



Company: B.P.
Project: La Plata County, CO NAD83
Site: Second Pad
Well: Second 17U-34-06 2



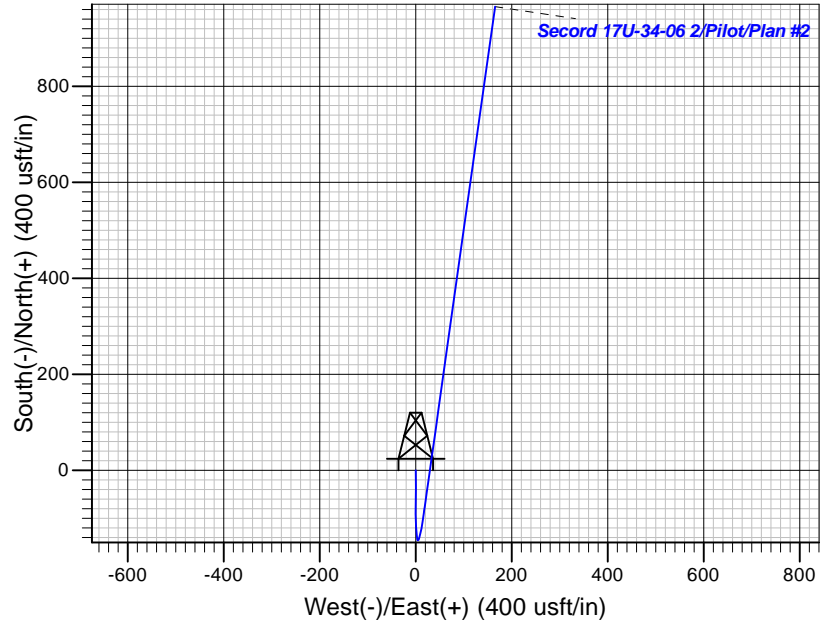
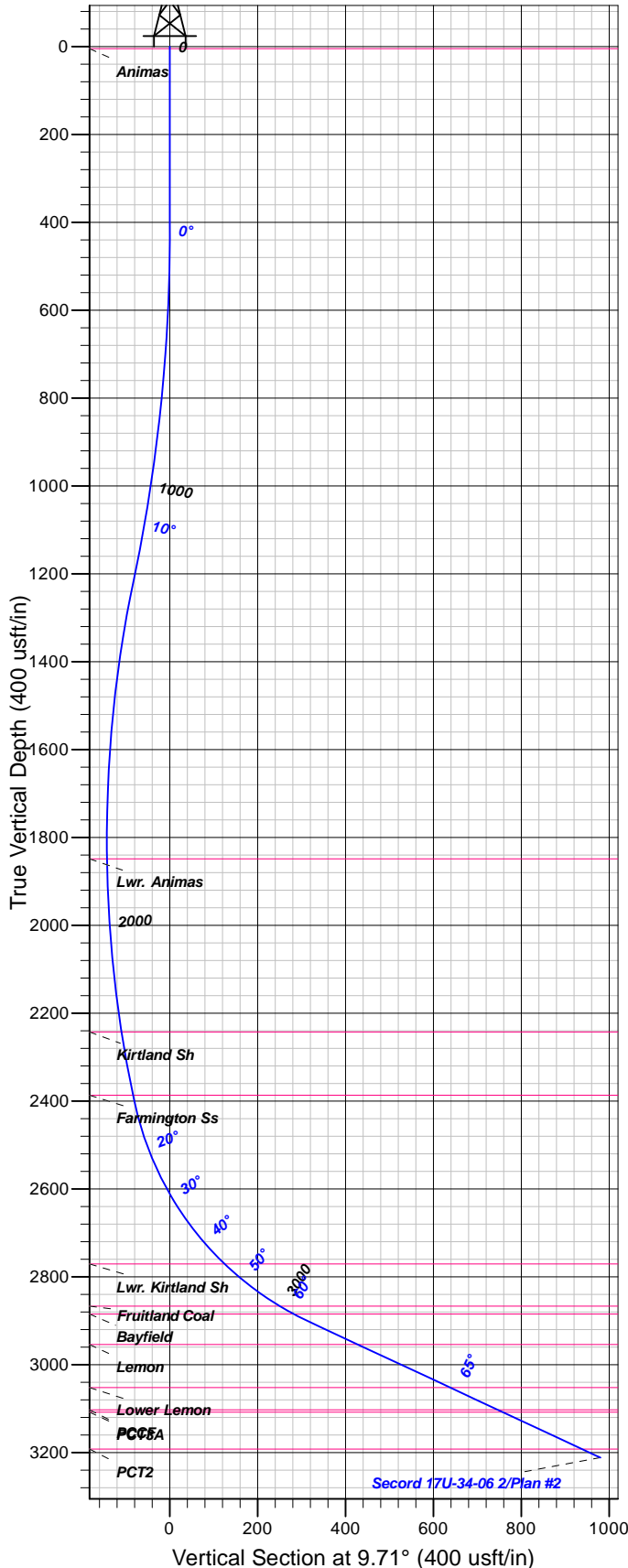
Well Details: Second 17U-34-06 2

GL 7221' & RKB 11' @ 7232.00usft (Aztec 507)

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|-------|-------|------------|------------|------------|--------------|------|
| 0.00 | 0.00 | 1196144.95 | 2409098.88 | 37.1877253 | -107.5285486 | |

Azimuths to Grid North
True North: 1.24°
Magnetic North: 10.46°

Magnetic Field
Strength: 50120.3snT
Dip Angle: 63.67°
Date: 1/3/2018
Model: HDGM



FORMATION TOP DETAILS

| TVDP | MD | Formation |
|---------|---------|------------------|
| 11.00 | 11.00 | Animas |
| 1849.00 | 1859.25 | Lwr. Animas |
| 2243.00 | 2254.98 | Kirtland Sh |
| 2387.00 | 2401.32 | Farmington Ss |
| 2771.00 | 2845.41 | Lwr. Kirtland Sh |
| 2867.00 | 3003.81 | Fruitland Coal |
| 2885.00 | 3040.26 | Bayfield |
| 2954.00 | 3201.23 | Lemon |
| 3052.00 | 3433.12 | Lower Lemon |
| 3103.00 | 3553.80 | PCT3A |
| 3108.00 | 3565.63 | PCT2 |
| 3192.00 | 3764.39 | |

Plan: Plan #2

9:52, March 22 2018
Created By: Janie Collins

PROJECT DETAILS: La Plata County, CO NAD83

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

System Datum: Mean Sea Level

CASING DETAILS

No casing data is available

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VFace | Target |
|-----|---------|-------|--------|---------|--------|--------|------|---------|--------|--------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 420.00 | 0.00 | 0.00 | 420.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 1220.00 | 12.00 | 180.00 | 1214.16 | -83.47 | 0.00 | 1.50 | 180.00 | -82.27 | |
| 4 | 2417.03 | 12.00 | 8.00 | 2402.38 | -84.70 | 17.57 | 2.00 | -175.91 | -80.52 | |
| 5 | 3079.53 | 65.00 | 8.00 | 2902.57 | 309.30 | 72.95 | 8.00 | 0.00 | 317.17 | |
| 6 | 3811.00 | 65.00 | 8.00 | 3211.70 | 965.78 | 165.21 | 0.00 | 0.00 | 979.81 | |

DESIGN TARGET DETAILS

No target data is available.



B.P.

La Plata County, CO NAD83

Secord Pad

Secord 17U-34-06 2

Pilot

Plan: Plan #2

Standard Planning Report

22 March, 2018





| | | | |
|------------------|---------------------------|-------------------------------------|--|
| Database: | Grand Junction District | Local Co-ordinate Reference: | Well Secord 17U-34-06 2 |
| Company: | B.P. | TVD Reference: | GL 7221' & RKB 11' @ 7232.00usft (Aztec 507) |
| Project: | La Plata County, CO NAD83 | MD Reference: | GL 7221' & RKB 11' @ 7232.00usft (Aztec 507) |
| Site: | Secord Pad | North Reference: | Grid |
| Well: | Secord 17U-34-06 2 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Pilot | | |
| Design: | Plan #2 | | |

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

| Site | | Secord Pad | | | |
|-----------------------|-----------|--------------|-------------------|-------------------|--------------|
| Site Position: | | Northing: | 1,196,144.95 usft | Latitude: | 37.1877252 |
| From: | Map | Easting: | 2,409,098.88 usft | Longitude: | -107.5285486 |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13.20 in | Grid Convergence: | -1.24 ° |

| Well | Secord 17U-34-06 2 | | | | | |
|----------------------|--------------------|-----------|---------------------|-------------------|---------------|---------------|
| Well Position | +N/-S | 0.00 usft | Northing: | 1,196,144.95 usft | Latitude: | 37.1877252 |
| | +E/-W | 0.00 usft | Easting: | 2,409,098.88 usft | Longitude: | -107.5285486 |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 7,221.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Pilot | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | HDGM | 1/3/2018 | 9.22 | 63.67 | 50,120 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | Plan #2 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 9.71 |

| 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 | |
| 420.00 | 0.00 | 0.00 | 420.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,220.00 | 12.00 | 180.00 | 1,214.16 | -83.47 | 0.00 | 1.50 | 1.50 | 0.00 | 180.00 | |
| 2,417.03 | 12.00 | 8.00 | 2,402.38 | -84.70 | 17.57 | 2.00 | 0.00 | -14.37 | -175.91 | |
| 3,079.53 | 65.00 | 8.00 | 2,902.57 | 309.30 | 72.95 | 8.00 | 8.00 | 0.00 | 0.00 | |
| 3,811.00 | 65.00 | 8.00 | 3,211.70 | 965.78 | 165.21 | 0.00 | 0.00 | 0.00 | 0.00 | |



| | | | |
|------------------|---------------------------|-------------------------------------|--|
| Database: | Grand Junction District | Local Co-ordinate Reference: | Well Secord 17U-34-06 2 |
| Company: | B.P. | TVD Reference: | GL 7221' & RKB 11' @ 7232.00usft (Aztec 507) |
| Project: | La Plata County, CO NAD83 | MD Reference: | GL 7221' & RKB 11' @ 7232.00usft (Aztec 507) |
| Site: | Secord Pad | North Reference: | Grid |
| Well: | Secord 17U-34-06 2 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Pilot | | |
| Design: | Plan #2 | | |

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 |
| 5.00 | 0.00 | 0.00 | 5.00 | 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 |
| 420.00 | 0.00 | 0.00 | 420.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 1.20 | 180.00 | 499.99 | -0.84 | 0.00 | -0.83 | 1.50 | 1.50 | 0.00 |
| 600.00 | 2.70 | 180.00 | 599.93 | -4.24 | 0.00 | -4.18 | 1.50 | 1.50 | 0.00 |
| 700.00 | 4.20 | 180.00 | 699.75 | -10.26 | 0.00 | -10.11 | 1.50 | 1.50 | 0.00 |
| 800.00 | 5.70 | 180.00 | 799.37 | -18.89 | 0.00 | -18.62 | 1.50 | 1.50 | 0.00 |
| 900.00 | 7.20 | 180.00 | 898.74 | -30.12 | 0.00 | -29.69 | 1.50 | 1.50 | 0.00 |
| 1,000.00 | 8.70 | 180.00 | 997.77 | -43.95 | 0.00 | -43.32 | 1.50 | 1.50 | 0.00 |
| 1,100.00 | 10.20 | 180.00 | 1,096.41 | -60.37 | 0.00 | -59.50 | 1.50 | 1.50 | 0.00 |
| 1,200.00 | 11.70 | 180.00 | 1,194.59 | -79.36 | 0.00 | -78.23 | 1.50 | 1.50 | 0.00 |
| 1,220.00 | 12.00 | 180.00 | 1,214.16 | -83.47 | 0.00 | -82.27 | 1.50 | 1.50 | 0.00 |
| 1,300.00 | 10.40 | 179.37 | 1,292.64 | -99.01 | 0.08 | -97.58 | 2.00 | -1.99 | -0.79 |
| 1,400.00 | 8.41 | 178.25 | 1,391.29 | -115.35 | 0.40 | -113.63 | 2.00 | -1.99 | -1.12 |
| 1,500.00 | 6.43 | 176.44 | 1,490.45 | -128.25 | 0.97 | -126.25 | 2.00 | -1.99 | -1.81 |
| 1,600.00 | 4.45 | 173.02 | 1,589.99 | -137.69 | 1.79 | -135.42 | 2.00 | -1.97 | -3.41 |
| 1,700.00 | 2.52 | 164.29 | 1,689.80 | -143.66 | 2.86 | -141.12 | 2.00 | -1.93 | -8.73 |
| 1,800.00 | 0.93 | 117.56 | 1,789.76 | -146.15 | 4.17 | -143.35 | 2.00 | -1.59 | -46.74 |
| 1,859.25 | 1.18 | 50.19 | 1,849.00 | -145.98 | 5.06 | -143.04 | 2.00 | 0.42 | -113.69 |
| Lwr. Animas | | | | | | | | | |
| 1,900.00 | 1.84 | 31.52 | 1,889.73 | -145.16 | 5.73 | -142.11 | 2.00 | 1.62 | -45.82 |
| 2,000.00 | 3.73 | 17.15 | 1,989.61 | -140.68 | 7.53 | -137.40 | 2.00 | 1.89 | -14.37 |
| 2,100.00 | 5.69 | 12.55 | 2,089.27 | -132.73 | 9.56 | -129.22 | 2.00 | 1.97 | -4.60 |
| 2,200.00 | 7.68 | 10.32 | 2,188.59 | -121.32 | 11.84 | -117.59 | 2.00 | 1.98 | -2.24 |
| 2,254.98 | 8.77 | 9.52 | 2,243.00 | -113.57 | 13.19 | -109.72 | 2.00 | 1.99 | -1.46 |
| Kirtland Sh | | | | | | | | | |
| 2,300.00 | 9.67 | 8.99 | 2,287.44 | -106.46 | 14.35 | -102.51 | 2.00 | 1.99 | -1.16 |
| 2,400.00 | 11.66 | 8.12 | 2,385.71 | -88.16 | 17.09 | -84.01 | 2.00 | 1.99 | -0.87 |
| 2,401.32 | 11.69 | 8.11 | 2,387.00 | -87.89 | 17.12 | -83.75 | 2.00 | 1.99 | -0.72 |
| Farmington Ss | | | | | | | | | |
| 2,417.03 | 12.00 | 8.00 | 2,402.38 | -84.70 | 17.57 | -80.52 | 2.00 | 1.99 | -0.70 |
| 2,500.00 | 18.64 | 8.00 | 2,482.35 | -63.01 | 20.62 | -58.63 | 8.00 | 8.00 | 0.00 |
| 2,600.00 | 26.64 | 8.00 | 2,574.57 | -24.92 | 25.98 | -20.18 | 8.00 | 8.00 | 0.00 |
| 2,700.00 | 34.64 | 8.00 | 2,660.54 | 25.50 | 33.06 | 30.71 | 8.00 | 8.00 | 0.00 |
| 2,800.00 | 42.64 | 8.00 | 2,738.59 | 87.28 | 41.75 | 93.07 | 8.00 | 8.00 | 0.00 |
| 2,845.41 | 46.27 | 8.00 | 2,771.00 | 118.77 | 46.17 | 124.85 | 8.00 | 8.00 | 0.00 |
| Lwr. Kirtland Sh | | | | | | | | | |
| 2,900.00 | 50.64 | 8.00 | 2,807.20 | 159.22 | 51.86 | 165.68 | 8.00 | 8.00 | 0.00 |
| 3,000.00 | 58.64 | 8.00 | 2,865.03 | 239.91 | 63.20 | 247.13 | 8.00 | 8.00 | 0.00 |
| 3,003.81 | 58.94 | 8.00 | 2,867.00 | 243.14 | 63.65 | 250.39 | 8.00 | 8.00 | 0.00 |
| Fruitland Coal | | | | | | | | | |
| 3,040.26 | 61.86 | 8.00 | 2,885.00 | 274.51 | 68.06 | 282.06 | 8.00 | 8.00 | 0.00 |
| Bayfield | | | | | | | | | |
| 3,079.53 | 65.00 | 8.00 | 2,902.57 | 309.30 | 72.95 | 317.17 | 8.00 | 8.00 | 0.00 |
| 3,100.00 | 65.00 | 8.00 | 2,911.22 | 327.67 | 75.53 | 335.71 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 65.00 | 8.00 | 2,953.48 | 417.41 | 88.14 | 426.30 | 0.00 | 0.00 | 0.00 |
| 3,201.23 | 65.00 | 8.00 | 2,954.00 | 418.52 | 88.30 | 427.42 | 0.00 | 0.00 | 0.00 |



| | | | |
|------------------|---------------------------|-------------------------------------|--|
| Database: | Grand Junction District | Local Co-ordinate Reference: | Well Secord 17U-34-06 2 |
| Company: | B.P. | TVD Reference: | GL 7221' & RKB 11' @ 7232.00usft (Aztec 507) |
| Project: | La Plata County, CO NAD83 | MD Reference: | GL 7221' & RKB 11' @ 7232.00usft (Aztec 507) |
| Site: | Secord Pad | North Reference: | Grid |
| Well: | Secord 17U-34-06 2 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Pilot | | |
| Design: | Plan #2 | | |

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) |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Lemon | | | | | | | | | |
| 3,300.00 | 65.00 | 8.00 | 2,995.74 | 507.16 | 100.76 | 516.89 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 65.00 | 8.00 | 3,038.00 | 596.91 | 113.37 | 607.48 | 0.00 | 0.00 | 0.00 |
| 3,433.12 | 65.00 | 8.00 | 3,052.00 | 626.64 | 117.55 | 637.49 | 0.00 | 0.00 | 0.00 |
| Lower Lemon | | | | | | | | | |
| 3,500.00 | 65.00 | 8.00 | 3,080.26 | 686.66 | 125.98 | 698.07 | 0.00 | 0.00 | 0.00 |
| 3,553.80 | 65.00 | 8.00 | 3,103.00 | 734.94 | 132.77 | 746.81 | 0.00 | 0.00 | 0.00 |
| PCCF | | | | | | | | | |
| 3,565.63 | 65.00 | 8.00 | 3,108.00 | 745.56 | 134.26 | 757.53 | 0.00 | 0.00 | 0.00 |
| PCT3A | | | | | | | | | |
| 3,600.00 | 65.00 | 8.00 | 3,122.53 | 776.41 | 138.60 | 788.66 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 65.00 | 8.00 | 3,164.79 | 866.16 | 151.21 | 879.25 | 0.00 | 0.00 | 0.00 |
| 3,764.39 | 65.00 | 8.00 | 3,192.00 | 923.95 | 159.33 | 937.58 | 0.00 | 0.00 | 0.00 |
| PCT2 | | | | | | | | | |
| 3,800.00 | 65.00 | 8.00 | 3,207.05 | 955.91 | 163.82 | 969.84 | 0.00 | 0.00 | 0.00 |
| 3,811.00 | 65.00 | 8.00 | 3,211.70 | 965.78 | 165.21 | 979.81 | 0.00 | 0.00 | 0.00 |
| Secord 2 Lat 1 BHL - Secord 2 Lat 2 BHL - Secord 2 Lat 3 BHL | | | | | | | | | |

Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------|-----------------------|------------------|-----------|---------|-------------------|
| 11.0 | 11.00 | Animas | | 0.00 | 360 |
| 1,859.25 | 1,849.00 | Lwr. Animas | | 0.00 | 360.00 |
| 2,254.98 | 2,243.00 | Kirtland Sh | | 0.00 | 360.00 |
| 2,401.32 | 2,387.00 | Farmington Ss | | 0.00 | 360.00 |
| 2,845.41 | 2,771.00 | Lwr. Kirtland Sh | | 0.00 | 360.00 |
| 3,003.81 | 2,867.00 | Fruitland Coal | | 0.00 | 360.00 |
| 3,040.26 | 2,885.00 | Bayfield | | 0.00 | 360.00 |
| 3,201.23 | 2,954.00 | Lemon | | 0.00 | 360.00 |
| 3,433.12 | 3,052.00 | Lower Lemon | | 0.00 | 360.00 |
| 3,553.80 | 3,103.00 | PCCF | | 0.00 | 360.00 |
| 3,565.63 | 3,108.00 | PCT3A | | 0.00 | 360.00 |
| 3,764.39 | 3,192.00 | PCT2 | | 0.00 | 360.00 |