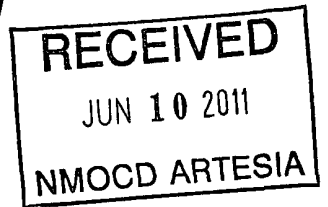




An Operating Unit of Smith International, Inc.

SUR: P-36-25s-28e, 660/S & 330/E
BHL: M-36-25s-28e, 642/S & 351/W
API # 30-015-38261

DIRECTIONAL SURVEY REPORT



YATES PETROLEUM

TROJANS BQT STATE #1H

EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

Pathfinder Energy Services, Inc.
6213 W. Interstate 20 • Midland, TX • 79706
(432) 681-6000

Pathfinder

6213 W Interstate 20
Midland, Texas 79706
Tel 432 687 1647
Fax 432 687 1544



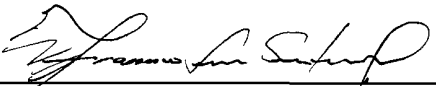
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) DUSTIN EASLEY
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 02-15-11 TO 02-25-11
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
TROJANS BQT STATE #1H
EDDY COUNTY, NM
RIG: PATTERSON 75

9. SURVEY CERTIFIED FROM: 7317 TO 11267 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4653.43 FEET ON A BEARING OF 269.65 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 11342 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: 02/15/2011
Date Completed: 02/25/2011

YATES PETROLEUM CORPORATION
TROJANS BQT STATE #1H
EDDY COUNTY, NM
Rig:Patterson UTI #75
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:DUSTIN EASLEY
GABE GARCIA

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.4.50.7409 N LON:104.1.59.4894 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 634296.4250 Y: 393247.4380
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.67°EAST TO GRID
Vertical Section Plane: 269.87
Survey Vert. Reference: 23.00' Kelly Bushing To Ground
Altitude:2916.00' Ground To MSL

Measured Depth	11342.00	(feet)
Inclination	90.92	(deg)
Azimuth	270.80	(deg)
True Vertical Depth	6774.59	(feet)
Vertical Section	4653.39	(feet)
Survey X cord	629643.09	(feet)
Survey Y cord	393218.74	(feet)
Survey Lat	32.08071716 N	(deg)
Survey Lon	104.04821609 W	(deg)
Rectangular Corr. N/S	28.70 S	(feet)
Rectangular Corr. E/W	4653.34 W	(feet)
Closure Distance	4653.43	(feet)
Direction of Closure	269.65	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TROJANS BQT STATE #1H
EDDY COUNTY, NM
Rig:Patterson UTI #75
PathFinder Office Supervisor: Francisco Sinisiteria
PathFinder Field Engineers: Dustin Easley
Gabe Garcia

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.450.7409 N LON:104.159.4894 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 634296.4250 Y: 393247.4380
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.67°EAST TO GRID
Vertical Section Plane: 269.87
Survey Vert. Reference: 23.00' Kelly Bushing To Ground
Altitude:2916.00' Ground To MSL

Survey Calculations by RX5 V6.03D 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)
THE FOLLOWING ARE MS SURVEY GYRO SURVEYS										
0.00	0.00	0.00	0.13	0.00	-0.24	0.16 N	0.24 E	0.29@	56.69	0.00
200.00	0.50	351.51	200.13	200.00	-0.12	1.02 N	0.11 E	1.03@	6.35	0.25
400.00	0.50	348.62	400.12	200.00	0.18	2.74 N	0.19 W	2.75@	356.09	0.01
600.00	0.50	13.73	600.11	200.00	0.14	4.44 N	0.15 W	4.45@	358.04	0.11
800.00	0.75	64.83	800.10	200.00	-1.25	5.85 N	1.24 E	5.98@	11.97	0.29
1000.00	0.75	26.94	1000.09	200.00	-3.03	7.57 N	3.02 E	8.15@	21.72	0.24
1200.00	0.75	6.00	1200.07	200.00	-3.77	10.04 N	3.75 E	10.72@	20.46	0.14
1400.00	0.25	343.43	1400.06	200.00	-3.79	11.76 N	3.76 E	12.35@	17.73	0.26
1600.00	0.75	315.54	1600.05	200.00	-2.75	13.11 N	2.72 E	13.39@	11.71	0.27
1800.00	1.00	332.65	1800.03	200.00	-1.04	15.60 N	1.00 E	15.63@	3.67	0.18
2000.00	1.25	312.70	1999.99	200.00	1.36	18.63 N	1.41 W	18.68@	355.69	0.23
2200.00	0.75	38.75	2199.97	200.00	2.14	21.13 N	2.19 W	21.24@	354.08	0.71
2400.00	1.50	73.80	2399.93	200.00	-1.20	22.88 N	1.14 E	22.91@	2.86	0.49
2600.00	2.25	74.85	2599.82	200.00	-7.50	24.64 N	7.45 E	25.74@	16.82	0.38
2800.00	1.50	66.91	2799.72	200.00	-13.71	26.69 N	13.64 E	29.97@	27.08	0.40
3000.00	1.25	71.96	2999.66	200.00	-18.19	28.39 N	18.13 E	33.68@	32.56	0.14
3200.00	1.00	77.07	3199.62	200.00	-21.97	29.46 N	21.90 E	36.71@	36.63	0.13
3400.00	1.25	53.12	3399.58	200.00	-25.42	31.16 N	25.35 E	40.17@	39.13	0.26
3600.00	0.75	22.18	3599.55	200.00	-27.66	33.68 N	27.59 E	43.53@	39.32	0.36
3800.00	0.75	38.23	3799.54	200.00	-28.97	35.92 N	28.89 E	46.10@	38.81	0.10
4000.00	0.50	44.29	3999.52	200.00	-30.40	37.57 N	30.31 E	48.27@	38.90	0.13
4200.00	0.75	53.34	4199.51	200.00	-32.06	38.98 N	31.97 E	50.41@	39.36	0.13
4400.00	0.25	31.67	4399.50	200.00	-33.34	40.13 N	33.25 E	52.11@	39.64	0.26
4600.00	0.50	16.72	4599.50	200.00	-33.82	41.34 N	33.73 E	53.35@	39.21	0.13
4800.00	0.50	356.78	4799.49	200.00	-34.03	43.04 N	33.93 E	54.81@	38.25	0.09

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TROJANS BQT STATE #1H
EDDY COUNTY, NM
RIG:Patterson UTI #75

Page 02/05

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)
5000.00	0.25	204.83	4999.49	200.00	-33.80	43.52 N	33.70 E	55.04@	37.75	0.36
5200.00	0.25	159.88	5199.49	200.00	-33.76	42.71 N	33.67 E	54.39@	38.24	0.10
5400.00	0.25	98.94	5399.49	200.00	-34.34	42.24 N	34.25 E	54.38@	39.04	0.13
5600.00	0.25	130.99	5599.49	200.00	-35.10	41.88 N	35.01 E	54.59@	39.89	0.07
5800.00	0.75	116.05	5799.48	200.00	-36.61	41.02 N	36.51 E	54.92@	41.67	0.26
6000.00	1.00	148.10	5999.45	200.00	-38.70	38.97 N	38.61 E	54.86@	44.74	0.27
6200.00	1.25	151.16	6199.42	200.00	-40.67	35.57 N	40.59 E	53.97@	48.77	0.13
THE FOLLOWING ARE CUDD MWD SURVEYS										
6290.00	1.40	147.40	6289.39	90.00	-41.73	33.79 N	41.65 E	53.63@	50.95	0.19
6322.00	1.30	175.80	6321.38	32.00	-41.96	33.09 N	41.89 E	53.39@	51.69	2.09
6353.00	2.40	233.20	6352.37	31.00	-41.47	32.36 N	41.40 E	52.54@	51.99	6.52
6417.00	10.00	263.30	6415.96	64.00	-34.86	30.90 N	34.79 E	46.53@	48.39	12.52
6480.00	18.10	265.40	6477.02	63.00	-19.65	29.48 N	19.58 E	35.39@	33.59	12.88
6512.00	22.10	264.60	6507.07	32.00	-8.69	28.51 N	8.63 E	29.79@	16.84	12.53
6544.00	25.90	265.30	6536.30	32.00	4.27	27.37 N	4.34 W	27.71@	351.00	11.91
6575.00	30.10	266.60	6563.66	31.00	18.79	26.36 N	18.85 W	32.40@	324.43	13.69
6607.00	34.00	267.80	6590.78	32.00	35.75	25.54 N	35.81 W	43.98@	305.49	12.35
6639.00	38.00	268.90	6616.66	32.00	54.55	25.00 N	54.60 W	60.06@	294.60	12.66
6702.00	46.20	267.60	6663.37	63.00	96.73	23.68 N	96.78 W	99.64@	283.75	13.09
6734.00	50.23	266.69	6684.69	32.00	120.56	22.48 N	120.61 W	122.68@	280.56	12.77
6798.00	54.80	271.00	6723.64	64.00	171.30	21.52 N	171.35 W	172.69@	277.16	8.92
6829.00	51.70	273.10	6742.18	31.00	196.12	22.40 N	196.17 W	197.44@	276.51	11.38
6861.00	48.60	277.10	6762.69	32.00	220.57	24.56 N	220.63 W	221.99@	276.35	13.63
6893.00	48.50	277.30	6783.87	32.00	244.36	27.57 N	244.42 W	245.97@	276.43	0.56
6924.00	51.20	276.10	6803.86	31.00	267.88	30.33 N	267.95 W	269.66@	276.46	9.20
6956.00	54.40	274.70	6823.21	32.00	293.25	32.72 N	293.33 W	295.14@	276.36	10.59
6987.00	57.50	273.50	6840.56	31.00	318.86	34.55 N	318.94 W	320.81@	276.18	10.50
7019.00	60.90	272.10	6856.95	32.00	346.31	35.88 N	346.39 W	348.24@	275.91	11.27
7051.00	64.60	271.00	6871.59	32.00	374.74	36.65 N	374.82 W	376.61@	275.58	11.96

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TROJANS BQT STATE #1H
EDDY COUNTY, NM
RIG:Patterson UTI #75

Page 03/05

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)
7083.00	68.80	270.20	6884.25	32.00	404.12	36.95 N	404.20 W	405.89@	275.22	13.32
7115.00	73.20	269.30	6894.67	32.00	434.37	36.82 N	434.45 W	436.01@	274.84	14.00
7146.00	76.20	269.20	6902.84	31.00	464.26	36.43 N	464.35 W	465.78@	274.49	9.68
7179.00	78.50	268.90	6910.07	33.00	496.46	35.89 N	496.54 W	497.84@	274.13	7.03
7211.00	81.30	268.40	6915.68	32.00	527.95	35.15 N	528.03 W	529.20@	273.81	8.88
7243.00	84.30	268.10	6919.69	32.00	559.68	34.18 N	559.76 W	560.81@	273.49	9.42
** TIE IN TO CUDD MWD SURVEYS										
7274.00	85.90	268.00	6922.34	31.00	590.55	33.13 N	590.63 W	591.56@	273.21	5.17
THE FOLLOWING ARE PATHFINDER MWD SURVEYS										
7317.00	86.53	266.94	6925.18	43.00	633.42	31.24 N	633.49 W	634.26@	272.82	2.86
7412.00	92.51	266.56	6925.97	95.00	728.23	25.85 N	728.29 W	728.75@	272.03	6.31
7508.00	92.51	266.93	6921.77	96.00	824.00	20.41 N	824.05 W	824.30@	271.42	0.38
7603.00	93.21	268.79	6917.03	95.00	918.82	16.86 N	918.86 W	919.01@	271.05	2.09
7698.00	93.83	270.14	6911.20	95.00	1013.63	15.98 N	1013.67 W	1013.80@	270.90	1.56
7794.00	94.35	270.84	6904.35	96.00	1109.38	16.80 N	1109.42 W	1109.55@	270.87	0.91
7889.00	92.15	271.93	6898.96	95.00	1204.19	19.09 N	1204.23 W	1204.39@	270.91	2.58
7984.00	91.19	271.92	6896.20	95.00	1299.09	22.28 N	1299.14 W	1299.33@	270.98	1.01
8079.00	91.80	271.58	6893.72	95.00	1394.00	25.18 N	1394.06 W	1394.29@	271.03	0.74
8111.00	91.89	271.07	6892.69	32.00	1425.97	25.92 N	1426.04 W	1426.27@	271.04	1.62
8143.00	92.51	270.40	6891.46	32.00	1457.95	26.33 N	1458.01 W	1458.25@	271.03	2.85
8175.00	92.42	270.24	6890.08	32.00	1489.92	26.51 N	1489.98 W	1490.22@	271.02	0.57
8207.00	92.15	269.88	6888.81	32.00	1521.89	26.54 N	1521.96 W	1522.19@	271.00	1.41
8238.00	91.98	269.66	6887.69	31.00	1552.87	26.42 N	1552.93 W	1553.16@	270.97	0.90
8270.00	92.33	269.54	6886.49	32.00	1584.85	26.19 N	1584.91 W	1585.13@	270.95	1.16
8302.00	92.33	268.95	6885.18	32.00	1616.82	25.77 N	1616.88 W	1617.09@	270.91	1.84
8334.00	92.42	268.13	6883.86	32.00	1648.78	24.96 N	1648.84 W	1649.03@	270.87	2.58
8365.00	92.59	267.54	6882.50	31.00	1679.73	23.79 N	1679.79 W	1679.96@	270.81	1.98
8397.00	92.42	267.44	6881.11	32.00	1711.68	22.39 N	1711.73 W	1711.88@	270.75	0.62

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TROJANS BQT STATE #1H
EDDY COUNTY, NM
RIG:Patterson UTI #75

Page 04/05

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)
8429.00	91.28	267.67	6880.07	32.00	1743.63	21.02 N	1743.68 W	1743.81@	270.69	3.63
8461.00	91.45	267.87	6879.31	32.00	1775.60	19.78 N	1775.65 W	1775.76@	270.64	0.82
8493.00	91.28	268.13	6878.55	32.00	1807.58	18.66 N	1807.62 W	1807.72@	270.59	0.97
8525.00	91.36	268.10	6877.81	32.00	1839.55	17.61 N	1839.60 W	1839.68@	270.55	0.27
8588.00	91.71	268.44	6876.12	63.00	1902.50	15.71 N	1902.54 W	1902.61@	270.47	0.77
8652.00	92.15	268.08	6873.97	64.00	1966.44	13.77 N	1966.48 W	1966.53@	270.40	0.89
8715.00	92.24	268.02	6871.55	63.00	2029.36	11.62 N	2029.40 W	2029.43@	270.33	0.17
8779.00	92.07	267.15	6869.15	64.00	2093.27	8.93 N	2093.29 W	2093.31@	270.24	1.38
8842.00	92.95	268.43	6866.39	63.00	2156.16	6.50 N	2156.18 W	2156.19@	270.17	2.46
8906.00	92.86	268.10	6863.14	64.00	2220.06	4.57 N	2220.07 W	2220.08@	270.12	0.53
8969.00	92.86	267.29	6860.00	63.00	2282.93	2.04 N	2282.94 W	2282.94@	270.05	1.28
9033.00	93.12	267.29	6856.66	64.00	2346.78	0.99 S	2346.78 W	2346.78@	269.98	0.41
9096.00	93.39	268.10	6853.09	63.00	2409.63	3.51 S	2409.63 W	2409.63@	269.92	1.35
9160.00	91.54	267.35	6850.33	64.00	2473.53	6.05 S	2473.52 W	2473.53@	269.86	3.12
9255.00	91.71	267.28	6847.64	95.00	2568.39	10.50 S	2568.38 W	2568.40@	269.77	0.19
9360.00	91.10	266.35	6845.06	105.00	2673.21	16.33 S	2673.18 W	2673.23@	269.65	1.06
9456.00	91.98	268.00	6842.48	96.00	2769.07	21.06 S	2769.02 W	2769.10@	269.56	1.95
9551.00	93.21	268.92	6838.18	95.00	2863.94	23.61 S	2863.89 W	2863.99@	269.53	1.62
9646.00	93.65	268.89	6832.50	95.00	2958.75	25.43 S	2958.70 W	2958.81@	269.51	0.46
9742.00	93.30	269.36	6826.68	96.00	3054.57	26.89 S	3054.51 W	3054.63@	269.50	0.61
9837.00	91.45	268.90	6822.74	95.00	3149.47	28.33 S	3149.42 W	3149.55@	269.48	2.01
9933.00	91.28	268.50	6820.46	96.00	3245.43	30.51 S	3245.37 W	3245.51@	269.46	0.45
10028.00	91.98	268.49	6817.76	95.00	3340.36	33.00 S	3340.29 W	3340.46@	269.43	0.74
10123.00	91.89	268.13	6814.55	95.00	3435.27	35.80 S	3435.20 W	3435.39@	269.40	0.39
10219.00	92.24	269.56	6811.09	96.00	3531.19	37.74 S	3531.11 W	3531.32@	269.39	1.53
10314.00	92.51	270.07	6807.15	95.00	3626.11	38.04 S	3626.03 W	3626.23@	269.40	0.61
10409.00	93.30	270.02	6802.34	95.00	3720.98	37.97 S	3720.91 W	3721.10@	269.42	0.83
10505.00	93.47	269.83	6796.67	96.00	3816.82	38.09 S	3816.74 W	3816.93@	269.43	0.27

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TROJANS BQT STATE #1H
EDDY COUNTY, NM
RIG:Patterson UTI #75

Page 05/05

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)
10600.00	91.80	270.30	6792.30	95.00	3911.71	37.99 S	3911.64 W	3911.82@	269.44	1.83
10721.00	91.71	270.67	6788.60	121.00	4032.65	36.96 S	4032.57 W	4032.74@	269.47	0.31
10817.00	91.71	270.35	6785.73	96.00	4128.60	36.11 S	4128.53 W	4128.69@	269.50	0.33
10911.00	91.80	270.31	6782.85	94.00	4222.55	35.57 S	4222.48 W	4222.63@	269.52	0.10
11007.00	91.36	270.75	6780.21	96.00	4318.51	34.68 S	4318.44 W	4318.58@	269.54	0.65
11102.00	90.84	271.42	6778.38	95.00	4413.47	32.88 S	4413.41 W	4413.53@	269.57	0.89
11197.00	90.92	271.02	6776.92	95.00	4508.43	30.86 S	4508.37 W	4508.48@	269.61	0.43
11267.00	90.92	270.80	6775.80	70.00	4578.41	29.75 S	4578.36 W	4578.45@	269.63	0.31
STRAIGHT LINE PROJECTION TO BIT DEPTH										
11342.00	90.92	270.80	6774.59	75.00	4653.39	28.70 S	4653.34 W	4653.43@	269.65	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.:	Trojans BQT State	1H	
WELL LOCATION:	Eddy County		
COUNTY / STATE / COUNTRY:	Eddy County	NM	USA
RIG:	Patterson UTI 75		
API WELL No:	30-015-38261		
JOB No:	700001625-WT-WT		
P.O. / AFE No.	10-310-0		
DIRECTIONAL COMPANY:	Pathfinder Energy Services		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7 67	LWD Calculated:	7.66771
		Agreed Upon:	7 67
X =	634296 425000	Feet	Y = 393247.438000
		Feet	
SITE LATITUDE:	32.080761 N	SITE LONGITUDE:	104.033192
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	New Mexico East
PROPOSED DRIFT DIRECTION:	269.87		
KELLY BUSHING ELEVATION:	23		
ALTITUDE:	2916	Feet	WATER DEPTH:
		Feet	

TIE-IN SURVEY

MEASURED DEPTH:	7274
DRIFT ANGLE:	85.9
DRIFT DIRECTION:	268
TRUE VERTICAL DEPTH:	6922.34
VERTICAL SECTION:	590.55
RECTANGULAR COORDINATE (N / S) :	33.13
RECTANGULAR COORDINATE (E / W) :	-590.63
CLOSURE DISTANCE / DIRECTION:	
SURVEY CALCULATION METHOD:	AA ☐ MC ☒ RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	CUDD Drilling and Measurement Services
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO

WELL PLAN

KICKOFF DEPTH:	6390	TOTAL DEPTH:	11351.39
KICKOFF ANGLE:	1.25	MAX ANGLE:	91

PES Engineers: Dustin Easley
Gabe Garcia

**Signature of both field engineers required if applicable

Directional Driller: Kevin Jezek

DATE: 15-Feb-2010

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* YATES PETROLEUM *

JOB NUMBER: SVCO-110096

WELL NAME: TROJANS BQT ST. #1H

LOCATION: EDDY COUNTY, NEW MEXICO

SURVEY DATE: JANUARY 29, 2011

SURVEY ENGINEER: S. SMITH

MAGNETIC DECLINATION: 07.69 GRID NORTH

GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 269.87
SURF. ELEVATION: 22

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*****
*** DEPTH MEASURED IN FEET *****
*****
COMMENTS: PATTERSON 75
          RKB 22'
          TBUSSELL@YATESPETROLEUM.COM**
          MIKEL@YATESPETROLEUM.COM
          *****
          COMPANY REPRESENTATIVE
          *****
```

MS ENERGY SERVICES
ODESSA, TEXAS

JOB NUMBER: SVCC-110096

WELL NAME: TROJANS BQT ST. #1H

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	090.00	0.00 N	0.00 E	0.00		0.00	AT 000.00
200.0	200.00	0.13	0.863	00.50	351.51	0.86 N	0.13 W	0.25	0.50	0.87	AT 351.51
400.0	399.99	0.42	2.583	00.50	348.62	2.58 N	0.43 W	0.01	0.03	2.62	AT 350.55
600.0	599.98	0.39	4.286	00.50	013.73	4.28 N	0.39 W	0.11	0.22	4.30	AT 354.73
800.0	799.97	-1.01	5.687	00.75	064.83	5.69 N	1.00 E	0.29	0.58	5.78	AT 009.94
1000.0	999.96	-2.79	7.407	00.75	026.94	7.41 N	2.77 E	0.24	0.49	7.92	AT 020.52
1200.0	1199.94	-3.53	9.874	00.75	006.00	9.88 N	3.50 E	0.14	0.27	10.43	AT 019.53
1400.0	1399.93	-3.54	11.594	00.25	343.43	11.60 N	3.52 E	0.26	0.53	12.12	AT 016.86
1600.0	1599.92	-2.50	12.949	00.75	315.54	12.95 N	2.49 E	0.27	0.54	13.19	AT 010.82
1800.0	1799.90	-0.79	15.437	01.00	332.65	15.44 N	0.76 E	0.18	0.36	15.46	AT 002.81
2000.0	1999.86	1.61	18.472	01.25	312.70	18.47 N	1.65 W	0.23	0.46	18.54	AT 354.90
2200.0	2199.84	2.38	20.974	00.75	038.75	20.97 N	2.43 W	0.71	1.41	21.11	AT 353.38
2400.0	2399.80	-0.95	22.718	01.50	073.80	22.72 N	0.90 E	0.49	0.99	22.74	AT 002.27
2600.0	2599.67	-7.26	24.460	02.25	074.85	24.48 N	7.20 E	0.38	0.75	25.51	AT 016.40
2800.0	2799.59	-13.46	26.498	01.50	066.91	26.53 N	13.40 E	0.40	0.79	29.72	AT 026.80
3000.0	2999.53	-17.95	28.190	01.25	071.95	28.23 N	17.88 E	0.14	0.28	33.42	AT 032.35
3200.0	3199.49	-21.73	29.248	01.00	077.07	29.30 N	21.66 E	0.13	0.27	36.43	AT 036.48
3400.0	3399.43	-25.18	30.940	01.25	053.12	31.00 N	25.11 E	0.26	0.53	39.89	AT 039.01
3600.0	3599.42	-27.42	33.456	00.75	022.18	33.52 N	27.34 E	0.36	0.72	43.26	AT 039.21
3800.0	3799.41	-28.73	35.693	00.75	038.23	35.76 N	28.63 E	0.10	0.21	45.82	AT 038.70
4000.0	3999.39	-30.15	37.343	00.50	044.29	37.41 N	30.07 E	0.13	0.26	48.00	AT 038.79
4200.0	4199.38	-31.82	38.745	00.75	053.34	38.82 N	31.73 E	0.13	0.27	50.13	AT 039.26
4400.0	4399.37	-33.10	39.895	00.25	031.67	39.97 N	33.01 E	0.26	0.53	51.84	AT 039.55
4600.0	4599.37	-33.58	41.101	00.50	016.72	41.13 N	33.49 E	0.12	0.27	53.08	AT 039.12
4800.0	4799.36	-33.79	42.808	00.50	356.73	42.88 N	30.69 E	0.09	0.17	54.53	AT 038.15
5000.0	4999.36	-33.56	43.264	00.25	204.83	43.36 N	33.46 E	0.37	0.73	54.77	AT 037.65
5200.0	5199.36	-33.52	42.478	00.25	159.88	42.55 N	33.42 E	0.10	0.19	54.11	AT 038.15
5400.0	5399.36	-34.10	41.999	00.25	098.34	42.06 N	34.00 E	0.13	0.25	54.10	AT 038.94
5600.0	5599.35	-34.86	41.644	00.25	130.99	41.72 N	34.77 E	0.07	0.14	54.31	AT 039.80
5800.0	5799.35	-36.36	40.779	00.75	116.03	40.86 N	36.27 E	0.26	0.51	54.64	AT 041.59
6000.0	5999.32	-38.46	38.718	01.00	148.10	38.81 N	38.37 E	0.27	0.54	54.57	AT 044.68
6200.0	6199.29	-40.42	35.321	01.25	151.16	35.41 N	40.34 E	0.13	0.26	53.68	AT 048.72
6400.0	6399.24	-42.48	31.476	01.25	152.19	31.57 N	42.41 E	0.01	0.02	52.87	AT 053.34
6600.0	6599.21	-44.00	28.336	00.75	157.19	28.44 N	43.94 E	0.25	0.51	52.34	AT 057.09
6800.0	6799.19	-43.87	25.503	01.00	201.19	25.60 N	43.82 E	0.35	0.70	50.75	AT 059.70
7000.0	6999.16	-42.11	22.546	01.00	220.19	22.64 N	42.06 E	0.17	0.33	47.77	AT 061.70
7200.0	7199.13	-39.45	20.378	01.00	241.19	20.47 N	39.40 E	0.18	0.36	44.40	AT 062.55
7400.0	7399.11	-37.05	19.454	00.50	264.20	19.54 N	37.01 E	0.29	0.57	41.85	AT 062.17
7600.0	7599.10	-35.31	20.345	00.75	310.21	20.43 N	38.26 E	0.30	0.61	40.15	AT 055.92
7800.0	7799.07	-33.14	23.074	01.25	323.22	23.15 N	38.09 E	0.25	0.51	40.38	AT 055.02
8000.0	7999.02	-32.75	27.279	01.50	020.21	27.35 N	32.68 E	0.67	1.33	42.62	AT 050.07
8200.0	8198.96	-33.37	31.895	01.25	352.22	31.97 N	33.29 E	0.35	0.71	46.16	AT 046.16
8400.0	8398.93	-31.43	34.636	01.00	289.22	34.71 N	31.35 E	0.60	1.19	46.77	AT 042.09
8600.0	8598.88	-27.22	34.686	01.50	258.24	34.75 N	27.14 E	0.41	0.82	44.09	AT 037.99
8800.0	8798.79	-21.72	32.276	02.00	237.23	32.33 N	21.64 E	0.40	0.81	38.90	AT 033.80
9000.0	8998.70	-16.46	29.180	01.50	242.24	29.22 N	16.39 E	0.26	0.52	33.50	AT 029.29
9200.0	9198.62	-11.72	26.101	01.75	232.24	26.13 N	11.66 E	0.19	0.38	28.61	AT 024.05
9400.0	9398.54	-7.60	22.243	01.50	220.25	22.26 N	7.55 E	0.21	0.42	23.51	AT 019.75
9531.0	9529.49	-5.60	19.473	01.50	211.26	19.49 N	5.56 E	0.18	0.24	20.26	AT 015.92

* THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *

* 9531.00 FEET EQUALS 20.26 FEET AT 015.92 *

Trojans BQT State #1H_MWD Survey_Report_02-14-11
Cudd Drilling & Measurement Services

Yates Petroleum Corporation
Trojans BQT State #1H - Cudd MWD ST Survey #4

Eddy Co, New Mexico (Nad-83)
Trojans BQT State #1H
Your Ref:

Measured Dogleg Depth Rate (ft) (°/100ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)
6734.00	50.235	266.689	6684.28	22.49 N	121.43 W	121.38
0.00						
6798.00	54.800	271.000	6723.23	21.53 N	172.17 W	172.12
8.91						
6829.00	51.700	273.100	6741.77	22.40 N	196.99 W	196.94
11.38						
6861.00	48.600	277.100	6762.28	24.57 N	221.45 W	221.39
13.63						
6893.00	48.500	277.300	6783.46	27.57 N	245.25 W	245.18
0.56						
6924.00	51.200	276.100	6803.45	30.33 N	268.78 W	268.71
9.20						
6956.00	54.400	274.700	6822.80	32.73 N	294.15 W	294.07
10.59						
6987.00	57.500	273.500	6840.15	34.56 N	319.76 W	319.68
10.50						
7019.00	60.900	272.100	6856.54	35.89 N	347.21 W	347.13
11.27						
7051.00	64.600	271.000	6871.18	36.66 N	375.65 W	375.56
11.96						
7083.00	68.800	270.200	6883.84	36.96 N	405.03 W	404.94
13.32						
7115.00	73.200	269.300	6894.26	36.83 N	435.28 W	435.19
14.00						
7146.00	76.200	269.200	6902.43	36.44 N	465.17 W	465.09
9.68						
7179.00	78.500	268.900	6909.66	35.90 N	497.36 W	497.28
7.03						
7211.00	81.300	268.400	6915.27	35.16 N	528.86 W	528.77
8.88						
7243.00	84.300	268.100	6919.28	34.19 N	560.59 W	560.51
9.42						
7274.00	85.900	268.000	6921.93	33.14 N	591.45 W	591.38
5.17						
7305.00	87.500	268.000	6923.71	32.06 N	622.38 W	622.31
5.16						
7347.00	89.500	269.000	6924.81	30.96 N	664.35 W	664.28
5.32						

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to WELL. Northings and Eastings are relative to site.

The Dogleg Severity is in Degrees per 100 feet.

Trojans BQT State #1H_MWD Survey_Report_02-14-11

Vertical Section is from Slot and calculated along an Azimuth of 269.869° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.159°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 7347.00ft., the Bottom Hole Displacement is 665.07ft., in the Direction of 269.869° (Grid).

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM
TROJANS "BQT" STATE #1H
EDDY COUNTY, NEW MEXICO
Rig:PATTERSON 75

Mon Feb 14 18:23:33 2011

Coordinates

Latitude: 32.080761 N (32 deg. 4 min. 50.7409 sec.)
Longitude: 104.033192 W (-104 deg. 1 min. 59.4894 sec.)
Elevation: 2939.00 feet.
Calculation Date: Feb/14/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9804 degrees
Total Magnetic Field: 0.48536 gauss
Magnetic Declination: 7.827120 degrees
Horizontal Intensity: 0.242825 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.827120 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 634296.4250 feet
Y: 393247.4380 feet
True to Grid: (convergence) -0.159411 degrees
Magnetic to Grid: 7.667710 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.667710 Degr.

FIELD CALCULATION
PathFinder Energy Services, Inc.
Magnetic & Grid Calculations

YATES PETROLEUM CORPORATION
TROJANS BQT STATE #1H
ROCK SPUR; BONE SPRING
Rig:Patterson UTI #75

Sat Feb 26 06:21:31 2011

Coordinates

Latitude: 32.080761 N (32 deg. 4 min. 50.7409 sec.)
Longitude: 104.033192 W (-104 deg. 1 min. 59.4894 sec.)
Elevation: 2939.00 feet.
Calculation Date: Feb/15/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9805 degrees
Total Magnetic Field: 0.48514 gauss
Magnetic Declination: 7.825297 degrees
Horizontal Intensity: 0.242714 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.825297 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 634296.4250 feet
Y: 393247.4380 feet
True to Grid: (convergence) -0.159411 degrees
Magnetic to Grid: 7.665887 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.665887 Degr.