Kennecott Minerals Company
A Division of Kennecott Corporation

Utah Copper Division
Concentrator Plant
P. O. Box 250
Magna, Utah 84044
801 263-6123

February 17, 1987

Kennecott

Mr. Calvin K. Sudweeks
Director, Bureau of Water Pollution Control
Utah Division of Environmental Health
288 North 1460 West
P. O. Box 16690
Salt Lake City, Utah 84116

SUBJECT: Utah Copper Division Modernization Project
Flotation and Molybdenum Recovery Facilities

Dear Mr. Sudweeks:

In response to your request of January 23, 1987, the following information regarding the Copperton flotation and molybdenum recovery facilities is provided.

- o Copper Concentrate Pipeline. This pipeline is a process pipeline. However, the following requested information is provided.
  - Pipeline Plan - See Drawing 460-C-001, attached.
  - Pipeline Profile - See Drawing 460-C-002, attached.
  - Pipeline Material - 6.625 inch outside diameter, 0.280 inch wall, API-5L Grade X52 with 43-46 mil polyethlyene liner.
  - Pipe Construction - Field welded with shrink sleeves and buried 4 feet.
  - Corrosion Protection - Passive cathodic protection system with anodes at approximately 0.5 mile intervals.
  - Pipe Strength Design - See Table 1.
- o Copper Concentrate Slurry - Physical Data. This material is in process and is transported by a process pipeline. However, the following requested information is provided:
  - Concentrate Slurry Solids - 55% to 65% by weight.
  - Concentrate Slurry Specific Gravity - 1.7 to 2.0.

- Concentrate Slurry Flow Rate - 380 gpm to 500 gpm.
- Concentrate Slurry Temperature - 45°F to 75°F.
- Concentrate Slurry pH - 9.5 to 11.5.
- Concentrate Slurry Particle Size - 80% to 85% passing 200 Tyler mesh.
- Concentrate Slurry Water Quality - See Table 2.

o Tailings Slurry -

- Quality - See Table 2 (This data is identical to the data in the previously submitted Dames & Moore Report "Groundwater Impacts of Pipeline Failure" submitted to the Bureau of July 12, 1986.
- Quantity - approximately 38,000 gpm.

Please contact me if you require additional information.

Very truly yours,

A. M. Trbovich

AMT:mf
Attachments

cc: G. H. Boyce, w/attach.
L. K. Jacobsen, w/attach.
V. R. Rao, w/attach.
R. J. Ramsey, w/attach.
J. B. Winter, w/o attach.

TABLE 1

CONCENTRATE PIPELINE STRENGTH DESIGN

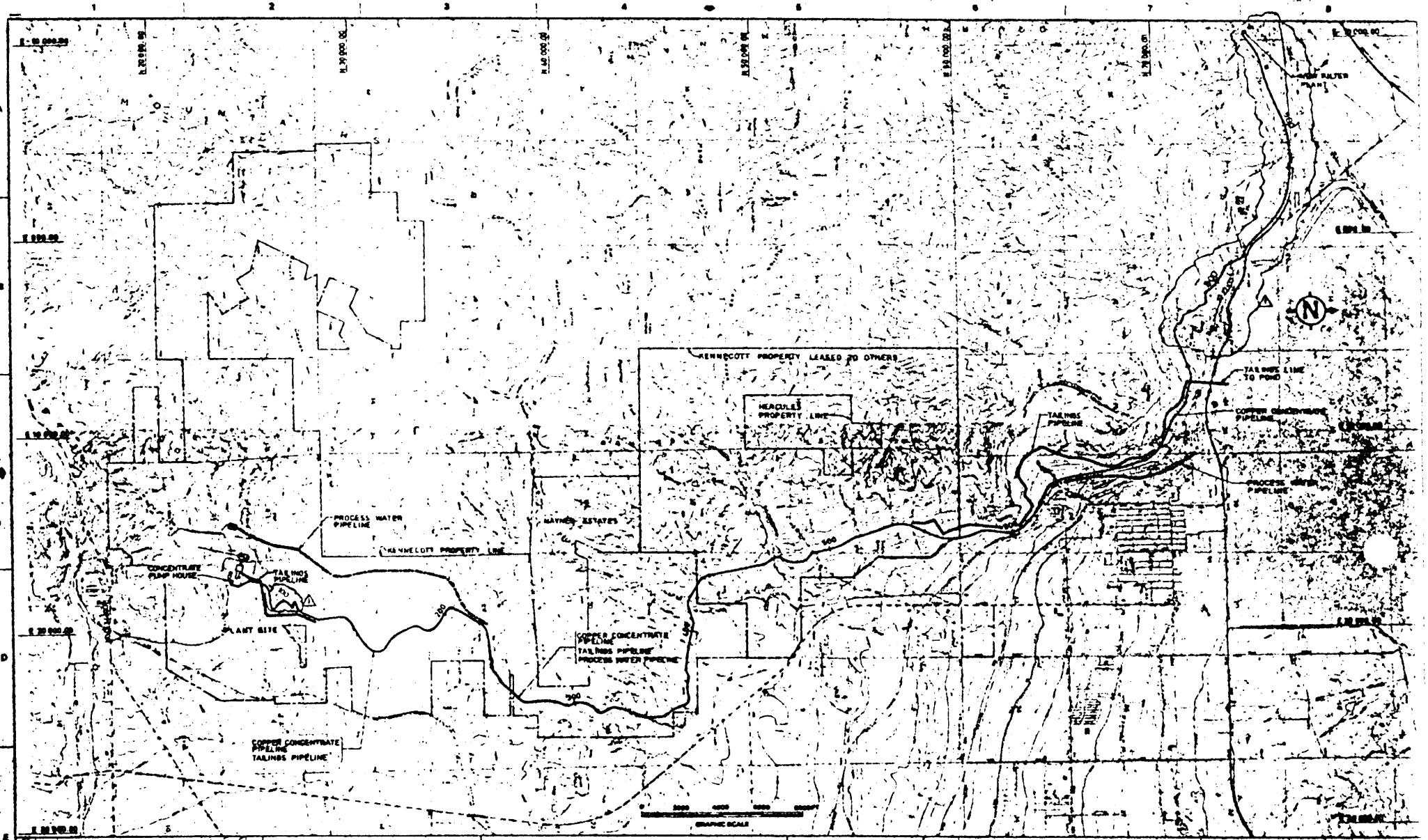
Corrosion Allowance for 25 Year Life	0.188 inch
Annual Corrosion Allowance	
First 30,000 feet	0.0075 inch
Remaining Pipeline	0.005 inch
Allowable Pressure in Pipeline	
(after deducting corrosion allowance)	1155 PSI
Design Code	AWSI/ASME B31.11-1986

TABLE 2

TAILINGS SLURRY WATER QUALITY DATA

Constituent	Slurry Water Concentration (mg/l)
Major Ion	
Calcium	500
Magnesium	75
Sodium	900
Potassium	75
Sulfate	800
Chloride	1,400
Trace Ion	
Total Cadmium	0.5*
Copper	0.15*
Lead	0.3*
Mercury	0.001*
Zinc	0.5*
Arsenic	0.25*
Cyanide	0.1*
Other	
pH	8.5
TDS	4500
BOD	15*

*Maximum anticipated concentrations - actual concentrations will likely be much lower.



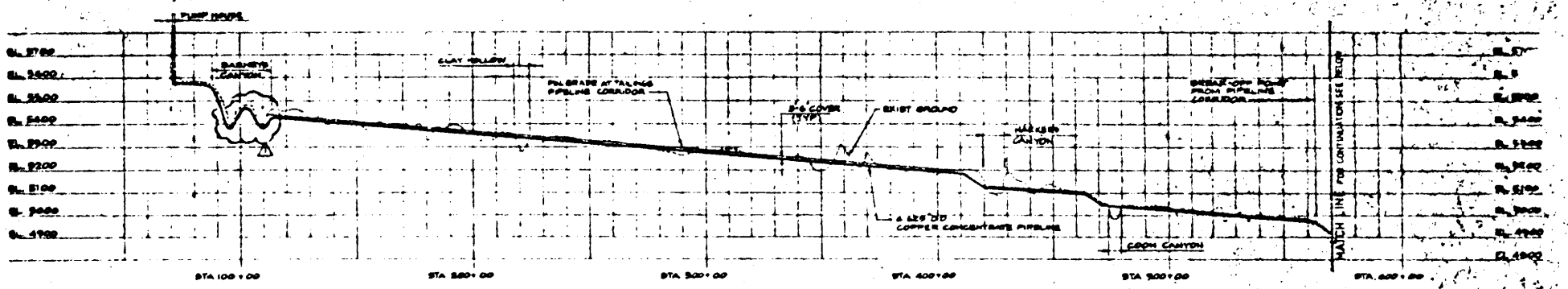
BECHTEL CIVIL & MINERALS, INC.
SAN FRANCISCO

KENNECOTT

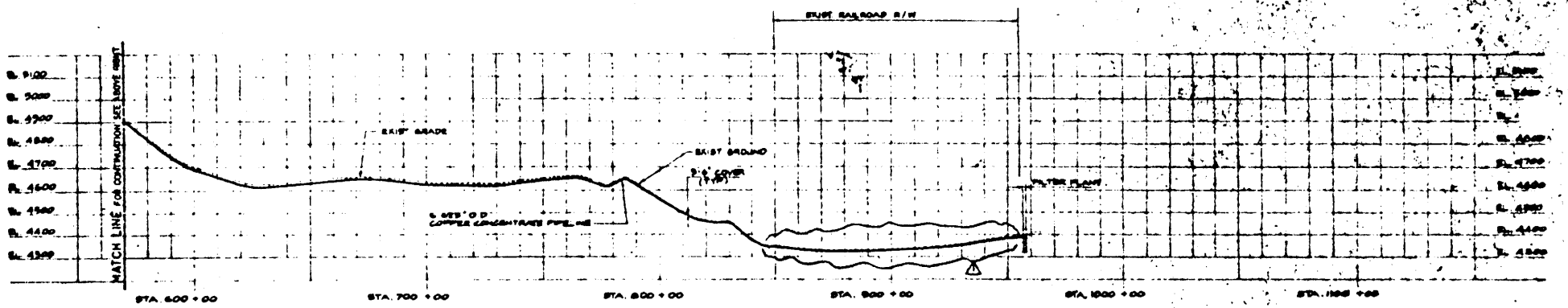
UCD CONCENTRATOR MODERNIZATION

COPPER CONCENTRATE PIPELINE
PLAN

460-C-001



PROFILE
HOR 1" = 2000'
VERT 1" = 200'



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