



# USACE Individual Permit

## Colorado Stone Quarries, Inc.

Marble, CO  
September 2020

### Sheet Index

- 1 - Coversheet
- 2 - Legend
- 3 - Current Conditions
- 4 - Alternative 5 - Mining Plan
- 5 - Alternative 5 - Reclamation Plan
- 6 - Alternative 6 - Mining Plan
- 7 - Alternative 6 - Reclamation Plan
- 8 - Alternative 7 - Mining Plan
- 9 - Alternative 7 - Reclamation Plan
- 10 - Stream and Diversion Profiles
- 11 - Section 0+00 - Cross Section
- 12 - Section 2+00 - Cross Section
- 13 - Section 4+00 - Cross Section
- 14 - Section 6+00 - Cross Section
- 15 - Section 8+00 - Cross Section
- 16 - Section 10+00 - Cross Section
- 17 - Section 12+00 - Cross Section
- 18 - Section 14+00 - Cross Section
- 19 - Section 16+00 - Cross Section
- 20 - Section 18+00 - Cross Section
- 21 - Section 20+00 - Cross Section
- 22 - Watershed
- 23 - Base Stream Reach
- 24 - Typical Armoring (Long)
- 25 - Typical Armoring (Section)
- 26 - Typical Dump Slope

Prepared by:



### Coversheet (1 of 26)

#### Pride of America Mine

#### Colorado Stone Quarries, Inc

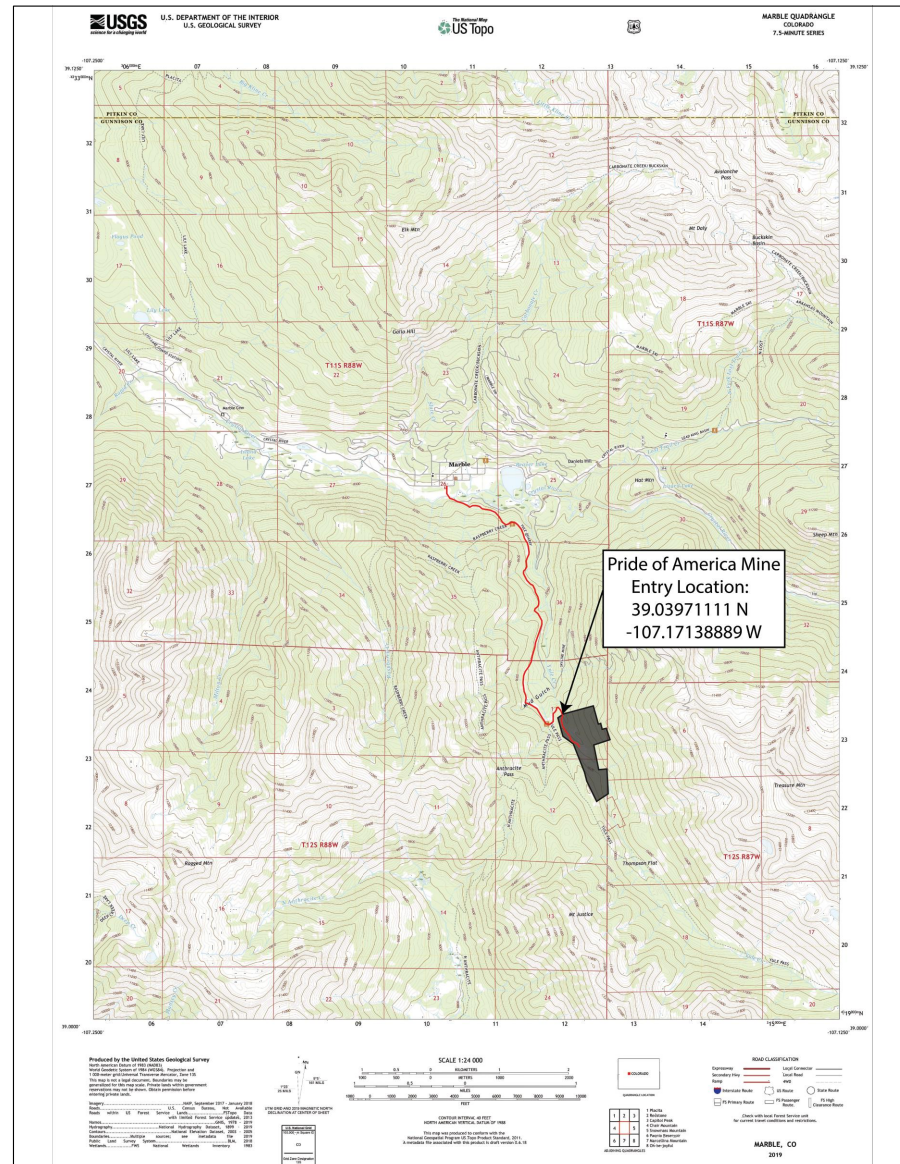
DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677  
State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=200'

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# LEGEND

## BOUNDARIES

Federally Administered Area



## ROADS AND RELATED FEATURES

Off-highway Vehicle Access



On-highway Vehicle Access



## RIVERS, LAKES, SHORELINES, AND CANALS

Perennial Stream/ditch



Buried Aqueduct, Flume, or Conduit

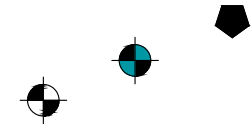


Drainage Basin

Start and End of Stream Reach of Concern

Ground Water Monitoring Well

Surface Water Monitoring Location



## MINING FEATURES

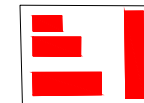
DRMS Permit Boundary



Gunnison County ROW

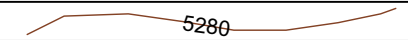


Fuel Tanks and Generators



## CONTOURS

2019 Index (25')



2019 Intermediate (5')



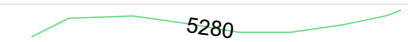
Mining Index (25')



Mining Intermediate (5')



Reclamation Index (25')



### Legend (2 of 26) Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

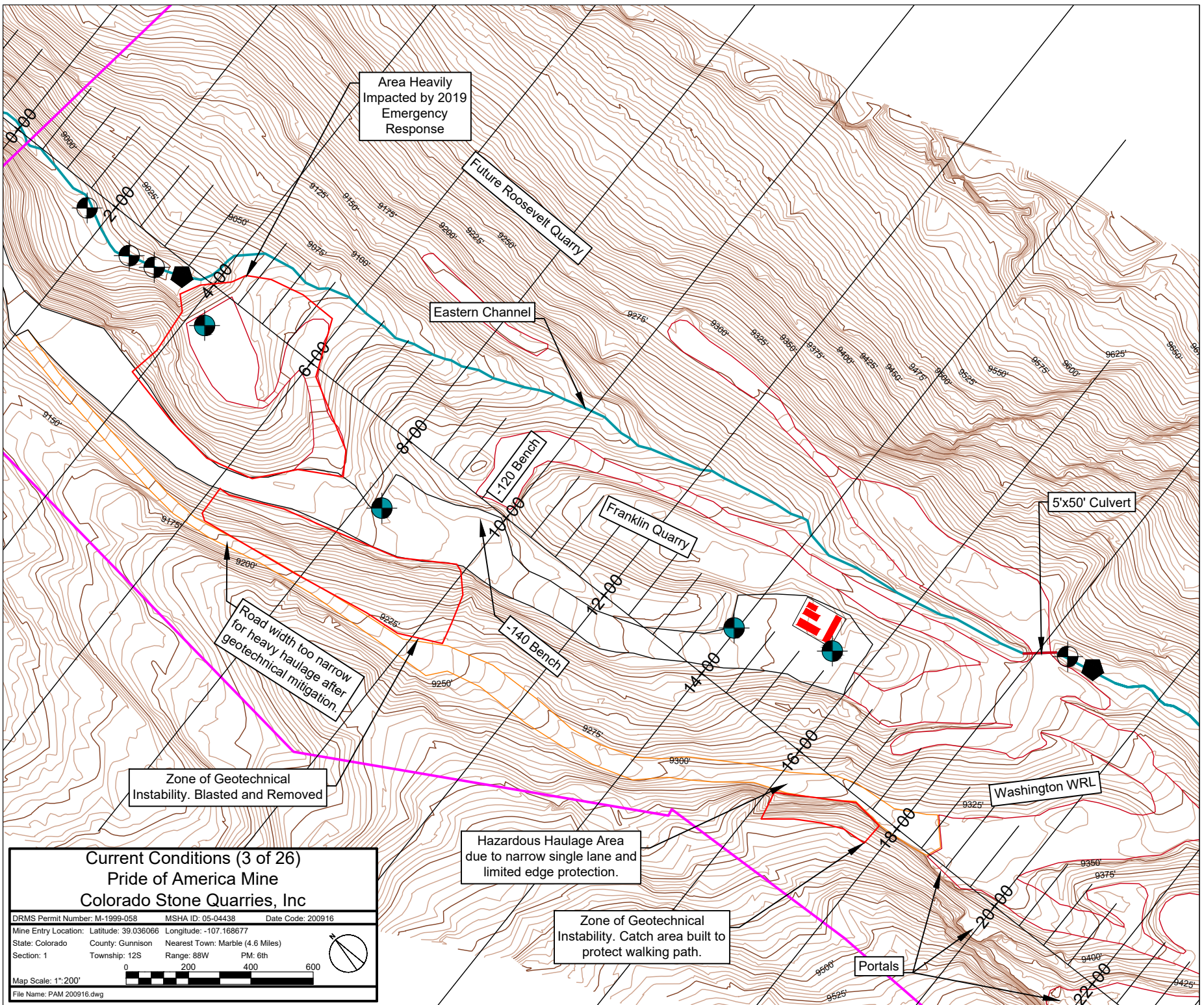
Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677  
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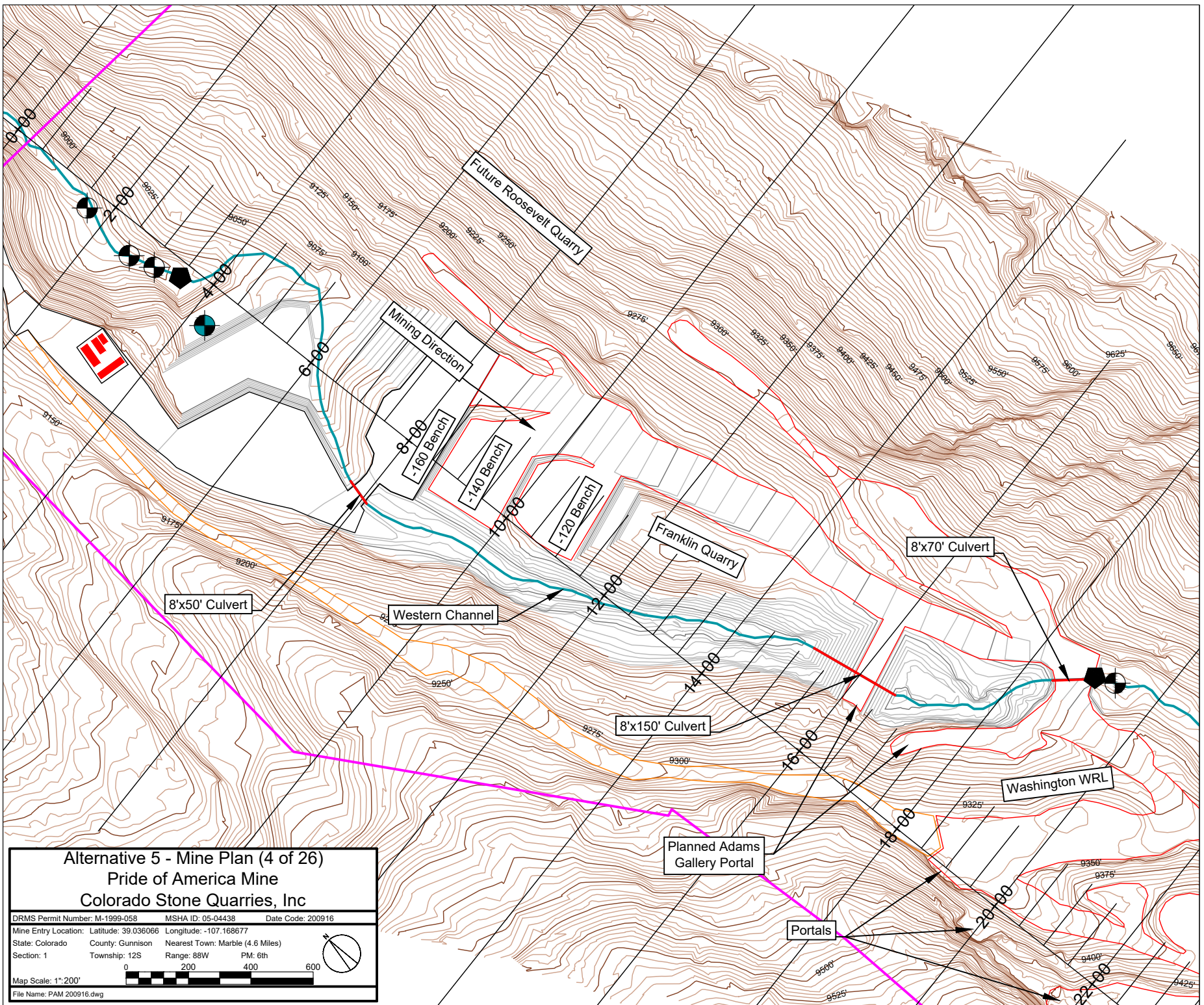
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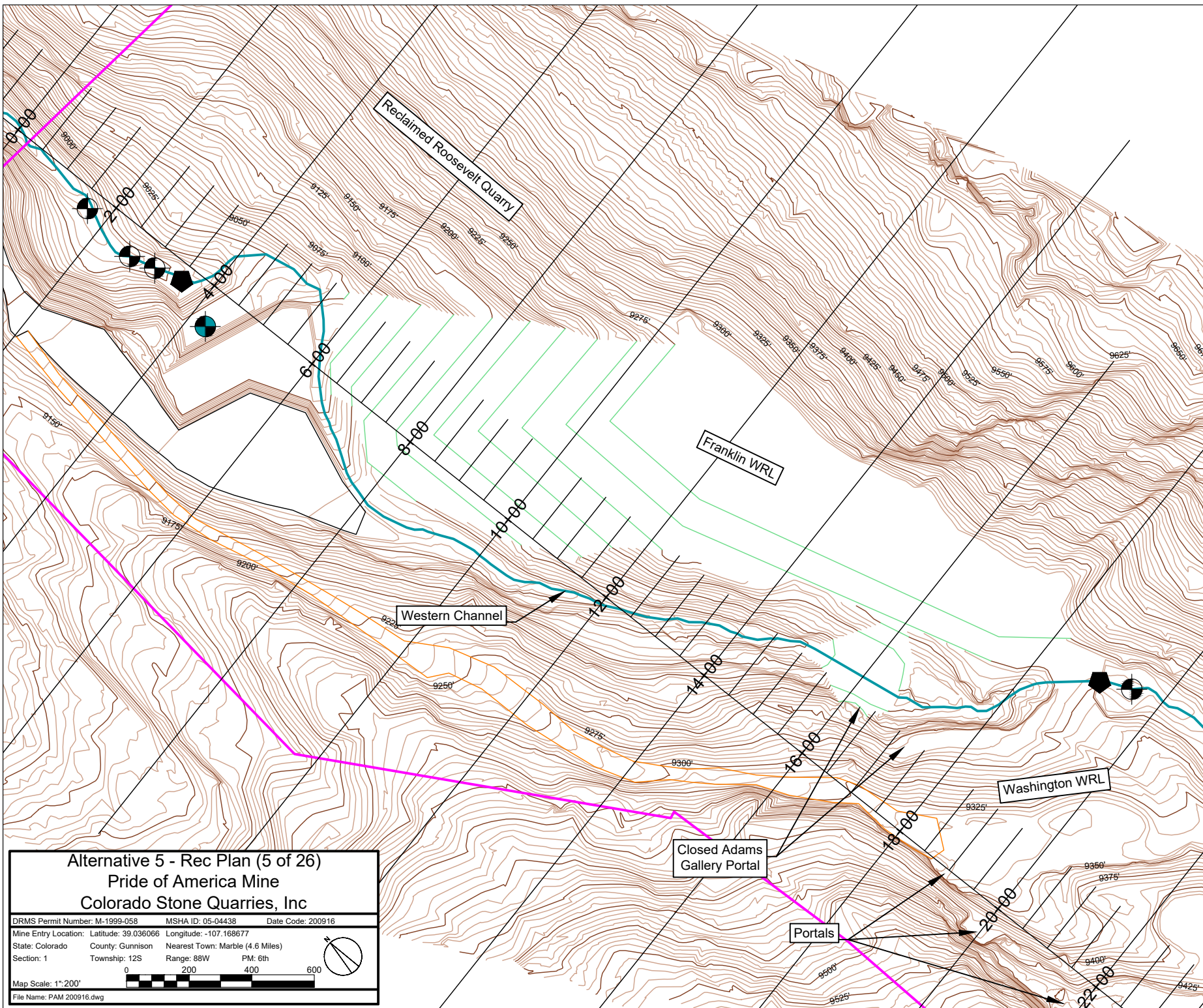




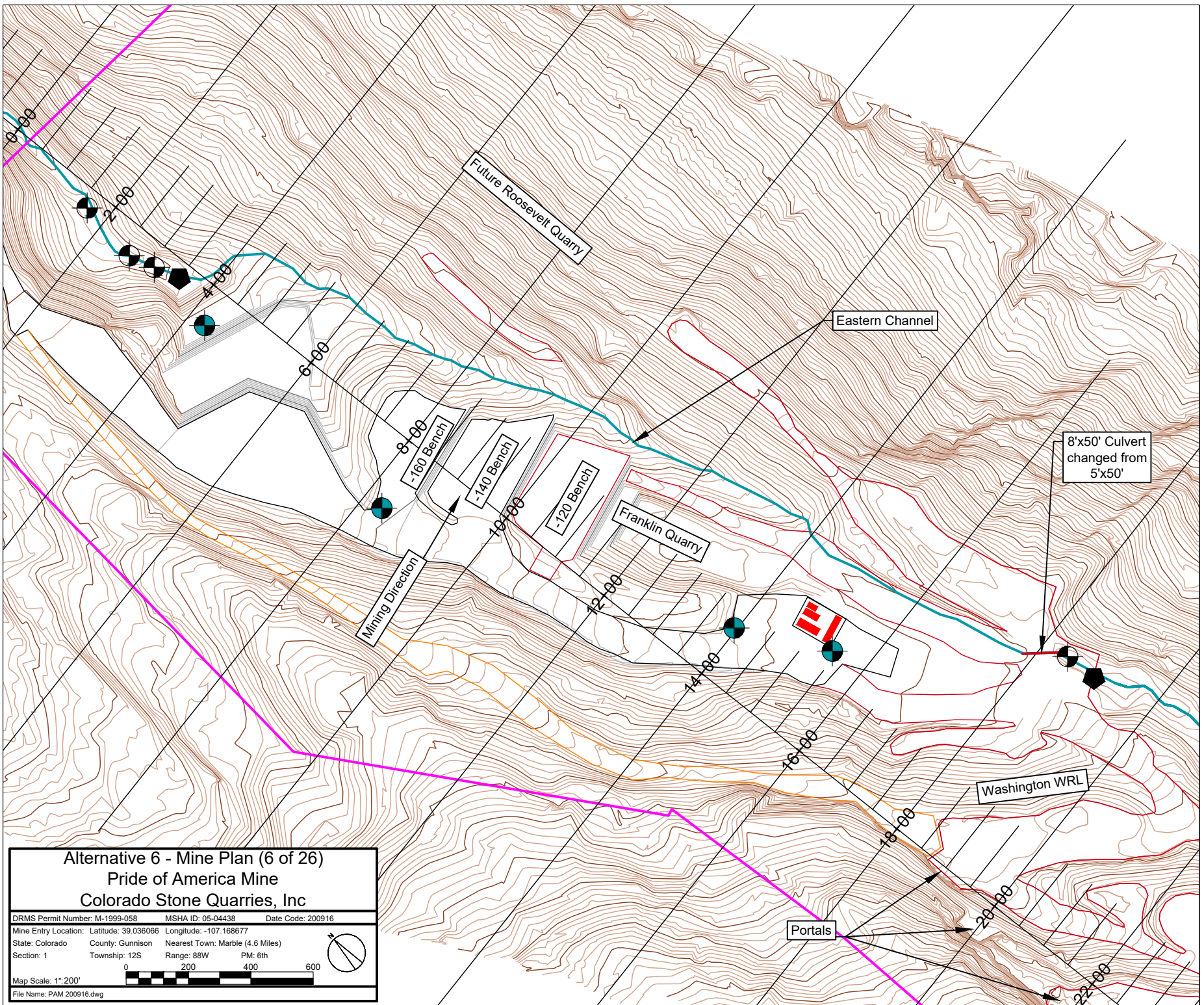




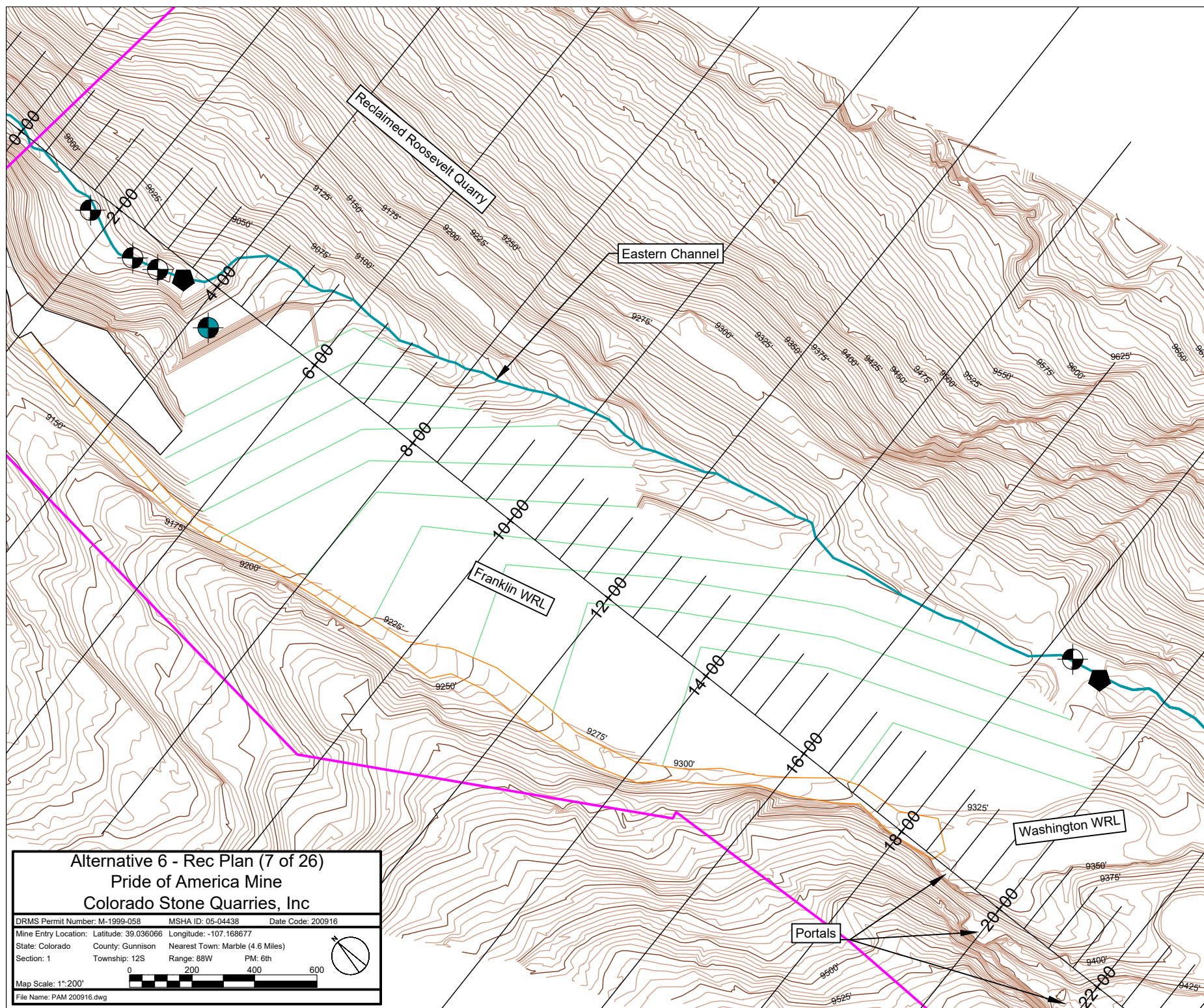




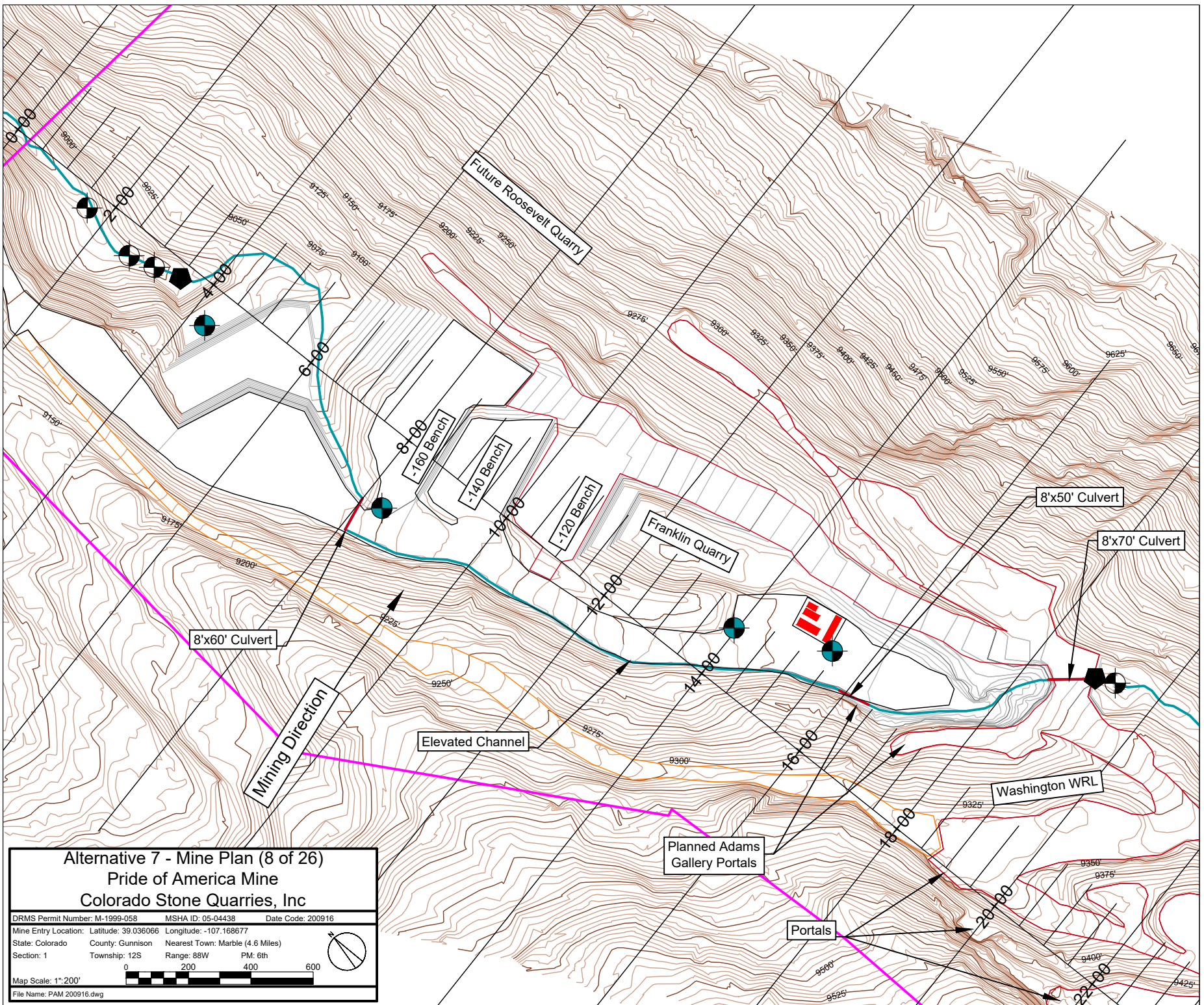




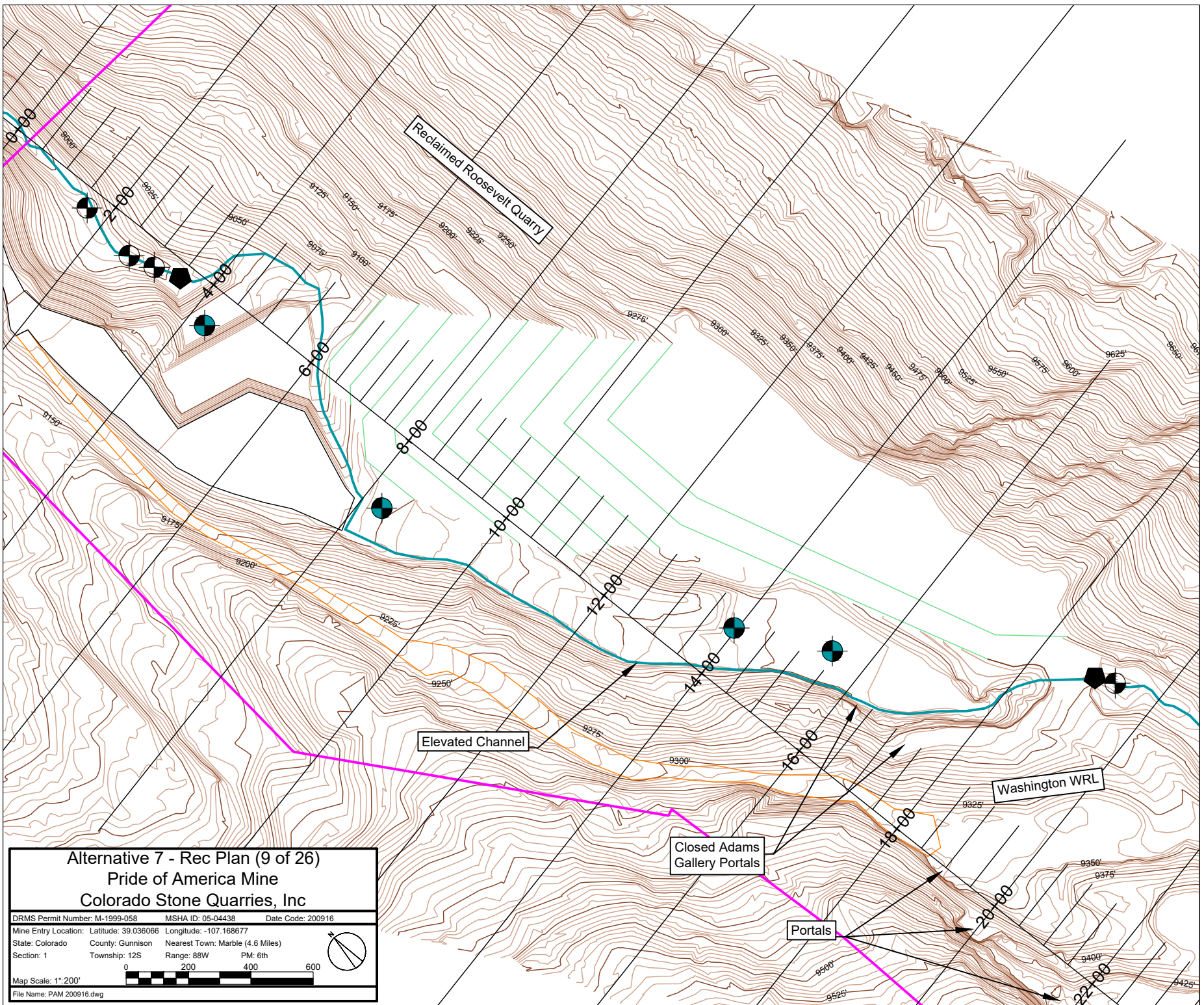














# Stream and Diversion Profiles (10 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

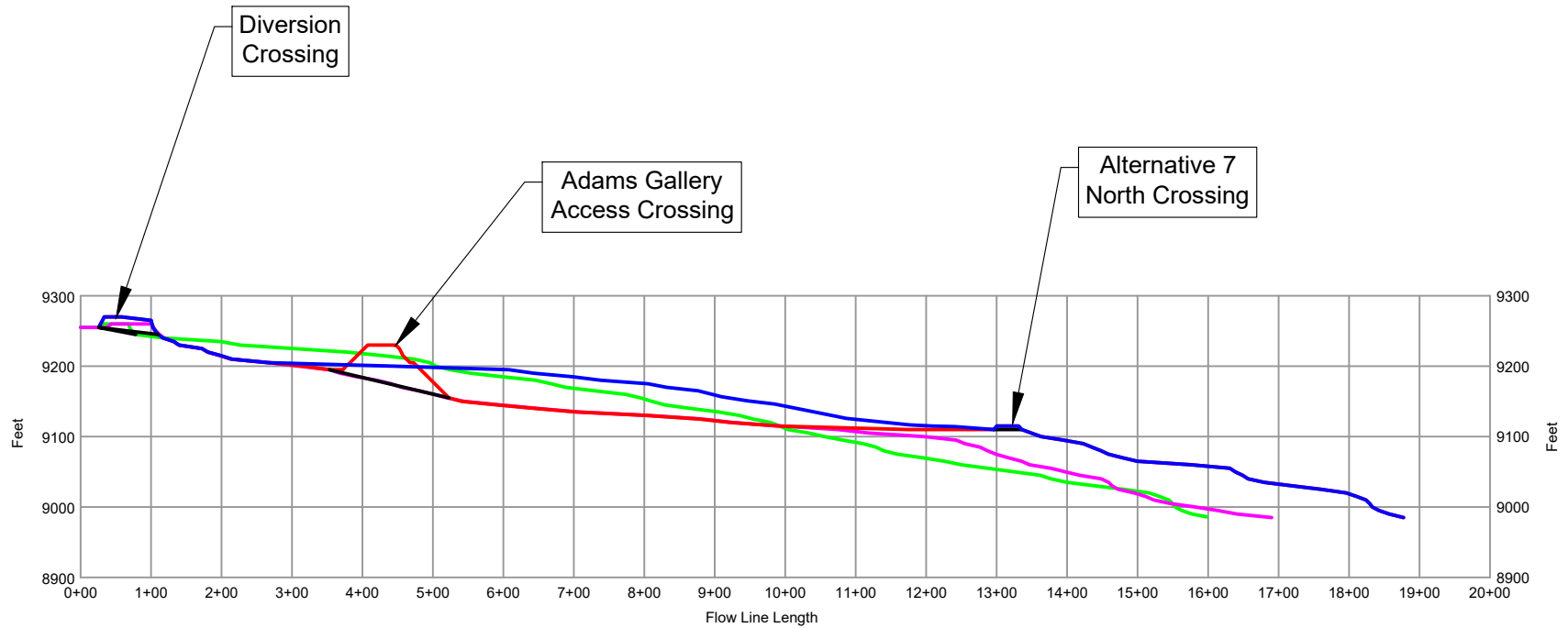
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Section: 1 Township: 12S Range: 88W PM: 6th

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2018 Creek Profile  
Alternative 5  
Alternative 6  
Alternative 7  
Culvert





# Section 0+00 - Cross Section (11 of 26)

Pride of America Mine

Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058

MSHA ID: 05-04438

Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

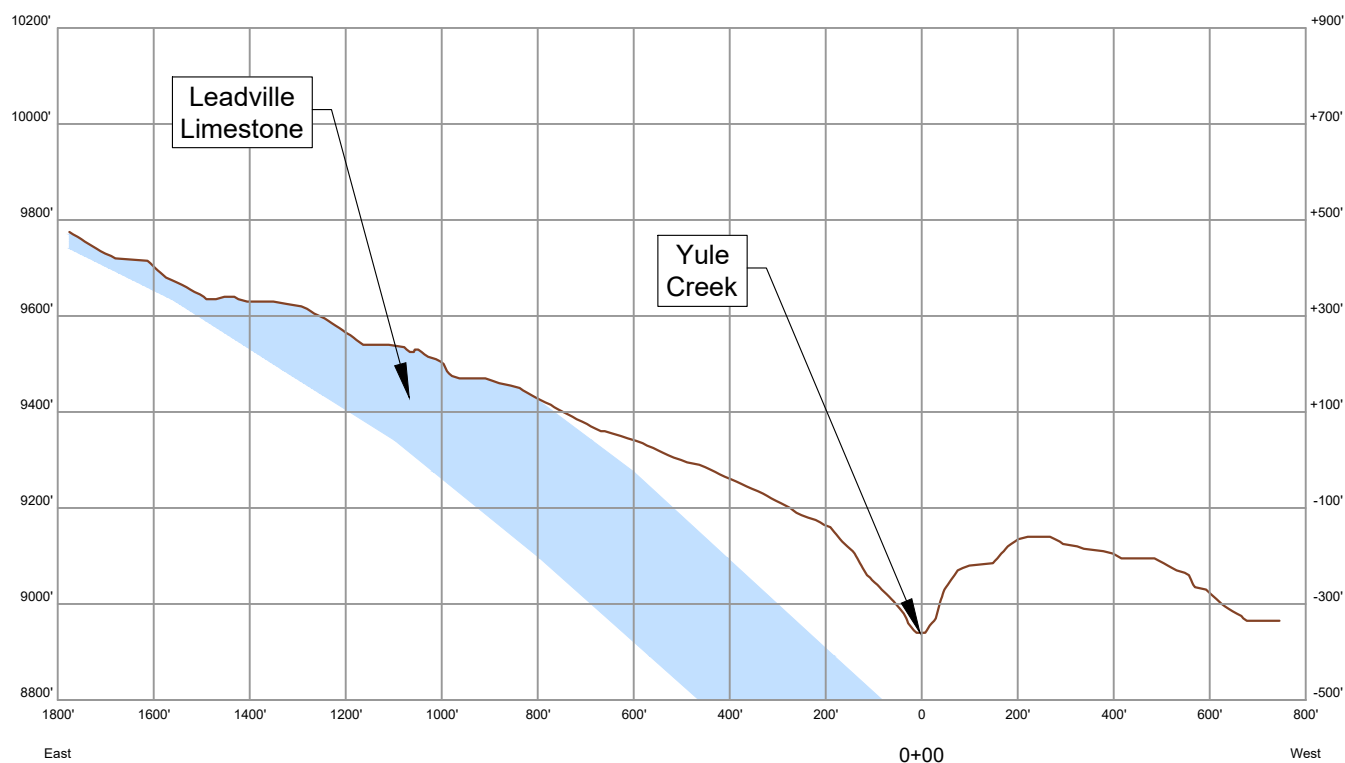
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Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'



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# Section 2+00 - Cross Section (12 of 26)

Pride of America Mine

Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058

MSHA ID: 05-04438

Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

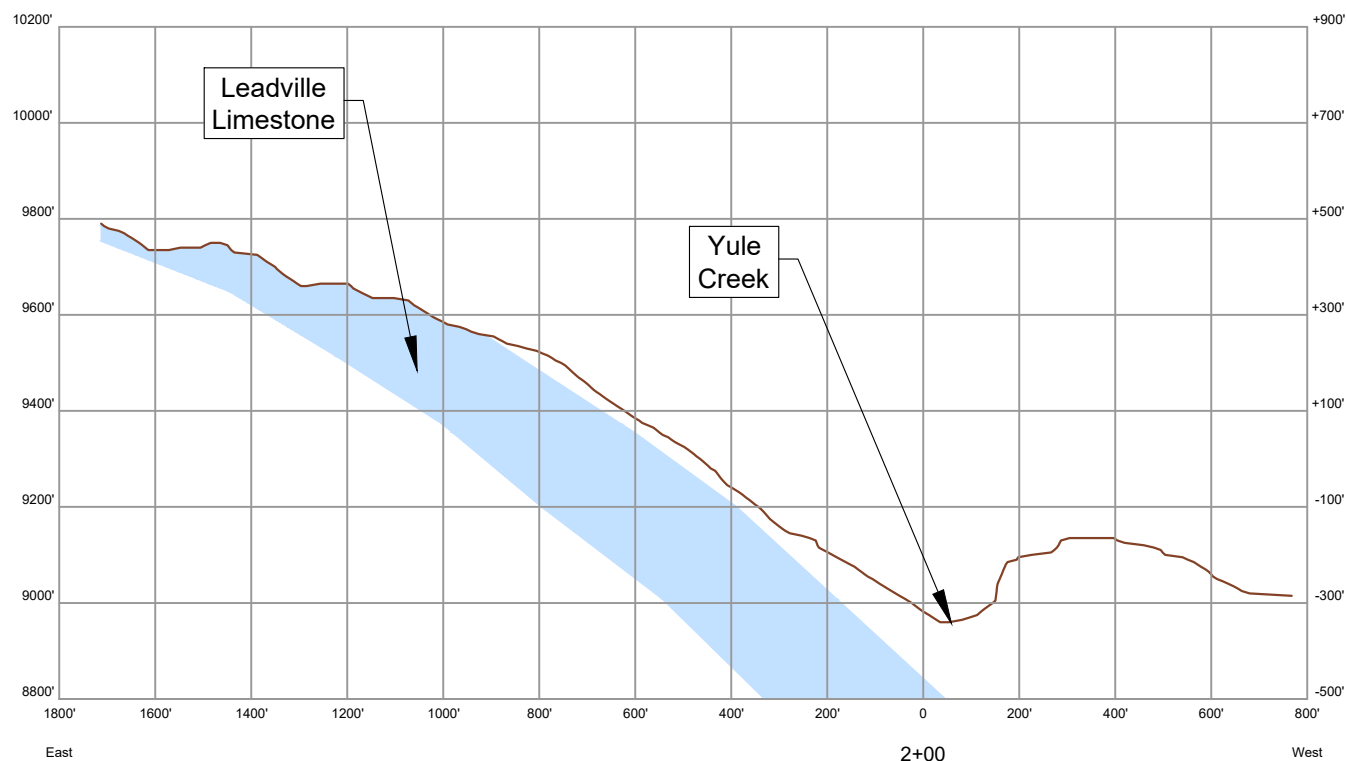
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Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'



File Name: PAM 200916.dwg





# Section 4+00 - Cross Section (13 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

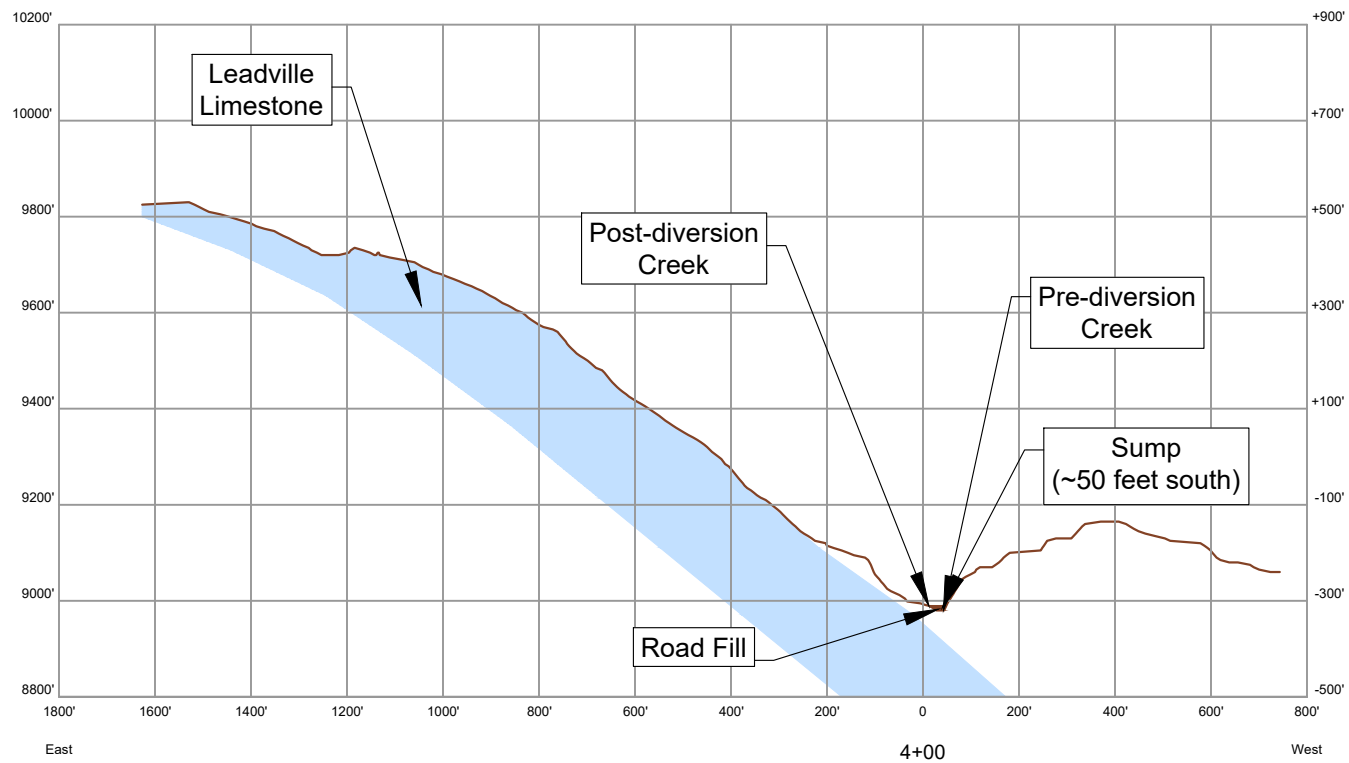
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Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'



File Name: PAM 200916.dwg





# Section 6+00 - Cross Section (14 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

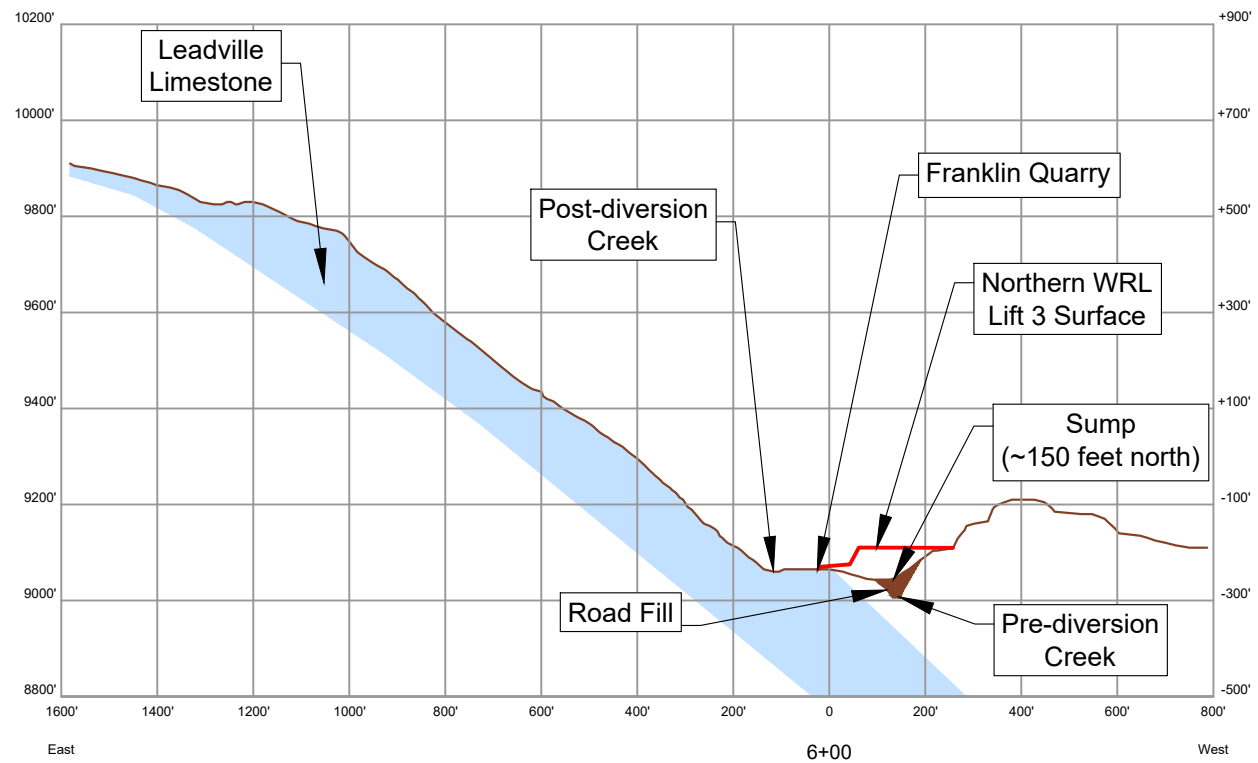
State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'



File Name: PAM 200916.dwg



# Section 8+00 - Cross Section (15 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

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Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

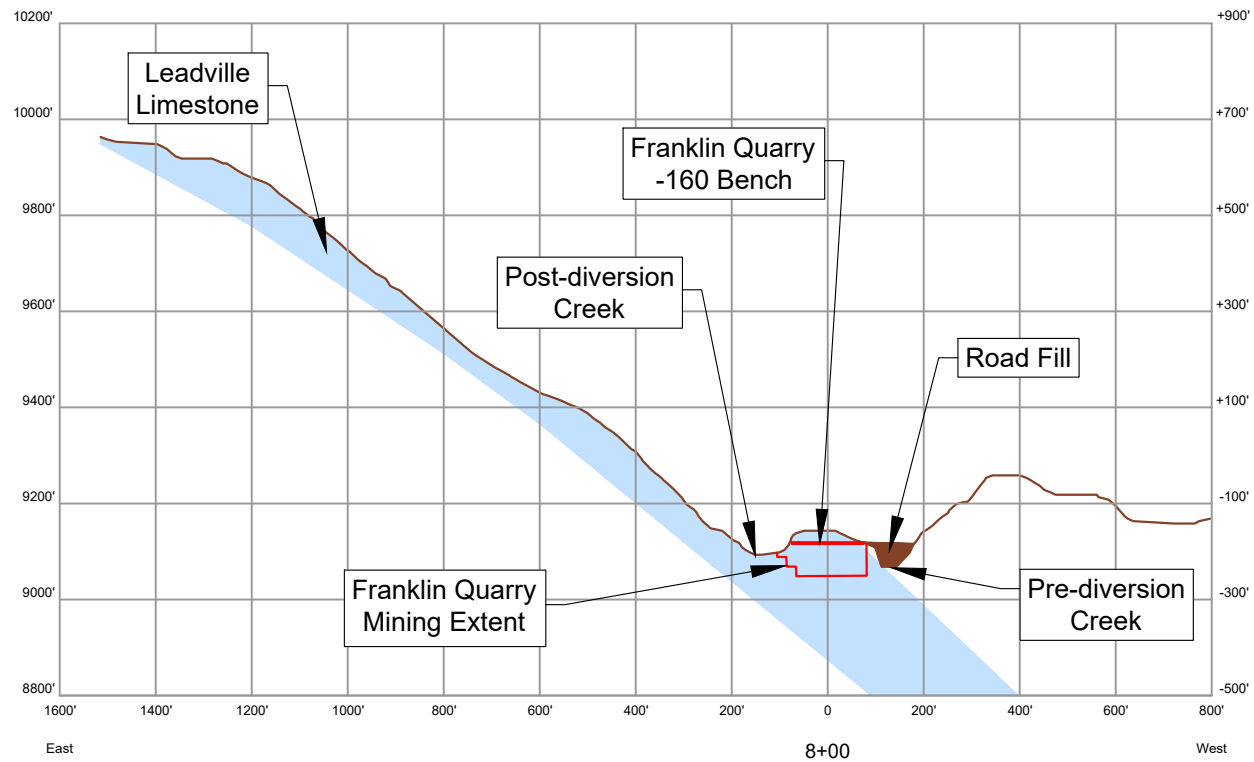
State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'

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# Section 10+00 - Cross Section (16 of 26)

Pride of America Mine  
Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

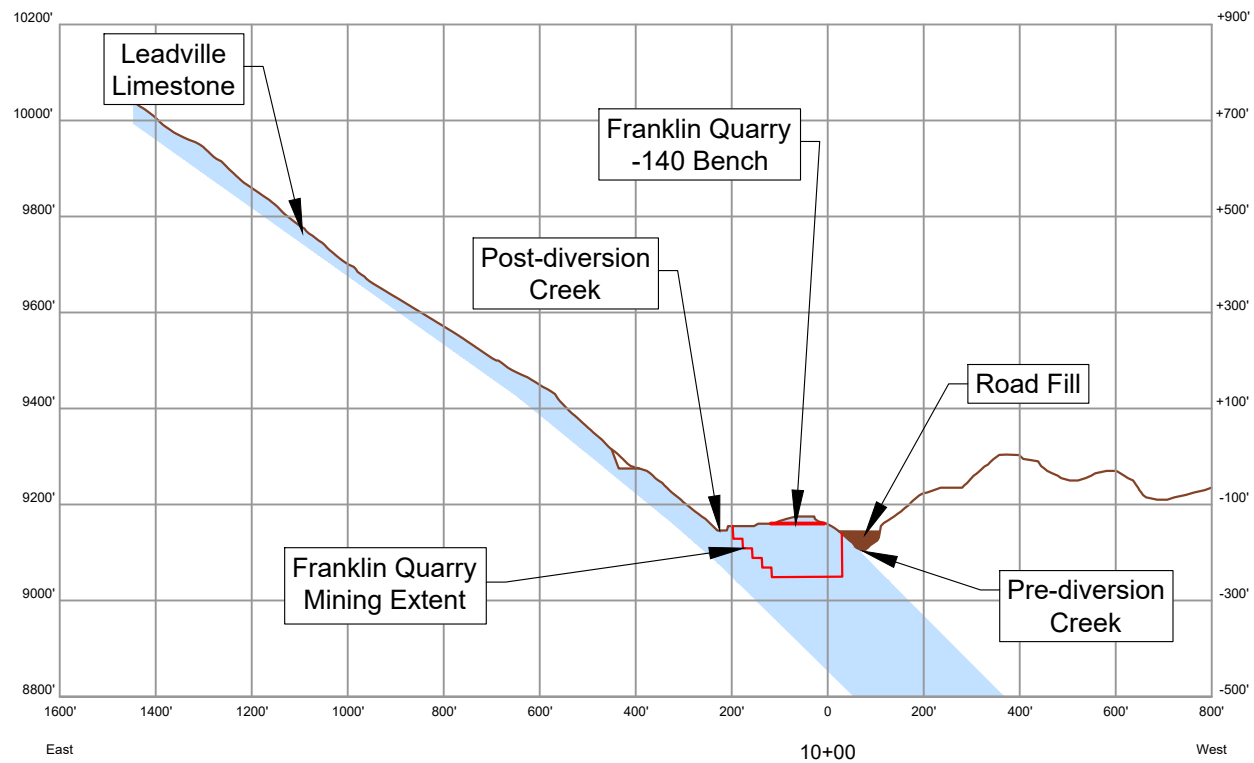
Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'

File Name: PAM 200916.dwg



# Section 12+00 - Cross Section (17 of 26)

Pride of America Mine  
Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

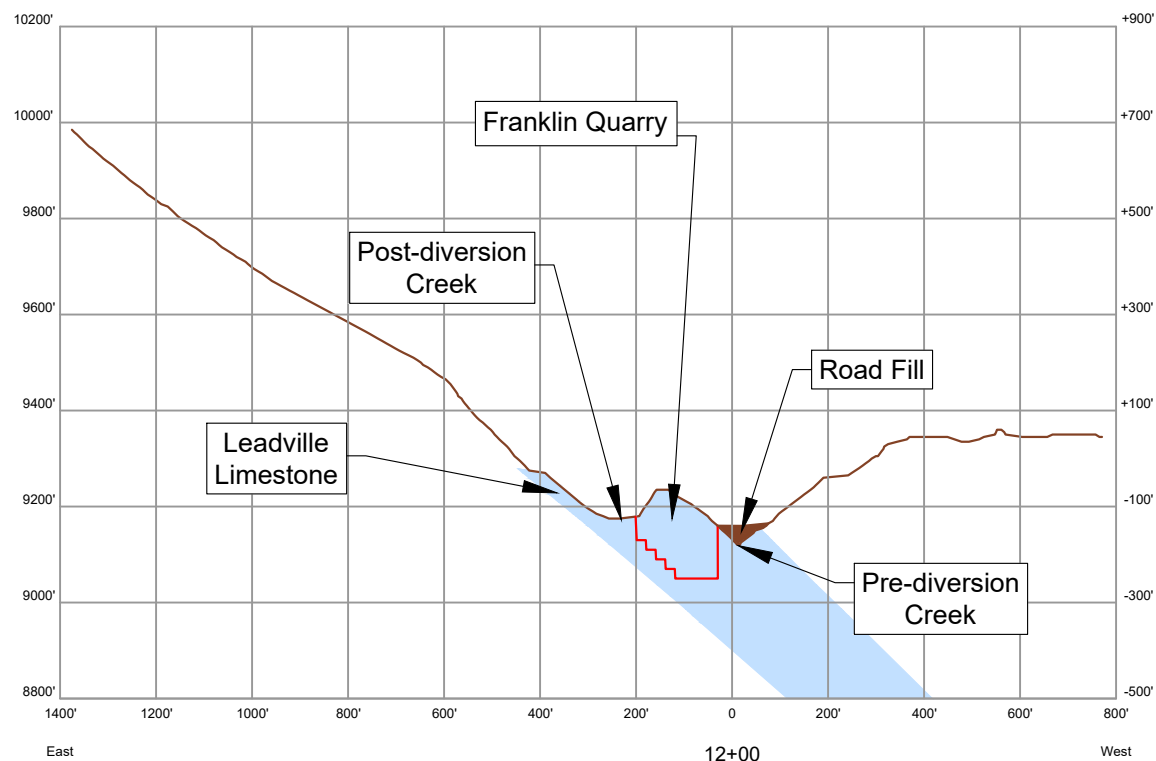
Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'

File Name: PAM 200916.dwg





# Section 14+00 - Cross Section (18 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

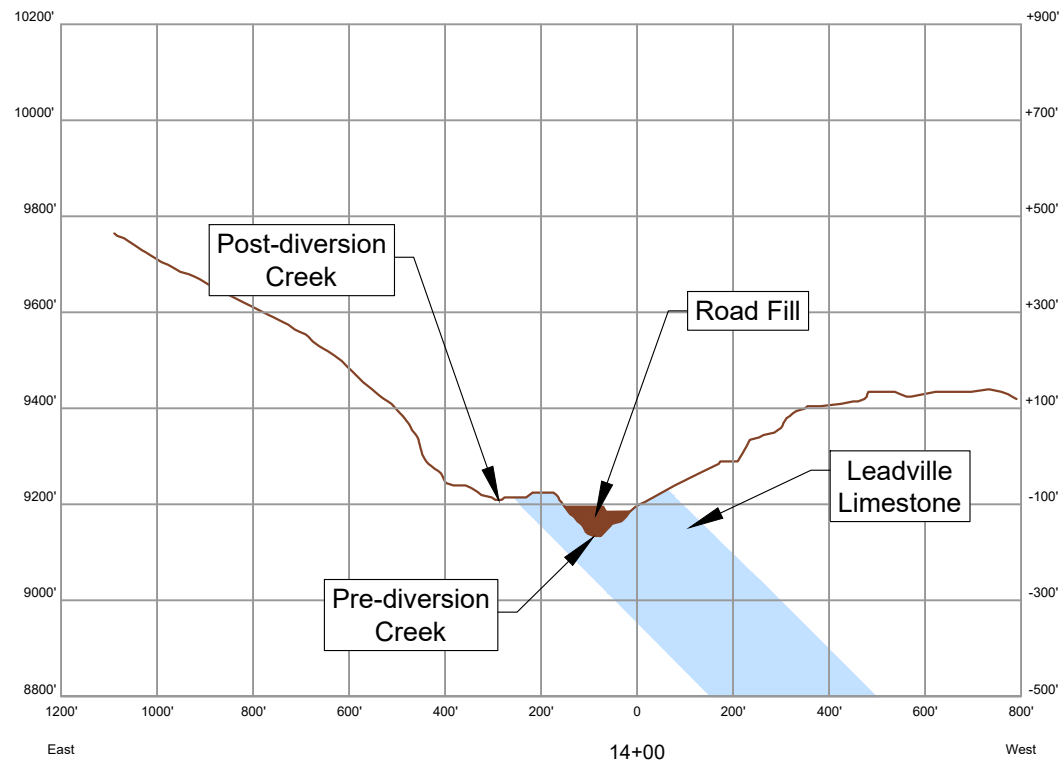
Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'

File Name: PAM 200916.dwg



# Section 16+00 - Cross Section (19 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

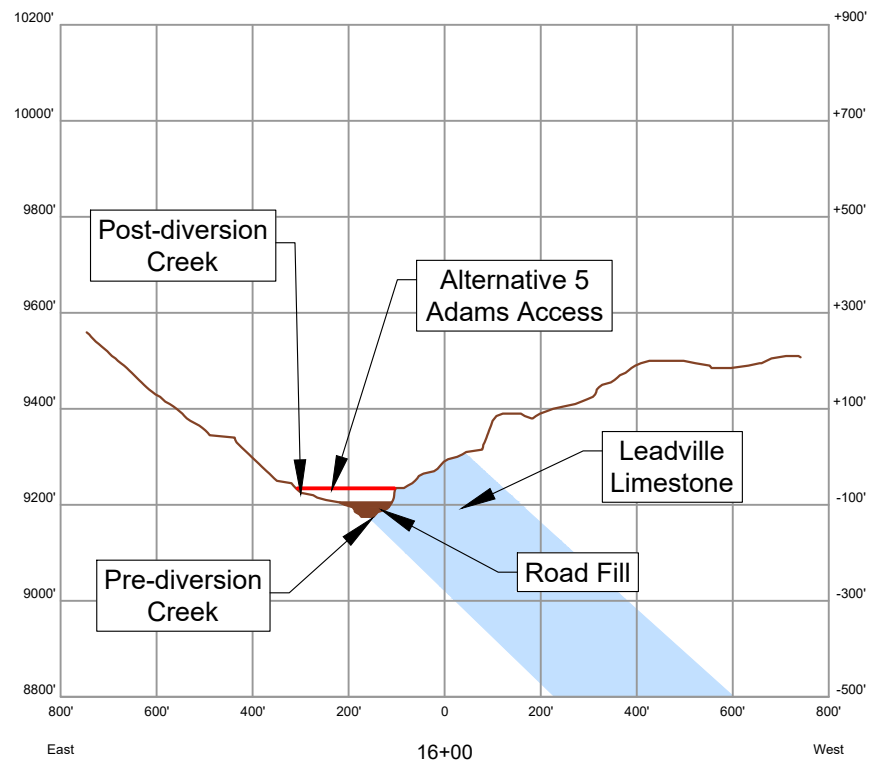
State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'

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File Name: PAM 200916.dwg





# Section 18+00 - Cross Section (20 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

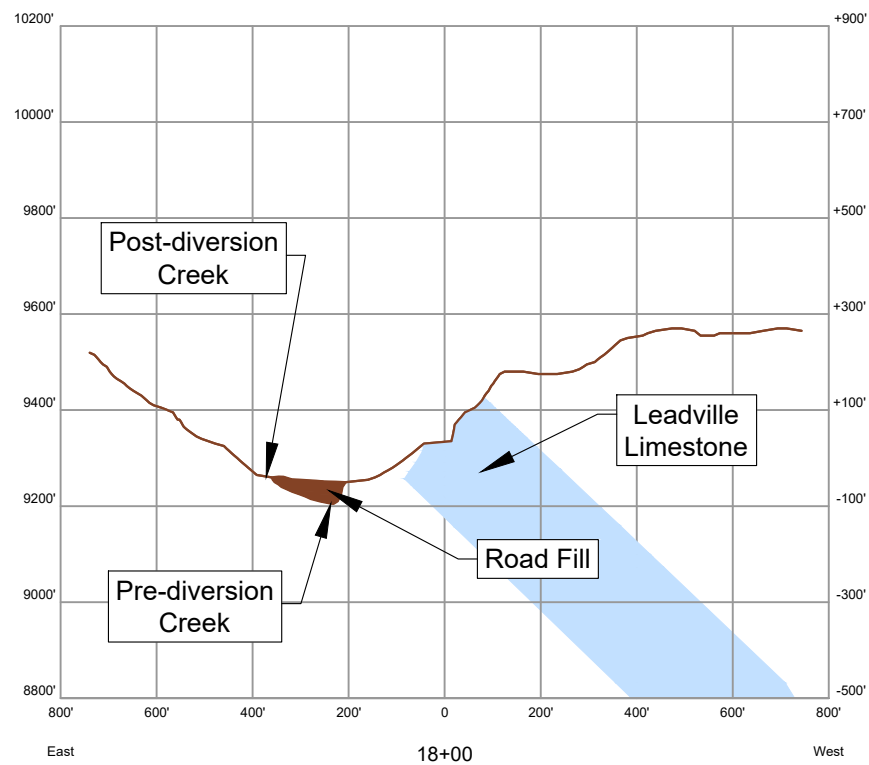
State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=400'



File Name: PAM 200916.dwg



# Section 20+00 - Cross Section (21 of 26)

## Pride of America Mine Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

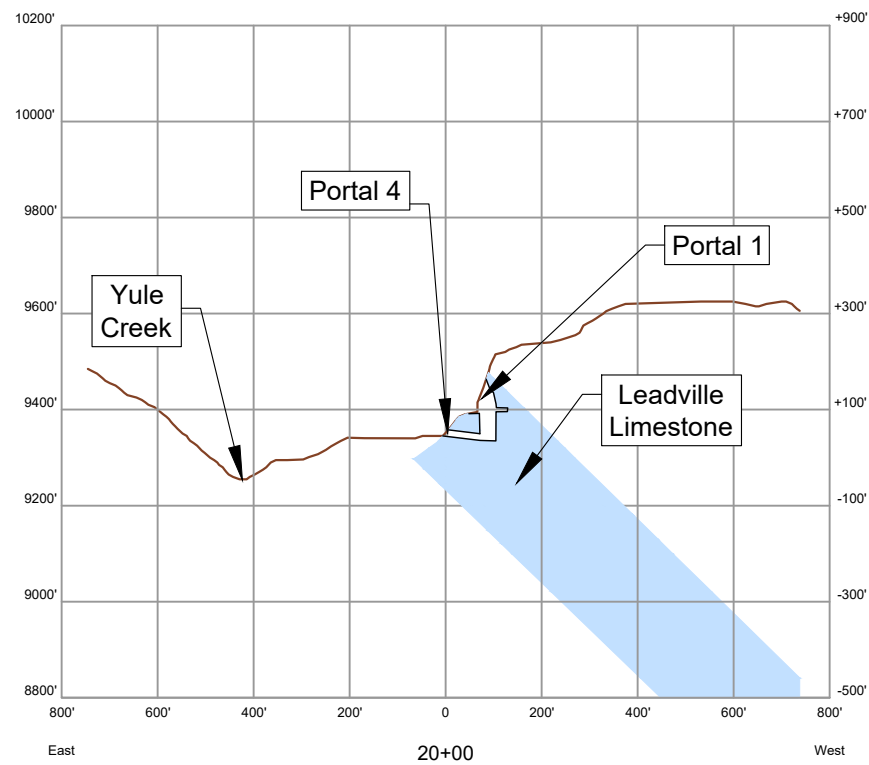
Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677

State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)

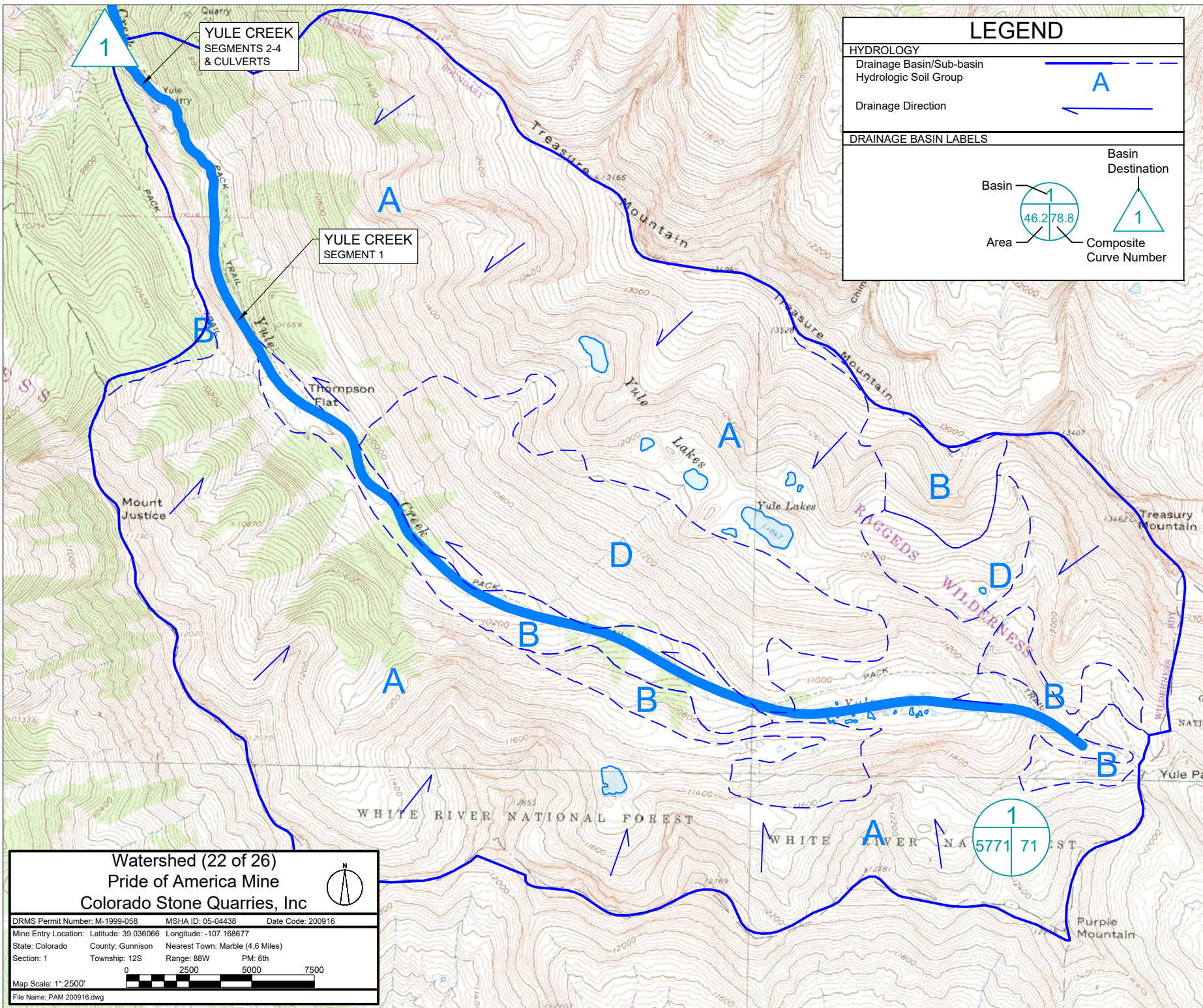
Section: 1 Township: 12S Range: 88W PM: 6th

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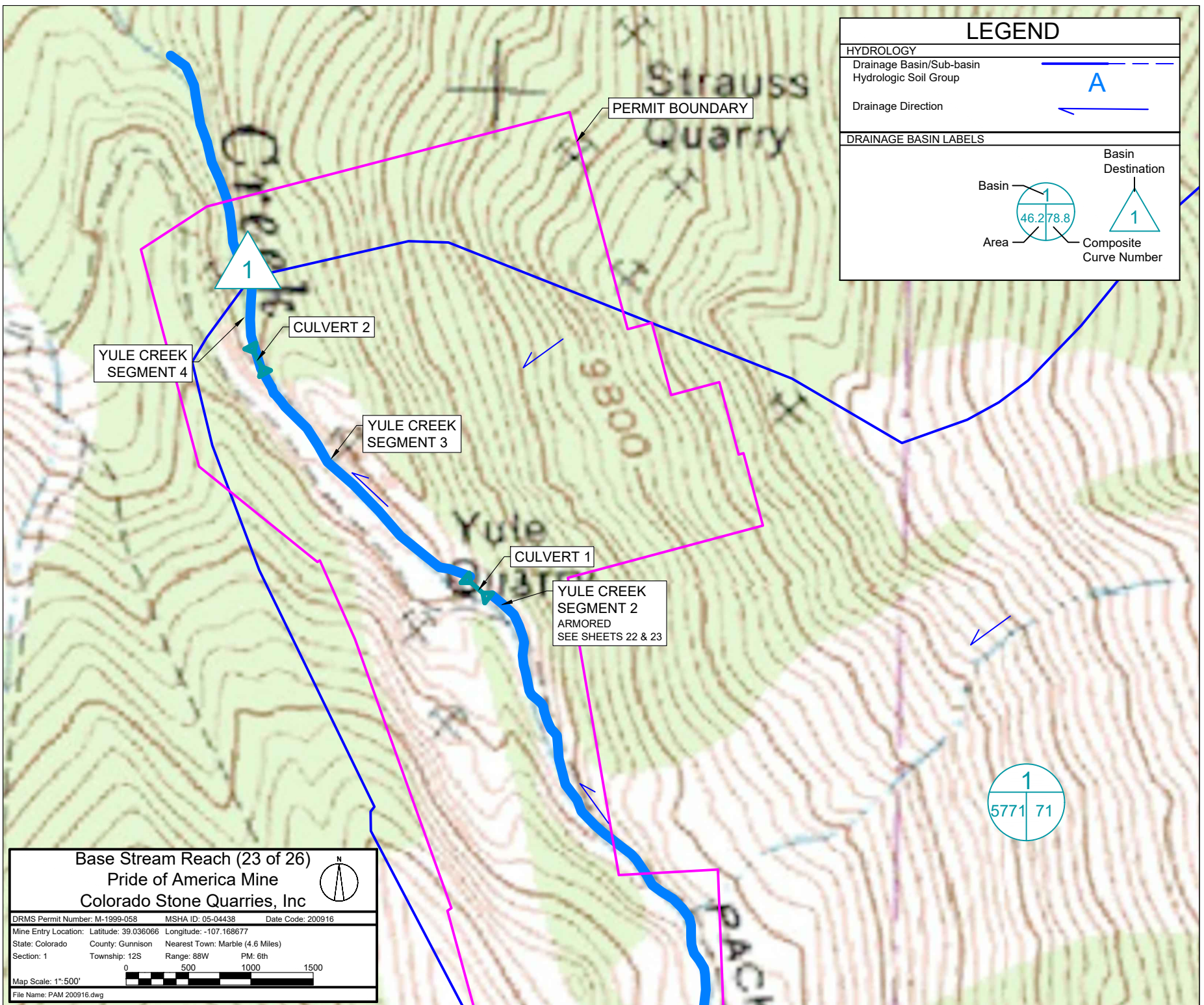




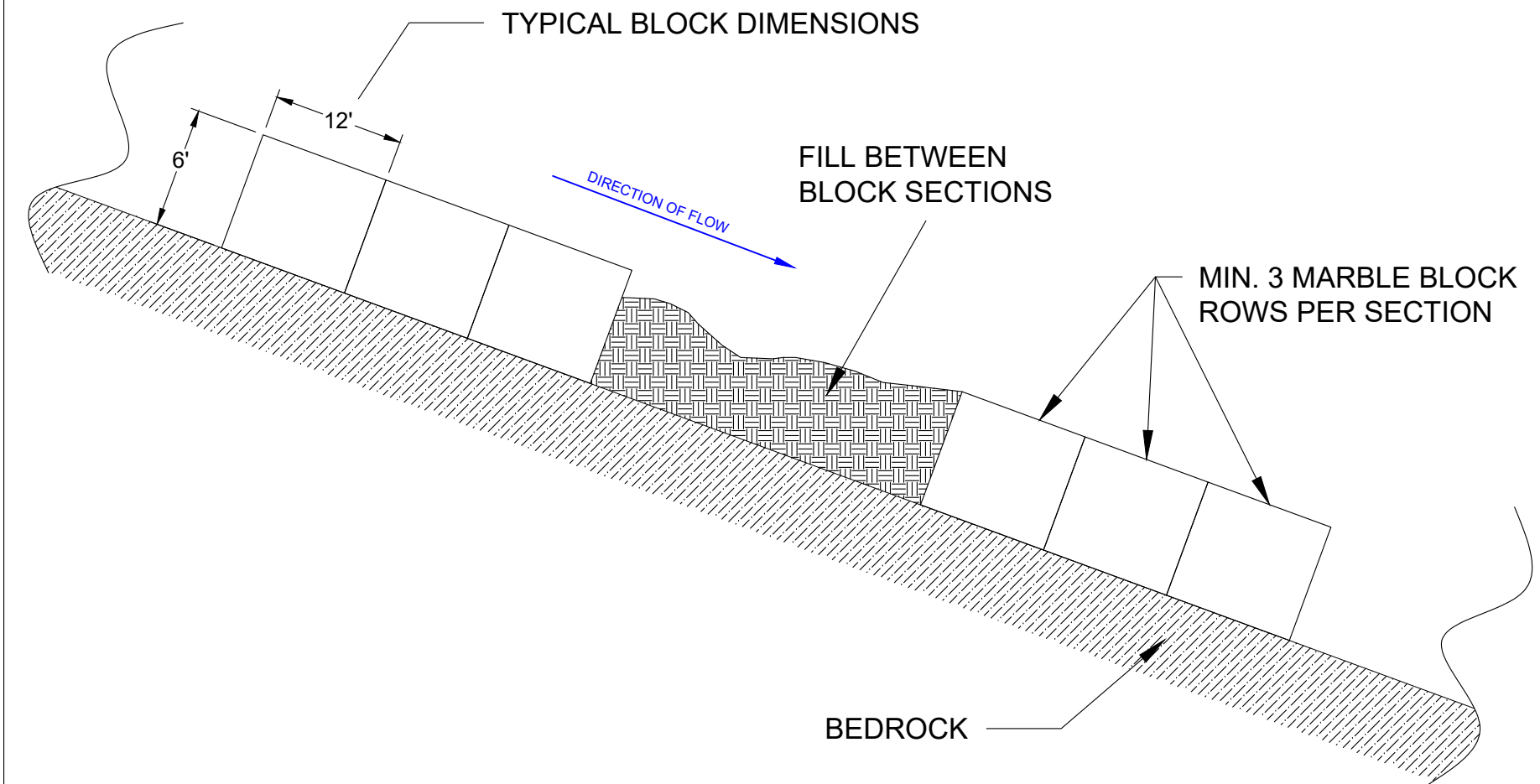




LEGEND	
HYDROLOGY	
Drainage Basin/Sub-basin	
Hydrologic Soil Group	
Drainage Direction	
DRAINAGE BASIN LABELS	







Typical Armoring (Long) (24 of 26)  
Pride of America Mine  
Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058 MSHA ID: 05-04438 Date Code: 200916

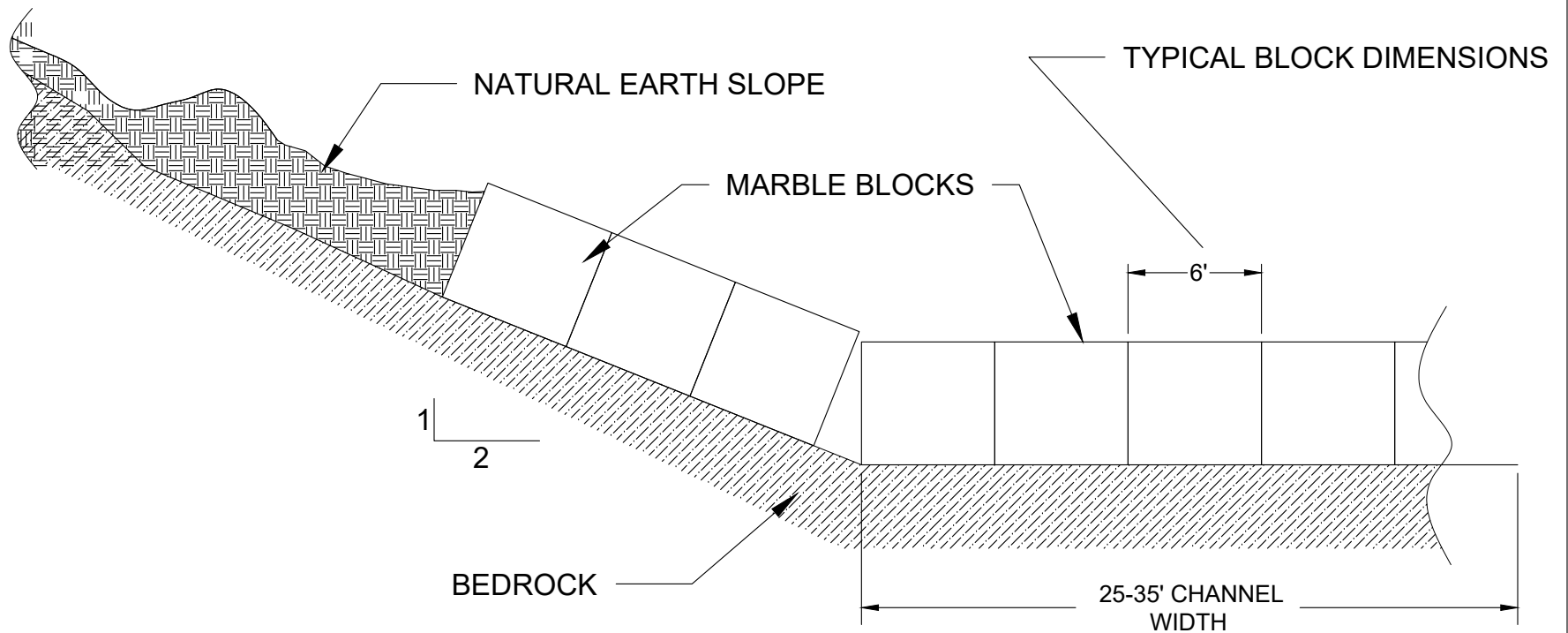
Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677  
State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)  
Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=NA



File Name: PAM 200916.dwg

DIRECTION OF FLOW IS INTO SHEET



Typical Armoring (Section) (25 of 26)  
Pride of America Mine  
Colorado Stone Quarries, Inc

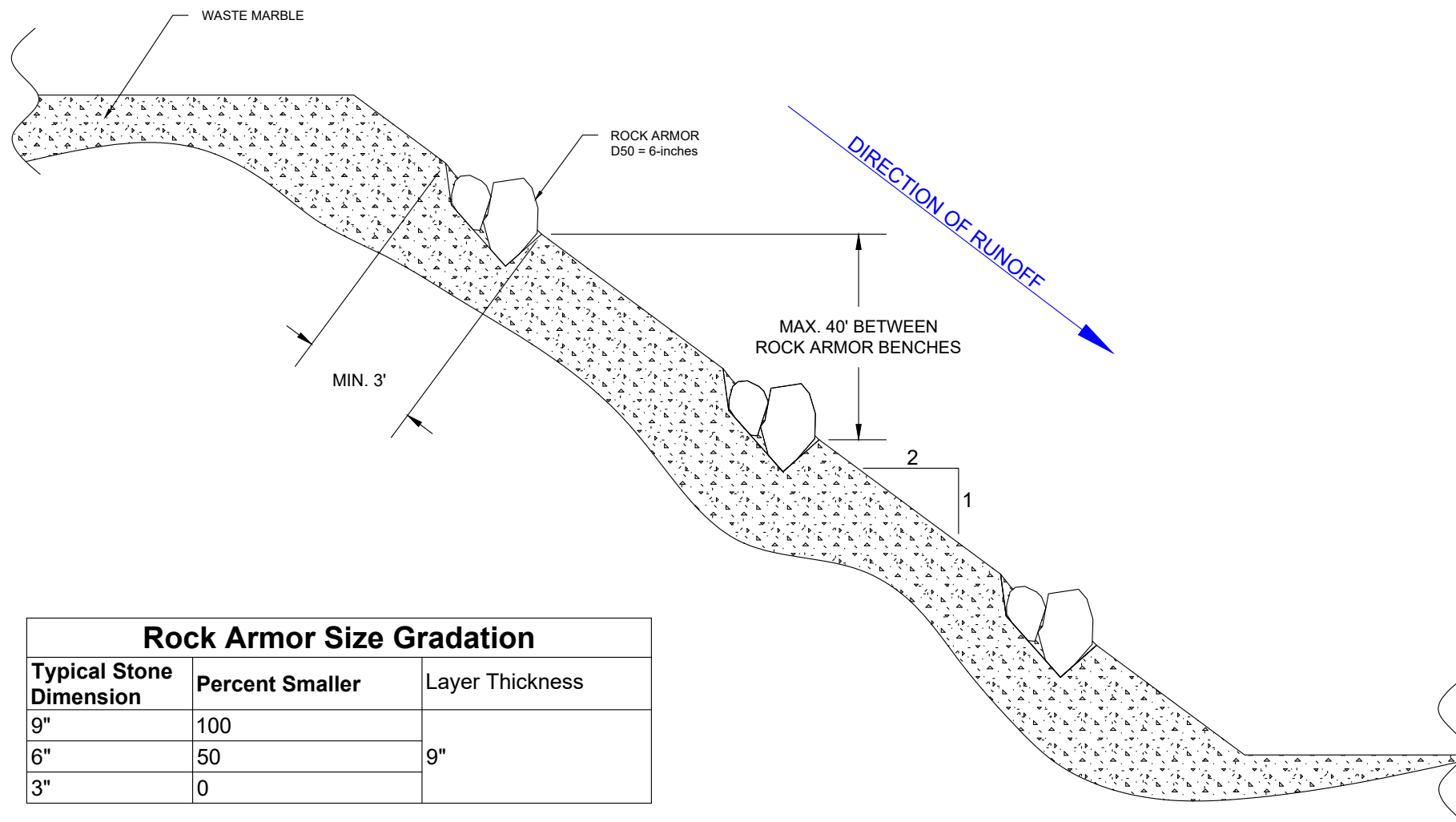
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Mine Entry Location: Latitude: 39.036066 Longitude: -107.168677  
State: Colorado County: Gunnison Nearest Town: Marble (4.6 Miles)  
Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=NA



File Name: PAM 200916.dwg



### Rock Armor Size Gradation

Typical Stone Dimension	Percent Smaller	Layer Thickness
9"	100	9"
6"	50	
3"	0	

### Typical Dump Slope (26 of 26) Pride of America Mine Colorado Stone Quarries, Inc

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 Section: 1 Township: 12S Range: 88W PM: 6th

Map Scale: 1"=NA



File Name: PAM 200916.dwg





**Figure 1.** View to the south of the Pride of America Mine (PAM) from the October 2, 2019 drone flight. The road in the bottom right corner of the frame is County Road 3c. The west-most and elevated ‘road’ within the mine area is the Gunnison County ROW walking path. The central road that switch-backs in the southern extent of the mine is the on-site haul road and includes both the on-highway truck access road and the off-highway mine vehicle and equipment road. Photo captured October 2, 2019.





**Figure 2.** Post-blast smoothing of Belden shale at the northern extent of the access road along cross-section alignment 6+00. The small cabin on the Franklin Ridge is now removed and was located at cross-section alignment 9+00 (location of Figure 4). View to the south, photo captured May 15, 2019.



**Figure 3:** 2020 Erosion control structures (armoring) and velocity attenuators installed within the eastern channel along cross-section alignment 6+00. View to the south-southeast, photo captured May 13, 2020.





**Figure 4.** Initial excavation of the Franklin Ridge along the TR-05 temporary access road at approximately 09+00 cross-section alignment. Mining occurred from west to east. View to the south-southeast; photo captured from the access road on October 2, 2019.





**Figure 5:** Off-highway vehicle and equipment access to the Franklin Quarry from the east adjacent to the eastern Yule Creek alignment along cross-section alignment 15+00. This area represents the area of the eastern alignment to be armored and widened as detailed in Alternative 2. The dump truck in view is parked adjacent to the diversion point. View to the south, photo captured May 5, 2019.





**Figure 6:** View of the Washington waste rock landform (dump) prior to the initiation of TR-05 construction along cross-section alignment 17+00. Marble blocks are stacked at a 0.5H:1V slope and abut the bedrock cliff to the west. The near vertical marble block wall is backfilled with mixed sized waste to create an unmovable and stable site derived waste management structure. View to the south-southwest, photo captured August 30, 2018.





**Figure 7:** View of the upper Washington waste rock landform (dump) prior to the initiation of TR-05 construction along cross-section alignment 18+00. Marble rip-rap caps the 1.5H:1V slope above the marble block retaining wall. Notice the bedrock cliff to the west-northwest of the slope. View to the west, photo captured August 12, 2010.