



Mallard Exploration

Weld Co., CO

Sec.19-T08N-R60W

Hunt Fed 8-60 19-24-8

API #05-123-46706

Original Hole

Survey: Renovare MWD Surface

Standard Survey Report

03 August, 2022



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Renovare Energy

Survey Report



| | | | |
|------------------|-----------------------|-------------------------------------|----------------------------------|
| Company: | Mallard Exploration | Local Co-ordinate Reference: | Well Hunt Fed 8-60 19-24-8 |
| Project: | Weld Co., CO | TVD Reference: | KB 15' @ 4948.00usft (Cartel 11) |
| Site: | Sec.19-T08N-R60W | MD Reference: | KB 15' @ 4948.00usft (Cartel 11) |
| Well: | Hunt Fed 8-60 19-24-8 | North Reference: | True |
| Wellbore: | Original Hole | Survey Calculation Method: | Minimum Curvature |
| Design: | RE0729221-6 | Database: | EDM 5000.1 Single User Db |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | Weld Co., CO | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | |

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|-----------------------|----------|------------------|--------------|--------|------------|--------------------|--------|
| Site | | Sec.19-T08N-R60W | | | | | |
| Site Position: | | Northing: | 1,482,695.68 | usft | Latitude: | 40° 39' 1.07280 N | |
| From: | Lat/Long | Easting: | 3,380,986.48 | usft | Longitude: | 104° 7' 36.95520 W | |
| Position Uncertainty: | 0.00 | usft | Slot Radius: | 13.200 | in | Grid Convergence: | 0.89 ° |

| | | | | | | |
|----------------------|--------------------------------------|-----------|---------------------|-------------------|---------------|--------------------|
| Well | Hunt Fed 8-60 19-24-8, SENE 19 8N60W | | | | | |
| Well Position | +N/-S | 0.00 usft | Northing: | 1,482,695.45 usft | Latitude: | 40° 39' 1.05828 N |
| | +E/-W | 0.00 usft | Easting: | 3,381,066.41 usft | Longitude: | 104° 7' 35.91840 W |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 4,948.00 usft | Ground Level: | 4,933.00 usft |

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|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Original Hole | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2020 | 08/02/22 | 7.41 | 66.89 | 52,028 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|------|
| Design | RE0729221-6 | | | | |
| 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 | 259.85 | |

| | | | | | |
|-----------------------|------------------|--------------------------------------|------------------|--------------------|--|
| Survey Program | Date | 08/03/22 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 202.00 | 1,978.00 | Renovare MWD Surface (Original Hole) | MWD | MWD - Standard | |

| | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|------------------------------|-----------------------------|----------------------------|
| Survey | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Surface | | | | | | | | | |
| 202.00 | 0.00 | 0.00 | 202.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| First Renovare Survey | | | | | | | | | |
| 294.00 | 1.10 | 159.10 | 293.99 | -0.83 | 0.32 | -0.16 | 1.20 | 1.20 | 0.00 |
| 367.00 | 2.90 | 169.10 | 366.95 | -3.29 | 0.91 | -0.32 | 2.50 | 2.47 | 13.70 |
| 454.00 | 4.40 | 161.10 | 453.77 | -8.61 | 2.41 | -0.86 | 1.82 | 1.72 | -9.20 |
| 542.00 | 7.30 | 158.50 | 541.30 | -17.01 | 5.55 | -2.47 | 3.31 | 3.30 | -2.95 |
| 629.00 | 9.50 | 154.80 | 627.36 | -28.65 | 10.64 | -5.42 | 2.60 | 2.53 | -4.25 |
| 716.00 | 10.70 | 153.90 | 713.01 | -42.40 | 17.25 | -9.51 | 1.39 | 1.38 | -1.03 |

| | | | |
|------------------|-----------------------|-------------------------------------|----------------------------------|
| Company: | Mallard Exploration | Local Co-ordinate Reference: | Well Hunt Fed 8-60 19-24-8 |
| Project: | Weld Co., CO | TVD Reference: | KB 15' @ 4948.00usft (Cartel 11) |
| Site: | Sec.19-T08N-R60W | MD Reference: | KB 15' @ 4948.00usft (Cartel 11) |
| Well: | Hunt Fed 8-60 19-24-8 | North Reference: | True |
| Wellbore: | Original Hole | Survey Calculation Method: | Minimum Curvature |
| Design: | RE0729221-6 | Database: | EDM 5000.1 Single User Db |

| Survey | | | | | | | | | | |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-----------------------------|----------------------------|---------------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| 803.00 | 12.60 | 156.90 | 798.22 | -58.38 | 24.53 | -13.85 | 2.29 | 2.18 | 3.45 | |
| 890.00 | 15.30 | 158.00 | 882.64 | -77.76 | 32.55 | -18.34 | 3.12 | 3.10 | 1.26 | |
| 978.00 | 18.10 | 158.50 | 966.92 | -101.25 | 41.91 | -23.41 | 3.19 | 3.18 | 0.57 | |
| 1,065.00 | 20.10 | 159.40 | 1,049.13 | -127.82 | 52.12 | -28.78 | 2.32 | 2.30 | 1.03 | |
| 1,152.00 | 20.30 | 161.40 | 1,130.78 | -156.11 | 62.20 | -33.71 | 0.83 | 0.23 | 2.30 | |
| 1,239.00 | 19.20 | 158.60 | 1,212.66 | -183.74 | 72.23 | -38.72 | 1.67 | -1.26 | -3.22 | |
| 1,327.00 | 20.70 | 159.30 | 1,295.38 | -211.76 | 83.01 | -44.39 | 1.73 | 1.70 | 0.80 | |
| 1,414.00 | 22.50 | 161.30 | 1,376.27 | -241.91 | 93.78 | -49.68 | 2.24 | 2.07 | 2.30 | |
| 1,501.00 | 22.60 | 159.10 | 1,456.62 | -273.30 | 105.08 | -55.28 | 0.98 | 0.11 | -2.53 | |
| 1,588.00 | 21.70 | 155.30 | 1,537.20 | -303.53 | 117.77 | -62.44 | 1.94 | -1.03 | -4.37 | |
| 1,675.00 | 22.50 | 155.10 | 1,617.81 | -333.24 | 131.50 | -70.72 | 0.92 | 0.92 | -0.23 | |
| 1,763.00 | 23.70 | 156.50 | 1,698.75 | -364.74 | 145.64 | -79.09 | 1.50 | 1.36 | 1.59 | |
| 1,850.00 | 21.80 | 154.50 | 1,778.98 | -395.36 | 159.57 | -87.40 | 2.36 | -2.18 | -2.30 | |
| 1,928.00 | 22.10 | 156.70 | 1,851.33 | -421.90 | 171.61 | -94.57 | 1.12 | 0.38 | 2.82 | |
| Last Renovare Survey | | | | | | | | | | |
| 1,978.00 | 22.10 | 156.70 | 1,897.66 | -439.18 | 179.05 | -98.85 | 0.00 | 0.00 | 0.00 | |
| Proj to BHL/TD | | | | | | | | | | |

| Survey Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|-----------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | | |
| | | +N/-S (usft) | +E/-W (usft) | Comment | |
| 0.00 | 0.00 | 0.00 | 0.00 | Surface | |
| 202.00 | 202.00 | 0.00 | 0.00 | First Renovare Survey | |
| 1,928.00 | 1,851.33 | -421.90 | 171.61 | Last Renovare Survey | |
| 1,978.00 | 1,897.66 | -439.18 | 179.05 | Proj to BHL/TD | |

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