



FILE NO. H.S. 8
 DRAWING NO. 1
 SCALE 1"=500'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION BM 834

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

PLACE SEAL HERE

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



DATE AUG. 3, 19 81
 OPERATOR'S WELL NO. 1466
 API WELL NO. 47-017
 STATE COUNTY DODDRIDGE PERMIT 3038

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION: ELEVATION 845' WATER SHED CAMP RUN
 DISTRICT SOUTHWEST COUNTY DODDRIDGE
 QUADRANGLE OXFORD 7 1/2' Holbrook 15' EC
 SURFACE OWNER DONALD GRIMM ACREAGE 103
 OIL & GAS ROYALTY OWNER DONALD GRIMM LEASE ACREAGE 103
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR
 _____ PLUS OFF OLD FORMATION _____ PERFORATE NEW
 FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

ESTIMATED DEPTH 5400
 DESIGNATED AGENT James Willet
 ADDRESS Box 48, Buchanan WV 26201
6-6 STRAIGHT FORK - BLUESTONE CR

SEP 9 1981
 132

RECEIVED

JAN 14 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

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

Operator's Well No. J-466
API Well No. 47 - 017 - 3038
State County Permit

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: 845 Watershed: Camp Run
District: Southwest County: Doddridge Quadrangle: Oxford 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 8/24, 19 81 OIL & GAS INSPECTOR FOR THIS WORK:
(IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name Steve Casey
Address Rt. # 2, Box 232-D
Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Alexander Depth 4775-4819 feet
Depth of completed well, 5047 feet Rotary / Cable Tools
Water strata depth: Fresh, 46 feet; salt, 0 feet.
Coal seam depths: None Is coal being mined in the area? No
Work was commenced 11/17, 19 81, and completed 11/24, 19 81

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		1192.95	1192.95	260 sks.	
Coal	8 5/8	ERW	23	x		1192.95	1192.95	260 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	x		4901.30	4901.30	225 sks.	Depths set
Tubing									
Liners									Perforations:
									Top Bottom
									4100 4102
									4422 4509
									4775 4819

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 4775-4819 feet
Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Ebl/d
Combined Final open flow, 1,032 Mcf/d Final open flow, _____ Ebl/d
Time of open flow between initial and final tests, 4 hours
Static rock pressure, 1700 psig (surface measurement) after 96 hours shut in.
[If applicable due to multiple completion--] 4422 - 4509
Second producing formation Benson & Riley Pay zone depth 4775 - 4819 feet
Gas: Initial open flow, _____ Mcf/d Oil: Initial open flow, _____ Ebl/d
Final open flow, _____ Mcf/d Final open flow, _____ Ebl/d
Time of open flow between initial and final tests, _____ hours

om Hole Pressure Static rock pressure, _____ psig (surface measurement) after _____ hours shut in
Pf=PweXGLS
 $t=60 + (0.0075 \times 4901) + 459.7 + 556 \times \frac{1}{53.35} \times 556 = 29687 = 0.0000337$ Pf=1700 x 2.72 (0.0000337)
 $(0.600)(4459)(0.9) = 1700 \times 2.72^{0.08} = 1700 \times 1.083$
Pf=1841 psi

JAN 27 1982

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

Alexander: Perforations: 4775 - 4819 (16 holes)
Fracturing: 200 sks. 80/100 sand: 600 sks. 20/40 sand: 750 Bbls. fluid.

Benson & Riley: Perforations: 4100-4102 (2 holes)
4422-4509 (8 Holes)

Fracturing: 200 sks. 80/100 sand: 400 sks. 20/40 sand: 750 gal. Acid:
600 Bbls. fluid.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all foam and salt water, seal, oil and gas
Top soil			0	10	
Shale & sand			10	110	
Sand & shale			110	320	1" stream @ 46'
Red rock & shale			320	400	
Sand & shale			400	530	Damp @ 300'
Red rock & shale			530	625	
Sand & shale			625	1080	Gas ck. @ 2398 No show
Shale & sand			1080	1410	
Shale			1410	1575	Gas ck @ 3046 16/10-1" w/water
Big Lime			1575	1685	30,123 cu.ft.
Sand & shale			1685	1750	
Shale & sand			1750	2370	Gas ck @ 3475 18/10 - 1" w/water
Shale			2370	3810	31,550 cu.ft..
Sand & shale			3810	4100	
Riley			4100	4102	Gas ck @ 3907 9/10 - 1" w/water
Sand & shale			4102	4422	22,592 cu.ft.
Benson			4422	4515	
Sand & shale			4515	4670	Gas ck @ 4678 8/10 - 1" w/water
Lt. Brown sand			4670	4675	21,300 cu.ft.
Sand & shale			4675	4775	
Alexander			4775	4819	Gas ck @ 4924 10/10 - 1" w/water
Lt. brown sand			4819	4835	23,614 cu.ft.
Shale			4835	4855	
Dark brown sand			4855	4860	Gas ck @ 5047 12/10 - 1" w/water
Shale			4860	4910	26,087 cu.ft.
Lt. brown sand			4910	4930	
Shale			4930	4970	
Lt. brown sand & shale	ALEX.		4970	5047	T.D.

(Attach separate sheets to complete as necessary.)

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 seal, encountered in the drilling of a well."

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-466

API Well No. 47 917 3038
State County Per

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

LOCATION: Elevation: 845 Watershed: Camp Run
District: Southwest County: Doddridge Quadrangle: Oxford 7.5

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

DESIGNATED AGENT James R. Willett
Address P.O. Box 48
Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER Donald Grimm
Address Rt. # 1,
West Union, WV 26456

COAL OPERATOR None
Address

ACREAGE 10-
SURFACE OWNER Donald Grimm
Address Rt. # 1
West Union, WV 16456
ACREAGE 103

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name Donald Grimm
Address Rt. # 1,
West Union, WV 26456

FIELD SALE (IF MADE) TO:
Name Unknown
Address

Name
Address

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

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address

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 8/20, 1979, to the undersigned well operator from Hugh Spencer

If said deed, lease, or other contract has been recorded:
Recorded on August 28, 1979, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Oil & Gas ^{lease} Book 111 at page 390. 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 application 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 plan 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
15 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3097

RECEIVED

AUG 24 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

BLANKET BOND

J & J Enterprises, Inc.
Well Operator
By 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, WV 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5400 feet Rotary -X- / Cable tools /

Approximate water strata depths: Fresh, 175 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		1375	1375	325 sks.	
Coal	8 ⁵ / ₈	ERW	23	x		1375	1375	325 sks.	Sizes
Intermediate									
Production	4 ¹ / ₂	J-55	10.5	x		5350	5350	280 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 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 4-25-82

[Signature]
Deputy Director - Oil & Gas Division

The following waiver must be completed 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.

RECEIVED

Date: _____, 19____

By _____
Its _____