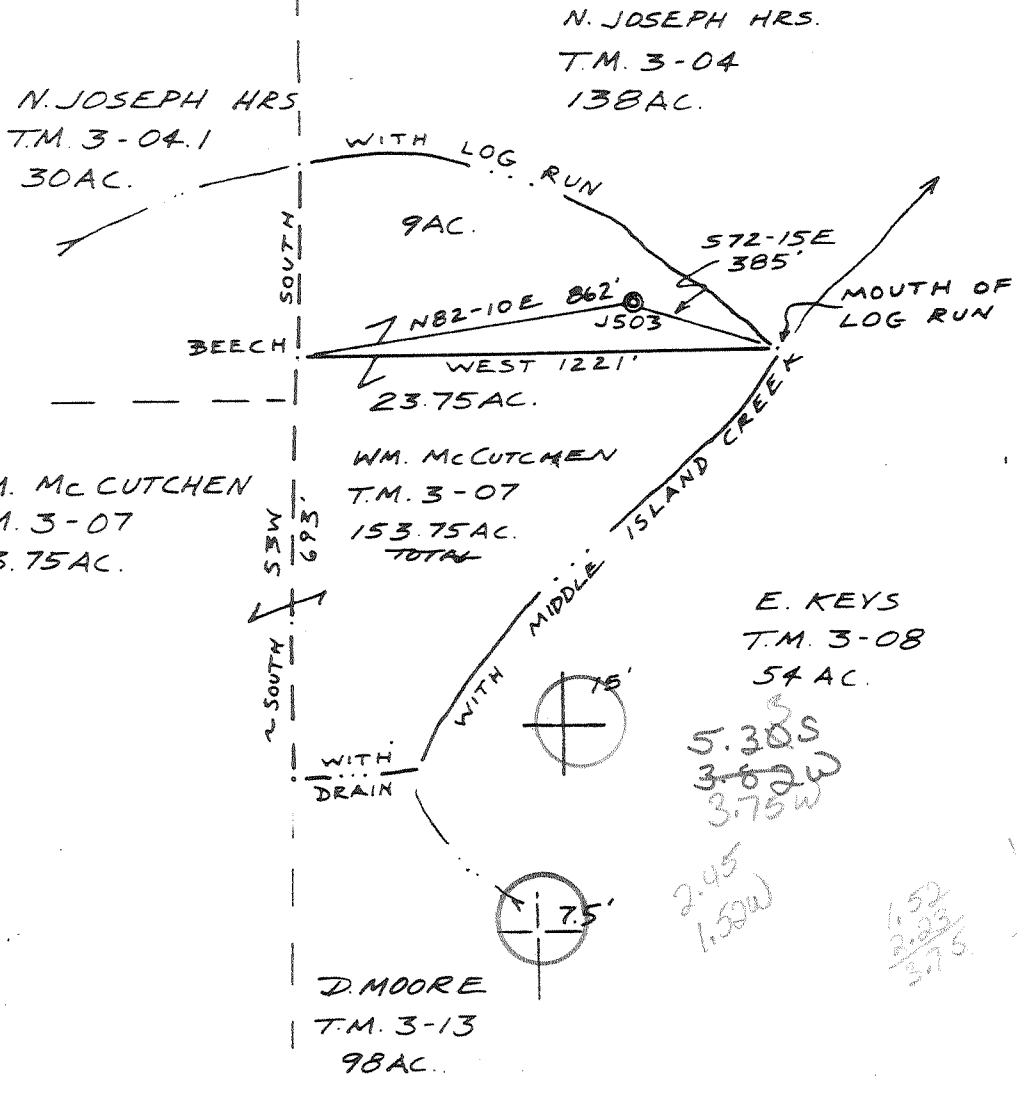


LATITUDE 39° 22' 30"  
39° 25'

LONGITUDE 80° 47' 30"  
80° 45'

NORTH



FILE NO. JJ  
 DRAWING NO. 2  
 SCALE 1"=500  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROVEN SOURCE OF ELEVATION BM 751

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) Neal Hughes  
 R.P.E. \_\_\_\_\_ L.L.S. 632



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



DATE JUNE 9, 1981  
 OPERATOR'S WELL NO. 510  
 API WELL NO. SHALLOW  
47-017-3017  
 STATE COUNTY PERMIT

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 810 WATER SHED MIDDLE ISLAND CREEK  
 DISTRICT WEST UNION COUNTY JODDRIDGE  
 QUADRANGLE WEST UNION 7.5 & 15' EC  
 SURFACE OWNER WM. McCUTCHEN ACREAGE 32.75  
 OIL & GAS ROYALTY OWNER SAME LEASE ACREAGE 32.75  
 LEASE NO. JJ 1054  
 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 Gorden ESTIMATED DEPTH 3000  
 WELL OPERATOR JWJ Enterprises, Inc. DESIGNATED AGENT Roger Ralston  
 ADDRESS P.O. Box 48 ADDRESS P.O. Box 48  
Buckhannon, WV 26201 Buckhannon, WV 26201

000 3017

JUN 31 1981

FORM IV-35  
**RECEIVED**  
 [08-78]

NOV - 5 1981

Date: November 4, 1981

Operator's Well No. J-510

API Well No. 47 - 017 - 3017  
 State County Permit

OIL AND GAS DIVISION  
 WV DEPARTMENT OF MINES

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

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: 810 Watershed: Middle Island Creek  
 District: West Union County: Doddridge Quadrangle: West Union 7.5

WELL OPERATOR J & J Enterprises, Inc. DESIGNATED AGENT James R. Willett  
 Address P.O. Box 48 Address P.O. Box 48  
Buckhannon, WV 26201 Buckhannon, WV 26201

PERMITTED WORK: Drill  / Convert  / Drill deeper  / Redrill  / Fracture or stimulate   
 Plug off old formation  / Perforate new formation   
 Other physical change in well (specify) \_\_\_\_\_

PERMIT ISSUED ON 6/17, 19 81

OIL & GAS INSPECTOR FOR THIS WORK:  
 Name Stephen Casey

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

Address Rt. # 2, Box 232-D

Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Benson Depth \_\_\_\_\_ feet

Depth of completed well, 3320 feet Rotary  / Cable Tools \_\_\_\_\_

Water strata depth: Fresh, 932,175 feet; salt, 0 feet.

Coal seam depths: 410-15 Is coal being mined in the area? NO

Work was commenced 8/10, 1981, and completed 8/14, 1981

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		
Conductor	11 3/4	H-40	42	x		29	29	0 sks. Bands
Fresh water	8 5/8	ERW	23	x		517	517	160 sks.
Coal	8 5/8	ERW	23	x		517	517	160 sks. Sizes
Intermediate								
Production	4 1/2	J-55	10.5	x		2533.20	2533.20	225 sks. Depos set
Tubing								
Liners								Perforations:
								Top Bottom
								2455 2460
								2109 2114

OPEN FLOW DATA

Producing formation Gordon Pay zone depth 2455-60

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

Combined Final open flow, 110 Mcf/d Final open flow, \_\_\_\_\_ Bbl/d

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

Static rock pressure, 575 psig (surface measurement) after 96 hours shut in

(If applicable due to multiple completion--)

Second producing formation Weir Pay zone depth 2109-14

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

BOTTOM HOLE PRESSURE

Pf=Pwe XGLS  

$$X = 60 = (0.0075 \times 2533) + 459.7 = 539 = \frac{1}{53.35} \times 539 = 28756 = 0.0000347 \quad Pf = 575 \times 2.72 = 1564$$

$$(0.671)(2285)(0.9) G = 575 \times 2.72 \times 0.048 = 575 \times 1.049 = 575$$

Pf= 603

NOV 16 1981

[08-78]

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

Gordon: Perforations: 2455-60 (12 holes)

Fracturing: 250 sks. 80/100 sand; 650 sks: 20/40 sand:500 gal Acid:  
429 Bbls. fluid.

Weir: Perforations: (2109-2114) (12 holes)

Fracturing: 250 sks. 80/100 sand: 650 sks. 20/40 sand: 500 gal. Acid:  
429 Bbls. fluid.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
			0	17	½" stream water @ 380
Shale			17	100	
Sand			100	125	Damp @ 932
Red rock & grey shale			125	220	Damp @ 1755
Grey sand & red rock			220	290	
Grey sand & red rock			290	380	Gas ck @ 1865 22/10-1" w/water
Grey sand			380	410	35,313 cu.ft.
Shale			410	415	Gas ck @ 2112 22/10-1" w/water
Coal			415	640	35,313 cu.ft.
Shale & red rock			640	680	Gas ck @ 2453 22/10-1" w/water
Sand & shale			680	690	35,313 cu.ft.
Sand & shale			690	1645	Gas ck @ 2970 5/10-1" w/water
Sand, shale & red rock			1645	1700	18,839 cu.ft.
Little Lime			1700	1755	Gas ck @ 3166 4/10-1" w/water
Big Lime			1755	1855	15,081 cu.ft.
Big Injun			1855	2105	
Sand & shale			2105	2114	Gas ck @ 3197 12/10-1" w/water
Weir			2114	2425	25,087 cu.ft.
Sand & shale			2425	2460	
Gordon			2460	3105	Gas ck @ 3320 12/10-1" w/water
Sand & shale			3105	3135	25,087 cu.ft.
Warren			3135	3165	
Sand & shale			3165	3200	
Speechley			3200	3320	
Sand & shale					TD.

(Attach separate sheets to complete as necessary.)

J & J Enterprises, Inc.

Well Operator

By

Peter Battles

Its

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."

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-510  
API Well No. 47 - 017 - 3017  
State County Permi

TYPE: Oil \_\_\_ / Gas x /  
(If "Gas", Production x / Underground storage \_\_\_ / Deep \_\_\_ / Shallow x /)  
LOCATION: Elevation: 810 Watershed: Middle Island Creek  
District: West Union County: Doddridge Quadrangle: West Union 7.5'

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

DESIGNATED AGENT Roger Rolston  
Address P.O. Box 48  
Buckhannon, WV 26201

COAL & GAS LEASE OWNER Wm. McCutchan  
Address 300 Wood St.  
West Union, WV 26456

COAL OPERATOR None  
Address

ACREAGE 32.75  
FACE OWNER Wm. McCutchan  
Address 300 Wood St.  
West Union, WV 26456  
ACREAGE 32.75

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name Wm. Paul McCutchan  
Address 300 Wood St.  
West Union, WV 26456

OLD SALE (IF MADE) TO:  
Unknown  
Address

Name  
Address

ADDRESS

COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address  
**RECEIVED**  
JUN 17 1981

INSPECTOR TO BE NOTIFIED Stephen Casey  
Address Rt. # 2, Box 232-D  
Jane Lew, WV 26378

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 1/7, 1981, to the undersigned well operator from Wm. Paul & Va. Lee McCutchan/His wife [said deed, lease, or other contract has been recorded:]

Recorded on 1/14, 1981, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas Book 118 at page 664. 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) \_\_\_\_\_

as 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 time they wish to make or are required to make by Code § 22-4-3 must be filed with the Department 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 registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

WE SUBMIT COPIES OF ALL PHYSICAL LOGS DIRECTLY TO: VIRGINIA OIL AND GAS CONSERVATION COMMISSION WASHINGTON STREET EAST CHARLESTON, WV 25311 PHONE: (304) 348-3092

BLANKET BOND

J & J Enterprises, Inc.  
Well Operator  
By Peter Battles  
Its Geologist

Dodd 3017

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, WV 26201

GEOLOGICAL TARGET FORMATION, Gorden

Estimated depth of completed well, 3000 feet Rotary x/ Cable tools /
Approximate water strata depths: Fresh, 135 feet; salt, 1135 feet.
Approximate coal seam depths: None Is coal being mined in the area? Yes / No x

CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight, New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS (Kinds, Sizes, Depths set, 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 the work is to be done 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 2-23-82.

Signature of 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.

By Its