

4/27/87

LATITUDE 39° 22' 30" 39 25 1,200'

LONGITUDE 80° 22' 30"

MAE BOND (LIFE)

GENE & MANDALL BOND 32.16 Ac.

30.88 Ac.

20 Ac.

30 Ac

17 Ac.

EDITH GRIFFIN 113 Ac.

RICHARD C. FOLEY 113 Ac.

ALBERT GATRELL 93.75 Ac.

5.575
2.46w

2.695
0.22w

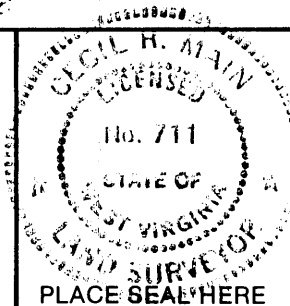
REFERENCES

N 54° 15' W 121' TO 6" Hy.
N 2° 00' W 146' TO 3" DOGWOOD

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200'
PROVEN SOURCE OF ELEVATION WELL API # 0349
Elev. 1025'

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) Cecil R. Main
R.P.E. _____ L.L.S. 711



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE MARCH 21, 1987
OPERATOR'S WELL NO. WASHBURN #1A
API WELL NO.

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
LOCATION: ELEVATION 1040 WATER SHED SHORT RUN
DISTRICT CENTERVILLE 1 COUNTY TYLER

QUADRANGLE PENNSBORO 75' 539 133 CS West Union
SURFACE OWNER GLENN W. JAMES ACREAGE 146
OIL & GAS ROYALTY OWNER LELIA WASHBURN, et. al. LEASE ACREAGE 150
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 ALEXANDER ESTIMATED DEPTH 5600'
WELL OPERATOR APPALACHIAN ENERGY DEV., INC. DESIGNATED AGENT GEORGE WILLIAMS
ADDRESS P.O. BOX 902 397 ADDRESS P.O. BOX 902
BELINGTON, W.V. 26250 BELINGTON, W.V. 26250

6-6 Stanley (90)

FORM IV-6 (8-78)

H.T. HALL

COUNTY NAME

PERMIT

MAY 04 1987



State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

Date 10-24-87
Operator's
Well No. #1-A
Farm Washburn
API No. 47-095-1192

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: 1040 Watershed Short 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 Glenn W. James
ADDRESS Canton, Ohio
MINERAL RIGHTS OWNER Lelia Washburn et al
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
ADDRESS Middlebourne, Wv
PERMIT ISSUED 4-27-87
DRILLING COMMENCED 9-1-87
DRILLING COMPLETED 9-6-87

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
11 3/4	270	270	Surface
9 5/8			
8 5/8	1998	1998	385 sxs
7			
5 1/2			
4 1/2	5280	5280	275 sxs
3			
2			
Liners used			

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

GEOLOGICAL TARGET FORMATION Alexander Depth 5200 feet
Depth of completed well 5339 feet Rotary X / Cable Tools _____
Water strata depth: Fresh 45&175 feet; Salt none feet
Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA Alexander 5201-22
Benson 4908-13
Producing formation Riley Pay zone depth 4511-41 feet
Gas: Initial open flow 65 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 790 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1795 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

APR 15 1988

(Continue on reverse side)

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

- 1) Alexander-perf 5201-22 w/19 holes. Foam frac w/40000# 20/40 sand in 601 bbls 75 quality foam, using 551800 SCF N₂. Avg Pr-3200, Avg Rate-20, ISDP-1250.
- 2) Benson-perf 4908-13 w/16 holes. Foam frac w/31500# 20/40 sand in 470 bbls 75 quality foam, using 374000 SCF N₂. Avg Pr-2950, Avg Rate-20, ISDP-3500.
- 3) Riley-perf 4511-41 w/20 holes. Foam frac w/20000# 20/40 sand in 364 bbls 75 quality foam, using 322000 SCF N₂. Avg pr-3100, Avg Rate-20, ISDP-1300.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
sand & shale			0	900	½" H ₂ O at 175'
red rock			900	920	
sand & shale			920	1888	
Big Lime			1888	1945	
sand & shale			1945	4508	Gas 17/10-7" @ 2728'
Riley			4508	4556	Gas 38/10-2" @ 4031
shale			4556	4903	Gas 75/10-2" @ 4622
Benson			4903	4913	Gas 100/10-2" @ 5058
shale			4913	5200	Gas 59/10-2" @ 5339
Alexander			5200	5223	
shale			5223	5339	
Total Depth				5339	

7/8
RECEIVED
 APR 27 1987



1) Date: 4/22, 19 87
 2) Operator's Well No. Washburn #1-A
 3) API Well No. 47 095 1192
 State County Permit

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

- 4) WELL TYPE: A Oil / Gas / B (If "Gas", Production / Underground storage / Deep / Shallow)
 5) LOCATION: Elevation: 1040 Watershed: Short Run
 District: Centerville County: Tyler 095 Quadrangle: Pennsboro 538
 6) WELL OPERATOR Appalachian CODE: 2325 7) DESIGNATED AGENT George Williams
 Address Energy Dev., Inc. Address Rt 2 Box 499
Rt 2 Box 499 Grafton, Wv 26354 Grafton, Wv 26354
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Robert Lowther Name N/A
 Address General Delivery Address _____
Middlebourne, Wv 26149
 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify) _____
 11) GEOLOGICAL TARGET FORMATION, Alexander
 12) Estimated depth of completed well, 5350 feet
 13) Approximate strata depths: Fresh, 580 feet; salt, none feet.
 14) Approximate coal seam depths: none Is coal being mined in the area? Yes / No

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	For drilling	Left in well		Kinds	Depths set
Conductor	11-3/4		42	x		250	250	surface		Per Rule 15.05 Sizes
Fresh water										
Coal										
Intermediate	8-5/8		23	x		1490	1490	surface		Depths set 530 SKS OR AS REQUIRED BY RULE 15.05 Locations: Top Bottom
Production	4 1/2	J55	10.5	x		5340	5340	1000' fill		
Tubing										
Liners										

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1192 Date April 27 19 87

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 April, 27, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>511</u> <u>197</u>	WPC: <u>AS</u>	S&E: <u>AS</u>	Other: _____
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NOTE: Keep one copy of this permit posted at the drilling location.

[Signature]
 Director, Division of Oil and Gas

File

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

10020