

## Results of Directional Survey

|             |                     |           |                                            |             |
|-------------|---------------------|-----------|--------------------------------------------|-------------|
| API number: | <b>30-025-40043</b> |           |                                            |             |
| OGRID:      |                     | Operator: | <b>DEVON ENERGY PRODUCTION COMPANY, LP</b> |             |
|             |                     | Property: | <b>ICHABOD 7 FEDERAL</b>                   | <b># 1H</b> |

|         |        |          |           |                |                |
|---------|--------|----------|-----------|----------------|----------------|
| surface | ULSTR: | <b>P</b> | <b>07</b> | <b>T 26S</b>   | <b>R 34E</b>   |
|         |        |          |           | <b>195 FSL</b> | <b>330 FEL</b> |

|                 |        |               |            |                 |                |
|-----------------|--------|---------------|------------|-----------------|----------------|
| BH Loc          | ULSTR: | <b>A</b>      | <b>07</b>  | <b>T 26S</b>    | <b>R 34E</b>   |
| <b>14275 MD</b> |        | <b>9598.0</b> | <b>TVD</b> | <b>4944 FSL</b> | <b>806 FEL</b> |
|                 |        |               |            | <b>336 FNL</b>  |                |

|                |        |               |            |                |                |
|----------------|--------|---------------|------------|----------------|----------------|
| Top Perf/OH    | ULSTR: | <b>P</b>      | <b>07</b>  | <b>T 26S</b>   | <b>R 34E</b>   |
| <b>9995 MD</b> |        | <b>9706.2</b> | <b>TVD</b> | <b>691 FSL</b> | <b>375 FEL</b> |

|                 |        |               |            |                 |                |
|-----------------|--------|---------------|------------|-----------------|----------------|
| Bot Perf/OH     | ULSTR: | <b>A</b>      | <b>07</b>  | <b>T 26S</b>    | <b>R 34E</b>   |
| <b>13949 MD</b> |        | <b>9609.1</b> | <b>TVD</b> | <b>4621 FSL</b> | <b>765 FEL</b> |
|                 |        |               |            | <b>659 FNL</b>  |                |

|              | MD           | N/S     | E/W     | VD      |
|--------------|--------------|---------|---------|---------|
|              | 9991         | 491.76  | -44.34  | 9705.88 |
| TOP PERFS/OH | <b>9995</b>  | 495.72  | -44.80  | 9706.24 |
|              | 10023        | 523.42  | -48.03  | 9708.75 |
|              | 13948        | 4424.94 | -434.74 | 9609.07 |
| BOT PERFS/OH | <b>13949</b> | 4425.93 | -434.87 | 9609.05 |
|              | 13979        | 4455.68 | -438.76 | 9608.45 |

|              |              |         |         |         |
|--------------|--------------|---------|---------|---------|
| NEXT TO LAST | 14200        | 4674.82 | -466.36 | 9601.08 |
| LAST READING | 14218        | 4692.67 | -468.56 | 9600.33 |
| TD           | <b>14275</b> | 4749.20 | -475.53 | 9597.96 |

|                  |         |        |
|------------------|---------|--------|
| Surface Location | 195 FS  | 330 FE |
| Projected BHL    | 4944 FS | 806 FE |
| Location of      |         |        |
| Top Perfs/OH     | 691 FS  | 375 FE |
| Bottom Perfs/OH  | 4621 FS | 765 FE |

### SUMMARY of Subsurface Locations

| Surface Location | P-07-26S-34E | 195 FS  | 330 FE | Vert. Depth |
|------------------|--------------|---------|--------|-------------|
|                  |              |         |        |             |
| Top Perfs/OH     | P-07-26S-34E | 691 FS  | 375 FE | 9706.24     |
| Bottom Perfs/OH  | A-07-26S-34E | 4621 FS | 765 FE | 9609.05     |
|                  |              |         |        |             |
| Projected TD     | A-07-26S-34E | 4944 FS | 806 FE | 9597.96     |

OCT 27 2011

**McVAY DRILLING COMPANY**

P.O. Box 2450  
Hobbs, New Mexico 88241  
(575) 397-3311  
FAX: 39-DRILL

Well Name and Num: Ichabod 7 Fed 1H  
Location: Sec. 7, T26S, R34E  
Operator: Devon  
Drilling Contractor: McVay Drilling Company

SUR: P-7-26s-34e, 195/S & 330/E  
BHL: A-7-26s-34e, 4944/S & 806/E  
API # 30-025-40043

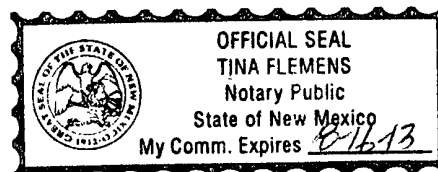
The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

| <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> |
|------------------|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
| 0.53             | 361          | 1.48             | 4850         | 39.90            | 9546         | 92.30            | 11698        |
| 0.54             | 536          | 1.74             | 5051         | 46.90            | 9642         | 91.40            | 11883        |
| 0.43             | 813          | 1.16             | 5381         | 48.30            | 9674         | 92.50            | 12006        |
| 0.90             | 1092         | 0.02             | 5877         | 51.70            | 9706         | 91.30            | 12284        |
| 0.86             | 1379         | 0.49             | 6321         | 70.90            | 9833         | 92.30            | 12469        |
| 0.51             | 1750         | 0.66             | 6801         | 78.40            | 9896         | 92.50            | 12561        |
| 0.92             | 2048         | 0.95             | 7280         | 88.90            | 10148        | 92.50            | 12592        |
| 1.15             | 2235         | 1.64             | 7758         | 95.20            | 10371        | 91.40            | 12838        |
| 1.40             | 2620         | 89.00            | 8236         | 91.40            | 10495        | 91.90            | 13023        |
| 1.23             | 2907         | 1.41             | 8714         | 89.50            | 10556        | 91.40            | 13178        |
| 2.38             | 3192         | 1.13             | 9193         | 89.50            | 10579        | 91.30            | 13300        |
| 3.26             | 3479         | 1.01             | 9674         | 89.40            | 10739        | 91.40            | 13486        |
| 1.49             | 3669         | 1.28             | 10140        | 90.70            | 10832        | 91.80            | 13732        |
| 1.87             | 3955         | 5.10             | 9263         | 92.00            | 10924        | 90.60            | 13917        |
| 1.96             | 4239         | 20.60            | 9290         | 90.70            | 11078        | 91.50            | 14010        |
| 2.71             | 4492         | 26.20            | 9354         | 92.90            | 11390        | 92.40            | 14218        |
| 1.37             | 4683         | 35.80            | 9482         | 92.40            | 11452        |                  |              |

By: H. H. Cronin Jr.

Subscribed and sworn to before me this 14th day of July, 2011

Tina Flemens  
Notary Public, Lea County, New Mexico





HOBBS OCD

OCT 07 2011

RECEIVED

## **Devon Energy Production Co, LP**

**Lea Co., New Mexico (Nad 83)**

**Ichabod 7 Fed #1H**

**Ichabod 7 Fed #1H**

**30-025-40043**

**Lateral #1**

SUR: P-7-26s-34e, 195/S & 330/E

BHL: A-7-26s-34e, 4944/S & 806/E

API # 30-025-40043

**Survey: Cudd MWD Survey#1**

## **Standard Survey Report**

**04 July, 2011**





# Cudd Drilling & Measurement Services

## Survey Report



|           |                                |                              |                                       |
|-----------|--------------------------------|------------------------------|---------------------------------------|
| Company:  | Devon Energy Production Co. LP | Local Co-ordinate Reference: | Site Ichabod 7 Fed #1H                |
| Project:  | Lea Co. New Mexico (Nad 83)    | TVD Reference:               | WELL @ 3380.00ft (Original Well Elev) |
| Site:     | Ichabod 7 Fed #1H              | MD Reference:                | WELL @ 3380.00ft (Original Well Elev) |
| Well:     | Ichabod 7 Fed #1H              | North Reference:             | Grid                                  |
| Wellbore: | Lateral #1                     | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Lateral #1                     | Database:                    | EDM 2003 21 Single User Db            |

|             |                             |               |                |
|-------------|-----------------------------|---------------|----------------|
| Project:    | Lea Co. New Mexico (Nad 83) |               |                |
| Map System: | US State Plane 1983         | System Datum: | Mean Sea Level |
| Geo Datum:  | North American Datum 1983   |               |                |
| Map Zone:   | New Mexico Eastern Zone     |               |                |

|                       |                                     |                   |                  |
|-----------------------|-------------------------------------|-------------------|------------------|
| Site:                 | Ichabod 7 Fed #1H Sec 7 T-26S R-34E |                   |                  |
| Site Position:        |                                     | Northing:         | 383,300.45 ft    |
| From:                 | Map                                 | Easting:          | 799,081.34 ft    |
| Position Uncertainty: | 0.00 ft                             | Slot Radius:      | "                |
|                       |                                     | Latitude:         | 32° 3' 3.755 N   |
|                       |                                     | Longitude:        | 103° 30' 5.116 W |
|                       |                                     | Grid Convergence: | 0.44 °           |

|                      |                   |         |                     |               |               |                  |
|----------------------|-------------------|---------|---------------------|---------------|---------------|------------------|
| Well:                | Ichabod-7 Fed #1H |         |                     |               |               |                  |
| Well Position        | +N/-S             | 0 00 ft | Northing:           | 383,300.45 ft | Latitude:     | 32° 3' 3.755 N   |
|                      | +E/-W             | 0 00 ft | Easting:            | 799,081.34 ft | Longitude:    | 103° 30' 5.116 W |
| Position Uncertainty |                   | 0 00 ft | Wellhead Elevation: | 3,380 00 ft   | Ground Level: | 3,355 00ft       |

|           |            |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore  |            | Lateral #1  |                    |                  |                        |
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | IGRF200510 | 06/16/11    | 7.53               | 60.06            | 48,556                 |

|                    |                          |               |               |                        |
|--------------------|--------------------------|---------------|---------------|------------------------|
| Design: Lateral #1 |                          |               |               |                        |
| Audit Notes:       |                          |               |               |                        |
| Version:           | 10                       | Phase:        | ACTUAL        | Tie On Depth: 9,100.00 |
| Vertical Section:  | Depth From (TVD)<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Direction<br>(°)       |
|                    | 0.00                     | 0.00          | 0.00          | 359.51                 |

|                |           |                                |            |                                  |
|----------------|-----------|--------------------------------|------------|----------------------------------|
| Survey Program | Date      | 07/04/11                       |            |                                  |
| From           | To        | Survey (Wellbore)              | Tool Name  | Description                      |
| (ft)           | (ft)      |                                |            |                                  |
| 100.00         | 9,100.00  | Gyro Survey #1 (Pilot Hole)    | NS-GYRO-MS | North sensing gyrocompassing m/s |
| 9,100.00       | 14,275.00 | Cudd MWD Survey#1 (Lateral #1) | CUDD MWD   | MWD - Standard CUDD MWD          |

|                       |             |         |                |        |       |                  |             |            |           |
|-----------------------|-------------|---------|----------------|--------|-------|------------------|-------------|------------|-----------|
| Survey                |             |         |                |        |       |                  |             |            |           |
| Measured Depth        | Inclination | Azimuth | Vertical Depth | +N/-S  | +E/-W | Vertical Section | Dogleg Rate | Build Rate | Turn Rate |
| (ft)                  | (°)         | (°)     | (ft)           | (ft)   | (ft)  | (ft)             | (°/100ft)   | (°/100ft)  | (°/100ft) |
| 9,100.00              | 1.36        | 184.60  | 9,098.04       | -31.63 | 70.05 | -32.23           | 0.00        | 0.00       | 0.00      |
| Tie-In to Scientific  |             |         |                |        |       |                  |             |            |           |
| 9,195.00              | 8.60        | 346.40  | 9,192.73       | -25.84 | 68.28 | -26.42           | 10.42       | 7.62       | 170.32    |
| First Cudd MWD Survey |             |         |                |        |       |                  |             |            |           |
| 9,226.00              | 12.60       | 335.60  | 9,223.19       | -20.50 | 66.34 | -21.07           | 14.35       | 12.90      | -34.84    |
| 9,258.00              | 16.70       | 331.80  | 9,254.15       | -13.27 | 62.73 | -13.80           | 13.15       | 12.81      | -11.88    |
| 9,290.00              | 20.60       | 333.70  | 9,284.46       | -4.16  | 58.06 | -4.66            | 12.33       | 12.19      | 5.94      |
| 9,322.00              | 23.30       | 335.00  | 9,314.14       | 6.62   | 52.89 | 6.17             | 8.57        | 8.44       | 4.06      |
| 9,354.00              | 26.20       | 335.10  | 9,343.20       | 18.77  | 47.24 | 18.36            | 9.06        | 9.06       | 0.31      |
| 9,386.00              | 28.30       | 336.80  | 9,371.64       | 32.15  | 41.27 | 31.79            | 7.00        | 6.56       | 5.31      |
| 9,418.00              | 30.30       | 338.10  | 9,399.55       | 46.61  | 35.27 | 46.31            | 6.56        | 6.25       | 4.06      |
| 9,450.00              | 32.50       | 338.00  | 9,426.86       | 62.07  | 29.04 | 61.82            | 6.88        | 6.88       | -0.31     |



# Cudd Drilling & Measurement Services

## Survey Report



|           |                                |                              |                                       |
|-----------|--------------------------------|------------------------------|---------------------------------------|
| Company:  | Devon Energy Production Co. LP | Local Co-ordinate Reference: | Site: Ichabod 7 Fed #1H               |
| Project:  | Lea Co. New Mexico (Nad:83)    | TVD Reference:               | WELL @ 3380.00ft (Original Well Elev) |
| Site:     | Ichabod 7 Fed #1H              | MD Reference:                | WELL @ 3380.00ft (Original Well Elev) |
| Well:     | Ichabod 7 Fed #1H              | North Reference:             | Grid                                  |
| Wellbore: | Lateral #1                     | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Lateral #1                     | Database:                    | EDM 2003.21 Single User Db            |

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 9,482.00            | 35.80           | 339.10      | 9,453.34            | 78.79      | 22.48      | 78.60                 | 10.49                 | 10.31                | 3.44                |
| 9,514.00            | 38.40           | 340.70      | 9,478.86            | 96.92      | 15.86      | 96.78                 | 8.67                  | 8.13                 | 5.00                |
| 9,546.00            | 39.90           | 342.60      | 9,503.68            | 116.09     | 9.50       | 116.01                | 6.00                  | 4.69                 | 5.94                |
| 9,578.00            | 42.50           | 345.10      | 9,527.75            | 136.34     | 3.65       | 136.30                | 9.62                  | 8.13                 | 7.81                |
| 9,610.00            | 45.30           | 347.80      | 9,550.81            | 157.91     | -1.53      | 157.91                | 10.52                 | 8.75                 | 8.44                |
| 9,642.00            | 46.90           | 348.80      | 9,573.00            | 180.48     | -6.21      | 180.53                | 5.48                  | 5.00                 | 3.13                |
| 9,674.00            | 48.30           | 350.30      | 9,594.58            | 203.72     | -10.49     | 203.80                | 5.58                  | 4.38                 | 4.69                |
| 9,706.00            | 51.70           | 351.40      | 9,615.14            | 227.92     | -14.38     | 228.03                | 10.95                 | 10.63                | 3.44                |
| 9,738.00            | 56.10           | 352.70      | 9,633.99            | 253.52     | -17.95     | 253.67                | 14.14                 | 13.75                | 4.06                |
| 9,768.00            | 61.00           | 353.70      | 9,649.64            | 278.93     | -20.97     | 279.10                | 16.58                 | 16.33                | 3.33                |
| 9,800.00            | 65.90           | 353.80      | 9,663.94            | 307.37     | -24.09     | 307.57                | 15.32                 | 15.31                | 0.31                |
| 9,833.00            | 70.90           | 353.60      | 9,676.09            | 337.86     | -27.45     | 338.08                | 15.16                 | 15.15                | -0.61               |
| 9,864.00            | 75.80           | 354.20      | 9,684.97            | 367.38     | -30.61     | 367.63                | 15.91                 | 15.81                | 1.94                |
| 9,896.00            | 78.40           | 353.90      | 9,692.11            | 398.41     | -33.84     | 398.68                | 8.18                  | 8.13                 | -0.94               |
| 9,928.00            | 80.60           | 353.80      | 9,697.94            | 429.69     | -37.21     | 429.99                | 6.88                  | 6.88                 | -0.31               |
| 9,960.00            | 82.90           | 353.40      | 9,702.53            | 461.16     | -40.74     | 461.49                | 7.29                  | 7.19                 | -1.25               |
| 9,991.00            | 84.70           | 353.20      | 9,705.88            | 491.76     | -44.34     | 492.12                | 5.84                  | 5.81                 | -0.65               |
| 10,023.00           | 85.00           | 353.50      | 9,708.75            | 523.42     | -48.03     | 523.81                | 1.32                  | 0.94                 | 0.94                |
| 10,054.00           | 85.80           | 352.90      | 9,711.24            | 554.10     | -51.69     | 554.52                | 3.22                  | 2.58                 | -1.94               |
| 10,084.00           | 86.80           | 352.10      | 9,713.17            | 583.78     | -55.59     | 584.24                | 4.27                  | 3.33                 | -2.67               |
| 10,116.00           | 88.10           | 352.20      | 9,714.60            | 615.45     | -59.96     | 615.94                | 4.07                  | 4.06                 | 0.31                |
| 10,148.00           | 88.90           | 352.20      | 9,715.44            | 647.14     | -64.30     | 647.67                | 2.50                  | 2.50                 | 0.00                |
| 10,180.00           | 89.70           | 352.00      | 9,715.83            | 678.84     | -68.70     | 679.40                | 2.58                  | 2.50                 | -0.63               |
| 10,212.00           | 90.80           | 352.10      | 9,715.69            | 710.53     | -73.12     | 711.13                | 3.45                  | 3.44                 | 0.31                |
| 10,243.00           | 91.00           | 353.00      | 9,715.20            | 741.26     | -77.14     | 741.90                | 2.97                  | 0.65                 | 2.90                |
| 10,275.00           | 92.70           | 353.50      | 9,714.17            | 773.02     | -80.90     | 773.69                | 5.54                  | 5.31                 | 1.56                |
| 10,307.00           | 94.90           | 353.40      | 9,712.05            | 804.74     | -84.54     | 805.44                | 6.88                  | 6.88                 | -0.31               |
| 10,339.00           | 95.60           | 352.90      | 9,709.12            | 836.38     | -88.34     | 837.11                | 2.68                  | 2.19                 | -1.56               |
| 10,371.00           | 95.20           | 353.60      | 9,706.11            | 868.02     | -92.09     | 868.77                | 2.51                  | -1.25                | 2.19                |
| 10,402.00           | 94.00           | 353.70      | 9,703.62            | 898.73     | -95.51     | 899.51                | 3.88                  | -3.87                | 0.32                |
| 10,433.00           | 92.90           | 353.80      | 9,701.75            | 929.49     | -98.88     | 930.30                | 3.56                  | -3.55                | 0.32                |
| 10,464.00           | 92.20           | 354.70      | 9,700.38            | 960.30     | -101.98    | 961.14                | 3.68                  | -2.26                | 2.90                |
| 10,495.00           | 91.40           | 355.50      | 9,699.40            | 991.17     | -104.62    | 992.03                | 3.65                  | -2.58                | 2.58                |
| 10,525.00           | 89.90           | 356.10      | 9,699.06            | 1,021.09   | -106.82    | 1,021.96              | 5.39                  | -5.00                | 2.00                |
| 10,556.00           | 89.50           | 356.10      | 9,699.22            | 1,052.01   | -108.93    | 1,052.91              | 1.29                  | -1.29                | 0.00                |
| 10,587.00           | 89.40           | 355.80      | 9,699.52            | 1,082.94   | -111.12    | 1,083.85              | 1.02                  | -0.32                | -0.97               |
| 10,618.00           | 89.20           | 355.10      | 9,699.90            | 1,113.84   | -113.58    | 1,114.77              | 2.35                  | -0.65                | -2.26               |
| 10,648.00           | 89.10           | 335.10      | 9,700.35            | 1,142.68   | -121.25    | 1,143.67              | 66.66                 | -0.33                | -66.67              |
| 10,678.00           | 89.20           | 355.10      | 9,700.80            | 1,171.52   | -128.93    | 1,172.58              | 66.66                 | 0.33                 | 66.67               |
| 10,709.00           | 89.20           | 355.10      | 9,701.23            | 1,202.40   | -131.57    | 1,203.48              | 0.00                  | 0.00                 | 0.00                |
| 10,739.00           | 89.40           | 355.40      | 9,701.60            | 1,232.30   | -134.06    | 1,233.40              | 1.20                  | 0.67                 | 1.00                |
| 10,770.00           | 89.10           | 355.40      | 9,702.00            | 1,263.19   | -136.54    | 1,264.32              | 0.97                  | -0.97                | 0.00                |
| 10,801.00           | 89.80           | 355.30      | 9,702.30            | 1,294.09   | -139.06    | 1,295.23              | 2.28                  | 2.26                 | -0.32               |
| 10,832.00           | 90.70           | 355.80      | 9,702.17            | 1,325.00   | -141.46    | 1,326.16              | 3.32                  | 2.90                 | 1.61                |
| 10,862.00           | 90.90           | 356.20      | 9,701.75            | 1,354.92   | -143.55    | 1,356.10              | 1.49                  | 0.67                 | 1.33                |
| 10,893.00           | 90.90           | 356.10      | 9,701.26            | 1,385.85   | -145.64    | 1,387.04              | 0.32                  | 0.00                 | -0.32               |
| 10,924.00           | 92.00           | 356.40      | 9,700.48            | 1,416.77   | -147.66    | 1,417.98              | 3.68                  | 3.55                 | 0.97                |
| 10,986.00           | 92.30           | 356.40      | 9,698.15            | 1,478.60   | -151.55    | 1,479.85              | 0.48                  | 0.48                 | 0.00                |
| 11,047.00           | 91.60           | 356.00      | 9,696.07            | 1,539.43   | -155.59    | 1,540.71              | 1.32                  | -1.15                | -0.66               |
| 11,141.00           | 91.10           | 356.20      | 9,693.86            | 1,633.19   | -161.98    | 1,634.51              | 0.57                  | -0.53                | 0.21                |
| 11,172.00           | 91.40           | 356.20      | 9,693.18            | 1,664.11   | -164.04    | 1,665.46              | 0.97                  | 0.97                 | 0.00                |
| 11,204.00           | 91.70           | 356.00      | 9,692.32            | 1,696.03   | -166.21    | 1,697.39              | 1.13                  | 0.94                 | -0.63               |
| 11,236.00           | 92.20           | 356.10      | 9,691.23            | 1,727.93   | -168.42    | 1,729.31              | 1.59                  | 1.56                 | 0.31                |
| 11,266.00           | 92.30           | 355.80      | 9,690.05            | 1,757.84   | -170.53    | 1,759.23              | 1.05                  | 0.33                 | -1.00               |



# Cudd Drilling & Measurement Services

## Survey Report



|           |                                |                              |                                       |
|-----------|--------------------------------|------------------------------|---------------------------------------|
| Company:  | Devon Energy Production Co. LP | Local Co-ordinate Reference: | Site: Ichabod 7 Fed #1H               |
| Project:  | Lea Co., New Mexico (Nad:83)   | TVD Reference:               | WELL @ 3380.00ft (Original Well Elev) |
| Site:     | Ichabod 7 Fed #1H              | MD Reference:                | WELL @ 3380.00ft (Original Well Elev) |
| Well:     | Ichabod 7 Fed #1H              | North Reference:             | Grid 1                                |
| Wellbore: | Lateral #1                     | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Lateral #1                     | Database:                    | EDM:2003:21;Single User Db            |

| Survey              |                 |             |                     |            |            |                       |                       |                      |                     |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 11,298.00           | 92.40           | 355.80      | 9,688.74            | 1,789.72   | -172.88    | 1,791.14              | 0.31                  | 0.31                 | 0.00                |
| 11,329.00           | 92.60           | 355.80      | 9,687.39            | 1,820.61   | -175.14    | 1,822.04              | 0.65                  | 0.65                 | 0.00                |
| 11,360.00           | 92.50           | 355.70      | 9,686.01            | 1,851.49   | -177.44    | 1,852.94              | 0.46                  | -0.32                | -0.32               |
| 11,390.00           | 92.90           | 355.90      | 9,684.60            | 1,881.38   | -179.63    | 1,882.85              | 1.49                  | 1.33                 | 0.67                |
| 11,421.00           | 93.10           | 355.80      | 9,682.97            | 1,912.26   | -181.87    | 1,913.74              | 0.72                  | 0.65                 | -0.32               |
| 11,450.00           | 92.40           | 355.60      | 9,681.58            | 1,941.14   | -184.05    | 1,942.64              | 2.51                  | -2.41                | -0.69               |
| 11,483.00           | 92.70           | 355.50      | 9,680.11            | 1,974.01   | -186.60    | 1,975.53              | 0.96                  | 0.91                 | -0.30               |
| 11,514.00           | 92.70           | 356.00      | 9,678.65            | 2,004.89   | -188.90    | 2,006.43              | 1.61                  | 0.00                 | 1.61                |
| 11,544.00           | 92.00           | 355.90      | 9,677.42            | 2,034.79   | -191.02    | 2,036.35              | 2.36                  | -2.33                | -0.33               |
| 11,574.00           | 92.10           | 356.50      | 9,676.35            | 2,064.70   | -193.00    | 2,066.28              | 2.03                  | 0.33                 | 2.00                |
| 11,605.00           | 92.20           | 356.40      | 9,675.19            | 2,095.62   | -194.92    | 2,097.21              | 0.46                  | 0.32                 | -0.32               |
| 11,636.00           | 91.90           | 356.40      | 9,674.08            | 2,126.54   | -196.87    | 2,128.15              | 0.97                  | -0.97                | 0.00                |
| 11,667.00           | 92.10           | 356.40      | 9,673.00            | 2,157.46   | -198.81    | 2,159.08              | 0.65                  | 0.65                 | 0.00                |
| 11,698.00           | 92.30           | 356.30      | 9,671.81            | 2,188.38   | -200.78    | 2,190.01              | 0.72                  | 0.65                 | -0.32               |
| 11,729.00           | 92.10           | 356.00      | 9,670.62            | 2,219.28   | -202.86    | 2,220.94              | 1.16                  | -0.65                | -0.97               |
| 11,760.00           | 91.10           | 355.10      | 9,669.75            | 2,250.18   | -205.27    | 2,251.85              | 4.34                  | -3.23                | -2.90               |
| 11,791.00           | 90.30           | 355.00      | 9,669.37            | 2,281.06   | -207.94    | 2,282.75              | 2.60                  | -2.58                | -0.32               |
| 11,822.00           | 90.80           | 355.00      | 9,669.07            | 2,311.94   | -210.64    | 2,313.66              | 1.61                  | 1.61                 | 0.00                |
| 11,852.00           | 91.30           | 355.40      | 9,668.52            | 2,341.83   | -213.15    | 2,343.57              | 2.13                  | 1.67                 | 1.33                |
| 11,883.00           | 91.40           | 355.70      | 9,667.79            | 2,372.73   | -215.56    | 2,374.48              | 1.02                  | 0.32                 | 0.97                |
| 11,914.00           | 92.00           | 355.60      | 9,666.87            | 2,403.62   | -217.91    | 2,405.40              | 1.96                  | 1.94                 | -0.32               |
| 11,945.00           | 91.90           | 355.80      | 9,665.82            | 2,434.52   | -220.23    | 2,436.31              | 0.72                  | -0.32                | 0.65                |
| 11,976.00           | 92.00           | 355.50      | 9,664.76            | 2,465.41   | -222.58    | 2,467.22              | 1.02                  | 0.32                 | -0.97               |
| 12,006.00           | 92.40           | 355.50      | 9,663.61            | 2,495.30   | -224.93    | 2,497.13              | 1.33                  | 1.33                 | 0.00                |
| 12,037.00           | 91.80           | 355.70      | 9,662.48            | 2,526.18   | -227.31    | 2,528.04              | 2.04                  | -1.94                | 0.65                |
| 12,068.00           | 91.10           | 355.10      | 9,661.69            | 2,557.07   | -229.80    | 2,558.95              | 2.97                  | -2.26                | -1.94               |
| 12,099.00           | 90.20           | 355.20      | 9,661.34            | 2,587.96   | -232.42    | 2,589.85              | 2.92                  | -2.90                | 0.32                |
| 12,130.00           | 90.20           | 355.00      | 9,661.23            | 2,618.85   | -235.06    | 2,620.76              | 0.65                  | 0.00                 | -0.65               |
| 12,160.00           | 90.90           | 355.20      | 9,660.94            | 2,648.74   | -237.63    | 2,650.67              | 2.43                  | 2.33                 | 0.67                |
| 12,191.00           | 91.40           | 355.00      | 9,660.32            | 2,679.62   | -240.27    | 2,681.57              | 1.74                  | 1.61                 | -0.65               |
| 12,222.00           | 91.60           | 355.10      | 9,659.51            | 2,710.49   | -242.95    | 2,712.47              | 0.72                  | 0.65                 | 0.32                |
| 12,253.00           | 91.60           | 354.80      | 9,658.65            | 2,741.36   | -245.68    | 2,743.36              | 0.97                  | 0.00                 | -0.97               |
| 12,284.00           | 91.30           | 354.40      | 9,657.86            | 2,772.21   | -248.59    | 2,774.24              | 1.61                  | -0.97                | -1.29               |
| 12,315.00           | 92.00           | 354.40      | 9,656.97            | 2,803.05   | -251.62    | 2,805.10              | 2.26                  | 2.26                 | 0.00                |
| 12,345.00           | 92.20           | 354.40      | 9,655.87            | 2,832.89   | -254.54    | 2,834.96              | 0.67                  | 0.67                 | 0.00                |
| 12,376.00           | 92.30           | 354.40      | 9,654.65            | 2,863.71   | -257.56    | 2,865.81              | 0.32                  | 0.32                 | 0.00                |
| 12,407.00           | 92.20           | 354.30      | 9,653.43            | 2,894.54   | -260.61    | 2,896.66              | 0.46                  | -0.32                | -0.32               |
| 12,438.00           | 92.00           | 354.10      | 9,652.30            | 2,925.36   | -263.75    | 2,927.51              | 0.91                  | -0.65                | -0.65               |
| 12,469.00           | 92.30           | 353.80      | 9,651.14            | 2,956.17   | -267.01    | 2,958.34              | 1.37                  | 0.97                 | -0.97               |
| 12,499.00           | 92.60           | 353.80      | 9,649.85            | 2,985.96   | -270.25    | 2,988.17              | 1.00                  | 1.00                 | 0.00                |
| 12,530.00           | 92.80           | 353.80      | 9,648.39            | 3,016.75   | -273.59    | 3,018.98              | 0.65                  | 0.65                 | 0.00                |
| 12,561.00           | 92.50           | 353.20      | 9,646.96            | 3,047.52   | -277.10    | 3,049.77              | 2.16                  | -0.97                | -1.94               |
| 12,592.00           | 92.50           | 353.00      | 9,645.61            | 3,078.26   | -280.82    | 3,080.55              | 0.64                  | 0.00                 | -0.65               |
| 12,623.00           | 91.40           | 353.30      | 9,644.55            | 3,109.02   | -284.51    | 3,111.34              | 3.68                  | -3.55                | 0.97                |
| 12,653.00           | 91.60           | 353.70      | 9,643.77            | 3,138.82   | -287.91    | 3,141.17              | 1.49                  | 0.67                 | 1.33                |
| 12,684.00           | 91.80           | 353.50      | 9,642.85            | 3,169.61   | -291.36    | 3,171.99              | 0.91                  | 0.65                 | -0.65               |
| 12,715.00           | 91.90           | 353.30      | 9,641.85            | 3,200.39   | -294.92    | 3,202.80              | 0.72                  | 0.32                 | -0.65               |
| 12,746.00           | 91.10           | 353.80      | 9,641.04            | 3,231.18   | -298.40    | 3,233.62              | 3.04                  | -2.58                | 1.61                |
| 12,777.00           | 91.30           | 354.20      | 9,640.39            | 3,262.01   | -301.64    | 3,264.47              | 1.44                  | 0.65                 | 1.29                |
| 12,807.00           | 91.60           | 354.30      | 9,639.63            | 3,291.85   | -304.65    | 3,294.33              | 1.05                  | 1.00                 | 0.33                |
| 12,838.00           | 91.40           | 354.00      | 9,638.82            | 3,322.67   | -307.81    | 3,325.19              | 1.16                  | -0.65                | -0.97               |
| 12,869.00           | 91.60           | 354.10      | 9,638.00            | 3,353.50   | -311.02    | 3,356.03              | 0.72                  | 0.65                 | 0.32                |
| 12,900.00           | 91.50           | 353.90      | 9,637.17            | 3,384.32   | -314.26    | 3,386.88              | 0.72                  | -0.32                | -0.65               |
| 12,931.00           | 91.60           | 354.00      | 9,636.33            | 3,415.13   | -317.52    | 3,417.72              | 0.46                  | 0.32                 | 0.32                |



# Cudd Drilling & Measurement Services

## Survey Report



|           |                                |                              |                                       |
|-----------|--------------------------------|------------------------------|---------------------------------------|
| Company:  | Devon Energy Production Co. LP | Local Co-ordinate Reference: | Site Ichabod 7 Fed #1H                |
| Project:  | Lea Co. New Mexico (Nad 83)    | TVD Reference:               | WELL @ 3380.00ft (Original Well Elev) |
| Site:     | Ichabod 7 Fed #1H              | MD Reference:                | WELL @ 3380.00ft (Original Well Elev) |
| Well:     | Ichabod 7 Fed #1H              | North Reference:             | Grid                                  |
| Wellbore: | Lateral #1                     | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Lateral #1                     | Database:                    | EDM 2003.21 Single User Db            |

| Survey               |                 |             |                     |            |            |                       |                       |                      |                     |  |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 12,962.00            | 91 70           | 353.90      | 9,635.43            | 3,445.95   | -320.79    | 3,448.56              | 0.46                  | 0.32                 | -0.32               |  |
| 12,992.00            | 91 70           | 353.90      | 9,634.54            | 3,475.76   | -323.98    | 3,478.41              | 0.00                  | 0.00                 | 0.00                |  |
| 13,023.00            | 91 90           | 353.60      | 9,633.57            | 3,506.56   | -327.35    | 3,509.24              | 1.16                  | 0.65                 | -0.97               |  |
| 13,054.00            | 92 10           | 353.80      | 9,632.49            | 3,537.36   | -330.75    | 3,540.06              | 0.91                  | 0.65                 | 0.65                |  |
| 13,085.00            | 92.20           | 353.50      | 9,631.33            | 3,568.15   | -334.18    | 3,570.87              | 1.02                  | 0.32                 | -0.97               |  |
| 13,115.00            | 91 30           | 353.90      | 9,630.41            | 3,597.95   | -337.47    | 3,600.70              | 3.28                  | -3.00                | 1.33                |  |
| 13,146.00            | 91 30           | 353.60      | 9,629.71            | 3,628.76   | -340.84    | 3,631.54              | 0.97                  | 0.00                 | -0.97               |  |
| 13,177.00            | 91 40           | 353.60      | 9,628.98            | 3,659.56   | -344.30    | 3,662.37              | 0.32                  | 0.32                 | 0.00                |  |
| 13,208.00            | 91 70           | 353.90      | 9,628.14            | 3,690.36   | -347.67    | 3,693.20              | 1.37                  | 0.97                 | 0.97                |  |
| 13,239.00            | 91.90           | 353.40      | 9,627.16            | 3,721.16   | -351.10    | 3,724.02              | 1.74                  | 0.65                 | -1.61               |  |
| 13,270.00            | 92.00           | 353.30      | 9,626.11            | 3,751.93   | -354.68    | 3,754.82              | 0.46                  | 0.32                 | -0.32               |  |
| 13,300.00            | 91 30           | 353.60      | 9,625.25            | 3,781.72   | -358.10    | 3,784.64              | 2.54                  | -2.33                | 1.00                |  |
| 13,331.00            | 91 10           | 353.60      | 9,624.60            | 3,812.52   | -361.56    | 3,815.47              | 0.65                  | -0.65                | 0.00                |  |
| 13,362.00            | 91 00           | 353.30      | 9,624.03            | 3,843.31   | -365.09    | 3,846.29              | 1.02                  | -0.32                | -0.97               |  |
| 13,393.00            | 91.20           | 353.20      | 9,623.43            | 3,874.09   | -368.74    | 3,877.10              | 0.72                  | 0.65                 | -0.32               |  |
| 13,423.00            | 91 30           | 353.50      | 9,622.78            | 3,903.88   | -372.21    | 3,906.92              | 1.05                  | 0.33                 | 1.00                |  |
| 13,455.00            | 91 40           | 353.50      | 9,622.02            | 3,935.67   | -375.83    | 3,938.74              | 0.31                  | 0.31                 | 0.00                |  |
| 13,486.00            | 91 40           | 353.10      | 9,621.27            | 3,966.45   | -379.45    | 3,969.55              | 1.29                  | 0.00                 | -1.29               |  |
| 13,517.00            | 91.60           | 353.30      | 9,620.46            | 3,997.22   | -383.12    | 4,000.35              | 0.91                  | 0.65                 | 0.65                |  |
| 13,548.00            | 91 90           | 353.30      | 9,619.51            | 4,027.99   | -386.73    | 4,031.15              | 0.97                  | 0.97                 | 0.00                |  |
| 13,579.00            | 92 00           | 353.30      | 9,618.45            | 4,058.76   | -390.35    | 4,061.95              | 0.32                  | 0.32                 | 0.00                |  |
| 13,609.00            | 92 00           | 353.40      | 9,617.41            | 4,088.54   | -393.82    | 4,091.76              | 0.33                  | 0.00                 | 0.33                |  |
| 13,640.00            | 92.20           | 353.10      | 9,616.27            | 4,119.31   | -397.46    | 4,122.56              | 1.16                  | 0.65                 | -0.97               |  |
| 13,671.00            | 91 60           | 353.50      | 9,615.24            | 4,150.08   | -401.08    | 4,153.36              | 2.33                  | -1.94                | 1.29                |  |
| 13,702.00            | 91 70           | 353.60      | 9,614.35            | 4,180.87   | -404.56    | 4,184.18              | 0.46                  | 0.32                 | 0.32                |  |
| 13,732.00            | 91.80           | 353.00      | 9,613.43            | 4,210.65   | -408.05    | 4,213.99              | 2.03                  | 0.33                 | -2.00               |  |
| 13,763.00            | 91 90           | 352.90      | 9,612.43            | 4,241.40   | -411.86    | 4,244.77              | 0.46                  | 0.32                 | -0.32               |  |
| 13,794.00            | 91 10           | 353.30      | 9,611.62            | 4,272.17   | -415.58    | 4,275.56              | 2.89                  | -2.58                | 1.29                |  |
| 13,825.00            | 91.20           | 353.20      | 9,611.00            | 4,302.94   | -419.22    | 4,306.37              | 0.46                  | 0.32                 | -0.32               |  |
| 13,856.00            | 91 00           | 352.90      | 9,610.40            | 4,333.71   | -422.97    | 4,337.17              | 1.16                  | -0.65                | -0.97               |  |
| 13,886.00            | 90.90           | 352.60      | 9,609.91            | 4,363.47   | -426.76    | 4,366.96              | 1.05                  | -0.33                | -1.00               |  |
| 13,917.00            | 90 60           | 352.70      | 9,609.50            | 4,394.21   | -430.72    | 4,397.73              | 1.02                  | -0.97                | 0.32                |  |
| 13,948.00            | 91 00           | 352.40      | 9,609.07            | 4,424.94   | -434.74    | 4,428.50              | 1.61                  | 1.29                 | -0.97               |  |
| 13,979.00            | 91 30           | 352.70      | 9,608.45            | 4,455.68   | -438.76    | 4,459.27              | 1.37                  | 0.97                 | 0.97                |  |
| 14,010.00            | 91 50           | 352.90      | 9,607.69            | 4,486.42   | -442.65    | 4,490.04              | 0.91                  | 0.65                 | 0.65                |  |
| 14,041.00            | 91 60           | 352.50      | 9,606.85            | 4,517.16   | -446.58    | 4,520.81              | 1.33                  | 0.32                 | -1.29               |  |
| 14,073.00            | 91 90           | 352.80      | 9,605.87            | 4,548.88   | -450.68    | 4,552.57              | 1.33                  | 0.94                 | 0.94                |  |
| 14,105.00            | 92 10           | 352.70      | 9,604.76            | 4,580.61   | -454.71    | 4,584.33              | 0.70                  | 0.63                 | -0.31               |  |
| 14,137.00            | 92.10           | 352.80      | 9,603.58            | 4,612.33   | -458.75    | 4,616.08              | 0.31                  | 0.00                 | 0.31                |  |
| 14,168.00            | 92 30           | 353.20      | 9,602.39            | 4,643.08   | -462.52    | 4,646.86              | 1.44                  | 0.65                 | 1.29                |  |
| 14,200.00            | 92 40           | 353.00      | 9,601.08            | 4,674.82   | -466.36    | 4,678.64              | 0.70                  | 0.31                 | -0.63               |  |
| 14,218.00            | 92 40           | 353.00      | 9,600.33            | 4,692.67   | -468.56    | 4,696.50              | 0.00                  | 0.00                 | 0.00                |  |
| Last Cudd MWD Survey |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 14,275.00            | 92 40           | 353.00      | 9,597.94            | 4,749.19   | -475.50    | 4,753.09              | 0.00                  | 0.00                 | 0.00                |  |
| Proj to Bit          |                 |             |                     |            |            |                       |                       |                      |                     |  |



**Cudd Drilling & Measurement Services**  
Survey Report



|           |                                |                              |                                       |
|-----------|--------------------------------|------------------------------|---------------------------------------|
| Company:  | Devon Energy Production Co. LP | Local Co-ordinate Reference: | Site: Ichabod 7 Fed #1H               |
| Project:  | Lea Co. New Mexico (Nad 83)    | TVD Reference:               | WELL @ 3380.00ft (Original Well Elev) |
| Site:     | Ichabod 7 Fed #1H              | MD Reference:                | WELL @ 3380.00ft (Original Well Elev) |
| Well:     | Ichabod 7 Fed #1H              | North Reference:             | Grid                                  |
| Wellbore: | Lateral #1                     | Survey Calculation Method:   | Minimum Curvature                     |
| Design:   | Lateral #1                     | Database:                    | EDM 2003.21 Single User Db            |

| Survey Annotations        |                           |                   |               |                       |
|---------------------------|---------------------------|-------------------|---------------|-----------------------|
| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Local Coordinates |               | Comment               |
|                           |                           | +N/-S<br>(ft)     | +E/-W<br>(ft) |                       |
| 9,100.00                  | 9,098.04                  | -31.63            | 70.05         | Tie-In to Scientific  |
| 9,195.00                  | 9,192.73                  | -25.84            | 68.28         | First Cudd MWD Survey |
| 14,218.00                 | 9,600.33                  | 4,692.67          | -468.56       | Last Cudd MWD Survey  |
| 14,275.00                 | 9,597.94                  | 4,749.19          | -475.50       | Proj to Bit           |

|                   |                    |             |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|



Project Lea Co., New Mexico (Nad 83)  
Site Ichabod 7 Fed #1H  
Well Ichabod 7 Fed #1H  
Wellbore Lateral #1  
Design Design #4



#### SECTION DETAILS

| Sec | MD       | Inc   | Azi    | TVD     | +N-S    | +E-W   | DLeg  | TFace  | VSec    | Target              |
|-----|----------|-------|--------|---------|---------|--------|-------|--------|---------|---------------------|
| 1   | 9657 00  | 46 90 | 350 10 | 9583 25 | 191 25  | -8 21  | 0 00  | 0 00   | 191 31  |                     |
| 2   | 9708 00  | 46 90 | 350 00 | 9618 10 | 227 93  | -14 55 | 0 14  | -90 03 | 228 05  |                     |
| 3   | 9998 45  | 90 75 | 349 05 | 9720 47 | 487 74  | -63 03 | 15 10 | -1 37  | 488 26  |                     |
| 4   | 10391 47 | 90 75 | 0 84   | 9715 31 | 878 50  | -97 59 | 3 00  | 89 92  | 879 30  |                     |
| 5   | 14275 29 | 90 75 | 0 84   | 9654 50 | 4761 57 | -40 56 | 0 00  | 0 00   | 4761 74 | PBHL - TD (I7F#1H)a |

#### ANNOTATIONS

TVD 9720 47 MD 9998 45 Annotation EOC - Hold I 90 75° - Turn to A 0 84°

#### PROJECT DETAILS Lea Co., New Mexico (Nad 83)

Geodetic System US State Plane 1983  
Datum North American Datum 1983  
Ellipsoid GRS 1980  
Zone New Mexico Eastern Zone  
System Datum Mean Sea Level

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

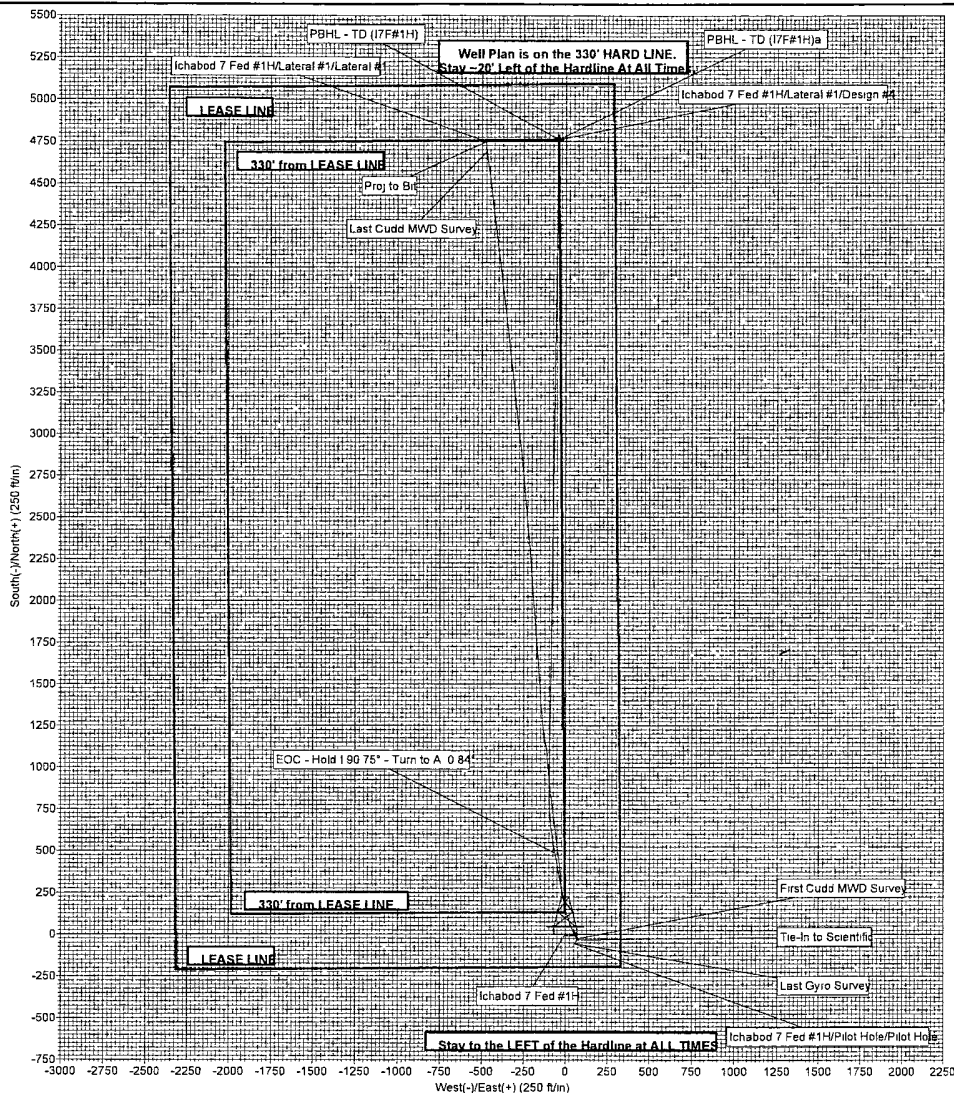
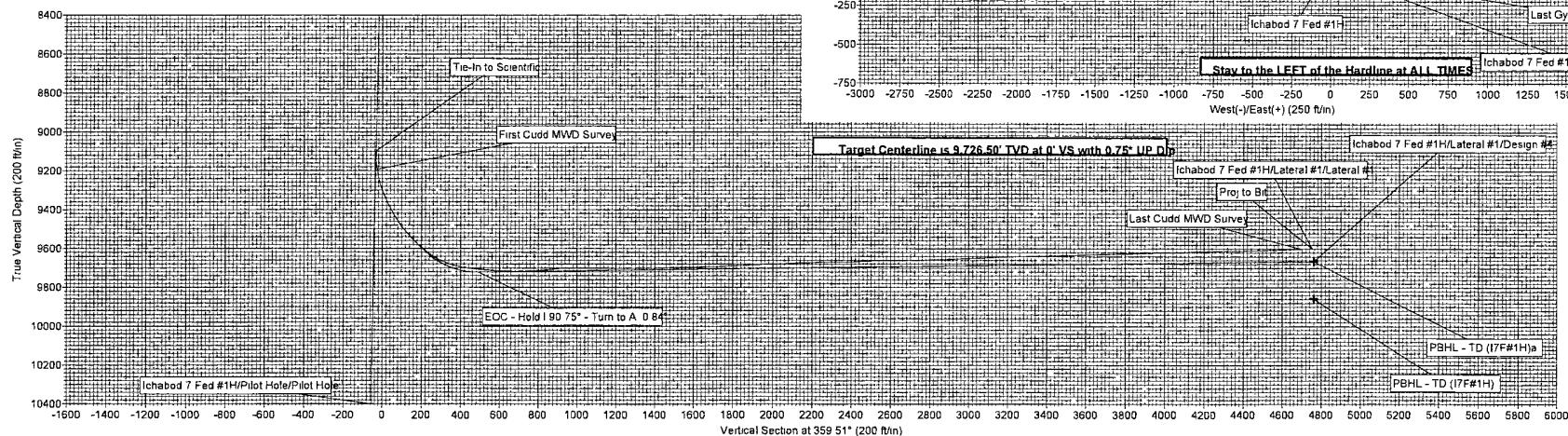
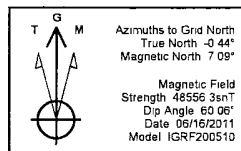
| Name                | TVD     | +N-S    | +E-W   | Northing  | Easting   | Latitude        | Longitude        | Shape |
|---------------------|---------|---------|--------|-----------|-----------|-----------------|------------------|-------|
| PBHL - TD (I7F#1H)a | 9654 50 | 4761 57 | -40 56 | 388052 01 | 799040 78 | 32° 3' 50 875 N | 103° 30' 5 161 W | Point |

#### WELL DETAILS Ichabod 7 Fed #1H

|                                       |      |           |           |                |                  |
|---------------------------------------|------|-----------|-----------|----------------|------------------|
| Ground Level 3355 00                  |      |           |           |                |                  |
| WELL @ 3380 00ft (Original Well Elev) |      |           |           |                |                  |
| +N-S                                  | +E-W | Northing  | Easting   | Latitude       | Slot             |
| 0 00                                  | 0 00 | 383300 45 | 799081 34 | 32° 3' 3 755 N | 103° 30' 5 116 W |

#### Plan Design #4 (Ichabod 7 Fed #1H/Lateral #1)

Created By Mike Starkey Date 9 22 July 04 2011  
Checked \_\_\_\_\_ Date \_\_\_\_\_  
Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
Approved \_\_\_\_\_ Date \_\_\_\_\_



Ichabod 7 Fed #1H\_Final MWD\_Survey-Report\_07-04-11.txt  
Cudd Drilling & Measurement Services

Devon Energy Production Co, LP  
Ichabod 7 Fed #1H - Cudd MWD Survey#1

SUR: P-7-26s-34e, 195/S & 330/E  
BHL: A-7-26s-34e, 4944/S & 806/E  
API # 30-025-40043

Lea Co., New Mexico (Nad 83)  
Ichabod 7 Fed #1H  
Your Ref:

| Measured<br>Dogleg<br>Depth<br>Rate<br>(ft)<br>(°/100ft) | Incl.  | Azim.   | Vertical<br>Depth<br>(ft) | Northings<br>(ft) | Eastings<br>(ft) | Vertical<br>Section<br>(ft) |
|----------------------------------------------------------|--------|---------|---------------------------|-------------------|------------------|-----------------------------|
| 9100.00<br>0.00                                          | 1.360  | 184.600 | 9098.04                   | 31.63 S           | 70.05 E          | -32.23                      |
| 9195.00<br>10.42                                         | 8.600  | 346.400 | 9192.73                   | 25.84 S           | 68.28 E          | -26.42                      |
| 9226.00<br>14.35                                         | 12.600 | 335.600 | 9223.19                   | 20.50 S           | 66.34 E          | -21.07                      |
| 9258.00<br>13.15                                         | 16.700 | 331.800 | 9254.15                   | 13.27 S           | 62.73 E          | -13.80                      |
| 9290.00<br>12.33                                         | 20.600 | 333.700 | 9284.46                   | 4.16 S            | 58.06 E          | -4.66                       |
| 9322.00<br>8.57                                          | 23.300 | 335.000 | 9314.14                   | 6.62 N            | 52.89 E          | 6.17                        |
| 9354.00<br>9.06                                          | 26.200 | 335.100 | 9343.20                   | 18.77 N           | 47.24 E          | 18.36                       |
| 9386.00<br>7.00                                          | 28.300 | 336.800 | 9371.64                   | 32.15 N           | 41.27 E          | 31.79                       |
| 9418.00<br>6.56                                          | 30.300 | 338.100 | 9399.55                   | 46.61 N           | 35.27 E          | 46.31                       |
| 9450.00<br>6.88                                          | 32.500 | 338.000 | 9426.86                   | 62.07 N           | 29.04 E          | 61.82                       |
| 9482.00<br>10.49                                         | 35.800 | 339.100 | 9453.34                   | 78.79 N           | 22.48 E          | 78.60                       |
| 9514.00<br>8.67                                          | 38.400 | 340.700 | 9478.86                   | 96.92 N           | 15.86 E          | 96.78                       |
| 9546.00<br>6.00                                          | 39.900 | 342.600 | 9503.68                   | 116.09 N          | 9.50 E           | 116.01                      |
| 9578.00<br>9.62                                          | 42.500 | 345.100 | 9527.75                   | 136.34 N          | 3.65 E           | 136.30                      |
| 9610.00<br>10.52                                         | 45.300 | 347.800 | 9550.81                   | 157.91 N          | 1.53 W           | 157.91                      |
| 9642.00<br>5.48                                          | 46.900 | 348.800 | 9573.00                   | 180.48 N          | 6.21 W           | 180.53                      |
| 9674.00<br>5.58                                          | 48.300 | 350.300 | 9594.58                   | 203.72 N          | 10.49 W          | 203.80                      |
| 9706.00<br>10.95                                         | 51.700 | 351.400 | 9615.14                   | 227.92 N          | 14.38 W          | 228.03                      |
| 9738.00<br>14.14                                         | 56.100 | 352.700 | 9633.99                   | 253.52 N          | 17.95 W          | 253.67                      |
| 9768.00<br>16.58                                         | 61.000 | 353.700 | 9649.64                   | 278.93 N          | 20.97 W          | 279.10                      |
| 9800.00<br>15.32                                         | 65.900 | 353.800 | 9663.94                   | 307.37 N          | 24.09 W          | 307.57                      |
| 9833.00<br>15.16                                         | 70.900 | 353.600 | 9676.09                   | 337.86 N          | 27.45 W          | 338.08                      |
| 9864.00                                                  | 75.800 | 354.200 | 9684.97                   | 367.38 N          | 30.61 W          | 367.63                      |

Ichabod 7 Fed #1H\_Final MWD\_Survey-Report\_07-04-11.txt

|       |          |        |         |         |           |          |         |
|-------|----------|--------|---------|---------|-----------|----------|---------|
| 15.91 | 9896.00  | 78.400 | 353.900 | 9692.11 | 398.41 N  | 33.84 W  | 398.68  |
| 8.18  | 9928.00  | 80.600 | 353.800 | 9697.94 | 429.69 N  | 37.21 W  | 429.99  |
| 6.88  | 9960.00  | 82.900 | 353.400 | 9702.53 | 461.16 N  | 40.74 W  | 461.49  |
| 7.29  | 9991.00  | 84.700 | 353.200 | 9705.88 | 491.76 N  | 44.34 W  | 492.12  |
| 5.84  | 10023.00 | 85.000 | 353.500 | 9708.75 | 523.42 N  | 48.03 W  | 523.81  |
| 1.32  | 10054.00 | 85.800 | 352.900 | 9711.24 | 554.10 N  | 51.69 W  | 554.52  |
| 3.22  | 10084.00 | 86.800 | 352.100 | 9713.17 | 583.78 N  | 55.59 W  | 584.24  |
| 4.27  | 10116.00 | 88.100 | 352.200 | 9714.60 | 615.45 N  | 59.96 W  | 615.94  |
| 4.07  | 10148.00 | 88.900 | 352.200 | 9715.44 | 647.14 N  | 64.30 W  | 647.67  |
| 2.50  | 10180.00 | 89.700 | 352.000 | 9715.83 | 678.84 N  | 68.70 W  | 679.40  |
| 2.58  | 10212.00 | 90.800 | 352.100 | 9715.69 | 710.53 N  | 73.12 W  | 711.13  |
| 3.45  | 10243.00 | 91.000 | 353.000 | 9715.20 | 741.26 N  | 77.14 W  | 741.90  |
| 2.97  | 10275.00 | 92.700 | 353.500 | 9714.17 | 773.02 N  | 80.90 W  | 773.69  |
| 5.54  | 10307.00 | 94.900 | 353.400 | 9712.05 | 804.74 N  | 84.54 W  | 805.44  |
| 6.88  | 10339.00 | 95.600 | 352.900 | 9709.12 | 836.38 N  | 88.34 W  | 837.11  |
| 2.68  | 10371.00 | 95.200 | 353.600 | 9706.11 | 868.02 N  | 92.09 W  | 868.77  |
| 2.51  | 10402.00 | 94.000 | 353.700 | 9703.62 | 898.73 N  | 95.51 W  | 899.51  |
| 3.88  | 10433.00 | 92.900 | 353.800 | 9701.75 | 929.49 N  | 98.88 W  | 930.30  |
| 3.56  | 10464.00 | 92.200 | 354.700 | 9700.38 | 960.30 N  | 101.98 W | 961.14  |
| 3.68  | 10495.00 | 91.400 | 355.500 | 9699.40 | 991.17 N  | 104.62 W | 992.03  |
| 3.65  | 10525.00 | 89.900 | 356.100 | 9699.06 | 1021.09 N | 106.82 W | 1021.96 |
| 5.39  | 10556.00 | 89.500 | 356.100 | 9699.22 | 1052.01 N | 108.93 W | 1052.91 |
| 1.29  | 10587.00 | 89.400 | 355.800 | 9699.52 | 1082.94 N | 111.12 W | 1083.85 |
| 1.02  | 10618.00 | 89.200 | 355.100 | 9699.90 | 1113.84 N | 113.58 W | 1114.77 |
| 2.35  | 10648.00 | 89.100 | 335.100 | 9700.35 | 1142.68 N | 121.25 W | 1143.67 |
| 66.66 | 10678.00 | 89.200 | 355.100 | 9700.80 | 1171.52 N | 128.93 W | 1172.58 |
| 66.66 | 10709.00 | 89.200 | 355.100 | 9701.23 | 1202.40 N | 131.57 W | 1203.48 |
| 0.00  | 10739.00 | 89.400 | 355.400 | 9701.60 | 1232.30 N | 134.06 W | 1233.40 |
| 1.20  | 10770.00 | 89.100 | 355.400 | 9702.00 | 1263.19 N | 136.54 W | 1264.32 |
| 0.97  | 10801.00 | 89.800 | 355.300 | 9702.30 | 1294.09 N | 139.06 W | 1295.23 |
| 2.28  | 10832.00 | 90.700 | 355.800 | 9702.17 | 1325.00 N | 141.46 W | 1326.16 |
| 3.32  |          |        |         |         |           |          |         |

|          | Ichabod 7 Fed #1H_Final MWD_Survey-Report_07-04-11.txt |         |         |           |          |         |
|----------|--------------------------------------------------------|---------|---------|-----------|----------|---------|
| 10862.00 | 90.900                                                 | 356.200 | 9701.75 | 1354.92 N | 143.55 W | 1356.10 |
| 1.49     |                                                        |         |         |           |          |         |
| 10893.00 | 90.900                                                 | 356.100 | 9701.26 | 1385.85 N | 145.64 W | 1387.04 |
| 0.32     |                                                        |         |         |           |          |         |
| 10924.00 | 92.000                                                 | 356.400 | 9700.48 | 1416.77 N | 147.66 W | 1417.98 |
| 3.68     |                                                        |         |         |           |          |         |
| 10986.00 | 92.300                                                 | 356.400 | 9698.15 | 1478.60 N | 151.55 W | 1479.85 |
| 0.48     |                                                        |         |         |           |          |         |
| 11047.00 | 91.600                                                 | 356.000 | 9696.07 | 1539.43 N | 155.59 W | 1540.71 |
| 1.32     |                                                        |         |         |           |          |         |
| 11141.00 | 91.100                                                 | 356.200 | 9693.86 | 1633.19 N | 161.98 W | 1634.51 |
| 0.57     |                                                        |         |         |           |          |         |
| 11172.00 | 91.400                                                 | 356.200 | 9693.18 | 1664.11 N | 164.04 W | 1665.46 |
| 0.97     |                                                        |         |         |           |          |         |
| 11204.00 | 91.700                                                 | 356.000 | 9692.32 | 1696.03 N | 166.21 W | 1697.39 |
| 1.13     |                                                        |         |         |           |          |         |
| 11236.00 | 92.200                                                 | 356.100 | 9691.23 | 1727.93 N | 168.42 W | 1729.31 |
| 1.59     |                                                        |         |         |           |          |         |
| 11266.00 | 92.300                                                 | 355.800 | 9690.05 | 1757.84 N | 170.53 W | 1759.23 |
| 1.05     |                                                        |         |         |           |          |         |
| 11298.00 | 92.400                                                 | 355.800 | 9688.74 | 1789.72 N | 172.88 W | 1791.14 |
| 0.31     |                                                        |         |         |           |          |         |
| 11329.00 | 92.600                                                 | 355.800 | 9687.39 | 1820.61 N | 175.14 W | 1822.04 |
| 0.65     |                                                        |         |         |           |          |         |
| 11360.00 | 92.500                                                 | 355.700 | 9686.01 | 1851.49 N | 177.44 W | 1852.94 |
| 0.46     |                                                        |         |         |           |          |         |
| 11390.00 | 92.900                                                 | 355.900 | 9684.60 | 1881.38 N | 179.63 W | 1882.85 |
| 1.49     |                                                        |         |         |           |          |         |
| 11421.00 | 93.100                                                 | 355.800 | 9682.97 | 1912.26 N | 181.87 W | 1913.74 |
| 0.72     |                                                        |         |         |           |          |         |
| 11450.00 | 92.400                                                 | 355.600 | 9681.58 | 1941.14 N | 184.05 W | 1942.64 |
| 2.51     |                                                        |         |         |           |          |         |
| 11483.00 | 92.700                                                 | 355.500 | 9680.11 | 1974.01 N | 186.60 W | 1975.53 |
| 0.96     |                                                        |         |         |           |          |         |
| 11514.00 | 92.700                                                 | 356.000 | 9678.65 | 2004.89 N | 188.90 W | 2006.43 |
| 1.61     |                                                        |         |         |           |          |         |
| 11544.00 | 92.000                                                 | 355.900 | 9677.42 | 2034.79 N | 191.02 W | 2036.35 |
| 2.36     |                                                        |         |         |           |          |         |
| 11574.00 | 92.100                                                 | 356.500 | 9676.35 | 2064.70 N | 193.00 W | 2066.28 |
| 2.03     |                                                        |         |         |           |          |         |
| 11605.00 | 92.200                                                 | 356.400 | 9675.19 | 2095.62 N | 194.92 W | 2097.21 |
| 0.46     |                                                        |         |         |           |          |         |
| 11636.00 | 91.900                                                 | 356.400 | 9674.08 | 2126.54 N | 196.87 W | 2128.15 |
| 0.97     |                                                        |         |         |           |          |         |
| 11667.00 | 92.100                                                 | 356.400 | 9673.00 | 2157.46 N | 198.81 W | 2159.08 |
| 0.65     |                                                        |         |         |           |          |         |
| 11698.00 | 92.300                                                 | 356.300 | 9671.81 | 2188.38 N | 200.78 W | 2190.01 |
| 0.72     |                                                        |         |         |           |          |         |
| 11729.00 | 92.100                                                 | 356.000 | 9670.62 | 2219.28 N | 202.86 W | 2220.94 |
| 1.16     |                                                        |         |         |           |          |         |
| 11760.00 | 91.100                                                 | 355.100 | 9669.75 | 2250.18 N | 205.27 W | 2251.85 |
| 4.34     |                                                        |         |         |           |          |         |
| 11791.00 | 90.300                                                 | 355.000 | 9669.37 | 2281.06 N | 207.94 W | 2282.75 |
| 2.60     |                                                        |         |         |           |          |         |
| 11822.00 | 90.800                                                 | 355.000 | 9669.07 | 2311.94 N | 210.64 W | 2313.66 |
| 1.61     |                                                        |         |         |           |          |         |
| 11852.00 | 91.300                                                 | 355.400 | 9668.52 | 2341.83 N | 213.15 W | 2343.57 |
| 2.13     |                                                        |         |         |           |          |         |
| 11883.00 | 91.400                                                 | 355.700 | 9667.79 | 2372.73 N | 215.56 W | 2374.48 |
| 1.02     |                                                        |         |         |           |          |         |
| 11914.00 | 92.000                                                 | 355.600 | 9666.87 | 2403.62 N | 217.91 W | 2405.40 |
| 1.96     |                                                        |         |         |           |          |         |
| 11945.00 | 91.900                                                 | 355.800 | 9665.82 | 2434.52 N | 220.23 W | 2436.31 |

Ichabod 7 Fed #1H\_Final MWD\_Survey-Report\_07-04-11.txt

|          |        |         |         |           |          |         |  |
|----------|--------|---------|---------|-----------|----------|---------|--|
| 0.72     |        |         |         |           |          |         |  |
| 11976.00 | 92.000 | 355.500 | 9664.76 | 2465.41 N | 222.58 W | 2467.22 |  |
| 1.02     |        |         |         |           |          |         |  |
| 12006.00 | 92.400 | 355.500 | 9663.61 | 2495.30 N | 224.93 W | 2497.13 |  |
| 1.33     |        |         |         |           |          |         |  |
| 12037.00 | 91.800 | 355.700 | 9662.48 | 2526.18 N | 227.31 W | 2528.04 |  |
| 2.04     |        |         |         |           |          |         |  |
| 12068.00 | 91.100 | 355.100 | 9661.69 | 2557.07 N | 229.80 W | 2558.95 |  |
| 2.97     |        |         |         |           |          |         |  |
| 12099.00 | 90.200 | 355.200 | 9661.34 | 2587.96 N | 232.42 W | 2589.85 |  |
| 2.92     |        |         |         |           |          |         |  |
| 12130.00 | 90.200 | 355.000 | 9661.23 | 2618.85 N | 235.06 W | 2620.76 |  |
| 0.65     |        |         |         |           |          |         |  |
| 12160.00 | 90.900 | 355.200 | 9660.94 | 2648.74 N | 237.63 W | 2650.67 |  |
| 2.43     |        |         |         |           |          |         |  |
| 12191.00 | 91.400 | 355.000 | 9660.32 | 2679.62 N | 240.27 W | 2681.57 |  |
| 1.74     |        |         |         |           |          |         |  |
| 12222.00 | 91.600 | 355.100 | 9659.51 | 2710.49 N | 242.95 W | 2712.47 |  |
| 0.72     |        |         |         |           |          |         |  |
| 12253.00 | 91.600 | 354.800 | 9658.65 | 2741.36 N | 245.68 W | 2743.36 |  |
| 0.97     |        |         |         |           |          |         |  |
| 12284.00 | 91.300 | 354.400 | 9657.86 | 2772.21 N | 248.59 W | 2774.24 |  |
| 1.61     |        |         |         |           |          |         |  |
| 12315.00 | 92.000 | 354.400 | 9656.97 | 2803.05 N | 251.62 W | 2805.10 |  |
| 2.26     |        |         |         |           |          |         |  |
| 12345.00 | 92.200 | 354.400 | 9655.87 | 2832.89 N | 254.54 W | 2834.96 |  |
| 0.67     |        |         |         |           |          |         |  |
| 12376.00 | 92.300 | 354.400 | 9654.65 | 2863.71 N | 257.56 W | 2865.81 |  |
| 0.32     |        |         |         |           |          |         |  |
| 12407.00 | 92.200 | 354.300 | 9653.43 | 2894.54 N | 260.61 W | 2896.66 |  |
| 0.46     |        |         |         |           |          |         |  |
| 12438.00 | 92.000 | 354.100 | 9652.30 | 2925.36 N | 263.75 W | 2927.51 |  |
| 0.91     |        |         |         |           |          |         |  |
| 12469.00 | 92.300 | 353.800 | 9651.14 | 2956.17 N | 267.01 W | 2958.34 |  |
| 1.37     |        |         |         |           |          |         |  |
| 12499.00 | 92.600 | 353.800 | 9649.85 | 2985.96 N | 270.25 W | 2988.17 |  |
| 1.00     |        |         |         |           |          |         |  |
| 12530.00 | 92.800 | 353.800 | 9648.39 | 3016.75 N | 273.59 W | 3018.98 |  |
| 0.65     |        |         |         |           |          |         |  |
| 12561.00 | 92.500 | 353.200 | 9646.96 | 3047.52 N | 277.10 W | 3049.77 |  |
| 2.16     |        |         |         |           |          |         |  |
| 12592.00 | 92.500 | 353.000 | 9645.61 | 3078.26 N | 280.82 W | 3080.55 |  |
| 0.64     |        |         |         |           |          |         |  |
| 12623.00 | 91.400 | 353.300 | 9644.55 | 3109.02 N | 284.51 W | 3111.34 |  |
| 3.68     |        |         |         |           |          |         |  |
| 12653.00 | 91.600 | 353.700 | 9643.77 | 3138.82 N | 287.91 W | 3141.17 |  |
| 1.49     |        |         |         |           |          |         |  |
| 12684.00 | 91.800 | 353.500 | 9642.85 | 3169.61 N | 291.36 W | 3171.99 |  |
| 0.91     |        |         |         |           |          |         |  |
| 12715.00 | 91.900 | 353.300 | 9641.85 | 3200.39 N | 294.92 W | 3202.80 |  |
| 0.72     |        |         |         |           |          |         |  |
| 12746.00 | 91.100 | 353.800 | 9641.04 | 3231.18 N | 298.40 W | 3233.62 |  |
| 3.04     |        |         |         |           |          |         |  |
| 12777.00 | 91.300 | 354.200 | 9640.39 | 3262.01 N | 301.64 W | 3264.47 |  |
| 1.44     |        |         |         |           |          |         |  |
| 12807.00 | 91.600 | 354.300 | 9639.63 | 3291.85 N | 304.65 W | 3294.33 |  |
| 1.05     |        |         |         |           |          |         |  |
| 12838.00 | 91.400 | 354.000 | 9638.82 | 3322.67 N | 307.81 W | 3325.19 |  |
| 1.16     |        |         |         |           |          |         |  |
| 12869.00 | 91.600 | 354.100 | 9638.00 | 3353.50 N | 311.02 W | 3356.03 |  |
| 0.72     |        |         |         |           |          |         |  |
| 12900.00 | 91.500 | 353.900 | 9637.17 | 3384.32 N | 314.26 W | 3386.88 |  |
| 0.72     |        |         |         |           |          |         |  |

|          | Ichabod 7 Fed #1H_Final |         |         | MWD_Survey-Report_07-04-11.txt |          |         |  |
|----------|-------------------------|---------|---------|--------------------------------|----------|---------|--|
| 12931.00 | 91.600                  | 354.000 | 9636.33 | 3415.13 N                      | 317.52 W | 3417.72 |  |
| 0.46     |                         |         |         |                                |          |         |  |
| 12962.00 | 91.700                  | 353.900 | 9635.43 | 3445.95 N                      | 320.79 W | 3448.56 |  |
| 0.46     |                         |         |         |                                |          |         |  |
| 12992.00 | 91.700                  | 353.900 | 9634.54 | 3475.76 N                      | 323.98 W | 3478.41 |  |
| 0.00     |                         |         |         |                                |          |         |  |
| 13023.00 | 91.900                  | 353.600 | 9633.57 | 3506.56 N                      | 327.35 W | 3509.24 |  |
| 1.16     |                         |         |         |                                |          |         |  |
| 13054.00 | 92.100                  | 353.800 | 9632.49 | 3537.36 N                      | 330.75 W | 3540.06 |  |
| 0.91     |                         |         |         |                                |          |         |  |
| 13085.00 | 92.200                  | 353.500 | 9631.33 | 3568.15 N                      | 334.18 W | 3570.87 |  |
| 1.02     |                         |         |         |                                |          |         |  |
| 13115.00 | 91.300                  | 353.900 | 9630.41 | 3597.95 N                      | 337.47 W | 3600.70 |  |
| 3.28     |                         |         |         |                                |          |         |  |
| 13146.00 | 91.300                  | 353.600 | 9629.71 | 3628.76 N                      | 340.84 W | 3631.54 |  |
| 0.97     |                         |         |         |                                |          |         |  |
| 13177.00 | 91.400                  | 353.600 | 9628.98 | 3659.56 N                      | 344.30 W | 3662.37 |  |
| 0.32     |                         |         |         |                                |          |         |  |
| 13208.00 | 91.700                  | 353.900 | 9628.14 | 3690.36 N                      | 347.67 W | 3693.20 |  |
| 1.37     |                         |         |         |                                |          |         |  |
| 13239.00 | 91.900                  | 353.400 | 9627.16 | 3721.16 N                      | 351.10 W | 3724.02 |  |
| 1.74     |                         |         |         |                                |          |         |  |
| 13270.00 | 92.000                  | 353.300 | 9626.11 | 3751.93 N                      | 354.68 W | 3754.82 |  |
| 0.46     |                         |         |         |                                |          |         |  |
| 13300.00 | 91.300                  | 353.600 | 9625.25 | 3781.72 N                      | 358.10 W | 3784.64 |  |
| 2.54     |                         |         |         |                                |          |         |  |
| 13331.00 | 91.100                  | 353.600 | 9624.60 | 3812.52 N                      | 361.56 W | 3815.47 |  |
| 0.65     |                         |         |         |                                |          |         |  |
| 13362.00 | 91.000                  | 353.300 | 9624.03 | 3843.31 N                      | 365.09 W | 3846.29 |  |
| 1.02     |                         |         |         |                                |          |         |  |
| 13393.00 | 91.200                  | 353.200 | 9623.43 | 3874.09 N                      | 368.74 W | 3877.10 |  |
| 0.72     |                         |         |         |                                |          |         |  |
| 13423.00 | 91.300                  | 353.500 | 9622.78 | 3903.88 N                      | 372.21 W | 3906.92 |  |
| 1.05     |                         |         |         |                                |          |         |  |
| 13455.00 | 91.400                  | 353.500 | 9622.02 | 3935.67 N                      | 375.83 W | 3938.74 |  |
| 0.31     |                         |         |         |                                |          |         |  |
| 13486.00 | 91.400                  | 353.100 | 9621.27 | 3966.45 N                      | 379.45 W | 3969.55 |  |
| 1.29     |                         |         |         |                                |          |         |  |
| 13517.00 | 91.600                  | 353.300 | 9620.46 | 3997.22 N                      | 383.12 W | 4000.35 |  |
| 0.91     |                         |         |         |                                |          |         |  |
| 13548.00 | 91.900                  | 353.300 | 9619.51 | 4027.99 N                      | 386.73 W | 4031.15 |  |
| 0.97     |                         |         |         |                                |          |         |  |
| 13579.00 | 92.000                  | 353.300 | 9618.45 | 4058.76 N                      | 390.35 W | 4061.95 |  |
| 0.32     |                         |         |         |                                |          |         |  |
| 13609.00 | 92.000                  | 353.400 | 9617.41 | 4088.54 N                      | 393.82 W | 4091.76 |  |
| 0.33     |                         |         |         |                                |          |         |  |
| 13640.00 | 92.200                  | 353.100 | 9616.27 | 4119.31 N                      | 397.46 W | 4122.56 |  |
| 1.16     |                         |         |         |                                |          |         |  |
| 13671.00 | 91.600                  | 353.500 | 9615.24 | 4150.08 N                      | 401.08 W | 4153.36 |  |
| 2.33     |                         |         |         |                                |          |         |  |
| 13702.00 | 91.700                  | 353.600 | 9614.35 | 4180.87 N                      | 404.56 W | 4184.18 |  |
| 0.46     |                         |         |         |                                |          |         |  |
| 13732.00 | 91.800                  | 353.000 | 9613.43 | 4210.65 N                      | 408.05 W | 4213.99 |  |
| 2.03     |                         |         |         |                                |          |         |  |
| 13763.00 | 91.900                  | 352.900 | 9612.43 | 4241.40 N                      | 411.86 W | 4244.77 |  |
| 0.46     |                         |         |         |                                |          |         |  |
| 13794.00 | 91.100                  | 353.300 | 9611.62 | 4272.17 N                      | 415.58 W | 4275.56 |  |
| 2.89     |                         |         |         |                                |          |         |  |
| 13825.00 | 91.200                  | 353.200 | 9611.00 | 4302.94 N                      | 419.22 W | 4306.37 |  |
| 0.46     |                         |         |         |                                |          |         |  |
| 13856.00 | 91.000                  | 352.900 | 9610.40 | 4333.71 N                      | 422.97 W | 4337.17 |  |
| 1.16     |                         |         |         |                                |          |         |  |
| 13886.00 | 90.900                  | 352.600 | 9609.91 | 4363.47 N                      | 426.76 W | 4366.96 |  |

Ichabod 7 Fed #1H\_Final MWD\_Survey-Report\_07-04-11.txt

|      |          |        |         |         |           |          |         |
|------|----------|--------|---------|---------|-----------|----------|---------|
| 1.05 | 13917.00 | 90.600 | 352.700 | 9609.50 | 4394.21 N | 430.72 W | 4397.73 |
| 1.02 | 13948.00 | 91.000 | 352.400 | 9609.07 | 4424.94 N | 434.74 W | 4428.50 |
| 1.61 | 13979.00 | 91.300 | 352.700 | 9608.45 | 4455.68 N | 438.76 W | 4459.27 |
| 1.37 | 14010.00 | 91.500 | 352.900 | 9607.69 | 4486.42 N | 442.65 W | 4490.04 |
| 0.91 | 14041.00 | 91.600 | 352.500 | 9606.85 | 4517.16 N | 446.58 W | 4520.81 |
| 1.33 | 14073.00 | 91.900 | 352.800 | 9605.87 | 4548.88 N | 450.68 W | 4552.57 |
| 1.33 | 14105.00 | 92.100 | 352.700 | 9604.76 | 4580.61 N | 454.71 W | 4584.33 |
| 0.70 | 14137.00 | 92.100 | 352.800 | 9603.58 | 4612.33 N | 458.75 W | 4616.08 |
| 0.31 | 14168.00 | 92.300 | 353.200 | 9602.39 | 4643.08 N | 462.52 W | 4646.86 |
| 1.44 | 14200.00 | 92.400 | 353.000 | 9601.08 | 4674.82 N | 466.36 W | 4678.64 |
| 0.70 | 14218.00 | 92.400 | 353.000 | 9600.33 | 4692.67 N | 468.56 W | 4696.50 |
| 0.00 | 14275.00 | 92.400 | 353.000 | 9597.94 | 4749.19 N | 475.50 W | 4753.09 |
| 0.00 |          |        |         |         |           |          |         |

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.  
Vertical depths are relative to WELL. Northings and Eastings are relative to Site.

The Dogleg Severity is in Degrees per 100 feet.  
Vertical Section is from Slot and calculated along an Azimuth of 359.510° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.  
Central meridian is -104.333°.  
Grid Convergence at Surface is 0.442°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 14275.00ft., the Bottom Hole Displacement is 4772.94ft., in the Direction of 359.510° (Grid).

Gyroscopic Survey Report for:  
DEVON ENERGY

SUR: P-7-26s-34e, 195/S & 330/E  
BHL: A-7-26s-34e, 4944/S & 806/E  
API # 30-025-40043

Well Location: LEA COUNTY, NEW MEXICO  
Well Name: ICHABOD 7 FED #1H  
Rig Name: MCVAY #8  
Survey Date: 6/14/2011  
Latitude: 32.05 deg  
North Reference: Grid North  
Grid Correction: -0.44 deg  
Depth Reference: RKB  
Calculation Method: Minimum Curvature  
Section (VS) Ref: 0.00N (ft), 0.00E (ft), 359.51Azim (deg)  
Definitive Survey: FINAL INRUN  
Operator: LEO GARZA

Comments:  
ZERO REFERENCE IS AT KB OF 19'.

| Measured Depth [ft] | Inclination [deg]            | Azimuth [deg]            | True Vertical Depth |
|---------------------|------------------------------|--------------------------|---------------------|
| [ft]                | Vertical Section [ft]        | Northing (Latitude) [ft] | Easting (Departure) |
| [ft]                | Dog Leg Severity [deg/100ft] | Closure Distance [ft]    | Closure Angle [deg] |
| 0.00                | 0.00                         | 0.00                     | 0.00                |
| 100.00              | 0.17                         | 224.35                   | 100.00              |
| 200.00              | 0.19                         | 241.70                   | 200.00              |
| 300.00              | 0.22                         | 247.69                   | 300.00              |
| 400.00              | 0.21                         | 220.86                   | 400.00              |
| 500.00              | 0.21                         | 231.80                   | 500.00              |
| 600.00              | 0.48                         | 146.02                   | 600.00              |
| 700.00              | 0.48                         | 122.52                   | 699.99              |
| 800.00              | 0.39                         | 125.00                   | 799.99              |
| 900.00              | 0.29                         | 106.11                   | 899.99              |
| 1000.00             | 0.45                         | 96.78                    | 999.99              |
| 1100.00             | 0.49                         | 79.52                    | 1099.98             |
| 1200.00             | 0.49                         | 72.43                    | 1199.98             |
| 1300.00             | 0.40                         | 87.46                    | 1299.98             |
| 1400.00             | 0.67                         | 105.09                   | 1399.97             |
| 1500.00             | 0.57                         | 94.28                    | 1499.97             |
| 1600.00             | 0.60                         | 118.38                   | 1599.96             |
| 1700.00             | 0.62                         | 116.93                   | 1699.96             |
| 1800.00             | 0.58                         | 114.07                   | 1799.95             |
| 1900.00             | 0.49                         | 124.14                   | 1899.95             |
| 2000.00             | 0.65                         | 117.16                   | 1999.94             |
| 2100.00             | 0.63                         | 132.24                   | 2099.93             |
| 2200.00             | 0.68                         | 127.27                   | 2199.93             |
| 2300.00             | 0.64                         | 141.77                   | 2299.92             |
| 2400.00             | 0.70                         | 124.32                   | 2399.91             |
| 2500.00             | 0.77                         | 126.74                   | 2499.91             |
| 2600.00             | 1.03                         | 99.47                    | 2599.89             |
| 2700.00             | 1.01                         | 97.05                    | 2699.88             |
| 2800.00             | 1.17                         | 96.80                    | 2799.86             |
| 2900.00             | 1.20                         | 72.58                    | 2899.84             |
| 3000.00             | 1.36                         | 80.77                    | 2999.81             |
| 3100.00             | 1.86                         | 76.10                    | 3099.77             |
| 3200.00             | 2.43                         | 80.86                    | 3199.70             |
| 3300.00             | 2.64                         | 84.73                    | 3299.61             |
| 3400.00             | 2.79                         | 83.52                    | 3399.49             |
| 3500.00             | 2.72                         | 86.04                    | 3499.38             |
| 3600.00             | 2.10                         | 93.66                    | 3599.29             |
| 3700.00             | 1.74                         | 90.87                    | 3699.23             |
| 3800.00             | 1.66                         | 80.01                    | 3799.19             |
| 3900.00             | 1.75                         | 80.66                    | 3899.14             |
| 4000.00             | 1.36                         | 63.53                    | 3999.11             |

TXT FILE.txt

|          |        |        |         |          |        |        |        |       |        |
|----------|--------|--------|---------|----------|--------|--------|--------|-------|--------|
| 4100.00  | 1.30   | 9.00   | 4099.09 | -3.59    | -3.06  | 61.40  | 1.22   | 61.47 | 92.86  |
| 4200.00  | 1.74   | 357.40 | 4199.05 | -0.95    | -0.42  | 61.50  | 0.54   | 61.51 | 90.40  |
| 4300.00  | 1.91   | 344.29 | 4299.00 | 2.18     | 2.70   | 60.98  | 0.45   | 61.04 | 87.47  |
| 4400.00  | 2.41   | 318.16 | 4398.93 | 5.36     | 5.87   | 59.13  | 1.09   | 59.42 | 84.33  |
| 4500.00  | 2.55   | 311.70 | 4498.84 | 8.44     | 8.92   | 56.07  | 0.31   | 56.77 | 80.96  |
| 4600.00  | 2.59   | 311.28 | 4598.74 | 11.43    | 11.88  | 52.71  | 0.04   | 54.03 | 77.29  |
| 4700.00  | 1.93   | 330.11 | 4698.66 | 14.40    | 14.83  | 50.18  | 0.98   | 52.32 | 73.53  |
| 4800.00  | 1.54   | 341.11 | 4798.61 | 17.15    | 17.57  | 48.90  | 0.51   | 51.96 | 70.24  |
| 4900.00  | 0.98   | 356.06 | 4898.59 | 19.28    | 19.69  | 48.41  | 0.65   | 52.26 | 67.86  |
| 5000.00  | 0.88   | 64.02  | 4998.58 | 20.46    | 20.88  | 49.03  | 1.04   | 53.29 | 66.93  |
| 5100.00  | 1.13   | 86.07  | 5098.56 | 20.85    | 21.28  | 50.71  | 0.46   | 54.99 | 67.23  |
| 5200.00  | 0.95   | 85.94  | 5198.55 | 20.96    | 21.41  | 52.52  | 0.19   | 56.72 | 67.82  |
| 5300.00  | 0.71   | 90.46  | 5298.54 | 21.00    | 21.46  | 53.96  | 0.25   | 58.07 | 68.31  |
| 5400.00  | 0.41   | 98.58  | 5398.53 | 20.93    | 21.41  | 54.93  | 0.31   | 58.95 | 68.71  |
| 5500.00  | 0.38   | 136.92 | 5498.53 | 20.64    | 21.11  | 55.50  | 0.26   | 59.38 | 69.17  |
| 5600.00  | 0.57   | 120.57 | 5598.53 | 20.14    | 20.62  | 56.15  | 0.23   | 59.82 | 69.84  |
| 5700.00  | 0.25   | 141.02 | 5698.52 | 19.71    | 20.20  | 56.72  | 0.35   | 60.21 | 70.40  |
| 5800.00  | 0.29   | 163.92 | 5798.52 | 19.30    | 19.78  | 56.92  | 0.12   | 60.26 | 70.83  |
| 5900.00  | 0.50   | 154.29 | 5898.52 | 18.66    | 19.15  | 57.18  | 0.21   | 60.30 | 71.49  |
| 6000.00  | 0.40   | 160.99 | 5998.52 | 17.94    | 18.43  | 57.48  | 0.11   | 60.37 | 72.22  |
| 6100.00  | 0.44   | 161.29 | 6098.51 | 17.24    | 17.74  | 57.72  | 0.04   | 60.38 | 72.92  |
| 6200.00  | 0.53   | 152.07 | 6198.51 | 16.46    | 16.96  | 58.06  | 0.12   | 60.49 | 73.72  |
| 6300.00  | 0.63   | 159.66 | 6298.51 | 15.53    | 16.03  | 58.47  | 0.12   | 60.63 | 74.67  |
| 6400.00  | 0.69   | 160.83 | 6398.50 | 14.45    | 14.95  | 58.86  | 0.06   | 60.73 | 75.75  |
| 6500.00  | 0.62   | 166.07 | 6498.49 | 13.35    | 13.86  | 59.19  | 0.09   | 60.79 | 76.82  |
| 6600.00  | 0.70   | 164.56 | 6598.49 | 12.24    | 12.75  | 59.48  | 0.08   | 60.83 | 77.90  |
| 6700.00  | 0.70   | 160.75 | 6698.48 | 11.07    | 11.58  | 59.85  | 0.05   | 60.96 | 79.05  |
| 6800.00  | 0.70   | 164.21 | 6798.47 | 9.90     | 10.41  | 60.21  | 0.04   | 61.11 | 80.19  |
| 6900.00  | 0.73   | 160.05 | 6898.46 | 8.71     | 9.23   | 60.60  | 0.06   | 61.29 | 81.34  |
| 7000.00  | 0.62   | 148.49 | 6998.46 | 7.65     | 8.17   | 61.09  | 0.17   | 61.64 | 82.38  |
| 7100.00  | 0.74   | 151.88 | 7098.45 | 6.61     | 7.14   | 61.68  | 0.13   | 62.10 | 83.40  |
| 7200.00  | 0.93   | 144.82 | 7198.44 | 5.38     | 5.91   | 62.45  | 0.21   | 62.73 | 84.59  |
| 7300.00  | 1.03   | 148.25 | 7298.42 | 3.94     | 4.49   | 63.39  | 0.11   | 63.55 | 85.95  |
| 7400.00  | 0.89   | 144.40 | 7398.41 | 2.54     | 3.09   | 64.32  | 0.15   | 64.39 | 87.25  |
| 7500.00  | 1.08   | 164.40 | 7498.40 | 0.99     | 1.55   | 65.03  | 0.39   | 65.04 | 88.63  |
| 7600.00  | 1.15   | 167.92 | 7598.38 | -0.90    | -0.34  | 65.49  | 0.10   | 65.49 | 90.30  |
| 7700.00  | 1.28   | 166.76 | 7698.35 | -2.97    | -2.41  | 65.95  | 0.13   | 66.00 | 92.09  |
| 7800.00  | 1.26   | 164.99 | 7798.33 | -5.13    | -4.56  | 66.50  | 0.04   | 66.65 | 93.92  |
| 7900.00  | 1.23   | 166.02 | 7898.31 | -7.24    | -6.67  | 67.04  | 0.03   | 67.37 | 95.68  |
| 8000.00  | 1.22   | 161.89 | 7998.28 | -9.30    | -8.72  | 67.63  | 0.09   | 68.19 | 97.35  |
| 8100.00  | 1.33   | 168.35 | 8098.26 | -11.45   | -10.87 | 68.20  | 0.18   | 69.06 | 99.05  |
| 8200.00  | 1.12   | 168.17 | 8198.24 | -13.54   | -12.96 | 68.63  | 0.21   | 69.84 | 100.69 |
| 8300.00  | 1.09   | 166.32 | 8298.22 | -15.43   | -14.84 | 69.06  | 0.05   | 70.63 | 102.13 |
| 8400.00  | 1.01   | 170.87 | 8398.20 | -17.23   | -16.64 | 69.42  | 0.11   | 71.39 | 103.48 |
| 8500.00  | 1.20   | 175.11 | 8498.18 | -19.15   | -18.55 | 69.65  | 0.21   | 72.08 | 104.92 |
| 8600.00  | 1.19   | 171.32 | 8598.16 | -21.22   | -20.62 | 69.90  | 0.08   | 72.87 | 106.44 |
| 8700.00  | 1.10   | 173.45 | 8698.14 | -23.20   | -22.60 | 70.16  | 0.09   | 73.71 | 107.86 |
| 8800.00  | 1.36   | 181.57 | 8798.12 | -25.34   | -24.74 | 70.24  | 0.31   | 74.47 | 109.41 |
| 8900.00  | 1.27   | 177.84 | 8898.09 | -27.64   | -27.04 | 70.25  | 0.12   | 75.27 | 111.05 |
| 9000.00  | 1.33   | 184.26 | 8998.06 | -29.91   | -29.31 | 70.20  | 0.16   | 76.08 | 112.66 |
| 9100.00  | 1.36   | 184.60 | 9098.04 | -32.25   | -31.65 | 70.02  | 0.02   | 76.84 | 114.32 |
| 9200.00  | 1.23   | 196.66 | 9198.01 | -34.46   | -33.86 | 69.62  | 0.30   | 77.42 | 115.94 |
| 9300.00  | 1.39   | 203.17 | 9297.99 | -36.60   | -36.01 | 68.83  | 0.21   | 77.68 | 117.62 |
| 9400.00  | 1.33   | 202.97 | 9397.96 | -38.77   | -38.19 | 67.90  | 0.06   | 77.91 | 119.36 |
| 9500.00  | 1.20   | 203.34 | 9497.93 | -40.80   | -40.22 | 67.04  | 0.14   | 78.18 | 120.97 |
| 9600.00  | 1.26   | 208.78 | 9597.91 | -42.71   | -42.15 | 66.09  | 0.13   | 78.39 | 122.52 |
| 9700.00  | 1.00   | 219.99 | 9697.89 | -44.33   | -43.77 | 65.01  | 0.34   | 78.37 | 123.96 |
| 9800.00  | 1.01   | 219.96 | 9797.88 | -45.66   | -45.11 | 63.88  | 0.01   | 78.21 | 125.23 |
| 9900.00  | 0.91   | 214.87 | 9897.86 | -46.97   | -46.44 | 62.87  | 0.13   | 78.16 | 126.45 |
| 10000.00 |        | 1.19   | 214.69  | 9997.84  | -48.47 | -47.94 | 61.82  | 0.28  | 78.23  |
| 127.80   |        |        |         |          |        |        |        |       |        |
| 10100.00 |        | 0.95   | 210.83  | 10097.83 |        | -50.03 | -49.51 | 60.80 | 0.25   |
| 78.41    | 129.15 |        |         |          |        |        |        |       |        |

|              |      |        |          |        |        |       |      |
|--------------|------|--------|----------|--------|--------|-------|------|
| 10200.00     | 0.90 | 226.78 | 10197.81 | -51.27 | -50.76 | 59.81 | 0.26 |
| 78.44 130.32 |      |        |          |        |        |       |      |
| 10300.00     | 0.91 | 235.94 | 10297.80 | -52.24 | -51.74 | 58.58 | 0.14 |
| 78.16 131.45 |      |        |          |        |        |       |      |
| 10400.00     | 0.93 | 230.56 | 10397.79 | -53.18 | -52.70 | 57.30 | 0.09 |
| 77.85 132.60 |      |        |          |        |        |       |      |
| 10500.00     | 1.24 | 252.62 | 10497.77 | -54.01 | -53.54 | 55.64 | 0.51 |
| 77.21 133.90 |      |        |          |        |        |       |      |
| 10565.00     | 1.29 | 260.23 | 10562.76 | -54.33 | -53.87 | 54.25 | 0.27 |
| 76.45 134.80 |      |        |          |        |        |       |      |

OCT 07 2011



RECEIVED

**Scientific Drilling**

Gyroscopic Survey Report  
for  
DEVON ENERGY

SUR: P-7-26s-34e, 195/S & 330/E  
BHL: A-7-26s-34e, 4944/S & 806/E  
API # 30-025-40043

|                    |                                          |
|--------------------|------------------------------------------|
| Well Location      | LEA COUNTY, NEW MEXICO                   |
| Well Name          | ICHABOD 7 FED #1H                        |
| Rig Name           | McVAY #8                                 |
| Survey Date        | 6/14/2011                                |
| Latitude           | 32.05 deg                                |
| North Reference    | Grid North                               |
| Grid Correction    | -0.44 deg                                |
| Depth Reference    | RKB                                      |
| Calculation Method | Minimum Curvature                        |
| Section (VS) Ref   | 0.00N (ft), 0.00E (ft), 359.51Azim (deg) |
| Definitive Survey  | FINAL INRUN                              |
| Operator           | LEO GARZA                                |

**Comments**

ZERO REFERENCE IS AT KB OF 19'.



## Survey Report

| Well Name:   |            | ICHABOD 7 FED #1H |           |          |                |               |                  |                        |                      |
|--------------|------------|-------------------|-----------|----------|----------------|---------------|------------------|------------------------|----------------------|
| Survey:      |            | FINAL INRUN       |           |          |                |               |                  |                        |                      |
| Survey Date: |            | 6/14/2011         |           |          |                |               |                  |                        |                      |
| MD<br>ft     | Inc<br>deg | Azim<br>deg       | TVD<br>ft | VS<br>ft | Northing<br>ft | Easting<br>ft | DLS<br>deg/100ft | Closure Distance<br>ft | Closure Angle<br>deg |
| 0.00         | 0.00       | 0.00              | 0.00      | 0.00     | 0.00           | 0.00          | Invalid          | 0.00                   | 0.00                 |
| 100.00       | 0.17       | 224.35            | 100.00    | -0.10    | -0.10          | -0.10         | 0.17             | 0.15                   | 224.35               |
| 200.00       | 0.19       | 241.70            | 200.00    | -0.29    | -0.29          | -0.35         | 0.06             | 0.46                   | 230.73               |
| 300.00       | 0.22       | 247.69            | 300.00    | -0.44    | -0.44          | -0.68         | 0.04             | 0.81                   | 237.02               |
| 400.00       | 0.21       | 220.86            | 400.00    | -0.65    | -0.66          | -0.98         | 0.10             | 1.18                   | 236.25               |
| 500.00       | 0.21       | 231.80            | 500.00    | -0.90    | -0.91          | -1.25         | 0.04             | 1.55                   | 233.89               |
| 600.00       | 0.48       | 146.02            | 600.00    | -1.36    | -1.37          | -1.16         | 0.51             | 1.80                   | 220.30               |
| 700.00       | 0.48       | 122.52            | 699.99    | -1.94    | -1.94          | -0.58         | 0.19             | 2.02                   | 196.57               |
| 800.00       | 0.39       | 125.00            | 799.99    | -2.36    | -2.36          | 0.06          | 0.09             | 2.36                   | 178.61               |
| 900.00       | 0.29       | 106.11            | 899.99    | -2.63    | -2.63          | 0.58          | 0.15             | 2.69                   | 167.53               |
| 1000.00      | 0.45       | 96.78             | 999.99    | -2.76    | -2.75          | 1.21          | 0.17             | 3.00                   | 156.17               |
| 1100.00      | 0.49       | 79.52             | 1099.98   | -2.73    | -2.71          | 2.02          | 0.15             | 3.39                   | 143.30               |
| 1200.00      | 0.49       | 72.43             | 1199.98   | -2.53    | -2.51          | 2.85          | 0.06             | 3.80                   | 131.35               |
| 1300.00      | 0.40       | 87.46             | 1299.98   | -2.39    | -2.36          | 3.60          | 0.15             | 4.31                   | 123.28               |
| 1400.00      | 0.67       | 105.09            | 1399.97   | -2.54    | -2.50          | 4.51          | 0.31             | 5.15                   | 119.01               |
| 1500.00      | 0.57       | 94.28             | 1499.97   | -2.74    | -2.69          | 5.56          | 0.15             | 6.18                   | 115.80               |
| 1600.00      | 0.60       | 118.38            | 1599.96   | -3.03    | -2.97          | 6.52          | 0.25             | 7.16                   | 114.54               |
| 1700.00      | 0.62       | 116.93            | 1699.96   | -3.53    | -3.47          | 7.46          | 0.02             | 8.23                   | 114.94               |
| 1800.00      | 0.58       | 114.07            | 1799.95   | -3.99    | -3.92          | 8.41          | 0.05             | 9.28                   | 115.01               |
| 1900.00      | 0.49       | 124.14            | 1899.95   | -4.45    | -4.37          | 9.22          | 0.13             | 10.20                  | 115.34               |
| 2000.00      | 0.65       | 117.16            | 1999.94   | -4.95    | -4.87          | 10.08         | 0.18             | 11.20                  | 115.76               |
| 2100.00      | 0.63       | 132.24            | 2099.93   | -5.59    | -5.50          | 11.00         | 0.17             | 12.30                  | 116.56               |
| 2200.00      | 0.68       | 127.27            | 2199.93   | -6.33    | -6.23          | 11.88         | 0.08             | 13.41                  | 117.67               |
| 2300.00      | 0.64       | 141.77            | 2299.92   | -7.14    | -7.03          | 12.70         | 0.17             | 14.52                  | 118.96               |
| 2400.00      | 0.70       | 124.32            | 2399.91   | -7.93    | -7.81          | 13.55         | 0.21             | 15.64                  | 119.96               |
| 2500.00      | 0.77       | 126.74            | 2499.91   | -8.69    | -8.56          | 14.60         | 0.08             | 16.92                  | 120.39               |
| 2600.00      | 1.03       | 99.47             | 2599.89   | -9.25    | -9.11          | 16.02         | 0.49             | 18.43                  | 119.62               |
| 2700.00      | 1.01       | 97.05             | 2699.88   | -9.52    | -9.37          | 17.79         | 0.05             | 20.10                  | 117.78               |
| 2800.00      | 1.17       | 96.80             | 2799.86   | -9.77    | -9.60          | 19.68         | 0.16             | 21.89                  | 116.00               |
| 2900.00      | 1.20       | 72.58             | 2899.84   | -9.59    | -9.41          | 21.69         | 0.50             | 23.64                  | 113.44               |
| 3000.00      | 1.36       | 80.77             | 2999.81   | -9.11    | -8.90          | 23.85         | 0.24             | 25.46                  | 110.47               |
| 3100.00      | 1.86       | 76.10             | 3099.77   | -8.55    | -8.32          | 26.60         | 0.52             | 27.87                  | 107.38               |
| 3200.00      | 2.43       | 80.86             | 3199.70   | -7.85    | -7.60          | 30.27         | 0.60             | 31.21                  | 104.09               |
| 3300.00      | 2.64       | 84.73             | 3299.61   | -7.34    | -7.05          | 34.66         | 0.27             | 35.37                  | 101.49               |
| 3400.00      | 2.79       | 83.52             | 3399.49   | -6.90    | -6.56          | 39.37         | 0.16             | 39.91                  | 99.46                |
| 3500.00      | 2.72       | 86.04             | 3499.38   | -6.50    | -6.12          | 44.16         | 0.14             | 44.58                  | 97.89                |
| 3600.00      | 2.10       | 93.66             | 3599.29   | -6.49    | -6.08          | 48.36         | 0.70             | 48.74                  | 97.16                |
| 3700.00      | 1.74       | 90.87             | 3699.23   | -6.66    | -6.22          | 51.71         | 0.37             | 52.08                  | 96.85                |
| 3800.00      | 1.66       | 80.01             | 3799.19   | -6.45    | -5.99          | 54.65         | 0.33             | 54.98                  | 96.25                |



## Survey Report

| Well Name:   |      | ICHABOD 7 FED #1H |         |       |          |         |           |                  |               |  |
|--------------|------|-------------------|---------|-------|----------|---------|-----------|------------------|---------------|--|
| Survey:      |      | FINAL INRUN       |         |       |          |         |           |                  |               |  |
| Survey Date: |      | 6/14/2011         |         |       |          |         |           |                  |               |  |
| MD           | Inc  | Azim              | TVD     | VS    | Northing | Easting | DLS       | Closure Distance | Closure Angle |  |
| ft           | deg  | deg               | ft      | ft    | ft       | ft      | deg/100ft | ft               | deg           |  |
| 3900.00      | 1.75 | 80.66             | 3899.14 | -5.98 | -5.49    | 57.58   | 0.09      | 57.85            | 95.44         |  |
| 4000.00      | 1.36 | 63.53             | 3999.11 | -5.22 | -4.71    | 60.16   | 0.60      | 60.34            | 94.48         |  |
| 4100.00      | 1.30 | 9.00              | 4099.09 | -3.59 | -3.06    | 61.40   | 1.22      | 61.47            | 92.86         |  |
| 4200.00      | 1.74 | 357.40            | 4199.05 | -0.95 | -0.42    | 61.50   | 0.54      | 61.51            | 90.40         |  |
| 4300.00      | 1.91 | 344.29            | 4299.00 | 2.18  | 2.70     | 60.98   | 0.45      | 61.04            | 87.47         |  |
| 4400.00      | 2.41 | 318.16            | 4398.93 | 5.36  | 5.87     | 59.13   | 1.09      | 59.42            | 84.33         |  |
| 4500.00      | 2.55 | 311.70            | 4498.84 | 8.44  | 8.92     | 56.07   | 0.31      | 56.77            | 80.96         |  |
| 4600.00      | 2.59 | 311.28            | 4598.74 | 11.43 | 11.88    | 52.71   | 0.04      | 54.03            | 77.29         |  |
| 4700.00      | 1.93 | 330.11            | 4698.66 | 14.40 | 14.83    | 50.18   | 0.98      | 52.32            | 73.53         |  |
| 4800.00      | 1.54 | 341.11            | 4798.61 | 17.15 | 17.57    | 48.90   | 0.51      | 51.96            | 70.24         |  |
| 4900.00      | 0.98 | 356.06            | 4898.59 | 19.28 | 19.69    | 48.41   | 0.65      | 52.26            | 67.86         |  |
| 5000.00      | 0.88 | 64.02             | 4998.58 | 20.46 | 20.88    | 49.03   | 1.04      | 53.29            | 66.93         |  |
| 5100.00      | 1.13 | 86.07             | 5098.56 | 20.85 | 21.28    | 50.71   | 0.46      | 54.99            | 67.23         |  |
| 5200.00      | 0.95 | 85.94             | 5198.55 | 20.96 | 21.41    | 52.52   | 0.19      | 56.72            | 67.82         |  |
| 5300.00      | 0.71 | 90.46             | 5298.54 | 21.00 | 21.46    | 53.96   | 0.25      | 58.07            | 68.31         |  |
| 5400.00      | 0.41 | 98.58             | 5398.53 | 20.93 | 21.41    | 54.93   | 0.31      | 58.95            | 68.71         |  |
| 5500.00      | 0.38 | 136.92            | 5498.53 | 20.64 | 21.11    | 55.50   | 0.26      | 59.38            | 69.17         |  |
| 5600.00      | 0.57 | 120.57            | 5598.53 | 20.14 | 20.62    | 56.15   | 0.23      | 59.82            | 69.84         |  |
| 5700.00      | 0.25 | 141.02            | 5698.52 | 19.71 | 20.20    | 56.72   | 0.35      | 60.21            | 70.40         |  |
| 5800.00      | 0.29 | 163.92            | 5798.52 | 19.30 | 19.78    | 56.92   | 0.12      | 60.26            | 70.83         |  |
| 5900.00      | 0.50 | 154.29            | 5898.52 | 18.66 | 19.15    | 57.18   | 0.21      | 60.30            | 71.49         |  |
| 6000.00      | 0.40 | 160.99            | 5998.52 | 17.94 | 18.43    | 57.48   | 0.11      | 60.37            | 72.22         |  |
| 6100.00      | 0.44 | 161.29            | 6098.51 | 17.24 | 17.74    | 57.72   | 0.04      | 60.38            | 72.92         |  |
| 6200.00      | 0.53 | 152.07            | 6198.51 | 16.46 | 16.96    | 58.06   | 0.12      | 60.49            | 73.72         |  |
| 6300.00      | 0.63 | 159.66            | 6298.51 | 15.53 | 16.03    | 58.47   | 0.12      | 60.63            | 74.67         |  |
| 6400.00      | 0.69 | 160.83            | 6398.50 | 14.45 | 14.95    | 58.86   | 0.06      | 60.73            | 75.75         |  |
| 6500.00      | 0.62 | 166.07            | 6498.49 | 13.35 | 13.86    | 59.19   | 0.09      | 60.79            | 76.82         |  |
| 6600.00      | 0.70 | 164.56            | 6598.49 | 12.24 | 12.75    | 59.48   | 0.08      | 60.83            | 77.90         |  |
| 6700.00      | 0.70 | 160.75            | 6698.48 | 11.07 | 11.58    | 59.85   | 0.05      | 60.96            | 79.05         |  |
| 6800.00      | 0.70 | 164.21            | 6798.47 | 9.90  | 10.41    | 60.21   | 0.04      | 61.11            | 80.19         |  |
| 6900.00      | 0.73 | 160.05            | 6898.46 | 8.71  | 9.23     | 60.60   | 0.06      | 61.29            | 81.34         |  |
| 7000.00      | 0.62 | 148.49            | 6998.46 | 7.65  | 8.17     | 61.09   | 0.17      | 61.64            | 82.38         |  |
| 7100.00      | 0.74 | 151.88            | 7098.45 | 6.61  | 7.14     | 61.68   | 0.13      | 62.10            | 83.40         |  |
| 7200.00      | 0.93 | 144.82            | 7198.44 | 5.38  | 5.91     | 62.45   | 0.21      | 62.73            | 84.59         |  |
| 7300.00      | 1.03 | 148.25            | 7298.42 | 3.94  | 4.49     | 63.39   | 0.11      | 63.55            | 85.95         |  |
| 7400.00      | 0.89 | 144.40            | 7398.41 | 2.54  | 3.09     | 64.32   | 0.15      | 64.39            | 87.25         |  |
| 7500.00      | 1.08 | 164.40            | 7498.40 | 0.99  | 1.55     | 65.03   | 0.39      | 65.04            | 88.63         |  |
| 7600.00      | 1.15 | 167.92            | 7598.38 | -0.90 | -0.34    | 65.49   | 0.10      | 65.49            | 90.30         |  |



## Survey Report

Well Name: ICHABOD 7 FED #1H

Survey: FINAL INRUN

Survey Date: 6/14/2011

| MD       | Inc  | Azim   | TVD      | VS     | Northing | Easting | DLS       | Closure Distance | Closure Angle |
|----------|------|--------|----------|--------|----------|---------|-----------|------------------|---------------|
| ft       | deg  | deg    | ft       | ft     | ft       | ft      | deg/100ft | ft               | deg           |
| 7700.00  | 1.28 | 166.76 | 7698.35  | -2.97  | -2.41    | 65.95   | 0.13      | 66.00            | 92.09         |
| 7800.00  | 1.26 | 164.99 | 7798.33  | -5.13  | -4.56    | 66.50   | 0.04      | 66.65            | 93.92         |
| 7900.00  | 1.23 | 166.02 | 7898.31  | -7.24  | -6.67    | 67.04   | 0.03      | 67.37            | 95.68         |
| 8000.00  | 1.22 | 161.89 | 7998.28  | -9.30  | -8.72    | 67.63   | 0.09      | 68.19            | 97.35         |
| 8100.00  | 1.33 | 168.35 | 8098.26  | -11.45 | -10.87   | 68.20   | 0.18      | 69.06            | 99.05         |
| 8200.00  | 1.12 | 168.17 | 8198.24  | -13.54 | -12.96   | 68.63   | 0.21      | 69.84            | 100.69        |
| 8300.00  | 1.09 | 166.32 | 8298.22  | -15.43 | -14.84   | 69.06   | 0.05      | 70.63            | 102.13        |
| 8400.00  | 1.01 | 170.87 | 8398.20  | -17.23 | -16.64   | 69.42   | 0.11      | 71.39            | 103.48        |
| 8500.00  | 1.20 | 175.11 | 8498.18  | -19.15 | -18.55   | 69.65   | 0.21      | 72.08            | 104.92        |
| 8600.00  | 1.19 | 171.32 | 8598.16  | -21.22 | -20.62   | 69.90   | 0.08      | 72.87            | 106.44        |
| 8700.00  | 1.10 | 173.45 | 8698.14  | -23.20 | -22.60   | 70.16   | 0.09      | 73.71            | 107.86        |
| 8800.00  | 1.36 | 181.57 | 8798.12  | -25.34 | -24.74   | 70.24   | 0.31      | 74.47            | 109.41        |
| 8900.00  | 1.27 | 177.84 | 8898.09  | -27.64 | -27.04   | 70.25   | 0.12      | 75.27            | 111.05        |
| 9000.00  | 1.33 | 184.26 | 8998.06  | -29.91 | -29.31   | 70.20   | 0.16      | 76.08            | 112.66        |
| 9100.00  | 1.36 | 184.60 | 9098.04  | -32.25 | -31.65   | 70.02   | 0.02      | 76.84            | 114.32        |
| 9200.00  | 1.23 | 196.66 | 9198.01  | -34.46 | -33.86   | 69.62   | 0.30      | 77.42            | 115.94        |
| 9300.00  | 1.39 | 203.17 | 9297.99  | -36.60 | -36.01   | 68.83   | 0.21      | 77.68            | 117.62        |
| 9400.00  | 1.33 | 202.97 | 9397.96  | -38.77 | -38.19   | 67.90   | 0.06      | 77.91            | 119.36        |
| 9500.00  | 1.20 | 203.34 | 9497.93  | -40.80 | -40.22   | 67.04   | 0.14      | 78.18            | 120.97        |
| 9600.00  | 1.26 | 208.78 | 9597.91  | -42.71 | -42.15   | 66.09   | 0.13      | 78.39            | 122.52        |
| 9700.00  | 1.00 | 219.99 | 9697.89  | -44.33 | -43.77   | 65.01   | 0.34      | 78.37            | 123.96        |
| 9800.00  | 1.01 | 219.96 | 9797.88  | -45.66 | -45.11   | 63.88   | 0.01      | 78.21            | 125.23        |
| 9900.00  | 0.91 | 214.87 | 9897.86  | -46.97 | -46.44   | 62.87   | 0.13      | 78.16            | 126.45        |
| 10000.00 | 1.19 | 214.69 | 9997.84  | -48.47 | -47.94   | 61.82   | 0.28      | 78.23            | 127.80        |
| 10100.00 | 0.95 | 210.83 | 10097.83 | -50.03 | -49.51   | 60.80   | 0.25      | 78.41            | 129.15        |
| 10200.00 | 0.90 | 226.78 | 10197.81 | -51.27 | -50.76   | 59.81   | 0.26      | 78.44            | 130.32        |
| 10300.00 | 0.91 | 235.94 | 10297.80 | -52.24 | -51.74   | 58.58   | 0.14      | 78.16            | 131.45        |
| 10400.00 | 0.93 | 230.56 | 10397.79 | -53.18 | -52.70   | 57.30   | 0.09      | 77.85            | 132.60        |
| 10500.00 | 1.24 | 252.62 | 10497.77 | -54.01 | -53.54   | 55.64   | 0.51      | 77.21            | 133.90        |
| 10565.00 | 1.29 | 260.23 | 10562.76 | -54.33 | -53.87   | 54.25   | 0.27      | 76.45            | 134.80        |

HOBBS OCD  
OCT 07 2011  
RECEIVED

## DEVON ENERGY

Wildcat (Lea County, NM)  
Lea County, NM  
Ichabod "7" Federal #1H  
VH - Job #32K0611559

SUR: P-7-26s-34e, 195/S & 330/E  
BHL: A-7-26s-34e, 4944/S & 806/E  
API # 30-025-40043

Survey: Actual

## SDI Standard Survey Report

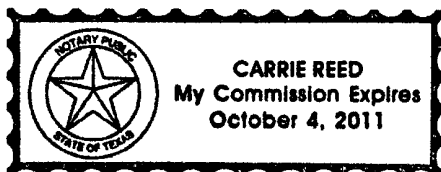
This survey is correct to the best of my knowledge and is supported by actual field data.

Michael Norton

Notarized this date 22nd of July, 2011.

Carrie Reed

Notary Signature  
County of Midland  
State of Texas



**Scientific Drilling International, Inc.**  
SDI Standard Survey Report



|                  |                          |                                     |                                     |
|------------------|--------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | DEVON ENERGY             | <b>Local Co-ordinate Reference:</b> | Well Ichabod "7" Federal #1H        |
| <b>Project:</b>  | Wildcat (Lea County, NM) | <b>TVD Reference:</b>               | WELL @ 0 0usft (Original Well Elev) |
| <b>Site:</b>     | Lea County, NM           | <b>MD Reference:</b>                | WELL @ 0 0usft (Original Well Elev) |
| <b>Well:</b>     | Ichabod "7" Federal #1H  | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | VH - Job #32K0611559     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | VH - Job #32K0611559     | <b>Database:</b>                    | EDM-Regulatory                      |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Wildcat (Lea County, NM)             |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |                |                          |                   |
|------------------------------|----------------|--------------------------|-------------------|
| <b>Site</b>                  | Lea County, NM |                          |                   |
| <b>Site Position:</b>        |                | <b>Northing:</b>         | 419,798 73 usft   |
| <b>From:</b>                 | Lat/Long       | <b>Easting:</b>          | 689,831 11 usft   |
| <b>Position Uncertainty:</b> | 0 0 usft       | <b>Slot Radius:</b>      | 0"                |
|                              |                | <b>Latitude:</b>         | 32° 9' 9 565 N    |
|                              |                | <b>Longitude:</b>        | 103° 43' 11 824 W |
|                              |                | <b>Grid Convergence:</b> | 0 33 °            |

|                             |                                            |                            |                                  |
|-----------------------------|--------------------------------------------|----------------------------|----------------------------------|
| <b>Well</b>                 | Ichabod "7" Federal #1H, Directional (DDC) |                            |                                  |
| <b>Well Position</b>        | +N/-S                                      | 0 0 usft                   | <b>Northing:</b> 383,357 94 usft |
|                             | +E/-W                                      | 0 0 usft                   | <b>Easting:</b> 757,721 47 usft  |
| <b>Position Uncertainty</b> | 0 0 usft                                   | <b>Wellhead Elevation:</b> | usft                             |
|                             |                                            | <b>Latitude:</b>           | 32° 3' 4 452 N                   |
|                             |                                            | <b>Longitude:</b>          | 103° 30' 5 434 W                 |
|                             |                                            | <b>Ground Level:</b>       | 0 0 usft                         |

|                  |                      |                    |                            |                          |                                |
|------------------|----------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| <b>Wellbore</b>  | VH - Job #32K0611559 |                    |                            |                          |                                |
| <b>Magnetics</b> | <b>Model Name</b>    | <b>Sample Date</b> | <b>Declination<br/>(°)</b> | <b>Dip Angle<br/>(°)</b> | <b>Field Strength<br/>(nT)</b> |
|                  | IGRF2010             | 6/14/2011          | 7 54                       | 60 04                    | 48,546                         |

|                          |                                    |                         |                         |                          |
|--------------------------|------------------------------------|-------------------------|-------------------------|--------------------------|
| <b>Design</b>            | VH - Job #32K0611559               |                         |                         |                          |
| <b>Audit Notes:</b>      |                                    |                         |                         |                          |
| <b>Version:</b>          | 1 0                                | <b>Phase:</b>           | ACTUAL                  | <b>Tie On Depth:</b> 0 0 |
| <b>Vertical Section:</b> | <b>Depth From (TVD)<br/>(usft)</b> | <b>+N/-S<br/>(usft)</b> | <b>+E/-W<br/>(usft)</b> | <b>Direction<br/>(°)</b> |
|                          | 0 0                                | 0 0                     | 0 0                     | 359 51                   |

|                        |                      |                               |                  |                    |
|------------------------|----------------------|-------------------------------|------------------|--------------------|
| <b>Survey Program</b>  | <b>Date</b>          | 7/21/2011                     |                  |                    |
| <b>From<br/>(usft)</b> | <b>To<br/>(usft)</b> | <b>Survey (Wellbore)</b>      | <b>Tool Name</b> | <b>Description</b> |
| 100 0                  | 10,565 0             | Actual (VH - Job #32K0611559) | Keeper           | Keeper Gyro        |

|                                  |                            |                        |                                |                               |                             |                                |                                    |
|----------------------------------|----------------------------|------------------------|--------------------------------|-------------------------------|-----------------------------|--------------------------------|------------------------------------|
| <b>Survey</b>                    |                            |                        |                                |                               |                             |                                |                                    |
| <b>Measured Depth<br/>(usft)</b> | <b>Inclination<br/>(°)</b> | <b>Azimuth<br/>(°)</b> | <b>True Vertical<br/>Depth</b> | <b>North/South<br/>(usft)</b> | <b>East/West<br/>(usft)</b> | <b>Closure Azimuth<br/>(°)</b> | <b>Closure Distance<br/>(usft)</b> |
| 0 0                              | 0 00                       | 0 00                   | 0 0                            | 0 0                           | 0 0                         | 0 00                           | 0 0                                |
| 100 0                            | 0 17                       | 224 35                 | 100 0                          | -0 1                          | -0 1                        | 224 35                         | 0 1                                |
| 200 0                            | 0 19                       | 241 70                 | 200 0                          | -0 3                          | -0 4                        | 230 55                         | 0 5                                |
| 300 0                            | 0 22                       | 247 69                 | 300 0                          | -0 4                          | -0 7                        | 236 84                         | 0 8                                |
| 400 0                            | 0 21                       | 220 86                 | 400 0                          | -0 7                          | -1 0                        | 236 14                         | 1 2                                |
| 500 0                            | 0 21                       | 231 80                 | 500 0                          | -0 9                          | -1 2                        | 233 82                         | 1 5                                |
| 600 0                            | 0 48                       | 146 02                 | 600 0                          | -1 4                          | -1 1                        | 220 04                         | 1 8                                |
| 700 0                            | 0 48                       | 122 52                 | 700 0                          | -1 9                          | -0 6                        | 196 14                         | 2 0                                |
| 800 0                            | 0 39                       | 125 00                 | 800 0                          | -2 4                          | 0 1                         | 178 28                         | 2 4                                |
| 900 0                            | 0 29                       | 106 11                 | 900 0                          | -2 6                          | 0 6                         | 167 27                         | 2 7                                |
| 1,000 0                          | 0 45                       | 96 78                  | 1,000 0                        | -2 7                          | 1 2                         | 155 90                         | 3 0                                |
| 1,100 0                          | 0 49                       | 79 52                  | 1,100 0                        | -2 7                          | 2 0                         | 143 08                         | 3 4                                |

# Scientific Drilling International, Inc.

SDI Standard Survey Report



|                  |                          |                                     |                                     |
|------------------|--------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | DEVON ENERGY             | <b>Local Co-ordinate Reference:</b> | Well Ichabod "7" Federal #1H        |
| <b>Project:</b>  | Wildcat (Lea County, NM) | <b>TVD Reference:</b>               | WELL @ 0 0usft (Original Well Elev) |
| <b>Site:</b>     | Lea County, NM           | <b>MD Reference:</b>                | WELL @ 0 0usft (Original Well Elev) |
| <b>Well:</b>     | Ichabod "7" Federal #1H  | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | VH - Job #32K0611559     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | VH - Job #32K0611559     | <b>Database:</b>                    | EDM-Regulatory                      |

| Survey                   |                    |                |                        |                       |                     |                        |                            |
|--------------------------|--------------------|----------------|------------------------|-----------------------|---------------------|------------------------|----------------------------|
| Measured Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | True Vertical<br>Depth | North/South<br>(usft) | East/West<br>(usft) | Closure Azimuth<br>(°) | Closure Distance<br>(usft) |
| 1,200 0                  | 0 49               | 72 43          | 1,200 0                | -2 5                  | 2 9                 | 131 15                 | 3 8                        |
| 1,300 0                  | 0 40               | 87 46          | 1,300 0                | -2 4                  | 3 6                 | 123 08                 | 4 3                        |
| 1,400 0                  | 0 67               | 105 09         | 1,400 0                | -2 5                  | 4 5                 | 118 82                 | 5 2                        |
| 1,500 0                  | 0 57               | 94 28          | 1,500 0                | -2 7                  | 5 6                 | 115 63                 | 6 2                        |
| 1,600 0                  | 0 60               | 118 38         | 1,600 0                | -3 0                  | 6 6                 | 114 39                 | 7 2                        |
| 1,700 0                  | 0 62               | 116 93         | 1,700 0                | -3 5                  | 7 5                 | 114 81                 | 8 3                        |
| 1,800 0                  | 0 58               | 114 07         | 1,799 9                | -3 9                  | 8 4                 | 114 89                 | 9 3                        |
| 1,900 0                  | 0 49               | 124 14         | 1,899 9                | -4 4                  | 9 3                 | 115 24                 | 10 2                       |
| 2,000 0                  | 0 65               | 117 16         | 1,999 9                | -4 9                  | 10 1                | 115 67                 | 11 2                       |
| 2,100 0                  | 0 63               | 132 24         | 2,099 9                | -5 5                  | 11 0                | 116 47                 | 12 3                       |
| 2,200 0                  | 0 68               | 127 27         | 2,199 9                | -6 2                  | 11 9                | 117 58                 | 13 4                       |
| 2,300 0                  | 0 64               | 141 77         | 2,299 9                | -7 0                  | 12 7                | 118 88                 | 14 5                       |
| 2,400 0                  | 0 70               | 124 32         | 2,399 9                | -7 8                  | 13 6                | 119 89                 | 15 7                       |
| 2,500 0                  | 0 77               | 126 74         | 2,499 9                | -8 5                  | 14 6                | 120 32                 | 16 9                       |
| 2,600 0                  | 1 03               | 99 47          | 2,599 9                | -9 1                  | 16 0                | 119 56                 | 18 4                       |
| 2,700 0                  | 1 01               | 97 05          | 2,699 9                | -9 4                  | 17 8                | 117 72                 | 20 1                       |
| 2,800 0                  | 1 17               | 96 80          | 2,799 9                | -9 6                  | 19 7                | 115 95                 | 21 9                       |
| 2,900 0                  | 1 20               | 72 58          | 2,899 8                | -9 4                  | 21 7                | 113 39                 | 23 6                       |
| 3,000 0                  | 1 36               | 80 77          | 2,999 8                | -8 9                  | 23 9                | 110 41                 | 25 5                       |
| 3,100 0                  | 1 86               | 76 10          | 3,099 8                | -8 3                  | 26 6                | 107 33                 | 27 9                       |
| 3,200 0                  | 2 43               | 80 86          | 3,199 7                | -7 6                  | 30 3                | 104 05                 | 31 2                       |
| 3,300 0                  | 2 64               | 84 73          | 3,299 6                | -7 0                  | 34 7                | 101 46                 | 35 4                       |
| 3,400 0                  | 2 79               | 83 52          | 3,399 5                | -6 5                  | 39 4                | 99 43                  | 39 9                       |
| 3,500 0                  | 2 72               | 86 04          | 3,499 4                | -6 1                  | 44 2                | 97 87                  | 44 6                       |
| 3,600 0                  | 2 10               | 93 66          | 3,599 3                | -6 1                  | 48 4                | 97 14                  | 48 7                       |
| 3,700 0                  | 1 74               | 90 87          | 3,699 2                | -6 2                  | 51 7                | 96 83                  | 52 1                       |
| 3,800 0                  | 1 66               | 80 01          | 3,799 2                | -6 0                  | 54 7                | 96 23                  | 55 0                       |
| 3,900 0                  | 1 75               | 80 66          | 3,899 1                | -5 5                  | 57 6                | 95 43                  | 57 9                       |
| 4,000 0                  | 1 36               | 63 53          | 3,999 1                | -4 7                  | 60 2                | 94 46                  | 60 3                       |
| 4,100 0                  | 1 30               | 9 00           | 4,099 1                | -3 0                  | 61 4                | 92 84                  | 61 5                       |
| 4,200 0                  | 1 74               | 357 40         | 4,199 1                | -0 4                  | 61 5                | 90 38                  | 61 5                       |
| 4,300 0                  | 1 91               | 344 29         | 4,299 0                | 2 7                   | 61 0                | 87 45                  | 61 0                       |
| 4,400 0                  | 2 41               | 318 16         | 4,398 9                | 5 9                   | 59 1                | 84 32                  | 59 4                       |
| 4,500 0                  | 2 55               | 311 70         | 4,498 8                | 8 9                   | 56 1                | 80 95                  | 56 8                       |
| 4,600 0                  | 2 59               | 311 28         | 4,598 7                | 11 9                  | 52 7                | 77 28                  | 54 0                       |
| 4,700 0                  | 1 93               | 330 11         | 4,698 7                | 14 9                  | 50 2                | 73 51                  | 52 3                       |
| 4,800 0                  | 1 54               | 341 11         | 4,798 6                | 17 6                  | 48 9                | 70 22                  | 52 0                       |
| 4,900 0                  | 0 98               | 356 06         | 4,898 6                | 19 7                  | 48 4                | 67 85                  | 52 3                       |
| 5,000 0                  | 0 88               | 64 02          | 4,998 6                | 20 9                  | 49 0                | 66 92                  | 53 3                       |
| 5,100 0                  | 1 13               | 86 07          | 5,098 6                | 21 3                  | 50 7                | 67 22                  | 55 0                       |
| 5,200 0                  | 0 95               | 85 94          | 5,198 5                | 21 4                  | 52 5                | 67 81                  | 56 7                       |
| 5,300 0                  | 0 71               | 90 46          | 5,298 5                | 21 5                  | 54 0                | 68 30                  | 58 1                       |
| 5,400 0                  | 0 41               | 98 58          | 5,398 5                | 21 4                  | 54 9                | 68 70                  | 59 0                       |
| 5,500 0                  | 0 38               | 136 92         | 5,498 5                | 21 1                  | 55 5                | 69 17                  | 59 4                       |

# Scientific Drilling International, Inc.

SDI Standard Survey Report



|                  |                          |                                     |                                     |
|------------------|--------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | DEVON ENERGY             | <b>Local Co-ordinate Reference:</b> | Well Ichabod "7" Federal #1H        |
| <b>Project:</b>  | Wildcat (Lea County, NM) | <b>TVD Reference:</b>               | WELL @ 0 0usft (Original Well Elev) |
| <b>Site:</b>     | Lea County, NM           | <b>MD Reference:</b>                | WELL @ 0 0usft (Original Well Elev) |
| <b>Well:</b>     | Ichabod "7" Federal #1H  | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | VH - Job #32K0611559     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | VH - Job #32K0611559     | <b>Database:</b>                    | EDM-Regulatory                      |

| Survey                   |                    |                |                        |                       |                     |                        |                            |
|--------------------------|--------------------|----------------|------------------------|-----------------------|---------------------|------------------------|----------------------------|
| Measured Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | True Vertical<br>Depth | North/South<br>(usft) | East/West<br>(usft) | Closure Azimuth<br>(°) | Closure Distance<br>(usft) |
| 5,600 0                  | 0 57               | 120 57         | 5,598 5                | 20 6                  | 56 2                | 69 83                  | 59 8                       |
| 5,700 0                  | 0 25               | 141 02         | 5,698 5                | 20 2                  | 56 7                | 70 40                  | 60 2                       |
| 5,800 0                  | 0 29               | 163 92         | 5,798 5                | 19 8                  | 57 0                | 70 83                  | 60 3                       |
| 5,900 0                  | 0 50               | 154 29         | 5,898 5                | 19 2                  | 57 2                | 71 48                  | 60 3                       |
| 6,000 0                  | 0 40               | 160 99         | 5,998 5                | 18 4                  | 57 5                | 72 23                  | 60 4                       |
| 6,100 0                  | 0 44               | 161 29         | 6,098 5                | 17 7                  | 57 8                | 72 92                  | 60 4                       |
| 6,200 0                  | 0 53               | 152 07         | 6,198 5                | 17 0                  | 58 1                | 73 71                  | 60 5                       |
| 6,300 0                  | 0 63               | 159 66         | 6,298 5                | 16 0                  | 58 5                | 74 66                  | 60 7                       |
| 6,400 0                  | 0 69               | 160 83         | 6,398 5                | 15 0                  | 58 9                | 75 74                  | 60 8                       |
| 6,500 0                  | 0 62               | 166 07         | 6,498 5                | 13 9                  | 59 2                | 76 82                  | 60 8                       |
| 6,600 0                  | 0 70               | 164 56         | 6,598 5                | 12 8                  | 59 5                | 77 90                  | 60 9                       |
| 6,700 0                  | 0 70               | 160 75         | 6,698 5                | 11 6                  | 59 9                | 79 04                  | 61 0                       |
| 6,800 0                  | 0 70               | 164 21         | 6,798 5                | 10 4                  | 60 2                | 80 18                  | 61 1                       |
| 6,900 0                  | 0 73               | 160 05         | 6,898 5                | 9 2                   | 60 6                | 81 34                  | 61 3                       |
| 7,000 0                  | 0 62               | 148 49         | 6,998 5                | 8 2                   | 61 1                | 82 38                  | 61 7                       |
| 7,100 0                  | 0 74               | 151 88         | 7,098 4                | 7 1                   | 61 7                | 83 39                  | 62 1                       |
| 7,200 0                  | 0 93               | 144 82         | 7,198 4                | 5 9                   | 62 5                | 84 59                  | 62 8                       |
| 7,300 0                  | 1 03               | 148 25         | 7,298 4                | 4 5                   | 63 4                | 85 95                  | 63 6                       |
| 7,400 0                  | 0 89               | 144 40         | 7,398 4                | 3 1                   | 64 3                | 87 25                  | 64 4                       |
| 7,500 0                  | 1 08               | 164 40         | 7,498 4                | 1 6                   | 65 1                | 88 63                  | 65 1                       |
| 7,600 0                  | 1 15               | 167 92         | 7,598 4                | -0 3                  | 65 5                | 90 29                  | 65 5                       |
| 7,700 0                  | 1 28               | 166 76         | 7,698 4                | -2 4                  | 66 0                | 92 09                  | 66 0                       |
| 7,800 0                  | 1 26               | 164 99         | 7,798 3                | -4 6                  | 66 5                | 93 92                  | 66 7                       |
| 7,900 0                  | 1 23               | 166 02         | 7,898 3                | -6 7                  | 67 1                | 95 67                  | 67 4                       |
| 8,000 0                  | 1 22               | 161 89         | 7,998 3                | -8 7                  | 67 7                | 97 34                  | 68 2                       |
| 8,100 0                  | 1 33               | 168 35         | 8,098 3                | -10 9                 | 68 2                | 99 04                  | 69 1                       |
| 8,200 0                  | 1 12               | 168 17         | 8,198 2                | -13 0                 | 68 7                | 100 68                 | 69 9                       |
| 8,300 0                  | 1 09               | 166 32         | 8,298 2                | -14 8                 | 69 1                | 102 12                 | 70 7                       |
| 8,400 0                  | 1 01               | 170 87         | 8,398 2                | -16 6                 | 69 4                | 103 47                 | 71 4                       |
| 8,500 0                  | 1 20               | 175 11         | 8,498 2                | -18 5                 | 69 7                | 104 90                 | 72 1                       |
| 8,600 0                  | 1 19               | 171 32         | 8,598 2                | -20 6                 | 69 9                | 106 42                 | 72 9                       |
| 8,700 0                  | 1 10               | 173 45         | 8,698 1                | -22 6                 | 70 2                | 107 84                 | 73 7                       |
| 8,800 0                  | 1 36               | 181 57         | 8,798 1                | -24 7                 | 70 3                | 109 39                 | 74 5                       |
| 8,900 0                  | 1 27               | 177 84         | 8,898 1                | -27 0                 | 70 3                | 111 03                 | 75 3                       |
| 9,000 0                  | 1 33               | 184 26         | 8,998 1                | -29 3                 | 70 2                | 112 64                 | 76 1                       |
| 9,100 0                  | 1 36               | 184 60         | 9,098 0                | -31 6                 | 70 0                | 114 30                 | 76 9                       |
| 9,200 0                  | 1 23               | 196 66         | 9,198 0                | -33 8                 | 69 6                | 115 92                 | 77 4                       |
| 9,300 0                  | 1 39               | 203 17         | 9,298 0                | -36 0                 | 68 9                | 117 59                 | 77 7                       |
| 9,400 0                  | 1 33               | 202 97         | 9,398 0                | -38 2                 | 67 9                | 119 33                 | 77 9                       |
| 9,500 0                  | 1 20               | 203 34         | 9,497 9                | -40 2                 | 67 1                | 120 94                 | 78 2                       |
| 9,600 0                  | 1 26               | 208 78         | 9,597 9                | -42 1                 | 66 1                | 122 50                 | 78 4                       |
| 9,700 0                  | 1 00               | 219 99         | 9,697 9                | -43 8                 | 65 0                | 123 94                 | 78 4                       |
| 9,800 0                  | 1 01               | 219 96         | 9,797 9                | -45 1                 | 63 9                | 125 21                 | 78 2                       |
| 9,900 0                  | 0 91               | 214 87         | 9,897 9                | -46 4                 | 62 9                | 126 44                 | 78 2                       |

# Scientific Drilling International, Inc.

## SDI Standard Survey Report



|                  |                          |                                     |                                     |
|------------------|--------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | DEVON ENERGY             | <b>Local Co-ordinate Reference:</b> | Well Ichabod "7" Federal #1H        |
| <b>Project:</b>  | Wildcat (Lea County, NM) | <b>TVD Reference:</b>               | WELL @ 0 0usft (Original Well Elev) |
| <b>Site:</b>     | Lea County, NM           | <b>MD Reference:</b>                | WELL @ 0 0usft (Original Well Elev) |
| <b>Well:</b>     | Ichabod "7" Federal #1H  | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | VH - Job #32K0611559     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | VH - Job #32K0611559     | <b>Database:</b>                    | EDM-Regulatory                      |

| Survey                   |                    |                |                        |                       |                     |                        |                            |
|--------------------------|--------------------|----------------|------------------------|-----------------------|---------------------|------------------------|----------------------------|
| Measured Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | True Vertical<br>Depth | North/South<br>(usft) | East/West<br>(usft) | Closure Azimuth<br>(°) | Closure Distance<br>(usft) |
| 10,000 0                 | 1 19               | 214 69         | 9,997 8                | -47 9                 | 61 8                | 127 78                 | 78 2                       |
| 10,100 0                 | 0 95               | 210 83         | 10,097 8               | -49 5                 | 60 8                | 129 14                 | 78 4                       |
| 10,200 0                 | 0 90               | 226 78         | 10,197 8               | -50 7                 | 59 8                | 130 31                 | 78 4                       |
| 10,300 0                 | 0 91               | 235 94         | 10,297 8               | -51 7                 | 58 6                | 131 44                 | 78 2                       |
| 10,400 0                 | 0 93               | 230 56         | 10,397 8               | -52 7                 | 57 3                | 132 60                 | 77 8                       |
| 10,500 0                 | 1 24               | 252 62         | 10,497 8               | -53 5                 | 55 7                | 133 89                 | 77 2                       |
| 10,565 0                 | 1 29               | 260 23         | 10,562 8               | -53 9                 | 54 3                | 134 79                 | 76 5                       |



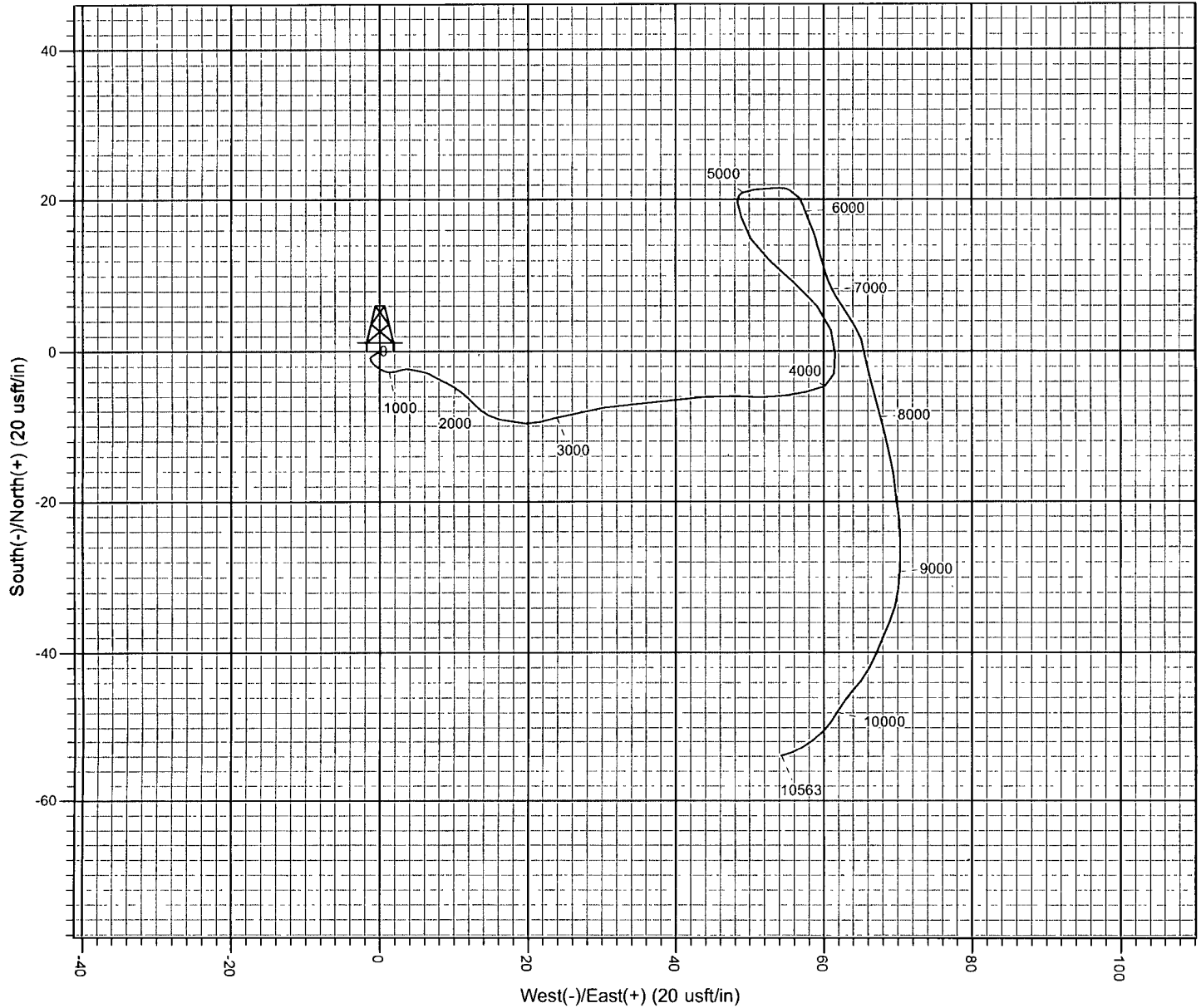
Project: Wildcat (Lea County, NM)  
Lea County, NM  
Well: Ichabod "7" Federal #1H  
Wellbore: VH - Job #32K0611559  
Design: VH - Job #32K0611559



Azimuths to Grid North  
True North -0 44°  
Magnetic North 7 10°  
Magnetic Field  
Strength 48545 7snT  
Dip Angle 60 04°  
Date 6/14/2011  
Model IGRF2010

WELL DETAILS: Ichabod "7" Federal #1H  
WELL @ 0.0usft (Original Well Elev)  
Ground Level 0.0

| +N/-S | +E/-W | Northing  | Easting   | Latitude       | Longitude        | Slot |
|-------|-------|-----------|-----------|----------------|------------------|------|
| 0.0   | 0.0   | 383357.94 | 757721.47 | 32° 3' 4.452 N | 103° 30' 5.434 W |      |



PROJECT DETAILS: Wildcat (Lea County, NM)  
Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level

SITE DETAILS: Lea County, NM  
Site Centre Latitude: 32° 9' 9 565 N  
Longitude: 103° 43' 11.824 W  
Positional Uncertainty: 0.0  
Convergence: 0.33  
Local North: Grid