

0036

PLATEAU MINING COMPANY

A Subsidiary of Getty Mining Company

P.O. Drawer PMC

Price, Utah 84501

Telephone (801) 637-2875

#7

August 8, 1983

RECEIVED
AUG 09 1983

David Lof
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84111

DIVISION OF
OIL GAS & MINING

Re: NOV 83-4-5-1

Dear David;

Attached please find a map showing the drainage facilities in the area south of Ditch No. 9; also find drainage area and facilities design data.

As you may recall from your inspections since the NOV was issued, we abated the violation on the ground; the information included here is documentation of design adequacy.

I hope this resolves the problem in this area.

The facilities shown on the attached map will be added to the Surface Water & Sedimentation Control Facilities Map and submitted to your office in the near future.

Sincerely,

PLATEAU MINING COMPANY


Ben A. Grimes
Environmental Coordinator

BAG:sd

Attachments

cc: Bob Lauman

DESIGN DATA

Tributary area = 1.1 ac = 0.0017 sq. mi.

Disturbed area = 0.6 ac, Undisturbed area = 0.5 ac

Weighted CN = $\frac{(0.6 \times 89) + (0.5 \times 75)}{1.1} = 83$

10-yr., 24-hr. runoff (2.1 rainfall) = 0.76 inches

Time of Concentration (Kirpich):

$$t_c = 0.0078 L^{0.77} (L/H)^{0.385} = 0.582 \text{ hrs.}$$

where L = watershed length = 200 ft.,

H = watershed relief = 110 ft.

Peak Flow (SCS):

$$Q_p = \frac{484 A Q}{\Delta t = 0.6 t_c} = \frac{484 (0.0017)(0.76)}{(0.01) + 0.6 (0.582)} = 1.76 \text{ cfs}$$

Ditch Specifications (Manning):

$$Q = 1.49/n R^{0.67} S^{0.5} A = 1.76 \text{ cfs}$$

Where R = hydraulic radius (ft)

S = slope (ft/ft)

A = channel area (sq. ft.)

n = roughness coefficient

Trapezoidal channel, grass lining

1:1 side slopes, 2 ft. deep,

1 foot bottom width,

Depth of flow = 0.41 ft.

Freeboard = 1.59 ft.

Flow velocity = 3.0 fps (grass lining required)

Sediment Trap Specifications:

10-yr., 24-hr. runoff volume:

$$\begin{aligned} 0.76 \text{ inches} \div 12 \text{ in/ft} \times 1.1 \text{ ac} &= 0.07 \text{ ac. ft.} \\ &= 3035 \text{ cu. ft.} \end{aligned}$$