



An Operating Unit of Smith International, Inc

30-015-38565

DIRECTIONAL SURVEY REPORT

YATES PETROLEUM

RUDOLPH ATX STATE COM #4H

EDDY COUNTY, NEW MEXICO

RECEIVED

AUG 3 2011

NMOCD ARTESIA

PREPARED BY: FRANCISCO SINISTERRA

Pathfinder Energy Services, Inc.
6213 W. Interstate 20 • Midland, TX • 79706
(432) 681-6000

Pathfinder

6213 W Interstate 20
Midland, Texas 79706
Tel 432 687 1647
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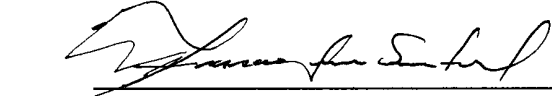


DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JAY FULTON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 04-22-11 TO 05-18-11
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
RUDOLPH ATX STATE COM #4H
EDDY COUNTY, NM
RIG: SILVER OAK #10
9. SURVEY CERTIFIED FROM: 8200 TO 13227 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4600.55 FEET ON A BEARING OF 356.38 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13286 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


FRANCISCO SINISTERRA
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 05/06/2011
Date Completed: 05/18/2011

YATES PETROLEUM CORPORATION
RUDOLPH ATX STATE COM #4H
EDDY COUNTY, NEW MEXICO
Rig:SILVER OAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: C.HARDY
G.SAKAS

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.39.14.7089 N LON:103.52.31.7047 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 682252.3940 Y: 601991.1900
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.53° EAST TO GRID
Vertical Section Plane: 355.92
Survey Vert. Reference: 18.00' Rotary Table To Ground
Altitude:3487.00' Ground To MSL

Measured Depth	13286.00	(feet)
Inclination	93.03	(deg)
Azimuth	358.80	(deg)
True Vertical Depth	8879.42	(feet)
Vertical Section	4600.41	(feet)
Survey X cord	681961.73	(feet)
Survey Y cord	606582.55	(feet)
Survey Lat	32.66670921 N	(deg)
Survey Lon	103.87635372 W	(deg)
Rectangular Corr. N/S	4591.36 N	(feet)
Rectangular Corr. E/W	290.67 W	(feet)
Closure Distance	4600.55	(feet)
Direction of Closure	356.38	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
RUDOLPH ATX STATE COM #4H
EDDY COUNTY, NEW MEXICO
Rig:SILVER OAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
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Survey Vert. Reference: 18.00' Rotary Table To Ground
Altitude:3487.00' Ground To MSL

Survey Calculations by RX5 V6.03E 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)
TIE-IN TO MS ENERGY GYRO SURVEY @ 8100' MD.										
8100.00	1.25	267.81	8098.65	3862.00	12.13	7.31 N	68.04 W	68.43@	276.13	0.03
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
8200.00	1.14	310.44	8198.63	100.00	12.87	7.91 N	69.89 W	70.33@	276.46	0.87
8294.00	1.32	296.68	8292.61	94.00	14.08	9.01 N	71.57 W	72.13@	277.17	0.37
8388.00	1.14	294.79	8386.59	94.00	15.08	9.88 N	73.38 W	74.05@	277.67	0.20
8419.00	1.23	296.90	8417.58	31.00	15.40	10.16 N	73.96 W	74.65@	277.83	0.32
8450.00	3.25	336.58	8448.56	31.00	16.40	11.12 N	74.61 W	75.43@	278.48	7.85
8482.00	8.44	348.41	8480.38	32.00	19.59	14.26 N	75.44 W	76.77@	280.70	16.56
8513.00	14.77	353.03	8510.73	31.00	25.80	20.41 N	76.38 W	79.06@	284.96	20.62
8545.00	20.84	355.77	8541.19	32.00	35.57	30.15 N	77.29 W	82.96@	291.31	19.14
8576.00	23.48	356.59	8569.89	31.00	47.26	41.81 N	78.07 W	88.56@	298.18	8.57
8607.00	26.20	357.69	8598.02	31.00	60.28	54.82 N	78.71 W	95.92@	304.86	8.90
8639.00	29.02	359.62	8626.38	32.00	75.09	69.64 N	79.05 W	105.35@	311.38	9.24
8670.00	31.74	0.41	8653.12	31.00	90.73	85.32 N	79.04 W	116.30@	317.19	8.87
8702.00	33.68	1.29	8680.04	32.00	107.95	102.61 N	78.78 W	129.36@	322.48	6.24
8733.00	35.61	2.34	8705.54	31.00	125.48	120.22 N	78.21 W	143.42@	326.95	6.52
8764.00	39.13	3.13	8730.18	31.00	144.16	139.01 N	77.31 W	159.06@	330.92	11.46
8795.00	42.03	2.70	8753.72	31.00	164.17	159.15 N	76.29 W	176.49@	334.39	9.40
8826.00	46.08	2.61	8775.99	31.00	185.58	180.68 N	75.29 W	195.74@	337.38	13.07
8857.00	49.42	2.70	8796.83	31.00	208.36	203.60 N	74.23 W	216.71@	339.97	10.78
8888.00	51.79	3.05	8816.51	31.00	232.14	227.52 N	73.03 W	238.95@	342.21	7.69
8920.00	54.61	3.84	8835.67	32.00	257.54	253.09 N	71.48 W	263.00@	344.23	9.03
8950.00	58.30	3.75	8852.25	30.00	282.30	278.04 N	69.83 W	286.67@	345.90	12.30
8982.00	62.34	3.75	8868.09	32.00	309.84	305.78 N	68.01 W	313.25@	347.46	12.62
9013.00	66.48	3.66	8881.48	31.00	337.54	333.67 N	66.20 W	340.17@	348.78	13.36

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
 RUDOLPH ATX STATE COM #4H
 EDDY COUNTY, NEW MEXICO
 RIG:SILVER OAK 10

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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)	(ft)	(ft)	(deg)	
9045.00	70.87	3.58	8893.11	32.00	367.07	363.41 N	64.32 W	369.06@	349.96	13.72
9075.00	74.04	3.58	8902.15	30.00	395.41	391.96 N	62.54 W	396.92@	350.93	10.57
9107.00	77.12	3.49	8910.12	32.00	426.13	422.89 N	60.63 W	427.21@	351.84	9.63
9138.00	79.58	3.31	8916.38	31.00	456.23	453.19 N	58.83 W	456.99@	352.60	7.96
9169.00	82.75	2.78	8921.14	31.00	486.62	483.78 N	57.20 W	487.15@	353.26	10.36
9199.00	85.47	1.55	8924.22	30.00	516.28	513.59 N	56.07 W	516.65@	353.77	9.94
9231.00	88.81	359.27	8925.82	32.00	548.14	545.55 N	55.85 W	548.40@	354.16	12.63
9262.00	90.13	357.60	8926.10	31.00	579.11	576.53 N	56.69 W	579.31@	354.38	6.87
9323.00	90.22	357.98	8925.92	61.00	640.07	637.49 N	59.04 W	640.22@	354.71	0.64
9417.00	89.87	357.48	8925.84	94.00	734.02	731.41 N	62.77 W	734.10@	355.10	0.65
9511.00	89.50	357.81	8926.36	94.00	827.98	825.33 N	66.63 W	828.02@	355.38	0.53
9605.00	89.08	356.98	8927.53	94.00	921.94	919.23 N	70.90 W	921.96@	355.59	0.99
9698.00	89.52	357.61	8928.66	93.00	1014.91	1012.11 N	75.29 W	1014.91@	355.75	0.83
9791.00	88.90	356.23	8929.94	93.00	1107.88	1104.97 N	80.29 W	1107.88@	355.84	1.63
9885.00	89.25	356.84	8931.46	94.00	1201.86	1198.78 N	85.97 W	1201.86@	355.90	0.75
9978.00	89.78	357.75	8932.25	93.00	1294.83	1291.68 N	90.36 W	1294.83@	356.00	1.13
10072.00	88.81	356.48	8933.41	94.00	1388.80	1385.55 N	95.09 W	1388.81@	356.07	1.70
10164.00	88.29	356.41	8935.73	92.00	1480.77	1477.34 N	100.79 W	1480.77@	356.10	0.57
10258.00	88.02	354.78	8938.76	94.00	1574.71	1571.01 N	108.01 W	1574.72@	356.07	1.76
10352.00	88.11	354.98	8941.93	94.00	1668.64	1664.58 N	116.39 W	1668.65@	356.00	0.23
10445.00	88.55	356.22	8944.64	93.00	1761.60	1757.27 N	123.52 W	1761.60@	355.98	1.41
10538.00	88.37	355.60	8947.14	93.00	1854.57	1850.00 N	130.15 W	1854.57@	355.98	0.69
10631.00	88.64	354.87	8949.57	93.00	1947.53	1942.64 N	137.87 W	1947.53@	355.94	0.84
10724.00	88.72	355.77	8951.71	93.00	2040.50	2035.31 N	145.46 W	2040.50@	355.91	0.97
10817.00	89.87	355.54	8952.86	93.00	2133.49	2128.03 N	152.51 W	2133.49@	355.90	1.26
10910.00	90.40	356.33	8952.64	93.00	2226.49	2220.79 N	159.10 W	2226.49@	355.90	1.02
11004.00	90.66	357.01	8951.77	94.00	2320.47	2314.63 N	164.56 W	2320.47@	355.93	0.77
11097.00	91.19	357.53	8950.27	93.00	2413.43	2407.51 N	168.99 W	2413.44@	355.98	0.80

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
 RUDOLPH ATX STATE COM #4H
 EDDY COUNTY, NEW MEXICO
 RIG:SILVER OAK 10

Page 03/03

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
11191.00	92.15	357.85	8947.53	94.00	2507.35	2501.40 N	172.77 W	2507.36@	356.05	1.08
11283.00	91.80	357.26	8944.36	92.00	2599.26	2593.26 N	176.70 W	2599.27@	356.10	0.75
11377.00	91.28	356.48	8941.83	94.00	2693.21	2687.08 N	181.83 W	2693.23@	356.13	1.00
11471.00	91.19	357.13	8939.80	94.00	2787.18	2780.91 N	187.06 W	2787.20@	356.15	0.70
11564.00	90.57	354.49	8938.38	93.00	2880.16	2873.65 N	193.86 W	2880.18@	356.14	2.92
11658.00	90.84	355.62	8937.22	94.00	2974.14	2967.29 N	201.96 W	2974.15@	356.11	1.24
11751.00	91.10	356.14	8935.64	93.00	3067.12	3060.03 N	208.64 W	3067.14@	356.10	0.63
11844.00	91.36	354.90	8933.65	93.00	3160.10	3152.73 N	215.90 W	3160.11@	356.08	1.36
11938.00	91.63	355.15	8931.20	94.00	3254.05	3246.34 N	224.05 W	3254.06@	356.05	0.39
12033.00	92.51	356.57	8927.76	95.00	3348.99	3341.03 N	230.91 W	3349.00@	356.05	1.76
12125.00	90.92	355.14	8925.01	92.00	3440.94	3432.74 N	237.55 W	3440.95@	356.04	2.32
12219.00	91.89	356.09	8922.71	94.00	3534.91	3526.43 N	244.74 W	3534.92@	356.03	1.44
12312.00	92.07	356.13	8919.49	93.00	3627.85	3619.16 N	251.04 W	3627.86@	356.03	0.20
12406.00	92.07	355.70	8916.10	94.00	3721.79	3712.86 N	257.74 W	3721.80@	356.03	0.46
12499.00	92.07	356.10	8912.74	93.00	3814.73	3805.56 N	264.38 W	3814.74@	356.03	0.43
12592.00	92.24	357.46	8909.24	93.00	3907.65	3898.35 N	269.60 W	3907.66@	356.04	1.47
12685.00	92.42	358.23	8905.46	93.00	4000.52	3991.21 N	273.09 W	4000.54@	356.09	0.85
12779.00	91.98	357.81	8901.85	94.00	4094.39	4085.08 N	276.34 W	4094.42@	356.13	0.65
12872.00	92.33	358.54	8898.35	93.00	4187.25	4177.97 N	279.30 W	4187.29@	356.18	0.87
12965.00	92.15	357.68	8894.72	93.00	4280.11	4270.84 N	282.36 W	4280.17@	356.22	0.94
13059.00	92.68	358.39	8890.76	94.00	4373.96	4364.70 N	285.59 W	4374.04@	356.26	0.94
13152.00	92.77	358.80	8886.34	93.00	4466.76	4457.57 N	287.86 W	4466.86@	356.31	0.45
13227.00	93.03	358.80	8882.54	75.00	4541.57	4532.46 N	289.43 W	4541.69@	356.35	0.35
STRAIGHT LINE PROJECTION TO BIT DEPTH @ 13286' MD.										
13286.00	93.03	358.80	8879.42	59.00	4600.41	4591.36 N	290.67 W	4600.55@	356.38	0.00



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM CORPORATION		
LEASE / WELL No.:	RUDOLPH ATX STATE COM	4H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	N.M.	USA
RIG:	SILVER OAK 10		
API WELL No:	30-015-38565		
JOB No:	700002261 WT-WT		
P.O. / AFE No.	11-052-0		
DIRECTIONAL COMPANY:	PATHFINDER ENERGY		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.53	LWD Calculated:	7.53
Agreed Upon:		7.53	
X =	682252.394000	Feet	Y =
601991.190000		Feet	
SITE LATITUDE:	32.654086	SITE LONGITUDE:	103.875474
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	355.92		
KELLY BUSHING ELEVATION:	18 FEET		
ALTITUDE:	3487	Feet	WATER DEPTH:
		Feet	

TIE-IN SURVEY

MEASURED DEPTH:	8100		
DRIFT ANGLE:	1.25		
DRIFT DIRECTION:	267.81		
TRUE VERTICAL DEPTH:	8098.65		
VERTICAL SECTION:	12.13		
RECTANGULAR COORDINATE (N / S):	7.31		
RECTANGULAR COORDINATE (E / W):	-68.04		
CLOSURE DISTANCE / DIRECTION:	68.43	276.13	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	MS ENERGY SERVICES		
COPY OF TIE-IN SURVEY REPORT	☒ YES		☐ NO

WELL PLAN

KICKOFF DEPTH:	TOTAL DEPTH:
KICKOFF ANGLE:	MAX ANGLE:

DESIGNED BY: _____

**Signature of both field engineers required if applicable

DRAWN BY: _____

DATE: _____

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM** *

JOB NUMBER: SVCO-110483
WELL NAME: RUDOLPH ATX STATE COM. #4
LOCATION: EDDY COUNTY, NEW MEXICO
SURVEY DATE: MAY 06, 2011
SURVEY ENGINEER: S. SMITH
MAGNETIC DECLINATION: 07.53 GRID NORTH
GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 355.92
SURF. ELEVATION: 18

*****	*****
***** DEPTH MEASURED IN FEET *****	*****
*****	*** THIS DIRECTIONAL SURVEY REPORT IS ***
	** CORRECT TO THE BEST OF MY KNOWLEDGE **
COMMENTS: SILVER OAK 10	* AND IS SUPPORTED BY ACTUAL FIELD DATA! *
RKB 18'	**
TBUSSELL@YATESPETROLEUM.COM**	**
MIKEL@YATESPETROLEUM.COM	** ***** **
	** COMPANY REPRESENTATIVE **

MS ENERGY SERVICES
ODESSA, TEXAS

JOB NUMBER: SVCO-110483

WELL NAME: RUDOLPH ATX STATE COM. #4

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL	BEARING AZIMUTH	COORDINATES LATITUDE DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
0.0	0.00	0.00	0.000	00.00	000.00	0.00 N 0.00 E	0.00		0.00	AT 000.00
200.0	200.00	0.34	0.271	00.25	034.39	0.36 N 0.25 E	0.13	0.25	0.44	AT 034.39
400.0	400.00	1.10	0.667	00.25	012.42	1.15 N 0.59 E	0.05	0.10	1.29	AT 027.11
600.0	600.00	1.57	1.224	00.25	079.45	1.65 N 1.11 E	0.14	0.28	1.99	AT 033.88
800.0	799.99	2.05	1.730	00.25	005.47	2.17 N 1.58 E	0.15	0.30	2.68	AT 036.10
1000.0	999.99	2.32	2.660	00.50	096.50	2.50 N 2.49 E	0.28	0.56	3.53	AT 044.85
1200.0	1199.98	2.01	4.379	00.50	095.53	2.32 N 4.22 E	0.00	0.01	4.82	AT 061.23
1400.0	1399.95	1.56	7.839	01.50	092.56	2.12 N 7.71 E	0.50	1.00	7.99	AT 074.63
1600.0	1599.90	1.81	12.096	01.00	067.58	2.67 N 11.94 E	0.36	0.73	12.23	AT 077.41
1800.0	1799.87	2.93	15.858	01.25	070.75	4.05 N 15.61 E	0.13	0.26	16.13	AT 075.45
2000.0	1999.82	4.22	20.025	01.25	066.78	5.63 N 19.67 E	0.04	0.09	20.46	AT 074.03
2200.0	2199.80	5.65	21.584	00.50	320.81	7.17 N 21.13 E	0.73	1.47	22.31	AT 071.26
2400.0	2399.79	6.86	20.366	00.50	300.84	8.29 N 19.83 E	0.09	0.17	21.49	AT 067.31
2600.0	2599.78	7.27	18.345	00.75	261.86	8.55 N 17.78 E	0.24	0.48	19.73	AT 064.31
2800.0	2799.77	7.10	15.732	00.75	262.89	8.21 N 15.19 E	0.01	0.01	17.26	AT 061.62
3000.0	2999.73	6.73	12.265	01.25	257.92	7.59 N 11.75 E	0.25	0.51	13.99	AT 057.16
3200.0	3199.68	6.61	7.493	01.50	269.95	7.13 N 7.00 E	0.19	0.38	9.99	AT 044.49
3400.0	3399.65	6.31	4.158	00.50	231.97	6.59 N 3.70 E	0.57	1.15	7.56	AT 029.31
3600.0	3599.64	5.58	3.068	00.25	233.00	5.79 N 2.66 E	0.13	0.25	6.37	AT 024.70
3800.0	3799.64	4.99	2.444	00.25	212.03	5.16 N 2.08 E	0.05	0.09	5.56	AT 022.00
4000.0	3999.64	4.47	1.785	00.25	243.06	4.59 N 1.46 E	0.07	0.13	4.82	AT 017.68
4200.0	4199.64	5.17	1.325	00.50	352.11	5.26 N 0.95 E	0.31	0.63	5.34	AT 010.29
4400.0	4399.63	6.05	0.831	00.25	267.14	6.10 N 0.40 E	0.27	0.54	6.11	AT 003.74
4600.0	4599.63	5.92	-0.018	00.25	247.17	5.91 N 0.44 W	0.04	0.09	5.92	AT 355.74
4800.0	4799.61	3.18	-0.672	01.50	181.19	3.12 N 0.90 W	0.71	1.42	3.25	AT 343.97
5000.0	4999.56	1.43	-3.844	01.75	282.23	1.15 N 3.94 W	1.26	2.51	4.10	AT 286.28
5200.0	5199.46	3.14	-9.705	01.75	282.26	2.44 N 9.90 W	0.00	0.00	10.20	AT 283.87
5400.0	5399.36	4.87	-16.017	02.00	280.29	3.72 N 16.32 W	0.13	0.26	16.74	AT 282.83
5600.0	5599.22	7.04	-23.101	02.25	285.32	5.38 N 23.54 W	0.16	0.31	24.15	AT 282.87
5800.0	5799.11	8.91	-29.359	01.50	278.48	6.80 N 29.92 W	0.39	0.78	30.68	AT 282.81
6000.0	5999.04	10.65	-34.255	01.50	292.51	8.19 N 34.93 W	0.18	0.37	35.87	AT 283.20
6200.0	6198.99	12.47	-38.218	01.00	287.53	9.72 N 39.01 W	0.26	0.51	40.20	AT 283.99
6400.0	6398.95	14.25	-41.698	01.25	297.56	11.25 N 42.61 W	0.16	0.32	44.07	AT 284.79
6600.0	6598.90	16.15	-46.063	01.50	282.59	12.83 N 47.10 W	0.22	0.44	48.81	AT 285.24
6800.0	6798.84	17.23	-50.727	01.25	274.62	13.58 N 51.82 W	0.16	0.31	53.57	AT 284.68
7000.0	6998.82	17.42	-53.745	00.50	256.64	13.55 N 54.85 W	0.39	0.79	56.50	AT 283.88
7200.0	7198.81	16.92	-55.402	00.50	241.67	12.94 N 56.47 W	0.07	0.13	57.93	AT 282.90
7400.0	7398.80	15.27	-56.397	00.75	184.70	11.22 N 57.34 W	0.32	0.64	58.43	AT 281.07
7600.0	7598.78	12.69	-56.864	00.75	187.72	8.62 N 57.62 W	0.02	0.04	58.26	AT 278.50
7800.0	7798.75	11.72	-59.731	01.50	272.76	7.44 N 60.41 W	0.81	1.62	60.87	AT 277.03
8000.0	7998.68	12.08	-64.948	01.50	266.78	7.42 N 65.64 W	0.08	0.16	66.06	AT 276.45
8100.0	8098.65	12.13	-67.347	01.25	267.81	7.31 N 68.04 W	0.25	0.25	68.43	AT 276.13

* THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
* 8100.00 FEET EQUALS 68.43 FEET AT 276.13 *

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CORP.
RUDOLPH STATE COM #4H
EDDY COUNTY, NEW MEXICO
Rig: SILVER OAK 10

Tue Apr 19 10:31:52 2011

Coordinates

Latitude: 32.654086 N (32 deg. 39 min. 14.7089 sec.)
Longitude: 103.875474 W (-103 deg. 52 min. 31.7047 sec.)
Elevation: 3505.00 feet.
Calculation Date: Apr/19/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.5366 degrees
Total Magnetic Field: 0.48857 gauss
Magnetic Declination: 7.777464 degrees
Horizontal Intensity: 0.240312 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.777464 Degs

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 682252.3940 feet
Y: 601991.1900 feet
True to Grid: (convergence) -0.247049 degrees
Magnetic to Grid: 7.530415 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.530415 Degs.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

**YATES PETROLEUM CORPORATION
RUDOLPH ATX STATE COM #4H
3RD BONE SPRING SAND**

Fri May 06 21:24:23 2011

Coordinates

Latitude: 32.654086 N (32 deg. 39 min. 14.7089 sec.)
Longitude: 103.875474 W (-103 deg. 52 min. 31.7047 sec.)
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