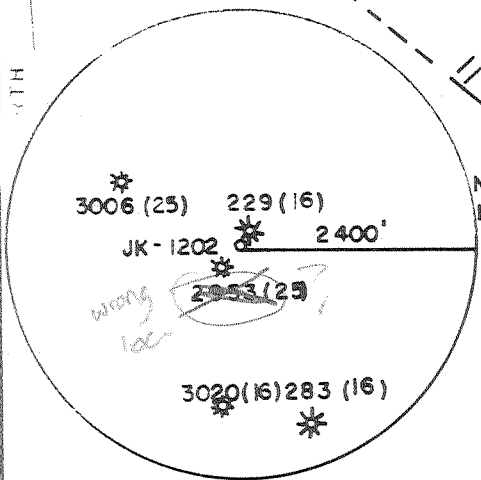
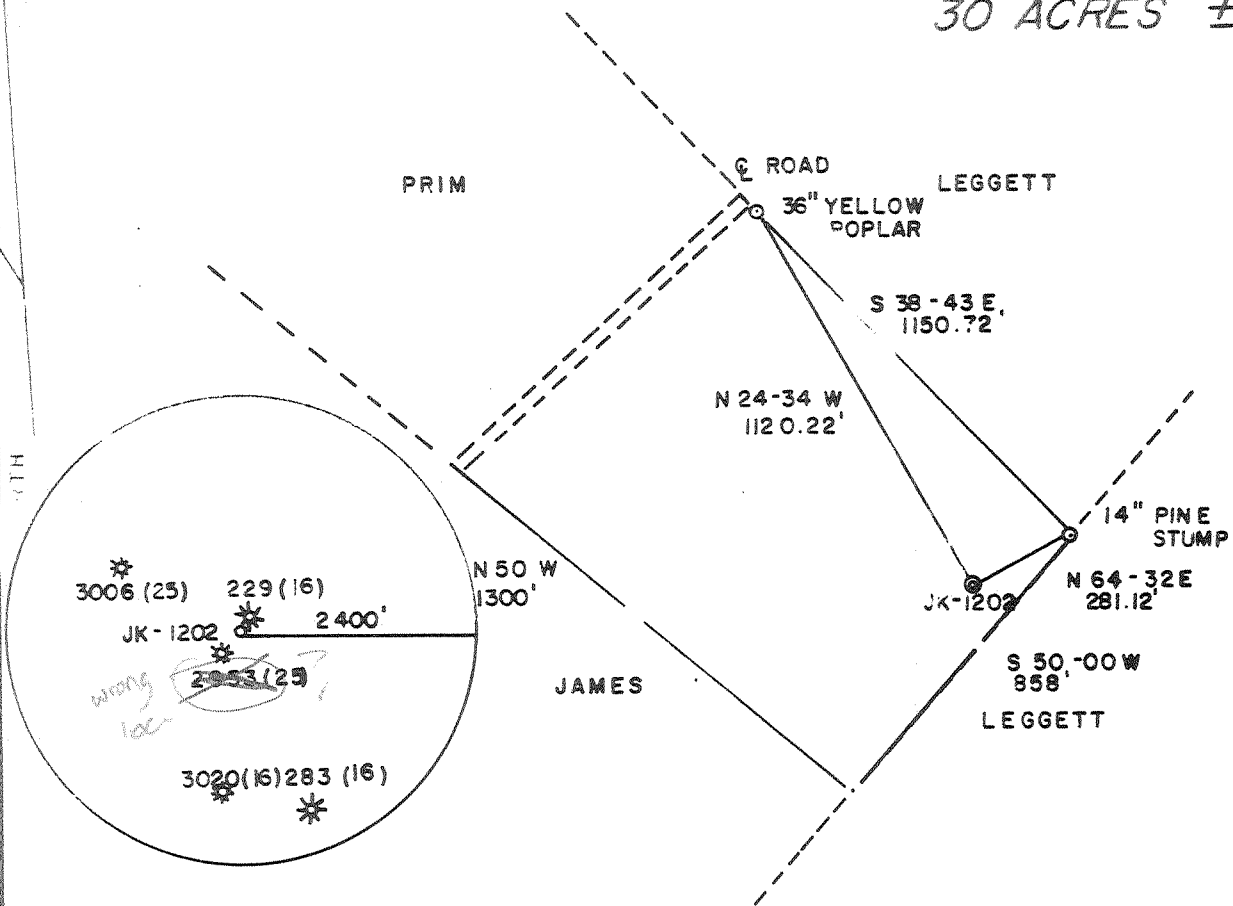


CODE _____ CARD _____ PLOT



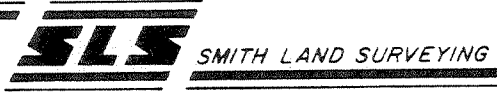
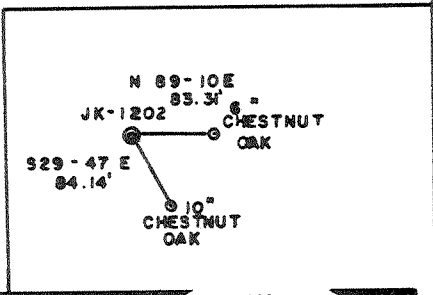
LEGGETT LEASE

30 ACRES ±



WELL NO. JK-1202

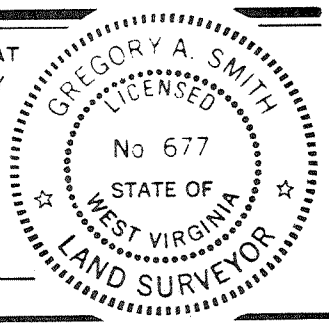
REFERENCES



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
DATE APRIL 26, 1985
OPERATORS WELL NO. JK-1202
API WELL NO. 47 - 017 - 3453
STATE COUNTY PERMIT

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.

L.L.S. 677 Gregory A. Smith



MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 18-16
PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEV. = 1248 SCALE 1" = 500'



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____ "GAS" PRODUCTION STORAGE _____ DEEP _____ SHALLOW

LOCATION: ELEVATION 1251' WATERSHED CABIN RUN
DISTRICT CENTRAL 1 COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5' 526
SURFACE OWNER RAYMOND LEGGETT ACREAGE 30.62 Holbrook 058
OIL & GAS ROYALTY OWNER ERNEST & ROGER LEGGETT LEASE ACREAGE 30.62 No 2

PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE PLUG OFF _____
OLD FORMATION _____ PERFORATE NEW FORMATION _____ PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION RHINE STREET
ESTIMATED DEPTH 5995'

WELL OPERATOR J & J ENTERPRISES, INC. 427 DESIGNATED AGENT RICHARD REDDECLIFF
ADDRESS P.O. BOX 48, BUCKHANNON, WV 26201 ADDRESS P.O. BOX 48, BUCKHANNON, WV 26201

LONGITUDE 80-05-00

COUNTY NAME PERMIT

575

V-35
ev 8-81)

RECEIVED
SEP 17 1985



DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date September 16, 1985
Operator's Well No. JK-1202
Farm Roger Leggett
API No. 47 - 017 3453

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: 1251 Watershed Cabin Run
District: Central County Doddridge Quadrangle Oxford 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 Raymond O. Leggett
ADDRESS Rt. # 1, West Union, WV 26456
MINERAL RIGHTS OWNER Same as surface
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK Mike
Underwood ADDRESS Rt. # 2, Box 114
Salem, WV 26426
PERMIT ISSUED 7.17.85
DRILLING COMMENCED 8/13/85
DRILLING COMPLETED 8/22/85
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"	253.60	253.60	130 sks.
9 5/8			
8 5/8	1912.30	1912.30	125 sks.
7			
5 1/2			
4 1/2	5650.85	5650.85	300 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Rhine Street Depth feet
Depth of completed well 5712 feet Rotary x / Cable Tools
Water strata depth: Fresh 135,860 feet; Salt 0 feet
Coal seam depths: 1090-95 Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Alexander Pay zone depth 5524-48 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Combined Final open flow 2,000 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1650 psig (surface measurement) after 96 hours shut in
(If applicable due to multiple completion--)
Second producing formation Benson & Balltown Pay zone depth 4206-4375
5229-31 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.

Balltown: Perforations: 4206-08 (4 holes) 4214-16 (4 holes) 4276-78 (3 holes) 4375 (2 holes)
 Fracturing: 400 sks. 20/40 sand: 750 gal. acid: 569 Bbls. fluid.
 Benson: Perforations: 5229-31 (8 holes)
 Fracturing: 400 sks. 20/40 sand: 500 gal. acid: 552 Bbls. fluid.
 Alexander: Perforations: 5524-28 (8 holes) 5544-48 (8 holes)
 Fracturing: 450 sks. 20/40 sand: 656 Bbls. fluid: foam frac.

BOTTOM HOLE PRESSURE $P_f = P_{we}^{XGLS}$
 $t = 60 + (0.0075 \times 5651) + 459.7 = 562$ $x = \frac{1}{53.35} \times 562 = \frac{1}{29987} = 0.000033$ $P_f = 1650 \times 2.72^{(0.000033)}$
 $(0.635)(4877)(0.9) = 1650 \times 2.72^{0.09} = 1650 \times 1.09$

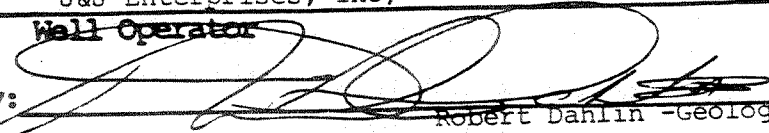
$P_f = 1799$ psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas.
Fill			0	15	
Sand, shale & red rock			15	70	Damp @ 135'
Shale & red rock			70	105	
Sand, shale & red rock			105	170	Damp @ 860'
Sand, shale & red rock			170	355	
Red rock & shale			355	555	Damp @ 955'
Sand & shale			555	660	
Red rock, sand & shale			660	850	Gas ck @ 2420 80/10-2" w/water 377,000 cu.ft.
Sand & shale			850	1000	
Sand & shale			1000	1090	
Coal			1090	1095	Gas ck @ 3537 50/10-1" w/water 53,251 cu.ft.
Red rock, sand & shale			1095	1505	
Sand & shale			1505	1900	
Sand & shale			1900	2224	Gas ck @ 3880' 25/10-2" w/water 37,654 cu.ft.
Big Lime			2224	2300	
Sand & shale			2300	2645	
Sand & shale			2645	4025	Gas ck @ 4219 130/10-1" w/water 120.19 cu.ft.
Sand & shale			4025	4206	
Balltown			4206	4278	
Sand & shale			4278	5229	Gas ck @ 4843 50/10-1" w.water 53,251 cu.ft.
Benson			5229	5231	
Sand & shale			5231	5524	
Alexander			5524	5548	Gas ck @ 5184 25/10-2" w/water 37,654 cu.ft.
Sand & shale			5548	5712	
				T.D.	
				E/KOTD.	Gas ck @ 5527 20/10-2" w/water 189,000 cu.ft.
					Gas ck @ 5712 110/10-1" w/water kk0.56 cu.ft.

Low nearby X-ray log
Top Dev @ 2724

(Attach separate sheets as necessary)

J&J Enterprises, Inc,
 Well Operator
 By: 
 Robert Dahlin - Geologist
 Date: 9/16/85

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 coal, encountered in the drilling of a well."



1) Date: May 31, 19 85
 2) Operator's Well No. JK-1202
 3) API Well No. 47 State West Virginia County Putnam Permit -017-3453

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND 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: 1251' Watershed: Cabin Run
 District: Central County: Doddridge Quadrangle: Oxford 7.5'
- 6) WELL OPERATOR J & J Enterprises, Inc. 427 7) DESIGNATED AGENT Richard Reddecliff
 Address P.O. Box 48 Address P.O. Box 48
Buckhannon, WV 26201 24150 Buckhannon, WV 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Mike Underwood Name S.W. Jack Drilling Co.
 Address Rt. 2 Box 114 Address P.O. Box 48
Salem, WV 26426 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, Rhine Street 437
- 12) Estimated depth of completed well, 5995' feet
- 13) Approximate strata depths: Fresh, 125' feet; salt, N/A feet.
- 14) Approximate coal seam depths: N/A Is coal being mined in the area? Yes _____ No X

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		
Conductor	11 3/4	H-40	42	X		<u>250'</u>	<u>250'</u>	<u>0 Sacks</u>
Fresh water	8 5/8	ERW	23	X		<u>1851'</u>	<u>1851'</u>	<u>To Surface</u>
Coal	8 5/8	ERW	23	X		<u>1851'</u>	<u>1851'</u>	<u>To Surface</u>
Intermediate								
Production	<u>4 1/2</u>	<u>J-55</u>	<u>10.5'</u>	<u>X</u>		<u>5995'</u>	<u>5945'</u>	<u>300 Sacks</u>
Tubing								<u>or as required by rule 15-01</u>
Liners								

DEPT. OF MINES
 DIVISION OF GAS AND MINES
 DEPT. OF MINES
 DEPT. OF MINES

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3453 Date July 17 19 85

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 17, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>82</u>	<u>✓</u>	<u>MU</u>	<u>MU</u>	<u>1983</u>

[Signature]

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