



I do hereby certify that all wells within 2500' Radius are shown to the best of my knowledge.

FILE NO. 346.01  
 DRAWING NO. 81-49  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION J-513  
Elev. = 920'

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) Rayford S. Ostrander  
 R.P.E. \_\_\_\_\_ L.L.S. 555

PLACE SEAL HERE

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



DATE 28 October, 19 81  
 OPERATOR'S WELL NO. J-592  
 API WELL NO. \_\_\_\_\_  
47 - 017 - 3058  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE X DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1039' WATER SHED Arnold Creek  
 DISTRICT West Union COUNTY Doddridge  
 QUADRANGLE West Union 15' PC  
 SURFACE OWNER Middle Island C.L.M.S. Assoc. ACREAGE 86 1/2  
 OIL & GAS ROYALTY OWNER Clarence E. B.A. Hurst / A.F. Hanes LEASE ACREAGE 86 1/2  
 LEASE NO. JJ-1122  
 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 Benson ESTIMATED DEPTH 4800  
 WELL OPERATOR J-T Enterprises, Inc. DESIGNATED AGENT H.L. Barnett  
 ADDRESS P.O. Box 48 ADDRESS P.O. Box 48  
Buckhannon, W. Va. 26201 Buckhannon, W. Va. 26201

NOV 19 1981  
 91

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DEC 24 1981

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

**OIL AND GAS DIVISION**  
WV DEPARTMENT OF MINES

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil  / Gas  / Liquid Injection  Waste Disposal   
(If "Gas", Production  / Underground storage  Deep  Shallow )  
LOCATION: Elevation: 1039 Watershed: Arnolds Creek  
District: West Union County: Doddridge Quadrangle: West Union

WELL OPERATOR J & J Enterprises, Inc. DESIGNATED AGENT James R. Willett  
Address P.O. Box 48 Address P.O. Box 48  
Buckhannon, WV 26201 Buckhannon, WV 26201

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

PERMIT ISSUED ON 11/4, 1981 OIL & GAS INSPECTOR FOR THIS WORK:  
(IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Steve Casey  
Address Rt. # 2, Box 232-D  
Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Benson Depth 4945-4948 feet  
Depth of completed well, 5117 feet Rotary  Cable Tools   
Water strata depth: Fresh, 515 feet; salt, None feet.  
Coal seam depths: 660-62 Is coal being mined in the area? No  
Work was commenced 11/24, 1981, and completed 12/2, 1981

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 <sup>3</sup> / <sub>4</sub>	H-40	42	x		30	0	0 sks.	Kinds
Fresh water	8 <sup>5</sup> / <sub>8</sub>	ERW	23	x		934	934	220 sks.	
Coal	8 <sup>5</sup> / <sub>8</sub>	ERW	23	x		934	934	220 sks.	Sizes
Intermediate									
Production	4 <sup>1</sup> / <sub>2</sub>	J-55	10.5	x		5024.30	5024.30	170 sks.	Depths set
Tubing									
Liners									Perforations: Top Bottom

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4945-48 feet  
Gas: Initial open flow, \_\_\_\_\_ Mcf/d Oil: Initial open flow, \_\_\_\_\_ Bbl/d  
Final open flow, 622 Mcf/d Final open flow, \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests, 4 hours  
Static rock pressure, 1525 psig (surface measurement) after 96 hours shut in  
[If applicable due to multiple completion--]

Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ 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

Bottom Hole Pressure Static rock pressure, \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in  
Pf=PweXGLS  $\frac{1}{1}$   
 $t=60+(0.0075 \times 5024) + 459.7=557$   $x=53.35$   $x \ 557 = 29736 = 0.0000336$   $Pf=1525 \times 2.72^{0.0000336} \times 0.671$   
 $\times 4947 \times 0.9 = 1525 \times 2.72^{0.10} = 1525 \times 1.105$

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

Benson: 4945-48 (12 holes)

Fracturing: 200 sks. 80/100 sand; 700 sks. 20/40 sand; 940 Bbls. fluid.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Top Soil			0	10	
Sand & shale			10	90	
Red rock and shale			90	200	Hole damp @ 515'
Red rock, sand & shale			200	600	
Red rock and shale			600	610	Gas Ck @ 2125
Shale and sand			610	660	16/10-2" w/water 169,000 cu.ft.
Coal			660	662	
Sand and shale			662	740	Gas ck @ 2681
Red rock, sand and shale			740	1115	22/10-2" w/water 444,000 cu.ft.
Sand and shale			1115	1910	
Big Lime			1910	1990	Gas ck @ 3081
Sand and shale			1990	2375	26/10-2" w/water 483,000 cu.ft.
Shale			2375	2470	
Sand & shale			2470	3200	
Shale & sand			3200	4945	
Benson			4945	4948	
Sand & shale			4948	5070	
<u>Alexander</u>			5070	5085	
Sand & shale			5085	5117 T.D.	

(Attach separate sheets to complete as necessary)

J & J Enterprises, Inc.  
Well Operator

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By *Peter Battles*  
Peter Battles  
Its Geologist

NOTE: Regulation 2.02(4) 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-592  
API Well No. 47 - 017 - 3058  
State County Permit

WELL TYPE: Oil \_\_\_ / Gas X /  
(If "Gas", Production X / Underground storage \_\_\_ / Deep \_\_\_ / Shallow X /)  
LOCATION: Elevation: 1039 Watershed: Arnolds Creek  
District: West Union County: Doddridge Quadrangle: West Union

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

DESIGNATED AGENT James R. Willett  
Address P. O. Box 48  
Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER Clarence & B.A.Hurst/A.F.Hanes  
Address Rt.#2, Box 106 / P.O. Box 381  
Pennsboro, WV 26415/Kingston, Wash. 98346  
Acreage 86.50

COAL OPERATOR None  
Address:

SURFACE OWNER Middle Island C.L.M.S. Assoc.  
Address J.Y. Longacre  
Apt. 1303, Euclid Ave., Weirton, WV 26062  
Acreage 86.50

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name Clarence & Betty Hurst/A.F.Hanes  
Address Rt.#2, Box 106 / P.O. Box 381  
Pennsboro, WV / Kingston, Wash. 26415 98346  
Name

FIELD SALE (IF MADE) TO:  
Name Unknown  
Address:

Address:

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

COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address:  
NOV - 4 1981

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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 X / dated March 12, 1981, to the undersigned well operator from Petro-Enterprises, Inc.

If said deed, lease, or other contract has been recorded;]  
Recorded on March 28, 1981, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Deed Book 119 at page 602. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate X /  
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 GEOPHYSICAL LOGS DIRECTLY TO:  
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION  
615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

BLANKET BOND

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

[08-78]

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, Benson

Estimated depth of completed well, 4800 feet Rotary X / Cable tools      /

Approximate water strata depths: Fresh, 50 feet; salt, None 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	1 3/4	H-40	42	x		30	0	0 sks.	Kinds
Fresh water	8 5/8	ERW	23	x		1300	1300	250 sks.	
Coal	8 5/8	ERW	23	x		1300	1300	250 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5			4750	4750	325 sks.	Depths 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 applicable, the consent required by Code § 22-4-8a from the owner of any water well or drilling 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 7-6-82

*[Signature]*  
Deputy Director - Oil & Gas Division

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