

New Location   
 Drill Deeper   
 Abandonment  issued 7/18/72

*Cities Service Oil Co.*

Company ~~Cities Service Oil Co.~~  
 Address Box 873, CHARLESTON, W.VA., 25329  
 Farm Woodruff Investment Co.  
 Tract Acres 59 Lease No. C-5748  
 Well (Farm) No. 1 Serial No. GW-1386  
 Elevation (Spirit Level) 588.91  
 Quadrangle RAVENSWOOD S-550 W-187  
 County JACKSON District UNION  
 Engineer *[Signature]*  
 Engineer's Registration No. 2074  
 File No. Drawing No. W-26-62  
 Date JULY 6, 1962 Scale 1" = 660'

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

WELL LOCATION MAP  
 FILE NO. JAC-1042-P

+ 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.

*Deep Well* JUL 31 1972

Latitude 38 ° 55

Longitude 81 ° 45

WOODRUFF INVESTMENT CO.

240 AC.  
PT. OF C-5748

WOODRUFF INVESTMENT CO.  
59 AC.

STONE PART OF 452 AC

Topo. Loc.

W.O. N82°00'W 958.98'  
1. GW-1386

S09°30'E 1008.48' 2

C-5748

S01°51'E 776.33' 2

WOODRUFF INVESTMENT CO.

WOODRUFF INVESTMENT CO.

Post

S21°00'E 495' 2

STK.

M. CUNNINGHAM

U.S. ROUTE

*5.50 S. 544S Salt sand 1444-1952  
1.83 W. 182-W B. Injin 1662-1802  
6 SC (H-4) Corniferous 4352  
Oriskany 4431-4463*

New Location   
Drill Deeper   
Abandonment

Company COLUMBIAN CARBON Co.

Address Box 873, CHARLESTON, W.VA.

Farm WOODRUFF INVESTMENT Co.

Tract PT. OF 452<sup>E</sup> Acres 59 Lease No. C-5748

Well (Farm) No. 1 Serial No. GW-1386

Elevation (Spirit Level) 588.91

Quadrangle RAVENSWOOD-EC S-550 W-187

County JACKSON District UNION

Engineer [Signature]

Engineer's Registration No. 2074

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DEPARTMENT OF MINES  
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CHARLESTON

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*5-5 0 extends*

*SAMPLES 400-4456 27 N 40*

*Deep Well Orisk. prod. from Jac. 796*



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 5

Quadrangle Ravenswood SW

Permit No. Jac-1042

WELL RECORD

Oil or Gas Well gas  
(KIND)

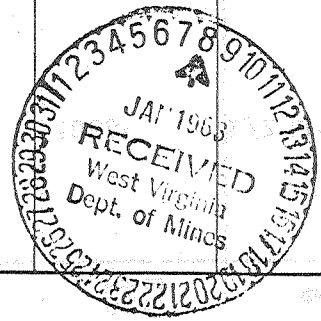
Company Columbian Carbon Company  
Address Box 873, Charleston 23, W. Va.  
Farm Woodruff Invest. Co Acres 452  
Location (waters) U. S. Route #33  
Well No. 1 - GW-1386 Elev. 588.91'  
District Union County Jackson  
The surface of tract is owned in fee by Woodruff Invest. Co.  
1009-15 Baltimore Ave Address Kansas City 5, Mo.  
Mineral rights are owned by same  
Address \_\_\_\_\_  
Drilling commenced 7-7-62  
Drilling completed 8-28-62  
Date Shot not shot From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_  
Open Flow 20/10ths Water in \_\_\_\_\_ 1 Inch  
\_\_\_\_\_/10ths Merc. in \_\_\_\_\_ Inch  
Volume 47,130 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#	59'	59'	Kind of Packer _____ none
18 3/8" 48#	387'5"	387'5"	Size of _____
10 3/4" 32#	868'4"	pulled	Depth set _____
8 1/2" 24#	1811'	1811'	Perf. top _____
6 3/4" _____			Perf. bottom _____
5 3/16" 14#	4452'2"	4452'2"	Perf. top _____
3" _____			Perf. bottom _____
2 3/8" 4.6#	4358'3"	4358'3"	
Liners Used	w/ 2" cage		

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
see reverse side  
COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

RESULT AFTER TREATMENT 10/10 W. 2" = 133 MCF - Oriskany  
ROCK PRESSURE AFTER TREATMENT 9 days 1070#  
Fresh Water 58-62' 102' Feet Salt Water 1060' 1485' Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand			0	48	F. water	58-62'	hole full
Gray Shale			48	126	F. water	102'	2 blr/hr.
Red Rock			126	136			
Lime			136	150			
Sand			150	166			
Red Rock			166	218			
Gray Shale			218	252			
Red Rock			252	285			
Gray Shale			285	305			
Red Rock			305	331			
Gray Shale			331	360			
Red Rock			360	385			
Shell			385	392			
Red Rock			392	396			
Shale and Shells			396	465			
Red Rock			465	510			
Gray Shale			510	578			
Red Rock			578	591			
Lime			591	605			
Red Rock			605	625			
Gray Shale			625	675			
Lime Shells			675	684			
Sand			684	686			
Lime and Shale			686	760			
Gray Shale			760	775			
Red Rock			775	795			
Sand			795	806			



Formation	Color	Hard or Soft	Top 5	Bottom	Oil, Gas or Water	Depth Found	Remarks
Gray Shale			806	875			
Sand			875	970			
Gray Shale			970	1050			
Sand - <i>Big Dunkard?</i>			1050	1168	S. water	1060'	1/2 blr/hr.
Gray Shale			1168	1180			
Sand			1180	1232			
Gray Shale			1232	1270			
Sand			1270	1277			
Gray Shale			1277	1337			
Sand - <i>Salt Sand?</i>			1337	1367			
Gray Shale			1367	1415			
Sand - <i>Salt Sand?</i>			1415	1430			
Gray Shale			1430	1444			
Sand - <i>Salt Sand?</i>			1444	1551	S. water	1485'	hole full
Gray Shale			1551	1552			
Lime - <i>Big line 3340</i>			1552	1650			
Gray Shale			1650	1662			
Big Injun Sand			1662	1778			
Gray Shale			1778	1780			
Sand - <i>Squaw</i>			1780	1801			
Gray Shale			1801	2130			
Black Shale - <i>Coffee Shale</i>			2130	2142			
Berea Sand			2142	2149			
Gray Shale			2149	3575	Gas	3230'	show
Brown Shale - <i>441</i>			3575	3665			
Gray Shale			3665	3680			
Brown Shale			3680	3820			
Gray Shale			3820	4218			
Brown Shale			4218	4363	4363'DLM=4342'SLM		
Corniferous Lime - <i>463</i>			4363 <i>4342</i>	4431	4430'DLM=4431'SLM		
Oriskany Sand			4431	4470	Gas	4441-44'	show
					Gas	4453' 20/10	W. 1"=47M
Total depth				4470'			
				<i>475</i>			
<b>CASING RECORD</b>							
7-12-62	Ran 13-3/8" casing at 370'DLM						
7-16-62	Ran 10-3/4" casing with shoe at 864'DLM.						
7-28-62	Ran 8-5/8" casing with shoe at 1709'DLM-set in 20' red mud-pulled and reran 8-2-62 at 1804'DLM with shoe.						
8-18-62	Ran 5-1/2" casing at 4412'SLM-cemented with 30 sacks. Ran with shoe.						
SEE FRACTURING RECORD ON ATTACHED SHEET.							

Date January 7, 19 63

APPROVED Columbian Carbon Company, Owner

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

*gac-1042*

FRACTURING RECORD ON GW-1386, WOODRUFF INVESTMENT CO. #1

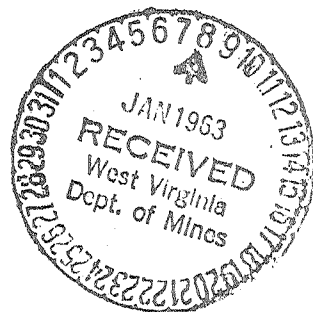
Before attempting to fracture Oriskany on 8-30-62 gas gauged 47 MCF. Loaded 5" casing and hole with 2,000 gallons acid. Pressured to 3100#. Let soak. Pressure dropped to 1500#. Pressured to 2600# - lost pressure -. went on vacuum. Gas blowing outside of 5". bailed - got some acid and frac sand.

Attempted to Fracture Oriskany 9-4-62

Ran Lynes packer on 3" - set in formation at 4421'. Pumped in 2,000 gallons acid - displaced - had 25 bbls. in formation at 3100#. Lost pressure - on vacuum. Pumped 15 minutes at average injection rate of 17 bbls/minute. Pressure went to 3,400#-started to get blow in 5" - came around packer. Tried to release packer-could not release. Tried to circulate around packer. Got circulation but could not move. Perforated top of packer and circulated freely down tubing and up 5" casing. Ran McCullough Free Point Indicator. Found tubing tight at 4,360' - free at 4,355'. Assume 5" collapsed around tubing 4355-60'. Ran cutter in 3" - would only go to 4,343' - 3" apparently collapsed below that point. Cut 3" tubing at 4,355'. Took 100,000# to pull 2 joints - Bailer only goes to 4,336' in 5".

Ran 2" tubing, cage on bottom 22'4" joint below cage with bull plug in bottom-cage at 4,313' - bottom of tubing at 4,335'.

Well dried up - final open flow 10/10 W. 2" = 133 MCF  
9 day rock pressure 1,070#



RECEIVED

001 25 1972

FORM OG-8

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

OIL & GAS  
REGISTRATION

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE MADE IN TRIPLICATE, ONE COPY MAILED TO THE DEPARTMENT, ONE COPY TO BE RETAINED BY THE WELL OPERATOR AND THE THIRD COPY (AND EXTRA COPIES IF REQUIRED) SHOULD BE MAILED TO EACH COAL OPERATOR AT THEIR RESPECTIVE ADDRESSES.

Woodruff Investment Company  
COAL OPERATOR OR OWNER (fee)  
% Davis W. Smith  
ADDRESS  
1203 W 70th Street  
Kansas City, Missouri 64113  
COAL OPERATOR OR OWNER  
ADDRESS  
LEASE OR PROPERTY OWNER  
ADDRESS

Cities Service Oil Company  
NAME OF WELL OPERATOR  
Box 873, Charleston, W. Va. 25323  
COMPLETE ADDRESS  
July 19, 19 72  
WELL AND LOCATION  
Union District  
Jackson County  
Well No. 1, GW-1386  
Woodruff Investment Co. Farm

STATE INSPECTOR SUPERVISING PLUGGING Fred Burdette, Sissonville, W. Va.

AFFIDAVIT

STATE OF WEST VIRGINIA,  
County of Jackson } ss:

Steve Duckworth and Leroy Prunty  
being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by Cities Service Oil Company well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 4th day of October, 19 72, and that the well was plugged and filled in the following manner:

SAND OR ZONE RECORD	FILLING MATERIAL	PLUGS USED	CASING	
			CSG PULLED	CSG LEFT IN
FORMATION	Filled hole with (6% Bentonite Mud)	SIZE & KIND	4358 of	2 inch
			3188'	961' of 5 "
	1170-11370 15 sacks	cement	1718	61' of 8 "
	2115-2205 7 sacks	cement	388 of	13 "
	2210-2190 7 sacks	cement		59' of 16 "
	1718-1728 10 sacks	cement		
	1010-1010 10 sacks	cement		
	1400-380 stone bridge	stone		
	280-260 0 sacks	cement		
	60 to surface 30 sacks	cement		
	Cement used 90 sacks			
	Amurcol used 20 sacks			
COAL SEAMS		DESCRIPTION OF MONUMENT		
(NAME)		4" x 15" casing inserted as		
(NAME)		prescribed by law		
(NAME)				
(NAME)				

and that the work of plugging and filling said well was completed on the 12th day of October, 19 72.

And further deponents saith not.

Sworn to and subscribed before me this 18th day of October, 1972.  
Josephine M. Chasonville  
Notary Public.

My commission expires: October 20, 1980

Permit No. TAC-10112-D