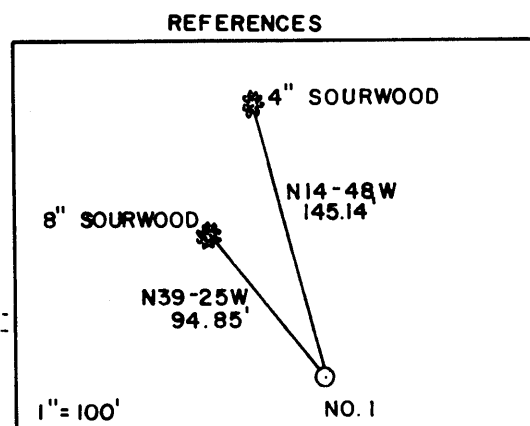
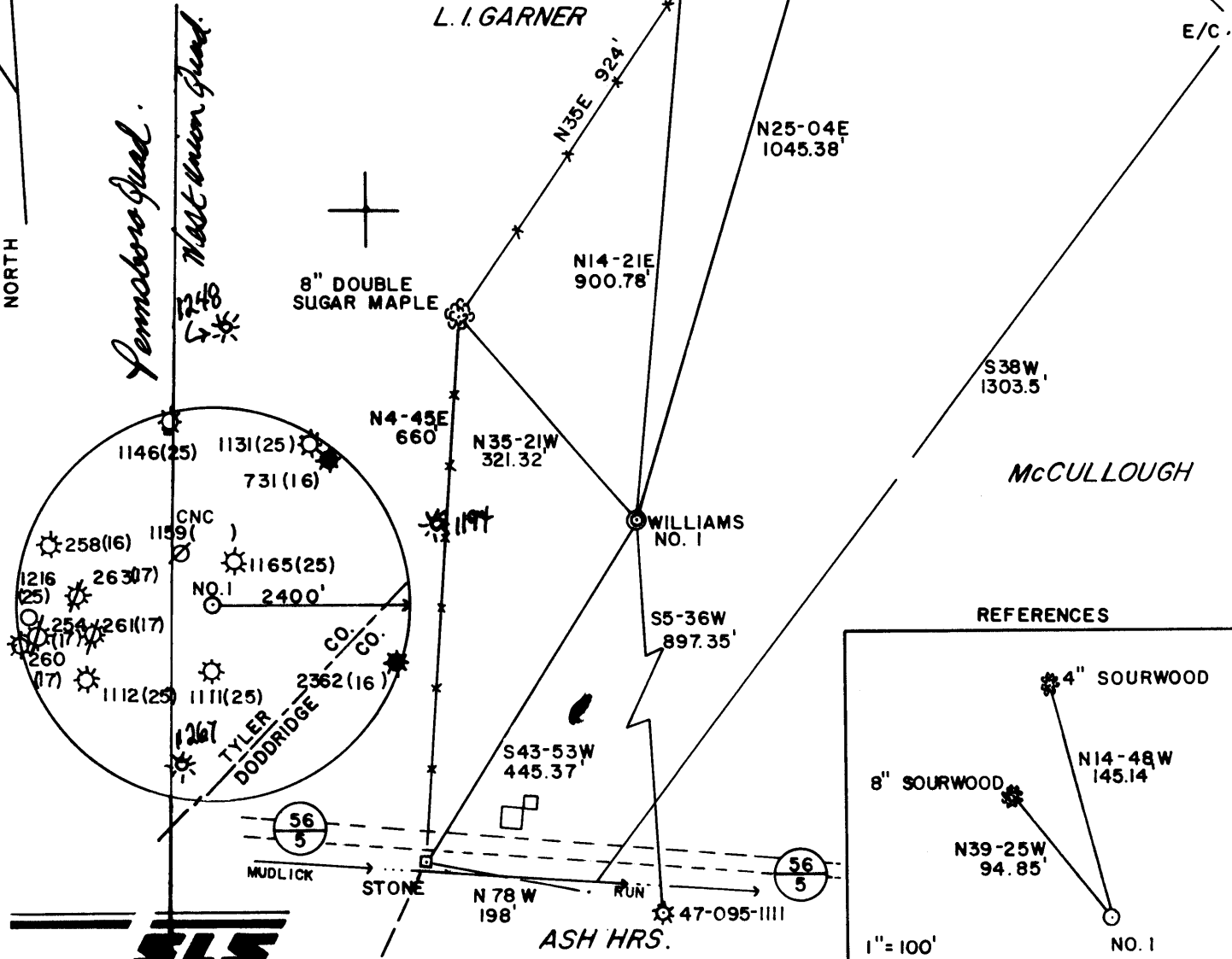


LATITUDE 39-20-00

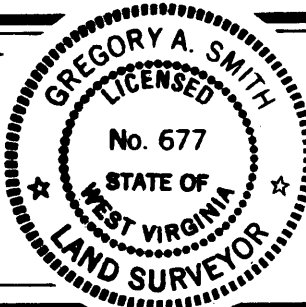
Janice 6/29/88 June 3/24/95
R.J. WILLIAMS LEASE
15 ACRES ± TOTAL
WELL NO. 1

NORTH

LONGITUDE 80-05-08



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.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JUNE 9, 19 88
 OPERATORS WELL NO. WILLIAMS NO. 1
 API WELL NO. 47-095-01246-7
 STATE WV COUNTY TYLER PERMIT 5990-5652

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1846 (25-35)
 SCALE 1" = 200'
 PROVEN SOURCE OF ELEVATION TOP OF KNOB = 1308'

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
OIL AND GAS DIVISION

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

LOCATION: ELEVATION 983' WATERSHED MUDLICK RUN
 DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5
 SURFACE OWNER RONALD J. WILLIAMS ACREAGE 15
 ROYALTY OWNER RONALD J. WILLIAMS LEASE ACREAGE 15
 PROPOSED WORK: LEASE NO. _____
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER _____
 PHYSICAL CHANGE IN WELL (SPECIFY) Change 4 1/2" pipe thru old well formation & complete well TARGET FORMATION ALEXANDER
 ESTIMATED DEPTH 5990-5652

WELL OPERATOR APPALACHIAN ENERGY DEVELOPMENT DESIGNATED AGENT GEORGE WILLIAMS
 ADDRESS RT.2 BOX 499, GRAFTON, WV 26352 ADDRESS RT.2 BOX 499, GRAFTON, WV 26352

575

COUNTY NAME PERMIT

Jamie 6/29/98 June 3/24/95

R.J. WILLIAMS LEASE

15 ACRES ± TOTAL

WELL NO. 1

LATITUDE 39-20-00

24" WHITE OAK

S45E McCULLOUGH 594'

LONGITUDE 80-50-00

NORTH

*Jennifers Glad.
North Union Glad.*

L.I. GARNER

47-095-1165

8" DOUBLE SUGAR MAPLE

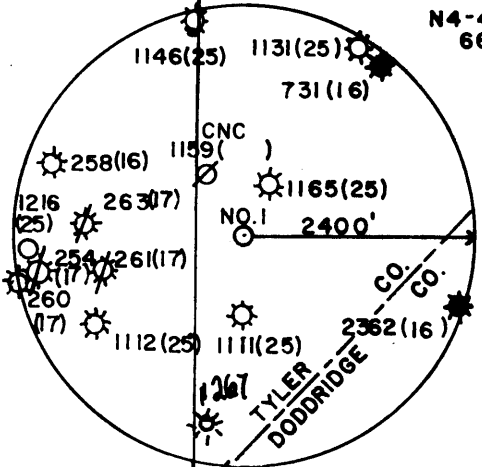
*1.385
2.142*

N25-04E 1045.38'

N14-21E 900.78'

S38W 1303.5'

MCCULLOUGH

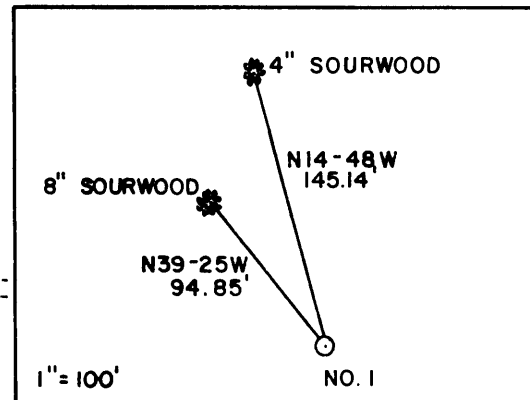


N4-45E 660' N35-21W 321.32'

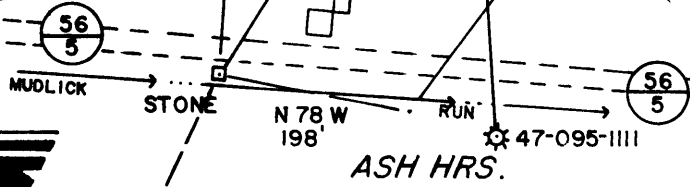
WILLIAMS NO. 1

S5-36W 897.35'

REFERENCES



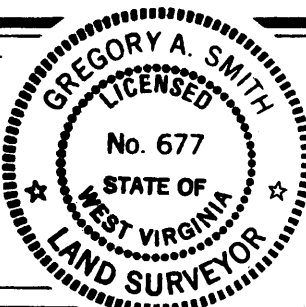
*1.38
2.14*



ASH HRS.



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.



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

DATE JUNE 9, 19 88

OPERATORS WELL NO. WILLIAMS NO. 1

API WELL NO. 47 - 095 - 01246-7
STATE COUNTY PERMIT

L.L.S. 677 Gregory A. Smith

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1846 (25-35)
PROVEN SOURCE OF ELEVATION TOP OF KNOB = 1308' SCALE 1" = 200'

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY OIL AND GAS DIVISION



WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 983' WATERSHED MUDLICK RUN
DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5
SURFACE OWNER RONALD J. WILLIAMS ACREAGE 15
ROYALTY OWNER RONALD J. WILLIAMS LEASE ACREAGE 15
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
PHYSICAL CHANGE IN WELL (SPECIFY) Squeeze 4 1/2" pipe thru old well formation & complete well TARGET FORMATION ALEXANDER
ESTIMATED DEPTH 5990' - 5652'

WELL OPERATOR APPALACHIAN ENERGY DEVELOPMENT DESIGNATED AGENT GEORGE WILLIAMS
ADDRESS RT.2 BOX 499, GRAFTON, WV 26352 ADDRESS RT.2 BOX 499, GRAFTON, WV 26352

COUNTY NAME PERMIT

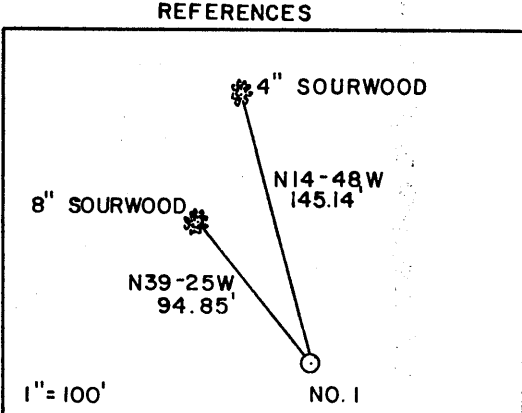
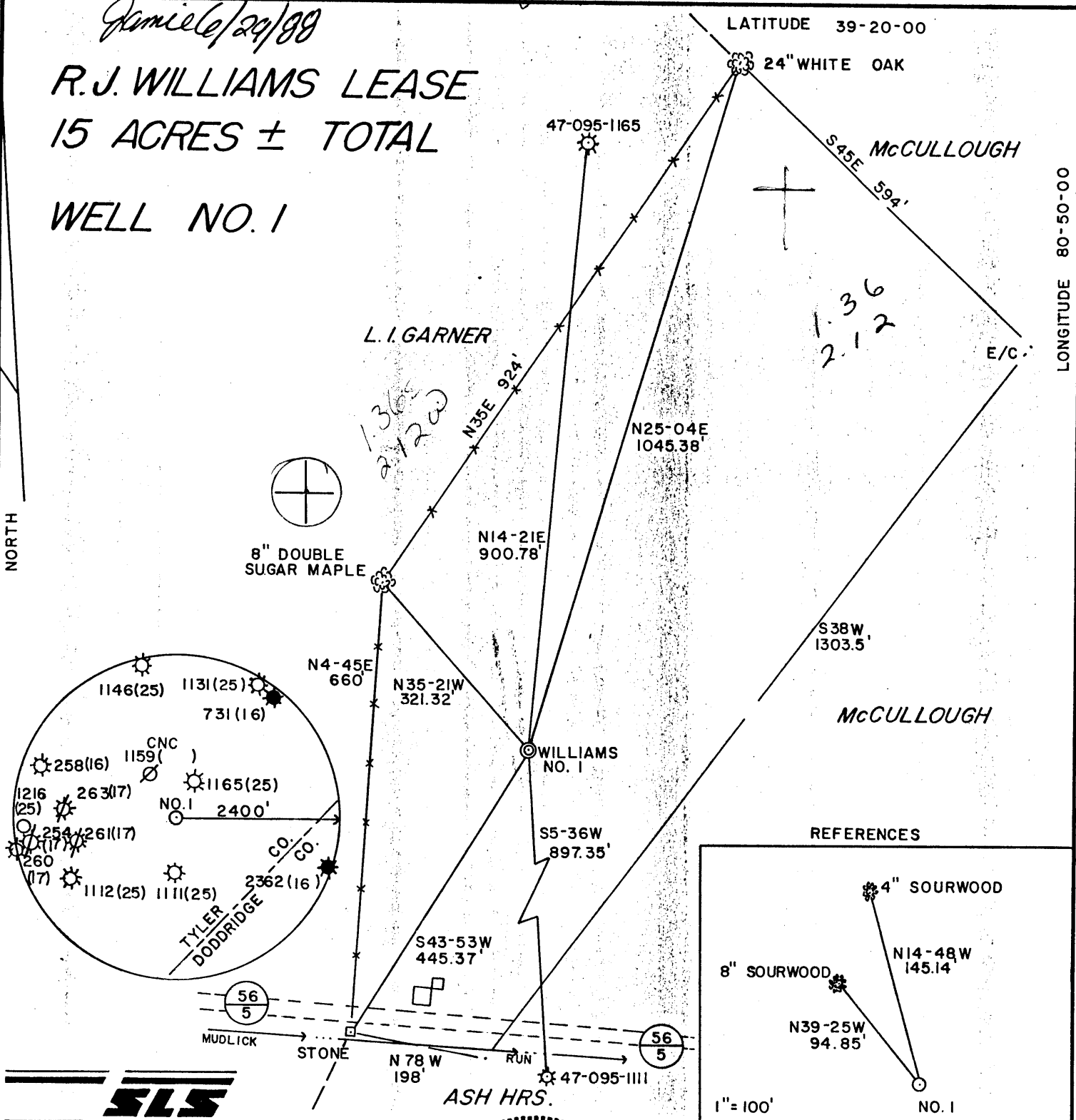
Jamie/29/98

R.J. WILLIAMS LEASE 15 ACRES ± TOTAL

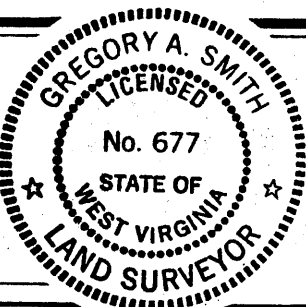
WELL NO. 1

NORTH

LONGITUDE 80-50-00
7,260'



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.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JUNE 9, 19 88
 OPERATORS WELL NO. WILLIAMS NO. 1
 API WELL NO. 47-095-1246
 STATE COUNTY PERMIT

L.L.S. Gregory A. Smith
677

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1846 (25-35)
 PROVEN SOURCE OF ELEVATION TOP OF KNOB = 1308' SCALE 1" = 200'

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



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

LOCATION: ELEVATION 983' WATERSHED MUDLICK RUN DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5 671 COUNTY NAME

SURFACE OWNER RONALD J. WILLIAMS ACREAGE 15 LEASE ACRES 15 LEASE NO.

ROYALTY OWNER RONALD J. WILLIAMS

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE 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 5990' JUL 1 1988

WELL OPERATOR APPALACHIAN ENERGY DEVELOPMENT DESIGNATED AGENT GEORGE WILLIAMS
 ADDRESS RT.2 BOX 499, GRAFTON, WV 26352 ADDRESS RT.2 BOX 499, GRAFTON, WV 26352

397
6-6 Stanley (90)

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SEP 22 1983



DIVISION OF OIL & GAS
DEPT. OF ENERGY

State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

Date 9/14/88
Operator's
Well No. 1
Farm Williams
API No. 47 - 095 - 1246

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: 983 Watershed Mudlick Run
District: Centerville County Tyler Quadrangle Pennsboro

COMPANY Appalachian Energy Dev., Inc.
ADDRESS Rt. 2, Box 499, Grafton, WV 26354
DESIGNATED AGENT George R. Williams
ADDRESS Rt. 2, Box 499, Grafton, WV 26354
SURFACE OWNER R.J. Williams
ADDRESS 14145 Marshallville Rd., Canal Fulton, OH 44614
MINERAL RIGHTS OWNER R.J. Williams
ADDRESS 14145 Marshallville Rd., Canal Fulton, OH 44614
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
ADDRESS Middlebourne, WV
PERMIT ISSUED 6/30/88
DRILLING COMMENCED 8/6/88
DRILLING COMPLETED 8/12/88
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 Cnd.			
13-10"	30	0	0
9 5/8			
8 5/8	1542	1542	Surface
7			
5 1/2			
4 1/2	5263	5263	300 sxs.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander/Benson/Riley Depth 5166 feet
Depth of completed well 5652 feet Rotary X / Cable Tools
Water strata depth: Fresh 115 feet; Salt 1460 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 10 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 660 Mcf/d Oil: 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

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

- 1) Alexander - perf 5166-76 w/18 holes. Frac w/30,000# 20/40 sand in 315 bbls. water using 43,000 SCF. N₂.
- 2) Benson - perf 4878-82 w/16 holes. Frac w/30,000# 20/40 sand in 310 bbls. water using 44,000 SCF. N₂.
- 3) Riley - perf 4488-4520 w/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 fr and salt water, coal, oil and
Sand and Shale			0	470	Hole damp @ 115'
Red Rock			470	510	Hole wet @ 1460'
Sand and Shale			510	1902	
Big Lime			1902	1952	
Big Injun			1952	2056	
Sand and Shale			2056	2212	
Weir			2212	2332	
Sand and Shale			2332	4478	
Riley			4478	4520	
Shale			4520	4878	
Benson			4878	4884	
Shale			4884	5164	
✓ Alexander			5164	5180	
Shale			5180	5652	
TOTAL DEPTH					<u>5652</u>

Bral @ TD

(Attach separate sheets as necessary)

APPALACHIAN ENERGY DEV., INC.
Well Operator

By: George R. Williams
Date: 9/14/88

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."
1306

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

- 1) Well Operator: 0397 Appalachian Energy Development, Inc. 2325, 1, 670
- 2) Operator's Well Number: Williams No. 1 3) Elevation: 983'
- 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: 5990 feet
- 7) Approximate fresh water strata depths: 60' 110' 350'
- 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	Fill-up (cu. ft.)
<u>OK R.A.L.</u> Conductor	11 3/4			30'	0	0 Sks.
Fresh Water	8 5/8			1083'	1083'	CTS 38 38 CSR 18-11.3
Coal						
Intermediate						
Production	4 1/2			5990'	5990'	CTS or by 38 CSR 18-11.1
Tubing						
Liners						

RECEIVED
 JUN 27 1988

PACKERS : Kind _____
 Sizes _____
 Depths set _____

DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

For Division of Oil and Gas Use Only

Fee(s) paid: 1416 Well Work Permit 19 Reclamation Fund 19 WPCP
 Plat 19 WW-9 19 WW-2B 19 Bond 503 blanket Agent 19
 (Type)

RECEIVED
JUN 27 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

1) Date: June 9, 1988
2) Operator's well number Williams No. 1
3) API Well No: 47 - 095 - 1246
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 Ronald J. Williams
Address 14145 Marshallville Rd.
Canal Fulton, OH 44614

(b) Name _____
Address _____

(c) Name _____
Address _____

6) Inspector Robert Lowther
Address General Delivery
Middlebourne, WV 26149
Telephone (304)- 758 - 4764

5) (a) Coal Operator:
Name N/A
Address _____

(b) Coal Owner(s) with Declaration
Name Ronald J. Williams
Address _____

Name _____
Address _____

(c) Coal Lessee with Declaration
Name N/A
Address _____

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 8 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 Williams
Its: President
Address Rt. 2, Box 499
Grafton, WV 26352
Telephone 265 - 4147

Subscribed and sworn before me this 9th day of June, 1988

Gregory A. Smith Notary Public
My commission expires 12/1/92