

KANAWHA VALLEY BANK LEASE

5,626 ACRES ± WELL NO. WV 508304

PATRICIA A. FORD ET AL
2,954.59 AC. (SURFACE)

LATITUDE 38°00'00"

LONGITUDE 81°25'00"

PENN VIRGINIA OPERATING COMPANY, LLC
47-039-3637

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

WELL NO. WV 508304
STATE PLANE COORDINATES

(N) 353,492
(E) 1,871,192

47-081-0342

WELL NO. WV 508304

LEASE DESC. CALL
S 32° W 9,652.5'

1800.081

2161.14'

4886.96'

5618.86' E

N 35°33'30" E

1,580.94'

N 30°33'00" W

499.77'

S 36°45'00" E

1,048.00'

N 62°22'00" E

507.22'

41°43'00" E

70 ACRES TCT.

KANAWHA COUNTY
RALEIGH COUNTY

47-081-626

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

LEASE DESCRIPTION CALLS FOR RUNNING WITH CLEAR FORK

IRON ROD IN CONCRETE (FOUND)

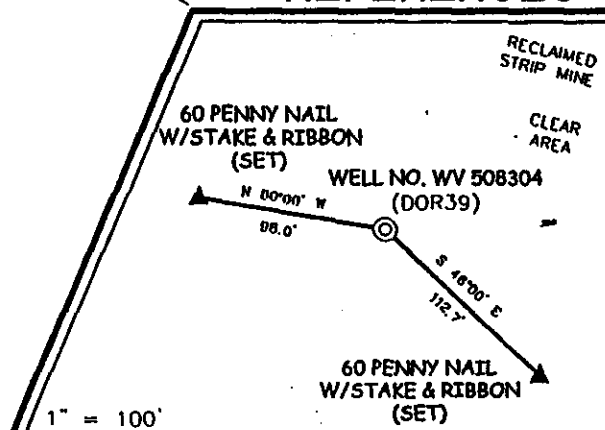
47-081-0645

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 12/31/01.
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).



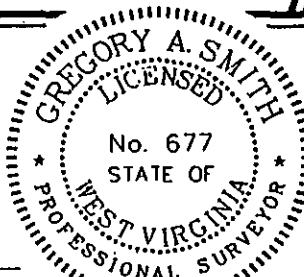
REFERENCES



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 28, 20 02

OPERATORS WELL NO. WV 508304

API WELL NO. 47 - 81 - 01266
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 4677P508304(111-60)
PROVEN SOURCE OF ELEVATION ELK RUN COAL CO. CONTROL PT. LEI ELEV. 1,403.7'
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 2,357' WATERSHED LAUREL BRANCH OF 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 7,000' 6005'

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

6-6 262

APR 5 2002

COUNTY NAME RAL PERMIT 1266

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

Reviewed ARB

Well Operator's Report of Well Work

Farm Name: Ford, Patricia A., Etal Operator Well No.: 508304

LOCATION: Elevation: 2357' Quadrangle: Dorothy
District: Clear Fork County: Raleigh

Latitude: 10,930 Feet South of 38 Deg. 0 0
Longitude: 8680 Feet West of 81 Deg. 25 0

RECEIVED
Office of Oil & Gas
Permitting
JUL 08 2002
WV Department of
Environmental Protection

Company: Equitable Production Company
P.O. Box 2347, 1710 Pennsylvania Avenue
Charleston, WV 25328

Agent: Stephen G. Perdue

Inspector: Ofie Helmick
Permit issued: 4/1/2002
Well work commenced: 04/09/02
Well work completed: 05/02/02

Verbal Plugging Permission granted on: _____

Rotary Rig X Cable Rig _____

Total Depth 6005 feet _____

Fresh water depths (ft) _____

Salt water depths (ft) _____

Is coal being mined in area? _____

Coal Depths (ft): _____

Open Hole 330'-335'; 815'-820';

OPEN FLOW DATA

Producing formation	Lower Shale; Upper Shale; Weir	Pay Zone Depth (ft):	See Attach for details
Gas: Initial open flow	<u>0</u> MCF/d	Oil: Initial open flow	_____ Bbl/d
Final open flow:	<u>1040</u> MCF/d	Final open flow:	_____
Time of open flow between initial and final tests	_____	Hours	_____
Static rock pressure	<u>606</u> 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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	30'	60'	
9 5/8"	1423'	1423'	514.3 ft³
7"	3030'	3030'	597.5 ft³
4 1/2"	6008.6'	6008.6'	396.8 ft³

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.

Kathy L. Conway
For: Equitable Production Company

By: Mark A. Davis
Date: 6/17/02

RAL 1266

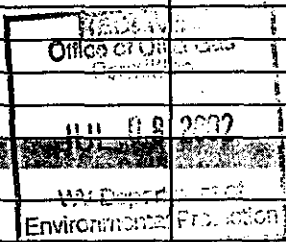
AUG 2 2002

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

Well: WV-508304-Kanawha Valley Bank

API# 47-081-01266

Date	04/25/02	04/25/02	04/25/02			
Type Frac:	N ²	N ²	Foam			
Acid, N ₂ , Foam, Water						
Zone Treated	Lower Devonian	Upper Devonian	Weir			
# Perfs	50	50	27			
From - To:	5227' - 5985'	4036' - 4776'	3645' - 3694'			
BD Pressure @ psi	3250	2790	2180			
ATP psi	3185	2440	2945			
Avg. Rate, B=B/M, S= SCF/M	55,770 S	55,450 S	32 B (foam)			
Max. Treat Press psi	3240	2540	3500			
ISIP psi	2340	1740	1550			
Frac Gradient	.41	.39	.50			
10 min S-I Pressure	1890	1470	1420			
Material Volume						
Sand-sks			726			
Water-bbl			223			
SCF N ₂	1,050,300	1,044,600	892,715			
Acid-gal	750 gal 7 ½%	750 gal 7 ½%	500 gal 15%			
NOTES:						



TOP	BOTTOM	FORMATION	REMARKS
	2196	SALT SAND:	GT @ 2911' = NS
		LOWER	GT @ 3103' = NS
3084	3110	MAXTON:	
3149	3216	LITTLE LIME:	
3235	3518	BIG LIME:	GT @ 3260' & 3418' = NS
3643	3656	UPPER WEIR:	GT @ 3576' = NS
3664	3694	MIDDLE WEIR:	GT @ 3701' = NS
3774	3783	LOWER WEIR:	GT @ 3922' = NS
4016	4034	SUNBURY:	GT @ 4111' = NS
4034	4077	BEREA:	GT @ 4300' = NS
4330	4344	GORDON:	GT @ 4615' = NS
5226	5986	LOWER HURON:	GT @ 4925' = odor
		LOWER HURON	GT @ 5209' = odor
5252	5281	SILTSTONE:	
5986		JAVA:	GT @ 5520' = odor
6026		TD	