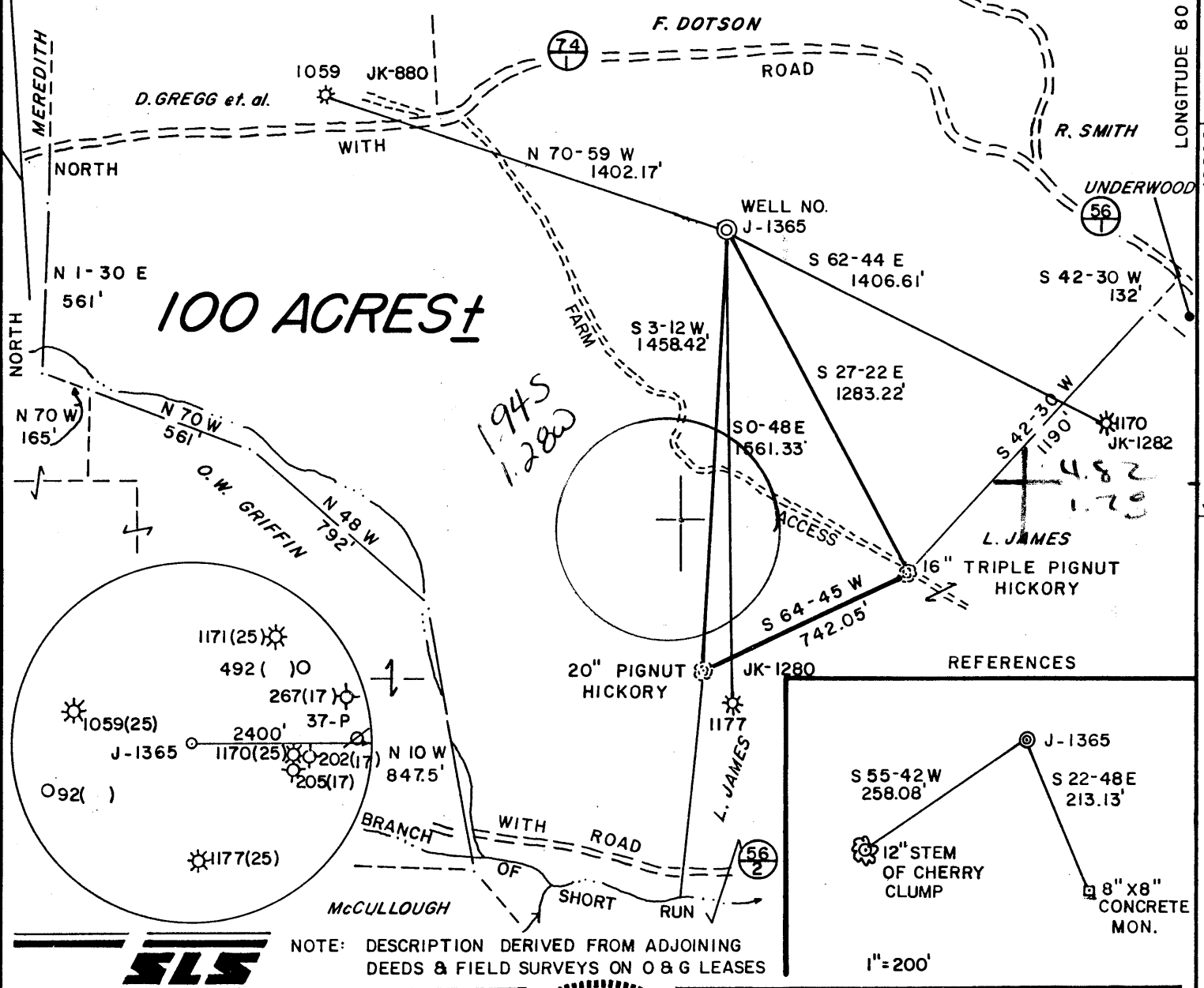


AYERS LEASE

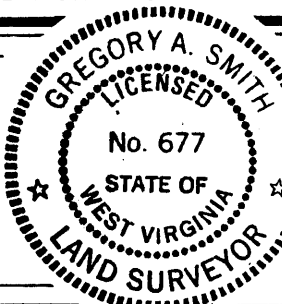
WELL NO. J-1365



NOTE: DESCRIPTION DERIVED FROM ADJOINING DEEDS & FIELD SURVEYS ON O & G LEASES

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.

L.L.S. Gregory A. Smith
677



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

DATE NOVEMBER 20, 19 87

OPERATORS WELL NO. J-1365

API WELL NO. 47 - 095 - 1221
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 1766 (19/36)
PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEV. 1088' SCALE 1" = 500'

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1076' WATERSHED SHORT RUN

DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5'671

SURFACE OWNER VIRGINIA AYERS ACREAGE 100 c 133
ROYALTY OWNER GORRELL DOAK HRS. LEASE ACREAGE 100 5

PROPOSED WORK: LEASE NO. JJ-2308

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION ALEXANDER
ESTIMATED DEPTH 5450'

WELL OPERATOR J & J ENTERPRISES, INC. DESIGNATED AGENT OLIVER L. HAWKINS III
ADDRESS P.O. BOX 48, BUCKHANNON, WV 26201 ADDRESS P.O. BOX 48, BUCKHANNON, WV 26201

427
6-6 wilbur (92)

COUNTY NAME
PERMIT



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JAN 19 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date January 15, 1988
Operator's
Well No. J-1365
Farm Ayers
API No. 47 - 095 - 1221

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

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

LOCATION: Elevation: 1076' 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 Virginia Ayers

ADDRESS 111 E. Tippens St., Attica, Ohio 44807

MINERAL RIGHTS OWNER same as surface

ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK _____

Robert Lowther ADDRESS Gen, Del., Middlebourne, WV 26362

PERMIT ISSUED 12/14/87

DRILLING COMMENCED 12/27/87

DRILLING COMPLETED 1/1/88

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 Cord.			
13-10"	32.00'	pulled	
9 5/8			
8 5/8	1292.20	1292.20	265 sks.
7			
5 1/2			
4 1/2		5320.55'	285 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5450' feet

Depth of completed well 5579' feet Rotary xx / Cable Tools _____

Water strata depth: Fresh 1530' feet; Salt none feet

Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Alexander, Benson Pay zone depth 5265/5281
4969/4970 feet

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

Commingled Final open flow 1,233 * 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 Riley Pay zone depth 4564/4594 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 25 1988
(Continue on reverse side)

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

Riley: Perforations: 4564/4594 (19 holes)

Fracking: 375 sks. 20/40 sand: 604 Bbls fluid: 495,000 scf nitrogen: 500 gal. acid:

Benson: Perforations: 4969/4970 (12 holes)

Fracking: 300 sks. 20/40 sand: 579 Bbls fluid: 500 gal. acid:

Alexander: Perforations: 5265/5281 (18 holes)

Fracking: 300 sks. 20/40 sand: 499 Bbls. fluid: 500 gal. acid:

Pf=Pwe XGLS

$$t=60+(0.0075 \times 5320)+459.7=559$$

$$x=53.35 \times 559 = \frac{29,822}{1000000} = 0.0000335$$

$$Pf=1500 \times 2.72^{(0.000335)(0.675)(4922)(0.9)}$$

$$Pf=1500 \times 2.72^{(0.10)} = 1500 \times 1.10$$

Pf=1650 psi

WELL LOG

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all free and salt water, coal, oil and gas
Fill & Clay			0	10	1/2" stream water @1530'
Shale			10	20	Gas check @1909' No show
Sand			20	45	Gas check @2186' No show
Red Rock & Shale			45	260	Gas check @2555' 34/10ths 1" w/w
Sand			260	290	62,000
Sand & Shale			290	350	Gas check @3511' 24/10ths 1" w/w
Sand			350	370	52,000
Sand & Shale			370	410	Gas check @4498' 20/10ths 2" w/w
Shale & Red Rock			410	1935	189,000
Big Lime			1935	1995	Gas check @4715' 5/10ths 2" w/w
Big Injun			1995	2120	94,000
Sand & Shale			2120	2285	Gas check @5054' 30/10ths 2" w/w
Weir			2285	2400	231,000
Sand & Shale			2400	2475	Gas check @5363' 30/10ths 2" w/w
Berea			2475	2482	231,000
Sand & Shale			2482	4560	Gas check @Drill Collar 6/10ths
Riley			4560	4600	2" w/w 103,000
Sand & Shale			4600	4966	
Benson			4966	4972	
Sand & Shale			4972	5220	
Alexander			5220	5284	
Sand & Shale			5284	5579' TD	

(Attach separate sheets as necessary)

J & J Enterprises, Inc.

Well Operator

By: Daniel F. Stark

Date: Daniel F. Stark - Geologist

1/15/88

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."

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DEC 07 1987



1) Date: Dec. 1, 19 87
 2) Operator's Well No. J-1365
 3) API Well No. 47 State 095 County 1221 Permit

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

- 4) WELL TYPE: A Oil Gas
 B (If "Gas", Production Underground storage Deep Shallow)
 5) LOCATION: Elevation: 1076' Watershed: Short Run
 District: Centerville County: Tyler 095 Quadrangle: West Union 7.5' 670
 6) WELL OPERATOR J & J Enterprises CODE: 24150 7) DESIGNATED AGENT Oliver Lee Hawkins, III
 Address P.O. Box 48 427 Address P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201
 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther
 Address General Delivery
Middlebourne, WV 26362
 9) DRILLING CONTRACTOR: Name S.W. Jack Drilling
 Address P.O. 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 439
 12) Estimated depth of completed well, 5450 feet
 13) Approximate trata depths: Fresh, 110, 1060 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 From Tyler 92, 267, 492, 1059, 1170, 1171

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
Fresh water	8 5/8	ERW	23	X		1276'	1276'	To Surface	by 38 CSR 18-11.3
Coal	8 5/8	ERW	23	X		1276'	1276'	To Surface	by 38 CSR 18-11.2.2
Intermediate									
Production	4 1/2	J-55	10.5	X		5450'	5350'	300 Sacks	Depths set
Tubing								or by	38 CSR 18-11.1
Liners									Perforations:
									Top Bottom

If cement fails to circulate around 6 1/2" casing, bond log must be run, and squeeze cementing may be performed to achieve returns.

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-095-1221 Date December 14 19 87

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 December 14, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>[Signature]</u>	Agent: <u>[Signature]</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>239</u> <u>2196</u>	WPOP: <u>[Signature]</u>	SSR: <u>[Signature]</u>	Other: _____
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NOTE: Keep one copy of this permit posted at the drilling location.
John H. Johnston by Margaret [Signature]
 Director, Division of Oil and Gas File

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

6498