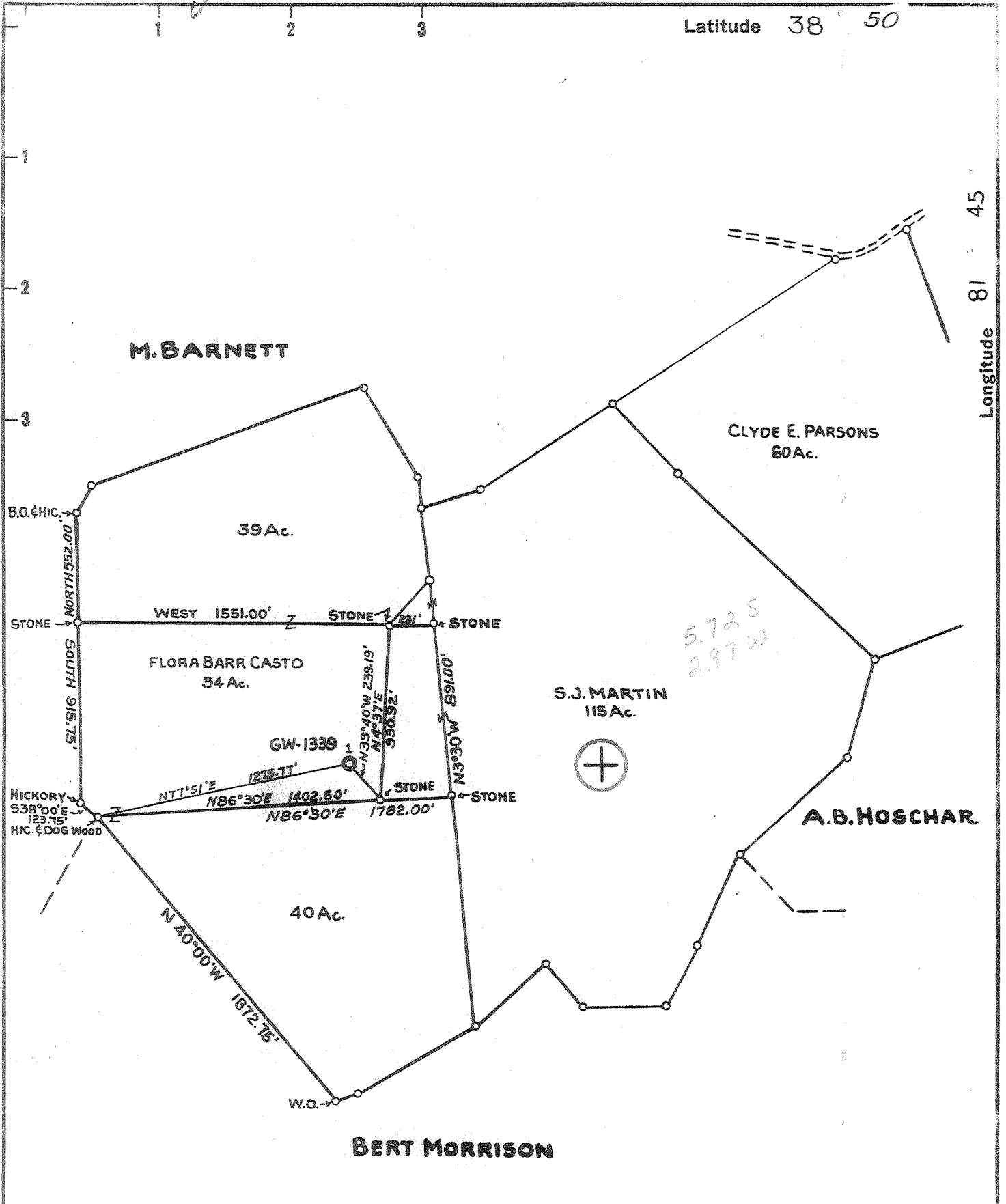


Latitude 38° 50'



New Location
 Drill Deeper
 Abandonment ISSUED 6/25/75

Company	<i>CITIES SERVICE OIL CO</i>
Address	<i>BOX 873 CHARLESTON W.VA. 25323</i>
Farm	<i>FLORA BARR CASTO ETAL</i>
Tract	Acres <i>288.00</i> Lease No. <i>CT-259</i>
Well (Farm) No.	<i>1</i> Serial No. <i>GW-1339</i>
Elevation (Spirit Level)	<i>749.50' SE</i>
Quadrangle	<i>RAVENSWOOD T 5-580 W-300</i>
County	<i>JACKSON</i> District <i>RIPLEY</i>
Engineer	<i>R. B. Morrison</i>
Engineer's Registration No.	<i>2074</i>
File No.	Drawing No. <i>W-10-61</i>
Date	<i>JUNE 23 1961</i> Scale <i>1" = 660'</i>

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

WELL LOCATION MAP
 FILE NO. *JAC-1024-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.

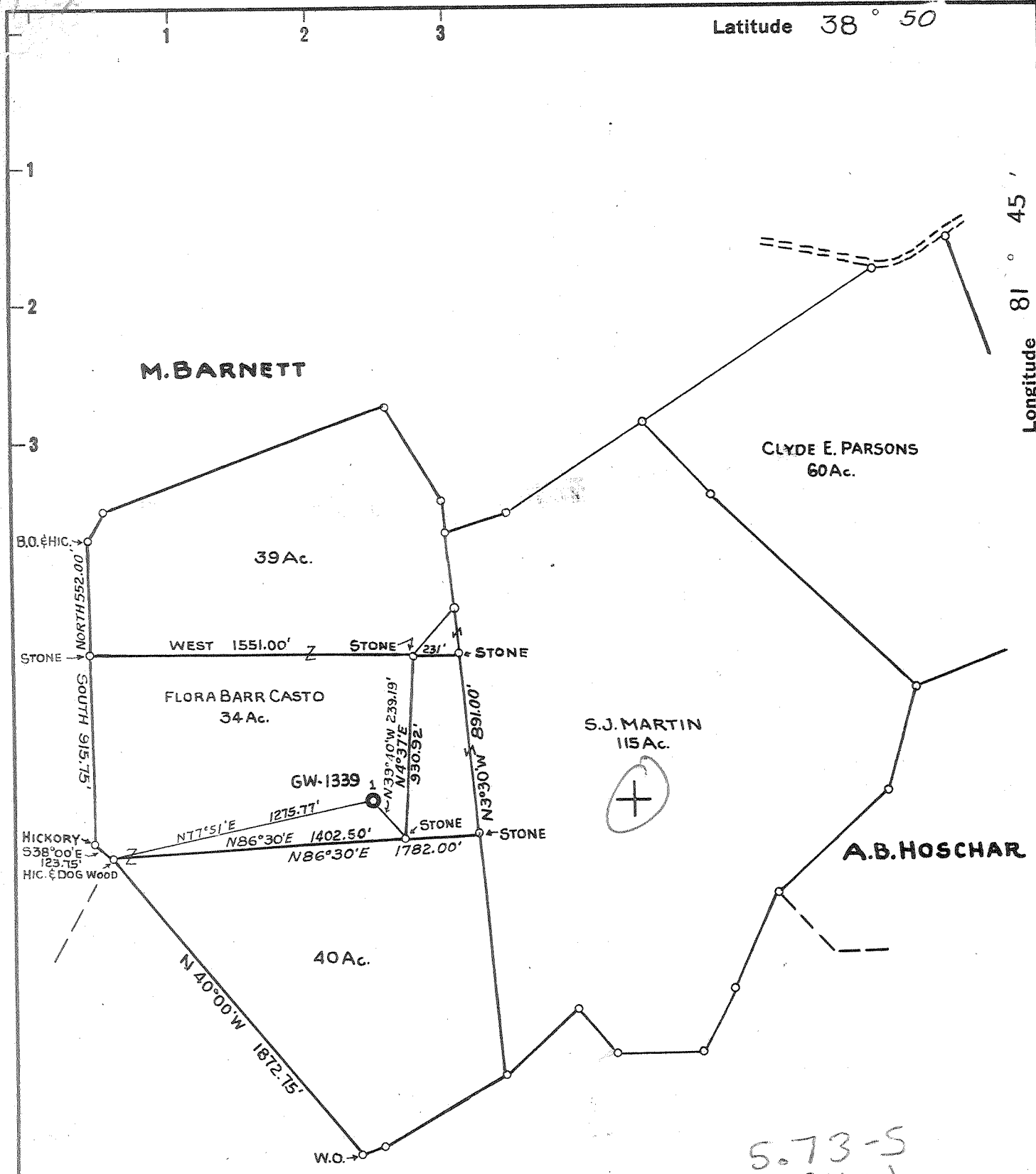
47-035

DEEP WELL

JUL 9 1975

Latitude 38° 50'

Longitude 81° 45'



- New Location
- Drill Deeper
- Abandonment

5.73-S
2.94-W
~~5.81-S 5.81-S~~
~~2.99-W 2.99-W~~
9-56 (11-4) 9

Company COLUMBIAN CARBON COMPANY

Address BOX 873 CHARLESTON W.VA.

Farm FLORA BARR CASTO ETAL

Tract _____ Acres 288.00 Lease No. CT-259

Well (Farm) No. 1 Serial No. GW-1339

Elevation (Spirit Level) 749.50'

Quadrangle RAVENSWOOD 7 5-580 W-300

County JACKSON District RIPLEY

Engineer _____

Engineer's Registration No. 2074

File No. _____ Drawing No. W-10-61

Date JUNE 23 1961 Scale 1" = 660'

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

WELL LOCATION MAP

FILE NO. JAC-1024

+ 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.

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

Quadrangle Ravenswood #7 SW

Permit No. Jac-1024

WELL RECORD

Oil or Gas Well Gas

Company Columbian Carbon Company, Operator

Address Box 873, Charleston 23, W. va.

Farm Flora Barr Casto, et al Acres 288

Location (waters) Thirteen Mile Creek

Well No. 1 - GW-1339 Elev. 749.50' G

District Ripley County Jackson

The surface of tract is owned in fee by Flora B. Casto

Rockcastle Address West Va.

Mineral rights are owned by Flora B. Casto, et al

(for further add. contact C. C. C.)

Drilling commenced 7-19-61

Drilling completed 9-28-61

Date Shot not shot From _____ To _____

With _____

Open Flow 4/10ths Water in _____ 2 Inch

_____/10ths Merc. in _____ Inch

Volume 84,000 Cu. Ft.

Rock Pressure 1910 lbs. 36 hrs.

Oil _____ bbls., 1st 24 hrs.

WELL ACIDIZED not acidized

WELL FRACTURED see reverse side

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16" 65#	50'7"	50'7"	Kind of Packer none
13 3/8" 48#	683'	683'	
10 3/4" 40.5#	1218'1"	pulled	Size of
8 1/4" 24#	2162'6"	pulled	
8 3/4" 23#	4739'6"	4739'6"	Depth set
5 3/16			
3			Perf. top
2 3/8" 4.6#	4825'6"	4825'6"	
Liners Used w/ cage on bottom			Perf. bottom
			Perf. top
			Perf. bottom

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

COAL WAS ENCOUNTERED AT 599 FEET 24 INCHES
____ FEET _____ INCHES _____ FEET _____ INCHES
____ FEET _____ INCHES _____ FEET _____ INCHES

RESULT AFTER TREATMENT 16/10 M. 2" = 622,000 cubic feet

ROCK PRESSURE AFTER TREATMENT 84 hours 1300#

Fresh Water _____ Feet _____ Salt Water 1125' 1185' 1340' Feet 1745'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sandstone			0	40			
Red Rock			40	50			
Sand			50	75			
Red Rock			75	85			
Shale and Shells			85	155			
Red Shale			155	215			
Grey Shale			215	227			
Sand			227	233			
Red Rock			233	265			
Grey Shale			265	447			
Sand			447	470			
Shale			470	553			
Sand - <u>1 1/2" Rk Ss?</u>			553	583			
Shale			583	599			
Coal			599	601			
Grey Shale			601	851			
Red Rock			851	901			
Shale			901	912			
Red Rock			912	915			
Grey Shale			915	956			
Shale and Shells			956	1060			
Grey Shale			1060	1090			
Sand - <u>Big Sand?</u>			1090	1197	S. Water	1125'	2 blrs/hr.
Shale			1197	1250	S. Water	1185'	5 blrs/hr.
Sand - <u>Small Sand? Gas Sand?</u>			1250	1372	S. Water	1340'	1 blr/hr.
Grey Shale			1372	1407			
Sand - <u>Small Sand?</u>			1407	1455			

Formation	Color	Hard or Soft	Top //	Bottom	Oil, Gas or Water	Depth Found	Remarks
Grey Shale			1455	1610			
Sand - Salt	Sand?		1610	1675			
Grey Shale			1675	1690			
Sand - Salt	Sand?		1690	1715			
Grey Shale			1715	1728			
Sand - Salt	Sand?		1728	1808	S. water	1745'	hole full
Lime - Big	lime?		1808	1911			
Shale			1911	1948			
White Shale			1948	1988			
Grey Shale			1988	2120			
Blue Shale			2120	2130			
Sand - Lajun?			2130	2244	2167'DLM=2149'SLM		
Grey Shale			2244	2420			
Brown Shale - Sinter	Shale?		2420	2450			
Grey Shale			2450	3674	Gas	3600'	show
Brown Shale - 441			3674	3719			
Grey shale			3719	3891			
Brown Shale	Huron		3891	4139			
Grey Shale			4139	4490			
Brown Shale	Rhineshat		4490	4695	Gas pays		
Lime - Hunterville		-463	4695	4806	4806' 40/10 W. 1" = 67 MCF		
Oriskany Sand			4806	4821	4807-10' incr. to 20/10 W. 2"=189M		
Lime - Helderberg			4821	4846			
Total depth-----				4846'DLM			
				= 4827'SLM			

485

FRACTURING RECORD

Fractured the Oriskany Sand 10-2 and 10-3-61. Before fracing gas gauged 84 MCF-36' hour rock pressure 1910#. On 10-2 pumped in 500 gallons mud acid-loaded tubing-broke down at 4100#. Pressure started increasing-went as high as pump would go-could not get it to break. Shut down for truck with higher pressure heads. On 10-3-61 broke down at 4600#-pressure dropped to 4400#. Started 1/4# sand-went to 4600#. Hold at 4600# at 1/4# - 1/2# - 3/4# - went to 1#-pressure went to 5,000# for entire sand. Flushed at 5,000# - time 30 minutes. Used 600 barrels water, 8,500# sand, 2 drums TMN. Injection rate 17 bpm. 10 minutes after shut down 3300#. Final open flow 16/10 M. 2" = 622 MCF.

4695 4806 4821

CASING RECORD

- 7-21-61 - Ran 16" drive pipe at 50'DLM.
- 7-28-61 - Ran 13-3/8" casing with shoe at 651'DLM-6 sacks Gel-no circulation.
- 8-6-61 - Ran 10-3/4" casing with shoe at 1211'DLM-10 sacks Aquagel-good circulation.
- 8-24-61 - Ran 8-5/8" casing with shoe at 2149'SLM-gelled with 9 sacks.
- 9-15-61 - Ran 7" casing at 4709'DLM with shoe-15 sacks Aquagel-35 sacks sealment.

Date October 18, 19 61

APPROVED Columbian Carbon Company, Oper., Owner

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