



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION INTERSECTION OF ROADS EL. 592

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 ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) Harrell R. Boice
 R.P.E. _____ L.L.S. 667

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)



DATE MAY 20 1986
 OPERATOR'S WELL NO. W. SMITH-2
 API WELL NO. 47-107-1400
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION: ELEVATION 662 WATER SHED POND CREEK
 DISTRICT HARRIS 2 COUNTY WOOD
 QUADRANGLE POND CREEK 553 009 WC 4 Belleville
 SURFACE OWNER WILLIAM SMITH ACREAGE 136 1/3
 OIL & GAS ROYALTY OWNER WILLIAM SMITH LEASE ACREAGE 136 1/3
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 3600
 WELL OPERATOR H.D. WELLS OIL & GAS INC. DESIGNATED AGENT H.D. WELLS III
 ADDRESS P.O. Box 1785 943 ADDRESS P.O. Box 1785
CHARLESTON, W.VA 25326 CHARLESTON, W.VA 25326

JUN 30 1986

FERC

2/15/87



State of West Virginia DEPARTMENT OF ENERGY Oil and Gas Division

Date 2/9/87 Operator's Well No. W. Smith No. 2 Farm W. Smith API No. 47 - 107 - 1400

WELL OPERATOR'S REPORT OF DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas x / Liquid Injection / Waste Disposal / (If "Gas," Production x / Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 662' Watershed Cove Run District: Harris County Wood Quadrangle Pond Creek

COMPANY H. D. Wells Oil & Gas Exp. & Dev., Inc.

ADDRESS P.O. Box 1785, Charleston, WV 25326

DESIGNATED AGENT H. D. Wells, III

ADDRESS same

SURFACE OWNER William Smith

ADDRESS Belleville, WV

MINERAL RIGHTS OWNER same

ADDRESS

OIL AND GAS INSPECTOR FOR THIS WORK Glenn

Robinson ADDRESS Mineral Wells, WV

PERMIT ISSUED June, 1986

DRILLING COMMENCED 6/25/86

DRILLING COMPLETED 7/03/86

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Table with 4 columns: Casing & Tubing, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-16, 13-10, 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION Devonian Shale (Huron) Depth 3,650 feet

Depth of completed well 3,600 feet Rotary x / Cable Tools

Water strata depth: Fresh 60 feet; Salt 800 feet

Coal seam depths: N/A Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Shale Pay zone depth 3300-3600 feet

Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d

Final open flow 60 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests 8 hours

Static rock pressure 385 psig (surface measurement) after 4 hours shut in

(If applicable due to multiple completion--)

Second producing formation Berea Pay zone depth 1,950 feet

Gas: Initial open flow show Mcf/d Oil: Initial open flow Bbl/d

Final open flow 30 Mcf/d Oil: Final open flow Bbl/d

Time of open flow between initial and final tests 8 hours

Static rock pressure 390 psig (surface measurement) after 4 hours shut in

60 Mcf = OF for well

APR 27 1987

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Shot Shale Sec.	<u>Frac Berea</u>	45,000# 20/40
8,000 lbs Gelatin		330,000 SCF/W
		Max. Press. 1,800
		Avg. Press. 1,200
		250 gal. HCL 15%
		15 perfs 1982-1985

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Top Soil			0	15	
Sand			15	60	Fresh Water 60'
Shale			60	200	
Sand & Shale			200	835	
Shale			835	1304	
Shale			1304	1480	
Lime			1480	1501	
Injun Sand			1501	1610	
Shale			1610	1982	
Berea Sand			1982	1985	Gas Show
Shale			1985	3600	Total Depth

404 1985
83 3135

(Attach separate sheets as necessary)

H. D. Wells Oil & Gas Exp. & Dev., Inc.
Well Operator
By: [Signature]
Date: 2/9/87

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including those encountered in the drilling of a well."



1) Date: May 30, 1986
 2) Operator's Well No. W. Smith #2
 3) API Well No. 47 107-1400
 State County Permit

RECEIVED
JUN - 3 1986

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
 DIVISION OF OIL & GAS DEPARTMENT OF ENERGY
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas XX /
 B (If "Gas", Production XX / Underground storage / Deep / Shallow XX /)
- 5) LOCATION: Elevation: 662 Watershed: Cove Run
 District: Harris 943 2 County: Wood Quadrangle: Pond Creek 532
- 6) WELL OPERATOR H.D. Wells Oil & Gas CODE: 52900 7) DESIGNATED AGENT H. D. Wells, III
 Address P.O. Box 1785 Address same
Charleston, WV 25326
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Glen P. Robinson 9) DRILLING CONTRACTOR:
 Address Rt. 1 #6 Mt. Pleasant Estate Name Clint Hurt & Associates
Mineral Wells, WV 26150 Address P.O. Box 1973
Midland, TX 79702
- 10) PROPOSED WELL WORK: Drill XX / Drill deeper / Redrill / Stimulate X /
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Berea/Gordon/Devonian Shale 401
- 12) Estimated depth of completed well, 3,600 feet
 13) Approximate strata depths: Fresh, 45 242 feet; salt, 1,000 feet.
 14) Approximate coal seam depths: n/a Is coal being mined in the area? Yes / No XX /

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used		
Conductor							Kinds
Fresh water	9 5/8	J55	26	x		442,300'	to surf. by rule 15.05
Coal							Sizes
Intermediate	7			x		2,100'	1,000' fill up
Production	4 1/2	K55	10	x		3,600'	200 SKS
Tubing							OR AS REQUIRED BY RULE
Lin...							15.01
							Perforations:
							Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-107-1400

Date June 23 19 86

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires June 23, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <u>AS</u>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>4102</u> <u>4103</u>	WPCP: <u>AS</u>	S&E: <u>AS</u>	Other: <u> </u>
---	------------------	-----------------	-------------------	---------------------------------	-----------------	----------------	----------------------

John H. Johnston by Gene Smith
 Director, Division of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.