

API NO. 45 - 051 - 21273
WELL NAME: Squire Smith, PC-5
DATE September 26, 1989

DD-451

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 Ervinton District Dickenson County, Virginia on 30 day, August month, 1989.

WELL TYPE: Oil / Gas / Enhanced Recovery / Waste Disposal
If Gas-Production / Underground Storage / Exempt by Code Section 45.1-300.B.1. from general Oil and Gas Conservation Law yes / no
WELL WORK: Drill / 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 Ervinton

SURFACE ELEVATION 2302.11' QUADRANGLE Caney Ridge

LATITUDE 12,580'S 37° 05' 00" LONGITUDE 2,900'W 82° 22' 30"

DRILLING DATA

DATE DRILLING COMMENCED 7/22/89 DRILLING CONTRACTOR Union Drilling
DATE DRILLING COMPLETED 7/27/89 ADDRESS PO Drawer 40, Buckhannon, WV 26201
DATE WELL COMPLETED 8/30/89 TELEPHONE NUMBER 304-472-4610
TOTAL DEPTH OF COMPLETED WELL 2559' RIG TYPE X ROTARY CABLE TOOL

GEOLOGICAL DATA

FRESH WATER AT (1) None FEET GPM: (2) FEET GPM
SALT WATER AT (1) None FEET GPM: (2) FEET GPM

COAL SEAMS:

NAME	TOP	BOTTOM	THICKNESS	MINING IN AREA		
				YES	NO	MINED OUT
Upper Horsepen	1678	1680	2	Lower Horsepen	1951-1952	1
Middle Horsepen	1684	1686	2	X-Seam	2002-2004	2
Warcreek	1826	1828	2	Poco #4	2330-2333	3
Unnamed C	1864	1866	2	Poco #1	2477-2478	1
Beckley	1893	1898	5			

OIL AND GAS SHOWS:

FORMATION	TOP	BOTTOM	THICKNESS	IPF(MCFD/BOPD)	PRESSURE	HOURS TESTED
Total Depth - 2559				84 mcf		

STIMULATION RECORD

ZONE (1) Poco #1 FORMATION STIMULATED WITH Waterfrac 20 using
435 BBLs fluid, 12,900# 20/40 sand
PERFORATED 2477 TO 2478 NO. OF PERFORATIONS 10 PERFORATION SIZE .39
FORMATION BROKE DOWN AT 2978 PSIG AVERAGE INJECTED RATE 15.9 BPM
INITIAL SHUT IN PRESSURE 2394 PSIG 5 MINUTE SHUT IN PRESSURE 1880 PSIG

STIMULATION RECORD

ZONE (2) Poco #4 FORMATION STIMULATED WITH Waterfrac 20 using
414 BBLs fluid, 12,570# 20/40 sand
PERFORATED 2330 TO 2333 NO. OF PERFORATIONS 10 PERFORATION SIZE .44
FORMATION BROKE DOWN AT 3584 PSIG AVERAGE INJECTED RATE 20.2 BPM
INITIAL SHUT IN PRESSURE 1152 PSIG 5 MINUTE SHUT IN PRESSURE 1065 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	MCFD	HOURS TESTED

COMPLETION REPORT

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

LOCATION

COUNTY _____ DISTRICT _____

SURFACE ELEVATION _____ QUADRANGLE _____

LATITUDE ____ 'S ____ ' ____ " LONGITUDE ____ 'W ____ ' ____ "

DRILLING DATA

DATE DRILLING COMMENCED _____ DRILLING CONTRACTOR _____
 DATE DRILLING COMPLETED _____ ADDRESS _____
 DATE WELL COMPLETED _____ TELEPHONE NUMBER _____
 TOTAL DEPTH OF COMPLETED WELL _____ RIG TYPE _____ ROTARY _____ CABLE TOOL _____

GEOLOGICAL DATA

FRESH WATER AT (1) _____ FEET _____ GPM: (2) _____ FEET _____ GPM
 SALT WATER AT (1) _____ FEET _____ GPM: (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

STIMULATION RECORD

ZONE (3) Lower Horsepen/X-Seam FORMATION STIMULATED WITH Waterfrac 20 using
450 BBLs fluid, 14,760# 20/40 sand
 PERFORATED 1951 TO 2004 NO. OF PERFORATIONS 10 PERFORATION SIZE .39
 FORMATION BROKE DOWN AT 3400 PSIG AVERAGE INJECTED RATE 24.0 BPM
 INITIAL SHUT IN PRESSURE 1109 PSIG 5 MINUTE SHUT IN PRESSURE 969 PSIG

STIMULATION RECORD

ZONE (4) Unnamed C/Beckley FORMATION STIMULATED WITH Waterfrac 20 using
453 BBLs fluid, 16,270# 20/40 sand
 PERFORATED 1864 TO 1998 NO. OF PERFORATIONS 16 PERFORATION SIZE .39
 FORMATION BROKE DOWN AT 1378 PSIG AVERAGE INJECTED RATE 25.0 BPM
 INITIAL SHUT IN PRESSURE 1000 PSIG 5 MINUTE SHUT IN PRESSURE 883 PSIG

FINAL PRODUCTION: () NATURAL () AFTER STIMULATION

ZONE	BOD	MCFD	HOURS TESTED	ROCK PRESSURE	HOURS TESTED
ZONE (1)					
ZONE (2)					
FINAL PRODUCTION IF GAS ZONES ARE COMINGLED		MCFD	HOURS TESTED	PSIG	HOURS TESTED

COMPLETION REPORT

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

LOCATION

COUNTY _____ DISTRICT _____

SURFACE ELEVATION _____ QUADRANGLE _____

LATITUDE ____ 'S ____ ' ____ " LONGITUDE ____ 'W ____ ' ____ "

DRILLING DATA

DATE DRILLING COMMENCED _____ DRILLING CONTRACTOR _____
DATE DRILLING COMPLETED _____ ADDRESS _____
DATE WELL COMPLETED _____ TELEPHONE NUMBER _____
TOTAL DEPTH OF COMPLETED WELL _____ RIG TYPE _____ ROTARY _____ CABLE TOOL _____

GEOLOGICAL DATA

FRESH WATER AT (1) _____ FEET _____ GPM: (2) _____ FEET _____ GPM
SALT WATER AT (1) _____ FEET _____ GPM: (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

STIMULATION RECORD

ZONE (5) U.Horsepen/M.Horsepen/Warcreek FORMATION STIMULATED WITH Waterfrac 20 using
457 BBLs fluid, 13,100# 20/40 sand
PERFORATED 1678 TO 1828 NO. OF PERFORATIONS 17 PERFORATION SIZE .39
FORMATION BROKE DOWN AT 1290 PSIG AVERAGE INJECTED RATE 30.7 BPM
INITIAL SHUT IN PRESSURE 1025 PSIG 5 MINUTE SHUT IN PRESSURE 885 PSIG

STIMULATION RECORD

ZONE () _____ 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 (X) AFTER STIMULATION
BOD MCFD HOURS TESTED ROCK PRESSURE HOURS TESTED

ZONE (1) _____
ZONE (2) _____
FINAL PRODUCTION IF GAS ZONES ARE COMINGLED Gas Show MCFD HOURS TESTED
350 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"		20'			

CASING

Circulated
and Cemented

to Surface 8 5/8" 332.95'

WATER PROTECTION

(Casing Set
According to
Section
45.1-334)

COAL PROTECTION

(Casing Set
According to
Section
45.1-334)

OTHER CASING &

Tubing Left 4 1/2" 2527.50'
In Well 2 3/8" 2496'

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.

DRILLER'S LOG

Compiled by J. Matthew Conrad

Geological Age	Formation	General Lithology	Color	Depth		Thickness	Remarks
				Top	Bottom		

Pennsylvanian

Sands, shales, coal

0

2559

2559

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: LDT/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:

<u>Depth of Survey</u>	<u>Feet/Degree Deviated From True Vertical</u>	<u>Depth of Survey</u>	<u>Feet/Degree Deviated From True Vertical</u>
<u> </u>	<u>SEE ATTACHMENT</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

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

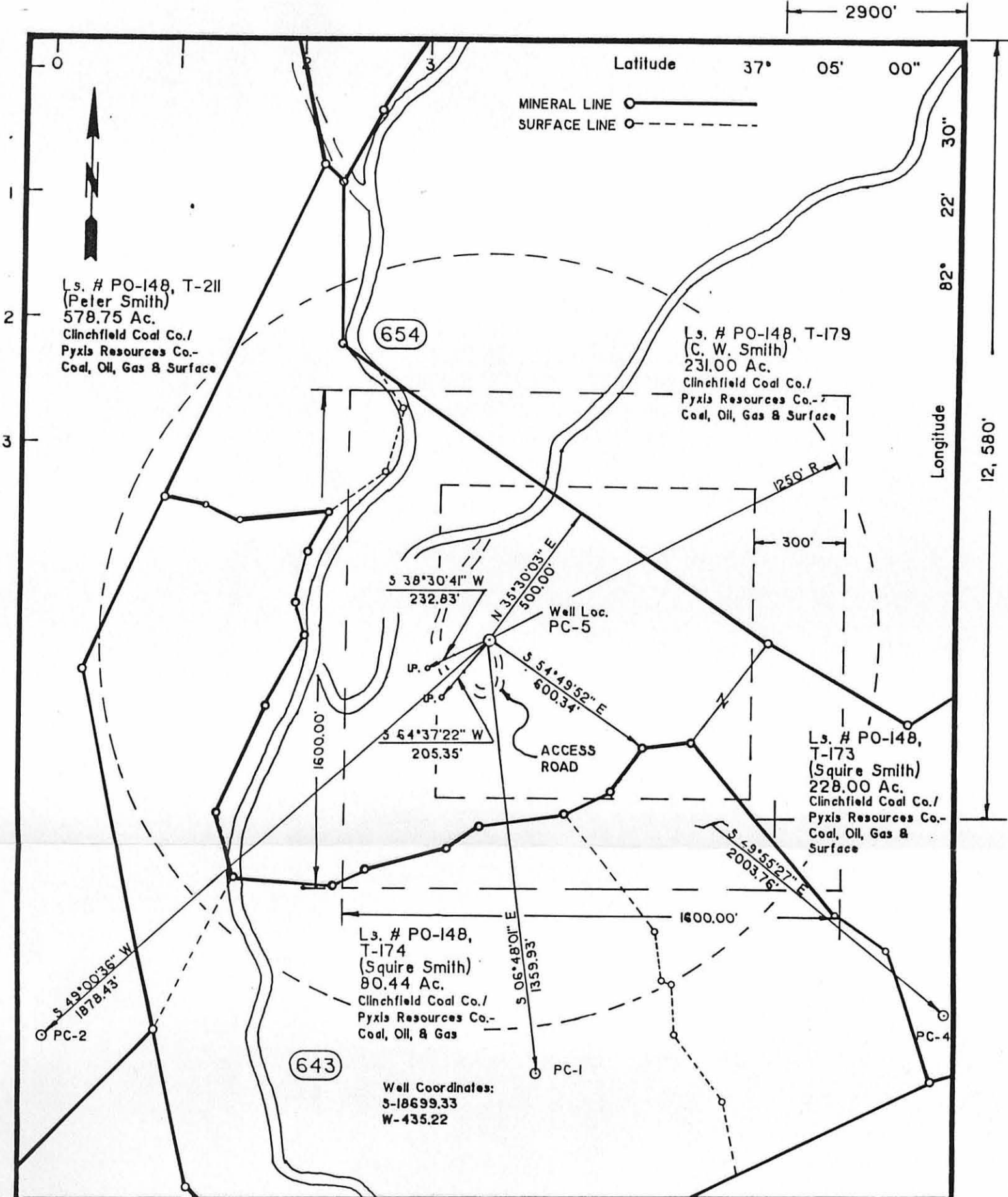
DIRECTIONAL SURVEYS

PC-5

DEPTH

DEGREES

227	1°
595	1½°
816	1½°
1006	1½°
1224	0°
1443	1¼°
1664	1¼°
1882	1¼°
2071	1°
2290	1¼°
2509	1°



COMPANY Equitable Resources Exploration

ADDRESS 1989 E. Stone Drive, Kingsport, TN 37660

WELL NAME PC-5

FARM Squire Smith TRACT T-173

LEASE NO. PO-148 ELEVATION 2302.11

ACRES 228.00 QUADRANGLE Caney Ridge

COUNTY Dickenson DISTRICT Ervinton

REG. ENGINEER X REG. NO. 6992

CERT. LAND SURVEYOR _____ CERT. NO. _____

FILE NO. _____ DRAWING NO. 1898

DATE 5 - 24 - 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-5 DF-451

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.

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. [Signature]
 Registered Engineer or Certified
 Land Surveyor in Charge