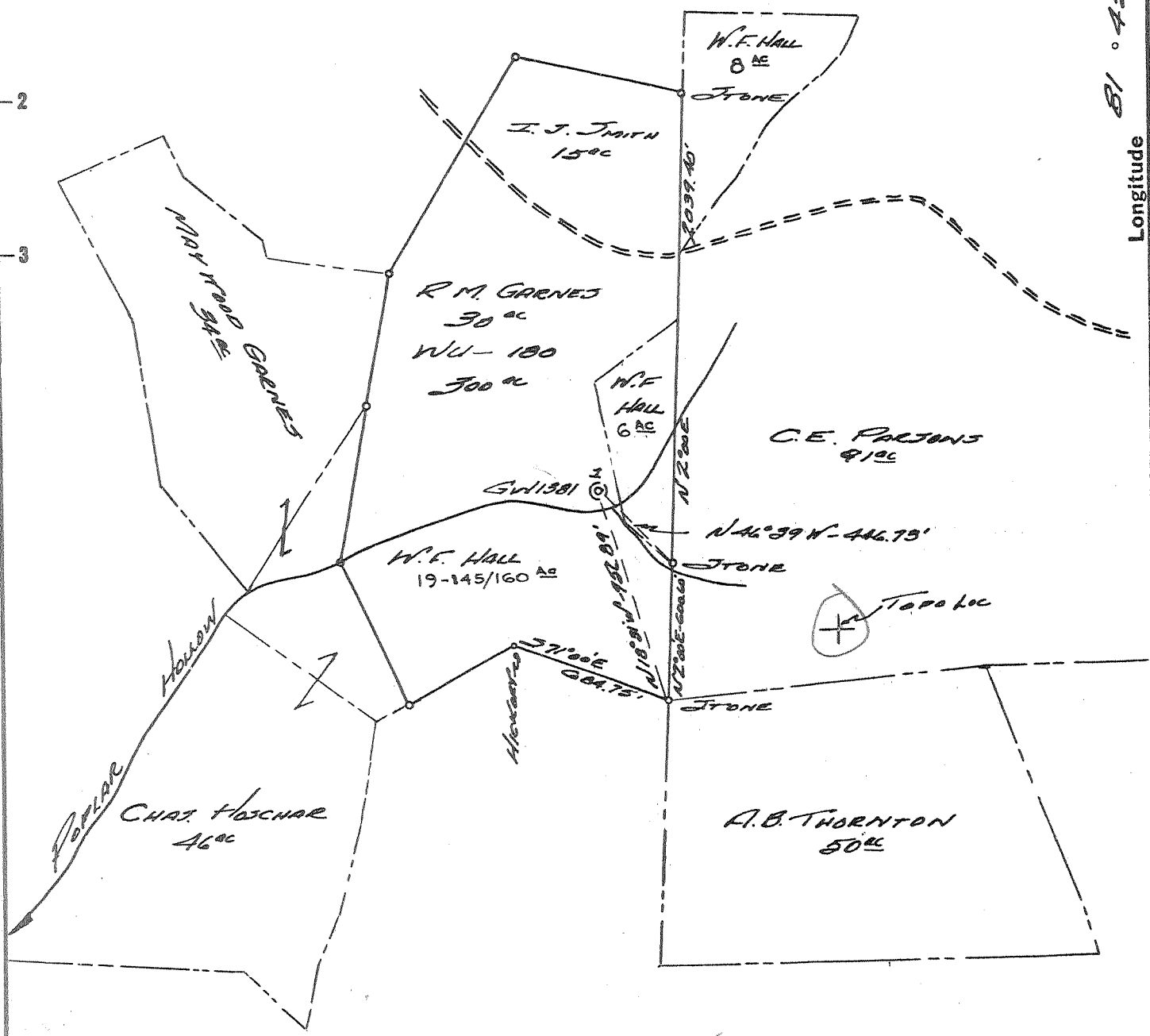


Latitude 38° 50'

Longitude 81° 45'



75C (H-4)

5.61-S

2.03-W

~~5.61-S~~ OF 38° 50'
~~2.03-W~~ OF 81° 45'
~~2.03-W~~
 6

New Location ..
 Drill Deeper
 Abandonment

Company COLUMBIAN CARBON Co.
 Address Box 873 CHARLESTON, W. Va.
 Farm R. M. GARNES
 Tract _____ Acres 300 Lease No. WU-180
 Well (Farm) No. 1 Serial No. GW 1381
 Elevation (Spirit Level) 841.49
 Quadrangle RAVENS WOOD 3567 N 206
 County JACKSON District RIPLEY
 Engineer R. B. Anderson
 Engineer's Registration No. 2074
 File No. _____ Drawing No. W-23-62
 Date 29 May 62 Scale 1" = 660'

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

WELL LOCATION MAP
 FILE NO. JAC-1038

+ 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 0-2500' ^{others not received yet}) DEEP WELL 6-6 311



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 4

Quadrangle Ravenswood sw

Permit No. Jac-1038

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company Columbian Carbon Company
Address Box 873, Charleston 23, W. Va.
Farm R. M. Garnes, et al Acres 300
Location (waters) Poplar Hollow
Well No. 1 - GW-138L Elev. 841.49'
District Ripley County Jackson
The surface of tract is owned in fee by R. M. Garnes,
Address Evans, W. Va.
Mineral rights are owned by R. M. Garnes, et al
(for further add. contact C. C. C.)
Address _____
Drilling commenced 6-14-62
Drilling completed 12-21-62
Date Shot not shot From _____ To _____
With _____
Open Flow 4 /10ths Water in 1 Inch
_____ /10ths Merc. in _____ Inch
Volume 21,060 Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED not acidized
WELL FRACTURED see attached sheet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size 16" 65#	93'6"	93'6"	Kind of Packer _____
18 3/8" 48#	725'7"	725'7"	Bottom Hole
10 3/4" 40#	1322'4"	pulled	Size of _____
8 1/4" 24#	2526'4"	2526'4"	Depth set <u>4876'S LM</u>
6% 5 3/16" 14#	4910'	4910'	Perf. top _____
3 2 7/8" 4#	4907'	4907'	Perf. bottom _____
Liners Used <u>w/ 2" cage & bull plug</u>			Perf. top _____
			Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
see reverse side

COAL WAS ENCOUNTERED AT None FEET None INCHES
none FEET none INCHES FEET INCHES
FEET INCHES FEET INCHES

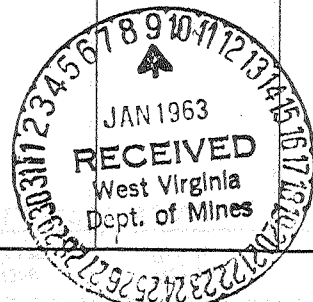
RESULT AFTER TREATMENT 12/10 M. 2" = 539MCF

ROCK PRESSURE AFTER TREATMENT 24 hours 1790# - 48 hours 1810#

Fresh Water 70' Feet Salt Water 1210' 1890' Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Red Rock			0	38			
Blue Slate			38	55			
Red Rock			55	93	F. water	70'	1-13" blr/hr.
Grey Shale			93	117			
Slate			117	154			
Red Rock			154	160			
Grey Lime			160	175			
Red Rock			175	230			
Blue Slate			230	260			
Sand			260	271			
Red Rock			271	287			
Sand			287	317			
Red Rock			317	338			
Slate			338	345			
Red Rock			345	387			
Lime			387	395			
Sand			395	405			
Slate			405	417			
Red Rock			417	475			
Lime			475	520			
Slate			520	530			
Red Rock			530	545			
Slate			545	565			
Grey Lime			565	571			
Red Rock			571	592			
Slate			592	692			
Sand			692	700			

(over)



Formation	Color	Hard or Soft	Top 4	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate and Shells			700	725	718'DLM=719'SLM		
Red Rock			725	790			
Slate			790	810			
Red Rock			810	820			
Slate and Shells			820	825			
Green Lime			825	846			
Red Rock			846	875			
Slate			875	914			
Lime			914	960			
Slate and Shells			960	985			
Sand			985	1011			
Slate and Shells			1011	1141			
Sand - <i>Big Dunkard?</i>			1141	1260	S. water	1210'	1-13"blr/hr.
Slate			1260	1300	1302'DLM=	1302'SLM	
Lime			1300	1340			
Sand - <i>Salt Sand?</i>			1340	1430			
Slate and Shells			1430	1505			
Sand			1505	1520			
Slate and Shells			1520	1587			
Lime			1587	1630			
Slate and Shells			1630	1854			
Sand and Shale			1854	1859			
Slate and Shells			1859	1865			
Sand - <i>Salt Sand?</i>			1865	1884			
Big Lime			1884	2020	S. water	1890'	1/2-10"blr/hr.
Big Injun Sand			2020	2110			
Slate and Shells			2110	2124			
Sand - <i>Southern</i>			2124	2136			
Broken Sand - <i>WEIR</i>			2136	2280			
Slate and Lime Shells			2280	2482			
Brown Shale			2482	2503			
Berea Sand			2503	2515	2500'DLM=	2504'SLM	
Shale			2515	2525	Gas	2504'SLM	show
Slate			2525	3715	2510'DLM=	2510'SLM	
Light Brown Shale - <i>441</i>			3715	3762			
Slate and Shells			3762	4000			
Brown Shale			4000	4190			
White Slate			4190	4560			
Black Slate - <i>HAMILTON?</i>			4560	4740			
Black Shale - <i>MARCELLUS</i>			4740	4764			
Corniferous Lime - <i>463</i>			4764	4876			
Oriskany Sand			4876	4900	Gas	4884'	show
Lime - <i>Helderberg</i>			4900	4916	<i>485</i>		
Total depth-----				4916'			
Cemented back to-----				4900'			
Operations suspended from 8-15-62 to 10-2-62							
CASING RECORD							
6-16-62	Ran 16" drive pipe at 93'DLM.						
6-25-62	Ran 13-3/8" casing with shoe 719'SLM=718'DLM-Mixed 8 sacks Gel with 50 bbls. water.						
7-3-62	Ran 10-3/4" casing with shoe 1302'DLM-pulled.						
7-18-62	Ran 8-5/8" casing 2504'SLM=2500'DLM. Mixed 300 bbls. 9.4# mud, Circulated hole and killed gas. Cemented with 50 sacks-set pipe down.						
12-1-62	Ran 5-1/2" 20' off bottom- 4868-1/2"DLM=4876'SLM with Midget bottom hole packer-3 centralizers on pipe, R/L nipple 500' off bottom. Cemented with 75 sacks-pumped plug to 4,860'.						
SEE FRACTURING RECORD ON REVERSE SIDE							

Date January 8, 19 63

APPROVED Columbian Carbon Company, Owner

By W. S. Moore, Mgr. of Prod.
(Title)

Jan-10-38

FRACTURING RECORD ON GW-1381, R. M. GARNES, ET AL #1

FRACTURED THE BEREA

ran Baker RT 8 Packer on 3" tubing - set at 2009' in 8-5/8" casing. Fractured the Berea 8-3-62. Before fracturing gas gauged 21 MCF - show oil and salt water. Pumped in 1,500 gallons acid - displaced with 55 bbls. water. Loaded packer with 96 barrels water. Acid pressure went to 2300# - broke to 1700# - displaced at 1950# average. Broke down at 2300#. Pumped in 20,000 gallons water, 1 drum Tergitol, 22,500# sand at 2350# maximum, 2300# average. Average injection rate 18 bpm. Total fluid 21,420 gallons - Flush 2650# - 50 bbls. 10 minutes after shut down 1800#. Started sand at 1/2#/gallon - went to 1-1/2#/gallon maximum. Well making 76 bbls. salt water in 24 hours. Killed gas and cemented Berea with 100 sacks.

Operations shut down from 8-15-62 to 10-24-62.

FRACTURED THE ORISKANY 12-26-62

Pumped in 1,500 gallons acid - breakdown pressure 4050# - dropped to 4,000#. Started sand 1/4#/gallon - pumping time 12 minutes. Increased sand to 1/2#/gallon. Pumped in rest of treatment - 7 minutes pumping time for flush. Flushed with 125 bbls. Injection rate 17 bbls/minute. Used 10,000# 20-40 sand, 22,000 gallons water with sand, 500 gallons water for breakdown - minimum pressure 3850# - maximum 4050#.

Final open flow 12/10 M. 2" = 539 MCF
48 hour rock pressure 1810#.

