



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION INTERSECTION
 (42 and 15) ELEVATION 858'

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

PLACE SEAL HERE

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



DATE FEBRUARY 18th 19 81
 OPERATOR'S WELL NO. J-398
 API WELL NO. _____
 47 - 017 - 3033
 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 1229' WATER SHED WOLF PEN RUN
 DISTRICT NEW MILTON COUNTY DODDRIDGE
 QUADRANGLE NEW MILTON T.S. Vadis NC
 SURFACE OWNER DELUERT ATKINSON ACREAGE 52 1/4 Ac.
 OIL & GAS ROYALTY OWNER C.W. MUTSCHELKNAUS LEASE ACREAGE 52 1/4 Ac.
 LEASE NO. H-11
 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 66 NEW MILTON N.
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5400'
 WELL OPERATOR J. AND J. ENTERPRISES, INC. DESIGNATED AGENT BOGEE BOLSTON
 ADDRESS P.O. BOX 48 ADDRESS P.O. BOX 48
 BUCKHANNON, WEST VIRGINIA 26201 BUCKHANNON, WEST VIRGINIA 26201

144 AUG 11 1981

[08-78]

Operator's Well No. J-398

API Well No. 47 - 017 - 3033
State County Permit

RECEIVED

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

FEB 18 1982

WELL OPERATOR'S REPORT
OF

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES, OIL AND GAS DIVISION
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: 1229 Watershed: Wolfpen Run
District: New Milton County: Doddridge Quadrangle: Smithburg 7.5'

WELL OPERATOR J & J Enterprises, Inc. DESIGNATED AGENT Harry L. Barnett
Address P.O. Box 48 Address P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

PERMITTED WORK: Drill X / Convert ___ / Drill deeper ___ / Redrill ___ / Fracture or stimulate X
Plug off old formation ___ / Perforate new formation ___ /
Other physical change in well (specify) _____

PERMIT ISSUED ON 7/21, 19 82 OIL & GAS INSPECTOR FOR THIS WORK:

(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name: Stephen Casey
Address Rt. # 2, Box 232-D
Jane Lew, WV 26378

BIOLOGICAL TARGET FORMATION: Alexander Depth 5551-94 feet
Depth of completed well, 5751 feet Rotary X / Cable Tools ___
Water strata depth: Fresh, 1660 feet; salt, 0 feet.
Coal seam depths: 610-12 Is coal being mined in the area? NO
Work was commenced 1/7, 19 82, and completed 1/14, 19 82

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 | | 34 | 34 | 0 sks. | Rinds |
| Fresh water | 8 ⁵ / ₈ | ERW | 23 | X | | 1261 | 1261 | 300 sks. | |
| Coal | 8 ⁵ / ₈ | ERW | 23 | X | | 1261 | 1261 | 300 sks. | Sizes |
| Intermediate | | | | | | | | | |
| Production | 4 ¹ / ₂ | J-55 | 10.5 | X | | 5617.55 | 5617.55 | 200 sks. | Perms set |
| Tubing | | | | | | | | | |
| Logans | | | | | | | | | Perforations: |
| | | | | | | | | | Top Bottom |
| | | | | | | | | | 5140 5144 |
| | | | | | | | | | 5243 5246 |
| | | | | | | | | | 5551 5594 |

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5551-94 feet
Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
Combined Final open flow, 377 Mcf/d Final open flow, ___ Bbl/d
Time of open flow between initial and final tests, 4 hours
Static rock pressure, 1350 psig (surface measurement) after 96 hours shut in

(If applicable due to multiple completion--)
Second producing formation Benson & Riley Pay zone depth 5243-46 feet
Gas: Initial open flow, ___ Mcf/d Oil: Initial open flow, ___ Bbl/d
Final open flow, ___ Mcf/d Final open flow, ___ Bbl/d
Time of open flow between initial and final tests, ___ hours

Pressure static rock pressure, ___ psig (surface measurement) after ___ hours shut in
GLS
 $0.0075 \times 5618 + 459.7 = 562$ $X = \frac{1}{53.35} \times 562 + \frac{1}{29974} = 0.0000334$ $Pf = 1350 \times 2.72 (0.0000334)$
 $(5367) (0.9) = 1350 \times 2.72 \times 0.111 = 1350 \times 1.12$

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[08-78]

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

Alexander: Perforations: 5551-5594 (14 holes)
Fracturing: 150 sks. 80/100 sand: 300 sks. 20/40 sand: 500 Bbls. fluid.

Benson: Perforations: 5404-06 (2 holes)
Fracturing: 100 sks. 80/100 sand: 300 sks. 20/40 sand: 500 gal. Acid.
500 Bbls. fluid.

Riley: Perforations: 5140-44 (14 holes) 5243-46 (12 holes)
Fracturing: 100 sks. 80/100 sand: 300 sks. 20/40 sand: 500 gals. Acid:
500 Bbls. Fluid.

WELL LOG

| FORMATION | Color | Hard or Soft | Top Feet | Bottom Feet | Remarks Including indication of all fresh and salt water, coal, gas, etc. |
|-------------------|-------|--------------|----------|-------------|--|
| Top Soil & fill | | | 0 | 5 | |
| Shale & sand | | | 5 | 195 | |
| Sand & shale | | | 195 | 470 | Hole Damp @ 1660' |
| Red rock & shale | | | 470 | 610 | |
| Coal | | | 610 | 612 | |
| Shale & red rock | | | 612 | 750 | Gas ck @ 2770 - No show |
| Sand & shale | | | 750 | 805 | |
| Red rock & shale | | | 805 | 880 | Gas ck @ 5289 30/10-1/2" w/water 10,304 cu.ft. |
| Shale & sand | | | 880 | 1295 | |
| Dark Shale | | | 1295 | 1310 | |
| Shale & sand | | | 1310 | 1660 | Gas ck @ 5474 60/10-1/2" w/water 14,520 cu.ft. |
| Sand & dark shale | | | 1600 | 1880 | |
| Shale | | | 1880 | 2255 | |
| Big Lime | | | 2255 | 2315 | Gas ck @ 5627 20/10-1/2" w/water 8,419 cu.ft. |
| Sand & shale | | | 2315 | 2405 | |
| Shale & sand | | | 2405 | 2450 | |
| Shale & sand | | | 2450 | 2525 | |
| Sand & shale | | | 2525 | 5140 | Gas ck @ 5751 4/10-1/2" w/water 3,785 cu.ft. |
| Riley | | | 5140 | 5246 | |
| Shale & sand | | | 5246 | 5404 | |
| Benson | | | 5404 | 5406 | |
| Sand & shale | | | 5406 | 5551 | |
| <u>Alexander</u> | | | 5551 | 5594 | |
| Shale & sand | | | 5594 | 5751 | |
| | | | | T..D. | |

(Attach separate sheets to complete as necessary.)

J & J Enterprises, Inc.

Well Operator

By

Peter Battles
Peter Battles

Its

Geologist

NOTE: Regulation 2.0216 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."

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-398

API Well No. 47-017 3033
State County Perm

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

LOCATION: Elevation: 1229 Watershed: Wolfpen Run
District: New Milton County: Doddridge Quadrangle: Smithburg 7.5'

WELL OPERATOR J & J Enterprises, Inc.
Address P.O. Box 48
Buckhannon, WV 26201

DESIGNATED AGENT Roger Rolston
Address P.O. Box 48
Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER C.W. Mutschelknaus
Address Rt. # 1, Box 52
Salem, WV 26426

COAL OPERATOR
Address

ACREAGE 52 1/2
SURFACE OWNER Delvert Atkinson
Address 5 Beech St
North East, Maryland 21901
ACREAGE 52 1/2

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name J.O. Van Swearingen
Address Address unknown

FIELD SALE (IF MADE) TO:
Name Unknown
Address

Name
Address

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Stephen Casey
Address Rt. # 2, Box 232-D
Jane Lew, WV 26378

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address
RECEIVED
JUL 21 1981

OIL & GAS DIVISION
DEPT. OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed ___ / lease ___ / other contract x / dated 9/14, 1979, to the undersigned well operator from Justin L. Henderson.

If said deed, lease, or other contract has been recorded:
Recorded on 9/23, 1979, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas Lease Book 111 at page 269. A permit is requested as follows:

PROPOSED WORK: Drill ___ / 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 objection 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 the Department.

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:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
15 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

J & J Enterprises, Inc.
Well Operator
By Peter Battles
Peter Battles
Geologist

BLANKET BOND

PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) S.W. Jack Drilling Company

Address P.O. Box 48
Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5400 feet Rotary X / Cable tools /
Approximate water strata depths: Fresh, 500 feet; salt, 1800 feet.
Approximate coal seam depths: None Is coal being mined in the area? Yes No X

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 sks. | Kinds |
| Fresh water | 8 5/8 | ERW | 23 | x | | 1850 | 1850 | 450 sks. | |
| Coal | 8 5/8 | ERW | 23 | x | | 1850 | 1850 | 450 sks. | Sizes |
| Intermediate | | | | | | | | | |
| Production | 4 1/2 | J-55 | 10.5 | x | | 5350 | 5350 | 300 sks. | Depths set |
| Tubing | | | | | | | | | |
| Liners | | | | | | | | | Perforations: |
| | | | | | | | | | Top |

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.

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 3-24-82

[Signature]
Deputy Director - Oil & Gas Division

[Signature]

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