

SMITH LEASE

WELL NO. J-396

NORTH

LONGITUDE 80-47-30

3592

2920

NICHOLS

N 77 E 462' E/C.

S 22 E 1237.5' BUCK

N 6-30 E 1254' RUN

GAIN

N 45-51 E 398.36' PIN OAK
WELL NO. J-396 S 07-40 W 311.53'

S 82-42 E 246.24' BLACK WALNUT STUMP

47 ACRES

BENSON

S 7 W 660'

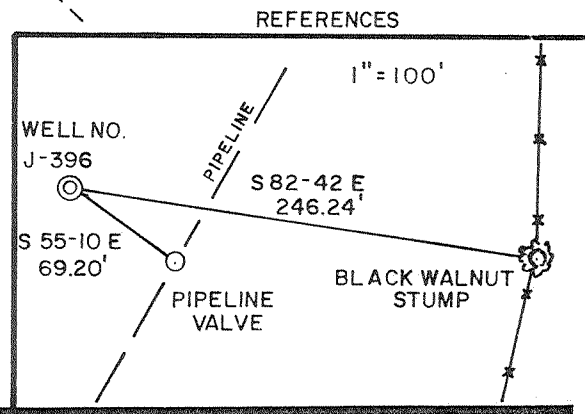
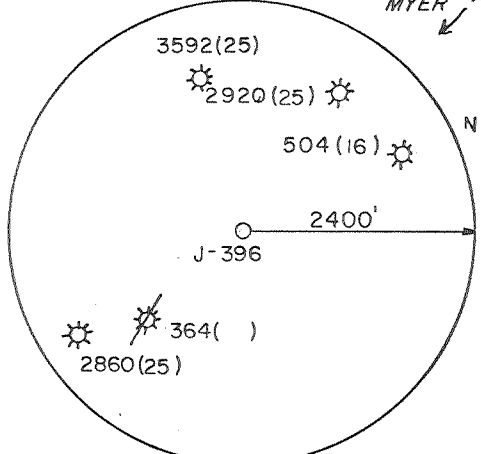
S 7 E 346.5'

N 18 E 495' MYER

N 25-30 W 1105.5' WOLFORD

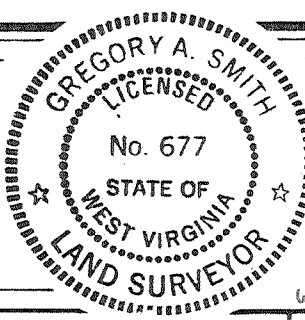
S 40 W 858' HAUGHT

SMITH



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. 677 Gregory A. Smith



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

DATE OCTOBER 26, 19 87

OPERATORS WELL NO. J-396

API WELL NO. 47 - 017 - 3615

STATE COUNTY PERMIT

WAS 017-2981

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 1641 (22-71) SCALE 1"=500' PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEV. 1282'

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY OIL AND GAS DIVISION



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

LOCATION: ELEVATION 1178' WATERSHED SLAUGHTER RUN

DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5' 671

SURFACE OWNER JERRY L. MYER ACREAGE 46

ROYALTY OWNER ANNA MAE SMITH et al. LEASE ACREAGE 47

PROPOSED WORK: LEASE NO. JJ-2227

DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X 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 5700'

WELL OPERATOR J&J ENTERPRISES, INC. DESIGNATED AGENT OLIVER L. HAWKINS, III

ADDRESS P.O. BOX 48 BUCKHANNON, WV 26201

COUNTY NAME PERMIT



Date January 6, 1988
Operator's
Well No. J-396
Farm Smith Heirs
API No. 47 - 017 - 3615

RECEIVED
JAN 11 1988

State of West Virginia
Department of Mines
Oil and Gas Division

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL OPERATOR'S REPORT
OF

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

LOCATION: Elevation: 1178' Watershed Slaughter Run
District: West Union County Doddridge 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 Jerry L. Myer
ADDRESS Box 116A, Wilbur, WV 26459
MINERAL RIGHTS OWNER Anna Mae Smith, et.al.
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK _____
Mike Underwood ADDRESS Rt.2, Box 135, Salem, WV 26426
PERMIT ISSUED 11/24/87
DRILLING COMMENCED 12/8/87
DRILLING COMPLETED 12/12/87

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Corl.			
13-10"	32.00'	pulled	
9 5/8			
8 5/8	1353.15'	1353.15'	280 sks
7			
5 1/2			
4 1/2		5205.05'	225 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 5700' feet
Depth of completed well 5367' feet Rotary XX / Cable Tools _____
Water strata depth: Fresh 70' feet; Salt none feet
Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Benson Pay zone depth 5101/5103 feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Mingled Final open flow 400 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours

Static rock pressure 1400# psig (surface measurement) after 72 hours shut in
(If applicable due to multiple completion--)

Second producing formation Riley Pay zone depth 4671/4688 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 1400# psig (surface measurement) after 72 hours shut in

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

Riley: Perforations: 4671/4688 (12 holes)

Fracking: 185 sks 20/40 sand: 500 gal 15% HCL: 235 bbls fluid

Benson: Perforations: 5101/5103 (12 holes)

Fracking: 520 sks. 20/40 sand: 500 gal 15% HCL: 450 bbls fluid

Pf=Pwe^{xGLS}

$$t=60 + (0.0075 \times 5205) + 459.7 = 559$$

$$x = \frac{1}{53.35 \times 559} = \frac{1}{29.882} = 0.0000335$$

$$Pf = 1400 \times 2.72 \times (0.0000335 \times 0.661) \times (4887) \times (0.9) \times (0.097)$$

$$Pf = 1400 \times 2.72 = 1400 \times 1.10 \quad Pf = 1540 \text{ psi}$$

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fre and salt water, coal, oil and g
Fill			0	5	1" stream fresh water @70'
Red Clay			5	15	Gas check @2010' no show
Red & Gray Shale			15	775	Gas check @2192' 4/10 7" w/w
Sand			775	800	853,000
Red & Gray Shale			800	1575	Gas check @2313' 200/10 2" w/w
Sand			1575	1640	596,000
Sand & Shale			1640	2034	Gas check @2900' 2/10 7" w/w
Big Lime			2034	2090	603,000
Big Injun			2090	2220	Gas check @3547' 160/10 2" w/w
Sand & Shale			2220	2375	530,000
Weir			2375	2480	Gas check @4597' 140/10 2" w/w
Sand & Shale			2480	2580	499,000
Berea			2580	2590	Gas check @4844' 120/10 2" w/w
Sand & Shale			2590	4650	462,000
Riley			4650	4700	Gas check @5212' 170/10 2" w/w
Sand & Shale			4700	5100	550,000
Benson			5100	5106	Gas check @TD 130/10 2" w/w
Sand & Shale			5106	5367 TD	481,000
					Gas check @drill collars 2/10 7" w/w 603,000

RECEIVED
JAN 11 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

J & J Enterprises, Inc.

Well Operator

By:

Date: Robert Dahlin - Geologist

1/6/88

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 sand, encountered in the drilling of a well."



1) Date: Nov. 6, 1987
 2) Operator's Well No. J-396
 3) API Well No. 47 State 017 County 3615 Permit

7/85
RECEIVED
 NOV 16 1987

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY, 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: 1178' Watershed: Slaughter Run
 District: West Union 8 County: Doddridge 017 Quadrange: West Union 7.5' 670
- 6) WELL OPERATOR J & J Enterprises CODE: 24150 7) DESIGNATED AGENT Oliver L. Hawkins, III
 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
 Address Rt. 2, Box 135 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, 5700 feet
- 13) Approximate trata depths: Fresh, 40 150, 360, feet; salt, N/A feet.
- 14) Approximate coal seam depths: N/A, 65-70 Is coal being mined in the area? Yes _____ / No /
- 15) CASING AND TUBING PROGRAM 495 From Doddridge 87, 364, 504, 2860, 2920

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		1312'	1312'	To Surface	by 38 CSR 18-11.3
Coal	8 5/8	ERW	23	X		1312'	1312'	To Surface	by 33 CSR 18-11.2.2
Intermediate									
Production	4 1/2	J-55	10.5	X		5700'	5600'	300 Sacks	Depths set
Tubing								or by 38	CSR 18-11.1
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-017-3615

November 24, 1987 19
 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 November 24, 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: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>238</u> <u>2192</u>	WCCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
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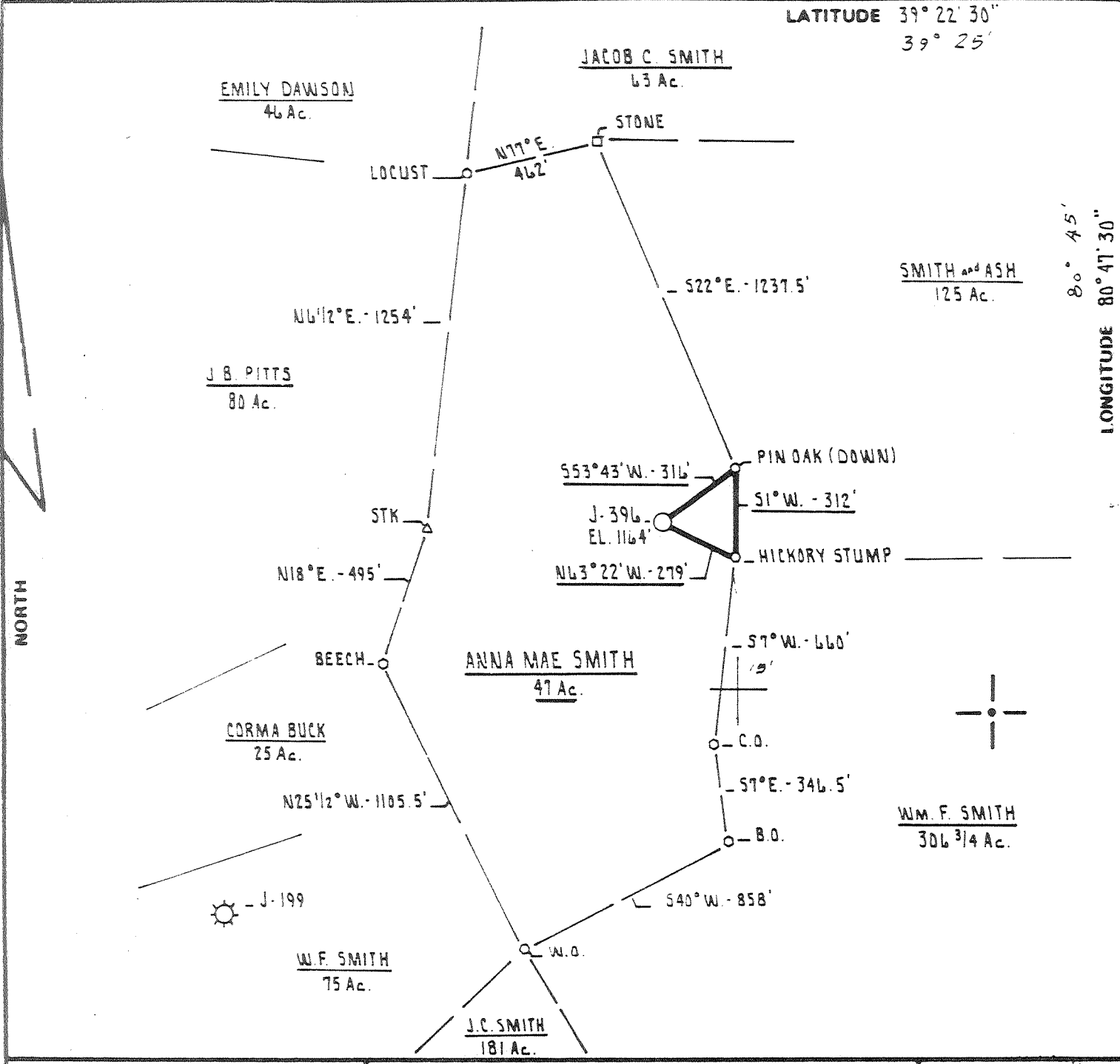
NOTE: Keep one copy of this permit posted at the drilling location.

John H. Johnston by Margaret J. Hesse
 Director, Division of Oil and Gas File

6426

LATITUDE 39° 22' 30"
39° 25'

LONGITUDE 80° 47' 30"
80° 45'



FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200
PROVEN SOURCE OF ELEVATION J. AND J. ENTERPRISES
WELL # J-199 ELEV: 860'

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) Cecil R. Main
R.P.E. _____ L.L.S. 711

PLACE SEAL HERE

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



DATE JANUARY 28th 19 81
OPERATOR'S WELL NO. J-396
API WELL NO. _____
47 - 017 - 2981
STATE COUNTY PERMIT

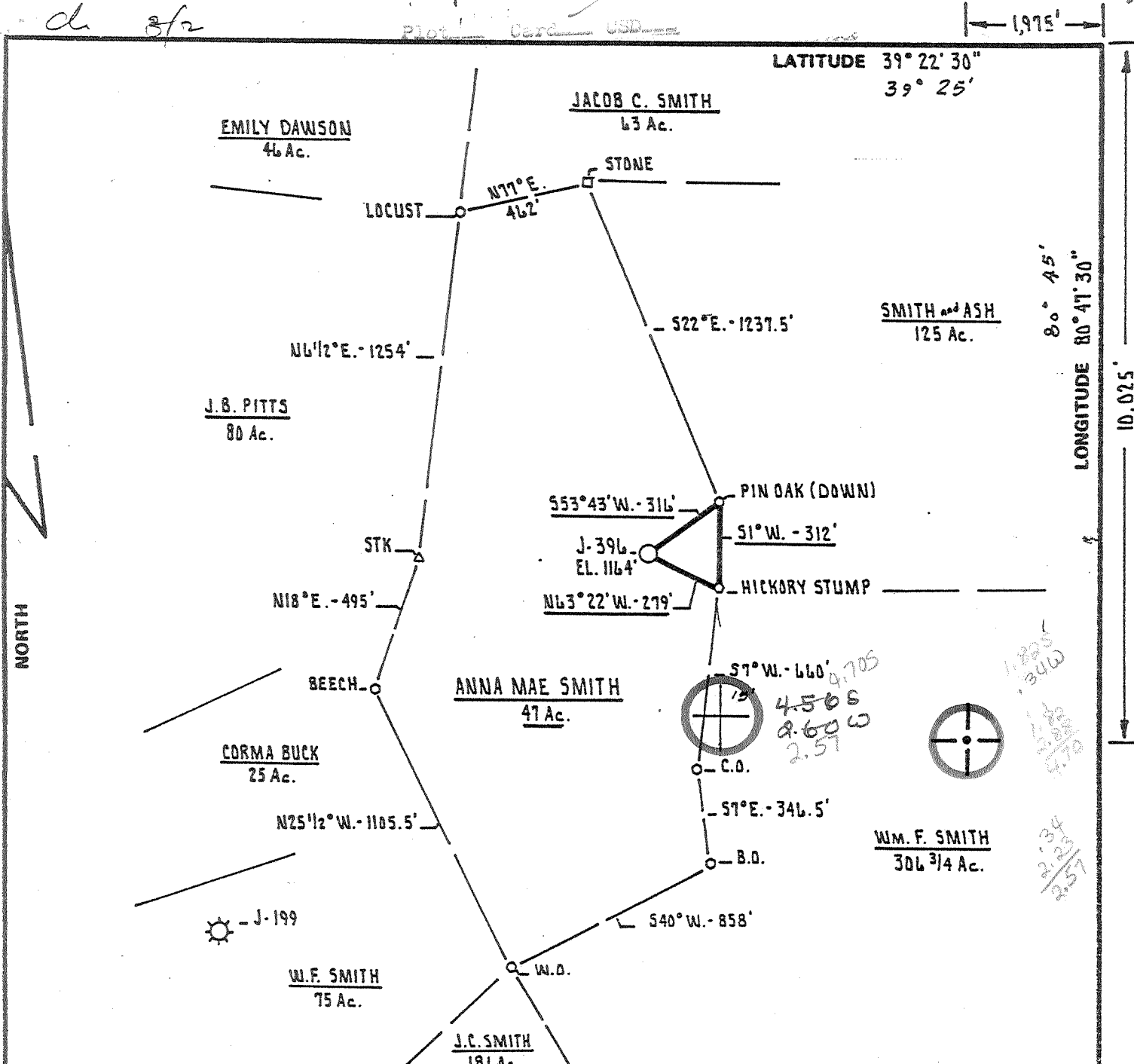
STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

~~CANCELLED~~

now: 017 - 3615

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1164' WATER SHED SLAUGHTER RUN
DISTRICT WEST UNION COUNTY DODDRIDGE
QUADRANGLE WEST UNION 7.5'
SURFACE OWNER ANNA MAE SMITH ACREAGE 47 Ac.
OIL & GAS ROYALTY OWNER B.G. SMITH LEASE ACREAGE 46 Ac.
LEASE NO. K-905
PROPOSED WORK: DRILL X 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 5400'
WELL OPERATOR J. AND J. ENTERPRISES, INC. DESIGNATED AGENT HARRY BARNETT
ADDRESS P.O. BOX 48 BUCKHANNON, WEST VIRGINIA 26201 ADDRESS P.O. BOX 48 BUCKHANNON, WEST VIRGINIA 26201

MAY 21 1984



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION J. AND J. ENTERPRISES
 WELL # J-199 ELEV: 860'

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) Cecil R. Main
 R.P.E. _____ L.L.S. 711

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1164' WATER SHED SLAUGHTER RUN
 DISTRICT WEST UNION COUNTY DODDRIDGE
 QUADRANGLE WEST UNION T.5
 SURFACE OWNER ANNA MAE SMITH ACREAGE 47 Ac.
 OIL & GAS ROYALTY OWNER B.G. SMITH LEASE ACREAGE 46 Ac.
 LEASE NO. K-905
 PROPOSED WORK: DRILL X 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 5400'
 WELL OPERATOR J. AND J. ENTERPRISES, INC. DESIGNATED AGENT HARRY BARNETT
 ADDRESS P.O. BOX 48 BUCKHANNON, WEST VIRGINIA 26201 ADDRESS P.O. BOX 48 BUCKHANNON, WEST VIRGINIA 26201

STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION
 DATE JANUARY 28TH 19 81
 OPERATOR'S WELL NO. J-396
 API WELL NO. 47 - 017 - 2981
 STATE 47 COUNTY 017 PERMIT 2981
 MAR 28 1981

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-396
API Well No. 47 - 017 2981
State County Perm

WELL TYPE: Oil ___ / Gas X /
(If "Gas", Production X / Underground storage ___ / Deep ___ / Shallow X /)
LOCATION: Elevation: 1164 Watershed: Slaughter Run
District: West Union County: Doddridge Quadrangle: West Union 7.5'

WELL OPERATOR J & J Enterprises, Inc.
Address Box 48
Buckhannon, WV 26201

DESIGNATED AGENT Roger Rolston
Address Box 48
Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER B.G. Smith
Address Rt. 50 West
Salem, WV 26426
Acreage 46

COAL OPERATOR None
Address

SURFACE OWNER Anna Mae Smith
Address 110 High Street
West Union, WV 26456
Acreage 47

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name B.G. Smith
Address Rt. 50 West
Salem, WV 26426

FIELD SALE (IF MADE) TO:
Name Unknown
Address

Name
Address

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Stephen Casey
Address Rt. 2, Box 232-D
Jane Lew, WV 26378

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address
RECEIVED
FEB 27 1981

OIL & GAS DIVISION
DEPT. OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed ___ / lease X / other contract ___ / dated 1/3, 1979, to the undersigned well operator from Key Oil Company

If said deed, lease, or other contract has been recorded:]
Recorded on 7/3, 1979, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas lease Book 107 at page 353. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper ___ / Redrill ___ / Fracture or stimulate X /
Plug off old formation ___ / Perforate new formation ___ /
Other physical change in well (specify) _____

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
PHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
1014 WASHINGTON STREET EAST
CHARLESTON, WV 25301

BLANKET BOND

J & J Enterprises, Inc.
Well Operator

By Peter Battles
Peter Battles
Its Geologist

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) S.W. Jack Drilling Company
Address Box 48
Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5400 feet Rotary Cable tools

Approximate water strata depths: Fresh, 100, 1150 feet; salt, None feet.

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

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	30	0 sks.	Kinds
Fresh water	8 5/8	ERW	23	x		1600	1600	300 sks.	
Coal	8 5/8	ERW	23	x		1600	1600	300 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	x		5350	5350	275 sks.	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-2a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is in part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 11-3-81.

[Signature]
Deputy Director - Oil & Gas Division

The following waiver must be signed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator / owner / lessee / of the coal under this well location, has examined this proposed well location. If a Mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: , 19

By
Its