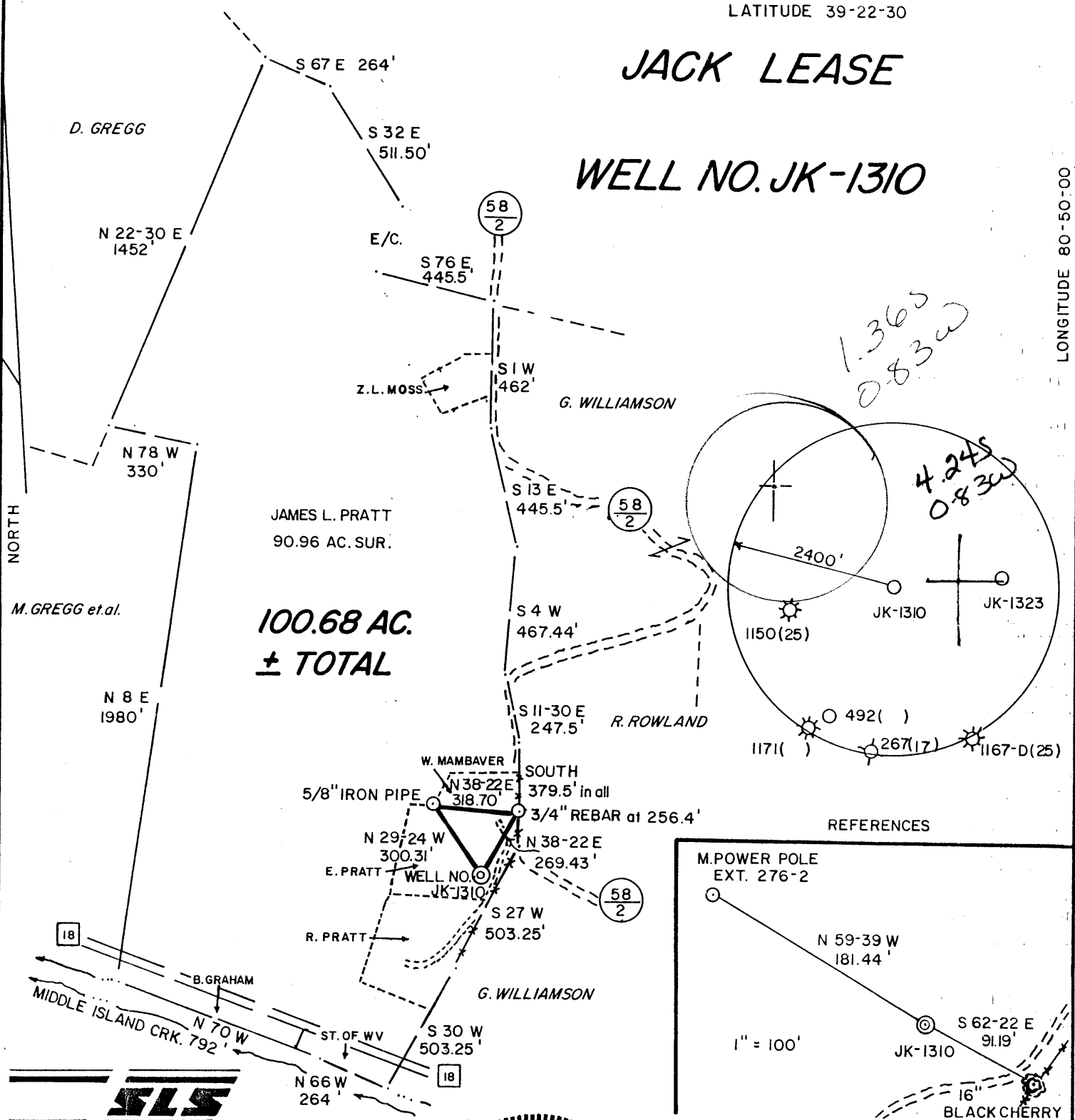


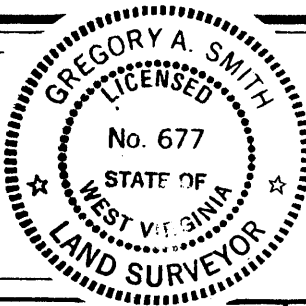
JACK LEASE

WELL NO. JK-1310



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 12, 19 87

OPERATORS WELL NO. JK-1310

API WELL NO. 47 - 095 - 1200

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1640 (22-13)

PROVEN SOURCE OF ELEVATION BM. ELEV. = 737' 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 833' WATERSHED MIDDLE ISLAND CREEK

DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5' 671

SURFACE OWNER ELDEN E. & NANCY PRATT ACREAGE 3.133 133

ROYALTY OWNER HANNAH C. JACK LEASE ACREAGE 100.68 CS

PROPOSED WORK: LEASE NO. JJ-2147

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 5700'

WELL OPERATOR J&J ENTERPRISES INC. 427 DESIGNATED AGENT OLIVER L. HAWKINS III.

ADDRESS P.O. BOX 48 BUCKHANNON, WV 26201 ADDRESS P.O. BOX 48 BUCKHANNON, WV 26201

JUL 20 1987

66 Wilbur (92)



IV-35
(Rev 8-81)

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State of West Virginia
Department of Mines
Oil and Gas Division

Date November 20, 1987
Operator's
Well No. 2546
Farm Aris Parker #1
API No. 47 - 095 - 1200

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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 XX /)

LOCATION: Elevation: 833' Watershed Middle Island Creek
District: Centerville County Tyler Quadrangle West Union 7.5'

COMPANY Union Drilling, Inc.
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201
DESIGNATED AGENT Oliver Lee Hawkins III
ADDRESS P.O. Box 48, Buckhannon, WV 26201
SURFACE OWNER Elden E. Pratt
ADDRESS 211 Bennett Drive, Weirton, WV 26062
MINERAL RIGHTS OWNER N/A
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
ADDRESS General Delivery, Middlebourne, WV 26149
PERMIT ISSUED 7-13-87
DRILLING COMMENCED 10-5-87
DRILLING COMPLETED 10-9-87

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"	20'	0	
9 5/8			
8 5/8		952.95	318.6
7			
5 1/2			
4 1/2		4830.95	335.4
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 5700 feet
Depth of completed well 4927 feet Rotary XXX / Cable Tools
Water strata depth: Fresh 660, 1637 feet; Salt feet
Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Benson, Riley Pay zone depth 4740 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow (1730) Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 2 hours
Static rock pressure 1300 psig (surface measurement) after 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

(Continue on reverse side)
DEC 21 1987

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

Dowell - 2 stage Foam Frac - 10-19-87

4329/32 - Riley - 528,000 SCF nitrogen, 221 bbls fluid 41,151# sand
 4347/49
 4366/68

4734/40 - Benson - 765,000 SCF nitrogen, 257 bbls fluid 53,500# sand

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			0	5	fresh water @ 660' - Damp
Red Rock			5	10	fresh water @ 1637' - Damp
Shale			10	14	
Sand			14	194	
Red Rock & Shale			194	1430	Gas Check @ 1537' - No show
Sand & Shale			1430	1613	Gas Check @ 1632' - No show
Little Lime			1613	1625	
Sand & Shale			1625	1644	
Little Lime			1644	1670	
Big Lime			1675	1793	
Big Injun			1794	1848	Gas Check @ 1821' - Good odor
Gantz			1850	1878	
Weir			2044	2157	
Sand & Shale			2157	4326	Gas Check @ 2633' - No show
Riley			4326	4386	Gas Check @ 3007' - small odor
Sand & Shale			4386	4733	
✓ Benson			4733	4741	
Sand & Shale			4741	4927 ✓	Gas Check @ 4927' - 8/10-1' water Gas Check @ DC - 8/10-1' water

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

Union Drilling, Inc.
Well Operator

By: Douglas P. Terry

Date: November 20, 1987 Douglas P. Terry

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 ... encountered in the drilling of a well."

(Obverse)



1) Date: June 12, 1987
2) Operator's Well No. JK-1310
3) API Well No. 47 State 095 County 1200 Permit

RECEIVED JUN 22 1987

STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas X
B (If "Gas", Production X / Underground storage / Deep / Shallow X)
5) LOCATION: Elevation: 833' Watershed: Middle Island Creek
District: Centerville / County: Tyler 095 Quadrangle: West Union 7.5' 670
6) WELL OPERATOR J&J Enterprises Inc. CODE: 24150 7) DESIGNATED AGENT Oliver Lee Hawkins III
Address P.O. Box 48 Buckhannon, WV 26201
8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther Address General Delivery Middlebourne, WV 26149
9) DRILLING CONTRACTOR: Name S.W. Jack Drilling Address P.O. Box 48 Buckhannon, WV 26201
10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate X
Plug off old formation / Perforate new formation
Other physical change in well (specify)
11) GEOLOGICAL TARGET FORMATION, Alexander
12) Estimated depth of completed well, 5700' feet
13) Approximate trata depths: Fresh, 85' feet; salt, N/A feet.
14) Approximate coal seam depths: N/A Is coal being mined in the area? Yes / No X

15) CASING AND TUBING PROGRAM

Table with columns: CASING 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, Depths set, Perforations: Top, Bottom)

OFFICE USE ONLY DRILLING PERMIT

Permit number 47-095-1200 Date July 13 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 July 13, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Plat, Casing, Fee, WPOP, S&T, Other. Includes handwritten checkmarks and signatures.

NOTE: Keep one copy of this permit posted at the drilling location.

Director, Division of Oil and Gas

File

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