Chen & Associates
Consulting Geotechnical Engineers

96 South Zuni
Denver, Colorado 80223
303/744-7105

Casper
Colorado Springs
Fort Collins
Glenwood Springs
Rock Springs
Salt Lake City
San Antonio

May 15, 1987

Subject: Laboratory Testing, Umetco Contract No. 615-309972

Job No. 1 374 87

Mr. Jack Brewer
Deremo-Snyder Mine
P.O. Box 506
Dove Creek, Colorado 81324

Dear Mr. Brewer:

As you requested in your letter to Curtis Sealy dated April 21, 1987, we have performed compaction and permeablility tests on two soil samples from the Wilson/Silver Bell Mine area. These samples were received April 23, 1987, at our Denver laboratory. The results are presented on Table I and Figs. 1 and 2, attached.

If you have any questions or need further assistance, please call.

Sincerely,

CHEN & ASSOCIATES, INC.

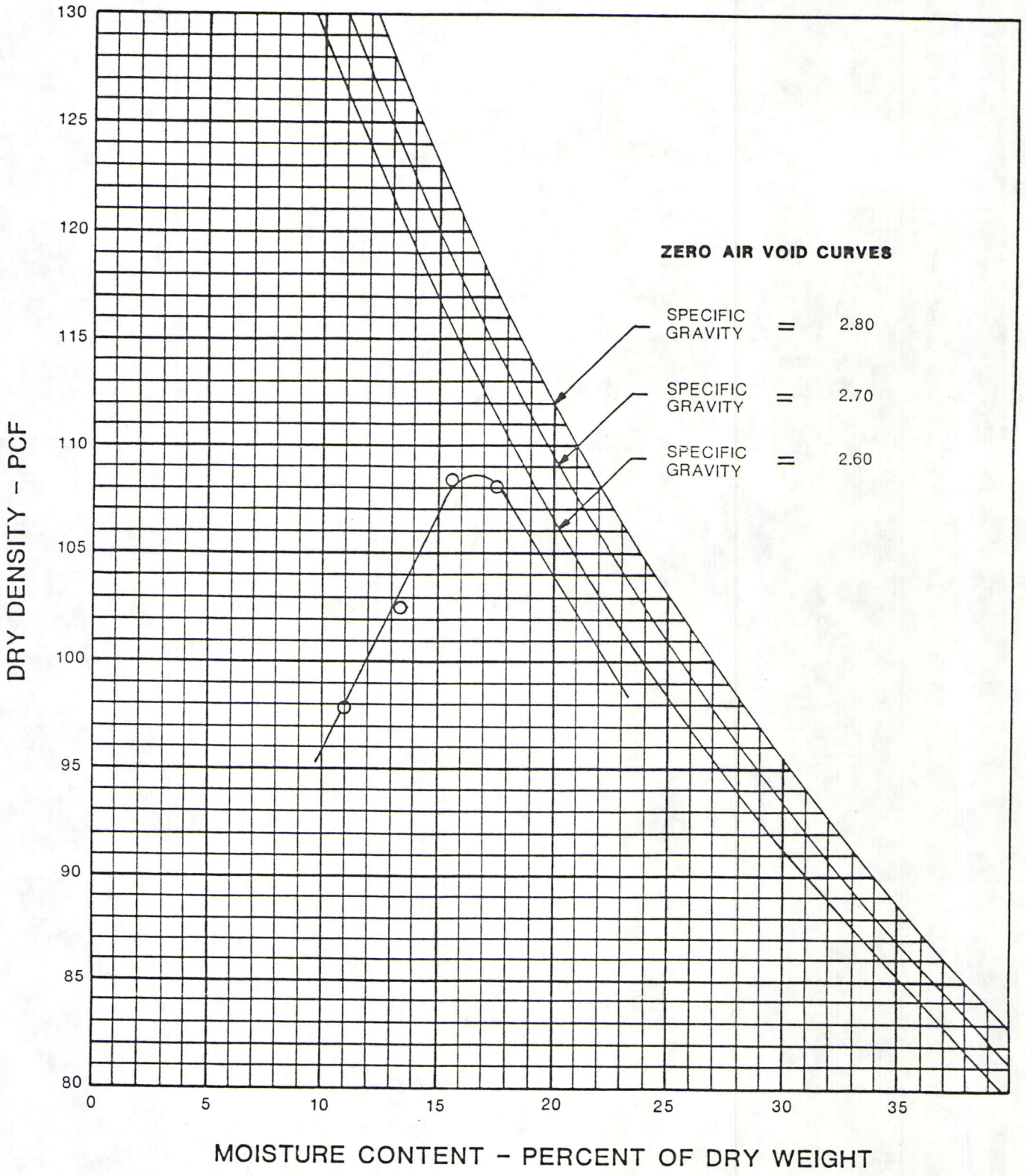
By Sally K. Miller
Sally K. Miller A.E.T.
Soils Laboratory Supervisor

SKM/rrb
Rev. by: KRC
cc: Mr. Niels B. Haubold
P.O. Box 1029
Grand Junction, Colorado 81501

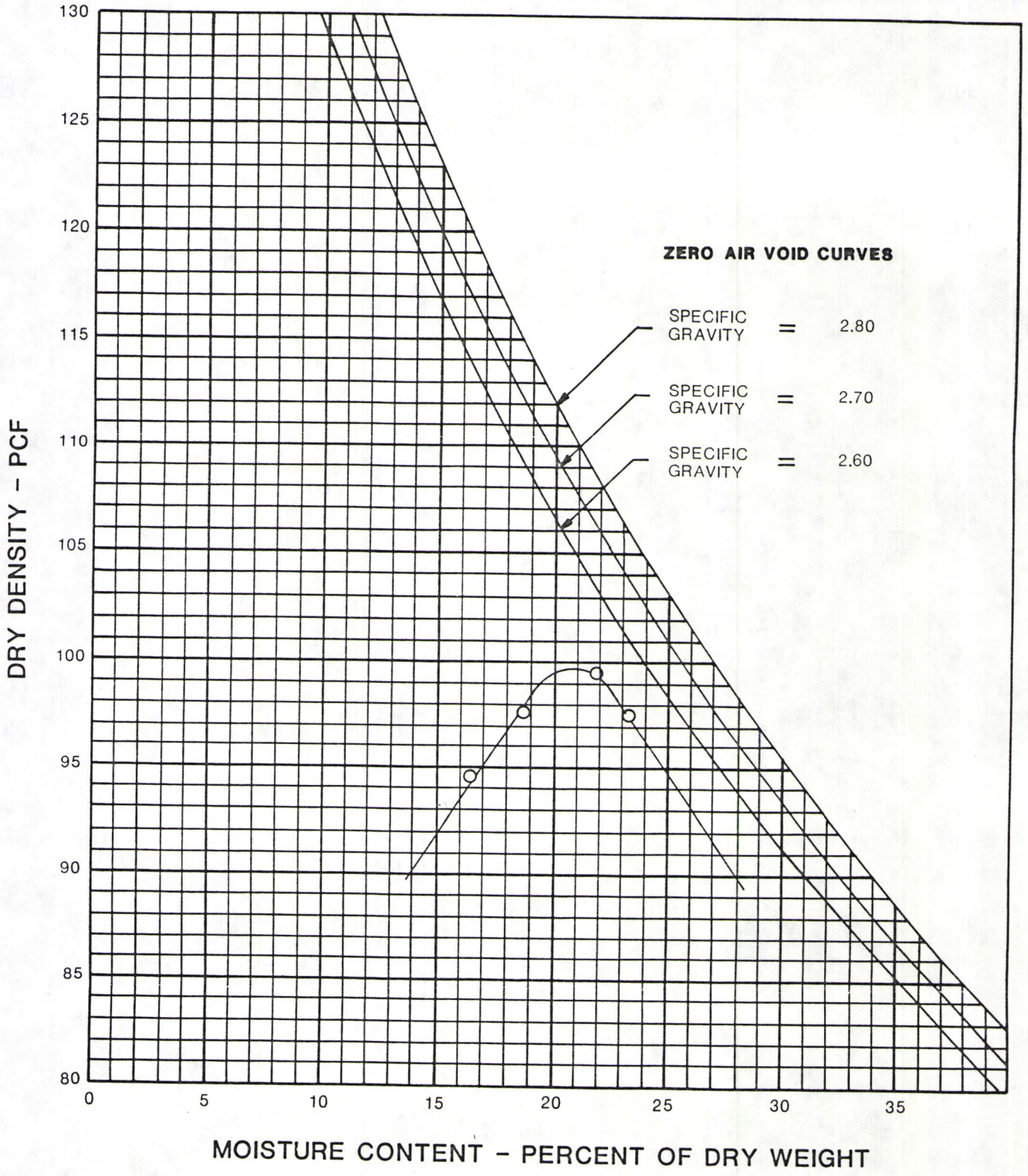
CHEN & ASSOCIATES, INC.
Table I
Permeability Test Results

Job No. 1 374 87

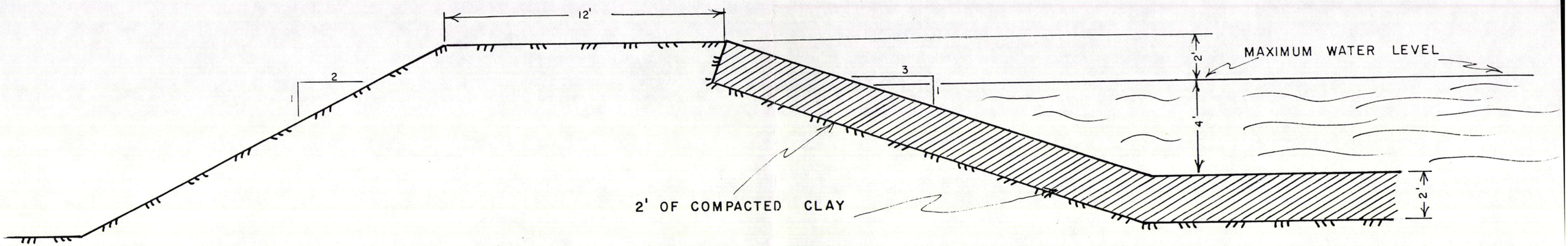
Sample No.	Initial Moisture Content, %	Initial Dry Density, pcf	Initial Compaction, %	Final Moisture Content, %	Final Dry Density, pcf	Coefficient of Permeability, cm/sec
1	16.4	103.3	95.0	20.1	102.7	8.3×10^{-8}
2	21.5	94.6	94.7	25.3	95.6	2.9×10^{-7}



LOCATION :		MOISTURE-DENSITY RELATIONSHIPS	
HOLE NO. : DEPTH : SAMPLE NO. : 1			
SOIL DESCRIPTION : Clay		Chen & Associates	
MAX. DRY DENSITY : 108.8 PCF OPT. MOIST. CONTENT : 16.6 %		PROCEDURE : ASTM D 698-78 Method A	
LIQUID LIMIT : 33 PLASTICITY INDEX : 16		JOB NO. : 1 374 87	FIG. NO.
GRAVEL : ___ % SAND : ___ % SILT AND CLAY (-200) : 85 %		DATE : April 27, 1987	1



LOCATION :		MOISTURE-DENSITY RELATIONSHIPS	
HOLE NO. : DEPTH : SAMPLE NO. : 2			
SOIL DESCRIPTION : Sandy clay		Chen & Associates	
MAX. DRY DENSITY : 99.9 PCF OPT. MOIST. CONTENT : 20.9 %		PROCEDURE : ASTM D 698-78 Method A	
LIQUID LIMIT : 37 PLASTICITY INDEX : 15		JOB NO. : 1 374 87	FIG. NO.
GRAVEL : ____ % SAND : ____ % SILT AND CLAY (-200) : 68 %		DATE : April 27, 1986	2



RECEIVED
JUN 01 1987
DIVISION OF
OIL, GAS & MINING

UMETCO MINERALS
CORPORATION
URAVAN

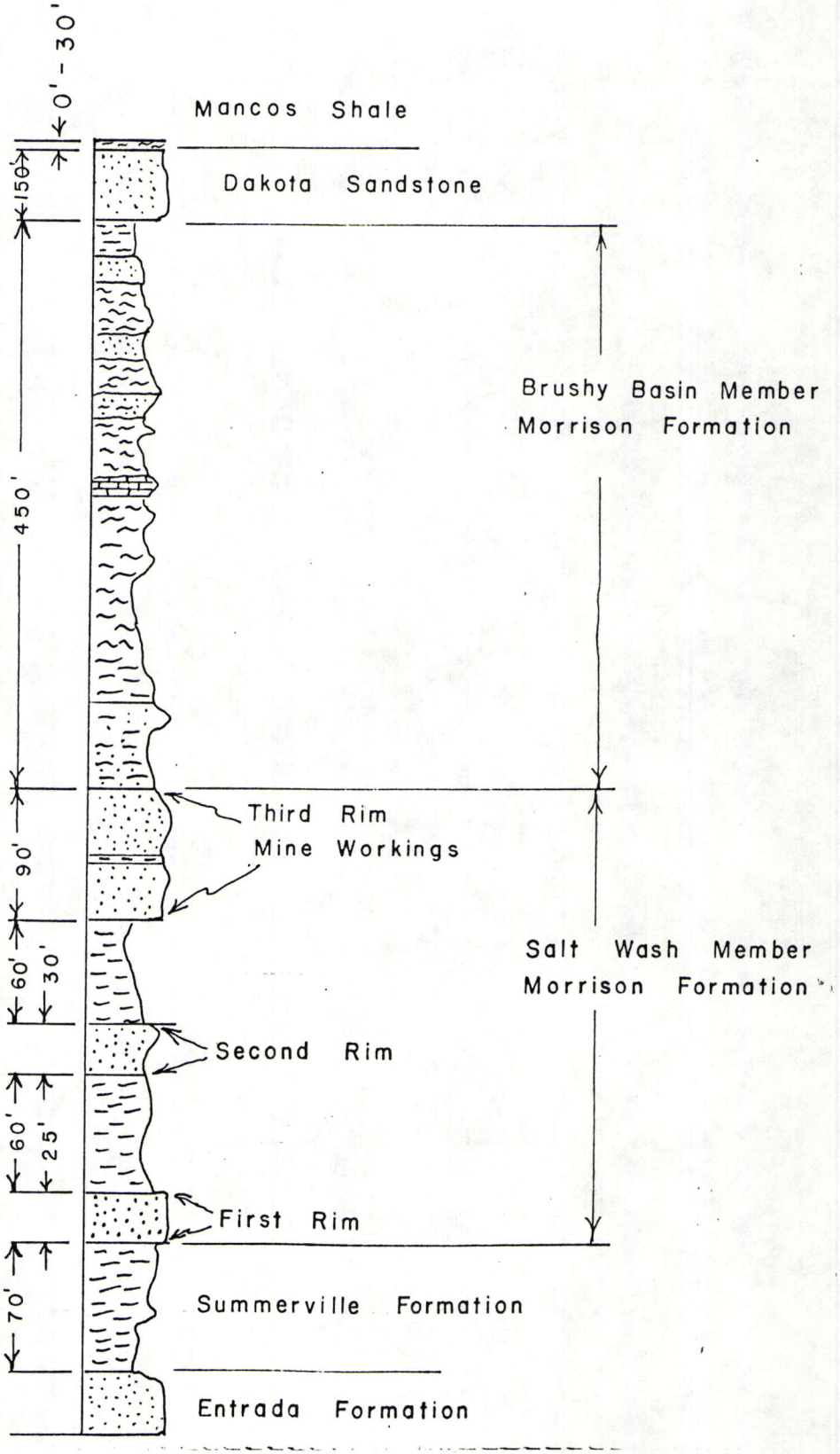
WILSON - SILVER BELL MINE

TYPICAL SECTION OF DIKE

SCALE: 1/4" = 1'

DRAWN BY: N. B. H. DATE: 3 - 17 - 87

REVISED:



UMETCO MINERALS CORPORATION
Typical Geological Cross Section
Wilson - Silver Bell Mine Area