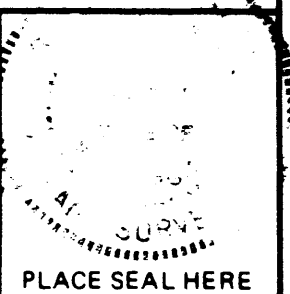


NOTE: ALL PERMITTED WELLS WITHIN 1200' SHOWN

FILE NO. 11-35
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 / 200
 PROVEN SOURCE OF ELEVATION TOP OF KNOB
 ELEV. 915'

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) Gregory A. Smith
 R.P.E. _____ L.L.S. 677



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



DATE AUG. 4, 1983
 OPERATOR'S WELL NO. J-313
 API WELL NO. 47-095-1036
 STATE WEST VIRGINIA COUNTY TYLER 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 763' WATER SHED MIDDLE ISLAND CREEK
 DISTRICT CENTERVILLE COUNTY TYLER
 QUADRANGLE WEST UNION 7.5' 415' EC
 SURFACE OWNER EDWIN D. MULVAY et. ux. ACREAGE 107
 OIL & GAS ROYALTY OWNER A.E. PRATT ESTATE LEASE ACREAGE 107
 LEASE NO. P.S. 28
 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 ALEXANDER ESTIMATED DEPTH 4975'
 WELL OPERATOR J & J ENTERPRISES DESIGNATED AGENT RICHARD REDDAKLIFF
 ADDRESS P. O. BOX 48 ADDRESS P. O. BOX 48
BUCKHANNON WV 26201 BUCKHANNON WV 26201

SEP 10 1983

G-C Wilbur (az)

RECEIVED

APR 11 1984

IV-35
(Rev 8-81)

OIL & GAS DIVISION
DEPT. OF MINES



State of West Virginia

Department of Mines
Oil and Gas Division

Date April 9, 1984
Operator's Well No. J-313
Farm Mulvay
API No. 47 - 095 - 1036

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: 763 Watershed Middle Island Creek
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 Edwin D. Mulvay, Et ux
ADDRESS Star Route, West Union, WV 26456
MINERAL RIGHTS OWNER A.E. Pratte estate
ADDRESS Box 132, Washington, Pa.
OIL AND GAS INSPECTOR FOR THIS WORK Robert Middlebourne, Lowther ADDRESS Geb, Delivery WV 26149
PERMIT ISSUED 8/1/83
DRILLING COMMENCED 3/6/84
DRILLING COMPLETED 3/13/84
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 Cond.			
13-10"	30	0	0 sks.
9 5/8			
8 5/8	1301.35	1301.35	310 sks.
7			
5 1/2			
4 1/2	4768.75	4768.75	190 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth _____ feet
Depth of completed well 5177 feet Rotary x / Cable Tools _____
Water strata depth: Fresh 45,70 feet; Salt 0 feet
Coal seam depths: 375-80, 1120-25 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4653-57 feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Combined Final open flow (762) Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1475 psig (surface measurement) after 96 hours shut in
(If applicable due to multiple completion--)
Second producing formation Riley Pay zone depth 4217-63 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

APR 23 1984
(Continue on reverse side)

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

Benson: Perforations: 4653-57 (16 holes)

Fracturing: 100 sks. 80/100 sand: 450 sks. 20/40 sand: 500 gal. Acid; 500 Bbls. fluid.

Riley: Perforations: 4217-63 (15 holes)

Fracturing: 100 sks. 80/100 sand: 300 sks. 20/40 sand: 500 gal. Acid; 540 Bbls. fluid.

BOTTOM HOLE PRESSURE $P_f = P_{we}^{XGLS}$

$$t = 60 + (0.0075 \times 4769) + 459.7 = 555 \quad X = \frac{1}{53.35} \times 555 \quad \frac{1}{29609} = 0.000034 \quad P_f = 1475 \times 2.72^{(0.000034)}$$

$$(0.670)(4437)(0.9) = 1475 \times 2.72^{0.09} = 1475 \times 1.09$$

Pf=1608 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
Clay			0	12	
Shale & sand			12	115	1/2" stream @ 45'
Sand, shale & red rock			115	320	
Red rock & sand			320	375	2 1/2" stream @ 70'
Coal			375	380	
Shale & red rock			380	565	Gas ck @ 1829 66/10-1" w/water
Sand & shale			565	935	61,199 Cu.ft.
Shale & sand			935	1120	
Coal			1120	1125	Gas ck @ 3131 48/10-1" w/water
Sand, shale & red rock			1125	1575	52,715 cu.ft.
Sand			1575	1618	
Big Lime			1618	1680	Gas ck @ 4312 40/10-1" w/water
Injun			1680	1807	47,629 cu.ft.
Sand & shale			1807	2700	
Sand & shale			2700	3080	Gas ck @ 4900 90/10-1" w/water
Sand & shale			3080	4217	71,464 cu.ft.
Riley			4217	4263	
Sand & shale			4263	4653	
Benson			4653	4657	
Sand & shale			4657	5177	
					T.D.

(Attach separate sheets as necessary)

J&J Enterprises, INC.

Well Operator

By: Bob J. Miller

Date: 4/9/84

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 soil, encountered in the drilling of a well."



1) Date: August 23, 1983
2) Operator's Well No. J-313
3) API Well No. 47 - 095 - 1036
State County Permit

DRILLING CONTRACTOR:

S.W. Jack Drilling Company
P.O. Box 48
Buckhannon, WV 26201

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

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil / Gas X / B (If "Gas", Production X / Underground storage / Deep / Shallow X /)
5) LOCATION: Elevation: 763 / Watershed: Middle Island Creek / District: Centerville / County: Tyler / Quadrangle: West Union 7.5
6) WELL OPERATOR J&J Enterprises, Inc. / Address: P.O. Box 48, Buckhannon, WV 26201
7) OIL & GAS ROYALTY OWNER A.E. Pratt estate / Address: Box 132, Washington, Pa. / Acreage: 107
8) SURFACE OWNER Edwin D. Mulvay, et ux / Address: Star Rt., West Union, WV 26456 / Acreage: 107
9) FIELD SALE (IF MADE) TO: Address: Unknown
10) OIL & GAS INSPECTOR TO BE NOTIFIED Robert A. Lowther / Address: Gen. Delivery, Middlebourne, WV 26149
11) DESIGNATED AGENT Richard Reddecliff / Address: P.O. Box 48, Buckhannon, WV 26201
12) COAL OPERATOR None
13) COAL OWNER(S) WITH DECLARATION ON RECORD: Name Edwin D. Mulvay, Et ux / Address Star Rt., West Union, WV 26456
14) COAL LESSEE WITH DECLARATION ON RECORD: Name None / Address
15) PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate / Plug off old formation / Perforate new formation / Other physical change in well (specify)
16) GEOLOGICAL TARGET FORMATION, Alexander
17) Estimated depth of completed well, 4975 feet
18) Approximate water strata depths: Fresh, 73 feet; salt, 0 feet
19) Approximate coal seam depths: None / Is coal being mined in the area? Yes / No X

20) CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight per ft., New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS (Kinds, Sizes, Depths set, Perforations: Top, Bottom)

21) EXTRACTION RIGHTS

Check and provide one of the following:
[X] 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 [X]

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] My Commission Expires October 16, 1989

Signed: [Signature] Its: Designated Agent

OFFICE USE ONLY

DRILLING PERMIT

Permit number 47-095-1036 Date September 13 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. 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 September 13, 1985 unless drilling is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Plat, Casing, Fee

Administrator, Office of Oil and Gas