

Note: The accuracy of this map is within the limits prescribed by the O.B.G. Div. of Dept of mines. (1 part in 200)

Note: Elevation from U.S.G.S. elev. 713 at intersection of "Jeep Trail" with Clendenin Creek Road. S.E. corner of Elmwood I: 2400 Quad.

**CERTIFICATE**

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph G of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

*W. J. Barney* R.P.E. No. 2074

SURVEY - JUNE 14, 1963 - W.S. GRAVELY - R.B. 50 & 52

- New Location
- Drill Deeper
- Redrill
- Abandonment

Company	COMMONWEALTH GAS CORPORATION
Address	P.O. BOX 1433 CHARLESTON, W. VA.
Farm	L. M. BOWLING ETAL
Tract (UNIT)	Acres 137 3/4 Lease No. 1779-1785
Well (Farm) No.	1 Serial No. 710
Elevation (Spirit Level)	954.8'
Quadrangle	KENNA <del>NEW</del> - WC
County	PUTNAM District UNION
Engineer	<i>W. J. Barney</i>
Engineer's Registration No.	2074
File No.	Drawing No.
Date	JUNE 18, 1963 Scale 1" = 660'

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  
CHARLESTON

**WELL LOCATION MAP**  
FILE NO. PUT-692

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

No samples 6-6-1962 Deep Well



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 25

Quadrangle Kenna N. W.

Permit No. Put. 692

WELL RECORD

Oil or Gas Well Gas  
(KIND)

Company COMMONWEALTH GAS CORPORATION  
Address P. O. Box 1433, Charleston, W. Va. 25325  
Farm L. M. Bowling et al Acres 137-3/4  
Location (waters) Clendenin Creek  
Well No. 718 Elev. 954.8  
District Union County Putnam  
The surface of tract is owned in fee by Stanley Cochran  
R.F.D., Liberty, W. Va. Address  
Mineral rights are owned by L. M. Bowling, RFD Box 32  
Liberty, W. Va. - Garland Smith, Park Addition  
Bunbar, W. Va. Address  
Drilling commenced July 12, 1963  
Drilling completed Dec. 11, 1963  
Date Shot From To  
With

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16	22'	22'	Kind of Packer
13	537'	389'	
10	1140' 10"	346'	Size of
8 3/4	2283'	2283'	
6 3/4			Depth set
5 3/16	5106' 6"	5106' 6"	
3			Perf. top <u>5116</u>
2 Tubing	5122'	5122'	Perf. bottom <u>5122</u>
Liners Used			Perf. top
			Perf. bottom

Open Flow /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch  
Volume 504,000 Cu. Ft.  
Rock Pressure 950 lbs. 72 hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
WELL ACIDIZED \_\_\_\_\_

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
20 bags behind the 8-1/4" casing, 214 bags behind the 13" casing.  
COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

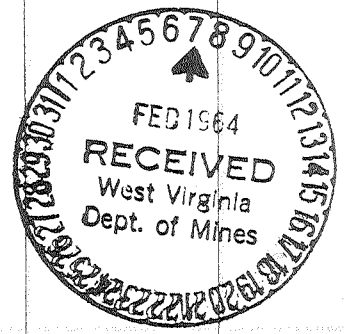
WELL FRACTURED 442,000 cu. ft. before frac. - Sand frac 11-26-63 with 26,000 lbs. sand and 1000 bbls. water

RESULT AFTER TREATMENT 504,000 cu. ft. frac.

ROCK PRESSURE AFTER TREATMENT \_\_\_\_\_

Fresh Water 1089 Feet 1328 - 1354 Salt Water 1790 - 1812 Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface			0	10			
Red Rock			10	22			
Blue Rock			22	30			
Red Mud			30	45			
Blue Mud			45	55			
Blue Slate			55	75			
Red Rock			75	90			
Blue Slate			90	110			
Red Rock			110	130			
Blue Slate			130	160			
Red Rock			160	190			
Blue Slate			190	202			
Red Rock			202	218			
Blue Slate			218	240			
Red Rock			240	250			
Blue Gritty Slate			250	265			
Red Rock			265	300			
Blue Slate			300	310			
Sand			310	328			
Blue Slate			328	335			
Red Rock			335	380			
Blue Sand			380	405			
Red Rock			405	420			
Blue Slate			420	450			
Blue Sand			450	460			
Red Rock			460	485			
Blue Slate			485	510			
Red Rock			510	530			
Blue Slate			530	551			



Formation	Color	Hard or Soft	Top 25	Bottom	Oil, Gas or Water	Depth Found	Remarks
Red Rock			551	565			
Blue Slate			565	668			
Red Rock			668	700			
Blue Slate			700	728			
Sand			728	765			
Red Rock			765	810			
Blue Slate			810	820			
Red Rock			820	835			
Blue Slate			835	945			
Blue Sand			945	982			
Blue Slate			982	1007			
Red Rock			1007	1020			
Blue Sand			1020	1035			
Slate			1035	1050			
Sand			1050	1100	Water	1089	1 bailer per hr
Slate			1100	1141			
Sand			1141	1148			
Slate			1148	1250			
Sand			1250	1303			
Slate			1303	1318			
Sand			1318	1360	Water sand	1328-1354	4-1/2 bailers per hr.
Slate			1360	1371			
Sand			1371	1398			
Blue Slate			1398	1555			
Slate & shells			1555	1676			
SALT SAND			1676	1820	Water sand	1790-1812	
Slate			1820	1835			
SALT SAND			1835	1940			
LITTLE LIME			1940	1961			
BIG LIME			1961	2103		1962	S.L.M.
Slate			2103	2111			
INJUN SAND			2111	2193			
Slate & Sand			2193	2245			
Blue Slate			2245	2281			
Lime Shell			2281	2290		2285	S.L.M.
Blue Slate			2290	2309			
Gritty Shell			2309	2319			
Slate & Shell			2319	2579			
Brown Shale			2579	2604			
BEREA SAND			2604	2625			
Slate & Shells			2625	3325			
Slate			3325	3835			
BROWN SHALE			3835	3880	Gas	3833-3844	Burned 6' high
White Slate			3880	4072			in 1"
BROWN SHALE			4072	4150		4100	S.L.M.
White Slate			4150	4182			
Brown Shale			4182	4360	Gas	4220-4239	2/10 W 1"
White Slate			4360	4770	Gas	4348-4365	3/10 W 1"
BROWN SHALE			4770	5003			
CORNIFEROUS LIME			5003	5101	Gas	5113-5117	24/10 W 2"
ORISKANY SAND			5101	5125	Gas	5117-5119	3/10 W 5"
		TOTAL DEPTH		5125			
					FINAL GAUGE:	504,000 cu. ft. after frac.	
				5003 955 4048			

Date February 3, 19 64

APPROVED COMMONWEALTH GAS CORPORATION

By W. D. Hardy  
(Title) Land & Eng. Dept