

February 9, 2021

Sent Via Email and ePermitting Submission System

Mr. Peter Hays
Division of Reclamation Mining and Safety
1313 Sherman St., Rm. 215
Denver, CO 80203

RE: Climax Molybdenum Company, Henderson Mill, Permit No. M-1977-342, Technical Revision 33, Expansion of Mill-EPF 1.5 – Seep Water Collection and Return System

Dear Mr. Hays:

The Henderson Mill is submitting this Technical Revision to Permit No. M-1977-342 for an expansion of Mill EPF 1.5 – Seep Water Collection and Return System. This expansion consists of an engineered storage area for materials that are excavated from the seep canals associated with the EPF.

Currently, excavated materials from the seep water canals are stored on the south side of the Seep Water Collection and Return System EPF for drying. The water contained in these materials drains back into the seep water collection system and is pumped to the surface of the tailing storage facility (TSF) by the Ute Park Pump Station. The dried materials are then used on the face of the TSF to repair erosion caused by rain events and snowmelt runoff. The storage area was utilized for this purpose due to the convenience of being located within the footprint of the EPF. However, it has not been ideal as the area doesn't drain well and is not set up properly for loading of materials into trucks for placement on the TSF. It was determined that a new material storage area was needed.

This new storage area, called the Seep Spoils Storage Area, was constructed near the base of 1-Dam on the north side of the EPF where conditions were more ideal. The slope of the ground allowed water to drain into the seep collection system and it was constructed to allow for proper loading of haul trucks. Although construction of the berm and drainage system has already been completed, tailing material has not yet been placed in it. In conversations with you during your June and July Mill inspections, it was requested that Henderson produce as-built drawings and ground investigations to ensure that water draining from the excavated materials will be captured in the EPF. Accompanying the following narrative description are as-built drawings by W.W. Wheeler & Associates, Inc. (Attachment 1) and geologic cross-sections and test pit data by Ajax and Clear Creek Associates.

In August, Henderson excavated and logged eleven (11) test pits to investigate geology and hydrologic conditions in the vicinity of the proposed Seep Spoils Storage Area. Five of the test pits (TP-1, TP-2, TP-3, TP-4, and TP-11) were located within or near the bermed area. The other six test pits were located to the east and investigated the extent of the Quaternary alluvial/glacial sediments (Qd) aquifer. The locations and surface elevation of the test pits and proposed facility are shown on Figure 2 (Attachment 2). The excavation depths of the test pits ranged from 2 ½ feet to 13 feet. The test pits located nearest the proposed Seep Spoils Storage Area were shallower due to the occurrence of competent unweathered bedrock nearer the surface (Attachment 3).

The five test pits located near the bermed area encountered either Tertiary Troublesome Formation and/or the Precambrian Idaho Springs Formation (Xg). The Troublesome Formation (Tt) consists of semi-

consolidated claystone or siltstone. The Precambrian Idaho Springs Formation (Xg) consists of biotite gneiss and migmatite. The upper Xg surface was weathered to depths of two to four feet. All five test pits were dry. Based on prior analyses and observations, the Tt and the Xg, in the vicinity of 1-Dam have very low permeability.

Of the six test pits excavated east of the proposed Seep Spoils Storage Facility, two (TP-8 and TP-9) encountered Tt without encountering Qd sediments. The other four test pits bottomed in Qd sediments; however, the sediments were dry. Based on the findings of the test pits, the extent of Qd sediments is delineated to be south and east of the proposed facility, whereas the Seep Spoils Storage area is entirely constructed on low-permeability Tt and Xg.

Cross-sections A-A' and B-B' (presented in Figures 3 and 4 – Attachment 2), illustrate the topographic slope (graded to the southeast) and subsurface geology along with key features of the proposed Seep Spoils Storage Area. The cross sections show how the topography and geology will convey any stormwater and seepage draining from the stored materials to the filter drain and through the drainpipe outfall to the Seepwater Collection and Return System. It is unlikely any seepage would migrate outside of this flowpath; but if it did, the low permeability Tt claystone/siltstone would restrict further migration.

Henderson will not store materials in the Seep Spoils Storage Area until final approval by DRMS. In the meantime, please let me know if you need any additional information to complete your review of this submittal.

Regards,



Geoff Niggeler
Chief Environmental Engineer
Henderson Operations
Climax Molybdenum Company

Enc.

Attachment 1 – W. W. Wheeler & Associates, Inc. – Seep Spoils Storage Facility As-Built Drawings & Engineering Certification

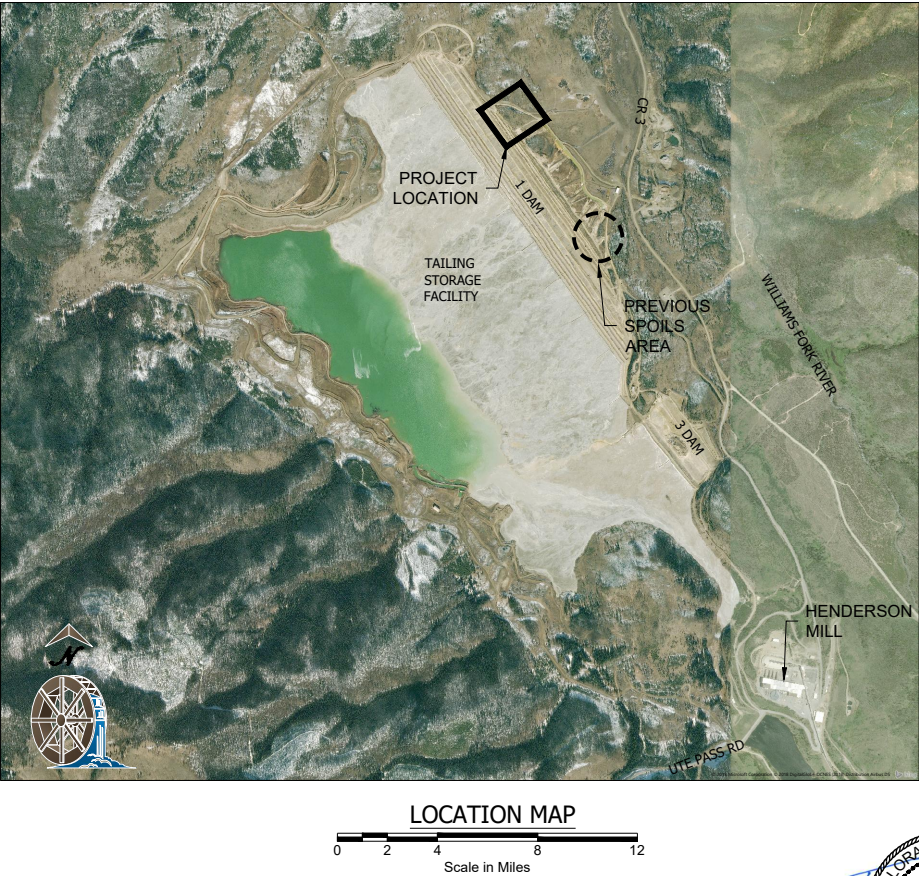
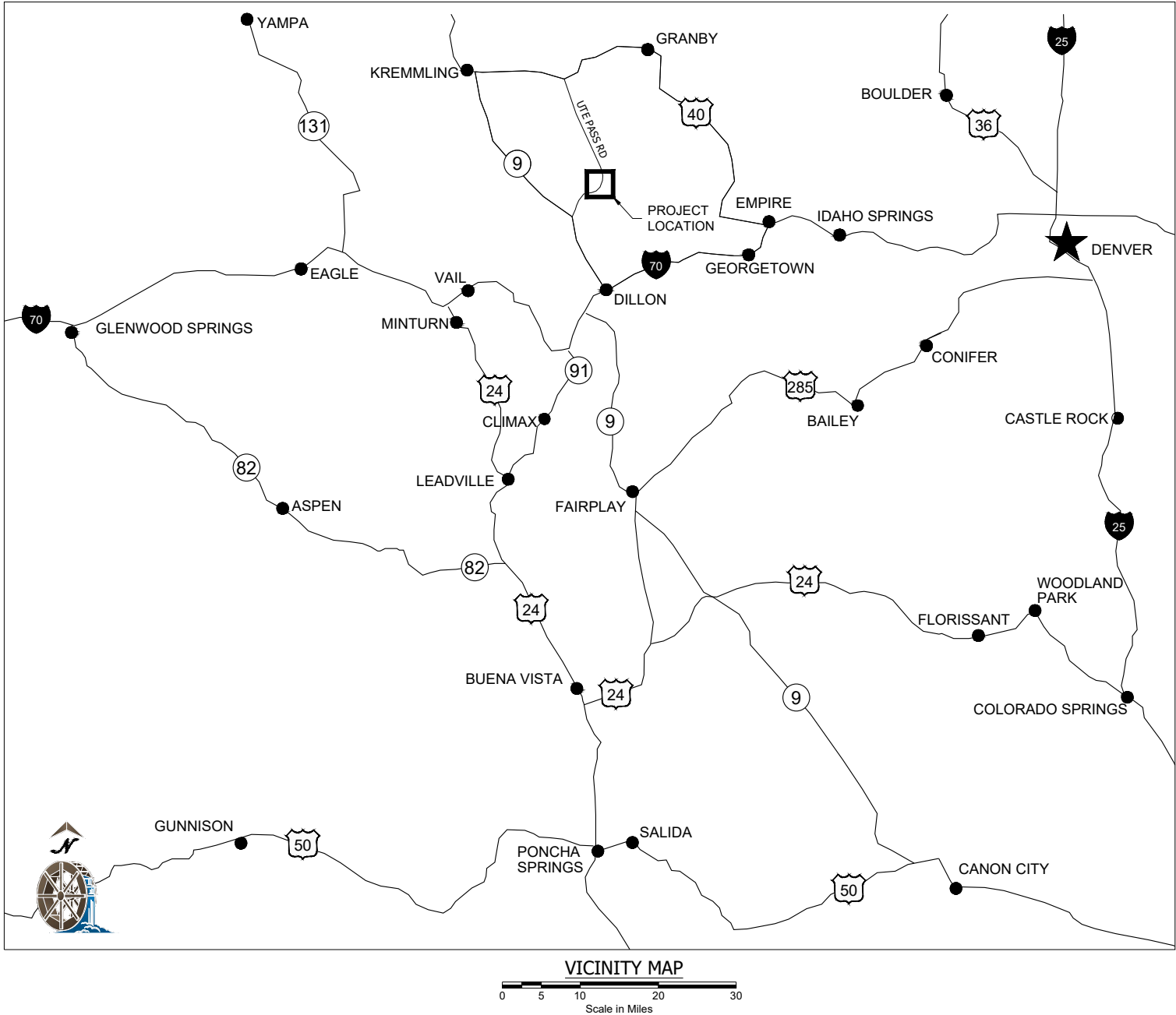
Attachment 2 – Ajax/Clear Creek Associates – Test Pit and Geologic Data Figures

Attachment 3 – Ajax/Clear Creek Associates – Test Pit Field Logs and Photographs

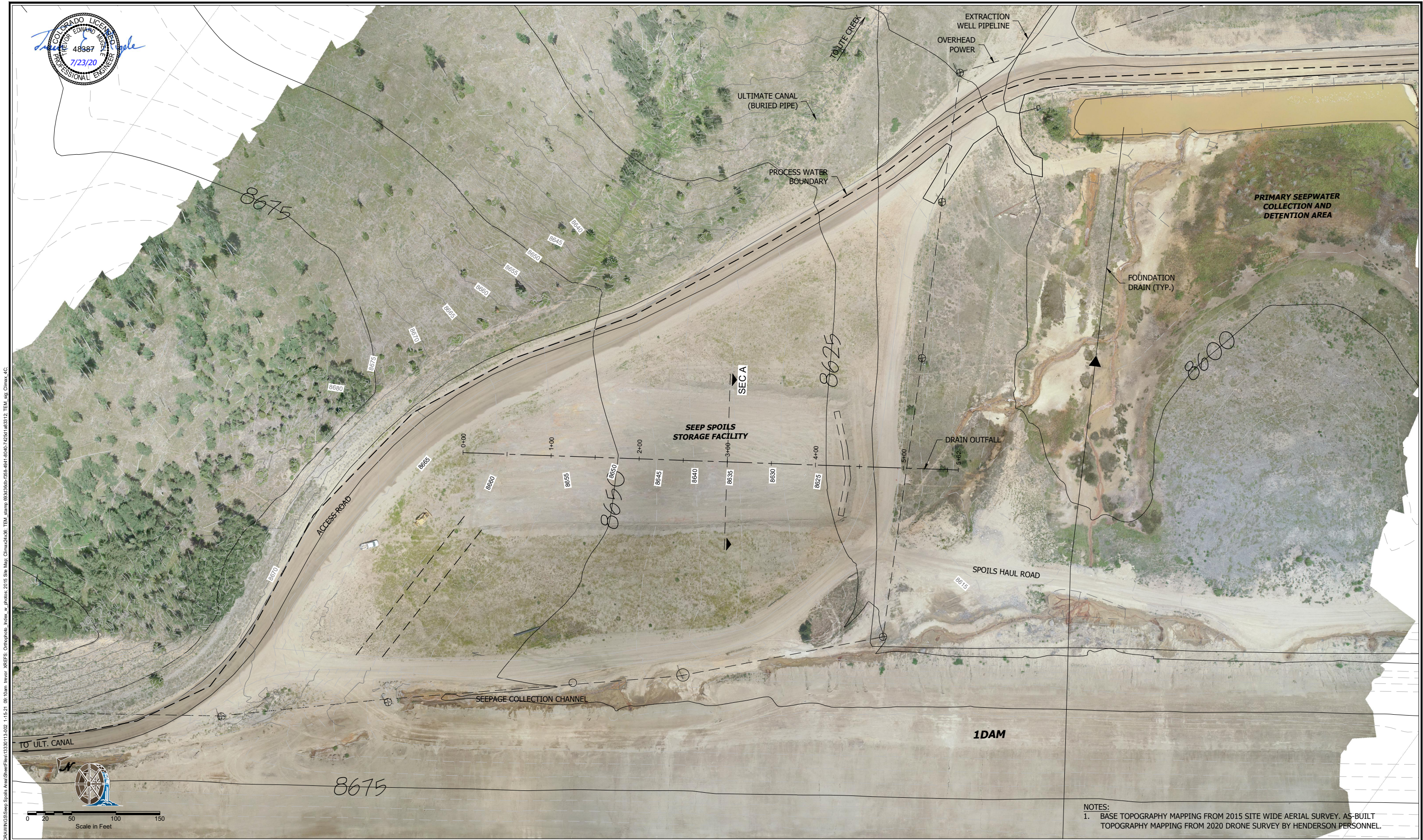
cc: Miguel Hamarat, Climax

SEEP SPOILS STORAGE FACILITY
HENDERSON MILL
PARSHALL, CO

DRAWING INDEX	
DRAWING NO.	DRAWING TITLE
G1	COVER SHEET, DRAWING INDEX, AND LOCATION MAPS
G2	GENERAL ARRANGEMENT - SITE PLAN
C1	AS-BUILT - PLAN VIEW
C2	AS-BUILT - PROFILE, SECTIONS, AND DETAILS



REVISIONS	NO.	DATE	MADE BY	CKD. BY	REMARKS	REFERENCE DWGS	DRAWING NO.	REFERENCE	Climax Molybdenum A Freeport-McMoRan Company W. W. WHEELER & ASSOCIATES, INC Water Resources Engineers 3700 S. INGA STREET ENGLEWOOD, CO 80110-3405 303-761-4130 FAX 303-761-2802	SEEP SPOILS			Climax Molybdenum Henderson Mill			
		07/20	SAA	TEM	RECORD DRAWING		<i>"This drawing together with any and all additions, corrections, changes and alterations thereof is the property of Climax Molybdenum Company and is furnished on the express condition that it shall not be reproduced, copied, lent, or disposed of directly or indirectly, nor used for any other purpose than for which it is specifically furnished without the prior written consent of said Climax Molybdenum Company."</i>				Parshall, CO		PROJECT NUMBER	1333.00		
												MADE BY	TEM	07/20		
												CHECKED BY	SMM	07/20		DRAWING NO.
												ACCEPTED BY	...			G1
																



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NOTES:
1. BASE TOPOGRAPHY MAPPING FROM 2015 SITE WIDE AERIAL SURVEY. AS-BUILT TOPOGRAPHY MAPPING FROM 2020 DRONE SURVEY BY HENDERSON PERSONNEL.

NO.	DATE	MADE BY	CKD. BY	REMARKS
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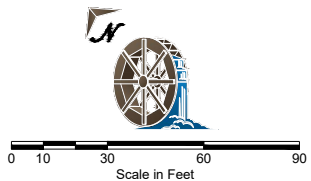
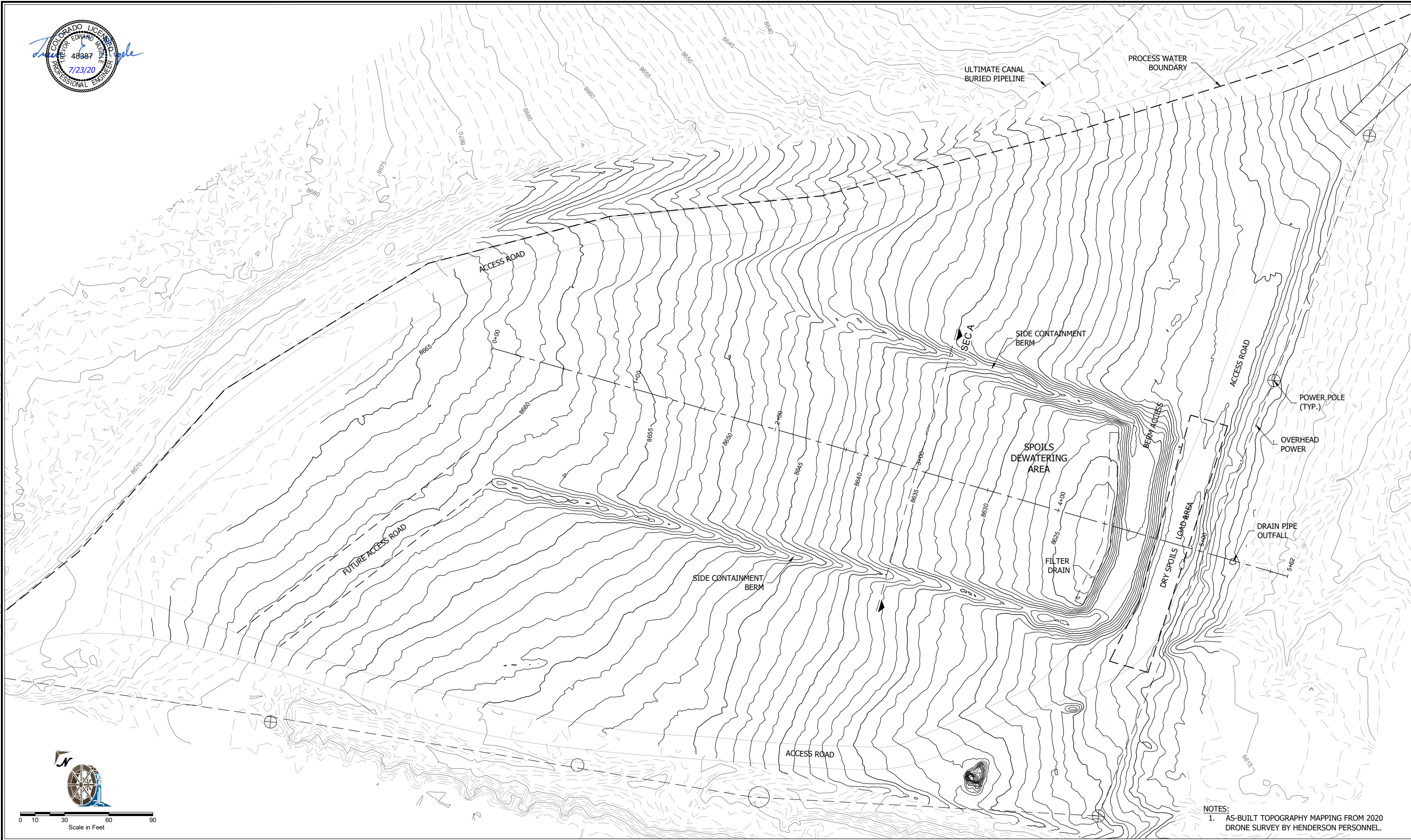
A Freeport-McMoRan Company



3700 S. INCA STREET
ENGLEWOOD, CO 80110-3405
303-761-4130
FAX 303-761-2802

SEEP SPOILS
STORAGE FACILITY
GENERAL ARRANGEMENT
SITE PLAN

Climax Molybdenum Henderson Mill Parshall, CO		
MADE BY TEM	07/20	PROJECT NUMBER 1333.00
CHECKED BY SMM	07/20	DRAWING NO.
ACCEPTED BY ...		G2



NOTES:
1. AS-BUILT TOPOGRAPHY MAPPING FROM 2020
DRONE SURVEY BY HENDERSON PERSONNEL.

REVISIONS	NO.	DATE	MADE BY	CKD. BY	REMARKS
	1	07/20	SAA	TEM	RECORD DRAWING

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REFERENCE DWGS	DRAWING NO.	REFERENCE



A Freeport-McMoRan Company

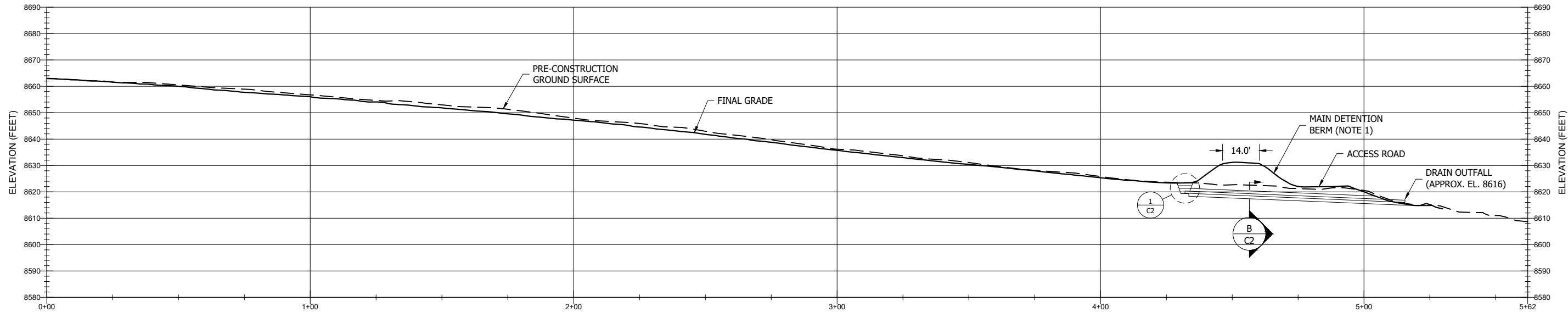


3700 S. INCA STREET
ENGLEWOOD, CO 80110-3405
303-761-4130
FAX 303-761-2802

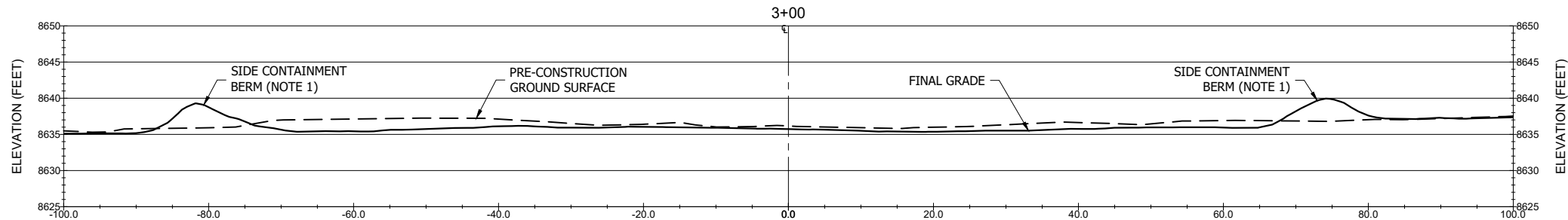
SEEP SPOILS
STORAGE FACILITY
AS-BUILT
PLAN VIEW

Climax Molybdenum Henderson Mill Parshall, CO		
MADE BY TEM	07/20	PROJECT NUMBER 1333.00
CHECKED BY SMM	07/20	DRAWING NO.
ACCEPTED BY ...		C1

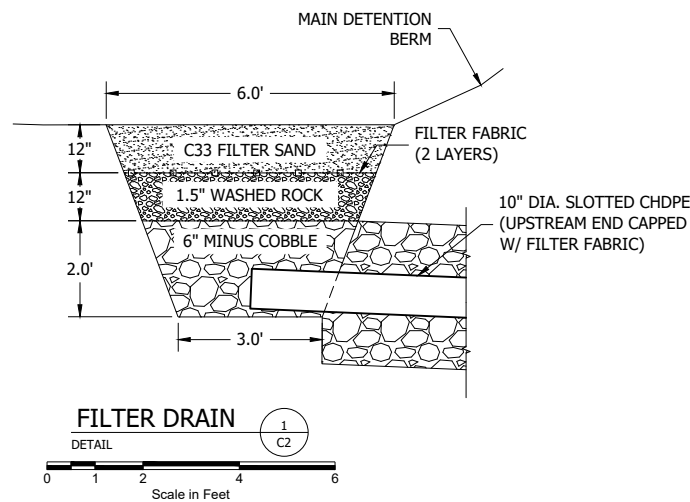
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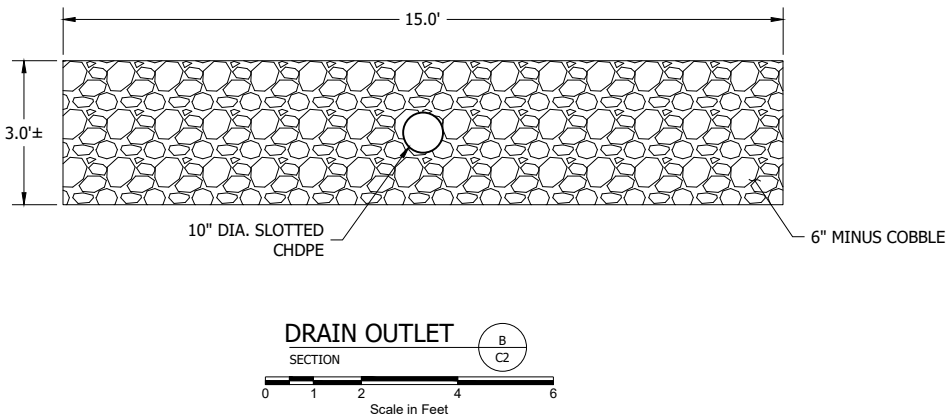
PROFILE VIEW OF SEEP SPOILS FACILITY



SEEP SPOILS STORAGE FACILITY
SECTION



FILTER DRAIN
DETAIL



DRAIN OUTLET
SECTION



- NOTES:
- BORROW MATERIALS FOR BERMS WAS SOURCED FROM SPOILS FACILITY FOOTPRINT AREA.
 - AS-BUILT CONDITIONS SHOWN FROM SURVEY DATA AND BASED IN PART ON INFORMATION THAT HAS BEEN PROVIDED BY OTHERS.

REVISIONS	NO.	DATE	MADE BY	CHKD. BY	REMARKS	REFERENCE DWGS	DRAWING NO.	REFERENCE	Climax Molybdenum A Freeport-McMoRan Company	3700 S. INCA STREET ENGLEWOOD, CO 80110-3405 303-761-4130 FAX 303-761-2802	W. W. WHEELER & ASSOCIATES, INC. Water Resources Engineers	SEEP SPOILS			Climax Molybdenum Henderson Mill Parshall, CO		
	1	07/20	SAA	TEM	RECORD DRAWING							STORAGE FACILITY			MADE BY TEM	07/20	PROJECT NUMBER 1333.00
												AS-BUILT			CHECKED BY SMM	07/20	DRAWING NO.
												PROFILE, SECTIONS, AND DETAILS			ACCEPTED BY ...		C2



Legend

- Test Pit
- Phase I Extraction Well
- Monitor Well
- Approximate Northwestern Extent of Qd Formation
- Ultimate Canal
- Canal
- Intermittent Surface Water
- Access Road

SCALE: 1 inch: 150 feet

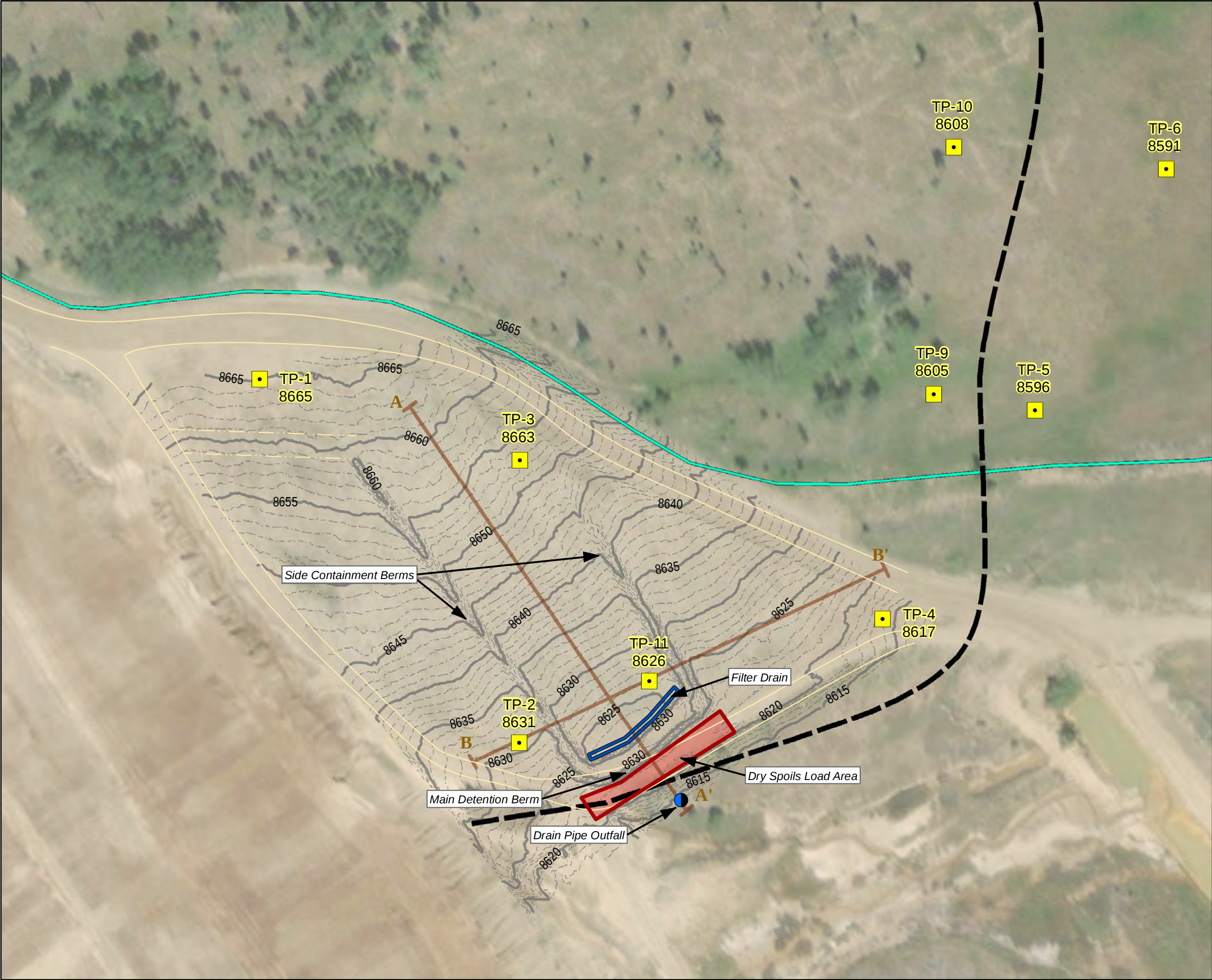
0 150 300 Feet

Service Layer Credits: Source: Esri, Maxar, 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.

Figure 1

Seep Spoils Storage Area Location Map

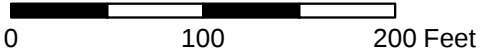
Henderson Mill, CO



Legend

- Test Pit Location and Survey Elevation (feet amsl)
- Topographic Index Contour (contour interval = 5 ft)
- Minor Topographic Contour (contour interval = 1 ft)
- Cross Section Trace
- Approximate Northwestern Extent of Qd Formation
- Ultimate Canal
- Access Road

SCALE: 1 inch: 100 feet

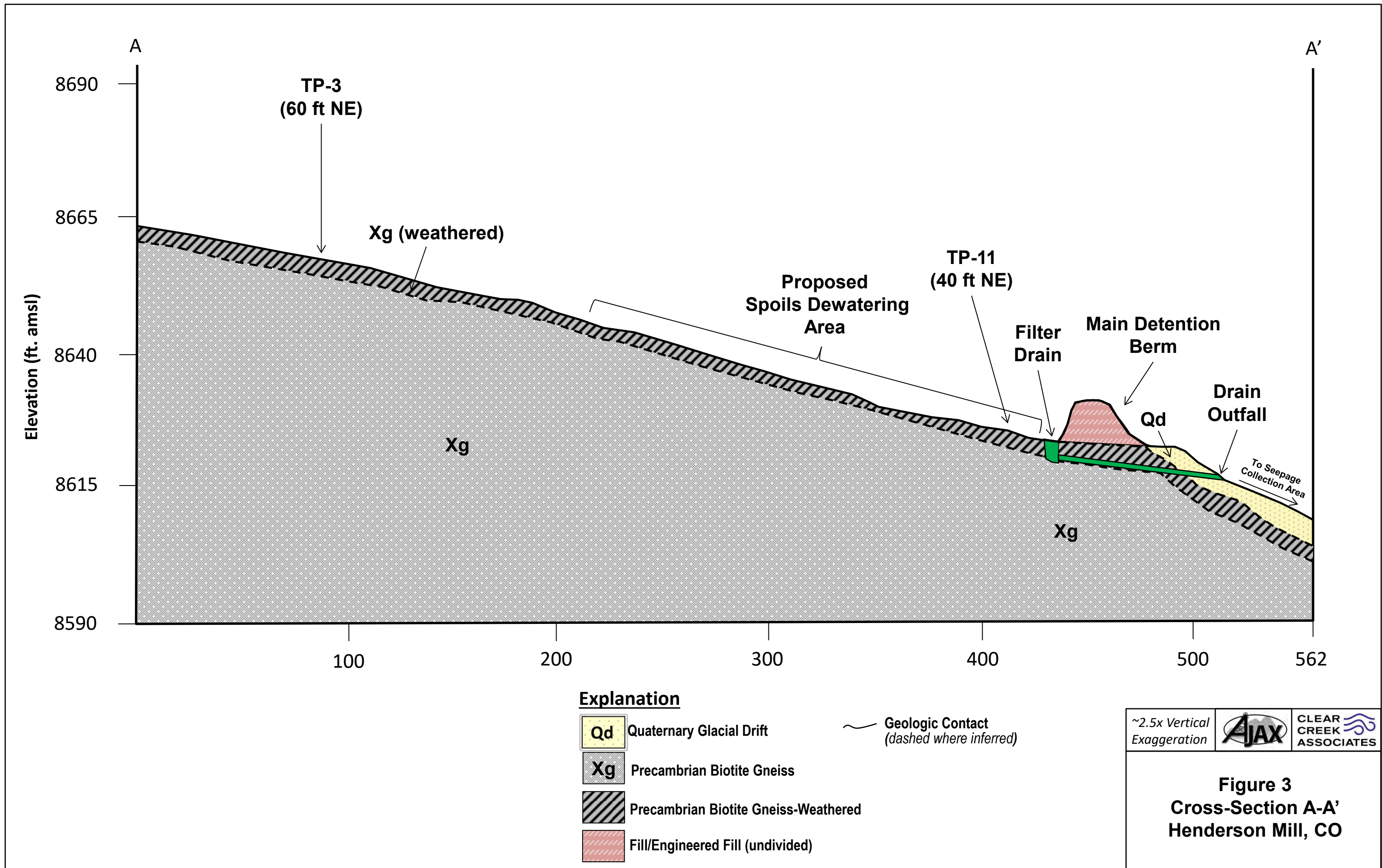


Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Imagery from USDA NAIP Natural Color Imagery for Colorado acquired 2013.



Figure 2
Seep Spoils Storage Area
and Test Pit Locations

Henderson Mill, CO



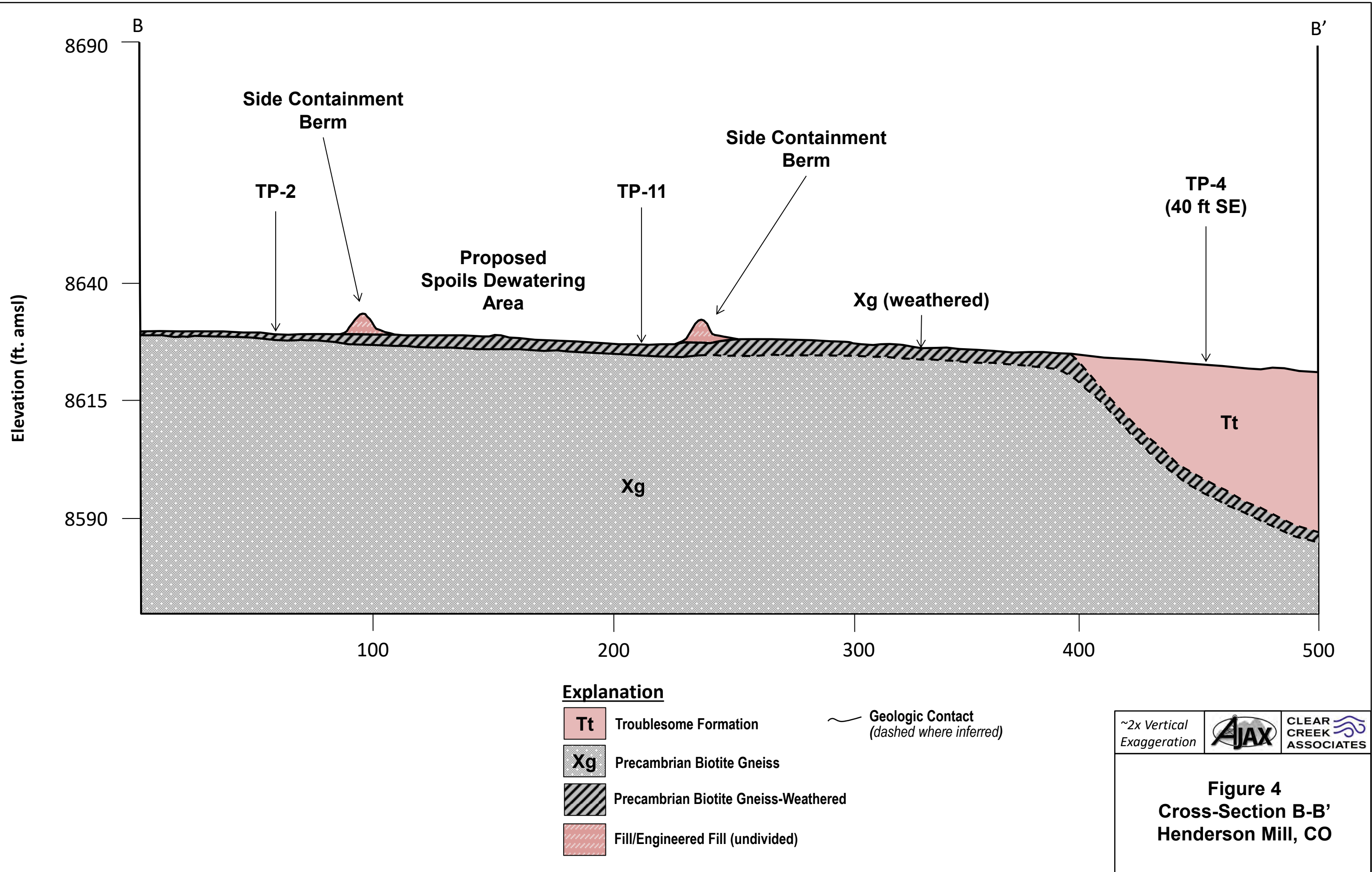


Table 1
Test Pit Summary
Henderson Mill 1-Dam Seep Spoils Storage Facility

Name	Mine Y (ft)	Mine X (ft)	Lat (Dec.Degree)	Long (Dec. Degree)	Elevation (ft amsl)	Lithology (depths ft)
TP-1	199266.406	1832412.279	39.8785288	-106.1009532	8665	0.0-5.5 Tt, dry 5.5-8.0 Weathered Xg, dry 8.0-8.0 Xg, refusal
TP-2	198876.339	1832690.891	39.8774631	-106.0999512	8631	0.0-0.5 Xg, refusal, dry
TP-3	199179.296	1832691.549	39.8782948	-106.0999561	8653	0.0-4.0 Weathered Xg, dry 4.0-4.0 Xg, refusal
TP-4	199009.187	1833080.926	39.8778349	-106.0985646	8617	0.0-7.0 Tt, dry
TP-5	199232.859	1833244.290	39.8784519	-106.0979879	8596	0.0-6.0 Qd, dry 6.0-6.0 Qd, cobbles, refusal
TP-6	199491.694	1833385.180	39.8791650	-106.0974920	8591	0.0-0.75 Topsoil, dry 0.75-8.5 Qd, dry
TP-7	199524.261	1833780.509	39.8792616	-106.0960842	8572	0.0-2.0 Topsoil, dry 2.0-13.0 Qd, dry
TP-8	199382.978	1833886.310	39.8788756	-106.0957039	8571	0.0-1.0 Topsoil, dry 1.0-12.5 Qd, dry
TP-9	199250.237	1833135.529	39.8784976	-106.0983758	8605	0.0-1.5 Topsoil, dry 1.5-7.0 Tt, dry
TP-10	199514.846	1833157.262	39.8792244	-106.0983047	8608	0.0-1.0 Topsoil, dry 1.0-8.0 Tt, dry
TP-11	198942.098	1832830.570	39.8776462	-106.0994550	8626	0.0-2.5 Weathered Xg, dry 2.5 -2.5 Xg, refusal

Tt - Tertiary Troublesome Formation

Xg - Precambrian Biotite Gneiss

TRENCH TEST PIT LOG FORM

Project Henderson Mill

Page 1 of 1

Sample Location Seep Spoils

Project Number _____

Trench Number TP-1

Date 8-5-20

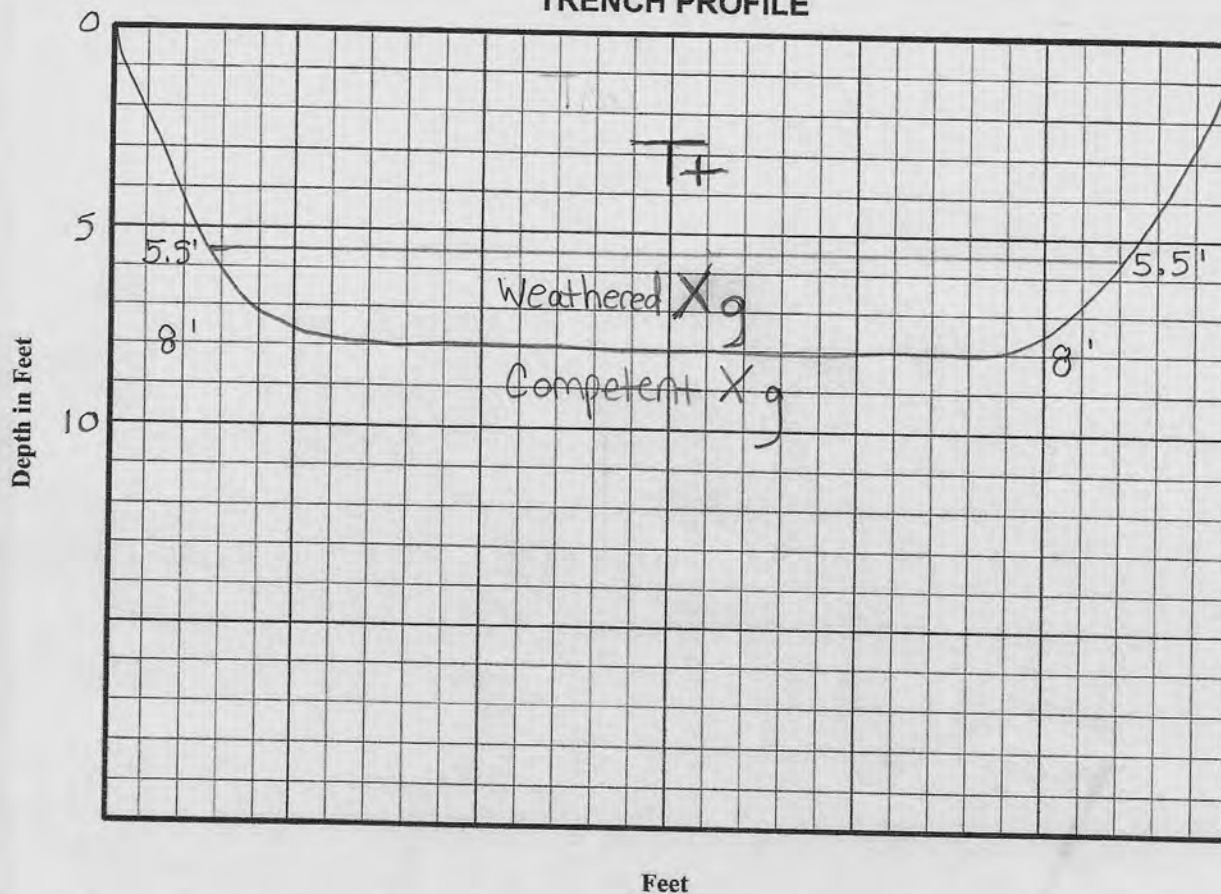
Coordinates: Inside Stake 39.8785288

Outside Stake _____

Native/Fill Stake -106.1009532

Logged By LWM

TRENCH PROFILE



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-2.5ft Troublesome Fm. (T+) Claystone, hard, dry, reddish brown
 2.5-5.5ft T+, Claystone with sand, friable, dry, reddish brown
 5.5-8.0ft Gneiss (Xg), highly weathered with clayey matrix
 dry to slightly moist, gray
 8.0ft+ Xg, hard, competent, refusal with excavator

Begin Trench 0915
 Total Depth 8 ft

Finish Trench 0935
 Total Length 6 ft

Trenching Contractor Ron Henderson

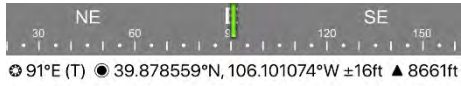
Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 1 (TP-1)

Coordinates: 39.8785288, -106.1009532

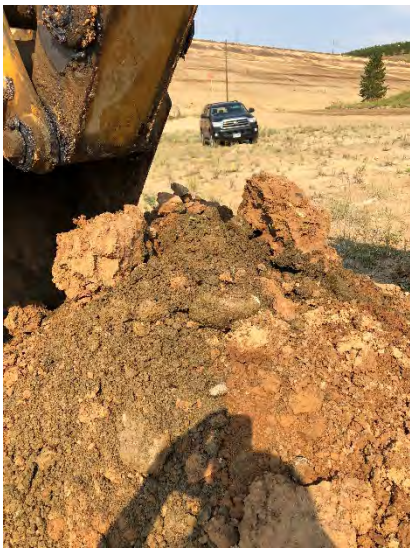
TP-1, looking E



TP-1, 0-5.5 ft, Tt



TP-1, Weathered Xg on Spoils Pile at 6 ft



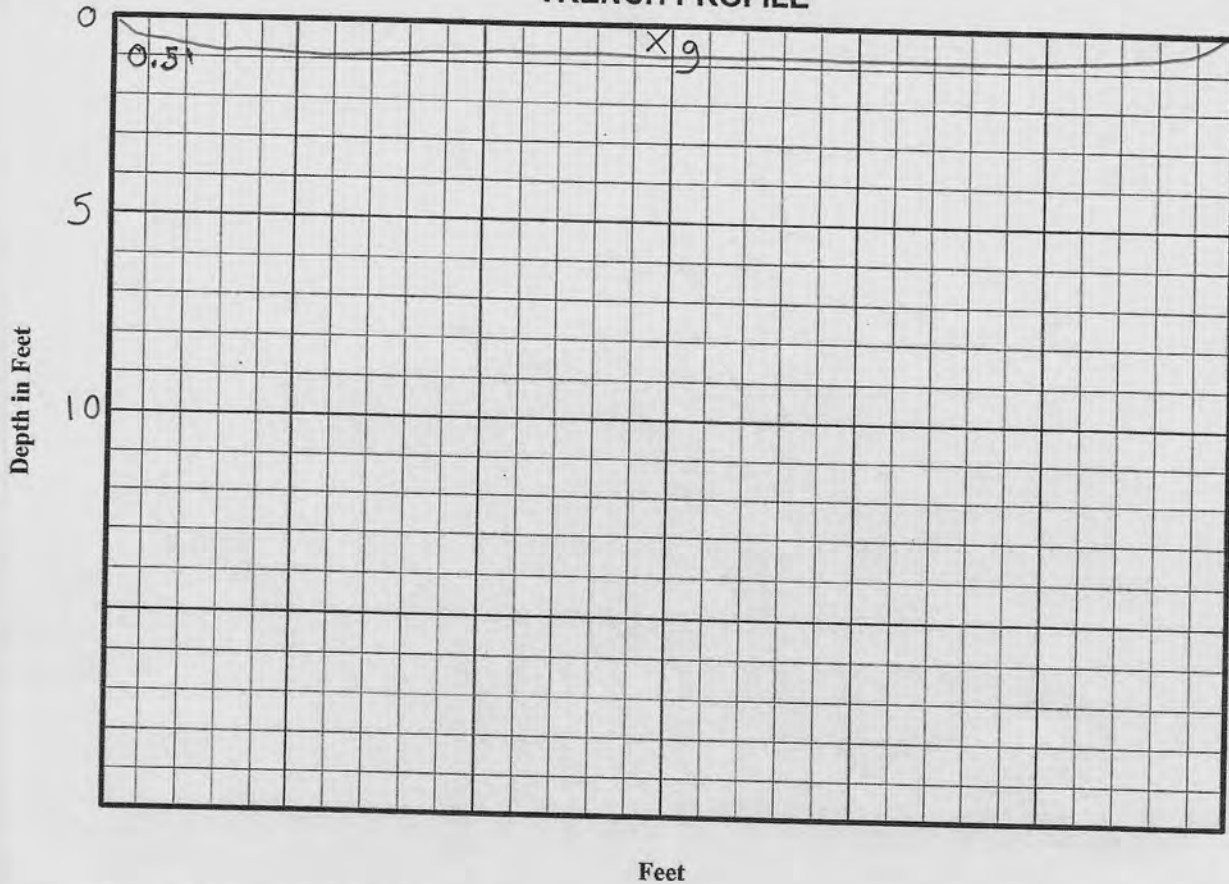
TP-1, Spoils pile, Weathered Xg



TRENCH TEST PIT LOG FORM

Project Henderson Mill Page 1 of 1
 Sample Location Seep Spoils Project Number _____
 Coordinates: Inside Stake 39.8774631 Trench Number TP-2 Date 8-5-20
 Native/Fill Stake -106.0999512 Outside Stake _____
 Logged By LWM

TRENCH PROFILE



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-0.5ft+ Gneiss (Xg),
Refusal with excavator

Begin Trench 0905 Finish Trench 0910 Trenching Contractor Ron-Henderson
 Total Depth 0.5' Total Length NA

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 2 (TP-2)

Coordinates: 39.8774631, -106.0999512

TP-2, looking E



TP-2, 0-0.5 ft, Xg



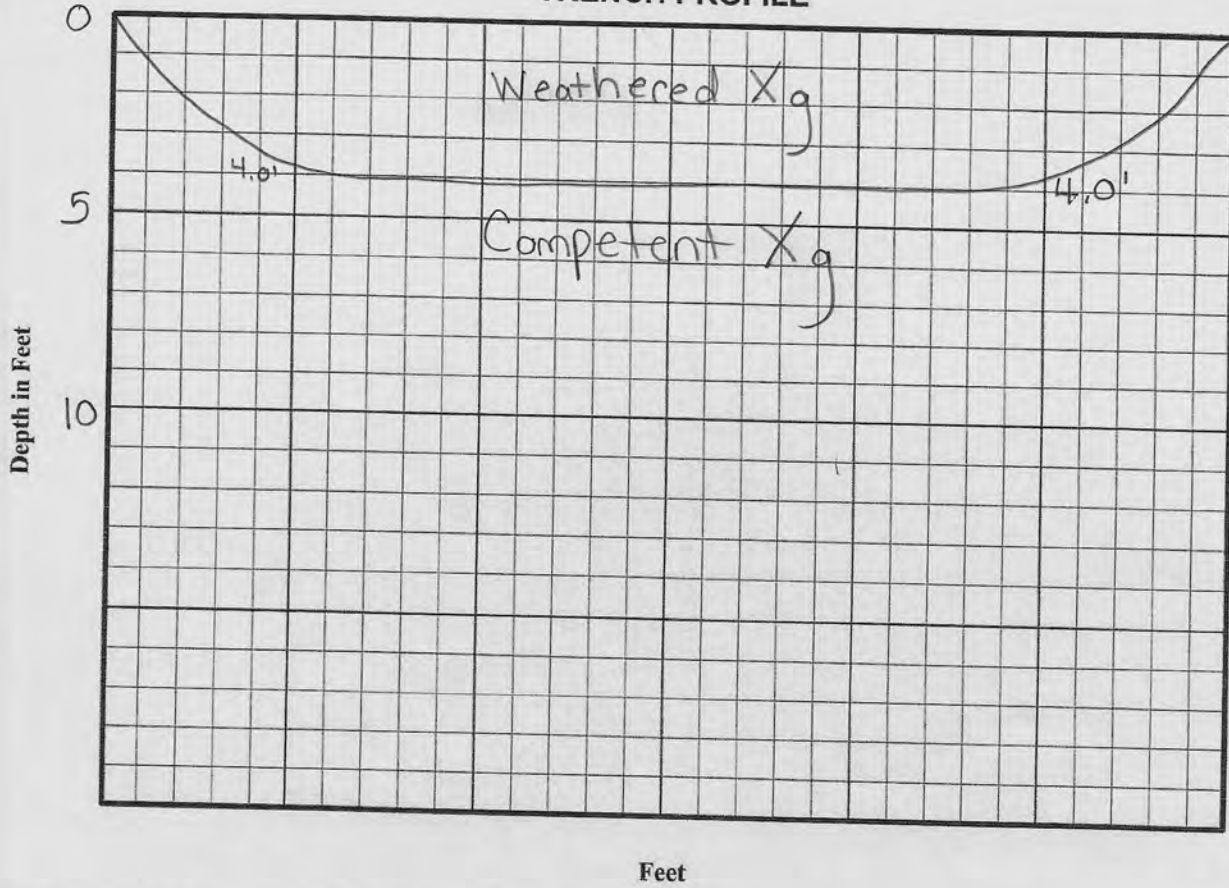
TP-2, 0-0.5 ft, Xg



TRENCH TEST PIT LOG FORM

Project Henderson Mill Project Number _____ Page 1 of 1
 Sample Location Seep Spoils Trench Number TP-3 Date 8-5-20
 Coordinates: Inside Stake 239.8782948 Outside Stake _____
 Native/Fill Stake -106.0999561
 Logged By LWM

TRENCH PROFILE



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-4.0 ft Gneiss (Xg), highly weathered, iron staining, dry friable, banding
 4.0 ft Xg, competent, excavator refusal

Begin Trench 0948 Finish Trench 1000 Trenching Contractor Ron-Henderson
 Total Depth 4 ft Total Length 5 ft

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 3 (TP-3)

Coordinates: 39.8782948, -106.0999561

TP-3, looking SE



TP-3, 0-2 ft, Weathered Xg



TP-3, 0-3 ft, Weathered Xg

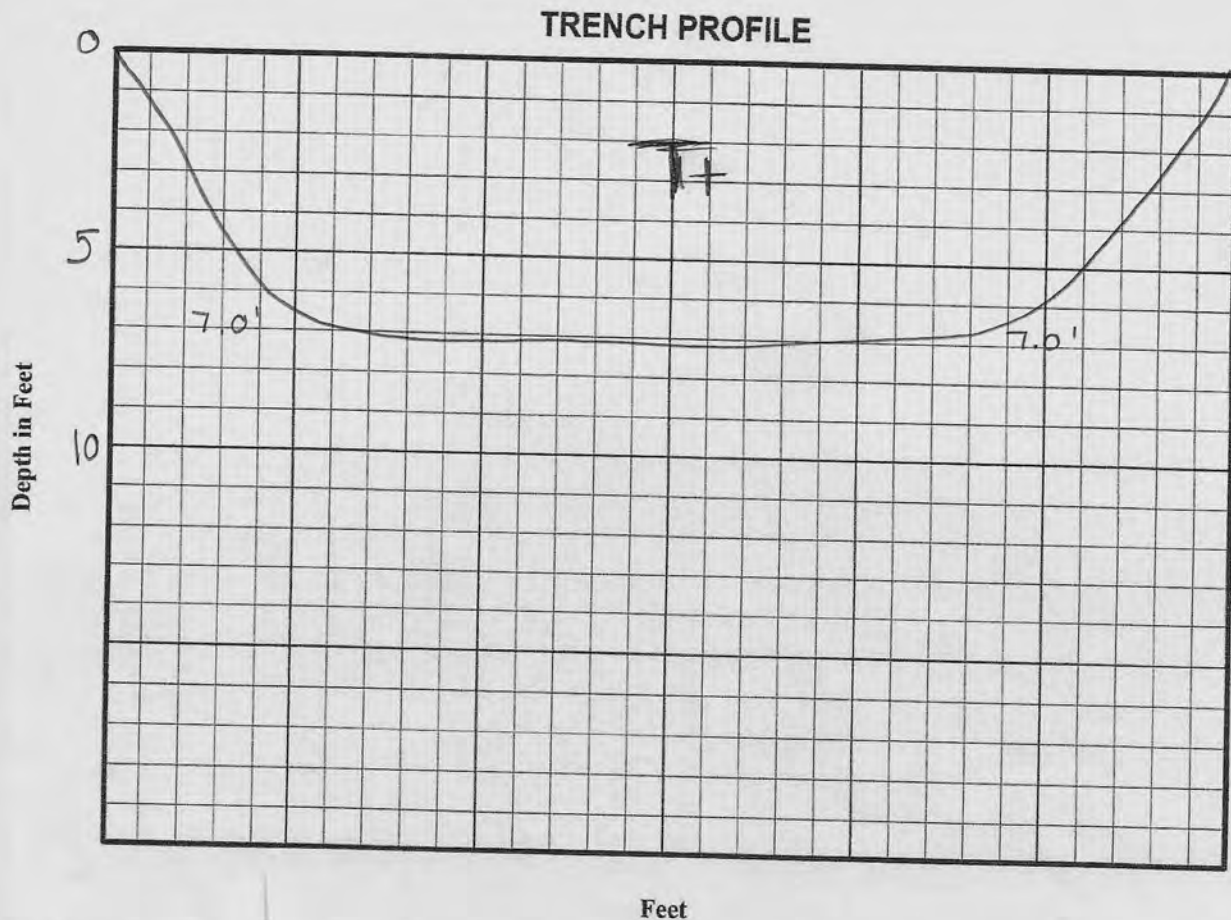


TP-3, 0-3 ft, Weathered Xg



TRENCH TEST PIT LOG FORM

Project Henderson Mill Page 1 of 1
 Sample Location Seep Spoils Project Number _____
 Coordinates: Inside Stake 39.8778349 Trench Number TP-4 Date 8-5-20
 Native/Fill Stake -106.0985646 Outside Stake _____
 Logged By LWM



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-4.5 ft Troublesome Fm (Tt) Claystone, firm, dry, schist frag
4.5-7.0 ft Tt Claystone with sand, soft to firm, dry, reddish brown

Begin Trench 0825 Finish Trench 0850 Trenching Contractor Ron-Henderson
 Total Depth 7 ft Total Length 8 ft

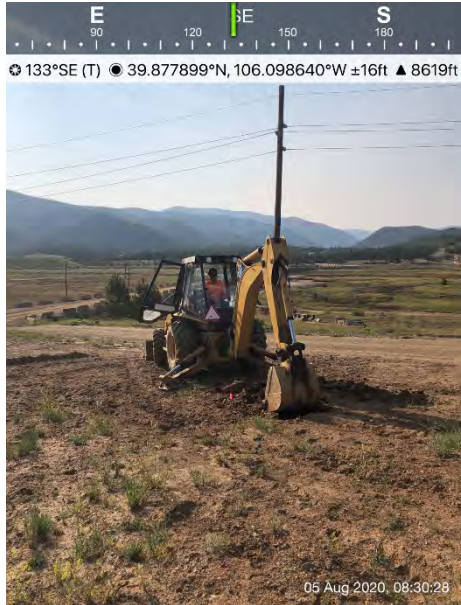
Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 4 (TP-4)

Coordinates: 39.8778349, -106.0985646

TP-4, looking E



TP-4, 0-3 ft, Tt



TP-4, 0-5 ft, Tt



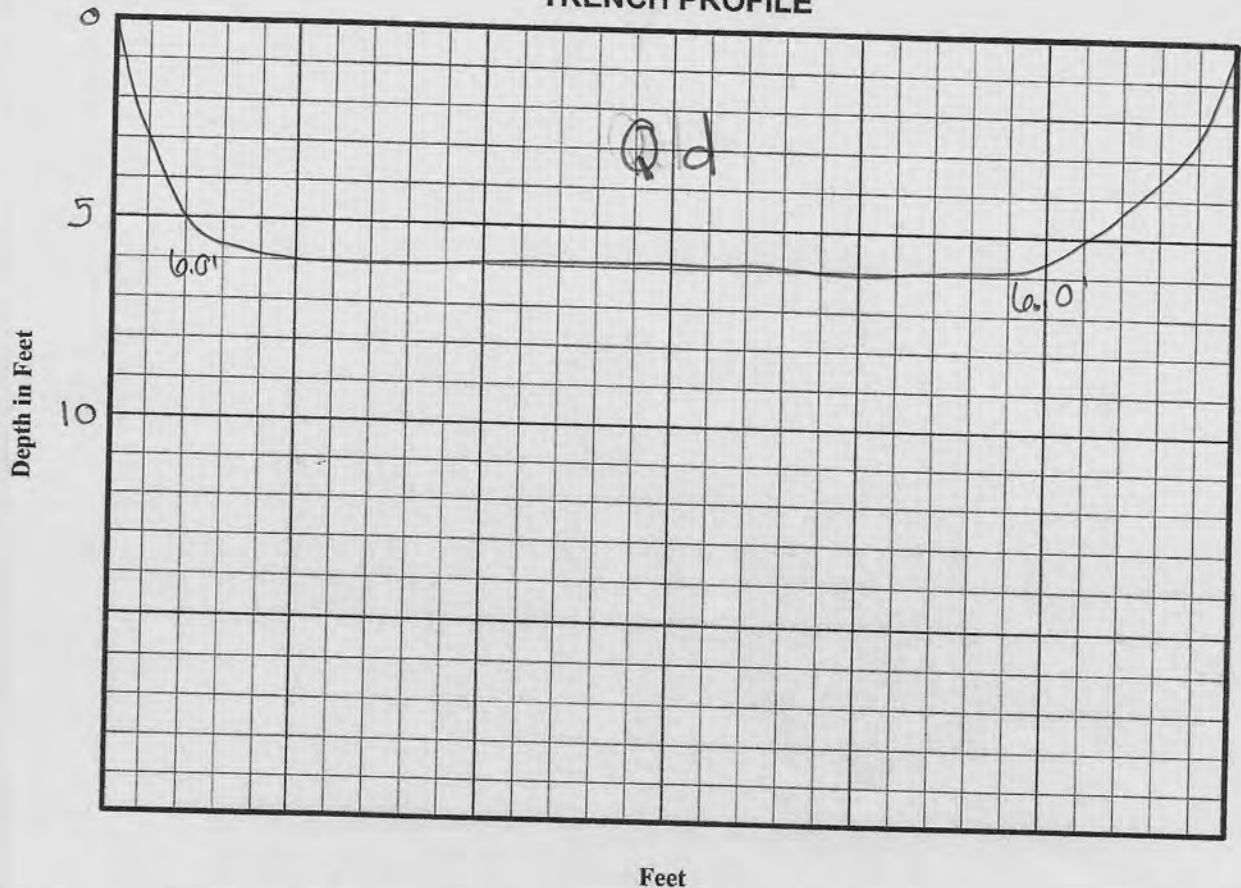
TP-4, 0-7 ft, Tt



TRENCH TEST PIT LOG FORM

Project Henderson Mill Project Number _____ Page 1 of 1
 Sample Location 1-Dam Trench Number TP-5 Date 8-5-20
 Coordinates: Inside Stake 39.8784519 Outside Stake _____
 Native/Fill Stake -106.0979879
 Logged By LWM

TRENCH PROFILE



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-1.0ft Topsoil, Silty Sand w/ gravel, root matter, tan, dry
 1.0-6.0ft Sand w/ gravel, cobbles, trace clay, well-graded
 Subang-subrand cobble up to 6" } fn-crs sand
 + gravels, dry, yellow-brown
 excavator refusal due to cobbles @ 6.0'

Begin Trench 1111 Finish Trench 1130 Trenching Contractor Ron-Henderson
 Total Depth 6 ft Total Length _____

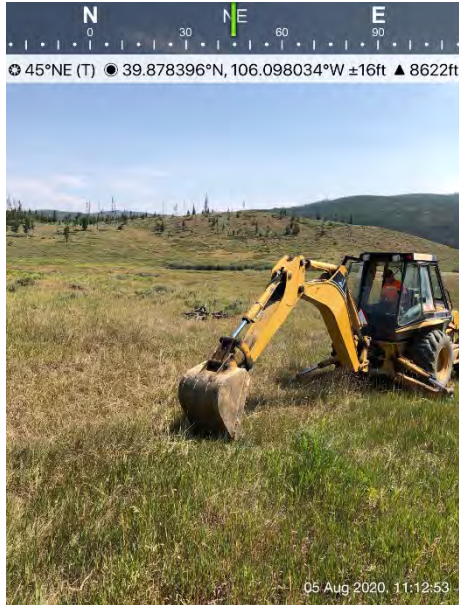
Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 5 (TP-5)

Coordinates: 39.8784519, -106.0979879

TP-5, looking NE



TP-5, 0-2 ft, Qd

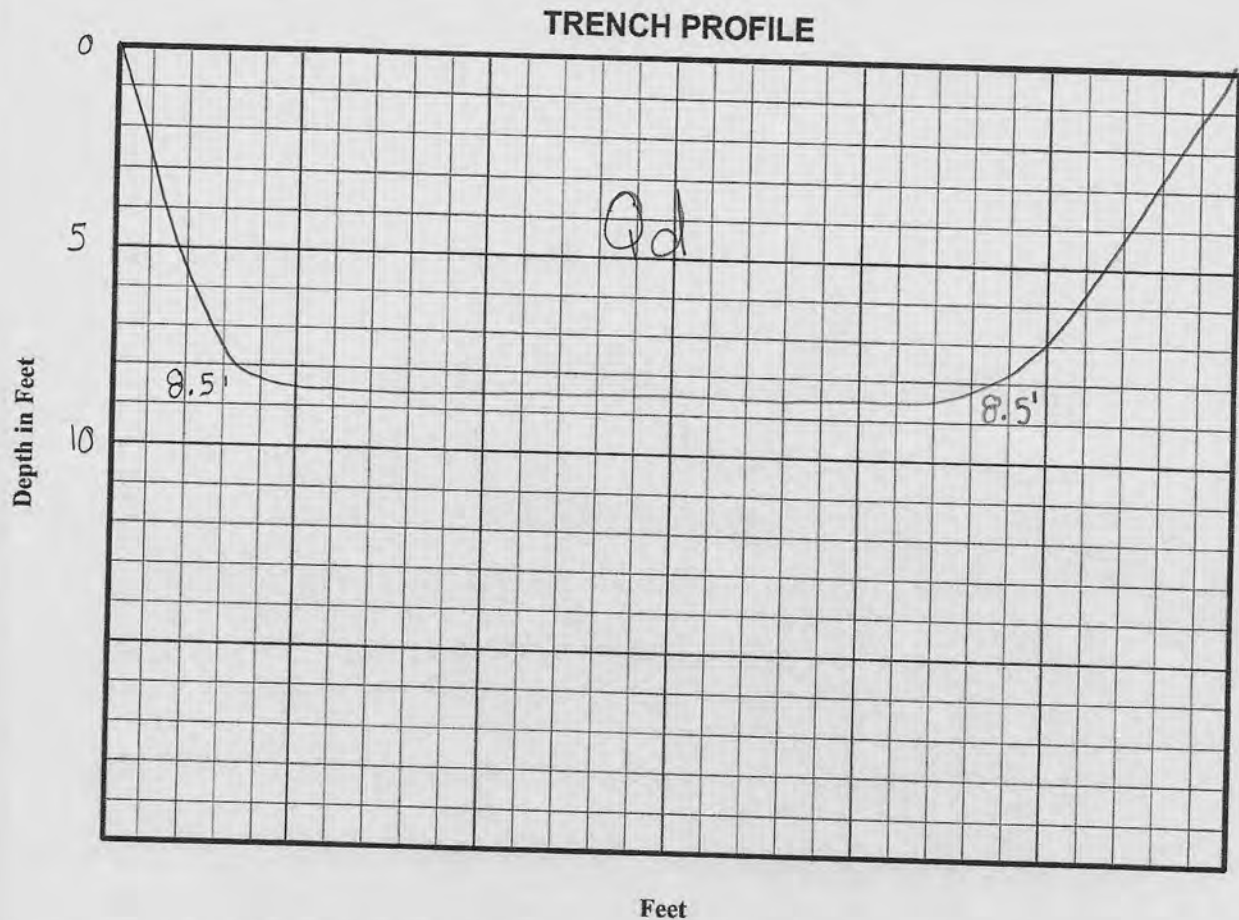


TP-5, 0-2 ft, Qd



TRENCH TEST PIT LOG FORM

Project Henderson Mill Project Number _____ Page 1 of 1
 Sample Location Seep Spoils Trench Number TP-6 Date 8-5-20
 Coordinates: Inside Stake 39.8791650 Outside Stake _____
 Native/Fill Stake -106.0974920
 Logged By LWM



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-0.75 ft Topsoil, silt + sand, root matter, light brown, dry
 0.75-3.0 ft Silt w/ sand, 60% fines, 40% f-med sand,
 dry hard, light reddish brown, semi consol
 3.0-8.5 ft Sand w/ clay and some gravel, f.-crs. sand,
 2" subround - subang gravel, low plast,
 slightly moist, reddish brown
 Appears mix of Qd + Tt, very near
 contact

Begin Trench 1320 Finish Trench 1350 Trenching Contractor Ron-Henderson
 Total Depth 8.5 ft Total Length 6 ft

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 6 (TP-6)

Coordinates: 39.879165, -106.097492

TP-6, looking SE



TP-6, 0-6 ft, Qd



TP-6, 0-8 ft, Qd

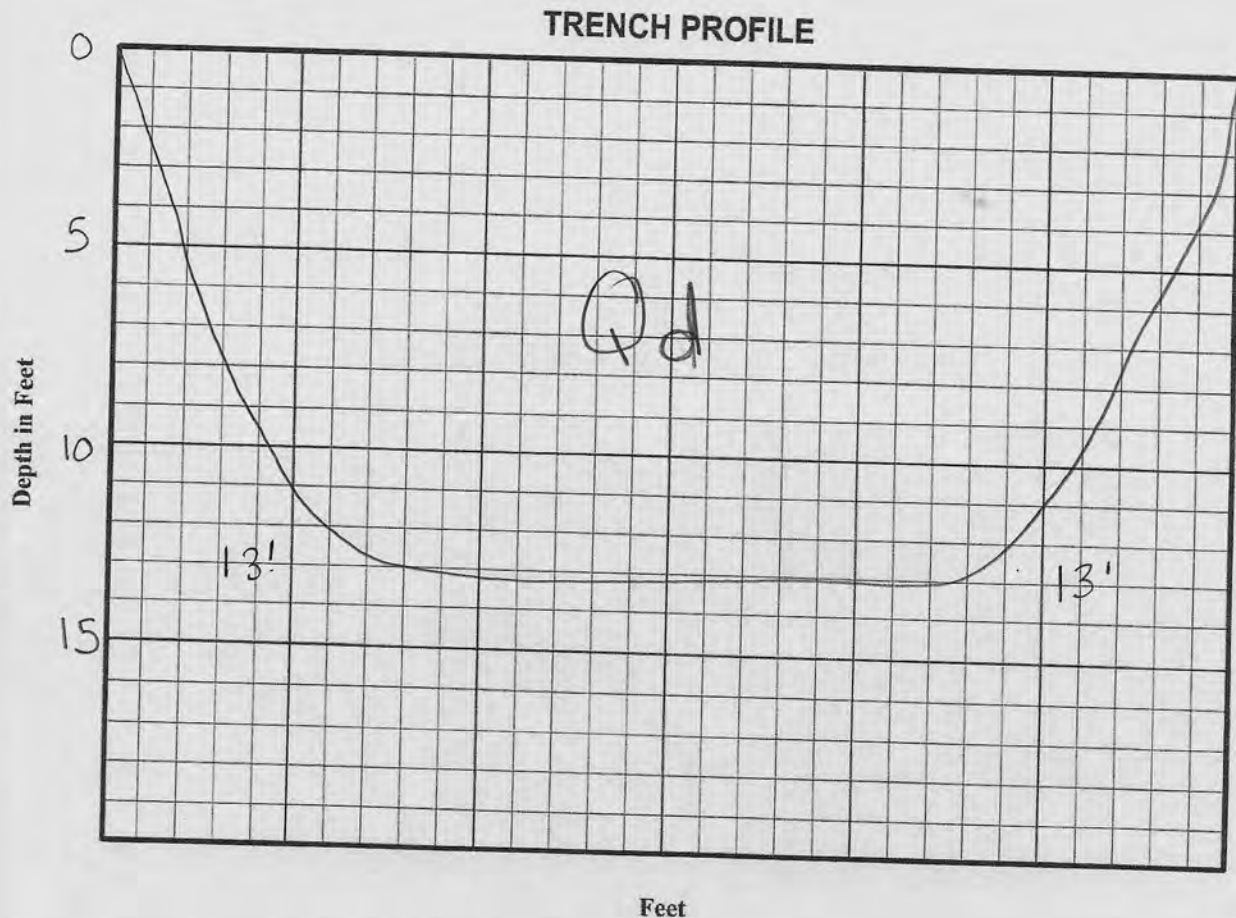


TP-6, Spoils Pile, Qd



TRENCH TEST PIT LOG FORM

Project Henderson Mill Project Number _____ Page 1 of 1
 Sample Location Seep Spoils Trench Number TP-7 Date 8-5-20
 Coordinates: Inside Stake 39.8788756 Outside Stake _____
 Native/Fill Stake -106.0957039
 Logged By LWM



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-2 ft Topsoil, organic clay, hard, dry, charcoal gray
 2-4 ft Alluvium (Qd), sand, clay, fine gravel, well sorted, semi-consol, slightly moist, reddish brown
 4.0-6.5 ft Sand, fr-v. crs, trace gravel, slightly moist, gray
 6.5-9.0 ft as above, increase cobbles, subrounded >6", moist
 9.0-13.0 ft Sand & gravel some clay, v. crs sand, few subround cobbles 6-12", high plast clays, gray-brown, wet
No visible water in bottom of pit, wet cuttings

Begin Trench 1355 Finish Trench 1440 Trenching Contractor Ron-Henderson
 Total Depth 13 ft Total Length 10 ft

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

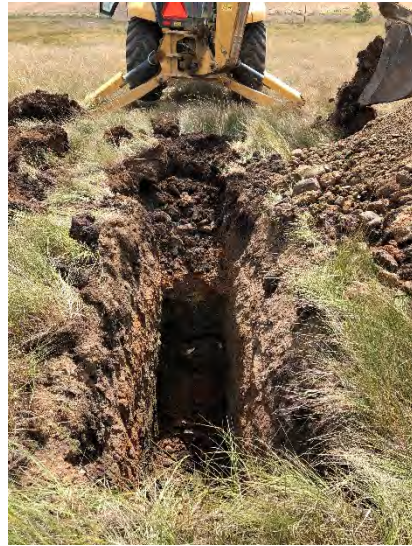
Site Location: Test Pit 7 (TP-7)

Coordinates: 39.8792616, -106.0960842

TP-7, looking S



TP-7, 0-5 ft, Qd



TP-7, 0-12 ft, Qd



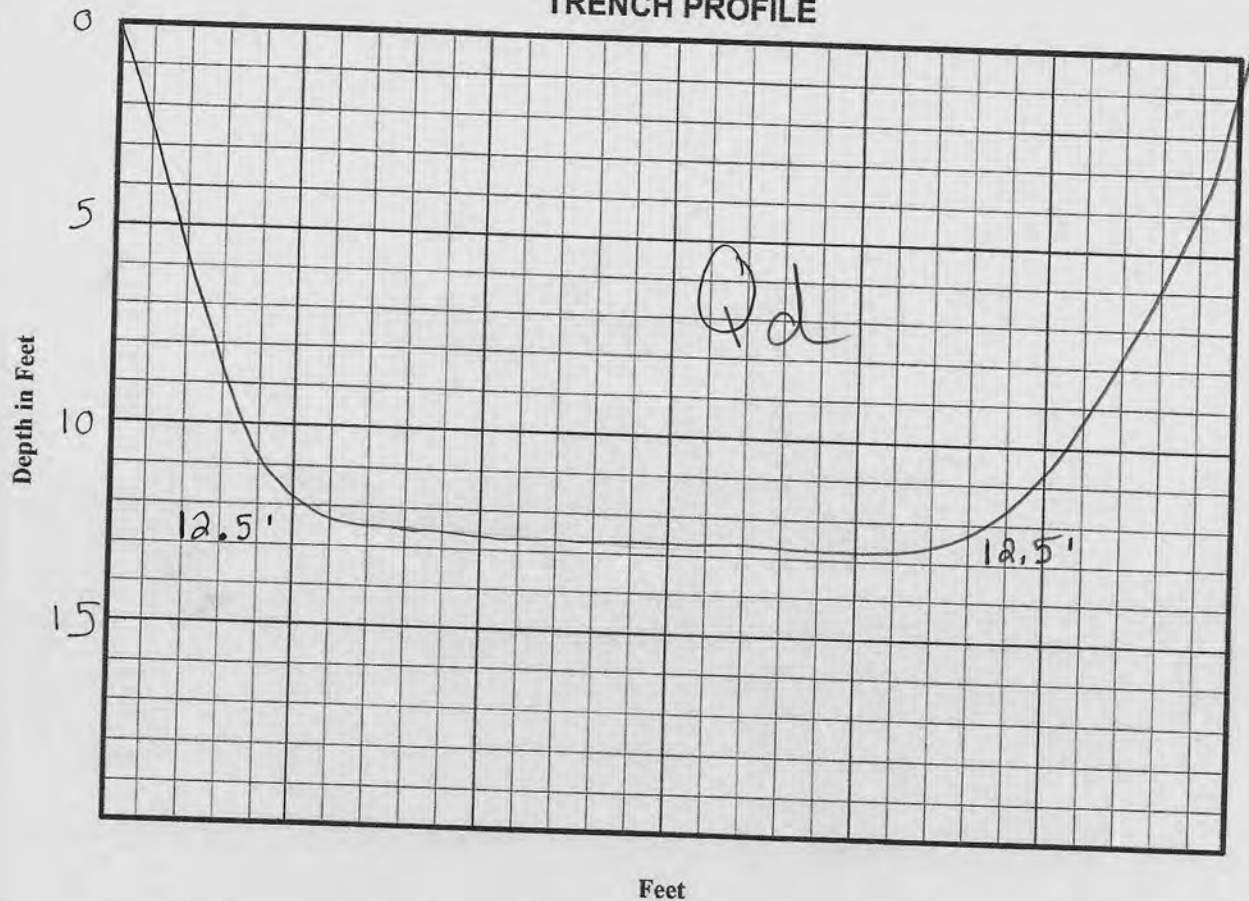
TP-7, Spoils Pile, Qd



TRENCH TEST PIT LOG FORM

Project Henderson Mill Project Number _____ Page 1 of 1
 Sample Location Seep Spoils Trench Number TP-8 Date 8-5-20
 Coordinates: Inside Stake 39.8788756 Outside Stake _____
 Native/Fill Stake -106.0957039
 Logged By LWM

TRENCH PROFILE



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-1.0 ft Top Soil, silty sand, root matter, brown, dry
 1.0-3.0 ft Clay w/ trace f-med. sand, low plastic, soft
 3.0-7.0 ft Sand w/ Gravel and cobble trace fines,
 med-crs. sand, subang-subround cobbles, 6-8"
 gray brown, slightly moist
 7.0-12.5 ft As above, cobbles 6-18", reddish brown
 7.0-9.0 ft moist, 9.0-12.5 ft wet sand + gravel
 no visible water in pit, wait 20 min, water seep
 on sediments in spoils pile

Begin Trench 1450 Finish Trench 1600 Trenching Contractor Ben Henderson
 Total Depth 12.5 ft Total Length 10 ft

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 8 (TP-8)

Coordinates: 39.8788756, -106.0957039

TP-8, looking W



TP-8, 0-8 ft, Qd



TP-8, 0-12 ft, Qd



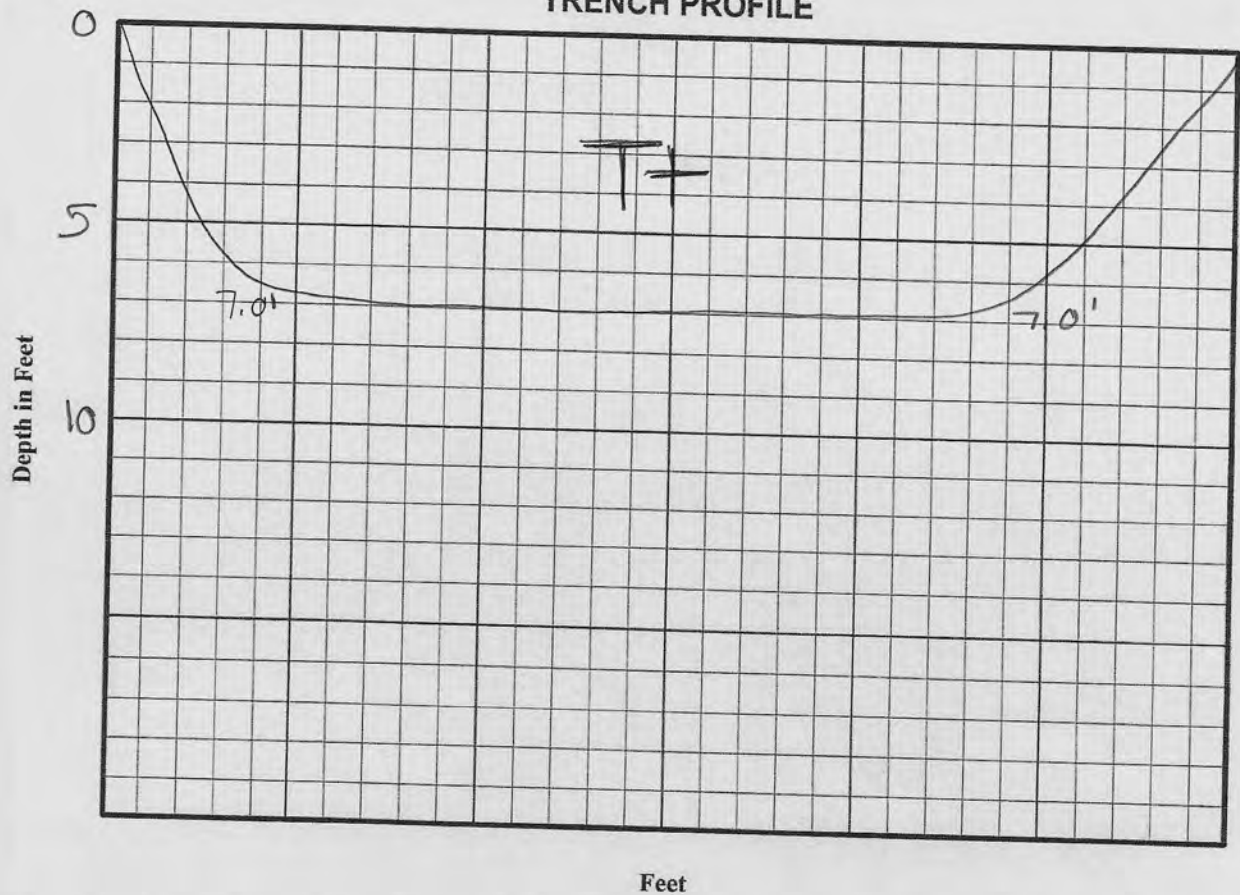
TP-8, Spoils Pile, Qd



TRENCH TEST PIT LOG FORM

Project Henderson Mill Project Number _____ Page 1 of 1
 Sample Location 1-Dam Trench Number TP-9 Date 8-5-20
 Coordinates: Inside Stake 39.8784976 Outside Stake _____
 Native/Fill Stake -106.0983758
 Logged By LWM

TRENCH PROFILE



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-1.5ft+ Topsoil, silty sand, root matter, reddish tan, dry;
 1.5-7.0ft+ Troublesome Fm. (T+) claystone, soft, dry to slightly
 moist, reddish brown

Begin Trench 1135 Finish Trench 1155 Trenching Contractor Ron-Henderson
 Total Depth 7ft Total Length 8ft

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 9 (TP-9)

Coordinates: 39.8784976, -106.0983758

TP-9, looking E



TP-9, 0-6 ft, Tt



TP-9, 0-6 ft, Tt

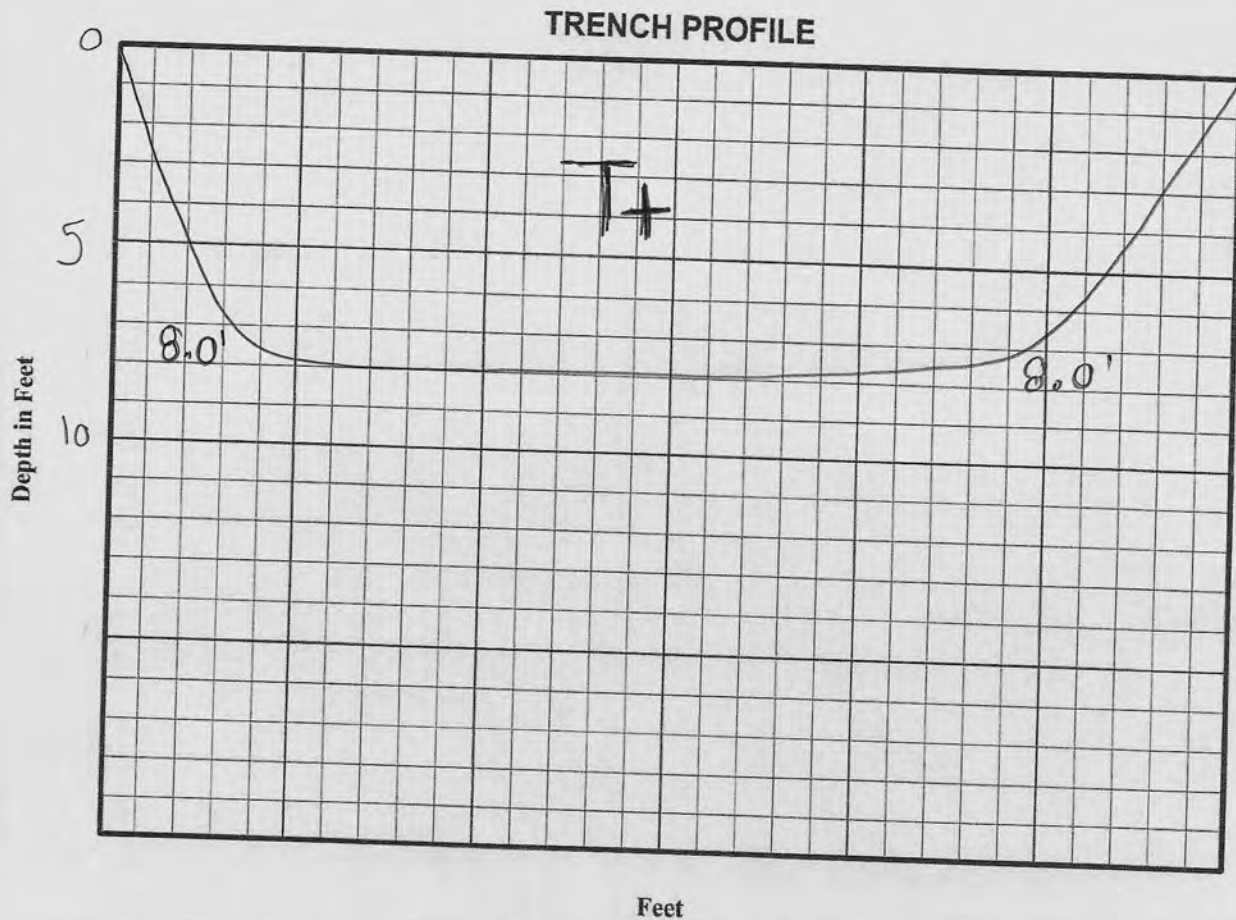


TP-9, Spoils Pile, Tt



TRENCH TEST PIT LOG FORM

Project Henderson Mill Project Number _____ Page 1 of 1
 Sample Location Seep Spills Trench Number TP-10 Date 8-5-20
 Coordinates: Inside Stake 39.87922 44 Outside Stake _____
 Native/Fill Stake -106.0983047
 Logged By LWM



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-1.0 ft+ Top Soil, Silty sand, root matter, soft, dry
 1.0-8.0 ft+ Troublesome Fm. (T+), claystone, w/ some f.-m. sand, weathered, soft, dry to slightly moist, reddish brown

Begin Trench 1300 Finish Trench 1317 Trenching Contractor Ron Henderson
 Total Depth 8 ft+ Total Length 7 ft+

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 10 (TP-10)

Coordinates: 39.8792244, -106.0983047

TP-10, looking N



TP-10, 0-5 ft, Tt



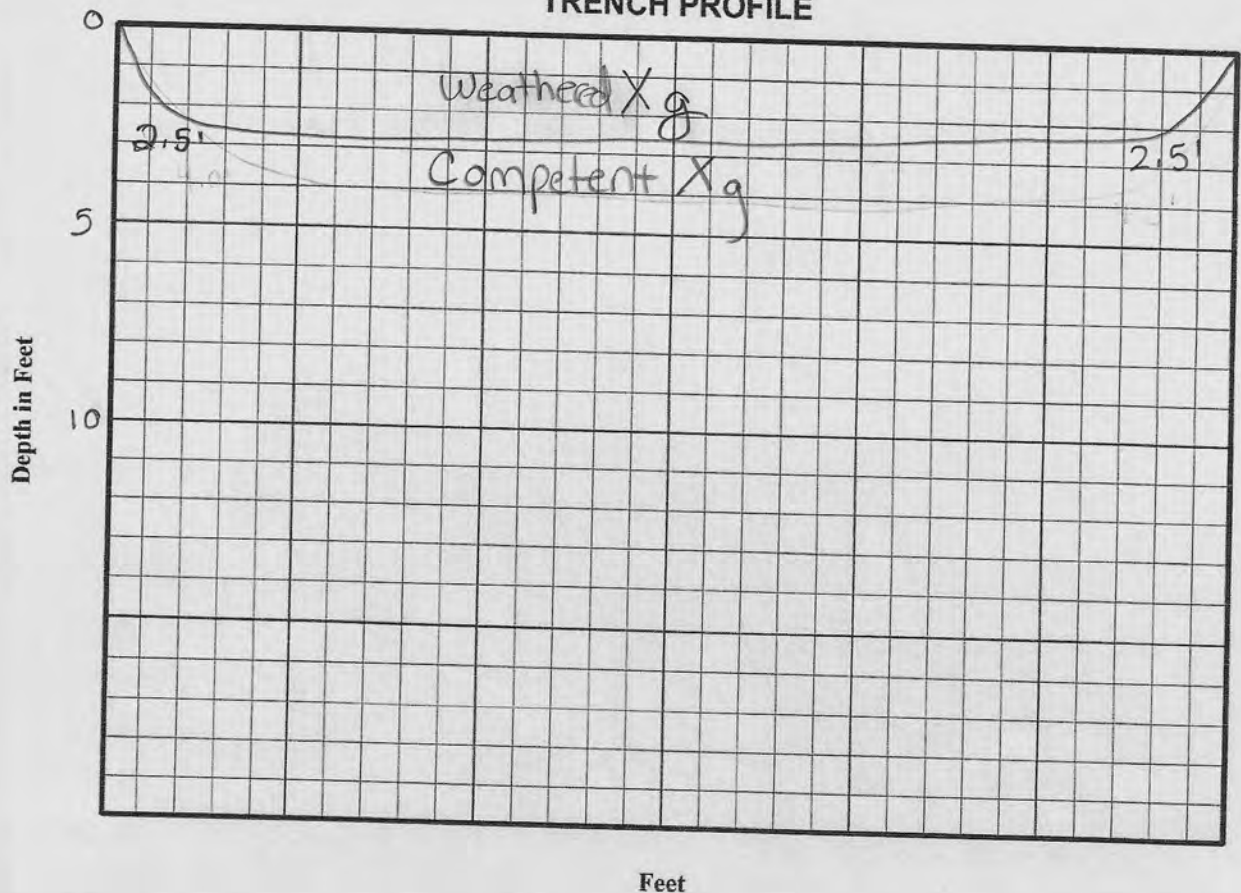
TP-10, Spoils Pile, Tt



TRENCH TEST PIT LOG FORM

Project Henderson Mill Page 1 of 1
 Sample Location Seep Spoils Project Number _____
 Coordinates: Inside Stake 39.877462 Trench Number TP-11 Date 8-5-20
 Native/Fill Stake -106.0994550 Outside Stake _____
 Logged By LW M

TRENCH PROFILE



Subsurface description and filed USCS Classifications

(USCS name, color, size and angularity or plasticity, density, moisture content, additional facts and debris encountered)

0-2.5 ft Gneiss (Xg), weathered, dry, dark gray
 2.5 ft Xg, competent, hard, dry, refusal w/ excavator

Begin Trench 1015 Finish Trench 1025 Trenching Contractor Ron-Henderson
 Total Depth 2.5' ft Total Length 5 ft

Site Name: Henderson Mill 1-Dam Seep Spoils Area

Date: August 5, 2020

Site Location: Test Pit 11 (TP-11)

Coordinates: 39.8776462, -106.099455

TP-11, looking E



TP-11, 0-2.5 ft, Weathered Xg



TP-11, 0-2.5 ft, Weathered Xg



TP-11, 0-2.5 ft, Weathered Xg

