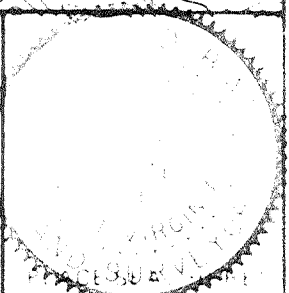


INSET  
 PEABODY COORD.  
 N: 576,349.89  
 E: 3,209,281.35  
 NAIL 20" HIC  
 ROWLAND A-50 REV.  
 NAIL 14" Pop.  
 1" = 200'

NO. 2-R  
 SCALE 1" = 1,000'  
 MINIMUM DEGREE OF ACCURACY 1:2,500'  
 PROVEN SOURCE OF ELEVATION PC-66 PEABODY COAL CO. DATUM (U.S.G.S)

CO: 081 PMT: 823  
 Loc Digitized from OGIS 7.5' Mylar  
 QUAD: 547 DATE: 12-JUN-90  
 LAT: 37 52.5 Miles South: 2.19  
 LONG: 81 32.5 Miles West: 1.09  
 STATEMENT OF MINES  
 (SIGNED: Kenneth D. Dias)  
 RPE \_\_\_\_\_ L.S. 837-SU



INDICATES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV 6  
 8-89



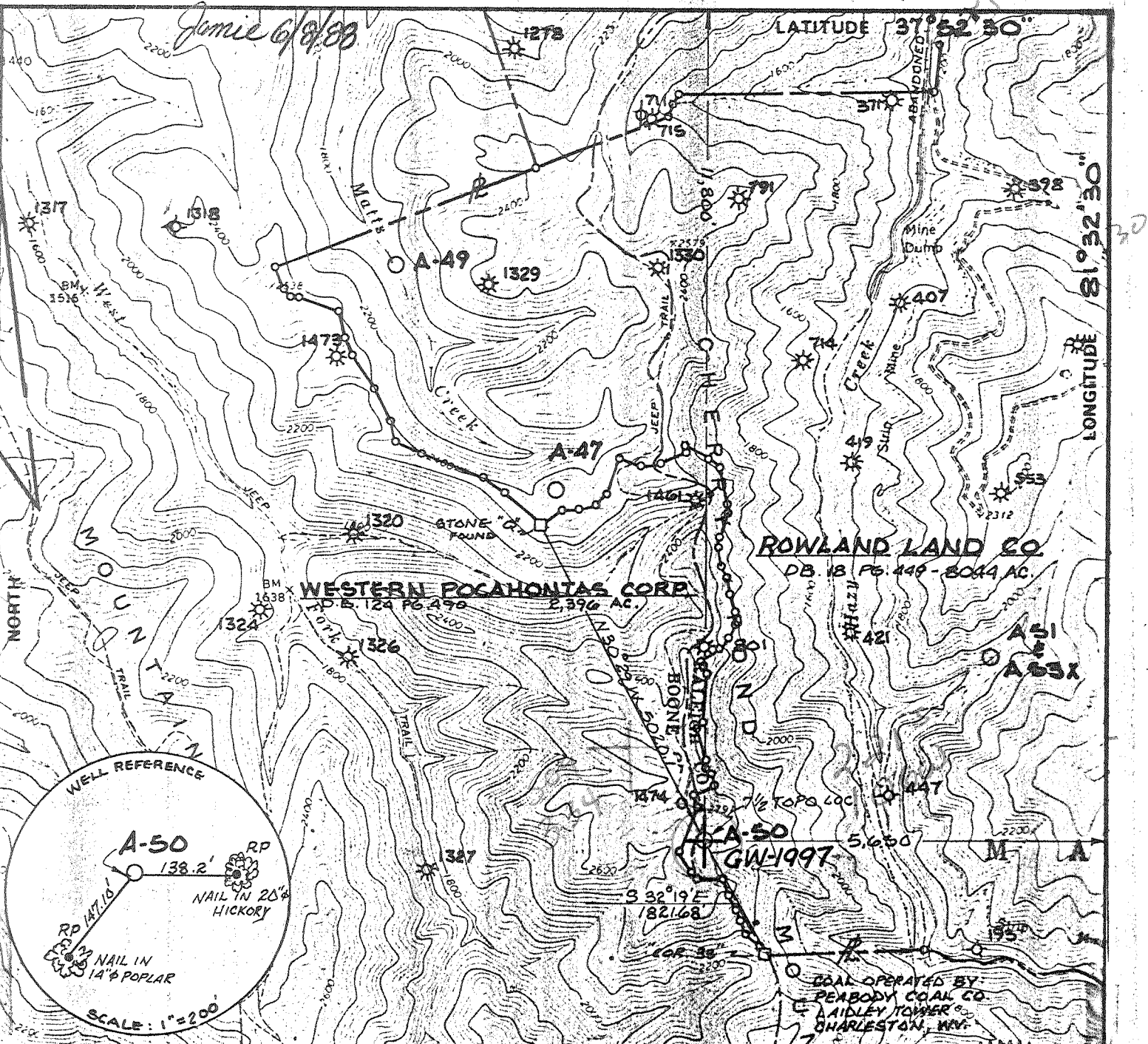
STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE JUNE 13<sup>th</sup> 89  
 OPERATOR'S WELL NO. ROWLAND A-50 REV  
 API WELL NO. 47 081  
 STATE WELL NO. 0823  
 REVISION Revised

WELL TYPE OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF GAS) PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
 DATE OF ELEVATION 2613.85' WATERSHED HAZY CK. - MARSH FORK OF BIG COAL RIVER  
 DISTRICT MARSH FORK COUNTY RALEIGH  
 QUADRANGLE PILOT KNOB  
 LAND OWNER ROWLAND LAND CO. ACREAGE P/O 47,340.87 AC.  
 LEASE OWNER ROWLAND LAND CO. LEASE ACREAGE 693.579  
 LEASE NO. WV-389  
 WORK DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REFRILL \_\_\_ FRACKURE OR  
 STIMULATE X PLUG OFF OLD FORMATION \_\_\_ REPERFORATE \_\_\_  
 FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL \_\_\_  
 PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH \_\_\_  
 WELL OPERATOR OXY USA Inc. DESIGNATED WELL NO. DELBERT G. OLIVER  
 ADDRESS P.O. BOX 873 CHARLESTON, W.V. 25323 P.O. BOX 873  
CHARLESTON, W.V. 25323

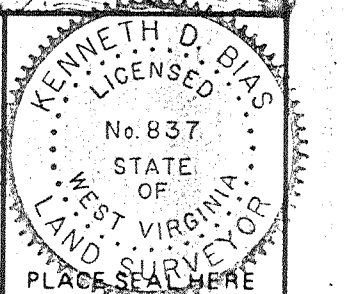
SEP 1 1989

DEEP WELL




FILE NO. KDB-1  
 DRAWING NO. 6-88  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1:2500'  
 PROVEN SOURCE OF ELEVATION STA. PC-66  
EL: 1596.91 (PEABODY COAL CO.)  
IN HAZY CREEK

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  
 R.P.E. \_\_\_\_\_ L.L.S. 837



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)

  
 STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE 4-14 19 88  
 OPERATOR'S WELL NO. R.L.C.A-50GW-1997  
 API WELL NO. 47-081-0823  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 2,613.85' WATER SHED HAZY CREEK OF MARSH FK. OF BIG COAL RIVER  
 DISTRICT MARSH FORK COUNTY RALEIGH  
 QUADRANGLE PILOT KNOB 547 0066 Bald Knob ec

SURFACE OWNER ROWLAND LAND CO. ACREAGE 693.579  
 OIL & GAS ROYALTY OWNER ROWLAND LAND Co. LEASE ACREAGE 47,340.87  
 LEASE NO. WV 389

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 DEVONIAN SHALE ESTIMATED DEPTH 6800'  
 WELL OPERATOR OXY U.S.A., Inc. DESIGNATED AGENT DELBERT G. OLIVER  
 ADDRESS P.O. Box 873 ADDRESS P.O. Box 873  
CHARLESTON, WV 25323 CHARLESTON, WV 25323

JUN 10 1988

DEEP WELL 6-6 unnamed (10)

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MAR 22 1989

09-JUN-88  
API # 47- 81-00823

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-50, GW-1997

LOCATION: Elevation: 2613.85 Quadrangle: PILOT KNOB

District: MARSH FORK County: RALEIGH  
Latitude: 11800 Feet South of 37 Des. 52Min. 30 Sec.  
Longitude 5650 Feet West of 81 Des. 32 Min. 30 Sec.

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

Asent: DELBERT G. OLIVER

Inspector: RODNEY G. DILLON  
Permit Issued: 06/09/88  
Well work Commenced: 07/20/88  
Well work Completed: 03/13/89  
Verbal Plussings: N/A  
Permission granted on: N/A  
Rotary  Cable \_\_\_\_\_ Ris \_\_\_\_\_  
Total Depth (feet) 7158  
Fresh water depths (ft) 40  
Salt water depths (ft) \_\_\_\_\_  
Is coal being mined in area (Y/N)?  
Coal Depths (ft): 277-283; 950-956;

Size	Casings & Tubins	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13.375'		427'	427'	Surface
9.625'		1759'	1759'	352 cu ft
7.0'		3695'	3695'	450 cu ft
4.5'			3691'	342 cu ft
2.375'			6235'	

OPEN FLOW DATA

Lower Huron,  
Ravencliff-Maxton, Upper Devonian

Producing formation \_\_\_\_\_ Pay zone depth (ft) 6236  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow 1488 MCF/d Final open flow 45 Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours  
 Static rock Pressure 320 psig (surface pressure) after 14 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 \_\_\_\_\_ Bbl/d  
 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.

Delbert G. Oliver, Apalachian Project Manager

For: OXY USA, INC

By: *Delbert G. Oliver*  
Date: 3-22-89

MAR 31 1989

ROWLAND LAND CO. A-50

Details of Perforated Intervals, Fracturing or Stimulating, Physical Change, Etc:

Lower Huron: Perforated 5601-6236 (50 Holes).  
Frac'd W/25,000# Sand, 55 BLW, 694 MCFN<sub>2</sub>.

Upper Devonian: Perforated 4683-5431 (50 Holes).  
Frac'd W/ 50,000# Sand, 92 BLW, 661 MCFN<sub>2</sub>.

Maxton-Ravencliff: Perforated 2913-3310 (62 Holes).  
Frac'd W/50,000# Sand, 105 BLW, 886 MCFN<sub>2</sub>.

WELL LOG

<u>FORMATION</u>	<u>TOP (FT)</u>	<u>BOTTOM (FT)</u>
SAND	0	277
COAL	277	283
SAND	283	435
SILTSTONE	435	492
SAND	492	791
SILTSTONE	791	849
SAND	849	895
SILTSTONE	895	950
COAL	950	956
SILTSTONE	956	990
SAND	990	1070
SILTSTONE	1070	1342
SAND	1342	1382
SILTSTONE	1382	1448
SAND	1448	1504
SILTSTONE	1504	1570
SAND	1570	1689
SILTSTONE	1689	1886
SAND	1886	2011
SILTSTONE	2011	2142
SAND	2142	2450
SILTSTONE	2450	2507
SAND	2507	2548
SILTSTONE	2548	2609
SAND	2609	2697
SILTSTONE	2697	2749
RAVENCLIFF	2749	2844
SILTSTONE	2844	2914
SAND	2914	2939
SILTSTONE	2939	2996
AVIS L.S.	2996	3030
SILTSTONE	3030	3288

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DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

MAR 31 1989

(con't)

081 823, Pg. 2

WELL LOG

<u>FORMATION</u>	<u>TOP (FT)</u>	<u>BOTTOM (FT)</u>
MIDDLE MAXTON	3288	3345
SILTSTONE	3345	3481
LOWER MAXTON	3481	3557
LITTLE LIME	3557	3648
BIG LIME	3648	4006
SILTSTONE	4006	4090
UPPER WEIR	4090	4150
LOWER WEIR	4150	4256
SHALE	4256	4477
SUNBURY	4477	4488
DEVONIAN SHALE	4488	4683
GORDON	4683	4692
DEVONIAN SHALE	4692	5590
LOWER HURON	5590	6246
JAVA	6246	6688
RHINESTREET	6688	7118
MARCELLUS	7118	7168
ONONDAGA	7168	7177

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DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

7121

MAR 31 1989

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

Issued 06/09/88  
Expires 06/09/90

- 3072 36205, 2, 546
- Well Operator: OXY USA, INC.
  - Operator's Well Number: Rowland Land Co., A-50 GW-1997 3) Elevation: 2613.85'
  - Well type: (a) Oil  or Gas 
    - (b) If Gas: Production  / Underground Storage 
      - Deep  / Shallow
  - Proposed Target Formation(s): Devonian Shale 441
  - Proposed Total Depth: 7115 feet
  - Approximate fresh water strata depths: None
  - Approximate salt water depths: None
  - Approximate coal seam depths: 314', 954', 1074', 1184'
  - Does land contain coal seams tributary to active mine? Yes  / No
  - Proposed Well Work: Devonian Shale Drilling Well

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	13 3/8"	K55	48#	130	130	Surface
Fresh Water						38CSR18-11-3
Coal	9 5/8"	K55	36#	1250	1250	Surface
Intermediate	7"	K55	23#	3630	3630	400 Cu. Ft.
Production	4 1/2"	K55	11.6#	7115	7115	38CSR18-11-1 380 Cu. Ft.
Tubing	2 3/8"	J55	4.7#	7050	7050	
Liners						

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MAY 27 1988

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

12/1  
30069  
15

For Division of Oil and Gas Use Only

Fee(s) paid: 15 Well Work Permit 15 Reclamation Fund 15 WPCP

Plat 15 WW-9 15 WW-2B 15 Bond 50 Blambit Agent 15

(Type)

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY



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MAY 27 1988

Page 1 of 4  
Form WW2-A  
(09/87)  
File Copy

DIVISION OF OIL & GAS 3)  
DEPARTMENT OF ENERGY

Date: May 20, 1988  
Operator's well number  
Rowland A-50, GW 1997  
API Well No: 47 - 081 - 0823  
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 Street  
Charleston, WV 25301  
(b) Name Attn: Dave Pollitt  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Rodney G. Dillon  
Address P. O. Box 1526  
Sophia, WV 25921  
Telephone (304)-465-1911

5) (a) Coal Operator:  
Name Peabody Coal Company  
Address P. O. Box 1233  
Charleston, WV 25324  
(b) Coal Owner(s) with Declaration  
Name Rowland Land Company  
Address 1033 Quarrier Street  
Charleston, WV 25301  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name Peabody Coal Company  
Address P. O. Box 1233  
Charleston, WV 25324

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:  
\_\_\_\_\_ Personal Service (Affidavit attached)  
x 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: Project Manager  
Address P. O. Box 873  
Charleston, WV 25323  
Telephone (304) 344-8383

Subscribed and sworn before me this 19 day of MAY, 1988

*James D. Bay*  
My commission expires June 4, 1989  
Notary Public