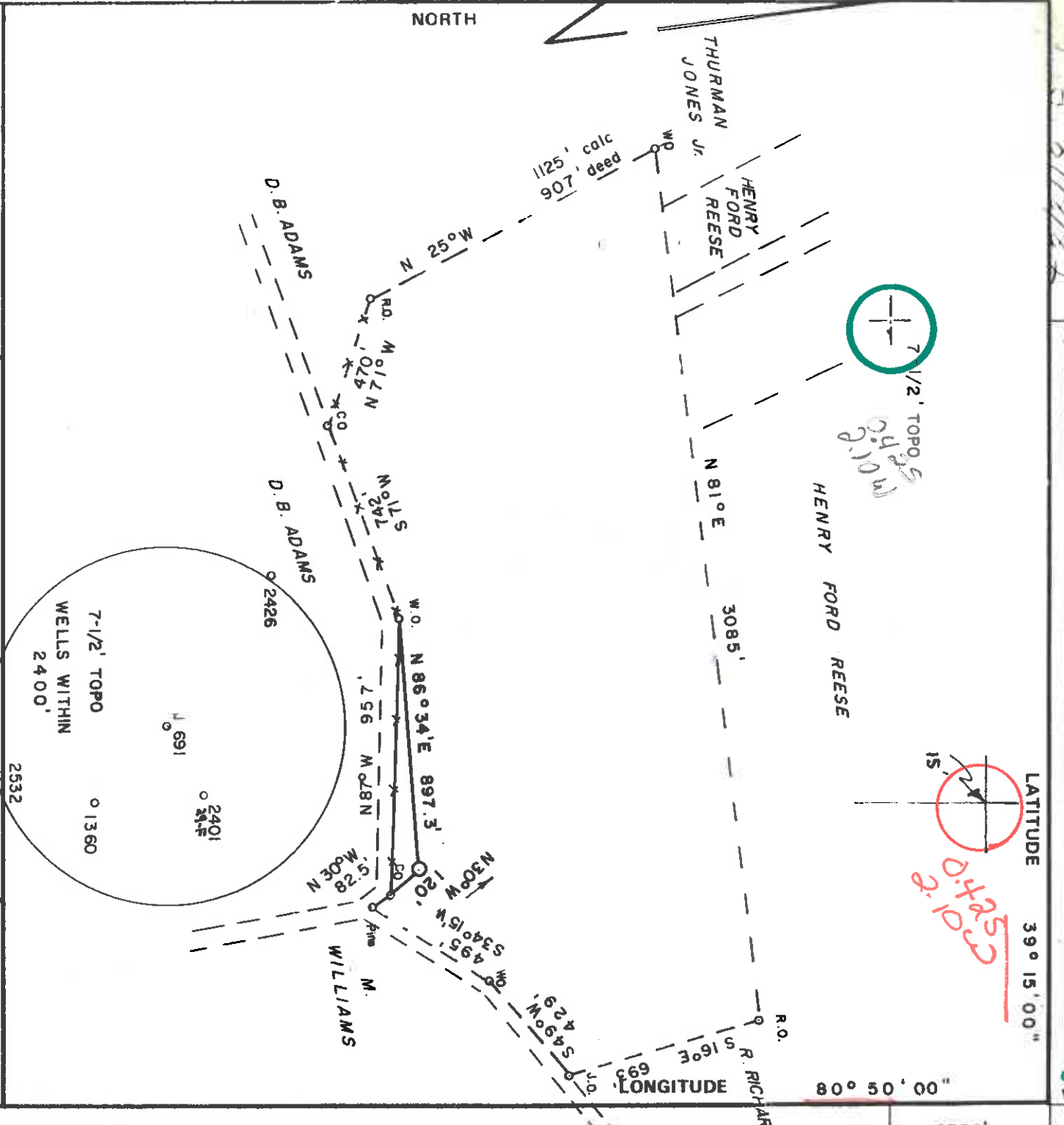


LATITUDE 39° 15' 00"
 LONGITUDE 80° 50' 00"



FILE NO. _____
 DRAWING NO. 81-894-L
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION EL. 965 - 3600 S.E. of SITE

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) Jake Labadie
 R.P.E. 5566 L.L.S. _____

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-781)

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

DATE JUNE 4 19 82
 OPERATOR'S WELL NO. J-691
 API WELL NO. 47-017-3110
 STATE 47 COUNTY 017 PERMIT 3110



WELL TYPE OIL GAS & LIQUID INJECTION WASTE DISPOSAL _____
 (IF "GAS") PRODUCTION & STORAGE DEEP SHALLOW _____
 LOCATION ELEVATION 1160 WATER SHED CABIN RUN _____
 DISTRICT CENTRAL COUNTY DODDRIDGE
 QUADRANGLE OXFORD Baldbrook 1st DC
 SURFACE OWNER HENRY FORD REESE MARYLOU REESE WELSH ACREAGE 44
 OIL & GAS ROYALTY OWNER MAXWELL HEIRS LEASE ACREAGE 67.25
 LEASE NO. M-650

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

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5400
 WELL OPERATOR J & J ENTERPRISES INC DESIGNATED AGENT H.L. BARNETT
 ADDRESS BOX 48 BUCKHANNON, W. VA. 26201 ADDRESS BOX 48 BUCKHANNON, WVA. 26201
 JUL 1 1982

H. T. HALL
 58 P3 P. 6-4
 Greenwood (89)
 SPD-Riley

WELL OPERATOR'S RECORD
OF
SPRING, FAIRMOUNT AND/OR STEWARTON, OR OTHER LOCAL GRANT

WELL TYPE: GAS / LIQUID / WATER DISPOSAL / DEEP / SHALLOW /
(SEE "GAS", PRODUCTION / UNDERGROUND STORAGE / DEEP / SHALLOW)
LOCATION: Evacuation: 1160 Watershed: Cabin Run
District: Central County: Doddridge Quadrangle: Oxford
WELL OPERATOR: J&J Enterprises, Inc. ESTABLISHED NAME: Richard Reddecliff
Address: P.O. Box 48 Address: P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

PERMITTED WORK: Drill / Convert / Drill deeper / Redrill / Increase or decrease
plug off old formation / Perform new formation /
Other physical change in well (specify) _____

PERMIT ISSUED ON 2/4 19 83 BY GAS INSPECTOR FOR THIS WORK: _____
(IF APPLICABLE: PRODUING OF GAS FROM AN
CONCRETE PRODUCTION FROM SURFING OR
REMOVING. VERBAL PERMISSION OBTAINED
_____ 19 _____)
Name Stephen Casey
Address Rt. # 2, BOX 232-D
Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Alexander Depth _____ feet
Depth of completed well, 5606 feet Recovery / Cable Tools _____
Water strata depth: Fresh 85,169 2015 salt, None feet.
Coal seam depths: None Is coal being mined in the area? NO
Work was commenced 4/19 19 83, and completed 4/25 19 83

CASING AND TUBING PROGRAM

| CASING OR TUBING TYPE | SPECIFICATIONS | | | | FOOTAGE INTERVALS | | | CEMENT STRENGTH OR SACS (CUBIC FEET) | | METERS |
|-------------------------|----------------|-------|-------------|---------------------------|-------------------|---------|----------|--------------------------------------|------|--------|
| | Size | Grade | Wt. per ft. | Used for drilling in well | Start | End | Start | End | | |
| Conductor | 11 3/4 | H-40 | 42 | X | 30 | 0 | 0 Sks. | | 4416 | 4418 |
| Fresh water | 8 5/8 | ERW | 23 | X | 1344.25 | 1344.25 | 365 Sks. | | 4676 | 4678 |
| Coal | 8 5/8 | ERW | 23 | X | 1344.25 | 1344.25 | 365 Sks. | | 5002 | 5004 |
| Intermediate Production | 4 1/2 | J-55 | 10.5 | X | 5433.75 | 5433.75 | 350 Sks. | | 5336 | 5374 |
| Tubing | | | | | | | | | | |
| Cables | | | | | | | | | | |

Producing formation Alexander

Flow of open flow between intervals and shall 201 1/4
Final open flow, 984 Mcr/A
Cm: 201 1/4 open flow, 201 1/4
Flow rate depth 5336-74

Flow of open flow between intervals and shall 201 1/4
Final open flow, 984 Mcr/A
Cm: 201 1/4 open flow, 201 1/4
Flow rate depth 5336-74
Flow of open flow between intervals and shall 201 1/4
Final open flow, 984 Mcr/A
Cm: 201 1/4 open flow, 201 1/4
Flow rate depth 5336-74
Flow of open flow between intervals and shall 201 1/4
Final open flow, 984 Mcr/A
Cm: 201 1/4 open flow, 201 1/4
Flow rate depth 5336-74
Flow of open flow between intervals and shall 201 1/4
Final open flow, 984 Mcr/A
Cm: 201 1/4 open flow, 201 1/4
Flow rate depth 5336-74

Operator's J-691
 Well No. 47 017 311
 API Well No. 3110-Ren
 DEPARTMENT OF MINES, GEOLOGY AND GAS DIVISION

WELL OPERATOR'S RECORD
 OF
 OPERATIONS, MEASUREMENTS AND/OR SAMPLING OF PRODUCTION CHARGE

WELL TYPE: Gas X / Steam Injection / Base Design
 (For "Gas", Production / Induced Storage / Deep / Shallow X)
 LOCATION: Section: 1160 Watered: Cabin Run
District: Central County: Doddridge Quarter: Oxford
 WELL OPERATOR: J&J Enterprises, Inc. Registered Name: Richard Reddcliff
Address: P.O. Box 48 Address: P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

PERMITTED WORK: Drill X / Convert / Drill deeper / Reduce / Increase or regulate
Plug off old formation / Perforate new formation /
 Other physical change in well (specify) _____

PERMIT ISSUED ON 2/4, 19 83 BY GAS INSPECTOR FOR THIS WORK:
 (IF APPLICABLE: PURPOSE OF THIS WORK OR CONTINUOUS PRODUCTION FROM EXISTING OR REMOVED. VERBAL PERMISSION OBTAINED _____)
 Name Stephen Casey
 Address Rt. # 2, Box 232-D
Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Alexander Depth _____ feet
 Depth of completed well, 5606 feet Recary X / Cable Tools _____ feet
 Water strata depth: Fresh 85, 1690 2015 salt, None feet.
 Coal seam depths: None Is coal being mined in the area? No
 Work was commenced 4/19, 19 83, and completed 4/25, 19 83

CASTING AND TUBING PROGRAM

| CASTING OR TUBING TYPE | SPECIFICATIONS | | | | FOOTAGE INTERVALS | | DEPTH FROM TOP OF SACS (Cable feet) | SACS |
|------------------------|----------------|-------|-----------------|-------------------|-------------------|--------------|-------------------------------------|-----------------|
| | Size | Grade | Weight per foot | Used for drilling | Depth in well | Feet in well | | |
| Conductor | 113/4 | H-40 | 42 | X | 30 | 0 | 0 SKS. | Wells |
| Fresh water | 85/8 | ERW | 23 | X | 1344.25 | 1344.25 | 365 SKS. | |
| Coal | 85/8 | ERW | 23 | X | 1344.25 | 1344.25 | 365 SKS. | Sizes |
| Intermediate | | | | | | | | |
| Production | 4 1/2 | J-55 | 10.5 | X | 5433.75 | 5433.75 | 350 SKS. | Design see |
| Tubing | | | | | | | | |
| Cables | | | | | | | | |
| | | | | | | | | Specifications: |
| | | | | | | | | 720 |
| | | | | | | | | 4416 |
| | | | | | | | | 4676 |
| | | | | | | | | 5002 |
| | | | | | | | | 5004 |
| | | | | | | | | 5336 |
| | | | | | | | | 5374 |

OPEN FLOW DATA
 Producing formation Alexander Pay zone depth 5336-74
 GAS: Initial open flow, _____ MCF/D GCS: Initial open flow, _____ Mbl/D
 Final open flow, 984 MCF/D Final open flow, _____ Mbl/D

Combined
 Time of open flow between initial and final tests, 4 hours
 Static rock pressure, 1650 psig (surface measurement) after _____ hours shut in
 (For applicable use in multiple completion---)
 Second producing formation Riley & Bradford Pay zone depth 4676-78
 GAS: Initial open flow, _____ MCF/D GCS: Initial open flow, _____ Mbl/D
 Final open flow, _____ MCF/D Final open flow, _____ Mbl/D

Time of open flow between initial and final tests, _____ hours
 Static rock pressure, _____ psig (surface measurement) after _____ hours shut in
 (For applicable use in multiple completion---)
 Second producing formation _____ Pay zone depth _____
 GAS: Initial open flow, _____ MCF/D GCS: Initial open flow, _____ Mbl/D
 Final open flow, _____ MCF/D Final open flow, _____ Mbl/D
 Time of open flow between initial and final tests, _____ hours
 Static rock pressure, _____ psig (surface measurement) after _____ hours shut in
 (For applicable use in multiple completion---)
 Second producing formation _____ Pay zone depth _____
 GAS: Initial open flow, _____ MCF/D GCS: Initial open flow, _____ Mbl/D
 Final open flow, _____ MCF/D Final open flow, _____ Mbl/D

Well Hole Pressure Static rock pressure, _____
 Pf=PweXGLS
60+(0.0075 x 5434) + 459.7=560 X=53.35 x 560 29900 =0.0000334 Pf=1650 x 2.72 (0.0000334)
3.698 (4877) (0.9) =1650 x 2.720.102 = 1650 x 1.108


Alexander: Perforations: 5336-38 (2 holes) 5356-58 (2 holes) 5374-76 (4 holes)
 Fracturing: 10,000 lbs. 80/100 sand: 45,000 lbs. 20/40 sand: 500 gal. Acid:
 497 bbls. fluid.

Riley: Perforations: 5002-04 (8 holes)
 Fracturing: 10,000 lbs. 80/100 sand: 30,000 lbs. 20/40 sand: 500 gal. Acid:
 390 bbls. fluid.

Bradford: Perforations: 4416-18 (4 holes) 4676-78 (4 holes)
 Fracturing: 10,000 lbs. 80/100 sand: 40,000 lbs. 20/40 sand: 500 gal. Acid:
 469 bbls. fluid.

| FORMATION | Color | Hard- SS% | SS % | Spore Feet | PERFORATIONS AND DEPTHS |
|--------------------------------|-------|--------------|---------|---------------|---|
| Red rock | | | 0 | 45 | |
| Shale & red rock | | | 45 | 80 | 1/2" stream @ 95' |
| sand, red rock & shale | | | 80 | 175 | |
| sandy shale & shale | | | 175 | 215 | 2 1/2" stream @ 1690' |
| red rock, sand & shale | | | 215 | 285 | |
| sand, shale & red rock | | | 285 | 320 | |
| shale & sandy shale | | | 320 | 445 | 3/4" stream @ 2015 |
| shale, red rock & sand | | | 445 | 660 | |
| red rock & shale | | | 660 | 780 | Gas ck @ collars 7/10-1" w/water 19,924 cu.ft. |
| sand, red rock & shale | | | 780 | 1015 | |
| sand rock, shale & sandy shale | | | 1015 | 1215 | |
| sand & shale | | | 1215 | 1820 | |
| sand & sandy shale | | | 1820 | 2090 | |
| g Lime & Injun | | | 2090 | 2260 | |
| shale | | | 2260 | 2395 | |
| sand & sandy shale | | | 2395 | 3075 | |
| sand & sandy shale | | | 3075 | 4416 | |
| Bradford | | | 4416 | 4678 | |
| shale & sandy shale | | | 4678 | 5002 | |
| shale | | | 5002 | 5004 | |
| sand & sandy shale | | | 5004 | 5083 | |
| sandy shale & sand | | | 5083 | 5336 | |
| Bradford | | | 5336 | 5376 | |
| shale & sand | | | 5376 | 5415 | |
| sandy shale | | | 5415 | 5606 | |
| | | | | TMD | |

(Assess seepage sheets as required as necessary)

J&J Enterprises, INC.
 Well Operator
 By 
 Robert Dahlin
 Geologist

REGULATION 2.32(1) provides as follows:
 The term "log" or "logs" shall mean a systematic, detailed recording made of the perforations, including sand, accumulated in the drilling of a well.



1) Date: February 2, 1987
 2) Operator's Well No. 5-691
 3) API Well No. 47 State WV County Putnam Permit 1110

DRILLING CONTRACTOR:
Black Drilling Company

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
OIL AND GAS WELL PERMIT APPLICATION

RENEWAL OLD NO. 3116

4) WELL TYPE: A Oil / Gas / Underground storage / Deep / Shallow

5) LOCATION: B (If "Gas", Production / Elevation: 1120 / Watershed: Putnam / District: Putnam / County: Putnam / Quadrangle: Section 10, T12N, R10E, S12E

6) WELL OPERATOR Black Drilling Company, Inc. / Address 1000 Main St., Putnam, WV 26601

7) OIL & GAS ROYALTY OWNER Putnam Coal Co. / Address 1000 Main St., Putnam, WV 26601

8) SURFACE OWNER Putnam Coal Co. / Address 1000 Main St., Putnam, WV 26601

9) FIELD SALE (IF MADE) TO: Putnam Coal Co. / Address 1000 Main St., Putnam, WV 26601

10) OIL & GAS INSPECTOR TO BE NOTIFIED: Putnam Coal Co. / Address 1000 Main St., Putnam, WV 26601

11) COAL LESSEE WITH DECLARATION ON RECORD: Putnam Coal Co. / Address 1000 Main St., Putnam, WV 26601

12) COAL OPERATOR Putnam Coal Co. / Address 1000 Main St., Putnam, WV 26601

13) COAL OWNER(S) WITH DECLARATION ON RECORD: Putnam Coal Co. / Address 1000 Main St., Putnam, WV 26601

14) PROPOSED WORK: Drill / Drill deeper / Redrill / Fracture or stimulate / Plug off old formation / Perforate new formation

15) GEOLOGICAL TARGET FORMATION, Other physical change in well (specify) At approximately 1250 feet

16) Estimated depth of completed well, 1250 feet; salt, 1250 feet.
 17) Approximate water strata depths: Fresh, 0 feet; Is coal being mined in the area? Yes No
 18) Approximate coal seam depths: 0 feet

20) 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 | | |
| Conductor | 1 1/2" | 40 | 4.9 | | | 0 | None |
| Fresh water | 2" | 40 | 6.2 | | | 1500 | 1500 |
| Coal | 2 1/2" | 40 | 7.7 | | | 1500 | 1500 |
| Intermediate | 3" | 40 | 9.1 | | | 1500 | 1500 |
| Production | 3 1/2" | 40 | 10.6 | | | 1500 | 1500 |
| Tubing | 2 3/8" | 40 | 6.8 | | | 1500 | 1500 |
| Liners | | | | | | | Perforations: Top Bottom |

21) EXTRACTION RIGHTS
 Check and provide one of the following:
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)

22) ROYALTY PROVISIONS
 Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No
 If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

23) Required Copies (See reverse side.)
 24) 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.

Notary: [Signature] / Signed: [Signature]
 My Commission Expires October 9, 1988 / Iss: [Signature]

OFFICE USE ONLY
DRILLING PERMIT
 Permit number: 1110 / Date: February 2, 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. 10) 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.)
 unless drilling is commenced prior to that date and prosecuted with due diligence.
 Permit expires October 9, 1988
 Bond: 1000 / Agent: [Signature] / Plat: [Signature] / Casing: 1000 / Fee: 1000
 Administrator, Office of Oil and Gas

Line Item Explanation

- 1) Date of Application
- 2) Your well name and number
- 3) To be filled out by office of oil & gas
- 4A) "Oil" means natural crude oil or petroleum and other hydrocarbons, regardless of gravity, which are produced at the well in liquid form by ordinary production methods and which are not the result of condensation of gas after it leaves underground reservoirs; "Gas" means all natural gas and all other fluid hydrocarbons not defined as oil.
- 4B) "Shallow well" means any well drilled and completed in a formation above the top of the uppermost member of the "Onondaga Group" or a depth less than six thousand feet, whichever is shallower.
"Deep well" means any well drilled and completed in a formation at or below the top of the uppermost member of the "Onondaga Group" or at a depth less than six thousand feet, whatever is shallower.
- 5) Where well is located
- 6) Before a permit can be issued in a corporation, company partnership, or fictitious name, the name must be registered with the Secretary of State Office
- 7) Use separate sheet if necessary
- 8) Present surface owner at time application is filed.
- 9) Optional
- 11) See Reg. 7.01 relating to code §22-4-1k
- 12) "Coal Operator" means any persons, firm, partnership, partnership association or corporation that prepares to or does operate a coal mine. See Note 24
- 13 & 14) As per §22-4-20; See Note 24
- 15) Work that will be attempted—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.
- 16) Anticipated formation for which well will be completed
- 17) Self explanatory
- 18) Depth to deepest freshwater, and shallowest salt water, taken from nearby wells corrected for differences in elevation
- 19) All coal seam depths
- 20) Proposed casing program and cementing refer to Code 22-4-5, 22-4-6, 22-4-7, 22-4-8, 22-4-8a Reg 9.01, 15.01, 15.02, 15.03, 15.04, 25.01, 25.02, 25.03, 25.04
- 21) Code 22-4-11(c) - In lieu of filing the lease or leases or other continuing contract on contracts, the applicant for a permit described herein may file the following:
(1) A brief description of the tract of land including the district and county wherein the tract is located;
(2) The identification of all parties to all leases or other continuing contractual agreements by which the right to extract, produce or market the oil or gas is claimed;
(3) The book and page number wherein each such lease or contract by which the right to extract, produce or market the oil or gas is recorded;
(4) A brief description of the royalty provisions of each such lease or contract.
- 22) Code 22-4-11(a) and 22-4-11(c).
- 23) 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.
- 24) The above named coal operator, coal owners, and coal lessees 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.

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.

WAIVER

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 _____

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-691
API Well No. 47 State County Per

017-3110

WELL TYPE: Oil / Gas

(If "Gas", Production / Underground storage / Deep / Shallow /)

LOCATION: Elevation: 1160 Watershed: Cabin Run

District: Central County: Doddridge Quadrangle: Oxford

WELL OPERATOR J&J Enterprises, Inc.

DESIGNATED AGENT H.L. Barrett

Address P.O. Box 48

Address P.O. Box 48

Buckhannon, WV 26201

Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER

Maxwell Heirs

COAL OPERATOR

Address C/O The Union National Bank

Address:

Clarksburg, WV 26301

Acreage 67.25

Porter L. Reese (same address)

COAL OWNER(S) WITH DECLARATION ON RECORD:

SURFACE OWNER

Henry F. Reese & Mary Lou Reese

Name Isabelle Cheon

Address Rt. # 1, Box 44

Wheeler

Address 1010 6th St.

Greenwood, WV 26360

Moundsville, WV 26041

Acreage 44

Name

FIELD SALE (IF MADE) TO:

Address

Name Unknown

Address

COAL LESSEE WITH DECLARATION ON RECORD:

OIL & GAS INSPECTOR TO BE NOTIFIED

RECEIVED

Name Stephen Casey

Address

Address Rt. 2, Box 232-D

Jane Lew, WV 26378

JUN 18 1982

OIL AND GAS DIVISION
WV DEPARTMENT 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 / dated 9/3, 19 80, to the undersigned well operator from Clarence W. Mutschelknaus

[If said deed, lease, or other contract has been recorded:]

Recorded on 9/25, 19 80, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas Lease Book 117 at page 218. 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 obligation 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 title 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
GEOGRAPHICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
1617 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3097

BLANKET PERMIT

J&J Enterprises, Inc.
Well Operator

Ry Peter Battles

Geologist

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, 80-200 feet; salt, 510 feet.

Approximate coal seam depths: 0 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 |
| Conductor | 11 3/4 H-40 | 42 | X | 300' | 300' | OS&S | Kinds | |
| Fresh water | 8 5/8 ERW | 23 | X | 1500 | 1500 | No surface | No surface | |
| Coal | 8 5/8 ERW | 23 | X | 1500 | 1500 | No surface | Sizes | |
| Intermediate | | | | | | | | |
| Production | 4 1/2 J-55 | 10.5 | X | 5350 | 5350 | 325 sks. | Deaths set | |
| Tubing | | | | | | | | |
| Liners | | | | | | | 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 appropriate, the consent required by Code § 22-4-8a from the owner of any water well or drilling site, 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 in 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,

ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY

APPROVED FOR drilling THIS PERMIT SHALL EXPIRE 3-6-83.

IF OPERATIONS HAVE NOT COMMENCED BY

BY [Signature]

The following operator must be certified 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

RECEIVED

JUN 10 1983

Date: June 3, 1983
 Operator's J-691
 Well No. 47 017 3110-
 API Well No. 47 017 3110-
 State County West

OIL & GAS DIVISION
DEPT. OF MINES

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

WELL OPERATOR'S REPORT
 OF
 DRILLING, REWORKING AND/OR RECOMPLETION, OR PRODUCTION CHANGE

WELL TYPE: Gas / Gas / Light Injection / Water Disposal
 (If "Gas", Production X / Underground storage / Deep / Shallow X /)
 LOCATION: Elevation: 1160 Watershed: Cabin Run
 District: Central County: Doddridge Quadrangle: Oxford
 WELL OPERATOR: J&J Enterprises, Inc. DESIGNATED AGENT: Richard Reddecliff
 Address: P.O. Box 48 Buckhannon, WV 26201
Buckhannon, WV 26201

PERMITTED WORK: Drill X / Convert / Drill deeper / Refrill / Structure or equipment
plug off old formation / Perforate new formation /
 Other physical change in well (specify)

PERMIT ISSUED ON 2/4, 19 83 OLD & GAS INSPECTOR FOR THIS WORK: Stephen Casey
 (IF APPLICABLE: PROLOGUE OF DEW HOLE OR CONTINUOUS PROGRESSOR FROM DRILLING OR REWORKING. VERBAL PERMISSION DENIED) Name Stephen Casey Address Rt. # 2, BOX 232-D
 , 19 Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Alexander Depth feet
 Depth of completed well, 5606 feet Rotary X / Cable Tools
 Water strata depth: Fresh 85, 1690 feet salt, None feet.
 Coal seam depths: None Is coal being mined in the area? No
 Work was commenced 4/19, 19 83, and completed 4/25, 19 83

CASING AND TUBING PROGRAM

| CASING OR TUBING TYPE | SPECIFICATIONS | | | | FOOTAGE INTERVALS | CEMENT SLURRY OR SACKS (Cubic Feet) | PACKERS |
|-----------------------|----------------|-------|---------------|-----|-------------------|-------------------------------------|-------------|
| | Size | Grade | Weight per ft | New | | | |
| Conductor | 11 3/4 | H-40 | 42 | X | 30 | 0 SKS. | Stands |
| Fresh water | 8 5/8 | ERW | 23 | X | 1344.25 | 365 SKS. | |
| Coal | 8 5/8 | ERW | 23 | X | 1344.25 | 365 SKS. | Sizes |
| Intermediate | | | | | 5433.75 | 5433.75 | 350 SKS. |
| Production | 4 1/2 | J-55 | 10.5 | X | | | Setting set |
| Tubing | | | | | | | |
| Annular | | | | | | | |
| | | | | | | | Corrosions: |
| | | | | | | | Corr |
| | | | | | | | 4416 |
| | | | | | | | 4676 |
| | | | | | | | 5002 |
| | | | | | | | 5374 |

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5336-74
 Gas: Initial open flow, McF/D Oil: Initial open flow, Bbl/D
984 McF/D Final open flow, Bbl/D
 Time of open flow between initial and final tests, 4 hours
 Static rock pressure, 1650 psig (surface measurement) after hours shut in
 Log appropriate due to multiple completion--]
 Second producing formation Riley & Bradford Pay zone depth 4676-78
 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

Bottom Hole Pressure Static rock pressure, psig (surface measurement) after hours shut in
 Pf=PweXGIS
 t=60+(0.0075 x 5434) + 459.7=560 X=53.35 x 560 29900 =0.0000334 PF=1650 x 2.72 (0.0000334)
 (0.698) (4877) (0.9) =1650 x 2.720.102 = 1650 x 1.108
 JUN 27 1983

STATUS OF PERFORATED INTERVALS, FRACTURING OR STIMULATION, PHYSICAL CHANGE, ETC.

Alexander: Perforations: 5336-38 (2 holes) 5356-58 (2 holes) 5374-76 (4 holes)
Fracturing: 10,000 lbs. 80/100 sand: 45,000 lbs. 20/40 sand: 500 gal. Acid:
497 Bbls. fluid.

Riley: Perforations: 5002-04 (8 holes)
Fracturing: 10,000 lbs. 80/100 sand: 30,000 lbs. 20/40 sand: 500 gal. Acid:
390 Bbls. fluid.

Bradford: Perforations: 4416-18 (4 holes) 4676-78 (4 holes)
Fracturing: 10,000 lbs. 80/100 sand: 40,000 lbs. 20/40 sand: 500 gal. Acid:
469 Bbls. fluid.

000 000

| FORMATION | Color | Hard Spot | Top Feet | Bottom Feet | REMARKS INCLUDING INDICATION OF ALL PERSON AND SALT WATER, SEAL, ETC. |
|-------------------------------|-------|--------------|-------------|----------------|---|
| Red rock | | | 0 | 45 | |
| Shale & red rock | | | 45 | 80 | 1/2" stream @ 95' |
| Sand, red rock & shale | | | 80 | 175 | |
| Sandy shale & shale | | | 175 | 215 | 2 1/2" stream @ 1690' |
| Red rock, sand & shale | | | 215 | 285 | |
| Sand, shale & red rock | | | 285 | 320 | 3/4" stream @ 2015 |
| Shale & sandy shale | | | 320 | 445 | |
| Shale, red rock & sand | | | 445 | 660 | |
| Red rock & shale | | | 660 | 780 | Gas ck @ collars 7/10-1" w/water 19,924 cu.ft. |
| Sand, red rock & shale | | | 780 | 1015 | |
| Red rock, shale & sandy shale | | | 1015 | 1215 | |
| Sand & shale | | | 1215 | 1820 | |
| Sand & sandy shale | | | 1820 | 2090 | |
| Big Lime & Injun | | | 2090 | 2260 | |
| Shale | | | 2260 | 2395 | |
| Sand & sandy shale | | | 2395 | 3075 | |
| Sand & sandy shale | | | 3075 | 4416 | |
| Bradford | | | 4416 | 4678 | |
| Shale & sandy shale | | | 4678 | 5002 | |
| Riley | | | 5002 | 5004 | |
| Sand & sandy shale | | | 5004 | 5083 | |
| Sandy shale & sand | | | 5083 | 5336 | |
| <u>Alexander</u> | | | 5336 | 5376 | |
| Shale & sand | | | 5376 | 5415 | |
| Sandy shale | | | 5415 | 5606 | |
| | | | | TMD | |

(Attach separate sheets as required as necessary.)

J&J Enterprises, INC.

Well Operator

By  Robert Dahlin

Geologist

NOTE: Regulation 2.02(f) provides as follows:

"The term 'log' or 'well log' shall mean a systematic, faceted, geological record of all strata, including logs, encountered in the drilling of a well."