

## CUTTINGS DESCRIPTIONS

**WELL NAME:** Megascolides No.2

**DATE:** 12-01-2007

**GEOLOGIST:** David Horner

**PAGE:** 1

Interval (m)	%	Description
510-515	80	SANDSTONE: light brown to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and strong calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, trace fine black coaly detritus, moderately hard, very poor visual porosity, no oil fluorescence.
	20	CLAYSTONE: light to dark grey to medium green grey to medium brown grey, very silty, often very finely arenaceous with altered feldspar grains, trace black carbonaceous flecks and detritus, trace micromica, moderately hard, subfissile.
515-520	90	SANDSTONE: as for 510-515m.
	10	CLAYSTONE: as for 510-515m.
520-525	50	SANDSTONE: as for 510-515m.
	50	CLAYSTONE: as for 510-515m.
525-535	10	SANDSTONE: light brown to medium green grey, very fine to occasionally fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and weak calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, trace fine black coaly detritus, moderately hard, very poor visual porosity, no oil fluorescence.
	90	CLAYSTONE: light to dark grey to medium green grey to medium brown grey, very silty in part, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and detritus, trace micromica, moderately hard, subfissile.
535-540	20	SANDSTONE: as for 525-535m.
	80	CLAYSTONE: light to dark grey to medium green grey to medium brown grey, very silty in part, often very finely arenaceous with altered feldspar grains, trace to common black carbonaceous flecks and detritus, trace micromica, moderately hard, subfissile.
540-545	10	SANDSTONE: as for 525-535m.
	90	CLAYSTONE: as for 535-540m.
545-555	90	SANDSTONE: light brown grey to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, trace fine black coaly detritus, moderately hard, very poor visual porosity, no oil fluorescence.
	10	CLAYSTONE: as for 535-540m.
555-565	100	SANDSTONE: light brown grey to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, trace fine black coaly detritus, friable to moderately hard, very poor visual porosity, no oil fluorescence.

Interval (m)	%	Description	PAGE: 2
565-570	80	SANDSTONE: as for 545-555m.	
	20	CLAYSTONE: light to dark grey to medium green grey to medium brown grey, very silty in part, often very finely arenaceous with altered feldspar grains, very carbonaceous in part - grades to coal, trace to common black carbonaceous flecks and detritus, trace micromica, moderately hard, subfissile.	
570-575	50	SANDSTONE: as for 545-555m.	
	50	CLAYSTONE: as for 565-570m.	
575-585	30	SANDSTONE: light to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, moderately hard, very poor visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark brown grey to medium grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, common black carbonaceous flecks and coaly detritus, trace micromica, moderately hard, subfissile.	
585-595	40	SANDSTONE: as for 575-585m.	
	60	CLAYSTONE: as for 575-585m.	
595-605	20	SANDSTONE: as for 575-585m.	
	80	CLAYSTONE: medium to dark brown grey to medium grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, very carbonaceous in part - grades to coal, common black carbonaceous flecks and coaly detritus, trace micromica, moderately hard, subfissile.	
	Trace	COAL: black to very dark brown, often very argillaceous, earthy lustre with blocky fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard, brittle.	
605-615	40	CLAYSTONE: as for 595-605m.	
	60	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, moderately hard, very poor visual porosity, no oil fluorescence.	
615-625	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: medium to dark brown grey to medium grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, common black carbonaceous flecks and coaly detritus, trace micromica, moderately hard, subfissile.	
625-630	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, moderately hard, very poor visual porosity, no oil fluorescence.	
630-650	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 3
	Trace	CLAYSTONE: as for 615-625m.	
650-655	90	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, moderately hard, very poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, very carbonaceous in part - grades to coal, common black carbonaceous flecks and coaly detritus, trace micromica, moderately hard, subfissile.	
655-660	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite and red geothite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 650-655m.	
660-670	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 650-655m.	
	Trace	COAL: black to very dark brown, often very argillaceous, earthy lustre with blocky fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard, brittle.	
670-675	80	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, common calcite lined fractures, moderately hard, very poor visual porosity, no intergranular oil fluorescence.	
	20	CLAYSTONE: as for 650-655m.	
	Trace	COAL: as for 660-670m.	
FLUOR		FLUORESCENCE: the calcite fracture infill material has 10% moderately bright patchy light yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
675-680	25	SANDSTONE: as for 670-675m.	
	70	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, very carbonaceous in part - grades to coal, common black carbonaceous flecks and coaly detritus, trace micromica, common calcite lined fractures, moderately hard, subfissile.	
	5	COAL: as for 660-670m.	
FLUOR		FLUORESCENCE: the calcite fracture infill material has 10% moderately bright patchy light yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
680-685	30	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite and red geothite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, very carbonaceous in part - grades to coal, common black carbonaceous flecks and coaly detritus, trace micromica, trace calcite and red geothite lined fractures, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 4
	Trace	COAL: as for 660-670m.	
685-690	30	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous, common black carbonaceous flecks and coaly detritus, trace micromica, trace calcite lined fractures, moderately hard, subfissile.	
690-695	80	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 685-690m.	
695-705	90	SANDSTONE: as for 690-695m.	
	10	CLAYSTONE: as for 685-690m.	
705-710	80	SANDSTONE: as for 690-695m.	
	20	CLAYSTONE: as for 685-690m.	
710-715	90	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common to abundant black coal detritus, trace calcite lined fractures, moderately hard, very poor visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 685-690m.	
	Trace	COAL: black to very dark brown, often very argillaceous, earthy lustre with blocky fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard, brittle.	
715-720	50	SANDSTONE: light to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix, moderate silica and calcareous cement, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, moderately hard, very poor visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium to dark brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, common black carbonaceous flecks and coaly detritus, trace micromica, moderately hard, subfissile.	
720-730	40	SANDSTONE: light to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: medium to dark brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, common black carbonaceous flecks and coaly detritus, trace micromica, trace calcite lined fractures, moderately hard, subfissile.	

Interval (m)	%	Description	PAGE: 5
730-735	Trace	SANDSTONE: light to medium green grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	100	CLAYSTONE: as for 720-730m.	
735-740	10	SANDSTONE: as for 730-735m.	
	90	CLAYSTONE: as for 720-730m.	
740-745	50	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 720-730m.	
745-755	90	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 720-730m.	
755-760	75	SANDSTONE: as for 745-755m.	
	20	CLAYSTONE: light to dark brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, very carbonaceous in part, common black carbonaceous flecks and coaly detritus, trace micromica, trace calcite lined fractures, moderately hard, subfissile.	
	5	COAL: dark brown to black, mainly very argillaceous, earthy lustre, blocky to platy fracture, hard.	
760-765	20	SANDSTONE: light to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to medium brown grey to medium green grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, common black carbonaceous flecks and coaly detritus, trace micromica, trace calcite lined fractures, moderately hard, subfissile.	
765-775	30	SANDSTONE: as for 760-765m.	
	70	CLAYSTONE: as for 760-765m.	
775-780	20	SANDSTONE: as for 760-765m.	
	75	CLAYSTONE: as for 760-765m.	
	5	COAL: dark brown to black, mainly very argillaceous, earthy lustre, blocky to platy fracture, hard.	
780-785	Trace	SANDSTONE: as for 760-765m.	

Interval (m)	%	Description	PAGE: 6
	100	CLAYSTONE: light to medium brown grey to medium green grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, trace micromica, trace calcite lined fractures, moderately hard, subfissile.	
785-795	30	SANDSTONE: as for 760-765m.	
	70	CLAYSTONE: as for 780-785m.	
795-800	60	SANDSTONE: light to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: as for 780-785m.	
800-805	100	SANDSTONE: light to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 780-785m.	
805-810	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common quartz and grey green volcanogenic lithics, trace red brown lithics, common black coal detritus, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to medium brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, very carbonaceous in part, abundant black carbonaceous flecks and coaly detritus, trace micromica, moderately hard, subfissile.	
	Trace	COAL: dark brown to black, mainly very argillaceous, earthy lustre, blocky to platy fracture, hard.	
810-815	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: light to medium grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, moderately hard, subfissile.	
	Trace	COAL: as for 805-810m.	
815-820	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 810-815m.	
820-825	80	SANDSTONE: as for 815-820m.	
	20	CLAYSTONE: as for 810-815m.	

Interval (m)	%	Description	PAGE: 7
825-830	90	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 810-815m.	
830-835	70	SANDSTONE: as for 825-830m.	
	30	CLAYSTONE: light to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, moderately hard, subfissile.	
835-845	10	SANDSTONE: off white to medium green grey, very fine to occasionally fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 830-835m.	
	Trace	COAL: very dark brown to black, often very argillaceous, earthy lustre and blocky to platy fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard.	
845-850	20	SANDSTONE: as for 835-845m.	
	75	CLAYSTONE: as for 830-835m.	
	5	COAL: as for 835-845m.	
850-855	10	SANDSTONE: as for 835-845m.	
	90	CLAYSTONE: as for 830-835m.	
855-860	20	SANDSTONE: as for 835-845m.	
	80	CLAYSTONE: as for 830-835m.	
	Trace	COAL: as for 835-845m.	
860-865	15	SANDSTONE: off white to medium green grey, very fine to occasionally fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, moderately hard, subfissile.	
	5	COAL: very dark brown to black, often very argillaceous, earthy lustre and blocky to platy fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard.	
865-870	Trace	SANDSTONE: as for 860-865m.	
	100	CLAYSTONE: light to dark brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, moderately hard, subfissile.	
	Trace	COAL: as for 860-865m.	

Interval (m)	%	Description	PAGE: 8
870-875	10	SANDSTONE: as for 860-865m.	
	90	CLAYSTONE: light to dark brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, common calcite lined fractures, moderately hard, subfissile.	
	Trace	COAL: as for 860-865m.	
875-880	20	SANDSTONE: off white to medium green grey, very fine to occasionally fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, moderately hard, subfissile.	
880-885	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 875-880m.	
	Trace	COAL: very dark brown to black, often very argillaceous, earthy lustre and blocky to platy fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard.	
885-890	20	SANDSTONE: as for 880-885m.	
	80	COAL: as for 880-885m.	
890-900	15	SANDSTONE: off white to medium green grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to dark grey to medium brown grey, dominantly medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
	5	COAL: as for 880-885m.	
900-905	10	SANDSTONE: as for 890-900	
	90	CLAYSTONE: as for 890-900m.	
	Trace	COAL: as for 880-885m.	
905-910	10	SANDSTONE: as for 890-900	
	90	CLAYSTONE: as for 890-900m.	

Interval (m)	%	Description	PAGE: 9
910-915	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 890-900m.	
915-920	30	SANDSTONE: as for 910-915m.	
	70	CLAYSTONE: light to dark brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
	Trace	COAL: very dark brown to black, often very argillaceous, earthy lustre and blocky to platy fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard.	
920-925	10	SANDSTONE: as for 910-915m.	
	90	CLAYSTONE: as for 915-920m.	
925-930	90	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace to common calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 915-920m.	
930-935	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace to common calcite lined fractures, hard, no visual porosity, no intergranular oil fluorescence.	
FLUOR		FLUORESCENCE: the calcite fracture infill material has trace moderately bright patchy light yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
935-940	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace to common calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
940-950	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 915-920m.	
950-965	100	SANDSTONE: as for 940-950m.	
	Trace	COAL: very dark brown to black, often very argillaceous, earthy lustre and blocky to platy fracture where argillaceous, subvitreous lustre with subconchoidal fracture where clean, hard.	

Interval (m)	%	Description	PAGE: 10
965-970	100	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
970-975	100	SANDSTONE: as for 965-970m.	
	Trace	COAL: as for 950-965m.	
975-980	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
980-985	10	SANDSTONE: as for 975-980m.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
	Trace	COAL: as for 950-965m.	
985-990	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 980-985m.	
990-1000	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
1000-1005	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: light to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
	30	COAL: black, moderately argillaceous in part, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1005-1010	60	SANDSTONE: off white to medium green grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	35	CLAYSTONE: as for 1000-1005m.	

Interval (m)	%	Description	PAGE: 11
	5	COAL: as for 1000-1005m.	
1010-1015	10	SANDSTONE: as for 1005-1010m.	
	90	CLAYSTONE: as for 1000-1005m.	
	Trace	COAL: as for 1000-1005m.	
1015-1020	20	SANDSTONE: off white to medium green grey, very fine to occasionally fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: as for 1000-1005m.	
	Trace	COAL: as for 1000-1005m.	
1020-1025	30	SANDSTONE: as for 1015-1020	
	70	CLAYSTONE: medium to dark grey to medium to dark brown grey, often very silty, occasionally very finely arenaceous with altered feldspar grains, moderately to very carbonaceous in part, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1025-1035	10	SANDSTONE: off white to medium green grey, very fine to occasionally fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 1020-1025m.	
	Trace	COAL: black, very argillaceous in part - grades to claystone, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1035-1040	30	SANDSTONE: as for 1025-1035m.	
	65	CLAYSTONE: as for 1020-1025m.	
	5	COAL: as for 1025-1035m.	
1040-1045	10	SANDSTONE: as for 1025-1035m.	
	85	CLAYSTONE: as for 1020-1025m.	
	5	COAL: as for 1025-1035m.	
1045-1050	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: medium to dark grey to medium to dark brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	

Interval (m)	%	Description	PAGE: 12
1050-1055	90	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: medium to dark grey to medium to dark brown grey, often very silty, often very finely arenaceous with altered feldspar grains, moderately carbonaceous in part, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1055-1060	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
1060-1065	50	SANDSTONE: as for 1055-1060m.	
	50	CLAYSTONE: as for 1050-1055m.	
	Trace	COAL: black, very argillaceous in part - grades to claystone, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1065-1070	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, moderate to strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 1050-1055m.	
	Trace	COAL: as for 1060-1065m.	
1070-108	Trace	SANDSTONE: as for 1065-1070m.	
	90	CLAYSTONE: medium to dark grey to medium to dark brown grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to occasionally very carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
	10	COAL: as for 1060-1065m.	
1080-1085	10	SANDSTONE: as for 1065-1070m.	
	90	CLAYSTONE: as for 1070-1080m.	
	Trace	COAL: as for 1060-1065m.	
1085-1095	50	SANDSTONE: off white to medium green grey to medium brown grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1095-1100	20	SANDSTONE: as for 1085-1095m.	

Interval (m)	%	Description	PAGE: 13
	80	CLAYSTONE: as for 1085-1095m.	
1100-1105	30	SANDSTONE: off white to medium green grey to medium brown grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: as for 1085-1095m.	
1105-1110	50	SANDSTONE: as for 1100-1105m.	
	50	CLAYSTONE: as for 1085-1095m.	
1110-1120	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to very carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
	10	COAL: black, very argillaceous in part - grades to claystone, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1120-1130	10	SANDSTONE: as for 1110-1120m.	
	90	CLAYSTONE: as for 1110-1120	
1130-1140	10	SANDSTONE: as for 1110-1120m.	
	90	CLAYSTONE: medium to dark brown grey to medium grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1140-1150	30	SANDSTONE: as for 1110-1120m.	
	60	CLAYSTONE: as for 1130-1140m.	
1150-1160	10	SANDSTONE: as for 1110-1120m.	
	90	CLAYSTONE: as for 1130-1140m.	
	Trace	COAL: black, very argillaceous in part - grades to claystone, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1160-1170	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace to common calcite lined fractures, hard, no visual porosity, no intergranular oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace to common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy yellow-white fluorescence giving a weak dull milky white crush cut, trace residue.	

<b>Interval (m)</b>	<b>%</b>	<b>Description</b>	<b>PAGE: 14</b>
1170-1180	10	SANDSTONE: as for 1160-1170m.	
	90	CLAYSTONE: as for 1160-1170m.	
	Trace	COAL: as for 1150-1160m.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 5% moderately bright to bright patchy yellow-white fluorescence giving a weak dull milky white crush cut, trace residue.	
1180-1185	50	SANDSTONE: as for 1160-1170m.	
	50	CLAYSTONE: as for 1160-1170m.	
	Trace	COAL: as for 1150-1160m.	
1185-1190	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1190-1195	Trace	SANDSTONE: as for 1185-1190m.	
	100	CLAYSTONE: as for 1185-1190m.	
1195-1205	10	SANDSTONE: as for 1185-1190m.	
	90	CLAYSTONE: as for 1185-1190m.	
1205-1215	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: medium to dark grey to medium brown grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to very carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1215-1220	20	SANDSTONE: as for 1205-1215m.	
	80	CLAYSTONE: as for 1205-1215m.	
1220-1225	30	SANDSTONE: as for 1205-1215m.	
	70	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, often very silty, often very finely arenaceous with altered feldspar grains, slightly to very carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1225-1235	Trace	SANDSTONE: as for 1205-1215m.	
	100	CLAYSTONE: as for 1220-1225m.	

Interval (m)	%	Description	PAGE: 15
1235-1245	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace to common calcite lined fractures, hard, no visual porosity, no intergranular oil fluorescence.	
	90	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace to common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 5% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1245-1250	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, common calcite lined fractures, hard, no visual porosity, no intergranular oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 10% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1250-1255	50	SANDSTONE: as for 1245-1250m.	
	50	CLAYSTONE: as for 1245-1250m.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 10% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1255-1260	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace to common calcite lined fractures, hard, no visual porosity, no intergranular oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace to common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 5% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1260-1270	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace to common calcite lined fractures, hard, no visual porosity, no intergranular oil fluorescence.	
	Trace	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace to common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 10% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	

Interval (m)	%	Description	PAGE: 16
1270-1275	30	SANDSTONE: off white to medium green grey to light brown grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium grey to medium green grey to medium to dark brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1275-1280	20	SANDSTONE: as for 1270-1275m.	
	80	CLAYSTONE: as for 1270-1275m.	
1280-1285	30	SANDSTONE: off white to medium green grey to light brown grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	70	CLAYSTONE: as for 1270-1275m.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1285-1290	20	SANDSTONE: as for 1280-1285m.	
	80	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1290-1295	50	SANDSTONE: off white to medium green grey to light brown grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1295-1300		SANDSTONE: as for 1290-1295m.	
	60	CLAYSTONE: as for 1290-1295m.	
1300-1305	40	SANDSTONE: off white to medium green grey to light brown grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	80	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	

Interval (m)	%	Description	PAGE: 17
FLUOR	20	FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1305-1310	30	SANDSTONE: off white to light brown grey to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	70	CLAYSTONE: as for 1300-1305m.	
1310-1315	100	SANDSTONE: off white to light brown grey to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	Trace	CLAYSTONE: as for 1300-1305m.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1315-1320	90	SANDSTONE: off white to light brown grey to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1300-1305m.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1320-1325	10	SANDSTONE: off white to light brown grey to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, common calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	90	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 20% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, thin ring residue, trace medium dark brown oil staining on some calcite crystal surfaces.	
1325-1330	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, common calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	50	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common goethite calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 15% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, thin ring residue, trace medium dark brown oil staining on some calcite crystal surfaces.	

Interval (m)	%	Description	PAGE: 18
1330-1335	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, common calcite and goethite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common calcite and goethite lined fractures, hard, subfissile.	
1335-1340	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, common calcite and trace goethite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	40	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common calcite and trace goethite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 5% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1340-1345	100	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
1345-1350	100	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common to abundant black coal detritus, rare calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
1350-1355	90	SANDSTONE: off white to medium green grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common to abundant black coal detritus, rare calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: off white to medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
	Trace	COAL: black, very argillaceous in part - grades to claystone, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1355-1365	70	SANDSTONE: as for 1350-1355m.	
	30	CLAYSTONE: as for 1350-1355m.	
1365-1370	90	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common to abundant black coal detritus, rare calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1350-1355m.	

Interval (m)	%	Description	PAGE: 19
1370-1375	90	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common to abundant black coal detritus, common calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	10	CLAYSTONE: off white to medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 5% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1375-1380	50	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1380-1385	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: light to medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1385-1390	30	SANDSTONE: as for 1380-1385m.	
	70	CLAYSTONE: as for 1380-1385m.	
1390-1395	30	SANDSTONE: as for 1380-1385m.	
	70	CLAYSTONE: as for 1380-1385m.	
	Trace	COAL: very dark brown to black, very argillaceous in part, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1395-1400	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: light to medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1400-1410	30	SANDSTONE: as for 1395-1400m.	
	70	CLAYSTONE: as for 1395-1400m.	

Interval (m)	%	Description	PAGE: 20
1410-1415	50	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 1395-1400m.	
1415-1420	70	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: as for 1395-1400m.	
1420-1425	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine to medium, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: light to medium grey to medium green grey to medium brown grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1425-1430	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, rare calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
1430-1435	50	SANDSTONE: as for 1425-1430m.	
	50	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, often very silty, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1435-1440	40	SANDSTONE: as for 1425-1430m.	
	60	CLAYSTONE: as for 1425-1430m.	
1440-1445	70	SANDSTONE: as for 1425-1430m.	
	30	CLAYSTONE: as for 1425-1430m.	
1445-1455	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, hard to very hard, no visual porosity, no oil fluorescence.	
1455-1460	10	SANDSTONE: as for 1445-1455m.	
	90	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, hard, subfissile.	

Interval (m)	%	Description	PAGE: 21
1460-1470	Trace	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, hard to very hard, no visual porosity, no oil fluorescence.	
	100	CLAYSTONE: as for 1455-1460m.	
1470-1480	30	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace to common calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace to common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has 5% moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1480-1485	20	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	75	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
	5	COAL: very dark brown to black, dominantly very argillaceous, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1485-1490	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1490-1495	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	40	CLAYSTONE: as for 1485-1490m.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	

Interval (m)	%	Description	PAGE: 22
1495-1500	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, common calcite lined fractures, hard to very hard, no visual porosity, no intergranular oil fluorescence.	
	70	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1500-1505	40	SANDSTONE: as for 1495-1500m.	
	50	CLAYSTONE: as for 1495-1500m.	
FLUOR		FLUORESCENCE: The calcite fracture infill has trace moderately bright to bright patchy pale yellow fluorescence giving a weak dull yellow white crush cut, trace residue.	
1505-1510	70	SANDSTONE: off white to medium green grey, very fine to rarely medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1510-1515	90	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1505-1510m.	
1515-1525	80	SANDSTONE: off white to medium green grey, very fine to rarely medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1505-1510m.	
1525-1530	70	SANDSTONE: as for 1515-1525m.	
	30	CLAYSTONE: as for 1505-1510m.	
1530-1535	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 23
	90	CLAYSTONE: medium to very dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately to very carbonaceous - grades in part to argillaceous coal, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1535-1540	30	SANDSTONE: as for 1530-1535m.	
	70	CLAYSTONE: as for 1530-1535m.	
1540-1545	50	SANDSTONE: as for 1530-1535m.	
	50	CLAYSTONE: as for 1530-1535m.	
1545-1550	20	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, hard to very hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1550-1555	40	SANDSTONE: as for 1545-1550m.	
	60	CLAYSTONE: as for 1545-1550m.	
1555-1560	60	SANDSTONE: as for 1545-1550m.	
	40	CLAYSTONE: as for 1545-1550m.	
1560-1565	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: medium to dark grey to medium green grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
	Trace	COAL: very dark brown to black, dominantly very argillaceous, blocky to subconchoidal fracture, earthy to subvitreous lustre, hard, brittle.	
1565-1570	50	SANDSTONE: as for 1560-1565m.	
	50	CLAYSTONE: as for 1560-1565m.	
	Trace	COAL: as for 1560-1565m.	
1570-1575	10	SANDSTONE: as for 1560-1565m.	
	90	CLAYSTONE: as for 1560-1565m.	
1575-1578	50	SANDSTONE: off white to medium green grey to light brown, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	

Interval (m)	%	Description	PAGE: 24
	50	CLAYSTONE: as for 1560-1565m.	
1578-1585	80	SANDSTONE: off white to medium green grey to light brown, very fine to rarely medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: medium to dark grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1585-1590	90	SANDSTONE: off white to medium green grey to light brown, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1578-1585m.	
1590-1595	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
1595-1600	50	SANDSTONE: as for 1590-1595m.	
	50	CLAYSTONE: medium to dark grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1600-1605	60	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1605-1610	70	SANDSTONE: as for 1600-1605m.	
	30	CLAYSTONE: as for 1600-1605m.	
1610-1615	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: as for 1600-1605m.	
1615-1620	60	SANDSTONE: as for 1610-1615m.	
	40	CLAYSTONE: as for 1600-1605m.	

Interval (m)	%	Description	PAGE: 25
1624 SPOT	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, abundant calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, abundant calcite lined fractures, hard, subfissile to fissile.	
FLUOR		FLUORESCENCE: The white crystalline calcite fracture infill (5% of total sample) has 80% bright patchy very pale yellowish white fluorescence giving a weak instant followed by strong bright milky white crush cut, thick very pale yellowish white ring residue.	
1620-1625	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, common calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, common calcite lined fractures, hard, subfissile to fissile.	
FLUOR		FLUORESCENCE: The white crystalline calcite fracture infill (trace of total sample) has 60% bright patchy very pale yellowish white fluorescence giving a weak instant followed by strong bright milky white crush cut, thick very pale yellowish white ring residue.	
1625-1630	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
	30	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
FLUOR		FLUORESCENCE: The white crystalline calcite fracture infill (trace of total sample) has 50% bright patchy very pale yellowish white fluorescence giving a weak instant followed by strong bright milky white crush cut, moderate very pale yellowish white ring residue.	
1630-1635	100	SANDSTONE: off white to medium green grey, very fine to rarely medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
1635-1640	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: medium to dark grey to occasionally medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to moderately carbonaceous, common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	

Interval (m)	%	Description	PAGE: 26
1640-1645	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: medium to dark grey to occasionally medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1645-1650	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: as for 1640-1645m.	
1650-1655	100	SANDSTONE: as for 1645-1650m.	
	Trace	CLAYSTONE: as for 1640-1645m.	
1655-1660	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to occasionally medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1660-1665	30	SANDSTONE: as for 1655-1660m.	
	70	CLAYSTONE: as for 1655-1660m.	
1665-1670	50	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, rare calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	50	CLAYSTONE: medium to dark grey to occasionally medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile to fissile.	
1670-1675	30	SANDSTONE: as for 1665-1670m.	
	70	CLAYSTONE: as for 1665-1670m.	
1675-1685	10	SANDSTONE: as for 1665-1670m.	
	90	CLAYSTONE: medium to dark grey to medium brown grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	

Interval (m)	%	Description	PAGE: 27
1685-1690	100	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	Trace	CLAYSTONE: as for 1675-1685m.	
1690-1700	90	SANDSTONE: as for 1685-1690m.	
	10	CLAYSTONE: as for 1675-1685m.	
1700-1705	100	SANDSTONE: as for 1685-1690m.	
1705-1710	30	SANDSTONE: as for 1685-1690m.	
	70	CLAYSTONE: medium brown grey to occasionally medium to dark grey to medium green grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile to fissile.	
1710-1720	100	CLAYSTONE: as for 1705-1710m.	
1720-1725	Trace	SANDSTONE: off white to medium green grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and weak calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, rare calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	100	CLAYSTONE: medium to dark grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile to fissile.	
1725-1730	20	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and weak calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, rare calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: as for 1720-1725m.	
1730-1735	20	SANDSTONE: off white to medium green grey, very fine to occasionally fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and weak calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, rare calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	80	CLAYSTONE: medium to dark grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile to fissile.	
1735-1740	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, rare calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: as for 1730-1735m.	

Interval (m)	%	Description	PAGE: 28
1740-1745	40	SANDSTONE: as for 1735-1740m.	
	60	CLAYSTONE: medium brown to medium brown grey to medium to dark grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile to fissile.	
1745-1750	40	SANDSTONE: as for 1735-1740m.	
	60	CLAYSTONE: as for 1740-1745m.	
1750-1755	60	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite and red goethite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium brown to medium brown grey to medium to dark grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite and red goethite lined fractures, hard, subfissile to fissile.	
1755-1760	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium brown to medium brown grey to medium to dark grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile to fissile.	
1760-1765	90	SANDSTONE: as for 1755-1760m.	
	10	CLAYSTONE: as for 1755-1760m.	
1765-1770	10	SANDSTONE: as for 1755-1760m.	
	90	CLAYSTONE: off white to medium brown to medium brown grey to medium to dark grey, very silty in part, very finely arenaceous with altered feldspar grains in part, moderately carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile to fissile.	
1770-1775	90	SANDSTONE: off white to medium green, very fine, subangular to rounded, moderately sorted, abundant green argillaceous matrix, very strong silica and moderate calcareous cements, abundant altered feldspar grains, common grey green volcanogenic lithics, common red brown lithics, trace quartz grains, trace black coal detritus, trace calcite and goethite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1765-1770m.	
1775-1780	90	SANDSTONE: off white to medium green, very fine to occasionally fine, subrounded to rounded, moderately sorted, abundant green argillaceous matrix, very strong silica and weak to moderate calcareous cements, abundant altered feldspar grains, common grey green lithics, common red and brown lithics, trace quartz grains, trace fine brown mica flakes, trace black coal detritus, trace calcite and goethite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	10	CLAYSTONE: as for 1765-1770m.	
1780-1785	50	SANDSTONE: as for 1775-1780m.	

Interval (m)	%	Description	PAGE: 29
	50	SHALE: medium brown to medium to dark brown grey to dark grey, moderately silty in part, moderately carbonaceous, trace micromica, trace clacite and goethite lined fractures, hard, siliceous texture, subfissile.	
1785-1790	10	SANDSTONE: as for 1775-1780m.	
	90	SHALE: as 1780-1785m.	
1790-1795	40	SANDSTONE: off white to medium green grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace to common calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: off white to medium brown to medium brown grey to medium to dark grey, very silty in part, very finely arenaceous with altered feldspar grains in part, very carbonaceous in part - grades to argillaceous coal, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace to common calcite lined fractures, hard, subfissile to fissile.	
1795-1800	70	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: off white to medium brown to medium brown grey to medium to dark grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to very carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1800-1805	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine to medium, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
1805-1810	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green volcanogenic lithics, trace red brown lithics and quartz grains, trace coarse brown mica flakes, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
1810-1815	70	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace to common quartz grains, trace coarse brown mica flakes, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	30	CLAYSTONE: medium to dark grey to medium brown grey, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to occasionally very carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1815-1820	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace to common quartz grains, trace to common black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: as for 1810-1815m.	

Interval (m)	%	Description	PAGE: 30
1820-1825	50	SANDSTONE: as for 1815-1820m.	
	50	CLAYSTONE: medium to dark grey to medium brown, very silty in part, very finely arenaceous with altered feldspar grains in part, slightly to occasionally very carbonaceous, trace to common black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1825-1830	100	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
1830-1835	100	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
FLUOR		FLUORESCENCE: The calcite vein infill has trace moderately bright pale yellow white fluorescence giving a weak dull milky white crush cut, trace residue.	
1835-1840	100	SANDSTONE: off white to medium green grey, very fine to medium, dominantly medium, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, common calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
	Trace	CLAYSTONE: as for 1820-1825m.	
FLUOR		FLUORESCENCE: The calcite vein infill has 20% moderately bright pale yellow white fluorescence giving a weak dull milky white crush cut, trace residue.	
1840-1845	80	SANDSTONE: off white to medium green grey, very fine to medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace to common calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
	20	CLAYSTONE: as for 1820-1825m.	
FLUOR		FLUORESCENCE: The calcite vein infill has 10% moderately bright pale yellow white fluorescence giving a weak dull milky white crush cut, trace residue.	
1845-1855	10	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace to common calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
	90	CLAYSTONE: medium to very dark grey to medium to dark brown grey, occasionally very silty, occasionally very finely arenaceous with altered feldspar grains, moderately to very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace to common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite vein infill has 10% moderately bright pale yellow white fluorescence giving a weak dull milky white crush cut, trace residue.	

Interval (m)	%	Description	PAGE: 31
1855-1860	30	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, common calcite lined fractures, very hard, no visual porosity, no intergranular oil fluorescence.	
	70	CLAYSTONE: medium to very dark grey to medium to dark brown grey, occasionally very silty, occasionally very finely arenaceous with altered feldspar grains, moderately to very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, common calcite lined fractures, hard, subfissile.	
FLUOR		FLUORESCENCE: The calcite vein infill has 20% moderately bright pale yellow white fluorescence giving a weak dull milky white crush cut, trace residue.	
1860-1865	40	SANDSTONE: off white to medium green grey, very fine to fine, dominantly very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	60	CLAYSTONE: medium to very dark grey to medium to dark brown grey, occasionally very silty, occasionally very finely arenaceous with altered feldspar grains, moderately to very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1865-1870	80	SANDSTONE: off white to medium green grey, very fine to fine, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	20	CLAYSTONE: as for 1860-1865m.	
1870-1875	60	SANDSTONE: off white to medium green grey, very fine to occasionally medium, dominantly fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	40	CLAYSTONE: medium to dark grey to medium brown grey to medium brown, occasionally very silty, occasionally very finely arenaceous with altered feldspar grains, moderately carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1875-1885	10	SANDSTONE: off white to medium green grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and moderate calcareous cements, abundant off white altered feldspar grains, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	90	CLAYSTONE: light to very dark grey to medium brown grey to medium brown, occasionally very silty, occasionally very finely arenaceous with altered feldspar grains, moderately carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1885-1890	Trace	SANDSTONE: as for 1875-1885m.	
	100	CLAYSTONE: medium to very dark grey to medium brown grey, occasionally very silty, occasionally very finely arenaceous with altered feldspar grains, moderately to very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	

Interval (m)	%	Description	PAGE: 32
1890-1900	30	SANDSTONE: off white to medium brown grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains - matrix supported, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	70	CLAYSTONE: medium to very dark grey, occasionally moderately silty, rarely very finely arenaceous with altered feldspar grains, moderately to very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1900-1915	Trace	SANDSTONE: as for 1890-1900m.	
	100	CLAYSTONE: dark to very dark grey, occasionally moderately silty, rarely very finely arenaceous with altered feldspar grains, moderately to dominantly very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
1915-1920	100	CLAYSTONE: as for 1900-1915m.	
1920-1925	Trace	SANDSTONE: off white to medium brown grey, very fine, subangular to rounded, moderately sorted, abundant off white argillaceous matrix - matrix supported, very strong silica and calcareous cements, abundant off white altered feldspar grains - matrix supported, common grey green red & brown lithics, trace quartz grains, trace black coal detritus, trace calcite lined fractures, very hard, no visual porosity, no oil fluorescence.	
	100	CLAYSTONE: dark to very dark grey, occasionally moderately silty, rarely very finely arenaceous with altered feldspar grains, moderately to dominantly very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1925-1935	100	CLAYSTONE: as for 1920-1925m.	
1935-1940	100	CLAYSTONE: dark to very dark grey, light to medium brown in part, occasionally moderately silty, rarely very finely arenaceous with altered feldspar grains, moderately to dominantly very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile to fissile.	
1940-1955	100	CLAYSTONE: dark to very dark grey, rarely light to medium brown, occasionally moderately silty, moderately to dominantly very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1955-1965	100	CLAYSTONE: dark to very dark grey, rarely medium brown grey, occasionally moderately silty, moderately to dominantly very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1965-1980	100	CLAYSTONE: dark to very dark grey to medium to dark brown, occasionally slightly silty, very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1980-1990	100	CLAYSTONE: dark to very dark grey to dark brown, occasionally slightly silty, very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
1990-2000	100	CLAYSTONE: dark to very dark grey to dark brown, occasionally slightly silty, very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, trace calcite lined fractures, hard, subfissile.	
2000-2018	100	CLAYSTONE: dark to very dark grey to medium to dark brown, occasionally slightly silty, very carbonaceous, trace black carbonaceous flecks and coaly detritus, common micromica, rare calcite lined fractures, hard, subfissile.	
2018-2020		Contaminated with cavings after trip.	
2020-2030	100	CLAYSTONE: dark to very dark grey to medium to dark brown, slightly silty, very carbonaceous, common micromica, hard, subfissile.	

Interval (m)	%	Description	PAGE: 33
2030-2040	100	CLAYSTONE: dark to very dark grey, occasionally medium to dark brown, slightly silty, very carbonaceous, common micromica, hard, subfissile.	
2040-2045	60	CLAYSTONE: dark to very dark brown, slightly silty in part, very carbonaceous - grades to coal, trace micromica, hard, subfissile.	
	40	COAL: black where clean, very dark brown and very argillaceous in part, subvitreous to slightly earthy lustre, platy to blocky fracture, common slickensided surfaces, hard, brittle. The coal has no fluorescence but gives a weak dull yellow crush cut, trace residue.	
2045-2050	60	CLAYSTONE: dark to very dark brown to black, slightly silty in part, very carbonaceous - grades to coal, trace micromica, hard, subfissile.	
	40	COAL: dominantly very dark brown and very argillaceous, black where clean, subvitreous to earthy lustre, platy to blocky fracture, common slickensided surfaces, hard, brittle. The coal has no fluorescence but gives a weak dull yellow crush cut, trace residue.	
2050-2055	80	CLAYSTONE: as for 2045-2050m.	
	20	COAL: as for 2045-2050m.	
2055-2060	90	CLAYSTONE: medium to dark brown to black, slightly silty in part, moderately to very carbonaceous - grades to coal in part, trace micromica, hard, subfissile.	
	10	COAL: as for 2045-2050m.	
2060-2065	90	MARBLE(?): off white to light grey, rarely green, microcrystalline where cuttings intact - bulk of sample soft/mushy, slightly to very argillaceous, hard.	
	10	ANHYDRITE(?): light grey, slightly calcareous, bulk of sample soft/mushy, cryptocrystalline, hard.	
FLUOR		FLUORESCENCE: the marble(?) has trace dull to rarely moderately bright patchy pale yellow white fluorescence giving a very weak milky white crush cut, trace residue.	
2065-2070	100	MARBLE(?): off white to light grey, microcrystalline (weathered in part to light grey argillaceous calcilutite), slightly to moderately argillaceous, occasional coarse calcite crystals, trace green serpentinite, hard.	
2070-2075	100	UNIDENTIFIED: light grey, homogeneous to speckled, mottled in part, cryptocrystalline to microcrystalline, trace flow or stress banding in part, trace vesicles(?) infilled with brown yellow or green minerals, common micro to macrocrystalline calcite infilled fractures and patches, trace yellow orange and brown crypto to macrocrystalline mineral infilled veins and patches, trace bright green serpentine(?) patches, non to occasionally very calcareous, hard.	
2075-2080	100	UNIDENTIFIED: light grey, homogeneous to speckled, mottled in part, cryptocrystalline to microcrystalline, trace flow or stress banding in part, trace vesicles(?) infilled with brown yellow or green minerals, common micro to macrocrystalline calcite infilled fractures and patches, common yellow orange and brown crypto to macrocrystalline mineral infilled veins and patches, trace bright green serpentine(?) patches, non to occasionally very calcareous, hard.	
2080-2085	30	UNIDENTIFIED: as for 2075-2080m.	
	70	METAMORPHICS (SPOTTED ARGILLITE): speckled light brown to brown black, cryptocrystalline textured argillite, hard.	
2085-2090	100	UNIDENTIFIED: light grey, homogeneous to speckled, mottled in part, cryptocrystalline to microcrystalline, trace flow or stress banding, trace micro to macrocrystalline calcite infilled fractures and patches, trace orange and brown crypto to macrocrystalline mineral infilled veins and patches, non to occasionally very calcareous, hard.	
2090-2095	100	UNIDENTIFIED: light grey, homogeneous to mottled, cryptocrystalline texture, trace flow or stress banding, trace micro to macrocrystalline calcite infilled fractures and patches, trace orange and brown crypto to macrocrystalline mineral infilled veins, non to occasionally very calcareous, hard.	

Interval (m)	%	Description	PAGE: 34
2095-2100	100	UNIDENTIFIED: light grey, homogeneous to mottled, cryptocrystalline texture, trace micro to macrocrystalline calcite infilled fractures and patches, trace orange and brown crypto to macrocrystalline mineral infilled veins, non to occasionally very calcareous, hard.	
2100-2105	100	UNIDENTIFIED: light grey to off white, homogeneous to mottled to spotted, trace micro to macrocrystalline calcite infilled fractures, trace orange and brown crypto to macrocrystalline mineral infilled veins, non to occasionally very calcareous, hard.	
2105-2110	50	UNIDENTIFIED: light grey to off white, homogeneous to spotted with fine black grains, trace micro to macrocrystalline calcite infilled fractures, trace orange and brown crypto to macrocrystalline mineral infilled veins, non to occasionally very calcareous, hard.	
	50	CARBONACEOUS SHALE: (lightly metamorphosed) medium brown to brown black, speckled in part, siliceous texture, moderately to very carbonaceous, trace pyrite, hard.	
2110-2115	70	SANDSTONE: (lightly metamorphosed) off white spotted with black, abundant white matrix with common black grains, fine grained, very strong siliceous and calcareous cements, trace coarsely crystalline calcite veining, trace yellow brown coarsely crystalline veining, hard, no visual porosity, no oil fluorescence.	
	30	CARBONACEOUS SHALE: (lightly metamorphosed) as for 2105-2110m.	
2115-2120	80	SANDSTONE: (lightly metamorphosed) off white spotted with black, abundant white matrix with common black grains, fine grained, trace hard black carbonaceous material, very strong siliceous and calcareous cements, trace coarsely crystalline calcite veining, trace yellow brown coarsely crystalline veining, hard, no visual porosity, no oil fluorescence.	
	20	CARBONACEOUS SHALE: (lightly metamorphosed) medium brown to brown black, rarely speckled, siliceous texture, moderately to very carbonaceous, trace pyrite, hard.	
2120-2125	60	SANDSTONE: (lightly metamorphosed) off white spotted with black, abundant white matrix with common black grains, fine grained, trace hard black carbonaceous material, very strong siliceous and calcareous cements, common coarsely crystalline calcite veining, common yellow brown coarsely crystalline veining, hard, no visual porosity, no oil fluorescence.	
	30	UNIDENTIFIED: light grey to off white, homogeneous to spotted with fine black grains, common micro to macrocrystalline calcite infilled fractures, trace orange and brown crypto to macrocrystalline mineral infilled veins, non to occasionally very calcareous, hard.	
	10	CARBONACEOUS SHALE: (lightly metamorphosed) medium brown to brown black, rarely speckled, siliceous texture, moderately to very carbonaceous, trace pyrite, hard.	
2125-2130	80	SANDSTONE: (lightly metamorphosed) off white spotted with black, abundant white matrix with common black grains, fine to coarse grained, trace hard black carbonaceous material, very strong siliceous and calcareous cements, common coarsely crystalline calcite veining, common yellow brown coarsely crystalline veining, hard, no visual porosity, no oil fluorescence.	
	10	UNIDENTIFIED: light grey to off white, homogeneous to occasionally spotted with fine black grains, common micro to macrocrystalline calcite infilled fractures, trace orange and brown crypto to macrocrystalline mineral infilled veins, non to occasionally very calcareous, hard.	
	10	CARBONACEOUS SHALE: (lightly metamorphosed) medium brown to brown black, rarely speckled, siliceous texture, moderately to very carbonaceous, trace pyrite, hard.	
T.D.		T.D. 2130m reached at 0845hrs, 31st January, 2007.	