

FILE NO. 81-894-H  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 / 200'  
 PROVEN SOURCE OF ELEVATION EL. 1415 at road intersection near S.E. P. Corner

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) John Robert Sales  
 R.P.E. 5566 L.L.S. \_\_\_\_\_

PLACE SEAL HERE

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

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS.") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X


LOCATION ELEVATION 1700 WATER SHED SANDY CREEK  
 DISTRICT RENO COUNTY PRESTON  
 QUADRANGLE FELLOWSVILLE 7.5' THORNTON 15.0' SC

SURFACE OWNER INTERSTATE LUMBER COMPANY ACREAGE 75.75  
 OIL & GAS ROYALTY OWNER INTERSTATE LUMBER COMPANY LEASE ACREAGE 75.75  
 LEASE NO. \_\_\_\_\_

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

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION HAVERTY ESTIMATED DEPTH 5600

WELL OPERATOR J & J ENTERPRISES INC. DESIGNATED AGENT Richard M. Reddecliff  
 ADDRESS Box 48 ADDRESS P.O. BOX 48  
BUCKHANNON, W.VA. 26201 BUCKHANNON, W.VA.



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE 3 - 31 19 92  
 OPERATOR'S WELL NO. J - 663  
 API WELL NO. \_\_\_\_\_  
47 - 077 - 0239  
 STATE COUNTY PERMIT

MAR 14 1983



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

Balltown: Perforations: 3459-63 (16 holes)  
 Fracturing; 300 sks. 20/40 sand: 576 Bbls. fluid.  
 1st. Balltown: Perforations: 3244-48 (16 holes)  
 Fracturing: 300 sks. 20/40 sand: 500 gal. acid: 570 Bbls. fluid.

BOTTOM HOLE PRESSURE  $P_f = P_{we}^{XGLS}$   
 $t = 60 + (0.0075 \times 3642) + 459.7 = 547$   $X = 53.35 \times 547 = \frac{1}{29183} = 0.000034$   $P_f = 600 \times 2.72^{(0.000034)}$   
 $(0.595)(3354)(0.9) = 600 \times 2.72^{(0.06)} = 600 \times 1.06 =$   
 $f = 636$  psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fre and salt water, coal, oil and g
Top Soil			0	15	
Red rock & sand			15	80	
Sandy shale & sand			80	265	Damp @ 270'
Sand & sandy shale			265	290	
Coal			290	294	1" stream @ 870'
Sandy shale & sand			294	381	
Coal			381	385	Gas ck @ 3405 No show
Sandy shale & sand			385	1160	
Red rock and sandy shale			1160	1305	Gas ck @ 3525 No show
Sand & sandy shale			1305	1490	
Little lime			1490	1510	Gas ck @ 3405 No show
Big Lime			1510	1575	
Sand & sandy shale			1575	2445	
Sand & sandy shale			2445	3244	Gas ck @ 3525 No show
1st Balltown			3244	3248	
Sand & sandy shale			3248	3459	
Balltown			3459	3463	
Sand & sandy shale			3463	4120	
Sand & sandy shale			4120	5752 T.D.	

(Attach separate sheets as necessary)

J&J Enterprises, Inc.

Well Operator

By:

Date:

7/20/84

Robert Dahlin - Geologist

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



1) Date: October 4, 1983  
 2) Operator's Well No. J-663  
 3) API Well No. 47 - 077 -- 0239-REN  
 State            County            Permit           

Old Number 0239

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            / Underground storage            / Deep            / Shallow X)
- 5) LOCATION: Elevation: 1700 Watershed: Sandy Creek  
 District: Reno County: Preston Quadrangle: Fellowsville
- 6) WELL OPERATOR J&J Enterprises, Inc. 7) DESIGNATED AGENT Richard 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 William Blosser Name S.W. Jack Drilling Company  
 Address Rt. # 4, Box 317 Address P.O. Box 48  
Fairmont, WV 26564 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, Haverty
- 12) Estimated depth of completed well, 5600 feet
- 13) Approximate strata depths: Fresh, 140 feet; salt, 0 feet.
- 14) Approximate coal seam depths: 250 Is coal being mined in the area? Yes            / No X
- 15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					ROOTAGE 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		1500	1500	To surface	By Rule 1505
Coal	8 5/8	ERW	23	X		1500	1500	To surface	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		5550	5550	400 sks.	Depths set
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-077-0239-REN

Date October 27, 1983

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 October 27, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<b>LANKET BOND</b>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	1335

*[Signature]*  
 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



1) Date: February 18, 19 82  
 2) Operator's Well No. J-663  
 3) API Well No. 47 077 State 0330 County 0330 Permit

DRILLING CONTRACTOR:

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

OIL AND GAS WELL PERMIT APPLICATION

J. M. Jack Drilling Co.  
P.O. Box 48  
Buckhannon, WV 26201

- 4) WELL TYPE: A Oil \_\_\_\_\_ / Gas x /  
 B (If "Gas", Production x / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow x /)
- 5) LOCATION: Elevation: 1700 Watershed: Sandy Creek  
 District: None County: Froston Quadrangle: Fellowville
- 6) WELL OPERATOR J&J Enterprises, Inc. 11) DESIGNATED AGENT Richard M. Reddick  
 Address P.O. Box 48 Address P.O. Box 48  
Buckhannon, WV 26201 Buckhannon, WV 26201
- 7) OIL & GAS ROYALTY OWNER Interstate Lumber Co. 12) COAL OPERATOR None  
 Address 601 E. Main St. Address \_\_\_\_\_  
Kingwood, WV 26537 75.75
- 8) SURFACE OWNER Interstate Lumber Co. 13) COAL OWNER(S) WITH DECLARATION ON RECORD:  
 Address 601 E. Main St. Name Eastern Associated Coal Corp.  
Kingwood, WV 26537 Address Koppers Building  
75.75 Pittsburgh, Pa. 15210
- 9) FIELD SALE (IF MADE) TO:  
 Address Unknown
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name William Blosser Address \_\_\_\_\_  
Rt. # 4, Box 317 Fairmont, WV 26564
- 15) PROPOSED WORK: Drill x / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Fracture or stimulate x /  
 Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_  
 Other physical change in well (specify) \_\_\_\_\_
- 16) GEOLOGICAL TARGET FORMATION, Haverty  
 17) Estimated depth of completed well, 5600 feet  
 18) Approximate water strata depths: Fresh, 140 feet; salt, None feet.  
 19) Approximate coal seam depths: 250 Is coal being mined in the area? Yes \_\_\_\_\_ / No x /

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	For drilling	Left in well		
Conductor	<u>11 3/4</u>	<u>H-40</u>	<u>42</u>	<u>x</u>		<u>30</u>	<u>0</u>	<u>0 sbs.</u>	Kinds
Fresh water	<u>8 5/8</u>	<u>KW</u>	<u>23</u>	<u>x</u>		<u>1500</u>	<u>1500</u>	<u>To surface</u>	Sizes
Coal	<u>8 5/8</u>	<u>KW</u>	<u>23</u>	<u>x</u>		<u>1500</u>	<u>1500</u>	<u>To surface</u>	
Intermediate									Depths set
Production	<u>4 1/2</u>	<u>J-55</u>	<u>10.5</u>	<u>x</u>		<u>5550</u>	<u>5550</u>	<u>400 sbs.</u>	
Tubing									Perforations: Top Bottom
Liners									

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 Ardis S. Campbell  
 My Commission Expires October, Nov. 1989

Signed: \_\_\_\_\_  
 Its: Designated Agent

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 077-0330 Date \_\_\_\_\_

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.)

Permit expires November 8, 1983 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
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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 proposes 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 or 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(d) and 22-4-11(e).
- 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 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.

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 \_\_\_\_\_