

API NO. 45 - 051 - 21343  
WELL NAME: C. W. Smith PC-8  
DATE April 30, 1990

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

D 1-472

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 Ervington District Dickenson County, Virginia on 16 day, March 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 X/ no \_\_\_  
WELL WORK: Drill X/ Deepen \_\_\_/ Redrill \_\_\_/ Stimulate X/ Plug Off Old Formation \_\_\_/ Perforate New Formation X/ 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 Ervinton

SURFACE ELEVATION 2337.70' QUADRANGLE Caney Ridge

LATITUDE 11,190'S 37° 05' 00" LONGITUDE 950'W 82° 22' 30"

DRILLING DATA

DATE DRILLING COMMENCED 2/07/90 DRILLING CONTRACTOR Union Drilling  
 DATE DRILLING COMPLETED 2/13/90 ADDRESS Drawer 40, Buckhannon, WV 26201  
 DATE WELL COMPLETED 3/16/90 TELEPHONE NUMBER 304-472-4610  
 TOTAL DEPTH OF COMPLETED WELL 2571' RIG TYPE x ROTARY        CABLE TOOL

GEOLOGICAL DATA

FRESH WATER AT (1) 98 FEET Damp ~~GPM:~~ (2)        FEET        GPM  
 SALT WATER AT (1)        FEET        GPM: (2)        FEET        GPM

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS	MINING IN AREA			
				<del>XXXS</del>	NO	<del>XXXXXXXXXX</del>	
M. Horsepen	1748	1750	2	L. Horsepen	1980	1982	2
Warcreek	1856	1858	2	X-Seam	2033	2035	2
Unnamed "C"	1895	1896	1	Poco #8	2126	2127	1
Beckley	1926	1930	4	Poco #5	2322	2325	3
				Poco #4	2357	2360	3
				Poco #1	2505	2510	5

OIL AND GAS SHOWS:

FORMATION        TOP        BOTTOM 2397 THICKNESS        IPF (MCFD/BOPD) 75 MCF PRESSURE        HOURS TESTED       

STIMULATION RECORD M. Horsepen, Warcreek Unnamed "C", Beckley, L. Horsepen, X-Seam, Poco #5, Poco #4, Poco #1 FORMATION STIMULATED WITH 750 Limited Entry frac using 562 bbls fluid, 16,800# 12/20 sand and 1,281,900 SCF N2  
 PERFORATED 1749 TO 2506 NO. OF PERFORATIONS 16 PERFORATION SIZE .36  
 FORMATION BROKE DOWN AT 1660 PSIG AVERAGE INJECTED RATE 14.7 BPM  
 INITIAL SHUT IN PRESSURE 1900 PSIG 5 MINUTE SHUT IN PRESSURE 1730 PSIG

STIMULATION RECORD

ZONE (2)        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: ( ) NATURAL ( ) AFTER STIMULATION  
       BOD        MCFD        HOURS TESTED        ROCK PRESSURE        HOURS TESTED

ZONE (1)         
 ZONE (2)       

FINAL PRODUCTION IF GAS ZONES ARE COMINGLED 60 MCFD 6 HOURS TESTED  
460 PSIG 16 HOURS TESTED

\* - This is not an absolute open flow.

CASING AND TUBING

	<u>SIZE</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>LENGTH</u>	<u>PACKERS OR</u>	
					<u>PERFORATIONS</u>	<u>BRIDGE PLUGS</u>
					<u>FEET TO FEET</u>	<u>KIND SIZE SET AT</u>
CONDUCTOR	11 3/4"		29'			

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

WATER PROTECTION  
(Casing Set  
According to  
Section  
45.1-334) 8 5/8" 308'

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

OTHER CASING &  
Tubing Left 4 1/2" 2543.80'  
In Well 2 3/8" 2529'

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.

---



---



---

**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: 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 lowers 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 X Ninety (90) days  
           two (2) years, if the well is exploratory

DRILLER'S LOG

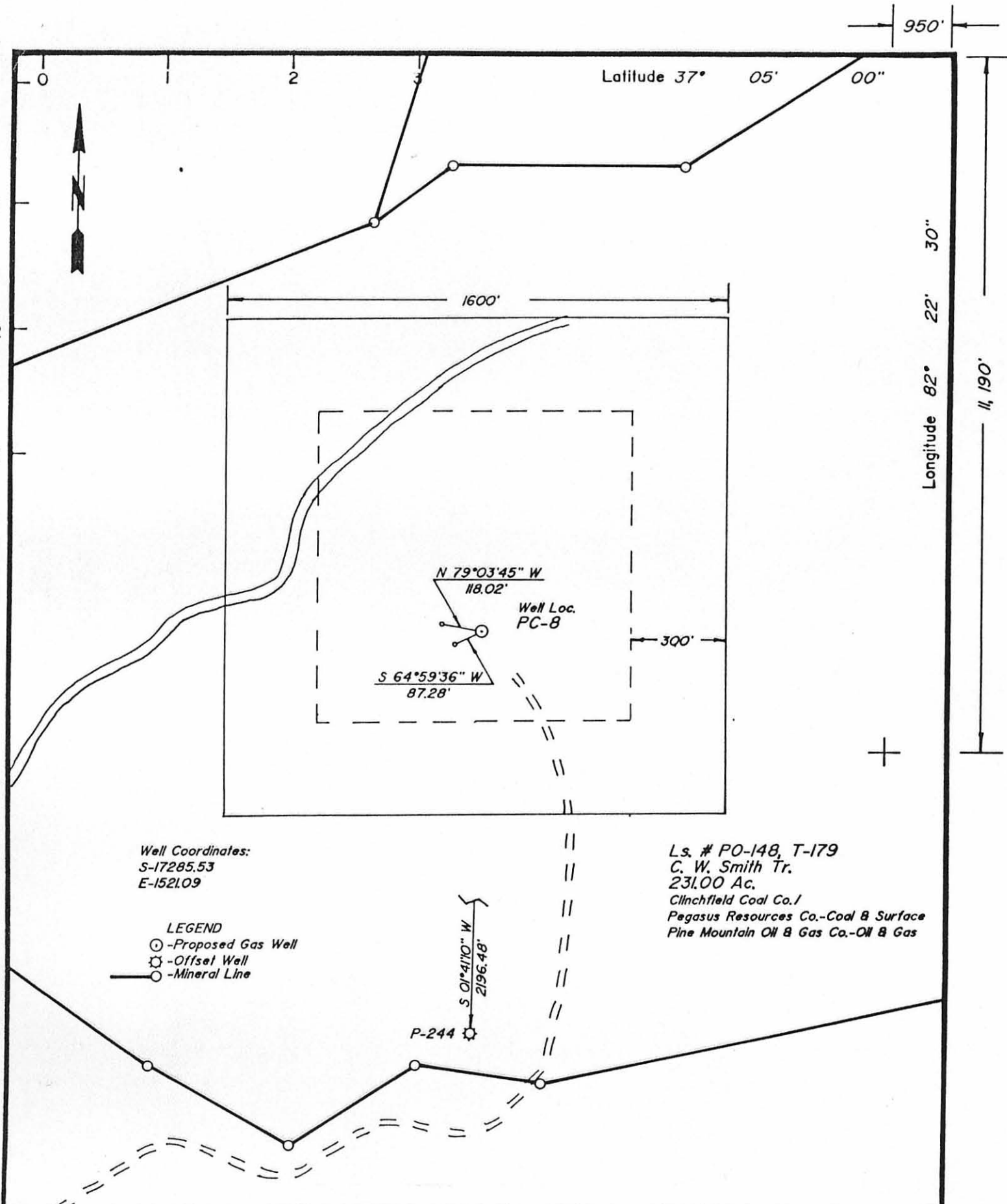
Compiled by J. Matthew Conrad

Geological Age	Formation	General Lithology	Color	Depth		Thickness	Remarks	
				Top	Bottom			
Pennsylvanian	Lee	Sand/Shale/Thin Coal		0	1107	1107		
		Jawbone Coal		1107	1110	3		
		Sand/Shale/Thin Coal		1110	1926	816		
		Beckley Coal		1926	1930	4		
		Sand/Shale/Thin Coal		1930	2198	218		
		Pocahontas	Sand/Shale/Thin Coal		2198	2322	174	
			Poco #5 Coal		2322	2325	3	Top Salt Sand @2148'
			Sand and Shale		2325	2357	32	
			Poco #4 Coal		2357	2360	3	
			Sand/Shale/Thin Coal		2360	2505	145	
			Poco #1 Coal		2505	2510	5	
			Sand and Shale		2510	2575	65	
		Mississippian		Red Rock		2575	2580	5

## DIRECTIONAL SURVEY

PC-8

DEPTH	DEGREES
191'	$\frac{1}{4}^{\circ}$
343'	$\frac{1}{4}^{\circ}$
558'	$\frac{3}{4}^{\circ}$
778'	$\frac{3}{4}^{\circ}$
943'	$2^{\circ}$
1161'	$1^{\circ}$
1380'	$2^{\circ}$
1597'	$1\frac{1}{2}^{\circ}$
1782'	$2\frac{1}{4}^{\circ}$
1999'	$1\frac{1}{4}^{\circ}$
2213'	$1\frac{1}{2}^{\circ}$
2397'	$1\frac{1}{2}^{\circ}$



Well Coordinates:  
S-17285.53  
E-1521.09

- LEGEND
- ⊙ - Proposed Gas Well
  - ⊗ - Offset Well
  - Mineral Line

Ls. # PO-148, T-179  
C. W. Smith Tr.  
231.00 Ac.  
Clinchfield Coal Co./  
Pegasus Resources Co.-Coal & Surface  
Pine Mountain Oil & Gas Co.-Oil & Gas

COMPANY Equitable Resources Exploration

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

WELL NAME PC-8

FARM C. W. Smith TRACT 179

LEASE NO. PO-148 ELEVATION 2337.70

ACRES 231.00 QUADRANGLE Caney Ridge

COUNTY Dickenson DISTRICT Ervington

REG. ENGINEER X REG. NO. 6992

CERT. LAND SURVEYOR \_\_\_\_\_ CERT. NO. \_\_\_\_\_

FILE NO. \_\_\_\_\_ DRAWING NO. 1953

DATE 12-21-89 SCALE 1" = 400'

This plat is X new \_\_\_\_\_ updated

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

FORM 5

WELL LOCATION MAP  
WELL NO. PC-8

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

H. L. BALDIDGE  
REGISTERED ENGINEER AND CERTIFIED LAND SURVEYOR

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 Va. Well Review Board.

H. L. Baldidge  
Registered Engineer or Certified Land Surveyor in Charge