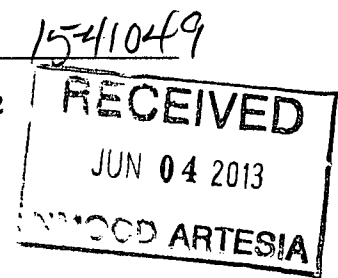


# HALLIBURTON

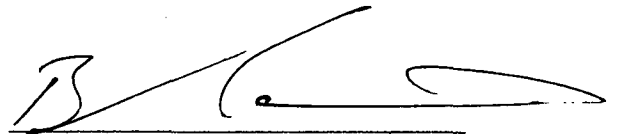
3950 Interwood South Parkway • Houston, TX 77032

PHONE 281.986.4400 • FAX 281.986.4499



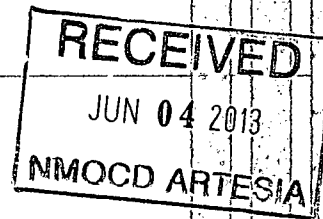
## State of New Mexico, Eddy County

I, Brandon Machacek, certify that I am employed by Halliburton Energy Services, Inc. (AKA Sperry Drilling) and that on the dates of March 24, 2013 through April 1, 2013, I did conduct or supervise the taking of a MWD Directional surveys for the well Government AB12 Well from 3118' MD to 6724' MD. This data is true, correct, complete and within the limitations of the tools as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling). I am authorized and qualified to make this report and this survey was conducted at the request of Occidental Petroleum for the Government AB12 well, API No. 30-015-41049 in Eddy County, New Mexico. I have reviewed this report and find that it conforms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling).

A handwritten signature in black ink, appearing to be "Brandon Machacek", written over a horizontal line.

Brandon Machacek  
MWD Field Engineer

**Occidental Petroleum  
Government AB12  
Eddy County, New Mexico  
H&P 344  
API# 30-015-41049**



**March 24, 2013 – April 1, 2013  
HD-MJ-0900291393**

**Sperry Drilling  
MWD Survey Report**

**Submitted by Brandon Machacek  
3950 Interwood South Parkway  
Houston, TX 77032  
Ph: 281.986.4400**

**HALLIBURTON**

**Drilling and Formation  
Evaluation**

# Survey Report for Occidental Petroleum

**Rig** : H&P 344  
**Well Name** : Government AB12  
**Field Name** : Burton Flats N. (Bone Spring)  
**Country** : USA  
**Job Number** : HD-XX-0900291393  
**Job Start Date** : 24-Mar-13  
**API Number** : 30-015-41049



## TABLE OF CONTENTS

1. Directional Survey Data



## DIRECTIONAL SURVEY DATA

## Tie-in

0.00      0.00      0.00      0.00      0.00 N      0.00 E

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (%/100)
144.00	0.31	277.97	144.00	0.05 N	0.39 W	-0.13	0.22
235.00	0.40	249.14	235.00	0.02 S	0.93 W	-0.16	0.22
386.00	1.58	220.31	385.97	1.80 S	2.77 W	1.22	0.82
476.00	1.32	249.45	475.95	3.11 S	4.54 W	2.16	0.86
567.00	0.31	251.95	566.93	3.55 S	5.75 W	2.36	1.11
653.00	0.31	192.14	652.93	3.85 S	6.02 W	2.60	0.36
751.00	0.40	170.04	750.93	4.45 S	6.02 W	3.19	0.17
872.00	0.88	219.35	871.92	5.58 S	6.54 W	4.20	0.57
1022.00	0.88	230.33	1,021.91	7.21 S	8.15 W	5.47	0.11
1157.00	1.19	229.06	1,156.89	8.79 S	10.01 W	6.66	0.23
1293.00	1.41	172.06	1,292.86	11.37 S	10.85 W	9.03	0.92
1383.00	1.49	222.03	1,382.83	13.34 S	11.48 W	10.83	1.36
1565.00	1.41	228.44	1,564.77	16.58 S	14.74 W	13.38	0.10
1701.00	1.41	226.05	1,700.73	18.85 S	17.19 W	15.12	0.04
1836.00	1.41	232.75	1,835.69	21.01 S	19.71 W	16.75	0.12
1971.00	1.41	238.33	1,970.65	22.89 S	22.45 W	18.05	0.10
2106.00	1.41	242.24	2,105.61	24.54 S	25.33 W	19.10	0.07
2286.00	1.32	250.24	2,285.56	26.27 S	29.24 W	20.03	0.12
2466.00	1.19	338.17	2,465.53	25.23 S	31.89 W	18.50	0.97
2650.00	1.10	249.84	2,649.50	24.07 S	34.26 W	16.90	0.87
2832.00	1.10	252.15	2,831.47	25.21 S	37.56 W	17.37	0.02
2888.00	0.88	254.46	2,887.46	25.49 S	38.49 W	17.46	0.40
3118.00	0.79	245.58	3,117.44	26.61 S	41.62 W	17.95	0.07
3208.00	0.98	247.75	3,207.43	27.16 S	42.89 W	18.23	0.21
3253.00	2.02	204.61	3,252.41	28.02 S	43.58 W	18.95	3.26
3343.00	4.04	187.59	3,342.28	32.61 S	44.66 W	23.23	2.43
3433.00	4.52	189.56	3,432.03	39.25 S	45.67 W	29.55	0.55
3522.00	7.71	193.20	3,520.51	48.51 S	47.61 W	38.25	3.61
3612.00	9.09	184.57	3,609.55	61.48 S	49.55 W	50.59	2.07
3702.00	10.29	180.58	3,698.27	76.60 S	50.20 W	65.29	1.52
3792.00	12.10	173.42	3,786.56	94.01 S	49.20 W	82.56	2.54
3882.00	13.48	167.38	3,874.32	113.62 S	45.83 W	102.45	2.13
3973.00	13.54	167.59	3,962.81	134.37 S	41.22 W	123.70	0.09
4063.00	14.75	164.37	4,050.08	155.70 S	35.87 W	145.67	1.60
4152.00	14.81	164.53	4,136.13	177.58 S	29.78 W	168.31	0.08
4243.00	16.19	164.57	4,223.82	201.02 S	23.31 W	192.57	1.52
4332.00	16.81	164.55	4,309.15	225.39 S	16.57 W	217.78	0.70
4423.00	16.64	166.26	4,396.30	250.74 S	9.97 W	243.93	0.57
4512.00	16.82	165.06	4,481.53	275.56 S	3.63 W	269.51	0.43
4602.00	16.48	165.79	4,567.76	300.51 S	2.86 E	295.26	0.44
4692.00	15.84	167.36	4,654.20	324.87 S	8.69 E	320.28	0.87

## DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (%/100)
4782.00	17.13	162.29	4,740.51	349.48 S	15.40 E	345.73	2.15
4872.00	16.98	162.68	4,826.55	374.65 S	23.35 E	371.97	0.21
4962.00	16.36	161.66	4,912.77	399.23 S	31.25 E	397.62	0.76
5052.00	17.47	164.69	4,998.87	424.29 S	38.81 E	423.68	1.58
5142.00	17.46	165.37	5,084.72	450.39 S	45.78 E	450.64	0.22
5233.00	16.91	165.12	5,171.66	476.39 S	52.63 E	477.47	0.61
5323.00	15.92	163.23	5,257.99	500.86 S	59.55 E	502.82	1.25
5413.00	16.93	163.08	5,344.32	525.21 S	66.93 E	528.15	1.12
5505.00	16.19	162.54	5,432.51	550.26 S	74.67 E	554.23	0.81
5596.00	17.04	162.45	5,519.70	575.07 S	82.50 E	580.10	0.93
5686.00	17.94	162.30	5,605.54	600.85 S	90.69 E	606.98	1.00
5775.00	17.52	160.53	5,690.32	626.54 S	99.32 E	633.86	0.76
5864.00	17.12	159.72	5,775.28	651.46 S	108.32 E	660.06	0.53
5955.00	16.34	162.10	5,862.43	676.21 S	116.90 E	686.01	1.15
6045.00	16.39	164.08	5,948.78	700.46 S	124.27 E	711.24	0.62
6135.00	16.27	163.89	6,035.15	724.79 S	131.25 E	736.46	0.15
6225.00	16.27	163.57	6,121.55	748.99 S	138.32 E	761.57	0.10
6315.00	15.85	162.85	6,208.04	772.83 S	145.51 E	786.36	0.52
6404.00	14.72	162.40	6,293.89	795.22 S	152.51 E	809.69	1.28
6494.00	15.27	160.65	6,380.82	817.30 S	159.90 E	832.79	0.80
6585.00	14.48	160.19	6,468.77	839.32 S	167.72 E	855.91	0.88
6675.00	14.87	162.34	6,555.83	860.91 S	175.04 E	878.52	0.75
6724.00	14.35	163.16	6,603.25	872.71 S	178.71 E	890.81	1.15
6784.00	14.35	163.16	6,661.38	886.95 S	183.02 E	905.61	0.01

## SURVEY FOOTER

SURVEYS CALCULATED USING SHORT COLLAR METHOD.  
 WELL ASSUMED VERTICAL AT WELLHEAD.  
 SURVEYS FROM 144'MD TO 2888'MD PROVIDED BY EXTREME DIRECTIONAL.  
 SURVEYS FROM 3118'MD TO 6724' MD PROVIDED BY SPERRY DRILLING.  
 SURVEY AT 6724' MD IS PROJECTED TO TD AT 6784' MD.  
 SPERRY DRILLING ENGINEERS: B. MACHACEK, M. BARAJAS

## DIRECTIONAL SURVEY DATA NOTES

- Calculation based on minimum curvature method.
- Survey coordinates relative to well system reference point.
- TVD values given relative to drilling measurement point.
- Vertical section relative to well head.
- Vertical section is computed along a direction of 168.71 degrees (Grid)
- A total correction of 7.69 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 6,784.00 feet is 905.63 feet along 168.34 degrees (Grid)

**WARRANTY**

HALLIBURTON ENERGY SERVICES, INC. WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HALLIBURTON ENERGY SERVICES, INC. CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION, AND PRODUCTION OPERATION. HALLIBURTON ENERGY SERVICES, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HALLIBURTON ENERGY SERVICES, INC. SERVICES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HALLIBURTON ENERGY SERVICES, INC.

**HALLIBURTON**

Sperry Drilling



Halliburton/Sperry Drilling  
3950 Interwood S. Pkwy  
Houston, Texas 77032  
Phone 281.986.4400  
Fax 281.986.4498



District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6151 Fax: (575) 393-6120  
District II  
8715 First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Rancho Road, Aztec, NM 87410  
Phone: (505) 334-6173 Fax: (505) 334-6170  
District IV  
1230 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3450 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	048035	Old Millman Ranch- Bone Spring
Property Code	Property Name	Well Number
	GOVERNMENT AB FEDERAL	12
OGRID No	Operator Name	Elevation
192463	OXY USA INC.	3291.3'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North-South line	Feet from the	East-West line	County
B	10	20 SOUTH	28 EAST, N.M.P.M		990'	NORTH	1980'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North-South line	Feet from the	East-West line	County
G	10	20 SOUTH	28 EAST, N.M.P.M.		1930'	NORTH	1780'	EAST	EDDY

Dedicated to	Joint or Infill	Consolidation Code	Order No.
40			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<p>SURFACE LOCATION NEW MEXICO EAST NAD 1927 Y=528386.7 X=552651.5 LAT.: N 32.5926684° LONG.: W 104.1623783°</p> <p>GRID AZ = 168°42' 958.8'</p> <p>BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 Y=528428.4 X=552838.9 LAT.: N 32.5900884° LONG.: W 104.1617748°</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Jennifer Duarte</i> 11/9/12 Jennifer Duarte jennifer_duarte@oxy.com</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of a professional surveyor made by me or under my supervision and that the same is true and correct to the best of my belief.</p> <p>15079 OCTOBER 24 2012 Date of Survey</p> <p><i>Terry J. Asch</i> 11/9/2012 Terry J. Asch Professional Surveyor Certificate Number 15079</p>

## Operator Copy

Form 3160-3  
(March 2012)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

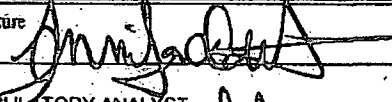

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

5. Lease Serial No. NM-15003	
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No. GOVERNMENT AB FEDERAL #12	
9. API Well No.	
1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	10. Field and Pool, or Exploratory Old Millman Ranch - Bone Spring
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone	11. Sec., T. R. M. or Blk. and Survey or Area B, SEC 10, T20S, R28E
2. Name of Operator OXY USA WTP Limited Partnership	12. County or Parish EDDY
3a. Address P.O. BOX 4294 HOUSTON, TX 77210	13. State NM
3b. Phone No. (include area code) 713-513-6640	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 990' FNL & 1980' FEL At proposed prod. zone 1930' FNL & 1780' FEL	
14. Distance in miles and direction from nearest town or post office 12 Miles Northeast of Carlsbad, N.M.	
15. Distance from proposed* 990' location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any)	16. No. of acres in lease 1720
17. Spacing Unit dedicated to this well 40	
18. Distance from proposed location* to nearest well, drilling, completed, 1190.5' applied for, on this lease, ft.	19. Proposed Depth 6842 MD 6700' TVD
20. BLM/BIA Bond No. on file ES0138	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3288.8' GL Operator's responsibility	22. Approximate date work will start* 05/13/2012
23. Estimated duration 10 DAYS	

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature 	Name (Printed/Typed) JENNIFER DUARTE (jennifer_duarte@oxy.com)	Date 11/09/2012
Title REGULATORY ANALYST		
Approved by (Signature) 	Name (Printed/Typed)	Date 11/31/13
Title G. FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

**APPROVAL FOR TWO YEARS**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

Capitan Controlled Water Basin

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**Approval Subject to General Requirements  
& Special Stipulations Attached

United States Department of the Interior  
Bureau of Land Management  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad, New Mexico 88220

Attention: Jennifer Duarte

RE: Government AB Federal #12  
Section 10, 20S-28E  
Eddy County, New Mexico

**STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS**

**OPERATOR NAME:** OXY USA WTP Limited Partnership  
**ADDRESS:** P.O. Box 4294  
Houston, Texas 77210-4294

**The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:**

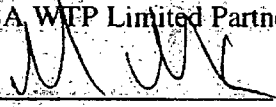
**LEASE NO.:** NM-15003

**LEGAL DESCRIPTION:** SL 1930' FNL & 1780' FEL SWNE (G)  
PBHL 1930' FNL & 1780' FEL SWNE (G)  
Section 10 T20S-R28E  
Eddy County, New Mexico

**FORMATIONS:** Bone Springs


**BOND COVERAGE:** Nationwide

**BLM BOND FILE NO.:** ES 0136


**AUTHORIZED SIGNATURE:**   
Michael Meir

**TITLE:** Land Negotiator

**DATE:** April 25, 2012

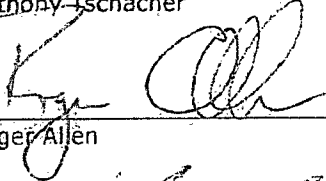
	<b>OXY PERMIAN DRILLING</b>	SDP No: 1
	<b>DRILLING PROCEDURE</b>	Revision No: 00
	<b>GOVERNMENT AB 12</b>	Revision Date: 03/13/13
	<b>3-STRING WELL</b>	Page No: 1 of 33

Drilling Engineer:

  
Anthony Tschacher


3/15/13  
Date

Drilling Superintendent:

  
Roger Allen

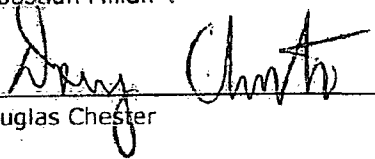
3-15-13  
Date

Drilling Engineering Supervisor:

  
Sebastian Millan

03/15/2013  
Date

Drilling Manager:

  
Douglas Chester

3/15/2013  
Date