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March 11, 2022

ELECTRONIC DELIVERY

Mr. Elliott Russell
Environmental Protection Specialist
Colorado Department of Natural Resources
Division of Reclamation, Mining and Safety
Office of Mined Land Reclamation
1313 Sherman Street, Room 215
Denver, Colorado 80203

RE: Permit No. M-1980-244; Cripple Creek & Victor Gold Mining Company; Cresson Project; Preliminary Adequacy Review Response to Technical Revision 130 – Stormwater Improvements

Mr. Russell,

On February 11, 2022, Newmont Corporation's Cripple Creek and Victor Gold Mining Company (CC&V) received the Division of Reclamation, Mining, and Safety (DRMS) adequacy review of Technical Revision (TR) 130 to Permit M-1980-244, proposing improvements to stormwater controls. Below are DRMS comments in **bold** followed by CC&V's responses in *italics*.

1) **<u>Purpose</u>: The compliance problem #2 cited in the August 10, 2021 DRMS inspection report was directed toward stormwater controls at the High Grade Mill (HGM) and the area off of the Valley Leach Facility 1 liner. The specific requirement was "to describe or identify how the Operator intends to safely control impacted stormwater intercepted by the High Grade Mill liner." TR130 focuses the crusher area (which has no impact on stormwater at the HGM) and on the area east of the HGM. No designs or analyses are presented in TR130 demonstrating how existing or improved stormwater controls are going to effectively control stormwater intercepted by the HGM. Please provide analyses and designs demonstrating how stormwater intercepted by the HGM will be controlled, including routing of stormwater captured in the HGM area and routed to the VLF2 and/or the low area south of the HGM and north of VLF1 (hand labeled as "New Sump" on Drawing No. 30-647-501 in the TR-79 submittal). Discharge flows form the New Sump area are what caused the problem resulting in contact water being discharged off lined areas, and the erosion of DCF off the VLF2 liner. Furthermore, if stormwater routing controls are not designed and constructed to convey discharges from the "New Sump" area, then the New Sump needs to be a zero-discharge facility. No analyses are presented for the New Sump area. Please provide analyses and designs demonstrating the remaining runoff to the New Sump area, accounting for the reduction in flow from the proposed improvements hydrologic analyses for the New Sump area should include runoff from the north slope of VLF1, as this slope has not been ripped for probably more than 20 years and would be expected to shed some runoff during a high intensity storm event (reflected in the use of CN = 91 for the crusher area watersheds).**

The August 2021 incident was primarily caused by surface water runoff from the native area to the east and the adjacent haul road running onto the HGM platform, overtopping the existing High Grade Mill (HGM) concrete sump, and flowing into the "New Sump" area outlined in TR79. Sediment accumulation at the "New Sump" prevented water from efficiently infiltrating into the Valley Leach Facility 1 (VLF1) drain cover fill (DCF), causing water to pond and ultimately wash out portions of the VLF1 perimeter berm. Figure 1 shows the locations of the HGM sump and the "New Sump" for clarity.

The approach to safely control impacted stormwater intercepted by the HGM liner included with TR130 includes two components:

1. *Reduce the volume of impacted water by diverting surface water runoff from the eastern native hillside and haul road away from the HGM area. Currently, the watershed area reporting to the HGM liner is 72.1 acres (ac). By diverting flows from the eastern native hillside and haul road as proposed, the HGM watershed area will be reduced to 31.6 ac. Figure 1 shows the existing HGM liner watershed as a yellow line (72.1 ac), and the reduced watershed from the proposed activities described in TR130 shown as a cyan line (31.6 ac). Approximately 40.5 ac of native area will be routed away from the HGM watershed and ultimately to EMP-11 via the "detention pond" (original watershed comprised 1.3 ac of the reported 41.8 ac of native area) and new proposed conveyance pipeline.*
2. *Impacted stormwater intercepted by the HGM liner and reporting to the existing concrete HGM sump will be routed to an existing bench on VLF2, where it will be distributed at the maximum leach solution application rate of 0.005 gallons per minute per square foot (gpm/ft2). NewFields estimated the volume of stormwater intercepted by the HGM liner is 7.66 acre-feet (ac-ft), and the existing DCF overlying the HGM liner can hold 7.68 ac-ft, using an assumed average gravel porosity of 0.3.*

As part of normal operations, the sediment accumulation in the "New Sump" area will be cleaned out and replaced with new DCF, maintaining a minimum 2-foot cover fill height over the existing liner. The VLF1 perimeter berm that was washed out in the August 2021 storm has been repaired to maintain containment. Stormwater runoff from VLF1 that reports to the "New Sump" will ultimately report to the VLF1 Process Solution Storage Area (PSSA). This area was not included in TR130, as the intent is to route water away from the "New Sump".

2) **<u>Schedule</u>: The TR states that project funding approval and construction planning will occur after the approval of TR130 with construction beginning once funding has been secured and as weather permits. Please provide a specific construction schedule to ensure timely construction activities with a project completion prior to June 15, 2022. Please also provide temporary measures that can be completed sooner to help control current discharge in the New Sump area to ensure stormwater infiltrates into VLF1 before reaching the current infiltration area that is adjacent to the edge of liner where overtopping occurred.**

Designs will not be finalized until approval of TR 130 is received from DRMS. A cost estimate will be included with final designs, which will go through the Newmont CC&V investment review process for approval of funding. Investment reviews are completed on a monthly basis, but may require secondary and tertiary approval, depending on the cost of the project. Once funding is secured, CC&V will have to bid and award the work to contractors to complete the project, which will include timelines for completion. The bid process typically takes one to two months, depending *on the scale of the project and availability of contractors to do the work. Additionally, as DRMS is aware, construction activities are weather permitting. Based on these factors, CC&V anticipates construction activities may begin in July, at the earliest. CC&V is committed to completing quality stormwater control upgrades in a timely manner.*

As noted in CC&V's response to Comment #1, above, as part of normal operations as well as a temporary measure to help control current discharge, the sediment accumulation in the "New Sump" area will be cleaned out and replaced with new DCF, maintaining a minimum 2-foot cover fill height over the existing liner. The VLF1 perimeter berm that was washed out in the August 2021 storm has been repaired to maintain containment. Stormwater runoff from VLF1 that reports to the "New Sump" will ultimately report to the VLF1 Process Solution Storage Area (PSSA). This area was not included in TR130, as the intent is to route water away from the "New Sump".

3) **<u>VLF2 Discharge</u>: The last paragraph on the first page of the aforementioned January 11th TM, discusses rerouting HGM contact water "onto VLF2 for controlled discharge and infiltration". This raises concerns about potential washouts, ponded water as a wildlife attractant, and slope stability in the proposed discharge area of VLF2. The DRMS is keenly aware of the frequent maintenance required on the VLFs to facilitate the infiltration of process solution. Ponded contact water would not be allowed under the approved wildlife protection plan. If this rerouted contact water were to infiltrate quickly enough to avoid ponding (as alluded to in the first paragraph of Section 4.0 of the TR130 TM, and the current problem in the depression/New Sump) where, it would be expected to at least temporarily saturate the discharge area, causing potential stability issues and/or washouts. Please demonstrate these concerns are unwarranted.**

Water will be pumped from the existing concrete HGM sump and applied to the VLF2 surface at the maximum solution application rate of 0.005 gpm/ft2. A minimum VLF2 area of approximately 74,000 ft2 will be designated for receiving water from the existing concrete HGM sump. Since water will be distributed at a similar rate as normal leaching operations, potential washouts, ponded water as a wildlife attractant, and slope stability issues are not expected.

4) **<u>Times of concentration</u>: The three "Native Hillside" watersheds use the maximum 300 feet for sheet flow. Steep slopes accelerate sheet flow and heavily treed or rocky slopes tend to deflect sheet flow more quickly to the faster, shallow concentrated flow, thereby decreasing the time of concentration and increasing the estimated peak flow. Common practice for calculating times of concentration for steep, heavily treed or rocky slopes would limit the sheet flow to no more than 100 feet. Please make appropriate corrections.**

The time of concentration calculations and corresponding lag times used in the HEC-HMS model were modified to include a 100 ft sheet flow length. The table below reflects modified inputs and results from the HEC-HMS model, and the schematic shows the HEC-HMS model layout.

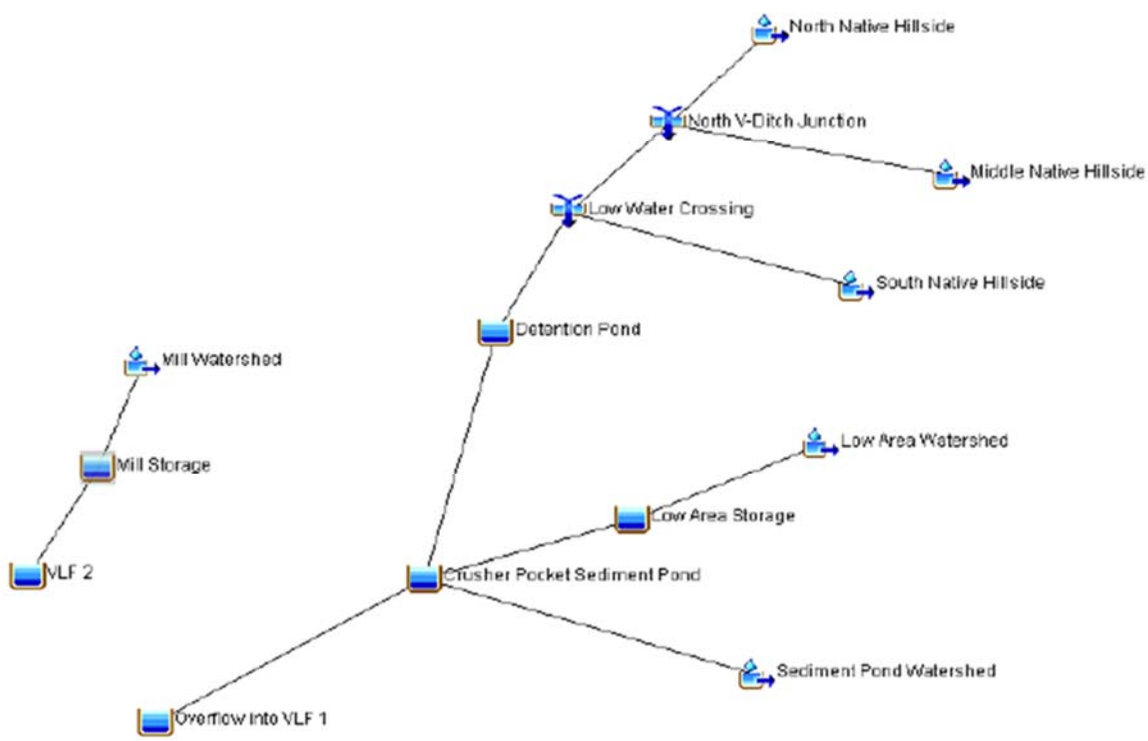
WATERSHED FLOW CALCULATIONS

WATERSHED	Area (ac)	Length (ft)	Slope (ft/ft)	Curve Number	Time of Conc. (min)	Lag Time (min)	Peak Discharge (cfs)
North Native Hillside	18.2	1994.0	0.163	81	10.7	6.4	59.70
Middle Native Hillside	15.3	1071.0	0.304	67.3	9.6	5.8	27.60
South Native Hillside	8.3	1257.0	0.262	77	7.7	4.6	24.20
Low Area Watershed	9.2	844.0	0.121	91	3.0	1.8	46.40
Sediment Pond Watershed	6.04	1189.0	0.092	91	4.6	2.8	29.60
Mill	28.2	2144	0.094	100*	7.78	4.67	146.1

* Assuming 100% of runoff reports to sump

JUNCTION/POND	Peak Discharge (cfs)	Peak Storage (ac-ft)	Maximum Storage (ac-ft)
North V-Ditch Junction	87.30	N/A	N/A
Low Water Crossing	110.90	N/A	N/A
Detention Pond	13.40	2.9	4.10
Low Area Storage	16.30	2.4	8.50
Sediment Pond	29.60	9	9.22
Overflow Into VLF 1	0.00	N/A	N/A
Mill Storage	0.90	7.66	7.68†

† Assuming porosity = 0.3



5) <u>SCS Curve Numbers</u>: **Please provide rationale for the selected curve numbers.**

The reported curve numbers are a composite or weighted value based on the land cover type area. NewFields estimated the areas based on aerial photography and site observations, and the original curve numbers were taken from TR101.

Composite Curve Number Calculations

WATERSHED	Cover Type	Area (ac)	Curve Number †	Composite Curve Number
North Native Hillside	Natural Ground, Grass	18.90	81	81.0
Middle Native Hillside A	Natural Ground, Grass	6.57	81	
Middle Native Hillside B	Natural Ground, Woods	8.74	57	67.3
South Native Hillside A	Natural Ground, Woods	3.42	57	
South Native Hillside B	General Disturbed/Roads	4.90	91	77.0
Low Area Watershed	General Disturbed/Roads	9.25	91	91.0
Sediment Pond Watershed	General Disturbed/Roads	6.04	91	91.0
Mill	General Disturbed/Roads	28.19	91	91.0

†Curve Numbers provided in TR-101: Knight Piésold, 2018. "Stormwater Management Plan Evaluation – Review Findings, EMP 22 and ECOSA Facility Toe Berm Design Upgrades". Knight Piésold and Co., Denver, CO, USA

6) <u>Rainfall depth</u>: **The analyses indicate the 100-year, 24-hour rainfall depth is 4.07 inches. A quick check of the online NOAA precipitation frequency atlas (https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=co) indicates the value is 4.26 inches (reference: Latitude: 38.7321° Longitude: -105.1486° Elevation: 10277.21 ft). The rainfall depth used for TR101 was 4.1 inches. Please use the same value used in TR101, or provide documentation for using a different value.**

The value reported in the text of TR101 was rounded to 4.1 inches; however, Attachment 2 of TR101 contained a printout from the referenced NOAA Atlas 14 online Precipitation Frequency Data Server, which reflected 4.07 inches for the 100-year, 24-hour design storm event. NewFields used the raw data (4.07 inches) rather than the rounded value (4.1 inches) in the analyses, and verified the information was still current by revisiting the NOAA Atlas 14 website in November 2021. Attachment 1 contains the NOAA Atlas 14 Precipitation Frequency Data Server printout from November 2021, confirming 4.07 inches is still valid for the 100-year, 24-hour design storm event at the selected location.

7) <u>Existing Depression Retention Pond</u>: **Figure 2 indicates the depression just south of the LOB will be used as a retention pond, yet there is 2,331 feet of HDPE pipe proposed to convey flows to EMP-11. Additionally, the HEC-HMS schematic on the "Watershed Flow Calculations" sheet suggests gravity flow. Is water to be pumped into the HDPE pipe, or is it gravity flow? If its gravity flow, this would be a detention pond and means to limit sediment into the HDPH pipe need to be implemented to reduce the potential for lower flows to deposit sediment into the pipes flat sections, leading to a plugged pipe. If this is truly a retention pond, it will retain**

a mixture of non-contact water from the native hillside and contact water from the LOB and VLF1 over a shallow liner, thereby limiting the infiltration rate and may take quite some time to pump out (no demonstration is made of the depression's storage capacity). As this depression is proposed to receive more runoff than it currently does, and will receive some contact water, it is a potential wildlife attractant. Please address the following:

a. **Is the discharge pumped or gravity flow?**

The entire system will flow by gravity; no pumping is anticipated. Figure 2 shows the pipeline profile, starting at the depression that will be used as a detention pond (incorrectly labeled as a "retention" pond in TR130).

b. **If gravity flow, how will sediment be restricted from entering the 2,331 feet of pipe?**

Sediment will be restricted using a perforated riser pipe surrounded by gravel and geotextile. Figure 2 shows a schematic of the perforated riser pipe intake.

c. **How long is the depression expected to retain stormwater following the design event?**

The depression is expected to retain stormwater for approximately 2.5 days following the 100-year, 24-hour design storm event (as determined in the HEC-HMS model).

Additionally, all water reporting to this depression is anticipated to be non-contact water. Although the LOB and a portion of the depression are underlain with geomembrane liner, no process solution has been applied to the overlying fill materials or materials being transported at or around the LOB. Figure 3 shows the depression area with the geomembrane liner subgrade, showing how the VLF1 lined subgrade drains away from the pond.

8) **<u>HDPE pipe flow and design</u>: Attachment A, Pipeline Flow Calculations, indicates 1,336 feet of HDPE pipe are proposed between the depression near the LOB and EMP-11. Figure 2 shows 2,331 feet of HDPE pipe in the same reach. Hydraulic analyses for the pipeline uses Manning's equation, which assumes uniform steady state flow. The pipeline plan view in Figure 2 shows multiple horizontal bends, primarily in the flatter lower portion; and there will no doubt be multiple vertical bends given the terrain where the pipeline is proposed (no profile was provided). Flow in these transition zones is non-uniform. The aforementioned pipeline calculations also demonstrate the 18-inch pipe at a 2.1 percent grade between STA 4+86 and 6+17 will be 79 percent full with an 18-inch energy head. DRMS calculations indicate the Froude number is well over 1.1 in both analyzed segments of the 18-inch pipe, suggesting a hydraulic jump could easily form in the pipe in transition zones. The calculations for the 24-inch pipe indicates the pipe will be 76 percent full. DRMS calculations indicate the Froude number is between 0.9 and 1.1 in the 24-inch pipe, suggesting the flow could easily be either subcritical or super critical, thereby indicating uniform flow calculations may not be appropriate. This is an indication that pressure flow may likely occur, at which normal depth assumptions are no longer valid. Given the length of the**

proposed pipe and potential long term sediment deposition in the pipe (resulting from multiple consecutive low flow events), pipe flow should be re-evaluated using non-uniform flow methodology or the pipe size should be increased such that best practice of limiting uniform flow depths to less than 60 percent full is followed. Finally, there is no mention of cleanouts in the design. Given the length and variable flow conditions, sediment is very likely to be deposited in the pipe and become cemented in over longer periods of low flow events. {Note: The DRMS expects the proposed ~460-foot, 24-inch diameter pipe between the low area near the crusher and EMP-11 to become blocked with sediment over time, but does not believe this pipe to be critical in stormwater management.} Please respond to the following:

a. Provide consistent documentation on the length of pipe proposed.

The information presented in the attachments of TR130 showed only the steepest and shallowest pipe sections for sizing purposes. The table below presents all pipe segments and Figure 2 shows the corresponding pipe profile. Please note that the data shown in the revised table differs from that shown in TR130, as the perforated pipe intake structure was incorporated into the HEC-HMS model.

PIPELINE FLOW CALCULATIONS

NOMINAL PIPE SIZE	STA			$Q_{PEAK, 100}$ (CFS) †	Length (ft)	Slope (ft/ft)	Mannings n	Inside Dia. (in)	Calculated Depth (in)	Q Area (ft^2)	V (ft/s)
24"	0+55	TO	4+88	13.35	486.0	0.005	0.012	21.6	18.2	2.3	5.9
18"	4+88	TO	6+17	13.35	131.0	0.021	0.012	16.2	15.1	1.4	9.6
18"	6+17	TO	8+00	13.35	183.0	0.053	0.012	16.2	9.8	0.9	14.8
18"	8+00	TO	13+36	13.35	536.0	0.329	0.012	16.2	5.5	0.4	28.1
18"	13+36	TO	15+57	13.35	221.0	0.182	0.012	16.2	6.8	0.6	23.6
18"	15+57	TO	18+59	13.35	320.0	0.234	0.012	16.2	6.3	0.5	25.9
18"	18+59	TO	22+76	13.35	235.0	0.027	0.012	16.2	12.6	1.2	11.2

† Flow rates differ from those originally reported in TR130 due to the addition of a perforated pipe intake structure.

b. Provide a profile of the proposed pipe between the LOB depression and EMP-11.

Figure 2 (attached) shows the proposed pipe plan and profile. Please note that no fittings are proposed to achieve vertical and horizontal bends; directional changes will be achieved using the allowable pipe bend radius of 27 times the outside diameter of the pipe, or 40.5 feet for 18-inch diameter pipe and 54 feet for 24-inch diameter pipe (minimum).

c. Perform either non-uniform flow analyses or increase the pipe size to limit uniform flow to less than 60 percent full.

The pipe material selected is a solid-wall, butt-fusion welded DR21 HDPE pipe. This pipe is suited for full-flow, pressurized applications and hydraulic jumps that may develop within the pipe will not have a negative impact on the pipe or the surface water management plan as a whole.

d. Describe how maintenance/sediment removal will be performed on the long pipe.

The pipe is anticipated to be self-cleaning, but a cleanout has been incorporated as shown near Station 6+50 on Figure 2 as a precautionary measure. Additional cleanouts may be installed as *needed (using a tapping saddle or other) if significant sediment is observed during cleaning operations. Sediment will primarily be restricted from entering the pipe at the perforated pipe riser.*

e. Will the transition between the two pipe sizes be done with eccentric or concentric reducers?

Either type could be used (Newmont to determine based on material availability during construction); if concentric reducers are used, the underlying pipe subgrade will be graded to maintain the pipe flowline.

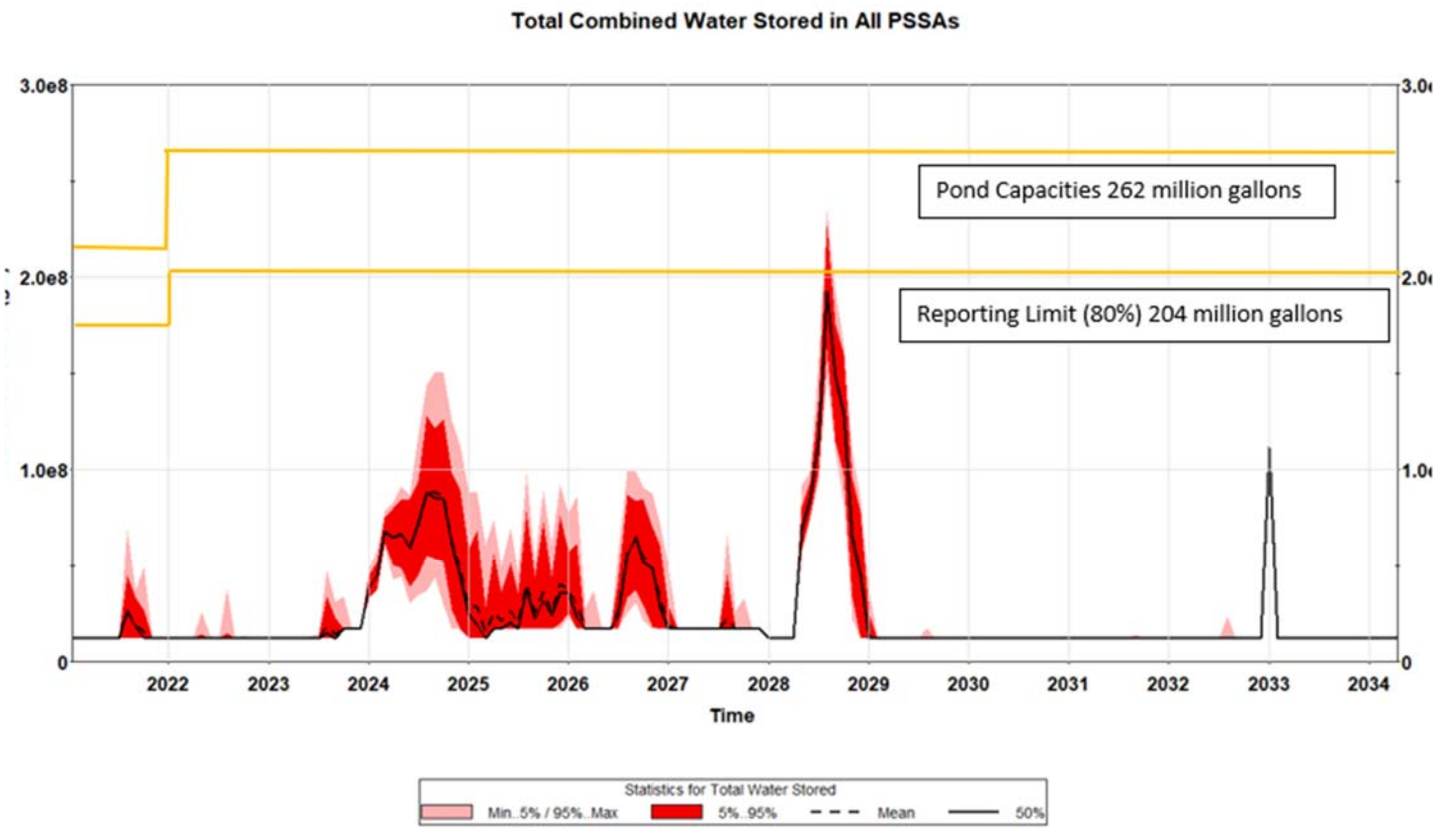
9) **Water balance: It is difficult to interpret the graphs in Attachment B, but it appears the 95 percent confidence is exceeded in late 2024 and most of 2027. Please provide additional narrative and/or labels on the two graphs to explain how the proposed discharge to VLF2 will not exceed the 80 percent full requirements for VLF2.**

The intent of presenting the water balance results was to confirm discharging the impacted stormwater intercepted by the HGM liner on VLF2 will not overwhelm the PSSA systems. This modeling exercise showed that stormwater had a minimal impact on the PSSA storage volume and that process solution management is the primary driver for PSSA storage and freeboard.

Although the graphs originally included with TR130 showed exceedances in 2024 and 2027 for the VLF2 Phase 1/2 PSSA, sufficient capacity exists in combined VLF PSSAs at site, as shown in the graph below. The water balance model originally showed excess water in the combined PSSAs (exceeding the 80 percent full reporting action level) during 2027 due to a decreased solution application rate (leaching VLF2 Phase 3 only) and continued solution draindown from VLF2 Phase 1/2. The graph shown below reflects a potential adjustment in operational solution management in 2027 and 2028 to show how excess water in the PSSAs can be managed with minor operational adjustments. The graph below reflects leaching VLF2 Phase 3 according to the planned rate and stacking plan, then recirculating a small portion of solution onto the VLF2 Phase 1/2 heap to maintain required freeboard in the combined PSSAs. The modeled spike in 2028 reflects a condition where the heap height is low, causing a more rapid draindown time. Again, this spike can be mitigated by recirculating solution elsewhere on VLF2 (or implementing other operational water management strategies) to ensure sufficient freeboard is maintained in the PSSAs.

This scenario included with the graph below is intended to provide an example of potential operational adjustments that can be implemented to maintain required freeboard levels only; other methods may include modifying ore stacking plans, re-applying leach solution to VLF2 Phase 1/2 ore at a different rate, or other process-related operational strategies that will prevent exceeding the 80 percent full reporting action level. CC&V intends to actively monitor the VLF2 PSSAs during operations to maintain freeboard levels.

The 80 percent full reporting action level, including the additional capacity after the VLF2 Phase 3 PSSA estimated certification date, has been included on the graph for reference.



10) **<u>Channel/scour velocity:</u> The design report does not appear to be concerned with channel scour resulting from flow velocities in excess of 10 fps in an unarmored channel adjacent to what appears to be a major haul road that could be undermined by such high velocity flow, but does appear to be concerned with scour in the flatter section of the proposed HDPE pipe. The latter seems unlikely and not particularly problematic, whereas the former would appear to be more problematic. Please provide rationale as to why scour protection along the haul road is not a concern, or commit to armoring the "V" portion of the proposed channel.**

CC&V will maintain these channels in accordance with the approved Stormwater Management Plan, inspecting and maintaining controls accordingly as appropriate.

11) **<u>VLF2 discharge protection</u>: The design report states "Riprap with a D50 of 6 inches will be installed at the pipe outlet as needed to disperse energy and prevent eroding the VLF2 surface." No design analyses or even expected discharge velocity from the proposed pipe was provided. Assuming the concerns in Comment #3 above can be adequately addressed, please provide analyses and designs for the proposed outlet on VLF2.**

As described in the response to Comment #3, water will be pumped at the maximum leach solution application rate of 0.005 gpm/ft2, eliminating the need for riprap or other erosion protection.

12) **<u>Bond impact</u>: The TR states there is no impact to the bond. However, the TR proposes installing about 1,830 feet of 18-inch HDPE pipe and 960 feet of 24-inch HDPE pipe. Removal**

of this pipe at final reclamation will impact the reclamation bond. The designs submitted to address Comment #1, will also specify the length and size of the additional pipe to be installed to convey stormwater intercepted by the HGM liner to VLF2.

At closure, the pipe will be left in place and buried with final regrading of VLF1, 2 and the HGM platform. No additional closure costs are associated with this process.

Should you require further information please do not hesitate to contact Katie Blake at 719-851-4048 or Katie.Blake@Newmont.com or myself at Justin.Raglin@Newmont.com.

Regards,

Justin Raglin
Sustainability & External Relations Manager
Cripple Creek and Victor Gold Mining Company

EC: E. Russell – DRMS
M. Cunningham – DRMS
M. Crepeau – Teller County
L. Morgan – Teller County
J. Raglin – CC&V
K. Blake – CC&V

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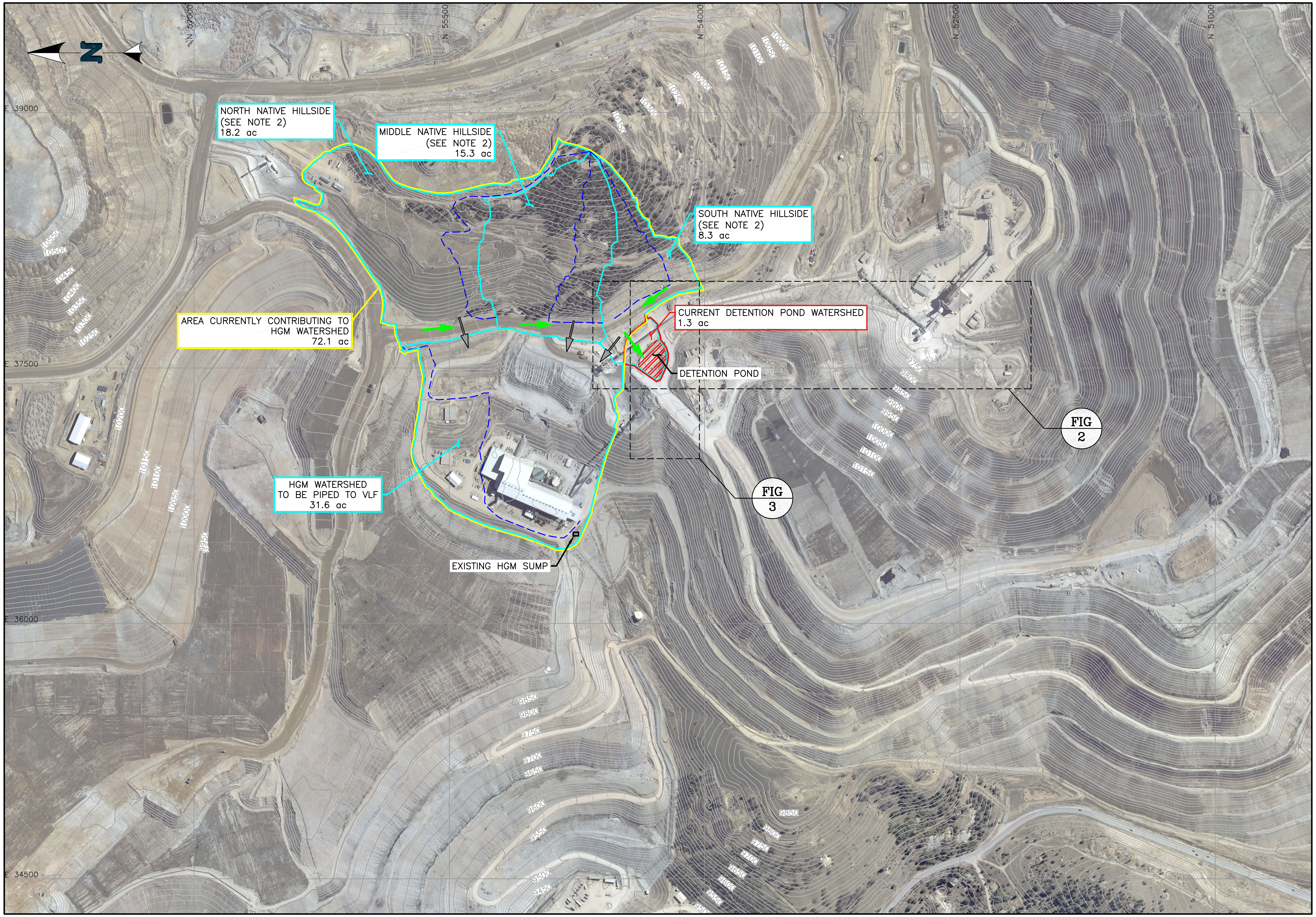
FIGURES



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LEGEND:

- EXISTING AND PROPOSED GROUND CONTOURS
- TIME OF CONCENTRATION FLOW PATHS
- WATERSHED BOUNDARIES WITH PROPOSED MODIFICATIONS
- EXISTING HGM WATERSHED BOUNDARY
- EXISTING RUNOFF FLOW DIRECTION
- PROPOSED RUNOFF FLOW DIRECTION

NOTES:

1. CONTOURS SHOWN INCLUDE PROPOSED GRADING.
2. CURRENTLY REPORTS TO HGM WATERSHED. STORMWATER CONTROLS TO DIVERT RUNOFF TO DETENTION POND.
3. SEE FIGURE 2 FOR PLAN AND PROFILE OF DETENTION POND OUTLET PIPE.
4. SEE FIGURE 3 FOR VLF1 LINER CROSS SECTION UNDER DETENTION POND.

WATERSHED AREAS		
	EXISTING WATERSHED	PROPOSED WATERSHED
HGM	72.1 ac	31.6 ac
DETENTION POND	1.3 ac	41.8 ac

Jay N. Janney-Moore
3-10-2022

Reference:

NEWMONT PROVIDED THE 2020 FLYOVER DATA TO NEWFIELDS ON JAN. 13, 2021 IN THE FOLLOWING FILE: "5ft topo 9-1-20.DWG". EXISTING GROUND INCLUDES FUTURE SCHIST ISLAND PIT CONFIGURATIONS.

\\nfenglewood\shared\Projects\0106.054 Stormwater Improvements\A-CAD\FIGS\0106.054.006F.dwg-3/9/2022 3:11 PM

NewFields

CLIENT: CRIPPLE CREEK & VICTOR GOLD MINING COMPANY

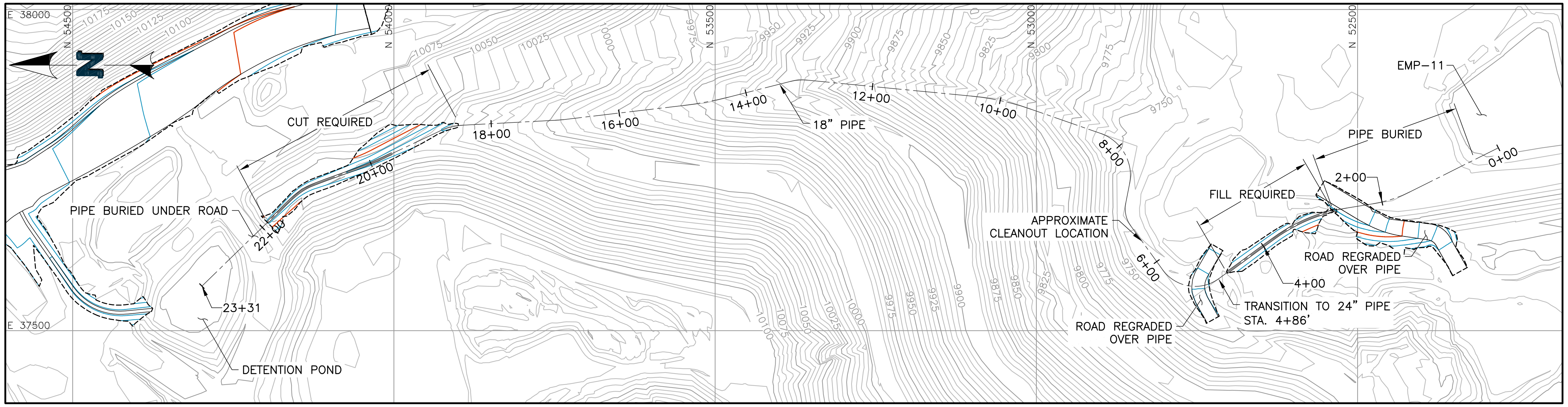
PROJECT: STORMWATER IMPROVEMENTS

TITLE: WATERSHED BOUNDARIES

FILENAME: 0106.054.006F

FIGURE NO.: 1

REVISION: A



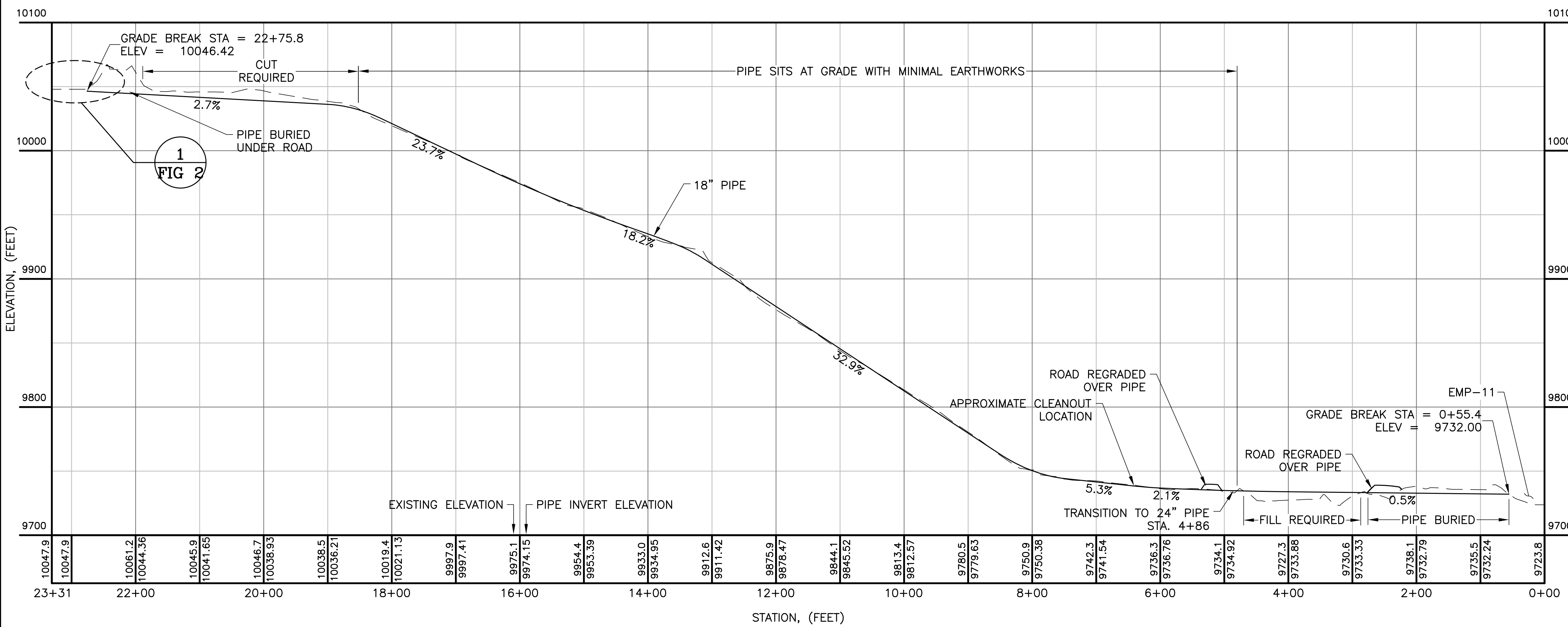
LEGEND:

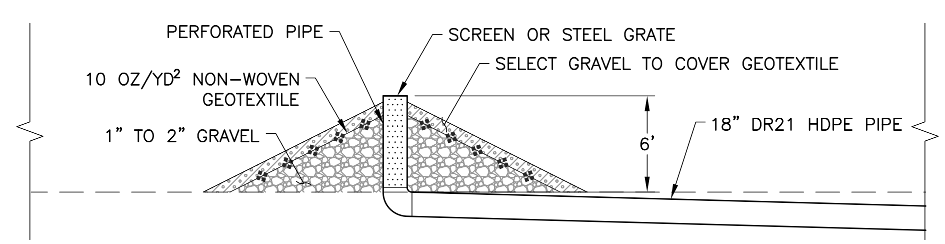
EXISTING GROUND CONTOURS

PROPOSED GROUND CONTOURS

ALIGNMENT TABLE

	STATION	NORTHING	EASTING	DELTA (D-M-S)	LENGTH (FT)	RADIUS (FT)
BP	0+00.00	52,281.06	37,784.63			
PT	0+00.00	52,281.06	37,784.63			
PC	1+53.67	52,418.55	37,716.00	017-17-06	60.34	200.00
PT	2+14.01	52,475.75	37,697.53			
PC	2+55.57	52,516.78	37,690.86	026-58-26	125.97	267.57
PT	3+81.54	52,631.89	37,642.63			
PC	4+85.97	52,716.14	37,580.93	090-13-56	98.08	62.28
PT	5+84.05	52,803.33	37,594.58			
PC	6+68.98	52,853.24	37,663.30	047-19-58	37.18	45.00
PT	7+06.15	52,860.94	37,698.60			
PC	7+36.45	52,854.98	37,728.30	082-08-17	98.85	68.96
PT	8+35.30	52,899.90	37,806.98			
PC	9+50.14	53,008.35	37,844.77	013-39-33	95.36	400.00
PT	10+45.50	53,101.27	37,865.16			
PC	13+02.03	53,356.60	37,889.97	019-46-24	26.49	76.76
PT	13+28.52	53,382.88	37,887.98			
PC	14+28.34	53,479.65	37,863.45	007-30-25	70.83	540.58
PT	14+99.17	53,549.24	37,850.59			
PC	16+87.14	53,735.92	37,828.61	003-39-10	12.75	200.00
PT	16+99.89	53,748.62	37,827.52			
PC	18+44.01	53,892.53	37,819.82	022-06-03	37.16	96.34
PT	18+81.16	53,928.35	37,810.82			
PC	19+90.99	54,027.75	37,764.12	004-55-08	17.17	200.00
PT	20+08.16	54,043.59	37,757.49			
PC	20+93.21	54,123.38	37,728.06	023-59-41	41.88	100.00
PT	21+35.09	54,158.54	37,705.88			
EP	23+30.85	54,298.79	37,569.30			





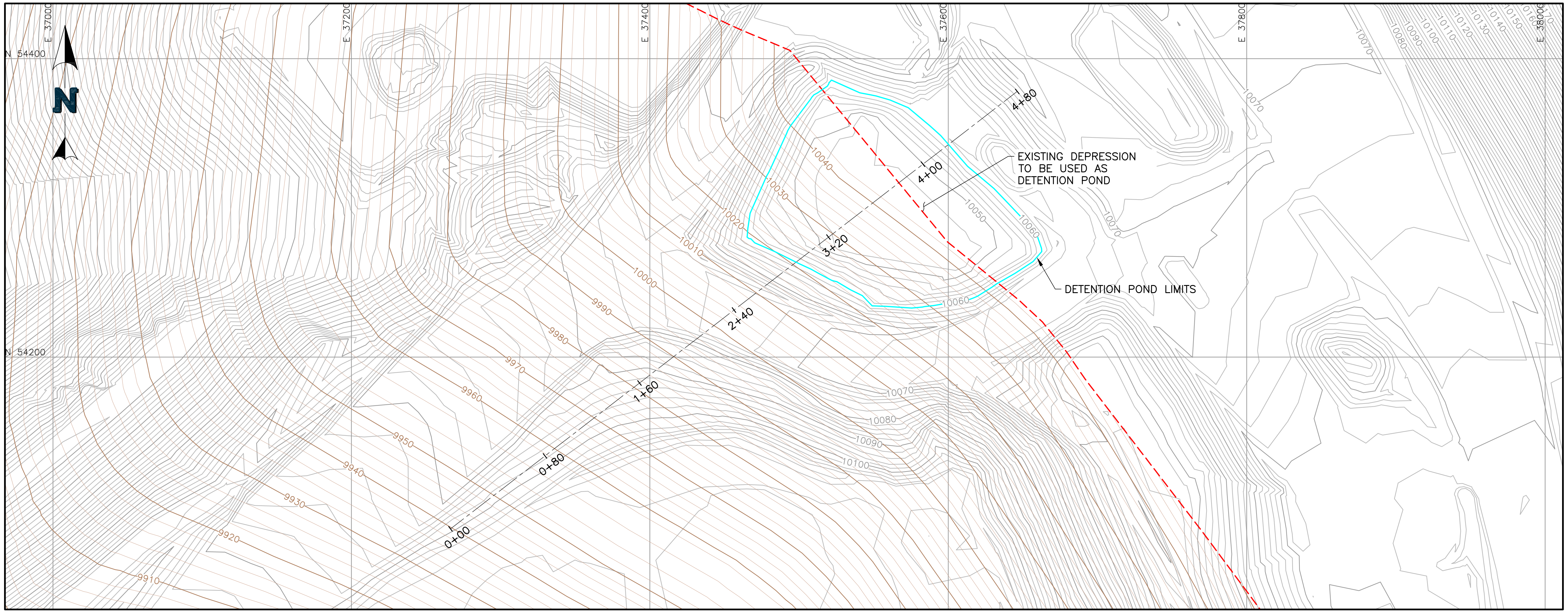
1 FIG 2 RISER PIPE DETAIL

Jay N. Janney-Moore
3-10-2022

Reference:
NEWMONT PROVIDED THE 2020 FLYOVER DATA TO NEWFIELDS ON JAN. 13, 2021 IN THE FOLLOWING FILE: "5ft topo 9-1-20.DWG". EXISTING GROUND INCLUDES FUTURE SCHIST ISLAND PIT CONFIGURATIONS.

\\nfenglewood\shared\Projects\0106.054 Stormwater Improvements\A-CAD\DWGS\0106.054.004P.dwg-3/9/2022 3:09 PM

NewFields
CLIENT CRIPPLE CREEK & VICTOR GOLD MINING COMPANY
PROJECT STORMWATER IMPROVEMENTS
TITLE PIPELINE PLAN AND PROFILE
FILENAME 0106.054.004P
FIGURE NO. 2
REVISION A



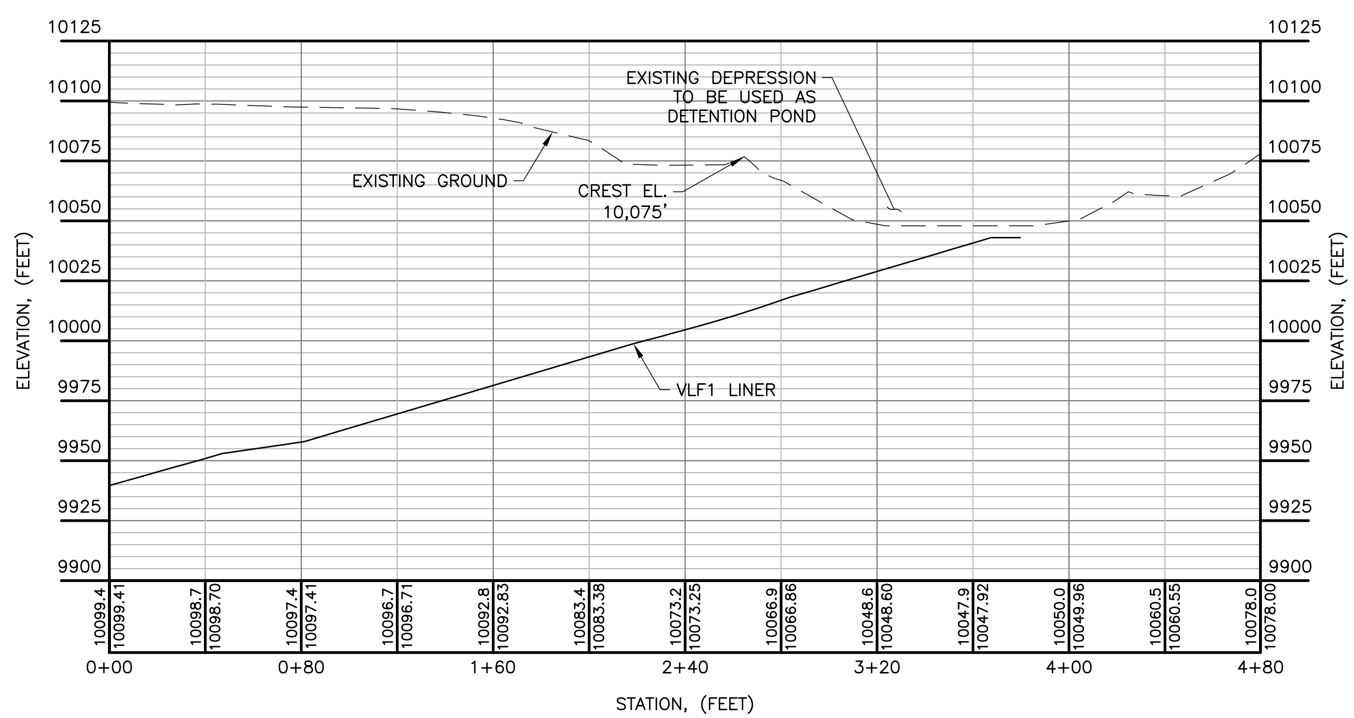
LEGEND:

EXISTING GROUND CONTOURS

VLF1 LINER SUBGRADE CONTOURS

VLF1 LINER LIMITS

0 40 80 FEET



0 40 80 FEET HORIZONTAL

0 40 80 FEET VERTICAL

NO EXAGGERATION

Jay N. Janney-Moore
3-10-2022

NewFields

CLIENT CRIPPLE CREEK & VICTOR GOLD MINING COMPANY

PROJECT STORMWATER IMPROVEMENTS

TITLE VLF 1 LINER SECTION

FILENAME 0106.054.007F

FIGURE NO. 3

REVISION A

\\nfenglewood\shared\Projects\0106.054 Stormwater Improvements\A-CAD\FIGS\0106.054.007F.dwg--3/9/2022 3:05 PM

ATTACHMENT 1

Design Storm Depth

NOAA Atlas 14, Volume 8, Version 2
Location name: Cripple Creek, Colorado, USA*
Latitude: 38.7497°, Longitude: -105.1797°
Elevation: 9551.02 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]										
Duration	**Average recurrence interval (years)**									
	1	**2**	**5**	**10**	**25**	**50**	**100**	**200**	**500**	**1000**
5-min	**0.223** (0.173-0.288)	**0.256** (0.198-0.330)	**0.318** (0.246-0.412)	**0.379** (0.291-0.494)	**0.475** (0.360-0.663)	**0.560** (0.412-0.791)	**0.654** (0.464-0.952)	**0.759** (0.516-1.14)	**0.911** (0.596-1.42)	**1.04** (0.657-1.62)
10-min	**0.327** (0.254-0.422)	**0.374** (0.290-0.484)	**0.466** (0.360-0.604)	**0.555** (0.426-0.723)	**0.696** (0.527-0.971)	**0.820** (0.603-1.16)	**0.958** (0.680-1.39)	**1.11** (0.756-1.67)	**1.33** (0.873-2.07)	**1.52** (0.961-2.38)
15-min	**0.399** (0.309-0.514)	**0.457** (0.354-0.590)	**0.568** (0.439-0.736)	**0.676** (0.520-0.882)	**0.849** (0.642-1.18)	**1.00** (0.735-1.41)	**1.17** (0.829-1.70)	**1.36** (0.922-2.04)	**1.63** (1.07-2.53)	**1.85** (1.17-2.90)
30-min	**0.550** (0.427-0.710)	**0.627** (0.486-0.810)	**0.776** (0.600-1.01)	**0.921** (0.708-1.20)	**1.15** (0.873-1.61)	**1.36** (0.998-1.92)	**1.59** (1.12-2.31)	**1.84** (1.25-2.76)	**2.21** (1.44-3.43)	**2.51** (1.59-3.93)
60-min	**0.676** (0.525-0.873)	**0.771** (0.598-0.996)	**0.956** (0.739-1.24)	**1.14** (0.875-1.49)	**1.43** (1.09-2.00)	**1.69** (1.25-2.40)	**1.99** (1.41-2.89)	**2.31** (1.57-3.48)	**2.79** (1.82-4.33)	**3.18** (2.01-4.97)
2-hr	**0.803** (0.629-1.03)	**0.915** (0.716-1.17)	**1.14** (0.887-1.46)	**1.36** (1.05-1.75)	**1.71** (1.31-2.38)	**2.03** (1.51-2.85)	**2.38** (1.71-3.44)	**2.78** (1.92-4.15)	**3.37** (2.23-5.18)	**3.85** (2.46-5.96)
3-hr	**0.868** (0.685-1.10)	**0.988** (0.779-1.26)	**1.23** (0.965-1.57)	**1.47** (1.15-1.89)	**1.86** (1.44-2.57)	**2.21** (1.66-3.09)	**2.61** (1.88-3.75)	**3.05** (2.11-4.53)	**3.70** (2.46-5.67)	**4.24** (2.73-6.53)
6-hr	**1.02** (0.813-1.29)	**1.15** (0.916-1.45)	**1.42** (1.13-1.79)	**1.69** (1.33-2.15)	**2.13** (1.67-2.93)	**2.54** (1.92-3.51)	**2.99** (2.19-4.26)	**3.50** (2.45-5.15)	**4.26** (2.87-6.46)	**4.89** (3.18-7.45)
12-hr	**1.24** (0.998-1.55)	**1.38** (1.11-1.73)	**1.68** (1.35-2.10)	**1.98** (1.58-2.49)	**2.47** (1.95-3.35)	**2.92** (2.23-4.00)	**3.42** (2.53-4.83)	**3.99** (2.83-5.81)	**4.83** (3.29-7.26)	**5.54** (3.64-8.35)
24-hr	**1.48** (1.20-1.83)	**1.67** (1.36-2.07)	**2.04** (1.66-2.54)	**2.41** (1.94-3.01)	**2.99** (2.37-3.98)	**3.50** (2.70-4.72)	**4.07** (3.03-5.66)	**4.70** (3.36-6.75)	**5.63** (3.86-8.34)	**6.39** (4.24-9.55)
2-day	**1.74** (1.43-2.13)	**2.02** (1.66-2.47)	**2.53** (2.07-3.11)	**3.00** (2.45-3.71)	**3.73** (2.97-4.89)	**4.34** (3.37-5.77)	**5.01** (3.76-6.86)	**5.73** (4.13-8.12)	**6.77** (4.69-9.91)	**7.62** (5.11-11.3)
3-day	**1.97** (1.63-2.40)	**2.29** (1.89-2.78)	**2.85** (2.35-3.49)	**3.38** (2.77-4.15)	**4.18** (3.35-5.44)	**4.86** (3.79-6.41)	**5.59** (4.21-7.60)	**6.38** (4.62-8.98)	**7.52** (5.24-10.9)	**8.44** (5.70-12.4)
4-day	**2.18** (1.81-2.64)	**2.51** (2.08-3.04)	**3.11** (2.57-3.79)	**3.67** (3.02-4.49)	**4.52** (3.64-5.86)	**5.24** (4.11-6.89)	**6.02** (4.57-8.16)	**6.88** (5.00-9.64)	**8.10** (5.67-11.7)	**9.09** (6.17-13.3)
7-day	**2.70** (2.26-3.24)	**3.07** (2.57-3.69)	**3.74** (3.12-4.51)	**4.36** (3.62-5.30)	**5.33** (4.33-6.85)	**6.15** (4.87-8.02)	**7.04** (5.39-9.47)	**8.02** (5.89-11.1)	**9.43** (6.66-13.5)	**10.6** (7.24-15.3)
10-day	**3.16** (2.66-3.78)	**3.57** (3.01-4.28)	**4.33** (3.63-5.20)	**5.02** (4.19-6.06)	**6.07** (4.96-7.74)	**6.96** (5.54-9.01)	**7.92** (6.09-10.6)	**8.97** (6.62-12.4)	**10.5** (7.42-14.9)	**11.7** (8.04-16.8)
20-day	**4.48** (3.82-5.31)	**5.08** (4.33-6.03)	**6.11** (5.18-7.26)	**6.99** (5.90-8.36)	**8.26** (6.77-10.3)	**9.28** (7.43-11.8)	**10.3** (8.00-13.5)	**11.4** (8.51-15.5)	**13.0** (9.28-18.2)	**14.2** (9.86-20.2)
30-day	**5.55** (4.76-6.53)	**6.31** (5.41-7.43)	**7.54** (6.44-8.92)	**8.57** (7.28-10.2)	**9.98** (8.20-12.3)	**11.1** (8.89-13.9)	**12.1** (9.44-15.7)	**13.2** (9.88-17.8)	**14.7** (10.6-20.4)	**15.8** (11.1-22.4)
45-day	**6.86** (5.93-8.03)	**7.79** (6.72-9.13)	**9.26** (7.96-10.9)	**10.4** (8.92-12.3)	**12.0** (9.87-14.6)	**13.1** (10.6-16.3)	**14.2** (11.1-18.2)	**15.3** (11.4-20.3)	**16.6** (12.0-22.8)	**17.6** (12.4-24.8)
60-day	**7.95** (6.90-9.27)	**9.01** (7.81-10.5)	**10.6** (9.20-12.5)	**11.9** (10.2-14.0)	**13.6** (11.2-16.4)	**14.7** (11.9-18.2)	**15.8** (12.4-20.1)	**16.8** (12.6-22.2)	**18.0** (13.1-24.6)	**18.9** (13.4-26.5)

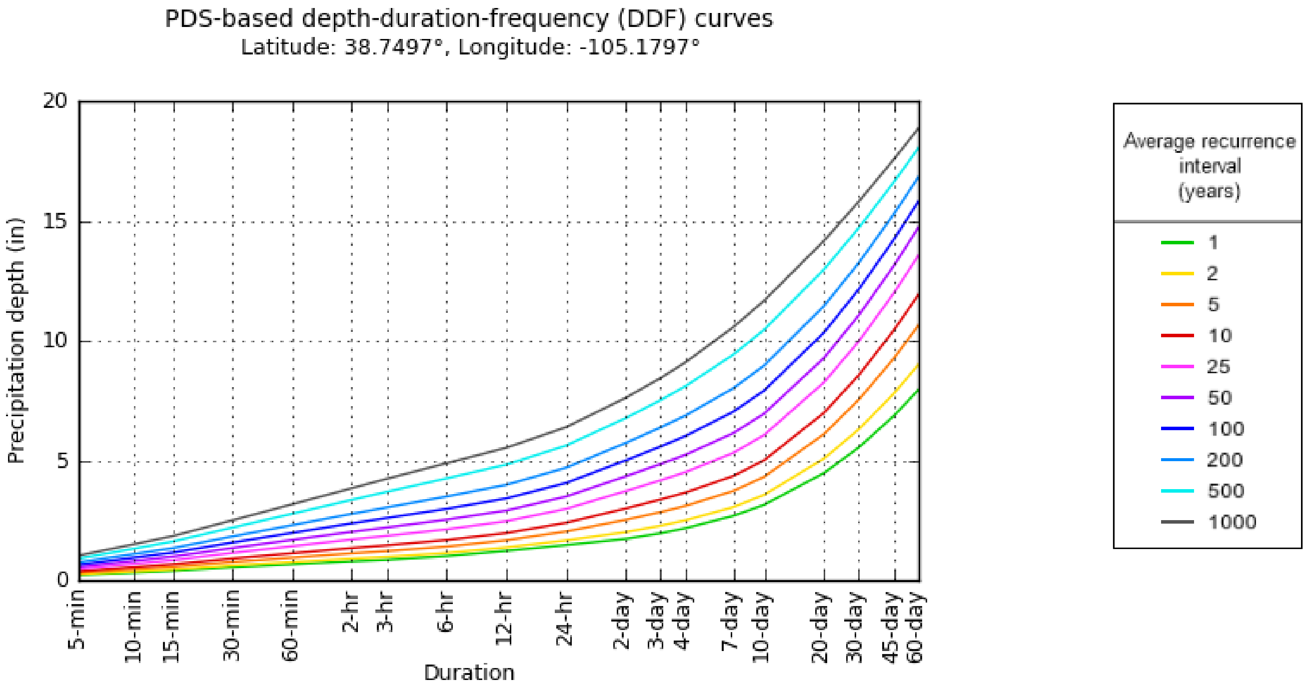
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

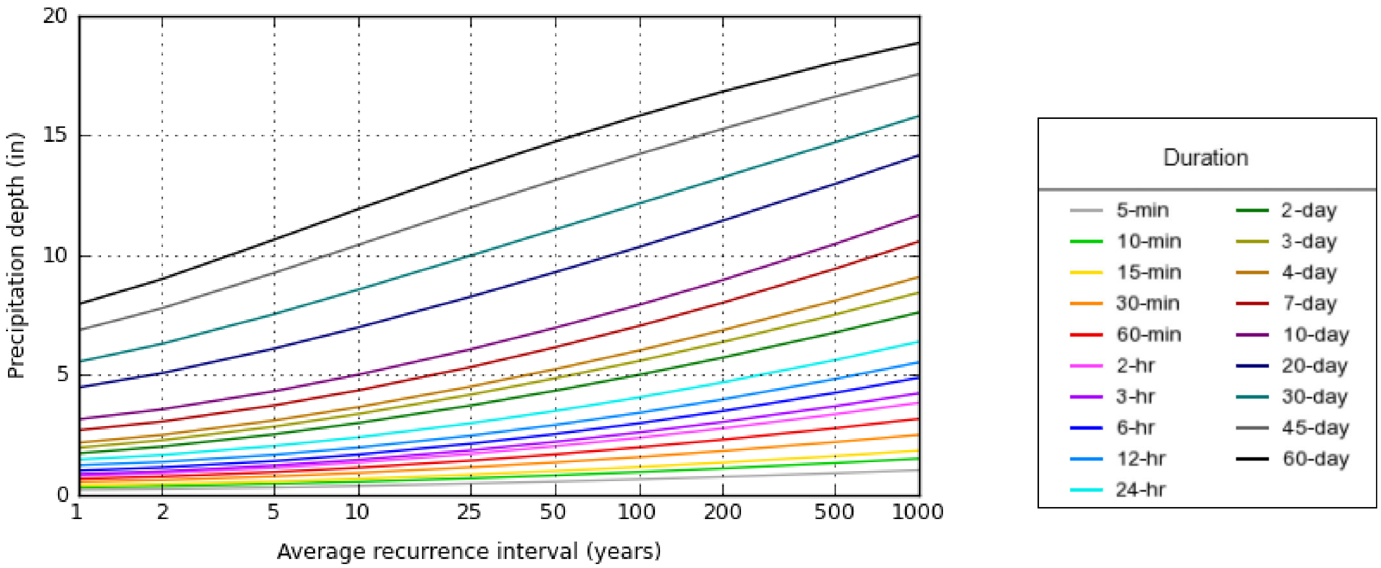
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical



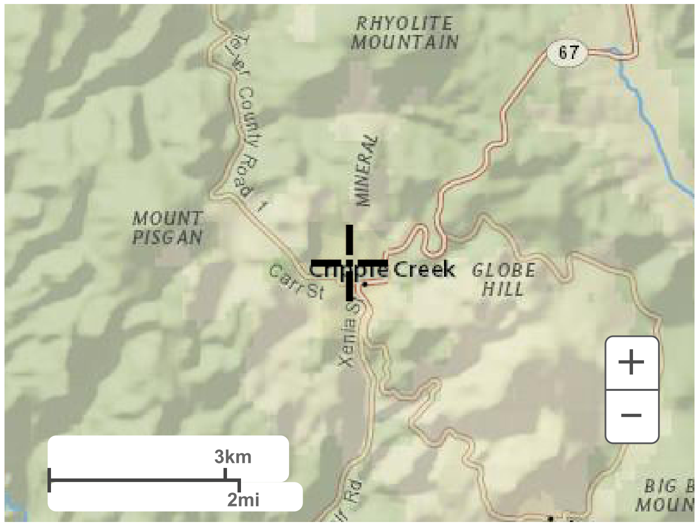


NOAA Atlas 14, Volume 8, Version 2 Created (GMT): Tue Nov 2 17:00:49 2021

Back to Top

Maps & aerials

Small scale terrain



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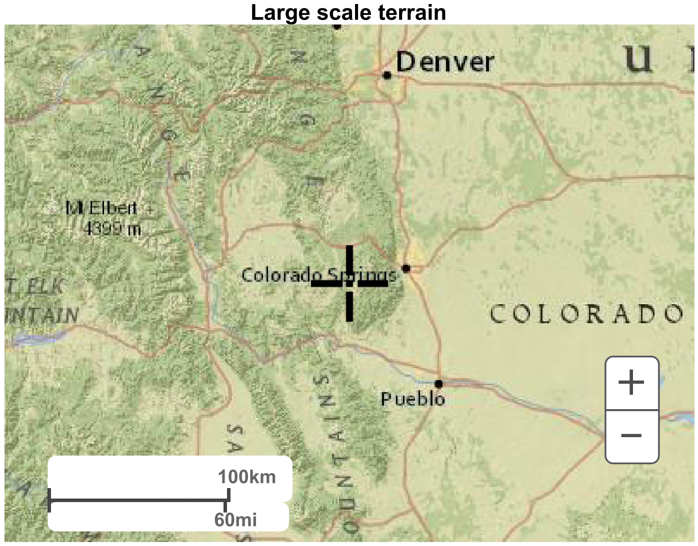
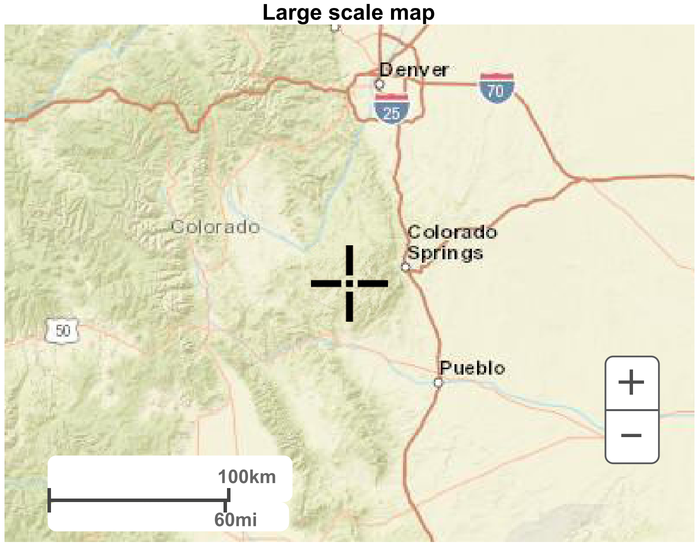


Large scale map



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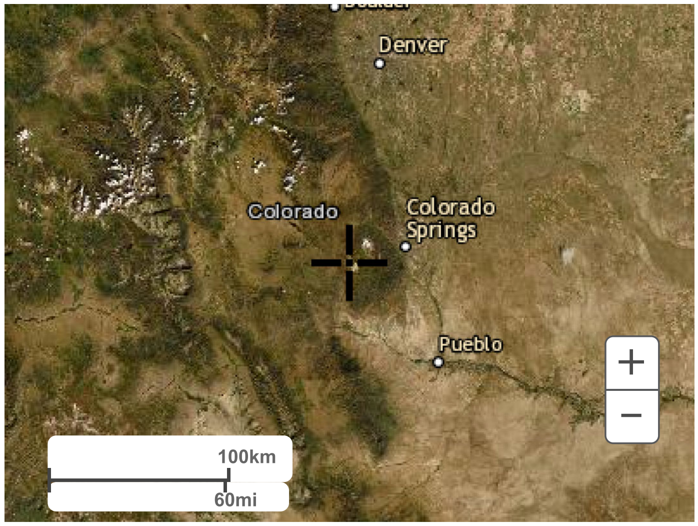

Back to Top

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