



A Schlumberger Company

30-015-38386

DIRECTIONAL SURVEY REPORT

YATES PETROLEUM

DOMINO "AOJ" FEDERAL COM #12H

EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

Pathfinder

6213 WCR 112
Midland Texas 79706
Tel (432)687-1647
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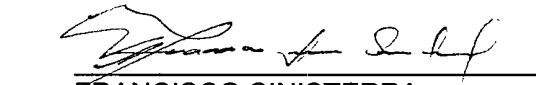


DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JEREMY HOLMES
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 07-08-11 TO 07-24-11
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
DOMINO "AOJ" FEDERAL COM #12H
EDDY COUNTY, NM
RIG: SILVER OAK 10
9. SURVEY CERTIFIED FROM: 7965 TO 12998 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4589.86 FEET ON A BEARING OF 89.52 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13140.00 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: 06/29/2011
Date Completed: 07/24/2011

YATES PETROLEUM CORPORATION
DOMINO AQJ FEDERAL COM #12H
EDDY COUNTY COUNTY, NM
Rig:SILVER OAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:JEREMY HOLMES
RYAN MILLER

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.40.49.2998 N LON:103.53.56.5741 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 674957.6310 Y: 611519.9320
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.53° EAST TO GRID
Vertical Section Plane: 89.62
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude:3505.00' Ground To MSL

Measured Depth	13140.00	(feet)
Inclination	88.55	(deg)
Azimuth	88.92	(deg)
True Vertical Depth	8832.63	(feet)
Vertical Section	4589.85	(feet)
Survey X cord	679547.33	(feet)
Survey Y cord	611557.99	(feet)
Survey Lat	32.68041315 N	(deg)
Survey Lon	103.88413102 W	(deg)
Rectangular Corr. N/S	38.06 N	(feet)
Rectangular Corr. E/W	4589.70 E	(feet)
Closure Distance	4589.86	(feet)
Direction of Closure	89.52	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

Page 01/03
Tie-in Date: 06/29/2011
Date Completed: 07/24/2011

YATES PETROLEUM CORPORATION
DOMINO AQJ FEDERAL COM #12H
EDDY COUNTY COUNTY, NM
Rig:SILVER OAK 10
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Vertical Section Plane: 89.62
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude:3505.00' 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)
TIED IN TO MS GYRO SURVEY @ 7880'MD.										
7880.00	3.50	131.89	7879.21	0.00	26.65	28.71 N	26.46 E	39.04@	42.66	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
7965.00	2.11	150.45	7964.11	85.00	29.33	25.62 N	29.16 E	38.82@	48.70	1.93
8027.00	1.85	156.71	8026.07	62.00	30.28	23.70 N	30.12 E	38.33@	51.80	0.54
8120.00	1.93	158.21	8119.02	93.00	31.43	20.87 N	31.30 E	37.62@	56.30	0.10
8213.00	1.67	154.65	8211.97	93.00	32.58	18.19 N	32.46 E	37.21@	60.73	0.30
8275.00	1.67	154.50	8273.95	62.00	33.34	16.56 N	33.23 E	37.13@	63.51	0.01
8307.00	2.11	122.47	8305.93	32.00	34.04	15.82 N	33.93 E	37.44@	65.00	3.52
8338.00	5.36	83.76	8336.87	31.00	35.96	15.67 N	35.85 E	39.13@	66.39	12.71
8369.00	9.85	71.92	8367.59	31.00	39.93	16.65 N	39.82 E	43.16@	67.30	15.27
8400.00	15.39	67.15	8397.83	31.00	46.26	19.08 N	46.13 E	49.92@	67.53	18.17
8431.00	20.40	65.57	8427.32	31.00	55.00	22.91 N	54.85 E	59.44@	67.33	16.24
8462.00	24.45	66.47	8455.97	31.00	65.84	27.71 N	65.65 E	71.26@	67.12	13.11
8494.00	27.52	65.53	8484.73	32.00	78.68	33.42 N	78.46 E	85.28@	66.93	9.68
8525.00	30.16	65.39	8511.88	31.00	92.32	39.63 N	92.06 E	100.22@	66.71	8.52
8555.00	33.06	64.64	8537.43	30.00	106.61	46.27 N	106.31 E	115.94@	66.48	9.76
8586.00	35.88	64.89	8562.98	31.00	122.53	53.75 N	122.18 E	133.48@	66.25	9.11
8618.00	39.13	66.54	8588.37	32.00	140.34	61.75 N	139.94 E	152.96@	66.19	10.63
8649.00	43.70	70.03	8611.61	31.00	159.44	69.31 N	158.99 E	173.44@	66.45	16.51
8681.00	47.92	71.77	8633.91	32.00	181.17	76.80 N	180.67 E	196.31@	66.97	13.75
8712.00	51.88	74.26	8653.88	31.00	203.89	83.71 N	203.34 E	219.90@	67.62	14.17
8743.00	54.61	76.24	8672.43	31.00	227.95	90.03 N	227.36 E	244.53@	68.40	10.18
8774.00	56.89	78.84	8689.88	31.00	253.00	95.55 N	252.37 E	269.86@	69.26	10.11
8805.00	58.30	81.29	8706.49	31.00	278.81	100.06 N	278.15 E	295.60@	70.22	8.08
8836.00	59.71	83.08	8722.45	31.00	305.16	103.67 N	304.48 E	321.64@	71.20	6.72

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
DOMINO AQJ FEDERAL COM #12H
EDDY COUNTY COUNTY, NM
RIG:SILVER OAK 10

Page 02/03

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)
8868.00	61.91	84.40	8738.06	32.00	332.94	106.71 N	332.24 E	348.96@	72.19	7.76
8899.00	65.77	85.41	8751.73	31.00	360.67	109.18 N	359.95 E	376.15@	73.13	12.79
8929.00	69.91	85.71	8763.04	30.00	388.38	111.33 N	387.65 E	403.32@	73.98	13.83
8961.00	74.13	86.62	8772.91	32.00	418.75	113.36 N	418.01 E	433.11@	74.83	13.46
8992.00	76.77	87.92	8780.70	31.00	448.73	114.79 N	447.98 E	462.45@	75.63	9.43
9023.00	79.14	88.43	8787.17	31.00	479.04	115.75 N	478.28 E	492.09@	76.40	7.81
9054.00	82.48	88.32	8792.12	31.00	509.63	116.62 N	508.86 E	522.06@	77.09	10.78
9086.00	86.79	88.84	8795.11	32.00	541.47	117.41 N	540.71 E	553.31@	77.75	13.57
9117.00	89.52	90.15	8796.11	31.00	572.45	117.68 N	571.69 E	583.67@	78.37	9.77
9147.00	89.87	90.94	8796.27	30.00	602.45	117.39 N	601.68 E	613.03@	78.96	2.88
9240.00	91.63	90.87	8795.05	93.00	695.41	115.93 N	694.66 E	704.27@	80.53	1.89
9334.00	91.36	90.91	8792.60	94.00	789.36	114.47 N	788.62 E	796.88@	81.74	0.29
9428.00	91.19	90.85	8790.51	94.00	883.31	113.02 N	882.58 E	889.79@	82.70	0.19
9522.00	91.19	90.88	8788.56	94.00	977.27	111.60 N	976.55 E	982.91@	83.48	0.03
9615.00	91.10	91.18	8786.70	93.00	1070.22	109.93 N	1069.52 E	1075.15@	84.13	0.34
9709.00	91.10	91.29	8784.89	94.00	1164.17	107.91 N	1163.48 E	1168.47@	84.70	0.12
9803.00	91.01	91.27	8783.16	94.00	1258.11	105.81 N	1257.44 E	1261.88@	85.19	0.10
9896.00	90.48	92.64	8781.95	93.00	1351.03	102.64 N	1350.37 E	1354.27@	85.65	1.58
9989.00	90.57	92.46	8781.10	93.00	1443.90	98.50 N	1443.28 E	1446.64@	86.10	0.22
10083.00	90.66	93.03	8780.09	94.00	1537.75	94.00 N	1537.16 E	1540.04@	86.50	0.61
10176.00	90.66	92.70	8779.02	93.00	1630.60	89.35 N	1630.04 E	1632.49@	86.86	0.35
10270.00	90.57	92.57	8778.01	94.00	1724.46	85.03 N	1723.94 E	1726.03@	87.18	0.17
10363.00	90.31	93.30	8777.30	93.00	1817.30	80.27 N	1816.81 E	1818.58@	87.47	0.83
10456.00	90.22	93.16	8776.87	93.00	1910.12	75.03 N	1909.66 E	1911.14@	87.75	0.18
10550.00	88.37	94.82	8778.02	94.00	2003.83	68.49 N	2003.42 E	2004.59@	88.04	2.64
10643.00	87.67	94.48	8781.24	93.00	2096.42	60.95 N	2096.06 E	2096.94@	88.33	0.84
10736.00	87.58	94.80	8785.09	93.00	2188.98	53.43 N	2188.67 E	2189.33@	88.60	0.36
10830.00	87.49	95.25	8789.13	94.00	2282.48	45.21 N	2282.23 E	2282.67@	88.87	0.49

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Survey Report

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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 Dir (ft) (deg)		DLS (dg/100ft)
10948.00	86.88	95.71	8794.93	118.00	2399.72	33.95 N	2399.54 E	2399.78@	89.19	0.65
11040.00	86.88	94.55	8799.94	92.00	2491.15	25.74 N	2491.04 E	2491.17@	89.41	1.26
11133.00	86.79	93.92	8805.07	93.00	2583.71	18.88 N	2583.64 E	2583.71@	89.58	0.68
11226.00	87.41	92.82	8809.78	93.00	2676.39	13.42 N	2676.36 E	2676.39@	89.71	1.36
11320.00	88.46	91.99	8813.16	94.00	2770.22	9.48 N	2770.21 E	2770.23@	89.80	1.42
11413.00	89.52	89.96	8814.80	93.00	2863.17	7.90 N	2863.18 E	2863.19@	89.84	2.46
11506.00	89.69	89.72	8815.44	93.00	2956.17	8.16 N	2956.18 E	2956.19@	89.84	0.32
11599.00	89.69	89.40	8815.95	93.00	3049.17	8.87 N	3049.17 E	3049.19@	89.83	0.34
11692.00	89.60	89.63	8816.52	93.00	3142.16	9.66 N	3142.17 E	3142.18@	89.82	0.27
11785.00	89.69	89.67	8817.10	93.00	3235.16	10.23 N	3235.16 E	3235.18@	89.82	0.11
11879.00	89.69	89.29	8817.61	94.00	3329.16	11.08 N	3329.16 E	3329.18@	89.81	0.40
11972.00	89.60	89.09	8818.19	93.00	3422.16	12.40 N	3422.15 E	3422.17@	89.79	0.24
12065.00	89.60	89.14	8818.83	93.00	3515.15	13.83 N	3515.13 E	3515.16@	89.77	0.05
12159.00	89.78	88.74	8819.34	94.00	3609.14	15.57 N	3609.12 E	3609.15@	89.75	0.47
12252.00	90.22	88.32	8819.34	93.00	3702.12	17.96 N	3702.09 E	3702.13@	89.72	0.65
12345.00	90.13	88.10	8819.06	93.00	3795.10	20.86 N	3795.04 E	3795.10@	89.69	0.25
12438.00	90.04	88.43	8818.92	93.00	3888.07	23.68 N	3888.00 E	3888.07@	89.65	0.37
12532.00	88.81	89.14	8819.86	94.00	3982.05	25.67 N	3981.97 E	3982.05@	89.63	1.51
12625.00	88.72	88.72	8821.87	93.00	4075.02	27.41 N	4074.93 E	4075.02@	89.61	0.46
12718.00	88.90	88.33	8823.80	93.00	4167.99	29.80 N	4167.88 E	4167.99@	89.59	0.46
12812.00	89.16	88.72	8825.39	94.00	4261.96	32.22 N	4261.84 E	4261.96@	89.57	0.50
12905.00	88.90	89.23	8826.97	93.00	4354.94	33.88 N	4354.81 E	4354.94@	89.55	0.61
12998.00	88.55	88.92	8829.04	93.00	4447.91	35.38 N	4447.77 E	4447.91@	89.54	0.50
STRAIGHT LINE PROJECTION TO BIT @ 13140' MD.										
13140.00	88.55	88.92	8832.63	142.00	4589.85	38.06 N	4589.70 E	4589.86@	89.52	0.00



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET**CLIENT INFORMATION**

CLIENT:	YATES PETROLEUM CORPORATION		
LEASE / WELL No.:	DOMINO AQJ FEDERAL COM	12H	
WELL LOCATION:	EDDY COUNTY, NM		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	SILVER OAK 10		
API WELL No:	30-015-38386		
JOB No:	700002935 WT-WT		
P.O. / AFE No.	102650		
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.54	LWD Calculated:	7.53
		Agreed Upon:	7.53
X =	674957 631000	Feet	Y = 611519 932000
			Feet
SITE LATITUDE:	32.680361	SITE LONGITUDE:	103.899048
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	89.62		
KELLY BUSHING ELEVATION:	18		
ALTITUDE:	3505	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	7880		
DRIFT ANGLE:	3.5		
DRIFT DIRECTION:	131.89		
TRUE VERTICAL DEPTH:	7879.21		
VERTICAL SECTION:	26.65		
RECTANGULAR COORDINATE (N / S) :	28.71		
RECTANGULAR COORDINATE (E / W) :	26.46		
CLOSURE DISTANCE / DIRECTION:	0	0	
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:	8292	TOTAL DEPTH:	13185
KICKOFF ANGLE:	89.17	MAX ANGLE:	89.17

PES Engineers:

JEREMY HOLMES

RYAN MILLER

**Signature of both field engineers required if applicable

Directional Driller:

RICHARD HILL

DATE: 11-Jul-2011

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM** *

JOB NUMBER: SVCO-110813

WELL NAME: DOMINO AOJ FED COM #12H

LOCATION: EDDY COUNTY., NEW MEXICO

SURVEY DATE: JULY 10, 2011

SURVEY ENGINEER: S. SMITH

MAGNETIC DECLINATION: 07.54 GRID NORTH

GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
DIPPOSAL DIRECTION OF: 089.62
SURF. ELEVATION: 18

***** DEPTH MEASURED IN FEET *****

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

MS ENERGY SERVICES
ODESSA, TEXAS

3 NUMBER: SVCO-110813

WELL NAME: DOMINO AOJ FED COM #12H

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	-0.43	-0.096	00.25	282.32	0.09 N	0.43 W	0.13	0.25	0.44 AT	282.32
400.0	400.00	-0.48	-0.415	00.25	058.83	0.41 N	0.48 W	0.23	0.46	0.63 AT	310.69
600.0	600.00	-0.42	-0.935	00.25	312.34	0.93 N	0.43 W	0.20	0.40	1.03 AT	335.31
800.0	799.99	-1.50	-1.657	00.50	298.85	1.65 N	1.52 W	0.13	0.26	2.24 AT	317.38
1000.0	999.99	-3.05	-2.475	00.50	296.36	2.46 N	3.06 W	0.01	0.02	3.92 AT	308.73
1200.0	1199.97	-5.15	-4.008	01.00	310.38	3.97 N	5.17 W	0.26	0.53	6.52 AT	307.53
1400.0	1399.95	-5.95	-6.350	00.75	022.88	6.31 N	5.99 W	0.53	1.05	8.70 AT	316.47
1600.0	1599.92	-5.03	-9.695	01.25	010.39	9.66 N	5.09 W	0.27	0.54	10.92 AT	332.21
1800.0	1799.90	-4.21	-12.607	00.50	027.90	12.58 N	4.29 W	0.39	0.79	13.29 AT	341.17
2000.0	1999.88	-2.15	-13.978	01.00	069.42	13.96 N	2.25 W	0.35	0.71	14.14 AT	350.86
2200.0	2199.87	-0.16	-14.329	00.25	124.92	14.33 N	0.26 W	0.44	0.88	14.33 AT	358.98
2400.0	2399.86	1.04	-15.074	00.75	039.94	15.08 N	0.94 E	0.38	0.77	15.11 AT	003.58
2600.0	2599.85	0.87	-15.256	00.75	231.00	15.26 N	0.77 E	0.75	1.49	15.28 AT	002.87
2800.0	2799.84	-0.54	-13.653	00.50	205.51	13.65 N	0.63 W	0.18	0.37	13.66 AT	357.37
3000.0	2999.84	-1.07	-12.459	00.25	200.02	12.45 N	1.15 W	0.13	0.25	12.51 AT	354.71
3200.0	3199.83	-1.39	-11.194	00.50	190.53	11.18 N	1.46 W	0.13	0.26	11.28 AT	352.56
3400.0	3399.83	-1.35	-9.950	00.25	152.04	9.94 N	1.42 W	0.17	0.34	10.04 AT	351.89
3600.0	3599.83	-1.46	-9.254	00.25	224.55	9.24 N	1.52 W	0.15	0.30	9.37 AT	350.68
3800.0	3799.83	-1.99	-8.569	00.25	210.06	8.56 N	2.04 W	0.03	0.06	8.80 AT	346.57
4000.0	3999.83	-1.80	-8.343	00.25	069.57	8.33 N	1.85 W	0.24	0.47	8.53 AT	347.47
4200.0	4199.82	-1.30	-8.920	00.25	011.08	8.91 N	1.36 W	0.12	0.24	9.01 AT	351.33
4400.0	4399.82	-1.02	-10.198	00.50	012.59	10.19 N	1.09 W	0.13	0.25	10.25 AT	353.92
4600.0	4599.82	-1.12	-11.371	00.25	317.30	11.36 N	1.19 W	0.21	0.41	11.43 AT	354.02
4800.0	4799.81	-1.71	-12.009	00.25	316.01	12.00 N	1.79 W	0.00	0.01	12.13 AT	351.51
5000.0	4999.81	-1.61	-13.102	00.50	026.72	13.09 N	1.70 W	0.24	0.48	13.20 AT	352.60
5200.0	5199.79	-0.15	-15.258	01.00	037.43	15.26 N	0.25 W	0.26	0.52	15.26 AT	359.07
5400.0	5399.76	2.21	-17.815	01.00	047.14	17.83 N	2.09 E	0.08	0.17	17.95 AT	006.69
5600.0	5599.73	4.67	-20.286	01.00	041.85	20.32 N	4.54 E	0.05	0.09	20.82 AT	012.59
5800.0	5799.70	6.63	-23.134	01.00	026.55	23.18 N	6.48 E	0.13	0.27	24.07 AT	015.62
6000.0	5999.68	7.80	-25.945	00.75	016.26	26.00 N	7.63 E	0.15	0.29	27.09 AT	016.35
6200.0	6199.67	8.27	-28.066	00.50	005.97	28.12 N	8.08 E	0.14	0.27	29.26 AT	016.04
6400.0	6399.66	8.46	-29.801	00.50	005.68	29.86 N	8.26 E	0.00	0.00	30.98 AT	015.47
6600.0	6599.65	9.13	-31.842	00.75	025.94	31.90 N	8.92 E	0.17	0.33	33.13 AT	015.62
6800.0	6799.63	10.11	-33.793	00.50	026.65	33.86 N	9.88 E	0.13	0.25	35.27 AT	016.27
7000.0	6999.62	10.66	-35.870	00.75	006.36	35.94 N	10.42 E	0.17	0.33	37.42 AT	016.17
7200.0	7199.61	11.42	-38.332	00.75	027.07	38.41 N	11.16 E	0.13	0.27	40.00 AT	016.21
7400.0	7399.59	13.32	-39.649	00.75	082.78	39.74 N	13.06 E	0.35	0.70	41.83 AT	018.19
7600.0	7599.55	16.86	-37.727	01.75	132.49	37.84 N	16.61 E	0.69	1.39	41.32 AT	023.70
7800.0	7799.35	23.20	-31.742	03.25	133.18	31.90 N	22.99 E	0.75	1.50	39.32 AT	035.79
7880.0	7879.21	26.65	-28.537	03.50	131.89	28.71 N	26.46 E	0.33	0.26	39.05 AT	042.67

* THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
* 7880.00 FEET EQUALS 39.05 FEET AT 042.67 *
* ***** *

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

A Soli Energy Company

YATES PETROLEUM
DOMINO AQUIFER FEDERAL COM #12H
EDDY COUNTY, NEW MEXICO
Rig: SILVER OAK 10

Tue Jun 28 16:03:17 2011

Coordinates

Latitude: 32.680361 N (32 deg. 40 min. 49.2998 sec.)
Longitude: 103.899048 W (-103 deg. 53 min. 56.5741 sec.)
Elevation: 3523.00 feet.
Calculation Date: Jun/28/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.5520 degrees
Total Magnetic Field: 0.48851 gauss
Magnetic Declination: 7.766910 degrees
Horizontal Intensity: 0.240167 gauss
To Convert Magnetic Dir. to a TRUE North Dir. Add 7.766910 Degs

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 674957.6310 feet
Y: 611519.9320 feet
True to Grid (convergence) -0.234496 degrees
Magnetic to Grid: 7.532414 degrees
To Convert Magnetic Dir. to a GRID dir. Add 7.532414 Degs.