



A Schlumberger Company

***DIRECTIONAL SURVEY REPORT***

*30-015-38575*

**YATES PETROLEUM**

***ANTHILL "AAK" STATE COM #2H - SHC***

***EDDY COUNTY, NEW MEXICO***

**PREPARED BY: JUAN ALCOCER**

Pathfinder

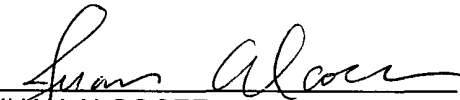
6213 WCR 112  
Midland, Texas 79706  
Tel (432)687-1647  
Fax (432)687-1544



DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:  
A) ALEX CASTILLO
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 4-22-12 TO 4-23-12
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  
ANTHILL "AAK" STATE COM #2H - SHC  
EDDY COUNTY, NM  
RIG: SILVER OAK 10
9. SURVEY CERTIFIED FROM: 476 TO 1,803 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE  
DISPLACED AT 8.90 FEET ON A BEARING OF 186.12 DEGREES FROM THE  
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 1,940 FEET,  
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

  
\_\_\_\_\_  
JUAN ALCOCER  
MWD COORDINATOR

# PathFinder Energy Services, Inc.

## BHL Report

Page 01/01  
Tie-in Date: 04/21/2012  
Date Completed: 05/15/2012

YATES PETROLEUM CROP.  
ANTHILL AAK STATE COM #2H  
EDDY COUNTY, NM  
Rig:SILVER OAK 10  
PathFinder Office Supervisor: JUAN ALCOCER  
PathFinder Field Engineers:ALEX CASTILLO  
FREDDY LICERO

Survey Horiz. Reference:WELLHEAD  
Ref Coordinates: LAT:32.36.2.3456 N LON:104.2.17.2731 W  
GRID Reference:NAD83 new mexico east Transverse Mercator  
Ref GRID Coord: X: 632245.1600 Y: 582373.9600  
North Aligned To:GRID NORTH  
Total Magnetic Correction: 7.57° EAST TO GRID  
Vertical Section Plane: 270.02  
Survey Vert. Reference: 18.00' Kelly Bushing To Ground  
Altitude:3303.00' Ground To MSL

|                       |                |             |
|-----------------------|----------------|-------------|
| Measured Depth        | 1940.00        | (feet)      |
| Inclination           | 0.88           | (deg)       |
| Azimuth               | 268.78         | (deg)       |
| True Vertical Depth   | 1939.32        | (feet)      |
| Vertical Section      | 0.95           | (feet)      |
| Survey X cord         | 632244.21      | (feet)      |
| Survey Y cord         | 582365.11      | (feet)      |
| Survey Lat            | 32.60062725 N  | (deg)       |
| Survey Lon            | 104.03813458 W | (deg)       |
| Rectangular Corr. N/S | 8.85 S         | (feet)      |
| Rectangular Corr. E/W | 0.95 W         | (feet)      |
| Closure Distance      | 8.90           | (feet)      |
| Direction of Closure  | 186.12         | (deg)       |
| Dogleg Severity       | 0.00           | (deg/100ft) |

# PathFinder Energy Services, Inc.

## Survey Report

YATES PETROLEUM CROP.  
 ANTHILL AAK STATE COM #2H  
 EDDY COUNTY, NM  
 Rig: SILVER OAK 10  
 PathFinder Office Supervisor: JUAN ALCOCER  
 PathFinder Field Engineers: ALEX CASTILLO  
 FREDDY LICERO

Page 01/01  
 Tie-in Date: 04/21/2012  
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 Survey Vert. Reference: 18.00' Kelly Bushing To Ground  
 Altitude: 3303.00' Ground To MSL

Survey Calculations by RX5 V6.04A using Minimum Curvature

| Measured<br>Depth<br>(ft)                            | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Course<br>Length<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) (ft) |        | Closure<br>Dist Dir<br>(ft) (deg) |        | DLS<br>(dg/100ft) |
|------------------------------------------------------|---------------|------------------------|-------------|--------------------------|-----------------------------|-------------------------------------------|--------|-----------------------------------|--------|-------------------|
| ASSUME VERTICAL AT 376.00'MD.                        |               |                        |             |                          |                             |                                           |        |                                   |        |                   |
| 376.00                                               | 0.00          | 0.00                   | 376.00      | 0.00                     | 0.00                        | 0.00                                      | 0.00   | 0.00@                             | 0.00   | 0.00              |
| THE FOLLOWING ARE PATHFINDER MWD SURVEYS.            |               |                        |             |                          |                             |                                           |        |                                   |        |                   |
| 476.00                                               | 4.66          | 213.92                 | 475.89      | 100.00                   | 2.27                        | 3.37 S                                    | 2.27 W | 4.06@                             | 213.92 | 4.66              |
| 567.00                                               | 3.52          | 215.36                 | 566.66      | 91.00                    | 5.94                        | 8.72 S                                    | 5.95 W | 10.55@                            | 214.30 | 1.26              |
| 658.00                                               | 1.49          | 213.54                 | 657.56      | 91.00                    | 8.21                        | 11.98 S                                   | 8.22 W | 14.53@                            | 214.44 | 2.23              |
| 748.00                                               | 0.18          | 137.95                 | 747.55      | 90.00                    | 8.77                        | 13.06 S                                   | 8.77 W | 15.73@                            | 213.88 | 1.62              |
| 839.00                                               | 1.06          | 67.03                  | 838.55      | 91.00                    | 7.89                        | 12.84 S                                   | 7.90 W | 15.08@                            | 211.60 | 1.12              |
| 929.00                                               | 2.20          | 61.46                  | 928.51      | 90.00                    | 5.61                        | 11.69 S                                   | 5.62 W | 12.97@                            | 205.66 | 1.28              |
| 1020.00                                              | 2.02          | 64.86                  | 1019.45     | 91.00                    | 2.63                        | 10.18 S                                   | 2.63 W | 10.51@                            | 194.49 | 0.24              |
| 1117.00                                              | 1.32          | 95.22                  | 1116.41     | 97.00                    | -0.03                       | 9.55 S                                    | 0.03 E | 9.55@                             | 179.81 | 1.14              |
| 1202.00                                              | 1.67          | 111.87                 | 1201.38     | 85.00                    | -2.16                       | 10.10 S                                   | 2.16 E | 10.33@                            | 167.95 | 0.65              |
| 1297.00                                              | 0.62          | 101.41                 | 1296.36     | 95.00                    | -3.95                       | 10.72 S                                   | 3.94 E | 11.42@                            | 159.80 | 1.12              |
| 1392.00                                              | 0.26          | 28.91                  | 1391.36     | 95.00                    | -4.56                       | 10.63 S                                   | 4.55 E | 11.56@                            | 156.82 | 0.63              |
| 1486.00                                              | 0.35          | 335.52                 | 1485.36     | 94.00                    | -4.54                       | 10.18 S                                   | 4.54 E | 11.15@                            | 155.99 | 0.30              |
| 1582.00                                              | 0.62          | 297.11                 | 1581.35     | 96.00                    | -3.96                       | 9.68 S                                    | 3.95 E | 10.46@                            | 157.79 | 0.43              |
| 1677.00                                              | 0.79          | 295.71                 | 1676.35     | 95.00                    | -2.91                       | 9.16 S                                    | 2.91 E | 9.61@                             | 162.41 | 0.18              |
| 1803.00                                              | 0.88          | 268.78                 | 1802.33     | 126.00                   | -1.16                       | 8.81 S                                    | 1.16 E | 8.88@                             | 172.53 | 0.32              |
| STRAIGHT LINE PROJECTION TO BIT DEPTH AT 1940.00'MD. |               |                        |             |                          |                             |                                           |        |                                   |        |                   |
| 1940.00                                              | 0.88          | 268.78                 | 1939.32     | 137.00                   | 0.95                        | 8.85 S                                    | 0.95 W | 8.90@                             | 186.12 | 0.00              |



A Schlumberger Company

## TIE-IN SURVEY INFORMATION SHEET

### CLIENT INFORMATION

|                           |                       |     |     |
|---------------------------|-----------------------|-----|-----|
| CLIENT:                   | YATES PETROLEUM CORP. |     |     |
| LEASE / WELL No.:         | ANTHILL AAK STATE COM | #2H |     |
| WELL LOCATION:            | EDDY COUNTY, NM       |     |     |
| COUNTY / STATE / COUNTRY: | EDDY                  | NM  | USA |
| RIG:                      | SLIVER OAK 10         |     |     |
| API WELL No:              | 30-015-38575          |     |     |
| JOB No:                   | 12MLD0167             |     |     |
| P.O. / AFE No.            |                       |     |     |
| DIRECTIONAL COMPANY:      | PATHFINDER            |     |     |

### WELL SITE INFORMATION

|                                  |                                                                                                        |                 |                   |
|----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| TOTAL MAGNETIC CORRECTION (TMC): |                                                                                                        |                 |                   |
| On Wall Plat:                    | 7.566                                                                                                  | LWD Calculated: | 7.567             |
| Agreed Upon:                     | 7.567                                                                                                  |                 |                   |
| X =                              | 632245.160000                                                                                          | Feet            | Y = 582373.960000 |
|                                  |                                                                                                        |                 | Feet              |
| SITE LATITUDE:                   | 32.600652 N                                                                                            | SITE LONGITUDE: | 104.038131 W      |
| GRID SYSTEM:                     | TRUE <input type="checkbox"/> UTM <input type="checkbox"/> LAMBERT <input checked="" type="checkbox"/> | ZONE:           | NEW MEXICO EAST   |
| PROPOSED DRIFT DIRECTION:        | 270.02                                                                                                 |                 |                   |
| KELLY BUSHING ELEVATION:         | 18.0'                                                                                                  |                 |                   |
| ALTITUDE:                        | 3303                                                                                                   | Feet            | WATER DEPTH:      |
|                                  |                                                                                                        |                 | N/A               |
|                                  |                                                                                                        |                 | Feet              |

### TIE-IN SURVEY

|                                    |                              |                                        |                                                         |
|------------------------------------|------------------------------|----------------------------------------|---------------------------------------------------------|
| MEASURED DEPTH:                    | 376                          |                                        |                                                         |
| DRIFT ANGLE:                       | 0                            |                                        |                                                         |
| DRIFT DIRECTION:                   | 0                            |                                        |                                                         |
| TRUE VERTICAL DEPTH:               | 376                          |                                        |                                                         |
| VERTICAL SECTION:                  | 0                            |                                        |                                                         |
| RECTANGULAR COORDINATE ( N / S ) : | 0                            |                                        |                                                         |
| RECTANGULAR COORDINATE ( E / W ) : | 0                            |                                        |                                                         |
| CLOSURE DISTANCE / DIRECTION:      | 0                            | 0                                      |                                                         |
| SURVEY CALCULATION METHOD:         | AA <input type="checkbox"/>  | MC <input checked="" type="checkbox"/> | RC <input type="checkbox"/> BT <input type="checkbox"/> |
| SOURCE OF TIE-IN DATA ( COMPANY ): | SURFACE                      |                                        |                                                         |
| COPY OF TIE-IN SURVEY REPORT       | <input type="checkbox"/> YES |                                        | <input checked="" type="checkbox"/> NO                  |

### WELL PLAN

|                |        |              |         |
|----------------|--------|--------------|---------|
| KICKOFF DEPTH: | 7793.7 | TOTAL DEPTH: | 12693.6 |
| KICKOFF ANGLE: | 0      | MAX ANGLE:   | 91.45   |

PES Engineers: ALEX CASTILLO  
FREDDY LICERO

\*\*Signature of both field engineers required if applicable

Directional Driller: EDWARD

DATE: 21-Apr-2012

## PathFinder Energy Services, Inc.

### Magnetic & Grid Calculations

Yates Petroleum Corp.  
Anthill AAK State Com #2H  
Eddy County, NM  
Rig: Silver Oak 10

Fri Apr 20 14:32:18 2012

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### Coordinates

Latitude: 32.600652 N ( 32 deg. 36 min. 2.3456 sec.)  
Longitude: 104.038131 W (-104 deg. 2 min. 17.2731 sec.)  
Elevation: 3321.00 feet.  
Calculation Date: Apr/20/2012

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### Magnetic Calculations

Model: IGRF2010  
Dip Angle: 60.4343 degrees  
Total Magnetic Field: 0.48708 gauss  
Magnetic Declination: 7.725303 degrees  
Horizontal Intensity: 0.240364 gauss  
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.725303 Degr

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### Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east  
Ellipsoid: GRS80  
X: 632245.1600 feet  
Y: 582373.9600 feet  
True to Grid: (convergence) -0.159050 degrees  
Magnetic to Grid: 7.566253 degrees  
To Convert a Magnetic Dir. to a GRID dir. Add 7.566253 Degr.

# PathFinder Energy Services, Inc.

## Magnetic & Grid Calculations

YATES PETROLEUM CROP.  
ANTHILL AAK STATE COM #2H / 30-015-38575  
EDDY COUNTY, NEW MEXICO  
Rig: SILVER OAK 10

*FIELD  
CALCULATION*

Sat Apr 21 14:06:01 2012

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### Coordinates

Latitude: 32.600652 N (32 deg. 36 min. 2.3456 sec.)  
Longitude: 104.038131 W (-104 deg. 2 min. 17.2731 sec.)  
Elevation: 3321.00 feet.  
Calculation Date: Apr/21/2012

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### Magnetic Calculations

Model: IGRF2010  
Dip Angle: 60.4341 degrees  
Total Magnetic Field: 0.48732 gauss  
Magnetic Declination: 7.726670 degrees  
Horizontal Intensity: 0.240456 gauss  
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.726670 Degr

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### Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east  
Ellipsoid: GRS80  
X: 632245.1600 feet  
Y: 582373.9600 feet  
True to Grid: (convergence) -0.159050 degrees  
Magnetic to Grid: 7.567620 degrees  
To Convert a Magnetic Dir. to a GRID dir. Add 7.567620 Degr.



Job Number: SVCO-120645  
 Company: Yates Petroleum Corporation  
 Lease/Well: ANTHILL AAK STATE COM 2H  
 Location: Eddy County, NM  
 Rig Name: Silver Oak #10  
 RKB: 18'  
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA  
 Declination: 7.57°  
 Grid: East To Grid North  
 File name: F:\SURVEY\2012SU~1\YATES\CONROE\ANTHIL~1\2H.SVY  
 Date/Time: 04-May-12 / 08:32  
 Curve Name: Surface - 7394' M.D. (Gyroscopic)

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane 270.02  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from  
 Surface MD to 7,394' MD is, to the best of  
 our knowledge a true and accurate account of  
 the well bore.  
 Sammy Smith 5/4/12  
 MS Energy Services Date

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                         |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| .00                     | .00                  | .00                       | .00                       | .00       | .00       | .00                       | .00            | .00              | .00                           |
| 200.00                  | .75                  | 183.96                    | 199.99                    | -1.31     | -.09      | .09                       | 1.31           | 183.96           | .38                           |
| 400.00                  | 4.00                 | 211.86                    | 399.80                    | -8.54     | -3.86     | 3.86                      | 9.37           | 204.35           | 1.68                          |
| 600.00                  | 3.50                 | 210.86                    | 599.37                    | -19.70    | -10.68    | 10.67                     | 22.41          | 208.45           | .25                           |
| 800.00                  | .75                  | 78.90                     | 799.26                    | -24.69    | -12.53    | 12.52                     | 27.69          | 206.89           | 2.02                          |
| 1000.00                 | 1.75                 | 59.87                     | 999.21                    | -22.91    | -8.60     | 8.59                      | 24.47          | 200.57           | .53                           |
| 1200.00                 | 1.75                 | 96.86                     | 1199.12                   | -21.74    | -2.93     | 2.92                      | 21.94          | 187.66           | .56                           |
| 1400.00                 | .50                  | 359.83                    | 1399.09                   | -21.23    | .10       | -.11                      | 21.23          | 179.72           | .94                           |
| 1600.00                 | 1.00                 | 279.82                    | 1599.08                   | -20.06    | -1.62     | 1.61                      | 20.13          | 184.61           | .52                           |
| 1800.00                 | .75                  | 267.80                    | 1799.05                   | -19.82    | -4.65     | 4.64                      | 20.35          | 193.20           | .15                           |

| Measured<br>Depth<br>FT           | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|-----------------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                                   |                      |                           |                           |           |           |                           | Distance<br>FT | Direction<br>Deg |                               |
| 2000.00                           | 1.00                 | 313.77                    | 1999.03                   | -18.66    | -7.21     | 7.21                      | 20.00          | 201.14           | .36                           |
| 2200.00                           | 1.25                 | 323.76                    | 2198.99                   | -15.69    | -9.76     | 9.76                      | 18.48          | 211.89           | .16                           |
| 2400.00                           | 1.50                 | 328.74                    | 2398.93                   | -11.69    | -12.41    | 12.41                     | 17.05          | 226.71           | .14                           |
| 2600.00                           | 1.25                 | 294.72                    | 2598.88                   | -8.54     | -15.75    | 15.75                     | 17.92          | 241.52           | .42                           |
| 2800.00                           | 1.00                 | 294.69                    | 2798.84                   | -6.90     | -19.32    | 19.32                     | 20.52          | 250.34           | .13                           |
| 3000.00                           | .50                  | 302.66                    | 2998.82                   | -5.70     | -21.64    | 21.64                     | 22.38          | 255.24           | .25                           |
| 3200.00                           | .75                  | 268.63                    | 3198.81                   | -5.26     | -23.68    | 23.68                     | 24.26          | 257.47           | .22                           |
| 3400.00                           | .75                  | 248.60                    | 3398.80                   | -5.77     | -26.21    | 26.21                     | 26.84          | 257.58           | .13                           |
| 3600.00                           | .75                  | 278.44                    | 3598.78                   | -6.06     | -28.72    | 28.72                     | 29.36          | 258.09           | .19                           |
| 3800.00                           | .50                  | 288.41                    | 3798.77                   | -5.59     | -30.85    | 30.85                     | 31.35          | 259.73           | .14                           |
| 4000.00                           | .50                  | 279.38                    | 3998.76                   | -5.17     | -32.54    | 32.53                     | 32.94          | 260.97           | .04                           |
| 4200.00                           | .50                  | 38.36                     | 4198.76                   | -4.35     | -32.86    | 32.85                     | 33.14          | 262.46           | .43                           |
| 4400.00                           | .25                  | 357.33                    | 4398.75                   | -3.23     | -32.33    | 32.33                     | 32.49          | 264.30           | .18                           |
| 4600.00                           | .50                  | 319.30                    | 4598.75                   | -2.13     | -32.92    | 32.92                     | 32.99          | 266.30           | .17                           |
| 4800.00                           | .50                  | 359.29                    | 4798.74                   | -.59      | -33.50    | 33.50                     | 33.51          | 268.98           | .17                           |
| 5000.00                           | .50                  | 319.27                    | 4998.73                   | .94       | -34.08    | 34.08                     | 34.10          | 271.58           | .17                           |
| 5200.00                           | .50                  | 343.24                    | 5198.73                   | 2.44      | -34.90    | 34.91                     | 34.99          | 273.99           | .10                           |
| 5400.00                           | .50                  | 318.22                    | 5398.72                   | 3.92      | -35.74    | 35.74                     | 35.95          | 276.26           | .11                           |
| 5600.00                           | .25                  | 354.19                    | 5598.71                   | 5.01      | -36.36    | 36.37                     | 36.71          | 277.84           | .17                           |
| 5800.00                           | .25                  | 347.98                    | 5798.71                   | 5.87      | -36.50    | 36.50                     | 36.97          | 279.13           | .01                           |
| 6000.00                           | .50                  | 279.75                    | 5998.71                   | 6.44      | -37.45    | 37.45                     | 38.00          | 279.76           | .23                           |
| 6200.00                           | .50                  | 275.53                    | 6198.70                   | 6.67      | -39.18    | 39.18                     | 39.74          | 279.67           | .02                           |
| 6400.00                           | .50                  | 274.30                    | 6398.69                   | 6.82      | -40.92    | 40.92                     | 41.48          | 279.47           | .01                           |
| 6600.00                           | .75                  | 268.07                    | 6598.68                   | 6.85      | -43.10    | 43.10                     | 43.64          | 279.03           | .13                           |
| 6800.00                           | 1.25                 | 241.84                    | 6798.65                   | 5.77      | -46.33    | 46.33                     | 46.68          | 277.10           | .33                           |
| 7000.00                           | 1.25                 | 216.61                    | 6998.61                   | 2.99      | -49.55    | 49.55                     | 49.64          | 273.45           | .27                           |
| 7200.00                           | 1.25                 | 217.38                    | 7198.56                   | -.49      | -52.18    | 52.18                     | 52.18          | 269.46           | .01                           |
| <b>Last Survey Depth Recorded</b> |                      |                           |                           |           |           |                           |                |                  |                               |
| 7394.00                           | 1.00                 | 240.93                    | 7392.52                   | -3.00     | -54.94    | 54.94                     | 55.02          | 266.88           | .27                           |