USACE Individual Permit
Colorado Stone Quarries, Inc.
Marble, CO
September 2020

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Prepared by:

Coversheet (1 of 26)
Pride of America Mine
Colorado Stone Quarries, Inc.
Current Conditions (3 of 26)
Pride of America Mine
Colorado Stone Quarries, Inc

DRMS Permit Number: 91-1999-003
DRMS Site Code: 200915

Mine Entry Location: Section: 123
Township: 12S
Range: 88W

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

Hazardous Haulage Area due to narrow single lane and limited edge protection.

Road width too narrow for heavy haulage after geotechnical mitigation.

Zone of Geotechnical Instability. Blasted and Removed.

Area Heavily Impacted by 2019 Emergency Response

Zone of Geotechnical Instability. Catch area built to protect walking path.
Alternative 6 - Mine Plan (6 of 26)
Pride of America Mine
Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058
Latitude: 39.036066
Longitude: -107.168677

Mine Entry Location:
Section: 1
Township: 12S
Range: 88W

File Name: PAM 200916.dwg

Western Channel
Eastern Channel
Future Roosevelt Quarry
Franklin Quarry
Future Roosevelt Quarry
-120 Bench
-140 Bench
-160 Bench
Future Roosevelt Quarry

8'x50' Culvert changed from 5'x50'

80'
160'
240'
320'
400'
600'

Pride of America Mine
Colorado Stone Quarries, Inc

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

PM: 6th

Map Scale: 1"/200'

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

Latitude: 39.036066
Longitude: -107.168677

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

File Name: PAM 200916.dwg

Map Scale: 1:400'

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

District: East

Pre-diversion
Creek

Post-diversion
Creek

Leadville
Limestone

Road Fill

Pre-diversion
Creek

Franklin Quarry
DRMS Permit Number: M-1999-058
Latitude: 39.036066
Longitude: -107.168677
Mine Entry Location: Section: 1 Township: 12S Range: 88W
File Name: PAM 200916.dwg
Watershed (22 of 26)
Pride of America Mine
Colorado Stone Quarries, Inc

DRMS Permit Number: M-1999-058
State: Colorado
County: Gunnison
Nearest Town: Marble (4.6 Miles)
Section: 1
Township: 12S
Range: 88W
Nearest Town: Marble (4.6 Miles)
Map Scale: 1:2500

HYDROLOGY
Drainage Basin/Sub-basin
Hydrologic Soil Group
Drainage Direction

DRAINAGE BASIN LABELS

LEGEND

Basin
Destination
Area
Composite
Curve Number

1

YULE CREEK
SEGMENT 1

YULE CREEK
SEGMENTS 2-4 & CULVERTS
TYPICAL BLOCK DIMENSIONS

FILL BETWEEN BLOCK SECTIONS

MIN. 3 MARBLE BLOCK ROWS PER SECTION

BEDROCK
DIRECTION OF FLOW IS INTO SHEET

NATURAL EARTH SLOPE

MARBLE BLOCKS

BEDROCK

TYPICAL BLOCK DIMENSIONS

25-35' CHANNEL WIDTH

Map Scale: 1"=50 ft
### Typical Dump Slope (26 of 26)

**Pride of America Mine**  
**Colorado Stone Quarries, Inc**

<table>
<thead>
<tr>
<th>Typical Stone Dimension</th>
<th>Percent Smaller</th>
<th>Layer Thickness</th>
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<tbody>
<tr>
<td>9&quot;</td>
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<td>6&quot;</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>3&quot;</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**Mine Entry Location:**  
- **Latitude:** 39.036066  
- **Longitude:** -107.168677  
- **Nearest Town:** Marble (4.6 Miles)  
- **PM:** 6th  
- **File Name:** PAM 200916.dwg

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

**DIRECTION OF RUNOFF**  
- **WASTE MARBLE**  
- **ROCK ARMOR**  
  - D50 = 6-inches  
  - Max. 40' between rock armor benches  
  - Min. 3'

**Map Scale:** 1":0  
**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.