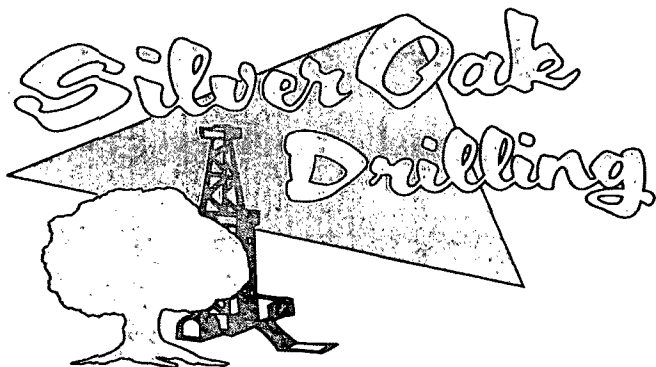




PO Box 1370
Artesia, NM 88211-1370
(505) 748-1288

30 015 41787

NM OIL CONSERVATION
ARTESIA DISTRICT
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March 19, 2014

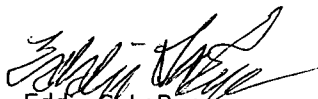
Yates Petroleum Corporation
105 S. 4th
Artesia, NM 88211-1395

RE: Patriot AIZ #14-H
441' FSL & 95' FWL
Sec. 21, T19S, R25E
Eddy County, New Mexico

Dear Sir,

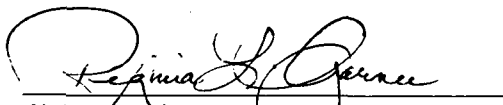
The attached is the Deviation Survey for the above captioned well.

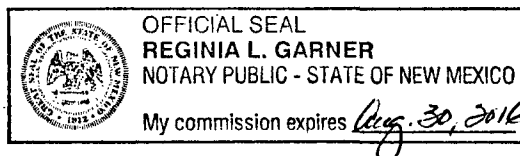
Very truly yours,


Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 19th day of March, 2014.

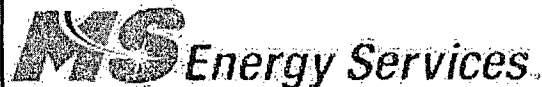

Notary Public



Patriot AIZ #14-H

Date	Depth	Deviation	Direction	TVD
3/7/2014	283	0.50	0.00	0.00
3/7/2014	532	0.30	0.00	0.00
3/7/2014	719	1.00	0.00	0.00
3/8/2014	940	0.30	0.00	0.00
3/9/2014	1038	0.50	70.60	0.00
3/9/2014	1228	0.80	58.90	0.00
3/10/2014	1416	0.70	61.40	0.00
3/10/2014	1603	0.90	70.00	0.00
3/10/2014	1821	14.00	79.50	1820.86
3/10/2014	1900	0.80	66.20	1899.85
3/10/2014	1945	0.90	64.80	1944.84
3/10/2014	1976	0.70	297.00	1975.84
3/10/2014	2007	6.00	266.80	2006.78
3/10/2014	2039	12.00	265.10	2038.37
3/10/2014	2070	17.90	263.10	2068.31
3/10/2014	2101	22.60	263.00	2097.38
3/10/2014	2133	26.30	263.70	2126.51
3/10/2014	2164	29.60	264.80	2153.89
3/10/2014	2195	33.40	266.40	2180.32
3/11/2014	2289	43.30	270.80	2252.00
3/11/2014	2320	44.80	271.30	2275.00
3/11/2014	2351	46.10	270.90	2297.00
3/11/2014	2381	49.70	270.40	2317.00
3/11/2014	2414	53.90	269.20	2337.00
3/11/2014	2445	57.00	269.60	2355.00
3/11/2014	2476	59.60	267.90	0.00
3/11/2014	2538	65.50	267.20	2400.10
3/11/2014	2569	64.80	267.00	2413.73
3/11/2014	2601	69.30	268.80	2425.60
3/11/2014	2632	73.80	268.90	2435.41
3/11/2014	2664	79.30	269.40	2442.85
3/11/2014	2695	81.90	269.70	2447.91
3/11/2014	2727	85.70	270.10	2451.37
3/12/2014	2758	89.20	369.20	2452.00
3/12/2014	2789	91.70	268.30	2452.00
3/12/2014	2820	91.30	268.40	2451.00
3/12/2014	2852	91.10	268.60	2451.00
3/12/2014	2945	90.50	269.30	2449.00
3/12/2014	3039	89.90	269.40	2449.00
3/12/2014	3132	89.60	269.30	2449.80
3/12/2014	3226	90.40	268.40	2449.80
3/12/2014	3319	90.00	267.80	2449.48
3/12/2014	3600	90.50	268.50	2446.45

Date	Depth	Deviation	Direction	TVD
3/12/2014	3693	89.40	268.40	2446.54
3/12/2014	3787	90.20	268.40	2446.86
3/12/2014	3880	91.70	268.50	2445.32
3/13/2014	3974	91.30	268.1.00	2442.00
3/13/2014	4068	90.70	268.00	2441.00
3/13/2014	4161	90.30	268.00	2440.00
3/13/2014	4348	91.40	268.20	2439.02
3/13/2014	4441	91.60	268.50	2436.58
3/13/2014	4538	91.20	268.00	2434.29
3/13/2014	4629	91.60	268.30	2431.99
3/13/2014	4722	90.80	268.70	2430.04
3/13/2014	4815	90.80	268.80	2428.74
3/13/2014	4909	90.90	269.30	2427.35
3/13/2014	5003	90.80	268.90	2425.95
3/13/2014	5096	90.70	269.10	2424.74
3/14/2014	5190	90.60	269.10	2423.67
3/14/2014	5283	90.10	269.90	2423.10
3/14/2014	5377	90.00	269.30	2423.02
3/14/2014	5474	89.60	266.50	2423.35
3/14/2014	5564	89.20	266.50	2424.32
3/14/2014	5658	90.10	266.80	2424.90
3/14/2014	5751	90.40	266.90	2424.49
3/14/2014	5845	90.40	267.30	2423.84
3/14/2014	5938	90.30	267.70	2423.27
3/14/2014	6032	90.00	268.00	2423.02
3/15/2014	6125	90.00	267.90	2423.02
3/15/2014	6219	90.10	268.00	2422.94
3/15/2014	6313	90.40	268.00	2422.53
3/15/2014	6406	90.70	267.90	2421.64
3/15/2014	6500	91.00	267.90	2420.24
3/15/2014	6593	90.90	267.80	2418.70
3/15/2014	6687	91.00	267.70	2417.14
3/15/2014	6780	91.30	267.30	2415.27
3/15/2014	6874	91.70	267.20	2412.00
3/16/2014	6967	91.90	267.20	2409.89
3/16/2014	7061	92.40	268.60	2406.37
3/16/2014	7154	92.00	269.00	2402.80
3/16/2014	7248	91.30	269.10	2400.09
3/16/2014	7342	91.70	269.40	2397.63
3/16/2014	7387	92.00	269.50	2396.18



Job Number: SVMO-140292
 Company: Yates Petroleum Corporation
 Lease/Well: Patriot AIZ 14H
 Location: Eddy County, NM
 Rig Name: Silver Oak #11
 RKB: 18.5'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.80°
 Grid: East To Grid North
 File name: S:12014SU~1\YATES\MO\PATRIO~1\14H.SVY
 Date/Time: 11-Mar-14 / 13:55
 Curve Name: Surface - 872' M.D. (Rate Gyro)

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 ARTESIA DISTRICT
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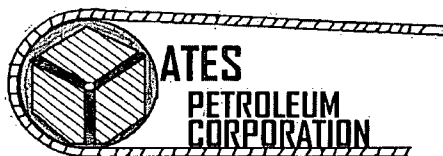
MS SURVEY

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method
 Vertical Section Plane 91.91
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 872' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Clayton Smith 3/11/14
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance: FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.52	11.13	100.00	.45	.09	.07	.45	11.13	.52
200.00	.70	13.49	199.99	1.48	.32	.27	1.52	12.08	.18
300.00	.77	13.13	299.98	2.73	.61	.52	2.80	12.64	.07
400.00	.86	12.52	399.97	4.12	.93	.79	4.22	12.70	.09
500.00	.93	24.97	499.96	5.59	1.43	1.25	5.77	14.39	.21
600.00	.89	36.95	599.95	6.94	2.24	2.01	7.30	17.90	.19
700.00	.70	62.43	699.94	7.85	3.25	2.99	8.49	22.50	.40
800.00	.46	34.20	799.94	8.46	4.02	3.73	9.37	25.40	.37
Last Survey Depth Recorded									
872.00	.28	26.31	871.93	8.86	4.26	3.96	9.83	25.67	.26



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ARTESIA DISTRICT

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Yates Petroleum Corp.

Eddy County, NM (NAD83 NME)

Patriot AIZ

#14H

WB1/Job #1410302

Design: Surveys (Silver Oak 11)

Phoenix Final Survey Report

17 March, 2014



PHOENIX
TECHNOLOGY SERVICES



Phoenix Technology Services

Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #14H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3533.50usft (Silver Oak 11)
Site:	Patriot AIZ	MD Reference:	KB @ 3533.50usft (Silver Oak 11)
Well:	#14H	North Reference:	Grid
Wellbore:	WB1/Job #1410302	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	GCR DB

Project	Eddy County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Patriot AIZ		
Site Position:		Northing:	596,840.50 usft
From:	Map	Easting:	490,606.70 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 38' 26.35759 N
		Longitude:	104° 29' 53.31675 W
		Grid Convergence:	-0.09 °

Well	#14H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 38' 26.35759 N
		Longitude:	104° 29' 53.31675 W
		Ground Level:	3,515.00 usft

Wellbore	WB1/Job #1410302				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	02/25/14	7.71	60.35	48,494

Design	Surveys (Silver Oak 11)			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	268.50

Survey Program	Date 03/17/14				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	872.00	Gyro Survey (WB1/Job #1410302)	CB-GYRO-MS	Camera based gyro multishot	
1,038.00	7,463.00	Phoenix MWD Survey (WB1/Job #141030)	MWD	MWD - Standard	

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)		TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.52	11.30		100.00	0.44	0.09	-0.10	0.52
200.00	0.70	13.49		199.99	1.48	0.32	-0.36	0.18
300.00	0.77	13.13		299.98	2.73	0.62	-0.69	0.07
400.00	0.86	12.52		399.97	4.12	0.93	-1.04	0.09
500.00	0.93	24.97		499.96	5.59	1.44	-1.58	0.21
600.00	0.89	36.95		599.95	6.94	2.25	-2.43	0.19
700.00	0.70	62.43		699.94	7.85	3.25	-3.46	0.40
800.00	0.46	34.20		799.94	8.46	4.02	-4.24	0.37
872.00	0.28	26.31		871.93	8.86	4.26	-4.49	0.26
Tie-on to Gyro Survey								



Phoenix Technology Services

Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #14H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3533.50usft (Silver Oak 11)
Site:	Patriot AlZ	MD Reference:	KB @ 3533.50usft (Silver Oak 11)
Well:	#14H	North Reference:	Grid
Wellbore:	WB1/Job #1410302	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,038.00	0.50	70.60	1,037.93	9.46	5.12	-5.37	0.22
First Phoenix MWD Survey							
1,228.00	0.80	58.90	1,227.92	10.42	7.04	-7.31	0.17
1,416.00	0.70	61.40	1,415.90	11.65	9.17	-9.48	0.06
1,603.00	0.90	71.00	1,602.88	12.68	11.57	-11.89	0.13
1,821.00	0.90	79.80	1,820.86	13.54	14.87	-15.22	0.06
1,900.00	0.80	66.20	1,899.85	13.87	15.98	-16.34	0.28
1,945.00	0.90	64.80	1,944.84	14.15	16.59	-16.96	0.23
1,976.00	0.70	297.00	1,975.84	14.34	16.64	-17.01	4.64
2,007.00	6.00	266.80	2,006.78	14.33	14.86	-15.23	17.44
2,039.00	12.00	265.10	2,038.37	13.95	9.87	-10.23	18.77
2,070.00	17.90	263.10	2,068.31	13.11	1.92	-2.26	19.10
2,101.00	22.60	263.00	2,097.38	11.81	-8.73	8.42	15.16
2,133.00	26.30	263.70	2,126.51	10.28	-21.88	21.61	11.60
2,164.00	29.60	264.80	2,153.89	8.83	-36.34	36.09	10.77
2,195.00	33.40	266.40	2,180.32	7.60	-52.48	52.27	12.55
2,226.00	38.10	268.00	2,205.47	6.73	-70.57	70.37	15.46
2,257.00	40.80	269.40	2,229.41	6.29	-90.26	90.06	9.17
2,288.00	43.30	270.80	2,252.42	6.33	-111.02	110.81	8.61
2,320.00	44.80	271.30	2,275.42	6.74	-133.26	133.04	4.81
2,351.00	46.10	270.90	2,297.17	7.17	-155.35	155.11	4.29
2,382.00	49.70	270.40	2,317.95	7.42	-178.35	178.09	11.67
2,414.00	53.90	269.20	2,337.73	7.33	-203.49	203.22	13.45
2,445.00	57.00	268.60	2,355.31	6.84	-229.01	228.75	10.13
2,476.00	59.60	267.90	2,371.60	6.03	-255.37	255.13	8.60
2,507.00	62.70	266.60	2,386.56	4.72	-282.49	282.27	10.65
2,538.00	65.50	267.20	2,400.10	3.21	-310.33	310.14	9.20
2,569.00	64.80	267.00	2,413.13	1.79	-338.42	338.26	2.33
2,601.00	69.30	268.80	2,425.60	0.72	-367.86	367.72	14.99
2,630.69	73.61	268.90	2,435.04	0.15	-396.00	395.86	14.52
2630.69 MD, 330' Crossing Heel Point							
2,632.00	73.80	268.90	2,435.41	0.13	-397.26	397.12	14.52
2,664.00	79.30	269.40	2,442.85	-0.33	-428.36	428.22	17.25
2,695.00	81.90	269.70	2,447.91	-0.57	-458.94	458.80	8.44
2,727.00	85.70	270.10	2,451.37	-0.63	-490.75	490.60	11.94
2,758.00	89.20	269.20	2,452.75	-0.81	-521.71	521.56	11.66
2,789.00	91.70	268.30	2,452.50	-1.49	-552.70	552.55	8.57
2,820.00	91.30	268.40	2,451.69	-2.38	-583.68	583.54	1.33
2,852.00	91.10	268.60	2,451.02	-3.22	-615.66	615.53	0.88
2,945.00	90.50	269.30	2,449.72	-4.92	-708.63	708.52	0.99
3,039.00	89.90	269.40	2,449.39	-5.99	-802.63	802.51	0.65
3,132.00	89.60	269.30	2,449.80	-7.05	-895.62	895.50	0.34
3,226.00	90.40	268.40	2,449.80	-8.93	-989.60	989.49	1.28
3,319.00	90.00	267.80	2,449.48	-12.02	-1,082.55	1,082.49	0.78
3,413.00	91.00	268.10	2,448.66	-15.38	-1,176.48	1,176.48	1.11



Phoenix Technology Services

Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #14H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3533.50usft (Silver Oak 11)
Site:	Patriot AIZ	MD Reference:	KB @ 3533.50usft (Silver Oak 11)
Well:	#14H	North Reference:	Grid
Wellbore:	WB1/Job #1410302	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
3,506.00	90.60	268.10	2,447.36	-18.46	-1,269.42	1,269.47	0.43
3,600.00	90.50	268.50	2,446.45	-21.25	-1,363.38	1,363.47	0.44
3,693.00	89.40	268.40	2,446.54	-23.77	-1,456.34	1,456.46	1.19
3,787.00	90.20	268.40	2,446.86	-26.39	-1,550.30	1,550.46	0.85
3,880.00	91.70	268.50	2,445.32	-28.91	-1,643.25	1,643.45	1.62
3,974.00	91.30	268.10	2,442.86	-31.69	-1,737.18	1,737.41	0.60
4,068.00	90.70	268.00	2,441.22	-34.89	-1,831.11	1,831.40	0.65
4,161.00	90.30	268.00	2,440.41	-38.14	-1,924.05	1,924.39	0.43
4,254.00	90.00	268.00	2,440.17	-41.38	-2,016.99	2,017.38	0.32
4,348.00	91.40	268.20	2,439.02	-44.50	-2,110.93	2,111.37	1.50
4,441.00	91.60	268.50	2,436.58	-47.18	-2,203.86	2,204.34	0.39
4,535.00	91.20	268.00	2,434.29	-50.05	-2,297.79	2,298.31	0.68
4,629.00	91.60	268.30	2,431.99	-53.08	-2,391.71	2,392.28	0.53
4,722.00	90.80	268.70	2,430.04	-55.51	-2,484.66	2,485.26	0.96
4,815.00	90.80	268.80	2,428.74	-57.54	-2,577.63	2,578.25	0.11
4,909.00	90.90	269.30	2,427.35	-59.10	-2,671.60	2,672.23	0.54
5,003.00	90.80	268.90	2,425.95	-60.58	-2,765.58	2,766.22	0.44
5,096.00	90.70	269.10	2,424.74	-62.20	-2,858.56	2,859.21	0.24
5,190.00	90.60	269.10	2,423.67	-63.68	-2,952.54	2,953.20	0.11
5,283.00	90.10	269.40	2,423.10	-64.89	-3,045.53	3,046.19	0.63
5,377.00	90.00	269.30	2,423.02	-65.96	-3,139.53	3,140.18	0.15
5,471.00	89.60	266.50	2,423.35	-69.40	-3,233.45	3,234.16	3.01
5,564.00	89.20	266.50	2,424.32	-75.08	-3,326.27	3,327.10	0.43
5,658.00	90.10	266.80	2,424.90	-80.57	-3,420.11	3,421.05	1.01
5,751.00	90.40	266.90	2,424.49	-85.68	-3,512.97	3,514.01	0.34
5,845.00	90.40	267.30	2,423.84	-90.44	-3,606.85	3,607.98	0.43
5,938.00	90.30	267.70	2,423.27	-94.50	-3,699.75	3,700.96	0.44
6,032.00	90.00	268.00	2,423.02	-98.02	-3,793.69	3,794.95	0.45
6,125.00	90.00	267.90	2,423.02	-101.35	-3,886.63	3,887.95	0.11
6,219.00	90.10	268.00	2,422.94	-104.71	-3,980.57	3,981.95	0.15
6,313.00	90.40	268.00	2,422.53	-107.99	-4,074.51	4,075.94	0.32
6,406.00	90.70	267.90	2,421.64	-111.32	-4,167.45	4,168.93	0.34
6,500.00	91.00	267.90	2,420.24	-114.76	-4,261.37	4,262.92	0.32
6,593.00	90.90	267.80	2,418.70	-118.25	-4,354.29	4,355.90	0.15
6,687.00	91.00	267.70	2,417.14	-121.94	-4,448.21	4,449.88	0.15
6,780.00	91.30	267.30	2,415.27	-126.00	-4,541.10	4,542.84	0.54
6,874.00	91.70	267.20	2,412.81	-130.50	-4,634.96	4,636.79	0.44
6,967.00	91.90	267.20	2,409.89	-135.05	-4,727.80	4,729.72	0.22
7,061.00	92.40	268.60	2,406.37	-138.49	-4,821.67	4,823.64	1.58
7,154.00	92.00	269.00	2,402.80	-140.43	-4,914.58	4,916.57	0.61
7,248.00	91.30	269.10	2,400.09	-141.99	-5,008.53	5,010.53	0.75
7,293.49	91.49	269.25	2,398.98	-142.65	-5,054.00	5,056.00	0.53
7293.49 MD, 330° Crossing Toe Point							
7,342.00	91.70	269.40	2,397.63	-143.22	-5,102.49	5,104.49	0.53



Phoenix Technology Services

Phoenix Final Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #14H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	KB @ 3533.50usft (Silver Oak 11)
Site:	Patriot AIZ	MD Reference:	KB @ 3533.50usft (Silver Oak 11)
Well:	#14H	North Reference:	Grid
Wellbore:	WB1/Job #1410302	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 11)	Database:	GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,387.00	92.00	269.50	2,396.18	-143.65	-5,147.46	5,149.46	0.70
Last Phoenix MWD Survey							
7,463.00	92.00	269.50	2,393.52	-144.32	-5,223.41	5,225.40	0.00
Projection to TD							

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
872.00	871.93	8.86	4.26	Tie-on to Gyro Survey
1,038.00	1,037.93	9.46	5.12	First Phoenix MWD Survey
2,630.69	2,435.04	0.15	-396.00	2630.69 MD, 330' Crossing Heel Point
7,293.49	2,398.98	-142.65	-5,054.00	7293.49 MD, 330' Crossing Toe Point
7,387.00	2,396.18	-143.65	-5,147.46	Last Phoenix MWD Survey
7,463.00	2,393.52	-144.32	-5,223.41	Projection to TD

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County, NM (NAD83 NME)
Site: Patriot AIZ
Well: #14H
Wellbore: WB1/Job #1410302
Design: Plan #2 03-10-14
Rig: Silver Oak 11



Azimuths to Grid North
True North: 0.09°
Magnetic North: 7.80°
Magnetic Field
Strength: 48493.7nT
Dip Angle: 60.35°
Date: 02/25/2014
Model: IGRF2010_14

WELL DETAILS

+N/-S	+E/-W	Northing	Easting	Ground Level	Latitude	Longitude
0.00	0.00	596840.50	490606.70	3515.00	32° 38' 26.35759 N	104° 29' 53.31675 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target	Annotation
1	1900.00	0.80	66.20	1899.85	13.87	15.98	0.00	0.00	-16.34		Tie-on to 1900' MD
2	1975.00	0.80	66.20	1974.84	14.29	16.94	0.00	0.00	-17.31		PTB, KOP, 12.13°/100' Build
3	2727.75	90.57	268.31	2453.27	2.80	-459.92	12.13	-157.88	459.68		LP, Hold 90.57° Inc, 268.31° Azm
4	7324.35	90.57	268.31	2407.70	-132.40	-5054.30	0.00	0.00	5056.03	BHL Patriot AIZ #14H	
5	7424.35	90.57	268.31	2406.71	-135.34	-5154.25	0.00	0.00	5156.03		TD at 7424.35, 100' Past Hardline

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BHL Patriot AIZ #14H	2407.70	-132.40	-5054.30	596708.10	485552.40	32° 38' 24.95598 N	104° 30' 52.42590 W	Point

- plan has target center

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Local Origin: Well #14H, Grid North

Latitude: 32° 38' 26.35759 N
Longitude: 104° 29' 53.31675 W

Grid East: 490606.70
Grid North: 596840.50
Scale Factor: 1.000

Geomagnetic Model: IGRF2010_14
Sample Date: 25-Feb-14

Magnetic Declination: 7.71°
Dip Angle from Horizontal: 60.35°
Magnetic Field Strength: 48494

To convert a Magnetic Direction to a Grid Direction, Add 7.80°
To convert a Magnetic Direction to a True Direction, Add 7.71° East
To convert a True Direction to a Grid Direction, Add 0.09°

FORMATION TOP DETAILS

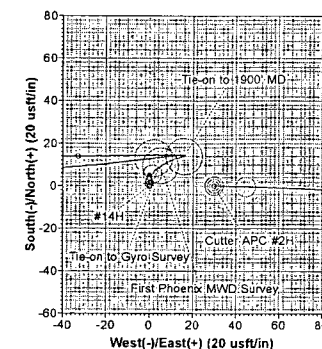
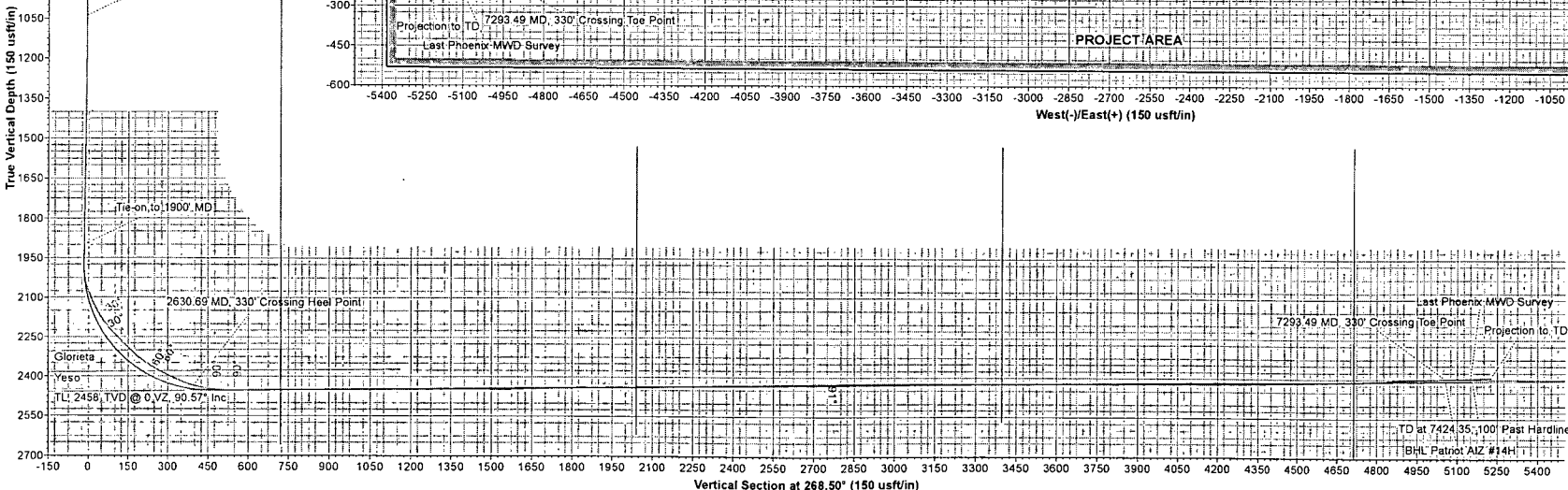
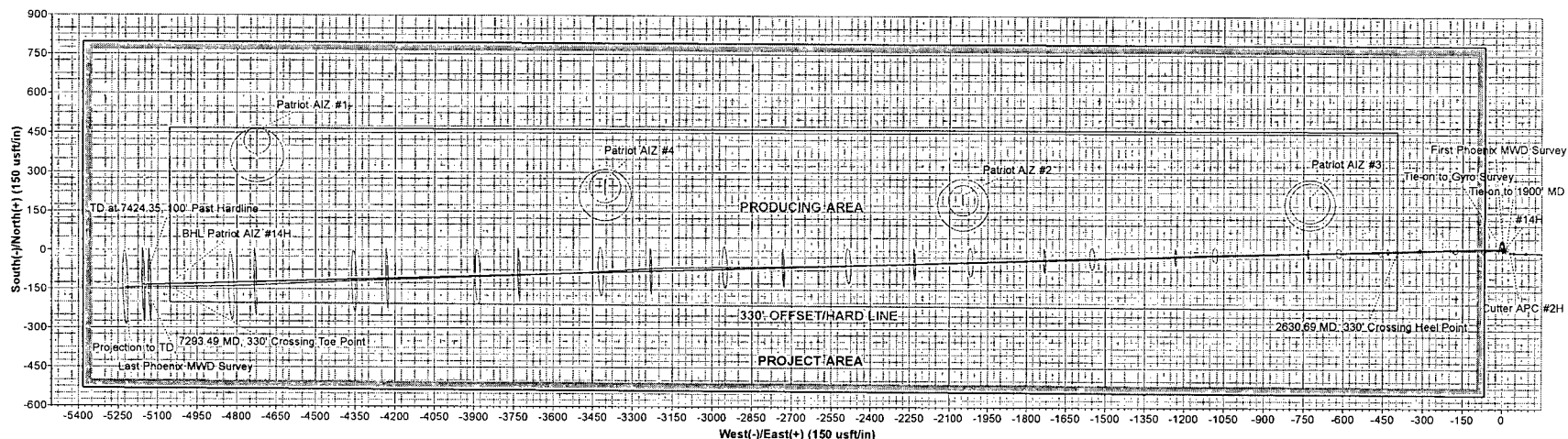
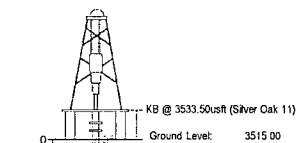
TVDPath	MDPath	Formation	DipAngle	DipDir
2301.92	2334.01	Glorieta	-0.57	268.50
2380.97	2458.23	Yeso	-0.57	268.50
2407.98	7295.78	TL 2458° TVD @ 0 VZ, 90.57° Inc	-0.57	268.50

CASING DETAILS

TVD	MD	Name	Size
	78.00	20"	20
	1000.00	9 5/8"	9 5/8

LEGEND

- #2H, WB1/Job #1410303, Plan #1 02-20-14 V0
- #4, WB1, Inc Surveys V0
- #1, WB1, Inc Surveys V0
- #2, WB1, Inc Surveys V0
- #3, WB1, Inc Surveys V0
- #14H, WB1/Job #1410302, Surveys (Silver Oak 11) V0
- Plan #2 03-10-14





PHOENIX
TECHNOLOGY SERVICES

April 21, 2014

Yates Petroleum Corp.
Attention: Regulatory Department
105 S. 4th St.
Artesia, NM 88210

Re: Yates Petroleum
Patriot AIZ #14H
Eddy County, NM
API #30-015- 41787
Job No. 1410302

Dear Regulatory Department;

Phoenix Technology Services, Inc. has filed the Survey Data Certification, Surveys, and Lease Plat for the above referenced well with the State of New Mexico Oil Conservation Division – District 2 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Daniel Scott	14H	1,038	7,387	03/09/14	03/16/14	MWD

Thank you for the opportunity to be of service. Please contact me if you have any questions or require additional information.

Best Regards,

Dana Robinson

Dana Robinson
Operations Administrator

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1410302

OPERATOR Yates Petroleum Corporation

WELL NAME Patriot AIZ #14H

COUNTY & STATE

Eddy, New Mexico

API WELL NUMBER 30-015-41787

PROPOSED DIRECTION 268.5

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
872 ft	871.93 ft	0.28	26.31	8.86 ft	4.26 ft	GYRO

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
9-Mar-14	1,038 ft	0.5	70.6

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
16-Mar-14	7,387 ft	92	269.5

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
16-Mar-14	7,463 ft	92	269.5

Daniel Scott

PRINT YOUR NAME ABOVE

Daniel Scott

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.8
DECLINATION OR GRID	GRID

3/16/2014

TODAY'S DATE

MWD SUPERVISOR 1 Daniel Scott

DIRECTIONAL DRILLER 1

Brian Terrell

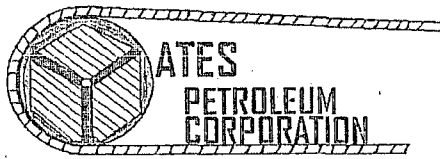
MWD SUPERVISOR 2 James Garber

DIRECTIONAL DRILLER 2

Greg Puntney

1805 Brittmore Road Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)



Yates Petroleum Corp.

Eddy County, NM (NAD83 NME)

Patriot AIZ

#14H

WB1/Job #1410302

Design: Surveys (Silver Oak 11)

Phoenix Final Survey Report

17 March, 2014





Phoenix Technology Services

Phoenix Final Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County, NM (NAD83 NME)
Site: Patriot AIZ
Well: #14H
Wellbore: WB1/Job #1410302
Design: Surveys (Silver Oak 11)

Local Co-ordinate Reference: Well #14H
TVD Reference: KB @ 3533.50usft (Silver Oak 11)
MD Reference: KB @ 3533.50usft (Silver Oak 11)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB

Project	Eddy County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Patriot AIZ				
Site Position:		Northing:	596,840.50 usft	Latitude:	32° 38' 26.35759 N
From:	Map	Easting:	490,606.70 usft	Longitude:	104° 29' 53.31675 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	-0.09 °

Well	#14H					
Well Position	+N/-S	0.00 usft	Northing:	596,840.50 usft	Latitude:	32° 38' 26.35759 N
	+E/-W	0.00 usft	Easting:	490,606.70 usft	Longitude:	104° 29' 53.31675 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,515.00 usft	

Wellbore	WB1/Job #1410302				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010_14	02/25/14	7.71	60.35	48,494

Design	Surveys (Silver Oak 11)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	268.50	

Survey Program	Date 03/17/14				
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.00	872.00	Gyro Survey (WB1/Job #1410302)	CB-GYRO-MS	Camera based gyro multishot	
1,038.00	7,463.00	Phoenix MWD Survey (WB1/Job #141030)	MWD	MWD - Standard	

Survey	MD	Inc	Azi (azimuth)	TVD	N/S	E/W	V. Sec	DLeg
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	100.00	0.52	11.30	100.00	0.44	0.09	-0.10	0.52
	200.00	0.70	13.49	199.99	1.48	0.32	-0.36	0.18
	300.00	0.77	13.13	299.98	2.73	0.62	-0.69	0.07
	400.00	0.86	12.52	399.97	4.12	0.93	-1.04	0.09
	500.00	0.93	24.97	499.96	5.59	1.44	-1.58	0.21
	600.00	0.89	36.95	599.95	6.94	2.25	-2.43	0.19
	700.00	0.70	62.43	699.94	7.85	3.25	-3.46	0.40
	800.00	0.46	34.20	799.94	8.46	4.02	-4.24	0.37
	872.00	0.28	26.31	871.93	8.86	4.26	-4.49	0.26
Tie-on to Gyro Survey								



Phoenix Technology Services

Phoenix Final Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County, NM (NAD83 NME)
Site: Patriot AIZ
Well: #14H
Wellbore: WB1/Job #1410302
Design: Surveys (Silver Oak 11)

Local Co-ordinate Reference: Well #14H
TVD Reference: KB @ 3533.50usft (Silver Oak 11)
MD Reference: KB @ 3533.50usft (Silver Oak 11)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)
1,038.00	0.50	70.60	1,037.93	9.46	5.12	-5.37	0.22
First Phoenix MWD Survey							
1,228.00	0.80	58.90	1,227.92	10.42	7.04	-7.31	0.17
1,416.00	0.70	61.40	1,415.90	11.65	9.17	-9.48	0.06
1,603.00	0.90	71.00	1,602.88	12.68	11.57	-11.89	0.13
1,821.00	0.90	79.80	1,820.86	13.54	14.87	-15.22	0.06
1,900.00	0.80	66.20	1,899.85	13.87	15.98	-16.34	0.28
1,945.00	0.90	64.80	1,944.84	14.15	16.59	-16.96	0.23
1,976.00	0.70	297.00	1,975.84	14.34	16.64	-17.01	4.64
2,007.00	6.00	266.80	2,006.78	14.33	14.86	-15.23	17.44
2,039.00	12.00	265.10	2,038.37	13.95	9.87	-10.23	18.77
2,070.00	17.90	263.10	2,068.31	13.11	1.92	-2.26	19.10
2,101.00	22.60	263.00	2,097.38	11.81	-8.73	8.42	15.16
2,133.00	26.30	263.70	2,126.51	10.28	-21.88	21.61	11.60
2,164.00	29.60	264.80	2,153.89	8.83	-36.34	36.09	10.77
2,195.00	33.40	266.40	2,180.32	7.60	-52.48	52.27	12.55
2,226.00	38.10	268.00	2,205.47	6.73	-70.57	70.37	15.46
2,257.00	40.80	269.40	2,229.41	6.29	-90.26	90.06	9.17
2,288.00	43.30	270.80	2,252.42	6.33	-111.02	110.81	8.61
2,320.00	44.80	271.30	2,275.42	6.74	-133.26	133.04	4.81
2,351.00	46.10	270.90	2,297.17	7.17	-155.35	155.11	4.29
2,382.00	49.70	270.40	2,317.95	7.42	-178.35	178.09	11.67
2,414.00	53.90	269.20	2,337.73	7.33	-203.49	203.22	13.45
2,445.00	57.00	268.60	2,355.31	6.84	-229.01	228.75	10.13
2,476.00	59.60	267.90	2,371.60	6.03	-255.37	255.13	8.60
2,507.00	62.70	266.60	2,386.56	4.72	-282.49	282.27	10.65
2,538.00	65.50	267.20	2,400.10	3.21	-310.33	310.14	9.20
2,569.00	64.80	267.00	2,413.13	1.79	-338.42	338.26	2.33
2,601.00	69.30	268.80	2,425.60	0.72	-367.86	367.72	14.99
2,630.69	73.61	268.90	2,435.04	0.15	-396.00	395.86	14.52
2630.69 MD, 330' Crossing Heel Point							
2,632.00	73.80	268.90	2,435.41	0.13	-397.26	397.12	14.52
2,664.00	79.30	269.40	2,442.85	-0.33	-428.36	428.22	17.25
2,695.00	81.90	269.70	2,447.91	-0.57	-458.94	458.80	8.44
2,727.00	85.70	270.10	2,451.37	-0.63	-490.75	490.60	11.94
2,758.00	89.20	269.20	2,452.75	-0.81	-521.71	521.56	11.66
2,789.00	91.70	268.30	2,452.50	-1.49	-552.70	552.55	8.57
2,820.00	91.30	268.40	2,451.69	-2.38	-583.68	583.54	1.33
2,852.00	91.10	268.60	2,451.02	-3.22	-615.66	615.53	0.88
2,945.00	90.50	269.30	2,449.72	-4.92	-708.63	708.52	0.99
3,039.00	89.90	269.40	2,449.39	-5.99	-802.63	802.51	0.65
3,132.00	89.60	269.30	2,449.80	-7.05	-895.62	895.50	0.34
3,226.00	90.40	268.40	2,449.80	-8.93	-989.60	989.49	1.28
3,319.00	90.00	267.80	2,449.48	-12.02	-1,082.55	1,082.49	0.78
3,413.00	91.00	268.10	2,448.66	-15.38	-1,176.48	1,176.48	1.11



Phoenix Technology Services
Phoenix Final Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County, NM (NAD83 NME)
Site: Patriot AIZ
Well: #14H
Wellbore: WB1/Job #1410302
Design: Surveys (Silver Oak 11)

Local Co-ordinate Reference: Well #14H
TVD Reference: KB @ 3533.50usft (Silver Oak 11)
MD Reference: KB @ 3533.50usft (Silver Oak 11)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
3,506.00	90.60	268.10	2,447.36	-18.46	-1,269.42	1,269.47	0.43
3,600.00	90.50	268.50	2,446.45	-21.25	-1,363.38	1,363.47	0.44
3,693.00	89.40	268.40	2,446.54	-23.77	-1,456.34	1,456.46	1.19
3,787.00	90.20	268.40	2,446.86	-26.39	-1,550.30	1,550.46	0.85
3,880.00	91.70	268.50	2,445.32	-28.91	-1,643.25	1,643.45	1.62
3,974.00	91.30	268.10	2,442.86	-31.69	-1,737.18	1,737.41	0.60
4,068.00	90.70	268.00	2,441.22	-34.89	-1,831.11	1,831.40	0.65
4,161.00	90.30	268.00	2,440.41	-38.14	-1,924.05	1,924.39	0.43
4,254.00	90.00	268.00	2,440.17	-41.38	-2,016.99	2,017.38	0.32
4,348.00	91.40	268.20	2,439.02	-44.50	-2,110.93	2,111.37	1.50
4,441.00	91.60	268.50	2,436.58	-47.18	-2,203.86	2,204.34	0.39
4,535.00	91.20	268.00	2,434.29	-50.05	-2,297.79	2,298.31	0.68
4,629.00	91.60	268.30	2,431.99	-53.08	-2,391.71	2,392.28	0.53
4,722.00	90.80	268.70	2,430.04	-55.51	-2,484.66	2,485.26	0.96
4,815.00	90.80	268.60	2,428.74	-57.54	-2,577.63	2,578.25	0.11
4,909.00	90.90	269.30	2,427.35	-59.10	-2,671.60	2,672.23	0.54
5,003.00	90.80	268.90	2,425.95	-60.58	-2,765.58	2,766.22	0.44
5,096.00	90.70	269.10	2,424.74	-62.20	-2,858.56	2,859.21	0.24
5,190.00	90.60	269.10	2,423.67	-63.68	-2,952.54	2,953.20	0.11
5,283.00	90.10	269.40	2,423.10	-64.89	-3,045.53	3,046.19	0.63
5,377.00	90.00	269.30	2,423.02	-65.96	-3,139.53	3,140.18	0.15
5,471.00	89.60	266.50	2,423.35	-69.40	-3,233.45	3,234.16	3.01
5,564.00	89.20	266.50	2,424.32	-75.08	-3,326.27	3,327.10	0.43
5,658.00	90.10	266.80	2,424.90	-80.57	-3,420.11	3,421.05	1.01
5,751.00	90.40	266.90	2,424.49	-85.68	-3,512.97	3,514.01	0.34
5,845.00	90.40	267.30	2,423.84	-90.44	-3,606.85	3,607.98	0.43
5,938.00	90.30	267.70	2,423.27	-94.50	-3,699.75	3,700.96	0.44
6,032.00	90.00	268.00	2,423.02	-98.02	-3,793.69	3,794.95	0.45
6,125.00	90.00	267.90	2,423.02	-101.35	-3,886.63	3,887.95	0.11
6,219.00	90.10	268.00	2,422.94	-104.71	-3,980.57	3,981.95	0.15
6,313.00	90.40	268.00	2,422.53	-107.99	-4,074.51	4,075.94	0.32
6,406.00	90.70	267.90	2,421.64	-111.32	-4,167.45	4,168.93	0.34
6,500.00	91.00	267.90	2,420.24	-114.76	-4,261.37	4,262.92	0.32
6,593.00	90.90	267.80	2,418.70	-118.25	-4,354.29	4,355.90	0.15
6,687.00	91.00	267.70	2,417.14	-121.94	-4,448.21	4,449.88	0.15
6,780.00	91.30	267.30	2,415.27	-126.00	-4,541.10	4,542.84	0.54
6,874.00	91.70	267.20	2,412.81	-130.50	-4,634.96	4,636.79	0.44
6,967.00	91.90	267.20	2,409.89	-135.05	-4,727.80	4,729.72	0.22
7,061.00	92.40	268.60	2,406.37	-138.49	-4,821.67	4,823.64	1.58
7,154.00	92.00	269.00	2,402.80	-140.43	-4,914.58	4,916.57	0.61
7,248.00	91.30	269.10	2,400.09	-141.99	-5,008.53	5,010.53	0.75
7,293.49	91.49	269.25	2,398.98	-142.65	-5,054.00	5,056.00	0.53
7293.49 MD, 330' Crossing Toe Point							
7,342.00	91.70	269.40	2,397.63	-143.22	-5,102.49	5,104.49	0.53



Phoenix Technology Services

Phoenix Final Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County, NM (NAD83 NME)
Site: Patriot AIZ
Well: #14H
Wellbore: WB1/Job #1410302
Design: Surveys (Silver Oak 11)

Local Co-ordinate Reference: Well #14H
TVD Reference: KB @ 3533.50usft (Silver Oak 11)
MD Reference: KB @ 3533.50usft (Silver Oak 11)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: GCR DB

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg ("/100usft)	
7,387.00	92.00	269.50	2,396.18	-143.65	-5,147.46	5,149.46	0.70	
Last Phoenix MWD Survey								
7,463.00	92.00	269.50	2,393.52	-144.32	-5,223.41	5,225.40	0.00	
Projection to TD								

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
872.00	871.93	8.86	4.26	Tie-on to Gyro Survey
1,038.00	1,037.93	9.46	5.12	First Phoenix MWD Survey
2,630.69	2,435.04	0.15	-396.00	2630.69 MD, 330' Crossing Heel Point
7,293.49	2,398.98	-142.65	-5,054.00	7293.49 MD, 330' Crossing Toe Point
7,387.00	2,396.18	-143.65	-5,147.46	Last Phoenix MWD Survey
7,463.00	2,393.52	-144.32	-5,223.41	Projection to TD

Checked By: _____ Approved By: _____ Date: _____