

MAY 31 1951

Jason Harman No. 1 (A-425) Well.

Dry Fork District, Tucker County, W. Va.

By Cumberland and Allegheny Gas Co., 800 Union Trust Bldg., Pittsburgh, Pa.

Located 2.1 Mi. S. of 39° 05' and 4.4 Mil. W. of 79° 20'.

Davis Quadrangle - SC

Elevation, 3304' L.

Permit - Tucker - 4

Drilling commenced June, 1949; completed September, 1950.

Acidized September 26, 1950.

Gas Pocket at 8630 - 8633 - 100,000 cu. ft.

Plugged back to 8650'.

Section based on samples from 7759 to 9085'; examined by Russell R. Flowers.

Top	Bottom	Thickness	
7759	7775	16	Shale, grayish-black to black, carbonaceous
<u>Tully Limestone, 27 Feet.</u>			
7775	7786	11	Limestone, dark-gray to olive-black, very fine textured, very shaly, a very large part of these samples are grayish-black to black shale
7786	7792	6	Limestone, dark-gray to olive-black, very fine textured, very shaly; some olive-gray to grayish-black, calcareous shale; a large amount of grayish-black to black shale
7792	7802	10	Limestone to calcareous shale, olive-black and brownish-black to grayish-black; a very large amount of grayish-black to black shale
<u>Hamilton and Marcellus Formations, 47 Feet.</u>			
7802	7827	25	Shale, grayish-black, some grayish-black to black (carbonaceous); small amounts of olive-black to brownish-black, shaly limestone
7827	7852	25	Shale, dark-gray to grayish-black, some grayish-black to black
7852	7917	65	Shale, grayish-black, some grayish-black to black (many of the samples contain cavings)
7917	7973	56	Shale, grayish-black to black, carbonaceous
7973	8158	185	Shale, grayish-black, some grayish-black to black (carbonaceous)
8158	8183	25	Shale, black (highly carbonaceous) and grayish-black to black
8183	8197	14	Shale, grayish-black to black
8197	8206	9	Shale, dark-gray, calcareous in part
8206	8226	20	Limestone (very shaly) to shale (calcareous), dark-gray to olive-black

8226	8281	55	Shale, black (highly carbonaceous) and grayish-black to black, calcareous in part, somewhat pyritic in the lower part; small amounts of white, vein calcite
8281	8289	8	Siltstone, brownish-gray to brownish-black, very shaly, very highly micaceous, pyritic (bentonite), 20%; shale, dark-gray to black (carbonaceous), highly calcareous in part; trace of vein calcite
<u>Huntersville Formation, 117 Feet. and Needmore Shale (?)</u>			
8289	8308	19	Limestone (very shaly) to shale (highly calcareous), grayish-black to black, carbonaceous,; about 20% of the top two samples is a brownish-gray to brownish-black, very highly micaceous, pyritic, shaly siltstone (bentonitic); some black, carbonaceous shale; a small amount of white, vein calcite in the upper part
8308	8326	18	Shale, grayish-black to black, carbonaceous, pyritic and calcareous in part; a moderate to large amount of dark-gray, calcareous shale
<del>8226</del>	<del>8236</del>	10	Shale, medium dark to dark-gray, calcareous; some grayish-black to black shale (Depth corrected from 8336 to 8333)
8333	8336	3	Chert, medium dark gray, calcareous to a dark-gray and grayish-black, shaly limestone; a large amount of cavings
8336	8340	4	Shale, grayish-black to black, siliceous with some medium dark to dark-gray chert
8340	8346	6	Shale, grayish-black to black, highly silicified, calcareous in part
8346	8365	19	Shale, grayish-black, some grayish-black to black, silicified in part
8365	8372	7	Shale, black, "coaly" (appears to be crumpled); small amount of clear glassy vein quartz with well developed crystal faces on one end indicating cavity filling; small amount of white to light-gray, vein calcite
8372	8384	12	Shale, grayish-black, some black
8384	8393	9	Shale, grayish-black to black, silicified in part; small amount of medium- to dark-gray, shaly chert
8393	8396	3	Shale, grayish-black to black, silicified to shaly chert
8396	8403	7	Siltstone (very cherty) medium-gray mottled with dark-gray to grayish-black, a large amount of grayish-black (very shaly), highly calcareous
<u>Heldersburg Formation (2), 102 Feet.</u>			
8403	8413	10	Siltstone and sandstone (very fine), medium- to dark-gray, some grayish-black (shaly), highly calcareous to silty and sandy limestone
8413	8420	7	Limestone, mottled light- and dark-gray (with white to light-gray spots and grayish-black, shaly streaks) very sandy (very fine) and silty, somewhat cherty, contains fossil fragments

8420	8423	3	✓ Limestone, medium- to dark-gray (with white to light-gray spots and grayish-black, shaly streaks), very sandy, (very fine), very silty, somewhat cherty
8423	8439	16	✓ Limestone (very sandy) to sandstone (very highly calcareous), medium light to medium dark gray, very fine to medium-grained, subrounded (the largest grains are rounded), contains much shaly material in the upper part
8439	8444	5	✓ Limestone, light- to medium-gray mottled with dark-gray (shaly) material, very sandy (very fine to medium-grained)
8444	8450	6	✓ Limestone (sandy, fine) to very fine, <sup>5</sup> silty sandstone, medium-dark gray to dark-gray, contains much dark (shaly) material
8450	8459	9	Limestone (very sandy) at top to sandstone (very highly calcareous) at the bottom, medium-gray (with dark-gray, <del>xxxx</del> shaly spots), very fine to fine-grained, some medium (rounded) grains, contains much dark (shaly) material
8459	8463	4	Sandstone (very fine, highly calcareous) to limestone (very sandy), medium-gray, silty, some fine to medium (quartz) grains, some dark (shaly) material
8463	8465	2	Limestone (very sandy) to sandstone (very highly calcareous), mottled light- and dark-gray, very silty, much dark (shaly) material
8465	8472	7	Sandstone, medium-gray, some dark-gray (very shaly), <del>ft</del> very fine grained, some fine grains, silty, very highly calcareous, more shaly in the lower part
8472	8474	2	Limestone (very sandy) to sandstone (very fine), highly calcareous) medium- to dark-gray, some light-gray, some grayish-black, very silty, a large amount of dark (shaly) material
8474	8480	6	✓ Limestone (very sandy) to sandstone (very fine, highly calcareous), medium- to dark-gray, very silty, shaly; some fine to very coarse, milky, quartz <del>xxxx</del> grains
8480	8484	4	Siltstone to sandstone (very fine), dark-gray to grayish-black, very shaly, highly calcareous
8484	8488	4	Sandstone, medium-gray (with dark-gray, very shaly streaks), fine to very fine, silty in part, highly calcareous
8488	8491	3	Sandstone (very fine) to siltstone, medium-gray (with dark-gray, very shaly streaks), highly calcareous
8491	8493	2	Sandstone, medium-gray, very fine to medium-grained, shaly to a very sandy (very fine) and silty, grayish-black shale, highly calcareous
8493	8500	7	Shale (very silty) to siltstone (shaly), grayish-black to black, sandy (very fine) to a very fine to medium-grained, medium-gray sandstone, highly calcareous
8500	8505	5	Shale, grayish-black to black, silty to a dark-gray and grayish-black, shaly siltstone, highly calcareous, sandy (very fine)

8505	8505	--	<p>✓ ✓</p> <p>Siltstone, medium- to dark-gray, sandy (very fine), highly calcareous; some grayish-black to black, silty shale</p> <p style="text-align: center;"><u>Shear Zone (?) 3 Feet.</u></p>
8505	8507	2	<p>Sandstone, very light to light-gray, fine grained, some medium and some very fine grains, somewhat calcareous; some siltstone, medium- to dark-gray, highly calcareous, shaly to a silty shale (grayish-black); a large amount of dark-gray to grayish-black shale (cavings ?)</p>
8507	8508	1	<p>Siltstone to very fine sandstone, medium- to dark-gray, highly calcareous, somewhat shaly to a silty, grayish-black shale; some very light to light-gray, fine- to medium-grained sandstone (mostly broken into individual grains)</p> <p style="text-align: center;"><u>Oriskany Sandstone, 6 Feet.</u></p>
8508	8514	6	<p>Sandstone, very light gray, fine- to medium-grained, some coarse grains, subrounded to rounded, quartzitic (mostly clear and glassy quartz), much of this sandstone is broken across the sand grains, somewhat calcareous</p> <p style="text-align: center;"><u>Huntersville Formation or Needmore(?) Shale, 5 Feet.</u></p>
8514	8517	3	<p>Shale, grayish-black, some grayish-black to black (this shale is not cavings)</p>
8517	8518	1	<p>Shale, grayish-black; sandstone (probably very light gray cavings). This sample is too highly contaminated with iron rust to describe</p>
8518	8519	1	<p>Shale, grayish-black, some grayish-black to black; small amount of very light gray sandstone (This and the above sample may represent another shear zone)</p> <p style="text-align: center;"><u>Oriskany Sandstone, 19 Feet.</u></p>
8519	8520	1	<p>Sandstone, light- to medium-gray, fine to medium-grained, subrounded to rounded, quartzose, slightly calcareous, contains a small amount of black interstitial material</p>
8520	8522	2	<p>Sandstone, very light to light-gray, very fine grained, some fine (rounded) grains, quartzitic, calcareous</p>
8522	8525	3	<p>Sandstone, light to medium light gray, very fine grained, highly calcareous</p>
8525	8527	2	<p>No sample</p>
8527	8528	1	<p>Sandstone, light to medium light gray, very fine grained, highly calcareous</p>
8528	8530	2	<p>Sandstone, light-gray, fine-grained, some medium (rounded) grains, somewhat calcareous; a large amount of dark-gray to black shale (cavings?)</p>
8530	8538	8	<p>Sandstone, very light to light-gray, fine to very fine, a few scattered medium (rounded) grains, quartzitic; highly calcareous</p>

Helderberg Formation, 246 Feet.

8538	8540	2	Sandstone, light gray (with medium- to dark-gray, shaly streaks), very fine grained, some fine grains, very highly calcareous
8540	8544	4	Sandstone, medium light to medium dark gray, very fine grained, very highly calcareous with spots of sandy limestone; some dark, shaly interstitial material in the lower part, some medium sand grains at the bottom
8544	8549	5	✓ Sandstone (very fine, very highly calcareous) to limestone (very sandy), light- to medium-gray, contains some dark, shaly, interstitial material
8549	8551	2	Sandstone, light-gray, very fine to fine-grained, highly calcareous
8551	8554	3	✓ Sandstone, light- to medium-gray, very fine grained, very highly calcareous with some sandy limestone, very shaly in part
8554	8555	1	Limestone, medium-gray, very sandy to sandstone, very fine grained, some fine grains, contains some dark (shaly) interstitial material
8555	8558	3	✓ Limestone, medium- to dark-gray with some grayish-black (very shaly to shale), very sandy to sandstone (very fine), highly calcareous
8558	8567	9	Sandstone (very highly calcareous, very fine) to limestone (very sandy), medium-gray, some dark-gray to grayish-black (shaly)
8567	8575	8	Limestone, dark-gray to grayish-black (with light-gray spots), very silty to a very highly calcareous, very shaly siltstone
8575	8577	2	✓ Shale, grayish-black to black, highly calcareous, sandy (fine, rounded), somewhat cherty
8577	8579	2	Sandstone, very light to light-gray, very fine to fine-grained, some medium grains, quartzose, calcareous in part
8579	8584	<del>2577</del> 5	Sandstone, light-gray (with some medium-gray, <i>shaly</i> spots <del>(shaly)</del> in the lower part), fine-grained, many medium grains in the lower part, subrounded to rounded, highly calcareous at the top to a very sandy limestone at the bottom
8584	8587	3	Sandstone, medium-gray to dark-gray (limestone spots) to grayish-black (very shaly), very fine to medium-grained, highly calcareous
8587	8592	5	Sandstone, light-gray with medium-gray spots, very fine to fine grained, highly to very highly calcareous
8592	8597	5	Limestone, light- to medium-gray (with dark-gray, very shaly streaks), very sandy (very fine); some fossil fragments
8597	8607	10	Sandstone, very light to light-gray, very fine to fine-grained, highly calcareous
8607	8608	1	Sandstone, light- to medium-gray, very fine to fine-grained, highly calcareous, somewhat shaly in part
8608	9616	8	Sandstone (very highly calcareous) to limestone (very sandy) light- to medium-gray, very fine to fine grained

8616	8621	5	Sandstone (very highly calcareous) to limestone (very sandy), medium-gray (with light-gray spots), some dark-gray (shaly), very fine to medium-grained
8621	8623	2	Limestone, medium- to dark-gray, very sandy (very fine to fine-grained)
8623	8630	7	Limestone, medium- to dark-gray (with light-gray spots) very sandy (very fine to fine), silty and cherty, shaly in part
8630	8637	7	Limestone, dark-gray to brownish-black (with light- to medium-gray spots), very sandy (very fine), silty, cherty, very shaly in the lower part
8637	8646	9	Limestone, dark-gray to grayish-black, (with light-gray spots), very shaly and silty, somewhat sandy in the upper part (very fine)
8646	8653	7	Limestone, very light to medium-gray, very sandy (very fine to medium-grained)
8653	8663	10	Limestone, light- to dark-gray, sandy (fine to very fine)
8663	8692	29	Limestone, medium- to dark-gray (with light-gray spots), sandy (very fine to fine-grained, mostly very fine at the bottom)
8692	8703	11	Limestone, medium- to dark-gray (with light-gray spots), very sandy (very fine), cherty; at the bottom, very sandy to very fine sandstone (very highly calcareous), very cherty
8703	8733	30	Limestone, dark-gray to grayish-black (with light- to medium-gray spots), very shaly to a highly calcareous shale, silty, cherty in the upper part
8733	8752	19	Limestone, grayish-black (with light- to medium-gray spots), very shaly
8752	8769	17	Limestone, grayish-black to black, some medium-gray, very shaly to a highly calcareous shale
8769	8784	15	Limestone (very shaly) to shale (calcareous), grayish-black to black
<u>Huntersville or Marcellus (?) 101 Feet.</u>			
8784	8885	101	Shale, black and grayish-black to black, highly calcareous, siliceous, much of this shale contains very finely disseminated pyrite; some white vein calcite; less calcareous toward the bottom; a very small amount of chert in the bottom few samples
<u>Helderberg Formation, 100 Feet.</u>			
8885	8888	3	Shale, grayish-black, some grayish-black to black, calcareous; some medium- to dark-gray (with light-gray spots) limestone, very shaly, somewhat cherty
8888	8904	16	Limestone, light to medium dark gray, very shaly, cherty
8904	8909	5	Limestone, medium- to dark-gray (with light-gray spots), shaly, cherty, and silty (very fine quartz crystals)

8909	8916	7	Limestone, medium- to dark-gray, some grayish-black (shaly), some light-gray, somewhat cherty and silty ; some fossil fragments
8916	8926	10	Limestone, medium- to dark-gray and brownish-black, some brownish-black to grayish-black (very shaly) at the top, very cherty, silty, somewhat shaly
8926	8935	9	Limestone, light- to dark-gray, somewhat shaly, silty, and cherty
8935	8951	18	Limestone, brownish-black to grayish-black, very shaly to a calcareous shale, cherty at the bottom, silty
8951	8960	9	Limestone, brownish-black (with light- to medium-gray spots), some grayish-black (shaly), very shaly, silty and cherty
8960	8976	16	Limestone, dark-gray to grayish-black (with brownish cast); at the top, shaly and very silty; at the bottom, very shaly and cherty
8976	8989	13	Limestone (very shaly) to shale (highly calcareous), dark-gray with light- to medium-gray spots); some dark-gray to grayish-black, very silty in the upper part; small amount of light- to medium-gray chert and some fossil fragments
8989	9007	18	Limestone, dark-gray to grayish-black (with some light- to medium-gray spots), very shaly with some highly calcareous shale, silty in the upper part, somewhat cherty, fossiliferous
9007	9028	21	Limestone, dark-gray to grayish-black, very shaly to a highly calcareous shale
9028	9043	15	Shale (highly calcareous) and some very shaly limestone, dark-gray to grayish-black, a few scattered fossil fragments
9043	9065	22	Limestone, light- to medium-gray (with medium dark to dark-gray. shaly spots and streaks), very shaly, silty, some chert in the upper part
9065	9080	15	Shale, (highly calcareous) to limestone (very shaly), grayish-black, some medium- to dark-gray (with brownish cast)
9080	9085	5	Shale, dark-gray, calcareous; some medium- to dark-gray, shaly limestone; some medium light to medium dark gray chert
	9085		TOTAL DEPTH