Question 21.

2023 WATER QUALITY DATA

- 2023 DRMS Water Quality Monitoring Plan Evaluation
- Table 1: Indicator Parameters 5-Year Groundwater Quality Monitoring Data
- Table 2: Indicator Parameters 5-Year Surface Water Quality Monitoring Data
- Charts 1-35: POC Five-Year Data Graphs (Metals, pH, Sulfate, TDS, Fluoride)
- Charts 36-40: EVMW-1S Five-Year Data Graphs (Metals, pH, Sulfate, TDS, Fluoride)
- Map 5: WQMP Sites Eagle River Watershed
- Map 6: WQMP Sites Tenmile Creek Watershed
- Map 7: WQMP Sites Arkansas River Watershed

Climax Molybdenum
A Freeport-McMoRan Company

Climax Mine Water Quality Monitoring Plan Evaluation - 2023

Sampling Locations

Groundwater
Sample Locations: ARWell, ARK-MW-001D, EVMW-3S, EVMW-3D, EV-MW-004, TM-MW-002D, GW#2, TM-MW-001D, GW#1, ARK-MW-002S, ARK-MW-002D, EVMW-1D, EVMW-1S, EVMW-2, EVS-1, EVS-2, EVS-3

Internal Surface Water
Sample Locations: CC-SW1, EI-SW1

Surface Water
Sample Locations: Arkansas #1, Arkansas #2, AI, BI, EPR Outlet

Duplicate Sample Locations:

- First Quarter: ARK-MW-002S
- Second Quarter: EVMW-2
- Third Quarter: EVMW-3D
- Fourth Quarter: EVMW-1S

During 2023, all water quality sample locations were successfully collected except for:

First Quarter:

- Inaccessible or frozen due to winter conditions:
  - ARK-MW-001D, EVMW-2, EV-MW-004, EVS-1, EVS-2, EVS-3, EI-SW1, CC-SW1

Second Quarter:

- No Observable Discharge:
  - EPR Outlet (typically collected Q2 & Q3, but biannual samples collected in Q3 & Q4 this year)

Third Quarter:

- None

Fourth Quarter:

- Dry due to winter conditions or no flows:
  - EVS-1 (dry)
  - EI-SW1 (flows diverted into treatment system during McNulty Phase III work)
- Pump Failure (currently working to replace):
  - EVMW-1D

Discussion of Results: POC Wells

Numeric Protection Limits (NPLs) were implemented at point of compliance (POC) wells in the approved Water Quality Monitoring Plan (WQMP) for the indicator parameter list. Section 5.0 of the WQMP discusses the rationale for selection of the NPLs. A comparison of results to applicable NPLs is provided in attached Table 1 and Charts 1-40 show five-year time series graphs for all indicator parameters. In 2023, all indicator parameter results were below applicable NPLs except for pH at monitoring well GW#2 (see below discussion). Also, we have included the five-year time series data graphs for all indicator parameters at internal groundwater well location EVMW-1S (see below discussion and charts 36-40).

GW#2 pH discussion:

Groundwater in the Tenmile Creek drainage area occurs within a shallow alluvial/glacial till aquifer and within the underlying bedrock units, which consist of granodiorite and monzonite. Groundwater flow direction in both systems is toward the northeast. The alluvial/glacial aquifer is monitored downgradient of the Mayflower TSF in wells GW#1 and GW#2, which were installed by Climax in 1987. Groundwater conditions in the underlying bedrock system is monitored in wells TM-MW-001D and TM-MW-002D which were installed in 2012. A site map showing the locations of monitor wells is presented in the attached 2023 GW#2 report, as Figure 1. Construction and test reports for the four monitor wells are also included as Attachment A. Climax maintains a database with monitoring results for each of the wells. The database extends back to 1990 for monitor wells GW#1 and GW#2, and 2012 for the two bedrock monitor wells. Analytical results for the two bedrock monitor wells consistently yield neutral pH and low, or background, concentrations for tested parameters.

On April 16, 2018, the pH at GW#2 was measured at 6.18 standard units, which is outside the numeric protection level (NPL) range of 6.5 to 8.5. Climax notified Colorado Department of Reclamation, Mining and Safety (DRMS) April 17, 2018, per section 5.2.1.1 of the Water Quality Monitoring Plan (WQMP). Climax and DRMS agreed the site should be monitored on a monthly basis until the pH was measured within the NPL range for three consecutive months.

Summary of GW#2 Activities in 2023

In 2023 Climax completed the following investigation activities:

- Continuation of monthly pH measurements in GW#2
- Quarterly groundwater sample collection and analysis at all four monitor wells
- Microbiological assessment of GW#1 and GW#2 monitor wells

Climax had also planned to conduct video surveys of GW#1 and GW#2 in 2023; however, this task was delayed so Climax could facilitate contractor access to the wellheads, which are currently within small buildings. The following is a summary of the completed 2023 evaluation activities:

GW#2 pH Monitoring:

Table 1 (below) and Figure 2 present 2023 pH results from GW#2. Monthly monitoring in 2023 yielded pH measurements below the NPL range in 4 of 10 months. The four months that yielded values below 6.5 were measured successively from March through June. Measurements for the last six months, July through December, were above 6.5.

Table 1 – GW#2 pH Measurements from 2023

Site Number	Sample Date	pH, Field, Standard Units
GW#2	01/30/2023	6.59
GW#2	02/22/2023	6.52
GW#2	03/21/2023	6.43
GW#2	04/13/2023	6.21
GW#2	05/15/2023	6.42
GW#2	06/14/2023	6.28
GW#2	07/25/2023	6.62
GW#2	08/14/2023	6.65
GW#2	09/25/2023	6.61
GW#2	10/17/2023	6.65
GW#2	11/07/2023	6.58
GW#2	12/06/2023	6.52

2023 Monitoring Activities:

Water quality samples were collected from GW-#2 in March, June, July, and October 2023. The results are consistent with past results with concentrations of all other parameters well below respective Numeric Protection Limits (NPLs) established in the WQMP. This includes iron and manganese, which were both non-detect in GW#2 in the samples collected in 2023. Table 2, below, lists minimum and maximum concentrations measured in 2023 in GW#2 along with respective NPL.

Table 2 – GW#2 Range of 2023 Concentrations for Parameters with NPLs

Parameter	Min	Max	NPL
Cadmium, dissolved	<0.00005	0.000081	0.005
Copper, dissolved	<0.0008	<0.0008	0.2
Iron, dissolved	<0.06	<0.06	0.3
Manganese, dissolved	<0.01	<0.01	0.05
Molybdenum, dissolved	0.00102	0.00172	0.21
Zinc, dissolved	<0.02	0.027	2
Sulfate	42.3	70.9	250
TDS	146	178	400

2023 Complete Well Profile Assessments of Wells GW#1 and GW#2:

During the July 25, 2023, sampling event, Climax collected additional water samples from GW#1 and GW#2. The samples were submitted to Water Systems Engineering (WSE) for a complete well profile assessment. The purpose of the assessment was to evaluate whether the water pumped from the well could be influenced by chemical and/or microbiological activity within the well or within the near-well aquifer environment. Two samples were collected from each well: one immediately following start-up of the pump to assess in-well conditions (casing sample), and one collected following well purging to assess aquifer conditions (aquifer sample). The WSE Well Profile Assessment report is provided in attached GW#2 report, as Attachment 2. Relevant findings from the WSE report include:

- The lab-measured pH for the GW#2 samples were similar for the casing and aquifer samples, 6.71 and 6.68, respectively. This suggests that any chemical or microbiological activity in the well does not seem to reduce the pH of the water. In fact, the results for the GW#1 sample set yielded a lower pH for the aquifer sample than the casing sample.
- Samples collected from both wells yielded negative Langelier Saturation Index (LSI) calculations, indicating that the water has “reduced likelihood for scale development and potential for chemical corrosion to occur”. This suggests that it is unlikely that there is a substantial buildup of chemical scale within the well or within the well screen. Since the casing materials are polyvinyl chloride (PVC), any corrosive effects of the water are limited.
- As noted in the report, Total organic carbon (TOC) is used as an indicator for the bacterial stimulation and biofouling. TOC was not detected in either well.

- Tests for the presences of iron- and manganese-oxidizing bacteria were negative in both samples from GW#1. The test was positive for the GW#2 casing sample, but negative for the aquifer sample. Further analysis showed the GW#2 casing sample had a “low occurrence rate of iron bacteria.”

Based on review of the WSE report, the well casing and aquifer at GW#1 and GW#2 are not conducive to the formation of chemical and/or microbiological scale that could cause an influence in the chemistry of a properly purged sample. Based on these results, neither well requires chemical or mechanical rehabilitation at this time. Additionally, it does not appear the water pumped from the wells is being influenced by chemical and/or microbiological activity within the well or within the near-well aquifer environment.

Analysis and Next Steps:

Climax has conducted additional work to understand the presence and nature of the lower pH values observed in well GW#2. Work in 2023 consisted of monthly pH monitoring, quarterly groundwater sampling, and comprehensive chemical and microbiological well assessments of wells GW#1 and GW#2. Key findings from this additional work include:

- In 2023, the pH in GW#2 ranged from 6.21 to 6.65. The average of all readings collected in 2023 was 6.5, which is slightly lower than the historical average of all measurements collected since 1997 of 6.6. Fluctuations above and below the average value are to be expected and values below 6.5 are not necessarily out of line with normal conditions at this location.

- Figure 3 is a graph of all pH measurements in GW#2 collected since 1997. The graph shows that from 1997 to 2007, the pH varied over a wide range, approximately 6.3 to 8. From 2007 to late 2014, the pH varied over a narrower range, approximately 6.4 to 7.3. In late 2014 there was a shift back to a more variable and slightly lower pH measurement range.

- A Mann-Kendall statistical analysis of GW#2 pH measurements collected in the past five years (since 2018) yielded a stable trend (attached in 2023 GW#2 report, as Figure 4).

- Despite the lower pH values, water chemistry data since 2012 have had non-detect or low concentrations for indicator parameters (no other exceedances of NPLs). More recent results from GW#2 (post 2012) have yielded lower concentrations of most parameters and lower total dissolved solids.

- Climax’s characterization efforts of uncaptured seeps and surface waters located between Mayflower TSF and GW#2 suggest potential opportunities for additional capture of impacted waters. In 2023, Climax initiated a field program to advance several tasks to enhance capture of potentially impacted seeps and surface waters.

This included construction of the Mayflower Seepage Collection and Secondary Containment System (see TR-37) in the drainage east of the 5 Dam Seepwater Pump System, which was initiated in late 2023. Based on the distance of the monitor wells from this area, we anticipate that up to 2 to 3 years may be needed to assess whether this activity has an effect on the groundwater chemistry in the alluvial/glacial aquifer.

In 2024, Climax will continue to collect and analyze monthly pH data from GW#2 in addition to regularly scheduled quarterly samples. Climax intends to advance the assessment of GW#1 and GW#2 to include camera surveys. The purpose of the camera surveys is to confirm that rehabilitation of the wells is not necessary, and inspect the wells for other flow features, such as seeping or cascading water above the water table.

Discussion of Results: Evaluation of Groundwater and Surface Water Data

Tenmile and Arkansas Watersheds

In accordance with Section 5.2.2.1 of the WQMP regarding trend evaluation of data collected in the Tenmile and Arkansas basins, Climax will "routinely evaluate indicator parameter water quality trends for the groundwater monitoring sites identified above on an annual basis, and report findings in the Annual Report to DRMS."

As requested by DRMS, five-year indicator data sets are presented in data tables (Tables 1 and 2) and depicted on Charts 1-35, are attached for the POC wells. Graph titles are color coordinated, matching the color of the data table to the corresponding POC well. A review of POC groundwater data shows a pH exceedance at TM-MW-002D with a 8.56 s.u. lab result from the October 2023 sample. Climax will increase pH sampling to a monthly frequency in 2024 and investigate possible reason for this increased result. All other groundwater data and graphs do not indicate an apparent decline in 2023 in indicator parameter quality at any of the POC wells in the Tenmile and Arkansas basins.

Eagle River Watershed

In accordance with Section 6.0 of the WQMP, Climax evaluated Eagle River basin POC well data against applicable NPLs. The review did not indicate any exceedances of the NPLs in the Eagle River basin. Likewise, no trends of indicator parameters (suggesting a decline in water quality) were apparent in any of the three POC wells. Laboratory data and graphs depicting indicator parameter concentrations over the last five years are contained in Tables 1 and 2, and Charts 1-35, attached.

Climax also evaluated indicator parameter data from the remaining wells and surface water monitoring locations in the Eagle River basin in accordance with Section 6.3.2 of the WQMP. The first part of this evaluation involved looking for any potential discernable water quality trends over time. No apparent trends at surface water monitoring sites AI, BI or Eagle Park Reservoir Outlet (EPR Outlet) were noted during this evaluation. Similarly, no

apparent trends were noted in indicator parameters at seeps EVS-1, EVS-2, or EVS-3. Indicator parameter values at groundwater wells EVMW-1D and EVMW-2 were generally within historic ranges.

Eagle River Watershed Well EVMW-1S

As previously reported, during the second and third quarter monitoring events in 2022, iron and manganese concentrations in well EVMW-1S increased outside the range of data from recent years. In response to this observation, Climax implemented increased monitoring frequencies in 2023 at wells EVMW-1S, EVMW-1D and EVMW-004 (wells closest to the above area of evaluation) in accordance with Section 6.3.2.4 of the Climax WQMP. Wells EVMW-1S and EVMW-004 have been monitored monthly since March 2023 (weather & access permitting) in addition to quarterly monitoring of water quality in Robinson Lake and Robinson Lake Seep. The dedicated well pump in monitoring well EVMW-1D failed in September, curtailing the increased monitoring at that location. A replacement has been ordered and monthly sampling will resume this spring.

Chart 36 presents the most recent five years of data for iron, manganese, and other indicator metals molybdenum, cadmium, copper, and zinc. As has been observed in the past iron and manganese show greater variability, while other metals remain consistently low. Concentrations of primary indicator parameters, sulfate, and TDS, over the last five years are presented on Charts 38 and 39. White a slightly increasing visual trend was observed in the sulfate and TDS data between 2017 and 2019, concentrations over the last four years (2020 – 2023) are generally stable, and all concentrations have remained lower than historic highs over the full period of record at this location beginning in 1993.

Well EVMW-1S is a shallow internal monitoring well completed through the alluvium and upper weathered bedrock immediately downgradient of the seepage collection cutoff wall below Robinson Lake. Increasing trends of certain parameters (including iron and manganese) were previously observed at well EVMW-1S, EVMW-1D and EVMW-004 beginning in late 2012. In response, monitoring frequency was increased and additional investigations were conducted between 2012 and 2014, including studies to understand the potential quantity of water that is conveyed through this shallow system and its relation to the Robinson Lake seep.

Following the observations noted above, Climax performed further examination of water quality parameters in EVMW-1S as prescribed by Section 6.3.2.1 of the WQMP. This involves an analysis that defines a window of time for evaluating whether a trend exists, including defining the baseline dataset through the most recent sampling period. At this location, the full baseline period is considered to include all data collected since 2001, following the completion of the seepage collection system. Over this period only iron and manganese can be perceived as having any kind of increasing trend, however, previous studies have also established that dissolved iron and manganese concentrations are highly variable and susceptible to phase changes related to redox conditions. Seasonally, lower concentrations of iron and manganese are typically observed in first quarter samples, followed by higher levels in third quarter samples. TDS and sulfate concentrations do not

show any strong seasonal variations although first quarter samples have had higher concentrations the last several years followed by lower concentrations in the second quarter samples, potentially related to greater influx from snow melt.

As part of the additional data evaluation prescribed in Section 6.3.2.1 of the WQMP, a statistical evaluation was performed using the 2022 data; comparing the 4 most recent quarterly sampling results against the 80th percentile upper prediction limit (UPL), and the 2 most recent quarterly sampling results against the 95th percentile UPL. The 80th and 95th percentile values were calculated, conservatively using baseline data collected from 2011 through 2021. The table below presents the evaluation of the data collected during 2022 relative to the UPL values. As indicated, the dissolved iron and manganese concentrations observed during both the 2nd and 3rd quarters exceed the 95th percentile UPL values. The monthly data collected during 2023 have also been added to this evaluation and are presented in the table below. As illustrated, at least one sample during the 3rd and 4th quarters had iron concentrations exceeding the 95th percentile UPL, although the magnitude of the iron concentrations in 2023 were lower than 2022. At least one sample from the 2nd, 3rd, and 4th quarters had manganese concentrations exceeding the 95th percentile UPL, but no four consecutive quarterly results have exceeded the 80th percentile. Despite these observed iron and manganese values, the more stable indicator parameters of sulfate and TDS have remained generally stable over the last several years.

Sample Date	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Sulfate, Dissolved (mg/L)	TDS (mg/L)
3/29/2022	1.6	0.87	614	1060
6/16/2022	4.8	1.18	497	934
9/1/2022	5.4	1.37	491	996
12/27/2022	1.8	0.86	505	986
03/29/2023	1.91	0.789	615	1000
04/12/2023	1.42	0.851	550	986
05/16/2023	***	***	***	***
06/21/2023	1.42	1.56	454	926
07/20/2023	2.2	0.82	484	906
08/16/2023	2.45	0.858	481	930
09/25/2023	3.18	1.00	489	930
10/26/2023	***0.03***	1.12	419	922
11/15/2023	3.5	1.09	434	924
12/14/2023	2.08	0.94	519	924
80th % UPL	2.3	0.89	540	1030
95th % UPL	2.7	0.97	593	1074

UPL values (95th % & 80th %) calculated using baseline data from 2011 – 2021
Italicized sample results report Non-Detect results (reported as ½ MDL value)
*** no sample collected in May 2023

Climax intends to continue monthly sampling of monitoring wells EVMW-1S, EVMW-1D, and EVMW-004, as well as quarterly sampling of Robinson Lake and Robinson Lake Seep. Additional evaluation is also being conducted to assess any potential relationship between water level in the seepage collection pond and iron and manganese concentrations in well EVMW-1S. At this stage no definitive correlation has been determined, but work will continue to determine potential reasons for the observed increases.

Discussion of Results: Outlier Identification and Data Validation

The 2023 groundwater and surface water data were analyzed for outliers. One data outlier was identified for the 12/14/23 EVMW-1S sulfate result, which came back as below minimum detectable level. Timely, that happened to be our duplicate sample location for the quarter, and the duplicate came back at 519 mg/L, which was within the five-year historic levels of that well location. This value was used for the 2023 Q4 sample results to show that no data trend was identified.

Changes Over the Preceding Year Regarding any Disturbances to the Prevailing Hydrologic Balance

Climax has not identified any changes over the preceding year (2023) regarding any disturbances to the prevailing hydrologic balance within the permitted affected area.

Changes Over the Preceding Year Regarding any Disturbances of the Quality and Quantity of Water in Surface and Groundwater Systems

Except as discussed herein (see above discussions regarding continued water quality investigations at wells GW#2 and EVMW-1S), Climax has not identified any changes over the preceding year (2023), regarding any disturbances to the quality and quantity of water in surface and groundwater systems within the permitted affected area.

GW #2 Investigation Report

2023 Activities

CLEAR CREEK ASSOCIATES

Memorandum

To: Alex Ungers and Meghan Graham, Climax Molybdenum **Date:** February 20, 2024

From: Michael Alter, CPG

CC: Eric Detmer and Elaine DuBois, Climax Molybdenum

Subject: GW#2 Evaluation Update

Clear Creek Associates is assisting Climax Molybdenum Company (Climax) with evaluation of groundwater conditions in the Ten Mile Creek drainage area north (downgradient) of the Mayflower Tailings Storage Facility (TSF). The evaluation was initiated by Climax in 2021 to understand the presence and nature of lower pH values recorded in monitor well GW#2, which monitors groundwater conditions in the shallow alluvial aquifer near the northern property boundary. This memo provides background information, describes 2023 investigation activities, reviews current conditions/trends, and discusses next steps in the evaluation.

Background Information

Groundwater in the Ten Mile Creek drainage area occurs within a shallow alluvial/glacial till aquifer and within the underlying bedrock units, which consist of granodiorite and monzonite. Groundwater flow direction in both systems is toward the northeast. The alluvial/glacial aquifer is monitored downgradient of the Mayflower TSF in wells GW#1 and GW#2, which were installed by Climax in 1987. Groundwater conditions in the underlying bedrock system is monitored in wells TM-MW-001D and TM-MW-002D which were installed in 2012. A site map showing the locations of monitor wells is presented in Figure 1. Construction and test reports for the four monitor wells are included in Attachment A. Climax maintains a database with monitoring results for each of the wells. The database extends back to 1990 for monitor wells GW#1 and GW#2, and 2012 for the two bedrock monitor wells. Analytical results for the two bedrock monitor wells consistently yield neutral pH and low, or background, concentrations for tested parameters.

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Monitoring Plan (WQMP). Climax and DRMS agreed the site should be monitored on a monthly basis until the pH was measured within the NPL range for three consecutive months.

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- The lab-measured pH for the GW#2 samples were similar for the casing and aquifer samples, 6.71 and 6.68, respectively. This suggests that any chemical or microbiological

activity in the well does not seem to reduce the pH of the water. In fact, the results for the GW#1 sample set yielded a lower pH for the aquifer sample than the casing sample.

- Samples collected from both wells yielded negative Langelier Saturation Index (LSI) calculations, indicating that the water has "reduced likelihood for scale development and potential for chemical corrosion to occur". This suggests that it is unlikely that there is a substantial buildup of chemical scale within the well or within the well screen. Since the casing materials are polyvinyl chloride (PVC), any corrosive effects of the water are limited.
- As noted in the report, Total organic carbon (TOC) is used as an indicator for the bacterial stimulation and biofouling. TOC was not detected in either well.
- Tests for the presences of iron- and manganese-oxidizing bacteria were negative in both samples from GW#1. The test was positive for the GW#2 casing sample, but negative for the aquifer sample. Further analysis showed the GW#2 casing sample had a "low occurrence rate of iron bacteria."

Based on our review of the WSE report, it is our opinion that the well casing and aquifer at GW#1 and GW#2 are not conducive to the formation of chemical and/or microbiological scale that could cause an influence in the chemistry of a properly purged sample. Based on these results, we feel neither well requires chemical or mechanical rehabilitation at this time. Additionally, we do not believe the water pumped from the wells is being influenced by chemical and/or microbiological activity within the well or within the near-well aquifer environment.

Discussion

Climax has conducted additional work to understand the presence and nature of the lower pH values observed in well GW#2. Work in 2023 consisted of monthly pH monitoring, quarterly groundwater sampling, and comprehensive chemical and microbiological well assessments of wells GW#1 and GW#2. Key findings from this additional work include:

- In 2023, the pH in GW#2 ranged from 6.21 to 6.65. The average of all readings collected in 2023 was 6.5, which is slightly lower than the historical average of all measurements collected since 1997, of 6.6. Fluctuations above and below the average value are to be expected and values below 6.5 are not necessarily out of line with normal conditions at this location.

- Figure 3 is a graph of all pH measurements in GW#2 collected since 1997. The graph shows that from 1997 to 2007, the pH varied over a wide range, approximately 6.3 to 8. From 2007 to late 2014, the pH varied over a narrower range, approximately 6.4 to 7.3. In late 2014 there was a shift back to a more variable and slightly lower pH measurement range.
- A Mann-Kendall statistical analysis of GW#2 pH measurements collected in the past five years (since 2018) yielded a stable trend (Figure 4).
- Despite the lower pH values, water chemistry data since 2012 have had non-detect or low concentrations for indicator parameters (no other exceedances of NPLs). More recent results from GW#2 (post 2012) have yielded lower concentrations of most parameters and lower total dissolved solids.
- Climax's characterization efforts of uncaptured seeps and surface waters located between Mayflower TSF and GW#2 suggest potential opportunities for additional capture of impacted waters. In 2023, Climax initiated a field program to advance several tasks to enhance capture of potentially impacted seeps and surface waters. This included construction of the Mayflower Seepage Collection and Secondary Containment System (see TR-37) in the drainage east of the 5 Dam Seepwater Pump System, which was initiated in late 2023. Based on the distance of the monitor wells from this area, we anticipate that up to 2 to 3 years may be needed to assess whether this activity has an effect on the groundwater chemistry in the alluvial/glacial aquifer.

In 2024, Climax will continue to collect and analyze monthly pH data from GW#2 in addition to regularly scheduled quarterly samples. Climax intends to advance the assessment of GW#1 and GW#2 to include camera surveys. The purpose of the camera surveys is to confirm that rehabilitation of the wells is not necessary, and inspect the wells for other flow features, such as seeping or cascading water above the water table.

FIGURES

Legend

- Monitoring Wells

SCALE: 1 inch: 1,300 feet

0 1,500 3,000 Feet

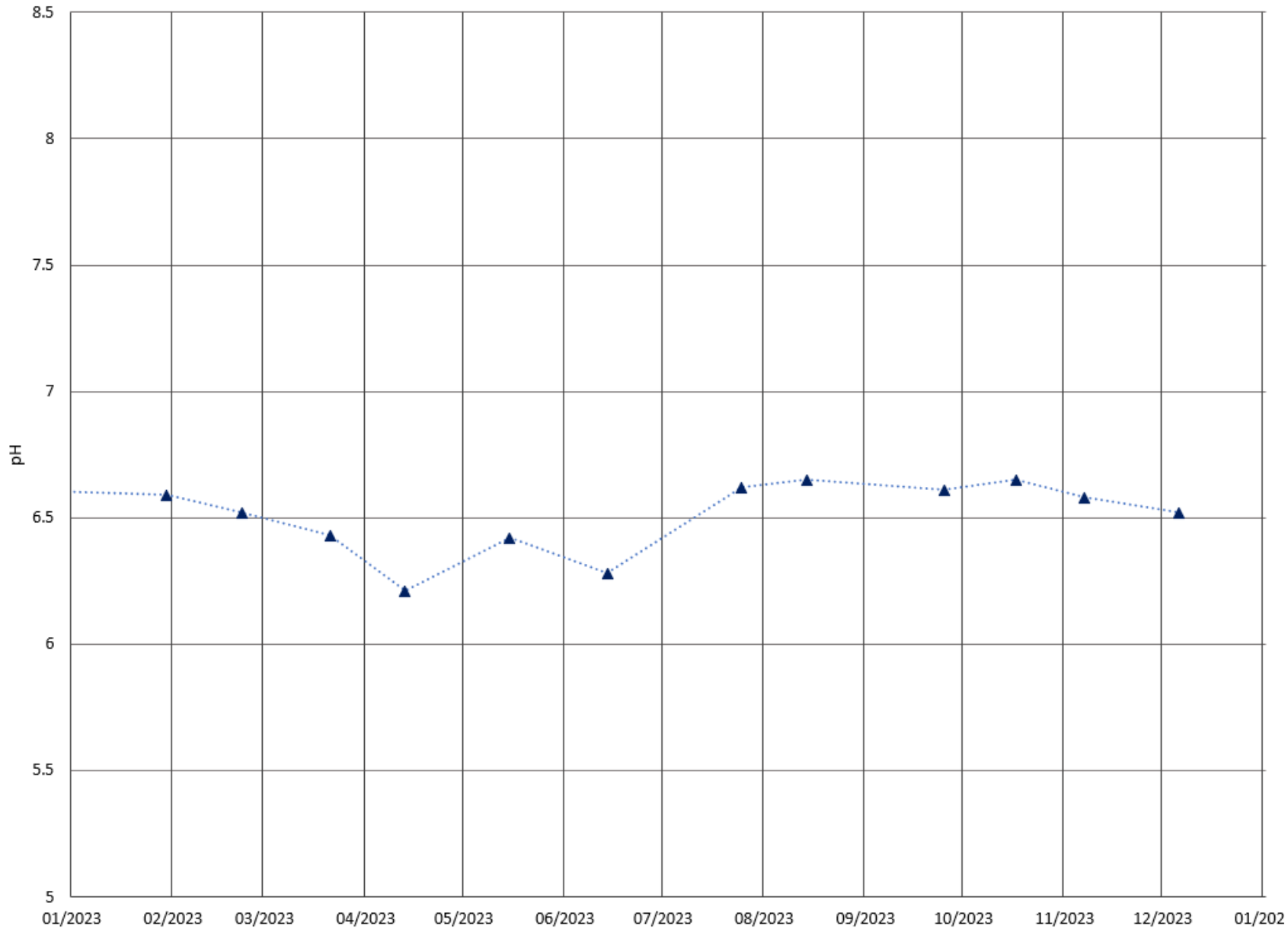
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Imagery from USDA NAIP Natural Color Imagery for Colorado acquired 2013.

CLEAR CREEK ASSOCIATES

Figure 1

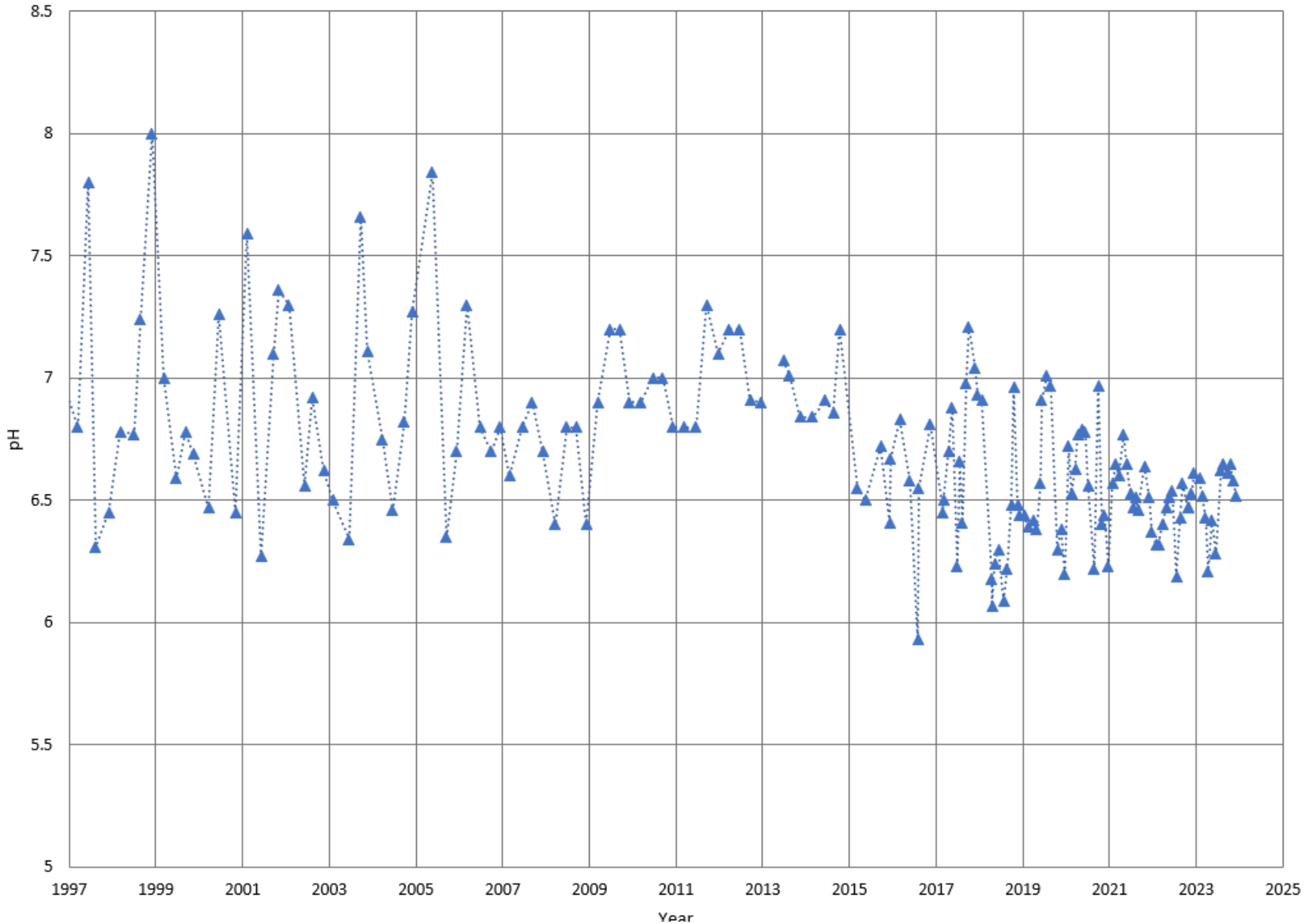
Site Map
Ten Mile Basin Site
Climax Mine, CO

Document Path: P:\Freeport McMoRan\Climax Mine\GW-1 Project\Maps\GIS\Figure 1 Ten Mile Basin Well Locations.mxd



CLEAR CREEK ASSOCIATES
8777 North Gainey Center Drive
Suite 250
Scottsdale, Arizona 85258
(480) 659-7131

Figure 2 – GW#2 pH 2023



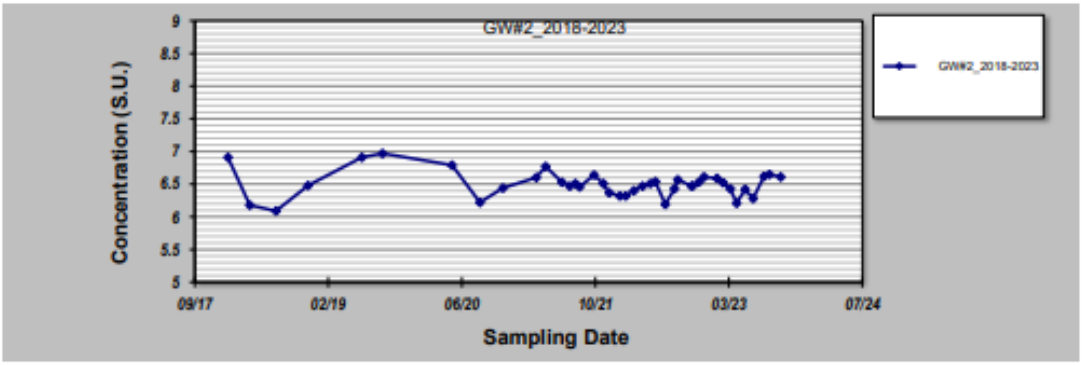
CLEAR CREEK ASSOCIATES
8777 North Gainey Center Drive
Suite 250
Scottsdale, Arizona 85258
(480) 659-7131

Figure 3 – GW#2 pH 1997 to 2023

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	19-Feb-24	Job ID:	cc21.1119
Facility Name:	Climax	Constituent:	pH
Conducted By:	M. Alter	Concentration Units:	S.U.
Sampling Point ID:	GW#2_2018-2023		

Sampling Event	Sampling Date	PH CONCENTRATION (S.U.)
1	1/24/2018	6.91
2	4/16/2018	6.18
3	7/23/2018	6.09
4	11/20/2018	6.48
5	6/10/2019	6.91
6	8/28/2019	6.97
7	5/12/2020	6.79
8	8/25/2020	6.22
9	11/19/2020	6.44
10	3/24/2021	6.6
11	4/28/2021	6.77
12	6/28/2021	6.53
13	7/27/2021	6.47
14	8/17/2021	6.51
15	9/2/2021	6.46
16	10/28/2021	6.64
17	11/30/2021	6.51
18	12/23/2021	6.37
19	1/31/2022	6.32
20	2/22/2022	6.32
21	3/24/2022	6.4
22	4/26/2022	6.47
23	5/25/2022	6.51
24	6/13/2022	6.54
25	7/20/2022	6.19
26	8/25/2022	6.43
27	9/6/2022	6.57
28	10/28/2022	6.47
29	10/28/2022	6.47
30	11/22/2022	6.53
31	12/12/2022	6.61
32	01/30/2023	6.59
33	02/22/2023	6.52
34	03/21/2023	6.43
35	04/13/2023	6.21
36	05/15/2023	6.42
37	06/14/2023	6.28
38	07/25/2023	6.62
39	08/14/2023	6.65
40	09/24/2023	6.61
Coefficient of Variation:		0.03
Mann-Kendall Statistic (S):		-22
Confidence Factor:		59.6%
Concentration Trend:		Stable



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

CLEAR CREEK ASSOCIATES

8777 North Gainey Center Drive
Suite 250
Scottsdale, Arizona 85258
(480) 659-7131

Figure 4 – Statistical Analysis
GW#2 pH 2018 - 2023

ATTACHMENT A

WRJ-25-75

SP EMW

6

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

STATE OF COLORADO } SS. **AFFIDAVIT**
COUNTY OF SUMMIT

RECEIVED
JUL 31 1987
WATER RESOURCES
STATE ENGINEER
COLO.

X STATEMENT OF BENEFICIAL USE OF GROUND WATER
____ AMENDMENT OF EXISTING RECORD
____ LATE REGISTRATION

PERMIT NUMBE [redacted] LOCATION OF WELL

THE AFFIANT(S) Climax Molybdenum Company whose mailing address is _____ City Climax, Colorado (STATE) 80429 (ZIP)

County Summit
SE ¼ of the NE ¼, Section 13
Twp. 7 S (N OR S), Rng. 79 W (E OR W), 6th P.M.

being duly sworn upon oath, deposes and says that ~~he~~ (they) ~~is~~(are) the owner(s) of the well described hereon; the well is located as described above, at distances of 1,502 feet from the North (NORTH OR SOUTH) section line and 201 feet from the East (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 1st day of July, 19 87; the maximum sustained pumping rate of the well is 10 gallons per minute, the pumping rate claimed hereby is 10 gallons per minute; the total depth of the well is 97.2 feet; the average annual amount of water to be diverted is None acre-feet; for which claim is hereby made for Groundwater monitoring only purpose(s); the legal description of the land on which the water from this well is used is N. A. of which None acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) [signature]

Subscribed and sworn to before me on this 28th day of July, 1987

My Commission expires: 4-25-91 (SEAL)

[signature] NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:
THAT THOSE CONDITIONS OF APPROVAL AS STATED ON THE PERMIT ARE COMPLIED WITH.

FOR OFFICE USE ONLY

Court Case No. _____
Prior. _____ Mo. ____ Day ____ Yr. ____
Div. 5 Cty. 59
Sec. ____ ____ ¼, ____ ¼, ____ ¼,
Well Use 9
Dist. 36 Basin _____ Man Dis _____

AUG 25 1987
DATE

[signature] STATE ENGINEER

[signature] BY

Well drilled by Lane Western Company, Inc. Lic. No. 1199

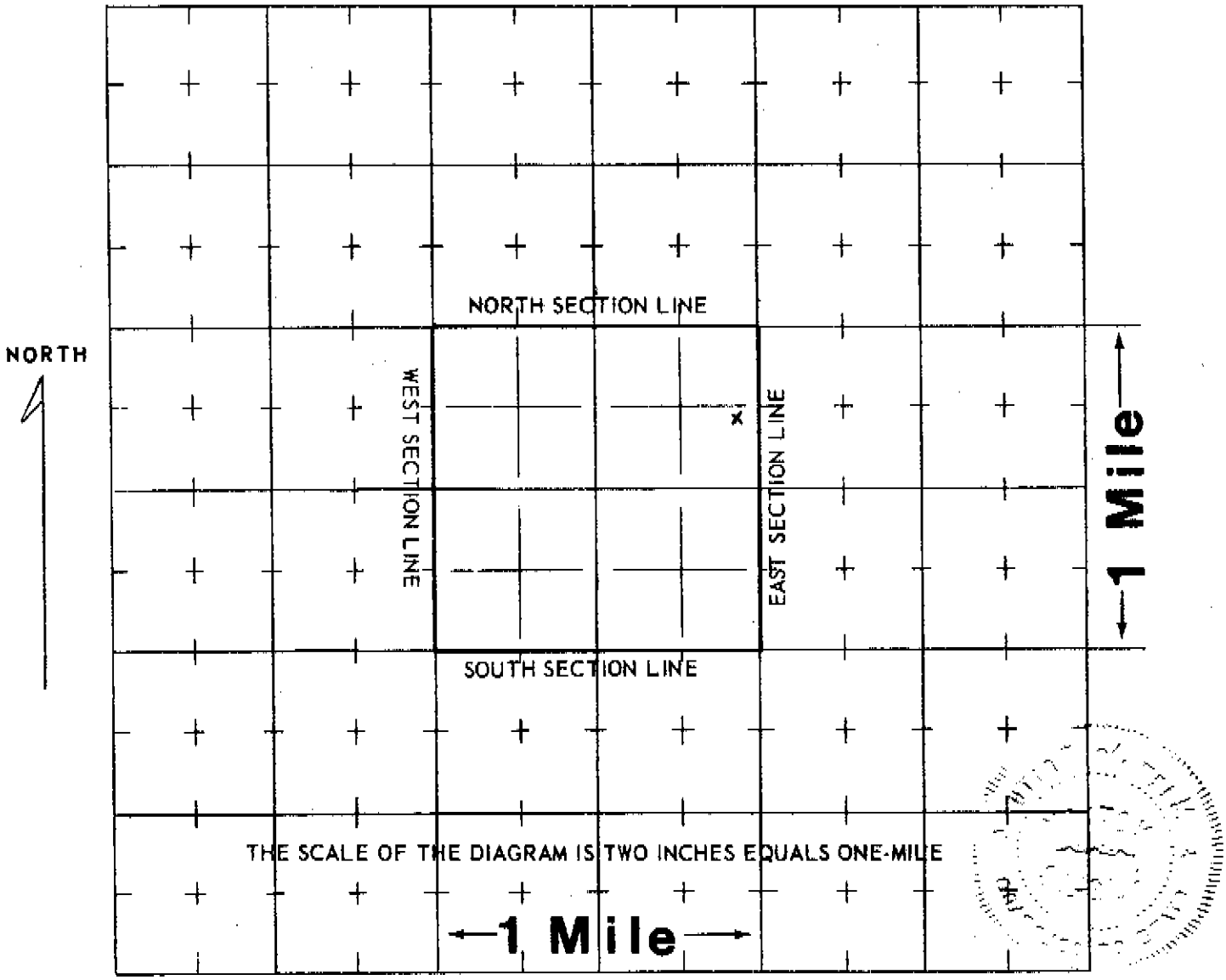
Permanent Pump installed by Lane Western Company, Inc. Lic. No. 1199

Meter Serial No. None ☐ Flow Meter Date Installed N. A.

Owner of land on which water is being used N. A.

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the **CENTER SQUARE** (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep.
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
100 gpm pumped continuously for one year produces 160 acre-feet.

**(WHITE AND PINK COPY TO BE FILED WITH THE STATE ENGINEER
PINK COPY WILL BE RETURNED TO OWNER)**

W-26-77

WAE MW

THIS FORM MUST BE SUBMITTED WITHIN 60 DAYS OF COMPLETION OF THE WORK DESCRIBED HEREON. TYPE OR PRINT IN BLACK INK.

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER 31726-M

RECEIVED
JUL 30 1987
WATER RESOURCES
STATE ENGINEER

WELL OWNER Warren Alloway
Climax Molybdenum Company

ADDRESS Climax, CO 80429

DATE COMPLETED June 26, 19 87

SE ¼ of the NE ¼ of Sec. 13,
T. 7 S, R. 79 W, 6th P.M.

WELL LOG

From	To	Type and Color of Material	Water Loc.
0	20'	Sand & boulders	
20 '	25'	Gravel w/occasional boulder	X
25 '	35'	Gravel w/cobbles	X
35 '	40'	Sand & clay	X
40 '	50'	Cobbles, gravel, sand	X
50 '	94.5'	Clay w/sand layers	X
94.5'	96.5'	Granite bedrock	

TOTAL DEPTH 96.5'

Use additional pages necessary to complete log.

HOLE DIAMETER

10 in. from 0 to 96.5 ft.

____ in. from ____ to ____ ft.

____ in. from ____ to ____ ft.

DRILLING METHOD Mud Rotary

CASING RECORD:

Plain Casing

Size 4" & kind PVC from +2 to 25 ft.

Size 4" & kind PVC from 45 to 85 ft.

Size ____ & kind ____ from ____ to ____ ft.

Perforated Casing

Size 4" & kind PVC from 25 to 45 ft.

Size ____ & kind ____ from ____ to ____ ft.

Size ____ & kind ____ from ____ to ____ ft.

GROUTING RECORD

Material Cement grout - Bentonite Seal

Intervals 96.5' - 85' 18.5' - 0 50' - 60'

Placement Method Tremie pipe

GRAVEL PACK: Size #10-20

Interval 50' - 20'

TEST DATA Not tested

Date Tested ____, 19 __

Static Water Level Prior to Test ____ ft.

Type of Test Pump ____

Length of Test ____

Sustained Yield (Metered) ____

Final Pumping Water Level ____

PUMP INSTALLATION REPORT

Pump Make _____

Type _____

Powered by _____ HP _____

Pump Serial No. _____

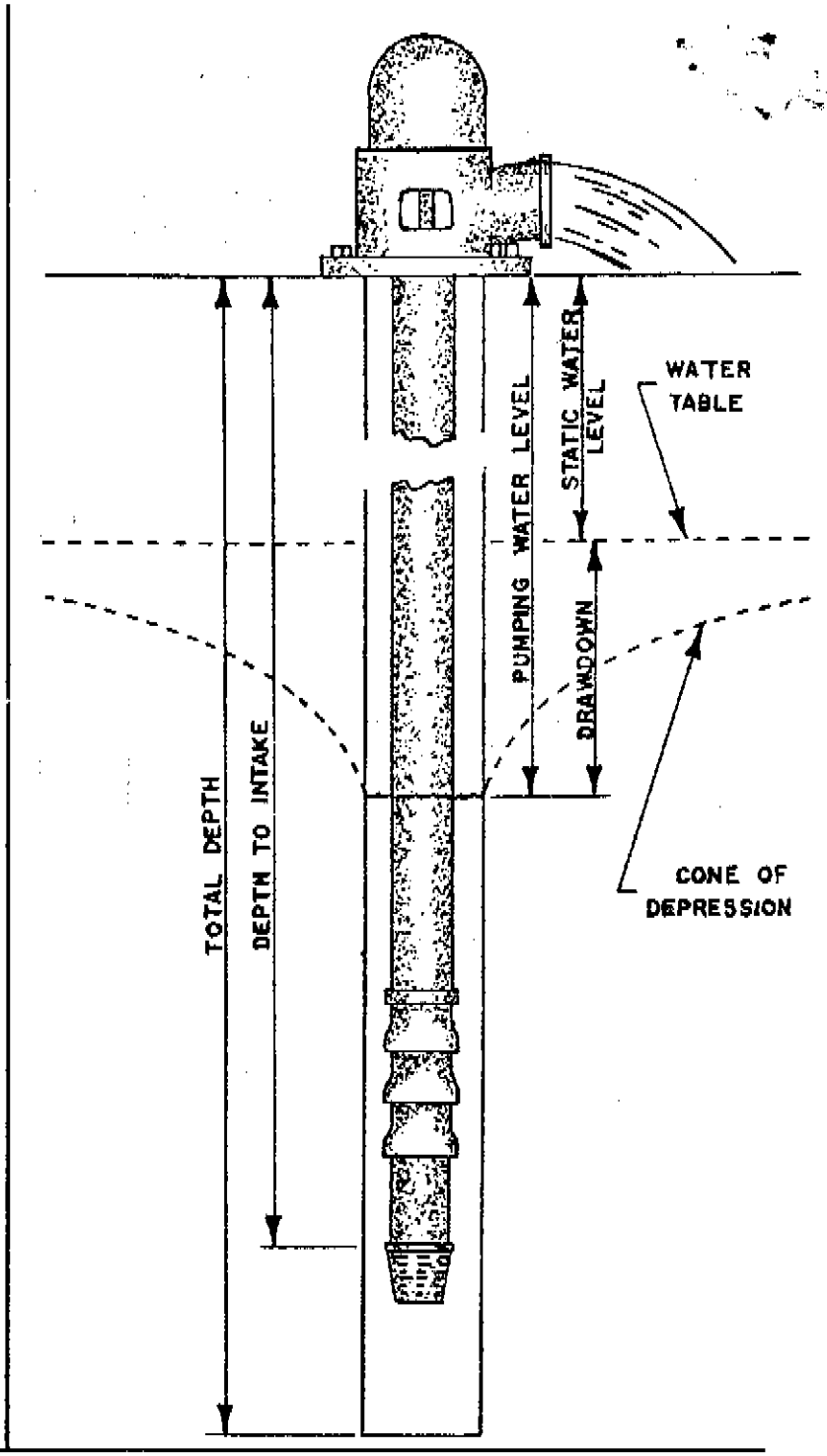
Motor Serial No. _____

Date Installed _____

Pump Intake Depth _____

Remarks _____

_____



WELL TEST DATA WITH PERMANENT PUMP

Date Tested _____

Static Water Level Prior to Test _____

Length of Test _____ Hours

Sustained yield (Metered) _____ GPM

Pumping Water Level _____

Remarks _____

_____

CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature Charles K. Cothern License No. 1199

Charles K. Cothern

State of Colorado, County of ARAPAHOE SS.

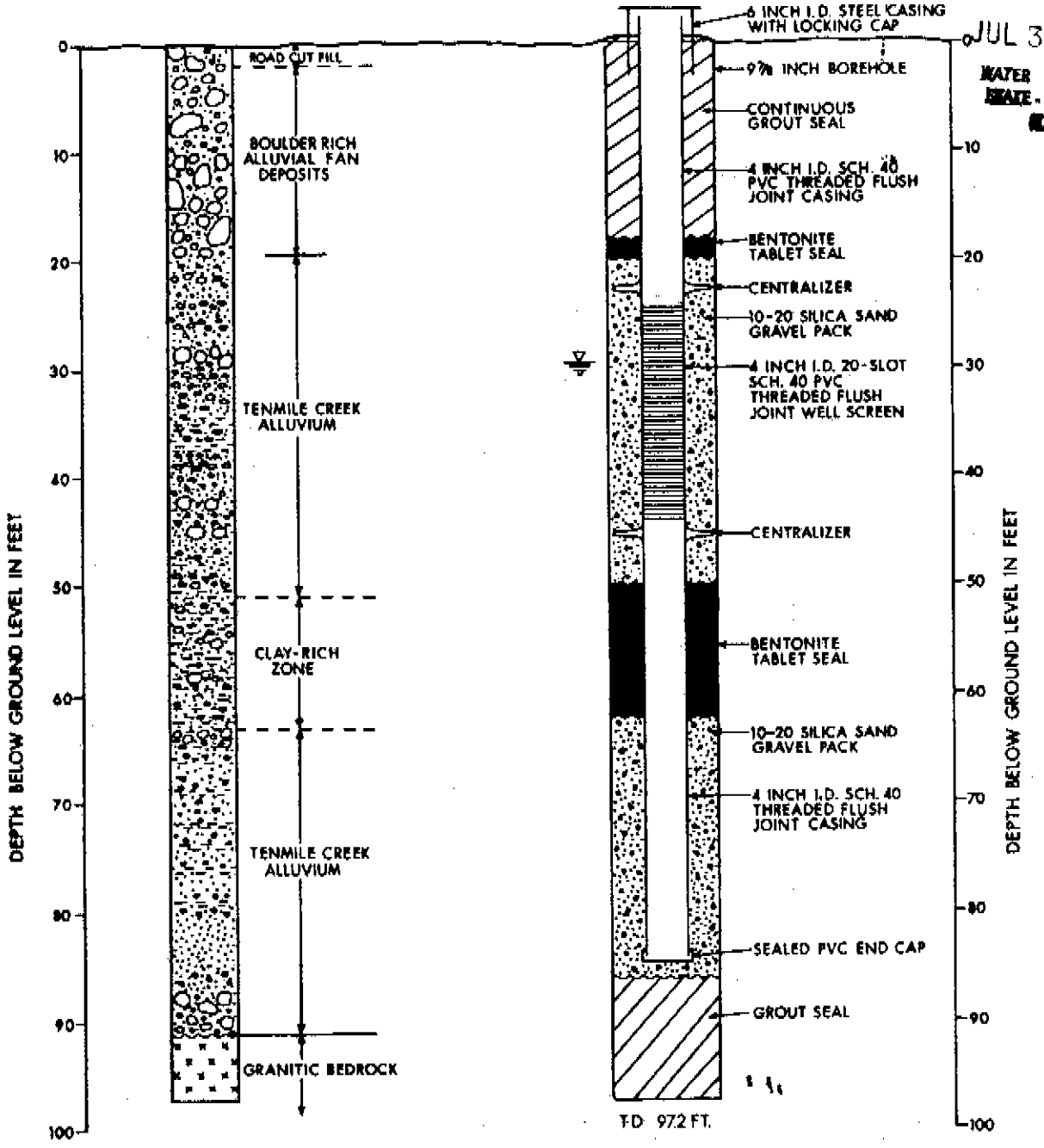
Subscribed and sworn to before me this 29th day of July, 1987

My Commission expires: July 27, 1989.

Notary Public Margaret Bittenfield

FORM TO BE MADE OUT IN QUADRUPLICATE: WHITE FORM must be an original copy, on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer. PINK COPY is for the Owner and YELLOW COPY is for the Driller.

JOHN C. HALEPASKA AND ASSOCIATES, INC.



LEGEND

- CLAYS
- SANDS AND GRAVELS
- COBLES AND BOULDERS
- BEDROCK
- STATIC WATER LEVEL

NO HORIZONTAL SCALE

NOTES:

- PERMIT NO. 31726-M
- LOCATED SE¼ NE¼ SEC. 13 T 7 S R 79 W, SUMMIT CO., COLO.
- WELL DRILLED 6/15 - 6/26/87 USING MUD ROTARY SYSTEM WITH A 9⅞" BIT.
- STATIC WATER LEVEL RECORDED 7/8/87

Permit No. 31726-M

CLIMAX MOLYBDENUM COMPANY
GROUND WATER MONITORING WELL NO.1
FORMATION LOG AND WELL CONSTRUCTION DETAILS

PROJECT NO. 5110	FIG. NO. 2

48B

WRJ-5-Rev. 76

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

RECEIVED
APR 24 1987

RECEIVED
MAY 06 1987
WATER RESOURCES
DIV. 1

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(XX) OTHER Ground Water Monitoring Well
WATER COURT CASE NO. _____

WATER RESOURCES 87 2:08 P
STATE ENGINEER 2 @ 25.00
032472 50.00
WATRES P0012
FEE 50.00
CHEQUE 50.00

(1) APPLICANT - mailing address

NAME Warren Alloway

~~XXXXXX~~ Climax Molybdenum Company

CITY Climax, Colorado 80429
(State) (Zip)

TELEPHONE NO. (303) 486-2150

(2) LOCATION OF PROPOSED WELL

County Summit

SE ¼ of the NE ¼, Section 13

Twp. 7 S (N,S), Rng. 79 W (E,W), 6th P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) N/A

Average annual amount of ground water to be appropriated (acre-feet): N/A

Number of acres to be irrigated: None

Proposed total depth (feet): 50

Aquifer ground water is to be obtained from:

N/A

Owner's well designation Ground water monitoring Well No. 1

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
( ) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
( ) MUNICIPAL (8)
(XX) OTHER (9) Ground water monitoring

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name Licensed

Street _____

City _____ (State) (Zip)

Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

CHG 11m 2

Receipt No. 75421A CL-1, 7A5427 11702-A

Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED PURSUANT TO C.R.S. 37-90-137(2) TO SATISFY THE PERMIT REQUIREMENTS OF C.R.S. 37-90-138(3) FOR THE CONSTRUCTION OF A WELL FOR MONITORING WATER LEVELS AND/OR WATER QUALITY SAMPLING IN THE SE1/4 OF THE NE1/4 OF SECTION 13, T7S, R79W, 6TH P.M.
2) THIS WELL MUST BE EQUIPPED WITH A LOCKING CAP OR SEAL TO PREVENT WELL CONTAMINATION OR POSSIBLE HAZARDS AS AN OPEN WELL. THE WELL MUST BE KEPT LOCKED AT ALL TIMES EXCEPT DURING SAMPLING OR MEASURING.
3) THIS WELL MUST BE CONSTRUCTED BY OR UNDER THE SUPERVISION OF A LICENSED WELL DRILLER ACCORDING TO THE RULES AND REGULATIONS OF THE BOARD OF EXAMINERS OF WATER WELL CONSTRUCTION AND PUMP INSTALLATION CONTRACTORS.
4) RECORDS OF WATER LEVEL MEASUREMENTS AND WATER QUALITY ANALYSES SHALL BE MAINTAINED BY THE WELL OWNER AND SUBMITTED TO THE DIVISION OF WATER RESOURCES UPON REQUEST.
5) UPON CONCLUSION OF THE MONITORING PROGRAM, THE APPLICANT SHALL PLUG AND ABANDON THIS WELL IN ACCORDANCE WITH THE RULES AND REGULATIONS ADOPTED BY THE ABOVE MENTIONED BOARD.
6) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBER AND NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.
7) THE APPLICANT MUST SUBMIT AN AS BUILT DRAWING SHOWING THE EXACT LOCATION,
- CONTINUED, ATTACHED SHEET -

APPLICATION APPROVED

PERMIT NUMBER 31726 -M

DATE ISSUED MAY 12 1987

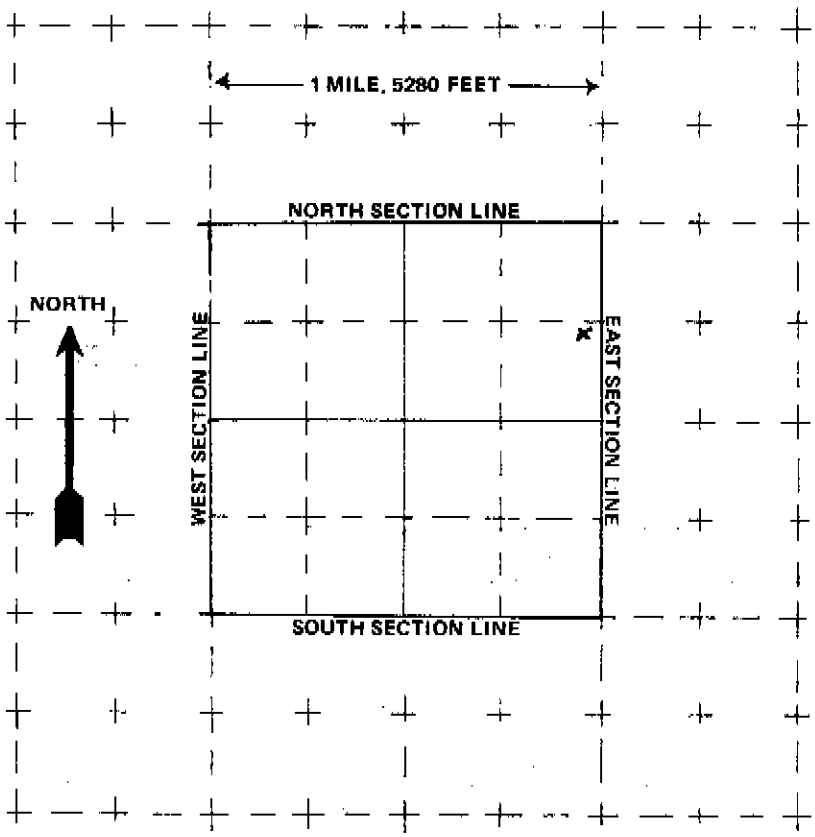
EXPIRATION DATE MAY 12 1988

Jerry A. Danielson
(STATE ENGINEER)

BY [signature]

I.D. 5-36 COUNTY 59

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

1,502 ft. from North (north or south) sec. line

201 ft. from East (east or west) sec. line

LOT ____ BLOCK ____ FILING # ____

SUBDIVISION ____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: Climax Molybdenum Co.

No. of acres None . Will this be the only well on this tract? ____

(8) PROPOSED CASING PROGRAM

Plain Casing

4 in. from 0 ft. to 25 ft.

____ in. from ____ ft. to ____ ft.

Perforated casing

4 in. from 25 ft. to 50 ft.

____ in. from ____ ft. to ____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): Climax Molybdenum Company No. of acres: None

Legal description: ____

(11) DETAILED DESCRIPTION of the use of ground water: **Household use and domestic wells must indicate type of disposal system to be used.** Ground water monitoring

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

Warren H. Alloway 4-23-87

SIGNATURE OF APPLICANT(S) WARREN ALLOWAY, ENGINEER

Use additional sheets of paper if more space is required.

APPLICANT: WARREN ALLOWAY
CLIMAX MOLYBDENUM COMPANY

WELL PERMIT NO. 31726-M

CONDITIONS OF APPROVAL, CONTINUED:

CONSTRUCTION DETAILS INCLUDING THE TOTAL DEPTH OF THE WELL, THE CASING PROGRAM WITH ZONES OF PERFORATIONS, AND A DESCRIPTION OF THE GROUTING TYPE AND INTERVAL. A WELL COMPLETION REPORT WITH A LITHOLOGIC LOG MUST ALSO BE SUBMITTED BY THE LICENSED DRILLER UNDER WHOSE SUPERVISION THE WELL WAS CONSTRUCTED OR BY THE OWNER IF CONSTRUCTED BY HIMSELF.

BED, 5-11-87

DWR 26-77

w/memo

RECEIVED
JUL 30 1987
WATER RESOURCES
ENGR. • ENGINEER

THIS FORM MUST BE SUBMITTED WITHIN 60 DAYS OF COMPLETION OF THE WORK DESCRIBED HERE ON. TYPE OR PRINT IN BLACK INK.

COLORADO DIVISION OF WATER RESOURCES

1313 Sherman Street - Room 818
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT

PERMIT NUMBER 31727-M

Warren Alloway

WELL OWNER Climax Molybdenum Company

ADDRESS Climax, Colorado 80429

DATE COMPLETED June 30, 19 87

SE ¼ of the SW ¼ of Sec. 7,

T. 7 S, R. 78 W, 6th P.M.

WELL LOG

From	To	Type and Color of Material	Water Loc.
0'	5'	Top soil, clay, gravel	
5'	20'	Boulders, cobbles, sand	
20'	25'	Brown clay	
25'	50'	Cobbles, sand w/clay layers	X
50'	55'	Reddish brown clay	
55'	68'	Clay, sand layers	

TOTAL DEPTH 68'

Use additional pages necessary to complete log.

HOLE DIAMETER

10 in. from 0 to 68 ft.

____ in. from ____ to ____ ft.

____ in. from ____ to ____ ft.

DRILLING METHOD Mud Rotary

CASING RECORD: Plain Casing

Size 4" & kind PVC from +2 to 25 ft.

Size 4" & kind PVC from 35 to 45 ft.

Size 4" & kind PVC from 55 to 56 ft.

Perforated Casing

Size 4" & kind PVC from 25 to 35 ft.

Size 4" & kind PVC from 45 to 55 ft.

Size ____ & kind ____ from ____ to ____ ft.

GROUTING RECORD

Material	~~Natural Fill~~	Bentonite	Bentonite	Cement
Intervals	68' - 63'	63' - 60'	20' - 18'	18' - 0

Placement Method Tremie

GRAVEL PACK: Size #10-20

Interval 60' - 20'

TEST DATA

Not Tested

Date Tested ____, 19__

Static Water Level Prior to Test ____ ft.

Type of Test Pump ____

Length of Test ____

Sustained Yield (Metered) ____

Final Pumping Water Level ____

PUMP INSTALLATION REPORT

Pump Make _____

Type _____

Powered by _____ HP _____

Pump Serial No. _____

Motor Serial No. _____

Date Installed _____

Pump Intake Depth _____

Remarks _____

_____

WELL TEST DATA WITH PERMANENT PUMP

Date Tested _____

Static Water Level Prior to Test _____

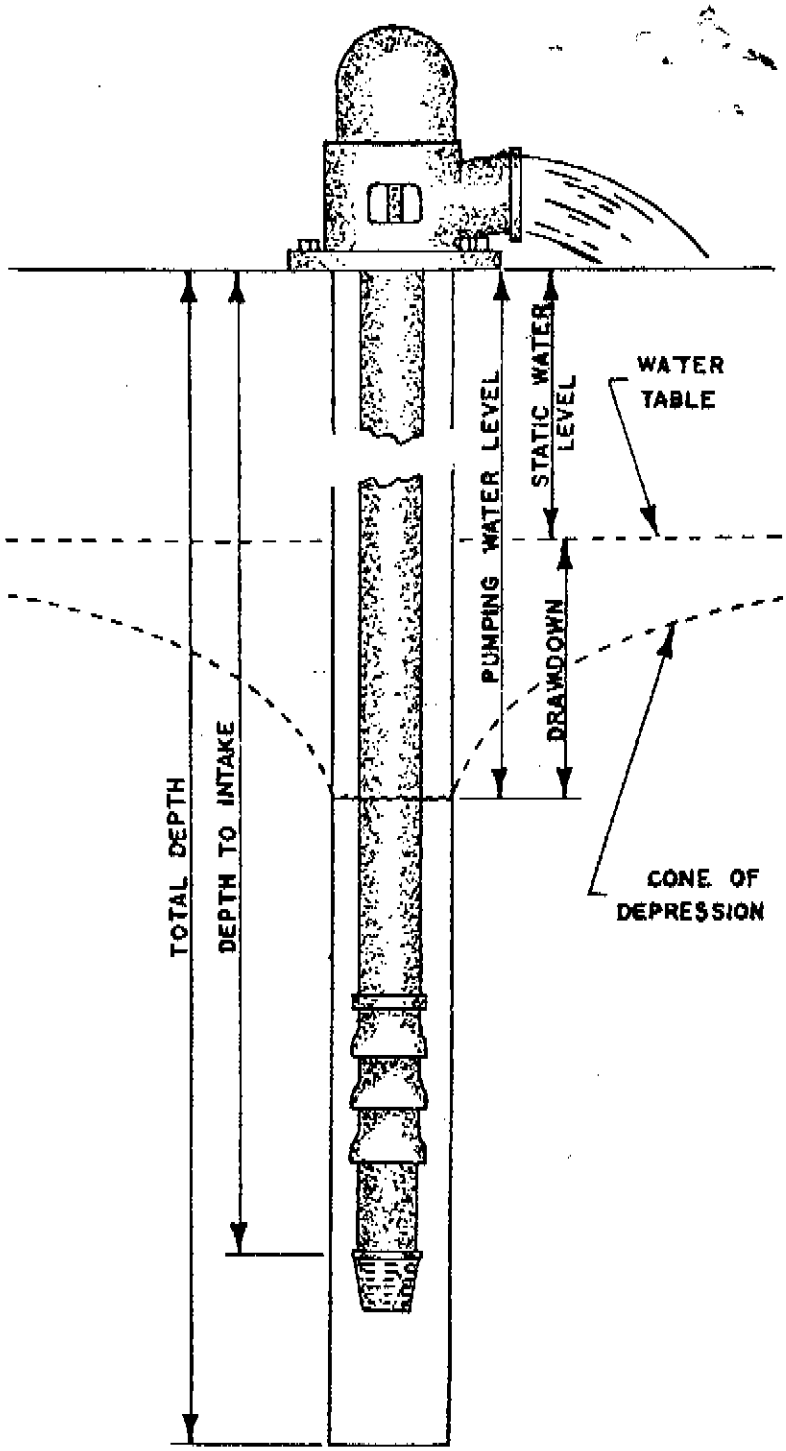
Length of Test _____ Hours

Sustained yield (Metered) _____ GPM

Pumping Water Level _____

Remarks _____

_____



CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature Charles K. Cothern License No. 1199

Charles K. Cothern

State of Colorado, County of ARAPAHOE SS

Subscribed and sworn to before me this 29th day of July, 19 87.

My Commission expires: July 27, 1989.

Notary Public Margaret Cuttyfield

FORM TO BE MADE OUT IN QUADRUPLICATE: WHITE FORM must be an original copy on both sides and signed. WHITE AND GREEN copies must be filed with the State Engineer. PINK COPY is for the Owner and YELLOW COPY is for the Driller.

SPEMW

5

WRJ-25-75

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

STATE OF COLORADO } ss. **AFFIDAVIT**
COUNTY OF SUMMIT }

RECEIVED
JUL 31 1987
WATER RESOURCES
STATE ENGINEER

X STATEMENT OF BENEFICIAL USE OF GROUND WATER
____ AMENDMENT OF EXISTING RECORD
____ LATE REGISTRATION

PERMIT NUMBER [redacted] LOCATION OF WELL

THE AFFIANT(S) Climax Molybdenum Company County Summit
whose mailing address is _____ SE ¼ of the SW ¼, Section 7
City Climax, Colorado (STATE) 80429 (ZIP) Twp. 7 S (N OR S), Rng. 78 W (E OR W), 6th P M

being duly sworn upon oath, deposes and says that ~~he~~ (they) ~~is~~ (are) the owner(s) of the well described hereon, the well is located as described above, at distances of 1,177 feet from the South (NORTH OR SOUTH) section line and 2,399 feet from the West (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 1st day of July, 1987; the maximum sustained pumping rate of the well is 10 gallons per minute, the pumping rate claimed hereby is 10 gallons per minute; the total depth of the well is 68.5 feet; the average annual amount of water to be diverted is None acre-feet; for which claim is hereby made for Groundwater Monitoring only purpose(s); the legal description of the land on which the water from this well is used is N. A. of which None acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) [signature]

Subscribed and sworn to before me on this 28th day of July, 1987

My Commission expires: 4-25-91

(SEAL) [signature] NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

THAT THOSE CONDITIONS OF APPROVAL AS STATED ON THE PERMIT ARE COMPLIED WITH.

FOR OFFICE USE ONLY

Court Case No. _____

Prior _____ Mo. ____ Day ____ Yr. ____

Div. 5 Cty. 59

Sec. ____ ____ ¼, ____ ¼, ____ ¼

Well Use 9

Dist. 36 Basin ____ Man. Dis ____

AUG 25 1987
DATE

[signature]
STATE ENGINEER

BY [signature]

Well drilled by Lane Western Company, Inc. Lic. No. 1199

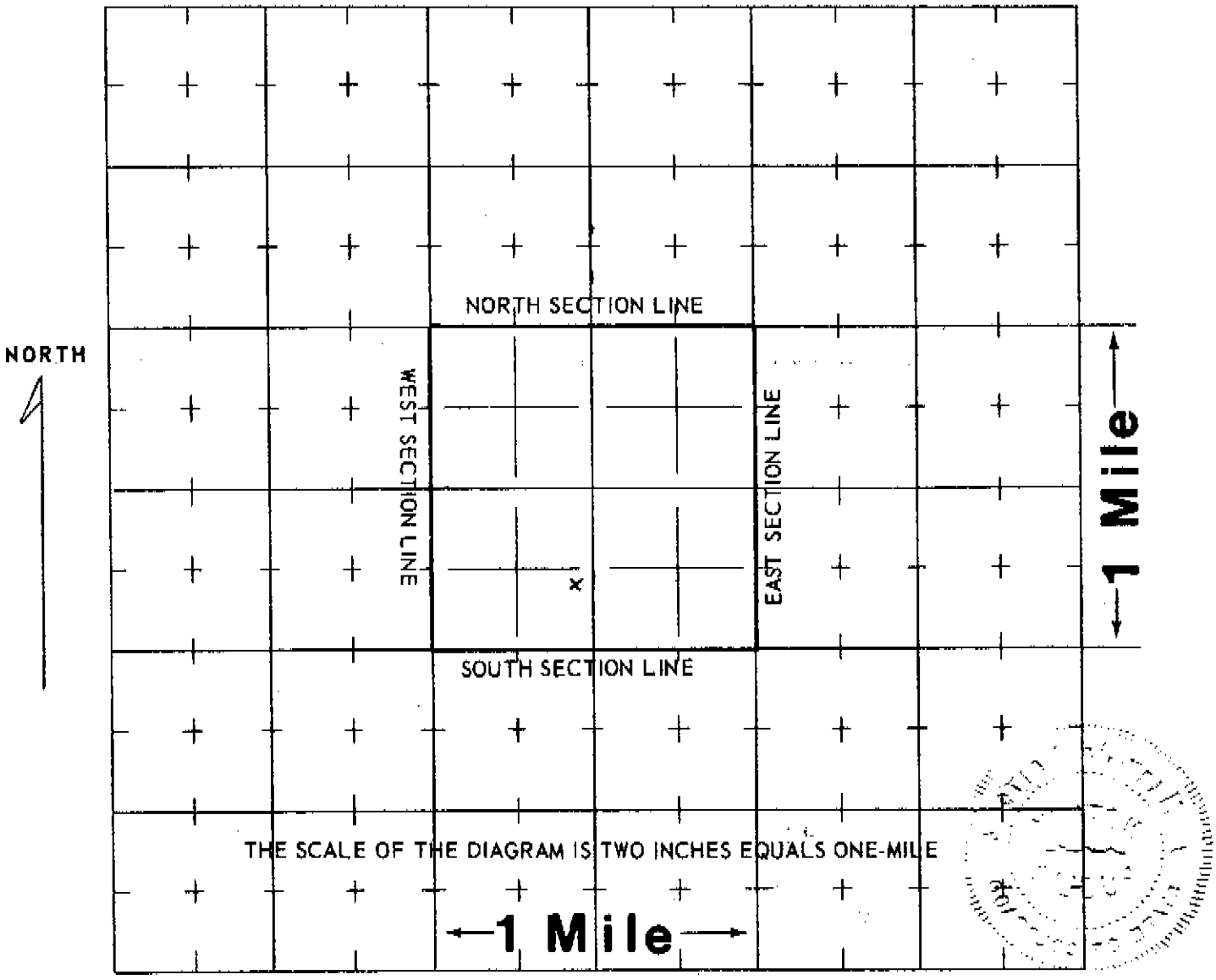
Permanent Pump installed by Lane Western Company, Inc. Lic. No. 1199

Meter Serial No. None ☐ Flow Meter Date Installed N. A.

Owner of land on which water is being used N. A.

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the **CENTER SQUARE** (one section) to indicate the location of the well, if possible.

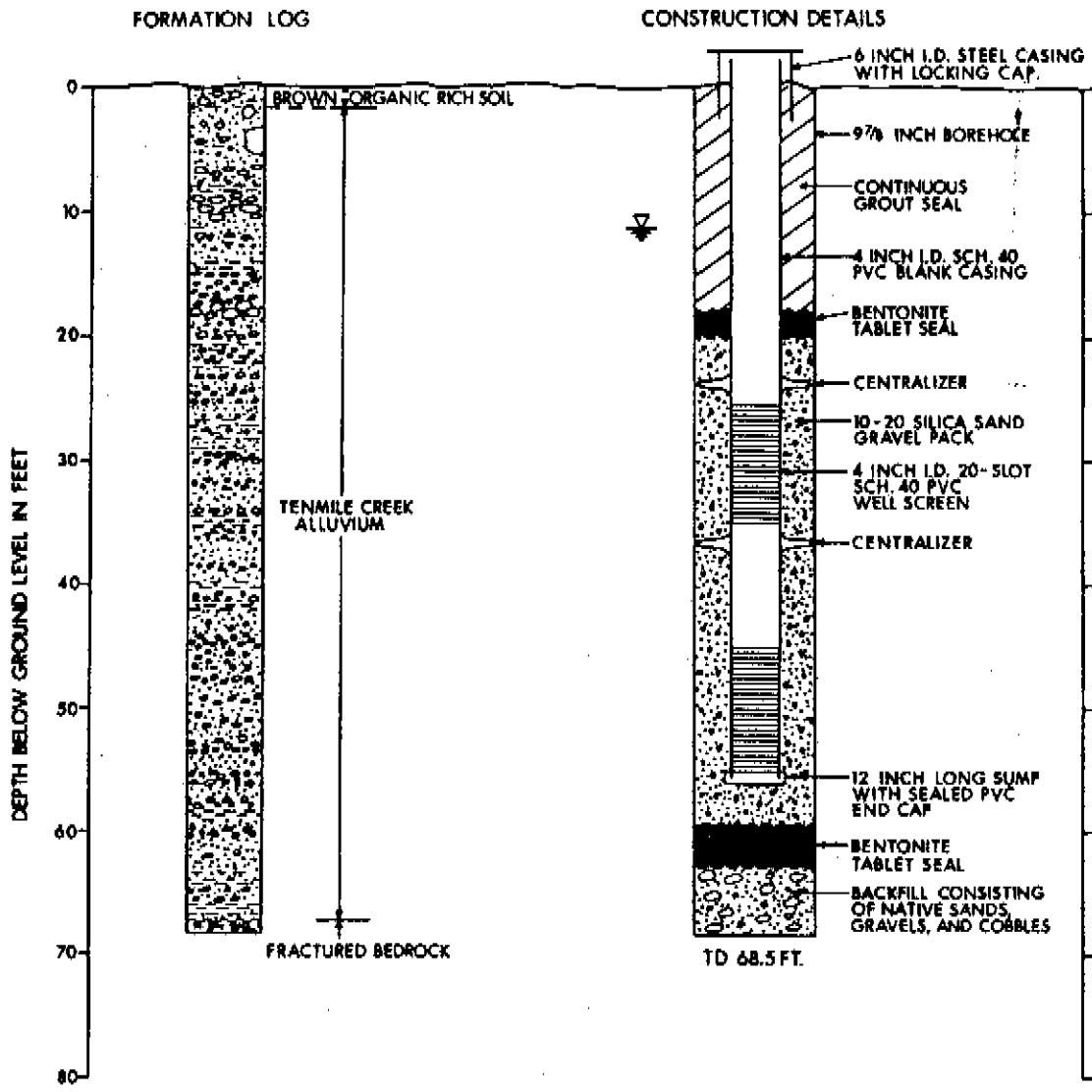


WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep.
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
100 gpm pumped continuously for one year produces 160 acre-feet.

**(WHITE AND PINK COPY TO BE FILED WITH THE STATE ENGINEER
PINK COPY WILL BE RETURNED TO OWNER)**

JOHN C. HALEPASKA AND ASSOCIATES, INC.



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LEGEND

- CLAYS
- SANDS AND GRAVELS
- COBBLES AND BOULDERS
- BEDROCK
- STATIC WATER LEVEL

NO HORIZONTAL SCALE

NOTES:

- PERMIT NO. 31727-M
- LOCATED SE¼ SW¼ SEC. 7 T7S R79W, SUMMIT CO., COLO.
- WELL DRILLED 6/7-6/30/87 USING MUD ROTARY SYSTEM WITH A 9⅞" BIT
- STATIC WATER LEVEL RECORDED 7/8/87

Permit No. 31727-M

CLIMAX MOLYBDENUM COMPANY
GROUND WATER MONITORING WELL NO.2
FORMATION LOG AND WELL CONSTRUCTION DETAILS

PROJECT NO. 5110	FIG. NO. 3

WRJ-5 Rev. 76.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

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PERMIT APPLICATION FORM

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COLO.

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(XX) OTHER Ground water monitoring well
WATER COURT CASE NO. _____

(1) APPLICANT - mailing address

NAME Warren Alloway

~~XXXXXX~~ Climax Molybdenum Company

CITY Climax Colorado (State) 80429 (Zip)

TELEPHONE NO. (303) 486-2150

(2) LOCATION OF PROPOSED WELL

County Summit

SE ¼ of the SW ¼, Section 7

Twp. 7 S (N,S), Rng. 78 W (E,W), 6th P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) N/A

Average annual amount of ground water to be appropriated (acre-feet): N/A

Number of acres to be irrigated: None

Proposed total depth (feet): 50

Aquifer ground water is to be obtained from:

N/A

Owner's well designation Groundwater Monitoring Well No. 2

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
( ) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
( ) MUNICIPAL (8)
(XX) OTHER (9) Ground water monitoring

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name Licensed

Street _____

City _____ (State) (Zip)

Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 754273 / 11702-B

Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED PURSUANT TO C.R.S. 37-90-137(2) TO SATISFY THE PERMIT REQUIREMENTS OF C.R.S. 37-90-138(3) FOR THE CONSTRUCTION OF A WELL FOR MONITORING WATER LEVELS AND/OR WATER QUALITY SAMPLING IN THE SE1/4 OF THE SW1/4 OF SECTION 7, T7S, R78W, 6TH P.M.
2) THIS WELL MUST BE EQUIPPED WITH A LOCKING CAP OR SEAL TO PREVENT WELL CONTAMINATION OR POSSIBLE HAZARDS AS AN OPEN WELL. THE WELL MUST BE KEPT LOCKED AT ALL TIMES EXCEPT DURING SAMPLING OR MEASURING.
3) THIS WELL MUST BE CONSTRUCTED BY OR UNDER THE SUPERVISION OF A LICENSED WELL DRILLER ACCORDING TO THE RULES AND REGULATIONS OF THE BOARD OF EXAMINERS OF WATER WELL CONSTRUCTION AND PUMP INSTALLATION CONTRACTORS.
4) RECORDS OF WATER LEVEL MEASUREMENTS AND WATER QUALITY ANALYSES SHALL BE MAINTAINED BY THE WELL OWNER AND SUBMITTED TO THE DIVISION OF WATER RESOURCES UPON REQUEST.
5) UPON CONCLUSION OF THE MONITORING PROGRAM, THE APPLICANT SHALL PLUG AND ABANDON THIS WELL IN ACCORDANCE WITH THE RULES AND REGULATIONS ADOPTED BY THE ABOVE MENTIONED BOARD.
6) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBER AND NAME OF THE AQUIFER. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.
7) THE APPLICANT MUST SUBMIT AN AS BUILT DRAWING SHOWING THE EXACT LOCATION,
- CONTINUED, ATTACHED SHEET -

APPLICATION APPROVED

PERMIT NUMBER 31727 -M

DATE ISSUED MAY 12 1987

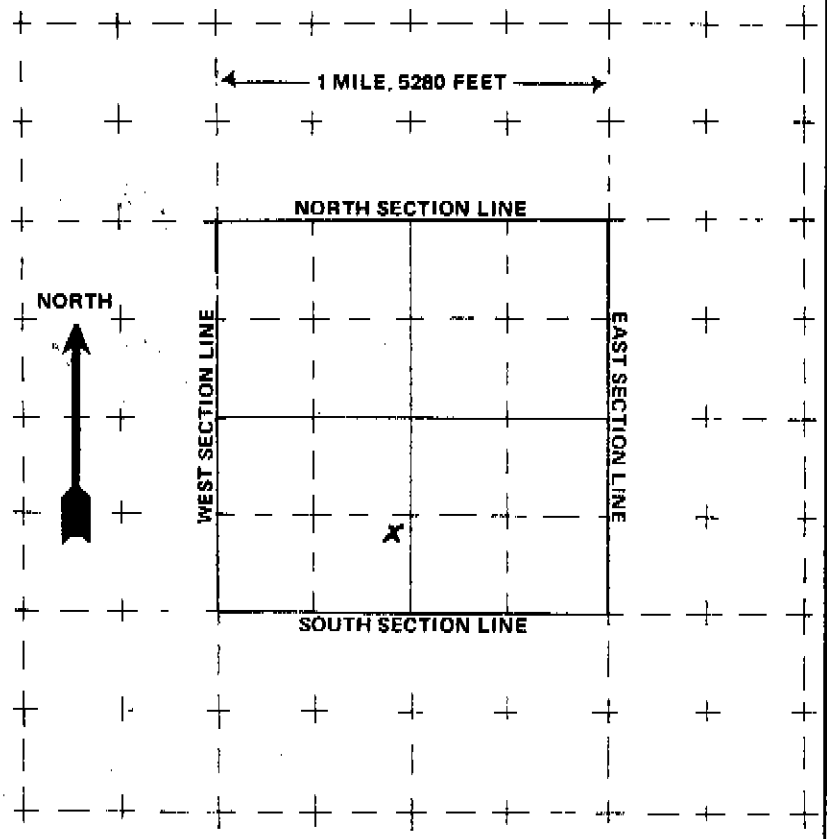
EXPIRATION DATE MAY 12 1988

Jim A. Davidson
(STATE ENGINEER)

BY J. Vanhoto

I.D. 5-36 COUNTY 59

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

1,177 ft. from South (north or south) sec. line

2,399 ft. from West (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: Climax Molybdenum Co.

No. of acres None . Will this be the only well on this tract? _____

(8) PROPOSED CASING PROGRAM

Plain Casing

4 in. from 0 ft. to 25 ft.

_____ in. from _____ ft. to _____ ft.

Perforated casing

4 in. from 25 ft. to 50 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

_____

_____

_____

_____

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): Climax Molybdenum Company No. of acres: None

Legal description: _____

(11) DETAILED DESCRIPTION of the use of ground water: **Household use and domestic wells must indicate type of disposal system to be used.** Ground water monitoring.

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

Warren A. Alloway 4-23-87

SIGNATURE OF APPLICANT(S) WARREN ALLOWAY, ENGINEER

Use additional sheets of paper if more space is required.

APPLICANT: WARREN ALLOWAY
CLIMAX MOLYBDENUM COMPANY

WELL PERMIT NO. 31727-M

CONDITIONS OF APPROVAL, CONTINUED:

CONSTRUCTION DETAILS INCLUDING THE TOTAL DEPTH OF THE WELL, THE CASING PROGRAM WITH ZONES OF PERFORATIONS, AND A DESCRIPTION OF THE GROUTING TYPE AND INTERVAL. A WELL COMPLETION REPORT WITH A LITHOLOGIC LOG MUST ALSO BE SUBMITTED BY THE LICENSED DRILLER UNDER WHOSE SUPERVISION THE WELL WAS CONSTRUCTED OR BY THE OWNER IF CONSTRUCTED BY HIMSELF.

BED, 5-11-87

Layne-Western Company, Inc. A Marley Company
8301 East Iliff Avenue · Denver, Colorado 80231 · 303/755-1281

July 29, 1987

Colorado Division of Water Resources
1313 Sherman Street Room 818
Denver, Colorado 80203

Reference: Climax Molybdenum Company
Permit No. 31726-M
Permit No. 31727-M

Gentlemen:

Enclosed herewith, please find Well Completion and Pump Installation Reports in connection with the above referenced permits.

If we may be of further assistance, please advise.

Very truly yours,

LAYNE-WESTERN COMPANY, INC.

Margaret Butterfield

(Mrs.) Margaret Butterfield

mb
Enclosure

FORM NO. GWS-31 4/2012

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Ste 821, Denver, CO 80203
Main (303) 866-3581 Fax (303) 866-3589 www.water.state.co.us

For Office Use Only

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WATER RESOURCES STATE ENGINEER COLO.

1. WELL PERMIT NUMBER: 290013

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Climax Molybdenum Company

MAILING ADDRESS: Fremont Pass, Highway 91

CITY: Climax STATE: CO ZIP CODE: 80429

TELEPHONE NUMBER w/area code: 917-486-7584

3. WELL LOCATION AS DRILLED: SW 1/4, SE 1/4, Sec., 7 Twp. 7 ☐ N or S, ☒ Range 78 ☐ E or W ☒

DISTANCES FROM SEC. LINES: 1010 ft. from ☐ N or ☒ S section line and 1145 ft. from ☒ E or ☐ W section line.

SUBDIVISION: _____, LOT____, BLOCK____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: TM-MW-002D

Easting: 401031

STREET ADDRESS AT WELL LOCATION: 11236 Hwy 91, Fremont Pass, Climax, CO 80429 Northing: 4367662

4. GROUND SURFACE ELEVATION Est. 10,277 feet DRILLING METHOD air rotary

DATE COMPLETED 09/27/2012 TOTAL DEPTH 153.5 feet DEPTH COMPLETED 153.5 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0-10'	Glacial till	gravel	10YR4/3	8'
10-75'	Glacial till	gravel	10YR4/3	
75-85'	Granodiorite	fine	GLEY15/N	
85-110'	Monzonite	fine	GLEY16/N	
110-153.5'	Monzonite	fine	GLEY18/N	

6. HOLE DIAM (in.)

	From (ft)	To (ft)
ODEX (8.75")	0	153.5
hammer (7.5")	0	153.5

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
4"	PVC	0.237	0	93.5

PERFORATED CASING: Screen Slot Size (in): 0.020

4"	PVC	0.237	93.5	153.5

8. FILTER PACK:

Material: silica sand
Size: 10/20
Interval: 88.5-153.5

9. PACKER PLACEMENT:

Type: _____
Depth: _____

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
Bentonite	7.5 bag	chip	84.3-88.4	positive
grout	108 bags	1.2 kg/L	3-84.3	tremie

Remarks: Grout 20% solids mix

11. DISINFECTION: Type _____ Amt. Used _____

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD _____

Static Level_____ ft. Date/Time measured:_____, Production Rate_____ gpm.

Pumping Level_____ ft. Date/Time measured_____, Test Length (hrs)_____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license. If filing online the State Engineer considers entering of licensed contractor name to be compliance with Rule 17.4

Company Name:	Phone w/area code:	License Number:
Arcadis	720-344-3500	

Mailing Address: 630 Plaza Dr., Suite 100 Highlands Ranch, CO 80129

Sign (or enter name if filing online)	Print Name and Title	Date
Richard Walther	Richard Walther, Senior Geologist	10/24/2012

FORM NO. GWS-31 4/2012

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Ste 821, Denver, CO 80203
Main (303) 866-3581 Fax (303) 866-3589 www.water.state.co.us

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NOV 27 2012

WATER RESOURCES STATE ENGINEER COLO

1. WELL PERMIT NUMBER: 290014

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Climax Molybdenum Company

MAILING ADDRESS: Fremont Pass, Highway 91

CITY: Climax STATE: CO ZIP CODE: 80429

TELEPHONE NUMBER w/area code: 917-486-7584

3. WELL LOCATION AS DRILLED: SE 1/4, NE 1/4, Sec., 13 Twp. 7 ☐ N or S, ☒ Range 79 ☐ E or W ☒

DISTANCES FROM SEC. LINES: 1580 ft. from ☒ N or ☐ S section line and 220 ft. from ☒ E or ☐ W section line.

SUBDIVISION: _____, LOT____, BLOCK____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: TM-MW-001D

Easting: 400226

STREET ADDRESS AT WELL LOCATION: 11236 Hwy 91, Fremont Pass, Climax, CO 80429 Northing: 4366835

4. GROUND SURFACE ELEVATION Est. 10,369 feet DRILLING METHOD air rotary

DATE COMPLETED 09/22/2012 TOTAL DEPTH 202 feet DEPTH COMPLETED 202 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0-15'	Glacial till	gravel	10YR 4/3	28'
15-98'	Glacial till	gravel	10YR 4/3	
98-120'	Monzonite	fine	GLEY17/N	
120-132'	Monzonite	fine	GLEY12.5/N	
132-175'	Monzonite	fine	GLEY17/N	
175-190'	Granodiorite	fine	10GY3/1	
190-202'	Granodiorite	fine	GLEY17/N	

6. HOLE DIAM (in.)

	From (ft)	To (ft)
ODEX (8.75")	0	202'
hammer (7.5")	0	202'

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
4"	PVC	0.237	0	102

PERFORATED CASING: Screen Slot Size (in): 0.020

4"	PVC	0.237	102	202

8. FILTER PACK:

Material: silica sand
Size: 10/20
Interval: 114-202

9. PACKER PLACEMENT:

Type: _____
Depth: _____

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
Grout	14 bags	1.2 kg/L	0-111.9'	tremie

Remarks: Grout 20% solids mix

11. DISINFECTION: Type _____ Amt. Used _____

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD _____

Static Level_____ ft. Date/Time measured:_____, Production Rate_____ gpm.

Pumping Level_____ ft. Date/Time measured_____, Test Length (hrs)_____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license. If filing online the State Engineer considers entering of licensed contractor name to be compliance with Rule 17.4

Company Name:	Phone w/area code:	License Number:
Arcadis	720-344-3500	

Mailing Address: 630 Plaza Dr., Suite 100 Highlands Ranch, CO 80126

Sign (or enter name if filing online)	Print Name and Title	Date
Richard Walther	Richard Walther, Senior Geologist	10/24/2012

ATTACHMENT B

Date: October 9, 2023

Lab Report No. 22817

Elaine DuBois
Climax Molybdenum – Climax Mine
11236 Hwy 91 Fremont Pass
Climax, CO 80429

Project Description: Climax Molybdenum; Wells GW1, GW2; Samples dated 07/25/2023
Complete Well Profiles (2); PO ZH000008NT

Test Description:

The Complete Well Profile analysis is designed for comparative analysis of two samples, typically one static and one pumping sample. The Complete Well Profile utilizes a series of inorganic chemical and microbiological tests to identify fouling and corrosion issues with potential impacts on the operation of the sampled well. The tests include a number of inorganic chemical parameters such as pH, total dissolved solids/conductivity, hardness, alkalinity, oxidation reduction potential (ORP), bicarbonate, carbonates, silica, sodium, potassium, chloride, iron, manganese, phosphate, nitrate, sulfate, and total organic carbon (TOC). Biological assessment is designed to quantify the total bacterial population, identify two dominant populations of bacteria, assess anaerobic conditions, and identify the presence of iron related bacteria and sulfate reducing organisms. Also included are tests for Adenosine triphosphate (ATP), heterotrophic plate count (HPC), and a microscopic evaluation; and in potable systems, total coliform and E. coli coliform presence/absence.

Testing Procedures:

All laboratory testing procedures are performed according to the guidelines set forth in *Standard Methods for the Examination of Water and Wastewater* as established by the American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF). Corrosion analyses are performed in accordance with the guidelines as set forth by the National Association of Corrosion Engineers (NACE). In general, these methods are approved by both the Environmental Protection Agency (EPA) and AWWA for the reporting of water and/or wastewater data.

Sample collection and shipment is the responsibility of the customer, performed according to protocol and procedures defined by the laboratory in advance of the sampling event with regards to the specific project and nature of the problem.

Disclaimer:

The data and interpretations presented are based on an evaluation of the samples and submitted data. Conclusions reached in this report are based upon the data available at the time of submittal and the accuracy of the report depends upon the validity of information submitted. Any recommendations presented are based on laboratory and field evaluations of similar fouling occurrences within potable water systems. Further investigative efforts, such as efficiency testing, site inspection, video survey, or other evaluation methods may offer additional insight into the system's condition and the degree of fouling present.

Client: Climax Molybdenum
Date: October 9, 2023
Lab Report No.22817

Re: Climax Molybdenum; Wells GW1, GW2; Samples dated 07/25/2023
Complete Well Profiles (2); PO ZH000008NT

ND - Not Detected NA - Not Applicable * as $CaCO_3$	**GW 1 Casing**	**GW 1 Aquifer**	**Detection Limits**
pH Value	6.68	6.53	NA
Phenolphthalein Alkalinity*	ND	ND	4 mg/l
Total Alkalinity*	56	40	4 mg/l
Hydroxide Alkalinity*	ND	ND	4 mg/l
Carbonate Alkalinity*	ND	ND	4 mg/l
Bicarbonate Alkalinity*	56	40	4 mg/l
Total Dissolved Solids	408	374	1.0 mg/l
Conductivity (µm or µS/cm)	566	520	NA
ORP (mV)	288.2	302.5	NA
Langelier Saturation Index (at 16°C)	- 1.44	- 1.56	NA
Total Hardness*	268	264	4 mg/l
Carbonate Hardness	56	40	4 mg/l
Non Carbonate Hardness	212	224	4 mg/l
Calcium*	180	264	4 mg/l
Magnesium*	88	ND	4 mg/l
Sodium (as Na)	9.03	6.05	0.02 mg/l
Potassium (as K)	4.8	4.8	0.1 mg/l
Phosphorus, Reactive (as PO_4^{3-})	0.18	0.15	0.06 mg/l
Chlorides (as Cl)	12.1	11.0	1 mg/l
Nitrate (Nitrogen)	ND	ND	0.3 mg/l
Chlorine (as Cl)	ND	ND	0.02 mg/l
Dissolved Iron (as Fe^{2+})	ND	ND	0.02 mg/l
Suspended Iron (as Fe^{3+})	0.05	0.08	0.02 mg/l
Iron Total (as Fe)	0.05	0.08	0.02 mg/l
Iron (resuspended)	0.07	0.04	0.02 mg/l
Copper (as Cu)	ND	ND	0.04 mg/l
Manganese (as Mn)	ND	ND	0.1 mg/l
Sulfate (as SO_4)	205	240	2 mg/l
Silica (as SiO_2)	13.0	14.2	1.0 mg/l
Tannin/Lignin	ND	ND	0.1 mg/l
Total Organic Carbon (C)	ND	ND	0.3 mg/l

ND - Not Detected NA - Not Applicable * as $CaCO_3$	**Well GW 2 Casing**	**Well GW 2 Aquifer**	**Detection Limits**
pH Value	6.71	6.68	NA
Phenolphthalein Alkalinity*	ND	ND	4 mg/l
Total Alkalinity*	52	40	4 mg/l
Hydroxide Alkalinity	ND	ND	4 mg/l
Carbonate Alkalinity	ND	ND	4 mg/l
Bicarbonate Alkalinity	52	40	4 mg/l
Total Dissolved Solids	157	144	1.0 mg/l
Conductivity (µm or µS/cm)	218	200	NA
ORP (mV)	296.6	303.4	NA
Langelier Saturation Index (at 16°C)	- 1.77	- 1.87	NA
Total Hardness*	76	84	4 mg/l
Carbonate Hardness	52	40	4 mg/l
Non Carbonate Hardness	24	44	4 mg/l
Calcium*	76	84	4 mg/l
Magnesium*	ND	ND	4 mg/l
Sodium (as Na)	15.80	3.72	0.02 mg/l
Potassium (as K)	0.6	0.7	0.1 mg/l
Phosphorus, Reactive (as PO_4^{3-})	0.26	0.29	0.06 mg/l
Chlorides (as Cl)	5.7	5.9	2 mg/l
Nitrate (Nitrogen)	0.4	0.3	0.3 mg/l
Chlorine (as Cl)	ND	ND	0.02 mg/l
Dissolved Iron (as Fe^{2+})	ND	ND	0.02 mg/l
Suspended Iron (as Fe^{3+})	0.03	0.02	0.02 mg/l
Iron Total (as Fe)	0.03	0.02	0.02 mg/l
Iron (resuspended)	0.11	0.02	0.02 mg/l
Copper (as Cu)	ND	ND	0.04 mg/l
Manganese (as Mn)	ND	ND	0.1 mg/l
Sulfate (as SO_4)	44	44	2 mg/l
Silica (as SiO_2)	15.0	14.8	1.0 mg/l
Tannin/Lignin	ND	ND	0.1 mg/l
Total Organic Carbon (C)	ND	ND	0.3 mg/l

Biological Analysis:

	Well GW 1 Casing	Well GW 1 Aquifer	Detection Limit
Plate Count (colonies/ml)	54	4	NA
Anaerobic Growth (%)	20	<10	NA
Sulfate Reducing Bacteria	Negative	Negative	NA
Fe/Mn Oxidizing Bacteria	Negative	Negative	NA
ATP (cells per ml) Initial	55,000	41,000	NA
ATP (cells per ml) 24 Hour	74,000	167,000	NA
Bacterial Identification	*Brevundimonas vesicularis*	*Brevundimonas vesicularis*	NA
Bacterial Identification	*Bacillus specie*	-	NA

	Well GW 2 Casing	Well GW 2 Aquifer	Detection Limit
Plate Count (colonies/ml)	13	1	NA
Anaerobic Growth (%)	<10	10	NA
Sulfate Reducing Bacteria	Negative	Negative	NA
Fe/Mn Oxidizing Bacteria	Positive	Negative	NA
ATP (cells per ml) Initial	28,000	37,000	NA
ATP (cells per ml) 24 Hour	45,000	53,000	NA
Bacterial Identification	*Brevundimonas vesicularis*	*Brevundimonas vesicularis*	NA
Bacterial Identification	*Micrococcus specie*	-	NA
Bacterial Identification	*Crenothrix*	-	NA

Microscopic Evaluation:

GW 1

Casing: Low visible bacterial activity, very low number of crystals, low plant particulate matter, very low iron oxide, low iron oxide entrained biomass with very low numbers of *Crenothrix*.

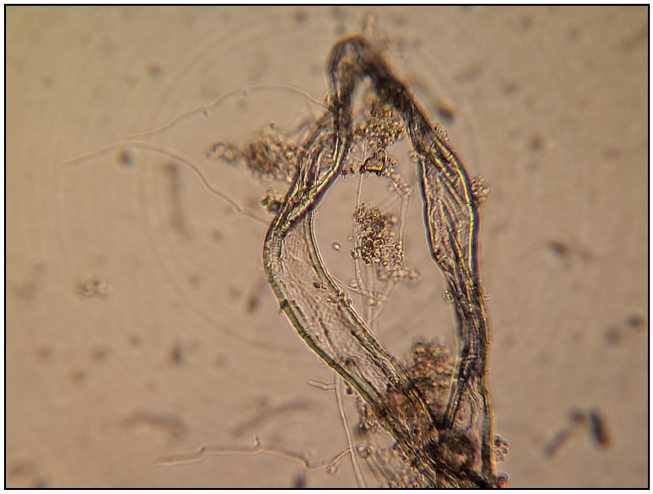

Figure 1: Sediment at 200x magnification

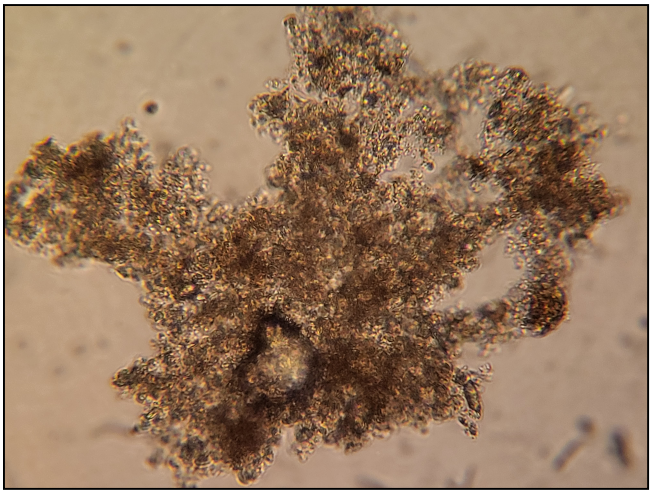

Figure 2: Sediment at 200x magnification

Aquifer: Very low visible bacterial activity with trace of biomass.

GW 2

Casing: Moderate visible bacterial activity, very low number of crystals, very low number of protozoa, low plant particulate matter, very low iron oxide, low iron oxide entrained biomass with very low numbers of *Crenothrix.*

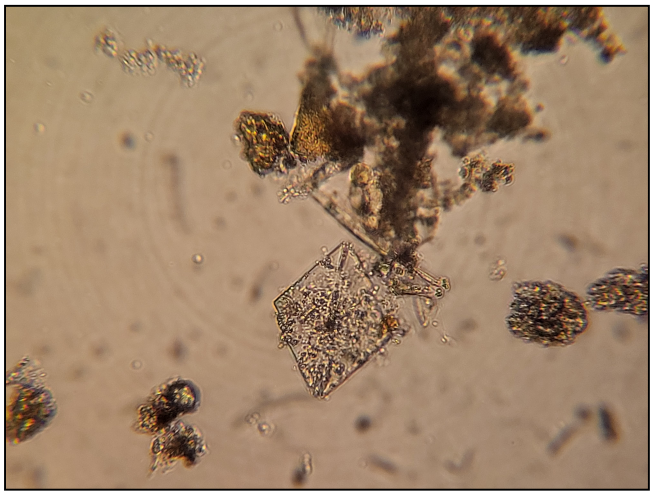

Figure 3: Sediment at 200x magnification

Figure 4: Sediment at 200x magnification

Microscopic Evaluation - *continued*:

GW 2

Aquifer: Very low visible bacterial activity, very low plant particulate matter with very low of iron oxide entrained biomass.

Observations:

Casing and aquifers samples were submitted for analysis from Well GW1 and GW2 for the Climax Molybdenum Mine. It was noted that both wells have a sulfur smell, especially at first start-up. Upon arrival in the lab, the samples were free of discoloration but each had visible bacteria activity as confirmed by microscopic evaluation. It was also noted that iron oxide, crystals and plant particulate was evident in the microscopic evaluation in the casing and aquifer samples. Low protozoa numbers were present in well GW2 casing sample.

Initial testing noted a slightly acidic pH value in both wells. Total alkalinity was lower at 56 milligrams per liter (mg/l) in the casing sample and 40 mg/l for the aquifer sample for well GW 1, and 52 mg/l for casing and 40 mg/l for aquifer in well GW 2. All alkalinity contribution in each sample was exclusively from bicarbonate (HCO_3^-) ions, as carbonate and hydroxide ions were not identified. It is expected for alkalinity and pH values to be lower with the acidic influence from the mines.

Total dissolved solids (TDS) levels, calculated as a function of electrical conductivity, were measured in elevated concentrations in well GW 1 at 408 mg/l in the casing sample and decreased to 374 mg/l in the aquifer sample. The TDS was on the lower end for well GW 2 at 157 mg/l in the casing and 144 mg/l in the aquifer sample. The conductivity level in both wells fell within the expected range.

The Oxidation Reduction Potential (ORP) measurements for GW 1 well samples were 288.2 millivolts (mV) for the casing, and 302.5 mV for the aquifer. In well GW 2, the casing sample was at 296.6 mV and 303.4 in the aquifer sample. These readings are elevated and indicate an oxidative environment. With ORP levels at this point it is sufficient to expect oxidation and precipitation of metals such as iron and manganese.

The Langelier Saturation Index (LSI) calculation predicts scale formation and the likelihood for chemical corrosion. The LSI value for well GW 1 was -1.44 in the casing sample and -1.56 for the aquifer sample. In well GW 2, the casing sample LSI value was -1.77 and -1.87 in the aquifer sample. Negative values indicate a reduced likelihood of calcium scale development and the potential for chemical corrosion to occur. The calculated LSI values are considered highly aggressive and reactive materials such as low carbon steel or high strength low alloy will be susceptible to corrosion.

Water hardness measures the calcium (Ca^{2+}) and magnesium (Mg^{2+}) concentrations in groundwater. Total Hardness was elevated in both the casing and aquifer samples for well GW 1 in the upper 200 mg/l range. Hardness levels at greater than 180 mg/L are considered very hard and highly mineralized. Calcium was elevated at 180 mg/l in the casing and 264 mg/l in the aquifer. Sulfate levels were elevated in GW1, impacting non-carbonate hardness values. Well GW 2 fell within the expected range for hardness and calcium.

Magnesium was in the average range at 88 mg/l in the casing sample but decreased to not detected in the aquifer sample in well GW 1. This fluctuation between the two samples indicates

chemical congestions and scale formation downhole. It was not detected in well GW 2 samples.

Potassium was elevated for well GW 1 with 4.8 mg/l in both the casing and aquifer samples. Potassium concentrations in excess of 5 mg/l in a well indicate a highly congested water chemistry and increase concerns with fouling. Potassium fell in the average range for well GW 2.

Dissolved iron, suspended iron and iron total were either not detected or minimal amounts were identified in the samples for both wells. Resuspended iron, a test that accounts for dissolved and suspended iron as well as iron that has been mobilized by bacteria, was found in minimal amounts in both wells. In the microscopic evaluations, it was identified to have iron oxide entrained biomass which will impact these concentrations. Manganese, an ion that behaves very similar to iron, was not detected in either well.

Sulfate was detected in the well GW 1 samples at 205 mg/l in the casing sample and 240 mg/l in the aquifer sample. These values are elevated, with the combination of the negative LSI, there is an increase in potential for sulfate to influence the rate of chemical corrosion. In well GW 2, the levels were in the expected range.

Total Organic Carbon (TOC) is used as an indicator of water quality and the potential for bacterial stimulation and biofouling. TOC was not detected in either well.

Utilized methods of bacterial quantification included heterotrophic plate count (HPC) and adenosine triphosphate (ATP) analysis. The HPC levels were average in both wells. The initial ATP counts were in the expected range in casing and aquifer samples for GW 1 and GW 2 wells. A second count was taken at the 24-hour mark and increased slightly in the casing samples and GW 2 aquifer sample but was still in the expected range. The aquifer samples in GW 1 had a significant increase to 167,000 cells per milliliter (cpm). This is above the average ATP range and therefore indicate a potential for the development of biofouling.

Anaerobic growth, reported as a percentage of the overall bacterial population, was elevated at 20% in well GW 1 casing sample and in well GW 2 aquifer sample at 10%. Typically, as anaerobic levels increase, biofouling becomes more dynamic with increases in the occurrence of both total coliforms and problematic bacteria. Testing for sulfate reducing bacteria (SRB) was negative in both wells.

Tests for the presence of iron and manganese-oxidizing bacteria were negative in both the casing and aquifer samples for well GW 1. The test was positive in the casing sample for well GW 2 and negative in the aquifer sample. Microscopic evaluation of the casing sample reported a low occurrence rate of iron bacteria, specifically the iron and manganese oxidizer *Crenothrix*.

Identification of the dominant bacteria within the sample included species of iron oxidizing bacteria as well as slime forming organisms. Background on the identified species is provided below, in alphabetical order and in each well.

Bacillus is a genus of gram-positive bacteria that can be obligate aerobes or facultative anaerobes. *Bacilli* are widely dispersed in nature, being found in a variety of environments. Generally non-pathogenic, *Bacilli* presence is of concern due to the bacterium's ability to exude large secretions of biomass as a means of attachment and nutrient capture.

Brevundimonas vesicularis is an aerobic, motile, gram-negative bacterium that has been isolated from slime deposits in paper mills.

Crenothrix are a genus of sheathed bacteria that oxidize iron and manganese. *Crenothrix* cells are non-motile and can generally be found in a variety of aquatic environments with sufficient organic matter present. Oxidation, resulting from aeration including cascading water or rapid recharge, can stimulate the growth and activity of these bacteria. *Crenothrix* are commonly found associated with other iron and manganese oxidizing bacteria such as Gallionella and Leptothrix. As a result of the oxidation of both iron and manganese, *Crenothrix* sheaths are encrusted with iron and manganese oxides, resulting in a very effective fouling mechanism.

Micrococcus endophyticus are an aerobic, gram positive bacteria often isolated from plant roots. Though not a spore former, *Micrococcus* cells are resilient and can survive in harsh environments for an extended period of time. *Micrococcus* is generally thought to be a saprotrophic or commensal organism, though it can be an opportunistic pathogen, particularly in hosts with compromised immune systems.

Interpretations:

Submitted data did not indicate any loss of production capacity or efficiency for either GW1 or GW2. It was reported that at start-up a sulfur – H_2S odor is notable but that it dissipates with pumping. Hydrogen sulfide is a by-product of sulfate reducing bacteria, a nuisance anaerobe that reduce sulfates when present downhole. Typically, sulfate reducing bacteria can develop as anaerobic populations increase beyond fifteen percent. The casing sample from GW1 did contain an elevated level of anaerobic activity that declined sharply with pumping. Hydrogen sulfide is easily detectable at limited concentrations which can dissipate very quickly with high volume pumping. Anaerobic growth, include sulfate reducing bacteria, are typically tied to idle wells, stagnated lower zones, or heavy biofouling. Given the limited observable occurrence, it is advised that the wells be cycled more frequently. As pump well design data was limited, it may prove beneficial to look at the well column and ensure that when operating, the column is turned over thereby reducing the potential for development of anaerobic growth.

If you have any questions regarding the analyses or the information presented, please contact our office.

Michael Schnieders, PG, PH-GW
Hydrogeologist

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
ARwell	09/16/2019	***0.000025***	***0.0004***	0.015	0.07	0.0046	***0.005***	7.16	33.1	158	***0.4***
	09/16/2019	***0.000025***	***0.0004***	***0.015***	0.07	0.004	***0.005***	7.16	32.3	168	0.4
	12/17/2018	***0.000025***	***0.0004***	0.01	0.171	0.0058	***0.005***	7.42	30.8	182	0.52
	03/20/2019	***0.000025***	0.0004	0.01	0.255	0.0063	***0.005***	7.25	30.8	184	0.5
	06/12/2019	***0.000025***	***0.0013***	***0.015***	0.02	0.003	***0.005***	7.01	17.8	156	0.2
	09/16/2019	***0.000025***	***0.0004***	***0.015***	0.07	0.004	***0.005***	7.16	32.3	168	0.4
	12/11/2019	***0.000025***	***0.0004***	***0.015***	0.1	0.0052	***0.005***	7.16	28.8	168	0.5
	03/12/2020	***0.000025***	***0.0004***	***0.015***	0.22	0.0062	***0.005***	7.05	28.1	170	0.5
	03/12/2020	***0.000025***	0.0004	***0.04***	0.23	0.0069	***0.005***	7.05	28.5	182	0.6
	05/19/2020	***0.000025***	***0.0004***	***0.015***	0.05	0.0043	***0.01***	7.23	24.5	176	0.3
	09/03/2020	***0.000025***	***0.0004***	***0.015***	0.07	0.0043	***0.01***	7.45	29.5	178	0.4
	11/10/2020	***	***	***	***	***	***	***	***	***	***
	03/25/2021	***0.000025***	**0.0004**	0.015	0.22	0.0062	***0.005***	7.05	28.1	170	0.5
	06/11/2021	***0.000025***	**0.0004**	***0.04***	0.159	0.00731	***0.01***	7.47	27.3	161	0.71
	09/23/2021	***0.000025***	**0.0004**	***0.03***	0.138	0.0062	***0.01***	7.39	29.5	172	0.53
	12/02/2021	***0.000025***	0.00763	***0.03***	0.157	0.00671	***0.01***	7.42	28.8	188	0.57
	03/25/2022	***0.000025***	***0.0004***	***0.03***	0.2	0.00716	***0.05***	7.54	30.9	170	0.53
	03/25/2022	***0.000025***	***0.0004***	***0.03***	0.22	0.00773	***0.05***	7.54	30.2	170	0.6
	06/20/2022	***0.000025***	***0.0004***	***0.03***	0.121	0.00484	***0.01***	7.22	29.8	164	0.36
	09/02/2022	***0.000025***	***0.0004***	***0.03***	0.186	0.00536	***0.01***	7.36	29.5	166	0.39
	12/14/2022	***	***	***	***	***	***	***	***	***	***
	03/28/2023	***0.000025***	***0.0004***	***0.03***	0.292	0.00685	***0.01***	7.54	27.6	172	0.53
	06/19/2023	***0.000025***	***0.0004***	***0.03***	0.054	0.00373	***0.01***	7.16	18.8	154	0.29
	08/23/2023	***0.000025***	***0.0004***	***0.03***	0.13	0.00408	***0.01***	7.4	28.4	172	0.37
	10/10/2023	***0.000025***	***0.0004***	***0.03***	0.199	0.00446	***0.01***	7.4	30.2	186	0.4
Numeric Protection Limit (NPL)		***0.005***	***0.2***	***0.3***	***TBD***	***0.210***	***2.0***	***6.5 - 8.5***	***250***	***400***	***2.0***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Note: Data in purple represents a duplicate sample

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
ARK-MW-001D	03/20/2019	***0.000025***	***0.0004***	0.11	0.039	0.0306	***0.005***	7.87	29.5	220	1.7
	06/12/2019	***0.000025***	***0.0004***	0.08	***0.005***	0.0303	***0.005***	7.72	41.2	214	1.9
	09/16/2019	***0.000025***	***0.0004***	0.09	***0.005***	0.0324	***0.005***	7.78	41.2	218	1.7
	12/11/2019	***	***	***	***	***	***	***	***	***	***
	03/16/2020	***0.000025***	***0.0004***	0.08	**0.005**	0.0306	***0.005***	7.98	42.6	206	1.7
	05/19/2020	***0.000025***	***0.0004***	0.11	***0.005***	0.0301	***0.01***	7.46	39.3	224	1.7
	09/22/2020	***0.000025***	***0.0004***	0.099	0.019	0.0331	***0.01***	8.17	42.7	212	1.8
	09/22/2020	***0.000025***	***0.0004***	0.121	0.061	0.0307	***0.01***	8.17	43.5	212	1.7
	11/10/2020	***0.000025***	***0.0004***	0.097	0.066	0.0289	***0.01***	7.96	42.8	222	1.84
	03/25/2021	***	***	***	***	***	***	***	***	***	***
	06/23/2021	***0.000025***	***0.0004***	0.129	0.091	0.0288	***0.01***	8.12	38.1	218	1.76
	09/23/2021	***0.000025***	***0.0004***	0.075	***0.005***	0.0313	***0.01***	7.99	40.8	218	1.89
	12/06/2021	***	***	***	***	***	***	***	***	***	***
	03/25/2022	***	***	***	***	***	***	***	***	***	***
	06/21/2022	***0.000025***	***0.0004***	0.105	***0.005***	0.031	***0.01***	7.85	45	220	1.87
	09/02/2022	***0.000025***	***0.0004***	0.124	0.012	0.0308	***0.01***	7.98	43.3	210	1.64
	12/14/2022	***	***	***	***	***	***	***	***	***	***
	03/28/2023	***	***	***	***	***	***	***	***	***	***
	06/26/2023	***0.000025***	***0.0004***	0.144	0.061	0.0318	0.021	7.87	40.6	218	1.79
	08/23/2023	***0.000025***	***0.0004***	0.134	0.026	0.032	***0.01***	8.08	41.4	222	1.57
	10/10/2023	***0.000025***	***0.0004***	0.141	0.015	0.0316	***0.01***	8.03	46.6	230	1.78
Numeric Protection Limit (NPL)		***0.005***	***0.2***	***0.3***	***TBD***	***0.210***	***2.0***	***6.5 - 8.5***	***250***	***400***	***2.0***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

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Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVMW-3S	01/23/2019	***	***	***	***	***	***	***	***	***	***
	06/18/2019	***0.000025***	***0.0004***	***0.015***	0.08	0.0014	***0.005***	7.26	6.2	180	***0.05***
	09/17/2019	***0.000025***	***0.0004***	***0.015***	0.01	0.0018	***0.005***	7.68	11.2	244	***0.05***
	11/20/2019	***0.000025***	0.0011	***0.015***	0.02	0.0026	***0.005***	7.07	10.1	236	***0.05***
	03/17/2020	***0.000025***	0.002	***0.015***	0.04	0.0012	***0.005***	*7.89*	11.7	218	***0.05***
	06/11/2020	***0.000025***	0.0013	***0.03***	0.03	0.0013	***0.01***	7.54	8.6	186	***0.05***
	08/18/2020	***0.000025***	0.0028	***0.03***	0.02	0.0021	***0.01***	7.27	11.8	236	***0.05***
	11/02/2020	***0.000025***	***0.0004***	***0.03***	0.07	0.00146	***0.01***	7.43	11.5	252	***0.06***
	03/22/2021	***	***	***	***	***	***	***	***	***	***
	06/18/2021	***0.000025***	***0.004***	***0.03***	0.016	0.00093	***0.01***	7.23	10.5	200	***0.075***
	09/16/2021	***0.000025***	***0.004***	***0.03***	0.019	0.00174	***0.01***	7.1	10.9	268	***0.075***
	12/08/2021	***0.000025***	***0.004***	***0.03***	0.06	0.00168	***0.01***	7.48	10.1	240	***0.075***
	12/08/2021	***0.000025***	***0.004***	0.115	0.065	0.00167	0.022	7.48	14.9	246	***0.075***
	03/22/2022	***0.000025***	***0.004***	***0.03***	0.012	0.00064	***0.01***	7.16	15.3	246	***0.075***
	06/15/2022	***0.000025***	0.00124	***0.03***	0.018	0.00159	***0.01***	7.31	7	224	***0.075***
	09/14/2022	***0.000025***	0.00424	***0.03***	0.021	0.00078	***0.01***	7.14	7.8	106	***0.075***
	12/13/2022	***0.000025***	***0.004***	***0.03***	0.017	0.00091	***0.04***	7.02	9.5	244	***0.075***
	03/23/2023	***0.000025***	***0.004***	***0.03***	0.027	0.00195	***0.01***	7.2	12.9	226	***0.075***
	06/20/2023	***0.000025***	***0.004***	***0.03***	***0.005***	0.00079	***0.01***	7.32	7.1	210	***0.075***
	09/20/2023	***0.000025***	***0.004***	***0.03***	***0.005***	0.0012	***0.01***	7.47	9.9	246	***0.075***
	10/09/2023	***0.000025***	***0.004***	***0.03***	0.036	0.00302	***0.01***	7.59	12.3	252	***0.075***
Numeric Protection Limit (NPL)		***0.005***	***0.2***	***0.3***	***TBD***	***0.210***	***2.0***	***6.5 - 8.5***	***250***	***400***	***None***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Data in purple represents a duplicate sample

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = no data collected for parameter at location during sampling event

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVMW-3D	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/18/2019	***0.000025***	***0.0004***	***0.015***	0.03	0.0011	***0.005***	7.69	2.5	238	0.4
	09/17/2019	***0.000025***	0.0014	***0.015***	0.02	0.0014	***0.005***	7.88	5.4	208	0.3
	11/20/2019	***0.000025***	***0.0004***	***0.015***	0.03	0.0011	***0.005***	7.48	2.3	244	0.3
	03/17/2020	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0006	***0.005***	7.78	1.9	246	0.3
	06/11/2020	***0.000025***	***0.0004***	***0.03***	0.02	0.0007	***0.01***	7.46	5.2	244	0.3
	08/18/2020	***0.000025***	0.0037	***0.03***	0.06	0.0016	***0.01***	7.79	2.9	272	0.2
	11/02/2020	***0.000025***	***0.0004***	***0.03***	0.046	0.0008	***0.01***	7.39	6.2	272	0.34
	03/22/2021	***	***	***	***	***	***	***	***	***	***
	06/18/2021	***0.000025***	***0.00124***	***0.03***	0.023	0.00078	***0.01***	7.71	9.4	230	0.34
	06/18/2021	***0.000025***	0.00129	***0.03***	0.021	0.00078	***0.01***	7.71	2.7	234	0.34
	09/16/2021	0.000141	0.0038	***0.03***	0.024	0.00105	***0.01***	7.62	4.1	246	0.31
	12/08/2021	***0.000025***	***0.0004***	***0.03***	0.021	0.00062	0.032	7.71	2.3	242	0.38
	03/22/2022	0.00058	***0.0004***	***0.03***	***0.005***	0.00068	***0.01***	7.92	3.4	232	0.35
	06/15/2022	***0.000025***	0.00217	***0.03***	0.017	0.00081	***0.01***	7.26	2.2	232	0.37
	09/14/2022	0.000142	***0.0004***	***0.03***	***0.005***	0.00062	***0.01***	7.88	3.3	210	0.27
	12/13/2022	***0.000025***	0.00092	0.158	0.018	0.0007	0.044	8.02	2	238	0.37
	03/23/2023	***0.000025***	0.00164	***0.03***	0.017	0.00074	***0.01***	7.72	1.8	232	0.35
	06/20/2023	***0.000025***	***0.0004***	***0.03***	0.025	0.00072	***0.01***	7.69	1.5	242	0.3
	09/20/2023	***0.000025***	0.00178	***0.03***	***0.005***	0.00068	***0.01***	7.63	1.9	236	0.3
	09/20/2023	***0.000025***	0.0004	***0.03***	***0.005***	0.0007	***0.01***	7.63	2.9	248	0.3
	10/09/2023	***0.000061***	0.00335	***0.03***	***0.005***	0.00139	***0.01***	7.78	2.6	236	0.34
Numeric Protection Limit (NPL)		***0.005***	***0.2***	***0.3***	***TBD***	***0.210***	***2.0***	***6.5 - 8.5***	***250***	***400***	***None***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Data in purple represents a duplicate sample

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EV-MW-004	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/20/2019	***0.000025***	***0.0004***	***0.015***	0.09	0.0028	0.02	7.43	49.3	304	0.2
	08/28/2019	***0.000025***	***0.0004***	***0.015***	0.02	0.0028	***0.005***	7.64	48.9	322	0.1
	11/12/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0027	***0.005***	7.23	43.7	288	0.2
	03/03/2020	***	***	***	***	***	***	***	***	***	***
	06/24/2020	***0.000025***	***0.0004***	***0.03***	0.08	0.0032	***0.01***	6.92	48.8	304	0.2
	09/02/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0025	***0.01***	7.59	44.2	286	0.1
	11/03/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00258	***0.01***	7.24	47.7	300	0.14
	03/22/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00258	***0.01***	7.52	45.9	296	0.15
	08/31/2021	***0.000025***	***0.0004***	***0.03***	0.017	0.00302	0.041	7.46	51.7	314	***0.075***
	12/09/2021	***0.000025***	***0.0004***	***0.03***	***0.069***	0.00361	***0.01***	7.47	48.6	296	0.15
	03/23/2022	***0.000025***	***0.0004***	***0.03***	0.028	0.00283	***0.01***	7.4	51	308	***0.075***
	06/16/2022	***0.000025***	***0.0004***	***0.03***	0.044	0.00339	***0.01***	7.38	50.7	304	***0.075***
	09/15/2022	***0.000025***	0.00138	***0.03***	0.013	0.00316	***0.01***	7.41	49.1	292	***0.075***
	12/13/2022	***0.000025***	***0.0004***	***0.03***	0.015	0.00248	***0.01***	7.41	44.2	294	0.31
	12/13/2022	***0.000025***	***0.0004***	***0.03***	0.016	0.00247	0.036	7.41	47.1	300	***0.075***
	03/29/2023	***	***	***	***	***	***	***	***	***	***
	04/25/2023	***0.000025***	***0.0004***	***0.03***	0.02	0.00289	***0.01***	7.41	47.6	286	0.27
	05/16/2023	***0.000025***	***0.0004***	***0.03***	0.026	0.00308	***0.01***	7.39	52.5	298	0.21
	06/21/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00332	***0.01***	7.5	45.3	282	***0.075***
	07/20/2023	***0.000025***	0.00089	***0.03***	***0.005***	0.00375	***0.01***	7.54	48.1	292	***0.075***
	08/16/2023	***0.000025***	0.00085	***0.03***	***0.005***	0.00381	***0.01***	7.62	50.3	378	***0.075***
	09/25/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00378	***0.01***	7.21	59.5	272	***0.075***
	10/26/2023	***0.000025***	0.00118	***0.03***	***0.005***	0.0036	***0.01***	7.62	45.8	284	***0.075***
	11/15/2023	***0.000025***	0.00113	***0.03***	***0.005***	0.00353	***0.01***	7.52	60.1	278	***0.075***
	12/14/2023	***0.000025***	0.00138	***0.03***	***0.005***	0.00374	***0.01***	7.74	43.9	266	***0.075***
Numeric Protection Limit (NPL)		***0.005***	***0.2***	***0.3***	***TBD***	***0.210***	***2.0***	***6.5 - 8.5***	***250***	***400***	***None***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Data in purple represents a duplicate sample

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
TM-MW-002D	01/16/2019	***0.000025***	***0.0004***	***0.01***	0.005	0.0064	***0.005***	8.43	63.2	180	0.43
	05/30/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0068	***0.005***	8.14	54	152	0.5
	08/26/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0066	***0.005***	8.14	57.8	176	0.6
	10/22/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0072	0.01	7.88	58.6	182	0.4
	01/22/2020	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0068	***0.005***	8.26	62.1	162	0.5
	05/12/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0058	***0.01***	8.08	55.5	180	0.5
	08/25/2020	***0.000025***	0.0009	***0.03***	***0.005***	0.0074	***0.01***	8.41	58.2	172	0.5
	11/19/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0066	***0.01***	8.31	54.1	172	0.39
	03/24/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00616	***0.01***	8.37	63.7	170	0.34
	06/28/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00636	***0.01***	8.39	57	182	0.62
	09/02/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00585	***0.01***	8.28	58.3	164	0.49
	11/30/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00596	***0.01***	8.31	57.6	190	0.4
	03/24/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00651	***0.05***	8.35	62.6	168	0.45
	06/13/2022	***0.000025***	0.00113	***0.03***	***0.005***	0.00641	***0.01***	8.23	59.8	178	0.46
	09/05/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00608	***0.01***	8.37	59.6	172	0.41
	12/12/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00643	0.026	8.48	54.9	178	0.3
	03/21/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00634	0.024	8.42	61.7	176	0.46
	06/14/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00683	***0.01***	8.34	58.6	168	0.43
	07/25/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00675	***0.01***	8.5	52.5	162	0.5
	10/17/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00653	***0.01***	8.56	57.7	172	0.44
Numeric Protection Limit (NPL)		***0.005***	***0.2***	***0.3***	***0.050***	***0.210***	***2.0***	***6.5 - 8.5***	***250***	***400***	***None***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
GW#2	01/16/2019	0.00005	***0.0004***	***0.01***	***0.0025***	0.0013	***0.005***	*6.4*	46.6	144	0.08
	02/13/2019	*	*	*	*	*	*	6.7	*	*	*
	03/28/2019	*	*	*	*	*	*	6.7	*	*	*
	04/24/2019	*	*	*	*	*	*	6.7	*	*	*
	05/30/2019	*	*	*	*	*	*	6.7	*	*	*
	06/10/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0011	***0.005***	6.9	36.3	136	0.1
	07/22/2019	*	*	*	*	*	*	6.7	*	*	*
	08/26/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0011	***0.005***	7.0	37.7	136	***0.05***
	10/22/2019	***0.000025***	0.0014	***0.015***	***0.005***	0.0011	0.03	*6.3*	40.6	128	***0.05***
	11/21/2019	*	*	*	*	*	*	6.7	*	*	*
	12/19/2019	*	*	*	*	*	*	6.7	*	*	*
	01/22/2020	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0011	0.03	6.72	54.5	138	***0.05***
	02/18/2020	*	*	*	*	*	*	6.53	*	*	*
	03/19/2020	*	*	*	*	*	*	6.63	*	*	*
	04/13/2020	*	*	*	*	*	*	6.77	*	*	*
	05/12/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.001	***0.01***	6.79	47.2	142	***0.05***
	06/10/2020	*	*	*	*	*	*	6.78	*	*	*
	07/08/2020	*	*	*	*	*	*	6.56	*	*	*
	08/25/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0012	***0.01***	*6.22*	42.5	128	0.4
	09/30/2020	*	*	*	*	*	*	6.97	*	*	*
	10/15/2020	*	*	*	*	*	*	*6.4*	*	*	*
	11/19/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00122	0.027	*6.44*	47.4	144	***0.06***
	12/21/2020	*	*	*	*	*	*	*6.23*	*	*	*
	01/28/2021	*	*	*	*	*	*	*6.57*	*	*	*
	02/23/2021	*	*	*	*	*	*	*6.65*	*	*	*
	03/24/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.001	***0.01***	*6.6*	69.8	154	***0.08***
	04/28/2021	*	*	*	*	*	*	*6.77*	*	*	*
	05/27/2021	*	*	*	*	*	*	*6.65*	*	*	*
	06/28/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00099	0.032	*6.53*	45.6	115	0.89
	07/27/2021	*	*	*	*	*	*	*6.47*	*	*	*
	08/17/2021	*	*	*	*	*	*	*6.51*	*	*	*
	09/02/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	***0.00105***	***0.01***	*6.46*	***60***	***146***	***0.08***
	10/26/2021	*	*	*	*	*	*	*6.64*	*	*	*
	11/30/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00106	0.02	*6.51*	59.5	176	***0.08***
	12/22/2021	*	*	*	*	*	*	*6.37*	*	*	*
	01/31/2022	*	*	*	*	*	*	*6.32*	*	*	*
	02/22/2022	*	*	*	*	*	*	*6.32*	*	*	*
	03/24/2022	***0.00025***	***0.0004***	***0.03***	***0.005***	0.00107	***0.01***	*6.4*	72.2	172	***0.08***
	04/26/2022	*	*	*	*	*	*	*6.47*	*	*	*
	05/25/2022	*	*	*	*	*	*	*6.4*	*	*	*
	06/13/2022	***0.00025***	***0.0004***	***0.03***	***0.005***	0.0011	***0.01***	6.54	53.3	154	***0.08***
	07/20/2022	*	*	*	*	*	*	*6.19*	*	*	*
	08/23/2022	*	*	*	*	*	*	*6.43*	*	*	*
	09/05/2022	***0.00025***	***0.0004***	***0.03***	***0.005***	0.00105	***0.01***	6.57	57.1	152	***0.08***
	10/28/2022	***0.00025***	***0.0004***	***0.03***	***0.005***	0.0011	0.027	*6.47*	57.3	152	***0.08***
	10/28/2022	***0.00025***	***0.0004***	***0.03***	***0.005***	0.00113	**0.01**	*6.47*	60.1	150	***0.08***
	11/22/2022	*	*	*	*	*	*	6.53	*	*	*
	12/12/2022	*	*	*	*	*	*	6.61	*	*	*
	01/30/2023	*	*	*	*	*	*	*6.59*	*	*	*
	02/22/2023	*	*	*	*	*	*	*6.52*	*	*	*
	03/21/2023	0.000081	***0.0004***	***0.03***	***0.005***	0.00108	0.027	6.43	70.9	178	***0.08***
	04/13/2023	*	*	*	*	*	*	*6.21*	*	*	*
	05/15/2023	*	*	*	*	*	*	*6.42*	*	*	*
	06/14/2023	***0.00025***	***0.0004***	***0.03***	***0.005***	0.00172	0.022	6.28	49.7	146	***0.08***
	07/25/2023	0.000053	***0.0004***	***0.03***	***0.005***	0.00102	0.01	*6.62*	48.3	148	***0.08***
	08/14/2023	*	*	*	*	*	*	*6.65*	*	*	*
	09/25/2023	*	*	*	*	*	*	*6.61*	*	*	*
	10/17/2023	***0.00025***	***0.0004***	***0.03***	***0.005***	0.00116	0.01	*6.65*	42.3	148	***0.08***
	11/07/2023	*	*	*	*	*	*	6.58	*	*	*
	12/06/2023	*	*	*	*	*	*	6.52	*	*	*
Numeric Protection Limit (NPL)		***0.005***	***0.2***	***0.3***	***0.050***	***0.210***	***2.0***	***6.5 - 8.5***	***250***	***400***	***None***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Data in purple represents a duplicate sample

Note: Red italicized data are NPL exceedances for site, which have been communicated to DRMS and investigations are currently ongoing.

* Monthly pH data collection at GW#2 did not include sampling for other parameters

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
TM-MW-001D	01/15/2019	0.00005	***0.0004***	***0.01***	0.01	0.0362	***0.005***	8.56	192	354	3.9
	06/10/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0413	***0.005***	8.06	187	354	3.2
	08/26/2019	0.00005	***0.0004***	***0.015***	***0.005***	0.0384	***0.005***	8.17	183	342	3.1
	10/23/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0399	***0.005***	8.06	194	348	3.2
	03/11/2020	0.00009	***0.0004***	***0.015***	***0.005***	0.0398	***0.005***	8.26	176	336	3.3
	05/12/2020	0.00006	***0.0004***	***0.03***	***0.005***	0.0365	***0.01***	8.14	174	350	3.3
	08/25/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0393	***0.01***	8.5	186	342	3
	11/19/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.037	***0.01***	8.45	180	338	3.36
	11/19/2020	***0.000025***	***0.0004***	***0.03***	***0.081***	0.0479	***0.01***	8.45	179	338	3.34
	03/24/2021	0.000059	***0.0004***	***0.03***	***0.005***	0.0367	***0.01***	8.44	195	330	3.02
	06/28/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0369	***0.01***	8.55	182	318	3.29
	09/02/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0403	***0.01***	8.45	183	344	3.31
	12/02/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0375	***0.01***	8.48	176	348	3.24
	03/24/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0378	***0.01***	8.49	194	334	3.2
	06/13/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0376	***0.01***	8.11	192	342	3.27
	06/13/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	*0.0376*	***0.01***	*8.11*	*189*	*338*	*3.29*
	09/05/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0368	***0.01***	8.44	197	336	3.09
	12/12/2022	***0.000056***	***0.0004***	***0.03***	***0.005***	0.0374	0.023	8.48	186	334	3.23
	03/30/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0362	***0.024***	8.52	172	338	3.43
	06/22/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	*0.0436*	0.02	8.45	177	340	3.19
	07/25/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0442	***0.01***	8.64	185	338	3.43
	10/17/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0387	***0.01***	8.58	184	334	3.42

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Data in purple represents a duplicate sample

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
GW#1	01/15/2019	0.00219	0.0016	***0.01***	***0.0025***	0.137	0.41	6.21	229	396	1.2
	06/10/2019	0.00152	0.0016	***0.015***	***0.005***	0.127	0.3	6.93	147	316	1
	08/26/2019	0.00037	***0.0004***	***0.015***	***0.005***	0.127	0.35	6.86	178	346	0.9
	10/23/2019	0.00196	0.0034	***0.015***	***0.005***	0.134	0.39	6.96	187	374	1.1
	03/11/2020	0.00209	0.0027	***0.015***	***0.005***	0.141	0.46	6.51	205	390	1.1
	05/12/2020	0.00161	0.0013	***0.03***	***0.005***	0.118	0.33	6.74	159	346	1.1
	08/25/2020	0.00193	0.0014	***0.03***	***0.005***	0.127	0.48	6.48	189	370	0.9
	11/19/2020	0.00211	0.00208	***0.03***	***0.005***	0.124	0.453	6.44	189	392	1.14
	03/24/2021	0.00228	0.00213	***0.03***	***0.005***	0.126	0.441	6.51	236	392	1.13
	06/28/2021	0.00205	0.00161	***0.03***	***0.005***	0.118	0.431	6.43	219	365	1.15
	09/02/2021	0.00227	0.00186	***0.03***	***0.005***	0.127	0.432	6.24	230	420	1.23
	12/02/2021	0.00244	0.00202	***0.03***	***0.005***	0.129	0.441	6.32	218	428	1.19
	03/24/2022	0.00236	0.00164	***0.03***	***0.005***	0.13	0.438	6.3	229	418	1.14
	06/13/2022	0.0021	0.0016	***0.03***	***0.005***	0.119	0.398	6.22	202	380	1.1
	09/05/2022	0.00233	0.00188	***0.03***	***0.005***	0.125	0.454	6.1	242	422	1.07
	12/12/2022	0.00256	0.00199	***0.03***	***0.005***	0.123	0.492	6.38	247	430	1.1
	03/30/2023	0.00246	0.00162	***0.03***	***0.005***	0.13	0.488	6.27	235	448	1.24
	06/22/2023	0.0022	0.00159	***0.03***	***0.005***	0.122	0.394	6.25	257	408	1.06
	07/25/2023	0.00242	0.00166	***0.03***	***0.005***	0.129	0.427	6.42	229	424	1.18
	10/17/2023	0.00226	0.00165	***0.03***	***0.005***	0.121	0.462	6.36	245	436	1.18

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
ARK-MW-002S	03/28/2019	0.00006	***0.0004***	4.82	3.5	0.0076	0.01	7.1	8	638	0.14
	06/12/2019	***0.000025***	***0.0004***	1.78	3.74	0.0051	***0.005***	7.01	4.5	660	***0.05***
	09/17/2019	***0.000025***	***0.0004***	5.78	3.88	0.0041	***0.005***	7.1	***0.5***	648	0.1
	12/11/2019	***0.000025***	***0.0004***	6.21	4.04	0.0052	***0.005***	6.77	***0.5***	678	0.2
	03/16/2020	0.00006	***0.0004***	0.67	3.26	0.0059	***0.005***	6.92	8.2	644	0.1
	06/25/2020	***0.000025***	***0.0004***	4.36	4.2	0.0037	***0.005***	7.2	***5***	666	***0.05***
	09/03/2020	***0.000025***	***0.0004***	4.22	4.28	0.0039	***0.01***	7.13	***0.5***	654	0.1
	11/06/2020	0.000093	***0.0004***	3.7	3.91	0.00313	***0.01***	6.99	1.5	664	0.14
	03/25/2021	0.00005	***0.0004***	3.21	3.47	0.00517	***0.01***	7.15	1.4	650	0.25
	03/25/2021	0.00005	***0.0004***	3.33	3.71	0.00549	***0.01***	7.15	***0.5***	650	***0.075***
	06/14/2021	***0.000025***	***0.0004***	3.65	4.07	0.0104	***0.01***	6.89	***0.5***	605	***0.075***
	09/22/2021	***0.000025***	***0.0004***	4.19	4.26	0.00223	***0.01***	6.93	***12.5***	648	***0.075***
	12/06/2021	***	***	***	***	***	***	***	***	***	***
	03/28/2022	***0.000025***	***0.0004***	4.55	3.69	0.214	***0.01***	7.06	***0.5***	632	0.16
	06/20/2022	***0.000025***	***0.0004***	3.45	4.18	0.00493	***0.01***	6.94	***1***	628	0.16
	09/02/2022	***0.000025***	***0.0004***	2.99	3.82	0.00332	***0.01***	6.91	***0.5***	608	***0.075***
	12/14/2022	***	***	***	***	***	***	***	***	***	***
	03/28/2023	0.000058	***0.0004***	2.83	4.01	0.00515	***0.01***	6.98	***0.5***	636	***0.075***
	03/28/2023	***0.000025***	***0.0004***	3.18	4.17	0.00559	***0.01***	6.98	***0.5***	616	***0.075***
	06/26/2023	***0.000025***	***0.0004***	1.86	4.21	0.00364	***0.01***	6.84	***0.5***	630	***0.075***
	08/23/2023	***0.000025***	***0.0004***	8.28	3.69	0.0127	***0.01***	7.12	***0.5***	632	***0.075***
	10/10/2023	0.00051	***0.0004***	3.2	4.21	0.00868	***0.01***	7.08	***0.5***	622	***0.075***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Data in purple represents a duplicate sample

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
ARK-MW-002D	03/28/2019	***0.000025***	***0.0004***	***0.01***	0.045	0.0245	***0.005***	8.65	28.3	336	7.83
	03/28/2019	***0.000025***	***0.0004***	***0.01***	0.046	0.0242	***0.005***	8.65	24.7	348	7.83
	06/12/2019	***0.000025***	***0.0004***	***0.015***	0.02	0.0238	***0.005***	8.81	17.3	288	8.2
	09/17/2019	***0.000025***	0.0012	0.11	***0.005***	0.0233	***0.005***	8.97	14.6	270	7.4
	12/11/2019	***0.000025***	***0.0004***	0.06	0.03	0.0298	***0.005***	8.31	24.9	286	8
	03/16/2020	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0231	***0.005***	8.46	13.1	242	7.6
	06/25/2020	***0.000025***	***0.0004***	***0.03***	0.01	0.0233	***0.01***	8.68	17	284	8
	09/03/2020	***0.000025***	***0.0004***	***0.03***	0.01	0.0257	***0.01***	8.49	16.7	294	7.3
	11/06/2020	***0.000025***	***0.0004***	0.03	***0.005***	0.0237	***0.01***	8.73	15.4	274	7.68
	03/25/2021	***0.000025***	***0.0004***	***0.03***	0.018	0.0273	***0.01***	8.81	18.5	282	7.82
	06/14/2021	***0.000025***	***0.0004***	***0.03***	0.034	0.0285	***0.01***	8.83	23.1	286	7.42
	09/22/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0287	***0.01***	8.83	18.1	258	8.04
	12/06/2021	***0.000025***	***0.0004***	***0.03***	0.026	0.0325	***0.01***	8.75	20.8	292	8.11
	03/28/2022	***0.000025***	***0.0004***	***0.03***	***0.025***	0.0269	***0.05***	8.68	17.7	272	7.63
	06/17/2022	***0.000025***	***0.0004***	***0.03***	0.012	0.0282	***0.01***	8.67	16.9	286	8
	09/02/2022	***0.000025***	***0.0004***	***0.03***	0.011	0.0252	***0.01***	8.65	15.1	238	7.34
	12/15/2022	***0.000025***	***0.0004***	***0.03***	0.005	0.0302	***0.01***	8.9	14.4	256	7.72
	03/28/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0265	***0.01***	9.02	14.8	226	7.6
	06/26/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0282	***0.01***	8.99	15.3	284	8.12
	08/23/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0416	***0.01***	9.04	19.7	272	7.33
	10/10/2023	0.000053	***0.0004***	***0.03***	0.016	0.36	***0.01***	8.98	21.1	252	7.82

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVMW-1D	01/22/2019	***0.000025***	***0.0004***	0.06	0.181	0.0031	0.01	7.67	356	702	0.2
	06/20/2019	***0.000025***	***0.0004***	0.04	0.18	0.0021	0.06	7.94	384	706	0.1
	08/28/2019	***0.000025***	0.0012	0.19	0.21	0.0031	0.03	7.75	409	712	0.1
	11/12/2019	***0.000025***	***0.0004***	0.18	0.13	0.0022	***0.005***	7.46	433	716	0.1
	03/10/2020	***0.000025***	***0.0004***	0.12	0.17	0.0021	***0.005***	7.89	398	754	0.1
	05/13/2020	***0.000025***	***0.0004***	0.07	0.14	0.0024	***0.01***	8.08	356	718	0.2
	09/02/2020	***0.000025***	***0.0004***	0.1	0.24	0.0023	***0.01***	7.82	394	724	0.1
	11/06/2020	***0.000025***	***0.0004***	0.193	0.16	0.00182	***0.01***	7.73	398	730	0.13
	02/24/2021	***0.000025***	***0.0004***	0.093	0.188	0.0024	***0.01***	7.6	451	732	0.16
	06/15/2021	***0.000025***	***0.0004***	0.122	0.298	0.0021	***0.01***	7.56	413	703	***0.075***
	08/31/2021	***0.000025***	***0.0004***	***0.003***	0.051	0.00183	***0.035***	7.61	419	728	***0.075***
	12/01/2021	***0.000025***	***0.0004***	0.108	0.195	0.00187	***0.01***	7.64	443	712	***0.075***
	03/30/2022	***	***	***	***	***	***	***	***	***	***
	06/16/2022	***0.000025***	0.0011	0.102	0.288	0.00236	***0.01***	7.49	418	738	0.17
	09/01/2022	***0.000025***	***0.0004***	0.19	0.3	0.00183	***0.01***	7.51	386	748	***0.075***
	12/27/2022	***0.000025***	***0.0004***	0.283	0.281	0.00252	***0.01***	7.46	369	732	***0.16***
	03/29/2023	***0.000025***	***0.0004***	0.251	0.316	0.00288	0.022	7.57	413	730	0.22
	04/12/2023	***0.000025***	***0.0004***	0.321	0.342	0.00215	0.022	7.21	404	714	0.16
	05/16/2023	***	***	***	***	***	***	***	***	***	***
	06/21/2023	***0.000025***	***0.0004***	0.374	0.383	0.00247	***0.01***	7.65	441	758	***0.075***
	07/20/2023	***0.000025***	0.0189	***0.03***	0.046	0.00404	0.043	7.72	411	702	0.16
	08/16/2023	***0.000025***	0.00263	***0.03***	0.044	0.00276	***0.01***	7.6	424	720	***0.075***
	09/25/2023	*	*	*	*	*	*	*	*	*	*
	09/28/2023	*	*	*	*	*	*	*	*	*	*
	10/26/2023	*	*	*	*	*	*	*	*	*	*
	11/15/2023	*	*	*	*	*	*	*	*	*	*
	12/15/2023	*	*	*	*	*	*	*	*	*	*

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Pump failure after August 2023 sample - currently working to replace the pump

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVMW-1S	01/22/2019	***0.000025***	***0.0004***	1.83	0.802	0.377	***0.005***	7.19	509	976	0.24
	06/18/2019	0.00008	***0.0004***	1.68	0.57	0.372	***0.005***	7.2	452	896	0.2
	08/28/2019	***0.000025***	***0.0004***	2.15	0.88	0.361	0.01	7.42	512	954	0.2
	11/12/2019	***0.000025***	***0.0004***	2.19	0.89	0.368	***0.005***	7.04	507	946	0.2
	03/09/2020	0.00009	***0.0004***	1.53	0.83	0.338	***0.005***	7.25	589	1080	0.2
	06/15/2020	0.00007	***0.0004***	2.08	0.75	0.332	***0.01***	7.28	493	932	0.2
	09/02/2020	0.00007	***0.0004***	2.45	0.93	0.366	***0.01***	7.19	539	1030	0.2
	11/06/2020	***0.000025***	***0.0004***	1.7	0.897	0.346	***0.01***	7.33	541	1030	0.21
	02/24/2021	0.000109	***0.0004***	1.42	0.798	0.333	***0.01***	7.41	635	1070	0.2
	06/15/2021	0.000052	***0.0004***	2.46	0.883	0.338	***0.01***	7.25	519	911	0.24
	08/31/2021	***0.000111***	***0.0004***	2.55	0.996	0.332	***0.01***	7.25	554	1050	0.26
	12/01/2021	***0.000025***	***0.0004***	2.48	0.918	0.328	***0.01***	7.27	578	1030	0.25
	03/29/2022	0.000061	***0.0004***	1.6	0.868	0.372	***0.01***	7.17	614	1060	0.23
	06/16/2022	***0.000025***	***0.0004***	4.79	1.18	0.291	***0.01***	7.03	497	934	0.41
	09/01/2022	0.000084	***0.0004***	5.39	1.37	0.309	***0.01***	7.05	491	996	0.41
	12/27/2022	0.000051	***0.0004***	1.84	0.855	0.374	***0.01***	7.01	505	986	0.18
	03/29/2023	0.000072	***0.0004***	1.91	0.789	0.341	***0.01***	7.34	615	1000	0.18
	04/12/2023	0.000115	***0.0004***	1.42	0.851	0.328	***0.01***	7.25	550	986	0.19
	05/16/2023	***	***	***	***	***	***	***	***	***	***
	06/21/2023	0.000078	***0.0004***	1.42	1.56	0.283	***0.01***	6.85	454	926	0.51
	07/20/2023	0.00058	***0.0004***	2.2	0.82	0.352	***0.01***	7.17	484	906	0.3
	08/16/2023	***0.000025***	***0.0004***	2.45	0.858	0.316	***0.01***	7.24	481	930	0.3
	09/25/2023	***0.000025***	***0.0004***	3.18	1	0.322	***0.01***	7.19	489	930	0.34
	10/26/2023	0.000059	***0.0004***	***0.03***	1.12	0.338	***0.01***	7.16	419	922	0.35
	11/15/2023	0.00006	***0.0004***	3.5	1.09	0.35	***0.01***	7.02	434	924	0.42
	12/14/2023	0.000069	***0.0004***	2.08	0.94	0.342	***0.01***	7.37	<1	924	0.25

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Highlighted data are considered outliers and not included on data charts

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVMW-2	01/23/2019	***	***	***	***	***	***	***	***	***	***
	06/20/2019	***0.000025***	***0.0004***	***0.015***	0.06	0.0027	***0.005***	7.65	26.8	292	***0.05***
	08/28/2019	***0.000025***	0.0011	***0.015***	0.02	0.0013	***0.005***	7.81	19.4	288	***0.05***
	12/10/2019	***0.000025***	0.0019	***0.015***	0.06	0.0184	0.01	7.73	32	326	***0.05***
	12/10/2019	***0.000025***	0.0021	***0.015***	0.1	0.0263	0.01	7.73	34.6	328	***0.05***
	03/03/2020	***	***	***	***	***	***	***	***	***	***
	06/24/2020	***0.000025***	0.0009	***0.03***	0.04	0.0029	***0.01***	7.28	24	304	***0.05***
	09/02/2020	***0.000025***	0.0012	***0.03***	0.02	0.003	***0.01***	7.76	22.6	286	***0.05***
	11/03/2020	***0.000025***	0.0013	***0.03***	0.022	0.00623	***0.01***	7.8	37.2	322	***0.06***
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/04/2021	***0.000025***	0.00098	***0.03***	0.028	0.0074	***0.01***	7.72	41.6	338	***0.075***
	08/31/2021	***0.000025***	0.00104	***0.03***	0.017	0.00225	***0.01***	7.74	25.5	308	***0.075***
	12/08/2021	***0.000025***	***0.0004***	***0.03***	0.038	0.00242	0.03	7.75	25.2	286	***0.075***
	03/23/2022	***	***	***	***	***	***	***	***	***	***
	06/21/2022	***0.000025***	***0.0004***	***0.03***	0.055	0.00319	***0.01***	7.61	31.8	302	***0.075***
	09/01/2022	***0.000025***	0.00296	***0.03***	0.028	0.0023	***0.01***	7.59	16.2	288	***0.075***
	12/27/2022	***	***	***	***	***	***	***	***	***	***
	03/23/2023	***	***	***	***	***	***	***	***	***	***
	06/20/2023	***0.000025***	0.00085	***0.03***	***0.005***	0.00082	***0.01***	7.69	15.8	288	***0.075***
	06/20/2023	***0.000025***	0.00081	***0.03***	***0.005***	0.00084	0.023	7.69	15.3	290	***0.075***
	09/20/2023	***0.000025***	0.00232	***0.03***	***0.005***	0.017	***0.01***	7.69	62.6	365	***0.075***
	10/26/2023	***0.000025***	0.00119	***0.03***	***0.005***	0.0029	***0.01***	7.71	21.1	302	***0.075***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Note: Data in purple represents a duplicate sample

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVS-1	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/26/2019	***0.000025***	0.0011	***0.015***	***0.005***	0.0921	***0.005***	7.83	37.7	226	0.4
	09/18/2019	**	**	**	**	**	**	**	**	**	**
	11/12/2019	***0.000025***	***0.0004***	2.19	0.89	0.368	***0.005***	7.04	507	946	0.2
	03/15/2020	**	**	**	**	**	**	**	**	**	**
	06/25/2020	***0.000025***	0.0017	***0.03***	***0.005***	0.109	***0.01***	7.65	41	268	0.4
	06/25/2020	***0.000025***	0.0017	***0.03***	***0.005***	0.11	***0.01***	7.65	41.5	260	0.5
	09/01/2020	**	**	**	**	**	**	**	**	**	**
	10/05/2020	**	**	**	**	**	**	**	**	**	**
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	***0.000025***	0.00207	***0.03***	***0.005***	0.12	***0.01***	7.79	88.7	350	0.44
	09/02/2021	**	**	**	**	**	**	**	**	**	**
	12/09/2021	***	***	***	***	***	***	***	***	***	***
	03/30/2022	***	***	***	***	***	***	***	***	***	***
	06/22/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00561	***0.01***	7.99	29.7	152	0.55
	09/01/2022	0.000051	0.00164	***0.03***	***0.005***	0.138	***0.01***	7.93	31.5	322	0.49
	12/13/2022	***	***	***	***	***	***	***	***	***	***
	03/31/2023	***	***	***	***	***	***	***	***	***	***
	06/28/2023	0.000056	0.00245	***0.03***	***0.005***	0.107	***0.01***	7.81	17	238	0.44
	08/21/2023	**	**	**	**	**	**	**	**	**	**
	10/09/2023	**	**	**	**	**	**	**	**	**	**

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Data in purple represents a duplicate sample

** = No Sample Collected - Insufficient flow (or dry) due to late summer dry conditions*

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Climax Molybdenum
A Freeport-McMoRan Company

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVS-2	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/26/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0071	***0.005***	7.87	10.7	116	*nd*
	09/18/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.0077	***0.005***	8.26	30.4	184	0.3
	11/13/2019	***0.000025***	***0.0004***	***0.015***	***0.005***	0.006	***0.005***	7.85	39.2	220	0.2
	03/15/2020	***	***	***	***	***	***	***	***	***	***
	06/25/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0071	***0.01***	7.51	13	128	*0.2*
	09/01/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0073	***0.01***	8.21	30.9	192	0.3
	10/05/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00728	***0.01***	7.79	31.6	198	0.3
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00749	***0.01***	8.01	17.7	158	0.27
	09/02/2021	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00863	***0.01***	8.16	31.3	194	0.32
	12/09/2021	***	***	***	***	***	***	***	***	***	***
	03/30/2022	***	***	***	***	***	***	***	***	***	***
	06/22/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00757	***0.01***	7.48	13.8	142	0.3
	09/01/2022	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00887	***0.01***	8.06	33.2	216	0.26
	12/13/2022	***	***	***	***	***	***	***	***	***	***
	03/31/2023	***	***	***	***	***	***	***	***	***	***
	06/28/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00864	***0.01***	7.64	11.9	136	0.22
	08/21/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0103	***0.01***	8.11	30.7	204	0.36
	10/09/2023	***0.000025***	***0.0004***	***0.03***	***0.005***	0.00788	***0.01***	8.21	36.6	218	***0.075***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = no data collected for parameter at location during sampling event

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
EVS-3	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/26/2019	***0.000025***	***0.0004***	***0.01***	***0.0025***	0.0064	***0.005***	7.86	18.7	128	0.3
	09/18/2019	***0.000025***	***0.0004***	***0.01***	***0.0025***	0.0065	***0.005***	8.34	37.5	214	0.4
	11/13/2019	***	***	***	***	***	***	***	***	***	***
	03/15/2020	***	***	***	***	***	***	***	***	***	***
	06/25/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.0051	***0.01***	7.99	17.1	138	0.3
	09/01/2020	***0.000025***	***0.0004***	***0.03***	***0.005***	0.006	***0.01***	7.98	39	214	0.3
	10/05/2020	***0.000025***	***0.0004***	**0.03**	0.018	0.00512	***0.01***	7.62	39.9	238	0.3
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	***0.000025***	***0.0004***	**0.03**	***0.005***	0.0064	***0.01***	8.01	24	147	0.39
	09/02/2021	**	**	**	**	**	**	**	**	**	**
	12/09/2021	***	***	***	***	***	***	***	***	***	***
	03/30/2022	***	***	***	***	***	***	***	***	***	***
	06/22/2022	***0.000025***	0.00183	**0.03**	***0.005***	0.133	***0.01***	7.71	34.1	268	0.54
	09/01/2022	***0.000025***	***0.0004***	**0.03**	***0.005***	0.00746	***0.01***	8.05	39.9	236	0.37
	12/13/2022	***	***	***	***	***	***	***	***	***	***
	03/31/2023	***	***	***	***	***	***	***	***	***	***
	06/28/2023	***0.000025***	***0.0004***	**0.03**	***0.005***	0.00687	***0.01***	7.36	16.4	140	0.33
	08/21/2023	***0.00133***	***0.00086***	**0.03**	***0.005***	0.0107	***0.01***	8.2	32.1	210	0.5
	10/09/2023	***0.000025***	***0.0004***	**0.03**	***0.005***	0.00769	***0.01***	8.21	38.2	232	0.23

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

** = No Sample Collected - Insufficient flow (or dry) due to late summer dry conditions*

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Climax Molybdenum
A Freeport-McMoRan Company

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
Arkansas #1	07/15/2019	***0.000025***	***0.0004***	0.015	0.06	0.005	0.0014
	11/06/2019	*0.000025*	*0.0004*	*0.05*	*0.08*	*0.02*	*0.002*
	06/22/2020	***0.000025***	0.001	0.03	0.08	0.01	0.0015
	08/31/2020	***0.000025***	***0.0004***	0.06	0.1	0.02	0.0017
	06/17/2021	0.000052	0.00093	***0.03***	0.075	***0.05***	0.00147
	09/21/2021	***0.000025***	***0.0004***	0.101	0.151	0.02	0.00195
	06/21/2022	***0.000025***	***0.0004***	0.068	0.091	***0.05***	0.00139
	09/26/2022	0.000051	***0.0004***	***0.03***	0.097	***0.05***	0.0018
	06/28/2023	***0.000025***	***0.0004***	***0.03***	0.064	***0.05***	0.00142
	08/21/2023	***0.000025***	***0.0004***	0.068	0.114	0.032	0.00198

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
Arkansas #1	07/15/2019	0.0014	0.01	7.51	4.4	24	18
	11/06/2019	0.0019	0.02	8.46	20.1	70	51
	06/22/2020	0.0014	***0.01***	6.82	5.4	50	21
	08/31/2020	0.0016	***0.01***	7.99	24.4	60	51
	06/17/2021	0.00127	***0.01***	7.6	5.4	34	20
	09/21/2021	0.002	***0.01***	7.94	27.2	76	58
	06/21/2022	0.00124	***0.01***	7.6	17.4	28	22
	09/26/2022	0.00185	***0.01***	7.59	34.9	92	69
	06/28/2023	0.00166	0.029	7.1	5.8	36	24
	08/21/2023	0.00207	***0.01***	7.87	16.2	58	49

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = No Data. Pre-dates data collection at location.

Climax Molybdenum
A Freeport-McMoRan Company

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
Arkansas #2	07/15/2019	***0.000025***	***0.0004***	0.03	0.07	0.02	0.0027
	11/06/2019	***0.000025***	***0.0004***	0.05	0.13	0.14	0.0143
	06/22/2020	0.00006	0.0009	***0.03***	0.09	0.03	0.0038
	08/31/2020	***0.000025***	***0.0004***	***0.03***	0.09	0.04	0.0056
	03/30/2021	***	***	***	***	***	***
	06/17/2021	0.00005	***0.0004***	***0.03***	0.072	0.017	0.00278
	09/21/2021	***0.000025***	***0.0004***	0.062	0.113	0.059	0.00759
	06/21/2022	***0.000025***	0.0009	***0.03***	0.071	0.023	0.00313
	09/02/2022	***0.000025***	***0.0004***	0.076	***0.03***	0.03	0.00489
	06/26/2023	***0.000025***	0.00083	***0.03***	0.068	0.018	0.00287
	08/21/2023	***0.000025***	***0.0004***	***0.03***	0.113	0.028	0.00441

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
Arkansas #2	07/15/2019	0.0031	0.01	7.39	16.5	26	20
	11/06/2019	0.0132	0.01	7.82	25.1	94	64
	06/22/2020	0.0036	0.02	6.99	8.2	50	26
	08/31/2020	0.0054	***0.01***	8.12	16.9	58	47
	06/17/2021	0.00272	***0.01***	7.68	5.8	38	22
	09/21/2021	0.00776	***0.01***	8.94	23.2	78	60
	06/21/2022	0.0028	***0.01***	7.72	8.3	28	25
	09/02/2022	0.00504	***0.01***	8.23	26.2	74	56
	06/26/2023	0.00314	0.043	7.83	7.8	44	28
	08/21/2023	0.00425	***0.01***	8.32	17.4	44	46

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = No Data. Pre-dates data collection at location.

Climax Molybdenum
A Freeport-McMoRan Company

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
Al	06/26/2019	***0.000025***	***0.0004***	0.04	0.13	***0.005***	0.0006
	11/20/2019	***0.000025***	***0.0004***	***0.015***	***0.015***	0.01	0.0315
	06/11/2020	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0101
	09/21/2020	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.025
	06/18/2021	***0.000025***	***0.0004***	***0.03***	0.089	***0.005***	0.0016
	09/16/2021	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0336
	06/15/2022	***0.000025***	***0.0004***	***0.03***	0.188	***0.005***	0.0272
	09/14/2022	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0327
	06/20/2023	***0.000025***	***0.0004***	***0.03***	0.089	***0.005***	0.0087
	09/20/2023	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	***0.001***

Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
Al	06/26/2019	0.0009	***0.005***	7.84	***0.5***	50	36
	11/20/2019	0.0319	***0.005***	7.81	30.2	120	54
	06/11/2020	0.0115	***0.01***	7.39	13	88	61
	09/21/2020	0.0264	***0.01***	8.48	24.8	120	93
	06/18/2021	0.00345	***0.01***	7.98	6.1	60	49
	09/16/2021	0.0325	***0.01***	8.22	23.4	116	104
	06/15/2022	0.0275	***0.01***	7.85	24.2	120	94
	09/14/2022	0.0336	***0.01***	8.22	26.2	178	102
	06/20/2023	0.00855	***0.01***	7.92	9.4	76	63
	09/20/2023	0.00077	***0.01***	8.15	10.9	102	81

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = No Data. Pre-dates data collection at location.

Climax Molybdenum
A Freeport-McMoRan Company

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
BI	06/26/2019	***0.000025***	***0.0004***	0.04	0.13	***0.005***	0.0016
	11/20/2019	***0.000025***	***0.0004***	***0.015***	***0.015***	***0.005***	0.0004
	06/11/2020	***0.000025***	***0.0004***	***0.03***	0.19	***0.005***	0.0102
	09/21/2020	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0005
	06/18/2021	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.00041
	09/16/2021	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.00061
	06/15/2022	***0.000025***	***0.0004***	***0.03***	0.083	***0.005***	0.0059
	09/14/2022	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.00068
	06/20/2023	***0.000025***	***0.0004***	***0.03***	0.075	***0.005***	0.0097
	09/20/2023	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0332

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
BI	06/26/2019	*0.002*	***0.005***	7.9	3.7	60	42
	11/20/2019	*0.0004*	***0.005***	7.49	***13.1***	84	80
	06/11/2020	0.0133	***0.01***	7.2	***12.6***	86	59
	09/21/2020	0.0005	***0.01***	8.42	10.3	84	77
	06/18/2021	0.00036	***0.01***	7.96	5.4	48	44
	09/16/2021	0.00092	***0.01***	8.03	8.9	90	81
	06/15/2022	0.0061	***0.01***	7.73	9.9	70	53
	09/14/2022	0.00046	***0.01***	8.13	11.1	82	73
	06/20/2023	0.00927	0.022	8.03	10.7	82	69
	09/20/2023	0.0321	***0.01***	8.15	28.4	132	122

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = No Data. Pre-dates data collection at location.

Climax Molybdenum
A Freeport-McMoRan Company

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
EPR Outlet	09/25/2019	***0.000025***	***0.0004***	***0.015***	***0.015***	***0.005***	0.028
	09/30/2019	***0.000025***	***0.0004***	***0.015***	0.03	***0.005***	0.0292
	12/18/2019	***0.000025***	0.001	***0.015***	***0.015***	***0.005***	0.0322
	06/25/2020	**	**	**	**	**	**
	09/21/2020	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0252
	06/30/2021	**	**	**	**	**	**
	09/02/2021	***0.000025***	***0.0004***	***0.03***	***0.06***	***0.005***	0.0329
	06/15/2022	**	**	**	**	**	**
	09/14/2022	***0.000025***	***0.0004***	***0.03***	***0.06***	***0.005***	0.0334
	06/28/2023	**	**	**	**	**	**
	09/20/2023	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	*0.0353*

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - No flow at Outlet*

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
EPR Outlet	09/25/2019	0.0288	***0.005***	7.67	24.3	92	94
	09/30/2019	0.0311	***0.005***	7.59	25.2	114	101
	12/18/2019	0.0305	***0.005***	7.76	23.1	118	99
	06/25/2020	**	**	**	**	**	**
	09/21/2020	0.025	***0.01***	8.38	21.7	112	93
	06/30/2021	**	**	**	**	**	**
	09/02/2021	0.0355	***0.01***	7.97	25.5	118	103
	06/15/2022	**	**	**	**	**	**
	09/14/2022	0.0038	***0.01***	7.99	26.3	108	102
	06/28/2023	**	**	**	**	**	**
	09/20/2023	*0.0333*	***0.01***	*7.8*	*26.8*	*124*	*106*
	10/09/2023			8.2			

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - No flow at Outlet*

nd = No Data. Pre-dates data collection at location.

Climax Molybdenum
A Freeport-McMoRan Company

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
CC-SW1	06/25/2019	0.00008	0.0008	***0.015***	0.15	***0.005***	0.001
	09/24/2019	0.00007	***0.0004***	***0.015***	***0.015***	***0.005***	0.0019
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	0.00011	0.001	***0.03***	0.07	***0.005***	0.0014
	08/31/2020	0.00007	***0.0004***	***0.03***	***0.03***	***0.005***	0.0017
	10/19/2020	0.000094	***0.0004***	***0.03***	***0.063***	***0.005***	0.00249
	03/31/2021	***	***	***	***	***	***
	06/17/2021	0.000108	***0.0004***	***0.03***	0.115	***0.005***	0.00128
	09/21/2021	0.000079	***0.0004***	***0.03***	***0.03***	***0.005***	0.00173
	09/21/2021	0.000076	***0.0004***	***0.03***	***0.03***	***0.005***	0.00178
	10/29/2021	***	***	***	***	***	***
	03/15/2022	***	***	***	***	***	***
	06/22/2022	0.000097	***0.0004***	***0.03***	0.098	***0.005***	0.00144
	09/26/2022	0.000087	***0.0004***	***0.03***	***0.03***	***0.005***	0.00168
	11/28/2022	***	***	***	***	***	***
	06/22/2023	0.000107	0.00086	***0.03***	***0.03***	***0.005***	0.00122
	08/22/2023	0.000094	***0.0004***	***0.03***	0.07	***0.005***	0.00184
	10/11/2023	0.000086	***0.0004***	***0.03***	***0.03***	0.013	0.00203

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = No Data. Pre-dates data collection at location.

Note: Data in purple represents a duplicate sample

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
CC-SW1	06/25/2019	0.002	0.02	7.44	11.1	50	33
	09/24/2019	0.0021	0.01	7.64	31.9	62	65
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	0.0012	0.02	6.94	5	62	32
	08/31/2020	0.0016	***0.01***	7.31	30.8	80	54
	10/19/2020	0.00176	***0.01***	7.24	35.1	100	66
	03/31/2021	***	***	***	***	***	***
	06/17/2021	0.00119	0.024	7.52	17.7	52	33
	09/21/2021	0.00163	***0.01***	7.57	35.6	86	69
	09/21/2021	0.0168	***0.01***	7.57	35.7	90	68
	10/29/2021	***	***	***	***	***	***
	03/15/2022	***	***	***	***	***	***
	06/22/2022	0.0013	0.023	7.56	20.6	58	37
	09/26/2022	0.00155	***0.01***	7.73	38.7	96	68
	11/28/2022	***	***	***	***	***	***
	06/22/2023	0.00122	0.035	7.39	17.8	62	37
	08/22/2023	0.00177	***0.01***	7.72	34.3	84	62
	10/11/2023	0.00178	0.023	7.84	41.2	104	75

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = Not Accessible (or Frozen) due to Winter Conditions*

nd = No Data. Pre-dates data collection at location.

Note: Data in purple represents a duplicate sample

Climax Molybdenum
A Freeport-McMoRan Company

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
EI-SW1	06/25/2019	***0.000025***	***0.0004***	***0.015***	0.13	***0.005***	0.0016
	09/24/2019	***0.000025***	***0.0004***	***0.015***	0.03	***0.005***	0.0015
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	***0.000025***	***0.0004***	***0.03***	0.12	***0.005***	0.0014
	08/31/2020	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0016
	10/19/2020	***0.000025***	***0.0004***	***0.03***	0.156	***0.005***	0.00201
	03/31/2021	***	***	***	***	***	***
	05/27/2021	***	***	***	***	***	***
	06/08/2021	***0.000025***	***0.0004***	***0.03***	0.134	***0.005***	0.00247
	07/29/2021	0.000095	0.0273	***0.03***	***0.03***	***0.005***	0.0013
	08/12/2021	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.00129
	09/15/2021	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.0017
	10/29/2021	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.00141
	03/15/2022	***	***	***	***	***	***
	06/29/2022	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.00134
	07/28/2022	***0.000025***	***0.0004***	***0.03***	***0.03***	***0.005***	0.00049
	09/26/2022	***0.000025***	***0.0004***	***0.03***	0.271	***0.005***	0.00436
	11/28/2022	***	***	***	***	***	***
	06/22/2023	0.000688	0.0096	***0.03***	0.148	0.263	0.00524
	09/04/2023	***	***	***	***	***	***
	10/11/2023	***	***	***	***	***	***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*

nd = No Data. Pre-dates data collection at location.

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
EI-SW1	06/25/2019	0.0028	***0.005***	7.74	5	102	88
	09/24/2019	0.0019	***0.005***	8.01	7.2	158	180
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	0.0014	***0.01***	7.77	14.3	152	107
	08/31/2020	0.0015	***0.01***	8.31	7.7	180	156
	10/19/2020	0.00191	***0.02***	8.33	11.4	184	160
	03/31/2021	***	***	***	***	***	***
	05/27/2021	***	***	***	***	***	***
	06/08/2021	0.00250	***0.01***	8.35	***0.5***	94	85
	07/29/2021	0.00135	***0.01***	8.41	9.4	154	149
	08/12/2021	0.00124	***0.01***	8.4	7.4	156	149
	09/15/2021	0.0168	***0.01***	8.36	7.7	172	181
	10/29/2021	0.00131	***0.01***	8.33	7.7	176	153
	03/15/2022	***	***	***	***	***	***
	06/29/2022	0.00129	***0.01***	8.11	6.1	128	121
	07/28/2022	0.0028	***0.01***	8.41	6	144	140
	09/26/2022	0.00494	***0.01***	8.29	7.9	170	150
	11/28/2022	***	***	***	***	***	***
	06/22/2023	***0.01***	***0.08***	7.08	27.8	156	128
	09/04/2023	*	*	*	*	*	*
	10/11/2023	*	*	*	*	*	*

Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Table 3 - Indicator Parameters
5-Year Surface Water Quality Monitoring Data
Climax Mine

**** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions*
nd = No Data. Pre-dates data collection at location.

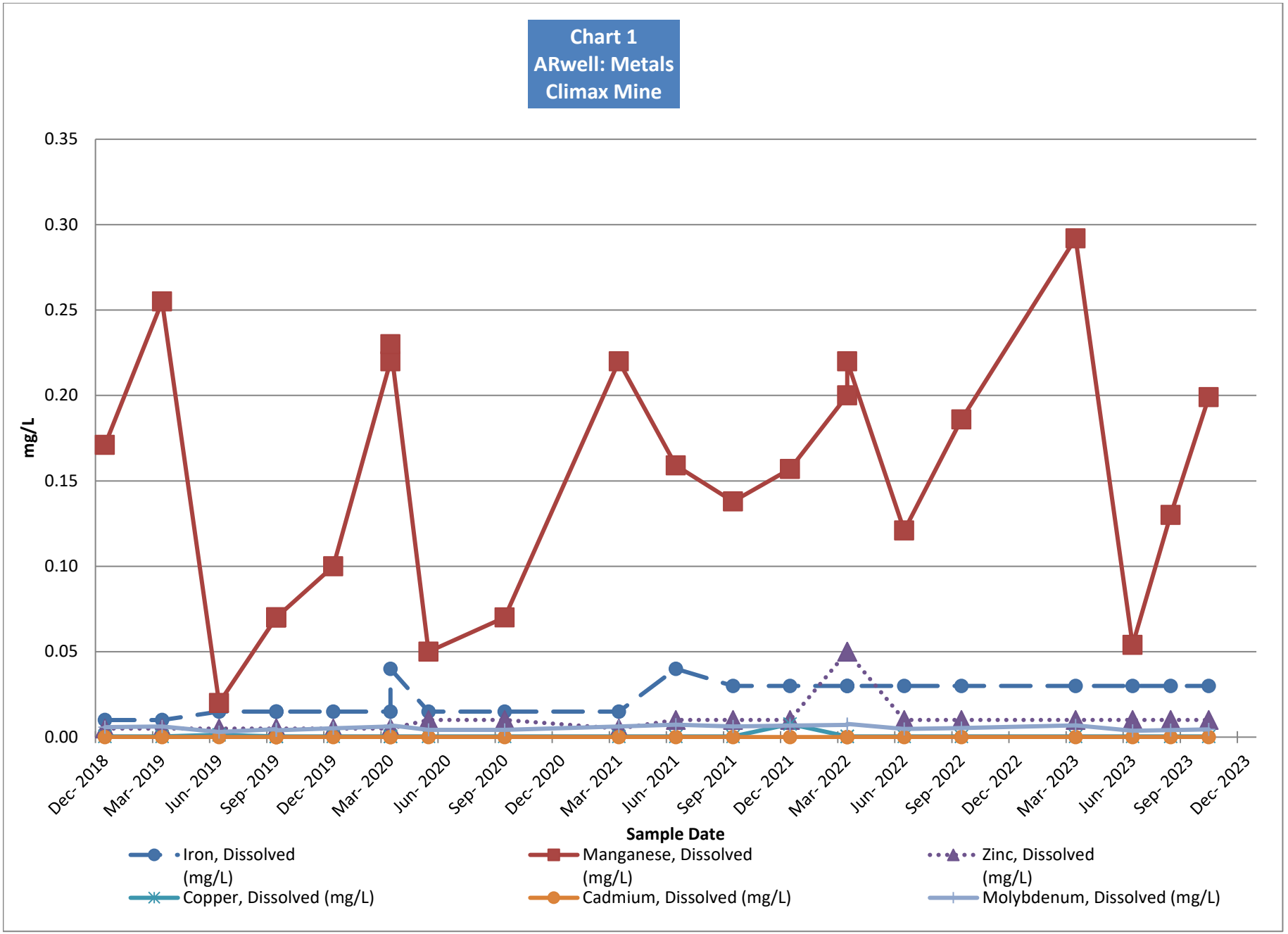


Chart 1
ARwell: Metals
Climax Mine
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
mg/L
Dec- 2018
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Iron, Dissolved (mg/L)
Manganese, Dissolved (mg/L)
Zinc, Dissolved (mg/L)
Copper, Dissolved (mg/L)
Cadmium, Dissolved (mg/L)
Molybdenum, Dissolved (mg/L)

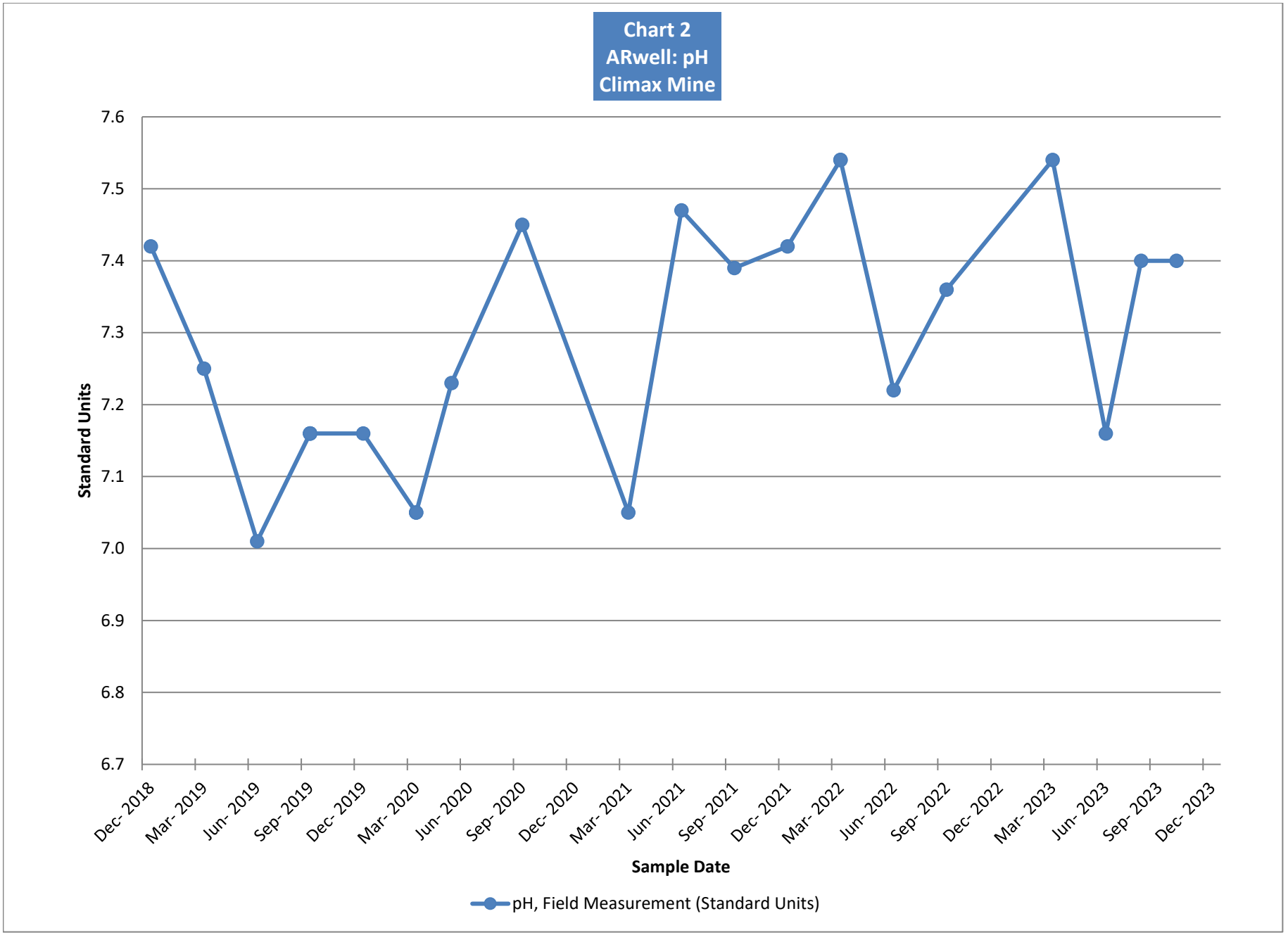


Chart 2
ARwell: pH
Climax Mine
7.6
7.5
7.4
7.3
7.2
7.1
7.0
6.9
6.8
6.7
Standard Units
Dec- 2018
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
pH, Field Measurement (Standard Units)

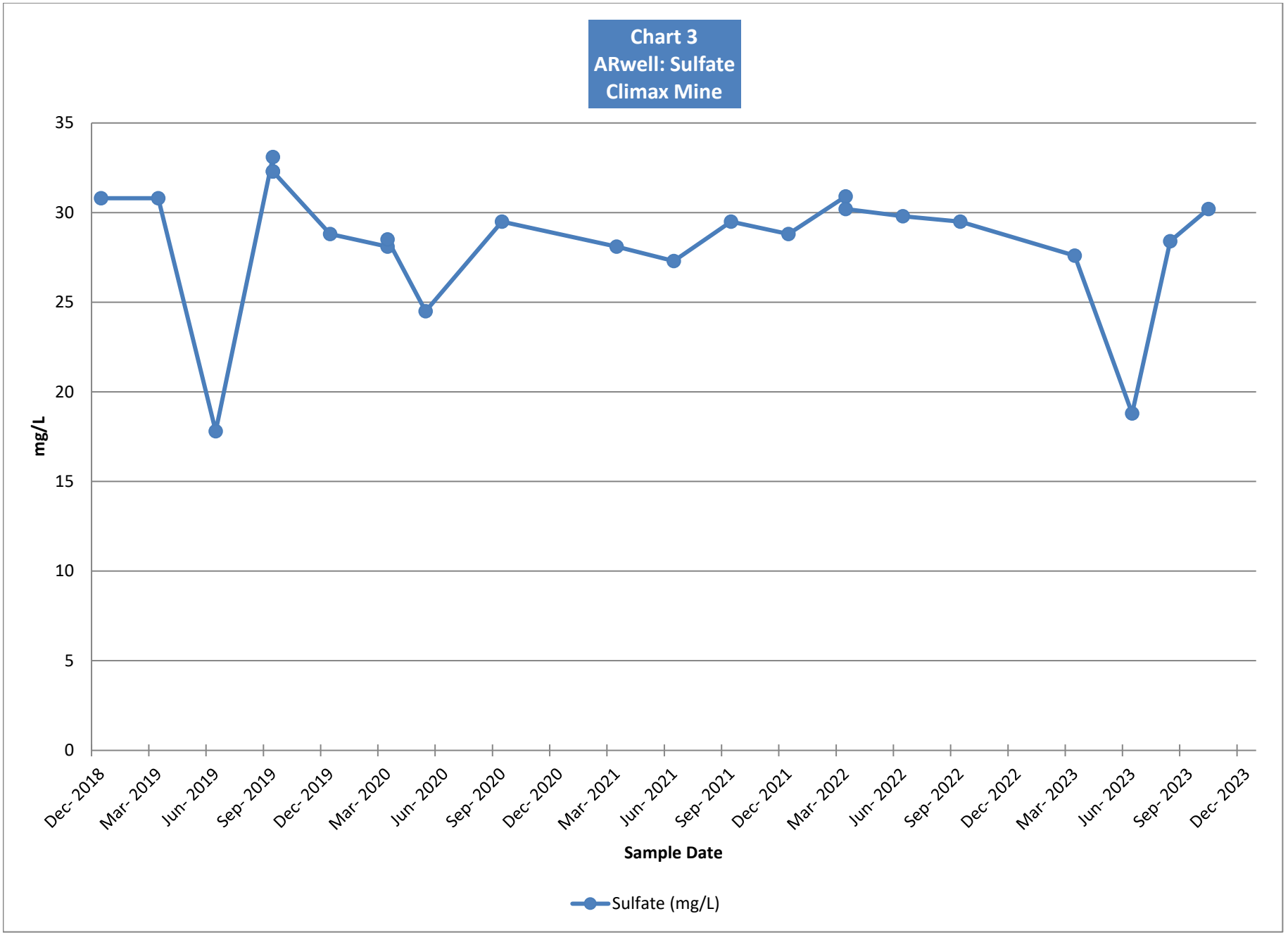


Chart 3
ARwell: Sulfate
Climax Mine
35
30
25
20
15
10
5
0
mg/L
Dec- 2018
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Sulfate (mg/L)

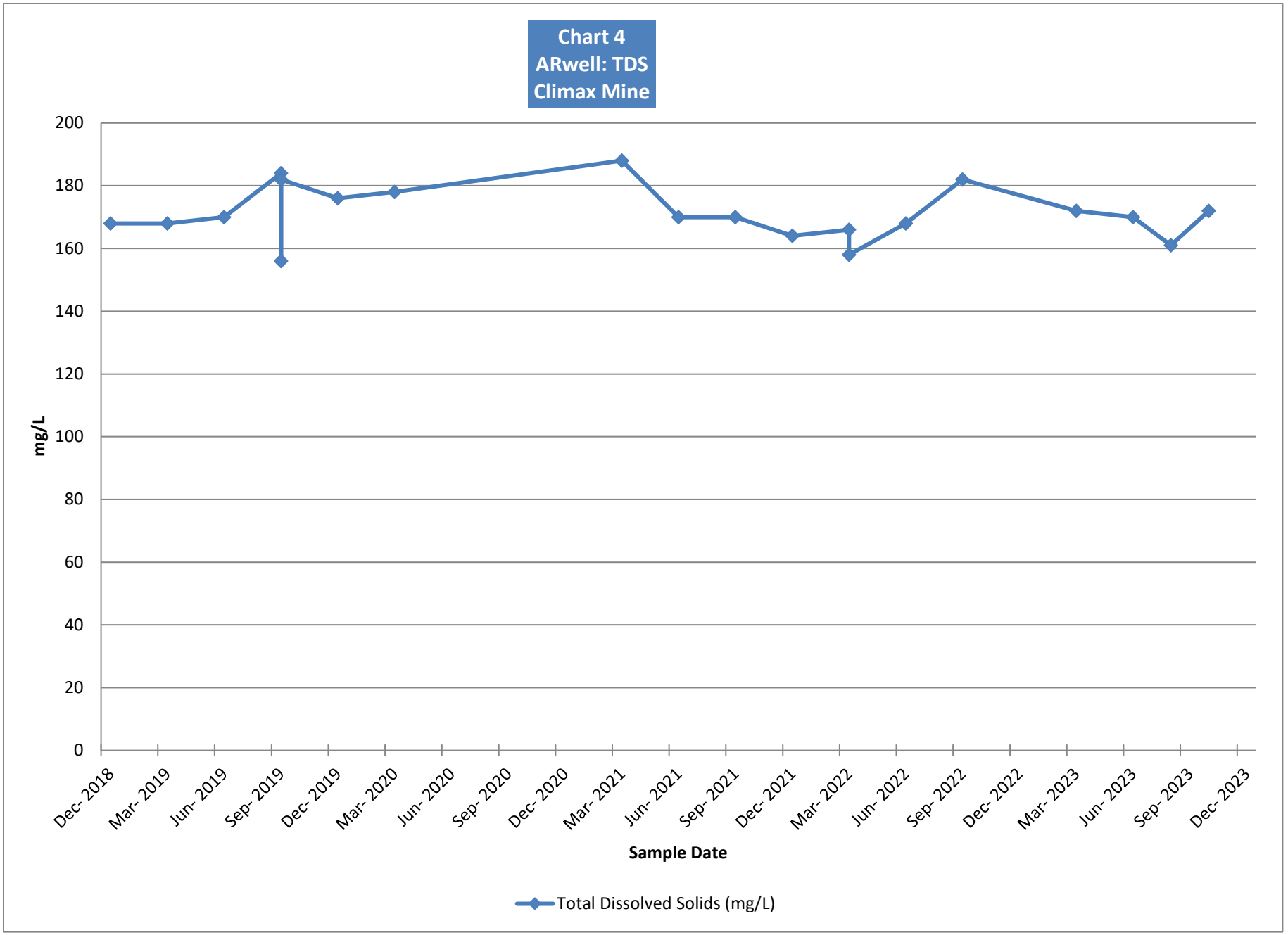


Chart 4
ARwell: TDS
Climax Mine
200
180
160
140
120
100
80
60
40
20
0
mg/L
Dec- 2018
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Total Dissolved Solids (mg/L)

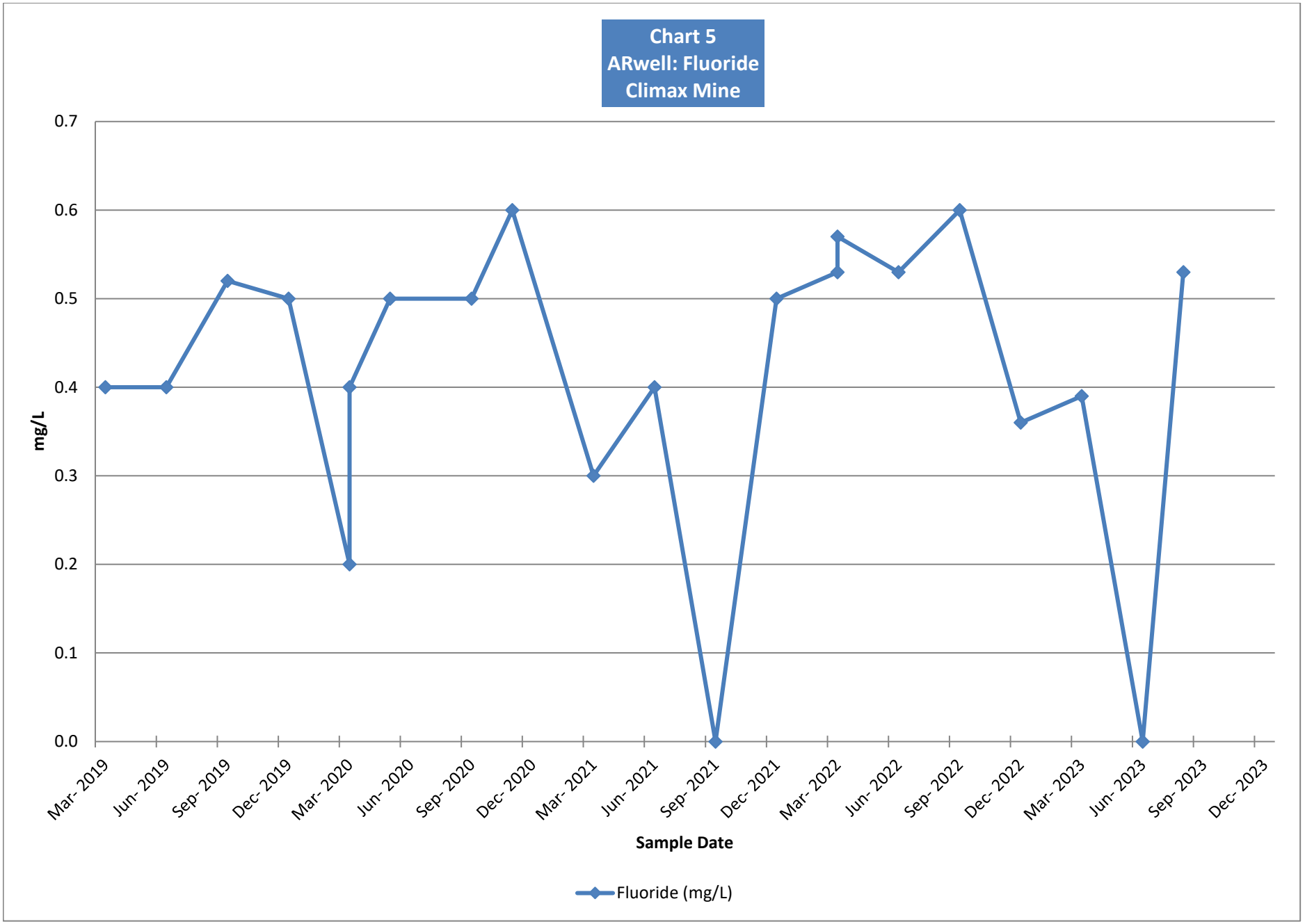


Chart 5
ARwell: Fluoride
Climax Mine
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
mg/L
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Fluoride (mg/L)

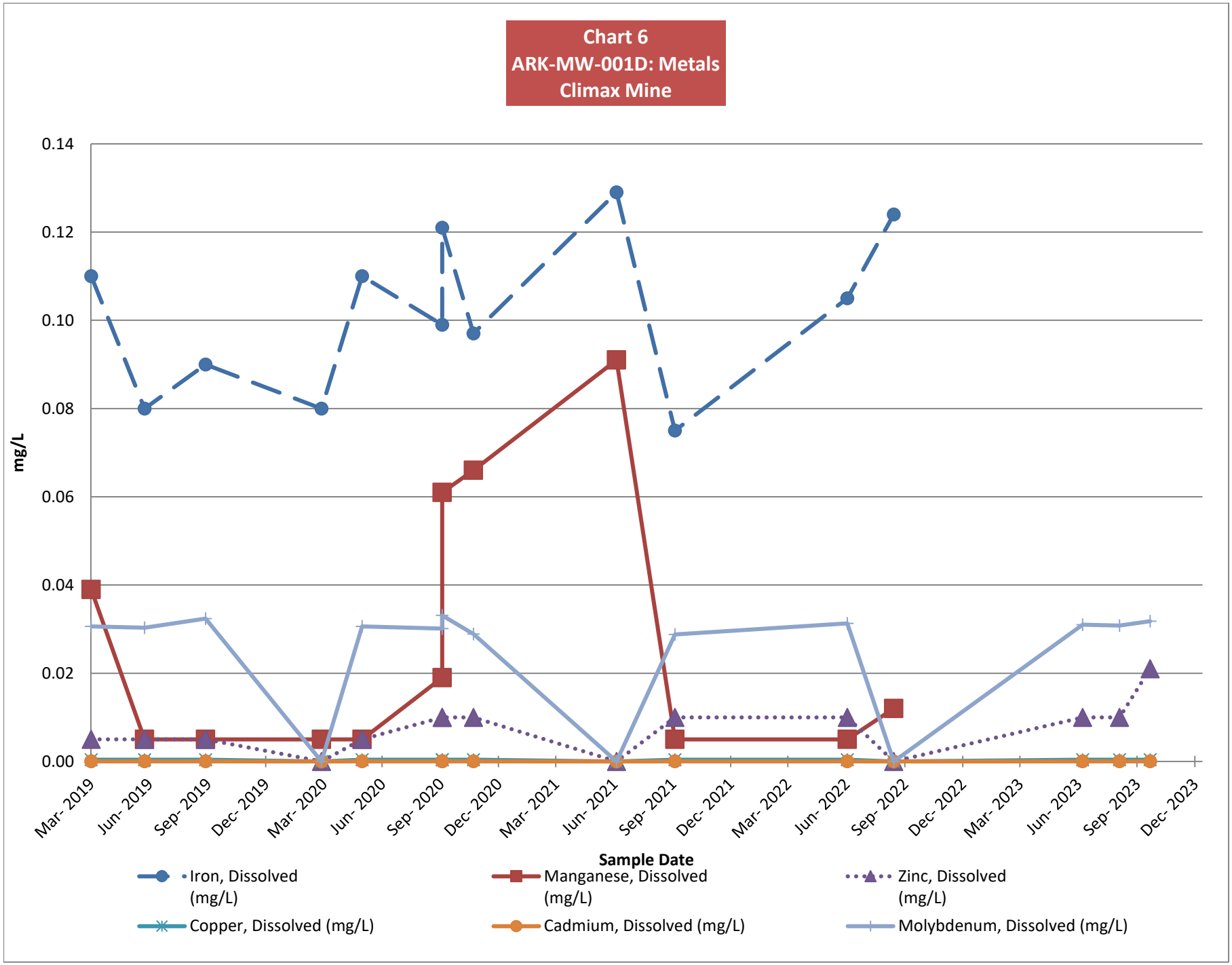


Chart 6
ARK-MW-001D: Metals
Climax Mine
mg/L
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Iron, Dissolved (mg/L)
Manganese, Dissolved (mg/L)
Zinc, Dissolved (mg/L)
Copper, Dissolved (mg/L)
Cadmium, Dissolved (mg/L)
Molybdenum, Dissolved (mg/L)

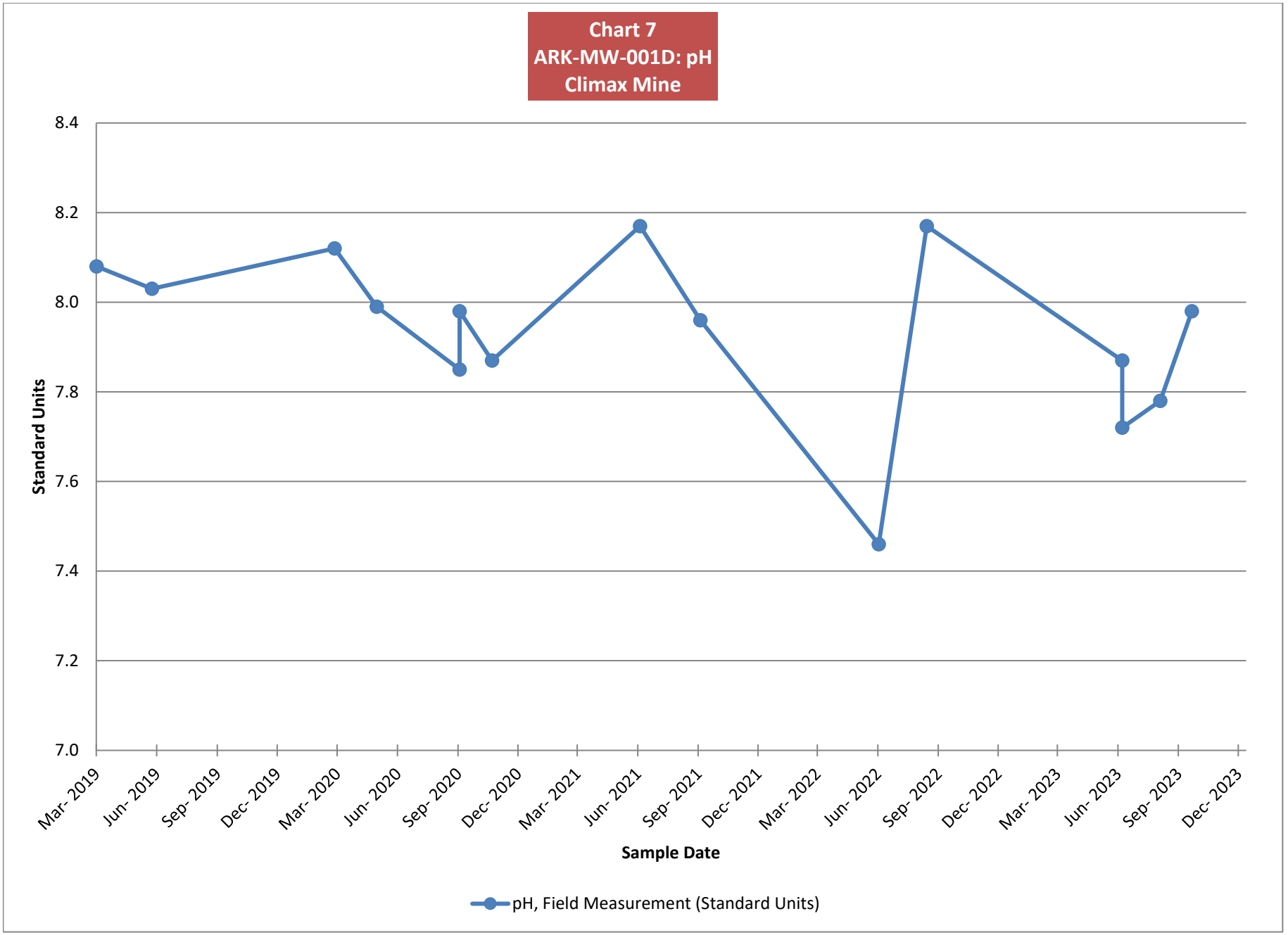


Chart 7
ARK-MW-001D: pH
Climax Mine
8.4
8.2
8.0
7.8
7.6
7.4
7.2
7.0
Standard Units
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
pH, Field Measurement (Standard Units)

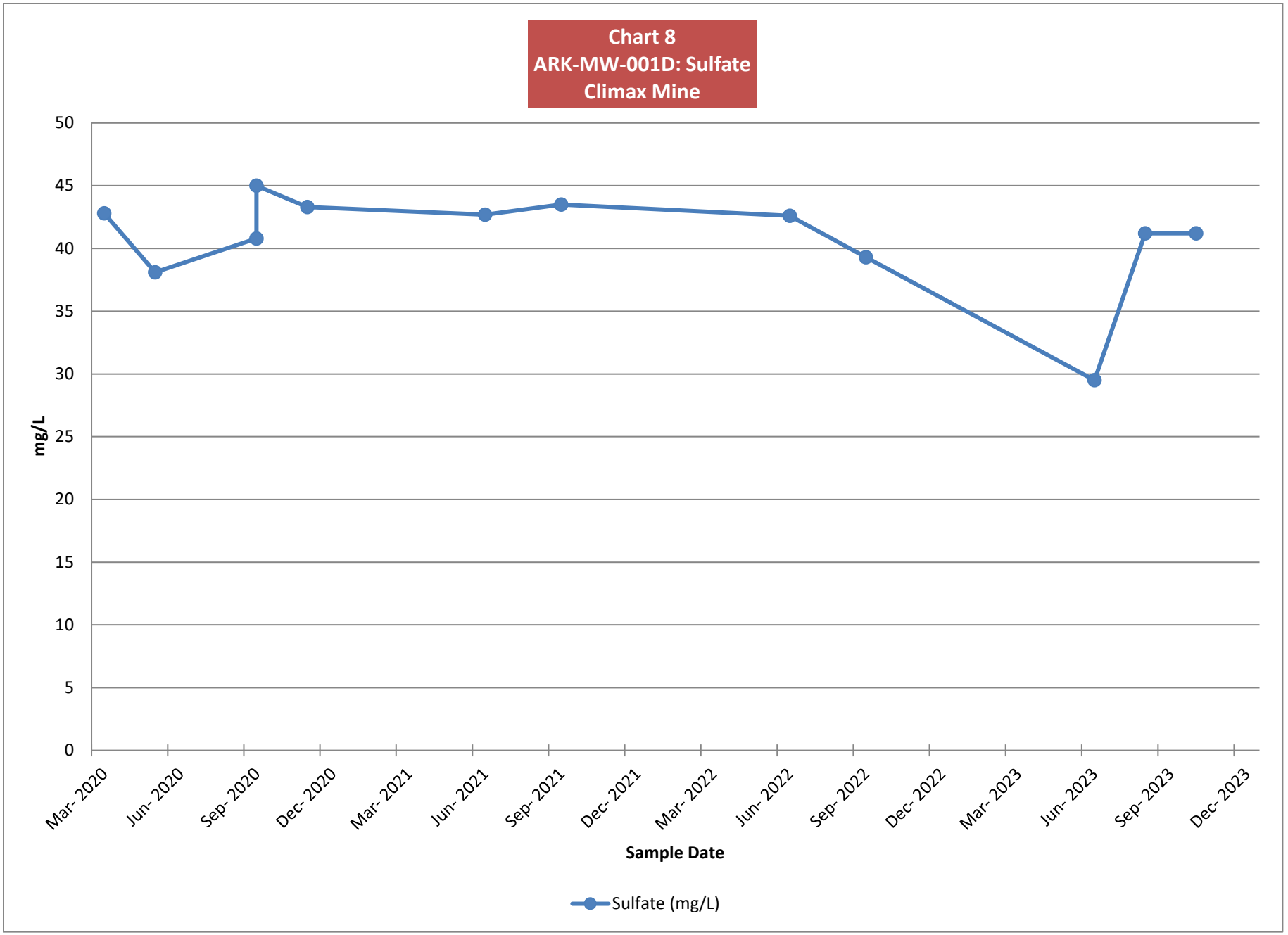


Chart 8
ARK-MW-001D: Sulfate
Climax Mine
50
45
40
35
30
25
20
15
10
5
0
mg/L
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Sulfate (mg/L)

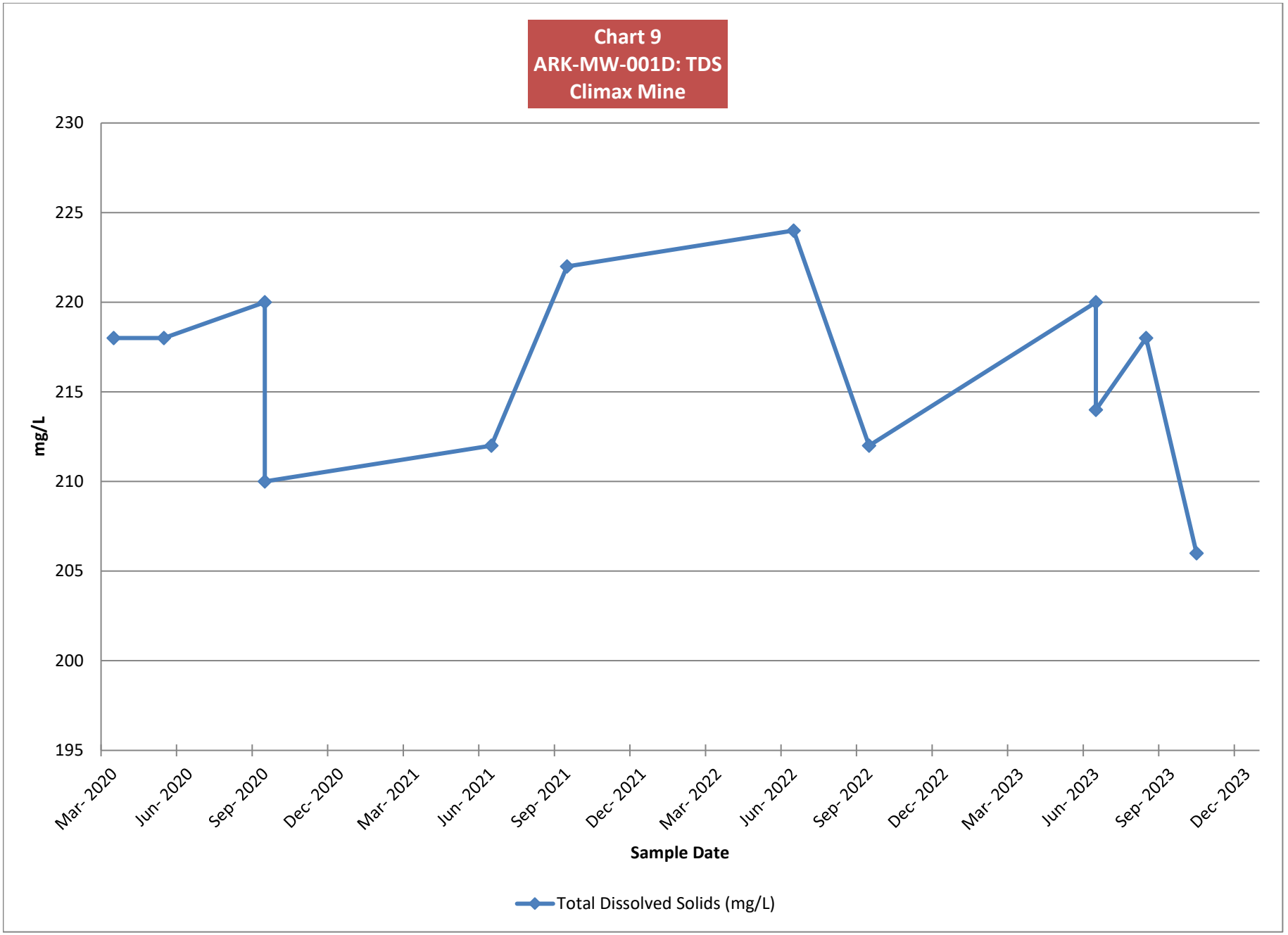


Chart 9
ARK-MW-001D: TDS
Climax Mine
230
225
220
215
210
205
200
195
mg/L
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Total Dissolved Solids (mg/L)

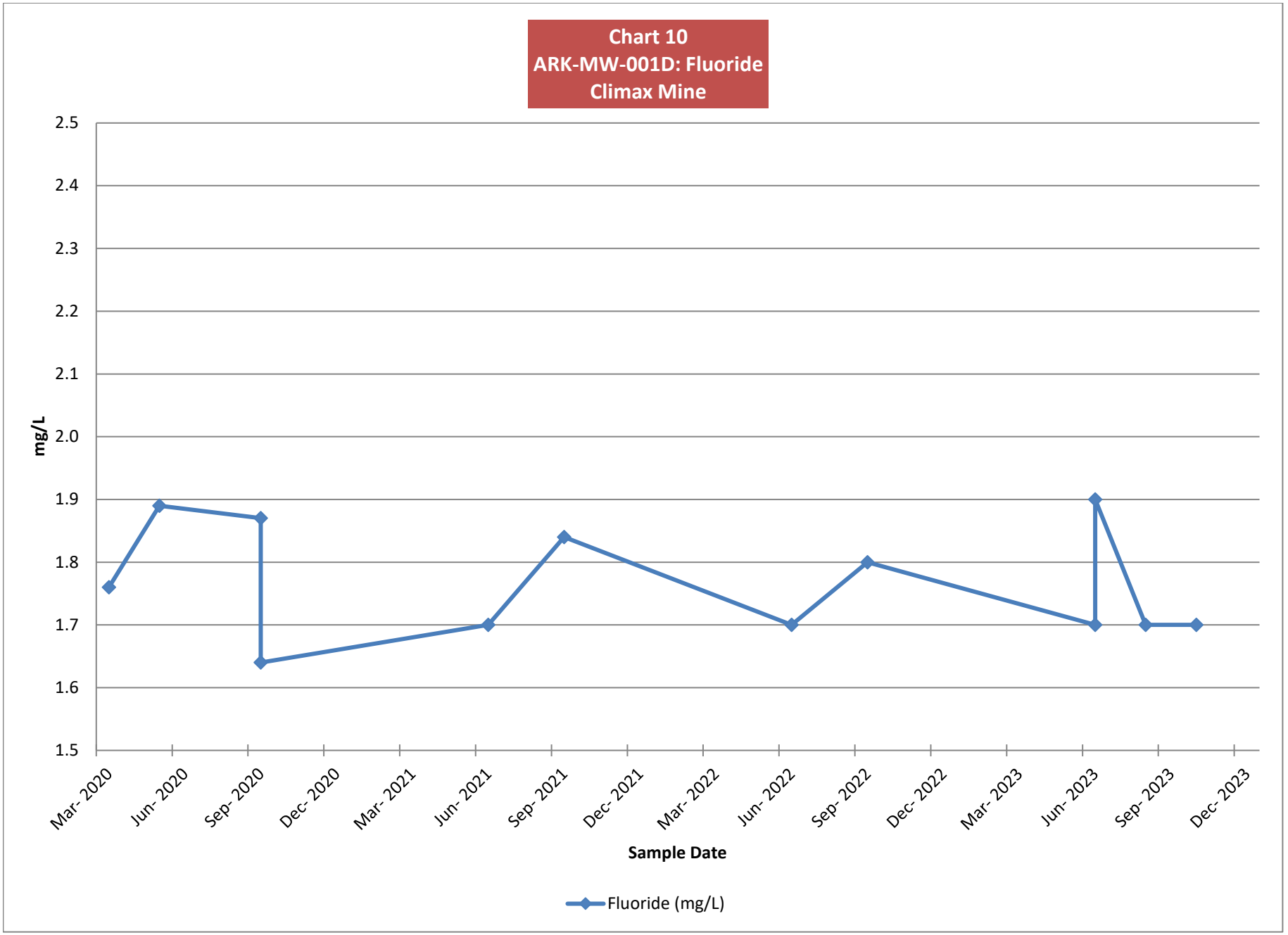
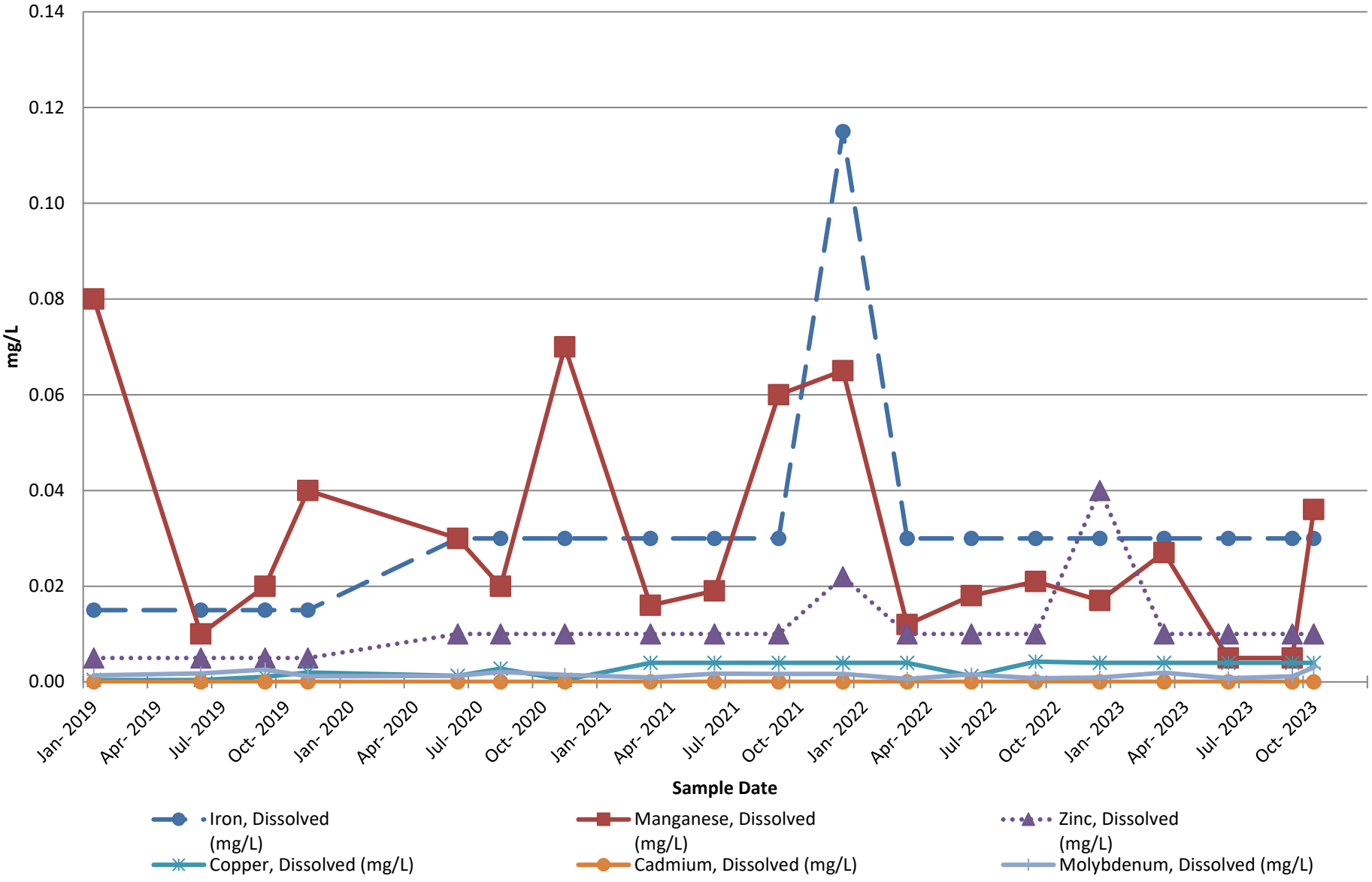


Chart 10
ARK-MW-001D: Fluoride
Climax Mine
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
mg/L
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Fluoride (mg/L)

Chart 11
EVMW-3S: Metals
Climax Mine



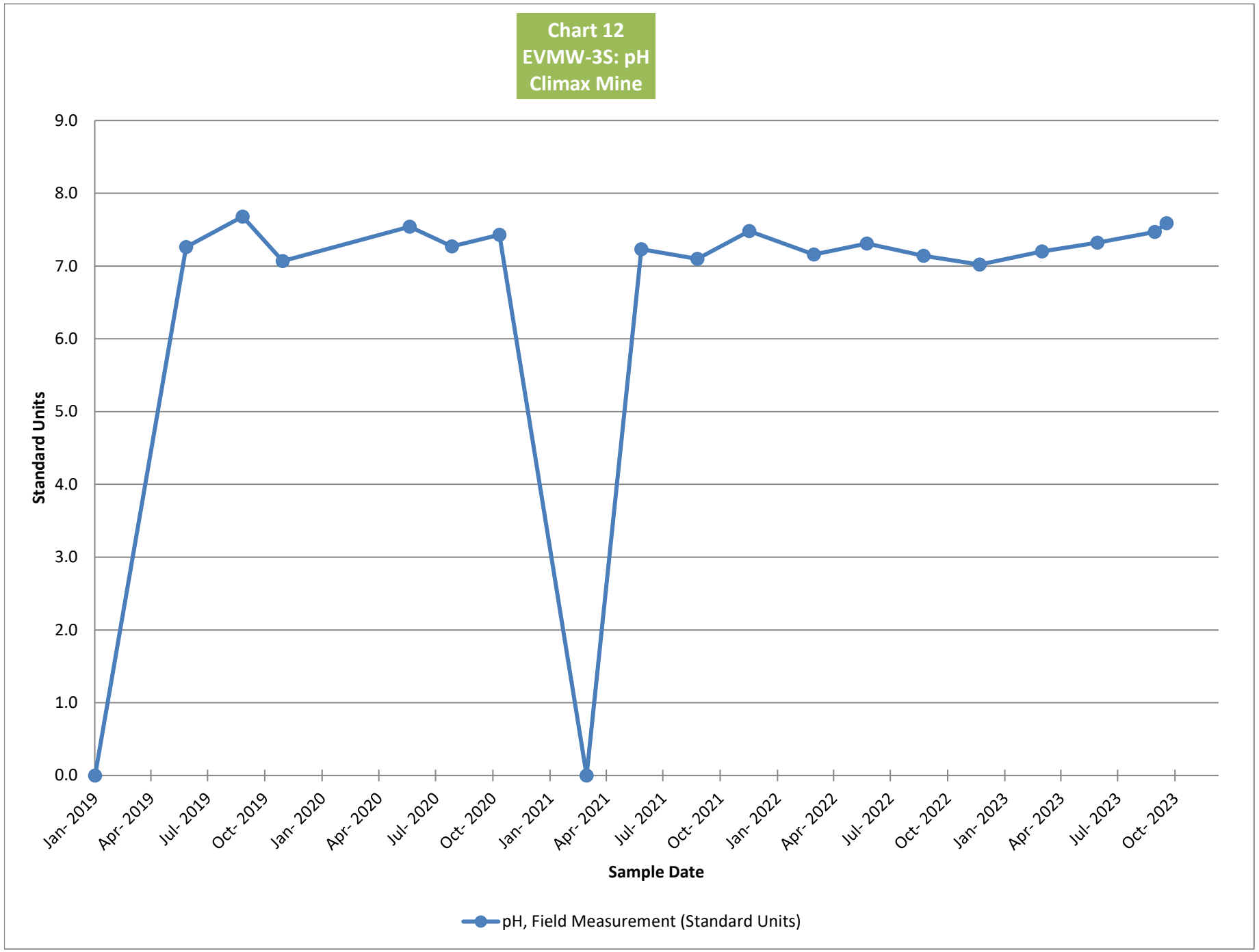


Chart 12
EVMW-3S: pH
Climax Mine
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Standard Units
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
pH, Field Measurement (Standard Units)

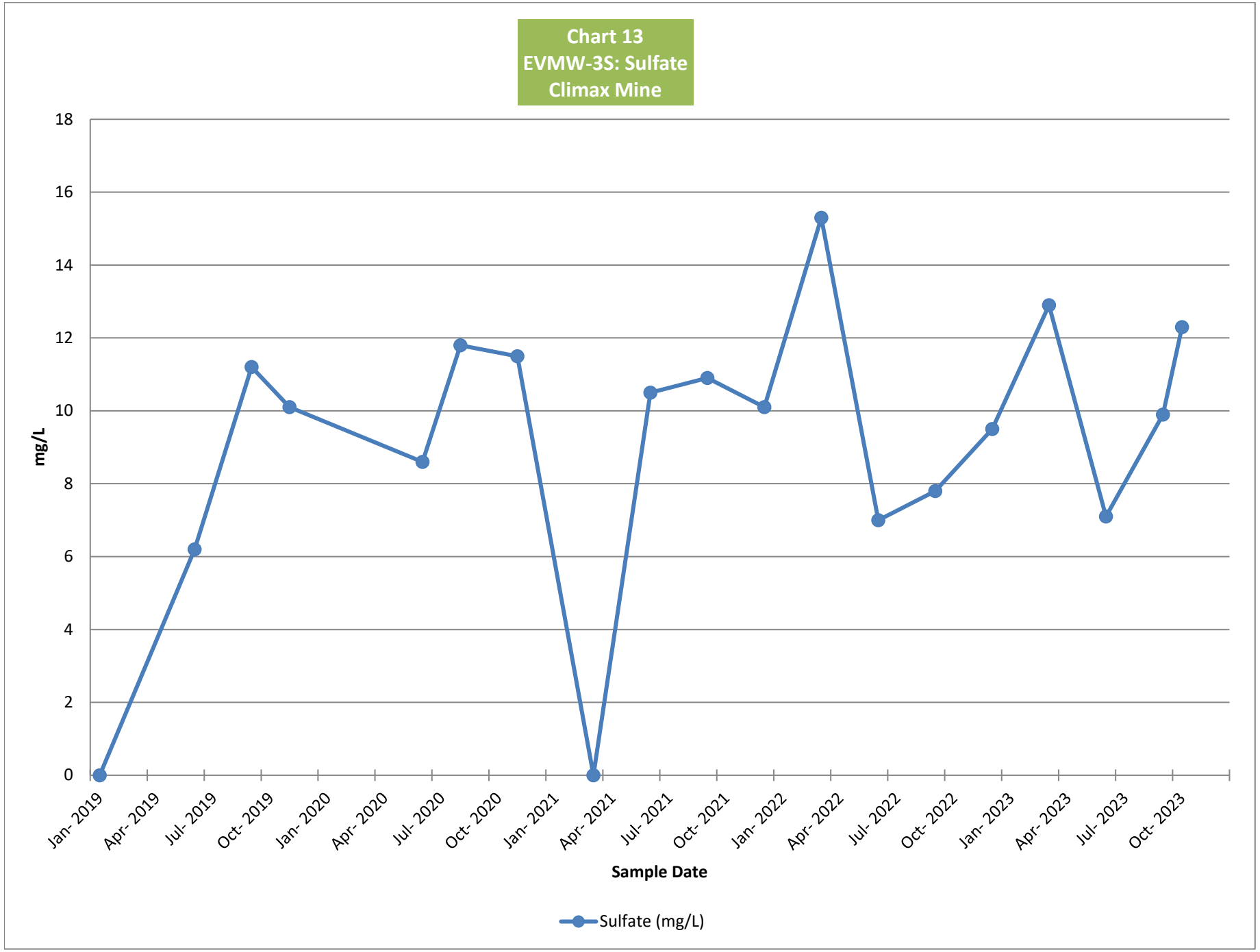


Chart 13
EVMW-3S: Sulfate
Climax Mine
18
16
14
12
10
8
6
4
2
0
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Sulfate (mg/L)

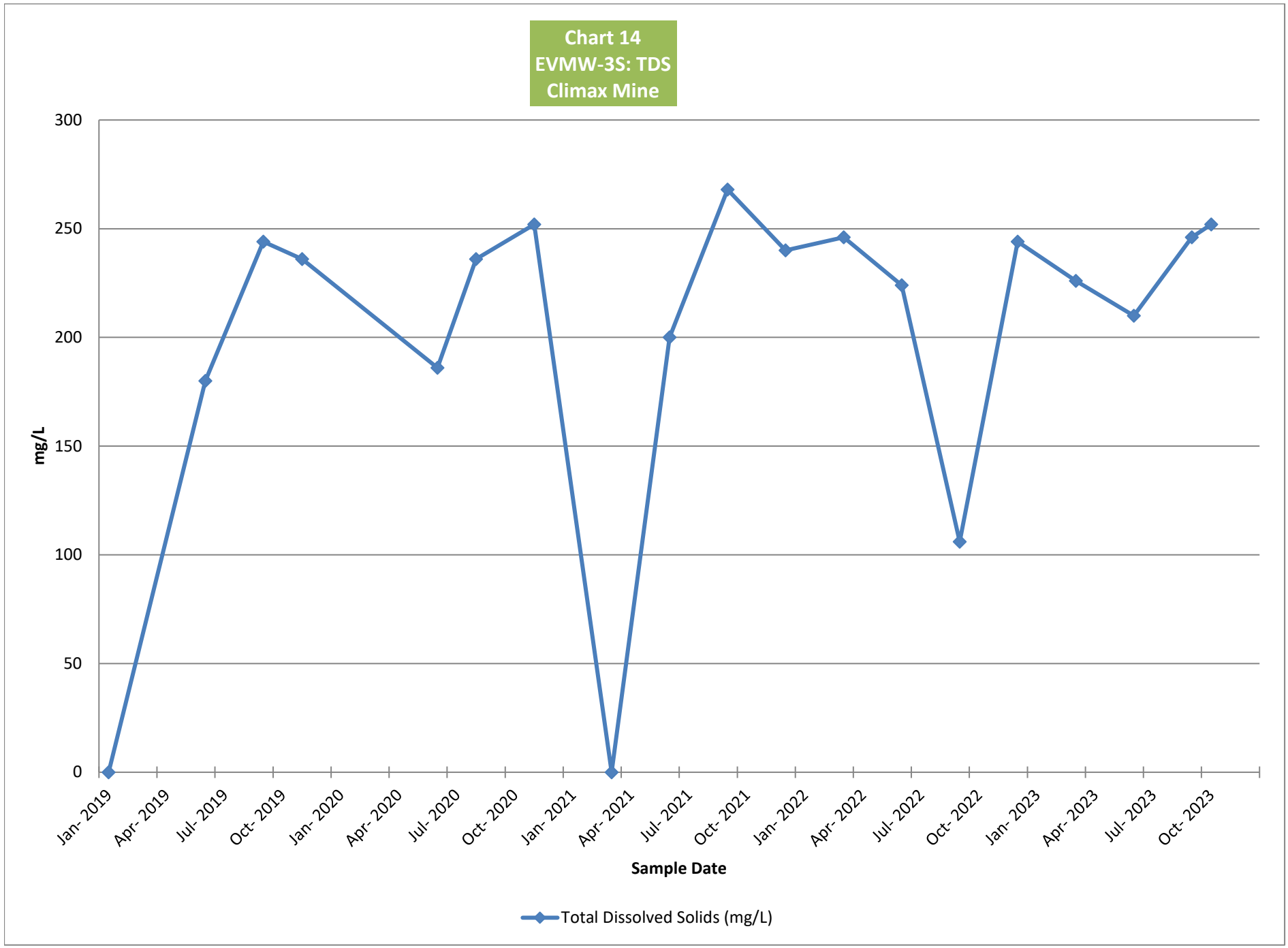


Chart 14
EVMW-3S: TDS
Climax Mine
300
250
200
150
100
50
0
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Total Dissolved Solids (mg/L)

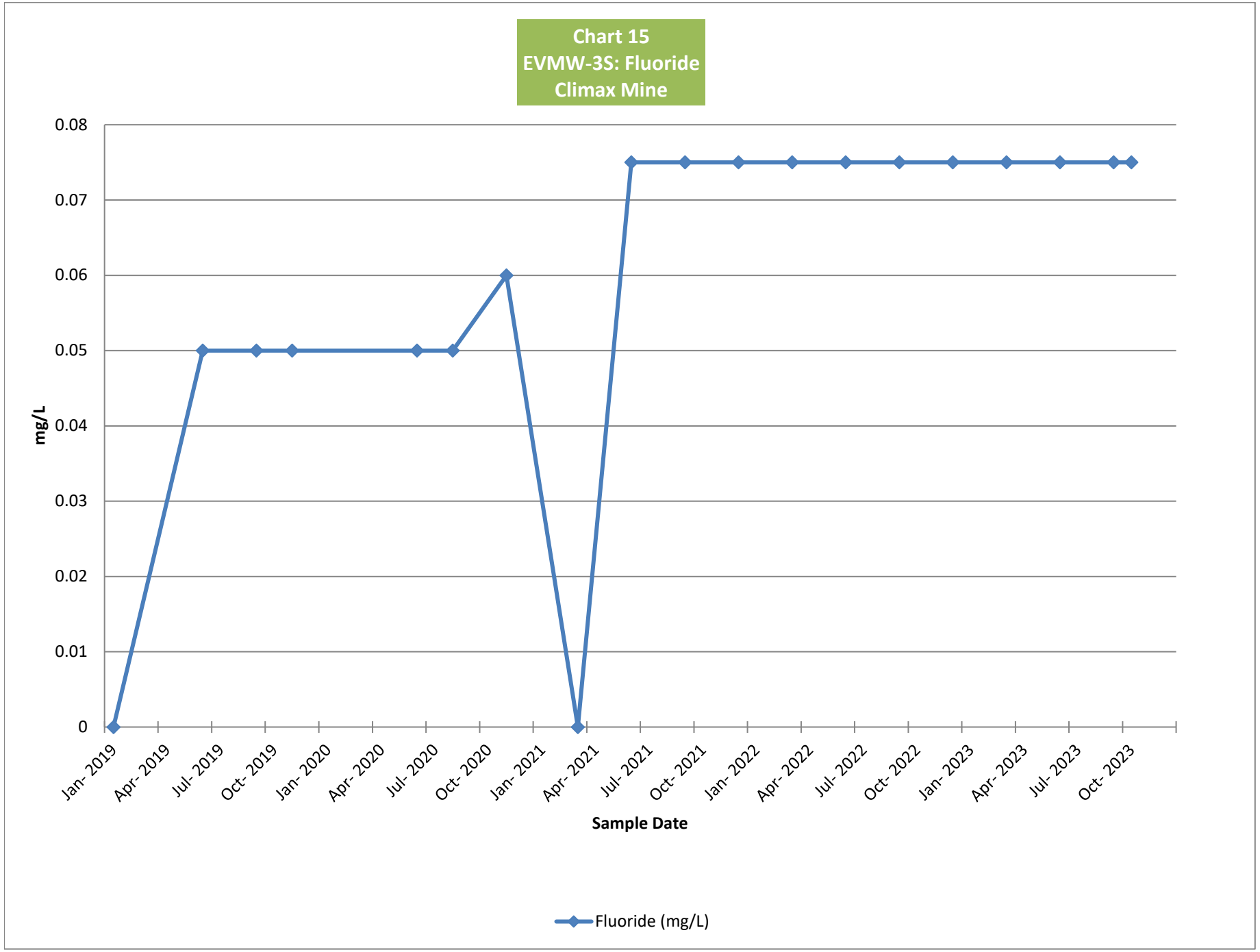


Chart 15
EVMW-3S: Fluoride
Climax Mine
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Fluoride (mg/L)

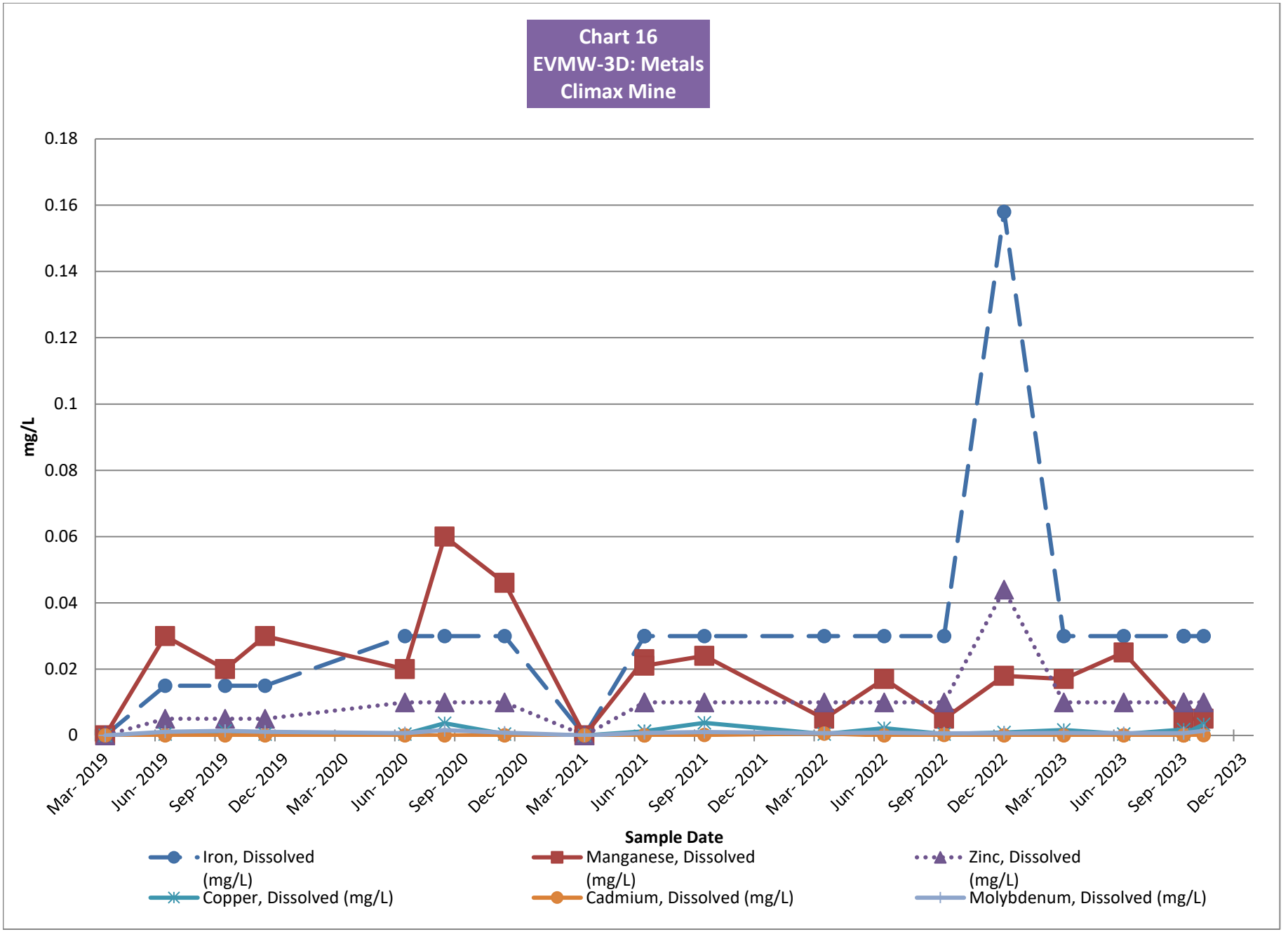


Chart 16
EVMW-3D: Metals
Climax Mine
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
mg/L
Mar- 2019
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Iron, Dissolved (mg/L)
Manganese, Dissolved (mg/L)
Zinc, Dissolved (mg/L)
Copper, Dissolved (mg/L)
Cadmium, Dissolved (mg/L)
Molybdenum, Dissolved (mg/L)

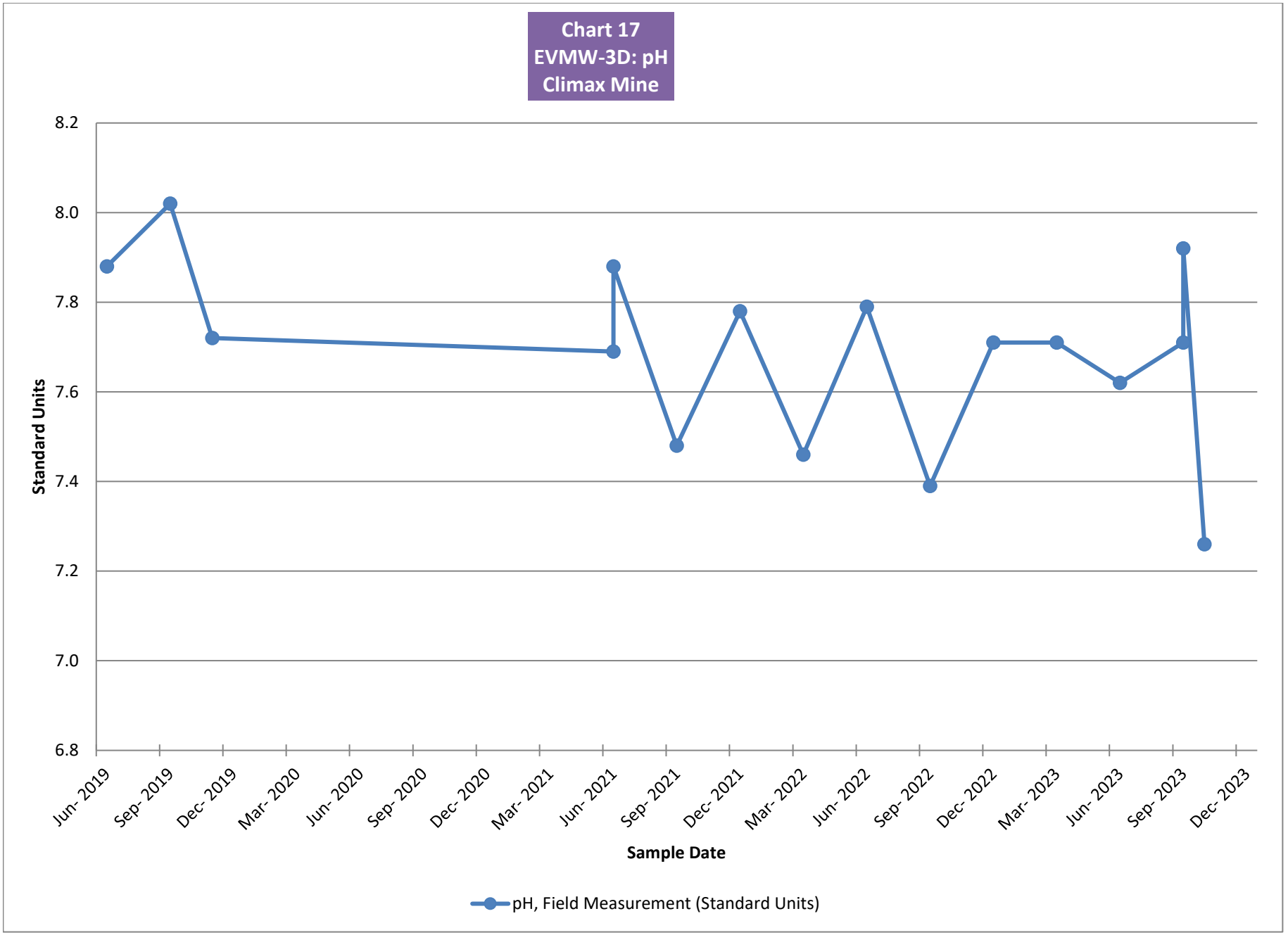


Chart 17
EVMW-3D: pH
Climax Mine
8.2
8.0
7.8
7.6
7.4
7.2
7.0
6.8
Standard Units
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
pH, Field Measurement (Standard Units)

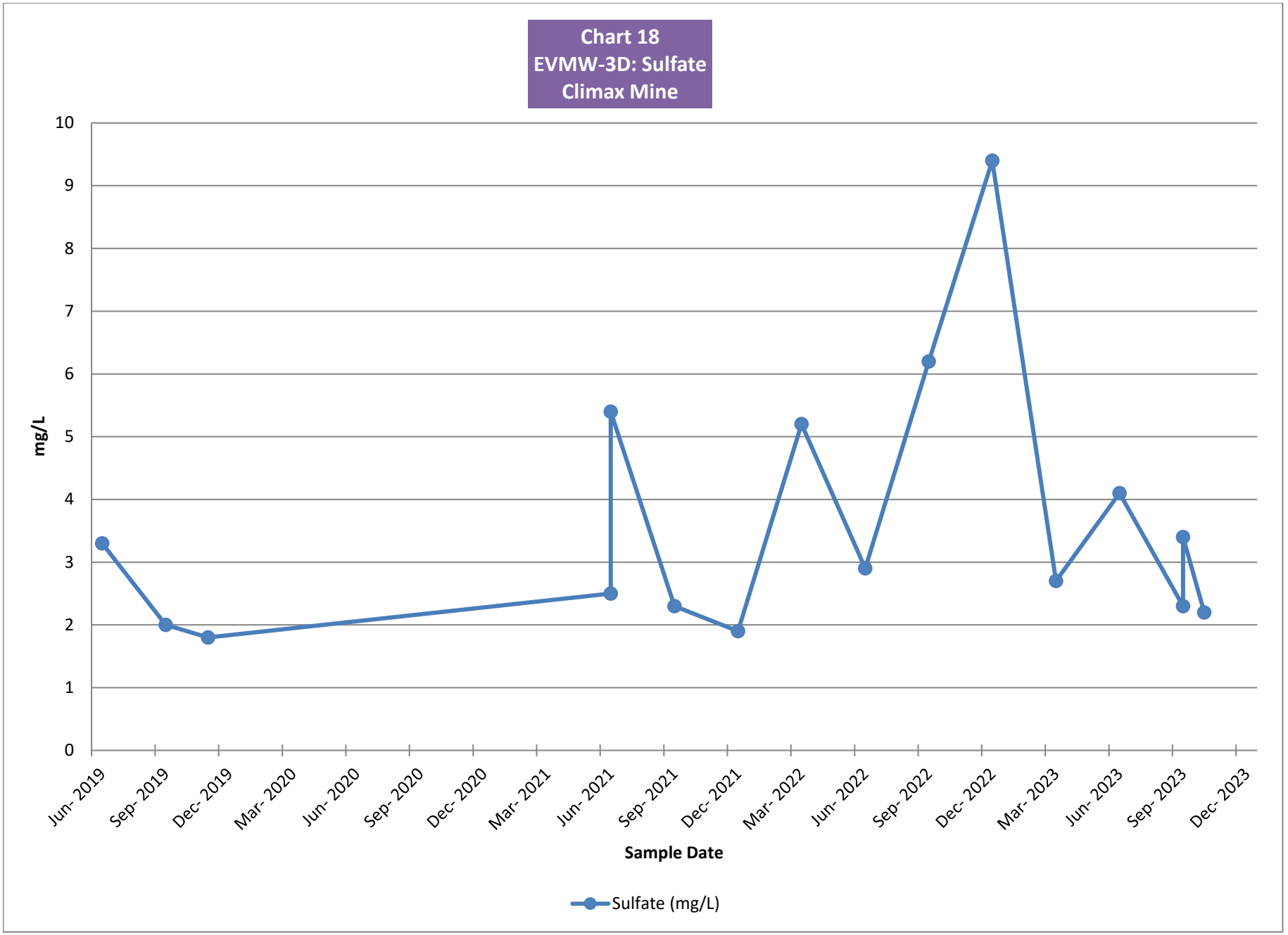


Chart 18
EVMW-3D: Sulfate
Climax Mine
mg/L
10
9
8
7
6
5
4
3
2
1
0
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Sulfate (mg/L)

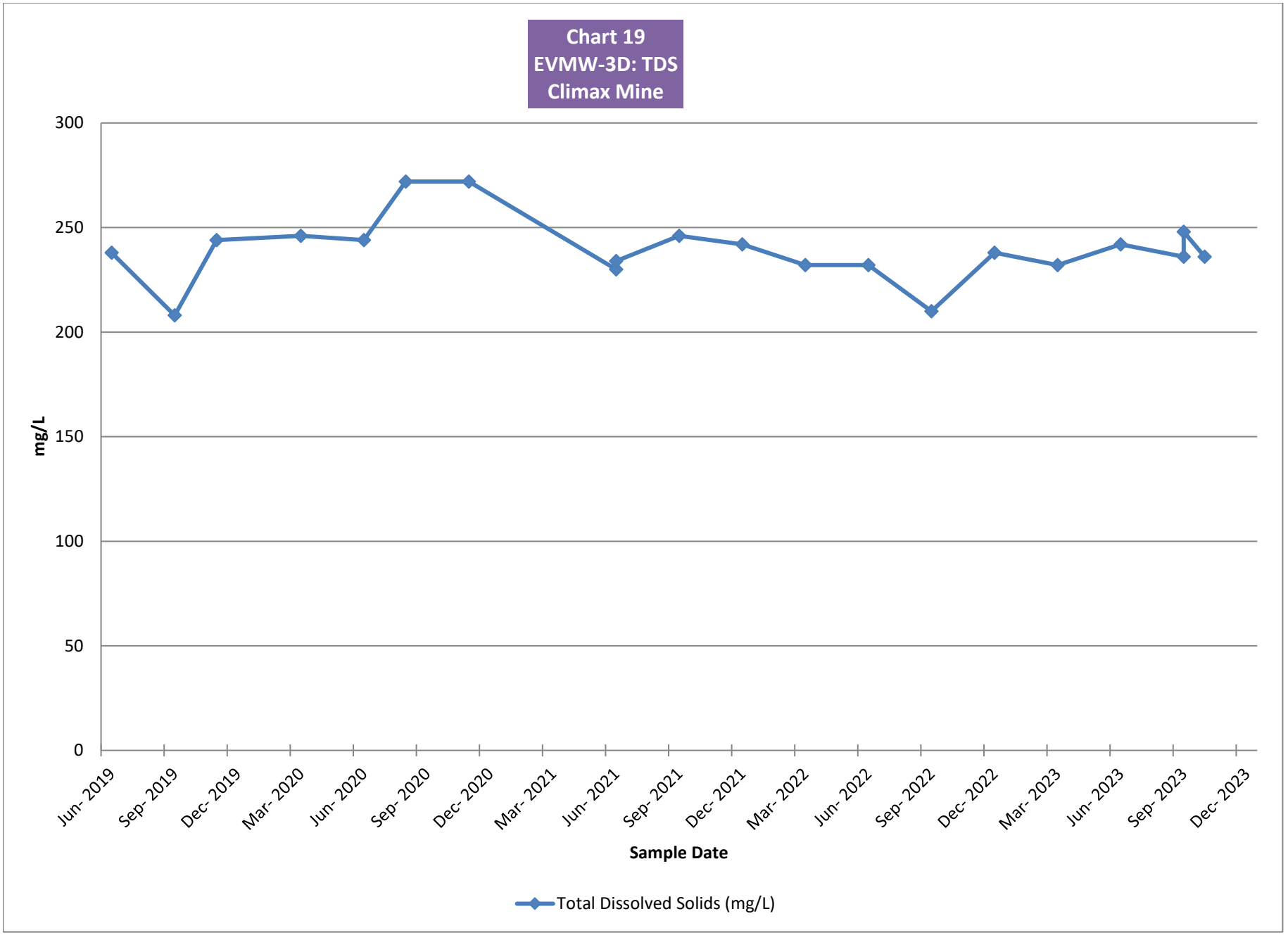


Chart 19
EVMW-3D: TDS
Climax Mine
300
250
200
150
100
50
0
mg/L
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Total Dissolved Solids (mg/L)

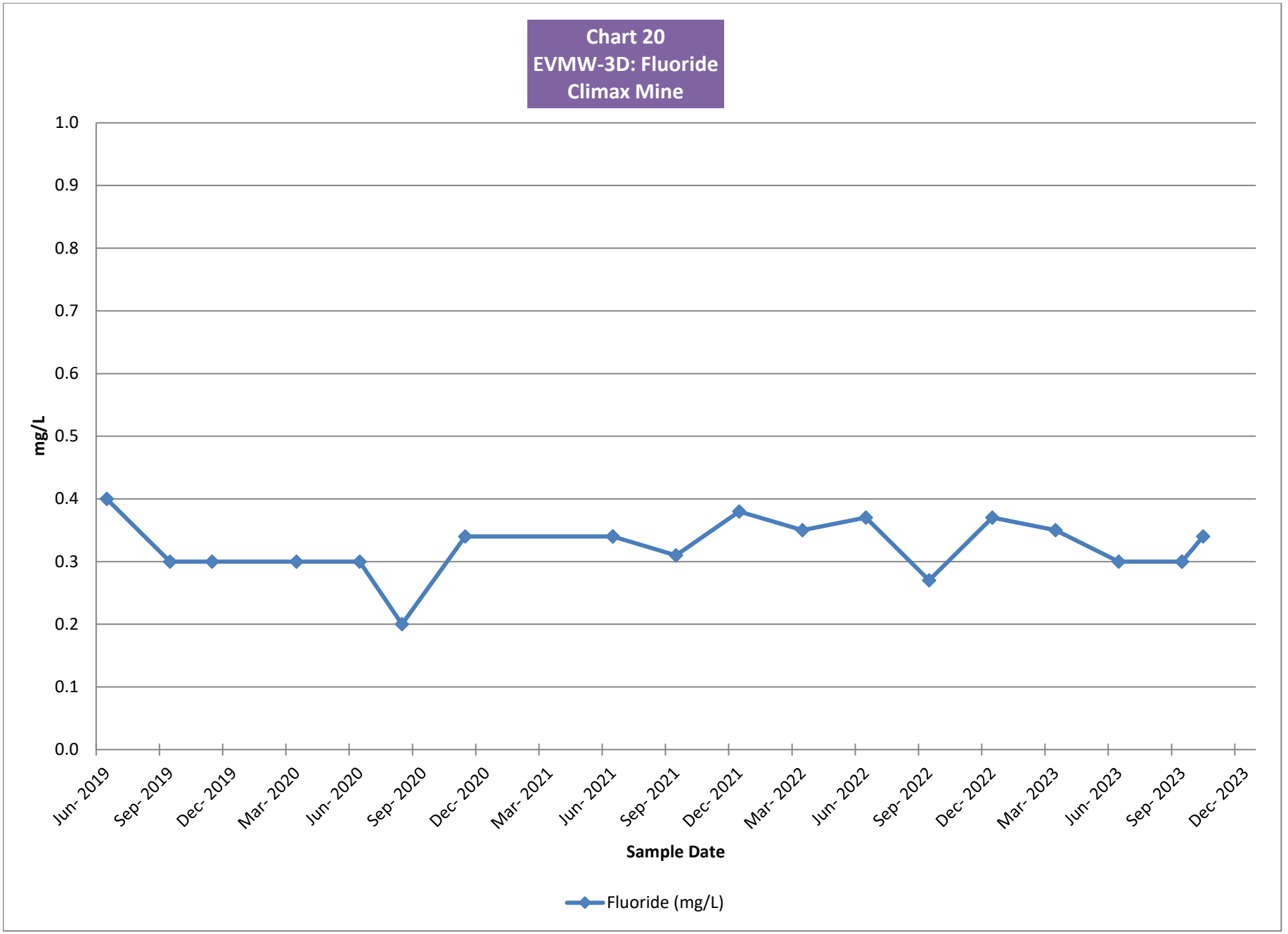


Chart 20
EVMW-3D: Fluoride
Climax Mine
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
mg/L
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Fluoride (mg/L)

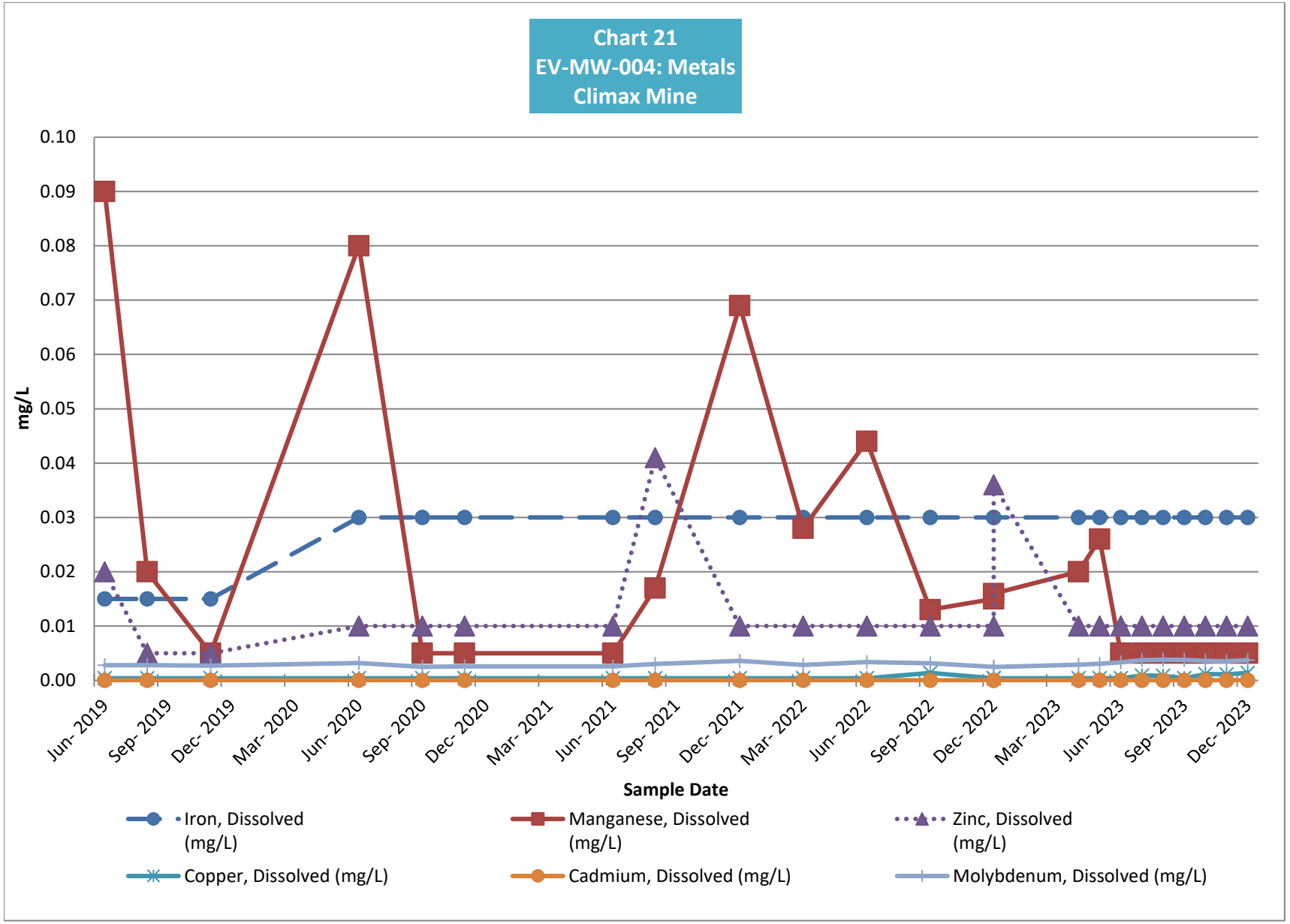


Chart 21
EV-MW-004: Metals
Climax Mine
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
mg/L
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Iron, Dissolved (mg/L)
Manganese, Dissolved (mg/L)
Zinc, Dissolved (mg/L)
Copper, Dissolved (mg/L)
Cadmium, Dissolved (mg/L)
Molybdenum, Dissolved (mg/L)

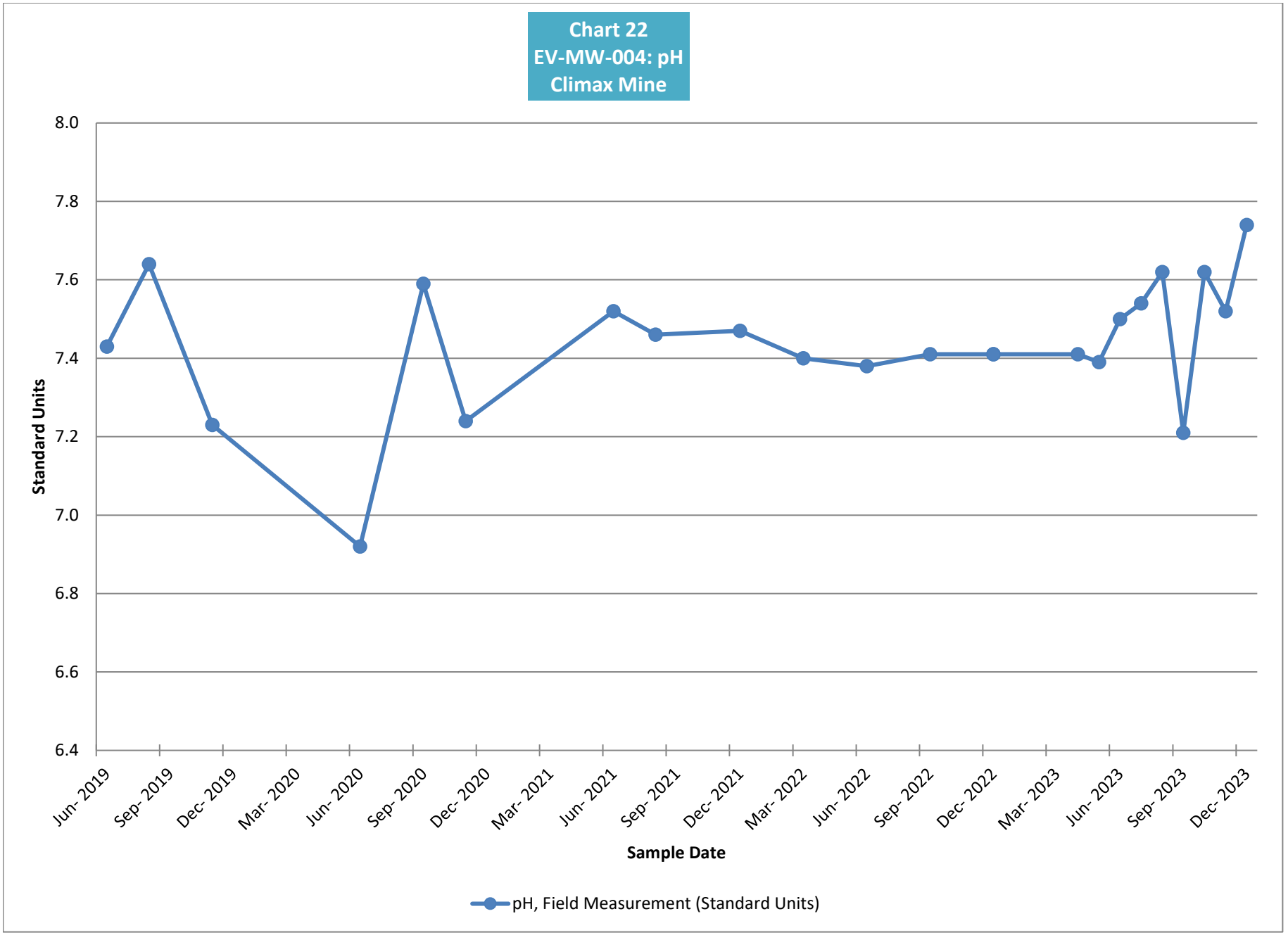


Chart 22
EV-MW-004: pH
Climax Mine
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4
Standard Units
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
pH, Field Measurement (Standard Units)

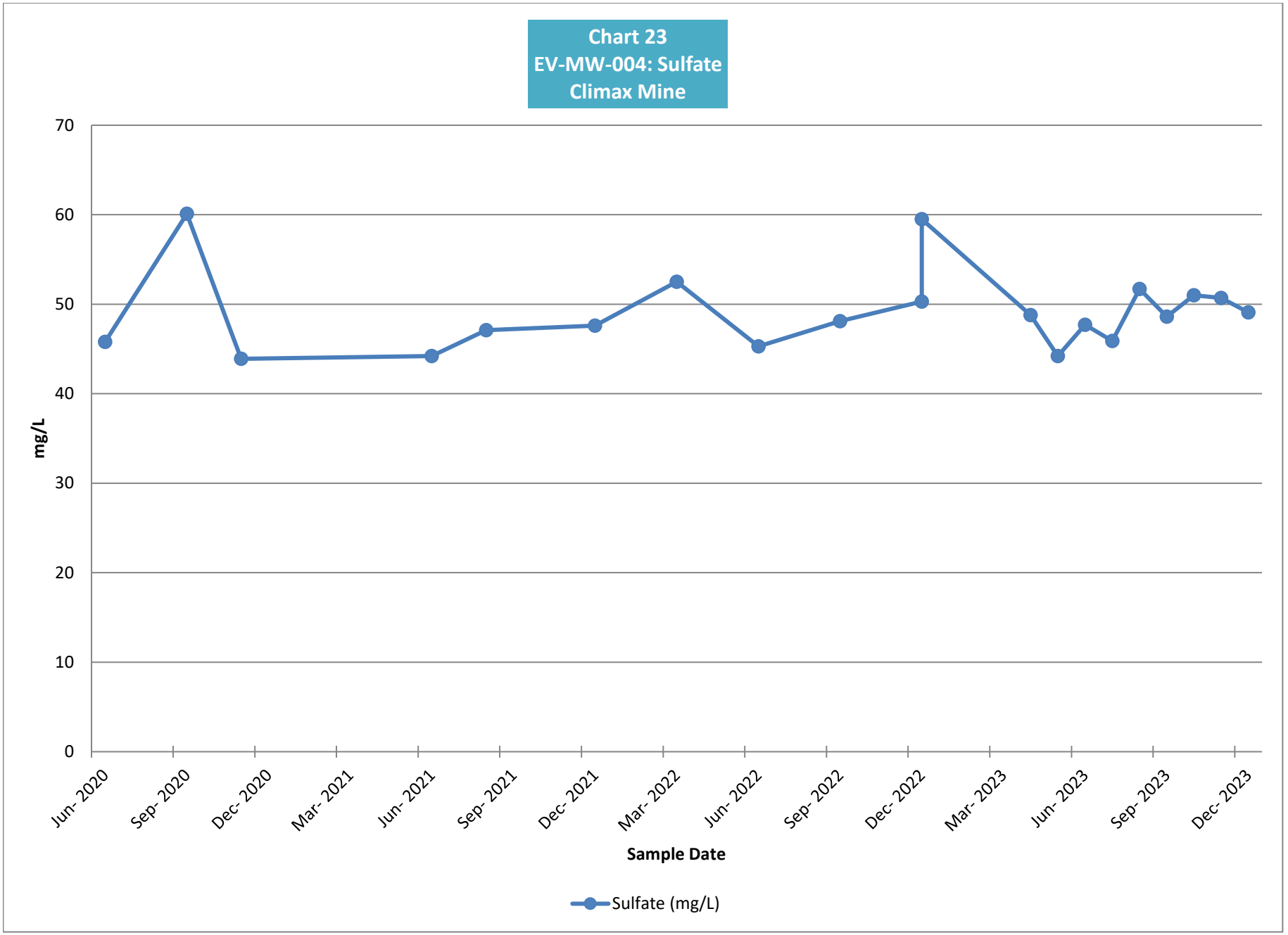


Chart 23
EV-MW-004: Sulfate
Climax Mine
70
60
50
40
30
20
10
0
mg/L
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Sulfate (mg/L)

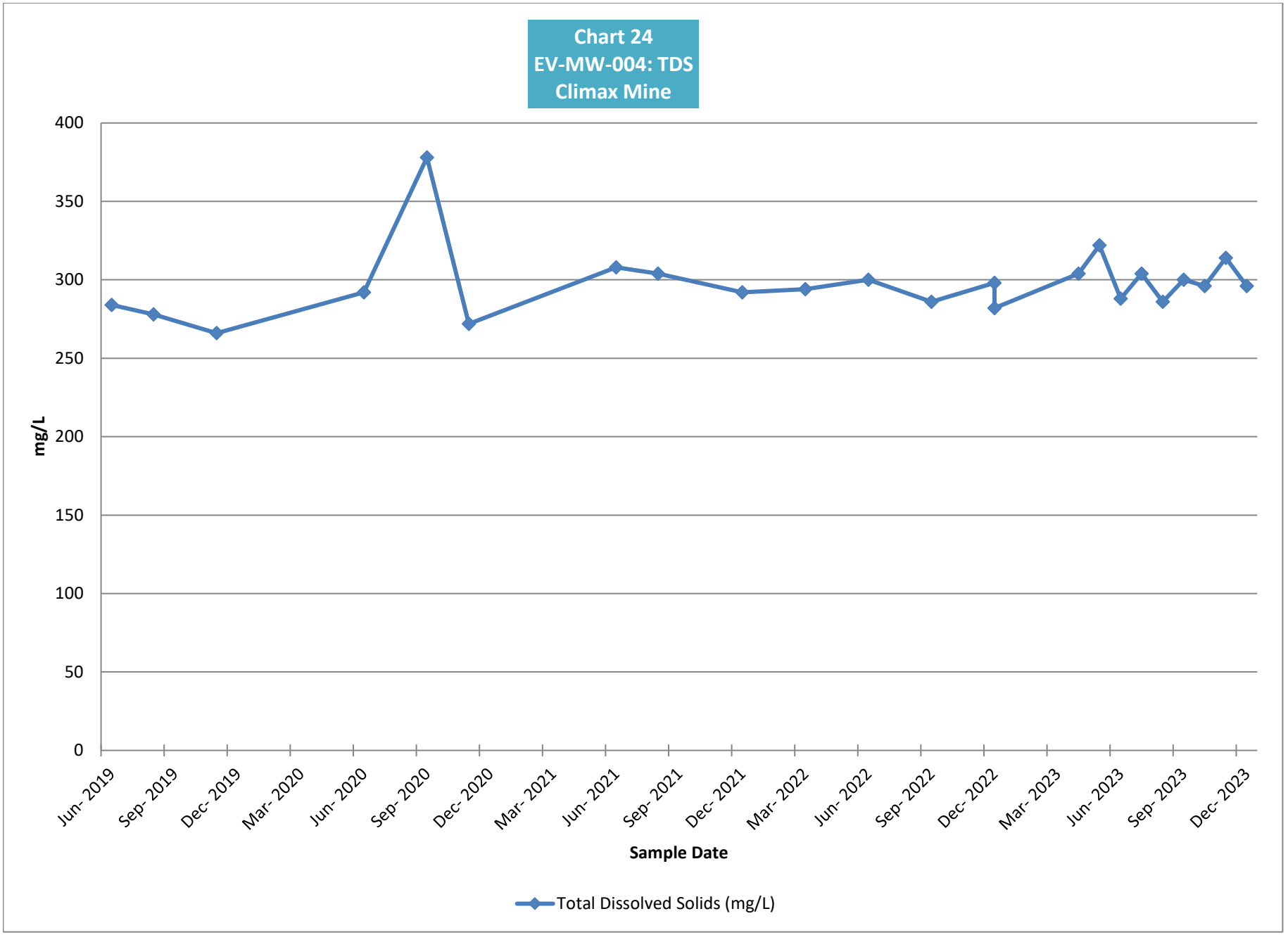


Chart 24
EV-MW-004: TDS
Climax Mine
400
350
300
250
200
150
100
50
0
mg/L
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Total Dissolved Solids (mg/L)

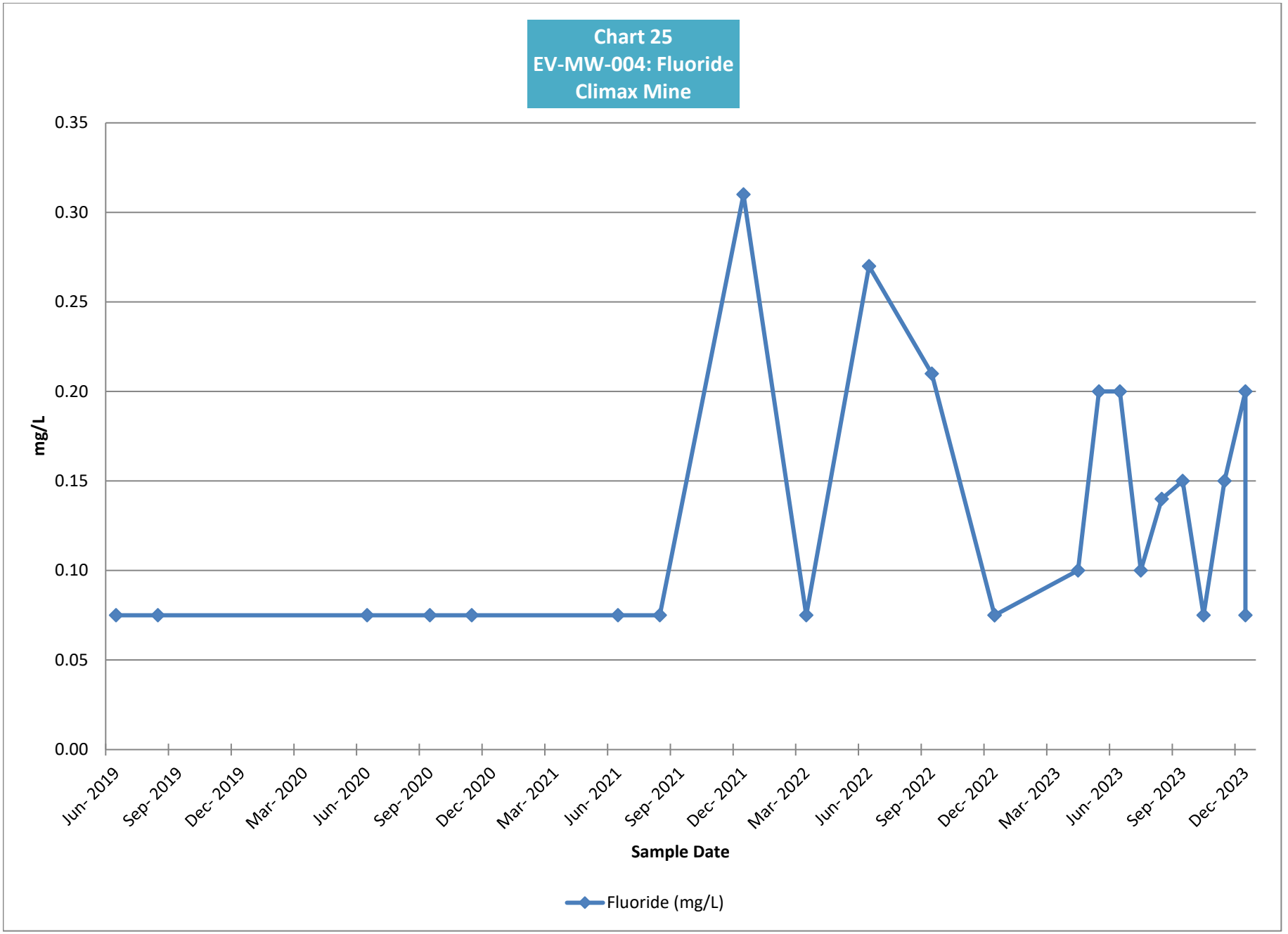


Chart 25
EV-MW-004: Fluoride
Climax Mine
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
mg/L
Jun- 2019
Sep- 2019
Dec- 2019
Mar- 2020
Jun- 2020
Sep- 2020
Dec- 2020
Mar- 2021
Jun- 2021
Sep- 2021
Dec- 2021
Mar- 2022
Jun- 2022
Sep- 2022
Dec- 2022
Mar- 2023
Jun- 2023
Sep- 2023
Dec- 2023
Sample Date
Fluoride (mg/L)

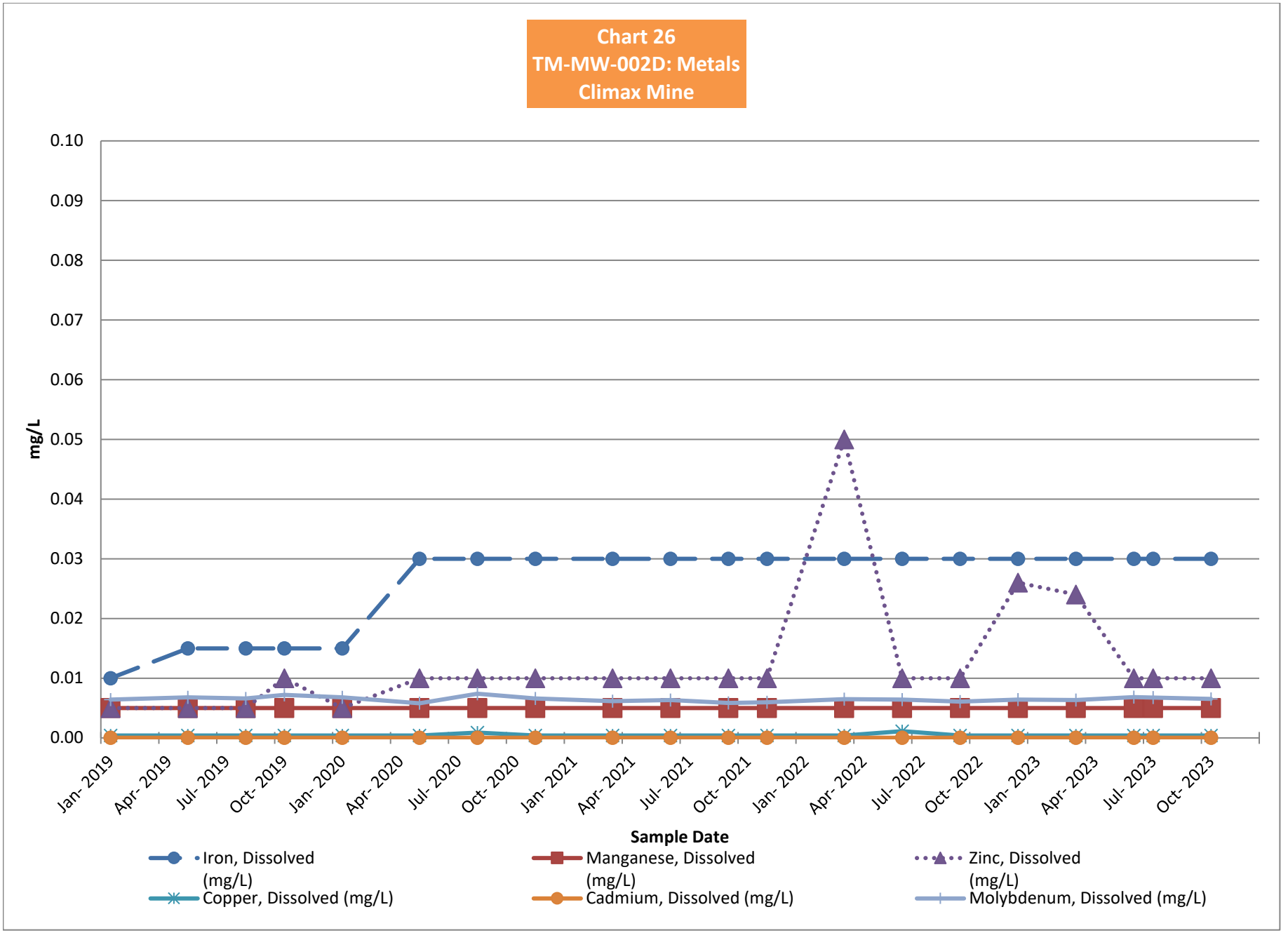


Chart 26
TM-MW-002D: Metals
Climax Mine
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Iron, Dissolved (mg/L)
Manganese, Dissolved (mg/L)
Zinc, Dissolved (mg/L)
Copper, Dissolved (mg/L)
Cadmium, Dissolved (mg/L)
Molybdenum, Dissolved (mg/L)

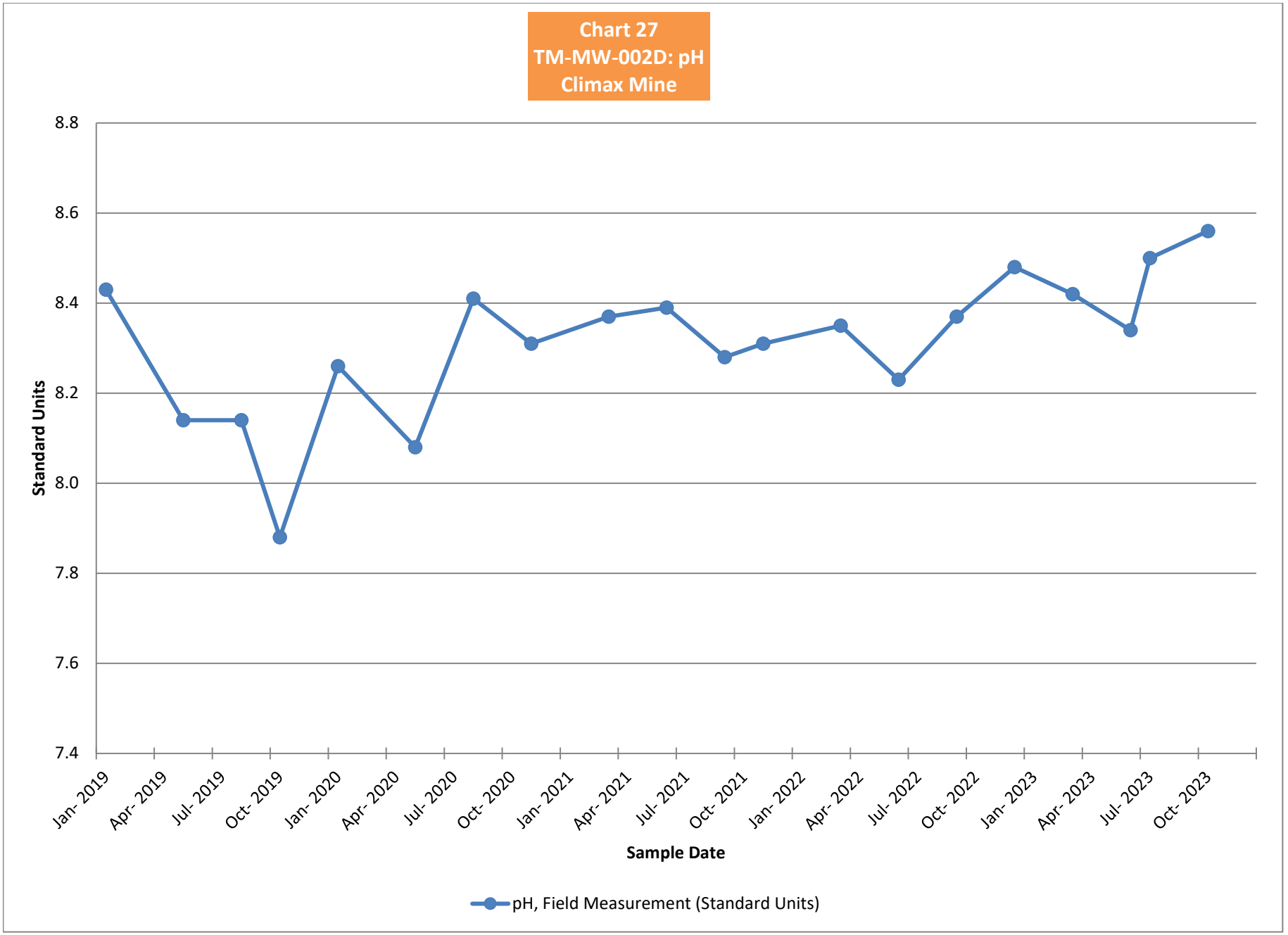


Chart 27
TM-MW-002D: pH
Climax Mine
8.8
8.6
8.4
8.2
8.0
7.8
7.6
7.4
Standard Units
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
pH, Field Measurement (Standard Units)

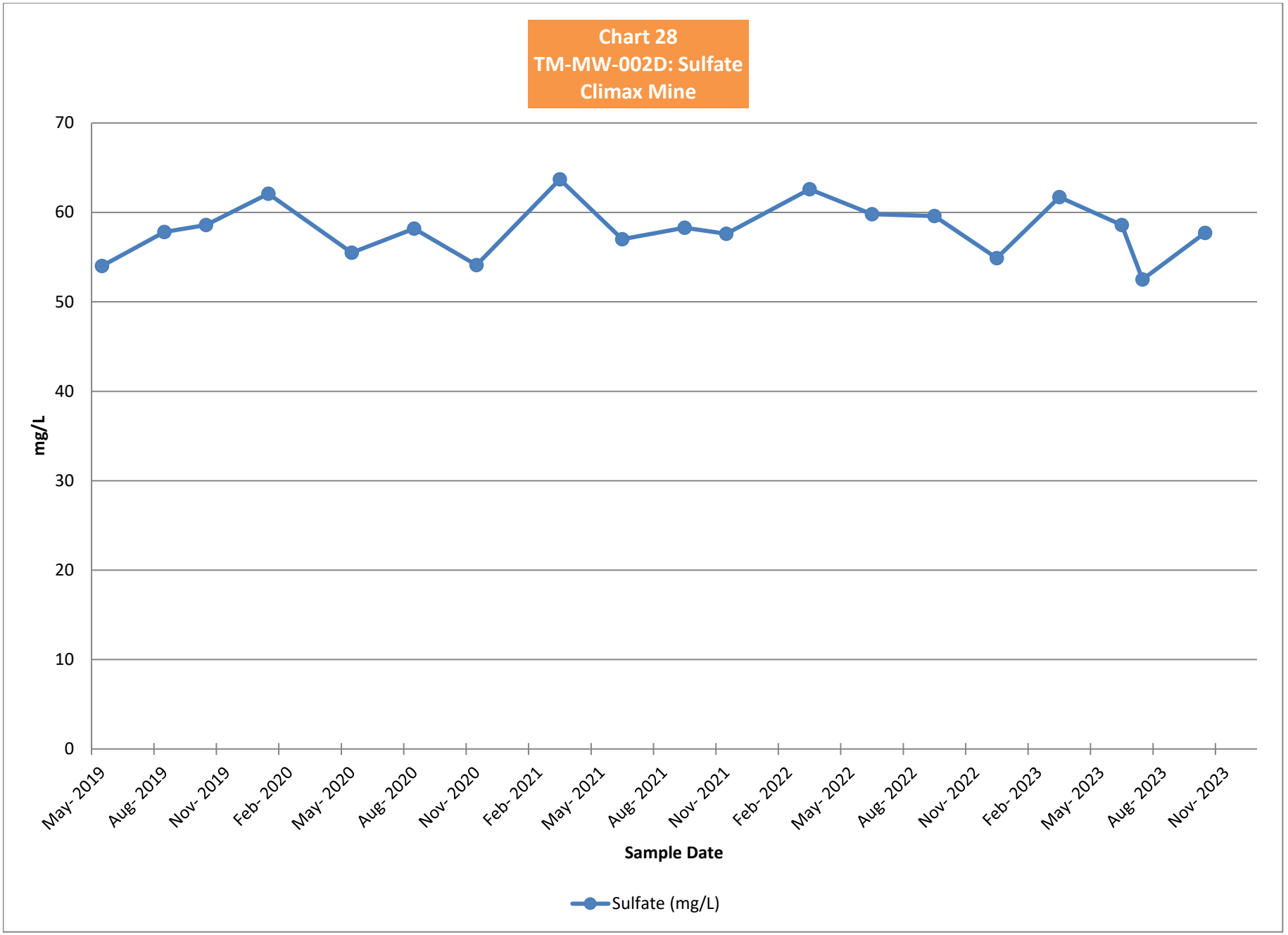


Chart 28
TM-MW-002D: Sulfate
Climax Mine
70
60
50
40
30
20
10
0
mg/L
May- 2019
Aug- 2019
Nov- 2019
Feb- 2020
May- 2020
Aug- 2020
Nov- 2020
Feb- 2021
May- 2021
Aug- 2021
Nov- 2021
Feb- 2022
May- 2022
Aug- 2022
Nov- 2022
Feb- 2023
May- 2023
Aug- 2023
Nov- 2023
Sample Date
Sulfate (mg/L)

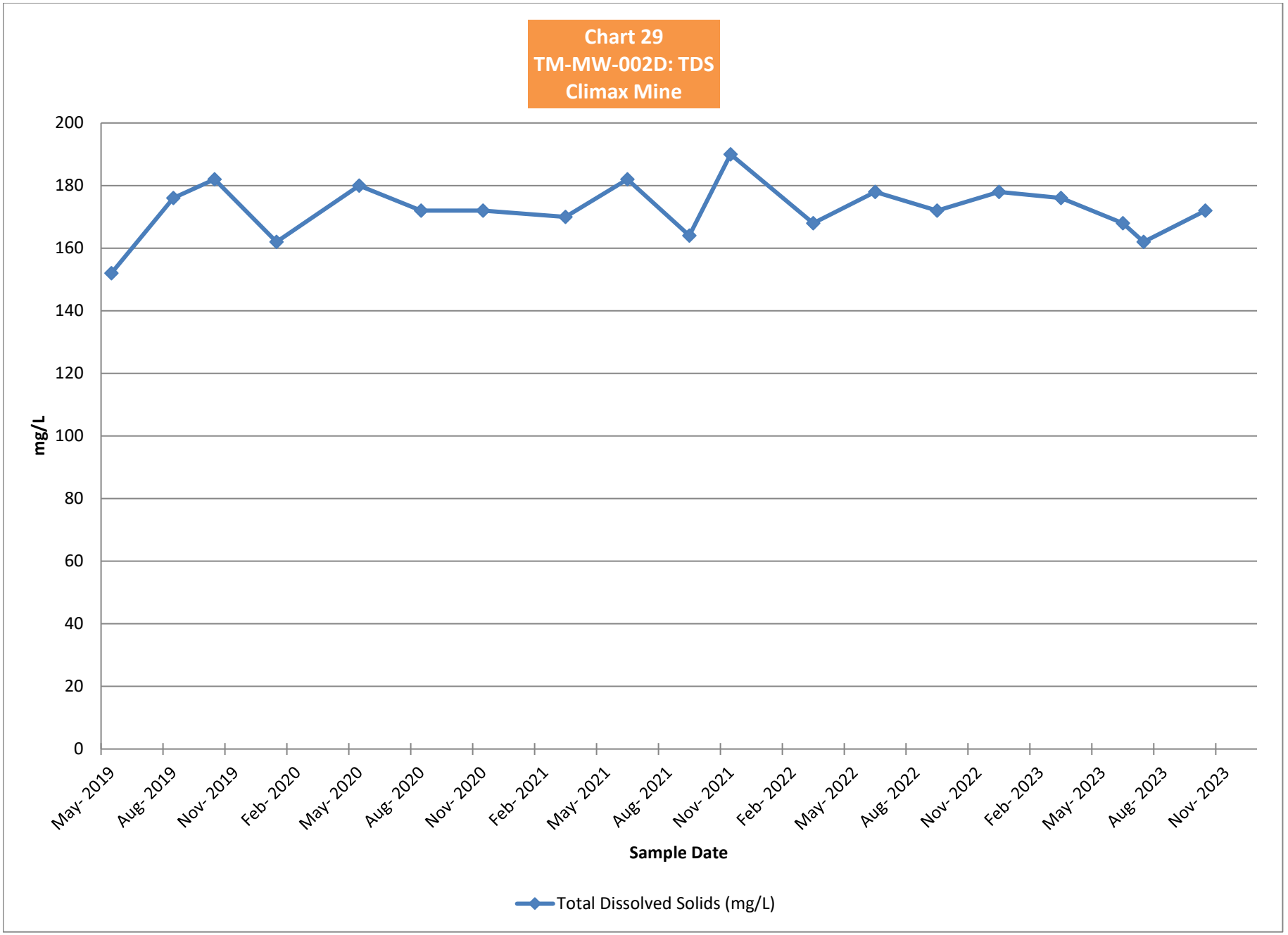


Chart 29
TM-MW-002D: TDS
Climax Mine
200
180
160
140
120
100
80
60
40
20
0
mg/L
May- 2019
Aug- 2019
Nov- 2019
Feb- 2020
May- 2020
Aug- 2020
Nov- 2020
Feb- 2021
May- 2021
Aug- 2021
Nov- 2021
Feb- 2022
May- 2022
Aug- 2022
Nov- 2022
Feb- 2023
May- 2023
Aug- 2023
Nov- 2023
Sample Date
Total Dissolved Solids (mg/L)

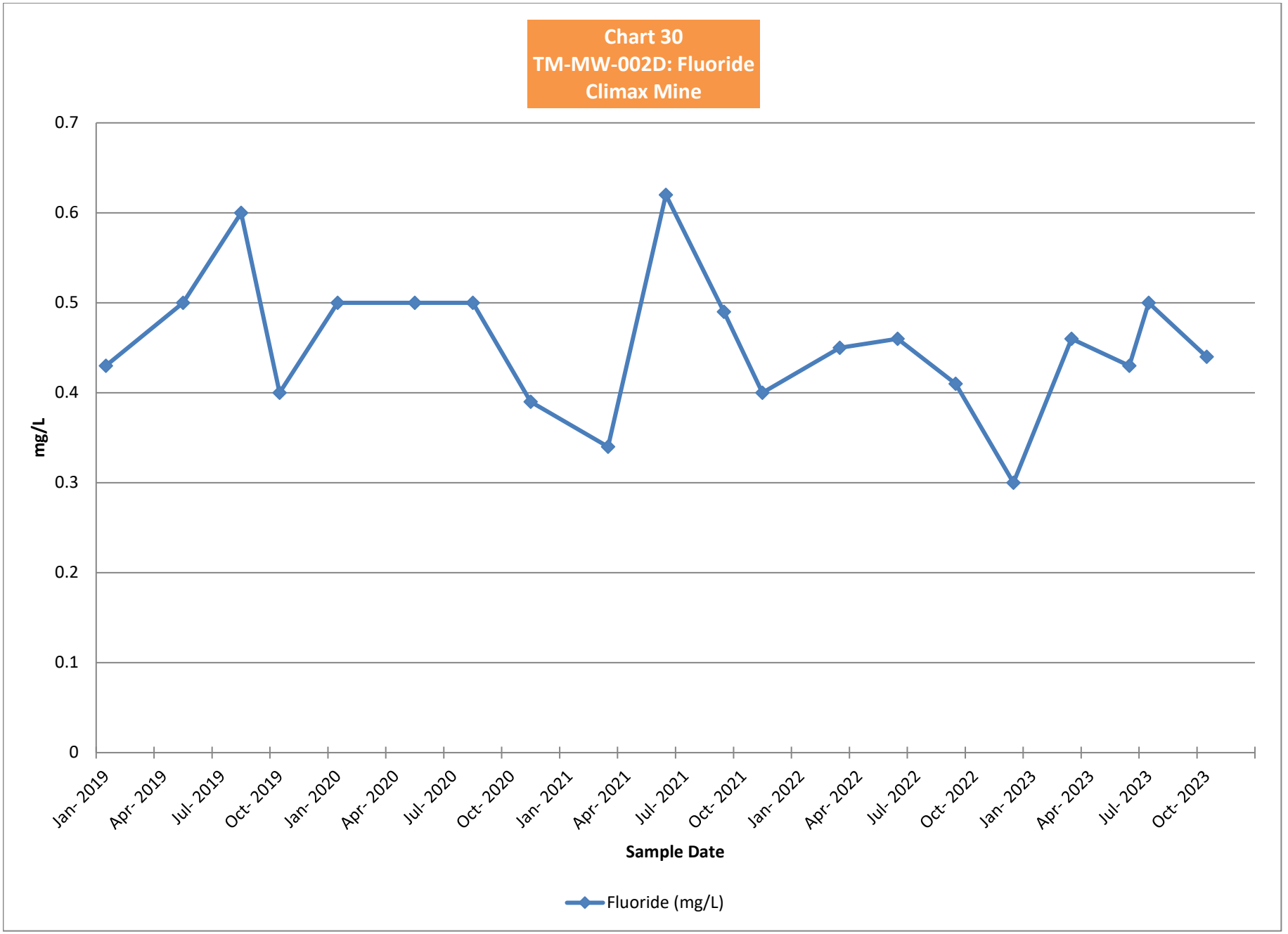
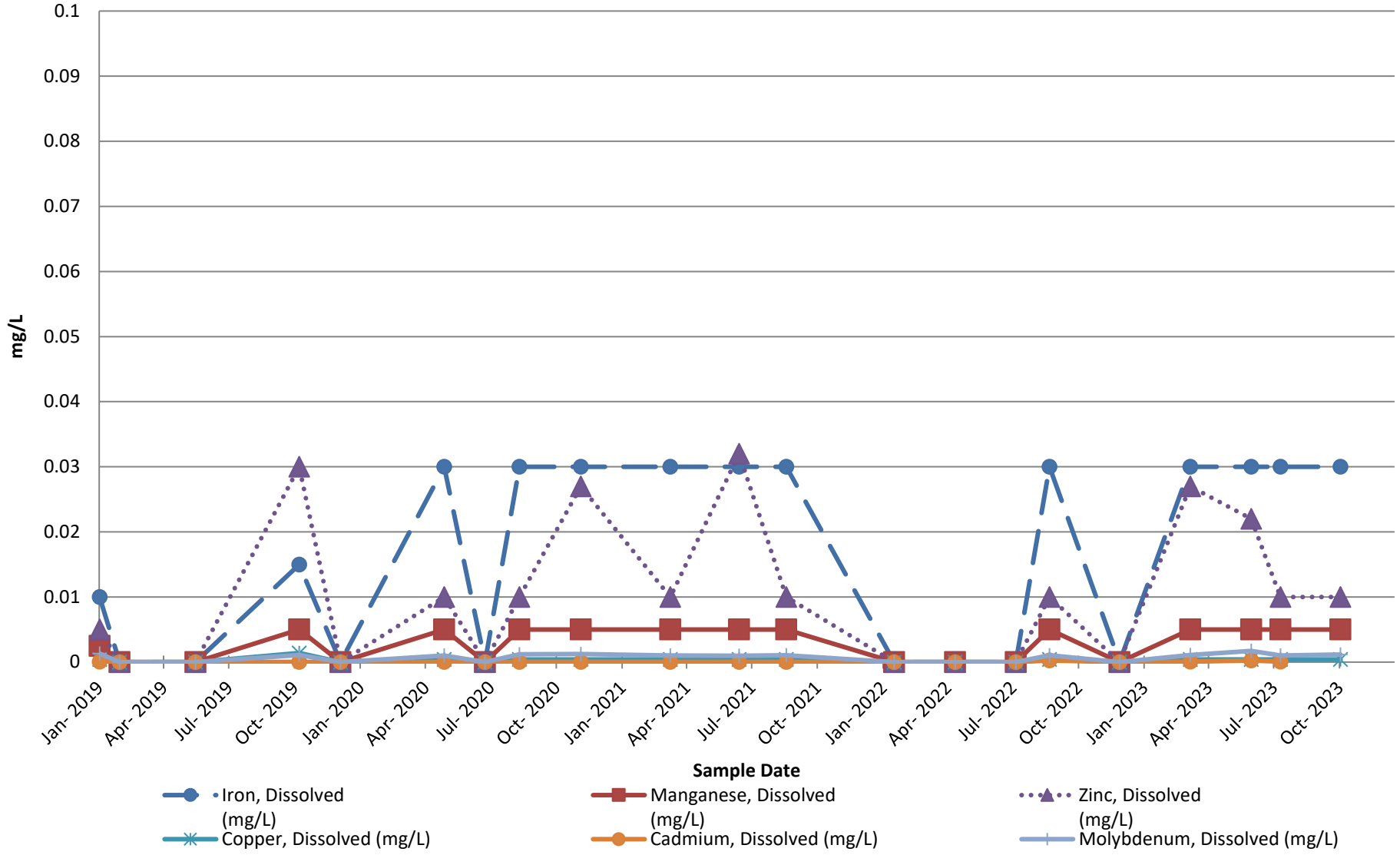


Chart 30
TM-MW-002D: Fluoride
Climax Mine
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Fluoride (mg/L)

Chart 31
GW#2: Metals
Climax Mine



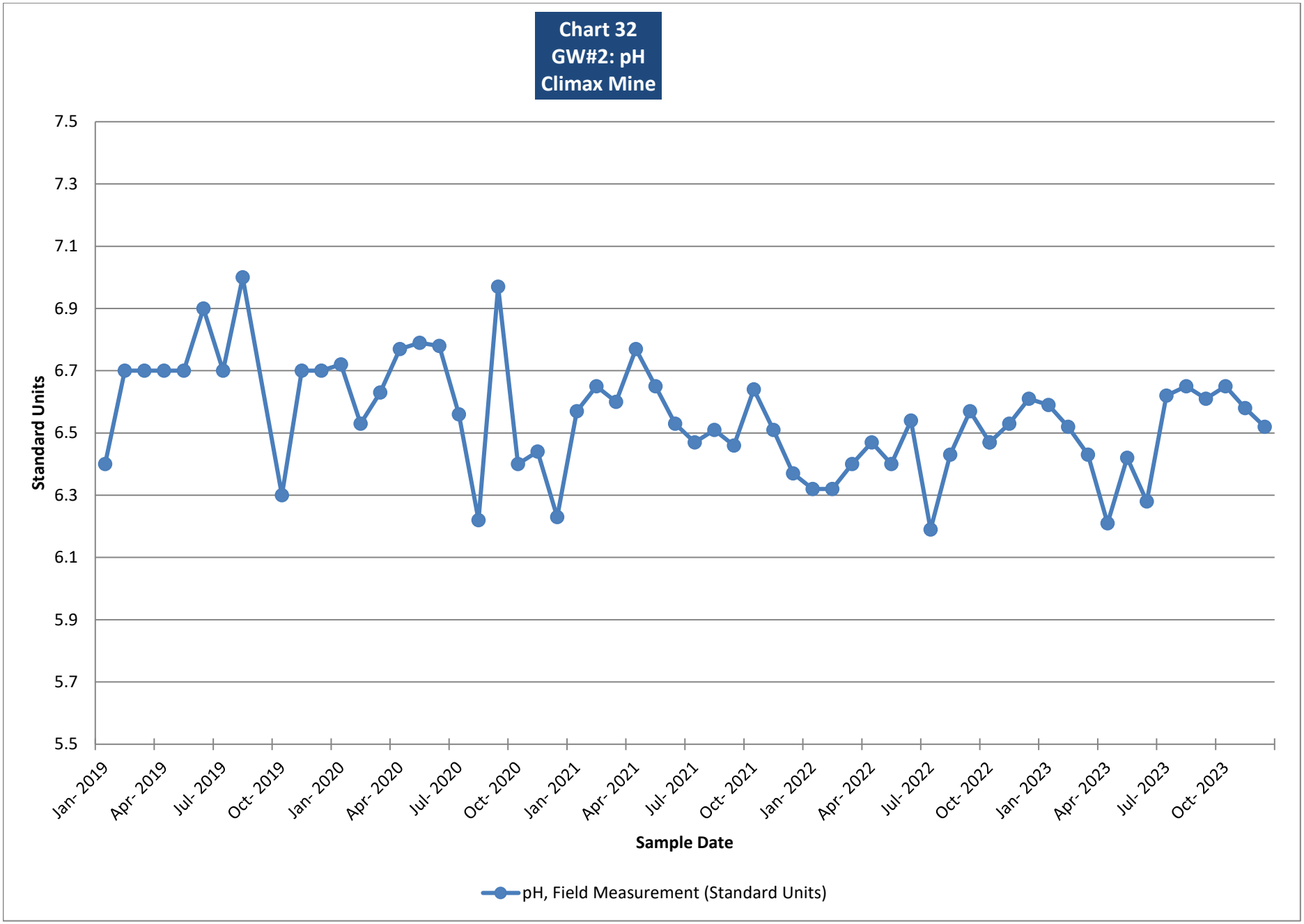


Chart 32
GW#2: pH
Climax Mine
7.5
7.3
7.1
6.9
6.7
6.5
6.3
6.1
5.9
5.7
5.5
Standard Units
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
pH, Field Measurement (Standard Units)

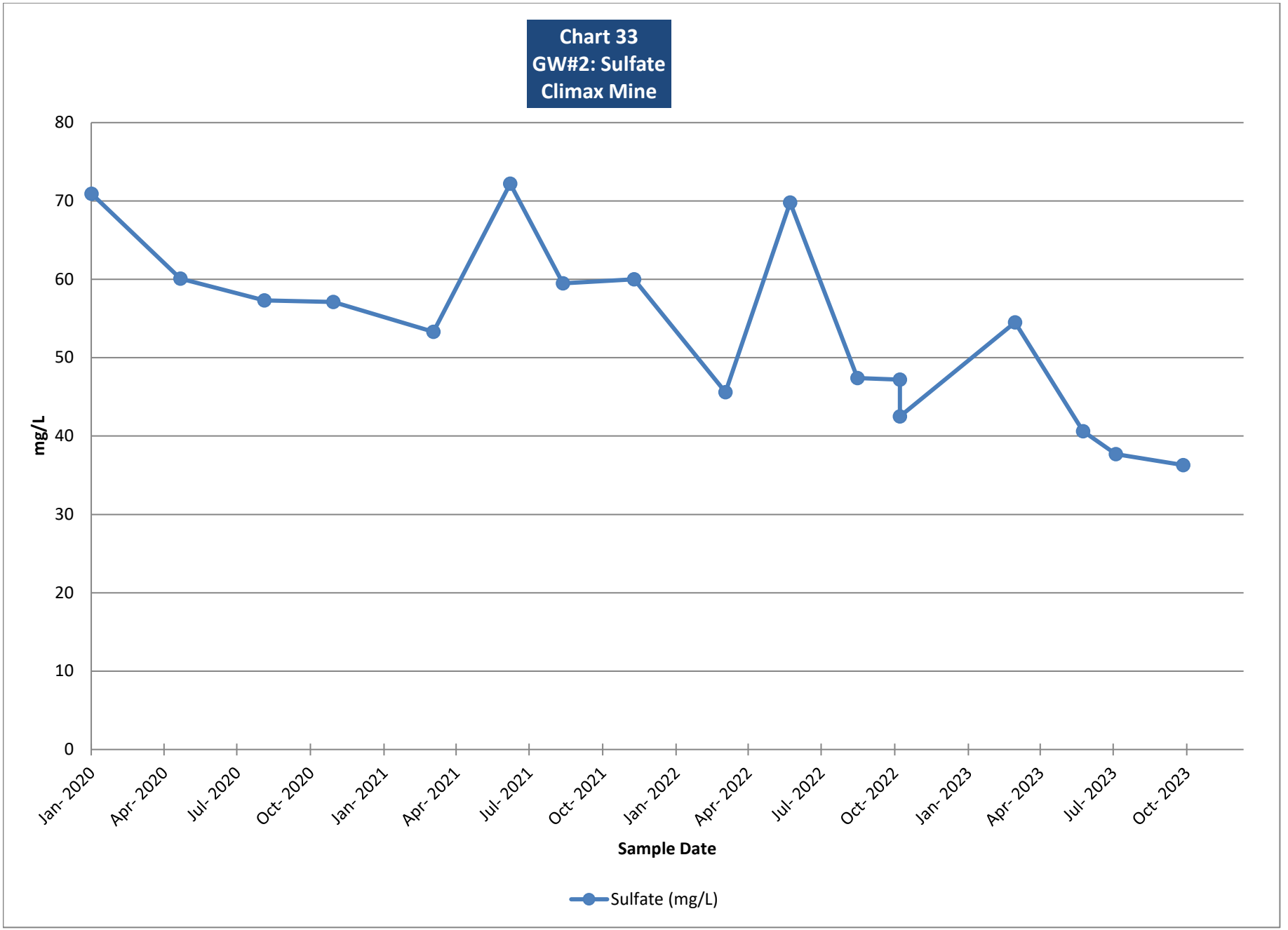


Chart 33
GW#2: Sulfate
Climax Mine
80
70
60
50
40
30
20
10
0
mg/L
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Sulfate (mg/L)

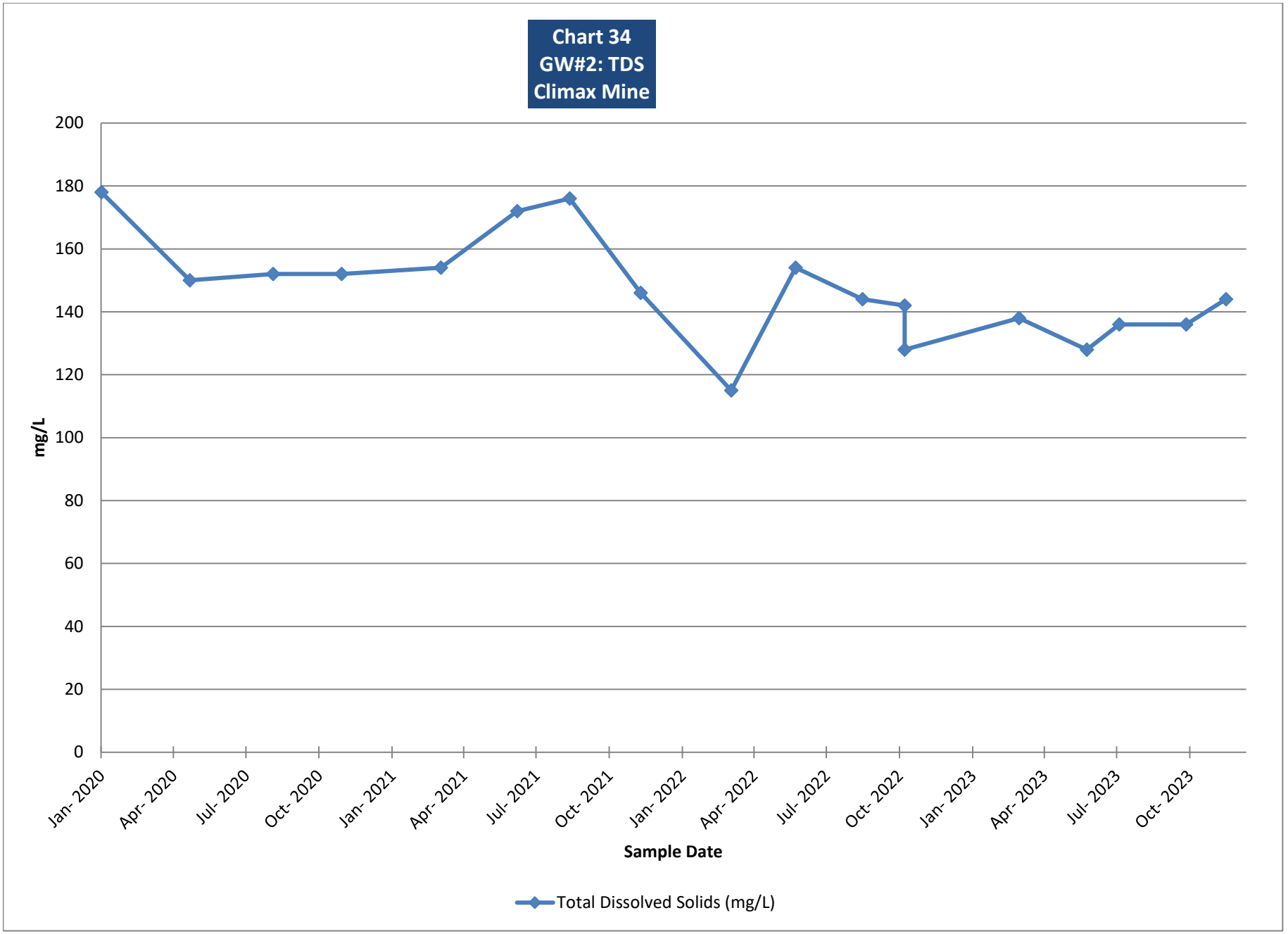


Chart 34
GW#2: TDS
Climax Mine
200
180
160
140
120
100
80
60
40
20
0
mg/L
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Total Dissolved Solids (mg/L)

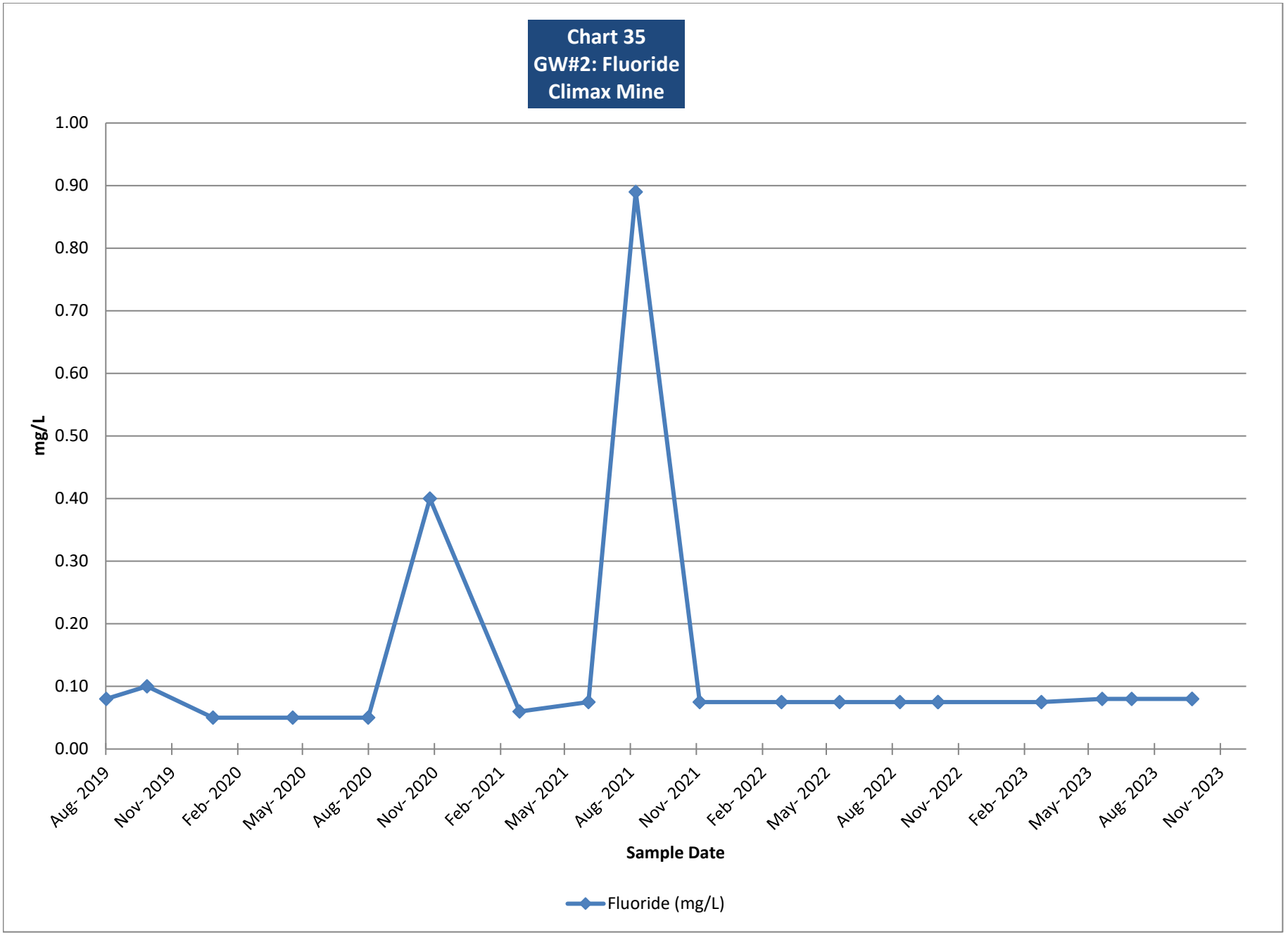


Chart 35
GW#2: Fluoride
Climax Mine
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
mg/L
Aug- 2019
Nov- 2019
Feb- 2020
May- 2020
Aug- 2020
Nov- 2020
Feb- 2021
May- 2021
Aug- 2021
Nov- 2021
Feb- 2022
May- 2022
Aug- 2022
Nov- 2022
Feb- 2023
May- 2023
Aug- 2023
Nov- 2023
Sample Date
Fluoride (mg/L)

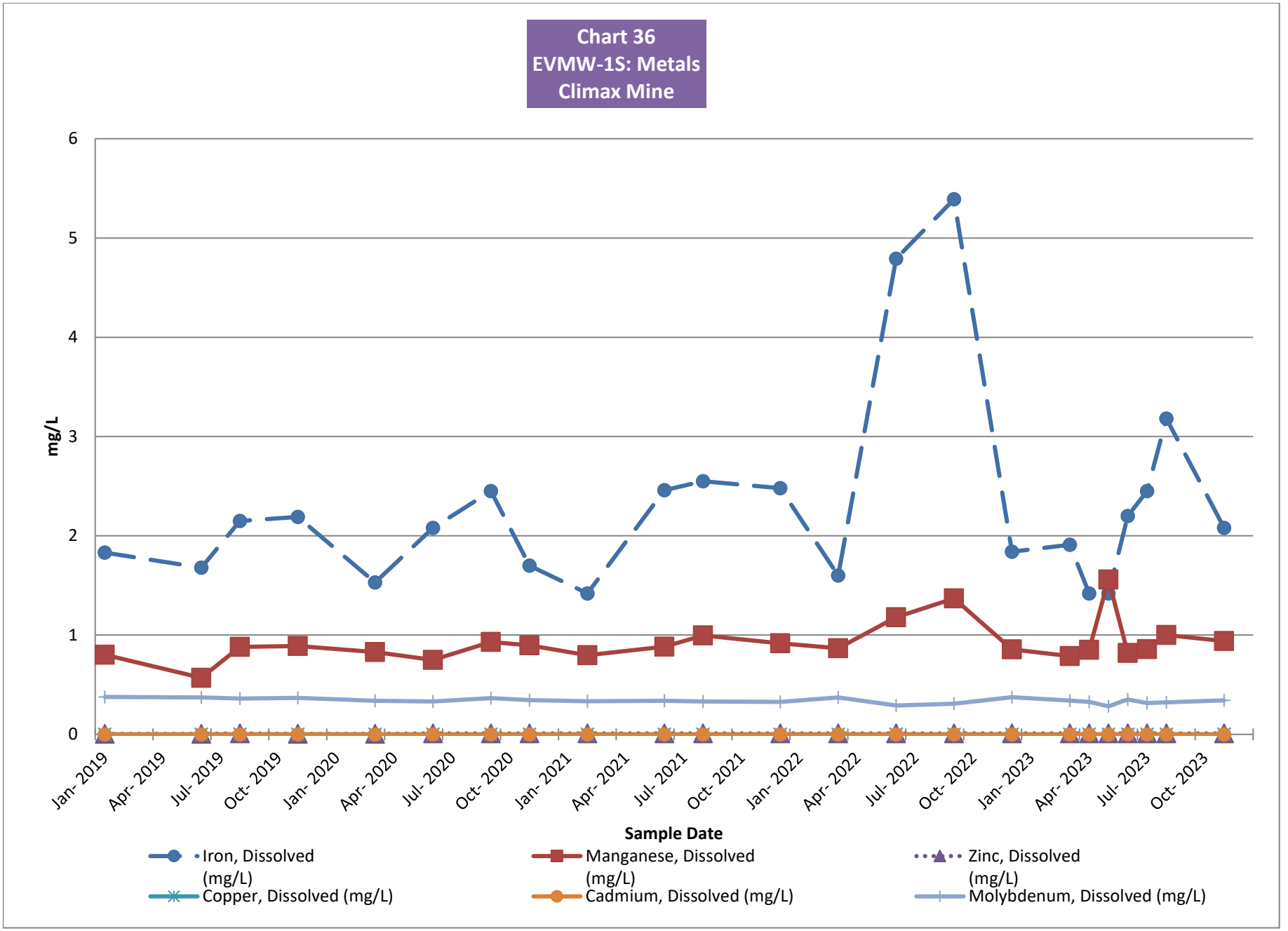


Chart 36
EVMW-1S: Metals
Climax Mine
mg/L
6
5
4
3
2
1
0
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Iron, Dissolved (mg/L)
Manganese, Dissolved (mg/L)
Zinc, Dissolved (mg/L)
Copper, Dissolved (mg/L)
Cadmium, Dissolved (mg/L)
Molybdenum, Dissolved (mg/L)

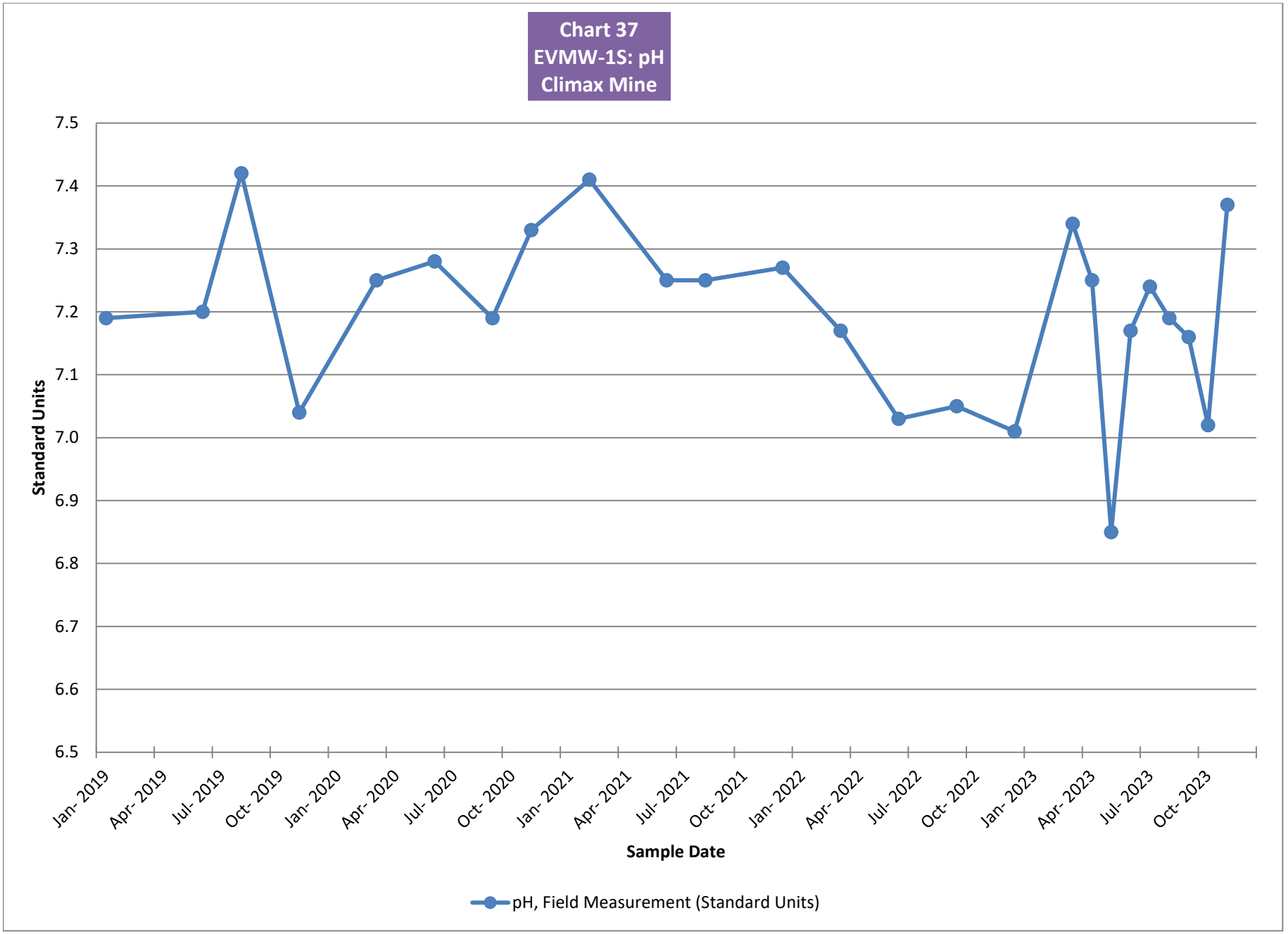


Chart 37
EVMW-1S: pH
Climax Mine
7.5
7.4
7.3
7.2
7.1
7.0
6.9
6.8
6.7
6.6
6.5
Standard Units
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
pH, Field Measurement (Standard Units)

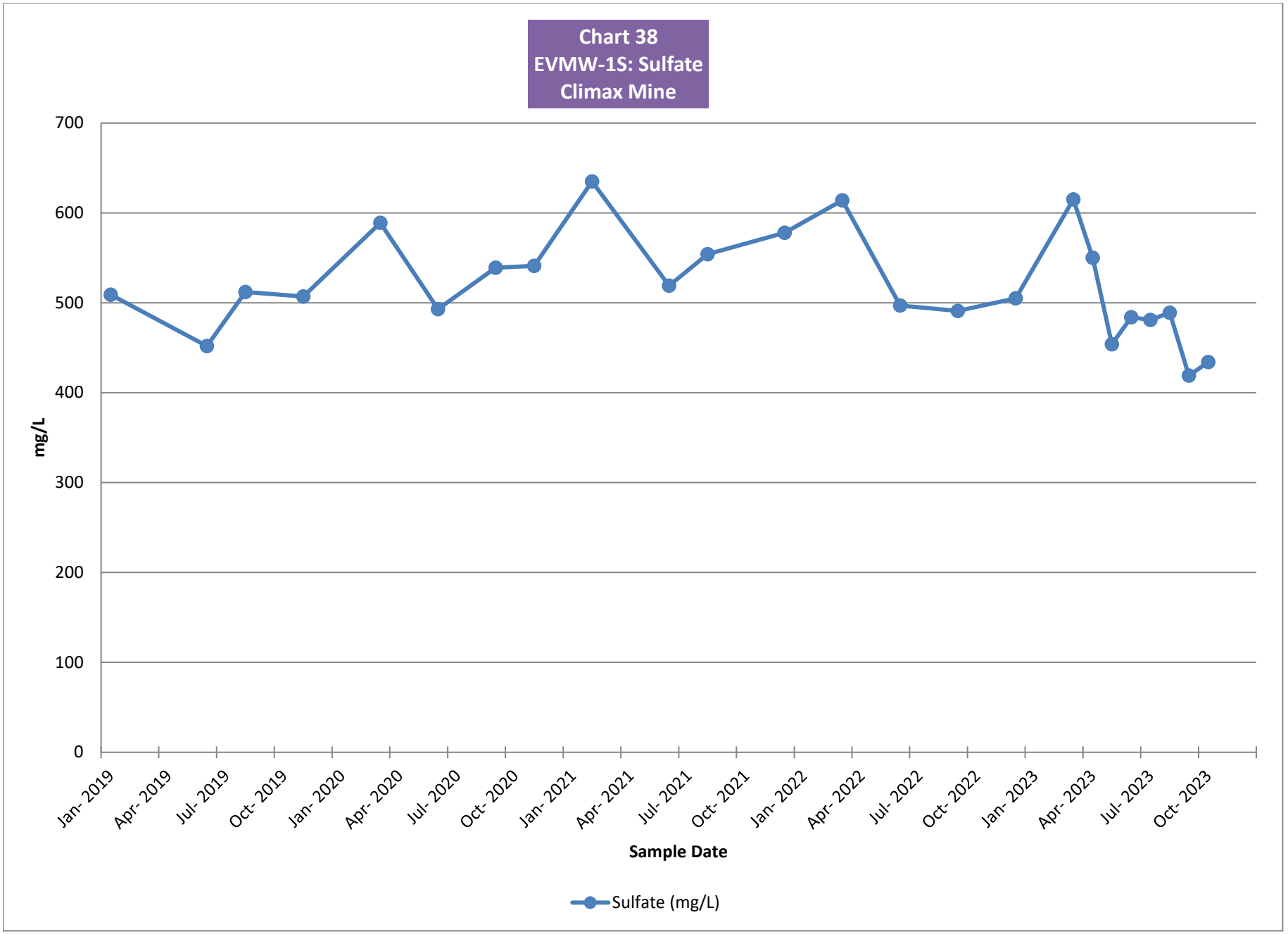


Chart 38
EVMW-1S: Sulfate
Climax Mine
700
600
500
400
300
200
100
0
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Sulfate (mg/L)

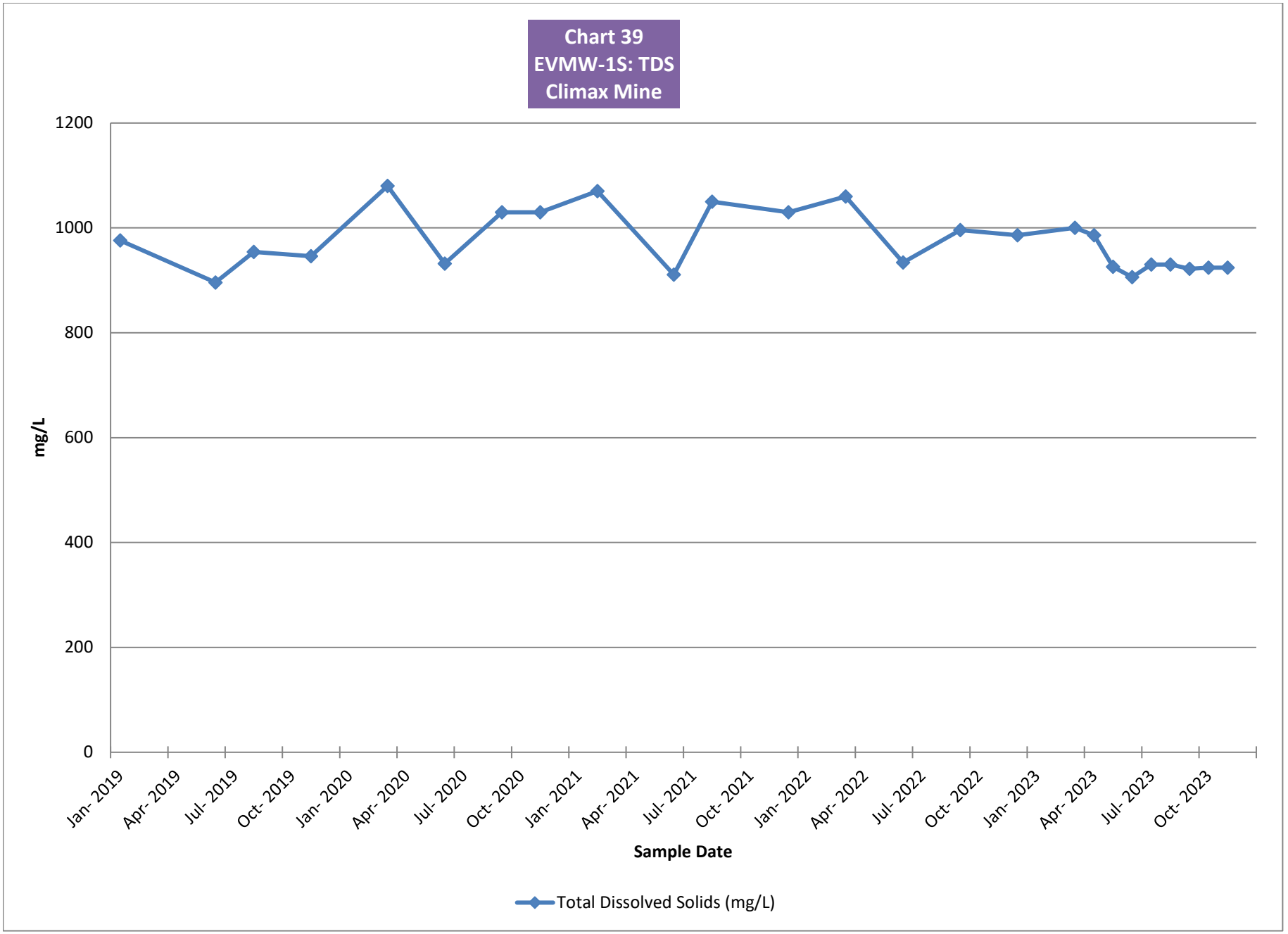


Chart 39
EVMW-1S: TDS
Climax Mine
1200
1000
800
600
400
200
0
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Total Dissolved Solids (mg/L)

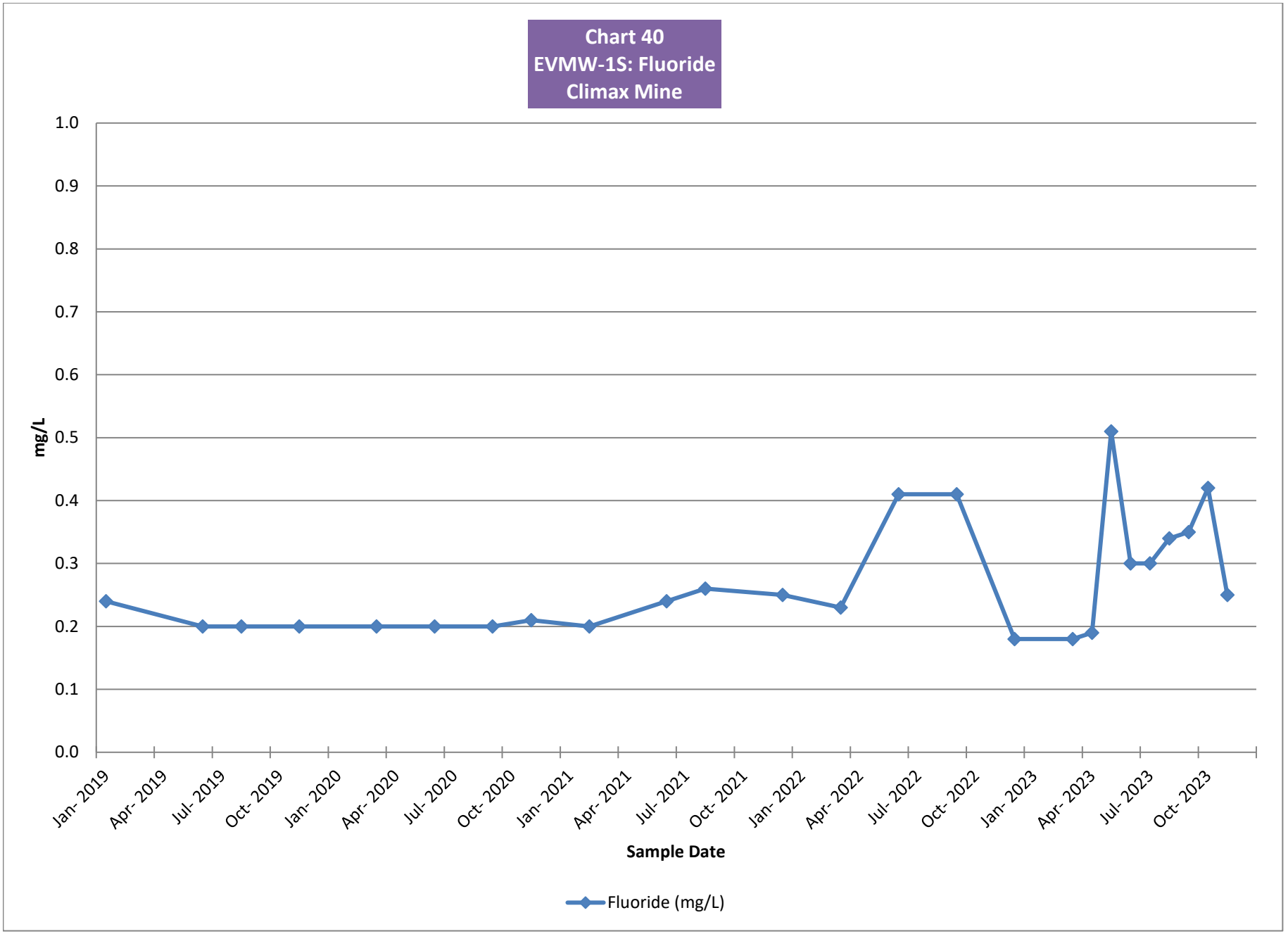


Chart 40
EVMW-1S: Fluoride
Climax Mine
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
mg/L
Jan- 2019
Apr- 2019
Jul- 2019
Oct- 2019
Jan- 2020
Apr- 2020
Jul- 2020
Oct- 2020
Jan- 2021
Apr- 2021
Jul- 2021
Oct- 2021
Jan- 2022
Apr- 2022
Jul- 2022
Oct- 2022
Jan- 2023
Apr- 2023
Jul- 2023
Oct- 2023
Sample Date
Fluoride (mg/L)