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DEC 09 2011

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A Schlumberger Company

DIRECTIONAL SURVEY REPORT

YATES PETROLEUM

ZAPATA "BQZ" STATE COM #1H - SHC

LEA COUNTY, NEW MEXICO

SUR: N-2-26s-32e, 330/S & 2180/W
BHL: C-2-26s-32e, 4960/S & 1943/W
API # 30-025-40001

PREPARED BY: FRANCISCO SINISTERRA

JAN 12 2012

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) MICHAEL SAKAS
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 06-12-11 TO 06-17-11
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: LEA COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
ZAPATA "BQZ" STATE COM #1H – SHC
LEA COUNTY, NM
RIG: PATTERSON #36

9. SURVEY CERTIFIED FROM: 944 TO 4726 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 33.08 FEET ON A BEARING OF 196.79 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 4785 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: 06/12/2011
Date Completed: 06/17/2011

YATES PETROLEUM CORP.
ZAPATA "BQZ" STATE COM #1H
LEA COUNTY, TX
Rig:PATTERSON 36
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:MICHAEL SAKAS
MURAD ALIYEV

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.3.57.3069 N LON:103.38.49.9404 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 753878.8100 Y: 388394.3700
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.25° EAST TO GRID
Vertical Section Plane: 357.02
Survey Vert. Reference: 21.50' Kelly Bushing To Ground
Altitude:3256.00' Ground To MSL

Measured Depth	4785.00	(feet)
Inclination	0.53	(deg)
Azimuth	233.56	(deg)
True Vertical Depth	4784.20	(feet)
Vertical Section	-31.13	(feet)
Survey X cord	753869.25	(feet)
Survey Y cord	388362.70	(feet)
Survey Lat	32.06583169 N	(deg)
Survey Lon	103.64723718 W	(deg)
Rectangular Corr. N/S	31.67 S	(feet)
Rectangular Corr. E/W	9.56 W	(feet)
Closure Distance	33.08	(feet)
Direction of Closure	196.79	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORP.
ZAPATA "BQZ" STATE COM #1H
LEA COUNTY, TX
Rig:PATTERSON 36
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: MICHAEL SAKAS
MURAD ALIYEV

Page 01/02
Tie-in Date: 06/12/2011
Date Completed: 06/17/2011

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.357.3069 N LON:103.38.49.9404 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 753878.8100 Y: 388394.3700
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.25° EAST TO GRID
Vertical Section Plane: 357.02
Survey Vert. Reference: 21.50' Kelly Bushing To Ground
Altitude:3256.00' Ground To MSL

Survey Calculations by RX5 V6.03E 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)
TIE IN ASSUMING VERTICAL DEPTH @ 844' MD.										
844.00	0.00	0.00	844.00	0.00	0.00	0.00	0.00	0.00@	0.00	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS										
944.00	0.26	215.02	944.00	944.00	-1.69	1.75 S	1.23 W	2.14@	215.02	0.03
1103.00	0.09	123.58	1103.00	159.00	-2.05	2.12 S	1.33 W	2.50@	212.16	0.17
1262.00	0.26	191.03	1262.00	159.00	-2.47	2.54 S	1.30 W	2.85@	207.04	0.15
1452.00	0.62	193.00	1451.99	190.00	-3.88	3.97 S	1.61 W	4.28@	202.10	0.19
1642.00	0.97	195.02	1641.97	190.00	-6.40	6.52 S	2.26 W	6.90@	199.10	0.19
1833.00	1.06	209.01	1832.94	191.00	-9.43	9.63 S	3.53 W	10.26@	200.16	0.14
2023.00	1.41	231.59	2022.90	190.00	-12.28	12.62 S	6.22 W	14.07@	206.24	0.31
2213.00	2.11	229.98	2212.81	190.00	-15.74	16.32 S	10.73 W	19.53@	213.32	0.37
2403.00	1.76	234.37	2402.70	190.00	-19.42	20.27 S	15.78 W	25.69@	217.90	0.20
2593.00	1.32	230.95	2592.63	190.00	-22.28	23.35 S	19.85 W	30.64@	220.37	0.24
2783.00	1.49	240.95	2782.57	190.00	-24.66	25.92 S	23.71 W	35.13@	222.44	0.16
2973.00	1.14	233.32	2972.52	190.00	-26.79	28.25 S	27.38 W	39.35@	224.11	0.21
3164.00	0.35	240.16	3163.50	191.00	-28.11	29.68 S	29.41 W	41.79@	224.74	0.42
3354.00	1.49	52.40	3353.49	190.00	-26.97	28.46 S	27.96 W	39.90@	224.49	0.97
3544.00	1.14	45.01	3543.44	190.00	-24.30	25.62 S	24.67 W	35.56@	223.92	0.20
3734.00	0.62	60.09	3733.41	190.00	-22.57	23.77 S	22.44 W	32.69@	223.35	0.30
3924.00	1.06	73.41	3923.39	190.00	-21.69	22.75 S	19.86 W	30.20@	221.12	0.25
4115.00	0.79	126.72	4114.37	191.00	-22.11	23.04 S	17.11 W	28.70@	216.61	0.45
4305.00	2.46	135.90	4304.29	190.00	-26.02	26.75 S	13.23 W	29.84@	206.31	0.89
4495.00	0.79	125.70	4494.21	190.00	-29.91	30.44 S	9.33 W	31.84@	197.03	0.89
4685.00	0.35	267.77	4684.20	190.00	-30.73	31.23 S	8.84 W	32.45@	195.81	0.57
4726.00	0.53	233.56	4725.20	41.00	-30.83	31.34 S	9.12 W	32.64@	196.22	0.76
STRAIGHT LINE PROJECTION TO BIT AT DEPTH 4785'MD.										
4785.00	0.53	233.56	4784.20	59.00	-31.13	31.67 S	9.56 W	33.08@	196.79	0.00



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM CORP.		
LEASE / WELL No.:	ZAPATA "BQZ" STATE COM	#1H	
WELL LOCATION:	LEA COUNTY, NM		
COUNTY / STATE / COUNTRY:	LEA	NM	USA
RIG:	PATTERSON 36		
API WELL No.	30-025-40001		
JOB No:	700002769 WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.24	LWD Calculated:	7.24
X = 753878.810000		Feet	Y = 388394.370000
			Feet
SITE LATITUDE:	32.065919 N	SITE LONGITUDE:	103 647206 W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	
PROPOSED DRIFT DIRECTION:	357.02		
KELLY BUSHING ELEVATION:	21.50'		
ALTITUDE:	3260	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	844		
DRIFT ANGLE:	0		
DRIFT DIRECTION:	0		
TRUE VERTICAL DEPTH:	844		
VERTICAL SECTION:	0		
RECTANGULAR COORDINATE (N / S) :	0		
RECTANGULAR COORDINATE (E / W) :	0		
CLOSURE DISTANCE / DIRECTION:	0	0	
SURVEY CALCULATION METHOD:	AA ☐	MC ☐	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):			
COPY OF TIE-IN SURVEY REPORT	☐ YES		☒ NO

WELL PLAN

KICKOFF DEPTH:	8658.54	TOTAL DEPTH	13624.18
KICKOFF ANGLE:	0	MAX ANGLE:	90

PES Engineers: _____ MICHAEL SAKAS

**Signature of both field engineers required if applicable

Directional Driller: _____

DATE: _____



PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CORPORATION
ZAPATA "BQZ" STATE COM #1H
LEA COUNTY, NEW MEXICO
Rig: PATTEROSN 36

Wed Jun 08 17:51:23 2011

Coordinates

Latitude: 32.065919 N (32 deg. 3 min. 57.3069 sec.)
Longitude: 103.647206 W (-103 deg. 38 min. 49.9404 sec.)
Elevation: 3277.50 feet.
Calculation Date: Jun/08/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0273 degrees
Total Magnetic Field: 0.48515 gauss
Magnetic Declination: 7.611005 degrees
Horizontal Intensity: 0.242377 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.611005 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 753878.8100 feet
Y: 388394.3700 feet
True to Grid: (convergence) -0.364274 degrees
Magnetic to Grid: 7.246731 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.246731 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Fri Jun 24 05:02:33 2011

Coordinates

Latitude: 32.065919 N (32 deg. 3 min. 57.3069 sec.)
Longitude: 103.647206 W (-103 deg. 38 min. 49.9404 sec.)
Elevation: 3256.00 feet.
Calculation Date: Jun/24/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0262 degrees
Total Magnetic Field: 0.48511 gauss
Magnetic Declination: 7.605664 degrees
Horizontal Intensity: 0.242363 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.605664 Degs

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 753878.8100 feet
Y: 388394.3700 feet
True to Grid: (convergence) -0.364274 degrees
Magnetic to Grid: 7.241390 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.241390 Degs.