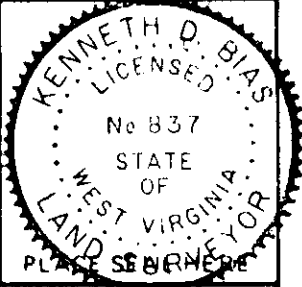


FILE NO K.D.B. 2-R
 DRAWING NO _____
 SCALE 1" = 6000'
 MINIMUM DEGREE OF ACCURACY 1:2500'
 PROVEN SOURCE OF ELEVATION PG. 66 EL. 1596.91 PEABODY COAL CO. DATUM IN HAZY CK.

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) Kenneth D. Bias
 RPE _____ LLS 837



INDICATES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV 6

DATE JANUARY, 26 1989

OPERATOR'S WELL NO R.L.G.A-61

API WELL NO GW-2013

47 005 1501

STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 DEPTH: GAS PRODUCTION STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 2485.47 WATER SHED MATTS CK.-WEST FORK- POND FORK- LITTLE COAL
 DISTRICT CROOK COUNTY BOONE
 QUADRANGLE PILOT KNOB 547 006 & Bald Knob EC
 SURFACE OWNER ROWLANDS LANDS CO. ACREAGE Plg 47,340.87
 REVENUE ROYALTY OWNER ROWLAND LAND CO. LEASE ACREAGE 693.579
 LEASE NO WV-389

FRAC. WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE TO WELL SPECIFY _____

PROV. AND BRANDS: _____ CLEAN OUT AND REPLUG _____

TARGET FORMATION WEIR ESTIMATED DEPTH 4225'

WELL OPERATOR OXY USA Inc. DESIGNATED AGENT DELBERT G. OLIVER FEB 24 1989

ADDRESS BOX 873 307a ADDRESS BOX 873
CHARLESTON, WV. 25323 CHARLESTON, WV 25323

6-6 unnamed (D)

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APR 04 1990

21-Feb-89
API # 47- 5-01501

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

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY Well Operator's Report of Well Work

Farm name: ROWLAND LAND COMPANY Operator Well No.: A-61 GW-2013

LOCATION: Elevation: 2483.47 Quadrangle: PILOT KNOB

District: CROOK County: BOONE
Latitude: 5150 Feet South of 37 Deg. 52Min. 30 Sec.
Longitude 7700 Feet West of 81 Deg. 32 Min. 30 Sec.

Company: OXY USA, INC.
P. O. BOX 873
CHARLESTON, WV 25323-0873

Agent: DELBERT G. OLIVER

Inspector: JERRY HOLCOMB
Permit Issued: 02/21/89
Well work Commented: 3-28-89
Well work Completed: 3-16-90
Verbal Plugging
Permission granted on: NA
Rotary X Cable Rig
Total Depth (feet) 6350'
Fresh water depths (ft) 56'; 231'; 600'

Salt water depths (ft) NONE

Is coal being mined in area (Y/N)? Y
Coal Depths (ft): 58-60'; 62-64'; 220-227'
445-465'; 590-600'; 1535-1540'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13.375"	24'	24'	Surface
9.625"	1397'	1397'	Surface
7.0"	3582'	3582'	804 Cu Ft
4.5"		6327'	466 Cu Ft

OPEN FLOW DATA

Producing formation WEIR Pay zone depth (ft) 4092'
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 3000 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 44 Hours
Static rock Pressure 630 psig (surface pressure) after 64 Hours

Second producing formation UPPER DEVONIAN SHALE Pay zone depth (ft) 5392'
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

**THE UPPER DEVONIAN SHALE HAS BEEN COMPLETED BUT IS BELOW A RETRIEVABLE BRIDGE PLUG AND WILL NOT BE PRODUCED AT THIS TIME.

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.

For: DELBERT G. OLIVER, APPALACHIAN PROJECT MANAGER
OXY USA, INC.

By: *Delbert G. Oliver*
Date: MARCH 26, 1990 APR 16 1990

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

- 1) Well Operator: OXY USA Inc. 36205, 1, 546.
- 2) Operator's Well Number: Rowland Land Co. A-61, GW 2013 3) Elevation: 2483.47'
- 4) Well type: (a) Oil or Gas
 (b) If Gas: Production Underground Storage
 Deep Shallow
- 5) Proposed Target Formation(s): Weir
- 6) Proposed Total Depth: 4225' feet
- 7) Approximate fresh water strata depths: 56', 231', 600'
- 8) Approximate salt water depths: None
- 9) Approximate coal seam depths: 2425', 2314', 2160', 2043', 1819', 1720', 1572', 1501' (Active, mined) and 1322' (Mined out).
- 10) Does land contain coal seams tributary to active mine? Yes No
- 11) Proposed Well Work:
- 12) New Drilling Well.

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	20"	H-40	94#	40'	40'	Surface
Fresh Water	9-5/8"	H-40	32#	630'	630'	Surface
Coal						38CSR18-11.3 38CSR18-11.2
Intermediate	7"	J-55	23#	1375'	1375'	Surface
Production	4-1/2"	J-55	11.6#	4225'	4225'	300 cu ft
Tubing	2-3/8"	EUE	4.7#	4205'	4205'	38CSR18-11.1
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

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For Division of Oil and Gas Use Only DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond 500000 Agent

(Type)

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FEB 17 1989

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

- 1) Date: February 10, 1989
- 2) Operator's well number
Rowland Land Co. A-61, GW 2013
- 3) API Well No: 47 - 005 - 1501
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - (a) Name Rowland Land Company
Address 1033 Quarrier St., Rm. 301
Charleston, WV 25301 Attn: David Pollitt
 - (b) Name _____
Address _____
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
 - Name Peabody Coal Company
Address P. O. Box 1233
Charleston, WV 25324 Attn: Toby Waller
 - (b) Coal Owner(s) with Declaration
Name Rowland Land Company
Address 1033 Quarrier St., Rm. 301
Charleston, WV 25301, Attn: David Pollitt
 - Name _____
Address _____
 - (c) Coal Lessee with Declaration
Name Peabody Coal Company
Address P. O. Box 1233
Charleston, WV 25324, Attn: Toby Waller
- 6) Inspector Jerry Holcomb
Address Rt 2, Box 159, Hwy #34
Hamlin, WV 25523
Telephone (304)- 824-5963

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

X 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 4 on the above named parties, by:

- X Personal Service (Affidavit attached)
- _____ 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 OXY USA Inc.
 By: Delbert G. Oliver *Delbert G. Oliver*
 Its: Appalachian Project Manager
 Address P. O. Box 873
Charleston, WV 25323
 Telephone (304) 344-8383

Subscribed and sworn before me this 10 day of February, 1989

My commission expires _____

James J. Gray
James J. Gray
1989

Commissioner
-Notary Public

DETAILS OF PERFORATED INTERVALS, FRACTURING, PHYSICAL CHANGE, ETC.:

~~WEIR~~
Upper Weir perforated 3944-3960' (17 holes);
Lower Weir perforated 4068-4078' (11 holes) & 4085-4092' (8 holes)
Frac'd with 64,300# sand, 292 BF, 475 MCF N2.

UPPER
DEVONIAN SHALE

Perforated 5343-5368' (26 holes) & 5378-5392' (15 holes)
Frac'd with 53,000# sand, 129 BF, 650 MCF N2.

Retrievable Bridge Plug set at 4150'.
Will produce only Weir at this time, will test and produce the
UDS at a later date.

WELL LOG

<u>TOP/FORMATION</u>	<u>DEPTH</u>
RAVENCLIFF SAND	2734
AVIS LIME	2866
UPPER MAXON SAND	2980
MIDDLE MAXON SAND	3022
LITTLE LIME	3426
BIG LIME	3524
BASE/BIG LIME	3852
UPPER WEIR SAND	3944
LOWER WEIR SAND	4068
DEVONIAN SHALE	4336
GORDON SAND	4535
LOWER HURON	5487
JAVA SHALE	6108
TOTAL DEPTH	6359

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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