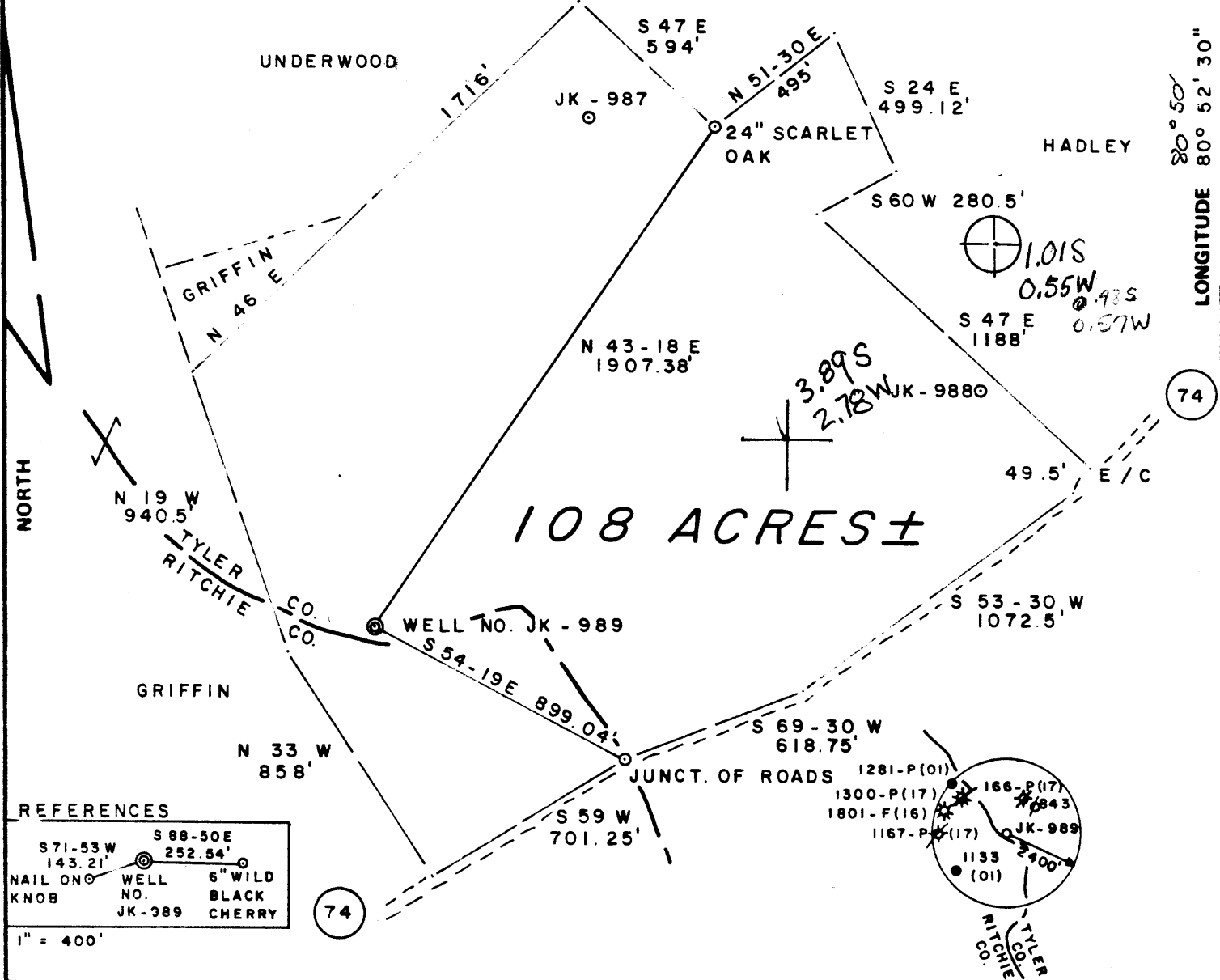


# GRIFFIN LEASE WELL NO. 3925'

## JK-989



### 108 ACRES ±

#### REFERENCES

S 71-53 W 143.21'	S 88-50 E 252.54'	6" WILD BLACK CHERRY
NAIL ON KNOB	WELL NO. JK-989	

1" = 400'

FILE NO. 13 - 36  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 / 200  
 PROVEN SOURCE OF ELEVATION BM ELEV. 951'

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

PLACE SEAL HERE

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



DATE MAY 10, 19 84  
 OPERATOR'S WELL NO. JK-989  
 API WELL NO. 47-095-1081  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1201.00' WATERSHED \_\_\_ STRAIGHT RUN \_\_\_  
 DISTRICT CENTERVILLE COUNTY TYLER  
 QUADRANGLE PENNSBORO 7.5 West Union 133  
 SURFACE OWNER EDITH H. GRIFFIN ACREAGE 108  
 OIL & GAS ROYALTY OWNER EDITH H. GRIFFIN LEASE ACREAGE 108  
 LEASE NO. JJ-1478  
 PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

JUN 18 1984

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5300'  
 WELL OPERATOR J & J ENTERPRISES, INC. DESIGNATED AGENT RICHARD M. REDDECLIFF  
 ADDRESS P. O. BOX 48 ADDRESS P. O. BOX 48  
BUCKHANNON, WV 26201 BUCKHANNON, WV 26201



**RECEIVED**  
AUG 29 1984

OIL & GAS DIVISION  
**DEPT. OF MINES**

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date August 27, 1984  
Operator's  
Well No. JK-989  
Farm Edith Griffin  
API No. 47-095-1081

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: 1204 Watershed Straight Run  
District: Centerville County Tyler Quadrangle Pennsboro 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 Edith Hess Griffin

ADDRESS P.O. Box 3025, Parkersburg, WV 26101

MINERAL RIGHTS OWNER Same as surface

ADDRESS \_\_\_\_\_

OIL AND GAS INSPECTOR FOR THIS WORK Robert

Lowther ADDRESS Gen. Del., Middlebourne, WV  
26149

PERMIT ISSUED 6/12/84

DRILLING COMMENCED 8/4/84

DRILLING COMPLETED 8/10/84

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	1312.10	1312.10	325 sks.
7			
5 1/2			
4 1/2	5202.70	5202.70	225 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5345-5410 feet

Depth of completed well 5995 feet Rotary x / Cable Tools \_\_\_\_\_

Water strata depth: Fresh 95,1445 feet; Salt 0 feet

Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 5099-5101 feet

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

Combined Final open flow 600 Mcf/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1800 psig (surface measurement) after 96 hours shut in  
(If applicable due to multiple completion--)

Second producing formation Riley Pay zone depth 4694-4740 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.

Benson: Perforations: 5099-5101 (8 holes)

Fracturing: 300 sks. 20/40 sand: 520 Bbls. fluid.

Riley: Perforations: 4694-95 (2 holes) 4709-13 (6 holes) 4718-19 (3 holes) 4727-29 (3 holes)  
4738-40 (3 holes)

Fracturing: 300 sks. 20/40 sand: 500 gal. acid: 510 Bbls. fluid.

BOTTOM HOLE PRESSURE  $P_f = P_{we}^{XGLS}$

$$t = 60 + (0.0075 \times 5203) + 459.7 = 559 \quad X = \frac{1}{53.35} \times 559 = \frac{1}{29823} = 0.000034 \quad P_f = 1800 \times 2.72^{(0.000034)}$$

$$(0.735)(4898)(0.9) = 1800 \times 2.72^{0.11} = 1800 \times 1.1$$

$P_f = 1980$  psi

WELL LOG

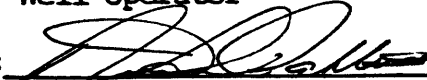
FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand			0	50	
Sand & shale			50	300	
Sand & shale			300	1350	1/2" stream @ 95'
1st Salt sand			1350	1520	
Sandy shale			1520	1585	Wet @ 1445'
2nd salt sand			1585	1730	
Sand & shale			1730	1870	Gas ck @ 3058 10/10-2" w/water 133,000 cu.ft.
3rd salt sand			1870	1930	
Shale			1930	1975	
Maxton sand			1975	2000	Gas ck @ 3677 10/10-2" w/water 133,000 cu.ft.
Sandy shale			2000	2038	
Little lime			2038	2055	
Shale			2055	2075	Gas ck @ 4599 8/10-2" w/water 119,000 cu.ft.
Big Lime			2075	2150	
Big Injun			2150	2240	
Shale			2240	2260	Gas ck @ 4999 24/10-2" w/water 207,000 cu.ft.
Squaw			2260	2280	
Sandy shale			2280	2450	
Weir			2450	2560	Gas ck @ 5307 12/10-2" w/water 152,000 cu.ft.
Sand & shale			2560	3560	
Warren			3560	3610	
Sand & shale			3610	4694	Gas ck @ collars 12/10-2" w/water 152,000 cu.ft.
Riley			4694	4740	
Sandy shale			4740	5099	
Benson			5099	5101	
Sandy shale			5101	5345	
Alexander			5345	5410	
Sandy shale			5410	5995	
				TD. Rhinstett @ TD.	5975 26 33 95

5995  
1204  
4791

(Attach separate sheets as necessary)

J&J Enterprises, Inc.

Well Operator

By: 

Robert Dahlin-Geologist

Date: 8/27/84

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 23, 19 84  
 2) Operator's Well No. JK-989  
 3) API Well No. 47 - 095 - 1081  
 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 X /  
 B (If "Gas", Production X / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow X)
- 5) LOCATION: Elevation: 1004' Watershed: STRAIGHT RUN (LKHANN)  
 District: CENTERVILLE County: TYLER Quadrangle: PENNSBORO 7.5'
- 6) WELL OPERATOR J & J ENTERPRISES, INC.  
 Address P.O. BOX 48  
BUCKHANNON, WV 26201
- 7) DESIGNATED AGENT RICHARD M. REDDECLIFF  
 Address P.O. BOX 48  
BUCKHANNON, WV 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name ROBERT A. LOWTHER  
 Address GENERAL DELIVERY  
MIDDLEBOURNE, WV 26149
- 9) DRILLING CONTRACTOR:  
 Name S.W. JACK DRILLING CO.  
 Address P.O. 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, ALEXANDER
- 12) Estimated depth of completed well, 5300' feet
- 13) Approximate strata depths: Fresh, 80' feet; salt, N/A feet.
- 14) Approximate coal seam depths: 650'-651' 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	Left in well		
Conductor	11 3/4	H-40	42	X		30	0	0 Sacks	Kinds: <u>BEAT</u> Sizes: _____ Depths set: _____ Perforations: _____ Top _____ Bottom _____
Fresh water	8 5/8	ERW	23	X		1104'	1104'	To surface	
Coal	8 5/8	ERW	23	X		1104'	1104'	To surface	
Intermediate									
Production	4 1/2	J-55	10.5	X		5200'	5200'	225 Sacks	
Tubing								or as required by Rule 15-03	
Liners									

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-095-1081 Date June 12, 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 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 June 12, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BB</u>	Agent: <u>MW</u>	Plat: <u>MW</u>	Casing: <u>MW</u>	Fee: <u>1559</u>
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[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