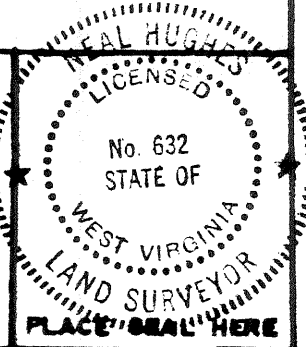


LONGITUDE 80° 50'

LATITUDE 39° 22' 30"  
5800' SOUTH  
9200' WEST

FILE NO. L + M  
DRAWING NO. 1  
SCALE 1" = 500'  
MINIMUM DEGREE OF ACCURACY 1/200  
PROVEN SOURCE OF ELEVATION BM 782

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) Neal Hughes  
R.P.E. \_\_\_\_\_ L.L.S. 632



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



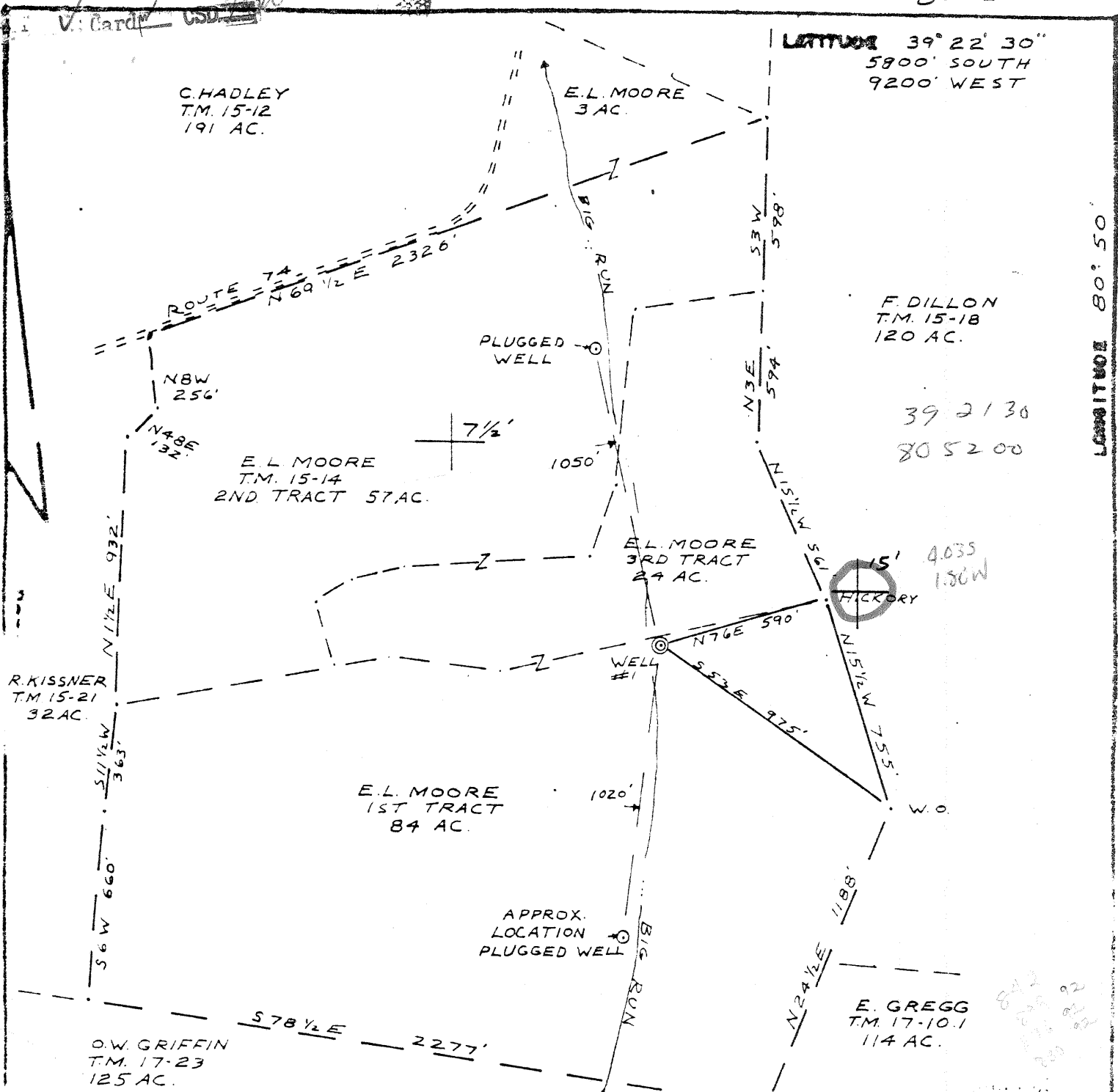
DATE \_\_\_\_\_, 19\_\_\_\_  
OPERATOR'S WELL NO. \_\_\_\_\_  
API WELL NO. 47-095-0877-00  
STATE COUNTY PERMIT

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 825 WATER SHED BIG RUN  
DISTRICT CENTERVILLE COUNTY TYLER  
QUADRANGLE WEST UNION 7 1/2 15' 05 133  
SURFACE OWNER E. L. MOORE ACREAGE 168  
OIL & GAS ROYALTY OWNER E. L. MOORE LEASE ACREAGE 168  
LEASE NO. 40486  
PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

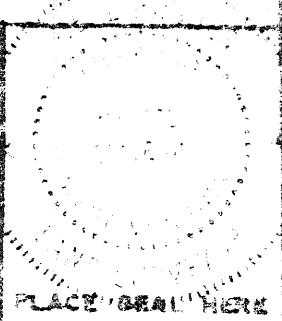
PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
TARGET FORMATION Devonian ESTIMATED DEPTH 4500'  
WELL OPERATOR Appalachian Energy Dev DESIGNATED AGENT George Williams  
ADDRESS P.O. Box 902 ADDRESS P.O. Box 902  
Belington, WV 26250 Belington, WV 26250  
031 OWDD-66 without 92 90

18 1985



FILE NO. L + M  
 DRAWING NO. 1  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROVEN SOURCE OF ELEVATION BM 782

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) Neal Hughes  
 R.P.E. \_\_\_\_\_ L.L.S. 632



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



DATE \_\_\_\_\_  
 OPERATOR'S WELL NO. \_\_\_\_\_  
 API WELL NO. 47-095-0877  
 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 825 WATER SHED BIG RUN  
 DISTRICT CENTERVILLE COUNTY TYLER  
 QUADRANGLE WEST UNION 7 1/2  
 SURFACE OWNER E. L. MOORE ACREAGE 168  
 OIL & GAS ROYALTY OWNER E. L. MOORE LEASE ACREAGE 168  
 LEASE NO 40486  
 PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE \_\_\_\_\_ PLUS OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUS AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUS \_\_\_\_\_  
 TARGET FORMATION Devonian Salt ESTIMATED DEPTH 4500'  
 WELL OPERATOR W.M. Petroleum Co. DESIGNATED AGENT James Copen  
 ADDRESS 241 Box 13-B ADDRESS 113 Sherwood Williamstown, WV  
Jan 2 1981

IV-35  
(Rev 8-81)

**RECEIVED**  
MAY 22 1985  
OIL & GAS DIV.  
DEPT. OF MINES



**State of West Virginia**

Department of Mines  
Oil and Gas Division

Date 5/22/85  
Operator's  
Well No. #1  
Farm Moore  
API No. 47 - 095 - 877 DD

WELL OPERATOR'S REPORT  
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

**RECEIVED**  
MAY 31 1985

WELL TYPE: Oil    / Gas X / Liquid Injection    / Waste Disposal    / OIL & GAS DIVISION  
(If "Gas," Production    / Underground Storage    / Deep    / ~~Shallow~~    / **DEPT. OF MINES**)

LOCATION: Elevation: 825' Watershed Big Run  
District: Centerville County Tyler Quadrangle West Union 7.5'

COMPANY Appalachian Energy Development, Inc.

ADDRESS P. O. Box 902, Belington, WV 26250

DESIGNATED AGENT George Williams

ADDRESS P. O. Box 902, Belington, WV 26250

SURFACE OWNER Mabel Moore

ADDRESS Rt. 2, Box 172, Pennsboro, WV 26415

MINERAL RIGHTS OWNER Same as above

ADDRESS   

OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther  
ADDRESS G.D., Middlebourne, WV

PERMIT ISSUED 2/22/85

DRILLING COMMENCED 3/18/85

DRILLING COMPLETED 3/28/85

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"			
9 5/8			
8 5/8	274'	274'	125 sks
7			
5 1/2			
4 1/2	2218'	2218'	245 sks
3			
2 7/8"	4822'	4803'	2000' fill up
Liners used			

GEOLOGICAL TARGET FORMATION Benson Depth 4700 feet

Depth of completed well 4822 feet Rotary X / Cable Tools   

Water strata depth: Fresh - feet; Salt - feet

Coal seam depths: - Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4700' - 4712' feet

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

Final open flow 600 Mcf/d Final open flow - Bbl/d

Time of open flow between initial and final tests    hours

Static rock pressure 1600 psig (surface measurement) after 24 hours shut in  
(If applicable due to multiple completion--)

Second producing formation Riley Pay zone depth 4276' - 4334' feet

Gas: Initial open flow 60 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

(Continue on reverse side)

JUN 10 1985

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

Perforated Benson: 4696' - 4704' (10 holes)  
Frac with 50 sks 80/100, 150 sks 20/40, 500 gal 15% HCl,  
40,000 SCF N<sub>2</sub>, 340 BBLS treated fluid.

Perforated Riley: 4281' - 4326' (12 holes)  
Frac with 50 sks 80/100, 150 sks 20/40, 500 gal 15% HCl,  
40,000 SCF N<sub>2</sub>, 324 BBLS treated fluid.

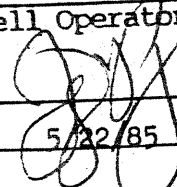
WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
shale/sand			2180	3870	<u>E Log Tops</u>
sand			3870	3883	Riley 4286'
shale			3883	4465	Benson 4702'
sand/shale			4465	4505	
shale			4505	4822	
TD				<u>4822</u> Benson @ T.D.	
					NEW TD 4822 OLD TD 2263 <hr/> DD Hg. 2659

(Attach separate sheets as necessary)

Appalachian Energy Development, Inc.

Well Operator

By:   
Date: 5/22/85

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."



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
**Oil and Gas Division**  
**WELL RECORD**

**RECEIVED**

NOV 15 1982

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

Quadrangle West Union  
Permit No. 47-095-0877

Rotary  Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas   
Recycling \_\_\_\_\_ Comb.   
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind)

Company L&M Petroleum Co.  
Address P.O. Box 89, Reno, OH 45773  
Farm Moore/Griffin Acres 160  
Location (waters) Big Run  
Well No. 1 Elev. 825  
District Centerville County Tyler  
The surface of tract is owned in fee by \_\_\_\_\_  
Emerson Moore & Mable Moore  
Address 1600 Shakespeare Ave., Akron, OH  
Mineral rights are owned by See Attached  
\_\_\_\_\_ Address \_\_\_\_\_  
Drilling Commenced 12/13/80  
Drilling Completed 12/17/80  
Initial open flow \_\_\_\_\_ cu. ft. \_\_\_\_\_ bbls.  
Final production 130 cu. ft. per day 0 bbls.  
Well open 6 hrs. before test \_\_\_\_\_ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8			
8 5/8	274	274	125 sx
7			
5 1/2			
4 1/2	2217.9	2217.9	245 sx
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

Frac well on 11/9/82 using 19,500# sand, 32,560 gal. fluid;BD:2210; ATP:2600;  
RATE: 26BPM; ISI: 1750; 5 Min: 1600

PERFS: 2028-36: 9 shots; 2045-48: 4 shots; 2100-10': 11 shots; 2116-20: 5 shots;  
2122-24: 3 shots

Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet Salt Water \_\_\_\_\_ Feet  
Producing Sand Devonian Shale (Weir) Depth 2028'-2124'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Clay			0	5		
Red Rock			5	173		
Slate			173	240		
Sand			240	278		
Slate			278	309		
Lime Shelles			309	363		
Slate, Shells			363	415		
Sand			415	446		
Slate			446	523		
Sand			523	545		
Lime			545	583		
Red Rock			583	597		
Sand			597	630		
Red Rock			630	653		
Slate			653	713		
Sand			713	744		
Slate			744	753		
Sand			753	772		
Slate			772	783		
Sand			783	801		
Sand			801	813		
Slate			813	834		
Lime			834	856		
Slate			856	889		
Sand			889	912		

NOV 22 1982

(over)

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Slate			912	923		
Sand			923	940		
Slate			940	953		
Sand			953	967		
Slate			967	973		
Sand			973	981		
Sand			981	1000		
SEE ATTACHED SHEET						

Date 11/11, 19 82

APPROVED Jamene Cozyan, Owner  
 L.M. Petroleum Co.

DIVISION OF GAS- INTEREST  
MOORE/GRIFFIN #1

7.5782% LO	Mabel Moore 1600 Shakespeare Ave. Akron, OH 44303
.6875% LO	Richard and Vada Sue Kissner RT #2 Box 172 Pennsboro, WV 26415
1.7969% LO	Edith Hess Griffin 2604 - 26th Ave. Box 3025 Parkersburg, WV 26101
1.2187% LO	Clarence and Ruby Hadley Box 26 Alma, WV 26320
.2437% LO	Union Bank of Harrisville P O Box 175 Harrisville, PA 26362
.8532% LO	Paul E. Jemison, Agent 215 East St. Middlebourne, WV 26149
.0609% LO	Ralph and Thelma McCullough Box 2 Smithville, WV 26178
.0609% LO	Robert and Hilda McCullough 101 Crest St. Summersville, WV 26651

NOV 29 1982

CEMENTING REPORT

DATE: 12-17-80

WELL: E. L. Moore #1 *Griffin*

PERMIT: 47-095-0877

COUNTY AND STATE: Tyler, WV

DATE SPUDDED: 12-13-80

DATE CEMENTED:

TD: 2263' K.B.

SAND: Berea

CASING: 66 Jts., 9.5#, K-55 Range 2 Casing  
Total pipe 2217.90'  
Pipe Set @ 2227.90 K.B.

FLOAT EQUIPMENT: 1 - Flapper Float Shoe @ 2227.90' K.B.  
1 - Insert w. Latch Down @ 2194.30' K.B.  
6 - Cents @ 1-3-6-9-12-15 Collars  
1 - Basket @ 1757.10' K.B.

CEMENT JOB: Halliburton Cemented w. 245 sks. 50/50 poz w. 2% Gel,  
10% salt & 1/4# Flocele per sack. Ran 20 bbl. mud Flush ahead  
of cement.

PLUG DISPLACEMENT:

- a) Fluid: 35 bbl.
- b) Pressure: 1500 PSI on latch Down Plug
- c) Circulation (cement to surface): Approx. Cement Top @ 800'

REMARKS:

Plug Down @ 1:15 a.m. 12-18-80  
Rig Released @ 1.45 A.M. 12-18-80



1560-1570 SHALE, lt. gray aab. with red  
 1570-1580 SILTSTONE, lt. gray, arg., sl. calc.  
 1580-1590 SHALE, red  
 1590-1600 SANDSTONE, white, fn. gr., subredd, fairly sorted,  
 FAIR YELLOW-GREEN FL  
 1600-10 SHALE - med gy, silty  
 1610-1750 SHALE - a/ab w/LIMESTONE - med gy, med brn, fxl,  
 MAXVILLE  
 1750-80 SANDSTONE - white, fn gr, sub redd, p. sorted, v calc,  
 GOOD LT BLUE FL  
 1780-1810 SANDSTONE - white, fn gr, sub redd, NO FL  
 1810-1820 SANDSTONE - lt gy, v fn gr, v arg, NO FL  
 1820-60 SS - cream, lt gy, a/ab, arg, V POOR Y-G FL  
 1860-1990 SHALE - med gy, silty  
 1990-2020 SILTSTONE - cream, lt gy w/shale - a/ab  
 2020-2030 SHALE & SILTSTONE - a/ab NO FL  
 2030-2130 SANDSTONE - cream, v fn gr, arg, sl calc, FAIR LT BLUE  
 & YELLOW-GREEN FL  
 2130-50 SHALE - med gy, silty

~~LD. 2218 (?)~~

TD

2263

SAMPLE DESCRIPTION  
Moore/Griffin #1

1000-30 SHALE - med gy, silty, mica, tr siltst  
1030-40 SILTSTONE - lt gy, mica, arg  
1040-60 SANDSTONE - white, v fn gr, mica, sub rod to sub arg,  
fairly srted, NO FL  
1060-70 SANDSTONE - a/ab V GOOD YELLOW-GREEN FL  
1070-80 SHALE - med & dk gy, fn text, calc, w/ss- a/ab  
1080-90 SHALE - med gy, silty  
1090-1100 SANDSTONE - tan, v fn gr - silt, calc, arg, NO FL  
1100-40 SS - lt gy, cream, fn gr, med gr, sub arg, arg, p srted,  
v calc, Abund chert, NO FL  
1140-60 SHALE - lt gy, fn text  
1160-80 SANDSTONE - cream, fn gr/v fn gr, p. srted,  
v mica, NO FL  
1180-1210 SANDSTONE - white, med gr, sub rdd, fairly srted,  
disagg, v clean, V POOR FL, tr coal  
1210-20 SILTSTONE - pink  
1220-40 SANDSTONE - white, med gr, rdd to sub rdd,  
Fairly srted, disaggregate, v clean, NO FL  
1240-50 SANDSTONE - lt gr, v. fn gr, arg, NO FL  
1250-70 SANDSTONE - cream, lt gy, fn gr to med gr,  
p. srted, sl shaley, w/coal, NO FL  
1270-1330 SANDSTONE - whate, med gr, sub rdd,  
fairly srted, clean, NO FL  
1339-1420 SHALE - dk gy, med brn, fn text, carbonaceous,  
tr pyr.  
1420-1430 SHALE aab. with coal  
1430-1440 SANDSTONE, cr., fn.gr. to v. fn.gr., sub rdd., wl srted.,  
mica, arg., calcareous, good YELLOW-GREEN FL  
1440-1460 SANDSTONE, cr., fn.gr., subrdd., sub ang., mica, NO FL  
1460-1540 SHALE, black, fn. text., carbon. tr pyr.  
1540-1550 SHALE, black aab. with coal

# HALLIBURTON SERVICES SUMMARY

HALLIBURTON DIVISION

HALLIBURTON LOCATION

BILLED ON TICKET NO. 110261

## WELL DATA

WELL NAME: West Union SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RRG. \_\_\_\_\_ COUNTY Tyler STATE OK  
 FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
 FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_  
 INITIAL PROD. OIL \_\_\_\_\_ SPD. WATER \_\_\_\_\_ SPD. GAS \_\_\_\_\_ MCFD \_\_\_\_\_  
 PRESENT PROD. OIL \_\_\_\_\_ SPD. WATER \_\_\_\_\_ SPD. GAS \_\_\_\_\_ MCFD \_\_\_\_\_  
 COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
 PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
 BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
 MSG. DATA \_\_\_\_\_ TOTAL DEPTH 254

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	21	20	5 7/8	512	274	1000
LINER						
TUBING						
OPEN HOLE						SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

## TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR		
FLOAT SHOE		
GUIDE SHOE	1	130000
CENTRALIZERS	1	130000
BOTTOM PLUG		
TOP PLUG	1	130000
HEAD	1	130000
PACKER		
OTHER		

## JOB DATA

CALLER OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <u>2-15-50</u>	DATE <u>2-18-50</u>	DATE <u>7-15-50</u>	DATE <u>2-19-50</u>
TIME <u>2:00</u>	TIME <u>11:20</u>	TIME <u>11:30</u>	TIME <u>12:15</u>

## PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<u>R. D. ...</u>	<u>24227</u>	<u>...</u>
<u>...</u>	<u>...</u>	<u>...</u>
<u>...</u>	<u>3606</u>	<u>...</u>

## MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL. AM  
 DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL. AM  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 ACID TYPE \_\_\_\_\_ GAL. %  
 SURFACTANT TYPE \_\_\_\_\_ GAL. IN  
 NE AGENT TYPE \_\_\_\_\_ GAL. IN  
 FLUID LOSS ADD. TYPE \_\_\_\_\_ GAL.-LB. IN  
 GELLING AGENT TYPE \_\_\_\_\_ GAL.-LB. IN  
 FRIC. RED. AGENT TYPE \_\_\_\_\_ GAL.-LB. IN  
 BREAKER TYPE \_\_\_\_\_ GAL.-LB. IN  
 BLOCKING AGENT TYPE \_\_\_\_\_ GAL.-LB.  
 PERFFAC BALLS TYPE \_\_\_\_\_ QTY. \_\_\_\_\_  
 OTHER \_\_\_\_\_

DEPARTMENT ...  
 DESCRIPTION OF JOB ...  
 JOB DONE THRU: TUBING  CASING  ANNULUS  TBO./ANN.   
 CUSTOMER REPRESENTATIVE X  
 HALLIBURTON OPERATOR ... COPIES REQUESTED 1

## CEMENT DATA

STAGE	NUMBER OF SACKS	TYPE	API CLASS	BRAND	BULK SACKED	ADDITIVES	YIELD - CU.FT./SK.	MIXED LBS./GAL.
1	125	150	B		13	1 1/2 P.P. 1/2 ...	1.19	1.6

## PRESSURES IN PSI

## SUMMARY

## VOLUMES

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_ PRESURE: BBL-GAL. 25 TYPE ...  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_ LOAD & BKDN: BBL-GAL. \_\_\_\_\_ PAD: BBL-GAL. 5  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_ TREATMENT: BBL-GAL. \_\_\_\_\_ DISPL: BBL-GAL. 13  
 SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN. \_\_\_\_\_ 15-MIN. \_\_\_\_\_ CEMENT SLURRY: BBL-GAL. 26  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_ TOTAL VOLUME: BBL-GAL. \_\_\_\_\_  
 AVERAGE RATES IN BPM \_\_\_\_\_ REMARKS ...  
 TREATING \_\_\_\_\_ CEMENT LEFT IN PIPE \_\_\_\_\_

**RECEIVED**

FEB 25 1985



1) Date: Feb. 11, 1985, 19\_\_  
 2) Operator's Well No. Moore #1  
 3) API Well No. 47 - 095 - 877  
 State County Permit

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

- 4) WELL TYPE: A Oil \_\_\_\_\_ / Gas X /  
 B (If "Gas", Production \_\_\_\_\_ / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow X /)
- 5) LOCATION: Elevation: 825' Watershed: Big Run  
 District: Centerville County: Tyler Quadrangle: West Union
- 6) WELL OPERATOR: Appalachian Energy Development, Inc. DESIGNATED AGENT George Williams  
 Address P. O. Box 902 Address P. O. Box 902  
Belington, WV 26250 Belington, WV 26250
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther 9) DRILLING CONTRACTOR: Name Unknown  
 Address General Delivery Address \_\_\_\_\_  
Middlebourne, WV 26149
- 10) PROPOSED WELL WORK: Drill \_\_\_\_\_ / Drill deeper X / Redrill \_\_\_\_\_ / Stimulate X /  
 Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_ /  
 Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Benson  
 12) Estimated depth of completed well, 4930' feet  
 13) Approximate strata depths: Fresh, cased off feet; salt, cased off feet.  
 14) Approximate coal seam depths: cased off Is coal being mined in the area? Yes \_\_\_\_\_ / No X /
- 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		
Conductor									
Fresh water	<u>8 5/8"</u>					<u>274'</u>	<u>274'</u>	<u>125 sks</u>	} <u>EXISTING</u>
Coal									
Intermediate	<u>4 1/2"</u>					<u>2217.9'</u>	<u>2217.9'</u>	<u>245 sks</u>	
Production	<u>2 7/8"</u>			<u>X</u>		<u>4930'</u>	<u>4900'</u>	<u>1000'</u>	} <u>or as depths required by rule 1501</u>
Tubing									
Liners									Perforations: Top Bottom

**OFFICE USE ONLY**  
**DRILLING PERMIT**

Permit number 47-095-0877-DD Date March 7, 19 85

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 March 7, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>228</u>	<u>MH</u>	<u>MU</u>	<u>MU</u>	<u>521</u>

Margaret J. Hassel  
 Administrator, Office 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.

File

OIL AND GAS WELL PERMIT APPLICATION

TYPE: Oil x / Gas x /  
(If "Gas", Production \_\_\_ / Underground storage \_\_\_ / Deep \_\_\_ / Shallow \_\_\_)

LOCATION: Elevation: 825 Watershed: Big Run  
District: Centerville County: Tyler Quadrangle: West Union

OPERATOR L&M Petroleum Co. DESIGNATED AGENT Joanne Cogan  
Address Rt. 1, Box 18-B Address 113 Sherwood  
Marietta, Ohio 45750 Williamstown, WV 26187

OIL & GAS  
PROPERTY OWNER Emerson Moore (40486) COAL OPERATOR None  
Address 1600 Shakespear Ave. Address \_\_\_\_\_  
Akron, OH 44306

ACREAGE 168  
FACE OWNER Same as above COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name Same as above  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_

LAND SALE (IF MADE) TO:  
Name NA  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_

AND GAS INSPECTOR TO BE NOTIFIED:  
Name Phil Tracy 758-4573  
Address \_\_\_\_\_

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed \_\_\_ / lease x / other contract \_\_\_ / dated 12/27, 1972, to the undersigned well operator from Emerson Moore made to Royal Resources (said deed, lease or other contract has been recorded:)

Recorded on \_\_\_\_\_, 19\_\_\_\_, in the office of the Clerk of the County Commission of \_\_\_\_\_ county, West Virginia, in Deed Book 196, at page 276. A permit is requested as follows:

PROPOSED WORK: Drill xx / Drill Deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate \_\_\_ /  
Plug off old formation \_\_\_ / Perforate new formation \_\_\_ /  
Other physical change in well (specify) \_\_\_\_\_

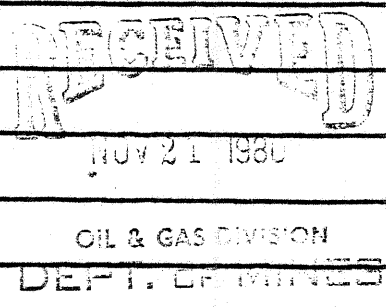
--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any action they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by Department of Mines. Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL  
PHYSICAL LOGS DIRECTLY TO:  
OFFICE OF OIL AND GAS  
200 Washington Street, East

**BLANKET BOND**

Joanne Cogan Vice President  
Well Operator



PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY: ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRIILLING CONTRACTOR (IF KNOWN):

Address

GEOLOGICAL TARGET FORMATION, Devonain Shale

Estimated depth of completed well, 4500 feet Rotary X / Cable tools /

Approximate water strata depths: Fresh, feet; salt, feet.

Approximate coal seam depths: Is coal being mined in the area? Yes / No X /

DRILLING AND TUBING PROGRAM

Table with columns: DRILLING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight per ft, New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS (Kinds, Sizes, Depths set, Perforations: Top, Bottom)

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 7-25-81

Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator / owner / lessee of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: , 19

By Its