



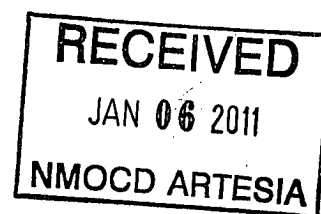
For your records

An Operating Unit of Smith International, Inc.

DIRECTIONAL SURVEY REPORT

30-015-37367

YATES PETROLEUM
PETROGULF "BJT" FEDERAL #2H- SHC
EDDY COUNTY, NEW MEXICO



PREPARED BY: FRANCISCO SINISTERRA

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

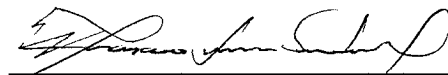
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) PRITHWISH DAS
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 07-14-10 TO 07-21-10
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
PETROGULF "BJT" FEDERAL #2H- SHC
EDDY COUNTY, NM
RIG: LATSHAW #3

9. SURVEY CERTIFIED FROM: 870 TO 4473 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 51.77 FEET ON A BEARING OF 83.37 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 4527 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: 07/15/2010
Date Completed: 07/21/2010

YATES PETROLEUM
PETROGULF "BJT" FEDERAL #2H
EDDY COUNTY, NEW MEXICO
Rig: LATSHAW # 3
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: P. DAS

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.12.56.0193 N LON: 103.44.28.0697 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 724483.9460 Y: 442659.6370
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.46° EAST TO GRID
Vertical Section Plane: 269.65
Survey Vert. Reference: 22.00' Rotary Table To Ground
Altitude: 3577.00' Ground To MSL

Measured Depth	4527.00	(feet)
Inclination	2.11	(deg)
Azimuth	103.96	(deg)
True Vertical Depth	4525.97	(feet)
Vertical Section	-51.46	(feet)
Survey X cord	724535.37	(feet)
Survey Y cord	442665.62	(feet)
Survey Lat	32.21557658 N	(deg)
Survey Lon	103.74096411 W	(deg)
Rectangular Corr. N/S	5.98 N	(feet)
Rectangular Corr. E/W	51.42 E	(feet)
Closure Distance	51.77	(feet)
Direction of Closure	83.37	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
PETROGULF "BJT" FEDERAL #2H
EDDY COUNTY, NEW MEXICO
Rig: LATSHAW # 3
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Survey Vert. Reference: 22.00' Rotary Table To Ground
Altitude: 3577.00' Ground To MSL

Survey Calculations by RX5 V6.03A using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	Rectangular Offsets (ft)	TOTAL (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
TIE IN ASSUMING VERTICAL DEPTH @ 770' MD.									
770.00	0.00	0.00	770.00	0.00	-0.00	0.00	0.00	0.00@ 0.00	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS									
870.00	0.62	21.26	870.00	100.00	-0.20	0.50 N	0.20 E	0.54@ 21.26	0.62
962.00	0.26	80.06	962.00	92.00	-0.59	1.00 N	0.58 E	1.16@ 30.11	0.58
1055.00	0.26	317.19	1055.00	93.00	-0.65	1.20 N	0.65 E	1.36@ 28.41	0.49
1148.00	0.09	10.80	1147.99	93.00	-0.53	1.42 N	0.52 E	1.51@ 19.98	0.24
1241.00	0.44	130.42	1240.99	93.00	-0.81	1.26 N	0.80 E	1.50@ 32.45	0.53
1430.00	0.70	355.60	1429.99	189.00	-1.28	1.94 N	1.27 E	2.32@ 33.10	0.56
1617.00	0.79	103.96	1616.98	187.00	-2.45	2.77 N	2.43 E	3.69@ 41.25	0.65
1803.00	1.67	71.88	1802.94	186.00	-6.27	3.30 N	6.25 E	7.07@ 62.14	0.58
1990.00	2.90	74.26	1989.79	187.00	-13.43	5.44 N	13.39 E	14.45@ 67.91	0.66
2116.00	3.08	73.47	2115.61	126.00	-19.75	7.26 N	19.71 E	21.00@ 69.77	0.15
2241.00	2.02	62.30	2240.49	125.00	-24.93	9.24 N	24.88 E	26.54@ 69.62	0.93
2335.00	1.76	52.81	2334.44	94.00	-27.56	10.89 N	27.49 E	29.57@ 68.40	0.43
2459.00	0.79	353.84	2458.41	124.00	-29.00	12.89 N	28.92 E	31.66@ 65.98	1.22
2552.00	0.97	335.20	2551.40	93.00	-28.61	14.24 N	28.52 E	31.88@ 63.47	0.36
2646.00	1.06	5.88	2645.39	94.00	-28.37	15.83 N	28.27 E	32.40@ 60.76	0.58
2739.00	0.09	229.74	2738.38	93.00	-28.41	16.63 N	28.31 E	32.83@ 59.56	1.21
2833.00	0.97	128.75	2832.38	94.00	-28.97	16.09 N	28.87 E	33.05@ 60.87	1.05
2926.00	1.14	162.15	2925.36	93.00	-29.86	14.71 N	29.77 E	33.21@ 63.70	0.68
3018.00	0.88	123.74	3017.35	92.00	-30.72	13.45 N	30.64 E	33.46@ 66.30	0.77
3112.00	0.97	132.88	3111.34	94.00	-31.90	12.51 N	31.82 E	34.19@ 68.54	0.18
3205.00	1.14	192.73	3204.32	93.00	-32.26	11.07 N	32.19 E	34.04@ 71.02	1.14
3298.00	0.26	133.32	3297.31	93.00	-32.20	10.02 N	32.14 E	33.67@ 72.68	1.11
3392.00	1.23	41.56	3391.31	94.00	-33.03	10.63 N	32.97 E	34.64@ 72.13	1.35

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
PETROGULF "BJT" FEDERAL #2H
EDDY COUNTY, NEW MEXICO
RIG: LATSHAW # 3

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
3565.00	1.06	47.27	3564.27	173.00	-35.45	13.11 N 35.37 E	37.72@ 69.67	0.12
3659.00	0.79	56.94	3658.26	94.00	-36.64	14.05 N 36.56 E	39.16@ 68.98	0.33
3751.00	0.88	67.49	3750.25	92.00	-37.83	14.67 N 37.74 E	40.49@ 68.76	0.19
3844.00	1.93	78.30	3843.22	93.00	-40.03	15.26 N 39.93 E	42.75@ 69.09	1.16
3938.00	2.37	110.29	3937.16	94.00	-43.40	14.91 N 43.31 E	45.80@ 71.01	1.34
4031.00	0.79	163.99	4030.12	93.00	-45.37	13.62 N 45.29 E	47.29@ 73.26	2.16
4124.00	1.32	197.66	4123.11	93.00	-45.21	11.99 N 45.14 E	46.70@ 75.13	0.85
4218.00	1.49	177.70	4217.08	94.00	-44.92	9.73 N 44.86 E	45.90@ 77.76	0.55
4311.00	0.97	128.49	4310.06	93.00	-45.57	8.03 N 45.52 E	46.23@ 79.99	1.21
4473.00	2.11	103.96	4472.00	162.00	-49.53	6.46 N 49.49 E	49.91@ 82.56	0.80
STRAIGHT- LINE PROJECTION TO BIT @ 4527' MD (4525.97' TVD)								
4527.00	2.11	103.96	4525.97	54.00	-51.46	5.98 N 51.42 E	51.77@ 83.37	0.00

PATHFINDER

ENERGY SERVICES

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM		
LEASE / WELL No.:	PETROGULF "BJT" FEDERAL	#2H	
WELL LOCATION:	UNDESIGNATED BONE SPRING		
COUNTY / STATE / COUNTRY:	EDDY COUNTY	NEW MEXICO	USA
RIG:	LATSHAW # 3		
API WELL No:	30-105-37367		
JOB No:	101010904-WT-WT		
P.O. / AFE No.	09-313-0		
DIRECTIONAL COMPANY:	PES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.46	LWD Calculated:	7.459
		Agreed Upon:	7.46
X =	724483.946000	Feet	Y = 442659.637000
			Feet
SITE LATITUDE:	32.215561	SITE LONGITUDE:	103.74113
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	269.65		
KELLY BUSHING ELEVATION:	22		
ALTITUDE:	3577	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	770		
DRIFT ANGLE:	0		
DRIFT DIRECTION:	0		
TRUE VERTICAL DEPTH:	770		
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:	900	TOTAL DEPTH:	4400
KICKOFF ANGLE:	0	MAX ANGLE:	0

PES Engineers:

Perthuis Leg Day

**Signature of both field engineers required if applicable

Directional Driller:

[Signature]

DATE:

07/14/10