VDMR Well No. 348

Operator: Clinchfield Coal Company
Farm: Big Sandy Fuel Corp.
Well No: 214
Location: Dickenson County
9300' S. of 37°15'
4500' W. of 82°15'
Elevation: 1546.0' Ground
Total Depth: 5665' (5713' SLM)
Drilling Commenced: 1/14/59
Well Completed: 7/9/59
Result: Gas Well

Geologic Log
Samples studied and described
by: John M. Wilson
Virginia Division of
Mineral Resources
October, 1962

GEOLOGIC LOG

Depth	Interval	Description
Pennsylvanian System (0-1728)		
Pottsville Group (0-1728)		
Norton formation (0-755)		
10-75	65	Siltstone, light to dark gray, moderately soft, flaky, locally poorly fissile, siliceous; with: common coaly carbonaceous material.
75-100	25	Sandstone, clear to light gray, moderately soft, friable, medium-grained, medium sorted, subangular to subrounded, interstitially silty, slightly calcareous, with: common mica, and abundant coaly carbonaceous partings. Nonporous.
100-114	14	Sandstone, clear, hard, brittle, fine-grained, well sorted, subrounded to well-rounded, interstitially silty, slightly calcareous, with; common mica, and rare coaly carbonaceous partings. Nonporous to slightly porous.
114-144	30	Siltstone, light to dark gray, hard, brittle, locally poorly fissile, argillaceous, with; common mica. Estimated 1 foot coal bed in this interval.
144-159	15	Siltstone, dark gray to black, hard, brittle, locally fissile, locally finely sandy, argillaceous, with; common mica.
159-185	26	Sandstone, clear to white with light orange, moderately hard, fine-to medium-grained with rare coarse-grained, medium sorted, subangular to subrounded, interstitially silty, slightly calcareous, with; common mica. Nonporous.
185-212	27	Siltstone, light to medium gray with common black, moderately hard, brittle, locally very finely sandy, siliceous, with; common mica, and minor stringers of sandstone, as in 159-185.

212-231	19	Siltstone, light to medium gray with brownish-gray, hard, locally sandy, siliceous, with; abundant mica.
231-251	20	Siltstone, medium gray to black with brown, moderately hard, brittle, rare local fissility, argillaceous, with; abundant mica, and common coaly carbonaceous material.
251-254	3	Sandstone, white to light gray and light brownish-gray, moderately soft, friable, fine- to medium-grained, medium sorted, subangular to subrounded, calcareous, with; common mica. Nonporous to slightly porous.
254-264	10	Siltstone, medium gray to black, moderately hard, brittle, locally very finely sandy, siliceous, with; common mica
264-300	36	Siltstone, light to dark gray, hard, siliceous, with; common mica, and common coaly carbonaceous partings and lamanae.
300-315	15	Sandstone, white to light gray, moderately soft, friable, fine-to medium-grained, medium sorted, subangular to rounded, interstitially silty, slightly calcareous, with; abundant mica. Nonporous. Estimated 1-2 feet coal bed in this interval.
315-325	10	Siltstone, brownish-gray, and dark gray to black, moderately hard, brittle, locally fissile, locally calcareous, with; abundant mica, and common coaly lamanae and partings.
325-368	43	Sandstone, micaceous, light to medium gray, moderately hard, friable, very fine-to fine-grained, medium sorted, subangular to subrounded, interstitally silty, siliceous, with; abundant coaly carbonaceous lamanae and partings. Nonporous.
368-387	19	Sandstone, as in 325-368, calcareous.
387-414	27	Shale; dark gray to black, hard, brittle, fair fissility, locally silty, argillaceous, with; common mica.
414-430	16	Sandstone, light to medium gray with brownish-gray, hard, brittle, very fine-to fine-grained, medium sorted, subangular to subrounded, interstitially silty, calcareous, with; abundant coaly lamanae and partings, and abundant mica. Nonporous to slightly porous.

430-447	17	Siltstone, carbonaceous, black, hard, brittle, locally poorly fissile, argillaceous, with; common mica.
447-463	16	Interbedded; Siltstone, light to medium gray, moderately soft, brittle, siliceous, with; abundant mica; and, Shale, carbonaceous, black, moderately hard, good fissility, locally finely sandy, argillaceous, with; common mica.
463-494	31	Interbedded; Shale, silty, coaly carbonaceous, black, moderately hard, brittle, fair fissility, argillaceous, with; common mica; and, Sandstone, light gray to brownish-gray, hard, brittle, very fine-to fine-grained, medium sorted, subrounded, interstitially silty, slightly calcareous, with; abundant mica, and abundant coaly carbonaceous lamanae. Nonporous to slightly porous.
494-516	22	Shale, light to dark gray and black, hard, brittle, fissile, locally finely sandy, argillaceous, with; common mica.
516-539	23	Sandstone, clear to white, moderately hard, friable, medium-to coarse-grained, medium sorted, subangular to subrounded interstitially silty, siliceous, with; common mica, and common coaly carbonaceous partings.
539-490	51	Sandstone, clear, moderately soft, friable, fine-to medium-grained, medium sorted, subangular to subrounded, interstitially silty, slightly calcareous, with; common mica, and common chlorite.
590-625	35	Siltstone, dark grayish-brown to black, moderately hard, brittle. locally fissile, with; common mica. Minor stringers of Sandstone, conglomeratic, white hard, brittle, fine-grained to granule size, subangular, siliceous. Nonporous.
625-643	18	Siltstone, carbonaceous, black, hard, tough, siliceous, with; common mica, and common coaly carbonaceous partings.
643-649	6	Sandstone, light gray to white, hard, friable, very fine-to fine-grained, medium sorted, subrounded, interstitially silty, siliceous, with; common mica, and rare chlorite. Slightly porous.
649-681	32	Siltstone, dark gray, moderately hard, brittle, locally poorly fissile, argillaceous, with; common mica, and common coaly carbonaceous material.

681-697	16	Sandstone, white to light gray, moderately soft, friable, fine-to medium-grained, medium sorted, subangular to subrounded, interstitially silty, slightly calcareous, with; abundant mica, and common coaly carbonaceous lamanae and partings. Slightly porous.
697-703	6	Siltstone, medium gray, hard, tough, siliceous, with; common mica
703-715	12	Sandstone, as in 681-697
715-740	25	Siltstone, light gray to black, hard, tough, locally finely sandy, locally fissile, argillaceous, with; common mica
740-755	15	Siltstone, medium gray, moderately hard, brittle, locally sandy, locally fissile, argillaceous, with; common mica.
Lee formation (755-1728)		
755-787	32	Sandstone, light gray, hard, brittle, very fine-to fine-grained, medium sorted, subrounded to well rounded, interstitially silty, siliceous, with; common mica, and abundant carbonaceous streaks and partings. Slight porosity.
787-793	6	Sandstone, white to light gray, hard, friable, very fine-to medium-grained, poorly sorted, interstititally silty, siliceous, with; common mica and common carbonaceous streaks.
793-805	12	Siltstone, light to dark gray and black, moderately soft, flaky, clayey, with; common mica.
805-806	1	Coal, impure in part. Interpreted depth and thickness.
806-816	10	Sandstone, white to light gray, hard, friable, very fine -to medium-grained, poorly sorted, interstitially silty, siliceous, with; common mica.
816-820	4	Siltstone, light to dark gray and black, moderately soft, flaky, clayey, with; common mica.
820-858	38	Sandstone, white to light gray, moderately hard, friable, medium-to coarse-grained, medium sorted, subangular to subrounded,slightly calcareous, with; rare mica, and rare chlorite. Contains minor stringers of Siltstone, light brownish-gray to black, hard, brittle, locally fissile, argillaceous, with; common mica, abundant carbonaceous lamanae.

858-889	31	CN	Sandstone, light gray, moderately hard, brittle, very fine-to medium grained, poorly sorted, subrounded to well rounded, interstitially silty, siliceous, with; common mica, and common carbonaceous streaks. Nonporous to slightly porous.
889-907	18		Siltstone, medium gray, moderately hard, tough, locally fissile, siliceous, with; common mica.
907-915	8	CN	Sandstone, light gray, moderately hard, tough, fine-to medium-grained, medium sorted, rounded, interstitially silty, slightly calcareous, with; common mica. Nonporous.
915-926	11		Siltstone, medium gray, moderately hard, tough, locally poorly fissile, siliceous, with; common mica.
926-945	19	CN	Sandstone, white to light gray, moderately hard, tough, fine-to medium-grained, medium sorted, rounded, interstitially silty, slightly calcareous, with; common mica. Nonporous. Minor stringers of Siltstone, as in 915-926.
945-976	31		Siltstone, medium to dark gray with dark brown, hard, tough, locally finely sandy, siliceous, with; common mica and common sandy lamanae.
976-984	8	CN	Sandstone, white to light gray, hard, friable, very fine-to fine-grained, medium-sorted, subangular to subrounded, interstitially silty, siliceous, with; rare mica, and common carbonaceous lamanae and partings. Nonporous.
984-990	6	CN	Sandstone, white to light and medium gray, with brownish-gray, moderately hard, brittle, very fine-to fine-grained, medium sorted, subrounded, interstitially silty, siliceous, with; common mica, and common carbonaceous lamanae and partings. Nonporous to slightly porous.
990-994	4		No samples
994-999	5	CN	Sandstone, as in 984-990
999-1052	53		Siltstone, light to medium gray, moderately hard, flaky, locally poorly fissile, locally finely sandy, with; common mica, and common coaly carbonaceous lamanae and partings.
1052-1065	13	CN	Sandstone, conglomeratic, white to light gray, moderately hard, friable, fine-to coarse-grained, with common granules, poorly sorted, subangular to rounded, silty, siliceous, with; common mica and common carbonaceous material. Nonporous.

1065-1083	18	CK	Sandstone, as in 1052-1065, with stringers of Siltstone, dark gray to black, moderately soft, brittle, siliceous, with; common mica.
1083-1108	25		Siltstone, medium gray to black, hard, flaky, poorly fissile, locally finely sandy, with; common mica.
1108-1143	35	CK	Sandstone, white to light gray, hard, friable, fine-to coarse-grained, poorly sorted, subrounded to well rounded, siliceous, with; common mica, and common coaly carbonaceous streaks and partings. Slightly porous
1143-1162	19		Siltstone, light to dark gray and brown, hard, tough, locally poorly fissile, locally finely sandy, siliceous, with; common mica, and common carbonaceous lamanae.
1162-1217	55	CK	Sandstone, white, hard, tough, fine-to medium-grained, medium sorted, subangular to subrounded, interstitially silty, siliceous, with; common mica, and common coaly carbonaceous partings. Nonporous to slightly porous.
1217-1230	13		Siltstone, dark gray, moderately hard, brittle, locally finely sandy, siliceous, with; abundant mica.
1230-1238	8	CK	Sandstone, white to light gray, hard, tough, very fine-to fine-grained, medium sorted, subangular to subrounded, interstitially silty, siliceous, with: abundant mica, and abundant coaly carbonaceous streaks. Nonporous.
1238-1252	14	CK	Sandstone, clear to white and light gray, moderately soft, friable, fine-to medium-grained. with common coarse, medium sorted, subrounded to well rounded, interstitially silty, siliceous, with: abundant mica, common coaly carbonaceous material, and common chlorite. Nonporous to slightly porous.
1252-1327	75	CK	Sandstone, as in 1238-1252, with minor stringers of Siltstone, dark gray to black, carbonaceous, hard, fissile, argillaceous, with: abundant mica.
1327-1335	8	CK	Sandstone, clear to white, hard, tough, fine-to coarse-grained, poorly sorted, subangular to subrounded, interstitially silty, slightly calcareous, with: common mica, common chlorite, and common carbonaceous material. Nonporous to slightly porous.

1335-1402	67	Sandstone, clear to white, moderately hard, friable, medium-grained, well sorted, subangular to rounded, interstitially silty, siliceous, with: common mica, common chlorite, and common coaly carbonaceous material. Slightly porous.
1402-1453	51	Sandstone, clear to dirty white, moderately soft, friable, fine-to medium-grained, medium sorted, subangular to subrounded, interstitially silty, siliceous, locally slightly calcareous, with: common mica, and common chlorite. Nonporous to slightly porous.
1453-1468	15	Sandstone, white to milky white, moderately hard, friable, fine-to coarse-grained, poorly sorted, subangular to rounded, interstitially silty, calcareous, with: common mica, chlorite, and coaly carbonaceous material and lamanae. Nonporous.
1468-1570	102	Shale, carbonaceous, dark gray to black, hard, flaky, fissile, rarely locally silty, argillaceous, with: common mica, common coaly lamanae, and minor stringers of Sandstone, as in 1453-1468, throughout.
1570-1585	15	Sandstone, clear to white and lighy gray, moderately hard, friable, fine-to medium grained with rare coarse-grained, poorly sorted, subrounded to well rounded, interstitially silty, slightly calcareous, with: abundant mica and common coaly carbonaceous material. Nonporous.
1585-1587	2	Coal, soft, impure in part
1587-1621	34	Sandstone, as in 1570-1585, with minor stringers of Siltstone, carbonaceous, black, hard, tough, siliceous.
1621-1642	21	Sandstone, clear to white, moderately soft, friable, medium-grained, well sorted, subangular to rounded, interstitially silty, siliceous, with: common mica, and common carbonaceous material. Nonporous.
1642-1646	4	Siltstone, medium gray to black, hard, tough, locally poorly fissile, siliceous, with: common mica, and common coaly lamanae.
1646-1676	30	Sandstone, white to clear, moderately hard, friable, fine-to medium-grained, medium sorted, subrounded to well rounded, interstitially silty, slightly calcareous, with: common mica, chlorite, and carbonaceous material. Nonporous.
1676-1722	46	Sandstone, conglomeratic, clear to white and milky white, moderately soft, friable fine-to coarse-grained, with abundant granules and pebbles, poorly sorted,

		subangular to subrounded, interstitially silty, siliceous, with: common mica, common coaly carbonaceous material, and minor stringers of Siltstone, medium gray to black, moderately soft, flaky, with: common mica. Slightly porous.
1722-1725	3	Coal, soft, relatively pure.
1725-1728	3	Sandstone, as in 1676-1722.
Mississippian System (1728-3970)		
Pennington Group (1728-2989)		
Bluestone formation		Siltstone, light to dark gray and rare black, hard, tough, locally poorly fissile, with: common mica, and common carbonaceous material, with minor stringers of Shale, medium gray, moderately soft, flaky, fissile, with: common mica.
/1728-(2345-2360)/		
1728 - 1830	102	
1830-1859	29	Sandstone, white to light gray, moderately soft, friable, fine-to medium-grained, medium sorted, subrounded to rounded, interstitially silty, siliceous, with: common mica, and common carbonaceous material. Nonporous to slightly porous.
1859-1865	6	Siltstone, light to dark gray and black, hard, tough, with: common mica and carbonaceous material.
1865-1871	6	Sandstone, as in 1830-1859.
1871-1895	24	Siltstone, light to dark gray, hard, flaky, locally poorly fissile, locally finely sandy, calcareous, with: common mica, and common carbonaceous material.
1895-1945	50	Siltstone, light to dark gray with rare red moderately hard, brittle, locally fissile, locally finely sandy, calcareous, with: common mica, and common carbonaceous lamanae and partings.
1945-1963	18	Siltstone, light gray, moderately soft, flaky, calcareous, with: common mica, common pyrite, and common coaly lamanae and partings.
1963-2010	37	Siltstone, red, with green and light gray, hard, tough, calcareous, with: common mica, rare pyrite, rare carbonaceous material and lamanae, and minor stringers of Limestone, dark gray to black, moderately hard, microcrystalline.
2010-2013	3	Coal, soft, in part impure. Interpreted depth and thickness.
2013-2083	70	Siltstone, with Limestone stringers, as in 1963-2010.

2083-2105	22	Siltstone, light to medium gray, with common red and pale green, moderately soft, crumbly, calcareous, with: common mica, and common carbonaceous streaks.
2105-2168	63	Siltstone, light to dark gray and green, moderately soft, crumbly, locally slightly calcareous, with: common mica and common carbonaceous lamanae.
2168-2188	20	Siltstone, dark gray, with light gray, rare red, and rare pale green, moderately hard, flaky, locally fissile, locally calcareous, with: common mica, and common carbonaceous lamanae and partings.
2188-2345	157	Shale, clayey, dark gray to black, moderately soft, flaky locally fissile, silty, calcareous, with: common carbonaceous, partings and lamanae.
Princeton sandstone / (2345-2360)-2485/		
2345-2360	15	No samples
2360-2450	90	Shale, light to medium gray, moderately hard, tough, locally fissile, locally silty, siliceous, slightly calcareous, with: common mica, and carbonaceous material, and minor stringers of Limestone, dark gray, moderately hard, microcrystalline.
2450-2485	35	Siltstone, variegated, red, green, light to dark gray, hard, tough, calcareous, with: rare mica and common carbonaceous material.
Hinton formation (2485-2989)		
2485-2502	17	Siltstone, as 2450-2485, with: stringers of Limestone, light gray, moderately hard, flaky, microcrystalline, with: common pyrite.
2502-2504	2	Coal (Interpreted depth and thickness)
2504-2510	6	Siltstone, with Limestone stringers, as in 2485-2502.
2510-2530	20	Siltstone, light to dark gray and black, moderately hard, brittle, silty, calcareous, with: common carbonaceous material.
2530-2542	12	Siltstone, as 2510-2530, with: stringers of Limestone, dark gray to black, oolitic, microcrystalline.
2542-2567	25	Siltstone, light gray to black with brown-gray, hard, tough, locally finely sandy, siliceous, slightly calcareous, with: common carbonaceous lamanae.
2567-2575	8	No samples.

2575-2595	20	Interbedded: Shale, medium gray, with brownish-gray, hard, tough, fair fissility, locally silty, slightly calcareous; with Siltstone, light gray, moderately hard, brittle, locally finely sandy, siliceous, with: common mica, and common carbonaceous material.
2595-2600	5	No samples
2600-2640	40	Interbedded: Shale and Siltstone, as in 2575-2595
2640-2660	20	Interbedded, Siltstone as above, with: Sandstone, clear to white, with light brown, moderately soft, friable, very fine-to fine-grained, medium sorted, subangular, interstitially silty, siliceous, slightly calcareous with: abundant carbonaceous streaks and partings. Nonporous
2660-2672	12	No samples
2672-2692	20	Interbedded Siltstone and Sandstone, as in 2640-2660.
2692-2761	69	Sandstone, as in 2640 to 2660.
2761-2850	89	Siltstone, light to medium gray, with rare red, moderately hard, brittle, locally fissile, argillaceous, with: Common carbonaceous lamanae and partings.
Stony Gap sandstone member (2850-2989)		
2850-2870	20	Sandstone, white to pale green and light gray, moderately hard, friable, very fine-to fine-grained, well sorted, subrounded to rounded, interstitially silty, siliceous, with: common mica and common carbonaceous streaks. Nonporous to slightly porous.
2870-2912	42	Interbedded; Sandstone, as above, with: Siltstone, light to dark gray, moderately soft, flaky, siliceous, with: abundant mica, common carbonaceous material, and rare pyrite.
2912-2965	53	Sandstone, clear to white, moderately hard, friable, very fine-to fine-grained, with rare medium-grained, medium sorted, subangular to subrounded, interstitially silty, calcareous, with: abundant mica, and abundant carbonaceous material. Nonporous to slightly porous.
2965-2985	20	Interbedded: Siltstone, light to dark gray, black, and light green, moderately soft, flaky, slightly calcareous, with: abundant mica, and rare pyrite with: Sandstone, moderately soft, friable, very fine-grained with common fine-grained, well sorted, subangular to subrounded, interstitially silty, calcareous, with: abundant mica, and abundant coaly

		carbonaceous lamanae and partings. Nonporous.
2985-2989	4	Siltstone, argillaceous, light to medium gray, very hard, tough, locally fissile, grading to shale, very slightly calcareous, with: abundant carbonaceous lamanae.
Bluefield formation (2989-3154)		
~~2989-3034~~	45	Dolomite, calcareous, silty, dark brownish-gray to black, very hard, tough, locally poorly fissile, microcrystalline, with: rare mica, and rare pyrite. (Lithology varified by X-ray diffraction).
3034-3078	44	Siltstone, light to dark gray, moderately hard, brittle, locally finely sandy, siliceous, very slightly calcareous, with: common mica and common pyrite.
3078-3090	12	Interbedded: Siltstone, as in 3034-3078, with: Sandstone, white to light gray, very fine-to fine-grained, medium sorted, subrounded to rounded, interstitially silty, slightly calcareous, with: abundant mica, abundant carbonaceous streaks.
3090-3113	23	Siltstone, carbonaceous, dark gray to black, with common red, hard, tough, locally fissile, argillaceous, with: rare pyrite, and abundant mica.
3113-3154	41	Shale, carbonaceous, black and dark gray, hard, tough, fair fissility, argillaceous, locally silty, with: rare mica.
Greenbriar limestone (3154-3702)		
3154-3214	60	Limestone, light to dark gray, fossiliferous (crinoids, and others), hard, tough, locally silty, very fine-grained, microcrystalline, with: rare pyrite, and common calcite veinlets.
3214-3283	69	Limestone, light to medium gray, oolitic, fossiliferous, hard, tough, fine-grained, microcrystalline, with: rare pyrite.
3283-3326	43	Limestone, white to light olive-gray with dark gray, locally oolitic, rarely fossiliferous, moderately hard, fine-grained, microcrystalline, with; rare pyrite, and common calcite veinlets.
3326-3377	51	Limestone, medium to dark gray and black, with olive drab, rarely fossiliferous, very hard, tough, very fine-grained, microcrystalline
3377-3476	99	Limestone, olive, buff, with light gray, locally oolitic, common fossils, moderately hard, fine-grained, microcrystalline, with: rare pyrite.

3476-3671	195	Limestone, white to buff, and light olive, fossiliferous, hard, tough, medium-grained, medium-crystalline, with: common pyrite
3671-3702	31	Limestone, light olive to light brown, very hard, tough, fine-grained, fine-crystalline, with; common chert.
Maccrady formation (3702-3755)		
3702-3730	28	Siltstone, red, red-brown, with medium gray, moderately soft, crumbly, locally poorly fissile, slightly calcareous, with; rare carbonaceous material, and common medium-to coarse grained rounded, milky white quartz grains.
3730-3755	25	Siltstone, dark red-brown, medium to dark gray pale green, moderately hard, brittle, locally finely sandy, slightly calcareous, with; common mica.
Price formation (3755-3970)		
3755-3772	17	Interbedded; Siltstone, as in 3730-3755, without red, with; Sandstone, light to medium gray, moderately soft, friable, very fine-to fine-grained medium sorted, subrounded to subangular, interstitially silty, slightly calcareous, with; abundant carbonaceous lamanae, and abundant pyrite. Nonporous.
3772-3782	10	Sandstone, as in 3755-3772.
3782-3853	71	Interbedded; Siltstone and Sandstone as in 3755-3772.
3853-3905	52	Siltstone, light to dark gray, very hard, tough, locally finely sandy, calcareous, with; common carbonaceous lamanae and partings, and common mica.
3905-3970	65	Siltstone, light to dark gray, hard, tough, locally poorly fissile, locally finely sandy, siliceous, with; common carbonaceous lamanae, common mica, and rare fossils.
Mississippian-Devonian Systems (3970-4307)		
Big Stone Gap shale (3970-4307)		
3970-3985	15	Shale, silty, dark gray, hard, tough, fair fissility, locally finely sandy, argillaceous, with; rare mica.
3985-4017	32	Siltstone, medium to dark gray and black, hard, tough, locally finely sandy, siliceous, with; common pyrite, and rare mica.
4017-4277	260	Shale, dark gray to black, moderately hard, tough, fair fissility, locally silty, siliceous, with; common mica, and rare pyrite.

4277-4307	30	Shale, carbonaceous, black, very hard, tough, fissile, locally siliceous, argillaceous, with; rare pyrite, and rare mica.
Devonian System (4307-T. D)		
Devonian shales (4307-T. D)		
4307-4320	13	Interbedded; Shale as in 4277-4307, with; Sandstone, white to light gray, hard, tough, very fine-to fine-grained, well sorted, subangular, interstitially silty, siliceous, with; common carbonaceous streaks, and common mica. Nonporous.
4320-4405	85	Interbedded; Siltstone, white to light gray, moderately hard, tough, locally finely sandy, siliceous, with; rare mica; with; Shale, black, very hard, tough, fissile, locally carbonaceous, argillaceous, with; rare pyrite, and rare mica.
4405-4417	12	Siltstone, carbonaceous, black, very hard, tough, locally finely sandy, siliceous, with; abundant pyrite, and common mica.
4417-4576	161	Interbedded: Shale and Siltstone as in 4320-4405, with; abundant pyrite.
4576-4708	132	Siltstone, light to dark gray, with brown gray, very hard, tough, locally poorly fissile, locally finely sandy, siliceous, with; common mica.
4708-4837	129	Siltstone, medium to dark gray and black, moderately hard, flaky, locally finely sandy and siliceous, with; rare mica, and stringers of Sandstone, white to light yellowish-brown, moderately hard, friable, fine-grained, well sorted, subrounded to subangular, interstitially silty, siliceous, with; common mica, and common carbonaceous streaks. Nonporous.
4837-5089	252	Siltstone, light gray to black, hard, tough, locally finely sandy, siliceous, grading to Shale locally, with; common mica, common carbonaceous material, and rare pyrite.
5089-5111	22	Shale, medium to dark gray and black, moderately soft, flaky, fair fissility, locally silty and siliceous, argillaceous, with; common carbonaceous material, common pyrite, and common mica.
5111-5128	17	Siltstone, light to dark gray, hard, tough, locally fissile, siliceous, with; common mica, and abundant carbonaceous lamanae and partings.
5128-5200	72	Shale, carbonaceous, black, moderately hard, flaky, good fissility, locally silty and siliceous, argillaceous, with; rare mica.

5200-5220	20	Interbedded; Shale, as in 5128-5200, with; Siltstone, light to medium gray, and light brown, very hard, tough, locally finely sandy, siliceous, with; common mica, and common carbonaceous lamanae.
5220-5315	95	Shale, carbonaceous, black, moderately hard, flaky, fair fissility, argillaceous, with; rare mica, and minor stringers of Siltstone, light to medium gray, very hard, tough, siliceous, with; common carbonaceous lamanae.
5315-5466	151	Interbedded; Shale and Siltstone, lithologies as in 5220-5315.
5466-5575	109	Litholigies as in 5315-5466, with abundant pyrite.
5575-5598	23	Shale, coaly carbonaceous, black, moderately soft, flaky, good fissility, rarely locally silty, argillaceous, with; abundant coal, common pyrite, and abundant granule-sized, milky white quartz.
5598-5662	64	Shale as in 5575-5598, without quartz.
5662-5665	3	Limestone, light gray, hard, tough, very fine-grained, microcrystalline, with; common pyrite.

TOTAL DEPTH 5665

VDMR Well No. 348

Operator: Clinchfield Coal Company
Farm: Big Sandy Fuel Corp.
Well No.: 214
Location: Dickenson County
9300' S. of 37°15'
4500' W. of 82°15'
Elevation: 1546.0' Ground
Total Depth: 5665' (5713' SLM)
Drilling Commenced: 1/14/59
Well Completed: 7/9/59
Result: Gas Well
Coal: 195'-196', 460'-462', 1560'-1561', 1795'-1797'
Water: 30', 495'-507'
Gas Show: 348'-352', 4311'-4314', 4333'-4336', 4338'-4345', Blow Out - 5580'

Geologic Log
Samples studied and described
by: John M. Wilson
Virginia Division of
Mineral Resources
October, 1962

Pennsylvanian System (0-1728')
Pottsville Group (0-1728')
Norton formation (0-755')
Lee formation (755'-1728')
Mississippian System (1728'-3970')
Pennington Group (1728'-2989')
Bluestone formation [1728'-(2345'-2360')]
Princeton sandstone [(2345'-2360')-2485']
Hinton formation (2485'-2989')
Stony Gap sandstone member (2850'-2989')

Bluefield formation (2989'-3154')
Greenbriar limestone (3154'-3702')
Maccrady formation (3702'-3755')
Price formation (3755'-3970')
Mississippian-Devonian Systems (3970'-4307')
Big Stone Gap shale (3970'-4307')
Devonian System (4307'-T. D.)
Devonian shales and siltstones (4307'-T. D.)

VDMR Well No. W-348

GEOLOGIC SUMMARY

Pennsylvanian System		
Norton Formation	in	10
	bottom	755
Lee Formation	top	755
	bottom	1895
Mississippian System		
Bluestone Formation	top	1895
	bottom	2345±
Princeton Sandstone	top	2345±
	bottom	2360±
Hinton Formation	top	2360±
	bottom	2870
Stony Gap Sandstone	top	2640
	bottom	2870
Bluefield Formation	top	2870
	bottom	3154
Greenbrier Limestone	top	3154
	bottom	3702
Maccrady-Price Formations	top	3702
	bottom	3970
Mississippian-Devonian Systems		
Big Stone Gap Shale	top	3970
	bottom	4307
Devonian Pre-Devonian Systems		
Devonian-Pre-Devonian undivided	top	4307
	(sampled depth 5665)	

Correlations by: J. M. Wilson and R. C. Milici September 1963