



STATE OF
COLORADO

Cazier - DNR, Tim <tim.cazier@state.co.us>

ECOSA Field Fit Ditches

Comer, Timm <TComer@anglogoldashantina.com>

Wed, Apr 10, 2013 at 8:25 AM

To: "Cazier - DNR, Tim" <tim.cazier@state.co.us>

Tim,

Attached is the analysis I had Adrian do on field fitting in the drainage ditches that are being installed beneath the ECOSA. He feels comfortable with the field fit, but would like to see it when it is complete. I will let you know, it is getting close to being complete and I would like you to see it too.

Timm

Timm C. Comer
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1385_20130314_AB_ECOSA Underdrain Modification.pdf

1545K

15 March 2013

Timm C. Comer
Manager, Environmental Resources
AngloGold Ashanti (Colorado) Corp.
Victor, Colorado
Email: tcomer@anglogoldashantina.com

Re: **Modification of ECOSA Underdrain System**

Dear Timm:

Application has been made for approval of a modification to the underdrain system of the East Cresson Overburden Storage Area ("ECOSA").

The original underdrain design was included in the Mine Life Extension Permit M-1980-244, and is shown in Plate 14 of the ECOSA design report (Attachment 1 to this letter). The design comprised three parallel 7.3 feet deep seepage mitigation trenches beneath the western half of the ECOSA, whose purpose was to conduct any seepage through the western portion of the ECOSA that overlies Precambrian rock to the east, for infiltration into areas underlain by the drained Tertiary volcanic diatremal rock.

The topography and shape of the ECOSA have changed since the design was undertaken, as a result of mining of clay-rich material from the footprint of the ECOSA, particularly in the western half. Cripple Creek & Victor Gold Mining Company ("CC&V") have proposed a modification to the uppermost (most southerly) seepage mitigation trench to accommodate the changed circumstances, as shown in Attachment 2 to this letter. The southern trench is proposed to start at approximately the original location, and to extend eastward with a 1% downward slope to a clay borrow area in the center west of the ECOSA footprint, where any water contained in the trench will be directed. The trench will not continue beyond the borrow area.

This modification has been reviewed with respect to the purpose of the trench:



1. Removal of seepage from the Precambrian area underneath ECOSA. The proposed mitigation trench alignment provides drainage from the same area as the original trench, with the same 1% eastward slope, so the drainage capability is unchanged.
2. Infiltration of any captured seepage water to the diatreme rock. The infiltration area of the base of the proposed mitigation trench and borrow area where it discharges that overlies the diatreme is 7,500 square feet in the trench, and up to 90,000 square feet in the borrow pit area. This infiltration area greatly exceeds the 15,000 square feet infiltration area in the original design.

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Based on this evaluation, the proposed trench re-alignment is approved.

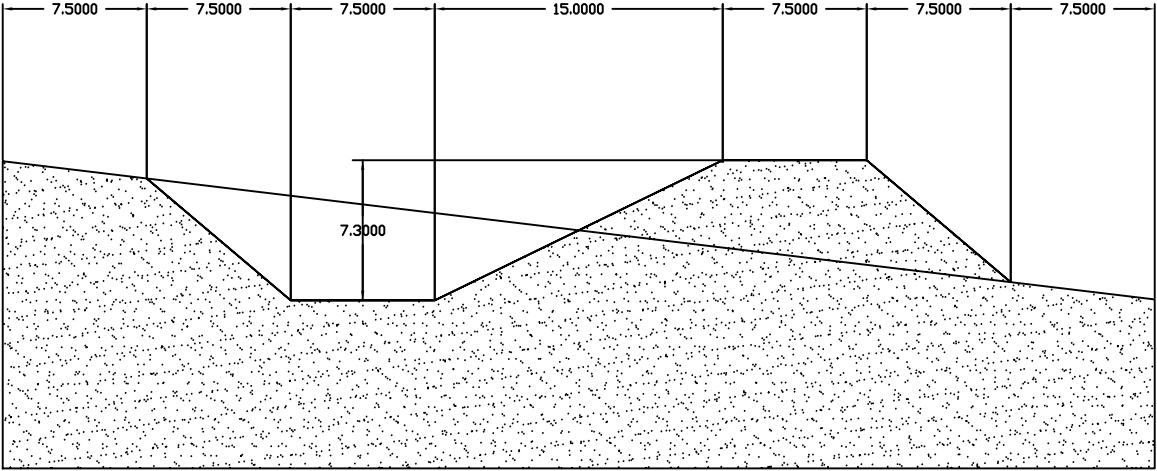
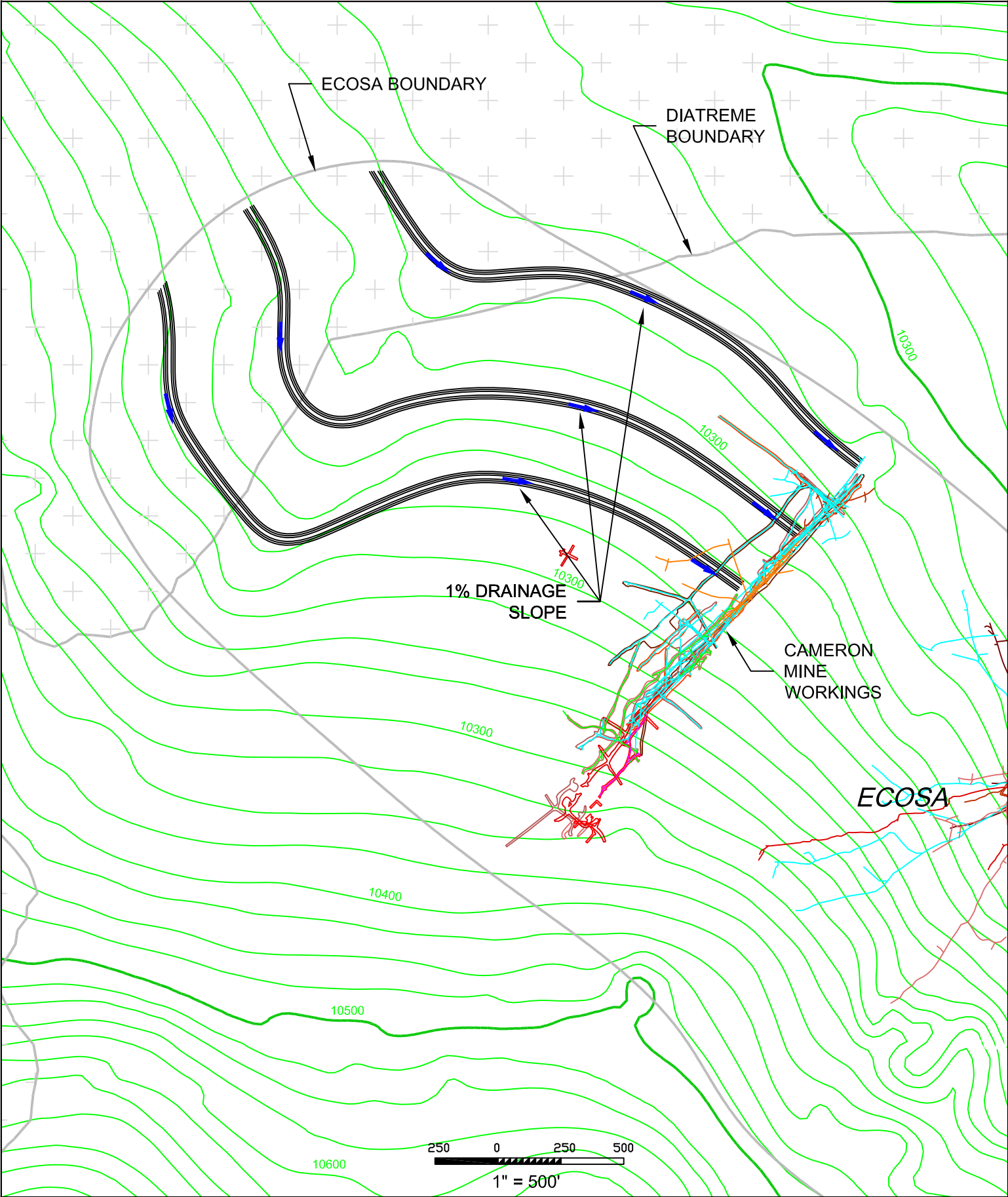
Following construction of the re-aligned trench, and prior to covering with ECOSA overburden material, the trench shall be inspected by a qualified Professional Engineer, and the opportunity to inspect the trench shall be offered to the Colorado Department of Natural Resources, Division of Reclamation, Mining and Safety.

Respectfully submitted,
Adrian Brown Consultants, Inc.

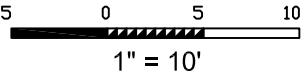
 

Adrian Brown, P.E.

cc: Levi Bates, AngloGoldAshanti North America
Koehler Anderson, AngloGoldAshanti North America
Jeff Gaul, AngloGoldAshanti North America
Marc Tidquist, AngloGoldAshanti North America
Brandon Heser, AngloGoldAshanti North America

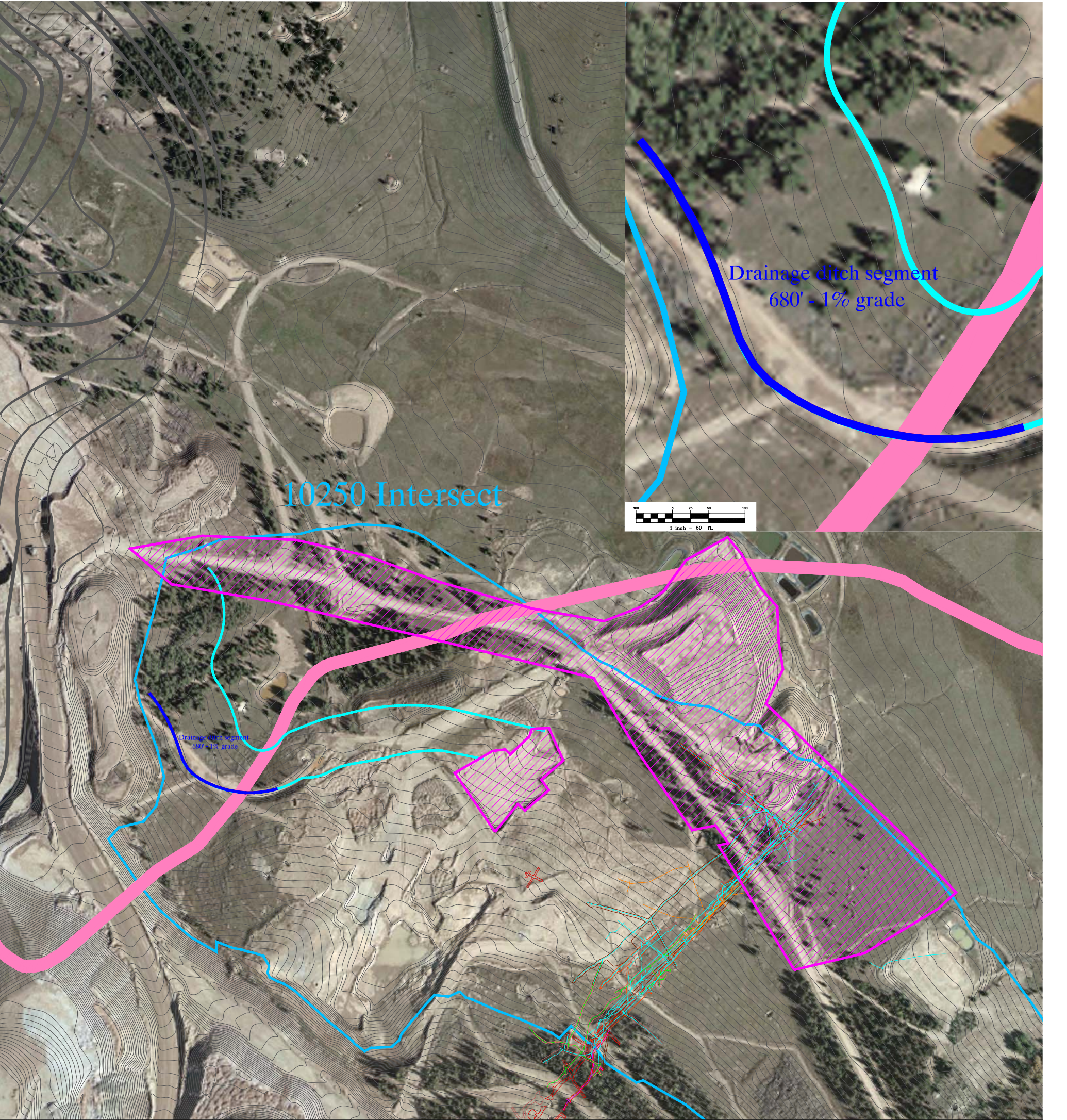


TYPICAL DRAINAGE DITCH CROSS SECTION

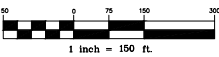


ATTACHMENT 1

Scale	As shown	East Cresson Overburden Storage Area
Design:	A. Brown, P.E. 22-Feb-2012	PLATE 14
Drawing:	MLE2-Master-35-ECOSA.dwg	SEEPAGE MITIGATION TRENCH SYSTEM
File:	D:\...\1385_cri-mle2\4_Maps	



- | | | | |
|--|-------------------|--|-----------------------------|
| | Proposed Ditch | | 5' Interval Contour Lines |
| | Diatreme | | Active Stope Location |
| | Completed section | | Underground Workings(Other) |
| | 10250 Intersect | | Clay mining area |



AngloGold Ashanti (Colorado) Corp.
Cripple Creek & Victor Gold Mining Company

Ecosa Ditch Proposal
3/11/2013

