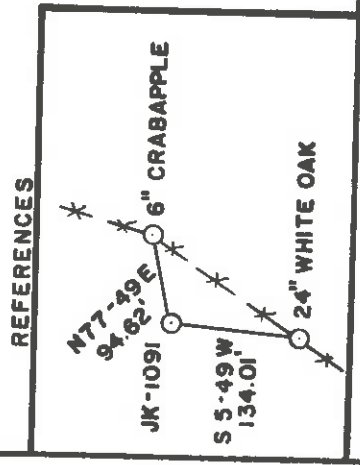
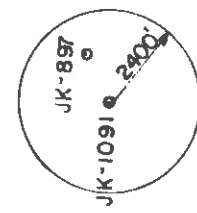
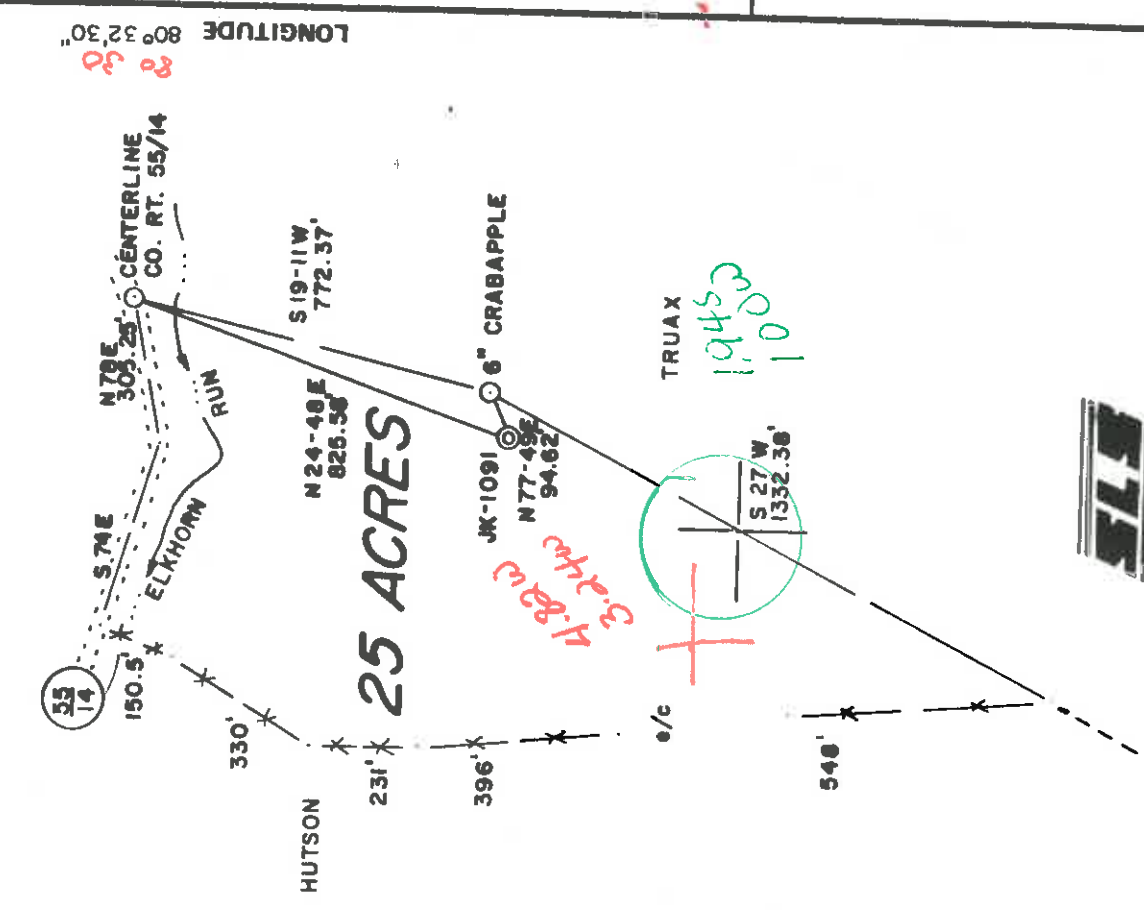


# VARNER LEASE

## WELL NO. JK-1091

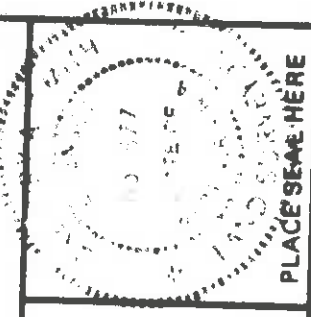
LATITUDE 39°22'30"  
39 25

LONGITUDE 80°32'30"



FILE NO. 16-22  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 400'  
MINIMUM DEGREE OF ACCURACY 1/200  
PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEV. 1557'

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) Gregory A. Smith  
R.P.E. \_\_\_\_\_ L.L.S. 677



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



DATE SEPTEMBER 26, 19 84  
OPERATOR'S WELL NO. JK-1091  
API WELL NO. \_\_\_\_\_  
STATE 47 COUNTY 017 PERMIT 3378

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_\_\_ GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
(IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW   
LOCATION: ELEVATION 1162' WATER SHED ELKHORN RUN  
DISTRICT McCLELLAN COUNTY DODDRIDGE  
QUADRANGLE SALEM 7.5' 6 Center point is ECU  
SURFACE OWNER CHARLES TRUAX, et. ux. ACRES 25.6  
OIL & GAS ROYALTY OWNER HAYWARD VARNER, et. al. LEASE ACREAGE 25

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 ALEXANDER ESTIMATED DEPTH 5800'  
WELL OPERATOR J.B.J ENTERPRISES, INC. DESIGNATED AGENT RICHARD REDDECLIFF  
ADDRESS P.O. BOX 48 BUCKHANNON, WV 26201  
BUCKHANNON, WV 26201

NOV 19 1984

6-6 Salem (102)



**WEST VIRGINIA**  
JAN 17 1985  
OIL & GAS DIVISION  
DEPT. OF MINES

Date January 14, 1985  
Operator's Well No. JK-1091  
Farm Haywood Varnes  
API No. 47-017 - 3378

Department of Mines  
Oil and Gas Division  
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: 1162 Watershed Elkhorn Run  
District: McClellan County Doddridge Quadrangle Salem 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 Charles T. Truax

ADDRESS 237 W. Main St., Salem, WV 26426

MINERAL RIGHTS OWNER Hayward Varner C/O Clarence

ADDRESS Mutschelknaus, Salem, WV 26426

OIL AND GAS INSPECTOR FOR THIS WORK Mike

Underwood ADDRESS Rt.2, Box 114, Salem, WV 26426

PERMIT ISSUED 11/9/84

DRILLING COMMENCED 12/14/84

DRILLING COMPLETED 12/20/84

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	1438.90	1438.90	320 sks.
7			
5 1/2			
4 1/2	5414.30	5414.30	205 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander

Depth of completed well 5818 feet Rotary x / Cable Tools            feet

Water strata depth: Fresh 1290 feet; Salt 0 feet

Coal seam depths: 396-400, 950-55 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 5254-59 feet

Gas: Initial open flow            Mcf/d Oil: Initial open flow            Bbl/d

Final open flow 202 Mcf/d Final open flow            Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1500 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 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

JAN 28 1985 (Continue on reverse side)

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


Benson: Perforations: 5254-59 (12 holes)  
Fracturing: 400 sks. 20/40 sand: 529 Bbls. Fluid: Foam frac.

BOTTOM HOLE PRESSURE PF=Pwe XGIS  
 $t=60 + (0.0075 \times 5414) + 459.7 = 560$      $X=53.35 \times 560 = 29876$      $=0.000033$     PF=1500 x 2.72 (0.000033)  
 $(0.677) (5254) (0.9) = 1500 \times 2.72 \times 0.1 = 1500 \times 1.1$   
 PF=1650 psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
Top Soil			0	10	
Sand & red rock			10	65	1/2" stream @ 1290'
White sand			65	80	
Sandy shale & red rock			80	230	Gas ck @ 2287 No show
Sandy shale & red rock			230	396	
Coal			396	400	
Sandy shale & sand			400	950	Gas ck @ 2814 15/10-2" w/water 603,000 cu.ft.
Coal			950	955	
Sandy shale			955	1610	
Sand & sandy shale			1610	2185	Gas ck @ 3120 8/10-2" w/merc. 440,000 cu.ft.
Lime			2185	2260	
Sand & sandy shale			2260	3870	
Sand & sandy shale			3870	4890	Gas ck @ 3620 6/10-2" w/Merc 381,000 cu.ft.
Sandy shale			4890	5254	
Sand & sandy shale			5254	5259	Gas ck @ 4390 4/10-2" w/merc. 311,000 cu.ft.
<u>Benson</u>			5259	5385	
Sand & sandy shale			5385	5818	Gas ck @ 4981 4/10-2" w/merc. 311,000 cu.ft.
Sandy shale			5818	T.D.	

(Attach separate sheets as necessary)

J&J Enterprises, Inc.  
 Well Operator  
 BY:   
 Robert Dahlin-Geologist  
 Date: 1/14/85

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  
 well information in the log."



1) Date: October 15, 19 84  
 2) Operator's Well No. JK-1091  
 3) API Well No. 47 - 017 - 3378  
 State County Permit

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 APPLICATION FOR A WELL WORK PERMIT

4) WELL TYPE: A Oil  Gas   
 B (If "Gas", Production   
 5) LOCATION: Elevation: 1162' Undergrnd storage  Deep  Shallow   
 District: McClellan  
 6) WELL OPERATOR J & J Enterprises, Inc. Quadrangle: Salem 7.5'  
 Address P.O. Box 48 2410 P.O. Box 48  
Buckhannon, WV 26201  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name Mike Underwood  
 Address Rt. 2 Box 114  
Salem, WV 26426  
 10) PROPOSED WELL WORK: Drill  / Drill deeper  / Redrill  / Stimulate   
 Plug off old formation  / Perforate new formation  / Other physical change in well (specify) OCT 23 1984  
 11) GEOLOGICAL TARGET FORMATION, Alexander  
 12) Estimated depth of completed well, 5800' feet  
 13) Approximate trata depths: Fresh, 150' feet; salt, N/A feet.  
 14) Approximate coal seam depths: N/A Is coal being mined in the area? Yes  No

CASING OR TUBING TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cable feet)	PACKERS
	Size	Grade	Weight per ft.	For drilling	Left in well		
Conductor	11 3/4	H-40	42	X	30'	0 Sacks	
Fresh water	8 5/8 ERW		23	X	1262'	To Surface	Kind <u>NEAT</u>
Coal	8 5/8 ERW		23	X	1262'	To Surface	
Intermediate							
Production Tubing	4 1/2	J-55	10.5	X	5800'	300 Sacks	Depth set <u>or as required by rule 15-01</u>
Liners							Perforations: Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-017-3378

Date November 9, 19 84

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 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 November 9, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fec
<u>82</u>	<u>75</u>	<u>MUMN</u>	<u>1842</u>	

*Margaret J. Lane*  
 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

