

New Location   
 Drill Deeper   
 Abandonment

Company COLUMBIAN CARBON COMPANY  
 Address BOX 873 CHARLESTON, W.VA.  
 Farm D.H. HILL ARNOLD CONSOLIDATION  
 Tract NO. 71 Acres 1200.0 Lease No. WU-159  
 Well (Farm) No. 1 Serial No. GW-1292  
 Elevation (Spirit Level) ~~3,178.50~~ 3,316.5'  
 Quadrangle HORTON-9 SW S 369 W 077  
 County RANDOLPH District DRY FORK  
 Engineer Wendell Moore  
 Engineer's Registration No. 2113  
 File No. \_\_\_\_\_ Drawing No. W-6-58  
 Date AUG. 29, 1958 Scale 1" = 2,000'

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

**WELL LOCATION MAP**  
 FILE NO. RAN-100

+ 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.

*Samples on file 6-6 261 Deep Well*



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Quadrangle Horton 9 SW

Permit No. Ran-100

WELL RECORD

Oil or Gas Well Gas  
(KIND)

Company Columbian Carbon Company, Operator  
Address Box 873, Charleston 23, W. Va.  
Farm D. H. Hill Arnold Consolidation, Acres 1200  
Location (waters) Bill White Run of Gladly Fork  
Well No. 1 - GW-1292 Elev. 3126.50'  
District Dry Fork County Randolph  
The surface of tract is owned in fee by Boyd Phares Heirs  
Mineral rights are owned by Director, Bureau of Land Management  
Address Washington 25, D.C.

Casing and Tubing	Used in Drilling	Left in Well	Packers
16" 65#	32'8"	32'8"	Kind of Packer Anchor
18" 65#			Size of 5 1/2"
20 1 3/4" 42#	765'11"	745'11"	Depth set. 5248'
8 1/4" 36#	5592'6"	5592'6"	
6 5/8"			
5 3/16"			
3"			Perf. top
2 3/8" 4.6#	5594'6"	5594'6"	Perf. bottom
Anchor Used	298'7"	298'7"	Perf. top
			Perf. bottom

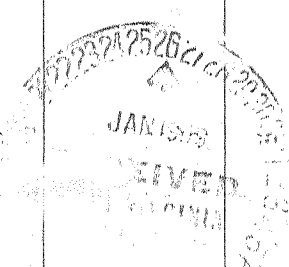
Drilling commenced 9-29-58  
Drilling completed 11-10-58  
Date Shot Not shot From          To           
With           
Open Flow 10 /10ths Water in 1" Inch  
         /10ths Merc. in          Inch  
Volume 33,000 Cu. Ft.  
Rock Pressure 600 lbs. 14 hrs.  
Oil          bbls., 1st 24 hrs.  
WELL ACIDIZED Not acidized

CASING CEMENTED          SIZE          No. Ft.          Date           
See reverse side.  
COAL WAS ENCOUNTERED AT None FEET          INCHES  
         FEET          INCHES          FEET          INCHES  
         FEET          INCHES          FEET          INCHES

WELL FRACTURED See reverse side.

RESULT AFTER TREATMENT Chert - 231 MCF; Oriskany - 207 MCF; Total 438 MCF.  
ROCK PRESSURE AFTER TREATMENT 12 day pressure on Chert 1600#; 2 day pressure on Oriskany 1240#.  
Fresh Water 40' Feet          Salt Water          Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface			0	20			
Slate & Shells			20	40			
Lime			40	100	Fresh water	40'	
Gritty Lime			100	190			
Lime, Broken			190	270			
Lime			270	410			
Slate & Lime			410	450			
Lime			450	660			
Lime and Sand			660	695	5060	5259	5525
Lime			695	860	3317	3317	3317
Lime & Shale			860	1035			
Lime			1035	1650	1743	1942	2208
Shale & Lime			1650	1865			
Lime			1865	2155			
Lime & Shale			2155	2270			
Lime			2270	2430			
Shale & Lime Streaks			2430	3040			
Shale			3040	3125			
Shale & Lime			3125	4105			
Shale			4105	4410			
Shale & Lime			4410	4560			
Shale			4560	4645			
Black Shale			4645	4652			
Shale			4652	5060			
Lime			5060	5130			
Chert			5130	5205			
Shale			5205	5259			
Oriskany			5259	5525			
Lime			5525	5547			
Total depth				5547'			Landing Flange Measurement



(over)

Formation	Color	Hard or Soft	Top $\gamma$	Bottom	Oil, Gas or Water	Depth Found	Remarks	
<u>Fracturing Record</u>								
12-3-58	- Perforated	Chert and Oriskany	as follows:					
	5474-76'		4	shots per foot	9	shots	No gas	
	5442-52'		4	" "	" "	41	" "	
	5405-13'	5416-24'	4	" "	" "	66	" "	
	5277-85'	5287-96'	4	" "	" "	70	" Gas gauged 5/10 W 1" 23,560 cu. ft	
	5258-64'		4	" "	" "	25	" "	
	5126-41'		4	" "	" "	61	" Gas gauging 33,380 cubic feet	
Total	-----			272	"			
12-8-58	- Ran tubing and set packer at 5056'.							
12-9-58	- 600# pressure in 14 hours. Pumped in 2,000 gallons mud acid-displaced with 7 pumps Starting pressure 2300# -went to 2500# maximum pressure - pumping wide open. Used 12,000 gallons water with 1% tergitol. Started sand .7#/gallon. Pressure started at 2,600# - increased gradually to 3,200# maximum pressure. 3,000# pressure at end of water and sand, 7,500# 20-40 Sand, 1,500# 10-30 Sand to tail in with. Started perf balls when 4,000 gallons water and sand in. Used 200 perf balls. Pumping time 16 minutes - injection rate - 750 gpm. Flushed with 90 barrels water. Pressure 3,000# -increased to 3,250# at end of treatment. Time - 7 minutes 540 gpm. Shut in. 9 minutes after quit pumping 1100# pressure.							
12-11-58	- Released packer - lowered and reset between Chert and Oriskany. Oriskany gas gauged 6/10 W 2" - 103 MCF - Chert gas 479 MCF - total 582 MCF.							
12-12-58	- Pulled tubing and cleaned out. Re-ran 3" tubing and set packer at 5190', after setting packer Oriskany gas gauged 20/10 W 1" - 47,130 cu. ft. - 20 1/2 hour pressure on Oriskany 1240#. Chert gas shut in.							
12-19-58	- Re-fractured the Oriskany. Pumped in 500 gallons MCA. Pumped in 2200 gallons water with Tergitol to load tubing. Displaced 500 gallons MCA with 2 pumps - maximum pressure 2400# - broke to 1800#. Shut down 10 minutes - broke down with 5 pumps - started at 3200# maximum - dropped gradually to 3050#. Started sand at .7#/gallon with water and tergitol. Used 30 barrels to break. Pumped in 10,000 gallons water and sand. Pressure started at 3050# - went to 3600# maximum. Broke to 3150# at end of sand. Used 6700# 20-40 Sand and 1500# 10-30 sand. Started perf balls when 3,000 gallons in. Used 200 balls. Flushed with 90 barrels water. Pressure 3150# when starting - increased to 3250# at end of water. Used 200 gallons tergitol - 100 of 08 and 100 of TMN. Total pumping time 25 minutes - injection rate 600 gpm. Breaking time 2 minutes - injection rate 630 gpm. Water and sand time 16 min. Injection rate 600 gpm Flushing time 7 minutes - 540 gpm. S.I. 10 minutes after quit pumping at 1200#.							
12-22-58	- Released packer, pulled tubing and cleaned out to bottom. Ran 298' 7" of 5 1/2" anchor with 2 3/8" tubing; tubing cage 31'8" off of bottom. 2 x 5 1/2 x 7 packer set at 5248 between Chert & Oriskany.							
Final open flow - Chert gas			231,000 cubic feet					
Final open flow - Oriskany gas			207,000 cubic feet					
Total open flow			438,000 cubic feet					
24 hour pressure on Chert	760#.							
48 hour rock pressure on Chert	990#.							
71 hour rock pressure on Chert	1105#.							
5 day rock pressure on Chert	1340#.							
12 day rock pressure on Chert	1600#.							
23 hour rock pressure on Oriskany	1040#.							
48 hour rock pressure on Oriskany	1240#.							
<u>Casing Record</u>								
10-22-58	- Ran 11 3/4" casing at 753' DLM. Cemented with 350 sacks.							
11-11-58	- Ran 8 5/8" casing at 5547' Schlumberger Measurement with guide shoe and 5 centralizers Cemented with 300 sacks.							
Cable tools	0 - 542'							
Rotary tools	542' - Total depth							

Date January 22, 19 59

APPROVED Columbian Carbon Company, Operator

By R. B. Anderson, General Manager  
(Title)