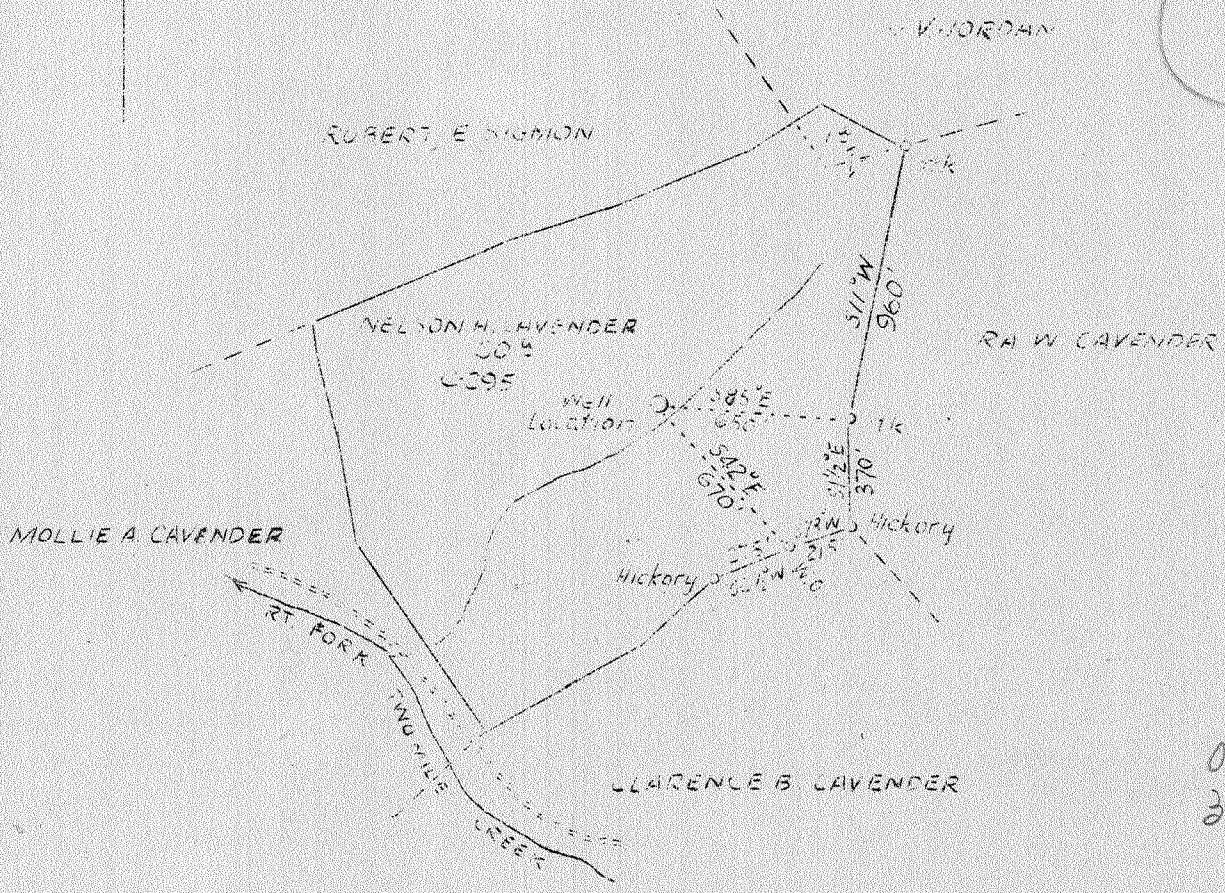


LATITUDE 38° 30'

LONGITUDE 81° 35'

13719



A 575 2 FC (J-5)

Company Columbian Carbon Co.
 Address Box 1240, Charleston, W.Va.
 Farm Nelson H. Cavender
 Tract Acres 60 Lease No. C-295
 Well (Farm) No. 1 Serial No.
 Elevation (Spirit Level) 1031
 Quadrangle Charleston - NC
 County Kanawha District Union
 Engineer James N. Sell
 Engineer's Registration No. 772
 File No. Drawing No.
 Date Jan. 15, 1938 Scale 1"-660'

STATE OF WEST VIRGINIA
 Department of Mines
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 File No. KAN-513

+ 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.

6-619- Deep Well

WEST VIRGINIA DEPARTMENT OF MINES

OIL & GAS DIVISION

W E L L R E C O R D

Permit No. Kan-513

Gas Well

Charleston N. E. Quad

C A S I N G & T U B I N G

Company	Columbian Carbon Co.	14"	41'0"	41'0"
Address	Charleston, W. Va.	10-3/4	468'8"	Pulled
Farm	Nelson Cavender (C-295) Acres 60	8-5/8	1800'9"	1800'9"
Location	Kanawha 2 Mile	6-5/8	5086'3"	5086'3"
Well No. 1	1 (GW-409) Elev. 1033.6 DF	3 1/2	Liner 68'1"	68'1"
District	Union County Kanawha	2-3/8	5238'9"	5238'9"
Surface & Mineral Address	Nelson Cavender, et ux R #5, Charleston, W. Va.			
Coal	4 1/2 A - A. J. Bruen			
Address	19 E 83d St. New York			
Drilling Commenced	2-14-38 - Completed 6-5-38			
Date Shot	6-5-38 - Depth 5206-5146			
Volume	431,040 c.f.			
Rock Pressure	1590 lbs. 23 hrs.			
Fresh Water	75' 1 blr. per Hr. 720' 1/2 blr. hr.			
Salt Water	1280' HFW; 1944' 1/2-8" blr. hr.			

FORMATION	Color	Top	Base	Results	FORMATION	Color	Top	Base	Results
Soil		0	31		Corniferous Lime		5038	5136	
Slate		31	85		Oriskany Sand		5136	5206	
Red Rock		85	95		Lime		5206	5216	
Slate		95	125		Total Depth			5216	
Red Rock		125	160						
Slate		160	220						
Red Rock		220	285						
Slate		285	326		Gas 1896 Small show		5038	5136	5206
Red Rock		326	346		" 2080 "		1034	1034	1034
Slate		346	365				4004	4102	4172
Red Rock		365	377		Pay: 5149-5150				
Slate		377	385		5160-5162				
Red Rock		385	407		5168-5171				
Slate		407	490		5200-5201				
Sand		490	540		5204-5205				
Slate		540	615						
Sand		615	642						
Slate		642	685		CEMENT RECORD: 3/24/38 Cemented 8-5/8 Csg.				
Sand		685	750		Ran 85 sacks Alpha cement mixed with				
Slate & Shells		750	966		2% Solution Aquagel. 4 sacks Aquagel				
Sand		966	1000		circulated ahead of cement. Ran 10"				
Slate		1000	1063		spacer. 7' cement in pipe. 5' below				
Sand		1063	1160		pipe. Mills, Cementer - Halliburton				
Slate		1160	1195		Oil Well Cementing Co.				
Salt Sand		1195	1515						
Slate		1515	1540		5/18/38 Cemented 6-5/8" Casing. Ran				
Sand		1540	1560		25 sacks Alpha Cement. New type				
Slate		1560	1580		asbestos plug - 10' Spacer on bottom.				
Sand		1580	1645		Pipe 18" off bottom. 45' hard cement				
Slate		1645	1660		in hole. Dallas Holley, Cementer -				
Lime		1660	1680		Halliburton Oil Well Cementing Co.				
Sand		1680	1720						
Slate		1720	1730						
Little Lime		1730	1762						
Slate		1762	1775						
Big Lime		1775	1926						
Big Injun		1926	1958						
Slate & Shells		1958	2371						
Brown Shale		2371	2376						
Berea		2376	2383						
Slate & Shells		2383	2433						
Hard Lime Shell		2433	2443						
Brown Shale		3590	3660						
Slate & Shells		3660	3890						
Brown Shale		3890	3920						
Slate & Shells		3920	3975						
Brown Shale		3975	4224						
Slate & Shells		4224	4684						
Brown Shale		4684	4945						
Slate		4945	4968						
Black Shale		4968	5038 SLM						