



A Schlumberger Company

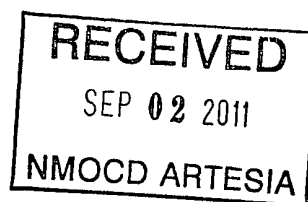
DIRECTIONAL SURVEY REPORT

30-015-37462

YATES PETROLEUM

CHEVRON BOT #1H

EDDY COUNTY, NEW MEXICO



PREPARED BY: FRANCISCO SINISTERRA

Pathfinder

6213 WCR 112
Midland, Texas 79706
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) GEORGE SAKAS
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 06-18-11 TO 07-03-11
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
CHEVRON BOT #1H
EDDY COUNTY, NM
RIG: PATRIOT 5
9. SURVEY CERTIFIED FROM: 656 TO 13860 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 6576.80 FEET ON A BEARING OF 359.54 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13912 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: 06/17/2011
Date Completed: 07/03/2011

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
Rig: PATRIOT 5
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: G.SAKAS
R.PAGE
J. FULTON

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.14.42.0241 N LON: 104.0.50.7588 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 640032.2930 Y: 453013.5640
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.62° EAST TO GRID
Vertical Section Plane: 359.58
Survey Vert. Reference: 26.50' Rotary Table To Ground
Altitude: 2953.00' Ground To MSL

Measured Depth	13912.00	(feet)
Inclination	90.31	(deg)
Azimuth	357.11	(deg)
True Vertical Depth	7568.04	(feet)
Vertical Section	6576.80	(feet)
Survey X cord	639979.85	(feet)
Survey Y cord	459590.14	(feet)
Survey Lat	32.26308514 N	(deg)
Survey Lon	104.01420608 W	(deg)
Rectangular Corr. N/S	6576.59 N	(feet)
Rectangular Corr. E/W	52.43 W	(feet)
Closure Distance	6576.80	(feet)
Direction of Closure	359.54	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION

CHEVRON BOT #1H

EDDY COUNTY, NEW MEXICO

Rig: PATRIOT 5

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: G.SAKAS

R.PAGE

J. FULTON

Survey Calculations by RX4 using Minimum Curvature

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.14.42.0241 N LON: 104.0.50.7588 W

GRID Reference: NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 640032.2930 Y: 453013.5640

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.62° EAST TO GRID

Vertical Section Plane: 359.58

Survey Vert. Reference: 26.50' Rotary Table To Ground

Altitude: 2953.00' Ground To MSL

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 SURVEYS ARE MULTI SHOT GYRO SURVEYS.										
200.00	1.25	8.22	199.99	0.00	2.16	2.16 N	0.31 E	2.18@	8.23	0.00
400.00	1.50	10.31	399.93	200.00	6.89	6.89 N	1.09 E	6.98@	9.01	0.13
** TIE-IN TO MULTI SHOT GYRO SURVEY @ 600' MD.										
600.00	1.25	13.49	599.87	200.00	11.57	11.59 N	2.07 E	11.77@	10.13	0.13
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
656.00	0.88	24.09	655.86	56.00	12.56	12.58 N	2.39 E	12.80@	10.75	0.75
751.00	0.88	55.17	750.85	95.00	13.63	13.66 N	3.28 E	14.05@	13.52	0.50
844.00	0.79	57.20	843.84	93.00	14.38	14.41 N	4.41 E	15.07@	17.01	0.10
938.00	1.14	70.31	937.83	94.00	15.04	15.08 N	5.83 E	16.17@	21.15	0.44
1033.00	0.62	91.74	1032.82	95.00	15.33	15.38 N	7.24 E	17.00@	25.20	0.64
1127.00	0.97	84.66	1126.81	94.00	15.38	15.44 N	8.54 E	17.65@	28.94	0.39
1221.00	1.14	95.77	1220.79	94.00	15.35	15.42 N	10.26 E	18.52@	33.64	0.28
1315.00	1.41	83.66	1314.77	94.00	15.36	15.46 N	12.34 E	19.78@	38.61	0.41
1409.00	0.35	39.68	1408.76	94.00	15.70	15.80 N	13.67 E	20.90@	40.87	1.26
1504.00	0.35	22.93	1503.75	95.00	16.19	16.29 N	13.97 E	21.47@	40.61	0.11
1598.00	0.35	52.97	1597.75	94.00	16.63	16.73 N	14.31 E	22.02@	40.55	0.19
1693.00	0.26	158.11	1692.75	95.00	16.60	16.71 N	14.63 E	22.20@	41.20	0.51
1787.00	0.26	188.83	1786.75	94.00	16.19	16.30 N	14.67 E	21.93@	41.99	0.15
1881.00	0.53	198.67	1880.75	94.00	15.57	15.68 N	14.50 E	21.35@	42.77	0.30
1976.00	1.06	200.66	1975.74	95.00	14.33	14.44 N	14.05 E	20.15@	44.22	0.56
2070.00	0.62	187.27	2069.73	94.00	13.02	13.12 N	13.68 E	18.95@	46.20	0.51
2165.00	0.97	153.87	2164.72	95.00	11.78	11.89 N	13.97 E	18.34@	49.60	0.60
2259.00	1.49	142.43	2258.70	94.00	10.09	10.20 N	15.06 E	18.19@	55.89	0.61
2354.00	1.06	125.38	2353.67	95.00	8.60	8.72 N	16.53 E	18.69@	62.20	0.60
2448.00	1.06	203.98	2447.66	94.00	7.29	7.42 N	16.89 E	18.45@	66.29	1.43
2542.00	1.06	188.32	2541.65	94.00	5.64	5.76 N	16.41 E	17.39@	70.65	0.31

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

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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)
2636.00	0.35	209.24	2635.64	94.00	4.53	4.65 N	16.14 E	16.80@	73.92	0.79
2731.00	0.53	197.65	2730.64	95.00	3.86	3.98 N	15.87 E	16.36@	75.92	0.21
2825.00	0.44	198.74	2824.63	94.00	3.11	3.23 N	15.62 E	15.95@	78.33	0.10
2918.00	0.62	219.94	2917.63	93.00	2.39	2.50 N	15.18 E	15.39@	80.65	0.28
3013.00	0.53	235.72	3012.62	95.00	1.75	1.86 N	14.49 E	14.61@	82.69	0.19
3107.00	0.53	257.60	3106.62	94.00	1.42	1.52 N	13.71 E	13.79@	83.67	0.21
3201.00	0.44	257.73	3200.62	94.00	1.26	1.35 N	12.93 E	13.00@	84.03	0.10
3296.00	0.53	214.27	3295.61	95.00	0.82	0.91 N	12.32 E	12.36@	85.77	0.39
3360.00	0.62	254.41	3359.61	64.00	0.49	0.57 N	11.82 E	11.84@	87.23	0.63
3556.00	0.79	228.80	3555.60	196.00	-0.67	0.60 S	9.79 E	9.80@	93.52	0.18
3674.00	0.62	215.87	3673.59	118.00	-1.72	1.66 S	8.80 E	8.95@	100.65	0.20
3862.00	0.62	217.24	3861.58	188.00	-3.34	3.29 S	7.59 E	8.27@	113.43	0.01
4050.00	0.53	213.21	4049.57	188.00	-4.87	4.83 S	6.50 E	8.09@	126.61	0.05
4239.00	0.62	234.82	4238.56	189.00	-6.18	6.15 S	5.18 E	8.04@	139.87	0.12
4427.00	0.70	230.37	4426.54	188.00	-7.49	7.47 S	3.47 E	8.23@	155.09	0.05
4614.00	0.53	229.14	4613.53	187.00	-8.77	8.76 S	1.93 E	8.97@	167.56	0.09
4803.00	0.70	227.80	4802.52	189.00	-10.11	10.11 S	0.42 E	10.12@	177.64	0.09
4991.00	0.70	185.30	4990.51	188.00	-12.02	12.02 S	0.54 W	12.03@	182.58	0.27
5180.00	0.70	190.40	5179.50	189.00	-14.30	14.31 S	0.86 W	14.33@	183.42	0.03
5368.00	0.79	173.23	5367.48	188.00	-16.72	16.72 S	0.91 W	16.75@	183.12	0.13
5557.00	0.18	280.82	5556.47	189.00	-17.95	17.96 S	1.05 W	17.99@	183.34	0.46
5747.00	0.18	67.42	5746.47	190.00	-17.78	17.79 S	1.07 W	17.82@	183.43	0.18
5935.00	0.35	301.15	5934.47	188.00	-17.37	17.38 S	1.28 W	17.43@	184.23	0.25
6123.00	0.18	209.30	6122.47	188.00	-17.33	17.34 S	1.92 W	17.45@	186.32	0.21
6312.00	0.26	155.07	6311.47	189.00	-17.97	17.99 S	1.89 W	18.09@	185.98	0.11
6500.00	0.26	221.63	6499.47	188.00	-18.68	18.69 S	1.99 W	18.80@	186.07	0.15
6595.00	0.44	195.82	6594.47	95.00	-19.19	19.21 S	2.23 W	19.34@	186.63	0.25
6689.00	0.97	310.77	6688.46	94.00	-19.01	19.03 S	2.93 W	19.26@	188.76	1.30

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

Page 03/06

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)
6783.00	0.97	308.75	6782.45	94.00	-17.99	18.02 S	4.16 W	18.49@	192.99	0.04
6876.00	0.70	344.82	6875.44	93.00	-16.94	16.98 S	4.92 W	17.67@	196.16	0.62
6909.00	0.70	354.18	6908.44	33.00	-16.54	16.58 S	4.99 W	17.32@	196.75	0.35
6952.00	1.06	8.36	6951.43	43.00	-15.89	15.93 S	4.96 W	16.68@	197.30	0.97
7004.00	2.29	6.22	7003.41	52.00	-14.38	14.42 S	4.78 W	15.19@	198.33	2.37
7035.00	5.72	2.81	7034.33	31.00	-12.22	12.26 S	4.63 W	13.10@	200.71	11.09
7067.00	10.20	2.63	7066.01	32.00	-7.80	7.83 S	4.43 W	9.00@	209.47	14.00
7098.00	14.25	3.38	7096.30	31.00	-1.25	1.28 S	4.08 W	4.27@	252.57	13.07
7130.00	17.67	5.66	7127.06	32.00	7.51	7.49 N	3.36 W	8.21@	335.81	10.86
7161.00	20.05	8.55	7156.40	31.00	17.44	17.43 N	2.11 W	17.55@	353.10	8.24
7193.00	21.72	8.34	7186.30	32.00	28.71	28.71 N	0.44 W	28.71@	359.13	5.22
7224.00	23.13	5.29	7214.95	31.00	40.44	40.45 N	0.96 E	40.46@	1.36	5.90
7255.00	25.15	2.51	7243.24	31.00	53.08	53.09 N	1.81 E	53.13@	1.95	7.48
7287.00	27.87	1.08	7271.87	32.00	67.35	67.37 N	2.25 E	67.41@	1.91	8.73
7318.00	30.86	1.08	7298.89	31.00	82.55	82.57 N	2.53 E	82.61@	1.76	9.65
7349.00	34.21	2.14	7325.02	31.00	99.20	99.23 N	3.01 E	99.27@	1.74	10.96
7381.00	37.72	3.96	7350.92	32.00	117.96	117.99 N	4.02 E	118.06@	1.95	11.46
7412.00	41.06	4.78	7374.87	31.00	137.56	137.60 N	5.52 E	137.71@	2.30	10.90
7443.00	44.23	5.31	7397.67	31.00	158.46	158.52 N	7.37 E	158.69@	2.66	10.29
7474.00	46.96	5.56	7419.36	31.00	180.49	180.56 N	9.47 E	180.81@	3.00	8.83
7506.00	50.39	5.31	7440.49	32.00	204.39	204.48 N	11.75 E	204.82@	3.29	10.73
7537.00	54.26	5.64	7459.43	31.00	228.79	228.90 N	14.09 E	229.34@	3.52	12.51
7569.00	58.04	5.78	7477.25	32.00	255.21	255.34 N	16.73 E	255.89@	3.75	11.82
7600.00	60.94	6.30	7492.99	31.00	281.75	281.90 N	19.55 E	282.57@	3.97	9.47
7631.00	63.40	6.37	7507.46	31.00	308.97	309.14 N	22.57 E	309.97@	4.18	7.94
7663.00	65.60	6.29	7521.23	32.00	337.65	337.85 N	25.75 E	338.83@	4.36	6.88
7694.00	69.56	5.21	7533.06	31.00	366.13	366.35 N	28.62 E	367.47@	4.47	13.17
7726.00	73.69	3.77	7543.14	32.00	396.38	396.62 N	30.99 E	397.83@	4.47	13.59

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG:PATRIOT 5

Page 04/06

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)
7757.00	76.50	1.78	7551.12	31.00	426.29	426.54 N	32.44 E	427.77@	4.35	10.98
7788.00	78.96	1.70	7557.70	31.00	456.56	456.82 N	33.36 E	458.03@	4.18	7.94
7820.00	81.60	1.16	7563.10	32.00	488.08	488.34 N	34.15 E	489.54@	4.00	8.42
7851.00	83.80	1.44	7567.04	31.00	518.81	519.08 N	34.84 E	520.25@	3.84	7.15
7882.00	86.09	0.69	7569.78	31.00	549.68	549.95 N	35.42 E	551.09@	3.68	7.77
7914.00	86.88	0.34	7571.74	32.00	581.62	581.89 N	35.70 E	582.99@	3.51	2.70
7945.00	88.72	0.47	7572.93	31.00	612.59	612.87 N	35.92 E	613.92@	3.35	5.95
7976.00	90.75	0.85	7573.07	31.00	643.58	643.86 N	36.28 E	644.88@	3.23	6.66
8039.00	90.84	2.01	7572.20	63.00	706.54	706.84 N	37.85 E	707.85@	3.07	1.85
8133.00	88.37	2.59	7572.84	94.00	800.42	800.75 N	41.62 E	801.83@	2.98	2.70
8228.00	88.20	2.85	7575.69	95.00	895.24	895.60 N	46.13 E	896.79@	2.95	0.33
8322.00	88.55	0.92	7578.35	94.00	989.12	989.51 N	49.22 E	990.73@	2.85	2.09
8416.00	90.40	0.87	7579.22	94.00	1083.09	1083.49 N	50.69 E	1084.67@	2.68	1.97
8510.00	89.69	1.07	7579.14	94.00	1177.06	1177.47 N	52.28 E	1178.63@	2.54	0.78
8573.00	90.57	0.89	7579.00	63.00	1240.04	1240.46 N	53.36 E	1241.61@	2.46	1.43
8604.00	90.84	1.15	7578.62	31.00	1271.03	1271.46 N	53.91 E	1272.60@	2.43	1.21
8667.00	91.28	1.14	7577.45	63.00	1333.99	1334.43 N	55.17 E	1335.57@	2.37	0.70
8698.00	91.28	1.23	7576.76	31.00	1364.97	1365.42 N	55.81 E	1366.56@	2.34	0.29
8761.00	90.40	0.32	7575.83	63.00	1427.95	1428.41 N	56.66 E	1429.53@	2.27	2.01
8792.00	90.40	0.98	7575.62	31.00	1458.95	1459.40 N	57.01 E	1460.52@	2.24	2.13
8886.00	90.84	1.03	7574.60	94.00	1552.91	1553.38 N	58.66 E	1554.49@	2.16	0.47
8980.00	89.52	0.03	7574.31	94.00	1646.89	1647.37 N	59.53 E	1648.45@	2.07	1.76
9074.00	89.60	0.63	7575.03	94.00	1740.88	1741.37 N	60.07 E	1742.41@	1.98	0.64
9168.00	89.43	0.41	7575.82	94.00	1834.87	1835.36 N	60.93 E	1836.37@	1.90	0.30
9263.00	89.60	0.84	7576.63	95.00	1929.85	1930.35 N	61.96 E	1931.35@	1.84	0.49
9357.00	89.60	1.17	7577.28	94.00	2023.82	2024.34 N	63.61 E	2025.34@	1.80	0.35
9452.00	89.34	1.04	7578.16	95.00	2118.78	2119.31 N	65.44 E	2120.32@	1.77	0.31
9546.00	89.96	0.70	7578.74	94.00	2212.75	2213.30 N	66.87 E	2214.31@	1.73	0.75

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

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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)
9640.00	89.96	0.39	7578.80	94.00	2306.74	2307.30 N	67.76 E	2308.29@	1.68	0.33
9734.00	90.40	359.32	7578.51	94.00	2400.73	2401.29 N	67.53 E	2402.24@	1.61	1.23
9829.00	90.66	359.36	7577.63	95.00	2495.73	2496.28 N	66.43 E	2497.17@	1.52	0.28
9927.00	90.75	359.45	7576.42	98.00	2593.72	2594.27 N	65.41 E	2595.10@	1.44	0.13
10016.00	91.19	359.64	7574.92	89.00	2682.71	2683.26 N	64.71 E	2684.04@	1.38	0.54
10110.00	90.48	359.89	7573.55	94.00	2776.70	2777.24 N	64.32 E	2777.99@	1.33	0.80
10205.00	89.16	359.90	7573.84	95.00	2871.69	2872.24 N	64.15 E	2872.96@	1.28	1.39
10299.00	89.34	0.32	7575.07	94.00	2965.68	2966.23 N	64.33 E	2966.93@	1.24	0.49
10393.00	89.43	0.26	7576.08	94.00	3059.67	3060.23 N	64.80 E	3060.91@	1.21	0.12
10487.00	89.16	0.65	7577.24	94.00	3153.65	3154.22 N	65.55 E	3154.90@	1.19	0.50
10582.00	89.96	0.38	7577.97	95.00	3248.63	3249.21 N	66.40 E	3249.89@	1.17	0.89
10676.00	89.87	359.56	7578.11	94.00	3342.63	3343.21 N	66.36 E	3343.87@	1.14	0.88
10770.00	90.04	358.25	7578.18	94.00	3436.62	3437.19 N	64.56 E	3437.79@	1.08	1.41
10865.00	90.22	357.68	7577.97	95.00	3531.58	3532.13 N	61.19 E	3532.66@	0.99	0.63
10959.00	90.48	357.89	7577.39	94.00	3625.54	3626.06 N	57.55 E	3626.51@	0.91	0.36
11053.00	90.84	358.38	7576.31	94.00	3719.50	3720.00 N	54.49 E	3720.40@	0.84	0.65
11147.00	90.04	358.58	7575.59	94.00	3813.48	3813.96 N	52.00 E	3814.32@	0.78	0.88
11242.00	90.04	358.09	7575.52	95.00	3908.46	3908.92 N	49.24 E	3909.23@	0.72	0.52
11336.00	90.40	358.54	7575.16	94.00	4002.43	4002.88 N	46.48 E	4003.15@	0.67	0.61
11430.00	89.96	358.03	7574.87	94.00	4096.41	4096.84 N	43.66 E	4097.07@	0.61	0.72
11524.00	90.31	357.86	7574.64	94.00	4190.37	4190.78 N	40.29 E	4190.97@	0.55	0.41
11619.00	90.48	357.83	7573.99	95.00	4285.32	4285.71 N	36.72 E	4285.86@	0.49	0.18
11713.00	89.87	358.41	7573.70	94.00	4379.29	4379.65 N	33.64 E	4379.78@	0.44	0.90
11807.00	90.22	358.93	7573.63	94.00	4473.28	4473.63 N	31.45 E	4473.74@	0.40	0.67
11902.00	89.78	358.96	7573.63	95.00	4568.27	4568.61 N	29.71 E	4568.71@	0.37	0.46
11996.00	89.34	358.52	7574.35	94.00	4662.26	4662.59 N	27.64 E	4662.67@	0.34	0.66
12090.00	89.43	358.24	7575.36	94.00	4756.23	4756.54 N	24.98 E	4756.61@	0.30	0.31
12208.00	88.99	358.29	7576.99	118.00	4874.19	4874.48 N	21.41 E	4874.52@	0.25	0.38

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL		Closure		DLS
						Rectangular Offsets		Dist	Dir	
						(ft)	(ft)	(ft)	(deg)	(dg/100ft)
12303.00	88.81	358.17	7578.81	95.00	4969.15	4969.41 N	18.48 E	4969.45@	0.21	0.23
12397.00	89.25	357.27	7580.40	94.00	5063.08	5063.33 N	14.74 E	5063.35@	0.17	1.07
12491.00	90.84	356.89	7580.33	94.00	5156.99	5157.20 N	9.95 E	5157.21@	0.11	1.74
12585.00	91.19	356.76	7578.66	94.00	5250.87	5251.04 N	4.74 E	5251.04@	0.05	0.40
12679.00	90.75	357.02	7577.07	94.00	5344.75	5344.89 N	0.36 W	5344.89@	360.00	0.54
12773.00	89.69	356.89	7576.71	94.00	5438.65	5438.75 N	5.35 W	5438.76@	359.94	1.14
12868.00	90.48	358.06	7576.57	95.00	5533.58	5533.66 N	9.54 W	5533.67@	359.90	1.49
12962.00	90.48	358.71	7575.78	94.00	5627.56	5627.62 N	12.18 W	5627.63@	359.88	0.69
13057.00	90.13	359.59	7575.28	95.00	5722.55	5722.61 N	13.59 W	5722.62@	359.86	1.00
13152.00	90.22	358.98	7574.99	95.00	5817.55	5817.60 N	14.78 W	5817.62@	359.85	0.65
13245.00	89.96	357.76	7574.84	93.00	5910.53	5910.56 N	17.42 W	5910.58@	359.83	1.34
13340.00	91.28	356.84	7573.81	95.00	6005.44	6005.44 N	21.90 W	6005.48@	359.79	1.69
13434.00	90.84	356.94	7572.07	94.00	6099.32	6099.29 N	27.00 W	6099.35@	359.75	0.48
13529.00	90.22	357.22	7571.19	95.00	6194.23	6194.16 N	31.84 W	6194.24@	359.71	0.72
13622.00	90.13	356.48	7570.91	93.00	6287.12	6287.02 N	36.95 W	6287.13@	359.66	0.80
13716.00	90.92	356.88	7570.05	94.00	6381.00	6380.86 N	42.39 W	6381.00@	359.62	0.94
13811.00	90.66	357.14	7568.74	95.00	6475.89	6475.72 N	47.35 W	6475.89@	359.58	0.39
13860.00	90.31	357.11	7568.32	49.00	6524.84	6524.65 N	49.80 W	6524.84@	359.56	0.72
STRAIGHT LINE PROJECTION TO BIT @ 13912' MD.										
13912.00	90.31	357.11	7568.04	52.00	6576.80	6576.59 N	52.43 W	6576.80@	359.54	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.

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION

CHEVRON BOT #1H

EDDY COUNTY, NEW MEXICO

Rig: PATRIOT 5

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: G.SAKAS

R.PAGE

J. FULTON

Survey Calculations by RX4 using Minimum Curvature

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.14.42.0241 N LON: 104.0.50.7588 W

GRID Reference: NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 640032.2930 Y: 453013.5640

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.62° EAST TO GRID

Vertical Section Plane: 359.58

Survey Vert. Reference: 26.50' Rotary Table To Ground

Altitude: 2953.00' Ground To MSL

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 SURVEYS ARE MULTI SHOT GYRO SURVEYS.										
200.00	1.25	8.22	199.99	0.00	2.16	2.16 N	0.31 E	2.18@	8.23	0.00
400.00	1.50	10.31	399.93	200.00	6.89	6.89 N	1.09 E	6.98@	9.01	0.13
** TIE-IN TO MULTI SHOT GYRO SURVEY @ 600' MD.										
600.00	1.25	13.49	599.87	200.00	11.57	11.59 N	2.07 E	11.77@	10.13	0.13
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
656.00	0.88	24.09	655.86	56.00	12.56	12.58 N	2.39 E	12.80@	10.75	0.75
751.00	0.88	55.17	750.85	95.00	13.63	13.66 N	3.28 E	14.05@	13.52	0.50
844.00	0.79	57.20	843.84	93.00	14.38	14.41 N	4.41 E	15.07@	17.01	0.10
938.00	1.14	70.31	937.83	94.00	15.04	15.08 N	5.83 E	16.17@	21.15	0.44
1033.00	0.62	91.74	1032.82	95.00	15.33	15.38 N	7.24 E	17.00@	25.20	0.64
1127.00	0.97	84.66	1126.81	94.00	15.38	15.44 N	8.54 E	17.65@	28.94	0.39
1221.00	1.14	95.77	1220.79	94.00	15.35	15.42 N	10.26 E	18.52@	33.64	0.28
1315.00	1.41	83.66	1314.77	94.00	15.36	15.46 N	12.34 E	19.78@	38.61	0.41
1409.00	0.35	39.68	1408.76	94.00	15.70	15.80 N	13.67 E	20.90@	40.87	1.26
1504.00	0.35	22.93	1503.75	95.00	16.19	16.29 N	13.97 E	21.47@	40.61	0.11
1598.00	0.35	52.97	1597.75	94.00	16.63	16.73 N	14.31 E	22.02@	40.55	0.19
1693.00	0.26	158.11	1692.75	95.00	16.60	16.71 N	14.63 E	22.20@	41.20	0.51
1787.00	0.26	188.83	1786.75	94.00	16.19	16.30 N	14.67 E	21.93@	41.99	0.15
1881.00	0.53	198.67	1880.75	94.00	15.57	15.68 N	14.50 E	21.35@	42.77	0.30
1976.00	1.06	200.66	1975.74	95.00	14.33	14.44 N	14.05 E	20.15@	44.22	0.56
2070.00	0.62	187.27	2069.73	94.00	13.02	13.12 N	13.68 E	18.95@	46.20	0.51
2165.00	0.97	153.87	2164.72	95.00	11.78	11.89 N	13.97 E	18.34@	49.60	0.60
2259.00	1.49	142.43	2258.70	94.00	10.09	10.20 N	15.06 E	18.19@	55.89	0.61
2354.00	1.06	125.38	2353.67	95.00	8.60	8.72 N	16.53 E	18.69@	62.20	0.60
2448.00	1.06	203.98	2447.66	94.00	7.29	7.42 N	16.89 E	18.45@	66.29	1.43
2542.00	1.06	188.32	2541.65	94.00	5.64	5.76 N	16.41 E	17.39@	70.65	0.31

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

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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)
2636.00	0.35	209.24	2635.64	94.00	4.53	4.65 N	16.14 E	16.80@	73.92	0.79
2731.00	0.53	197.65	2730.64	95.00	3.86	3.98 N	15.87 E	16.36@	75.92	0.21
2825.00	0.44	198.74	2824.63	94.00	3.11	3.23 N	15.62 E	15.95@	78.33	0.10
2918.00	0.62	219.94	2917.63	93.00	2.39	2.50 N	15.18 E	15.39@	80.65	0.28
3013.00	0.53	235.72	3012.62	95.00	1.75	1.86 N	14.49 E	14.61@	82.69	0.19
3107.00	0.53	257.60	3106.62	94.00	1.42	1.52 N	13.71 E	13.79@	83.67	0.21
3201.00	0.44	257.73	3200.62	94.00	1.26	1.35 N	12.93 E	13.00@	84.03	0.10
3296.00	0.53	214.27	3295.61	95.00	0.82	0.91 N	12.32 E	12.36@	85.77	0.39
3360.00	0.62	254.41	3359.61	64.00	0.49	0.57 N	11.82 E	11.84@	87.23	0.63
3556.00	0.79	228.80	3555.60	196.00	-0.67	0.60 S	9.79 E	9.80@	93.52	0.18
3674.00	0.62	215.87	3673.59	118.00	-1.72	1.66 S	8.80 E	8.95@	100.65	0.20
3862.00	0.62	217.24	3861.58	188.00	-3.34	3.29 S	7.59 E	8.27@	113.43	0.01
4050.00	0.53	213.21	4049.57	188.00	-4.87	4.83 S	6.50 E	8.09@	126.61	0.05
4239.00	0.62	234.82	4238.56	189.00	-6.18	6.15 S	5.18 E	8.04@	139.87	0.12
4427.00	0.70	230.37	4426.54	188.00	-7.49	7.47 S	3.47 E	8.23@	155.09	0.05
4614.00	0.53	229.14	4613.53	187.00	-8.77	8.76 S	1.93 E	8.97@	167.56	0.09
4803.00	0.70	227.80	4802.52	189.00	-10.11	10.11 S	0.42 E	10.12@	177.64	0.09
4991.00	0.70	185.30	4990.51	188.00	-12.02	12.02 S	0.54 W	12.03@	182.58	0.27
5180.00	0.70	190.40	5179.50	189.00	-14.30	14.31 S	0.86 W	14.33@	183.42	0.03
5368.00	0.79	173.23	5367.48	188.00	-16.72	16.72 S	0.91 W	16.75@	183.12	0.13
5557.00	0.18	280.82	5556.47	189.00	-17.95	17.96 S	1.05 W	17.99@	183.34	0.46
5747.00	0.18	67.42	5746.47	190.00	-17.78	17.79 S	1.07 W	17.82@	183.43	0.18
5935.00	0.35	301.15	5934.47	188.00	-17.37	17.38 S	1.28 W	17.43@	184.23	0.25
6123.00	0.18	209.30	6122.47	188.00	-17.33	17.34 S	1.92 W	17.45@	186.32	0.21
6312.00	0.26	155.07	6311.47	189.00	-17.97	17.99 S	1.89 W	18.09@	185.98	0.11
6500.00	0.26	221.63	6499.47	188.00	-18.68	18.69 S	1.99 W	18.80@	186.07	0.15
6595.00	0.44	195.82	6594.47	95.00	-19.19	19.21 S	2.23 W	19.34@	186.63	0.25
6689.00	0.97	310.77	6688.46	94.00	-19.01	19.03 S	2.93 W	19.26@	188.76	1.30

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular (ft)	Offsets (ft)	Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
6783.00	0.97	308.75	6782.45	94.00	-17.99	18.02 S	4.16 W	18.49@	192.99	0.04
6876.00	0.70	344.82	6875.44	93.00	-16.94	16.98 S	4.92 W	17.67@	196.16	0.62
6909.00	0.70	354.18	6908.44	33.00	-16.54	16.58 S	4.99 W	17.32@	196.75	0.35
6952.00	1.06	8.36	6951.43	43.00	-15.89	15.93 S	4.96 W	16.68@	197.30	0.97
7004.00	2.29	6.22	7003.41	52.00	-14.38	14.42 S	4.78 W	15.19@	198.33	2.37
7035.00	5.72	2.81	7034.33	31.00	-12.22	12.26 S	4.63 W	13.10@	200.71	11.09
7067.00	10.20	2.63	7066.01	32.00	-7.80	7.83 S	4.43 W	9.00@	209.47	14.00
7098.00	14.25	3.38	7096.30	31.00	-1.25	1.28 S	4.08 W	4.27@	252.57	13.07
7130.00	17.67	5.66	7127.06	32.00	7.51	7.49 N	3.36 W	8.21@	335.81	10.86
7161.00	20.05	8.55	7156.40	31.00	17.44	17.43 N	2.11 W	17.55@	353.10	8.24
7193.00	21.72	8.34	7186.30	32.00	28.71	28.71 N	0.44 W	28.71@	359.13	5.22
7224.00	23.13	5.29	7214.95	31.00	40.44	40.45 N	0.96 E	40.46@	1.36	5.90
7255.00	25.15	2.51	7243.24	31.00	53.08	53.09 N	1.81 E	53.13@	1.95	7.48
7287.00	27.87	1.08	7271.87	32.00	67.35	67.37 N	2.25 E	67.41@	1.91	8.73
7318.00	30.86	1.08	7298.89	31.00	82.55	82.57 N	2.53 E	82.61@	1.76	9.65
7349.00	34.21	2.14	7325.02	31.00	99.20	99.23 N	3.01 E	99.27@	1.74	10.96
7381.00	37.72	3.96	7350.92	32.00	117.96	117.99 N	4.02 E	118.06@	1.95	11.46
7412.00	41.06	4.78	7374.87	31.00	137.56	137.60 N	5.52 E	137.71@	2.30	10.90
7443.00	44.23	5.31	7397.67	31.00	158.46	158.52 N	7.37 E	158.69@	2.66	10.29
7474.00	46.96	5.56	7419.36	31.00	180.49	180.56 N	9.47 E	180.81@	3.00	8.83
7506.00	50.39	5.31	7440.49	32.00	204.39	204.48 N	11.75 E	204.82@	3.29	10.73
7537.00	54.26	5.64	7459.43	31.00	228.79	228.90 N	14.09 E	229.34@	3.52	12.51
7569.00	58.04	5.78	7477.25	32.00	255.21	255.34 N	16.73 E	255.89@	3.75	11.82
7600.00	60.94	6.30	7492.99	31.00	281.75	281.90 N	19.55 E	282.57@	3.97	9.47
7631.00	63.40	6.37	7507.46	31.00	308.97	309.14 N	22.57 E	309.97@	4.18	7.94
7663.00	65.60	6.29	7521.23	32.00	337.65	337.85 N	25.75 E	338.83@	4.36	6.88
7694.00	69.56	5.21	7533.06	31.00	366.13	366.35 N	28.62 E	367.47@	4.47	13.17
7726.00	73.69	3.77	7543.14	32.00	396.38	396.62 N	30.99 E	397.83@	4.47	13.59

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

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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)
7757.00	76.50	1.78	7551.12	31.00	426.29	426.54 N	32.44 E	427.77@	4.35	10.98
7788.00	78.96	1.70	7557.70	31.00	456.56	456.82 N	33.36 E	458.03@	4.18	7.94
7820.00	81.60	1.16	7563.10	32.00	488.08	488.34 N	34.15 E	489.54@	4.00	8.42
7851.00	83.80	1.44	7567.04	31.00	518.81	519.08 N	34.84 E	520.25@	3.84	7.15
7882.00	86.09	0.69	7569.78	31.00	549.68	549.95 N	35.42 E	551.09@	3.68	7.77
7914.00	86.88	0.34	7571.74	32.00	581.62	581.89 N	35.70 E	582.99@	3.51	2.70
7945.00	88.72	0.47	7572.93	31.00	612.59	612.87 N	35.92 E	613.92@	3.35	5.95
7976.00	90.75	0.85	7573.07	31.00	643.58	643.86 N	36.28 E	644.88@	3.23	6.66
8039.00	90.84	2.01	7572.20	63.00	706.54	706.84 N	37.85 E	707.85@	3.07	1.85
8133.00	88.37	2.59	7572.84	94.00	800.42	800.75 N	41.62 E	801.83@	2.98	2.70
8228.00	88.20	2.85	7575.69	95.00	895.24	895.60 N	46.13 E	896.79@	2.95	0.33
8322.00	88.55	0.92	7578.35	94.00	989.12	989.51 N	49.22 E	990.73@	2.85	2.09
8416.00	90.40	0.87	7579.22	94.00	1083.09	1083.49 N	50.69 E	1084.67@	2.68	1.97
8510.00	89.69	1.07	7579.14	94.00	1177.06	1177.47 N	52.28 E	1178.63@	2.54	0.78
8573.00	90.57	0.89	7579.00	63.00	1240.04	1240.46 N	53.36 E	1241.61@	2.46	1.43
8604.00	90.84	1.15	7578.62	31.00	1271.03	1271.46 N	53.91 E	1272.60@	2.43	1.21
8667.00	91.28	1.14	7577.45	63.00	1333.99	1334.43 N	55.17 E	1335.57@	2.37	0.70
8698.00	91.28	1.23	7576.76	31.00	1364.97	1365.42 N	55.81 E	1366.56@	2.34	0.29
8761.00	90.40	0.32	7575.83	63.00	1427.95	1428.41 N	56.66 E	1429.53@	2.27	2.01
8792.00	90.40	0.98	7575.62	31.00	1458.95	1459.40 N	57.01 E	1460.52@	2.24	2.13
8886.00	90.84	1.03	7574.60	94.00	1552.91	1553.38 N	58.66 E	1554.49@	2.16	0.47
8980.00	89.52	0.03	7574.31	94.00	1646.89	1647.37 N	59.53 E	1648.45@	2.07	1.76
9074.00	89.60	0.63	7575.03	94.00	1740.88	1741.37 N	60.07 E	1742.41@	1.98	0.64
9168.00	89.43	0.41	7575.82	94.00	1834.87	1835.36 N	60.93 E	1836.37@	1.90	0.30
9263.00	89.60	0.84	7576.63	95.00	1929.85	1930.35 N	61.96 E	1931.35@	1.84	0.49
9357.00	89.60	1.17	7577.28	94.00	2023.82	2024.34 N	63.61 E	2025.34@	1.80	0.35
9452.00	89.34	1.04	7578.16	95.00	2118.78	2119.31 N	65.44 E	2120.32@	1.77	0.31
9546.00	89.96	0.70	7578.74	94.00	2212.75	2213.30 N	66.87 E	2214.31@	1.73	0.75

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG:PATRIOT 5

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular (ft)	Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
9640.00	89.96	0.39	7578.80	94.00	2306.74	2307.30 N	67.76 E	2308.29@ 1.68	0.33
9734.00	90.40	359.32	7578.51	94.00	2400.73	2401.29 N	67.53 E	2402.24@ 1.61	1.23
9829.00	90.66	359.36	7577.63	95.00	2495.73	2496.28 N	66.43 E	2497.17@ 1.52	0.28
9927.00	90.75	359.45	7576.42	98.00	2593.72	2594.27 N	65.41 E	2595.10@ 1.44	0.13
10016.00	91.19	359.64	7574.92	89.00	2682.71	2683.26 N	64.71 E	2684.04@ 1.38	0.54
10110.00	90.48	359.89	7573.55	94.00	2776.70	2777.24 N	64.32 E	2777.99@ 1.33	0.80
10205.00	89.16	359.90	7573.84	95.00	2871.69	2872.24 N	64.15 E	2872.96@ 1.28	1.39
10299.00	89.34	0.32	7575.07	94.00	2965.68	2966.23 N	64.33 E	2966.93@ 1.24	0.49
10393.00	89.43	0.26	7576.08	94.00	3059.67	3060.23 N	64.80 E	3060.91@ 1.21	0.12
10487.00	89.16	0.65	7577.24	94.00	3153.65	3154.22 N	65.55 E	3154.90@ 1.19	0.50
10582.00	89.96	0.38	7577.97	95.00	3248.63	3249.21 N	66.40 E	3249.89@ 1.17	0.89
10676.00	89.87	359.56	7578.11	94.00	3342.63	3343.21 N	66.36 E	3343.87@ 1.14	0.88
10770.00	90.04	358.25	7578.18	94.00	3436.62	3437.19 N	64.56 E	3437.79@ 1.08	1.41
10865.00	90.22	357.68	7577.97	95.00	3531.58	3532.13 N	61.19 E	3532.66@ 0.99	0.63
10959.00	90.48	357.89	7577.39	94.00	3625.54	3626.06 N	57.55 E	3626.51@ 0.91	0.36
11053.00	90.84	358.38	7576.31	94.00	3719.50	3720.00 N	54.49 E	3720.40@ 0.84	0.65
11147.00	90.04	358.58	7575.59	94.00	3813.48	3813.96 N	52.00 E	3814.32@ 0.78	0.88
11242.00	90.04	358.09	7575.52	95.00	3908.46	3908.92 N	49.24 E	3909.23@ 0.72	0.52
11336.00	90.40	358.54	7575.16	94.00	4002.43	4002.88 N	46.48 E	4003.15@ 0.67	0.61
11430.00	89.96	358.03	7574.87	94.00	4096.41	4096.84 N	43.66 E	4097.07@ 0.61	0.72
11524.00	90.31	357.86	7574.64	94.00	4190.37	4190.78 N	40.29 E	4190.97@ 0.55	0.41
11619.00	90.48	357.83	7573.99	95.00	4285.32	4285.71 N	36.72 E	4285.86@ 0.49	0.18
11713.00	89.87	358.41	7573.70	94.00	4379.29	4379.65 N	33.64 E	4379.78@ 0.44	0.90
11807.00	90.22	358.93	7573.63	94.00	4473.28	4473.63 N	31.45 E	4473.74@ 0.40	0.67
11902.00	89.78	358.96	7573.63	95.00	4568.27	4568.61 N	29.71 E	4568.71@ 0.37	0.46
11996.00	89.34	358.52	7574.35	94.00	4662.26	4662.59 N	27.64 E	4662.67@ 0.34	0.66
12090.00	89.43	358.24	7575.36	94.00	4756.23	4756.54 N	24.98 E	4756.61@ 0.30	0.31
12208.00	88.99	358.29	7576.99	118.00	4874.19	4874.48 N	21.41 E	4874.52@ 0.25	0.38

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT 5

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL		Closure		DLS (dg/100ft)
						Rectangular Offsets (ft)	(ft)	Dist (ft)	Dir (deg)	
12303.00	88.81	358.17	7578.81	95.00	4969.15	4969.41 N	18.48 E	4969.45@	0.21	0.23
12397.00	89.25	357.27	7580.40	94.00	5063.08	5063.33 N	14.74 E	5063.35@	0.17	1.07
12491.00	90.84	356.89	7580.33	94.00	5156.99	5157.20 N	9.95 E	5157.21@	0.11	1.74
12585.00	91.19	356.76	7578.66	94.00	5250.87	5251.04 N	4.74 E	5251.04@	0.05	0.40
12679.00	90.75	357.02	7577.07	94.00	5344.75	5344.89 N	0.36 W	5344.89@	360.00	0.54
12773.00	89.69	356.89	7576.71	94.00	5438.65	5438.75 N	5.35 W	5438.76@	359.94	1.14
12868.00	90.48	358.06	7576.57	95.00	5533.58	5533.66 N	9.54 W	5533.67@	359.90	1.49
12962.00	90.48	358.71	7575.78	94.00	5627.56	5627.62 N	12.18 W	5627.63@	359.88	0.69
13057.00	90.13	359.59	7575.28	95.00	5722.55	5722.61 N	13.59 W	5722.62@	359.86	1.00
13152.00	90.22	358.98	7574.99	95.00	5817.55	5817.60 N	14.78 W	5817.62@	359.85	0.65
13245.00	89.96	357.76	7574.84	93.00	5910.53	5910.56 N	17.42 W	5910.58@	359.83	1.34
13340.00	91.28	356.84	7573.81	95.00	6005.44	6005.44 N	21.90 W	6005.48@	359.79	1.69
13434.00	90.84	356.94	7572.07	94.00	6099.32	6099.29 N	27.00 W	6099.35@	359.75	0.48
13529.00	90.22	357.22	7571.19	95.00	6194.23	6194.16 N	31.84 W	6194.24@	359.71	0.72
13622.00	90.13	356.48	7570.91	93.00	6287.12	6287.02 N	36.95 W	6287.13@	359.66	0.80
13716.00	90.92	356.88	7570.05	94.00	6381.00	6380.86 N	42.39 W	6381.00@	359.62	0.94
13811.00	90.66	357.14	7568.74	95.00	6475.89	6475.72 N	47.35 W	6475.89@	359.58	0.39
13860.00	90.31	357.11	7568.32	49.00	6524.84	6524.65 N	49.80 W	6524.84@	359.56	0.72
STRAIGHT LINE PROJECTION TO BIT @ 13912' MD.										
13912.00	90.31	357.11	7568.04	52.00	6576.80	6576.59 N	52.43 W	6576.80@	359.54	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 CORPORATION		
LEASE / WELL No.:	CHEVRON "BOT"	1H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NEW MEXICO	USA
RIG:	PATRIOT 5		
API WELL No:	30-015-37462		
JOB No:	700002479 WT-WT		
P O. / AFE No.	09-383-0		
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.65	LWD Calculated:	7.62
		Agreed Upon:	7.62
X =	640032 293000	Feet	Y = 453013.564
			Feet
SITE LATITUDE:	32.245007	SITE LONGITUDE:	104.0141
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	359.27		
KELLY BUSHING ELEVATION:	26.5		
ALTITUDE:	2953	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	600		
DRIFT ANGLE:	1.25		
DRIFT DIRECTION:	13.49		
TRUE VERTICAL DEPTH:	599.87		
VERTICAL SECTION:	11.57		
RECTANGULAR COORDINATE (N / S) :	11.59 N		
RECTANGULAR COORDINATE (E / W) :	2.07 E		
CLOSURE DISTANCE / DIRECTION:	11.77	10.13	
SURVEY CALCULATION METHOD:	AA ☐ MC ☒ RC ☐ BT ☐		
SOURCE OF TIE-IN DATA (COMPANY):	Multi shot . Gyro .		
COPY OF TIE-IN SURVEY REPORT	☒ YES		☐ NO

WELL PLAN

KICKOFF DEPTH:	7002	TOTAL DEPTH:	13941.67
KICKOFF ANGLE:	0	MAX ANGLE:	90

PES Engineers:

GEORGE SAKAS

RICHARD PAGE

**Signature of both field engineers required if applicable

Directional Driller: IRBY LEJEUNE

DATE: 17-Jun-2011

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations



YATES PETROLEUM, INC.
CHEVRON BOT #1H
EDDY COUNTY, NM
Rig: PATRIOT 5

Mon Jun 13 15:15:14 2011

Coordinates

Latitude: 32.245007 N (32 deg. 14 min. 42.0241 sec.)
Longitude: 104.014100 W (-104 deg. 0 min. 50.7588 sec.)
Elevation: 2979.50 feet.
Calculation Date: Jun/13/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.1294 degrees
Total Magnetic Field: 0.48583 gauss
Magnetic Declination: 7.790233 degrees
Horizontal Intensity: 0.241965 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.790233 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 640032.2930 feet
Y: 453013.5640 feet
True to Grid: (convergence) -0.170325 degrees
Magnetic to Grid: 7.619908 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.619908 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Field
Calculation

YATES PETROLEUM CORPORATION
CHEVRON BOT #1H
EDDY COUNTY
Rig: PATRIOT 5

Fri Jun 17 14:10:27 2011

Coordinates

Latitude: 32.245007 N (32 deg. 14 min. 42.0241 sec.)
Longitude: 104.014100 W (-104 deg. 0 min. 50.7588 sec.)
Elevation: 2979.50 feet.
Calculation Date: Jun/17/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.1291 degrees
Total Magnetic Field: 0.48582 gauss
Magnetic Declination: 7.788902 degrees
Horizontal Intensity: 0.241961 gauss

To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.788902 Degr.

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 640032.2930 feet
Y: 453013.5640 feet
True to Grid: (convergence) -0.170325 degrees
Magnetic to Grid: 7.618576 degrees

To Convert a Magnetic Dir. to a GRID dir. Add 7.618576 Degr.