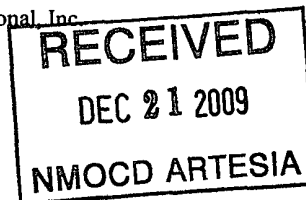


# PATHFINDER

For your  
records

An Operating Unit of Smith International, Inc.

30-015-37252



## ***DIRECTIONAL SURVEY REPORT***

**YATES PETROLEUM**

***JUNIPER "BIP" FED #8H PILOT HOLE***

***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: 09/17/09 TO 09/21/09
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  
JUNIPER "BIP" FED #8H PILOT HOLE  
EDDY COUNTY, NM  
RIG: SILVER OAK #10
9. SURVEY CERTIFIED FROM: 642 TO 2805 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 45.61 FEET ON A BEARING OF 49.88 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 2855 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

  
FRANCISCO SINISTERRA  
M/LWD SERVICE COORDINATOR

# PathFinder Energy Services, Inc.

## BHL Report

Page 01/01  
Tie-in Date: 09/17/2009  
Date Completed: 09/20/2009

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YATES PETROLEUM CORPORATION  
JUNIPER BIP FED #8H  
EDDY COUNTY, NEW MEXICO  
Rig:SILVER OAK #10  
PathFinder Office Supervisor: FRANCISCO SINISTERRA  
PathFinder Field Engineers:M. SHIPP

Survey Horiz. Reference:WELLHEAD  
Ref Coordinates: LAT:32.14.35.6256 N LON:103.59.51.5336 W  
GRID Reference:NAD83 new mexico east Transverse Mercator  
Ref GRID Coord: X: 645120.5000 Y: 452382.5000  
North Aligned To:GRID NORTH  
Total Magnetic Correction: 7.80° EAST TO GRID  
Vertical Section Plane: 82.57  
Survey Vert. Reference: 18.00' Kelly Bushing To Ground  
Altitude:3063.00' Ground To MSL

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|                       |                |             |
|-----------------------|----------------|-------------|
| Measured Depth        | 2855.00        | (feet)      |
| Inclination           | 2.46           | (deg)       |
| Azimuth               | 353.02         | (deg)       |
| True Vertical Depth   | 2853.18        | (feet)      |
| Vertical Section      | 38.39          | (feet)      |
| Survey X cord         | 645155.38      | (feet)      |
| Survey Y cord         | 452411.89      | (feet)      |
| Survey Lat            | 32.24330983 N  | (deg)       |
| Survey Lon            | 103.99753510 W | (deg)       |
| Rectangular Corr. N/S | 29.39 N        | (feet)      |
| Rectangular Corr. E/W | 34.88 E        | (feet)      |
| Closure Distance      | 45.61          | (feet)      |
| Direction of Closure  | 49.88          | (deg)       |
| Dogleg Severity       | 0.00           | (deg/100ft) |

# PathFinder Energy Services, Inc.

## Survey Report

YATES PETROLEUM CORPORATION  
 JUNIPER BIP FED #8H  
 EDDY COUNTY, NEW MEXICO  
 Rig:SILVER OAK #10  
 PathFinder Office Supervisor: FRANCISCO SINISTERRA  
 PathFinder Field Engineers: M. SHIPP

Survey Horiz. Reference:WELLHEAD  
 Ref Coordinates: LAT:32.14.35.6256 N LON:103.59.51.5336 W  
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 Survey Vert. Reference: 18.00' Kelly Bushing To Ground  
 Altitude:3063.00' Ground To MSL

Survey Calculations by RX5 V5.11i using Minimum Curvature

| Measured Depth (ft)                       | Incl (deg) | Drift Dir. (deg) | TVD (ft) | Subsea Depth (ft) | Vertical Section (ft) | TOTAL Rectangular Offsets (ft) |         | Closure Dist Dir (ft) (deg) |        | DLS (dg/100ft) | TEMP (F) |
|---|------------|------------------|----------|-------------------|-----------------------|--------------------------------|---------|-----------------------------|--------|----------------|----------|
| ASSUME VERTICAL FROM SURFACE.             |            |                  |          |                   |                       |                                |         |                             |        |                |          |
| 542.00                                    | 0.00       | 0.00             | 542.00   | 524.00            | 0.00                  | 0.00                           | 0.00    | 0.00@                       | 0.00   | 0.00           | 0.00     |
| THE FOLLOWING ARE PATHFINDER MWD SURVEYS. |            |                  |          |                   |                       |                                |         |                             |        |                |          |
| 642.00                                    | 0.44       | 335.71           | 642.00   | 624.00            | -0.11                 | 0.35 N                         | 0.16 W  | 0.38@                       | 335.71 | 0.44           | 93.80    |
| 737.00                                    | 0.53       | 336.51           | 737.00   | 719.00            | -0.34                 | 1.09 N                         | 0.48 W  | 1.19@                       | 336.01 | 0.09           | 93.80    |
| 832.00                                    | 0.18       | 50.97            | 831.99   | 813.99            | -0.33                 | 1.58 N                         | 0.54 W  | 1.67@                       | 341.08 | 0.54           | 97.41    |
| 928.00                                    | 0.44       | 24.99            | 927.99   | 909.99            | -0.01                 | 2.01 N                         | 0.27 W  | 2.03@                       | 352.37 | 0.30           | 97.41    |
| 1023.00                                   | 0.44       | 27.31            | 1022.99  | 1004.99           | 0.40                  | 2.67 N                         | 0.05 E  | 2.67@                       | 1.12   | 0.02           | 97.41    |
| 1113.00                                   | 1.41       | 349.14           | 1112.98  | 1094.98           | 0.53                  | 4.06 N                         | 0.00 E  | 4.06@                       | 0.03   | 1.22           | 97.41    |
| 1214.00                                   | 0.62       | 11.66            | 1213.96  | 1195.96           | 0.63                  | 5.82 N                         | 0.12 W  | 5.82@                       | 358.80 | 0.86           | 101.02   |
| 1309.00                                   | 0.79       | 0.75             | 1308.95  | 1290.95           | 0.89                  | 6.97 N                         | 0.01 W  | 6.97@                       | 359.92 | 0.23           | 101.02   |
| 1404.00                                   | 0.88       | 12.55            | 1403.94  | 1385.94           | 1.24                  | 8.34 N                         | 0.16 E  | 8.34@                       | 1.08   | 0.20           | 101.02   |
| 1500.00                                   | 0.09       | 63.26            | 1499.94  | 1481.94           | 1.56                  | 9.10 N                         | 0.39 E  | 9.10@                       | 2.43   | 0.86           | 104.64   |
| 1594.00                                   | 0.70       | 307.30           | 1593.94  | 1575.94           | 1.22                  | 9.48 N                         | 0.01 W  | 9.48@                       | 359.97 | 0.79           | 104.64   |
| 1691.00                                   | 0.62       | 262.09           | 1690.93  | 1672.93           | 0.27                  | 9.76 N                         | 1.00 W  | 9.81@                       | 354.17 | 0.53           | 108.25   |
| 1881.00                                   | 0.97       | 324.54           | 1880.92  | 1862.92           | -1.51                 | 10.93 N                        | 2.95 W  | 11.32@                      | 344.91 | 0.46           | 108.25   |
| 2072.00                                   | 1.06       | 129.86           | 2071.91  | 2053.91           | -1.07                 | 11.12 N                        | 2.53 W  | 11.40@                      | 347.18 | 1.05           | 104.64   |
| 2168.00                                   | 3.52       | 102.36           | 2167.82  | 2149.82           | 2.30                  | 9.92 N                         | 1.03 E  | 9.97@                       | 5.94   | 2.73           | 104.64   |
| 2263.00                                   | 4.84       | 88.21            | 2262.57  | 2244.57           | 9.04                  | 9.42 N                         | 7.89 E  | 12.28@                      | 39.95  | 1.75           | 104.64   |
| 2359.00                                   | 5.19       | 81.19            | 2358.21  | 2340.21           | 17.41                 | 10.21 N                        | 16.23 E | 19.17@                      | 57.82  | 0.74           | 101.02   |
| 2455.00                                   | 5.28       | 62.54            | 2453.81  | 2435.81           | 25.90                 | 12.91 N                        | 24.44 E | 27.64@                      | 62.15  | 1.77           | 104.64   |
| 2550.00                                   | 3.34       | 56.55            | 2548.54  | 2530.54           | 32.49                 | 16.45 N                        | 30.62 E | 34.76@                      | 61.75  | 2.09           | 104.64   |
| 2646.00                                   | 2.90       | 33.67            | 2644.40  | 2626.40           | 36.60                 | 20.01 N                        | 34.30 E | 39.72@                      | 59.74  | 1.36           | 101.02   |
| 2742.00                                   | 2.81       | 354.90           | 2740.29  | 2722.29           | 38.30                 | 24.38 N                        | 35.44 E | 43.02@                      | 55.48  | 1.98           | 101.02   |

# PathFinder Energy Services, Inc.

## Survey Report

YATES PETROLEUM CORPORATION  
 JUNIPER BIP FED #8H  
 EDDY COUNTY, NEW MEXICO  
 RIG:SILVER OAK #10

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| Measured<br>Depth<br>(ft)            | Incl<br>(deg) | Drift<br>Dir.<br>(deg) | TVD<br>(ft) | Subsea<br>Depth<br>(ft) | Vertical<br>Section<br>(ft) | TOTAL<br>Rectangular Offsets<br>(ft) |         | Closure<br>Dist Dir<br>(ft) (deg) |       | DLS<br>(dg/100ft) | TEMP<br>(F) |
|--------------------------------------|---------------|------------------------|-------------|-------------------------|-----------------------------|--------------------------------------|---------|-----------------------------------|-------|-------------------|-------------|
| 2805.00                              | 2.46          | 353.02                 | 2803.22     | 2785.22                 | 38.37                       | 27.26 N                              | 35.14 E | 44.47@                            | 52.20 | 0.57              | 104.64      |
| STARIGHT LINE PROJECTION @ 2855' MD. |               |                        |             |                         |                             |                                      |         |                                   |       |                   |             |
| 2855.00                              | 2.46          | 353.02                 | 2853.18     | 2835.18                 | 38.39                       | 29.39 N                              | 34.88 E | 45.61@                            | 49.88 | 0.00              | 104.60      |

### TIE-IN SURVEY INFORMATION SHEET

#### CLIENT INFORMATION

|                           |                             |     |     |
|---------------------------|-----------------------------|-----|-----|
| CLIENT:                   | YATES PETROLEUM CORPORATION |     |     |
| LEASE / WELL No.:         | JUNIPER "BIP" FED           | #8H |     |
| WELL LOCATION:            | WILDCAT; BONE SPRING        |     |     |
| COUNTY / STATE / COUNTRY: | EDDY                        | NM  | USA |
| RIG:                      | SILVER OAK #10              |     |     |
| API WELL No:              | 30-015-37252                |     |     |
| JOB No:                   | 101008962-WT-WT             |     |     |
| P.O. / AFE No.            |                             |     |     |
| DIRECTIONAL COMPANY:      | PES                         |     |     |

#### WELL SITE INFORMATION

|                           |                               |   |                                  |
|---------------------------|-------------------------------|---|----------------------------------|
| MAGNETIC DECLINATION:     |                               |   |                                  |
| On Wall Plat:             | 7.81                          | LWD Calculated:                         | 7.801313                         |
|                           | Agreed Upon:                  | 7.8                                     |                                  |
| X =                       | 645120.500000                 | Feet                                    | Y = 452382.500000                |
|                           |                               |   | Feet                             |
| SITE LATITUDE:            | 32.243229N                    | SITE LONGITUDE:                         | 103.997648W                      |
| GRID SYSTEM:              | TRUE <input type="checkbox"/> | UTM <input checked="" type="checkbox"/> | LAMBERT <input type="checkbox"/> |
|                           | ZONE:                         |   | NEW MEXICO EAST                  |
| PROPOSED DRIFT DIRECTION: | 82.57                         |   |                                  |
| KELLY BUSHING ELEVATION:  | 18'                           |   |                                  |
| ALTITUDE:                 | 3063                          | Feet                                    | WATER DEPTH:                     |
|                           |                               |   | Feet                             |

#### TIE-IN SURVEY

|                                    |                              |  |   |
|------------------------------------|------------------------------|--|---|
| MEASURED DEPTH:                    | 542                          |  |   |
| DRIFT ANGLE:                       | 0                            |  |   |
| DRIFT DIRECTION:                   | 0                            |  |   |
| TRUE VERTICAL DEPTH:               | 542                          |  |   |
| 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 ): | TIE-IN FROM SURFACE          |  |   |
| COPY OF TIE-IN SURVEY REPORT       | <input type="checkbox"/> YES |  | <input checked="" type="checkbox"/> NO                  |

#### WELL PLAN

|                |     |              |          |
|----------------|-----|--------------|----------|
| KICKOFF DEPTH: | 600 | TOTAL DEPTH: | 12675.78 |
| KICKOFF ANGLE: | 0   | MAX ANGLE:   | 90       |

PES Engineers: \_\_\_\_\_

*Matt Shi*

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

Directional Driller: \_\_\_\_\_

*Richard Hill*

DATE: 9/16/05

# PathFinder Energy Services, Inc.

## Magnetic & Grid Calculations

YATES PETROLEUM  
JUNIPER BIP FEDERAL #8H  
EDDY COUNTY, NEW MEXICO  
Rig:SILVER OAK 10

Fri Sep 11 17:59:04 2009

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### Coordinates

Latitude: 32.243229 N (32 deg. 14 min. 35.6256 sec.)  
Longitude: 103.997648 W (-103 deg. 59 min. 51.5336 sec.)  
Elevation: 3081.00 feet.  
Calculation Date: Sep/11/2009

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### Magnetic Calculations

Model: IGRF2005  
Dip Angle: 60.1898 degrees  
Total Magnetic Field: 0.48788 gauss  
Magnetic Declination: 7.980407 degrees  
Horizontal Intensity: 0.242539 gauss  
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.980407 Degs

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### Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east  
Ellipsoid: GRS80  
X: 645120.5000 feet  
Y: 452382.5000 feet  
True to Grid: (convergence) -0.179094 degrees  
Magnetic to Grid: 7.801313 degrees

To Convert a Magnetic Dir. to a GRID dir. Add 7.801313 Degs.