

NOTE - ELEVATION TAKEN FROM UE "1251"

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

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.

New Location
 Drill Deeper
 Abandonment

Company CITIES SERVICE OIL COMPANY
 Address Box 873, CHARLESTON, W.VA.
 Farm LEWIS MAXWELL "C"
 Tract PART OF 1500AC Acres 307 Lease No. 1-11-47-00905
 Well (Farm) No. C-20 Serial No. GW-1533
 Elevation (Spirit Level) 1131.64
 Quadrangle VADIS-3 5009 W-412
 County DODDRIDGE District NEW MILTON
 Miner Wendell Moore
 Registration No. 2113
 Drawing No. W-10-65
 RCH 65 Scale 1" = 300'

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

WELL LOCATION MAP
 FILE NO. DOD-1230

+ 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.

6-6-99



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

Rotary
Spudder
Cable Tools
Storage

Quadrangle Vadis 3 SW

Permit No. Dod-1230

WELL RECORD

Oil or Gas Well gas
(KIND)

Company Cities Service Oil Company
Address P. O. Box 873, Charleston, W. Va. 25323
Farm Lewis Maxwell Acres 307
Location (waters) Ridge Road
Well No. "C"-20, GW-1533 Elev. 1131.64'
District New Milton County Doddridge
The surface of tract is owned in fee by Robert Maxwell
Star Route 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 4-14-65
Drilling completed 5-7-65
Date Shot not shot From To
With

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			<u>none</u>
13			Size of
10 <u>3/4" 32#</u>	<u>47'</u>	<u>47'</u>	Depth set
<u>8 1/4" 24#</u>	<u>752'</u>	<u>752'</u>	
<u>7" 23#</u>	<u>1134'</u>	<u>1134'</u>	
<u>5 3/16</u>			Perf. top
<u>4 1/2" 9.5#</u>	<u>1996'</u>	<u>1996'</u>	Perf. bottom
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

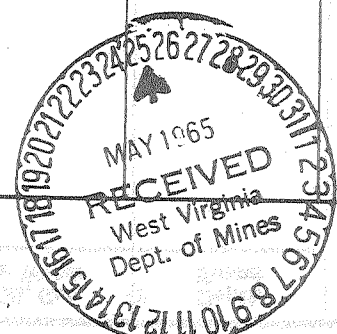
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume show gas Cu. Ft.
Rock Pressure lbs. hrs.
Oil bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) see attached sheet
WELL FRACTURED (DETAILS) see attached sheet

Attach copy of cementing record.
CASING CEMENTED SIZE No. Ft. Date
Amount of cement used (bags) see reverse side
Name of Service Co.
COAL WAS ENCOUNTERED AT none FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 10/10 M, 2" = 492M (246M Big Lime-246M Big Injun)
ROCK PRESSURE AFTER TREATMENT 96 HOURS 505#
Fresh Water 130' 373' Feet Salt Water Feet
Producing Sand Big Lime and Big Injun Depth B. L. 1770-1836', B. I. 1836-1905'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Top Soil			0	10			
Lime			10	20			
Red Rock			20	24			
Slate			24	33			
Red Rock			33	37			
Sand			37	57			
Red Rock			57	77			
Sand			77	122			
Slate			122	147	F. water	130'	2 blrs/hr.
Red Rock & Slate			147	163			
Lime			163	196			
Red Rock			196	232			
Sand			232	318			
Slate			318	327			
Red Rock			327	335			
Slate			335	346			
Red Rock			346	355			
Slate			355	364			
Broken Lime			364	395	F. water	373'	hole full
Black Slate			395	402			
Lime			402	420			
Slate and Shells			420	480			
Lime			480	535			
Red Rock			535	549			
Lime			549	560			
Slate			560	588			
Red Rock and Slate			588	646			

(over)



Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks	
Lime			646	664				
Red Rock			664	676				
Slate			676	731				
Lime			731	759				
Red Rock			759	800				
Slate			800	830				
Red Rock			830	840				
Slate and Shells			840	930				
Sand			930	945				
Slate			945	996				
Sand			996	1025				
Lime			1025	1035				
Slate and Shells			1035	1060				
Sand			1060	1148				
Slate and Shells			1148	1254				
Sand			1254	1356				
Slate			1356	1410				
Sand			1410	1420				
Slate and Shells			1420	1450				
Lime			1450	1470	Gas	1455'	show	
Slate			1470	1495				
Sand			1495	1535				
Slate and Shells			1535	1573				
Lime			1573	1590				
Slate and Shells			1590	1670				
Lime			1670	1702				
Slate and Shells			1702	1736				
Sand			1736	1770	Gas	1769-74'	55M-blew down to 29M	
Big Lime			1770	1825			incr. to 36M	
Big Injun Sand			1825	1895			incr. to 63M	
Slate and Shells			1895	1972	Oil	1855-65' 1878-93' 1831-36' 1878-85')	slight show	
Total depth	-----				1972' Drillers' Meas. 1985' Schl. Meas.			
Schlumberger Log showed:								
Big Lime			1770	1836	Perf. Big Lime 1767-1770'-1773-76'			
Big Injun			1836	1905	Perf. Big Inj. 1841-48'--1894-97'			
<u>CASING RECORD</u>								
4-24-65	Set 8-5/8" 2-7 casing at 146' in 20' red mud with shoe. Did not cement.							
4-27-65	Set 7" 23# casing with shoe at 1125' in 20' red mud-did not cement. Pulled later.							
5-7-65	Set 4-1/2" 9.5# J-55 casing with shoe at 1985' Schl. Meas. Cemented with 45 sacks regular cement with 2% calcium and friction reducer. Pumped plug to 1953', Centralizers 1953', 1921' and 1825'-R/L nipple at 1474'							
See additional information on attached sheet								

Date _____, 19____

APPROVED _____, Owner

By _____ (Title)

Formation	Color	Hard or Soft	Top / A	Bottom	Oil, Gas or Water	Depth Found	Remarks
<u>Additional information on GW-1533, Lewis Maxwell "C"-20</u>							
5-7-65							Ran Schlumberger Logs: Temperature, Gamma Ray, Density and Induction. Drillers' total depth 1972' - Schlumberger's total depth 1985'. Schlumberger Log showed Big Lime 1770-1836' -- Big Injun 1836-1905'
5-11-65							Perforated Big Injun 1841-48' 2 jets per foot; 1894-97' 4 jets per foot. Bailed dry. Show gas - 1 hour pickup 3#.
5-12-65							<u>FRACTURED THE BIG INJUN</u> 19 hour rock pressure 43#. Fractured Big Injun. Used 500 gallons MCA, 2,000 gallons 15% Hydrochloric acid. Broke down at 1500# to 900#. Used 20 perf balls in breakdown. Broke down at 2300#, 2900# and 3100#. Treated with 622 bbls. water and sand. Minimum pressure 2200# - maximum pressure 2700#. Average pressure 2371#. Average injection rate 31.8 bbls/minute. Sand concentration 1/4# to 1/2#/gallon. Used 48,000# 20-40 sand, 146,000 SCF Nitrogen, 100# J-100 and 55 gallons Tergitol. Used 5 perf balls half way thru treatment - no change in pressure. Added 10 perf balls. Pressure increased from 2350# to 2700#. Used 35 perf balls total. After blowing 53 hours gas gauged 246 MCF.
5-18-65							<u>ACIDIZED BIG LIME</u> 87 hour rock pressure 495#. Set Baker Model "K" Retainer at 1800' and perforated Big Lime 1767' to 1770' with 4 jets/foot and 1773' to 1776' with 4 jets/foot. Acidized Big Lime with 500 gallons of mud acid and 2,000 gallons 15% acid. Pumped into formation at 3500#. Broke to 2300#. Pumped 1250 gallons acid and dropped 14 perf balls. Pressure went to 3600# and broke to 2000#. Gradually declined to 1500#. Flushed with 28 bbls. of water. Average injection rate 5 bbls/minute. Flowed back and started bailing. Bailed dry to top of retainer set at 1800'. Drilled out retainer set at 1800'.
5-19-65							Final open flow 492 MCF (Big Lime 246M -- Big Injun 246M)



Date May 24, 1965

APPROVED Cities Service Oil Company, Owner

By L. D. Todd, District Sup't
(Title)