

Plot of Board CSN

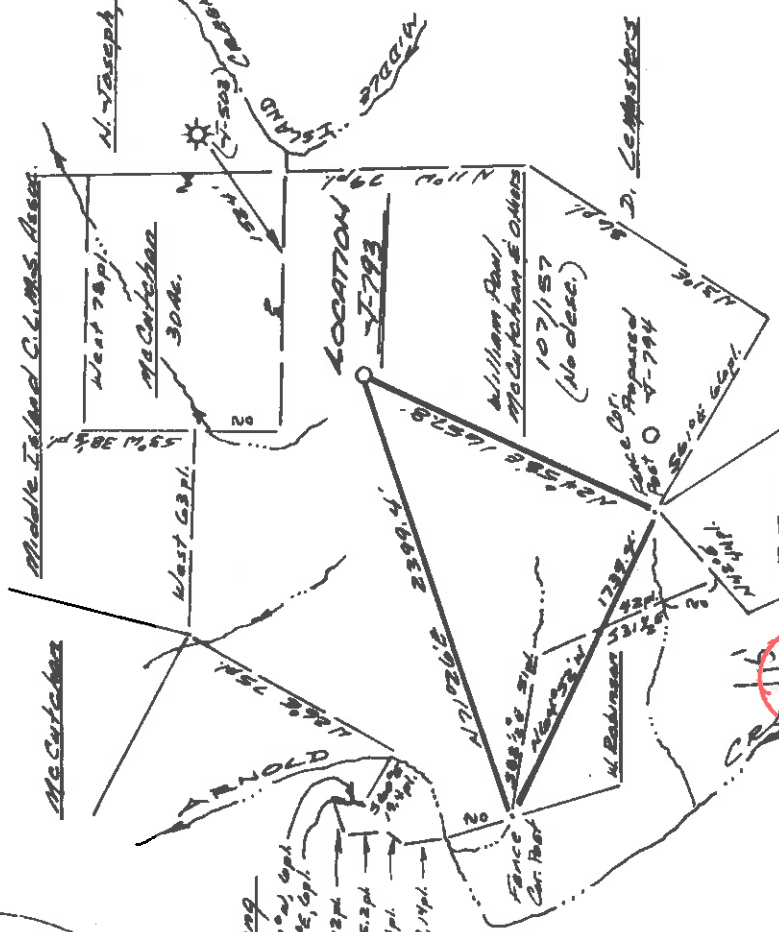
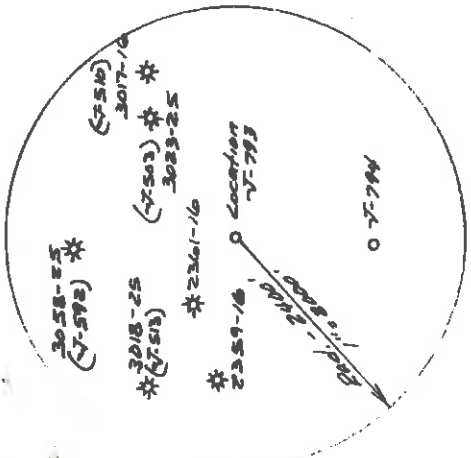
9,750'

LATITUDE 39 22' 30"

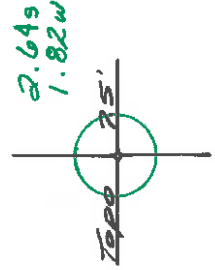
39 25' 15"

LONGITUDE 80 47' 30"

006 57



15' loc.  
5.52 S  
4.05 W



NOTE: Deed Book 107/157  
(No Description)  
Calls taken from adjoining deeds.  
E- Calls unknown

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

FILE NO. 346.01  
 DRAWING NO. 83-56  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1/16 200  
 PROVEN SOURCE OF ELEVATION 7-503 4611  
560' = 900'

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) Coyford W. Dutton  
 R.P.E. U.S. 555  
Buckhannon, W. Va.

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION



DATE 14 July 19 83  
 OPERATOR'S WELL NO. W-293  
 API WELL NO. 47-017-3252

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS:") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1092' WATER SHED Arnold Creek  
 DISTRICT West Union COUNTY Doddridge  
 QUADRANGLE West Union ACRES 15.8

SURFACE OWNER William Paul & Virginia Bush McArthurhan ACRES 121  
 OIL & GAS ROYALTY OWNER W.P. & V.B. McArthurhan - Ms. Home Lease ACRES 121  
 LEASE NO. 75-1185

PROPOSED WORK: DRILL  CONVERT  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 5050  
 WELL OPERATOR SLT ENTERPRISES, INC. DESIGNATED AGENT Richard R. Reddick  
 ADDRESS P.O. Box 48 ADDRESS P.O. Box 48  
Buckhannon, WV 26801 Buckhannon, WV 26801

6-6 Central Station (91)

**RECEIVED**  
MAR 1 - 1984



IV-35  
(Rev 8-81) OIL & GAS DIVISION  
DEPT. OF MINES

Date February 28, 1984  
Operator's Well No. J-793  
Farm Paul McCutchan  
API No. 47 - 017 - 3252

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<sup>x</sup> / Liquid Injection / Waste Disposal /  
(If "Gas," Production x / Underground Storage / Deep / Shallow x /)

LOCATION: Elevation: 1092 Watershed Arnolds Creek  
District: Central County Doddridge Quadrangle West Union

COMPANY J&J Enterprises, Inc.

ADDRESS P.O. Box 48, Buckhannon, WV 26201

DESIGNATED AGENT Richard Reddecliff

ADDRESS P.O. Box 48, Buckhannon, WV 26201

SURFACE OWNER Wm. Paul McCutchan

ADDRESS 300 Wood St., West Union, WV 26456

MINERAL RIGHTS OWNER Wm. Paul McCutchan

ADDRESS Same

OIL AND GAS INSPECTOR FOR THIS WORK Stephen

Casey ADDRESS Rt. # 2, Box 232-D, JaneLew

PERMIT ISSUED 9/20/83 WV 26378

DRILLING COMMENCED 1/28/84

DRILLING COMPLETED 2/3/84

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

Casing Tubing	Used in Drilling in Well	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	30	0	0 sks.
9 5/8			
8 5/8	1299.50	1299.50	300 sks.
7			
5 1/2			
4 1/2	5097.50	5097.50	170 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander

Depth \_\_\_\_\_ feet

Depth of completed well 5500 feet Rotary x / Cable Tools \_\_\_\_\_

Water strata depth: Fresh 600 feet; Salt 0 feet

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

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4989-4991.5 feet

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

Final open flow 440 Mcf/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1500 psig (surface measurement) after 96 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 Oil: 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

MAR 5 1984

(Continue on reverse side)

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

Benson: Perforations: 4989-4991.5 (10 holes)  
Fracturing: 50,000 lbs. 20/40 sand: 500 gal. Acid: 480 Bbls. fluid.

BOTTOM HOLE PRESSURE  
 $Pf = P_{we} X GLS$   
 $t = 60 + (0.0075 \times 5097) + 459.7 = 557$      $X = \frac{1}{53.35} \times 557 = \frac{1}{29765} = 0.000034$      $Pf = 1500 \times 2.72 (0.000034)$   
 $(0.670) (4990) (0.9) = 1500 \times 2.72^{0.10} + 1500 \times 1.1$   
 $Pf = 1650$  psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
Red rock & shale			0	40	Including indication of all fresh and salt water, coal, oil and gas
Sand & sandy shale			40	60	
Brown sand & shale			60	80	1/2" stream @ 600'
Red rock, shale & sand			80	145	Gas ck @ 2170 25/10-2" w/water 211,000 cu.ft.
Red rock and shale			145	175	
Red rock & shale			175	195	Gas ck @ 2417 15/10-2" w/water 163,000 cu.ft.
Red rock & shale			195	470	
Sand, shale & red rock			470	712	
Sand, shale & red rock			712	1090	
Shale & sand			1090	1240	Gas ck @ 2724 20/10-2" w/water 189,000 cu.ft.
Shale & sand			1240	1270	
Shale & lime			1270	1915	
Little Lime			1915	1930	Gas ck @ 5080 140/10-1" w/water 499,000 cu.ft.
Sandy shale			1930	1965	
Big Lime & Injun			1965	2160	
Sandy shale & sand			2160	2395	
Shale & sand			2395	2635	
Sandy shale			2635	4989	
Benson ✓			4989	4992	
Sand & shale			4992	5310	
Sand			5310	5500	

F.D.

(Attach separate sheets as necessary)

J&J Enterprises, Inc.

Well Operator

By: 

Date: 2/28/84

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including <sup>any</sup> encountered in the drilling of a well."

1) Date: July 18, 19 83  
 2) Operator's Well No. J-793  
 3) API Well No. 47 - 017 - 3252  
 State County Permit



S.W. Jack-Drilling Company DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 Box 48 Buckhannon, WV 26201  
OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil / Gas  / Production  / Underground storage  / Deep  / Shallow   
 B (If "Gas", Production  / Watershed: Arnold Creek  
 Elevation: 1092 / County: Doddridge  
 District: Central District / Quadrangle: West Union
- 5) LOCATION: J&J Enterprises, Inc. / DESIGNATED AGENT Richard Reddecliff  
 Address: P.O. Box 48 / P.O. Box 48  
 Buckhannon, WV 26201
- 6) WELL OPERATOR J&J Enterprises, Inc. / DESIGNATED AGENT Richard Reddecliff  
 Address: P.O. Box 48 / P.O. Box 48  
 Buckhannon, WV 26201
- 7) OIL & GAS ROYALTY OWNER Wm. Paul McCutchan  
 Address: 300 Wood St. / West Union, WV 26456  
 Acreage 121
- 8) SURFACE OWNER Wm. Paul McCutchan  
 Address: 300 Wood St. / West Union, WV 26456  
 Acreage 121
- 9) FIELD SALE (IF MADE) TO: Unknown  
 Address: Unknown

- 10) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name: Stephen Casey  
 Address: Rt. 2, Box 232-D / Jane Lew, WV 26378
- 11) PROPOSED WORK: Drill  / Drill deeper  / Redrill  / Fracture or stimulate  / Perforate new formation   
 Plug off old formation  / Other physical change in well (specify) Alexander
- 12) GEOLOGICAL TARGET FORMATION, 5050 feet  
 17) Estimated depth of completed well, 5050 feet  
 18) Approximate water strata depths: Fresh, 140-420 feet; salt, 0 feet.  
 19) Approximate coal seam depths: None Is coal being mined in the area? Yes No
- 14) COAL LESSEE WITH DECLARATION ON RECORD:  
 Name: Stephen Casey  
 Address: Rt. 2, Box 232-D / Jane Lew, WV 26378  
 RECEIVED JUL 21 1983

20) 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.	Kinda
Fresh water	85/8	ERW	23	X		1000	1000	To surface	To surface
Coal	85/8	ERW	23	X		1000	1000	To surface	To surface
Intermediate									
Production	4 1/2	J-55	10.5	X		5000	5000	200 sks.	Depths set
Tubing									
Liners									

21) EXTRACTION RIGHTS

- Check and provide one of the following:  
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.  
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)

22) ROYALTY PROVISIONS

- Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes  No   
 If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.  
 23) Required Copies (See reverse side.)

- 24) 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.  
 Notary: Glenn A. Campbell  
 My Commission Expires: October 16, 1989  
 Signed: Richard Reddecliff Its: Designated Agent

OFFICE USE ONLY

47-017-3252 DRILLING PERMIT

Permit number 47-017-3252 Date September 20, 1983

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector (Refer to No. 10) Prior to the construction of roads, locations and pits for any new permitted work.

Permit expires September 20, 1983 unless drilling is commenced prior to that date and presented with due diligence.  
 Bond: [Signature] Agent: [Signature] Plat: [Signature] Casing Fee: [Signature]  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

