



**Scientific Drilling**

## **Oxy USA Inc.**

**Haskell County Kansas**

**Section 3 - 30S - 32W**

**Longbotham #6**

**Original Wellpath**

**Design: Original Wellpath**

# **EOW Completion Report**

**30 August, 2011**



<b>Company:</b>	Oxy USA Inc.	<b>Local Co-ordinate Reference:</b>	Well Longbotham #6
<b>Project:</b>	Haskell County Kansas	<b>TVD Reference:</b>	WELL #6 @ 2897.7usft (Original Well Elev)
<b>Site:</b>	Section 3 - 30S - 32W	<b>MD Reference:</b>	WELL #6 @ 2897.7usft (Original Well Elev)
<b>Well:</b>	Longbotham #6	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Wellpath	<b>Database:</b>	EDMOKC

<b>Project</b>	Haskell County Kansas, Haskell County Kansas, South Kansas		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Kansas South 1502		

<b>Site</b>	Section 3 - 30S - 32W, SHL of Longbotham #6				
<b>Site Position:</b>		<b>Northing:</b>	297,622.28 usft	<b>Latitude:</b>	37° 27' 41.140 N
<b>From:</b>	Map	<b>Easting:</b>	1,332,291.71 usft	<b>Longitude:</b>	100° 48' 2.322 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	-1.41 °

<b>Well</b>	Longbotham #6					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	297,622.28 usft	<b>Latitude:</b>	37° 27' 41.140 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	1,332,291.71 usft	<b>Longitude:</b>	100° 48' 2.322 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	2,897.7 usft	<b>Ground Level:</b>	2,886.7 usft

<b>Wellbore</b>	Original Wellpath				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2011	06/28/11	6.54	65.29	51.923

<b>Design</b>	Original Wellpath				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	267.80	

<b>Survey Program</b>	Date 08/29/11			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
1,879.0	6,110.0	Survey #1 MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1

<b>Survey</b>									
<b>MD (usft)</b>	<b>Inc (°)</b>	<b>Azi (azimuth) (°)</b>	<b>TVD (usft)</b>	<b>N/S (usft)</b>	<b>E/W (usft)</b>	<b>V. Sec (usft)</b>	<b>DLeg (°/100usft)</b>		
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.00	
1,879.0	0.87	74.09	1,878.9	3.9	13.7	-13.9	0.05		
1,975.0	0.49	73.96	1,974.9	4.2	14.8	-15.0	0.40		
2,071.0	2.96	277.18	2,070.9	4.6	12.7	-12.9	3.56		
2,167.0	5.79	272.40	2,166.6	5.2	5.5	-5.6	2.97		
2,263.0	7.04	261.39	2,262.0	4.5	-5.2	5.0	1.82		
2,359.0	9.28	275.37	2,357.0	4.3	-18.7	18.6	3.10		
2,455.0	11.06	271.96	2,451.5	5.4	-35.6	35.4	1.96		
2,551.0	13.59	270.94	2,545.3	5.9	-56.1	55.9	2.65		
2,647.0	16.18	270.71	2,638.1	6.2	-80.8	80.5	2.70		
2,743.0	20.97	269.13	2,729.0	6.1	-111.4	111.0	5.02		
2,839.0	24.46	269.90	2,817.6	5.8	-148.4	148.1	3.65		



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## EOW Completion Report



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<b>Well:</b>	Longbotham #6	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Wellpath	<b>Database:</b>	EDMOKC

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
2,935.0	26.63	267.77	2,904.2	5.0	-189.8	189.5	2.45	
3,031.0	26.59	265.55	2,990.0	2.4	-232.7	232.4	1.04	
3,127.0	25.51	266.57	3,076.3	-0.5	-274.8	274.6	1.22	
3,223.0	26.56	266.16	3,162.5	-3.1	-316.8	316.7	1.11	
3,319.0	25.52	265.18	3,248.8	-6.3	-358.8	358.8	1.17	
3,415.0	28.28	269.33	3,334.4	-8.3	-402.2	402.2	3.48	
3,511.0	26.64	269.00	3,419.6	-9.0	-446.5	446.5	1.72	
3,607.0	27.96	268.53	3,504.9	-9.9	-490.5	490.5	1.39	
3,703.0	27.27	267.65	3,589.9	-11.4	-535.0	535.0	0.83	
3,800.0	28.20	265.42	3,675.8	-14.1	-580.0	580.1	1.44	
3,896.0	27.53	264.74	3,760.7	-18.0	-624.7	624.9	0.77	
3,992.0	28.65	263.20	3,845.4	-22.7	-669.7	670.0	1.39	
4,088.0	29.00	264.14	3,929.5	-27.8	-715.7	716.2	0.60	
4,184.0	28.22	266.41	4,013.7	-31.6	-761.5	762.1	1.39	
4,280.0	28.19	264.60	4,098.4	-35.2	-806.7	807.4	0.89	
4,376.0	27.35	266.38	4,183.3	-38.7	-851.3	852.1	1.23	
4,471.0	27.43	269.43	4,267.6	-40.3	-894.9	895.8	1.48	
4,567.0	27.03	269.59	4,353.0	-40.7	-938.9	939.7	0.42	
4,663.0	27.77	268.74	4,438.2	-41.3	-983.0	983.9	0.87	
4,759.0	28.04	267.60	4,523.1	-42.8	-1,027.9	1,028.8	0.62	
4,854.0	27.75	269.73	4,607.0	-43.8	-1,072.4	1,073.3	1.09	
4,950.0	28.80	269.57	4,691.6	-44.1	-1,117.8	1,118.7	1.10	
5,046.0	27.45	268.90	4,776.2	-44.7	-1,163.1	1,163.9	1.44	
5,142.0	27.62	268.33	4,861.4	-45.8	-1,207.5	1,208.3	0.33	
5,327.0	25.47	268.38	5,026.9	-48.1	-1,290.1	1,291.0	1.16	
5,422.0	25.43	267.07	5,112.6	-49.7	-1,330.9	1,331.8	0.59	
5,518.0	27.05	267.98	5,198.8	-51.6	-1,373.3	1,374.2	1.74	
5,614.0	28.37	269.19	5,283.7	-52.7	-1,417.9	1,418.9	1.49	
5,710.0	27.14	268.20	5,368.7	-53.7	-1,462.6	1,463.6	1.37	
5,805.0	27.91	269.47	5,452.9	-54.6	-1,506.5	1,507.5	1.02	
5,902.0	28.64	269.40	5,538.4	-55.0	-1,552.4	1,553.4	0.75	
5,998.0	27.62	270.63	5,623.0	-55.0	-1,597.7	1,598.6	1.22	
6,063.0	26.66	270.61	5,680.9	-54.7	-1,627.3	1,628.2	1.48	
6,110.0	26.66	270.61	5,722.9	-54.5	-1,648.4	1,649.3	0.00	

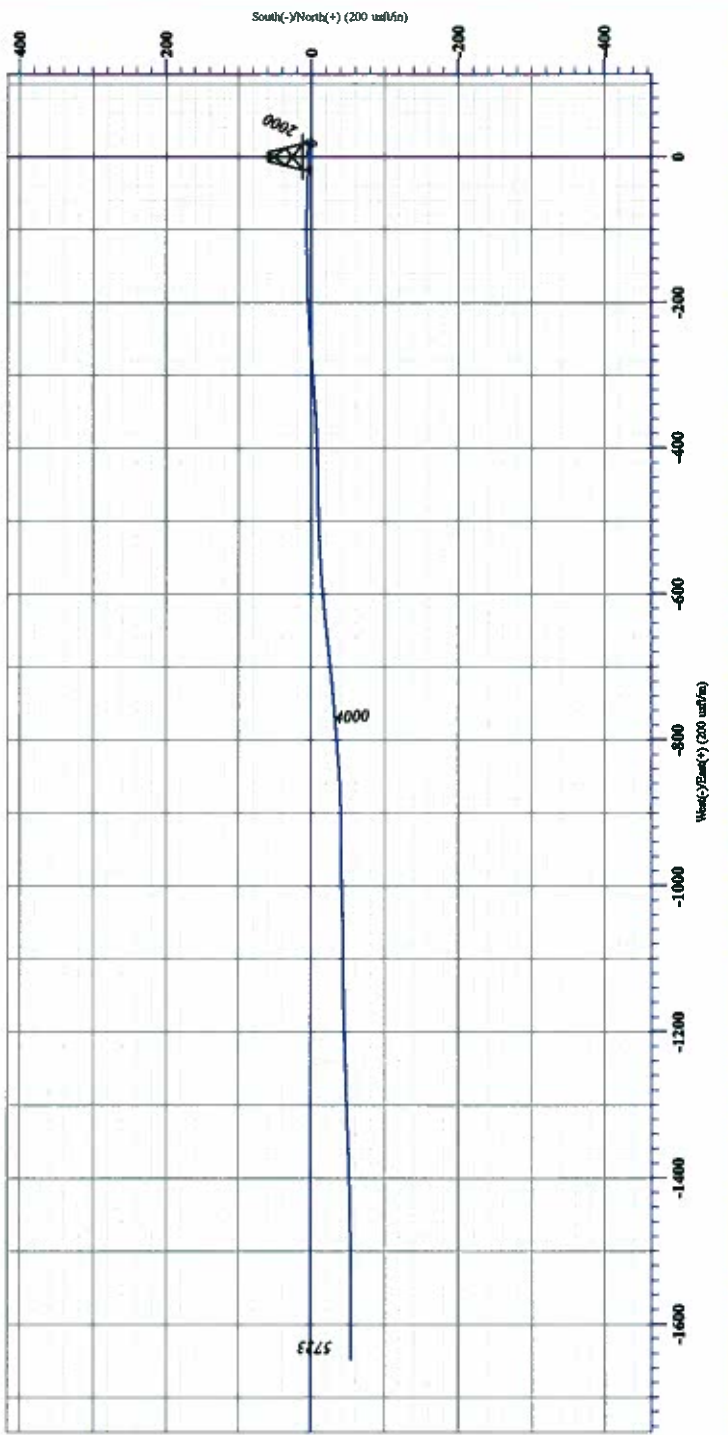
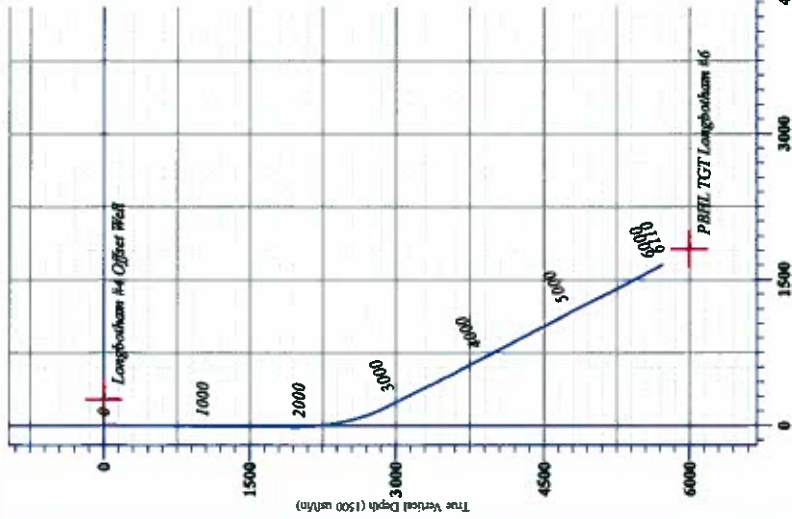
Checked By: _____	Approved By: _____	Date: _____
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# Oxy USA Inc.

Field: Haskell County Kansas  
 Site: Section 3 - 30S - 32W  
 Well: Longbootham #6  
 Wellpath: Original Wellpath  
 Plan: Original Wellpath

Azimuth to Grid North  
 True North: 1.41°  
 Magnetic North: 7.15°  
 Magnetic Field  
 Strength: 31923 Gauss  
 Dip Angle: 65.59°  
 Declination: 0.0282011  
 Model: IGR2011



Vertical Section Azimuth  
 267.80

Bottom Hole from Surface:  
 5722.9' TVD 54.5' S & 1648.4' W  
 6110' MD 1649.3' VS @ 267.80 Azimuth



Design: Original Wellpath (Longbootham #6/Original Wellpath)  
 Created By: Gentle Lightfoot Date: 11:28, August 30 2011

WGS	WGS	WGS	WGS	WGS
0.0	0.0	0.0	0.0	0.0
29702.3	133291.71	97.37	41.04N	100°-49'-13.27"
133291.71	97.37	41.04N	100°-49'-13.27"	572