

API NO. 45 - 051 - 20908  
WELL NAME: ark Harrison, P-284  
DATE November 6, 1990

DI-297

Virginia Oil and Gas Inspector  
P. O. Box 1416  
Abingdon, VA 24210  
703 628-8115



REPORT OF COMPLETION OF WELL WORK

Pursuant to Regulation 4.06 of the Regulations under the Virginia Oil and Gas Act, the undersigned well operator reports completion of the type(s) of well work specified below on the referenced well in Sand Lick District Dickenson County, Virginia on 21 day, August month, 19 90.

WELL TYPE: Oil \_\_\_ / Gas x / Enhanced Recovery \_\_\_ / Waste Disposal \_\_\_  
If Gas-Production x / Underground Storage \_\_\_ / Exempt by Code Section 45.1-300.B.1. from general Oil and Gas Conservation Law yes \_\_\_ / no \_\_\_  
WELL WORK: Drill x / Deepen \_\_\_ / Redrill \_\_\_ / Stimulate \_\_\_ / Plug Off Old Formation \_\_\_ / Perforate New Formation \_\_\_ / Plug \_\_\_ / Replug \_\_\_ / Other physical change in well (specify) \_\_\_\_\_  
The well work was done as shown in the Appendix(es) applicable to the type(s) of well work involved.

CONFIDENTIALITY STATUS UNDER CODE OF VIRGINIA SECTION 45.1-332

x Ninety days from the filing of this report

OR

Two years from \_\_\_\_\_, the date on which the referenced well was completed, the well being an exploratory well as defined in Code of Virginia, Section 45.1-288.21.

APPLICANT Equitable Resources Exploration

BY J. Matthew Conrad

ITS Geologist

ADDRESS 1989 E. Stone Dr., Kingsport, TN 37660

TELEPHONE 615-378-5101

COMPLETION REPORT

WELL TYPE: Oil ( ) Gas Production ( x ) Gas-Underground Storage ( )  
 Enhanced Recovery ( ) Waste Disposal ( )

LOCATION

COUNTY Dickenson DISTRICT Sand Lick

SURFACE ELEVATION 1523.73' QUADRANGLE Prater

LATITUDE 7,850'S 37° 10' 00" LONGITUDE 7,475'W 82° 12' 30"

DRILLING DATA

DATE DRILLING COMMENCED 7/29/90 DRILLING CONTRACTOR Union Drilling  
 DATE DRILLING COMPLETED 8/2/90 ADDRESS Drawer 40, Buckhannon, WV 26201  
 DATE WELL COMPLETED 8/21/90 TELEPHONE NUMBER 304-472-4610  
 TOTAL DEPTH OF COMPLETED WELL 2391' RIG TYPE x ROTARY CABLE TOOL

GEOLOGICAL DATA

FRESH WATER AT (1) 62' FEET 1/2" str. CM: (2) FEET GPM  
 SALT WATER AT (1) 740' FEET 1/2" str. CM: (2) FEET GPM

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS	MINING IN AREA	
				YES	NO MINED OUT

OIL AND GAS SHOWS:

FORMATION	TOP	BOTTOM	THICKNESS	IPF (MCFD/BOPD)	PRESSURE	HOURS TESTED
		1439		15MCF		
		2305		1387 MCF		
		2368		1518 MCF		
		2391		1518 MCF		

STIMULATION RECORD

ZONE (1) N/A FORMATION STIMULATED WITH \_\_\_\_\_

PERFORATED TO \_\_\_\_\_ NO. OF PERFORATIONS \_\_\_\_\_ PERFORATION SIZE \_\_\_\_\_  
 FORMATION BROKE DOWN AT \_\_\_\_\_ PSIG AVERAGE INJECTED RATE \_\_\_\_\_ BPM  
 INITIAL SHUT IN PRESSURE \_\_\_\_\_ PSIG MINUTE SHUT IN PRESSURE \_\_\_\_\_ PSIG

STIMULATION RECORD

ZONE (2) N/A FORMATION STIMULATED WITH \_\_\_\_\_

PERFORATED TO \_\_\_\_\_ NO. OF PERFORATIONS, \_\_\_\_\_ PERFORATION SIZE \_\_\_\_\_  
 FORMATION BROKE DOWN AT \_\_\_\_\_ PSIG AVERAGE INJECTED RATE \_\_\_\_\_ BPM  
 INITIAL SHUT IN PRESSURE \_\_\_\_\_ PSIG MINUTE SHUT IN PRESSURE \_\_\_\_\_ PSIG

FINAL PRODUCTION: ( x ) NATURAL ( ) AFTER STIMULATION  
 BOD MCFD HOURS TESTED ROCK PRESSURE HOURS TESTED  
 ZONE (1) 822 48 560 48

ZONE (2) \_\_\_\_\_  
 FINAL PRODUCTION IF GAS ZONES ARE COMINGLED \_\_\_\_\_ MCFD HOURS TESTED  
 \_\_\_\_\_ PSIG HOURS TESTED

CASING AND TUBING

	<u>SIZE</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>LENGTH</u>	<u>PERFORATIONS</u> <u>FEET TO FEET</u>	<u>PACKERS OR</u> <u>BRIDGE PLUGS</u> <u>KIND SIZE SET AT</u>
CONDUCTOR	11 3/4"		30'			

CASING  
Circulated  
and Cemented  
to Surface \_\_\_\_\_

WATER PROTECTION  
(Casing Set  
According to  
Section  
45.1-334) \_\_\_\_\_

COAL PROTECTION  
(Casing Set  
According to  
Section  
45.1-334) 8 5/8" 841' \_\_\_\_\_

OTHER CASING &  
Tubing Left  
In Well \_\_\_\_\_

LINERS  
Remaining  
In Well \_\_\_\_\_

OTHER used and not  
left \_\_\_\_\_

Is the well underlain by Red Shale  Yes  No, If Yes, was coal  
protection string set to Red Shales?  Yes  No

REMARKS: Shut down, fishing jobs, depths and dates, caving, etc.

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**Samples and Cuttings**

Will  Will not  be available for examination by a member of the Virginia Division of Mineral Resources

Will  Will not  be furnished to the Virginia Division of Mineral Resources upon request

Will  Will not  require sacks to be furnished by the Virginia Division of Mineral Resources

**Electric Logs and Surveys:**

Type of Electric Log(s) Ran: SNL/CDL/TEMP/GR

Did log disclose vertical location of a coal seam? Yes  No

Was log made at request of a coal owner according to Section 45.1-333.B.1 of the Virginia Code? Yes  No

Note: If a coal seam was located, the part of the survey from the surface through the coal is attached in accordance with Section 45.1-333.B.3 of the Virginia Code

**Deviation Surveys**

Deviation surveys were  were not  required under Section 45.1-333.C of the Virginia Code "to the bottom of the lowest published coal seam depth."

Note: If a deviation survey(s) was/were required, the survey results are as follows:

Depth of Survey	Feet/Degree Deviated From True Vertical	Depth of Survey	Feet/Degree Deviated From True Vertical
	See Attachment		

A continuous survey was  was not  required, under Section 45.1-333.C of the Virginia Code.

Note: If a continuous survey was required, the survey results are attached.

**Changes in the Permitted Well Work:**

The well operator did  did not  make any change(s) in the permitted well work, verbally approved by the Inspector or Assistant Inspector under Regulation 4.03 of the Regulations under the Virginia Oil and Gas Act, for the purpose of insuring successful completion of the well work.

NOTE: The nature and purpose of each such change, if any, is set out below or on additional sheets if such are required.

**Confidentiality Status:**

Confidentiality status under Section 45.1-332, of the Virginia Code: The operator requests that information herein and log(s) be kept confidential (after COMPLETION DATE of the well) for a period of  Ninety (90) days  two (2) years, if the well is exploratory

DRILLER'S LOG

Compiled by J. Matti Conrad

Geological Age	Formation	General		Depth		Thickness	Remarks
		Lithology	Color	Top	Bottom		
Pennsylvanian	Lee	Sand, shale, coal		0	1274	1274	
	Pocahontas	Sand, shale, coal		1274	1850	576	
Mississippian	Bluestone	Shale & Sand		1850	2260	410	(Red Rock)
	Ravencliff	Clean sand		2260	2334	74	
		Siltstone & Shale		2334	2391	57	
Logger's Total Depth					2391		

DIRECTIONAL SURVEY

P-284

DEPTH	DEGREES
267'	$\frac{1}{4}^{\circ}$
418'	$\frac{1}{2}^{\circ}$
629'	$\frac{1}{2}^{\circ}$
1065'	$\frac{3}{4}^{\circ}$
1221'	$1^{\circ}$
1439'	$\frac{3}{4}^{\circ}$
1626'	$\frac{3}{4}^{\circ}$
1843'	$\frac{3}{4}^{\circ}$
2028'	$1^{\circ}$
2244'	$1^{\circ}$

Date: March 3, 1986

Operator's Well No. P-284

DI-297

VIRGINIA OIL AND GAS INSPECTOR DEPARTMENT OF LABOR AND INDUSTRY DIVISION OF MINES OIL AND GAS SECTION 205 W. MAIN STREET ABINGDON, VIRGINIA 24210 PHONE 703 628-8115

WELL PLAT

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000. Latitude and longitude lines are represented by border lines as shown.

This plat is new X / updated \_ /

This plat is X / is not \_ / based on a mine coordinate system established for the areas of the well location.

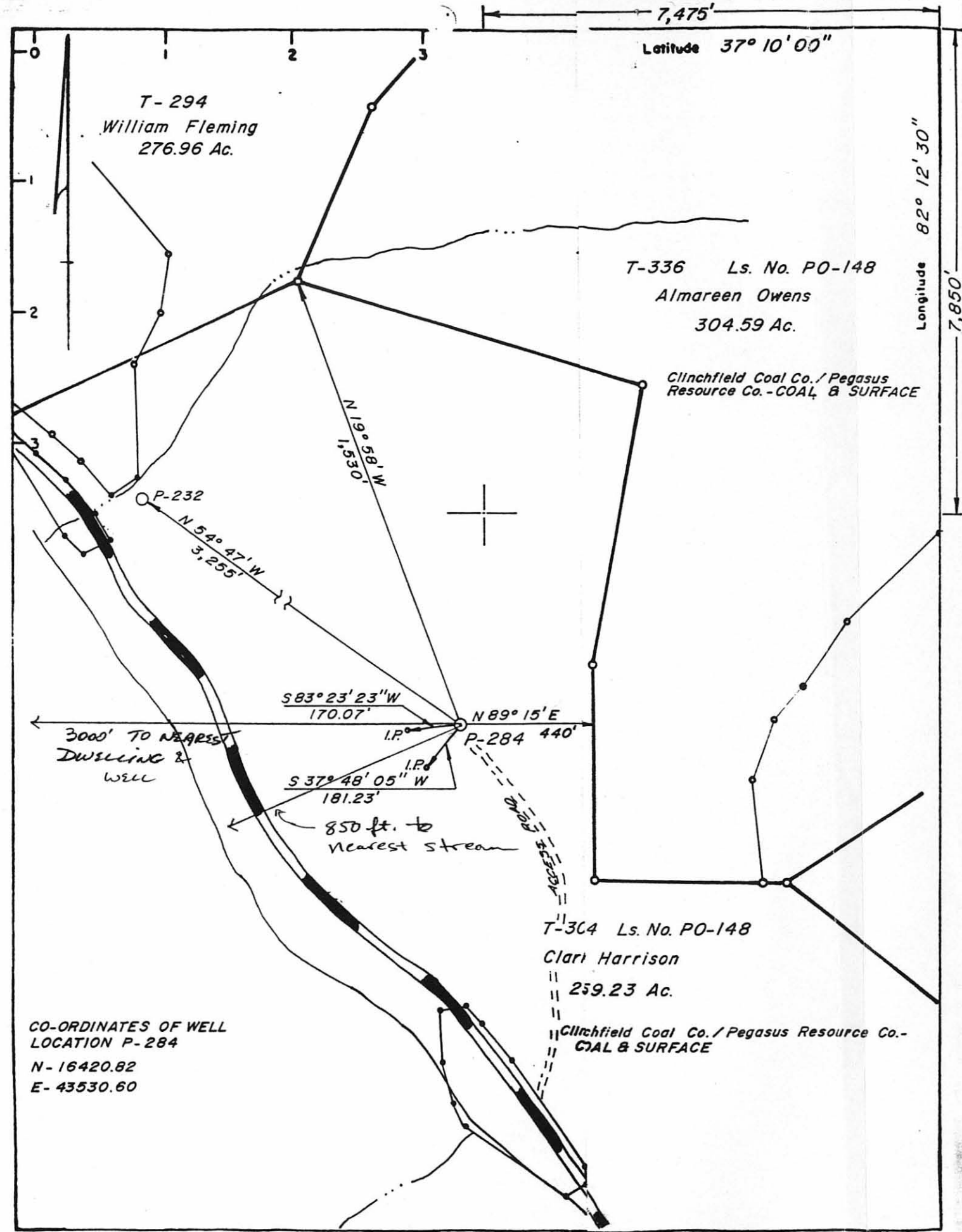
Well operator Philadelphia Oil Company

Address 1101 N. Eastman Road, Kingsport, TN. 37664 Farm Clark Harrison Tract T-304 Acres 259.23 Lease No. PO-148 Elevation 1523.73 Quadrangle Prater, Va. County Dickenson District Sand Lick Registered Engineer X Registration No. 6992 Certified Land Surveyor Cert. No. File No. Drawing No. 1542 Date 3/3/86 Scale 1" = 400'

Certification of Well Plat

I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief, and shows all the information required by law and the regulations of the Virginia Well Review Board.

Harold L. Baldridge, PE Registered Engineer or Certified Land Surveyor in Charge



CO-ORDINATES OF WELL LOCATION P-284 N- 16420.82 E- 43530.60