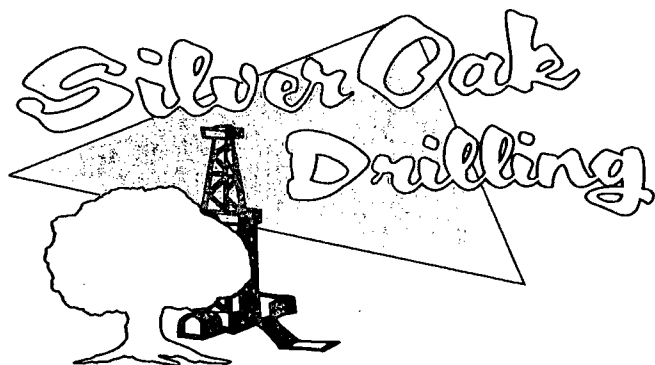




PO Box 1370
Artesia, NM 88211-1370
(505) 748-1288

30-015-40536

August 31, 2012

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

RE: Warren Federal ANW #8H
400' FSL & 230' FWL
Sec. 9, T19S, R25E
Eddy County, New Mexico

Dear Sir,

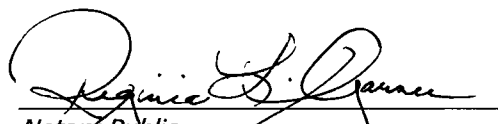
The attached is the Deviation Survey for the above captioned well.

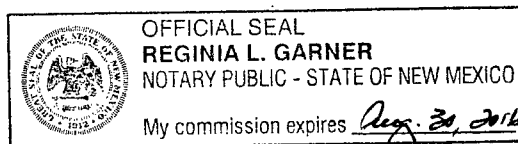
Very truly yours,


Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 31st day of August, 2012.


Notary Public



Warren Federal ANW #8H

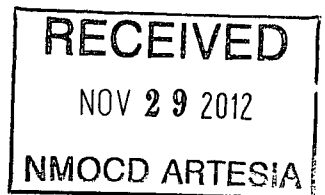
Date	Depth	Dev	Dir	TVD	Horiz Disp
8/14/2012	174	0.80			
8/14/2012	327	0.70			
8/18/2012	597	0.40			
8/19/2012	720	0.40			
8/21/2012	980	0.97			
8/21/2012	1076	0.97			
8/21/2012	1171	0.53	269.54		
8/21/2012	1458	0.35	190.27		
8/21/2012	1649	0.44	286.69	1648.91	
8/21/2012	1840	0.35	319.30	1839.91	
8/22/2012	1960	0.70	99.31	1959.90	-12.66
8/22/2012	2024	8.00	96.58	2023.00	-8.11
8/23/2012	2055	12.50	94.30	2054.22	
8/23/2012	2087	16.44	93.16	2085.22	
8/23/2012	2119	20.75	93.16	2115.55	
8/23/2012	2182	29.11	93.86	2172.00	
8/24/2012	2278	39.83	89.11	2251.35	
8/24/2012	2310	43.35	88.59	2275.31	
8/24/2012	2342	48.63	88.76	2297.54	
8/24/2012	2468	63.84	90.87	2364.00	
8/24/2012	2563	69.20	90.17	2401.00	
8/24/2012	2722	78.17	89.03	2447.00	
8/24/2012	2785	81.07	89.20	2558.00	
8/24/2012	2816	83.01	89.20		
8/24/2012	2848	87.85	89.11		
8/25/2012	2910	89.34	89.64	2468.00	
8/25/2012	3005	89.34	89.29	2469.00	
8/25/2012	3100	88.81	89.64	2971.00	
8/25/2012	3195	87.85	90.17	2474.00	
8/25/2012	3289	89.16	89.64	2476.00	
8/25/2012	3384	88.81	89.38	2478.28	
8/25/2012	3384	88.81	89.38	2478.28	
8/25/2012	3464	87.49	89.64	2486.67	
8/25/2012	3479	38.11	89.99	2480.83	
8/25/2012	3479	88.11	89.99	2480.83	
8/25/2012	3574	89.52	89.73	2482.80	
8/25/2012	3574	89.52	89.73	2482.80	
8/25/2012	3669	89.16	90.26	2483.89	
8/26/2012	3860	89.08	90.08	2489.54	
8/26/2012	3955	89.16	89.73	2490.00	
8/26/2012	4050	87.49	89.55	2493.78	
8/26/2012	4145	33.72	39.38	2446.90	
8/26/2012	4240	88.55	89.55	2499.00	

Date	Depth	Dev	Dir	TVD	Horiz Disp
8/26/2012	4335	88.02	90.87	2502.00	
8/26/2012	4430	88.90	90.87	2504.00	
8/26/2012	4620	88.64	89.90	2510.78	
8/26/2012	4715	87.76	89.82	2513.76	
8/26/2012	4810	88.72	89.82	2516.80	
8/27/2012	4905	87.76	90.08	2519.00	
8/27/2012	5000	88.64	89.99	2511.00	
8/27/2012	5095	87.85	90.17	2525.00	
8/27/2012	5190	87.41	90.26	2529.00	
8/27/2012	5286	88.11	89.82	2533.00	
8/27/2012	5377	87.41	89.03	2536.73	
8/28/2012	5472	87.93	88.41	2540.00	
8/28/2012	5567	88.55	89.73	2543.00	
8/28/2012	5662	88.20	90.34	2546.00	
8/28/2012	5756	87.49	91.93	2549.00	
8/28/2012	5851	88.11	91.57	2553.00	
8/29/2012	6041	88.02	92.89	2560.00	
8/29/2012	6136	88.81	93.07	2563.00	
8/29/2012	6327	88.81	92.28	2568.00	
8/29/2012	6421	88.55	90.52	2571.00	
8/29/2012	6517	88.29	90.52	2573.00	
8/29/2012	6612	88.81	90.34	2576.00	
8/29/2012	6707	88.11	90.52	2578.00	
8/29/2012	6802	88.99	40.93	2581.00	
8/29/2012	6899	89.62	90.52	2581.00	



A Schlumberger Company

DIRECTIONAL SURVEY REPORT



YATES PETROLEUM

WARREN ANW FEDERAL #8H

EDDY COUNTY, NEW MEXICO

PREPARED BY: MARCUS MITCHAM

Pathfinder

6213 WCR. 112
Midland, Texas. 79706-3725, USA
Tel. (432) 687-1647
Fax (432) 687-1544



DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) MICHAEL SAKAS
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 8-21-12 TO 8-29-12
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: GAMMA-RAY
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
WARREN ANW FEDERAL #8H
EDDY COUNTY, NM
RIG: SILVER OAK 4
9. SURVEY CERTIFIED FROM: 788 TO 6,849 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4,672.37 FEET ON A BEARING OF 90.35 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 6,912 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

A handwritten signature in black ink, appearing to read "Marcus Mitcham".

MARCUS MITCHAM
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 08/20/2012
Date Completed: 08/29/2012

YATES PETROLEUM CORP.
WARREN ANW FEDERAL #8H API# 30-015-40536
EDDY COUNTY, New Mexico
Rig: Silver Oak #4
PathFinder Office Supervisor: Marcus Mitcham
PathFinder Field Engineers: M. Sakas
E. Lee

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.40.9.9265 N LON: 104.29.51.1099 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 490811.5800 Y: 607306.6100
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.99° EAST TO GRID
Vertical Section Plane: 90.35
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude: 3523.00' Ground To MSL

Measured Depth	6912.00	(feet)
Inclination	89.52	(deg)
Azimuth	90.52	(deg)
True Vertical Depth	2582.25	(feet)
Vertical Section	4672.37	(feet)
Survey X cord	495483.87	(feet)
Survey Y cord	607278.15	(feet)
Survey Lat	32.66936474 N	(deg)
Survey Lon	104.48234663 W	(deg)
Rectangular Corr. N/S	28.46 S	(feet)
Rectangular Corr. E/W	4672.29 E	(feet)
Closure Distance	4672.37	(feet)
Direction of Closure	90.35	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORP.
WARREN ANW FEDERAL #8H API# 30-015-40536
EDDY COUNTY, New Mexico
Rig:Silver Oak #4
PathFinder Office Supervisor: Marcus Mitcham
PathFinder Field Engineers: M.Sakas
E.Lee

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.40.9.9265 N LON:104.29.51.1099 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 490811.5800 Y: 607306.6100
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.99° EAST TO GRID
Vertical Section Plane: 90.35
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude:3523.00' Ground To MSL

Survey Calculations by RX5 V6.04A using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
THE FOLLOWING ARE GYRODATA GYRO SURVEYS.										
100.00	0.48	265.72	99.99	0.00	-0.42	0.03 S	0.42 W	0.42@	266.07	0.00
200.00	0.41	278.06	199.99	100.00	-1.20	0.01 S	1.20 W	1.20@	269.51	0.12
300.00	0.55	255.88	299.99	100.00	-2.01	0.08 S	2.02 W	2.02@	267.81	0.23
400.00	0.38	230.64	399.98	100.00	-2.73	0.40 S	2.74 W	2.77@	261.59	0.26
500.00	0.77	240.70	499.98	100.00	-3.57	0.94 S	3.58 W	3.70@	255.23	0.40
**	TIED-IN TO GYRODATA GYRO SURVEY AT 580'MD.									
580.00	1.01	237.07	579.97	80.00	-4.63	1.59 S	4.64 W	4.90@	251.08	0.31
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
788.00	0.44	259.18	787.95	208.00	-6.95	2.74 S	6.96 W	7.48@	248.55	0.30
884.00	0.70	271.31	883.95	96.00	-7.89	2.79 S	7.91 W	8.39@	250.56	0.30
980.00	0.97	239.23	979.94	96.00	-9.18	3.19 S	9.20 W	9.74@	250.84	0.55
1076.00	0.97	237.12	1075.92	96.00	-10.55	4.05 S	10.58 W	11.33@	249.04	0.04
1171.00	0.53	269.64	1170.92	95.00	-11.66	4.49 S	11.69 W	12.52@	248.99	0.63
1267.00	0.35	36.20	1266.92	96.00	-11.94	4.26 S	11.96 W	12.70@	250.41	0.82
1362.00	0.35	104.85	1361.91	95.00	-11.49	4.10 S	11.51 W	12.22@	250.41	0.42
1458.00	0.35	190.28	1457.91	96.00	-11.25	4.46 S	11.28 W	12.13@	248.42	0.49
1649.00	0.44	286.69	1648.91	191.00	-12.06	4.82 S	12.09 W	13.01@	248.24	0.31
1840.00	0.35	319.30	1839.91	191.00	-13.14	4.17 S	13.17 W	13.81@	252.42	0.12
1960.00	0.70	99.31	1959.90	120.00	-12.66	4.01 S	12.68 W	13.30@	252.45	0.83
1992.00	3.87	98.17	1991.87	32.00	-11.40	4.20 S	11.42 W	12.17@	249.82	9.91
2024.00	8.00	96.58	2023.69	32.00	-8.11	4.61 S	8.14 W	9.35@	240.50	12.91
2055.00	12.05	94.30	2054.22	31.00	-2.74	5.10 S	2.77 W	5.80@	208.51	13.12
2087.00	16.44	93.16	2085.22	32.00	5.12	5.60 S	5.09 E	7.56@	137.72	13.75
2119.00	20.75	93.16	2115.55	32.00	15.31	6.16 S	15.27 E	16.47@	111.96	13.47
2151.00	24.97	93.77	2145.03	32.00	27.72	6.92 S	27.68 E	28.53@	104.03	13.21

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORP.
 WARREN ANW FEDERAL #8H API# 30-015-40536
 EDDY COUNTY, New Mexico
 RIG: Silver Oak #4

Page 02/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
2182.00	29.11	93.86	2172.63	31.00	41.79	7.85 S	41.74 E	42.47@	100.66	13.36
2214.00	33.15	92.63	2200.02	32.00	58.30	8.78 S	58.25 E	58.91@	98.57	12.78
2246.00	36.67	90.43	2226.26	32.00	76.61	9.25 S	76.55 E	77.11@	96.89	11.68
2278.00	39.83	89.11	2251.38	32.00	96.41	9.17 S	96.36 E	96.80@	95.43	10.20
2310.00	43.35	88.59	2275.31	32.00	117.65	8.74 S	117.59 E	117.92@	94.25	11.05
2342.00	48.63	88.76	2297.54	32.00	140.64	8.21 S	140.59 E	140.83@	93.34	16.50
2373.00	54.26	88.85	2316.85	31.00	164.87	7.70 S	164.82 E	165.00@	92.68	18.16
2405.00	59.18	90.26	2334.41	32.00	191.61	7.50 S	191.56 E	191.71@	92.24	15.81
2437.00	61.82	90.61	2350.16	32.00	219.46	7.71 S	219.41 E	219.55@	92.01	8.30
2468.00	63.84	90.87	2364.32	31.00	247.03	8.07 S	246.99 E	247.12@	91.87	6.56
2500.00	65.86	91.05	2377.92	32.00	276.00	8.56 S	275.95 E	276.08@	91.78	6.33
2531.00	67.80	90.87	2390.11	31.00	304.49	9.03 S	304.44 E	304.58@	91.70	6.28
2563.00	69.20	90.17	2401.84	32.00	334.26	9.30 S	334.21 E	334.34@	91.59	4.83
2595.00	71.58	89.46	2412.58	32.00	364.40	9.21 S	364.36 E	364.47@	91.45	7.73
2626.00	72.72	88.76	2422.08	31.00	393.90	8.75 S	393.86 E	393.96@	91.27	4.26
2658.00	73.25	88.76	2431.45	32.00	424.49	8.08 S	424.45 E	424.53@	91.09	1.66
2690.00	75.01	88.67	2440.20	32.00	455.26	7.39 S	455.22 E	455.28@	90.93	5.51
2721.00	78.17	89.03	2447.39	31.00	485.40	6.79 S	485.37 E	485.41@	90.80	10.26
2753.00	79.84	88.76	2453.49	32.00	516.80	6.18 S	516.77 E	516.81@	90.69	5.28
2785.00	81.07	89.20	2458.79	32.00	548.35	5.62 S	548.32 E	548.35@	90.59	4.08
2816.00	83.01	89.20	2463.09	31.00	579.04	5.19 S	579.02 E	579.04@	90.51	6.26
2848.00	85.74	88.85	2466.22	32.00	610.88	4.65 S	610.86 E	610.88@	90.44	8.60
2880.00	87.85	89.11	2468.01	32.00	642.81	4.08 S	642.80 E	642.81@	90.36	6.64
2910.00	89.34	89.64	2468.75	30.00	672.80	3.76 S	672.79 E	672.80@	90.32	5.27
3005.00	89.34	89.29	2469.84	95.00	767.78	2.87 S	767.78 E	767.79@	90.21	0.37
3100.00	88.81	89.64	2471.38	95.00	862.76	1.98 S	862.76 E	862.76@	90.13	0.67
3195.00	87.85	90.17	2474.14	95.00	957.71	1.82 S	957.72 E	957.72@	90.11	1.15
3289.00	89.16	89.64	2476.60	94.00	1051.68	1.67 S	1051.69 E	1051.69@	90.09	1.50

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORP.
 WARREN ANW FEDERAL #8H API# 30-015-40536
 EDDY COUNTY, New Mexico
 RIG:Silver Oak #4

Page 03/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
3384.00	88.81	89.38	2478.28	95.00	1146.65	0.86 S	1146.67 E	1146.67@	90.04	0.46
3479.00	88.11	89.99	2480.83	95.00	1241.61	0.33 S	1241.63 E	1241.63@	90.02	0.98
3574.00	89.52	89.73	2482.80	95.00	1336.58	0.10 S	1336.61 E	1336.61@	90.00	1.51
3669.00	89.16	90.26	2483.89	95.00	1431.57	0.09 S	1431.60 E	1431.60@	90.00	0.67
3764.00	87.49	89.64	2486.67	95.00	1526.53	0.01 S	1526.56 E	1526.56@	90.00	1.88
3860.00	89.08	90.08	2489.54	96.00	1622.48	0.22 N	1622.51 E	1622.51@	89.99	1.72
3955.00	89.16	89.73	2491.00	95.00	1717.46	0.38 N	1717.50 E	1717.50@	89.99	0.38
4050.00	87.49	89.55	2493.78	95.00	1812.41	0.98 N	1812.45 E	1812.45@	89.97	1.77
4145.00	88.72	89.38	2496.92	95.00	1907.35	1.86 N	1907.39 E	1907.40@	89.94	1.31
4240.00	88.55	89.55	2499.18	95.00	2002.31	2.75 N	2002.36 E	2002.37@	89.92	0.25
4335.00	88.02	90.87	2502.03	95.00	2097.26	2.40 N	2097.32 E	2097.32@	89.93	1.50
4430.00	88.90	90.87	2504.58	95.00	2192.23	0.96 N	2192.27 E	2192.27@	89.97	0.93
4525.00	87.49	89.99	2507.57	95.00	2287.17	0.25 N	2287.22 E	2287.22@	89.99	1.75
4620.00	88.64	89.90	2510.78	95.00	2382.12	0.34 N	2382.16 E	2382.16@	89.99	1.21
4715.00	87.76	89.82	2513.76	95.00	2477.06	0.57 N	2477.11 E	2477.11@	89.99	0.93
4810.00	88.72	89.82	2516.68	95.00	2572.01	0.87 N	2572.07 E	2572.07@	89.98	1.01
4905.00	87.76	90.08	2519.60	95.00	2666.97	0.95 N	2667.02 E	2667.02@	89.98	1.05
5000.00	88.64	89.99	2522.58	95.00	2761.92	0.90 N	2761.97 E	2761.97@	89.98	0.93
5095.00	87.85	90.17	2525.49	95.00	2856.87	0.76 N	2856.93 E	2856.93@	89.98	0.85
5190.00	87.41	90.26	2529.42	95.00	2951.79	0.41 N	2951.85 E	2951.85@	89.99	0.47
5286.00	88.11	89.82	2533.17	96.00	3047.71	0.34 N	3047.77 E	3047.77@	89.99	0.86
5377.00	87.41	89.03	2536.73	91.00	3138.63	1.25 N	3138.70 E	3138.70@	89.98	1.16
5472.00	87.93	88.41	2540.59	95.00	3233.51	3.37 N	3233.59 E	3233.60@	89.94	0.85
5567.00	88.55	89.73	2543.51	95.00	3328.44	4.91 N	3328.53 E	3328.54@	89.92	1.54
5662.00	88.20	90.34	2546.20	95.00	3423.40	4.86 N	3423.50 E	3423.50@	89.92	0.74
5756.00	87.49	91.93	2549.74	94.00	3517.32	3.00 N	3517.41 E	3517.41@	89.95	1.85
5851.00	88.11	91.57	2553.38	95.00	3612.22	0.10 N	3612.29 E	3612.29@	90.00	0.75
5947.00	87.41	92.80	2557.14	96.00	3708.10	3.56 S	3708.15 E	3708.15@	90.06	1.47

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORP.
 WARREN ANW FEDERAL #8H API# 30-015-40536
 EDDY COUNTY, New Mexico
 RIG:Silver Oak #4

Page 04/04

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS (dg/100ft)
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(dg/100ft)
6041.00	88.02	92.89	2560.88	94.00	3801.93	8.22 S	3801.96 E	3801.96@	90.12	0.66
6136.00	88.81	93.07	2563.51	95.00	3896.80	13.16 S	3896.79 E	3896.81@	90.19	0.85
6231.00	87.93	92.72	2566.21	95.00	3991.66	17.96 S	3991.63 E	3991.67@	90.26	1.00
6326.00	88.81	92.28	2568.92	95.00	4086.56	22.10 S	4086.50 E	4086.56@	90.31	1.04
6421.00	88.55	90.52	2571.11	95.00	4181.51	24.42 S	4181.44 E	4181.51@	90.33	1.87
6517.00	88.29	90.52	2573.75	96.00	4277.48	25.29 S	4277.40 E	4277.48@	90.34	0.27
6612.00	88.81	90.34	2576.16	95.00	4372.44	26.00 S	4372.37 E	4372.45@	90.34	0.58
6707.00	88.11	90.52	2578.71	95.00	4467.41	26.71 S	4467.33 E	4467.41@	90.34	0.76
6802.00	88.99	90.43	2581.11	95.00	4562.38	27.50 S	4562.30 E	4562.38@	90.35	0.93
6849.00	89.52	90.52	2581.72	47.00	4609.37	27.89 S	4609.29 E	4609.37@	90.35	1.14
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 6912'MD.										
6912.00	89.52	90.52	2582.25	63.00	4672.37	28.46 S	4672.29 E	4672.37@	90.35	0.00

** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder Energy Services, Inc. and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM		
LEASE / WELL No.:	WARREN ANW FEDERAL	#8H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	SILVER OAK #4		
API WELL No:	30-015-40536		
JOB No:	12MLD0390		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.99	LWD Calculated:	7.99
Agreed Upon:		7.99	
X =	490811.580000	Feet	Y = 607306.610000
		Feet	
SITE LATITUDE:	32.669424	SITE LONGITUDE:	104.497531
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	90.35		
KELLY BUSHING ELEVATION:	18		
ALTITUDE:	3523	Feet	WATER DEPTH:
		N/A	
		Feet	

TIE-IN SURVEY

MEASURED DEPTH:	580		
DRIFT ANGLE:	1.01		
DRIFT DIRECTION:	237.07		
TRUE VERTICAL DEPTH:	579.97		
VERTICAL SECTION:	-4.63		
RECTANGULAR COORDINATE (N / S) :	-1.59		
RECTANGULAR COORDINATE (E / W) :	-4.64		
CLOSURE DISTANCE / DIRECTION:	4.9	251.1	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	GYRO DATA		
COPY OF TIE-IN SURVEY REPORT	☒ YES		☐ NO

WELL PLAN

KICKOFF DEPTH:	1992.1	TOTAL DEPTH:	6942.3
KICKOFF ANGLE:	0	MAX ANGLE:	88.47

PES Engineers: M. SAKAS
E. LEE

**Signature of both field engineers required if applicable

Directional Driller: M. SCHMIDT

DATE: 21-Aug-2012

A Gyrodata Directional Survey

Field Copy Only, not definitive

for

YATES PETROLEUM CORPS

**Lease: WARREN FED ANW Well: #8H, 4 1/2" DRILLPIPE
Location: SILVER OAK RIG #4, EDDY COUNTY, NEW MEXICO**

Job Number: MD0812GMS465

Run Date: 20 Aug 2012

Surveyor: Jason Solomon

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Well Plan/Plot

Survey Latitude: 32.669422 deg. N Longitude: 104.497528 deg. W

Azimuth Correction:

Gyro: 0.09000 deg to Grid North

Depth Reference: Rotary Table

Rotary Table Elevation: 18.00

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

YATES PETROLEUM CORPS
 Lease: WARREN FED ANW Well: #8H, 4 1/2" DRILLPIPE
 Location: SILVER OAK RIG #4, EDDY COUNTY, NEW MEXICO
 Job Number: MD0812GMS465

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00 N 0.00 E

0 TO 580 FT RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 4 1/2" DRILLPIPE
 ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO SILVER OAK RIG #4 RKB 18

100.00	0.48	265.72	0.48	100.00	0.4	265.7	0.03 S 0.42 W
200.00	0.41	278.06	0.12	200.00	1.2	269.4	0.01 S 1.20 W
300.00	0.55	255.88	0.23	299.99	2.0	267.8	0.08 S 2.02 W
400.00	0.38	230.64	0.27	399.99	2.8	261.6	0.40 S 2.74 W
500.00	0.77	240.70	0.40	499.98	3.7	255.3	0.94 S 3.58 W
580.00	1.01	237.07	0.31	579.97	4.9	251.1	1.59 S 4.64 W

Final Station Closure: Distance: 4.90 ft Az: 251.13 deg.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Yates Petroleum
Warren Federal ANW #8H
Eddy County, New Mexico
Rig: Silver Oak #4

Mon Aug 13 16:49:28 2012

Coordinates

Latitude: 32.669424 N (32 deg. 40 min. 9.9265 sec.)
Longitude: 104.497531 W (-104 deg. 29 min. 51.1099 sec.)
Elevation: 3541.00 feet.
Calculation Date: Aug/13/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.4097 degrees
Total Magnetic Field: 0.48663 gauss
Magnetic Declination: 7.900770 degrees
Horizontal Intensity: 0.240296 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.900770 Degs

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 490811.5800 feet
Y: 607306.6100 feet
True to Grid: (convergence) 0.088632 degrees
Magnetic to Grid: 7.989402 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.989402 Degs.