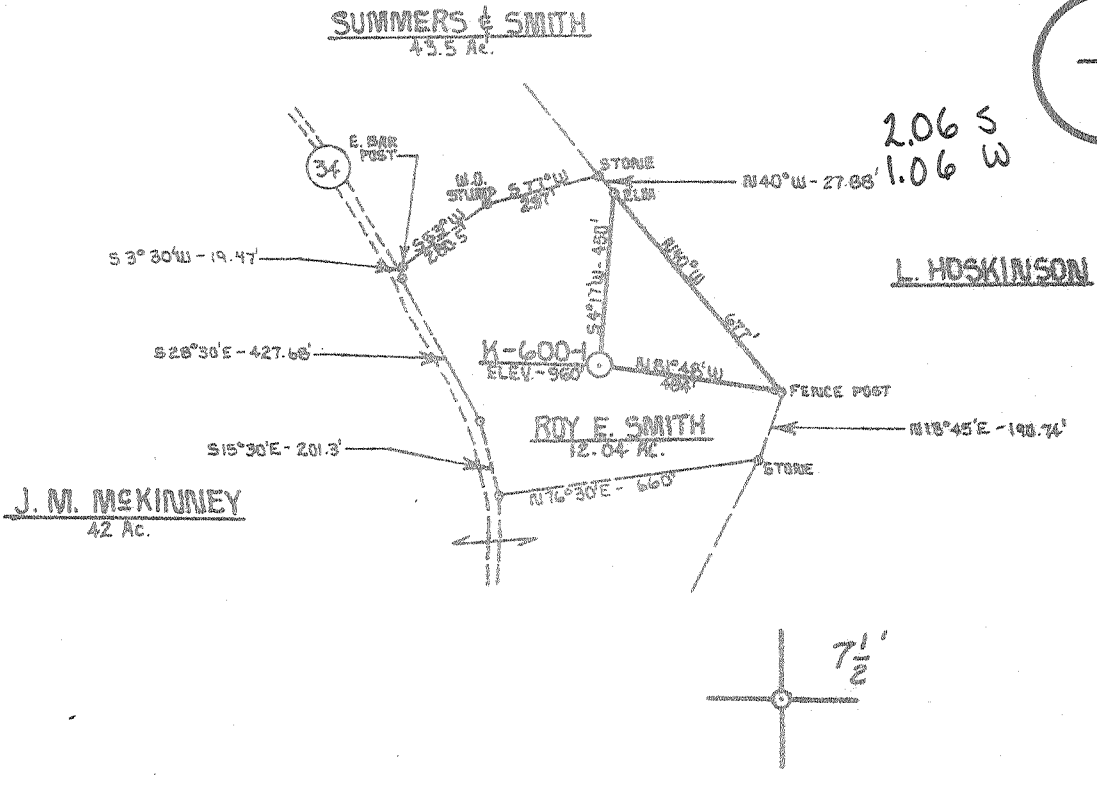


39 18 15  
80 46 00

NORTH



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200  
 PROVEN SOURCE OF ELEVATION B.M. ON BRIDGE AT INT. RT. 18 & OLD RT. 50 RT. WEST UNION. ELEV. - 785'

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) Daniel L. Whedde  
 R.P.E. \_\_\_\_\_ L.L.S. 530



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



DATE JANUARY 3, 19 79  
 OPERATOR'S WELL NO. K-600-1  
 API WELL NO. 47 - 017 - 2572  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 960' WATER SHED MIDDLE ISLAND CREEK  
 DISTRICT WEST UNION COUNTY DODDRIDGE  
 QUADRANGLE WEST UNION T.5, 15' SE  
 SURFACE OWNER H.D. SPURLOCK ACREAGE 12.04  
 OIL & GAS ROYALTY OWNER ROY E. SMITH LEASE ACREAGE 12.04  
 LEASE NO. K-600  
 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 5,150'  
 WELL OPERATOR J. & J. ENTERPRISES, INC. DESIGNATED AGENT HARRY BARNETT  
 ADDRESS P.O. BOX 48 BUCKHANNON, W. VA. 26201 ADDRESS P.O. BOX 48 BUCKHANNON, W. VA. 26201

[08-78]

Date: February 29, 1980

Operator's  
well No. J-72

API well No. 47-017-2572  
State Survey Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES, OIL AND GAS DIVISION

WELL OPERATOR'S PERMIT  
SPRINGS, FRACURING, PLUGGING, OR OTHER PHYSICAL CHANGE

WELL TYPE: Oil  Gas  / Liquid Injection  Water Injection   
(If "Gas", Production  Underground Storage  Deep  Shallow   
LOCATION: Elevation: 960 Watered: Middle Island Creek  
District: West Union County: Doddridge Township: West Union 7 1/2  
WELL OPERATOR: J & J Enterprises, Inc. OPERATOR'S AGENT: H. L. Barnett  
Address: P. O. Box 48, Buckhannon, W. Va. 26201

PERMITTED WORK: Drill  / Convert  Drill deeper  Redrill   
Plug off old formation  / Perforate new formation  MAR - 1990  
Other physical change in well (specify):

PERMIT ISSUED ON January 9, 1980, BY OIL & GAS INSPECTOR Paul Garrett  
IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING: VERBAL PERMISSION OBTAINED  
Name: Paul Garrett  
Address: 321 Beech Street, Clarksburg, W. Va. 26301

GEOLOGICAL TARGET FORMATION: Alexander Depth: 5121 feet  
Depth of completed well, 5308 feet Rotary  / Cable Tools   
Water strata depth: Fresh, 35 feet; salt, None feet.  
Coal seam depths: None Is coal being mined in the area? No  
Work was commenced January 17, 1980, and completed January 22, 1980

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FOOTAGE OR SACKS (Cubic feet)	REMARKS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor	11 3/4H-40		42	X		26	0	0 sks. None
Fresh water	8 5/8 ERW		23	X		899	899	280 sks.
Coal	8 5/8 ERW		23	X		899	899	280 sks.
Intermediate								
Production	4 1/2	J-55	10.5	X		5281	5281	730 sks.
Tubing								
Liners								
								5130 5148
								5162 5164
								5176 5178
								5184 5192

OPEN FLOW DATA

Producing formation: Alexander Pay zone depth: 5130-5192 feet

Gas: Initial open flow 492 Mcf/d Oil: Initial open flow, \_\_\_ Bbl/d  
Final open flow, \_\_\_ Mcf/d Final open flow, \_\_\_ Bbl/d

Time of open flow between initial and final tests, 4 1/2 hours

Static rock pressure, 1500 psig (surface measurement) after 40 hours shut in

[If applicable due to multiple completion--]

Second producing formation: Pay zone depth: feet

Gas: Initial open flow, \_\_\_ Mcf/d Oil: Initial open flow, \_\_\_ Bbl/d  
Final open flow, \_\_\_ Mcf/d 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

Signature in reverse side

8-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OF PERFORATIONS, PHYSICAL PROPERTIES, ETC.

Alexander- Perforations: 5130-5148, (3 holes), 5162-5164, ( 2 holes), 5176-5178, (2 holes),  
5184-5192 (8 holes).  
Fracturing: 500 gal. Acid; 30,000 lbs. Sand 80/100 wire mesh; 60,000 lbs. Sand 20/40 wire mesh;

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including Inclusions and Sand Water, etc.
Clay			0	15	
Shale			15	40	1 1/2" stream water @35'
Red Rock			40	45	
Shale			45	70	
Sand			70	80	
Red Rock			80	85	
Sand & Shale			85	120	
Red Rock			120	130	
Sand, Shale, & Red Rock			130	537	
Sand			537	570	
Sand & Shale			570	710	
Red Rock & Shale			710	745	
Shale			745	880	
Red Rock & Shale			880	910	
Shale			910	935	
Sand & Shale			935	1600	
Lime			1600	1630	
Shale & Sand			1630	1820	
Little Lime			1820	1830	
Big Lime			1830	1935	
Injun			1935	2040	
Shale			2040	2171	
Weir			2171	2264	
Sand & Shale			2264	2576	
Sand			2576	2623	
Sand & Shale			2623	3241	
Speechley			3241	3396	
Sand & Shale			3396	3780	
Balltown			3780	3970	
Sand & Shale			3970	4430	
Riley			4430	4474	
Sand & Shale			4474	4806	
Benson			4806	4826	

- 4806 4826 Gas @ 4844' 10/10-thru 3/4" with water  
(Attach separate sheets to complete log)

J & J ENTERPRISES, INC.

Well Operator

By

PETER BATTLES

Is

GEOLOGIST

NOTE: Regulation 2.02(f) 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."

J-72 Continued

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Including Interval of Sand and Gravel
Sand & Shale			4826	5121	
<u>Alexander</u>			5121	5215	
Shale			5215	5308	
			TD	5308	

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. K-600-#1 API Well No. 47-017-2572 State County Permit

WELL TYPE: Oil / Gas X / (If "Gas", Production X / Underground storage / Deep / Shallow X /)

LOCATION: Elevation: 960 Watershed: Middle Island Creek District: West Union County: Doddridge Quadrangle: West Union 7 1/2

WELL OPERATOR J & J Enterprises, Inc. Address P. O. Box 48 Buckhannon, W. Va. 26201

DESIGNATED AGENT H. L. Barnett Address P. O. Box 48 Buckhannon, W. Va. 26201

OIL & GAS ROYALTY OWNER Roy E. & Addie Smith Address Star Route, Box 5 West Union, W. Va. 26456

COAL OPERATOR None Address

ACREAGE 12.04 SURFACE OWNER Roy E. & Addie Smith Address Star Route, Box 5 West Union, W. Va. 26456

COAL OWNER(S) WITH DECLARATION ON RECORD: Name None Address

FIELD SALE (IF MADE) TO: Name Address

COAL LESSEE WITH DECLARATION ON RECORD: Name None Address

OIL & GAS INSPECTOR TO BE NOTIFIED Name Paul Garrett Address 321 Beech Street Clarksburg, W. Va. 26301

RECORDED JAN 9 1980

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 October 18, 1978, to the undersigned well operator from Roy E. and Addie Smith

[If said deed, lease, or other contract has been recorded:] Recorded on October 23, 1978, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas Lease Book 105 at page 239. 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 5 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 GEOPHYSICAL LOGS DIRECTLY TO: WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION 1614 WASHINGTON STREET EAST CHARLESTON, WV 25311 TELEPHONE: (304) 348-3092

BLANKET BOND

J & J ENTERPRISES, INC. Well Operator By Peter Battles PETER BATTLES GEOLOGIST

[08-78]

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 P. O. Box 48  
Buckhannon, W. Va. 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5300 feet Rotary X / Cable tools      /

Approximate water strata depths: Fresh, 50 feet; salt, 0 feet.

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

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	0	0 sks.	Kinds
Fresh water	8 5/8	ERW	23	X		700	700	225 sks.	
Coal	8 5/8	ERW	23	X		700	700	225 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	X		5280	5280	300 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 § 22-4-8a 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 to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.  
THIS PERMIT MUST BE POSTED AT THE WELL SITE

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 9-11-80.

[Signature]  
Deputy Director - Oil & Gas Division

This permit must be obtained 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