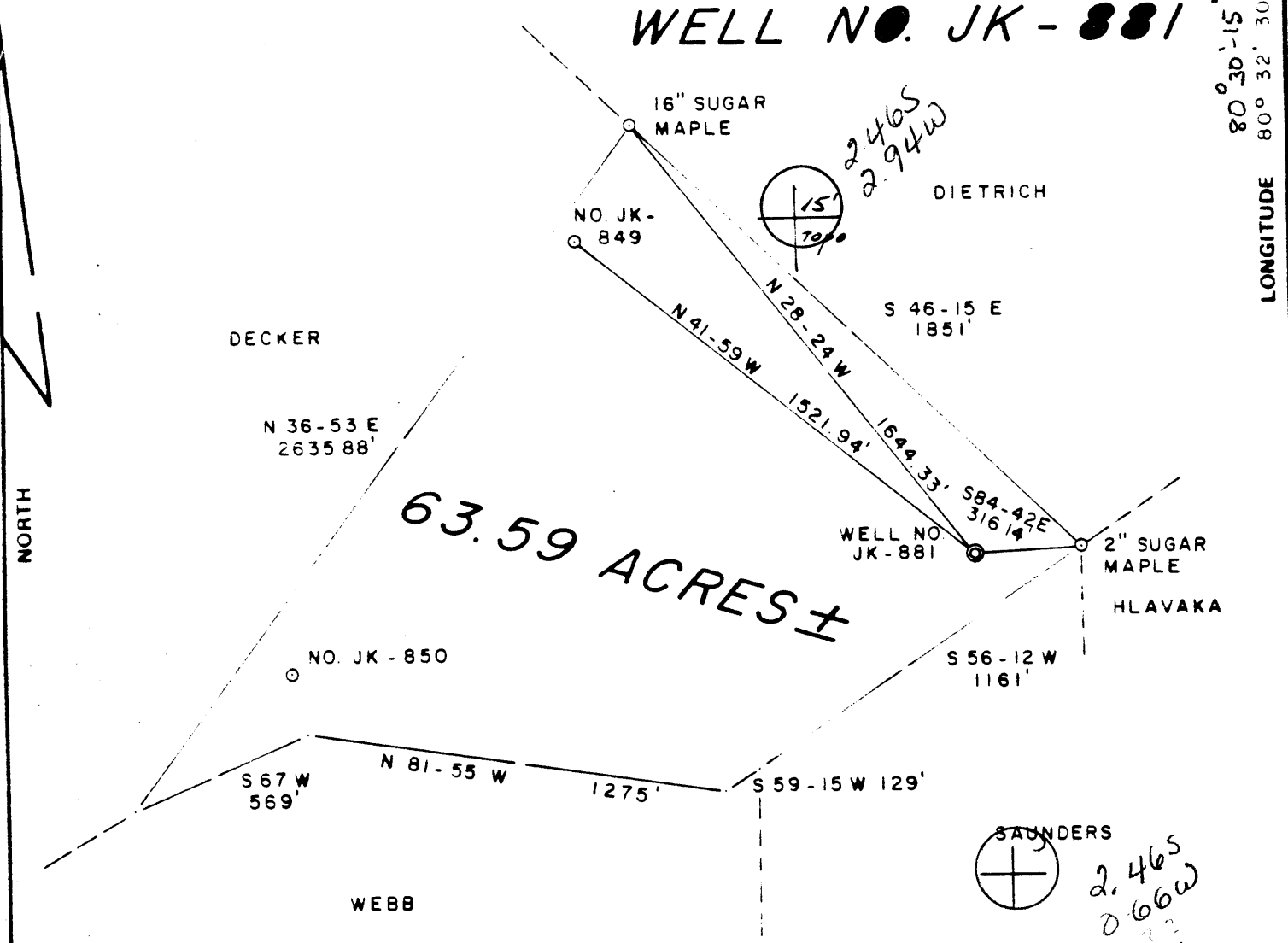


# MUTSCHELKNAUS LEASE

## WELL NO. JK-881



NOTE: NO PERMITTED WELLS SHOWN WITHIN 2400'

FILE NO. 13-8  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROVEN SOURCE OF ELEVATION JUNCT. OF ROADS  
 ELEV. 912'

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 FEB. 6, 19 84  
 OPERATOR'S WELL NO. JK-881  
 API WELL NO. 47-017-3311  
 STATE WEST VIRGINIA COUNTY DODDRIDGE PERMIT

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 1237' WATER SHED PIKE FORK  
 DISTRICT Mc CLELLAN 5 COUNTY DODDRIDGE  
 QUADRANGLE FOLSOM 7.5' 349 Centerpoint 15' EC 6  
 SURFACE OWNER Charles F. Michels/Howard Spurlock ACREAGE 63.59  
 OIL & GAS ROYALTY OWNER CLARENCE W. MUTSCHELKNAUS, et al LEASE ACREAGE 63.59  
 LEASE NO. JK-29  
 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 5450'  
 WELL OPERATOR J & J ENTERPRISES, INC. DESIGNATED AGENT RICHARD M. REDDECLIFF  
 ADDRESS P.O. BOX 48 427 ADDRESS P.O. BOX 48  
BUCKHANNON, WV 26201 BUCKHANNON, WV 26201

APR 23 1984

6-6 Smithton-Flint-Sedalia (99)



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

Perforated 7-12-84 Perfco WireLine Co.

Alexander	5583-5590	Avg. Press. 3100 psig	Avg. Rate 20 bpm
Benson	5211-5306	Avg. Press. 3100 psig	Avg. Rate 26 bpm
Balltown	4249-4254	Avg. Press. 2900 psig	Avg. Rate 20 bpm

Fractured 7-12-84 Halliburton Services - Waterfrac with nitrogen assist

1st stage	25000 lbs.	20/40 sand
2nd stage	35000 lbs.	20/40 sand
3rd stage	17500 lbs.	20/40 sand

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 & Shale			0	110	
Sand			110	170	
Shale			170	200	Fresh water @ 200'
Sand & Shale			200	230	
Shale & Red Rock			230	635	
Sand			635	690	
Shale			690	790	
Sand			790	815	
Shale			815	1040	
Sandy Shale			1040	1130	
Red Rock & Shale			1130	1250	
Sandy Shale			1250	1380	
Red Rock			1380	1410	
Black Shale			1410	1475	
Sandy Shale			1475	1680	
Sand			1680	1700	
Sandy Shale			1700	2220	
Big Lime			2220	2274	
Big Injun			2274	2362	
Berea			2728	2754	
Gantz			2858	2866	
Gordon			2948	2970	
4th Sand			3004	3056	
5th Sand			3072	3091	
Warren			3621	3648	
Speechley			3668	3856	
Balltown			4236	4254	
Bradford			4582	4782	
Upper Benson			5202	5230	
Benson			5299	5305	
Alexander			5566	5590	
Shale			5590	5995	TOTAL DEPTH

(Attach separate sheets as necessary)

KEPCO, INC.

Well Operator

By: David Blanton Chief Geologist

Date: October 4, 1984

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: March 13, 19 84  
 2) Operator's Well No. JK-881  
 3) API Well No. 47 - 017 - 3311  
 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  / Underground storage  / Deep  / Shallow  )
- 5) LOCATION: Elevation: 1237 Watershed: Pike Fork  
 District: McClellan County: Doddridge Quadrangle: Folsom 7.5
- 6) WELL OPERATOR J&J Enterprises, Inc. 7) DESIGNATED AGENT Richard Reddecliff  
 Address P.O. Box 48 Address P.O. Box 48  
Buckhannon, WV 26201 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  / Drill deeper  / Redrill  / Stimulate   
 Plug off old formation  / Perforate new formation   
 Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Alexander  
 12) Estimated depth of completed well, 5450 feet  
 13) Approximate strata depths: Fresh, ~~XXXXXXX~~ 250 feet; salt, 0 feet.  
 14) Approximate coal seam depths: 475 Is coal being mined in the area? Yes  / No
- 15) CASING AND TUBING PROGRAM

**RECEIVED**  
 MAR 27 1984

OIL & GAS DIVISION  
 DEPT. OF MINES

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	113/4	H-40	42	x		30	0	0 sks.	Kinds
Fresh water	85/8	ERW	23	x		1300	1300	To surface	<b>NEAT</b>
Coal	85/8	ERW	23	x		1300	1300	To surface	
Intermediate									
Production	4 1/2	J-55	10.5	x		5400	5400	325 sks.	Depths set
Tubing									<b>OR AS REQ BY RULE 15.01</b>
Liners									
									Top Bottom

OFFICE USE ONLY  
**DRILLING PERMIT**

Permit number 47-017-3311 Date April 12, 1984

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 April 12, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent: <u>LP</u>	Plat: <u>MH</u>	Casing: <u>MH</u>	Fee: <u>1473</u>
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Margaret J. Dasse  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.