



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

30-015-38575

YATES PETROLEUM

ANTHILL "AAK" STATE COM #2H

EDDY COUNTY, NEW MEXICO

PREPARED BY: JUAN ALCOCER

Pathfinder

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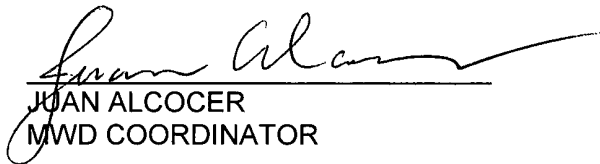


DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) ALEX CASTILLO
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 5-05-12 TO 5-16-12
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
ANTHILL "AAK" STATE COM #2H
EDDY COUNTY, NM
RIG: SILVER OAK 10
9. SURVEY CERTIFIED FROM: 7,485 TO 12,524 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4,595.08 FEET ON A BEARING OF 270.06 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 12,600 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



JUAN ALCOCER
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 04/21/2012
Date Completed: 05/16/2012

YATES PETROLEUM CROP.
ANTHILL AAK STATE COM #2H / 30-015-38575
EDDY COUNTY, NM
Rig:SILVER OAK 10
PathFinder Office Supervisor: JUAN ALCOCER
PathFinder Field Engineers:ALEX CASTILLO
FREDDY LICERO

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.36.2.3456 N LON:104.2.17.2731 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 632245.1600 Y: 582373.9600
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.57°EAST TO GRID
Vertical Section Plane: 270.02
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude:3303.00' Ground To MSL

Measured Depth	12600.00	(feet)
Inclination	92.33	(deg)
Azimuth	270.52	(deg)
True Vertical Depth	8253.56	(feet)
Vertical Section	4595.08	(feet)
Survey X cord	627650.08	(feet)
Survey Y cord	582378.74	(feet)
Survey Lat	32.60069888 N	(deg)
Survey Lon	104.05305269 W	(deg)
Rectangular Corr. N/S	4.78 N	(feet)
Rectangular Corr. E/W	4595.08 W	(feet)
Closure Distance	4595.08	(feet)
Direction of Closure	270.06	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CROP.
ANTHILL AAK STATE COM #2H
EDDY COUNTY, NM

Rig:SILVER OAK 10

PathFinder Office Supervisor: JUAN ALCOCER

PathFinder Field Engineers: ALEX CASTILLO
FREDDY LICERO

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.36.2.3456 N LON:104.2.17.2731 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 632245.1600 Y: 582373.9600

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.57° EAST TO GRID

Vertical Section Plane: 270.02

Survey Vert. Reference: 18.00' Kelly Bushing To Ground

Altitude:3303.00' 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		Closure		DLS
						Rectangular (ft)	Offsets (ft)	Dist (ft)	Dir (deg)	
THE FOLLOWING ARE MS ENERGY SERVICES GYRO SURVEYS.										
200.00	0.75	183.96	199.99	0.00	-0.06	2.65 S	0.06 E	2.65@	178.63	0.00
400.00	4.00	211.86	399.80	200.00	3.71	9.88 S	3.71 W	10.55@	200.58	1.68
600.00	3.50	210.86	599.37	200.00	10.52	21.05 S	10.52 W	23.53@	206.57	0.25
800.00	0.75	78.90	799.26	200.00	12.36	26.04 S	12.37 W	28.83@	205.42	2.02
1000.00	1.75	59.87	999.21	200.00	8.44	24.25 S	8.45 W	25.68@	199.20	0.53
1200.00	1.75	96.86	1199.12	200.00	2.76	23.08 S	2.77 W	23.25@	186.85	0.56
1400.00	0.50	359.83	1399.09	200.00	-0.26	22.58 S	0.26 E	22.58@	179.35	0.94
1600.00	1.00	279.82	1599.07	200.00	1.46	21.41 S	1.47 W	21.46@	183.92	0.52
1800.00	0.75	267.80	1799.05	200.00	4.49	21.16 S	4.49 W	21.63@	191.99	0.15
2000.00	1.00	313.77	1999.03	200.00	7.05	20.00 S	7.06 W	21.21@	199.44	0.36
2200.00	1.25	323.76	2198.99	200.00	9.61	17.03 S	9.61 W	19.56@	209.43	0.16
2400.00	1.50	328.74	2398.93	200.00	12.25	13.04 S	12.26 W	17.90@	223.24	0.14
2600.00	1.25	294.72	2598.88	200.00	15.60	9.89 S	15.60 W	18.47@	237.63	0.42
2800.00	1.00	294.69	2798.84	200.00	19.16	8.25 S	19.17 W	20.86@	246.72	0.13
3000.00	0.50	302.66	2998.82	200.00	21.48	7.05 S	21.49 W	22.61@	251.84	0.25
3200.00	0.75	268.63	3198.81	200.00	23.53	6.61 S	23.53 W	24.44@	254.32	0.22
3400.00	0.75	278.44	3398.79	200.00	26.13	6.45 S	26.13 W	26.92@	256.15	0.06
3600.00	0.75	278.44	3598.78	200.00	28.72	6.06 S	28.72 W	29.36@	258.08	0.00
3800.00	0.50	288.41	3798.77	200.00	30.84	5.59 S	30.85 W	31.35@	259.72	0.14
4000.00	0.50	279.38	3998.76	200.00	32.53	5.18 S	32.53 W	32.94@	260.96	0.04
4200.00	0.50	38.36	4198.75	200.00	32.85	4.35 S	32.85 W	33.14@	262.46	0.43
4400.00	0.25	357.33	4398.75	200.00	32.33	3.23 S	32.33 W	32.49@	264.30	0.18
4600.00	0.50	319.30	4598.75	200.00	32.92	2.13 S	32.92 W	32.99@	266.30	0.17

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CROP.
ANTHILL AAK STATE COM #2H
EDDY COUNTY, NM
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 (ft) (ft)		Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
4800.00	0.50	359.29	4798.74	200.00	33.50	0.60 S	33.50 W	33.51@	268.98	0.17
5000.00	0.50	319.27	4998.73	200.00	34.08	0.94 N	34.08 W	34.10@	271.57	0.17
5200.00	0.50	343.24	5198.72	200.00	34.90	2.43 N	34.90 W	34.99@	273.99	0.10
5400.00	0.50	318.22	5398.72	200.00	35.74	3.92 N	35.74 W	35.95@	276.26	0.11
5600.00	0.25	354.19	5598.71	200.00	36.36	5.00 N	36.36 W	36.71@	277.84	0.17
5800.00	0.25	347.98	5798.71	200.00	36.50	5.87 N	36.50 W	36.97@	279.13	0.01
6000.00	0.50	279.75	5998.71	200.00	37.45	6.44 N	37.45 W	38.00@	279.76	0.23
6200.00	0.50	275.53	6198.70	200.00	39.18	6.67 N	39.18 W	39.74@	279.67	0.02
6400.00	0.50	274.30	6398.69	200.00	40.92	6.82 N	40.92 W	41.48@	279.47	0.01
6600.00	0.75	268.07	6598.68	200.00	43.10	6.84 N	43.09 W	43.63@	279.02	0.13
6800.00	1.25	241.84	6798.65	200.00	46.33	5.77 N	46.33 W	46.68@	277.10	0.33
7000.00	1.25	216.61	6998.60	200.00	49.55	2.99 N	49.55 W	49.64@	273.45	0.27
7200.00	1.25	217.38	7198.56	200.00	52.18	0.50 S	52.18 W	52.18@	269.46	0.01
** TIED INTO MS ENERGY SERVICES GYRO SURVEY @ 7394.00'MD.										
7394.00	1.00	240.93	7392.52	194.00	54.94	3.00 S	54.94 W	55.02@	266.87	0.27
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
7485.00	0.88	272.37	7483.51	91.00	56.33	3.36 S	56.33 W	56.43@	266.59	0.57
7578.00	0.26	235.97	7576.50	93.00	57.22	3.45 S	57.22 W	57.32@	266.55	0.74
7672.00	0.26	226.61	7670.50	94.00	57.55	3.71 S	57.55 W	57.67@	266.31	0.05
7735.00	0.35	298.64	7733.50	63.00	57.82	3.72 S	57.83 W	57.94@	266.32	0.58
7766.00	1.23	283.21	7764.50	31.00	58.23	3.60 S	58.23 W	58.34@	266.47	2.90
7797.00	3.96	276.43	7795.46	31.00	59.62	3.40 S	59.62 W	59.72@	266.74	8.85
7828.00	6.86	282.55	7826.32	31.00	62.49	2.88 S	62.49 W	62.56@	267.36	9.52
7859.00	9.58	286.99	7857.00	31.00	66.77	1.72 S	66.77 W	66.79@	268.52	9.00
7890.00	12.66	284.24	7887.42	31.00	72.53	0.13 S	72.53 W	72.53@	269.90	10.08
7921.00	15.92	281.00	7917.45	31.00	80.00	1.52 N	80.00 W	80.01@	271.09	10.82
7952.00	19.26	277.76	7947.00	31.00	89.24	3.02 N	89.24 W	89.29@	271.94	11.22
7983.00	22.69	276.11	7975.94	31.00	100.25	4.34 N	100.25 W	100.35@	272.48	11.23

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CROP.
ANTHILL AAK STATE COM #2H
EDDY COUNTY, NM
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 (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8014.00	26.03	274.29	8004.18	31.00	112.99	5.49 N	112.98 W	113.12@	272.78	11.04
8045.00	29.46	273.09	8031.61	31.00	127.39	6.41 N	127.38 W	127.55@	272.88	11.21
8076.00	32.98	271.76	8058.12	31.00	143.44	7.08 N	143.43 W	143.61@	272.83	11.57
8108.00	36.32	269.71	8084.44	32.00	161.62	7.30 N	161.62 W	161.79@	272.59	11.05
8139.00	39.83	268.74	8108.84	31.00	180.74	7.04 N	180.73 W	180.87@	272.23	11.49
8169.00	43.88	268.01	8131.18	30.00	200.74	6.46 N	200.74 W	200.84@	271.84	13.60
8201.00	48.19	267.48	8153.39	32.00	223.75	5.55 N	223.75 W	223.82@	271.42	13.52
8232.00	52.58	266.52	8173.15	31.00	247.59	4.30 N	247.59 W	247.63@	270.99	14.36
8263.00	57.07	266.25	8191.01	31.00	272.87	2.70 N	272.87 W	272.89@	270.57	14.50
8294.00	61.55	266.42	8206.82	31.00	299.47	1.00 N	299.47 W	299.47@	270.19	14.46
8326.00	66.13	267.40	8220.93	32.00	328.14	0.55 S	328.14 W	328.14@	269.90	14.57
8353.00	69.47	266.00	8231.13	27.00	353.09	1.99 S	353.09 W	353.10@	269.68	13.27
8384.00	73.51	269.09	8240.97	31.00	382.45	3.24 S	382.45 W	382.47@	269.51	16.10
8415.00	76.15	269.12	8249.08	31.00	412.37	3.71 S	412.37 W	412.38@	269.49	8.52
8446.00	79.67	269.68	8255.57	31.00	442.67	4.02 S	442.67 W	442.69@	269.48	11.49
8477.00	83.54	270.13	8260.10	31.00	473.33	4.07 S	473.33 W	473.35@	269.51	12.57
8509.00	87.49	270.05	8262.60	32.00	505.23	4.02 S	505.23 W	505.25@	269.54	12.35
8539.00	89.08	270.02	8263.50	30.00	535.21	4.00 S	535.22 W	535.23@	269.57	5.30
8601.00	88.99	269.94	8264.54	62.00	597.21	4.03 S	597.21 W	597.22@	269.61	0.19
8694.00	89.43	270.87	8265.82	93.00	690.19	3.37 S	690.19 W	690.20@	269.72	1.11
8787.00	90.66	270.26	8265.75	93.00	783.19	2.45 S	783.19 W	783.19@	269.82	1.48
8881.00	91.19	271.01	8264.23	94.00	877.17	1.41 S	877.17 W	877.17@	269.91	0.98
8975.00	92.33	270.98	8261.35	94.00	971.11	0.22 N	971.11 W	971.11@	270.01	1.21
9068.00	92.42	269.64	8257.49	93.00	1064.02	0.72 N	1064.02 W	1064.03@	270.04	1.44
9161.00	92.68	269.35	8253.36	93.00	1156.93	0.09 S	1156.93 W	1156.93@	270.00	0.42
9254.00	92.95	269.00	8248.79	93.00	1249.81	1.43 S	1249.81 W	1249.81@	269.93	0.48
9348.00	91.19	269.67	8245.39	94.00	1343.73	2.52 S	1343.73 W	1343.74@	269.89	2.00

PathFinder Energy Services, Inc.

Survey Report

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ANTHILL AAK STATE COM #2H
EDDY COUNTY, NM
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 (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
9442.00	91.36	269.40	8243.30	94.00	1437.71	3.28 S	1437.71 W	1437.71@	269.87	0.34
9535.00	90.66	270.23	8241.66	93.00	1530.69	3.59 S	1530.69 W	1530.70@	269.87	1.17
9628.00	90.75	270.42	8240.52	93.00	1623.68	3.06 S	1623.68 W	1623.69@	269.89	0.23
9722.00	90.84	270.91	8239.21	94.00	1717.67	1.97 S	1717.67 W	1717.67@	269.93	0.53
9815.00	88.72	270.10	8239.57	93.00	1810.66	1.15 S	1810.66 W	1810.66@	269.96	2.44
9908.00	89.34	270.88	8241.14	93.00	1903.64	0.35 S	1903.64 W	1903.64@	269.99	1.07
10001.00	89.34	271.00	8242.22	93.00	1996.62	1.17 N	1996.62 W	1996.62@	270.03	0.13
10094.00	89.78	271.47	8242.93	93.00	2089.60	3.18 N	2089.60 W	2089.60@	270.09	0.69
10187.00	90.04	271.70	8243.08	93.00	2182.56	5.75 N	2182.56 W	2182.57@	270.15	0.37
10281.00	89.78	270.36	8243.22	94.00	2276.55	7.44 N	2276.54 W	2276.55@	270.19	1.45
10375.00	89.96	270.46	8243.44	94.00	2370.54	8.11 N	2370.54 W	2370.55@	270.20	0.22
10469.00	89.78	268.88	8243.65	94.00	2464.54	7.57 N	2464.54 W	2464.55@	270.18	1.69
10563.00	90.04	268.90	8243.80	94.00	2558.52	5.75 N	2558.52 W	2558.52@	270.13	0.28
10657.00	90.48	269.14	8243.37	94.00	2652.50	4.14 N	2652.50 W	2652.51@	270.09	0.53
10749.00	89.87	268.96	8243.09	92.00	2744.49	2.62 N	2744.49 W	2744.49@	270.05	0.69
10843.00	90.31	269.17	8242.94	94.00	2838.48	1.08 N	2838.48 W	2838.48@	270.02	0.52
10938.00	90.92	269.64	8241.92	95.00	2933.46	0.10 N	2933.46 W	2933.46@	270.00	0.81
11029.00	89.52	269.77	8241.57	91.00	3024.46	0.37 S	3024.46 W	3024.46@	269.99	1.55
11123.00	89.52	270.23	8242.36	94.00	3118.46	0.37 S	3118.46 W	3118.46@	269.99	0.49
11217.00	89.34	270.27	8243.30	94.00	3212.45	0.04 N	3212.45 W	3212.45@	270.00	0.20
11311.00	88.72	269.57	8244.89	94.00	3306.44	0.09 S	3306.44 W	3306.44@	270.00	1.00
11404.00	88.90	270.06	8246.82	93.00	3399.42	0.39 S	3399.42 W	3399.42@	269.99	0.56
11498.00	89.34	270.07	8248.26	94.00	3493.40	0.29 S	3493.40 W	3493.40@	270.00	0.47
11591.00	88.02	269.79	8250.41	93.00	3586.38	0.40 S	3586.38 W	3586.38@	269.99	1.45
11685.00	88.46	269.88	8253.29	94.00	3680.33	0.67 S	3680.33 W	3680.33@	269.99	0.48
11778.00	88.99	269.86	8255.36	93.00	3773.31	0.88 S	3773.31 W	3773.31@	269.99	0.57
11872.00	88.55	269.85	8257.38	94.00	3867.29	1.12 S	3867.29 W	3867.29@	269.98	0.47

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Survey Report

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 ANTHILL AAK STATE COM #2H
 EDDY COUNTY, NM
 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 (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
11965.00	89.08	269.93	8259.30	93.00	3960.27	1.30 S	3960.27 W	3960.27@	269.98	0.58
12059.00	89.08	270.50	8260.81	94.00	4054.25	0.94 S	4054.25 W	4054.25@	269.99	0.61
12151.00	89.52	270.50	8261.94	92.00	4146.24	0.14 S	4146.24 W	4146.24@	270.00	0.48
12244.00	90.13	270.75	8262.22	93.00	4239.24	0.87 N	4239.24 W	4239.24@	270.01	0.71
12338.00	90.75	270.67	8261.50	94.00	4333.23	2.04 N	4333.23 W	4333.23@	270.03	0.67
12431.00	91.45	270.67	8259.71	93.00	4426.20	3.12 N	4426.20 W	4426.20@	270.04	0.75
12524.00	92.33	270.52	8256.65	93.00	4519.15	4.09 N	4519.15 W	4519.15@	270.05	0.96
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 12600.00'MD.										
12600.00	92.33	270.52	8253.56	76.00	4595.08	4.78 N	4595.08 W	4595.08@	270.06	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 CORP.		
LEASE / WELL No.:	ANTHILL AAK STATE COM	#2H	
WELL LOCATION:	EDDY COUNTY, NM		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	SLIVER OAK 10		
API WELL No:	30-015-38575		
JOB No:	12MLD0167		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.566	LWD Calculated:	7.567
Agreed Upon:	7.567		
X =	632245.160000	Feet	Y = 582373.960000
			Feet
SITE LATITUDE:	32.600652 N	SITE LONGITUDE:	104.038131 W
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	270.02		
KELLY BUSHING ELEVATION:	18.0'		
ALTITUDE:	3303	Feet	WATER DEPTH: N/A
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	7394		
DRIFT ANGLE:	1.00		
DRIFT DIRECTION:	240.93		
TRUE VERTICAL DEPTH:	7392.52		
VERTICAL SECTION:	54.94		
RECTANGULAR COORDINATE (N / S) :	-3.00		
RECTANGULAR COORDINATE (E / W) :	-54.94		
CLOSURE DISTANCE / DIRECTION:	55.02	266.88	
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:	7793.7	TOTAL DEPTH:	12693.6
KICKOFF ANGLE:	0	MAX ANGLE:	91.45

PES Engineers: ALEX CASTILLO
FREDDY LICERO

**Signature of both field engineers required if applicable

Directional Driller: EDWARD

DATE: 21-Apr-2012

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM** *

JOB NUMBER: SVCO-120645

WELL NAME: ANTHILL AAK STATE COM #2H

LOCATION: EDDY COUNTY, NEW MEXICO

SURVEY DATE: MAY 04, 2012

SURVEY ENGINEER: S. SMITH

MAGNETIC DECLINATION: 07.57 GRID NORTH

GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 270.02
SURF. ELEVATION: 18

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*****
***** DEPTH MEASURED IN FEET *****
*****
COMMENTS: SILVER OAK 10
          RKB 18'
          TBUSSELL@YATESPETROLEUM.COM**
          MIKEL@YATESPETROLEUM.COM
          *****
          COMPANY REPRESENTATIVE
          *****
*****
```

MS ENERGY SERVICES
ODESSA, TEXAS

JOB NUMBER: SVCO-120645

WELL NAME: ANTHILL AAK STATE COM #2H

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	199.99	0.09	-1.306	00.75	183.96	1.31 S	0.09 W	0.38	0.75	1.31 AT	183.96
400.0	399.80	3.86	-8.540	04.00	211.86	8.54 S	3.86 W	1.68	3.36	9.37 AT	204.35
600.0	599.37	10.67	-19.707	03.50	210.86	19.70 S	10.68 W	0.25	0.50	22.41 AT	208.45
800.0	799.26	12.52	-24.699	00.75	078.90	24.69 S	12.53 W	2.02	4.04	27.69 AT	206.89
1000.0	999.21	8.59	-22.912	01.75	059.87	22.91 S	8.60 W	0.53	1.07	24.47 AT	200.57
1200.0	1199.12	2.92	-21.742	01.75	096.86	21.74 S	2.93 W	0.56	1.11	21.94 AT	187.66
1400.0	1399.09	-0.11	-21.233	00.50	359.83	21.23 S	0.10 E	0.94	1.88	21.23 AT	179.72
1600.0	1599.08	1.61	-20.064	01.00	279.82	20.06 S	1.62 W	0.52	1.04	20.13 AT	184.61
1800.0	1799.05	4.64	-19.817	00.75	267.80	19.82 S	4.65 W	0.15	0.31	20.35 AT	193.20
2000.0	1999.03	7.21	-18.661	01.00	313.77	18.66 S	7.21 W	0.36	0.72	20.00 AT	201.14
2200.0	2198.99	9.76	-15.695	01.25	323.76	15.69 S	9.76 W	0.16	0.32	18.48 AT	211.89
2400.0	2398.94	12.41	-11.699	01.50	328.74	11.69 S	12.41 W	0.14	0.28	17.05 AT	226.71
2600.0	2598.88	15.75	-8.550	01.25	294.72	8.54 S	15.75 W	0.42	0.84	17.92 AT	241.52
2800.0	2798.84	19.32	-6.910	01.00	294.69	6.90 S	19.32 W	0.13	0.25	20.52 AT	250.34
3000.0	2998.82	21.64	-5.711	00.50	302.66	5.70 S	21.64 W	0.25	0.51	22.38 AT	255.24
3200.0	3198.81	23.68	-5.272	00.75	268.63	5.26 S	23.68 W	0.22	0.44	24.26 AT	257.47
3400.0	3398.80	26.21	-5.782	00.75	248.60	5.77 S	26.21 W	0.13	0.26	26.84 AT	257.58
3600.0	3598.78	28.72	-6.068	00.75	278.44	6.06 S	28.72 W	0.19	0.39	29.36 AT	258.09
3800.0	3798.77	30.85	-5.601	00.50	288.41	5.59 S	30.85 W	0.14	0.27	31.35 AT	259.73
4000.0	3998.76	32.53	-5.184	00.50	279.38	5.17 S	32.54 W	0.04	0.08	32.94 AT	260.97
4200.0	4198.76	32.85	-4.358	00.50	038.36	4.35 S	32.86 W	0.43	0.86	33.14 AT	262.46
4400.0	4398.75	32.33	-3.237	00.25	357.33	3.23 S	32.33 W	0.18	0.35	32.49 AT	264.30
4600.0	4598.75	32.92	-2.140	00.50	319.30	2.13 S	32.92 W	0.17	0.34	32.99 AT	266.30
4800.0	4798.74	33.50	-0.606	00.50	359.29	0.59 S	33.50 W	0.17	0.34	33.51 AT	268.98
5000.0	4998.73	34.08	0.928	00.50	319.27	0.94 N	34.08 W	0.17	0.34	34.10 AT	271.58
5200.0	5198.73	34.91	2.424	00.50	343.24	2.44 N	34.90 W	0.10	0.21	34.99 AT	273.99
5400.0	5398.72	35.74	3.910	00.50	318.22	3.92 N	35.74 W	0.11	0.22	35.95 AT	276.26
5600.0	5598.72	36.37	4.995	00.25	354.19	5.01 N	36.36 W	0.17	0.33	36.71 AT	277.84
5800.0	5798.71	36.50	5.856	00.25	347.98	5.87 N	36.50 W	0.01	0.03	36.97 AT	279.13
6000.0	5998.71	37.45	6.430	00.50	279.75	6.44 N	37.45 W	0.23	0.47	38.00 AT	279.76
6200.0	6198.70	39.18	6.661	00.50	275.53	6.67 N	39.18 W	0.02	0.04	39.74 AT	279.67
6400.0	6398.69	40.92	6.810	00.50	274.30	6.82 N	40.92 W	0.01	0.01	41.48 AT	279.47
6600.0	6598.68	43.10	6.831	00.75	268.07	6.85 N	43.10 W	0.13	0.26	43.64 AT	279.03
6800.0	6798.65	46.33	5.756	01.25	241.84	5.77 N	46.33 W	0.33	0.67	46.68 AT	277.10
7000.0	6998.61	49.55	2.974	01.25	216.61	2.99 N	49.55 W	0.27	0.55	49.64 AT	273.45
7200.0	7198.56	52.18	-0.511	01.25	217.38	0.49 S	52.18 W	0.01	0.02	52.18 AT	269.46
7394.0	7392.52	54.94	-3.016	01.00	240.93	3.00 S	54.94 W	0.27	0.52	55.02 AT	266.88

*
* THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
* ***** *
* 7394.00 FEET EQUALS 55.02 FEET AT 266.88 *
* ***** *

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Yates Petroleum Corp.
Anthill AAK State Com #2H
Eddy County, NM
Rig: Silver Oak 10

Fri Apr 20 14:32:18 2012

Coordinates

Latitude: 32.600652 N (32 deg. 36 min. 2.3456 sec.)
Longitude: 104.038131 W (-104 deg. 2 min. 17.2731 sec.)
Elevation: 3321.00 feet.
Calculation Date: Apr/20/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.4343 degrees
Total Magnetic Field: 0.48708 gauss
Magnetic Declination: 7.725303 degrees
Horizontal Intensity: 0.240364 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.725303 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 632245.1600 feet
Y: 582373.9600 feet
True to Grid: (convergence) -0.159050 degrees
Magnetic to Grid: 7.566253 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.566253 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CROP.
ANTHILL AAK STATE COM #2H / 30-015-38575
EDDY COUNTY, NEW MEXICO
Rig: SILVER OAK 10

*FIELD
CALCULATION*

Sat Apr 21 14:06:01 2012

Coordinates

Latitude: 32.600652 N (32 deg. 36 min. 2.3456 sec.)
Longitude: 104.038131 W (-104 deg. 2 min. 17.2731 sec.)
Elevation: 3321.00 feet.
Calculation Date: Apr/21/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.4341 degrees
Total Magnetic Field: 0.48732 gauss
Magnetic Declination: 7.726670 degrees
Horizontal Intensity: 0.240456 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.726670 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 632245.1600 feet
Y: 582373.9600 feet
True to Grid: (convergence) -0.159050 degrees
Magnetic to Grid: 7.567620 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.567620 Degr.