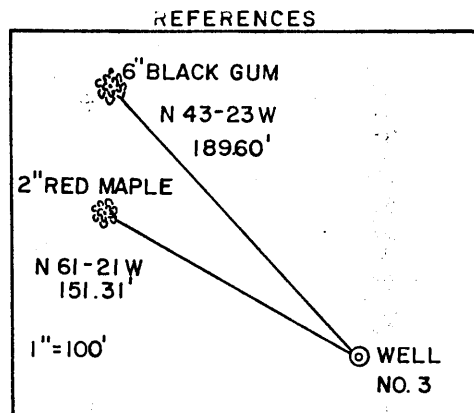
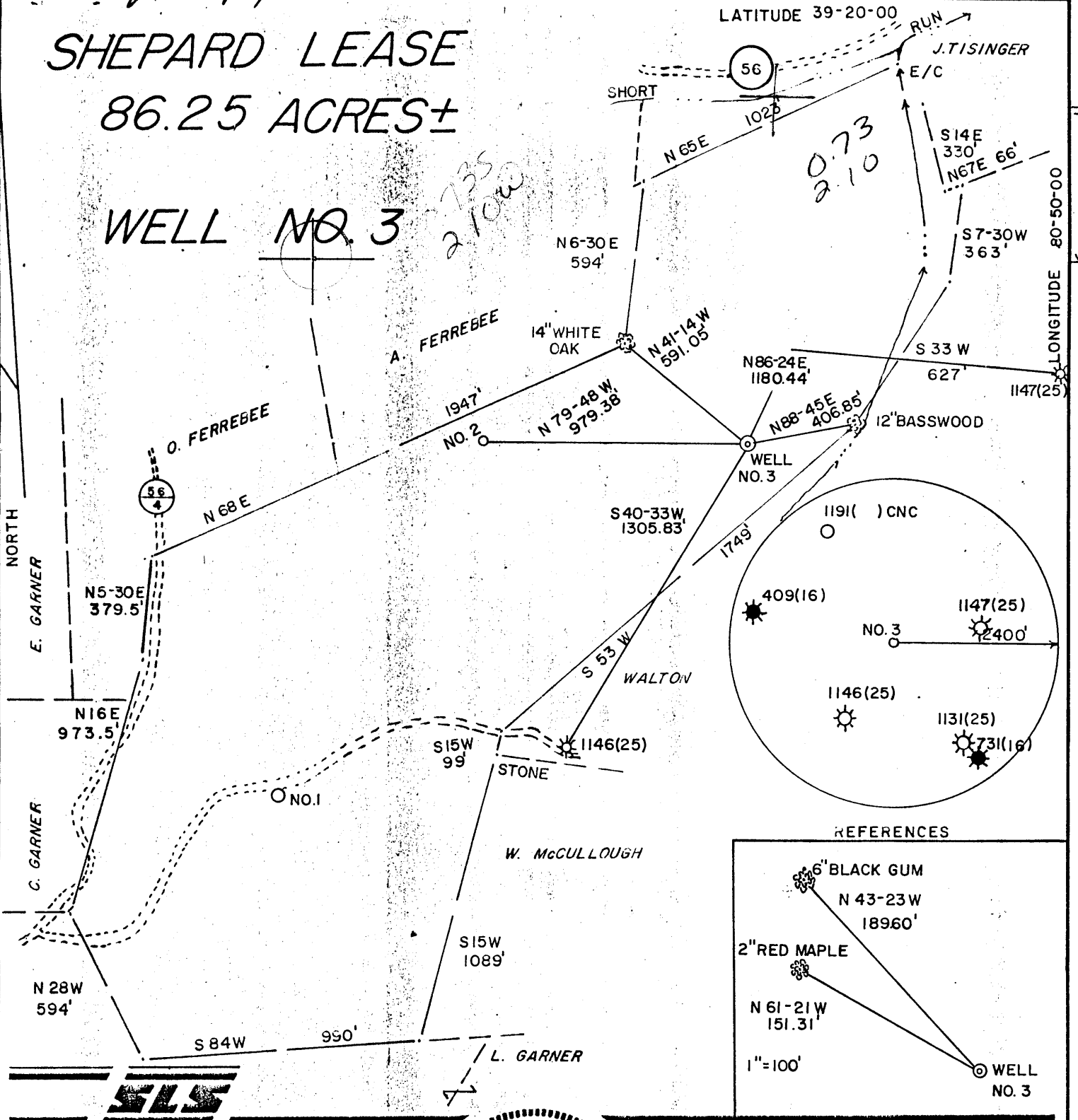


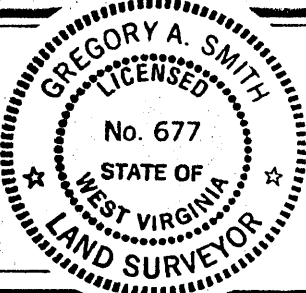
SHEPARD LEASE 86.25 ACRES±

WELL NO. 3



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 ENERGY.

L.L.S. 677 Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JUNE 7, 19 88

OPERATORS WELL NO. SHEPARD NO. 3


API WELL NO. 47 - 095 - 1248

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1845 (25-32)

PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEV. = 1308' SCALE 1" = 500'

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION: ELEVATION 1041' WATERSHED SHORT RUN +15' SC

DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5 671

SURFACE OWNER PHYLLIS A. SHEPARD ACREAGE 86.25 133

ROYALTY OWNER PHYLLIS A. SHEPARD LEASE ACREAGE 86.25 8

PROPOSED WORK: LEASE NO. _____

DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER _____

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION ALEXANDER

ESTIMATED DEPTH 5900' JUL 1 1988

WELL OPERATOR APPALACHIAN ENERGY DEVELOPMENT DESIGNATED AGENT GEORGE WILLIAMS

ADDRESS RT.2 BOX 499, GRAFTON, WV 26354 ADDRESS RT.2 BOX 499, GRAFTON, WV 26354

WR-35

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DIVISION OF OIL & GAS
DEPT. OF ENERGY

DEPARTMENT OF ENERGY
Oil and Gas Division

State of West Virginia

Date August 29, 1988
Operator's
Well No. 3
Farm Shepard
API No. 47 - 095 - 1248

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 x /)

LOCATION: Elevation: 1041 Watershed Short Run
District: Centerville County Tyler Quadrangle Pennsboro

COMPANY Appalachian Energy Div., Inc.
ADDRESS Rt. 2, Box 499, Grafton, WV 26354
DESIGNATED AGENT George R. Williams
ADDRESS Rt. 2, Box 499, Grafton, WV 26354
SURFACE OWNER Phyllis Shepard
ADDRESS 1662 Kaiser Drive, Reynoldsburg, OH 43068
MINERAL RIGHTS OWNER Phyllis Shepard
ADDRESS 1662 Kaiser Drive, Reynoldsburg, OH 43068
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
ADDRESS Middlebourne, WV
PERMIT ISSUED 7/1/88
DRILLING COMMENCED 7/18/88
DRILLING COMPLETED 7/23/88
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	30	0	0
9 5/8			
8 5/8	1660	1660	Surface
7			
5 1/2			
4 1/2	5313	5313	300 exs.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander/Benson/Riley Depth 5206 feet
Depth of completed well 5343 feet Rotary x / Cable Tools
Water strata depth: Fresh 28 feet; Salt 1595 feet
Coal seam depths: Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Alexander/Benson/Riley Pay zone depth See Perf. Detail feet
Gas: Initial open flow 35 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 810 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure 1680 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

SEP 09 1988

(Continue on reverse side)

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

- 1) Alexander - perf 5208-24 w/ 18 holes. Frac w/30,000# 20/40 sand in 315 bbls. water, using 43,500 SCF N₂
- 2) Benson - perf 4916-24 w/ 18 holes. Frac w/30,000# 20/40 sand in 313 bbls. water, using 44,600 SCF N₂
- 3) Riley - perf 4515-46 2/16 holes. Foam frac w/30,000# 20/40 sand in 700 bbls. 75 quality foam, using 556,000 SCF N₂

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all free and salt water, coal, oil and gas
Sand and Shale			0	655	Hole damp @28'
Red Rock			655	740	Hole wet @ 1595'
Sand and Shale			740	1860	
Big Lime			1860	1960	
Big Injun			1960	2080	
Sand and Shale			2080	2245	
Weir			2245	2368	
Sand and Shale			2368	4508	
Riley			4508	4547	
Shale			4547	4918	
Benson			4918	4924	
Shale			4924	5206	
✓ Alexander			5206	5229	
Shale			5229	5343	
TOTAL DEPTH				<u>5343</u>	

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

APPALACHIAN ENERGY DEV., INC.

Well Operator

By: George R. Williams

Date: August 29, 1988

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 coal, encountered in the drilling of a well."

1/2 CL

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

6397

2325, 1, 670

- 1) Well Operator: Appalachian Energy Development, Inc.
- 2) Operator's Well Number: Shepard No. 3 3) Elevation: 1041'
- 4) Well type: (a) Oil / or Gas /
 (b) If Gas: Production / Underground Storage /
 Deep / Shallow /
- 5) Proposed Target Formation(s): Alexander 439
- 6) Proposed Total Depth: 5900 feet
- 7) Approximate fresh water strata depths: 80'
- 8) Approximate salt water depths: N/A
- 9) Approximate coal seam depths: N/A
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 11) Proposed Well Work: Drill & Stimulate
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling		Left in well
Conductor	11 3/4			30'	0	0 Sks.
Fresh Water	8 5/8			1636'	1636' ←	CTS 38 CSR 18-11.3
Coal						
Intermediate						
Production	4 1/2			5900'	5900'	CTS or 38 CSR 18-11.1
Tubing						
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

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7407
 19
 Fee(s) paid: For Division of Oil and Gas Use Only DIVISION OF OIL & GAS
 Well Work Permit Reclamation Fund DEPARTMENT OF ENERGY
 Plat WW-9 WW-2B Bond 50 Blumberg WPCP
 (Type) Agent

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Page 1 of 10
Form W2-A
(09/87)
File Copy

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

1) Date: June 22, 1988
2) Operator's well number: Shepard No. 3
3) API Well No: 47 - 095 - 1248
State - County - Permit

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

4) Surface Owner(s) to be served:
(a) Name Phyllis A. Shepard
Address 1662 Kaiser Dr.
Reynoldsburg, OH 43068
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Robert Lowther
Address General Delivery
Middlebourne, WV 26149
Telephone (304) - 753 - 4764

5) (a) Coal Operator:
Name N/A
Address _____
(b) Coal Owner(s) with Declaration
Name N/A
Address _____
(c) Coal Lessee with Declaration
Name N/A
Address _____
Telephone _____

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

_____ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 10 on the above named parties, by:
_____ Personal Service (Affidavit attached)
X Certified Mail (Postmarked postal receipt attached)
_____ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Appalachian Energy Development, Inc.
By: George R. Williams
Its: President
Address Rt. 2, Box 499
Grafton, WV 26354
Telephone (304) 265 - 4147

Subscribed and sworn before me this 22nd day of June, 1988
Gregory A. Smith Notary Public
My commission expires 12/7/92