2024
ANNUAL HYDROLOGIC REPORT

BOWIE RESOURCES, LLC

BOWIE RESOURCES, LLC
BOWIE NO. 2 MINE
P.O. BOX 483
PAONIA, COLORADO 81428
PERMIT C-1996-083

PREPARED BY:

Tamme Bishop, P.E.
Consulting Engineer

2024 Annual Hydrology Report

Bowie Resources, LLC

Bowie No. 2 Mine

Permit Number C-1996-083

Paonia, Colorado

Introduction

The Bowie No. 2 Mine was built and opened by Bowie Resources during the spring and summer months of 1997 with coal production/development beginning on August 15, 1997. This room and pillar operation began developing a main and submain system of underground entries to provide the ventilation, haulage and coal conveyor support for years to come. These entries are driven carefully on projections, held to minimum widths with larger than normal coal pillars left in place to assure adequate support for the life of the mine. The mine began longwall production during November 1999.

The following 2024 Annual Hydrology Report describes the hydrologic monitoring for surface and ground water within the permit and adjacent area of the Bowie No. 2 Mine and presents baseline data for the natural mine plan progression.

In this report, springs, ponds and streams (including ditches, rivers, and canals) are considered surface water. Alluvial wells and drill holes are sampled and analyzed as ground water. Please refer to the permit application for a discussion of the methods employed during the gathering of field parameters. Permit Map-09 (attached as an exhibit in this report) indicates the location of all monitoring points referred to in this report.

At the request of the Division, we have included baseline data for all Springs, Streams, Drill Holes and Alluvial Wells on the annual tabulation figures. Previously, parameters not tested and tested but found below the Method Detection Limit (MDL) were left blank. Blank cells represent a "not tested" condition, while a "<MDL" notation is made for the condition where a parameter falls below the Method Detection Limit. Additional requests from the Division during the approval process for PR-04 have added other improvements to the tables, including minimum/maximum/average values for the baseline period and minimum/maximum/average values for the operational influenced period of the monitoring point.

Table 1 (immediately following this narrative) defines the monitoring points by type and sample frequency, field parameter sampling schedule and laboratory parameter sampling schedule.

Table 2 contains a listing of the laboratory parameters for surface and ground water to be tested in accordance with the mining permit application. Laboratory analysis are performed by ACZ Laboratories, INC., 2773 Downhill Dr, Steamboat Springs, CO 80407 and Enviro-Chem Analytical, Inc., 685 West Gunnison Avenue, Grand Junction, CO.

Table 3 contains a listing of the field parameters and their application to the Springs, Streams, Drill Holes and Ponds within the permit boundary. Flow readings for springs and small streams are reported in gallons per minute. Stream and river flows are reported in cubic feet per second.

Table 4 contains local precipitation data for the year. This data is available from the internet at www.wrcc.dri.edu/summary/Climsmco.html select Paonia 1 SW (056306). The average precipitation for the period of record (1893 through 2016) is 15.39 inches. Data recorded at the Bowie no. 2 mine site through December 31, 2024 is 12.99 inches, which is below average. That number does not necessarily reflect the total snowfall received at the mine, overall the precipitation was average when snowfall is taken into account.

Table 5 contains a listing of all monitoring points, with descriptions of their locations and a reference to the Monitoring Point Figure that contains this year's monitoring data. The included charts are given a figure number. During 2015 and 2016, approval of Technical Revision Nos. 103 and 107 eliminated, or temporarily suspended forty-seven (47) monitoring points. Table 5 hi-lights the changes to the monitoring program.

Monitoring point figures follow this introduction. Each Monitoring Point has an individual table which tabulates the annual data collection and reports Minimum, Maximum, Average and Baseline data. A reference in each footnote explains the period used for baseline data.

Flow data for the North Fork of the Gunnison River is obtained from the USGS from a website http://nwis-colo.cr.usgs.gov/historic.html. This flow reading is obtained telemetrically from a station near Somerset, CO and is reflective of upper river flows only. This monitoring point is identified by the USGS as 09132500.

Flow data for the Fire Mountain Canal is obtained from Mr. Trey Dennison, member of the Fire Mountain Canal and Reservoir Company, whose phone number is (970) 527-5166 or cell (970) 589-2857. This flow is representative of the upper and lower flows.

Monitoring point identifiers near the mine portals are historic and follow no specific naming convention. Monitoring points located in other areas typically follow a convention where the first letter(s) designates a water source type, such as "S" for Spring or "SP" for Spring and Pond. The numeral(s) following the first letter designate what Section the water source is located, for instance, SP34-2 would be a spring and pond in Section 34. The numeral separated with a dash indicates an index number for that point. SP34-2 would be the second monitoring point found in Section 34.

CDPS Monitoring Points

DMRs are submitted monthly to the Colorado Department of Public Health and Environment with copies to the Division of Reclamation, Mining and Safety and are included herein by reference.

North Fork Alluvium Monitoring Wells

Alluvial monitoring wells AW-1 through AW-6 are located near the mine entrance along the north side of Bowie Road. These wells are monitored quarterly for field parameters and semi-annually for full suite laboratory parameters during the second and fourth quarters in accordance with the permit application. Alluvial monitoring wells AW-7 through AW-9 are located near the mine entrance along the south side of Bowie Road. AW-10 cannot be reliably sampled due to a collapse of the casing, and was eliminated from the monitoring plan. These wells were installed as a requirement of PR-03 which allowed the mine operator to relocate Sediment Pond B to the south side of the highway. Alluvial Wells 11 through 13 were installed during the fall of 2000 to monitor the alluvium in the area where the new coal loadout (PR-06) was constructed. Alluvial well 13 was eliminated by the construction of the unit train loadout. Alluvial well 14 was installed during 2003 west of Pond K. Alluvial wells 15 through 17 were installed during the fourth quarter of 2003 and are located north of Bowie Road below coal mine waste disposal area #2.

The 2024 sampling season provides results consistent with baseline information provided in the permit application, showing no adverse impact to groundwater during the construction of the mine, however 2024 was relatively dry through the summer and beginning of summer, so laboratory samples were not obtained for many well sites. There has not been any significant degradation of alluvial wells 11 and 12 which are located below gob pile #3. Although it has been trending higher, Alluvial well 6 did not have high conductivity values this year. Alluvial well 3's conductivity values are also trending higher, but did not record a high conductivity this year. The well is located below the coal stockpile pad, which has not held a significant amount of coal for the last two years. However, looking at the chart associated with AW-3, since November 1996 it too has been trending higher.

Surface Water Monitoring Stations: PONDS

Ponds were sampled for water quality when discharging or inflows/outflows were occurring. Ponds are typically spring-fed or seep-fed and exhibit diffuse non-concentrated areas of inflow. Often the pond outlets present the only point of concentrated flow at which flow measurements and field parameters can be obtained.

Where possible, quality measurements are obtained at the pond inlet. Stagnant water in ponds is not sampled since water quality results would show the effects of evaporation and stock use and could not be used to evaluate potential mine affects. Ponds are monitored quarterly. The following information is collected for the ponds; 1) inflow; 2) outflow; and 3) water level below spillway outlet or depth of water in pond measured from the bottom of the pond. Field data collected during the 2024 sampling season is consistent with baseline information provided in the permit application.

Surface Water Monitoring Stations: SPRINGS

Forty-nine springs and springs with ponds were monitored during the 2024 monitoring season in accordance with the Hydrologic Monitoring Plan. This plan indicates that identified springs will be inspected quarterly for field parameters with full suite laboratory parameters required on springs with flows greater than five (5) gallons per minute. During the construction phase of the mine, four (4) springs (S-6, S-7, S-9 and S-15) were eliminated by road and portal bench construction activities. The 2024 field and laboratory analysis are consistent with baseline data provided in the permit application. There has been a trend in many of the springs that shows the conductivity increases as the flow decreases. This trend is most likely caused by the increased time the water is in contact with the alluvium because of the lower flows.

Surface Water Monitoring Stations: STREAMS AND DITCHES

Twenty-three surface water monitoring stations including the North Fork of the Gunnison, Terror Creek, Hubbard Creek, Freeman Gulch, the Deer Trail Ditch, Stephens Draw, and the Fire Mountain Canal are monitored quarterly for field parameters and semi-annually for full suite analysis. The results of the 2024 field and laboratory studies are consistent with baseline information supplied in the permit application.

The USGS, with right of way permission from the USDA-Forest Service, installed continuous monitoring stations on both Hubbard and Terror Creeks. Similar stations are installed near each creek's confluence with the North Fork of the Gunnison River. These stations have been calibrated by the USGS's hydrology department and now provide accurate readings for the Annual Hydrology Reports. The USGS did not collect flow data for their station during 2024. Flow data for the creeks were determined by Bowie Resources, LLC during 2024.

Surface Water Monitoring Stations: SMALL AREA EXEMPTIONS

The locations of the small area exemptions are presented on Map 20. The Applicant will monitor the flow from the small area exemptions to assure compliance with 4.05.2(3). The Applicant will use its best efforts to obtain samples. The samples will be

analyzed for pH, conductivity and total settleable solids. Samples will be in compliance if they contain settleable solid levels of 0.5 ml/l or less and the pH is greater than 6.5 and less than 9.0. No small area exemption sampling was performed during the year.

Coal Member of Mesaverde

Eleven bedrock wells were monitored during the 2024 sampling season. These holes were monitored quarterly for field parameters and semi-annually for full suite laboratory analysis. Data collected and evaluated is consistent with the baseline information provided in the permit application except for DH-39 which is adjacent to the repaired DH-15. DH-39 did not have higher than average conductivity for the one quarter it was monitored, but not as high as in 2022. The trend in increased conductivity began after DH-15 was sealed and replaced with DH-15A, see description in the following paragraph. DH-58A had slightly higher than average conductivity values for this year, but nothing of major concern. The mine construction work during 1997 required the elimination of four monitored drill holes. These holes are DH 42, DH 52, DH 54 and DH 55 and were located near the mine portals. Drill Holes DH-13 and DH-34b were eliminated by mining. Drill hole DH-34c was damaged by ground movement. DH-16 is blocked at 60-feet so no monitoring can be performed. Drill Holes DH-57, 57a and DH-58, 58a were added in conjunction with the Terror Creek Coal Exploration Plan, with monitoring beginning in the fall of 1999. Drill holes DH-57 and DH57a were destroyed by longwall mining during 2001. DH-58 and 58a were eliminated by mining during late 2003 so they are no longer monitored.

D-Seam monitoring wells DH-15, DH-25 and DH-38 can no longer be monitored since all three have damaged well casings. During 2016, DH-15 was sealed and replaced by new D-Seam monitoring well DH-15A. The new well is located near the old monitoring well. Monitoring of DH-15A began the fourth quarter of 2016. Conductivity was not elevated at DH15A during the 2Q both in the field and laboratory data, nor were TDS, sulfate, dissolved Calcium and Nitrogen/Ammonia were slightly high although not significantly higher than in 2022. It is unknown why these data points have been high, and it is unknown if the high values will return next year, or if the water will remain average. The data will once again be monitored in next years' report to determine if there is a trend. It is unclear what the new normal may be based on drilling and installing DH-15A.

Drill holes DH-65, DH-66, DH-67D, DH-67blw and DH-67abv were added in conjunction with the Iron Point Federal coal lease, with some monitoring beginning during the fall of 2000. DH-67D was damaged during 2003 so no monitoring was performed. The DH-67 holes were refurbished during 2004. DH-66 was eliminated by mining during early 2004 so it is no longer monitored. DH-67blw had a pinched casing so a new DH-67blw was drilled during 2014. The Operator was not able to obtain a sample from DH 67B

this year during the second quarter. The site was not accessible during the 1Q.

Drill holes DD-NM4X98-27, 28 and 29 were in-mine monitoring holes which were added to the monitoring program during 2003. The three monitoring points were abandoned when the mine activity retreated from the east mains in mid 2004. TC-03-01, 02 and 03 were added to the monitoring program during 2003. TC-03-03 was sealed in 2010 because a ventilation shaft was constructed where TC-03-03 was located. Monitoring wells TC-03-01 and TC-03-02 could not be rehabilitated during 2014. The wells could be used as water level piezometers but the wells are not functional for water quality data. Monitoring results for these well is of questionable value.

Drill holes CWI-DH-58 and CWI-DH-60 were added to the monitoring program in 2011 with the approval of permit revision 12 to cover the area west of Terror Creek. Monitoring well CWI-DH-60 was cleaned and rehabilitated between August 20 and August 23, 2014. On August 22, 2014, the well was evacuated using the airlift and bailing techniques and the water quality showed a pH of 7.70 s.u., conductivity of 863 µS/cm, and temperature of 20.5° C. After a 12 hour recovery period, the SWL was measured at 892.0 feet btoc (August 23, 2014).

A new well CWI-DH-58a was drilled to replace CWI-DH-58 late in 2014. The Applicant drilled DH-2010-1SS and DH-2010-1B during 2011. DH-2010-1B is completed in the B-Seam and DH-2010-1SS is completed in a water bearing zone above the B-Seam. Drill hole 2010-1B was refurbished during 2014. After the 2014 well rehabilitation work, 2010-1B had the following water quality: pH 9.75 su, conductivity 277 umhos/cm, total iron 4.31 mg/l, manganese 0.0621 mg/l.

Conclusion

The results of the hydrologic monitoring conducted during the 2024 season indicate consistent chemical and physical properties when compared with the baseline values provided in the permit application. Longwall mining is the focus of all mining operations at Bowie No. 2 Mine. Longwall mining ceased February 26, 2016 so there was no mining during the calendar year. Prior mining has not affected the local hydrology during the current year. Water quality at all monitored sites remains good overall and no chemical or physical impacts have been noted. Except as noted above, none of the field or laboratory parameter results indicate an adverse impact associated with the mining operations of the Bowie No. 2 Mine on the local hydrology.

Many sites require four quarters of sampling for field parameters (Terror Creek Drainage system, Dove Gulch, nearly all of the Ponds, many of the S-Series Springs,

etc.). However, due to drought conditions and or/snow during the winter months, many sites did not have water available to obtain samples for field or laboratory parameters. In those cases, if there were field parameters obtained and no laboratory data listed, it means there was not enough water to obtain a sample to send to the lab.

Summary of Hydrology Monitoring Stations

Station Number	Station Name	Elevation (ft.)	Depth (ft.)	Frequency of Measurements		Report Frequency	Report Format		Comments
				Field Par.	Lab. Par.		AHR	DMR	
Surface Water Monitoring - SPRINGS WITH PONDS									
SP5-1	Pond & Spring on W side of Terror Creek	7400		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP6-4	Pond & Spring on S side of West Fork Terror Creek	8040		Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
SP7-1	Pond & Spring on W side of Terror Creek	7780		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP7-5	Pond & Spring on E side Stevens Gulch	8300		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP12-4	Pond & Spring on W Side Stevens Gulch	8040		Quarterly	Quarterly	Annually	Yes	No	Permanently Suspended TR-103
SP16	Pond & spring on S side West Fork Terror Creek	7780		Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
SP17	Pond & Spring on W side of Terror Creek - Section 5	7520		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP18	Pond & Spring on W side of Terror Creek - Section 5	7280		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP19	Pond & Spring on E side Stevens Gulch-Section 7	8240		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP20	Pond & Spring on W side of Terror Creek - Section 7	7840	4	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP22	Pond & Spring on W side of Terror Creek - Section 8	7560		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP23	Pond & Spring on E side Stevens Gulch-Section 7	7480		Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
SP34-11	Spring & Pond in Sheel Corral Gulch	7440	3	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
ST36-2	Flat Tanks above Stevens Gulch Road	8160		Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
ST36-4	Tank and Spring below Stevens Gulch Road	8040		Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
ST36-5	Tank and Spring above Stevens Gulch Road	8240		Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
Surface Water Monitoring - SPRINGS									
S-1	Mine Site Area	6990	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-2	J&M Spring & PL No. 2	7920	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-3	Freeman Gulch	7920	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-4	J&M Spring & PL No. 3	7880	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-4a	J&M Spring & PL No. 3	7910	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-5	J&M Spring & PL No.1	7800	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-5a	J&M Spring & PL No. 1	7860	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-5b	J&M Spring Y PL No.1	7860	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-6	Eliminated by 1997 Construction								
S-7	Eliminated by 1997 Construction								
S-8	C Gulch	7220	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-9	Eliminated by 1997 Construction								
S-10	Steven's Draw	7550	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-11	Steven's Draw	7940	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-12	B Gulch	7650	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-13	Freeman Gulch	7500	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-14	Steven's Draw	7100	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-15	Eliminated by 1997 Construction								
S-16	J&M Spring & PL No. 4	7750	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-17	Freeman Gulch-Cottonwood on sandstone outcrop	7110	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S-18	J&M Spring & PL No. 5	7750	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1

Summary of Hydrology Monitoring Stations (Continued)

Station Number	Station Name	Elevation (ft.)	Depth (ft.)	Frequency of Measurements		Report Frequency	Report Format		Comments
				Field Par.	Lab. Par.		AHR	DMR	
Surface Water Monitoring Stations - SPRINGS (cont.)									
S1-3	Spring in W Fork Terror Creek	7860	N/A	Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
S1-5	Spring in W Fork Terror Creek	8020	N/A	Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
S2-2	Along Hubbard Creek Freeman Gulch road	6740	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S2-3	Along Hubbard Creek Freeman Gulch road	6740	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S2-9	Along Hubbard Creek Road	6320	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S2-10	Along Hubbard Creek Road	6320	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S3-1	Spring in Sheep Corral	6840	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S5-2	Seep West of Terror Creek Road	7200	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S5-3	Red's Spring & Pipeline	7200	N/A	Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-107
S5-4	Hugh's Family Pipe & Spring	7320	N/A	Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-107
S6-1	Spring on S Side of W Fork of Terror Creek	7720	N/A	Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103
S6-6	Spring on West side of Terror Creek	7860	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S6-7	Spring on S Side of W Fork of Terror Creek (Conc Box)	7600	N/A	Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-107
S7-4	Spring on East side of Stevens Gulch	8190	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S7-9	Spring on W side of Terror Creek	7800	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S7-10	Spring on W side of Terror Creek	7880	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S8-5	Spring on W side of Terror Creek	7800	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S21	Spring on W. side of Terror Creek - Section 8	7100	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S33-4	Spring in Sheep Corral on the upper end of draw	7790	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-7	Spring along Sheep Corral Gulch along road	7390	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-10	Spring in Dove Gulch from Hubbard Side	6640	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-19	Along Hubbard Creek	6460	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-20	Along Hubbard Creek	6440	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-21	Along Hubbard Creek	6430	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-22	Spring in Dove Gulch from Hubbard Side	6700	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-23	Spring in Dove Gulch from Hubbard Side	6650	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-24	Along Hubbard Creek	6390	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S34-25	Spring in Dove Gulch from Hubbard Side	6680	N/A	Quarterly	Quarterly	Annually	Yes	No	No winter monitoring - Lab analysis >5gpm, List 1
S36-7	Seeps 11 Below Stevens Gulch Rd	8120	N/A	Quarterly	Quarterly	Annually	Yes	No	Temporarily Suspended TR-103

Summary of Hydrology Monitoring Stations (Continued)

Station Number	Station Name	Elevation (ft.)	Depth (ft.)	Frequency of Measurements		Report Frequency	Report Format		Comments
				Field Par.	Lab. Par.		AHR	DMR	
Surface Water Monitoring Stations - STREAMS AND DITCHES									
A-Gulch-lo	Lower A Gulch	5960	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
B-Gulch-lo	Lower B Gulch	5960	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
B-Gulch-up	Upper B Gulch	7080	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
C-Gulch-lo	Lower C Gulch	5960	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
C-Gulch-up	Upper C Gulch	7120	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
D2-1	Lower Sheep Corral Gulch	6360	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
D21-1	Downstream Terror Creek-Confluence w/NFG	5760	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monit-2nd & 4th Qrt, List 1-Flow USGS
D32-4	East Fork Terror Creek	7480	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monit-2nd & 4th Qrt, List 1-Flow USGS
D33-14	Upper Sheep Corral Gulch	7320	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
D34-13	Lower Dove Gulch	6440	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
D34-14	Upper Hubbard Creek near Iron Point	6560	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monit-2nd & 4th Qrt, List 1-Flow USGS
Deer-low	Lower Deer Trail Ditch	5920	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monit-2nd & 4th Qrt, List 1-Aug, List 2
Deer-up	Upper Deer Trail Ditch	5960	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monit-2nd & 4th Qrt, List 1-Aug, List 2
D-Gulch-lo	Lower D Gulch	5960	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
D-Gulch-up	Upper D Gulch	7160	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
FMC-Low	Lower Fire Mountain Canal	5920	N/A	May/Jul/Sep	Semi-Annually	Annually	Yes	No	No winter monitoring - 1st & 3rd Qrt, List 1
FMC-up	Upper Fire Mountain Canal	5960	N/A	May/Jul/Sep	Semi-Annually	Annually	Yes	No	No winter monitoring - 1st & 3rd Qrt, List 1
Free-low	Lower Freeman Gulch	7560	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
Free-up	Upper Freeman Gulch	6360	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
Hub-low	Lower Hubbard Creek	5880	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monit-2nd & 4th Qrt, List 1-Flow USGS
Hub-up	Upper Hubbard Creek	6320	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
NFG-low	Lower North Fork of The Gunnison	5680	N/A	Quarterly	Semi-Annually	Annually	Yes	No	2nd & 4th Qrt, List 1 - August, List 2 - Flow USGS
NFG-up	Upper North Fork of The Gunnison	5880	N/A	Quarterly	Semi-Annually	Annually	Yes	No	2nd & 4th Qrt, List 1 - August, List 2 - Flow USGS
Steph-low	Lower Steven's Draw	7000	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
Steph-up	Upper Steven's Draw	7920	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
SW-01	Downstream West Fork Terror Creek	7140	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
SW-02	Mid-Stream Terror Creek	7040	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
SW-04	Upstream West Terror Creek	7880	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Inactive, replaced by SW-12
SW-05	Downstream Stevens Gulch	6600	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
SW-10	Terror Ditch	6480	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
SW-11	Upstrea Stevens Gulch	8084	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
SW-12	Upstream West Fork Terror Creek	7920	N/A	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring - 2nd & 4th Qrt, List 1
EF-1, 7, 8, 9	West Fork Ephemeral Channels	Varies	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Temporarily Suspended TR-107
EF-2, 3, 4, 5, 6	West Fork Ephemeral Channels	Varies	N/A	Quarterly	Semi-Annually	Annually	Yes	No	Temporarily Suspended TR-103

Summary of Hydrology Monitoring Stations (Continued)

Station Number	Station Name	Elevation (ft.)	Depth (ft.)	Frequency of Measurements		Report Frequency	Report Format		Comments
				Field Par.	Lab. Par.		AHR	DMR	
Coal Member of Mesaverde									
DH-15	Steven's Draw	7143	218	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
DH-25	C Gulch Water Level Only	7144	325	Quarterly	N/A	Annually	Yes	No	Permanently Suspended TR-103
DH-38	Water Level Only D Gulch	7245	454	Quarterly	N/A	Annually	Yes	No	Permanently Suspended TR-103
DH-15a	Replaces well DH-15	7143	218	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH-39	Steven's Draw	7143	181	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH-49	B Gulch	7203	324	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH 42, 52, 54, & 55									Eliminated by 1997 Construction Project
DH-57, 57a	Above and Below D-Seam								Eliminated by mining 2001
DH-58, 58a	Freeman Gulch completed above/below D seam								Seam Abandonded Jan. 2004
DH-65	Completed above D-Seam								Monitoring Suspended 2014
DH-66	Completed below D-Seam								Abandonded First Q 2004
DH-67B	Completed in the B-Seam	6451	594	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH-67D	Completed in the D-Seam	6450	325	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH-67abv	Above the D Seam	6451	193	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH-67blw	Below the D-Seam and above the B-Seam	6451	360	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DHDD-NM4X98-27	Above B-Seam								Abandonded 05/2004
DHDD-NM4X98-28	Upper B-Seam								Abandonded 05/2004
DHDD-NM4X98-29	Rollins Sandstone								Abandonded 05/2004
TC-03-01(B)	Upper B Seam	7118	713	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
TC-03-019 R	Rollins Sandstone								Not Monitored left open 11/2010
TC-03-02	Above B-Seam	7095	586	Quarterly	Semi-Annually	Annually	Yes	No	Permanently Suspended TR-103
TC-03-03	Above Upper B-Seam								Abandonded 11/2010 Sealed
CWI-DH-58	Upper B Seam & Above Upper B-Seam, dry conditions	7442	575	Quarterly	Semi-Annually	Annually	Yes	No	Monitoring Suspended 2014
CWI-DH-58A	Upper B Seam Replaces CWI-DH-58								
CWI-DH-60	Upper B Seam	7921	1085	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH2010-1B	Upper B Seam	7545	1220	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
DH2010-1SS	Sandstone water bearing zone above the B-Seam	7545	1140	Quarterly	Semi-Annually	Annually	Yes	No	No winter monitoring-Lab analysis 2nd & 4th Qrts
North Fork Alluvium Monitoring Wells									
AW-1	Alluvial Well	5978	120	Quarterly	Semi-Annually	Annually	Yes	No	Lab anlaysis 2nd & 4th Qrts
AW-2	Alluvial Well	5967	50.4	Quarterly	Semi-Annually	Annually	Yes	No	Lab anlaysis 2nd & 4th Qrts
AW-3	Alluvial Well	5963	150	Quarterly	Semi-Annually	Annually	Yes	No	Lab anlaysis 2nd & 4th Qrts
AW-4	Alluvial Well	5978	60	Quarterly	Semi-Annually	Annually	Yes	No	Lab anlaysis 2nd & 4th Qrts
AW-5	Alluvial Well	5982	100	Quarterly	Semi-Annually	Annually	Yes	No	Lab anlaysis 2nd & 4th Qrts
AW-6	Alluvial Well	5981	112	Quarterly	Semi-Annually	Annually	Yes	No	Lab anlaysis 2nd & 4th Qrts
AW-7	Alluvial Well	5950	188	Quarterly	Semi-Annually	Annually	Yes	No	Installed Fall of 1999 - Lab 2nd & 4th Qrts
AW-8	Alluvial Well	5950	60	Quarterly	Semi-Annually	Annually	Yes	No	Installed Fall of 1999 - Lab 2nd & 4th Qrts
AW-9	Alluvial Well	5946	80	Quarterly	Semi-Annually	Annually	Yes	No	Installed Fall of 1999 - Lab 2nd & 4th Qrts
AW-11	Alluvial Well	5884	60.86	Quarterly	Semi-Annually	Annually	Yes	No	Installed Fall of 2000 - Lab 2nd & 4th Qrts
AW-12	Alluvial Well	5878	45.38	Quarterly	Semi-Annually	Annually	Yes	No	Installed Fall of 2000 - Lab 2nd & 4th Qrts
AW-14	Alluvial Well	5822	30	Quarterly	Semi-Annually	Annually	Yes	No	Installed Summer of 2003 - Lab 2nd & 4th Qrts
AW-15	Alluvial Well	5973	86	Quarterly	Semi-Annually	Annually	Yes	No	Installed Winter of 2003 - Lab 2nd & 4th Qrts
AW-16	Alluvial Well	5965	75	Quarterly	Semi-Annually	Annually	Yes	No	Installed Winter of 2003 - Lab 2nd & 4th Qrts
AW-17	Alluvial Well	5951	62	Quarterly	Semi-Annually	Annually	Yes	No	Installed Winter of 2003 - Lab 2nd & 4th Qrts

Summary of Hydrology Monitoring Stations (Continued)

Station Number	Station Name	Elevation (ft.)	Depth (ft.)	Frequency of Measurements		Report Frequency	Report Format		Comments
				Field Par.	Lab. Par.		AHR	DMR	
Surface Water Monitoring Stations - PONDS									
P-1	Steven's Draw	7080	5	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P-2	Head of Freeman Gulch	7600	5	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P-3	Associated with Spring 16	7730	4.5	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P-4	Associated with Spring 4	7880	3.5	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P-5	Associated with Spring 5 & 5a	7800	8	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P-6	Associated with Spring 18	7880	3	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P1-4	W Fork Terror Creek-Pond	7960		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P1-6	W Fork Terror Creek	7980		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P1-11	W Fork Terror Creek	8000		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P1-12	W Fork Terror Creek	7860		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P5-5	Hugh's Pipe & Pond	7320		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P6-2	W Fork Terror Creek	8000		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P6-5	W Fork Terror Creek	8020		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P7-2	Stevens Gulch	8190		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P7-7	Stevens Gulch	8380		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P7-11	Stevens Gulch	8400		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P8-4	Terror Creek	6980		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P12-1	Stevens Gulch	7950		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P12-2	Stevens Gulch	8030		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P12-9	Stevens Gulch	7800		Quarterly	N/A	Annually	Yes	No	Permanently Suspended TR-103
P12-10	Stevens Gulch	7820		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P12-11	Stevens Gulch	7800		Quarterly	N/A	Annually	Yes	No	Permanently Suspended TR-103
P17-1	Coal Gulch	7340		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P18-1	Coal Gulch	7760		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P18-4	Stevens Gulch	8350		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P81	Stevens Gulch, Section 18	8640		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P82	Terror Creek, Section 17	7580		Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P83	Coal Gulch, Section 18	7820	2.5	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P33-3	Dry Pond in Sheep Corral Gulch below dry spring	7760	5.5	Quarterly	N/A	Annually	Yes	No	No winter monitoring-Reprt Inflow, Outflow, Depth
P31-1	Dry Pond Below Stevens Gulch Rd	8120		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P36-1	Flat Pond Above Stevens Gulch Rd	8120		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
Pond & Tank 36-2	Flat Tanks above Stevens Gulch Rd								
P36-3	Meadow Pondabove Stevens Gulch Road	8140		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103
P36-6	Dry Pond 11	8140		Quarterly	N/A	Annually	Yes	No	Temporarily Suspended TR-103

LAB PARAMETER LIST

SURFACE WATER LIST 1

Field Parameters	
Flow Rate (gpm)	
Water Level	
pH (Standard Units)	
Conductivity (umhos/cm)	
Temerature (C)	
*Dissolved Oxygen (mg/l)	
Lab Parameters	
Wet Chemistry	**MDL**
Bicarbonate (HCO_3) (mg/l)	2 mg/L
Chloride (Cl^-) (mg/l)	0.5 mg/L
Conductivity (umhos/cm)	1 umhos/cm
Nitrate/Nitrite (mg/l)	0.1 mg/L
pH (Standard Units)	0.1 s.u.
Hardness (mg/l)	1 mg/L
Phosphate (PO_4^{-3} as P) (mg/l)	0.02 mg/L
Residue, Filterable (TDS) @180 C (mg/l)	0.5 mg/L
Residue, NonFilterable (TSS) (mg/l)	0.5 mg/L
Sodium Absorption Ratio in Water	0.15
Sulfate (SO_4^{--}) (mg/l)	0.6 mg/L
Metals	
Aluminum (Al), total recoverable (mg/l)	0.05 mg/L
Arsenic (As), total recoverable (mg/l)	0.002 mg/L
Cadmium (Cd), total recoverable (mg/l)	0.0002 mg/L
Calcium (Ca^{+2}), total recoverable (mg/l)	0.2 mg/L
Copper (Cu), total recoverable (mg/l)	0.01 mg/L
Iron (Fe), total recoverable & Diss (mg/l)	0.01 mg/L
Lead (Pb), total recoverable (mg/l)	0.02 mg/L
Magnesium (Mg^{+2}), total recoverable (mg/l)	0.2 mg/L
Manganese (Mn), total recoverable (mg/l)	0.01 mg/L
Mercury (Hg), total recoverable (mg/l)	0.000025 mg/L
Molybdenum (Mo), total recoverable (mg/l)	0.02 mg/L
Selenium (Se), total recoverable (mg/l)	0.001 mg/L
Sodium (NA^+), total recoverable (mg/l)	0.2 mg/L
Zinc (Zn), total recoverable (mg/l)	0.005 mg/L
Organic Analysis	
Oil and Grease (mg/l)	0.5 mg/L

SURFACE WATER LIST 2

Field Parameters	
Flow Rate (gpm)	
Water Level	
pH (Standard Units)	
Conductivity (umhos/cm)	
Temerature (C)	
*Dissolved Oxygen (mg/l)	
Lab Parameters	
Wet Chemistry	**MDL**
pH (Standard Units)	0.1 s.u.
Residue, Filterable (TDS) @180 C (mg/l)	0.5 mg/L
Ammonia (NH_3) (mg/l)	0.1 mg/L
Chloride (Cl) (mg/l)	0.5 mg/L
Cyanide (CN) (mg/l)	0.2 mg/L
Dissolved Oxygen (mg/l)	Report
Hardness (mg/l)	1 mg/L
Nitrate (NO_3) (mg/l)	0.1 mg/L
Nitrite (NO_2) (mg/l)	0.01 mg/L
Sulfide (S) (mg/l)	0.2 mg/L
Sulfate (SO_4^{--})(mg/l)	0.1 mg/L
Metals	
Arsenic (As), total recoverable (ug/l)	0.002 mg/L
Boron, total recoverabel (mg/l)	0.1 mg/L
Cadmium (Cd), total recoverable (ug/l)	0.0002 mg/L
Chromium III CrIII (ug/l)	0.01 mg/L
Chromium VI CrIV (ug/l)	0.02 mg/L
Copper (Cu), total recoverable (ug/l)	0.01 mg/L
Iron (Fe), dissolved (ug/l)	0.005 mg/L
Iron (Fe), total recoverable (ug/l)	0.001 mg/L
Lead (Pb), total recoverable (ug/l)	0.01 mg/L
Manganese (Mn), dissolved (ug/l)	0.01 mg/L
Manganese (Mn), total recoverable (ug/l)	0.01 mg/L
Mercury (Hg), total recoverable (ug/l)	0.000025 mg/L
Nickel, total recoverable (ug/l)	0.02 mg/L
Selenium (Se), total recoverable (ug/l)	0.001 mg/L
Silver (Ag), total recoverable (ug/l)	0.001 mg/L
Zinc (Zn), total recoverable (ug/l)	0.005 mg/L

GROUND WATER

Field Parameters	
Water Elevation (Feet)	
Depth to Water (Feet)	
pH (Standard Units)	
Conductivity (umhos/cm)	
Temperature (C)	
Lab Parameters	
Wet Chemistry	**MDL**
Bicarbonate (HCO_3) (mg/l)	2 mg/L
Carbonate (CO_3) (mg/l)	2 mg/L
Chloride (Cl^-) (mg/l)	0.5 mg/L
Conductivity (umhos/cm)	1 umhos/cm
Nitrate/Nitrite (mg/l)	0.1 mg/L
Ammonia (NH_3) (mg/l)	0.1 mg/L
pH (Lab Units)	0.1 mg/L
Hardness (mg/l)	1 mg/L
Phosphate (PO_4^{-3} as P) (mg/l)	0.02 mg/L
Residue, Filterable (TDS) @180 C (mg/l)	0.5 mg/L
Sulfate (SO_4^{--}) (mg/l)	0.6 mg/L
Metals	
Arsenic (As), dissolved (mg/l)	0.002 mg/L
Cadmium (Cd), dissolved (mg/l)	0.0002 mg/L
Calcium (Ca^{+2}), dissolved (mg/l)	0.2 mg/L
Iron (Fe), dissolved (mg/l)	0.01 mg/L
Iron (Fe), total recoverable (mg/l)	0.01 mg/L
Magnesium (Mg^{+2}), dissolved (mg/l)	0.2 mg/L
Manganese (Mn), dissolved (mg/l)	0.01 mg/L
Manganese (Mn), total recoverable (mg/l)	0.01 mg/L
Mercury (Hg), dissolved (mg/l)	0.000025 mg/L
Selenium (Se), dissolved (mg/l)	0.001 mg/L
Sodium (NA^+), dissolved (mg/l)	0.2 mg/L
Zinc (Zn), dissolved (mg/l)	0.005 mg/L

Refer to Pages 2.05-134 and 2.05-135 of Permit Application

Surface Water List 2 is applicable annually for North Fork Gunnison and Deer Trail Ditch only

NOTE: Springs are considered Surface Water

**Dissolved Oxygen is reported for Deer Trail Ditch, Fire Mountain Canal and North Fork Gunnison*

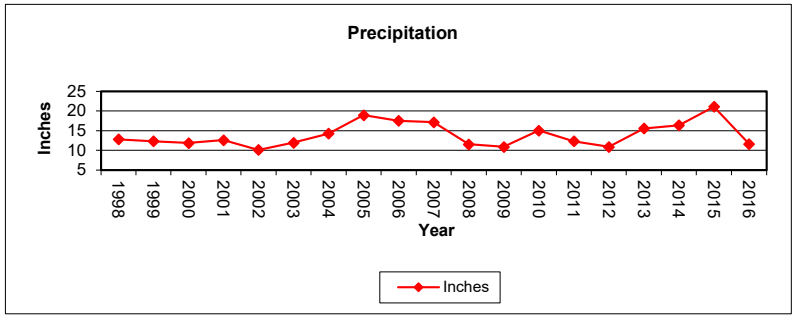
FIELD PARAMETER LIST

Parameter	Unit	Wells	Ponds	Streams	Springs
Conductivity	umhos/cm	Yes	Yes	Yes	Yes
Flow Rate	CFS/GPM	No	Yes	Yes	Yes
pH	Standard	Yes	Yes	Yes	Yes
Temperature	C	Yes	Yes	Yes	Yes
Water Level	Feet	Yes	Yes	No	No

PRECIPITATION VALUES

Monthly Precipitation Values

Month	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	1.13	1.08	1.93	0.73	0.55	0.26	1.31	2.05	0.81	0.68	1.67	0.91	0.42	0.49	1.22	1.83	0.66	1.02	0.9
February	0.83	0.38	1.27	1.06	0.11	1.35	1.46	1.38	0.28	0.92	1.1	1	1.66	0.87	1.41	0.89	2.16	1	0.85
March	1.43	0.42	1.03	0.42	1.03	1.17	0.14	1.93	1.58	1.39	0.54	0.89	1.2	1.22	0.3	1.14	0.77	0.76	0.3
April	1.43	2.54	0.42	0.57	0.61	0.49	3.3	1.37	0.83	1.2	0.77	1.09	0.51	1.68	0.62	1.3	1.31	1.75	1.21
May	0.16	1.00	0.67	1.75	0.28	1.81	0	1.22	0.17	1.18	0.64	2.73	1.68	0.83	0.09	1.24	1.71	3.86	1.33
June	0.47	0.94	0.86	0.39	0.04	0.48	0.34	1.64	0.5	0.99	0.67	0.63	0.55	0.32	0.05	0	0.21	1.05	0.51
July	0.66	2.7	0.89	1.31	0.28	0.76	0.02	0.4	3.06	0.85	0.24	0.27	1.44	1.74	1.26	1.37	1.11	2.43	0.8
August	1.18	1.42	1.27	2.35	0.66	0.46	0.48	1.71	0.87	1.16	2.07	0.33	2.09	0.46	2.35	0.78	2.13	1.96	1.81
September	0.75	1.16	1.27	0.34	2.43	1.93	2.85	2.84	2.32	3.2	0.62	0.32	1.15	1.2	0.92	3.28	2.96	1.2	1.07
October	1.88	0.05	0.75	0.84	2.53	0.46	1.37	2.11	5.08	1.37	0.74	0.58	1.84	1.55	0.64	2.12	1.17	1.94	0.49
November	1.87	0.07	0.73	1.85	0.9	1.74	1.72	0.84	1.39	0	0.91	0.77	0.58	0.96	0.61	0.91	0.65	1.48	0.16
December	1.00	0.57	0.78	0.99	0.71	1.03	1.26	1.47	0.65	4.20	1.55	1.36	1.91	1.01	1.41	0.69	1.56	2.70	2.18
Minimum	0.16	0.05	0.42	0.34	0.04	0.26	0.00	0.40	0.17	0.00	0.24	0.27	0.42	0.32	0.05	0.00	0.21	0.76	0.16
Average	1.07	1.03	0.99	1.05	0.84	1.00	1.19	1.58	1.46	1.43	0.96	0.91	1.25	1.03	0.91	1.30	1.37	1.76	0.97
Maximum	1.88	2.7	1.93	2.35	2.53	1.93	3.30	2.84	5.08	4.20	2.07	2.73	2.09	1.74	2.35	3.28	2.96	3.86	2.18
Total	12.79	12.33	11.87	12.60	10.13	11.94	14.25	18.96	17.54	17.14	11.52	10.88	15.03	12.33	10.88	15.55	16.40	21.15	11.61



This data is obtained from the internet at www.wrcc.dri.edu/summary/Climsmco.html select Paonia 1 SW (056306).

** No data recorded during the 2024 water year

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Table 5

Monitoring Point Reports
Table of Contents

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Table 5

Monitoring Point Reports
Table of Contents

				Chart Fig No.
S6-7	South Side of West Fork Terror Creek Spring 6-7	Monitoring Point Report Figure No.		
S7-4	Stevens Gulch - Spring 7-4	Monitoring Point Report Figure No.	43	
S7-9	Terror Creek - Spring 7-9	Monitoring Point Report Figure No.	44	
S7-10	Terror Creek - Spring 7-10	Monitoring Point Report Figure No.	45	
S8-5	Terror Creek - Spring 8-5	Monitoring Point Report Figure No.	46	
S21	Terror Creek - Spring 21	Monitoring Point Report Figure No.	47	
S33-4	Sheep Corral - Spring 33-4	Monitoring Point Report Figure No.	48	
S34-7	Sheep Corral - Spring 34-7	Monitoring Point Report Figure No.	49	
S34-10	Dove Gulch - Spring 34-10	Monitoring Point Report Figure No.	50	
S34-19	Hubbard Creek - Spring 34-19	Monitoring Point Report Figure No.	51	
S34-20	Hubbard Creek - Spring 34-20	Monitoring Point Report Figure No.	52	
S34-21	Hubbard Creek - Spring 34-21	Monitoring Point Report Figure No.	53	
S34-22	Hubbard Creek - Spring 34-22	Monitoring Point Report Figure No.	54	
S34-23	Hubbard Creek - Spring 34-23	Monitoring Point Report Figure No.	55	
S34-24	Hubbard Creek - Spring 34-24	Monitoring Point Report Figure No.	56	
S34-25	Dove Gulch - Spring 34-25	Monitoring Point Report Figure No.	57	58
S36-7	Seeps 11 below Stevens Gulch Road	Monitoring Point Report Figure No.		

Surface Water Monitoring Stations - STREAMS AND DITCHES

A-Gulch-lo	Drainage System	Monitoring Point Report Figure No.		
B-Gulch-lo	Drainage System	Monitoring Point Report Figure No.		
B-Gulch-up	Drainage System	Monitoring Point Report Figure No.		
C-Gulch-lo	Drainage System	Monitoring Point Report Figure No.		
C-Gulch-up	Drainage System	Monitoring Point Report Figure No.		
D2-1	Sheep Corral - Drainage System	Monitoring Point Report Figure No.	59	
D21-1	Terror Creek - Confluence w/NFG	Monitoring Point Report Figure No.	60	61
D32-4	Terror Creek - Drainage System	Monitoring Point Report Figure No.	62	63
D33-14	Upper Sheep Corral Gulch	Monitoring Point Report Figure No.	64	
D34-13	Dove Gulch - Drainage System	Monitoring Point Report Figure No.	65	
D34-14	Hubbard Creek - Drainage System	Monitoring Point Report Figure No.	66	67
Deer-low	Canal - Deer Trail Ditch	Monitoring Point Report Figure No.	68	69
Deer-up	Canal - Deer Trail Ditch	Monitoring Point Report Figure No.	70	71
D-Gulch-lo	Drainage System	Monitoring Point Report Figure No.		
D-Gulch-up	Drainage System	Monitoring Point Report Figure No.		
FMC-low	Canal - Fire Mountain Canal	Monitoring Point Report Figure No.	72	
FMC-up	Canal - Fire Mountain Canal	Monitoring Point Report Figure No.	73	
Free-low	Freeman Gulch - Drainage System	Monitoring Point Report Figure No.	74	75
Free-up	Freeman Gulch - Drainage System	Monitoring Point Report Figure No.	76	
Hub-low	Hubbard Creek - Drainage System	Monitoring Point Report Figure No.	77	78
Hub-up	Hubbard Creek - Drainage System	Monitoring Point Report Figure No.		
NFG-low	North Fork - Drainage System	Monitoring Point Report Figure No.	79	80
NFG-up	North Fork - Drainage System	Monitoring Point Report Figure No.	81	82
Steph-low	Stevens Draw - Drainage System	Monitoring Point Report Figure No.	83	84
Steph-up	Stevens Draw - Drainage System	Monitoring Point Report Figure No.	85	
SW-01	West Fork Terror Creek - Downstream	Monitoring Point Report Figure No.	86	
SW-02	Terror Creek - Mid Stream	Monitoring Point Report Figure No.	87	
SW-04	Terror Creek - Upstream	Monitoring Point Report Figure No.		

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Table 5

Monitoring Point Reports
Table of Contents

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Table 5

Monitoring Point Reports
Table of Contents

Surface Water Monitoring Stations: PONDS

SP5-1
Terror Creek - Pond Spring 5-1
Elevation - 7400

Initiated	7/18/1985	7/18/1985	7/18/1985
Activated	3/31/2015	3/31/2015	3/31/2015
Date	10/31/2024	9/16/2024	6/24/2044

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0.00	0.94	7.36	0.00	0.66	4.12	0.00	Damp	0.00
Inflow	GPM	0.00	0.00	0.00	0.00	0.23	2.96	0.00	Damp	0.00
Freeboard	Feet	0.00	0.00	0.00	0.00	0.00	2.00	2.00		0.50
Temperature	Celsius	4.1	12.8	23.2	3.80	11.04	20.10			
Conductivity	umhos/cm	490	672	804	697.00	786.93	842.00			
pH	su	7.3	8.2	9.0	7.62	8.14	8.55			
Field Comments								No visible flow	No visible flow	No visible flow
Lab Parameters	UNITS									
Bicarbonate	mg/L	256.0	383.5	441.6	453.00	467.50	482.00			
Carbonate	mg/L	16.0	16.0	16.0	0.00	0.00	0.00			
Chloride	mg/L	2.0	6.4	10.0	3.90	4.27	4.50			
Conductivity	umhos/cm	552.0	656.8	974.0	680.00	690.67	700.00			
Hardness	mg/L	182.0	250.8	287.0	246.00	250.33	256.00			
Acidity	mg/L	14.0	14.0	14.0	-410.00	-390.00	-380.00			
pH	su	6.4	7.9	8.7	7.58	7.84	8.05			
ResidueFilterable-TDS	mg/L	320.0	374.9	451.0	428.00	442.67	457.00			
ResidueNonFilterable-TSS	mg/L	2.0	128.0	742.0	91.30	119.15	147.00			
SAR		1.2	1.7	2.5	2.31	2.42	2.52			
Sulfate	mg/L	16.0	34.3	70.0	16.90	18.37	19.80			
Calcium (Dissolved)	mg/L	30.0	57.8	69.0	0.00	0.00	0.00			
Magnesium (Total)	mg/L	18.0	25.9	28.0	22.00	23.27	23.90			
Sodium (Dissolved)	mg/L	43.0	61.0	76.0	0.00	0.00	0.00			
Iron (Total)	mg/L	0.4	0.4	0.4	0.25	0.60	0.98			
Iron (Dissolved)	mg/L	0.1	0.1	0.1	0.01	0.03	0.05			
Manganese (Total)	mg/L	0.06	0.06	0.06	0.05	0.11	0.16			

The area of concern for monitoring point SP5-1 was affected by the mining operation on or about March 31, 2015.

Negative value of acidity indicates alkalinity

Baseline Information Collection initiated on 7/18/85 and completed on March 31, 2015.
Point SP5-1 has been influenced by mining.

SP7-1
Terror Creek - Pond Spring 7-1
Depth 3'
Elevation - 7780

Initiated	7/25/1985	7/25/1985	7/25/1985
Activated	6/1/2013	6/1/2013	6/1/2013
Date	10/31/2024	8/20/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0	3.35	30	0	2.48	16.91	0	0.475	0.475
Inflow	GPM	0	0.00	0	0	2.42	10.9	Damp	1.26	0.125
Freeboard	Feet	0	1.07	3	0	0.40	1.5	1	0	0
Temperature	Celsius	10.3	16.68	32	7.4	15.98	24.1		24.1	15.9
Conductivity	umhos/cm	353	602.53	928	539	612.58	742		620	593
pH	su	6.7	7.95	9.4	7.38	8.10	8.63		8.01	8.58
Field Comments										
Lab Parameters	UNITS									
Bicarbonate	mg/L	226	382.24	603	253.28	308.06	368			
Chloride	mg/L	2	8.98	54.59	2.3	4.72	13.08			
Conductivity	umhos/cm	450	633.06	1120	475	522.80	585			
Hardness	mg/L	145	233.44	295	190.28	223.86	254			
Nitrate-Nitrite	mg/L	0.3	0.30	0.3	0.031	0.04	0.045			
Oil and Grease	mg/L	0	<MDL	0	0	<MDL	0			
pH	su	7	7.81	8.4	7.18	8.08	8.6			
Phosphate	mg/L	0	<MDL	0	0.073	0.12	0.19			
ResidueFilterable-TDS	mg/L	280	404.33	808	330	359.20	382			
ResidueNonFilterable-TSS	mg/L	2	85.47	580	7	35.62	81.2			
SAR		1.2	1.70	2.9	1.3	1.87	3.681			
Sulfate	mg/L	10	20.32	39	27.99	29.92	33.6			
Aluminum (TREC)	mg/L	0.034	0.03	0.034	0.12	199.98	999			
Arsenic (TREC)	mg/L	0.06	0.06	0.06	0.0004	0.00	0.002			
Cadmium (TREC)	mg/L	0.02	0.02	0.02	0.002	0.00	0.002			
Calcium (TREC)	mg/L	33	50.86	70.6	41.9	52.34	58.8			
Copper (TREC)	mg/L	0.003	0.00	0.003	0.009	0.01	0.009			
Iron (TREC)	mg/L	1.24	1.24	1.24	0.157	0.49	1.19			
Lead (TREC)	mg/L	0.02	0.02	0.02	0.0003	0.01	0.02			
Magnesium (TREC)	mg/L	13.9	25.89	37	20.4	22.60	26.1			
Manganese (TREC)	mg/L	0.376	0.38	0.376	0.029	0.05	0.0904			
Mercury (TREC)	mg/L	0.00003	0.00	0.00003	2E-05	0.00	2E-05			
Molybdenum (TREC)	mg/L	0.007	0.01	0.007	0.001	0.00	0.001			
Selenium (TREC)	mg/L	0.003	0.00	0.003	0.0004	0.00	0.002			
Sodium (TREC)	mg/L	78.1	78.10	78.1	43.7	62.92	116.7			
Zinc (TREC)	mg/L	0.01	0.01	0.01	0.02	0.02	0.02			

The area of concern for monitoring point SP7-1was activated on or about 06/1/2013.

Baseline Information Collection initiated on 7/25/85 and not yet completed.
Point SP7-1 has not been influenced by mining.

SP7-5
Steven's Gulch - Pond Spring 7-5
Elevation - 8300

Initiated	7/6/1983	7/6/1983
Activated		
Date	10/7/2024	8/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max		
Inflow	GPM	0.00	0.74	4.49				0.000	0.000
Outflow	GPM	0.00	0.09	0.75				0.000	0.000
Freeboard	Feet	0.00	1.01	6.00				2.5	3.5
Temperature	Celsius	3.5	9.3	21.7					
Conductivity	umhos/cm	145	319	800					
pH	su	6.4	7.5	9.0					
Field Comments									
Lab Parameters	UNITS								
Bicarbonate	mg/L	71.81	183.45	227.00					
Chloride	mg/L	<MDL	4.39	19.82					
Conductivity	umhos/cm	184	298	430					
Hardness	mg/L	74.97	154.5	228.0					
Nitrate-Nitrite	mg/L	<MDL	0.256	0.256					
Oil & Grease	mg/L	<MDL	<MDL	<MDL					
pH	su	6.7	7.4	8.4					
Phosphate	mg/L	<MDL	<MDL	<MDL					
ResidueFilterable-TDS	mg/L	163	204	260					
ResidueNonFilterable-TSS	mg/L	<MDL	42	236					
SAR		0.250	0.350	0.933					
Sulfate	mg/L	<MDL	18.2	154.0					
Aluminum (TREC)	mg/L	<MDL	0.022	0.022					
Arsenic (TREC)	mg/L	<MDL	0.04	0.04					
Cadmium (TREC)	mg/L	<MDL	0.01	0.01					
Calcium (TREC)	mg/L	19.8	27.7	35.6					
Copper (TREC)	mg/L	<MDL	0.02	0.02					
Iron (TREC)	mg/L	0.10	0.31	0.62					
Lead (TREC)	mg/L	<MDL	0.05	0.05					
Magnesium (TREC)	mg/L	6.2	16.1	27.0					
Manganese (TREC)	mg/L	<MDL	0.02	0.02					
Mercury (TREC)	mg/L	<MDL	0.00004	0.00004					
Molybdenum (TREC)	mg/L	<MDL	0.006	0.006					
Selenium (TREC)	mg/L	<MDL	0.023	0.023					
Sodium (TREC)	mg/L	8.50	17.53	26.56					
Zinc (TREC)	mg/L	<MDL	0.006	0.006					

The area of concern for monitoring point SP7-5 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Baseline Information Collection initiated on 7/6/83 and not yet considered complete.
Point SP7-5 has not been influenced by mining.

SP17
Terror Creek - Pond Spring 17
Depth 4'
Elevation - 7520

Initiated	4/15/1983	4/15/1983	4/15/1983
Activated			
Date	10/7/2024	8/20/2024	6/20/2024

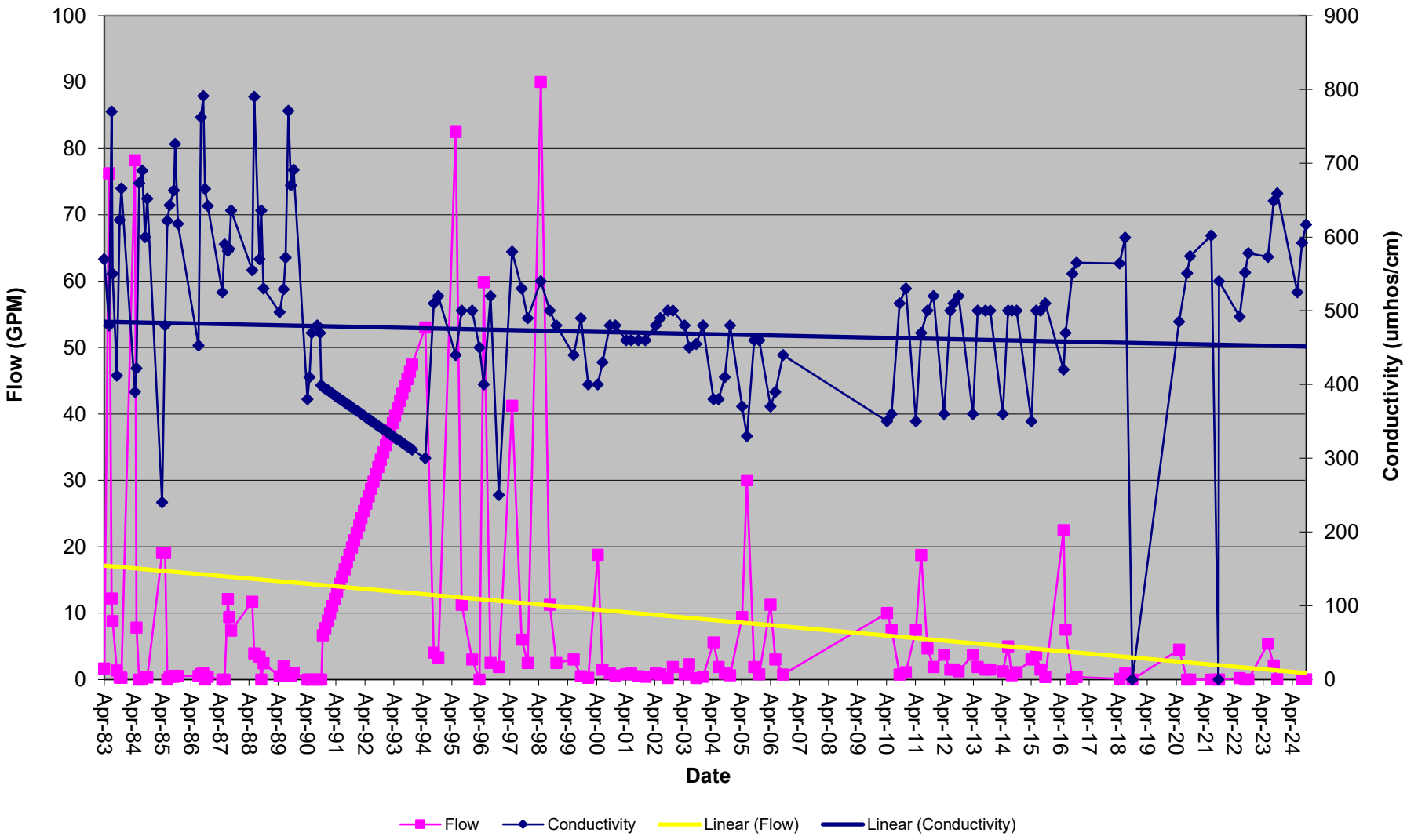
Field Parameters	UNITS	Summary Information Baseline Min	Ave	Max	Operation Min	Ave	Max			
Outflow	GPM	0	2.47	31.7				Damp	0.032	0
Inflow	GPM	0	11.04	90				0.032	0.039	0.01
Freeboard	Feet	0	0	1.5					0	0.1
Temperature	Celsius	3.6	9.6	25				11.1	10	9.3
Conductivity	umhos/cm	240	479	791				617	592	525
pH	su	6.77	7.6	9.3				7.63	7.42	8.53
Field Comments										
Lab Parameters	UNITS									
Bicarbonate	mg/L	186.0	263.8	361.0						
Chloride	mg/L	<MDL	10	202						
Conductivity	umhos/cm	325	485	686						
Hardness	mg/L	17.00	174.48	232.00						
Nitrate-Nitrite	mg/L	<MDL	0.67	1.1						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	6.8	7.6	8.4						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable-TDS	mg/L	145	287	430						
ResidueNonFilterable-TSS	mg/L	<MDL	19	74						
SAR		1.08	2.55	41.10						
Sulfate	mg/L	5.35	27.06	68						
Aluminum (TREC)	mg/L	<MDL	201.800	1210						
Arsenic (TREC)	mg/L	<MDL	0.01	0.02						
Cadmium (TREC)	mg/L	<MDL	0.01	0.01						
Calcium (TREC)	mg/L	33.7	44.0	56.2						
Copper (TREC)	mg/L	<MDL	0.01	0.01						
Iron (TREC)	mg/L	0.0197	0.30	2.25						
Lead (TREC)	mg/L	<MDL	0.02	0.04						
Magnesium (TREC)	mg/L	10.3	14.9	18.9						
Manganese (TREC)	mg/L	<MDL	0.024	0.0862						
Mercury (TREC)	mg/L	<MDL	0.00008	0.00022						
Molybdenum (TREC)	mg/L	<MDL	0.003	0.006						
Selenium (TREC)	mg/L	<MDL	0.00435	0.014						
Sodium (TREC)	mg/L	32.2	49.5	112.6						
Zinc (TREC)	mg/L	<MDL	0.010	0.02						

The area of concern for monitoring point SP17 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

A diffuse flow from an area of approximately 30' x 20' discharges into a pond measuring approximately 30' x 50'. (Hanna, 99)

Baseline Information Collection initiated on 4/15/83 and not yet considered complete.
Point SP17 has not been influenced by mining.

Plot of Flow and Conductivity



SP17 - Terror Creek Spring Pond 17

Figure 5

SP18
Terror Creek - Pond Spring 18
Elevation - 7280

Initiated	4/15/1983	4/15/1983	4/15/1983
Activated			
Date	10/31/2024	9/16/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0.00	0.96	3.96				Damp	0.00	0.00
Inflow	GPM	0.04	2.61	17.50				No visible flow	0.04	0.12
Freeboard	Feet	0.00	0.00	0.00						
Temperature	Celsius	3.0	10.1	21.3						10.8
Conductivity	umhos/cm	260	637	832						820
pH	su	7.7	8.3	9.6						7.8
Field Comments										
Lab Parameters	UNITS									
Bicarbonate	mg/L	133.0	343.7	408.7						
Chloride	mg/L	3.00	7.94	62.04						
Conductivity	umhos/cm	230	606	892						
Hardness	mg/L	86.00	235.68	277.00						
Nitrate-Nitrite	mg/L	<MDL	0.5	0.8						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	7.2	8.0	8.3						
Phosphate	mg/L	<MDL	0.023	0.024						
ResidueFilterable-TDS	mg/L	110	344	678						
ResidueNonFilterable-TSS	mg/L	2	39	171						
SAR		0.89	1.39	1.84						
Sulfate	mg/L	10	27	53						
Aluminum (TREC)	mg/L	0.028	260.405	806.000						
Arsenic (TREC)	mg/L	<MDL	0.04	0.04						
Cadmium (TREC)	mg/L	<MDL	0.01	0.01						
Calcium (TREC)	mg/L	57.9	62.4	66.8						
Copper TREC)	mg/L	<MDL	0.003	0.003						
Iron (TREC)	mg/L	0.24	1.24	4.51						
Lead (TREC)	mg/L	0.03	0.03	0.03						
Magnesium (TREC)	mg/L	21.0	24.7	28.1						
Manganese (TREC)	mg/L	0.01	3.04	21.20						
Mercury (TREC)	mg/L	<MDL	0.00007	0.00007						
Molybdenum (TREC)	mg/L	<MDL	0.010	0.010						
Selenium (TREC)	mg/L	<MDL	0.012	0.012						
Sodium (TREC)	mg/L	49.1	56.7	69.7						
Zinc (TREC)	mg/L	<MDL	0.004	0.004						

The area of concern for monitoring point SP18 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Baseline Information Collection initiated on 4/15/83 and not yet considered complete.
Point SP18 has not been influenced by mining.

SP19
Steven's Gulch - Pond Spring 19
Elevation - 8240

Initiated	8/22/1983	8/22/1983	8/22/1983
Activated	2/28/2015	2/28/2015	2/28/2015
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0	0.41	8.62	0	0.22	3.75	0	0	0
Inflow	GPM	0	0.03	0.49	0	0.13	2.50	0	0	0
Freeboard	Feet	0	1.45	2.70	0	1.89	4.00	3	3	2
Temperature	Celsius	-1.4	17.66	27.50	12.5	15.20	17.90			
Conductivity	umhos/cm	110	286.89	545.00	140	146.75	153.50			
pH	su	7.7	8.43	10.00	8.1	8.23	8.35			
Field Comments										
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	84.2	166.2	256.2						
Carbonate	mg/L									
Chloride	mg/L	<MDL	3	7						
Conductivity	umhos/cm	150	272	410						
Hardness	mg/L	61	120	185						
pH	su	6.9	7.5	8.4						
ResidueFilterable-TDS	mg/L	100	174	256						
ResidueNonFilterable-TSS	mg/L	6	64	396						
SAR		0.15	0.37	1.00						
Sulfate	mg/L	<MDL	24	101						
Calcium (Dissolved)	mg/L	16	28	41						
Magnesium (Total)	mg/L	5	12	20						
Sodium (Dissolved)	mg/L	3	9	23						

The area of concern for monitoring point SP19 was affected by the mining operation on or about February 28, 2015.

** Data not provided in field notes*

Baseline Information Collection initiated on 8/22/83 and complete February 28, 2015.
Point SP19 has been influenced by mining.

SP20
Terror Creek - Pond Spring 20
Depth 4'
Elevation - 7840

Initiated	5/15/1983	5/15/1983	5/15/1983
Activated	6/30/2013	6/30/2013	6/30/2013
Date	10/7/2024	8/20/2024	6/24/2024

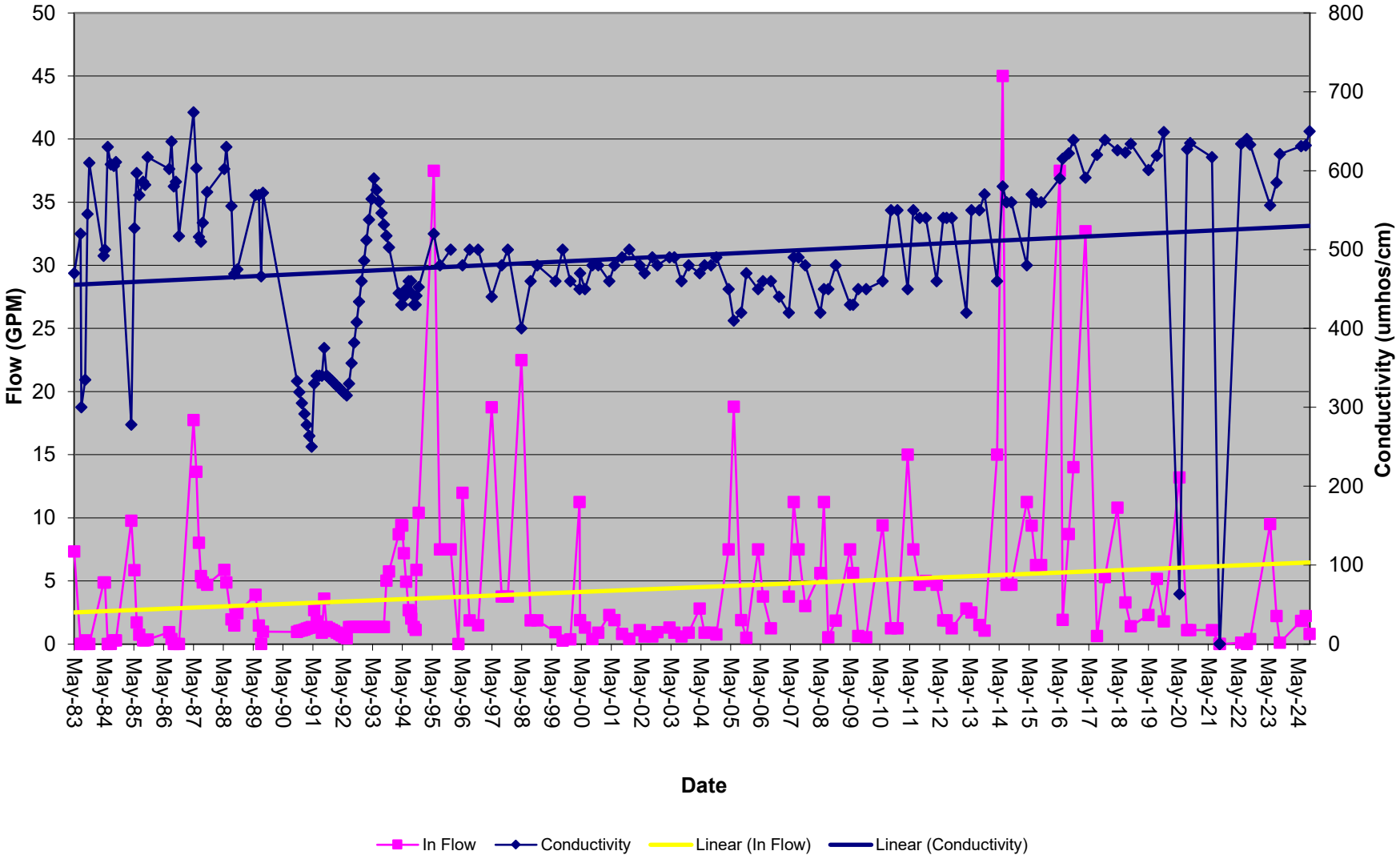
		Summary Information								
Field		Baseline			Operation					
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max			
Outflow	GPM	0.0	0.6	2.3	0.0	4.5	42.2	1.19	2.21	0.86
Inflow	GPM	0.0	3.5	37.5	0.0	8.2	45.0	1.83	2.22	0.79
Freeboard	Feet	0.0	0.0	0.8	0.0	0.0	0.0	0	0	
Temperature	Celsius	2.0	8.8	27.7	6.7	8.6	13.8	8.7	10	8.6
Conductivity	umhos/cm	250.0	471.2	674.0	460.0	599.8	650.0	650	632	631
pH	su	5.3	7.5	8.9	6.9	7.5	8.0	7.8	7.51	7.68
Field Comments										
Lab Parameters	UNITS									
Bicarbonate	mg/L	144.7	289.9	342.0	247.4	322.5	385.0			
Chloride	mg/L	0.0	5.0	28.3	2.3	2.7	4.6			
Conductivity	umhos/cm	311.5	513.5	714.0	465.0	525.6	591.0			
Hardness	mg/L	108.0	207.6	511.9	197.0	224.2	243.0			
Nitrate-Nitrite	mg/L	<MDL	0.3	0.3	<MDL	<MDL	0.1			
Oil and Grease	mg/L	<MDL	<MDL	0.0	<MDL	<MDL	0.0			
pH	su	6.7	7.4	8.5	7.0	7.6	8.5			
Phosphate	mg/L	<MDL	<MDL	0.0	<MDL	0.0	0.2			
ResidueFilterable-TDS	mg/L	240.0	318.8	460.0	324.0	356.7	438.0			
ResidueNonFilterable-TSS	mg/L	<MDL	88.9	1800.0	<MDL	8.3	13.0			
SAR		0.5	1.3	2.3	1.2	1.8	5.4			
Sulfate	mg/L	0.8	12.5	60.0	0.0	29.2	34.2			
Aluminum (TREC)	mg/L	<MDL	0.2	0.5	<MDL	46.6	186.0			
Arsenic (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			
Cadmium (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			
Calcium (TREC)	mg/L	36.3	69.1	128.3	42.1	53.9	59.8			
Copper (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			
Iron (TREC)	mg/L	0.0	0.1	0.2	0.0	0.1	0.3			
Lead (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			
Magnesium (TREC)	mg/L	17.2	28.6	46.5	19.9	21.8	23.3			
Manganese (TREC)	mg/L	<MDL	0.0	0.0	<MDL	7.7	23.0			
Mercury (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			
Molybdenum (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			
Selenium (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			
Sodium (TREC)	mg/L	40.2	47.6	53.1	42.9	51.2	124.8			
Zinc (TREC)	mg/L	<MDL	0.0	0.0	<MDL	0.0	0.0			

Activated 6/30/2013

This spring and pond consists of an area of approximately 20' x 20' of diffuse flow which is collected in a pond of approximately 30' x 60'. (Hanna, 99)

Baseline Information Collection initieated on 5/15/83 and not yet considered complete.
Point SP20 has not been influenced by mining.

Plot of Flow and Conductivity



SP20 - Terror Creek Spring Pond 20

Figure 9

SP22
Terror Creek - Pond Spring 22
Depth 4'
Elevation - 7480

Initiated	7/18/1983	7/18/1983	7/18/1983
Activated	8/5/2012	8/5/2012	8/5/2012
Date	10/31/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Inflow	GPM	0.00	0.33	5.63	0.00	0.15	5.81	0.00	0.00	Damp
Outflow	GPM	0.00	0.00	0.00	0.00	0.01	0.20	0.00	Damp	0.00
Freeboard	Feet	0.0	1.1	4.0	0.00	1.49	6.00	3.00	6.00	3.50
Temperature	Celsius	6.9	16.9	28.6						
Conductivity	umhos/cm	343	661	915						
pH	su	7.3	8.3	9.7						
Field Comments										
Lab Parameters	UNITS									
Bicarbonate	mg/L	165.9	343.38	584						
Carbonate	mg/L	<MDL	1.9282	11.71						
Chloride	mg/L	1	7.6205	13						
Conductivity	umhos/cm	390	629.15	878						
Hardness	mg/L	132	277.64	377						
pH	su	7.3	8.013	8.56						
ResidueFilterable-TDS	mg/L	145	377.3	564						
ResidueNonFilterable-TSS	mg/L	4	20.579	65						
SAR		0.53	1.0868	1.897						
Sulfate	mg/L	14	48.52	230						
Calcium (Dissolved)	mg/L	17	57.892	90						
Magnesium (Total)	mg/L	12	32.355	51						
Sodium (Dissolved)	mg/L	14	40.51	63						

The monitoring point for Spring and Pond 22 is located on an east facing slope that drains down toward Terror Creek.

Baseline Information is derived from monitoring events beginning on 7/18/83 through 8/5/2012,
Point SP22 influenced by mining on 8/5/12.

SP23
Stevens Gulch - Pond Spring 23
Elevation - 8300

Initiated	8/22/1983	8/22/1983	8/22/1983
Activated	7/15/2014	7/15/2014	7/15/2014
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0.00	1.05	9.29	0.00		62.50	0.00	0.00	Seep
Inflow	GPM							0.00	0.00	0.00
Freeboard	Feet	0.00	0.02	0.28	0.00	0.78	3.10	1	0.1	0.5
Temperature	Celsius	-0.10	10.07	21.70	3.50	11.17	19.90			
Conductivity	umhos/cm	220.00	403.91	891.00	220	397	521			
pH	su	6.80	7.42	9.60	6.3	7.4	9.4			
Field Comments										
Lab Parameters	UNITS									
Bicarbonate	mg/L	91.9	254.6	424.6						
Chloride	mg/L	<MDL	5.15	17.37						
Conductivity	umhos/cm	236	424	670						
Hardness	mg/L	105.00	209.37	322.00						
Nitrate-Nitrite	mg/L	0.11	0.11	0.11						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	6.4	7.3	8.4						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable-TDS	mg/L	156	270	380						
ResidueNonFilterable-TSS	mg/L	2	61	216						
SAR		0.120	0.437	1.010						
Sulfate	mg/L	<MDL	10.08	43.00						
Aluminum (TREC)	mg/L	0.0210	0.0210	0.0210						
Arsenic (TREC)	mg/L	0.0200	0.0200	0.0200						
Cadmium (TREC)	mg/L	0.0100	0.0100	0.0100						
Calcium (TREC)	mg/L	41.300	41.300	41.300						
Copper (TREC)	mg/L	0.003	0.003	0.003						
Iron (TREC)	mg/L	0.15	0.54	1.15						
Lead (TREC)	mg/L	0.05	0.05	0.05						
Magnesium (TREC)	mg/L	11.0	23.4	38.0						
Manganese (TREC)	mg/L	0.010	0.067	0.110						
Mercury (TREC)	mg/L	0.00008	0.00008	0.00008						
Molybdenum (TREC)	mg/L	0.0030	0.0030	0.0030						
Selenium (TREC)	mg/L	0.0180	0.0180	0.0180						
Sodium (TREC)	mg/L	15.78	15.78	15.78						
Zinc (TREC)	mg/L	0.010	0.010	0.010						

**Multiple Seeps Inflow - Unmeasurable*

Activated 7/15/2014

Baseline Information Collection initiated on 8/22/83.
Point SP23 was influenced by mining 7/15/2014.

SP34-11
Sheep Corral - Spring/Pond 34-11
Elevation - 7440
Depth - 3'

Initiated	10/27/1997	10/27/1997	10/27/1997
Activated	6/1/2002	6/1/2002	6/1/2002
Date	10/7/2024	9/13/2024	6/20/2024

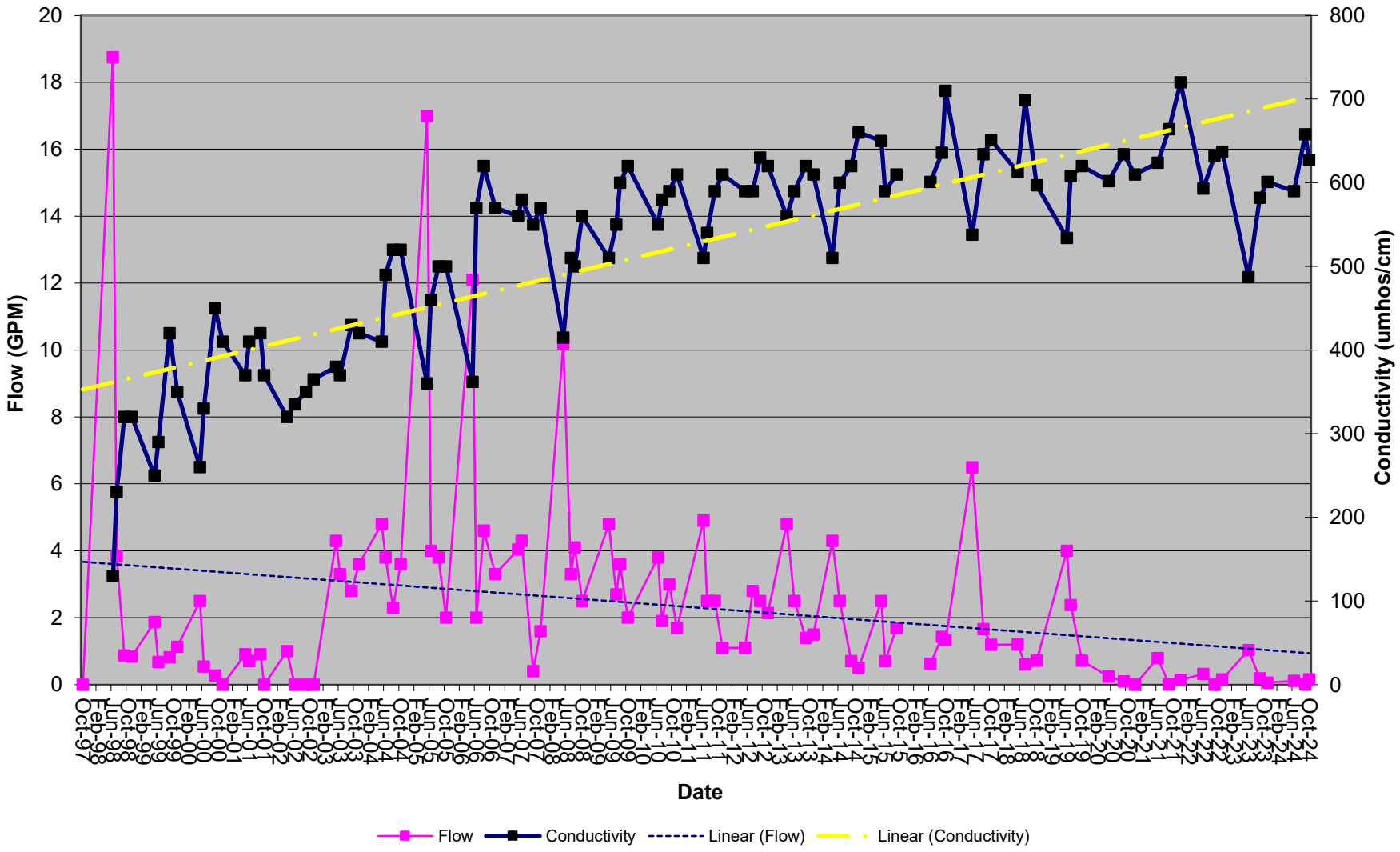
Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0.0	2.2	18.8	0.0	2.47	17.00	0	0	0.011
Inflow	GPM				0.0	1.63	6.49	0.16	0.005	0.11
FieldComment										
ph	su	6.9	7.5	8.0	6.7	7.69	8.50	7.61	8.2	8.19
Conductivity	umhos/cm	130	325	450	360	568	720	627	658	590
Temperature	Celsius	6.1	10.0	15.1	4.1	7.7	12.8	8.1	7.7	6.6
Lab Parameters	UNITS									
Bicarbonate	mg/L	165	197	217	137.9	240.8	331.0			
Chloride	mg/L	<MDL	2	3	<MDL	4.00	11.79			
Conductivity	umhos/cm	324	412	482	367.8	491.6	633.0			
Hardness	mg/L	92	103	111	100.0	122.8	152.5			
Nitrate-Nitrite	mg/L	<MDL	0.03	0.09	<MDL	1.063	2.580			
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	0.077	0.077			
pH	su	6.9	7.5	8.0	6.23	7.55	8.50			
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.044	0.072			
ResidueFilterable-TDS	mg/L	180	247	290	55.5	257.2	371.0			
ResidueNonFilterable-TSS	mg/L	<MDL	51	154	<MDL	42.2	107.0			
SAR		<MDL	<MDL	<MDL	2.09	3.19	4.75			
Sulfate	mg/L	30	33	40	26.34	40.36	57.42			
Aluminum	mg/L	0.04	2.15	6.34	<MDL	51.81	226.00			
Arsenic	mg/L	<MDL	0.0003	0.001	0.001	0.010	0.015			
Cadmium	mg/L	<MDL	<MDL	<MDL	<MDL	0.004	0.006			
Calcium	mg/L	27.5	30.3	32.1	7.7	32.4	43.6			
Copper	mg/L	<MDL	0.31	0.92	<MDL	<MDL	<MDL			
Iron (Total)	mg/L	0.04	2.35	6.89	0.01	1.28	8.03			
Lead	mg/L	<MDL	<MDL	<MDL	<MDL	0.02	0.03			
Magnesium	mg/L	5.7	6.7	7.5	3.41	7.30	10.60			
Manganese (Total)	mg/L	<MDL	0.046	0.137	<MDL	0.03	0.11			
Mercury	mg/L	<MDL	<MDL	<MDL	<MDL	0.0001	0.0002			
Molyebdenum	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
Selenium	mg/L	<MDL	<MDL	<MDL	0.0006	0.0125	0.0560			
Sodium	mg/L	30.8	49.5	64.1	59.7	177.3	807.0			
Zinc	mg/L	<MDL	0.01	0.04	0.01	0.02	0.02			

The monitoring point for SP34-11 is along the old coal exploration road winding down Sheep Corral Gulch. The spring in sandstone just above the pond surface.

Baseline Information for Point SP34-11 is derived from events beginning on 10/27/97 through 6/1/02.
Point influenced by mining on 6/1/02.

Plot of Flow and Conductivity



SP34-11 - Sheep Corral Spring and Pond 34-11

Figure 13

S-1
Mine Site Area - B Gulch
Elevation - 6990

Initiated	6/12/1995	6/12/1995	6/12/1995	6/12/1995
Activated	3/30/1997	3/30/1997	3/30/1997	3/30/1997
Date	10/3/2024	8/20/2024	5/13/2024	3/18/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				*
Flow	GPM	0.00	0.38	1.25	0.00	0.04	3.00	0	0	0	0
FieldComment								Dry	Dry	Dry	Damp
ph	su	8.4	8.6	8.7	8.1	8.3	8.5				
Conductivity	umhos/cm	1520	2053	2300	2000	2067	2200				
Temperature	Celsius	2.4	10.5	17.1	12.8	17.2	20.1				
Lab Parameters	**UNITS**										
Bicarbonate	mg/L	784	784	784							
Chloride	mg/L	28	28	28							
Conductivity	umhos/cm	2140	2140	2140							
Hardness	mg/L	570	570	570							
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL							
Oil and Grease	mg/L	<MDL	<MDL	<MDL							
pH	su	7.5	7.5	7.5							
Phosphate	mg/L	<MDL	<MDL	<MDL							
ResidueFilterable-TDS	mg/L	1480	1480	1480							
ResidueNonFilterable-TSS	mg/L	30	30	30							
SAR		5.66	5.66	5.66							
Sulfate	mg/L	490	490	490							
Aluminum	mg/L	0.89	0.89	0.89							
Arsenic	mg/L	<MDL	<MDL	<MDL							
Cadmium	mg/L	<MDL	<MDL	<MDL							
Calcium	mg/L	52	52	52							
Copper	mg/L	<MDL	<MDL	<MDL							
Iron (Total)	mg/L	1.01	1.01	1.01							
Lead	mg/L	<MDL	<MDL	<MDL							
Magnesium	mg/L	107	107	107							
Manganese (Total)	mg/L	0.017	0.017	0.017							
Mercury	mg/L	<MDL	<MDL	<MDL							
Molyebdenum	mg/L	<MDL	<MDL	<MDL							
Selenium	mg/L	0.002	0.002	0.002							
Sodium	mg/L	307	307	307							
Zinc	mg/L	0.01	0.01	0.01							

** Site not accessbile 1Q*

The S-1 monitoring point location is along the Stevens Draw road where it crosses B Gulch. This spring is located on the upper side of the road, discharges along the road and eventually contributes its flow through Sediment Pond B.

Baseline Information for Point S-1 is derived from events beginning on 6/12/95 through 3/30/97.
Point influenced by mining on 3/20/97.

S-2
J Spring PL No. 2
Freeman Gulch - Spring 2
Elevation - 7920

Initiated	6/12/1995	6/12/1995	6/12/1995
Activated	11/10/2001	11/10/2001	11/10/2001
Date	10/3/2024	9/13/2024	5/16/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.22	1.88	0.00	0.00	0.30	0	0	0
FieldComment								Dry	Dry	Dry
ph	su	6.8	7.3	7.8						
Conductivity	umhos/cm	40	106	525						
Temperature	Celsius	1.2	10.2	19.1						
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	57	57	57						
Chloride	mg/L	1	1	1						
Conductivity	umhos/cm	126	126	126						
Hardness	mg/L	44	44	44						
Nitrate-Nitrite	mg/L	0.51	0.51	0.51						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	6.0	6.0	6.0						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable-TDS	mg/L	90	90	90						
ResidueNonFilterable-TSS	mg/L	<MDL	<MDL	<MDL						
SAR		0.43	0.43	0.43						
Sulfate	mg/L	<MDL	<MDL	<MDL						
Aluminum	mg/L	0.10	0.10	0.10						
Arsenic	mg/L	0.002	0.002	0.002						
Cadmium	mg/L	<MDL	<MDL	<MDL						
Calcium	mg/L	14.2	14.2	14.2						
Copper	mg/L	<MDL	<MDL	<MDL						
Iron (Total)	mg/L	0.71	0.71	0.71						
Lead	mg/L	<MDL	<MDL	<MDL						
Magnesium	mg/L	2.1	2.1	2.1						
Manganese (Total)	mg/L	0.063	0.063	0.063						
Mercury	mg/L	<MDL	<MDL	<MDL						
Molyebdenum	mg/L	<MDL	<MDL	<MDL						
Selenium	mg/L	<MDL	<MDL	<MDL						
Sodium	mg/L	6.5	6.5	6.5						
Zinc	mg/L	<MDL	<MDL	<MDL						

** Site not accessbile 1Q*

The monitoring point for S-2 is located along the old coal exploration road which leads down into Freeman Gulch, to Pond 2, Drill holes 34B and 34C and the monitoring point for the Upper end of Freeman Gulch.

Baseline Information for Point S-2 is derived from events beginning on 6/12/95 through 11/10/01.
Point influenced by mining on 11/10/01.

S-3
Freeman Gulch - Spring 3
Elevation - 7920

Initiated	6/12/1995	6/12/1995	6/12/1995
Activated	10/15/2001	10/15/2001	10/15/2001
Date	10/17/2024	9/14/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.29	3.75	0.00	0.00	0.00	0	0	0
FieldComment								Dry	Dry	Damp
ph	su	6.7	7.8	8.5						
Conductivity	umhos/cm	120	222	443						
Temperature	Celsius	7.6	15.6	28.7						
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	77	77	77						
Chloride	mg/L	4	4	4						
Conductivity	umhos/cm	164	164	164						
Hardness	mg/L	72	72	72						
Nitrate-Nitrite	mg/L	0.05	0.05	0.05						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	7.5	7.5	7.5						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable-TDS	mg/L	110	110	110						
ResidueNonFilterable-TSS	mg/L	8	8	8						
SAR		0.34	0.34	0.34						
Sulfate	mg/L	<MDL	<MDL	<MDL						
Aluminum	mg/L	0.35	0.35	0.35						
Arsenic	mg/L	<MDL	<MDL	<MDL						
Cadmium	mg/L	<MDL	<MDL	<MDL						
Calcium	mg/L	21.7	21.7	21.7						
Copper	mg/L	<MDL	<MDL	<MDL						
Iron (Total)	mg/L	0.37	0.37	0.37						
Lead	mg/L	<MDL	<MDL	<MDL						
Magnesium	mg/L	4.2	4.2	4.2						
Manganese (Total)	mg/L	0.014	0.014	0.014						
Mercury	mg/L	<MDL	<MDL	<MDL						
Molyebdenum	mg/L	<MDL	<MDL	<MDL						
Selenium	mg/L	<MDL	<MDL	<MDL						
Sodium	mg/L	6.6	6.6	6.6						
Zinc	mg/L	<MDL	<MDL	<MDL						

** Site not accessbile 1Q*

The monitoring point for S-3 is located along the old coal exploration road which leads down into Freeman Gulch, to Pond 2, Drill Holes 34B and 34C and the monitoring point for the Upper end of Freeman Gulch.

Baseline Information for Point S-3 is derived from events beginning on 6/12/95 through 10/15/01.
Point influenced by mining on 10/15/01.

S-4
J Spring PL No. 3
Terror Creek - Spring 4
Elevation - 7880

Initiated	6/12/1995	6/12/1995	6/12/1995
Activated	1/15/2001	1/15/2001	1/15/2001
Date	10/16/2024	9/15/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.24	3.75	0.00	0.21	2.37			
FieldComment								Damp	Dry	Damp
ph	su	6.4	7.4	9.0	6.8	7.5	8.0			
Conductivity	umhos/cm	80	268	433	300	396	594			
Temperature	Celsius	1.2	10.0	24.0	1.8	6.5	10.7			
Lab Parameters	UNITS									
Bicarbonate	mg/L	56	56	56	231.8	231.8	231.8			
Chloride	mg/L	2	2	2	49.63	49.63	49.63			
Conductivity	umhos/cm	99	99	99	438	441	443			
Hardness	mg/L	44	44	44	150.69	150.69	150.69			
Nitrate-Nitrite	mg/L	0.62	0.62	0.62	0.32	0.32	0.32			
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
pH	su	6.7	6.7	6.7	6.8	6.9	7.1			
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
ResidueFilterable-TDS	mg/L	60	60	60	236	245	253			
ResidueNonFilterable-TSS	mg/L	16	16	16	1	19	36			
SAR		0.29	0.29	0.29	1.85	1.85	1.85			
Sulfate	mg/L	<MDL	<MDL	<MDL	60.51	60.51	60.51			
Aluminum (TREC)	mg/L	0.98	0.98	0.98	0.039	0.039	0.039			
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL	0.03	0.03	0.03			
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	0.01	0.01	0.01			
Calcium (TREC)	mg/L	13.6	13.6	13.6	46	46	46			
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	0.01	0.01	0.01			
Iron (TREC)	mg/L	0.88	0.88	0.88	0.15	0.56	0.97			
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	0.03	0.03	0.03			
Magnesium (TREC)	mg/L	2.4	2.4	2.4	8.7	8.7	8.7			
Manganese (TREC)	mg/L	0.03	0.03	0.03	0.020	0.026	0.032			
Mercury (TREC)	mg/L	0.0002	0.0002	0.0002	0.00006	0.00006	0.00006			
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	0.005	0.005	0.005			
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	0.008	0.008	0.008			
Sodium (TREC)	mg/L	4.5	4.5	4.5	52.9	52.9	52.9			
Zinc (TREC)	mg/L	<MDL	<MDL	<MDL	0.005	0.005	0.005			

The monitoring point for S-4 is located along an unmarked road in an un-named gulch leading down from the broad ridge that separates Sheep Corral and Freeman Gulches from Terror Creek. This spring feeds P-4.

** Site not accessbile 1Q*

Baseline Information for Point S-4 is derived from events beginning on 6/12/95 through 1/15/01.
Point influenced by mining on 1/15/01.

S-4
J Spring PL No. 3
Terror Creek - Spring 4
Elevation - 7880

Initiated	6/12/1995	6/12/1995	6/12/1995
Activated	1/15/2001	1/15/2001	1/15/2001
Date	10/16/2024	9/15/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.24	3.75	0.00	0.21	2.37			
FieldComment								Damp	Dry	Damp
ph	su	6.4	7.4	9.0	6.8	7.5	8.0			
Conductivity	umhos/cm	80	268	433	300	396	594			
Temperature	Celsius	1.2	10.0	24.0	1.8	6.5	10.7			
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	56	56	56	231.8	231.8	231.8			
Chloride	mg/L	2	2	2	49.63	49.63	49.63			
Conductivity	umhos/cm	99	99	99	438	441	443			
Hardness	mg/L	44	44	44	150.69	150.69	150.69			
Nitrate-Nitrite	mg/L	0.62	0.62	0.62	0.32	0.32	0.32			
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
pH	su	6.7	6.7	6.7	6.8	6.9	7.1			
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
ResidueFilterable-TDS	mg/L	60	60	60	236	245	253			
ResidueNonFilterable-TSS	mg/L	16	16	16	1	19	36			
SAR		0.29	0.29	0.29	1.85	1.85	1.85			
Sulfate	mg/L	<MDL	<MDL	<MDL	60.51	60.51	60.51			
Aluminum (TREC)	mg/L	0.98	0.98	0.98	0.039	0.039	0.039			
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL	0.03	0.03	0.03			
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	0.01	0.01	0.01			
Calcium (TREC)	mg/L	13.6	13.6	13.6	46	46	46			
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	0.01	0.01	0.01			
Iron (TREC)	mg/L	0.88	0.88	0.88	0.15	0.56	0.97			
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	0.03	0.03	0.03			
Magnesium (TREC)	mg/L	2.4	2.4	2.4	8.7	8.7	8.7			
Manganese (TREC)	mg/L	0.03	0.03	0.03	0.020	0.026	0.032			
Mercury (TREC)	mg/L	0.0002	0.0002	0.0002	0.00006	0.00006	0.00006			
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	0.005	0.005	0.005			
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	0.008	0.008	0.008			
Sodium (TREC)	mg/L	4.5	4.5	4.5	52.9	52.9	52.9			
Zinc (TREC)	mg/L	<MDL	<MDL	<MDL	0.005	0.005	0.005			

The monitoring point for S-4 is located along an unmarked road in an un-named gulch leading down from the broad ridge that separates Sheep Corral and Freeman Gulches from Terror Creek. This spring feeds P-4.

** Site not accessbile 1Q*

Baseline Information for Point S-4 is derived from events beginning on 6/12/95 through 1/15/01.
Point influenced by mining on 1/15/01.

S-4a
J Spring PL No. 3
Terror Creek - Spring 4a
Elevation - 7910

Initiated	11/9/1995	11/9/1995	11/9/1995
Activated	1/15/2001	1/15/2001	1/15/2001
Date	10/16/2024	9/15/2024	6/24/2024

Summary Information

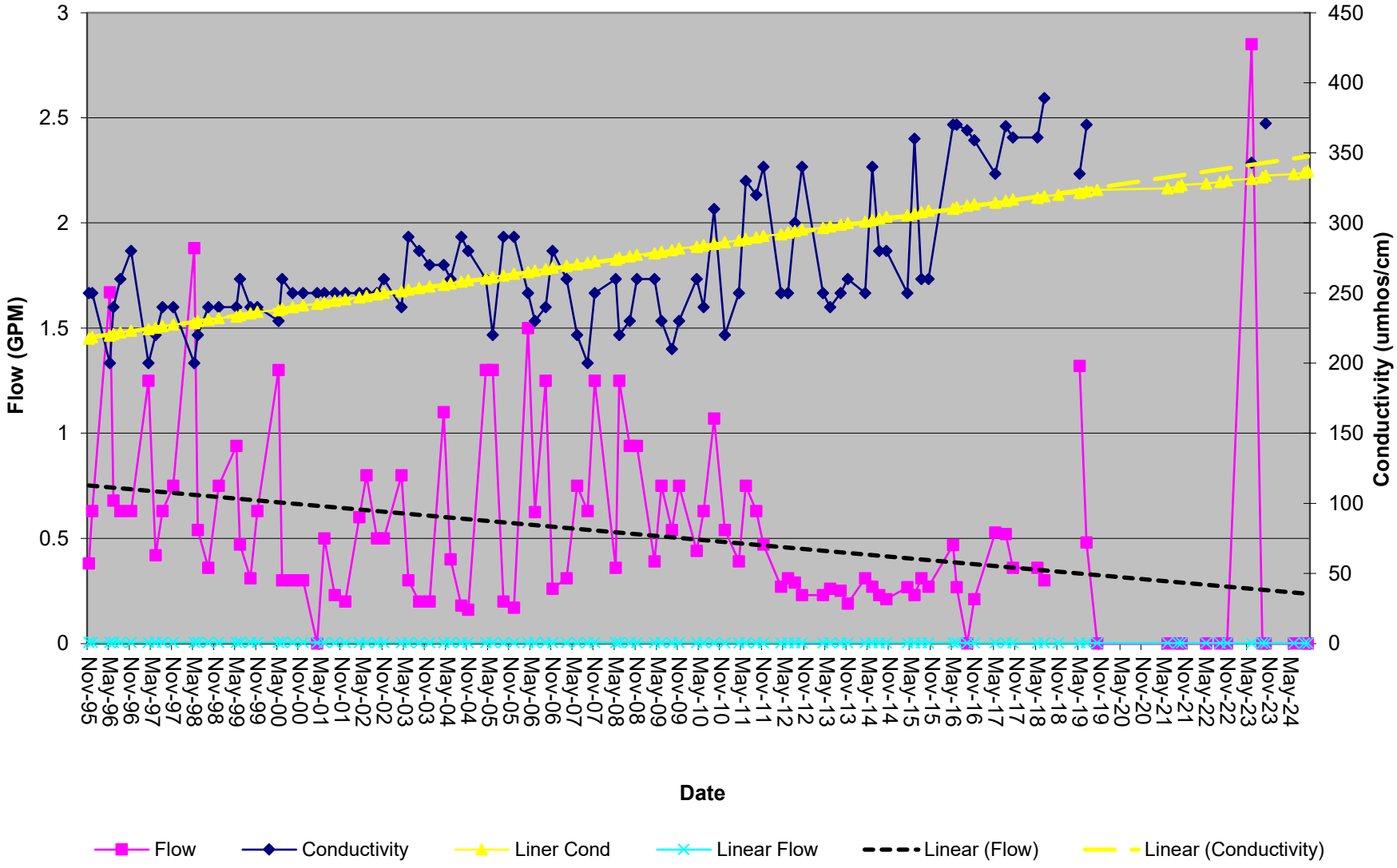
Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.30	0.72	1.88	0.00	0.53	2.85			
FieldComment								Damp	Dry	Damp
ph	su	7.2	7.8	8.5	6.3	7.5	8.1			
Conductivity	umhos/cm	200	239	280	200	282	389			
Temperature	Celsius	2.4	7.4	14.2	4.3	6.6	15.0			
Lab Parameters	UNITS									
Bicarbonate	mg/L	146	146	146	204.9	204.9	204.9			
Chloride	mg/L	2	2	2	47.15	47.15	47.15			
Conductivity	umhos/cm	289	289	289	313	321	330			
Hardness	mg/L	125	125	125	131.95	131.95	131.95			
Nitrate-Nitrite	mg/L	0.16	0.16	0.16	0.31	0.31	0.31			
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
pH	su	7.30	7.30	7.30	7.1	7.3	7.5			
Phosphate	mg/L	0.08	0.08	0.08	<MDL	<MDL	<MDL			
ResidueFilterable-TDS	mg/L	200	200	200	196	226	263			
ResidueNonFilterable-TSS	mg/L	<MDL	<MDL	<MDL	2	27	48			
SAR		0.49	0.49	0.49	0.658	0.658	0.658			
Sulfate	mg/L	13	13	13	14.41	14.41	14.41			
Aluminum (TREC)	mg/L	0.88	0.88	0.88	0.023	0.023	0.023			
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL	0.005	0.005	0.005			
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	0.006	0.006	0.006			
Calcium (TREC)	mg/L	43.10	43.10	43.10	44.4	44.4	44.4			
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	0.002	0.002	0.002			
Iron (TREC)	mg/L	1.23	1.23	1.23	0.08	0.54	1.24			
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	0.03	0.03	0.03			
Magnesium (TREC)	mg/L	4.30	4.30	4.30	5.12	5.12	5.12			
Manganese (TREC)	mg/L	0.02	0.02	0.02	0.01	0.02	0.03			
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL	0.00008	0.00008	0.00008			
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	0.007	0.007	0.007			
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	0.008	0.008	0.008			
Sodium (TREC)	mg/L	12.5	12.5	12.5	17.6	17.6	17.6			
Zinc (TREC)	mg/L	0.03	0.03	0.03	0.006	0.006	0.006			

** Site not accessbile 1Q*

The monitoring point for S-4a is located along an unmarked road in an un-named gulch leading down from the broad ridge that separates Sheep Corral and Freeman Gulches from Terror Creek. This spring feeds P-4.

Baseline Information for Point S-4a is derived from events beginning on 11/9/95 through 1/15/01.
Point influenced by mining on 1/15/01.

Plot of Flow and Conductivity



S-4a - Terror Creek Spring 4a

Figure 20

S-5
J Spring PL No. 1
Sheep Corral - Spring 5
Elevation - 7800

Initiated	6/12/1995	6/12/1995	6/12/1995
Activated	12/1/2001	12/1/2001	12/1/2001
Date	10/16/2024	9/15/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.27	0.80	0.00	0.22	3.00			
FieldComment								Dry	Dry	Dry
ph	su	7.2	7.6	8.1	7.1	7.4	8.4			
Conductivity	umhos/cm	190	332	400	310	361	430			
Temperature	Celsius	4.0	7.2	11.8	5.0	6.6	8.9			
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	188	191	193	203.5	203.5	203.5			
Chloride	mg/L	2	2	2	32.26	32.26	32.26			
Conductivity	umhos/cm	406	407	407	414	414	414			
Hardness	mg/L	113	118	123	132.93	132.93	132.93			
Nitrate-Nitrite	mg/L	<MDL	0.08	0.15	0.31	0.31	0.31			
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
pH	su	6.90	7.00	7.10	7.08	7.08	7.08			
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
ResidueFilterable-TDS	mg/L	220	225	230	268	268	268			
ResidueNonFilterable-TSS	mg/L	<MDL	14	28	6	6	6			
SAR		1.51	1.52	1.53	1.78	1.78	1.78			
Sulfate	mg/L	17	23	29	33.75	33.75	33.75			
Aluminum (TREC)	mg/L	<MDL	0.16	0.32	0.028	0.028	0.028			
Arsenic (TREC)	mg/L	<MDL	0.001	0.001	0.006	0.006	0.006			
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	0.008	0.008	0.008			
Calcium (TREC)	mg/L	34.00	35.55	37.10	40.9	40.9	40.9			
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	0.002	0.002	0.002			
Iron (TREC)	mg/L	<MDL	0.32	0.64	0.05	0.05	0.05			
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	0.03	0.03	0.03			
Magnesium (TREC)	mg/L	6.70	7.00	7.30	7.48	7.48	7.48			
Manganese (TREC)	mg/L	0.017	0.027	0.037	0.003	0.003	0.003			
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL	0.00006	0.00006	0.00006			
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	0.011	0.011	0.011			
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	0.012	0.012	0.012			
Sodium (TREC)	mg/L	36.50	37.45	38.40	47.8	47.8	47.8			
Zinc (TREC)	mg/L	<MDL	0.005	0.010	0.006	0.006	0.006			

** Site not accessbile 1Q*

The monitoring point location for S-5 is locate along an unmapped road which leads down an un-named gulch which leads into Sheep Corral Gulch. This spring feeds Pond 5.

Baseline Information for Point S-5 is derived from events beginning on 6/12/95 through 12/1/01.
Point influenced by mining on 12/1/01.

S-5a
J Spring PL No. 1
Sheep Corral - Spring 5A
Elevation - 7860

Initiated	6/12/1995	6/12/1995	6/12/1995
Activated	12/1/2001	12/1/2001	12/1/2001
Date	10/16/2024	9/15/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.13	0.89	4.30	0.00	0.26	3.00			
FieldComment								Dry	Dry	Dry
ph	su	6.9	7.4	8.0	7.0	7.4	8.3			
Conductivity	umhos/cm	160	301	400	340	388	448			
Temperature	Celsius	4.0	6.7	9.1	5.1	6.6	7.8			
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	184.00	185.00	186.00						
Chloride	mg/L	2.00	2.00	2.00						
Conductivity	umhos/cm	388	391	393						
Hardness	mg/L	125.00	128.00	131.00						
Nitrate-Nitrite	mg/L	<MDL	0.03	0.05						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	6.90	7.40	7.90						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable-TDS	mg/L	190.00	205.00	220.00						
ResidueNonFilterable-TSS	mg/L	<MDL	17.00	34.00						
SAR		1.10	1.11	1.12						
Sulfate	mg/L	21.00	25.00	29.00						
Aluminum	mg/L	<MDL	0.34	0.69						
Arsenic	mg/L	<MDL	<MDL	<MDL						
Cadmium	mg/L	<MDL	<MDL	<MDL						
Calcium	mg/L	37.80	38.70	39.60						
Copper	mg/L	<MDL	<MDL	<MDL						
Iron (Total)	mg/L	0.02	0.48	0.95						
Lead	mg/L	<MDL	<MDL	<MDL						
Magnesium	mg/L	7.50	7.70	7.90						
Manganese (Total)	mg/L	<MDL	0.019	0.037						
Mercury	mg/L	<MDL	<MDL	<MDL						
Molyebdenum	mg/L	<MDL	<MDL	<MDL						
Selenium	mg/L	<MDL	<MDL	<MDL						
Sodium	mg/L	28.10	28.60	29.10						
Zinc	mg/L	0.02	0.02	0.02						

** Site not accessible 1Q*

The monitoring point location for S-5a is located along an unmapped road which is down an un-named gulch which leads into Sheep Corral Gulch. This spring feeds Pond 5.

Baseline Information for Point S-5a is derived from events beginning on 9/27/95 through 12/1/01.
Point influenced by mining on 12/1/01.

S-5b
J Spring Y PL No. 1
Sheep Corral - Spring 5B
Elevation - 7860

Initiated	6/12/1995	6/12/1995	6/12/1995
Activated	12/1/2001	12/1/2001	12/1/2001
Date	10/16/2024	9/15/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM				0.01	0.52	2.90	0.11		0.04
FieldComment									Dru	
ph	su				7.0	7.9	8.9	7.7		8.3
Conductivity	umhos/cm				400	531	701	583		579
Temperature	Celsius				4.4	8.2	13.6	8		8.1
Lab Parameters	UNITS									
Bicarbonate	mg/L				277.8	277.8	277.8			
Chloride	mg/L				22.33	22.33	22.33			
Conductivity	umhos/cm				541	562	580			
Hardness	mg/L				114.78	114.78	114.78			
Nitrate-Nitrite	mg/L				0.32	0.32	0.32			
Oil and Grease	mg/L				<MDL	<MDL	<MDL			
pH	su				7.30	7.54	7.77			
Phosphate	mg/L				<MDL	<MDL	<MDL			
ResidueFilterable-TDS	mg/L				312	353	406			
ResidueNonFilterable-TSS	mg/L				14	30	60			
SAR					3.62	3.62	3.62			
Sulfate	mg/L				41.98	41.98	41.98			
Aluminum (TREC)	mg/L				0.034	0.034	0.034			
Arsenic (TREC)	mg/L				0.055	0.055	0.055			
Cadmium (TREC)	mg/L				0.01	0.01	0.01			
Calcium (TREC)	mg/L				33.4	33.4	33.4			
Copper (TREC)	mg/L				0.01	0.01	0.01			
Iron (TREC)	mg/L				0.24	0.51	0.81			
Lead (TREC)	mg/L				0.02	0.02	0.02			
Magnesium (TREC)	mg/L				7.62	7.62	7.62			
Manganese (TREC)	mg/L				0.083	0.118	0.180			
Mercury (TREC)	mg/L				0.00004	0.00004	0.00004			
Molyebdenum (TREC)	mg/L				0.013	0.013	0.013			
Selenium (TREC)	mg/L				0.004	0.004	0.004			
Sodium (TREC)	mg/L				90.5	90.5	90.5			
Zinc (TREC)	mg/L				0.005	0.005	0.005			

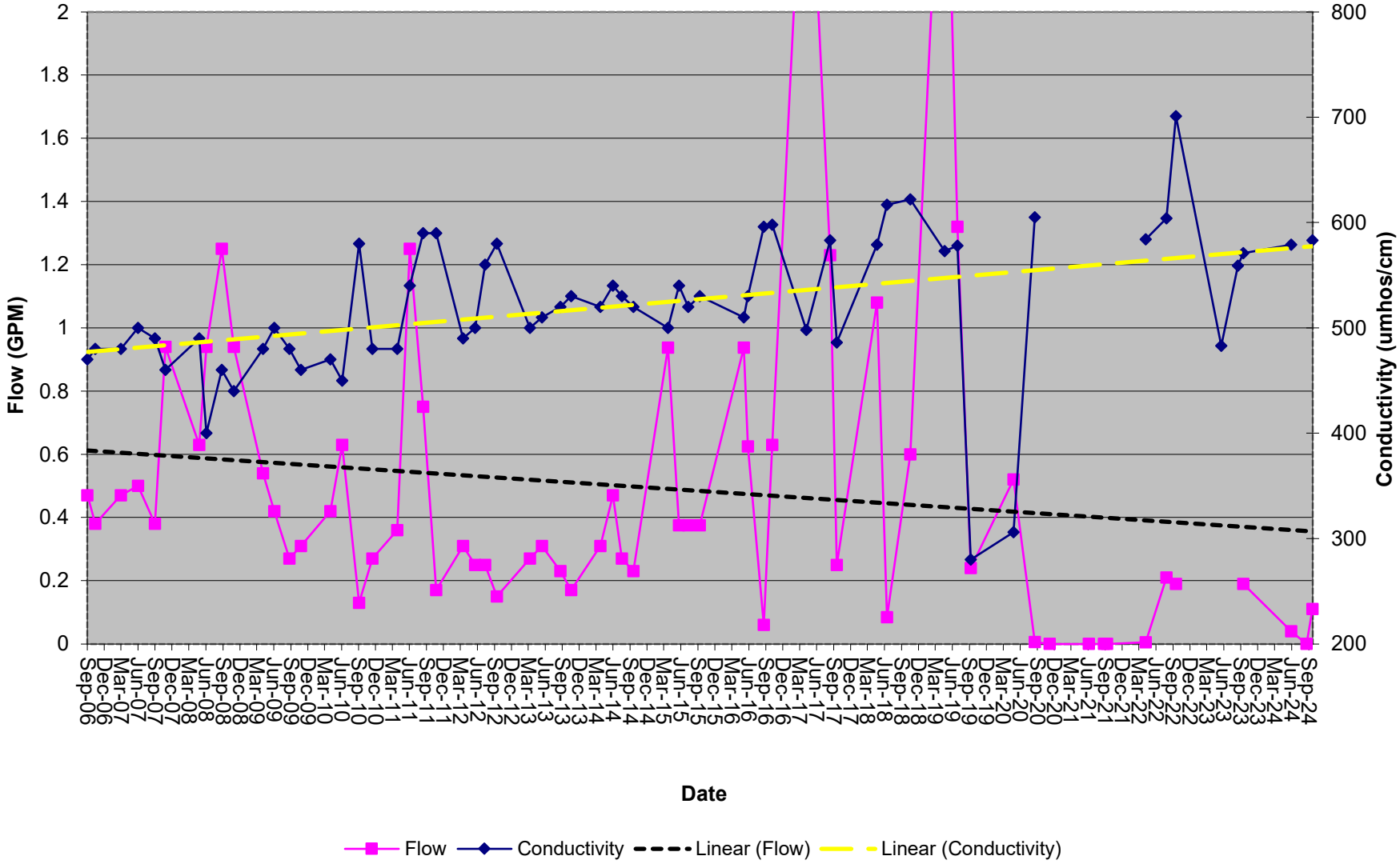
The area of concern for monitoring point S-5b was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered Operational.

The monitoring point location for S-5b is located along an unmapped road which is down an un-named gulch which leads into Sheep Corral Gulch. It is located across the draw from Springs 5 and 5a to the west.

** Site not accessbile 1Q*

There is no baseline information collection possible for points initiated after the influence of mining.

Plot of Flow and Conductivity



S-5b - Sheep Corral Spring 5b

Figure 24

S-8
C Gulch - Spring 8
Elevation - 7220

Initiated	6/12/1995	6/12/1995	6/12/1995	6/12/1995
Activated	11/1/2002	11/1/2002	11/1/2002	11/1/2002
Date	10/3/2024	8/20/2024	5/16/2024	3/18/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.00	0.08	2.50	0.00	0.00	0.00	0	0	0	0
FieldComment								Dry	Dry	Dry	Damp
ph	su	6.90	6.90	6.90							
Conductivity	umhos/cm	1380	1380	1380							
Temperature	Celsius	13.70	13.70	13.70							
Lab Parameters	UNITS										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
ResidueFilterable-TDS	mg/L										
ResidueNonFilterable-TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

** Site not accessbile 1Q*

The monitoring point for S-8 is located just above the mine portal road which crosses over the mine portals on the utility bench of the mine.

Baseline Information for Point S-8 is derived from events beginning on 6/12/95 through 11/1/02.
Point influenced by mining on 11/1/02.

S-10
Stevens Draw - Spring 10
Elevation - 7550

Initiated	7/12/1995	7/12/1995	7/12/1995	7/12/1995
Activated	11/1/2002	11/1/2002	11/1/2002	11/1/2002
Date	10/3/2024	8/20/2024	6/24/2024	3/18/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.00	0.17	2.50	0.00	0.00	0.01	0	0	0	0
FieldComment								Dry	Dry	Dry	Dry
ph	su	8.40	8.50	8.60							
Conductivity	umhos/cm	620	640	660							
Temperature	Celsius	19.80	21.10	22.40							
Lab Parameters	UNITS										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
ResidueFilterable-TDS	mg/L										
ResidueNonFilterable-TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

** Site not accessbile 1Q*

The monitoring point for S-10 is located along the Stevens Draw road and is located on the lower side of the road.

Baseline Information for Point S-10 is derived from events beginning on 7/12/95 through 11/1/02.
Point influenced by mining on 11/1/02.

S-11
Stevens Draw - Spring 11
Elevation - 7940

Initiated	7/12/1995	7/12/1995	7/12/1995	7/12/1995
Activated	1/15/2001	1/15/2001	1/15/2001	1/15/2001
Date	10/3/2024	8/20/2024	6/24/2024	3/18/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.00	0.00	0.00	0.00	0.05	4.00	0	0	0	0
FieldComment								Dry	Dry	Dry	Damp
ph	su				7.6	7.6	7.6				
Conductivity	umhos/cm				160	160	160				
Temperature	Celsius				7.7	7.7	7.7				
Lab Parameters	**UNITS**										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
ResidueFilterable -TDS	mg/L										
ResidueNonFilterable-TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

** Site not accessbile 1Q*

The monitoring point for S-11 is located along the Stevens Draw road and is located on the lower side of the road.

Baseline Information for Point S-11 is derived from events beginning on 7/12/95 through 1/15/01.
Point influenced by mining on 1/15/01.

S-12
B Gulch - Spring 12
Elevation - 7650

Initiated	7/12/1995	7/12/1995	7/12/1995	7/12/1995
Activated	7/1/2004	7/1/2004	7/1/2004	7/1/2004
Date	10/3/2024	8/20/2024	5/21/2024	3/18/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0
FieldComment								Dry	Dry	Dry	Damp
ph	su										
Conductivity	umhos/cm										
Temperature	Celsius										
Lab Parameters	**UNITS**										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
ResidueFilterable-TDS	mg/L										
ResidueNonFilterable -TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

** Site not accessbile 1Q*

The monitoring point for S-12 is located along a switchback road that ascends the southern facing exposure of the canyon wall of the North Fork of the Gunnison River. The road leads to the broad ridge which separates the Hubbard Creek and Terror Creek drainage systems.

Baseline Information for Point S-12 is derived from events beginning on 7/12/95 through 7/1/04.
Point Influenced by mining on 7/1/04.

S-13
Freeman Gulch - Spring 13
Elevation - 7500

Initiated	9/27/1995	9/27/1995	9/27/1995
Activated	11/18/1999	11/18/1999	11/18/1999
Date	10/3/2024	9/13/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.01	0.27	0.00	0.01	0.94	0	0	0
FieldComment								Dry	Dry	Dry
ph	su	8.2	8.2	8.2						
Conductivity	umhos/cm	300	300	300						
Temperature	Celsius	10.0	10.0	10.0						
Lab Parameters	UNITS									
Bicarbonate	mg/L									
Chloride	mg/L									
Conductivity	umhos/cm									
Hardness	mg/L									
Nitrate-Nitrite	mg/L									
Oil and Grease	mg/L									
pH	su									
Phosphate	mg/L									
ResidueFilterable-TDS	mg/L									
ResidueNonFilterable-TSS	mg/L									
SAR										
Sulfate	mg/L									
Aluminum	mg/L									
Arsenic	mg/L									
Cadmium	mg/L									
Calcium	mg/L									
Copper	mg/L									
Iron (Total)	mg/L									
Lead	mg/L									
Magnesium	mg/L									
Manganese (Total)	mg/L									
Mercury	mg/L									
Molyebdenum	mg/L									
Selenium	mg/L									
Sodium	mg/L									
Zinc	mg/L									

** Site not accessbile 1Q*

The monitoring point for S-13 is located along an old coal exploration road which eventually reaches Drillhole 13. This spring is located on the northern facing slopes of Freeman Gulch.

Baseline Information for Point S-13 is derived from events beginning on 9/27/95 through 11/18/99.
Point influenced by mining on 11/18/99.

S-14
Stevens Draw - Spring 14
Elevation - 7100

Initiated	9/27/1995	9/27/1995	9/27/1995
Activated			
Date	10/3/2024	8/20/2024	5/16/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.15	4.00				0	0	0
FieldComment								Dry	Dry	Dry
ph	su	7.6	8.1	8.6						
Conductivity	umhos/cm	1020	1124	1300						
Temperature	Celsius	3.1	11.2	22.2						
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	472	472	472						
Chloride	mg/L	16	16	16						
Conductivity	umhos/cm	1220	1220	1220						
Hardness	mg/L	414	414	414						
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	7.2	7.2	7.2						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable -TDS	mg/L	780	780	780						
ResidueNonFilterable-TSS	mg/L	22	22	22						
SAR		2.55	2.55	2.55						
Sulfate	mg/L	209.0	209.0	209.0						
Aluminum	mg/L	0.24	0.24	0.24						
Arsenic	mg/L	0.002	0.002	0.002						
Cadmium	mg/L	<MDL	<MDL	<MDL						
Calcium	mg/L	80.1	80.1	80.1						
Copper	mg/L	<MDL	<MDL	<MDL						
Iron (Total)	mg/L	1.68	1.68	1.68						
Lead	mg/L	<MDL	<MDL	<MDL						
Magnesium	mg/L	51.9	51.9	51.9						
Manganese (Total)	mg/L	0.184	0.184	0.184						
Mercury	mg/L	<MDL	<MDL	<MDL						
Molyebdenum	mg/L	<MDL	<MDL	<MDL						
Selenium	mg/L	<MDL	<MDL	<MDL						
Sodium	mg/L	118	118	118						
Zinc	mg/L	<MDL	<MDL	<MDL						

The area of concern for monitoring point S-14 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The monitoring point for S-14 is located on a fork of the Stevens Draw road just above Pond 1. Spring seeps from the east bank of drainage along about 100' sections. (Hanna, 1995)

** Site not accessbile 1Q*

Baseline Information Collection initiated on 9/27/95 and not yet considered complete.
Point S-14 has not been influenced by mining.

S-16
J Spring PL No.4
Terror Creek - Spring 16
Elevation - 7750

Initiated	10/11/1995	10/11/1995	10/11/1995
Activated	1/15/2001	1/15/2001	1/15/2001
Date	10/16/2024	9/14/2024	6/24/2024

Summary Information

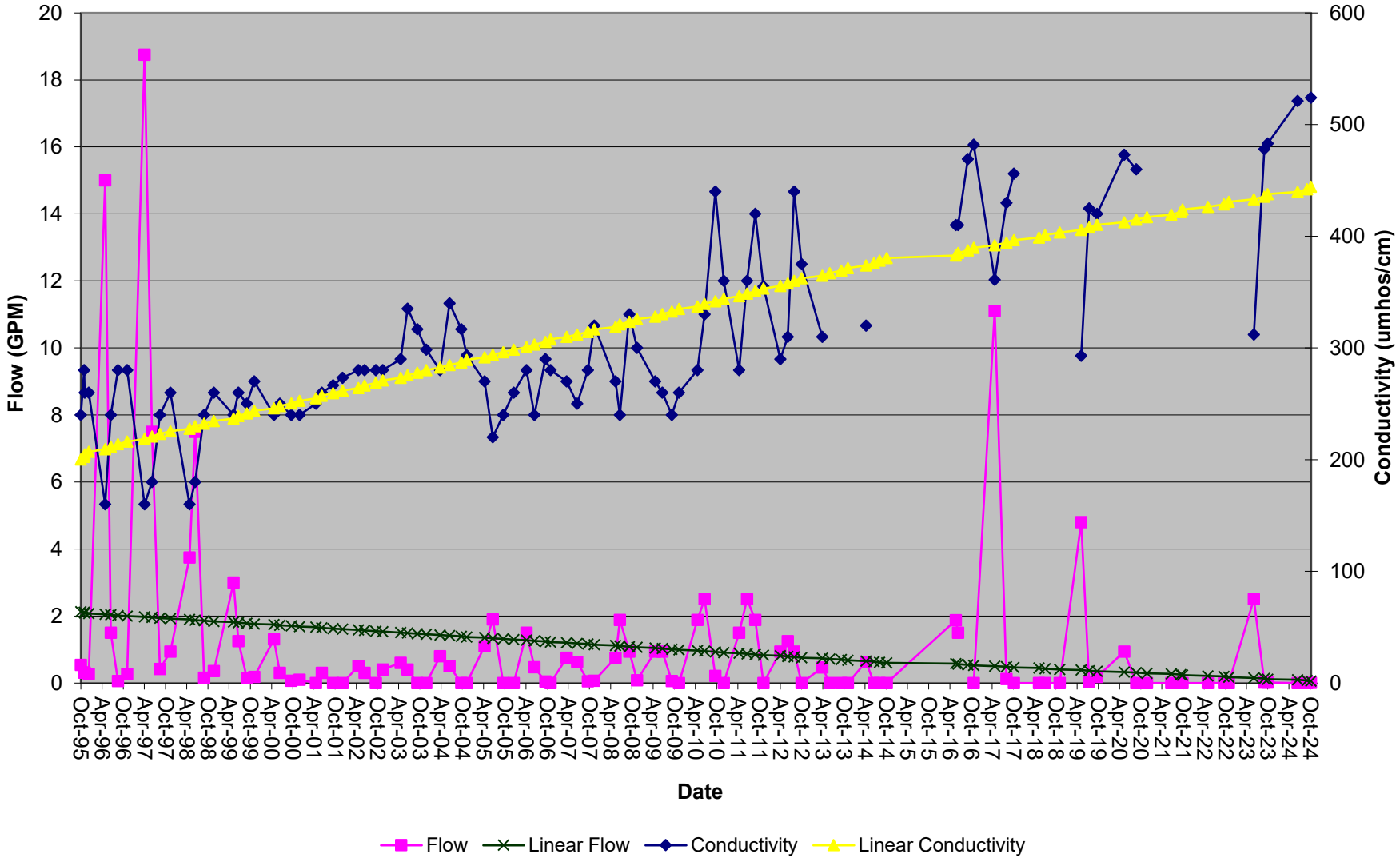
Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.06	2.67	18.75	0.00	0.74	11.10	0.005	0	0
FieldComment										
ph	su	6.9	7.2	7.6	6.7	7.4	7.9	7.37		7.42
Conductivity	umhos/cm	160	236	280	220	343	524	524		521
Temperature	Celsius	4.5	7.0	12.0	5.2	7.3	12.8	10.9		10.1
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	107	129	159	140.0	170.6	193.8			
Chloride	mg/L	<MDL	2	5	1.70	13.57	37.22			
Conductivity	umhos/cm	230	260	296	242	353	449			
Hardness	mg/L	59	93	114	76.80	103.17	117.72			
Nitrate-Nitrite	mg/L	<MDL	0.10	0.24	<MDL	0.31	0.31			
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
pH	su	6.4	6.9	7.5	6.69	7.06	7.63			
Phosphate	mg/L	<MDL	0.07	0.33	<MDL	<MDL	<MDL			
ResidueFilterable-TDS	mg/L	140	164	190	169	223	284			
ResidueNonFilterable-TSS	mg/L	<MDL	2	8	2	13	31			
SAR		0.60	0.70	0.75	1.30	1.35	1.42			
Sulfate	mg/L	<MDL	3.4	12.0	18.30	25.53	38.69			
Aluminum (TREC)	mg/L	0.03	0.07	0.17	0.017	0.098	0.179			
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL	0.005	0.005	0.005			
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	0.007	0.007	0.007			
Calcium (TREC)	mg/L	18.2	28.7	35.1	23.5	31.7	35.9			
Copper (TREC)	mg/L	<MDL	0.002	0.010	<MDL	0.003	0.003			
Iron (TREC)	mg/L	0.03	0.15	0.49	0.02	0.18	0.42			
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	0.02	0.02	0.02			
Magnesium (TREC)	mg/L	3.2	5.3	6.5	<MDL	5.81	6.94			
Manganese (TREC)	mg/L	<MDL	0.005	0.017	<MDL	0.013	0.030			
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0001	0.0001			
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.009	0.009			
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.002	0.002			
Sodium (TREC)	mg/L	10.5	15.4	18.2	23.9	31.0	36.1			
Zinc (TREC)	mg/L	<MDL	0.01	0.02	<MDL	0.007	0.007			

** Site not accessbile 1Q*

The monitoring point for S-16 is located on an un-mapped road in an un-named gulch which discharges eventually into Terror Creek. The flow from S-16 contributes to Pond 3, which is just below it.

Baseline Information for Point S-16 is derived from events beginning on 10/11/95 through 1/15/02.
Point influenced by mining on 1/15/01.

Plot of Flow and Conductivity



S-16 - Terror Creek Spring 16

Figure 32

S-17
Freeman Gulch - Spring 17
Cottonwood on sandstone outcrop
Elevation - 7110

Initiated	5/9/1996	5/9/1996	5/9/1996
Activated	12/7/2000	12/7/2000	12/7/2000
Date	10/3/2024	9/13/2024	5/16/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	2.11	20.00	0.00	0.00	0.00	0	0	0
FieldComment								Dry	Dry	Damp
ph	su	8.40	8.61	8.80						
Conductivity	umhos/cm	480.00	532.50	580.00						
Temperature	Celsius	8.40	16.33	25.00						
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	266.00	280.25	298.00						
Chloride	mg/L	2.00	2.50	3.00						
Conductivity	umhos/cm	511.00	538.25	586.00						
Hardness	mg/L	177.00	200.00	216.00						
Nitrate-Nitrite	mg/L	<MDL	0.02	0.04						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	8.10	8.25	8.40						
Phosphate	mg/L	<MDL	0.01	0.03						
ResidueFilterable-TDS	mg/L	300.00	342.50	380.00						
ResidueNonFilterable-TSS	mg/L	<MDL	72.00	134.00						
SAR		1.15	1.50	2.08						
Sulfate	mg/L	20.00	27.50	30.00						
Aluminum	mg/L	0.10	2.52	5.42						
Arsenic	mg/L	<MDL	0.001	0.005						
Cadmium	mg/L	<MDL	<MDL	<MDL						
Calcium	mg/L	42.00	50.33	55.00						
Copper	mg/L	<MDL	0.003	0.01						
Iron (Total)	mg/L	0.10	2.80	6.08						
Lead	mg/L	<MDL	0.01	0.02						
Magnesium	mg/L	17.50	18.05	19.00						
Manganese (Total)	mg/L	<MDL	0.04	0.09						
Mercury	mg/L	<MDL	<MDL	<MDL						
Molyebdenum	mg/L	<MDL	<MDL	<MDL						
Selenium	mg/L	<MDL	0.0003	0.001						
Sodium	mg/L	38.30	47.70	62.70						
Zinc	mg/L	<MDL	0.02	0.04						

Baseline Closed at end of 2000 Monitoring Season

** Site not accessbile 1Q*

The monitoring point location for S-17 is located on the southern facing slopes of Freeman Gulch and is accessed by foot from trails that originate on the Hubbard Creek Road.

Baseline Information for Point S-17 is derived from events beginning on 5/9/96 through 12/7/00.
Point influenced by mining on 12/7/00.

S-18
J Spring PL No.5
Terror Creek - Spring 18
Elevation - 7750

Initiated	6/28/1999	6/28/1999	6/28/1999
Activated			
Date	10/16/2024	9/14/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.72	5.00						
FieldComment								No flow	No flow	No flow
ph	su	6.7	8.0	10.2						
Conductivity	umhos/cm	220	381	670						
Temperature	Celsius	2.9	10.5	17.8						
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	167.7	248.2	401.0						
Chloride	mg/L	<MDL	<MDL	<MDL						
Conductivity	umhos/cm	331.1	426.0	600.0						
Hardness	mg/L	115.9	165.6	266.0						
Nitrate-Nitrite	mg/L	<MDL	1.09	2.13						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	6.52	7.72	8.33						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable-TDS	mg/L	117.5	229.6	377.0						
ResidueNonFilterable-TSS	mg/L	1	22	64						
SAR		1.35	1.49	1.68						
Sulfate	mg/L	14.41	21.34	25.73						
Aluminum	mg/L	<MDL	0.86	1.59						
Arsenic	mg/L	<MDL	0.008	0.010						
Cadmium	mg/L	<MDL	0.002	0.002						
Calcium	mg/L	30.0	43.7	66.8						
Copper	mg/L	<MDL	<MDL	<MDL						
Iron (Total)	mg/L	0.023	0.750	1.800						
Lead	mg/L	<MDL	0.01	0.01						
Magnesium	mg/L	8.92	13.76	24.20						
Manganese (Total)	mg/L	<MDL	0.02	0.02						
Mercury	mg/L	<MDL	0.00004	0.00004						
Molyebdenum	mg/L	<MDL	<MDL	<MDL						
Selenium	mg/L	<MDL	0.070	0.086						
Sodium	mg/L	36.0	44.0	53.8						
Zinc	mg/L	0.01	0.02	0.03						

The area of concern for monitoring point S-18 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The monitoring point for S-18 is located on an unmapped road in an un-named gulch which discharges eventually into Terror Creek. The flow from S-18 contributes to Pond 6, which is just below it.

** Site not accessbile 1Q*

Baseline Information Collection initiated on 6/28/99 and not yet considered complete.
Point S-18 has not been influenced by mining.

S2 - 10
Along Hubbard Creek Road
Hubbard Creek - Spring 2-10
Elevation - 6320'

Initiated	4/1/1999	4/1/1999	4/1/1999	4/1/1999
Activated	9/24/1999	9/24/1999	9/24/1999	9/24/1999
Date	12/6/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				*
Flow	GPM	0.0	0.9	3.6	0.0	0.1	4.2	0	0	0	0
FieldComment								Dry	Dry	Dry	Dry
ph	su	7.4	7.4	7.4	8.0	8.6	10.2				
Conductivity	umhos/cm	840	840	840	940	1294	1670				
Temperature	Celsius	4.9	4.9	4.9	4.0	17.2	24.6				
Lab Parameters	UNITS										
Bicarbonate	mg/L				570.7	570.7	570.7				
Chloride	mg/L				<MDL	<MDL	<MDL				
Conductivity	umhos/cm				1048.5	1048.5	1048.5				
Hardness	mg/L				375.48	375.48	375.48				
Nitrate-Nitrite	mg/L				<MDL	<MDL	<MDL				
Oil and Grease	mg/L				11.39	11.39	11.39				
pH	su				8.34	8.34	8.34				
Phosphate	mg/L				<MDL	<MDL	<MDL				
Residue Filterable-TDS	mg/L				1052	1052	1052				
Residue NonFilterable-TSS	mg/L				15	15	15				
SAR					0.29	0.29	0.29				
Sulfate	mg/L				205.39	205.39	205.39				
Aluminum	mg/L				0.25	0.25	0.25				
Arsenic	mg/L				0.0066	0.0066	0.0066				
Cadmium	mg/L				<MDL	<MDL	<MDL				
Calcium	mg/L				53.4	53.4	53.4				
Copper	mg/L				0.06	0.06	0.06				
Iron (Total)	mg/L				0.51	0.51	0.51				
Lead	mg/L				0.08	0.08	0.08				
Magnesium	mg/L				58.8	58.8	58.8				
Manganese (Total)	mg/L				0.03	0.03	0.03				
Mercury	mg/L				0.0002	0.0002	0.0002				
Molyebdenum	mg/L				<MDL	<MDL	<MDL				
Selenium	mg/L				0.0068	0.0068	0.0068				
Sodium	mg/L				12.94	12.94	12.94				
Zinc	mg/L				0.055	0.055	0.055				

Influenced by the disturbance of Freeman Gulch.

* Site not accessible 1Q

The monitoring point for S2-10 is found along the Hubbard Creek road near the mouth of Freeman Gulch. The flow and field parameters are measured where the flow crosses the Hubbard Creek road, just before it enters Hubbard Creek.

Baseline information for Point S2-10 is derived from events beginning on 4/1/99 through 11/25/99.
Point influenced by mining on 11/25/99.

S2-2
Along Hubbard Creek Freeman Gulch Road
Hubbard Creek - Spring 2-2
Elevation - 6740

Initiated	6/9/1998	6/9/1998	6/9/1998
Activated	9/15/2001	9/15/2001	9/15/2001
Date	10/3/2024	9/13/2024	5/15/2024

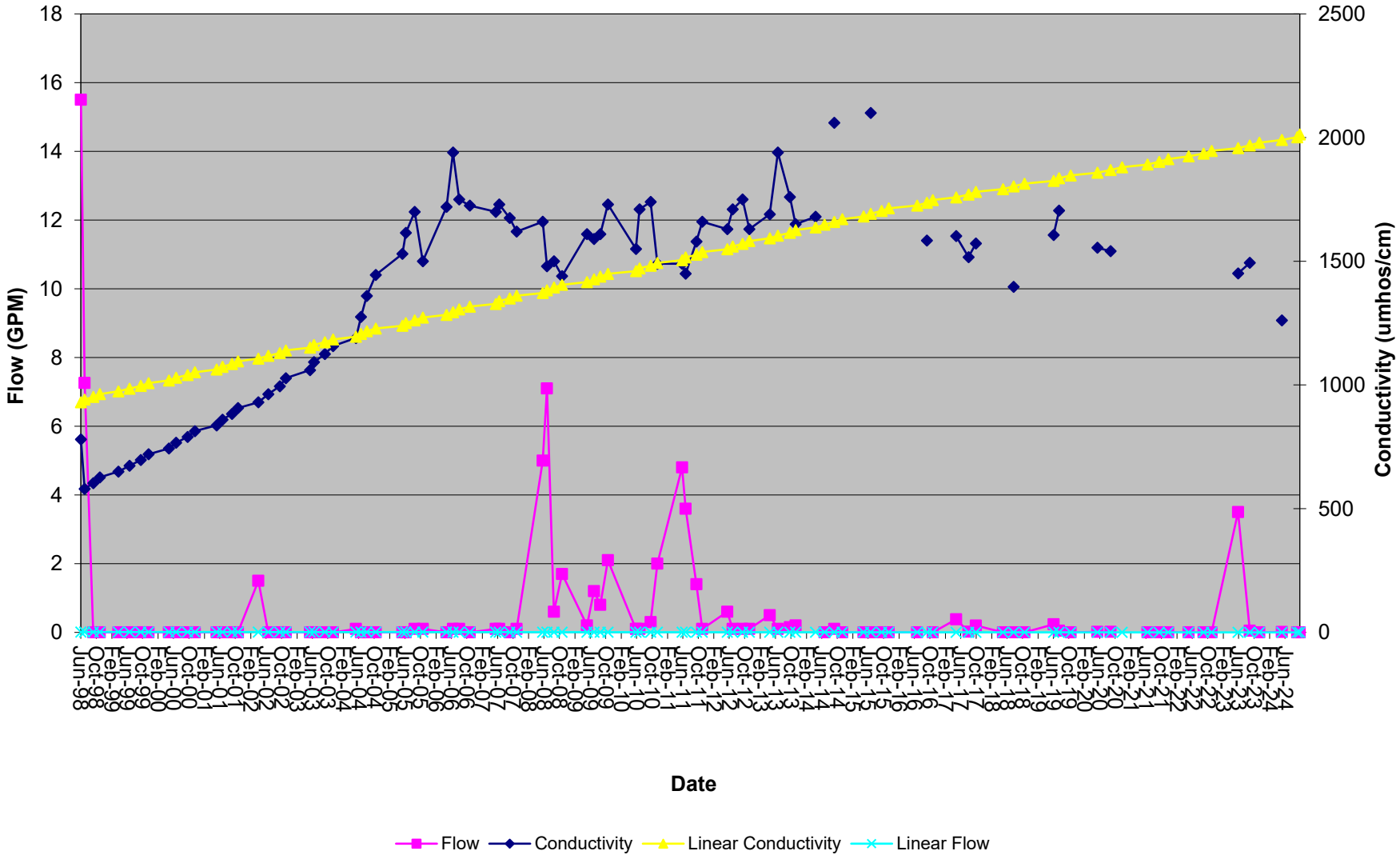
Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.0	1.5	15.5	0.0	0.5	7.1	Damp	0	0.01
FieldComment								*No visible flow*	*No visible flow*	*N*
ph	su	6.9	7.5	8.0	7.4	8.6	9.3			8.55
Conductivity	umhos/cm	580	680	780	930	1609	2100			1261
Temperature	Celsius	11.5	12.3	13.2	0.1	14.3	26.3			8.7
Lab Parameters	UNITS									
Bicarbonate	mg/L	339	350	361	489.6	536.9	584.2			
Carbonate	mg/L	<MDL	<MDL	<MDL	15.6	19.5	23.4			
Chloride	mg/L	2	3	3	<MDL	2.5	2.5			
Conductivity	umhos/cm	685	702	718	1042.2	1142.9	1243.7			
Hardness	mg/L	208	212	215	132.5	144.6	156.7			
Nitrate-Nitrite	mg/L	0.07	0.09	0.12	<MDL	<MDL	<MDL			
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
pH	su	7.7	7.8	7.8	8.5	8.7	8.8			
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			
ResidueFilterable-TDS	mg/L	390.0	420.0	450.0	941	964	987			
ResidueNonFilterable-TSS	mg/L	38.0	49.0	60.0	130	252	374			
SAR		<MDL	<MDL	<MDL	8.6	10.4	12.3			
Sulfate	mg/L	40.0	40.0	40.0	179.5	199.0	218.6			
Aluminum	mg/L	1.94	2.15	2.36	0.19	0.48	0.77			
Arsenic	mg/L	<MDL	<MDL	<MDL	0.077	0.092	0.107			
Cadmium	mg/L	<MDL	<MDL	<MDL	0.010	0.011	0.012			
Calcium	mg/L	51.5	52.5	53.6	24.70	27.91	31.11			
Copper	mg/L	<MDL	<MDL	<MDL	<MDL	0.013	0.013			
Iron (Total)	mg/L	1.56	1.90	2.25	0.375	1.948	3.520			
Lead	mg/L	<MDL	<MDL	<MDL	<MDL	0.06	0.06			
Magnesium	mg/L	19.4	19.6	19.8	17.19	18.19	19.18			
Manganese (Total)	mg/L	0.017	0.021	0.024	0.012	0.023	0.034			
Mercury	mg/L	<MDL	<MDL	<MDL	0.0001	0.0002	0.0003			
Molyebdenum	mg/L	<MDL	<MDL	<MDL	<MDL	0.005	0.005			
Selenium	mg/L	<MDL	<MDL	<MDL	0.005	0.076	0.146			
Sodium	mg/L	69.4	78.6	87.8	247.8	273.4	299.0			
Zinc	mg/L	0.02	0.02	0.02	0.02	0.03	0.03			

* Site not accessible 1Q

Baseline Information for Point S2-2 is derived from events beginning on 6/9/98 through 9/15/2001.
Point influenced by mining on 9/15/01.

Plot of Flow and Conductivity



S2-2 - Hubbard Creek Spring 2-2

Figure 37

S2-3
Along Hubbard Creek Freeman Gulch Road
Hubbard Creek - Spring 2-3
Elevation - 6740

Initiated	6/9/1998	6/9/1998	6/9/1998
Activated	9/15/2001	9/15/2001	9/15/2001
Date	10/3/2024	9/13/2024	5/16/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.0	0.2	1.3	0.0	0.01	1.00	0	0	0
FieldComment								Damp	Dry	Dry
ph	su	7.8	7.8	7.8						
Conductivity	umhos/cm	740	740	740						
Temperature	Celsius	12.1	12.1	12.1						
Lab Parameters	UNITS									
Bicarbonate	mg/L									
Chloride	mg/L									
Conductivity	umhos/cm									
Hardness	mg/L									
Nitrate-Nitrite	mg/L									
Oil and Grease	mg/L									
pH	su									
Phosphate	mg/L									
ResidueFilterable -TDS	mg/L									
ResidueNonFilterable-TSS	mg/L									
SAR										
Sulfate	mg/L									
Aluminum	mg/L									
Arsenic	mg/L									
Cadmium	mg/L									
Calcium	mg/L									
Copper	mg/L									
Iron (Total)	mg/L									
Lead	mg/L									
Magnesium	mg/L									
Manganese (Total)	mg/L									
Mercury	mg/L									
Molyebdenum	mg/L									
Selenium	mg/L									
Sodium	mg/L									
Zinc	mg/L									

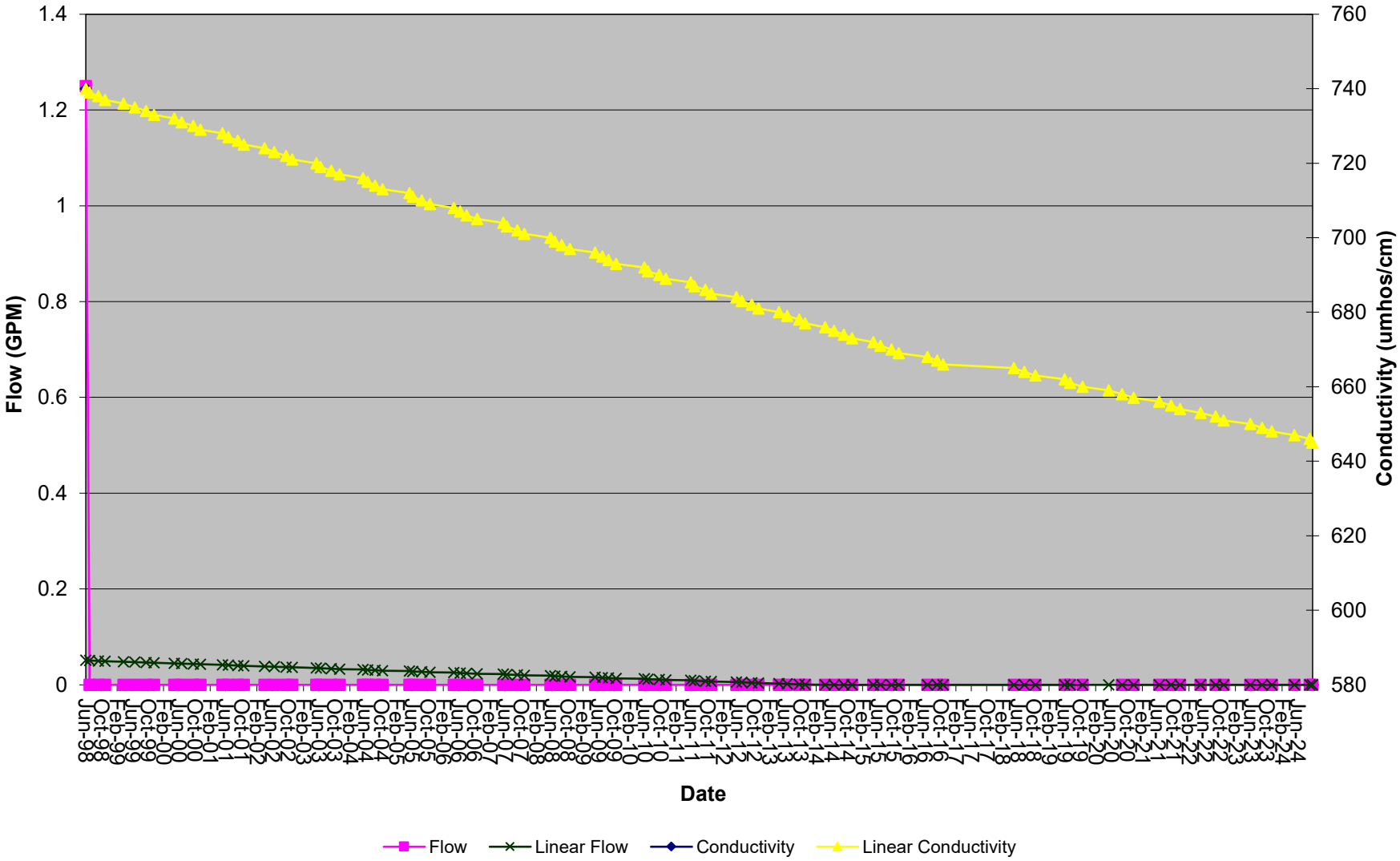
Influenced by the disturbance of Freeman Gulch

* Site not accessible 1Q

The monitoring point for S2-3 is located along the same old coal exploration road used to access S2-2. It is located near the bottom of Freeman Gulch, along the upper edge of the road.

Baseline Information for Point S2-3 is derived from events beginning on 6/9/98 through 9/24/99.
Point influenced by mining on 9/24/99.

Plot of Flow and Conductivity



S2-3 - Hubbard Creek Spring 2-3

Figure 39

S2-9
Along Hubbard Creek Road
Hubbard Creek - Spring 2-9
Elevation - 6320'

Initiated	4/1/1999	4/1/1999	4/1/1999	4/1/1999
Activated	9/24/1999	9/24/1999	9/24/1999	9/24/1999
Date	12/6/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.0	1.3	3.8	0.0	0.00	0.00	0	0	0	0
FieldComment								Dry	Dry	Dry	Dry
ph	su	7.5	7.5	7.5							
Conductivity	umhos/cm	1340	1340	1340							
Temperature	Celsius	4.6	4.6	4.6							
Lab Parameters	**UNITS**										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
Residue Filterable-TDS	mg/L										
Residue NonFilterable-TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

* Site not accessible 1Q

The monitoring point for S2-9 is found along the Hubbard Creek road near the mouth of Freeman Gulch. The flow and field parameters are measured at the outlet end of a 24" culvert that directs this runoff from this spring into Hubbard Creek.

Baseline Information for Point S2-9 is derived from events beginning on 4/1/99 through 9/24/99.
Point influenced by mining on 9/24/99.

S3-1
Spring in Sheep Corral
Sheep Corral - Spring 3-1
Elevation - 6840

Initiated	5/21/2003	5/21/2003	5/21/2003
Activated	5/21/2003	5/21/2003	5/21/2003
Date	10/3/2024	9/13/2024	5/16/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM				0.00	0.66	6.34			
FieldComment								Dry	Dry	Dry
ph	su				6.8	8.0	8.6			
Conductivity	umhos/cm				968	1237	1520			
Temperature	Celsius				4.1	10.5	19.5			
Lab Parameters	**UNITS**									
Bicarbonate	mg/L				489.0	489.0	489.0			
Chloride	mg/L				3.0	3.0	3.0			
Conductivity	umhos/cm				845.0	845.0	845.0			
Hardness	mg/L				326.0	326.0	326.0			
Nitrate-Nitrite	mg/L				0.2	0.2	0.2			
Oil and Grease	mg/L				0.0	<MDL	0.0			
pH	su				7.8	7.8	7.8			
Phosphate	mg/L				0.0	<MDL	0.0			
Residue Filterable-TDS	mg/L				557.0	557.0	557.0			
Residue NonFilterable-TSS	mg/L				0.0	<MDL	0.0			
SAR					2.2	2.2	2.2			
Sulfate	mg/L				96.3	96.3	96.3			
Aluminum	mg/L				0.0	<MDL	0.0			
Arsenic	mg/L				0.0	<MDL	0.0			
Cadmium	mg/L				0.0	0.0	0.0			
Calcium	mg/L				83.3	83.3	83.3			
Copper	mg/L				0.0	<MDL	0.0			
Iron (Total)	mg/L				0.0	<MDL	0.0			
Lead	mg/L				0.0	<MDL	0.0			
Magnesium	mg/L				28.6	28.6	28.6			
Manganese (Total)	mg/L				0.0	<MDL	0.0			
Mercury	mg/L				0.0	<MDL	0.0			
Molyebdenum	mg/L				0.0	0.0	0.0			
Selenium	mg/L				0.1	0.1	0.1			
Sodium	mg/L				108.0	108.0	108.0			
Zinc	mg/L				0.0	<MDL	0.0			

The area of concern for monitoring point S3-1 was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered Operational.

* Site not accessible 1Q

There is no baseline collection possible for points initiated after the influence of mining.

S5-2
Powerline Seep - Spring 5-2
Elevation - 7200

Initiated	10/29/2012	10/29/2012	10/29/2012
Activated			
Date	10/7/2024	8/20/2024	6/20/2024

Summary Information

Field		Baseline			Operation					
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max			*
Flow	GPM	0.34	0.34	0.34				Dry	Dry	Dry
Temperature	Celsius	9.2	9.2	9.2						
Conductivity	umhos/cm	850	850	850						
pH	su	7.6	7.6	7.6						
Field Comments										
Lab										

The area of concern for monitoring point S5-2 has not been affected by the mining operation. Therefore, all record monitoring events are considered Baseline.

S6-6
Spring on West Side of
Terror Creek - Spring 6-6
Elevation - 7860

Initiated	7/19/1983	7/19/1983	7/19/1983
Activated	7/22/2012	7/22/2012	7/22/2012
Date	10/31/2024	8/20/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Flow	GPM	0.00	0.09	3.10				0	0	0
Temperature	Celsius	15.8	18.3	21.1						
Conductivity	umhos/cm	239	298	432						
pH	su	7.8	8.3	8.7						
Field Comments								Dry	Dry	Damp
Lab Parameters	UNITS									
Bicarbonate	mg/L	117.1	117.1	117.1						
Carbonate	mg/L									
Chloride	mg/L	1	1	1						
Conductivity	umhos/cm	235	235	235						
Hardness	mg/L	95	95	95						
pH	su	7.9	7.9	7.9						
Residue Filterable-TDS	mg/L	132	132	132						
ResidueNon Filterable-TSS	mg/L	32	32	32						
SAR		0.71	0.71	0.71						
Sulfate	mg/L	10	10	10						
Calcium (Dissolved)	mg/L	25	25	25						
Magnesium (Total)	mg/L	8	8	8						
Sodium (Dissolved)	mg/L	16	16	16						
Potassium	mg/L									
TDS Ratio (grav./calc.)										

The area of concern for monitoring point S6-6 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

* Site not accessible 1Q

Baseline Information Collection initiated on 7/5/83 and not yet considered complete.
Point S6-6 has not been influenced by mining.

S7-10
Spring on W side of
Terror Creek - Spring 7-10
Elevation - 7880

Initiated	8/1/1983	8/1/1983	8/1/1983
Activated	12/31/2013	12/31/2013	12/31/2013
Date	10/31/2024	8/20/2024	6/20/2024

		Summary Information								
Field		Baseline			Operation					
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max			
Flow	GPM	0.00	1.56	18.75	0.00	0.85	3.75	0.01	0.19	0.03
Temperature	Celsius	1.6	7.81	21.7	6.40	8.23	12.30	6.9	12.3	10.5
Conductivity	umhos/cm	190	480	660	7.10	586.37	686.00	650	661	663
pH	su	7.0	7.6	8.4	6.58	7.45	8.02	7.1	7.76	8.02
Field Comments										
Lab										
Parameters	UNITS									
Bicarbonate	mg/L	142.00	259.51	384.00	241.77	296.89	352.00			
Chloride	mg/L	<MDL	6.8	54.6	4.6	7.8	10.9			
Conductivity	umhos/cm	292	487	722	542	561	580			
Hardness	mg/L	3.00	203.62	258.00	214.04	220.02	226.00			
Nitrate-Nitrite	mg/L	0.3	0.3	0.31	<MDL					
Oil & Grease	mg/L	<MDL	<MDL	<MDL	<MDL					
pH	su	6.76	7.58	8.59	7.08	7.22	7.35			
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL					
Residue Filterable-TDS	mg/L	190	319	476	358	394	430			
Residue NonFilterable-TSS	mg/L	<MDL	57	272	14	14	14			
SAR		0.470	0.920	3.959	1.610	2.785	3.959			
Sulfate	mg/L	0.4	22.0	49.8	35.9	42.9	49.8			
Aluminum (TREC)	mg/L	0.023	0.023	0.110	0.110	0.110	0.110			
Arsenic (TREC)	mg/L	0.0100	0.0100	0.0100	0.0010	0.0010	0.0010			
Cadmium (TREC)	mg/L	0.020	0.020	0.020	0.002	0.002	0.002			
Calcium (TREC)	mg/L	36.1	36.1	54.9	43.5	49.2	54.90			
Copper (TREC)	mg/L	0.0010	0.0010	0.0120	0.0120	0.0120	0.0120			
Iron (TREC)	mg/L	0.06	0.22	0.49	0.02	0.17	0.31			
Magnesium (TREC)	mg/L	24.70	24.70	25.60	21.50	23.55	25.60			
Manganese (TREC)	mg/L	<MDL	0.0123	0.0260	0.0260	0.0260	0.03			
Mercury (TREC)	mg/L	0.0000	0.0000	0.0000	0.00002	0.00002	0.00002			
Molybdenum (TREC)	mg/L	0.003	0.003	0.003	0.001	0.001	0.001			
Selenium (TREC)	mg/L	0.023	0.023	0.023	0.003	0.003	0.003			
Sodium (TREC)	mg/L	32.3	32.3	133.1	55.8	94.5	133.1			
Zinc (TREC)	mg/L	0.006	0.006	0.011	0.011	0.011	0.011			

This spring consists of a small 2' x 5' area of exposed rocks. Spring water bubbles up through the rocks. (Hanna, 99)

Activated December 31, 2013

* Site not accessible 1Q

Baseline Information Collection initiated on 8/1/83.
Point S7-10 was influenced by mining 12/31/2013.

S7-4
Spring on E Side of
Steven's Gulch - Spring 7-4
Elevation - 7780

Initiated	7/19/1983	7/19/1983	7/19/1983
Activated			
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	1.80	11.13						
Temperature	Celsius	8.1	12.1	24.3						
Conductivity	umhos/cm	250	336	530						
pH	su	6.6	7.5	8.2						
Field Comments								Dry	Dry	Damp
Lab Parameters	UNITS									
Bicarbonate	mg/L	40.9	155.3	225.7						
Chloride	mg/L	<MDL	7.58	22.33						
Conductivity	umhos/cm	226	286	353						
Hardness	mg/L	124.53	149.11	184.00						
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL						
Oil and Grease	mg/L	<MDL	<MDL	<MDL						
pH	su	6.6	7.4	8.2						
Phosphate	mg/L	<MDL	<MDL	<MDL						
Residue Filterable-TDS	mg/L	172	218	305						
ResidueNon Filterable-TSS	mg/L	11	35	52						
SAR		0.25	0.77	2.63						
Sulfate	mg/L	<MDL	8.71	14.82						
Aluminum (TREC)	mg/L	<MDL	0.024	0.024						
Arsenic (TREC)	mg/L	<MDL	0.026	0.026						
Cadmium (TREC)	mg/L	<MDL	0.02	0.02						
Calcium (TREC)	mg/L	25.30	25.30	25.30						
Copper (TREC)	mg/L	0.01	0.01	0.01						
Iron (TREC)	mg/L	0.35	0.47	0.58						
Lead (TREC)	mg/L	0.04	0.04	0.04						
Magnesium (TREC)	mg/L	13.0	15.0	18.0						
Manganese (TREC)	mg/L	0.01	0.01	0.01						
Mercury (TREC)	mg/L	<MDL	0.00007	0.00007						
Molybdenum (TREC)	mg/L	<MDL	0.002	0.002						
Selenium (TREC)	mg/L	<MDL	0.018	0.018						
Sodium (TREC)	mg/L	12.99	12.99	12.99						
Zinc (TREC)	mg/L	<MDL	0.01	0.01						

The area of concern for monitoring point S7-4 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

* Site not accessible 1Q

Baseline Information Collection initiated on 7/1/83 and net yet considered complete.
Point S7-4 has not been influenced by mining.

S7-9
Spring on W side of
Terror Creek - Spring 7-9
Elevation - 7800

Initiated	7/19/1983	7/19/1983	7/19/1983
Activated	7/22/2012	7/22/2012	7/22/2012
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.01	0.27	0.00	0.00	0.00			
Temperature	Celsius	8.6	11.3	15.2						
Conductivity	umhos/cm	271	614	791						
pH	su	7.0	7.5	8.0						
Field Comments								Dry	Damp	Damp
Lab Parameters	UNITS									
Bicarbonate	mg/L	139.1	326.2	427.0						
Carbonate	mg/L									
Chloride	mg/L	1.0	5.7	11.0						
Conductivity	umhos/cm	259.0	522.3	678.0						
Hardness	mg/L	104.0	264.3	347.0						
pH	su	6.7	7.5	8.0						
Residue Filterable-TDS	mg/L	144.0	327.0	425.0						
ResidueNon Filterable-TSS	mg/L	94.0	129.3	170.0						
SAR		0.1	0.6	0.9						
Sulfate	mg/L	4.0	26.0	43.0						
Calcium (Dissolved)	mg/L	30.0	68.0	88.0						
Magnesium (Total)	mg/L	7.0	23.0	31.0						
Sodium (Dissolved)	mg/L	3.0	24.7	38.0						
Potassium	mg/L									
TDS Ratio (grav./calc.)										

The monitoring point for Spring 7-9 is located on an east facing slope that drains down toward Terror Creek.

* Site not accessible 1Q

Baseline Information is derived from monitoring events beginning on 7/19/83 through 7/22/2012.
Point S7-9 influenced by mining on 7/22/12.

S8-5
Spring on W side of
Terror Creek - Spring 8-5
Elevation - 7800

Initiated	7/19/1983	7/19/1983	7/19/1983
Activated	7/15/2012	7/15/2012	7/15/2012
Date	10/31/2024	8/20/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Flow	GPM	0	0.50	8.62	0.00	0.00	3.00			
Temperature	Celsius	7.5	13.80	24.4						
Conductivity	umhos/cm	660	746.00	920						
pH	su	7.3	8.01	8.8						
Field Comments								Dry	Dry	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	334	397.13	475						
Carbonate	mg/L									
Chloride	mg/L	6	8.50	11						
Conductivity	umhos/cm	606	686.00	774						
Hardness	mg/L	247	315.13	380						
pH	su	7.0	7.89	8.2						
Residue Filterable-TDS	mg/L	355	404.38	460						
Residue NonFilterable-TSS	mg/L	4	146.00	502						
SAR		0.89	0.99	1.24						
Sulfate	mg/L	30	40.13	56						
Calcium (Dissolved)	mg/L	64.1	75.60	96.7						
Magnesium (Total)	mg/L	21.1	30.71	36.0						
Sodium (Dissolved)	mg/L	31.9	40.14	48						
Potassium	mg/L	1.10	1.10	1.10						
TDS Ratio (grav./calc.)		1.11	1.11	1.11						

The monitoring point for Spring 8.5 is located on an east facing slope that drains down toward Terror Creek.

Baseline Information is derived from monitoring events beginning on 7/19/83 through 7/15/2012.
Point S8-5 influenced by mining 7/15/12.

S21
Spring on W side of Terror Creek - Section 8
Spring 21
Elevation - 7100

Initiated	4/15/1983	4/15/1983	4/15/1983
Activated	12/1/2010	12/1/2010	12/1/2010
Date	10/16/2024	9/14/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0	1.03	7.5	0	1.47	15.86			
Temperature	Celsius	2.5	12.1	20.2	4	9.53	16.2			
Conductivity	umhos/cm	360	687	907	667	1166.50	1592			
pH	su	7.2	7.9	8.5	7.65	9.02	17.1			
Field Comments					0	#DIV/0!	0	Dry	Damp	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	268	388.56	456	93.08	336.03	495			
Carbonate	mg/L	<MDL	0.23	3.5						
Chloride	mg/L	2	8.78	14	10.4	15.33	21.8			
Conductivity	umhos/cm	555	679.72	775	434	817.33	1180			
Hardness	mg/L	279	350.00	442	323	378.88	466			
Nitrate-Nitrite	mg/L				0.1	0.10	0.1			
Oil/Grease	mg/L				<MDL	<MDL	<MDL			
pH	su	7	7.88	8.4	7.76	8.12	8.5			
ResidueFilterable-TDS	mg/L	330	408.44	535	340	572.33	790			
ResidueNonFilterable-TSS	mg/L	2	24.92	106	6.6	16.87	27			
SAR		0.48	0.65	1	2.2	2.590	3.31			
Sulfate	mg/L	30	50.22	91	89.6	138.44	222			
Calcium (Dissolved)	mg/L	58	84.47	108						
Magnesium (Total)	mg/L	25	33.81	42	35.4	43.90	52.4			
Sodium (Dissolved)	mg/L	22	27.92	44						
Potassium	mg/L	2	2.00	2						
TDS Ratio (grav./calc.)		1	1.00	1						
Aluminum, TREC	mg/L				<MDL	0.55	0.896			
Arsenic, TREC	mg/L				<MDL	0.00	0.001			
Cadmium, TREC	mg/L				<MDL	0.00	0.002			
Calcium, TREC	mg/L				52.8	78.67	108			
Copper, TREC	mg/L				<MDL	0.01	0.01			
Iron, TREC	mg/L				0.0855	0.36	0.726			
Lead, TREC	mg/L				<MDL	0.03	0.06			
Manganese, TREC	mg/L				0.0108	15.92	47.7			
Mercury, TREC	mg/L				<MDL	3.000E-05	3.000E-05			
Molybdenum, TREC	mg/L				<MDL	0.00	0.001			
Selenium, TREC	mg/L				<MDL	0.01	0.007			
Sodium, TREC	mg/L				96.8	110.93	127			
Zinc, TREC	mg/L				<MDL	0.01	0.01			

** Site not accessible 1Q*

Baseline Information for Point S21 is derived from events beginning on 4/15/83 through 12/1/10.
Point influenced by mining on 12/1/10.

S33-4
Spring in Sheep Corral on Upper End of Draw
Spring in Sheep Corral
Elevation - 7790

Initiated	10/30/1997	10/30/1997	10/30/1997
Activated	12/1/2001	12/1/2001	12/1/2001
Date	10/7/2024	9/13/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.0	0.0	0.0	0.0	0.0	0.0			
FieldComment								Dry	Dry	Dry
ph	su									
Conductivity	umhos/cm									
Temperature	Celsius									
Lab Parameters	**UNITS**									
Bicarbonate	mg/L									
Chloride	mg/L									
Conductivity	umhos/cm									
Hardness	mg/L									
Nitrate-Nitrite	mg/L									
Oil and Grease	mg/L									
pH	su									
Phosphate	mg/L									
ResidueFilterable-TDS	mg/L									
ResidueNonFilterable-TSS	mg/L									
SAR										
Sulfate	mg/L									
Aluminum	mg/L									
Arsenic	mg/L									
Cadmium	mg/L									
Calcium	mg/L									
Copper	mg/L									
Iron (Total)	mg/L									
Lead	mg/L									
Magnesium	mg/L									
Manganese (Total)	mg/L									
Mercury	mg/L									
Molyebdenum	mg/L									
Selenium	mg/L									
Sodium	mg/L									
Zinc	mg/L									

This spring was found during the fall of 1997 and was not locatable after 1998.

** Site not accessible 1Q*

The monitoring point for S33-4 (Spring 33-4) is located above P33-3 in a roadless fork. Evidence of a dry spring was found in October and has not been relocated.

Baseline Information for Point S33-4 is derived from events beginning on 10/30/97 through 12/1/01.
Point influenced by mining on 12/1/01.

S34-10
Spring in Dove Gulch from
Hubbard Side
Spring 34-10
Elevation - 6640

Initiated	6/2/1998	6/2/1998	6/2/1998	6/2/1998
Activated				
Date	10/3/2024	9/13/2024	5/16/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.0	0.6	11.0	0.0	0.4	16.4				
FieldComment								Damp	Dry	Dry	Dry
ph	su	7.3	7.4	7.4	8.2	8.4	8.7				
Conductivity	umhos/cm	320	435	550	1160	1340	1689				
Temperature	Celsius	8.2	9.1	10.6	6.7	11.6	19.6				
Lab Parameters	UNITS										
Bicarbonate	mg/L	325	335	344	284.2	284.2	284.2				
Carbonate	mg/L	<MDL	<MDL	<MDL	3.6	3.6	3.6				
Chloride	mg/L	5	5	5	0.86	0.86	0.86				
Conductivity	umhos/cm	622	681	740	1032.1	1032.1	1032.1				
Hardness	mg/L	170	186	202	236.3	236.3	236.3				
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
Oil and Grease	mg/L	<MDL	<MDL	<MDL	2.43	2.43	2.43				
pH	su	7.8	7.8	7.8	8.43	8.43	8.43				
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
ResidueFilterable-TDS	mg/L	370	400	430	751	751	751				
ResidueNonFilterable-TSS	mg/L	<MDL	31	62	29	29	29				
SAR		<MDL	<MDL	<MDL	3.39	3.39	3.39				
Sulfate	mg/L	40	50	60	194.69	194.69	194.69				
Aluminum	mg/L	0.07	1.96	3.86	0.25	0.25	0.25				
Arsenic	mg/L	<MDL	0.001	0.001	0.064	0.064	0.064				
Cadmium	mg/L	<MDL	<MDL	<MDL	0.015	0.015	0.015				
Calcium	mg/L	40.1	43.4	46.8	55.4	55.4	55.4				
Copper	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
Iron (Total)	mg/L	0.05	1.65	3.26	0.102	0.102	0.102				
Lead	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
Magnesium	mg/L	16.9	18.8	20.7	23.8	23.8	23.8				
Manganese (Total)	mg/L	<MDL	0.027	0.055	<MDL	<MDL	<MDL				
Mercury	mg/L	<MDL	<MDL	<MDL	0.0001	0.0001	0.0001				
Molyebdenum	mg/L	<MDL	<MDL	<MDL	0.01	0.01	0.01				
Selenium	mg/L	0.001	0.001	0.001	0.0036	0.0036	0.0036				
Sodium	mg/L	70.2	77.4	84.6	119.8	119.8	119.8				
Zinc	mg/L	<MDL	0.01	0.03	0.011	0.011	0.011				

** Site note accessible 1Q*

The monitoring point for S34-10 is located high on the northern facing slopes that forms the Dove Gulch Canyon. It is accessed on foot from the remnants of an old coal exploration road in the mouth of Dove Gulch. It is one of three springs found in this location, originating in the sandstone outcrop and discharges via sheet flow into Dove Gulch.

Baseline Information for Point S34-10 is derived from events beginning on 10/31/97 through 12/1/03.
Point influenced by mining on 12/1/03.

S34-19
Along Hubbard Creek
Spring 34-19
Elevation - 6460

Initiated	6/9/1998	6/9/1998	6/9/1998	6/9/1998
Activated				
Date	10/8/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.0	0.2	7.5							
FieldComment								Dry	Damp (Rain)	Dry	Dry
ph	su	7.1	7.9	8.6							
Conductivity	umhos/cm	149	1008	2400							
Temperature	Celsius	3.3	13.5	22.4							
Lab Parameters	UNITS										
Bicarbonate	mg/L	434	434	434							
Chloride	mg/L	9	9	9							
Conductivity	umhos/cm	911	911	911							
Hardness	mg/L	197	197	197							
Nitrate-Nitrite	mg/L	0.1	0.1	0.1							
Oil and Grease	mg/L	<MDL	<MDL	<MDL							
pH	su	7.6	7.6	7.6							
Phosphate	mg/L	<MDL	<MDL	<MDL							
ResidueFilterable-TDS	mg/L	550	550	550							
ResidueNonFilterable-TSS	mg/L	<MDL	<MDL	<MDL							
SAR		<MDL	<MDL	<MDL							
Sulfate	mg/L	290.0	290.0	290.0							
Aluminum	mg/L	0.2	0.2	0.2							
Arsenic	mg/L	<MDL	<MDL	<MDL							
Cadmium	mg/L	<MDL	<MDL	<MDL							
Calcium	mg/L	44.7	44.7	44.7							
Copper	mg/L	<MDL	<MDL	<MDL							
Iron (Total)	mg/L	0.2	0.2	0.2							
Lead	mg/L	<MDL	<MDL	<MDL							
Magnesium	mg/L	20.8	20.8	20.8							
Manganese (Total)	mg/L	0.006	0.006	0.006							
Mercury	mg/L	<MDL	<MDL	<MDL							
Molyebdenum	mg/L	<MDL	<MDL	<MDL							
Selenium	mg/L	0.002	0.002	0.002							
Sodium	mg/L	132.0	132.0	132.0							
Zinc	mg/L	<MDL	<MDL	<MDL							

The area of concern for monitoring point S34-19 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The monitoring point fos S34-19 is found along the Hubbard Creek Trail. It is a diverse flow along the upper edge of the trail.

** Site note accessible 1Q*

Baseline Information Collection initiated on 6/9/98 and not yet considered complete.
Point S34-19 has not been influenced by mining.

S34-20
Along Hubbard Creek - Spring 34-20
Elevation - 6440

Initiated	6/2/1998	6/2/1998	6/2/1998	6/2/1998
Activated				
Date	10/8/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.0	0.0	0.6							
FieldComment								Dry	Damp	Dry	Damp
ph	su	7.6	7.8	8.2							
Conductivity	umhos/cm	860	1140	1320							
Temperature	Celsius	12.5	18.4	24.1							
Lab Parameters	**UNITS**										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
ResidueFilterable-TDS	mg/L										
ResidueNonFilterable-TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

The area of concern for monitoring point S34-20 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The monitoring point for S34-20 is found along the Hubbard Creek Trail. It is a diverse flow along the upper edge of the trail.

** Site note accessible 1Q*

Baseline Information Collection initiated on 6/2/98 and not yet considered complete.
Point S34-20 has not been influenced by mining.

S34-21
Spring in Dove Gulch from Hubbard Side
Spring 34-21
Elevation - 6430

Initiated	6/2/1998	6/2/1998	6/2/1998	6/2/1998
Activated				
Date	10/8/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.0	0.5	10.7	0.0	0.1	4.0				
FieldComment								Dry	Dry	Damp	Dry
ph	su	7.6	7.6	7.6	7.4	7.8	8.4				
Conductivity	umhos/cm	620	620	620	700	1531	1980				
Temperature	Celsius	18.7	18.7	18.7	15.3	19.7	26.4				
Lab Parameters	UNITS										
Bicarbonate	mg/L	454	454	454							
Chloride	mg/L	6	6	6							
Conductivity	umhos/cm	831	831	831							
Hardness	mg/L	226	226	226							
Nitrate-Nitrite	mg/L	0.2	0.2	0.2							
Oil and Grease	mg/L	3.0	3.0	3.0							
pH	su	8.1	8.1	8.1							
Phosphate	mg/L	<MDL	<MDL	<MDL							
ResidueFilterable-TDS	mg/L	490	490	490							
ResidueNonFilterable-TSS	mg/L	<MDL	<MDL	<MDL							
SAR		<MDL	<MDL	<MDL							
Sulfate	mg/L	70	70	70							
Aluminum	mg/L	0.18	0.18	0.18							
Arsenic	mg/L	<MDL	<MDL	<MDL							
Cadmium	mg/L	<MDL	<MDL	<MDL							
Calcium	mg/L	52.9	52.9	52.9							
Copper	mg/L	<MDL	<MDL	<MDL							
Iron (Total)	mg/L	0.14	0.14	0.14							
Lead	mg/L	<MDL	<MDL	<MDL							
Magnesium	mg/L	22.9	22.9	22.9							
Manganese (Total)	mg/L	<MDL	<MDL	<MDL							
Mercury	mg/L	<MDL	<MDL	<MDL							
Molyebdenum	mg/L	<MDL	<MDL	<MDL							
Selenium	mg/L	<MDL	<MDL	<MDL							
Sodium	mg/L	105.0	105.0	105.0							
Zinc	mg/L	<MDL	<MDL	<MDL							

** Site note accessible 1Q*

The monitoring point for S34-21 is found along the Hubbard Creek Trail. It is a diverse flow along the upper edge of the trail.

Baseline Information for Point S34-21 is derived from events beginning on 6/9/98 through 11/10/03.
Point influenced by mining on 11/10/03.

S34-22
Spring in Dove Gulch from Hubbard Side
Spring 34-22
Elevation - 6700

Initiated	6/2/1998	6/2/1998	6/2/1998	6/2/1998
Activated				
Date	10/8/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.0	1.5	35.0	0.0	0.3	13.6				
FieldComment								Dry	Dry	Damp	Dry
ph	su	7.2	7.3	7.4	7.8	8.0	8.4				
Conductivity	umhos/cm	230	230	230	1260	1499	1808				
Temperature	Celsius	17.2	17.2	17.2	8.5	9.9	12.1				
Lab Parameters	UNITS										
Bicarbonate	mg/L	302	302	302	285.4	285.4	285.4				
Carbonate	mg/L	12	15	18	18.1	18.1	18.1				
Chloride	mg/L	4	4	4	<MDL	<MDL	<MDL				
Conductivity	umhos/cm	602	602	602	1011.5	1011.5	1011.5				
Hardness	mg/L	171	171	171	238.8	238.8	238.8				
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
Oil and Grease	mg/L	<MDL	<MDL	<MDL	2.41	2.41	2.41				
pH	su	8.2	8.2	8.2	8.8	8.8	8.8				
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
ResidueFilterable-TDS	mg/L	380	380	380	854	854	854				
ResidueNonFilterable-TSS	mg/L	<MDL	<MDL	<MDL	40	40	40				
SAR		<MDL	<MDL	<MDL	4.19	4.19	4.19				
Sulfate	mg/L	50	50	50	223.91	223.91	223.91				
Aluminum	mg/L	0.31	0.31	0.31	0.23	0.23	0.23				
Arsenic	mg/L	<MDL	<MDL	<MDL	0.064	0.064	0.064				
Cadmium	mg/L	<MDL	<MDL	<MDL	0.026	0.026	0.026				
Calcium	mg/L	38.3	38.3	38.3	53.9	53.9	53.9				
Copper	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
Iron (Total)	mg/L	0.27	0.27	0.27	0.187	0.187	0.187				
Lead	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
Magnesium	mg/L	18.3	18.3	18.3	25.3	25.3	25.3				
Manganese (Total)	mg/L	<MDL	<MDL	<MDL	0.1	0.1	0.1				
Mercury	mg/L	<MDL	<MDL	<MDL	0.0001	0.0001	0.0001				
Molyebdenum	mg/L	<MDL	<MDL	<MDL	0.01	0.01	0.01				
Selenium	mg/L	<MDL	<MDL	<MDL	0.0048	0.0048	0.0048				
Sodium	mg/L	74.4	74.4	74.4	149	149	149				
Zinc	mg/L	<MDL	<MDL	<MDL	0.006	0.006	0.006				

** Site note accessible 1Q*

The monitoring point for S34-22 is located high on the northern facing slopes that forms the Dove Gulch Canyon. It is accessed on foot from the remnants of an old coal exploration road in the mouth of Dove Gulch. It is one of three springs found in this location, originating in the sandstone outcrop and discharges via sheet flow into Dove Gulch.

Baseline Information for Point S34-22 is derived from events beginning on 6/9/98 through 11/20/03.
Point influenced by mining on 11/20/03.

S34-23
Spring in Dove Gulch from Hubbard Side
Spring 34-23
Elevation - 6650

Initiated	6/2/1998	6/2/1998	6/2/1998	6/2/1998
Activated				
Date	10/8/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.0	3.5	75.0	0.0	0.1	4.6				
FieldComment								Dry	Dry	Damp	Dry
ph	su	7.6	7.8	8.0	8.5	8.5	8.5				
Conductivity	umhos/cm	320	390	460	900	900	900				
Temperature	Celsius	12.1	14.0	15.9	9.0	9.0	9.0				
Lab Parameters	**UNITS**										
Bicarbonate	mg/L	249	268	287							
Chloride	mg/L	2	3	4							
Conductivity	umhos/cm	537	545	552							
Hardness	mg/L	169	171	173							
Nitrate-Nitrite	mg/L	<MDL	0.01	0.02							
Oil and Grease	mg/L	<MDL	<MDL	<MDL							
pH	su	8.1	8.3	8.4							
Phosphate	mg/L	<MDL	<MDL	<MDL							
ResidueFilterable-TDS	mg/L	330	335	340							
ResidueNonFilterable-TSS	mg/L	<MDL	11	22							
SAR		<MDL	<MDL	<MDL							
Sulfate	mg/L	30	40	50							
Aluminum	mg/L	0.32	0.95	1.57							
Arsenic	mg/L	<MDL	<MDL	<MDL							
Cadmium	mg/L	<MDL	<MDL	<MDL							
Calcium	mg/L	40.5	41.8	43.1							
Copper	mg/L	<MDL	<MDL	<MDL							
Iron (Total)	mg/L	0.25	0.77	1.29							
Lead	mg/L	<MDL	<MDL	<MDL							
Magnesium	mg/L	15.9	16.1	16.4							
Manganese (Total)	mg/L	<MDL	0.013	0.026							
Mercury	mg/L	<MDL	<MDL	<MDL							
Molyebdenum	mg/L	<MDL	<MDL	<MDL							
Selenium	mg/L	0.001	0.001	0.001							
Sodium	mg/L	59.8	61.1	62.4							
Zinc	mg/L	<MDL	0.005	0.010							

** Site note accessible 1Q*

The monitoring point for S34-23 is located high on the northern facing slopes that forms the Dove Gulch Canyon. It is accessed on foot drom the remnants of an old coal exploration road in the mouth of Dove Gulch. It in one of three springs found in this location, orginating in the sandstone outcrops and discharges via sheet flow into Dove Gulch.

Baseline Information for Point S34-23 is derived from events beginning on 6/9/98 through 12/8/03.
Point influenced by mining on 12/8/03.

S34-24
Along Hubbard Creek - Spring 34-24
Elevation - 6390

Initiated	6/2/1998	6/2/1998	6/2/1998	6/2/1998
Activated	4/1/2002	4/1/2002	4/1/2002	4/1/2002
Date	10/8/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.00	0.06	0.91	0.0	0.00	0.10				
FieldComment								Dry	Dry	Dry	Dry
ph	su	7.8	7.8	7.8	7.8	8.0	8.2				
Conductivity	umhos/cm	1010	1010	1010	1210	1740	2400				
Temperature	Celsius	19.0	19.0	19.0	9.0	20.3	24.8				
Lab Parameters	UNITS										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
ResidueFilterable-TDS	mg/L										
ResidueNonFilterable-TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

** Site note accessible 1Q*

The monitoring point for S34-24 is found along the Hubbard Creek Trail. It is a diverse flow along the upper edge of the trail.

Baseline Information for Point S34-24 is derived from events beginning on 6/2/98 through 4/1/02.
Point influenced by mining on 4/1/02.

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

S34-25
Spring in Dove Gulch from Hubbard Side
Dove Gulch - Spring 34-25
Elevation - 6680'

Surface Water

Initiated	6/2/1998	6/2/1998	6/2/1998	6/2/1998
Activated	10/30/2008	10/30/2008	10/30/2008	10/30/2008
Date	10/8/2024	8/22/2024	4/24/2024	3/19/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM				0.0	0.4	5.0				
FieldComment								Dry	Dry	Dry	Damp
ph	su				8.1	8.4	8.8				
Conductivity	umhos/cm				800	916	1088				
Temperature	Celsius				5.0	10.5	17.9				
Lab Parameters	**UNITS**										
Bicarbonate	mg/L				335	335	335				
Carbonate	mg/L				37	37	37				
Chloride	mg/L				3	3	3				
Conductivity	umhos/cm				759	759	759				
Hardness	mg/L				120	120	120				
Nitrate-Nitrite	mg/L				0.03	0.03	0.03				
Oil and Grease	mg/L				<MDL	<MDL	<MDL				
pH	su				8.8	8.8	8.8				
Phosphate	mg/L				<MDL	<MDL	<MDL				
ResidueFilterable-TDS	mg/L				490	490	490				
ResidueNonFilterable-TSS	mg/L				19	19	19				
SAR					5.99	5.99	5.99				
Sulfate	mg/L				67	67	67				
Aluminum	mg/L				0.61	0.61	0.61				
Arsenic	mg/L				<MDL	<MDL	<MDL				
Cadmium	mg/L				<MDL	<MDL	<MDL				
Calcium	mg/L				27.6	27.6	27.6				
Copper	mg/L				<MDL	<MDL	<MDL				
Iron (Total)	mg/L				0.51	0.51	0.51				
Lead	mg/L				0.0004	0.0004	0.0004				
Magnesium	mg/L				12.4	12.4	12.4				
Manganese (Total)	mg/L				<MDL	<MDL	<MDL				
Mercury	mg/L				<MDL	<MDL	<MDL				
Molyebdenum	mg/L				<MDL	<MDL	<MDL				
Selenium	mg/L				0.0016	0.0016	0.0016				
Sodium	mg/L				149	149	149				
Zinc	mg/L				<MDL	<MDL	<MDL				

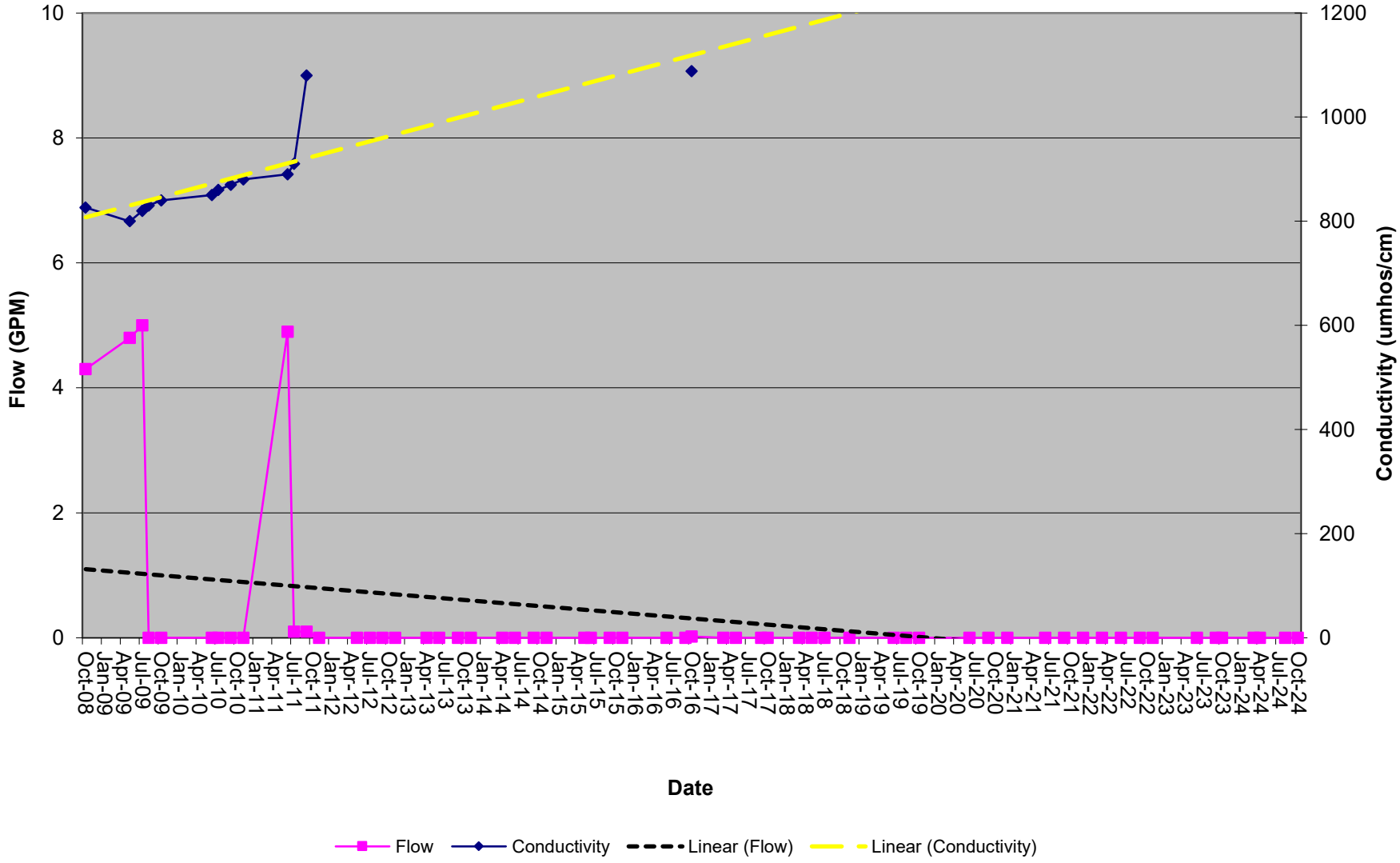
The area of concern for monitoring point S34-25 was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered operational.

The monitoring point for S34-25 is found on drill site GVB-8A-A, 8A & 9D in the Dove Gulch drainage.

** Site note accessible 1Q*

There is no baseline collection possible for points initiated after the influence of mining.

Plot of Flow and Conductivity



S34-25 - Dove Gulch Spring and Pond 34-25

Figure 58

S34-7
Spring along Sheep Corral Gulch
Spring 34-7
Elevation - 7390

Initiated	10/27/1997	10/27/1997	10/27/1997
Activated	6/1/2002	6/1/2002	6/1/2002
Date	10/7/2027	9/13/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			*
Flow	GPM	0.00	0.30	4.41	0.0	0.03	1.00			
FieldComment								Dry	Dry	Dry
ph	su	6.8	7.5	8.0	7.2	7.9	8.4			
Conductivity	umhos/cm	160	258	300	330	625	1170			
Temperature	Celsius	5.9	11.2	19.8	3.7	13.6	24.5			
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	200	200	200						
Chloride	mg/L	4	4	4						
Conductivity	umhos/cm	420	420	420						
Hardness	mg/L	129	129	129						
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL						
Oil and Grease	mg/L	4	4	4						
pH	su	8.0	8.0	8.0						
Phosphate	mg/L	<MDL	<MDL	<MDL						
ResidueFilterable-TDS	mg/L	230	230	230						
ResidueNonFilterable-TSS	mg/L	138	138	138						
SAR		<MDL	<MDL	<MDL						
Sulfate	mg/L	30.0	30.0	30.0						
Aluminum	mg/L	3.51	3.51	3.51						
Arsenic	mg/L	0.001	0.001	0.001						
Cadmium	mg/L	<MDL	<MDL	<MDL						
Calcium	mg/L	37.0	37.0	37.0						
Copper	mg/L	<MDL	<MDL	<MDL						
Iron (Total)	mg/L	3.58	3.58	3.58						
Lead	mg/L	<MDL	<MDL	<MDL						
Magnesium	mg/L	8.9	8.9	8.9						
Manganese (Total)	mg/L	0.113	0.113	0.113						
Mercury	mg/L	<MDL	<MDL	<MDL						
Molyebdenum	mg/L	<MDL	<MDL	<MDL						
Selenium	mg/L	<MDL	<MDL	<MDL						
Sodium	mg/L	41.0	41.0	41.0						
Zinc	mg/L	0.03	0.03	0.03						

** Site note accessible 1Q*

The monitoring point for S34-7 is located just to the south of an old coal exploration road which winds down Sheep Corral Gulch.

Baseline Information for Point S34-7 is derived from events beginning on 10/27/97 through 6/1/02.
Point influenced by mining on 6/1/02.

D2-1
Lower Sheep Corral Gulch
Sheep Corral - Drainage System
Elevation - 6360

Initiated	11/6/1998	11/6/1998	11/6/1998	11/6/1998
Activated	11/1/2003	11/1/2003	11/1/2003	11/1/2003
Date	10/8/2024	8/22/2024	4/24/2024	

Field Parameters	UNITS	Summary Information Baseline Min	Ave	Max	Operation Min	Ave	Max				
Flow	GPM	0.00	0.32	4.55	0.00	0.34	13.60	0	0	0	
FieldComment								Dry	Dry	Dry	*
ph	su	7.1	7.8	8.4	7.4	8.1	8.6				
Conductivity	umhos/cm	940	1210	1640	1140	1499	2000				
Temperature	Celsius	4.1	11.1	19.4	5.0	16.8	25.4				
Lab Parameters	UNITS										
Bicarbonate	mg/L	540	540	540	398.95	593.87	772.59				
Chloride	mg/L	11	11	11	<MDL	15.41	20.81				
Conductivity	umhos/cm	1230	1230	1230	1173.0	1508.7	1847.3				
Hardness	mg/L	291	291	291	228.45	325.43	372.55				
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL	<MDL	1.866	2.730				
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	2.060	4.050				
pH	su	8.2	8.2	8.2	7.8	8.4	8.9				
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
ResidueFilterable-TDS	mg/L	790	790	790	824	1060	1321				
ResidueNonFilterable-TSS	mg/L	<MDL	<MDL	<MDL	1.0	64.9	296.0				
SAR		5.3	5.3	5.3	1.34	5.08	11.30				
Sulfate	mg/L	190	190	190	230.00	275.24	380.32				
Aluminum	mg/L	0.39	0.39	0.39	0.057	0.377	1.23				
Arsenic	mg/L	<MDL	<MDL	<MDL	0.0017	0.054	0.142				
Cadmium	mg/L	<MDL	<MDL	<MDL	<MDL	0.006	0.015				
Calcium	mg/L	49.8	49.8	49.8	36.9	55.3	66.6				
Copper	mg/L	<MDL	<MDL	<MDL	<MDL	0.284	0.552				
Iron (Total)	mg/L	0.3	0.3	0.3	0.10	0.49	1.22				
Lead	mg/L	<MDL	<MDL	<MDL	<MDL	0.03	0.05				
Magnesium	mg/L	40.6	40.6	40.6	33.1	45.5	57.3				
Manganese (Total)	mg/L	0.01	0.01	0.01	<MDL	0.053	0.084				
Mercury	mg/L	<MDL	<MDL	<MDL	<MDL	0.0001	0.0002				
Molyebdenum	mg/L	<MDL	<MDL	<MDL	<MDL	0.003	0.003				
Selenium	mg/L	<MDL	<MDL	<MDL	0.0002	0.0492	0.1680				
Sodium	mg/L	205	205	205	54.8	200.8	393.8				
Zinc	mg/L	<MDL	<MDL	<MDL	<MDL	0.032	0.090				

** Not accessible*

The D2-1 Monitoring point is at the lower extreme of Sheep Corral Gulch. It is located just below the Hubbard Creek Road, just north of the Blue Ribbon Mine.

Baseline Information for Point D2-1 is derived from events beginning on 10/31/97 through 4/1/02.
Point influenced by mining on 4/1/02.

D21-1
Downstream
Terror Creek - Confluence w/NFG
Elevation - 5760

Initiated	3/23/2010	3/23/2010	3/23/2010	3/23/2010
Activated				
Date	10/10/2024	8/22/2024	4/24/2024	3/19/2024

Field Parameters	UNITS	Summary Information Baseline Min	Ave	Max	Operation Min	Ave	Max				
Flow	CFS	0.02	5.51	46.00					2.8	3.8	
FieldComment								*			*
ph	su	7.1	8.4	9.0				7.91	8.12	7.74	8.13
Conductivity	umhos/cm	75	308	820				334	192.3	75.3	270
Temperature	Celsius	0.4	9.9	20.6				10.6	17.8	5.5	7.7
Lab Parameters	UNITS										
Bicarbonate	mg/L	35.70	121.74	292.00				157		41.5	
Chloride	mg/L	0.6	39.9	188.5				1.3		<MDL	
Conductivity	umhos/cm	65	285	744				313		71	
Hardness	mg/L	31.50	129.08	297.20				138		36	
Nitrate-Nitrite	mg/L	<MDL	0.167	0.570				<MDL		0.035	
Oil and Grease	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
pH	su	6.40	7.82	8.53				6.5		6.4	
Phosphate	mg/L	<MDL	0.062	0.280				0.13		0.0341	
ResidueFilterable-TDS	mg/L	1	212	494				190		98	
ResidueNonFilterable-TSS	mg/L	<MDL	34	302				27		39	
SAR		0.23	0.65	1.70				0.48		0.23	
Sulfate	mg/L	1.23	25.86	72.03				23.6		<MDL	
Aluminum (TREC)	mg/L	0.008	0.804	4.000				0.375		4	
Arsenic (TREC)	mg/L	0.000	0.010	0.060				0.00067		0.00055	
Cadmium (TREC)	mg/L	0.002	0.006	0.020				<MDL		<MDL	
Calcium (TREC)	mg/L	6.05	26.96	67.30				27.3		8.66	
Copper (TREC)	mg/L	0.002	0.007	0.017				<MDL		<MDL	
Iron (TREC)	mg/L	0.06	1.02	11.70				0.53		3.25	
Lead (TREC)	mg/L	0.00	0.01	0.05				0.00084		0.00104	
Magnesium (TREC)	mg/L	2.96	14.44	44.40				16.9		3.51	
Manganese (TREC)	mg/L	<MDL	0.817	23.700				0.071		0.056	
Mercury (TREC)	mg/L	0.00001	0.00006	0.00012				<MDL		<MDL	
Molyebdenum (TREC)	mg/L	0.000	0.003	0.008				<MDL		<MDL	
Selenium (TREC)	mg/L	<MDL	0.00603	0.03600				0.00017		0.00018	
Sodium (TREC)	mg/L	3.08	17.38	67.50				12.8		3.08	
Zinc (TREC)	mg/L	0.003	0.025	0.110				<MDL		<MDL	

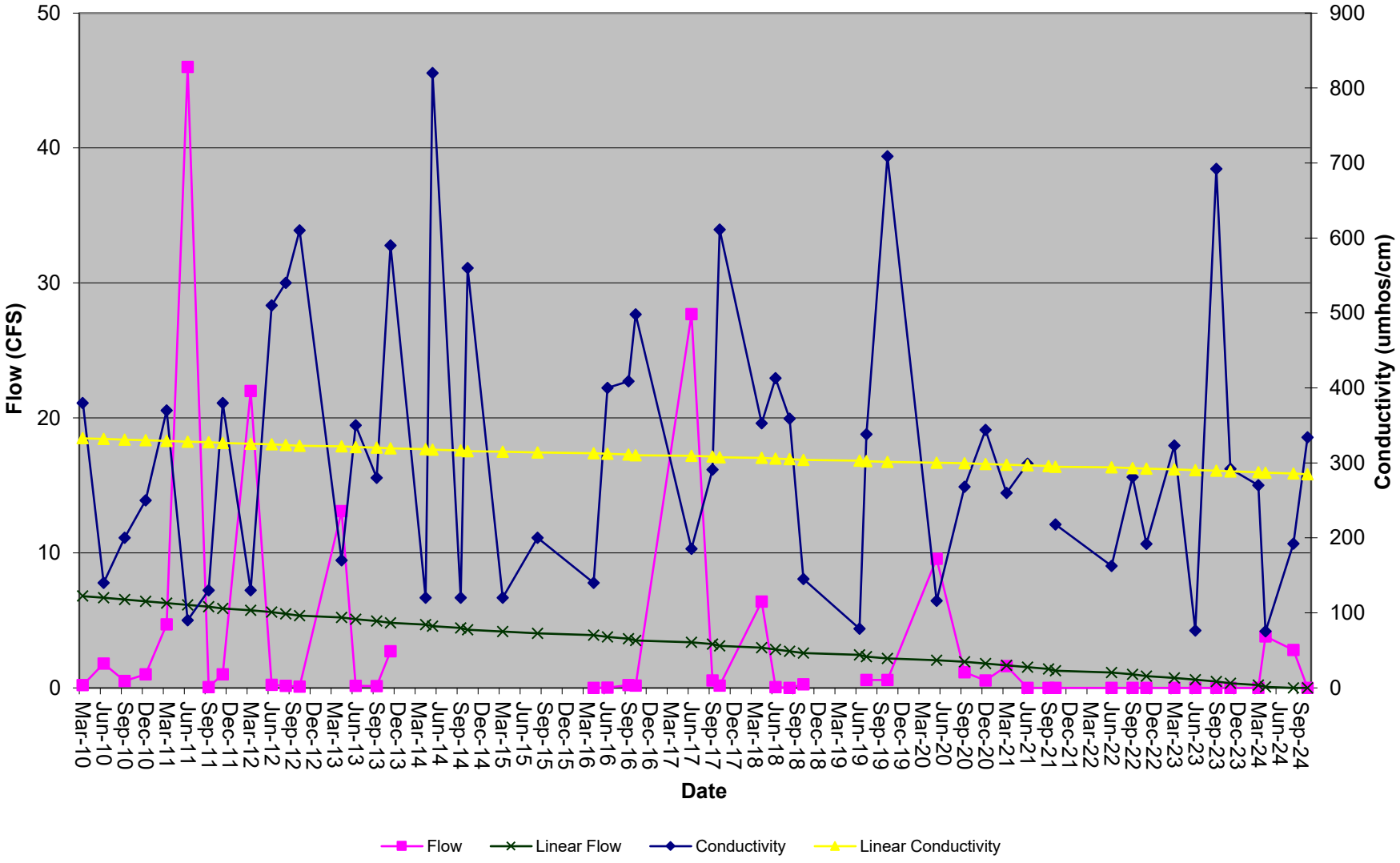
The area of concern for monitoring point D21-1 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The D21-1 Monitoring point is at downstream Terror Creek-Confluence w/NFG.

** Stream flow too low for measurement*
*** Strem flow too high for measurement*
**** Site not accessible*

Baseline Information Collection initiated 3/23/10 and not yet considered complete.
Point D21-1 has not been influence by mining.

Plot of Flow and Conductivity



D21-1 - Terror Creek Drainage System

Figure 62

D32-4
East Fork Terror Creek
Elevation - 7480

Initiated								3/23/2010	3/23/2010	3/23/2010	3/23/2010
Activated											
Date								10/9/2024	9/16/2024	4/30/2024	
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	0.04	6.14	75.80				0.4	4.2	5.8	
FieldComment											*
ph	su	6.9	8.1	8.8				7.6	8.1	8.3	
Conductivity	umhos/cm	20	127	688				688	193.8	105.2	
Temperature	Celsius	0.0	9.5	19.0				8.7	6.9	3.9	
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	1.7	62.5	144.6				94.6		58.3	
Chloride	mg/L	<MDL	4.5	76.9				<MDL		1.18	
Conductivity	umhos/cm	60.8	130.1	429.0				176		100	
Hardness	mg/L	22.3	57.3	192.3				79.0		42.0	
Nitrate-Nitrite	mg/L	<MDL	0.7	8.1				0.033		<MDL	
Oil & Grease	mg/L	<MDL	2.4	6.4				<MDL		<MDL	
pH	su	6.4	7.5	8.3				6.4		6.6	
Phosphate	mg/L	<MDL	0.14	1.37				0.1300		0.0837	
ResidueFilterable-TDS	mg/L	37	115	342				114		86	
ResidueNonFilterable-TSS	mg/L	<MDL	28	450				<MDL		9.0000	
SAR		<MDL	0.75	28.16				0.3000		0.2600	
Sulfate	mg/L	<MDL	8.1	54.8				<MDL		<MDL	
Aluminum (TREC)	mg/L	<MDL	1.30	11.17				<MDL		1.43	
Arsenic (TREC)	mg/L	<MDL	0.0089	0.1680				0.00047		0.00035	
Cadmium (TREC)	mg/L	<MDL	0.4202	11.2000				<MDL		<MDL	
Calcium (TREC)	mg/L	<MDL	13.9	65.4				19.3		10.1	
Copper (TREC)	mg/L	<MDL	0.005	0.050				<MDL		<MDL	
Iron (Dissolved)	mg/L	<MDL	5.77	165.00				<MDL		0.069	
Iron (TREC)	mg/L	0.020	0.943	5.420				0.19		1.01	
Lead (TREC)	mg/L	<MDL	0.0073	0.0500				<MDL		0.0003	
Magnesium (TREC)	mg/L	<MDL	5.36	11.10				7.41		4.04	
Manganese (TREC)	mg/L	<MDL	0.042	0.277				0.012		<MDL	
Mercury (TREC)	mg/L	<MDL	0.00007	0.00027				<MDL		<MDL	
Molyebdenum (TREC)	mg/L	<MDL	0.037	0.900				<MDL		<MDL	
Selenium (TREC)	mg/L	<MDL	0.005	0.024				<MDL		0.00016	
Sodium (TREC)	mg/L	2.3	5.3	20.3				6.1		3.81	
Zinc (TREC)	mg/L	<MDL	0.023	0.160				<MDL		<MDL	

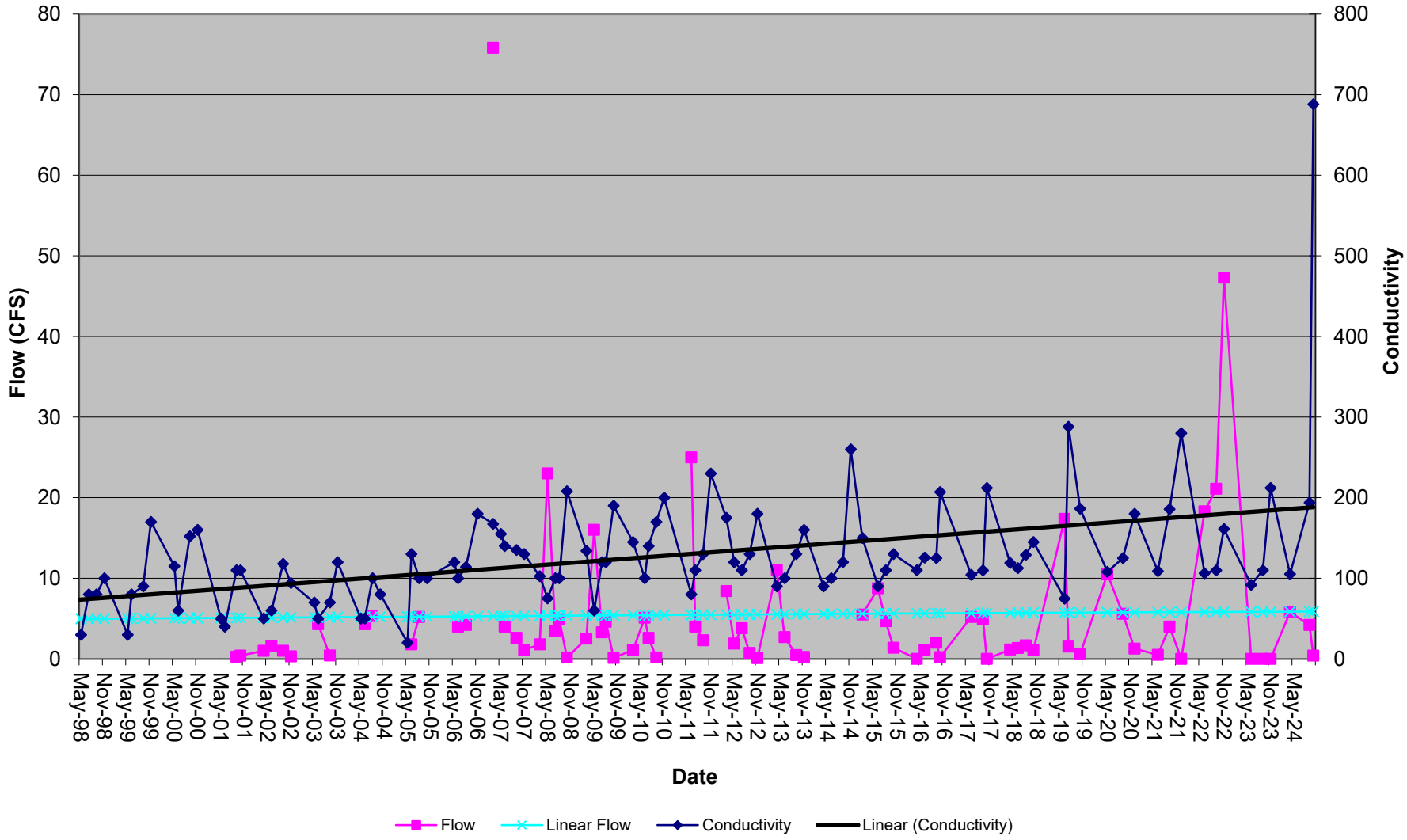
The area of concern for monitoring point D32-4 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The D32-4 Monitoring Point is on upper Terror Creek. It is located at the Cottonwood Stomp ford. This point is used to obtain conductivity, pH and temperature readings. The irregular stream channel found at this location does not provide an adequate method of determining flow values. Flow values are taken by Resource Engineering.

** Not Accessible*

Baseline Information Collection initiated on 10/31/97 and not yet considered complete.
Point D32-4 has not been influenced by mining.

Plot of Flow and Conductivity



D33-14
Upper Sheep Corral Gulch
Elevation - 7320

Initiated	11/6/1998	11/6/1998	11/6/1998	11/6/1998
Activated	11/1/2003	11/1/2003	11/1/2003	11/1/2003
Date	10/9/2024	9/13/2024	6/20/2024	

Field Parameters	UNITS	Summary Information Baseline Min	Ave	Max	Operation Min	Ave	Max				
Flow	GPM	0.00	0.00	0.00	0.00	1.90	98.86	0.4	0.008	0.4	
FieldComment											*
ph	su				6.5	7.9	8.5	7.65	8.1	8.23	
Conductivity	umhos/cm				330	677	807	764	751	691	
Temperature	Celsius				2.0	8.2	26.5	8.7	8.8	8.7	
Lab Parameters	UNITS										
Bicarbonate	mg/L				124.0	282.1	392.0	320		327	
Chloride	mg/L				1.2	1.9	2.7	1.83		1.65	
Conductivity	umhos/cm				192.0	527.5	670.0	651		559	
Hardness	mg/L				63	81	118	68		67	
Nitrate-Nitrite	mg/L				<MDL	0.34	2.13	0.055		0.032	
Oil and Grease	mg/L				<MDL	0.82	0.82	<MDL		<MDL	
pH	su				6.60	7.79	8.60	6.6		7.1	
Phosphate	mg/L				<MDL	0.03	0.04	<MDL		<MDL	
ResidueFilterable-TDS	mg/L				126	323	406	392		402	
ResidueNonFilterable-TSS	mg/L				<MDL	3	3	<MDL		<MDL	
SAR					0.71	5.19	7.70	6.8		7.2	
Sulfate	mg/L				6.50	35.31	53.60	40.8		53.6	
Aluminum	mg/L				<MDL	<MDL	<MDL	<MDL		<MDL	
Arsenic	mg/L				0.009	0.009	0.009	<MDL		<MDL	
Cadmium	mg/L				<MDL	<MDL	<MDL	<MDL		<MDL	
Calcium	mg/L				20.0	24.4	32.7	21.5		21	
Copper	mg/L				<MDL	<MDL	<MDL	<MDL		<MDL	
Iron (Total)	mg/L				0.02	0.05	0.08	<MDL		<MDL	
Lead	mg/L				<MDL	<MDL	<MDL	<MDL		0.00036	
Magnesium	mg/L				3.00	4.57	8.78	3.41		3.41	
Manganese (Total)	mg/L				0.01	0.01	0.02	<MDL		<MDL	
Mercury	mg/L				<MDL	<MDL	<MDL	<MDL		<MDL	
Molyebdenum	mg/L				<MDL	<MDL	<MDL	<MDL		<MDL	
Selenium	mg/L				0.000	0.011	0.051	0.00016		0.0014	
Sodium	mg/L				12.1	100.7	139.0	128		133	
Zinc	mg/L				<MDL	<MDL	<MDL	<MDL		<MDL	

** Site not accesible during 1Q*
Not enough water for sample during 2Q 2018

The location for monitoring point D33-14 can be found just to the south of an old coal exploration road winding through Sheep Corral Gulch. It is just above Spring and Pond SP34-11.

** flow not provided in field notes*

Baseline Information for Point D33-14 is derived from events beginning on 11/6/98 through 11/1/03.
Point influenced by mining on 11/1/03.

D34-13
Lower Dove Gulch - Drainage System
Elevation - 6440

Initiated	10/31/1997	10/31/1997	10/31/1997	10/31/1997
Activated				
Date	10/8/2024	8/24/2024	4/24/2024	

Field Parameters	UNITS	Summary Information Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	GPM	0.00	0.12	12.00				0	0	0	0
FieldComment								Dry	Dry	0	*
ph	su				8.95	8.95	8.95				
Conductivity	umhos/cm										
Temperature	Celsius				14.70	14.70	14.70				
Lab Parameters	UNITS										
Bicarbonate	mg/L				357.00	357.00	357.00				
Chloride	mg/L				8.44	8.44	8.44				
Conductivity	umhos/cm				985.00	985.00	985.00				
Hardness	mg/L				120.00	120.00	120.00				
Nitrate-Nitrite	mg/L				0.02	0.02	0.02				
Oil and Grease	mg/L				<MDL	<MDL	<MDL				
pH	su				8.80	8.80	8.80				
Phosphate	mg/L				<MDL	<MDL	<MDL				
ResidueFilterable-TDS	mg/L				622.00	622.00	622.00				
ResidueNonFilterable-TSS	mg/L				11.00	11.00	11.00				
SAR					7.60	7.60	7.60				
Sulfate	mg/L				119.00	119.00	119.00				
Aluminum	mg/L				0.32	0.32	0.32				
Arsenic	mg/L				0.00	0.00	0.00				
Cadmium	mg/L				<MDL	<MDL	<MDL				
Calcium	mg/L				29.10	29.10	29.10				
Copper	mg/L				<MDL	<MDL	<MDL				
Iron (Total)	mg/L				0.30	0.30	0.30				
Lead	mg/L				0.00	0.00	0.00				
Magnesium	mg/L				11.60	11.60	11.60				
Manganese (Total)	mg/L				<MDL	<MDL	<MDL				
Mercury	mg/L				<MDL	<MDL	<MDL				
Molyebdenum	mg/L				<MDL	<MDL	<MDL				
Selenium	mg/L				0.00	0.00	0.00				
Sodium	mg/L				190.00	190.00	190.00				
Zinc	mg/L				<MDL	<MDL	<MDL				

The area of concern for monitoring point D34-13 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The location for D34-13 is at the lower extreme of Dove Gulch, along the western edge of Hubbard Creek Trail.

Baseline Information Collection initiated on 10/31/97 and not yet considered complete.
Point D34-13 has not been influenced by mining.

D34-14
Upper Hubbard Creek near Iron Point
Elevation - 6560

Initiated								9/30/1996	9/30/1996	9/30/1996	9/30/1996
Activated								4/1/2002	4/1/2002	4/1/2002	4/1/2002
Date								10/8/2024	8/24/2024	4/24/2024	3/19/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	0.12	23.34	220.00				2.0	3.0	70.0	3.5
FieldComment											
ph	su	6.8	8.1	8.9				8.5	8.1	8	8.5
Conductivity	umhos/cm	50	202	347				237	179	101.3	240
Temperature	Celsius	0.2	9.2	20.9				10.9	16.6	3.7	7.0
Lab Parameters	UNITS										
Bicarbonate	mg/L	3.6	98.4	187.0				120			57.5
Chloride	mg/L	<MDL	4.56	84.89				2.04			1.08
Conductivity	umhos/cm	74.0	196.1	439.0				237			89
Hardness	mg/L	<MDL	82.06	150.00				24			42
Nitrate-Nitrite	mg/L	<MDL	1.630	41.530				0.022			0.064
Oil & Grease	mg/L	<MDL	0.973	2.330				<MDL			<MDL
Phosphate	mg/L	<MDL	0.59	8.33				0.0341			<MDL
ResidueFilterable-TDS	mg/L	33	141	353				142			92
ResidueNonFilterable-TSS	mg/L	<MDL	19.7	166.0				5			<MDL
SAR		<MDL	1.08	20.50				1.5			0.22
Sulfate	mg/L	<MDL	29.77	1234.8				7.9			<MDL
Aluminum (TREC)	mg/L	<MDL	0.693	9.690				<MDL			1.83
Arsenic (TREC)	mg/L	<MDL	0.0067	0.1290				0.00054			0.00052
Cadmium (TREC)	mg/L	<MDL	0.3268	11.3000				<MDL			<MDL
Calcium (TREC)	mg/L	4.57	23.30	43.60				<MDL			11.7
Copper (TREC)	mg/L	<MDL	0.009	0.200				<MDL			<MDL
Iron (Dissolved)	mg/L	<MDL	<MDL	<MDL				<MDL			0.117
Iron (TREC)	mg/L	0.010	0.558	13.600				0.146			1.56
Lead (TREC)	mg/L	<MDL	0.073	2.800				0.00024			0.0008
Magnesium (TREC)	mg/L	0.42	6.38	16.30				5.83			3.21
Manganese (TREC)	mg/L	<MDL	0.101	3.900				<MDL			0.03
Mercury (TREC)	mg/L	<MDL	0.00009	0.00079				<MDL			<MDL
Molyebdenum (TREC)	mg/L	<MDL	0.042	1.130				<MDL			<MDL
Selenium (TREC)	mg/L	<MDL	0.0751	3.2700				<MDL			0.00019
Sodium (TREC)	mg/L	2.97	12.30	42.00				17.1			3.3
Zinc (TREC)	mg/L	<MDL	0.016	0.116				<MDL			<MDL

The area of concern for monitoring point D34-14 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The location for the D34-14 monitoring point is on Hubbard creek just below the igneous intrusion noted as Iron Point. The location can be found where a sapling has been painted white. The point where field parameters were taken did not provide an adequate method to determine flow values. Flow values are taken by Resource Engineering.

Baseline Information Collection initiated on 10/31/97 and not yet considered complete.
Point D34-14 has not been influenced by mining.

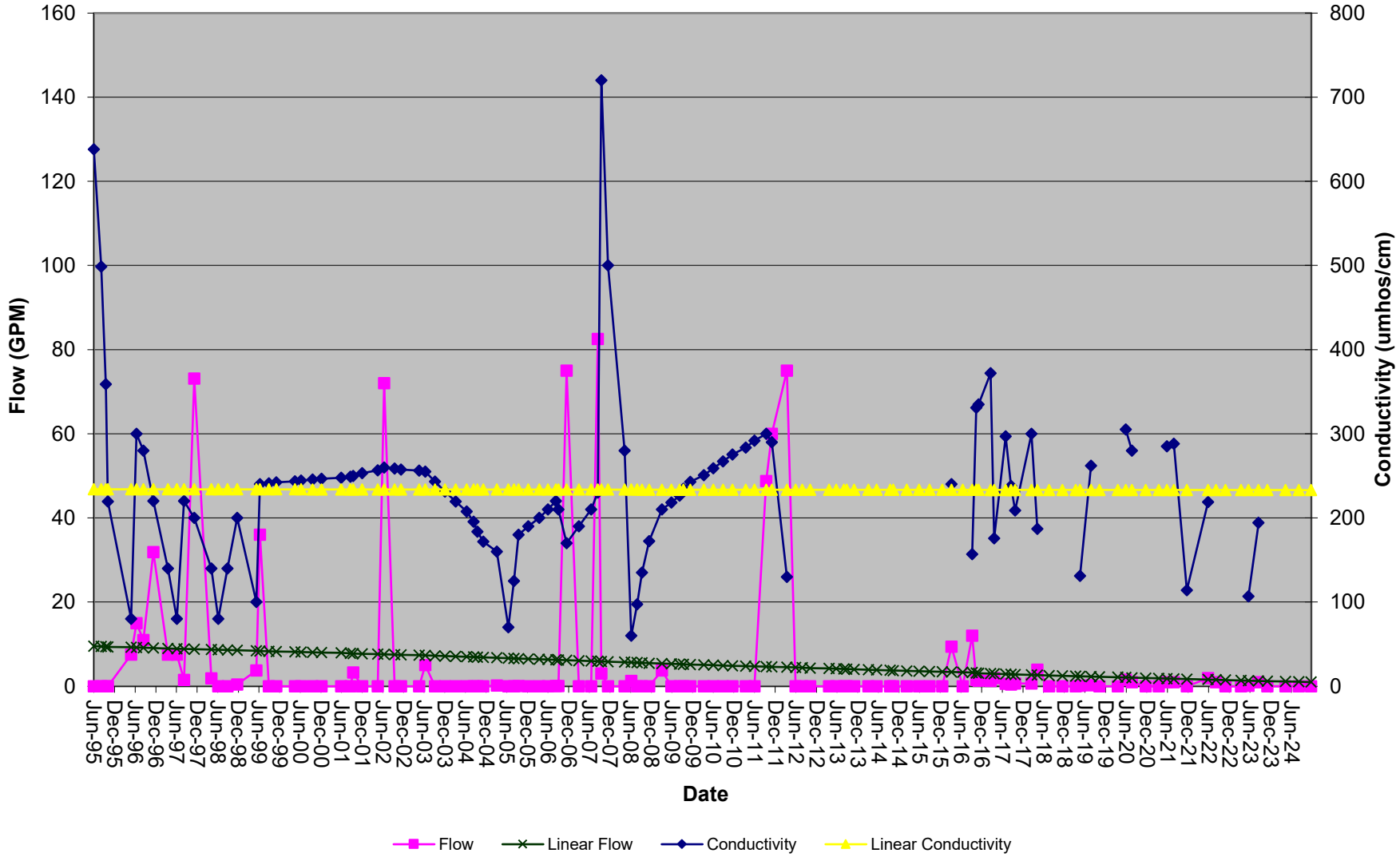
Deer-low
Lower Deer Trail Ditch Canal
Elevation - 5920

Initiated								6/14/1995	6/14/1995	6/14/1995	6/14/1995	
Activated								3/30/1997	3/30/1997	3/30/1997	3/30/1997	
Date								12/5/2024	8/19/2024	4/24/2024		
		Summary Information										
Field		Baseline			Operation							
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max					
Flow	GPM	0	8	32	0	6	83	Ditch	Ditch	Ditch		
Water Level in Flume	Feet				0.00	0.17	0.40	Diverted	Diverted	Diverted		1Q
FieldComment								Dry	Dry	Dry		No Water
ph	su	6.8	8.3	9.0	7.1	8.4	9.2					
Conductivity	umhos/cm	80	276	638	60	222	720					
Temperature	Celsius	4.9	13.1	21.2	3.1	11.9	21.5					
DO	mg/L	0.0	3.7	10.7	0.0	6.8	18.6					
Lab								*Ditch diverted above mine to Fire Mountain*				
Parameters	UNITS							*canal for 2-4 quarters*				
Bicarbonate	mg/L	41	70	118	39	90	131					
Chloride	mg/L	<MDL	1	2	<MDL	1.7	4.0					
Chromium III CrIII	mg/L				<MDL	<MDL	<MDL					
Chromium VI CrIV	mg/L				<MDL	<MDL	<MDL					
Cyanide, Total	mg/L				<MDL	<MDL	<MDL					
Conductivity	umhos/cm	97	148	238	98	185	308					
Hardness	mg/L	48	67	96	33	80	119					
Nitrate-Nitrite	mg/L	<MDL	0.07	0.17	<MDL	0.02	0.04					
Nitrate	mg/L	<MDL	0.08	0.17	<MDL	0.47	2.69					
Nitrite	mg/L	<MDL	0.01	0.02	<MDL	0.00	0.01					
Dissolved Oxygen		0	0	0	<MDL	7.93	7.95					
Ammonia	mg/L				0.10	0.18	0.25					
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	2	2					
pH	su	7.5	7.8	8.0	7.6	8.1	8.6					
Phosphate	mg/L	<MDL	0.03	0.08	<MDL	0.03	0.08					
ResidueFilterable-TDS	mg/L	30	93	150	70	161	302					
ResidueNonFilterable-TSS	mg/L	6	101	286	<MDL	15	41					
SAR		0.21	0.38	0.68	<MDL	0.78	6.50					
Sulfate	mg/L	<MDL	7	10	<MDL	11	20					
Sulfide S	mg/L				<MDL	<MDL	<MDL					
Aluminum (TREC)	mg/L	0.25	3.03	7.68	0.14	0.72	2.27					
Arsenic (TREC)	mg/L	<MDL	0.001	0.002	<MDL	0.0018	0.0150					
Boron	mg/L				0.78	0.78	0.78					
Cadmium (TREC)	mg/L	<MDL	0.001	0.003	<MDL	0.01	0.05					
Calcium (TREC)	mg/L	13.4	18.8	26.9	9.1	22.5	33.8					
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.004	0.017					
Iron (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.06	0.15					
Iron (TREC)	mg/L	0.45	3.83	9.79	0.10	0.89	5.29					
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0049	0.0400					
Magnesium (TREC)	mg/L	3.4	4.9	6.9	2.5	6.0	8.6					
Manganese (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	1.6	6.2					
Manganese (TREC)	mg/L	0.012	0.075	0.193	0.001	0.037	0.166					
Mercury (TREC)	mg/L	<MDL	0.00007	0.0002	<MDL	0.00005	0.0002					
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0003	0.0010					
Nickel	mg/L				<MDL	<MDL	<MDL					
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.002	0.010					
Silver	mg/L				<MDL	<MDL	<MDL					
Sodium (TREC)	mg/L	3.7	7.6	15.3	3.9	10.8	31.5					
Zinc (TREC)	mg/L	0.03	0.03	0.04	<MDL	0.02	0.05					

The lower end of Deer Trail Ditch is monitored at a point where the ditch empties into the Fire Mountain Canal.

Baseline Information for Point Deer-low is derived from events beginning on 6/14/95 through 3/30/97.
Point influenced by mining on 3/30/97.

Plot of Flow and Conductivity



Deer-low - Canal - Deer Trail Ditch

Figure 69

Deer-up
Upper Deer Trail Ditch Canal
Elevation - 5960

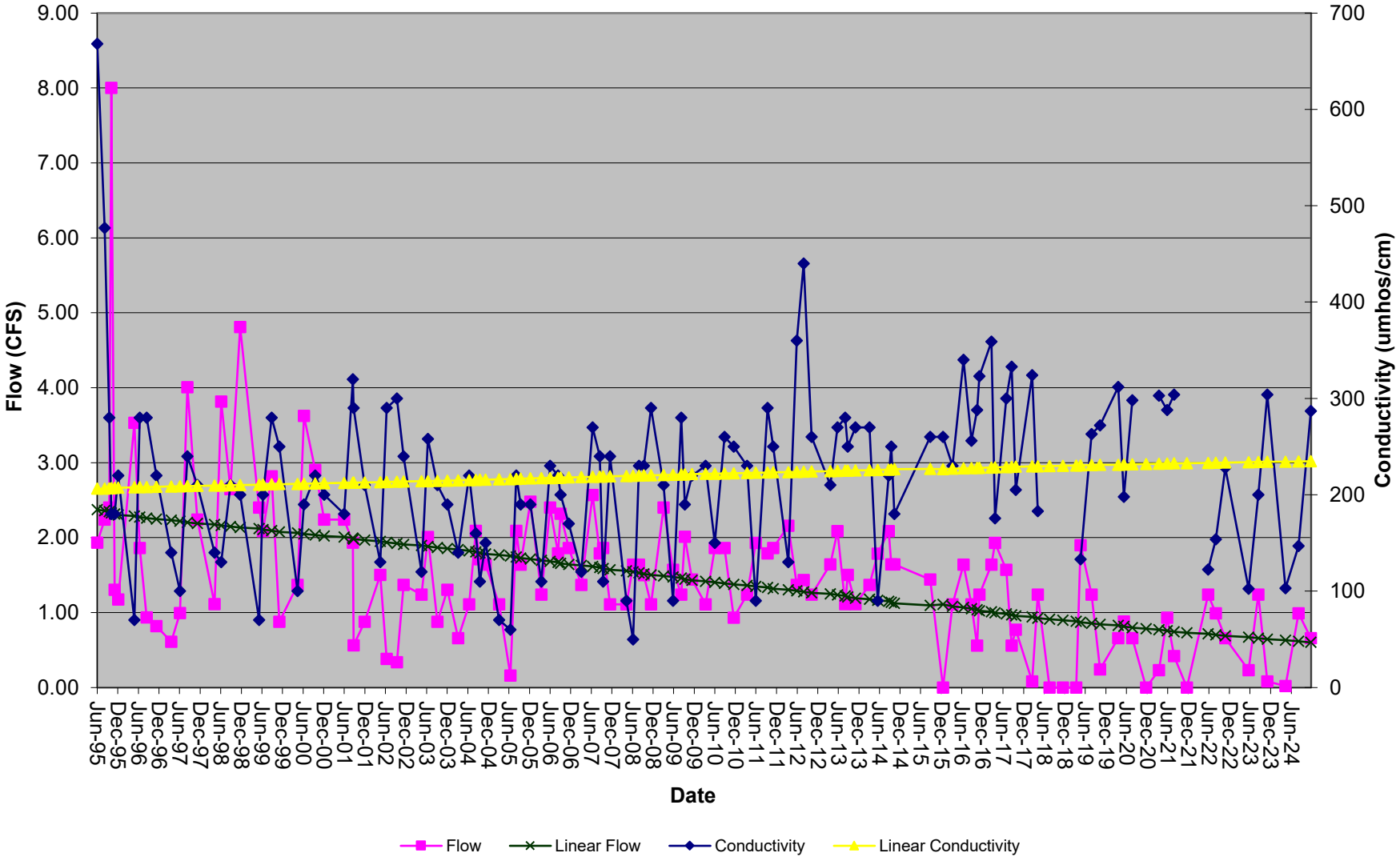
Initiated								6/14/1995	6/14/1995	6/14/1995	6/14/1995
Activated								3/30/1997	3/30/1997	3/30/1997	3/30/1997
Date								12/5/2024	8/19/2024	4/24/2024	
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	0.8	1.8	3.5	0.0	1.5	4.8	0.02	0.99	0.66	
Water Level in Flume	Feet	0.23	0.37	0.59	0.02	0.32	0.72	0.02	0.26	0.20	1Q
FieldComment											No water
ph	su	6.4	8.5	9.1	7.4	8.4	9.1	8.3	7.5	7.9	
Conductivity	umhos/cm	70	286	668	50	213	440	287	147	103	
Temperature	Celsius	0.8	11.4	20.3	0.2	9.6	22.1	1.4	15.7	4.6	
DO	mg/L	0.0	3.5	7.7	0.0	9.9	69.9	9.2	19.0	18.2	
Lab Parameters	UNITS										
Bicarbonate	mg/L	51.0	73.0	117.0	-42.5	100.7	176.0			52.1	
Hydroxide	mg/L	0	0	0	0	0	0				
Chloride	mg/L	<MDL	1.67	3.00	<MDL	18.07	190.50		<MDL	1.52	
Chromium III CrIII	mg/L				<MDL	<MDL	<MDL				
Chromium VI CrIV	mg/L				<MDL	0.01	0.01		<MDL		
Cyanide, Total	mg/L				<MDL	<MDL	<MDL				
Conductivity	umhos/cm	100	148	235	85	239	573			95	
Hardness	mg/L	42	61	94	<MDL	92	168		63	44	
Nitrate-Nitrite	mg/L	<MDL	0.02	0.07	<MDL	0.19	1.25		0.022	0.053	
Nitrate	mg/L	<MDL	0.02	0.07	<MDL	0.31	2.87		0.022		
Nitrite	mg/L	<MDL	0.01	0.02	<MDL	0.003	0.016		<MDL		
Dissolved Oxygen	mg/L	0	0.00	0.00	<MDL	9.375	10.850				
Ammonia	mg/L				<MDL	0.149	0.290		<MDL		
Oil and Grease	mg/L				<MDL	4.3	5.5		<MDL	<MDL	
pH	su	7.6	7.8	8.1	0.1	7.8	8.7		6.0	6.5	
Phosphate	mg/L	<MDL	0.01	0.03	<MDL	6.16	141.00			<MDL	
ResidueFilterable-TDS	mg/L	50	100	150	60	180	475		132	96	
ResidueNonFilterable-TSS	mg/L	<MDL	25	52	<MDL	12	40			<MDL	
SAR		0.24	0.37	0.62	<MDL	0.71	2.29			0.24	
Sulfate	mg/L	<MDL	10	20	<MDL	12.2	37.5		1.8	<MDL	
Sulfide S	mg/L				<MDL	0.13	0.13		<MDL		
Aluminum (TREC)	mg/L	0.24	1.09	1.77	<MDL	0.43	2.03			1.62	
Arsenic (TREC)	mg/L	<MDL	0.0003	0.0010	<MDL	0.0045	0.0300		0.00157	0.00055	
Boron	mg/L				<MDL	0.82	1.40		<MDL		
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.006	0.040		<MDL	<MDL	
Calcium (TREC)	mg/L	11.8	17.2	26.5	8.29	27.78	134.00		18.3	12.3	
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.004	0.019		<MDL	<MDL	
Iron (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.08	0.25		0.205	0.109	
Iron (TREC)	mg/L	0.38	1.19	1.85	0.03	10.18	618.00		5.69	1.39	
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0088	0.1000		0.00285	0.00089	
Magnesium (TREC)	mg/L	3.0	4.4	6.7	0.1	7.4	17.6		0.1	3.3	
Manganese (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.7	6.7		<MDL		
Manganese (TREC)	mg/L	0.02	0.03	0.03	0.002	0.827	26.700		0.139	0.027	
Mercury (TREC)	mg/L	<MDL	0.0001	0.0002	<MDL	0.00007	0.0004		<MDL	<MDL	
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.003	0.011			<MDL	
Nickel	mg/L				<MDL	0.0088	0.0120		<MDL		
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0033	0.0230		0.00024	0.00016	
Silver	mg/L				<MDL	0.0030	0.0030		<MDL		
Sodium (TREC)	mg/L	3.6	7.1	13.8	3.6	17.9	66.5			3.61	
Zinc (TREC)	mg/L	0.01	0.02	0.03	<MDL	0.01	0.04		0.027	0.035	

The upper end of Deer Trail Ditch is monitored at the headgate located on Hubbard Creek. This monitoring point is fitted with a 2' Parshall Flume.

Negative Acidity value indicates equivalent value of alkalinity

Baseline Information for Point Deer-up is derived from events beginning on 6/14/95 through 3/30/97.
Point influenced by mining on 3/30/97.

Plot of Flow and Conductivity



Deer-up - Canal - Deer Trail Ditch

Figure 71

FMC-low
Lower Fire Mountain Canal
Elevation - 5920'

Initiated								5/19/1999	5/19/1999	5/19/1999	5/19/1999
Activated								5/19/1999	5/19/1999	5/19/1999	5/19/1999
Date									8/19/2024	4/24/2024	3/19/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS				0	152	182	0	172	167	0
FieldComment								Ditch Off			Ditch Off
ph	su				6.8	8.2	8.9		7.7	7.7	
Conductivity	umhos/cm				40	148	280		186	121	
Temperature	Celsius				5.4	12.3	22.1		15.1	6.1	
DO	mg/L				0.0	9.6	81.6		17.5	19.8	
Lab Parameters	UNITS										
Bicarbonate	mg/L				25	77.6	133.8	108.00		61.00	
Chloride	mg/L				<MDL	7.8	51.0	1.81		1.29	
Conductivity	umhos/cm				71	164	346	180		115	
Hardness	mg/L				27.58	77.48	521.00	81		58	
Nitrate-Nitrite	mg/L				<MDL	0.33	2.70	<MDL		0.079	
Oil and Grease	mg/L				<MDL	46.51	68.00	<MDL		<MDL	
pH	su				6.4	7.7	8.4	6.6		6.4	
Phosphate	mg/L				<MDL	0.05	0.24	0.0341		<MDL	
ResidueFilterable-TDS	mg/L				40	116	300	122		56	
ResidueNonFilterable-TSS	mg/L				<MDL	65	474	45		32	
SAR					<MDL	0.49	1.55	0.4		0.28	
Sulfate	mg/L				<MDL	11.74	51.86	6.6		2.8	
Aluminum (TREC)	mg/L				<MDL	1.64	12.70	3.66		5.69	
Arsenic (TREC)	mg/L				<MDL	0.0045	0.1000	0.00078		0.00159	
Cadmium (TREC)	mg/L				<MDL	0.0068	0.1000	<MDL		<MDL	
Calcium (TREC)	mg/L				7.45	19.8	37.1	24.7		16.4	
Copper (TREC)	mg/L				<MDL	0.015	0.149	<MDL		<MDL	
Iron (TREC)	mg/L				0.02	1.64	12.30	2.95		5.67	
Lead (TREC)	mg/L				<MDL	0.0062	0.0500	0.00151		0.00372	
Magnesium (TREC)	mg/L				0.06	4.27	15.20	4.76		4.15	
Manganese (TREC)	mg/L				0.007	0.044	0.222	0.057		0.082	
Mercury (TREC)	mg/L				<MDL	0.000186	0.003000	<MDL		<MDL	
Molybdenum (TREC)	mg/L				<MDL	0.004	0.02	<MDL		<MDL	
Selenium (TREC)	mg/L				<MDL	0.0018	0.0120	0.00016		0.00036	
Sodium (TREC)	mg/L				2.8	10.7	41.4	8.12		4.81	
Zinc (TREC)	mg/L				<MDL	0.038	0.630	<MDL		0.037	

The area of concern for monitoring point FMC-low was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered operational.

The lower monitoring point for the Fire Mountain Canal is located at a point just south of its crossing under old State Hwy 133. Flow data is received from Fire Mountain Canal records (Trey Dennison 970-527-5166 or cell 970-589-2857).

** Flow at full capacity near Somerset from their website. Did not receive a call back with actual values.*
*** Average flow values from last five years*

Note: The Fire Mountain Canal was dry before field parameters could be obtained 3Q (2021)

There is no baseline collection possible for points initiated after the influence of mining.

FMC-up
Upper Fire Mountain Canal
Elevation - 5960'

Initiated								5/19/1999	5/19/1999	5/19/1999	5/19/1999
Activated								5/19/1999	5/19/1999	5/19/1999	5/19/1999
Date									8/19/2024	4/24/2024	3/19/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS				0	149	182	0	172	167	0
FieldComment								Ditch Off			Ditch Off
ph	su				7.0	8.2	8.9		7.7	8.5	
Conductivity	umhos/cm				40	144	290		194	148	
Temperature	Celsius				4.9	12.1	22.2		14.9	5.7	
DO	mg/L				0.0	9.4	82.3		19.6	20.3	
Lab Parameters	UNITS										
Bicarbonate	mg/L				2.00	75.17	147.00		97.5	60.6	
Chloride	mg/L				<MDL	9.6	103		1.79	1.71	
Conductivity	umhos/cm				64	169	402		180	116	
Hardness	mg/L				27.78	70.67	172.49		81	58	
Nitrate-Nitrite	mg/L				<MDL	0.26	2.15		<MDL	0.096	
Oil and Grease	mg/L				<MDL	<MDL	<MDL		<MDL	<MDL	
pH	su				6.5	7.8	8.6		6.7	6.5	
Phosphate	mg/L				<MDL	0.05	0.24		0.0589	<MDL	
ResidueFilterable-TDS	mg/L				40	121	364		120	120	
ResidueNonFilterable-TSS	mg/L				<MDL	85	692		43	44	
SAR					<MDL	0.46	1.77		0.39	0.28	
Sulfate	mg/L				<MDL	11.35	51.86		5.8	3.2	
Aluminum (TREC)	mg/L				<MDL	2.13	22.50		3.24	5.97	
Arsenic (TREC)	mg/L				<MDL	0.0042	0.0450		0.0008	0.00147	
Cadmium (TREC)	mg/L				<MDL	0.0022	0.0100		<MDL	<MDL	
Calcium (TREC)	mg/L				2.3	20.2	45.0		24.7	16.3	
Copper (TREC)	mg/L				<MDL	0.0153	0.1440		<MDL	<MDL	
Iron (TREC)	mg/L				0.03	2.16	26.30		2.78	5.77	
Lead (TREC)	mg/L				<MDL	0.0054	0.0300		0.0016	0.00367	
Magnesium (TREC)	mg/L				1.5	4.5	14.6		4.7	4.2	
Manganese (TREC)	mg/L				0.007	0.058	0.494		0.055	0.08	
Mercury (TREC)	mg/L				<MDL	0.00004	0.00018		<MDL	<MDL	
Molybdenum (TREC)	mg/L				<MDL	0.004	0.030		<MDL	<MDL	
Selenium (TREC)	mg/L				<MDL	0.0018	0.0110		0.00017	0.00035	
Sodium (TREC)	mg/L				2.8	10.0	36.6		8.1	4.8	
Zinc (TREC)	mg/L				<MDL	0.021	0.098		<MDL	0.098	

The area of concern for monitoring point FMC-up was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered operational.

The upper monitoring point for the Fire Mountain Canal is located where the ditch crosses Hubbard Creek. Flow data is received from Fire Mountain Canal records (Trey Dennison 970-527-5166 or cell 970-589-2857).

** Flow at full capacity near Somerset from their website. Did not receive a call back with actual values.*
*** Average flow values from last five years*

Note: The Fire Mountain Canal was dry before field parameters could be obtained 3Q (2020)

There is no baseline collection possible for points initiated after the influence of mining.

Free-low
Lower Freeman Gulch - Drainage System
Elevation - 7560

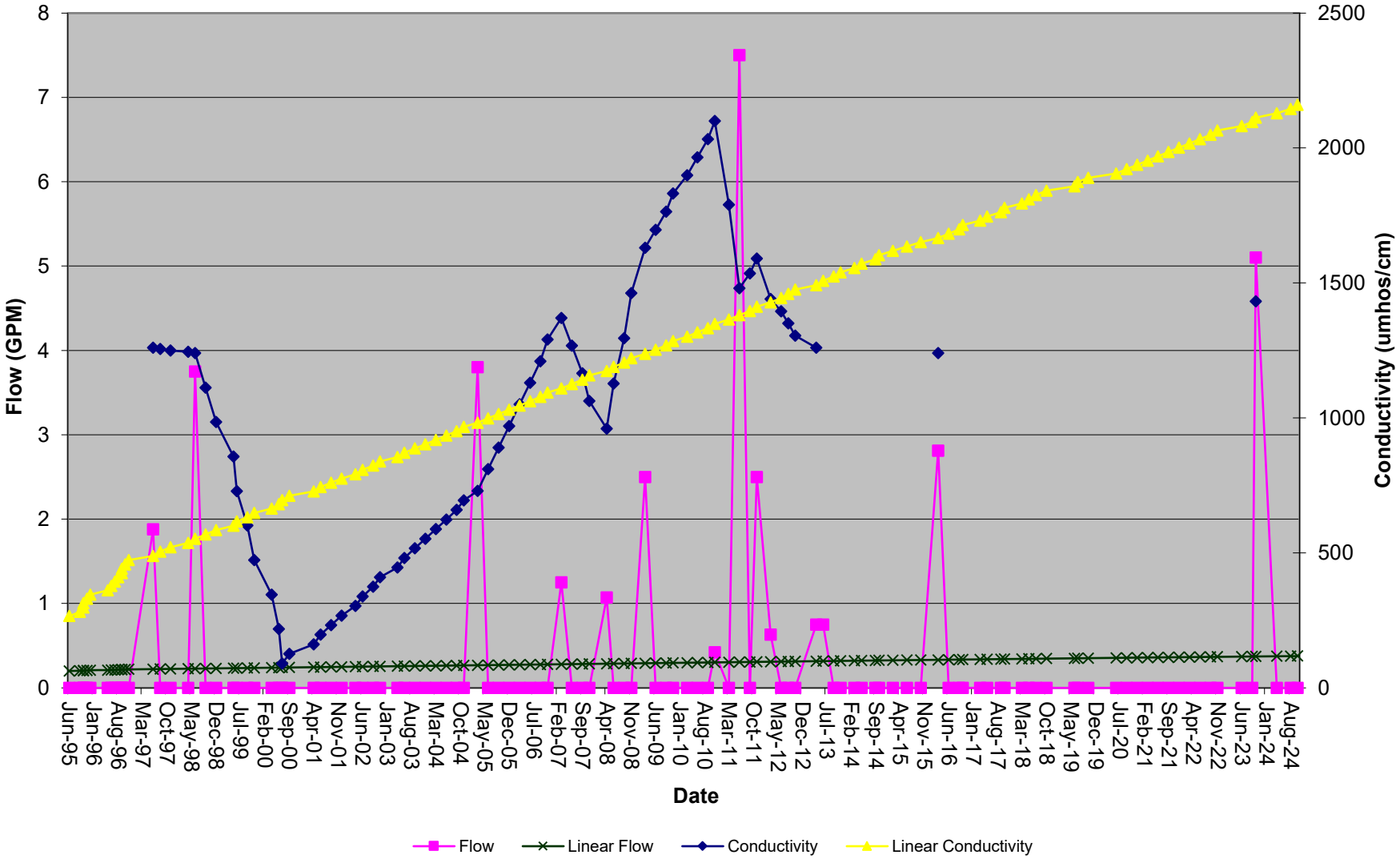
Initiated	6/12/1995	6/12/1995	6/12/1995	6/12/1995	
Activated	6/23/1999	6/23/1999	6/23/1999	6/23/1999	
Date	10/28/2024	8/22/2024	4/24/2024		

		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	GPM	0.00	0.24	3.75	0.00	0.30	7.50	0	0	0	
FieldComment								Dry	Dry	Dry	*
ph	su	8.3	8.5	8.6	7.3	8.2	8.6				
Conductivity	umhos/cm	1240	1250	1260	90	1313	2100				
Temperature	Celsius	18.4	19.8	21.2	0.6	12.6	23.0				
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	594	604	614	238.6	369.8	543.9				
Chloride	mg/L	16	18	19	3.06	7.44	11.41				
Conductivity	umhos/cm	1170	1190	1210	1321	1655	2470				
Hardness	mg/L	404	430	456	308.0	383.6	578.9				
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL	0.48	0.48	0.48				
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
pH	su	8.3	8.3	8.4	7.6	7.9	8.4				
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL				
ResidueFilterable-TDS	mg/L	730	765	800	908	1175	1590				
ResidueNonFilterable-TSS	mg/L	<MDL	3	6	6	36	90				
SAR		2.48	2.63	2.78	2.91	4.84	6.00				
Sulfate	mg/L	130	130	130	293.0	360.0	507.5				
Aluminum (TREC)	mg/L	0.13	0.21	0.29	<MDL	0.40	0.61				
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL	0.000	0.004	0.006				
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	0.002	0.005	0.010				
Calcium (TREC)	mg/L	56.4	61.2	65.9	50.80	66.25	98.40				
Copper (TREC)	mg/L	<MDL	0.005	0.01	0.01	0.02	0.02				
Iron (TREC)	mg/L	0.11	0.15	0.19	0.06	0.08	0.10				
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	0.00	0.02	0.03				
Magnesium (TREC)	mg/L	64.1	67.5	70.8	38.7	53.0	80.9				
Manganese (TREC)	mg/L	0.010	0.013	0.016	0.00	0.03	0.06				
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL	0.00001	0.00006	0.00008				
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.003	0.005				
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.012	0.018				
Sodium (TREC)	mg/L	120	124	127	163.0	199.7	223.5				
Zinc (TREC)	mg/L	<MDL	0.01	0.03	<MDL	0.03	0.06				

** Site inaccessible to snow*

Baseline Information for Point Free-low is derived from events beginning 6/12/95 through 6/23/99.
Point influenced by mining on 6/23/99.

Plot of Flow and Conductivity



Free-low - Freeman Gulch Drainage System

Figure 75

Free-up
Upper Freeman Gulch - Drainage System
Elevation - 6360

Initiated	6/12/1995	6/12/1995	6/12/1995	6/12/1995
Activated	6/28/1999	6/28/1999	6/28/1999	6/28/1999
Date	10/16/2024	9/13/2024	5/16/2024	

		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	GPM	0.00	0.00	0.00	0.00	0.27	10.30	0	0	0	
FieldComment								Dry	Dry	Dry	*
ph	su				6.68	7.66	8.31				
Conductivity	umhos/cm				603.00	699.40	759.00				
Temperature	Celsius				7.20	9.50	12.90				
Lab											
Parameters	UNITS										
Bicarbonate	mg/L				323.00	341.50	360.00				
Chloride	mg/L				<MDL	<MDL	2.20				
Conductivity	umhos/cm				519.00	587.50	656.00				
Hardness	mg/L				237.00	241.00	245.00				
Nitrate-Nitrite	mg/L				0.00	<MDL	0.00				
Oil and Grease	mg/L				0.00	<MDL	0.00				
pH	su				7.37	7.37	7.55				
Phosphate	mg/L				0.02	<MDL	0.02				
ResidueFilterable-TDS	mg/L				418.00	429.00	429.00				
ResidueNonFilterable-TSS	mg/L				7.40	<MDL	7.40				
SAR					1.86	1.86	1.91				
Sulfate	mg/L				96.50	<MDL	96.50				
Aluminum	mg/L				0.00	<MDL	0.00				
Arsenic	mg/L				0.00	<MDL	0.00				
Cadmium	mg/L				0.02	0.02	0.02				
Calcium	mg/L				66.10	67.70	67.70				
Copper	mg/L				0.00	<MDL	0.00				
Iron (Total)	mg/L				0.03	0.03	0.07				
Lead	mg/L				0.00	<MDL	0.00				
Magnesium	mg/L				17.40	18.50	18.50				
Manganese (Total)	mg/L				0.01	0.01	0.01				
Mercury	mg/L				0.11	<MDL	0.11				
Molyebdenum	mg/L				0.00	<MDL	0.00				
Selenium	mg/L				0.08	0.08	0.08				
Sodium	mg/L				57.60	68.20	68.20				
Zinc	mg/L				0.00	<MDL	0.00				

** Site in accesible due to snow*

Upper Freeman Gulch is monitored just below Pond 2 at the upper end of Freeman Gulch, near drill holes DH34-B and DH34-C.

Note: Site was not accessible during 1Q 2018

Baseline Information for Point Free-up is derived from events beginning 6/12/95 through 6/28/99.
Point influenced by mining on 6/28/99.

HUB-low
Lower Hubbard Creek - Drainage System
Elevation - 5880

Initiated	9/30/1996	9/30/1996	9/30/1996	9/30/1996
Activated	6/23/1999	6/23/1999	6/23/1999	6/23/1999
Date	10/10/2024	8/19/2024	4/24/2024	3/19/2024

		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	2.90	19.67	85.51	0.04	27.57	294.00	*	1.6	57.6	5.0
FieldComment											
ph	su	8.0	8.5	9.3	7.1	8.3	9.0	8.2	7.7	7.9	8.7
Conductivity	umhos/cm	80	198	390	50	302	850	361	153	106	291
Temperature	Celsius	2.3	11.1	20.2	0.3	9.5	21.7	10.2	7.7	4.3	12.1
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	62	115	155	28	137	690	156		57.5	
Chloride	mg/L	<MDL	1.7	3.0	<MDL	24.2	203.6	3.24		<MDL	
Conductivity	umhos/cm	118	254	406	87	312	711	347		96	
Hardness	mg/L	49	96	138	0.06	120.71	315.52	125		45	
Nitrate-Nitrite	mg/L	<MDL	0.05	0.29	<MDL	0.17	1.62	<MDL		0.069	
Oil and Grease	mg/L	<MDL	3.0	3.0	<MDL	3.0	3.0	<MDL		<MDL	
pH	su	7.5	7.9	8.3	6.5	7.9	8.4	6.7		6.5	
Phosphate	mg/L	<MDL	0.004	0.030	<MDL	0.04	0.27	0.0341		<MDL	
ResidueFilterable-TDS	mg/L	100	163	260	60	224	563	204		98	
ResidueNonFilterable-TSS	mg/L	<MDL	33	170	<MDL	21	200	<MDL		9	
SAR		<MDL	0.47	1.04	<MDL	0.83	2.62	0.97		0.25	
Sulfate	mg/L	<MDL	17	50	<MDL	31	102	<MDL		<MDL	
Aluminum (TREC)	mg/L	0.05	0.58	1.91	<MDL	18.30	733.00	<MDL		1.94	
Arsenic (TREC)	mg/L	<MDL	0.0004	0.0010	<MDL	0.0064	0.0600	0.00057		0.00051	
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.010	0.040	<MDL		<MDL	
Calcium (TREC)	mg/L	13.8	26.2	36.7	8.5	31.2	70.7	34.5		12.5	
Copper (TREC)	mg/L	<MDL	0.001	0.010	<MDL	0.008	0.060	<MDL		<MDL	
Iron (TREC)	mg/L	0.09	0.54	1.44	0.06	0.41	1.81	0.22		1.74	
Iron (Dissolved)	mg/L	0.00	<MDL	0.00	0.07	0.12	0.17	<MDL		0.112	
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0114	0.0700	0.00015		0.00069	
Magnesium (TREC)	mg/L	3.6	7.4	11.2	2.4	10.7	34.6	9.5		3.4	
Manganese (TREC)	mg/L	0.009	0.016	0.034	<MDL	0.023	0.080	<MDL		0.037	
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00007	0.00018	<MDL		<MDL	
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.006	0.030	<MDL		<MDL	
Selenium (TREC)	mg/L	<MDL	0.001	0.010	<MDL	0.0036	0.0200	<MDL		0.00015	
Sodium (TREC)	mg/L	5.3	15.9	27.6	3.6	23.8	73.0	24.7		3.9	
Zinc (TREC)	mg/L	<MDL	0.01	0.04	<MDL	0.010	0.037	<MDL		0.031	

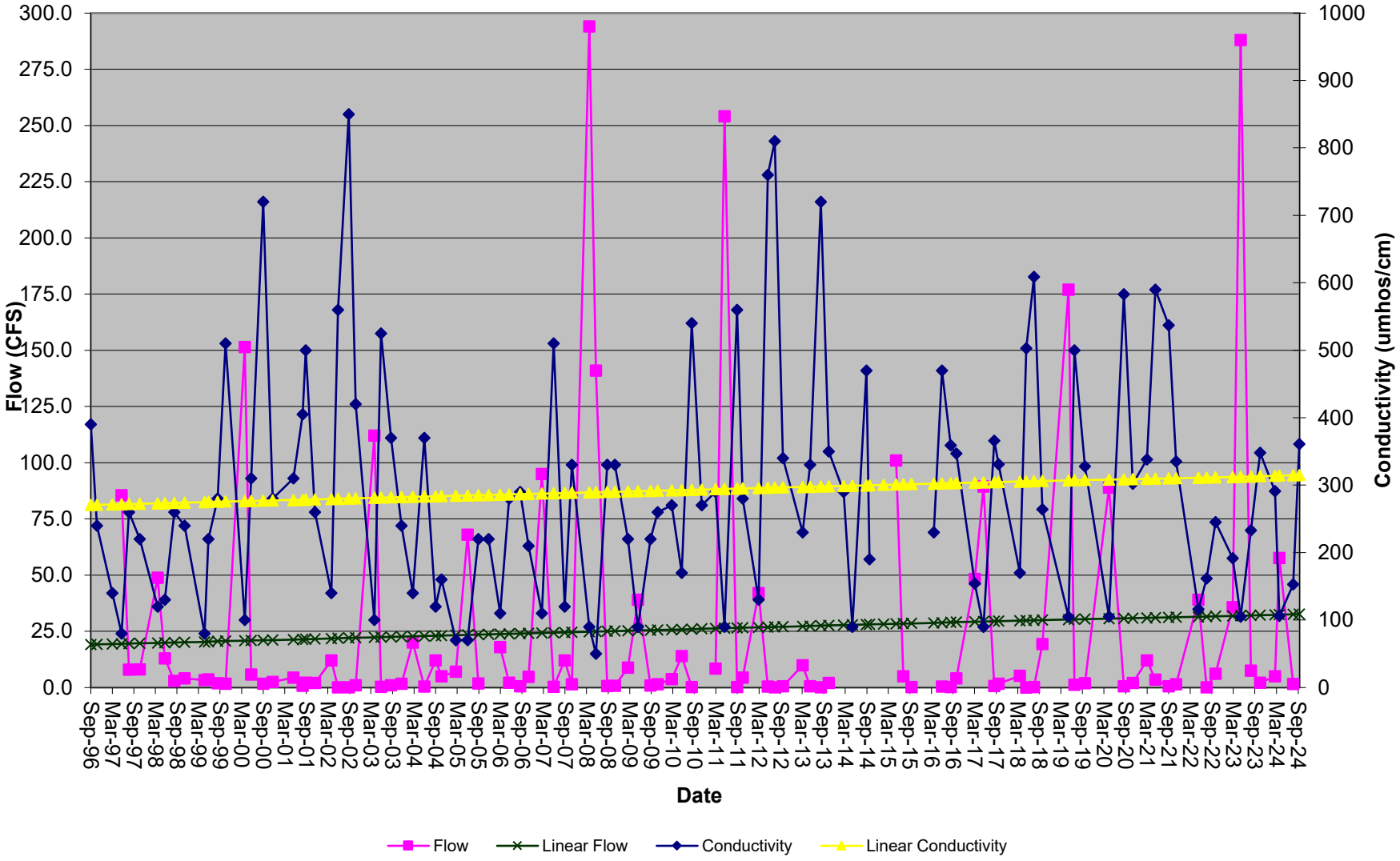
Note 1: USGS did not collect flow values.

** Flow not provided from USGS site # 9132960, last available date was 09/30/24*

The Lower Hubbard Creek monitoring point is located at a concrete box culvert under the Union Pacific railroad track just above the North Fork of the Gunnison. Flow values are takenfrom USGS site # 9132960

Baseline Information for Point Hub-low is derived from events beginning on 9/30/96 through 6/23/99.
Point influenced by mining on 6/23/99.

Plot of Flow and Conductivity



Hub-low - Hubbard Creek Drainage System

Figure 78

NFG-low
Lower North Fork of The Gunnison
Elevation - 5680

Initiated	9/30/1996	9/30/1996	9/30/1996	9/30/1996
Activated	3/31/1997	3/31/1997	3/31/1997	3/31/1997
Date	10/10/2024	8/19/2024	4/24/2024	3/19/2024

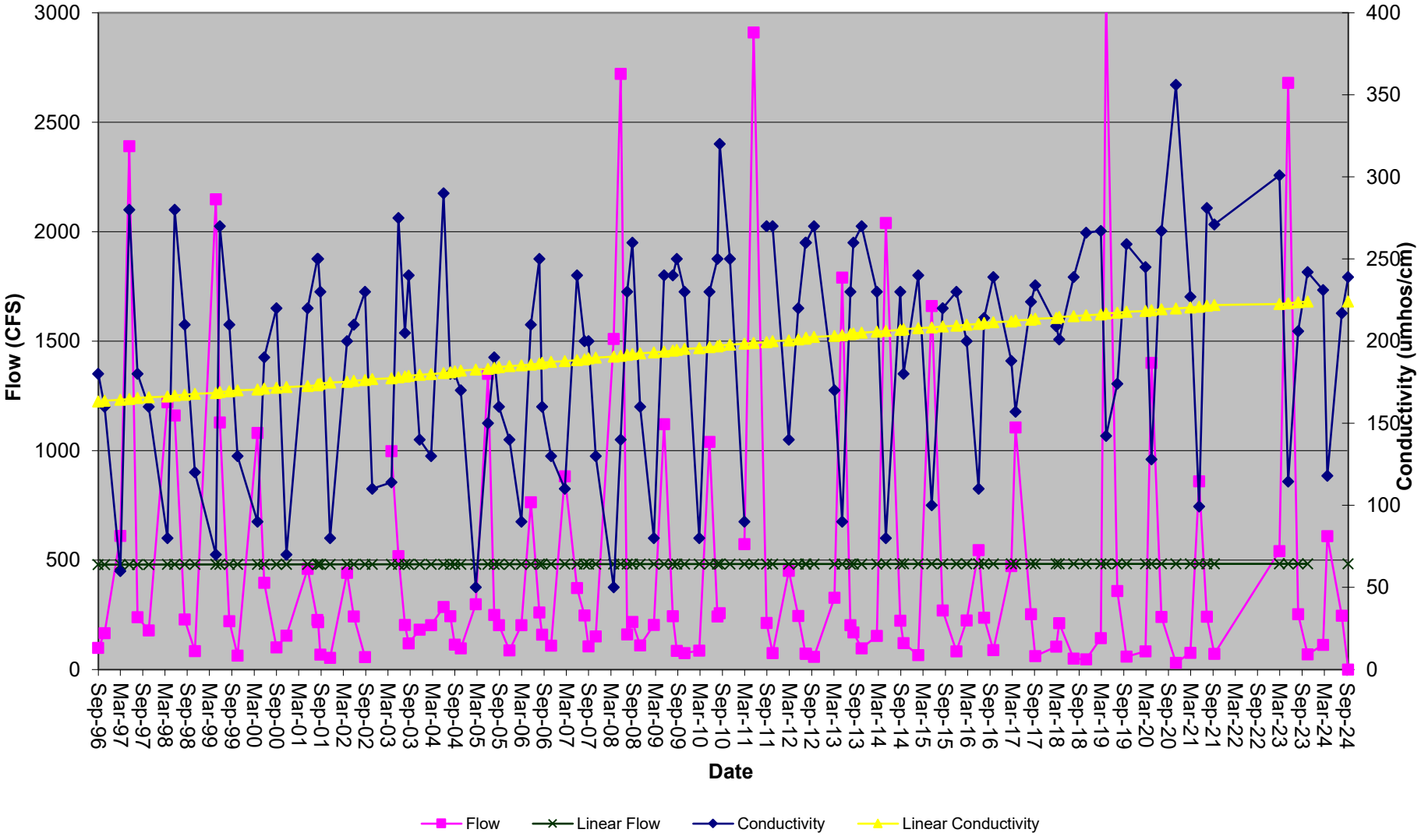
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	99	292	610	30	489	3080	*	246	608.5	112.7
FieldComment											
ph	su	8.1	8.4	8.7	5.0	8.3	9.1	8.1	8.3	8.3	8.3
Conductivity	umhos/cm	160	180	200	26	192	356	239	217	118	231
Temperature	Celsius	4.0	8.5	14.6	0.3	10.8	22.6	10.9	16.2	6.8	8.3
DO	mg/L				0.0	9.8	91.7	19.3	19.5	20.9	0.48
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	95	100	105	28.1	82.2	148.0	104		62.5	
Chloride	mg/L	2.00	2.50	3.00	<MDL	22.13	288.30	3.84	2.06	1.23	
Chromium III CrIII	mg/L				<MDL	<MDL	<MDL				
Chromium VI CrIV	mg/L				<MDL	<MDL	<MDL		<MDL		
Cyanide, Total	mg/L				<MDL	<MDL	<MDL		<MDL		
Conductivity	umhos/cm	201	222	242	78	204	754	236		114	
Hardness	mg/L	84	85	85	<MDL	82.51	270.40	89		54	
Nitrate	mg/L	<MDL	0.08	0.16	<MDL	0.31	3.90		0.103		
Nitrate-Nitrite	mg/L	0.00	0.08	0.16	<MDL	<MDL	<MDL	<MDL	103	0.082	
Nitrite	mg/L	<MDL	<MDL	<MDL	<MDL	0.002	0.010		<MDL		
Ammonia	mg/L	<MDL	<MDL	<MDL	<MDL	0.06	0.31		<MDL		
Oil & Grease	mg/L	<MDL	<MDL	<MDL	<MDL	4	5	<MDL	<MDL	<MDL	
pH	su	8.0	8.0	8.0	6.2	7.9	8.8	6.5	6.2	6.5	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.10	1.50	0.018		<MDL	
ResidueFilterable-TDS	mg/L	130	140	150	13	150	692	138	152	112	
ResidueNonFilterable-TSS	mg/L	<MDL	3	6	<MDL	26	141	10		114	
SAR		0.55	0.61	0.66	<MDL	0.59	2.42	0.62		0.28	
Sulfate	mg/L	10.0	15.0	20.0	<MDL	15.8	82.5	17.5	14.1	<MDL	
Sulfide S	mg/L				<MDL	0.04	0.04		<MDL		
Aluminum (TREC)	mg/L	0.10	0.15	0.21	<MDL	0.54	3.36	0.899		3.36	
Arsenic (TREC)	mg/L	<MDL	0.001	0.001	<MDL	0.0049	0.0500	0.00064	0.00227	0.00136	
Boron	mg/L				0.02	0.43	1.35		0.036		
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0029	0.0180	<MDL	<MDL	<MDL	
Calcium (TREC)	mg/L	24.6	24.8	25.0	6.9	26.3	132.0	26	26.5	15.5	
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.012	0.198	<MDL	0.013	<MDL	
Iron, Dissolved	mg/L	<MDL	<MDL	<MDL	<MDL	0.34	12.90	<MDL	0.071	0.139	
Iron (TREC)	mg/L	0.14	0.21	0.27	<MDL	0.76	9.99	0.875	9.99	3.21	
Lead (TREC)	mg/L	<MDL	0.010	0.020	<MDL	0.0095	0.1500	0.00084	0.00631	0.00286	
Magnesium (TREC)	mg/L	5.30	5.50	5.70	1.98	5.91	18.80	5.89		3.75	
Manganese (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.146	2.900		<MDL		
Manganese (TREC)	mg/L	0.021	0.090	0.160	0.007	0.052	0.802	0.04	0.355	0.062	
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00007	0.00030	<MDL	<MDL	<MDL	
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.004	0.030	<MDL		<MDL	
Nickel	mg/L				<MDL	0.010	0.010		<MDL		
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.003	0.034	0.00017	0.00039	0.00032	
Silver	mg/L				<MDL	<MDL	<MDL		<MDL		
Sodium (TREC)	mg/L	11.5	12.2	12.9	3.0	14.1	91.5	13.3		4.7	
Zinc (TREC)	mg/L	0.02	0.02	0.03	<MDL	0.02	0.16	<MDL	0.044	0.022	

Field parameters, except flow, for the Lower North Fork of the Gunnison River are taken on the river approximately 1500' below the confluence of Terror Creek and the North Fork of the Gunnison. Flow data for the North Fork of the Gunnison river is obtained from USGS station #09132500.

** Flow not provided from USGS site # 9132500, last available date was 09/30/24*

Baseline Information for Point NFG-low is derived from events beginning on 9/30/96 through 3/31/97. Point influenced by mining on 3/31/97.

Plot of Flow and Conductivity



NFG-low - North Fork Drainage System

Figure 80

NFG-up
Upper North Fork of The Gunnison
Elevation - 5880

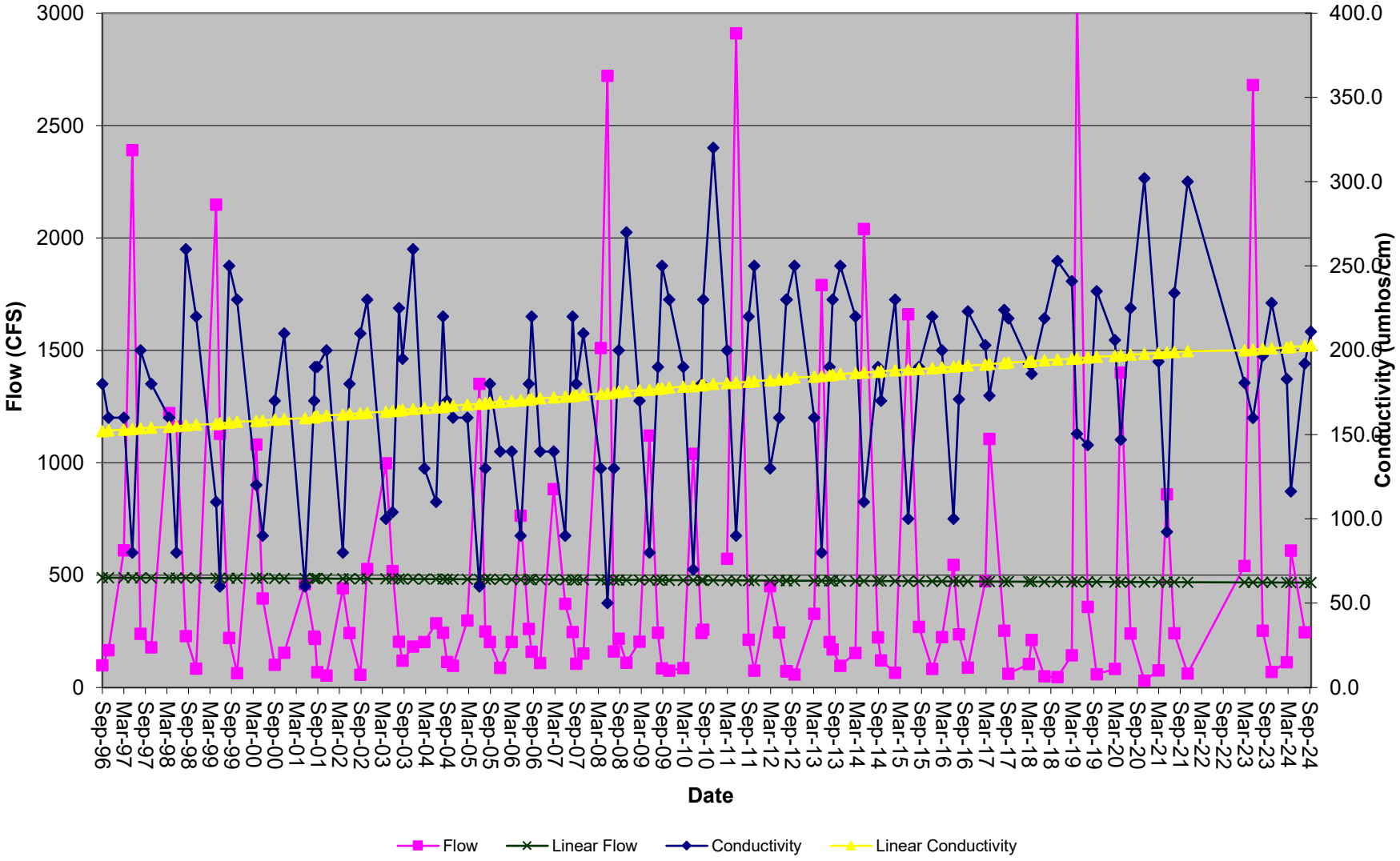
Initiated								9/30/1996	9/30/1996	9/30/1996	9/30/1996
Activated								3/31/1997	3/31/1997	3/31/1997	3/31/1997
Date								10/10/2024	8/19/2024	4/24/2024	3/19/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	99	292	610	30	489	3080	*	246	608.5	112.7
FieldComment											
ph	su	8.1	8.5	8.8	7.1	8.3	9.7	8.1	8.0	7.7	8.5
Conductivity	umhos/cm	160	167	180	50	178	320	211.0	192.1	116.3	183.0
Temperature	Celsius	3.6	7.3	13.7	0.2	10.2	22.6	9.1	14.9	4.6	11.9
DO	mg/L				0.1	10.3	91.2	18.1	17.7	23.1	0.2
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	88	93	98	31	81	203	89.7		63	
Chloride	mg/L	2.0	2.5	3.0	<MDL	25.7	471.5	3.52	1.61	1.15	
Chromium III CrIII	mg/L				<MDL	<MDL	<MDL				
Chromium VI CrIV	mg/L				<MDL	0.008	0.008		<MDL		
Cyanide, Total	mg/L				<MDL	0.067	0.081		<MDL		
Conductivity	umhos/cm	185	205	225	7	195	668	209		84	
Hardness	mg/L	74	77	79	26.5	78.3	253.0	77.00	78.00	55.00	
Nitrate	mg/L	<MDL	0.05	0.09	<MDL	0.34	3.47		<MDL		
Nitrate/Nitrite	mg/L	0.00	0.05	0.09	<MDL	0.2	3	<MDL	<MDL	0.073	
Nitrite	mg/L	<MDL	<MDL	<MDL	<MDL	0.004	0.017		<MDL		
Ammonia	mg/L	<MDL	<MDL	<MDL	<MDL	0.04	0.23		<MDL		
Oil & Grease	mg/L	<MDL	<MDL	<MDL	<MDL	7	11	<MDL	<MDL	<MDL	
pH	su	7.9	8.0	8.0	6.4	7.9	9.0	6.4	6.6	6.5	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.12	1.90	0.0899		<MDL	
ResidueFilterable-TDS	mg/L	120	130	140	9	144	522	118	124	108	
ResidueNonFilterable-TSS	mg/L	10	11	12	<MDL	25	131	18		8	
SAR		0.42	0.60	0.78	<MDL	0.62	2.39	0.63		0.28	
Sulfate	mg/L	10	15	20	<MDL	17	80	12.3	8.3	<MDL	
Sulfide S	mg/L				<MDL	0.05	0.05		<MDL		
Aluminum (TREC)	mg/L	0.08	0.18	0.27	<MDL	15.35	691.00	0.874		4.43	
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0036	0.0350	0.00056	0.00081	0.00127	
Boron	mg/L				0.02	0.38	1.20		0.033		
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.007	0.031	<MDL	<MDL	<MDL	
Calcium (TREC)	mg/L	21.9	22.9	24.0	7.0	24.0	138.0	23.3	24.2	15.3	
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.014	0.197	<MDL	<MDL		
Iron, Dissolved	mg/L				<MDL	0.71	22.80	<MDL	<MDL	0.113	
Iron (TREC)	mg/L	0.09	0.09	0.09	0.03	2.99	81.00	0.758	2.89	4.59	
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0107	0.1200	0.00073	0.00142	0.0026	
Magnesium (TREC)	mg/L	4.70	4.70	4.70	0.13	5.27	23.40	4.58		4.16	
Manganese (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.66	4.66		4.17		
Manganese (TREC)	mg/L	0.011	0.015	0.019	<MDL	0.173	7.600	0.027	0.065	0.078	
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00006	0.00022		<MDL	<MDL	
Molyebdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.004	0.030	<MDL		<MDL	
Nickel	mg/L				<MDL	0.03	0.05		<MDL		
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.003	0.027	0.00013	0.00017	0.00027	
Silver	mg/L				<MDL	<MDL	<MDL		<MDL		
Sodium (TREC)	mg/L	8.6	12.0	15.3	3.2	120.1	5420.0	12.6		4.7	
Zinc (TREC)	mg/L	0.020	0.025	0.030	<MDL	0.023	0.233	<MDL	<MDL	0.108	

Field parameters, except flow in the Upper North Fork of the Gunnison River monitoring point are taken on the river just above its confluence with Hubbard Creek. Flow data for the North Fork of the Gunnison river is obtained from USGS station #09132500.

** Flow not provided from USGS site # 9132500, last available date was 09/30/24*

Baseline Information for Point NFG-up is derived from events beginning on 9/30/96 through 3/31/97.
Point influenced by mining on 3/31/97.

Plot of Flow and Conductivity



NFG-up - North Fork Drainage System

Figure 82

Steph-low
Lower Stevens Draw
Elevation - 7000'

Initiated	7/12/1995	7/12/1995	7/12/1995	7/12/1995
Activated	7/1/2002	7/1/2002	7/1/2002	7/1/2002
Date	10/7/2024	8/20/2024	6/24/2024	3/18/2024

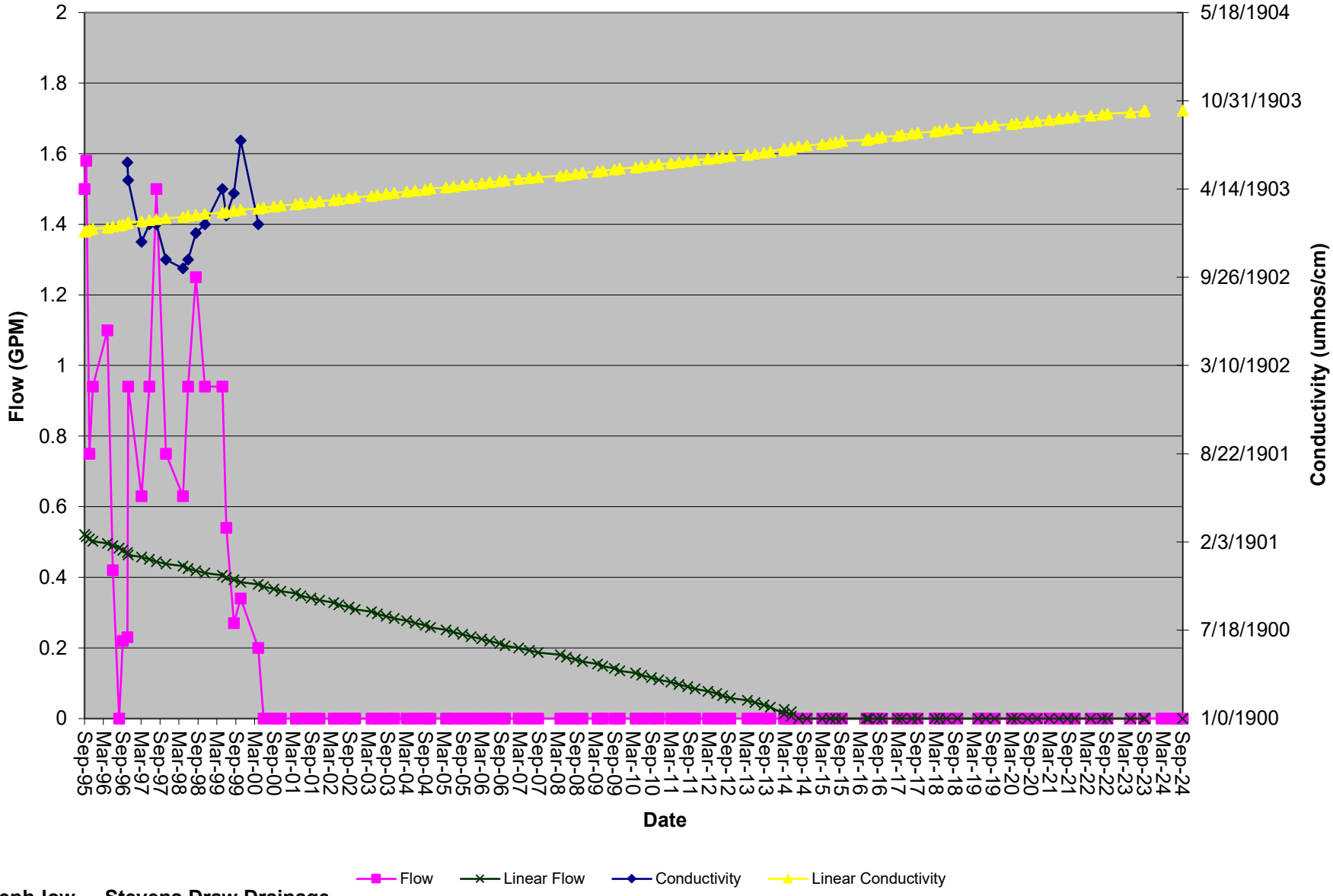
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	GPM	0.00	0.18	4.00				0	0	0	0
FieldComment								Dry	Dry	Dry	Dry
ph	su	7.9	8.2	8.4							
Conductivity	umhos/cm	1020	1139	1310							
Temperature	Celsius	3.8	10.8	17.2							
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	452	495	554							
Chloride	mg/L	14	16	20							
Conductivity	umhos/cm	1020	1093	1180							
Hardness	mg/L	343	382	433							
Nitrate-Nitrite	mg/L	0.02	0.20	0.97							
Oil and Grease	mg/L	<MDL	1	4							
pH	su	8.0	8.2	8.3							
Phosphate	mg/L	<MDL	<MDL	<MDL							
ResidueFilterable-TDS	mg/L	660	718	780							
ResidueNonFilterable-TSS	mg/L	<MDL	21	58							
SAR		<MDL	2.28	3.22							
Sulfate	mg/L	150	170	190							
Aluminum	mg/L	0.05	0.53	1.71							
Arsenic	mg/L	<MDL	0.001	0.002							
Cadmium	mg/L	<MDL	<MDL	<MDL							
Calcium	mg/L	49.4	59.6	72.4							
Copper	mg/L	<MDL	0.002	0.010							
Iron (Total)	mg/L	0.27	0.82	2.57							
Lead	mg/L	<MDL	<MDL	<MDL							
Magnesium	mg/L	41.3	55.9	66.2							
Manganese (Total)	mg/L	0.070	0.211	0.566							
Mercury	mg/L	<MDL	<MDL	<MDL							
Molyebdenum	mg/L	<MDL	<MDL	<MDL							
Selenium	mg/L	<MDL	0.0002	0.001							
Sodium	mg/L	99.8	120.0	152.0							
Zinc	mg/L	<MDL	0.01	0.03							

The area of concern for monitoring point Steph-low has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

The monitoring point location for Lower Stevens Draw is located in Stevens Draw, just below Pond 1 and Spring 14. It is accessed by a southern fork of the Stevens Draw road.

Baseline Information Collection initiated on 9/27/95 and not yet considered complete.
Point Steph-low has not been influenced by mining.

Plot of Flow and Conductivity



Steph-low - Stevens Draw Drainage System

Figure 84

Steph-up
Upper Stevens Draw
Elevation - 7920'

Initiated	7/12/1995	7/12/1995	7/12/1995	7/12/1995
Activated	7/1/2002	7/1/2002	7/1/2002	7/1/2002
Date	10/7/2024	8/20/2024	6/24/2024	3/18/2024

		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	GPM	0.00	0.15	5.00	0.00	0.04	3.75	0	0	0	0
FieldComment								Dry	Dry	Dry	Dry
ph	su				7.7	7.7	7.7				
Conductivity	umhos/cm				200	200	200				
Temperature	Celsius				11.2	11.2	11.2				
Lab											
Parameters	UNITS										
Bicarbonate	mg/L										
Chloride	mg/L										
Conductivity	umhos/cm										
Hardness	mg/L										
Nitrate-Nitrite	mg/L										
Oil and Grease	mg/L										
pH	su										
Phosphate	mg/L										
ResidueFilterable-TDS	mg/L										
ResidueNonFilterable-TSS	mg/L										
SAR											
Sulfate	mg/L										
Aluminum	mg/L										
Arsenic	mg/L										
Cadmium	mg/L										
Calcium	mg/L										
Copper	mg/L										
Iron (Total)	mg/L										
Lead	mg/L										
Magnesium	mg/L										
Manganese (Total)	mg/L										
Mercury	mg/L										
Molyebdenum	mg/L										
Selenium	mg/L										
Sodium	mg/L										
Zinc	mg/L										

** 1Q 2022 site inaccessible*

The monitoring point for Upper Stevens Draw is located in Stevens Draw, just below Spring 11. It is accessed by the Stevens Draw road.

Baseline Information for Point Steph-up is derived from events beginning 7/12/95 through 7/1/02.
Point influenced by mining on 7/1/02.

SW-01
West Terror Creek - Downstream
Elevation - 7140

Initiated								10/24/2013	10/24/2013	10/24/2013	10/24/2013	
Activated												
Date								10/9/2024	9/14/2024	4/30/2024		
		Summary Information										
		Baseline			Operation							
Field Parameters	UNITS	Min	Ave	Max	Min	Ave	Max					
Flow	CFS	0.01	3.63	52.00				1.84	0.99	4.00		
Water Level in Flume	Feet	0.025	0.617	2.800				0.6	0.4	1		
Temperature	Celsius	0	6.8	20.2				8.7	9.9	4.1		
Conductivity	umhos/cm	8.23	137	340				153	158	103		
pH	su	0.7	8.1	10.6				8.1	8.3	8.1		
Field Comments												*
Lab Parameters	UNITS											
Bicarbonate	mg/L	32	67.3	90.6				78.4		66.1		
Chloride	mg/L	0.56	1.02	3.51				<MDL		1.12		
Conductivity	umhos/cm	65	108	148				147		101		
Hardness	mg/L	30	52.74	69.90				62		43		
Acidity	mg/L	-76	-54.44	-25.00				<MDL		<MDL		
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		
Oil and Grease	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		
Phosphate	mg/L	0.017	0.07	0.24				0.0713		0.0496		
ResidueFilterable-TDS	mg/L	74	99	144				94		98		
ResidueNonFilterable-TSS	mg/L	<MDL	12	34				9		6		
SAR		0.210	0.315	0.505				0.28		0.3		
Sulfate	mg/L	1.4	7.4	82.0				<MDL		<MDL		
Aluminum (TREC)	mg/L	<MDL	6.114	101.000				0.122		2.21		
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL				0.00034		0.0004		
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		
Calcium (TREC)	mg/L	7.4	13.7	18.0				15.6		11.1		
Calcium (Dissolved)	mg/L	1.2	13.9	18.2								
Copper (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		
Iron (Dissolved)	mg/L	0.0310	3.3037	41.6000				<MDL		<MDL		
Iron (TREC)	mg/L	0.074	0.896	9.000				0.2		1.5		
Lead (TREC)	mg/L	<MDL	<MDL	<MDL				0.00012		0.00036		
Magnesium (TREC)	mg/L	0.10	4.37	6.07				5.47		3.81		
Magnesium (Dissolved)	mg/L	0.89	4.72	6.09								
Manganese (TREC)	mg/L	0.0003	0.0138	0.0334				0.012		<MDL		
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		
Molybdenum (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		
Selenium (TREC)	mg/L	<MDL	0.00	0.01				<MDL		0.00023		
Sodium (TREC)	mg/L	2.57	5.33	8.50				4.98		4.5		
Sodium (Dissolved)	mg/L	3.48	5.78	8.66								
Zinc (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		

The area of concern for monitoring point SW-01 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.
Negative acidity value indicates equivalent value of alkalinity

SW-02
Terror Creek - Mid Stream
Elevation - 7040

Initiated								10/24/2013	10/24/2013	10/24/2013	10/24/2013
Activated											
Date								10/9/2024	9/14/2024	4/30/2024	
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	0.00	6.05	95.37				0.423	2.269	3.053	
Water Level in Flume	Feet	0.00	0.38	3.10				0.100	0.290	0.350	
Temperature	Celsius	-0.7	9.1	20.3				8.7	9.9	4.2	
Conductivity	umhos/cm	2.9	126	334				279	134.1	109	
pH	su	5.3	8.2	10.2				8.21	8.58	8.59	
Field Comments											*
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	38	83	148				130		61.1	
Chloride	mg/L	0.57	23.34	198.50				1.69		1.15	
Conductivity	umhos/cm	65.4	178	548				259		160	
Hardness	mg/L	29.02	70.07	157.58				108		42	
Nitrate-Nitrite	mg/L	<MDL	0.20	0.61				0.033		<MDL	
Oil and Grease	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
pH	su	6.5	7.7	8.8				6.5		6.7	
Phosphate	mg/L	<MDL	0.52	7.79				0.32		0.0589	
ResidueFilterable-TDS	mg/L	75	144	430				156		98	
ResidueNonFilterable-TSS	mg/L	<MDL	23	86				11		5	
SAR		0.11	0.46	2.22				0.61		0.29	
Sulfate	mg/L	1.60	9.30	31.00				9		4.4	
Aluminum (TREC)	mg/L	<MDL	17.569	400.000				4.25		1.4	
Arsenic (TREC)	mg/L	<MDL	0.014	0.075				0.00138		0.00032	
Cadmium (TREC)	mg/L	<MDL	0.008	0.020				<MDL		<MDL	
Calcium (TREC)	mg/L	5.42	17.45	42.00				26.9		10.1	
Copper (TREC)	mg/L	<MDL	0.004	0.010				<MDL		<MDL	
Iron (TREC)	mg/L	0.033	0.790	4.530				4.53		1.02	
Lead (TREC)	mg/L	<MDL	0.008	0.050				0.0029		0.0003	
Magnesium (TREC)	mg/L	3.24	7.90	18.10				9.82		4.08	
Manganese (TREC)	mg/L	0.01	0.05	0.40				0.4		<MDL	
Mercury (TREC)	mg/L	<MDL	0.00006	0.00016				<MDL		<MDL	
Molybdenum (TREC)	mg/L	<MDL	0.004	0.006				<MDL		<MDL	
Selenium (TREC)	mg/L	<MDL	0.00375	0.02300				0.00026		0.00018	
Sodium (TREC)	mg/L	3.5	12.1	64.0				14.4		4.25	
Zinc (TREC)	mg/L	<MDL	0.027	0.060				<MDL		<MDL	

The area of concern for monitoring point SW-02 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

SW-02 is located on the East Fork of Terror Creek in the NW1/4 SE1/4 Sec 5, T13S, R91W, of the 6th P.M. A 48" Parshall flume manufactured by the Thompson Pipe and Steel Company of Denver, Colorado was installed at this location.

** Site not accessible*

SW-05
Stevens Gulch - Downstream
Elevation - 6600

Initiated	1/1/1983	1/1/1983	1/1/1983	1/1/1983
Activated				
Date	10/17/2024	9/16/2024	6/18/2024	3/19/2024

Summary Information

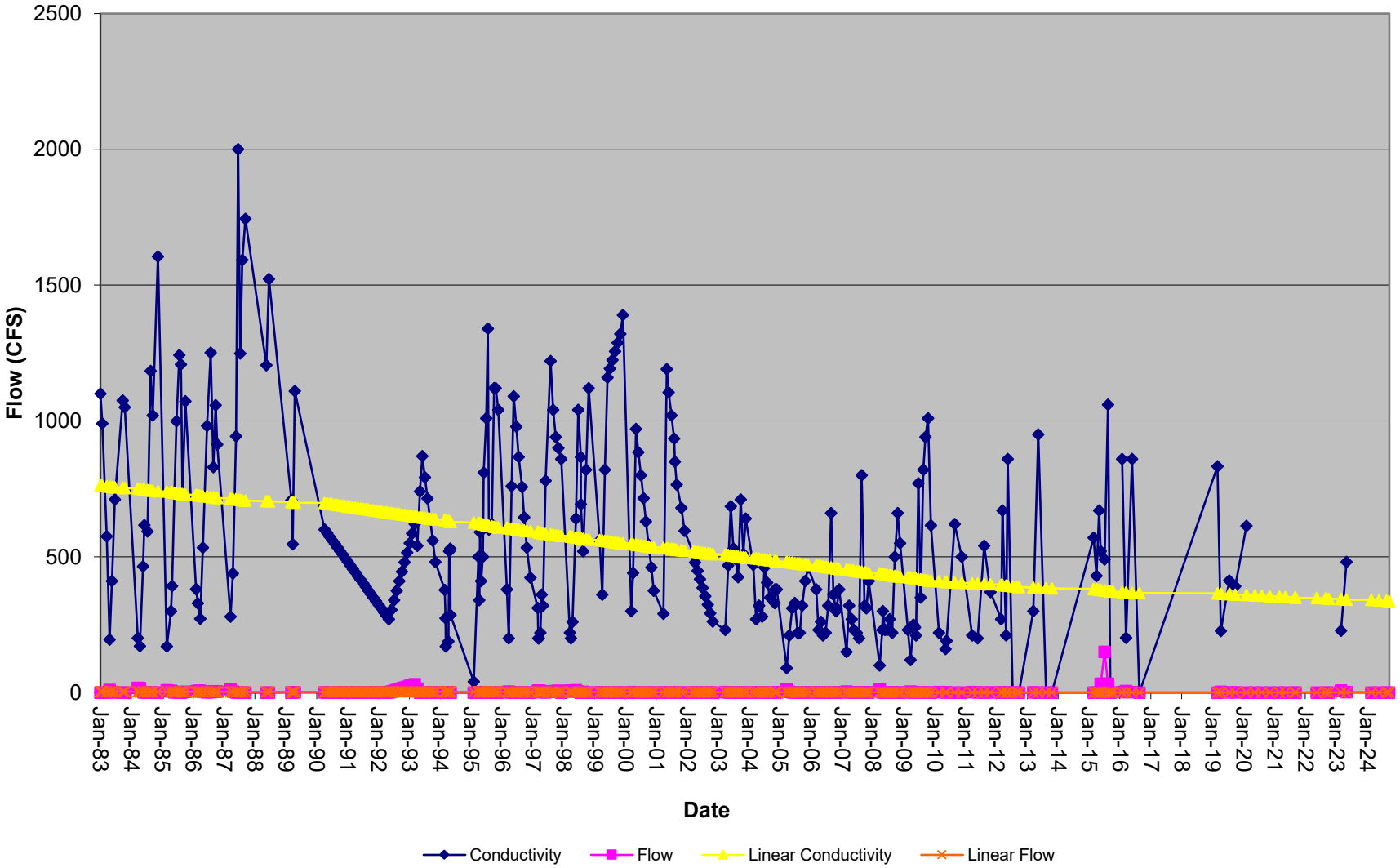
Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	CFS	0.00	1.25	16.94							
Water Level in Flume	Feet	0.00	0.09	1.06							
Temperature	Celsius	-0.5	10.3	23.7							
Conductivity	umhos/cm	0	563	2000							
pH	su	0.0	8.3	9.9							
Field Comments								Dry	Dry	Dry	Dry
Lab Parameters	UNITS										
Bicarbonate	mg/L	66	216	456							
Chloride	mg/L	<MDL	21.21	223.41							
Conductivity	umhos/cm	149	564	1560							
Hardness	mg/L	35.6	240.8	625.7							
Nitrate-Nitrite	mg/L	<MDL	0.34	0.88							
Oil and Grease	mg/L	<MDL	<MDL	<MDL							
pH	su	6.8	8.1	8.7							
Phosphate	mg/L	<MDL	0.19	0.47							
ResidueFilterable-TDS	mg/L	106	377	1130							
ResidueNonFilterable-TSS	mg/L	<MDL	35	438							
SAR		0.23	1.03	2.06							
Sulfate	mg/L	<MDL	91.9	450.0							
Aluminum (TREC)	mg/L	0.022	0.270	0.530							
Arsenic (TREC)	mg/L	<MDL	0.017	0.040							
Cadmium (TREC)	mg/L	<MDL	0.007	0.010							
Calcium (TREC)	mg/L	8.81	48.77	103.00							
Copper (TREC)	mg/L	<MDL	0.008	0.020							
Iron (TREC)	mg/L	0.03	0.36	1.46							
Lead (TREC)	mg/L	0.00	0.02	0.04							
Magnesium (TREC)	mg/L	7.10	25.60	61.20							
Manganese (TREC)	mg/L	0.01	0.52	7.30							
Mercury (TREC)	mg/L	0.00002	0.00011	0.00027							
Molybdenum (TREC)	mg/L	0.002	0.006	0.015							
Selenium (TREC)	mg/L	<MDL	0.006	0.018							
Sodium (TREC)	mg/L	9.60	32.08	64.00							
Zinc (TREC)	mg/L	0.005	0.009	0.020							

The area of concern for monitoring point SW-05 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

** Site not accessible*

The Stevens Gulch stream gauge, SW-05, is located near Bowie No. 1 mine's timber storage area in the NE1/4NW1/4, Sec 25, T13S, R92W, of the 6th P.M. A 36" Parshall flume was installed at this locations.

Plot of Flow and Conductivity



SW-05 Stevens Gulch Drainage

Figure 89

SW-10
Terror Ditch
Elevation - 6480

Initiated								7/1/1983	7/1/1983	7/1/1983	7/1/1983	
Activated												
Date								10/9/2024	9/14/2024	4/30/2024		
		Summary Information										
Field		Baseline			Operation							
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max					
Flow	CFS	0.00	3.17	12.80				1.53		2.40		
Water Level in Flume	Feet	0.00	0.43	0.87				0.3		0.4		
Temperature	Celsius	0.1	9.1	21.3				10.7		6.8		
Conductivity	umhos/cm	20	138	970				170.5		106.8		
pH	su	5.6	8.3	12.2				8.11		8.17		
Field Comments									OFF			*
Lab												
Parameters	UNITS											
Bicarbonate	mg/L	25.3	78.8	188.0				85.2		61.3		
Chloride	mg/L	<MDL	17.1	186.1				<MDL		1.12		
Conductivity	umhos/cm	53	168	756				162		100		
Hardness	mg/L	32	65	141				68		43		
Nitrate-Nitrite	mg/L	<MDL	0.17	0.54				<MDL		<MDL		
Oil and Grease	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL		
pH	su	6.4	7.7	8.5				6.4		6.7		
Phosphate	mg/L	<MDL	<MDL	<MDL				0.032		0.0744		
ResidueFilterable-TDS	mg/L	50	127	610				104		98		
ResidueNonFilterable-TSS	mg/L	<MDL	23.2	136.0				<MDL		5		
SAR		0.11	0.60	6.43				0.38		0.29		
Sulfate	mg/L	<MDL	11.31	68.50				<MDL		<MDL		
Aluminum (TREC)	mg/L	<MDL	14.030	154.000				<MDL		1.82		
Arsenic (TREC)	mg/L	<MDL	0.007	0.030				0.00042		0.00036		
Cadmium (TREC)	mg/L	<MDL	0.010	0.022				<MDL		<MDL		
Copper (TREC)	mg/L	<MDL	0.006	0.010				<MDL		<MDL		
Calcium (TREC)	mg/L	6.07	15.36	22.00				17.1		10.7		
Iron (TREC)	mg/L	0.014	0.500	1.730				0.153		1.29		
Lead (TREC)	mg/L	0.000	0.010	0.060				<MDL		0.00036		
Magnesium (TREC)	mg/L	3.00	7.32	21.00				6.04		3.96		
Manganese (TREC)	mg/L	0.010	0.021	0.072				<MDL		<MDL		
Mercury (TREC)	mg/L	<MDL	0.00007	0.00020				<MDL		<MDL		
Molybdenum (TREC)	mg/L	<MDL	0.0022	0.0060				<MDL		<MDL		
Selenium (TREC)	mg/L	<MDL	0.004	0.018				<MDL		0.00017		
Sodium (TREC)	mg/L	3.64	15.57	144.00				7.16		4.37		
Zinc (TREC)	mg/L	<MDL	0.014	0.050				<MDL		<MDL		

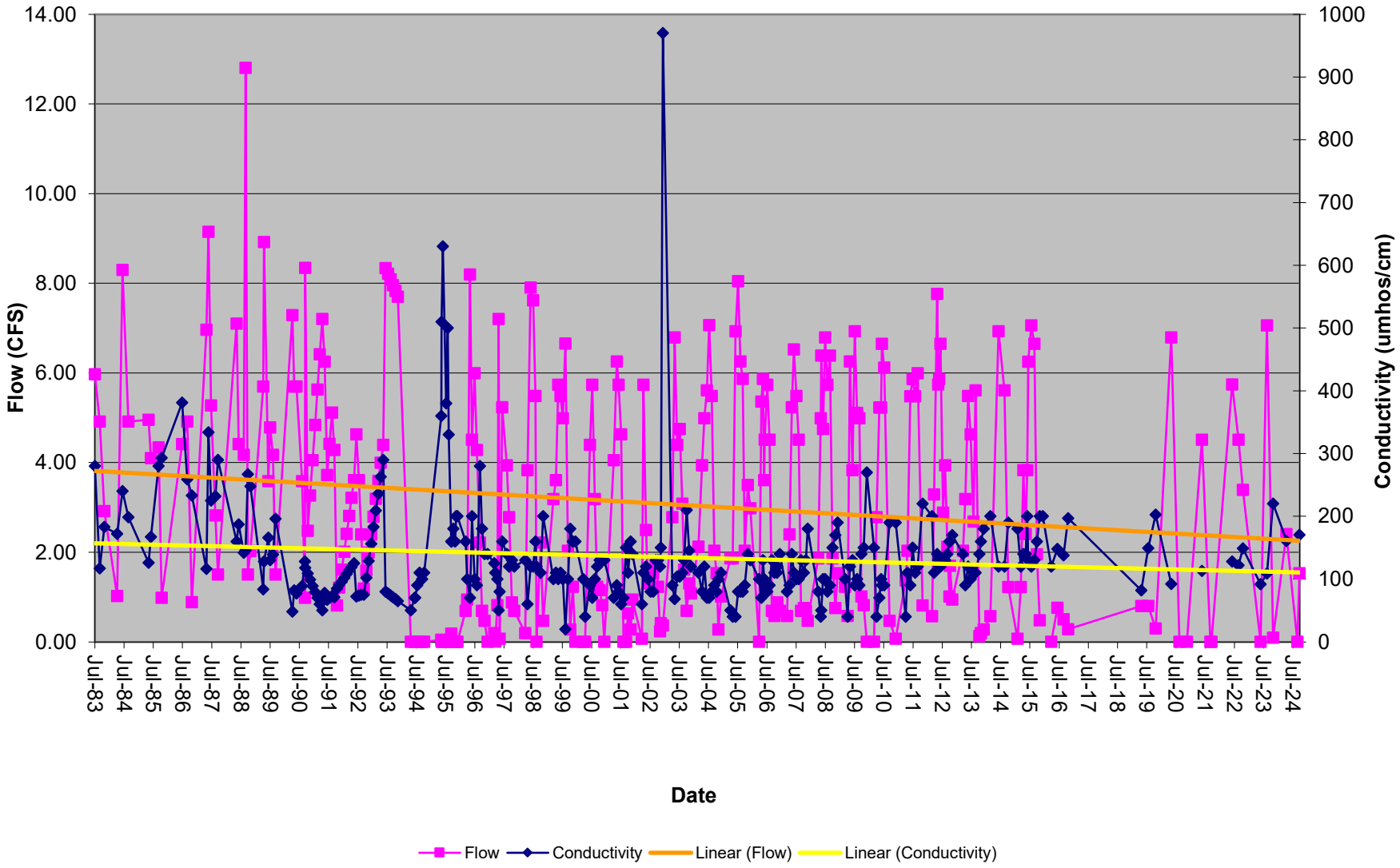
The area of concern for monitoring point SW-10 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

A stilling well and recorder were installed on a 30" Parshall flume on the Terror Ditch. This stream gauge is located in the NE1/4NE1/4, Sec 17, T13S, R91W o

** 1Q inaccessible due to snow*

**** No data in the field notes*

Plot of Flow and Conductivity



SW-10 - Terror Ditch

Figure 91

SW-11
Stevens Gulch - Upstream
Elevation - 8084

Initiated	6/6/2010	6/6/2010	6/6/2010	6/6/2010
Activated				
Date	10/17/2024	8/20/2024	6/18/2024	

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Flow	CFS	0	0.1	3.8							
Water Level in Flume	Feet	0	0.0	0.0							
Temperature	Celsius										
Conductivity	umhos/cm										
pH	su										
Field Comments								Dry	Dry	Dry	Dry
Lab Parameters	UNITS										
Bicarbonate	mg/L	55.9	63.6	71.3				*			
Carbonate	mg/L	0.0	0.0	0.0							
Chloride	mg/L	<MDL	2.8	3.0							
Conductivity	umhos/cm	98.7	107	116							
Hardness	mg/L	43.60	48.45	53.30							
Acidity	mg/L	-46.7	-42.35	-38.00							
Nitrate-Nitrite	mg/L	<MDL	0.00	0.00							
Oil and Grease	mg/L	<MDL	<MDL	<MDL							
pH	su	7.2	7.4	7.7							
Phosphate	mg/L	<MDL	0.12	0.13							
ResidueFilterable-TDS	mg/L	117	119	120							
ResidueNonFilterable-TSS	mg/L	<MDL	22	24							
SAR		0.37	0.39	0.40							
Aluminum (TREC)	mg/L	0.549	0.725	0.900							
Arsenic (TREC)	mg/L	<MDL	<MDL	0.000							
Cadmium (TREC)	mg/L	<MDL	<MDL	0.00							
Calcium (TREC)	mg/L	12.6	13.90	15.20							
Calcium (Dissolved)	mg/L	0	0.00	0.00							
Copper (TREC)	mg/L	<MDL	<MDL	0.00							
Iron (Dissolved)	mg/L	0.24	0.24	0.24							
Iron (TREC)	mg/L	0.42	0.82	1.23							
Lead (TREC)	mg/L	<MDL	<MDL	0.00							
Magnesium (TREC)	mg/L	2.94	3.34	3.73							
Manganese (TREC)	mg/L	0.03	0.06	0.08							
Mercury (TREC)	mg/L	<MDL	<MDL	0							
Molybdenum (TREC)	mg/L	<MDL	<MDL	0.000							
Selenium (TREC)	mg/L	<MDL	<MDL	0.000							
Sodium (TREC)	mg/L	5.65	5.80	5.94							
Sodium (Dissolved)	mg/L	0	0.00	0.00							
Zinc (TREC)	mg/L	<MDL	<MDL	0.00							

** Site not accessible*

SW-12
West Fork Terror Creek - Upstream
Elevation - 7920

Initiated								5/16/1983	5/16/1983	5/16/1983	5/16/1983
Activated											
Date								10/10/2024	9/14/2024	6/18/2024	
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Flow	CFS	0.04	4.29	52.00				0.81	0.67	1.84	
Water Level in Flume	Feet	0.050	0.702	4.000				0.35	0.31	0.6	
Temperature	Celsius	0.1	6.4	14.9				5.9	5.8	10.1	
Conductivity	umhos/cm	68.8	124	395				394.5	148.1	91.6	
pH	su	7.24	8.2	8.9				8.3	8.1	7.9	
Field Comments											
Lab Parameters	UNITS										
Bicarbonate	mg/L	33.8	113.6	1210.0				68.4		1210	
Chloride	mg/L	<MDL	0.75	1.40				<MDL		<MDL	
Conductivity	umhos/cm	53.5	92.4	133.0				133		92	
Hardness	mg/L	27.3	45.8	61.9				57		37	
Acidity	mg/L	-64.0	-46.4	-20.0				<MDL		<MDL	
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
Oil and Grease	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
Phosphate	mg/L	<MDL	0.05	0.12				0.12		<MDL	
ResidueFilterable-TDS	mg/L	65	86	108				90.0		80.0	
ResidueNonFilterable-TSS	mg/L	<MDL	13.7	37.0				<MDL		6	
SAR		0.174	0.258	0.486				0.28		0.19	
Sulfate	mg/L	1.2	2.4	3.3				<MDL		<MDL	
Aluminum (TREC)	mg/L	0.101	0.604	1.710				<MDL		0.371	
Arsenic (TREC)	mg/L	<MDL	<MDL	<MDL				0.00027		0.0003	
Cadmium (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
Calcium (TREC)	mg/L	7.1	403.4	8630.0				14.1		10.1	
Calcium (Dissolved)	mg/L	11.2	13.3	14.6							
Copper (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
Iron (Dissolved)	mg/L	0.0300	2.7335	######							
Iron (TREC)	mg/L	0.101	0.477	1.370				0.185		0.357	
Lead (TREC)	mg/L	<MDL	<MDL	<MDL				0.00039		0.00016	
Magnesium (TREC)	mg/L	2.35	3.97	5.58				5.18		2.95	
Magnesium (Dissolved)	mg/L	3.38	4.53	5.21							
Manganese (TREC)	mg/L	0.0011	0.0116	0.03				<MDL		<MDL	
Mercury (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
Molybdenum (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	
Sodium (TREC)	mg/L	2.19	4.02	7.77				4.71		2.61	
Sodium (Dissolved)	mg/L	2.69	4.22	5.97							
Zinc (TREC)	mg/L	<MDL	<MDL	<MDL				<MDL		<MDL	

The area of concern for monitoring point SW-12 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Negative acidity value indicates equivalent value of alkalinity
**Inaccessible due to snow*
*** Flow to high unable to read gauge*

DH-15a
Stevens Draw - Drill Hole
Pipe Elevation - 7143.3
Pipe 1.8' above ground
Depth - 215'

Initiated	6/12/1995	6/12/1995
Activated		
Date	4/30/2024	3/18/2024

Field Parameters	UNITS	Summary Information Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max		
Static Water Level	Feet				175.60	189.41	194.80	175.6	175.9
Water Elevation	Feet				6948.50	6953.89	6967.70	6967.7	6967.4
FieldComment									
ph	su				7.06	7.49	8.00	7.5	7.5
Conductivity	umhos/cm				2880.00	3838.10	4210.00	3880	3820
Temperature	Celsius				7.77	13.17	16.20	10.7	13.9
Lab Parameters	**UNITS**								
Bicarbonate	mg/L				897.00	1097.73	1380.00		956
Carbonate	mg/L				<MDL	<MDL	0.00		<MDL
Chloride	mg/L				9.71	33.37	39.30		30.1
Conductivity	umhos/cm				2740.00	3591.82	3970.00		3770
Hardness	mg/L				323.00	738.09	942.00		797
Nitrate-Nitrite	mg/L				<MDL	<MDL	2.04		2.04
Ammonia	mg/L				0.17	0.92	1.58		1.58
pH	su				7.35	7.84	8.10		7.9
Phosphate	mg/L				0.02	0.09	0.18		0.18
ResidueFilterable-TDS	mg/L				1980.00	2742.73	3140.00		2730
Sulfate	mg/L				556.00	1228.18	1500.00		1440
Arsenic (Dissolved)	mg/L				<MDL	<MDL	0.05		0.00132
Cadmium (Dissolved)	mg/L				<MDL	<MDL	0.00		<MDL
Calcium (Dissolved)	mg/L				50.20	130.74	167.00		151.0
Iron (Dissolved)	mg/L				<MDL	<MDL	0.27		0.267
Iron (TREC)	mg/L				0.39	5.77	53.90		1.18
Magnesium (Dissolved)	mg/L				43.10	99.53	130.00		102.0
Manganese (Dissolved)	mg/L				0.08	0.14	0.17		0.162
Manganese (TREC)	mg/L				0.09	0.17	0.23		0.171
Mercury (Dissolved)	mg/L				<MDL	<MDL	0.00		<MDL
Selenium (Dissolved)	mg/L				<MDL	<MDL	0.16		0.0163
Sodium (Dissolved)	mg/L				547.00	657.27	771.00		656
Zinc (Dissolved)	mg/L				<MDL	<MDL	0.12		0.118

DH-15a is a replacment well for DH-15. All data is considered operational.

** Site not accessible*

Drill Hole 15a is located on the western edge of the Stevens Draw road.

Baseline Information Collection initiated on 6/12/95 and not yet considered complete.
Point DH-15 has not been influenced by mining.

DH-39
Stevens Draw - Drill Hole
Pipe Elevation - 7142.65
Pipe 1.2' above ground
Depth - 181'

Initiated	6/12/1995	6/12/1995
Activated		
Date	4/30/2024	3/18/2024

Field Parameters	UNITS	Summary Information Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max		
Static Water Level	Feet	64.55	73.83	192.55				73.3	73.7
Water Elevation	Feet	6950.1	7068.8	7078.1				7069.35	7068.95
FieldComment									
ph	su	6.8	7.3	8.3				7.7	7.66
Conductivity	umhos/cm	1010	1526	4210				2350	2240
Temperature	Celsius	4.3	10.5	14.3				10.1	11.5
Lab Parameters	**UNITS**								
Bicarbonate	mg/L	384.69	578.86	897.00					880
Carbonate	mg/L	<MDL	2.86	25.00					<MDL
Chloride	mg/L	1.36	18.82	47.14					21
Conductivity	umhos/cm	1025	1614	3970					2310
Hardness	mg/L	<MDL	438.28	940.00					449
Nitrate-Nitrite	mg/L	<MDL	0.71	7.06					0.049
Ammonia	mg/L	<MDL	0.95	12.50					12.5
pH	su	7.0	7.6	8.5					8
Phosphate	mg/L	<MDL	0.40	4.80					4.8
ResidueFilterable-TDS	mg/L	443	1100	3140					1440
Sulfate	mg/L	101.25	306.03	1500.00					507
Arsenic (Dissolved)	mg/L	<MDL	0.0103	0.1730					0.00104
Cadmium (Dissolved)	mg/L	<MDL	0.007	0.035					<MDL
Calcium (Dissolved)	mg/L	6.5	86.3	167.0					87.5
Iron (Dissolved)	mg/L	<MDL	0.67	13.00					0.601
Iron (TREC)	mg/L	0.01	9.79	43.70					4.24
Magnesium (Dissolved)	mg/L	<MDL	61.7	146.0					55.9
Manganese (Dissolved)	mg/L	<MDL	1.307	60.100					0.339
Manganese (TREC)	mg/L	0.026	0.401	2.470					0.335
Mercury (Dissolved)	mg/L	<MDL	0.000264	0.00550					<MDL
Selenium (Dissolved)	mg/L	<MDL	0.006	0.021					0.0196
Sodium (Dissolved)	mg/L	95.8	229.7	670.0					355
Zinc (Dissolved)	mg/L	<MDL	0.02	0.19					0.1

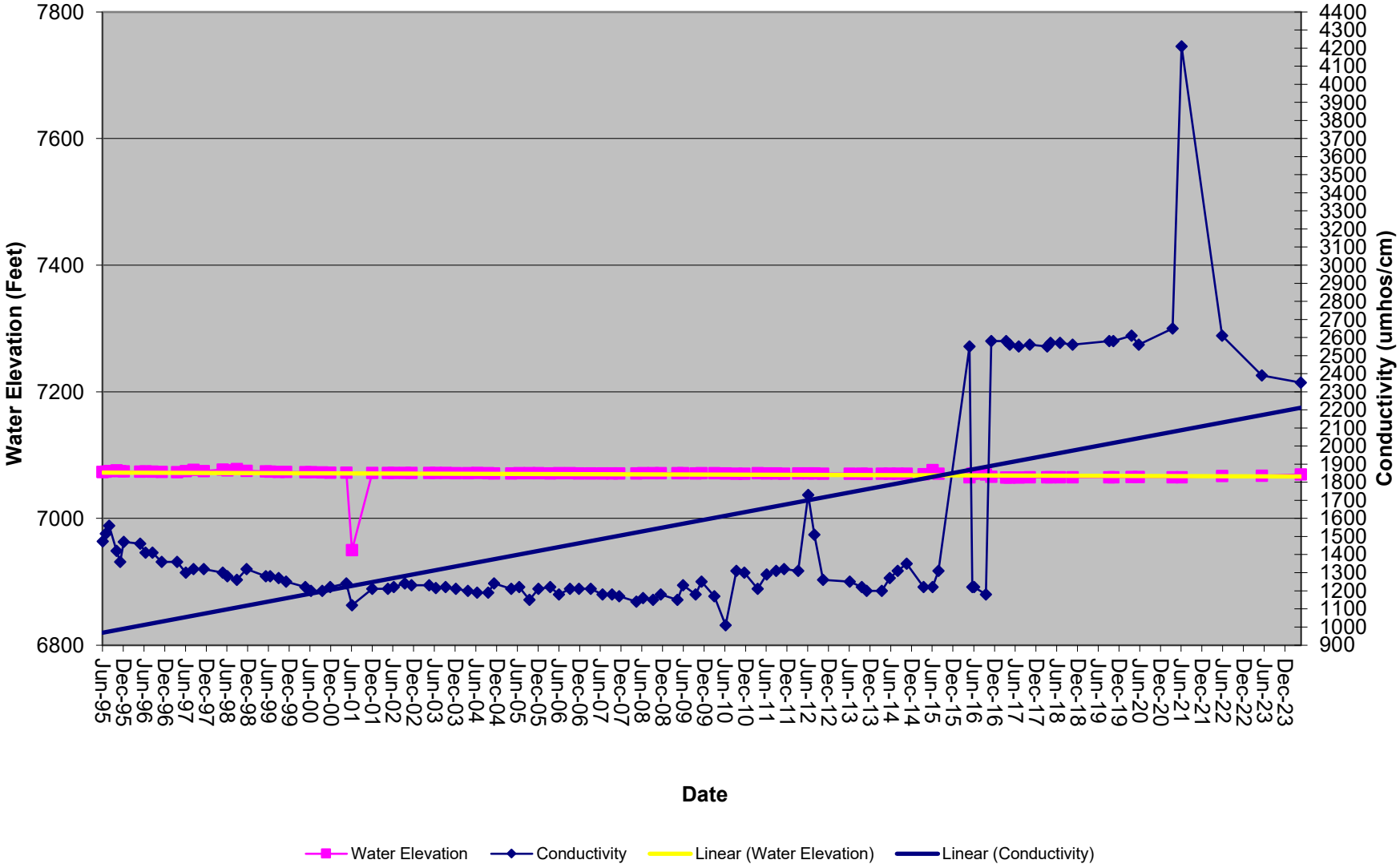
The area of concern for monitoring point DH-39 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Drill Hole 39 is located in Stevens Draw right next to Drill Hole 15. It is accessed by the Stevens Draw road.

** Site not accessible*

Baseline Information Collection initiated on 6/12/95 and not yet considered complete.
Point DH-39 has not been influenced by mining.

Plot of Conductivity and Water Level



DH-39 - Stevens Draw Drill Hole

Figure 96

DH-49
B Gulch - Drill Hole
Pipe Elevation - 7203.4
Pipe 0.7' above ground
Depth - 324'

Initiated	6/12/1995	6/12/1995
Activated	3/30/1997	3/30/1997
Date	4/30/2024	3/18/2024

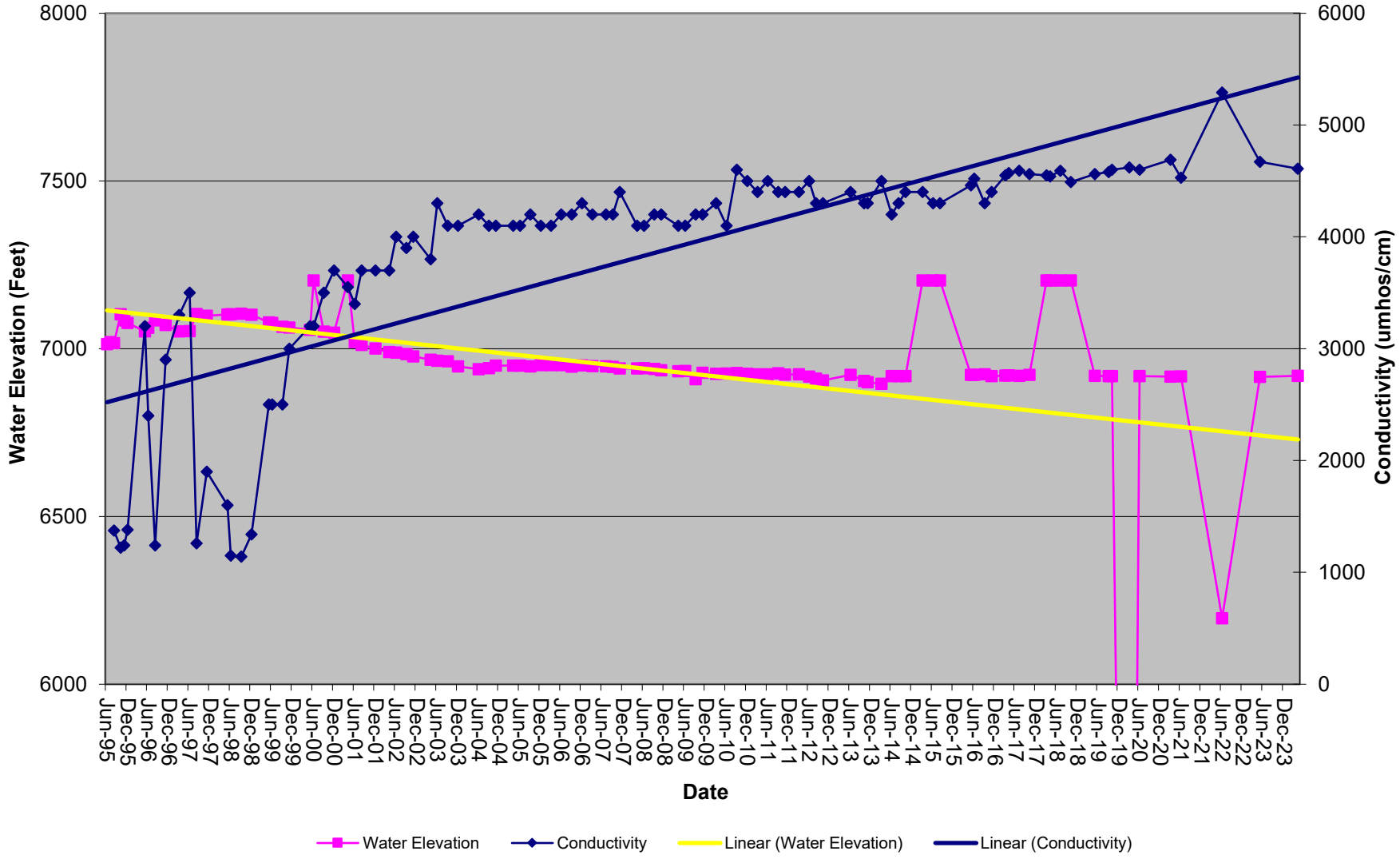
Field Parameters	UNITS	Summary Information Baseline Min	Ave	Max	Operation Min	Ave	Max		
Static Water Level	Feet	100.84	145.8	189.79	99.57	247.0478	311.46	284.7	285.3
Water Elevation	Feet	7013.6	7057.6	7102.6	6891.9	6956.4	7103.8	6918.7	6918.1
FieldComment									
ph	su	7.1	7.3	7.5	6.9	7.4	8.2	7.7	7.67
Conductivity	umhos/cm	1220	2028	3300	1140	4007	5290	4610	4610
Temperature	Celsius	10	11.9	13.5	10.8	13.8	17.3	14.7	16.1
Lab Parameters	**UNITS**								
Bicarbonate	mg/L	496	834	1090	313.4	1487.087	2130		1840
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	10.98	79.46		<MDL
Chloride	mg/L	14	15	16	<MDL	37.3	344.61		19.6
Conductivity	umhos/cm	1250	2023	2470	1160	3732.346	5920		4590
Hardness	mg/L	34	300	491	<MDL	187	463		160
Nitrate-Nitrite	mg/L	0.63	1.0	1.43	0.028	5.02	8.9		8.25
Ammonia	mg/L	0.14	1.9	3.8	<MDL	1.15	5		<MDL
pH	su	7.1	7.4	7.7	7.2	7.8	8.7		8.1
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.71	21.3		0.22
ResidueFilterable (TDS)	mg/L	790	1347	1790	700	2684	3411		3120
Sulfate	mg/L	216	362	470	180	652.46	915		915
Arsenic (Dissolved)	mg/L	<MDL	0.001	0.002	<MDL	0.040	0.560		0.00103
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.011	0.040		<MDL
Calcium (Dissolved)	mg/L	11	62	100	0.55	33.4	98.4		26
Iron (Dissolved)	mg/L	0.05	0.4	1.1	<MDL	0.142	1.12		0.338
Iron (TREC)	mg/L	0.2	12.4	29.4	0.0186	30.76	1310		6.73
Magnesium (Dissolved)	mg/L	1.6	35.1	58.6	18.7	30.2	71.5		23
Manganese (Dissolved)	mg/L	<MDL	0.038	0.105	<MDL	0.065	0.35		<MDL
Manganese (TREC)	mg/L	0.007	0.19	0.308	<MDL	2.00	68.7		0.222
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00008	0.00050		<MDL
Selenium (Dissolved)	mg/L	<MDL	0.003	0.007	<MDL	0.032441	0.283		<MDL
Sodium (Dissolved)	mg/L	5.2	230.7	556	109	919	2070		1060
Zinc (Dissolved)	mg/L	<MDL	0.003	0.01	<MDL	0.020	0.073		0.073

* Site not Accessible

Drill Hole 49 is located just above Stevens Draw road approximately 1000 feet southwest of the mine portals. It is accessed by the Stevens Draw road.

Baseline Information for Point DH-49 is derived from events beginning on 6/12/95 through 3/30/97.
Point influenced by mining on 3/30/97.

Plot of Conductivity and Water Level



DH-49 - B Gulch Drill Hole

Figure 98

DH-67abv
Completed above the D-Seam
Hubbard Creek - Monitoring Well
Elevation - 6450.5
Depth - 193'

Initiated	6/26/2005
Activated	
Date	6/18/2024

Field Parameters	UNITS	Summary Information Baseline Min	Ave	Max	Operation Min	Ave	Max	
Static Water Level	Feet	29.5	44.1	59.7				41.8
Water Elevation	Feet	6390.8	6406.6	6421.0				6409.2
FieldComment								*
ph	su	7.1	7.7	8.8				8.53
Conductivity	umhos/cm	2000	2650	3700				2490
Temperature	Celsius	5.6	10.4	14.4				14.4
Lab Parameters	UNITS							
Bicarbonate	mg/L	1.44	1962.32	13770.0				<MDL
Carbonate	mg/L	<MDL	65.6	138.5				<MDL
Chloride	mg/L	<MDL	84.1	407.0				37.7
Conductivity	umhos/cm	1370	2774	5850				2230
Hardness	mg/L	8.54	46.08	145.95				47
Nitrate-Nitrite	mg/L	<MDL	2.7	32.3				0.057
Ammonia	mg/L	<MDL	0.9	2.5				<MDL
pH	su	2.2	7.8	9.1				2.2
Phosphate	mg/L	<MDL	0.4	1.8				0.92
ResidueFilterable-TDS	mg/L	794	1867	3900				1510
Sulfate	mg/L	<MDL	26.03	288.00				93
Arsenic (Dissolved)	mg/L	<MDL	0.049	0.415				0.00509
Cadmium (Dissolved)	mg/L	<MDL	0.02	0.07				0.000678
Calcium (Dissolved)	mg/L	<MDL	19.6	115.0				11.1
Iron (Dissolved)	mg/L	<MDL	0.19	2.97				0.143
Iron (TREC)	mg/L	0.01	0.57	1.82				0.469
Magnesium (Dissolved)	mg/L	<MDL	4.5	18.1				4.7
Manganese (Dissolved)	mg/L	<MDL	2.737	86.700				<MDL
Manganese (TREC)	mg/L	0.006	0.042	0.132				<MDL
Mercury (Dissolved)	mg/L	<MDL	0.00008	0.00036				<MDL
Selenium (Dissolved)	mg/L	<MDL	0.030	0.149				<MDL
Sodium (Dissolved)	mg/L	218	811	2093				585
Zinc (Dissolved)	mg/L	<MDL	0.026	0.100				0.1

The area of concern for monitoring point DH-67abv has not been affected by the mining operation. Therefore, monitoring events are considered Baseline.

**Site inaccessible due to snow for 1Q*

Baseline Information Collection initiated on 10/12/00 and not yet considered complete.
Point DH-67abv has not been influenced by mining.

DH-67B
Hubbard Creek - B Seam Monitoring Well
Elevation - 6451
Depth - 594'

Initiated	6/29/2004
Activated	
Date	10/9/2024

Field Parameters	UNITS	Summary Information Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max	
Static Water Level	Feet	146.9	264.3	498.4				251.8
Water Elevation	Feet	5952.6	6190.2	6451.0				6199.2
FieldComment								
ph	su	6.5	7.8	9.3				9.27
Conductivity	umhos/cm	2570	6225.2	7500				7030
Temperature	Celsius	13.4	18.7	26.5				17.1
Lab Parameters	UNITS							
Bicarbonate	mg/L	1486.3	2992.5	3838.0				<MDL
Carbonate	mg/L	<MDL	159.57	725.4				<MDL
Chloride	mg/L	3.92	351.34	509				481
Conductivity	umhos/cm	497	5509	7810				6540
Hardness	mg/L	3.59	42.35	198				47
Nitrate-Nitrite	mg/L	<MDL	1.71	7.4				0.043
Ammonia	mg/L	0.102	4.39	9.48				
pH	su	7.35	8.12	9.37				8.1
Phosphate	mg/L	<MDL	0.58	5.96				0.48
ResidueFilterable-TDS	mg/L	2186	4045.8	8131				4200
Sulfate	mg/L	<MDL	16.82	91.58				<MDL
Arsenic (Dissolved)	mg/L	<MDL	0.102	0.545				0.00168
Cadmium (Dissolved)	mg/L	<MDL	0.027	0.07				<MDL
Calcium (Dissolved)	mg/L	0.24	9.36	53.7				
Iron (Dissolved)	mg/L	0.01	0.25	0.903				0.335
Iron (TREC)	mg/L	0.011	2.85	31.8				3.56
Magnesium (Dissolved)	mg/L	0.73	4.58	29.9				
Manganese (Dissolved)	mg/L	<MDL	0.024	0.102				
Manganese (TREC)	mg/L	0.009	0.104	1.129				<MDL
Mercury (Dissolved)	mg/L	<MDL	0.00009	0.00044				
Selenium (Dissolved)	mg/L	0.003	0.152	1.595				
Sodium (Dissolved)	mg/L	3.885	1436.6	2291.2				1750
Zinc (Dissolved)	mg/L	<MDL	0.06	0.4				0.127

The area of concern for monitoring point DH-67B has not been affected by the mining operation. Therefore, a
monitoring events are considered Baseline.

Note 1: Operator mislabled sample for the lab, therefore the incorrect parameters were run
Note 2: Special bailer for this well broke, could not get sample for second quarter

** Site not accessible 1Q due to snow*

Baseline Information Collection initiated on 6/29/04 and not yet considered complete.
Point DH-67B has not been influenced by mining.

DH-67blw
(Below the D-Seam)
Hubbard Creek - Monitoring Well
Elevation - 6466
Depth - 357'
Replacement Well 9/26/14

		Summary Information Baseline		
Field Parameters	UNITS	Min	Ave	Max
Static Water Level	Feet	244	258.874	318.55
Water Elevation	Feet	6147.5	6207.1	6222.0
FieldComment				
ph	su	7.9	8.5	9.7
Conductivity	umhos/cm	4800	6399	6920
Temperature	Celsius	16.1	17.7708	21.1
Lab Parameters	UNITS			
Bicarbonate	mg/L	1460	3316.92	4150
Carbonate	mg/L	<MDL	<MDL	<MDL
Chloride	mg/L	0.414	328	435
Conductivity	umhos/cm	2020	5610	6490
Hardness	mg/L	6	28.1583	55.1
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL
Ammonia	mg/L	0.39	4.2	11.1
pH	su	7.92	8.53267	9.35
Phosphate	mg/L	0.12	0.40133	1.12
Residue Filterable-TDS	mg/L	1380	3908.67	4840
Sulfate	mg/L	<MDL	30.2833	98.4
Arsenic	mg/L	<MDL	<MDL	<MDL
Cadmium	mg/L	<MDL	<MDL	<MDL
Calcium	mg/L	2.1	7.26	15.60
Iron (Dissolved)	mg/L	0.0358	0.08838	0.167
Iron (Total)	mg/L	0.104	0.7686	1.7
Magnesium	mg/L	0.009	2.25725	3.920
Manganese (Dissolved)	mg/L	0.0089	0.02998	0.0899
Manganese (Total)	mg/L	0.0014	61.3079	674
Mercury	mg/L	<MDL	<MDL	<MDL
Selenium	mg/L	<MDL	<MDL	<MDL
Sodium (Dissolved)	mg/L	514	1586.27	1830
Zinc	mg/L	<MDL	0.0953	0.1080

The area of concern for monitoring point DH-67blw has not been affec
monitoring events are considered Baseline.

Replacement well constructed September 2014

**Site inaccessible due to snow for 1Q*

Baseline Information collection re-initiated on 9/26/2014 and not yet considered complete.
Point DH-67blw has not been influenced by mining.

DH-67D (Reb)
Hubbard Creek - D - Seam Monitoring Well
Elevation - 6450'
Depth - 324.8'

Initiated	11/30/2000
Activated	
Date	6/18/2024

Field Parameters	UNITS	Summary Information Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max	
Static Water Level	Feet	123.4	223.19	253.85				246.3
Water Elevation	Feet	6196.2	6226.8	6326.6				6203.7
FieldComment								*
ph	su	7.9	9.3	10.6				8.54
Conductivity	umhos/cm	6.96	6231	8780				6870
Temperature	Celsius	11.2	16.4	20.8				20.8
Lab Parameters	**UNITS**							
Bicarbonate	mg/L	<MDL	2829.11	4320				<MDL
Carbonate	mg/L	<MDL	359.039	1160				<MDL
Chloride	mg/L	6.76	397.138	610				434
Conductivity	umhos/cm	2908	5884.73	13132				6730
Hardness	mg/L	<MDL	19.68	51.55				28
Nitrate-Nitrite	mg/L	<MDL	5.449	60.03				<MDL
Ammonia	mg/L	0.188	4.757	30.5				2.77
pH	su	7.61	8.89	9.63				8.3
Phosphate	mg/L	<MDL	2.006	48.2				0.6
ResidueFilterable-TDS	mg/L	0.15	3945	5188				4350
Sulfate	mg/L	<MDL	31.19	300				<MDL
Arsenic (Dissolved)	mg/L	<MDL	0.14571	0.915				0.0116
Cadmium (Dissolved)	mg/L	<MDL	0.686	16.6				0.000369
Calcium (Dissolved)	mg/L	<MDL	4.79	36.7				7.06
Iron (Dissolved)	mg/L	0.01	0.40	7.27				<MDL
Iron (TREC)	mg/L	0.0251	3.16	99.3				0.687
Magnesium (Dissolved)	mg/L	<MDL	2.37	10.2				2.42
Manganese (Dissolved)	mg/L	<MDL	0.035	0.417				<MDL
Manganese (TREC)	mg/L	<MDL	0.866	22.7				<MDL
Mercury (Dissolved)	mg/L	<MDL	0.00009	0.00042				<MDL
Selenium (Dissolved)	mg/L	<MDL	0.15096	1.064				<MDL
Sodium (Dissolved)	mg/L	784	1626.77	3576.25				1850
Zinc (Dissolved)	mg/L	0.006	0.043	0.206				<MDL

The area of concern for monitoring point DH-67D has not been affected by the mining operation. Therefore, all monitoring events are considered Baseline.

**Site inaccessible due to snow for 1Q*

Baseline Information Collection initiated on 11/30/00 and not yet considered complete.
Point DH-67D has not been influenced by mining.

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Baseline

Ground Water

CWI-DH-58A
Upper B Seam
Elevation -7442.2
Depth - 575'

					3/17/2015
					6/20/2024
		Summary Information			
Field Parameters	UNITS	Baseline Min	Ave	Max	
Static Water Level	Feet	512.6	533.5	536.1	535.3
Water Elevation	Feet	6906.1	6908.7	6929.6	6906.9
FieldComment					
ph	su	7.6	8.4	17.7	7.89
Conductivity	umhos/cm	2	1654	2460	2460
Temperature	Celsius	17.7	20.1	26.2	21.5
Lab Parameters	UNITS				
Bicarbonate	mg/L	635	1002	1380	1380
Carbonate	mg/L	<MDL	34.6	77.4	<MDL
Chloride	mg/L	16.4	20.5	34.6	19.1
Conductivity	umhos/cm	866	1539	2360	2300
Hardness	mg/L	8.2	27.5	65.7	29.0
Nitrate-Nitrite	mg/L	<MDL	0.08	0.08	<MDL
Ammonia	mg/L	0.03	1.14	2.05	2.05
pH	su	7.59	8.24	9.03	8
Phosphate	mg/L	1.67	3.01	5.67	5.67
ResidueFilterable-TDS	mg/L	744	1111	1510	1510
Sulfate	mg/L	<MDL	1.7	3.5	<MDL
Arsenic	mg/L	<MDL	0.02876	0.06200	0.00763
Cadmium	mg/L	<MDL	<MDL	<MDL	<MDL
Calcium	mg/L	<MDL	8.8	14.0	9.39
Iron (Dissolved)	mg/L	0.012	0.186	1.750	0.461
Iron (Total)	mg/L	0.573	2.521	9.270	2.32
Magnesium (Dissolved)	mg/L	0.052	1.156	6.000	1.26
Manganese (Dissolved)	mg/L	<MDL	0.2378	2.3300	0.069
Manganese (Total)	mg/L	<MDL	0.2262	0.6240	0.092
Mercury	mg/L	<MDL	<MDL	<MDL	<MDL
Selenium	mg/L	<MDL	<MDL	<MDL	<MDL
Sodium	mg/L	141	520	3050	590
Zinc	mg/L	<MDL	0.0336	0.0570	0.057

The area of concern for monitoring point CWI-DH-58A has not been affected by the n
monitoring events are considered Baseline.

New Well beginning in December 2014.

Baseline information collection initiated on March 17, 2015.
Point CWI-DH-58A has not and will not be influenced by mining.

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Baseline

Ground Water

CWI-DH-60
Upper B Seam
Elevation - 7921
Depth - 1085'

					10/20/2014
					6/20/2024
		Summary Information			
Field		Baseline			
Parameters	UNITS	Min	Ave	Max	
Static Water Level	Feet	943.3	946.5	952.1	943.3
Water Elevation	Feet	6968.9	6974.5	6977.7	6977.7
FieldComment					
ph	su	8.0	8.3	8.6	8.56
Conductivity	umhos/cm	1062	4701	10980	1180
Temperature	Celsius	18.5	21.4	23.4	22.1
Lab					
Parameters	UNITS				
Bicarbonate	mg/L	5620	7249	8330	<MDL
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL
Chloride	mg/L	240	300	337	311
Conductivity	umhos/cm	7820	9698	11000	11000
Hardness	mg/L	53.0	71.9	86.2	53
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL	<MDL
Ammonia	mg/L	0.84	1.69	2.84	2.13
pH	su	7.96	8.19	8.60	8.3
Phosphate	mg/L	0.05	0.23	0.50	0.477
ResidueFilterable-TDS	mg/L	6070	7514	8110	7700
Sulfate	mg/L	<MDL	20.7	23.2	<MDL
Arsenic	mg/L	<MDL	0.00041	0.00045	0.00036
Cadmium	mg/L	<MDL	0.0014	0.0018	0.0015
Calcium	mg/L	9.7	15.8	21.2	9.7
Iron (Dissolved)	mg/L	0.216	27.082	532.000	<MDL
Iron (Total)	mg/L	0.83	3.24	10.70	8.05
Magnesium (Dissolved)	mg/L	6.00	7.91	9.57	7.07
Manganese (Dissolved)	mg/L	0.0103	0.0145	0.0186	<MDL
Manganese (Total)	mg/L	0.0131	0.0392	0.1010	0.093
Mercury	mg/L	<MDL	<MDL	<MDL	<MDL
Selenium	mg/L	<MDL	<MDL	<MDL	<MDL
Sodium	mg/L	315	2898	3760	3040
Zinc	mg/L	<MDL	<MDL	<MDL	<MDL

The area of concern for monitoring point CWI-DH-60 has not been affected by the mi
monitoring events are considered Baseline.

CWI-DH-60 is located southwest of projected mining. It will not be impacted by Bowie

CWI-DH-60 was cemented to the bottom of the upper B-Seam during September 201

CWI-DH-60 was worked over and cleaned during August 2014.

Baseline Information collection re-initiated on 03/18/15.
Point CWI-DH-60 has not and will not be influenced by mining.

Figure 104

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Baseline

DH-2010-1SS
Sanstone Above B-Seam
Elevation - 7544.4
Depth - 1140'

						3/18/2015
						6/20/2024
		Summary Information				
Field Parameters	UNITS	Baseline Min	Ave	Max		
Static Water Level	Feet	1088.3	1097.2	1106.3		1106.3
Water Elevation	Feet	6440.7	6449.8	6458.7		6440.7
FieldComment						
ph	su	7.0	8.2	11.7		11.4
Conductivity	umhos/cm	1330	1797	2810		2810
Temperature	Celsius	7.3	25.4	27.6		26.4
Lab Parameters	UNITS					
Bicarbonate	mg/L	<MDL	702	914		914
Carbonate	mg/L	<MDL	<MDL	<MDL		<MDL
Chloride	mg/L	110	154	416		167
Conductivity	umhos/cm	1110	1489	2530		2020
Hardness	mg/L	7.9	40.6	52.0		52
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL		<MDL
Ammonia	mg/L	5.0	7.6	26.2		8.3
pH	su	7.10	7.62	11.20		7.9
Phosphate	mg/L	0.5	1.7	5.2		2.1
ResidueFilterable-TDS	mg/L	780	1068	1800		1280
Sulfate	mg/L	<MDL	34.04	154.00		<MDL
Arsenic (Dissolved)	mg/L	0.01	0.20	0.29		0.165
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL		<MDL
Calcium (Dissolved)	mg/L	0.1	13.3	17.2		17.2
Iron (Dissolved)	mg/L	0.087	0.171	0.564		0.564
Iron (Total)	mg/L	0.39	2.83	4.94		3.45
Magnesium (Dissolved)	mg/L	0.130	1.293	2.280		2.28
Manganese (Dissolved)	mg/L	0.0832	0.1056	0.1300		0.13
Manganese (Total)	mg/L	0.095	0.126	0.159		0.159
Mercury (Dissolved)	mg/L	<MDL	0.001	0.001		<MDL
Selenium (Dissolved)	mg/L	<MDL	0.0036	0.0044		0.0033
Sodium (Dissolved)	mg/L	274	340	502		473
Zinc (Dissolved)	mg/L	<MDL	0.1070	0.2090		0.143

The area of concern for monitoring point DH-2010-1SS has not been affected by the m
monitoring events are considered Baseline.

DH-2010-1SS is located in Section 5. It will be impacted by future Bowie No. 2 Mine

Lab analysis is required semi-annually

Baseline Information collection re-initiated on 03/18/15 and not yet considered complete.
Point DH-2010-1B has not been influenced by mining.

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Baseline

Ground Water

DH-2010-1B
B Seam
Elevation - 7544.6
Depth - 1220'

						10/16/2014
						6/20/2024
		Summary Information				
Field Parameters	UNITS	Baseline Min	Ave	Max		
Static Water Level	Feet	1092.4	1161.4	1998.1		1106.6
Water Elevation	Feet	5549	6386	6455		6440.4
FieldComment						
ph	su	7.4	10.7	23.3		7.7
Conductivity	umhos/cm	378	1798	2666		2210
Temperature	Celsius	6.5	24.1	27.7		6.5
Lab Parameters	UNITS					
Bicarbonate	mg/L	<MDL	212.2	1040.0		<MDL
Carbonate	mg/L	45	271	553		242
Chloride	mg/L	6.30	114.77	205.00		205
Conductivity	umhos/cm	336	1546	2530		2410
Hardness	mg/L	0.0	9.6	44.0		8
Nitrate-Nitrite	mg/L	<MDL	0.48	1.60		<MDL
Ammonia	mg/L	0.5	17.7	32.4		32.4
pH	su	8.20	10.58	11.58		11.1
Phosphate	mg/L	0.05	0.26	1.40		0.42
ResidueFilterable-TDS	mg/L	253	1106	1800		1570
Sulfate	mg/L	1.5	79.3	166.0		25
Arsenic (Dissolved)	mg/L	<MDL	0.0393	0.1710		0.0167
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL		0.00064
Calcium (Dissolved)	mg/L	1.54	3.61	15.00		3.2
Iron (Dissolved)	mg/L	0.0570	0.1207	0.2450		0.128
Iron (Total)	mg/L	0.20	1.37	4.31		0.572
Magnesium (Dissolved)	mg/L	<MDL	<MDL	<MDL		<MDL
Manganese (Dissolved)	mg/L	<MDL	0.0231	0.1110		<MDL
Manganese (Total)	mg/L	0.0068	0.0340	0.1370		0.012
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL		<MDL
Selenium (Dissolved)	mg/L	<MDL	<MDL	<MDL		0.00032
Sodium (Dissolved)	mg/L	74	332	504		504
Zinc (Dissolved)	mg/L	<MDL	<MDL	<MDL		0.085

The area of concern for monitoring point DH-2010-1B has not been affected by the m
monitoring events are considered Baseline.

DH-2010-1B is located in Section 5 It will be impacted by future Bowie No. 2 Mine w
DH-2010-1B was rehabilitated in 2014. Baseline inforamtion is collected beginning O

Baseline Information collection re-initiated on 10/16/14 and not yet considered complete.
Point DH-2010-1B has not been influenced by mining.

Figure 106

AW-1
Alluvial Well
Top of Pipe Elevation - 5977.76'
Depth - 120'
Pipe 1.06' Above Ground

Initiated	11/23/1996	11/23/1996	11/23/1996	11/23/1996
Activated	3/27/1997	3/27/1997	3/27/1997	3/27/1997
Date	12/11/2024	9/13/2024	4/29/2024	3/18/2024

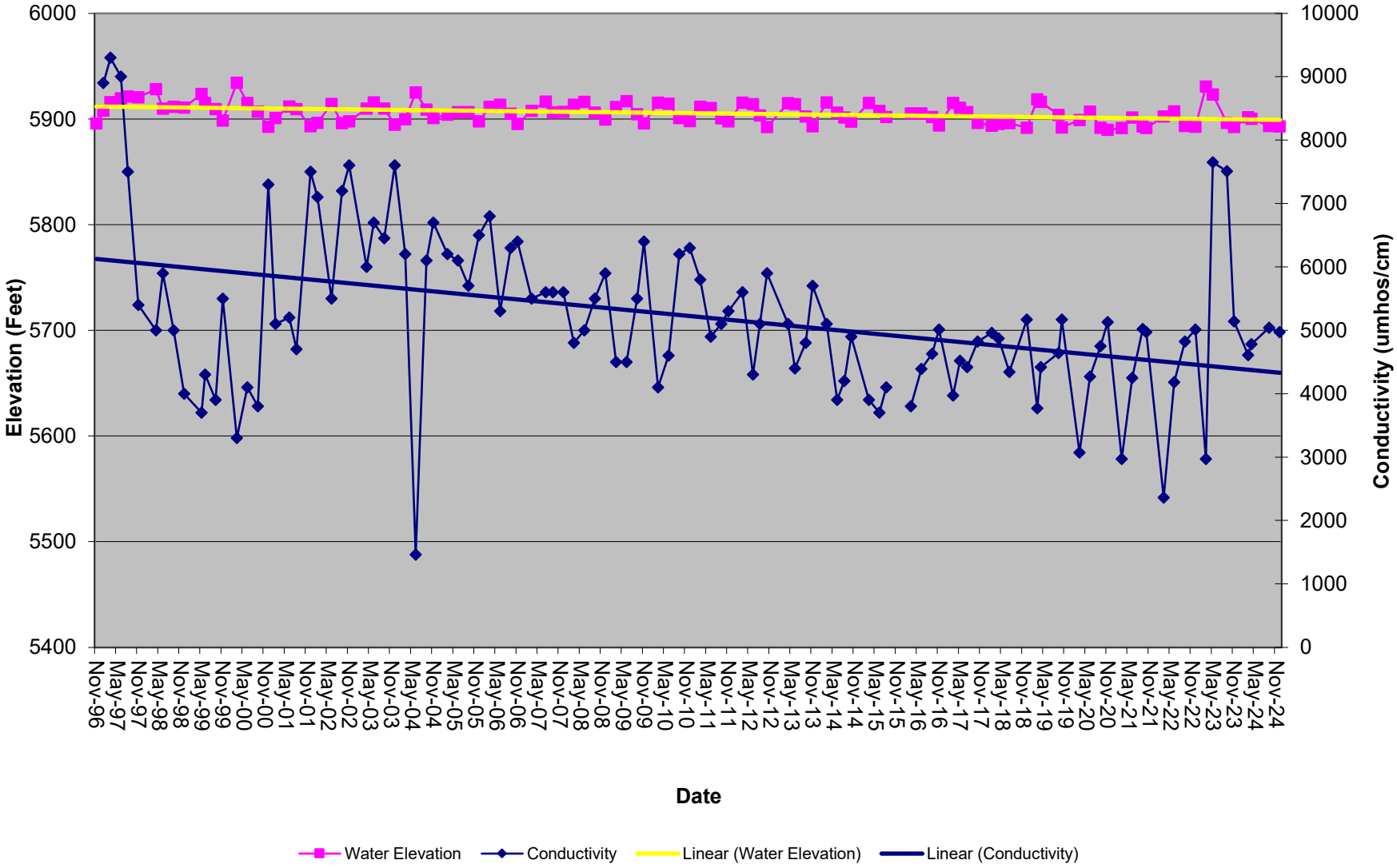
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	61.92	71.25	82.01	43.44	72.14	88.10	84.9	84.3	77.6	76.2
Water Elevation	Feet	5895.7	5906.5	5915.8	5889.7	5905.6	5934.3	5892.86	5893.46	5900.16	5901.56
FieldComment											
ph	su	7.1	7.2	7.3	7.0	7.4	12.9	7.48	7.71	7.55	7.58
Conductivity	umhos/cm	8900	9100	9300	1460	5163	9000	4970	5040	4780	4610
Temperature	Celsius	10.2	11.3	12.4	8.7	27.4	1590.0	13.4	13.7	11.6	12
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	641	649	657	214.0	615.4	1165.2			702	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	0.83	10.76			<MDL	
Chloride	mg/L	77	78	79	8.5	154.6	318.5			154	
Conductivity	umhos/cm	6480	7230	7980	894	5064	8610			4700	
Hardness	mg/L	2750	2895	3040	<MDL	1431	4511			1280	
Nitrate-Nitrite	mg/L	5.7	6.5	7.3	<MDL	3.54	11.20			1.56	
Ammonia	mg/L	0.07	0.11	0.14	<MDL	0.49	8.10				
pH	su	7.4	7.6	7.8	0.0	7.4	8.5			7.6	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.03	0.22			0.0341	
ResidueFilterable-TDS	mg/L	7990	8200	8410	787	4398	8710			3610	
Sulfate	mg/L	5140	5220	5300	135	2355	8330			2120	
Arsenic (Dissolved)	mg/L	<MDL	0	0	<MDL	0	1				
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.015	0.050				
Calcium (Dissolved)	mg/L	316	327	338	23.4	171.8	360.0				
Iron (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.12	1.75				
Iron (TREC)	mg/L	0.13	0.41	0.70	0.01	0.58	2.37				
Magnesium (Dissolved)	mg/L	476	505	533	53.8	280.3	961.5				
Manganese (Dissolved)	mg/L	<MDL	0.03	0.05	<MDL	0.034	0.490				
Manganese (TREC)	mg/L	0.01	0.03	0.06	<MDL	1.492	7.440				
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00005	0.00024				
Selenium (Dissolved)	mg/L	0.026	0.031	0.035	0.001	0.214	7.400				
Sodium (Dissolved)	mg/L	1550	1625	1700	253.0	883.7	1867.5				
Zinc (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.02	0.11				

Laboratory oversight, data not provided in laboratory analysis.

Alluvial Wells AW-1 through AW-6 are located north of Old State Highway 133, near the entrance to the mine.

There is no Baseline Collection possible for points initiated after the influence of mining.

Plot of Conductivity and Water Level



AW-1 - Alluvial Well

Figure 108

AW-2
Alluvial Well
Top of Pipe Elevation - 5966.2'
Depth - 50.4'
Pipe 1.32' Above Ground

Initiated	11/23/1996	11/23/1996	11/23/1996	11/23/1996
Activated	3/27/1997	3/27/1997	3/27/1997	3/27/1997
Date	12/11/2024	9/13/2024	4/29/2024	3/18/2024

		Summary Information									
		Baseline			Operation						
Field Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	50.35	50.65	50.81	35.55	47.18	54.90	45.6	45.2	45.3	45
Water Elevation	Feet	5915.8	5916.0	5916.3	5911.7	5919.4	5931.1	5921.02	5921.42	5921.32	5921.62
FieldComment			Damp						DRY	DRY	DRY
ph	su				6.8	7.1	7.7	7.35			
Conductivity	umhos/cm				989	6636	10610	9010			
Temperature	Celsius				10.5	14.6	18.4	13.4			
Lab Parameters	UNITS										
Bicarbonate	mg/L				345.18	792.65	1080.00				
Carbonate	mg/L				<MDL	235.47	908.00				
Chloride	mg/L				54.50	175.07	370.63				
Conductivity	umhos/cm				3770	8012	12510				
Hardness	mg/L				241.87	2845.46	4540.00				
Nitrate-Nitrite	mg/L				<MDL	3.12	9.65				
Ammonia	mg/L				<MDL	1.40	4.60				
pH	su				6.7	7.5	8.4				
Phosphate	mg/L				<MDL	0.07	0.25				
ResidueFilterable-TDS	mg/L				319	7505	11300				
Sulfate	mg/L				235	3913	6960				
Arsenic (Dissolved)	mg/L				<MDL	0.179	1.795				
Cadmium (Dissolved)	mg/L				<MDL	0.0345	0.1100				
Calcium (Dissolved)	mg/L				33	328	518				
Iron (Dissolved)	mg/L				0.02	0.09	0.26				
Iron (TREC)	mg/L				0.04	1.51	13.60				
Magnesium (Dissolved)	mg/L				170	547	970				
Manganese (Dissolved)	mg/L				<MDL	0.15	0.89				
Manganese (TREC)	mg/L				0.01	0.40	3.90				
Mercury (Dissolved)	mg/L				<MDL	0.04060	0.77000				
Selenium (Dissolved)	mg/L				0.00	0.06	0.54				
Sodium (Dissolved)	mg/L				21.0	1158.7	2212.5				
Zinc (Dissolved)	mg/L				<MDL	0.04	0.08				

Alluvial Wells AW-1 through AW-6 are located north of Old State Highway 133, near the entrance to the mine.

There is no Baseline Collection possible for points initiated after the influence of mining.

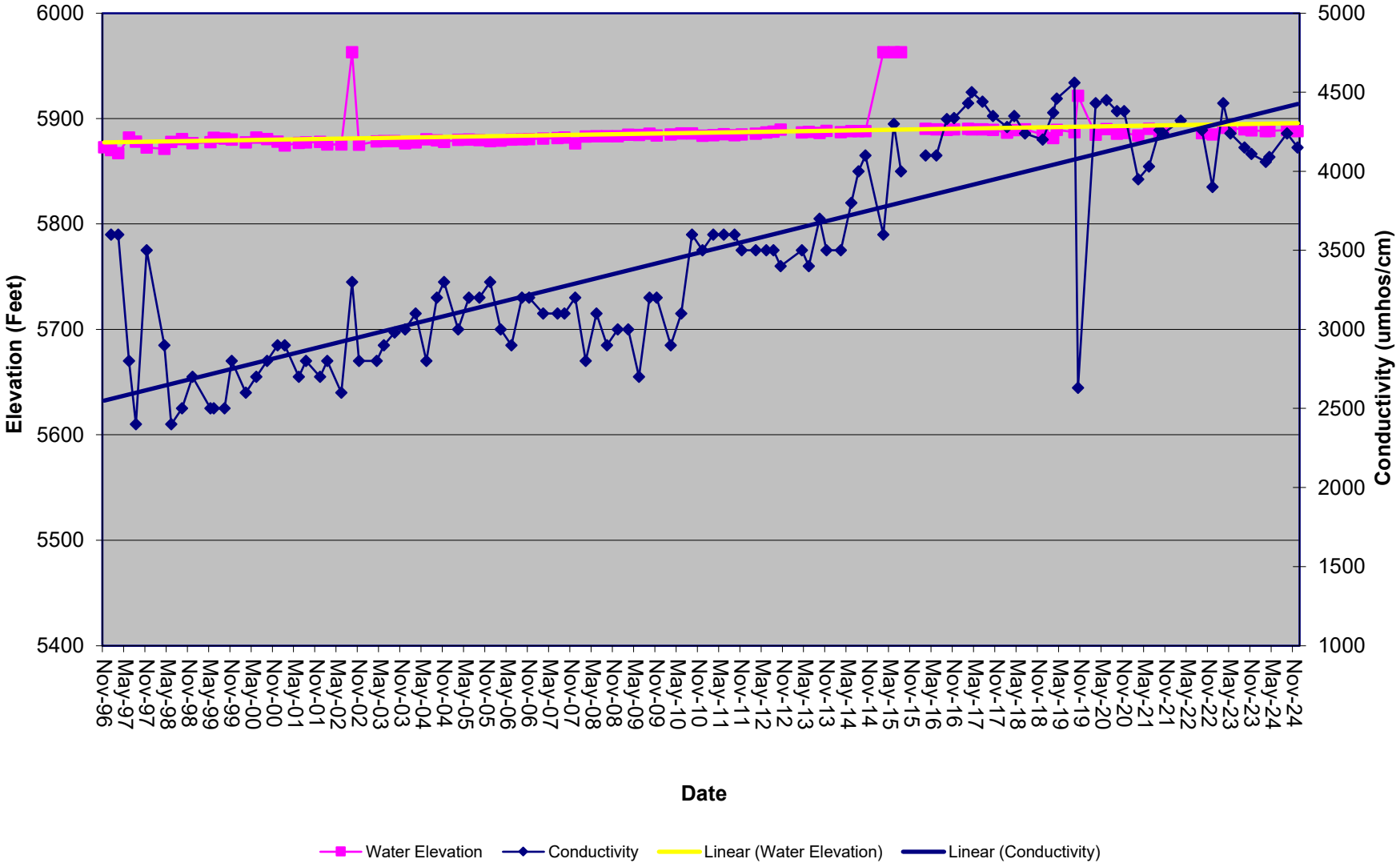
AW-3
Alluvial Well
Top of Pipe Elevation - 5962.96'
Depth - 150'
Pipe 1.16' Above Ground

Initiated								11/23/1996	11/23/1996	11/23/1996	11/23/1996
Activated								3/27/1997	3/27/1997	3/27/1997	3/27/1997
Date								12/11/2024	9/13/2024	4/29/2024	3/18/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	90.23	92.97	95.82	0.00	78.11	91.54	76.9	73.8	74.5	74.8
Water Elevation	Feet	5867.1	5870.0	5872.7	5871.4	5884.8	5963.0	5886.06	5889.16	5888.46	5888.16
FieldComment											
ph	su	6.9	7.0	7.1	6.8	20.1	675.0	7.31	7.7	7.29	7.08
Conductivity	umhos/cm	3600	3600	3600	2400	3477	4560	4150	4240	4090	4060
Temperature	Celsius	11.2	12.8	14.4	7.6	14.1	72.1	13.4	13.2	72.1	12.1
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	851	976	1100	40	610	1080			702	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	0.83	10.76			<MDL	
Chloride	mg/L	119	128	136	33.77	154.67	367.00			279	
Conductivity	umhos/cm	2800	2975	3150	1817	3301	4580			3960	
Hardness	mg/L	1280	1325	1370	<MDL	1702	3354			1990	
Nitrate-Nitrite	mg/L	<MDL	<MDL	<MDL	0.03	3.21	10.20			6.71	
Ammonia	mg/L	1.66	1.90	2.13	<MDL	0.36	2.00			<MDL	
pH	su	7.2	7.3	7.5	6.9	7.5	8.5			7.6	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.83	21.80			0.13	
ResidueFilterable-TDS	mg/L	2390	2415	2440	1750	2797	4130			3160	
Sulfate	mg/L	870	875	880	760	1314	2030			1620	
Arsenic (Dissolved)	mg/L	<MDL	0.001	0.001	<MDL	0.976	28.900			<MDL	
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.009	0.040			<MDL	
Calcium (Dissolved)	mg/L	201	206	210	90.5	255.8	505.0			307	
Iron (Dissolved)	mg/L	0.19	0.33	0.46	<MDL	0.53	8.22			<MDL	
Iron (TREC)	mg/L	8.00	8.23	8.46	0.03	2.47	27.50			0.199	
Magnesium (Dissolved)	mg/L	189	197	205	136	270	661			297	
Manganese (Dissolved)	mg/L	0.10	0.11	0.13	<MDL	0.144	1.280			0.179	
Manganese (TREC)	mg/L	0.12	0.12	0.12	0.008	3.958	111.000			18.3	
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00007	0.00035			<MDL	
Selenium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.017	0.134			0.0175	
Sodium (Dissolved)	mg/L	421	433	445	105	243	682			255	
Zinc (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.02	0.10			<MDL	

Alluvial Wells AW-1 through AW-6 are located north of Old State Highway 133, near the entrance to the mine.

There is no Baseline Collection possible for points initiated after the influence of mining.

Plot of Conductivity and Water Level



AW-3 - Alluvial Well

Figure 111

AW-4
Alluvial Well
Top of Pipe Elevation - 5977.2'
Depth - 60'
Pipe 1.12' Above Ground

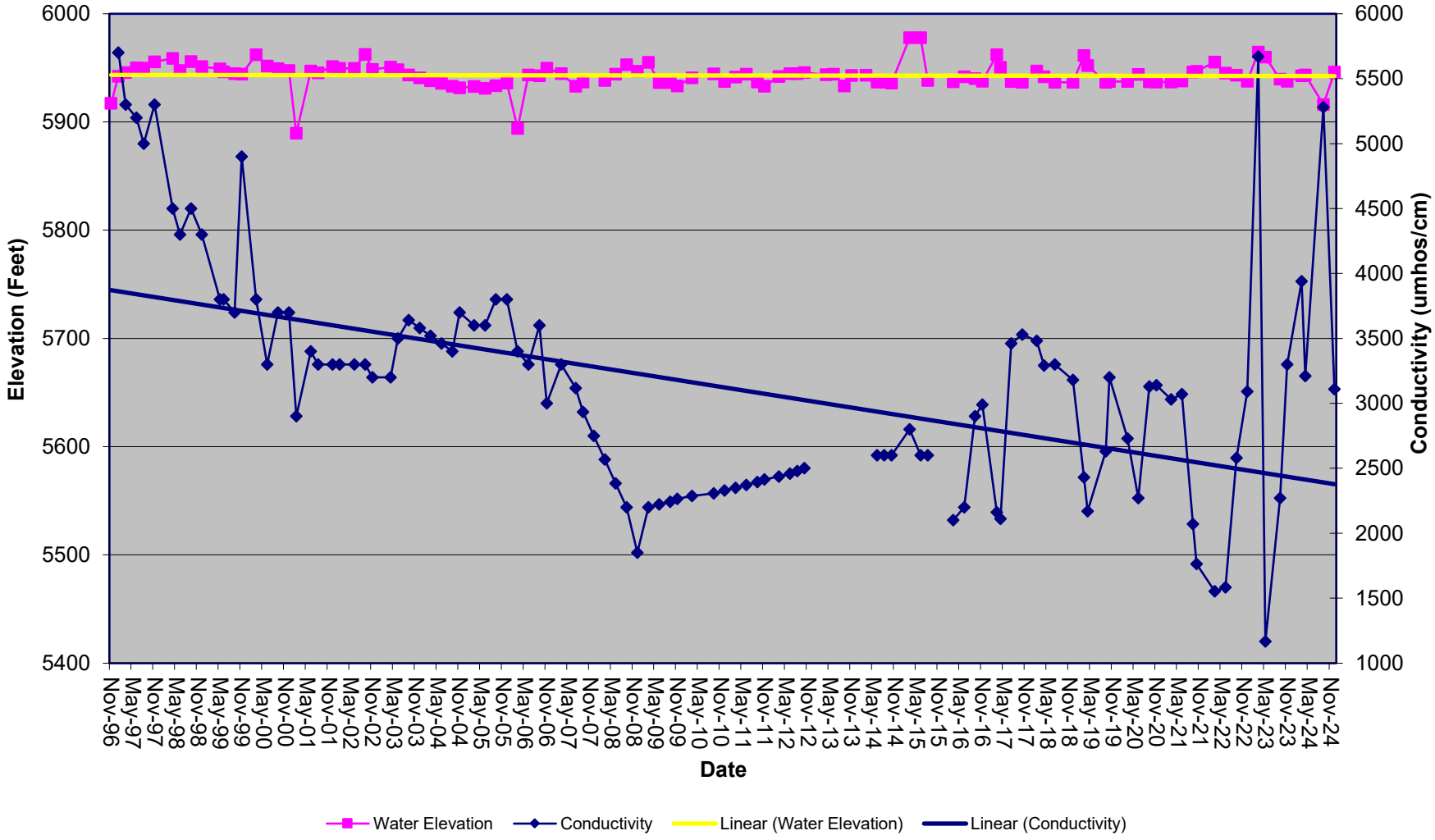
Initiated								11/23/1996	11/23/1996	11/23/1996	11/23/1996
Activated								3/27/1997	3/27/1997	3/27/1997	3/27/1997
Date								12/11/2024	9/13/2024	4/29/2024	3/18/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	32.42	42.94	60.78	13.50	35.20	88.38	31.9	61.9	34.4	35.3
Water Elevation	Feet	5917.1	5935.0	5945.5	5889.5	5942.7	5964.4	5946.02	5916.02	5943.52	5942.62
FieldComment											
ph	su	6.8	6.9	7.0	6.7	7.4	8.2	7.73	7.39	7.58	7.76
Conductivity	umhos/cm	5300	5500	5700	1167	3196	5670	3110	5280	3210	3940
Temperature	Celsius	11.2	11.9	12.6	8.0	12.3	15.5	8.4	14.4	12	13.1
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	624	707	790	316.1	524.1	758.0			353	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	0.37	4.49			<MDL	
Chloride	mg/L	57	60	63	31	143	489			116	
Conductivity	umhos/cm	3880	4495	5110	1520	3246	9490			3110	
Hardness	mg/L	2650	2670	2690	<MDL	1006	2730			1120	
Nitrate-Nitrite	mg/L	0.10	0.21	0.32	<MDL	0.54	6.75			0.671	
Ammonia	mg/L	0.09	0.22	0.34	<MDL	0.63	6.60			0.383	
pH	su	7.1	7.3	7.5	7.1	7.6	8.3			7.4	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.94	21.30			<MDL	
ResidueFilterable-TDS	mg/L	4830	5080	5330	1020	2615	4990			2560	
Sulfate	mg/L	2620	2920	3220	405	1248	2760			1490	
Arsenic	mg/L	<MDL	<MDL	<MDL	<MDL	0.005	0.042			<MDL	
Cadmium	mg/L	<MDL	<MDL	<MDL	<MDL	0.00442	0.03000			<MDL	
Calcium	mg/L	465	481	496	19.8	207.3	496.0			193	
Iron (Dissolved)	mg/L	<MDL	0.04	0.07	<MDL	0.11	0.73			0.538	
Iron (TREC)	mg/L	0.10	0.14	0.17	0.07	2.60	69.20			1.27	
Magnesium (Dissolved)	mg/L	353	357	361	71	163	362			154	
Manganese (Dissolved)	mg/L	0.22	0.43	0.64	<MDL	0.62	1.52			0.832	
Manganese (TREC)	mg/L	0.18	0.40	0.62	0.03	56.85	1270.00			0.847	
Mercury	mg/L	<MDL	<MDL	<MDL	<MDL	0.00006	0.00030			<MDL	
Selenium	mg/L	<MDL	0.0005	0.0010	<MDL	0.0036	0.0354			<MDL	
Sodium	mg/L	590	646	702	159	364	684			321	
Zinc	mg/L	<MDL	<MDL	<MDL	<MDL	0.04	0.22			0.221	

**Small bailer won't reach water, casing pinched*

Alluvial Wells AW-1 through AW-6 are located north of Old State Highway 133, near the entrance to the mine.

There is no Baseline Collection possible for points initiated after the influence of mining.

Plot of Conductivity and Water Level



AW-4 - Alluvial Well

Figure 113

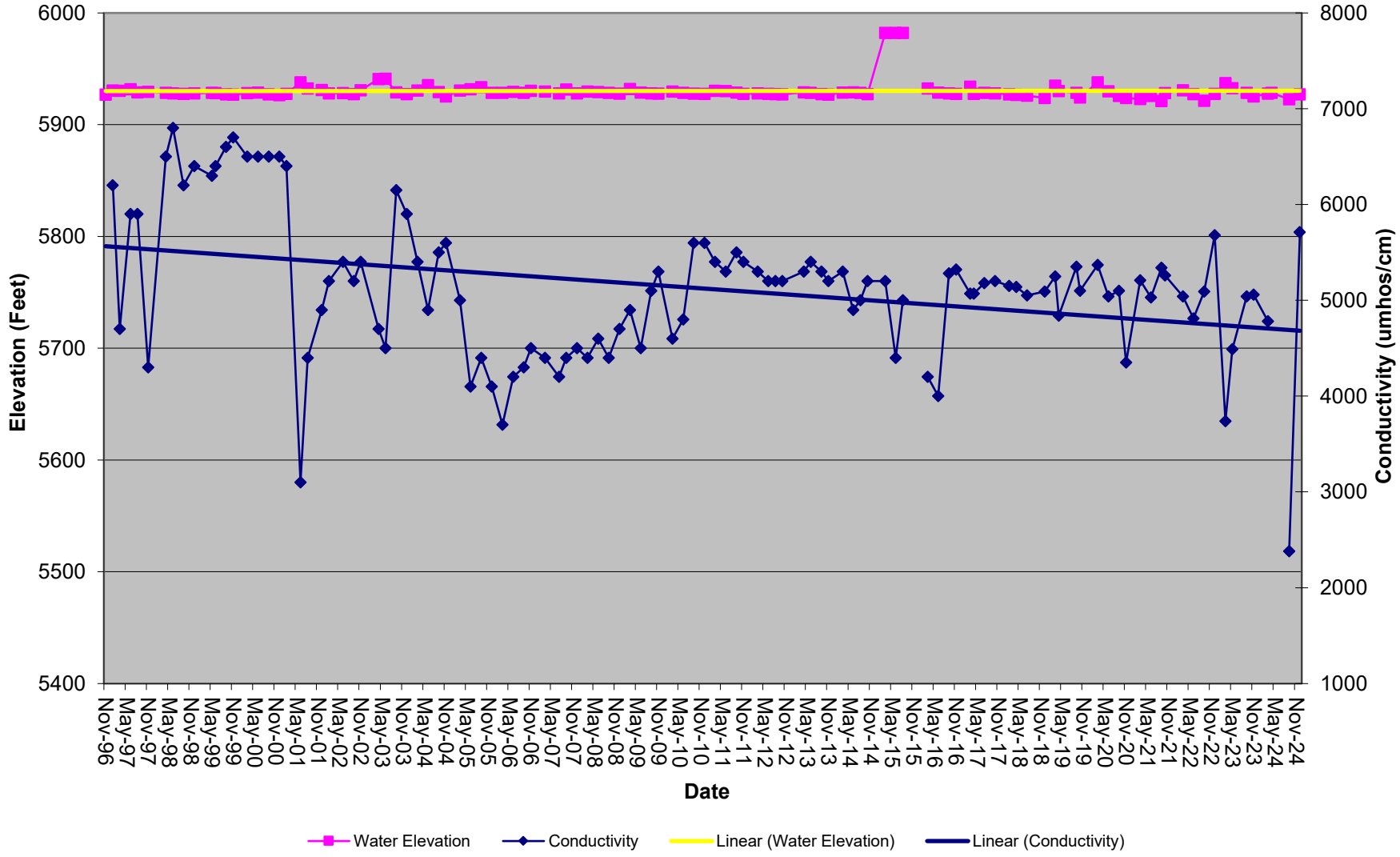
AW-5 Alluvial Well
Top of Pipe Elevation - 5982.14'
Depth - 100'
Pipe 1.14' Above Ground

Initiated								11/23/1996	11/23/1996	11/23/1996	11/23/1996
Activated								3/27/1997	3/27/1997	3/27/1997	3/27/1997
Date								12/11/2024	9/13/2024	4/29/2024	3/18/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	51.65	52.95	55.26	41.03	53.21	61.10	55.1	59.5	53.8	54.3
Water Elevation	Feet	5926.9	5929.2	5930.5	5921.0	5928.9	5941.1	5927.04	5922.64	5928.34	5927.84
FieldComment											
ph	su	7.1	7.2	7.3	6.6	7.5	51.8	7.6	7.4		7.5
Conductivity	umhos/cm	4700	5450	6200	2380	5123	6800	5710	2380		4780
Temperature	Celsius	12.8	13.7	14.6	7.1	14.3	16.9	13.1	14.5		15.1
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	566	658	750	99.05	749.85	1100.00			868	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	0.98	10.76			<MDL	
Chloride	mg/L	49	51	52	29.0	257.1	636.5			237	
Conductivity	umhos/cm	4270	4890	5510	378	4982	6650			4660	
Hardness	mg/L	3330	3380	3430	<MDL	2509	5318			2320	
Nitrate-Nitrite	mg/L	34.4	35.2	36.0	<MDL	14.26	46.70			14.3	
Ammonia	mg/L	0.10	0.11	0.13	<MDL	0.55	2.03			<MDL	
pH	su	7.2	7.4	7.6	6.7	7.4	8.4			7.6	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.136	3.240			<MDL	
ResidueFilterable-TDS	mg/L	5390	5580	5770	3270	4676	6760			3830	
Sulfate	mg/L	3140	3385	3630	977	2298	4550			2030	
Arsenic (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.067	0.552			<MDL	
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.01421	0.0690			<MDL	
Calcium (Dissolved)	mg/L	291	298	305	27.6	253.3	451.0			221	
Iron (Dissolved)	mg/L	<MDL	0.03	0.06	<MDL	0.038	0.106			<MDL	
Iron (TREC)	mg/L	0.10	0.11	0.12	<MDL	8.72	385.00			0.607	
Magnesium (Dissolved)	mg/L	633	642	650	253	510	1158			429	
Manganese (Dissolved)	mg/L	<MDL	0.01	0.02	<MDL	0.011	0.044			<MDL	
Manganese (TREC)	mg/L	0.01	0.01	0.02	<MDL	0.025	0.220			0.022	
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00005	0.00035			<MDL	
Selenium (Dissolved)	mg/L	0.03	0.03	0.03	0.002	0.031	0.250			0.0295	
Sodium (Dissolved)	mg/L	523	531	539	204	426	825			374	
Zinc (Dissolved)	mg/L	<MDL	0.01	0.03	<MDL	0.027	0.107			0.107	

Alluvial Wells AW-1 through AW-6 are located north of Old State Highway 133, near the entrance to the mine.

There is no Baseline Collection possible for points initiated after the influence of mining.

Plot of Conductivity and Water Level



AW-5 - Alluvial Well

Figure 115

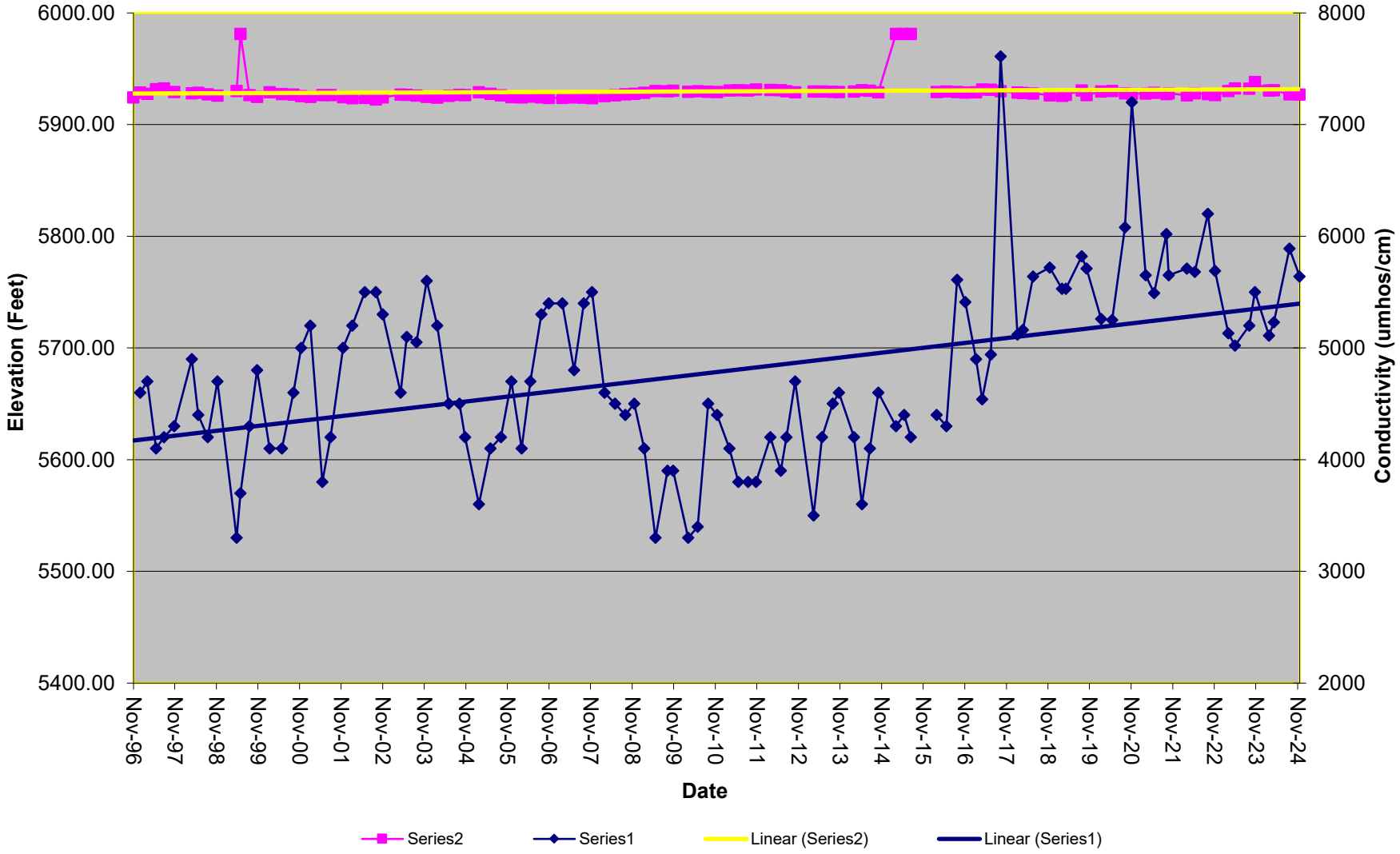
AW-6
Alluvial Well
Top of Pipe Elevation - 5981.18'
Depth - 112'
Pipe 1.38' Above Ground

Initiated								11/23/1996	11/23/1996	11/23/1996	11/23/1996
Activated								3/27/1997	3/27/1997	3/27/1997	3/27/1997
Date								12/11/2024	9/13/2024	4/29/2024	3/18/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	52.62	54.37	56.82	0.00	52.85	58.61	54.4	54.1	50.4	50.6
Water Elevation	Feet	5924.4	5926.8	5928.6	5922.6	5928.3	5981.2	5926.78	5927.08	5930.78	5930.58
FieldComment											
ph	su	7.3	7.4	7.4	7.0	75.6	7520.0	7.51	7.41	7520	7.68
Conductivity	umhos/cm	4600	4650	4700	3300	4769	7610	5640	5890	5230	5110
Temperature	Celsius	12.4	13.5	14.6	11.6	14.2	18.0	13.1	14.3	13.7	16.0
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	278	317	355	217.4	395.4	521.0			465	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			<MDL	
Chloride	mg/L	107	114	120	54.5	139.6	577.8			159	
Conductivity	umhos/cm	2580	3305	4030	3125	4559	7450			5170	
Hardness	mg/L	1880	1925	1970	<MDL	1827	4787			2190	
Nitrate-Nitrite	mg/L	7.3	8.1	8.8	0.0	4.9	9.0			2.55	
Ammonia	mg/L	0.07	0.07	0.07	<MDL	0.36	1.56			<MDL	
pH	su	7.5	7.6	7.7	7.0	7.6	8.3			7.5	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.75	21.80			0.13	
ResidueFilterable-TDS	mg/L	3910	3995	4080	2440	4226	5770			4640	
Sulfate	mg/L	2300	2300	2300	968	2914	33080			2840	
Arsenic (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.090	0.650			<MDL	
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.011	0.040			<MDL	
Calcium (Dissolved)	mg/L	248	254	260	37	238	327			284	
Iron (Dissolved)	mg/L	<MDL	0.14	0.27	<MDL	0.06	0.26			<MDL	
Iron (TREC)	mg/L	0.26	0.31	0.37	0.06	0.53	4.74			0.868	
Magnesium (Dissolved)	mg/L	307	315	322	0.0	318.5	1015.6			360	
Manganese (Dissolved)	mg/L	0.07	0.18	0.29	<MDL	0.488	15.500			0.103	
Manganese (TREC)	mg/L	0.11	0.20	0.29	<MDL	0.106	0.350			0.198	
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00008	0.00070			<MDL	
Selenium (Dissolved)	mg/L	0.05	0.06	0.06	0.001	0.065	0.380			0.0311	
Sodium (Dissolved)	mg/L	501	514	526	306.9	538.4	965.0			527	
Zinc (Dissolved)	mg/L	<MDL	0.05	0.11	<MDL	0.02	0.07			<MDL	

Alluvial Wells AW-1 through AW-6 are located north of Old State Highway 133, near the entrance to the mine.

There is no Baseline Collection possible for points initiated after the influence of mining.

Plot of Conductivity and Water Level



AW-6 - Alluvial Well

Figure 117

AW-7
Alluvial Well
Top of Pipe Elevation - 5950'
Depth - 188'
Pipe 2.17' Above Ground

Initiated								9/9/1999	9/9/1999	9/9/1999	9/9/1999
Activated								9/9/1999	9/9/1999	9/9/1999	9/9/1999
Date								12/11/2024	9/13/2024	4/29/2024	3/18/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet				50.59	77.43	107.80	99	85.1	87.1	105.1
Water Elevation	Feet				5842.2	5872.6	5899.4	5851	5864.9	5862.9	5844.9
FieldComment											
ph	su				7.1	7.8	8.5	8.21	7.84	8.11	7.92
Conductivity	umhos/cm				300	1963	3100	2450	2090	1819	1838
Temperature	Celsius				10.1	12.3	14.7	11.9	13.1	11.6	11.9
Lab											
Parameters	UNITS										
Bicarbonate	mg/L				<MDL	349.9	511.2			421	
Carbonate	mg/L				<MDL	36.9	341.5			<MDL	
Chloride	mg/L				13.0	128.3	539.0			62	
Conductivity	umhos/cm				359	1947	3645			1800	
Hardness	mg/L				<MDL	446.03	1093.20			320	
Nitrate-Nitrite	mg/L				<MDL	1.44	7.92			0.957	
Ammonia	mg/L				<MDL	0.199	1.200			<MDL	
pH	su				7.1	7.9	8.6			7.8	
Phosphate	mg/L				<MDL	0.05	0.31			0.0341	
ResidueFilterable-TDS	mg/L				200	1385	2254			505	
Sulfate	mg/L				40.00	582.65	1110.00			505	
Arsenic (Dissolved)	mg/L				<MDL	0.032	0.255			0.00023	
Cadmium (Dissolved)	mg/L				<MDL	0.006	0.023			0.000067	
Calcium (Dissolved)	mg/L				12.8	92.9	687.0			49.2	
Iron (Dissolved)	mg/L				<MDL	0.05	0.28			0.233	
Iron (TREC)	mg/L				<MDL	0.29	1.01			0.74	
Magnesium (Dissolved)	mg/L				6.3	81.6	619.0			47.8	
Manganese (Dissolved)	mg/L				<MDL	0.015	0.084			0.084	
Manganese (TREC)	mg/L				<MDL	0.352	4.740			0.427	
Mercury (Dissolved)	mg/L				<MDL	0.00006	0.00031			<MDL	
Selenium (Dissolved)	mg/L				<MDL	0.062	1.500			0.00316	
Sodium (Dissolved)	mg/L				46.7	345.9	1705.0			277	
Zinc (Dissolved)	mg/L				<MDL	0.023	0.091			0.091	

The area of concern for monitoring point AW-7 was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered Operational.

Alluvial Wells AW-7 through AW-9 are located south of Old State Highway 133, near the entrance to the mine. They were installed in 1999 as the result of PR-03.

*** Lab. data not provided*

There is no Baseline Collection possible for points initiated after the influence of mining.

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Ground Water

AW-8
Alluvial Well
Top of Pipe Elevation - 5950'
Depth - 60'
Pipe 1.97' Above Ground

Initiated	9/9/1999	9/9/1999	9/9/1999	9/9/1999
Activated	9/9/1999	9/9/1999	9/9/1999	9/9/1999
Date	12/11/2024	9/13/2024	4/29/2024	3/18/2024

Field Parameters	UNITS	Summary Information Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max				
Static Water Level	Feet				11.84	20.40	73.23	19.8	19.8	20.3	20.3
Water Elevation	Feet				5876.8	5929.6	5938.2	5930.2	5930.2	5929.7	5929.7
FieldComment								Dry	Dry	Dry	Dry
ph	su				8.2	9.0	9.8				
Conductivity	umhos/cm				260	360	460				
Temperature	Celsius				13.2	13.9	14.7				
Lab Parameters	UNITS										
Bicarbonate	mg/L				<MDL	444.0	444.0				
Carbonate	mg/L				<MDL	0.0	0.0				
Chloride	mg/L				<MDL	213.0	213.0				
Conductivity	umhos/cm				<MDL	2020.0	2020.0				
Hardness	mg/L				<MDL	448.0	448.0				
Nitrate-Nitrite	mg/L				<MDL	0.0	0.0				
Ammonia	mg/L				<MDL	0.0	0.0				
pH	su				<MDL	7.9	7.9				
Phosphate	mg/L				<MDL	0.0	0.0				
ResidueFilterable (TDS)	mg/L				<MDL	1580.0	1580.0				
Sulfate	mg/L				<MDL	638.0	638.0				
Arsenic	mg/L				<MDL	0.0	0.0				
Cadmium	mg/L				<MDL	0.0	0.0				
Calcium	mg/L				<MDL	710.0	710.0				
Iron (Dissolved)	mg/L				<MDL	0.0	0.0				
Iron (TREC)	mg/L				<MDL	0.1	0.1				
Magnesium	mg/L				<MDL	65.8	65.8				
Manganese (Dissolved)	mg/L				<MDL	0.0	0.0				
Manganese (Total)	mg/L				<MDL	0.0	0.0				
Mercury	mg/L				<MDL	0.0	0.0				
Selenium	mg/L				<MDL	0.0	0.0				
Sodium	mg/L				<MDL	367.0	367.0				
Zinc	mg/L				<MDL	0.0	0.0				

The area of concern for monitoring point AW-8 was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered Operational.

Alluvial Wells AW-7 through AW-9 are located south of Old State Highway 133, near the entrance to the mine. They were installed in 1999 as the result of PR-03.

** Lab. data not provided*

There is no Baseline Collection possible for points initiated after the influence of mining.

Revised 11/17

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Ground Water

AW-9
Alluvial Well
Top of Pipe Elevation - 5946
Depth - 80'
Pipe 1.15' Above Ground

Initiated								10/1/1999	10/1/1999	10/1/1999	10/1/1999
Activated								10/1/1999	10/1/1999	10/1/1999	10/1/1999
Date								12/11/2024	9/13/2024	4/29/2024	3/18/2024
		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet				32.42	56.32	81.60	80	49.8	59.4	80.5
Water Elevation	Feet				51.1	5831.4	5913.6	5866	5896.2	5886.6	5865.5
FieldComment								Dry			Dry
ph	su				7.0	7.8	8.6		7.86	8.02	
Conductivity	umhos/cm				260	1624	4400		1210	1121	
Temperature	Celsius				7.6	11.7	14.9		11.1	10.7	
Lab Parameters	UNITS										
Bicarbonate	mg/L				39.6	298.3	479.0			330	
Carbonate	mg/L				<MDL	7.23	13.70			<MDL	
Chloride	mg/L				3.0	116.5	544.5			27.1	
Conductivity	umhos/cm				519	1636	4350			1070	
Hardness	mg/L				<MDL	453.9	1530.0			248	
Nitrate-Nitrite	mg/L				<MDL	1.79	7.92			1.07	
Ammonia	mg/L				<MDL	0.16	1.10			<MDL	
pH	su				7.4	7.9	8.5			7.5	
Phosphate	mg/L				<MDL	1.41	21.60			<MDL	
ResidueFilterable-TDS	mg/L				330	1164	3800			662	
Sulfate	mg/L				21.8	436.9	2100.0			244	
Arsenic (Dissolved)	mg/L				<MDL	0.0419	0.2880			<MDL	
Cadmium (Dissolved)	mg/L				<MDL	0.00640	0.0220			<MDL	
Calcium (Dissolved)	mg/L				24.1	67.5	230.0			40.1	
Iron (Dissolved)	mg/L				<MDL	0.18	3.59			0.111	
Iron (TREC)	mg/L				<MDL	4.09	122.00			0.284	
Magnesium (Dissolved)	mg/L				20.7	75.2	280.0			36	
Manganese (Dissolved)	mg/L				<MDL	0.018	0.155			<MDL	
Manganese (TREC)	mg/L				<MDL	0.429	11.400			0.038	
Mercury (Dissolved)	mg/L				<MDL	0.00007	0.00036			<MDL	
Selenium (Dissolved)	mg/L				<MDL	0.110	3.100			0.00563	
Sodium (Dissolved)	mg/L				22.1	287.2	1998.0			140	
Zinc (Dissolved)	mg/L				<MDL	0.02	0.11			0.089	

The area of concern for monitoring point AW-9 was affected by the mining operation before its establishment. Therefore, all recorded monitoring events are considered Operational.

Alluvial Wells AW-7 through AW-9 are located south of Old State Highway 133, near the entrance to the mine. They were installed in 1999 as the result of PR-03.

*** Lab. data not provided*

There is no Baseline Collection possible for points initiated after the influence of mining.

Revised 11/17

AW-11
Alluvial Well
Elevation - 5884
Depth - 60.86'

Initiated	12/20/2000	12/20/2000	12/20/2000	12/20/2000
Activated	2/28/2002	2/28/2002	2/28/2002	2/28/2002
Date	12/11/2024	9/13/2024	4/30/2024	3/18/2024

		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	11.92	38.20	50.31	19.13	44.28	57.60	53.3	48.1	54.6	52.3
Water Elevation	Feet	5833.7	5845.8	5872.1	5826.4	5839.7	5864.9	5830.7	5835.9	5829.4	5831.7
FieldComment											
ph	su	6.7	7.3	7.5	6.9	7.6	8.3	7.53	7.59	7.53	7.73
Conductivity	umhos/cm	390	760	1060	480	1128	1823	1201	1401	1788	1823
Temperature	Celsius	11.2	13.4	15.7	7.5	12.8	16.1	10.5	12.9	11.1	12.2
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	350	367	384	177.3	320.0	536.0			351	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	5.02	6.88			<MDL	
Chloride	mg/L	2	3	3	<MDL	39.1	255.2			45	
Conductivity	umhos/cm	671	850	1030	661	1131	2870			1730	
Hardness	mg/L	587	587	587	265.0	551.4	911.7			844	
Nitrate-Nitrite	mg/L	0.10	0.28	0.56	<MDL	0.70	2.70			0.34	
Ammonia	mg/L	<MDL	0.05	0.08	<MDL	0.12	0.43			<MDL	
pH	su	7.2	7.5	7.8	7.1	7.8	8.5			7.5	
Phosphate	mg/L	<MDL	0.14	0.39	<MDL	1.05	20.60			0.0403	
ResidueFilterable-TDS	mg/L	360	553	690	350	779	2150			1300	
Sulfate	mg/L	20	150	250	4.94	232.01	700.00			700	
Arsenic (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.021	0.280			0.00063	
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.010	0.030			0.000084	
Calcium (Dissolved)	mg/L	70.6	92.9	110.0	30.8	128.9	765.0			150	
Iron (Dissolved)	mg/L	0.02	0.04	0.05	<MDL	0.21	2.46			0.736	
Iron (TREC)	mg/L	0.07	4.93	9.97	<MDL	3.38	36.60			36.6	
Magnesium (Dissolved)	mg/L	46.2	64.6	75.8	37.5	109.5	748.0			114	
Manganese (Dissolved)	mg/L	<MDL	0.02	0.03	<MDL	0.394	5.400			0.186	
Manganese (TREC)	mg/L	<MDL	0.34	0.57	<MDL	0.490	5.050			5.05	
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00008	0.00027			<MDL	
Selenium (Dissolved)	mg/L	<MDL	0.001	0.002	<MDL	0.011	0.116			0.00204	
Sodium (Dissolved)	mg/L	12.70	19.37	22.9	11.0	47.0	125.0			80	
Zinc (Dissolved)	mg/L	<MDL	0.01	0.02	<MDL	0.02	0.07			0.032	

** Could not access site*

Alluvial Wells AW-11 through AW-13 are located north of the Union Pacific Railroad. They were installed in 2000 to develop baseline data for a new train loadout.

Baseline Information for AW-11 is derived from events beginning on 12/20/00 through 2/28/02.
Point influenced by mining on 2/28/02.

AW-12
Alluvial Well
Elevation - 5878
Depth - 45.38'

Initiated	12/20/2000	12/20/2000	12/20/2000	12/20/2000
Activated	2/28/2002	2/28/2002	2/28/2002	2/28/2002
Date	12/11/2024	9/13/2024	4/29/2024	3/18/2024

		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	6.49	26.717	37.03	4.70	26.10	62.10	39.7	26.6	37.5	39.3
Water Elevation	Feet	5841.0	5851.3	5871.5	5815.9	5851.9	5873.3	5838.3	5851.4	5840.5	5838.7
FieldComment											
ph	su	7.1	7.5	7.7	6.7	7.6	8.1	7.5	7.8	7.7	7.7
Conductivity	umhos/cm	490	567	610	485	689	1640	701.0	609.0	742.0	755.0
Temperature	Celsius	10.4	13.0	16.1	7.6	13.0	19.0	10.5	13.7	13.6	13.3
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	297	336.33	371	265.95	369.50	471.43			385	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	5.69	8.99			<MDL	
Chloride	mg/L	2	2	2	<MDL	12.3	119.0			2.57	
Conductivity	umhos/cm	548	571	609	473	752	3170			674	
Hardness	mg/L	318	318	318	237.0	355.5	674.3			325	
Nitrate-Nitrite	mg/L	0.45	0.4733	0.51	<MDL	0.68	2.15			0.469	
Ammonia	mg/L	<MDL	0.09	0.27	<MDL	0.12	0.52			<MDL	
pH	su	7.4	7.6333	7.9	7.1	7.8	8.5			7.6	
Phosphate	mg/L	<MDL	0.0167	0.05	<MDL	0.16	1.04			<MDL	
ResidueFilterable-TDS	mg/L	310	330	340	221	471	2450			600	
Sulfate	mg/L	10	13.333	20	<MDL	21.1	48.8			48.8	
Arsenic (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.010	0.140			0.0004	
Cadmium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.010	0.040			0.000054	
Calcium (Dissolved)	mg/L	51.9	54.8	57.4	3.8	158.3	677.0			70.1	
Iron (Dissolved)	mg/L	0.02	8.3167	24.9	<MDL	0.59	10.28			0.114	
Iron (TREC)	mg/L	0.05	42.55	83.7	<MDL	29.03	806.00			115	
Magnesium (Dissolved)	mg/L	<MDL	25.433	42.4	<MDL	75.4	368.0			36.3	
Manganese (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.077	0.621			0.11	
Manganese (TREC)	mg/L	<MDL	0.864	2.050	<MDL	4.257	119.000			2.08	
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.00008	0.00028			<MDL	
Selenium (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.005	0.060			0.00053	
Sodium (Dissolved)	mg/L	19.5	20.633	21.2	13.8	42.3	202.0			21.6	
Zinc (Dissolved)	mg/L	<MDL	0.0033	0.01	<MDL	0.02	0.08			<MDL	

** Could not access site*

*** Not enough water for sample/parameters*

Alluvial Wells AW-11 through AW-13 are located north of the Union Pacific Railroad. They were installed in 2000 to develop baseline data for a new train loadout.

Baseline Information for AW-12 is derived from events beginning on 12/20/00 through 2/28/02.
Point influenced by mining on 2/28/02.

AW-14
Alluvial Well
Depth - 30'
Elevation - 5822
Pipe 0.78' Above Ground

Initiated	7/24/2003	7/24/2003	7/24/2003	7/24/2003
Activated	7/24/2003	7/24/2003	7/24/2003	7/24/2003
Date	12/11/2024	9/13/2024	4/30/2024	3/20/2024

		Summary Information									
		Baseline			Operation						
Field Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet				4.40	7.58	12.10	9	9.1	7.9	8.8
Water Elevation	Feet				5809.9	5814.4	5817.6	5813	5812.9	5814.1	5813.2
FieldComment											
ph	su				6.8	7.5	8.1	7.75	8.09	7.76	7.8
Conductivity	umhos/cm				2	1675	2790	2150	1589	1535	1538
Temperature	Celsius				7.6	12.2	15.7	12	13.3	8.4	11.9
Lab Parameters	UNITS										
Bicarbonate	mg/L				238.2	380.6	552.3			407	
Carbonate	mg/L				<MDL	12.4	20.0			<MDL	
Chloride	mg/L				2.0	137.8	397.0			47.1	
Conductivity	umhos/cm				650	1619	2860			1490	
Hardness	mg/L				237.0	799.3	1770.2			629	
Nitrate-Nitrite	mg/L				<MDL	0.6	2.7			0.35	
Ammonia	mg/L				<MDL	0.66	7.61			<MDL	
pH	su				6.9	7.6	8.5			7.6	
Phosphate	mg/L				<MDL	1.05	20.40			0.0558	
ResidueFilterable-TDS	mg/L				610	1214	1950			1010	
Sulfate	mg/L				67.6	403.8	677.0			462	
Arsenic (Dissolved)	mg/L				0.0002	0.040	0.922			0.00139	
Cadmium (Dissolved)	mg/L				<MDL	0.010	0.030			0.000074	
Calcium (Dissolved)	mg/L				41.6	129.3	241.0			109	
Iron (Dissolved)	mg/L				<MDL	0.88	7.80			2.17	
Iron (TREC)	mg/L				0.27	9.68	28.10			25	
Magnesium-Dissolved	mg/L				7.7	140.0	914.0			86.6	
Manganese-Dissolved	mg/L				0.004	0.497	2.160			0.169	
Manganese (TREC)	mg/L				0.004	1.756	6.780			3.3	
Mercury (Dissolved)	mg/L				<MDL	0.00010	0.00052			<MDL	
Selenium (Dissolved)	mg/L				<MDL	0.018	0.116			0.00168	
Sodium (Dissolved)	mg/L				40.7	132.6	991.0			93.1	
Zinc (Dissolved)	mg/L				<MDL	0.07	0.99			0.034	

The area of concern for monitoring point AW-14 was affected by the mining operation before its establishment. Therefore all recorded monitoring events are considered operational.

** Dry*

Alluvial Well AW-14 is located southwest of Pond K.

There is no baseline collection possible for points initiated after the influence of mining.

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Ground Water

AW-15
Alluvial Well
Top of Pipe Elevation - 5972.52
Depth - 86
Pipe 0.3' Above Ground

Initiated	12/29/2003	12/29/2003	12/29/2003	12/29/2003
Activated	9/27/2004	9/27/2004	9/27/2004	9/27/2004
Date	12/11/2024	9/13/2024	4/29/2024	3/18/2024

		Summary Information									
		Baseline			Operation						
Field Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	84.86	85.27	86.00	75.00	83.44	93.70	83	79.9	83	79.9
Water Elevation	Feet	5886.5	5887.3	5887.7	5878.8	5889.1	5897.5	5889.52	5892.62	5889.52	5892.62
FieldComment		Dry & Damp						Dry		Damp	Dry
ph	su				7.0	7.4	7.9		7.38		
Conductivity	umhos/cm				5	4533	5300		4890		
Temperature	Celsius				8.4	14.4	19.1		13.8		
Lab Parameters	UNITS										
Bicarbonate	mg/L				507.3	621.1	750.0				
Carbonate	mg/L				<MDL	5.61	6.88				
Chloride	mg/L				119.91	254.54	418.00				
Conductivity	umhos/cm				4416	4714	5412				
Hardness	mg/L				292.0	1198.2	1520.0				
Nitrate-Nitrite	mg/L				<MDL	6.06	11.30				
Ammonia	mg/L				0.269	0.458	0.647				
pH	su				7.11	7.95	8.36				
Phosphate	mg/L				0.02	0.08	0.14				
ResidueFilterable-TDS	mg/L				3388.0	3882.3	4793.3				
Sulfate	mg/L				1563.7	1926.02	2786.42				
Arsenic	mg/L				<MDL	0.012	0.019				
Cadmium	mg/L				<MDL	0.010	0.030				
Calcium	mg/L				46.50	181.56	231.80				
Iron (Dissolved)	mg/L				0.07	1.20	2.84				
Iron (TREC)	mg/L				1.56	4.06	9.22				
Magnesium (Dissolved)	mg/L				42.7	180.8	234.0				
Manganese (Dissolved)	mg/L				0.007	0.201	0.664				
Manganese (TREC)	mg/L				0.060	0.247	0.701				
Mercury	mg/L				0.00003	0.00006	0.00010				
Selenium	mg/L				0.039	0.057	0.077				
Sodium	mg/L				428.25	758.85	1510.00				
Zinc	mg/L				0.018	0.047	0.070				

**Not enough water for field or lab parameters*
*** Not enough water for lab sample*

Alluvial Wells AW-15 through AW-17 are located north of Old State Highway 133, below the GOB Pile.

Baseline Information for AW-15 is derived from events beginning on 12/29/03 through 9/27/04.
Point influenced by mining on 9/27/04.

Figure 124

Bowie Resources, LLC
Bowie No. 2 Mine
2024 Annual Hydrology Report

Ground Water

AW-16
Alluvial Well
Top of Pipe Elevation - 5964.67
Depth - 75
Pipe 0.8' Above Ground

Initiated	12/29/2003	12/29/2003	12/29/2003	12/29/2003
Activated	9/27/2004	9/27/2004	9/27/2004	9/27/2004
Date	12/11/2024	9/13/2024	4/29/2024	3/18/2024

		Summary Information									
		Baseline			Operation						
Field Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	68.00	69.23	70.48	61.65	72.61	83.40	73.6	73.6	69.8	68.3
Water Elevation	Feet	5894.2	5895.4	5896.7	5881.3	5892.1	5903.0	5891.07	5891.07	5894.87	5896.37
FieldComment								Dry	Dry	Dry	
ph	su	7.9	7.9	7.9	7.0	7.5	8.6				7.43
Conductivity	umhos/cm	740	740	740	7	4027	8510				7090
Temperature	Celsius	13.7	13.7	13.7	9.9	13.7	16.9				13.4
Lab Parameters	UNITS										
Bicarbonate	mg/L				558.0	695.6	867.0				
Carbonate	mg/L				<MDL	<MDL	<MDL				
Chloride	mg/L				43.6	82.7	150.0				
Conductivity	umhos/cm				5313.4	6240.9	6970.0				
Hardness	mg/L				2304.4	2764.4	3230.0				
Nitrate-Nitrite	mg/L				<MDL	3.67	5.85				
Ammonia	mg/L				<MDL	2.1	4.0				
pH	su				7.7	8.0	8.2				
Phosphate	mg/L				0.21	1.22	2.84				
ResidueFilterable-TDS	mg/L				5604	6073	6680				
Sulfate	mg/L				2903.8	3289.8	3970.0				
Arsenic	mg/L				0.001	0.056	0.146				
Cadmium	mg/L				0.034	0.042	0.050				
Calcium	mg/L				328.8	373.9	434.0				
Iron (Dissolved)	mg/L				0.08	0.16	0.31				
Iron (TREC)	mg/L				0.12	11.49	20.04				
Magnesium (Dissolved)	mg/L				380.3	450.8	520.0				
Manganese (Dissolved)	mg/L				0.0	0.192	0.510				
Manganese (Total)	mg/L				0.0	0.819	2.240				
Mercury	mg/L				0.00005	0.00006	0.00007				
Selenium	mg/L				0.009	0.019	0.040				
Sodium	mg/L				181.8	801.4	1356.5				
Zinc	mg/L				0.02	0.24	0.57				

Alluvial Wells AW-15 through AW-17 are located north of Old State Highway 133, below the GOB Pile.

**Just enough water for field parameters*
***Not enough water for parameters*

Baseline Information for AW-16 is derived from events beginning on 12/29/03 through 9/27/04.
Point influenced by mining on 9/27/04.

Figure 125

AW-17
Alluvial Well
Top of Pipe Elevation - 5950.81
Depth - 62
Pipe Flush with Ground

Initiated	12/29/2003	12/29/2003	12/29/2003	12/29/2003
Activated	9/27/2004	9/27/2004	9/27/2004	9/27/2004
Date	12/11/2024	9/13/2024	4/29/2024	3/18/2024

		Summary Information									
Field		Baseline			Operation						
Parameters	UNITS	Min	Ave	Max	Min	Ave	Max				
Static Water Level	Feet	38.40	46.51	59.00	26.40	55.09	68.60	60	52.9	51.8	52.7
Water Elevation	Feet	5891.8	5904.3	5912.4	5882.2	5895.7	5924.4	5890.81	5897.91	5899.01	5898.11
FieldComment											
ph	su	8.5	8.9	9.7	7.1	7.7	8.4	8.28		7.75	7.93
Conductivity	umhos/cm	200	264	320	870	3166	5380	2030		3610	2720
Temperature	Celsius	1.9	7.1	12.2	9.2	12.1	19.8	12.5		11.1	11.3
Lab											
Parameters	UNITS										
Bicarbonate	mg/L	114.6	114.6	114.6	162.54	325.90	641.70			264	
Carbonate	mg/L	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL			<MDL	
Chloride	mg/L	2.57	2.57	2.57	14.7	117.4	224.7			64.1	
Conductivity	umhos/cm	271.7	271.7	271.7	827	3087	5230			3520	
Hardness	mg/L	76	76	76	326	1042	1836			1150	
Nitrate-Nitrite	mg/L	3.05	3.05	3.05	<MDL	1.56	4.07			0.988	
Ammonia	mg/L	2.78	2.78	2.78	<MDL	0.45	0.83			<MDL	
pH	su	8.5	8.5	8.5	6.9	7.6	8.3			7.3	
Phosphate	mg/L	<MDL	<MDL	<MDL	<MDL	0.045	0.100			0.0403	
ResidueFilterable-TDS	mg/L	185	185	185	0	2385	4046			2870	
Sulfate	mg/L	2.1	2.1	2.1	126.36	1305.55	2230.00			1820	
Arsenic (Dissovled)	mg/L	0.016	0.016	0.016	<MDL	0.014	0.032			<MDL	
Cadmium (Dissolved)	mg/L	0.0003	0.0003	0.0003	<MDL	0.019	0.060			<MDL	
Calcium (Dissolved)	mg/L	17.26	17.26	17.26	71.9	208.3	358.8			269	
Iron (Dissolved)	mg/L	0.029	0.029	0.029	0.016	0.162	0.832			0.204	
Iron (TREC)	mg/L	0.117	0.117	0.117	0.090	1.033	10.350			0.761	
Magnesium (Dissolved)	mg/L	8.09	8.09	8.09	35.50	125.82	228.25			116	
Manganese (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.011	0.023			<MDL	
Manganese (TREC)	mg/L	0.041	0.041	0.041	0.007	16.915	236.000			0.013	
Mercury (Dissolved)	mg/L	<MDL	<MDL	<MDL	0.00002	0.00006	0.00013			<MDL	
Selenium (Dissolved)	mg/L	0.014	0.014	0.014	0.004	0.017	0.046			0.0191	
Sodium (Dissolved)	mg/L	12	12	12	40.60	301.96	565.00			431	
Zinc (Dissolved)	mg/L	0.005	0.005	0.005	0.010	0.029	0.079			0.079	

Alluvial Wells AW-15 through AW-17 are located north of Old State Highway 133, below the GOB Pile.

** Not enough water for field or lab parameters*
***Not enough water for lab sample*

Baseline Information for AW-17 is derived from events beginning on 12/29/03 through 9/27/04.
Point influenced by mining on 9/27/04.

P-1
Stevens Draw - Pond 1
Depth - 5'
Elevation - 7080

	Date	10/3/2024	8/20/2024	5/16/2024	3/18/2024
Field Parameters	UNITS				
Pond Inflow	GPM	0	0	0	0
Pond Outflow	GPM	0	0	0	0
Freeboard	FT	0	0	0	0
Water Depth	FT	0	0	0	0
Water Level	%	0	0	0	0
Field Comments		Dry	Dry	Dry	Dry

Pond 1 (P-1) results from the discharge of Spring 14 (S-14) and is located in Stevens Draw location of DH-15, DH-39 and the Lower Stevens Draw monitoring point.

1Q site inaccessible due to snow

Point P-1 has not been influenced by mining.

P-2
Head of Freeman Gulch -
Pond 2
Depth - 3'
Elevation - 7600

Date	10/10/2024	9/13/2024	5/16/2024

Field Parameters	UNITS			
Pond Inflow	GPM	0	0	0
Pond Outflow	GPM	0	0	0
Freeboard	FT	3	3	4
Water Depth	FT	0	0	0
Water Level	%	0	0	0
Field Comments		No discharge	No discharge	No discharge

Pond 2 (P-2) is located in Freeman Gulch, near the Upper Freeman Gulch monitoring point and is fed by the discharge of Spring 3 (S-3).

Note: Site in accesible 1Q due to snow levels

Baseline Information for Point P-2 is derived from events beginning on 11/14/95 through 9/19/99.
Point influenced by mining on 9/19/99.

P-3
Assoc. with Spring 16
Terror Creek-Pond 3
Depth - 6.5'
Elevation - 7730

Date	10/16/2024	9/14/2024	6/24/2024

Field Parameters	UNITS			
Pond Inflow	GPM	0		
Pond Outflow	GPM	0		
Freeboard	FT	4.5	5	5.5
Water Depth	FT	2	1.5	1
Water Level	%	29	21	14
Field Comments			Dry	Dry

Pond 3 (P-3) is located in an un-named gulch which leads to Terror Creek. This pond is fed by Spring 16 (S-16) and is accessible by a road that passes Pond 4 (P-4). This road is not shown on the map.

Note: Site in accesible 1Q due to snow levels

Point influenced by mining on 1/15/01.

P-4
Assoc. with Spring 4
Terror Creek - Pond 4
Depth - 3.5'
Elevation - 7880

Date	10/16/2024	9/24/2024	6/24/2024

Field Parameters	UNITS			
Pond Inflow	GPM	0	0	0
Pond Outflow	GPM	0	0	0
Freeboard	FT	0.1	0.5	0.5
Water Depth	FT	3.4	3	3
Water Level	%	97	86	86
Field Comments				

Pond 4 (P-4) is located in an un-named gulch which leads to Terror Creek. This pond receives water from Springs 4 (S-4) and 4a (S-4a). It is accessible by an old exploration road.

Note: Site in accesible 1Q due to snow levels

Baseline Information for Point P-4 is derived from events beginning on 9/27/95 through 1/15/01.
Point influenced by mining on 1/15/01.

P-5
Sheep Corral - Pond 5
Depth - 8'
Elevation - 7800

	Date	10/16/2024	9/15/2024	6/24/2024
Field Parameters	UNITS			
Pond Inflow	GPM	0	0	0
Pond Outflow	GPM	0	0	0
Freeboard	FT	6	5	4.5
Water Depth	FT	2	3	3.5
Water Level	%	25	38	44
Field Comments				

Pond 5 (P-5) is located in an un-named gulch which feeds into Sheep Corral Gulch. This pond is fed by Springs 5 (S-5), 5a (S-5a) and 5b (S-5b) and is accessible by an old coal exploration road.

Note: Site in accesible 1Q due to snow levels

Point influenced by mining on 11/15/01.

P-6
Terror Creek - Pond 6
Depth - 3'
Elevation - 7880

	Date	10/16/2024	9/14/2024	6/24/2024
Field Parameters	UNITS			
Pond Inflow	GPM	0	0	0
Pond Outflow	GPM	0.0	0.0	0.0
Freeboard	FT	3.0	3.0	3.0
Water Depth	FT	0	0	0
Water Level	%	0.00	0.00	0.00
Field Comments		Dry	Dry	Dry

Pond 6 (P-6) is located in an un-named gulch which leads to Terror Creek. This pond rece water from Spring 18 (S-18).

Note: Site in accesible 1Q due to snow levels

Point P-6 was influenced by mining in 2007.

P6-5
W. Fork of Terror Creek - Pond 6-5
Elevation - 8020

Initiated	7/19/1985	7/19/1985	7/19/1985
Activated			
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation					
Outflow	GPM	0.00	0.09	2.56				0.0	0.0	0.0
Inflow	GPM	0.00	0.00	0.00				0.0	0.0	0.0
Freeboard	Feet							6	6	4
Temperature	Celsius	12.7	15.6	24.7						
Conductivity	umhos/cm	280	452	791						
pH	su	6.2	7.8	8.5						
Field Comments										
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	164.7	290.7	420.9						
Carbonate	mg/L									
Chloride	mg/L	1	6	11						
Conductivity	umhos/cm	285	446	629						
Hardness	mg/L	127	199	320						
pH	su	7.3	7.5	7.9						
ResidueFilterable-TDS	mg/L	22	240	432						
ResidueNonFilterable-TSS	mg/L	10	185	830						
SAR		0.43	0.56	0.9						
Sulfate	mg/L	<MDL	7.7	14.0						
Calcium (Dissolved)	mg/L	31	50	74						
Magnesium (Total)	mg/L	12	22	33						
Sodium (Dissolved)	mg/L	13	19	29						
Potassium	mg/L									
TDS Ratio (grav./calc.)										

The area of concern for monitoring point P6-5 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/19/85 and not yet considered complete.
Point P6-5 has not been influenced by mining.

P7-2
Steven's Gulch - Pond 7-2
Elevation - 8190

Initiated	7/29/1985	7/29/1985	7/29/1985
Activated	6/10/2014	6/10/2014	6/10/2014
Date	10/7/2024	8/24/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation					
Outflow	GPM	0	0.67	15.39	11.25		11.25			
Inflow	GPM	0	0.27	3.75	0.00		0.00			
Freeboard	Feet	0	1.32	3.42	6.50		6.50	6	6.5	2.5
Temperature	Celsius	10	16.71	27.80	15.10		15.10			
Conductivity	umhos/cm	160	248.77	321.00	170.00		170.00			
pH	su	7.2	8.46	9.70	7.7		7.7			
Field Comments								No flow		
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	119.6	158.9	223.0						
Carbonate	mg/L									
Chloride	mg/L	<MDL	2.7	5.0						
Conductivity	umhos/cm	204.0	251.3	320.0						
Hardness	mg/L	92.0	117.0	142.0						
pH	su	6.8	7.5	8.3						
ResidueFilterable-TDS	mg/L	118.0	169.7	234.0						
ResidueNonFilterable-TSS	mg/L	10.0	100.0	538.0						
SAR		0.20	0.41	1.00						
Sulfate	mg/L	<MDL	11.3	49.0						
Calcium (Dissolved)	mg/L	22.0	27.9	35.0						
Magnesium (Total)	mg/L	9.0	11.5	15.0						
Sodium (Dissolved)	mg/L	5.0	10.0	22.0						
Potassium	mg/L									
TDS Ratio (grav./calc.)										

Activated 6/10/14

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/29/85.
Point P7-2 was influenced by mining June 10, 2014.

P7-7
Steven's Gulch - Pond 7-7
Elevation - 8380

Initiated	7/25/1985	7/25/1985	7/25/1985
Activated			
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max				Operation		
Inflow	GPM	0.0	0.0	0.0				0	0	0
Outflow	GPM	0.0	0.2	5.0				0	0	0
Freeboard	Feet	0.00	1.85	4.80						
Temperature	Celsius	3.1	14.6	27.1						
Conductivity	umhos/cm	227.0	381.2	829.0						
pH	su	6.4	7.6	8.1						
Field Comments								Dry	Dry	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	126.9	190.5	244.0						
Carbonate	mg/L									
Chloride	mg/L	<MDL	1.6	3.0						
Conductivity	umhos/cm	219.0	303.1	460.0						
Hardness	mg/L	117.0	151.2	183.0						
pH	su	6.4	7.3	7.9						
ResidueFilterable-TDS	mg/L	142.0	204.8	276.0						
ResidueNonFilterable-TSS	mg/L	2.0	65.1	252.0						
SAR		0.2	0.4	1.0						
Sulfate	mg/L	<MDL	6.8	10.0						
Calcium (Dissolved)	mg/L	24.0	34.8	42.0						
Magnesium (Total)	mg/L	11.0	15.6	19.0						
Sodium (Dissolved)	mg/L	4.0	10.8	29.0						
TDS Ratio (grav./calc.)										

The area of concern for monitoring point P7-7 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

**Dam Gone*
*** Data not provided in field notes*

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/25/85 and not yet considered complete.
Point P7-7 has not been influenced by mining.

P7-11
Steven's Gulch - Pond 7-11
Elevation - 8400

Initiated	7/25/1985	7/25/1985	7/25/1985
Activated			
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max				Operation		
Outflow	GPM	0.00	0.15	7.99				0	0	0
Inflow	GPM	0.00	0.17	7.99				0	0	0
Freeboard	Feet	0.00	1.32	2.61						
Temperature	Celsius	3.6	15.9	29.9						
Conductivity	umhos/cm	138	288	495						
pH	su	6.4	7.6	9.2						
Field Comments								Dry	Dry	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	105	320	2116						
Carbonate	mg/L	<MDL	<MDL	<MDL						
Chloride	mg/L	<MDL	3	4						
Conductivity	umhos/cm	202	262	346						
Hardness	mg/L	79	122	172						
pH	su	6.3	7.4	8.3						
ResidueFilterable-TDS	mg/L	144	190	260						
ResidueNonFilterable-TSS	mg/L	2	277	3033						
SAR		0.34	0.54	1.78						
Sulfate	mg/L	<MDL	18	121						
Calcium (Dissolved)	mg/L	3.66	26.50	41.00						
Magnesium (Total)	mg/L	7.0	12.4	19.7						
Sodium (Dissolved)	mg/L	8	13	42						
TDS Ratio (grav./calc.)		1.01	1.04	1.07						

The area of concern for monitoring point P7-11 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/25/85 and not yet considered complete.
Point P7-11 has not been influenced by mining.

P8-4
Terror Creek - Pond 8-4
Elevation - 6980

Initiated								1987	1987	1987
Activated										
Date								10/16/2024	9/14/2024	6/24/2024
		Summary Information								
Field		Baseline								
Parameters	UNITS	Min	Ave	Max						
Outflow	GPM	0.0	0.0	0.0				0	0	0
Inflow	GPM	0.0	0.08	0.94				0	0	0
Freeboard	Feet	0.35	0.38	0.41						
Temperature	Celsius	6.8	10.8	18.3						
Conductivity	umhos/cm	1140	1188	1220						
pH	su	8.4	8.5	8.6						
Field Comments								Dry	Dry	Dry
Lab										
Parameters	UNITS									
Bicarbonate	mg/L									
Chloride	mg/L									
Conductivity	umhos/cm									
Hardness	mg/L									
pH	su									
ResidueFilterable-TDS	mg/L									
ResidueNonFilterable-TSS	mg/L									
SAR										
Sulfate	mg/L									
Calcium (Dissolved)	mg/L									
Magnesium (Total)	mg/L									
Sodium (Dissolved)	mg/L									
Potassium	mg/L									
TDS Ratio (grav./calc.)										

The area of concern for monitoring point P8-4 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated in 1987 and not yet considered complete.
Point P8-4 has not been influenced by mining.

P12-1
Steven's Gulch - Pond 12-1
Elevation -7950

Initiated	7/30/1985	7/30/1985	7/30/1985
Activated	4/1/2014	4/1/2014	4/1/2014
Date	10/17/2024	9/14/2024	6/18/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation					
Outflow	GPM	0.00	0.29	3.75	9.375	0.3125	9.375	0	0	0
Inflow	GPM	0.00	0.00	0.00	3.75	0.1293	3.75	0	0	0
Freeboard	Feet	0.00	1.58	3.35	7.10	2.88	7.10	5	5	6
Temperature	Celsius	5.9	17.7	28.8	15.2		15.2			
Conductivity	umhos/cm	283	360	493	260		260			
pH	su	6.6	8.2	10.8	7.9		7.9			
Field Comments								Dry		
Lab Parameters	UNITS									
Bicarbonate	mg/L	88.0	168.4	269.6						
Carbonate	mg/L	12.4	12.4	12.4						
Chloride	mg/L	<MDL	4.5	7.0						
Conductivity	umhos/cm	256	341	487						
Hardness	mg/L	86.0	122.9	159.0						
pH	su	7.1	7.8	8.9						
ResidueFilterable-TDS	mg/L	154	215	288						
ResidueNonFilterable-TSS	mg/L	<MDL	38	160						
SAR		0.600	0.943	1.550						
Sulfate	mg/L	4.0	36.5	109.0						
Calcium (Dissolved)	mg/L	28.0	35.8	49.0						
Magnesium (Total)	mg/L	4.0	10.3	14.0						
Sodium (Dissolved)	mg/L	16.0	24.8	41.0						
TDS Ratio (grav./calc.)										

Note: Site in accesible 1Q due to snow levels

Activated 4/1/14

Baseline Information Collection initiated on 7/30/85.
Point P12-1 was influenced by mining 4/1/14.

P12-2
Steven's Gulch - Pond 12-2
Elevation - 8030

Initiated	7/6/1983	7/6/1983	7/6/1983
Activated	5/15/2014	5/15/2014	5/15/2014
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0	0.31	4.94	1.25		1.25		0	0
Inflow	GPM	0	0.19	0.38	0.00		0.00		0	0
Freeboard	Feet	0	0.10	0.56	6.00		6.00	6	4.5	6
Temperature	Celsius	5.4	16.33	26.30	17.20		17.20			
Conductivity	umhos/cm	239	380.35	520.00	350.00		350.00			
pH	su	6.4	8.03	9.40	7.7		7.7			
Field Comments										N
Lab Parameters	UNITS									
Bicarbonate	mg/L	200.0	253.6	336.0						
Carbonate	mg/L	5.9	8.85	11.80						
Chloride	mg/L	2.0	4.1	9.0						
Conductivity	umhos/cm	317	395	456						
Hardness	mg/L	144.00	192.08	238.00						
Acidity	mg/L	16.0	16.0	16.0						
pH	su	7.3	7.9	8.6						
ResidueFilterable-TDS	mg/L	168	244	292						
ResidueNonFilterable-TSS	mg/L	2	330	3332						
SAR		0.330	0.613	1.260						
Sulfate	mg/L	<MDL	19.57	113.00						
Calcium (Dissolved)	mg/L	20.0	41.7	54.0						
Iron (Total)	mg/L	1.42	1.42	1.42						
Iron (Dissolved)	mg/L	0.04	0.04	0.04						
Magnesium (Total)	mg/L	16.0	21.4	29.0						
Manganese (Total)	mg/L	0.320	0.320	0.320						
Sodium (Dissolved)	mg/L	10	19.17	36.00						
TDS Ratio (grav./calc.)	%									

Activated May 15, 2014

**Large Seep Area - Unmeasurable*

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/6/83.
Point P12-2 was influenced by mining 05/15/2014.

P12-10
Steven's Gulch - Pond 12-10
Elevation - 7820

`

Initiated	7/30/1985	7/30/1985	7/30/1985
Activated			
Date	11/14/2023	9/28/2023	6/12/2023

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0.0	1.6	48.066				0	0	0
Inflow	GPM	0.0	0.3	15.00				0	0	0
Freeboard	Feet							6	5	6
Temperature	Celsius	4.4	16.8	25.5						
Conductivity	umhos/cm	270	347	466						
pH	su	6.7	8.2	10.4						
Field Comments										
Lab Parameters	UNITS									
Bicarbonate	mg/L	122	188.8	309						
Carbonate	mg/L	6	9	12						
Chloride	mg/L	<MDL	6.3	17						
Conductivity	umhos/cm	217	333	463						
Hardness	mg/L	98	146	209						
pH	su	7.6	8.2	9.8						
ResidueFilterable-TDS	mg/L	146	208	288						
ResidueNonFilterable-TSS	mg/L	<MDL	26.6	120						
SAR		<MDL	0.73	1.07						
Sulfate	mg/L	4	19	41						
Calcium (Dissolved)	mg/L	28	37	48						
Magnesium (Total)	mg/L	6	13	29						
Sodium (Dissolved)	mg/L	9	20	32						
TDS Ratio (grav./calc.)										

The area of concern for monitoring point P12-10 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Corrected monitoring information from 4/28/10 to 11/29/11.
Contractor has been monitoring Pond 12-9 as 12-10, but realized his error during 4/10/12 monitoring.
Found remnants of Pond 12-10 on 4/10/12 - has been washed out for a long time. No evidence of flow.

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/30/85 and not yet considered complete.
Point P12-10 has not been influenced by mining.

P17-1
Coal Gulch - Pond 17-1
Elevation - 7340

Initiated	12/22/2004	12/22/2004	12/22/2004
Activated			
Dated	11/20/2023	9/16/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max				Operation		
Outflow	GPM	0.0	1.5	30				0	0	0
Inflow	GPM	0.0	0.0	0.0				0	0	0
Freeboard	Feet	0.0	0.7	5.5						
Temperature	Celsius	0.5	9.0	17.5						
Conductivity	umhos/cm	40.0	151.7	570						
pH	su	7.6	8.0	8.4						
Field Comments								Dry	Dry	Dry
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	40.5	56	84						
Carbonate	mg/L	<MDL	<MDL	<MDL						
Chloride	mg/L	1	3	4						
Conductivity	umhos/cm	77.8	104	146						
Hardness	mg/L	26.8	47	75						
pH	su	7.5	7.7	7.9						
ResidueFilterable-TDS	mg/L	61	80	100						
ResidueNonFilterable-TSS	mg/L	16	25	36						
SAR		0.16	0.17	0.19						
Sulfate	mg/L	<MDL	5.35	5.35						
Calcium (Dissolved)	mg/L	5.83	11.98	19.80						
Magnesium (Total)	mg/L	2.98	4.26	6.30						
Sodium (Dissolved)	mg/L	2.21	2.64	3.40						
TDS Ratio (grav./calc.)		1.07	1.36	1.82						

The area of concern for monitoring point P17-1 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 12/22/04 and not yet considered complete.
Point P17-1 has not been influenced by mining.

P18-1
Coal Gulch - Pond 18-1
Elevation - 7760

Initiated	7/19/1985	7/19/1985	7/19/1985
Activated	6/6/2012	6/6/2012	6/6/2012
Date	10/31/2024	9/16/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation Min	Operation Ave	Operation Max			
Outflow	GPM	0.00	0.20	2.11	0.00	0.04	0.94	0	0	0
Inflow	GPM	0.00	0.31	1.88	0.00	0.22	4.10	0	0	0
Freeboard	Feet	0.00	2.07	2.91	0.00	0.84	3.50			
Temperature	Celsius	9.8	16.2	26.7	11.20	17.85	23.10			
Conductivity	umhos/cm	115	211	378	557.00	600.00	620.00			
pH	su	6.3	7.8	9.2	8.10	8.43	8.68			
Field Comments								Dry	Dry	Dry
Lab Parameters	**UNITS**									
Bicarbonate	mg/L	49.0	125.4	201.3						
Carbonate	mg/L	0.6	0.6	0.6						
Chloride	mg/L	<MDL	7	11						
Conductivity	umhos/cm	120	244	398						
Hardness	mg/L	54	94	153						
pH	su	6.2	7.0	7.6						
ResidueFilterable-TDS	mg/L	86	169	280						
ResidueNonFilterable-TSS	mg/L	12	178	552						
SAR		<MDL	0.21	0.47						
Sulfate	mg/L	<MDL	15	39						
Calcium (Dissolved)	mg/L	15	25	40						
Magnesium (Total)	mg/L	4	7	13						
Sodium (Dissolved)	mg/L	<MDL	5	10						
TDS Ratio (grav./calc.)										

The monitoring point for Pond 18-1 is located on a south facing slope that drains down toward the North Fork of the Gunnison River.

Note: Site in accesible 1Q due to snow levels

Baseline Information is derived from monitoring events beginning on 7/19/85 through 6/6/2012.
Point P18-1 influenced by mining 6/6/12.

Initiate	7/6/1983	7/6/1983	7/6/1983
Activate			
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max				Operation		
Inflow	GPM	0.00	0.25	15.708				0	0	0
Outflow	GPM	0.00	0.00	0.00				0	0	0
Freeboard	Feet	0.48	2.11	5.4						0.60
Temperature	Celsius	2.2	16.0	29						
Conductivity	umhos/cm	206	329	500						
pH	su	5.9	7.4	8.8						
Field Comments								Dry	Damp	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	109.8	187.5	268						
Carbonate	mg/L	<MDL	<MDL	<MDL						
Chloride	mg/L	<MDL	6.45	30						
Conductivity	umhos/cm	197	324	581						
Hardness	mg/L	11	128	210						
pH	su	6.8	7.3	8.3						
ResidueFilterable-TDS	mg/L	126	211	402						
ResidueNonFilterable-TSS	mg/L	6	59	158						
SAR		0.34	0.65	1.58						
Sulfate	mg/L	<MDL	18.12	119						
Calcium (Dissolved)	mg/L	23	35	56						
Magnesium (Total)	mg/L	8	12	17						
Sodium (Dissolved)	mg/L	8	18	39						
TDS Ratio (grav./calc.)		1.05	1.05	1.05						

The area of concern for monitoring point P18-4 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/6/83 and not yet considered complete.
Point P18-4 has not been influenced by mining.

P33-3
Sheep Corral - Pond 33-3
Depth - 5.5'
Elevation - 7760

Date		10/7/2024	9/13/2024	6/20/2024
Field Parameters	UNITS			
Pond Inflow	GPM	0	0	0
Freeboard	FT	6.5	6.5	6.5
Water Depth	FT	0	0	0
Water Level	%	0	0	0
Field Comments		Dry	Dry	Dry

Pond 33-3 (P33-3) is located in an un-named drainage which discharges into Sheep Corra This pond apparently has no spring, and catches only run-off water in the early spring.

Note: Site in accesible 1Q due to snow levels

Baseline Information for Point P33-3 is derived from events beginning on 10/30/97 through 12/1/01.
Point influenced by mining on 12/1/01.

Initiated	6/14/1983	6/14/1983	6/14/1983
Activated			
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max				Operation		
Inflow	GPM	0.0	0.0	0				0	0	0
Outflow	GPM	0.0	0.1	4.488				0	0	0
Freeboard	Feet	0.18	1.06	2.55						
Temperature	Celsius	4.2	16.9	29						
Conductivity	umhos/cm	62.0	247.1	968						
pH	su	7.0	8.3	9.8						
Field Comments								Dry	Dry	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	53.7	140.7	478.2						
Carbonate	mg/L									
Chloride	mg/L	<MDL	20.0	120						
Conductivity	umhos/cm	95.0	271.8	885						
Hardness	mg/L	44.0	103.3	331						
pH	su	6.3	7.2	8						
ResidueFilterable-TDS	mg/L	90.0	200.5	372						
ResidueNonFilterable-TSS	mg/L	14.0	125.0	624						
SAR		0.1	0.4	1.74						
Sulfate	mg/L	<MDL	19.6	62						
Calcium (Dissolved)	mg/L	11.0	25.3	83						
Magnesium (Total)	mg/L	3.0	9.7	30						
Sodium (Dissolved)	mg/L	1.0	10.8	50						
Potassium	mg/L									
TDS Ratio (grav./calc.)										

The area of concern for monitoring point P81 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

** Data not provided in field notes*

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 6/14/83 and not yet considered complete.
Point P81 has not been influenced by mining.

P82
Steven's Gulch - Pond 82
Elevation - 7580

Initiated	7/18/1990	7/18/1990	7/18/1990
Activated			
Date	10/31/2024	8/20/2024	6/20/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max				Operation		
Outflow	GPM	0.00	0.09	4.90				0	0	0
Inflow	GPM	0.00	0.00	0.00				0	0	0
Freeboard	Feet	0.00	1.45	5.50						
Temperature	Celsius	7.8	17.9	28.0						
Conductivity	umhos/cm	91	237	569						
pH	su	6.4	8.5	10.0						
Field Comments								Dry	Dry	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	51.2	134	290						
Carbonate	mg/L	1	1	1						
Chloride	mg/L	<MDL	8	25						
Conductivity	umhos/cm	104	258	623						
Hardness	mg/L	36	89	158						
pH	su	6.4	7.1	8.4						
ResidueFilterable-TDS	mg/L	75	225	566						
ResidueNonFilterable-TSS	mg/L	28	155	450						
SAR		<MDL	0.22	0.49						
Sulfate	mg/L	4	22	78						
Calcium (Dissolved)	mg/L	11	24	45						
Magnesium (Total)	mg/L	2	7	13						
Sodium (Dissolved)	mg/L	<MDL	5	14						
Potassium	mg/L									
TDS Ratio (grav./calc.)										

The area of concern for monitoring point P82 has not been affected by the mining operation. Therefore, all recorded monitoring events are considered Baseline.

** Data not provided in field notes*

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/18/90 and not yet considered complete.
Point P82 has not been influenced by mining.

P83
Coal Gulch - Pond 83
Depth - 2.5'
Elevation -7820

Initiated	7/18/1983	7/18/1983	7/18/1983
Activated	7/15/2013	7/15/2013	7/15/2013
Date	10/7/2024	8/20/2024	6/24/2024

Summary Information

Field Parameters	UNITS	Baseline Min	Baseline Ave	Baseline Max	Operation					
Outflow	GPM	0.00	0.17	6.24	0.00	0.00	0.00	0	0	0
Inflow	GPM	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Freeboard	Feet	0.50	2.23	2.54	0.50	2.16	2.54			
Temperature	Celsius	9.4	18.6	27.8						
Conductivity	umhos/cm	148	354	485						
pH	su	6.9	74.7	803.0						
Field Comments								Dry	Dry	Dry
Lab Parameters	UNITS									
Bicarbonate	mg/L	75.6	203.8	280.6						
Carbonate	mg/L	39.5	39.5	39.5						
Chloride	mg/L	<MDL	7	14						
Conductivity	umhos/cm	160	357	499						
Hardness	mg/L	70	162	234						
pH	su	6.9	7.8	9.4						
ResidueFilterable-TDS	mg/L	95	202	270						
ResidueNonFilterable-TSS	mg/L	4	77	536						
SAR		0.21	0.42	0.71						
Sulfate	mg/L	<MDL	14	29						
Calcium (Dissolved)	mg/L	13	30	54						
Magnesium (Total)	mg/L	6	21	29						
Sodium (Dissolved)	mg/L	4	13	21						
Potassium	mg/L									
TDS Ratio (grav./calc.)										

** No data provided in field notes*

Note: Site in accesible 1Q due to snow levels

Baseline Information Collection initiated on 7/18/83 .
Point P83 was influenced by mining on or about July 15, 2013.

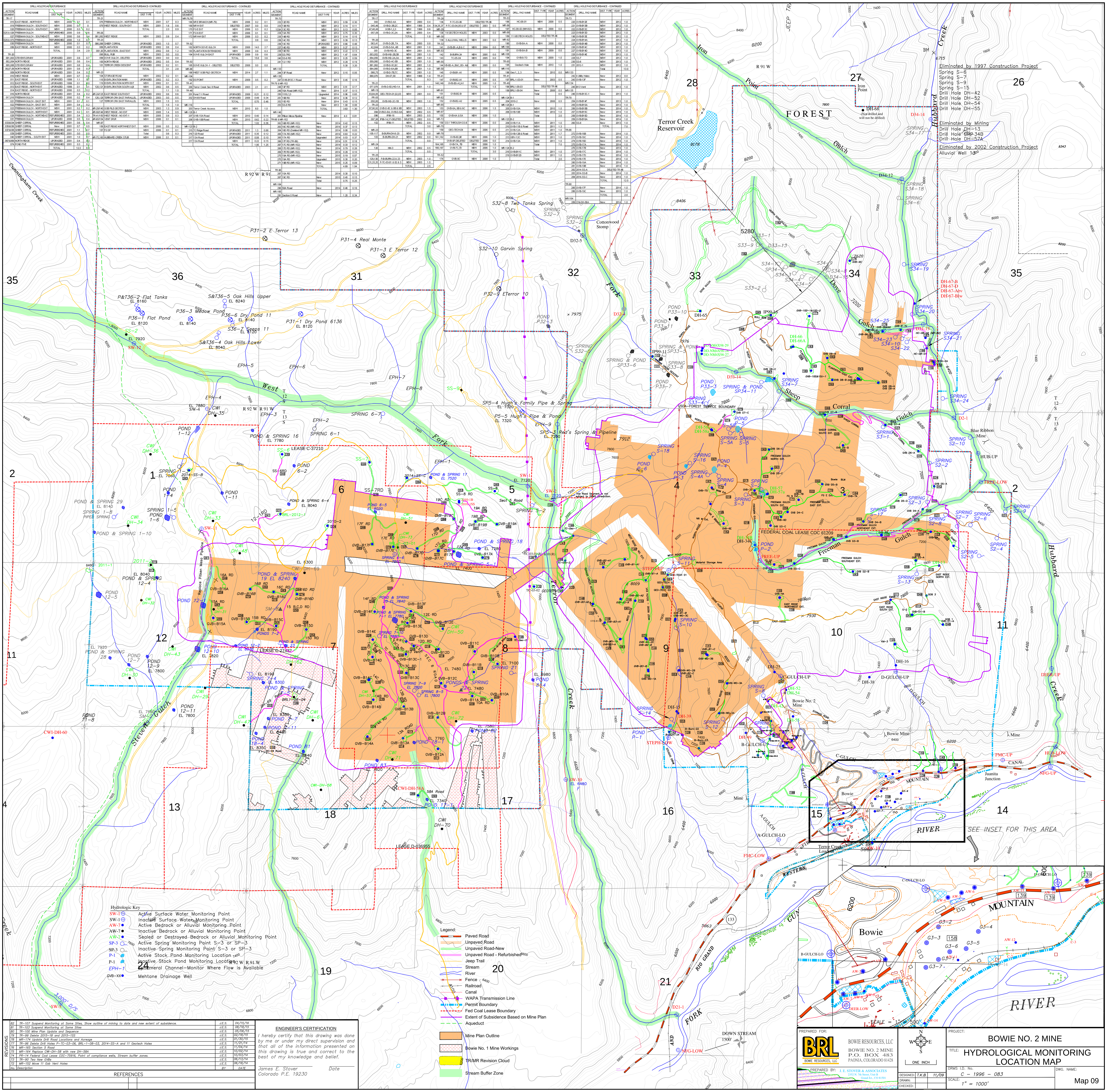
2024
MAPS

BOWIE RESOURCES, LLC

BOWIE RESOURCES, LLC
BOWIE NO. 2 MINE
P.O. BOX 483
PAONIA, COLORADO 81428
PERMIT C-1996-083

PREPARED BY:

Tamme Bishop, P.E.
Consulting Engineer



DRILL HOLE ROAD DISTURBANCE					
ACTION/ SEGMENT	ROAD NAME	DIST TYPE	YEAR	ACRES	MILES
TR-17					
015	EAST RIDGE - NORTH EXT.	NEW	2000	0.1	0.1
019	FREEMAN GULCH - SOUTH EXT	NEW	2000	0.1	0
020	FREEMAN GULCH - SOUTH EXT	NEW	2000	0.3	0.2
025 & 026	FREEMAN GULCH	REFURBISHED	2000	0.9	0.6
027	FREEMAN GULCH - SOUTHEAST	NEW	2000	0.6	0.4
029 & 073	FREEMAN GULCH	REFURBISHED	2000	1.0	0.7
030	FREEMAN GULCH	NEW	2000	0.1	0.7
056	EAST RIDGE - NORTH EXT.	NEW	2000	0.3	0.2
		TOTAL		3.4	2.9
TR-20					
001,003	STEVEN'S DRAW	UPGRADED	2001	0.9	0.7
002,004	NORTH RIDGE	UPGRADED	2001	0.6	0.4
005,008	STEVEN'S DRAW	UPGRADED	2001	0.8	0.4
06,07,09	NORTH RIDGE	UPGRADED	2001	0.8	0.3
009	NORTH RIDGE	UPGRADED	2001	0.4	0.3
010	WEST RIDGE	NEW	2001	0.7	0.5
011	EAST RIDGE	UPGRADED	1999	1.1	0.7
012	EAST RIDGE - SOUTH EXT	UPGRADED	1999	0.1	0.0
013	EAST RIDGE - NORTH EXT	UPGRADED	1999	0.1	0.1
014	EAST RIDGE - NORTH EXT	UPGRADED	2000	0.3	0.2
016	NORTH RIDGE	UPGRADED	2001	0.4	0.2
017,018	FREEMAN GULCH	UPGRADED	2000	0.2	0.4
021	FREEMAN GULCH - EAST EXT	NEW	2001	0.1	0.1
022	FREEMAN GULCH - EAST EXT	NEW	2001	0.4	0.2
023	FREEMAN GULCH - NORTH EXT	NEW	2001	0.2	0.2
024	FREEMAN GULCH - NORTH EXT	NEW	2001	0.2	0.1
028	FREEMAN GULCH - NORTHEAST	REFURBISHED	2001	0.4	0.3
031	FREEMAN GULCH	UPGRADED	2000	0.5	0.4
033&034	SHEEP CORRAL	REFURBISHED	2001	0.6	0.4
035&036	SHEEP CORRAL	New	2001	0.7	0.5
037&038	SHEEP CORRAL	REFURBISHED	2001	1.1	0.7
039	SHEEP CORRAL	REFURBISHED	2001	0.0	0.0
040	SHEEP CORRAL - SOUTH EXT	NEW	2001	1.0	0.7
067&069	NORTH RIDGE	UPGRADED	2001	0.4	0.3
074	POND FIVE	REFURBISHED	2001	0.3	0.2
		TOTAL		12.3	8.3

DRILL HOLE ROAD DISTURBANCE-CONTINUED					
ACTION/ SEGMENT	ROAD NAME	DIST TYPE	YEAR	ACRES	MILES
TR-21					
076	FREEMAN GULCH - NORTHEAST	NEW	2001	0.7	0.3
079	WEST RIDGE - SOUTH EXT	NEW	2001	1.6	0.6
		TOTAL		2.3	0.9
PR-05					
081,082	WEST RIDGE	NEW	2003	0.9	0.4
TR-23					
086,088	SHEEP CORRAL	UPGRADED	2003	1.0	0.7
089	PLANTATION	UPGRADED	2002	0.6	0.4
091,93	PLANTATION - EAST EXT	NEW	2002	0.8	1.2
095	BULL RUB	NEW	2003	0.0	0.0
099	DOVE GULCH - DELETED	UPGRADED	2003	0.0	0.0
100	NORTH RIDGE	UPGRADED	2002	0.5	0.4
101	TERROR CREEK DESCENT	UPGRADED	2002	0.2	0.1
		TOTAL		3.1	2.8
MR-23					
104	STORAGE ROAD	NEW	2002	0.2	0.1
118	B EXPLORATION MAIN	UPGRADED	2002	0.2	0.3
119	B EXPLORATION NORTH EXT	NEW	2002	0.1	0.1
120,121	B EXPLORATION SOUTH A,B	NEW	2002	0.6	0.5
		TOTAL		1.1	1.0
MR-24/125	EAST RIDGE SOUTH EXT	UPGRADED	2002	0.6	0.6
126,128	TERROR CRK EAST PARALLEL	UPGRADED	2003	0.0	0.5
127	TERROR CRK EAST PARALLEL	NEW	2003	1.5	0.5
		TOTAL		1.5	1.0
MR-29/140	GOB PILE GEOTECH	NEW	2003	1.3	0.9
MR-58/146	WEST RIDGE - NO EXT	NEW	2005	1.4	0.5
TR-41/150	WEST RIDGE - NO EXT-1	NEW	2005	0.9	0.3
MR-65/154	VENT SPUR	NEW	2006	0.1	0.1
MR-67					
156	EAST RIDGE NORTHWEST EXT.	NEW	2006	0.5	0.2
157	FG SP	NEW	2006	0.1	0.1
		Total		0.6	0.3
MR-75,160	HUBBARD CREEK STUB	NEW	2006	0.1	0.1

DRILL HOLE ROAD DISTURBANCE - CONTINUED					
ACTION/ SEGMENT	ROAD NAME	DIST TYPE	YEAR	ACRES	MILES
MR-78,79					
168	NR E BRANCH (MR-79)	NEW	2006	0.2	0.1
169	NR W EXT	DELETED	2007	0.0	0.0
170	FG E EXT	NEW	2006	0.3	0.2
171	FG N EXT	NEW	2006	0.1	0.1
172	NR WW EXT	NEW	2006	0.3	0.2
		TOTAL		0.9	0.6
TR-52					
182	NORTH DOVE GULCH	NEW	2008	14.0	2.7
183	PLANTATION EXTENSIONS	NEW	2008	0.9	0.3
184	DOVE GULCH EAST	UPGRADED	2008	0.9	0.6
		TOTAL		15.8	3.6
TR-53					
185	DOVE GULCH -1 - DELETED	DELETED	2008	0.0	0.0
MR-88					
188	WEST GOB PILE GEOTECH	NEW	2014	2.7	1.1
MR-104					
192	DG POINT	NEW	2009	0.5	0.2
TR-41					
200	Terror Creek Sec 8 Road	UPGRADED	2003	2.1	2.1
TR-49					
201	Pond 7-1 Road	UPGRADED	2008	0.21	0.12
202	DH-69 Road	UPGRADED	2008	0.49	0.34
		TOTAL		0.70	0.46
MR-116					
203	Terror Creek Access	NEW	2010	6.0	1.0
MR-125	B-1				
207	GVB-10A Road	NEW	2010	0.40	0.14
208	GVB-10B Road	NEW	2010	0.62	0.22
		TOTAL		1.02	0.36
MR-123	B-2				
215	TC Ridge Road	UPGRADED	2011	1.3	0.88
216	12D Road	UPGRADED	2011	0.35	0.12
217	13A Road	UPGRADED	2011	0.08	0.10
217	13A Road	NEW	2011	0.22	0.15
		TOTAL		1.95	1.25

DRILL HOLE ROAD DISTURBANCE - CONTINUED					
ACTION/ SEGMENT	ROAD NAME	DIST TYPE	YEAR	ACRES	MILES
TR-73					
232	12E RD	NEW	2012	0.59	0.30
233	13B RD	NEW	2012	0.14	0.11
133A	13C RD	NEW	2012	0.13	0.05
234	14A RD	NEW	2012	0.75	0.30
235	14B RD	NEW	2013	0.14	0.15
236	14C RD	NEW	2013	0.39	0.13
236	14C RD	UPGRADED	2013	0.66	0.48
237	14D RD	NEW	2013	0.27	0.13
238	14E RD	NEW	2013	0.22	0.13
239	SS-7RD	NEW	2012	1.47	0.64
240	SS-6 RD	NEW	2013	0.25	0.59
241	12-1 RD	NEW	2012	0.29	0.19
		TOTAL		5.30	3.20
MR-133					
244	13F Road	New	2012	0.15	0.05
MR-135					
247	GVB-B13C-1 Road	New	2013	0.45	0.16
TR-78 & MR-152					
248	14F RD	NEW	2013	0.51	0.17
249	16A Road (MR-152)	New	2014	0.37	0.13
250	15 B,C,D	Upgraded	2014	0.96	0.65
251	15B RD	New	2014	0.36	0.12
252	15D RD	New	2014	0.43	0.15
253	SS-8 RD	New	2013	1.00	0.08
		TOTAL		3.63	1.30
MR-146					
261	Pitken Mesa Pipeline	New	2014	4.0	0.81
TR-86 & MR-152					
262	16B RD (MR-152)	New	2014	0.42	0.15
263	16C RD (MR-152)	New	2014	0.37	0.13
264	16D RD (Deleted MR-152)	New	2014	0.08	0.03
265	17A RD (MR-152)	New	2014	0.63	0.22
265	17A RD	Upgraded	2014	0.53	0.37
266	17F RD (TR-89)	New	2014	0.51	0.18
267	17C RD (MR-152)	New	2014	0.33	0.12
268	17D RD (MR-152)	New	2014	0.79	0.28
269	17E RD (MR-152)	New	2014	0.29	0.10
270	19A RD (MR-152)	New	2015	0.19	0.07
270	19A RD	Upgraded	2015	0.30	0.20
271	19B RD (MR-152)	New	2015	0.25	0.09
		TOTAL		4.69	1.94
TR-90					
287	15A RD		2014	0.30	0.10
267	19C RD	New	2015	0.45	0.15
		Total		0.75	0.25
MR-164					
290	58A Road	New	2014	0.46	0.16
MR-165					
291	Section 5 Road	New		1.20	0.34

DRILL HOLE PAD DISTURBANCE				
ACTION/ SEGMENT	DRILL PAD NAME	DIST. TYPE	YEAR	ACRES
TR-17				
043	GVB-D-4A	NEW	2000	0.4
045,46	GVB-D-3B,2C	NEW	1999	0.4
47,48,49	GOB-1,2,3	NEW	1999	0.6
057,58	GVB-D-3C,3A	NEW	2000	0.4
		TOTAL		1.8
TR-20				
063,41	GVB-D-2B, 7A	NEW	2000	0.8
42,044	GVB-D-5A, 4B	NEW	2001	1.0
051	GVB-WD-3C	NEW	2001	0.5
053,052	GVB-WD-2B,3B	NEW	2001	1.0
054,055	GVB-WD-2A,3A	NEW	2001	1.0
059,060	GVB-D-4C-5B	NEW	2001	1.0
061,062	GVB-D-5C,6C	NEW	2001	1.0
064,065	GVB-D-6A,6B	NEW	2001	1.0
066,75	GVB-D-7B,7C	NEW	2001	1.0
068,070	DH-57,58	NEW	1999	1.0
		TOTAL		9.3
TR-21				
077,078	GVB-D-5D,WD-1A	NEW	2001	1.0
MR-19				
83,84,85	GEO-TECH-01,02,03	NEW	2001	0.0
PR-05				
050,80	GVB-WD-2C-1B	NEW	2003	1.0
TR-23				
87,90,92	GVB-D-8C & 8B & 9B	NEW	2003	1.5
094	GVB-D-8A; GVB-D-9A	NEW	2002	0.5
096	IP99-16	NEW	2003	0.5
097,98	IP99-14,17-DELETED	DELETED	2002	0.0
102	IP99-11	NEW	2002	0.5
		TOTAL		3.0
MR-23				
105-117	B-BURN-DH-8-20	NEW	2002	0.0
103	B-BURN-DH-21	NEW	2002	0.0
		TOTAL		0.0
MR-24				
120	KM-3	NEW	2002	0.5
		TOTAL		0.5
TR-25				
129,130	P-B-BURN-22 & 23	NEW	2003	1.0
131,33,33	P-TC-03-01 & 02 & 3	NEW	2003	1.5
		TOTAL		2.5

DRILL HOLE PAD DISTURBANCE				
ACTION/ SEGMENT	DRILL PAD NAME	DIST. TYPE	YEAR	ACRES
TR-28				
136	P-TC-03-06	DELETED TR-96		
134,35,37	P-TC-03-04,05 & 07	DELETED	2003	0.0
MR-29				
138	14 GEOTECH HOLES	NEW	2003	0.0
MR-30				
139	3 ALLUVIAL WELLS	NEW	2003	0.0
TR-32				
141	GVB-B1-A,B & C	NEW	2004	0.0
MR-53				
142	B-BURN-24	NEW	2005	0.0
143	TC-05-04	NEW	2005	0.0
MR-55				
144	VB-B2-A, B&C, B3- A&	NEW	2005	0.0
MR-58				
145	GVB-B1-A1	NEW	2005	0.5
TR-41				
147	GVB-B2-A1	NEW	2005	0.5
148,149	GVB-B3-A2,A1	NEW	2005	1.0
		TOTAL		1.5
MR-61				
151	GVB-B2-B	NEW	2005	0.5
MR-62				
152	GVB-B2-A2	NEW	2005	0.5
MR-65				
153	GVB-6A, 6B & 6C	NEW	2006	1.5
MR-67				
155	GVB-4A & 5A	NEW	2006	1.0
MR-72				
158	G3-1 THROUGH G3-6	NEW	2006	0.0
MR-75				
159	GEO-TECH-04	NEW	2006	0.5
MR-78				
161,162	GVB-6D,6E	NEW	2006	1.0
	GVB-6F-DELETED	DELETED	2006	0.0
164,165	GVB-7A, 7B	NEW	2006	1.0
166,167	GVB-7C,7D	NEW	2006	1.0
		TOTAL		3.0
TR-52				
174	GVB-9C	NEW	2008	1.0

DRILL HOLE PAD DISTURBANCE - CONTINUED				
ACTION/ SEGMENT	DRILL PAD NAME	DIST. TYPE	YEAR	ACRES
TR-53				
186	HC-08-01	NEW	2008	0.5
MR-86				
187	HC-08-02 (MW-82)	NEW	2008	0.0
MR-88				
189	11 GEOTECH HOLES	DELETED TR-96		
MR-92				
190	GVB-8A-A	NEW	2008	0.0
MR-100				
191	GVB-8A-B	NEW	2009	0.0
MR-105				
194	GVB-8-TG	NEW	2009	1.0
TR-65				
195	Geotech Hole	NEW	2010	1.0
MR-115				
196	Geo 1, 2, 3	New	2010	0.0
TR-41				
197	BRL-1-03-01	New	2003	0.5
TR-49				
198	BRL1-08-03	DELETED TR-96		
199	BRL1-08-04	New	2008	0.5
		Total		0.5
MR-124	B-1			
204	2010-2	New	2008	0.5
MR-125	B-1			
205	GVB-10A	NEW	2010	1.0
206	GVB-10B	NEW	2010	1.0
		Total		2.0
MR-123	B-2			
209	GVB-11A	NEW	2011	1.0
210	GVB-11B & Road	NEW	2011	1.3
211	GVB-12A	NEW	2011	1.0
212	GVB-12B & Road	NEW	2011	1.7
213	GBV-12C	NEW	2011	1.0
214	GVB-13A	NEW	2011	1.0
		Total		7.0
MR-124	B-2			
218	GVB-B11C	NEW	2011	1.0
219	GVB-B12D	NEW	2011	1.0
		Total		2.0

DRILL HOLE PAD DISTURBANCE - CONTINUED				
ACTION/ SEGMENT	DRILL PAD NAME	DIST. TYPE	YEAR	ACRES
TR-73				
220	GVB-B12E	NEW	2012	1.0
221	GVB-B13B	NEW	2012	1.0
222	GVB-B13C	NEW	2012	1.0
223	GVB-B13D	NEW	2012	1.0
198	GVB-B13E	NEW	2012	1.0
224	GVB-B14A	NEW	2012	1.0
225	GVB-B14B	NEW	2013	1.0
226	GVB-B14C	NEW	2013	1.0
227	GVB-B14D	NEW	2013	1.0
228	GVB-B14E	NEW	2013	1.0
229	SS-7	NEW	2012	1.0
230	SS-6	NEW	2013	1.0
231	2012-1	NEW	2012	1.0
		Total		13.0
MR-133				
242	4 Utility Holes	New	2012	0.0
243	GVB-13F	New	2012	1.0
MR-134				
245	B13 Vent	New	2013	1.0
MR-135				
246	GVB-B13C-1	New	2013	1.0
TR-78				
254	GVB-B14F	New	2013	1.0
255	GVB-B15A	New	2013	1.0
256	GVB-B15B	New	2014	1.0
257	GVB-B15C	New	2014	1.0
258	GVB-B15D	New	2014	1.0
259	GVB-B16A	New	2014	1.0
260	SS-8	New	2013	1.0
		TOTAL		7.0
TR-86				
272	GVB-16B	New	2014	1.0
273	GVB-16C	New	2014	1.0
274	GVB-16D	New	2014	1.0
275	GVB-17A	New	2014	1.0
276	GVB-17B	New	2014	1.0
277	GVB-17C	New	2014	1.0
278	GVB-17D	New	2014	1.0
279	GVB-17E	New	2014	1.0
280	GVB-19A	New	2014	1.0
281	GVB-19B	New	2014	1.0
282	2014-SS-A	DELETED TR-96		
283	2014-SS-B	New	2014	1.0
284	2014-SS-C	New	2014	1.0
		TOTAL		12.0
TR-90				
285	GVB-17F	New	2014	1.0
286	GVB-19C	New	2015	1.0
		TOTAL		2.0
MR-164				
289	CWI-DH-58A	New	2014	1.0

REVISIONS No.	Description	BY	DATE
82	TR-107 Suspend Monitoring at Some Sites, Show outline of mining to date and new extent of subsidence.	J.E.S.	04/15/16
81	TR-103 Suspend Monitoring at Some Sites	J.E.S.	08/18/15
80	TR-100 Mine Plan Update and Sequence	J.E.S.	05/06/15
79	TR-99 Delete 2015-1B and 2015-1SS	J.E.S.	02/18/15
78	MR-174 Update Drill Road Locations and Acreage	J.E.S.	01/30/15
77	TR-96 Delete Drill Holes P-TC-03-06, BRL-1-08-03, 2014-SS-A and 11 Geotech Holes	J.E.S.	11/21/14
76	MR-165 Section 5 Road	J.E.S.	11/04/14
75	MR-164 Replace CWI-DH-58 with new DH-58A	J.E.S.	10/02/14
74	PR-14 Federal Coal Lease COC-75916, Point of compliance wells, Stream buffer zones.	J.E.S.	10/03/14
73	TR-90 Two New GVBs	J.E.S.	06/13/14
72	MR-152 Move 11 Gob Vent Holes	J.E.S.	06/18/14

REFERENCES

ENGINEER'S CERTIFICATION

I hereby certify that this drawing was done by me or under my direct supervision and that all of the information presented on this drawing is true and correct to the best of my knowledge and belief.

James E. Stover — Date
Colorado P.E. 19230

PREPARED FOR: BOWIE RESOURCES, LLC
BOWIE NO. 2 MINE
P.O. BOX 483
PAONIA, COLORADO 81428

PREPARED BY: J. E. STOVER & ASSOCIATES
2352 N. 7th Street, Unit B
Grand Jct., CO 81501

ONE INCH

DESIGNED: T.K.B. 11/09
DRAWN:
CHECKED:

PROJECT: BOWIE NO. 2 MINE

TITLE: HYDROLOGICAL MONITORING LOCATION MAP

DRMS I.D. No. C – 1996 – 083

SCALE: 1" = 1000'

DWG. NAME: Map 09