

For your records

PATHFINDER[®]

A Schlumberger Company

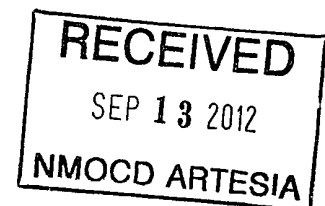
DIRECTIONAL SURVEY REPORT

30-015-38170

YATES PETROLEUM

QUAIL 'BQL' STATE COM #1H ST1

EDDY COUNTY, NEW MEXICO



PREPARED BY: MARCUS MITCHAM

Pathfinder

6213 WCR 112
Midland, Texas 79706-3725, USA
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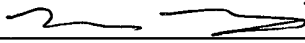


DIRECTIONAL SURVEY COMPANY REPORT:

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: 5/25/12 TO 6/07/12
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
QUAIL 'BQL' STATE COM #1H ST1
EDDY COUNTY, NM
RIG: PATRIOT 5
9. SURVEY CERTIFIED FROM: 1,320 TO 14,002 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4,636.22 FEET ON A BEARING OF 359.25 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 14,156 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



MARCUS MITCHAM
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 05/11/2012
Date Completed: 06/07/2012

YATES PETROLEUM CORPORATION
QUAIL BQL STATE COM #1H,ST1
EDDY COUNTY, N.M.

Rig:PATRIOT 5

PathFinder Office Supervisor: JUAN ALCOCER

PathFinder Field Engineers:G.SAKAS

C. Bundick

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.3.55.7875 N LON:103.50.55.1423 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 691477.2360 Y: 387902.3440
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.33° EAST TO GRID
Vertical Section Plane: 359.67
Survey Vert. Reference: 26.50' Kelly Bushing To Ground
Altitude:3220.00' Ground To MSL

Measured Depth	14156.00	(feet)
Inclination	91.10	(deg)
Azimuth	359.33	(deg)
True Vertical Depth	9721.82	(feet)
Vertical Section	4636.10	(feet)
Survey X cord	691416.57	(feet)
Survey Y cord	392538.16	(feet)
Survey Lat	32.07824055 N	(deg)
Survey Lon	103.84877927 W	(deg)
Rectangular Corr. N/S	4635.82 N	(feet)
Rectangular Corr. E/W	60.64 W	(feet)
Closure Distance	4636.22	(feet)
Direction of Closure	359.25	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION

QUAIL BQL STATE COM #1H,ST1

EDDY COUNTY, N.M.

Rig:PATRIOT 5

PathFinder Office Supervisor: JUAN ALCOCER

PathFinder Field Engineers: G.SAKAS

C. Bundick

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.55.7875 N LON:103.50.55.1423 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 691477.2360 Y: 387902.3440

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.33° EAST TO GRID

Vertical Section Plane: 359.67

Survey Vert. Reference: 26.50' Kelly Bushing To Ground

Altitude:3220.00' 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 INTO MULTI SHOT GYRO SURVEY AT 1200'MD.										
1200.00	1.69	182.20	1199.84	0.00	-9.76	9.70 S	10.15 E	14.04@	133.70	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
1320.00	1.93	182.01	1319.78	120.00	-13.55	13.49 S	10.01 E	16.80@	143.42	0.20
1415.00	1.32	184.30	1414.74	95.00	-16.23	16.18 S	9.87 E	18.95@	148.60	0.65
1508.00	0.53	170.64	1507.73	93.00	-17.73	17.67 S	9.86 E	20.24@	150.83	0.88
1603.00	0.62	222.86	1602.72	95.00	-18.54	18.48 S	9.58 E	20.82@	152.59	0.54
1698.00	0.62	212.73	1697.72	95.00	-19.34	19.29 S	8.96 E	21.27@	155.09	0.12
1793.00	0.88	205.83	1792.71	95.00	-20.43	20.38 S	8.36 E	22.03@	157.69	0.29
1887.00	1.23	221.23	1886.69	94.00	-21.83	21.79 S	7.38 E	23.00@	161.28	0.48
1982.00	0.88	254.83	1981.68	95.00	-22.78	22.74 S	6.01 E	23.52@	165.21	0.73
2077.00	1.06	265.70	2076.67	95.00	-23.03	23.00 S	4.43 E	23.42@	169.11	0.27
2171.00	0.70	321.57	2170.66	94.00	-22.64	22.62 S	3.20 E	22.84@	171.94	0.94
2265.00	0.79	304.31	2264.65	94.00	-21.81	21.80 S	2.31 E	21.92@	173.95	0.26
2360.00	1.06	308.01	2359.64	95.00	-20.90	20.89 S	1.08 E	20.92@	177.05	0.29
2453.00	0.97	343.27	2452.62	93.00	-19.61	19.61 S	0.17 E	19.61@	179.50	0.67
2546.00	0.88	341.68	2545.61	93.00	-18.17	18.18 S	0.28 W	18.18@	180.88	0.10
2641.00	0.70	350.02	2640.60	95.00	-16.91	16.91 S	0.61 W	16.92@	182.06	0.22
2735.00	0.79	346.12	2734.59	94.00	-15.71	15.72 S	0.86 W	15.74@	183.15	0.11
2829.00	0.79	339.49	2828.58	94.00	-14.47	14.48 S	1.25 W	14.54@	184.92	0.10
2924.00	0.70	333.81	2923.58	95.00	-13.34	13.35 S	1.73 W	13.46@	187.40	0.12
3017.00	1.06	45.09	3016.57	93.00	-12.22	12.23 S	1.37 W	12.31@	186.41	1.15
3113.00	1.23	43.95	3112.55	96.00	-10.86	10.86 S	0.03 W	10.86@	180.16	0.18
3207.00	1.06	55.90	3206.53	94.00	-9.66	9.65 S	1.39 E	9.75@	171.80	0.31

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
QUAIL BQL STATE COM #1H,ST1
EDDY COUNTY, N.M.
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)
3302.00	0.26	55.90	3301.52	95.00	-9.05	9.03 S	2.30 E	9.32@	165.74	0.84
3395.00	0.18	292.53	3394.52	93.00	-8.87	8.86 S	2.34 E	9.16@	165.23	0.42
3490.00	0.79	132.89	3489.52	95.00	-9.26	9.25 S	2.68 E	9.63@	163.85	1.01
3585.00	1.76	142.26	3584.50	95.00	-10.87	10.85 S	4.05 E	11.58@	159.52	1.04
3679.00	0.53	123.99	3678.47	94.00	-12.26	12.23 S	5.29 E	13.33@	156.59	1.35
3773.00	0.35	128.69	3772.47	94.00	-12.69	12.66 S	5.88 E	13.95@	155.08	0.20
3952.00	0.62	135.61	3951.47	179.00	-13.73	13.69 S	6.98 E	15.37@	152.97	0.15
4047.00	0.53	109.09	4046.46	95.00	-14.24	14.20 S	7.76 E	16.18@	151.35	0.29
4141.00	0.44	113.48	4140.46	94.00	-14.53	14.49 S	8.50 E	16.80@	149.60	0.10
4235.00	0.62	123.49	4234.45	94.00	-14.96	14.91 S	9.26 E	17.55@	148.17	0.21
4424.00	0.35	351.96	4423.45	189.00	-14.96	14.90 S	10.03 E	17.96@	146.06	0.47
4613.00	0.53	359.62	4612.44	189.00	-13.51	13.46 S	9.94 E	16.73@	143.55	0.10
4803.00	0.44	348.78	4802.44	190.00	-11.92	11.86 S	9.79 E	15.38@	140.46	0.07
4991.00	0.53	351.27	4990.43	188.00	-10.35	10.30 S	9.52 E	14.02@	137.24	0.05
5180.00	0.35	338.87	5179.42	189.00	-8.95	8.89 S	9.18 E	12.78@	134.09	0.11
5368.00	0.35	16.27	5367.42	188.00	-7.86	7.81 S	9.13 E	12.02@	130.52	0.12
5556.00	0.26	302.53	5555.42	188.00	-7.08	7.03 S	8.94 E	11.37@	128.18	0.20
5744.00	0.18	296.89	5743.42	188.00	-6.71	6.66 S	8.31 E	10.65@	128.71	0.04
5933.00	0.18	161.94	5932.42	189.00	-6.86	6.81 S	8.14 E	10.61@	129.92	0.18
6121.00	0.26	236.40	6120.42	188.00	-7.37	7.33 S	7.88 E	10.76@	132.93	0.14
6309.00	0.44	179.06	6308.41	188.00	-8.33	8.29 S	7.53 E	11.20@	137.73	0.20
6497.00	0.62	210.56	6496.41	188.00	-9.92	9.88 S	7.03 E	12.13@	144.59	0.18
6686.00	0.35	252.51	6685.40	189.00	-10.97	10.94 S	5.96 E	12.45@	151.43	0.23
6875.00	0.35	177.40	6874.40	189.00	-11.72	11.69 S	5.43 E	12.89@	155.07	0.23
7063.00	0.94	189.38	7062.38	188.00	-13.81	13.78 S	5.21 E	14.73@	159.30	0.32
7157.00	1.08	196.09	7156.37	94.00	-15.42	15.39 S	4.84 E	16.14@	162.56	0.20
7251.00	2.11	233.22	7250.33	94.00	-17.30	17.28 S	3.20 E	17.58@	169.50	1.50

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
QUAIL BQL STATE COM #1H,ST1
EDDY COUNTY, N.M.
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)
7346.00	0.79	263.24	7345.30	95.00	-18.41	18.41 S	1.15 E	18.44@	176.42	1.56
7440.00	0.70	321.46	7439.30	94.00	-18.03	18.03 S	0.15 E	18.03@	179.52	0.78
7534.00	1.49	306.43	7533.28	94.00	-16.85	16.86 S	1.19 W	16.90@	184.04	0.89
7629.00	2.02	317.46	7628.23	95.00	-14.87	14.89 S	3.32 W	15.26@	192.55	0.66
7723.00	2.02	337.88	7722.18	94.00	-12.11	12.14 S	5.06 W	13.15@	202.63	0.76
7817.00	1.85	310.99	7816.12	94.00	-9.57	9.61 S	6.83 W	11.79@	215.41	0.97
7912.00	1.93	322.37	7911.07	95.00	-7.28	7.33 S	8.96 W	11.58@	230.71	0.40
8006.00	1.93	325.11	8005.02	94.00	-4.72	4.78 S	10.83 W	11.84@	246.19	0.10
8100.00	1.76	270.36	8098.98	94.00	-3.40	3.47 S	13.18 W	13.63@	255.24	1.81
8195.00	0.53	328.89	8193.96	95.00	-3.00	3.09 S	14.87 W	15.19@	258.27	1.63
8289.00	0.79	280.14	8287.95	94.00	-2.51	2.60 S	15.73 W	15.95@	260.61	0.63
8384.00	0.70	341.49	8382.95	95.00	-1.84	1.94 S	16.56 W	16.67@	263.33	0.81
8479.00	1.76	80.11	8477.93	95.00	-1.05	1.13 S	15.31 W	15.35@	265.76	2.09
8573.00	0.62	63.70	8571.91	94.00	-0.58	0.66 S	13.43 W	13.45@	267.18	1.25
8668.00	0.18	264.83	8666.91	95.00	-0.37	0.45 S	13.12 W	13.13@	268.05	0.83
8762.00	0.26	240.48	8760.91	94.00	-0.49	0.57 S	13.45 W	13.46@	267.59	0.13
8857.00	0.26	229.02	8855.91	95.00	-0.73	0.81 S	13.80 W	13.82@	266.63	0.05
8952.00	0.53	221.21	8950.90	95.00	-1.20	1.29 S	14.25 W	14.31@	264.85	0.29
9046.00	0.26	189.84	9044.90	94.00	-1.74	1.82 S	14.58 W	14.69@	262.87	0.36
9141.00	0.70	183.55	9139.90	95.00	-2.53	2.61 S	14.65 W	14.88@	259.88	0.47
STOI DEPART ORIGINAL WELLBORE AT 9235'MD.										
9235.00	1.58	205.00	9233.88	94.00	-4.27	4.36 S	15.23 W	15.84@	254.02	1.03
9274.00	5.63	347.56	9272.82	39.00	-2.89	2.98 S	15.87 W	16.15@	259.37	17.82
9306.00	11.17	352.29	9304.47	32.00	1.72	1.63 N	16.63 W	16.71@	275.60	17.43
9337.00	16.18	355.49	9334.58	31.00	9.01	8.91 N	17.37 W	19.52@	297.17	16.34
9369.00	20.49	358.22	9364.95	32.00	19.07	18.96 N	17.89 W	26.07@	316.66	13.73
9401.00	24.27	0.02	9394.54	32.00	31.25	31.14 N	18.07 W	36.00@	329.88	12.00

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
QUAIL BQL STATE COM #1H,ST1
EDDY COUNTY, N.M.
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)
9432.00	27.44	0.76	9422.43	31.00	44.76	44.66 N	17.97 W	48.14@	338.08	10.28
9464.00	29.90	0.99	9450.50	32.00	60.11	60.01 N	17.73 W	62.57@	343.54	7.69
9495.00	32.01	1.74	9477.09	31.00	76.05	75.95 N	17.35 W	77.90@	347.13	6.92
9527.00	33.77	2.10	9503.96	32.00	93.41	93.31 N	16.77 W	94.81@	349.81	5.53
9559.00	36.49	2.02	9530.13	32.00	111.80	111.71 N	16.11 W	112.87@	351.80	8.50
9590.00	39.92	1.56	9554.48	31.00	130.96	130.87 N	15.51 W	131.79@	353.24	11.10
9622.00	43.18	0.72	9578.43	32.00	152.18	152.09 N	15.09 W	152.84@	354.33	10.34
9653.00	45.73	0.06	9600.55	31.00	173.88	173.80 N	14.95 W	174.44@	355.08	8.36
9685.00	48.01	359.33	9622.43	32.00	197.24	197.15 N	15.07 W	197.73@	355.63	7.32
9716.00	51.70	358.31	9642.41	31.00	220.92	220.84 N	15.57 W	221.39@	355.97	12.17
9748.00	55.31	358.20	9661.44	32.00	246.64	246.55 N	16.35 W	247.09@	356.21	11.29
9779.00	59.27	358.51	9678.19	31.00	272.71	272.62 N	17.10 W	273.15@	356.41	12.80
9810.00	63.84	358.69	9692.95	31.00	299.95	299.86 N	17.76 W	300.38@	356.61	14.75
9842.00	66.83	359.15	9706.30	32.00	329.03	328.93 N	18.31 W	329.44@	356.81	9.43
9873.00	70.52	359.52	9717.57	31.00	357.90	357.80 N	18.64 W	358.29@	357.02	11.96
9905.00	73.51	359.74	9727.45	32.00	388.33	388.23 N	18.84 W	388.69@	357.22	9.37
9937.00	76.50	359.81	9735.73	32.00	419.24	419.14 N	18.96 W	419.57@	357.41	9.35
9968.00	80.28	359.86	9741.97	31.00	449.60	449.50 N	19.05 W	449.90@	357.57	12.19
10006.00	86.53	358.45	9746.33	38.00	487.33	487.22 N	19.61 W	487.62@	357.70	16.85
10037.00	89.25	357.71	9747.47	31.00	518.29	518.18 N	20.65 W	518.59@	357.72	9.09
10068.00	90.04	358.10	9747.67	31.00	549.28	549.16 N	21.78 W	549.59@	357.73	2.84
10132.00	91.10	358.76	9747.03	64.00	613.26	613.13 N	23.53 W	613.58@	357.80	1.95
10227.00	91.28	358.98	9745.06	95.00	708.23	708.09 N	25.41 W	708.55@	357.95	0.30
10321.00	88.20	358.17	9745.48	94.00	802.20	802.05 N	27.74 W	802.53@	358.02	3.39
10416.00	89.69	358.34	9747.23	95.00	897.15	896.99 N	30.64 W	897.51@	358.04	1.58
10510.00	90.40	0.10	9747.16	94.00	991.14	990.98 N	31.91 W	991.49@	358.16	2.02
10604.00	90.31	359.78	9746.58	94.00	1085.14	1084.97 N	32.01 W	1085.45@	358.31	0.35

PathFinder Energy Services, Inc.

Survey Report

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QUAIL BQL STATE COM #1H,ST1
EDDY COUNTY, N.M.
RIG:PATRIOT 5

Page 05/06

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)
10698.00	89.87	0.54	9746.43	94.00	1179.14	1178.97 N	31.75 W	1179.40@	358.46	0.93
10793.00	91.28	2.15	9745.48	95.00	1274.08	1273.93 N	29.52 W	1274.28@	358.67	2.25
10887.00	89.25	1.26	9745.04	94.00	1368.02	1367.89 N	26.72 W	1368.15@	358.88	2.36
10982.00	90.04	359.88	9745.63	95.00	1463.00	1462.88 N	25.78 W	1463.10@	358.99	1.67
11077.00	89.60	358.23	9745.93	95.00	1557.99	1557.86 N	27.35 W	1558.10@	358.99	1.80
11171.00	89.25	357.98	9746.87	94.00	1651.95	1651.80 N	30.45 W	1652.08@	358.94	0.46
11266.00	88.99	357.55	9748.33	95.00	1746.89	1746.72 N	34.16 W	1747.05@	358.88	0.53
11360.00	89.78	357.33	9749.34	94.00	1840.81	1840.62 N	38.36 W	1841.02@	358.81	0.87
11454.00	89.96	358.70	9749.55	94.00	1934.77	1934.56 N	41.61 W	1935.01@	358.77	1.47
11549.00	90.22	358.60	9749.40	95.00	2029.75	2029.53 N	43.85 W	2030.01@	358.76	0.29
11642.00	90.04	359.25	9749.19	93.00	2122.75	2122.52 N	45.60 W	2123.01@	358.77	0.72
11736.00	90.57	359.37	9748.69	94.00	2216.74	2216.51 N	46.73 W	2217.00@	358.79	0.58
11831.00	90.75	359.95	9747.60	95.00	2311.73	2311.50 N	47.29 W	2311.98@	358.83	0.64
11925.00	91.10	0.24	9746.08	94.00	2405.72	2405.49 N	47.14 W	2405.95@	358.88	0.48
12020.00	91.36	1.03	9744.04	95.00	2500.68	2500.46 N	46.08 W	2500.88@	358.94	0.87
12114.00	89.69	0.70	9743.18	94.00	2594.66	2594.44 N	44.66 W	2594.83@	359.01	1.81
12209.00	90.13	359.87	9743.33	95.00	2689.65	2689.44 N	44.19 W	2689.80@	359.06	0.99
12304.00	90.31	359.40	9742.96	95.00	2784.65	2784.44 N	44.80 W	2784.80@	359.08	0.53
12399.00	91.01	0.93	9741.87	95.00	2879.63	2879.43 N	44.52 W	2879.77@	359.11	1.77
12494.00	89.60	1.12	9741.36	95.00	2974.60	2974.41 N	42.82 W	2974.72@	359.18	1.50
12587.00	89.25	1.29	9742.30	93.00	3067.57	3067.38 N	40.87 W	3067.65@	359.24	0.42
12682.00	89.34	1.21	9743.47	95.00	3162.52	3162.35 N	38.80 W	3162.59@	359.30	0.13
12777.00	90.48	0.26	9743.61	95.00	3257.50	3257.34 N	37.58 W	3257.56@	359.34	1.56
12871.00	89.52	359.55	9743.61	94.00	3351.50	3351.34 N	37.73 W	3351.55@	359.35	1.27
12964.00	89.78	358.57	9744.18	93.00	3444.49	3444.32 N	39.26 W	3444.55@	359.35	1.09
13059.00	90.31	358.42	9744.11	95.00	3539.47	3539.29 N	41.75 W	3539.54@	359.32	0.58
13153.00	90.75	358.09	9743.24	94.00	3633.44	3633.24 N	44.62 W	3633.52@	359.30	0.59

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
QUAIL BQL STATE COM #1H,ST1
EDDY COUNTY, N.M.
RIG:PATRIOT 5

Page 06/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS (dg/100ft)
						(ft)	(ft)	(ft)	(deg)	
13247.00	91.45	358.90	9741.43	94.00	3727.40	3727.19 N	47.09 W	3727.49@	359.28	1.14
13341.00	91.28	358.14	9739.19	94.00	3821.35	3821.13 N	49.51 W	3821.45@	359.26	0.83
13435.00	91.54	358.81	9736.88	94.00	3915.31	3915.07 N	52.01 W	3915.42@	359.24	0.76
13529.00	92.51	359.74	9733.56	94.00	4009.24	4009.00 N	53.20 W	4009.36@	359.24	1.43
13624.00	91.45	358.80	9730.28	95.00	4104.18	4103.94 N	54.41 W	4104.30@	359.24	1.49
13719.00	90.66	359.29	9728.53	95.00	4199.16	4198.91 N	56.00 W	4199.28@	359.24	0.98
13813.00	90.48	359.50	9727.59	94.00	4293.15	4292.89 N	56.99 W	4293.27@	359.24	0.29
13908.00	90.92	359.46	9726.43	95.00	4388.14	4387.88 N	57.85 W	4388.26@	359.24	0.46
14002.00	91.10	359.33	9724.78	94.00	4482.13	4481.86 N	58.84 W	4482.25@	359.25	0.24
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 14156'MD.										
14156.00	91.10	359.33	9721.82	154.00	4636.10	4635.82 N	60.64 W	4636.22@	359.25	0.00



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM CORPORATION		
LEASE / WELL No.:	QUAIL BQL STATE COM	#1H ST1	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY COUNTY	NM	USA
RIG:	PATRIOT 5		
API WELL No:	30-015-38170		
JOB No:	12MLD0187		
P.O. / AFE No.	10-266-0		
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat	7.33	LWD Calculated:	7.33
		Agreed Upon:	7.33
X =	691477.236000	Feet	Y = 387902.344000
			Feet
SITE LATITUDE:	32.065497	SITE LONGITUDE:	103.848651
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	359.67		
KELLY BUSHING ELEVATION:	26.5		
ALTITUDE:	3220	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	1200		
DRIFT ANGLE:	1.69		
DRIFT DIRECTION:	182.2		
TRUE VERTICAL DEPTH:	1199.84		
VERTICAL SECTION:	-9.76		
RECTANGULAR COORDINATE (N / S) :	-9.7		
RECTANGULAR COORDINATE (E / W) :	10.15		
CLOSURE DISTANCE / DIRECTION:	14.04	133.72	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	MULTI SHOT SURVEY		
COPY OF TIE-IN SURVEY REPORT	☒ YES		☐ NO

WELL PLAN

KICKOFF DEPTH:	9292.5	TOTAL DEPTH:	14231.2
KICKOFF ANGLE:	0	MAX ANGLE:	90

PES Engineers: G.SAKAS

**Signature of both field engineers required if applicable

Directional Driller: IRBY LEJUENE

DATE: 11-May-2012



Company:	YATES PETROLEUM	Operator:	JOSHUA SMITH
Lease / Well:	QUAIL BQL STATE COM #1H	Job Number:	SVCO-120693
County/Parish:	EDDY COUNTY	Probe Serial #	123
State:	NEW MEXICO	Proposed Direction:	359.67
Date:	5/13/2012	Mag. Declination:	7.35 EAST TO GRID
API#:	30-015-38170	Rig / RKB:	PATRIOT #5 / RKB 25 FEET
Dir. Company:	PATHFINDER	Tie-In From:	N / A
FIELD USE ONLY, DEFINITIVE SURVEY WILL COME FROM MS Survey OFFICES			

TIE-IN Survey					
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Coordinates (+N/-S) (+E/-W)	
0	0.00	0.00	0.00	0.00	0.00

Rate Gyro Survey Report									
Measured Depth (ft.)	Inclination	Azimuth Bearing	Vertical Depth	Vertical Section	Coordinates (+N/-S) (+E/-W)		Dog-Leg / 100 ft.	Closure Distance	Closure Direction
200	0.35	223.41	200.00	-0.44	-0.44	-0.42	0.17	9.61	223.41°
400	0.33	78.68	400.00	-0.75	-0.75	-0.28	0.33	0.80	200.29°
600	1.12	119.60	599.93	-1.60	-1.59	1.98	0.45	2.54	128.71°
800	1.42	103.40	799.93	-3.16	-3.13	6.09	0.23	6.85	117.18°
1000	1.01	150.07	999.89	-5.28	-5.23	9.38	0.52	10.74	119.14°
1200	1.69	182.20	1199.84	-9.76	-9.70	10.15	0.50	14.04	133.72°



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PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Yates Petroleum
Quail BQL State Com #1H
Eddy County, Nm
Rig:Patriot 5

Wed May 09 17:29:42 2012

Coordinates

Latitude: 32.065497 N (32 deg. 3 min. 55.7875 sec.)
Longitude: 103.848651 W (-103 deg. 50 min. 55.1423 sec.)
Elevation: 3246.50 feet. 3220 / 26.5
Calculation Date: May/09/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9695 degrees
Total Magnetic Field: 0.48401 gauss
Magnetic Declination: 7.590869 degrees
Horizontal Intensity: 0.242230 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.590869 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 691477.2360 feet
Y: 387902.3440 feet
True to Grid: (convergence) -0.257317 degrees
Magnetic to Grid: 7.333552 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.333552 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CORPORATION
QUAIL BQL STATE COM #1H
BONE SPRING

Fri May 11 20:01:11 2012

Coordinates

Latitude: 32.065497 N (32 deg. 3 min. 55.7875 sec.)
Longitude: 103.848651 W (-103 deg. 50 min. 55.1423 sec.)
Elevation: 3246.50 feet.
Calculation Date: May/11/2012

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9693 degrees
Total Magnetic Field: 0.48401 gauss
Magnetic Declination: 7.590199 degrees
Horizontal Intensity: 0.242228 gauss

To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.590199 Degr

Field camp

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 691477.2360 feet
Y: 387902.3440 feet
True to Grid: (convergence) -0.257317 degrees
Magnetic to Grid: 7.332882 degrees

To Convert a Magnetic Dir. to a GRID dir. Add 7.332882 Degr.