olive grey, very fine to medium grained, dominantly fine, subangular to subrounded, moderately sorted, moderate to strong silica cement, nil to often strong calcareous cement, abundant light green grey argillaceous matrix, abundant altered feldspar grains often with diffuse grain boundaries - merges into matrix, common to abundant green grey lithics, trace orange brown and black lithics, rare quartz grains, trace to occasionally abundant black coal detritus, hard, no visual porosity, no oil fluorescence.</p> <p>COAL: black, vitreous to subvitreous lustre, striated to subconchoidal fracture, cleated in part, hard, brittle, no oil fluorescence or cut.</p> <p>SEDIMENTARY AND STRUCTURAL ELEMENTS:</p> <p>Sedimentary dip at 40 degrees evidenced from massive bedding in coalier intervals.</p> <p>Coal detrital fragments are often well rounded and up to 10mm in diameter</p> <p>Numerous calcite infilled fractures and veins up to 10mm wide present at 10 degrees and 70 degrees to vertical. No evidence of open fracture volume.</p> <p>417.0 - 423.6m</p> <p>No Recovery.</p>	
415-417	80	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, common calcite veining, moderately hard, subfissile.	
417-420	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 415-417m.	
420-423	50	SANDSTONE: off white to medium green grey, very fine to occasionally fine, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica and moderate to strong calcareous cements, abundant white to medium green grey argillaceous matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 415-417m.	
423-426	60	SANDSTONE: medium green grey, silty to fine, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant medium green grey argillaceous and silt matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly to occasionally moderately carbonaceous, trace black coal detritus, common calcite veining, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 7
426-429	70	SANDSTONE: as for 423-426m.	
	30	CLAYSTONE: as for 423-426m.	
429-432	30	SANDSTONE: as for 423-426m.	
	70	CLAYSTONE: as for 423-426m.	
432-435	20	SANDSTONE: medium green grey, silty to very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant medium green grey argillaceous and silt matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, rare orange brown and black lithics, trace to common black carbonaceous detritus, abundant veining infilled with calcite and an orange red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly to moderately carbonaceous, trace black coal detritus, abundant veining infilled with calcite and an orange red mineral, moderately hard, subfissile.	
435-438	30	SANDSTONE: medium green grey, silty to very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant medium green grey argillaceous and silt matrix - matrix supported, abundant altered feldspar grains, common grey green lithics, rare orange brown and black lithics, trace to common black carbonaceous detritus, common veining infilled with calcite and an orange red mineral, moderately hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to sandstone, slightly to moderately carbonaceous, trace black coal detritus, common veining infilled with calcite and an orange red mineral, moderately hard, subfissile.	
438-441	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, rare orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
441-444	90	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, moderate silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, moderately hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 438-441m.	
444-447	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, abundant calcite veining with some pronounced coarse calcite crystals, moderately hard, no visual intergranular porosity.	
FLUOR		The sandstone has no fluorescence, but the calcite fracture infill material (10% of sample) has 20% dull to bright patchy medium yellow fluorescence giving a weak pale yellow crush cut fluorescence, thin ring residue.	

Interval (m)	%	Description	PAGE: 8
447-450	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, moderate silica and calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, abundant calcite veining with some pronounced coarse calcite crystals, moderately hard, no visual intergranular porosity, no oil fluorescence.	
CORE No.2 450-458.5		<p>Core No.2 450.0-458.5m, Cut 8.5m, Recovered 7.0m (82.4%)</p> <p>450.0-456.62m.</p> <p>Massive Sandstone (100%) with minor detrital fragments of Coal (Trace) and Numerous Calcite infilled fractures.</p> <p>SANDSTONE: very light bluish grey-medium greenish grey, very fine to fine grained, dominantly fine, subangular to subrounded, moderately sorted, strong silica cement, nil to occasionally strong calcareous cement, abundant bluish grey argillaceous matrix, abundant altered feldspar grains, rare to common green to grey lithics, trace off white orange and black lithics, rare quartz grains, trace to occasionally common black carbonaceous material, hard, no visual porosity, no intergranular oil fluorescence.</p> <p>COAL: black, vitreous lustre, striated to subconchoidal fracture, hard, brittle, no oil fluorescence or cut.</p> <p>SEDIMENTARY AND STRUCTURAL ELEMENTS/ FLUORESCENCE:</p> <p>Sedimentary dip at 40 degrees evidenced from carbonaceous flecks</p> <p>Numerous calcite infilled fractures and veins up to 15mm wide present at 75 degrees to vertical. No open fracture volume in high angle fractures, trace brown oil stain, 5% bright yellow oil fluorescence, slow pale yellow crush cut, pale yellow residual ring.</p> <p>Numerous calcite lined and open fractures and veins up to 1mm wide present at 10 degrees to vertical, no to poor visual porosity in low angle fractures, no oil fluorescence.</p> <p>The 10 degree fractures cross-cut the 75 degree fractures.</p> <p>456.62-457.0m</p> <p>Massive Claystone (100%)</p> <p>CLAYSTONE: medium greenish grey to dark greenish grey, moderately silty, occasionally finely arenaceous with altered feldspar grains, moderately hard to hard, subfissile.</p> <p>457.0 - 458.5m</p> <p>No Recovery.</p>	
458.5-462	100	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
462-465	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
465-471	10	SANDSTONE: as for 462-465m.	
	90	CLAYSTONE: as for 462-465m.	
471-477	80	SANDSTONE: as for 462-465m.	



Interval (m)	%	Description	PAGE: 9
	20	CLAYSTONE: as for 462-465m.	
477-483	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 462-465m.	
483-489	100	SANDSTONE: as for 477-483m.	
489-492	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, trace calcite veining, moderately hard, subfissile.	
492-495	30	SANDSTONE: as for 49-492m.	
	70	CLAYSTONE: as for 489-492m.	
495-498	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 489-492m.	
498-501	20	SANDSTONE: as for 495-498m.	
	80	CLAYSTONE: as for 489-492m.	
501-513	60	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
513-519	80	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, trace calcite veining, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 10
519-525	90	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
525-531	80	SANDSTONE: as for 519-525m.	
	20	CLAYSTONE: as for 519-525m.	
531-537	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 519-525m.	
537-549	100	SANDSTONE: as for 531-537m.	
549-567	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
567-573	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, trace calcite veining, moderately hard, subfissile.	
573-579	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
579-591	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
591-603	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace to common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 11
603-609	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
609-615	90	SANDSTONE: as for 603-609m.	
	10	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
615-621	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, trace calcite veining, moderately hard, subfissile.	
621-639	100	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
639-645	30	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, trace calcite veining, moderately hard, subfissile.	
645-651	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, trace calcite veining, moderately hard, subfissile.	
651-657	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 12
	90	CLAYSTONE: as for 645-651m.	
657-663	20	SANDSTONE: as for 651-657m.	
	80	CLAYSTONE: as for 645-651m.	
663-669	90	SANDSTONE: off white to medium green grey, very fine to rarely medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, common calcite veining, hard, no visual porosity.	
	10	CLAYSTONE: as for 645-651m.	
FLUOR		FLUORESCENCE: The sandstone has no fluorescence or cut, but the calcite fracture lining material (<1% of sample) has 30% patchy moderately bright pale yellow fluorescence giving a moderately bright milky white crush cut, thin ring residue.	
669-681	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
681-687	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
687-693	60	SANDSTONE: as for 681-687m.	
	90	CLAYSTONE: as for 681-687m.	
693-699	90	SANDSTONE: off white to medium green grey, very fine to fine, occasional medium grains, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity.	
	10	CLAYSTONE: as for 681-687m.	
FLUOR		FLUORESCENCE: The sandstone has no fluorescence or cut, but the calcite fracture lining material (trace of sample) has 10% patchy moderately bright pale yellow fluorescence giving a moderately bright milky white crush cut, thin ring residue.	
699-705	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity.	
	Trace	CLAYSTONE: as for 681-687m.	
FLUOR		FLUORESCENCE: The sandstone has no fluorescence or cut, but the calcite fracture lining material (trace of sample) has 5% patchy moderately bright pale yellow fluorescence giving a moderately bright milky white crush cut, thin ring residue.	

Interval (m)	%	Description	PAGE: 13
705-711	90	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black carbonaceous detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
711-717	20	SANDSTONE: as for 705-711m.	
	80	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
717-723	Trace	SANDSTONE: as for 705-711m.	
	100	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
723-729	10	SANDSTONE: as for 705-711m.	
	90	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
729-735	30	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity.	
	70	CLAYSTONE: as for 723-729m.	
FLUOR		FLUORESCENCE: The sandstone has no fluorescence or cut, but the calcite fracture lining material (trace of sample) has 5% patchy moderately bright pale yellow fluorescence giving a moderately bright milky white crush cut, thin ring residue.	
735-741	80	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black carbonaceous detritus, trace calcite veining, hard, no visual porosity.	
	20	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
FLUOR		FLUORESCENCE: The sandstone has no fluorescence or cut, but the calcite fracture lining material (trace of sample) has 5% patchy moderately bright pale yellow fluorescence giving a moderately bright milky white crush cut, thin ring residue.	
741-747	30	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 14
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to occasionally moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
CUT		The detrital coal has no fluorescence but give a very weak dull milky white crush cut.	
747-753	90	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 741-747m.	
753-759	90	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 741-747m.	
759-768	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
768-777	60	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
777-780	20	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine to medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: as for 777-780m.	
780-798	10	SANDSTONE: as for 777-780m.	
	90	CLAYSTONE: as for 777-780m.	
798-804	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 15
804-810	30	SANDSTONE: as for 798-804m.	
	70	CLAYSTONE: as for 798-804m.	
810-816	10	SANDSTONE: as for 798-804m.	
	90	CLAYSTONE: as for 798-804m.	
816-834	Trace	SANDSTONE: as for 798-804m.	
	100	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, trace to common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
834-840	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty - grades in part to siltstone, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
840-846	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 834-840m.	
846-852	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
CUT		The detrital coal has no fluorescence but give a very weak dull milky white crush cut.	
852-855	60	SANDSTONE: as for 846-852m.	
	40	CLAYSTONE: medium to occasionally dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
855-864	100	CLAYSTONE: as for 852-855m.	
864-867	100	CLAYSTONE: medium to occasionally dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
867-870	Trace	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 16
	100	CLAYSTONE: medium to occasionally dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
870-873	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to occasionally dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
873-876	80	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak to moderate calcareous cements, common to abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, very poor visual intergranular porosity.	
	20	CLAYSTONE: as for 873-876m.	
FLUOR		The sandstone has 5% patchy light brown oil staining with 70% dull to occasionally moderately bright patchy medium yellow fluorescence giving a dull pale yellow crush to occasionally slow streaming cut, thin ring residue.	
876-879	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak to moderate calcareous cements, common to abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black coal detritus, common calcite veining, hard, nil to very poor visual intergranular porosity.	
	10	CLAYSTONE: as for 873-876m.	
FLUOR		The sandstone has trace dull to occasionally moderately bright patchy medium yellow fluorescence giving a dull pale yellow crush to occasionally slow streaming cut, thin ring residue.	
879-882	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak to moderate calcareous cements, common to abundant off white to medium green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, nil to very poor visual intergranular porosity, no oil fluorescence.	
882-894	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak to moderate calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace to common quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: medium to occasionally dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
894-903	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine to medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace to common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	



Interval (m)	%	Description	PAGE: 17
903-906	90	SANDSTONE: as for 894-903m.	
	10	CLAYSTONE: as for 882-894m.	
906-909	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 882-894m.	
909-915	100	SANDSTONE: as for 906-909m.	
915-918	50	SANDSTONE: as for 906-909m.	
	50	CLAYSTONE: medium to dark grey, very silty, very finely arenaceous with altered feldspars grains in part, moderately to very carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
CUT		The coal has no fluorescence but give a weak dull milky white crush cut.	
918-921	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 915-918m.	
921-924	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to occasionally dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
924-927	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 921-924m.	
927-930	Trace	SANDSTONE: as for 924-927m.	
	100	CLAYSTONE: as for 921-924m.	
930-933	40	SANDSTONE: as for 924-927m.	
	60	CLAYSTONE: as for 921-924m.	

Interval (m)	%	Description	PAGE: 18
933-942	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 921-924m.	
942-948	80	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, common to abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, common quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: medium to occasionally dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
948-954	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
954-957	80	SANDSTONE: as for 948-954m.	
	20	CLAYSTONE: as for 948-954m.	
957-960	70	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 948-954m.	
960-963	20	SANDSTONE: as for 957-960m.	
	70	CLAYSTONE: medium to very dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
	10	COAL: black, blocky to striated to subconchoidal fracture, subvitreous where clean, often earthy and very argillaceous, hard, brittle.	
CUT		The coal has no fluorescence but give a weak dull milky white crush cut.	
963-969	Trace	SANDSTONE: as for 957-960m.	
	100	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
969-972	10	SANDSTONE: as for 957-960m.	

Interval (m)	%	Description	PAGE: 19
	90	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, trace black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
972-975	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: as for 969-972m.	
975-978	70	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 969-972m.	
978-984	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 969-972m.	
984-987	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 969-972m.	
987-993	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
993-996	20	SANDSTONE: as for 987-993m.	
	80	CLAYSTONE: as for 987-993m.	
996-999	50	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common to abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 987-993m.	
999-1002	70	SANDSTONE: as for 996-999m.	
	30	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, moderately to very carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 20
1002-1005	20	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: as for 999-1002m.	
1005-1008	20	SANDSTONE: as for 1002-1005m.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, moderately to very carbonaceous, common to abundant black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
	10	COAL: black, blocky to striated to subconchoidal fracture, subvitreous where clean, often earthy and very argillaceous, hard, brittle.	
CUT		The coal has no fluorescence but give a weak dull milky white crush cut.	
1008-1014	20	SANDSTONE: as for 1002-1005m.	
	80	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, often moderately carbonaceous, common black coal detritus, rare micromica, trace calcite veining, moderately hard, subfissile.	
1014-1017	80	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1008-1014m.	
1017-1020	90	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1008-1014m.	
	Trace	COAL: black, blocky to striated to subconchoidal fracture, subvitreous where clean, often earthy and very argillaceous, hard, brittle, trace cut as for 1005-1008m..	
1020-1026	30	SANDSTONE: as for 1017-1020m.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	Trace	COAL: as for 1017-1020m.	
1026-1032	10	SANDSTONE: as for 1017-1020m.	
	90	CLAYSTONE: as for 1020-1026m.	
1032-1035	50	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 21
	50	CLAYSTONE: as for 1020-1026m.	
1035-1038	80	SANDSTONE: as for 1032-1035m.	
	20	CLAYSTONE: as for 1020-1026m.	
1038-1041	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1041-1044	80	SANDSTONE: as for 1038-1041m.	
	10	CLAYSTONE: as for 1038-1041m.	
	10	COAL: black, blocky to striated to subconchoidal fracture, subvitreous where clean, often earthy and very argillaceous, hard, brittle, trace cut as for 1005-1008m..	
1044-1047	100	SANDSTONE: as for 1038-1041m.	
	Trace	CLAYSTONE: as for 1038-1041m.	
1047-1050	70	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1050-1056	90	SANDSTONE: as for 1047-1050m.	
	10	CLAYSTONE: as for 1047-1050m.	
1056-1062	80	SANDSTONE: as for 1047-1050m.	
	20	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	Trace	COAL: black, blocky to striated to subconchoidal fracture, subvitreous where clean, earthy and argillaceous in part, hard, brittle, trace cut as for 1005-1008m..	
1062-1065	100	SANDSTONE: as for 1047-1050m.	
	Trace	CLAYSTONE: as for 1056-1062m.	
	Trace	COAL: as for 1056-1062m.	
1065-1068	70	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 22
	20	CLAYSTONE: as for 1056-1062m.	
	10	COAL: as for 1056-1062m.	
1068-1071	20	SANDSTONE: as for 1065-1068m.	
	60	CLAYSTONE: as for 1056-1062m.	
	20	COAL: black, blocky to subconchoidal fracture, striated in part, subvitreous where clean, earthy and argillaceous in part, hard, brittle, trace cut as for 1005-1008m..	
1071-1074	10	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	40	COAL: black, platy to subconchoidal fracture, striated in part, subvitreous where clean, earthy and argillaceous in part, cleated, hard, brittle, trace cut as for 1005-1008m.	
1074-1077	100	CLAYSTONE: as for 1071-1074m.	
	Trace	COAL: as for 1071-1074m.	
1077-1080	100	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, common black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1080-1083	90	CLAYSTONE: as for 1077-1080m.	
	10	COAL: as for 1071-1074m.	
1083-1086	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	Trace	COAL: as for 1071-1074m.	
1086-1089	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: as for 1083-1086m.	
1089-1092	10	SANDSTONE: as for 1086-1089m.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, common black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1092-1095	40	SANDSTONE: as for 1086-1089m.	

Interval (m)	%	Description	PAGE: 23
	60	CLAYSTONE: as for 1089-1092m.	
1095-1098	10	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1098-1104	10	SANDSTONE: as for 1095-1098m.	
	80	CLAYSTONE: as for 1095-1098m.	
	10	COAL: black, platy to subconchoidal fracture, striated in part, subvitreous where clean, earthy and argillaceous in part, cleated, hard, brittle. The coal has no fluorescence but gives a weak dull milky white crush cut.	
1104-1107	Trace	SANDSTONE: as for 1095-1098m.	
	100	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1107-1116	100	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	Trace	COAL: as for 1098-1104m.	
1116-1119	80	CLAYSTONE: as for 1107-1116m.	
	20	COAL: black, platy to subconchoidal fracture, striated in part, subvitreous where clean, earthy and argillaceous in part, cleated, hard, brittle. The coal has no fluorescence but gives a weak dull milky white crush cut.	
1119-1125	10	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 1107-1116m.	
	Trace	COAL: as for 1116-1119m.	
1125-1128	10	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, common calcite veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, common calcite veining, moderately hard, subfissile.	
1128-1134	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, abundant black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	10	COAL: black, platy to subconchoidal fracture, striated in part, subvitreous where clean, earthy and argillaceous in part, cleated, hard, brittle. The coal has no fluorescence but gives a weak dull milky white crush cut.	

Interval (m)	%	Description	PAGE: 24
1134-1137	30	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, common calcite veining, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 1128-1134m.	
1137-1143	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, common calcite veining, hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, common black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1143-1152	80	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, common calcite veining, hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1137-1143m.	
1152-1158	70	SANDSTONE: as for 1143-1152m.	
	30	CLAYSTONE: as for 1137-1143m.	
FLUOR		The sandstone has very dull patchy orange residual oil fluorescence, no discernable cut.	
1158-1164	80	SANDSTONE: as for 1143-1152m.	
	20	CLAYSTONE: as for 1137-1143m.	
1164-1167	100	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, common calcite veining, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 1137-1143m.	
1167-1176	10	SANDSTONE: as for 1164-1167m.	
	80	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly to very carbonaceous, common black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	10	COAL: black, platy to subconchoidal fracture, striated in part, subvitreous where clean, earthy and argillaceous in part, cleated, hard, brittle. The coal has no fluorescence but gives a weak dull milky white crush cut.	
1176-1179	50	SANDSTONE: as for 1164-1167m.	
	50	CLAYSTONE: as for 1167-1176m.	
1179-1185	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, abundant black coal detritus, common calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1167-1176m.	



Interval (m)	%	Description	PAGE: 25
FLUOR		The sandstone consistently has very dull patchy orange residual oil fluorescence, no discernable cut.	
1185-1188	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, common black coal detritus, trace calcite veining, hard, no visual porosity.	
FLUOR		The sandstone consistently has very dull patchy orange residual oil fluorescence, no discernable cut.	
1188-1194	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity.	
	70	CLAYSTONE: medium grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1194-1200	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity.	
	80	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1200-1206	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace to common calcite veining, hard, no visual porosity.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace micromica, trace to common calcite veining, moderately hard, subfissile.	
FLUOR		The calcite fracture infill material (<1% of sample) has 10% dull to bright patchy milky white fluorescence giving a weak white crush cut, trace residue.	
1206-1209	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1209-1215	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1206-1209m.	
1215-1227	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 26
	Trace	CLAYSTONE: as for 1206-1209m.	
1227-1230	100	SANDSTONE: as for 1215-1227m.	
1230-1233	30	SANDSTONE: as for 1215-1227m.	
	70	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace micromica, common calcite veining, moderately hard, subfissile.	
FLUOR		The calcite fracture infill material (<1% of sample) has 20% dull to bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1233-1236	10	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace micromica, common calcite veining, moderately hard, subfissile.	
1236-1239	30	SANDSTONE: as for 1233-1236m.	
	70	CLAYSTONE: medium grey to medium brown grey to occasionally dark grey, often very silty, very finely arenaceous with altered feldspars grains in part, slightly carbonaceous, trace black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1239-1245	10	SANDSTONE: as for 1233-1236m.	
	90	CLAYSTONE: as for 1236-1239m.	
1245-1248	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium grey to medium brown grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains, slightly carbonaceous, trace black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1248-1263	10	SANDSTONE: as for 1245-1248m.	
	90	CLAYSTONE: as for 1245-1248m.	
1263-1269	100	CLAYSTONE: as for 1245-1248m.	
1269-1272	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, rare black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: medium grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains, slightly carbonaceous, rare black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
FLUOR		The calcite fracture infill material (trace of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1272-1278	100	CLAYSTONE: as for 1269-1272m.	

Interval (m)	%	Description	PAGE: 27
1278-1284	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, rare black coal detritus, trace calcite and orange red mineral veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains, slightly carbonaceous, rare black coal detritus, trace micromica, trace calcite and orange red mineral veining, moderately hard, subfissile.	
1284-1287	10	SANDSTONE: as for 1278-1284m.	
	90	CLAYSTONE: as for 1278-1284m.	
1287-1290	100	CLAYSTONE: medium grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains, slightly carbonaceous, rare black coal detritus, trace micromica, trace to common calcite veining, moderately hard, subfissile.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1290-1293	100	CLAYSTONE: medium grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspars grains, slightly carbonaceous, rare black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
1293-1296	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, rare black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: as for 1290-1293m.	
1296-1299	80	SANDSTONE: as for 1293-1296m.	
	20	CLAYSTONE: as for 1290-1293m.	
	Trace	COAL: black, platy to subconchoidal fracture, striated in part, subvitreous where clean, earthy and argillaceous in part, cleated, hard, brittle. The coal has no fluorescence but gives a weak dull milky white crush cut.	
FLUOR		The calcite fracture infill material (trace of sample) has 5% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1299-1302	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite veining, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium grey to medium brown grey, occasionally dark grey, often very silty, often very finely arenaceous with altered feldspars grains, slightly to moderately carbonaceous, common black coal detritus, trace micromica, trace calcite veining, moderately hard, subfissile.	
	Trace	COAL: as for 1296-1299m.	
1302-1305	Trace	SANDSTONE: as for 1299-1302m.	
	100	CLAYSTONE: as for 1299-1302m.	
1305-1311	100	CLAYSTONE: medium grey to medium brown grey, occasionally dark grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, trace calcite and orange red mineral veining, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 28
1311-1320	10	SANDSTONE: off white to medium green grey, very fine to rarely fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 1305-1311m.	
1320-1323	100	CLAYSTONE: as for 1305-1311m.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1323-1326	30	SANDSTONE: off white to medium green grey, very fine to rarely fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity.	
	70	CLAYSTONE: as for 1305-1311m.	
FLUOR		The calcite fracture infill material (<1% of sample) has 10% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1326-1329	80	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity.	
	20	CLAYSTONE: medium grey to medium brown grey, occasionally dark grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly carbonaceous, trace black coal detritus, trace micromica, trace calcite and orange red mineral veining, moderately hard, subfissile.	
FLUOR		The calcite fracture infill material (<1% of sample) has 10% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1329-1332	90	SANDSTONE: as for 1326-1329m.	
	10	CLAYSTONE: as for 1326-1329m.	
FLUOR		The calcite fracture infill material (<1% of sample) has 10% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1332-1338	50	SANDSTONE: as for 1326-1329m.	
	50	CLAYSTONE: as for 1326-1329m.	
FLUOR		The calcite fracture infill material (<1% of sample) has 10% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1338-1347	30	SANDSTONE: off white to medium green grey, very fine to rarely fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity.	
	70	CLAYSTONE: medium grey to medium brown grey, occasionally dark grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, trace calcite and orange red mineral veining, moderately hard, subfissile.	
FLUOR		The calcite fracture infill material (<1% of sample) has 10% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1347-1350	40	SANDSTONE: as for 1338-1347m.	

Interval (m)	%	Description	PAGE: 29
	60	CLAYSTONE: as for 1338-1347m.	
FLUOR		The calcite fracture infill material (<1% of sample) has 10% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1350-1353	30	SANDSTONE: off white to medium green grey, very fine to rarely fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 1338-1347m.	
1353-1356	10	SANDSTONE: as for 1350-1353m.	
	90	CLAYSTONE: as for 1338-1347m.	
1356-1359	100	CLAYSTONE: medium grey to medium brown grey, occasionally dark grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, trace calcite and orange red mineral veining, moderately hard, subfissile.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1359-1362	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity.	
	80	CLAYSTONE: as for 1356-1359m.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1362-1365	30	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 1356-1359m.	
1365-1368	10	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity.	
	90	CLAYSTONE: medium grey to medium brown grey, occasionally dark grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, trace calcite and orange red mineral veining, hard, subfissile.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1368-1371	60	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity.	
	40	CLAYSTONE: as for 1365-1368m.	

Interval (m)	%	Description	PAGE: 30
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1371-1374	30	SANDSTONE: as for 1368-1371m.	
	70	CLAYSTONE: as for 1365-1368m.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1374-1377	40	SANDSTONE: off white to medium green grey, very fine to rarely fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: as for 1365-1368m.	
1377-1380	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, trace calcite and red orange mineral veining, hard, no visual porosity.	
	40	CLAYSTONE: as for 1365-1368m.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1380-1383	90	SANDSTONE: as for 1377-1380m.	
	10	CLAYSTONE: as for 1365-1368m.	
FLUOR		The calcite fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1383-1386	80	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite and red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: medium grey to medium brown grey, occasionally dark grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, common calcite and orange red mineral veining, hard, subfissile.	
1386-1392	10	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite and red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 1383-1386m.	
1392-1395	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite and red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium brown grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, common calcite and orange red mineral veining, hard, subfissile.	

Interval (m)	%	Description	PAGE: 31
1395-1398	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite and red orange mineral veining, hard, no visual porosity.	
	90	CLAYSTONE: as for 1392-1395m.	
FLUOR		The fracture infill material (<1% of sample) has 5% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1398-1404	Trace	SANDSTONE: as for 1392-1395m.	
	100	CLAYSTONE: as for 1392-1395m.	
FLUOR		The fracture infill material (<1% of sample) has 5% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1404-1407	100	CLAYSTONE: as for 1392-1395m.	
FLUOR		The fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1407-1410	100	CLAYSTONE: as for 1392-1395m.	
FLUOR		The fracture infill material (<1% of sample) has 10% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1410-1413	20	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite and trace red orange mineral veining, hard, no visual porosity.	
	80	CLAYSTONE: medium to dark grey to medium brown grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, common calcite and trace orange red mineral veining, hard, subfissile.	
FLUOR		The fracture infill material (<1% of sample) has 5% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1413-1416	40	SANDSTONE: as for 1410-1413m.	
	60	CLAYSTONE: as for 1410-1413m.	
FLUOR		The fracture infill material (<1% of sample) has 5% dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1416-1419	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite and trace red orange mineral veining, hard, no visual porosity, no oil fluorescence.	
1419-1428	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite veining, hard, no visual porosity.	
FLUOR		The fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1428-1431	100	SANDSTONE: as for 1419-1428m.	

Interval (m)	%	Description	PAGE: 32
	Trace	CLAYSTONE: medium to dark grey to medium brown grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, slightly to moderately carbonaceous, trace black coal detritus, trace micromica, common calcite veining, hard, subfissile.	
FLUOR		The fracture infill material (<1% of sample) has trace dull to moderately bright patchy very pale yellow white fluorescence giving a weak white crush cut, trace residue.	
1431-1443	Trace	SANDSTONE: off white to medium green grey, very fine, subangular to subrounded, moderately sorted, strong silica and weak calcareous cements, abundant light green grey argillaceous matrix, abundant altered feldspar grains, common grey green lithics, trace quartz grains, trace orange brown and black lithics, trace black coal detritus, common calcite veining, hard, no visual porosity, no oil fluorescence.	
TOTAL DEPTH 1443m.	100	CLAYSTONE: medium to dark grey to medium brown grey, often very silty - grades to siltstone, often very finely arenaceous with altered feldspars grains - grades to very fine sandstone, moderately carbonaceous, trace black coal detritus, trace micromica, common calcite veining, hard, subfissile.	