

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

DISTRICT II

1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised July 16, 2010

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-31211	Pool Code 50270	Pool Name Penasco Draw, San Andres, Yaso Yaso
Property Code	Property Name FEDERAL AB	Well Number 13H
OGRID No. 025575	Operator Name YATES PETROLEUM CORP.	Elevation 3603'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	32	18 S	25 E		330	SOUTH	1650	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	32	18 S	25 E		2310	SOUTH	1650	WEST	EDDY
Dedicated Acres 80	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

		RECEIVED JUL 15 2011 NMOCD ARTESIA	
		OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Clifton May</u> Date: <u>4/8/11</u> Printed Name: <u>Clifton May</u> Email Address: <u>cliff@yatespetroleum.com</u>	
PROPOSED BOTTOM HOLE LOCATION Lat - N 32°42'14.501" Long - W 104°30'38.275" NMSPCE- N 619902.304 E 486800.625 (NAD-83)		SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. Signature & Seal of Professional Surveyor:	
SURFACE LOCATION Lat - N 32°41'54.914" Long - W 104°30'38.241" NMSPCE- N 617922.951 E 486800.629 (NAD-83)		Certificate No. Gary L. Jones 7977 BASIN SURVEYS 23913	

OPERATOR YATES PETROLEUM CORPORATION
WELL/LEASE FEDERAL AB 13 H
COUNTY EDDY

STATE OF NEW MEXICO
DEVIATION REPORT

30-015-37211

173	0.07
377	0.48
571	0.59
778	1.20
968	0.76
1,095	1.00
1,450	0.85
2,036	1.44

STATE OF TEXAS

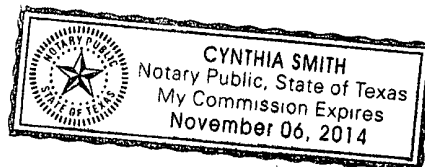
BY: Steve Moore

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Moore on behalf of Patterson-UTI Drilling Company LLC.

Aug. 30, 2011, by Steve

Cynthia Smith
Notary Public for Midland County, Texas
My Commission Expires:



30-015-37211



Job Number: SVCO-110961
 Company: Yates Petroleum Corporation
 Lease/Well: FEDERAL AB 13H
 Location: Eddy County, NM
 Rig Name: Patterson #101
 RKB: 19'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 8.13°
 Grid: East To Grid
 File name: F:\SURVEY\2011SU-11\YATES\FEDAB13H.SVY
 Date/Time: 08-Aug-11 / 16:57
 Curve Name: Surface - 2000' M.D. (Gyroscopic)

We hereby certify that our survey data from
 Surface MD to 2000 MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Dana Outte 8-10-11
 MS Energy Services Date

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.50	267.33	200.00	-.04	-.87	-.04	.87	267.33	.25
400.00	.25	244.11	399.99	-.27	-2.14	-.27	2.15	262.75	.14
600.00	.50	149.90	599.99	-1.22	-2.09	-1.22	2.42	239.79	.29
800.00	.25	96.68	799.99	-2.02	-1.22	-2.02	2.36	211.09	.20
1000.00	.50	92.46	999.98	-2.11	.09	-2.11	2.11	177.68	.13
1200.00	.50	98.69	1199.97	-2.28	1.82	-2.28	2.92	141.41	.03
1400.00	.50	92.47	1399.97	-2.45	3.55	-2.45	4.32	124.58	.03
1600.00	.75	133.26	1599.96	-3.38	5.38	-3.38	6.36	122.18	.25
1800.00	.75	132.04	1799.94	-5.16	7.30	-5.16	8.94	125.23	.01

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM CORPORATION** *

JOB NUMBER: SVCO 110961

WELL NAME: FEDERAL AB #13H

LOCATION: EDDY COUNTY, NEW MEXICO

SURVEY DATE: AUGUST 08, 2011

SURVEY ENGINEER: S. SMITH

MAGNETIC DECLINATION: 08.13 GRID NORTH

GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: N00-00E
SURF. ELEVATION: 19

***** DEPTH MEASURED IN FEET *****

***** THIS DIRECTIONAL SURVEY REPORT IS *****
***** CORRECT TO THE BEST OF MY KNOWLEDGE *****
***** AND IS SUPPORTED BY ACTUAL FIELD DATA! *****

COMMENTS: PATTERSON 101 *****
RKB 19' *****
EMAIL TBUSSELL@YATESPETROLEUM.COM**
MIKEL@YATESPETROLEUM.COM *****

***** COMPANY REPRESENTATIVE *****

**



A Schlumberger Company

DIRECTIONAL SURVEY REPORT

30-015-37211

YATES PETROLEUM

FEDERAL AB #13H

EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

Pathfinder

6213 WCR 112
Midland, Texas. 79706
Tel. (432)687-1647
Fax (432)687-1544



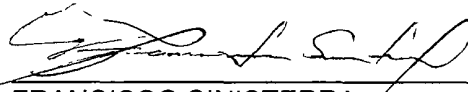
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JOHN PATTERSON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 08-07-11 TO 08-14-11
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
FEDERAL AB #13H
EDDY COUNTY, NM
RIG: PATTERSON 101

9. SURVEY CERTIFIED FROM: 2027 TO 4234 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 1943.78 FEET ON A BEARING OF 0.93 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 4286 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: 08/07/2011
Date Completed: 08/14/2011

YATES PETROLEUM CORPORATION
FEDERAL AB #13H
EDDY COUNTY, NEW MEXICO
Rig:PATTERSON 101
PathFinder Office Supervisor: FRANCISCO SINNISTERRA
PathFinder Field Engineers:J. PATTERSON
K.THURMAN

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.41.54.9145 N LON:104.30.38.2419 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 486800.6290 Y: 617922.9510
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.13° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 18.50' Rotary Table To Ground
Altitude:3603.00' Ground To MSL

Measured Depth	4286.00	(feet)
Inclination	88.02	(deg)
Azimuth	0.36	(deg)
True Vertical Depth	2584.77	(feet)
Vertical Section	1943.53	(feet)
Survey X cord	486832.00	(feet)
Survey Y cord	619866.46	(feet)
Survey Lat	32.70392959 N	(deg)
Survey Lon	104.51053133 W	(deg)
Rectangular Corr. N/S	1943.53 N	(feet)
Rectangular Corr. E/W	31.39 E	(feet)
Closure Distance	1943.78	(feet)
Direction of Closure	0.93	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION

FEDERAL AB #13H

EDDY COUNTY, NEW MEXICO

Rig:PATTERSON 101

PathFinder Office Supervisor: FRANCISCO SINNISTERRA

PathFinder Field Engineers: J. PATTERSON

K.THURMAN

Page 01/03

Tie-in Date: 08/07/2011

Date Completed: 08/14/2011

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.41.54.9145 N LON:104.30.38.2419 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 486800.6290 Y: 617922.9510

North Aligned To:GRID NORTH

Total Magnetic Correction: 8.13° EAST TO GRID

Vertical Section Plane: 0.00

Survey Vert. Reference: 18.50' Rotary Table To Ground

Altitude:3603.00' Ground To MSL

Survey Calculations by RX4 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 ENERGY GYRO SURVEYS										
0.00	0.00	0.00	-0.00	0.00	-0.00	0.00 S	0.00 W	0.01@	205.96	0.00
200.00	0.50	267.33	200.00	200.00	-0.05	0.05 S	0.87 W	0.88@	267.03	0.25
400.00	0.25	244.11	399.99	200.00	-0.28	0.28 S	2.14 W	2.16@	262.63	0.14
600.00	0.50	149.90	599.99	200.00	-1.22	1.22 S	2.09 W	2.42@	239.72	0.29
800.00	0.25	96.68	799.98	200.00	-2.03	2.03 S	1.22 W	2.37@	211.08	0.20
1000.00	0.50	92.46	999.98	200.00	-2.12	2.12 S	0.08 E	2.12@	177.75	0.13
1200.00	0.50	98.69	1199.97	200.00	-2.29	2.29 S	1.82 E	2.92@	141.50	0.03
1400.00	0.50	92.47	1399.97	200.00	-2.45	2.45 S	3.55 E	4.32@	124.65	0.03
1600.00	0.75	133.26	1599.95	200.00	-3.39	3.39 S	5.38 E	6.36@	122.22	0.25
1800.00	0.75	132.04	1799.94	200.00	-5.16	5.16 S	7.30 E	8.94@	125.26	0.01
** TIE IN SURVEY PROVIDED BY MS ENERGY SERVICES										
2000.00	0.75	110.60	1999.92	200.00	-6.50	6.50 S	9.50 E	11.51@	124.38	0.14
THE FOLLOWING ARE PATHFINDER MWD SURVEYS										
2027.00	0.79	154.46	2026.92	27.00	-6.73	6.73 S	9.75 E	11.84@	124.63	2.13
2058.00	0.62	106.79	2057.92	31.00	-6.97	6.97 S	10.00 E	12.19@	124.89	1.91
2090.00	2.20	35.11	2089.91	32.00	-6.52	6.52 S	10.52 E	12.37@	121.79	6.53
2122.00	5.63	21.34	2121.83	32.00	-4.55	4.55 S	11.44 E	12.32@	111.70	11.04
2154.00	10.11	18.05	2153.52	32.00	-0.42	0.42 S	12.88 E	12.89@	91.86	14.07
2186.00	15.30	15.08	2184.72	32.00	6.33	6.33 N	14.85 E	16.15@	66.91	16.34
2217.00	20.31	13.97	2214.23	31.00	15.51	15.51 N	17.22 E	23.17@	47.99	16.20
2249.00	24.27	12.65	2243.83	32.00	27.32	27.32 N	20.00 E	33.86@	36.21	12.47
2281.00	27.61	10.64	2272.61	32.00	41.03	41.03 N	22.81 E	46.94@	29.07	10.79
2313.00	30.95	9.15	2300.51	32.00	56.44	56.44 N	25.49 E	61.93@	24.30	10.68
2344.00	34.73	8.03	2326.56	31.00	73.06	73.06 N	27.99 E	78.24@	20.96	12.35
2376.00	38.69	6.79	2352.20	32.00	92.03	92.03 N	30.45 E	96.94@	18.31	12.59
2407.00	42.30	5.10	2375.78	31.00	112.05	112.05 N	32.52 E	116.67@	16.19	12.17

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
FEDERAL AB #13H
EDDY COUNTY, NEW MEXICO
RIG:PATTERSON 101

Page 02/03

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)
2438.00	45.81	3.44	2398.05	31.00	133.54	133.54 N	34.12 E	137.83@	14.33	11.92
2470.00	50.30	1.48	2419.44	32.00	157.31	157.31 N	35.12 E	161.19@	12.59	14.75
2501.00	53.99	1.34	2438.46	31.00	181.78	181.78 N	35.73 E	185.25@	11.12	11.91
2532.00	57.33	1.58	2455.94	31.00	207.36	207.36 N	36.38 E	210.53@	9.95	10.79
2564.00	61.11	1.05	2472.31	32.00	234.84	234.84 N	37.01 E	237.74@	8.96	11.90
2596.00	64.37	0.77	2486.97	32.00	263.28	263.28 N	37.46 E	265.93@	8.10	10.22
2628.00	67.27	1.31	2500.08	32.00	292.47	292.47 N	37.99 E	294.92@	7.40	9.19
2659.00	70.70	1.32	2511.19	31.00	321.39	321.39 N	38.65 E	323.71@	6.86	11.07
2691.00	73.69	1.19	2520.97	32.00	351.85	351.85 N	39.32 E	354.04@	6.38	9.35
2723.00	76.06	1.15	2529.32	32.00	382.73	382.73 N	39.95 E	384.81@	5.96	7.41
2755.00	80.37	0.92	2535.86	32.00	414.04	414.04 N	40.52 E	416.02@	5.59	13.49
2787.00	83.10	0.84	2540.46	32.00	445.70	445.70 N	41.00 E	447.59@	5.26	8.53
2864.00	89.08	0.02	2545.71	77.00	522.49	522.49 N	41.58 E	524.14@	4.55	7.84
2896.00	90.92	359.98	2545.71	32.00	554.49	554.49 N	41.58 E	556.04@	4.29	5.75
2928.00	91.10	359.77	2545.14	32.00	586.48	586.48 N	41.51 E	587.95@	4.05	0.86
2960.00	89.69	0.15	2544.92	32.00	618.48	618.48 N	41.48 E	619.87@	3.84	4.56
2991.00	88.11	0.51	2545.52	31.00	649.47	649.47 N	41.66 E	650.81@	3.67	5.23
3022.00	87.85	0.98	2546.61	31.00	680.45	680.45 N	42.07 E	681.75@	3.54	1.73
3054.00	88.20	1.57	2547.71	32.00	712.42	712.42 N	42.78 E	713.71@	3.44	2.14
3086.00	89.08	1.58	2548.47	32.00	744.40	744.40 N	43.66 E	745.68@	3.36	2.75
3118.00	89.25	1.59	2548.94	32.00	776.39	776.39 N	44.54 E	777.66@	3.28	0.53
3149.00	88.72	0.70	2549.49	31.00	807.37	807.37 N	45.16 E	808.64@	3.20	3.34
3181.00	88.20	359.38	2550.35	32.00	839.36	839.36 N	45.18 E	840.58@	3.08	4.43
3213.00	88.29	359.31	2551.33	32.00	871.34	871.34 N	44.82 E	872.50@	2.94	0.36
3245.00	88.11	359.31	2552.33	32.00	903.33	903.33 N	44.43 E	904.42@	2.82	0.56
3277.00	87.85	359.67	2553.46	32.00	935.31	935.31 N	44.15 E	936.35@	2.70	1.39
3308.00	87.93	359.99	2554.60	31.00	966.28	966.28 N	44.06 E	967.29@	2.61	1.06
3340.00	88.11	358.94	2555.71	32.00	998.26	998.26 N	43.76 E	999.22@	2.51	3.33

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
FEDERAL AB #13H
EDDY COUNTY, NEW MEXICO
RIG:PATTERSON 101

Page 03/03

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)
3371.00	88.11	358.84	2556.73	31.00	1029.24	1029.24 N	43.16 E	1030.15@	2.40	0.32
3403.00	88.29	358.91	2557.73	32.00	1061.22	1061.22 N	42.53 E	1062.07@	2.29	0.60
3466.00	88.46	359.02	2559.52	63.00	1124.18	1124.18 N	41.39 E	1124.94@	2.11	0.32
3530.00	89.43	358.94	2560.70	64.00	1188.16	1188.16 N	40.25 E	1188.84@	1.94	1.52
3594.00	89.43	359.03	2561.34	64.00	1252.15	1252.15 N	39.12 E	1252.76@	1.79	0.14
3657.00	89.69	358.80	2561.82	63.00	1315.13	1315.13 N	37.93 E	1315.68@	1.65	0.55
3720.00	89.78	359.19	2562.11	63.00	1378.12	1378.12 N	36.82 E	1378.62@	1.53	0.64
3783.00	89.25	359.17	2562.64	63.00	1441.12	1441.12 N	35.92 E	1441.56@	1.43	0.84
3847.00	87.67	359.54	2564.36	64.00	1505.09	1505.09 N	35.20 E	1505.50@	1.34	2.54
3911.00	86.70	358.44	2567.51	64.00	1569.00	1569.00 N	34.07 E	1569.37@	1.24	2.29
3974.00	86.61	358.63	2571.18	63.00	1631.87	1631.87 N	32.46 E	1632.19@	1.14	0.33
4036.00	86.44	359.23	2574.94	62.00	1693.74	1693.74 N	31.31 E	1694.03@	1.06	1.00
4099.00	87.23	359.33	2578.42	63.00	1756.64	1756.64 N	30.52 E	1756.91@	1.00	1.26
4163.00	88.46	0.69	2580.83	64.00	1820.59	1820.59 N	30.53 E	1820.85@	0.96	2.86
4227.00	88.11	0.20	2582.74	64.00	1884.56	1884.56 N	31.03 E	1884.82@	0.94	0.94
4234.00	88.02	0.36	2582.98	7.00	1891.56	1891.56 N	31.06 E	1891.81@	0.94	2.62
STRAIGHT LINE PROJECTION TO BIT AT 4286' MD(2584.77' TVD)										
4286.00	88.02	0.36	2584.77	52.00	1943.53	1943.53 N	31.39 E	1943.78@	0.93	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 CORP.		
LEASE / WELL No.:	FEDERAL AB	13H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	PATTERSON 101		
API WELL No:	30-015-37211		
JOB No:	70003264 WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	ADS		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	8.13	LWD Calculated:	Agreed Upon:
X =	486800.629000	Feet	Y = 617922.951000 Feet
SITE LATITUDE:	32.698587 N	SITE LONGITUDE:	104.510623 W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	0		
KELLY BUSHING ELEVATION:	18.5		
ALTITUDE:	3603	Feet	WATER DEPTH: Feet

TIE-IN SURVEY

MEASURED DEPTH:	2000		
DRIFT ANGLE:	0.75		
DRIFT DIRECTION:	110.6		
TRUE VERTICAL DEPTH:	1999.92		
VERTICAL SECTION:	-6.5		
RECTANGULAR COORDINATE (N / S) :	-6.5		
RECTANGULAR COORDINATE (E / W) :	9.5		
CLOSURE DISTANCE / DIRECTION:	11.51	124.36	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	MS ENERGY SERVICES		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	2072.6	TOTAL DEPTH:	4324.69
KICKOFF ANGLE:	0	MAX ANGLE:	89.05

PES Engineers:

**Signature of both field engineers required if applicable

Directional Driller:

DATE:

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM
FEDERAL AB 13H
EDDY COUNTY, NEW MEXICO
Rig: PATTERSON 101

Wed Aug 03 13:55:05 2011

Coordinates

Latitude: 32.698587 N (32 deg. 41 min. 54.9145 sec.)
Longitude: 104.510623 W (-104 deg. 30 min. 38.2419 sec.)
Elevation: 3621.50 feet.
Calculation Date: Aug/03/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.4583 degrees
Total Magnetic Field: 0.48780 gauss
Magnetic Declination: 8.033798 degrees
Horizontal Intensity: 0.240516 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 8.033798 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 486800.6290 feet
Y: 617922.9510 feet
True to Grid: (convergence) 0.095775 degrees
Magnetic to Grid: 8.129573 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 8.129573 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CORPORATION
FEDERAL AB #13H
PENASCO DRAW, SAN ANDRES, YESO
Rig:PATTERSON 101

Wed Aug 10 14:21:02 2011

Coordinates

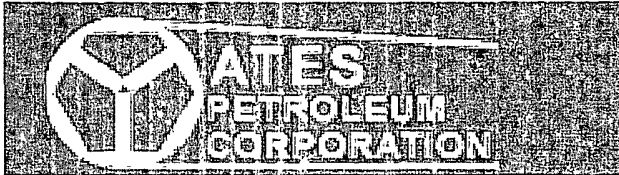
Latitude: 32.698587 N (32 deg. 41 min. 54.9145 sec.)
Longitude: 104.510623 W (-104 deg. 30 min. 38.2419 sec.)
Elevation: 3621.50 feet.
Calculation Date: Aug/07/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.4580 degrees
Total Magnetic Field: 0.48779 gauss
Magnetic Declination: 8.032472 degrees
Horizontal Intensity: 0.240512 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 8.032472 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 486800.6290 feet
Y: 617922.9510 feet
True to Grid: (convergence) 0.095775 degrees
Magnetic to Grid: 8.128247 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 8.128247 Degr.



Yates Petroleum Corp.

Eddy County

Federal AB

#13H

OH

Design: OH

Pathfinder X&Y Report

01 September, 2011

PATHFINDER®

A Schlumberger Company

30-015-37211



Pathfinder
Pathfinder X&Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp
Project: Eddy County
Site: Federal AB
Well: #13H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #13H
TVD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
MD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project: Eddy County

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site: Federal AB

Site Position:	Northing:	617,922.951 usft	Latitude:	32° 41' 54.914 N
From: Map	Easting:	486,800.629 usft	Longitude:	104° 30' 38.242 W
Position Uncertainty: 0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.10 °

Well: #13H

Well Position	+N/-S	0.00 usft	Northing:	617,922.951 usft	Latitude:	32° 41' 54.914 N
	+E/-W	0.00 usft	Easting:	486,800.629 usft	Longitude:	104° 30' 38.242 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,603.00 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/22/2011	8.04	60.46	48,784

Design: OH

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.00



Pathfinder Pathfinder X&Y Report



Company: Yates Petroleum Corp
Project: Eddy County
Site: Federal AB
Well: #13H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #13H
TVD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
MD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey Program		Date	9/1/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.00	2,000.00	Gyro Survey (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
2,027.00	4,036.00	Survey #2 - MWD (OH)	MWD	MWD - Standard	

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	-3,621.50	0.00	0.00	0.00	0.00	617,922.95	486,800.63
200.00	0.50	267.33	200.00	-3,421.50	-0.04	-0.87	-0.04	0.25	617,922.91	486,799.76
400.00	0.25	244.11	399.99	-3,221.51	-0.27	-2.14	-0.27	0.14	617,922.68	486,798.49
600.00	0.50	149.90	599.99	-3,021.51	-1.22	-2.09	-1.22	0.29	617,921.73	486,798.54
800.00	0.25	96.68	799.99	-2,821.51	-2.02	-1.22	-2.02	0.20	617,920.93	486,799.41
1,000.00	0.50	92.46	999.98	-2,621.52	-2.11	0.09	-2.11	0.13	617,920.84	486,800.71
1,200.00	0.50	98.69	1,199.97	-2,421.53	-2.28	1.82	-2.28	0.03	617,920.67	486,802.45
1,400.00	0.50	92.47	1,399.97	-2,221.53	-2.45	3.55	-2.45	0.03	617,920.50	486,804.18
1,600.00	0.75	133.26	1,599.96	-2,021.54	-3.38	5.38	-3.38	0.25	617,919.57	486,806.01
1,800.00	0.75	132.04	1,799.94	-1,821.56	-5.16	7.30	-5.16	0.01	617,917.79	486,807.93
2,000.00	0.75	110.60	1,999.92	-1,621.58	-6.50	9.50	-6.50	0.14	617,916.46	486,810.13
2,027.00	0.79	154.46	2,026.92	-1,594.58	-6.73	9.75	-6.73	2.13	617,916.23	486,810.38
2,058.00	0.62	105.79	2,057.92	-1,563.58	-6.96	10.00	-6.96	1.94	617,915.99	486,810.63
2,090.00	2.20	35.11	2,089.91	-1,531.59	-6.51	10.52	-6.51	6.50	617,916.44	486,811.15
KOP - 2090.00'MD, 2089.91'TVD', -6.51'N, 10.52'E										
2,122.00	5.63	21.34	2,121.83	-1,499.67	-4.54	11.45	-4.54	11.04	617,918.41	486,812.08
2,154.00	10.11	18.05	2,153.52	-1,467.98	-0.41	12.89	-0.41	14.06	617,922.54	486,813.52
2,186.00	15.30	15.08	2,184.73	-1,436.77	6.34	14.86	6.34	16.34	617,929.29	486,815.49
2,217.00	20.31	13.97	2,214.23	-1,407.27	15.52	17.22	15.52	16.20	617,938.47	486,817.85
2,249.00	24.27	12.65	2,243.83	-1,377.67	27.33	20.00	27.33	12.47	617,950.28	486,820.63
2,281.00	27.61	10.64	2,272.61	-1,348.89	41.04	22.82	41.04	10.79	617,963.99	486,823.44



Pathfinder Pathfinder X&Y Report



Company: Yates Petroleum Corp.
Project: Eddy County
Site: Federal AB
Well: #13H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #13H
TVD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
MD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)		TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,313.00	30.95	9 15		2,300 52	-1,320.98	56.45	25.49	56 45	10.68	617,979.41	486,826.12
2,344.00	34 73	8 03		2,326.56	-1,294.94	73.08	28.00	73.08	12 35	617,996 03	486,828 62
2,376.00	38 69	6 79		2,352 21	-1,269.29	92 04	30 45	92.04	12 59	618,014 99	486,831 08
2,407.00	42.30	5 10		2,375 78	-1,245.72	112.06	32.53	112.06	12.17	618,035.01	486,833 16
2,438.00	45 81	3.44		2,398.05	-1,223.45	133 55	34.12	133.55	11.92	618,056 50	486,834 75
2,470.00	50.30	1.48		2,419.44	-1,202.06	157.32	35 13	157.32	14.75	618,080 27	486,835.76
2,501.00	53.99	1 34		2,438 46	-1,183 04	181.79	35 73	181.79	11.91	618,104 74	486,836.36
2,532 00	57 33	1 58		2,455 94	-1,165.56	207 37	36 38	207 37	10 79	618,130 32	486,837 01
2,564 00	61.11	1.05		2,472 32	-1,149.18	234.85	37.01	234.85	11 90	618,157 80	486,837.64
2,596.00	64.37	0 77		2,486.97	-1,134.53	263 29	37.46	263.29	10.22	618,186 24	486,838 09
2,628.00	67.27	1 31		2,500.08	-1,121.42	292 48	37 99	292.48	9.19	618,215 43	486,838.62
2,659 00	70.70	1 32		2,511 19	-1,110.31	321 40	38 66	321.40	11 06	618,244 35	486,839.29
2,691.00	73 69	1.19		2,520 98	-1,100.52	351.86	39 32	351.86	9 35	618,274 81	486,839 95
2,723.00	76.06	1 15		2,529.33	-1,092.17	382.74	39.95	382.74	7.41	618,305 69	486,840.58
2,755.00	80.37	0.92		2,535.86	-1,085 64	414.05	40.52	414.05	13.49	618,337 00	486,841.15
2,787.00	83.10	0.84		2,540 46	-1,081 04	445.71	41.01	445.71	8.53	618,368 67	486,841.63
2,864.00	89.08	0.02		2,545 71	-1,075.79	522.50	41 58	522 50	7.84	618,445.45	486,842 21
2,896 00	90.92	359.98		2,545 71	-1,075.79	554 50	41 58	554.50	5 75	618,477 45	486,842 21
LP - 2896.00'MD, 2545.71'TVD', 554.50'N, 41.58'E											
2,928 00	91.10	359 77		2,545 14	-1,076.36	586 49	41 51	586 49	0 86	618,509 44	486,842 14
2,960 00	89.69	0.15		2,544.92	-1,076.58	618 49	41.49	618.49	4.56	618,541.44	486,842.12
2,991.00	88.11	0.51		2,545 52	-1,075.98	649.48	41.67	649.48	5.23	618,572.43	486,842 30
3,022.00	87 85	0 98		2,546.61	-1,074 89	680.46	42 07	680 46	1 73	618,603.41	486,842.70
3,054 00	88 20	1 57		2,547 71	-1,073 79	712.43	42 78	712.43	2.14	618,635 38	486,843.41
3,086.00	89.08	1 58		2,548 47	-1,073 03	744 41	43 66	744.41	2.75	618,667 36	486,844 29
3,118.00	89.25	1 59		2,548 94	-1,072 56	776 40	44 55	776.40	0 53	618,699 35	486,845 17
3,149.00	88 72	0 70		2,549 49	-1,072.01	807.38	45.16	807.38	3 34	618,730 34	486,845.79



Pathfinder Pathfinder X&Y Report



Company: Yates Petroleum Corp
Project: Eddy County
Site: Federal AB
Well: #13H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #13H
TVD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
MD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
3,181.00	88.20	359.38	2,550.35	-1,071.15	839.37	45.19	839.37	4.43	618,762.32	486,845.82
3,213.00	88.29	359.31	2,551.33	-1,070.17	871.36	44.82	871.36	0.36	618,794.31	486,845.45
3,245.00	88.11	359.31	2,552.33	-1,069.17	903.34	44.44	903.34	0.56	618,826.29	486,845.07
3,277.00	87.85	359.67	2,553.46	-1,068.04	935.32	44.15	935.32	1.39	618,858.27	486,844.78
3,308.00	87.93	359.99	2,554.60	-1,066.90	966.29	44.06	966.29	1.06	618,889.25	486,844.69
3,340.00	88.11	358.94	2,555.71	-1,065.79	998.27	43.76	998.27	3.33	618,921.22	486,844.39
3,371.00	88.11	358.84	2,556.73	-1,064.77	1,029.25	43.16	1,029.25	0.32	618,952.20	486,843.79
3,403.00	88.29	358.91	2,557.74	-1,063.76	1,061.23	42.53	1,061.23	0.60	618,984.18	486,843.16
3,466.00	88.46	359.02	2,559.52	-1,061.98	1,124.19	41.40	1,124.19	0.32	619,047.14	486,842.02
3,530.00	89.43	358.94	2,560.70	-1,060.80	1,188.17	40.26	1,188.17	1.52	619,111.12	486,840.89
3,594.00	89.43	359.03	2,561.34	-1,060.16	1,252.16	39.12	1,252.16	0.14	619,175.11	486,839.75
3,657.00	89.69	358.80	2,561.82	-1,059.68	1,315.15	37.93	1,315.15	0.55	619,238.10	486,838.56
3,720.00	89.78	359.19	2,562.11	-1,059.39	1,378.13	36.82	1,378.13	0.64	619,301.09	486,837.45
3,783.00	89.25	359.17	2,562.65	-1,058.85	1,441.13	35.92	1,441.13	0.84	619,364.08	486,836.55
3,847.00	87.67	359.54	2,564.37	-1,057.13	1,505.10	35.20	1,505.10	2.54	619,428.05	486,835.83
3,911.00	86.70	358.44	2,567.51	-1,053.99	1,569.01	34.08	1,569.01	2.29	619,491.96	486,834.71
3,974.00	86.61	358.63	2,571.18	-1,050.32	1,631.88	32.47	1,631.88	0.33	619,554.83	486,833.10
4,036.00	86.44	359.23	2,574.94	-1,046.56	1,693.75	31.31	1,693.75	1.00	619,616.71	486,831.94

BHL - 4036.00'MD, 2574.94'TVD', 1693.75'N, 31.31'E - BHL (Fed AB 14)

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,090.00	2,089.91	-6.51	10.52	KOP - 2090.00'MD, 2089.91'TVD', -6.51'N, 10.52'E
2,896.00	2,545.71	554.50	41.58	LP - 2896.00'MD, 2545.71'TVD', 554.50'N, 41.58'E
4,036.00	2,574.94	1,693.75	31.31	BHL - 4036.00'MD, 2574.94'TVD', 1693.75'N, 31.31'E



Pathfinder
Pathfinder X&Y Report

PATHFINDER
A Schlumberger Company

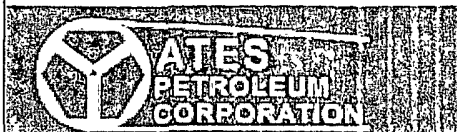
Company: Yates Petroleum Corp
Project: Eddy County
Site: Federal AB
Well: #13H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #13H
TVD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
MD Reference: KB=18.5' @ 3621.50usft (Patterson 101)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Checked By _____

Approved By: _____

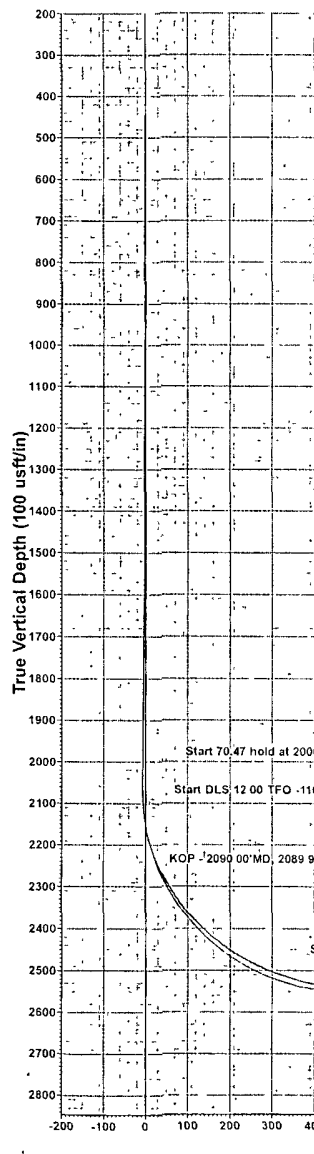
Date: _____



Project: Eddy County
Site: Federal AB
Well: #13H
Wellbore: OH
Plan: Plan #3 (#13H/OH)

PATHFINDER
A Schlumberger Company

We



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target
1	2000.00	0.75	110.60	1999.92	-6.50	9.50	0.00	0.00	-6.50	
2	2070.47	0.75	110.60	2070.39	-6.82	10.37	0.00	0.00	-6.82	
3	2814.81	89.06	0.30	2549.92	462.77	18.62	12.00	-110.31	462.77	
4	4295.80	89.06	0.30	2574.22	1943.55	26.37	0.00	0.00	1943.55	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N-S	+E-W	Northing	Easting	Shape
BHL (Fed AB)	2875.00	1943.55	26.37	619866.501	486826.999	Point

WELL DETAILS #13H						
Ground Elevation	3603.00					
RKB Elevation	KB=18.5' @ 3621.50usft (Patterson 101)					
Rig Name	Patterson 101					
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	617922.951	486800.629	32° 41' 54.914 N	104° 30' 38.242 W	

Azimuths to Grid North
True North: 0.10°
Magnetic North: 8.13°

Magnetic Field
Strength: 48784.0snT
Dip Angle: 60.46°
Date: 7/22/2011
Model: IGRF2010

PROJECT DETAILS: Eddy County
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

