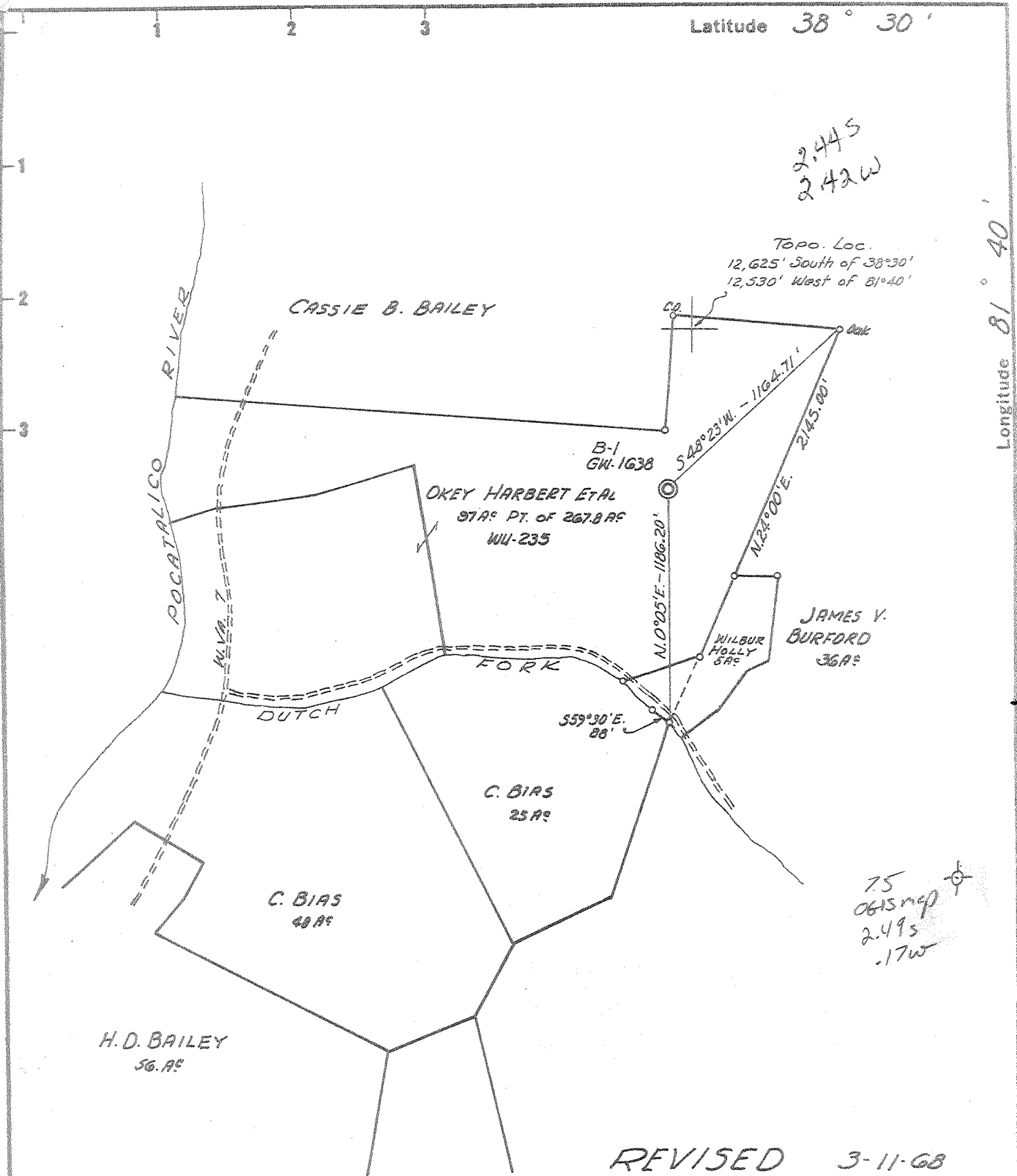


Latitude 38° 30'

Longitude 81° 40'
81° 42' 30"

2.445
2.42W

Topo. Loc.
12,625' South of 38°30'
12,530' West of 81°40'



75
0615 map
2.495
.17W

REVISED 3-11-68

- Fracture
- Before 6/5/27
- New Location
- Drill Deeper
- Redrill
- Abandonment

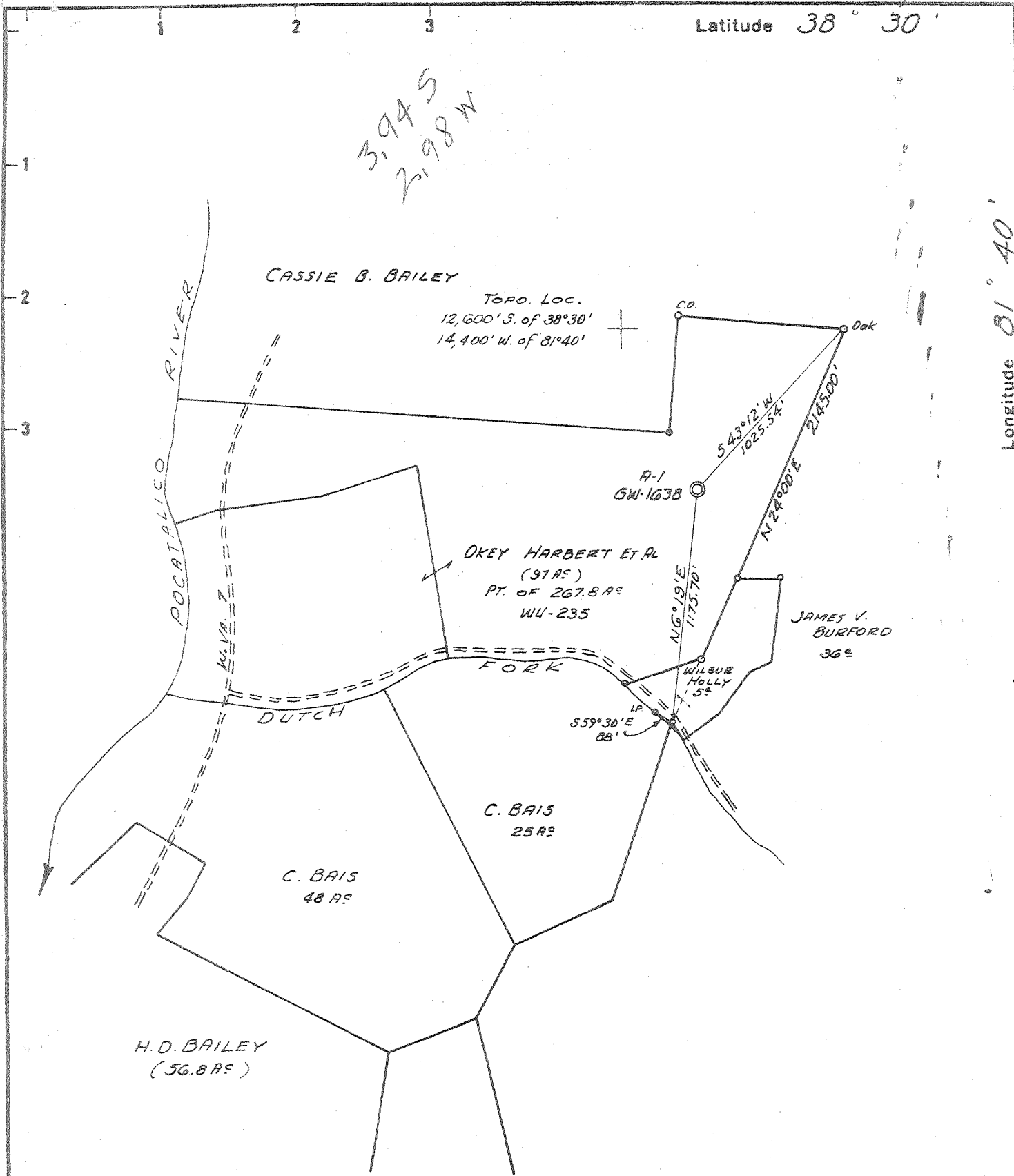
I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by Paragraph 5 of the Rules and Regulations of the Oil and Gas Section of the Mining Laws of West Virginia.
The accuracy of this survey is within the limits and as prescribed in paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.
PROVEN ELEVATION 4565 587

Company CITIES SERVICE OIL COMPANY
 Address Box 873, CHARLESTON, W. VA.
 Farm OKEY HARBERT ET AL
 Pt. of 267.8 AC
 Tract _____ Acres .97 Lease No. WU-235
 Well (Farm) No. B-1 Serial No. GN-1638
 Elevation (Spirit Level) 942.09
 Quadrangle CHARLESTON NW
 County KANAWHA District UNION
 Engineer Wendell S Moore
 Engineer's Registration No. 2113
 File No. _____ Drawing No. W-2-68
 Date 11 MARCH 68 Scale 1" = 660'

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

WELL LOCATION MAP
FILE NO. KAN 2223-Rev.

- + 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.



Fracture
 Before 6 5 27
 New Location
 Drill Deeper
 Redrill
 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 5 of the Rules and Regulations of the Oil and Gas Section of the Mining Laws of West Virginia.
 The accuracy of this survey is within the limits and as prescribed in paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.
PROVEN ELEVATION 4565 587

Company CITIES SERVICE OIL COMPANY
 Address BOX 873, CHARLESTON, W. VA.
 Farm OKEY HARBERT ET AL
Part of 267.8 AC
 Tract _____ Acres 97 Lease No. WU-235
 Well (Farm) No. A-1 Serial No. GW-1638
 Elevation (Spirit Level) 976.73
 Quadrangle CHARLESTON NW
 County KANAWHA District UNION
 Engineer Wendell S. Moore
 Engineer's Registration No. 2113
 File No. _____ Drawing No. W-2-68
 Date 14 FEB 68 Scale 1" = 660'

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

WELL LOCATION MAP
 FILE NO. KAN-2223

+ 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 (Newburg)

MAR 4 1968



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Rotary
Spudder
Cable Tools
Storage

Quadrangle Charleston
Permit No. Kan-2223

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company Cities Service Oil Company
Address P. O. Box 873, Charleston, W. Va. 25323
Farm Okey Harbert, et al Acres 267.8
Location (waters) Pocatalico River
Well No. "B" #1, GW-1638 Elev. 942.09'
District Union County Kanawha
The surface of tract is owned in fee by Gladys Harbert
Rocky Fork Road Address Charleston, W. Va.
Mineral rights are owned by Gladys Harbert, et al
(For further addresses contact C. S. Oil Co)
Address _____

Drilling commenced 3-16-68
Drilling completed 4-4-68
Date Shot not shot From _____ To _____
With _____

Open Flow /10ths Water in _____ Inch
/10ths Merc. in _____ Inch
Volume _____ Cu. Ft.
Rock Pressure _____ lbs _____ hrs.
Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) not acidized
WELL FRACTURED (DETAILS) see reverse side

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			none
13			Size of
9 9-5/8" 29.3#	94'	94'	Depth set
8 1/4			Perf. top <u>5702</u>
7 7" 23#	2094'	2094'	Perf. bottom <u>5706</u>
5 3/16			Perf. top <u>5708</u>
4 1/2" 11.6#	5790'	5790'	Perf. bottom <u>5712</u>
3			
3/8" 4.7#	5616'	5616'	
Liners Used	w/ cage on bottom		

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 none FEET _____ INCHES _____
FEET _____ INCHES FEET _____ INCHES
FEET _____ INCHES FEET _____ INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 8,427 MCF (actual) 8,500 MCF/D (absolute)
ROCK PRESSURE AFTER TREATMENT 117 HOURS Tubing 1414#, annulus 1414.5#
Fresh Water 810' Feet Salt Water 1605' Feet
Producing Sand Newburg Depth 5701-19' per electric logs

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Broken Sand and Shale			0	160			
Red Rock and Shale			160	340			
Sand			340	420			
Shale			420	620			
Shale and Sand			620	805			
Shale			805	1145	F. water	810'	foaming hole
Sand			1145	1165			
Sand and Shale			1165	1195			
Sand			1195	1260			
Shale			1260	1310			
Sand and Shale			1310	1530			
Shale			1530	1550			
Sand - <u>sect</u>			1550	1625	S. water	1605'	
Shale			1625	1655			
Lime and Broken Sand			1655	1750			
Big Lime			1750	1905			
Shale			1905	1925			
Sand - <u>squaw</u>			1925	2026			
Shale			2026	4870			
Lime - <u>Onondaga</u>			4870	4970			
Driskany Sand			4970	5025			
Sandy Lime and Dolomite			5025	5701			
see reverse side							

Elect. Logs
Igen - 1920-1954
Sh - 1954-1958
Lime - 1958-2002
Sh - _____
RECEIVED
MAY 18 1968
West Virginia
Dept. of Mines

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Newburg Sand			5701	5720			
Lime and Dolomite			5720	5754			
Drillers' Total depth			-----	5754			
Schlumberger's Total depth			-----	5744			
Plugged back total depth			-----	5738'			
Electric Logs showed:							
Oriskany			4957	4983			
Newburg Sand			5701	5719			
Casing Record							
3-16-68	Set and cemented 9-5/8" 29.3# H-40 casing at 103' with 50 sacks regular cement with 3% Calcium Chloride.						
3-21-68	Set and cemented 7" O. D. 23# casing with guide shoe at 2076' KBM with 155 sacks Pozmix and 100 sacks regular cement with 2% calcium chloride. Pumped 50 bbls. of 8% gel with lost circulation material ahead of cement. Good circulation of gel and cement. Insert at 2051'. Centralizers at 2051, 1954', 1863', 1766' and 1669'						
4-5-68	Set and cemented 4-1/2" O. D. 11.6# casing with guide shoe at 5747' KBM with 65 sacks Pozmix with 10% Salt, 1/4# Floseal/sack and 3/4% CFR-2/sack and 27 sacks Latex Cement. Worked casing 15' while cementing. Baker reciprocating scratchers on 12' centers from 5747' to 5483'. Differential fill up collar at 5743'. Centralizers at 5740', 5698', 5606', 5512' 5419' and 5324'.						
4-10-68	Ran McCullough Gamma Ray, Cement Bond Log and Collar Locator Log.						
4-10-68	Perforated Newburg Sand <u>5702-5706'</u> with 4 shots/ft. and <u>5708-12'</u> with 2 shots/ft. Total of 24 shots.						
4-21-68	<u>Fractured the Newburg Sand</u>						
	Gas gauging 335 MCF/D after blowing 6 hours. Swabbed hole dry and loaded hole with 1,000 gallons regular 15% acid and 60 bbls. water. Displaced acid and fractured Newburg Sand with 20,000# 20-40 sand in 13,000 gallons of gelled water. Maximum treating pressure 5800#, average treating pressure 5400#. AIR 16.9 bbls/min. Used 583 bbls. total fluid and 55 gallons Baroid B-11 and Radio Active beads during treatment.						
4-24-68	Gas stabilized and gauged 8,427 MCF/D with mist of water and some frac sand.						
4-30-68	117 hour D. W. pressure - tubing 1414#, Annulus 1414.5#. Ran Isochronal back pressure test. Calculated absolute open flow at wellhead with test data 8,500 MCF/D - actual open flow 8,427 MCF/D.						

Date May 8, 1968

APPROVED Cities Service Oil Company, Owner

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