

Javernick Oil LLC

Chandler Creek

Chandler Creek 24-32A

24-32

Original

Job #:

API:

Survey: Original

Mesa West Survey Report

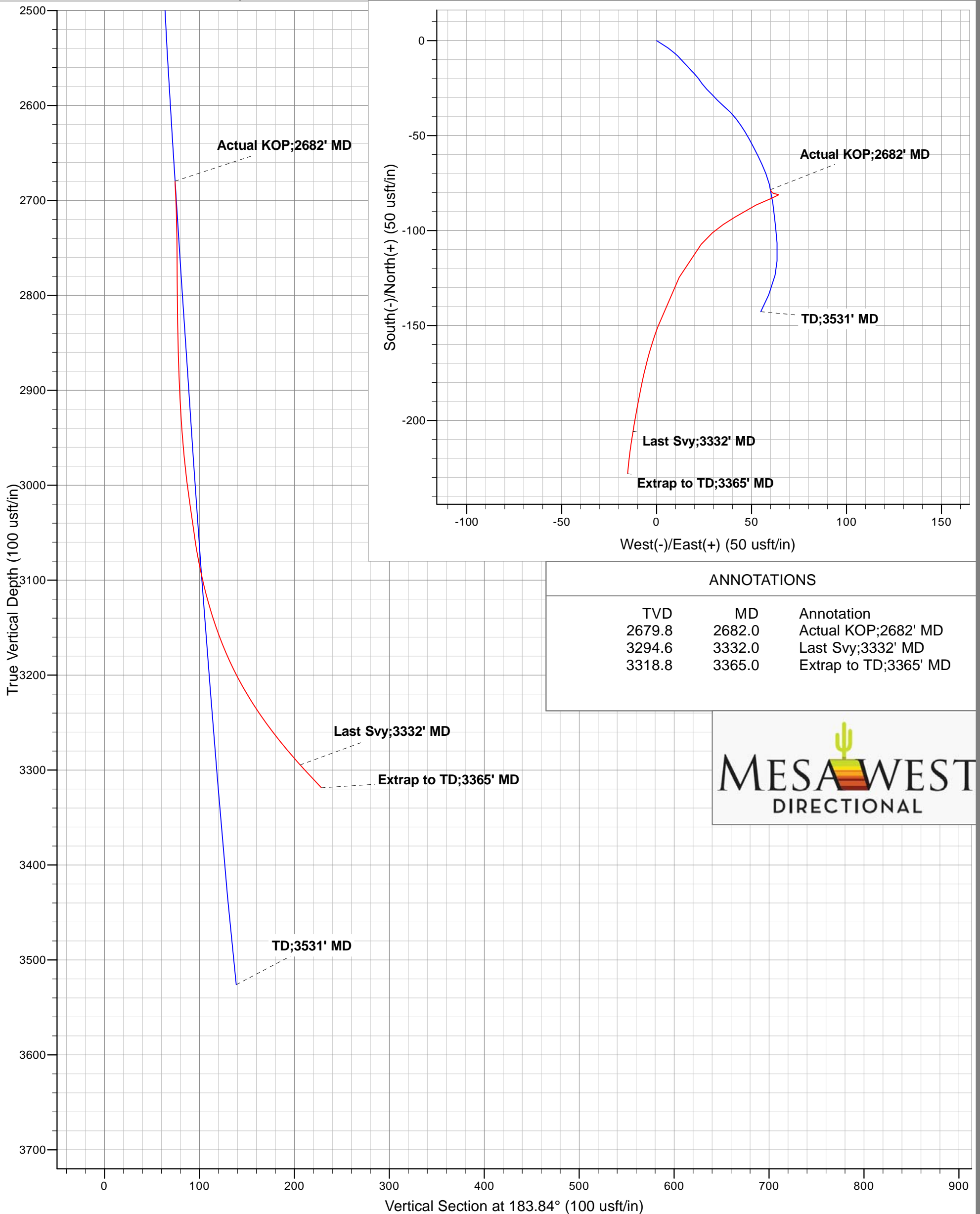
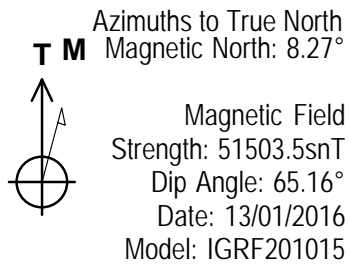
13 January, 2016



Site: Chandler Creek 24-32A
Well: 24-32
Wellbore: Stk #1
Plan: Final

Geodetic System: US State Plane 1927 (Exact solution)
 Ellipsoid: Clarke 1866
 Zone: Colorado Central 502
 Northing: 187087.17
 Easting: 2104289.27
 Latitude: 38° 20' 47.270 N
 Longitude: 105° 8' 11.000 W
 Grid Convergence: 0.23° West
 Ground Elevation: 5498.0
 KB Elevation: RKB @ 5510.0usft

No plan data is available



| ANNOTATIONS | | |
|-------------|--------|-----------------------|
| TVD | MD | Annotation |
| 2679.8 | 2682.0 | Actual KOP;2682' MD |
| 3294.6 | 3332.0 | Last Svy;3332' MD |
| 3318.8 | 3365.0 | Extrap to TD;3365' MD |



| | | | |
|------------------|-----------------------|-------------------------------------|-------------------|
| Company: | Javernick Oil LLC | Local Co-ordinate Reference: | Well 24-32 |
| Project: | Chandler Creek | TVD Reference: | RKB @ 5510.0usft |
| Site: | Chandler Creek 24-32A | MD Reference: | RKB @ 5510.0usft |
| Well: | 24-32 | North Reference: | True |
| Wellbore: | Original | Survey Calculation Method: | Minimum Curvature |
| Survey: | Original | Database: | WellPlan Services |

| | | | |
|--------------------|--------------------------------------|----------------------|----------------|
| Project | Chandler Creek | | |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 (NADCON CONUS) | | |
| Map Zone: | Colorado Central 502 | | |

| | | | |
|------------------------------|-----------------------|--------------------------|-------------------|
| Site | Chandler Creek 24-32A | | |
| Site Position: | | Northing: | 187,087.17 usft |
| From: | Map | Easting: | 2,104,289.27 usft |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " |
| | | Latitude: | 38° 20' 47.270 N |
| | | Longitude: | 105° 8' 11.000 W |
| | | Grid Convergence: | 0.23 ° |

| | | | |
|-----------------------------|--------------|----------------------------|------------------|
| Well | 24-32 | | |
| Well Position | +N/-S | 0.0 usft | Northing: |
| | +E/-W | 0.0 usft | Easting: |
| Position Uncertainty | 0.0 usft | Wellhead Elevation: | 0.0 usft |
| | | Latitude: | 38° 20' 47.270 N |
| | | Longitude: | 105° 8' 11.000 W |
| | | Ground Level: | 5,498.0 usft |

| | | | |
|------------------|-------------------|--------------------|----------------------------|
| Wellbore | Original | | |
| Magnetics | Model Name | Sample Date | Declination (°) |
| | IGRF201015 | 13/01/2016 | 8.27 |
| | | | Dip Angle (°) |
| | | | 65.16 |
| | | | Field Strength (nT) |
| | | | 51,503 |

| | | | |
|--------------------------|--------------------------------|----------------------|----------------------|
| Survey | Original | | |
| Audit Notes: | | | |
| Version: | 1.0 | Phase: | ACTUAL |
| | | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) |
| | 0.0 | 0.0 | 0.0 |
| | | | Direction (°) |
| | | | 159.01 |

| | | | |
|-----------------------|------------------|--------------------------|--------------------|
| Survey Program | Date | 13/01/2016 | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name |
| 400.0 | 3,531.0 | Original (Original) | Description |

| | | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|----------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|
| Survey | | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | Subsea (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.0 | 0.00 | 0.00 | 0.0 | -5,510.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 1.80 | 122.70 | 399.9 | -5,110.1 | -3.4 | 5.3 | 5.1 | 0.45 | 0.45 | 0.00 |
| 430.0 | 1.60 | 126.60 | 429.9 | -5,080.1 | -3.9 | 6.0 | 5.8 | 0.77 | -0.67 | 13.00 |
| 525.0 | 1.50 | 131.20 | 524.9 | -4,985.1 | -5.5 | 8.0 | 8.0 | 0.17 | -0.11 | 4.84 |
| 590.0 | 1.30 | 124.60 | 589.9 | -4,920.1 | -6.5 | 9.3 | 9.4 | 0.39 | -0.31 | -10.15 |
| 687.0 | 1.60 | 135.90 | 686.8 | -4,823.2 | -8.1 | 11.1 | 11.5 | 0.43 | 0.31 | 11.65 |
| 780.0 | 1.30 | 138.70 | 779.8 | -4,730.2 | -9.8 | 12.7 | 13.7 | 0.33 | -0.32 | 3.01 |
| 874.0 | 1.60 | 136.00 | 873.8 | -4,636.2 | -11.6 | 14.3 | 15.9 | 0.33 | 0.32 | -2.87 |
| 965.0 | 1.50 | 137.90 | 964.7 | -4,545.3 | -13.4 | 16.0 | 18.2 | 0.12 | -0.11 | 2.09 |
| 1,090.0 | 1.60 | 137.70 | 1,089.7 | -4,420.3 | -15.9 | 18.3 | 21.4 | 0.08 | 0.08 | -0.16 |

Survey Report

| | | | |
|------------------|-----------------------|-------------------------------------|-------------------|
| Company: | Javernick Oil LLC | Local Co-ordinate Reference: | Well 24-32 |
| Project: | Chandler Creek | TVD Reference: | RKB @ 5510.0usft |
| Site: | Chandler Creek 24-32A | MD Reference: | RKB @ 5510.0usft |
| Well: | 24-32 | North Reference: | True |
| Wellbore: | Original | Survey Calculation Method: | Minimum Curvature |
| Survey: | Original | Database: | WellPlan Services |

| Survey | | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|---------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | Subsea (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 1,151.0 | 1.90 | 132.00 | 1,150.7 | -4,359.3 | -17.2 | 19.6 | 23.0 | 0.57 | 0.49 | -9.34 |
| 1,245.0 | 2.20 | 146.10 | 1,244.6 | -4,265.4 | -19.7 | 21.8 | 26.2 | 0.62 | 0.32 | 15.00 |
| 1,337.0 | 2.30 | 143.20 | 1,336.5 | -4,173.5 | -22.6 | 23.9 | 29.7 | 0.16 | 0.11 | -3.15 |
| 1,430.0 | 2.50 | 136.00 | 1,429.5 | -4,080.5 | -25.6 | 26.4 | 33.4 | 0.39 | 0.22 | -7.74 |
| 1,521.0 | 2.40 | 135.00 | 1,520.4 | -3,989.6 | -28.4 | 29.1 | 36.9 | 0.12 | -0.11 | -1.10 |
| 1,614.0 | 2.70 | 136.70 | 1,613.3 | -3,896.7 | -31.3 | 32.0 | 40.7 | 0.33 | 0.32 | 1.83 |
| 1,708.0 | 3.00 | 130.90 | 1,707.2 | -3,802.8 | -34.6 | 35.4 | 44.9 | 0.44 | 0.32 | -6.17 |
| 1,801.0 | 2.80 | 134.30 | 1,800.0 | -3,710.0 | -37.7 | 38.8 | 49.2 | 0.28 | -0.22 | 3.66 |
| 1,895.0 | 2.80 | 144.10 | 1,893.9 | -3,616.1 | -41.2 | 41.8 | 53.5 | 0.51 | 0.00 | 10.43 |
| 1,986.0 | 2.50 | 144.20 | 1,984.8 | -3,525.2 | -44.6 | 44.3 | 57.5 | 0.33 | -0.33 | 0.11 |
| 2,077.0 | 2.50 | 148.90 | 2,075.7 | -3,434.3 | -47.9 | 46.5 | 61.4 | 0.23 | 0.00 | 5.16 |
| 2,171.0 | 2.90 | 151.70 | 2,169.6 | -3,340.4 | -51.8 | 48.7 | 65.8 | 0.45 | 0.43 | 2.98 |
| 2,265.0 | 3.20 | 151.70 | 2,263.5 | -3,246.5 | -56.2 | 51.0 | 70.7 | 0.32 | 0.32 | 0.00 |
| 2,359.0 | 3.00 | 154.80 | 2,357.4 | -3,152.6 | -60.7 | 53.3 | 75.8 | 0.28 | -0.21 | 3.30 |
| 2,452.0 | 3.00 | 154.20 | 2,450.2 | -3,059.8 | -65.1 | 55.4 | 80.6 | 0.03 | 0.00 | -0.65 |
| 2,544.0 | 3.60 | 159.20 | 2,542.1 | -2,967.9 | -70.0 | 57.5 | 85.9 | 0.72 | 0.65 | 5.43 |
| 2,636.0 | 3.70 | 164.80 | 2,633.9 | -2,876.1 | -75.5 | 59.3 | 91.8 | 0.40 | 0.11 | 6.09 |
| 2,788.0 | 3.90 | 174.10 | 2,785.6 | -2,724.4 | -85.4 | 61.1 | 101.6 | 0.43 | 0.13 | 6.12 |
| 2,881.0 | 3.90 | 171.80 | 2,878.4 | -2,631.6 | -91.7 | 61.9 | 107.8 | 0.17 | 0.00 | -2.47 |
| 2,973.0 | 3.90 | 175.20 | 2,970.1 | -2,539.9 | -97.9 | 62.6 | 113.8 | 0.25 | 0.00 | 3.70 |
| 3,096.0 | 4.20 | 174.30 | 3,092.8 | -2,417.2 | -106.6 | 63.4 | 122.2 | 0.25 | 0.24 | -0.73 |
| 3,220.0 | 4.60 | 185.40 | 3,216.5 | -2,293.5 | -116.0 | 63.4 | 131.0 | 0.76 | 0.32 | 8.95 |
| 3,314.0 | 4.60 | 190.50 | 3,310.2 | -2,199.8 | -123.5 | 62.3 | 137.6 | 0.43 | 0.00 | 5.43 |
| 3,438.0 | 5.60 | 204.00 | 3,433.7 | -2,076.3 | -133.9 | 59.0 | 146.1 | 1.25 | 0.81 | 10.89 |
| TD;3531' MD | | | | | | | | | | |
| 3,531.0 | 6.50 | 206.60 | 3,526.2 | -1,983.8 | -142.8 | 54.8 | 152.9 | 1.01 | 0.97 | 2.80 |

| Survey Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|-------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment | |
| | | +N/-S (usft) | +E/-W (usft) | | |
| 3,531.0 | 3,526.2 | -142.8 | 54.8 | TD;3531' MD | |

Checked By: _____ Approved By: _____ Date: _____