



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

30-015-26907

YATES PETROLEUM

PALO VERDE 'AJV' FEDERAL COM #1H

EDDY COUNTY, NEW MEXICO

RECEIVED

SEP 04 2012

NMOCD ARTESIA

PREPARED BY: JUAN ALCOCER

Pathfinder

6213 WCR 112
Midland, Texas 79706
Tel (432)687-1647
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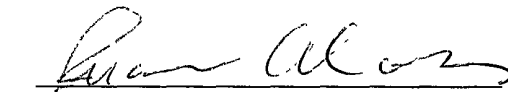
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY
A) JAMES BURLESON
3. POSITION OF SAID PERSON(S) (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 5/12/12 TO 5/27/12
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
PALO VERDE 'AJV' FEDERAL COM #1H
EDDY COUNTY, NM
RIG: FELDERHOFF 25

9. SURVEY CERTIFIED FROM 2,197 TO 6,815 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4,464.22 FEET ON A BEARING OF 91 09 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 6,880 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: 05/12/2012
Date Completed: 05/27/2012

YATES PETROLEUM
PALO VERDE AJV FED COM #1H
EDDY COUNTY, NM
Rig:FELDERHOFF 25
PathFinder Office Supervisor: JUAN ALCOCER
PathFinder Field Engineers:J.BURLESON
M.FELTS

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.33.14.3027 N LON:104.32.54.0119 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 475092.8100 Y: 565332.9280
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.06° EAST TO GRID
Vertical Section Plane: 91.42
Survey Vert. Reference: 10.00' Rotary Table To Ground
Altitude:3643.00' Ground To MSL

Measured Depth	6880.00	(feet)
Inclination	90.57	(deg)
Azimuth	89.62	(deg)
True Vertical Depth	2716.51	(feet)
Vertical Section	4464.15	(feet)
Survey X cord	479556.23	(feet)
Survey Y cord	565248.11	(feet)
Survey Lat	32.55376378 N	(deg)
Survey Lon	104.53384977 W	(deg)
Rectangular Corr. N/S	84.81 S	(feet)
Rectangular Corr. E/W	4463.42 E	(feet)
Closure Distance	4464.22	(feet)
Direction of Closure	91.09	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
PALO VERDE AJV FED COM #1H
EDDY COUNTY, NM
Rig:FELDERHOFF 25
PathFinder Office Supervisor: JUAN ALCOCER
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Vertical Section Plane: 91.42
Survey Vert. Reference: 10.00' Rotary Table To Ground
Altitude:3643.00' 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)
TIED-IN TO GYRODATA GYRO SURVEY AT 2100.00' MD.										
2100.00	1.12	308.97	2099.73	0.00	-29.36	3.44 N	29.28 W	29.48@	276.70	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
2197.00	10.73	92.96	2196.21	97.00	-21.05	3.57 N	20.97 W	21.27@	279.66	12.02
2224.00	16.80	103.77	2222.42	27.00	-14.72	2.51 N	14.66 W	14.88@	279.72	24.32
2256.00	20.14	113.88	2252.78	32.00	-5.11	0.82 S	5.13 W	5.20@	260.90	14.43
2287.00	23.74	112.91	2281.53	31.00	5.63	5.41 S	5.50 E	7.72@	134.54	11.67
2319.00	28.49	108.17	2310.26	32.00	18.95	10.30 S	18.70 E	21.35@	118.86	16.20
2351.00	33.85	104.83	2337.63	32.00	34.94	14.97 S	34.58 E	37.68@	113.41	17.59
2379.00	38.08	103.25	2360.29	28.00	50.98	18.95 S	50.53 E	53.96@	110.55	15.47
2410.00	40.98	102.81	2384.19	31.00	70.31	23.39 S	69.75 E	73.57@	108.54	9.40
2441.00	44.41	101.84	2406.97	31.00	90.94	27.87 S	90.28 E	94.49@	107.16	11.27
2473.00	48.45	99.38	2429.03	32.00	113.83	32.12 S	113.07 E	117.54@	105.86	13.80
2505.00	50.39	97.18	2449.84	32.00	137.95	35.62 S	137.11 E	141.66@	104.56	8.00
2536.00	52.41	94.46	2469.19	31.00	162.10	38.06 S	161.21 E	165.64@	103.29	9.46
2568.00	54.43	91.91	2488.26	32.00	187.78	39.48 S	186.86 E	190.99@	101.93	8.99
2600.00	56.37	89.62	2506.43	32.00	214.12	39.83 S	213.20 E	216.89@	100.58	8.45
2632.00	59.27	89.45	2523.47	32.00	241.19	39.61 S	240.28 E	243.52@	99.36	9.07
2663.00	62.34	90.15	2538.59	31.00	268.23	39.52 S	267.34 E	270.24@	98.41	10.10
2695.00	65.33	91.12	2552.70	32.00	296.95	39.84 S	296.05 E	298.72@	97.66	9.73
2727.00	67.88	90.68	2565.40	32.00	326.31	40.30 S	325.41 E	327.90@	97.06	8.07
2759.00	70.43	89.89	2576.79	32.00	356.21	40.45 S	355.32 E	357.61@	96.49	8.30
2791.00	72.28	87.78	2587.02	32.00	386.50	39.83 S	385.63 E	387.68@	95.90	8.51
2842.00	75.45	84.48	2601.20	51.00	435.26	36.51 S	434.49 E	436.02@	94.80	8.79

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
PALO VERDE AJV FED COM #1H
EDDY COUNTY, NM
RIG:FELDERHOFF 25

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)
2872.00	76.50	83.75	2608.47	30.00	464.13	33.52 S	463.44 E	464.65@	94.14	4.22
2903.00	76.77	83.47	2615.63	31.00	494.01	30.17 S	493.42 E	494.34@	93.50	1.24
2934.00	77.12	83.45	2622.63	31.00	523.92	26.73 S	523.42 E	524.10@	92.92	1.13
2965.00	78.44	84.33	2629.20	31.00	553.96	23.50 S	553.54 E	554.04@	92.43	5.08
2996.00	79.49	85.16	2635.13	31.00	584.18	20.72 S	583.84 E	584.21@	92.03	4.29
3027.00	80.28	86.37	2640.57	31.00	614.54	18.46 S	614.28 E	614.55@	91.72	4.61
3058.00	81.78	87.50	2645.41	31.00	645.07	16.83 S	644.85 E	645.07@	91.49	6.03
3089.00	83.36	88.20	2649.42	31.00	675.75	15.68 S	675.57 E	675.75@	91.33	5.57
3120.00	85.38	88.45	2652.46	31.00	706.55	14.77 S	706.40 E	706.56@	91.20	6.56
3151.00	87.49	89.04	2654.38	31.00	737.46	14.10 S	737.33 E	737.47@	91.10	7.07
3182.00	88.99	89.45	2655.34	31.00	768.42	13.69 S	768.32 E	768.44@	91.02	5.02
3212.00	89.25	89.25	2655.80	30.00	798.40	13.35 S	798.31 E	798.42@	90.96	1.09
3243.00	89.60	89.04	2656.11	31.00	829.37	12.89 S	829.31 E	829.41@	90.89	1.32
3274.00	89.78	89.18	2656.28	31.00	860.35	12.40 S	860.30 E	860.39@	90.83	0.74
3305.00	90.13	89.22	2656.30	31.00	891.32	11.97 S	891.30 E	891.38@	90.77	1.14
3335.00	90.04	90.97	2656.26	30.00	921.31	12.02 S	921.30 E	921.38@	90.75	5.84
3366.00	90.22	91.38	2656.19	31.00	952.31	12.66 S	952.29 E	952.37@	90.76	1.44
3397.00	90.48	91.12	2656.00	31.00	983.31	13.33 S	983.28 E	983.37@	90.78	1.19
3428.00	90.84	91.08	2655.64	31.00	1014.31	13.93 S	1014.27 E	1014.37@	90.79	1.17
3459.00	91.01	91.18	2655.14	31.00	1045.30	14.54 S	1045.27 E	1045.37@	90.80	0.64
3490.00	89.34	91.90	2655.04	31.00	1076.30	15.37 S	1076.25 E	1076.36@	90.82	5.87
3521.00	89.60	91.98	2655.33	31.00	1107.30	16.42 S	1107.23 E	1107.36@	90.85	0.88
3552.00	88.64	92.72	2655.81	31.00	1138.29	17.69 S	1138.20 E	1138.34@	90.89	3.91
3583.00	89.08	92.51	2656.42	31.00	1169.28	19.11 S	1169.16 E	1169.32@	90.94	1.57
3645.00	88.99	91.87	2657.47	62.00	1231.26	21.48 S	1231.11 E	1231.30@	91.00	1.04
3707.00	87.58	91.68	2659.32	62.00	1293.23	23.39 S	1293.05 E	1293.26@	91.04	2.29
3770.00	86.26	91.46	2662.71	63.00	1356.14	25.12 S	1355.93 E	1356.17@	91.06	2.12

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Page 03/04

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3833.00	87.41	91.25	2666.19	63.00	1419.04	26.61 S	1418.82 E	1419.07@	91.07	1.85
3897.00	87.93	90.70	2668.79	64.00	1482.99	27.69 S	1482.76 E	1483.02@	91.07	1.18
3960.00	88.20	90.00	2670.92	63.00	1545.94	28.08 S	1545.72 E	1545.97@	91.04	1.19
4024.00	88.64	89.90	2672.68	64.00	1609.90	28.02 S	1609.70 E	1609.94@	91.00	0.71
4086.00	88.99	89.57	2673.96	62.00	1671.86	27.74 S	1671.68 E	1671.91@	90.95	0.78
4149.00	89.43	89.58	2674.83	63.00	1734.82	27.27 S	1734.67 E	1734.89@	90.90	0.70
4213.00	89.69	90.62	2675.32	64.00	1798.80	27.38 S	1798.67 E	1798.88@	90.87	1.67
4276.00	90.31	90.59	2675.32	63.00	1861.79	28.05 S	1861.67 E	1861.88@	90.86	0.98
4339.00	90.13	91.44	2675.08	63.00	1924.79	29.16 S	1924.66 E	1924.88@	90.87	1.38
4403.00	88.46	91.51	2675.87	64.00	1988.78	30.81 S	1988.63 E	1988.87@	90.89	2.61
4466.00	89.08	91.23	2677.22	63.00	2051.77	32.31 S	2051.59 E	2051.85@	90.90	1.08
4529.00	89.60	90.32	2677.95	63.00	2114.76	33.17 S	2114.58 E	2114.84@	90.90	1.66
4591.00	89.25	90.46	2678.57	62.00	2176.74	33.59 S	2176.58 E	2176.84@	90.88	0.61
4654.00	88.11	91.15	2680.02	63.00	2239.72	34.47 S	2239.55 E	2239.82@	90.88	2.11
4717.00	88.02	89.93	2682.15	63.00	2302.68	35.07 S	2302.51 E	2302.78@	90.87	1.94
4781.00	88.46	90.44	2684.11	64.00	2366.63	35.27 S	2366.48 E	2366.75@	90.85	1.05
4844.00	89.16	90.31	2685.42	63.00	2429.61	35.69 S	2429.47 E	2429.73@	90.84	1.13
4908.00	89.08	91.55	2686.40	64.00	2493.60	36.72 S	2493.45 E	2493.72@	90.84	1.94
4988.00	88.90	92.96	2687.81	80.00	2573.57	39.87 S	2573.37 E	2573.68@	90.89	1.78
5050.00	89.16	93.05	2688.86	62.00	2635.54	43.12 S	2635.28 E	2635.63@	90.94	0.44
5111.00	89.17	93.05	2689.75	61.00	2696.51	46.37 S	2696.19 E	2696.59@	90.99	0.02
5173.00	89.08	92.96	2690.70	62.00	2758.48	49.62 S	2758.10 E	2758.54@	91.03	0.21
5235.00	86.88	92.87	2692.88	62.00	2820.41	52.77 S	2819.97 E	2820.47@	91.07	3.55
5296.00	87.49	93.31	2695.88	61.00	2881.31	56.05 S	2880.81 E	2881.36@	91.11	1.23
5358.00	87.41	93.23	2698.64	62.00	2943.22	59.58 S	2942.65 E	2943.25@	91.16	0.18
5420.00	87.32	92.61	2701.49	62.00	3005.13	62.74 S	3004.50 E	3005.16@	91.20	1.01
5482.00	87.93	91.56	2704.06	62.00	3067.07	64.99 S	3066.41 E	3067.09@	91.21	1.96

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Survey Report

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RIG:FELDERHOFF 25

Page 04/04

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5544.00	89.34	92.43	2705.54	62.00	3129.05	67.15 S	3128.35 E	3129.07@	91.23	2.67
5606.00	88.90	92.35	2706.49	62.00	3191.04	69.74 S	3190.29 E	3191.05@	91.25	0.72
5669.00	88.72	92.52	2707.80	63.00	3254.01	72.41 S	3253.22 E	3254.02@	91.28	0.39
5733.00	89.78	93.23	2708.63	64.00	3317.98	75.62 S	3317.13 E	3317.99@	91.31	1.99
5796.00	89.25	93.31	2709.17	63.00	3380.95	79.22 S	3380.02 E	3380.95@	91.34	0.85
5860.00	88.72	93.23	2710.30	64.00	3444.91	82.87 S	3443.91 E	3444.91@	91.38	0.84
5923.00	87.23	91.20	2712.53	63.00	3507.86	85.30 S	3506.82 E	3507.86@	91.39	4.00
5987.00	87.32	91.47	2715.57	64.00	3571.78	86.79 S	3570.73 E	3571.78@	91.39	0.44
6050.00	87.67	91.47	2718.32	63.00	3634.72	88.40 S	3633.65 E	3634.72@	91.39	0.56
6114.00	88.55	90.85	2720.43	64.00	3698.69	89.70 S	3697.60 E	3698.69@	91.39	1.68
6178.00	89.08	90.85	2721.76	64.00	3762.67	90.65 S	3761.58 E	3762.67@	91.38	0.83
6241.00	88.81	90.50	2722.92	63.00	3825.65	91.39 S	3824.56 E	3825.65@	91.37	0.70
6309.00	88.99	89.71	2724.22	68.00	3893.62	91.51 S	3892.55 E	3893.63@	91.35	1.19
6373.00	89.96	89.80	2724.81	64.00	3957.59	91.24 S	3956.55 E	3957.60@	91.32	1.52
6436.00	90.75	89.45	2724.42	63.00	4020.56	90.83 S	4019.54 E	4020.57@	91.29	1.37
6499.00	90.48	89.36	2723.74	63.00	4083.52	90.17 S	4082.54 E	4083.53@	91.27	0.45
6562.00	91.28	88.92	2722.78	63.00	4146.46	89.23 S	4145.52 E	4146.48@	91.23	1.45
6625.00	91.71	89.45	2721.13	63.00	4209.39	88.33 S	4208.49 E	4209.42@	91.20	1.08
6688.00	91.36	89.01	2719.44	63.00	4272.32	87.49 S	4271.46 E	4272.36@	91.17	0.89
6751.00	91.10	88.66	2718.09	63.00	4335.24	86.21 S	4334.44 E	4335.29@	91.14	0.69
6815.00	90.57	89.62	2717.16	64.00	4399.18	85.25 S	4398.42 E	4399.25@	91.11	1.71
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 6880.00' MD.										
6880.00	90.57	89.62	2716.51	65.00	4464.15	84.81 S	4463.42 E	4464.22@	91.09	0.00



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM		
LEASE / WELL No.:	PALO VERDE AJV FED COM	#1H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	FELDERHOFF 25		
API WELL No:	30-015-26907		
JOB No:	12MLD0204		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):					
On Wall Plat	8.06	LWD Calculated	8.060363	Agreed Upon:	8.060363
X =	475092 810000	Feet	Y =	565332 928000	Feet
SITE LATITUDE:	32.553973 N	SITE LONGITUDE:	104.548337 W		
GRID SYSTEM:	TRUE ☐	UTM ☐	LAMBERT ☒	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	91.42				
ROTARY TABLE ELEVATION:	10				
ALTITUDE:	3643	Feet	WATER DEPTH:	0	Feet

TIE-IN SURVEY

MEASURED DEPTH:	2100		
DRIFT ANGLE:	1.12		
DRIFT DIRECTION:	308.97		
TRUE VERTICAL DEPTH:	2099.73		
VERTICAL SECTION:	-29.36		
RECTANGULAR COORDINATE (N / S) :	3.44		
RECTANGULAR COORDINATE (E / W) :	-29.28		
CLOSURE DISTANCE / DIRECTION:	29.48	276.7	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	GYRODATA		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	2160	TOTAL DEPTH:	6910
KICKOFF ANGLE:	1.12	MAX ANGLE:	90

PES Engineers: J.BURLESON
M.FELTS

**Signature of both field engineers required if applicable

Directional Driller: CHRIS RICKETS

DATE: 12-May-2012

Yates - Palo Verde AJV Federal Com #1H Post Gyro Plan #3 TXT

HEADER INFORMATION

COMPANY : Yates Petroleum Corp.
 FIELD : Eddy County (NAD 83)
 SITE : Palo Verde "AJV" Federal Com
 WELL : #1H
 WELLPATH: OH
 DEPTHUNT: usft

WELL INFORMATION

WELL EW MAP : 475092.81
 WELL NS MAP : 565332.93
 DATUM ELEVN : 3643.00
 VSECT ANGLE : 91.42
 VSECT NORTH : 0.00
 VSECT EAST : 0.00

SURVEY TYPE INFORMATION

H 100.00 - 2100.00 GYRO #1 : NS-GYRO-MS
 H 2100.00 - 6918.48 POST GYRO PLAN #3 : NS-GYRO-MS

SURVEY LIST

MD	INC	AZI	TVD	VSEC	N/S	E/W
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.16	212.30	100.00	-0.07	-0.12	-0.07
200.00	0.38	240.25	200.00	-0.43	-0.40	-0.44
300.00	0.75	274.08	299.99	-1.36	-0.52	-1.38
400.00	0.94	272.11	399.98	-2.84	-0.44	-2.85
500.00	0.81	270.54	499.97	-4.37	-0.40	-4.38
600.00	0.88	281.26	599.96	-5.83	-0.25	-5.84
700.00	1.15	251.38	699.95	-7.53	-0.42	-7.54
800.00	1.44	240.36	799.92	-9.55	-1.36	-9.58
900.00	1.42	240.95	899.89	-11.69	-2.58	-11.76
1000.00	0.99	264.25	999.87	-13.62	-3.27	-13.70
1100.00	0.88	277.35	1099.85	-15.24	-3.26	-15.32
1200.00	0.96	277.83	1199.84	-16.83	-3.05	-16.91
1300.00	0.70	283.68	1299.83	-18.26	-2.79	-18.34
1400.00	0.77	278.91	1399.82	-19.53	-2.54	-19.60
1500.00	0.74	287.18	1499.81	-20.81	-2.25	-20.88
1600.00	0.88	299.58	1599.80	-22.11	-1.68	-22.16
1700.00	1.03	302.36	1699.79	-23.56	-0.82	-23.59
1800.00	0.97	298.92	1799.77	-25.08	0.07	-25.09
1900.00	1.04	306.04	1899.76	-26.58	1.02	-26.56
2000.00	1.01	316.20	1999.74	-27.95	2.19	-27.91
2100.00	1.12	308.97	2099.73	-29.35	3.44	-29.28
2101.90	1.12	308.97	2101.63	-29.38	3.46	-29.31
2150.00	4.24	82.33	2149.69	-28.00	4.00	-27.91
2200.00	9.48	87.47	2199.31	-22.06	4.42	-21.96
2250.00	14.75	88.97	2248.18	-11.58	4.72	-11.47
2300.00	20.02	89.68	2295.88	3.34	4.88	3.46
2350.00	25.29	90.11	2342.00	22.59	4.91	22.72
2400.00	30.57	90.40	2386.16	46.00	4.80	46.13
2450.00	35.84	90.61	2427.99	73.36	4.55	73.50
2500.00	41.11	90.77	2467.12	104.46	4.18	104.60
2550.00	46.39	90.90	2503.22	139.02	3.67	139.16
2600.00	51.66	91.01	2535.99	176.76	3.04	176.89
2650.00	56.94	91.11	2565.16	217.35	2.28	217.47
2700.00	62.21	91.19	2590.47	260.45	1.42	260.56
2750.00	67.49	91.27	2611.71	305.69	0.44	305.80
2800.00	72.76	91.34	2628.71	352.70	-0.63	352.79
2850.00	78.04	91.41	2641.31	401.06	-1.79	401.14
2900.00	83.31	91.47	2649.41	450.39	-3.03	450.45
2954.24	89.03	91.54	2653.03	504.48	-4.45	504.52
3000.00	89.03	91.54	2653.80	550.24	-5.68	550.26

	Yates	-	Palo Verde	AJV	Federal	Com	#1H	Post	Gyro	Plan	#3	TXT
3100.00	89.03		91.54	2655.49	650.22		-8.37		650.21			
3200.00	89.03		91.54	2657.18	750.21		-11.05		750.16			
3300.00	89.03		91.54	2658.87	850.19		-13.74		850.11			
3400.00	89.03		91.54	2660.56	950.18		-16.43		950.06			
3500.00	89.03		91.54	2662.25	1050.16		-19.12		1050.01			
3600.00	89.03		91.54	2663.94	1150.15		-21.81		1149.96			
3700.00	89.03		91.54	2665.63	1250.13		-24.49		1249.91			
3800.00	89.03		91.54	2667.32	1350.12		-27.18		1349.86			
3900.00	89.03		91.54	2669.01	1450.10		-29.87		1449.81			
4000.00	89.03		91.54	2670.69	1550.09		-32.56		1549.76			
4100.00	89.03		91.54	2672.38	1650.08		-35.25		1649.71			
4200.00	89.03		91.54	2674.07	1750.06		-37.93		1749.66			
4300.00	89.03		91.54	2675.76	1850.05		-40.62		1849.61			
4400.00	89.03		91.54	2677.45	1950.03		-43.31		1949.56			
4500.00	89.03		91.54	2679.14	2050.02		-46.00		2049.51			
4600.00	89.03		91.54	2680.83	2150.00		-48.69		2149.46			
4700.00	89.03		91.54	2682.52	2249.99		-51.37		2249.41			
4800.00	89.03		91.54	2684.21	2349.97		-54.06		2349.36			
4900.00	89.03		91.54	2685.90	2449.96		-56.75		2449.31			
5000.00	89.03		91.54	2687.59	2549.95		-59.44		2549.26			
5100.00	89.03		91.54	2689.28	2649.93		-62.13		2649.21			
5200.00	89.03		91.54	2690.97	2749.92		-64.81		2749.16			
5300.00	89.03		91.54	2692.66	2849.90		-67.50		2849.10			
5400.00	89.03		91.54	2694.34	2949.89		-70.19		2949.05			
5500.00	89.03		91.54	2696.03	3049.87		-72.88		3049.00			
5600.00	89.03		91.54	2697.72	3149.86		-75.57		3148.95			
5700.00	89.03		91.54	2699.41	3249.84		-78.25		3248.90			
5800.00	89.03		91.54	2701.10	3349.83		-80.94		3348.85			
5900.00	89.03		91.54	2702.79	3449.82		-83.63		3448.80			
6000.00	89.03		91.54	2704.48	3549.80		-86.32		3548.75			
6100.00	89.03		91.54	2706.17	3649.79		-89.01		3648.70			
6200.00	89.03		91.54	2707.86	3749.77		-91.69		3748.65			
6300.00	89.03		91.54	2709.55	3849.76		-94.38		3848.60			
6400.00	89.03		91.54	2711.24	3949.74		-97.07		3948.55			
6500.00	89.03		91.54	2712.93	4049.73		-99.76		4048.50			
6600.00	89.03		91.54	2714.62	4149.71		-102.45		4148.45			
6700.00	89.03		91.54	2716.31	4249.70		-105.13		4248.40			
6800.00	89.03		91.54	2718.00	4349.69		-107.82		4348.35			
6900.00	89.03		91.54	2719.68	4449.67		-110.51		4448.30			
6918.67	89.03		91.54	2720.00	4468.34		-111.01		4466.96			



A Schlumberger Company

PathFinder Energy Services, Inc. Magnetic & Grid Calculations

Yates Petroleum
Palo Verde AJV Federal Com #1H
Eddy County, Nm
Rig:Felderhoff 25

Sat May 12 11:24:37 2012

Coordinates

Latitude: 32.553973 N (32 deg. 33 min. 14.3027 sec.)
Longitude: 104.548337 W (-104 deg. 32 min. 54.0119 sec.)
Elevation: 3643.00 feet.
Calculation Date: May/12/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.3001 degrees
Total Magnetic Field: 0.48612 gauss
Magnetic Declination: 7.944671 degrees
Horizontal Intensity: 0.240854 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.944671 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 475092.8100 feet
Y: 565332.9280 feet
True to Grid: (convergence) 0.115692 degrees
Magnetic to Grid: 8.060363 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 8.060363 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM
PALO VERDE AJV FED C #1H
LONG DRAW; GLORIETA YESO

Wed May 16 03:49:26 2012

Coordinates

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