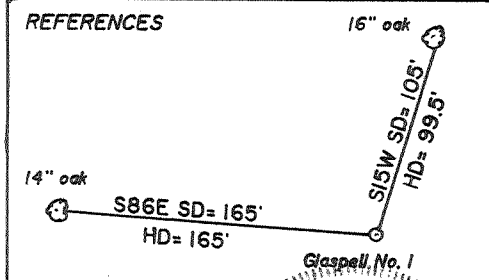
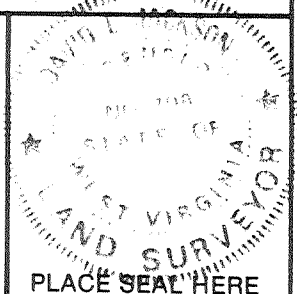


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS



FILE NO. \_\_\_\_\_  
 DRAWING NO. 1  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION Spot elev. 2020' SW of Location: elev. 1345

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) David L. Jackson  
 R.P.E. \_\_\_\_\_ L.L.S. 708



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



DATE September 20, 19 91  
 OPERATOR'S WELL NO. Glaspell No. 1  
 API WELL NO. \_\_\_\_\_

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

LOCATION: ELEVATION 1215 WATER SHED Little Battle Run  
 DISTRICT McClellan 5 COUNTY Doddridge  
 QUADRANGLE Center Point 7 1/2'

SURFACE OWNER Ingrid Arrigo - Grenon ACREAGE 63.25  
 OIL & GAS ROYALTY OWNER Arby E. Glaspell et al LEASE ACREAGE 64.25  
 LEASE NO. 451500

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. DESIGNATED AGENT Eric R. Stearns  
 ADDRESS P.O. Box 26, Bridgeport, WV 26330 ADDRESS P.O. Box 26, Bridgeport, WV 26330

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

Reviewed TMB  
Recorded \_\_\_\_\_

Well Operator's Report of Well Work

Farm name: HODGES, JOSEPH H BISHOP Operator Well No.: GLASPELL 1

LOCATION: Elevation: 1215.00 Quadrangle: CENTER POINT

District: MCCLELLAN County: DODDRIDGE  
Latitude: 12120 Feet South of 39 Deg. 25Min. 0 Sec.  
Longitude 6275 Feet West of 80 Deg. 37 Min. 30 Sec.

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

Agent: ERIC R. STEARNS

Inspector: MIKE UNDERWOOD  
Permit Issued: 10/18/91  
Well work Commenced: 10/27/91  
Well work Completed: 11/02/91  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary x Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5424  
Fresh water depths (ft) \_\_\_\_\_  
60: 956  
Salt water depths (ft) \_\_\_\_\_  
n/a  
Is coal being mined in area (Y/N)? N  
Coal Depths (ft): 280-284

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4	221	221	230
8 5/8	1862	1862	425
4 1/2	5397	5397	537

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 5304-5305  
Gas: Initial open flow 179 MCF/d Oil: Initial open flow 0 Bbl/c  
Final open flow 232 MCF/d Final open flow 0 Bbl/c  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 1200 psig (surface pressure) after 72 Hours

Second producing formation Big Injun Pay zone depth (ft) 2307-2313  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/c  
Final open flow co-mingled MCF/d Final open flow \_\_\_\_\_ Bbl/c  
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.

Eric R. Stearns  
For: PETROLEUM DEVELOPMENT CORP.

By: Eric R. Stearns  
Date: November 26, 1991

DEC 13 1991

Glasspell #1

STAGE	FORMATION	PERFS	80/100 SKS	20/40 SKS	ACID GAL	N2 (MCF)
1ST	Benson	10(5304-5305)	100	450	500	77
2ND	Big Injun	13(2307-2313)	100	450	750	45

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	2134	
Little Lime	2134	2155	1/2" stream H2O @ 60'
sand, shale	2155	2176	1/4" stream H2O @ 956'
Big Lime	2176	2291	
Big Injun	2291	2391	Coal 280-284
sand, shale	2391	2757	gas chk @ 2499' 34/10-2"H2O
Gantz	2757	2778	
sand, shale	2778	2956	gas chk @ 2810' 26/10-2"H2O
Gordon	2956	2980	
sand, shale	2980	3669	gas chk @ 2997' 42/10-2"H2O
Speechley	3669	4245	gas chk @ 3090' 42/10-2"H2O
sand, shale	4245	4328	gas chk @ 3999' 20/10-2"H2O
Balltown	4328	4636	gas chk @ 4402' 24/10-2"H2O
sand, shale	4636	4677	
Bradford	4677	4841	gas chk @ 4839' 24/10-2"H2O
sand, shale	4841	4932	
Riley	4932	5245	gas chk @ 4996' 10/10-2"H2O
sand, shale	5245	5300	gas chk @ 5246' 18/10-2"H2O
Benson	5300	5370	
sand, shale	5370	5436	
	5436	5436	Driller TD
		5424	Logger TD

017-3711  
 Issued 10/18/91  
 Page \_\_\_ of \_\_\_  
 Expired 10/18/93

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

- 1) Well Operator: Petroleum Development Corporation 38200(5) 286  
687
- 2) Operator's Well Number: Glaspell #1 3) Elevation: 1215'
- 4) Well type: (a) Oil \_\_\_ / or Gas x /  
 (b) If Gas: Production x / Underground Storage x /  
 Deep \_\_\_ / Shallow \_\_\_
- 5) Proposed Target Formation(s): Alexander Sand  
439
- 6) Proposed Total Depth: 5500 feet 230, 995, 1603
- 7) Approximate fresh water strata depths: None reported
- 8) Approximate salt water depths: 355, 797, 1495
- 9) Approximate coal seam depths: \_\_\_\_\_
- 10) Does land contain coal seams tributary to active mine? Yes \_\_\_ / No x
- 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	Fill-up (cu. ft.)
Conductor	11 3/4	H-40	42	30	180'	
Fresh Water						
Coal						
Intermediate	8 5/8	H-42	20#	1850'	1850' 1400' MAX	Neat CTS
Production	4 1/2	J-55	10.5	5500	5500	400 sks
Tubing						
Liners						

**RECEIVED**  
 Division of Energy

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

OCT 02 91

For Division of Oil and Gas Use Only Oil and Gas Section

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

13023

0861254

1) Date: September 25, 1991  
2) Operator's well number  
Glaspell #1  
3) API Well No: 47 - 017 - 3917  
State - County - Permit

**RECEIVED**  
Division of Energy

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

OCT 02 91

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

Permitting  
Oil and Gas Section

BERNARD W. SCHMITT  
4) Surface Owner(s) to be served:  
(a) Name Joseph H. Hodges, Bishop  
Address Chancery Office, Box 230  
Wheeling, WV 26003 1 ACRE  
(b) Name Ingrid Arrigo - Grenon  
Address 38 Summer Street  
Franklin, MA 02038 0.32 ACRE  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Mike Underwood  
Address Rt. 2, Box 135  
Salem, WV 26426  
Telephone (304)- 782-1043

5) (a) Coal Operator:  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name Arby Glaspell  
Address C.P. Star Route  
West Union, WV 26456  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR

XX Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

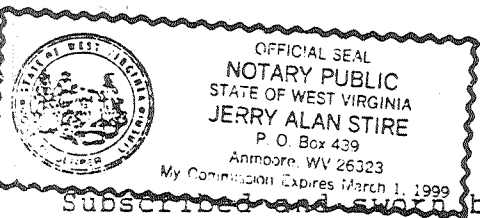
- \_\_\_\_\_ Personal Service (Affidavit attached)
- XX Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Petroleum Development Corporation  
By: [Signature]  
Its: \_\_\_\_\_ Geologist  
Address \_\_\_\_\_ P.O. Box 26  
\_\_\_\_\_ Bridgeport, WV 26330  
Telephone \_\_\_\_\_ 204-842-6256



Subscribed and sworn to before me this 30th day of September, 1991

Jerry A. Stire Notary Public  
My commission expires March 1, 1999