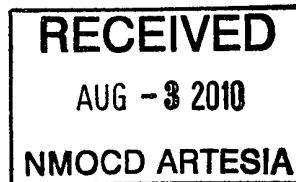




An Operating Unit of Smith International, Inc.



DIRECTIONAL SURVEY REPORT

YATES PETROLEUM
SHERPA "BOY" STATE #1H- ORIGINAL
EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

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

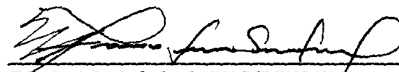
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) MATT SHIPP
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 04-26-10 TO 04-29-10
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
SHERPA "BOY" STATE #1H- ORIGINAL
EDDY COUNTY, NM
RIG: SILVER OAK

9. SURVEY CERTIFIED FROM: 454 TO 2188 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 21.49 FEET ON A BEARING OF 80.40 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 2240 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



FRANCISCO SINISTERRA
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

SHC

Page 01/01
Tie-in Date: 04/26/2010
Date Completed: 04/29/2010

YATES PETROLEUM CORPORATION
SHERPA BOY STATE #1H
EDDY COUNTY, NM
Rig: SILVER OAK #10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: M. SHIPP

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.9.0.4028 N LON: 104.9.5.5949 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 597594.9220 Y: 418393.5820
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.89° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 18.00' Kelly Bushing To Ground
Altitude: 3111.00' Ground To MSL

Measured Depth	2240.00	(feet)
Inclination	1.41	(deg)
Azimuth	103.84	(deg)
True Vertical Depth	2239.70	(feet)
Vertical Section	3.58	(feet)
Survey X cord	597616.11	(feet)
Survey Y cord	418397.16	(feet)
Survey Lat	32.15012164 N	(deg)
Survey Lon	104.15148566 W	(deg)
Rectangular Corr. N/S	3.58 N	(feet)
Rectangular Corr. E/W	21.19 E	(feet)
Closure Distance	21.49	(feet)
Direction of Closure	80.40	(deg)
Dogleg Severity	0.00	(deg/100ft)

SHC

Page 01/01

Tie-in Date: 04/26/2010

Date Completed: 04/29/2010

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION

SHERPA BOY STATE #1H

EDDY COUNTY, NM

Rig: SILVER OAK #10

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: M. SHIPP

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.9.0.4028 N LON: 104.9.5.5949 W

GRID Reference: NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 597594.9220 Y: 418393.5820

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.89° EAST TO GRID

Vertical Section Plane: 0.00

Survey Vert. Reference: 18.00' Kelly Bushing To Ground

Altitude: 3111.00' Ground To MSL

Survey Calculations by RX5 V6.03 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)
ASSUME VERTICAL TO 354' MD.										
354.00	0.00	0.00	354.00	0.00	0.00	0.00	0.00	0.00@	0.00	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS										
454.00	1.06	7.89	453.99	100.00	0.92	0.92 N	0.13 E	0.92@	7.89	1.06
492.00	0.97	12.13	491.99	38.00	1.58	1.58 N	0.24 E	1.60@	8.74	0.31
615.00	0.44	20.59	614.98	123.00	3.04	3.04 N	0.63 E	3.10@	11.67	0.44
706.00	0.53	318.84	705.98	91.00	3.68	3.68 N	0.47 E	3.71@	7.33	0.55
829.00	0.62	334.79	828.97	123.00	4.71	4.71 N	0.18 W	4.72@	357.76	0.15
951.00	0.53	3.59	950.96	122.00	5.87	5.87 N	0.43 W	5.89@	355.81	0.24
1105.00	0.26	106.10	1104.96	154.00	6.49	6.49 N	0.05 W	6.49@	359.56	0.42
1263.00	1.32	77.92	1262.94	158.00	6.77	6.77 N	2.07 E	7.08@	17.04	0.70
1422.00	0.44	99.97	1421.92	159.00	7.05	7.05 N	4.47 E	8.34@	32.37	0.58
1580.00	0.09	107.55	1579.92	158.00	6.90	6.90 N	5.18 E	8.63@	36.89	0.22
1738.00	2.37	99.98	1737.88	158.00	6.30	6.30 N	8.52 E	10.60@	53.51	1.44
1897.00	1.58	108.78	1896.78	159.00	5.03	5.03 N	13.83 E	14.72@	70.03	0.53
2055.00	0.97	91.01	2054.74	158.00	4.30	4.30 N	17.23 E	17.76@	75.99	0.46
2188.00	1.41	103.84	2187.71	133.00	3.89	3.89 N	19.95 E	20.32@	78.97	0.38
STRAIGHT LINE PROJECTION TO BIT @ 2240' MD.										
2240.00	1.41	103.84	2239.70	52.00	3.58	3.58 N	21.19 E	21.49@	80.40	0.00

SHC

PATHFINDER

ENERGY SERVICES

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM CORPORATION		
LEASE / WELL No.:	SHERPA "BOY" STATE	1H	
WELL LOCATION:	EDDY COUNTY, NEW MEXICO		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	SILVEROAK #10		
API WELL No:	30-015-37591		
JOB No:	101010314 WT-WT		
P.O. / AFE No.	09-411-0		
DIRECTIONAL COMPANY:	PES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.89	LWD Calculated:	7.8816
	Agreed Upon:	7.89	
X =	597594.922000	Feet	Y =
			418393.582000
		Feet	
SITE LATITUDE:	32.150112N		SITE LONGITUDE:
			104.151554W
GRID SYSTEM:	TRUE ☐	UTM ☒	LAMBERT ☐
			ZONE:
			NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	89.8		
KELLY BUSHING ELEVATION:	18		
ALTITUDE:	3113	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	354		
DRIFT ANGLE:	0		
DRIFT DIRECTION:	0		
TRUE VERTICAL DEPTH:	354		
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):	N/A		
COPY OF TIE-IN SURVEY REPORT	☐ YES		☒ NO

WELL PLAN

KICKOFF DEPTH:	500	TOTAL DEPTH:	2500
KICKOFF ANGLE:	0	MAX ANGLE:	0

PES Engineers:

Matt L.

**Signature of both field engineers required if applicable

Directional Driller:

Tyler

DATE:

4/28/17