



TEP Rocky Mountain LLC

Garfield County, CO NAD83

SG 11-22 Pad

SG 514-15 - Slot SG 514-15 (B2)

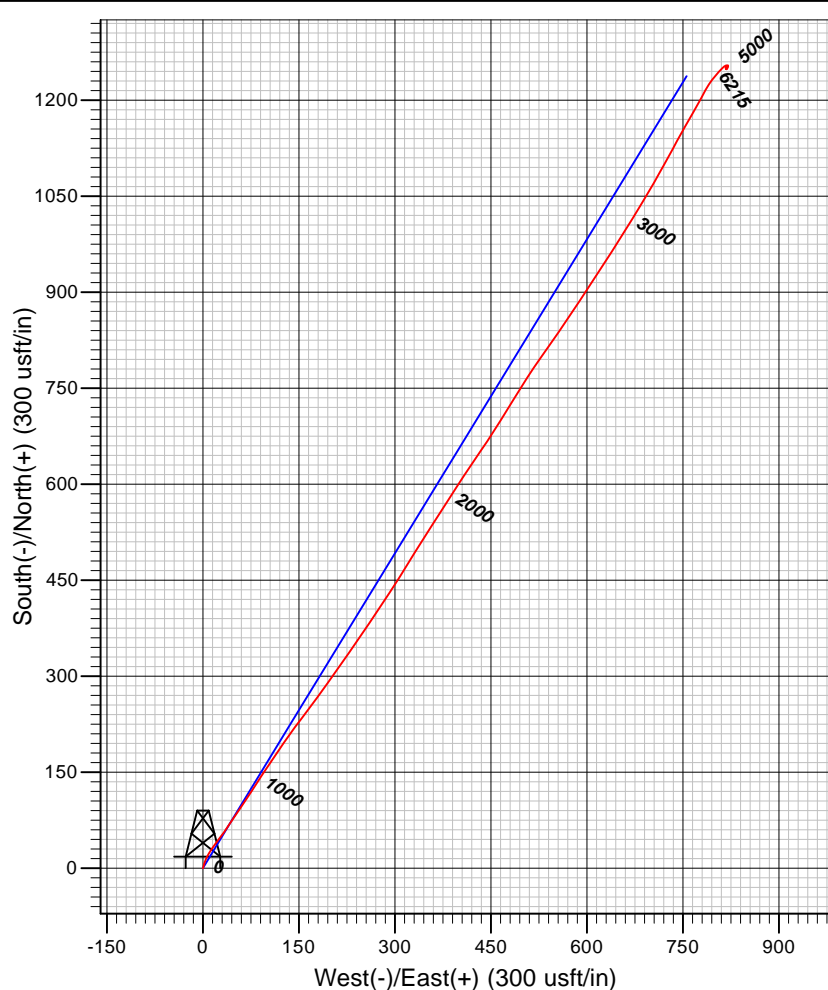
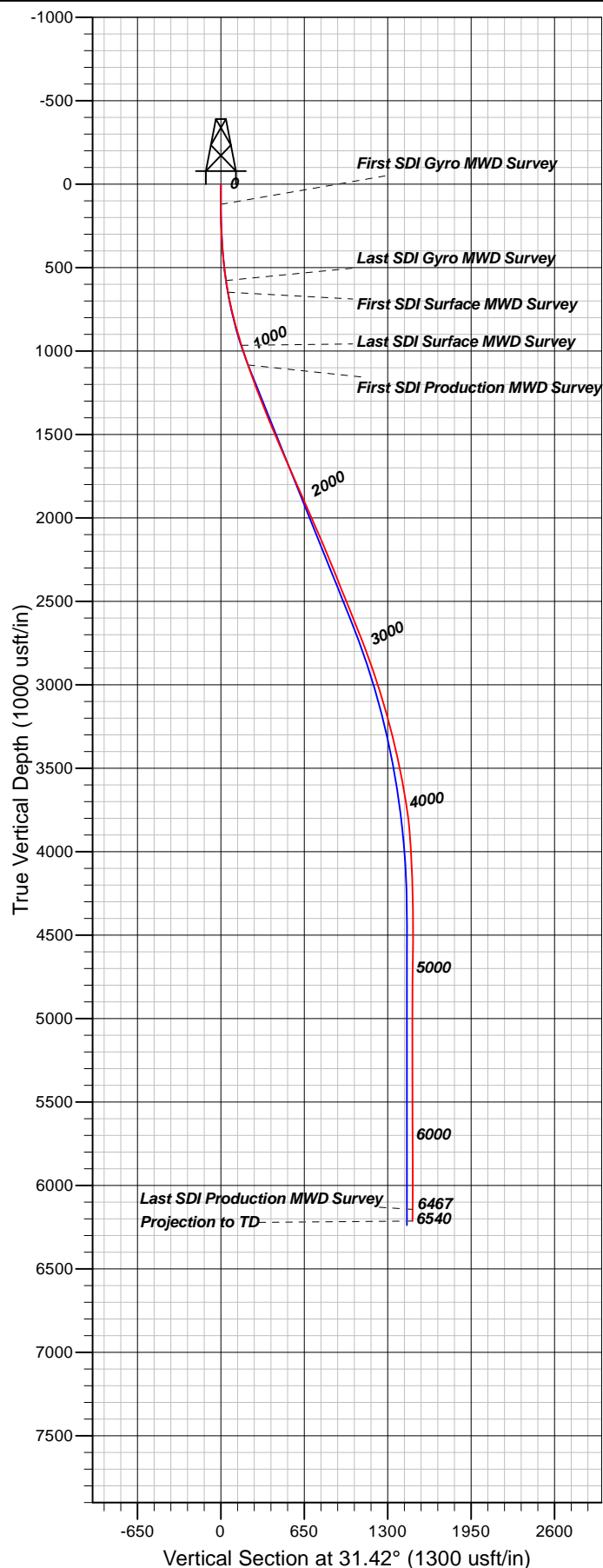
OH

Design: OH

Standard Survey Report

11 February, 2019





Well Details: SG 514-15

TVD Reference: GL 6092.4' & RKB 24' @ 6116.40usft
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.00 0.00 1591238.60 2264566.70 39.4277785 -108.1038998 SG 514-15 (B2)

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well SG 514-15 - Slot SG 514-15 (B2), True North
 Vertical (TVD) Reference: GL 6092.4' & RKB 24' @ 6116.40usft
 Section (VS) Reference: Slot - SG 514-15 (B2)(0.00N, 0.00E)
 Measured Depth Reference: GL 6092.4' & RKB 24' @ 6116.40usft
 Calculation Method: Minimum Curvature

PROJECT DETAILS: Garfield County, CO NAD83

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Central Zone

System Datum: Mean Sea Level

Plan: OH

11:03, February 11 2019
 Created By: Mel Mireles Jr.



Directional Survey Certification

2948 I-70 Business Loop
Grand Junction, CO 81504
(970)-245-9447 Fax (970)-245-9454

| | |
|----------------------------|--------------------------|
| Operator | TEP Rocky Mountain, LLC. |
| Well Name & No. | SG 514-15 |
| County & State | Garfield County, CO |
| SDI Job No. | OP.016230 |
| Rig | H&P 318 |

I, Mel Mireles Jr., having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 122 feet to a measured depth of 6,537 feet is true and correct as determined from all available records.

A handwritten signature in black ink, appearing to read 'Mel Mireles Jr.', written over a horizontal line.

Signature

11-Feb-19

Date

Mel Mireles Jr.

Grand Junction Assistant Well Planner
Scientific Drilling - Colorado District

| | | | |
|------------------|---------------------------|-------------------------------------|--------------------------------------|
| Company: | TEP Rocky Mountain LLC | Local Co-ordinate Reference: | Well SG 514-15 - Slot SG 514-15 (B2) |
| Project: | Garfield County, CO NAD83 | TVD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Site: | SG 11-22 Pad | MD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Well: | SG 514-15 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Grand Junction District |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | Garfield County, CO NAD83 | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| | | | | | |
|-----------------------|-----------|--------------|-------------------|-------------------|--------------|
| Site | | SG 11-22 Pad | | | |
| Site Position: | | Northing: | 1,591,239.00 usft | Latitude: | 39.4277783 |
| From: | Map | Easting: | 2,264,548.70 usft | Longitude: | -108.1039637 |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13.20 in | Grid Convergence: | -1.64 ° |

| Well | SG 514-15 - Slot SG 514-15 (B2) | | | | | |
|----------------------|---------------------------------|-----------|---------------------|-------------------|---------------|---------------|
| Well Position | +N/-S | 0.00 usft | Northing: | 1,591,238.60 usft | Latitude: | 39.4277786 |
| | +E/-W | 0.00 usft | Easting: | 2,264,566.70 usft | Longitude: | -108.1038999 |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 6,092.40 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | HDGM | 1/30/2019 | 9.40 | 65.60 | 51,620 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|------|
| Design | OH | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 31.42 | |

| | | | | | |
|-----------------------|------------------|--|------------------|--------------------------------|--|
| Survey Program | Date | 2/11/2019 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 122.00 | 581.00 | Survey #1 - Gyro MWD Survey (OH) | Gyro MWD 105 | Gyro MWD Error Model Ver 1.0.5 | |
| 653.00 | 988.00 | Survey #2 - Surface MWD Survey (OH) | MWD+HDGM | OWSG MWD + HDGM | |
| 1,116.00 | 6,537.00 | Survey #3 - Production MWD Survey (OH) | MWD+HDGM | OWSG MWD + HDGM | |

| | | | | | | | | | | |
|----------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| 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 | |
| 122.00 | 0.26 | 159.26 | 122.00 | -0.26 | 0.10 | -0.17 | 0.21 | 0.21 | 0.00 | |
| First SDI Gyro MWD Survey | | | | | | | | | | |
| 213.00 | 2.02 | 9.84 | 212.98 | 1.13 | 0.45 | 1.20 | 2.47 | 1.93 | -164.20 | |
| 306.00 | 3.61 | 17.49 | 305.87 | 5.54 | 1.61 | 5.56 | 1.75 | 1.71 | 8.23 | |
| 398.00 | 6.16 | 19.86 | 397.53 | 12.94 | 4.15 | 13.21 | 2.78 | 2.77 | 2.58 | |
| 489.00 | 8.53 | 31.99 | 487.78 | 23.26 | 9.39 | 24.74 | 3.10 | 2.60 | 13.33 | |
| 581.00 | 10.73 | 35.60 | 578.48 | 36.01 | 17.99 | 40.11 | 2.48 | 2.39 | 3.92 | |

| | | | |
|------------------|---------------------------|-------------------------------------|--------------------------------------|
| Company: | TEP Rocky Mountain LLC | Local Co-ordinate Reference: | Well SG 514-15 - Slot SG 514-15 (B2) |
| Project: | Garfield County, CO NAD83 | TVD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Site: | SG 11-22 Pad | MD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Well: | SG 514-15 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Grand Junction District |

| 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) |
| Last SDI Gyro MWD Survey | | | | | | | | | |
| 653.00 | 13.65 | 37.00 | 648.85 | 48.25 | 27.01 | 55.25 | 4.08 | 4.06 | 1.94 |
| First SDI Surface MWD Survey | | | | | | | | | |
| 747.00 | 16.63 | 33.99 | 739.57 | 68.27 | 41.20 | 79.74 | 3.28 | 3.17 | -3.20 |
| 842.00 | 19.19 | 34.01 | 829.96 | 92.48 | 57.54 | 108.92 | 2.69 | 2.69 | 0.02 |
| 936.00 | 21.28 | 33.48 | 918.16 | 119.52 | 75.59 | 141.40 | 2.23 | 2.22 | -0.56 |
| 988.00 | 22.42 | 33.31 | 966.42 | 135.68 | 86.24 | 160.74 | 2.20 | 2.19 | -0.33 |
| Last SDI Surface MWD Survey | | | | | | | | | |
| 1,116.00 | 23.74 | 33.50 | 1,084.17 | 177.56 | 113.87 | 210.89 | 1.03 | 1.03 | 0.15 |
| First SDI Production MWD Survey | | | | | | | | | |
| 1,179.00 | 24.67 | 35.18 | 1,141.63 | 198.89 | 128.45 | 236.68 | 1.84 | 1.48 | 2.67 |
| 1,273.00 | 26.55 | 36.99 | 1,226.40 | 231.70 | 152.39 | 277.17 | 2.17 | 2.00 | 1.93 |
| 1,368.00 | 27.52 | 37.02 | 1,311.02 | 266.19 | 178.38 | 320.15 | 1.02 | 1.02 | 0.03 |
| 1,463.00 | 28.15 | 34.48 | 1,395.03 | 302.19 | 204.28 | 364.37 | 1.41 | 0.66 | -2.67 |
| 1,557.00 | 29.39 | 34.15 | 1,477.42 | 339.55 | 229.78 | 409.55 | 1.33 | 1.32 | -0.35 |
| 1,651.00 | 29.58 | 35.26 | 1,559.25 | 377.59 | 256.13 | 455.74 | 0.62 | 0.20 | 1.18 |
| 1,746.00 | 29.14 | 33.29 | 1,642.05 | 416.07 | 282.36 | 502.26 | 1.12 | -0.46 | -2.07 |
| 1,840.00 | 29.55 | 32.34 | 1,723.99 | 454.78 | 307.32 | 548.31 | 0.66 | 0.44 | -1.01 |
| 1,934.00 | 30.08 | 31.38 | 1,805.54 | 494.48 | 331.99 | 595.04 | 0.76 | 0.56 | -1.02 |
| 2,029.00 | 30.16 | 33.22 | 1,887.72 | 534.77 | 357.46 | 642.70 | 0.98 | 0.08 | 1.94 |
| 2,124.00 | 29.81 | 32.28 | 1,970.00 | 574.70 | 383.14 | 690.17 | 0.62 | -0.37 | -0.99 |
| 2,218.00 | 28.81 | 33.52 | 2,051.97 | 613.34 | 408.13 | 736.16 | 1.24 | -1.06 | 1.32 |
| 2,312.00 | 28.77 | 34.16 | 2,134.35 | 650.94 | 433.34 | 781.39 | 0.33 | -0.04 | 0.68 |
| 2,407.00 | 29.02 | 32.60 | 2,217.52 | 689.27 | 458.59 | 827.27 | 0.84 | 0.26 | -1.64 |
| 2,502.00 | 28.31 | 31.12 | 2,300.88 | 727.97 | 482.65 | 872.83 | 1.06 | -0.75 | -1.56 |
| 2,595.00 | 26.82 | 32.87 | 2,383.32 | 764.47 | 505.44 | 915.86 | 1.82 | -1.60 | 1.88 |
| 2,690.00 | 27.93 | 34.91 | 2,467.69 | 800.72 | 529.80 | 959.50 | 1.53 | 1.17 | 2.15 |
| 2,784.00 | 27.74 | 35.11 | 2,550.81 | 836.67 | 554.98 | 1,003.30 | 0.23 | -0.20 | 0.21 |
| 2,878.00 | 28.19 | 33.28 | 2,633.84 | 873.12 | 579.75 | 1,047.32 | 1.03 | 0.48 | -1.95 |
| 2,973.00 | 27.35 | 33.72 | 2,717.89 | 910.04 | 604.18 | 1,091.56 | 0.91 | -0.88 | 0.46 |
| 3,067.00 | 25.76 | 32.89 | 2,801.97 | 945.15 | 627.26 | 1,133.56 | 1.74 | -1.69 | -0.88 |
| 3,161.00 | 24.37 | 32.36 | 2,887.12 | 978.69 | 648.73 | 1,173.37 | 1.50 | -1.48 | -0.56 |
| 3,256.00 | 22.99 | 31.29 | 2,974.12 | 1,011.10 | 668.86 | 1,211.52 | 1.52 | -1.45 | -1.13 |
| 3,350.00 | 21.58 | 30.94 | 3,061.10 | 1,041.61 | 687.28 | 1,247.16 | 1.51 | -1.50 | -0.37 |
| 3,445.00 | 20.47 | 30.27 | 3,149.77 | 1,070.94 | 704.64 | 1,281.24 | 1.20 | -1.17 | -0.71 |
| 3,539.00 | 19.26 | 28.56 | 3,238.18 | 1,098.76 | 720.34 | 1,313.16 | 1.43 | -1.29 | -1.82 |
| 3,633.00 | 17.42 | 28.55 | 3,327.40 | 1,124.74 | 734.47 | 1,342.70 | 1.96 | -1.96 | -0.01 |
| 3,727.00 | 16.19 | 29.95 | 3,417.38 | 1,148.45 | 747.74 | 1,369.86 | 1.38 | -1.31 | 1.49 |
| 3,822.00 | 15.04 | 29.53 | 3,508.87 | 1,170.65 | 760.43 | 1,395.42 | 1.22 | -1.21 | -0.44 |
| 3,916.00 | 14.12 | 28.52 | 3,599.85 | 1,191.34 | 771.91 | 1,419.06 | 1.02 | -0.98 | -1.07 |
| 4,011.00 | 11.98 | 28.69 | 3,692.39 | 1,210.17 | 782.18 | 1,440.48 | 2.25 | -2.25 | 0.18 |
| 4,105.00 | 9.25 | 32.80 | 3,784.77 | 1,225.08 | 790.96 | 1,457.78 | 3.01 | -2.90 | 4.37 |
| 4,200.00 | 6.48 | 40.70 | 3,878.87 | 1,235.57 | 798.59 | 1,470.71 | 3.12 | -2.92 | 8.32 |
| 4,294.00 | 4.49 | 41.02 | 3,972.44 | 1,242.37 | 804.47 | 1,479.57 | 2.12 | -2.12 | 0.34 |

| | | | |
|------------------|---------------------------|-------------------------------------|--------------------------------------|
| Company: | TEP Rocky Mountain LLC | Local Co-ordinate Reference: | Well SG 514-15 - Slot SG 514-15 (B2) |
| Project: | Garfield County, CO NAD83 | TVD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Site: | SG 11-22 Pad | MD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Well: | SG 514-15 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Grand Junction District |

| 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) | |
| 4,389.00 | 3.16 | 44.42 | 4,067.22 | 1,247.04 | 808.74 | 1,485.79 | 1.42 | -1.40 | 3.58 | |
| 4,483.00 | 2.36 | 47.44 | 4,161.11 | 1,250.20 | 811.98 | 1,490.17 | 0.86 | -0.85 | 3.21 | |
| 4,577.00 | 2.04 | 51.06 | 4,255.04 | 1,252.56 | 814.71 | 1,493.61 | 0.37 | -0.34 | 3.85 | |
| 4,672.00 | 1.48 | 69.69 | 4,350.00 | 1,254.05 | 817.17 | 1,496.17 | 0.84 | -0.59 | 19.61 | |
| 4,709.49 | 1.38 | 73.61 | 4,387.47 | 1,254.35 | 818.06 | 1,496.88 | 0.38 | -0.27 | 10.45 | |
| SG 514-15 BTV | | | | | | | | | | |
| 4,710.65 | 1.38 | 73.61 | 4,388.64 | 1,254.35 | 818.09 | 1,496.90 | 0.00 | 0.00 | 0.00 | |
| SG 514-15 25' Driller's BTV | | | | | | | | | | |
| 4,766.00 | 1.24 | 80.67 | 4,443.97 | 1,254.64 | 819.31 | 1,497.78 | 0.38 | -0.25 | 12.76 | |
| 4,861.00 | 0.81 | 159.89 | 4,538.96 | 1,254.17 | 820.56 | 1,498.04 | 1.42 | -0.45 | 83.39 | |
| 4,955.00 | 1.58 | 185.36 | 4,632.94 | 1,252.26 | 820.67 | 1,496.46 | 0.98 | 0.82 | 27.10 | |
| 5,050.00 | 1.67 | 224.91 | 4,727.91 | 1,249.97 | 819.57 | 1,493.94 | 1.16 | 0.09 | 41.63 | |
| 5,144.00 | 0.99 | 272.34 | 4,821.88 | 1,249.04 | 817.79 | 1,492.21 | 1.32 | -0.72 | 50.46 | |
| 5,239.00 | 0.76 | 32.73 | 4,916.88 | 1,249.60 | 817.31 | 1,492.44 | 1.60 | -0.24 | 126.73 | |
| 5,333.00 | 0.46 | 149.91 | 5,010.87 | 1,249.80 | 817.84 | 1,492.88 | 1.12 | -0.32 | 124.66 | |
| 5,429.00 | 0.97 | 180.17 | 5,106.87 | 1,248.65 | 818.03 | 1,492.01 | 0.64 | 0.53 | 31.52 | |
| 5,522.00 | 0.48 | 33.61 | 5,199.86 | 1,248.19 | 818.24 | 1,491.72 | 1.50 | -0.53 | -157.59 | |
| 5,616.00 | 0.44 | 350.68 | 5,293.86 | 1,248.87 | 818.40 | 1,492.39 | 0.36 | -0.04 | -45.67 | |
| 5,711.00 | 0.35 | 269.29 | 5,388.86 | 1,249.23 | 818.05 | 1,492.51 | 0.55 | -0.09 | -85.67 | |
| 5,805.00 | 0.66 | 231.12 | 5,482.85 | 1,248.89 | 817.34 | 1,491.85 | 0.47 | 0.33 | -40.61 | |
| 5,899.00 | 1.39 | 33.43 | 5,576.85 | 1,249.50 | 817.55 | 1,492.48 | 2.16 | 0.78 | 172.67 | |
| 5,994.00 | 0.88 | 26.54 | 5,671.83 | 1,251.11 | 818.51 | 1,494.36 | 0.55 | -0.54 | -7.25 | |
| 6,089.00 | 0.35 | 16.61 | 5,766.82 | 1,252.04 | 818.92 | 1,495.36 | 0.57 | -0.56 | -10.45 | |
| 6,183.00 | 0.29 | 85.57 | 5,860.82 | 1,252.34 | 819.24 | 1,495.78 | 0.39 | -0.06 | 73.36 | |
| 6,277.00 | 0.15 | 164.95 | 5,954.82 | 1,252.24 | 819.51 | 1,495.84 | 0.32 | -0.15 | 84.45 | |
| 6,372.00 | 0.63 | 244.28 | 6,049.82 | 1,251.89 | 819.07 | 1,495.31 | 0.65 | 0.51 | 83.51 | |
| 6,467.00 | 1.19 | 235.32 | 6,144.81 | 1,251.10 | 817.79 | 1,493.97 | 0.61 | 0.59 | -9.43 | |
| Last SDI Production MWD Survey | | | | | | | | | | |
| 6,537.00 | 1.19 | 235.32 | 6,214.79 | 1,250.28 | 816.59 | 1,492.64 | 0.00 | 0.00 | 0.00 | |
| Projection to TD - SG 514-15 25' Driller's PBHL - SG 514-15 PBHL | | | | | | | | | | |

| Design Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|---------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | | |
| | | +N/-S (usft) | +E/-W (usft) | Comment | |
| 122.00 | 122.00 | -0.26 | 0.10 | First SDI Gyro MWD Survey | |
| 581.00 | 578.48 | 36.01 | 17.99 | Last SDI Gyro MWD Survey | |
| 653.00 | 648.85 | 48.25 | 27.01 | First SDI Surface MWD Survey | |
| 988.00 | 966.42 | 135.68 | 86.24 | Last SDI Surface MWD Survey | |
| 1,116.00 | 1,084.17 | 177.56 | 113.87 | First SDI Production MWD Survey | |
| 6,467.00 | 6,144.81 | 1,251.10 | 817.79 | Last SDI Production MWD Survey | |
| 6,537.00 | 6,214.79 | 1,250.28 | 816.59 | Projection to TD | |



Scientific Drilling, Intl
Survey Report

| | | | |
|-----------|---------------------------|------------------------------|--------------------------------------|
| Company: | TEP Rocky Mountain LLC | Local Co-ordinate Reference: | Well SG 514-15 - Slot SG 514-15 (B2) |
| Project: | Garfield County, CO NAD83 | TVD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Site: | SG 11-22 Pad | MD Reference: | GL 6092.4' & RKB 24' @ 6116.40usft |
| Well: | SG 514-15 | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | Grand Junction District |

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