0038

PLATEAU MINING COMPANY

A Subsidiary of Getty Mining Company

P.O. Drawer PMC Price, Utah 84501

Telephone (801) 637-2875

August 8, 1983

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

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):

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

where L = watershed length = 200 ft.,
H = watershed relief = 110 ft.

Peak Flow (SCS):

$$Qp = \frac{484\ A\ Q}{\frac{\Delta t = 0.6tc}{2}} = \frac{484\ (0.0017)(0.76)}{\frac{(0.01)}{@} + 0.6\ (0.582)} = 1.76 \text{ cfs}$$

Ditch Specifications (Manning):

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

Where R = hydraulic radius (ft)
S = slope (ft/ft)
A = channel area (sq. ft.)
n = roughness coeffecient

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:
0.76 inches ÷ 12 in/ft x 1.1 ac = 0.07 ac. ft.
= 3035 cu. ft.