

# KANAWHA VALLEY BANK LEASE

## 5,626 ACRES± WELL NO. WV 508286

PATRICIA A. FORD ET AL  
1,637.149 AC.± (SURFACE)  
KANAWHA VALLEY BANK  
LEASE  
5,626 AC.±

PATRICIA A. FORD ET AL

LEASE DESC. CALL  
S 32° W 9,652.5'

PENN VIRGINIA  
OPERATING  
COMPANY, LLC  
(SURFACE)  
CARBON FUEL/  
BEDFORD LAND  
LEASE  
8,406 AC.±

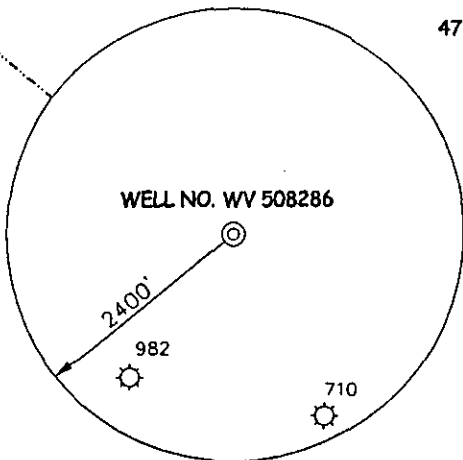
WELL NO.  
WV 508286  
STATE PLANE  
COORDINATES  
(N) 349,824  
(E) 1,884,364

WELL NO.  
WV 508286

NORTH

LONGITUDE 81°27'30"

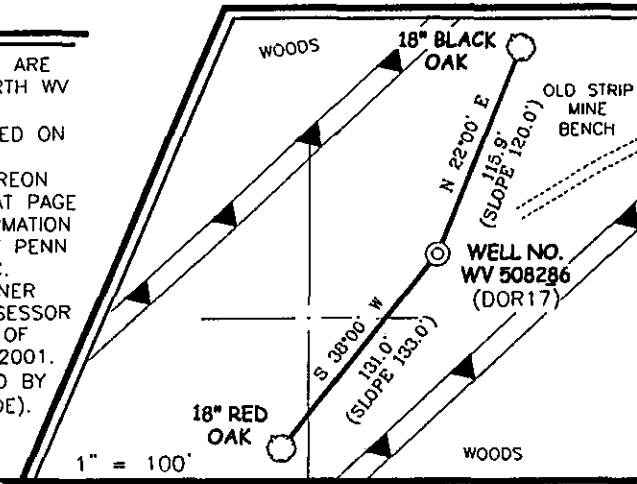
14,600'



### NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 1-14-02.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A LEASE BOOK 140 AT PAGE 465 ALONG WITH MAPS AND INFORMATION PROVIDED BY GARY PERSINGER OF PENN VIRGINIA OPERATING CO., LLC.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF KANAWHA COUNTY IN DECEMBER 2001.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

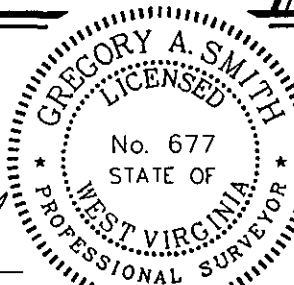
### REFERENCES



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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677

*Gregory A. Smith*



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

DATE FEBRUARY 5, 20 02

OPERATORS WELL NO. WV 508286

API WELL NO. 47-81-01262  
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 4677P508286(111-64)

PROVEN SOURCE OF ELEVATION BENCHMARK ELEVATION=984' SCALE 1"=2000'

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



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

LOCATION : ELEVATION 1,475' WATERSHED CLEAR FORK DISTRICT CLEAR FORK COUNTY RALEIGH QUADRANGLE DOROTHY 7.5'

SURFACE OWNER PATRICIA A. FORD ET AL ACREAGE 1,637.149 ROYALTY OWNER PATRICIA A. FORD ET AL LEASE ACREAGE 5,626

PROPOSED WORK : LEASE NO. 010306

DRILL  CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_ OTHER \_\_\_

PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 6,180' 500'

WELL OPERATOR EQUITABLE PRODUCTION COMPANY DESIGNATED AGENT STEPHEN G. PERDUE  
ADDRESS P.O. BOX 2347, CHARLESTON, WV 25328 ADDRESS P.O. BOX 2347, CHARLESTON, WV 25328

(Burner (1262))

MAR 29 2002

COUNTY NAME RAL

PERMIT 1262

LAT. 37°57'35.2"

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

*MB*

Well Operator's Report of Well Work

Farm Name: Ford, Patricia A., etal Operator Well No.: 508286

LOCATION: Elevation: 1475' Quadrangle: Dorothy

District: Clear Fork County: Raleigh

Latitude: 14600 Feet South of 38 Deg. 0 0  
Longitude: 3500 Feet West of 81 Deg. 27 30

Company: Equitable Production Company  
1710 Pennsylvania Avenue  
Charleston, WV 25328

Agent: Steve Perdue

Inspector: Ofie Helmick

Permit Issued: 3/26/2002

Well work commenced: 05/12/03

Well work completed: 06/16/03

Verbal Plugging

Permission granted on:

Rotary Rig X Cable Rig

Total Depth 5180 feet

Fresh water depths (ft) 40'

Salt water depths (ft) 1350'

Casing & Tubing Size	Used In Drilling	Left in Well	Cement Fill Up Cu. Ft.
13 3/8"	32'	32'	grouted
9 5/8"	828'	828'	375.3 ft³
7"	1743'	1743'	379.95 ft³
4 1/2"	5178.85'	5178.85'	533.2 ft³
2 3/8"		5085'	

Is coal being mined in area?

Coal Depths (ft): 96'-99'; 107'-110'; 133'-137'; 236'-240'; 440'-443'

OPEN FLOW DATA

Producing formation Lower Shale; Upper Shale; Gordon; Upper Weir Pay Zone Depth (ft): See Attach for details

Gas: Initial open flow 0 MCF/d Oil: Initial open flow          Bbl/d

Final open flow: 724 MCF/d Final open flow:         

Time of open flow between initial and final tests          Hours

Static rock pressure 465 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:         

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

RECEIVED  
Office of Oil & Gas  
Office of Chief  
OCT 21 2003  
WV Department of  
Environmental Protection

Kathy L. Lawrence  
For: Equitable Production Company

By:           
Date: 10/16/03

RAL 1262

NOV 14 2003

**EQUITABLE PRODUCTION COMPANY  
WR-35 COMPLETION REPORT - Attachment  
Well Treatment Summary**

Well: WV-508286-KVB

API# 47-081-01262

Date	06/06/03	06/06/03	06/06/03	06/06/03		
Type Frac Acid, N <sub>2</sub> , Foam, Water	N <sup>2</sup>	N <sup>2</sup>	85-80-75 Q Foam	85-80-75 Q Foam		
Zone Treated	Lower Shale	Upper Shale	Gordon	Upper Weir		
# Perfs	30	40	21	21		
From - To:	4596' - 5152'	3568' - 4484'	3414' - 3424'	2759' - 2769'		
BD Pressure @ psi	3200	2850	150	695		
ATP psi	2262	2500	1845	1905		
Avg. Rate, B=B/M, S= SCF/M	51,500 S	50,266 S	28 B (foam)	32 B (foam)		
Max. Treat Press psi	3200	2850	1920	2120		
ISIP psi	2440	1635	0	105		
Frac Gradient	.59	.47	.43	.47		
10 min S-I Pressure	1740 (5 min)	1585 (5 min)		1060		
Material Volume						
Sand-sks			306	402		
Water-bbl	65		233	138		
SCF N <sub>2</sub>	783,844	781,841	274,480	351,682		
Acid-gal	750 gal 7 ½%	672 gal 7 ½%	500 gal 15.2%	500 gal 14.8%		
NOTES:						

TOP	BOTTOM	FORMATION	REMARKS
		Coal	96'-99'; 107'-110'; 133'-137'; 236'-240'; 440'-443' Water @ 40' & 1350'
2268'	2294'	Lower Maxton	GT @ 2033', 2189' = NS
2321'	2377'	Little Lime	
2398'	2700'	Big Lime	GT @ 2408', 2628' = NS
2744'	2777'	Upper Weir	GT @ 2753' = NS
2948'	2960'	Lower Weir	GT @ 2909' = odor
3183'	3198'	Sunbury	GT @ 3251' = odor
3198'	3244'	Berea	GT @ 3409' = NS
3412'	3428'	Gordon	GT @ 3725' = NS
4307'	5052'	Lower Huron	GT @ 4041', 4291' = NS
5052'		Java	GT @ 5180' = NS
	5180'	TD	GT @ DC = odor