

Company CITIES SERVICE OIL COMPANY

Address BOX 873 CHARLESTON, W.V.A.

Farm L.E. MULLENAX, ET AL  
PART OF 640<sup>a</sup>

Tract Acres 84 Lease No. WU-219

Well (Farm) No. A-1 Serial No. GW-1611

Elevation (Spirit Level) 1757.56

Quadrangle PARSONS

County TUCKER District ST. GEORGE

Engineer Wm Mathews

Engineer's Registration No. 5811

File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

Date JUNE 3, 1971 Scale 1" = 400'

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

**WELL LOCATION MAP**

FILE NO. TUC-38-P

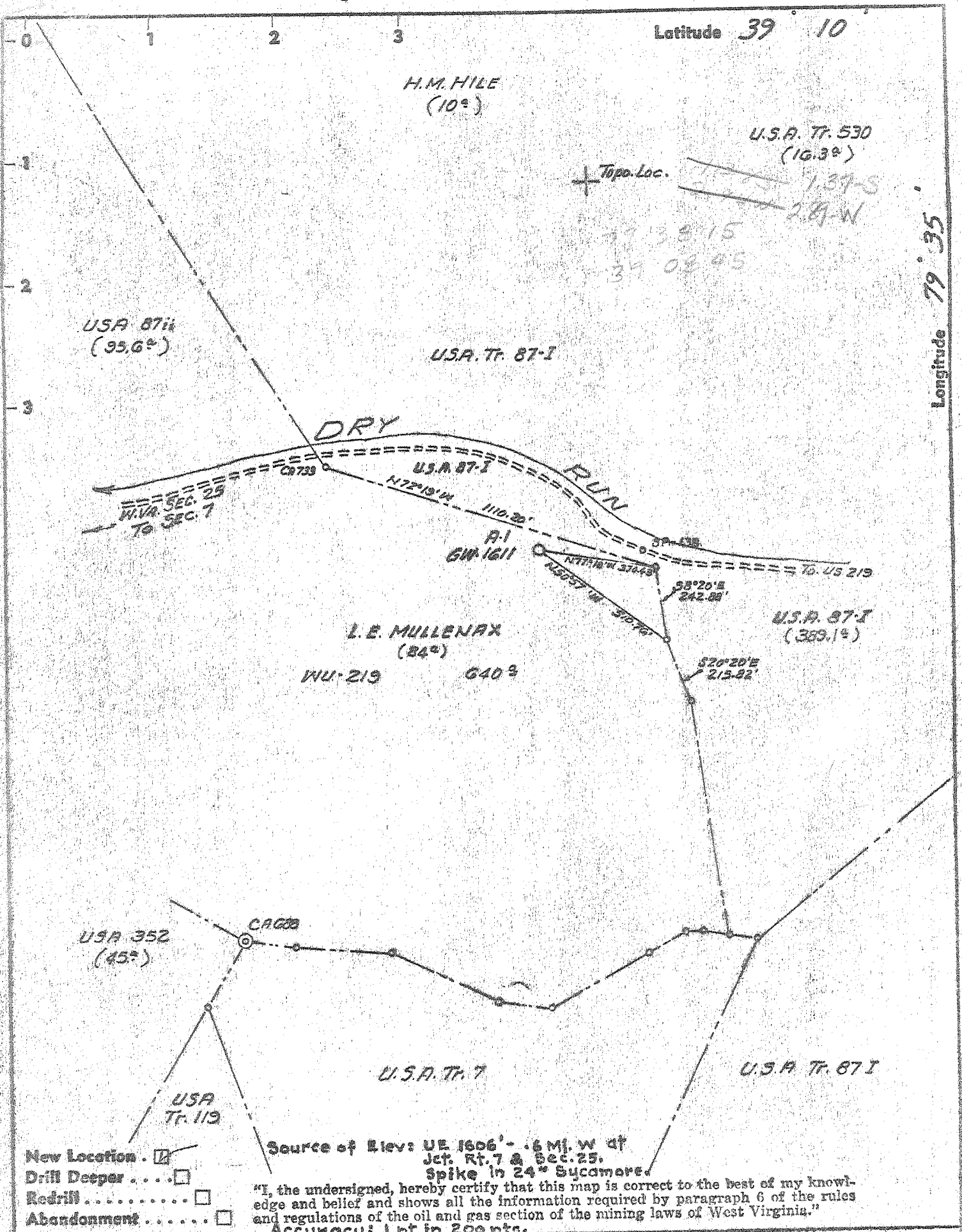
P 10/20/75

+ 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.

MAY 20 1985

47-093 688



- New Location
- Drill Deeper
- Redrill
- Abandonment

Source of Elev: UE 1506' - .6 Mi. W of Jct. Rt. 7 & Sec. 25. Spike in 24" Sycamore.

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."

Accuracy: 1 pt in 200 ft.

Company	CITIES SERVICE OIL COMPANY	
Address	BOX 873 CHARLESTON, W.V.A.	
Form	L. E. MULLENAX, ET AL PART OF G40 <sup>2</sup>	
Tract	Acres	Lease No.
	84	WU-219
Well (Farm) No.	A-1	Serial No. GW-1611
Elevation (Spirit Level)	1757.56	
Quadrangle	PARSONS	
County	TUCKER	District ST. GEORGE
Engineer	W. Mathews	
Engineer's Registration No.	5911	
File No.	Drawing No.	
Date	JUNE 3, 1971	Scale 1" = 400'

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

**WELL LOCATION MAP**  
FILE NO. TUC-38

+ 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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Sheet one of two  
(3 sides)

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS WELLS DIVISION 15

- Rotary
- Spudder
- Cable Tools
- Storage

Quadrangle Parsons  
Permit No. TUC-38

WELL RECORD

Oil or Gas Well Gas  
(KIND)

Company	Casing and Tubing	Used in Drilling depth set	Left in Well	Packers
Cities Service Oil Company	Size			Kind of Packer
Address Box 873, Charleston, W. Va. 25323	16			
Farm L. E. Mullenax, et al Acres 640	13 3/8 48#	165'	all	Size of
Location (waters) Dry Run	10			Depth set
Well No. "A" #1, GW-1611 KB Elev. 1766.56	<del>9-5/8"</del> 32.3#	1265'	all	Perf. top
District St. George County Tucker	<del>7"</del> 23#	4265'	all	Perf. bottom
The surface of tract is owned in fee by L. E. Mullenax	5 3/16			Perf. top
Route #2 Address Parsons, W. Va.	4 1/2 11.6#	6533'	all	Perf. bottom
Mineral rights are owned by L. E. Mullenax, et al (for further add. contact Cities Service)	3			
Drilling commenced 6-30-71	2			
Drilling completed 11-11-71	Liners Used			
Date Shot not shot From To				
With				

Attach copy of cementing record.

CASING CEMENTED SIZE No. Ft. Date

Amount of cement used (bags)

Name of Service Co. See reverse side

COAL WAS ENCOUNTERED AT FEET INCHES FEET INCHES FEET INCHES

WELL ACIDIZED (DETAILS) See reverse side

WELL FRACTURED (DETAILS) See reverse side

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 4 Point Absolute OF 24.8 MMCF/D

ROCK PRESSURE AFTER TREATMENT 2,645 psig HOURS 72 Hr. S.I.

Fresh Water 615' hole wet Feet Salt Water Feet

Producing Sand Depth

24,800 Mcf

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Soil			0	15			
Slate & Shells			15	2320			
Broken Sand			2320	2450			
S&S			2450	2655			
Sand			2655	2672			
S&S			2672	3120			
Dark Shale			3120	3144			
Sand			3144	3155			
S&S			3155	3380			
Sandy Shale			3380	3450			
Shale			3450	3462			
Shaley Sand			3462	3541			
Tioga Metabentonite			3541	3571	5472	3541	
Onondaga Limestone			3571	3594	1767	1767	
Onondaga Chert			3594	3722	3705	1774	
Needmore Shale			3722	3740			
Oriskany Sand			3740	3860			
Limestone - H			3860	4282			
Sand & Limestone - H			4282	4455			
Dolomite T			4455	4710			
Limestone, Shale, Siltstone & Sand T-UC			4710	5040			
Dolomite, Limestone, Shale & Siltstone Wc			5040	5210			
Limestone, Shale & Sand - Mck			5210	5472			
Rose Hill			5472	6455			
Upper Tuscarora			6455	6612			
Lower Tuscarora			6612	T.D. 6708'			

515

2940  
1767  
1973  
455  
1767  
4688

Tue 38

Formation	Color	Hard or Soft	Top / S	Bottom	Oil, Gas or Water	Depth Found	Remarks
<u>Casing Record</u>							
7-1-71	Ran 13-3/8" casing. Set and cemented 13-3/8" 48# H-40 new casing at 165' with 110 sacks of regular cement with 4% Ca Cl. Cement circulated to surface.						
7-9-71	Set and cemented 9-5/8" 32.3# H-40 new casing at 1,265' with 238 sacks. Pozmix followed by 100 sacks regular cement with 2% Ca Cl. Cement circulated to surface. Pumped 50 bbls. 6% gel with loss circulation material ahead of cement. Good circulation of gel.						
8-1-71	Set and cemented 7" 23# K-55 new casing at 4,265' with 95 sacks of 50-50 Pozmix with 10% salt. Pumped 500 gallons mud flush ahead of cement. Cents. at 4,233', 4009', 3,788' and 3,627'						
11-4-71	Set and cemented 4-1/2" 11.6# N-80 new casing at 6,533 with 75 sacks 50-50 Pozmix with 10% salt. Pumped 500 gallons mud flush ahead of cement. Hole did not circulate while cementing. Casing tally to T.D. equals 6,533'. Insert at 6,501', 6,439', 6,379', 6,317', 6,253', 6,192', 6,129', 6,067', 6,005' and 5,945'						
7-31-71	Ran Schlumberger GR, Sonic, Caliper and Dual Induction Logs. Top of Onondaga 3,594' and Oriskany sand, 3,740' to 3,860' - Loggers T.D. 4,260'						
8-7-71	Ran Cement bond log. Log indicates good to fair bonding 4,255' to indicated top of cement at 4,000'						
9-28-71	Ran Schlumberger GR log. Drillers T.D. 5,860', Loggers T.D. 5,857'						
10-6-71	Ran Schlumberger GR inside of D.P. to 6,208'. Top of Rosehill Shale 5,972'						
11-11-71	Ran Schlumberger GR, Neutron and Sonic Variable Density logs. Loggers T.D. 6,528' Drillers T.D. 6,534'. Cement Bond from Sonic Variable Density. Log indicates fair to good bond from 6,522' to 6,438', fair to poor bonding from 5,780' to indicated top of cement at 5,750'. Top Upper Tuscarora by logs 6,455' - good bonding 6,438' to 6,226', poor to fair 6,226' to 5,906', good bonding 5,906' to 5,789', fair to good 5,789' to 5,750' - poor bonding to indicated top of cement at 5,750'						
11-17-71	Mud Logging Unit indicated show of <u>gas at 6,591'</u> with 5 units - dropped back to 0 units.						
11-18-71	Mud logging unit indicated 6 units of gas during trip. 8 units of <u>gas show 6606-07'</u> dropped to 0 units						
11-23-71	Logging Unit indicated 8 units of <u>gas 6628' - 30'</u> and 8 units of <u>gas 6631-32'</u> .						
11-26-71	Ran Schlumberger GR and Neutron Logs. Depth reached by Logger 6,634' BHT 155° Top of Lower Tuscarora 6,612' from logs.						
12-17-71	Ran Schlumberger electric logs - IRTJ Induction, GR-Neutron and GR-Density Logs. Loggers T.D. 6,708', Drillers T.D. 6,705' BHT 150°						
11-2-71	Ran DST #1 to test Tuscarora Sand. <u>Tested 6,446 to 6,533-87'</u> - tool open 30 minutes and closed 60 minutes						
11-27-71	Ran DST #2. Set packer at 6,454'. 4-1/2" casing point 6,533'. <u>Tested open hole 6,533 to 6,634'</u> . Tool open 1 hour and closed 1 hour. Open 5 hours and closed 1 hour. Tool opened with a good blow. Gas and Salt water to surface in 15 minutes. Gas gauged 2,000 MCFD. Water estimated 3 b/m at end of 3 hours and 4 b/m at end of 5 hours. Recovered 600' of saltwater.						

Date February 3, 1972

APPROVED L. D. Todd, Owner  
 By L. D. Todd, Region Manager, Production Division  
 (Title)

Formation	Color	Hard or Soft	Top 15 A	Bottom	Oil, Gas or Water	Depth Found	Remarks
-7-71							Ran DST #3. Set packer at 6,450', 4½" casing point 6,533'. Tested open hole 6,533' to 6,705' Upper and Lower Tuscarora Sand. Tool open 1 hour - closed 1 hour. Open 15 hours - tool opened with a good blow. Gas and drilling water to surface in 7 minutes - gas gauging 4,378 MCF end of 1st hour's flow. Gas wet. Tool S.I. and opened for 2nd flow. Gas gauged 4,632 MCF after one hour of 2nd flow. Gas gauged 4,795 MCFD after 5 hours of 2nd flow and 450# on DP. Gas flowing with rest of fluid. Gas gauging 4,875 MCFD after 15 hours of 2nd flow with 450# on DP. <u>Gas Dry.</u>
-8-71							Completed DST #3 - tool open 17 hours after 2nd flow - gas gauging 4,875 MCFD. After flowing 15 hours 450# on DP. <u>Gas dry.</u> Closed tool for 3 hours for BHP
-9-71							Ran 6,701' of 2-3/8" 4.7# N-80 new tubing with Halliburton RTTS Packer. Set packer at 6,460'. Used 251' of tubing as tail pipe.
-10-71							Set Halliburton Packer at 6,450' and <u>acidized Upper and Lower Tuscarora Sand</u> with 2,000 gallons 20% penetrating acid. Pumped into formation at 2,000 psi. Maximum treating pressure 3,000#. Average treating pressure 2,900 psi. AIR 3 bbl/min. Well on vacuum immediately after treatment. Set 2-3/8" 4.7# N-80 new tubing at 6,681' with packer blanking plug. Set tree and pumped out blanking plug. <u>Gas dry after flowing 5 hours. Estimated open flow 18 MMCFD.</u>
							6446-6533 6591-6632

RECEIVED  
FEB 1 1972

Date \_\_\_\_\_, 19\_\_\_\_

APPROVED \_\_\_\_\_, Owner

By \_\_\_\_\_ (Title)

FEB 15 1972

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

**RECEIVED**  
NOV 6 - 1985

DIVISION OF OIL & GAS  
**DEPT. OF ENERGY**  
AFFIDAVIT OF PLUGGING AND FILLING

AFFIDAVIT SHOULD BE MADE IN TRIPPLICATE, 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.

None  
COAL OPERATOR OR OWNER

None  
ADDRESS

L. E. Mullenax, RFD 2, Parsons, WV 26287  
LEASE OR PROPERTY OWNER

John W. Hazel, U.S. Forest Service,  
P. O. Box 368, Parsons, WV 26287  
ADDRESS

Cities Service Oil and Gas Corporation  
NAME OF WELL OPERATOR

P. O. Box 873, Charleston, WV 25323  
COMPLETE ADDRESS

June 28, 1985  
WELL AND LOCATION

St. George District

Tucker County

Well No. Mullenax, etal "A" #1, GW-1611  
L. E. Mullenax, et al Farm

STATE INSPECTOR SUPERVISING PLUGGING Phillip Tracy, Elkins, WV 26241, 636-8798

**AFFIDAVIT**

STATE OF WEST VIRGINIA,  
County of Tucker } ss.:

Mark Schumaker and James Risner  
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 Tri-State Well Service, Inc., well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 25th day of June, 19 85, and that the well was plugged and filled in the following manner:

SAND OR ZONE RECORD FORMATION	FILLING MATERIAL	PLUGS USED SIZE & KIND	CASING	
			CSG PULLED	CSG LEFT IN
6708' to 5283'	Gelled hole w/6% gel. 115 sx RFC cement	425'		
	Cmtd in 2-3/8" 4.7# N-80 Tbg @ 5 1/2" 11.6# N-80 csg	153'	5137'	1528'
4329' to 4229'	26 sx reg cement 7" 23# K-55 csg	100'	3161'	1396'
3180' to 3086'	40 sx reg cement	96'		
3060' to 2910'	60 sx gas check cement 9-5/8" 32.3# H-40 csg		0'	1265'
1350' to 1200'	60 sx gas check cement			
1187' to 1186'	Baker Model 6AA cast iron bridge plug 9-5/8"			
1186' to 1178'	Setting tool for bridge plug lost in hole (fish) (Tool lost due to part in 9-5/8" csg @ 1149' KB)		could not recover.	
1065' to 915'	60 sx reg cement w/1% flac			
900' to 899'	Baker Model K-1 cement retainer			
890' to 690'	80 sx reg cement w/1% flac			
100' to Surface	50 sx reg cement w/1% flac			
(NAME)			DESCRIPTION OF MONUMENT	
(NAME)			Stainless steel plate welded on 9-5/8" csg	
(NAME)			inscribed w/Mullenax ETAL A#1, GW 1611	
(NAME)			CSOGC API 47 093 38 P & A 6-25-85. Replugged 10-29-85.	

and that the work of plugging and filling said well was completed on the 6th day of June, 19 85.  
Plugged 6-25-85  
Replugged 10-29-85

And further deponents saith not.

Sworn to and subscribed before me this 10 day of Oct, 19 85.

My commission expires:

June 1, 1989

Mark Schumaker U.P., Contractor  
James L. Risner, Company Supervisor  
Donald J. Bay, Notary Public.  
Permit No. 47-093-00038