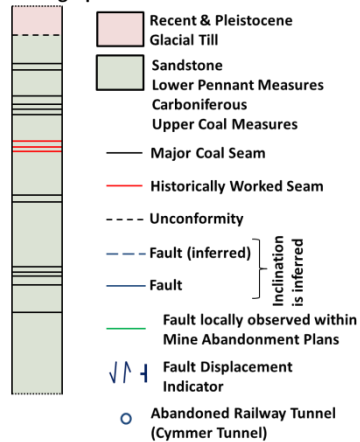
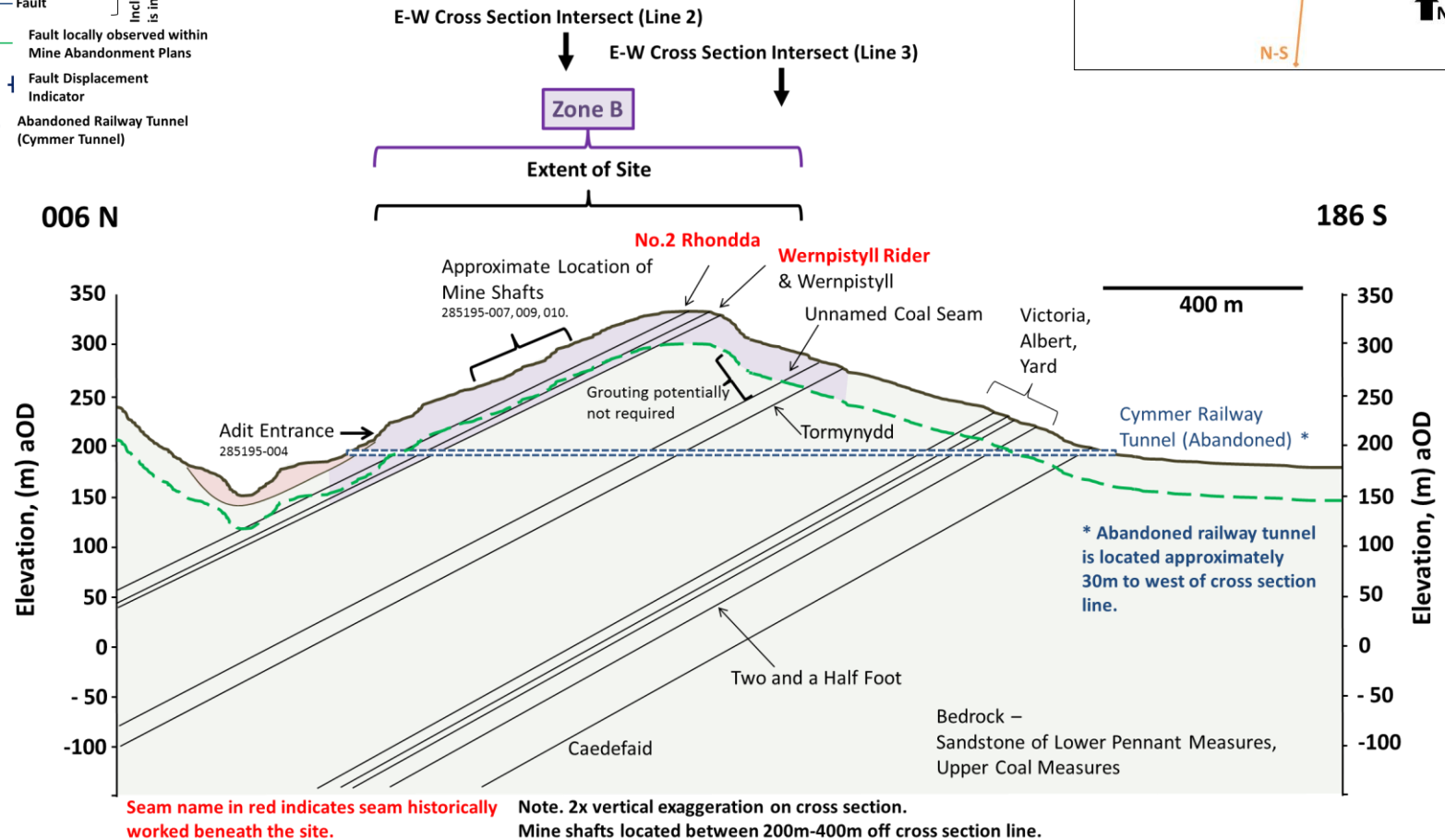
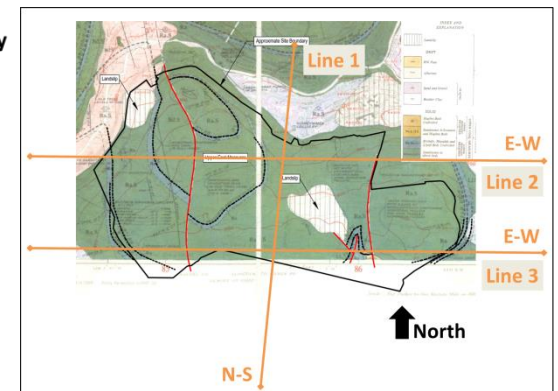


Stratigraphic Column



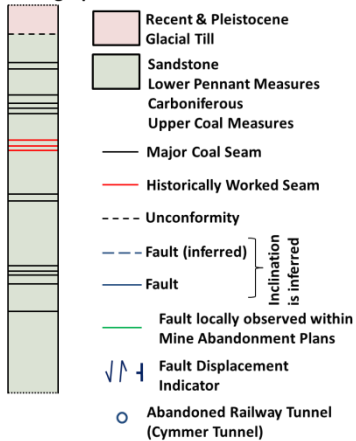
Coal Mining Remediation Strategy

Extent of grouting required
Grouting of coal seams required to 30m depth BGL.
15m exclusion zone placed around known mine entries

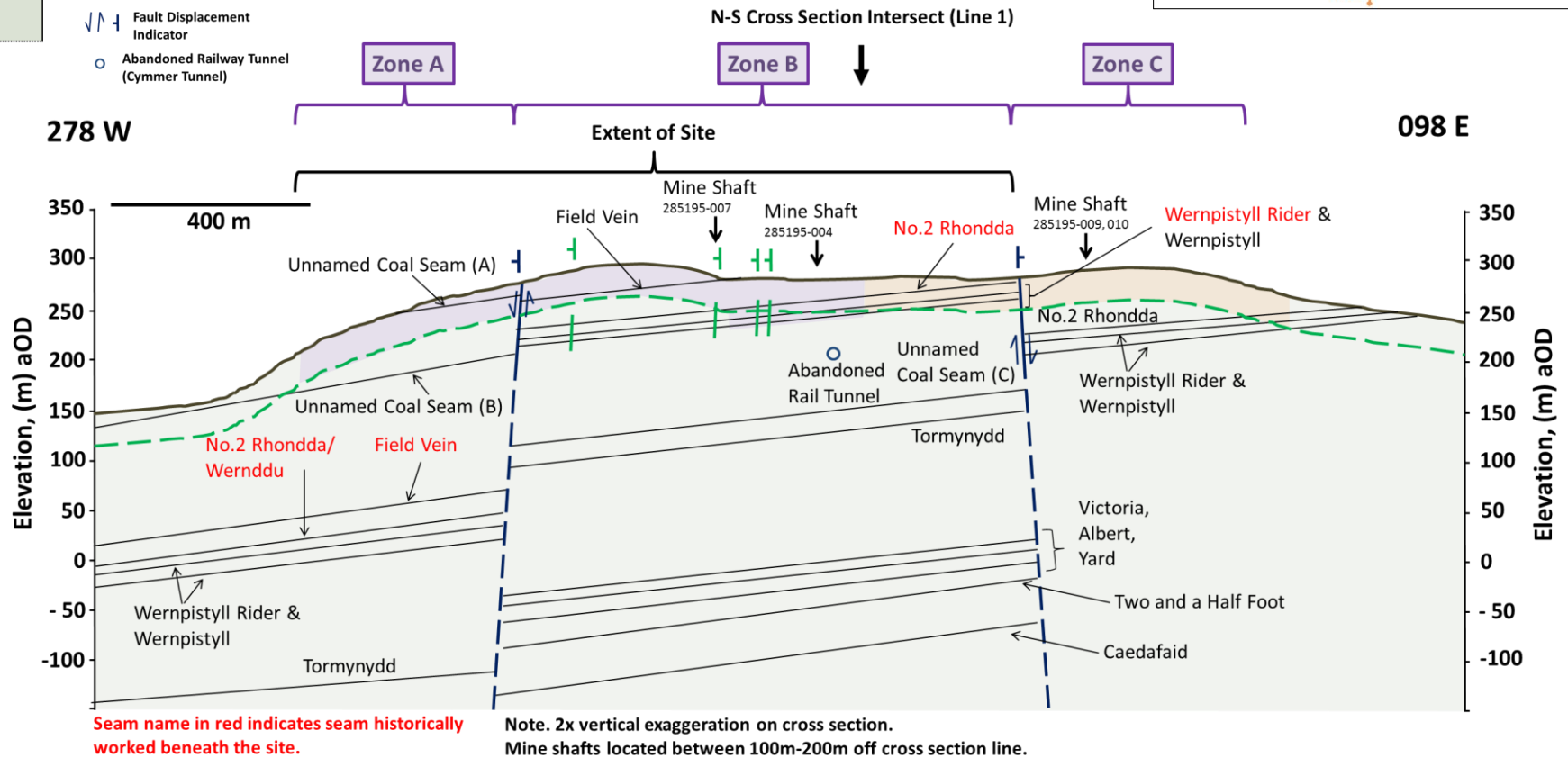
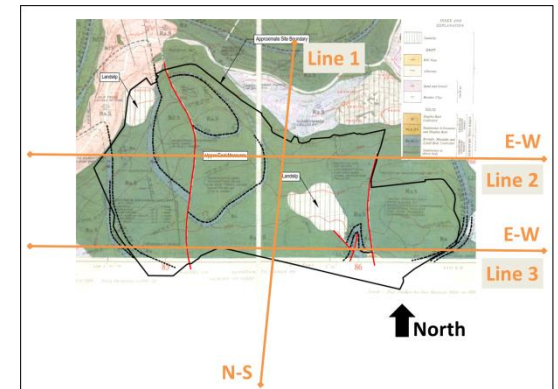
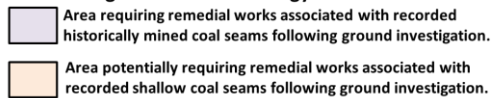


Purpose For Information	Project Title Afan Valley Adventure Resort, Caerau Parc, Afan Valley, Wales	Figure Title Geological Cross Section Orientation: N-S Line 1	Drawn	Checked	Approved	
			AM	CM	DL	
Client AFAN VALLEY LTD			Project No. 60552818	Date Sept 2017		Figure 4

Stratigraphic Column

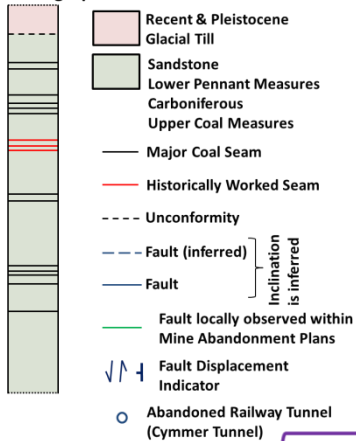


Coal Mining Remediation Strategy

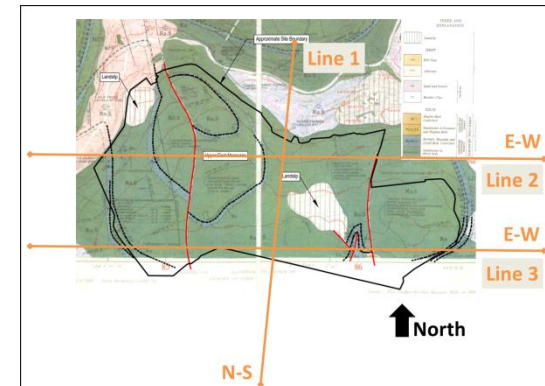
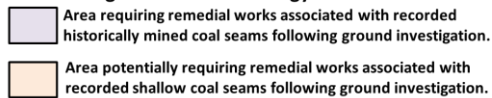


Purpose For Information	Project Title Afan Valley Adventure Resort, Caerau Parc, Afan Valley, Wales	Figure Title Geological Cross Section Orientation: E-W Line 2	Drawn AM	Checked CM	Approved DL	AECOM Figure 5
Client AFAN VALLEY LTD			Project No. 60552818	Date Sept 2017		

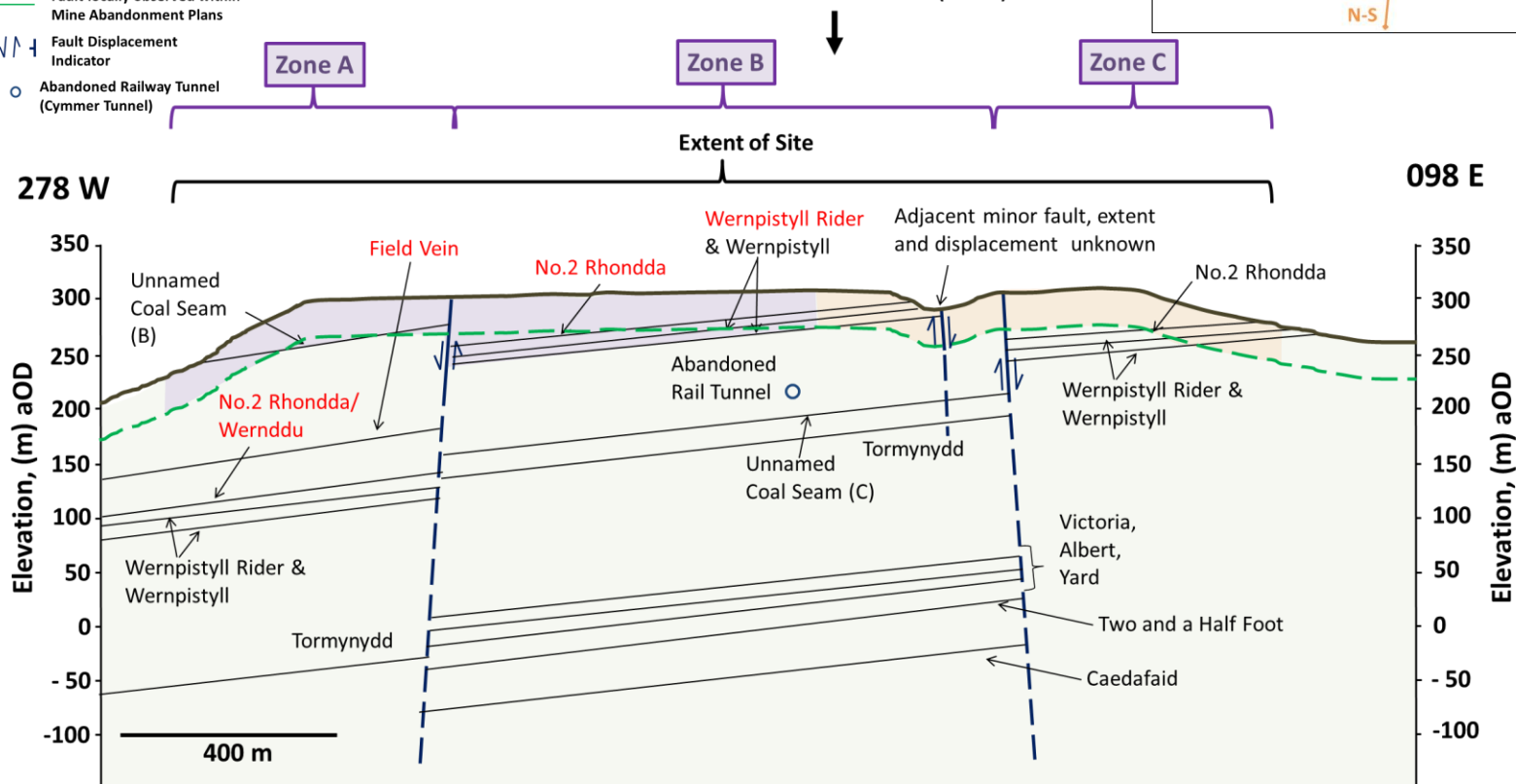
Stratigraphic Column



Coal Mining Remediation Strategy



N-S Cross Section Intersect (Line 1)



Seam name in red indicates seam historically worked beneath the site.

Note. 2x vertical exaggeration on cross section.
Mine shafts located between 100m-200m off cross section line.

Purpose For Information	Project Title Afan Valley Adventure Resort, Caerau Parc, Afan Valley, Wales	Figure Title Geological Cross Section Orientation: E-W Line 3	Drawn AM	Checked CM	Approved DL	 Figure 6
Client AFAN VALLEY LTD			Project No. 60552818	Date Sept 2017		

Appendix A BGS Exploratory Hole Records

RECORD OF SHAFT OR BORE FOR MINERALS

1-inch Map Registered No.

British Geological Survey

British Geological Survey

British Geological Survey

Name and Number of Shaft or Bore

Nantenlaeth C&N
Nº 2 Pit.

1" 248

For Messrs.

Town or Village

County

British Geological Survey

Six-inch quarter sheet

British Geological Survey

Exact site

2634 9776

6-inch Map
Registered
No.

SS 89 NE 4

(Attach a tracing from
a map, or a sketch-
map, if possible.)

Purpose for which made

Level at which shaft commenced relative to O.D. 679.99

State if shaft is up, down, horizontal or

inclined; in latter cases give angle of inclination and direction

Made by

British Geological Survey

British Geological Survey

British Geological Survey

Information from

Date of Sinking

Specimens

Additional Notes in Space Overleaf

For Survey use only)

GEOLOGICAL
CLASSIFICATION

NATURE OF STRATA

THICKNESS

DEPTH

NATURE OF STRATA	THICKNESS		DEPTH	
			NOTES	
Walling	9	"	(3.02)	9 "
Beds of clay + pebbles	36		(4.00)	45 "
Beds of clay and big boulders	24		(21.32)	69 "
Clift	7	6	(28.60)	77 5
Clift + fine grained rock	4	6	(25.0)	82 4
Broken rock with clay chips	126		(63.44)	208
Broken rock	43	6	(76.70)	251 6
Conglomerate	1		(77.0)	252 6
Rock	3		(77.92)	255 6
COAL	1	2	(78.28)	256 8
Fireclay	3		(79.19)	259 8
Clift	7	4	(81.43)	267 .
COAL		5	(81.55)	267 5
Fireclay + clift mixture	15	7	(86.31)	283
Rock	19	6	(92.26)	302 6
Black rock	1	9	(92.49)	303 3
Rock	8	9	(95.16)	312 .
Black rock	4		(96.07)	316
COAL	1	9	(96.91)	317 9
Fireclay	4		(99.13)	321 9
Clift & shavings	43	3	(113.2)	365
COAL } No. 1 RHONDDA	1		(111.63)	366
Fireclay	3	9	(112.79)	369 9
Rocking	8	3	(115.29)	378
COAL		10	(115.53)	378 10
Mixture rocking + clift	8		(118.00)	386 10
Clift	17	2	(123.22)	404 .
COAL } NORTH RHONDDA SEAM	1	4	(123.62)	405 4
Spanner			Continued	Overleaf

GEOLOGICAL SURVEY AND MUSEUM,
SOUTH KENSINGTON,
LONDON, S.W.7.

Date
received

Correspond-
ence File No.

1" N.S. Map
No.

1" O.S. Map
No.

Site marked (use symbol)
on 1" Map on 6" Map

Name and Number of Shaft or Bore given by Geological Survey :

County **SS 89NE/4**
6th Quarter Sheet

Nantkist N22. (2)

GEOLOGICAL CLASSIFICATION	DESCRIPTION	THICKNESS		DEPTH		
				(Feet)		
	Stone } NORTH RHONDDA SEAM		2	123.67	405	4
	COAL }		10	123.93	405	6
	Clift	15		128.50	421	4
	Rock	2		129.11	423	4
	Clift	15		133.69	438	4
	Clift with 2 rock bands	15		138.26	453	4
	White rock	15		142.84	468	4
	Black rock (jointy)	9		145.58	477	4
	White rock	12	8	149.45	490	
	Broken rock	18		154.94	508	
	White rock	18		160.43	526	
	White rock	18		165.92	544	
	Broken rock with clay joints	22		172.65	566	
	White rock	18		178.12	584	
	Rock with conglomerate bands + coal streaks	11		181.47	595	
	Black rock	9		184.22	604	
	White rock	6		186.05	610	
	White rock	9		188.79	619	
	Clift	5		190.32	624	
	Rock	13		194.28	637	
	Rock	11		197.64	648	
	Clift	9		200.38	657	
	COAL	1		200.69	658	
	Sliding } 'NO 2' RHONDDA		11	200.97	658	11
	COAL }		8	201.42	659	7
	Fireclay	2	6	201.91	662	1
	COAL	2		202.53	664	1
	Fireclay	3	6	203.40	667	7
	Barren rock with bands of clift	10	5	204.24	678	
	Corrected to :-			204.24	663	
	Fireclay	18		203.48	667	
	Clift	18		203.92	685	
	Rock	16		210.75	691	
	Clift	16	6	215.78	707	6
	COAL } WERNPISTYLL RIDER		11	216.24	709	
	Fireclay	16		218.07	715	
	Clift	18	7	222.84	729	
	Rock	18	9	228.09	747	9
	Clift	5	9	229.31	753	6
	COAL } WERNPISTYLL		1	230.22	755	
	Fireclay	4	10	231.73	759	10
	Barren rock	6	2	233.69	766	
	Hard rock - no beds	63	9	253.02	829	9
	Rock conglomerate	7		258.20	836	9
	Banded rock	3		256.12	839	9
	Clift	7	10	258.50	847	7
	Clift		10	258.71	848	5
	COAL		6	258.91	848	11
	Clift		5	259.06	849	4
	Clift		1	259.32	850	5
	COAL		63	259.55	858	
	Fireclay	4	7	260.95	855	7

Name and Number of Shaft or Bore given by Geological Survey:

County SS 89 NE/4
6" Quarter Sheet

Nantenbach N2 2. (3)

GEOLOGICAL CLASSIFICATION	DESCRIPTION	THICKNESS		DEPTH	
				metres	
	Hard rock	2	4	241.57	855 7
	Strong chert	5	1	245.21	857 11
	Bastard rock	1	11	265.80	864 11
	Strong chert	7	2	265.96	871 11 1/2
	COAL Bastard rock	12	2	269.64	884 1 1/2
	Chert	12	4	273.48	896 5 1/2
	COAL	1		273.53	897 5 1/2
	Fireclay	3	5	274.74	900 10 1/2
	Soft shale	3	11	275.95	904 9 1/2
	COAL		11	276.22	905 8 1/2
	Fireclay	4	3	277.53	909 11 1/2
	Hard rock	126	8	316.18	1036 7 1/2
	COAL		5	316.29	1037 1 1/2
	Hard rock	23	4	325.40	1060 4 1/2
	Chert	4	5	324.79	1064 9 1/2
	White rock in beds	35	9	325.69	1100 6 1/2
	COAL		8	335.86	1101 2 1/2
	Hard grey rock	6	2	337.93	1107 4 1/2
	COAL		5	337.96	1107 9 1/2
	Hard rock	2		338.47	1109 9 1/2
	COAL	1	6	338.94	1111 3 1/2
	Rashings			339.25	1112 3 1/2
	Fireclay	6	5	341.19	1118 8 1/2
	Bastard rock	3	1	342.13	1121 9 1/2
	Mild chert	20	8	348.46	1142 5 1/2
	Rock	1	6	348.90	1143 1 1/2
	Chert with beds of rock	11	6	352.42	1155 5 1/2
	Bastard rock	6		354.25	1161 5 1/2
	Mild chert	28	3	362.84	1189 8 1/2
	COAL		6	363.01	1190 2 1/2
	Chert	3		363.9	1193 2 1/2
	Fireclay	1		364.22	1194 2 1/2
	COAL		7	364.39	1194 9 1/2
	Fireclay	4	2	365.64	1198 1 1/2
	Chert	15	10	370.49	1214 9 1/2
	Mild rock	3	2	371.49	1217 1 1/2
	Chert	9	4	374.3	1227 3 1/2
	COAL	1		374.6	1228 3 1/2
	Fireclay	5	3	376.21	1233 6 1/2
	Bastard rock	6	5	378.26	1239 1 1/2
	Mild chert	12	1	381.86	1252 1 1/2
	Hard rock	2	4	382.59	1254 4 1/2
	Mild rock	18	2	388.11	1272 6 1/2
	Strong chert	16	6	393.46	1289 1 1/2
	Mild chert	39		405.04	1328 1 1/2
	COAL		10	405.33	1328 10 1/2
	Fireclay	4	3	406.58	1333 1 1/2
	Rashings		5	406.71	1333 6 1/2
	Fireclay	3	8	407.28	1337 2 1/2
	Strong chert	3	8	408.44	1340 10 1/2
	Mild rock	2	4	409.46	1343 2 1/2
	White rock	1		409.48	1344 2 1/2

TORMYNGDON

Name and Number of Shaft or Bore given by Geological Survey:

County

6th Quarter Sheet

Nantwistle No 2 (46)

SS 89 NE 14

GEOLOGICAL CLASSIFICATION	DESCRIPTION	THICKNESS		DEPTH	
				metres	
	Strong cliff	1	3	410.57	1344 2 1/2
	White rock	3		414.27	1348 5 1/2
	Bastard rock	6	9	418.32	1355 2 1/2
	Strong cliff	3	3	424.36	1358 5 1/2
	Black bedded rock	4		425.56	1362 5 1/2
	Strong cliff	3	9	426.69	1366 2 1/2
	Mild cliff	11	5	440.18	1377 7 1/2
	COAL	1	4	440.89	1378 11 1/2
	Fireclay	8	8	442.23	1387 7 1/2
	Cliff	5	7	444.86	1393 2 1/2
	COAL	9	3	445.17	1394 2
	Fireclay	25	5	446.84	1398 7
	White rock	16	6	451.91	1416 1
	Cliff	3	3	452.89	1419 4
	Bastard rock	13	1	456.89	1432 5
	Black bedded rock	4		458.10	1436 5
	Strong Cliff	4	5	459.44	1440 10
	Bedded rock	16	2	464.37	1456 10 1/2
	Strong cliff	10		467.36	1466 10 1/2
	Mild cliff	13	3	451.40	1480 1 1/2
	COAL } VICTORIA	2		452.01	1482 1 1/2
	Fireclay	5	2	455.61	1487 3 1/2
	Strong Cliff with balls of mine	7	7	455.77	1494 10 1/2
	Soft fireclay	2	1	456.53	1496 11 1/2
	COAL and basals		11	456.84	1497 10 1/2
	Hard fireclay	3	6	458.15	1501 4 1/2
	Hard white rock	26	7	465.74	1528 11 1/2
	Mild cliff	4	2	466.98	1531 1 1/2
	Fireclay	12	6	470.24	1543 7 1/2
	COAL }	1	8	471.09	1544 7 1/2
	Shale } YARD	8		474.72	1544 10 1/2
	COAL }	3	36	474.35	1545 4 1/2
	Fireclay	6	2	477.34	1548 7 1/2
	Rock	6	2	474.19	1554 9 1/2
	Strong cliff	7	7	476.51	1562 4 1/2
	Hard white roof	8	4	479.05	1570 8 1/2
	Cliff	5	4	480.39	1575 1 1/2
	COAL	5	2	480.50	1575 6
	Fireclay		11	480.83	1576 5
	Strong cliff	8	5	485.42	1584 10
	COAL } 2 1/2	1		485.68	1585 10
	Strong fireclay	4	2	484.99	1590
	Bastard rock	8	6	487.54	1598 6
	Cliff with beds of rock	13		491.50	1611 6
	Mild cliff	10	9	494.78	1622 3
	COAL } CAE)EFAID		11	495.09	1623 2
	Fireclay	4	2	496.53	1627 4
	Bastard rock	10	6	499.52	1637 10
	Strong cliff	10	4	502.70	1648 2
	COAL (parting in middle)	1	5	503.41	1649 7
	Strong fireclay stone		6	505.22	1650 1
	Rashy		6	503.41	1650 7
					1652 5

corrected to

Name and Number of Shaft or Bore given by Geological Survey :

Nantlennaeht No 2 (5).

County. SS89 NE/4
6th Quarter Sheet

GEOLOGICAL CLASSIFICATION	DESCRIPTION	THICKNESS		DEPTH	
	Fireclay	4	9	1652	5
	Rashes & coal	4	4	1657	2
	Rock	5	5	1662	11
	Bed of rock with white spar	1	1	1664	
	Bastard rock	6	1	1670	1
	Mild chert	4	8	1674	9
	Bed of hard rock	1	5	1676	2
	Chert	5	1	1728	1
	Chert	13	3	1741	4
	Rashes	6	6	1741	10
	White rock	13	1	1754	11
	Mild chert	6	9	1761	8
	Rashes & coal	1	1	1762	8
	Hard rock	6	3	1768	11
	Strong chert	7	3	1775	11
	Hard white rock	2	7	1778	6
	Chert	5	8	1783	16
	Rashes	6	6	1783	16
	COAL	5	5	1784	16
	Fireclay	5	3	1789	16
	Upper Cocksht Rock	47	2	1836	16
	Mild chert	3	1	1837	16
	COAL	1	1	1840	16
	Fireclay	2	1	1842	16
				1843	19
	Bastard fireclay	1	10	1845	7
	Rock	6	3	1851	10
	Chert beds of rock	7	11	1859	9
	Mild chert	18	5	1878	2
	COAL	5	5	1878	7
	Strong fireclay	2	5	1881	
	Lower Cocksht Rock	17	8	1898	8
	Black beddy rock	3	2	1901	10
	COAL	1	3	1903	12
	Rashes	3	3	1903	4
	Sft fireclay & rashes	7	9	1911	12
	COAL	3	3	1911	4
	Strong fireclay	5	2	1916	6
	Bastard rock	5	1	1921	7
	Beddy rock	11	6	1933	12
	Ironstone	1	1	1933	5
	Chert	26	8	1960	12
	Rashes	9	9	1960	10
	Chert	18	6	1979	4
	Mild chert	4	7	1983	11
	Rashes & sft chert	1	1	1984	11
	Chert	2	1	1987	1
	Ironstone	5	5	1987	5
	Bastard rock	8	11	1996	4
	Hard white rock	2	10	1999	2
	Bastard rock	10	3	2009	5
	Strong chert	7	1	2016	5

729 Hm
EX

Name and Number of Shaft or Bore given by Geological Survey:

County SS 89 NE/4
6" Quarter Sheet

Nautein Rath No 2 (6).

GEOLOGICAL CLASSIFICATION	DESCRIPTION	THICKNESS		DEPTH	
				metres	
	<u>COAL</u>			2016	5 1/2
	<u>Stony</u> } 4 FT.		8	2017	12
	<u>goss</u>		3	2017	4 1/2
	<u>Shale</u>	4	8	2022	2
	<u>Fireclay</u>	2	7	2024	7 1/2
	<u>Ironstone</u>	6	7	2031	2 1/2
	<u>Strong clift</u>	6	6	2021	8 1/2
	<u>Beds of rock</u>	10	10	2042	6 1/2
	<u>Strong clift with inst. beds</u>	9	6	2043	3 1/2
	<u>Bed of rock</u>	16	7	2054	10 1/2
	<u>Clift</u>	1	3	2061	1 1/2
	<u>Bed of rock with white spar</u>	2	6	2063	7 1/2
	<u>Strong clift</u>	1		2064	7 1/2
	<u>Hard white rock - small bed</u>	11		2065	6 1/2
	<u>of clift at bottom</u>				
	<u>Strong clift</u>	24	1	2089	7 1/2
	<u>Sft shale + rashes</u>	6	10	2096	5 1/2
	<u>Strong clift</u>	3	2	2099	7 1/2
	<u>Clift</u>	8		2107	7 1/2
	<u>Bed of white rock</u>	2	6	2110	1 1/2
	<u>Strong clift</u>		10	2110	11 1/2
	<u>Bed of white rock</u>	10	10	2121	9 1/2
	<u>Clift</u>	5	5	2122	2 1/2
	<u>COAL</u>	12	1 1/2	2134	4
	<u>Stony</u> } 6 FT..	1	3	2135	7
	<u>COAL</u>	3		2135	10
	<u>Rashy</u>	5	9	2141	7
	<u>Fireclay</u>	9		2142	4
	<u>Hard white fireclay</u>	6	2	2148	6
	<u>Rashy + clift</u>	5	2 1/2	2153	8 1/2
	<u>Basal fireclay with clay joints</u>	9	2	2162	10 1/2
	<u>Strong clift - clay clift</u>	5	4	2168	2 1/2
	<u>Strong clift</u>	3.6	6	2204	8 1/2
	<u>Very mild clift</u>	14	9	2219	5 1/2
	<u>Rock with beds of clift</u>	1		2220	5 1/2
	<u>Clift + rashes</u>	7		2227	5 1/2
	<u>Beds of rock + clift</u>	3	9	2231	2 1/2
	<u>COAL</u>	8		2239	2 1/2
	<u>Sft fireclay</u>	1	1	2240	3 1/2
	<u>rashy + sft clift.</u>	1	5	2241	8 1/2
	<u>Mild clift</u>	1	10	2243	6 1/2
	<u>Clift - beds of mine</u>	9	4	2252	10 1/2
	<u>Sft clift and rashes</u>	9	9	2262	7 1/2
	<u>Basal rock</u>	6		2263	1 1/2
	<u>Strong clift</u>	1	1	2264	2 1/2
	<u>Bed of rock</u>	3	8	2267	10 1/2
	<u>Strong clift</u>	3	1	2270	11 1/2
	<u>Bed of ironstone</u>	1 1/2		2284	11 1/2
	<u>Clift</u>	11		2285	10 1/2
	<u>Clod</u>	4	8	2290	6 1/2
	<u>COAL</u> } 9 FT.	8		2291	2 1/2
		4	8	2295	10 1/2



British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

**NGRC
BOREHOLE RECORDS
ADJUSTMENT FORM**

QUARTER SHEET SS 89 NW

BH REGISTRATION NUMBER BMW84 35-36

British Geological Survey

British Geological Survey

British Geological Survey

RECORDS ENTERED AND HELD BY WALLINGFORD

British Geological Survey

British Geological Survey

British Geological Survey

1

British Geological Survey

British Geological Survey

British Geological Survey

BH REGISTRATION NUMBER(S)

British Geological Survey

British Geological Survey

British Geological Survey

GLAM 25 NE/1

SECTION OF

at

No 1 Pit Duffryn Rhodda

COUNTY

Glam

Communicated by T. Price

Date of sinking

One-inch Map (N.S.) 248

Six-inch Map

Glam 25 NE

HEIGHT ABOVE O.D. 480

DIP OF STRATA

SS 8425 9574.

Depth taken from plotted section. No
written record exists.Abstract in G.S. Memo 1" 248.
(2nd Ed.) p. 140.

Rock and thin layers of cliff

Field Seam	{	Rock - - - - -	4	-----
		Coal - - - - -	1	
		Raslingo - - - - -	0	
		Raslingo - - - - -	0	
		Fireclay - - - - -	0	

Cliff and rock

No 2. Rhodda	{	Rock - - - - -	4 ft. 2 in	-----
		Coal - - - - -	2. 9	
		Fireclay - - - - -	2. 4	
		Bottom Coal - - - - -	1. 0	
		Fireclay - - - - -	---	

Measures

Coal 1 ft 10 in

Measures

Wernpestil Coal	{	Cliff	1 ft. 3 in	-----
		Coal		
		Fireclay		

Rock with two lesser bands of cliff

Tormynydd Coal	{	Rock	1 ft. 3 in	-----
		Coal		
		Raslingo		
		Fireclay		

Measures

Clay Rider Coal - a thin seam

Measures

Clay Seam 1 ft 3 in

Measures

Thickness.

Yards. feet. ins.

Depth from Surface.

Yards. feet. ins.

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150 0 0

486
162 0 6525
175 0 0574
191 1 6939
3131068
3561108
367