

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 346.01
 DRAWING NO. 84-11
 SCALE 1" = 50'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION BM-241
West of Location.

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) Richard S. Ostrander
 R.P.E. _____ L.L.S. 555
Buckhannon, WV

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



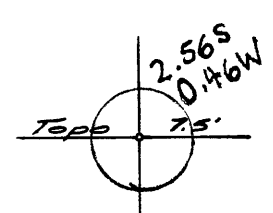
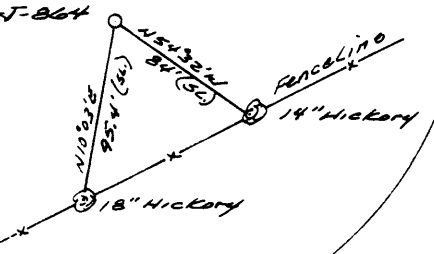
DATE 30 January, 19 84
 OPERATOR'S WELL NO. J-864
 API WELL NO. _____

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1210' WATERSHED Short Run to Arnold Creek
 DISTRICT Centerville COUNTY Tyler
 QUADRANGLE Pennsboro S39 West Union 15 C 5
 SURFACE OWNER Lexton Bond and Ida Mae Bond ACREAGE 70
 OIL & GAS ROYALTY OWNER George P. Lewis & others LEASE ACREAGE 70
 LEASE NO. J-144

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
 TARGET FORMATION Devonian Shale ESTIMATED DEPTH 5950
 WELL OPERATOR J&T ENTERPRISES, INC. DESIGNATED AGENT EDWARD REDDEQUIFF
 ADDRESS P.O. Box 48 427 ADDRESS P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

APR 2 1984





Date January 14, 1985
 Operator's _____
 Well No. J-864
 Farm George Lewis
 API No. 47 - 095 - 1065

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State of West Virginia
 Department of Mines
 Oil and Gas Division

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 x /)
 LOCATION: Elevation: 1210 Watershed Short Run To Arnolds Creek
 District: Centerville County Tyler Quadrangle Pennsboro

COMPANY J&J Enterprises, Inc
 ADDRESS P.O. Box 213, Pennsboro, WV 26415
 DESIGNATED AGENT Richard Reddecliff
 ADDRESS P.O. Box 48, Buckhannon, WV 26201
 SURFACE OWNER Roger Scott
 ADDRESS Rt. # 1, Box 213, Pennsboro, WV 26415
 MINERAL RIGHTS OWNER Aaron Lewis Hrs. C/O
West Union, WV
 ADDRESS Jewel Lewis, 302 Louise St., 26149
 OIL AND GAS INSPECTOR FOR THIS WORK Robert
Lowther ADDRESS Gen. Del., Middlebourne, WV
26149
 PERMIT ISSUED 3/29/84
 DRILLING COMMENCED 12/10/84
 DRILLING COMPLETED 12/18/84

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	32	0	0 sks.
9 5/8			
8 5/8	1726.20	1726.20	395 sks.
7			
5 1/2			
4 1/2	5174	5174	270 sks.
3			
2			
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON _____

GEOLOGICAL TARGET FORMATION Devonian Shale Depth _____ feet
 Depth of completed well 5617 feet Rotary x / Cable Tools _____
 Water strata depth: Fresh 130, 1210, 2010 feet; Salt 0 feet
 Coal seam depths: 1635-45 Is coal being mined in the area? No

OPEN FLOW DATA
 Producing formation Benson Pay zone depth 5068-70 feet
 Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
 Combined Final open flow 1,100 Mcf/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests 4 hours
 Static rock pressure 1700 psig (surface measurement) after 96 hours shut in
 (If applicable due to multiple completion--)

Second producing formation Riley Pay zone depth 4673-4703 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

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

Benson: Perforations: 5068-70 (8 holes)
Fracturing: 400 sks. 20/40 sand: Foam frac.
Riley: Perforations: 4673-76 (6 holes) 4692-93 (4 holes) 4702-03 (4 holes)
Fracturing: 300 sks. 20/40 sand: Foam frac;

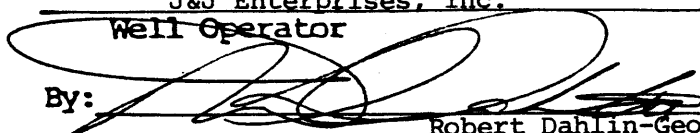
BOTTOM HOLE PRESSURE Pf=Pwe^{XGLS}
t=60 + (0.0075 x 5174) + 459.7 = 559 x = $\frac{1}{53.35} \times \frac{1}{554} = \frac{1}{29822}$ = 0.000034 Pf=1700 x 2.72^(0.000034)
(0.626) (4872) (0.9) = 1700 x 2.72^{0.09} = 1700 x 1.09

Pf= 1853 psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all and salt water, coal, oil and
Fill & shale			0	15	
Red rock and sand			15	65	Damp @ 130'
Shale & sand			65	100	
Shale, red rock & sand			100	180	3/4" stream @ 1210
Red rock, sand & shale			180	290	
Red rock & shale			290	350	1" stream @ 2010
Red rock, sand & shale			350	520	
Red rock, sand & shale			520	1090	
Shale & sand			1090	1635	Gas ck @ 2234 10/10-1/2" w/wat 197,000 cu.
Coal			1635	1645	
Sand & shale			1645	1990	Gas ck @ 3633 No show
Little lime			1990	2030	
Blue Monday			2030	2045	Gas ck @ 4969 No show
Big Lime			2045	2110	
Big Injun			2110	2230	
Sand & shale			2230	3250	
Sand & shale			3250	4673	
Riley			4673	4703	
Sand & shaele			4703	5068	
Benson			5068	5070	
Sand & shale			5070	5617	
					T.D.

(Attach separate sheets as necessary)

J&J Enterprises, Inc.
Well Operator
By: 
Robert Dahlin-Geologist
Date: 1/14/85

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: February 9, 19 84
 2) Operator's Well No. J-864
 3) API Well No. 47 - 095 - 1065
 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 /
 B (If "Gas", Production / Underground storage / Deep / Shallow)
 5) LOCATION: Elevation: 1210 Watershed: Short Run to Arnold Creek
 District: Centerville County: Tyler Quadrangle: Pennsboro
 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 Robert Lowther Name S.W. Jack Drilling Company
 Address General Delivery Address P.O. Box 48
Middlebourne, WV 26149 Buckhannon, WV 26201
 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate /
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify) _____
 11) GEOLOGICAL TARGET FORMATION, Devonian Shale
 12) Estimated depth of completed well, 5950 feet
 13) Approximate trata depths: Fresh, 380 feet; salt, 0 feet.
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes No

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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		
Conductor	11 3/4	H-40	42	x		30	0	0 sks. Kinds
Fresh water	8 5/8	ERW	23	x		1300	1300	To surface
Coal	8 5/8	ERW	23	x		1300	1300	To surface
Intermediate								
Production	4 1/2	J-55	10.5	x		5900	5900	450 sks. Depths set
Tubing								OR AS REQ. BY RULE
Liners								Perforations: 15.01
								Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-095-1065 Date March 29, 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 March 29, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BLANKET</u>	Agent: <u>[Signature]</u>	Plat: <u>MH/MH</u>	Casing	Fee
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[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