



April 14, 2015

Mr. Alex Fischer  
West Environmental Supervisor  
Colorado Oil & Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, Colorado

**RE: 1<sup>st</sup> Quarter 2015 Groundwater Monitoring Report  
Peakview Operating Company, LLC  
Voloshin-Morton 1(-8)  
Craig, Colorado**

Dear Mr. Fischer:

LT Environmental, Inc. (LTE) has been requested to submit this report on behalf of Peakview Operating Company, LLC (Peakview) detailing quarterly groundwater monitoring activities at the Voloshin-Morton 1(-8) well pad (Site).

## **QUARTERLY GROUNDWATER MONITORING ACTIVITIES**

### **Depth to Groundwater Measurements**

Depth to groundwater was measured in monitoring wells PMW01, MW02 through MW05, PMW09, MW16, MW17, PMW18, MW19 and MW20 on March 12, 2015. The recorded groundwater levels were used to calculate potentiometric surfaces and purge volumes. The depths to static groundwater level ranged from 2.82 feet below top of casing (BTOC) in MW05 to 5.89 feet BTOC in PMW13 (Table 1).

Calculating the difference in the top of casing and depth to groundwater, LTE determined the groundwater elevation in each monitoring well and generated a Groundwater Elevation Map (Figure 2). Based on the first quarter 2015 Groundwater Elevation Map, groundwater flow was generally to the north, toward the Yampa River.

### **Groundwater Sampling Procedures**

Each monitoring well was purged of a minimum of three well casing volumes or until dry prior to collection of groundwater samples. Groundwater samples for all 1-inch diameter wells were collected utilizing a peristaltic pump (MW02, MW03, MW04, MW05, MW16, MW17, W19 and MW20). Groundwater samples for all 2-inch diameter wells were collected using 1.6-inch diameter disposable bailers (PMW01, PMW09, PMW13 and PMW18). Groundwater samples were collected in laboratory-prepared sample bottles, placed on ice, and delivered under chain-of-custody protocol to ESC Lab Sciences of Mt. Juliet, Tennessee (ESC) for laboratory analysis.



of constituents identified in COGCC Table 910-1. Field observations during the sampling event noted several areas of standing water in the irrigation ditch between MW02 and MW03. No odor or sheen were noted in these areas. Well Development/Purging forms from the current quarter and the previous two quarters are included as an attachment at the request of the COGCC.

### **Groundwater Analytical Results**

During the March 12, 2015 groundwater monitoring event, 12 groundwater samples were collected and submitted to ESC for constituents identified in COGCC Table 910-1. All analytes were either below the laboratory detection limits or were within COGCC allowable concentrations. Groundwater analytical results for the March 12, 2015 monitoring event are depicted on Figure 3. Table 2 summarizes historical analytical data for all groundwater sampling events. The laboratory analytical reports are included as an attachment.

The March 2015 groundwater monitoring event represents the third consecutive quarter of complaint groundwater data at the Site. Peakview and LTE understand that after four consecutive quarters of groundwater compliance with COGCC Table 910-1 allowable concentrations have been observed, the remediation number associated with the Site shall be closed. The next quarterly monitoring event is scheduled for June, 2015.

Should you have any questions regarding this report, please contact LTE at (970) 285-9985.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink, appearing to read 'Chris McKisson', written over a light blue horizontal line.

Chris McKisson  
Project Environmental Scientist

A handwritten signature in blue ink, appearing to read 'Rob Fishburn', written over a light blue horizontal line.

Rob Fishburn, P.G.  
Western Slope Office Manager/  
Senior Hydrogeologist

Attachments:

Figure 1 – Site Location Map  
Figure 2 – Groundwater Elevation Map  
Figure 3 – Groundwater Analytical Data  
Table 1 – Groundwater Field Parameters  
Table 2 – Groundwater Analytical Results  
Well Development/Purging Forms  
Laboratory Analytical Reports







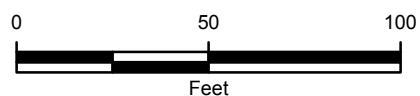




IMAGE COURTESY OF ESRI

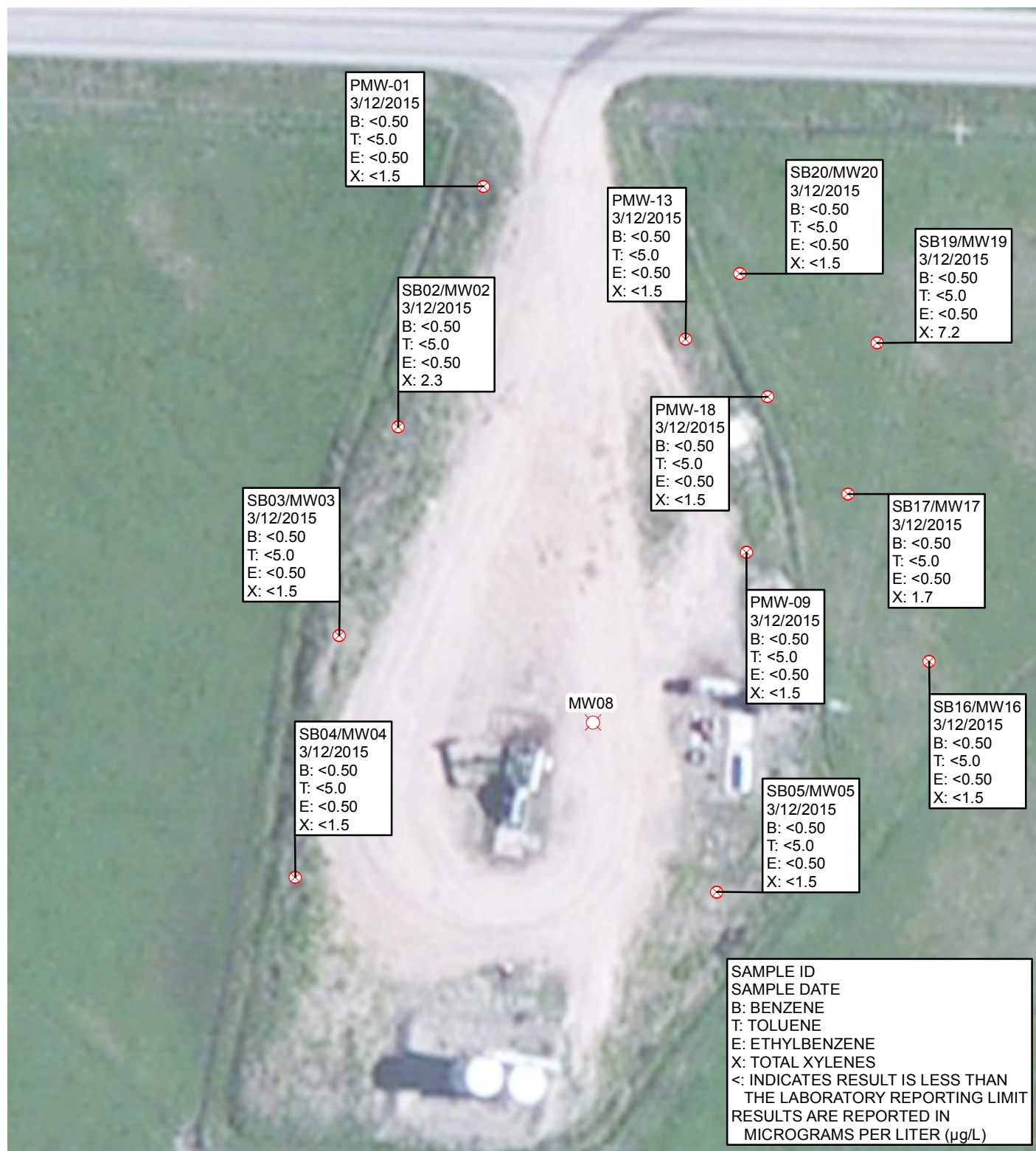
## LEGEND

-  SOIL BORING/MONITORING WELL
-  REMOVED/DESTROYED MONITORING WELL
-  ESTIMATED GROUNDWATER FLOW DIRECTION
-  RELATIVE GROUNDWATER ELEVATION CONTOUR  
CONTOUR INTERVAL = 0.50 FEET  
GRADIENT = 0.025 FEET/FOOT



**FIGURE 2**  
**RELATIVE GROUNDWATER ELEVATION MAP**  
 MARCH 12, 2015  
 VOLOSHIN MORTON 1-8  
 MOFFAT COUNTY, COLORADO  
 PEAKVIEW OPERATING COMPANY





**FIGURE 3**  
**GROUNDWATER ANALYTICAL RESULTS**  
**MARCH 12, 2015**  
**VOLOSHIN MORTON 1-8**  
**MOFFAT COUNTY, COLORADO**  
**PEAKVIEW OPERATING COMPANY**



**TABLE 1**  
**VOLOSHIN MORTON 1-8**  
**GROUNWATER FIELD PARAMETERS**  
**PEAKVIEW OPERATING COMPANY, LLC**

| Sample ID | Date       | TD<br>ft btoc | DTW<br>ft btoc | DTP<br>ft btoc | Temperature<br>°C | Conductivity<br>µS/cm | TDS<br>g/L | pH   |
|-----------|------------|---------------|----------------|----------------|-------------------|-----------------------|------------|------|
| MW01      | 5/24/2013* | 4.56          | 2.35           | NM             | NM                | NM                    | NM         | NM   |
|           | 9/17/2013  | 5.32          | 1.73           | NA             | 18.1              | 1,115                 | 0.832      | 7.15 |
| PMW01     | 6/16/2014  | 10.07         | 3.07           | NA             | 9.64              | 1,303                 | 1.196      | 7.12 |
|           | 9/22/2014  | 10.06         | 3.12           | NA             | 14.66             | 1,302.7               | 1.055      | 7.16 |
|           | 12/11/2014 | 10.06         | 5.02           | NA             | 8.64              | 959.2                 | 0.90666    | 7.3  |
|           | 3/12/2015  | 9.98          | 4.98           | NA             | 4.96              | 831.1                 | 0.87532    | 7.41 |
| MW02      | 5/24/2013  | 9.63          | 4.76           | NA             | 10.89             | 1,544                 | 1.350      | 8.05 |
|           | 6/11/2013  | 9.21          | 3.43           | NA             | 9.57              | 1,274                 | 1.176      | 7.75 |
|           | 9/17/2013  | 9.20          | 4.48           | NA             | 14.4              | 1,194                 | 0.975      | 7.47 |
|           | 3/12/2014  | 9.55          | 3.73           | NA             | 5.62              | 937                   | 0.911      | 7.97 |
|           | 6/16/2014  | 9.55          | 3.70           | NA             | 11.47             | 1,780                 | 1.56       | 7.62 |
|           | 9/22/2014  | 9.57          | 3.90           | NA             | 14.65             | 1,800.8               | 1.420      | 7.69 |
|           | 12/11/2014 | 9.57          | 5.87           | NA             | 10.67             | 1,058.4               | 0.94719    | 7.81 |
|           | 3/12/2015  | 9.30          | 4.78           | NA             | 7.22              | 1,016.0               | 0.99969    | 7.83 |
| MW03      | 5/24/2013  | 9.75          | 5.02           | NA             | 11.00             | 627                   | 0.533      | 7.50 |
|           | 9/17/2013  | 9.75          | 5.29           | NA             | 17.9              | 717                   | 0.539      | 7.25 |
|           | 6/16/2014  | 9.72          | 4.55           | NA             | 11.70             | 662                   | 0.572      | 7.57 |
|           | 9/22/2014  | 9.74          | 4.94           | NA             | 17.10             | 744.2                 | 0.563      | 7.50 |
|           | 12/11/2014 | 9.74          | 6.91           | NA             | 10.02             | 780.7                 | 0.71049    | 7.71 |
|           | 3/12/2015  | 9.73          | 4.99           | NA             | 5.67              | 563.7                 | 0.58072    | 7.52 |
| MW04      | 5/24/2013  | 9.74          | 5.42           | NA             | 9.92              | 1,758                 | 1.592      | 7.42 |
|           | 9/17/2013  | 9.74          | 5.31           | NA             | 17.2              | 1,278                 | 0.981      | 8.26 |
|           | 6/16/2014  | 9.75          | 4.50           | NA             | 10.24             | 895                   | 0.809      | 8.23 |
|           | 9/22/2014  | 9.73          | 4.76           | NA             | 16.23             | 1,123.7               | 0.877      | 8.51 |
|           | 12/11/2014 | 9.73          | 6.62           | NA             | 10.82             | 1,214.5               | 1.0838     | 8.9  |
|           | 3/12/2015  | 9.71          | 5.42           | NA             | 6.78              | 936.1                 | 0.93278    | 8.59 |
| MW05      | 5/24/2013  | 9.50          | 3.90           | NA             | 10.72             | 1,379                 | 1.229      | 7.93 |
|           | 9/17/2013  | 9.55          | 3.95           | NA             | 17.0              | 1,660                 | NM         | 7.17 |
|           | 6/16/2014  | 9.55          | 3.50           | NA             | 11.50             | 1,293                 | 1.096      | 7.66 |
|           | 9/22/2014  | 9.54          | 4.28           | NA             | 15.97             | 1,523.9               | 0.988      | 7.33 |
|           | 12/11/2014 | 9.54          | 5.38           | NA             | 10.02             | 1,185.7               | 1.0799     | 7.51 |
|           | 3/12/2015  | 9.53          | 2.82           | NA             | 5.61              | 927.1                 | 0.95738    | 7.37 |
| MW08      | 5/24/2013  | 9.66          | 4.32           | NA             | NM                | NM                    | NM         | NM   |
|           | 9/17/2013  | 9.66          | 6.40           | NA             | 18.0              | 1,114                 | 0.832      | 7.96 |
| MW09      | 5/24/2013  | 7.61          | 4.30           | NA             | NM                | NM                    | NM         | NM   |
| PMW09     | 6/16/2014  | 10.05         | 3.73           | NA             | 8.53              | 1,418                 | 1.344      | 7.84 |
|           | 9/22/2014  | 10.04         | 3.39           | NA             | 13.82             | 1,429.9               | 1.181      | 7.70 |
|           | 12/11/2014 | 10.04         | 5.22           | NA             | 10.81             | 1,101.2               | 0.98113    | 7.72 |
|           | 3/12/2015  | 10.01         | 4.52           | NA             | 6.93              | 802.3                 | 0.79542    | 7.76 |
| MW13      | 5/24/2013  | 9.75          | 4.66           | NA             | 12.67             | 1,649                 | 1.384      | 7.89 |
|           | 6/11/2013  | 9.74          | 4.43           | NA             | 10.43             | 1,568                 | 1.409      | 7.66 |
|           | 9/17/2013  | 9.75          | 5.44           | NA             | 16.7              | 1,605                 | 1.235      | 7.34 |
| PMW13     | 6/16/2014  | 10.11         | 4.55           | NA             | 9.93              | 2,421                 | 2.231      | 7.53 |
|           | 9/22/2014  | 10.10         | 4.91           | NA             | 14.68             | 2,575.7               | 2.077      | 7.31 |
|           | 12/11/2014 | 10.10         | 6.93           | NA             | 10.33             | 2,387.4               | 2.15607    | 7.38 |
|           | 3/12/2015  | 10.02         | 5.89           | NA             | 6.39              | 1,758.0               | 1.76905    | 7.44 |



**TABLE 1**  
**VOLOSHIN MORTON 1-8**  
**GROUNWATER FIELD PARAMETERS**  
**PEAKVIEW OPERATING COMPANY, LLC**

| Sample ID | Date       | TD<br>ft btoc | DTW<br>ft btoc | DTP<br>ft btoc | Temperature<br>°C | Conductivity<br>µS/cm | TDS<br>g/L | pH   |
|-----------|------------|---------------|----------------|----------------|-------------------|-----------------------|------------|------|
| MW16      | 5/24/2013  | 9.43          | 4.06           | NA             | 12.30             | 3,371                 | 2.868      | 8.92 |
|           | 6/11/2013  | 9.43          | 2.14           | NA             | 10.38             | 3,884                 | 3.489      | 8.85 |
|           | 9/17/2013  | 9.44          | 4.20           | NA             | 13.8              | 4,416                 | 3.646      | 8.22 |
|           | 6/16/2014  | 9.43          | 3.04           | NA             | 9.22              | 4,872                 | 4.534      | 8.42 |
|           | 9/22/2014  | 9.42          | 3.76           | NA             | 12.25             | 2,969.4               | 2.551      | 8.46 |
|           | 12/11/2014 | 9.42          | 5.81           | NA             | 9.08              | 5,038.5               | 4.7005     | 8.3  |
|           | 3/12/2015  | 9.40          | 4.42           | NA             | 6.44              | 4,988.1               | 5.04941    | 8.33 |
| MW17      | 5/24/2013  | 9.39          | 3.91           | NA             | 10.49             | 1,711                 | 1.538      | 7.90 |
|           | 6/11/2013  | 9.06          | 2.61           | NA             | 10.60             | 4,014                 | 3.591      | 6.71 |
|           | 9/17/2013  | 9.14          | 3.80           | NA             | 13.6              | 1,371                 | 1.137      | 7.66 |
|           | 6/16/2014  | 9.15          | 2.41           | NA             | 11.09             | 1,365                 | 1.216      | 7.64 |
|           | 9/22/2014  | 9.15          | 3.21           | NA             | 12.89             | 1,491.0               | 1.260      | 7.83 |
|           | 12/11/2014 | 9.15          | 5.19           | NA             | 8.93              | 1,364.5               | 1.27952    | 7.77 |
|           | 3/12/2015  | 9.12          | 3.66           | NA             | 6.19              | 1,280.7               | 1.29844    | 7.67 |
| MW18      | 5/24/2013  | 9.38          | 3.93           | 3.57           | 10.92             | 1,652                 | 1.445      | 8.06 |
|           | 6/11/2013  | 9.14          | 2.50           | 2.44           | 10.09             | 4,041                 | 3.670      | 6.78 |
|           | 9/17/2013  | 9.21          | 3.88           | 3.76           | NM                | NM                    | NM         | NM   |
| PMW18     | 6/16/2014  | 9.90          | 2.20           | NA             | 9.77              | 1,967                 | 1.806      | 7.75 |
|           | 9/22/2014  | 9.91          | 2.44           | NA             | 12.66             | 2,109.4               | 1.794      | 7.45 |
|           | 12/11/2014 | 9.91          | 4.86           | NA             | 9.36              | 1,988.9               | 1.84002    | 7.48 |
|           | 3/12/2015  | 9.83          | 3.75           | NA             | 6.24              | 1,675.6               | 1.69526    | 7.59 |
| MW19      | 5/24/2013  | 9.70          | 3.82           | NA             | 10.35             | 1,507                 | 1.355      | 7.72 |
|           | 6/11/2013  | 9.46          | 2.19           | NA             | 10.15             | 1,210                 | 1.093      | 7.68 |
|           | 9/17/2013  | 9.46          | 3.60           | NA             | 13.3              | 1,108                 | 0.929      | 7.53 |
|           | 3/12/2014  | 9.45          | 2.90           | NA             | 3.77              | 750                   | 0.820      | 7.29 |
|           | 6/16/2014  | 9.45          | 2.60           | NA             | 10.30             | 1,022                 | 0.924      | 7.51 |
|           | 9/22/2014  | 9.45          | 3.09           | NA             | 12.38             | 1,136.4               | 0.973      | 7.64 |
|           | 12/11/2014 | 9.45          | 5.16           | NA             | 9.11              | 1,161.3               | 1.07993    | 7.82 |
|           | 3/12/2015  | 9.42          | 4.01           | NA             | 5.96              | 1,517.9               | 1.55188    | 7.51 |
| MW20      | 5/24/2013  | 9.20          | 3.78           | NA             | 9.56              | 1,161                 | 1.066      | 7.94 |
|           | 6/11/2013  | 9.20          | 1.70           | NA             | 9.47              | 1,449                 | 1.338      | 8.42 |
|           | 9/17/2013  | 9.20          | 3.44           | NA             | 13.0              | 1,139                 | 0.955      | 8.09 |
|           | 3/12/2014  | 9.21          | 2.78           | NA             | 4.46              | 1,331                 | 1.423      | 8.23 |
|           | 6/16/2014  | 9.20          | 2.52           | NA             | 10.20             | 1,105                 | 0.984      | 8.20 |
|           | 9/22/2014  | 9.20          | 2.86           | NA             | 12.55             | 1,024.6               | 0.873      | 7.86 |
|           | 12/11/2014 | 9.20          | 4.93           | NA             | 9.64              | 1,493.3               | 1.37359    | 8.32 |
|           | 3/12/2015  | 9.18          | 3.80           | NA             | 6.93              | 1,356.2               | 1.34719    | 8.15 |

**Notes:**

< - less than the stated reporting limit  
**BOLD** - indicates result exceeds the COGCC concentration level  
COGCC - Colorado Oil and Gas Conservation Commission  
g/L - grams per liter  
µS/cm - microsiemens per centimeter  
NA - not applicable  
SU - standard unit  
ft - feet  
btoc - below top of casing  
NM - not measured  
TD - total depth  
DTW - depth to water  
DTP - depth to product (estimated based on visual observation)  
\* - well casing filled with silt after installation





**TABLE 2**  
**VOLOSHIN MORTON 1-8**  
**GROUNDWATER ANALYTICAL RESULTS**  
**PEAKVIEW OPERATING COMPANY, LLC**

| Sample ID | Date       | Benzene<br>µg/L | Toluene<br>µg/L | Ethylbenzene<br>µg/L | Total Xylenes<br>µg/L | Chlorides<br>µg/L | Sulfates<br>µg/L | TDS<br>µg/L |
|-----------|------------|-----------------|-----------------|----------------------|-----------------------|-------------------|------------------|-------------|
| MW01      | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 68,000            | 43,000           | 740,000     |
| PMW01     | 6/16/2014  | <b>5.2</b>      | <5.0            | <0.50                | <1.5                  | 140,000           | 43,000           | 1,000,000   |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | 98,000            | 62,000           | 790,000     |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 69,000            | 41,000           | 670,000     |
| MW02      | 5/24/2013  | <b>460</b>      | <5.0            | <0.50                | 2.7                   | NA                | NA               | NA          |
|           | 6/11/2013  | <b>160</b>      | <25             | <2.5                 | 12                    | NA                | NA               | NA          |
|           | 9/17/2013  | <b>7.4</b>      | <5.0            | <0.50                | <1.5                  | 46,000            | 320,000          | 1,000,000   |
|           | 3/12/2014  | <1.0            | <5.0            | <1.0                 | <3.0                  | NA                | NA               | NA          |
|           | 6/16/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | 70,000            | 820,000          | 1,900,000   |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | 3.1                   | 31,000            | 330,000          | 940,000     |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | 2.3                   | 40,000            | 190,000          | 950,000     |
| MW03      | 5/24/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 22,000            | 35,000           | 570,000     |
|           | 6/16/2014  | 0.70            | <5.0            | <0.50                | <1.5                  | 22,000            | 38,000           | 540,000     |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | 23,000            | 56,000           | 600,000     |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 15,000            | 34,000           | 510,000     |
| MW04      | 5/24/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 21,000            | 66,000           | 1,300,000   |
|           | 6/16/2014  | 0.53            | <5.0            | <0.50                | <1.5                  | 20,000            | 52,000           | 1,000,000   |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | NM*               | NM*              | NM*         |
|           | 12/12/2014 | NA              | NA              | NA                   | NA                    | 13,000            | 58,000           | 1,000,000   |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 10,000            | 47,000           | 740,000     |
| MW05      | 5/24/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 9,500             | 190,000          | 890,000     |
|           | 6/16/2014  | 0.77            | <5.0            | <0.50                | <1.5                  | 7,300             | 140,000          | 1,100,000   |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | NM*               | NM*              | NM*         |
|           | 12/12/2014 | NA              | NA              | NA                   | NA                    | 7,300             | 200,000          | 1,000,000   |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 12,000            | 200,000          | 950,000     |
| MW08      | 5/24/2013  | <0.50           | <5.0            | 1.1                  | 4.1                   | NA                | NA               | NA          |
|           | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
| MW09      | 5/24/2013  | <b>2,200</b>    | 310             | 390                  | 540                   | NA                | NA               | NA          |
| PMW09     | 6/16/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | 71,000            | 680,000          | 1,500,000   |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | 42,000            | 310,000          | 930,000     |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 16,000            | 240,000          | 770,000     |
| MW13      | 5/24/2013  | <b>8.9</b>      | <5.0            | <0.50                | 1.8                   | NA                | NA               | NA          |
|           | 6/11/2013  | <b>31</b>       | <5.0            | <0.50                | 1.6                   | NA                | NA               | NA          |
|           | 9/17/2013  | <b>7.1</b>      | <5.0            | <0.50                | <1.5                  | 100,000           | 150,000          | 1,200,000   |
| PMW13     | 6/16/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | 130,000           | 1,200,000        | 2,300,000   |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | 130,000           | 1,200,000        | 2,200,000   |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 47,000            | 450,000          | 1,800,000   |
| MW16      | 5/24/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 6/11/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 76,000            | 990,000          | 3,400,000   |
|           | 6/16/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | 140,000           | 1,600,000        | 4,600,000   |
|           | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                | NA               | NA          |
|           | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | 140,000           | 1,500,000        | 3,700,000   |
|           | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 150,000           | 2,100,000        | 4,900,000   |





**TABLE 2**  
**VOLOSHIN MORTON 1-8**  
**GROUNDWATER ANALYTICAL RESULTS**  
**PEAKVIEW OPERATING COMPANY, LLC**

| Sample ID                        | Date       | Benzene<br>µg/L | Toluene<br>µg/L | Ethylbenzene<br>µg/L | Total Xylenes<br>µg/L | Chlorides<br>µg/L  | Sulfates<br>µg/L   | TDS<br>µg/L        |
|----------------------------------|------------|-----------------|-----------------|----------------------|-----------------------|--------------------|--------------------|--------------------|
| MW17                             | 5/24/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 6/11/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 43,000             | 310,000            | 1,200,000          |
|                                  | 6/16/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | 44,000             | 330,000            | 1,200,000          |
|                                  | 9/22/2014  | <0.50           | <5.0            | <0.50                | 5.5                   | NA                 | NA                 | NA                 |
|                                  | 12/11/2014 | <0.50           | <5.0            | <0.50                | 6.2                   | 69,000             | 280,000            | 1,100,000          |
|                                  | 3/12/2015  | <0.50           | <5.0            | <0.50                | 1.7                   | 42,000             | 310,000            | 1,200,000          |
| MW18                             | 5/24/2013  | <b>5,700</b>    | <b>5,800</b>    | 470                  | <b>2,400</b>          | 82,000             | 360,000            | 1,400,000          |
|                                  | 6/11/2013  | <b>4,700</b>    | <b>5,200</b>    | 490                  | <b>2,500</b>          | NA                 | NA                 | NA                 |
| PMW18                            | 6/16/2014  | <b>10</b>       | <5.0            | 1.8                  | <1.5                  | 53,000             | 1,000,000          | 1,800,000          |
|                                  | 9/22/2014  | <0.50           | <5.0            | 0.59                 | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 12/11/2014 | <0.50           | <5.0            | <0.50                | <1.5                  | 47,000             | 650,000            | 1,500,000          |
|                                  | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 50,000             | 890,000            | 1,700,000          |
| MW19                             | 5/24/2013  | 0.72            | <5.0            | <0.50                | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 6/11/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 26,000             | 320,000            | 1,000,000          |
|                                  | 3/12/2014  | <1.0            | <5.0            | <1.0                 | <3.0                  | NA                 | NA                 | NA                 |
|                                  | 6/16/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | 23,000             | 260,000            | 880,000            |
|                                  | 9/22/2014  | <0.50           | <5.0            | <0.50                | 2.5                   | NA                 | NA                 | NA                 |
|                                  | 12/11/2014 | <0.50           | <5.0            | <0.50                | 7.1                   | 33,000             | 410,000            | 1,100,000          |
|                                  | 3/12/2015  | <0.50           | <5.0            | <0.50                | 7.2                   | 32,000             | 480,000            | 1,500,000          |
| MW20                             | 5/24/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 6/11/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 9/17/2013  | <0.50           | <5.0            | <0.50                | <1.5                  | 26,000             | 220,000            | 860,000            |
|                                  | 3/12/2014  | <1.0            | <5.0            | <1.0                 | <3.0                  | NA                 | NA                 | NA                 |
|                                  | 6/16/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | 38,000             | 280,000            | 970,000            |
|                                  | 9/22/2014  | <0.50           | <5.0            | <0.50                | <1.5                  | NA                 | NA                 | NA                 |
|                                  | 12/11/2014 | 0.66            | <5.0            | <0.50                | <1.5                  | 35,000             | 440,000            | 1,100,000          |
|                                  | 3/12/2015  | <0.50           | <5.0            | <0.50                | <1.5                  | 24,000             | 580,000            | 1,100,000          |
| COGCC<br>CONCENTRATION<br>LEVELS |            | 5               | 560             | 700                  | 1,400                 | <1.25 x background | <1.25 x background | <1.25 x background |

**Notes:**

< - less than the stated reporting limit

**BOLD** - indicates result exceeds the COGCC concentration level

COGCC - Colorado Oil and Gas Conservation Commission

µg/L - micrograms per liter

NM\* - Sample not collected due to insufficient sampling material

NA - not analyzed

SU - standard unit



























**Project Name:** Voloshin Morton 1-8

**Project Number:** 0478130.01

Well ID: MW03

### Developer's

**Initials:** Wt DH

### **Purging Method:**

**Pump**

## Bailer

**Other.**

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point \_\_\_\_ - Initial Water Depth \_\_\_\_ ) = \_\_\_\_ x 3 well volumes = \_\_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)

## PURGING REQUIREMENTS

**PURGING REQUIREMENTS**  
When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are  $\pm 10\%$  for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

### Well Stabilization Criteria:

pH  $\pm 0.1$  standard units

S.C.  $\pm 3\%$  microseimens

D.O.  $\pm 0.3$  mg/L

ORP  $\pm 10$  millivolts

**Turbidity** +/- 10% NTU's

**Discharge** 0.2 to 0.5 liters/min.

Drawdown <-0.33 ft once discharge is met

Temp no specific criteria





## WELL DEVELOPMENT/PURGING FORM

**Project Name:** Voloshin Morton 1-8

**Project Number:** 047813001

Well ID: MW02

### Developer's

**Initials:** W + AH

### Purging Method:

## Pump

## Bailer

### Other

[illegible]

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point \_\_\_\_ - Initial Water Depth \_\_\_\_ ) = \_\_\_\_ x 3 well volumes = \_\_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)

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## PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are  $\pm 10\%$  for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

### Well Stabilization Criteria:

pH  $\pm 0.1$  standard units

S.C.  $\pm 3\%$  microsems

D.O.  $\pm 0.3$  mg/L

ORP  $\pm 10$  millivolts

**Turbidity** +/- 10% NTU's

**Discharge** 0.2 to 0.5 liters/min.

Drawdown <-0.33 ft once discharge is met

Temp no specific criteria

## WELL DEVELOPMENT/PURGING FORM

**Project Name:** Voloshin Morton 1-8

**Project Number:** 047813001

Well ID: PMW01

## Developer's

**Initials:** MS/DH

### Purging Method:

## Pump

## Bailer

### Other

## PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

**Well Stabilization Criteria:**

pH                    +/- 0.1 standard units

S.C.  $\pm 3\%$  microsems

D.O.  $\pm 0.3$  mg/L

ORP +/- 10 millivolts

Turbidity +/- 10% NTU's

Discharge 0.2 to 0.5 liters/min.

Drawdown <-0.33 ft once discharge is met

Temp no specific criteria

[illegible]

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point \_\_\_\_ - Initial Water Depth \_\_\_\_ ) = \_\_\_\_ x 3 well volumes = \_\_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)

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# WELL DEVELOPMENT/PURGING FORM

Project Name: Volashin Martin 1-8

Project Number: 047813001

Well ID: PMW09

Developer's

Initials: MS/DH

Purging Method:

Pump

Bailer

Other

## PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

### Well Stabilization Criteria:

|           |                                |
|-----------|--------------------------------|
| pH        | +/- 0.1 standard units         |
| S.C.      | +/- 3% microsems               |
| D.O.      | +/- 0.3 mg/L                   |
| ORP       | +/- 10 millivolts              |
| Turbidity | +/- 10% NTU's                  |
| Discharge | 0.2 to 0.5 liters/min.         |
| Drawdown  | <0.33 ft once discharge is met |
| Temp      | no specific criteria           |

| Date     | Time | Initial Water Depth | pH   | Temp (C) | S.C. (u-S) | Dissolved Oxygen (mg/L) | Volume Removed (gallons) | Casing Volumes Removed | Comments (Color, Turbidity, Odor, NAPL)                      |
|----------|------|---------------------|------|----------|------------|-------------------------|--------------------------|------------------------|--|
| 12-11-14 | NM   | 5.22                | 7.83 | 10.3     | 1206.6     | 3.16                    | 0.25                     | 0                      | effervescence light brown, no odor, no sheen, low turbidity, |
|          |      |                     | 7.76 | 10.63    | 1363.8     | 3.08                    | 0.8                      | 1                      | darker brown, same   |
|          |      |                     | 7.72 | 10.81    | 1504.8     | 2.92                    | 1.6                      | 1                      | same   |
|          |      |                     |      |          |            |                         |                          |                        | baled dry after 3rd reading                                  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |
|          |      |                     |      |          |            |                         |                          |                        |  |

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = \_\_\_ x 3 well volumes = \_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)









# WELL DEVELOPMENT/PURGING FORM

Project Name: Voloshin Morton 1-8

Project Number: 047813001

Well ID: PMW18

Developer's  
Initials: MS/OH

Purging Method:

Pump

Bailer

Other

## PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

### Well Stabilization Criteria:

pH +/- 0.1 standard units  
S.C. +/- 3% microsems  
D.O. +/- 0.3 mg/L  
ORP +/- 10 millivolts  
Turbidity +/- 10% NTU's  
Discharge 0.2 to 0.5 liters/min.  
Drawdown <0.33 ft once discharge is met  
Temp no specific criteria

| Date     | Time | Initial Water Depth | pH   | Temp (C) | S.C. (u-S) | Dissolved Oxygen (mg/L) | Volume Removed (gallons) | Casing Volumes Removed | Comments (Color, Turbidity, Odor, NAPL)             |
|----------|------|---------------------|------|----------|------------|-------------------------|--------------------------|------------------------|---|
| 12-11-14 | NM   | 4.86'               | 7.71 | 9.88     | 1718       | NM                      | 0.25                     | 0                      | light brown, no odor, no sheen, light effervescence |
|          |      |                     | 7.62 | 9.33     | 2253.4     | NM                      | 0.8                      | 1                      | brown, same   |
|          |      |                     | 7.55 | 9.32     | 2752.1     | 4.57                    | 1.6                      | 1                      | chocolate, turbid                                   |
|          |      |                     | 7.48 | 9.36     | 2836.2     | 0.62                    | 2.4                      | 1                      | same  |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |
|          |      |                     |      |          |            |                         |                          |                        |   |

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = \_\_\_\_ x 3 well volumes = \_\_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)









# WELL DEVELOPMENT/PURGING FORM

Project Name: Voloshin Morton 1-8

Project Number: 047813001

Well ID: PMW01

Developer's

Initials: DH

Purging Method:

Pump

Bailer

Other

## PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

### Well Stabilization Criteria:

|           |                                |
|-----------|--------------------------------|
| pH        | +/- 0.1 standard units         |
| S.C.      | +/- 3% microsems               |
| D.O.      | +/- 0.3 mg/L                   |
| ORP       | +/- 10 millivolts              |
| Turbidity | +/- 10% NTU's                  |
| Discharge | 0.2 to 0.5 liters/min.         |
| Drawdown  | <0.33 ft once discharge is met |
| Temp      | no specific criteria           |

| Date    | Time | Initial Water Depth | pH   | Temp (C) | S.C. (u-S) | Dissolved Oxygen (mg/L) | Volume Removed (gallons) | Casing Volumes Removed | Comments (Color, Turbidity, Odor, NAPL) |
|---------|------|---------------------|------|----------|------------|-------------------------|--------------------------|------------------------|---|
| 9/22/14 | NM   | 3.12'               | 7.29 | 15.92    | 1435.1     | 4.26                    | 0.25                     | 8                      | clear, no odor, no sheen                |
|         |      |                     | 7.14 | 15.28    | 1630.4     | 2.13                    | 1.13                     | 1                      | light brown, turbid, no odor, no sheen  |
|         |      |                     | 7.10 | 14.75    | 1680.1     | 1.63                    | 2.26                     | 1                      | same                                    |
|         |      |                     | 7.16 | 14.66    | 1623.3     | 3.18                    | 3.39                     | 1                      | same                                    |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = \_\_\_\_ x 3 well volumes = \_\_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)













# WELL DEVELOPMENT/PURGING FORM

Project Name: Volashin Marten 1-8

Project Number: 047813001

Well ID: PMW09

Developer's

Initials: DH

Purging Method:

Pump

Bailer

Other

## PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

### Well Stabilization Criteria:

|           |                                |
|-----------|--------------------------------|
| pH        | +/- 0.1 standard units         |
| S.C.      | +/- 3% microsems               |
| D.O.      | +/- 0.3 mg/L                   |
| ORP       | +/- 10 millivolts              |
| Turbidity | +/- 10% NTU's                  |
| Discharge | 0.2 to 0.5 liters/min.         |
| Drawdown  | <0.33 ft once discharge is met |
| Temp      | no specific criteria           |

| Date    | Time | Initial Water Depth | pH   | Temp (C) | S.C. (u-S) | Dissolved Oxygen (mg/L) | Volume Removed (gallons) | Casing Volumes Removed | Comments (Color, Turbidity, Odor, NAPL)                     |
|---------|------|---------------------|------|----------|------------|-------------------------|--------------------------|------------------------|---|
| 9/22/14 | NM   | 3.39'               | 7.82 | 16.14    | 1659.8     | 2.04                    | 0.25                     | 0                      | clear, no odor, no sheen                                    |
|         |      |                     | 7.74 | 14.83    | 1758.4     | 2.24                    | 1.08                     | 1                      | light brown, turbid, no odor, no sheen                      |
|         |      |                     | 7.70 | 13.82    | 1817.2     | 2.82                    | 2.16                     | 1                      | same  |
|         |      |                     |      |          |            |                         |                          |                        | -baled dry @ 2.40 gal removed/insufficient H <sub>2</sub> O |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = \_\_\_ x 3 well volumes = \_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)



## WELL DEVELOPMENT/PURGING FORM

Project Name: Voloshin Marton 1-8

Project Number: 047813001

Well ID: PMWL3

Developer's

Initials: DH

Purging Method:

Pump

Bailer

Other

### PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

#### Well Stabilization Criteria:

|           |                                |
|-----------|--------------------------------|
| pH        | +/- 0.1 standard units         |
| S.C.      | +/- 3% microsems               |
| D.O.      | +/- 0.3 mg/L                   |
| ORP       | +/- 10 millivolts              |
| Turbidity | +/- 10% NTU's                  |
| Discharge | 0.2 to 0.5 liters/min.         |
| Drawdown  | <0.33 ft once discharge is met |
| Temp      | no specific criteria           |

| Date    | Time | Initial Water Depth | pH   | Temp (C) | S.C. (u-S) | Dissolved Oxygen (mg/L) | Volume Removed (gallons) | Casing Volumes Removed | Comments (Color, Turbidity, Odor, NAPL)         |
|---------|------|---------------------|------|----------|------------|-------------------------|--------------------------|------------------------|---|
| 9/22/14 | NM   | 4.91'               | 7.27 | 17.18    | 3169.4     | 1.37                    | 0.25                     | 8                      | light brown, light turbidity, no sheen, no odor |
|         |      |                     | 7.29 | 16.10    | 3378.1     | 2.11                    | 0.84                     | 1                      | same  |
|         |      |                     | 7.28 | 15.98    | 3006.1     | 1.78                    | 1.68                     | 1                      | same  |
|         |      |                     | 7.31 | 14.68    | 3198.0     | 1.89                    | 2.52                     | 1                      | same  |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = \_\_\_ x 3 well volumes = \_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)







# WELL DEVELOPMENT/PURGING FORM

Project Name: Volashin Marton 1-8

Project Number: 047813001

Well ID: PMW18

Developer's

Initials: DH

Purging Method:

Pump

Bailer

Other

## PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp. are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

### Well Stabilization Criteria:

|           |                                |
|-----------|--------------------------------|
| pH        | +/- 0.1 standard units         |
| S.C.      | +/- 3% microsemens             |
| D.O.      | +/- 0.3 mg/L                   |
| ORP       | +/- 10 millivolts              |
| Turbidity | +/- 10% NTU's                  |
| Discharge | 0.2 to 0.5 liters/min.         |
| Drawdown  | <0.33 ft once discharge is met |
| Temp      | no specific criteria           |

| Date    | Time | Initial Water Depth | pH   | Temp (C) | S.C. (u-S) | Dissolved Oxygen (mg/L) | Volume Removed (gallons) | Casing Volumes Removed | Comments (Color, Turbidity, Odor, NAPL) |
|---------|------|---------------------|------|----------|------------|-------------------------|--------------------------|------------------------|---|
| 9/22/14 | NM   | 2.44'               | 7.67 | 15.88    | 1093.8     | 6.02                    | 0.25                     | 0                      | clear, no odor, no sheen, no turbidity  |
|         |      |                     | 7.49 | 14.03    | 2809.5     | 1.32                    | 1.2                      | 1                      | brown, turbid, no odor, no sheen        |
|         |      |                     | 7.46 | 13.30    | 2914.2     | 1.21                    | 2.4                      | 1                      | same                                    |
|         |      |                     | 7.45 | 12.66    | 2760.0     | 0.43                    | 3.6                      | 1                      | same                                    |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |
|         |      |                     |      |          |            |                         |                          |                        |   |

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = \_\_\_ x 3 well volumes = \_\_\_  
(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)









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Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

## Report Summary

Wednesday March 25, 2015

Report Number: L753650

Samples Received: 03/14/15

Client Project: 047813001

Description: Voloshin Mortin 1-8

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Jared Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : PMW01  
Collected By : DH/WT  
Collection Date : 03/12/15 15:10

ESC Sample # : L753650-01

Site ID :

Project # : 047813001

| Parameter  | Result | Det. Limit | Units  | Method     | Date     | Dil. |
|--|--------|------------|--------|------------|----------|------|
| Chloride   | 69000  | 1000       | ug/l   | 9056MOD    | 03/24/15 | 1    |
| Sulfate  | 41000  | 5000       | ug/l   | 9056MOD    | 03/24/15 | 1    |
| Dissolved Solids                                     | 670000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL    | 0.50       | ug/l   | 8021B      | 03/20/15 | 1    |
| Toluene  | BDL    | 5.0        | ug/l   | 8021B      | 03/20/15 | 1    |
| Ethylbenzene   | BDL    | 0.50       | ug/l   | 8021B      | 03/20/15 | 1    |
| Total Xylene   | BDL    | 1.5        | ug/l   | 8021B      | 03/20/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 98.7   |            | % Rec. | 8021B      | 03/20/15 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : MW02  
Collected By : DH/WT  
Collection Date : 03/12/15 14:15

ESC Sample # : L753650-02

Site ID :

Project # : 047813001

| Parameter                   | Result | Det. Limit | Units  | Method     | Date     | Dil. |
|-----------------------------|--------|------------|--------|------------|----------|------|
| Chloride                    | 40000  | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate                     | 190000 | 25000      | ug/l   | 9056MOD    | 03/24/15 | 5    |
| Dissolved Solids            | 950000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene                     | BDL    | 0.50       | ug/l   | 8021B      | 03/20/15 | 1    |
| Toluene                     | BDL    | 5.0        | ug/l   | 8021B      | 03/20/15 | 1    |
| Ethylbenzene                | BDL    | 0.50       | ug/l   | 8021B      | 03/20/15 | 1    |
| Total Xylene                | 2.3    | 1.5        | ug/l   | 8021B      | 03/20/15 | 1    |
| Surrogate Recovery(%)       |        |            |        |            |          |      |
| a,a,a-Trifluorotoluene(PID) | 99.2   |            | % Rec. | 8021B      | 03/20/15 | 1    |

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25,2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8

ESC Sample # : L753650-03

Sample ID : MW03

Site ID :

Collected By : DH/WT  
Collection Date : 03/12/15 14:20

Project # : 047813001

| Parameter  | Result | Det. Limit | Units  | Method     | Date     | Dil. |
|--|--------|------------|--------|------------|----------|------|
| Chloride   | 15000  | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate  | 34000  | 5000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Dissolved Solids                                     | 510000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL    | 0.50       | ug/l   | 8021B      | 03/20/15 | 1    |
| Toluene  | BDL    | 5.0        | ug/l   | 8021B      | 03/20/15 | 1    |
| Ethylbenzene   | BDL    | 0.50       | ug/l   | 8021B      | 03/20/15 | 1    |
| Total Xylene   | BDL    | 1.5        | ug/l   | 8021B      | 03/20/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 98.7   |            | % Rec. | 8021B      | 03/20/15 | 1    |

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# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25,2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : MW04  
Collected By : DH/WT  
Collection Date : 03/12/15 14:24

ESC Sample # : L753650-04

Site ID :

Project # : 047813001

| Parameter  | Result | Det. Limit | Units  | Method     | Date     | Dil. |
|--|--------|------------|--------|------------|----------|------|
| Chloride   | 10000  | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate  | 47000  | 5000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Dissolved Solids                                     | 740000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL    | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL    | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL    | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | BDL    | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 100.   |            | % Rec. | 8021B      | 03/17/15 | 1    |

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REPORT OF ANALYSIS

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LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : MW05  
Collected By : DH/WT  
Collection Date : 03/12/15 14:30

ESC Sample # : L753650-05

Site ID :

Project # : 047813001

| Parameter  | Result | Det. Limit | Units  | Method     | Date     | Dil. |
|--|--------|------------|--------|------------|----------|------|
| Chloride   | 12000  | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate  | 200000 | 25000      | ug/l   | 9056MOD    | 03/21/15 | 5    |
| Dissolved Solids                                     | 950000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL    | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL    | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL    | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | BDL    | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 101.   |            | % Rec. | 8021B      | 03/17/15 | 1    |

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Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

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LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8

ESC Sample # : L753650-06

Sample ID : PMW09

Site ID :

Collected By : DH/WT  
Collection Date : 03/12/15 15:05

Project # : 047813001

| Parameter  | Result | Det. Limit | Units  | Method     | Date     | Dil. |
|--|--------|------------|--------|------------|----------|------|
| Chloride   | 16000  | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate  | 240000 | 25000      | ug/l   | 9056MOD    | 03/21/15 | 5    |
| Dissolved Solids                                     | 770000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL    | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL    | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL    | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | BDL    | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 99.9   |            | % Rec. | 8021B      | 03/17/15 | 1    |

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Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : PMW13  
Collected By : DH/WT  
Collection Date : 03/12/15 14:55

ESC Sample # : L753650-07

Site ID :

Project # : 047813001

| Parameter  | Result  | Det. Limit | Units  | Method     | Date     | Dil. |
|--|---------|------------|--------|------------|----------|------|
| Chloride   | 47000   | 10000      | ug/l   | 9056MOD    | 03/20/15 | 10   |
| Sulfate  | 450000  | 50000      | ug/l   | 9056MOD    | 03/20/15 | 10   |
| Dissolved Solids                                     | 1800000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL     | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | BDL     | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 99.9    |            | % Rec. | 8021B      | 03/17/15 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : MW16  
Collected By : DH/WT  
Collection Date : 03/12/15 14:35

ESC Sample # : L753650-08

Site ID :

Project # : 047813001

| Parameter  | Result  | Det. Limit | Units  | Method     | Date     | Dil. |
|--|---------|------------|--------|------------|----------|------|
| Chloride   | 150000  | 100000     | ug/l   | 9056MOD    | 03/20/15 | 100  |
| Sulfate  | 2100000 | 500000     | ug/l   | 9056MOD    | 03/20/15 | 100  |
| Dissolved Solids                                     | 4900000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL     | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | BDL     | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 99.5    |            | % Rec. | 8021B      | 03/17/15 | 1    |

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Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : MW17  
Collected By : DH/WT  
Collection Date : 03/12/15 14:40

ESC Sample # : L753650-09

Site ID :

Project # : 047813001

| Parameter  | Result  | Det. Limit | Units  | Method     | Date     | Dil. |
|--|---------|------------|--------|------------|----------|------|
| Chloride   | 42000   | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate  | 310000  | 25000      | ug/l   | 9056MOD    | 03/21/15 | 5    |
| Dissolved Solids                                     | 1200000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL     | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | 1.7     | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 103.    |            | % Rec. | 8021B      | 03/17/15 | 1    |

BDL - Below Detection Limit

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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : PMW18  
Collected By : DH/WT  
Collection Date : 03/12/15 15:00

ESC Sample # : L753650-10

Site ID :

Project # : 047813001

| Parameter  | Result  | Det. Limit | Units  | Method     | Date     | Dil. |
|--|---------|------------|--------|------------|----------|------|
| Chloride   | 50000   | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate  | 890000  | 50000      | ug/l   | 9056MOD    | 03/21/15 | 10   |
| Dissolved Solids                                     | 1700000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL     | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | BDL     | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 99.5    |            | % Rec. | 8021B      | 03/17/15 | 1    |

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REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25, 2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : MW19  
Collected By : DH/WT  
Collection Date : 03/12/15 14:45

ESC Sample # : L753650-11

Site ID :

Project # : 047813001

| Parameter  | Result  | Det. Limit | Units  | Method     | Date     | Dil. |
|--|---------|------------|--------|------------|----------|------|
| Chloride   | 32000   | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate  | 480000  | 50000      | ug/l   | 9056MOD    | 03/21/15 | 10   |
| Dissolved Solids                                     | 1500000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene  | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene  | BDL     | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene   | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene   | 7.2     | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)<br>a,a,a-Trifluorotoluene(PID) | 101.    |            | % Rec. | 8021B      | 03/17/15 | 1    |

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Rob Fishburn  
LT Environmental- Rifle, CO  
820 Megan Ave, Unit B  
Rifle, CO 81650

March 25,2015

Date Received : March 14, 2015  
Description : Voloshin Mortin 1-8  
Sample ID : MW20  
Collected By : DH/WT  
Collection Date : 03/12/15 14:50

ESC Sample # : L753650-12

Site ID :

Project # : 047813001

| Parameter                   | Result  | Det. Limit | Units  | Method     | Date     | Dil. |
|-----------------------------|---------|------------|--------|------------|----------|------|
| Chloride                    | 24000   | 1000       | ug/l   | 9056MOD    | 03/20/15 | 1    |
| Sulfate                     | 580000  | 50000      | ug/l   | 9056MOD    | 03/21/15 | 10   |
| Dissolved Solids            | 1100000 | 10000      | ug/l   | 2540 C-201 | 03/19/15 | 1    |
| Benzene                     | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Toluene                     | BDL     | 5.0        | ug/l   | 8021B      | 03/17/15 | 1    |
| Ethylbenzene                | BDL     | 0.50       | ug/l   | 8021B      | 03/17/15 | 1    |
| Total Xylene                | BDL     | 1.5        | ug/l   | 8021B      | 03/17/15 | 1    |
| Surrogate Recovery(%)       |         |            |        |            |          |      |
| a,a,a-Trifluorotoluene(PID) | 101.    |            | % Rec. | 8021B      | 03/17/15 | 1    |

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/25/15 10:21 Printed: 03/25/15 10:22



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| Analyte                     | Result  | Laboratory Blank |       | Limit  | Batch    | Date Analyzed  |
|-----------------------------|---------|------------------|-------|--------|----------|----------------|
|                             |         | Units            | % Rec |        |          |                |
| Benzene                     | < .0005 | mg/l             |       |        | WG775895 | 03/17/15 00:00 |
| Ethylbenzene                | < .0005 | mg/l             |       |        | WG775895 | 03/17/15 00:00 |
| Toluene                     | < .005  | mg/l             |       |        | WG775895 | 03/17/15 00:00 |
| Total Xylene                | < .0015 | mg/l             |       |        | WG775895 | 03/17/15 00:00 |
| a,a,a-Trifluorotoluene(PID) |         | % Rec.           | 100.0 | 55-122 | WG775895 | 03/17/15 00:00 |
| Dissolved Solids            | < 10    | mg/l             |       |        | WG776309 | 03/19/15 15:26 |
| Dissolved Solids            | < 10    | mg/l             |       |        | WG776310 | 03/19/15 15:42 |
| Chloride                    | < 1     | mg/l             |       |        | WG776589 | 03/20/15 11:22 |
| Sulfate                     | < 5     | mg/l             |       |        | WG776589 | 03/20/15 11:22 |
| Benzene                     | < .0005 | mg/l             |       |        | WG776983 | 03/20/15 13:19 |
| Ethylbenzene                | < .0005 | mg/l             |       |        | WG776983 | 03/20/15 13:19 |
| Toluene                     | < .005  | mg/l             |       |        | WG776983 | 03/20/15 13:19 |
| Total Xylene                | < .0015 | mg/l             |       |        | WG776983 | 03/20/15 13:19 |
| a,a,a-Trifluorotoluene(PID) |         | % Rec.           | 98.50 | 55-122 | WG776983 | 03/20/15 13:19 |
| Chloride                    | < 1     | mg/l             |       |        | WG777072 | 03/20/15 17:45 |
| Sulfate                     | < 5     | mg/l             |       |        | WG777072 | 03/20/15 17:45 |
| Sulfate                     | < 5     | mg/l             |       |        | WG777268 | 03/23/15 20:29 |
| Chloride                    | < 1     | mg/l             |       |        | WG776925 | 03/23/15 22:10 |
| Sulfate                     | < 5     | mg/l             |       |        | WG776925 | 03/23/15 22:10 |

| Analyte          | Units | Result | Duplicate |      | Limit | Ref Samp   | Batch    |
|------------------|-------|--------|-----------|------|-------|------------|----------|
|                  |       |        | Duplicate | RPD  |       |            |          |
| Dissolved Solids | mg/l  | 295.   | 291.      | 1.37 | 5     | L753318-01 | WG776309 |
| Dissolved Solids | mg/l  | 1150   | 1180      | 2.57 | 5     | L753650-09 | WG776310 |
| Chloride         | mg/l  | 29.0   | 29.3      | 1.00 | 20    | L753315-18 | WG776589 |
| Sulfate          | mg/l  | 100.   | 106.      | 0.0  | 20    | L753315-18 | WG776589 |
| Chloride         | mg/l  | 59.0   | 58.7      | 0.0  | 20    | L753465-04 | WG776589 |
| Sulfate          | mg/l  | 10.0   | 10.2      | 0.0  | 20    | L753465-04 | WG776589 |
| Chloride         | mg/l  | 16.0   | 16.4      | 0.0  | 20    | L753650-06 | WG777072 |
| Chloride         | mg/l  | 33.0   | 32.1      | 2.00 | 20    | L753696-05 | WG777072 |
| Sulfate          | mg/l  | 12.0   | 11.8      | 0.0  | 20    | L753696-05 | WG777072 |
| Sulfate          | mg/l  | 240.   | 244.      | 0.0  | 20    | L753650-06 | WG777072 |
| Sulfate          | mg/l  | 30.0   | 30.1      | 0.0  | 20    | L754345-05 | WG777268 |
| Sulfate          | mg/l  | 150.   | 147.      | 0.0  | 20    | L753506-02 | WG777268 |

\* Performance of this Analyte is outside of established criteria.  
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| Analyte  | Units | Result | Duplicate |  | RPD | Limit | Ref Samp   | Batch    |
|----------|-------|--------|-----------|--|-----|-------|------------|----------|
|          |       |        | Duplicate |  |     |       |            |          |
| Sulfate  | mg/l  | 32.0   | 31.8      |  | 0.0 | 20    | L753539-13 | WG776925 |
| Chloride | mg/l  | 0.0    | -0.262    |  | 0.0 | 20    | L753615-03 | WG776925 |
| Sulfate  | mg/l  | 0.0    | 0.0377    |  | 0.0 | 20    | L753615-03 | WG776925 |

| Analyte                     | Units | Laboratory Control Sample |        | % Rec | Limit  | Batch    |
|-----------------------------|-------|---------------------------|--------|-------|--------|----------|
|                             |       | Known Val                 | Result |       |        |          |
| Benzene                     | mg/l  | .05                       | 0.0442 | 88.4  | 70-130 | WG775895 |
| Ethylbenzene                | mg/l  | .05                       | 0.0459 | 91.7  | 70-130 | WG775895 |
| Toluene                     | mg/l  | .05                       | 0.0442 | 88.5  | 70-130 | WG775895 |
| Total Xylene                | mg/l  | .15                       | 0.139  | 92.7  | 70-130 | WG775895 |
| a,a,a-Trifluorotoluene(PID) |       |                           |        | 99.30 | 55-122 | WG775895 |
| Dissolved Solids            | mg/l  | 8800                      | 8820   | 100.  | 85-115 | WG776309 |
| Dissolved Solids            | mg/l  | 8800                      | 8720   | 99.1  | 85-115 | WG776310 |
| Chloride                    | mg/l  | 40                        | 39.6   | 99.0  | 90-110 | WG776589 |
| Sulfate                     | mg/l  | 40                        | 40.0   | 100.  | 90-110 | WG776589 |
| Benzene                     | mg/l  | .05                       | 0.0470 | 94.0  | 70-130 | WG776983 |
| Ethylbenzene                | mg/l  | .05                       | 0.0483 | 96.6  | 70-130 | WG776983 |
| Toluene                     | mg/l  | .05                       | 0.0469 | 93.9  | 70-130 | WG776983 |
| Total Xylene                | mg/l  | .15                       | 0.147  | 97.8  | 70-130 | WG776983 |
| a,a,a-Trifluorotoluene(PID) |       |                           |        | 97.70 | 55-122 | WG776983 |
| Chloride                    | mg/l  | 40                        | 39.8   | 100.  | 90-110 | WG777072 |
| Sulfate                     | mg/l  | 40                        | 40.0   | 100.  | 90-110 | WG777072 |
| Sulfate                     | mg/l  | 40                        | 39.9   | 100.  | 90-110 | WG777268 |
| Chloride                    | mg/l  | 40                        | 40.0   | 100.  | 90-110 | WG776925 |
| Sulfate                     | mg/l  | 40                        | 40.8   | 102.  | 90-110 | WG776925 |

| Analyte                     | Units | Laboratory Control |        | Sample Duplicate | Limit  | RPD  | Limit | Batch    |
|-----------------------------|-------|--------------------|--------|------------------|--------|------|-------|----------|
|                             |       | Result             | Ref    | %Rec             |        |      |       |          |
| Benzene                     | mg/l  | 0.0462             | 0.0442 | 92.0             | 70-130 | 4.30 | 20    | WG775895 |
| Ethylbenzene                | mg/l  | 0.0472             | 0.0459 | 94.0             | 70-130 | 2.96 | 20    | WG775895 |
| Toluene                     | mg/l  | 0.0455             | 0.0442 | 91.0             | 70-130 | 2.85 | 20    | WG775895 |
| Total Xylene                | mg/l  | 0.143              | 0.139  | 95.0             | 70-130 | 2.79 | 20    | WG775895 |
| a,a,a-Trifluorotoluene(PID) |       |                    |        | 99.00            | 55-122 |      |       | WG775895 |
| Dissolved Solids            | mg/l  | 8680               | 8820   | 99.0             | 85-115 | 1.60 | 5     | WG776309 |
| Dissolved Solids            | mg/l  | 8720               | 8720   | 99.0             | 85-115 | 0.00 | 5     | WG776310 |
| Chloride                    | mg/l  | 39.4               | 39.6   | 98.0             | 90-110 | 1.00 | 20    | WG776589 |
| Sulfate                     | mg/l  | 39.6               | 40.0   | 99.0             | 90-110 | 1.00 | 20    | WG776589 |

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| Analyte                     | Units | Laboratory Control Sample Duplicate |        |       | Limit  | RPD   | Limit | Batch    |
|-----------------------------|-------|-------------------------------------|--------|-------|--------|-------|-------|----------|
|                             |       | Result                              | Ref    | %Rec  |        |       |       |          |
| Benzene                     | mg/l  | 0.0481                              | 0.0470 | 96.0  | 70-130 | 2.21  | 20    | WG776983 |
| Ethylbenzene                | mg/l  | 0.0486                              | 0.0483 | 97.0  | 70-130 | 0.560 | 20    | WG776983 |
| Toluene                     | mg/l  | 0.0472                              | 0.0469 | 94.0  | 70-130 | 0.520 | 20    | WG776983 |
| Total Xylene                | mg/l  | 0.147                               | 0.147  | 98.0  | 70-130 | 0.100 | 20    | WG776983 |
| a,a,a-Trifluorotoluene(PID) |       |                                     |        | 97.50 | 55-122 |       |       | WG776983 |
| Chloride                    | mg/l  | 39.5                                | 39.8   | 99.0  | 90-110 | 1.00  | 20    | WG777072 |
| Sulfate                     | mg/l  | 39.9                                | 40.0   | 100.  | 90-110 | 0.0   | 20    | WG777072 |
| Sulfate                     | mg/l  | 40.0                                | 39.9   | 100.  | 90-110 | 0.0   | 20    | WG777268 |
| Chloride                    | mg/l  | 40.0                                | 40.0   | 100.  | 90-110 | 0.0   | 20    | WG776925 |
| Sulfate                     | mg/l  | 40.9                                | 40.8   | 102.  | 90-110 | 0.0   | 20    | WG776925 |

| Analyte                     | Units | Matrix Spike |           |     | % Rec | Limit    | Ref Samp   | Batch    |
|-----------------------------|-------|--------------|-----------|-----|-------|----------|------------|----------|
|                             |       | MS Res       | Ref Res   | TV  |       |          |            |          |
| Benzene                     | mg/l  | 0.0454       | 0.0       | .05 | 91.0  | 57.2-131 | L753650-04 | WG775895 |
| Ethylbenzene                | mg/l  | 0.0467       | 0.0       | .05 | 94.0  | 67.5-135 | L753650-04 | WG775895 |
| Toluene                     | mg/l  | 0.0449       | 0.0       | .05 | 90.0  | 63.7-134 | L753650-04 | WG775895 |
| Total Xylene                | mg/l  | 0.141        | 0.0000980 | .15 | 94.0  | 65.9-138 | L753650-04 | WG775895 |
| a,a,a-Trifluorotoluene(PID) |       |              |           |     | 98.70 | 55-122   |            | WG775895 |
| Chloride                    | mg/l  | 127.         | 25.7      | 25  | 100.  | 80-120   | L753315-17 | WG776589 |
| Sulfate                     | mg/l  | 250.         | 152.      | 25  | 98.0  | 80-120   | L753315-17 | WG776589 |
| Benzene                     | mg/l  | 1.71         | 1.93      | .05 | 0.0*  | 57.2-131 | L753511-02 | WG776983 |
| Ethylbenzene                | mg/l  | 0.545        | 0.613     | .05 | 0.0*  | 67.5-135 | L753511-02 | WG776983 |
| Toluene                     | mg/l  | 0.906        | 1.03      | .05 | 0.0*  | 63.7-134 | L753511-02 | WG776983 |
| Total Xylene                | mg/l  | 0.896        | 0.967     | .15 | 0.0*  | 65.9-138 | L753511-02 | WG776983 |
| a,a,a-Trifluorotoluene(PID) |       |              |           |     | 90.60 | 55-122   |            | WG776983 |
| Chloride                    | mg/l  | 62.8         | 12.0      | 50  | 100.  | 80-120   | L753650-05 | WG777072 |
| Sulfate                     | mg/l  | 453.         | 204.      | 10  | 100.  | 80-120   | L753650-05 | WG777072 |
| Sulfate                     | mg/l  | 91.6         | 44.3      | 50  | 95.0  | 80-120   | L754379-03 | WG777268 |
| Sulfate                     | mg/l  | 92.3         | 45.7      | 50  | 93.0  | 80-120   | L753547-01 | WG776925 |

| Analyte                     | Units | Matrix Spike Duplicate |        |       | Limit    | RPD  | Limit | Ref Samp   | Batch    |
|-----------------------------|-------|------------------------|--------|-------|----------|------|-------|------------|----------|
|                             |       | MSD                    | Ref    | %Rec  |          |      |       |            |          |
| Benzene                     | mg/l  | 0.0471                 | 0.0454 | 94.2  | 57.2-131 | 3.56 | 20    | L753650-04 | WG775895 |
| Ethylbenzene                | mg/l  | 0.0485                 | 0.0467 | 96.9  | 67.5-135 | 3.59 | 20    | L753650-04 | WG775895 |
| Toluene                     | mg/l  | 0.0466                 | 0.0449 | 93.3  | 63.7-134 | 3.75 | 20    | L753650-04 | WG775895 |
| Total Xylene                | mg/l  | 0.147                  | 0.141  | 98.0  | 65.9-138 | 3.95 | 20    | L753650-04 | WG775895 |
| a,a,a-Trifluorotoluene(PID) |       |                        |        | 99.10 | 55-122   |      |       |            | WG775895 |
| Chloride                    | mg/l  | 127.                   | 127.   | 202.* | 80-120   | 0.0  | 20    | L753315-17 | WG776589 |
| Sulfate                     | mg/l  | 250.                   | 250.   | 196.* | 80-120   | 0.0  | 20    | L753315-17 | WG776589 |

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| Analyte                     | Units | MSD   | Matrix Spike Duplicate |       | Limit    | RPD  | Limit | Ref Samp   | Batch    |
|-----------------------------|-------|-------|------------------------|-------|----------|------|-------|------------|----------|
|                             |       |       | Ref                    | %Rec  |          |      |       |            |          |
| Benzene                     | mg/l  | 1.76  | 1.71                   | 0*    | 57.2-131 | 2.89 | 20    | L753511-02 | WG776983 |
| Ethylbenzene                | mg/l  | 0.567 | 0.545                  | 0*    | 67.5-135 | 3.95 | 20    | L753511-02 | WG776983 |
| Toluene                     | mg/l  | 0.941 | 0.906                  | 0*    | 63.7-134 | 3.80 | 20    | L753511-02 | WG776983 |
| Total Xylene                | mg/l  | 0.942 | 0.896                  | 0*    | 65.9-138 | 5.02 | 20    | L753511-02 | WG776983 |
| a,a,a-Trifluorotoluene(PID) |       |       |                        | 90.80 | 55-122   |      |       |            | WG776983 |
| Chloride                    | mg/l  | 62.8  | 62.8                   | 102.  | 80-120   | 0.0  | 20    | L753650-05 | WG777072 |
| Sulfate                     | mg/l  | 453.  | 453.                   | 498.* | 80-120   | 0.0  | 20    | L753650-05 | WG777072 |
| Sulfate                     | mg/l  | 91.2  | 91.6                   | 93.8  | 80-120   | 0.0  | 20    | L754379-03 | WG777268 |
| Sulfate                     | mg/l  | 91.7  | 92.3                   | 92.2  | 80-120   | 1.00 | 20    | L753547-01 | WG776925 |

Batch number /Run number / Sample number cross reference

WG775895: R3025717: L753650-04 05 06 07 08 09 10 11 12  
WG776309: R3025728: L753650-01 02 03 04 05 06 07 08  
WG776310: R3025735: L753650-09 10 11 12  
WG776589: R3026081: L753650-02 03 04  
WG776983: R3026209: L753650-01 02 03  
WG777072: R3026385: L753650-05 06 07 08 09 10 11 12  
WG777268: R3026542: L753650-02  
WG776925: R3026710: L753650-01

\* \* Calculations are performed prior to rounding of reported values.

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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.