



FORM P-70

~~SECRET~~ COMMERCIAL IN CONFIDENCE

~~SEARCHED INDEXED SERIALIZED FILED OCT 30 1973~~ KOB 9-6-89

13 OCT 1970

Section of PARK FARM SURFACE BOREHOLE

Purpose **Coal Exploration**

Exact Site E 444 886.1 metres

N-360-662-Sub-seton

N 308 662-9. Metr.

near Sutton Scarsdale, Derbys.

shaft

Level at which bore commenced relative to O.D. 357.13 ft. m or ft*
drift A.O.D.

Date of sinking or boring 24. 8.72 to 20.10.72

Sinker or borer Foraky Ltd. (W. Thompson).

Cores examined by J.H. Rippon, and P.K. Boam (below 1078/10)



FORM P-3
SERIES 680

COMMERCIAL IN CONFIDENCE

31 OCT 1973

Section of PARK FARM SURFACE BOREHOLE

8-INCH MAP B/H
SK46 NU / 21

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	Delete as appropriate			
		THICKNESS m or ft*	cm or in*	THICKNESS m or ft*	cm or in*
Sandstone,	with minor interlaminated siltstone; diastems; locally crumpled bedding; coalified <i>Calamites</i> stem 0/04" diameter from top to 78/3 roughly perpendicular to the normal bedding; locally dune-sized cross-bedding, with units up to 0/4" thick	0	10	776	8
Siltstone	coarse, very evenly interlaminated with sandstone; abundant coaly micaceous planty planes;	0	5	777	6
Siltstone	coarse; poorly-defined bedding with local layers of sandstone up to 0/2" thick; local large plant debris on some bedding planes	1	11	777	11
Siltstone,	coarse at the top, becoming fine grain below 80/4; massive; rare faultlets; common large coalified "strap" plants, some with many attached <i>Spirorbis</i> ; common "fern" leaves and fronds including <i>Neuropteris</i> . some with attached <i>Spirorbis</i> passage	0	8	779	10
Mudstone,	unlaminated; local thin ironstone bands; locally listric; common "fern" fronds and "strap" plants; <i>Pinnularia</i> at 80/7; becoming silty towards the base	0	8	780	6
Siltstone	fine with abundant sandstone laminae; rare minor diastems, locally well-developed ripple drift as at 81/10, local poorly developed "train" drift; rare faultlets; common ironstone nodules;	1	5	781	2
Siltstone,	medium grain, well laminated; common ironstone nodules;	0	5	782	7
Siltstone,	medium grain with common sandstone laminae; well-developed "train" drift at 83/0; large ripple drift unit below;	0	5	783	0
Siltstone,	with many sandstone laminae; bedding contorted; abundant ironstone lenses;	0	5	783	5
Siltstone,	with abundant thin sandstone laminae; local ripple drift; bedding disturbed by an overthrust faultlet, dipping 10° with respect to the bedding at 84/3; diastems, especially to 84/0;	0	6	784	4



FORM P 71
SERIES 680

COMMERCIAL IN CONFIDENCE

Section of **PARK SURFACE BOREHOLE**

6-INCH MAP

B/H

SK46NU / 21

**Delete as appropriate*

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
Sandstone,	small scale dune sets; local discontinuous siltstone laminae; especially towards the base;	0	8	784	4
Sandstone	with interlayered and interlaminated siltstone; rare but prominent diastems, local "train" drift and poorly developed ripple drift; rare sand-filled burrows up to $0/0\frac{1}{2}$ " deep	1	4	785	0
Siltstone,	very coarse grain, laminated; frequent sandstone laminae and thin sandstone lenses; rare poorly-developed ripple drift; sandstone laminae more abundant from 92/6 to 93/0 and from 93/9 - 94/0	7	9	786	4
Siltstone	passage with abundant sandstone laminae; local poorly-developed ripple drift; usually evenly bedded;	3	4	794	1
Sandstone,	with discontinuous siltstone laminae, diastems, vaguely rippled bedding in parts; 20° hade umineralised break (? mining induced) throughout;	1	0	797	5
Sandstone	with discontinuous siltstone laminae; abundant dune sets; well-developed but irregular small scale cross-bedding; approximately 15° hade umineralised break from 799/8 to 801/8 (induced by mining ?); dune-sized ($0/5$ " thick units) sets in parts, especially below 802/0; abundant coaly micaceous planty planes throughout	4	11	798	5
Siltstone,	coarse, with sandstone laminae; ripple drift;	1	2	803	4
Siltstone	passage coarse, with abundant sandstone laminae and several prominent sandstone layers; many prominent diastems; local ripple drift;	1	6	804	6
Sandstone	with discontinuous siltstone laminae and layers; a few horizons of siltstone-clast breccia; many small-scale scour-and-fill structures;	0	9	806	0
					806 9

FORM 71
SERIES 680

COMMERCIAL IN COALFIELD

37 OCT 1973

Section of PARK FARM SURFACE BOREHOLE

B-INCH MAP B/H

SK46NW /21

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				806	9
Siltstone,	medium grain, very poorly laminated; "fern" fronds and "strap" plants; local ironstone lenses;	0	9	807	6
Siltstone	with irregular sandstone laminae	0	2	807	8
Sandstone,	dune sets; unmineralised low hade breaks throughout (mining induced?)	0	9	808	5
Siltstone,	with abundant thin sandstone laminae; occasional ripple drift, evenly-bedded elsewhere; low-hade unmineralised breaks throughout; passage	1	3	809	8
Sandstone,	with discontinuous siltstone laminae and layers; small-scale, irregular cross- bedding; abundant diastems; abundant small micaceous planty planes throughout erosional base	3	3	812	11
Sandstone,	with interlaminated siltstone; small- scale cross-bedding in parts, evenly laminated elsewhere local prominent diastems; abundant large coaly micaceous planty planes throughout;	1	6	814	5
Sandstone,	dune sets; local ironstone clasts; mineralised joints; base very irregular erosional	1	1	815	6
Sandstone,	truncated linguoid ripple sets; carbonate- mineralised joints throughout; few coaly micaceous planty planes to approximately 18/0, more abundant below; not canky; sharp	3	8	819	2
Sandstone,	dune sets; abundant very coaly micaceous planty planes from 19/2 to 19/9	0	8	819	10
Sandstone,	truncated linguoid ripple sets to 21/0, more irregularly-bedded below with extensive very coaly micaceous planty planes at some levels; discontinuous siltstone laminae common below 21/11; local thin ironstone lenses	2	4	822	2
Siltstone,	medium grain, with abundant sandstone lenses, with prominent diastems; sandstone content decreases gradually towards the base; low hade unmineralised breaks throughout;	2	6	824	8



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SERIES 680

Section of

COMMERCIAL IN CONFIDENCE

137 OCT 1973

PARK FARM SURFACE BOREHOLE

6-INCH MAP	B/H
SK46 NU / 21	

**Delete as appropriate*

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft	cm or in*
Siltstone,	fine grain, with thin evenly bedded sandstone laminae; passage	0	8	824	8
Siltstone	fine grain, well-laminated; rare sandstone laminae; abundant plant debris on some bedding planes; passage	2	6	825	4
Siltstone,	medium grain, with many evenly-bedded sandstone laminae and occasional thin sandstone lenses; finer grain below 28/3 with little sandstone; passage	0	8	826	6
Ironstone		0	2	828	8
Mudstone,	laminated; ironstone bands 0/2" thick at 29/0 and 30/5; core broken by high-hadé breaks from 29/0 - 30/0; passage	2	4	831	0
Mudstone,	poorly laminated; local small listric surfaces; rare small ironstone nodules; rare <u>Anthracosia</u> from 31/3; ironstone band 0/2" thick at 32/5; local sub-vertical breaks; passage	1	8	832	8
Mudstone,	slightly shaly, well laminated to approximately 33/4; common ironstone modules containing non-marine lamellibranchs from 33/6 to 33/11 with associated listric surfaces; ironstone bands 0/2" thick at 34/4 and 34/11; vaguely wormy from 33/4, common large ?shell-guilielmites from 33/4; rare ostracods; passage	2	4	835	0
Mudstone,	slightly shaly, slightly carbonaceous in parts, laminated; common shell-guilielmites, abundant from 35/7, with many <u>Spirorbis</u> ; wormy in parts, especially below 35/7; local thin ironstone lenses throughout; passage	1	4	836	4
Mudstone,	slightly shaly, slightly carbonaceous, common poorly preserved non-marine lamellibranchs (? <u>Anthracosia</u>), abundant <u>Spirorbis</u> ; vaguely wormy in parts; increasingly shaly and carbonaceous towards the base; iron-rich in the basal 0/1"	1	0½	837	4½



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~~COMMERCIAL IN CONFIDENCE~~

31 OCT 1973

Section of

PARK FARM SURFACE BOREHOLE

B-1INCH MAP

✓H

SK46M0 / 2

ANSWER

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
	CORE BOXED 837/4 - 844/4			837	42
* Mudstone,	dark grey, shaly; non-marine lamellibranchs and a little fish debris core attached	0	4	837	8½
* 2ND WATERLOO	Coal, bright 0 - 4 Coal, dirty dull 0 - 1½ Coal, dirty bright 0 - 1½ Coal, banded 0 - 3½ Coal and ironstone 0 - 1 } top leaf Coal, mostly bright 0 - 5½ Coal, banded 0 - 6½ Coal, bright 0 - 6 Seatearth mudstone, grey 0 - 5½ Coal, mostly bright 1 - 2½ middle leaf Seatearth mudstone, grey 0 - 5 Coal, dirty, bright 0 - 5½ Coal, bright 1 - 2½ lower leaf 6 - 21				
	Recovery 100%				
	Thickness corrected for a 15° dip = 6' 1"	6	3½	844	0
	core attached				
* Mudstone,	dark grey, with bright coal streaks	0	1	844	1
* Seat Earth	Mudstone, immature; roots and other plant remains	0	3	844	4



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COMMERCIAL IN CONFIDENCE

31 OCT 1973

Section of PARK FARM SURFACE BOREHOLE

6-INCH MAP B/H
246 NW/21

**Delete as appropriate*



FORM P-71
SERIES 680

COMMERCIAL IN CONFIDENCE

Section of

PARK FARM SURFACE BOREHOLE

6-INCH MAP B/H
246 NW/21

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
Seat Earth	Siltstone fine, grey, immature; few roots; abundant ironstone nodules from 51/4; rare thin sandstone lenses from 51/6; local coalified Calamites sharp	1	10	850	6
Siltstone,	with abundant sandstone lenses and laminae; diastems; rare roots;	0	7	852	4
Sandstone,	with many small micaceous planty planes and discontinuous siltstone layers and laminae; abundant prominent diastems; low-had unmineralised breaks (mining induced ?) throughout	2	1	855	0
Sandstone	with rare truncated siltstone lenses; possible dune sets; micaceous planty planes;	0	9	855	9
Sandstone	with frequent discontinuous siltstone laminae and layers; abundant small micaceous planty planes; many prominent diastems; rare horizons of contorted bedding;	2	9	858	6
Siltstone	fine, with abundant disconnected sandstone lenses;	0	2	858	8
Siltstone	fine with large sandstone load-and-pouch structures	1	4	860	0
Siltstone	fine with thin sandstone lenses and laminae, rare to approximately 61/0; more common below, with local load-and-pouch structures; less sand from 61/9 to 61/11 passage	1	11	861	11
Siltstone	fine, laminated; a few thin sandstone laminae in the top 0/3" ironstone lens 0/2" thick at 65/8, passage	4	1	866	0
Mudstone,	silty near the top, poorly laminated; ironstone band 0/1" thick at the base	2	5	868	5
Mudstone,	poorly laminated; common thin ironstone bands; wormy; guilielmites from 69/4, poorly preserved non-marine lamellibranchs from 70/5	2	5	870	10



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137 OCT 1973

Section of

COMMERCIAL IN CONFIDENCE
PARK FARM SURFACE BOREHOLE

6-INCH MAP B/H
SK46 NU/21

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	*Delete as appropriate			
		THICKNESS	DEPTH	m or ft*	cm or in*
Mudstone,	shaly highly carbonaceous, sub-cannelloid; iron-rich; rare fish-debris; attached	0	5	870	10
Coal,	mostly bright, with a few thin dull bands; core broken 71/7, attached	0	5	871	3
Mudstone,	highly carbonaceous, with many bright coal streaks; attached	0	1½	871	9½
Coal,	bright attached	0	0½	871	9¼
Seat Earth	Mudstone, dark brownish-grey; very listric; abundant roots; passage	1	2½	873	0
Seat Earth	Mudstone, grey, common listric surfaces, common ironstone nodules; abundant roots; becoming carbonaceous in basal 0/1" attached	3	4½	876	4½
COAL,	mostly bright, locally cannelloid; core largely fragmented; unattached	0	4½	876	9
Seat Earth	Mudstone, brown, very listric; abundant roots; sphaerosiderite patches from 80/10, ironstone nodules common from 81/8,	5	6	882	3
Seat Earth	Mudstone, grey, abundant sphaerosiderite; abundant roots	0	9	883	0
Seat Earth	Mudstone, dark brownish-grey; locally listric; common coalified "strap" plants and stigmarian roots; <u>Neuropterus</u> fronds at 84/10; local ironstone nodules; becoming silty below 85/0; to approximately 86/0; muddy, grey, and with large listric surfaces below 86/0;	4	5	887	5
Mudstone,	silty, dark brownish-grey; unlaminated; abundant coalified "strap" plants, common "fern" fronds and leaves; <u>Pinnularia</u> at 90/11; obscure bedding at 91/5 with abundant tiny ironstone pellets; local faultlets at 92/4; grey below approximately 94/0; passage	7	7	895	0



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COMMERCIAL IN CONFIDENCE

13 Oct 1973

— Section of **PARK FARM SURFACE BOREHOLE**

6-INCH MAP / B/H
SK46 NW/21

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
Siltstone	coarse, poorly laminated; abundant comminuted plant remains;	0	6	895	0
Mudstone,	silty, brownish grey, unlaminated; abundant poorly preserved "fern" fronds and leaves, common "strap" plants, <i>Calamites</i> , and <i>Lepidodendron</i> ; abundant faultlets from 899/10 to 900/0, and locally below;	7	10	895	6
Siltstone	fine, poorly laminated; abundant poorly preserved plant remains;	0	10	903	4
Mudstone,	silty unlaminated, usually brownish-grey; common small ironstone nodules; small ironstone-filled ?sedimentary dykes at 06/5, and locally below; abundant plant remains throughout, including coalified "strap" plants, <i>Calamites</i> , <i>Lepidodendron</i> , and poorly-preserved "fern" fronds and leaves; <i>Pinnularia</i> at 06/4; passage	4	4	904	2
Siltstone	fine, brownish-grey at the top, grey below; massive; locally common faultlets; abundant plant remains including "strap" plants and "fern" fronds and leaves; abundant tiny ironstone specks from 11/2 to 11/6; <i>Alethopteris</i> at 11/4;	4	6	908	6
Siltstone	fine, locally silty mudstone, dark grey, locally poorly laminated, abundant faultlets; local large inclined listric surfaces; local small ironstone nodules; abundant large coalified "strap" plants and <i>Calamites</i> , common "fern" remains, including <i>Alethopteris</i> large inclined listric surface at the base; sharp	7	10	913	0
Siltstone,	dark grey, with abundant sandstone laminae, bedding disturbed by numerous parallel faultlets throwing up to 1/12; diasteme; rapid passage	0	8	920	10
Siltstone	fine, massive; dark grey; irregular light greenish-grey patches from 29/5 to 29/7; abundant subparallel faultlets, common large inclined listric surfaces, common small ironstone nodules; irregular thin and very disturbed sandstone laminae from 30/7 to the base; abundant plant remains throughout including <i>Sigillaria</i> ; rare <i>Pinnularia</i>	9	7	921	6

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SERIES 680

57 APR 1973
COMMERCIAL IN CONFIDENCE

Section of PARK FARM SURFACE BOREHOLE

6-INCH MAP		B/H
SK46 NW/21		

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
Sandstone,	poorly-defined subhorizontal bedding; small ironstone and siltstone clasts to 31/5; abundant twin siltstone inclusions below, with 0/1" thick microbreccia at the base erosional base	0	9	931	1
Siltstone	fine with thin disconnected sandstone lenses; local horizons of contorted bedding, rare iron-rich layers; becoming muddy towards the base (core condition deteriorates abruptly at 35/2);	3	4	931	10
Mudstone,	laminated, common ironstone bands up to 0/1" thick; vague wormy traces to approximately 38/0 and very worm below, "kaolin" oolith ironstone band 0/1" thick at 38/10	3	8	935	2
Seat Earth	Mudstone, brown, very listric unattached	0	2	938	10
COAL and dirt	bat 0/1) coal, bright 0/1 } partly fragmented bat 0/1) unattached	0	3	939	3
Seat Earth	Mudstone, grey, very listric	0	9	940	0
Bat;	solid core unattached	0	8	940	8
Seat Earth	Mudstone, dark grey; very listric unattached	0	11	941	7
COAL,	bright unattached	0	1	941	8
Seat Earth	Mudstone, dark brownish-grey; very listric; sharp	0	2	941	10
Seat Earth	Siltstone fine, light grey; unlaminated, abundant <u>Stigmaria</u> ; passage	2	6	944	4
Seat Earth	Siltstone, with local disturbed sandstone laminae; bedding disturbed by roots; very iron-rich throughout; passage	0	9	945	1
Siltstone	fine, with rare sandstone laminae; common thin ironstone bands; abundant plant debris on many bedding planes	2	10	947	11



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SERIES 680

COMMERCIAL IN CONFIDENCE

Section of

PARK FARM SURFACE BOREHOLE

6-INCH MAP

✓H

~~SK46 Mv/21~~

**Delete as appropriate*

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	*Delete as appropriate		
		THICKNESS m or ft*	cm or in*	DEPTH m or ft* cm or in
Siltstone	with many regularly-occurring sandstone layers up to 0/1½" thick; diastems	0	10	947 11
Sandstone	with discontinuous siltstone laminae and layers; abundant diastems; sandstone content decreases below 49/6; passage	1	3	948 9
Siltstone	fine, laminated; rare sandstone laminae to 50/3; local thin ironstone bands; very wormy in parts; passage	1	7	950 0
Mudstone,	poorly laminated; wormy; <i>Cochlichnus</i> and a single poorly-preserved non-marine lamellibranch at 51/10;	1	10	951 7
Mudstone,	shaly, poorly laminated; fragment thin-shelled non-marine lamellibranchs, wormy	0	10	953 5
Siltstone	fine, poorly laminated; local iron-rich patches; locally very wormy;	4	7	954 3
Ironstone,	canky	0	6½	955 4½
Mudstone,	poorly laminated, slightly shaly; wormy; locally common poorly-preserved non-marine lamellibranchs to 62/9, with abundant minute juvenile non-marine lamellibranch at 61/3; abundant well-preserved <i>Anthracosia</i> , often with both valves attached, from 62/9, on some bedding planes	5	1½	964 6
Siltstone	fine, with thin sandstone lenses and laminae; sandstone content decreases downwards	0	6	965 0
Sandstone,	ripple sets; local discontinuous siltstone laminae especially in the basal 0/3" passage	2	0	967 0
Sandstone	with siltstone; sandstone lenses with basal diastems	0	4	967 4
Siltstone	fine, with connected sandstone lenses; several prominent diastems; local sandstone ? load structures; passage	1	4	968 8

13 OCT 1910

FORM P 71
SERIES 680

COMMERCIAL IN CONFIDENCE

6-INCH MAP

B/H

SK46 NW/21

Section of PARK FARM SURFACE BOREHOLE

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				968	8
Siltstone	fine with common sandstone laminae at several horizons; many minor diastems; bedding commonly contorted;	2	4	971	0
Siltstone	fine with common sandstone laminae and thin discontinuous sandstone lenses passage	1	0	972	0
Siltstone	fine with thin sandstone lenses; bedding commonly contorted;	2	0	974	0
Sandstone,	small scale cross-bedding with many discontinuous siltstone laminae; diastems;	0	5	974	5
Siltstone	fine with many prominent sandstone load structures;	1	10	976	3
Siltstone	fine with rare thin sandstone lenses and laminae; ironstone band 0/3" thick at 77/4	1	1	977	4
Siltstone	fine, laminated passage	1	8	979	0
Mudstone	silty, laminated; ironstone bands 0/2" thick at 79/11 and 83/6 passage	7	0	986	0
Mudstone,	laminated; common thin ironstone bands and lenses up to 0/1½" thick; very wormy; rare poorly preserved non-marine lamellibranchs to 98/3, and abundant thick-shelled non-marine lamellibranchs at 98/3	3	4	989	4
Mudstone,	shaly, highly carbonaceous; silty to 92/5; common non-marine lamellibranchs to 89/8, wormy throughout;	3	6	992	10
CORE BOXED 992/10 - 998/5½					
* Mudstone,	dark grey, shaly, with non-marine lamellibranchs and ironstone bands in the basal 5 inches	0	11½	993	9½
core unattached					
* FIRST ELL	Coal, mostly bright 0 - 9 Seatearth, mudstone, grey 0 - 4½ Coal, bright 0 - 3 Mudstone, canneloid 0 - 1 Seatearth mudstone, grey 2 - 2 Coal, bright 0 - 6 Cannel, dirty 0 - 2 Coal, bright 0 - 3 Coal, dirty, bright 0 - 1 4 - 7½ Recovery 100% Thickness corrected for 15° dip = 4 - 5½	4	7½	998	5
* Seat Earth	siltstone, medium grain, with sandstone streaks; roots	0	3½	998	8½

FORM P 71
SERIES 680

COMMERCIAL IN CONFIDENCE

3 OCT 1973

Section of PARK FARM SURFACE BOREHOLE

6-INCH MAP	B/H
SK46 NW/21	

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
Seat Earth	Siltstone, coarse, with irregular sandstone laminae; <u>Stigmaria</u> ; sharp	0	2	998	8½
Seat Earth	Sandstone, with discontinuous siltstone laminae; bedding disturbed by <u>Stigmaria</u> ;	0	11½	998	10½
Sandstone,	with abundant discontinuous siltstone laminae; diastems; roots throughout; sub-vertical unmineralised fractures (mining breaks ?)	3	8	999	10
Siltstone	coarse, with thin sandstone lenses; bedding very irregular and disturbed from 03/9; roots:	0	11	1003	6
Siltstone	coarse, laminated; several sandstone layers with erosional bases;	1	1	1004	5
Sandstone,	small-scale cross-bedding with discontinuous siltstone laminae and layers; abundant prominent diastems; local siltstone-clast breccia; bedding convoluted from 06/8 to 06/11; rare sand-filled burrows;	4	1	1005	6
Siltstone,	often coarse grain, with thin disconnected sandstone laminae and lenses; slurry with "sheen" surfaces from 09/7 to 10/0	1	11	1009	7
Sandstone	connected sandstone lenses with inter-layered siltstone	0	3	1011	6
Sandstone,	ripple sets	0	6	1011	9
Siltstone	with abundant sandstone lenses and abundant minor diastems	0	8	1012	11
Sandstone	ripple sets	1	4	1014	3
Siltstone	with sandstone lenses; local minor diastems;	0	8	1014	11
Siltstone	fine with thin sandstone lenses; passage	1	1	1016	0
Sandstone	with discontinuous siltstone laminae; abundant prominent diastems;	1	2	1017	2



FORM P 71
SERIES 680

COMMITTEE IN CHARGE

Sept 1973

Section of **PARK PARM SURFACE BOREHOLE**

B-1INCH MAP B/H
SK46 NW/21

**Delete as appropriate*

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
Siltstone	with sandstone; convoluted bedding; sharp	2	5	1017	2
Siltstone	fine with rare thin disconnected sandstone lenses; <u>Calamites</u> common on some bedding planes; wormy; core condition deteriorates sharply at base	3	10	1019	7
Mudstone,	poorly laminated, shaly; rare thin iron-stone bands in wormy; rare poorly-preserved non-marine lamellibranchs from 24/10 to approximately 26/0; frequent small <u>Naiadites</u> from 26/0; common small thick-shelled non-marine lamellibranchs from 30/5, becoming larger below 31/9; shell-guilielmites frequent throughout; ironstone band 0/2" thick at 32/1	8	8	1023	5
Mudstone,	shaly, slightly carbonaceous;	0	2	1032	1
Siltstone	fine, carbonaceous,	0	6	1032	3
Seat Earth	Siltstone fine, grey; poorly bedded in parts; <u>Stigmaria</u>	1	1	1033	9
Seat Earth	Siltstone with sandstone; poorly bedded, vague diastems; roots; passage	0	6	1034	4
Siltstone,	dark grey, with thin regularly-bedded sandstone laminae; rare roots; common small sand-filled burrows from 34/9	0	10	1035	2
Sandstone,	small-scale cross bedding, rare discontinuous siltstone laminae and layers; abundant prominent diastems; sandstone-filled burrows common at some levels; sub-vertical, carbonate-mineralised joints throughout	1	9	1036	11
Siltstone	fine with abundant thin disconnected sandstone lenses	1	0	1037	11
Sandstone,	with discontinuous siltstone laminae; diastems; erosional base	0	4	1038	3
Siltstone	fine, with abundant disconnected sandstone lenses and laminae; sandstone content decreases downwards; local small sandstone-filled burrows	1	9	1040	0

FORM P 71
SERIES 680

COMMERCIAL IN CONFIDENCE

157 OCT 1973

6-INCH MAP

B/H

SK46NW/21

Section of PARK FARM SURFACE BOREHOLE

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	*Delete as appropriate		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				1040	0
Sandstone	with fine grain siltstone; abundant diastems;	0	8	1040	8
Siltstone	fine with thin sandstone laminae; abundant diastems passage	0	4	1041	0
Mudstone	silty, poorly laminated; ironstone band 0/2" at 41/7; locally common poorly preserved thick-shelled non-marine lamellibranchs, and <i>Naiadites</i> , and vague wormy traces to 42/5; more definitely wormy below with larger <i>Naiadites</i> , <i>Anthracosia</i> and possible <i>Anthraconaria</i> ; passage	1	9	1042	9
Mudstone,	unlaminated, not shaly; local ironstone bands and lenses up to 0/1" thick; abundant <i>Naiadites</i> and <i>Anthraconaria</i> ; abundant <i>Spirorbis</i> associated with <i>Naiadites</i> ; passage	2	4	1045	1
Mudstone,	dark grey, poorly laminated, slightly silty; abundant large non-marine lamellibranchs, including <i>Naiadites</i> , <i>Anthracosphaerium</i> and <i>Anthraconaria</i>	0	8	1045	9
Mudstone,	shaly, carbonaceous; pyritic ironstone-filled ?sedimentary dyke with flanking listric surfaces from 45/9 to 46/1; abundant large thick-shelled non-marine lamellibranchs including <i>Anthracosia</i> to 46/3, common <i>Naiadites</i> from 46/3 to 46/6, becoming fewer below; thin ironstone bands common below 46/4;	1	1	1046	10
Mudstone,	light grey, not shaly, not carbonaceous; laminated; rare small ironstone lenses; abundant small inclined listric surfaces, and local faultlets to approximately 47/4; vague wormy traces throughout, and very wormy at 47/3, possible non-marine lamellibranchs debris at 47/9; rare coalified plant debris throughout; listric from 47/11 to 48/3; whole-core gently inclined listric surface at the base:	1	5	1048	3
<u>CORE BOXED 1048/3 - 1052/9½</u>					
* Mudstone,	grey, highly listric core not attached	0	5	1048	8
* <u>SECOND ELL</u>	Coal bright 1 - 4 Coal, dirty, bright fragmented 0 - 3½ Coal, mostly bright 0 - 5 Coal, banded 0 - 5 Coal, bright 0 - 7½ Seatearth, mudstone 0 - 1½ Coal, dirty bright 0 - 0½	3 - 3			

FORM P 71
SERIES 680

COMMERCIAL IN CONFIDENCE

31 OCT 1973

Section of PARK FARM SURFACE BOREHOLE

6-INCH MAP	B/H
SK46 NW/21	

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
	.../cont.				
	Recovery 95% Thickness corrected for 15° dip = 3' 1 1/2" core attached	3	3	1051	11
* Seat Earth	Siltstone, medium grained, light grey; darker in the top 2 1/2" with occasional bright coal streaks, roots	0	10 1/2	1052	9 1/2
Seat Earth	Siltstone with many sandstone laminae, local sandstone lenses; diastems; bedding disturbed by <u>Stigmaria</u> ;	1	7 1/2	1054	5
Sandstone	with siltstone; large sandstone ?load structures; roots;	0	7	1055	0
Sandstone	with a little interlaminated siltstone; many small scale scour-and-fill structures; "train" drift and ripple drift in a siltier horizon at 55/7; rare roots;	0	9	1055	9
Siltstone	fine with many thin, often connected, sandstone lenses and laminae; minor diastems; rare roots; passage	1	7	1057	4
Siltstone	fine with many connected sandstone lenses with erosional bases; sharp	2	1	1059	5
Siltstone	coarse, locally very poorly laminated; fracture surfaces often show a "sheen"; ? partly slurry; local <u>Calamites</u> ; rapid passage	2	4	1061	9
Sandstone,	with a little interlaminated siltstone; diastems; erosional base	0	2	1061	11
Siltstone,	poorly laminated; several thin unconnected sandstone lenses from approximately 64/0 passage	2	4	1064	3

FORM 71
SERIES 680

COMMERCIAL IN CONFIDENCE
37 OCT 1973

6-INCH MAP B/H
SK46 NW/21

Section of PARK FARM SURFACE BOREHOLE

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				1064	3
Siltstone	with many connected sandstone lenses; passage	0	5	1064	6
Siltstone	fine, with common thin sandstone lenses and laminae to approximately 67/0, fewer below; rare thin ironstone lenses:	5	2	1069	10
Mudstone,	poorly laminated;	0	11	1070	9
Ironstone		0	3½	1071	0½
Siltstone,	medium to coarse grain, very dark gray; poorly laminated; abundant thick-shelled non-marine lamellibranchs, mostly poorly preserved; sharp	1	1½	1072	2
Mudstone,	silty, poorly laminated; locally fine grain siltstone with rare thin sandstone laminae; abundant wormy traces; occasional poorly preserved non-marine lamellibranchs	2	2	1074	4
Siltstone	fine with connected sandstone lenses and laminae; sand content increases downwards; minor diastems to approximate 76/0 more prominent diastems below; rare roots, micaceous planty planes; passage	4	6	1078	10
Siltstone	fine with thin disconnected sandstone fine lenses and laminae; crumpled bedding with pouches; iron-rich patches; rare roots and "strap" plants	2	10	1081	8
Sandstone	fine massive; vague ripple sets from 88/2 to base; calcite-mineralised vertical break through most of core sharp	7	4	1089	0
Siltstone	fine and sandstone fine; variously inclined layers; diastems, ripple drift 91/0 - 92/2 with poorly-defined "train" drift; micaceous planty planes sharp	4	4	1093	4
Siltstone	fine, laminated, muddy; barren passage	3	0	1096	4
Mudstone,	laminated;	0	10	1097	2
Ironstone		0	6		
Mudstone,	dark, laminated; abundantly wormy with tracks; ironstone bands up to 0/2" thick; passage	5	10	1103	6



FORM P 71
SERIES 680

COMMENCEMENT IN CONVERSATION

27 OCT 1973

Section of

PARK FARM SURFACE BOREHOLE

6-INCH MAP

✓H

SK46NW/21

**Delete as appropriate*

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
Mudstone,	laminated, dark, locally fissile; ironstone bands up to 0/2" thick; rare non-marine lamellibranchs including Naiadites;	3	4	1103	6
Ironstone,	shelly	0	2	1106	10
Mudstone,	fissile; wormy; large carbonated non-marine lamellibranchs, dying out below 20/2 passage	14	0	1107	0
	<u>CLAY CROSS MARINE BAND</u>			1121	0
Mudstone,	dark fissile: Lingula, Curvirimula, wormy: fish-spines and rare scales, ostracods at 25/6, Dunbarella 27/2 - 29/0 with attached Spirorbis.	8	6	1129	6
Mudstone,	dark fissile: fish-debris, ostracods, Spirorbis attached	2	0	1131	6
COAL		0	1	1131	7
Seat Earth	Mudstone, brown; highly listric; roots	1	0	1132	7
Siltstone	fine with thin connected sandstone fine lenses. crumpled bedding, pouches; abundant small plants along bedding planes	6	11	1139	6
Siltstone	fine, laminated; thin papery sandstone fine laminae; sand-filled worm tubes; rare plant remains	1	1	1140	7
Mudstone	laminated, dark; large non-marine lamellibranchs mainly sporadic, but crowded at 46/2; vaguely wormy	6	1	1146	8
Siltstone	fine, laminated; small "strap" plants and plant debris, mainly along bedding; megaspores; oblique semi-listric breaks throughout	4	8	1151	4
Ironstone;	plant debris	0	4	1151	8

COMMERCIAL IN CONFIDENCE

FORM P 71
SERIES 680

31 OCT 1973

6-INCH MAP B/H
SK46NW/21

Section of PARK FARM SURFACE BOREHOLE

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				1151	8
Mudstone,	locally silty, dark; abundantly wormy; plants; rare guilielmites sharp	4	5	1156	1
Siltstone	fine with connected sandstone fine lenses; load casts sharp	1	2	1157	3
Mudstone	fissile, dark; numerous ironstone bands and nodules; wormy, ostracods, <i>Spirorbis</i> , large non-marine lamellibranchs including Anthracosia below 60/0; fish debris sharp	5	5	1162	8
Seat Earth	Siltstone fine, immature; <i>Stigmaria</i> , ironstone nodules	1	0	1163	8
Siltstone	fine with connected sandstone fine lenses; load and pouch structures; plants along bedding planes, micaceous plenty planes sharp	2	4	1166	0
Sandstone	fine to medium, truncated linguoid ripple sets; micaceous plenty planes; vertical breaks sharp	5	6	1171	6
Siltstone	fine with disconnected sandstone fine lenses; plants along bedding planes; sandstone dying out downwards, becoming rhythmic below 75/4 passage	4	2	1175	8
Mudstone	dark, slightly silty, laminated, ironstone bands; wormy; non-marine lamellibranchs including Anthracosia sporadic to 82/0, large crowded, and carbonated 82/0 - 84/2 with <i>Spirorbis</i> ; abundant ostracods in basal 0/1; vertical crinkled breaks throughout	8	2	1183	10
COAL		0	2	1184	0
Seat Earth	Siltstone fine, muddy; ironstone nodules; <i>Stigmaria</i> and plant debris passage	6	2	1190	2
Mudstone	laminated, dark, locally silty; ironstone bands, and nodules; wormy; small thin- shelled non-marine lamellibranchs, becoming larger downwards, crowded at some horizons below 96/0, with Anthracosia passage	7	4	1197	6
Mudstone	dark fissile; abundant carbonated thick shelled non-marine lamellibranchs, locally crowded;	0	7	1198	1



FORM P-7
SERIES 68

~~COMMERCIAL IN CONFIDENCE~~

AL IN CONF
31 OCT 1975

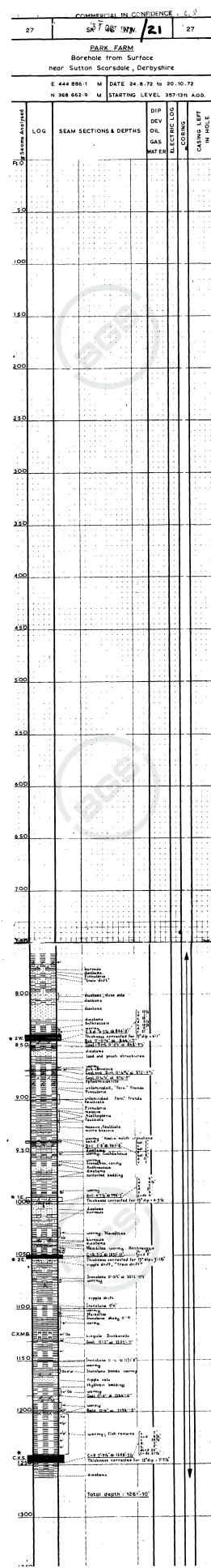
Section of

PARK FARM SURFACE BOREHOLE

6-INCH MAP	
SK 46 NW / 21	B/H

**Delete as appropriate*

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	Delete as appropriate			
		THICKNESS m or ft*	cm or in*	DEPTH m or ft* cm or in*	
BATT		0	4	1198	1
Seat Earth	Mudstone dark, slightly silty, immature; root guilielmites; rare ironstone nodules passage	3	7	1198	5
Mudstone,	dark, locally fissile, highly lenticular, with ironstone bands up to 0/1" thick; abundantly wormy; abundant fish debris, scales and spines; ostracods at 05/0 and at several horizons below; large non-marine lamellibranchs, rare to 08/0, abundant locally below and crowded at 12/2; rare and mainly thin-shelled non-marine lamellibranchs below 12/2, some with both valves, from 12/2 to 21/0, locally crowded below 21/0	38	2	1202	0
				1240	2
	CORE BOXED 1240/2 - 1248/11				
* Mudstone	shaly; thin-shelled non-marine lamellibranchs and a little fish debris core attached	0	6	1240	8
* CLAY CROSS SOFT	Coal, bright 0 - 7 Coal, dirty, and dirt 0 - 6½ Coal, banded 0 - 5 Coal, mostly bright 1 - 7½ Seatearth mudstone 0 - 5 Coal, bright 0 - 9 Coal dirty 0 - 6 Mudstone 0 - 0½ Coal, dirty, bright 0 - 5 Mudstone 0 - 0½ Coal, dirty, bright 0 - 8 Coal, bright 1 - 6½ Coal, dirty, bright 0 - 3 7 - 9½ Recovery 100% Thickness corrected for 12° dip = 7' 7½" rotation surface	7	9½	1248	5½
* Seat Earth	Mudstone, grey; roots	0	5½	1248	11





~~SK 46 NW / 21~~
EVIDENCE

SK 46 NW /21

FORM P 70		COMMERCIAL IN CONFIDENCE	
		= 31 OCT 1973	
Section of PARK FARM SURFACE BOREHOLE			
.....			
Purpose	Coal Exploration		
.....			
Exact Site	E 444 886·1 metres		
	N 368 662·9 metres		
near Sutton Scarsdale, Derbyshire.			

Level at which shaft bore commenced relative to O.D. 357.13 ft. m or ft*
drift A.O.D.

Sinker or borer Foraky Ltd. (W. Thompson)
Cores examined by J.H. Rippon and P.K. Boam (below 1078/10)

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
	Open hole from 760/0				
	Cores from			760	0
Mudstone,	locally silty, laminated; ironstone bands up to 0/1" thick; rare poorly preserved non-marine lamellibranchs; core fragmented and only about 1'0" recovered; core not attached	8	0+	768	0
Seat Earth	Mudstone, grey, listric; abundant ironstone nodules throughout; abundant roots; passage	1	5	769	5
Seat Earth	Siltstone, fine grain, muddy in parts; grey; common roots and ironstone nodules; "strap" plant at 70/4; local faultlets; passage	1	7	771	0
Seat Earth	Mudstone, grey; common ironstone nodules; common small faultlets and listric surfaces; roots, with occasional "fern" leaves and "strap" plants throughout; passage	0	11	771	11
Seat Earth	Siltstone, usually fine grain, with local irregular coarse silt patches; abundant large iron-rich patches throughout; roots common at top and becoming rarer downwards; common coalified "strap" plants at some levels; 0/2" thick layer of coarse siltstone at the base	2	2	774	1
Siltstone	usually fine grain, with local layers of coarse siltstone and fine sandstone, up to 0/3" thick; poorly bedded; common ironstone nodules; common roots; abundant worm burrows, especially at the coarser-grain horizons; local plant debris, including "fern" leaves; passage	2	7	776	8



COMMERCIAL CONFIDENCE		6-INCH MAP	B/H
23 OCT 1973		SK 46 NW / 21	
PARK FARM SURFACE BOREHOLE		RECEIVED	
*Delete as appropriate			
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS M OR FT* CM OR IN*	DEPTH M OR FT* CM OR IN*
Sandstone,	with minor interlaminated siltstone; diastems; locally crumpled bedding; coalified Calamites stem 0/0 ¹ " diameter from top to 78/3 roughly perpendicular to the normal bedding; locally dune-sized cross-bedding, with units up to 0/4" thick	0 10	776 8
Siltstone	coarse, very evenly interlaminated with sandstone; abundant coaly micaceous plancton planes;	0 5	777 6
Siltstone	coarse; poorly-defined bedding with local layers of sandstone up to 0/2" thick; local large plant debris on some bedding planes	1 11	777 11
Siltstone,	coarse at the top, becoming fine grain below 80/4; massive; rare faultlets; common large coalified "strap" plants, some with many attached Spirorbis; common "fern" leaves and fronds including Neuropteris, some with attached Spirorbis passage	0 8	779 10
Mudstone,	unlaminated; local thin ironstone bands; locally listric; common "fern" fronds and "strap" plants; Pinnularia at 80/7; becoming silty towards the base	0 8	780 6
Siltstone	fine with abundant sandstone laminae; rare minor diastems, locally well-developed ripple drift as at 81/10, local poorly developed "train" drift; rare faultlets; common ironstone nodules;	1 5	781 2
Siltstone,	medium grain, well laminated; common ironstone nodules;	0 5	782 7
Siltstone,	medium grain with common sandstone laminae; well-developed "train" drift at 83/0; large ripple drift unit below: *	0 5	783 0
Siltstone,	with many sandstone laminae; bedding contorted; abundant ironstone lenses;	0 5	783 5
Siltstone,	with abundant thin sandstone laminae; local ripple drift; bedding disturbed by an overthrust faultlet, dipping 10° with respect to the bedding at 84/3; diastema, especially to 84/0;	0 6	783 10
			784 4



Section of		DECLARED COMMERCIAL IN CONFIDENCE	6-INCH MAP	B/H
		37 OCT 1973	SK46NW / 21	
		*Delete as appropriate		
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS	DEPTH	
		m or ft*	cm or in*	m or ft* cm or in*
Siltstone,	medium grain, very poorly laminated; "fern" fronds and "strap" plants; local ironstone lenses;	0	9	806 9
Siltstone	with irregular sandstone laminae	0	2	807 6
Sandstone,	dune sets; unmineralised low hade breaks throughout (mining induced ?)	0	9	808 5
Siltstone,	with abundant thin sandstone laminae; occasional ripple drift, evenly-bedded elsewhere; low-hade unmineralised breaks throughout; passage	1	3	809 8
Sandstone,	with discontinuous siltstone laminae and layers; small-scale, irregular cross-bedding; abundant diastems; abundant small micaceous planty planes throughout erosional base	3	3	812 11
Sandstone,	with interlaminated siltstone; small-scale cross-bedding in parts, evenly laminated elsewhere local prominent diastems; abundant large coaly micaceous planty planes throughout;	1	6	814 5
Sandstone,	dune sets; local ironstone clasts; mineralised joints; base very irregular erosional	1	1	815 6
Sandstone,	truncated linguoid ripple sets; carbonate-mineralised joints throughout; few coaly micaceous planty planes to approximately 18/0, more abundant below; not canky; sharp	3	8	819 2
Sandstone,	dune sets; abundant very coaly micaceous planty planes from 19/2 to 19/9	0	8	819 10
Sandstone,	truncated linguoid ripple sets to 21/0, more irregularly-bedded below with extensive very coaly micaceous planty planes at some levels; discontinuous siltstone laminae common below 21/11; local thin ironstone lenses	2	4	822 2
Siltstone,	medium grain, with abundant sandstone lenses, with prominent diastems; sandstone content decreases gradually towards the base; low hade unmineralised breaks throughout;	2	6	824 8

Section of		COMMERCIAL IN CONDUCE		6-INCH MAP	
		131 OCT 1973		B/H	
		PARK FARM SURFACE BORING		SK46 NW/21	
*Delete as appropriate					
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA			THICKNESS	DEPTH
		m or ft*	cm or in*	m or ft*	cm or in*
Siltstone,	fine grain, with thin evenly bedded sandstone laminae; passage	0	8	824	8
Siltstone	fine grain, well-laminated; rare sandstone laminae; abundant plant debris on some bedding planes; passage	2	6	825	4
Siltstone,	medium grain, with many evenly-bedded sandstone laminae and occasional thin sandstone lenses; finer grain below 28/3 with little sandstone; passage	0	8	827	10
Ironstone		0	2	828	6
Mudstone,	laminated; ironstone bands 0/2" thick at 29/0 and 30/5; core broken by high-hade breaks from 29/0 - 30/0; passage	2	4	831	0
Mudstone,	poorly laminated; local small listric surfaces; rare small ironstone nodules; rare Anthracosia from 31/3; ironstone band 0/2" thick at 32/5; local sub-vertical breaks; passage	1	8	832	8
Mudstone,	slightly shaly, well laminated to approximately 33/4; common ironstone nodules containing non-marine lamellibranchs from 33/6 to 33/11 with associated listric surfaces; ironstone bands 0/2" thick at 34/4 and 34/11; vaguely wormy from 33/4, common large ?shell-guillemites from 33/4; rare ostracods; passage	2	4	835	0
Mudstone,	slightly shaly, slightly carbonaceous in parts, laminated; common shell-guillemites, abundant from 35/7, with many Spirorbis; wormy in parts, especially below 35/7; local thin ironstone lenses throughout; passage	1	4	836	4
Mudstone,	slightly shaly, slightly carbonaceous, common poorly preserved non-marine lamellibranchs (? Anthracosia), abundant Spirorbis; vaguely wormy in parts; increasingly shaly and carbonaceous towards the base; iron-rich in the basal 0/1"	1	0½	837	4½





section of PARK FARM SURFACE BOREHOLE 39

COMMERCIAL IN CONFIDENCE

6-INCH MAP

14

137 OCT 102

PARK FARM SURFACE BOREHOLE

SK 46 NW / 21

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	DESCRIPTION	Delete as appropriate		DEPTH m or ft* cm or in*
			THICKNESS m or ft*	cm or in*	
Seat Earth	Siltstone fine, grey, immature; few roots; abundant ironstone nodules from 51/4; rare thin sandstone lenses from 51/6; local coalified Calamites sharp		1	10	850 6
Siltstone,	with abundant sandstone lenses and laminae; diastems; rare roots;		0	7	852 4
Sandstone,	with many small micaceous planty planes and discontinuous siltstone layers and laminae; abundant prominent diastems; low-hade unmineralised breaks (mining induced ?) throughout		2	1	855 0
Sandstone	with rare truncated siltstone lenses; possible dune sets; micaceous planty planes;		0	9	855 9
Sandstone	with frequent discontinuous siltstone laminae and layers; abundant small micaceous planty planes; many prominent diastems; rare horizons of contorted bedding:		2	9	858 6
Siltstone	fine, with abundant disconnected sandstone lenses;		0	2	858 8
Siltstone	fine with large sandstone load-and-pouch structures		1	4	860 0
Siltstone	fine with thin sandstone lenses and laminae, rare to approximately 61/0; more common below, with local load-and-pouch structures; less sand from 61/9 to 61/11 passage		1	11	861 11
Siltstone	fine, laminated; a few thin sandstone laminae in the top 0/3" ironstone lens 0/2" thick at 65/8, passage		4	1	866 0
Mudstone,	silty near the top, poorly laminated; ironstone band 0/1" thick at the base		2	5	868 5
Mudstone,	poorly laminated; common thin ironstone bands; wormy; guilielmites from 69/4, poorly preserved non-marine lamellibranchs from 70/5		2	5	870 10



Section of		37 OCT 1973	COMMERCIAL IN CONFIDENCE		SK 66 NW/21	
		PARK FARM SURFACE BOREHOLE	RECORDED		Delete as appropriate	
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA			THICKNESS	DEPTH	
				m or ft* cm or in*	m or ft* cm or in*	
Mudstone,	shaly highly carbonaceous, sub-canneloid; iron-rich; rare fish-debris; attached	0	5	870	10	
Coal,	mostly bright, with a few thin dull bands; core broken 71/7, attached	0	5	871	3	
Mudstone,	highly carbonaceous, with many bright coal streaks; attached	0	1½	871	9½	
Coal,	bright attached	0	0½	871	9½	
Seat Earth	Mudstone, dark brownish-grey; very listric; abundant roots; passage	1	2½	873	0	
Seat Earth	Mudstone, grey, common listric surfaces, common ironstone nodules; abundant roots; becoming carbonaceous in basal 0/1" attached	3	4½	876	4½	
COAL,	mostly bright, locally canneloid; core largely fragmented; unattached	0	4½	876	9	
Seat Earth	Mudstone, brown, very listric; abundant roots; sphaerosiderite patches from 80/10, ironstone nodules common from 81/8,	5	6	882	3	
Seat Earth	Mudstone, grey, abundant sphaerosiderite; abundant roots	0	9	883	0	
Seat Earth	Mudstone, dark brownish-grey; locally listric; common coalified "strap" plants and stigmarian roots; Neuropteris fronds at 84/10; local ironstone nodules; becoming silty below 85/0; to approximately 86/0; muddy, grey, and with large listric surfaces below 86/0;	4	5	887	5	
Mudstone,	silty, dark brownish-grey; unlaminated; abundant coalified "strap" plants, common "fern" fronds and leaves; Pinnularia at 90/11; obscure bedding at 91/5 with abundant tiny ironstone pellets; local faultlets at 92/4; grey below approximately 94/0; passage	7	7	895	0	



Section of		COMMERCIAL IN CONFIDENCE		B-1 INCH MAP	
		LUDLOWIAN		B-H	
		13 OCT 1973		SULF NY/21	
GEOLOGICAL CLASSIFICATION		NATURE OF STRATA		Delete as appropriate	
				THICKNESS	DEPTH
				m or ft* cm or in*	m or ft* cm or in*
Siltstone		coarse, poorly laminated; abundant comminuted plant remains.		0 6	895 0
Mudstone,		silty, brownish grey, unlaminated; abundant poorly preserved "fern" fronds and leaves, common "strap" plants, Calamites, and Lepidodendron; abundant faultlets from 899/10 to 900/0, and locally below;	7 10	895 6	
Siltstone		fine, poorly laminated; abundant poorly preserved plant remains;	0 10	903 4	
Mudstone,		silty unlaminated, usually brownish-grey; common small ironstone nodules; small ironstone-filled ?sedimentary dykes at 06/5, and locally below; abundant plant remains throughout, including coalified "strap" plants, Calamites, Lepidodendron, and poorly-preserved "fern" fronds and leaves; Pinnularia at 08/4; passage	4 4	904 2	
Siltstone		fine, brownish-grey at the top, grey below; massive; locally common faultlets; abundant plant remains including "strap" plants and "fern" fronds and leaves; abundant tiny ironstone specks from 11/2 to 11/6; Alethopteris at 11/4;	4 6	913 0	
Siltstone		fine, locally silty mudstone, dark grey, locally poorly laminated, abundant faultlets; local large inclined listric surfaces; local small ironstone nodules; abundant large coalified "strap" plants and Calamites, common "fern" remains, including Alethopteris large inclined listric surface at the base; sharp	7 10	920 10	
Siltstone,		dark grey, with abundant sandstone laminae, bedding disturbed by numerous parallel faultlets throwing up to 1 1/2"; diastems; rapid passage	0 8	921 6	
Siltstone		fine, massive; dark grey; irregular light greenish-grey patches from 29/5 to 29/7; abundant subparallel faultlets, common large inclined listric surfaces, common small ironstone nodules; irregular thin and very disturbed sandstone laminae from 30/7 to the base; abundant plant remains throughout including Sigillaria; rare Pinnularia;	9 7	931 1	



Section of

COMMERCIAL IN CONFIDENCE

6-INCH MAP B.H.
SK46 NV/21

GEOLOGICAL CLASSIFICATION	PROFILERS	NATURE OF STRATA	*Delete as appropriate	
			THICKNESS m or ft* cm or in*	DEPTH m or ft* cm or in*
Sandstone,		poorly-defined subhorizontal bedding; small ironstone and siltstone clasts to 3 1/5; abundant twin siltstone inclusions below, with 0 1/1" thick microbreccia at the base	0	9 931 1
		erosional base		931 10
Siltstone		fine with thin disconnected sandstone lenses; local horizons of contorted bedding, rare iron-rich layers; becoming muddy towards the base (core condition deteriorates abruptly at 35/2);	3	4 935 2
Mudstone,		laminated, common ironstone bands up to 0 1/1" thick; vague wormy traces to approximately 38/0 and very worm below, "kaolin" oolith ironstone band 0 1/1" thick at 38/10	3	8 938 10
Seat Earth		Mudstone, brown, very listric unattached	0	2 939 0
COAL and dirt		bat 0/1 coal, bright 0/1 } partly fragmented bat 0/1 } unattached	0	5 939 3
Seat Earth		Mudstone, grey, very listric	0	9 940 0
Bat;		solid core unattached	0	8 940 8
Seat Earth		Mudstone, dark grey; very listric unattached	0	11 941 7
COAL,		bright unattached	0	1 941 8
Seat Earth		Mudstone, dark brownish-grey; very listric; sharp	0	2 941 10
Seat Earth		Siltstone fine, light grey; unlaminated, abundant <u>Stigmaria</u> ; passage	2	6 944 4
Seat Earth		Siltstone, with local disturbed sandstone laminæ; bedding disturbed by roots; very iron-rich throughout; passage	0	9 945 1
Siltstone		fine, with rare sandstone laminæ; common thin ironstone bands; abundant plant debris on many bedding planes	2	10 947 11



		13 JULY 1974	1014	15 JULY 1974	1014
		COMMERCIAL IN CONFIDENCE		G-INCH MAP	
		21 JUL 1974		B/H	
Section of		PARK FARM SURFACE BOREHOLE		SK46 NW/21	
				Delete as appropriate	
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				968	8
Siltstone	fine with common sandstone laminae at several horizons; many minor diastems; bedding commonly contorted;	2	4	971	0
Siltstone	fine with common sandstone laminae and thin discontinuous sandstone lenses passage	1	0	972	0
Siltstone	fine with thin sandstone lenses; bedding commonly contorted;	2	0	974	0
Sandstone,	small scale cross-bedding with many discontinuous siltstone laminae; diastems;	0	5	974	5
Siltstone	fine with many prominent sandstone load structures;	1	10	976	3
Siltstone	fine with rare thin sandstone lenses and laminae; ironstone band 0/3" thick at 77/4	1	1	977	4
Siltstone	fine, laminated passage	1	8	979	0
Mudstone	silty, laminated; ironstone bands 0/2" thick at 79/11 and 83/6	7	0	986	0
Mudstone,	laminated; common thin ironstone bands and lenses up to 0/1½" thick; very wormy; rare poorly preserved non-marine lamellibranchs to 98/3, and abundant thick-shelled non-marine lamellibranchs at 98/3	3	4	989	4
Mudstone,	shaly, highly carbonaceous; silty to 92/5; common non-marine lamellibranchs to 89/8, wormy throughout;	3	6	992	10
CORE BOXED 992/10 - 998/8½					
* Mudstone,	dark grey, shaly, with non-marine lamellibranchs and ironstone bands in the basal 5 inches	0	11½	993	9½
core unattached					
* FIRST ELL	Coal, mostly bright	0 - 9			
	Scat earth, mudstone, grey	0 - 4½			
	Coal, bright	0 - 3			
	Mudstone, canneloid	0 - 1			
	Scat earth mudstone, grey	2 - 2			
	Coal, bright	0 - 6			
	Cannel, dirty	0 - 2			
	Coal, bright	0 - 3			
	Coal, dirty, bright	0 - 1			
		4 - 7½			
	Recovery 100%				
	Thickness corrected for 15° dip = 4 - 5½	4	7½	998	5
* Gault Earth	siltstone, medium grain, with sandstone streaks; roots	0	11½	1000	10½

COMMERCIAL IN CONFIDENCE			
PARK FARM SURFACE BOREHOLE		S-1 OCT 1973	
		SK46 NW/21	
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m or ft*	DEPTH cm or in*
Seat Earth	Siltstone, coarse, with irregular sandstone laminae; Stigmaria; sharp	0 2	998 8½
Seat Earth	Sandstone, with discontinuous siltstone laminae; bedding disturbed by Stigmaria;	0 11½	998 10½
Sandstone,	with abundant discontinuous siltstone laminae; diastems; roots throughout; sub-vertical unmineralised fractures (mining breaks ?)	3 8	999 10
Siltstone	coarse, with thin sandstone lenses; bedding very irregular and disturbed from 03/9; roots;	0 11	1003 6
Siltstone	coarse, laminated: several sandstone layers with erosional bases;	1 1	1004 5
Sandstone,	small-scale cross-bedding with discontinuous siltstone laminae and layers: abundant prominent diastems; local siltstone-clast breccia; bedding convoluted from 06/8 to 06/11; rare sand-filled burrows;	4 1	1005 6
Siltstone,	often coarse grain, with thin disconnected sandstone laminae and lenses; slurry with "sheen" surfaces from 09/7 to 10/0	1 11	1009 7
Sandstone	connected sandstone lenses with inter-layered siltstone	0 3	1011 6
Sandstone,	ripple sets	0 6	1012 3
Siltstone	with abundant sandstone lenses and abundant minor diastems	0 8	1012 11
Sandstone	ripple sets	1 4	1014 3
Siltstone	with sandstone lenses; local minor diastems;	0 8	1014 11
Siltstone	fine with thin sandstone lenses; passage	1 1	1016 0
Sandstone	with discontinuous siltstone laminae; abundant prominent diastems;	1 2	1017 2



Section of

PARK FARM SURFACE BOREHOLE

6-INCH MAP B-1
SK46 N 1/2

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		IN FT*	CM OR IN*	IN FT*	CM OR IN*
Siltstone	with sandstone; convoluted bedding; sharp	2	5	1017	2
Siltstone	fine with rare thin disconnected sandstone lenses; Calamites common on some bedding planes; wormy; core condition deteriorates sharply at base	3	10	1019	7
Mudstone,	poorly laminated, shaly; rare thin iron-stone bands in wormy; rare poorly-preserved non-marine lamellibranchs from 24/10 to approximately 26/0; frequent small Naiadites from 26/0; common small thick-shelled non-marine lamellibranchs from 30/5, becoming larger below 31/9; shell-guilielmites frequent throughout; ironstone band 0/2" thick at 32/1	8	8	1023	5
Mudstone,	shaly, slightly carbonaceous;	0	2	1032	1
Siltstone	fine, carbonaceous,	0	6	1032	3
Seat Earth	Siltstone fine, grey; poorly bedded in parts; Stigmaria	1	1	1033	9
Seat Earth	Siltstone with sandstone; poorly bedded, vague diastems; roots; passage	0	6	1034	4
Siltstone,	dark grey, with thin regularly-bedded sandstone laminae; rare roots; common small sand-filled burrows from 34/9	0	10	1035	2
Sandstone,	small-scale cross bedding, rare discontinuous siltstone laminae and layers; abundant prominent diastems; sandstone-filled burrows common at some levels; sub-vertical, carbonate-mineralised joints throughout	1	9	1036	11
Siltstone	fine with abundant thin disconnected sandstone lenses	1	0	1037	11
Sandstone,	with discontinuous siltstone laminae; diastems; erosional base	0	4~	1038	3
Siltstone	fine, with abundant disconnected sandstone lenses and laminae; sandstone content decreases downwards; local small sandstone filled burrows	1	9	1040	0

Section of		COMMERCIAL IN CONFIDENCE		6-INCH MAP	
		21 OCT 1973		SK46NW/21	
PARK FARM SURFACE BOREHOLE		RECEIVED		Delete as appropriate	
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				1040	0
Sandstone	with fine grain siltstone; abundant diastems;	0	8	1040	8
Siltstone	fine with thin sandstone laminae; abundant diastems	0	4	1041	0
Mudstone	silty, poorly laminated; ironstone band 0/2" at 41/7; locally common poorly preserved thick-shelled non-marine lamellibranchs, and Naiadites, and vague wormy traces to 42/5; more definitely wormy below with larger Naiadites, Anthracosia and possible Anthraconia; passage	1	9	1042	9
Mudstone,	unlaminated, not shaly; local ironstone bands and lenses up to 0/12" thick; abundant Naiadites and Anthraconia; abundant Spirorbis associated with Naiadites; passage	2	4	1045	1
Mudstone,	dark grey, poorly laminated, slightly silty; abundant large non-marine lamellibranchs, including Naiadites, Anthracosphaerium and Anthraconia	0	8	1045	9
Mudstone,	shaly, carbonaceous; pyritic ironstone-filled ?sedimentary dyke with flanking listric surfaces from 45/9 to 46/1; abundant large thick-shelled non-marine lamellibranchs including Anthracosia to 46/3, common Naiadites from 46/3 to 46/6, becoming fewer below; thin ironstone bands common below 46/4;	1	1	1046	10
Mudstone,	light grey, not shaly, not carbonaceous; laminated; rare small ironstone lenses; abundant small inclined listric surfaces, and local faultlets to approximately 47/4; vague wormy traces throughout, and very wormy at 47/3, possible non-marine lamellibranchs debris at 47/9; rare coalified plant debris throughout; listric from 47/11 to 48/3; whole-core gently inclined listric surface at the base:	1	5	1048	3
<u>CORE BOXED 1048/3 - 1052/9</u>					
* Mudstone,	grey, highly listric core not attached	0	5	1048	8
* <u>SECOND ELL</u>	Coal, bright 1 - 4 Coal, dirty, bright fragmented 0 - 3½ Coal, mostly bright 0 - 5 Coal, banded 0 - 5 Coal, bright 0 - 7½ Searleath mudstone 0 - 1½ Coal, dirty bright 0 - 0½				

Section of		COMMERCIAL IN CONFIDENCE		6-INCH MAP	
		15 OCT 1973		B/H	
		PARK FARM SURFACE BOREHOLE		SK46 NW/21	
RECORDED					
*Delete as appropriate					
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
	.../cont.				
	Recovery 95% Thickness corrected for 15° dip = 3' 1½"	3	3	1051	11
	core attached				
* Seat Earth	Siltstone, medium grained, light grey; darker in the top 2½" with occasional bright coal streaks, roots	0	10½	1052	9½
Seat Earth	Siltstone with many sandstone laminae, local sandstone lenses; diastems; bedding disturbed by Stigmaria;	1	7½	1054	5
Sandstone	with siltstone; large sandstone ?load structures; roots;	0	7	1055	0
Sandstone	with a little interlaminated siltstone; many small scale scour-and-fill structures; "train" drift and ripple drift in a siltier horizon at 55/7; rare roots;	0	9	1055	9
Siltstone	fine with many thin, often connected, sandstone lenses and laminae; minor diastems; rare roots: passage	1	7	1057	4
Siltstone	fine with many connected sandstone lenses with erosional bases; sharp	2	1	1059	5
Siltstone	coarse, locally very poorly laminated; fracture surfaces often show a "sheen"; ? partly slurry; local Calamites; rapid passage	2	4	1061	9
Sandstone,	with a little interlaminated siltstone; diastems; erosional base	0	2	1061	11
Siltstone,	poorly laminated; several thin unconnected sandstone lenses from approximately 64/0 passage	2	4	1064	3

COMMERCIAL IN CONFIDENCE
37 OCT 1973 1000
PARK FARM SURFACE BOREHOLE
RECEIVED

6-INCH MAP B/W
SK46 NW/21

*Delete as appropriate

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS		DEPTH	
		m or ft*	cm or in*	m or ft*	cm or in*
				1064	3
Siltstone	with many connected sandstone lenses; passage	0	5	1064	8
Siltstone	fine, with common thin sandstone lenses and laminae to approximately 67/0, fewer below; rare thin ironstone lenses;	5	2	1069	10
Mudstone,	poorly laminated;	0	11	1070	9
Ironstone		0	3 $\frac{1}{2}$	1071	0 $\frac{1}{2}$
Siltstone,	medium to coarse grain, very dark grey; poorly laminated; abundant thick-shelled non-marine lamellibranchs, mostly poorly preserved; sharp	1	1 $\frac{1}{2}$	1072	2
Mudstone,	silty, poorly laminated; locally fine grain siltstone with rare thin sandstone laminae; abundant wormy traces; occasional poorly preserved non-marine lamellibranchs	2	2	1074	4
Siltstone	fine with connected sandstone lenses and laminae; sand content increases downwards; minor diastems to approximate 76/0 more prominent diastems below; rare roots, micaceous planty planes; passage	4	6	1078	10
Siltstone	fine with thin disconnected sandstone fine lenses and laminae; crumpled bedding with pouches; iron-rich patches; rare roots and "strap" plants	2	10	1081	8
Sandstone	fine massive; vague ripple sets from 88/2 to base; calcite-mineralised vertical break through most of core sharp	7	4	1089	0
Siltstone	fine and sandstone fine; variously inclined layers; diastems, ripple drift 91/0 - 92/2 with poorly-defined "train" drift; micaceous planty planes sharp	4	4	1093	4
Siltstone	fine, laminated, muddy; barren passage	3	0	1096	4
Mudstone,	laminated;	0	10	1097	2
Ironstone		0	6	1097	8
Mudstone,	dark, laminated; abundantly wormy with tracks; ironstone bands up to 0/2" thick; passage	5	10	1103	6

Section of		COMMERCIAL/CONFIDENTIAL		6-INCH MAP	
		21 OCT 1973		SK46NW21	
		RECEIVED		Delete as appropriate	
GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS	DEPTH		
		m or ft*	cm or in*	m or ft*	cm or in*
Mudstone,	laminated, dark, locally fissile; ironstone bands up to 0/2" thick; rare non-marine lamellibranchs including Naiadites;	3	4	1106	10
Ironstone,	shelly	0	2	1107	0
Mudstone,	fissile; wormy; large carbonated non-marine lamellibranchs, dying out below 20/2 passage	14	0	1121	0
	CLAY CROSS MARINE BAND				
Mudstone,	dark fissile; Lingula, Curvirimula, wormy; fish-spines and rare scales, ostracods at 25/6, Dunbarella 27/2 - 29/0 with attached Spirorbis.	8	6	1129	6
Mudstone,	dark fissile; fish-debris, ostracods, Spirorbis attached	2	0	1131	6
COAL		0	1	1131	7
Seat Earth	Mudstone, brown; highly listric; roots	1	0	1132	7
Siltstone	fine with thin connected sandstone fine lenses, crumpled bedding, pouches; abundant small plants along bedding planes	6	11	1139	6
Siltstone	fine, laminated; thin papery sandstone fine laminae; sand-filled worm tubes; rare plant remains	1	1	1140	7
Mudstone	laminated, dark; large non-marine lamellibranchs mainly sporadic, but crowded at 46/2; vaguely wormy	6	1	1146	8
Siltstone	fine, laminated; small "strap" plants and plant debris, mainly along bedding; megaspores; oblique semi-listric breaks throughout	4	8	1151	4
Ironstone;	plant debris	0	4	1151	8

COMMERCIAL IN CONFIDENCE

DRAILED
31 OCT 1973
21 NOV 1973

6-INCH MAP
SK46NW/21
B/H

PARK FARM SURFACE BOREHOLE

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	RECEIVED		Delete as appropriate	
		THICKNESS	DEPTH	m or ft*	cm or in*
Mudstone,	locally silty, dark; abundantly wormy; plants; rare <i>Guilielmites</i> sharp	4	5	1151	8
Siltstone	fine with connected sandstone fine lenses; load casts sharp	1	2	1156	1
Mudstone	fissile, dark; numerous ironstone bands and nodules; wormy, ostracods, <i>Spirorbis</i> , large non-marine lamellibranchs including <i>Anthracosia</i> below 60/0; fish debris sharp	5	5	1157	3
Seat Earth	Siltstone fine, immature; <i>Stigmaria</i> , ironstone nodules	1	0	1162	8
Siltstone	fine with connected sandstone fine lenses; load and pouch structures; plants along bedding planes, micaceous planity planes sharp	2	4	1163	8
Sandstone	fine to medium, truncated linguoid ripple sets; micaceous planity planes; vertical breaks sharp	5	6	1166	0
Siltstone	fine with disconnected sandstone fine lenses; plants along bedding planes; sandstone dying out downwards, becoming rhythmic below 75/4 passage	4	2	1171	6
Mudstone	dark, slightly silty, laminated, ironstone bands; wormy; non-marine lamellibranchs including <i>Anthracosia</i> sporadic to 82/0, large crowded, and carbonated 82/0 - 84/2 with <i>Spirorbis</i> ; abundant ostracods in basal 0/; vertical crinkled breaks throughout	8	2	1175	8
COAL		0	2	1183	10
Seat Earth	Siltstone fine, muddy; ironstone nodules; <i>Stigmaria</i> and plant debris passage	6	2	1184	0
Mudstone	laminated, dark, locally silty; ironstone bands, and nodules; wormy; small thin- shelled non-marine lamellibranchs, becoming larger downwards, crowded at some horizons below 96/0, with <i>Anthracosia</i> passage	7	4	1190	2
Mudstone	dark fissile; abundant carbonated thick shelled non-marine lamellibranchs, locally crowded;	0	7	1197	6
				1198	1



LOG		SEAM SECTIONS & DEPTHS				GEOPHYSICAL RECORDING		GROUTING LEFT IN HOLE	
DEPTHS ABOVING	LOG	OIL	DEV	GAS	WATER	ELECTRIC LOG	DRILLING	GRouting	GRouting
1.27									2.7
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