

# Cripple Creek & Victor Gold Mining Company

A Joint Venture · ANGLOGOLD ASHANTI (COLORADO) CORP., Manager

**Operations Office** P.O. Box 191 · 100 North 3<sup>rd</sup> Street Victor, Colorado 80860 (719) 689-2977 – Fax (719) 689-3254



SENT CERTIFIED, RETURN RECEIPT REQUESTED 7011-0470-0000-4833-9063

January 6, 2014

Mr. Timothy Cazier 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

Cripple Creek & Victor Gold Mining Company, Cresson Project Squaw Gulch (VLF), Hwy 67 Realignment

Subject: Weekly Construction Quality Assurance ("CQA") Report: AMEC: Squaw Gulch (VLF), Hwy 67 Realignment - Weeks ending 12/14/13 and 12/21/13

Dear Mr. Cazier:

Cripple Creek & Victor Gold Mining Company ("CC&V") is hereby providing the weekly Construction activity and Progress report prepared by AMEC, reporting the CQA services performed for the Squaw Gulch (VLF), Hwy 67 Realignment Construction during the weeks ending December 14, 2013 and December 21, 2013

Should you have any questions, please do not hesitate to contact me at (719) 689-4055.

Sincerely,

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Timm Comer Manager, Environmental Resources

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DIVISION OF RECLAMATION MINING AND SAFETY

Enclosures: AMEC Squaw Gulch (VLF), Hwy 67 Realignment Monitoring Summary (Weekly Report). Weeks ending 12/14/13 and 12/21/13.





## CRIPPLE CREEK & VICTOR GOLD MINING Co. Squaw Gulch (VLF), HWY 67 Realignment Field Monitoring Summary Weekly Report

Owner:	Cripple Creek & Victor Gold Mining Co.	Project Number:	Date
<b>Project:</b>	Squaw Gulch (VLF), Hwy 67 Realignment	74201125N0. ****. ****	12.14.2013
Location:	Cripple Creek & Victor Gold Mine, Colorado		
<b>Contractor:</b>	Ames Construction Co. Inc.		

Days	S	M	T	W	T	F	S
Work Shifts	-	D	D	D	D	D	D
or or a billio	-	-	-	-	-	-	-

Reporting Period: 12.08.13 thru 12.14.13

Ambient Temperature Ranges for reporting period: Low: -6°F to 25°F High: 6°F to 43°F

Weather conditions for reporting period: Cloud Cover: Mostly clear.

**Precipitation:** None **Wind:** Variable.

Ames: Continuing construction tasks for HWY 67 and VLF.

Planning: Continuing construction activities and scheduling for VLF and HWY 67.

### **CONSTRUCTION ACTIVITIES and PROGRESS:**

### I) Earthworks

A) VLF (Phase I)

Topsoil / Overburden Stripping: No topsoil or overburden stripping occurred this week; however, the slopes of the Area 34 Topsoil Stockpile were graded by dozers.

Production drilling: Production drilling occurred during this reporting period within the planned VLF limits.

Production blasting: Three blasts occurred during this reporting period within planned VLF limits.

#### **Structural Fill:**

Cat 992 loaders and a John Deere 870 excavator removed structural material from near Bench A between approximate stations A6+00 and A20+00. The material was loaded into 777 haul trucks and transported to the buttress fill area between Dump 4 and the Ball Mill fill. The material was placed and compacted primarily between approximate stations H24+00 to H30+00. A Cat D8 and D9 dozer were used to spread the loose lifts and compaction was achieved utilizing a Cat CS56 smooth drum roller by method specification. Any oversized material encountered was broken with a Cat excavator hammer-hoe.

A Cat D10 and a D8 dozer graded the slopes and stockpile shot rock near station Q6+00 to Q10+00.

A Cat 320 graded the slopes to grade near A2+00 to C2+00.

Clay (SLF) Processing:

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Cameron Site: No Clay mining or processing occurred at the Cameron Site. Approximately, 244,860 tons of clay / soil liner fill (SLF) material have been produced at the Cameron site. SLF produced from the operation remains stockpiled at Cameron Site for later removal / use.

Squaw Gulch Clay Borrow Site: Clay processing took place at the Squaw Gulch Clay Borrow Site. Approximately, 13,360 tons of soil liner fill material has been produced at the Squaw Gulch Clay Borrow Site to date.

## Underdrain System:

Secondary Underdrain: No work was performed on the Secondary underdrain during this reporting period. Approximately, a total of 4,054 feet of Secondary underdrain has been completed.

Primary Underdrain: No work was performed on the Primary underdrain during this reporting period. A total of 1,294.60 feet of Primary underdrain has been completed.

## Tree /Slash Grubbing and Clearing, Chipping:

A Cat 330 was clearing and grubbing near station A0+00 above the former Hwy 67 roadway and the PSSA Toe Berm. And a Cat 330 excavator and a Cat D6 dozer were used for clearing and grubbing near the Phase 2 Diversion Channel.

#### B) Underground Workings

Confirmatory drilling was performed on underground working No. 6123, U6368, U6369, U6370, 6371, U6372, and U6374. All borehole locations were established on a 4-foot center isolating any voids found. Further remediation efforts will be ongoing until remediated. Summary of the remediation efforts will follow when remediation is completed.

UG #U6397: Unknown Surface Working: The site was excavated exposing an adit leading to the north. The site will require confirmation drilling.

UG #6260: Known Adit, within Phase 2 diversion Ditch and North Access road: The adit was located and partially excavated to about 15 feet. Work stopped due to recently placed fill. Fill will need to be removed prior to the work continuing.

UG #6339: Known Surface Working: The working was located in a previously cut area. Survey now indicates there is 53 feet of fill to subgrade elevation. The site is considered remediated.

Underground working No.6372 and 6374 were filled with coarse shaft back fill material and prepared for remediation using a 2-layered geogrid system. UG 6372 has been remediated with geogrid. UG 6374 requires further work.

Underground workings No. 6336, 6337, 6338, U6366, U6367, U6368, U6369, U6370, 6371, U6373, U6375, 6376, U6377, U6380, U6381, U6382, U6383, U6393, and U6396 were excavated to competent bedrock, then backfilled and compacted. The workings are considered remediated.

## C) Highway 67

No significant construction activities were observed at the Highway 67 Realignment.

## South MSE Wall:

Approximately, 6 cubic yards of concrete were poured for the leveling pads at the South MSE Wall. This pour completed the concrete work for the leveling pads.





## **II) Storm Water Management**

Best Management Practices (BMP) is being performed. Erosion control efforts took place during this reporting period following any precipitation.

## **CQA ACTIVITIES:**

- I) <u>Field Activities:</u> Observation of construction activities during this reporting period included: Production drilling and blasting; VLF cut to fill and compaction; Underground remediation and confirmation drilling; Clearing and grubbing; Slope grading; Slope grading at Topsoil Stockpile #34; Leveling pad concrete work at the South MSE Wall; and clay (SLF) processing.
- II) <u>Laboratory Activities:</u> Laboratory testing continued with Permeability, Particle Size Distribution, Atterberg Limits, Moisture-Density, gradations and material classification and identifications and field material sampling were performed during this reporting period.
  - SLF: Sample Numbers 75-S and 76-S were obtained during this reporting period. Note that samples with the suffix "-S" indicate the material originated from the Squaw Gulch Borrow Site; sample numbers lacking the suffix are from the Cameron Site.
  - DCF: Sample Numbers 42 and 43 were obtained during this reporting period.

#### **General Project Items**

Meetings and Discussions: The Weekly Project Status meeting was held on December 11th between CC&V, Ames, and Amec.

Summary of Concerns: None

CC&V: Daily updates, reporting and scheduling are some of the tasks occurring between CC&V Projects, Amec and Ames.

Miscellaneous: None.

**Deliveries:** None

CQA Monitor Submitted by: <u>Eric Lorenson</u>

**Reviewed By:** 

Tim Burkhard Project Resident Manager Phone: 505.975.8655

Approved By: Scott Related

Date: 12 - 20 - 13

Date: 14 Dec. 2013

Date: 12-19-2013





## ATTACHMENT A

Name	Dec 1	Dec 2	Dec 3	Dec 4	Dec 5	Dec 6	Dec 7
Tim Burkhard		PR	PR	PR	PR	PR	PR
Steve Rice	-	UG	UG	UG	UG	UG	
Ben Melly	-	ST	ST	ST	ST	ST	ST
Robert Redd	-	-	-	UG	UG	UG	UG
Tyler Browning	-	-	ST	ST	ST	ST	
Reggie Long	-	ST	-	-	-	ST	ST
Eric Lorenson	-	ST	ST	ST	ST	ST	ST
Razi Molloy	-	LT	LT	LT	-	-	

# AMEC - 2013 COA Field Staff Schedule MLE2

## LEGEND

PS = Project Sponsor PCE = Project Certifying Engineer PM = Project Manager PR = Project Resident LS = Lead Soils Engineer LG = Lead Geosynthetics Engineer ST = Soil Technician LT = Laboratory Technician GT = Geosynthetics Technician FLM= Field/Laboratory Manager UG = Underground Working Remediation SE = Senior Engineer





Photographs of daily activities:



Photo 1: Placing, compacting and breaking oversize rocks at the buttress fill area.



Photo 2: Production drilling near Station A16+00 and cut removal near station A18+00.

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Photo 3: Excavating UG #6381-northwest side of the working.



Photo 4: Geogrid installation on UG #6372.

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# **CRIPPLE CREEK & VICTOR GOLD MINING Co.**

## Squaw Gulch (VLF), HWY 67 Realignment Field Monitoring Summary Weekly Report

<b>Owner:</b>	Cripple Creek & Victor Gold Mining Co.	Project Number:	Date
Project:	Squaw Gulch (VLF), Hwy 67 Realignment	74201125N0. ****. ****	12.21.2013
Location:	Cripple Creek & Victor Gold Mine, Colorado		
<b>Contractor:</b>	Ames Construction Co. Inc.		

Reporting Period: 12.15.13 thru 12.21.13

	Days	S	M	Т	W	T	F	S
Work Shifts		-	D	D	D	D	D	D
		-	-	-	-	-	-	-

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Ambient Temperature Ranges for reporting period: Low: 12°F to 28°F High: 30°F to 45°F

Weather conditions for reporting period: Cloud Cover: Mostly clear to overcast. Precipitation: Snow on Saturday Dec. 21, 2013 Wind: Variable

Ames: Continuing construction tasks for HWY 67 and VLF.

Planning: Continuing construction activities and scheduling for VLF and HWY 67.

#### **CONSTRUCTION ACTIVITIES and PROGRESS:**

#### I) Earthworks

## A) VLF (Phase I)

Topsoil / Overburden Stripping: No topsoil or overburden stripping occurred this week; however, the slopes of the Area 34 Topsoil Stockpile were graded by dozers.

Production drilling: Production drilling occurred during this reporting period within the planned VLF limits.

Production blasting: Four blasts occurred during this reporting period within planned VLF limits.

#### Structural Fill:

Cat 992 loaders and a John Deere 870 excavator removed structural material from near Bench A between approximate stations A6+00 and A20+00. The material was loaded into 777 haul trucks and transported to the ADR road fill between station 54+00 and 59+00 and to the buttress fill area between Dump 4 and the Ball Mill fill. A Cat D8 and D9 dozer were used to spread the loose lifts and compaction was achieved utilizing a Cat CS56 smooth drum roller by method specification. Any oversized material encountered was broken with a Cat excavator hammerhoe.

A John Deere 850 excavator, a Cat CS56 smooth drum roller, two Cat D8 dozers, and Cat 740 haul trucks were used for cut to fill activities near the Phase 2 Diversion Channel adjacent to Dump 4 at approximate station 31+50. Material was cut from station 22+00 to 30+00 and placed in the wash adjacent to Dump 4 to create a ramp for haul truck access. Rock fill was placed in less than 3 foot lifts by the Cat D8 dozers. Compaction was completed per method specification.

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Cat dozers graded the slopes downwards near station Q6+00 to Q12+00 and stockpile shot rock near station A6+00.

A Cat 330 excavator was grading the 1/2 to 1 slope on the northwest side of the PSSA area near stations A0+00.

### Clay (SLF) Processing:

Cameron Site: No Clay mining or processing occurred at the Cameron Site. Approximately, 244,860 tons of clay / soil liner fill (SLF) material have been produced at the Cameron site. SLF produced from the operation remains stockpiled at Cameron Site for later removal / use.

Squaw Gulch Clay Borrow Site: Clay processing took place at the Squaw Gulch Clay Borrow Site. Approximately, 19,300 tons of soil liner fill material has been produced at the Squaw Gulch Clay Borrow Site to date.

A John Deere 870 excavator was used to load Cat 777 haul trucks with clay till at the upper portions of the Squaw Gulch Clay Borrow area. The till was transported to lower portion of the borrow area for processing.

#### Underdrain System:

Secondary Underdrain: Approximately, 200 feet of secondary underdrain was installed between stations C6+00 and E11+00 and 810 feet was installed in the Phase 2 diversion Channel area adjacent to Dump. Approximately, a total of 5,064 feet of Secondary underdrain has been completed.

**Primary Underdrain:** No work was performed on the Primary underdrain during this reporting period. A total of 1,294.60 feet of Primary underdrain has been completed.

## Tree /Slash Grubbing and Clearing, Chipping:

No clearing and grubbing occurred.

#### B) Underground Workings

Confirmatory drilling was performed on underground working No. U6397. All borehole locations were established on a 4-foot center isolating any voids found. Further remediation efforts will be ongoing until remediated. Summary of the remediation efforts will follow when remediation is completed.

UG #6123 was blasted and the shot rock was removed from the working.

Two depressions were excavated at UG U6387 to competent rock at depths of 16 feet and 22 feet. The depressions were backfilled using excavated material placed in 18 inch to 25 inch lifts that were compacted using the excavator bucket.

#### C) Highway 67

No significant construction activities were observed at the Highway 67 Realignment.

#### South MSE Wall:

No significant activities occurred at the South MSE Wall; however, Ames worked on removing tailings and timbers from the Crib Wall. The timbers will be used as the facade at the south MSE wall; the tailings were stockpiled for later removal.

#### II) Storm Water Management

Best Management Practices (BMP) is being performed. Erosion control efforts took place during this reporting period following any precipitation.





### **CQA ACTIVITIES:**

- Field Activities: Observation of construction activities during this reporting period included: Production drilling and blasting; VLF cut to fill and compaction; Underground remediation and confirmation drilling; Slope grading; Slope grading at Topsoil Stockpile #34; Timber / tailings removal from the crib wall; Secondary underdrain work; and clay (Soil Liner Fill—SLF) and Drain Cover Fill (DCF) processing.
- II) <u>Laboratory Activities:</u> Laboratory testing continued with Permeability, Particle Size Distribution, Atterberg Limits, Moisture-Density, gradations and material classification and identifications and field material sampling were performed during this reporting period.
  - SLF: Sample Numbers 77-S through 79-S were obtained during this reporting period. Note that samples with the suffix "-S" indicate the material originated from the Squaw Gulch Borrow Site; sample numbers lacking the suffix are from the Cameron Site.
  - DCF: Sample Numbers 44 and 45 were obtained during this reporting period.

#### General Project Items

Meetings and Discussions: The Weekly Project Status meeting was held on December 18th between CC&V, Ames, and Amec.

#### Summary of Concerns: None

CC&V: Daily updates, reporting and scheduling are some of the tasks occurring between CC&V Projects, Amec and Ames.

Miscellaneous: None.

**Deliveries:** None

Submitted by: Eric Lorenson	Date: 21 Dec. 2013
CQA Monitor	
Poviourad Bu:	Date: 2-21-13

Tim Burkhard Project Resident Manager Phone: 505.975.8655

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ed By: _	Signer	war	

Date: /-2-14

Approved By: \_ CC&V Projects





# ATTACHMENT A

# AMEC - 2013 COA Field Staff Schedule MLE2

Name	Dec 15	Dec 16	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21
Tim Burkhard	-	PR	PR	PR	PR	PR	PR
Steve Rice	-		-	UG	UG	UG	
Ben Melly	-	ST	ST	ST	ST	ST	ST
Robert Redd	-	UG	UG	UG	UG		
Tyler Browning	-	_	ST	ST	ST	ST	ST
Reggie Long	-	ST	ST	ST	-		
Eric Lorenson		ST	ST	ST	ST	ST	ST
Razi Molloy	-	LT	LT	LT	11	IT	

## **LEGEND**

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# Photographs of daily activities:



Photo 1: Cut removal and production drilling along Bench A.



Photo 2: Secondary underdrain installation near the Phase 2 Diversion Channel.

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Photo 3: Preparation for timber removal at the Crib Wall



Photo 4: Cut operations between stations Q6+00 and A6+00.

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