



## **Legacy Reserves**

**Lea County, NM (NAD-27 2015)**

**Hamon Fed Com A #10H**

**Hamon Fed Com A #10H**

**Lateral #1**

**Plan: Design #1**

## **Standard Planning Report**

**27 September, 2015**

**HOBBS OCD**

**MAY 16 2016**

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|           |                              |                              |                            |
|-----------|------------------------------|------------------------------|----------------------------|
| Database: | EDM 5000.1 Single User Db    | Local Co-ordinate Reference: | Well Hamon Fed Com A #10H  |
| Company:  | Legacy Reserves              | TVD Reference:               | KB @ 3628.00usft (McVay 4) |
| Project:  | Lea County, NM (NAD-27 2015) | MD Reference:                | KB @ 3628.00usft (McVay 4) |
| Site:     | Hamon Fed Com A #10H         | North Reference:             | Grid                       |
| Well:     | Hamon Fed Com A #10H         | Survey Calculation Method:   | Minimum Curvature          |
| Wellbore: | Lateral #1                   |                              |                            |
| Design:   | Design #1                    |                              |                            |

|             |                                      |               |                |
|-------------|--------------------------------------|---------------|----------------|
| Project     | Lea County, NM (NAD-27 2015)         |               |                |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum:  | NAD 1927 (NADCON CONUS)              |               |                |
| Map Zone:   | New Mexico East 3001                 |               |                |

|                       |           |                      |                 |                   |                   |
|-----------------------|-----------|----------------------|-----------------|-------------------|-------------------|
| Site                  |           | Hamon Fed Com A #10H |                 |                   |                   |
| Site Position:        |           | Northing:            | 575,256.90 usft | Latitude:         | 32° 34' 45.742 N  |
| From:                 | Map       | Easting:             | 724,564.70 usft | Longitude:        | 103° 36' 15.500 W |
| Position Uncertainty: | 0.00 usft | Slot Radius:         | 13-3/16 "       | Grid Convergence: | 0.39 °            |

|                      |                      |           |                     |                 |               |                   |
|----------------------|----------------------|-----------|---------------------|-----------------|---------------|-------------------|
| Well                 | Hamon Fed Com A #10H |           |                     |                 |               |                   |
| Well Position        | +N/-S                | 0.00 usft | Northing:           | 575,256.90 usft | Latitude:     | 32° 34' 45.742 N  |
|                      | +E/-W                | 0.00 usft | Easting:            | 724,564.70 usft | Longitude:    | 103° 36' 15.500 W |
| Position Uncertainty |                      | 0.00 usft | Wellhead Elevation: | 0.00 usft       | Ground Level: | 3,610.00 usft     |

|           |            |             |                 |               |                     |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| Wellbore  | Lateral #1 |             |                 |               |                     |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|           | IGRF2015   | 7/18/2015   | 7.20            | 60.41         | 48,343              |

|                   |                            |                 |                 |                  |
|-------------------|----------------------------|-----------------|-----------------|------------------|
| Design            | Design #1                  |                 |                 |                  |
| Audit Notes:      |                            |                 |                 |                  |
| Version:          | Phase:                     | PLAN            | Tie On Depth:   | 0.00             |
| Vertical Section: | Depth From (TVD)<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Direction<br>(°) |
|                   | 0.00                       | 0.00            | 0.00            | 352.94           |

| Plan Sections         |                 |             |                       |              |              |                         |                        |                       |         |                    |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|--------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target             |
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                   | 0.00                  | 0.00    |                    |
| 5,500.00              | 0.00            | 0.00        | 5,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                   | 0.00                  | 0.00    |                    |
| 5,901.75              | 8.04            | 277.70      | 5,900.43              | 3.77         | -27.87       | 2.00                    | 2.00                   | 0.00                  | 277.70  |                    |
| 9,581.18              | 8.04            | 277.70      | 9,543.74              | 72.68        | -537.54      | 0.00                    | 0.00                   | 0.00                  | 0.00    |                    |
| 10,469.89             | 90.00           | 359.59      | 10,100.00             | 644.96       | -619.33      | 10.00                   | 9.22                   | 9.22                  | 81.97   |                    |
| 15,088.14             | 90.00           | 359.59      | 10,100.00             | 5,263.10     | -652.00      | 0.00                    | 0.00                   | 0.00                  | 0.00    | BHL (HFCA #10H/L1) |



Database: EDM 5000.1 Single User Db  
Company: Legacy Reserves  
Project: Lea County, NM (NAD-27 2015)  
Site: Hamon Fed Com A #10H  
Well: Hamon Fed Com A #10H  
Wellbore: Lateral #1  
Design: Design #1

Local Co-ordinate Reference: Well Hamon Fed Com A #10H  
TVD Reference: KB @ 3628.00usft (McVay 4)  
MD Reference: KB @ 3628.00usft (McVay 4)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 100.00                | 0.00            | 0.00        | 100.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 200.00                | 0.00            | 0.00        | 200.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 300.00                | 0.00            | 0.00        | 300.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 400.00                | 0.00            | 0.00        | 400.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 500.00                | 0.00            | 0.00        | 500.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 600.00                | 0.00            | 0.00        | 600.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 700.00                | 0.00            | 0.00        | 700.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 800.00                | 0.00            | 0.00        | 800.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 900.00                | 0.00            | 0.00        | 900.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,000.00              | 0.00            | 0.00        | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,100.00              | 0.00            | 0.00        | 1,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,200.00              | 0.00            | 0.00        | 1,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,300.00              | 0.00            | 0.00        | 1,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00              | 0.00            | 0.00        | 1,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,500.00              | 0.00            | 0.00        | 1,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00              | 0.00            | 0.00        | 1,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00              | 0.00            | 0.00        | 1,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00              | 0.00            | 0.00        | 1,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00              | 0.00            | 0.00        | 1,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00              | 0.00            | 0.00        | 2,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00              | 0.00            | 0.00        | 2,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00              | 0.00            | 0.00        | 2,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00              | 0.00            | 0.00        | 2,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00              | 0.00            | 0.00        | 2,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00              | 0.00            | 0.00        | 2,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00              | 0.00            | 0.00        | 2,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00              | 0.00            | 0.00        | 2,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00              | 0.00            | 0.00        | 2,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00              | 0.00            | 0.00        | 2,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00              | 0.00            | 0.00        | 3,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00              | 0.00            | 0.00        | 3,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00              | 0.00            | 0.00        | 3,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00              | 0.00            | 0.00        | 3,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00              | 0.00            | 0.00        | 3,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00              | 0.00            | 0.00        | 3,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00              | 0.00            | 0.00        | 3,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00              | 0.00            | 0.00        | 3,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00              | 0.00            | 0.00        | 3,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00              | 0.00            | 0.00        | 3,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00              | 0.00            | 0.00        | 4,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00              | 0.00            | 0.00        | 4,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00              | 0.00            | 0.00        | 4,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00              | 0.00            | 0.00        | 4,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00              | 0.00            | 0.00        | 4,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00              | 0.00            | 0.00        | 4,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00              | 0.00            | 0.00        | 4,600.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00              | 0.00            | 0.00        | 4,700.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00              | 0.00            | 0.00        | 4,800.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00              | 0.00            | 0.00        | 4,900.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00              | 0.00            | 0.00        | 5,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00              | 0.00            | 0.00        | 5,100.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,200.00              | 0.00            | 0.00        | 5,200.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00              | 0.00            | 0.00        | 5,300.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |



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Wellbore: Lateral #1  
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Planned Survey

| Measured Depth (usft)                          | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,400.00                                       | 0.00            | 0.00        | 5,400.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                                       | 0.00            | 0.00        | 5,500.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>NUDGE - Start Build 2.00</b>                |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,600.00                                       | 2.00            | 277.70      | 5,599.98              | 0.23         | -1.73        | 0.44                    | 2.00                    | 2.00                   | 0.00                  |
| 5,700.00                                       | 4.00            | 277.70      | 5,699.84              | 0.94         | -6.92        | 1.78                    | 2.00                    | 2.00                   | 0.00                  |
| 5,800.00                                       | 6.00            | 277.70      | 5,799.45              | 2.10         | -15.55       | 4.00                    | 2.00                    | 2.00                   | 0.00                  |
| 5,901.75                                       | 8.04            | 277.70      | 5,900.43              | 3.77         | -27.87       | 7.17                    | 2.00                    | 2.00                   | 0.00                  |
| <b>HOLD - Start 3679.43 hold at 5901.75 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,000.00                                       | 8.04            | 277.70      | 5,997.72              | 5.61         | -41.48       | 10.67                   | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00                                       | 8.04            | 277.70      | 6,096.74              | 7.48         | -55.33       | 14.23                   | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00                                       | 8.04            | 277.70      | 6,195.76              | 9.35         | -69.18       | 17.79                   | 0.00                    | 0.00                   | 0.00                  |
| 6,300.00                                       | 8.04            | 277.70      | 6,294.77              | 11.23        | -83.04       | 21.35                   | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00                                       | 8.04            | 277.70      | 6,393.79              | 13.10        | -96.89       | 24.91                   | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00                                       | 8.04            | 277.70      | 6,492.81              | 14.97        | -110.74      | 28.47                   | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00                                       | 8.04            | 277.70      | 6,591.83              | 16.85        | -124.59      | 32.03                   | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00                                       | 8.04            | 277.70      | 6,690.85              | 18.72        | -138.44      | 35.60                   | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00                                       | 8.04            | 277.70      | 6,789.87              | 20.59        | -152.29      | 39.16                   | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00                                       | 8.04            | 277.70      | 6,888.88              | 22.46        | -166.15      | 42.72                   | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00                                       | 8.04            | 277.70      | 6,987.90              | 24.34        | -180.00      | 46.28                   | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00                                       | 8.04            | 277.70      | 7,086.92              | 26.21        | -193.85      | 49.84                   | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00                                       | 8.04            | 277.70      | 7,185.94              | 28.08        | -207.70      | 53.40                   | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00                                       | 8.04            | 277.70      | 7,284.96              | 29.96        | -221.55      | 56.97                   | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00                                       | 8.04            | 277.70      | 7,383.98              | 31.83        | -235.40      | 60.53                   | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00                                       | 8.04            | 277.70      | 7,482.99              | 33.70        | -249.26      | 64.09                   | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00                                       | 8.04            | 277.70      | 7,582.01              | 35.57        | -263.11      | 67.65                   | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00                                       | 8.04            | 277.70      | 7,681.03              | 37.45        | -276.96      | 71.21                   | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00                                       | 8.04            | 277.70      | 7,780.05              | 39.32        | -290.81      | 74.77                   | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00                                       | 8.04            | 277.70      | 7,879.07              | 41.19        | -304.66      | 78.34                   | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00                                       | 8.04            | 277.70      | 7,978.09              | 43.06        | -318.52      | 81.90                   | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00                                       | 8.04            | 277.70      | 8,077.10              | 44.94        | -332.37      | 85.46                   | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00                                       | 8.04            | 277.70      | 8,176.12              | 46.81        | -346.22      | 89.02                   | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00                                       | 8.04            | 277.70      | 8,275.14              | 48.68        | -360.07      | 92.58                   | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00                                       | 8.04            | 277.70      | 8,374.16              | 50.56        | -373.92      | 96.14                   | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00                                       | 8.04            | 277.70      | 8,473.18              | 52.43        | -387.77      | 99.70                   | 0.00                    | 0.00                   | 0.00                  |
| 8,600.00                                       | 8.04            | 277.70      | 8,572.20              | 54.30        | -401.63      | 103.27                  | 0.00                    | 0.00                   | 0.00                  |
| 8,700.00                                       | 8.04            | 277.70      | 8,671.21              | 56.17        | -415.48      | 106.83                  | 0.00                    | 0.00                   | 0.00                  |
| 8,800.00                                       | 8.04            | 277.70      | 8,770.23              | 58.05        | -429.33      | 110.39                  | 0.00                    | 0.00                   | 0.00                  |
| 8,900.00                                       | 8.04            | 277.70      | 8,869.25              | 59.92        | -443.18      | 113.95                  | 0.00                    | 0.00                   | 0.00                  |
| 9,000.00                                       | 8.04            | 277.70      | 8,968.27              | 61.79        | -457.03      | 117.51                  | 0.00                    | 0.00                   | 0.00                  |
| 9,100.00                                       | 8.04            | 277.70      | 9,067.29              | 63.67        | -470.88      | 121.07                  | 0.00                    | 0.00                   | 0.00                  |
| 9,200.00                                       | 8.04            | 277.70      | 9,166.31              | 65.54        | -484.74      | 124.64                  | 0.00                    | 0.00                   | 0.00                  |
| 9,300.00                                       | 8.04            | 277.70      | 9,265.32              | 67.41        | -498.59      | 128.20                  | 0.00                    | 0.00                   | 0.00                  |
| 9,400.00                                       | 8.04            | 277.70      | 9,364.34              | 69.28        | -512.44      | 131.76                  | 0.00                    | 0.00                   | 0.00                  |
| 9,500.00                                       | 8.04            | 277.70      | 9,463.36              | 71.16        | -526.29      | 135.32                  | 0.00                    | 0.00                   | 0.00                  |
| 9,581.18                                       | 8.04            | 277.70      | 9,543.74              | 72.68        | -537.54      | 138.21                  | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP - Start DLS 10.00 TFO 81.97</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 9,600.00                                       | 8.50            | 290.40      | 9,562.37              | 73.34        | -540.14      | 139.19                  | 10.00                   | 2.49                   | 67.51                 |
| 9,650.00                                       | 11.27           | 315.07      | 9,611.64              | 78.09        | -547.06      | 144.76                  | 10.00                   | 5.54                   | 49.34                 |
| 9,700.00                                       | 15.21           | 328.67      | 9,660.32              | 87.16        | -553.93      | 154.60                  | 10.00                   | 7.89                   | 27.20                 |
| 9,750.00                                       | 19.64           | 336.54      | 9,708.02              | 100.48       | -560.69      | 168.65                  | 10.00                   | 8.84                   | 15.72                 |
| 9,800.00                                       | 24.28           | 341.54      | 9,754.38              | 117.95       | -567.29      | 186.80                  | 10.00                   | 9.28                   | 10.02                 |
| 9,850.00                                       | 29.03           | 345.01      | 9,799.06              | 139.43       | -573.69      | 208.90                  | 10.00                   | 9.51                   | 6.93                  |
| 9,900.00                                       | 33.85           | 347.57      | 9,841.71              | 164.77       | -579.83      | 234.80                  | 10.00                   | 9.64                   | 5.12                  |



Database: EDM 5000.1 Single User Db  
Company: Legacy Reserves  
Project: Lea County, NM (NAD-27 2015)  
Site: Hamon Fed Com A #10H  
Well: Hamon Fed Com A #10H  
Wellbore: Lateral #1  
Design: Design #1

Local Co-ordinate Reference: Well Hamon Fed Com A #10H  
TVD Reference: KB @ 3628.00usft (McVay 4)  
MD Reference: KB @ 3628.00usft (McVay 4)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

Planned Survey

| Measured Depth (usft)                   | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,950.00                                | 38.71           | 349.55      | 9,882.00              | 193.76       | -585.67      | 264.29                  | 10.00                   | 9.72                   | 3.97                  |
| 10,000.00                               | 43.60           | 351.16      | 9,919.64              | 226.19       | -591.16      | 297.15                  | 10.00                   | 9.78                   | 3.21                  |
| 10,050.00                               | 48.51           | 352.49      | 9,954.33              | 261.81       | -596.26      | 333.13                  | 10.00                   | 9.81                   | 2.68                  |
| 10,100.00                               | 53.43           | 353.64      | 9,985.81              | 300.36       | -600.93      | 371.96                  | 10.00                   | 9.84                   | 2.30                  |
| 10,150.00                               | 58.36           | 354.65      | 10,013.84             | 341.53       | -605.14      | 413.33                  | 10.00                   | 9.86                   | 2.02                  |
| 10,200.00                               | 63.29           | 355.56      | 10,038.21             | 385.01       | -608.85      | 456.94                  | 10.00                   | 9.87                   | 1.82                  |
| 10,250.00                               | 68.23           | 356.40      | 10,058.73             | 430.48       | -612.04      | 502.46                  | 10.00                   | 9.88                   | 1.67                  |
| 10,300.00                               | 73.18           | 357.17      | 10,075.24             | 477.58       | -614.68      | 549.53                  | 10.00                   | 9.89                   | 1.56                  |
| 10,350.00                               | 78.13           | 357.91      | 10,087.63             | 525.96       | -616.76      | 597.80                  | 10.00                   | 9.90                   | 1.48                  |
| 10,400.00                               | 83.08           | 358.62      | 10,095.79             | 575.25       | -618.24      | 646.90                  | 10.00                   | 9.90                   | 1.42                  |
| 10,450.00                               | 88.03           | 359.32      | 10,099.66             | 625.08       | -619.14      | 696.45                  | 10.00                   | 9.90                   | 1.39                  |
| 10,469.89                               | 90.00           | 359.59      | 10,100.00             | 644.96       | -619.33      | 716.21                  | 10.00                   | 9.90                   | 1.38                  |
| EOC - Start 4618.26 hold at 10469.89 MD |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,500.00                               | 90.00           | 359.59      | 10,100.00             | 675.07       | -619.54      | 746.12                  | 0.00                    | 0.00                   | 0.00                  |
| 10,600.00                               | 90.00           | 359.59      | 10,100.00             | 775.07       | -620.25      | 845.44                  | 0.00                    | 0.00                   | 0.00                  |
| 10,700.00                               | 90.00           | 359.59      | 10,100.00             | 875.07       | -620.95      | 944.77                  | 0.00                    | 0.00                   | 0.00                  |
| 10,800.00                               | 90.00           | 359.59      | 10,100.00             | 975.06       | -621.66      | 1,044.10                | 0.00                    | 0.00                   | 0.00                  |
| 10,900.00                               | 90.00           | 359.59      | 10,100.00             | 1,075.06     | -622.37      | 1,143.42                | 0.00                    | 0.00                   | 0.00                  |
| 11,000.00                               | 90.00           | 359.59      | 10,100.00             | 1,175.06     | -623.08      | 1,242.75                | 0.00                    | 0.00                   | 0.00                  |
| 11,100.00                               | 90.00           | 359.59      | 10,100.00             | 1,275.06     | -623.78      | 1,342.07                | 0.00                    | 0.00                   | 0.00                  |
| 11,200.00                               | 90.00           | 359.59      | 10,100.00             | 1,375.05     | -624.49      | 1,441.40                | 0.00                    | 0.00                   | 0.00                  |
| 11,300.00                               | 90.00           | 359.59      | 10,100.00             | 1,475.05     | -625.20      | 1,540.72                | 0.00                    | 0.00                   | 0.00                  |
| 11,400.00                               | 90.00           | 359.59      | 10,100.00             | 1,575.05     | -625.91      | 1,640.05                | 0.00                    | 0.00                   | 0.00                  |
| 11,500.00                               | 90.00           | 359.59      | 10,100.00             | 1,675.05     | -626.61      | 1,739.38                | 0.00                    | 0.00                   | 0.00                  |
| 11,600.00                               | 90.00           | 359.59      | 10,100.00             | 1,775.04     | -627.32      | 1,838.70                | 0.00                    | 0.00                   | 0.00                  |
| 11,700.00                               | 90.00           | 359.59      | 10,100.00             | 1,875.04     | -628.03      | 1,938.03                | 0.00                    | 0.00                   | 0.00                  |
| 11,800.00                               | 90.00           | 359.59      | 10,100.00             | 1,975.04     | -628.74      | 2,037.35                | 0.00                    | 0.00                   | 0.00                  |
| 11,900.00                               | 90.00           | 359.59      | 10,100.00             | 2,075.04     | -629.44      | 2,136.68                | 0.00                    | 0.00                   | 0.00                  |
| 12,000.00                               | 90.00           | 359.59      | 10,100.00             | 2,175.03     | -630.15      | 2,236.01                | 0.00                    | 0.00                   | 0.00                  |
| 12,100.00                               | 90.00           | 359.59      | 10,100.00             | 2,275.03     | -630.86      | 2,335.33                | 0.00                    | 0.00                   | 0.00                  |
| 12,200.00                               | 90.00           | 359.59      | 10,100.00             | 2,375.03     | -631.57      | 2,434.66                | 0.00                    | 0.00                   | 0.00                  |
| 12,300.00                               | 90.00           | 359.59      | 10,100.00             | 2,475.03     | -632.27      | 2,533.98                | 0.00                    | 0.00                   | 0.00                  |
| 12,400.00                               | 90.00           | 359.59      | 10,100.00             | 2,575.02     | -632.98      | 2,633.31                | 0.00                    | 0.00                   | 0.00                  |
| 12,500.00                               | 90.00           | 359.59      | 10,100.00             | 2,675.02     | -633.69      | 2,732.64                | 0.00                    | 0.00                   | 0.00                  |
| 12,600.00                               | 90.00           | 359.59      | 10,100.00             | 2,775.02     | -634.40      | 2,831.96                | 0.00                    | 0.00                   | 0.00                  |
| 12,700.00                               | 90.00           | 359.59      | 10,100.00             | 2,875.02     | -635.10      | 2,931.29                | 0.00                    | 0.00                   | 0.00                  |
| 12,800.00                               | 90.00           | 359.59      | 10,100.00             | 2,975.01     | -635.81      | 3,030.61                | 0.00                    | 0.00                   | 0.00                  |
| 12,900.00                               | 90.00           | 359.59      | 10,100.00             | 3,075.01     | -636.52      | 3,129.94                | 0.00                    | 0.00                   | 0.00                  |
| 13,000.00                               | 90.00           | 359.59      | 10,100.00             | 3,175.01     | -637.23      | 3,229.26                | 0.00                    | 0.00                   | 0.00                  |
| 13,100.00                               | 90.00           | 359.59      | 10,100.00             | 3,275.01     | -637.93      | 3,328.59                | 0.00                    | 0.00                   | 0.00                  |
| 13,200.00                               | 90.00           | 359.59      | 10,100.00             | 3,375.00     | -638.64      | 3,427.92                | 0.00                    | 0.00                   | 0.00                  |
| 13,300.00                               | 90.00           | 359.59      | 10,100.00             | 3,475.00     | -639.35      | 3,527.24                | 0.00                    | 0.00                   | 0.00                  |
| 13,400.00                               | 90.00           | 359.59      | 10,100.00             | 3,575.00     | -640.06      | 3,626.57                | 0.00                    | 0.00                   | 0.00                  |
| 13,500.00                               | 90.00           | 359.59      | 10,100.00             | 3,675.00     | -640.76      | 3,725.89                | 0.00                    | 0.00                   | 0.00                  |
| 13,600.00                               | 90.00           | 359.59      | 10,100.00             | 3,774.99     | -641.47      | 3,825.22                | 0.00                    | 0.00                   | 0.00                  |
| 13,700.00                               | 90.00           | 359.59      | 10,100.00             | 3,874.99     | -642.18      | 3,924.55                | 0.00                    | 0.00                   | 0.00                  |
| 13,800.00                               | 90.00           | 359.59      | 10,100.00             | 3,974.99     | -642.89      | 4,023.87                | 0.00                    | 0.00                   | 0.00                  |
| 13,900.00                               | 90.00           | 359.59      | 10,100.00             | 4,074.99     | -643.59      | 4,123.20                | 0.00                    | 0.00                   | 0.00                  |
| 14,000.00                               | 90.00           | 359.59      | 10,100.00             | 4,174.98     | -644.30      | 4,222.52                | 0.00                    | 0.00                   | 0.00                  |
| 14,100.00                               | 90.00           | 359.59      | 10,100.00             | 4,274.98     | -645.01      | 4,321.85                | 0.00                    | 0.00                   | 0.00                  |
| 14,200.00                               | 90.00           | 359.59      | 10,100.00             | 4,374.98     | -645.72      | 4,421.18                | 0.00                    | 0.00                   | 0.00                  |
| 14,300.00                               | 90.00           | 359.59      | 10,100.00             | 4,474.98     | -646.42      | 4,520.50                | 0.00                    | 0.00                   | 0.00                  |
| 14,400.00                               | 90.00           | 359.59      | 10,100.00             | 4,574.97     | -647.13      | 4,619.83                | 0.00                    | 0.00                   | 0.00                  |



Database: EDM 5000.1 Single User Db  
Company: Legacy Reserves  
Project: Lea County, NM (NAD-27 2015)  
Site: Hamon Fed Com A #10H  
Well: Hamon Fed Com A #10H  
Wellbore: Lateral #1  
Design: Design #1

Local Co-ordinate Reference: Well Hamon Fed Com A #10H  
TVD Reference: KB @ 3628.00usft (McVay 4)  
MD Reference: KB @ 3628.00usft (McVay 4)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

#### Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 14,500.00             | 90.00           | 359.59      | 10,100.00             | 4,674.97     | -647.84      | 4,719.15                | 0.00                    | 0.00                   | 0.00                  |
| 14,600.00             | 90.00           | 359.59      | 10,100.00             | 4,774.97     | -648.55      | 4,818.48                | 0.00                    | 0.00                   | 0.00                  |
| 14,700.00             | 90.00           | 359.59      | 10,100.00             | 4,874.97     | -649.25      | 4,917.81                | 0.00                    | 0.00                   | 0.00                  |
| 14,800.00             | 90.00           | 359.59      | 10,100.00             | 4,974.96     | -649.96      | 5,017.13                | 0.00                    | 0.00                   | 0.00                  |
| 14,900.00             | 90.00           | 359.59      | 10,100.00             | 5,074.96     | -650.67      | 5,116.46                | 0.00                    | 0.00                   | 0.00                  |
| 15,000.00             | 90.00           | 359.59      | 10,100.00             | 5,174.96     | -651.38      | 5,215.78                | 0.00                    | 0.00                   | 0.00                  |
| 15,088.14             | 90.00           | 359.59      | 10,100.00             | 5,263.10     | -652.00      | 5,303.33                | 0.00                    | 0.00                   | 0.00                  |
| TD at 15088.14        |                 |             |                       |              |              |                         |                         |                        |                       |

#### Design Targets

| Target Name<br>- hit/miss target<br>- Shape                                                        | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |
|----------------------------------------------------------------------------------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| BHL (HFCA #10H/L1)<br>- plan hits target center<br>- Point                                         | 0.00          | 0.01         | 10,100.00  | 5,263.10     | -652.00      | 580,520.00      | 723,912.70     | 32° 35' 37.864 N | 103° 36' 22.700 W |
| Target Window (HFCA #<br>- plan hits target center<br>- Rectangle (sides W100.00 H4,618.50 D30.00) | 0.00          | 352.94       | 10,100.00  | 5,263.10     | -652.00      | 580,520.00      | 723,912.70     | 32° 35' 37.864 N | 103° 36' 22.700 W |
| EOC (HFCA #10H/L1 Dc<br>- plan hits target center<br>- Point                                       | 0.00          | 0.00         | 10,100.00  | 644.87       | -619.33      | 575,901.78      | 723,945.37     | 32° 34' 52.165 N | 103° 36' 22.687 W |

#### Casing Points

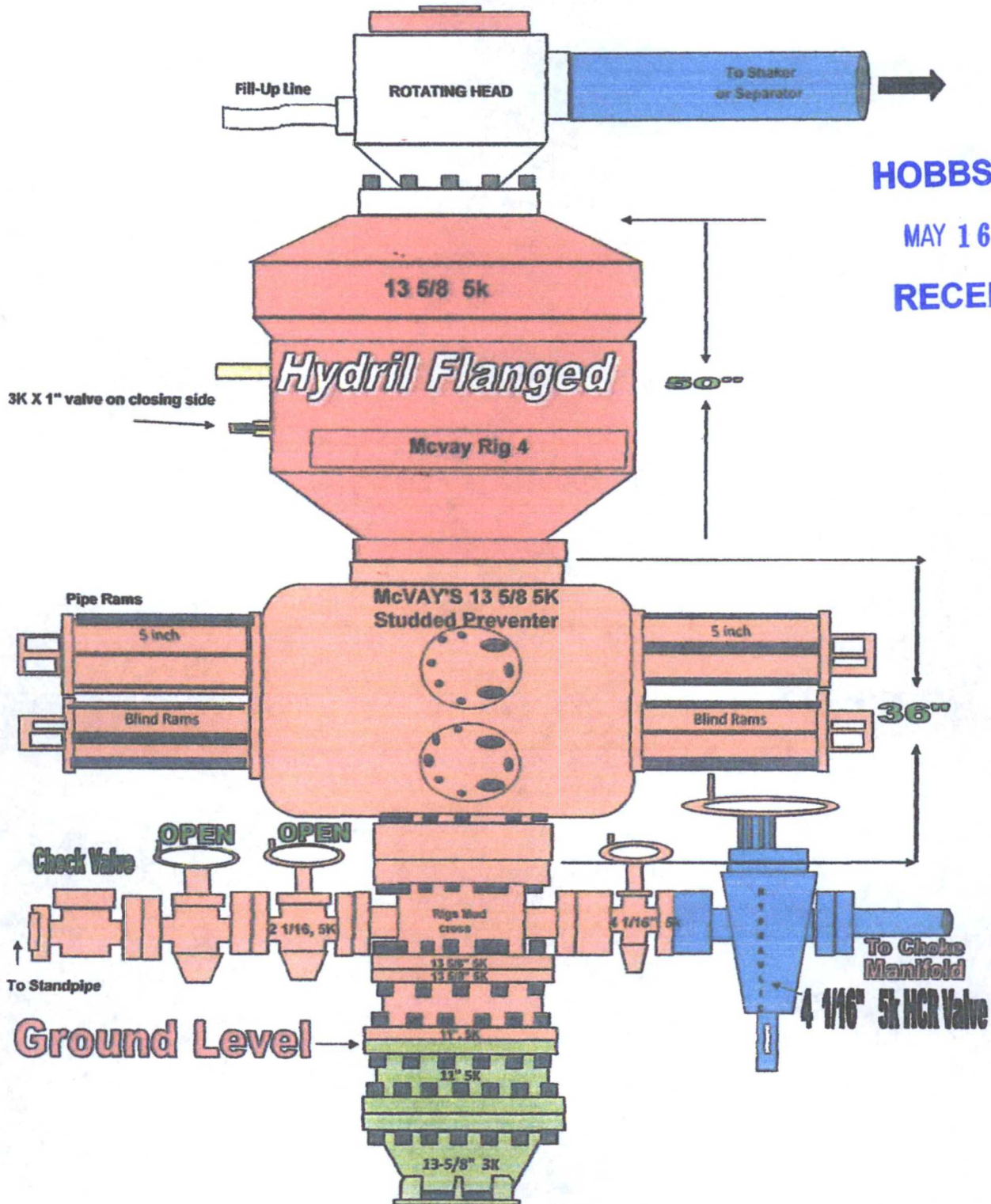
| Measured Depth (usft) | Vertical Depth (usft) | Name   | Casing Diameter (") | Hole Diameter (") |
|-----------------------|-----------------------|--------|---------------------|-------------------|
| 5,400.00              | 5,400.00              | 9 5/8" | 9-5/8               | 12-1/4            |

#### Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates<br>+N/-S (usft)<br>+E/-W (usft) | Comment                                 |
|-----------------------|-----------------------|---------------------------------------------------|-----------------------------------------|
| 5,500.00              | 5,500.00              | 0.00                                              | NUDGE - Start Build 2.00                |
| 5,901.75              | 5,900.43              | -27.87                                            | HOLD - Start 3679.43 hold at 5901.75 MD |
| 9,581.18              | 9,543.74              | 72.68                                             | KOP - Start DLS 10.00 TFO 81.97         |
| 10,469.89             | 10,100.00             | 644.96                                            | EOC - Start 4618.26 hold at 10469.89 MD |
| 15,088.14             | 10,100.00             | 5,263.10                                          | TD at 15088.14                          |



# McVay Rig 4

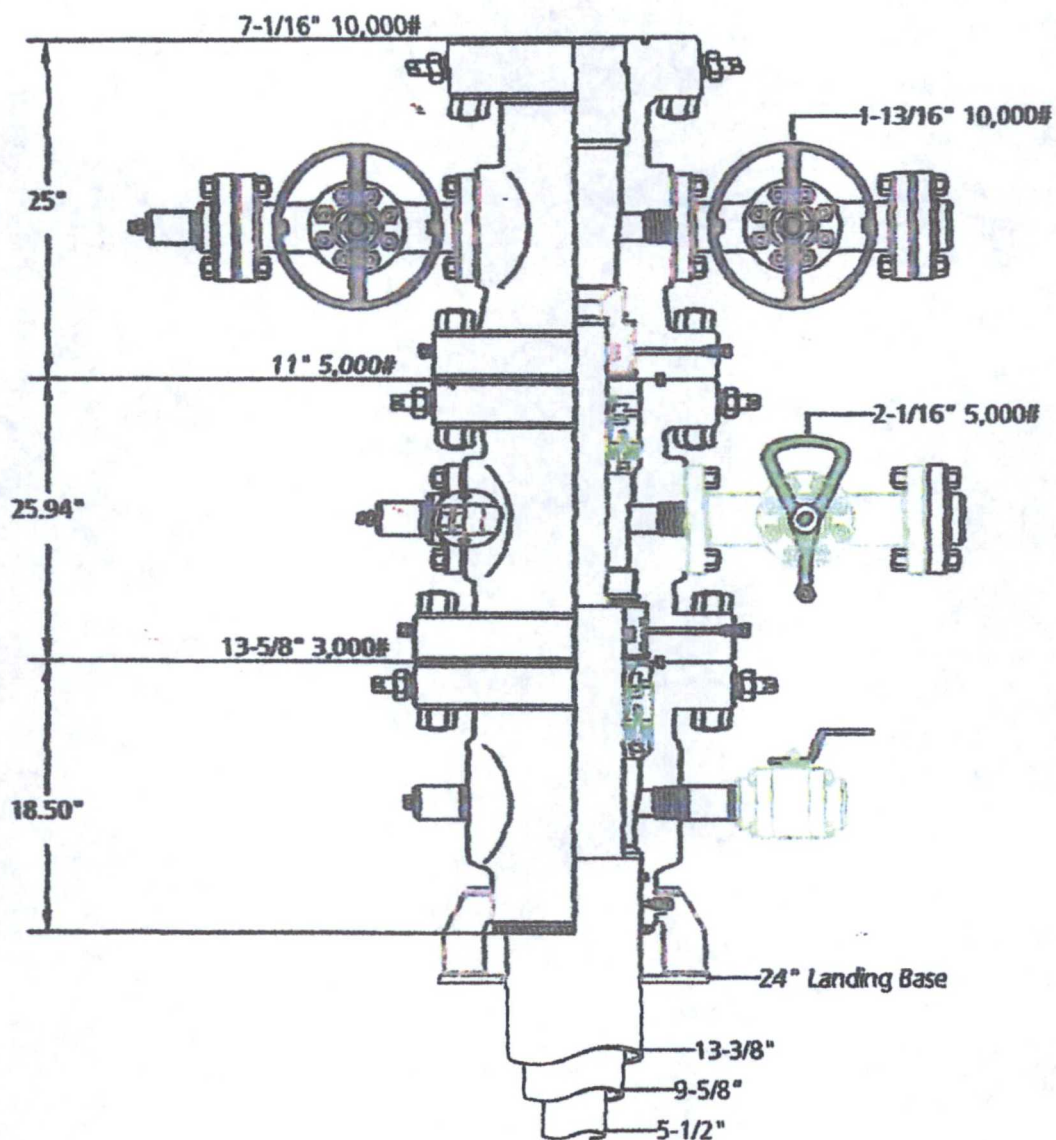


HOBBS OCD

MAY 16 2016

RECEIVED

Note: Dimensional information reflected on this drawing are estimated measurements only.



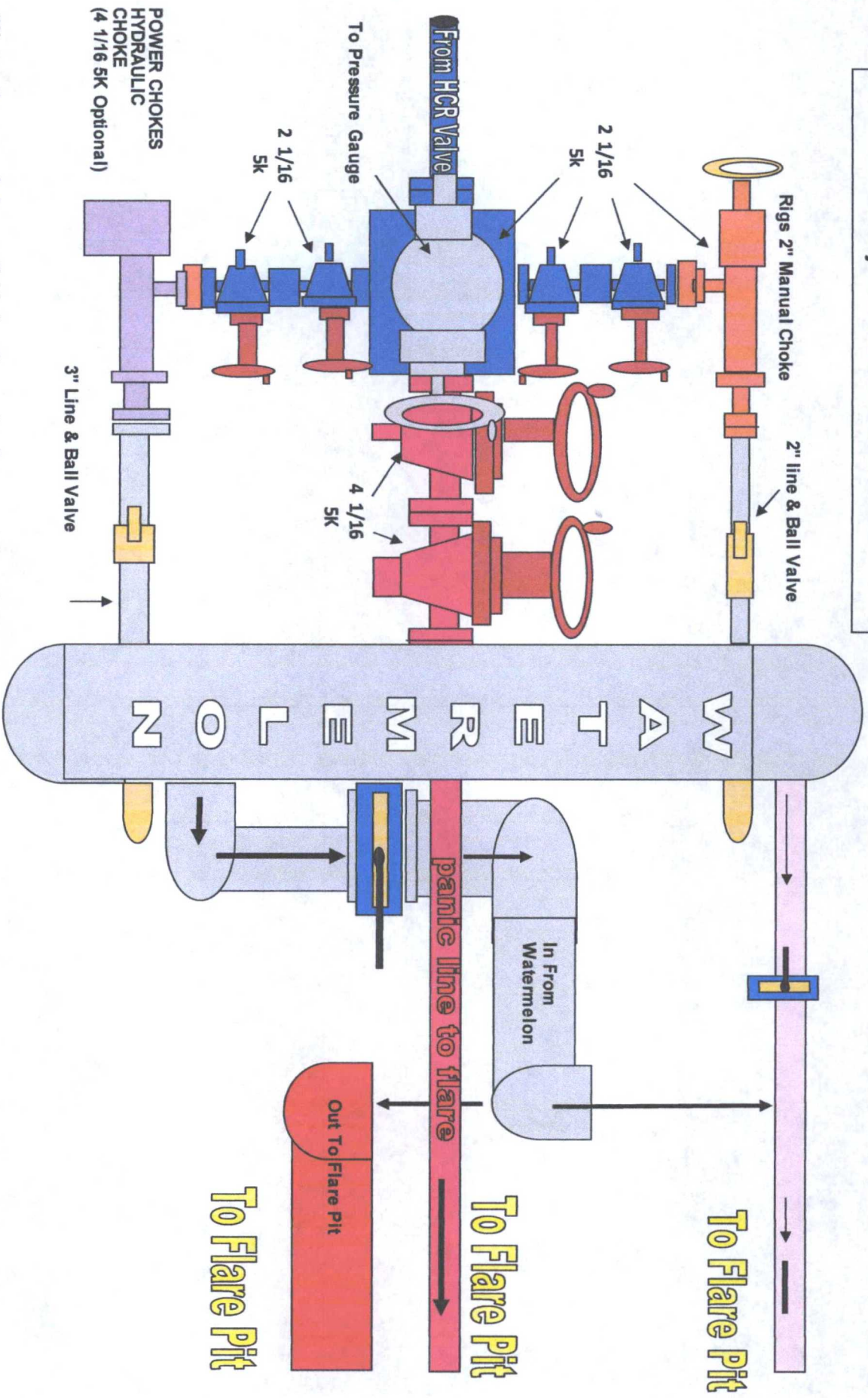
Legacy Reserves  
Conventional 3-String

 **CAMERON**

|                 |               |                   |           |
|-----------------|---------------|-------------------|-----------|
| Drawn: Jeanette | Date: 7-15-15 | Working Pressure: | # 1274616 |
|-----------------|---------------|-------------------|-----------|



# McVay 4 Choke Manifold



\*We use the same choke manifolds for all aspects of our operations & all are rated to 10K;

\* All connections downstream from BOP thru chokes Are Flanged, All connections downstream from chokes are Flanged .



Design Plan, Operating & Maintenance Plan & Closure Plan for the OCD Form C-144

Hamon Fed Com A ~~1H~~ 1H - 4H + 9H - 12H

**DESIGN PLAN:**

Fluid & cuttings coming from drilling operations will pass over the Shale Shaker with the cuttings going to the CRI haul off bin and the cleaned fluid returning to the working steel pits.

**Equipment includes:**

2-500 bbl steel tanks (fresh water for drilling)

2-700 bbl steel working pits (1400 bbls total)

2-20 cu yards steel haul off bins

2-pumps (CE FB1300)

2-shale shakers

1-mud cleaner (if needed)

1-centrifuge (if needed)

**OPERATING AND MAINTENANCE PLAN:**

Inspection to occur every tour for proper operation of system and individual components. If any problems are found they will be repaired and/or corrected immediately.

**CLOSURE PLAN:**

All haul bins containing cuttings will be removed from location and hauled to Controlled Recovery, Inc. (NM-01-0006) disposal site located near mile marker 66 on Highway 62/180.

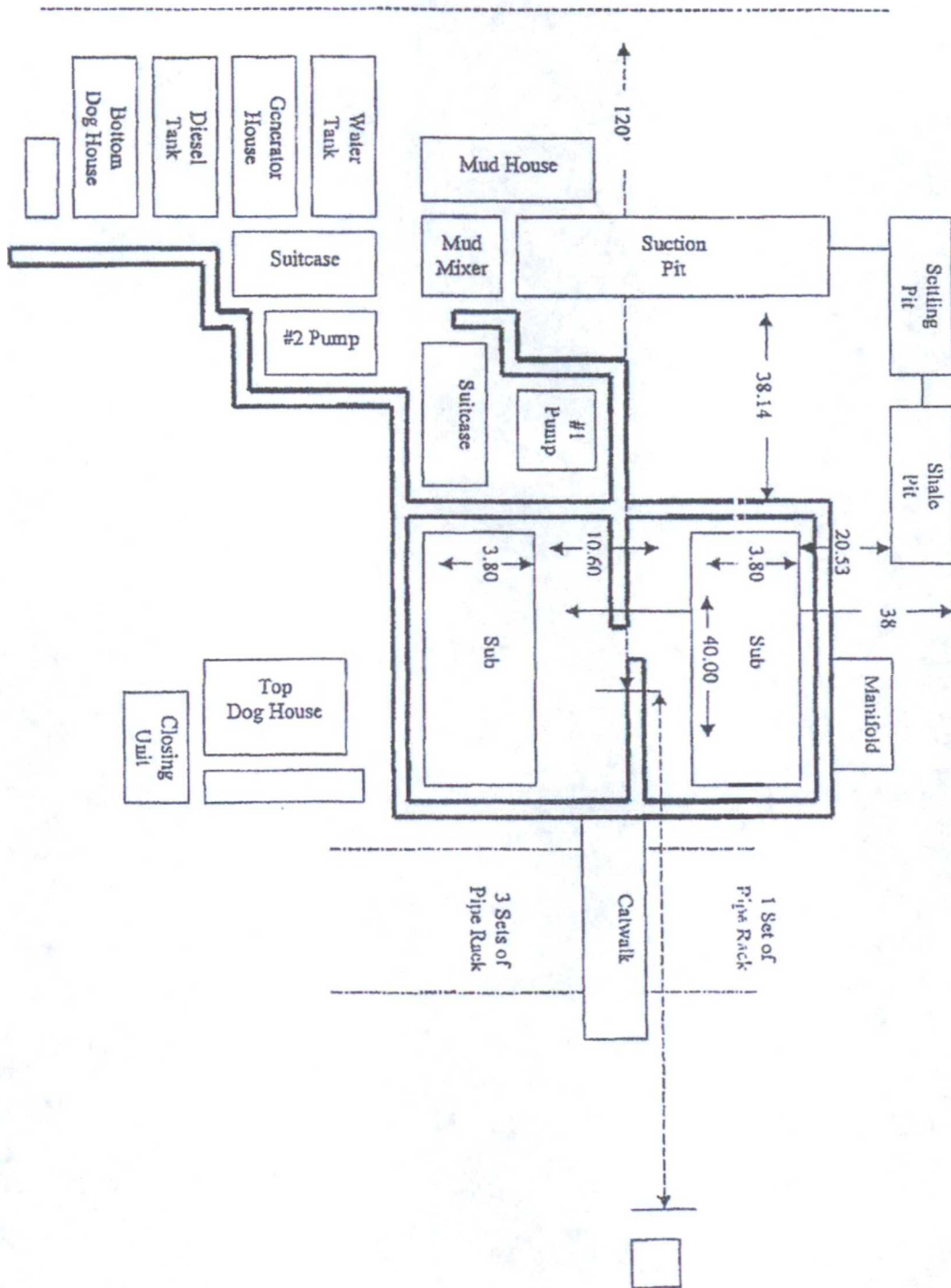


Blain K. Lewis

Senior Operations Engineer



# Plat for Closed Loop System





# EXHIBIT D

## Rig Plat Only HAMON FED COM A 9H, 10H, 11H, 12H V-DOOR WEST

