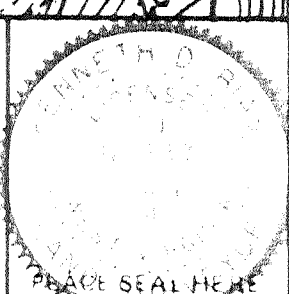




FILE NO. BMS 2-R
 DRAWING NO. _____
 SCALE 1"=1,000'
 MINIMUM DEGREE OF ACCURACY 1:2500'
 PROVEN SOURCE OF ELEVATION PC-66 PEABODY COAL CO. 1596.91 IN HAZY CK.

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. Davis
 RPE _____ SLS 837-SU



____ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV B
 R-81

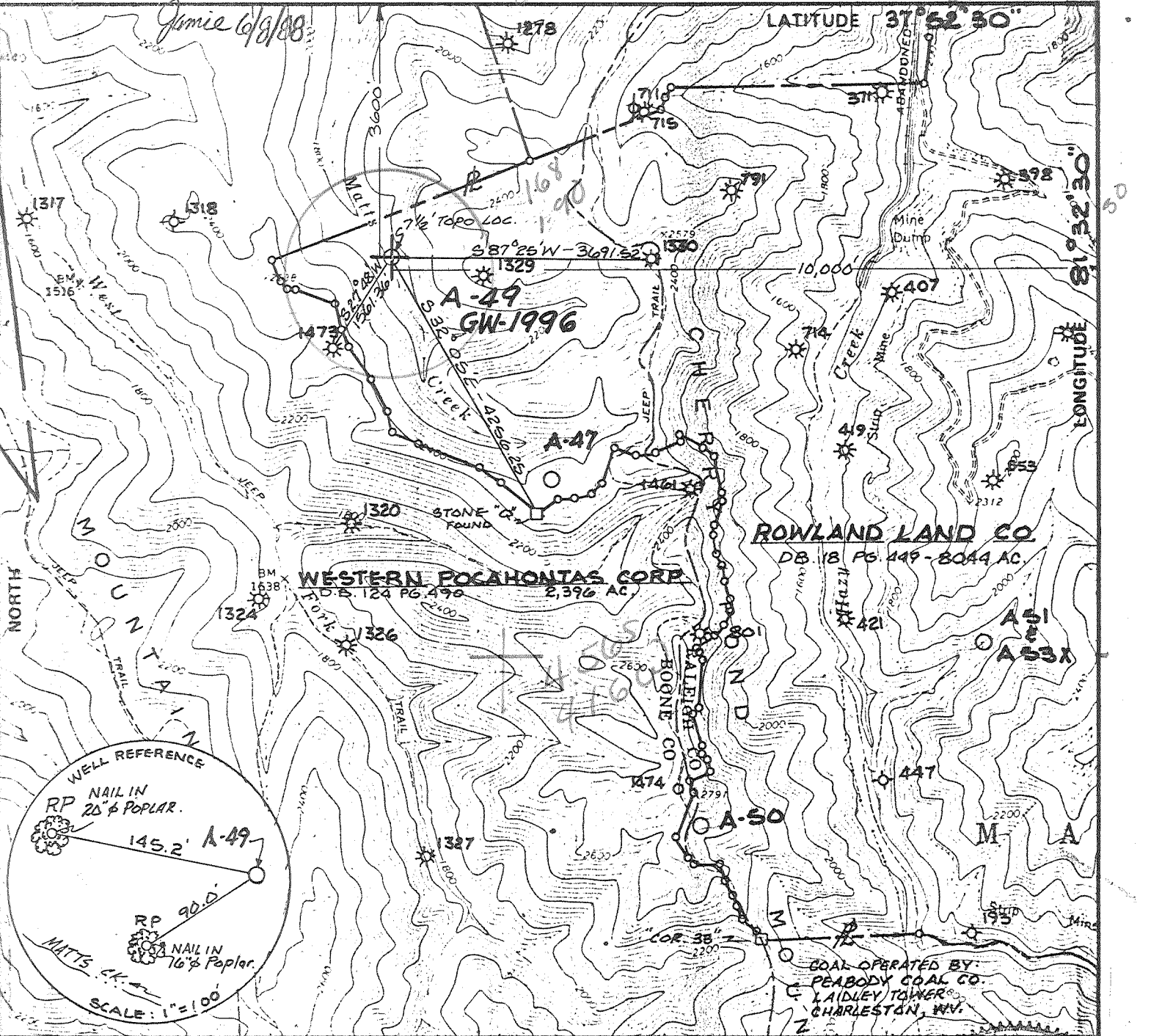
WELL TYPE: OIL _____ GAS _____ LIQUID INJECTION _____ WASTE DISPOSAL _____
 DEPTH: DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 1,868.9' WATERSHED MATT'S CREEK OF POND FORK
 DISTRICT CROOK COUNTY BOONE
 QUADRANGLE PILOT KNOB
 SURFACE OWNER ROWLAND LAND CO. ACRES 47,340.87
 OIL & GAS LEASE OWNER ROWLAND LAND CO. LEASE ACRES 693.579
 LEASE NO. WV-389
 PROPOSED WORK: DRILL _____ 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 _____
 WELL OPERATOR OXY USA Inc. DESIGNATED AGENT DELBERT G. OLIVER SEP 8 1989
 ADDRESS P.O. BOX 873 CHARLESTON, WV 25323 ADDRESS P.O. BOX 873 CHARLESTON, WV 25323

DATE JUNE 13th 1989
 OPERATOR'S WELL NO. ROWLAND A-49 REV.
 API WELL NO. 47 005 1482
 STATE WV COUNTY BOONE PERMIT Revised 8/25/89



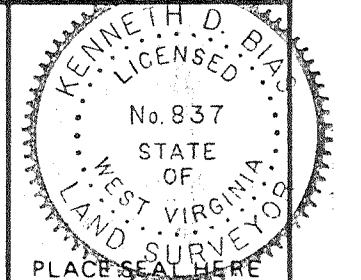
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

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 1988
 OPERATOR'S WELL NO. RLC A-49, GW-1996
 API WELL NO. 47-005-1482
 STATE COUNTY PERMIT

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

LOCATION ELEVATION 1868.91' WATER SHED MATTS CREEK OF WEST FORK OF POND FORK
 DISTRICT CROOK COUNTY BOONE
 QUADRANGLE PILOT KNOB 7 1/2 MIN. 547 006 Bald Knob EC

SURFACE OWNER ROWLAND LAND CO. ACREAGE 404.13
 OIL & GAS ROYALTY OWNER ROWLAND LAND Co. LEASE ACREAGE 47,340.87
 LEASE NO. WV-389

PROPOSED WORK DRILL 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 5800'
 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 3072 CHARLESTON WV. 25323

H. T. HALL

DEEP WELL - 6-6 unnamed (10)

RECEIVED
MAR 22 1989

09-Jun-88
API # 47- 5-01482

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-49, GW-1996

LOCATION: Elevation: 1868.91 Quadrangle: PILOT KNOB

District: CROOK County: BOONE
Latitude: 3600 Feet South of 37 Des. 52Min. 30 Sec.
Longitude 10000 Feet West of 81 Des. 32 Min. 30 Sec.

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

Asent: DELBERT G. OLIVER

Inspector: JERRY HOLCOMB *TD reached 9/7/88*
Permit Issued: 06/09/88
Well work Commenced: 08/02/88
Well work Completed: 03/13/89
Verbal Plussings: N/A
Permission granted on: N/A
Rotary Cable Ris
Total Depth (feet) 6382
Fresh water depths (ft) 97'
Salt water depths (ft) 1909'
Is coal beins mined in area (Y/N)?
Coal Depths (ft): 612-16;

Size	Used in	Left	Cement
	Drilling	in Well	Fill Up
			Cu. Ft.
20"	27'	27'	Surface
13.375"	403'	403'	Surface
9.625"	915'	915'	390 cu ft
7.0"	2948'	2948'	1450 cu ft
4.5"		3599'	301 cu ft

OPEN FLOW DATA

Producing formation Weir, Maxon-Ravencliff,
Lower Huron, Upper Devonian Pay zone depth (ft) 5649
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow 552 MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests 24 Hours
 Static rock Pressure 345 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, Appalachian Project Manager

For: OXY USA, INC.

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

MAR 31 1989

ROWLAND LAND CO. A-49

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

Lower Huron: Perforated 4905-5649 (49 Holes).
Frac'd W/17000# Sand, 42 BLW, 578 MCFN₂.

Upper Devonian: Perforated 3933-4485 (49 Holes).
Frac'd W/50,000# Sand, 96 BLW, 568 MCFN₂.

Weir: Perforated 3356-3499 (53 Holes).
Frac'd W/20,000# Sand, 42 BLW, 329 MCFN₂.

Maxon-Ravencliff: Perforated 2224-2490 (119 Holes).
Frac'd W/35,000# Sand, 79 BLW, 786 MCFN₂.

WELL LOG

<u>FORMATION</u>	<u>TOP (FT)</u>	<u>BOTTOM (FT)</u>
SAND	0	494
SILTSTONE	494	511
SAND	511	520
SILTSTONE	520	606
SAND	606	612
COAL	612	616
SAND	616	924
SILTSTONE	924	1061
SAND	1061	1088
SILTSTONE	1088	1130
SAND	1130	1177
SILTSTONE	1177	1264
SAND	1264	1374
SILTSTONE	1374	1423
SAND	1423	1440
SILTSTONE	1440	1527
SAND	1527	1685
SILTSTONE	1685	1720
SAND	1720	1802
SILTSTONE	1802	1820
SAND	1820	1863
SILTSTONE	1863	2026
RAVENCLIFF	2026	2240
SILTSTONE	2240	2258
AVIS L.S.	2258	2292
SILTSTONE	2292	2350
UPPER MAXTON	2350	2378
SILTSTONE	2378	2398
MIDDLE MAXTON	2398	2712
SILTSTONE	2712	2736
LOWER MAXTON	2736	2816
LITTLE LIME	2816	2915
BIG LIME	2915	3248
SILTSTONE	3248	3355
UPPER WEIR	3355	3395

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

MAR 31 1989

WELL LOG

<u>FORMATION</u>	<u>TOP (FT)</u>	<u>BOTTOM (FT)</u>
SHALE	3395	3493
LOWER WEIR	3493	3500
SHALE	3500	3720
SUNBURY	3720	3732
DEVONIAN SHALE	3732	3933
GORDON	3933	3937
DEVONIAN SHALE	3937	4840
LOWER HURON	4840	5480
JAVA	5480	5955
RHINESTREET	5955	6347
MARCELLUS	6347	6379
ONONDAGA	6379	6390

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

7120

MAR 31 1989

005-1482

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

FORM WW-2B

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

- 1) Well Operator: ³⁰⁷² OXY USA, INC. 36205, 1, 546
- 2) Operator's Well Number: Rowland Land Co., A-49 GW-1996 3) Elevation: 1868.91'
- 4) Well type: (a) Oil / or Gas /
(b) If Gas: Production / Underground Storage /
Deep / Shallow /
441
- 5) Proposed Target Formation(s): Devonian Shale
- 6) Proposed Total Depth: 6340 feet
- 7) Approximate fresh water strata depths: 460', 580', 680'
- 8) Approximate salt water depths: None
- 9) Approximate coal seam depths: 429', 519', 589', 684'-690', 330'-334'
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 11) Proposed Well Work: Devonian Shale Drilling 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	13 3/8"	K55	48#	50'	50'	Surface
Fresh Water						38CSR18-11.3
Coal	9 5/8"	K55	36#	650' 720'	650' 720'	Surface 38CSR18-11.2.2
Intermediate	7"	K55	23#	2900'	2900'	220 Cu. Ft.
Production	4 1/2"	K55	11.6#	6340'	6340'	38CSR18-11.1 375 Cu. Ft.
Tubing	2 3/8"	J55	4.7#	6300'	6300'	" 375 Cu. Ft.
Liners						

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MAY 27 1988

PACKERS : Kind _____
 Sizes _____
 Depths set _____

30068
15

For Division of Oil and Gas Use Only

Fee(s) paid: 22 Well Work Permit 22 Reclamation Fund 22 WPCP

Plat WW-9 WW-2B Bond 50 Blanket Agent

(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
DEPARTMENT OF ENERGY

1) Date: May 20, 1988
2) Operator's well number
Rowland A-49, GW 1996
3) API Well No: 47 - 005 - 1482
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: Dave Pollitt
(b) Name _____
Address _____
(c) Name _____
Address _____

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 St., Rm. 301
Charleston, WV 25301
Name _____
Address _____

6) Inspector Rodney G. Dillon
Address P. O. Box 1526
Sophia, WV 25921
Telephone (304)- 465-1911

(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
Donald J. Bay
My commission expires June 11, 1989
Commissioner
Notary Public