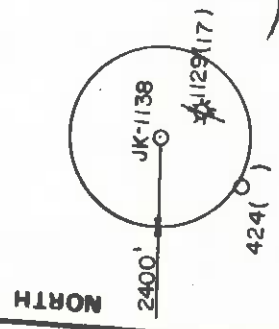


G.F. WILLIAMSON LEASE
WELL NO. JK-1138



REFERENCES
 12" MOCKERNUT
 HICKORY
 14" MOCKERNUT
 HICKORY
 N33-24 E 139.76'
 N62-21 E 1622.00'
 JK-1138
 1 inch = 200 feet

FILE NO. 16-48
 DRAWING NO.
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION ROAD INTERSECTION 1040'

SMITH LAND SURVEYING
 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)



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 1108' WATER SHED LONG RUN DISTRICT CENTRAL QUADRANGLE PENNSBORO 7.5' COUNTY DODDRIDGE
 SURFACE OWNER GLEN L. KEENER et al. OIL & GAS ROYALTY OWNER W.J. WILLIAMSON et al.
 LEASE NO. JJ-1671 LEASE ACREAGE 166

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
 WELL OPERATOR J & J ENTERPRISES ESTIMATED DEPTH 5600'
 ADDRESS P.O. BOX 48 DESIGNATED AGENT RICHARD REDDECLIFF
 BUCKHANNON, WV 26201 ADDRESS P.O. BOX 48 BUCKHANNON, WV 26201

6-4 Stanley (90)

PLACE SEAL HERE

DATE NOVEMBER 19 19 84
 OPERATOR'S WELL NO. JK-1138
 API WELL NO. 47-017

STATE COUNTY PERMIT
 47-017-3400

FEB 04 1985

RECEIVED

OCT 17 1985

DIVISION OF OIL & GAS
DEPT. OF ENERGYDate October 15, 1985

Operator's

Well No. JK-1138

State of West Virginia

Department of Mines

Farm Williams

Oil and Gas Division

API No. 47-017-3400

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGEWELL TYPE: Oil / Gas x / Liquid Injection / Waste Disposal /
(If "Gas," Production x / Underground Storage / Deep / Shallow x /)LOCATION: Elevation: 1108 Watershed Long Run
District: Central County Doddridge Quadrangle Pennsboro 7.5COMPANY J&J Enterprises, Inc.ADDRESS P.O. Box 48, Buckhannon, WV 26201DESIGNATED AGENT Richard ReddecliffADDRESS P.O. Box 48, Buckhannon, WV 26201SURFACE OWNER Glen L. KeenerADDRESS Box 132 APO, San Francisco, Cal. 96343MINERAL RIGHTS OWNER W.J. WilliamsonADDRESS OIL AND GAS INSPECTOR FOR THIS WORK MikeUnderwood ADDRESS Rt. # 2, Box 114Salem, WV 26426PERMIT ISSUED 1/29/85DRILLING COMMENCED 9/16/85DRILLING COMPLETED 9/22/85IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
CNGEOLOGICAL TARGET FORMATION AlexanderDepth of completed well 5998 feet Rotary x / Cable Tools feet
Water strata depth: Fresh 60,1235 feet; Salt 0 feet
Coal seam depths: NoneIs coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 5888-98 feetGas: Initial open flow Mcf/d Oil: Initial open flow Bbl/dCombined Final open flow 823 Mcf/d Final open flow Bbl/dTime of open flow between initial and final tests 4 hoursStatic rock pressure 1350 psig (surface measurement) after 96 hours shut in

(If applicable due to multiple completion--)

Second producing formation Alexander, Benson & Riley4568-804946-66Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/dFinal open flow Mcf/d Oil: Final open flow Bbl/dTime of open flow between initial and final tests hoursStatic rock pressure psig (surface measurement) after hours shut in

OCT 28 1985

(Continue on reverse side)

Casing & Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
13-10"	205.60	205.60	100 sks.
9 5/8			
8 5/8	1664.35	1664.35	125 sks.
7			
5 1/2			
4 1/2	5970.74	5970.74	410 sks.
3			
2			
Liners used			

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

Riley: Perforations: 4566-68 (10 holes) 4578-80 (8 holes) fluid. acid: 527 Bbls. fluid.
 Fracturing: 400 sks. 20/40 sand: 500 gal. acid: 433 Bbls. fluid.
 Benson: Perforations: 4946-66 (8 holes) fluid. acid: 527 Bbls. fluid.
 Fracturing: 350 sks. 20/40 sand: 500 gal. acid: 433 Bbls. fluid.
 Alexander: Perforations: 5260-63 (10 holes) 5272-74 (4 holes) fluid. acid: 562 Bbls. fluid.
 Fracturing: 400 sks. 20/40 sand: 500 gal. acid: 562 Bbls. fluid.
 Devonian Shale: Perforations: 5888-98 (10 holes) fluid. acid: 562 Bbls. fluid.
 Fracturing: 300 sks. 20/40 sand: 576 Bbls. fluid.

clk
 BOTTOM HOLE PRESSURE Pf=Pwe XGIS $\frac{1}{30089} = 0.000033$ Pf=1350 x 2.72 (0.000033)
 $t=60 + (0.0075 \times 5971) + 458.7 = 564$ X = $\frac{1}{53.35 \times 564} = 30089 = 0.000033$ Pf=1350 x 2.72 (0.000033)
 (0.62) (5232) (0.9) = 1350 x 2.72 $0.1 = 1350 \times 1$ WELL LOG
 Pf=1485 psi

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
Clay			0	3	Including indication of all fresh and salt water, coal, oil and gas
Sandy shale & sand			3	50	Gas ck @ 2129 2/10-1" w/water
Red rock, shale & sandy shale			50	200	103,000 cu.ft.
Sand & sandy shale			200	230	Gas ck @ 2448 1/10-1" w/water
Red rock & sand.			230	470	10.53 cu.ft.
Red rock & shale			470	550	Gas ck @ 3557 2/10-1" w/water
Sandy shale & sand			550	725	103,000 cu.ft.
Shale & red rock			725	885	Gas ck @ 4637 4/10-1" w/water
Sand & sandy shale			885	950	188,000 cu.ft.
White sand			950	1175	Gas ck @ 4988 6/10-1" w/water
Sandy shale & gray sand			1175	1195	231,000 cu.ft.
Sandy shale			1195	1265	Gas ck @ 5303 5/10-1" w/water
Sandy shale & gray sand			1265	1490	211,000 cu.ft.
Sandy shale & red rock			1490	1620	Gas ck 10 jts. down
Sand & sandy shale			1620	1700	3/10-1" w/water
Little lime			1700	1954	163,000 cu.ft.
Shale			1954	1960	Gas ck @ Drill collars 4/10-1" w/w
Big Lime			1960	1975	188,000 cu.ft.
Injun. <i>clk@TRP</i>			1975	2047	
Sandy shale			2047	2115	
Sand & sandy shale			2115	2670	
Sandy shale			2670	3025	
Sandy shale			3025	4566	
Riley			4566	4946	
Sandy shale			4580	4966	
Benson			4946	5260	
Sandy shale			4966	5274	
Alexander			5260	5884	
Sandy shale			5274	5898	
Devonian Shale			5884	5998	
Sandy shale			5898		

(Attach separate sheets as necessary)

J&J Enterprises, Inc.
 Well Operator
 By: *[Signature]*
 Robert Daklin - Geologist
 Date: 10/15/85

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 sand encountered in the drilling of a well."



1) Date: November 29, 19 94
 2) Operator's Well No. JK-1138
 3) API Well No. 47 - 017 - 3400
 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 _____
 Elevation: 1108
 District: Central
 5) LOCATION: _____
 Undergrnd storage _____ Deep _____ Shallow _____
 Watershed: Long Run
 County: Doddridge
 6) WELL OPERATOR J & J Enterprises, Inc.
 Address P.O. Box 48
Buckhannon, WV 26201
 7) DESIGNATED AGENT Richard Reddecliff
 Address 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
 9) DRILLING CONTRACTOR:
 Name S.W. Jack Drilling
 Address P.O. Box 48
Buckhannon, WV 26201
 10) PROPOSED WELL WORK: Drill deeper _____ Drill _____
 Plug off old formation _____ Perforate new formation _____
 Stimulate

11) GEOLOGICAL TARGET FORMATION, Alexander
 Other physical change in well (specify) _____
 12) Estimated depth of completed well, 5600' feet.
 13) Approximate trata depths: Fresh, 175' 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 (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.			
Conductor	1 3/4	H-40	42	For drilling <u>20 500 3 000</u> in well		
Fresh water	8 5/8	FRW	23	1508	To Surface	
Coal	8 5/8	FRW	23	1508	To Surface	
Intermediate						
Production	4 1/2	J-55	10.5	5600	300 Sacks	
Tubing					or as required by rule 15-01	
Liners						

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3400

January 29, 1985
 Date

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 January 29, 1987
 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>82</u>	<u>MW</u>	<u>MW</u>	<u>MW</u>	<u>1896</u>

Margaret J. Khan
 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

