

LATITUDE 39°15'00"

11900'

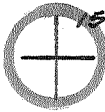
4525

0.525
4500
4.420

J.E. SMITH
7778 Ac.

80° 45'
LONGITUDE 80° 47' 30"

NORTH



A.S. HANSFORD

CLIFFORD CASTO
15.3 Ac. OF 35 Ac.

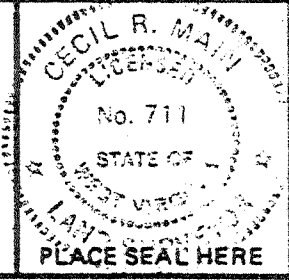
HARRY SMITH
450 Ac.

39 14 15
80 49 55

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF ACCURACY 1 PART IN 200
PROVEN SOURCE OF ELEVATION RD. INTERSECTION ROUTES
(11) (11) ELEVATION 922'

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



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

FORM IV-6 (8-78)



DATE JANUARY 16th 1981
OPERATOR'S WELL NO. J-422
API WELL NO. _____
47 - 017 - 2960
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 1045' WATER SHED RIGHT FORK OF ARNOLD'S CREEK
DISTRICT WEST UNION COUNTY DODDRIDGE
QUADRANGLE OXFORD 1.5 interest in 15' NE Holbrook (NE)
SURFACE OWNER LARRY DOTSON ACREAGE 15.3 Ac.
OIL & GAS ROYALTY OWNER CLIFFORD CASTO LEASE ACREAGE 35 Ac.
LEASE NO. J.J. 1028
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 ADDRESS P.O. BOX 48
BUCKHANNON, WEST VIRGINIA 26201 BUCKHANNON, WEST VIRGINIA 26201

~~6-6 Straight Fork-Bluestone North (133)~~
6-6 Straight Fork-Bluestone Creek (133)

FEB 24 1981

[08-18]

Operator's
Well No. J-422

API Well No. 47 - 017 - 2960
State County Permit

RECEIVED

NOV - 5 1981

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

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

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: 1045 Watershed: Right Fork of Arnolds Creek
District: West Union County: Doddridge Quadrangle: Osford

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 1/27, 1981, OIL & GAS INSPECTOR FOR THIS WORK:

(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Stephen Casey
Address Rt. # 2, Box 232-D
Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Alexander Depth 5170-5204 feet

Depth of completed well, 5403 feet Rotary / Cable Tools

Water strata depth: Fresh, 80-1855 feet; salt, 1425-40 feet.

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

Work was commenced 10/2, 1981, and completed 10/8, 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. Binds
Fresh water	8 5/8	ERW	23	x		1448.90	1448.90	350 sks.
Coal	8 5/8	ERW	23	x		1448.90	1448.90	350 sks. Sizes
Intermediate								
Production	4 1/2	J-55	10.5	x		5254.31	5254.31	450 sks. Bends set
Tubing								
Liners								Perforations:
								Top Bottom
								3686 3712
								3779 3879
								4095 4101
								4368 4374

OPEN FLOW DATA

Producing formation ALEXANDER Pay zone depth 5172-5204 feet

Gas: Initial open flow, _____ Mscf/d Oil: Initial open flow, _____ Bbl/d

Combined Final open flow, 1,100 Mscf/d Final open flow, _____ Bbl/d

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

Static rock pressure, 1600 psig (surface measurement) after 96 hours 4887-89 BNSN

(If applicable due to multiple completion--)

Second producing formation Benson, Riley, Warren, Balltown & Speechley Pay zone depth 3779-3879 BNSN

Gas: Initial open flow, _____ Mscf/d Oil: Initial open flow, 3686-3712 BNSN

Final open flow, _____ Mscf/d Final open flow, _____ Bbl/d

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

Static rock pressure, _____ psig (surface measurement) after _____ hours and in

STEM HOLE PRESSURE

Pf=PweXGLS

$$60 = (0.0075 \times 5254.31) = 459.7 = 559 = \frac{1}{53.35} \times 559 = 29823 = 0.0000335 \text{ Pf} = 1600 \times 2.72 (0.0000335)$$

$$(0.600) \times (4492) (0.9) = 1600 \times 2.72 \times 0.081 = 1600 \times 1.08$$

f=1728 psia

NOV 16 1981

[08-78]

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

Alexander
& Perforations: 5172-5204 (14 holes) 4887-89 (4 holes)
Benson Fracturing: 100 sks. 80/100 sand: 600 sks. 20/40 sand: 700 Bbls. fluid.

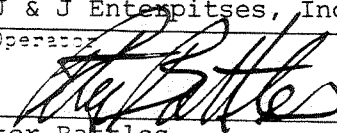
Riley
& Perforations: 4378-84 (6 holes)
Warren Fracturing: 4095-4101 (6 holes)
Fracturing: 100 sks. 80/100 sand: 280 sks. 20/40 sand: 500 gal. Acid.
400 Bbls. fluid.

Balltown
& Perforations: 3779-3879 (7 holes)
Speechley Fracturing: 3686-3712 (6 holes)
Fracturing: 100 sks. 80/100 sand: 280 sks. 20/40 sand: 500 gal. Acid:
400 Bbls. fluid.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including Indication of all Fracture and salt water, coal, oil and gas
Fill			0	5	
Sand & Red rock			5	28	
Red rock, shale & sand			28	60	
Red rock and sand			60	95	
Sand and shale			95	145	
Sand, shale and red rock			145	410	
Red rock and sand			410	455	
Sand and gray shale			455	480	
White sand			480	491	
Sand & gray shale			491	510	
White sand			510	550	
Sand & shale			550	628	
Sand & shale			628	640	
Sand, shale & red rock			640	740	
Sand & shale			740	870	
Red rock			870	9-0	
Sand & shale			900	1190	
Sand & shale			1190	1425	
Salt sand			1425	1440	
Sand & shale			1440	1820	
Blue shale			1820	1830	
Sand & shale			1830	1910	
Big Lime			1910	1970	
Big Injun			1970	2055	
Sand & shale			2055	2195	
Weir			2195	2325	
Sand & shale			2325	3686	
Speechley			3686	3712	
Sand & shale			3712	3779	
Balltown			3779	3879	
Sand & shale			3879	4095	
Warren			4095	4101	
Sand & shale			4101	4378	
Riley			4378	4384	

(Attach separate sheets to complete as necessary)

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

NOTE: Regulation 2.0246 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."

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

Well Log

FORMATION	Color	Hard or Soft	Feet		REMARKS Including indication of all fresh and salt water, coal, oil and gas
			Top	Bottom	
Sand & shale			4384	4880	
Benson			4880	4890	
Sand & shale			4890	5170	
Alexander			5170	5204	
Shale			5204	5403	T.D.

(Attach separate sheets to complete as necessary.)

Well Operator _____

By _____

Its _____

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."

NOV 16 1981

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-422

API Well No. 47 - 0172960
State County Perm

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

LOCATION: Elevation: 1045 Watershed: Right Fork of Arnolds Creek
District: West Union County: Doddridge Quadrangle: Oxford

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

DESIGNATED AGENT H.L. Barnett
Address Box 48
Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER Cliffrod Casto
Address 8421 Longacre Drive
Miramar, Florida 33025
Acreage 15.3

COAL OPERATOR None
Address:

SURFACE OWNER Larry Dorson
Address P.O. Box 1705
Parkersburg, WV 26101
Acreage 15.3

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name None
Address
Name
Address
OIL & GAS DIVISION
DEPT. OF MINES

FIELD SALE (IF MADE) TO:
Name Unknown
Address

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address

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

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed ___ / lease ___ / other contract x / dated 10-17, 1980, to the undersigned well operator from James F. Scott

[If said deed, lease, or other contract has been recorded:]
Recorded on 10-20, 1980, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas ^{lease} Book 117 at page 446. 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
GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
1019 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 526-3092

J & J Enterprises, Inc.
Well Operator
Peter Battles

BLANKET BOND

[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, WV 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5350 feet Rotary / Cable tools /
Approximate water strata depths: Fresh, 75 feet; salt, 1100 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	1 1/4	H-40	42	x		30	0	0 sks.	Kinds
Fresh water	8 5/8	ERW	23	x		1470	1470	375 sks.	
Coal	8 5/8	ERW	23	x		1470	1470	375 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	x		5300	5300	411 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 drilling 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 9-29-81.

[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