

IV-35
(Rev 8-81)

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State of West Virginia

OIL & GAS DIVISION
DEPT. OF MINES

Department of Mines
Oil and Gas Division

Date August 10, 1984
Operator's Well No. JK-991
Farm Edith Griffin
API No. 47 - 095 - 108

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas * / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production * / Underground Storage ___ / Deep ___ / Shallow * /)

LOCATION: Elevation: 1127 Watershed Big Run

District: Centerville County Tyler Quadrangle West Union 7.5

COMPANY J&J Enterprises, Inc.

ADDRESS P.O. Box 48, Buckhannon, WV 26201

DESIGNATED AGENT Richard Reddecliff

ADDRESS P.O. Box 48, Buckhannon, WV 26201

SURFACE OWNER O.W. Griffin

ADDRESS P.O. Box 3025, Parkersburg, WV 26101

MINERAL RIGHTS OWNER Same as surface

ADDRESS

OIL AND GAS INSPECTOR FOR THIS WORK Robert

Lowther ADDRESS Gen. Del. Middlebourne, WV

PERMIT ISSUED 6/12/84 26149

DRILLING COMMENCED 7/29/84

DRILLING COMPLETED 8/4/84

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 Cord. | | | |
| 13-10" | 32 | 0 | 0 sks. |
| 9 5/8 | | | |
| 8 5/8 | 1718.05 | 1718.05 | 380 sks. |
| 7 | | | |
| 5 1/2 | | | |
| 4 1/2 | 5986 | 5986 | 400 sks. |
| 3 | | | |
| 2 | | | |
| Liners used | | | |

GEOLOGICAL TARGET FORMATION Alexander Depth feet

Depth of completed well 5995 feet Rotary * / Cable Tools

Water strata depth: Fresh 275,700 feet; Salt 0 feet

Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Pay zone depth 5891-5943 feet

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

Combined Final open flow 866 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1800 psig (surface measurement) after 96 hours shut in
(If applicable due to multiple completion--)

Second producing formation Benson, Riley Pay zone depth 4596-4628 4990-98 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)

SEP 10 1984

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

Rhenastreet
Devonian Shale: Perforations: 5891-97 (12 holes) 5940-43 (6 holes)
Fracturing: 300 sks. 20/40 sand: 375 Bbls. fluid.
Benson: Perforations: 4990-98 (16 holes) Fracturing: 4000 lbs. 20/40 sand: 450 Bbls. fluid.
Riley: Perforations: 4596-99 (4 holes) 4605.5-06.5 (4 holes) 4615-17 (4 holes) 4626-28 (7 holes)
Fracturing: 300 sks. 20/40 sand: 100 sks. 80/100 sand: 585 Bbls. fluid.

BOTTOM HOLE PRESSURE Pf=Pwe XGLS

$$t=60 + (0.0075 \times 5986) + 459.7 = 565 \quad X = \frac{1}{53.35} \times \frac{1}{565} = \frac{1}{30121} = 0.000033 \quad Pf = 1800 \times 2.72^{(0.000033)}$$

$$(0.742)(5247)(0.9) = 1800 \times 2.72^{0.12} = 1800 \times 1.1$$

Pf=2029 psi

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 & shale | | | 0 | 110 | |
| Sand, red rock & shale | | | 110 | 600 | Damp @ 139 |
| White sand | | | 600 | 690 | ½" stream @ 275' |
| Sand & shale | | | 690 | 1455 | ½" stream @ 700' |
| Gray sand | | | 1455 | 1577 | |
| Sand & shale | | | 1577 | 1970 | |
| Big Lime | | | 1970 | 2045 | Gas ck @ 2162 40/10-1" w/water |
| Big Injun | | | 2045 | 2165 | 47,629 cu.ft. |
| Sand & shale | | | 2165 | 4596 | |
| Riley | | | 4596 | 4628 | Gas ck @ 2470 31/10-1" w/water |
| Sand & shale | | | 4628 | 4990 | 43,600 cu.ft. |
| Benson | | | 4990 | 4998 | |
| Sand & shale | | | 4998 | 5010 | Gas ck @ 3637 10/10-1" w/water |
| Sand & shale | | | 5010 | 5891 | 23,314 cu.ft. |
| Devonian Shale | | | 5891 | 5943 | |
| Sand & shale | | | 5943 | 5995 | Gas ck @ 4808 34/10-1" w/water |
| | | | | T.D. | 43,782 cu.ft. |
| | | | | <i>Rhenastreet</i> @ T.D. | Gas ck @ 5023 30/1001" w/water |
| | | | | | 41,222 cu.ft. |
| | | | | | Gas ck @ 5322 32/10-1" w/water |
| | | | | | 43,600 cu.ft. |

(Attach separate sheets as necessary)

J&J Enterprises, Inc.

Well Operator

By: *[Signature]* Robert Dahlin - Geologist

Date: 8/10/84

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 ~~and~~, encountered in the drilling of a well."



1) Date: MAY 23, 19 84
 2) Operator's Well No. JK-991
 3) API Well No. 47 - 095 - 1083
 State _____ County _____ Permit _____

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
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: 1127' Watershed: BIG RUN (M-37) WEST UNION 7.5'
 District: CENTERVILLE County: TYLER Quadrangle: _____
 6) WELL OPERATOR J & J ENTERPRISES, INC. 7) DESIGNATED AGENT RICHARD M. REDDECLIFF
 Address P.O. BOX 48 Address P.O. BOX 48
BUCKHANNON, WV 26201 BUCKHANNON, WV 26201
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name ROBERT A. LOWTHER Name S. W. JACK DRILLING CO.
 Address GENERAL DELIVERY Address P.O. BOX 48
MIDDLEBOURNE, WV 26149 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, 5300' feet
 13) Approximate strata depths: Fresh, 95' feet; salt, N/A feet.
 14) Approximate coal seam depths: 425' - 426' 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 | 11 3/4 | H-40 | 42 | X | | 30 | 0 | 0 Sacks | Kinds |
| Fresh water | 8 5/8 | ERW | 23 | X | | 1227' | 1227' | To surface | <u>NEAT</u> |
| Coal | 8 5/8 | ERW | 23 | X | | 1227' | 1227' | To surface | Sizes |
| Intermediate | | | | | | | | | Depths set |
| Production | 4 1/2 | J-55 | 10.5 | X | | 5200' | 5200' | 225 Sacks | Depths set |
| Tubing | | | | | | | | or as required by Rule 15-01 | |
| Liners | | | | | | | | | Perforations: |
| | | | | | | | | | Top Bottom |

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-095-1083 Date June 12, 19 84

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 June 12, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

| | | | | |
|-----------------|------------------|-----------------|-------------------|------------------|
| Bond: <u>BB</u> | Agent: <u>MH</u> | Plat: <u>MH</u> | Casing: <u>MH</u> | Fee: <u>1561</u> |
|-----------------|------------------|-----------------|-------------------|------------------|

T. J. ...
 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