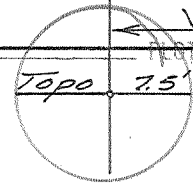


88 7/22/86

CODE _____ DATE _____

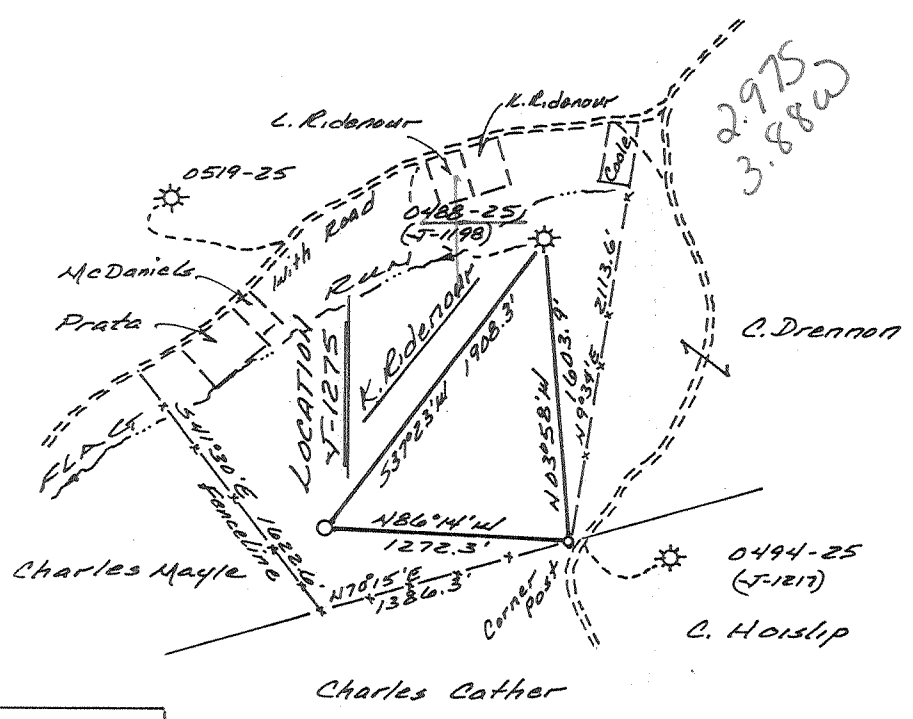
8,800' 3920' LATITUDE 39°17'30"



0.09S
1.05W

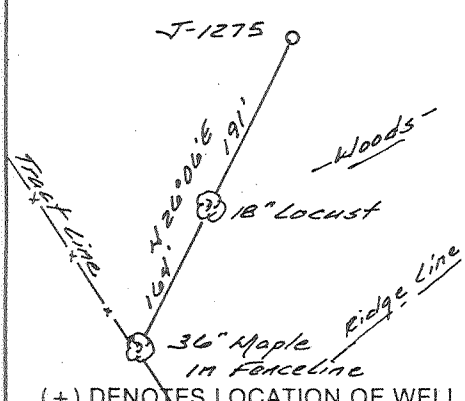
LONGITUDE 79°57'30"

NORTH



2.97S
3.88W

REFERENCE 1"=200'



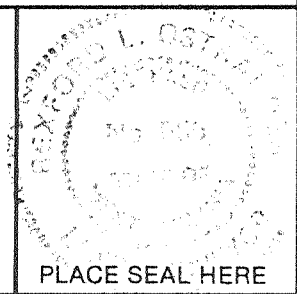
88-P

NOTE:

Location is 312'± from the west tract line.

FILE NO. 346.01
DRAWING NO. 86-9
SCALE 1"=1000'
MINIMUM DEGREE OF ACCURACY 1 in 200
PROVEN SOURCE OF ELEVATION Gaskwill T-1198
Elev. - 1510'

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



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE 24 April, 19 86
OPERATOR'S WELL NO. T-1275
API WELL NO. _____

47 - 091 - 0533
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
LOCATION: ELEVATION 1530' WATERSHED Flag Run
DISTRICT Knottsville COUNTY Taylor
QUADRANGLE Thornton 638 122 SW5

SURFACE OWNER Franklin H., Kenneth P. and Linda L. Riderour ACREAGE 98.5
OIL & GAS ROYALTY OWNER F.H., K.P. and L.L. Riderour 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 Haverly ESTIMATED DEPTH 5900'
WELL OPERATOR J&J ENTERPRISES, INC. DESIGNATED AGENT RICHARD REDDECLIFF
ADDRESS P.O. Box 48 427 ADDRESS P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

JUL 28 1986

COUNTY NAME PERMIT

6-6 unnamed

(0)



Date November 19, 1986
 Operator's
 Well No. J-1275
 Farm Ridenour
 API No. 47 - 091 - 0533

State of West Virginia
 Department of Mines
 Oil and Gas Division

7-35
 8-81
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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: 1530 Watershed Flag 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 Kenneth 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
 ADDRESS 2604 Crab Apple Lane Fairmont, WV 26554
 PERMIT ISSUED 7/22/86
 DRILLING COMMENCED 9/19/86
 DRILLING COMPLETED 9/27/86
 IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cord.			
13-10"	30	0	0 sks.
9 5/8			
8 5/8	1094.65	1094.65	240 sks.
7			
5 1/2			
4 1/2	5200.20	5200.20	750 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth feet
 Depth of completed well 5271 feet Rotary x / Cable Tools
 Water strata depth: Fresh 90,670 feet; Salt 0 feet
 Coal seam depths: 190 - 193 Is coal being mined in the area? No

OPEN FLOW DATA
 Producing formation Elks Pay zone depth 5111-13 feet
 Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
 Final open flow 712 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 hours shut in
 (If applicable due to multiple completion--)
 Second producing formation Benson & Riley Pay zone depth 4534-36 4186-88 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.

Elks: Perforations: 5111 - 13 (12 holes)
Fracturing: 300 sks. 20/40 sand: 500 gal. acid:

Benson: Perforations: 4534-36 (10 holes)
Fracturing: 525 sks. 20/40 sand: 500 gal. acid.

Riley: Perforations: 4111-88 (11 holes)
Fracturing: 400 sks. 20/40 sand:

BOTTOM HOLE PRESSURE P_{we}^{XGLS}

$$t=60 + (0.0075 \times 5200) + 459.7 = 558 \quad X = \frac{1}{53.35} \times 559 = \frac{1}{29807} = 0.000034 \quad Pf = 1475 \times 2.72$$
$$(0.000034) (0.680) (4612) (0.9) \quad 0.1 = 1475 \times 1.1$$
$$= 1475 \times 2.72$$

Pf= 1623 psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fr and salt water, coal, oil and
Ground Level			0	10	
Soil, shale & red rock			10	25	1/2" stream @ 90'
Sand & shale			25	190	1/2" stream @ 620'
Coal			190	193	
Sand, shale & red rock			193	360	Gas ck @ 1414 No show
Sand, shale & red rock			360	600	Gas ck @ 1793 No show
Sand & shale			600	740	
Sand, shale & red rock			740	1160	Gas ck @ 2522 No show
Sand			1160	1260	Gas ck @ 2871 No show
Little lime			1260	1310	
Shale			1310	1420	Gas ck @ 2997 No show
Big Lime			1420	1560	Gas ck @ 3377 4/10-1" w/water
Injun			1560	1610	21.06 cu.ft.
Red rock & shale			1610	1850	
Sand, shale & red rock			1850	2420	Gas ck @ 4105 2/10-1" w/water
Brown sand & shale			2420	4095	14.90 cu.ft.
Riley			4095	4115	
Sand & shale			4115	4186	Gas ck @ 4450 2/10-1" w/water
Benson			4186	4536	14.90 cu.ft.
Sand & shale			4536	5111	
Elks			5111	5113	Gas ck @ 4544 30/10-1" w/water
Sand & shale			5113	5271	57.73 cu. ft.
				T.D.	
					Gas ck @ 5271 2/10-1" w/water
					14.90 cu.ft.
					Gas ck @ collars 2/10-1" w/water
					14.90 cu.ft.

(Attach separate sheets as necessary)

J&J Enterprises, Inc.

Well Operator

By:

Date: 11/19/86

Robert Dahlin - Geologist

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."

FILE COPY

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JUL 22 1986



1) Date: 24 April, 19 86
 2) Operator's Well No. J-1275
 3) API Well No. 47 State 091-0533 County Permit

STATE OF WEST VIRGINIA
 DIVISION OF DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
 DEPARTMENT OF ENERGY
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: 1530' Watershed: Flag Run
 District: Knottsville 427 County: Taylor Quadrangle: Thornton
- 6) WELL OPERATOR J&J Enterprises, Inc. CODE: 24150 7) DESIGNATED AGENT Richard Reddecliff
 Address PO Box 48 Inc. Address PO Box 48
Buckhannon, WV 26201 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 437
- 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	11 3/4	H-40	42	X		30	0	0 sks	Kinds
Fresh water	85/8	ERW	23	X		1210	1210	to surface	as per rule
Coal	85/8	ERW	23	X		1210	1210	to surface	Sizes 15.05
Intermediate									
Production	4 1/2	J-55	10.5	X		5850	5850	550 sks	AS REQUIRED Depths set per rule
Tubing									15.01
Lin.									Perforations:
									Top Bottom

ch. Dan Ellis

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-091-0533 Date July 22 19 86

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 July 22, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <u>AS</u>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>2140</u>	WPCP: <u>AS</u>	S&E: <u>AS</u>	Other: <u> </u>
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John L. Johnston
 Director, Division of Oil and Gas
By Margaret J. Kasse File

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.