

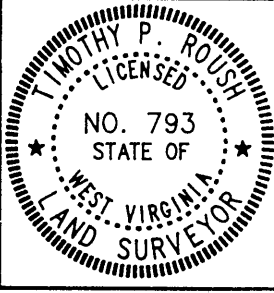
Call Table	
A	S20° W 62 P.
B	S61° 14'E 709.5'
C	N77° 47'E 594.0'
D	N60° 34'E 701.0'
E	N19° W 40 P.
WELL TIES	
①	-N83° 47'E 2704'
②	N71° 07'E 1570'
LOCATION REFERENCES	
N78° 38'W	120' Dbl. CO
N45° 23'W	178' 14" Hickory
S40° 26'W	51' 14" Hickory

Note: There are no known water supply sources located within 1000' of proposed well. (H) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 1820
 MAP NO. N47 N S 2 E W 5
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS BM - 902

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) *Timothy P. Roush*
 TIMOTHY P. ROUSH PS 793



STATE OF WEST VIRGINIA
 DIVISION OF ENERGY
 OIL AND GAS SECTION



DATE May 6, 19 96
 FARM Martha Elder NO. 12
 API WELL NO. 47-095-01655-5

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION WASTE DISPOSAL ___
 (IF "GAS") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 1297' WATERSHED McIntyre Fork
 DISTRICT McElroy COUNTY Tyler
 QUADRANGLE Centerpoint 7.5'

SURFACE OWNER Forrest Glover ACREAGE 95.5 Ac.
 OIL & GAS ROYALTY OWNER Pennzoil Products Co. et al. LEASE ACREAGE 187.25 Ac.
 LEASE NO. 99174-00

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 Gordon ESTIMATED DEPTH 3297'
 WELL OPERATOR Pennzoil Products Company DESIGNATED AGENT Philip S. Ondrusek
 ADDRESS P. O. Box 5519 ADDRESS P. O. Box 5519
 Vienna, W.Va. 26105 4670 Vienna, W.Va. 26105

AUG 23 1996
 9-0 96

RECEIVED
DIVISION OF
Environmental Protection

JAN 06 1997

Permitting
Office of Oil & Gas

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: Glover, Forrest etal

Operator Well No.: M. Elder #12

LOCATION: Elevation: 1,297.00'

Quadrangle: Center Point

District: McElroy

County: Tyler

Latitude: 9,400' Feet south of

39 Deg 27 Min 30 Sec.

Longitude: 8,500' Feet west of

80 Deg 40 Min 0 Sec.

Company: PENNZOIL PRODUCTS COMPANY
P.O. BOX 5519
VIENNA, WV 26105-5519

Agent: PHILIP S. ONDRUSEK

Inspector: Mike Underwood

Permit Issued: 8.22/96

Well work Commenced: 9/10/96

Well work Completed: 10/25/96

Verbal plugging

permission granted on:

Rotary Cable Rig

Total Depth (feet) 3328'

Fresh water depths (ft) NA

Salt water depths (ft) NA

Is coal being mined in area (Y/N) N

Coal Depths (ft): 626-630

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	571'	571'	285 Sacks
4 1/2"	3233'	3233'	275 Sacks

OPEN FLOW DATA

*Well was drilled as a waterflood injection well. No open-flow data was obtained

Producing formation Gordon Pay zone depth (ft) 3104-3126

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 pressure) after Hours

Second producing formation Pay zone depth (ft)

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 pressure) after Hours

NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

JAN 10 1997

For: PENNZOIL PRODUCTS COMPANY

By:

Date: 1/3/97

JAN 10 1997

Treatment :

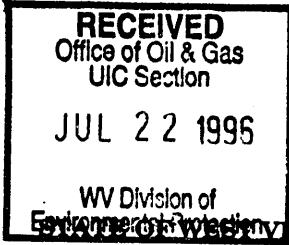
Perforations: 3170' - 3174' - 4 holes/ft. (16 holes)
Treatment: Treated via 4.5" Casing with 300 gals. 15% HCl, 219 bbls.
Borate cross-linked gelled water and 12,700 lbs. of 20/40 sand.

Well Log :

TD = 3328'

Sand & Shale	0	-	626
Pittsburg Coal	626	-	630
Shale	630	-	678
Sand	678	-	694
Shale	694	-	824
Sand	824	-	853
Shale	853	-	940
Sand	940	-	988
Shale	988	-	1110
Sand	1110	-	1118
Shale	1118	-	1172
Sand	1172	-	1202
Sand & Shale	1202	-	2333
Sand	2333	-	2362
Big Lime	2362	-	2440
Big Injun	2440	-	2554
Shale	2554	-	3104
Gordon	3104	-	3126
Shale	3126	-	3140
Sand	3140	-	3143
Shale	3143	-	3328

Permit COPY



1) Date July 16, 1996
 2) Well No. Martha Elder No.12
 3) SIC Code _____
 4) API Well No. 47 - 095 - 1655-LI
 State County Permit
 5) UIC Code _____

Issued 08/22/96
Expires 08/22/98

22441

NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

- WELL TYPE: Liquid Injection Gas Injection _____ Waste Disposal _____
- LOCATION: Elevation 1297 Watershed McIntyre Fork
 District McElroy County Tyler Quadrangle Centerpoint
- 8) WELL OPERATOR: Pennzoil Products Company
P.O. Box 5519
Vienna, WV 26105
- 9) DESIGNATED AGENT: Philip S. Ondrusek
P.O. Box 5519
Vienna, WV 26105
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED:
 Name Mike Underwood
 Address Route 2, Box 135
Salem, WV 26426
- 11) DRILLING CONTRACTOR:
 Name _____
 Address _____
- 12) PROPOSED WELL WORK: Drill Drill Deeper _____ Redrill _____ Stimulate
 Plug Off Old Formation _____ Perforate New Formation _____ Convert _____
 Other Physical Change in Well (specify) _____
- 13) Geological target formation Gordon Depth 3157 Ft. (Top) to 3172 Ft. (Bottom)
- 14) Estimated depth of completed well (or actual depth of existing well) 3297 Ft.
- 15) Approximate water strata depths: Fresh 477 Ft. Salt 1504 Ft.
- 16) Approximate coal seam depths: 1109 Ft.
- 17) Is coal being mined in the area? Yes No
- 18) Virgin reservoir pressure in target formation: 1400 psig. Source Estimated
- 19) Estimated reservoir fracture pressure: 3500 psig.
- 20) Maximum proposed injection operations: Volume per hour 25 bbl. Bottom Hole Pressure 2332 psig.
- 21) Detailed identification of materials to be injected, including additives: Fresh water, produced water, bactericides and other chemicals as needed to maintain water quality and improve oil recovery.
- 22) Filters (if any): Cartridge filters and/or coal bed filters
- 23) Specifications for cathodic protection and other corrosion control: _____

24) CASING AND TUBING PROGRAM:

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS	PACKERS
	Size	Grade	Weight	New	Used	For Drilling	Left in Well		
Conductor									Kinds
Fresh Water	8 5/8"	L.S.	20#	X		547	547	Cement To	
Coal								Surface	Sizes
Intermediate									
Production Tubing	4 1/2"	J-55	10.5#	X		3297	3297	Cement Over	Depths Set
Liners								Salt Sand	
									Perforations
									Top Bottom

25) APPLICANTS OPERATING RIGHTS were acquired from Martha E. Elder et al.
 by Deed _____ Lease Other Contract _____ Dated July 9, 1993 of record in the
Tyler County Clerk's Office in Deed Book 305 Page 131

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1655-LI

August 22, 1996 19
Date

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. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and (if required) construction and reclamation plan, subject to any modifications and conditions specified below.

Permit expires 8-22-98 unless well work is commenced prior to that date and prosecuted with due diligence

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <i>AS</i>	Casing: <i>IG</i>	Fee: <i>CK#</i>
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0301420899
Michael D. Lewis
CHIEF, OFFICE OF OIL AND GAS

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

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

OFFICE USE ONLY

This part of Form IV-3(b) is to record the dates of certain occurrences and any follow-up inspections.

	Date	Follow-up inspection(s)	Date(s)
Application received			
Well work started		
Total depth reached		
Well Record received		
Reclamation completed		

OTHER INSPECTIONS

Reason: _____

Reason: _____