

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTN.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210FORM APPROVED
OMB NO. 1004-0137
Expires: November 30, 2000

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other		5. Lease Serial No. NM025604							
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other		6. If Indian, Allottee or Tribe Name							
2. Name of Operator BP America Production Company		7. Unit or CA Agreement Name and No.							
3. Address P.O. Box 3092 Houston TX 77253		8. Lease Name and Well No. Horsetail Gas Com Federal #2							
3a. Phone No. (include area code) 281-366-4493		9. API Well No. 30-015-33528							
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface 1950 FSL 750 FWL NWSW(L) At top prod. interval reported below 1970 FSL 790 FWL NWSW(L) At total depth 1966 FSL 795 FWL NWSW(L)		10. Field and Pool, or Exploratory Empire Morrow, South							
14. Date Spudded 8/4/04		11. Sec., T., R., M., or Block and Survey or Area Sec 10 T18S R27E							
15. Date T.D. Reached 9/8/04		12. County or Parish Eddy							
16. Date Completed ☐ D & A ☒ Ready to Prod. 11/16/04		13. State NM							
17. Elevations (DF, RKB, RT, GL)* 3464'									
18. Total Depth: MD 9914' TVD 9891'		20. Depth Bridge Plug Set: MD TVD							
19. Plug Back T.D.: MD 9867' TVD 9844'									
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) DLL/MLL/CZDL/CNL/DSL/GR		22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run ☒ No ☐ Yes (Submit report) Directional Survey? ☐ No ☒ Yes (Submit copy)							
23. Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/Grade	Wt. (#ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2"	13-3/8"	48#	0	430'	---	425		Surf-Circ	N/A
12-1/4"	8-5/8"	32#	0	3010'	---	1150		Surf-Circ	N/A
8-3/4"	5-1/2"	17#	0	9905'	---	950		2700'-CBL	N/A
24. Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2-3/8"	9478'	9471'							
25. Producing Intervals									
Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status			
A) Morrow	9549'	9655'	9549-9655'		50	Open			
B)									
C)									
D)									
26. Perforation Record									
27. Acid, Fracture, Treatment, Cement Squeeze, Etc.									
Depth Interval	Amount and Type of Material								
9626-9655'	17471g CO2 foam frac w/ 31936# sand								
9549-9655	2000g 7.5% HCl acid w/ 50% CO2								
28. Production - Interval A									
Date First Produced 11/23/04	Test Date 11-30-04	Hours Tested 24	Test Production 61	Oil BBL 3151	Gas MCF 8	Water BBL 58.9	Oil Gravity 51.54	Gas Gravity 64.59	Production Method Flwg
Choke Size 10/64	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status Prod.	
28a. Production - Interval B									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status	

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status	

28c. Production-Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				Wolfcamp Strawn Atoka Morrow	

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

- ☒ 1. Electrical/Mechanical Logs (1 full set req'd)
 2. Geologic Report
 3. DST Report
 4. Directional Survey
 5. Sundry Notice for plugging and cement verification
 6. Core Analysis
 7. Other

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print)

SHERYL JOSEPH

Title

PERMITTING REP

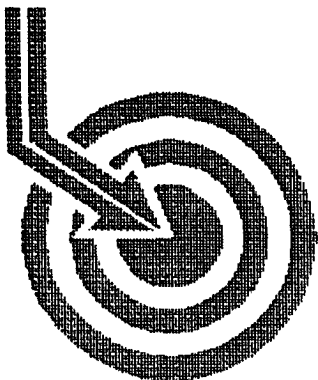
Signature

SHERYL JOSEPH

Date

12-30-07

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.



Scientific Drilling

OCCIDENTAL PERMIAN LTD.

Field: Horsetail
Site: Eddy County, NM
Well: Horsetail Gas Com Fed #2
Wellpath: VH - Job #32K0804507
Survey: 08/22/04

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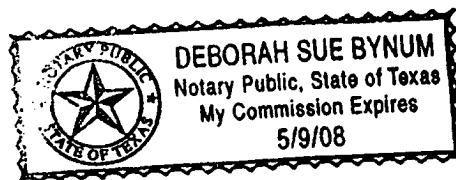
This survey is correct to the best of my knowledge
and is supported by actual field data.

[Signature].....Company Representative

Notorized this date 17th of October, 2004.

[Signature: Deborah Sue Bynum]
Notary Signature

County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: OCCIDENTAL PERMIAN LTD. **Date:** 10/17/2004 **Time:** 09:12:56 **Page:** 1
Field: Horsetail **Co-ordinate(NE) Reference:** Site: Eddy County, NM, Grid North
Site: Eddy County, NM **Vertical (TVD) Reference:** SITE 0.0
Well: Horsetail Gas Com Fed #2 **Section (VS) Reference:** Well (0.00N,0.00E,57.99Azi)
Wellpath: VH - Job #32K0804507 **Survey Calculation Method:** Minimum Curvature **Db:** Sybase

Survey: 08/22/04 **Start Date:** 8/22/2004
Company: Scientific Drilling Internatio **Engineer:** Guebara/Gonzales
Tool: Keeper;Keeper Surface Readout **Tied-to:** User Defined

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.0	0.00	359.97	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.25	214.59	100.0	-0.2	-0.2	-0.1	0.25	0.2	214.59
200.0	0.43	239.27	200.0	-0.8	-0.6	-0.6	0.23	0.8	225.99
300.0	0.46	250.41	300.0	-1.5	-0.9	-1.3	0.09	1.5	235.39
400.0	0.76	268.41	400.0	-2.5	-1.0	-2.3	0.35	2.5	245.98
500.0	0.84	266.62	500.0	-3.7	-1.1	-3.7	0.08	3.9	253.59
600.0	1.00	274.85	600.0	-5.1	-1.1	-5.3	0.21	5.4	258.69
700.0	1.13	285.29	699.9	-6.4	-0.7	-7.1	0.23	7.2	264.17
800.0	1.30	290.03	799.9	-7.8	-0.1	-9.1	0.20	9.1	269.51
900.0	1.20	294.31	899.9	-9.1	0.7	-11.2	0.14	11.2	273.79
1000.0	1.32	305.02	999.9	-10.1	1.8	-13.1	0.26	13.2	277.99
1100.0	1.57	295.78	1099.8	-11.3	3.1	-15.2	0.34	15.6	281.46
1200.0	1.37	303.80	1199.8	-12.5	4.4	-17.5	0.29	18.0	283.99
1300.0	1.31	291.77	1299.8	-13.7	5.4	-19.5	0.29	20.3	285.57
1400.0	0.90	290.12	1399.8	-14.8	6.1	-21.3	0.41	22.2	286.05
1500.0	1.12	295.45	1499.8	-15.8	6.8	-22.9	0.24	23.9	286.56
1600.0	1.25	281.02	1599.7	-17.2	7.5	-24.9	0.32	26.0	286.66
1700.0	1.10	278.46	1699.7	-18.7	7.8	-26.9	0.16	28.0	286.17
1800.0	1.26	286.31	1799.7	-20.1	8.3	-28.9	0.23	30.1	285.93
1900.0	1.43	277.67	1899.7	-21.8	8.7	-31.2	0.26	32.4	285.62
2000.0	1.36	275.24	1999.6	-23.7	9.0	-33.6	0.09	34.8	284.99
2100.0	1.46	288.03	2099.6	-25.5	9.5	-36.0	0.33	37.3	284.78
2200.0	1.51	281.23	2199.6	-27.3	10.2	-38.5	0.18	39.8	284.77
2300.0	1.16	288.11	2299.5	-28.9	10.7	-40.8	0.38	42.2	284.74
2400.0	1.35	295.49	2399.5	-30.2	11.5	-42.8	0.25	44.3	285.10
2500.0	1.61	287.96	2499.5	-31.7	12.5	-45.2	0.32	46.9	285.44
2600.0	1.56	283.81	2599.4	-33.6	13.2	-47.9	0.13	49.7	285.47
2700.0	1.33	290.80	2699.4	-35.2	14.0	-50.3	0.29	52.2	285.54
2800.0	1.44	296.84	2799.4	-36.6	15.0	-52.5	0.18	54.6	285.91
2900.0	1.54	287.63	2899.4	-38.1	15.9	-54.9	0.26	57.1	286.19
3000.0	1.25	286.64	2999.3	-39.7	16.7	-57.2	0.29	59.6	286.23
3100.0	1.16	293.18	3099.3	-41.0	17.4	-59.2	0.16	61.7	286.36
3200.0	1.47	295.50	3199.3	-42.2	18.3	-61.3	0.31	63.9	286.65
3300.0	1.59	299.35	3299.2	-43.6	19.6	-63.6	0.16	66.6	287.08
3400.0	1.80	291.09	3399.2	-45.2	20.8	-66.3	0.32	69.5	287.41
3500.0	1.50	288.41	3499.2	-47.0	21.8	-69.0	0.31	72.4	287.51
3600.0	1.36	292.86	3599.1	-48.5	22.6	-71.4	0.18	74.9	287.61
3700.0	1.56	298.95	3699.1	-49.8	23.8	-73.6	0.25	77.4	287.89
3800.0	1.67	290.87	3799.0	-51.4	24.9	-76.2	0.25	80.2	288.13
3900.0	1.59	281.02	3899.0	-53.3	25.7	-78.9	0.29	83.0	288.06
4000.0	1.58	285.44	3999.0	-55.2	26.4	-81.6	0.12	85.8	287.90
4100.0	1.83	289.34	4098.9	-57.2	27.3	-84.4	0.28	88.7	287.89
4200.0	2.07	280.89	4198.9	-59.5	28.1	-87.7	0.37	92.1	287.78
4300.0	1.90	283.28	4298.8	-62.0	28.9	-91.1	0.19	95.6	287.57
4400.0	2.06	285.39	4398.7	-64.3	29.7	-94.5	0.18	99.0	287.46
4500.0	2.37	282.35	4498.7	-67.0	30.6	-98.2	0.33	102.9	287.32
4600.0	2.54	287.00	4598.6	-70.0	31.7	-102.3	0.26	107.1	287.22
4700.0	2.70	291.62	4698.5	-72.8	33.2	-106.7	0.26	111.7	287.31
4800.0	2.83	288.92	4798.4	-75.8	34.9	-111.2	0.18	116.5	287.43



Scientific Drilling International

Survey Report

Company: OCCIDENTAL PERMIAN LTD.
Field: Horsetail
Site: Eddy County, NM
Well: Horsetail Gas Com Fed #2
Wellpath: VH - Job #32K0804507

Date: 10/17/2004 Time: 09:12:56 Page: 2
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Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,57.99Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.0	2.80	288.92	4898.2	-78.9	36.5	-115.8	0.03	121.4	287.49
5000.0	2.97	293.34	4998.1	-81.9	38.3	-120.5	0.28	126.5	287.64
5100.0	3.15	288.32	5098.0	-85.1	40.2	-125.5	0.32	131.8	287.76
5200.0	3.30	290.30	5197.8	-88.6	42.1	-130.8	0.19	137.4	287.83
5300.0	3.34	294.60	5297.6	-92.0	44.3	-136.2	0.25	143.2	288.01
5400.0	3.98	292.67	5397.4	-95.6	46.8	-142.0	0.65	149.5	288.25
5500.0	4.63	290.68	5497.2	-100.0	49.6	-149.0	0.67	157.0	288.41
5600.0	5.38	294.49	5596.8	-105.1	53.0	-157.0	0.82	165.7	288.64
5700.0	5.42	296.52	5696.3	-110.1	57.0	-165.5	0.20	175.1	289.01
5800.0	4.91	299.28	5795.9	-114.7	61.2	-173.5	0.57	184.0	289.44
5900.0	4.73	297.65	5895.6	-118.8	65.2	-180.9	0.23	192.3	289.83
6000.0	4.43	297.88	5995.3	-122.8	68.9	-187.9	0.30	200.2	290.14
6100.0	4.52	303.48	6094.9	-126.4	72.9	-194.6	0.45	207.8	290.54
6200.0	4.13	300.51	6194.7	-129.7	76.9	-201.0	0.45	215.2	290.94
6300.0	3.87	305.14	6294.4	-132.7	80.7	-206.9	0.41	222.1	291.31
6389.0	4.00	306.92	6383.2	-134.9	84.3	-211.8	0.20	228.0	291.70



Scientific
Drilling

Field: Horsetail
Site: Eddy County, NM
Well: Horsetail Gas Com Fed #2
Wellpath: VH - Job #32K0804507
Survey: 08/22/04

