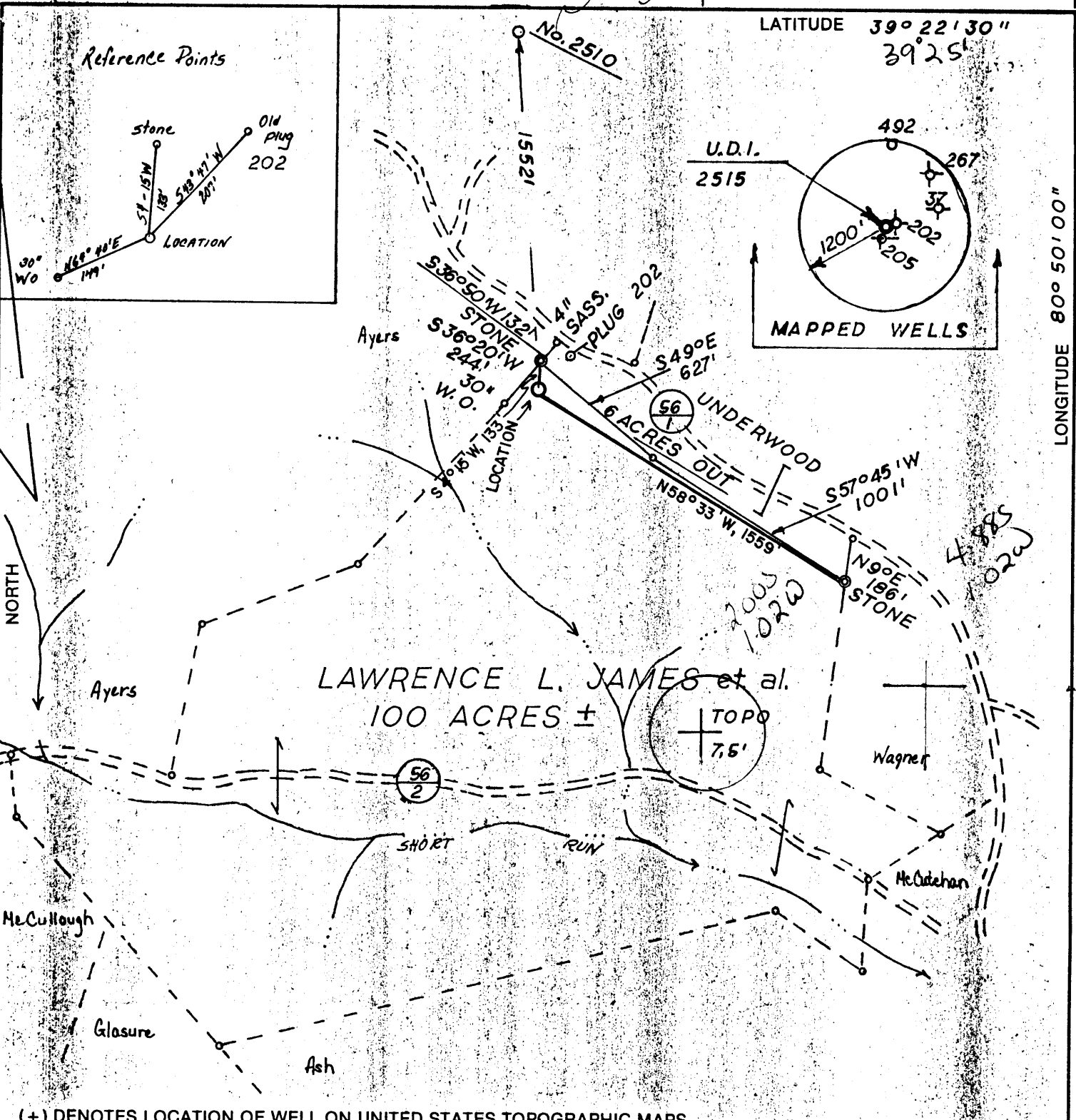


5430'

LATITUDE 39° 22' 30"
39° 25'



100105008 EDUJIGNOT
10401

LAWRENCE L. JAMES et al.
100 ACRES ±

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. U.D.I. 4-56
 DRAWING NO. 86-27
 SCALE: 1" = 600'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION NOB 3000' S W
OF LOC. = 1088

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 ENERGY.
 (SIGNED) Thomas F. Weaver, Jr.
 R.P.E. _____ L.L.S. 410

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE DEC. 17, 1986
 OPERATOR'S WELL NO. 2515
 API WELL NO. 47-095-1170
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1052 WATERSHED SHORT RUN
 DISTRICT CENTERVILLE 1 COUNTY TYLER
 QUADRANGLE WEST UNION 7.5' 671 133 05
 SURFACE OWNER LAWRENCE L. JAMES et al. ACREAGE 100
 OIL & GAS ROYALTY OWNER LAWRENCE L. JAMES et al. LEASE ACREAGE 100
 LEASE NO. J J-2153
 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) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5400'
 WELL OPERATOR UNION DRILLING, INC. DESIGNATED AGENT JOSEPH C. PETTEY
 ADDRESS R O, DRAWER 40 493 ADDRESS SAME
BUCKHANNON, WV. 26201 6-6 Wilbur (92)

FEB 3 1987

TYLER
COUNTY NAME
PERMIT

H.T. HALL 48673 FORM WW-6



RECEIVED
MAY 26 1987

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date 5/20/87
Operator's Well No. JK-1282
Farm Lawrence James
API No. 47 - 095 - 1170

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas / Liquid Injection / Waste Disposal /
(If "Gas," Production / Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 1052 Watershed Short Run
District: Centerville County Tyler Quadrangle West Union 7.5

COMPANY J&J Enterprises, Inc.
ADDRESS P.O. Box 48, Buckhannon, WV 26201
DESIGNATED AGENT Oliver L. Hawkins, III
ADDRESS P.O. Box 48, Buckhannon, WV 26201
SURFACE OWNER Lawrence & Thelma James
ADDRESS Box 104, Greenwood, WV 26360
MINERAL RIGHTS OWNER Same as surface
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
General Delivery ADDRESS Middlebourne, WV 26149
PERMIT ISSUED 1/29/87
DRILLING COMMENCED 1/30/87
DRILLING COMPLETED 2/5/87

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	30	0	0
9 5/8			
8 5/8	1251.10	1251.10	280 sks.
7			
5 1/2			
4 1/2	5361	5361	265 sks.
3			
2			
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON _____

GEOLOGICAL TARGET FORMATION Alexander Depth 5214-53 feet
Depth of completed well 5530 feet Rotary / Cable Tools _____
Water strata depth: Fresh 565,1190 feet; Salt 0 feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Alexander Pay zone depth 5214-53 feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 984 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1450 psig (surface measurement) after 96 hours shut in
(If applicable due to multiple completion--)
Second producing formation Benson & Riley Pay zone depth 4951-53 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

(REVERSE)

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

Alexander: Perforations: 5214-53 (16 holes) Foam frac.

Benson: Perforations: 4951-53 (16 holes)
Fracturing: 300 sks. 20/40 sand: 500 gal. acid.

Riley: Perforations: 4534-72 (14 hoels)
Fracturing: 375 sks. 20/40 sand: 500 gal. acid: foam frac .

Bottom Hole Pressure Pf=Pwe XGLS

t=60 + (0.0075 x 5361) + 459.7 = 560 x=53.35 x 560 = 29871 =0.000033 Pf=1450 x 2.72 (0.000033)
(0.675) (4894) (0.9) =1450 x 2.72 0.098 = 1450 x 1.1

Pf= 1595 psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fr and salt water, coal, oil and c
K.B.			0	10	
Sand, shale & red rock			10	285	
Shale & sand			285	470	Gas ck @ 3542 2/10-1" w/water 14.90 cu.ft.
Sand & shale			470	550	
Sand, shale & red rock			550	685	
Sand & shale			685	780	Gas ck @ 4612 4/10-1" w/water 21.04 cu.ft.
Sand, shale & red rock			780	850	
Sand, shale & red rock			850	930	
Sand & shale			930	1200	Gas ck @ 4865 4/10-1" w/water 21.04 cu.ft.
Sand & shale			1200	1360	
Shale & sand			1360	1535	
Sand & shale			1535	1900	Gas ck @ 4991 6/10-1" w/water 23.83 cu.ft.
Big Lime & Injun			1900	2070	
Sand & shale			2070	2650	
Sand & shale			2650	4534	Gas ck @ 5405 14/10-1" w/water 39.43 cu.ft.
Riley			4534	4572	
Sand & shale			4572	4951	
Benson			4951	4953	Gas ck @ Drill Collars 2/10-1" w/water 14.90 cu.ft.
Sand & shale			4953	5214	
Alexander			5214	5253	
Sand & shale			5253	5530	
				T.D.	

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MAY 26 1987
DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

J & J Enterprises, Inc.

Well Operator

By: 

Date: 5/20/87 Robert Dahlin, Geologist

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: January 16, 1987
 2) Operator's Well No. 2515 (JK-1282)
 3) API Well No. 47 095 1170
 State County Permit

RECEIVED
 JAN 23 1987

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

- DIVISION OF OIL & GAS, Gas /
 B (If "Gas", Production / Underground storage / Deep / Shallow)
- 4) LOCATION: Elevation: 1052 / Watershed: Short Run
 District: Centerville / County: Tyler 095 / Quadrangle: West Union 7.5 670
- 6) WELL OPERATOR Union Drilling CODE: 50550 7) DESIGNATED AGENT Joseph C. Pettey
 Address Post Office Drawer 40 Address Post Office Drawer 40
Buckhannon, WV 26201 Buckhannon, WV 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther
 Address General Delivery
Middlebourne, WV 26149
- 9) DRILLING CONTRACTOR: Name S. W. Jack Drilling Co.
 Address Post Office Box 48
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, 5400 feet
- 13) Approximate trata depths: Fresh, 125 feet; salt, N/A feet.
- 14) Approximate coal seam depths: N/A Is coal being mined in the area? Yes / No
- 15) CASING AND TUBING PROGRAM Per INSPECTORS REQUEST

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		20'	20'	C.T.S. by rule 15.05
Fresh water								
Coal								
Intermediate	8 5/8	ERW	23	X		1350	1200	to surface by rule 15.05
Production	4 1/2	J-55	10.5	X		5400	5400	
Tubing								as required
Liners								by rule 15.01 or 5405ks
								Depths set
								Perforations:
								Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1170 Date January 29, 1987

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, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>1363</u>	WPOP: <u>AS</u>	SEP: <u>AS</u>	Other: <input type="checkbox"/>
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NOTE: Keep one copy of this permit posted at the drilling location.

[Signature]
 Director, Division of Oil and Gas

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File

9595

167