

CODE \_\_\_\_\_ CARD \_\_\_\_\_ PLOT \_\_\_\_\_

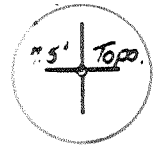
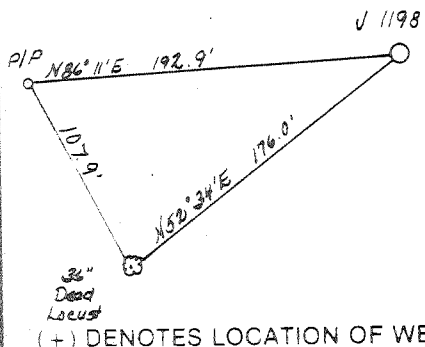
LATITUDE 39° 20' 00"

LONGITUDE 79° 55' 30"

NORTH

13,875'

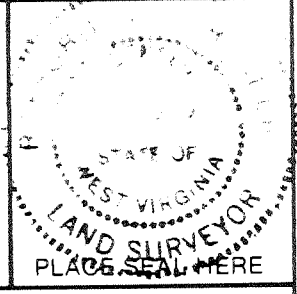
References  
1" = 100'



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

FILE NO. 346.01  
 DRAWING NO. 85-23  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION BM Knottsville 1483'  
USGS Thornton Quad

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 L. Reddick  
 R.P.E. \_\_\_\_\_ L.L.S. 555  
Buckhannon, WV



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



DATE April 24, 19 85  
 OPERATOR'S WELL NO. 1-1198  
 API WELL NO. \_\_\_\_\_

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

LOCATION: ELEVATION 150' WATER SHED Sandy Creek  
 DISTRICT Knottsville 6 COUNTY Taylor  
 QUADRANGLE Thornton 638 122 SW7

SURFACE OWNER Franklin H., Kenneth P. + Linda L. Ridenour ACREAGE 98.5  
 OIL & GAS ROYALTY OWNER Franklin H., Kenneth P. + Linda L. Ridenour LEASE ACREAGE 98.5  
 LEASE NO. TJ-1947

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 Haverty ESTIMATED DEPTH 5900'  
 WELL OPERATOR V+V Enterprises, Inc. DESIGNATED AGENT Richard Reddick  
 ADDRESS P.O. Box 48 ADDRESS P.O. Box 48  
Buckhannon, W. Va. 26201 Buckhannon, W. Va. 26201

MAY 06 1985

6-6 unnamed

(0)

FORM IV 6 (8-78)

HT HALL

COUNTY NAME Taylor

PERMIT 0488

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JUL 15 1985

OIL & GAS DIVISION  
DEPT. OF MINES



State of West Virginia  
Department of Mines  
Oil and Gas Division

Date July 11, 1985  
Operator's Well No. J-1198  
Farm Ridenour  
API No. 47 - 091 - 0488

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: 1510 Watershed Sandy Creek  
District: Knottsville County Taylor Quadrangle Thornton

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 Franklin M. Ridenour  
ADDRESS Rt. # 1, Box 397, Grafton, WV 26354  
MINERAL RIGHTS OWNER Same as surface  
ADDRESS \_\_\_\_\_  
OIL AND GAS INSPECTOR FOR THIS WORK Donald Ellis  
2604 Crab Apple Lane  
ADDRESS Fairmont, WV 26554  
PERMIT ISSUED 4/29/85  
DRILLING COMMENCED 5/20/85  
DRILLING COMPLETED 5/29/85  
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	1093.85	1093.85	270 sks.
7			
5 1/2			
4 1/2	5888.30	5888.30	460 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth 5650-90 feet  
Depth of completed well 5911 feet Rotary x / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 50,560, 1020 feet; Salt 0 feet  
Coal seam depths: 90-92, 440-43 Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation Haverty Pay zone depth 5793-97 feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Combined Final open flow 1,008 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 hours  
Static rock pressure 1350 psig (surface measurement) after 96 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation Elk, Benson & Riley Pay zone depth 5113-17 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.

Haverty: Perforations: 5793-97 (16 holes) FOAM FRAC ;  
 3rd Elk: Perforations: 5113-17 (16 holes)  
 Fracturing: 450 sks. 20/40 sand: 500 gal. acid: 674 Bbls. fluid.  
 Benson: Perforations: 4493-96 (12 holes)  
 Fracturing: 415 sks. 20/40 sand: 500 gal. acid: 552 Bbls. fluid.  
 Riley: Perforations: 4257-59 (7 holes) 4154-56 (6 holes)  
 Fracturing: 500 gal. acid: 612 Bbls. fluid.

BOTTOM HOLE PRESSURE Pf=Pwe XGLS

$$t=6- + (0.0075 \times 5888) + 459.7 = 564 \quad X = \frac{1}{53.35} \times 564 = \frac{1}{30082} = 0.000033 \quad Pf = 1350 \times 2.72^{(0.000033)}$$

$$(0.619)(4976)(0.9) = 1350 \times 2.72^{0.09} = 1350 \times 1.09$$

Pf= 1472 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
KB - Ground Level			0	10	1" stream @ 50'
Soil & Clay			10	40	
Sand & shale			40	90	½" stream @ 560'
Coal			90	92	
Sand & shale			92	200	½" stream @ 1020
Black shale			200	220	
Sand & shale			220	300	Gas ck @ 1609 No show
White sand			300	330	
Sand & shale			330	440	Gas ck @ 2272 No show
Coal			440	443	
Sand & shale			443	565	Gas ck @ 2621 No show
Sand & shale			565	818	
Sand & shale			818	970	Gas ck @ 2873 No show
Sand, shale & red rock			970	1135	
Sand & shale			1135	1330	Gas ck @ 3159 No show
Little Lime			1330	1350	
Sand, shale & red rock			1350	1400	Gas ck @ 3350 No show
Big Lime			1400	1495	
Injun			1495	1580	Gas ck @ 4139 10/10-1" w/water
Sand & shale			1580	1835	23,814 cu.ft.
Sand & shale			1835	2830	
Sand & shale			2830	4154	Gas ck @ 4295 4/10-1" w/water
Riley			4154	4259	15,041 cu.ft.
Sand & shale			4259	4493	
Benson			4493	4496	Gas ck @ 4453 4/10-1" w/water
Sand & shale			4496	5113	15,041 cu.ft.
3 rd Elk			5113	5117	
Sand & Shale			5117	5793	
Haverty			5793	5797	
Sand & shale			5797	5911	

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T.D.

(Attach separate sheets as necessary)

J&J Enterprises, Inc.

Well Operator

By:



Robert Dahlin-Geologist

Date: 7/11/85

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 mineral, encountered in the drilling of a well."

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APR 29 1985



1) Date: 24 April, 19 85  
 2) Operator's Well No. J-1198  
 3) API Well No. 47 091-0488  
 State County Permit

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

OIL & GAS DIVISION  
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil      / Gas X /  
 B (If "Gas", Production X / Underground storage      / Deep      / Shallow X /)
- 5) LOCATION: Elevation: 1510' Watershed: Sandy Creek  
 District: Knottsville County: Taylor Quadrangle: Thornton
- 6) WELL OPERATOR J&J ENTERPRISES, INC.  
 Address PO Box 48  
Buckhannon, WV 26201 *2450*
- 7) DESIGNATED AGENT Richard Reddecliff  
 Address PO Box 48  
Buckhannon, WV 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name Donald Ellis  
 Address 2604 Crab Apple Lane  
Fairmont, WV 26554
- 9) DRILLING CONTRACTOR:  
 Name SW Jack Drilling Co.  
 Address PO Box 48  
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, 5900' feet
- 13) Approximate strata depths: Fresh, 65 feet; salt, 0 feet.
- 14) Approximate coal seam depths: 120 to 450 Is coal being mined in the area? Yes      / No XX /

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	Left in well		
Conductor	113/4	H-40	42	X		30	0	0 sks	Kinds
Fresh water	85/8	ERW	23	X		1210	1210	to surface	<i>by rule 15.05</i>
Coal	85/8	ERW	23	X		1210	1210	to surface	Sizes
Intermediate									
Production	4.5	J-55	10.5	X		5850	5850	450 sks	<i>Depth 40 req used by rule 15.05</i>
Tubing									
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-091-0488 Date April 29, 1985

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 April 29, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>82</u>	<u>MW</u>	<u>MW</u>	<u>MW</u>	<u>1951</u>

*Margaret J. Hesse*  
 Administrator, Office of Oil and Gas