

Jamie
3/23/95

ALFRED FERREBEE
59.25 AC.

LATITUDE 39° 20' 00"
NELLIE McCULLOUGH
100 AC.

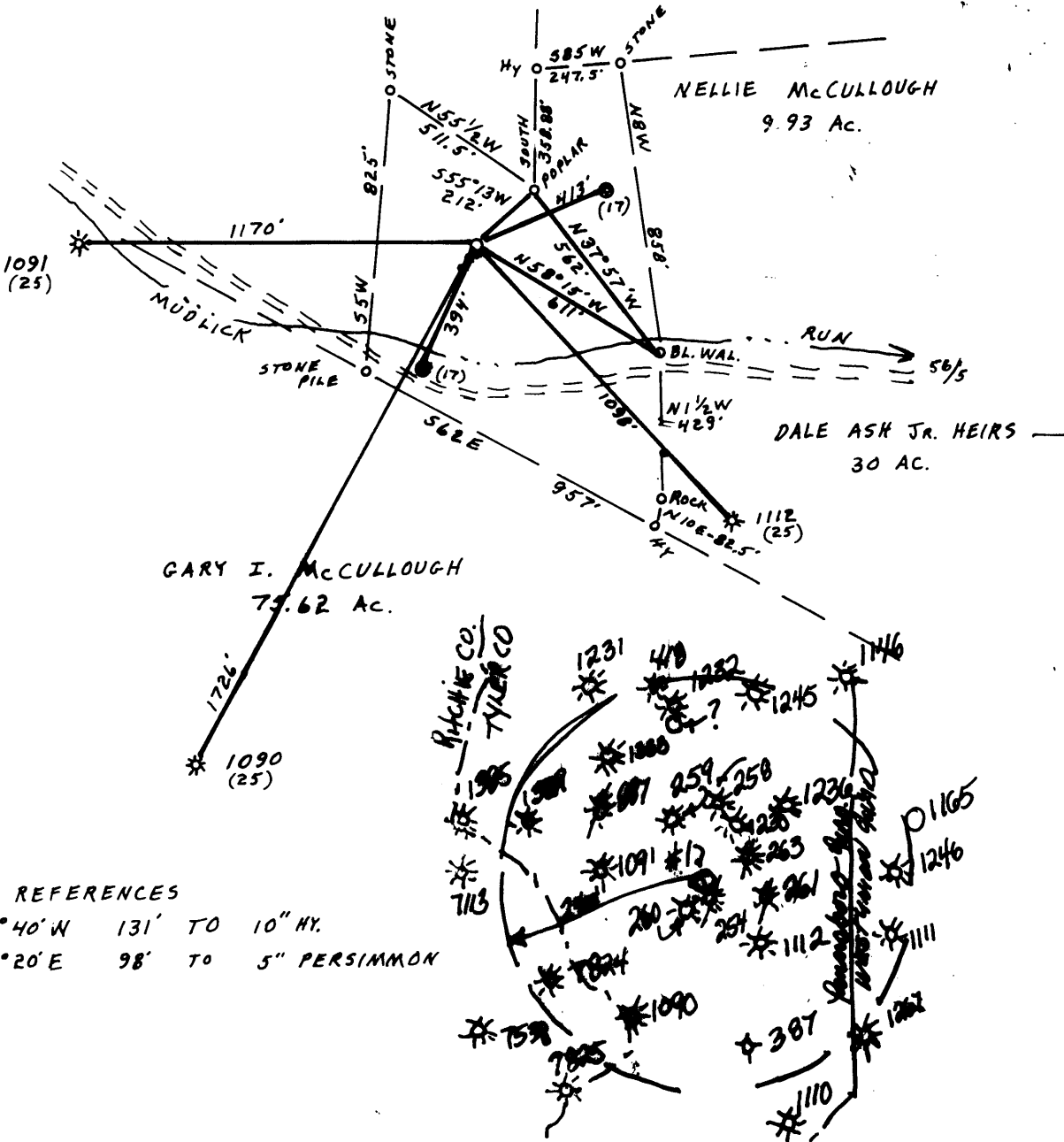
NELLIE McCULLOUGH
9.93 AC.

DALE ASH JR. HEIRS
30 AC.

GARY I. McCULLOUGH
75.62 AC.

LONGITUDE 80° 52' 30"

7350'



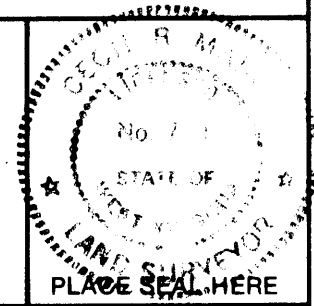
1.405
0.34w

REFERENCES
N 60° 40' W 131' TO 10" HY.
N 65° 20' E 98' TO 5" PERSIMMON

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200'
PROVEN SOURCE OF ELEVATION WELL API # 1091
ELEV. 982'

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 SEPTEMBER 28, 1987
OPERATOR'S WELL NO. MERRITT #1
API WELL NO.

47-095-1216 F

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1084' WATERSHED MUDLICK RUN
DISTRICT CENTERVILLE COUNTY TYLER
QUADRANGLE PENNSBORO 7.5'
SURFACE OWNER RUBY WILSON ACREAGE 18
OIL & GAS ROYALTY OWNER MARY & NANCY MERRITT HEIRS LEASE ACREAGE 18

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5950 5555
WELL OPERATOR APPALACHIAN ENERGY DEV., INC. DESIGNATED AGENT GEORGE WILLIAMSON 27 1997
ADDRESS P.O. BOX 902 ADDRESS P.O. BOX 902
BELINGTON, W.V. 26250 BELINGTON, W.V. 26250

COUNTY NAME TYLER
PERMIT 1216 F

FORM IV-6 (8-78)
H.T. HALL

1,750'

Jan 3/23/95

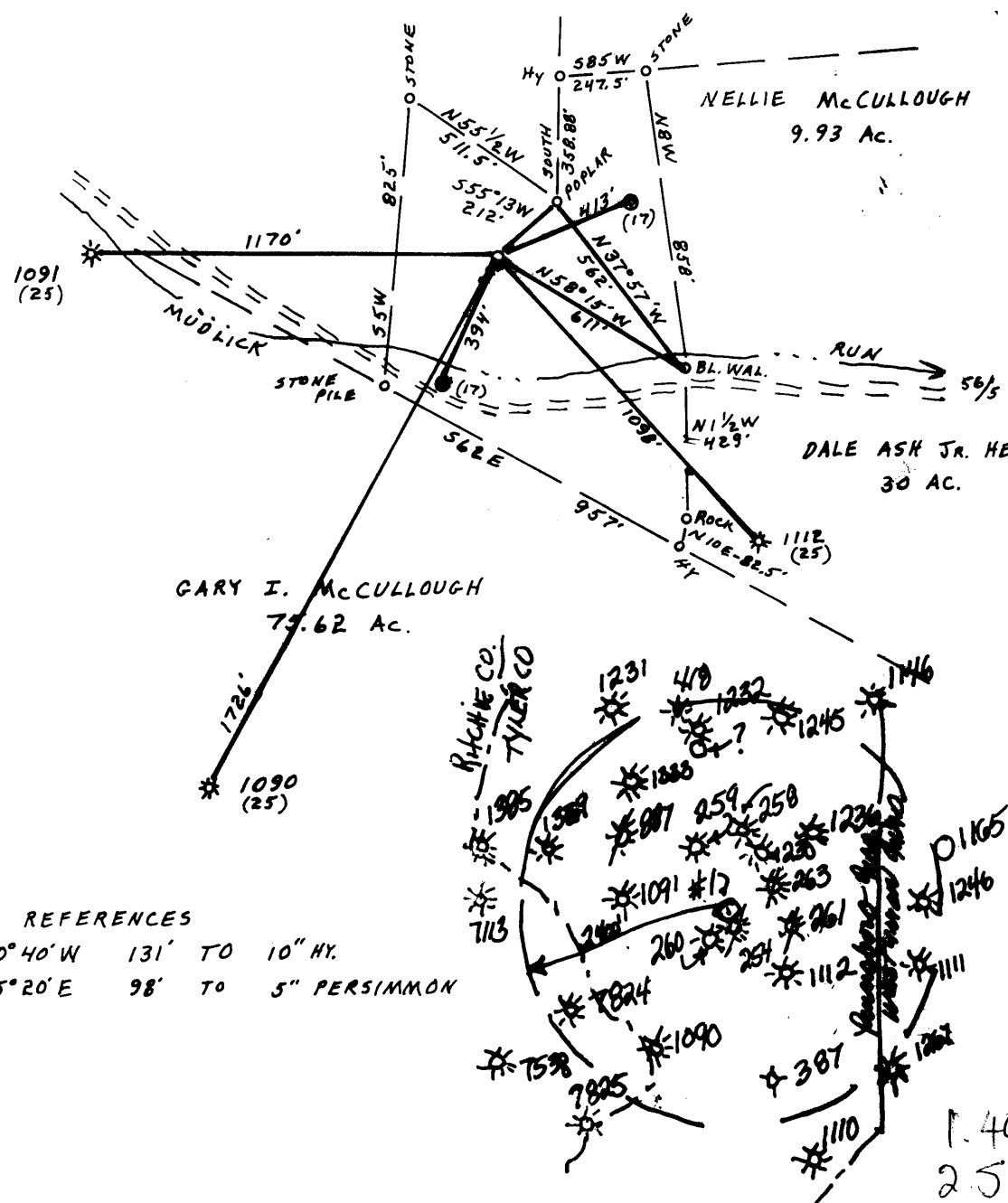
ALFRED FERREBEE
59.25 AC.

LATITUDE 39° 20' 00"
NELLIE McCULLOUGH
100 AC.

NELLIE McCULLOUGH
9.93 AC.

DALE ASK JR. HEIRS
30 AC.

GARY I. McCULLOUGH
75.62 AC.



LONGITUDE 80° 52' 30"

1.40
0.34

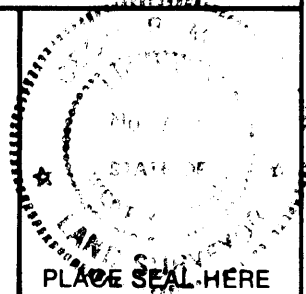
1.40
2.57

REFERENCES
N 60° 40' W 131' TO 10" HY.
N 65° 20' E 98' TO 5" PERSIMMON

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

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 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200'
 PROVEN SOURCE OF ELEVATION WELL API # 1091
 ELEV. 982'

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



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE SEPTEMBER 28, 1987
 OPERATOR'S WELL NO. MERRITT #1
 API WELL NO. _____

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

LOCATION: ELEVATION 1084' WATERSHED MUDLICK RUN
 DISTRICT CENTERVILLE COUNTY TYLER
 QUADRANGLE PENNSBORO 7.5' W. S.C.

SURFACE OWNER RUBY WILSON ACREAGE 18
 OIL & GAS ROYALTY OWNER MARY & NANCY MERRITT HEIRS LEASE ACREAGE 18

LEASE NO. _____
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
Sperry's Fracturing well that formation is made into a cylinder

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5950 5555

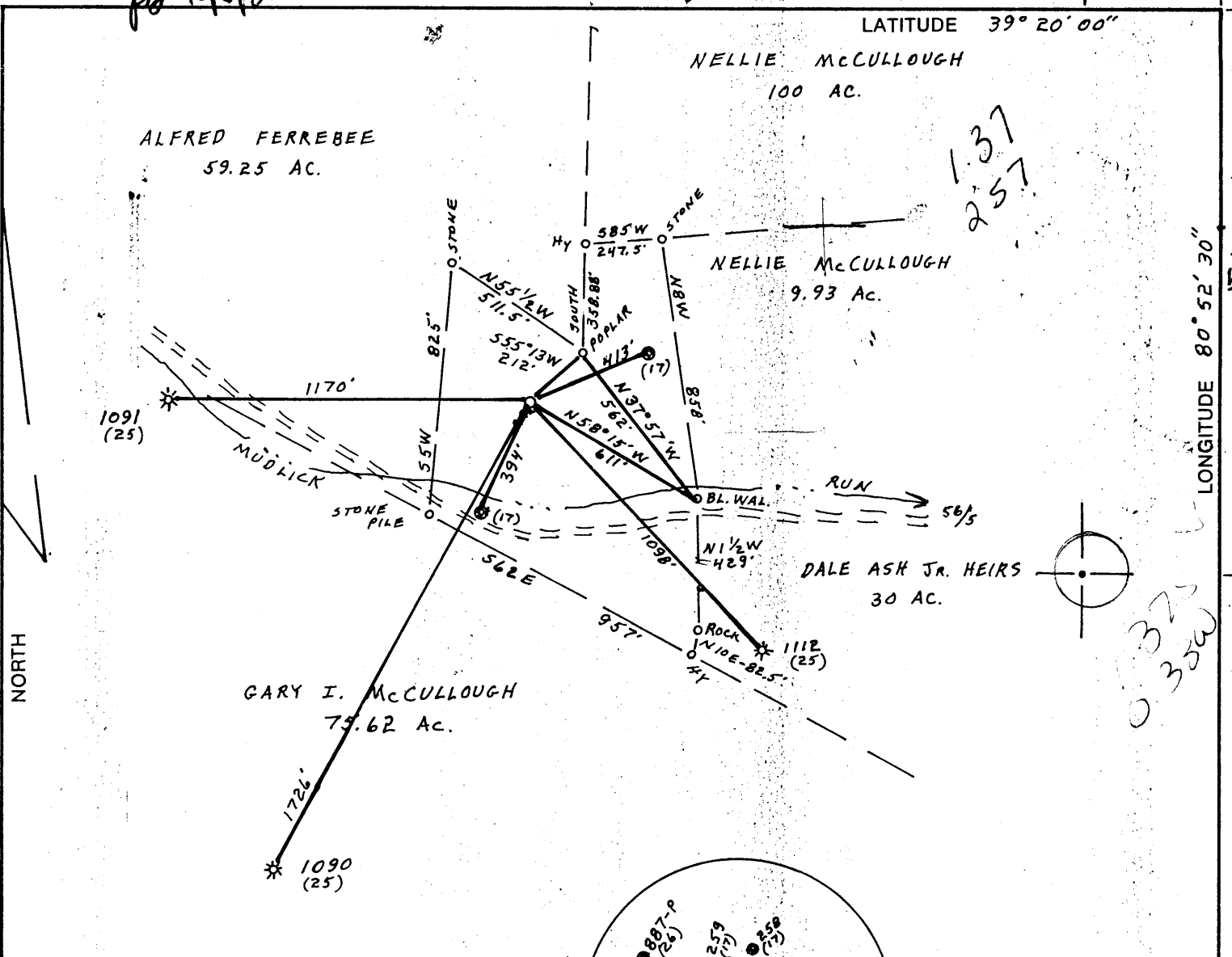
WELL OPERATOR APPALACHIAN ENERGY DEV., INC. DESIGNATED AGENT GEORGE WILLIAMS
 ADDRESS P.O. BOX 902 ADDRESS P.O. BOX 902
BELINGTON, W.V. 26250 BELINGTON, W.V. 26250

FORM IV-6 (8-78) H.T. HALL

COUNTY NAME TYLER PERMIT 216

988 10/6/87

1750'

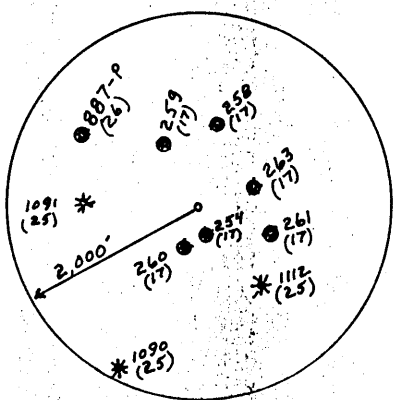


1.37
2.57

0.37
0.35

REFERENCES

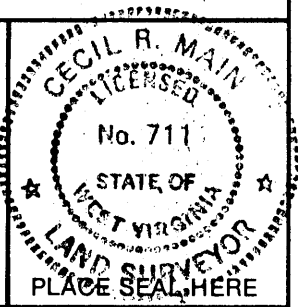
N 60° 40' W 131' TO 10" HY.
N 65° 20' E 98' TO 5" PERSIMMON



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

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 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200'
 PROVEN SOURCE OF ELEVATION WELL API # 1091
 ELEV. 982'

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 SEPTEMBER 28, 1987
 OPERATOR'S WELL NO. MERRITT #1
 API WELL NO. 47-095-1216
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1084' WATERSHED MUDLICK RUN
 DISTRICT CENTERVILLE 1 COUNTY TYLER
 QUADRANGLE PENNSBORO 7.5' 539 133 d West Union SC
 SURFACE OWNER RUBY WILSON ACREAGE 18
 OIL & GAS ROYALTY OWNER MARY & NANCY MERRITT HEIRS LEASE ACREAGE 18

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5990
 WELL OPERATOR APPALACHIAN ENERGY DEV., INC. DESIGNATED AGENT GEORGE WILLIAMS
 ADDRESS P.O. BOX 902 ADDRESS P.O. BOX 902
BELINGTON, W.V. 26250 397 BELINGTON, W.V. 26250

OCT 12 1987

6-6 Stanley

(90)

FORM IV-6 (8-78)
H.T. HALL

COUNTY NAME
PERMIT



WR-35

State of West Virginia

DEPARTMENT OF ENERGY
Oil and Gas Division

Date 11-1-87
Operator's Well No. Merritt #1
Farm Merritt
API No. 47-095-1216

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: 1084 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 Ruby Wilson
ADDRESS Pennsboro, Wv
MINERAL RIGHTS OWNER Merritt Heirs
ADDRESS Pennsboro, Wv
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
ADDRESS Middlebourne, Wv
PERMIT ISSUED 10-6-87
DRILLING COMMENCED 10-8-87
DRILLING COMPLETED 10-16-87
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 Cond., 13-10", 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION Alexander Depth 5250 feet
Depth of completed well 5555 feet Rotary x / Cable Tools
Water strata depth: Fresh 150 feet; Salt 1588 feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA Note: These zones are downhole commingled. 5242-52
Producing formation Alexander/Benson/Riley Pay zone depth 4549-87 feet
Gas: Initial open flow 45 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 765 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--)

APR 15 1988

(Continue on reverse side)

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

- 1) Alexander- perf 5242-52 w/14 holes. Frac w/30000# 20/40 sand in 316 bbls water using 42500 SCF N₂. Avg rate-26, Avg pr-2413, ISDP-1353.
- 2) Benson- perf 4950-54 w/14 holes. Frac w/30000# 20/40 sand in 360 bbls water using 36000 SCF N₂. Avg rate-24, Avg pr-2506, ISDP-1280.
- 3) Riley- Perf 4549-87 w/20 holes. Foam frac w/25000# 20/40 sand in 600 bbls 75 quality foam, using 485000 SCF N₂. Avg rate-24, Avg pr-3200, ISDP-1837.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
red rock			0	45	
sand and shale			45	353	1" stream @ 150'
red rock and shale			353	1422	
sand			1422	1593	3/4" stream @ 1588'
Big Lime			1887	1984	shale 1593-1887
Big Injun			1984	2112	
shale			2112	2464	Gas @ 2422-4/10-7" water
Berea			2464	2469	2914-4/10-7" "
sand and shale			2469	4549	3411-80/10-2" "
Riley			4549	4598	4046-5/10-7" "
shale			4598	4950	4605-4/10-7" "
Benson			4950	4954	5067-4/10-7" "
shale			4954	5241	5314-4/10-7" "
Alexander			5241	5262	T.D.-2/10-7" "
shale			5262	5555	
total depth				5555	

(Attach separate sheets as necessary)

Appalachian Energy Dev., Inc.

Well Operator

By: George Williams

Date: 11-1-87

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 coal, encountered in the drilling of a well."

121

(Observed)
7/85
RECEIVED
OCT 05 1987



1) Date: Sept. 30, 19 87
 2) Operator's Well No. Merritt #1
 3) API Well No. 47-095-1216
 State _____ County _____ Permit _____

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

- 4) WELL TYPE: A Oil _____ / Gas XX /
 B (If "Gas", Production _____ / Underground storage _____ / Deep _____ / Shallow XX /)
- 5) LOCATION: Elevation: 1084' Watershed: Mudlick Run
 District: Centerville 1 County: Tyler 095 Quadrangle: Pennsboro 538
- 6) WELL OPERATOR Appalachian Energy CODE: 2325 7) DESIGNATED AGENT George Williams
 Address P.O. Box 902 Address RT. 2 Box 499
Belington, WV 26250 Grafton, WV 26354
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther
 Address General Delivery
Middlebourne, WV
- 9) DRILLING CONTRACTOR: Name Unknown
 Address _____
- 10) PROPOSED WELL WORK: Drill XX / 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, 5990 feet
 13) Approximate trata depths: Fresh 35, 600, 640, 645 feet; salt, None 1370, 1505, 1531 feet.
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes _____ / No XX
- 15) CASING AND TUBING PROGRAM From TYLER 263, 259, 258

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		
Conductor	113/4		42	X		<u>258</u>	<u>258</u>	surface	Kinds
Fresh water						<u>654</u>	<u>654</u>		<u>38CSR10-11.3</u>
Coal						<u>654</u>	<u>654</u>	<u>OTS</u>	Sizes
Intermediate	8 5/8		23	X		1900	1900	surface	
Production	4 1/2	J55	10.5	X		5490	5490	as required	Depths/set <u>by rule 1570+</u>
Tubing									<u>38CSR10-11.1</u>
Liners									Perforations: Top _____ Bottom _____

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-095-1216 Date October 6 1987

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 October 6, 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: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>233</u> <u>1072</u>	WRCP: <input checked="" type="checkbox"/>	SAE: <input checked="" type="checkbox"/>	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.