



FILE NO. 346.02  
 DRAWING NO. 81-63  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION Intersection of Rt. 19/2 and Rt. 23/2 SE of Location

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) Rufford S. Detwiler  
 R.P.E. \_\_\_\_\_ L.L.S. 555  
Buckhannon, W. Va.

PLACE SEAL HERE

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



DATE 7 Dec., 19 81  
 OPERATOR'S WELL NO. J-604  
 API WELL NO. \_\_\_\_\_  
47 - 017 - 3078  
 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 1140' WATER SHED Jims Run  
 DISTRICT Southwest COUNTY Putnam  
 QUADRANGLE Oxford 7 1/2' Nolbrook 13' NE  
 SURFACE OWNER Delbert Osbourne ACREAGE 36 Ac.  
 OIL & GAS ROYALTY OWNER W. Nutter Heirs & W. Morris Heirs LEASE ACREAGE 36 Ac.  
 LEASE NO. M-317  
 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 Alexander ESTIMATED DEPTH 5300  
 WELL OPERATOR J&J Enterprises Inc. DESIGNATED AGENT H.L. Barnett  
 ADDRESS P.O. Box 48 ADDRESS P.O. Box 48  
Buckhannon WV 26201 Buckhannon WV 26201

MAR 01 1982

MAY 25 1982

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 X / Liquid Injection \_\_\_ Waste Disposal \_\_\_  
(If "Gas", Production X / Underground storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 1140 Watershed: Jims Run  
District: Southwest County: Doddridge Quadrangle: Osfird 7.5'

WELL OPERATOR J&J Enterprises, Inc. DESIGNATED AGENT Harry L. Barnett  
Address Box 48 Address Box 48  
Buckhannon, WV 26201 Buckhannon, WV 26201

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

PERMIT ISSUED ON 2/1, 19 82

OIL & GAS INSPECTOR FOR THIS WORK:

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

Name Stephen Casey

Address Rt. # 2, Box 232

\_\_\_\_\_, 19 \_\_\_\_\_

Jane Lew, WV 26378

GEOLOGICAL TARGET FORMATION: Alexander Depth 5105-03 feet

Depth of completed well, 5425 feet Rotary X / Cable Tools \_\_\_

Water strata depth: Fresh 70-136 feet; salt, None feet.

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

Work was commenced 4/14, 19 82, and completed 4/19, 19 82

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.	Rinds
Fresh water	8 5/8	ERW	23	x		1245.25	1245.25	300 sks.	
Coal	8 5/8	ERW	23	x		1245.25	1245.25	300 sks.	Sizes
Intermediate									
Production	4 1/2	J-55	10.5	x		5214.70	5214.70	240 sks.	Deaths set
Tubing									
Liners									Perforations:
									Top Bottom
									4434 4437
									4830 4978
									5105 5153

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5105-53 feet

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

Combined Final open flow, 1,008 Mcf/d Final open flow, \_\_\_ Bbl/d

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

Static rock pressure, 1100 psig (surface measurement) after 96 hours shut in

(If applicable due to multiple completion--)

Second producing formation Leopold, Benson & Riley Pay zone depth 4434-4437 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

Bottom Hole Pressure Static rock pressure, \_\_\_ psig (surface measurement) after \_\_\_ hours shut in

Pf=PweXGLS  
 $t=60+(0.0075 \times 5215) + 459.7=559$   $X=53.35 \times 559 = 29812$   $=0.0000335$   $Pf=1100 \times 2.72 (0.0000335) (0.600)$   
 $(4794) (0.9) = 1100 \times 2.72 \times 0.087 = 1100 \times 1.09$

Pf=12-- psi

JUN 2 1982

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

Alexander: Perforations: 5105-53 (19 holes)

Fracturing: 20,000 lbs. 80/100 sand: 50,000 lbs. 20/40 sand: 600 Bbls. fluid.

Leopold & Benson: Perforations: 4840-42 (5 holes) 4966-69 (5 holes)

Fracturing: 5,000 lbs. 80/100 sand: 25,000 lbs. 20/40 sand: 500 gals. Acid  
400 Bbls. fluid.

Riley: Perforations: 4434-37 (13 holes)

Fracturing: 5,000 lbs. 80/100 sand: 30,000 lbs. 20/40 sand: 500 gals. Acid: 450 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
Fill			0	50	
Sand, red rock & shale			50	87	
Sand			87	132	
Red rock & shale			132	145	
Sand & red rock			145	201	
Sandy shale			201	250	
Shale & red rock			250	260	
Sandy shale			260	285	
Red rock & shale			285	369	
Sandy shale			369	433	
Sand, red rock & shale			433	459	
Sandy shale			459	507	
Shale & red rock			507	519	
Sand, red rock & shale			519	581	
Sandy shale			581	600	
Red rock & shale			600	655	
Sandy shale & red rock			655	680	
Sand & red rock			680	726	
Sandy shale			726	783	
Shale & sandy shale			783	844	
Sandy shale & red rock			844	1024	
Shale & sand			1024	1214	
Lime, sand & shale			1214	1346	
Sandy shale & sand			1346	1592	
Sandy shale			1592	1805	
Shale & lime			1805	1863	
Big Lime			1863	1940	
Injun			1940	2005	
Shale & sandy shale			2005	2475	
Sandy shale & shale			2475	4434	
Riley			4434	4437	
Shale & sandy shale			4437	4840	
Benson			4840	4842	
Brown sand			4842	4966	
Leopold			4966	4969	
Sandy shale			4969	5105	
Alexander			5105	5153	
Sandy shale			5153	5425	

(Attach separate logs to complete as necessary.)

J&J Enterprises, Inc.

By Peter Battles  
Peter Battles Geologist

NOTE: Regulation 2.22(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."



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, 5300 feet Rotary  / Cable tools  /

Approximate water strata depths: Fresh, 1340 feet; salt, 1600 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 <sup>3</sup> / <sub>4</sub>	H-40	42	x		30	0	0 sks.	Kinds
Fresh water	8 <sup>5</sup> / <sub>8</sub>	ERW	23	x		1650	1650	To surface	
Coal	8 <sup>5</sup> / <sub>8</sub>	ERW	23	x		1650	1650	To surface	Sizes
Intermediate									
Production	4 <sup>1</sup> / <sub>2</sub>	J-55	10.5	x		5250	5250	210 sks.	Deaths 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 drilling within 200 feet of the proposed well.

A separate Form IV-8 shall not be required for fracturing or stimulating a well if the well 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 10-16-82.

[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.

Date:           , 19           

By             
Its