

# FREEMAN LEASE

## 71± ACRES

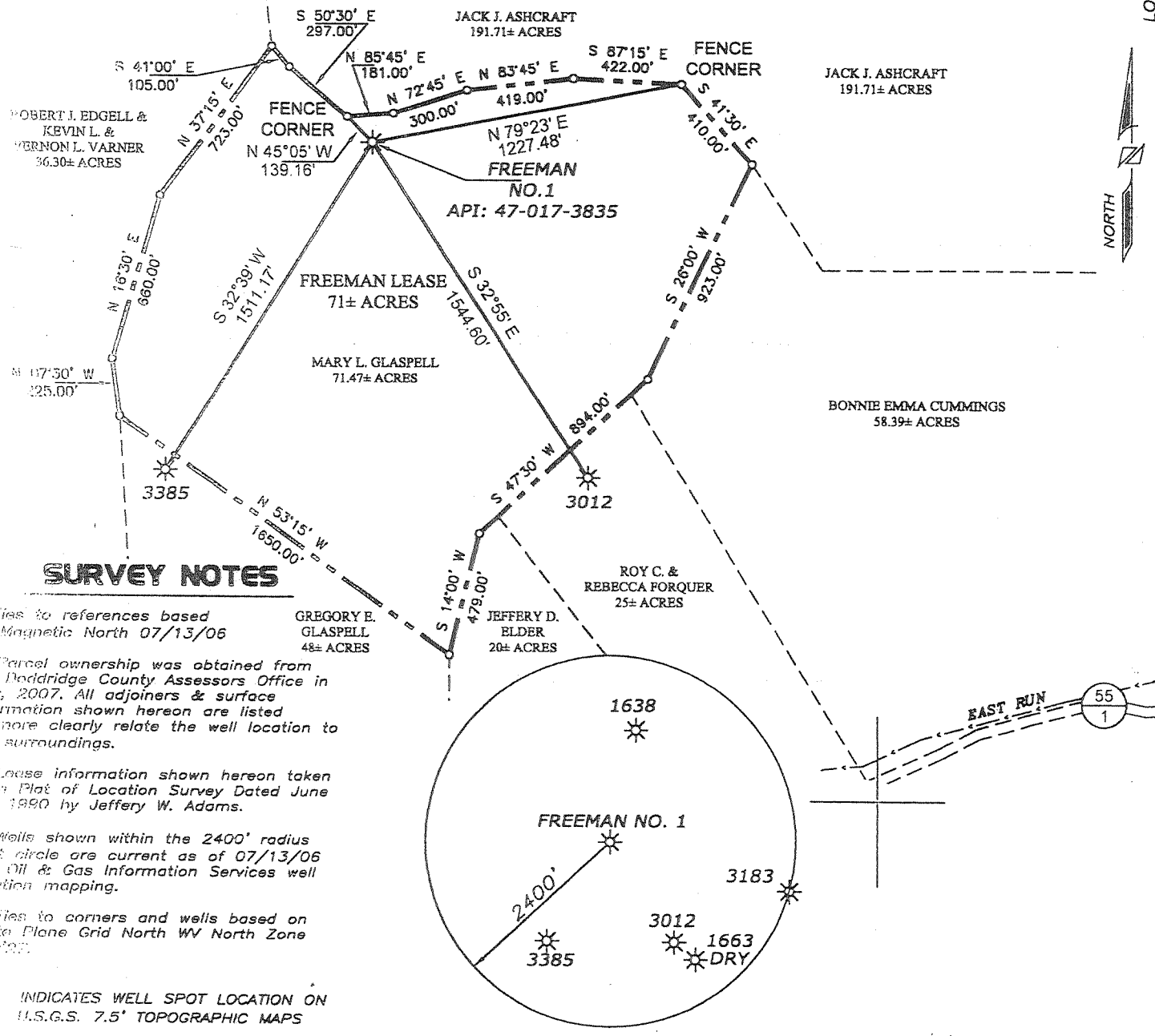
### FREEMAN NO. 1

3,630'  
LAT. 39° 25' 00"

47-017-3835  
STATE PLANE  
COORDINATES  
(N) 323,074  
(E) 1,690,146

47-017-3835  
GEOGRAPHIC  
COORDINATES  
(LAT) 39.381839  
(LON) 80.596212

LONG. 80° 35' 00"



#### SURVEY NOTES

- Ties to references based on Magnetic North 07/13/06
  - Parcel ownership was obtained from the Doddridge County Assessors Office in July, 2007. All adjoiners & surface information shown hereon are listed in more clearly relate the well location to it's surroundings.
  - Lease information shown hereon taken from Plat of Location Survey Dated June 22, 1890 by Jeffery W. Adams.
  - Wells shown within the 2400' radius spot circle are current as of 07/13/06 per Oil & Gas Information Services well location mapping.
  - Ties to corners and wells based on State Plane Grid North WV North Zone NAD'83.
- INDICATES WELL SPOT LOCATION ON U.S.G.S. 7.5' TOPOGRAPHIC MAPS

R022UN W2280.12 File: W2280\_12\_P1

**R. D. ZANDE & ASSOCIATES, INC.**  
1 Moore Avenue  
Buckhannon, WV 26201  
(304) 472-7140

DATE JULY 14, 2007  
SCALE 1" = 600' ACCURACY 1 / 2500  
OPERATORS FREEMAN NO. 1  
WELL No. 47 - 017 - 3835 - F  
API No. \_\_\_\_\_

TYPE OF WELL:

PRODUCTION  STORAGE  \*DEEP  \*SHALLOW

PROPOSED WORK ON LOCATION:  
 Drill  Drill Deeper  Redrill  Convert   
 Fracture / Stimulate  \*Plug off to Formation   
 Perforate New Formation  Plug and Abandon   
 Clean / Replug  Other Than Above   
 If "Other" Please see Details below \_\_\_\_\_  
 DETAILS OF PROPOSED WORK \_\_\_\_\_  
 TARGET FORMATION GORDON & 4TH SAND  
 ESTIMATED DEPTH 2,925' - 3,024'

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 rules issued and prescribed by the Division of Environmental Protection.

**JASON H. LITTLER**  
LICENSED  
No. 2139  
7/18/07  
STATE OF WEST VIRGINIA  
PROFESSIONAL SURVEYOR  
P.S. #2139

*Jason H. Littler*  
07/14/07

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

WELL AREA & LOCATION INFORMATION:  
 ELEVATION SOURCE DGPS SEP 07 2007  
 WATERSHED ROBINSON FORK  
 ELEVATION 1,305' DISTRICT McCLELLAN  
 COUNTY DODDRIDGE TOPO QUAD FOLSOM 7.5'  
 SURFACE OWNER MARY L. GLASPELL  
 ACREAGE 71.47±  
 ROYALTY OWNER PATRICK FREEMAN ET UX  
 LEASE ACREAGE 71±

WELL OPERATOR PETROLEUM DEVELOPMENT CORP.  
 ADDRESS P.O. BOX 26  
BRIDGEPORT, WV 26330

COMPANY AGENT ALAN SMITH  
 ADDRESS P.O. BOX 26  
BRIDGEPORT, WV 26330

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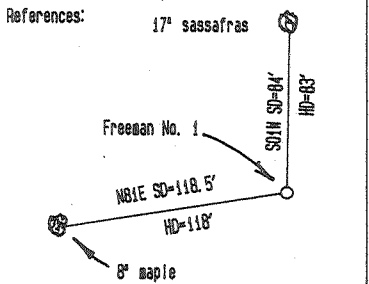
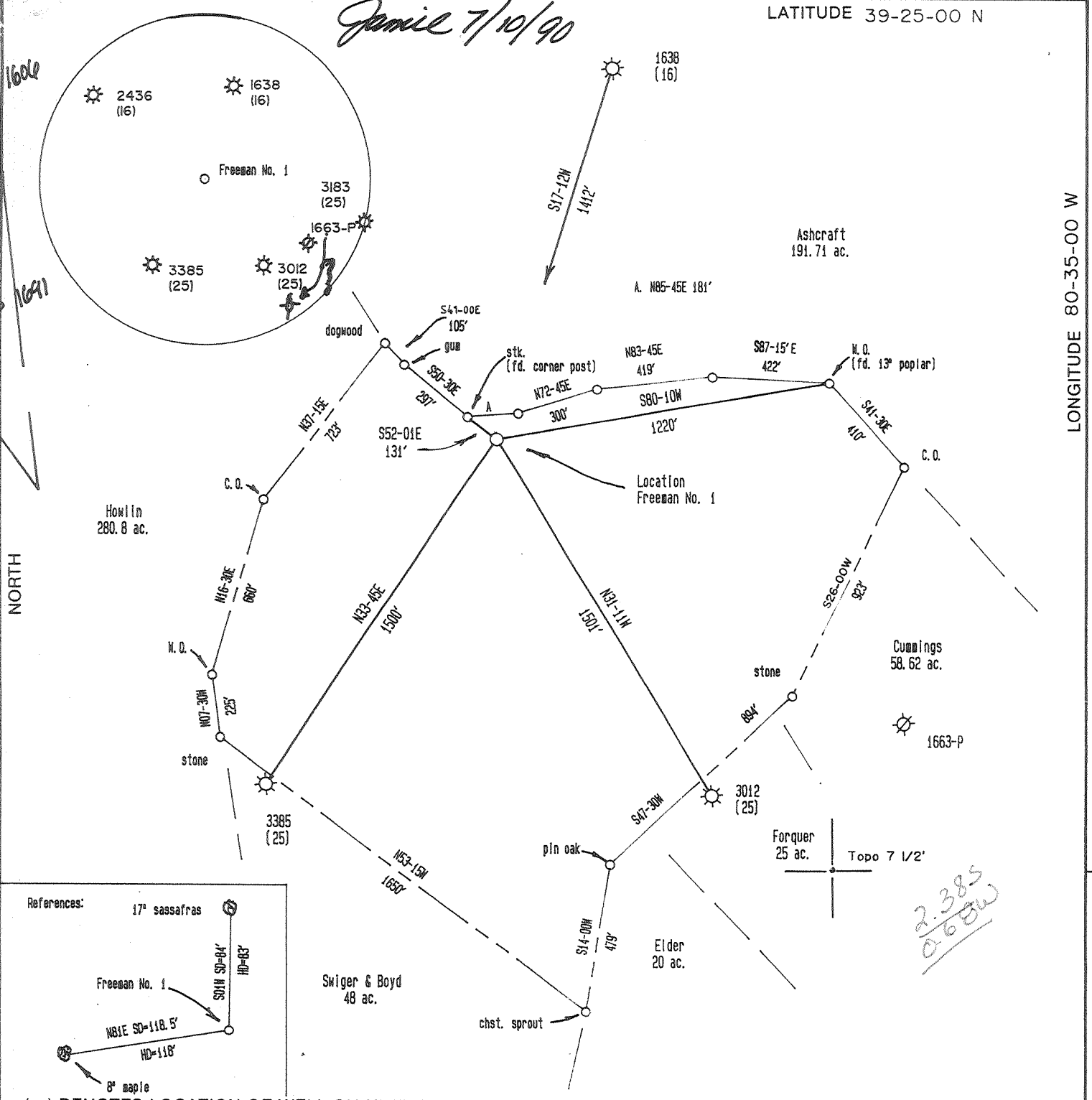
June 7/10/90

LATITUDE 39-25-00 N

3,700'

LONGITUDE 80-35-00 W

12,700'



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

FILE NO. \_\_\_\_\_  
 DRAWING NO. 1  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION Spot Elev. 2400' SE of location. Elev: 1425'

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 ENERGY.  
 (SIGNED) Jeffrey A. Adams  
 R.P.E. \_\_\_\_\_ L.L.S. 791

PLACE SEAL HERE

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENERGY**  
**DIVISION OF OIL AND GAS**



DATE June 22, 19 90  
 OPERATOR'S WELL NO. Freeman No. 1  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

LOCATION: ELEVATION 1281' WATER SHED Robinson Fork  
 DISTRICT McClellan 5 COUNTY Doddridge

QUADRANGLE Folsom 7 1/2' Centerpoint 15' C  
 SURFACE OWNER Michael S. Boord ACREAGE 71.47

OIL & GAS ROYALTY OWNER Patrick Freeman, et. ux. LEASE ACREAGE 71  
 LEASE NO. 434300

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 Benson ESTIMATED DEPTH 5000'  
 WELL OPERATOR Petroleum Development Corp. 687 DESIGNATED AGENT Eric R. Stearns JUL 16 1990  
 ADDRESS P.O. Box 26, Bridgeport, WV 26330 ADDRESS P.O. Box 26, Bridgeport, WV 26330

COUNTY NAME

PERMIT

6-6 Smithton-Flint-Sedalia (099)

FORM WV-6 068277

WR-35  
Rev (5-01)

DATE: 04/01/08  
API #:47-01703835

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Glasspell, Mary L. Operator Well No.: Freeman 1

LOCATION: Elevation: 1305' Quadrangle: Folsom 7.5'

District: MCCLELLAN County: DODDRIDGE  
Latitude: 12700 Feet South of 39 Deg. 25 Min. 0 Sec.  
Longitude 3700 Feet West of 80 Deg. 35 Min. 0 Sec.

Company: Petroleum Development Corporation

Address: <u>120 Genesis Boulevard</u>
<u>Bridgeport, WV 26330</u>
Agent: <u>Alan H. Smith</u>
Inspector: <u>Bill Harfield</u>
Date Permit Issued: <u>09/04/2007</u>
Date Well Work Commenced: <u>12/07/07</u>
Date Well Work Completed: <u>12/10/07</u>
Verbal Plugging:
Date Permission granted on:
Rotary <u>X</u> Cable <u>        </u> Rig <u>        </u>
Total Depth (feet): <u>5490'</u>
Fresh Water Depth (ft.): <u>1095'; 1730'</u>
Salt Water Depth (ft.):
Is coal being mined in area (N/Y)? <u>N</u>
Coal Depths (ft.): <u>463-466; 605-609; 620-623;</u>
<u>641-644; 693-697; 883-891</u>

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	34'	34'	
8 5/8"	1465'	1465'	355 sk5
4 1/2"	5418'	5418'	447 sks

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 5302-5305  
 Gas: Initial open flow          MCF/d Oil: Initial open flow          Bbl/d  
 Final open flow 462 MCF/d Final open flow          Bbl/d  
 Time of open flow between initial and final tests          Hours  
 Static rock pressure 1300 psig (surface pressure) after 72 Hours

Second producing formation Gordon Pay zone depth (ft) 2924-47'  
 Gas: Initial open flow 46 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 25# psig (surface pressure) after 72 Hours

Third producing formation 4<sup>th</sup> Sand Pay zone depth (ft) 3014-24'  
 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 Comm. 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

6-6 (99)

JUN 06 2008

Dodd, 3835

LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS,  
INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: \_\_\_\_\_

By: Alan H. Smith

Date: 04/01/08

Freeman #1

STAGE	FORMATION	PERFS	80/100 SKS	20/40 SKS	ACID GAL	N2 (MCF)
1ST	Benson	13 (5302-5305)	100	450	500	70

W E L L L O G

FORMATION	TOP FEET	BOTTOM FEET	REMARKS: FRESH & SALT WATER, COAL, OIL & GAS
KB - GL	0	10	
sand, shale, RR	10	2163	
Big Lime	2163	2244	1/2" stream H2O @ 1095'
Keener	2244	2274	3/4" stream H2O @ 1730'
sand, shale	2274	2279	Coal 463-466; 605-609
Big Injun	2279	2346	Coal 620-623; 641-644
sand, shale	2346	2916	Coal 693-697; 883-891
Gordon	2916	2948	
sand, shale	2948	3014	
4th	3014	3025	gas chk @ 3013' 12/10-1/4"H2O
sand, shale	3025	3636	
Speechley	3636	3834	
sand, shale	3834	3859	
Balltown	3859	4408	gas chk @ 4220' 10/10-1/4" H2
sand, shale	4408	4499	gas chk @ 4400' 10/10-1/4" H2
Bradford	4499	4667	
sand, shale	4667	5192	gas chk @ 4842' 10/10-1" H2O
Riley	5192	5216	
sand, shale	5216	5275	gas chk @ 5250' 10/10-1" H2O
Benson	5275	5318	gas chk @ 5309' 4/10-1/4" H2O
sand, shale	5318	5494	
	5494	5494	Driller TD
		5490	Logger TD

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: BOORD, MICHAEL S.

Operator Well No.: PAT FREEMAN 1

LOCATION: Elevation: 1281.00    Quadrangle: FOLSOM

District: MCCLELLAN

County: DODDRIDGE

Latitude: 12700 Feet South of 39    Deg. 25Min. 0    Sec.

Longitude 3700 Feet West of 80    Deg. 35 Min. 0    Sec.

Company: PETROLEUM DEVELOPMENT COR  
P. O. BOX 26  
BRIDGEPORT, WV 26330-0026

Agent: ERIC R. STEARNS

Inspector: MIKE UNDERWOOD

Permit Issued: 07/12/90

Well work Commenced: 10/12/90

Well work Completed: 10/19/90

Verbal Plugging

Permission granted on: \_\_\_\_\_

Rotary x Cable \_\_\_\_\_ Rig

Total Depth (feet) 5490'

Fresh water depths (ft) \_\_\_\_\_

1095'; 1730'

Salt water depths (ft) \_\_\_\_\_

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	34'	34'	
8 5/8"	1465'	1465'	355 sk5
4 1/2"	5418'	5418'	447 sks

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

Coal Depths (ft): 463-466; 605-609; 620-623;  
641-644; 693-697; 883-891

OPEN FLOW DATA

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 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

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For: Eric R. Stearns  
PETROLEUM DEVELOPMENT CORP.

By: Eric R. Stearns

Date: November 15, 1990

NOV 16 1990

Freeman #1

STAGE	FORMATION	PERFS	80/100 SKS	20/40 SKS	ACID GAL	N2 (MCF)
1ST	Benson	13 (5302-5305)	100	450	500	70

W E L L L O G

FORMATION	TOP FEET	BOTTOM FEET	REMARKS: FRESH & SALT WATER, COAL, OIL & GAS
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	5494	5494	Driller TD
		5490	Logger TD

017-3835

Issued 07/12/90

Expires 07/12/92 Page \_\_\_ of \_\_\_

FORM WW-2B

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: Petroleum Development Corporation 38200 (5) 349
- 2) Operator's Well Number: Patrick Freeman #1 3) Elevation: 1281'
- 4) Well type: (a) Oil    / or Gas XX  
(b) If Gas: Production XX / Underground Storage    /  
Deep    / Shallow XX /
- 5) Proposed Target Formation(s): Benson
- 6) Proposed Total Depth: 5000 feet
- 7) Approximate fresh water strata depths: 30, 98, 420, 414'
- 8) Approximate salt water depths: 1680 OK
- 9) Approximate coal seam depths: 380, 616, 695, 900 616'-619', 692'-696'
- 10) Does land contain coal seams tributary to active mine? Yes    / No XX /
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	11 3/4	H-40	42	30	----	----
Fresh Water						
Coal						
Intermediate	8 5/8	J-55	20/23	1450	1450	NEAT C.T.S.
Production	4 1/2	J-55	10.5	5000	5000	450 sks
Tubing						
Liners						

*Handwritten notes:*  
38200-11.3  
38200-11.2  
38200-11.1

RECEIVED  
DIVISION OF ENERGY  
JUN 27 90  
Permitting  
Oil and Gas Section

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

For Division of Oil and Gas Use Only

856202  
17

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond Blanket one  Agent  
(Type)

017-3835  
Issued 07/12/90  
Expires 07/12/92 Page \_\_\_\_ of \_\_\_\_

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Production	4 1/2	J-55	10.5	5000	5000	450 sks
Tubing						
Liners						

38CS178-11.3  
38CS184-2  
38CS181-1  
RECEIVED  
Division of Energy  
JUN 27 90  
Permitting  
Oil and Gas Section

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

856202  
17

For Division of Oil and Gas Use Only

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