

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

FILE NO. 346.1
 DRAWING NO. 85-26
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS 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) Rayford L. Astorandu
 R.P.E. L.L.S. 555
Buckhannon, WV

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE May 13, 19 85
 OPERATOR'S WELL NO. J-1219
 API WELL NO. 47-091-0496
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS ✓ LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION ✓ STORAGE DEEP SHALLOW ✓
 LOCATION: ELEVATION 1560' WATERSHED Swamp Run
 DISTRICT Knottsville 6 COUNTY Taylor
 QUADRANGLE Thianton 638 122 SW7
 SURFACE OWNER Charles Drennan, Jr. ACREAGE 130
 OIL & GAS ROYALTY OWNER Charles Drennan, Jr. LEASE ACREAGE 130
 LEASE NO. WV 1904
 PROPOSED WORK: DRILL ✓ CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE ✓ PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

COUNTY NAME
 PERMIT

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Haverty ESTIMATED DEPTH 5850'
 WELL OPERATOR J+J Enterprises, Inc. DESIGNATED AGENT Richard Reddecliff
 ADDRESS P.O. Box 48 427 ADDRESS P.O. Box 48
Buckhannon, W. Va. 26201 Buckhannon, W. Va. 26201

MAY 28 1985



IV-35
(Rev 8-81)

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AUG 27 1985

State of West Virginia
Department of Mines
Oil and Gas Division

Date August 22, 1985
Operator's Well No. J-1219
Farm Drennan
API No. 47 - 091 - 0496

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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: 1560 Watershed Swamp Run
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 Charles Drennan, Jr.
ADDRESS Rt. # 3, Box 48, Grafton, WV 26354
MINERAL RIGHTS OWNER Same as surface
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK Donald Ellis
2604 Crab Apple Lane Fairmont, WV 26554
PERMIT ISSUED 5/22/85
DRILLING COMMENCED 6/13/85
DRILLING COMPLETED 6/20/85
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"	20	0	0 sks.
9 5/8			
8 5/8	1143.15	1143.15	275 sks.
7			
5 1/2			
4 1/2	5490.75	5490.75	375 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth 5555-5640 feet
Depth of completed well 5972 feet Rotary x / Cable Tools
Water strata depth: Fresh 60,625 feet; Salt 0 feet
Coal seam depths: 160-62,515-17 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation 4th Elk Pay zone depth 5334-57 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Combined Final open flow 492 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1450 psig (surface measurement) after 96 hours shut in
(If applicable due to multiple completion--)
Second producing formation 3rd Elk & Benson Pay zone depth 5033-37 / 4410-12 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

(Continue on reverse side)

SEP 09 1985

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

Benson: Perforations: 4410-12 (8 holes)
 Fracturing: 400 sks. 20/40 sand: 500 gal. acid: 591 Bbls. fluid.
 3rd. Elk: 5033-37 (16 holes)
 Fracturing: 350 sks. 20/40 sand: 500 gal. acid: 596 Bbls. fluid.
 4th Elk: Perforations: 5334-36 (8 holes) 5353-57 (8 holes)
 Fracturing: 300 sks. 20/40 sand: 530 Bbls. fluid.

BOTTOM HOLE PRESSURE Pf=Pwe $\frac{XGLS}{1}$

$$t=60 + (0.0075 \times 5491) + 459.7 = 561 \quad X = \frac{53.35 \times 561}{29929} = 0.000033 \quad Pf=1450 \times 2.72^{(0.000033)}$$

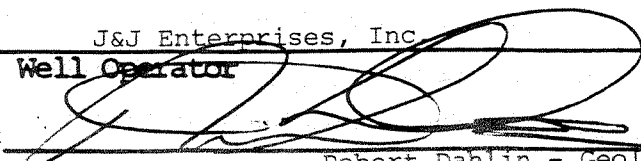
$$(0.670) (4884) (0.5) = 1450 \times 2.72^{0.1} = 1450 \times 1.1$$

Pf=1595 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	
Soil, shale & red rock			10	140	
Sand & shale			140	160	½" stream @ 60'
Coal			160	162	
Sand & shale			162	330	½" stream @ 625'
Sand & shale			330	515	
Coal			515	517	Gas ck @ 1607 No show
Sand & shale			517	705	
Sand & shale			705	1050	Gas ck @ 1732 No show
Sand, shale & red rock			1050	1140	
Sand & shale			1140	1345	Gas ck @ 2462 No show
Little Lime			1345	1365	
Sand			1365	1380	Gas ck @ 3253 No show
Big Lime & Injun			1380	1570	
Sand, shale & red rock			1570	2385	Gas ck @ 3411 No show
Sand & shale			2385	3140	
Sand & shale			3140	4410	Gas ck @ 4170 No show
Benson			4410	4412	
Sand & shale			4412	5033	Gas ck @ 4390 No show
3rd Elk			5033	5037	
Sand & shale			5037	5334	Gas ck @ 5430 No show
4th ELk			5334	5357	
Sand & shale			5357	5555	Gas ck @ 5749 2/10-½" w/water
Haverty			5555	5640	2,333 cu.ft.
Sand & shale			5640	5972	
				T.D.	Gas ck @ T.D. 4/10-½" w/water
					3,735 cu.ft.

(Attach separate sheets as necessary)

J&J Enterprises, Inc
 Well Operator
 By: 
 Robert Dahlin - Geologist
 Date: 8/22/85

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 all encountered in the drilling of a well."

RECEIVED

MAY 22 1985



1) Date: May 13, 1985
2) Operator's Well No. J 1219
3) API Well No. 47 State 091-0496 County Permit

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

APPLICATION FOR A WELL WORK PERMIT

OIL & GAS DIVISION DEPT. OF MINES

- WELL TYPE: Gas X
B (If "Gas", Production X / Underground storage / Deep / Shallow X)
5) LOCATION: Elevation: 1560' Watershed: Swamp Run
District: Knottsville County: Taylor Quadrangle: Thornton
6) WELL OPERATOR: J&J Enterprises, Inc. Address: PO Box 48, Buckhannon, WV 26201
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
11) GEOLOGICAL TARGET FORMATION: Haverty
12) Estimated depth of completed well: 5850' feet
13) Approximate trata 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

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, Top, Bottom). Rows include Conductor, Fresh water, Coal, Intermediate, Production, Tubing, Liners.

OFFICE USE ONLY DRILLING PERMIT

Permit number 47-091-0496

May 22 19 85 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. 8) Prior to the construction of roads, locations and pits for any permitted work.

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 May 22, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Plat, Casing, Fee. Values: 82, AIB, MN, MN, 1970

Margaret J. Hassel 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