

NOTE - ELEVATION TAKEN FROM U.S.G.S. "82J" ELEVATION 825.80' ABOUT 2.1 MILES SE ALONG STATE HIGHWAY 18 FROM JUNCTION U.S.50 AT WEST UNION, 18' WEST OF E RT. 18, IN TOP OF THE ROCK WING WALL AT THE SE CORNER OF A 15' CONCRETE BRIDGE. A STANDARD TABLET STAMPED "34 JEA" 82J" 1962

THE ACCURACY OF THIS SURVEY IS WITHIN THE LIMITS PRESCRIBED BY THE OIL AND GAS DIVISION OF THE DEPARTMENT OF MINES.

New Location   
 Drill Deeper   
 Abandonment

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.

Company CITIES SERVICE OIL Co.  
 Address Box 873 CHARLESTON, W. VA.  
 Farm LEWIS MAXWELL "D"  
 PART OF 1882 AC  
 Tract \_\_\_\_\_ Acres 640 Lease No. CFWV-909  
 Well (Farm) No. F-24 Serial No. GW-1486  
 Elevation (Spirit Level) 788.89'  
 Quadrangle WEST UNION-7 5371 W-037 <sup>SE</sup>  
 County DODDRIDGE District WEST UNION  
 Engineer Wendell S Moore  
 Engineer's Registration No. 2113  
 File No. \_\_\_\_\_ Drawing No. W-10-64  
 Date 5 MARCH 64 Scale 1" = 1000'

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

WELL LOCATION MAP  
 FILE NO. Dod-1105

+ Denotes location of well on United States Topographic Maps, scale 1 to 62500 latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

Sampler 1400 - 1730 6-6-99



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 6

Rotary   
Spudder   
Cable Tools   
Storage

Oil or Gas Well Gas  
(KIND)

WELL RECORD

West union 7 SW

No. DOD-1105

any Cities Service Oil Company  
Address P. O. Box 873, Charleston 23, W. Va.  
Farm Lewis Maxwell, et al "D" Acres 640  
Location (waters) Bluestone Creek  
Well No. F-24, GW-1486 Elev. 790.55'  
District West Union County Doddridge

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
18			<u>Anchor Packer</u>
10 3/4" 32#	63'	63'	Size of <u>4-1/2"</u>
8 1/4" 24#	331'	none	Depth set <u>571'</u>
7" 23#	833'	833'	
4-1/2" 9.5#	1745'	1745'	
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

The surface of tract is owned in fee by Leeman Maxwell III  
Address West Union, W. Va.  
Mineral rights are owned by Mrs. Grace Gaylord, et al  
for further add. contact C. S. O. Co  
Address \_\_\_\_\_

Drilling commenced 5-20-64  
Drilling completed 6-17-64  
Date Shot not shot From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_  
Open Flow /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch  
Volume 146 M Cu. Ft.  
Rock Pressure 540 lbs. 48 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

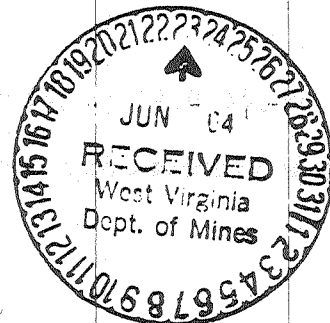
WELL FRACTURED see reverse side

RESULT AFTER TREATMENT 58/10 M. 4" = 4,714 MCF (Big Injun)

ROCK PRESSURE AFTER TREATMENT 48 hours 425#

Fresh Water 28' Feet Salt Water 538' Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Top Soil			0	20			
Gritty Lime			20	30	F. water	28'	hole full
Slate and Shells			30	95			
Red Rock			95	110			
Slate and Shells			110	209			
Gritty Lime			209	235			
Slate and Shells			235	285			
Red Rock			285	325			
Lime			325	345			
Slate			345	355			
Slate and Shells			355	410			
Red Rock			410	415			
Slate and Shells			415	454			
Sand			454	490			
Slate and Shells			490	530			
Sand			530	562	S. water	538'	2 blrs/hr.
Slate and Shells			562	818			
Gritty Lime			818	838			
Sand			838	930			
Slate and Shells			930	1000			
Sand			1000	1065			
Slate and Shells			1065	1105			
Sand			1105	1199			
Slate and Shells			1199	1270			
Sand			1270	1317	Gas	1275'	84M
Slate and Shells			1317	1455	Gas	1295'	381M blew down
Lime			1455	1480			146 MCF



Formation	Color	Hard or Soft	Top 6	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate and Shells			1480	1495	Oil	1500-1510'	
Lime			1495	1500			
Slate			1500	1510			Temperature log showed gas:
Big Lime			1510	1580		1590-92'	
Big Injun			1580	1685		1595-99'	
Slate and Shells			1685	1730		1618-22'	
						1626-34'	
Total depth-----				1730'DLM=		1638-42'	
				1734'Schl. Meas.		1670-72'	
Plugged back depth-----				1715'		1682-85'	
Schlumberger showed:							
Big Lime			1506	1585			
Big Injun			1585	1688			
6-8-64 Ran Logs: Schlumberger - Induction, Density, Gamma Ray, Temperature & Caliper							
Perforated 1590-92'-- 1595-99' -- 1618-22' -- 1626-34' -- 1638-42' -- 1670-72' -- 1682-85' -- all 2 shots/foot							
<b>FRACTURED THE BIG INJUN 6-15-64</b>							
Pumped in 500 gallons MCA, 2,000 gallons regular acid. Broke down with 48 bbls. water and 50 perf balls at 1,000# pressure. No change in pressure. Injected 615 bbls. water with 56,000# 20-40 sand. Maximum pressure 2,000# - minimum pressure 1,700#. Injection rate 43.9 bbls/minute. Average pressure 1875#. Maximum sand concentration 4#/gallon. Injected 24 balls at one half of treatment. No change in pressure. Used 100,000 SCF of Nitrogen. Pumping time 14 minutes - open ed well.							
Final open flow 58/10 M. 4" = 4,714 MCF							
<u>Casing record</u>							
5-25-64	Ran 8-5/8" at 328'DLM - set in 20' red mud. Pulled later.						
5-28-64	Ran 7" at 824'DLM with shoe - 20' red mud - R/L nipple 3 joints up.						
6-10-64	Ran 4-1/2" 9.5# casing at T. D. with packer set at 1571' and shoe on bottom, R/L nipple at 1,306'. Float insert at 1702' - 3 centralizers on 1st, 4th and 7th joints. Cemented with 33 sacks Hi Early Cement - plug to 1702' - set pipe down. Filled and shut in.						

Date June 22, 1964

APPROVED Cities Service Oil Company, Owner  
*W. S. Moore*  
 By W. S. Moore, Division Sup't  
 (Title)