

WM-61

UNITED STATES DEPARTMENT OF ENERGY
Albuquerque, New Mexico

**Uranium Mill Tailings
Remedial Action Project
(UMTRAP)
Gunnison, Colorado**

Main Construction Subcontract GUN--2

Information for Bidders

Volume II Processing Site Information (2 of 2)

June 1991



MORRISON KNUDSEN CORPORATION
ENVIRONMENTAL SERVICES GROUP

9710160036 910630
PDR WASTE
WM-61 PDR

with 10/2/91
92-0013

PURPOSE/DISCLAIMER

Disclaimer

The "Information for Bidders" documents provide bidders with available data regarding conditions at the processing, disposal and borrow sites. These data are not part of the subcontract documents, but are provided to bidders only to disclose the extent of data available to the Contractor and for the information and convenience of bidders. The Contractor makes no representation and offers no warranty either expressed or implied regarding the accuracy, precision or validity of the data contained herein. The Contractor also disclaims responsibility for any interpretations of this data by bidders, or for any opinions, conclusions or deductions which may be expressed or implied in the information contained herein.

Purpose

The purpose of this information is to provide bidders with available data regarding the following:

1. Geotechnical characteristics of the existing tailings pile or other contaminated materials at the processing site;
2. Geotechnical characteristics of the Landfill disposal site;
3. Geotechnical characteristics of radon barrier borrow and rock borrow materials at the approved and potential borrow sites;
4. Groundwater characteristics of the processing and disposal sites and vicinity;
5. Meteorological characteristics of the sites and vicinity;

The information has been extracted from data collected or prepared by Jacobs Engineering Group, Inc. and Morrison-Knudsen Environmental Services Group.

Additional information not presented in this report includes radiological characterization data for the processing site from various sources.

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GEOTECHNICAL DATA

GEOTECHNICAL DATA

Taken From: CSU, "Characterization of Inactive Uranium Mill Tailings Site: Gunnison, Colorado," CSU 1985 MKE Doc #4005-GUN-R-03-00178-00.

Lambert & Associates, "Sieve Analysis Results for Gunnison UMTRA Project", MKE Doc # 4005-GUN-R-09-00801-00, Feb 1990

Lambert & Associates, "Compaction & Sieve Analysis Test Results for Processing Site", MKE Doc # 3885-GUN-X-09-01315-00, Aug 1990

Lambert & Associates, "Capillary Moisture, Compaction, Sieve Analysis & Permeability Test Results for Processing Site", MKE Doc # 3885-GUN-X-09-01373-00, Sep 1990

Lambert & Associates, "Capillary Moisture Relations for Processing site", MKE Doc # 3885-GUN-X-09-01318-00, Aug 1990

Lambert & Associates, "Sieve Analysis Results for Processing Site", MKE Doc # 3885-GUN-X-09-01070-00, July 1990

Other, see individual sheets.

California and Shelby Tube Sample Characteristics

Boring	Depth (ft)	Material	Blow Count N	Dry Density, γ_D (lb/ft ³)	In situ Water Content, w (%)	Spec Gravity, G_s	Void Ratio, e	Saturation, S (%)	% Finer No. 100 Sieve	Liquid Limit (%)	Plasticity Index (%)	USC
GIN 200 (CT)	0.5	Tan fine silty sand	2/4/2	80.9	13.4	2.71	1.09	33.3	45.0	—	NP	SM
GIN 200 (ST)	5.0	Grey clay silts w/ some sand	—	—	—	—	—	—	70.1	34.3	13.2	CL
GIN 201 (CT)	10.0	Clay silts w/ grey and brown fine sand	2/3/6	86.4	14.9	2.71	0.96	98.9	83.3	27.4	9.3	CL
GIN 202 (CT)	0.5	Grey/purple silts w/ sand lenses	1/1/2	83.2	14.0	2.75	0.88	43.5	45.7	—	—	SM
GIN 202 (ST)	2.5	Grey clay silts	—	—	—	—	—	—	99.1	49.0	23.0	CL
GIN 203 (CT)	0.5	Tan fine silty sand	1/2/2	81.4	8.9	2.70	1.09	23.4	21.6	29	6.7	SM
GIN 204 (CT)	5.0	Tan silty sand	4/11/20	91.0	21.6	2.70	0.85	68.5	44.4	—	NP	SM
GIN 204 (CT)	10.0	Grey med/fine sand w/ silts lenses	7/3/13	100.0	13.3	2.75	0.70	74.6	27.1	—	NP	SM
GIN 205 (ST)	5.0	Grey/brown clayey sand	—	—	—	—	—	—	23.6	37.0	17.4	SC
GIN 205 (CT)	10.0	Grey fine silty sand	4/3/4	91.2	13.7	2.71	0.84	49.7	24.6	—	NP	SM
GIN 205 (CT)	7.5	Tan silty sand	5/3/8	87.9	19.9	2.71	0.92	58.4	26.3	—	NP	SM
GIN 206 (CT)	15.0	Grey sand, little silt	4/5/8	84.5	8.9	2.71	1.01	23.9	11.7	—	—	SP
GIN 207 (CT)	5.0	Light brown sandy clay silts	1/2/5	62.1	14.8	2.70	0.94	42.6	49.7	30.5	9.5	CL
GIN 207 (ST)	7.5	Grey silty fine sand	—	—	—	—	—	—	43.6	38.1	12.8	SM
GIN 210 (CT)	0.5	Tan fine clayey sand	1/1/1	73.8	33.0	2.71	1.32	67.5	38.2	31.4	8.9	SC

¹ Water contents were determined in the laboratory

Bulk Sample Characteristics

Sample	Depth (ft)	Description	In situ Water Content ¹		% Fines No. 200 Sieve	Specific Gravity	Liquid Limit		Plasticity Index	Std. Proctor		Std. Proctor Optimum Moisture (%)	UFC
			(%)	(%)			(%)	(%)		Max γ_d (lb/ft ³)	(%)		
GIN 200B	3'-8"	Gray clay silty w/ some sand	38.9		64.6	2.75	36	14		104.0	19.0	CL	
GIN 205B	0'-3"	Gray silty fine sand	17.6		40.3	—	—	NP		—	—	—	SN
GIN 206B	1'-3"	Gray silty medium fine sand	5.5		26.4	2.70	—	NP		117.0	13.3	SN	
GIN 208B	0.5'-3"	Gray silty fine sand	9.1		37.2	2.67	—	NP		—	—	—	SM
GIN 211B	3'-9 1/2"	Gray silty fine medium sand	16.3		42.7	2.71	—	NP		118.5	13.0	SN	
GIN 215B	0'-2"	Silty fine medium sand	5.7		45.7	2.63	—	NP		—	—	—	SN

¹ Water contents were determined in the laboratory

Undisturbed Samples—Saturated Permeability

Sample		Dry Density γ_D , pcf	Percent Finer No. 200 Sieve	Saturated Conductivity (cm/sec)
No.	Depth (ft.)			
Gun 200 CT	0.5	80.9	45.0	1.34×10^{-2}
Gun 201 CT	10.0	86.4	83.2	1.80×10^{-6}
Gun 202 CT	0.5	91.2	45.7	2.05×10^{-5}
Gun 203 CT	0.5	81.4	21.6	4.93×10^{-3}
Gun 204 CT	5.0	91.0	44.4	4.81×10^{-4}
Gun 204 CT	10.0	100.0	27.1	9.69×10^{-4}
Gun 205 CT	10.0	91.2	24.6	4.58×10^{-4}
Gun 206 CT	7.5	87.9	26.5	8.12×10^{-4}
Gun 206 CT	15.0	84.3	11.7	7.67×10^{-3}
Gun 207 CT	5.0	62.1	69.7	2.08×10^{-5}
Gun 210 CT	0.5	72.8	38.2	1.93×10^{-4}

Saturated Permeability of Remolded Bulk Samples at Different Densities

No.	Sample		% Finer No. 200 Sieve	Sample Dry Density (pcf)	% Maximum Standard Proctor Density	Saturated Conductivity $K_{20^{\circ}\text{C}}$ (cm/sec)
	Type					
Qm 200B	Slimes with some sand			76.4	73	$5.2 (10^{-3})$
				89.2	86	$4.1 (10^{-5})$
			64.6	98.9	93	$2.6 (10^{-8})$
Qm 211B	Slime/sand mixture			87.4	73	$1.4 (10^{-3})$
				100.0	85	$2.7 (10^{-3})$
			42.7	110.7	95	$1.6 (10^{-7})$
Qm 206B	Sand with some slime			87.4	81	$3.9 (10^{-3})$
				99.0	85	$2.1 (10^{-5})$
			26.4	116.2	100	$1.0 (10^{-6})$

Compression Characteristics

No.	Sample		Initial Dry Density (pcf)	% Maximum Standard Proctor Density	Initial Void Ratio (3)	Compression Indices	
	Type	USC				C_c (1)	C_r (2)
GUN 200B	Slime with some sand	CL	98.0	94	0.718	0.23	0.01
			72.5	70	1.322	0.39	0.09
GUN 206B	Sand with some slime	SM	108.9	93	0.548	0.08	—
			97.4	84	0.729	0.15	—
			86.0	74	0.954	0.13	—
GUN 202, 2.5' (ST)	Slime	CL	67.5	Intact	2.214	0.96	0.06
GUN 205, 5' (ST)	Sand with some slime	SC	90.6	Intact	0.796	0.03 ?	0.16 ?

(1) C_c : the compression index, slope of the virgin compression curve

(2) C_r : the reconsolidation index, slope of the reconsolidation curve

(3) At zero load

Partially Saturated Hydraulic Parameters for Tube Samples

	GUN 206 at 7.5' (CT)		GUN 205 at 10' (CT)		GUN 200 at 5' (ST)	GUN 20" at 5' (ST)
	intact	remolded	intact	remolded	intact	intact
Pore distribution index, λ	1.25	6.75	0.47	1.53	1.5	1.05
Residual saturation	18%	20.5%	7%	40%	87%	77%
Residual water content	9%	8%	16%	16%	33%	32%
Packed dry density (pcf)	88.2	81.5	90.7	85.5	—	—
% Finer No. 200 sieve		19.6		38.2	57.3	75.0

Partially Saturated Hydraulic Parameters for Bulk Samples

(Brooks-Corey Analysis)

	Gun 200B		Gun 211B		Gun 206B	
% Maximum Std. Proctor Density	71%	87%	75%	89%	79%	92%
Displacement head (h_d)	27.1	54.7	8.8	22.7	43.9	31.0
Pore distribution index (λ)	0.5	1.05	0.85	0.85	0.87	0.6
Residual saturation (S_r)	42%	65%	38%	50%	20%	40%
Residual water content	20%	23%	13%	11%	6%	8%
Field water content	38.9%		9.1%		5.5%	
Optimum water content	19%		13%		12.8%	
% Finer No. 200 Sieve	64.6%		42.7%		26.4%	

TEST HOLE		INITIAL DRY DENSITY (PCF)	INITIAL MOISTURE CONTENT (PERCENT)	FINAL MOISTURE CONTENT (PERCENT)	"B" VALUE	PERMEABILITY (CM/SEC)
Bulk-1	216 M-3	105.8	13.5	20.6	.981	4.3×10^{-6}
Bulk-2						
Bulk-1	217 M-4	108.6	12.5	17.6	.981	5.4×10^{-6}
Bulk-2						
Bulk-1	218 M-5	108.1	12.5	17.7	.984	9.5×10^{-6}
Bulk-2						
Bulk-1	220 M-6	98.4	16.5	22.7	.980	2.1×10^{-7}
Bulk-1	221 M-7	111.3	11.5	15.9	.980	1.8×10^{-7}

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Project No.: M90004GE

Date: 8/20/90

Figure: 31

TEST HOLE	INITIAL DRY DENSITY (PCF)	INITIAL MOISTURE CONTENT (PERCENT)	FINAL MOISTURE CONTENT (PERCENT)	"B" VALUE	PERMEABILITY CM/SEC
Bulk-2 222 M-8	110.9	11.0	☆ ☆	.987	2.6×10^{-7}
Bulk-1 Bulk-2 223 M-9	110.4	12.0	☆ ☆	.984	2.5×10^{-6}
Bulk-1 225 M-12	104.9	14.0	☆ ☆	.984	5.3×10^{-6}
Bulk-1 Bulk-2 226 M-13	107.6	12.0	☆ ☆	.986	1.22×10^{-5}
Bulk-1 228 M-11	92.0	21.5	☆ ☆	.986	3.9×10^{-8}

☆ ☆ Test not completed at the time of this submittal

Lambert and Associates

Project No. : M90004GE

Date : 8/22/90

Figure :

GUNNISON UMTRA
MOISTURE CONTENT TEST RESULTS

<u>HOLE</u>	<u>SAMPLE DEPTH</u>	<u>MOISTURE CONTENT (PERCENT)</u>
223 (M-9)	S-1	8.3
	S-2	11.3
	S-3	15.1
	S-4	12.7
	S-5	11.6
	S-6	17.4
	S-7	36.5
224 (M-10)	S-1	11.3
	S-2	6.5
	S-3	8.2
	S-4	20.0
	S-5	40.0
226 (M-13)	S-1	5.8
	S-2	8.8
	S-3	26.6
	S-4	31.3
227 (M-14)	S-1	17.9
	S-2	26.3
	S-3	36.5
228 (M-11)	S-1	48.9
	S-2	40.4
229 (M-15)	S-1	17.5
	S-2	9.2
	S-3	42.7
	S-4	45.9

GUNNISON UMTRA
MOISTURE-CONTENT TEST RESULTS

<u>HOLE</u>	<u>SAMPLE DEPTH</u>	<u>MOISTURE CONTENT (PERCENT)</u>
215 (M-1)	S-1	55.6
	S-2	46.9
216 (M-3)	S-1	15.5
	S-2	9.7
	S-3	26.0
	S-4	36.5
217 (M-4)	S-1	13.9
	S-2	18.7
	S-3	13.5
	S-4	33.8
218 (M-5)	S-1	6.6
	S-2	29.3
	S-3	37.3
	S-4	40.8
219 (M-2)	S-1	23.2
	S-2	31.4
	S-3	33.2
220 (M-6)	S-1	40.4
	S-2	19.6
	S-3	41.9
221 (M-7)	S-1	8.9
	S-2	14.2
	S-3	11.2
	S-4	38.4
222 (M-9)	S-1	9.5
	S-2	6.9
	S-3	14.0
	S-4	21.5
	S-5	25.3
	S-6	27.9



CONSULTING ENGINEERS / LAND SURVEYORS

2150 Hwy. 6 & 50, Grand Junction, CO 81505-9422 • 303/242-5202 • FAX 242-1672

January 24, 1991

Sample A: Consists of T-4 and T-6 thoroughly combined (subpile material).
Sample B: Consists of T-8 and T-10 thoroughly combined (subpile material).
Sample C: Consists of T-17 and T-26 thoroughly combined (offpile material).

M. Helene Langlois
MK-Ferguson Company
P.O. Box 9136
Albuquerque, NM 87119

MK-ENV/SF

RE: Purchase Order No. 3050-511-10189
Geotechnical Laboratory Testing, Gunnison, Colorado

Ms. Langlois:

Following are the test results requested under the above Purchase Order:

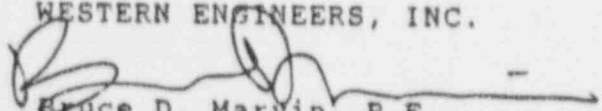
Test	Sample A	Sample B	Sample C
Liquid Limit	Not Determinable	N/A	28.1%
Plastic Limit	Non-Plastic	N/A	Non-Plastic
Plasticity Index	Non-Plastic	N/A	Non-Plastic
Specific Gravity	2.78	N/A	N/A
Standard Proctor:			
Maximum Density	108.7 pcf	121.0 pcf	121.2 pcf
Optimum Moisture	7.4%	11.6%	11.2%
Capillary Moisture:			
0 Bar	7.40%	11.60%	11.20%
0.1 Bar	7.40%	11.60%	9.92%
0.2 Bar	7.40%	11.60%	9.00%
0.5 Bar	5.51%	9.89%	6.53%
1.0 Bar	4.43%	8.30%	5.60%
2.0 Bars	3.74%	7.21%	5.14%
4.0 Bars	3.23%	6.10%	4.71%
7.0 Bars	3.01%	5.79%	5.58%
15.0 Bars	2.60%	5.40%	4.10%

As required, samples prepared at optimum moisture have been delivered to Garth Stowe at the MK-Ferguson, Grand Junction Office. A copy of the transmittal letter is attached. We have prepared representative specimens from each of the three composite samples to be sent to Rogers and Associates. We will wait to hear from you before sending those.

Also enclosed is an invoice for this Work.

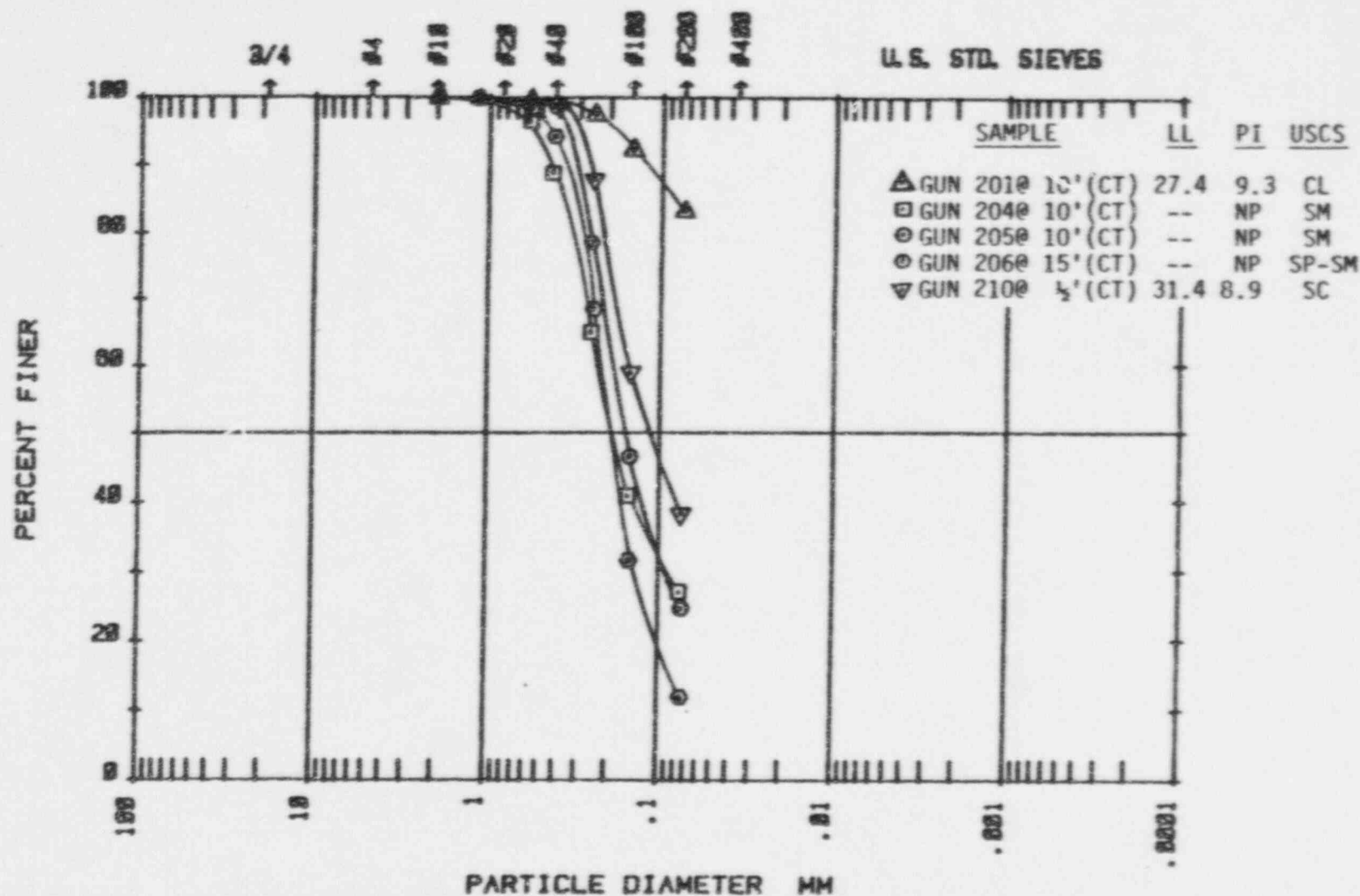
Submitted by:

WESTERN ENGINEERS, INC.

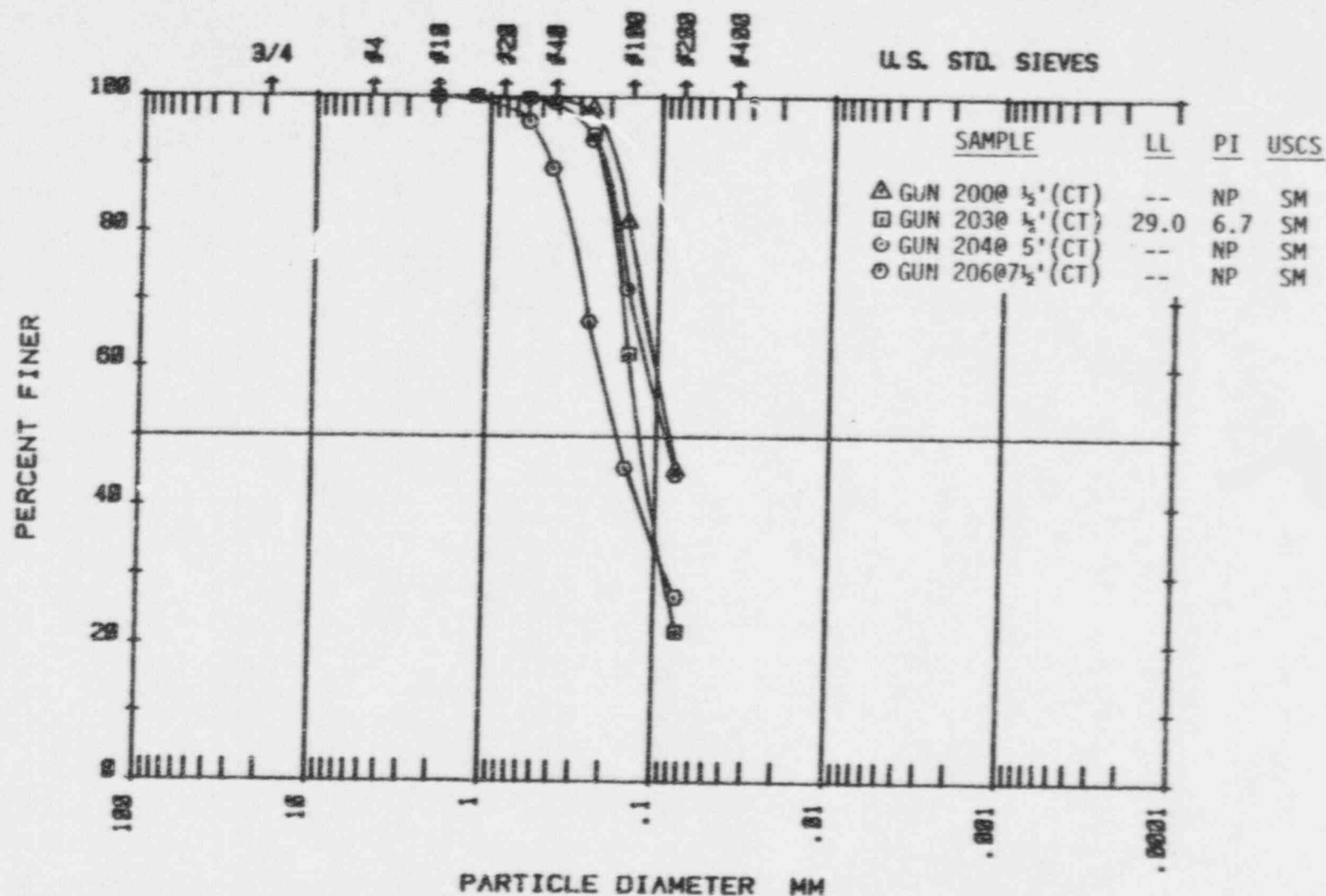

Bruce D. Marvin, P.E.
President

Note: Samples A, B & C consist
of minus No. 4 material
only.

CC: F. B. Guros, MK-Environmental, San Francisco

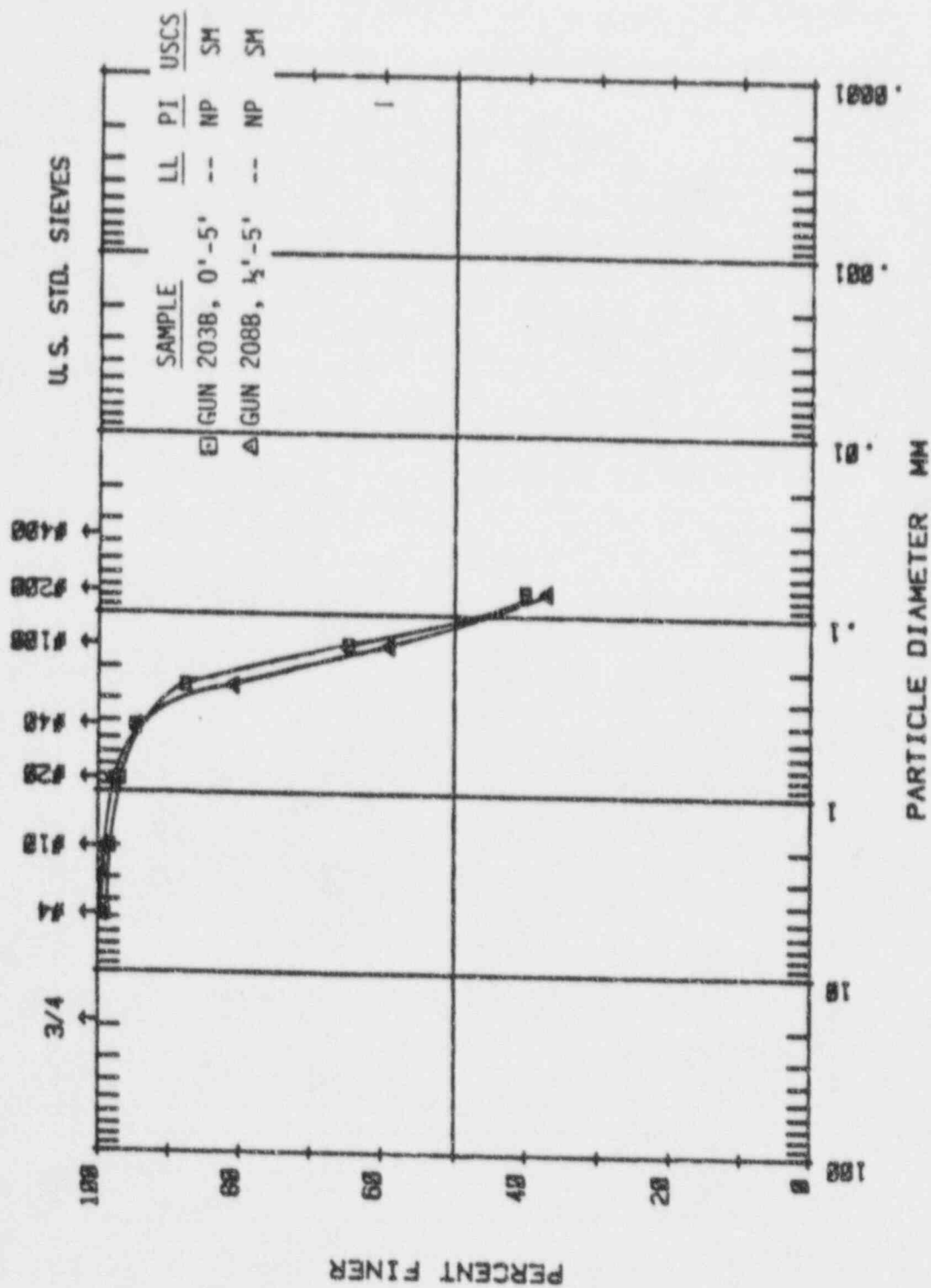


Gradation curves for selected California tube samples

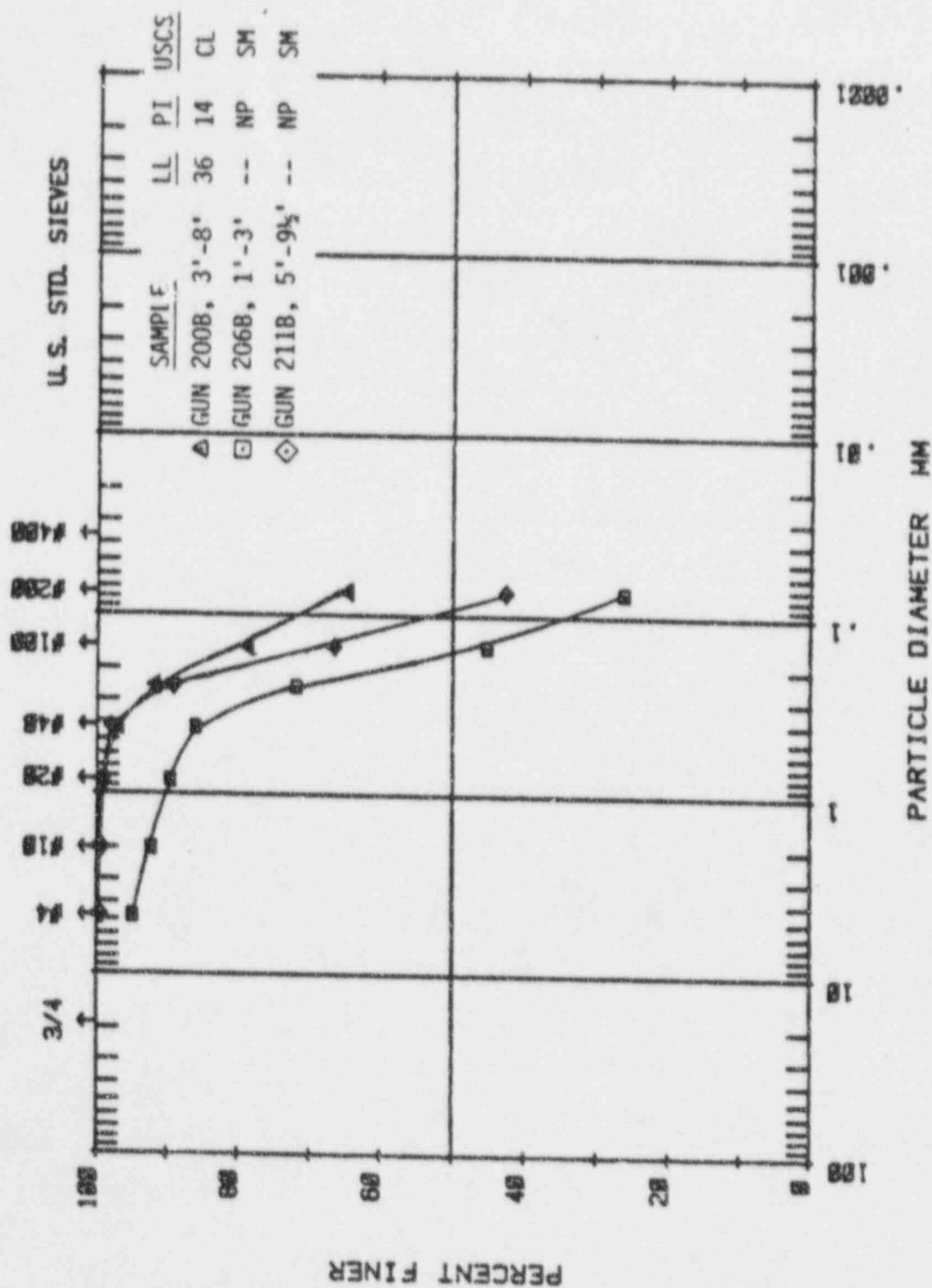


Gradation curves for selected California tube samples





Bulk sample gradation curves

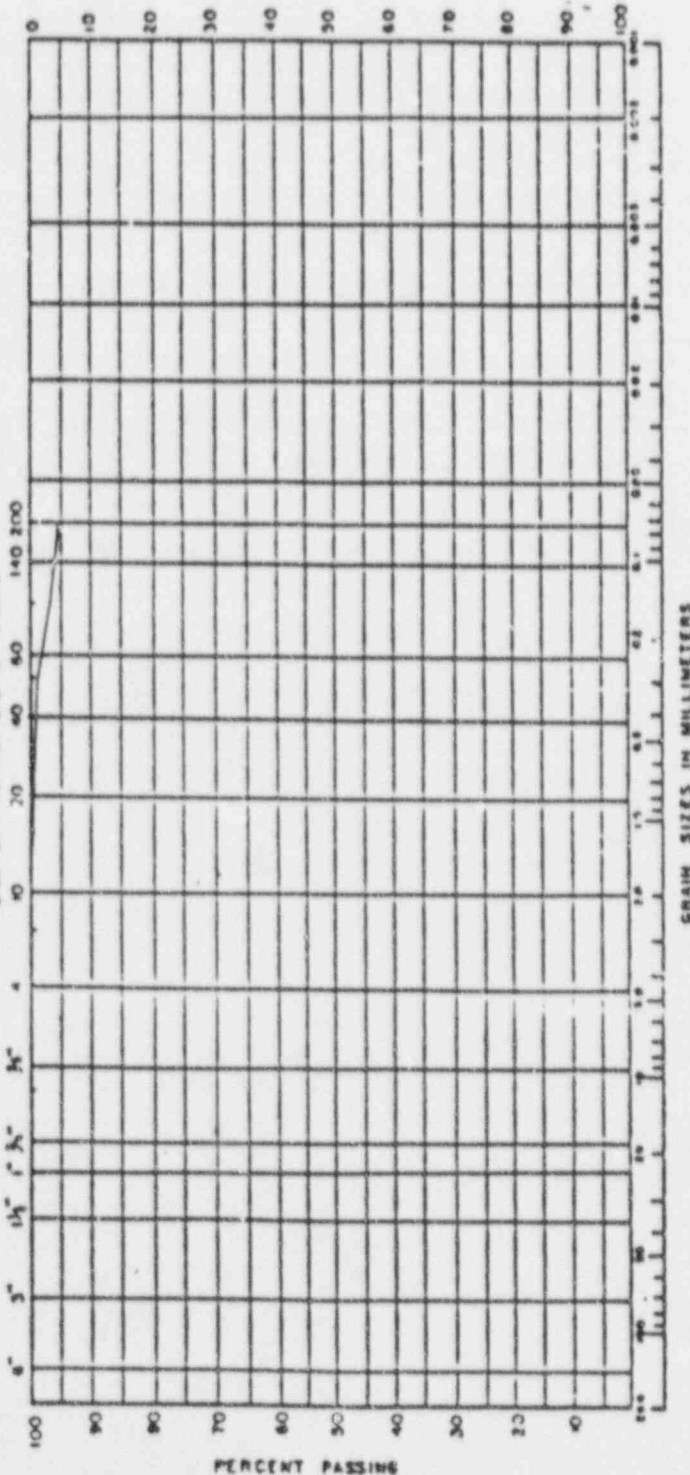


Bulk sample gradation curves, cont'd

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY
COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES



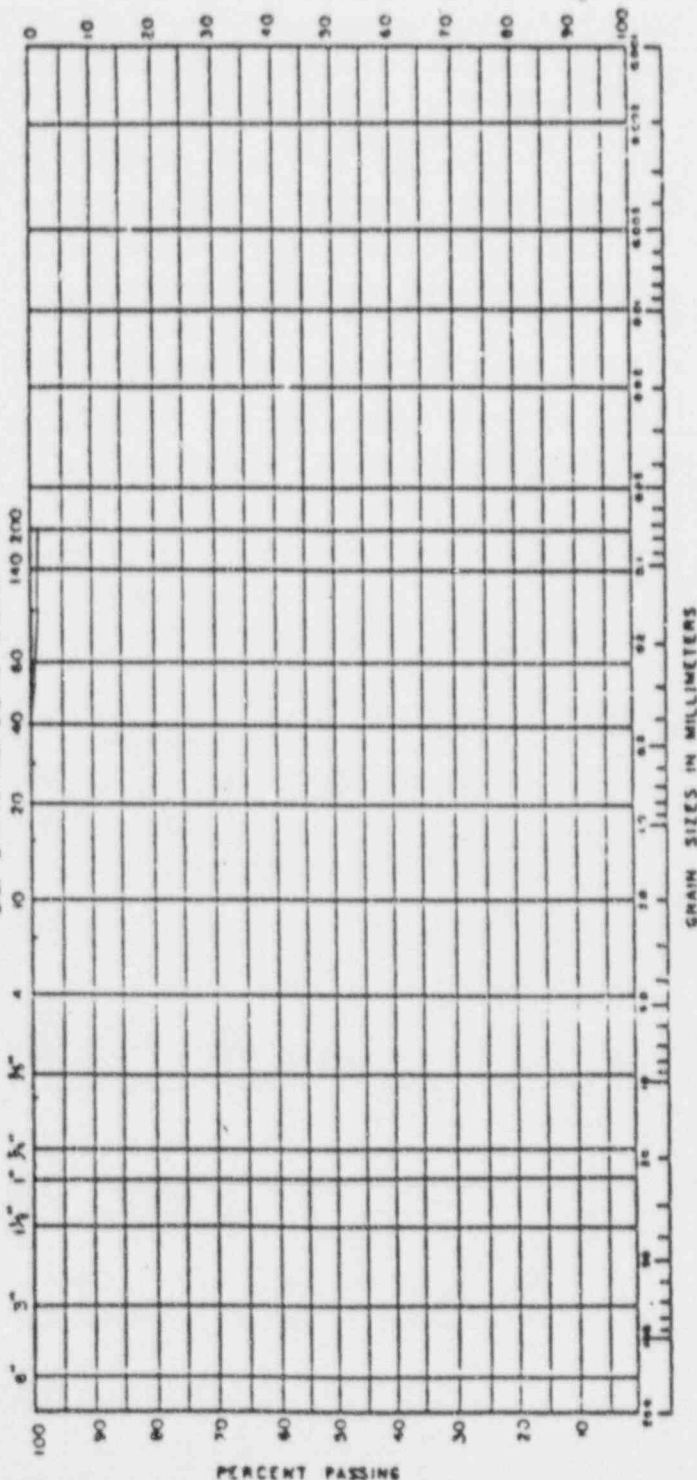
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 16	100
No. 30	99.8
No. 40	99.6
No. 50	99.1
No. 100	96.9
No. 200	95.7

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
215 (M-1)	51	55.6	3480-A

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		

U.S. STANDARD SIEVE SIZES

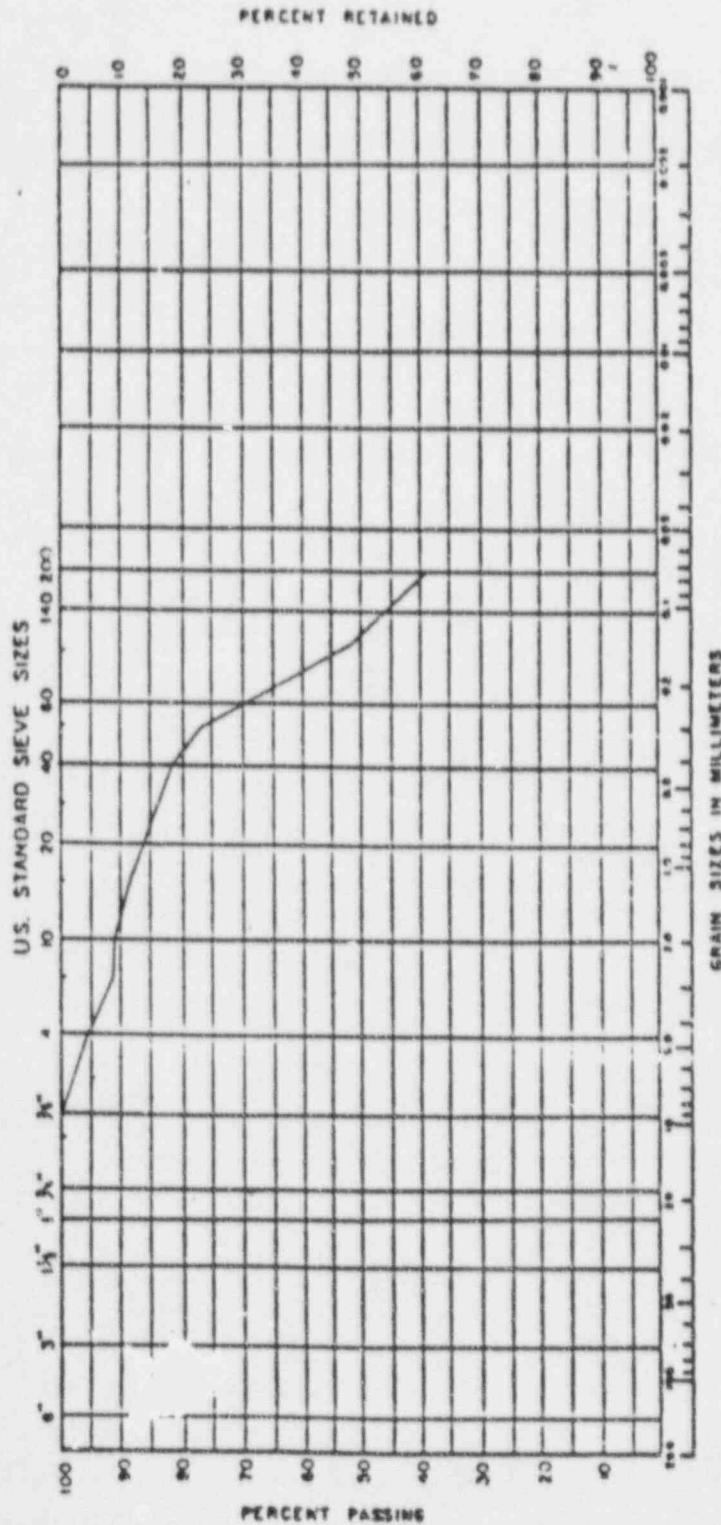


U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 16	100
No. 30	100
No. 40	100
No. 50	99.8
No. 100	99.7
No. 200	99.6

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
215 (M-1)	S2	46.9	3480-B

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	



U.S. STD. SIEVE SIZE	CUM. % PASSING
3/8"	100
No. 4	95.8
No. 8	91.6
No. 10	90.7
No. 16	87.8
No. 30	84.1
No. 40	82.2
No. 50	76.4
No. 100	51.3
No. 200	39.0

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
216 (M-3)	S1	15.5	3481-A

Lambert and Associates

Project No.: W0000405

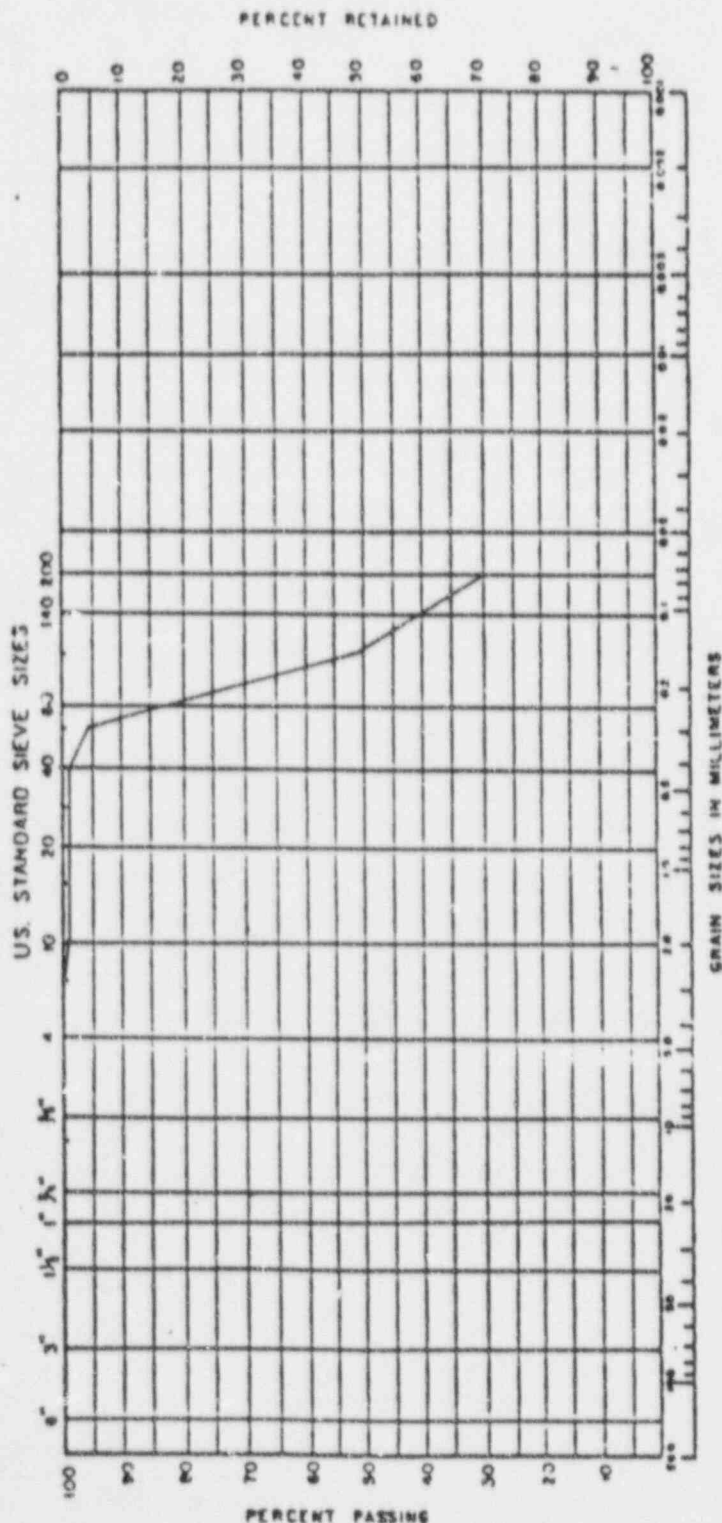
Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBLES	GRAVEL		FINE	SAND		SILT AND CLAY
	COARSE	FINE		COARSE	FINE	

U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 8	100
No. 10	99.8
No. 16	99.8
No. 30	99.7
No. 40	99.5
No. 50	95.8
No. 100	51.1
No. 200	30.0



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
216 (M-3)	S2	9.7	3481-B

Lambert and Associates

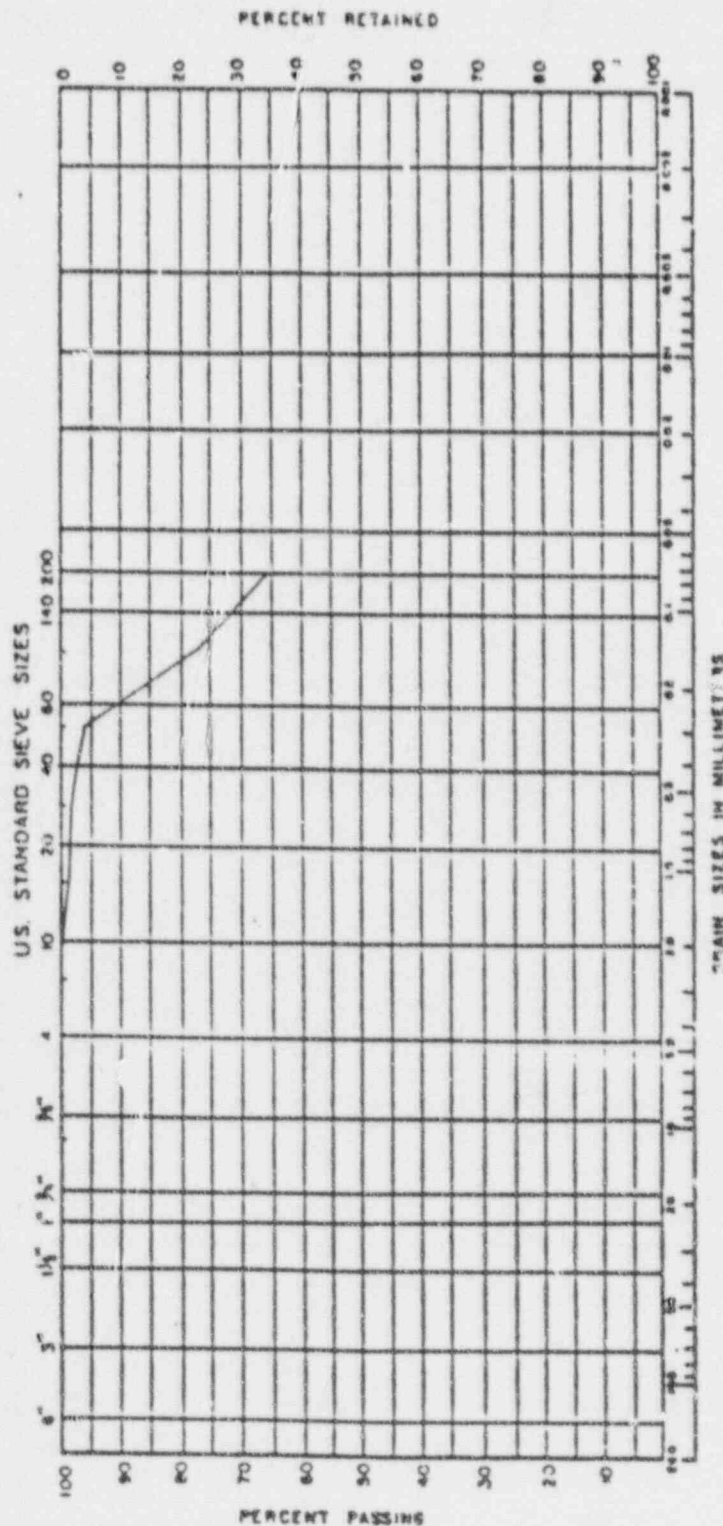
Project No: 4000046

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	WASH	FINER		



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	95.4
No. 30	98.7
No. 40	97.4
No. 50	91.2
No. 100	76.8
No. 200	65.4

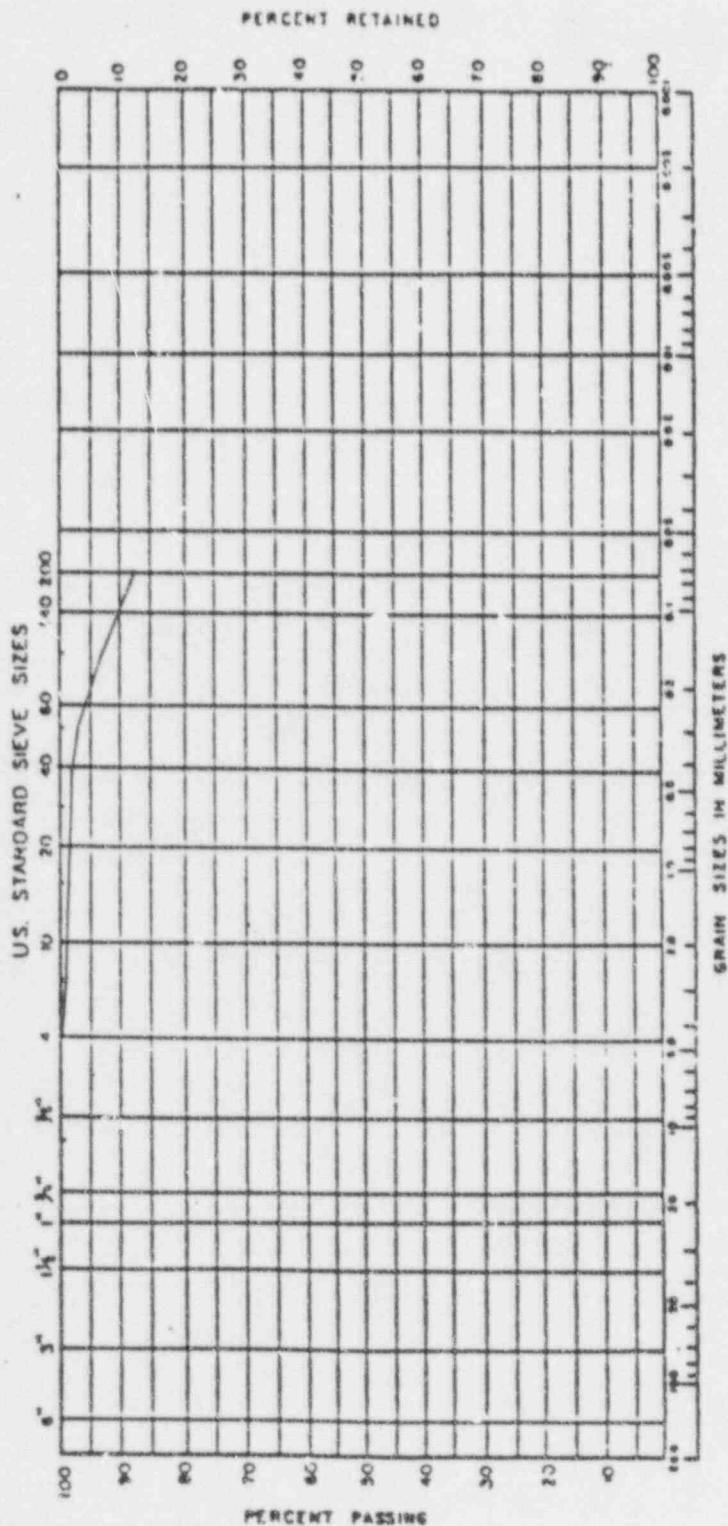
TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
216 (H-3)	53	26.0	3481-C

Lambert and Associates

Project No : 4400046
 Date :
 Drawn :

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	Coarse	Fine	Coarse	Fine	

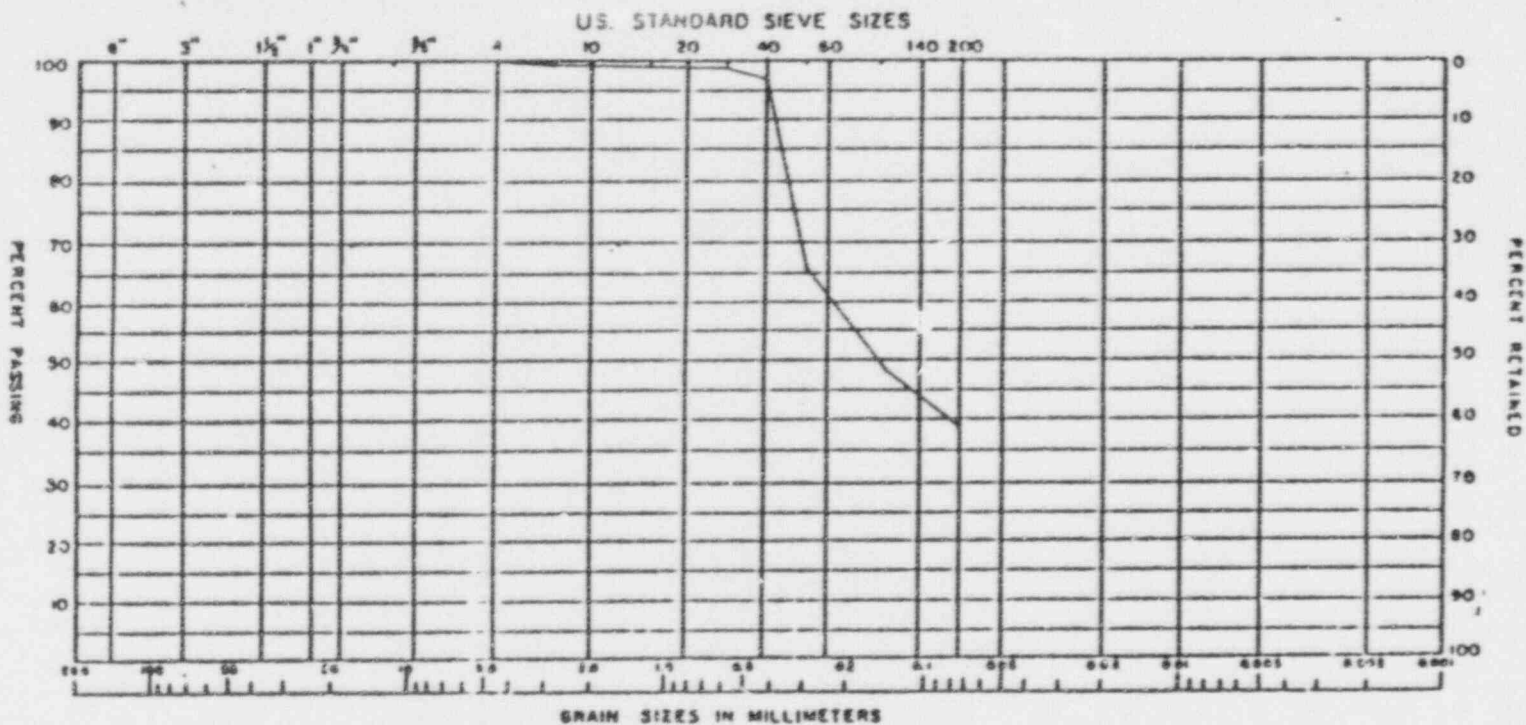


U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 4	100
No. 8	99.9
No. 10	99.8
No. 16	99.4
No. 30	98.7
No. 40	98.5
No. 50	97.5
No. 100	93.1
No. 200	88.0

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
216 (M-3)	S4	36.5	3481-D

UNIFIED SOIL CLASSIFICATION

CORBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

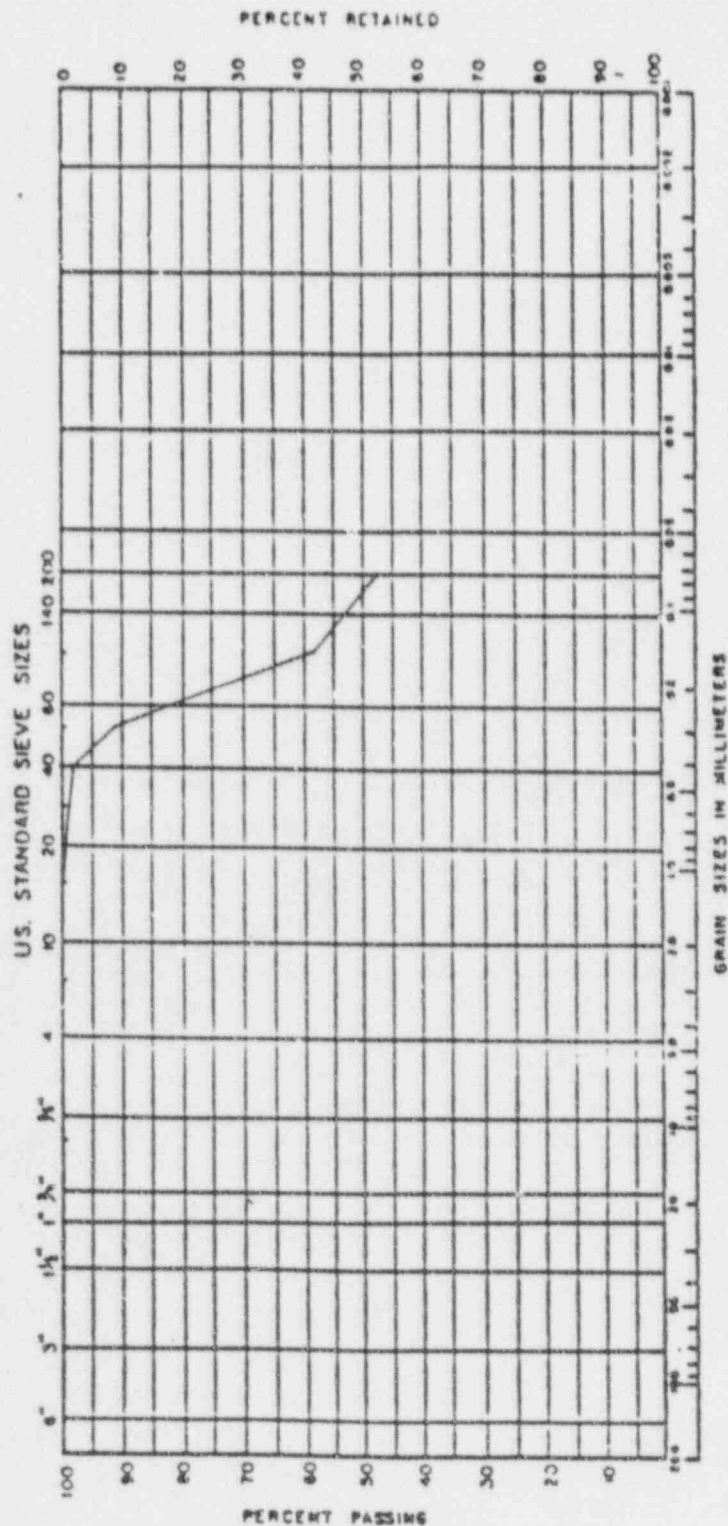


U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 4	100
No. 8	99.9
No. 10	99.5
No. 16	99.3
No. 30	99.3
No. 40	97.1
No. 50	65.3
No. 100	48.1
No. 200	39.3

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
217 (M-4)	S1	13.9	3482-A

UNIFIED SOIL CLASSIFICATION

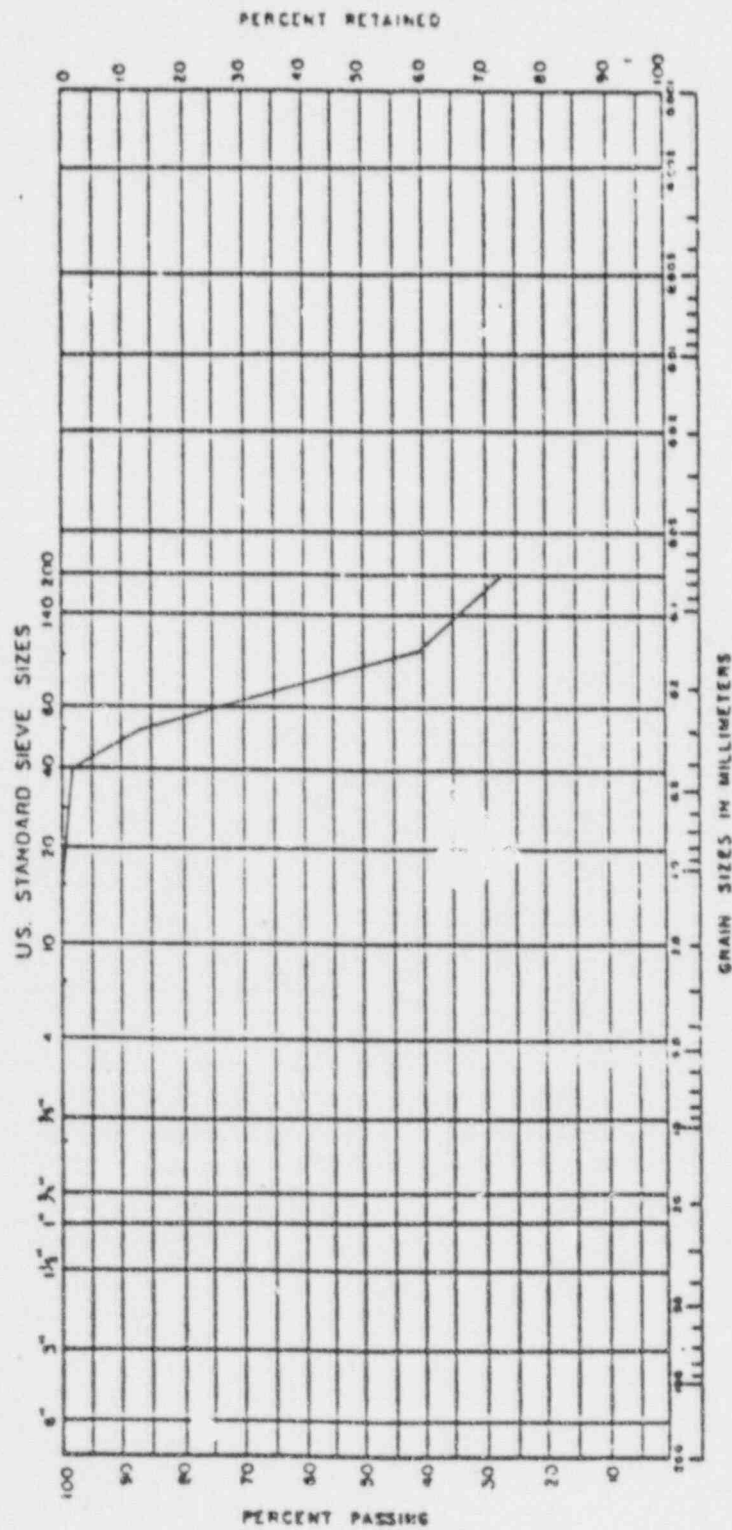
COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 16	100
No. 30	99.6
No. 40	98.5
No. 50	90.6
No. 100	59.0
No. 200	47.9

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
217 (M-4)	S2	18.7	3482-B

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	



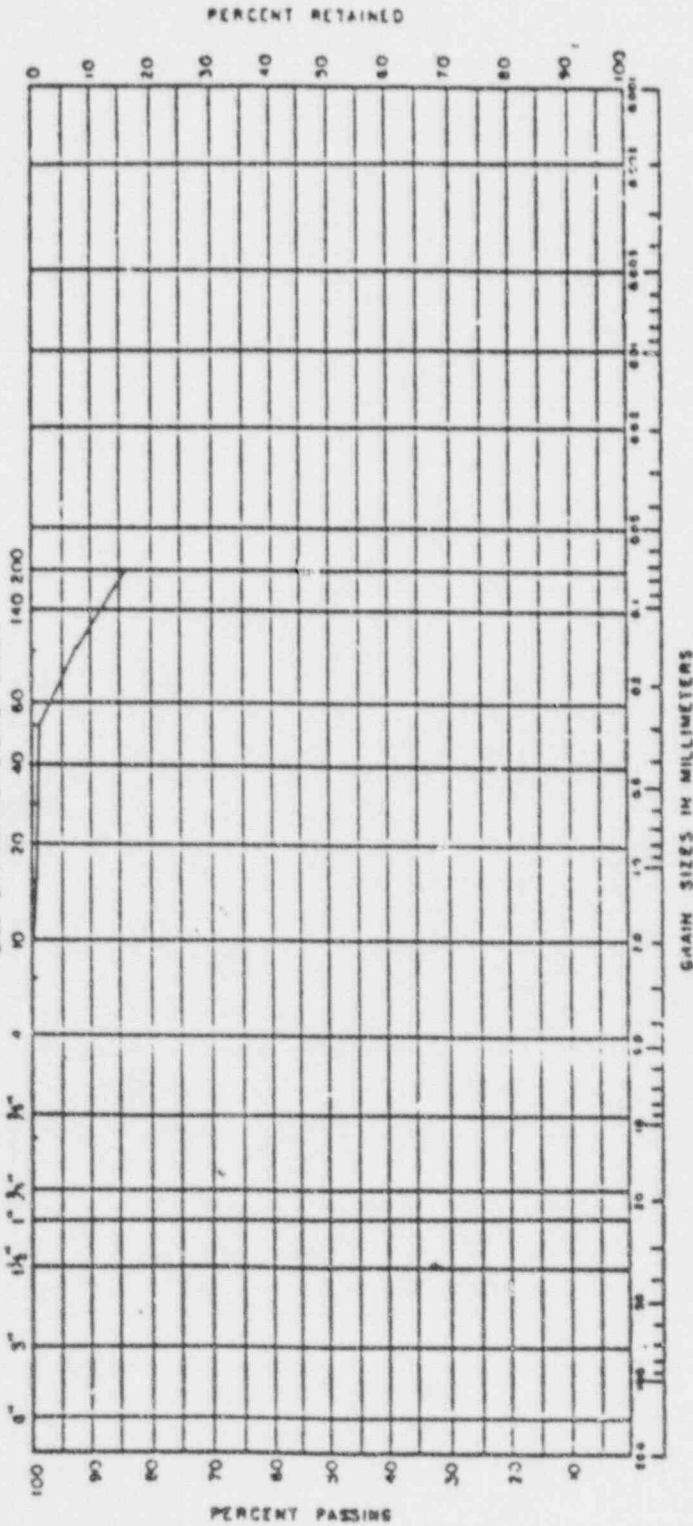
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 16	100
No. 30	99.8
No. 40	98.5
No. 50	86.9
No. 100	40.1
No. 200	26.9

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
217 (M-4)	53	13.5	3482-C

UNIFIED SOIL CLASSIFICATION

CORBELS	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES



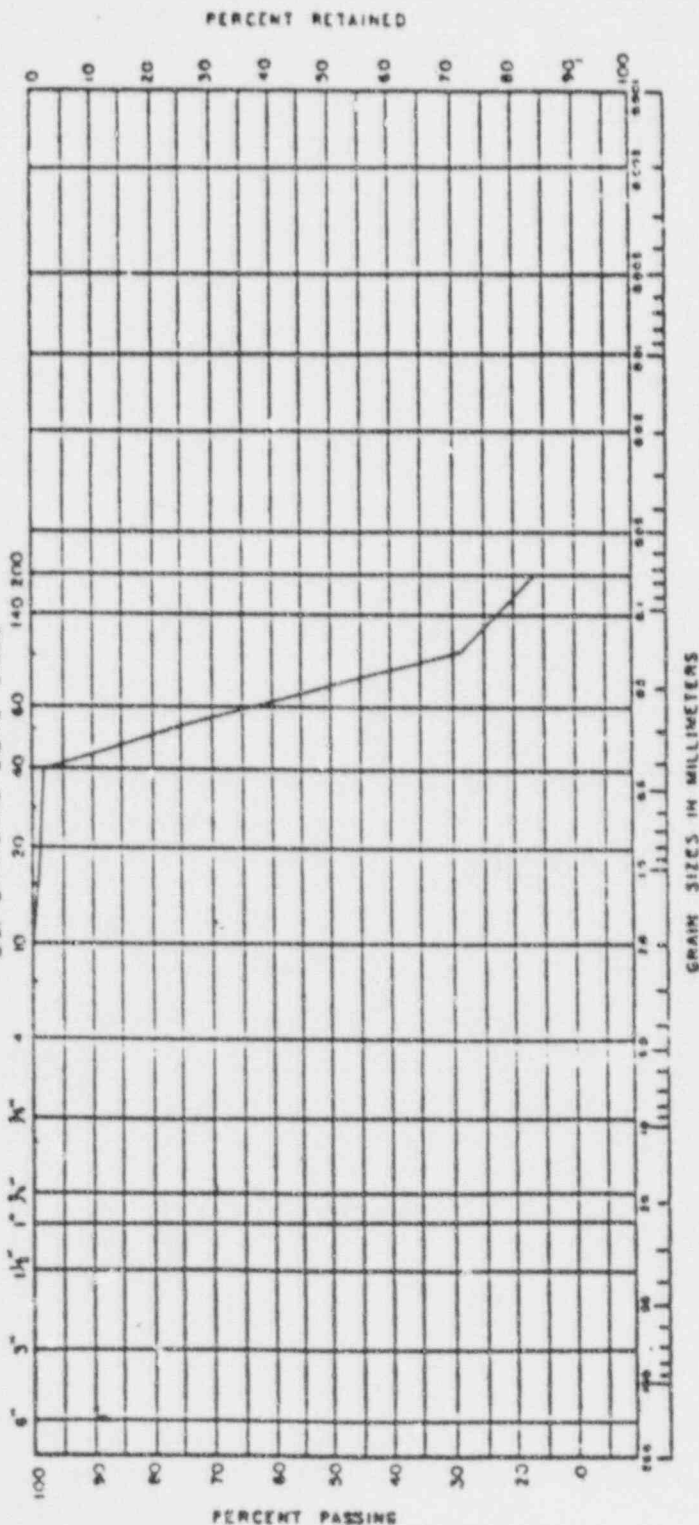
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.9
No. 30	99.8
No. 40	99.6
No. 50	99.0
No. 100	93.7
No. 200	84.9

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
217 (M-4)	S4	33.8	3482-D

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES

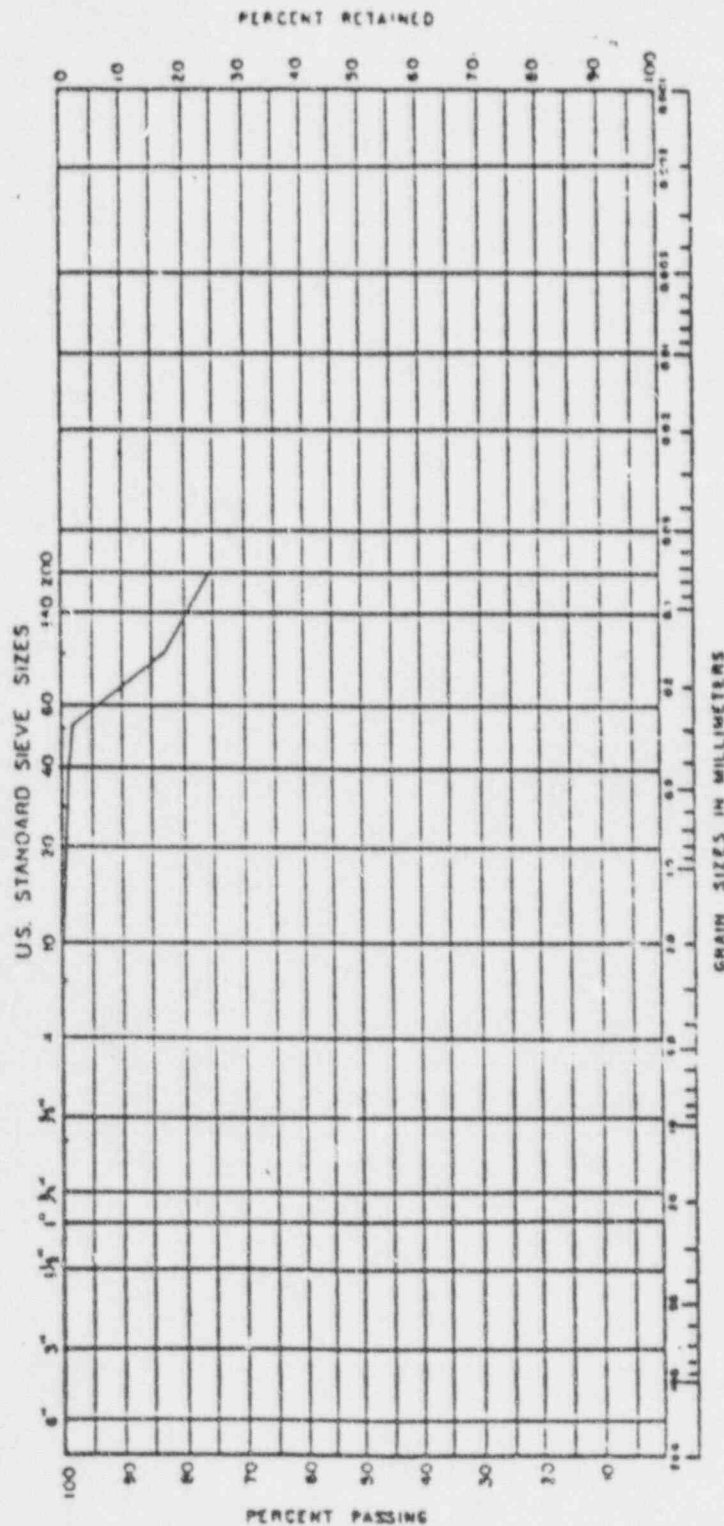


U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.9
No. 30	99.2
No. 40	98.4
No. 50	76.5
No. 100	29.9
No. 200	16.5

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
218 (M-5)	51	6.6	3483-A

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	MED. F.	FINE		



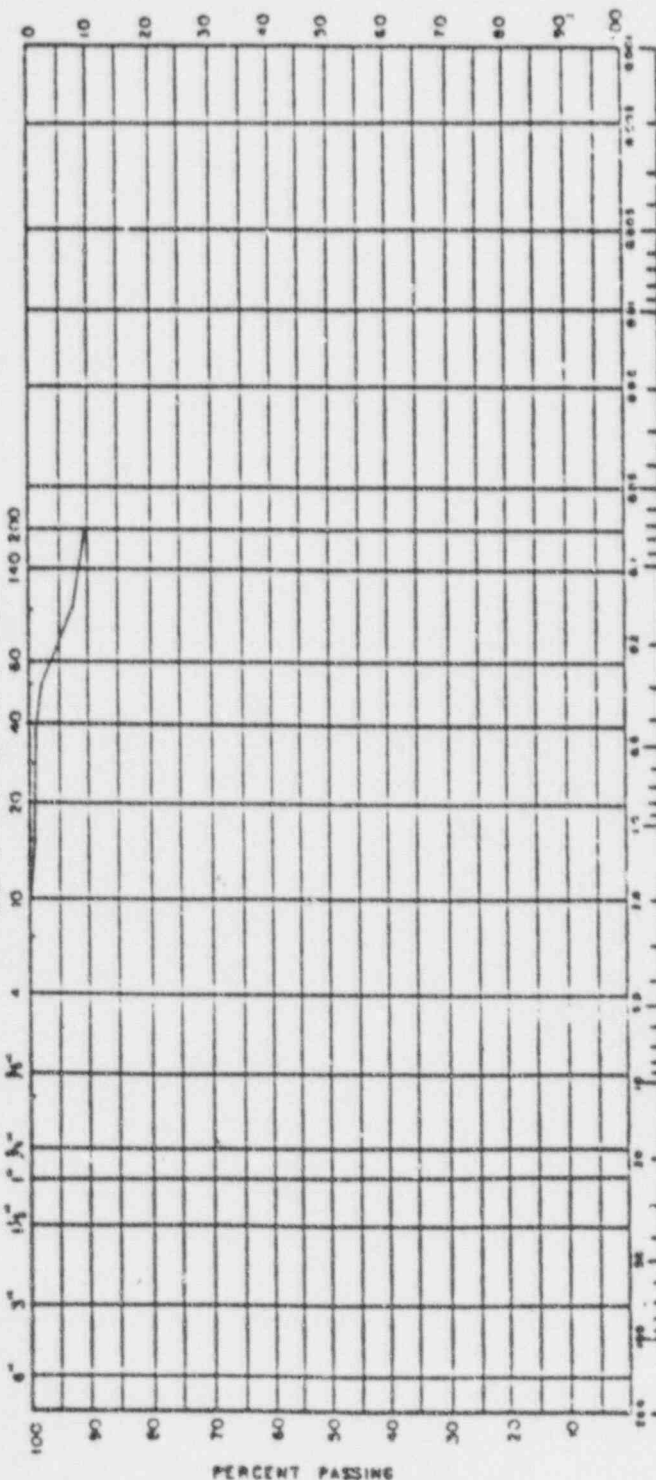
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.9
No. 30	99.8
No. 40	99.3
No. 50	98.2
No. 100	83.8
No. 200	75.2

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
218 (M-5)	52	29.3	3483-B

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		FINE	SAND		FINE	SILT AND CLAY
	COARSE	FINE		COARSE	MEDIUM		

U.S. STANDARD SIEVE SIZES

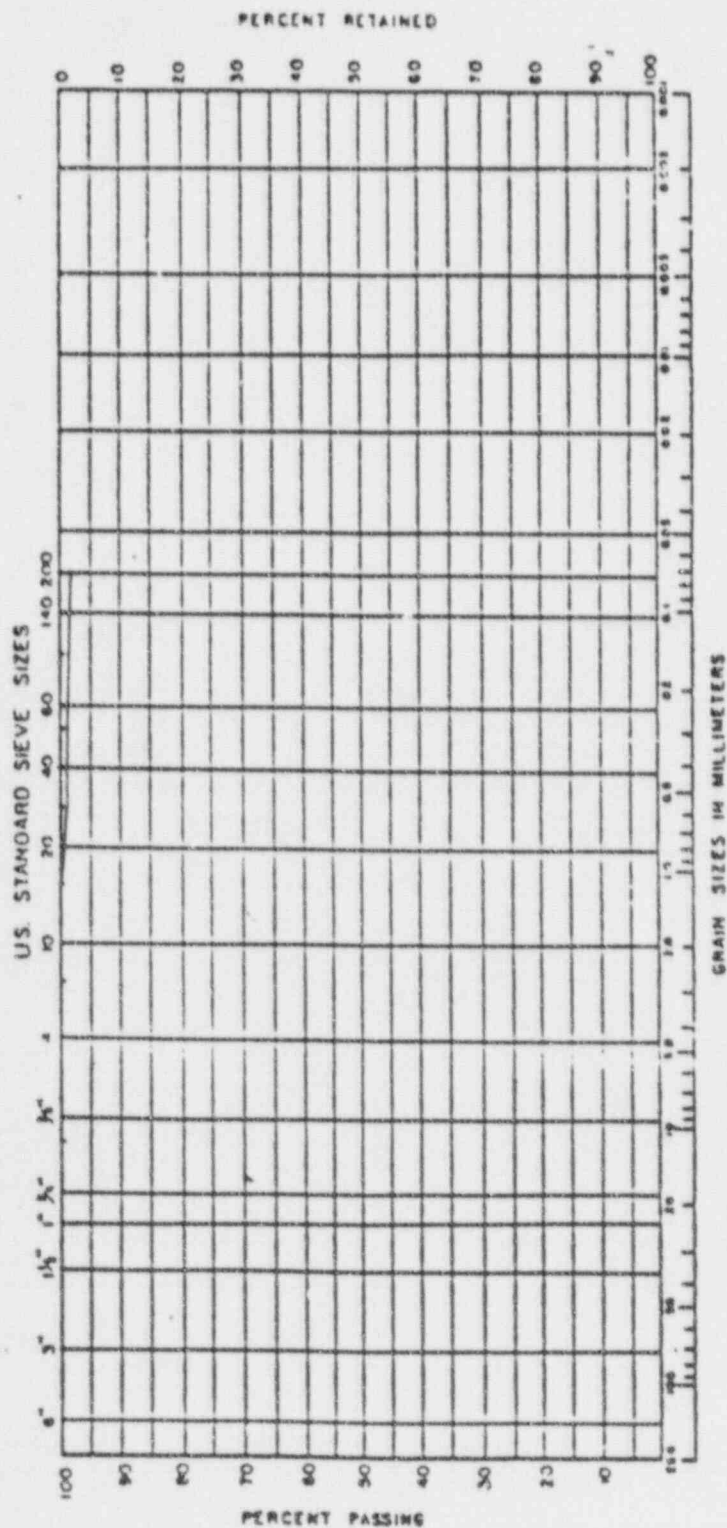


U.S. STD. SIEVE SIZE CUM. % PASSING

No. 10	100
No. 16	99.7
No. 30	99.7
No. 40	99.5
No. 50	98.7
No. 100	93.3
No. 200	90.1

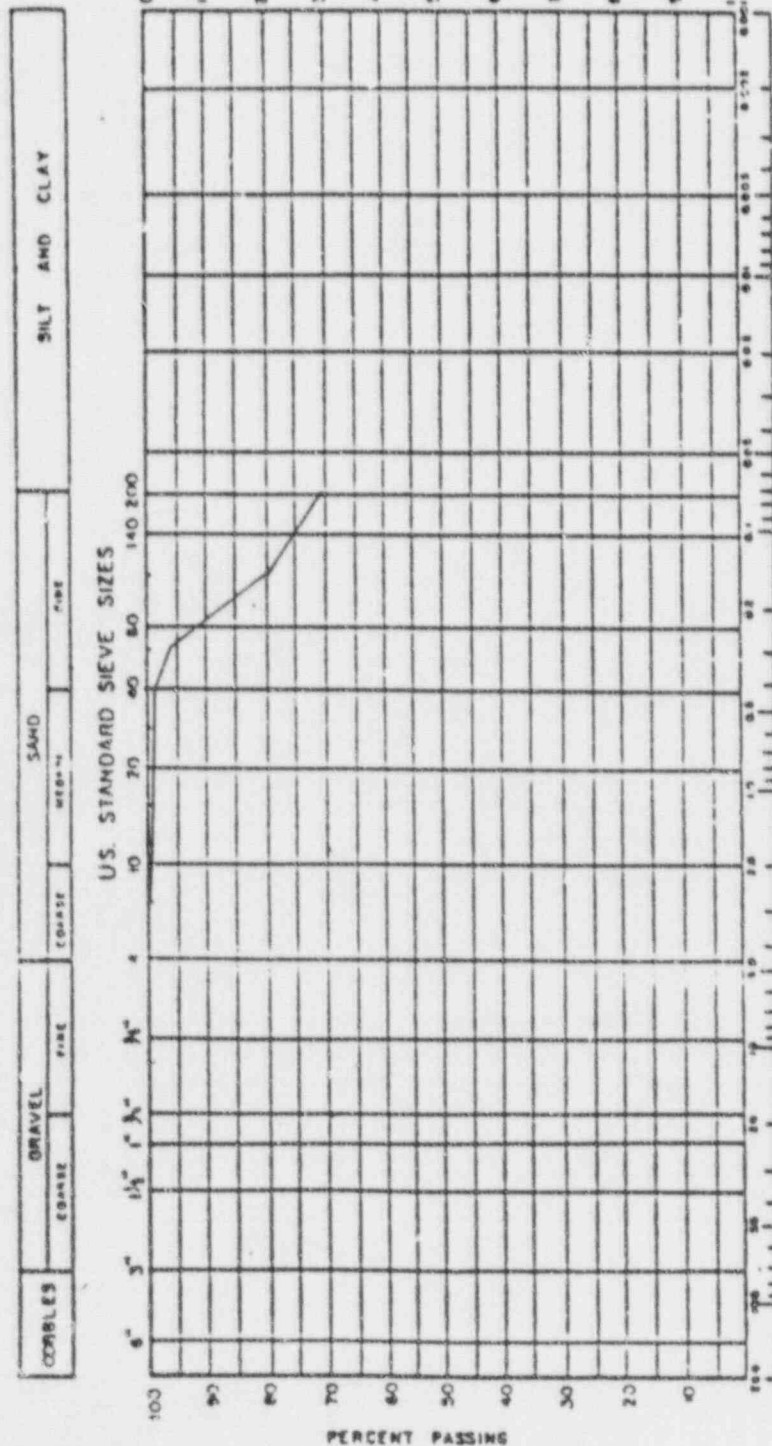
TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
218 (M-5)	53	37.3	3483-C

COMPLETES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	
1					
2					
3					
4					
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98					
99					
100					



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
218 (M-5)	54	40.8	3483-D

UNIFIED SOIL CLASSIFICATION

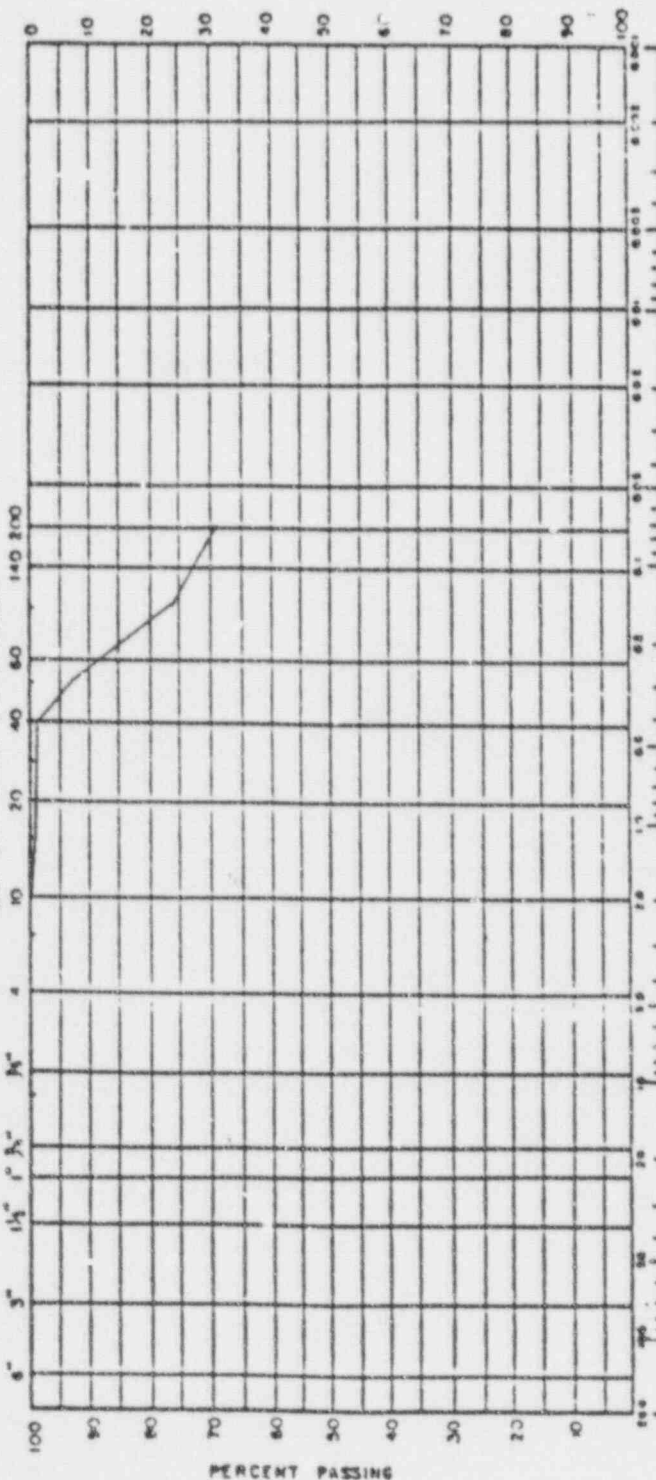


TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
219 (M-2)	51	23.2	3484-A

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES



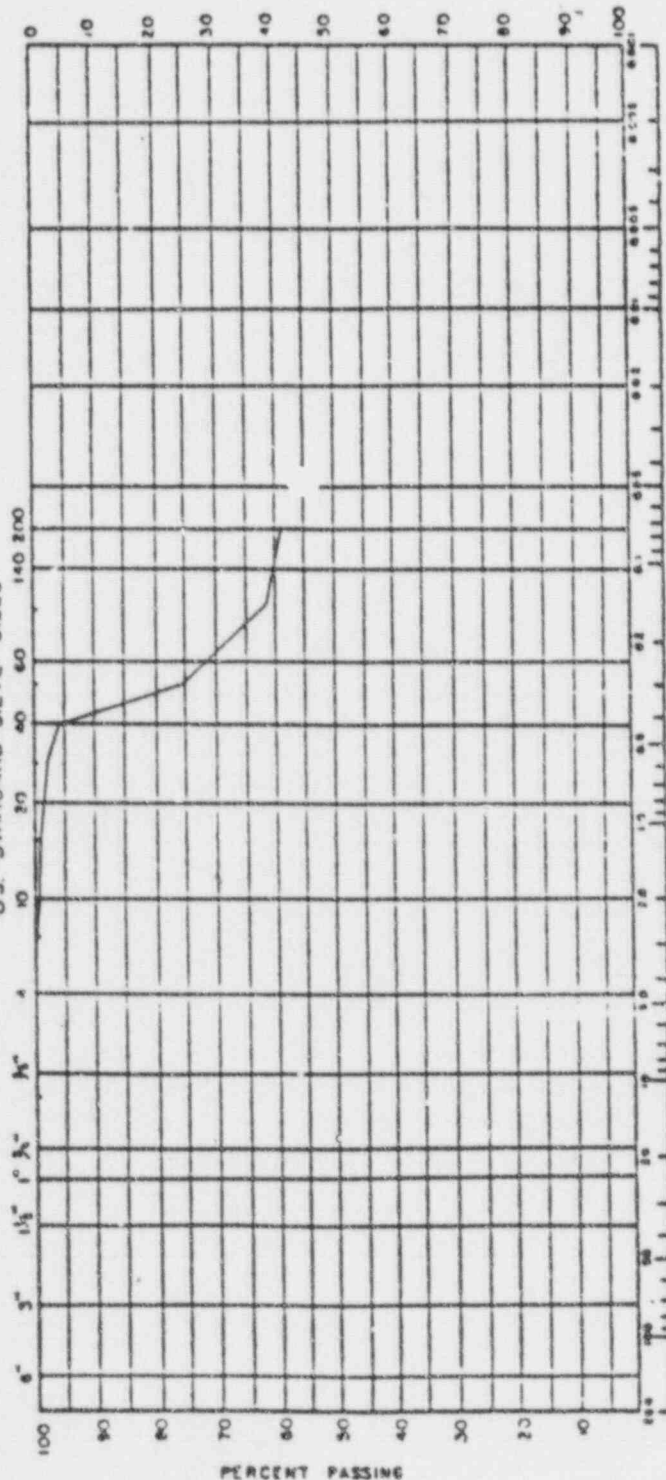
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 8	100
No. 10	100
No. 16	99.9
No. 30	99.6
No. 40	99.1
No. 50	93.5
No. 100	75.2
No. 200	69.0

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
219 (M-2)	S2	31.4	3484-B

UNIFIED SOIL CLASSIFICATION

CORBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 8	100
No. 10	99.9
No. 16	99.6
No. 30	98.6
No. 40	95.1
No. 50	75.5
No. 100	61.6
No. 200	59.5

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
219 (M-2)	S3	33.2	3484-C

Lambert and Associates

Project No: 1000000000
Date: 10/10/00

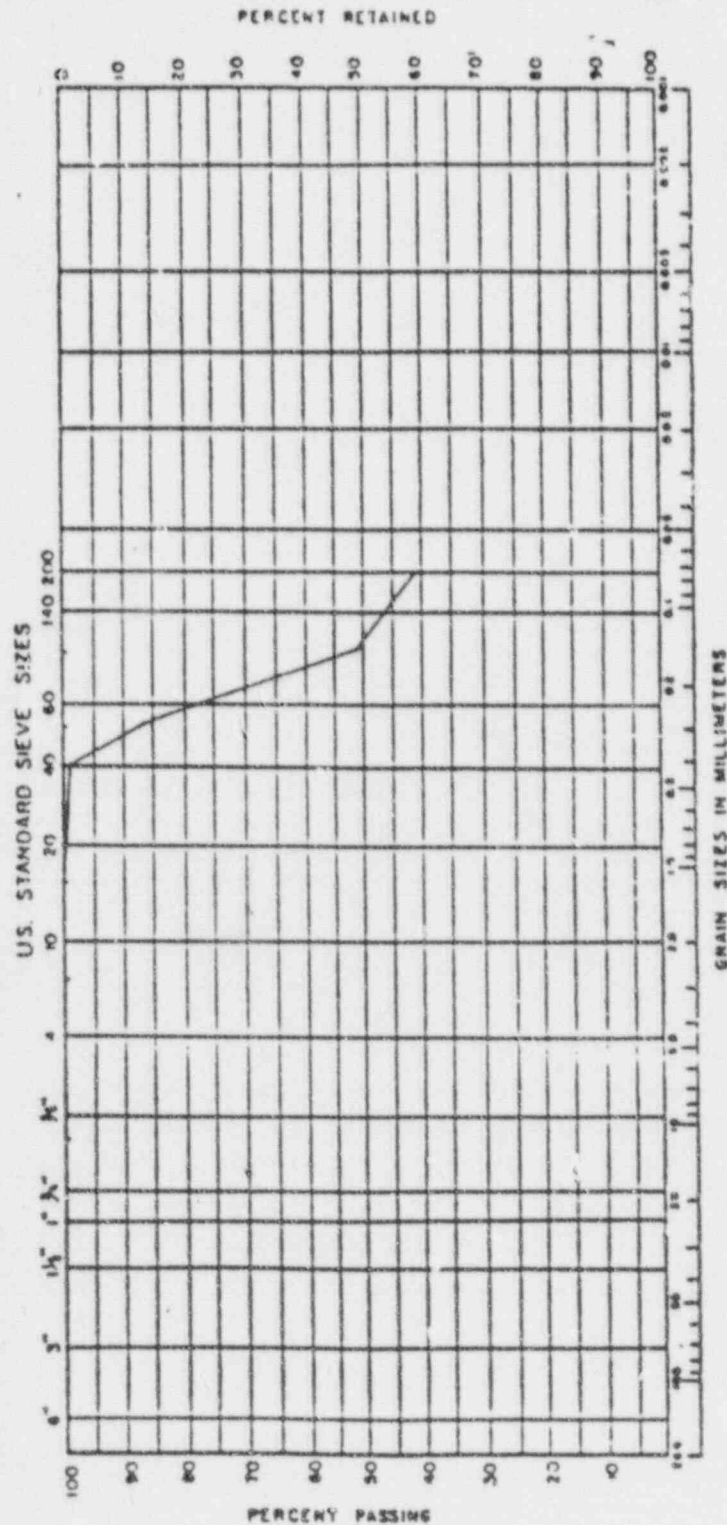
CYCLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	
1					
2					
3					
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6					
7					
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99					
100					



Project No: 10000438
Date: _____
Finura: _____

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		



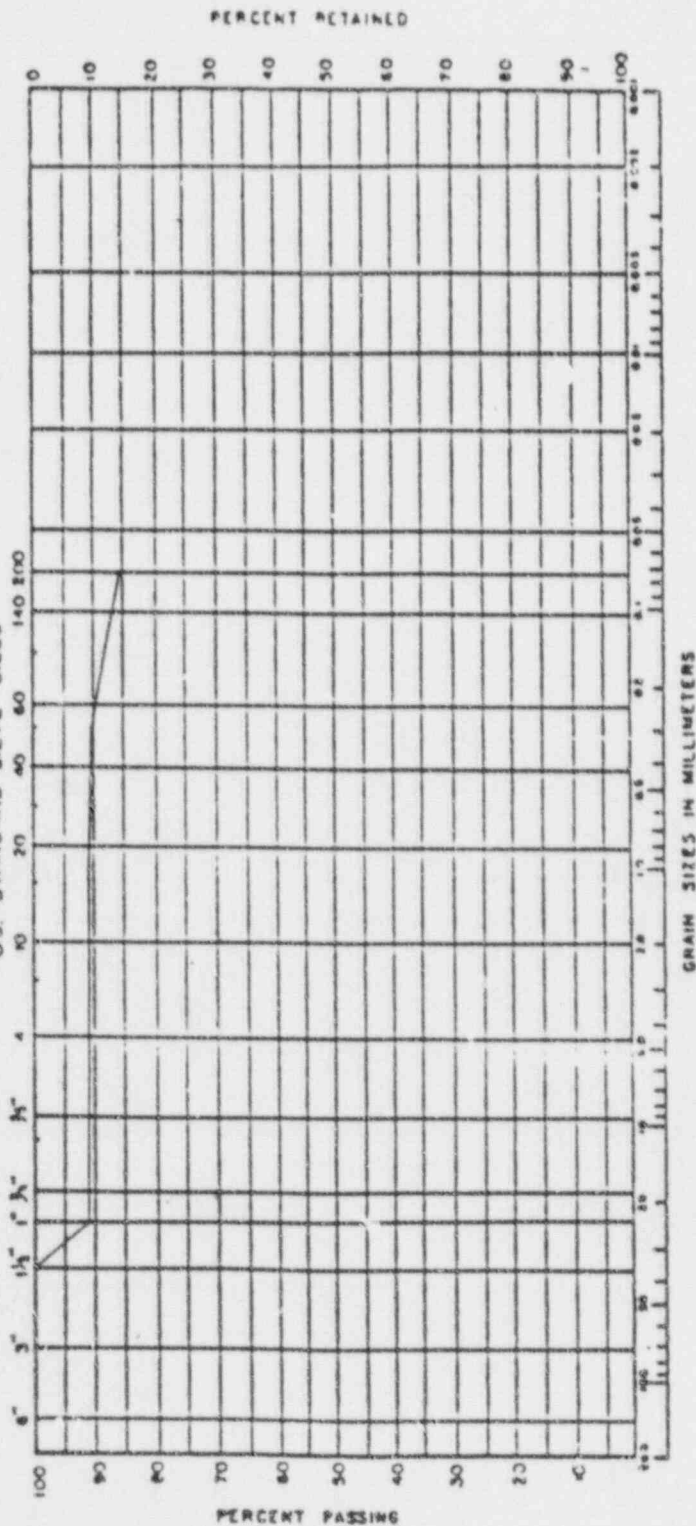
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 16	100
No. 30	99.6
No. 40	99.2
No. 50	86.6
No. 100	50.3
No. 200	40.7

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
220 (M-6)	52	19.6	3485-B

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		FINE	SAND	SILT AND CLAY
	COARSE	FINE			
			COARSE	MEDIUM	FINE

U.S. STANDARD SIEVE SIZES



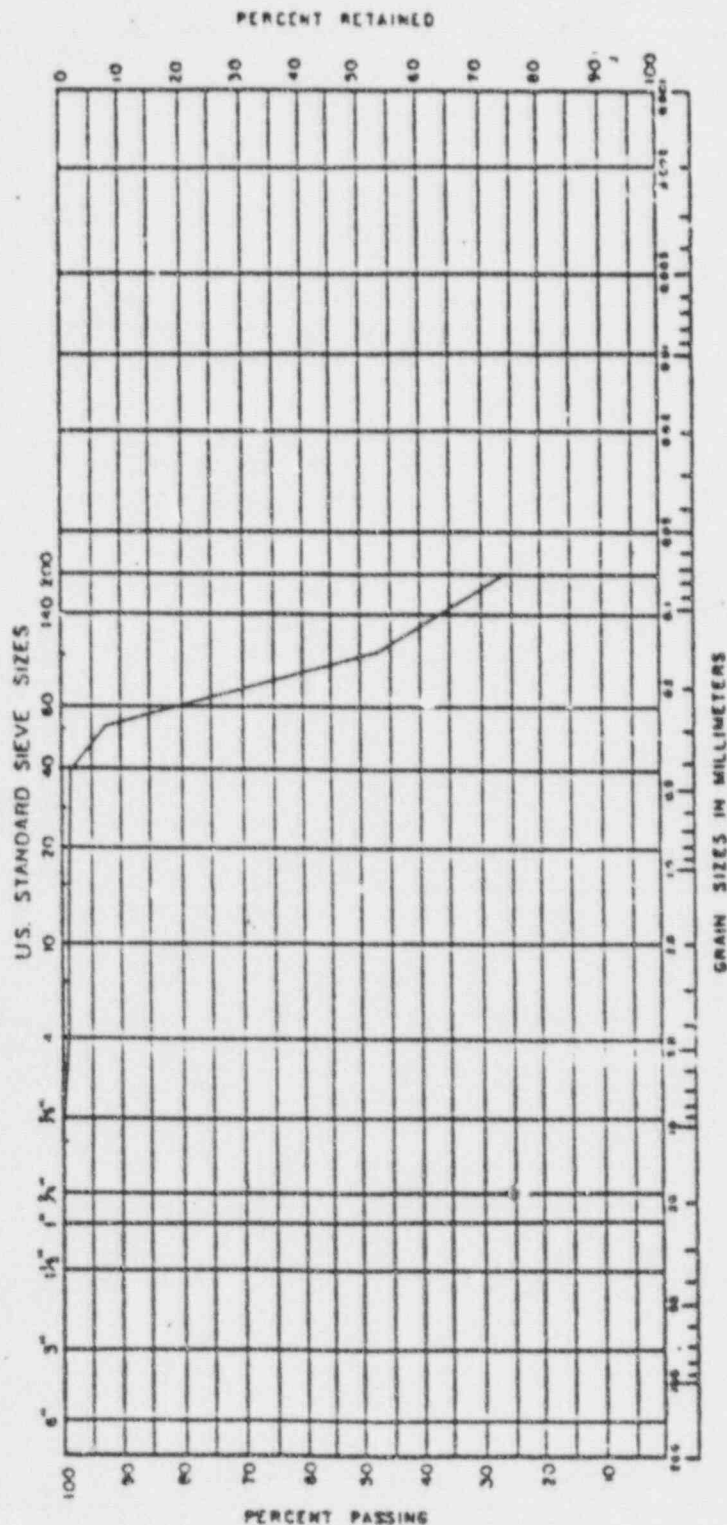
U.S. STD. SIEVE SIZE
CUM. % PASSING

1 1/2" 100
1" 90.9
3/4" 90.9
1/2" 90.9
3/8" 90.9
No. 4 90.9
No. 8 90.9
No. 10 90.8
No. 16 90.8
No. 30 90.7
No. 40 90.7
No. 50 90.6
No. 100 88.7
No. 200 85.9

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
220 (M-6)	S3	41.9	3485-C

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY
COARSE	FINE	COARSE	FINE	MEDIUM	FINE	

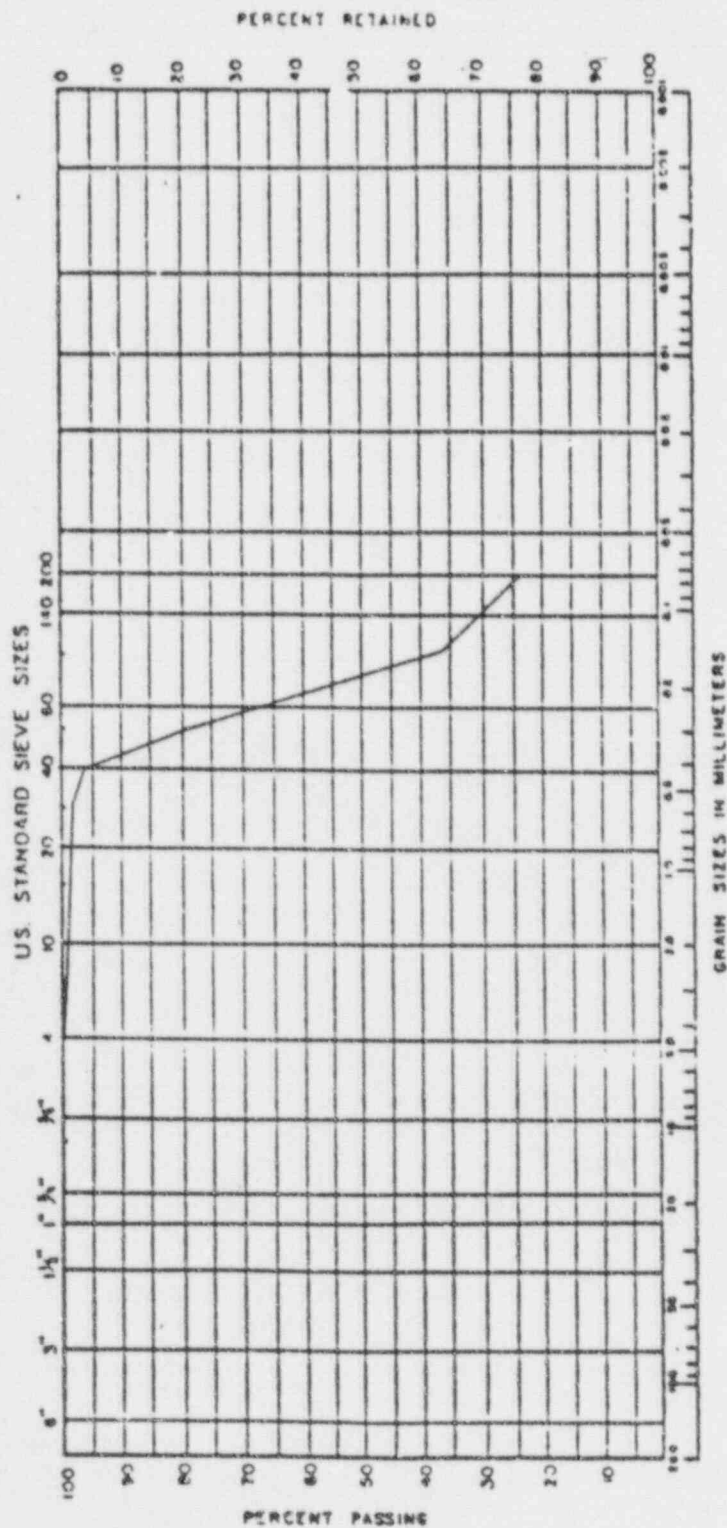


U.S. STD. SIEVE SIZE	CUM. % PASSING
3/8"	100
No. 4	99.7
No. 8	99.5
No. 10	99.4
No. 16	99.2
No. 30	99.1
No. 40	98.8
No. 50	92.7
No. 100	47.8
No. 200	26.2

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
221 (M-7)	51	8.9	3486-A

UNIFIED SOIL CLASSIFICATION

CORBLES	GRAVEL		TOURTE	SAND		FINE	SILT AND CLAY
	COARSE	FINE		NEARLY	FINE		

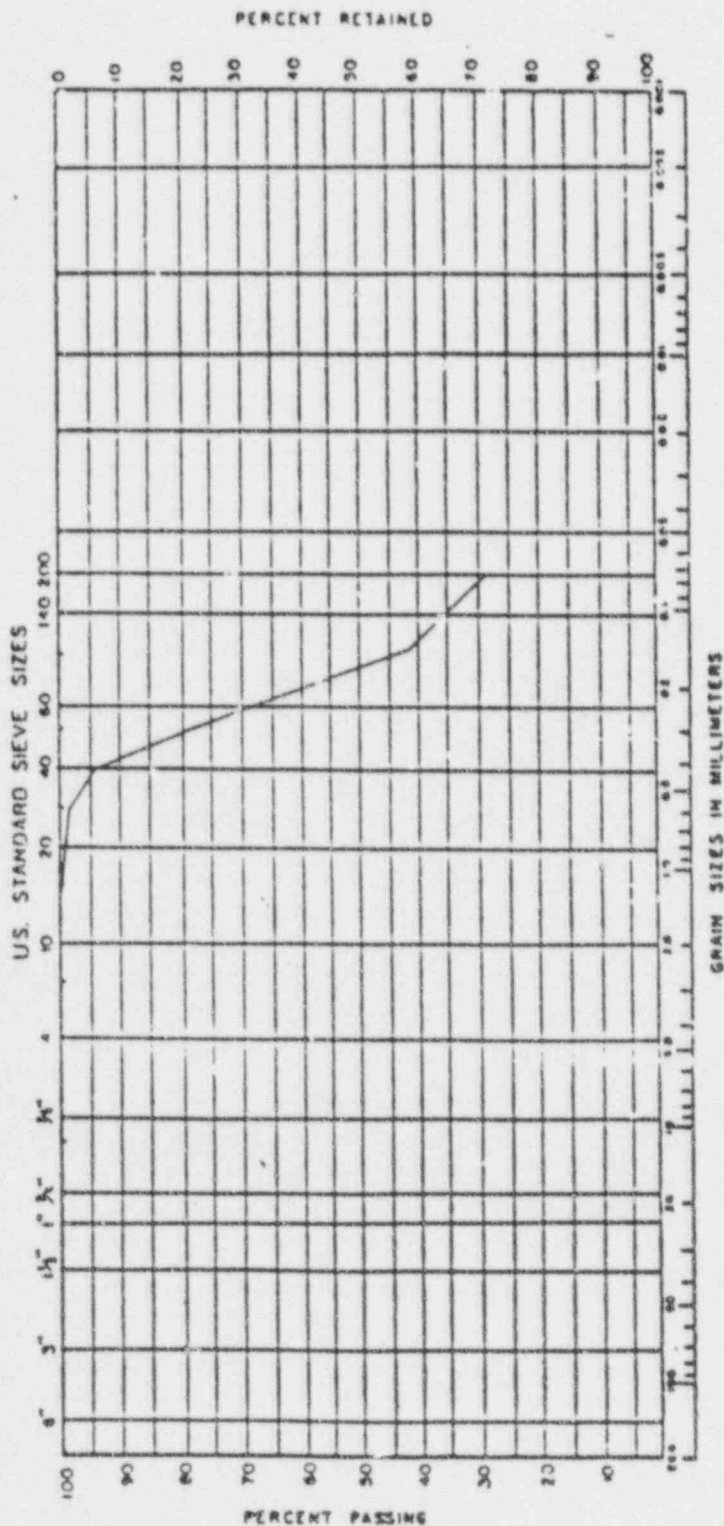


U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 4	100
No. 8	99.9
No. 10	99.9
No. 16	99.8
No. 30	98.6
No. 40	96.1
No. 50	79.3
No. 100	36.6
No. 200	24.8

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
221 (M-7)	52	14.2	3486-B

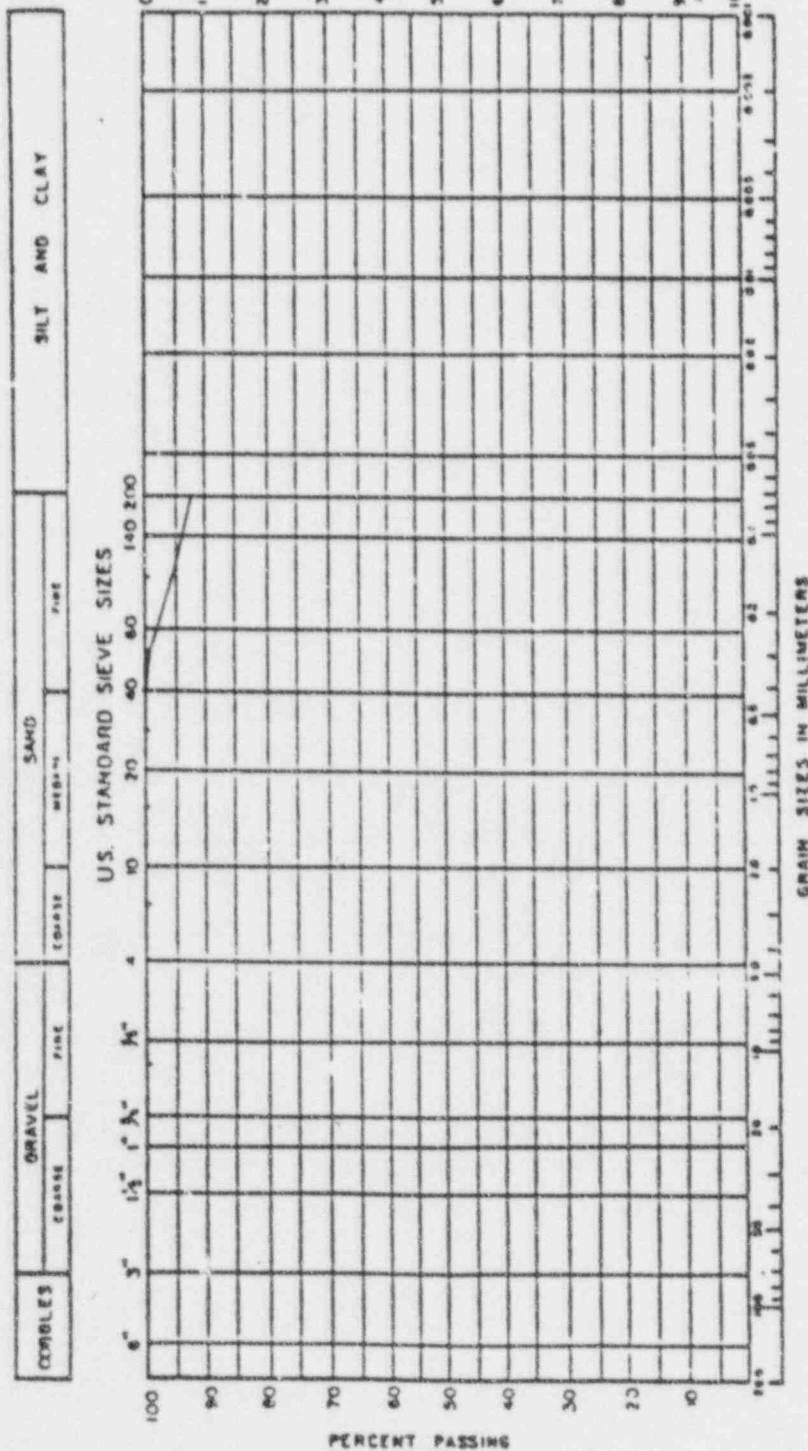
UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND	SILT AND CLAY
	coarse	fine	coarse	fine



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
221 (M-7)	S3	11.2	3486-c

UNIFIED SOIL CLASSIFICATION



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 40	100
No. 50	99.6
No. 100	95.6
No. 200	92.5

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
228 (M-7)	54	38.4	3486-D

Lambert and Associates

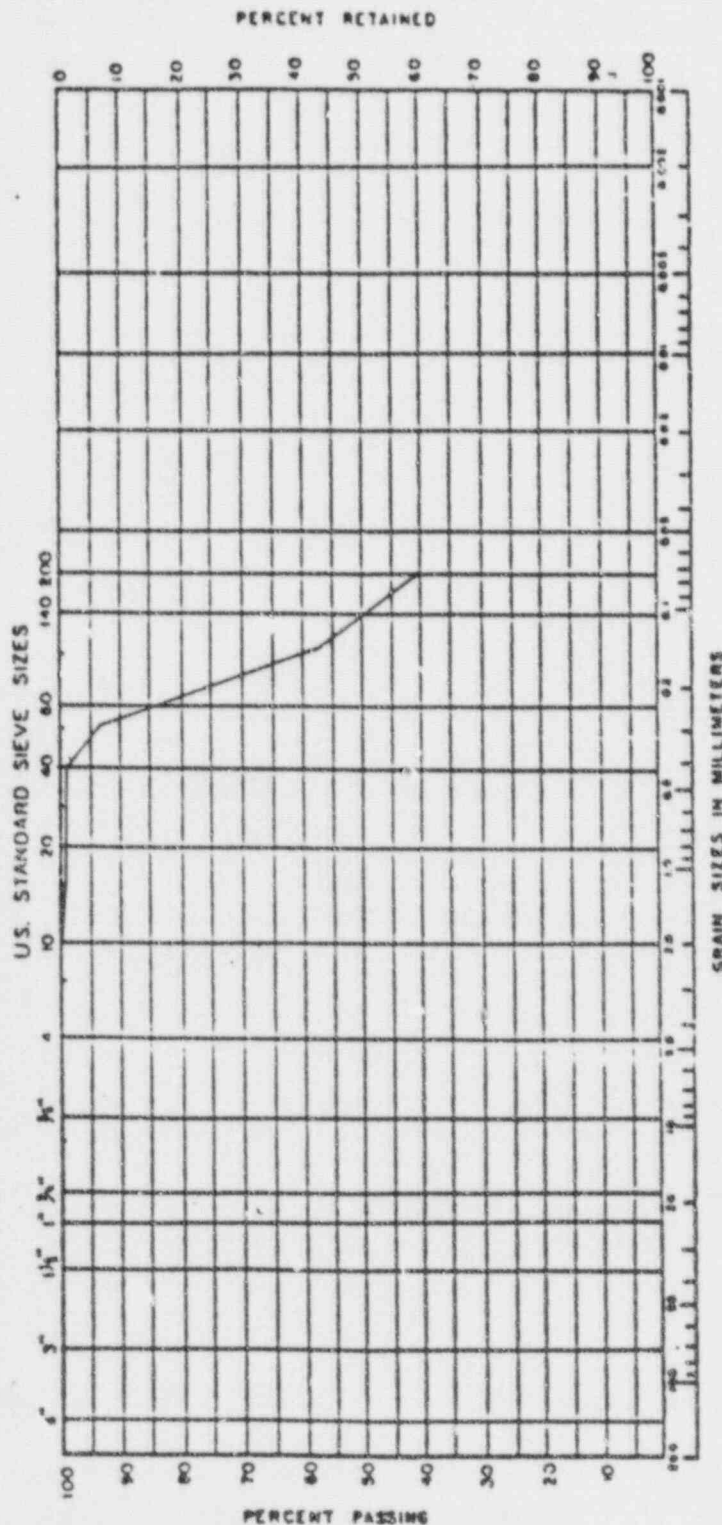
Project No. 1110007406

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
222 (M-8)	51	9.5	3487-A

Lambert and Associates

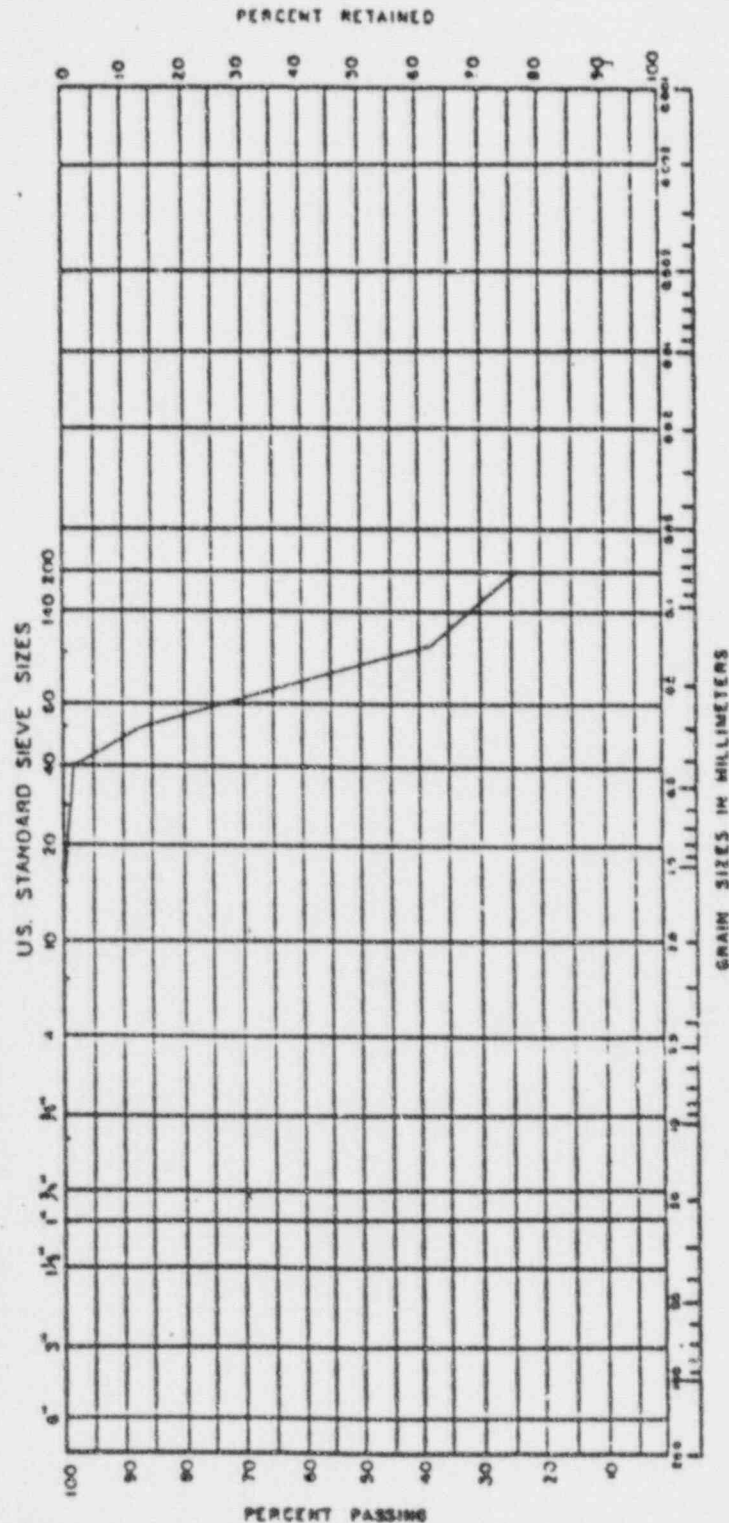
Project No: 490004GE

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		FINE	SAND	FINE	SILT AND CLAY
	COARSE	FINE		WASHED	WASHED	



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
222 (M-8)	52	6.9	3487-B

Lambert and Associates

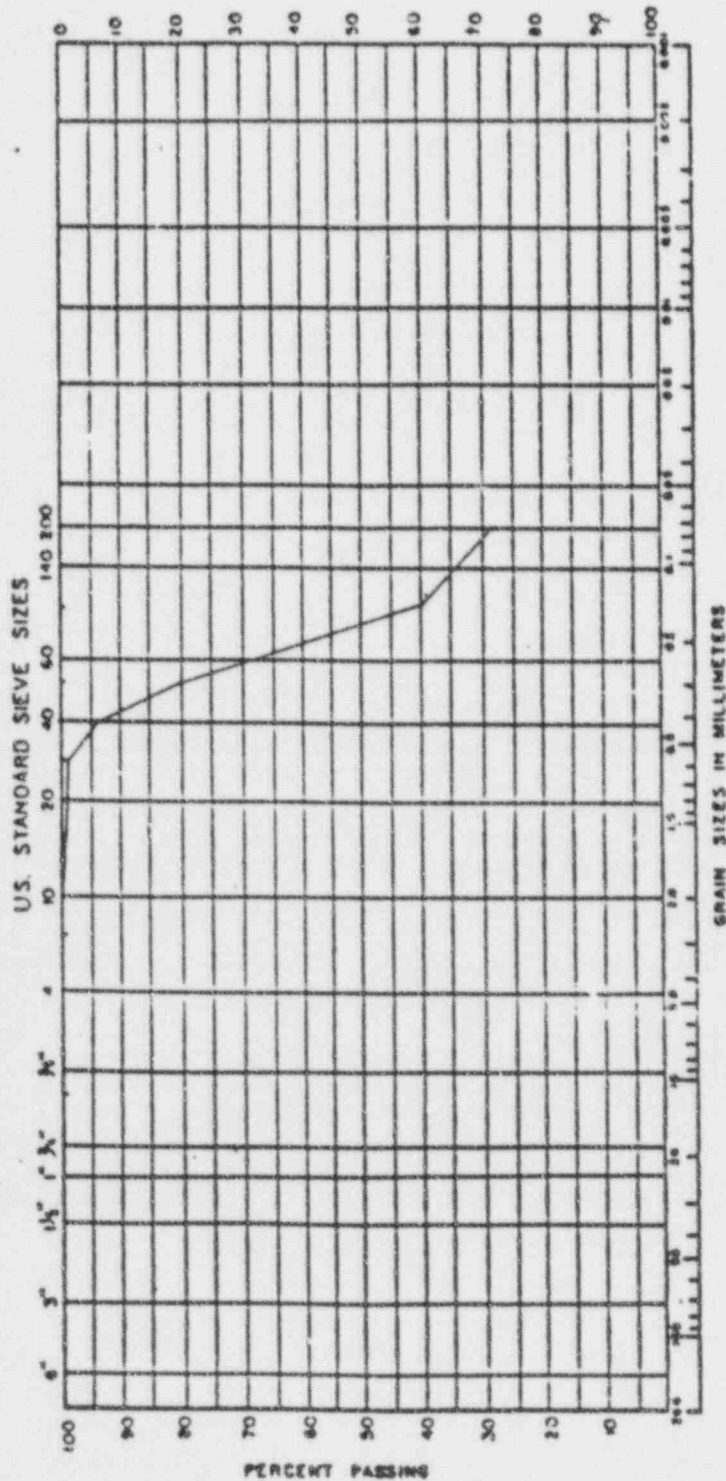
Project No: 1000047

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.9
No. 30	99.2
No. 40	94.2
No. 50	80.0
No. 100	39.9
No. 200	27.8

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
222 (M-8)	S3	14.0	3487-C

Lambert and Associates

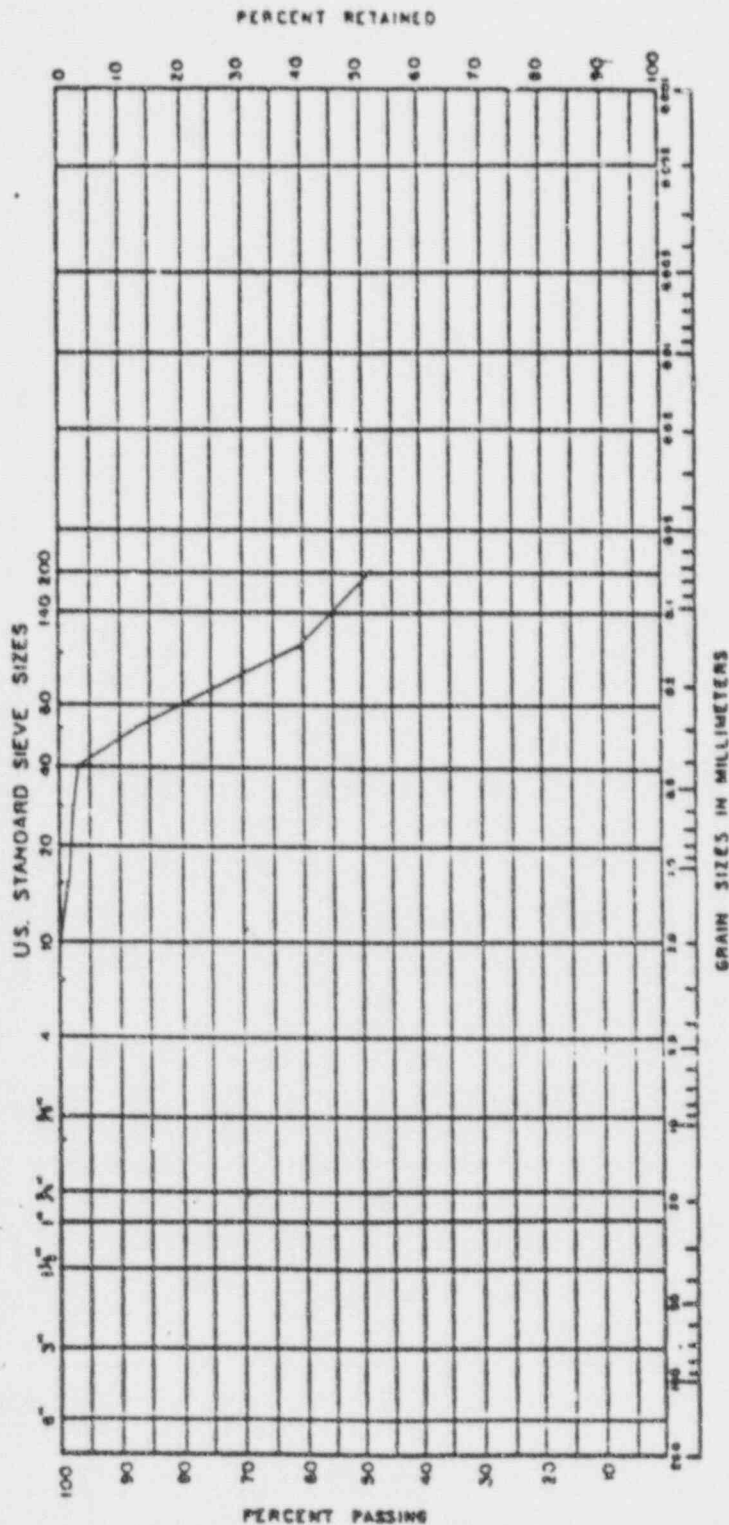
Project No.: 1907046E

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		

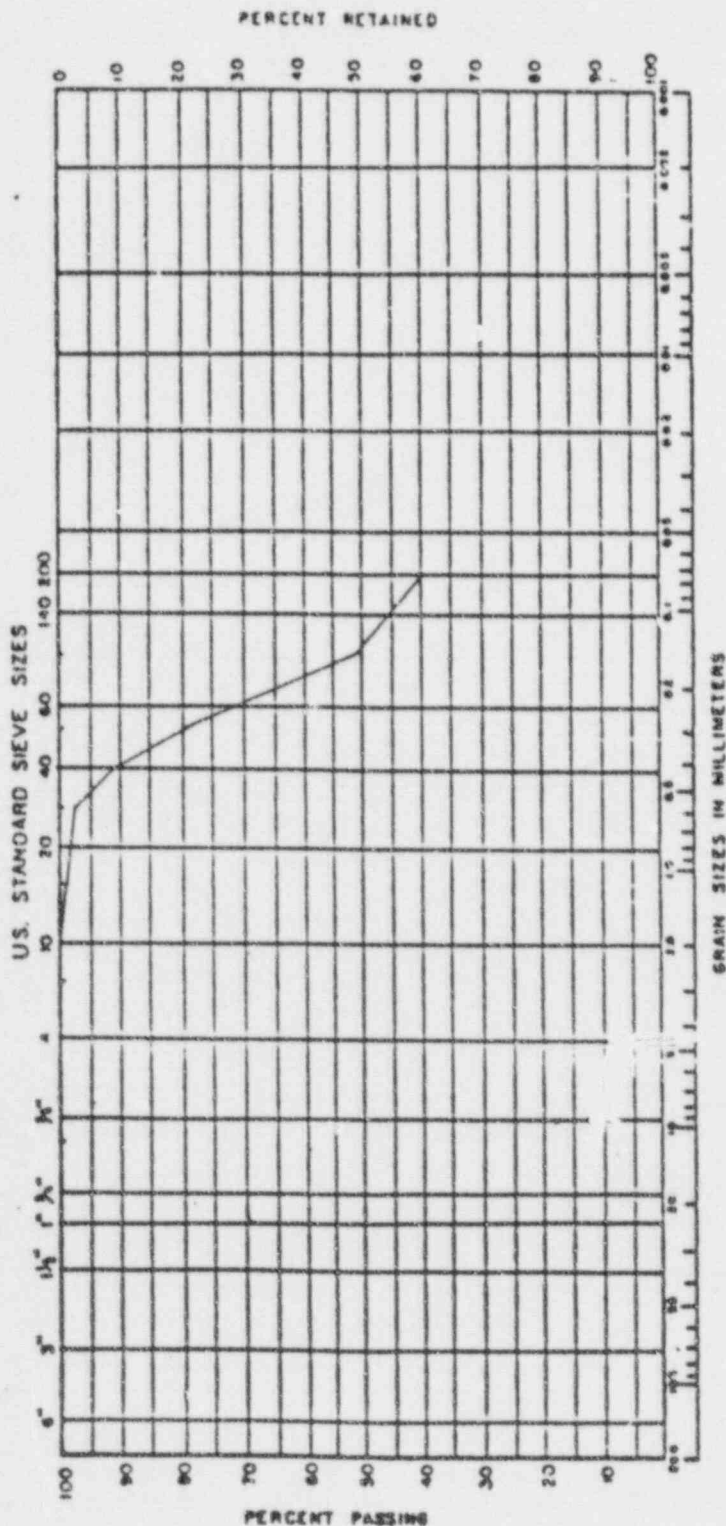


U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.7
No. 30	98.9
No. 40	97.6
No. 50	87.6
No. 100	60.2
No. 200	49.8

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
222 (M-8)	54	21.5	3487-D

UNIFIED SOIL CLASSIFICATION

CORBLES		GRAVEL		SAND		SILT AND CLAY
COARSE	FINE	COARSE	FINE	COARSE	FINE	



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
222 (H8)	55	25.3	3487-E

Lambert and Associates

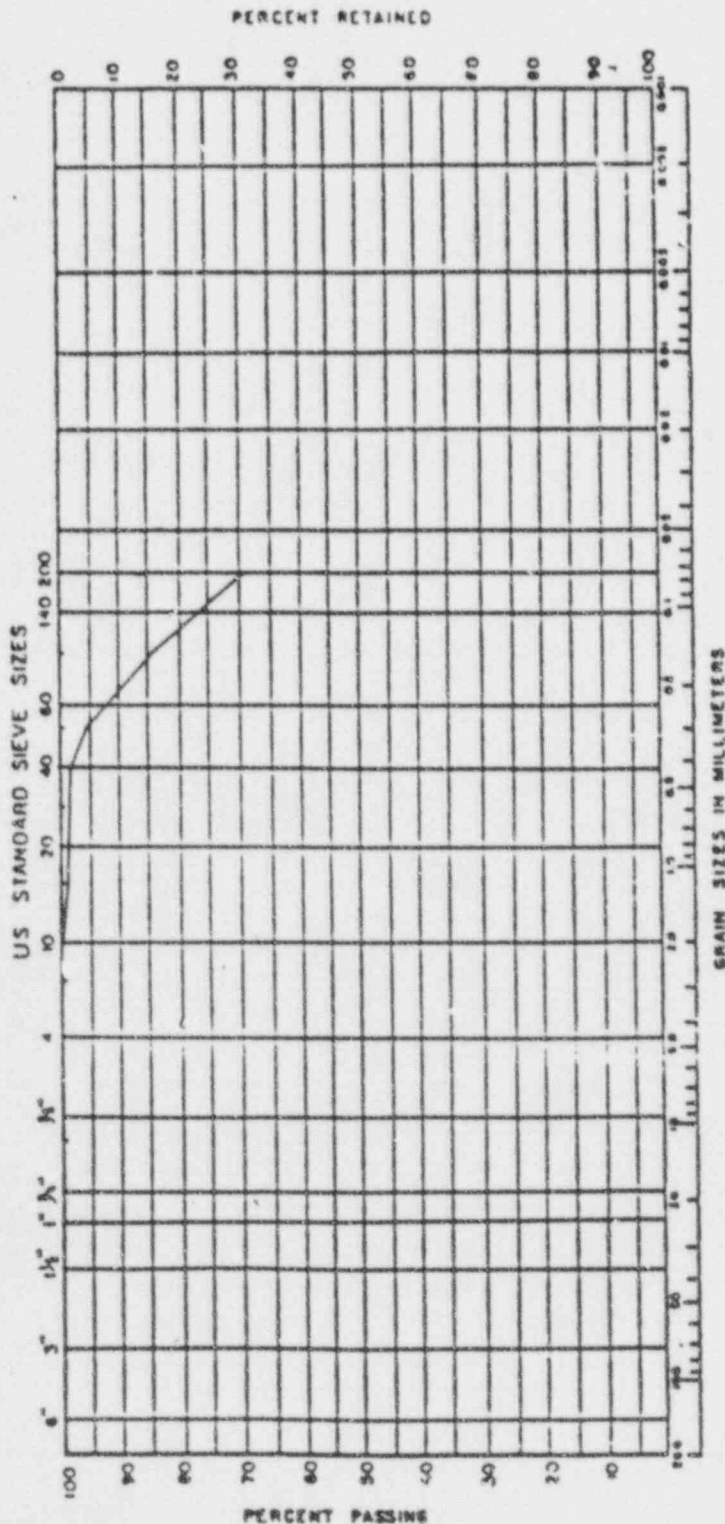
Project No.: 1000000000

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

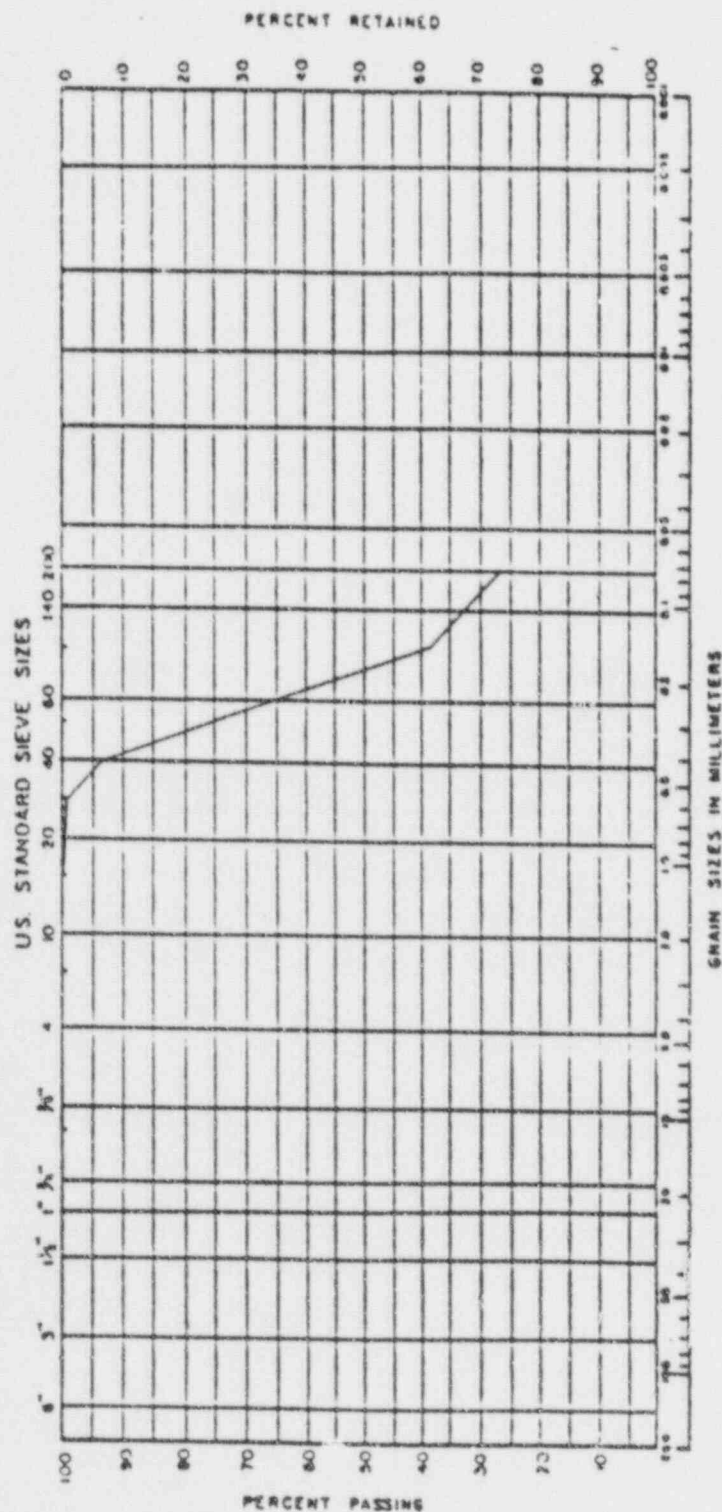
COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.8
No. 30	99.5
No. 40	98.9
No. 50	95.4
No. 100	84.2
No. 200	69.9

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
222 (H-8)	56	27.9	3487-F

SAMPLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	
1	100	0	0	0	100
2	100	0	0	0	100
3	100	0	0	0	100
4	100	0	0	0	100
5	100	0	0	0	100
6	100	0	0	0	100
7	100	0	0	0	100
8	100	0	0	0	100
9	100	0	0	0	100
10	100	0	0	0	100
11	100	0	0	0	100
12	100	0	0	0	100
13	100	0	0	0	100
14	100	0	0	0	100
15	100	0	0	0	100
16	100	0	0	0	100
17	100	0	0	0	100
18	100	0	0	0	100
19	100	0	0	0	100
20	100	0	0	0	100
21	100	0	0	0	100
22	100	0	0	0	100
23	100	0	0	0	100
24	100	0	0	0	100
25	100	0	0	0	100
26	100	0	0	0	100
27	100	0	0	0	100
28	100	0	0	0	100
29	100	0	0	0	100
30	100	0	0	0	100
31	100	0	0	0	100
32	100	0	0	0	100
33	100	0	0	0	100
34	100	0	0	0	100
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36	100	0	0	0	100
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41	100	0	0	0	100
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44	100	0	0	0	100
45	100	0	0	0	100
46	100	0	0	0	100
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49	100	0	0	0	100
50	100	0	0	0	100
51	100	0	0	0	100
52	100	0	0	0	100
53	100	0	0	0	100
54	100	0	0	0	100
55	100	0	0	0	100
56	100	0	0	0	100
57	100	0	0	0	100
58	100	0	0	0	100
59	100	0	0	0	100
60	100	0	0	0	100
61	100	0	0	0	100
62	100	0	0	0	100
63	100	0	0	0	100
64	100	0	0	0	100
65	100	0	0	0	100
66	100	0	0	0	100
67	100	0	0	0	100
68	100	0	0	0	100
69	100	0	0	0	100
70	100	0	0	0	100
71	100	0	0	0	100
72	100	0	0	0	100
73	100	0	0	0	100
74	100	0	0	0	100



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	100
No. 30	99.4
No. 40	94.9
No. 50	73.4
No. 100	38.0
No. 200	27.2

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
223 (M-9)	51	8.3	3488-A

Lambert and Associates

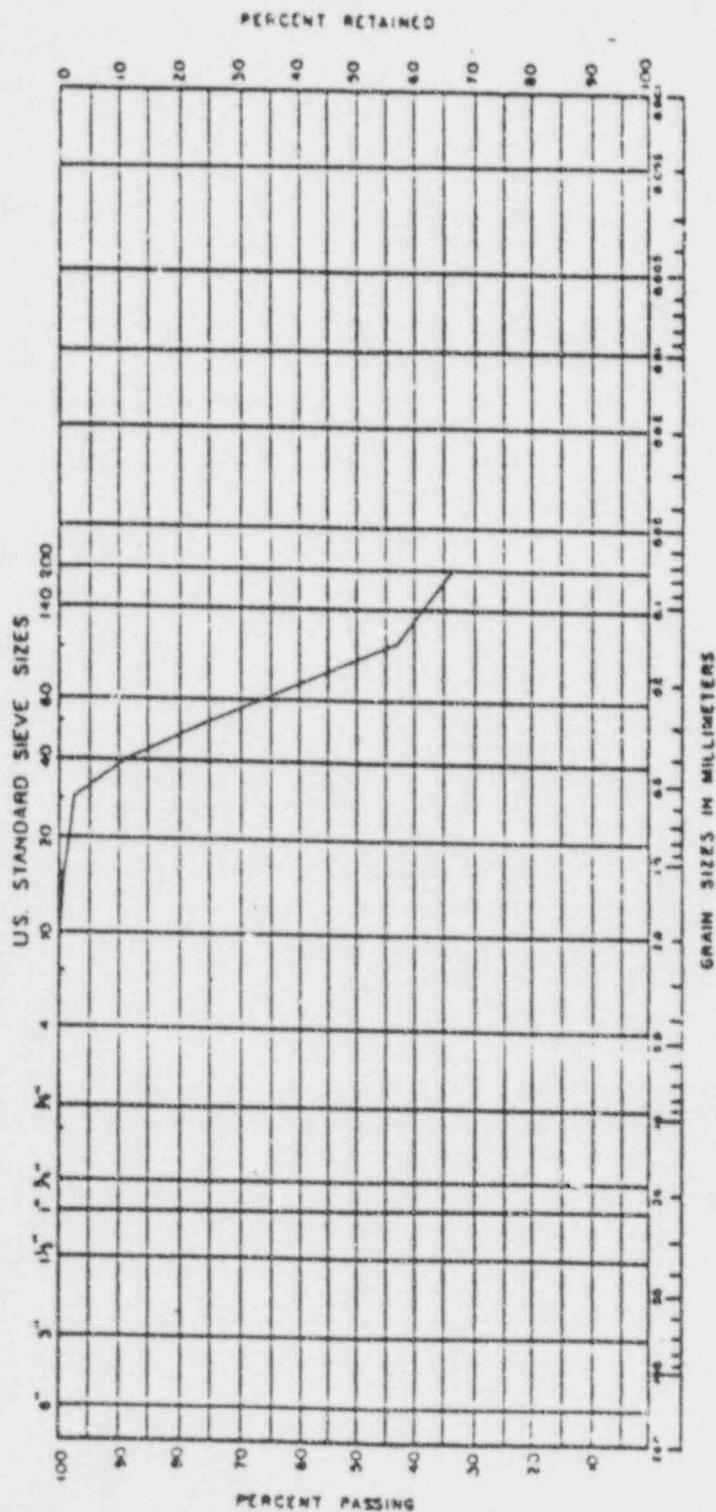
Project No. 00-000000

Date :

Figure 1

UNIFIED SOIL CLASSIFICATION

CORBELS		GRAVEL		SAND		SILT AND CLAY	
		COARSE	FINE	COARSE	FINE		



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.9
No. 30	97.5
No. 40	89.7
No. 50	75.2
No. 100	43.6
No. 200	34.2

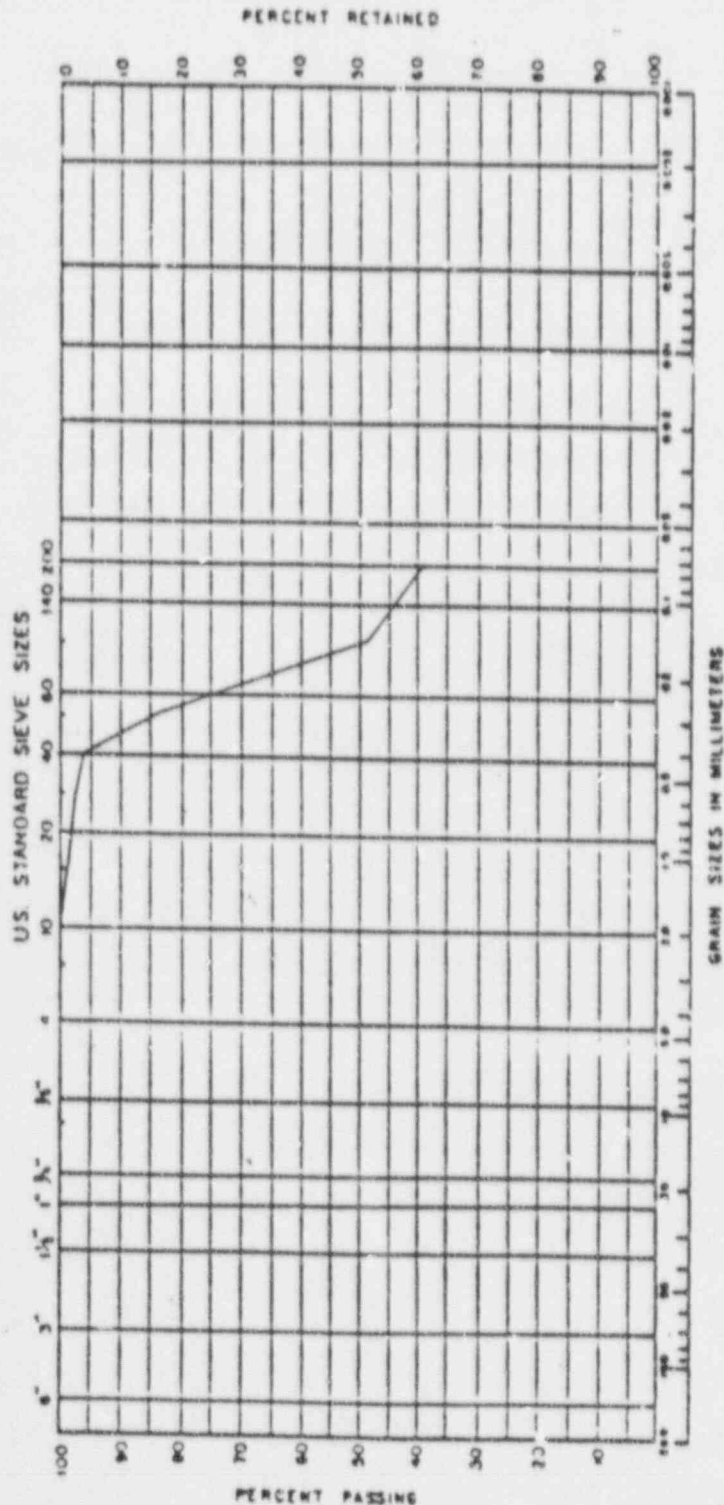
TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
223 (M-9)	52	11.3	3488-B

Project No.

Date:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY
COARSE	FINE	COARSE	FINE	MEDIUM	FINE	



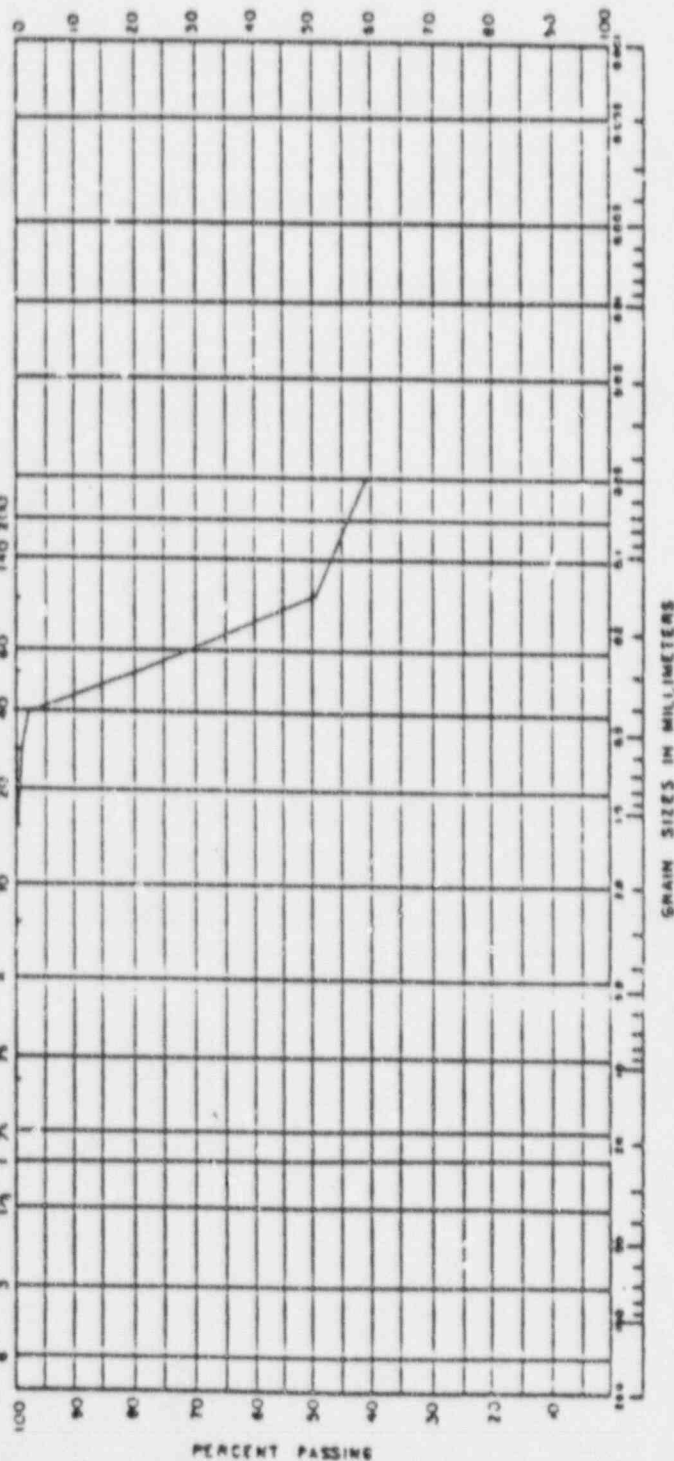
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.8
No. 30	98.7
No. 40	96.8
No. 50	83.9
No. 100	49.0
No. 200	39.8

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
223 (M-9)	53	15.1	1488-C

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND	SILT AND CLAY
	COARSE	FINE	COARSE	FINE

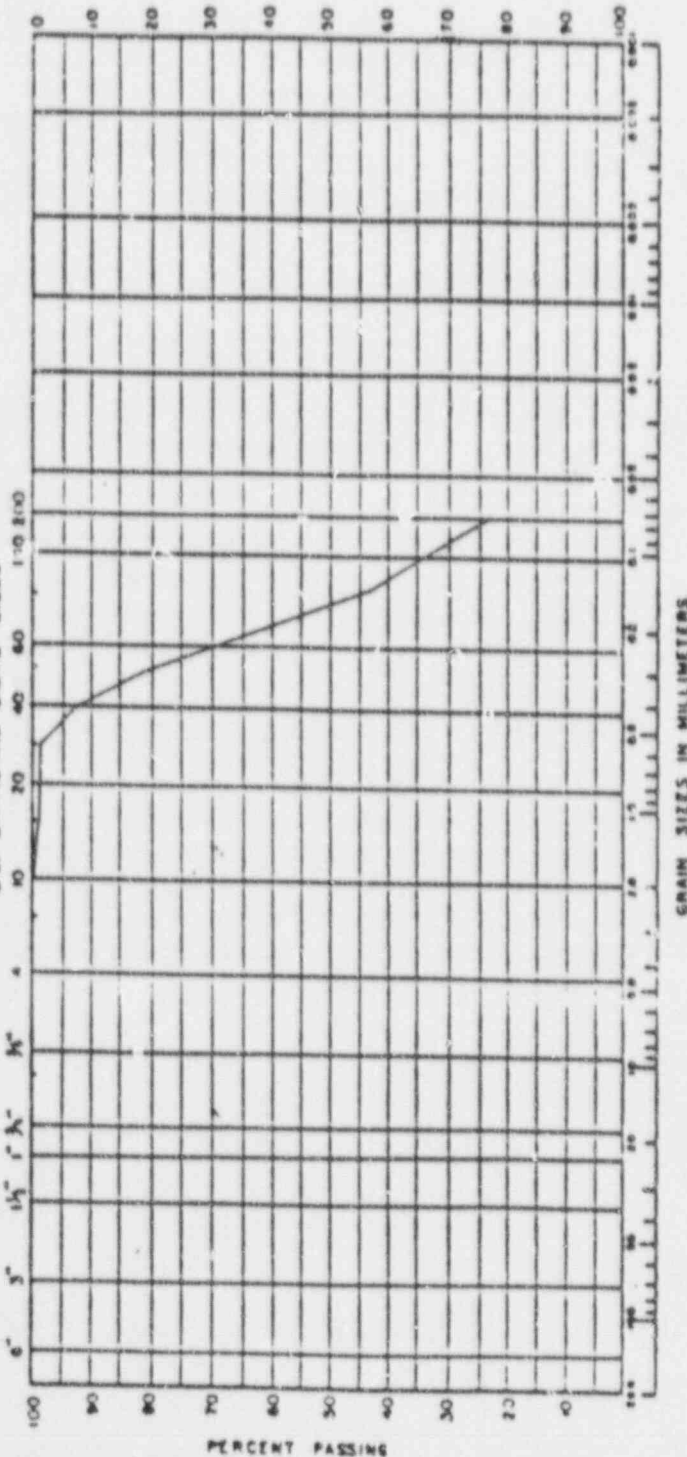
U.S. STANDARD SIEVE SIZES



UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		FINE	SAND	SILT AND CLAY
	COARSE	FINE		COARSE	

U.S. STANDARD SIEVE SIZES

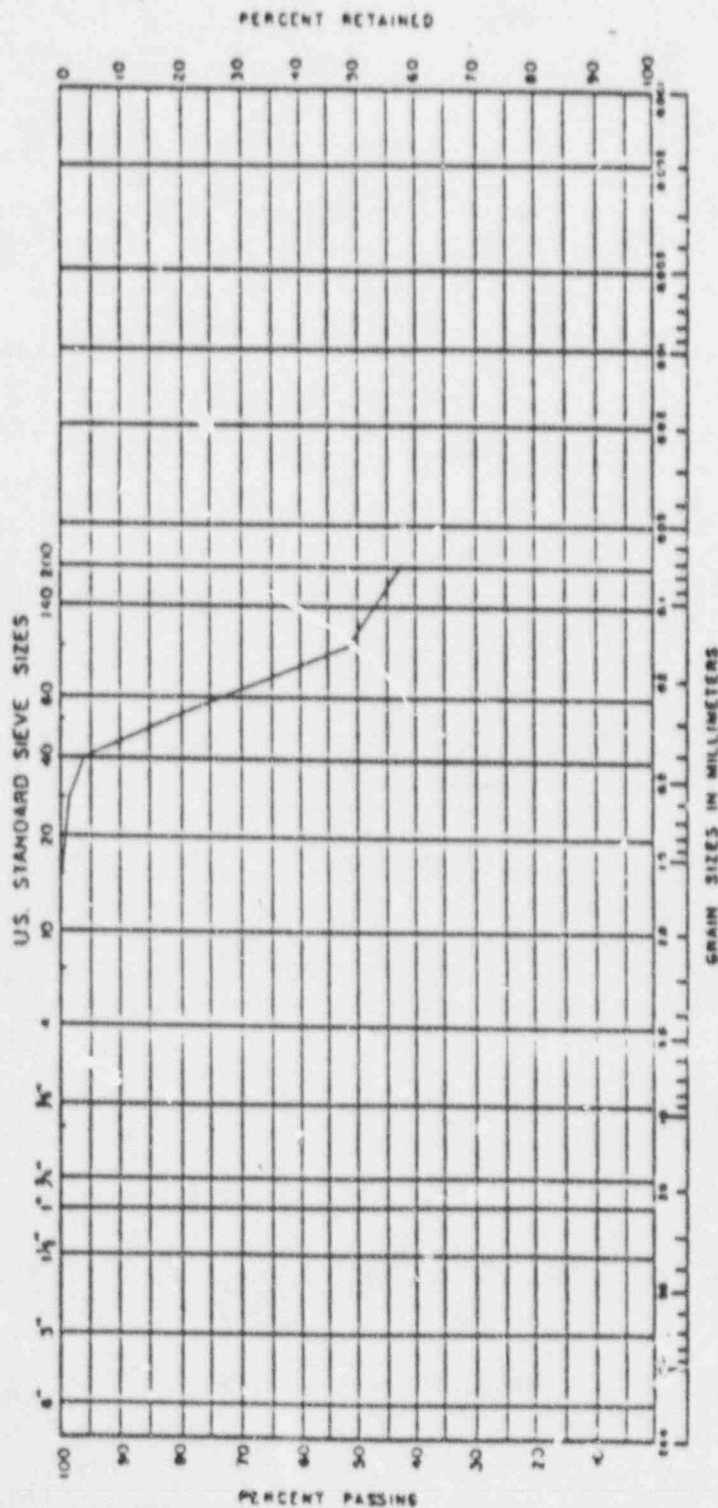


U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.9
No. 30	99.1
No. 40	92.5
No. 50	80.3
No. 100	42.9
No. 200	23.9

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLe NUMBER
223 (M-9)	55	11.6	3488-E

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY
COARSE	FINE	COARSE	FINE	COARSE	FINE	



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 30	99.2
No. 40	96.3
No. 50	81.1
No. 100	51.6
No. 200	43.3

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
223 (M-9)	56	17.4	3488-F

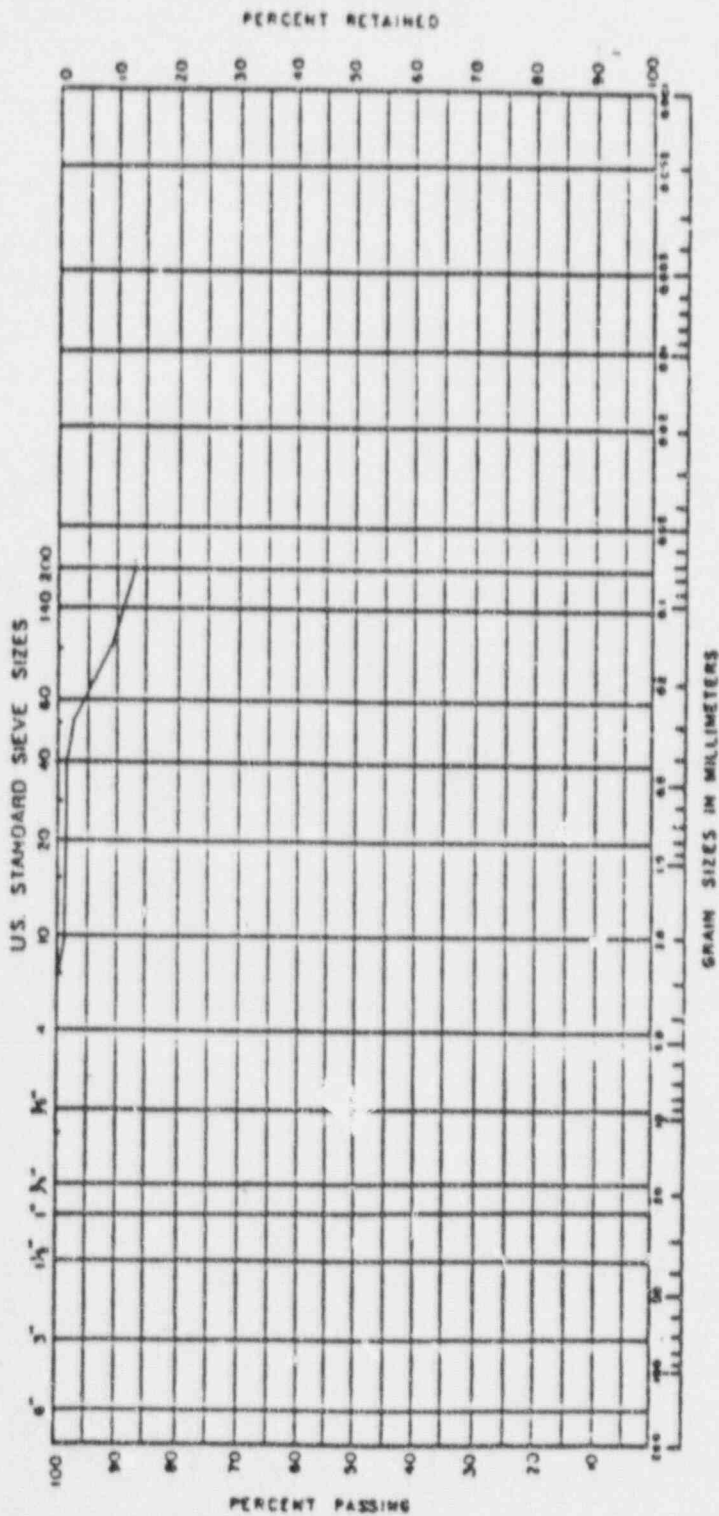
Lambert and Associates

Project No

Date

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	



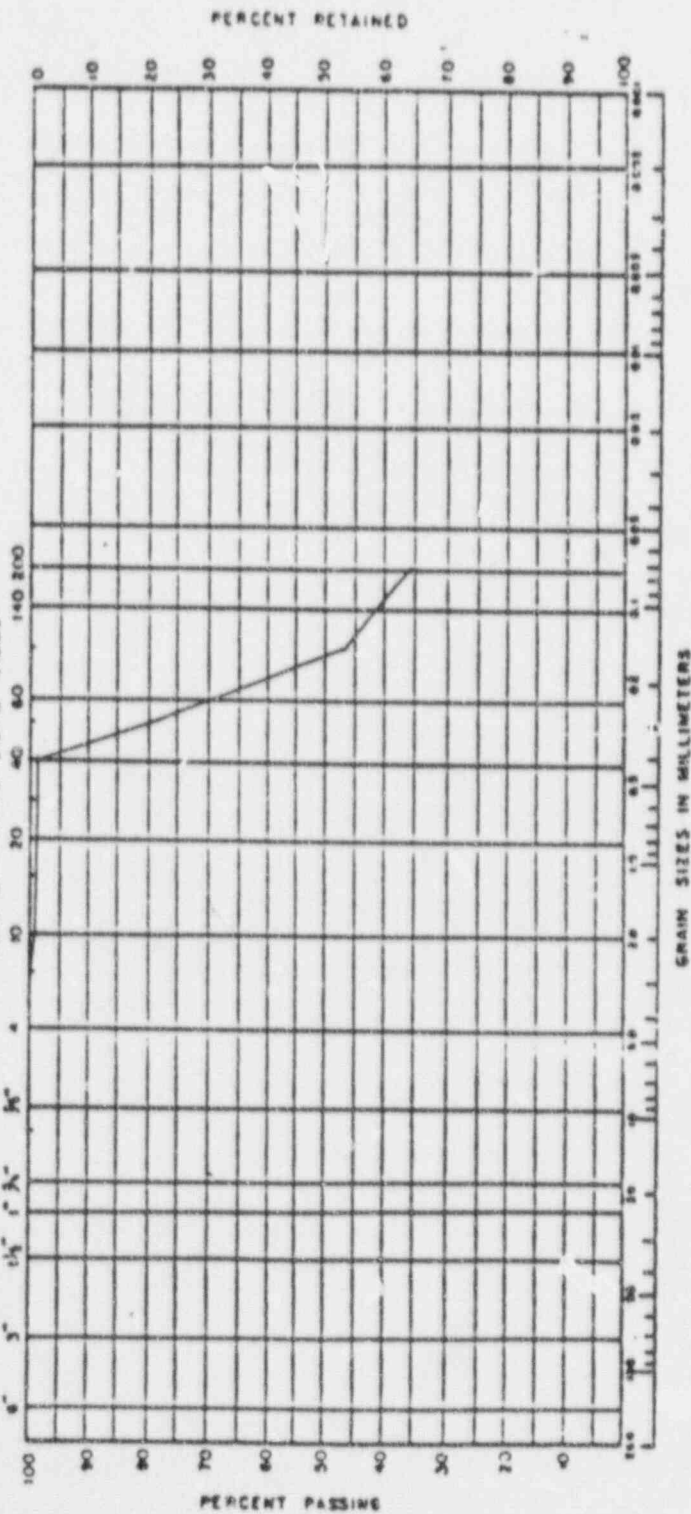
U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 8	100
No. 10	99.9
No. 16	99.9
No. 30	99.8
No. 40	99.5
No. 50	97.5
No. 100	90.2
No. 200	86.8

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
223 (H-9)	57	36.5	3488-G

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY
COARSE	FINE	COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 8	100
No. 10	99.9
No. 16	99.7
No. 30	99.2
No. 40	99.1
No. 50	78.9
No. 100	46.1
No. 200	35.9

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
224 (M-10)	S1	11.3	3489-A

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Project No: 11010408

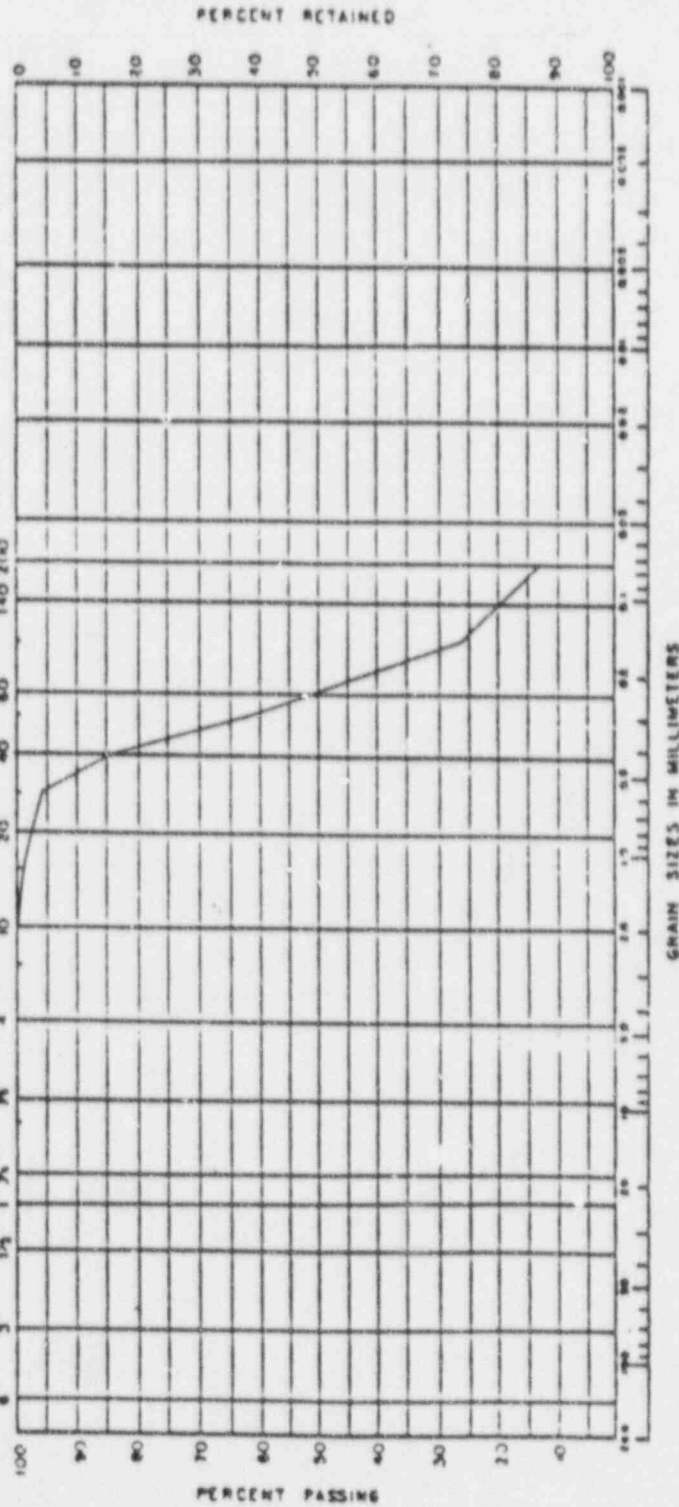
Date:

Engineer:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		

U.S. STANDARD SIEVE SIZES



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
224 (H-10)	52	6.5	3489-B

Lambert and Associates

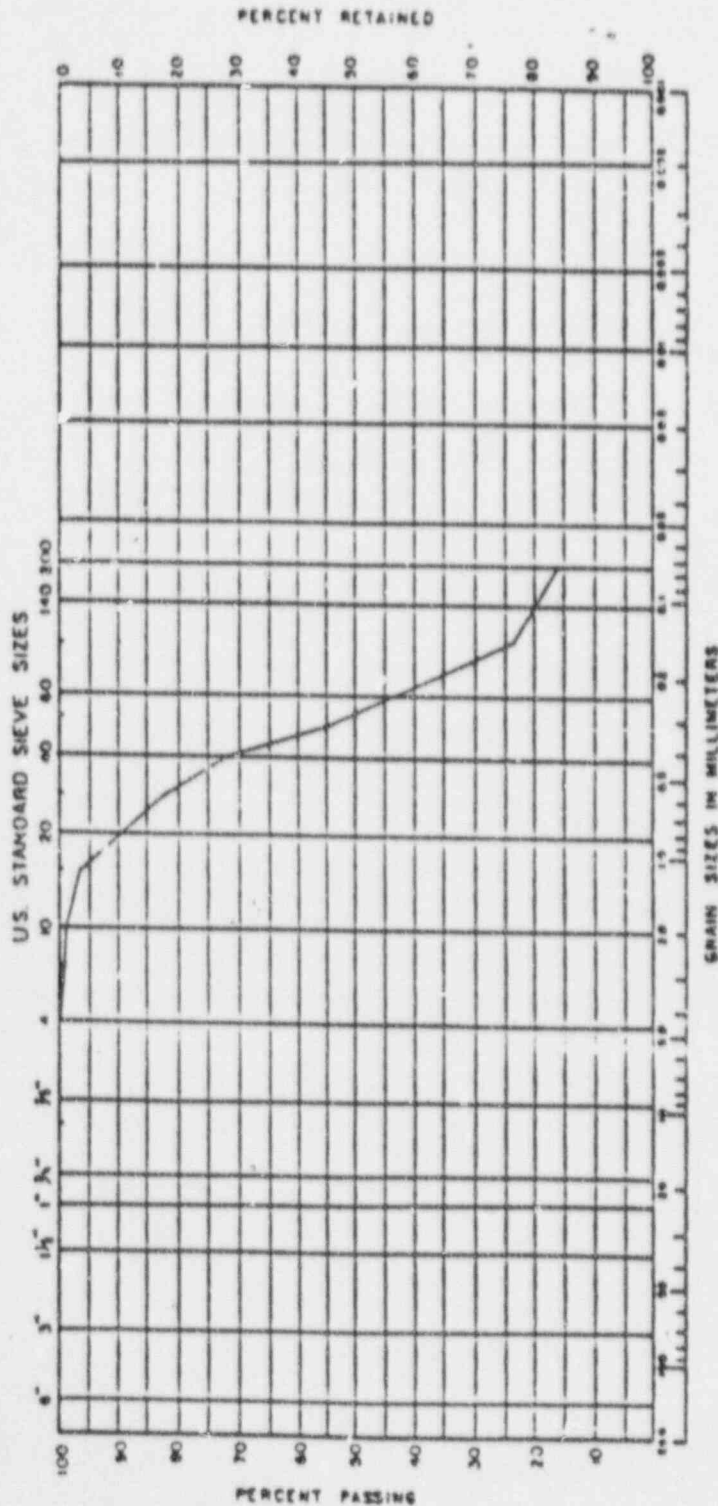
Project No: 1100046

Date:

Scale:

UNIFIED SOIL CLASSIFICATION

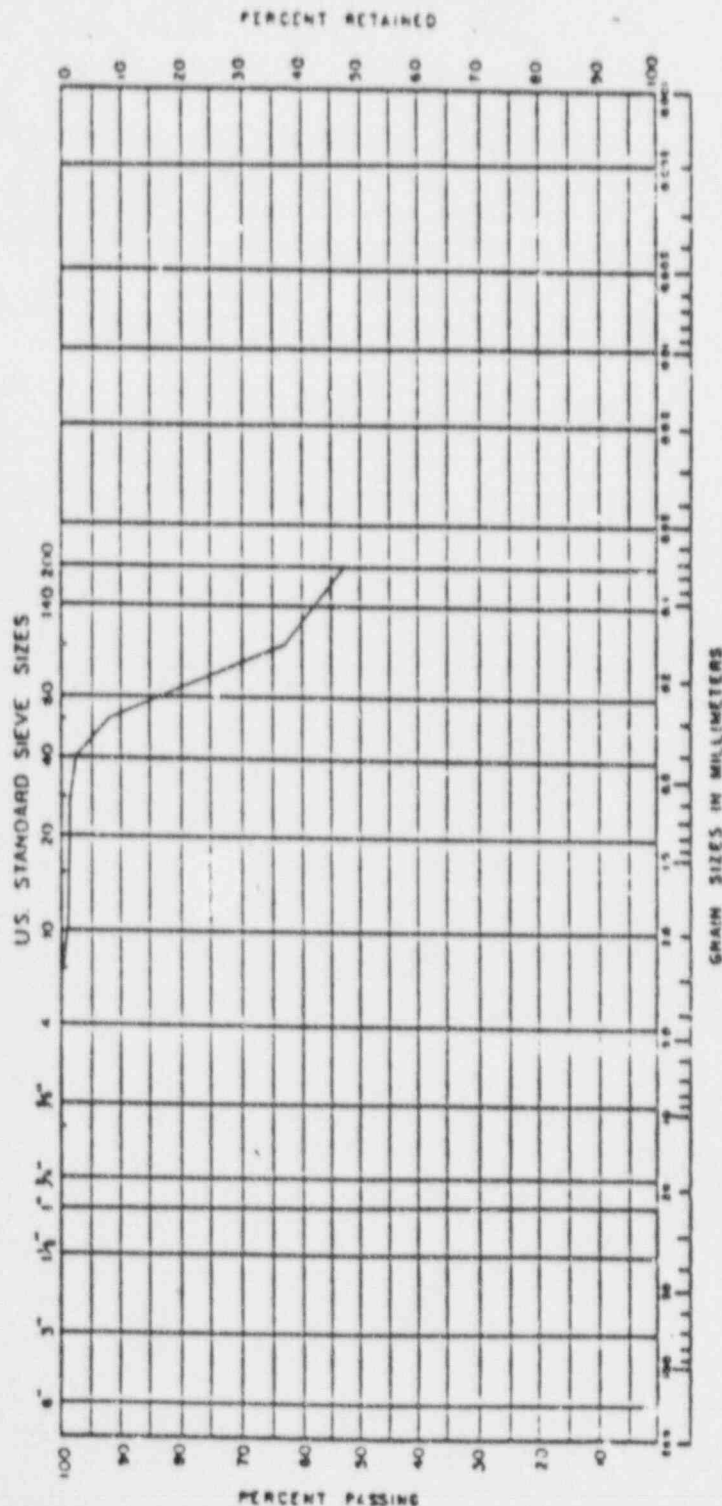
COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
224 (M-10)	53	8.2	3489-C

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	



U.S. STD. SIEVE SIZE

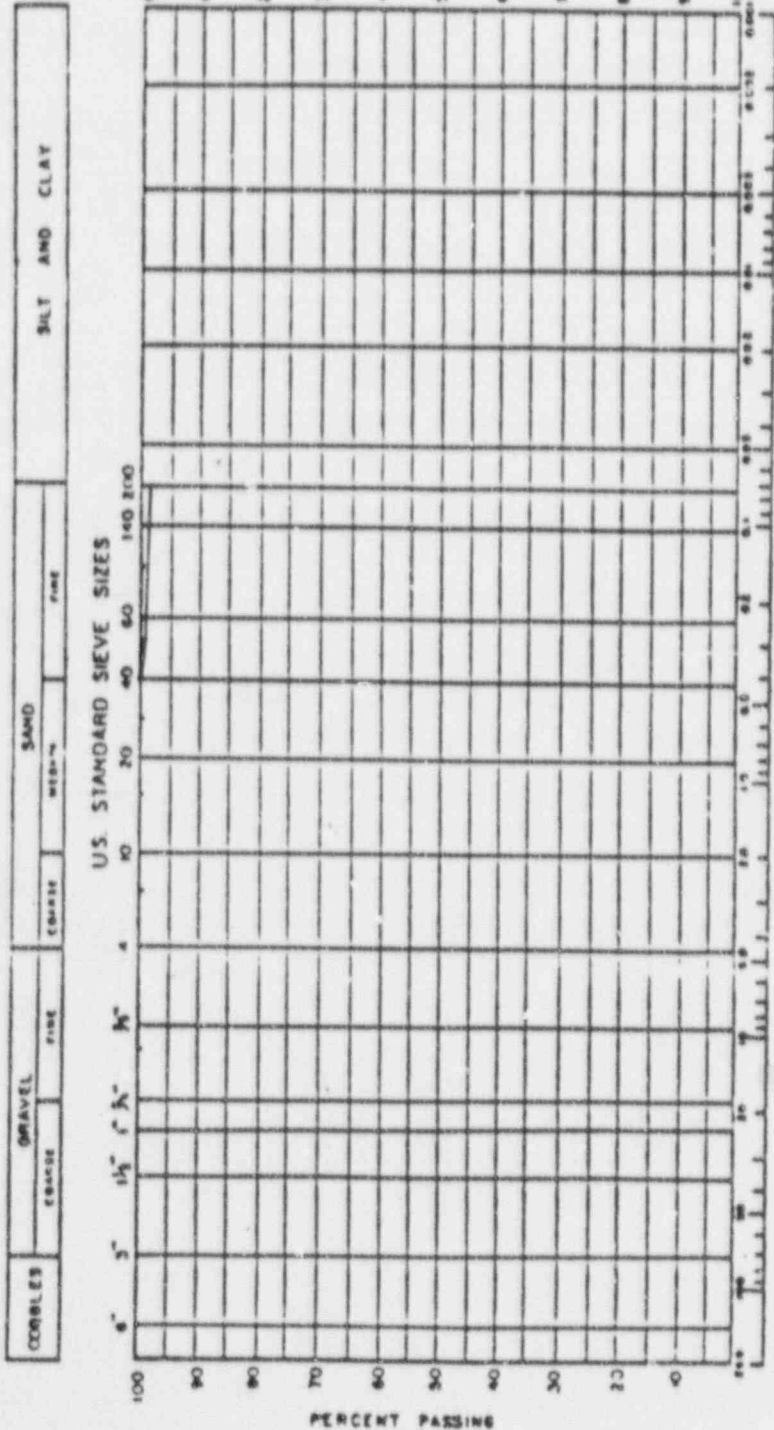
CUM. %

PASSING

No. 8	100
No. 10	99.9
No. 16	99.7
No. 30	98.9
No. 40	97.5
No. 50	91.2
No. 100	62.6
No. 200	53.4

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
224 (H-10)	S4	20.0	3489-D

UNIFIED SOIL CLASSIFICATION

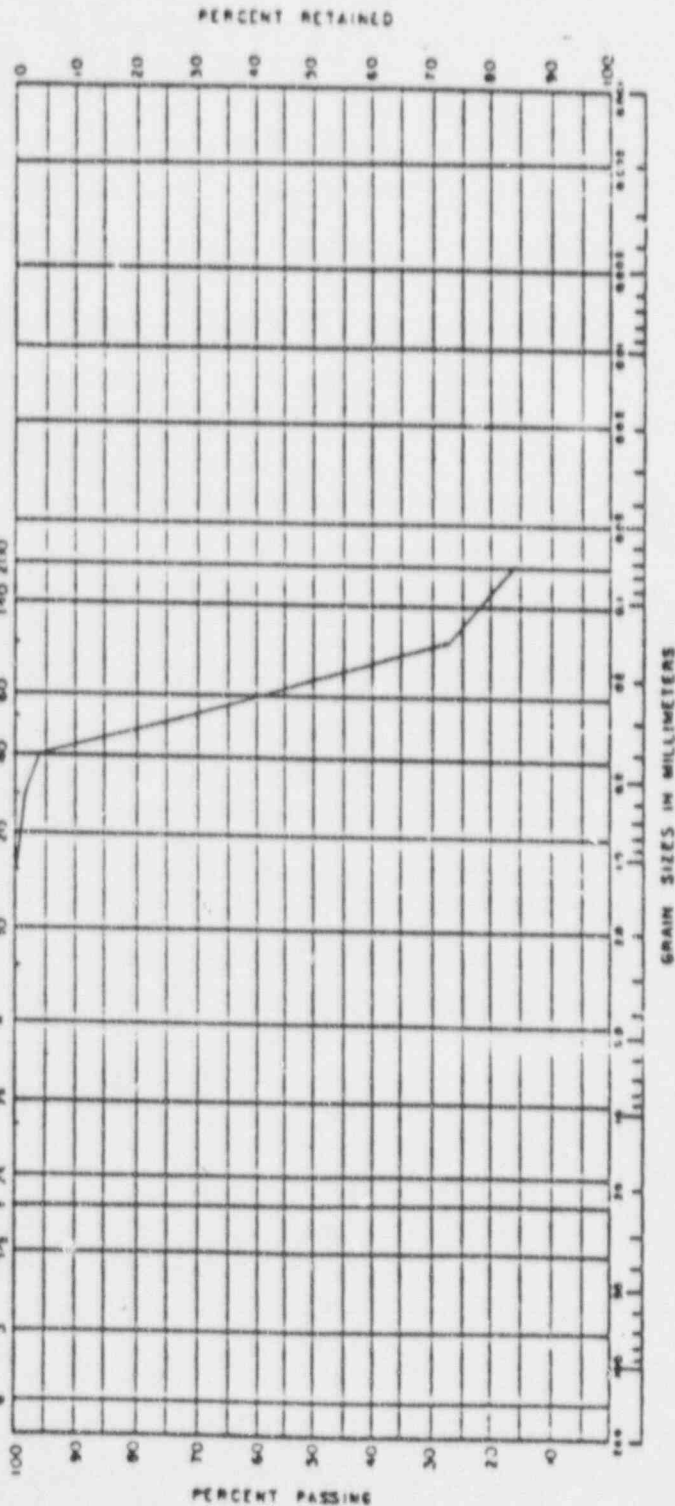


TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
224 (M-10)	55	40.0	3489-E

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	100
No. 30	98.6
No. 40	95.5
No. 50	72.9
No. 100	26.9
No. 200	16.1

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
226 (M-13)	51	5.8	3490-A

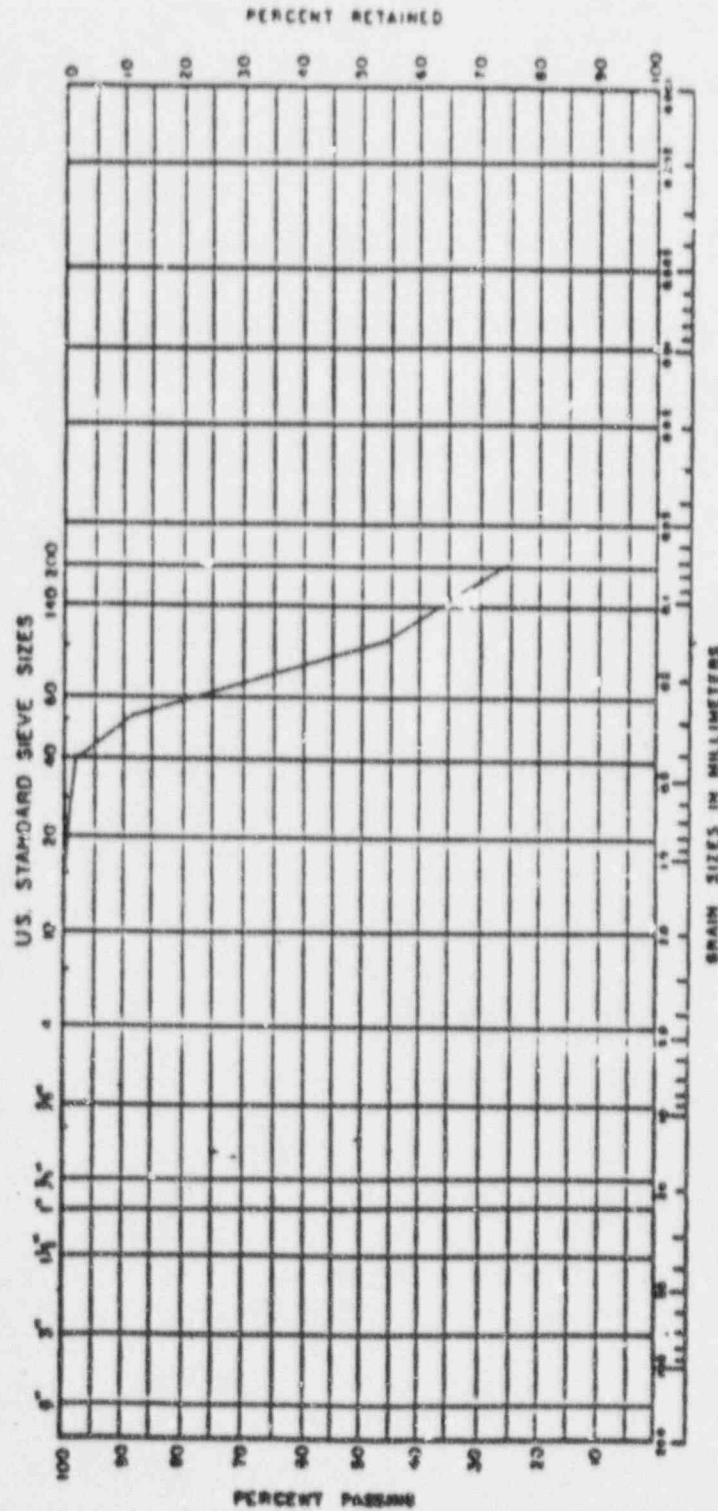
Lambert and Associates

Project No

Date

UNIFIED SOIL CLASSIFICATION

CORREL. ST.	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	



U.S. STD. SIEVE SIZE	CUM. % PASSING
No. 16	100
No. 30	99.7
No. 40	98.7
No. 50	88.4
No. 100	45.8
No. 200	25.5

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
226 (M-13)	52	8.8	3490-B

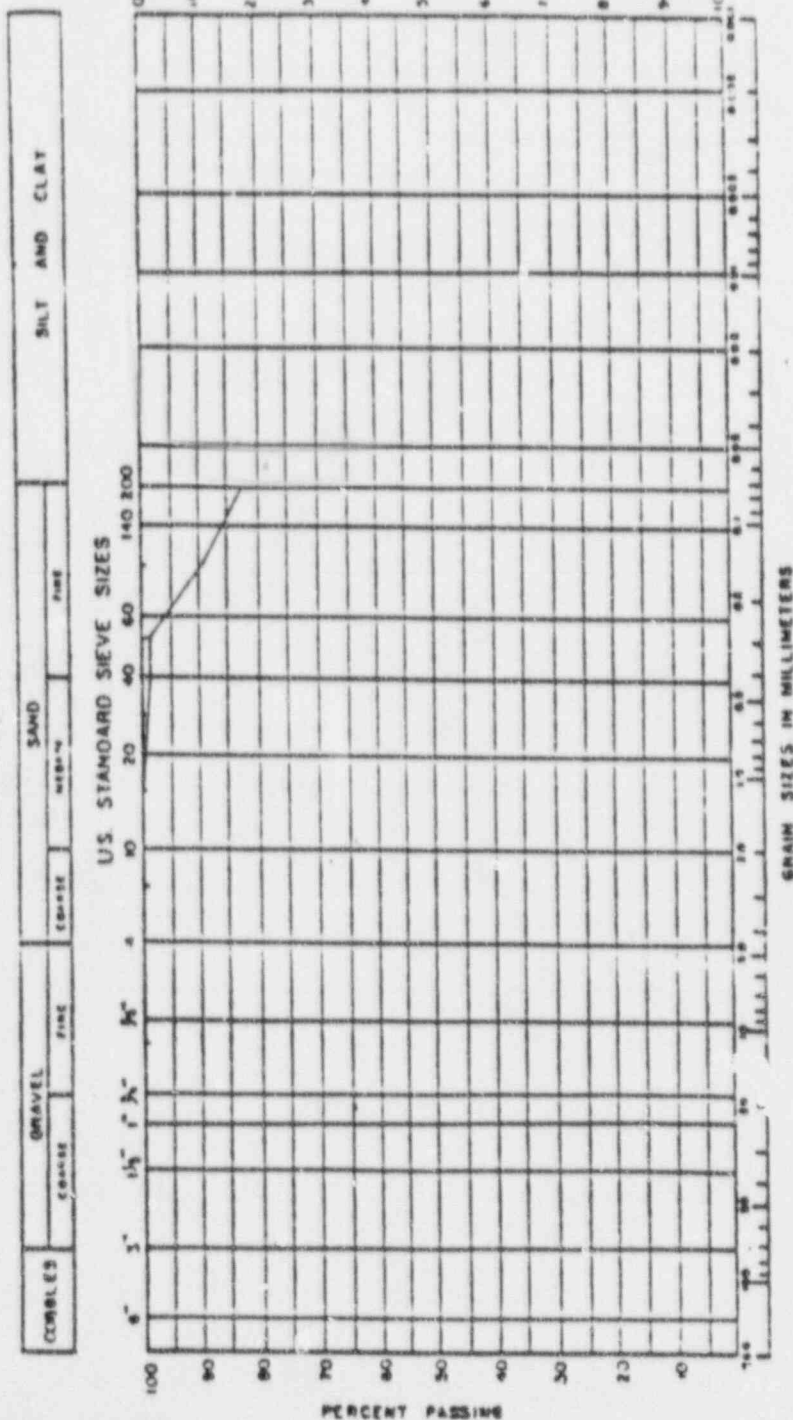
Lambert and Associates

Project No.: M90004NE

Date:

Figure:

UNIFIED SOIL CLASSIFICATION



U.S. SIEVE	CUM. % PASSING
No. 16	100
No. 30	99.9
No. 40	99.8
No. 50	99.3
No. 100	89.0
No. 200	82.4

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
226 (H-13)	53	26.6	3490-C

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Project No.: 490054E

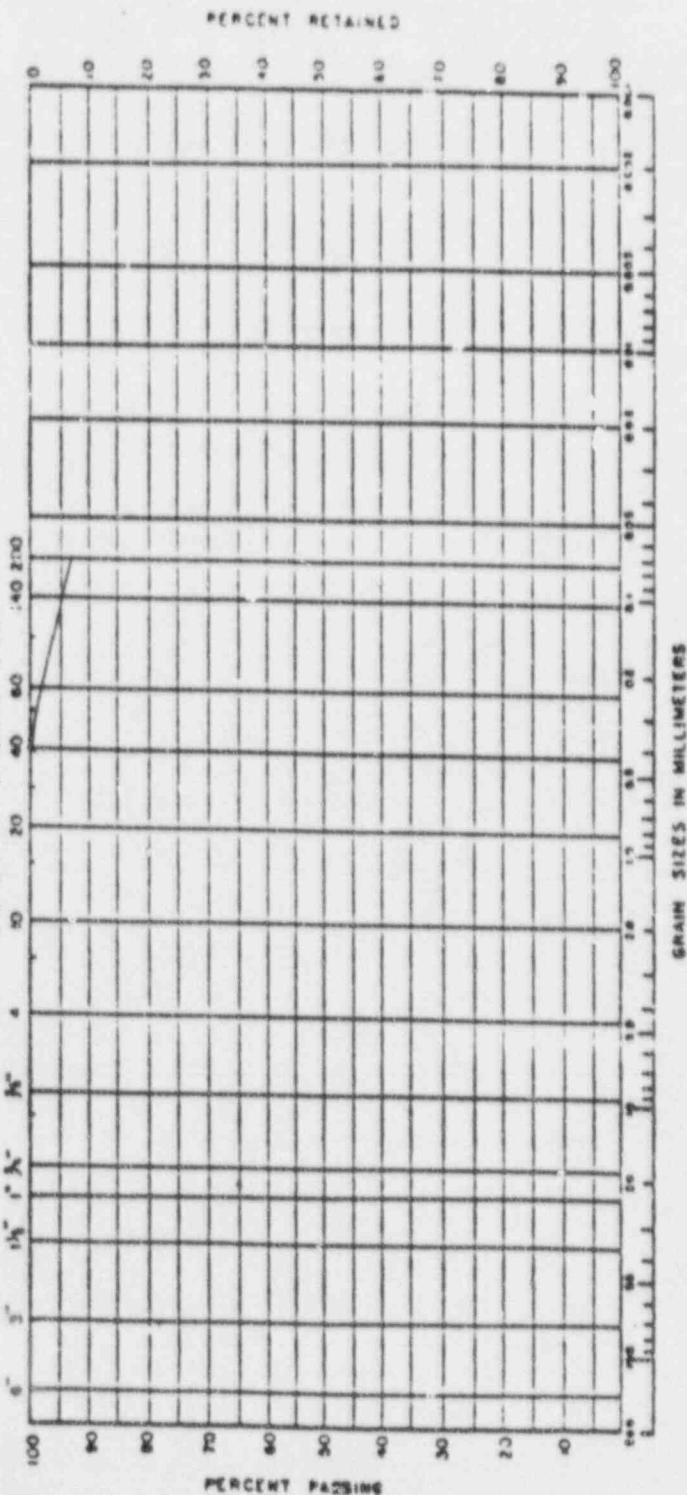
Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND	FINE		SILT AND CLAY
6"	3"	coarse	fine		coarse	fine	

U.S. STANDARD SIEVE SIZES



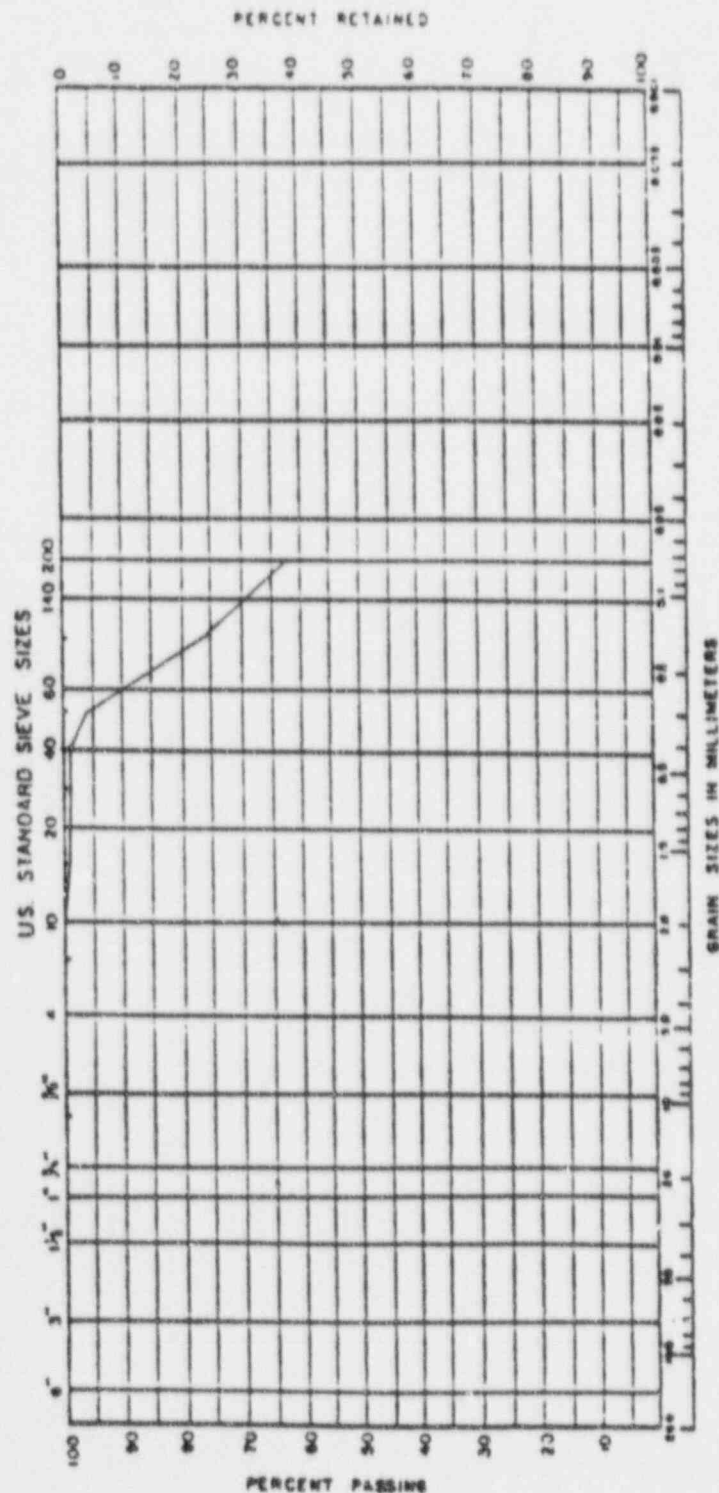
U.S. STANDARD SIEVE SIZE	CUMULATIVE PERCENT PASSING
No. 40	100
No. 50	99.5
No. 100	96.5
No. 200	94.3

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
226 (11-13)	54	31.3	3490-D

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Project No: M955041E
 Date:
 Figure:

CORREL	GRAVEL		SAND			SILT AND CLAY
	Coarse	Fine	Coarse	Medium	Fine	
1						
2						
3						
4						
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TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
227 (M-14)	51	17.9	3491-A

U.S. SIEVE	CUM. PASSING
10	100
20	100
40	100
60	100
80	100
100	100
120	100
140	100
160	100
180	100
200	100
230	100
250	100
280	100
300	100
325	100
350	100
375	100
400	100
425	100
450	100
475	100
500	100
530	100
560	100
600	100
630	100
660	100
700	100
750	100
800	100
850	100
900	100
950	100
1000	100

Time, h	10	100
Time, 16	99.9	
Time, 30	99.7	
Time, 40	99.3	
Time, 50	96.2	
Time, 100	75.6	
Time, 200	62.6	

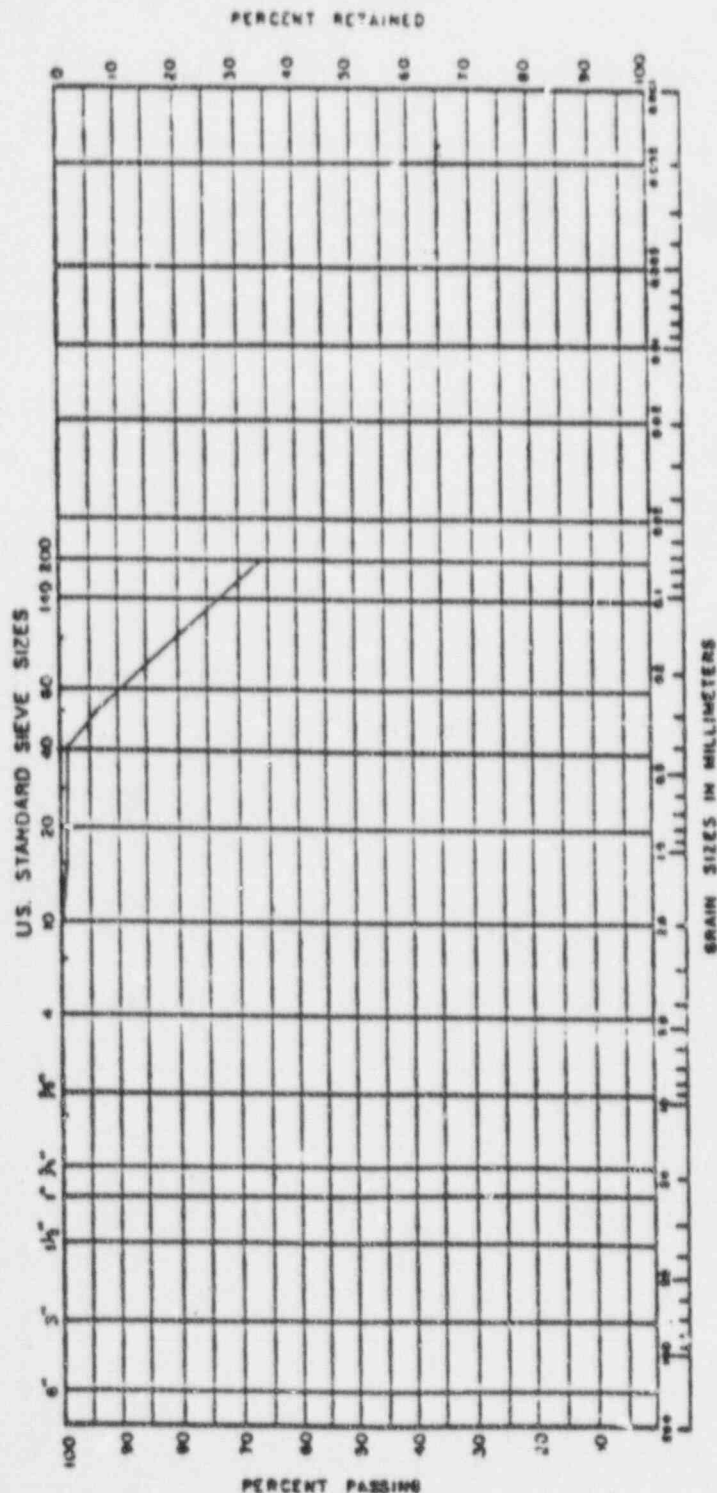
Lambert and Associates

Project No.: H900046E

Date:

Figure :

CONULCS	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	
1						
2						
3						
4						
5						
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TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
227 (M-14)	52	26.3	3491-B

Lambert and Associates

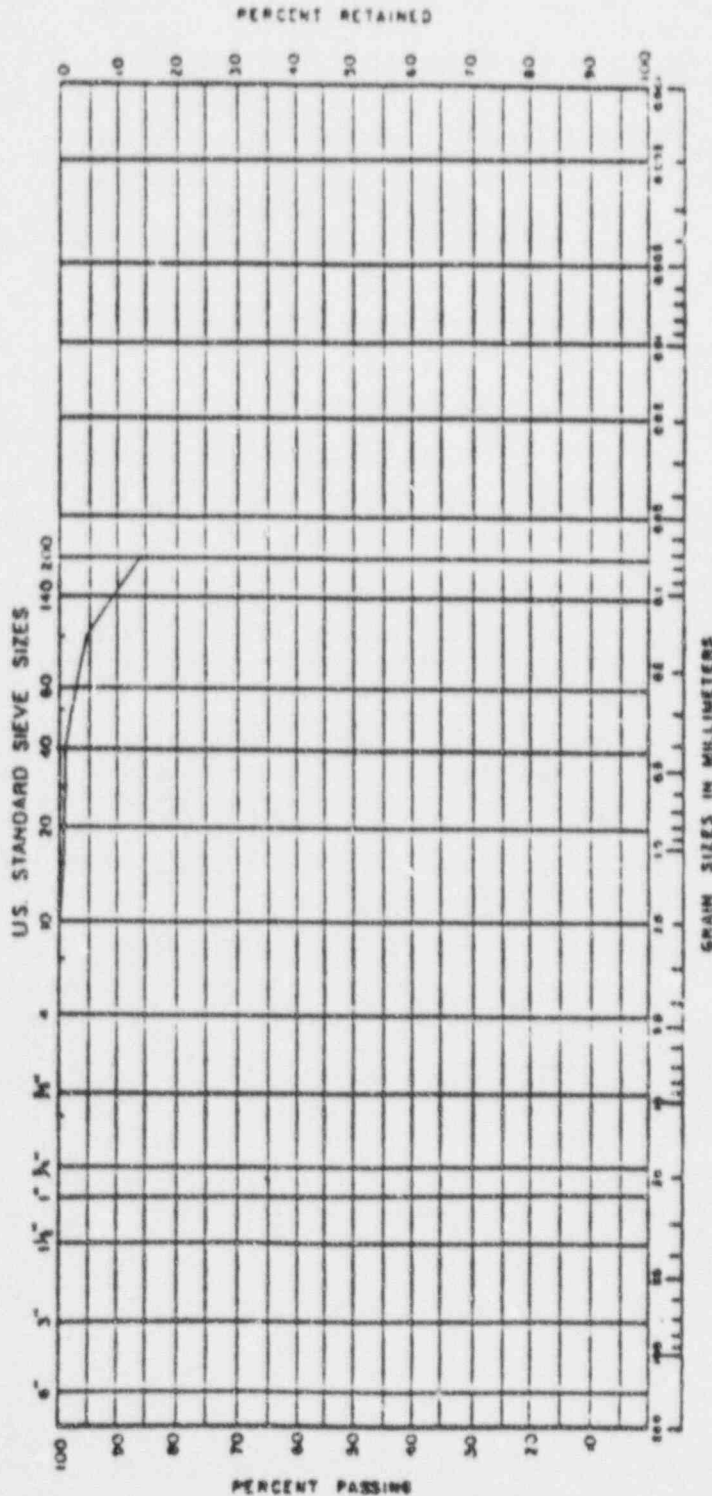
Project No.: M90004GE

Date: _____

Figure 1

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY
COARSE	FINE	COARSE	FINE	



U.S. SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.9
No. 30	99.8
No. 40	99.6
No. 50	98.1
No. 100	90.4
No. 200	85.1

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
227 (M-14)	S3	36.5	3491-C

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Project No.: M90004GE

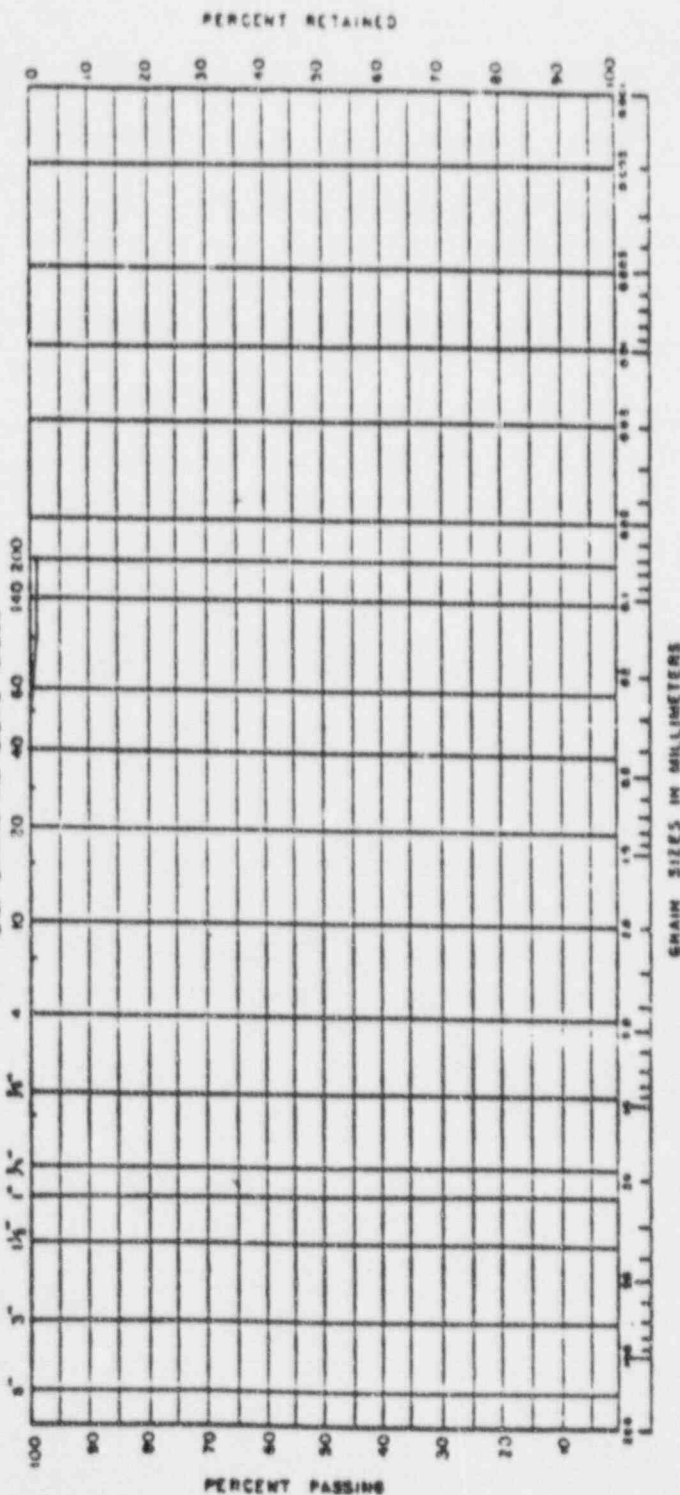
Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		

U.S. STANDARD SIEVE SIZES



U.S. SIEVE	CUM. % PASSING
No. 80	100
No. 100	99.8
No. 200	99.3

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
228 (M-11)	51	48.9	3492-A

Lambert and Associates

Project No: M900040E

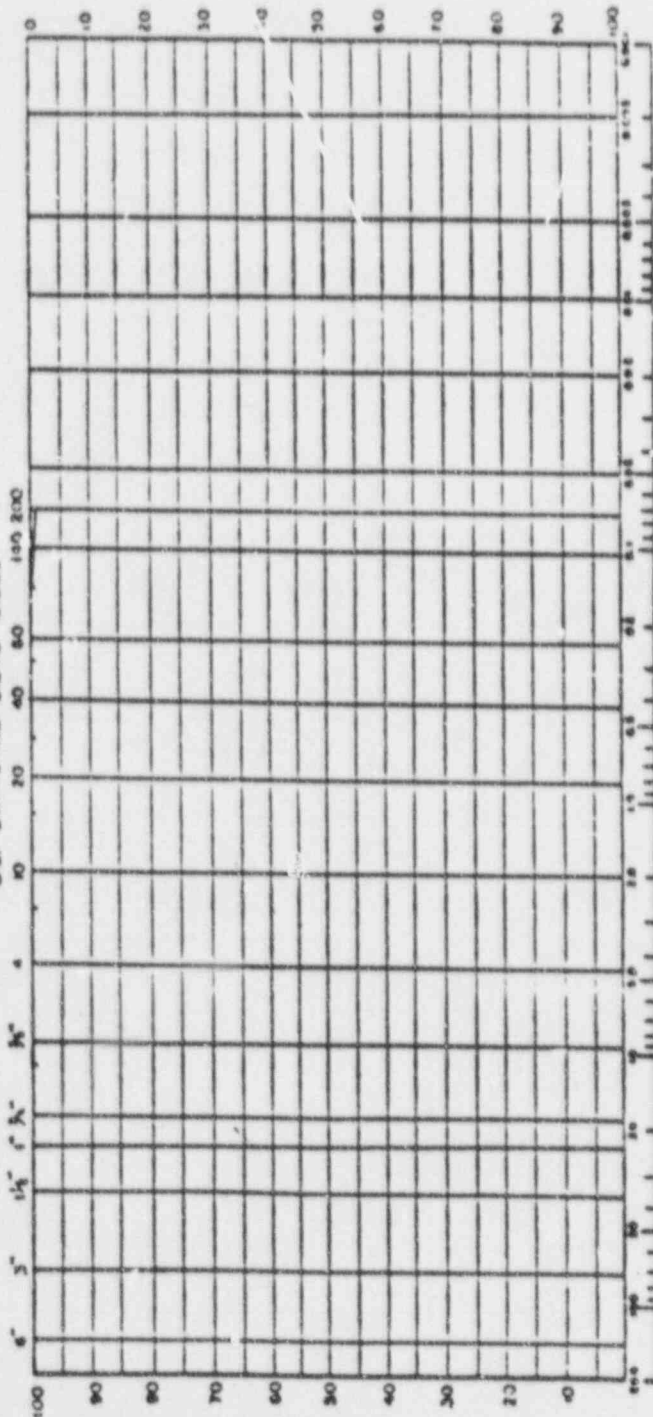
Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		FINE	SAND		SILT AND CLAY
	COARSE	FINE		COARSE	FINE	

U.S. STANDARD SIEVE SIZES



U.S. STANDARD SIEVE SIZES
 No. 100 100
 No. 200 99.7
 CUM. % PASSING

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
228 (M-11)	52	40.4	3492-B

Lambert and Associates

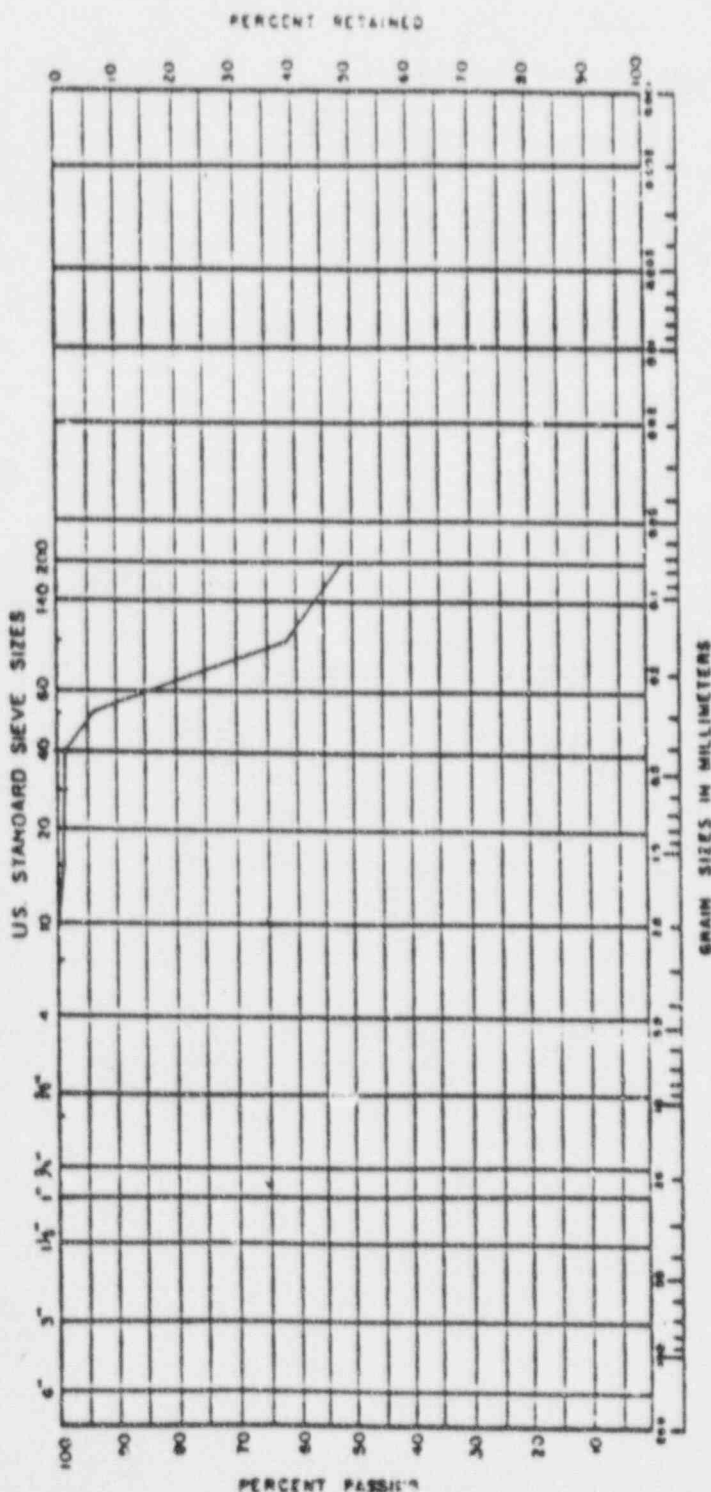
Project No.: 1190004GE

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
coarse	fine	coarse	fine	coarse	fine		



U.S. STANDARD SIEVE SIZE	CUMULATIVE PERCENT PASSING
No. 8	100
No. 10	100
No. 16	99.9
No. 30	99.8
No. 40	99.7
No. 50	94.5
No. 100	62.7
No. 200	52.1

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
229 (M-15)	51	17.5	3493-A

Lambert and Associates

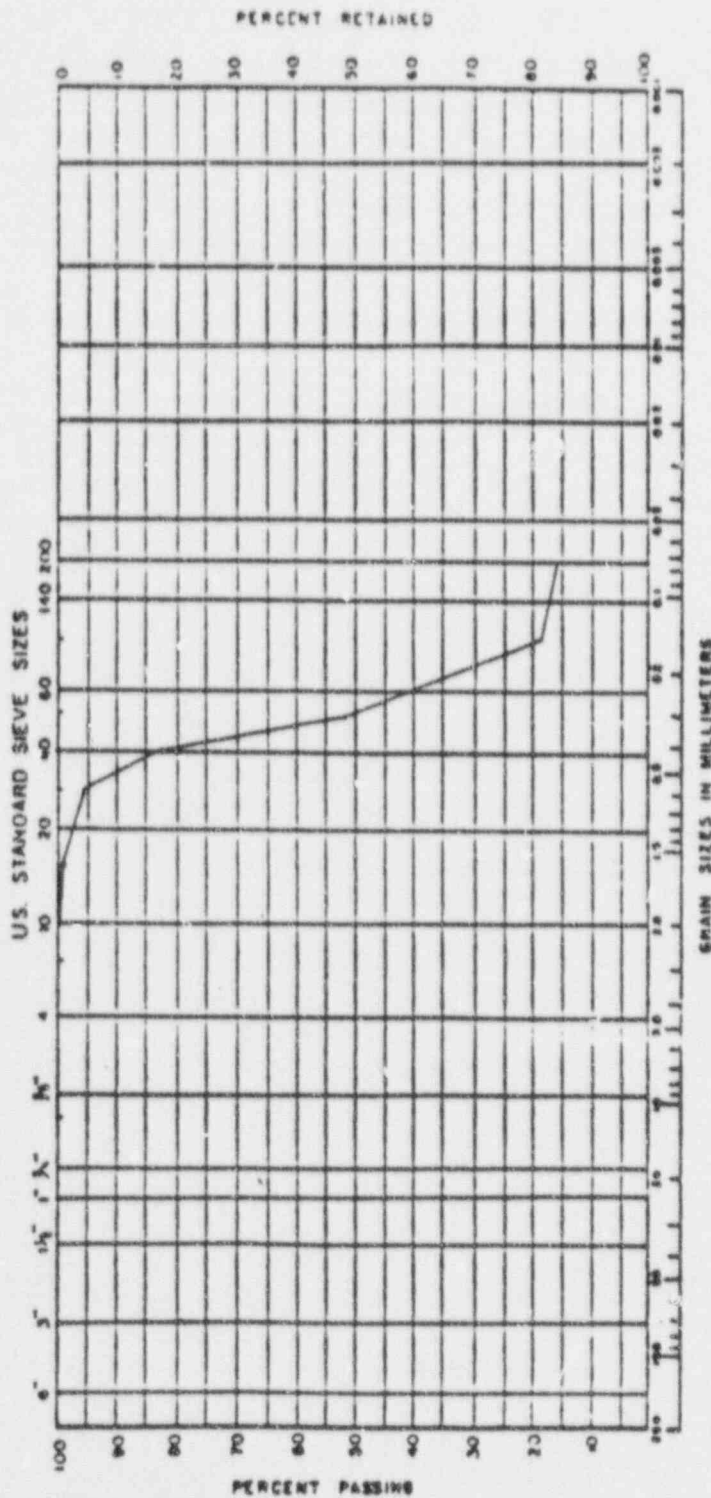
Project No.: M90004GE

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		FINE		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE



U.S. STANDARD SIEVE SIZE	CUM. % PASSING
No. 10	100
No. 16	99.8
No. 30	95.2
No. 40	83.3
No. 50	51.4
No. 100	19.6
No. 200	15.3

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
229 (M-15)	52	9.2	3493-B

Lambert and Associates

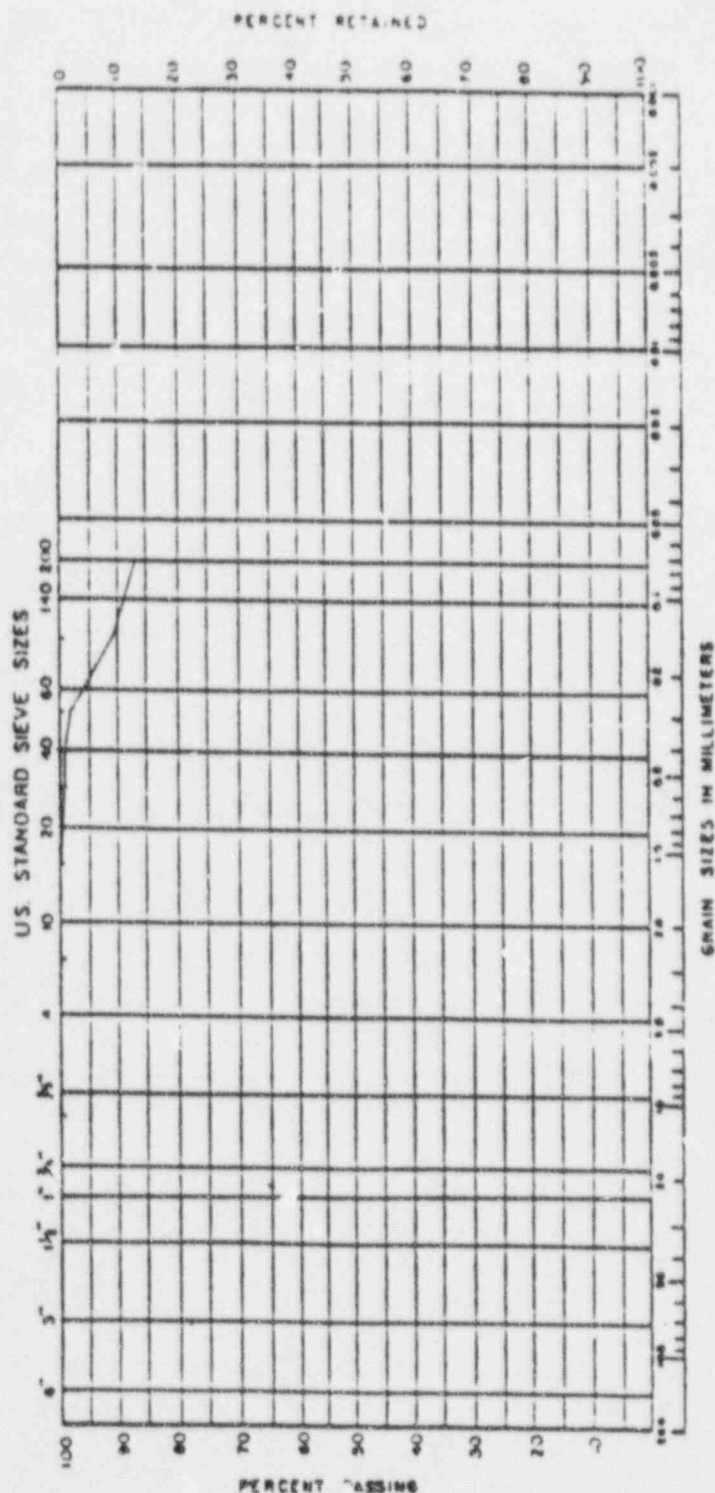
Project No.: M90004GE

Date:

Figure:

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE		



TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
229 (M-15)	53	42.7	3493-C

Lambert and Associates

Project No: 490004GE

Date:

Figure:

Lambert and Associates

Project No: 14300046

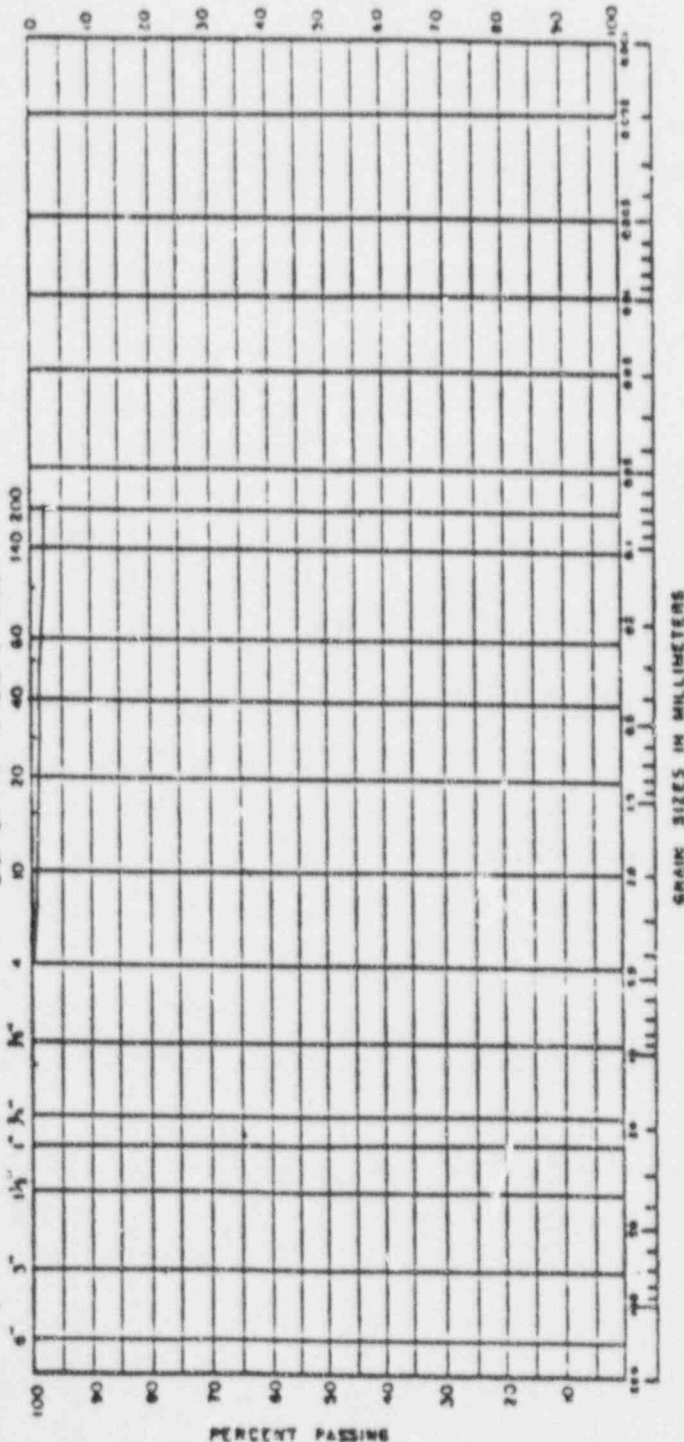
Date:

Figure:

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		FINE		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE

U.S. STANDARD SIEVE SIZES



U.S. STANDARD SIEVE SIZE	CUMULATIVE PERCENT PASSING
4	100
8	99.9
10	99.9
16	99.8
30	99.8
40	99.8
50	99.6
100	98.9
200	98.7

TEST HOLE NO.	SAMPLE DEPTH	MOISTURE CONTENT (%)	LABORATORY SAMPLE NUMBER
229 (M-15)	S4	45.9	3493-D

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE		

U.S. STANDARD SIEVE SIZES

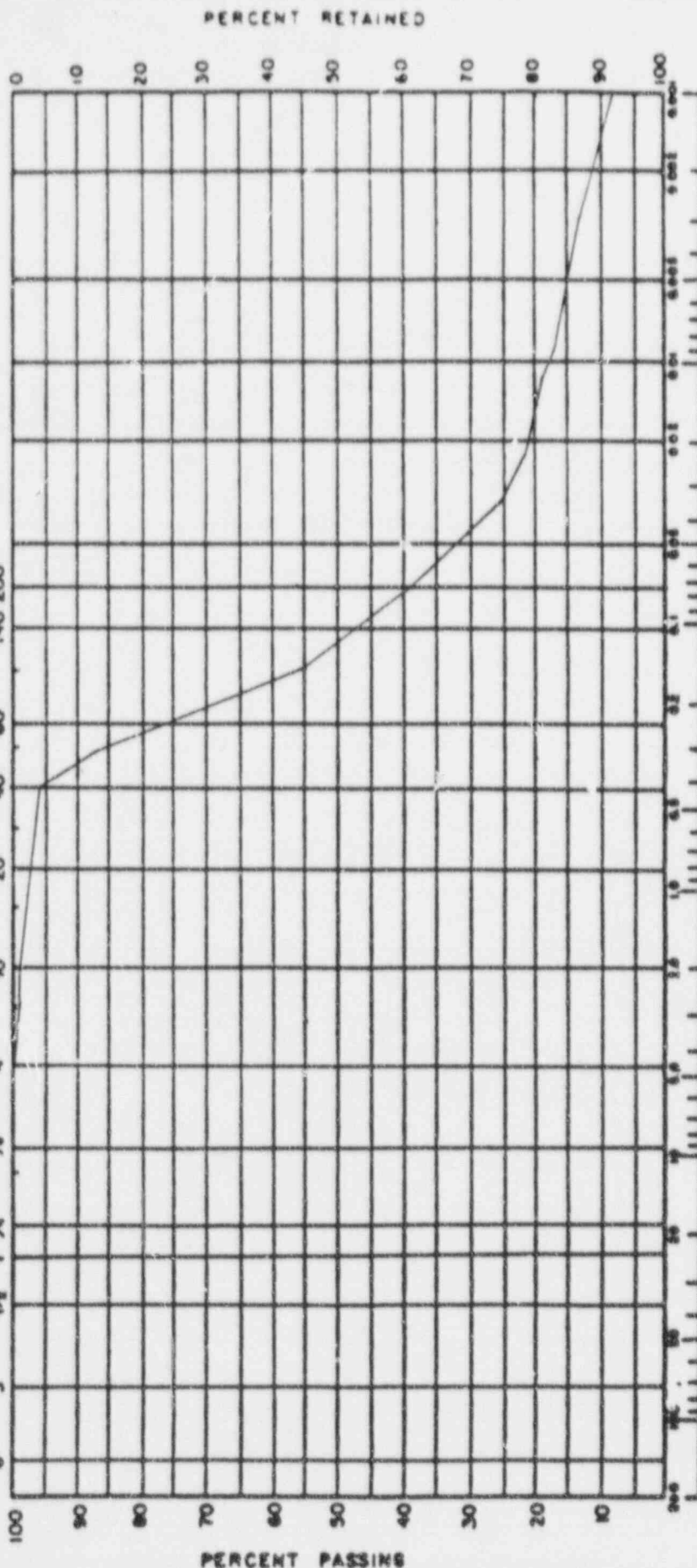
6" 5" 4" 3" 2" 1 1/2" 1" 3/4" 3/4" 1/2" 1/4" 1/8" 1/16" 1/32" 1/64" 1/128" 1/256" 1/512" 1/1024" 1/2048" 1/4096" 1/8192" 1/16384" 1/32768" 1/65536" 1/131072" 1/262144" 1/524288" 1/1048576" 1/2097152" 1/4194304" 1/8388608" 1/16777216" 1/33554432" 1/67108864" 1/134217728" 1/268435456" 1/536870912" 1/1073741824" 1/2147483648" 1/4294967296" 1/8589934592" 1/17179869184" 1/34359738368" 1/68719476736" 1/137438953472" 1/274877906944" 1/549755813888" 1/1099511627776" 1/2199023255552" 1/4398046511104" 1/8796093022208" 1/17592186044416" 1/35184372088832" 1/70368744177664" 1/140737488355328" 1/281474976710656" 1/562949953421312" 1/1125899906842624" 1/2251799813685248" 1/4503599627370496" 1/9007199254740992" 1/18014398509481984" 1/36028797018963968" 1/72057594037927936" 1/144115188075855872" 1/288230376151711744" 1/576460752303423488" 1/1152921504606846976" 1/2305843009213693952" 1/4611686018427387904" 1/9223372036854775808" 1/18446744073709551616" 1/36893488147419103232" 1/73786976294838206464" 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UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE		

U.S. STANDARD SIEVE SIZES

6" 3" 1 1/2" 3/4" 3/8" 1/4" 10 20 40 60 100 200



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
216 M-3 B BU/k-2				2.655	1.5	
CLASSIFICATION						

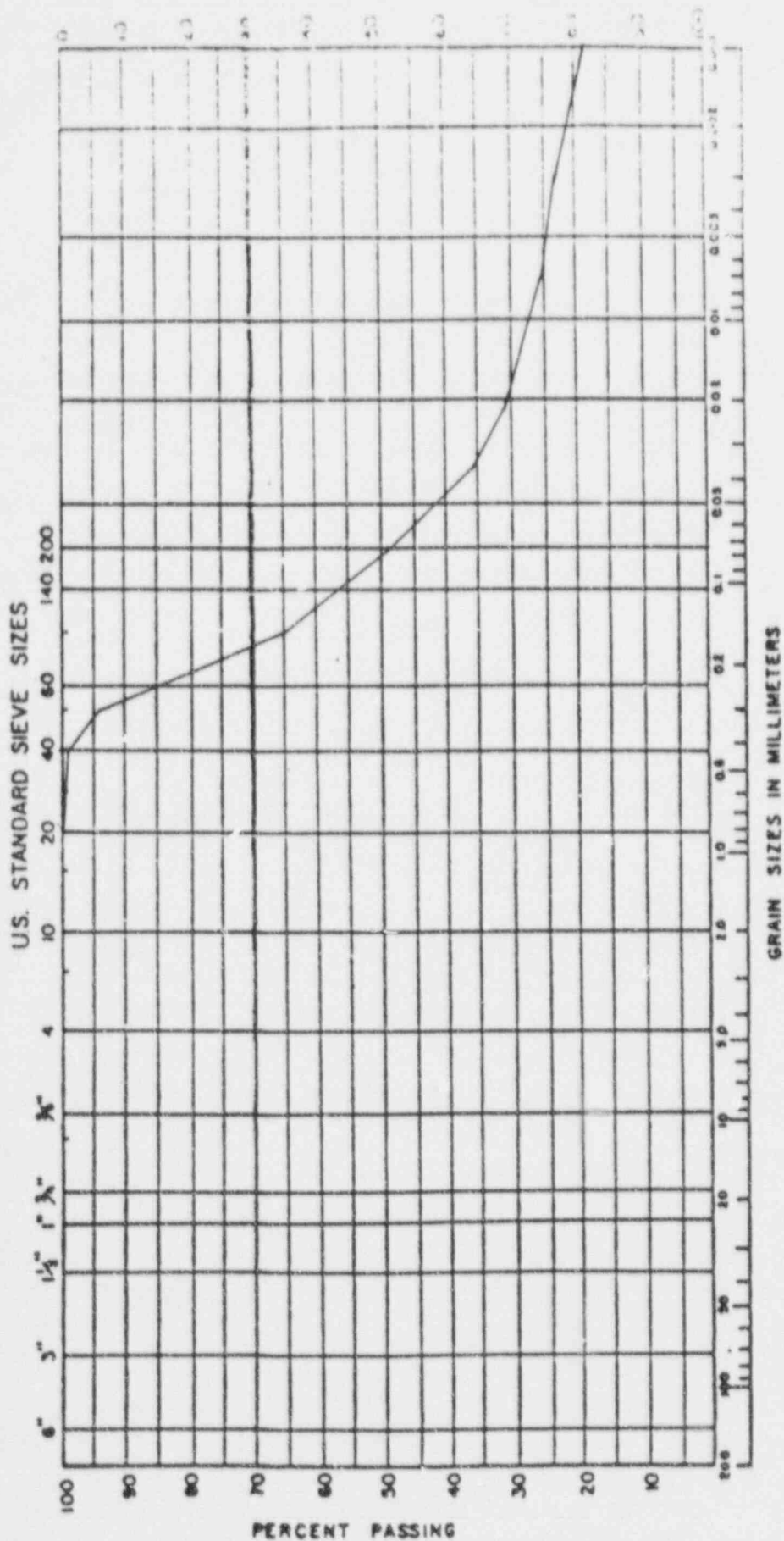
Project: Gunnison UMTA
Job Number: M90004GE

GRAIN SIZE DISTRIBUTION CURVES

Fig: 12

UNIFIED SOIL CLASSIFICATION

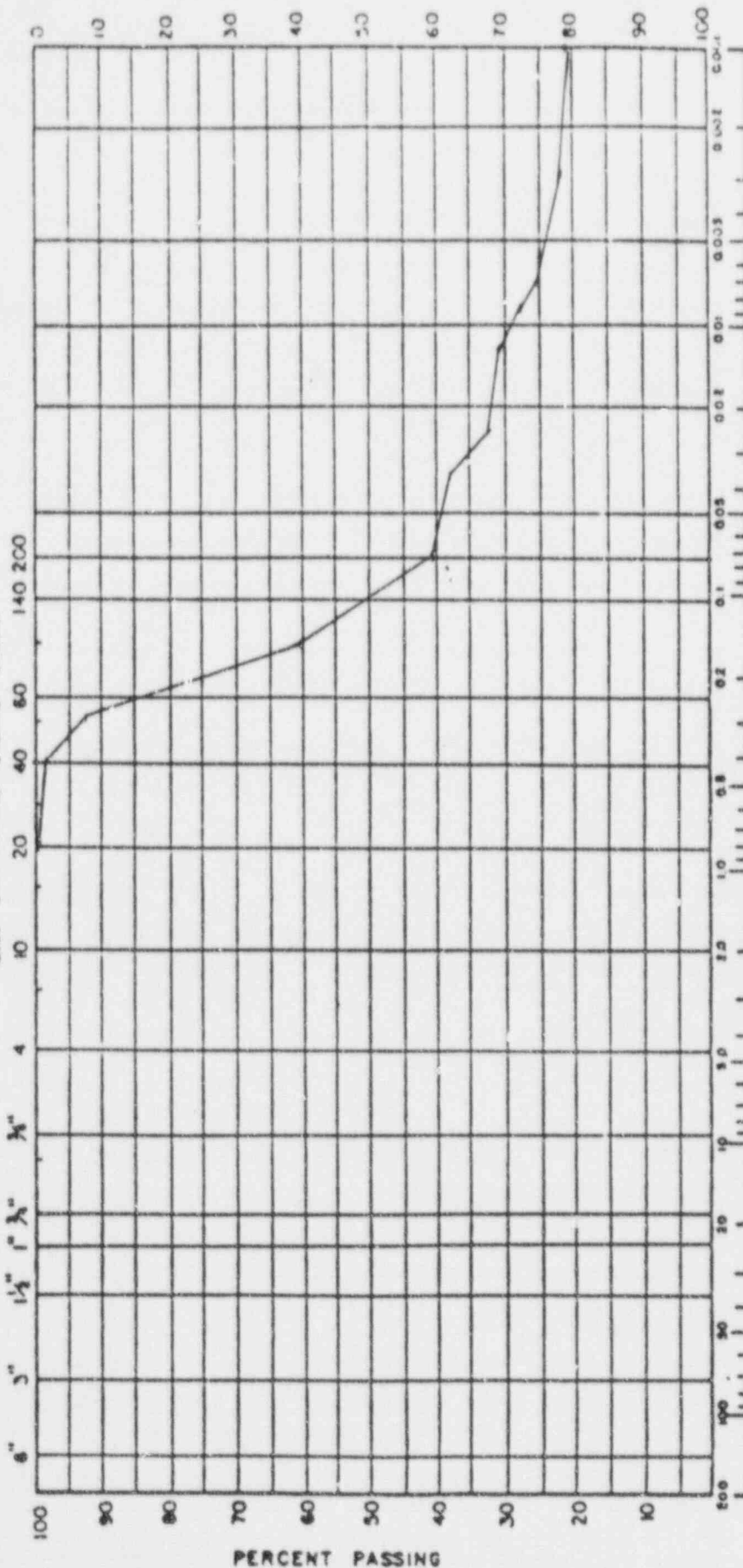
COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE



UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE

U.S. STANDARD SIEVE SIZES



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
217 M-4 B Bulk				2.725	1.1	
CLASSIFICATION						

Project: Gunnison UMTRA
Job Number: M90004GE

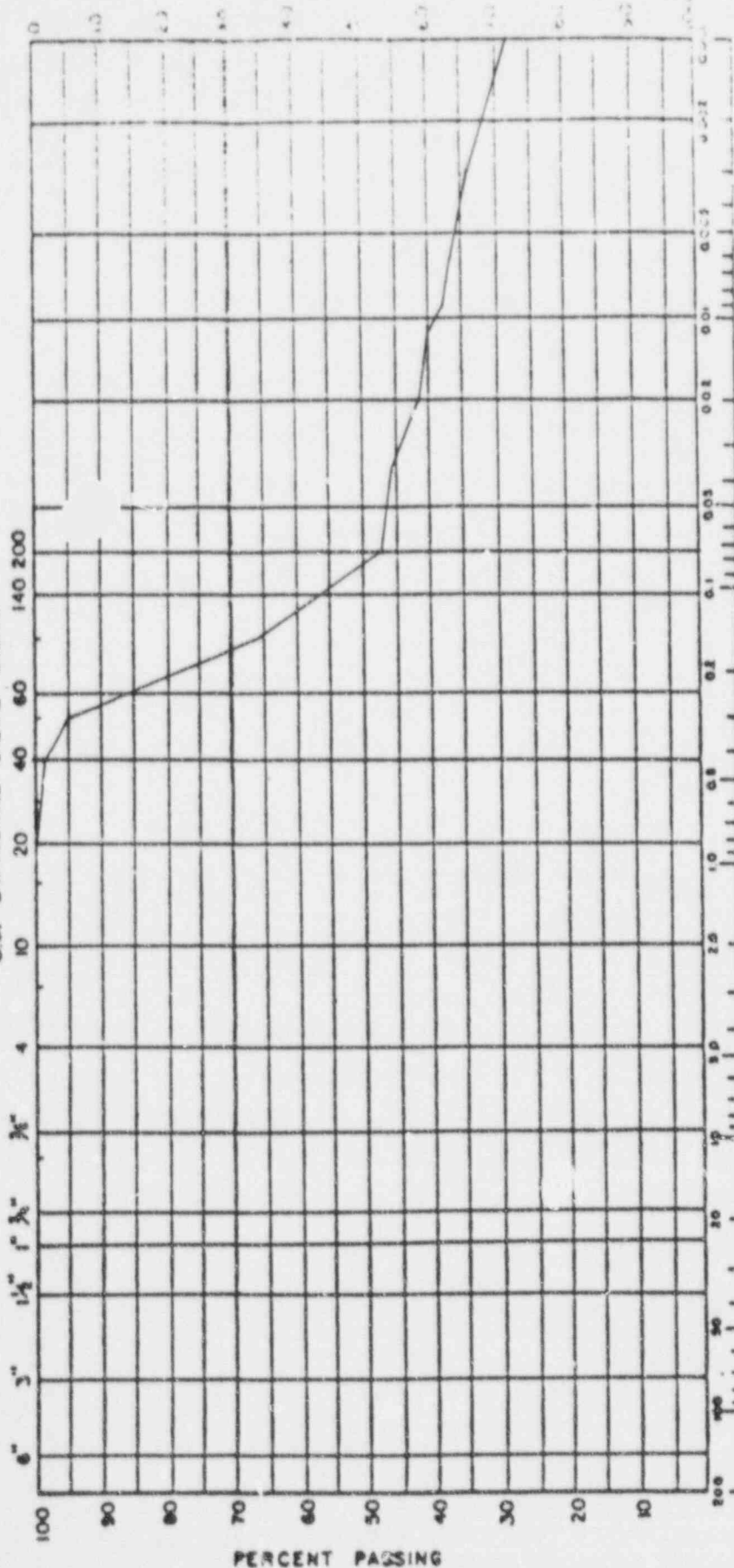
GRAIN SIZE DISTRIBUTION CURVES

Fig: 14

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE		

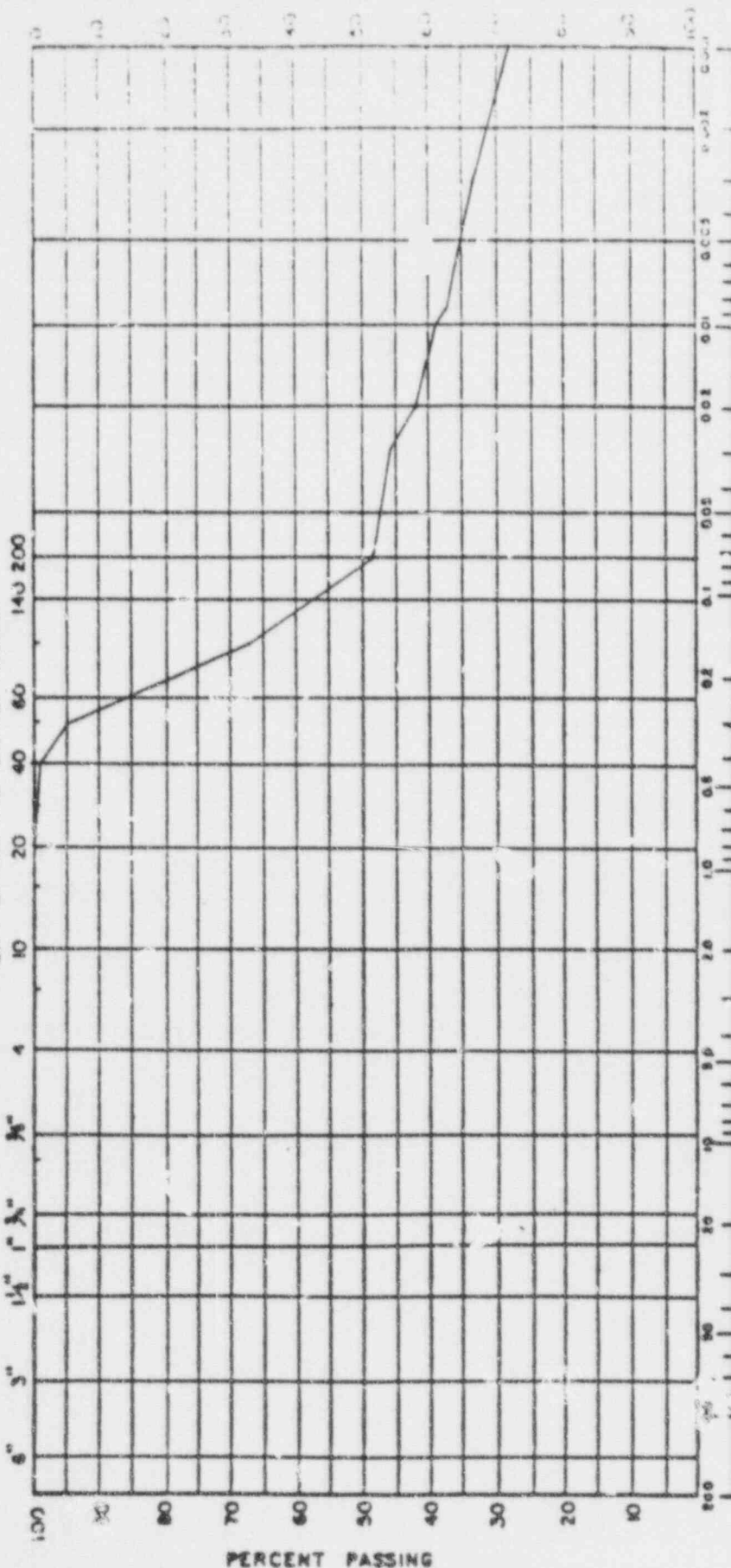
U.S. STANDARD SIEVE SIZES



UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE

U.S. STANDARD SIEVE SIZES



GRAIN SIZES IN MILLIMETERS

TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
218 M-5 B Bulk-2				2.633	0.7	
CLASSIFICATION						

Project: Gunnison UMTRA
Job Number: M90004GE

GRAIN SIZE DISTRIBUTION CURVES

Fig: 16

UNIFIED SOIL CLASSIFICATION

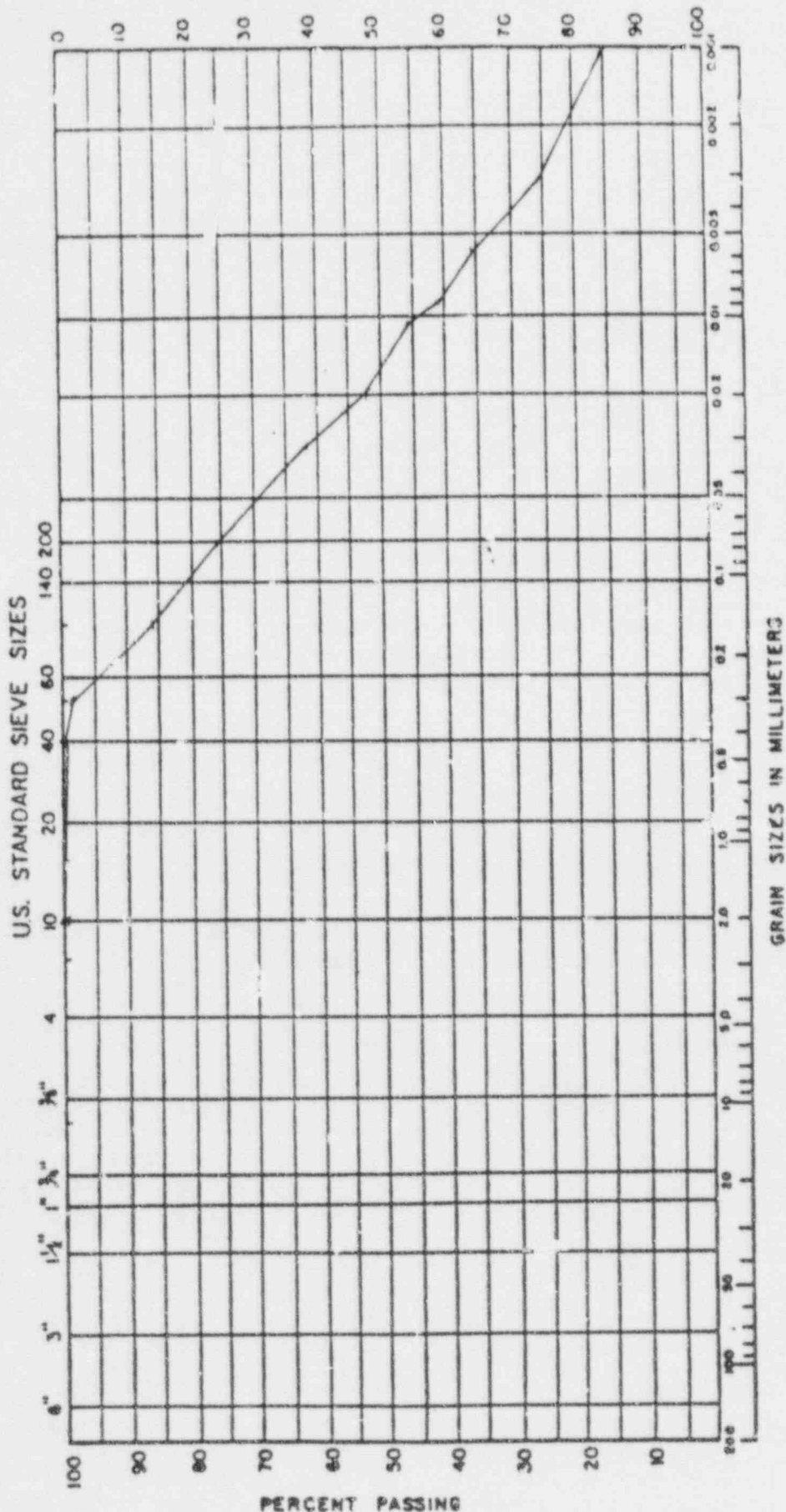
COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		

U.S. STANDARD SIEVE SIZES

6" 3" 1 1/2" 1" 3/4" 3/4" 1/2" 3/8" 1/4" 1/16" 1/32" 1/64" 1/128" 1/256" 1/512" 1/1024" 1/2048" 1/4096" 1/8192" 1/16384" 1/32768" 1/65536" 1/131072" 1/262144" 1/524288" 1/1048576" 1/2097152" 1/4194304" 1/8388608" 1/16777216" 1/33554432" 1/67108864" 1/134217728" 1/268435456" 1/536870912" 1/1073741824" 1/2147483648" 1/4294967296" 1/8589934592" 1/17179869184" 1/34359738368" 1/68719476736" 1/137438953472" 1/274877906944" 1/549755813888" 1/1099511627776" 1/2199023255552" 1/4398046511104" 1/8796093022208" 1/17592186044416" 1/35184372088832" 1/70368744177664" 1/140737488355328" 1/281474976710656" 1/562949953421312" 1/1125899906842624" 1/2251799813685248" 1/4503599627370496" 1/9007199254740992" 1/18014398509481984" 1/36028797018963968" 1/72057594037927936" 1/144115188075855872" 1/288230376151711744" 1/576460752303423488" 1/1152921504606846976" 1/2305843009213693952" 1/4611686018427387904" 1/9223372036854775808" 1/18446744073709551616" 1/36893488147419103232" 1/73786976294838206464" 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UNIFIED SOIL CLASSIFICATION

CORBLES		GRAVEL		COARSE		FINE		SAND		MEDIUM		FINE		SILT AND CLAY	



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
220 M-6 B Bulk-II				2.678	4.1	
CLASSIFICATION						

Project: Gunnison UMTRA
 Job Number: M90004GE

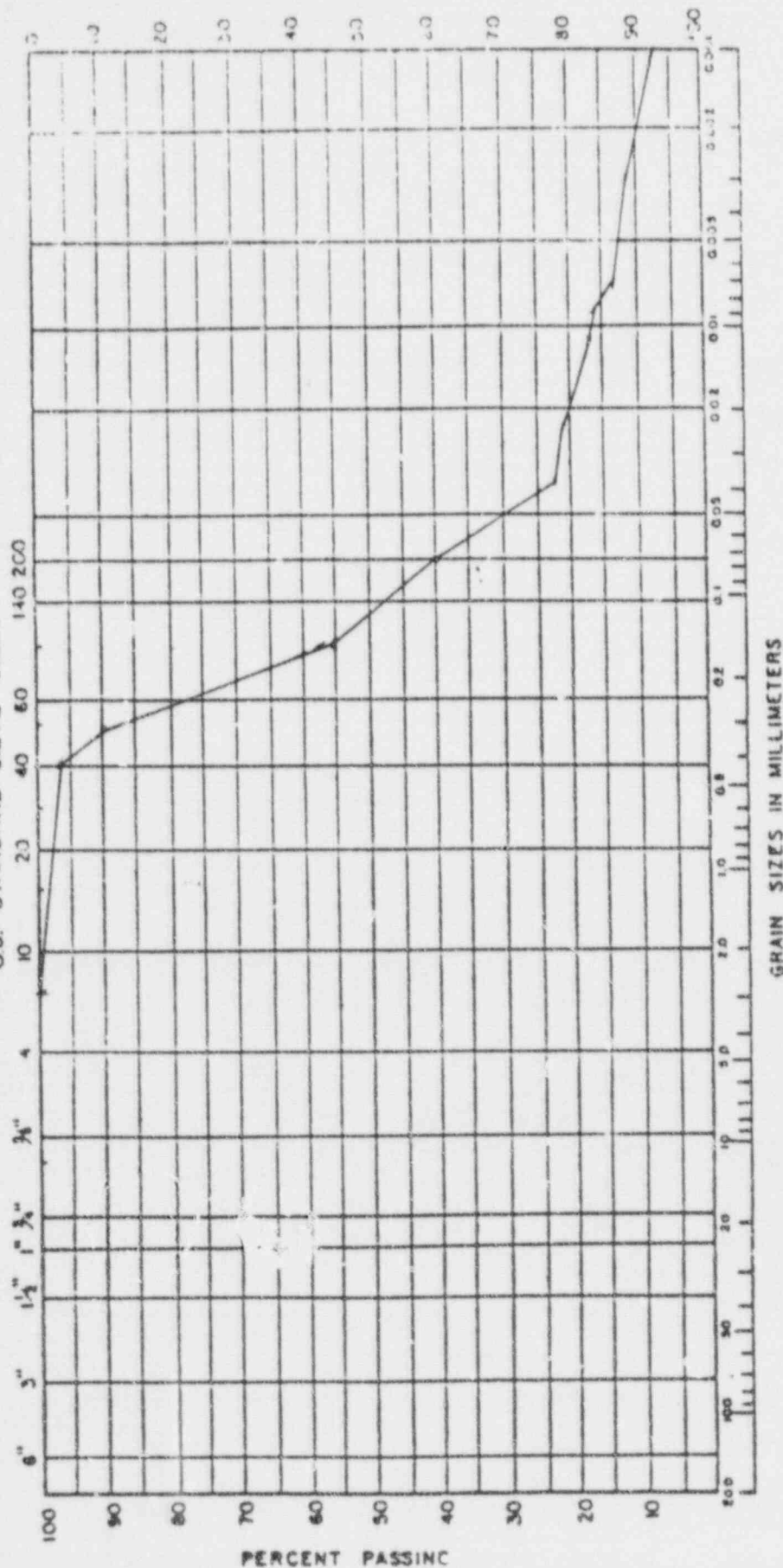
GRAIN SIZE DISTRIBUTION CURVES

Fig:
18

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE
6"	3"	1 1/2"	3/4"	4"	20	0.075	0.0075

U.S. STANDARD SIEVE SIZES



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
221 M-7 A Bulk-1		16	NP	2.708	3.0	
CLASSIFICATION						

Project: Gunnison UMTRA
Job Number M90004GE

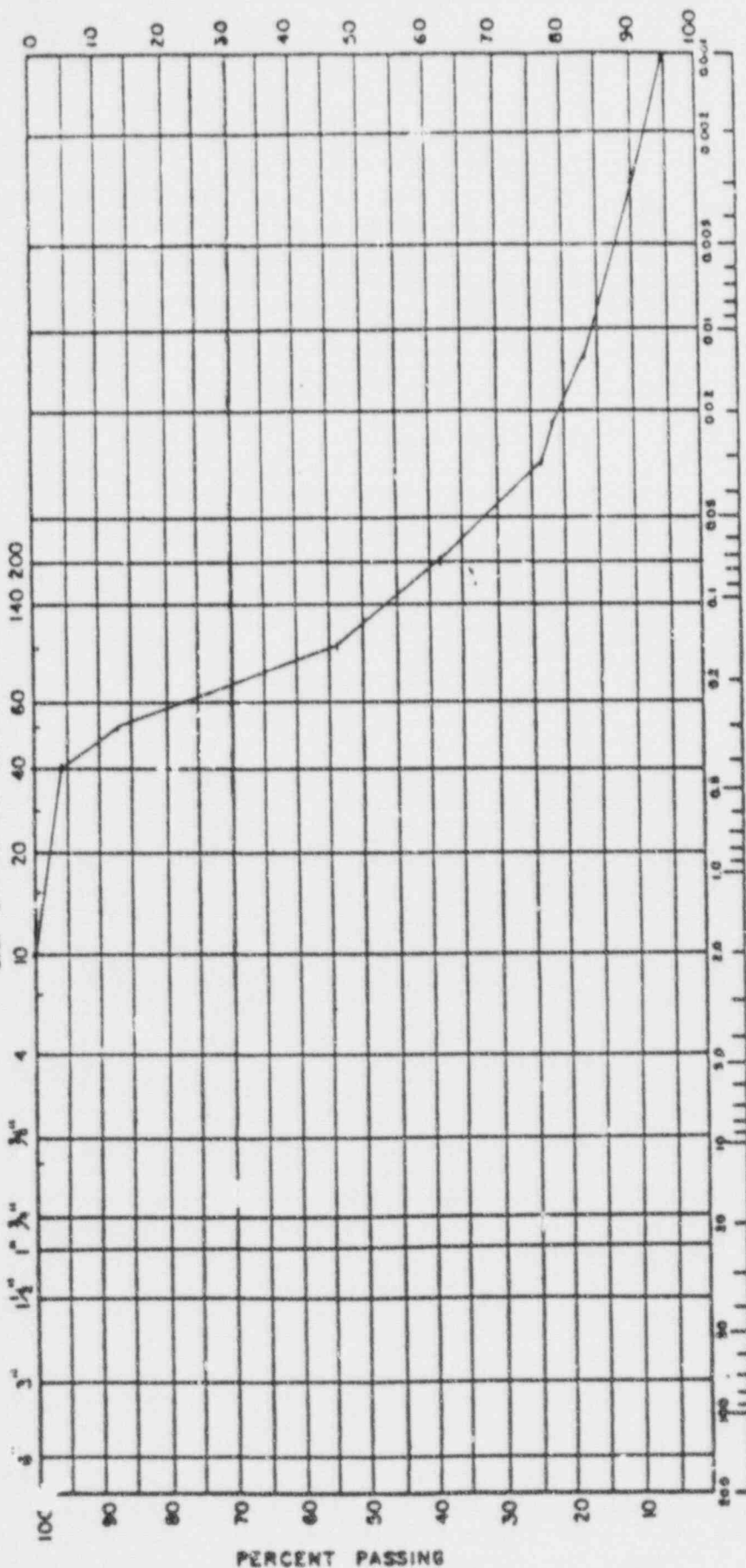
GRAIN SIZE DISTRIBUTION CURVES

Fig:
19

UNIFIED SOIL CLASSIFICATION

CORBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE

U.S. STANDARD SIEVE SIZES



TEST HOLE NO.	DEPTH (FEET)	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
221 M-7 B Bulk-1			2.708	2.9	
CLASSIFICATION					

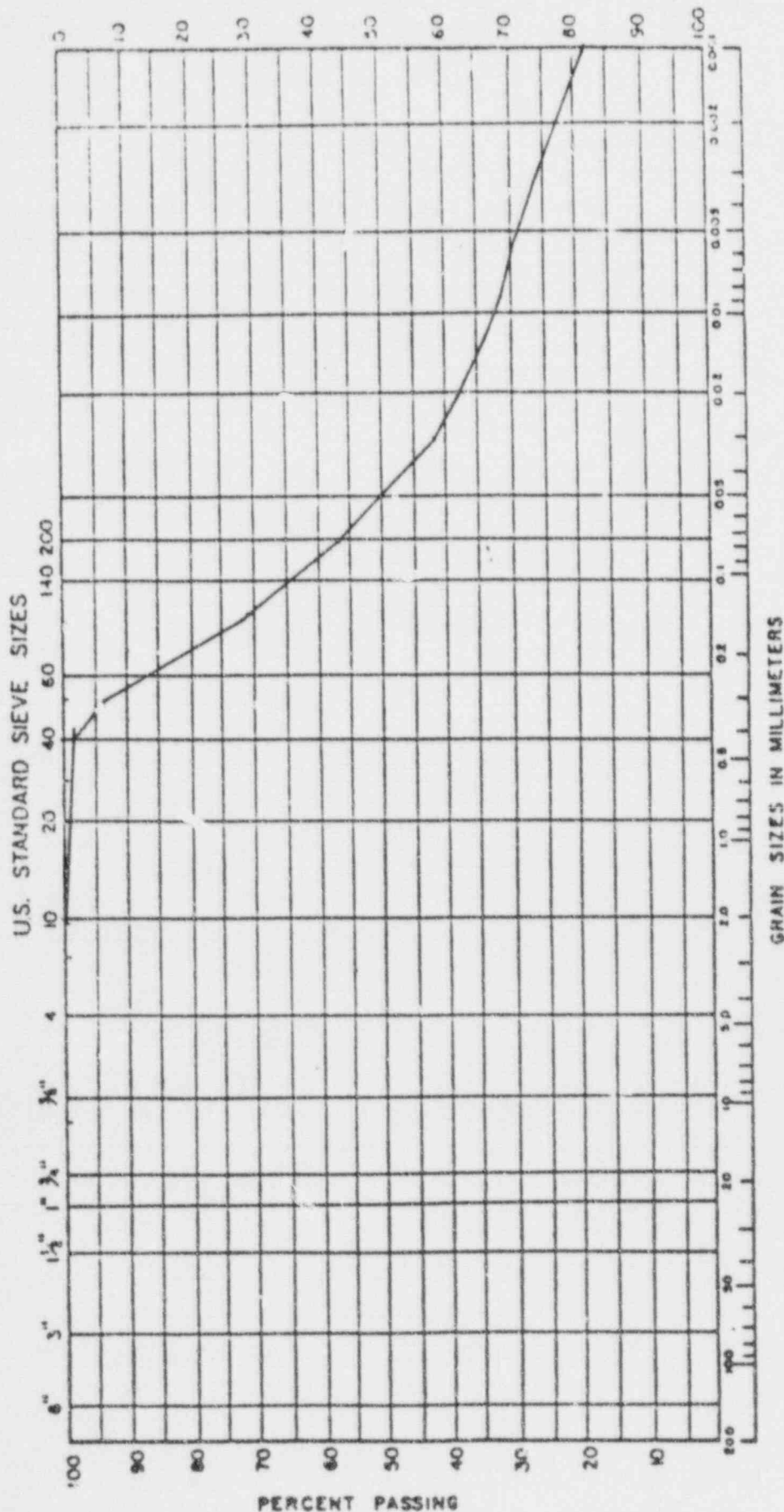
Project: Gunnison UMTRA
Job Number: M90004GE

GRAIN SIZE DISTRIBUTION CURVES

Fig: 20

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
222 M-8 A Bulk-2		21	7	2.653	2.6	
CLASSIFICATION						

Project: Gunnison LTRA
Job Number M90004GE

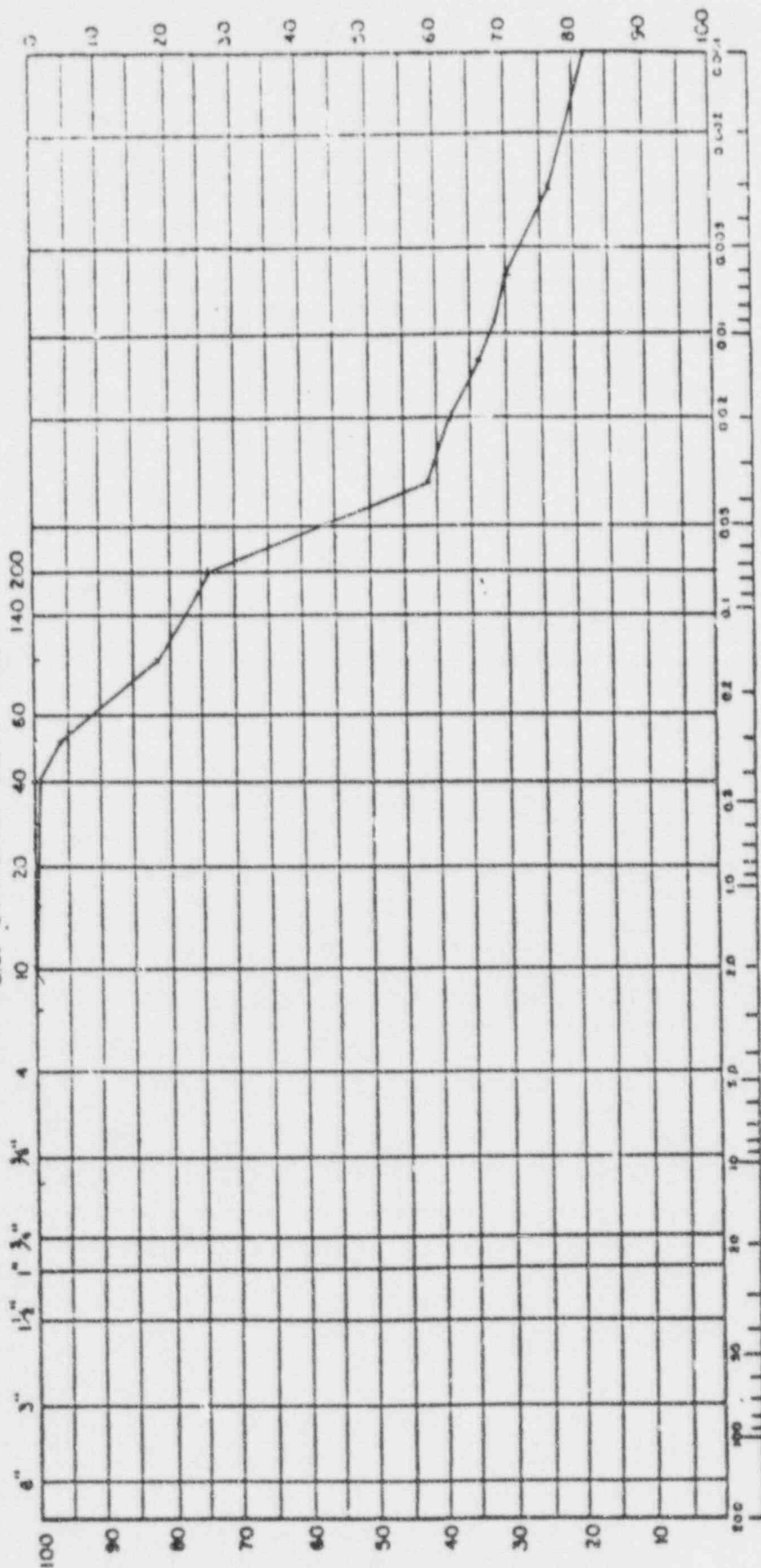
GRAIN SIZE DISTRIBUTION CURVES

Fig: 21

UNIFIED SOIL CLASSIFICATION

CORBELS		GRAVEL		COARSE		FINE		SAND		MEDIUM		FINE		SILT AND CLAY	

U.S. STANDARD SIEVE SIZES



GRAIN SIZES IN MILLIMETERS

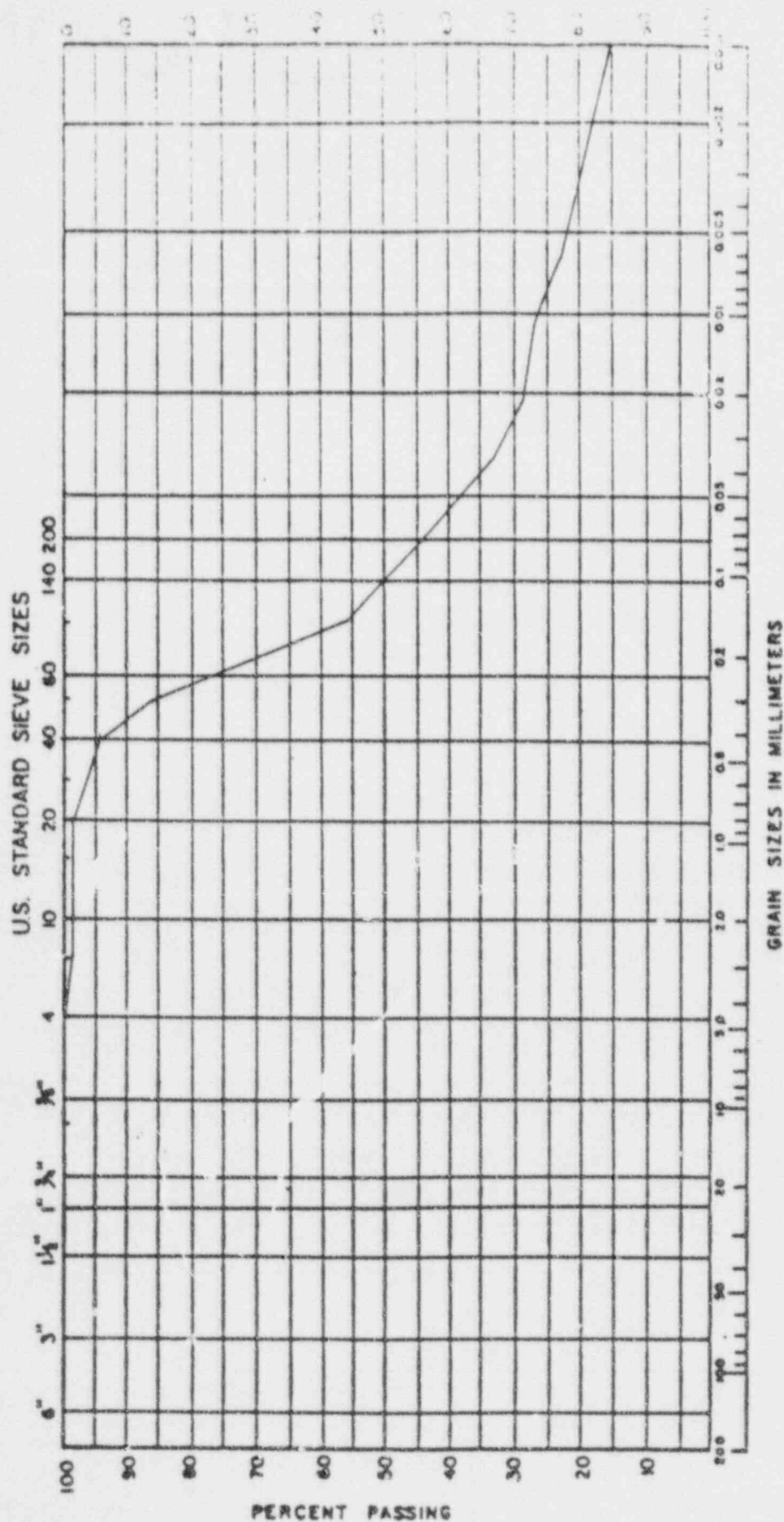
TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
222 M-8 B Bulk-2				2.653	2.7	
CLASSIFICATION						

Project: Gunnison UMTRA
Job Number: M90004GE

GRAIN SIZE DISTRIBUTION CURVES

Fig:
22

COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
23 M-9 A Bulk-1		17	1	2.720	0.7	
CLASSIFICATION						

Project: Gunnison UMTRA
Job Number M90004GE

GRAIN SIZE DISTRIBUTION CURVES

Fig 23

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE		

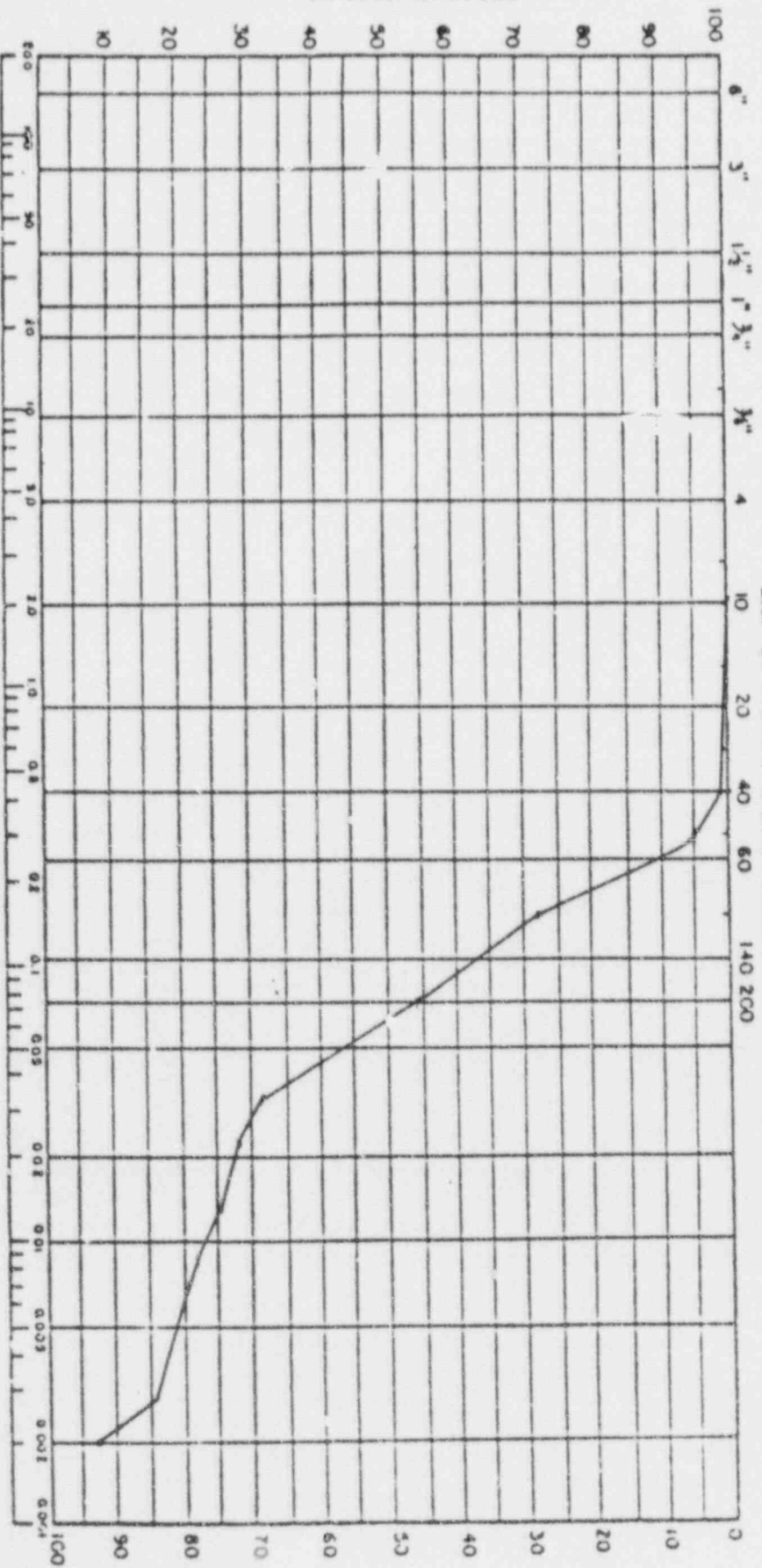
U.S. STANDARD SIEVE SIZES

6" 3" 1 1/2" 1" 3/4" 3/4" 1/2" 3/8" 1/4" 1/8" 1/16" 1/32" 1/64" 1/128" 1/256" 1/512" 1/1024" 1/2048" 1/4096" 1/8192" 1/16384" 1/32768" 1/65536" 1/131072" 1/262144" 1/524288" 1/1048576" 1/2097152" 1/4194304" 1/8388608" 1/16777216" 1/33554432" 1/67108864" 1/134217728" 1/268435456" 1/536870912" 1/1073741824" 1/2147483648" 1/4294967296" 1/8589934592" 1/17179869184" 1/34359738368" 1/68719476736" 1/137438953472" 1/274877906944" 1/549755813888" 1/1099511627776" 1/2199023255552" 1/4398046511104" 1/8796093022208" 1/17592186044416" 1/35184372088832" 1/70368744177664" 1/140737488355328" 1/281474976710656" 1/562949953421312" 1/1125899906842624" 1/2251799813685248" 1/4503599627370496" 1/9007199254740992" 1/18014398509481984" 1/36028797018963968" 1/72057594037927936" 1/144115188075855872" 1/288230376151711744" 1/576460752303423488" 1/1152921504606846976" 1/2305843009213693952" 1/4611686018427387904" 1/9223372036854775808" 1/18446744073709551616" 1/36893488147419103232" 1/73786976294838206464" 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UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND		SILT AND CLAY
	COARSE	FINE	COARSE	FINE	

U.S. STANDARD SIEVE SIZES



GRAIN SIZES IN MILLIMETERS

TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
225 M-12 A Bulk-1	19	2		2.667	3.2	
CLASSIFICATION						

UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	MEDIUM	FINE		

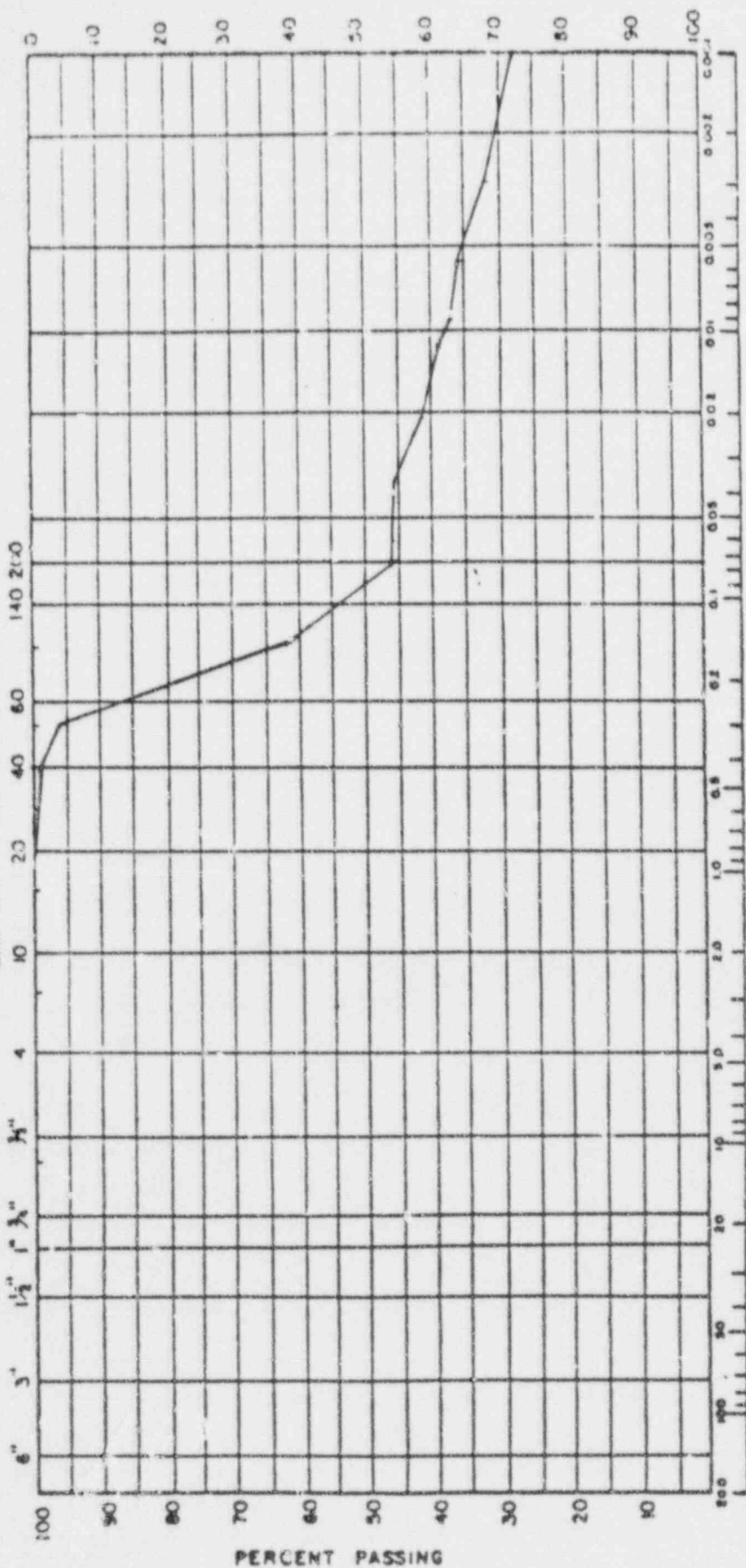
U.S. STANDARD SIEVE SIZES

6" 3" 1 1/2" 1" 3/4" 3/8" 3/16" 1/8" 1/16" 1/32" 1/64" 1/128" 1/256" 1/512" 1/1024" 1/2048" 1/4096" 1/8192" 1/16384" 1/32768" 1/65536" 1/131072" 1/262144" 1/524288" 1/1048576" 1/2097152" 1/4194304" 1/8388608" 1/16777216" 1/33554432" 1/67108864" 1/134217728" 1/268435456" 1/536870912" 1/1073741824" 1/2147483648" 1/4294967296" 1/8589934592" 1/17179869184" 1/34359738368" 1/68719476736" 1/137438953472" 1/274877906944" 1/549755813888" 1/1099511627776" 1/2199023255552" 1/4398046511104" 1/8796093022208" 1/17592186044416" 1/35184372088832" 1/70368744177664" 1/140737488355328" 1/281474976710656" 1/562949953421312" 1/1125899906842624" 1/2251799813685248" 1/4503599627370496" 1/9007199254740992" 1/18014398509481984" 1/36028797018963968" 1/72057594037927936" 1/144115188075855872" 1/288230376151711744" 1/576460752303423488" 1/1152921504606846976" 1/2305843009213693952" 1/4611686018427387904" 1/9223372036854775808" 1/18446744073709551616" 1/36893488147419103232" 1/73786976294838206464" 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UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE		

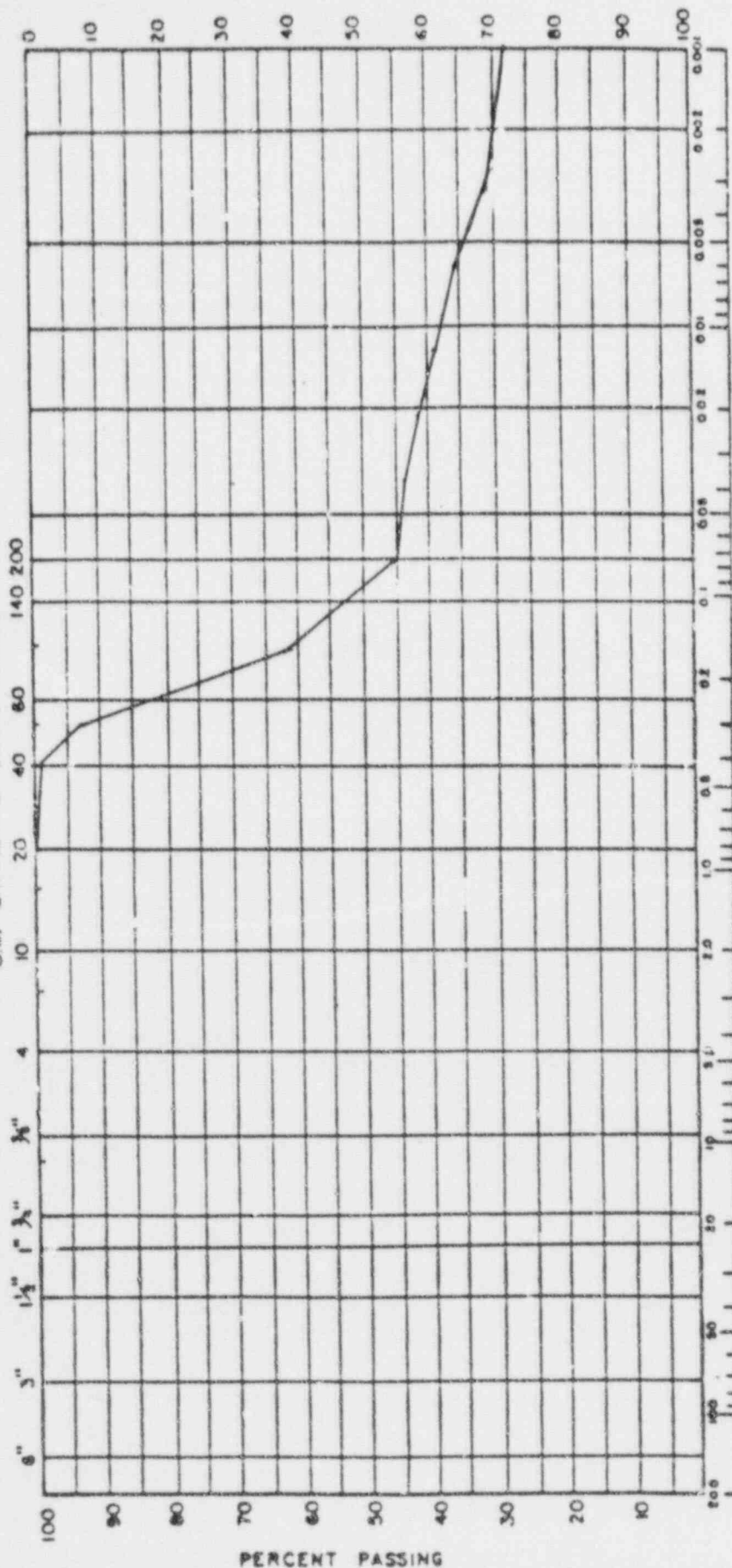
U.S. STANDARD SIEVE SIZES



UNIFIED SOIL CLASSIFICATION

COBBLES		GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE	COARSE	FINE		

U.S. STANDARD SIEVE SIZES



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
226 M-13 B Bulk-2				2.666	1.1	
CLASSIFICATION						

Project: Gunnison UMTRA
Job Number: M90004GE

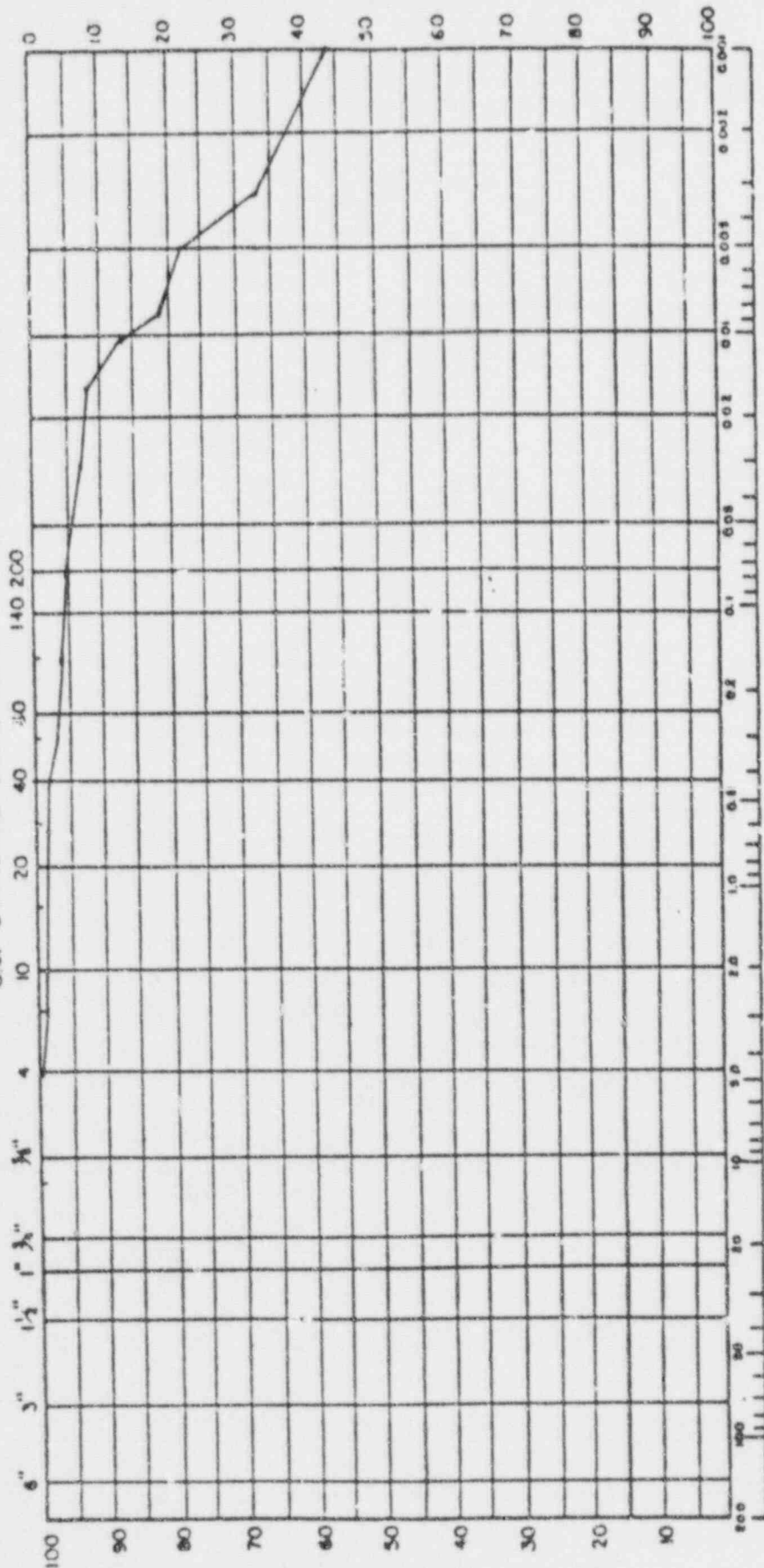
GRAIN SIZE DISTRIBUTION CURVES

Fig. 28

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND		SILT AND CLAY	
COARSE	FINE	COARSE	FINE		
6"	3"	1 1/2"	3/4"	4	10

U.S. STANDARD SIEVE SIZES



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
228 M-11 A Bulk-1		44	20	2.604	3.1	
CLASSIFICATION						

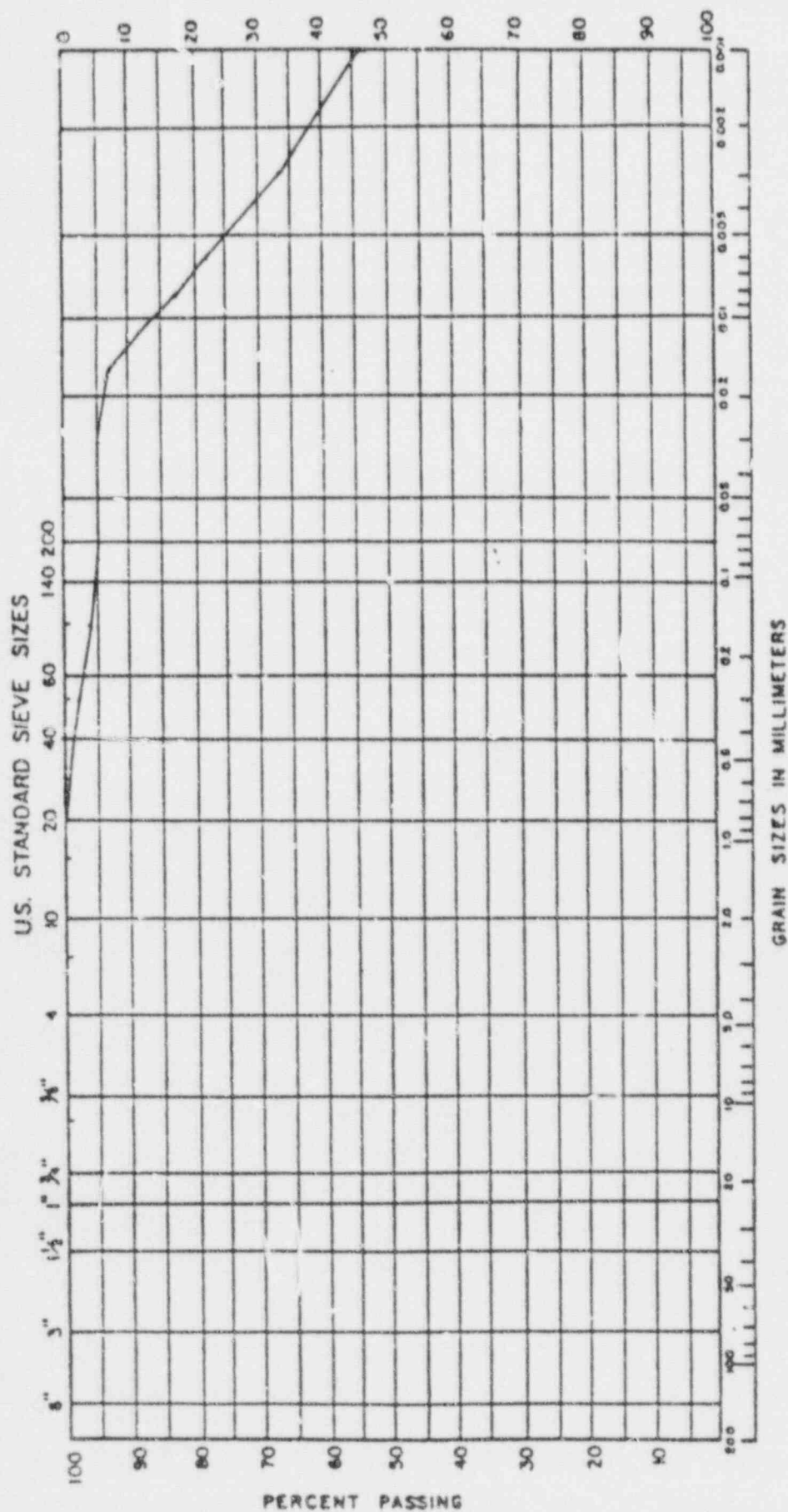
Project: Gunnison UMTRA
Job Number: M90004GE

GRAIN SIZE DISTRIBUTION CURVES

Fig. 29

SILT AND CLAY

COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	



TEST HOLE NO.	DEPTH (FEET)	LL	PI	SPECIFIC GRAVITY	MOISTURE CONTENT (%)	LABORATORY NUMBER
228 M-11 B Bulk-1				2.624	2.9	
CLASSIFICATION						

Project: Gunnison UMTRA
Job Number M90004GE

GRAIN SIZE DISTRIBUTION CURVES

Fig
30

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-2 9 1/2' - 10'

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
8"		0	100.00%
7"		0	100.00%
6"		0	100.00%
5"		0	100.00%
4"	7363	40.48	59.52%
3"	9603	52.80	47.20%
2"	10568	58.10	41.90%
1-1/2"	10649	58.55	41.45%
1"	11523	63.35	36.65%
3/4"	11906	65.46	34.54%
1/2"	12631	69.45	30.55%
3/8"	13048	71.74	28.26%
#4	13562	74.57	25.43%
#10	14233	78.25	21.75%
#20	15091	82.97	17.03%
#40	16107	88.56	11.44%
#100	17138	94.23	5.77%
#200	17516	96.31	3.69%

SIEVE ANALYSIS
 Soil Wt. gm
 18188.00
 =====

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-4 14' Slightly Cemented

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
=====			
8"	0	0	100.00%
7"	0	0	100.00%

6"	6100	34.42	65.58%
5"	6100	34.42	65.58%

4"	6100	34.42	65.58%
3"	6100	34.42	65.58%

2"	7360	41.53	58.47%
1-1/2"	8850	49.93	50.07%

1"	10930	61.67	38.33%
3/4"	11980	67.59	32.41%

1/2"	12870	72.61	27.39%
3/8"	13500	76.17	23.83%

#4	14332	80.86	19.14%
#10	14710	82.99	17.01%

#20	15302	86.33	13.67%
#40	16139	91.06	8.94%

#100	17124	96.61	3.39%
#200	17483	98.64	1.36%
=====			

SIEVE ANALYSIS
 Soil Wt. gm
 17724.00
 =====

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-6 12.25' - 13'

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
=====			
8"		0	100.00%
7"		0	100.00%

6"		0	100.00%
5"		0	100.00%

4"	1591	8.01	91.99%
3"	4998	25.17	74.83%

2"	6357	32.01	67.99%
1-1/2"	8491	42.75	57.25%

1"	10684	53.80	46.20%
3/4"	12053	60.69	39.31%

1/2"	13736	69.16	30.84%
3/8"	14515	73.09	26.91%

#4	15719	79.15	20.85%
#10	16310	82.12	17.88%

#20	17340	87.31	12.69%
#40	19026	95.80	4.20%

#100	19672	99.05	.95%
#200	19716	99.27	.73%
=====			

SIEVE ANALYSIS
 Soil Wt. gm
 19860.00
 =====



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 ENGINEERS
 GEOLOGISTS

COLORADO: COLORADO SPRINGS
 GRAND JUNCTION, PUEBLO

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-8 6' - 7' Interface

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
8"		0	100.00%
7"		0	100.00%
6"		0	100.00%
5"		0	100.00%
4"		0	100.00%
3"	0	0	100.00%
2"	3700	24.18	75.82%
1-1/2"	4450	29.08	70.92%
1"	5600	36.60	63.40%
3/4"	6665	43.56	56.44%
1/2"	7420	48.50	51.50%
3/8"	7910	51.70	48.30%
#4	8710	56.93	43.07%
#10	9250	60.46	39.54%
#20	10176	66.51	33.49%
#40	11299	73.85	26.15%
#100	12897	84.29	15.71%
#200	13304	86.95	13.05%

SIEVE ANALYSIS
 Soil Wt. gm
 15300.00
 =====



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COLORADO: COLORADO SPRINGS
 GRAND JUNCTION, PUEBLO,

PROJECT LOCATION: Gunnison Processing Site

SAMPLE LOCATION: T-10 8 1/2' - 9 1/2' Slightly Cemented

SIEVE No.	SOIL Wt. gm	% Retained	% Finer	SIEVE ANALYSIS Soil Wt. gm
=====				
8"		0	100.00%	1756.00 =====
7"		0	100.00%	
6"		0	100.00%	
5"		0	100.00%	
4"		0	100.00%	
3"	2632	22.39	77.61%	
2"	3457	29.41	70.59%	
1-1/2"	5586	47.52	52.48%	
1"	6208	52.81	47.19%	
3/4"	7069	60.13	39.87%	
1/2"	7682	65.35	34.65%	
3/8"	8134	69.19	30.81%	
#4	8817	75.00	25.00%	
#10	9285	78.98	21.02%	
#20	9835	83.66	16.34%	
#40	10586	90.05	9.95%	
#100	11185	95.14	4.86%	
#200	11296	96.09	3.91%	



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GEOLOGISTS

COLORADO: COLORADO SPRINGS
GRAND JUNCTION, PUEBLO,

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-15

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
=====			
8"		0	100.00%
7"		0	100.00%

6"		0	100.00%
5"		0	100.00%

4"		0	100.00%
3"	2090	10.83	89.17%

2"	2560	13.26	86.74%
1-1/2"	6570	34.04	65.96%

1"	8720	45.18	54.82%
3/4"	10010	51.87	48.13%

1/2"	11600	60.10	39.90%
3/8"	12580	65.18	34.82%

#4	14400	74.61	25.39%
#10	15450	80.05	19.95%

#20	16595	85.98	14.02%
#40	17840	92.44	7.56%

#100	18771	97.26	2.74%
#200	18953	98.20	1.80%
=====			

SIEVE ANALYSIS
 Soil Wt. gm
 19300.00
 =====

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-17 0' - 2'

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
8"		0	100.00%
7"		0	100.00%
6"		0	100.00%
5"		0	100.00%
4"		0	100.00%
3"	2210	15.90	84.10%
2"	4770	34.32	65.68%
1-1/2"	5650	40.65	59.35%
1"	6680	48.06	51.94%
3/4"	7380	53.09	46.91%
1/2"	8120	58.42	41.58%
3/8"	8560	61.58	38.42%
#4	9734	70.03	29.97%
#10	10250	73.74	26.26%
#20	10849	78.05	21.95%
#40	11599	83.45	16.55%
#100	12633	90.88	9.12%
#200	13070	94.03	5.97%

SIEVE ANALYSIS
 Soil Wt. gm
 13900.00
 =====

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-20 3'

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
8"		0	100.00%
7"		0	100.00%
6"		0	100.00%
5"		0	100.00%
4"	7040	34.65	65.35%
3"	9043	44.50	55.50%
2"	10050	49.46	50.54%
1-1/2"	12350	60.78	39.22%
1"	14250	70.13	29.87%
3/4"	15228	74.94	25.06%
1/2"	15970	78.59	21.41%
3/8"	16630	81.84	18.16%
#4	17520	86.22	13.78%
#10	18030	88.73	11.27%
#20	18893	92.98	7.02%
#40	19555	96.24	3.76%
#100	20117	99.00	1.00%
#200	20207	99.44	.56%

SIEVE ANALYSIS
 Soil Wt. gm
 20320.00
 =====

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-23 2' - 21/2'

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
8"		0	100.00%
7"		0	100.00%
6"		0	100.00%
5"		0	100.00%
4"		0	100.00%
3"		0	100.00%
2"		0	100.00%
1-1/2"	0	0	100.00%
1"	55	3.02	96.98%
3/4"	82	4.55	95.45%
1/2"	158	8.71	91.29%
3/8"	209	11.53	88.47%
#4	258	14.23	85.77%
#10	315	17.39	82.61%
#20	470	25.92	74.08%
#40	824	45.47	54.53%
#100	1299	71.69	28.31%
#200	1420	78.35	21.65%

SIEVE ANALYSIS
 Soil Wt. gm
 1811.90
 =====



**LINCOLN
 DeVORE**
 ENGINEERS
 GEOLOGISTS

COLORADO: COLORADO SPRINGS
 GRAND JUNCTION, PUEBLO,

PROJECT LOCATION: Gunnison Processing Site
 SAMPLE LOCATION: T-26 0' - 2'

SIEVE No.	SOIL Wt. gm	% Retained	% Finer
8"		0	100.00%
7"		0	100.00%
6"	0	0	100.00%
5"	5387	26.97	73.03%
4"	7296	36.53	63.47%
3"	10159	50.86	49.14%
2"	11576	57.96	42.04%
1-1/2"	12422	62.19	37.81%
1"	13557	67.88	32.12%
3/4"	14306	71.63	28.37%
1/2"	15034	75.27	24.73%
3/8"	16481	82.52	17.48%
#4	17074	85.49	14.51%
#10	17516	87.70	12.30%
#20	17705	88.64	11.36%
#40	18572	92.99	7.01%
#100	19529	97.78	2.22%
#200	19697	98.62	1.38%

SIEVE ANALYSIS
 Soil Wt. gm
 19973.00
 =====

BARRINGER LABORATORIES INC.

MKE. D.O. NO.

3885-GUN-R-09-01272-00 6-Jul-90

Helene Langlois
MK-FERGUSON (Gunnison)
P.O. Box 9136
Albuquerque, NM 87119

Page: 5
Copy: 2 of 2
Set: 2

Attn:
Project: Gunnison

Received: 19-Jun-90 08:46
PO #: 3050-511-10004 #005

Job: 902623E

Status: Final

Sample Type: Soil

Sieve Analysis

Sample Id	% of tot. wt.	depth ft.
GUN-SS-0001-T2-SPL (Passing Fraction) ⁽¹⁾	22	9/4 - 10
GUN-SS-0002-T4-SPL	20	14
GUN-SS-0003-T6-SPL	23	12.25-13
GUN-SS-0004-T8-SPL	27	6-7
GUN-SS-0005-T10-SPL	17	8.5-9.5
GUN-SS-0006-T15-SPL	25	0-2
GUN-SS-0007-T17-SPL	40	0-2
GUN-SS-0008-T20-SPL	20	3
GUN-SS-0009-T23-SPL	85	25
GUN-SS-0010-T26-SPL	22	0-2
GUN-SS-0001-T2-SPL (Non-Passing Fraction)	78	9/4-10
GUN-SS-0002-T4-SPL	80	14
GUN-SS-0003-T6-SPL	77	12.25-13
GUN-SS-0004-T8-SPL	73	6-7
GUN-SS-0005-T10-SPL	83	8.5-9.5
GUN-SS-0006-T15-SPL	75	0-2
GUN-SS-0007-T17-SPL	60	0-2
GUN-SS-0008-T20-SPL	80	3
GUN-SS-0009-T23-SPL	15	25
GUN-SS-0010-T26-SPL	78	0-2

Processing Site- June 1990 Test Pit Samples
(1) passing or non-passing the No. 4 sieve.

08/14/90 15:03 303 277 1689

MKE Doc. No. 3885-GUN-R-02-01302-00
BARRINGER

0072

RECEIVED-MKE

AUG 17 1990

UMTRA-S.E.

BARRINGER LABORATORIES INC.

cc R.C., DRS, IRB.
GUNNISON
RMB.

14000 W. 8TH AVE., SUITE 300
GOLDEN, COLORADO 80401
PHONE (303) 277-1801

1400 DEMING WAY, SUITE 10
SPRINGFIELD, NEVADA 89501
PHONE (702) 360-1150

14-Aug-90

Page: 1
Copy: 1 of 3
Set: 1

Melene Langlois
MK-FERGUSON (Gunnison)
P.O. Box 9136
Albuquerque, NM 87119

Attn:
Project: Gunnison

Received: 6-Aug-90 13:30
PO #: 3050-511-10004 #008

Job: 902932E

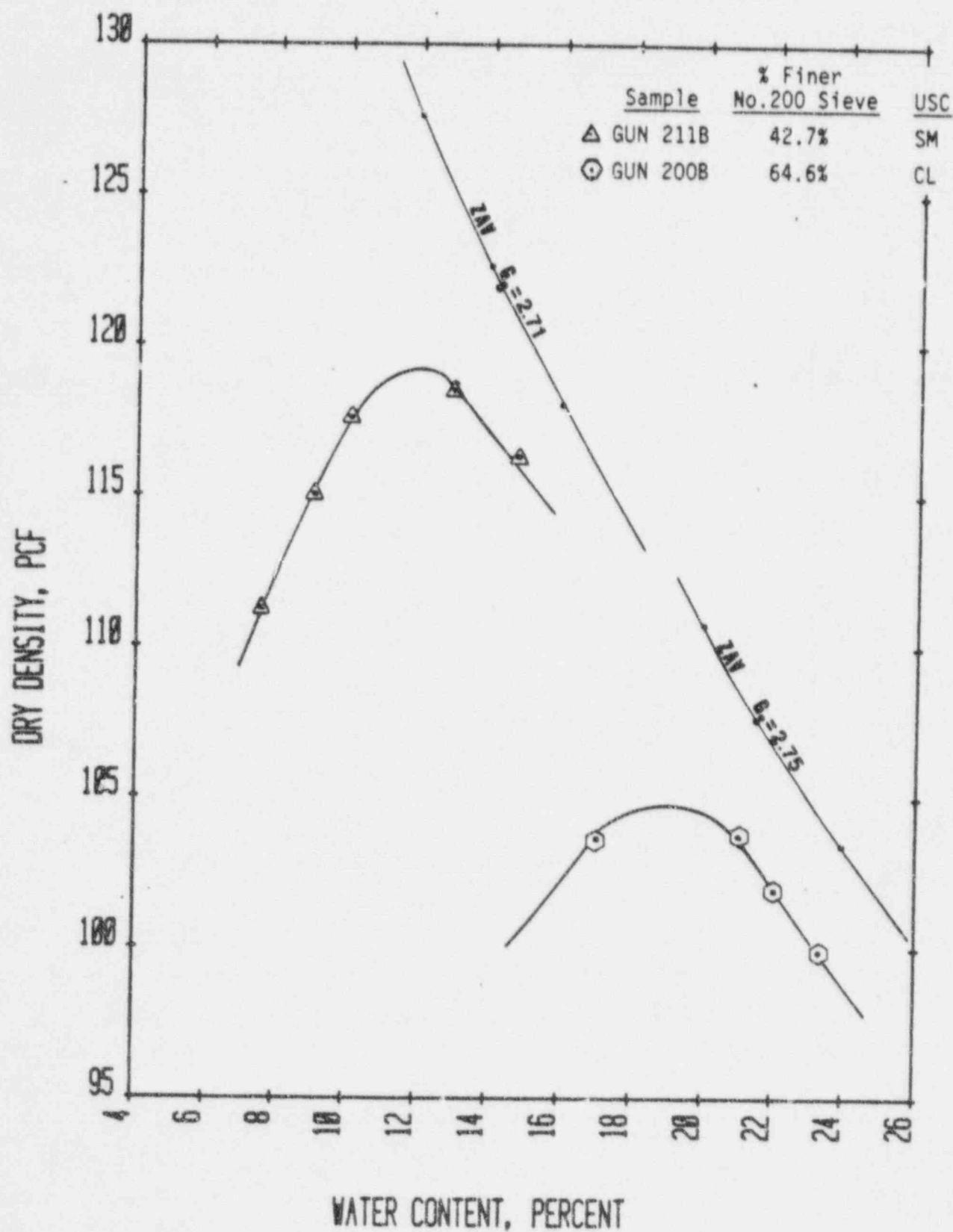
Status: Final

Sample Type: Soil

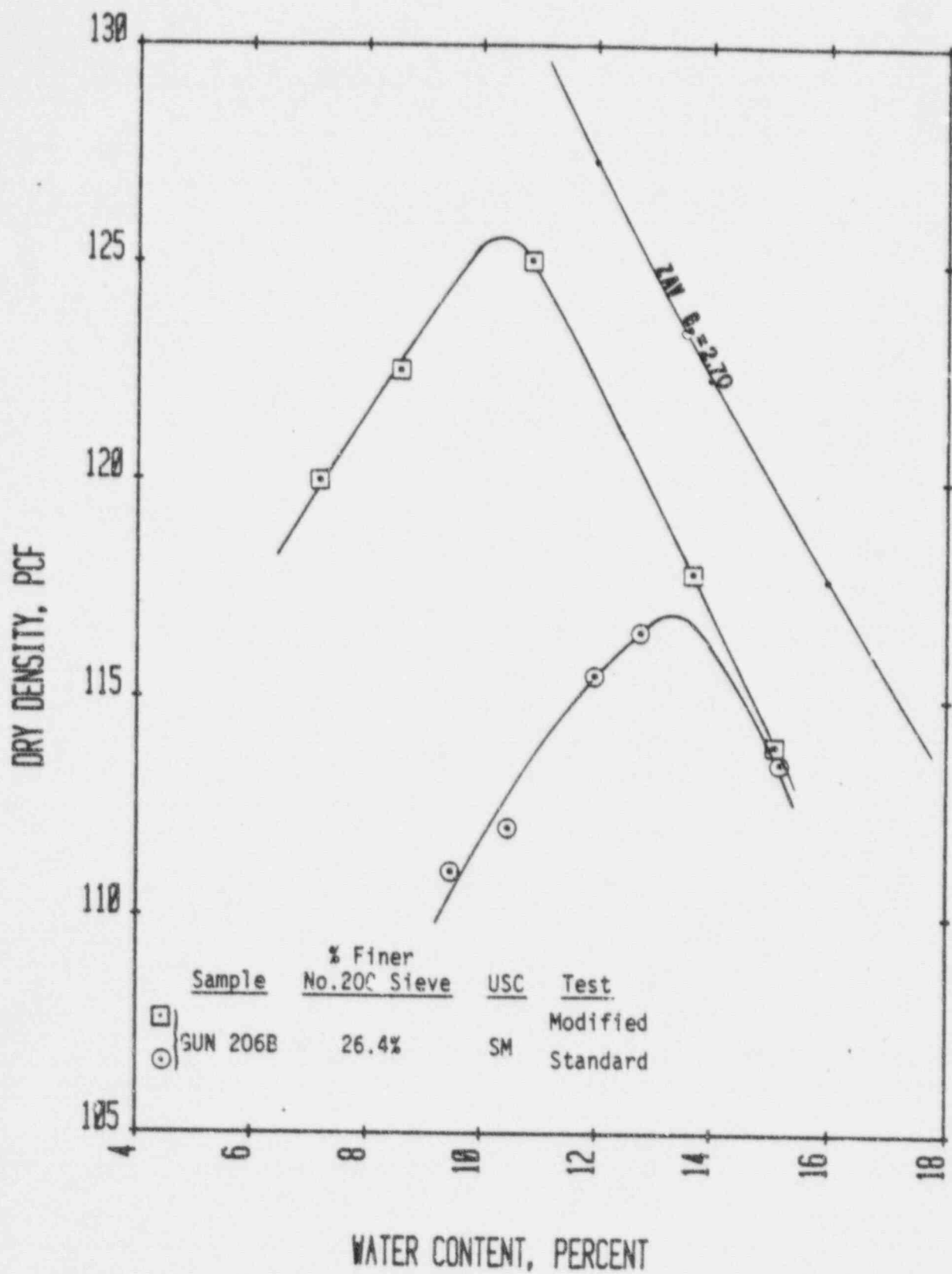
Sample Id		Ra Total pCi/g	Error 2σ*	Th-230 Total pCi/g	Error 2σ*	Dry Weight %
TEST PIT 11 (5'-6')	NON-PASSING	2.0	±0.7	24	±2	78
TEST PIT 11 (6'-7')	NON-PASSING	1.8	±0.7	16	±2	67
TEST PIT 16 (7'-8')	NON-PASSING	1.3	±0.6	20	±2	72
TEST PIT 16 (8'-9')	NON-PASSING	6.2	±1.2	20	±2	68
TEST PIT 11 (5'-6')	PASSING	3.2	±1.0	130	±10	22
TEST PIT 11 (6'-7')	PASSING	2.5	±0.8	51	±3	33
TEST PIT 16 (7'-8')	PASSING	3.2	±0.9	180	±10	28
TEST PIT 16 (8'-9')	PASSING	3.9	±1.0	112	±4	32

Processing Site- June 1990 Test Pit Samples

(1) passing or non-passing the No. 4 sieve.



Standard Proctor compaction curves: sand/slime mixture, GUN 211B, and sandy slimes sample, GUN 200B



Standard and Modified Proctor compaction curves: sand sample, GUN 206B

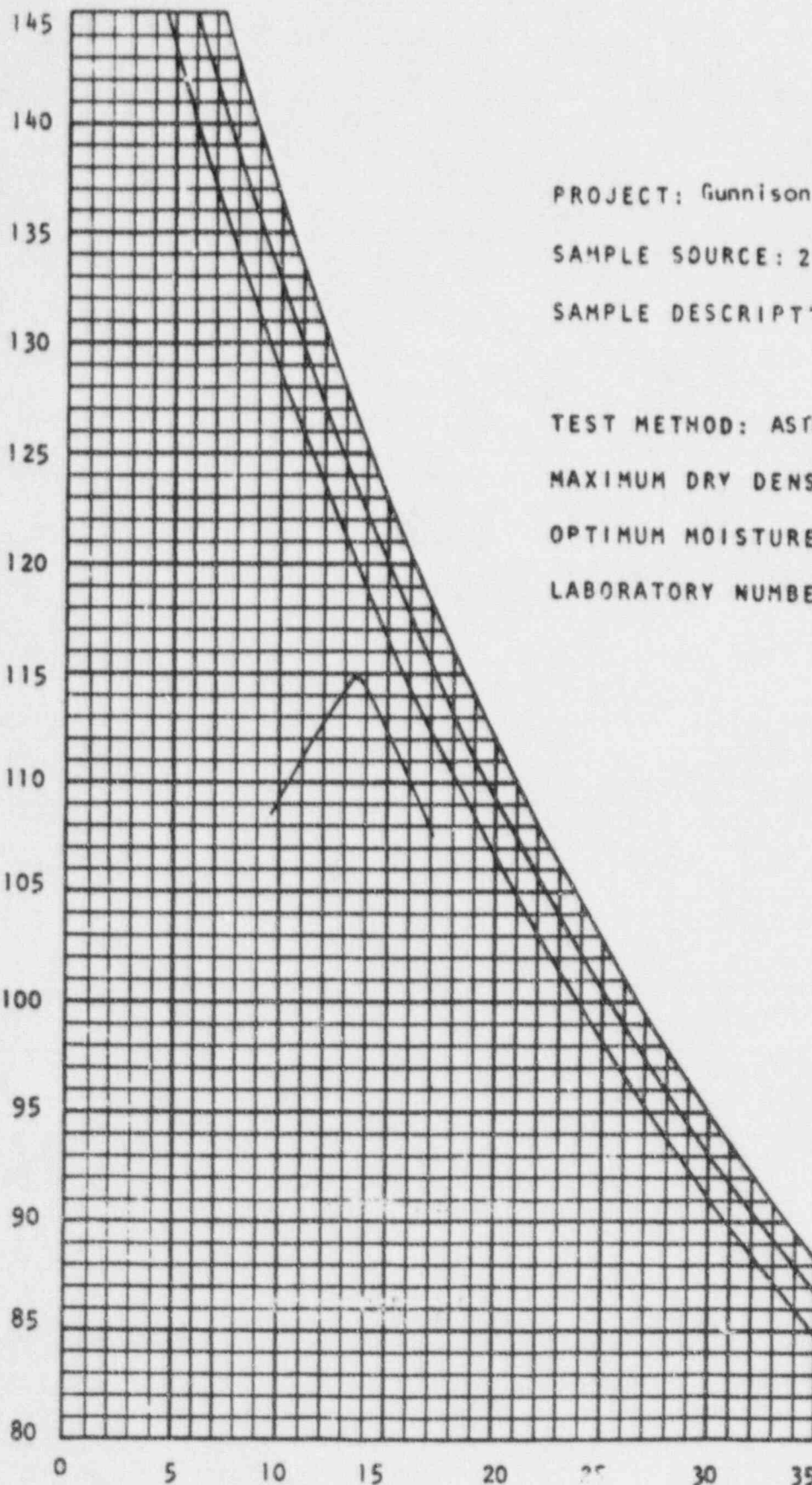
CAPILLARY-MOISTURE RELATIONS TEST RESULTS

Attached are the original work sheets (with plotted data) from the subject testing. A listing of the suites tested, in duplicate, is as follows:

	Material	Sample No.	Test	Conditions	Max Density, (dry)
Bulk-1 >	216 M3	1 & 1A	D 2325	92 % of max density	115 lb/ft ³ @ 13.5 % H ₂ O
Bulk-2		1B & 1C	D 3152	92 % of max density	"
Bulk-1 >	217 M4	2 & 2A	D 2325	92 % of max density	118 lb/ft ³ @ 12.5 % H ₂ O
Bulk-2		2B & 2C	D 3152	92 % of max density	"
Bulk-1 >	218 M5	3 & 3A	D 2325	92 % of max density	117.5 lb/ft ³ @ 12.5 % H ₂ O
Bulk-2		3B & 3C	D 3152	92 % of max density	"
Bulk-1	220 M6	4 & 4A	D 2325	92 % of max density	107 lb/ft ³ @ 16.5 % H ₂ O
		4B & 4C	D 3152	92 % of max density	"
Bulk-1	221 M7	5 & 5A	D 2325	92 % of max density	121 lb/ft ³ @ 11.5 % H ₂ O
		5B & 5C	D 3152	92 % of max density	"
Bulk-2	222 M8	6 & 6A	D 2325	92 % of max density	120.5 lb/ft ³ @ 11 % H ₂ O
		6B & 6C	D 3152	92 % of max density	"
Bulk-1 >	223 M9	7 & 7A	D 2325	92 % of max density	120 lb/ft ³ @ 12 % H ₂ O
Bulk-2		7B & 7C	D 3152	92 % of max density	"
Bulk-1	224 M11	8 & 8A	D 2325	92 % of max density	100 lb/ft ³ @ 21.5 % H ₂ O
		8B & 8C	D 3152	92 % of max density	"
Bulk-1	225 M12	9 & 9A	D 2325	92 % of max density	114 lb/ft ³ @ 14 % H ₂ O
		9B & 9C	D 3152	92 % of max density	"
Bulk-1 >	226 M13	10 & 10A	D 2325	92 % of max density	117 lb/ft ³ @ 12 % H ₂ O
Bulk-2		10B & 10C	D 3152	92 % of max density	"

All test samples were recompactd (@ optimum moisture) from -10 mesh disturbed soil which had been oven dried. The tests were measured in pounds per square inch, converted from the points in Bars that you requested as test points. The final test points vary slightly from your requested points as you will notice when they are converted back to Bars.

DRY DENSITY (pcf)



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 216 M-3 Bulk-1 Bulk-2

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 115.0 pcf

OPTIMUM MOISTURE CONTENT: 13.1%

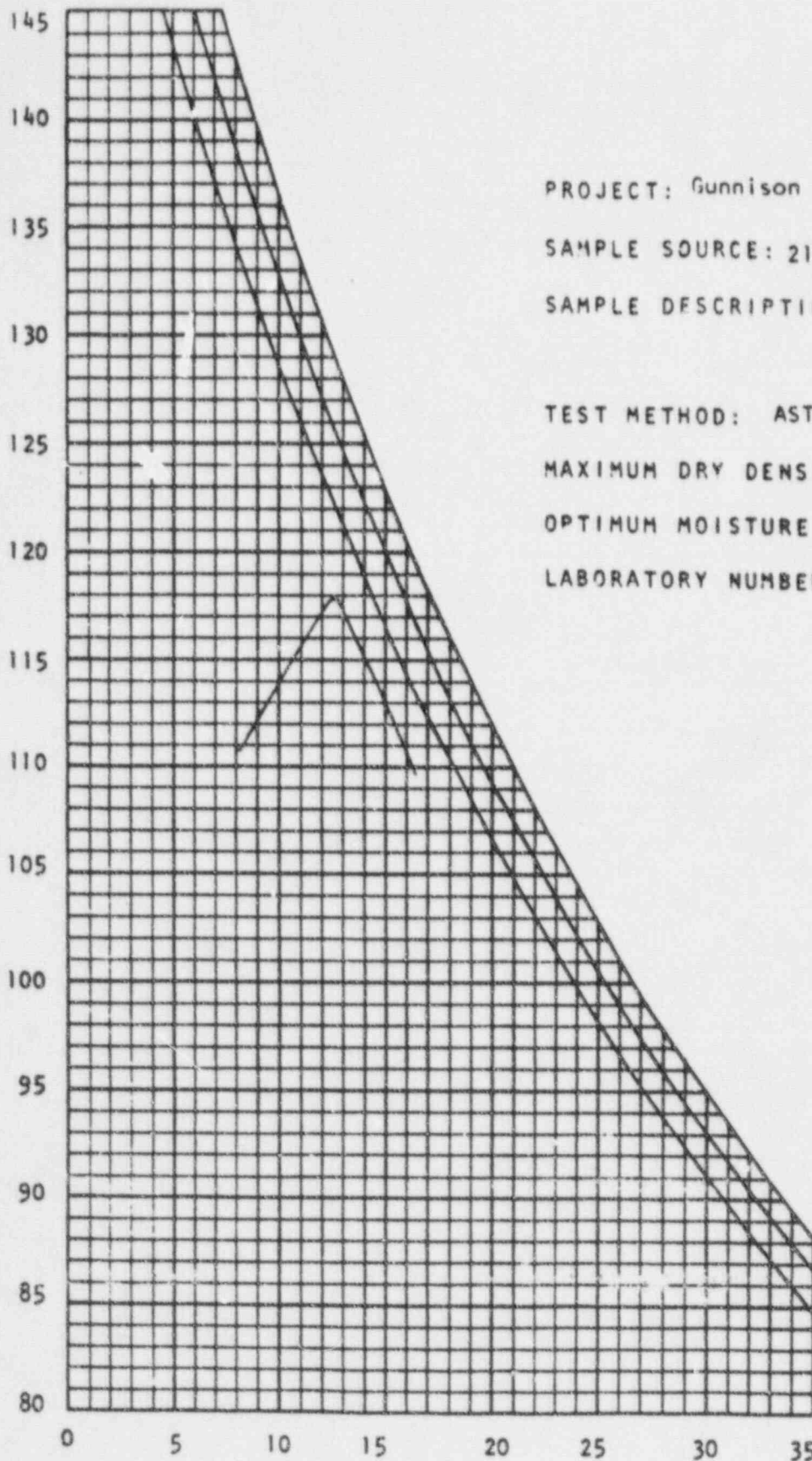
LABORATORY NUMBER:

Zero Air Voids for
Specific Gravity

Lambert and Associates

Project No.: M90004GE
Date: 7/9/90

DRY DENSITY (PCF)



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 217 M-4 Bulk-1 Bulk-2

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 118.0 pcf

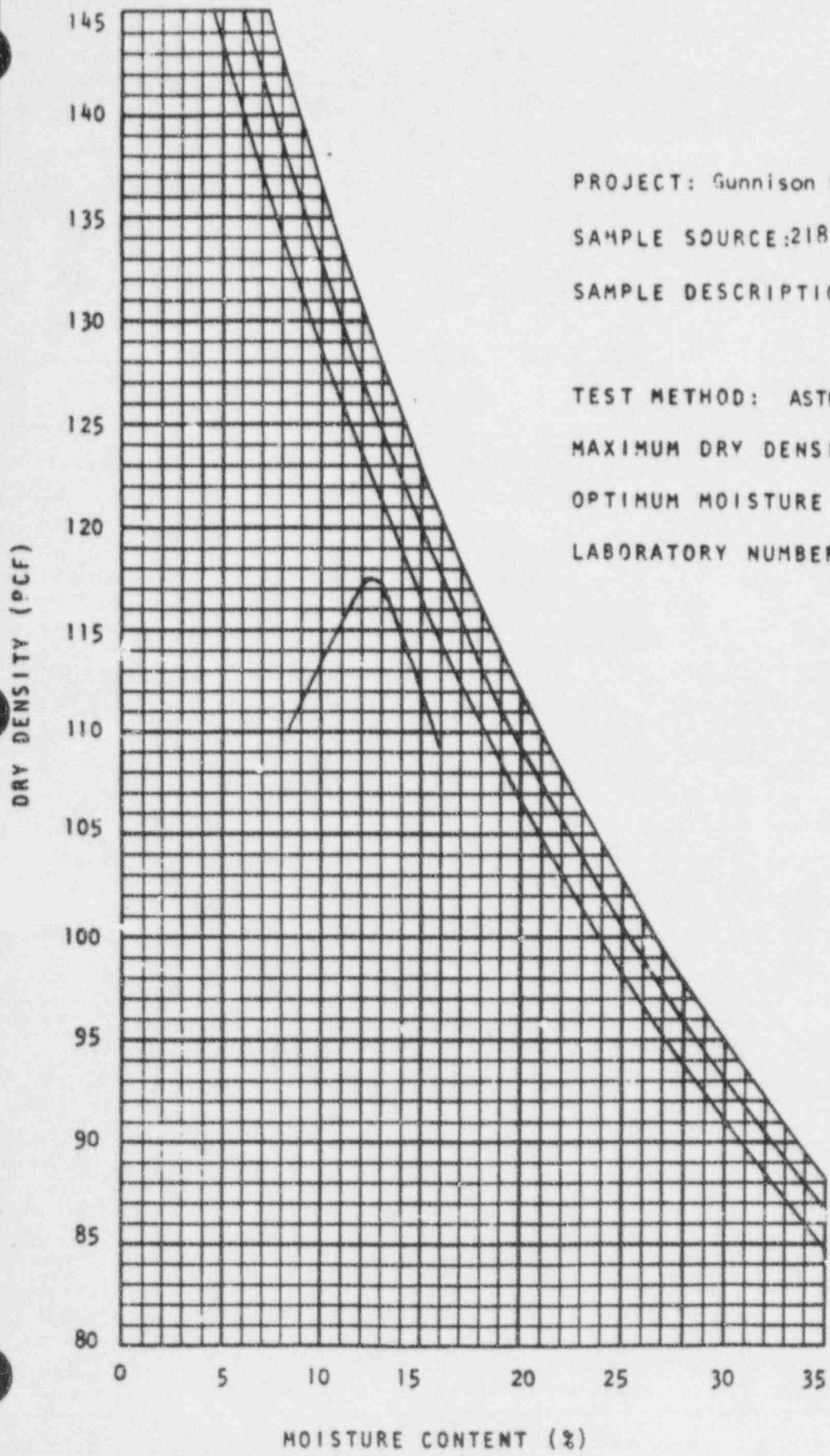
OPTIMUM MOISTURE CONTENT: 12.5%

LABORATORY NUMBER:

2.6
2.7 Zero Air Voids for
2.8 Specific Gravity

Lambert and Associates

Project No. M900004CF
Date: 7/9/90



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 218 M-5 Bulk-1 Bulk-2

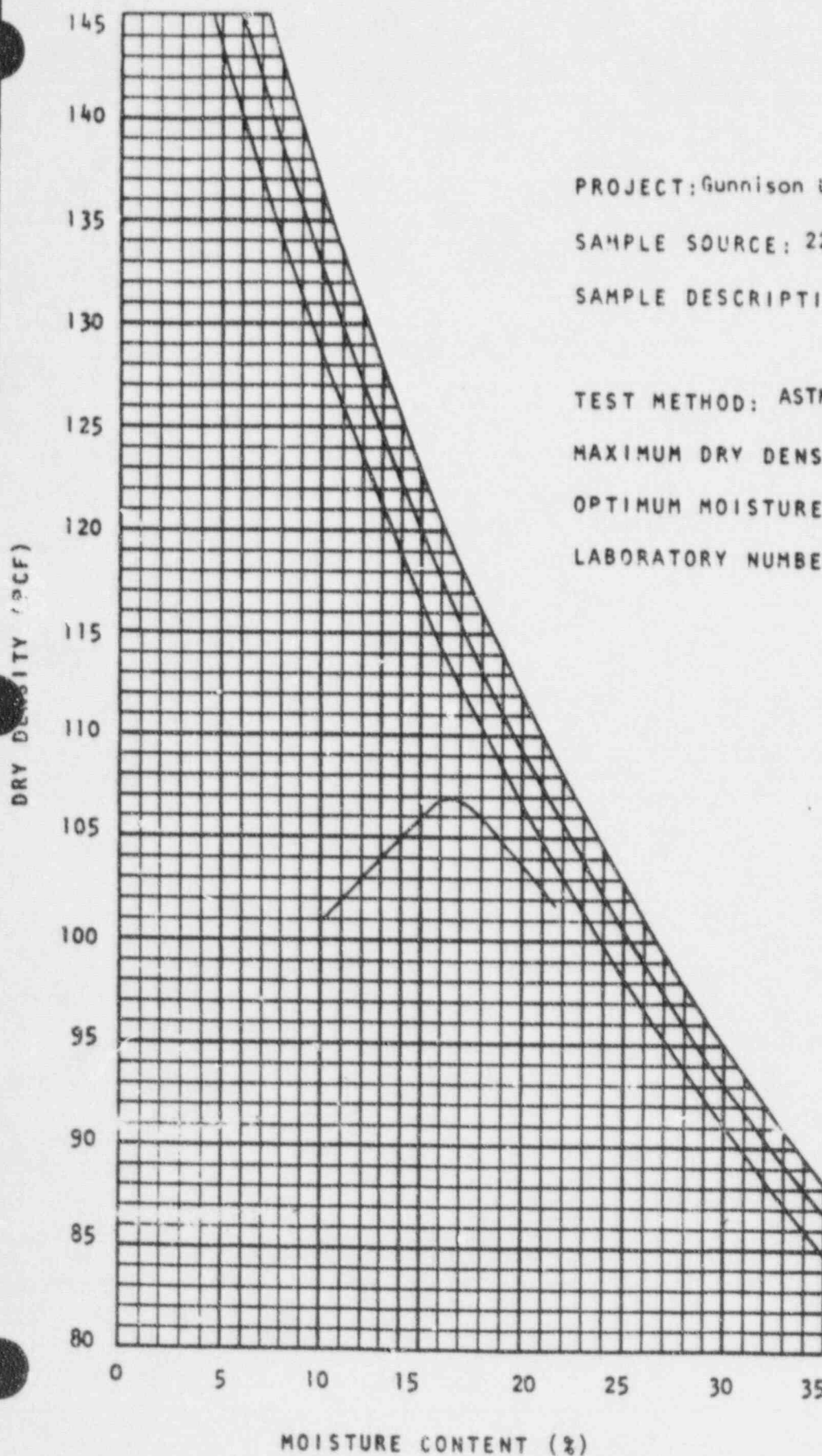
SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: $117\frac{1}{2}$ pcf

OPTIMUM MOISTURE CONTENT: $12\frac{1}{2}\%$

LABORATORY NUMBER:



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 220 M-6 Bulk-1

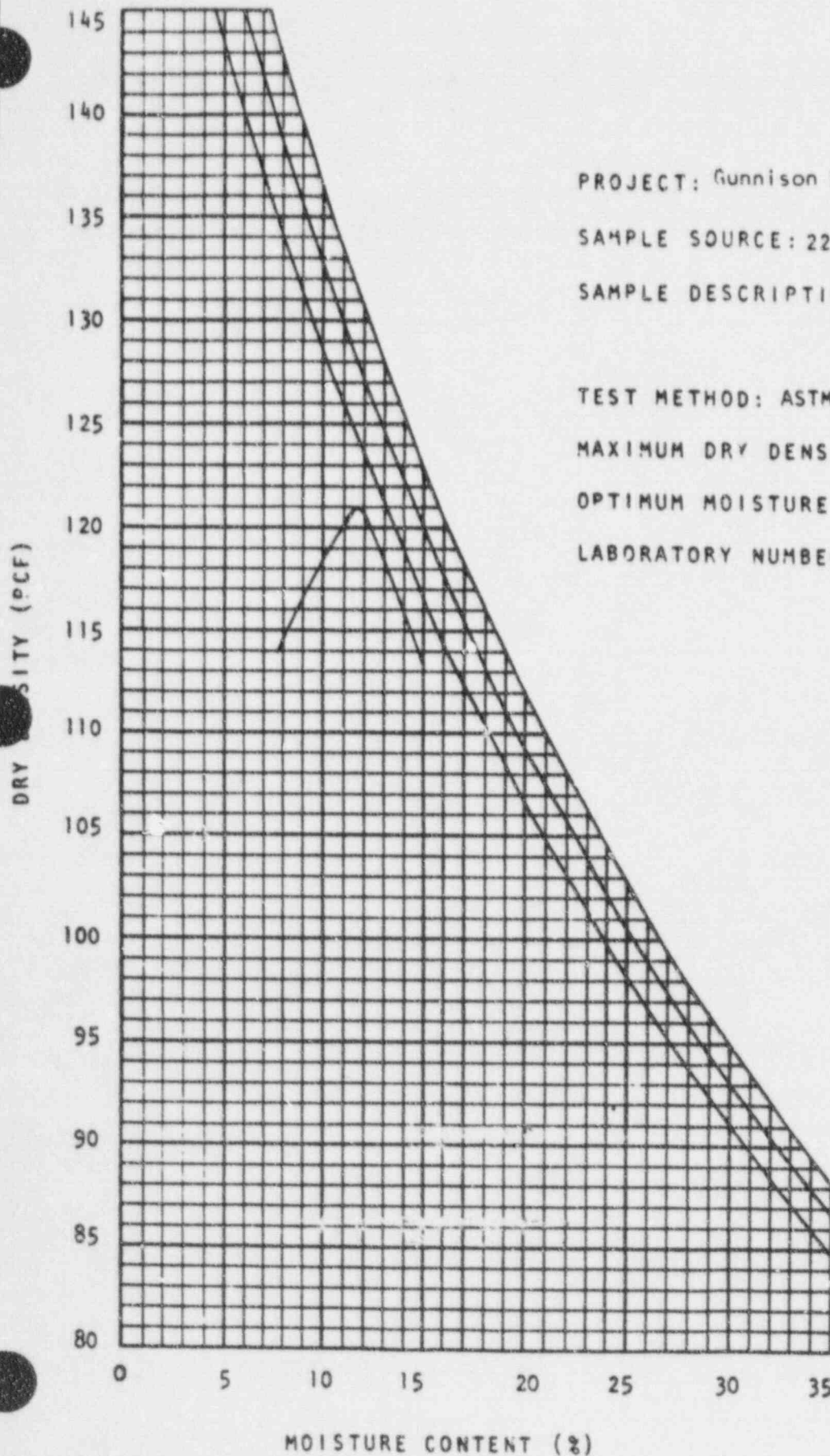
SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 107.0 pcf

OPTIMUM MOISTURE CONTENT: 16.1%

LABORATORY NUMBER:



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 221 M-7 Bulk-1

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 121.0 pcf

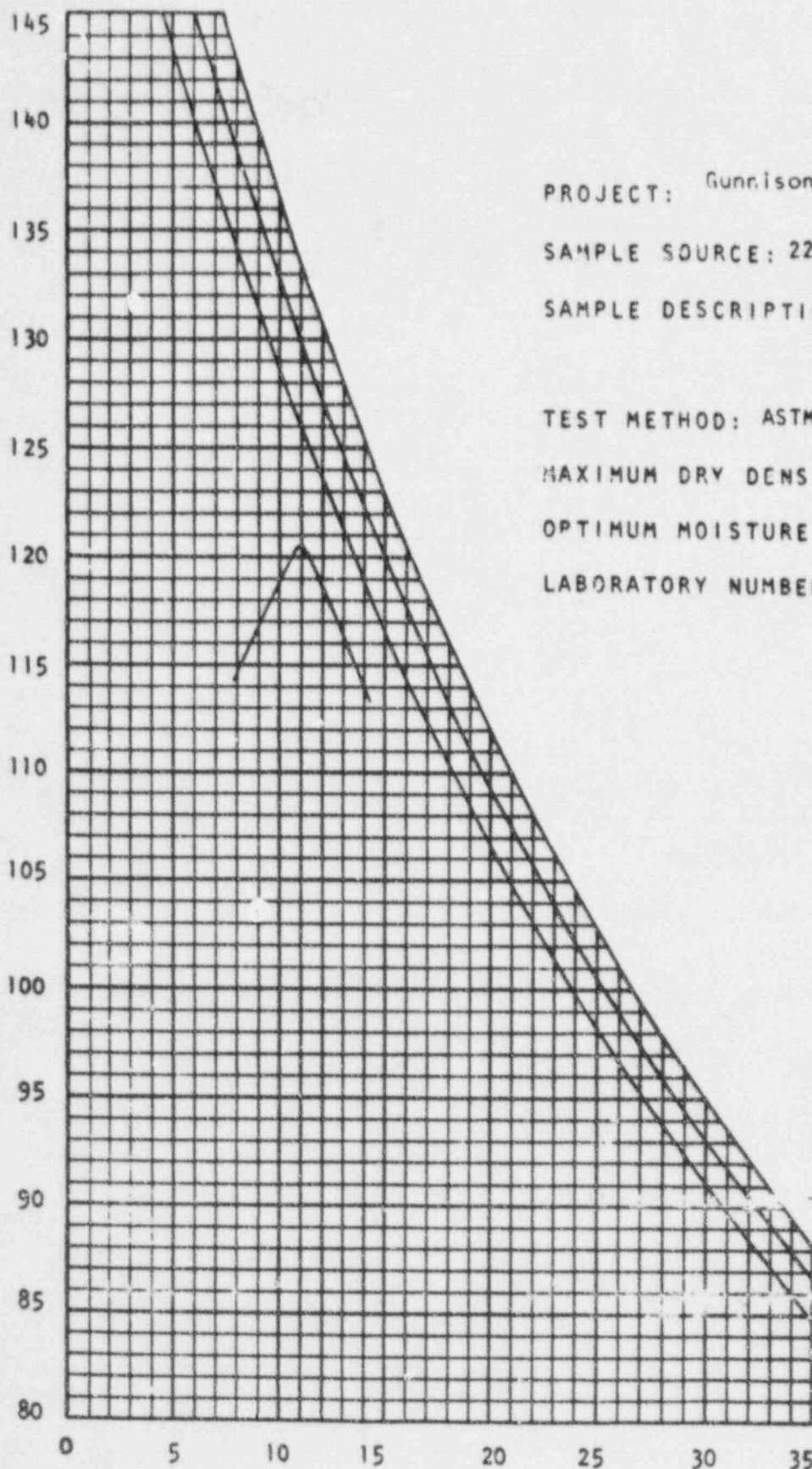
OPTIMUM MOISTURE CONTENT: 11.5%

LABORATORY NUMBER:

Lambert and Associates

Project No.: M90004GE
Date: 7/9/90

DRY DENSITY (PCF)



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 222 M-8 Bulk-2

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 120½ pcf

OPTIMUM MOISTURE CONTENT: 11.0%

LABORATORY NUMBER:

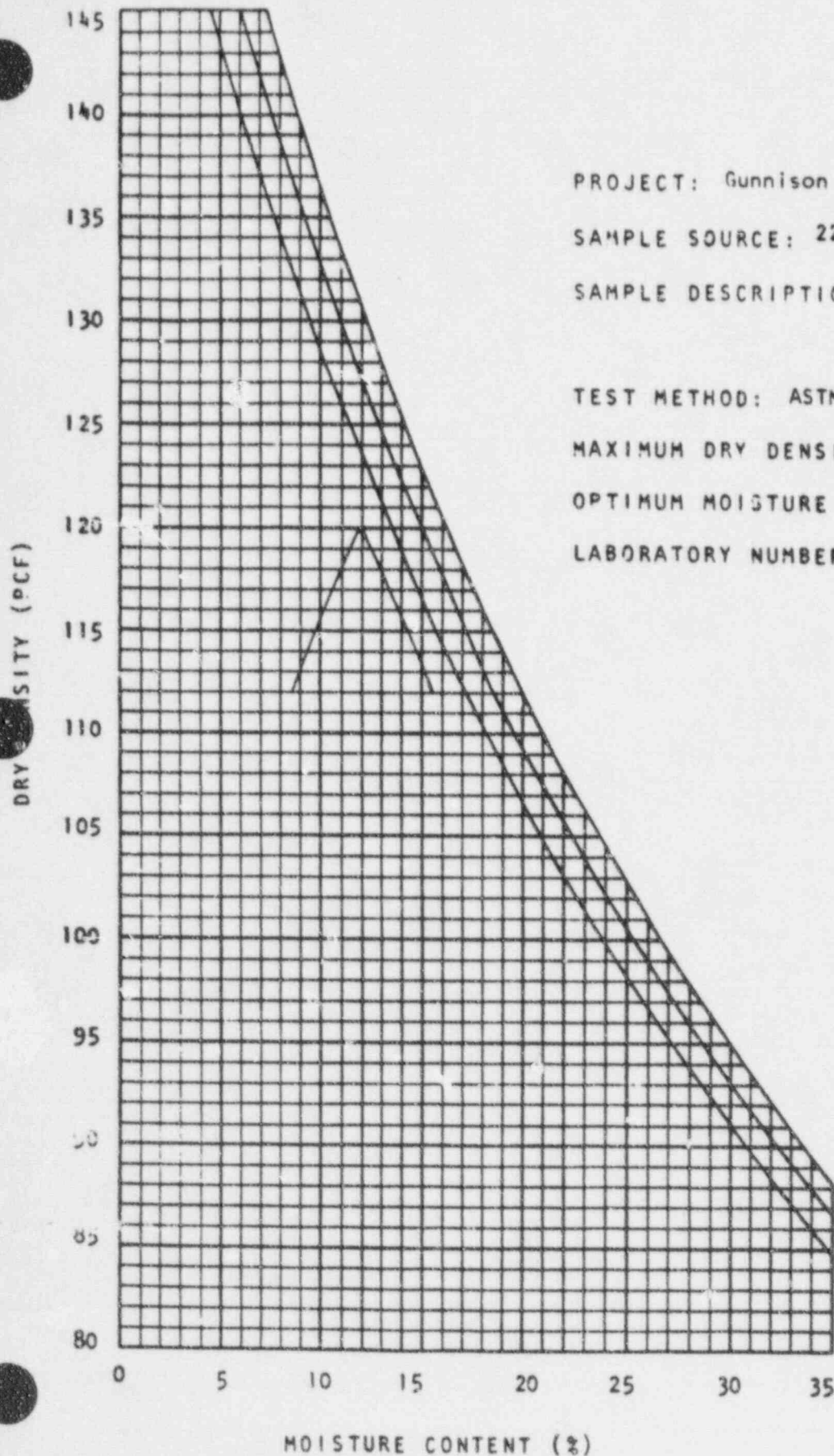
2.6
2.7 Zero Air Voids for
2.8 Specific Gravity

Lambert and Associates

Project No.: M900041E

Date: 7/9/90

Revision:



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 223 M-9 Bulk-1 Bulk-2

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 120.0 pcf

OPTIMUM MOISTURE CONTENT: 12.0%

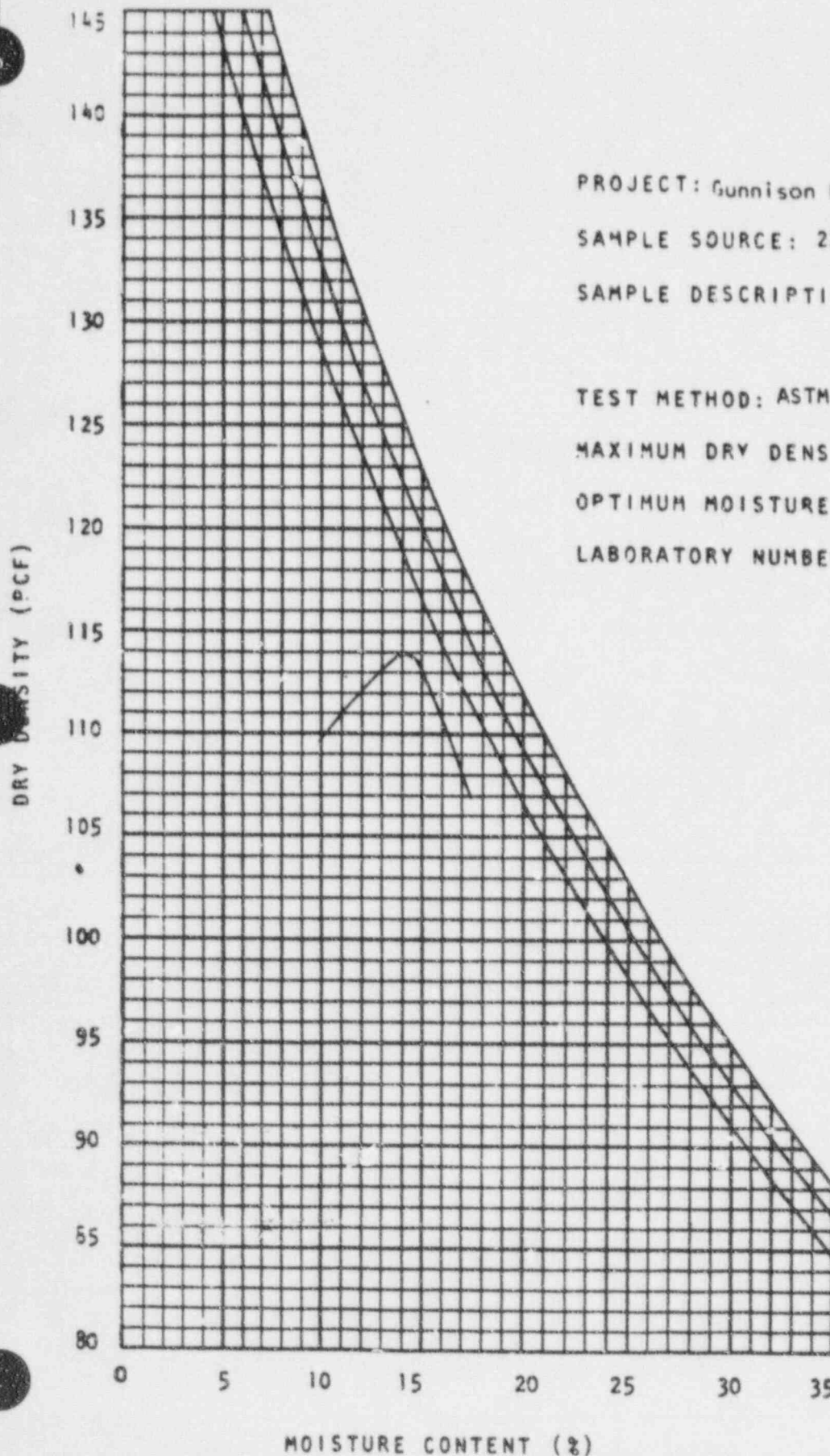
LABORATORY NUMBER:

Lambert and Associates

Project No.: H900046E

Date: 7/9/90

Figure: 7



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 225 M-12 Bulk-1

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 114.0 pcf

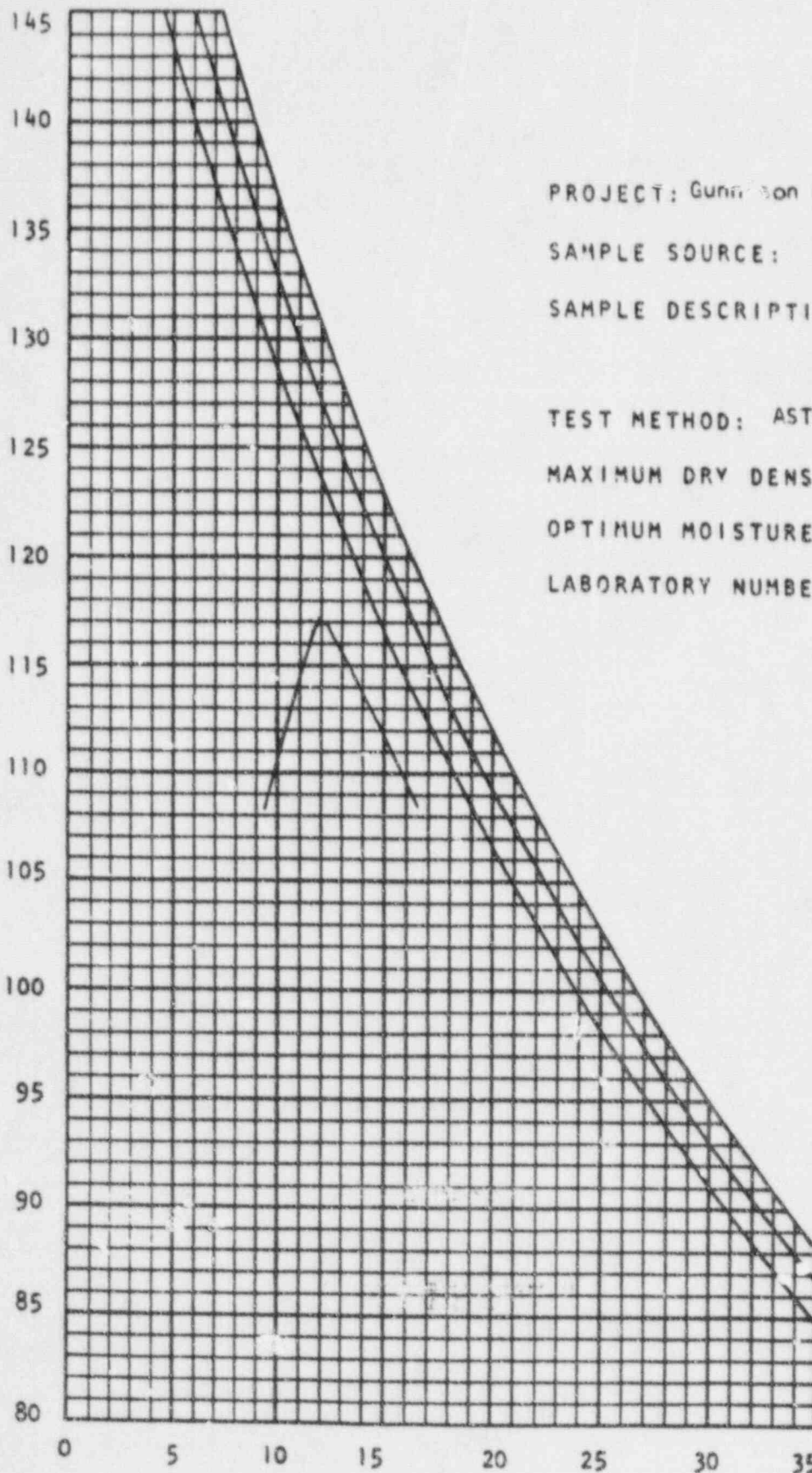
OPTIMUM MOISTURE CONTENT: 14.0%

LABORATORY NUMBER:

Lambert and Associates

Project No.: 10000412
Date: 7/9/90

DRY DENSITY (PCF)



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 226 M-13 Bulk-1 Bulk-2

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 117.0 pcf

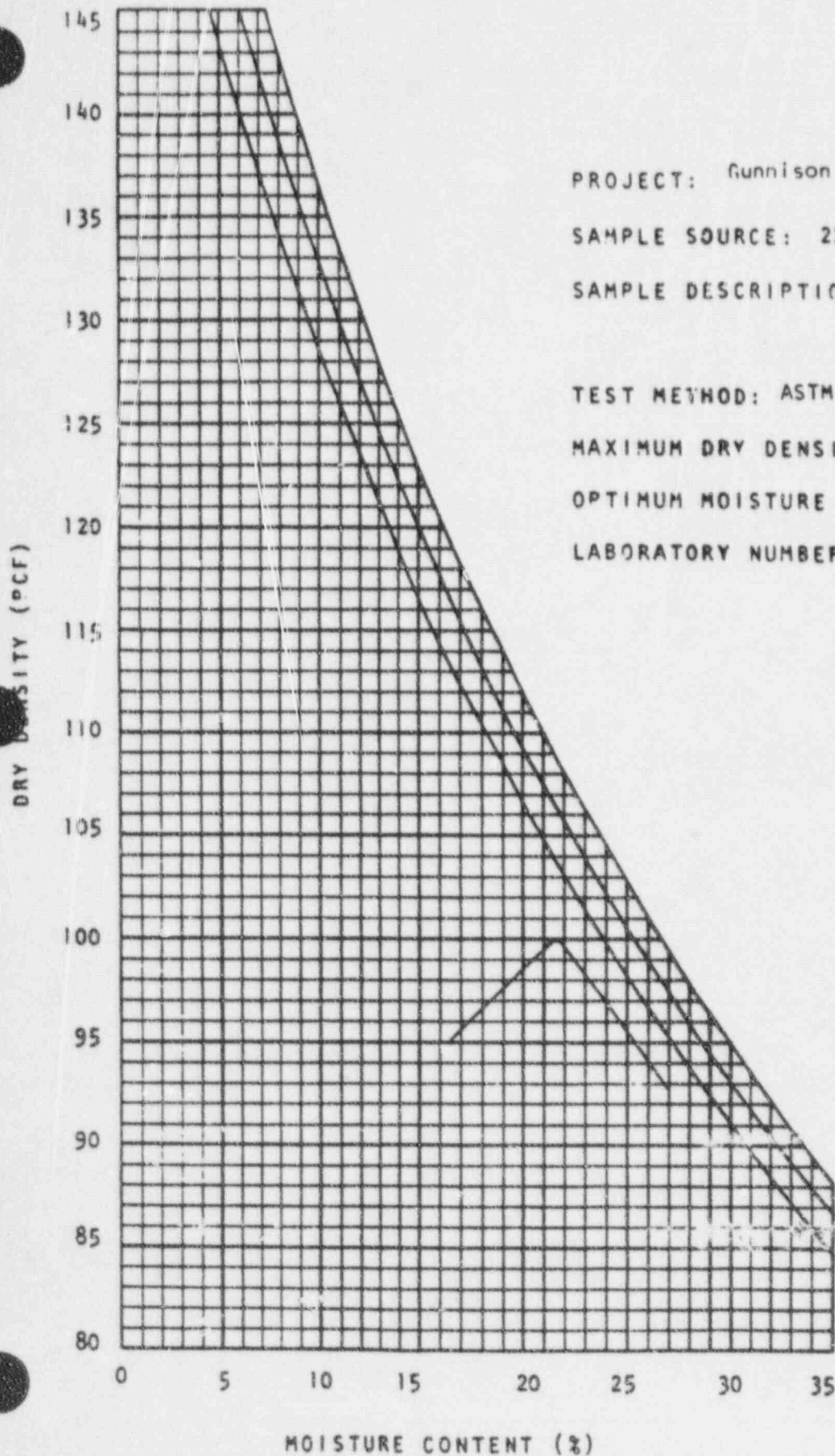
OPTIMUM MOISTURE CONTENT: 12.0%

LABORATORY NUMBER:

2.6
2.7 Zero Air Voids for
2.8 Specific Gravity

Lambert and Associates

Project No. M9000465
Date 7/9/90



PROJECT: Gunnison UMTRA

SAMPLE SOURCE: 228 M-11 Bulk-1

SAMPLE DESCRIPTION: Tailings

TEST METHOD: ASTM D698A

MAXIMUM DRY DENSITY: 100.0 pcf

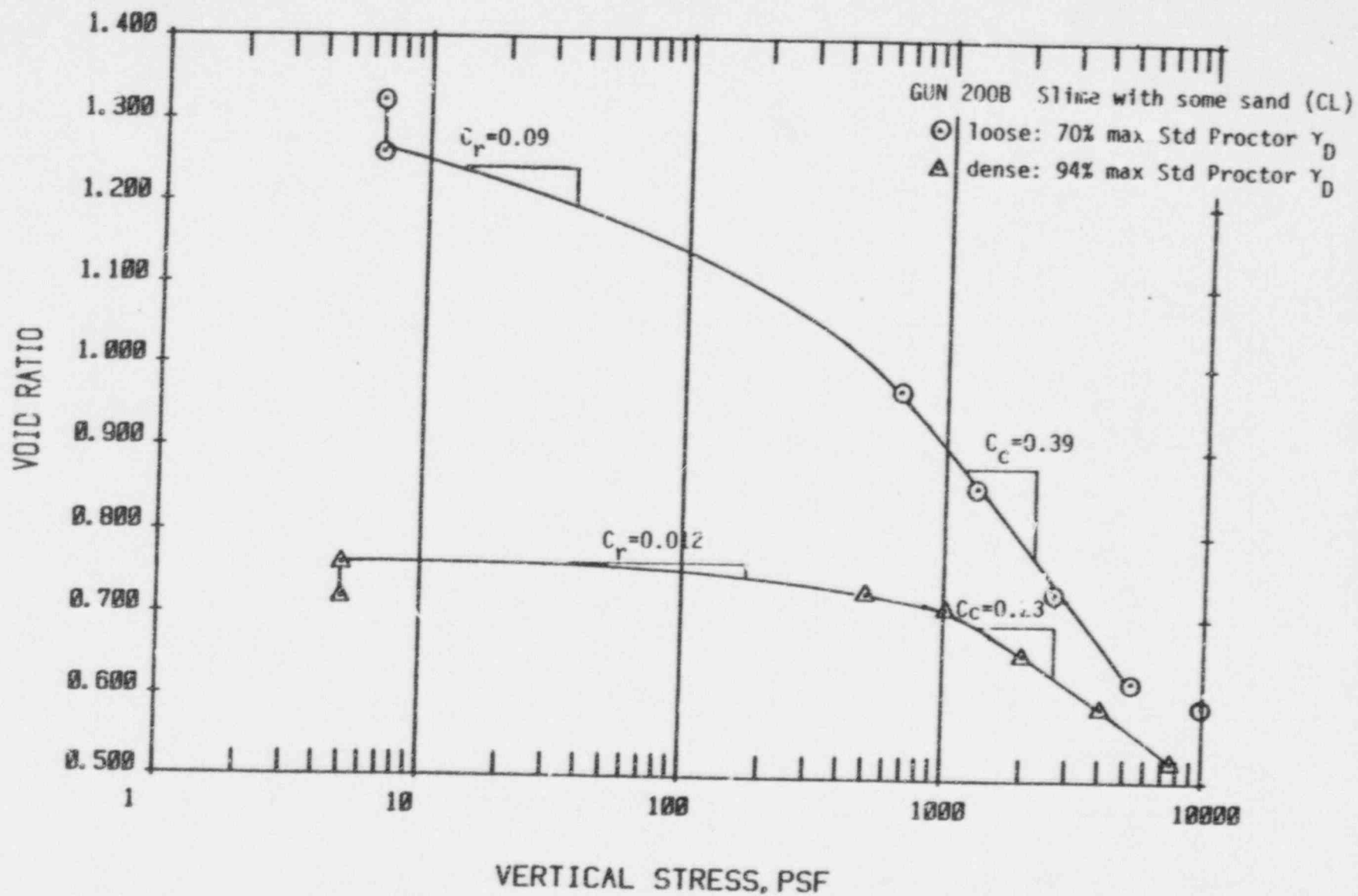
OPTIMUM MOISTURE CONTENT: 21.1%

LABORATORY NUMBER:

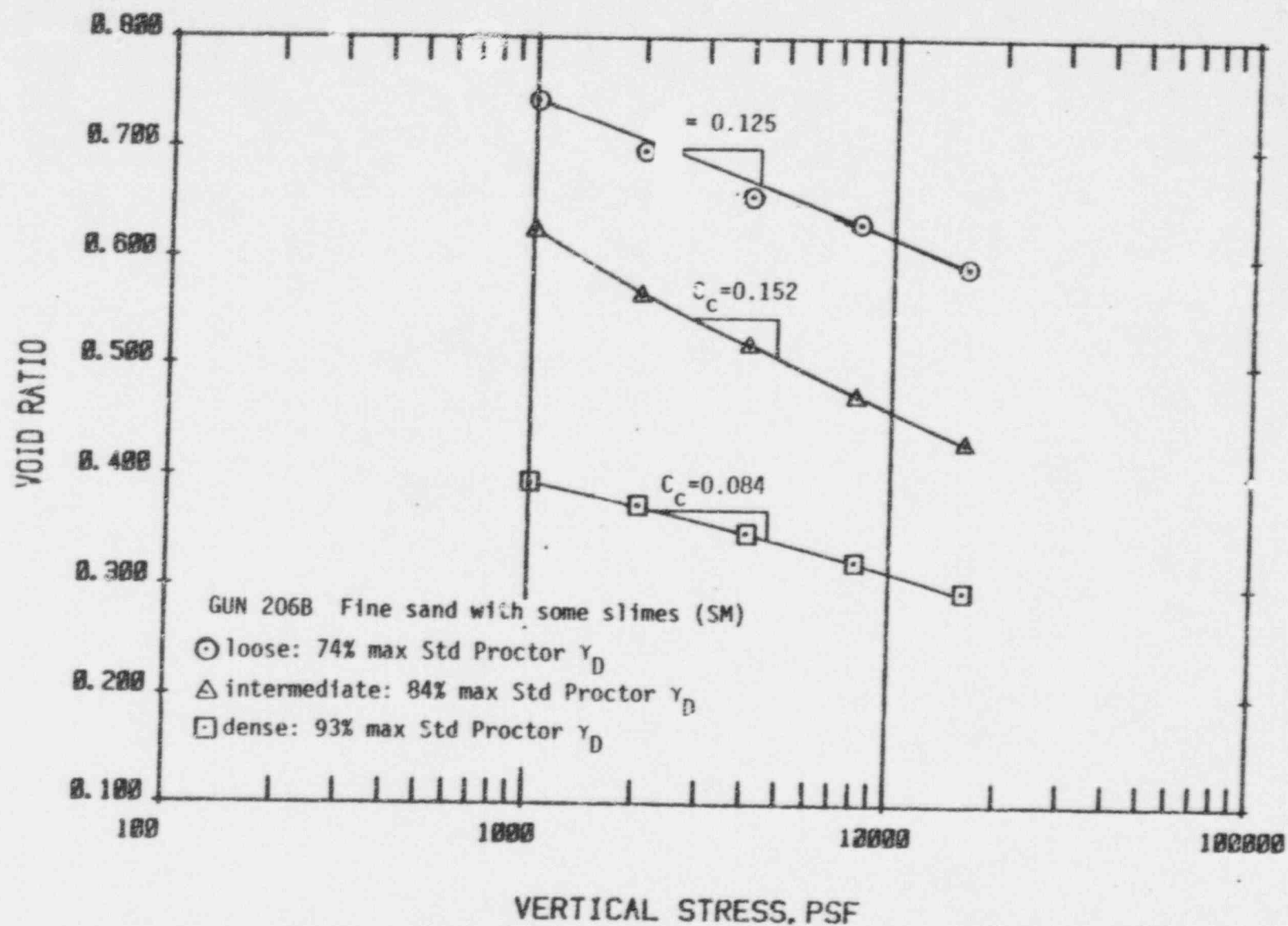
Lambert and Associates

Project No.: M90004GF

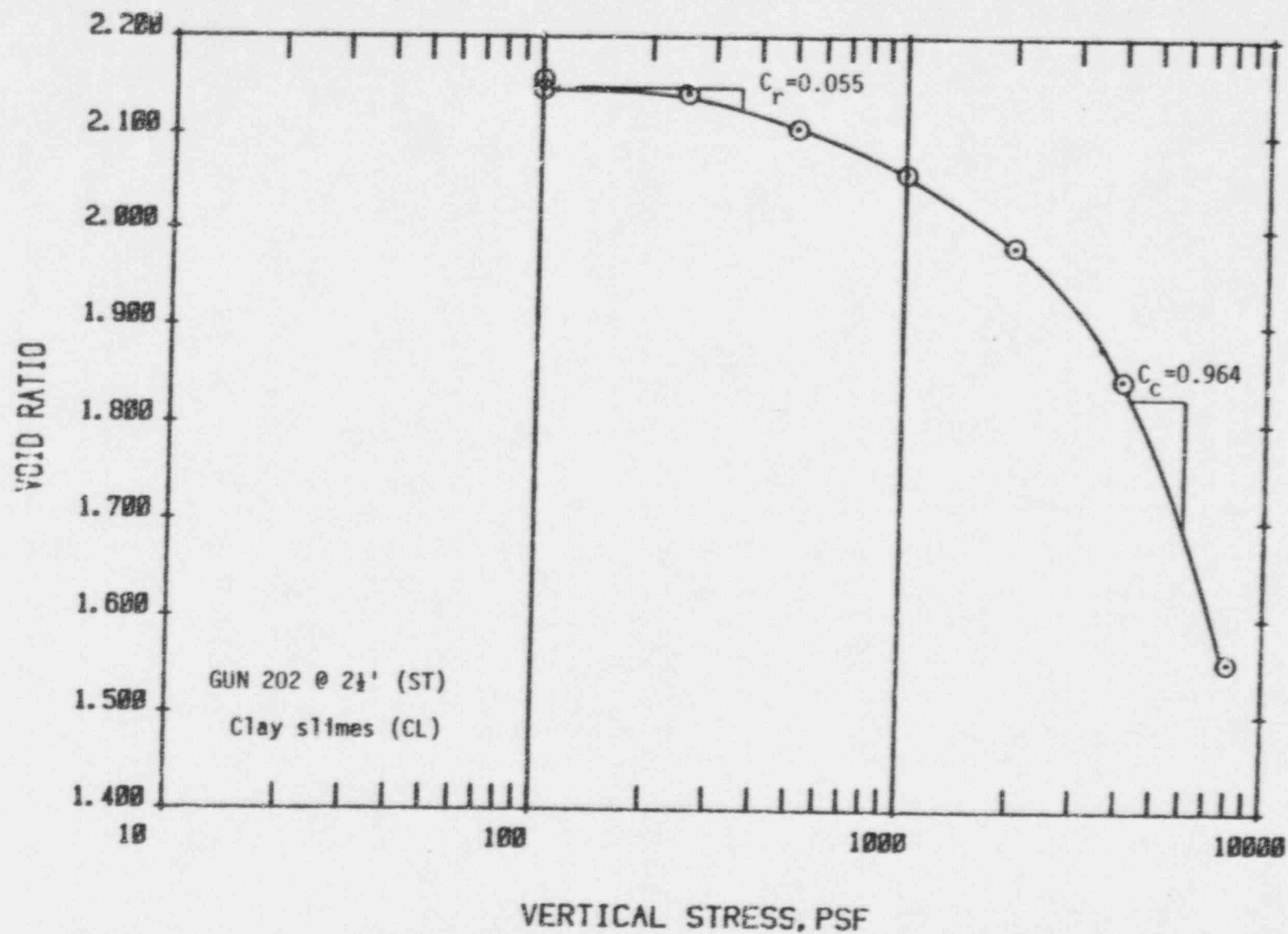
Date: 7/9/90



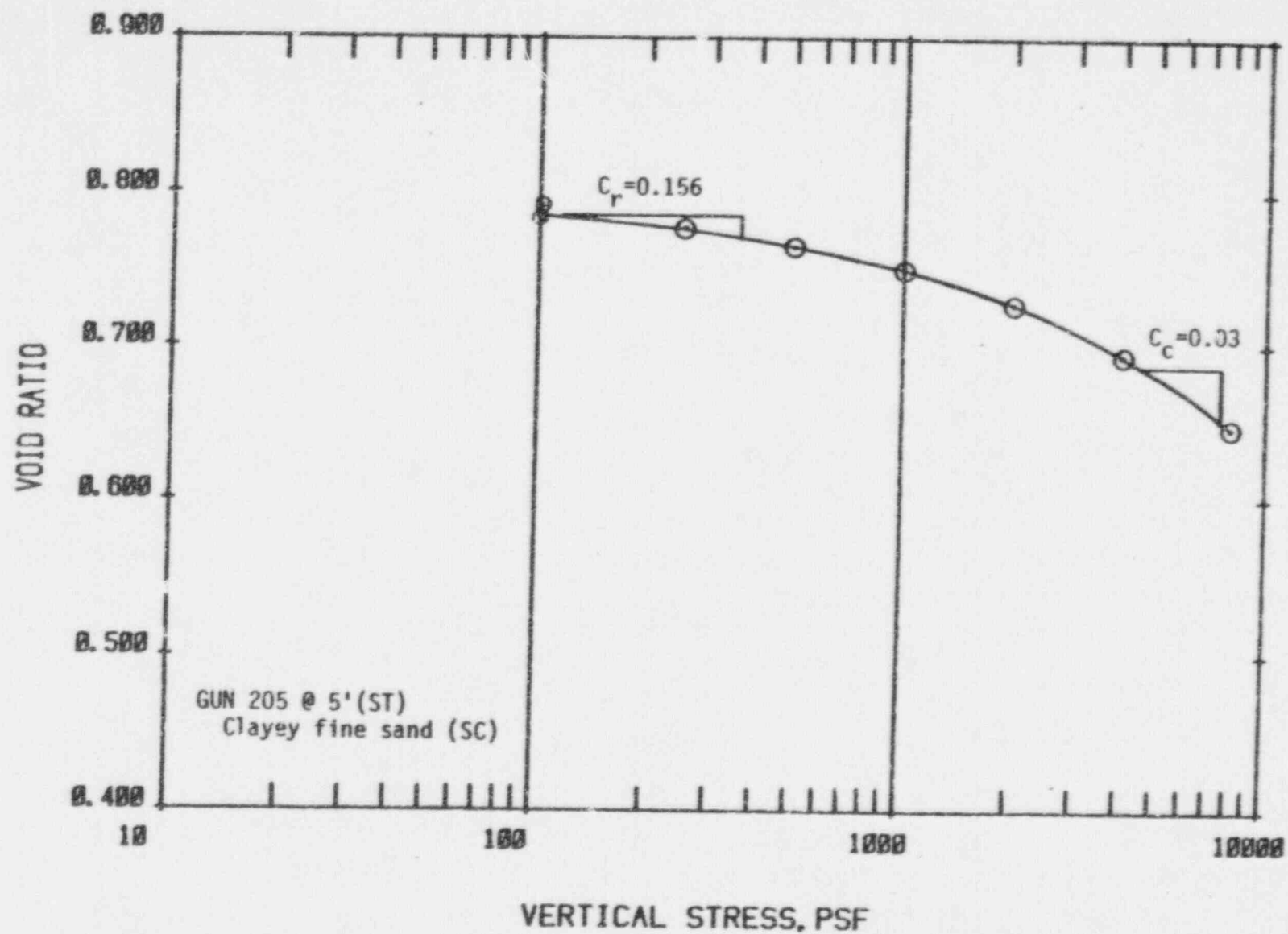
Compression curves for the remolded sample of slime with some sand, GUN 200B



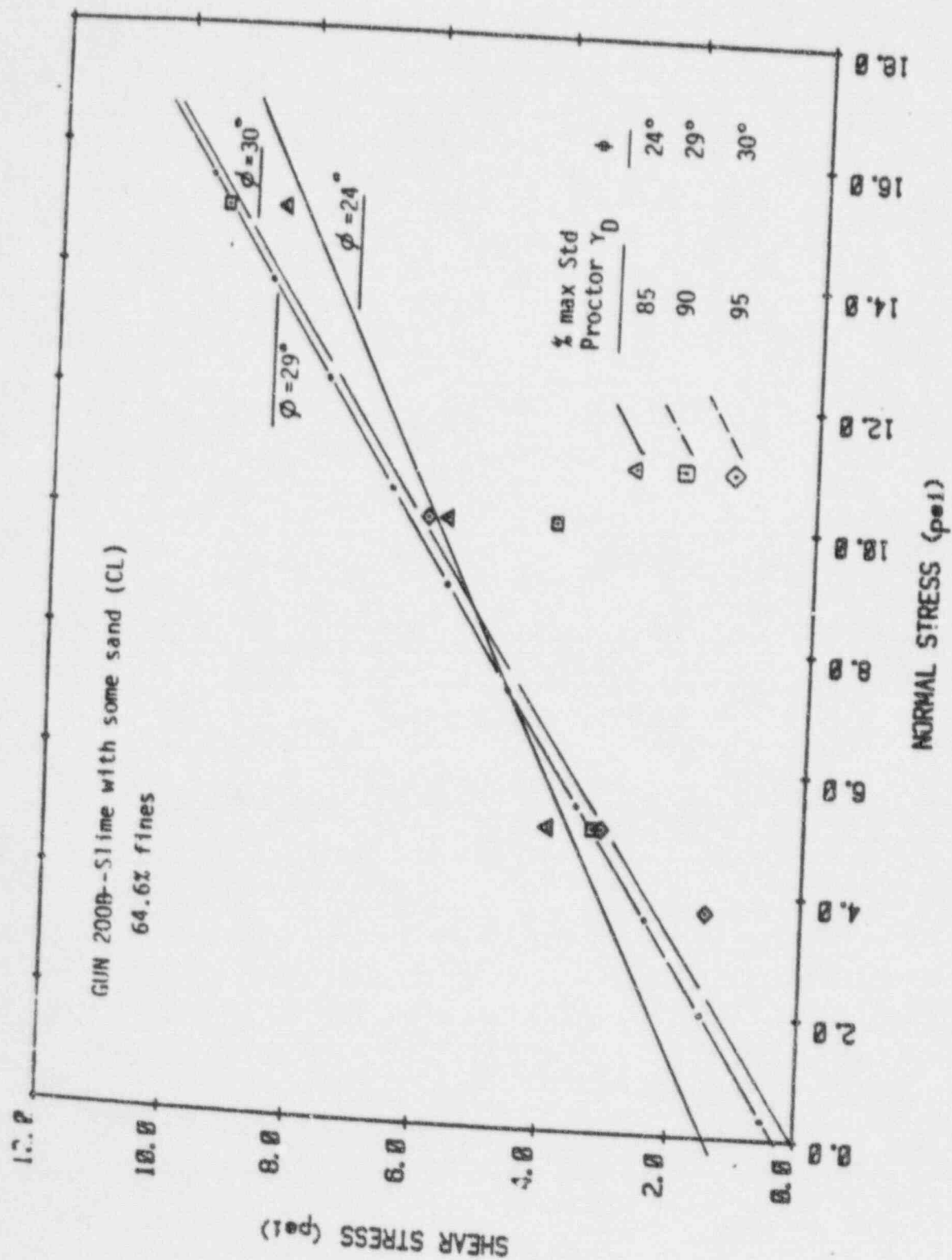
Compression curves for the remolded sand sample GUN 206B, packed at 3 initial densities



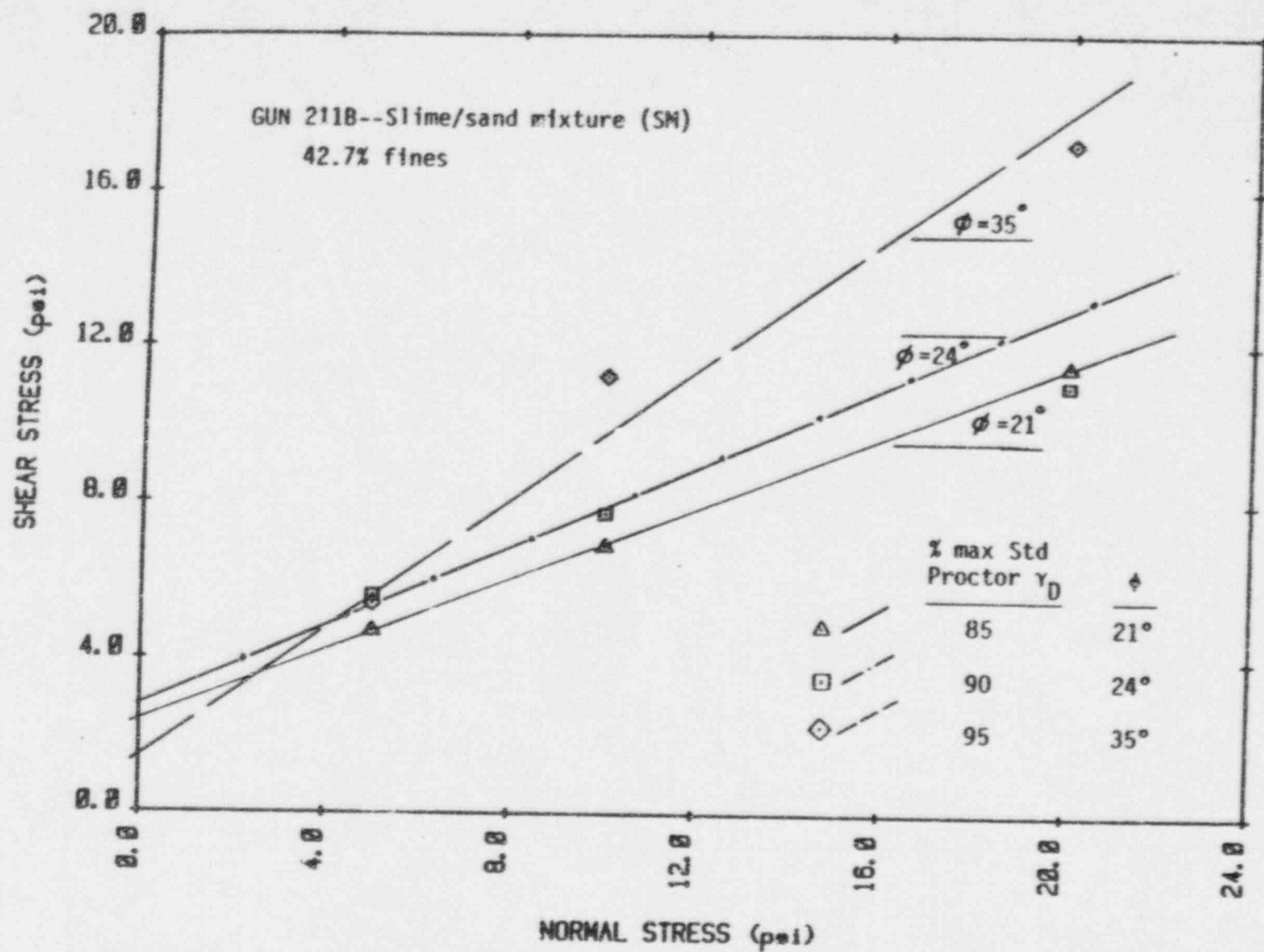
Compression curve for an intact slimes sample, GUN 202 @ 2½'(ST)



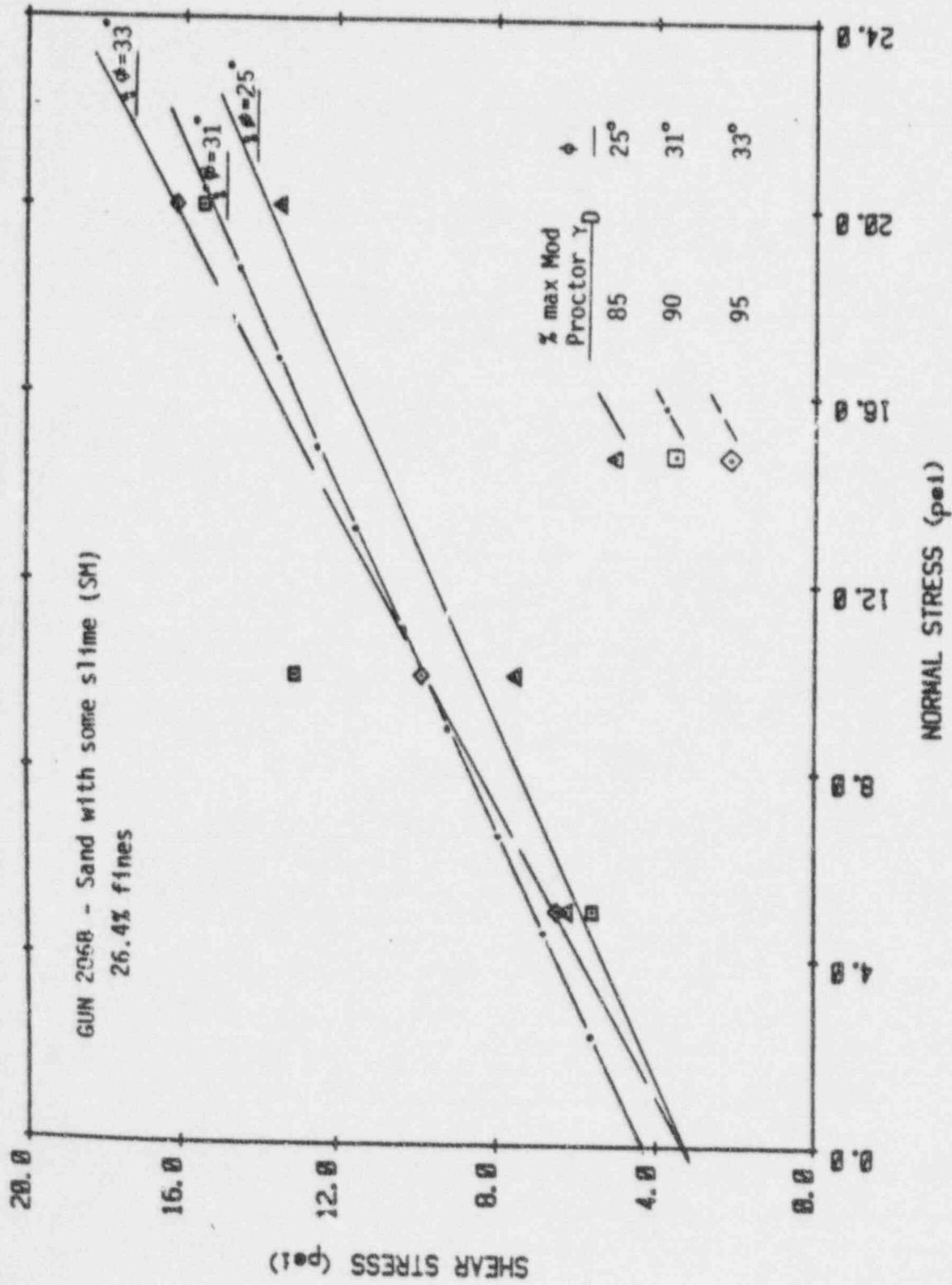
Compression curve for an intact sand sample, GUN 205 @ 5' (ST)



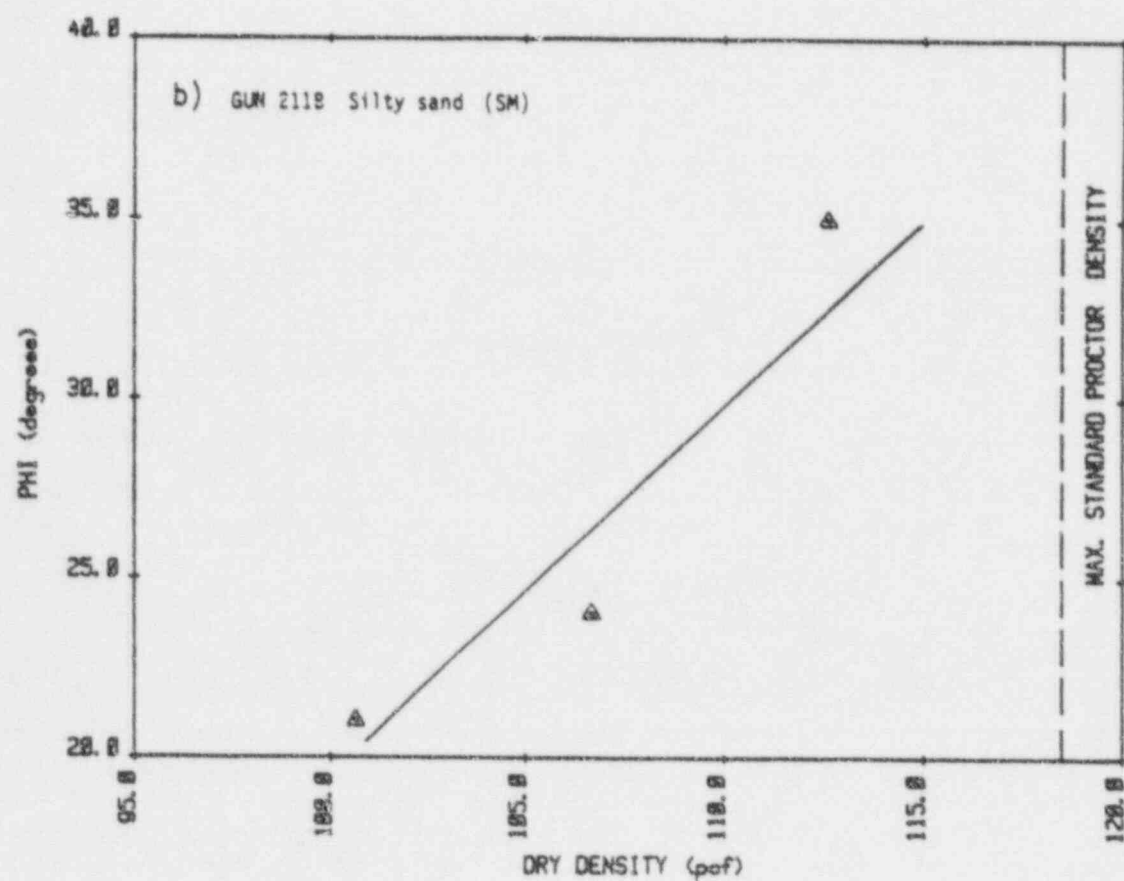
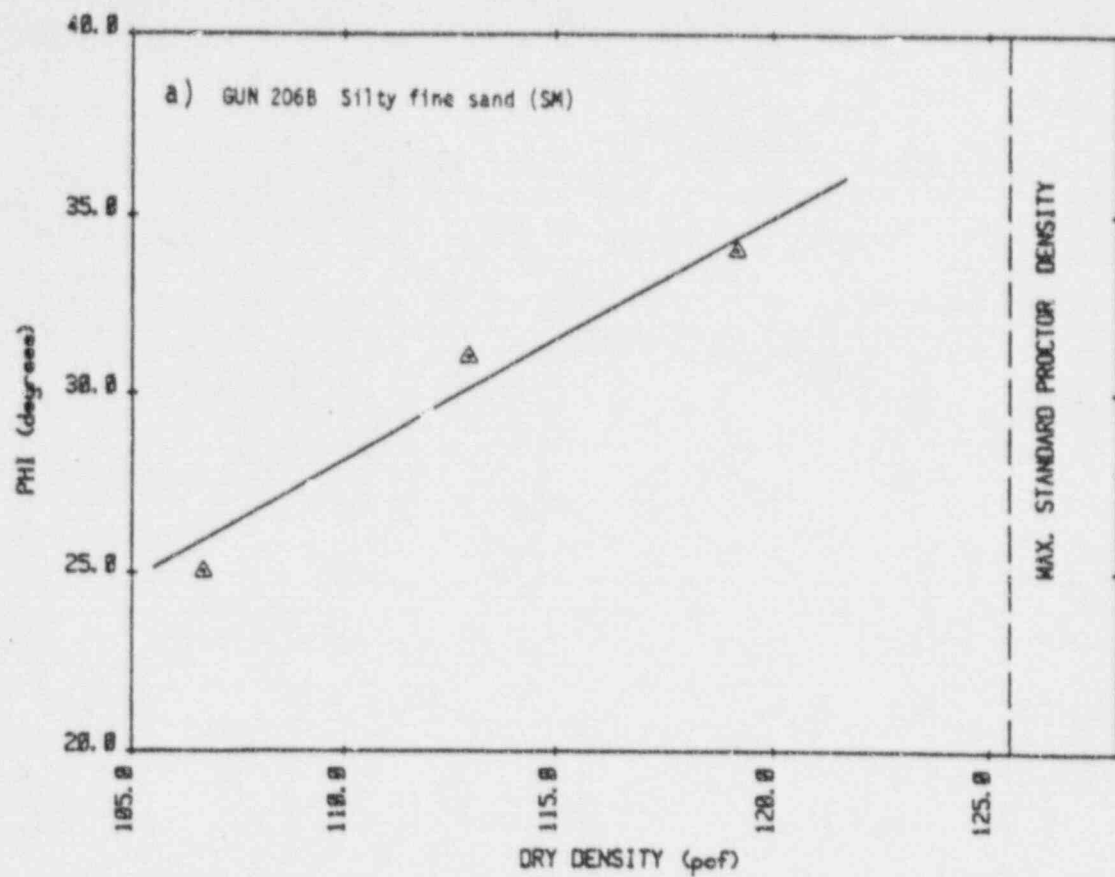
Direct shear Mohr failure envelopes: remolded bulk sandy
slimes sample, GUN 200B



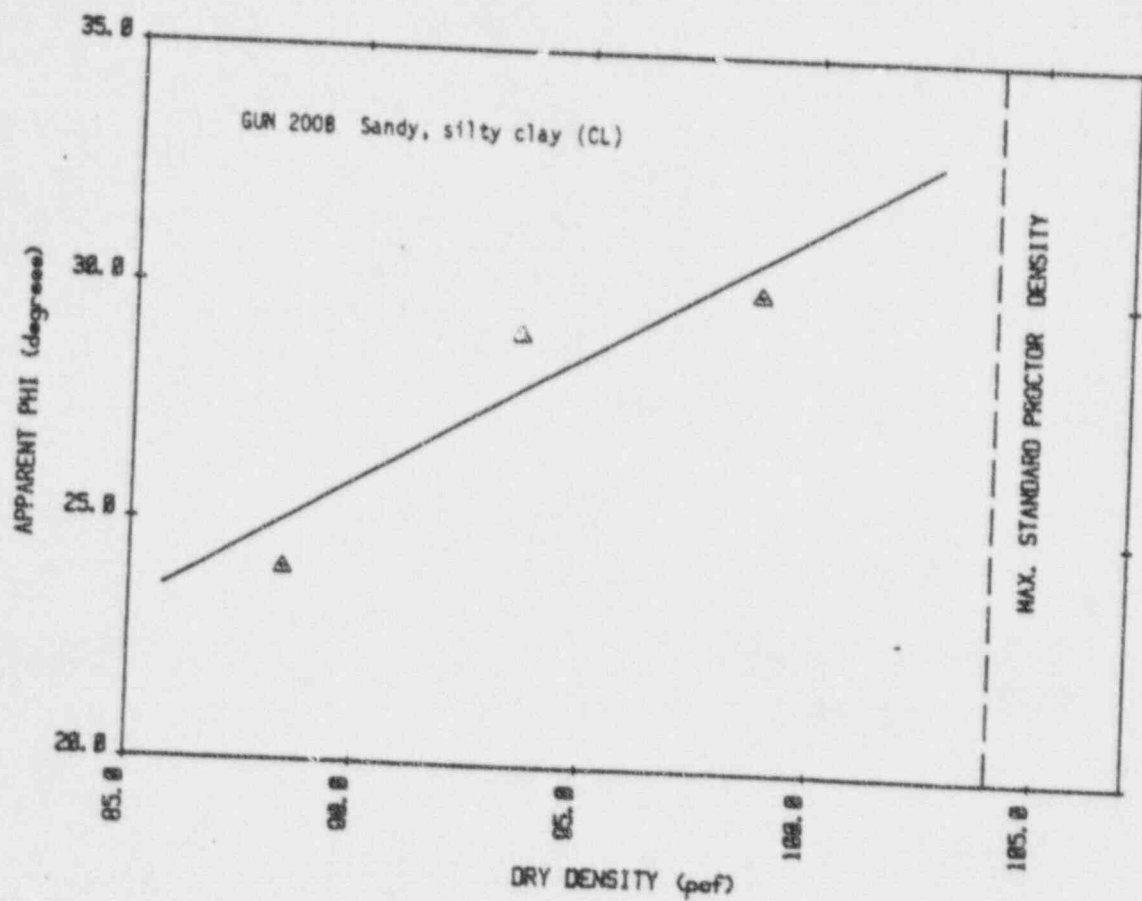
Direct shear Mohr failure envelopes: remolded sand/slime mixture, GUN 211B



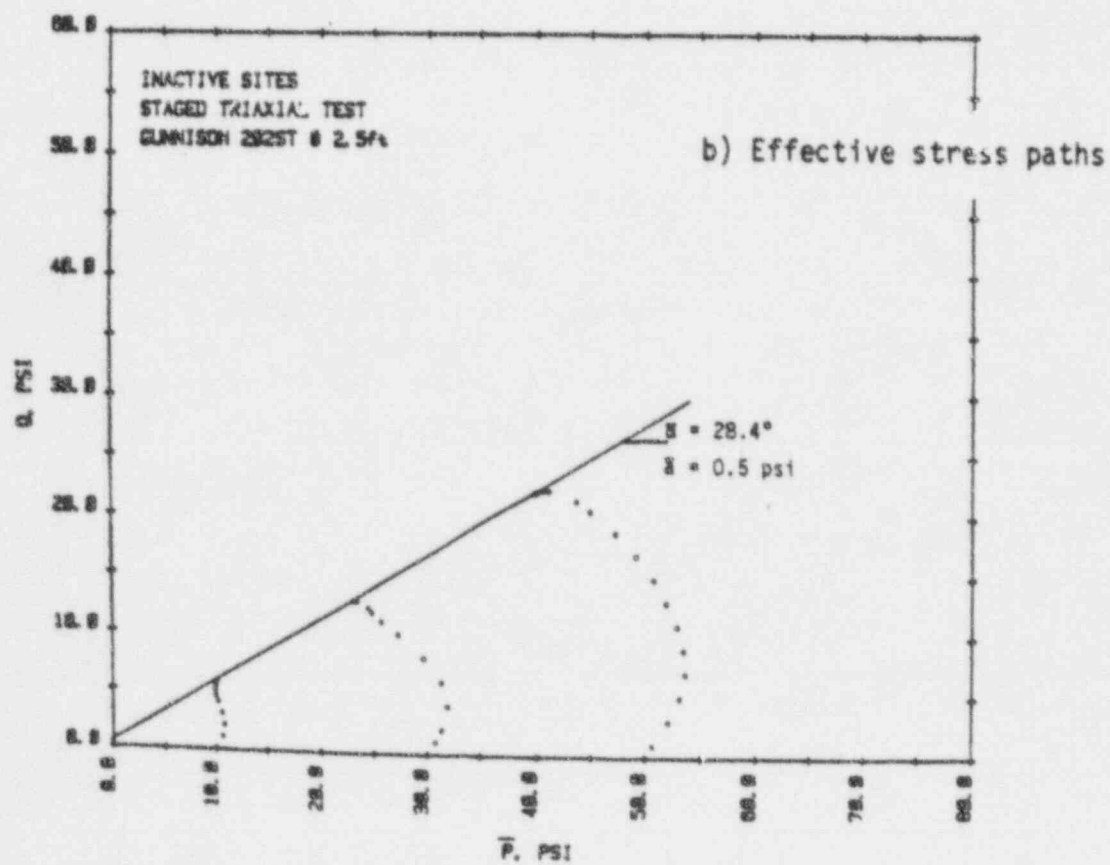
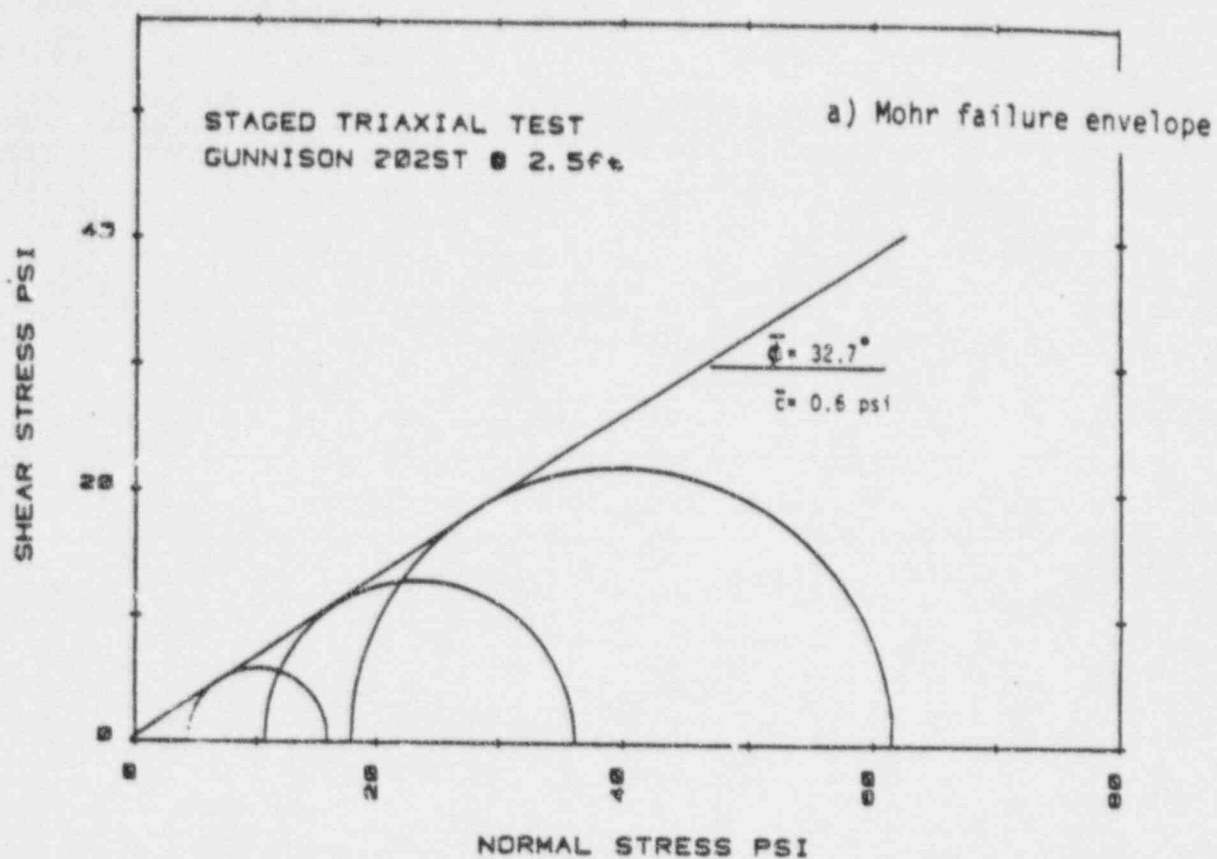
Direct shear Mohr failure envelopes: remolded sand sample, GUN 206B



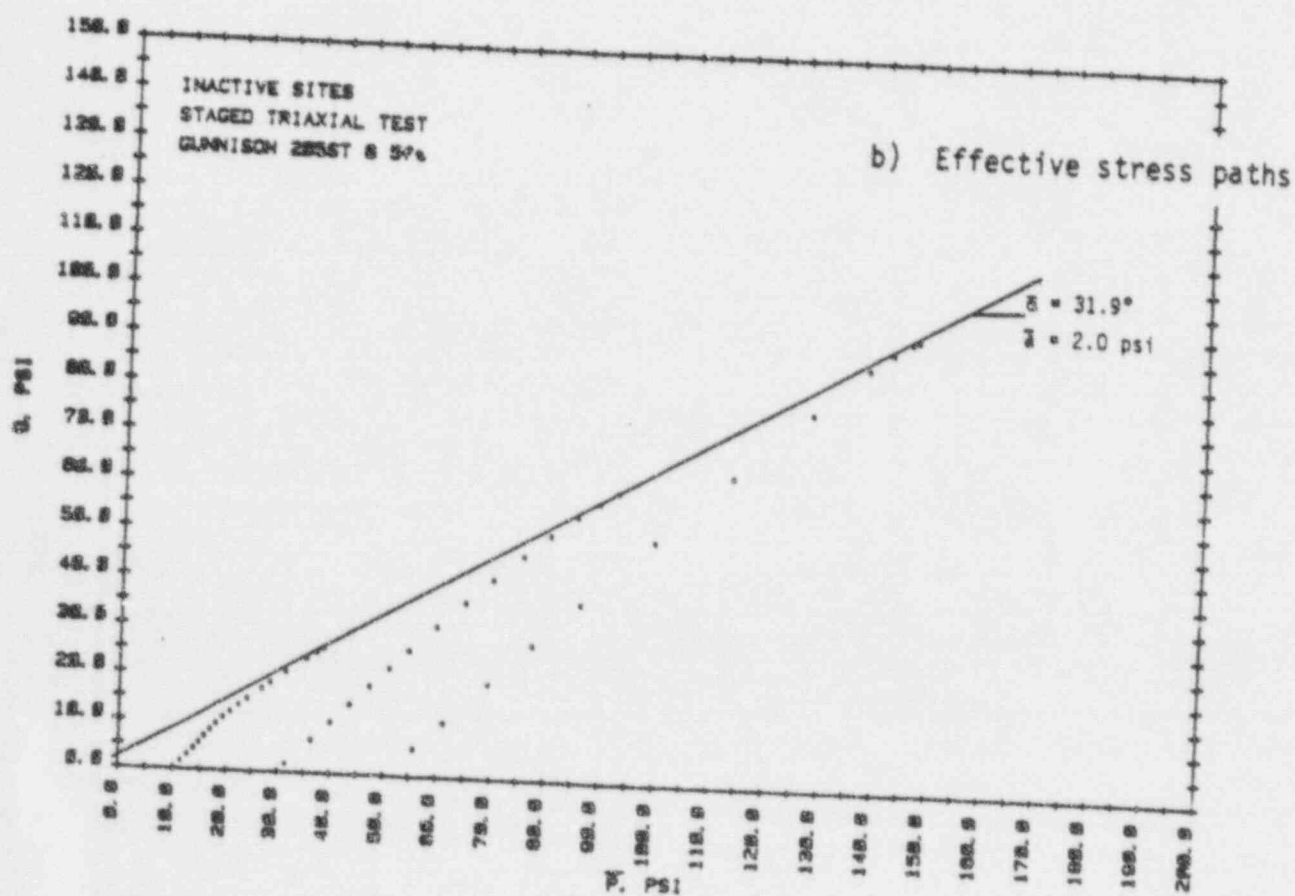
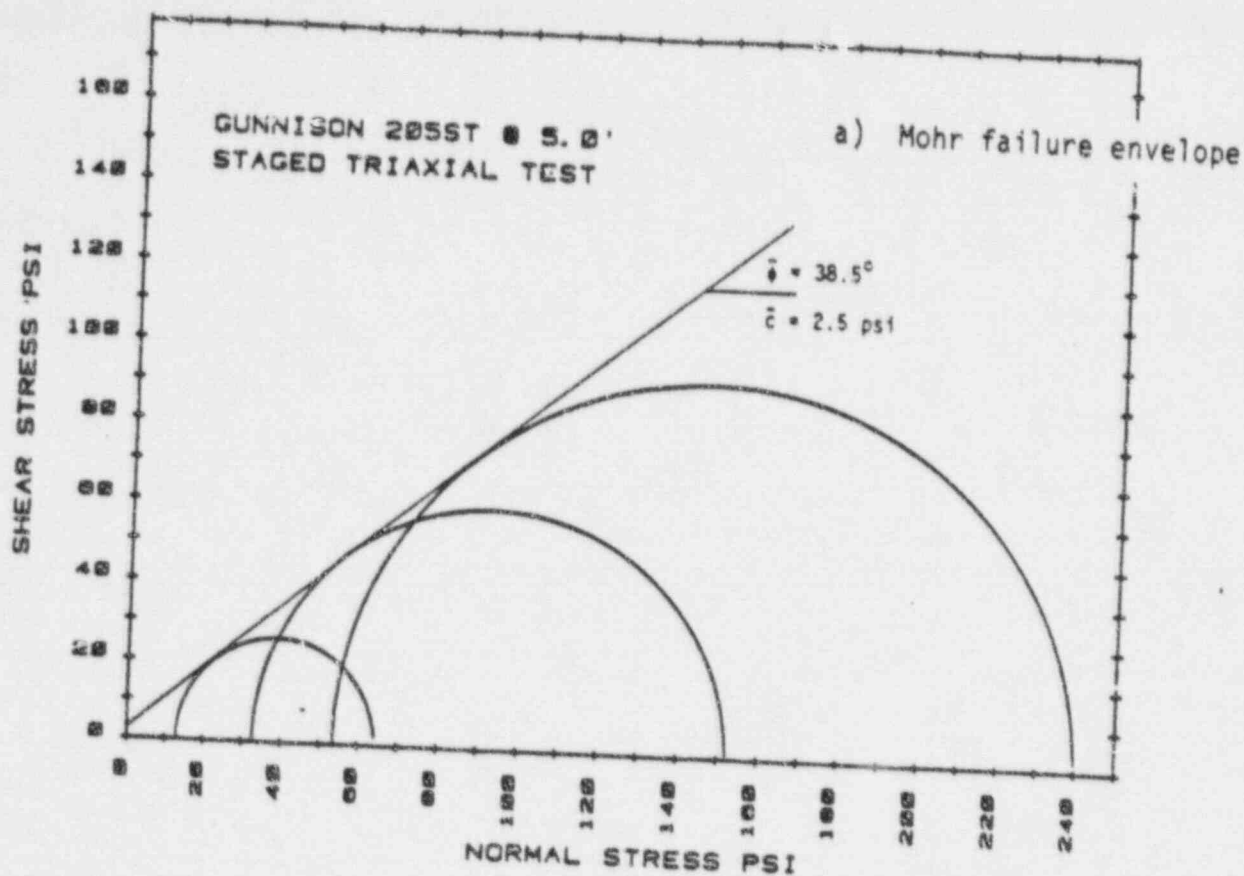
Angle of internal friction as a function of dry density
for a sand and a sand/slime mixture



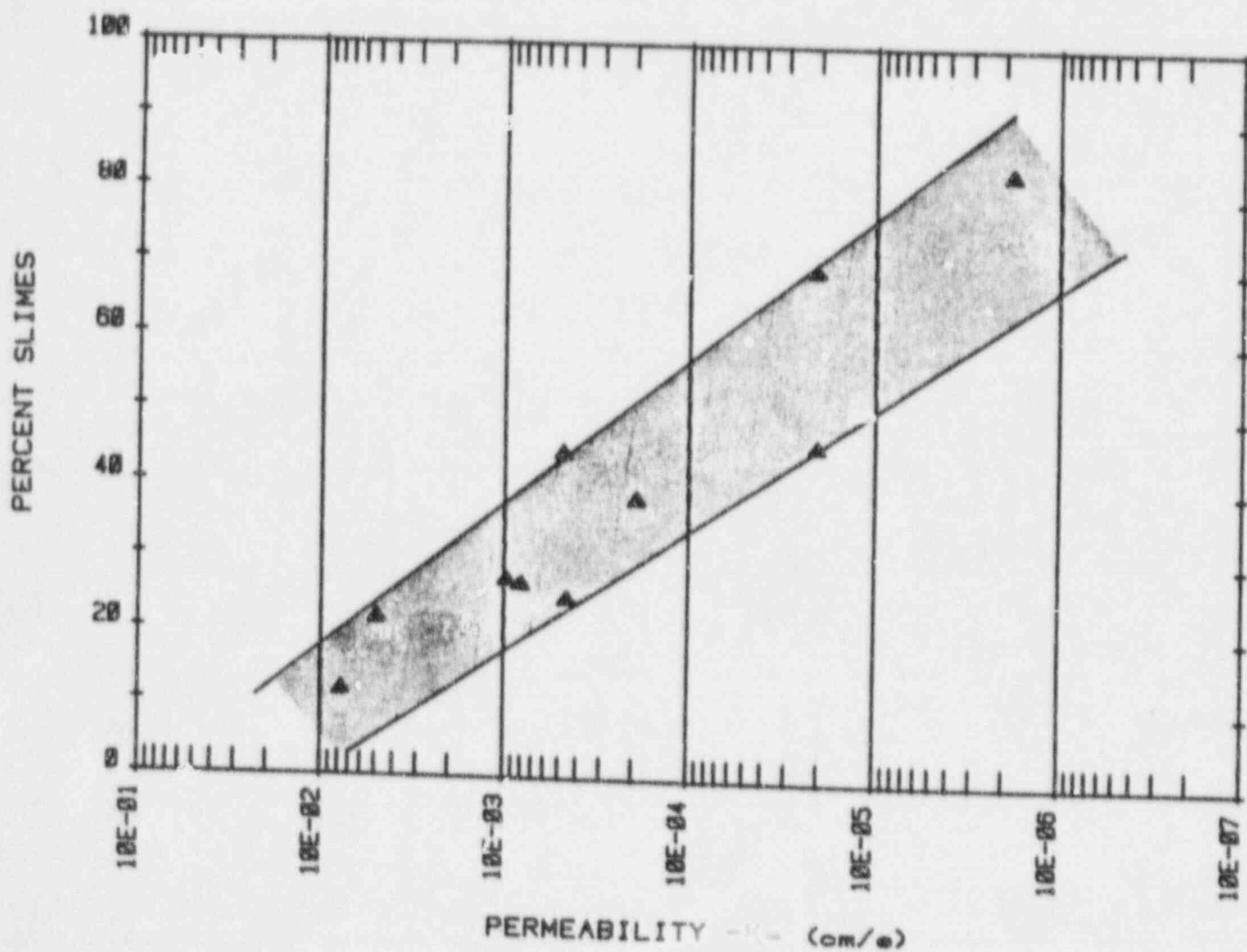
Apparent angle of internal friction as a function of dry density
for a sandy slimes sample



Staged triaxial test results (slime sample)

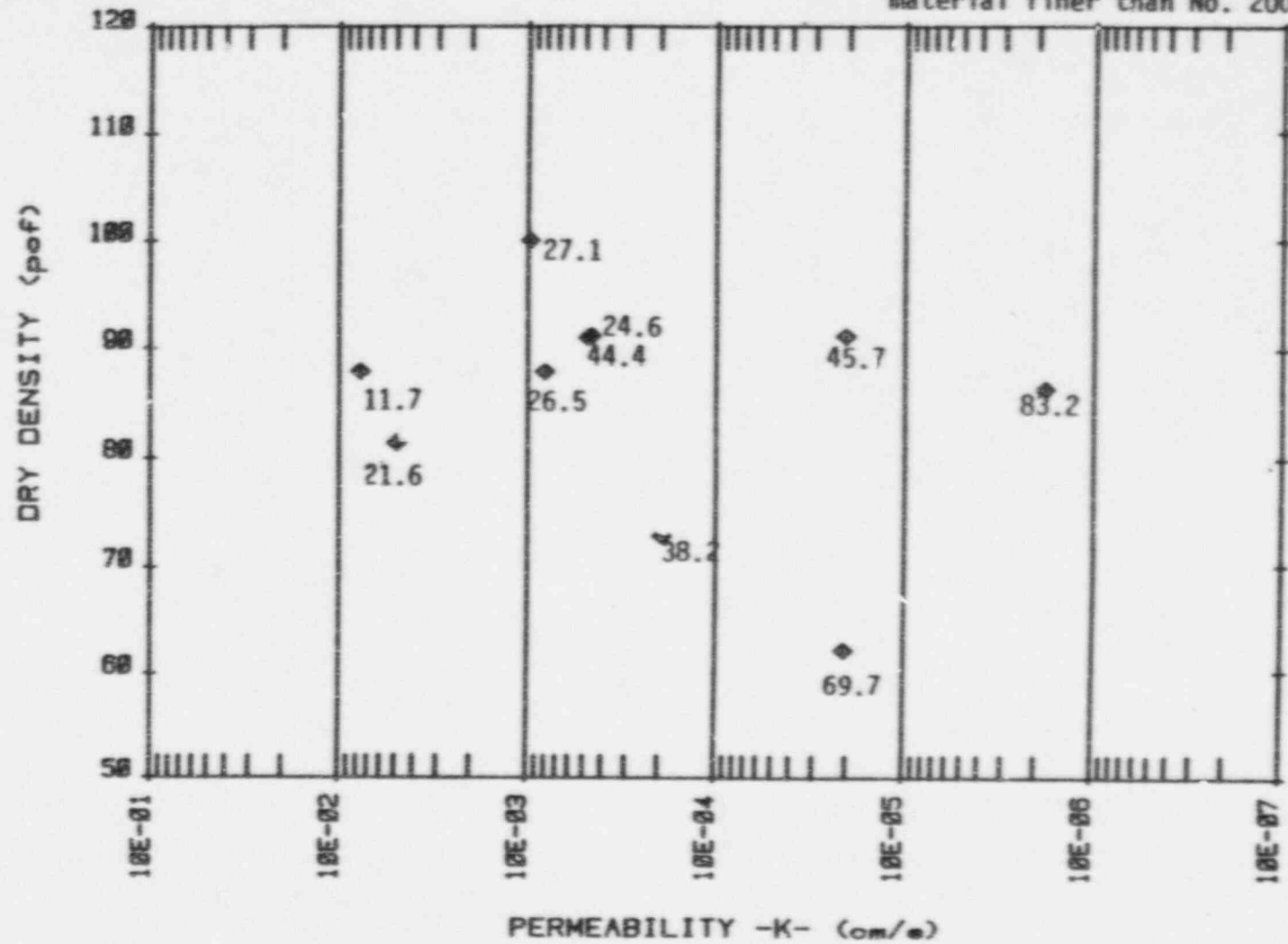


Staged triaxial test (CU) results (sand sample)

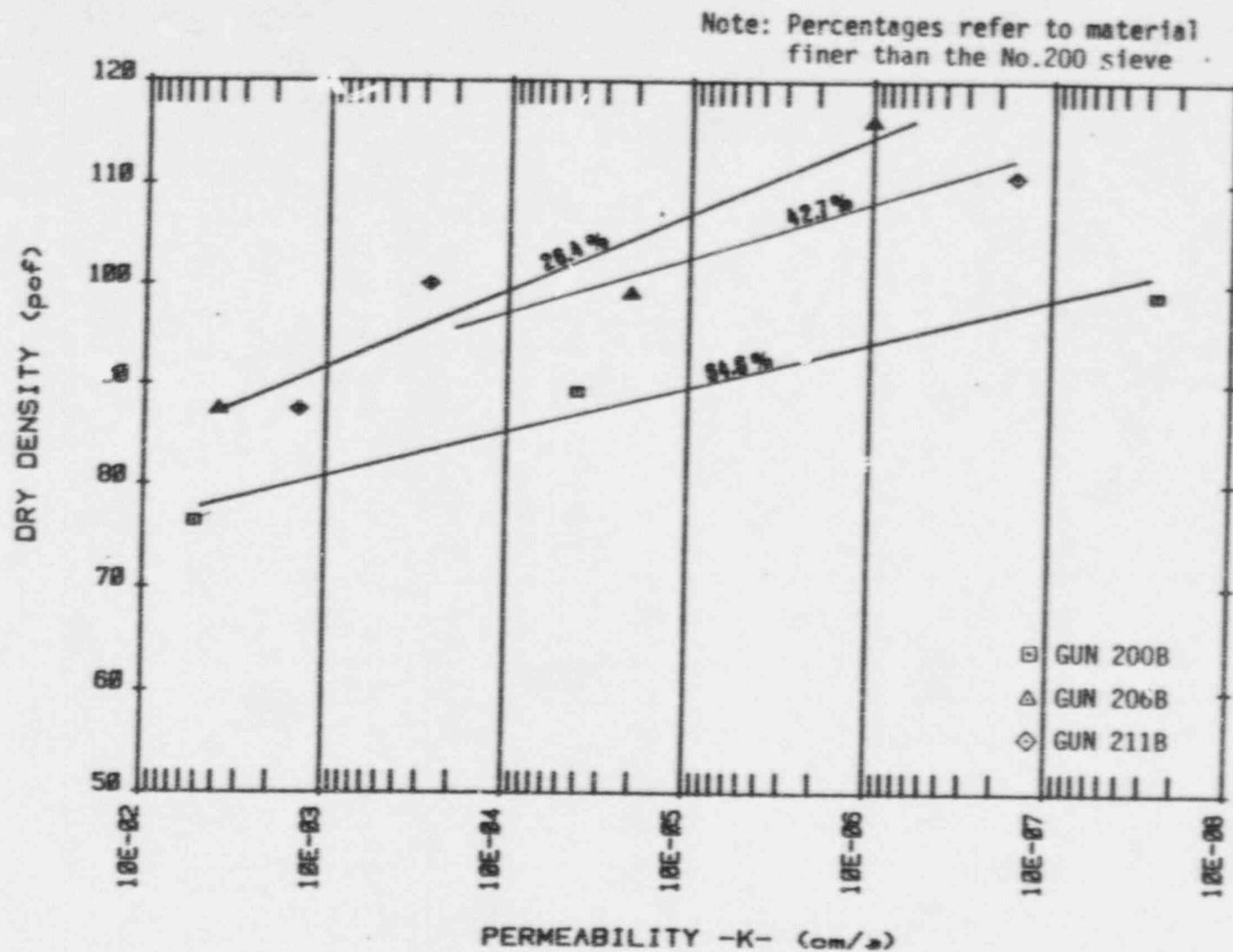


Saturated hydraulic conductivity of California tubes.

Note: Numbers refer to samples' percent material finer than No. 200 sieve



Saturated hydraulic conductivity versus dry density California tube samples



Saturated hydraulic conductivity for remolded bulk samples at various packing densities

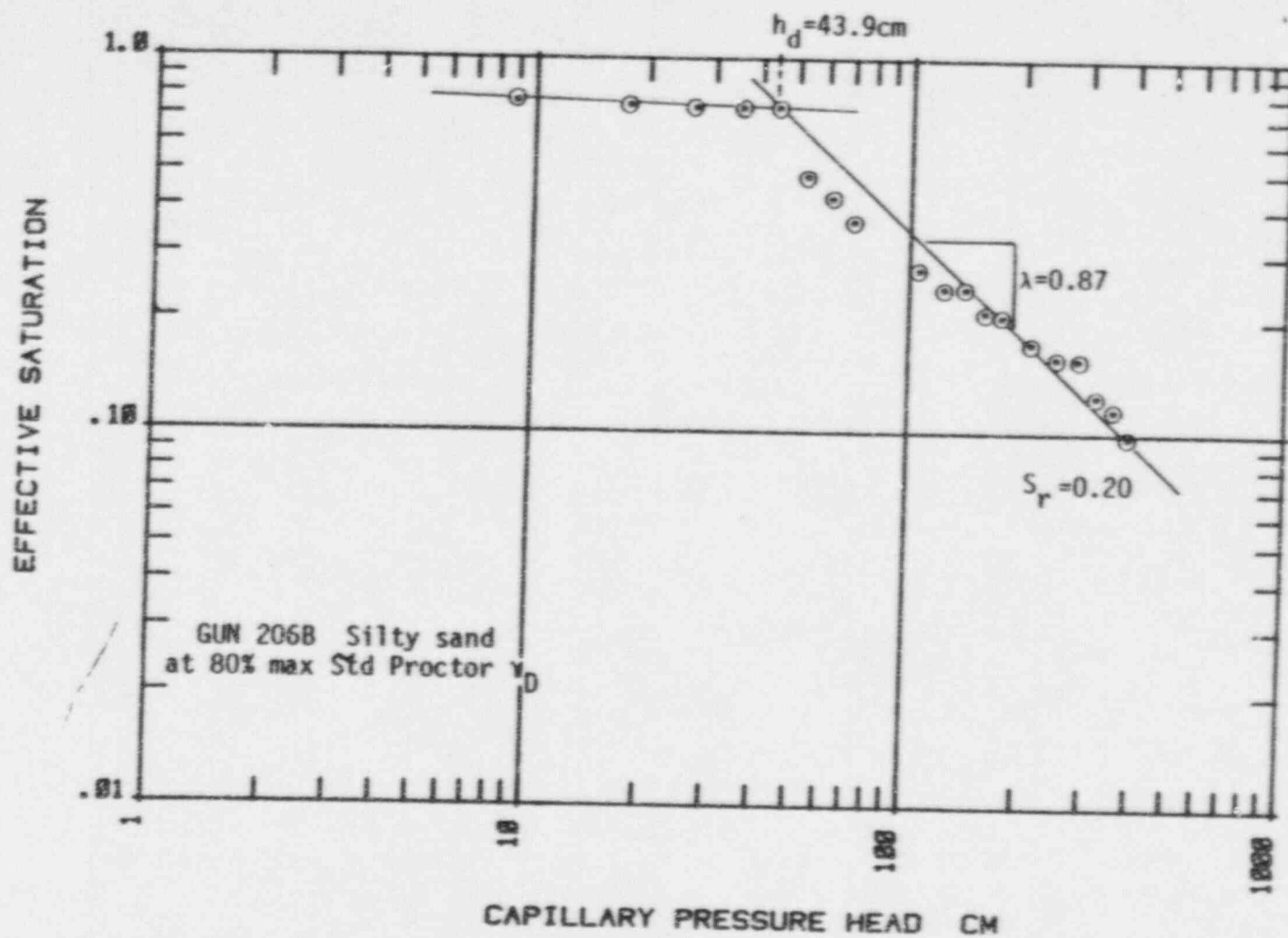
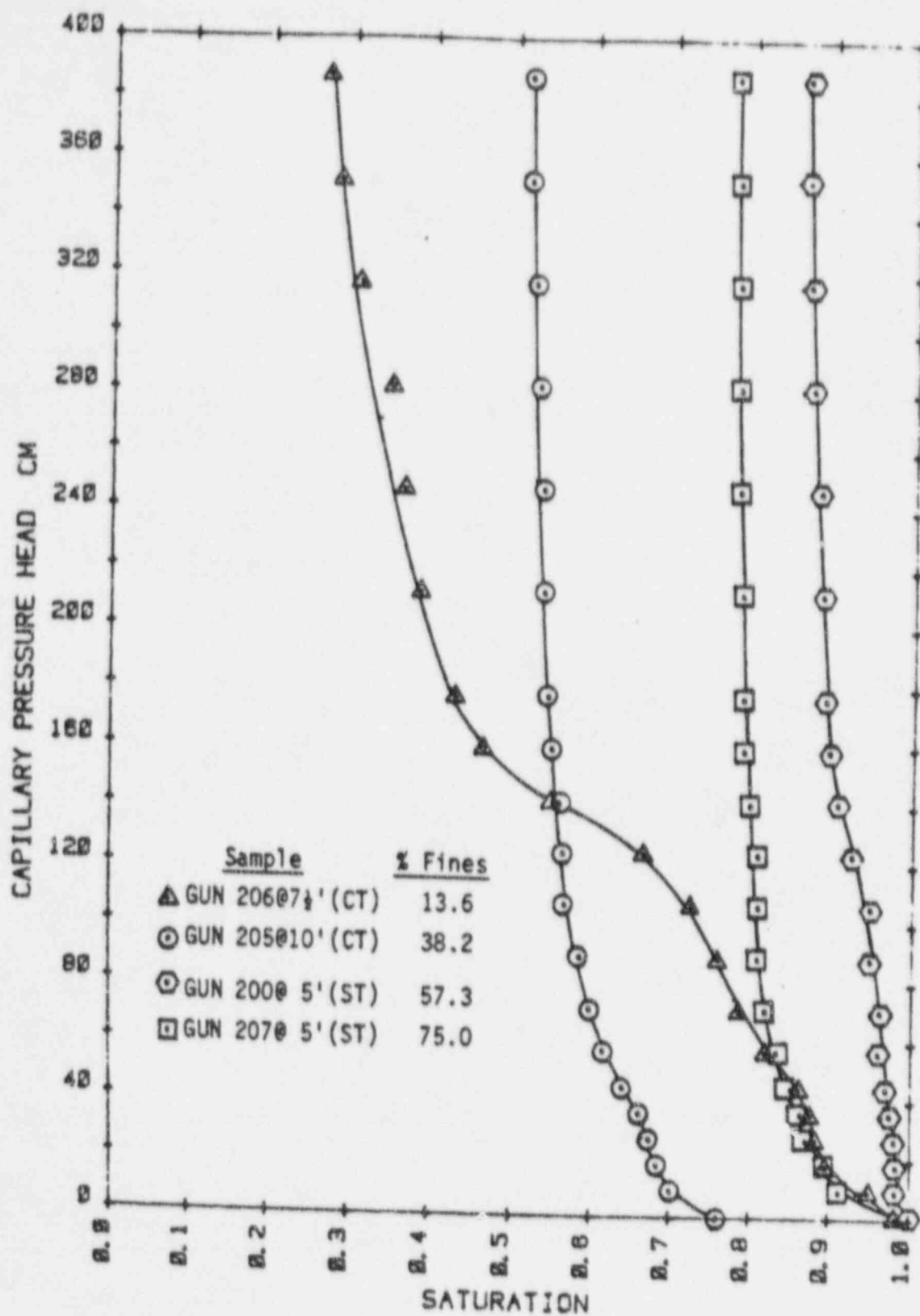
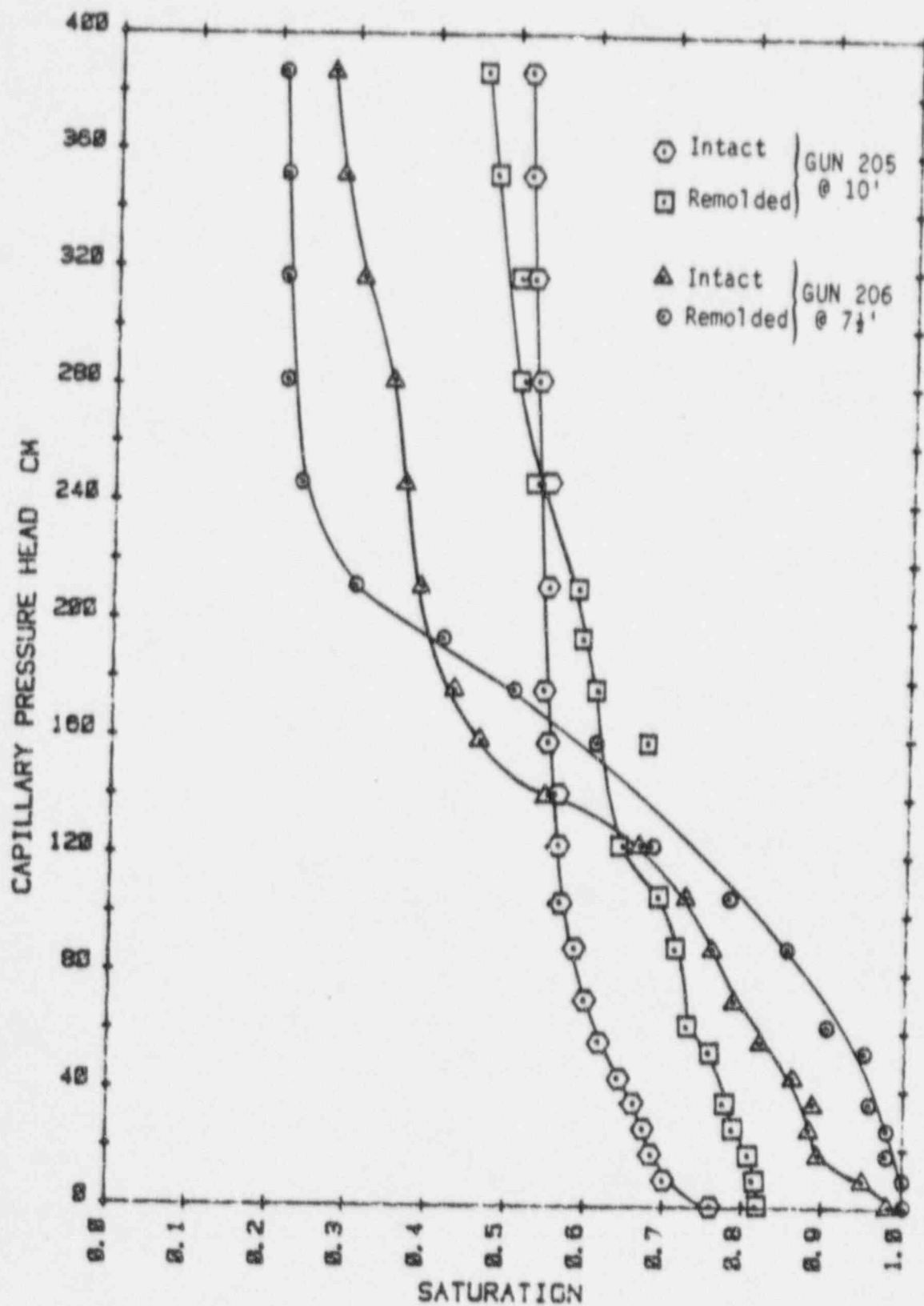


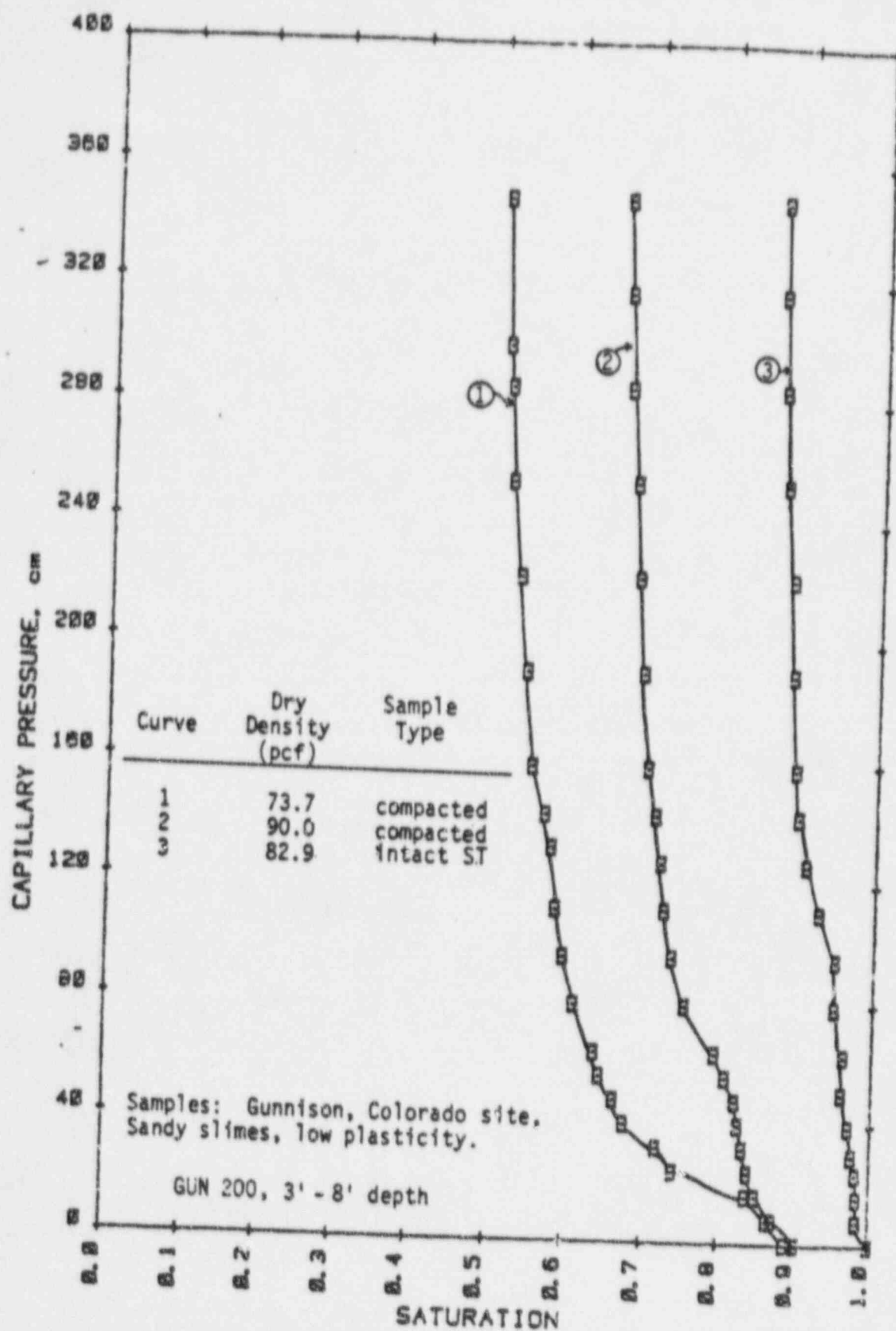
Illustration of the Brooks-Corey method for determining hydraulic parameters of partially saturated materials



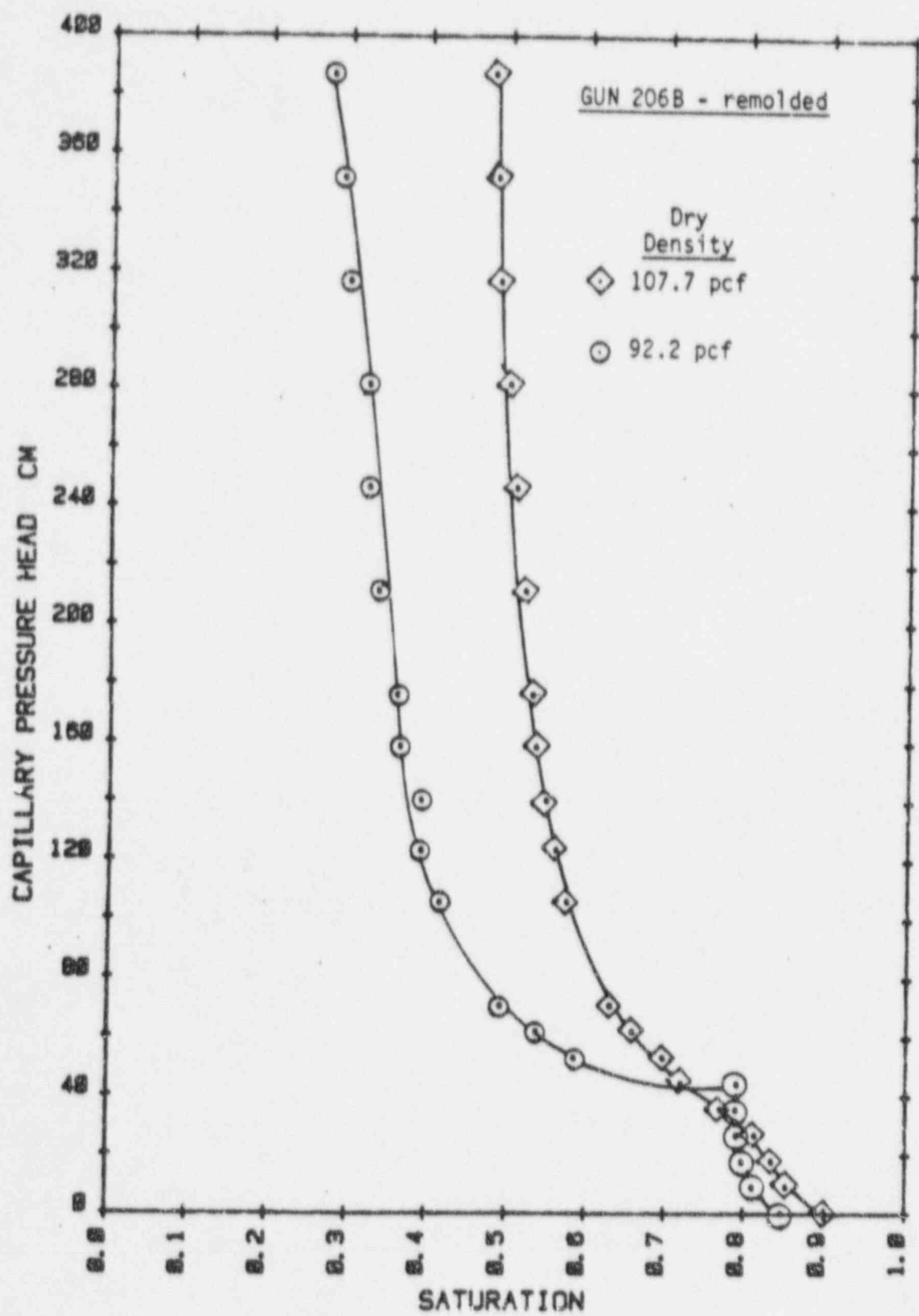
Pressure-saturation curves for intact tube samples



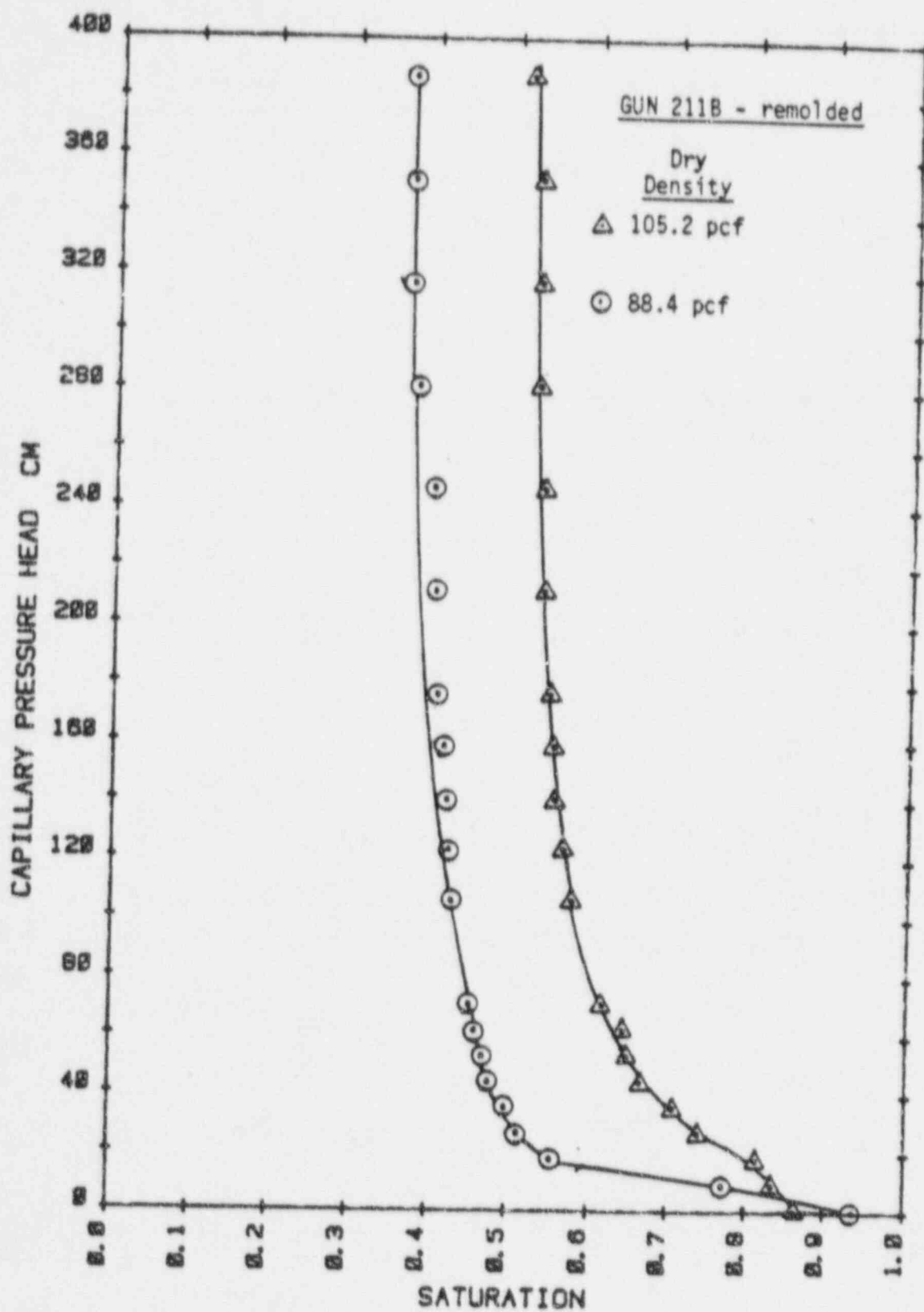
Comparison of desaturation curves for two samples, both intact and remolded



Pressure-saturation curves for GUN 200: comparison of intact sample with dense and loose remolded bulk samples



Pressure-saturation curves for a silty sand, GUN 206B



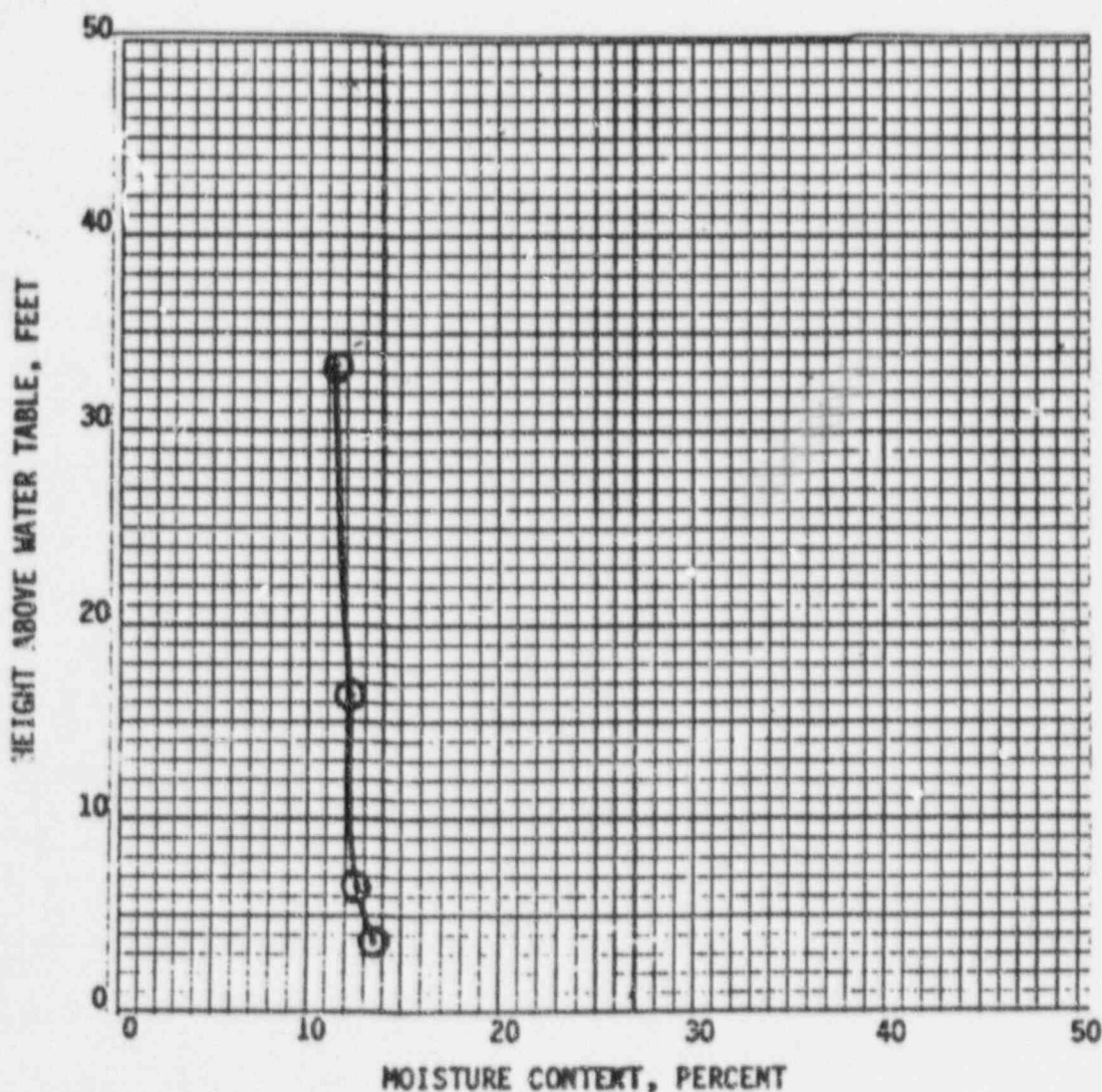
Pressure-saturation curves for a sand/slime mixture, GUN 211B

ASTM D 2325
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 1 + 1A
Depth: 2-5' Date: _____ Ring No.: 1 + 1A
Identification: 2/6 M3 S.W.A. 142 Soil type: _____
Initial natural moisture content: _____ % Sample type: Recompacted
Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
Void ratio: _____; Specific gravity: _____
Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

3.69	3.69	6.69	6.69	16.49	16.49	33.44	33.44		
1	1A	1	1A	1	1A	1	1A		
44.82	44.54	44.48	44.2	44.28	44.02	44.00	43.78		
39.81	39.64	39.93	39.64	39.93	39.64	39.93	39.64		
4.89	4.9	4.55	4.56	4.35	4.38	4.07	4.14		
3.82	3.48	3.82	3.48	3.82	3.48	3.82	3.48		
36.8	36.16	36.11	36.16	36.11	36.16	36.11	36.16		
13.59	13.55	12.60	12.61	12.05	12.11	11.27	11.85		



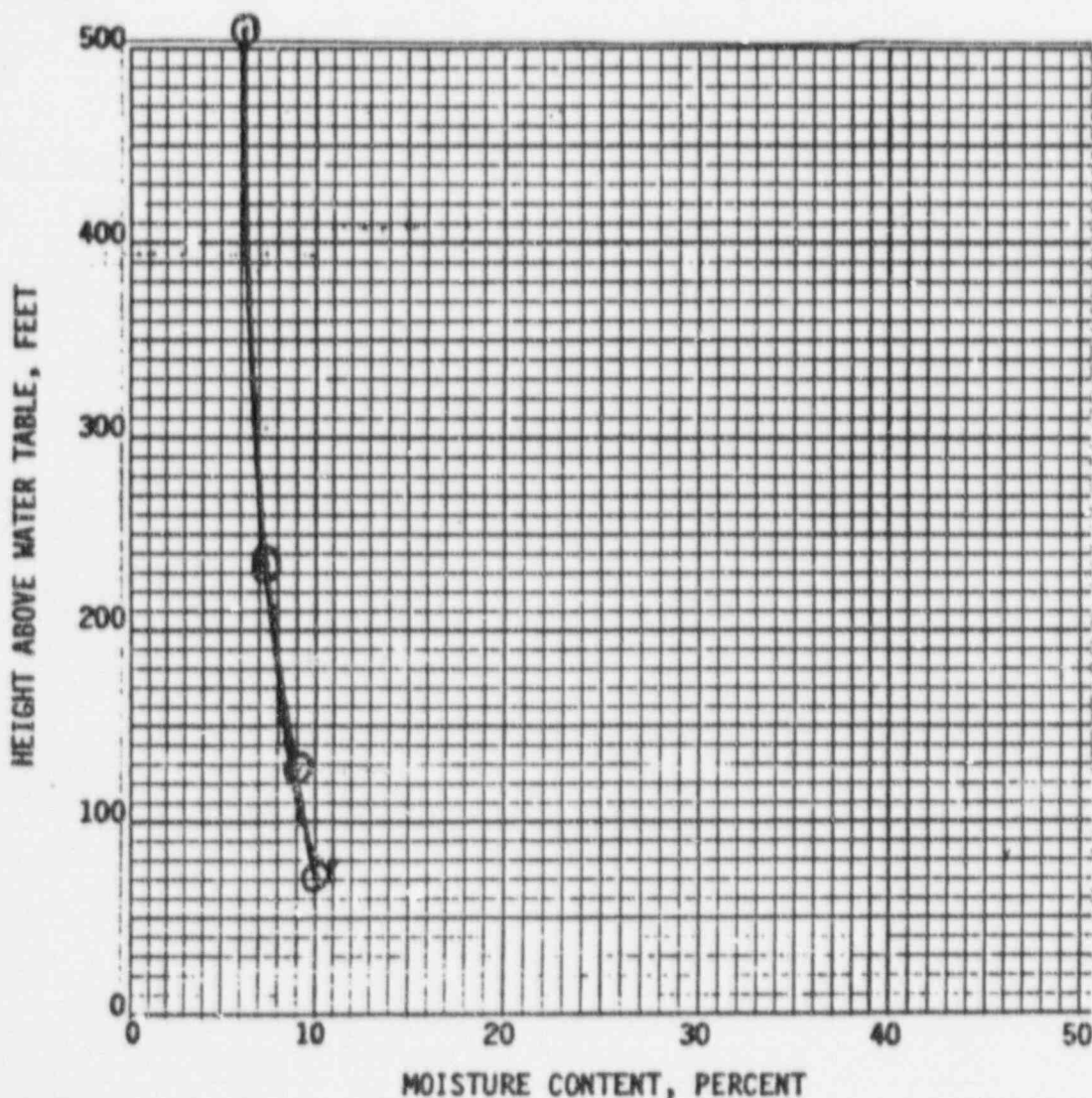
8-19-90
CC Chantley, CSC

ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 1841C
 Depth: 2 to 5' Date: _____ Ring No.: 1841C
 Identification: 2/6 M 3 A-1/K 1+2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

70.33	70.33	129.14	129.14	235.2	235.2	509.6	509.6		
1B	1C	1A	1C	1B	1C	1A	1C		
43.54	43.61	43.15	43.29	42.63	42.64	42.14	42.17		
39.93	39.99	39.93	39.99	39.93	39.99	39.93	39.99		
3.61	3.62	3.22	3.3	2.7	2.65	2.21	2.18		
3.81	3.83	3.81	3.83	3.81	3.83	3.81	3.83		
36.12	36.16	36.12	36.16	36.12	36.16	36.12	36.16		
9.99	10.01	8.91	9.13	7.48	7.33	6.12	6.03		



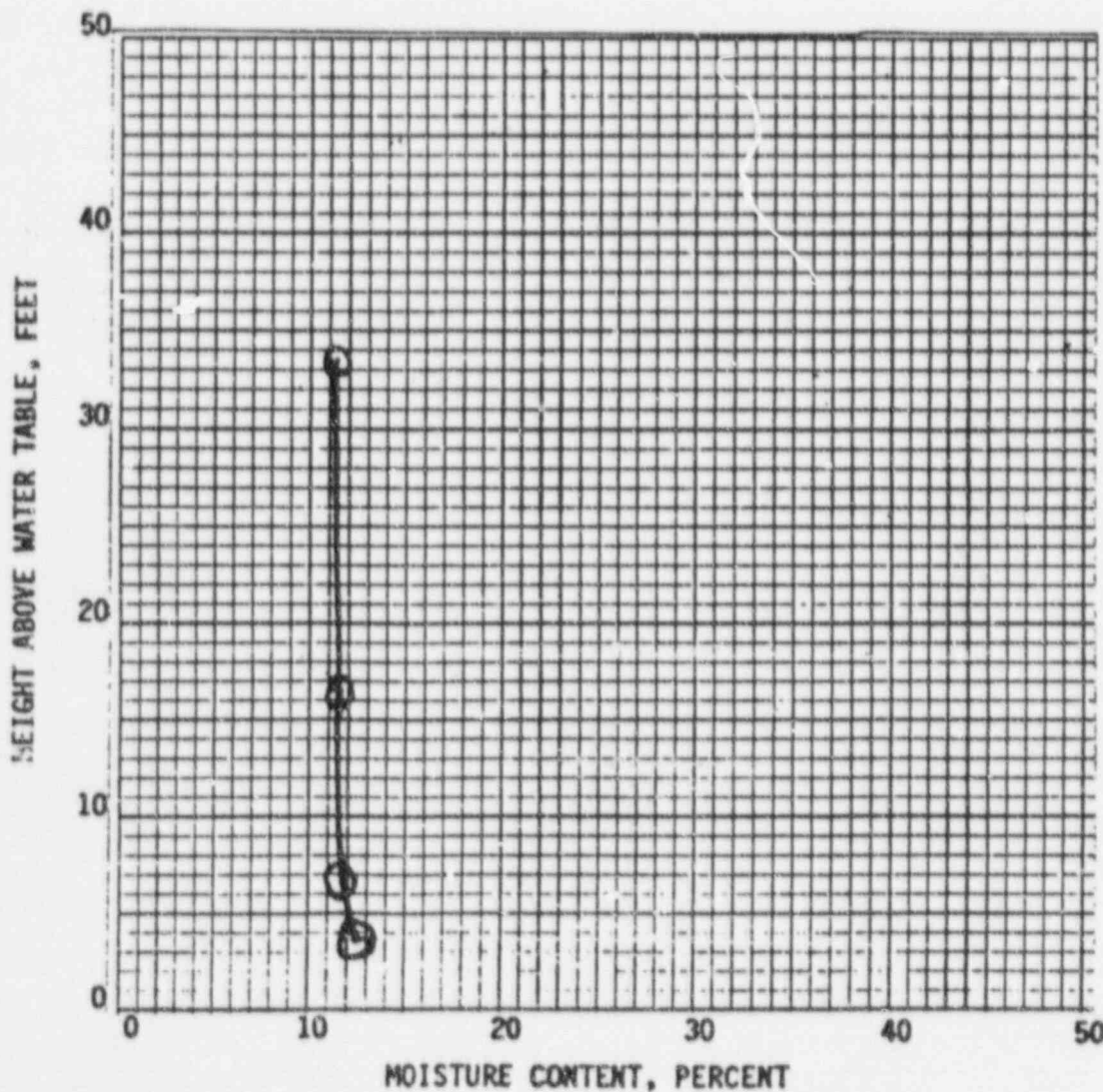
8-19-90
cc chand by use

ASTM D 2325
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 242A
 Depth: 2 to 7' Date: _____ Ring No.: 242A
 Identification: 217M4 Bunk 142 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92.9% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

3.69	3.69	6.69	6.69	16.49	16.49	33.49	33.49		
2	2A	2	2A	2	2A	2	2A		
44.77	45.14	49.5	44.85	44.34	44.72	44.18	44.62		
40.17	40.44	40.17	40.44	40.17	40.44	40.17	40.44		
4.6	4.7	4.33	4.41	4.17	4.29	4.01	4.18		
3.49	3.69	3.49	3.69	3.49	3.69	3.49	3.69		
36.68	36.75	36.68	36.75	36.68	36.75	36.68	36.75		
12.54	12.79	11.80	12.00	11.37	11.67	10.93	11.37		



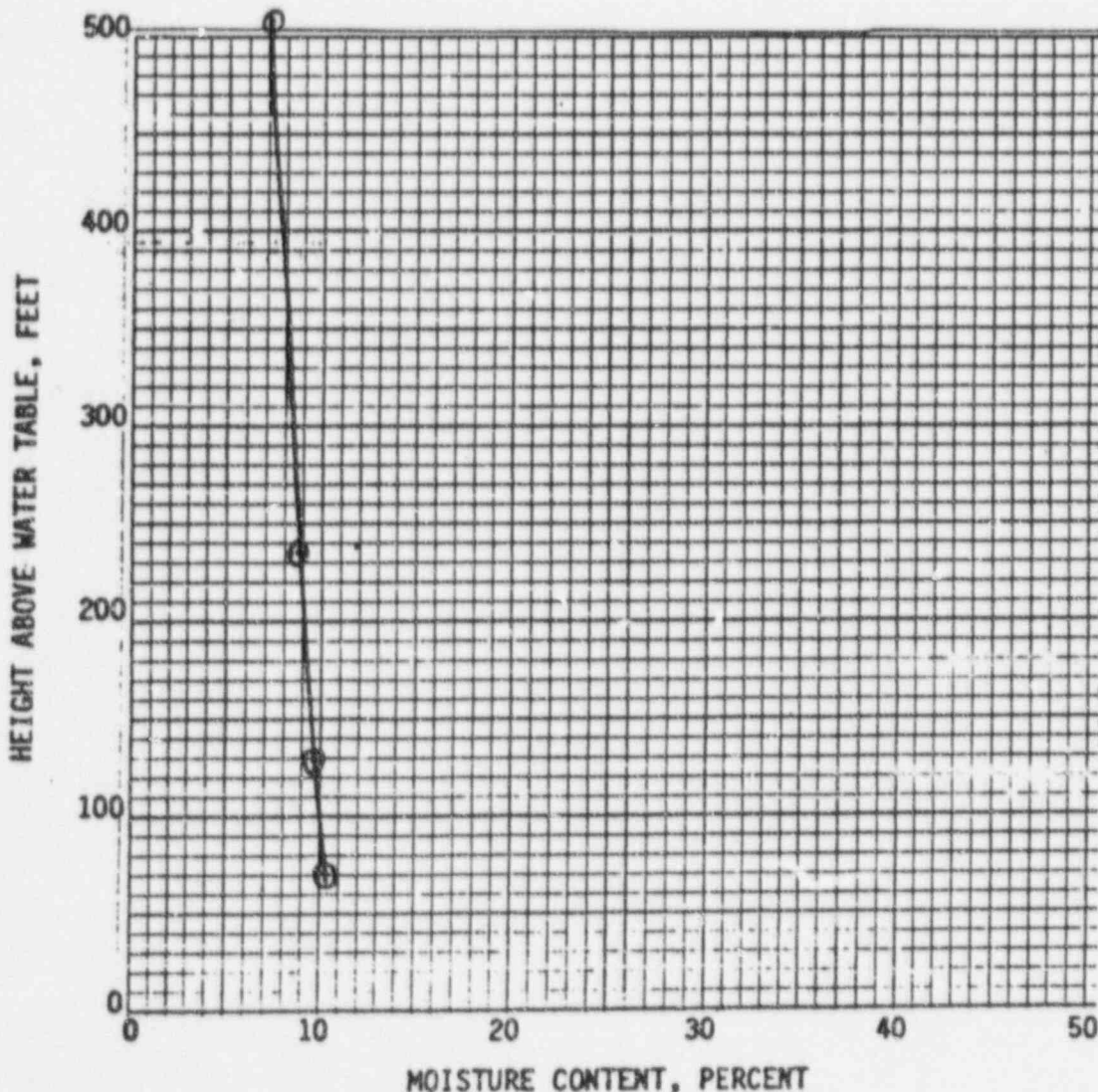
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 2842C
 Depth: 2 ft 2' Date: _____ Ring No.: 2842C
 Identification: 217 M4 A-1X 1 & 2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Resampled
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92.9% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

70.33	70.33	129.14	129.14	235.2	235.2	509.6	509.6		
2B	2C	2B	2C	2B	2C	2B	2C		
440.6	44.11	43.83	43.95	43.48	43.59	43.0	42.84		
40.3	40.36	40.3	40.36	40.3	40.36	40.3	40.36		
3.26	3.25	3.53	3.59	3.18	3.23	2.7	2.48		
3.68	3.66	3.68	3.66	3.68	3.66	3.68	3.66		
36.62	36.70	36.62	36.70	36.62	36.70	36.62	36.70		
10.27	10.22	9.64	9.28	8.68	8.80	7.37	6.76		



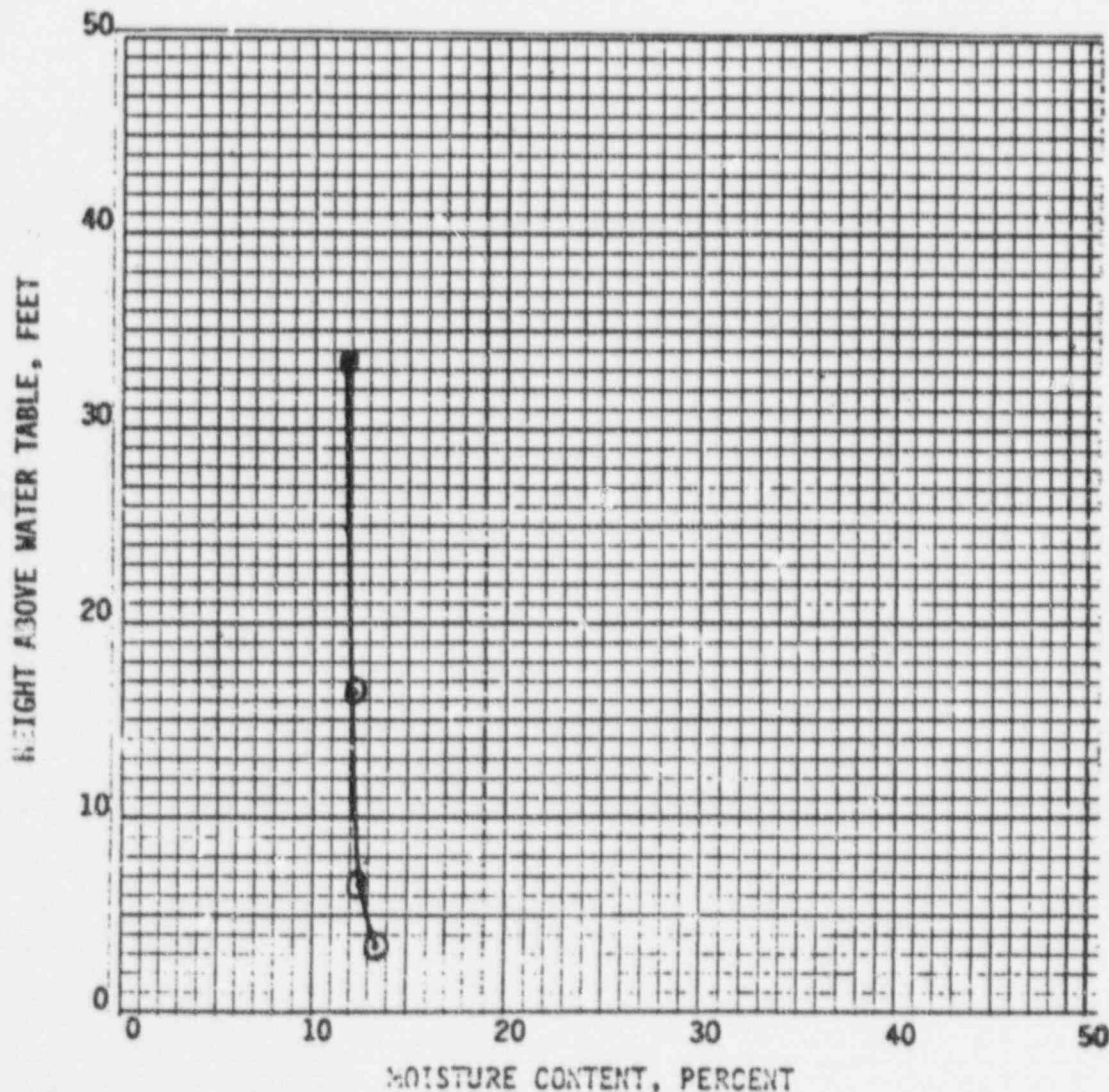
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ASTM D 2325
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 3+3A
 Depth: 1 to 5' Date: _____ Ring No.: 3+3A
 Identification: 218MS B&K 1+2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92.9% Max density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

3.69	3.69	6.69	6.69	16.49	16.49	33.44	33.44		
3	3A	3	3A	3	3A	3	3A		
45.37	45.29	45.0	44.95	44.89	44.83	44.71	44.73		
40.47	40.31	40.47	40.31	40.47	40.31	40.47	40.31		
4.9	4.98	4.53	4.64	4.42	4.52	4.24	4.42		
3.82	3.66	3.82	3.66	3.82	3.66	3.82	3.66		
36.65	36.65	36.65	36.65	36.65	36.65	36.65	36.65		
13.37	13.59	12.36	12.66	12.06	12.33	11.57	12.06		



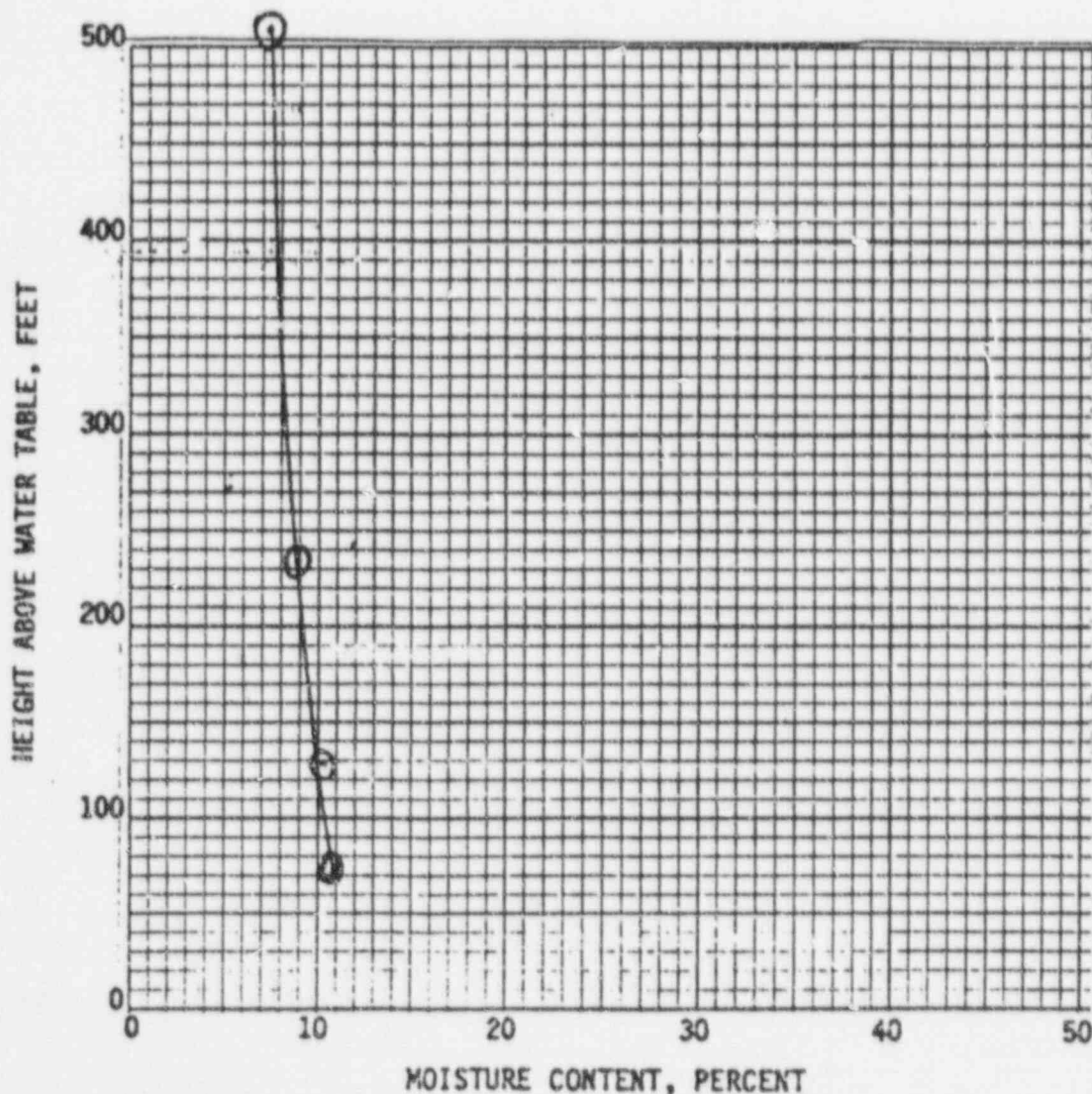
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 3643C
 Depth: 1 to 5' Date: _____ Ring No.: 3643C
 Identification: 218MS B-1/K 1+2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92.7% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

70.33	70.33	129.14	129.14	235.2	235.2	509.6	509.6		
3B	3C	3B	3C	3B	3C	3B	3C		
52.06	52.02	51.85	51.76	51.24	51.29	50.65	50.69		
47.98	47.97	47.98	47.98	47.98	47.97	47.98	47.97		
4.08	4.05	3.87	3.78	3.26	3.32	2.67	2.72		
10.67	10.55	10.67	10.55	10.67	10.55	10.67	10.55		
37.31	37.42	37.31	37.42	37.31	37.42	37.31	37.42		
10.94	10.82	10.37	10.11	8.74	8.87	7.16	7.27		



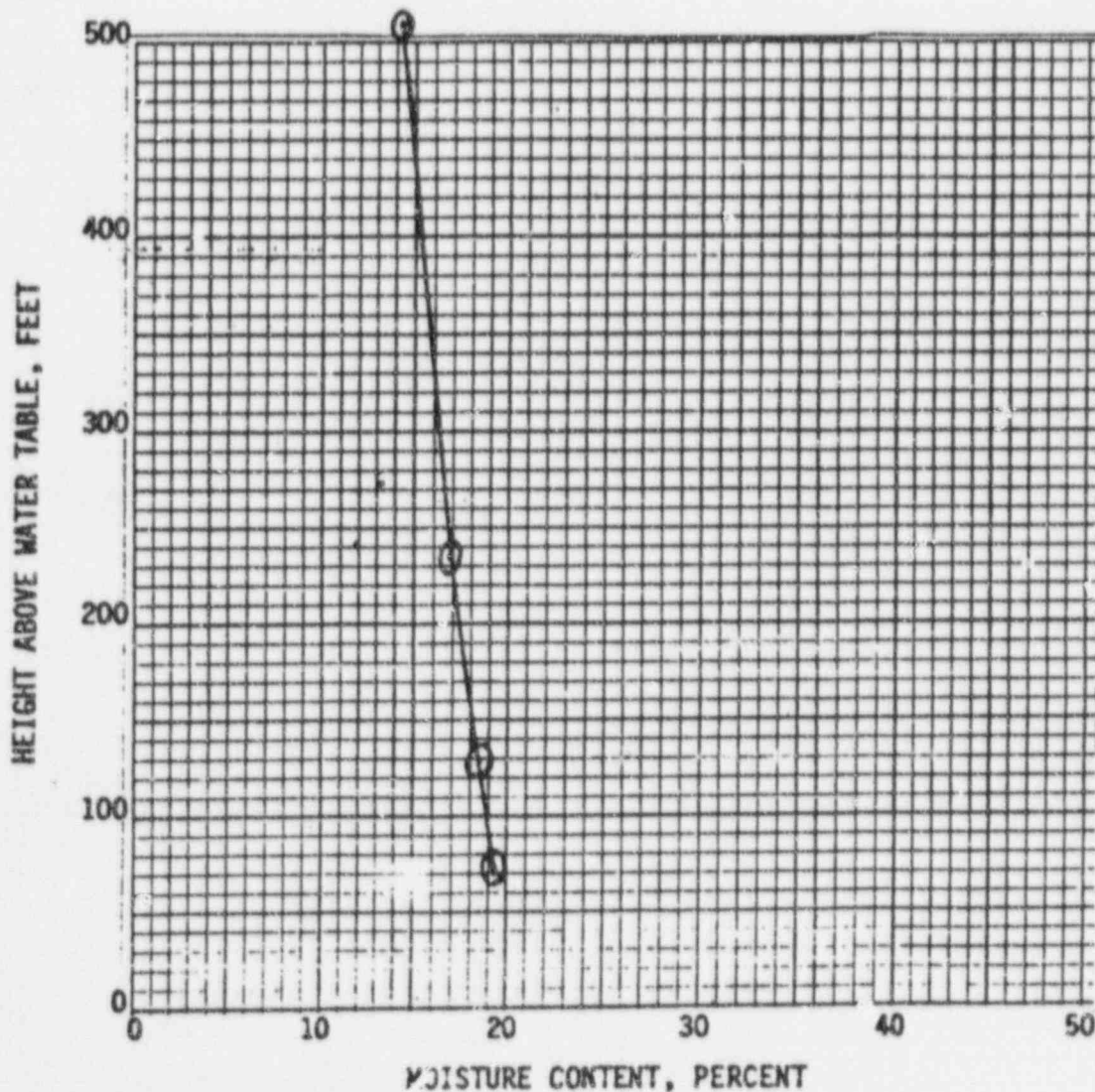
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 485-4C
 Depth: 5 ft. 5' Date: _____ Ring No.: 485-4C
 Identification: 220 M 6 B-1/K 1 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

70.33	70.33	128.14	129.14	215.2	235.2	509.6	509.6		
48	4C	48	4C	48	4C	48	4C		
50.94	51.1	50.69	50.75	50.88	50.19	48.98	49.53		
44.38	44.48	44.38	44.48	44.38	44.48	44.38	44.48		
6.56	6.62	6.31	6.27	5.7	5.71	4.6	5.05		
10.49	10.47	10.49	10.47	10.49	10.47	10.49	10.47		
33.89	34.01	33.89	34.01	33.89	34.01	33.89	34.01		
19.36	19.46	18.62	18.44	16.82	16.78	12.57	14.84		



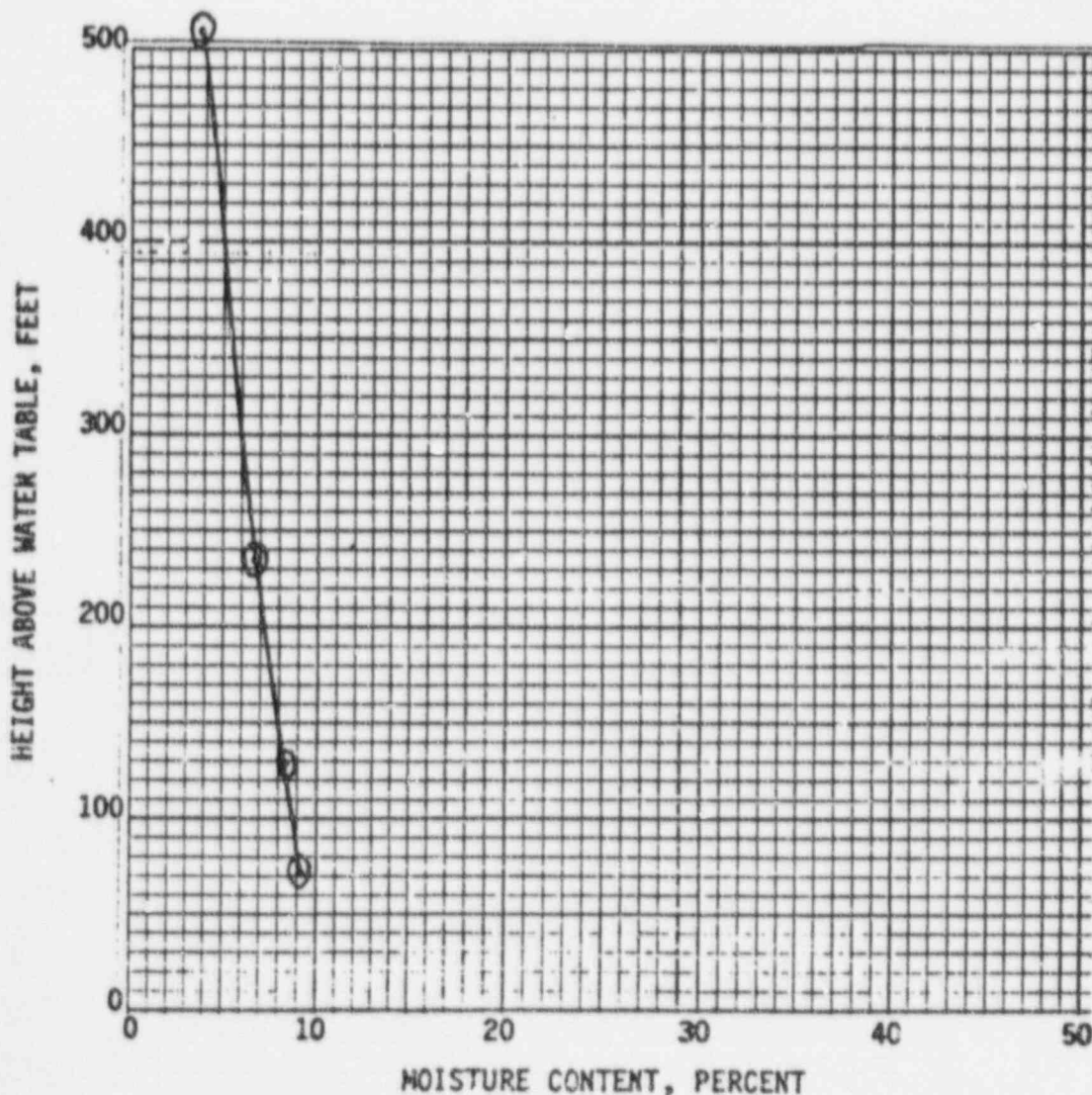
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 5845C
 Depth: 2 to 7' Date: _____ Ring No.: 5845C
 Identification: 221 M-7 B-1K 1 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

70.33	70.32	129.14	129.14	235.2	235.2	509.6	509.6		
5A	5C	5B	5C	5B	5C	5A	5C		
52.19	52.31	51.93	52.08	51.04	51.60	49.20	51.18		
48.63	48.88	48.63	48.88	48.63	48.88	48.63	48.88		
3.56	3.43	3.3	3.2	2.41	2.72	0.67	2.3		
10.48	10.45	10.48	10.45	10.48	10.45	10.48	10.45		
38.15	38.43	38.15	38.43	38.15	38.43	38.15	38.43		
9.33	8.93	8.65	8.33	6.32	7.08	1.76	5.98		



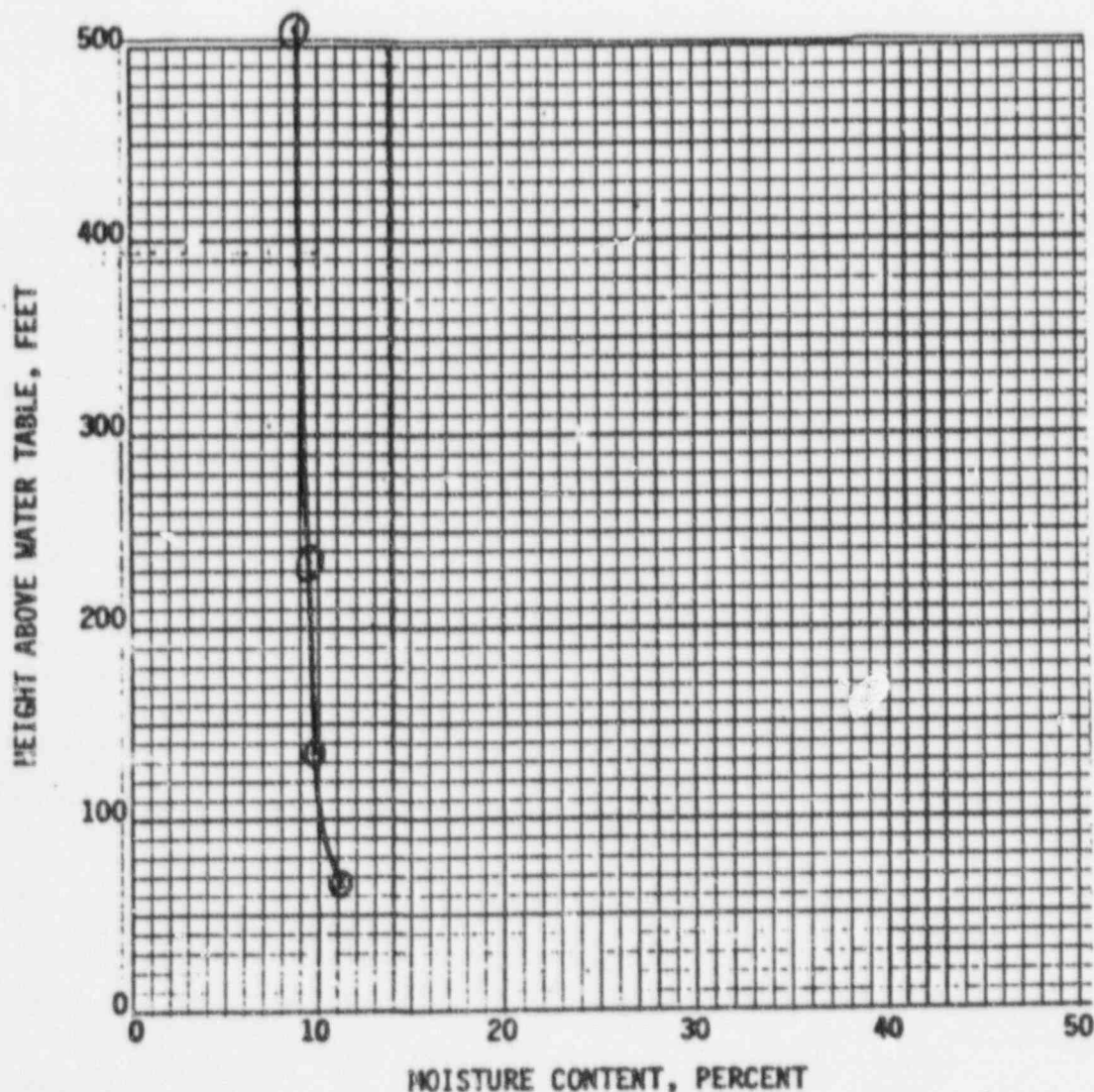
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 6846C
 Depth: 6 to 11' Date: _____ Ring No.: 6846C
 Identification: 222 M & B/K 2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92.70 Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net sampl Wt, g
- (8) Sampl Moisture %
- (9) Dry unit Wt of sampl, g
- (10) Sampl moisture vol %

66.88	66.88	133.25	133.25	235.2	235.2	502.7	502.7
6B	6C	6B	6C	6B	6C	6B	6C
52.96	53.47	52.59	52.89	52.42	52.79	52.17	52.58
48.81	49.09	48.81	49.09	48.81	49.09	48.81	49.09
4.15	4.38	3.73	3.8	3.61	3.7	3.36	3.49
10.51	10.45	10.51	10.45	10.51	10.45	10.51	10.45
38.3	38.64	38.3	38.64	38.3	38.64	38.3	38.64
10.84	11.34	9.74	9.83	9.43	9.58	8.77	9.03



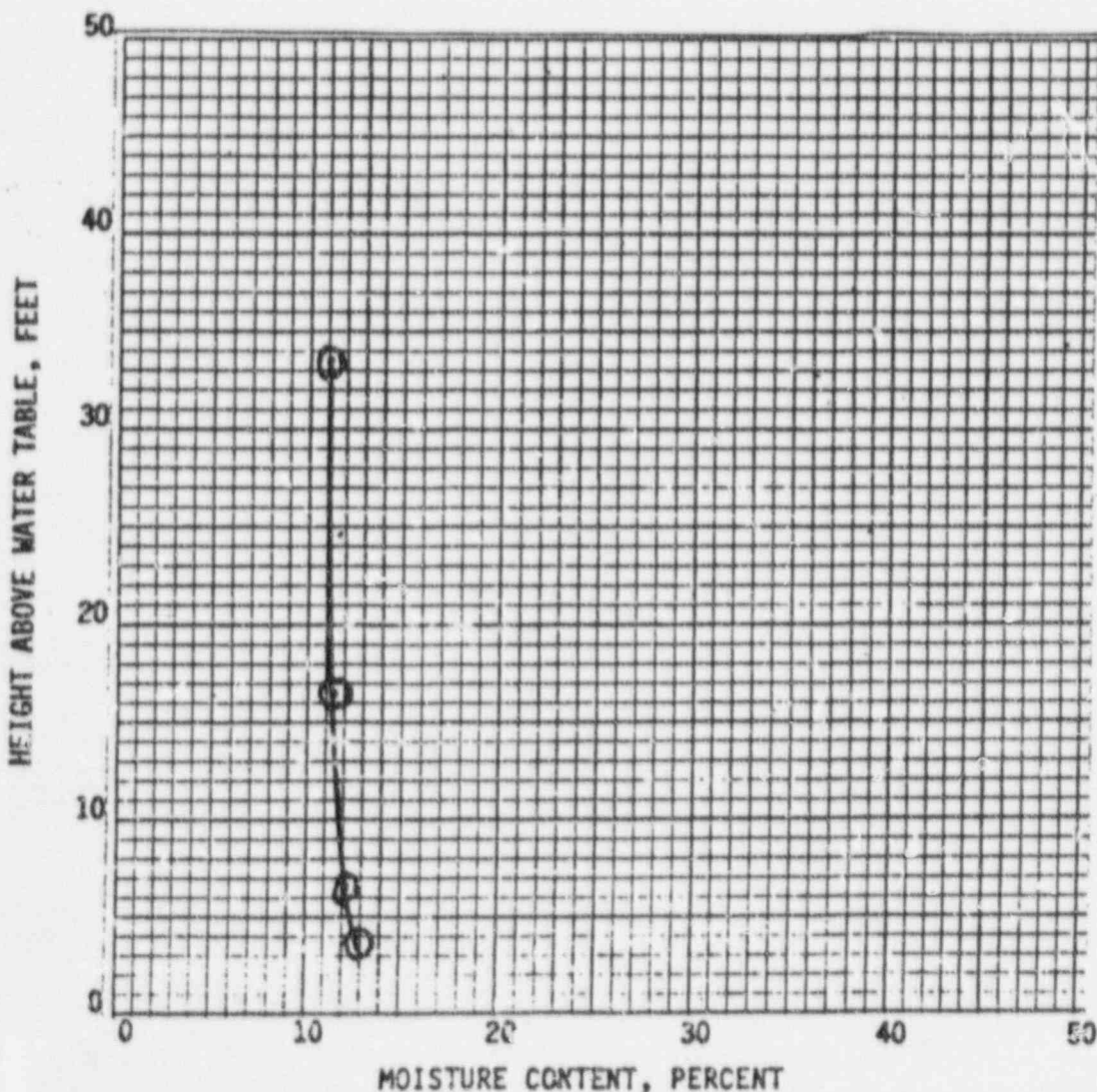
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ASTM D 2325
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 74 7A
 Depth: 6 to 11' Date: _____ Ring No.: 74 7A
 Identification: 223M9 Bu/X 142 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92.7% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

3.69	3.69	6.69	6.69	16.49	16.49	32.44	32.44		
7	7A	7	7A	7	7A	7	7A		
45.95	45.7	45.6	45.44	45.36	45.18	45.08	45.04		
41.08	40.89	41.08	40.89	41.08	40.89	41.08	40.89		
4.87	4.81	4.52	4.55	4.28	4.29	4.1	4.15		
3.66	3.50	3.66	3.50	3.66	3.50	3.66	3.50		
37.42	37.39	37.42	37.39	37.42	37.39	37.42	37.39		
13.81	12.86	12.08	12.17	11.44	11.47	10.96	11.1		



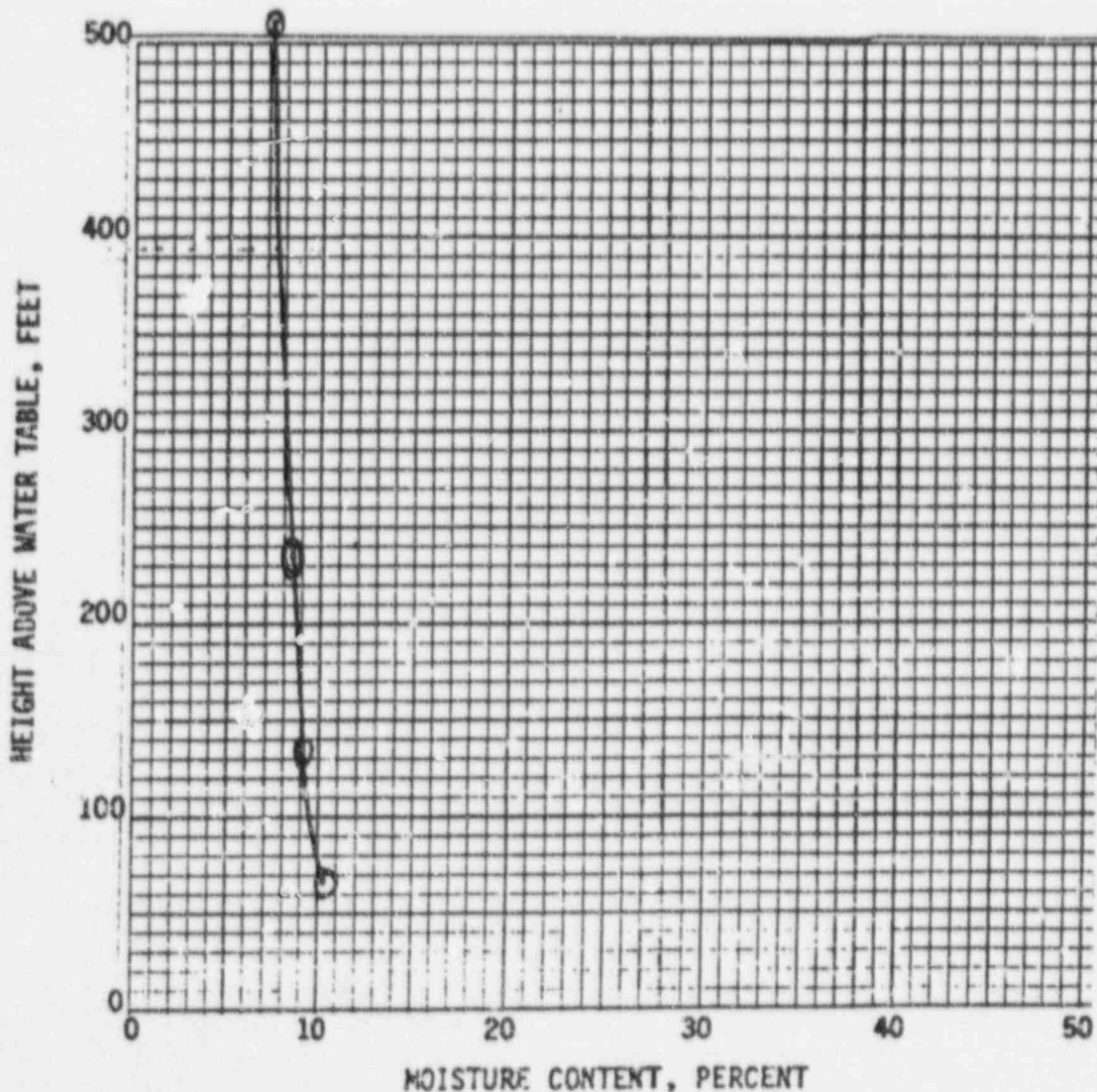
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 7B+7C
 Depth: 6 ft 11" Date: _____ Ring No.: 7B+7C
 Identification: 223 A19 6-1K 142 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smp l Wt, g
- (8) Smp l Moisture %
- (9) Dry unit Wt of smp l, g
- (10) Smp l moisture vol %

66.88	16.88	133.25	133.25	235.2	235.2	502.7	502.7		
7B	7C	7B	7C	7B	7C	7B	7C		
52.65	52.47	52.1	52.1	51.87	51.86	51.39	51.28		
48.58	48.73	48.58	48.73	48.58	48.73	48.58	48.73		
4.07	3.74	3.52	3.37	3.29	3.13	2.81	2.55		
10.63	10.85	10.63	10.85	10.63	10.85	10.63	10.85		
37.95	37.88	37.95	37.88	37.95	37.88	37.95	37.88		
10.72	9.87	9.28	8.9	8.67	8.26	7.4	6.73		



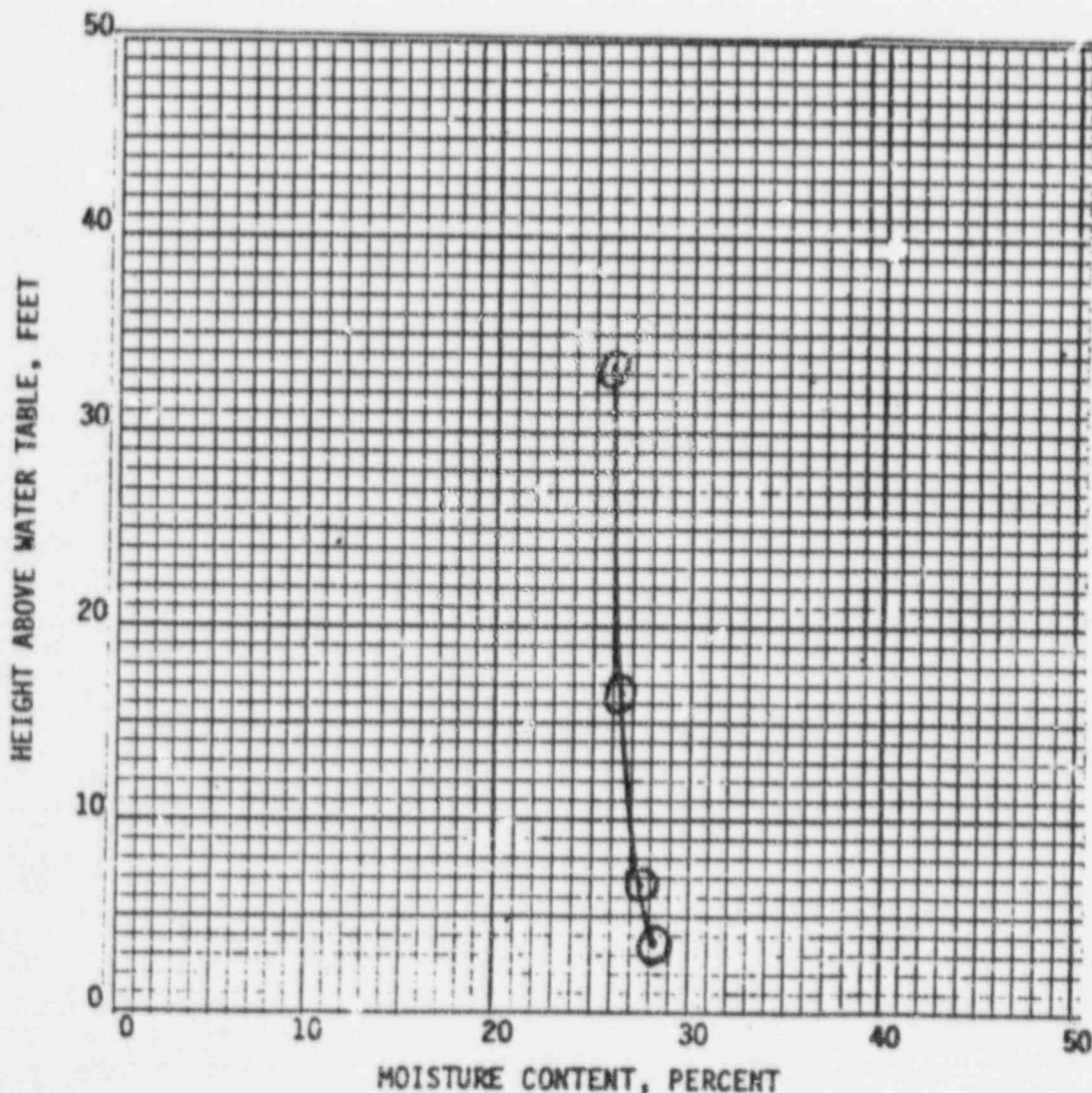
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ASTM D 2325
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 848A
 Depth: 5 to 5' Date: _____ Ring No.: 848A
 Identification: 228 M11 R.1/K 2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

3.69	3.69	6.69	6.69	16.49	16.49	33.44	33.44
8	8A	8	8A	8	8A	8	8A
43.75	43.87	43.85	43.64	43.22	43.30	43.07	43.16
34.95	35.05	34.95	35.05	34.95	35.05	34.95	35.05
8.8	8.82	8.6	8.59	8.27	8.25	8.12	8.11
3.70	3.82	3.70	3.82	3.70	3.82	3.70	3.82
31.25	31.23	31.25	31.23	31.25	31.23	31.25	31.23
28.16	28.24	27.52	27.51	26.46	26.42	25.98	25.97



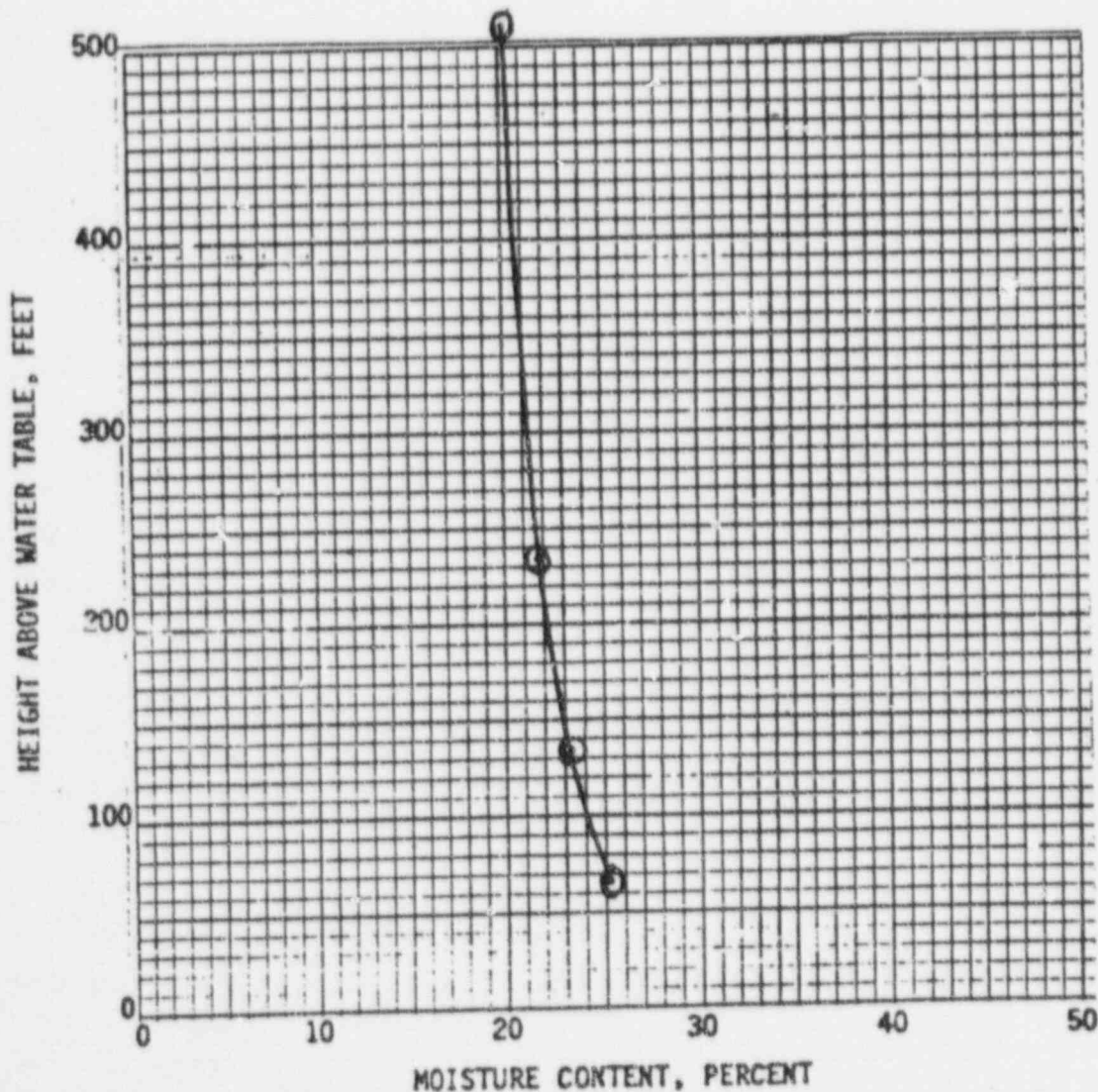
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 8848C
 Depth: 5 to 5' Date: _____ Ring No.: 8848C
 Identification: 228 M 11 B-1K 2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Resaturated
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

66.88	66.88	133.25	133.25	235.2	235.2	502.7	502.7
8B	8C	8A	8C	8B	8C	8B	8C
50.35	50.29	49.7	49.7	49.21	49.17	48.7	48.74
42.2	42.37	42.2	42.37	42.2	42.37	42.2	42.37
8.15	7.92	7.5	7.33	7.01	6.8	6.5	6.37
10.5	10.56	10.5	10.56	10.5	10.56	10.5	10.56
31.7	31.81	31.7	31.81	31.7	31.81	31.7	31.81
25.71	24.9	23.66	23.04	22.11	21.34	20.5	20.03



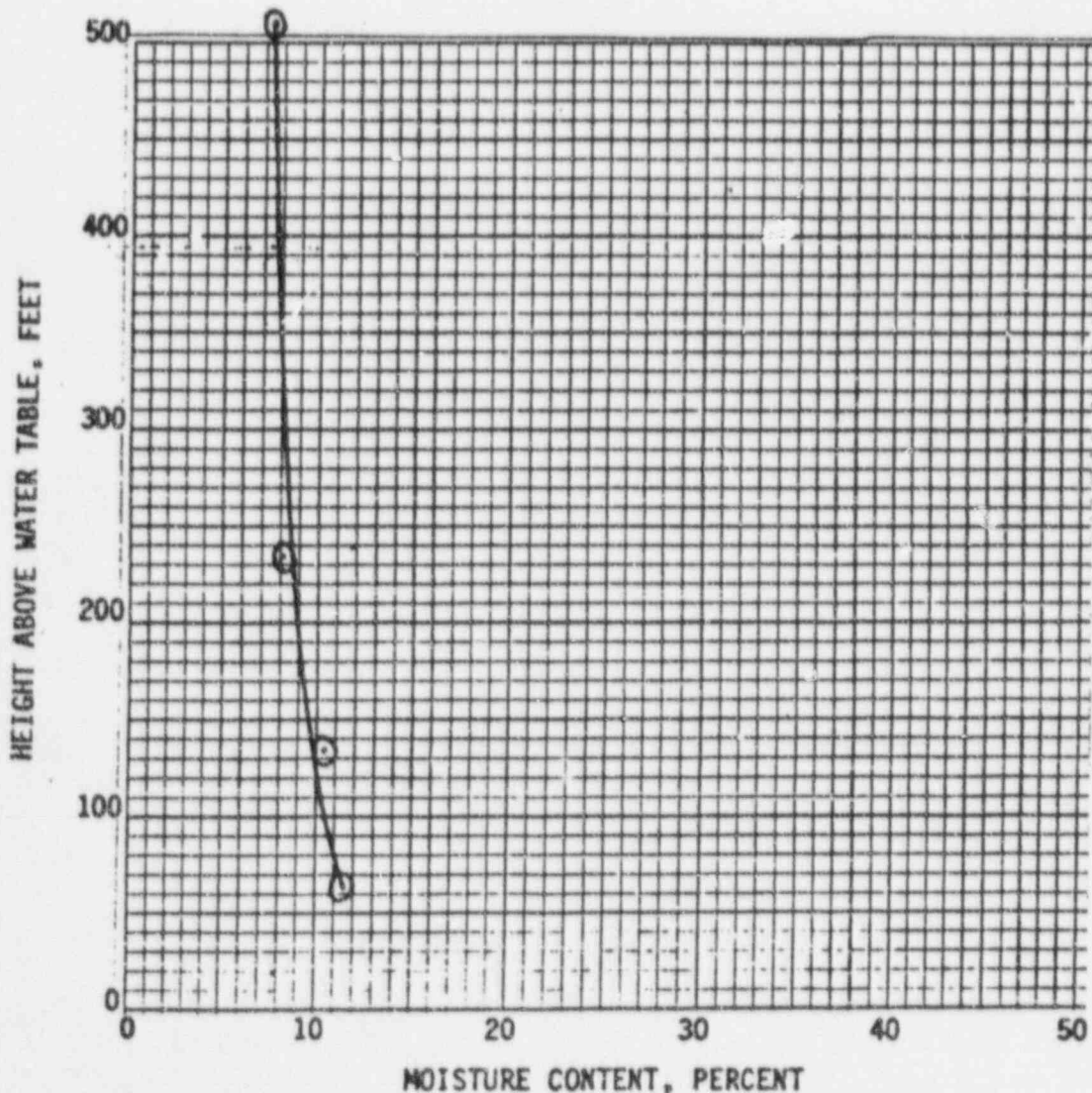
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 98+9C
 Depth: 2 to 7' Date: _____ Ring No.: 98+9C
 Identification: 225 M12 Bulk 1 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

66.88	66.88	132.75	132.75	235.2	235.2	502.7	502.7		
9B	9C	9B	9C	9B	9C	9B	9C		
50.43	50.7	50.0	50.33	49.19	49.47	48.91	49.28		
46.34	46.55	46.34	46.55	46.34	46.55	46.34	46.55		
4.09	4.15	3.66	3.78	2.85	2.92	2.57	2.73		
10.56	10.56	10.56	10.56	10.56	10.56	10.56	10.56		
35.78	35.99	35.78	35.99	35.78	35.99	35.78	35.99		
11.43	11.53	10.23	10.5	7.97	8.11	7.18	7.59		



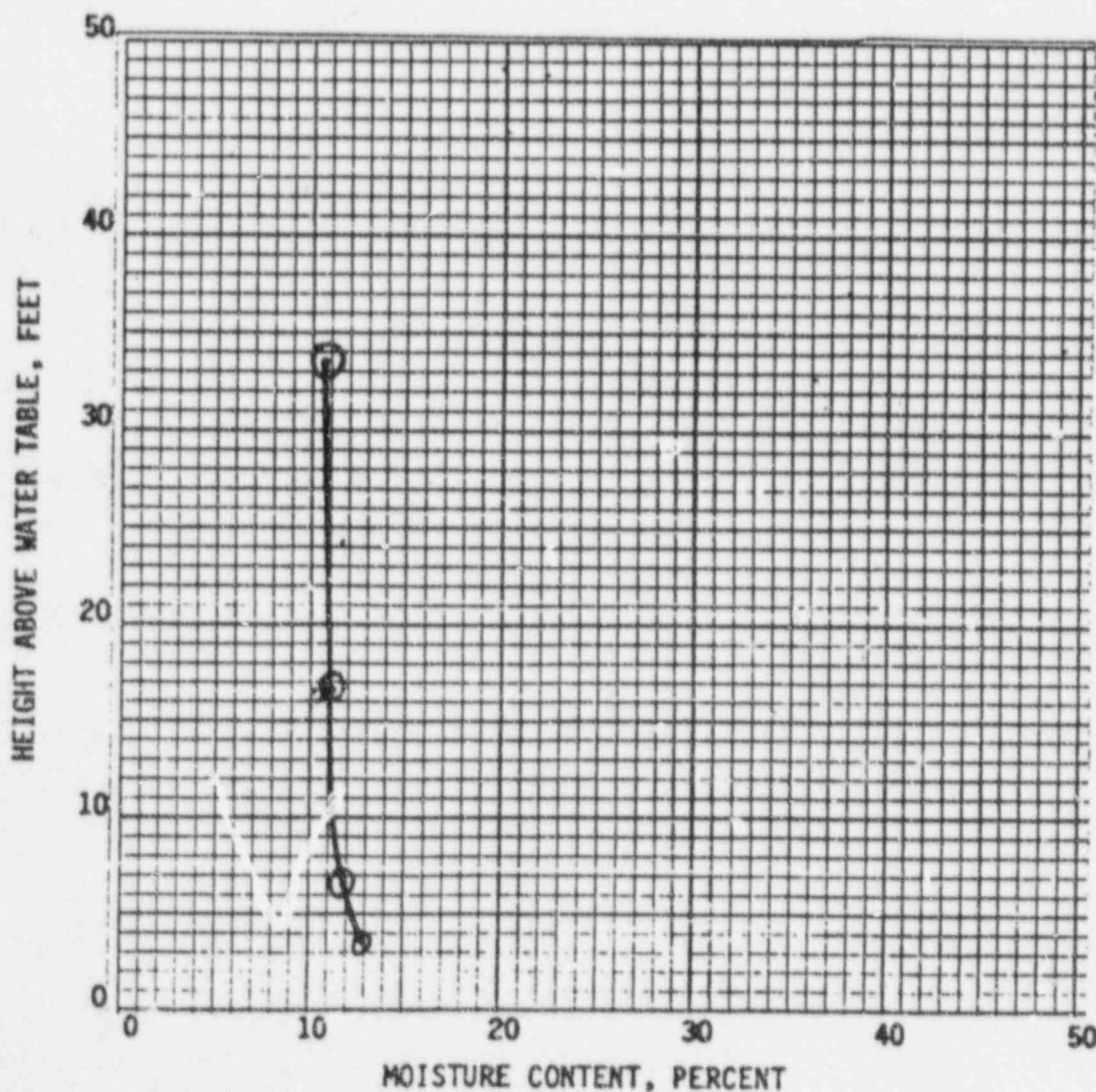
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ASTM D 2325
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 104 10A
 Depth: 5-9' Date: _____ Ring No.: 104 10A
 Identification: 226M13 Bulk 1+2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

3.69	3.69	6.69	6.69	16.49	16.49	33.49	33.49		
10	10A	10	10B	10	10B	10	10A		
44.76	44.87	44.37	44.51	44.87	44.23	44.0	44.08		
40.04	40.18	40.04	40.18	40.04	40.18	40.04	40.18		
4.72	4.69	4.33	4.33	4.83	4.05	3.96	3.9		
3.80	3.83	3.80	3.83	3.80	3.83	3.80	3.83		
36.24	36.35	36.24	36.35	36.24	36.35	36.24	36.35		
13.02	12.9	11.95	11.91	11.12	11.14	10.93	10.73		



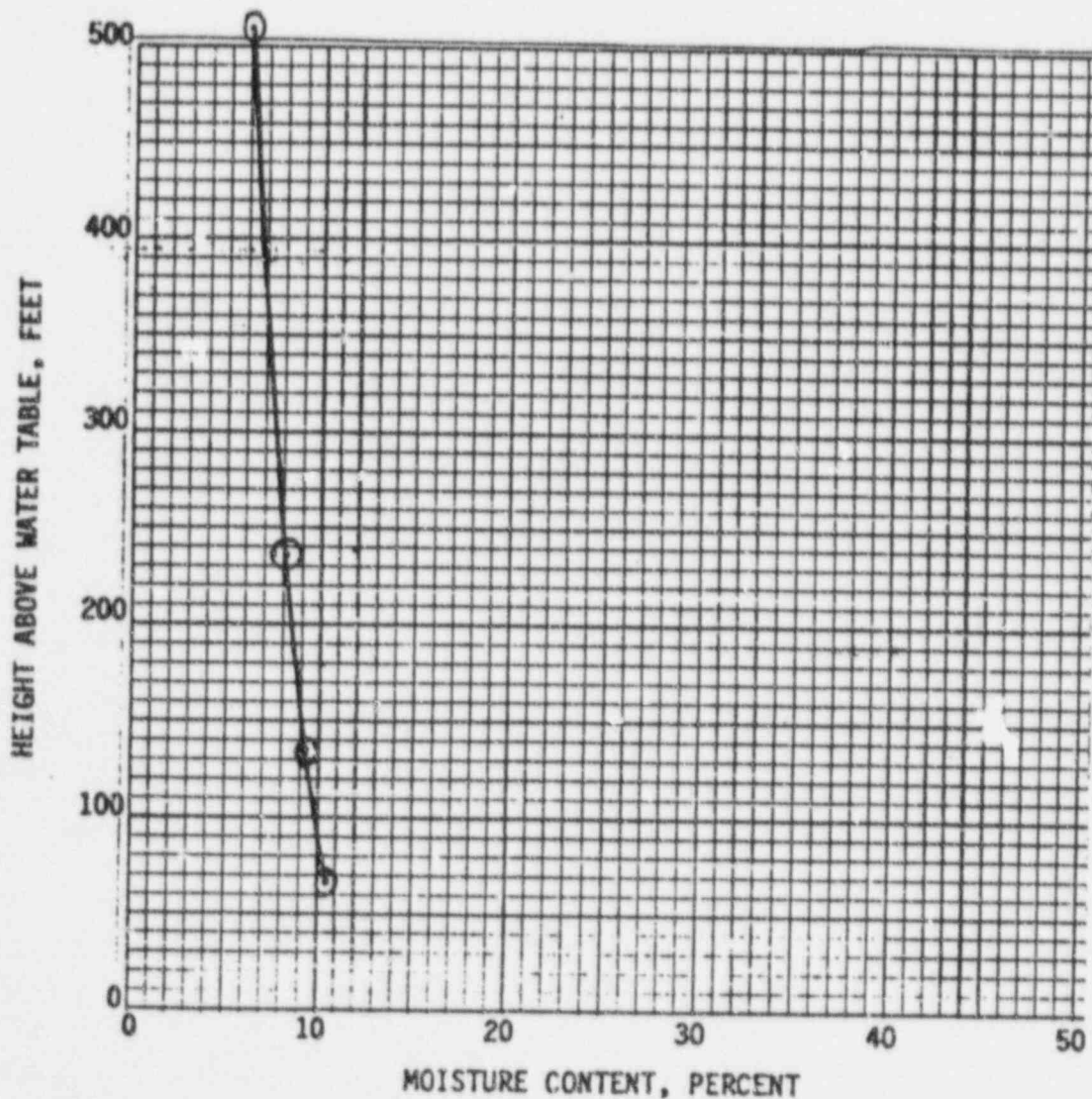
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ASTM D 3152
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 10B & 10C
 Depth: 5-9' Date: _____ Ring No.: 10B & 10C
 Identification: 226 M 13 8-1A 142 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Recompacted
 Initial natural weight: _____ g/cm³; _____ lb/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

66.88	66.88	133.75	133.25	235.2	235.2	502.7	502.7		
10B	10C	10B	10C	10B	10C	10B	10C		
51.59	49.58	51.14	49.24	50.62	48.76	49.86	48.05		
47.67	45.88	47.67	45.88	47.67	45.88	47.67	45.88		
3.92	3.7	3.47	3.36	2.95	2.88	2.19	2.17		
10.51	10.46	10.51	10.46	10.51	10.46	10.51	10.46		
37.16	35.42	37.16	35.42	37.16	35.42	37.16	35.42		
10.55	10.45	9.34	9.49	7.94	8.13	5.89	6.13		



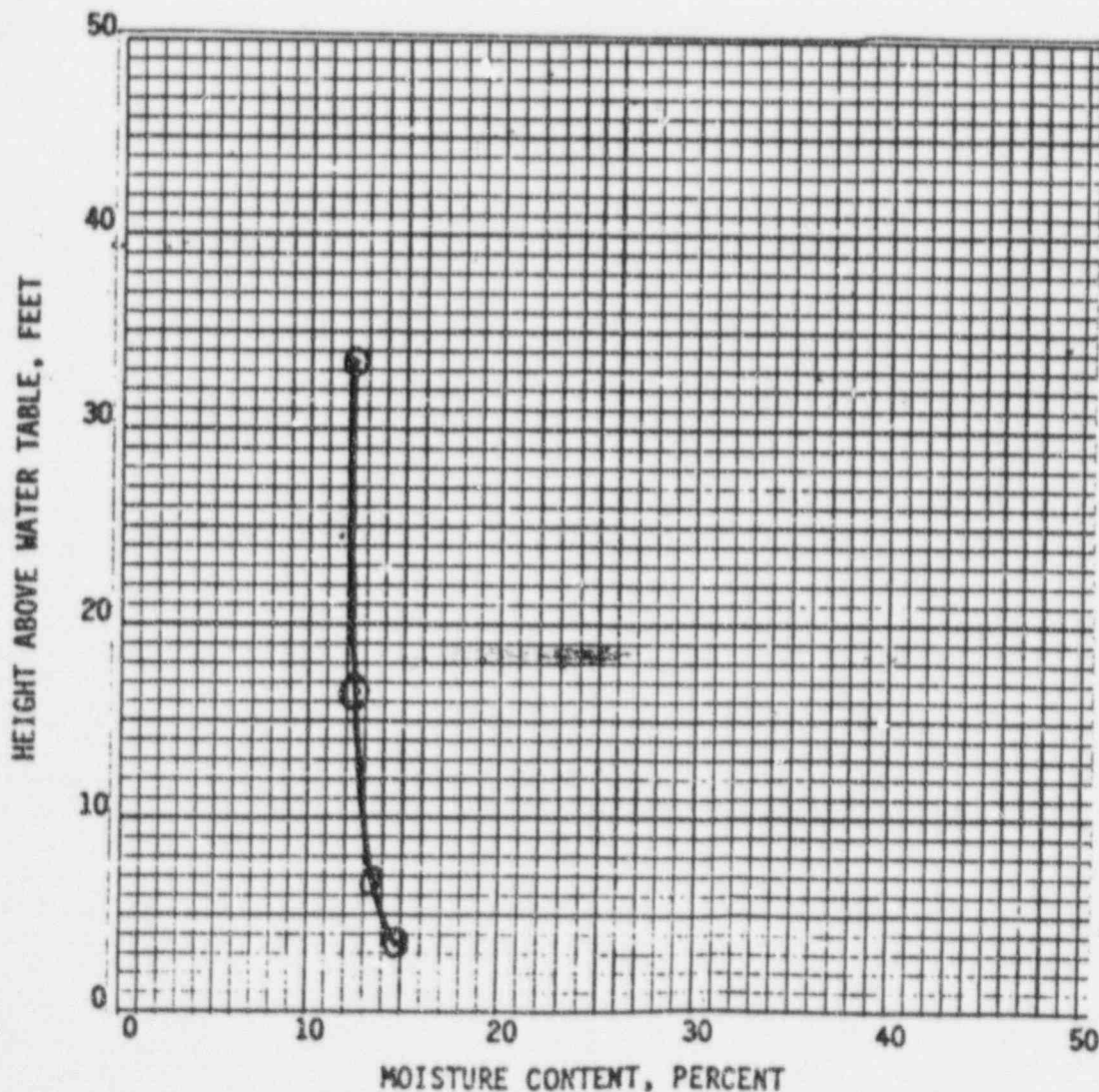
8-19-90
ccchamblyesc

ASTM D 2325
Capillary-Moisture relations for Soils

Location: _____ Sample No.: 646A
 Depth: 6 to 11' Date: _____ Ring No.: 646A
 Identification: 222M8 04/1A 2 Soil type: _____
 Initial natural moisture content: _____ % Sample type: Accompacted
 Initial natural weight: _____ g/cm³; 1b/ft³; Porosity: _____ %
 Void ratio: _____; Specific gravity: _____
 Remarks: 92% Max Density

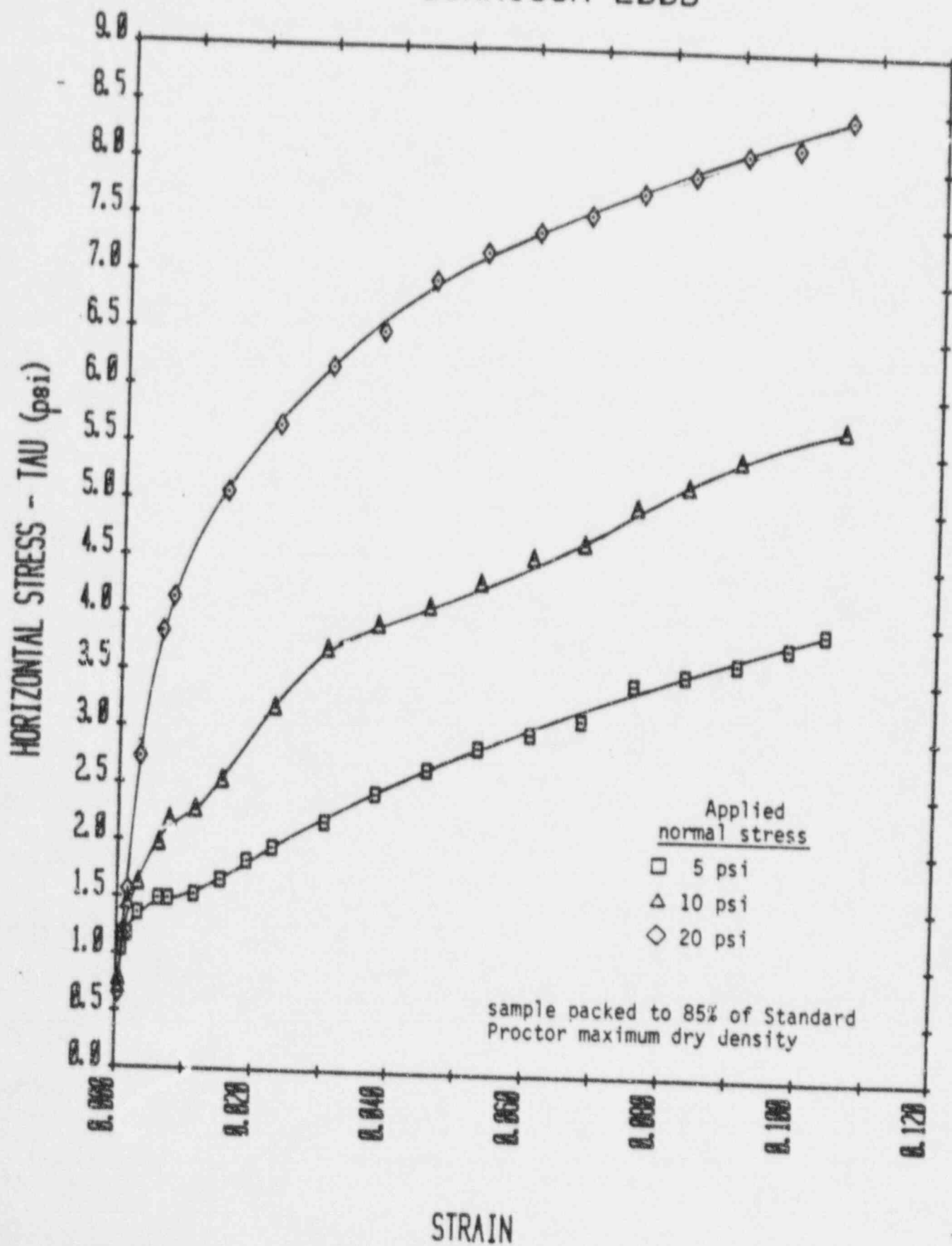
- (1) Tension, feet
- (2) Container No.
- (3) Wet gross Wt, g
- (4) Dry gross Wt, g
- (5) Wt of moisture, g
- (6) Tare Wt, g
- (7) Dry, net smpl Wt, g
- (8) Smpl Moisture %
- (9) Dry unit Wt of smpl, g
- (10) Smpl moisture vol %

3.69	3.69	6.69	6.69	16.49	16.49	33.44	33.44
6	6A	6	6A	6	6A	6	6A
46.96	46.63	46.43	46.1	46.08	45.74	45.98	45.61
41.39	41.04	41.39	41.04	41.39	41.04	41.39	41.04
5.57	5.59	5.04	5.06	4.69	4.7	4.59	4.57
3.80	3.48	3.80	3.48	3.80	3.48	3.80	3.48
37.59	37.56	37.59	37.56	37.59	37.56	37.59	37.56
14.82	14.88	12.41	12.47	12.48	12.51	12.21	12.17

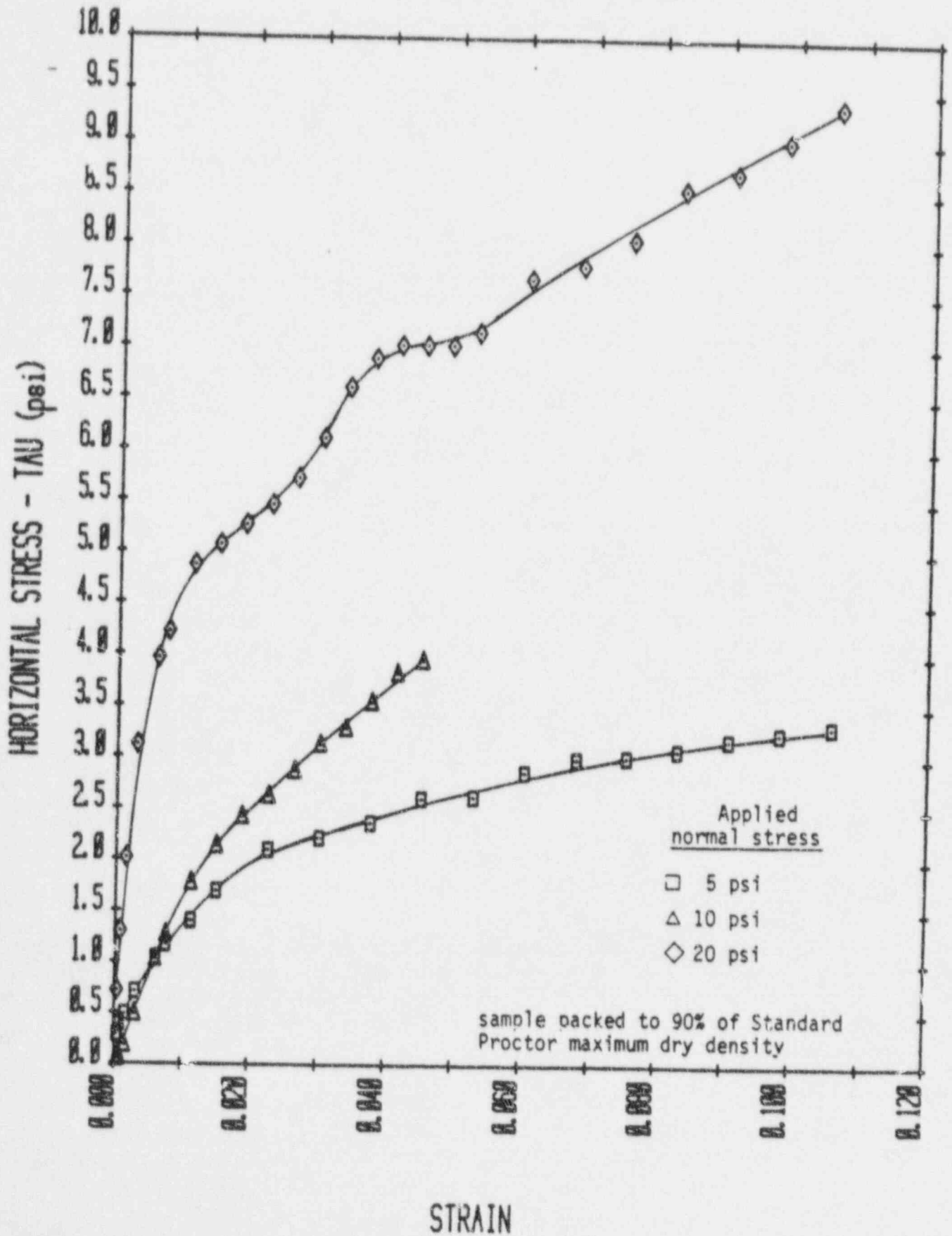


8-19-90
cc checked by csc

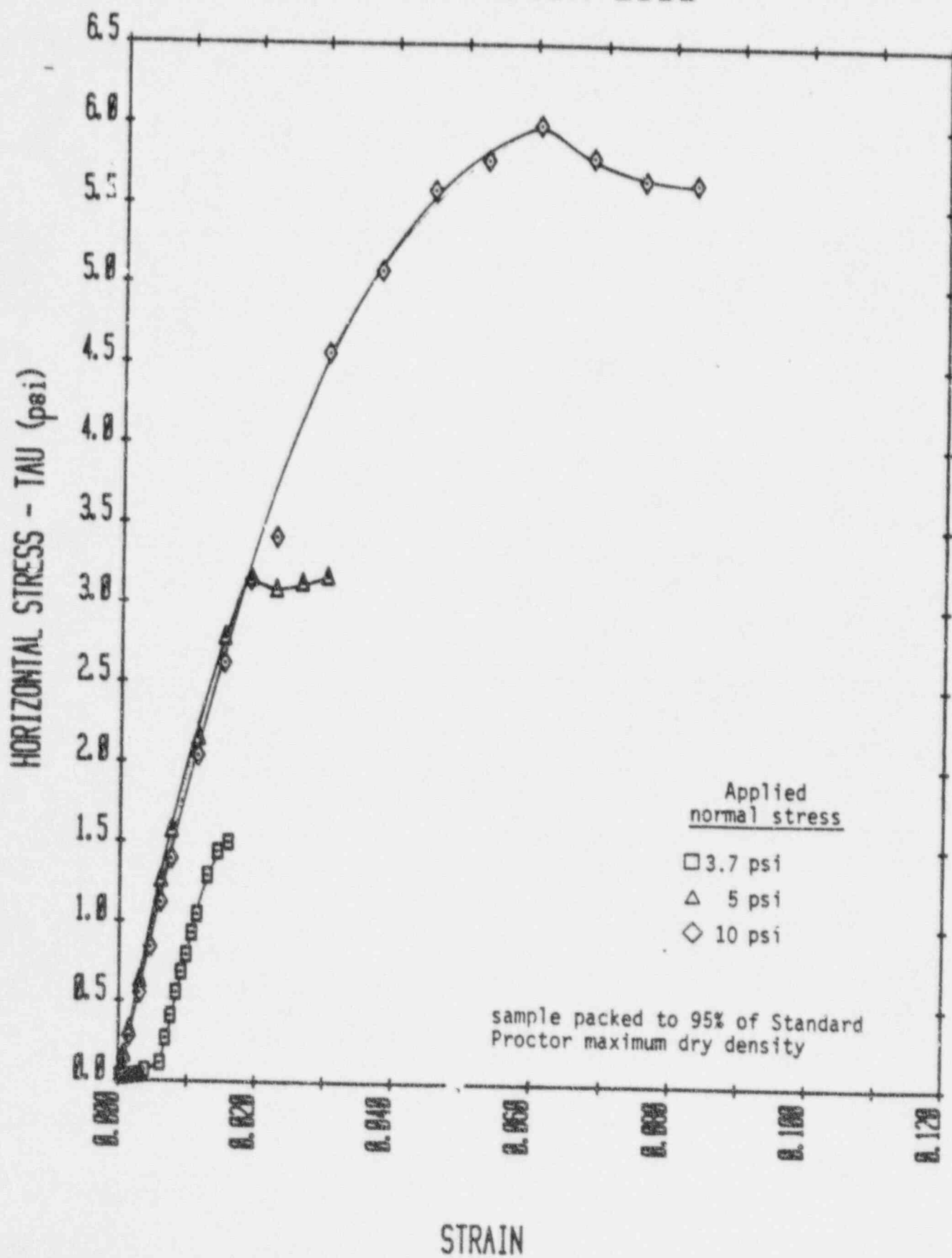
GUNNISON 200B



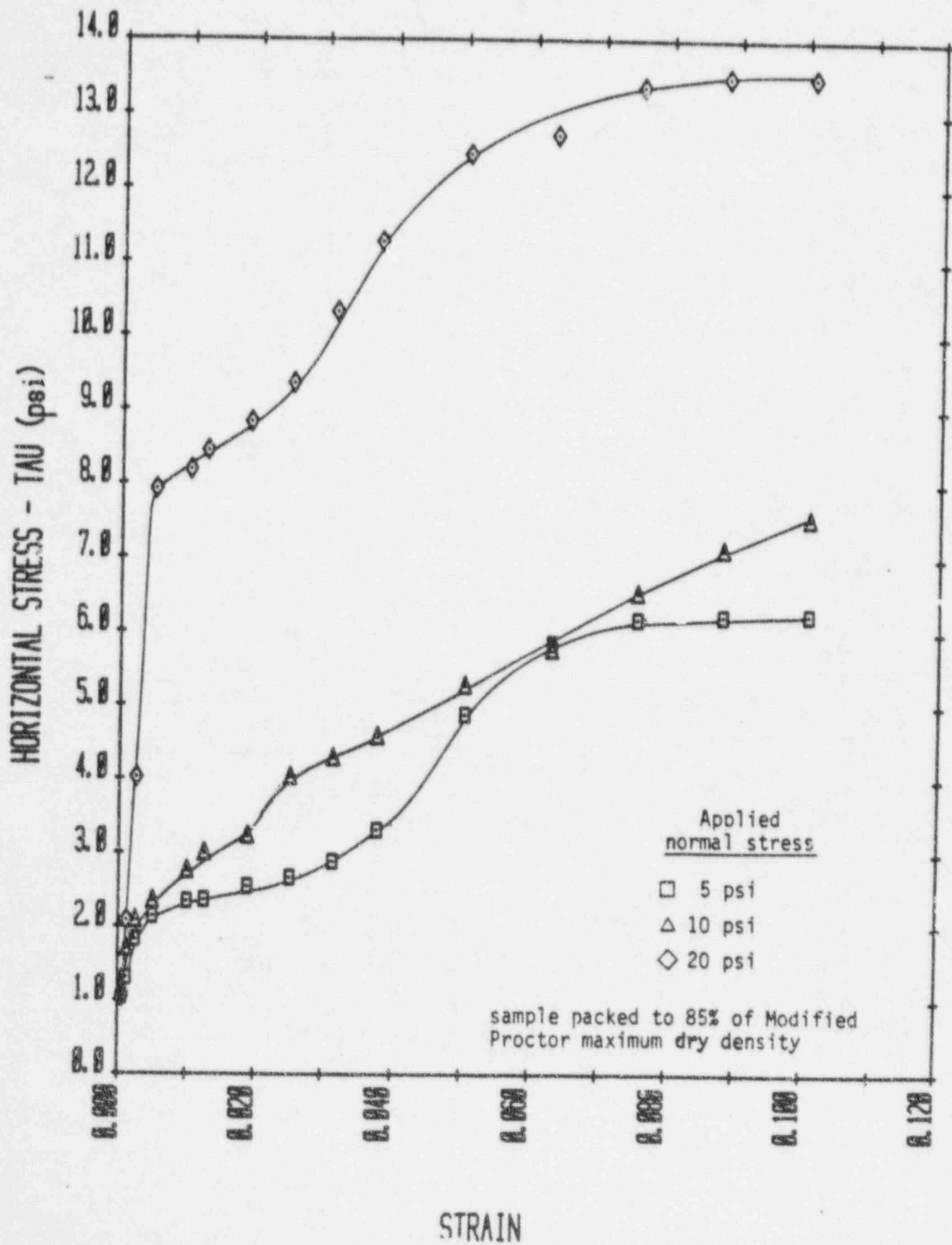
GUNNISON 200B



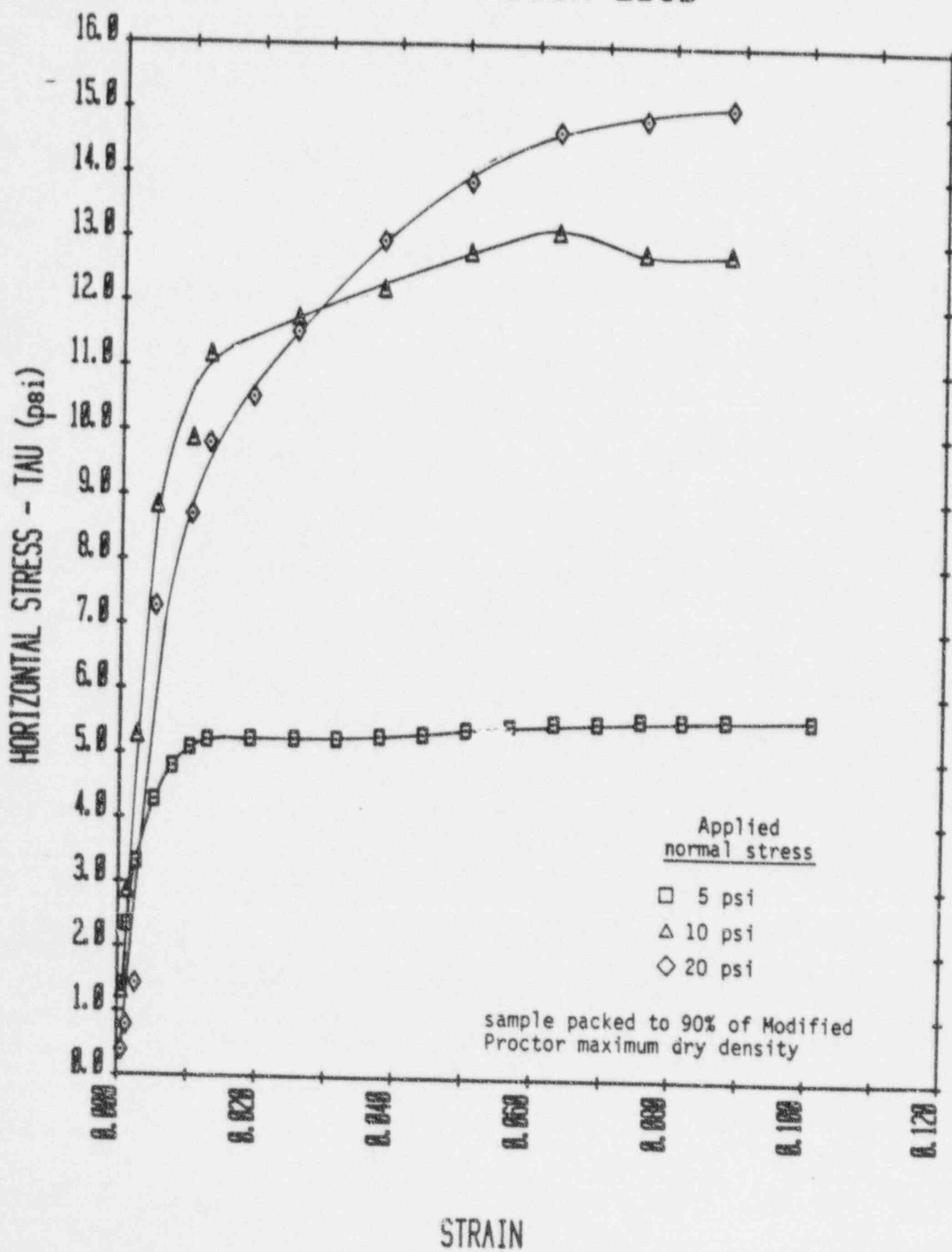
GUNNISON 200B



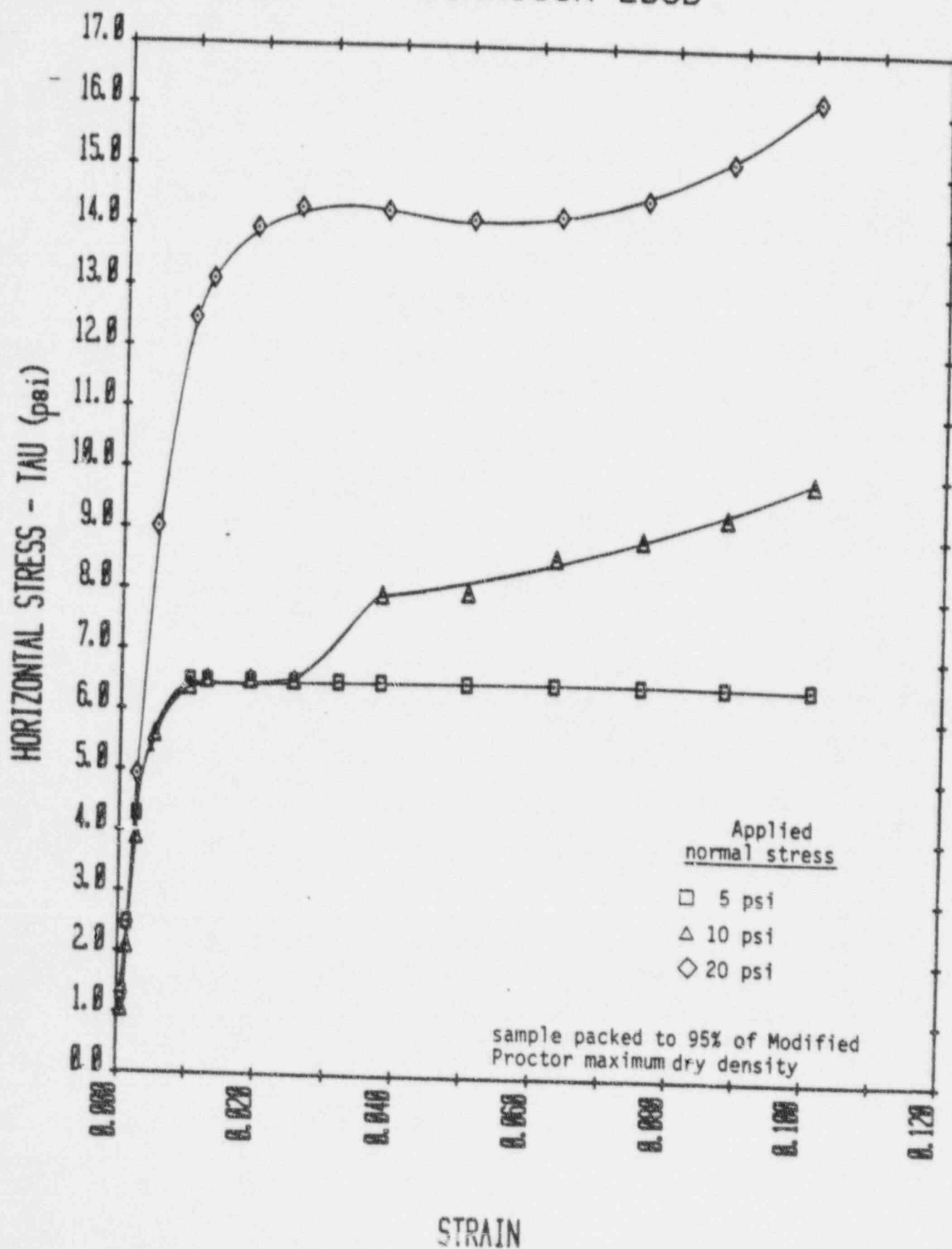
GUNNISON 206B



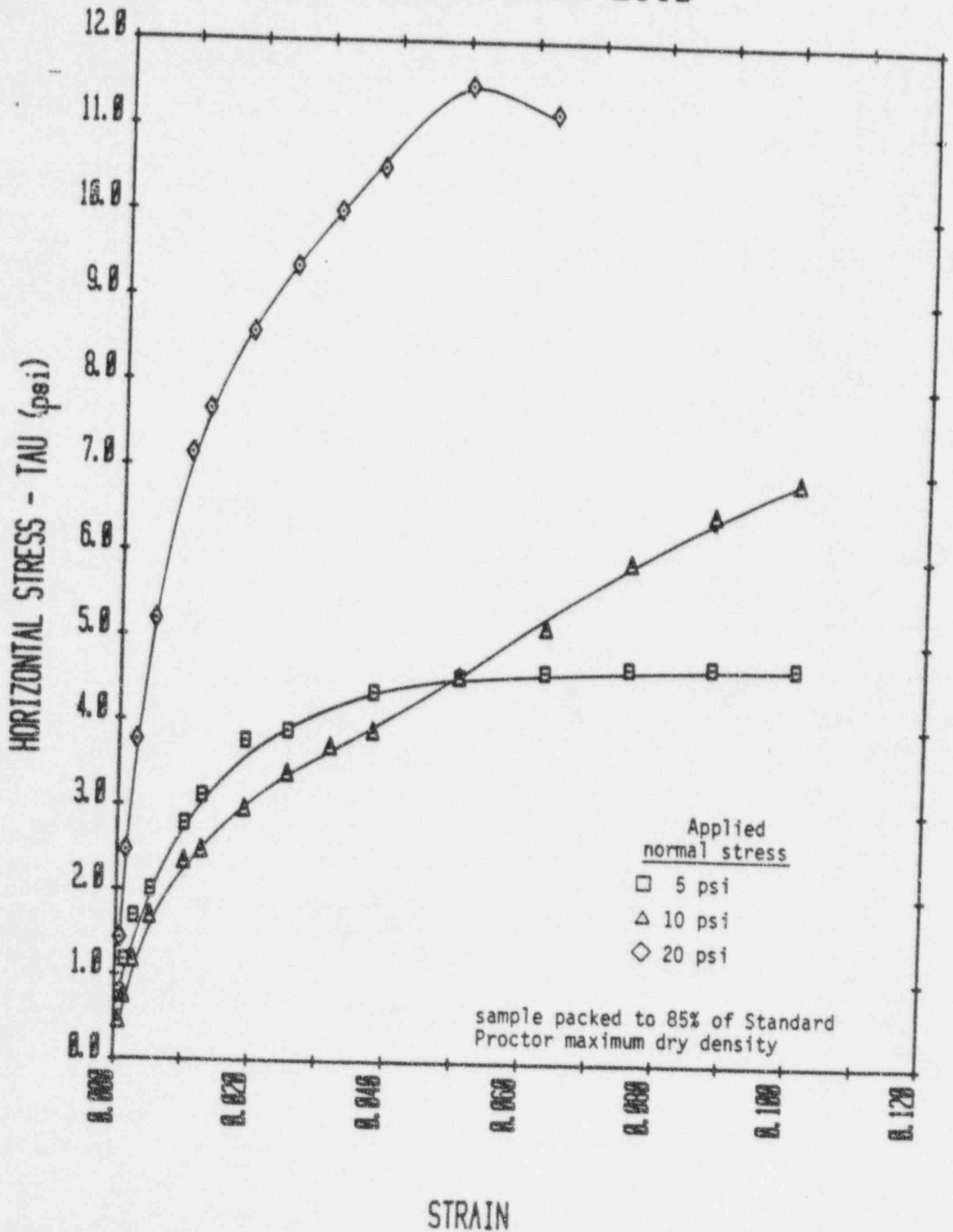
GUNNISON 206B



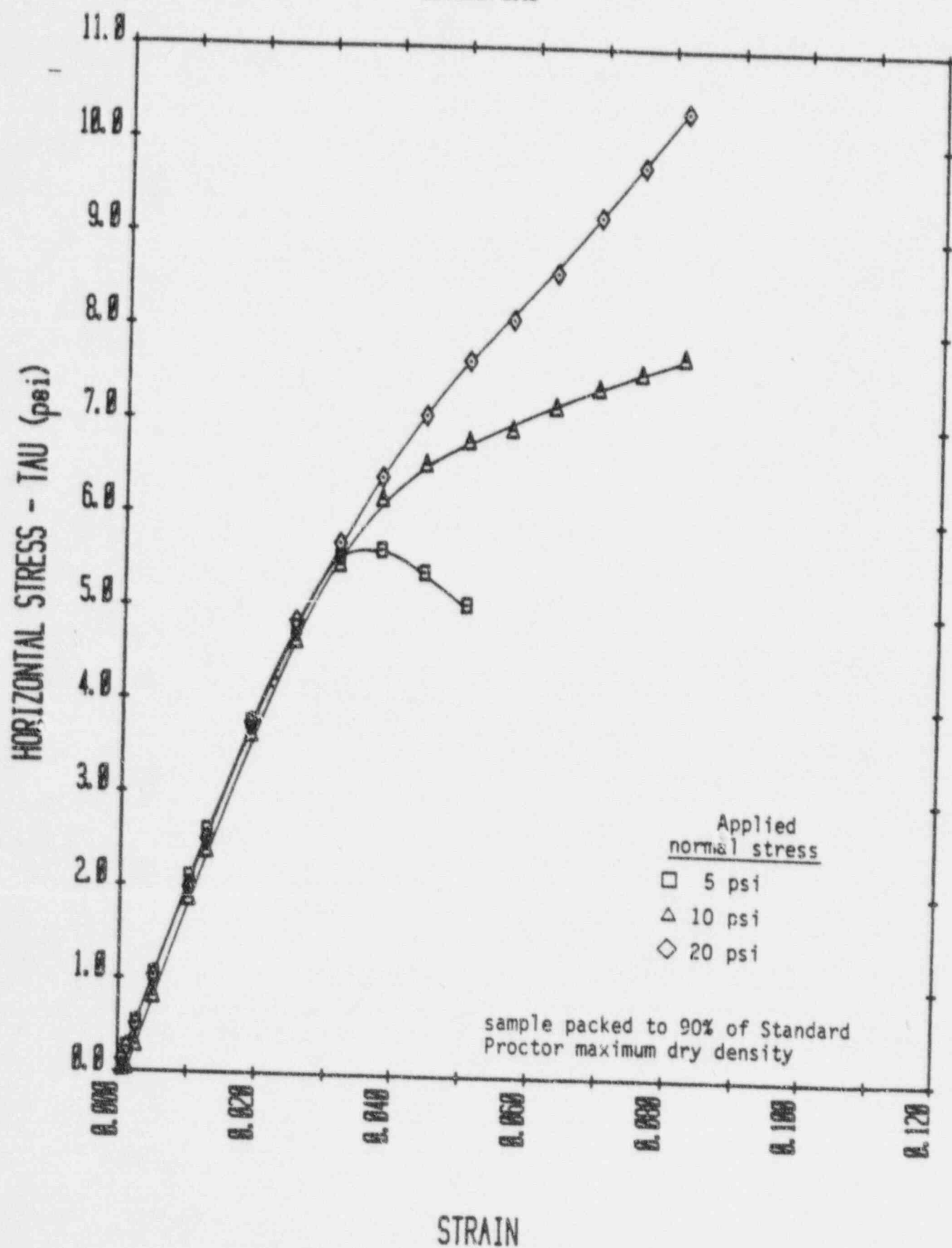
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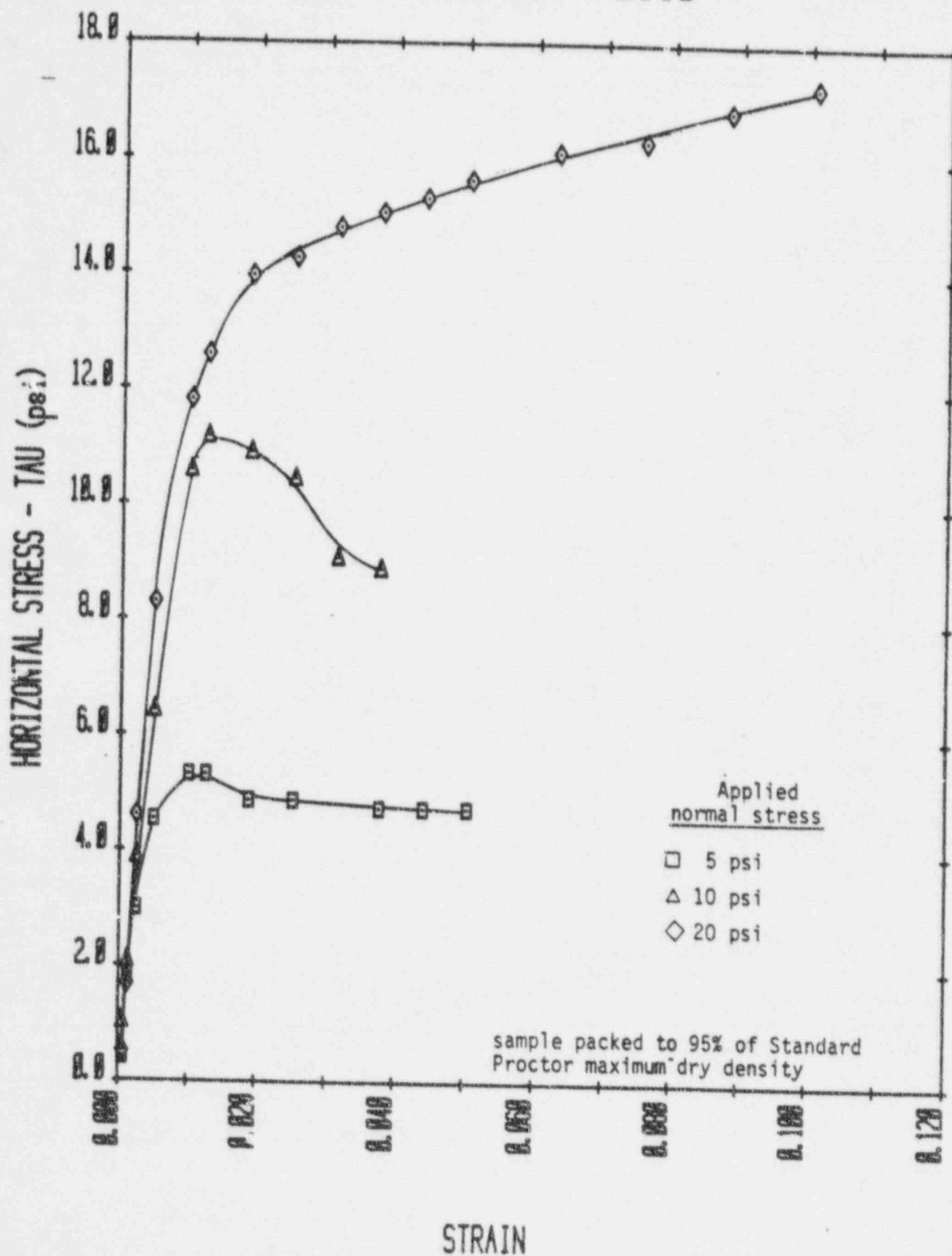
GUNNISON 211B

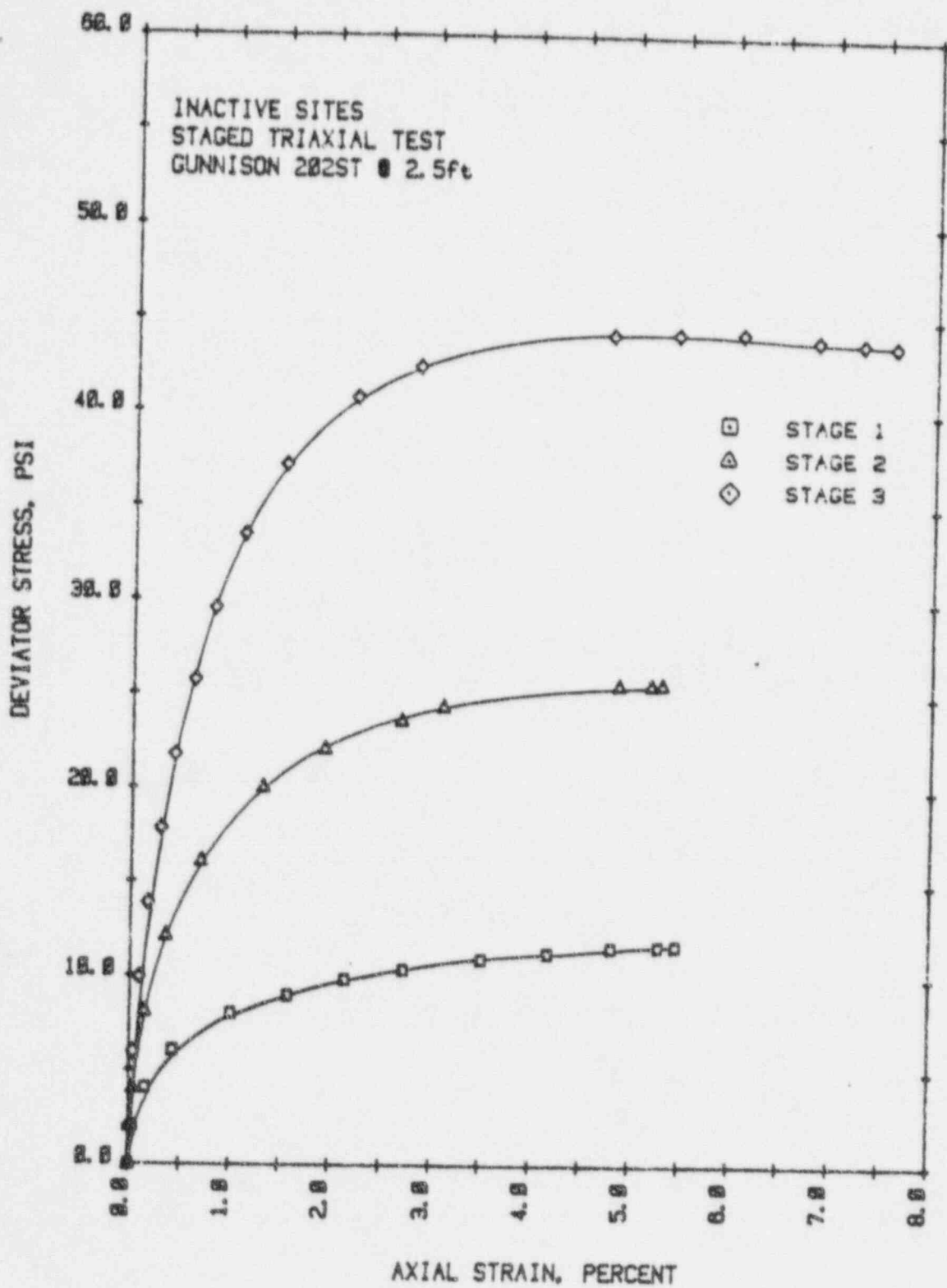


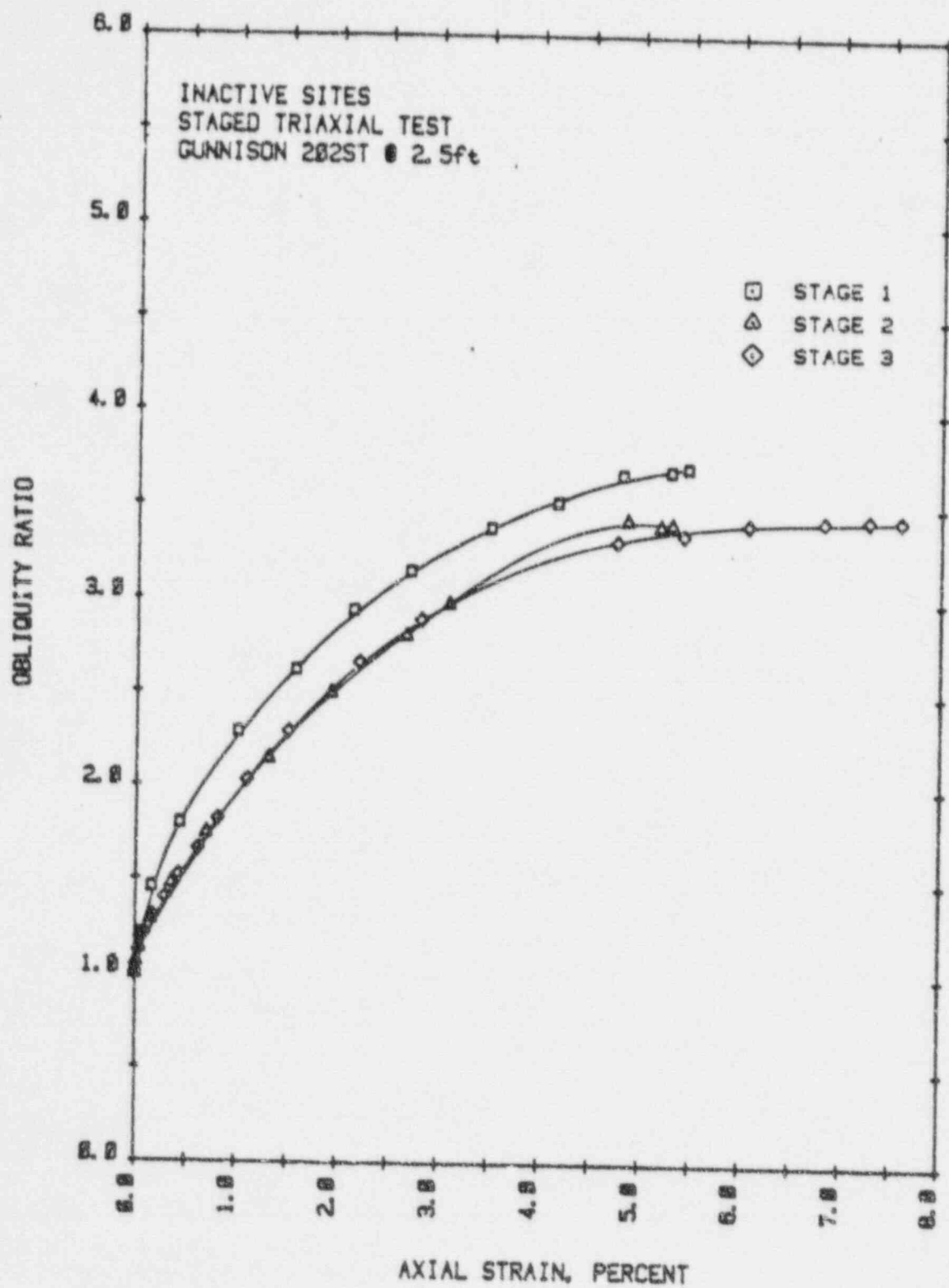
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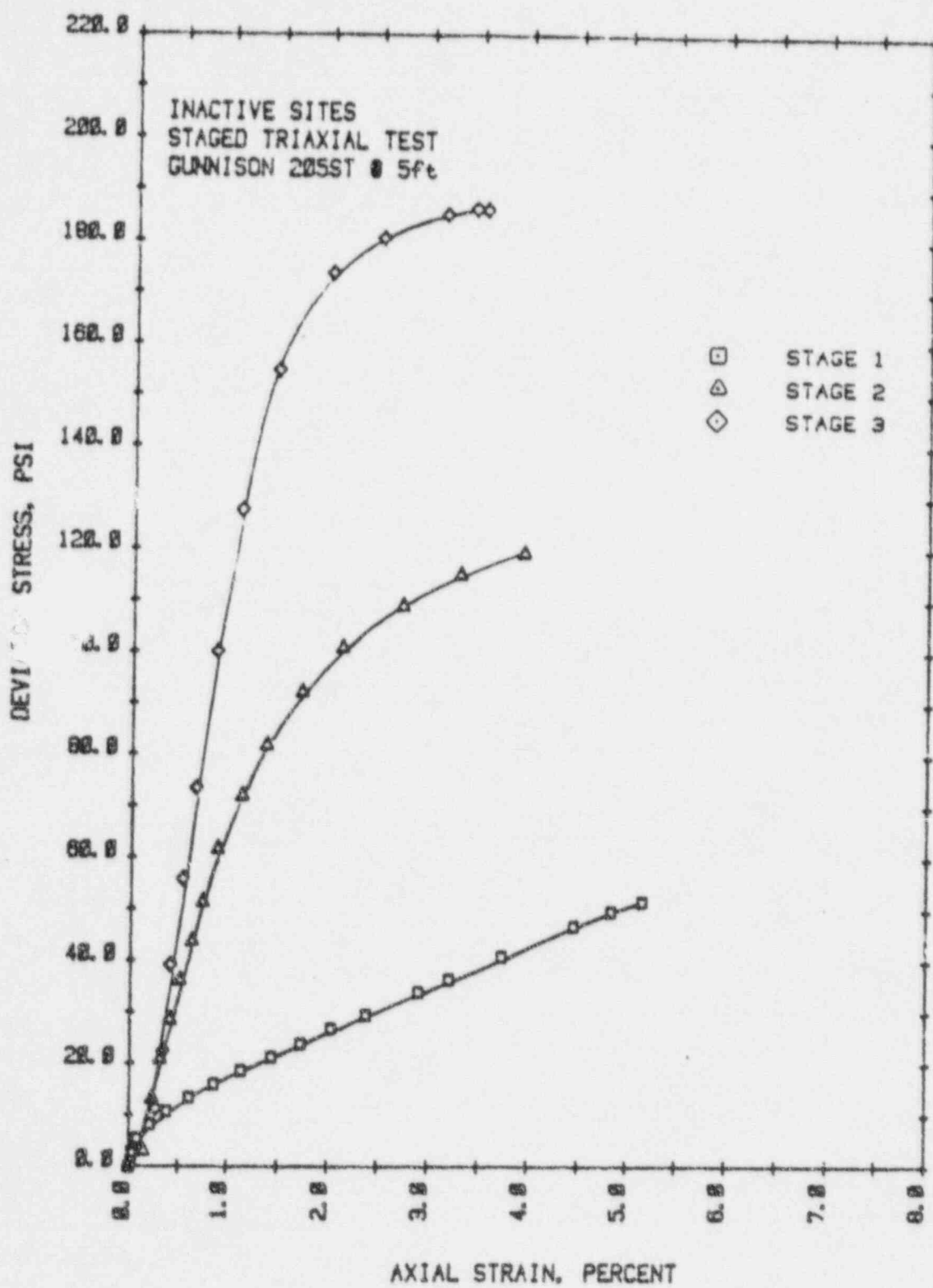


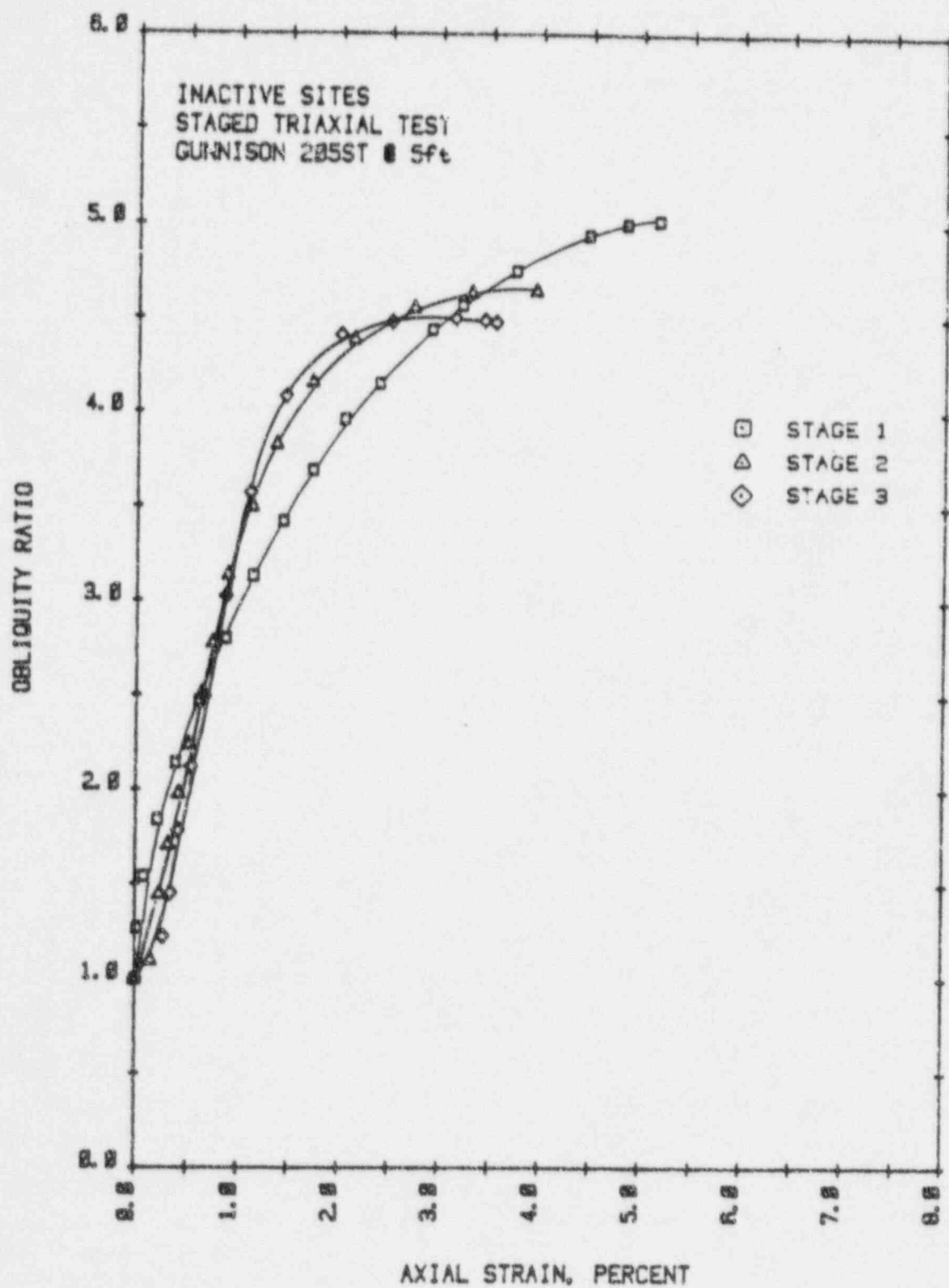
GUNNISON 211B











Gunnison St.

Bulk Density Results*

SAMPLE ID	GRAMS	IN3	GM/IN3	GM/CM3	LB/FT3	FT3/TON
G-A-025- 01	547.00	20.55	26.62	1.62	101.4	19.7
G-A-025- 02	560.35	19.75	28.37	1.73	108.1	18.5
G-A-025- 03	562.15	20.04	28.05	1.71	106.0	18.7
AVERAGE OF 3 INTERVALS:			27.68	1.69	105.4	19.0
G-C-031- 01	517.35	19.78	26.15	1.60	99.6	20.1
G-C-031- 02	525.45	19.90	26.41	1.61	100.6	19.9
G-C-031- 03	643.85	20.30	31.71	1.94	120.8	16.6
AVERAGE OF 3 INTERVALS:			28.09	1.71	107.0	18.7
G-C-046- 01	515.75	20.21	25.52	1.56	97.2	20.6
G-C-046- 02	625.15	19.64	31.83	1.94	121.3	16.5
G-C-046- 03	461.45	16.67	27.69	1.69	105.5	19.0
AVERAGE OF 3 INTERVALS:			28.35	1.73	108.0	18.5
G-C-051- 02	536.15	20.53	26.12	1.59	99.3	20.1
G-C-051- 03	466.95	21.60	21.62	1.32	82.3	24.3
G-C-051- 04	445.65	22.75	19.59	1.20	74.6	26.8
AVERAGE OF 3 INTERVALS:			22.44	1.37	85.5	23.4
G-C-057- 02	584.75	22.22	26.32	1.61	100.3	19.9
G-C-057- 03	564.85	20.14	28.05	1.71	106.8	16.7
G-C-057- 04	570.25	18.55	30.74	1.88	117.1	17.1
AVERAGE OF 3 INTERVALS:			28.37	1.73	108.1	18.5
G-A-065- 02	366.15	15.66	23.38	1.43	89.1	22.5
G-A-065- 03	453.95	16.47	27.56	1.68	105.0	19.1
AVERAGE OF 2 INTERVALS:			25.47	1.55	97.0	20.6
G-B-072- 01	501.25	19.64	25.52	1.56	97.2	20.6
G-B-072- 02	537.05	17.69	30.36	1.85	115.7	17.3
AVERAGE OF 2 INTERVALS:			27.94	1.71	106.4	18.8
G-B-076- 01	583.25	19.52	29.87	1.92	113.8	17.6
G-B-076- 02	472.85	19.36	24.42	1.49	93.0	21.5
AVERAGE OF 2 INTERVALS:			27.15	1.66	103.4	19.3
G-D-084- 01	509.85	19.62	25.98	1.59	99.0	20.2
G-D-084- 02	532.55	20.16	26.42	1.61	100.6	19.9
G-D-084- 03	552.35	20.21	27.34	1.67	104.1	19.2
G-D-084- 04	585.55	18.53	31.59	1.93	120.4	16.6
AVERAGE OF 4 INTERVALS:			27.83	1.70	106.0	18.9
G-D-092- 01	573.25	20.56	27.85	1.70	106.2	18.8
G-D-092- 02	545.45	19.95	27.35	1.67	104.2	19.2
G-D-092- 03	437.55	12.27	35.66	2.18	135.9	14.7
AVERAGE OF 3 INTERVALS:			30.30	1.85	115.4	17.3

* from MSRD, 1982.

PHYSICAL PROPERTIES AND pH OF THE URANIUM TAILINGS

Sample Location*	Percent Moisture	Bulk Density (lb/ft ³)	pH of Soil (5% water by wt)
GC-2	17.67	114.6	2.95
GC-5	18.18	115.8	3.40
GC-9	6.91	127.5	2.55

*See Figure 2-4.

360-12 11/77

Taken From: Engineering Assessment of Inactive
 Uranium MILL Tailings, Gunnison Colorado
 DOE/UMT -0107, FBDO, 360-12, UC70
 Ford, Bacon, Davis Utah Inc., Salt Lake City, Utah
 September 1981

Sieve analyses from 2 bulk samples collected adjacent to the tailings pile are presented in Table 7.1 (TAC, 1983).

Table 7.1 Sieve analyses of site soil

Loca- tion	Depth (feet)	Inches						No.				
		3	1½	1	¾	½	⅜	4	10	40	100	200
TS-1	5-8	91.2	78.6		58.3		40.7	16.3	13.2	6.0	1.9	1.1
TS-4	5-7	100.0	74.3	60.0	54.1	44.9	38.5	29.4	22.8	9.0	4.5	3.4

These materials have a Unified Soil Classification of GP.

*Taken From Processing Site Characterization Report for the
Uranium Mill Tailings Site at Gunnison, Colorado, TAC April 1984
MKE DOC # 4005-GUN-R-03-00002-00*

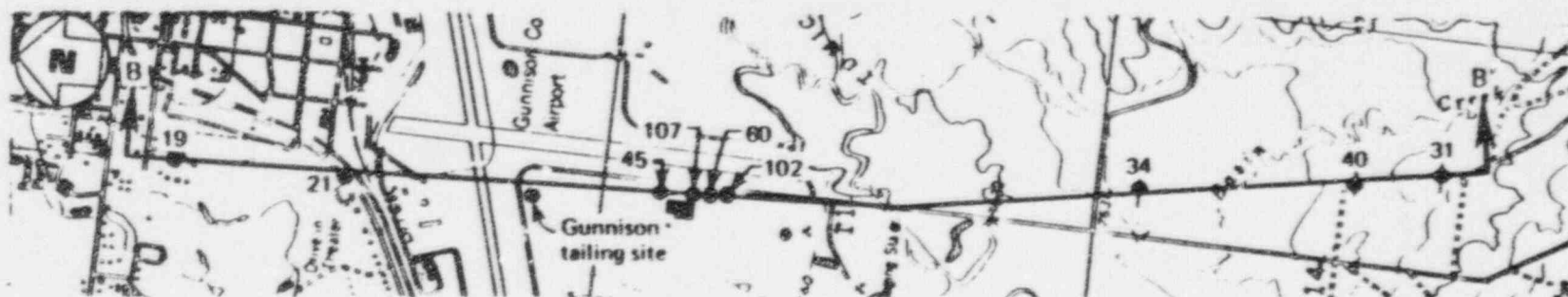
WATER AND CLIMATIC DATA

WATER OCCURRENCE AND CLIMATIC DATA

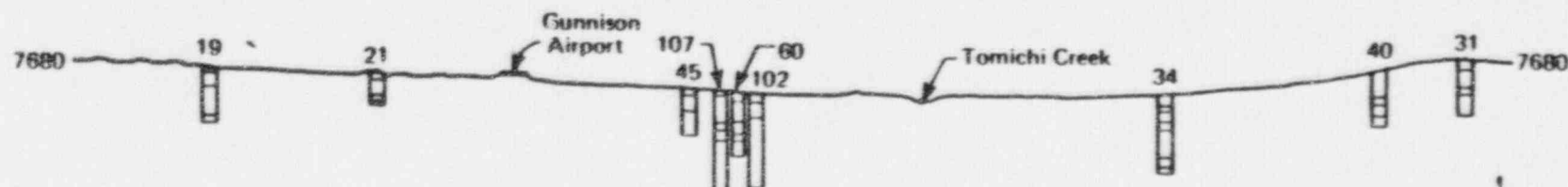
Taken From: TAC, "Processing Site Characterization Report for the Uranium Mill
Tailings Site at Gunnison, Colorado," Draft, April 1984,
UMTRA-DOE/AL-50108, MKE Doc #4005-GUN-R-03-00002-00

TAC, Unpublished Data taken from
MKE Doc # 4005-GUN-C-01-00712-00
MKE Doc # 4005-GUn-C-01-00723-00

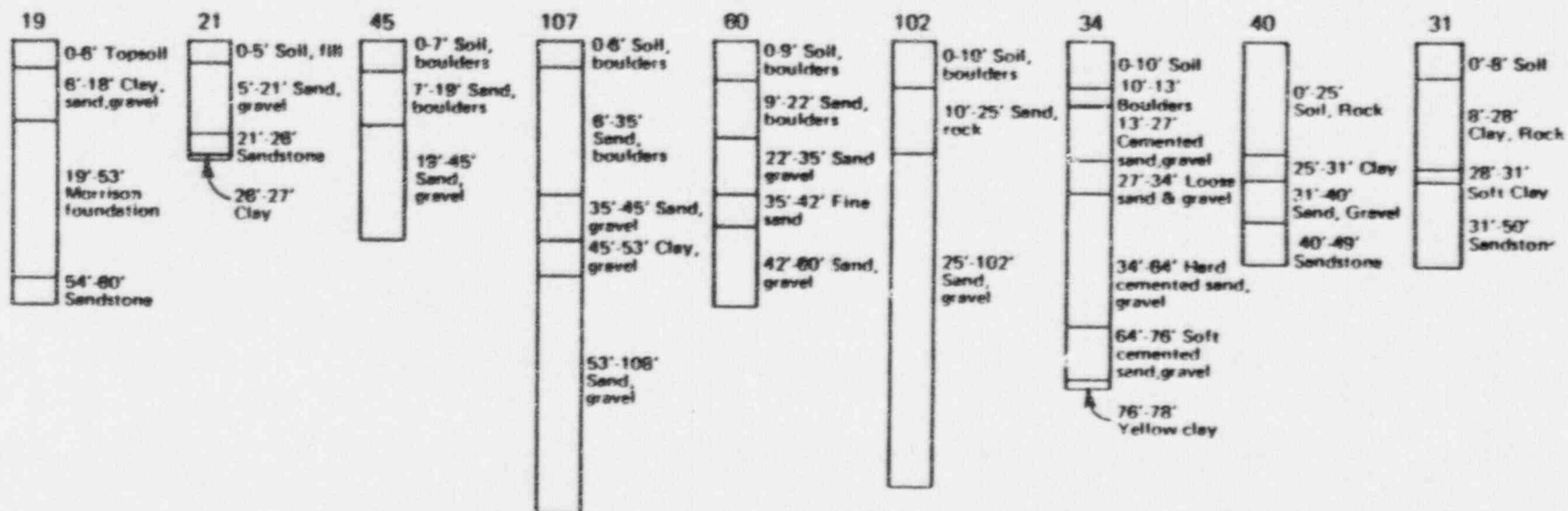
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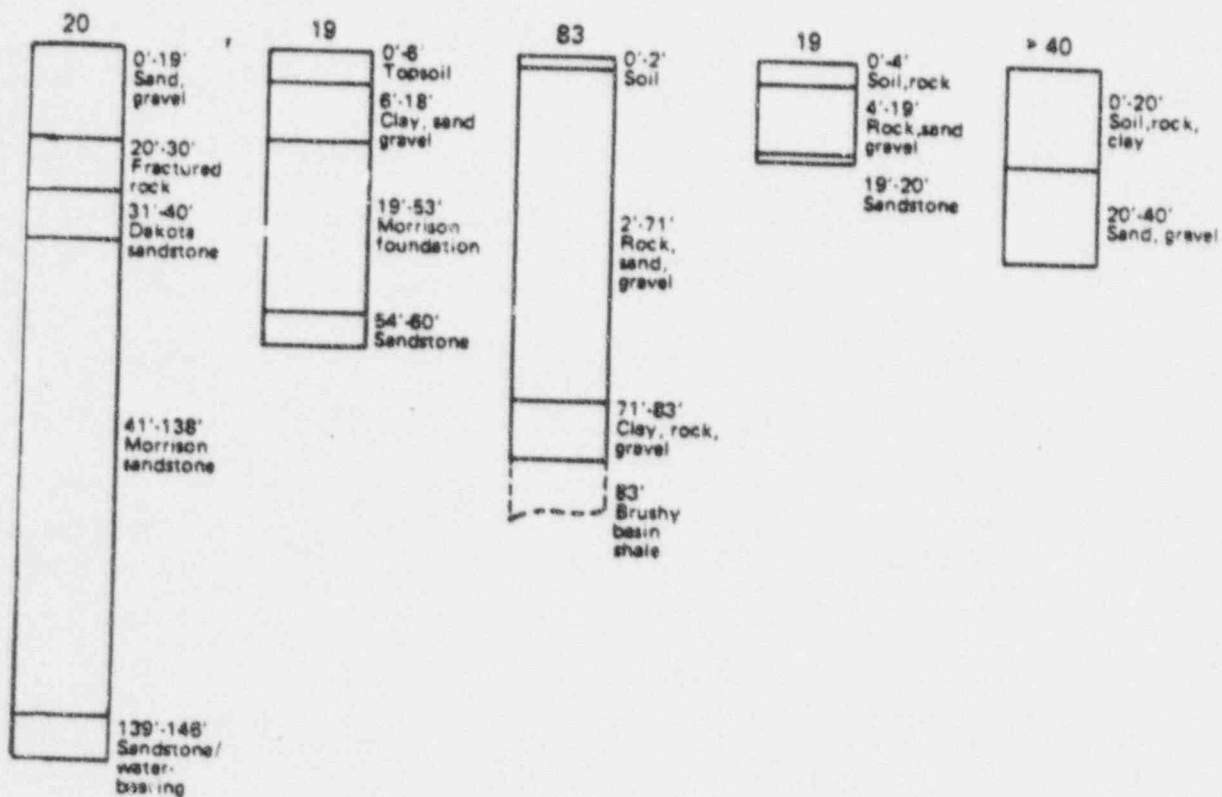
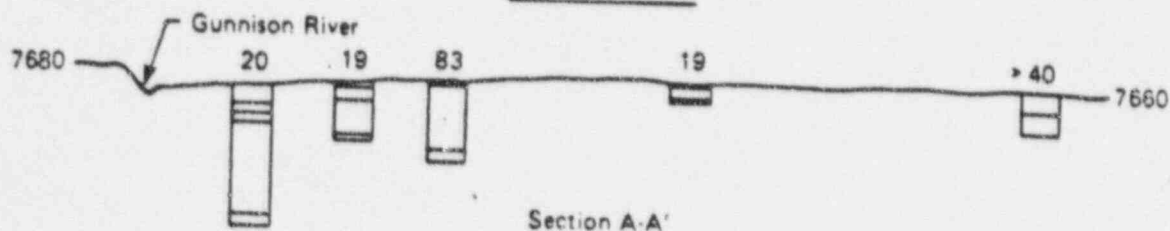
Plan view of area



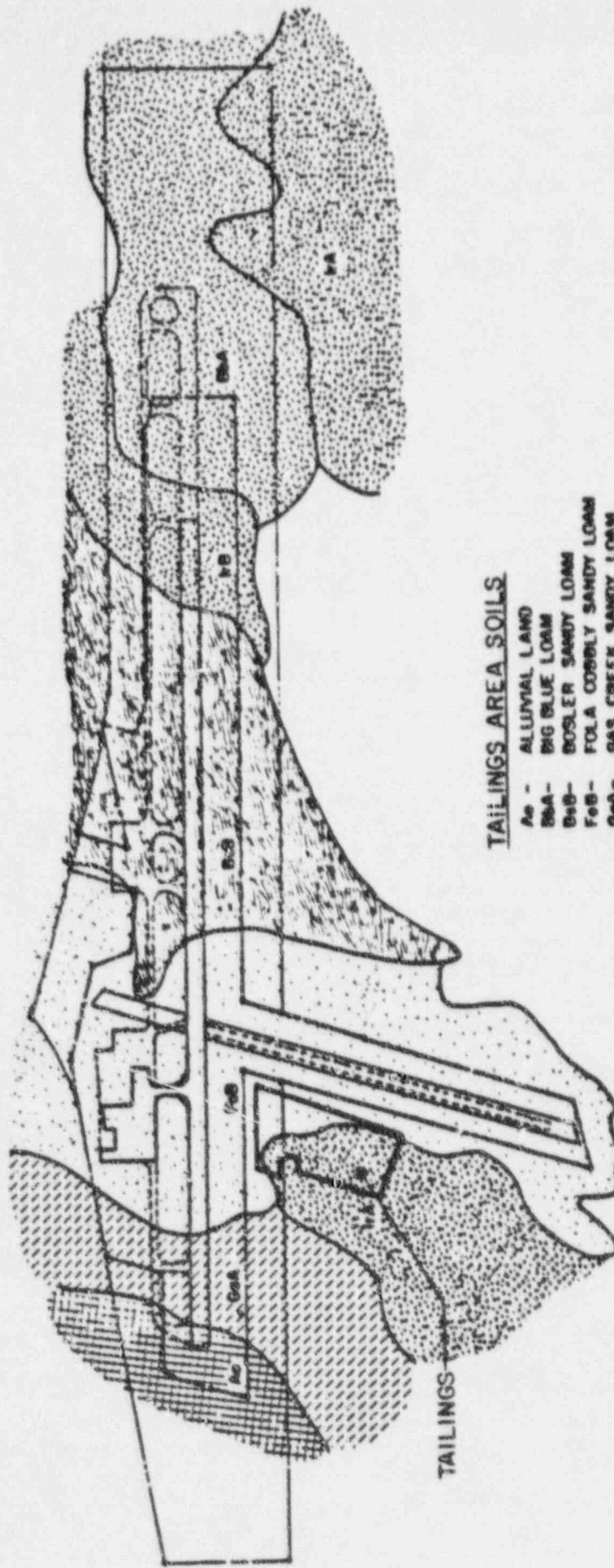
Section B-B'



Well logs in the Gunnison River Basin, Gunnison, Colorado.



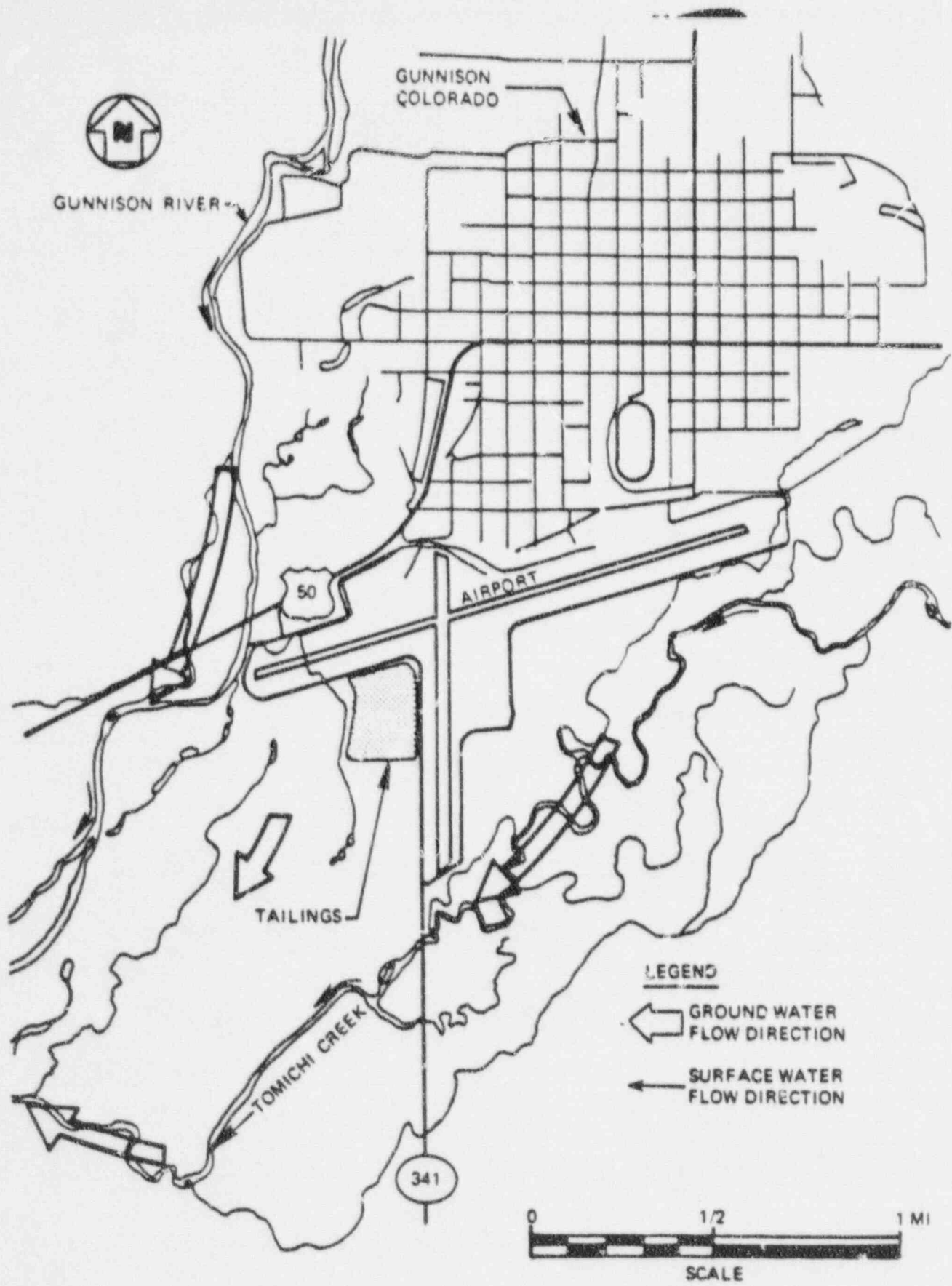
Well logs in the Gunnison River Basin, Gunnison, Colorado.



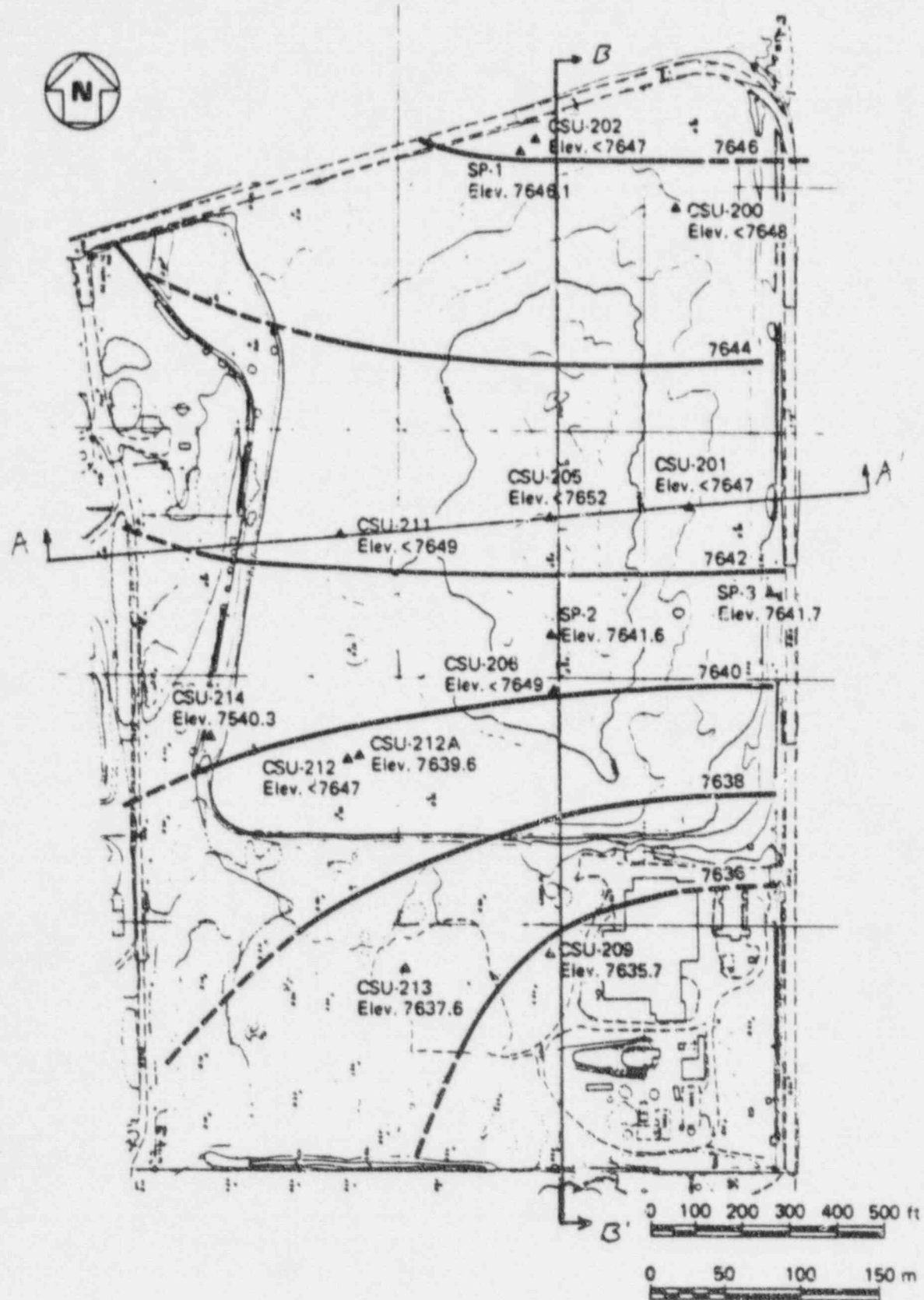
TAILINGS AREA SOILS

- Ae - ALLUVIAL LAND
 - B-1A - BIG BLUE LOAM
 - B-1B - BOSLER SANDY LOAM
 - F-1B - FOLA COBBLY SANDY LOAM
 - G-1A - GAS CREEK SANDY LOAM
 - B-1B - B-1B LOAMS
- W SOURCE - GUNNISON COUNTY SOIL SURVEY MANUAL
U.S. SOIL CONSERVATION SERVICE

Surficial soils - Gunnison, Colorado, area.



Direction of surface and ground-water flow.



Potentiometric surface below Gunnison site, October 12, 1982.

AVERAGE FLOW IN GUNNISON RIVER - 1960-70

(CFS)

Month	O	N	D	J	F	M	A	M	J	J	A	S
Mean	436	302	253	196	176	213	669	1,710	1,958	1,180	779	575
Max	543	425	339	242	199	351	1,187	2,894	2,748	1,892	1,056	870
Min	334	249	177	154	156	158	303	813	1,222	750	563	360

(USGS, 1975)

AVERAGE FLOW IN TOMICHI CREEK - 1960-70

(CFS)

MONTH	O	N	D	J	F	M	A	M	J	J	A	S
Mean	85.3	101.	74.5	64.4	67.4	106.	231.	341	349	183	179	112
Max	118	137	105	76.7	76.4	237	446	601	569	308	281	174
Min	59.4	76	58.9	53.9	56	63.7	114	163	182	125	106	72

(USGS, 1975)

PRELIMINARY DATA SUBJECT TO REVISION

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No. Washington
District

Gunnison River near Gunnison, Co. 09114500

July		Aug.		Sept.	
1	4.28				
2	4.05	2.62		2.11	
3	3.93	2.65		2.07	
4	3.78	2.58		1.98	
5	3.63	2.49		1.93	
6	3.46	2.48		1.90	
7	3.41	2.51		1.89	
8	3.38	2.46		1.88	
9	3.48	2.41		1.87	
10	2.67	2.39		1.85	
11	3.45	2.26		1.84	
12	3.21	2.33		1.83	
13	3.09	2.28		1.83	
14	3.25	2.32		1.83	
15	2.28	2.31		1.83	
16	3.09	2.32		1.88	
17	2.96	2.33		1.90	
18	2.82	2.30		1.94	
19	2.80	2.33		1.96	
20	2.81	2.35		2.02	
21	2.77	2.29		2.03	
22	2.76	2.33		2.08	
23	2.67	2.40		2.16	
24	2.67	2.32		2.17	
25	2.72	2.33		2.20	
26	2.71	2.33		2.22	
27	2.62	2.27		2.22	
28	2.57	2.25		2.24	
29	2.58	2.22		2.24	
30	2.61	2.19		2.24	
31	2.62	2.14		2.24	
		2.11			

PRELIMINARY DATA SUBJECT TO REVISION

PRELIMINARY DATA SUBJECT TO REVISION

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

File No.

Washington

District

Tomich, M. Peck at Gunnison, Co.

09 1190 00

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	July				Aug.				Sept.				PRELIMINARY DATA SUBJECT TO REVISION
1	3.39				2.73				2.56				PRELIMINARY DATA SUBJECT TO REVISION
2	3.32				2.67				2.51				
3	3.19				2.56				2.35				
4	3.08				2.50				2.25				
5	2.99				2.54				2.19				
6	2.90				2.62				2.13				
7	2.82				2.71				2.08				
8	2.82				2.63				2.04				
9	2.85				2.59				2.00				
10	2.98				2.60				1.96				
11	2.96				2.47				1.92				
12	2.79				2.38				1.92				
13	2.69				2.52				1.90				
14	2.69				2.49				1.88				
15	2.72				2.39				1.86				
16	2.65				2.37				1.89				
17	2.61				2.35				1.91				
18	2.53				2.36				1.86				
19	2.55				2.39				1.83				
20	2.51				2.43				1.81				
21	2.52				2.54				1.86				
22	2.52				2.63				1.90				
23	2.45				2.60				1.86				
24	2.39				2.64				1.83				
25	2.47				2.72				1.80				
26	2.49				2.80				1.68				
27	2.48				2.71				1.80				
28	2.46				2.58				1.88				
29	2.54				2.50				1.75				
30	2.49				2.43				1.60				
31	2.70				2.42								

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY (WATER RESOURCES DIVISION)Sta. No. 09119000Table No. 12Begin 831001
YR. MO. D. HR.Rating table for Tomichi Creek at Gunnison, Co
from Oct 1, 1983 to Sept 20, 1986, from _____ to _____, from _____ to _____

Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference
Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs
0.00			2.00	180	30	4.00	1140	100	.00			.00			.00			.00		
.10			.10	210	30	.10	1290	120	.10			.10			.10			.10		
.20			.20	240	35	.20	1410		.20			.20			.20			.20		
.30			.30	275		.30	1530	120	.30			.30			.30			.30		
.40			.40	310	35	.40	1650	150	.40			.40			.40			.40		
.50			.50	345	40	.50	1800	150	.50			.50			.50			.50		
.60			.60	385		.60	1950	200	.60			.60			.60			.60		
.70			.70	425	40	.70	2150	200	.70			.70			.70			.70		
.80			.80	465	45	.80	2350	250	.80			.80			.80			.80		
.90			.90	510		.90	2600	300	.90			.90			.90			.90		
1.00			3.00	555	45	5.00	2900	350	.00			.00			.00			.00		
.10			.10	600	50	.10	3250		.10			.10			.10			.10		
.20			.20	650		.20	3600		.20			.20			.20			.20		
.30	58	10	.30	700	50	.30	3950		.30			.30			.30			.30		
.40	68	12	.40	750	60	.40	4300		.40			.40			.40			.40		
.50	80	14	.50	810	70	.50	4650	350	.50			.50			.50			.50		
.60	94	14	.60	880	70	.60	5000		.60			.60			.60			.60		
.70	108	18	.70	950	80	.70			.70			.70			.70			.70		
.80	126	24	.80	1030		.80			.80			.80			.80			.80		
.90	150	30	.90	1110	80	.90			.90			.90			.90			.90		

This table is applicable for open-channel conditions. It is based on 7 discharge measurements made during 1983-84 Water year
and is _____ well defined between _____ cfs and _____ cfs.

Same as No. 9 at and below feet

Comp. by AK date 11/2/85Ckd. by AK date 11/7/85

1-0565

Wash. Resources Div.
Box 25046
Tacoma, Washington 98402
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY (WATER RESOURCES DIVISION)

Received 11/12/88

Sta. No. 091119000
Table No. 11

Rating table for Tamichi Creek at Gunnison, CO.
from Oct 1, 1986 to

Begin 861001

from				to				from				to			
Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height
1.00	55	10	3.00	600	40	5.00	2900	350	7.00	3250		9.00			11.00
1.10	65	15	3.10	640	50	5.10	3250		7.10	3600		9.10			11.10
1.20	80	15	3.20	690		5.20	3600		7.20	3950		9.20			11.20
1.30	95	20	3.30	740		5.30	3950		7.30	4300		9.30			11.30
1.40	115		3.40	790	50	5.40	4300		7.40	4650		9.40			11.40
1.50	135		3.50	840	60	5.50	4650		7.50	5000	350	9.50			11.50
1.60	155	20	3.60	900	60	5.60	5000	350	7.60			9.60			11.60
1.70	175	25	3.70	960	70	5.70			7.70			9.70			11.70
1.80	200		3.80	1030	80	5.80			7.80			9.80			11.80
1.90	225		3.90	1110	80	5.90			7.90			9.90			11.90
2.00	250	25	4.00	1190	100	6.00			8.00			10.00			12.00
2.10	275	30	4.10	1290	120	6.10			8.10			10.10			12.10
2.20	305	35	4.20	1410		6.20			8.20			10.20			12.20
2.30	340		4.30	1530	120	6.30			8.30			10.30			12.30
2.40	375		4.40	1650	150	6.40			8.40			10.40			12.40
2.50	410		4.50	1800	150	6.50			8.50			10.50			12.50
2.60	445	35	4.60	1950	200	6.60			8.60			10.60			12.60
2.70	480	40	4.70	2150	200	6.70			8.70			10.70			12.70
2.80	520		4.80	2350	250	6.80			8.80			10.80			12.80
2.90	560	40	4.90	2600	300	6.90			8.90			10.90			12.90

This table is applicable for open-channel conditions. It is based on 9 discharge measurements made during July 1986-87 RECEIVED-MKE

Same as No. 10 From 3.80 To 5.60
Cur. x. v. f. 16.24 m/s 1.5 m/s 1.5 m/s

DEC 12 1988 by LNC date 2-5-88
Ed. by LAL date 3-8-88

UMTRA-S.F.

CONTRACT NO. 14-1-10 M-12

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY (WATER RESOURCES DIVISION)Sta. No. 0914500Table No. 12Begin 11 10 01
YR. MO. D. HR.Rating table for Gunnison River near Gunnison, Colo.from Oct. 5 (1400) 1971 to Sept. 30, 1985, from 10 to 10

Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference	Gage height	Discharge	Difference
Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs	Feet	Cfs	Cfs
0.00			2.00	600	90	4.00	3600	200	6.00			8.00			10.00			12.00		
1.00			2.10	690	1	4.10	3800	200	6.10			8.10			10.10			12.10		
2.00			2.20	780	90	4.20	4000	210	6.20			8.20			10.20			12.20		
3.00			2.30	870	100	4.30	4210	210	6.30			8.30			10.30			12.30		
4.00			2.40	970	110	4.40	4420	210	6.40			8.40			10.40			12.40		
5.00			2.50	1080	110	4.50	4630	220	6.50			8.50			10.50			12.50		
6.00			2.60	1190	120	4.60	4850	220	6.60			8.60			10.60			12.60		
7.00			2.70	1310	130	4.70	5070	230	6.70			8.70			10.70			12.70		
8.00			2.80	1440	140	4.80	5300	21	6.80			8.80			10.80			12.80		
9.00			2.90	1580	150	4.90	5530	230	6.90			8.90			10.90			12.90		
1.00			3.00	1730	160	5.00	5760	240	7.00			9.00			11.00			13.00		
1.10			3.10	1890	170	5.10	6000	1	7.10			9.10			11.10			13.10		
1.20	80	40	3.20	2060	180	5.20	6240	240	7.20			9.20			11.20			13.20		
1.30	120	45	3.30	2240	180	5.30	6480	250	7.30			9.30			11.30			13.30		
1.40	165	55	3.40	2420	190	5.40	6730	1	7.40			9.40			11.40			13.40		
1.50	220	60	3.50	2610	190	5.50	6980	250	7.50			9.50			11.50			13.50		
1.60	280	70	3.60	2800	200	5.60	7230	260	7.60			9.60			11.60			13.60		
1.70	350	80	3.70	3000	1	5.70	7490	260	7.70			9.70			11.70			13.70		
1.80	430	85	3.80	3200	1	5.80	7750		7.80			9.80			11.80			13.80		
1.90	515	85	3.90	3400	200	5.90			7.90			9.90			11.90			13.90		

This table is applicable for open-channel conditions. It is based on _____ discharge measurements made during 1971 (Nos. 382-395)
and 1972 (Nos. 396-) and is _____ well defined between 200 cfs and 3,300 cfs.
Extended above 4.2 ft. MFW 2-15-78; ✓ RAJ
Extended below 1.4 ft. RJS 7-10-73; ✓ 8-28-73. RBK
Extended above 5.1 ft. CHC 9-30-84 ✓ 1-9-85 DRK

Comp. by RJS date 7-21-72Ckd. by RJS date 5-8-72

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY (WATER RESOURCES DIVISION)

Recd. ved.
12/12/81

Sig. No. 09111500

Table No. 14

Begin 86 10 06 01
VB MB DO MB

Rating table for Gunnison River Near Gunnison, Co

from Oct 6, 1986 to

10

from

2

VS.	MO.	D.	HR.
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

[illegible]

This table is applicable for open-channel conditions. It is based on 10 discharge measurements made during "1987 Water Year"
and is _____ well defined between _____ cfs and _____ cfs.

Comp. by D. A. K. date 2/8/88

Clkd. by *L. K. W. / d. 1002 / 6 / 18*

09114500
GUNNISON RIVER NEAR GUNNISON, CO.
NO OFFSETS USED

EXPANDED RATING TABLE
DATE PROCESSED: 10-27-1988 @ 10:37 BY BEKELLEY

DD: 2 TYPE: 001 RATING NO: 14
START DATE/TIME: 10-06-86 (0100)

BASED ON _____ DISCHARGE MEASUREMENTS, NOS _____ AND _____, AND IS _____ WELL DEFINED BETWEEN _____ AND _____ CFS
COMP BY _____ DA T _____ CHK. BY _____ DATE _____

[illegible]

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION
EXPANDED RATING TABLE

Received 10/28/88
for use by the Division
PAGE 1
TYPE: LINEAR

9119000
OMICHI CREEK AT GUNNISON, CO.
10 OFFSETS USED

DATE PROCESSED: 10-18-1988 @ 12:44 BY BEKELLEY

DD: 1 TYPE: 001 RATING NO: 11
START DATE/TIME: 10-01-86 (G100)

INPUT VALUE	DISCHARGE			(EXPANDED PRECISION)							DIFF IN Y PER .1 UNITS
	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	
1.00	55.0*	56.0	57.0	58.0	59.0	60.0	61.0	62.0	63.0	64.0	10.0
1.10	65.0*	66.5	68.0	69.5	71.0	72.5	74.0	75.5	77.0	78.5	15.0
1.20	80.0*	81.5	83.0	84.5	86.0	87.5	89.0	90.5	92.0	93.5	15.0
1.30	95.0*	97.0	99.0	101.0	103.0	105.0	107.0	109.0	111.0	113.0	20.0
1.40	115.0	117.0	119.0	121.0	123.0	125.0	127.0	129.0	131.0	133.0	20.0
1.50	135.0	137.0	139.0	141.0	143.0	145.0	147.0	149.0	151.0	153.0	20.0
1.60	155.0	157.0	159.0	161.0	163.0	165.0	167.0	169.0	171.0	173.0	20.0
1.70	175.0*	177.5	180.0	182.5	185.0	187.5	190.0	192.5	195.0	197.5	25.0
1.80	200.0*	202.5	205.0	207.5	210.0	212.5	215.0	217.5	220.0	222.5	25.0
1.90	225.0	227.5	230.0	232.5	235.0	237.5	240.0	242.5	245.0	247.5	25.0
2.00	250.0	252.5	255.0	257.5	260.0	262.5	265.0	267.5	270.0	272.5	25.0
2.10	275.0*	278.0	281.0	284.0	287.0	290.0	293.0	296.0	299.0	302.0	30.0
2.20	305.0*	308.5	312.0	315.5	319.0	322.5	326.0	329.5	333.0	336.5	35.0
2.30	340.0*	343.5	347.0	350.5	354.0	357.5	361.0	364.5	368.0	371.5	35.0
2.40	375.0	378.5	382.0	385.5	389.0	392.5	396.0	399.5	403.0	406.5	35.0
2.50	410.0	413.5	417.0	420.5	424.0	427.5	431.0	434.5	438.0	441.5	35.0
2.60	445.0*	448.5	452.0	455.5	459.0	462.5	466.0	469.5	473.0	476.5	35.0
2.70	480.0*	484.0	488.0	492.0	496.0	500.0	504.0	508.0	512.0	516.0	40.0
2.80	520.0*	524.0	528.0	532.0	536.0	540.0	544.0	548.0	552.0	556.0	40.0
2.90	560.0	564.0	568.0	572.0	576.0	580.0	584.0	588.0	592.0	596.0	40.0
3.00	600.0*	604.0	608.0	612.0	616.0	620.0	624.0	628.0	632.0	636.0	40.0
3.10	640.0*	645.0	650.0	655.0	660.0	665.0	670.0	675.0	680.0	685.0	50.0
3.20	690.0*	695.0	700.0	705.0	710.0	715.0	720.0	725.0	730.0	735.0	50.0
3.30	740.0	745.0	750.0	755.0	760.0	765.0	770.0	775.0	780.0	785.0	50.0
3.40	790.0	795.0	800.0	805.0	810.0	815.0	820.0	825.0	830.0	835.0	50.0
3.50	840.0*	845.0	852.0	858.0	864.0	870.0	876.0	882.0	888.0	894.0	60.0
3.60	900.0*	906.0	912.0	918.0	924.0	930.0	936.0	942.0	948.0	954.0	60.0
3.70	960.0*	967.0	974.0	981.0	988.0	995.0	1002	1009	1016	1023	70.0
3.80	1030*	1038	1046	1054	1062	1070	1078	1086	1094	1102	80.0
3.90	1110*	1118	1126	1134	1142	1150	1158	1166	1174	1182	80.0
4.00	1190*	1200	1210	1220	1230	1240	1250	1260	1270	1280	100.0
4.10	1290*	1302	1314	1326	1338	1350	1362	1374	1386	1398	120.0
4.20	1410*	1422	1434	1446	1458	1470	1482	1494	1506	1518	120.0
4.30	1530	1542	1554	1566	1578	1590	1602	1614	1626	1638	120.0
4.40	1650*	1665	1680	1695	1710	1725	1740	1755	1770	1785	150.0
4.50	1800*	1815	1830	1845	1860	1875	1890	1905	1920	1935	150.0
4.60	1950*	1970	1990	2010	2030	2050	2070	2090	2110	2130	200.0
4.70	2150*	2170	2190	2210	2230	2250	2270	2290	2310	2330	200.0

RECEIVED - MKE
OCT 13 1988
DFC: 13
INTRA-SE

[illegible]

MONITORING WELL INFORMATION

SITE: GUNNISON

REPORT DATE: 05/04/90

LOCATION ID	NORTH	EAST	BOREHOLE			WELL CASING			SCREENED INTERVAL		FLOW RELATIONSHIP
	COORDINATE (FT)	COORDINATE (FT)	ELEVATION (FT MSL)	DEPTH (FT)	DIAMETER (INCHES)	ELEVATION (FT MSL)	DEPTH (FT)	DIAMETER (INCHES)	DEPTH (FT)	LENGTH (FT)	
FORMATION OF COMPLETION: ALLUVIUM (AL)											
0001	3528.9	2399.5	7653.87	18.10	6.875	7655.81	20.05	2.000	8.00	5.0	UP GRADIENT
0002	2453.0	2399.1	7647.16	20.20	6.875	7649.20	22.20	2.000	10.00	5.0	UP GRADIENT
0003	2799.8	1063.3	7647.62	18.00	6.875	7649.64	20.85	2.000	10.00	5.0	CROSS GRADIENT
0004	2448.9	1765.1	7662.42	40.65	12.875	7664.41	42.65	2.000	30.00	5.0	ON-SITE
0005	2149.0	1126.0	7644.15	18.70	6.875	7645.78	20.30	2.000	10.00	5.0	DOWN GRADIENT
0006	1633.8	1639.6	7645.09	20.00	6.875	7647.07	21.98	2.000	10.00	5.0	DOWN GRADIENT
0007	1591.9	1868.8	7644.20	21.00	6.875	7646.21	22.95	2.000	11.00	5.0	DOWN GRADIENT
0008	1539.1	1872.3	7643.92	50.20	12.875	7645.41	51.68	8.000	30.00	17.9	DOWN GRADIENT
0009	1435.0	1816.5	7643.22	20.10	6.875	7645.24	22.12	2.000	10.00	5.0	DOWN GRADIENT
0010	1421.9	1453.7	7643.95	17.90	6.875	7645.90	19.82	2.000	8.00	5.0	DOWN GRADIENT
0011	1428.6	1187.5	7642.65	20.30	6.875	7644.45	22.14	2.000	10.00	5.0	DOWN GRADIENT
0012	1193.7	1738.3	7643.22	19.10	6.875	7645.35	21.23	2.000	10.00	5.0	DOWN GRADIENT
0013	912.6	997.6	7641.67	21.00	6.875	7643.70	23.05	2.000	11.00	5.0	DOWN GRADIENT
0014	755.9	1616.9	7642.11	19.90	6.875	7644.07	21.90	2.000	10.00	5.0	DOWN GRADIENT
0101	3523.6	2399.5	7653.74	49.60	6.875	7655.61	53.50	2.000	41.50	5.0	UP GRADIENT
0102	2453.4	2405.6	7647.22	52.00	6.875	7649.18	54.00	2.000	42.00	5.0	UP GRADIENT
0103	2800.9	1056.5	7647.69	50.00	6.875	7649.53	51.80	2.000	40.00	5.0	CROSS GRADIENT
0104	2459.8	1765.8	7662.48	70.00	12.875	7664.49	72.00	2.000	60.00	5.0	ON-SITE
0105	2148.1	1130.1	7644.12	52.10	6.875	7645.99	54.00	2.000	42.00	5.0	DOWN GRADIENT
0106	1634.0	1634.2	7645.14	44.30	6.875	7647.18	46.37	2.000	34.00	5.0	DOWN GRADIENT
0107	1591.5	1873.3	7644.19	53.00	6.875	7646.25	55.05	2.000	43.00	5.0	DOWN GRADIENT
0109	1437.0	1811.0	7643.20	53.50	6.875	7644.96	55.30	2.000	45.00	5.0	DOWN GRADIENT
0110	1421.7	1459.8	7644.02	48.90	6.875	7645.81	50.58	2.000	38.50	5.0	DOWN GRADIENT
0111	1430.8	1179.4	7642.60	52.10	6.875	7644.52	54.05	2.000	42.00	5.0	DOWN GRADIENT
0112	1192.5	1733.2	7643.15	49.70	6.875	7644.80	51.35	2.000	40.00	5.0	DOWN GRADIENT
0113	991.8	1003.3	7641.79	51.30	6.875	7643.77	53.25	2.000	41.00	5.0	DOWN GRADIENT
0120	1480.5	-193.0	7634.96	41.00	6.000	7363.50	27.00	2.000	20.00	5.0	DOWN GRADIENT
0121	1459.3	-180.9	7634.76	102.50	6.000	7636.44	102.00	2.000	95.00	5.0	DOWN GRADIENT
0122	1457.7	-187.8	7634.68	100.00	6.000	7636.40	87.00	2.000	80.00	5.0	DOWN GRADIENT
0123	1473.5	-209.4	7634.92	61.00	6.000	7636.68	62.00	2.000	55.00	5.0	DOWN GRADIENT
0125	131.0	-153.3	7630.84	24.80	6.000	7632.57	27.50	2.000	20.50	5.0	DOWN GRADIENT
0126	121.3	-165.3	7631.02	61.00	6.000	7632.82	62.00	2.000	55.00	5.0	DOWN GRADIENT
0127	112.1	-174.5	7630.97	101.00	6.000	7632.91	103.20	2.000	96.20	5.0	DOWN GRADIENT
0130	433.0	1400.5	7639.63	26.00	6.000	7641.48	27.00	2.000	20.00	5.0	DOWN GRADIENT
0132	433.7	1421.6	7639.74	100.50	6.000	7641.57	102.50	2.000	95.50	5.0	DOWN GRADIENT
0133	1641.0	1697.4	7639.72	21.00	6.000	7641.70	19.00	2.000	12.00	5.0	DOWN GRADIENT
0134	1634.4	1690.9	7639.59	21.00	6.000	7641.94	19.00	2.000	12.00	5.0	DOWN GRADIENT
0135	-743.6	-1457.6	7624.44	25.00	6.000	7626.17	27.00	2.000	18.00	5.0	DOWN GRADIENT
0136	-744.1	-1448.5	7624.51	61.00	6.000	7626.28	62.00	2.000	55.00	5.0	DOWN GRADIENT
0137	-745.5	-1437.7	7624.59	105.00	6.000	7626.11	102.00	2.000	95.00	5.0	DOWN GRADIENT
0140	392.9	2723.0	7640.79	26.00	6.000	7642.81	27.00	2.000	20.00	5.0	UP GRADIENT
0141	379.0	2722.6	7640.75	60.00	6.000	7642.85	62.00	2.000	57.00	5.0	UP GRADIENT

MONITORING WELL INFORMATION

SITE: GUNNISON

REPORT DATE: 05/04/90

LOCATION ID	NORTH COORDINATE (FT)	EAST COORDINATE (FT)	BOREHOLE			WELL CASING			SCREENED INTERVAL		FLOW RELATIONSHIP
			ELEVATION (FT MSL)	DEPTH (FT)	DIAMETER (INCHES)	ELEVATION (FT M.S.)	DEPTH (FT)	DIAMETER (INCHES)	DEPTH (FT)	LENGTH (FT)	
0142	364.3	2722.4	7640.63	98.50	6.000	7642.43	100.50	2.000	93.50	5.0	UP GRADIENT
0145	-1146.3	653.5	7630.76	27.00	6.000	7632.53	27.00	2.000	20.00	5.0	DOWN GRADIENT
0147	-1132.8	637.3	7631.10	101.00	6.000	7632.76	102.00	2.000	95.00	5.0	DOWN GRADIENT
0155	-2676.0	-1381.2	7618.87	27.00	6.000	7620.70	27.00	2.000	20.00	5.0	DOWN GRADIENT
0157	-2668.8	-1402.9	7618.84	101.00	6.000	7620.55	99.00	2.000	92.00	5.0	DOWN GRADIENT
0160	-1792.0	-5280.3	7597.52	75.00	6.000	7599.12	60.00	2.000	53.00	5.0	DOWN GRADIENT
0161	-1803.3	-5286.9	7597.35	101.00	6.000	7599.11	102.00	2.000	95.00	5.0	DOWN GRADIENT
0163	-38.7	-5678.2	7604.50	61.00	6.000	7606.62	63.00	2.000	56.00	5.0	CROSS GRADIENT
0170	872.1	1009.5	7640.58	141.00	6.000	7642.26	143.00	2.000	111.00	5.0	DOWN GRADIENT
0178	99999999.99	99999999.99	99999.99	9999.99	999.999	99999.99	9999.99	999.999	9999.99	999.99	UP GRADIENT
0179	99999999.99	99999999.99	99999.99	9999.99	999.999	99999.99	9999.99	999.999	9999.99	999.99	UP GRADIENT
0181	-1357.9	-2639.7	7615.31	28.00	6.000	7617.40	27.00	2.000	20.00	5.0	DOWN GRADIENT
0183	-1344.4	-2652.6	7615.25	101.00	6.000	7617.32	102.00	2.000	95.00	5.0	DOWN GRADIENT
0184	-1818.1	-4210.4	7606.88	61.00	6.000	7608.76	62.00	2.000	55.00	5.0	DOWN GRADIENT
0185	-1825.7	-4208.5	7606.95	101.00	6.000	7608.87	102.00	2.000	95.00	5.0	DOWN GRADIENT
0186	-67.3	-1798.4	7624.26	61.00	6.000	7626.01	62.00	2.000	55.00	5.0	DOWN GRADIENT
0187	-68.7	-1791.2	7624.39	101.00	6.000	7625.76	102.00	2.000	95.00	5.0	DOWN GRADIENT
0188	-978.6	-4343.5	7612.07	61.00	6.000	7613.67	62.00	2.000	55.00	5.0	DOWN GRADIENT
0189	-987.5	-4346.9	7612.37	100.00	6.000	7613.75	102.00	2.000	95.00	5.0	DOWN GRADIENT
0192	2090.0	1850.0	7661.8	9999.99	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0194	1894.6	-1445.3	7634.43	94.00	6.000	7636.26	85.00	2.000	87.00	5.0	DOWN GRADIENT
0195	1883.0	-1450.9	7634.22	60.00	6.000	7636.41	62.00	2.000	51.00	5.0	DOWN GRADIENT
0196	361.7	-3542.0	7618.62	60.00	6.000	7620.53	62.00	2.000	53.00	5.0	DOWN GRADIENT
0197	354.6	-3554.1	7618.82	100.00	6.000	7620.58	102.00	2.000	93.00	5.0	DOWN GRADIENT
0198	99999999.99	99999999.99	99999.99	9999.99	999.999	99999.99	9999.99	999.999	9999.99	999.99	DOWN GRADIENT
0200	99999999.99	99999999.99	7654.70	8.00	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0201	99999999.99	99999999.99	7656.30	11.00	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0202	99999999.99	99999999.99	7652.50	5.00	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0205	99999999.99	99999999.99	7663.10	14.30	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0206	99999999.99	99999999.99	7662.20	17.80	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0211	99999999.99	99999999.99	7656.00	9.50	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE

FORMATION OF COMPLETION: URANIUM MILL TAILINGS (TA)

0215	3119.	2202.	7653.2	6.3	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0216	2818.	1940.	7658.7	12.8	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0217	2521.	1963.	7659.8	11.3	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0218	2225.	1995.	7657.8	13.7	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0219	1804.	2160.	7646.8	6.0	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0220	3047.	1677.	7652.1	5.3	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0221	2748.	1699.	7659.0	8.2	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0222	2443.	1724.	7661.0	11.6	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0223	2148.	1750.	7660.6	13.7	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0224	1851.	1779.	7657.3	15.3	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0225	2676.	1452.	7656.6	7.5	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE

MONITORING WELL INFORMATION
 SITE: GUNNISON
 REPORT DATE: 05/04/90

LOCATION ID	NORTH COORDINATE (FT)	EAST COORDINATE (FT)	BOREHOLE			WELL CASING			SCREENED INTERVAL		FLOW RELATIONSHIP
			ELEVATION (FT MSL)	DEPTH (FT)	DIAMETER (INCHES)	ELEVATION (FT MSL)	DEPTH (FT)	DIAMETER (INCHES)	DEPTH (FT)	LENGTH (FT)	
0226	2377.	1456.	99999.99	10.0	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0227	2073.	1483.	7655.8	8.8	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0228	2923.	1284.	7650.7	6.0	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0229	1756.	1206.	7653.2	9.1	7.25	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0231	99999999.99	99999999.99	99999.99	2.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0232	99999999.99	99999999.99	99999.99	3.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0233	99999999.99	99999999.99	99999.99	4.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0234	99999999.99	99999999.99	99999.99	5.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0235	99999999.99	99999999.99	99999.99	8.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0236	99999999.99	99999999.99	99999.99	10.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0237	99999999.99	99999999.99	99999.99	12.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0238	99999999.99	99999999.99	99999.99	13.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0239	99999999.99	99999999.99	99999.99	9999.99	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0240	99999999.99	99999999.99	99999.99	5.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0241	99999999.99	99999999.99	99999.99	11.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0242	99999999.99	00999999.99	99999.99	14.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE
0243	99999999.99	00999999.99	99999.99	17.0	999.999	99999.99	9999.99	999.999	9999.99	999.99	ON-SITE

FIELDS DISPLAYED AS NINES INDICATE DATA IS UNAVAILABLE

DATA FILE: C:\DART\GUN01\MW110001.DAT

MONITORING WELL INFORMATION
 SITE: LANDFILL GUNNISON
 REPORT DATE: 05/04/90

LOCATION ID	NORTH COORDINATE (FT)	EAST COORDINATE (FT)	BOREHOLE			WELL CASING			SCREENED DEPTH (FT)	INTERVAL LENGTH (FT)	FLOW RELATIONSHIP
			ELEVATION (FT MSL)	DEPTH (FT)	DIAMETER (INCHES)	ELEVATION (FT MSL)	DEPTH (FT)	DIAMETER (INCHES)			

FORMATION OF COMPLETION: LEAN CLAYS, SANDY CLAYS, OR GRAVELLY CLAYS (CL)

0611	15087.3	12751.1	8013.73	102.00	6.000	8015.70	99.50	2.000	87.50	10.0	ON-SITE
0628	16301.2	12545.4	8050.02	85.00	8.000	8052.11	87.00	4.000	75.00	10.0	ON-SITE
0629	15745.8	12564.5	8033.63	85.00	8.000	8035.16	83.00	4.000	71.00	10.0	ON-SITE
0631	14314.5	12582.4	8028.18	97.00	8.000	8030.18	99.00	4.000	87.00	10.0	ON-SITE
0636	15314.3	12960.6	8024.16	85.00	8.000	8024.16	88.00	4.000	76.00	10.0	ON-SITE
0640	14722.0	13383.8	7990.51	85.00	8.000	7992.30	87.00	4.000	75.00	10.0	ON-SITE
0701	15765.40	12861.24	8039.43	407.5	7.88	8041.17	103.0	4.0	102.0	30.0	ON-SITE

FORMATION OF COMPLETION: CLAYEY GRAVEL OR CLAYEY SANDY GRAVEL (GC)

OFF SITE
 (CUGARS
 MUST BE
 LONG

0609	12563.3	14961.0	8010.73	150.00	6.000	8012.64	150.00	2.000	138.00	10.0	ON-SITE
0610	15114.6	12546.5	8014.98	150.00	6.000	8016.54	149.00	2.000	137.00	10.0	ON-SITE
0621	15007.7	12559.5	8011.65	183.00	10.000	8013.44	185.00	6.000	130.00	50.0	ON-SITE
0625	15042.9	12662.9	8012.22	150.00	5.600	8014.72	150.00	2.000	138.00	10.0	ON-SITE
0626	15177.3	12795.6	8017.10	152.00	5.600	8019.79	150.00	2.000	130.00	10.0	ON-SITE
0627	15031.5	12963.4	8010.82	153.00	5.600	8013.46	152.00	2.000	135.00	15.0	ON-SITE
0630	14674.5	12524.2	8008.95	137.00	8.000	8010.58	139.00	4.000	127.00	10.0	ON-SITE
0632	15077.5	11991.9	7977.62	115.00	8.000	7979.61	117.00	4.000	105.00	10.0	ON-SITE
0633	15108.6	11659.8	7982.93	112.00	8.000	7984.70	114.00	4.000	102.00	10.0	ON-SITE
0634	15390.9	11639.6	7975.92	105.00	8.000	7977.87	107.00	4.000	95.00	10.0	ON-SITE
0635	14496.9	12967.0	8005.95	161.00	8.000	8007.68	163.00	4.000	151.00	10.0	ON-SITE
0637	15879.6	12964.6	8042.38	167.00	8.000	8044.30	169.00	4.000	157.00	10.0	ON-SITE
0638	16210.3	13261.1	8053.11	176.00	8.000	8054.89	178.00	4.000	166.00	10.0	ON-SITE
0639	15460.0	13443.2	8024.14	157.00	8.000	8026.28	159.00	4.000	147.00	10.0	ON-SITE
0650	12337.4	15478.1	8023.75	142.00	4.750	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0651	12652.8	15677.7	8033.94	150.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0652	12244.9	16013.2	8036.58	250.00	4.750	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0653	12477.9	15980.4	8040.03	178.00	4.750	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0654	12805.8	16282.0	8052.98	150.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0656	12444.7	16296.7	8045.54	155.00	4.750	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0657	12686.0	16551.8	8054.70	155.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0660	13108.5	15325.3	8024.12	145.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0661	13352.8	15834.2	8040.11	155.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0662	13141.9	16646.0	8062.28	170.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0663	13543.8	16780.3	8066.11	171.00	5.125	8068.33	173.00	2.000	171.00	2.0	ON-SITE
0664	13685.1	16265.6	8049.88	155.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0665	13791.8	15799.0	8036.61	147.00	4.800	8038.61	147.00	1.250	145.00	2.0	ON-SITE
0666	13882.5	15358.1	8012.17	137.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0667	13371.8	15021.3	8010.46	134.00	4.800	8012.46	134.00	2.000	132.00	2.0	ON-SITE
0668	13615.2	14920.3	8005.24	138.00	4.750	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0669	13427.3	14449.9	7993.51	100.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0670	13887.6	14485.1	7987.96	82.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE

MONITORING WELL INFORMATION
 SITE: LANDFILL GUNNISON
 REPORT DATE: 05/04/90

LOCATION ID	NORTH COORDINATE (FT)	EAST COORDINATE (FT)	BOREHOLE ELEVATION (FT MSL)	BOREHOLE DEPTH (FT)	BOREHOLE DIAMETER (INCHES)	WELL CASING ELEVATION (FT MSL)	WELL CASING DEPTH (FT)	WELL CASING DIAMETER (INCHES)	SCREENED DEPTH (FT)	INTERVAL LENGTH (FT)	FLOW RELATIONSHIP
0671	12681.6	17064.7	8069.55	155.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0672	13282.5	17157.7	8074.14	158.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0673	15163.2	12804.8	8016.32	235.00	5.100	8018.32	235.00	1.250	235.00	2.0	ON-SITE
0674	12581.0	15831.4	8036.13	150.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0675	14480.2	16334.6	8041.99	165.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0676	15388.2	15902.5	7976.29	105.00	5.125	0000.00	000.00	00.000	000.00	000.0	ON-SITE
0703	15076.47	12549.62	8014.14	320.0	7.88	8016.11	229.0	4.0	229.0	120.0	ON-SITE
0704	15017.08	12589.74	8012.31	254.0	9.88	8014.03	120.0	6.0	107.0	120.0	ON-SITE
0705	16089.09	13251.89	8050.68	350.0	9.88	8052.78	232.0	6.0	137.0	90.0	ON-SITE
0706	16078.69	13187.03	8050.08	365.0	7.88	8051.87	226.5	4.0	134.0	90.0	ON-SITE
0708	16209.35	12511.31	8050.99	170.0	7.88	8052.21	166.7	4.0	154.7	10.0	ON-SITE
0709	17100.23	10196.60	7926.74	267.0	7.88	7928.68	202.0	4.0	202.0	10.0	DOWN GRADIENT
0710	13579.81	12674.21	8069.47	378.0	7.88	8071.00	332.0	4.0	320.0	10.0	UP GRADIENT
0712	15105.72	10549.81	7971.06	287.0	7.88	7972.90	286.0	4.0	274.0	10.0	DOWN GRADIENT
0713	14691.91	13380.09	7991.10	272.0	7.88	7992.72	217.0	4.0	205.0	10.0	DOWN GRADIENT
0714	15380.85	16119.16	7889.24	161.0	7.88	7890.96	146.0	4.0	134.0	10.0	DOWN GRADIENT
0715	15431.33	14325.79	8021.21	327.0	7.88	8022.91	174.0	4.0	132.0	40.0	DOWN GRADIENT
0716	17450.63	13191.55	8085.66	395.0	7.88	8087.22	229.0	4.0	185.0	40.0	DOWN GRADIENT

FORMATION OF COMPLETION: GNEISS (GN)

0702	15769.86	12873.30	8039.47	390.0	7.88	8041.72	392.0	4.0	348.0	40.0	ON-SITE
0707	16210.84	12479.64	8048.67	372.0	7.88	8050.60	374.0	4.0	360.0	10.0	ON-SITE

FORMATION OF COMPLETION: GRAVEL OR SANDY GRAVEL, POORLY GRADED (GP)

0717	16371.19	14719.46	8047.88	352.5	7.88	8049.57	202.0	4.0	160.0	40.0	DOWN GRADIENT
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FORMATION OF COMPLETION: JURASSIC JUNCTION CREEK SANDSTONE (JJ)

0711	14282.11	14745.10	8019.41	271.0	4.0	8021.81	247.5	4.0	235.5	10.0	CROSS GRADIENT
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DATA FILE: C:\DART\GUN08*J110008.DAT

MONITORING WELL INFORMATION
SITE: LANDFILL GARRISON

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	BUREAU ELEVATION (FT. MSL)	BUREAU DEPTH (FT.)	DIAMETER (IN.)	ELEVATION (FT. MSL)	WELL CASING DEPTH (FT.)	DIAMETER (IN.)	SCREENED DEPTH (FT.)	INTERVAL LENGTH (FT.)	FLOW RELATIONSHIP
674	42684.6	47064.7	8069.55	455.00	5.125	0000.00	000.00	00.000	000.00	000.0	DN-SITE
672	43282.5	47157.7	8074.14	458.00	5.125	0000.00	000.00	00.000	000.00	000.0	DN-SITE
674	42584.0	45834.4	8036.13	450.00	5.125	0000.00	000.00	00.000	000.00	000.0	DN-SITE
675	44480.2	46334.6	8041.99	465.00	5.125	0000.00	000.00	00.000	000.00	000.0	DN-SITE
676	45388.2	45902.5	7976.29	405.00	5.125	0000.00	000.00	00.000	000.00	000.0	DN-SITE
FORMATION OF COMPLETION: VOLCANIC BRECCIA											
001	45054.1	42655.8	8012.77	80.00	8.000	8014.74	82.00	4.000	70.00	10.0	DN-SITE
002	45485.4	42785.9	8017.64	80.00	8.000	8019.26	82.00	4.000	70.00	10.0	DN-SITE
003	45017.4	42830.5	8011.19	80.00	8.000	8013.14	82.00	4.000	70.00	10.0	DN-SITE
611	45087.3	42751.1	8013.73	102.00	6.000	8015.70	99.50	2.000	87.50	10.0	DN-SITE
628	46301.2	42545.4	8050.02	85.00	8.000	8052.11	87.00	4.000	75.00	10.0	DN-SITE
629	45745.8	42564.5	8033.63	85.00	8.000	8035.16	83.00	4.000	71.00	10.0	DN-SITE
631	44314.5	42582.4	8028.18	97.00	8.000	8030.48	99.00	4.000	87.00	10.0	DN-SITE
636	45314.3	42960.6	8024.16	85.00	8.000	8024.16	88.00	4.000	76.00	10.0	DN-SITE
640	44722.0	43383.8	7990.51	85.00	8.000	7992.30	87.00	4.000	75.00	10.0	DN-SITE

FIELDS DISPLAYED AS NINES INDICATE DATA IS UNAVAILABLE

MAPPER DATA FILE: GUN08*UDPMWI100352

Table D.1.1 Average and maximum discharge for the Gunnison River
near Gunnison, Colorado (Sta. No. 09114500)

Water year (Oct - Sept)	Mean discharge (cfs)	Max. discharge (cfs)
1911	944	3900
1912	1045	5880
1913	686	3180
1914	1168	5680
1915	683	2270
1916	1031	4620
1917	1010	5870
1918	1135	11450
1919	578	3100
1920	1166	7480
1921	918	6300
1922	805	4780
1923	1017	4930
1924	745	4270
1925	633	2460
1926	643	3530
1927	963	4800
1928	816	5510

Gage discontinued 1929-1944

1945	593	2480
1946	549	3310
1947	751	3860
1948	927	5360
1949	745	5000
1950	648	2370
1951	635	2990
1952	1020	5450
1953	664	3950
1954	392	1260
1955	501	1750
1956	623	3040
1957	1237	8820
1958	838	4410
1959	491	1930
1960	597	2550
1961	439	1850
1962	1003	5000
1963	448	1390
1964	484	2430
1965	1082	4600
1966	577	2150
1967	590	2640
1968	749	3900
1969	763	2730
1970	923	4060

Table D.1.3 Average and maximum discharge for Tomichi Creek at
Gunnison, Colorado (Sta. No. 09119000)

Water year (Oct - Sept)	Mean discharge (cfs)	Max. discharge (cfs)
1938	190	938
1939	169	1080
1940	78	276
1941	197	831
1942	287	1320
1943	192	728
1944	196	916
1945	156	555
1946	100	290
1947	204	860
1948	231	1210
1949	259	1310
1950	112	530
1951	124	615
1952	272	1340
1953	172	864
1954	70	260
1955	81	251
1956	115	600
1957	355	1890
1958	232	1340
1959	98	340
1960	145	600
1961	105	356
1962	192	888
1963	91	605
1964	135	768
1965	257	1120
1966	116	480
1967	80	276
1968	145	665
1969	154	715
1970	308	1620
1971	190	510
1972	135	555
1973	213	1480
1974	122	417
1975	195	1040
1976	133	441
1977	60	180
1978	139	751
1979	187	1070
1980	180	1040
1981	67	167

Ref. USGS, 1975.

Table D.1.1 Average and maximum discharge for the Gunnison River near Gunnison, Colorado (Sta. No. 09114500) (Concluded)

Water year (Oct - Sept)	Mean discharge (cfs)	Max. discharge (cfs)
1971	803	3120
1972	624	3460
1973	688	3370
1974	580	2460
1975	696	3340
1976	564	1940
1977	256	654
1978	733	4270
1979	906	4850
1980	909	4400
1981	381	1550

Ref. USGS, 1975.

Table D.1.2 Average flow in Gunnison River - 1960-1970 (cfs)

Month	O	N	D	J	F	M	A	M	J	J	A	S
Mean	436	302	253	196	176	213	669	1,710	1,958	1,180	779	575
Max	543	425	339	242	199	351	1,187	2,894	2,748	1,802	1,056	870
Min	334	249	177	154	156	158	303	813	1,222	750	563	360

Ref. USGS, 1975.

Table D.1.4 Average flow in Tomichi Creek - 1960-70 (cfs)

Month	O	N	D	J	F	M	A	M	J	J	A	S
Mean	85.3	101	74.5	64.4	67.4	106	231	341	349	183	179	112
Max	118	137	105	76.7	76.4	237	446	601	569	308	281	174
Min	59.4	76	58.9	53.9	56	63.7	114	163	182	125	106	72

Ref. USGS, 1975.

Ground Water Level Measurements

Piezometer	Piezometer Depth	Depth to Water Table			Water Table Elevation (ft. above sea level)		
		July 7, 1981	June 30, 1982	Aug. 13, 1982	July 7, 1981	June 30, 1982	Aug. 13, 1982
SP-1	nd ¹	nd	6' 0"	4' 11"	nd	7645	7646
SP-2	nd	nd	19' 1"	10' 0"	nd	7642	7631
SP-3	4' 4"	nd	3' 4"	3' 8"	nd	7644	7643
GUN 200	6' 6"	dry	dry	dry	—	—	—
GUN 201	9' 4"	dry	dry	dry	—	—	—
GUN 202	4' 8"	dry	dry	dry	—	—	—
GUN 203	11' 1"	dry	dry	dry	—	—	—
GUN 204	13' 0"	dry	dry	dry	—	—	—
GUN 209	nd	4' 8"	4' 11"	3' 11"	7637	7637	7636
GUN 211	7' 1"	dry	dry	dry	—	—	—
GUN 212	6' 9"	dry	dry	dry	—	—	—
GUN 212A(p)	14' 3"	13' 0"	14' 2"	12' 0"	7641	7640	7642
GUN 213(p)	nd	2' 7"	1' 9"	3' 3"	7640	7641	7640
GUN 214(p)	7' 6"	3' 3"	3' 2"	4' 2"	7643	7643	7642

¹ nd: no data available

STATIC GROUND WATER
SITE: GRIFFIN

FORMATION OF COMPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (F.T.)	EAST COORDINATE (F.T.)	LOG DATE	LOG TIME	GROUND ELEVATION (F.T. MSL)	GROUND WATER DEPTH (F.T.)	GROUND WATER ELEVATION (F.T. MSL)
001	3528.9	2399.5	04/10/84	12:00	7653.87	6.77	7647.10
001	3528.9	2399.5	04/24/84	12:00	7653.87	5.27	7648.60
001	3528.9	2399.5	05/08/84	12:00	7653.87	5.85	7648.02
001	3528.9	2399.5	05/15/84	12:00	7653.87	6.21	7647.66
001	3528.9	2399.5	05/22/84	12:00	7653.87	6.52	7647.35
001	3528.9	2399.5	05/29/84	12:00	7653.87	6.58	7647.29
001	3528.9	2399.5	06/05/84	12:00	7653.87	6.37	7647.50
001	3528.9	2399.5	06/12/84	12:00	7653.87	6.20	7647.67
001	3528.9	2399.5	06/19/84	12:00	7653.87	5.68	7648.19
001	3528.9	2399.5	06/26/84	12:00	7653.87	5.33	7648.54
002	2453.0	2399.4	03/04/85	10:20	7653.87	8.06	7645.81
002	2453.0	2399.4	04/10/84	12:00	7647.16	5.40	7641.76
002	2453.0	2399.4	04/24/84	12:00	7647.16	2.86	7644.30
002	2453.0	2399.4	05/08/84	12:00	7647.16	3.27	7643.89
002	2453.0	2399.4	05/15/84	12:00	7647.16	3.59	7643.57
002	2453.0	2399.4	05/22/84	12:00	7647.16	3.81	7643.35
002	2453.0	2399.4	05/29/84	12:00	7647.16	3.50	7643.66
002	2453.0	2399.4	06/05/84	12:00	7647.16	3.17	7643.99
002	2453.0	2399.4	06/12/84	12:00	7647.16	3.06	7644.10
002	2453.0	2399.4	06/19/84	12:00	7647.16	2.38	7644.78
002	2453.0	2399.4	06/26/84	12:00	7647.16	2.38	7644.78
003	2799.8	1063.3	03/04/85	13:25	7647.16	6.68	7640.48
003	2799.8	1063.3	07/03/88	11:15	7647.16	5.61	7641.55
003	2799.8	1063.3	04/10/84	12:00	7647.62	5.94	7641.68
003	2799.8	1063.3	04/24/84	12:00	7647.62	5.83	7641.79
003	2799.8	1063.3	05/08/84	12:00	7647.62	5.98	7641.64
003	2799.8	1063.3	05/15/84	12:00	7647.62	5.81	7641.81
003	2799.8	1063.3	05/22/84	12:00	7647.62	4.67	7642.95
003	2799.8	1063.3	05/29/84	12:00	7647.62	3.42	7644.20
003	2799.8	1063.3	06/05/84	12:00	7647.62	4.02	7643.60
003	2799.8	1063.3	06/12/84	12:00	7647.62	4.50	7643.17
003	2799.8	1063.3	06/19/84	12:00	7647.62	3.94	7643.68
003	2799.8	1063.3	06/26/84	12:00	7647.62	3.62	7644.00
004	2448.9	1765.4	03/04/85	17:05	7647.62	7.78	7639.84
004	2448.9	1765.4	04/10/84	12:00	7662.42	22.66	7639.76
004	2448.9	1765.4	04/24/84	12:00	7662.42	20.66	7641.76
004	2448.9	1765.4	05/08/84	12:00	7662.42	20.84	7641.58
004	2448.9	1765.4	05/15/84	12:00	7662.42	20.80	7641.62
004	2448.9	1765.4	05/22/84	12:00	7662.42	20.24	7642.18
004	2448.9	1765.4	05/29/84	12:00	7662.42	19.61	7642.81
004	2448.9	1765.4	06/05/84	12:00	7662.42	19.43	7642.99
004	2448.9	1765.4	06/12/84	12:00	7662.42	19.26	7643.16
004	2448.9	1765.4	06/19/84	12:00	7662.42	18.97	7643.45
004	2448.9	1765.4	06/26/84	12:00	7662.42	18.72	7643.70
			03/05/85	08:37	7662.42	23.58	7638.84

STATIC GROUND WATER
SITE: GUNWILSON

FORMATION OF COMPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
005	2149.0	1126.0	04/10/84	12:00	7644.15	5.44	7639.04
005	2149.0	1126.0	04/24/84	12:00	7644.15	4.33	7639.82
005	2149.0	1126.0	05/08/84	12:00	7644.15	4.58	7639.57
005	2149.0	1126.0	05/15/84	12:00	7644.15	7.40	7637.05
005	2149.0	1126.0	05/22/84	12:00	7644.15	2.29	7641.86
005	2149.0	1126.0	05/29/84	12:00	7644.15	1.83	7642.32
005	2149.0	1126.0	06/05/84	12:00	7644.15	1.85	7642.30
005	2149.0	1126.0	06/12/84	12:00	7644.15	1.37	7642.78
005	2149.0	1126.0	06/19/84	12:00	7644.15	1.14	7643.01
005	2149.0	1126.0	06/26/84	12:00	7644.15	.87	7643.28
006	1633.8	1639.6	03/04/85	15:45	7644.15	5.87	7638.28
006	1633.8	1639.6	04/10/84	12:00	7645.09	8.83	7636.26
006	1633.8	1639.6	04/24/84	12:00	7645.09	7.17	7637.92
006	1633.8	1639.6	05/08/84	12:00	7645.09	7.42	7637.67
006	1633.8	1639.6	05/15/84	12:00	7645.09	7.48	7637.61
006	1633.8	1639.6	05/22/84	12:00	7645.09	6.42	7638.67
006	1633.8	1639.6	05/29/84	12:00	7645.09	4.90	7640.19
006	1633.8	1639.6	06/05/84	12:00	7645.09	4.06	7641.03
006	1633.8	1639.6	06/12/84	12:00	7645.09	5.00	7640.09
006	1633.8	1639.6	06/19/84	12:00	7645.09	4.23	7640.86
006	1633.8	1639.6	06/26/84	12:00	7645.09	3.83	7641.26
007	1594.9	1868.8	07/27/85	11:50	7645.09	10.65	7634.44
007	1594.9	1868.8	04/10/84	12:00	7644.20	7.57	7636.63
007	1594.9	1868.8	04/24/84	12:00	7644.20	5.80	7638.40
007	1594.9	1868.8	05/08/84	12:00	7644.20	5.05	7639.15
007	1594.9	1868.8	05/15/84	12:00	7644.20	5.19	7639.01
007	1594.9	1868.8	05/22/84	12:00	7644.20	4.71	7639.49
007	1594.9	1868.8	05/29/84	12:00	7644.20	4.01	7640.19
007	1594.9	1868.8	06/05/84	12:00	7644.20	3.17	7641.03
007	1594.9	1868.8	06/12/84	12:00	7644.20	3.11	7641.09
007	1594.9	1868.8	06/19/84	12:00	7644.20	2.92	7641.28
007	1594.9	1868.8	06/26/84	12:00	7644.20	2.52	7641.68
007	1594.9	1868.8	07/27/85	09:30	7644.20	9.31	7634.89
008	1539.1	1872.3	02/03/88	10:00	7644.20	9.32	7634.88
008	1539.1	1872.3	04/10/84	12:00	7643.92	7.94	7636.04
008	1539.1	1872.3	04/24/84	12:00	7643.92	6.20	7637.72
008	1539.1	1872.3	05/08/84	12:00	7643.92	6.39	7637.53
008	1539.1	1872.3	05/15/84	12:00	7643.92	6.55	7637.37
008	1539.1	1872.3	05/22/84	12:00	7643.92	5.82	7638.10
008	1539.1	1872.3	05/29/84	12:00	7643.92	4.53	7639.39
008	1539.1	1872.3	06/05/84	12:00	7643.92	4.20	7639.72
008	1539.1	1872.3	06/12/84	12:00	7643.92	4.05	7639.87
008	1539.1	1872.3	06/19/84	12:00	7643.92	3.90	7640.02
009	1126.0	1816.5	06/26/84	12:00	7643.92	3.43	7640.49
009	1126.0	1816.5	04/10/84	12:00	7643.22	7.48	7635.74

STATIC GROUND WATER
SITE: TURNISON

FORMATION OF COMPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
009	1435.0	1816.5	04/24/84	12:00	7643.22		
009	1435.0	1816.5	05/08/84	12:00	7643.22	5.81	7637.41
009	1435.0	1816.5	05/15/84	12:00	7643.22	7.47	7635.75
009	1435.0	1816.5	05/22/84	12:00	7643.22	6.45	7636.77
009	1435.0	1816.5	05/29/84	12:00	7643.22	5.46	7637.76
009	1435.0	1816.5	06/05/84	12:00	7643.22	4.02	7639.20
009	1435.0	1816.5	06/12/84	12:00	7643.22	3.60	7639.62
009	1435.0	1816.5	06/19/84	12:00	7643.22	3.54	7639.68
009	1435.0	1816.5	06/26/84	12:00	7643.22	3.23	7639.99
009	1435.0	1816.5	07/03/84	12:00	7643.22	2.67	7640.55
010	1421.9	1453.7	04/10/84	12:00	7643.95	9.44	7633.51
010	1421.9	1453.7	04/24/84	12:00	7643.95	8.38	7635.57
010	1421.9	1453.7	05/08/84	12:00	7643.95	6.93	7637.02
010	1421.9	1453.7	05/15/84	12:00	7643.95	6.24	7637.71
010	1421.9	1453.7	05/22/84	12:00	7643.95	7.30	7636.65
010	1421.9	1453.7	05/29/84	12:00	7643.95	5.70	7638.25
010	1421.9	1453.7	06/05/84	12:00	7643.95	4.04	7639.91
010	1421.9	1453.7	06/12/84	12:00	7643.95	3.80	7640.15
010	1421.9	1453.7	06/19/84	12:00	7643.95	3.84	7640.11
010	1421.9	1453.7	06/26/84	12:00	7643.95	3.30	7640.65
010	1421.9	1453.7	07/03/85	15:50	7643.95	2.94	7641.01
011	1428.6	1187.5	04/10/84	12:00	7642.65	10.39	7632.26
011	1428.6	1187.5	04/24/84	12:00	7642.65	7.22	7635.43
011	1428.6	1187.5	05/08/84	12:00	7642.65	5.95	7636.70
011	1428.6	1187.5	05/15/84	12:00	7642.65	6.39	7636.26
011	1428.6	1187.5	05/22/84	12:00	7642.65	6.44	7636.21
011	1428.6	1187.5	05/29/84	12:00	7642.65	4.03	7638.62
011	1428.6	1187.5	06/05/84	12:00	7642.65	2.58	7640.07
011	1428.6	1187.5	06/12/84	12:00	7642.65	2.55	7640.10
011	1428.6	1187.5	06/19/84	12:00	7642.65	3.74	7638.91
011	1428.6	1187.5	06/26/84	12:00	7642.65	1.91	7640.74
011	1428.6	1187.5	07/03/85	09:55	7642.65	1.72	7640.93
012	1493.7	1738.3	04/10/84	12:00	7643.22	9.39	7633.83
012	1493.7	1738.3	04/24/84	12:00	7643.22	9.62	7633.60
012	1493.7	1738.3	05/08/84	12:00	7643.22	7.87	7635.35
012	1493.7	1738.3	05/15/84	12:00	7643.22	8.20	7635.02
012	1493.7	1738.3	05/22/84	12:00	7643.22	8.35	7634.87
012	1493.7	1738.3	05/29/84	12:00	7643.22	7.18	7636.04
012	1493.7	1738.3	06/05/84	12:00	7643.22	5.39	7637.83
012	1493.7	1738.3	06/12/84	12:00	7643.22	5.14	7638.08
012	1493.7	1738.3	06/19/84	12:00	7643.22	5.16	7638.06
012	1493.7	1738.3	06/26/84	12:00	7643.22	4.43	7638.79
012	1493.7	1738.3	07/03/85	19:30	7643.22	3.62	7639.60
013	912.6	997.6	04/10/84	12:00	7641.67	10.50	7631.17
013	912.6	997.6	04/24/84	12:00	7641.67	9.64	7632.03
013	912.6	997.6	05/08/84	12:00	7641.67	7.82	7633.85

FORMATION OF COMPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
043	942.6	997.6	05/08/84	12:00	7644.67		
043	942.6	997.6	05/15/84	12:00	7644.67	8.68	7632.99
043	942.6	997.6	05/22/84	12:00	7644.67	8.74	7632.93
043	942.6	997.6	05/29/84	12:00	7644.67	5.68	7635.99
043	942.6	997.6	06/05/84	12:00	7644.67	3.05	7638.62
043	942.6	997.6	06/12/84	12:00	7644.67	3.14	7638.53
043	942.6	997.6	06/19/84	12:00	7644.67	3.53	7638.14
043	942.6	997.6	06/26/84	12:00	7644.67	2.09	7639.58
044	755.9	1616.9	02/19/85	14:45	7644.67	1.84	7639.83
044	755.9	1616.9	04/10/84	12:00	7642.44	11.33	7630.34
044	755.9	1616.9	04/24/84	12:00	7642.44	DRY	DRY
044	755.9	1616.9	05/08/84	12:00	7642.44	7.79	7634.32
044	755.9	1616.9	05/15/84	12:00	7642.44	8.46	7633.65
044	755.9	1616.9	05/22/84	12:00	7642.44	8.46	7633.65
044	755.9	1616.9	05/29/84	12:00	7642.44	6.73	7635.38
044	755.9	1616.9	06/05/84	12:00	7642.44	4.87	7637.24
044	755.9	1616.9	06/12/84	12:00	7642.44	4.79	7637.32
044	755.9	1616.9	06/19/84	12:00	7642.44	4.85	7637.26
044	755.9	1616.9	06/26/84	12:00	7642.44	3.33	7639.78
101	3523.6	2399.5	03/03/85	19:45	7642.44	4.54	7640.57
101	3523.6	2399.5	04/10/84	12:00	7653.74	11.77	7630.34
101	3523.6	2399.5	04/24/84	12:00	7653.74	6.74	7647.03
101	3523.6	2399.5	05/08/84	12:00	7653.74	5.28	7648.46
101	3523.6	2399.5	05/15/84	12:00	7653.74	5.76	7647.98
101	3523.6	2399.5	05/22/84	12:00	7653.74	6.09	7647.65
101	3523.6	2399.5	05/29/84	12:00	7653.74	6.44	7647.30
101	3523.6	2399.5	06/05/84	12:00	7653.74	6.46	7647.28
101	3523.6	2399.5	06/12/84	12:00	7653.74	6.26	7647.48
101	3523.6	2399.5	06/19/84	12:00	7653.74	6.11	7647.63
101	3523.6	2399.5	06/26/84	12:00	7653.74	5.57	7648.17
102	2453.4	2405.6	03/03/85	10:38	7653.74	5.88	7647.86
102	2453.4	2405.6	04/10/84	12:00	7647.22	8.43	7645.61
102	2453.4	2405.6	04/24/84	12:00	7647.22	5.62	7644.60
102	2453.4	2405.6	05/08/84	12:00	7647.22	3.23	7643.99
102	2453.4	2405.6	05/15/84	12:00	7647.22	3.62	7643.60
102	2453.4	2405.6	05/22/84	12:00	7647.22	3.89	7643.33
102	2453.4	2405.6	05/29/84	12:00	7647.22	3.98	7643.24
102	2453.4	2405.6	06/05/84	12:00	7647.22	3.58	7643.64
102	2453.4	2405.6	06/12/84	12:00	7647.22	3.29	7643.73
102	2453.4	2405.6	06/19/84	12:00	7647.22	3.14	7644.08
102	2453.4	2405.6	06/26/84	12:00	7647.22	2.43	7644.79
103	2800.9	1056.5	03/03/85	13:45	7647.22	2.51	7644.81
103	2800.9	1056.5	04/10/84	12:00	7647.69	6.83	7640.39
103	2800.9	1056.5	04/24/84	12:00	7647.69	6.54	7641.45
			05/08/84	12:00	7647.69	6.22	7641.47
						6.44	7641.28

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LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
402	2800.9	1056.5	05/15/R4	12:00	7647.69		
403	2800.9	1056.5	05/22/R4	12:00	7647.69	6.14	7641.55
403	2800.9	1056.5	05/29/R4	12:00	7647.69	5.06	7642.63
403	2800.9	1056.5	06/05/R4	12:00	7647.69	3.83	7643.86
403	2800.9	1056.5	06/12/R4	12:00	7647.69	4.95	7642.74
403	2800.9	1056.5	06/19/R4	12:00	7647.69	4.91	7642.78
403	2800.9	1056.5	06/26/R4	12:00	7647.69	4.39	7643.30
404	2459.8	1765.8	03/04/R5	09:40	7647.69	4.30	7643.39
404	2459.8	1765.8	04/10/R4	12:00	7662.48	8.32	7639.37
404	2459.8	1765.8	05/24/R4	12:00	7662.48	22.84	7639.64
404	2459.8	1765.8	05/08/R4	12:00	7662.48	21.07	7641.41
404	2459.8	1765.8	05/15/R4	12:00	7662.48	21.28	7641.20
404	2459.8	1765.8	05/22/R4	12:00	7662.48	21.24	7641.24
404	2459.8	1765.8	05/29/R4	12:00	7662.48	20.59	7641.89
404	2459.8	1765.8	06/05/R4	12:00	7662.48	20.93	7641.55
404	2459.8	1765.8	06/12/R4	12:00	7662.48	19.78	7642.70
404	2459.8	1765.8	06/19/R4	12:00	7662.48	19.58	7642.80
404	2459.8	1765.8	06/26/R4	12:00	7662.48	19.28	7643.20
405	2148.1	1130.1	03/04/R5	12:00	7662.48	19.07	7643.41
405	2148.1	1130.1	04/10/R4	12:00	7644.12	23.74	7638.74
405	2148.1	1130.1	04/24/R4	12:00	7644.12	5.80	7638.32
405	2148.1	1130.1	05/08/R4	12:00	7644.12	4.90	7639.72
405	2148.1	1130.1	05/15/R4	12:00	7644.12	5.21	7638.91
405	2148.1	1130.1	05/22/R4	12:00	7644.12	4.65	7639.47
405	2148.1	1130.1	05/29/R4	12:00	7644.12	3.09	7641.03
405	2148.1	1130.1	06/05/R4	12:00	7644.12	2.61	7641.51
405	2148.1	1130.1	06/12/R4	12:00	7644.12	2.61	7641.51
405	2148.1	1130.1	06/19/R4	12:00	7644.12	2.71	7641.41
405	2148.1	1130.1	06/26/R4	12:00	7644.12	2.00	7642.12
406	1634.0	1634.2	03/04/R5	13:40	7644.12	1.90	7642.22
406	1634.0	1634.2	04/10/R4	12:00	7645.14	7.67	7636.45
406	1634.0	1634.2	04/24/R4	12:00	7645.14	9.04	7636.10
406	1634.0	1634.2	05/08/R4	12:00	7645.14	7.44	7637.70
406	1634.0	1634.2	05/15/R4	12:00	7645.14	7.69	7637.45
406	1634.0	1634.2	05/22/R4	12:00	7645.14	7.77	7637.37
406	1634.0	1634.2	05/29/R4	12:00	7645.14	6.48	7638.66
406	1634.0	1634.2	06/05/R4	12:00	7645.14	5.04	7640.10
406	1634.0	1634.2	06/12/R4	12:00	7645.14	4.81	7640.33
406	1634.0	1634.2	06/19/R4	12:00	7645.14	3.96	7640.18
406	1634.0	1634.2	06/26/R4	12:00	7645.14	4.35	7640.79
407	1591.5	1873.3	02/27/R5	13:50	7645.14	4.71	7640.43
407	1591.5	1873.3	04/10/R4	12:00	7645.19	10.95	7634.19
407	1591.5	1873.3	04/24/R4	12:00	7645.19	8.40	7635.79
407	1591.5	1873.3	05/08/R4	12:00	7645.19	6.77	7637.42
407	1591.5	1873.3	05/15/R4	12:00	7645.19	7.00	7637.19
						6.98	7637.21

STATIC GROUND WATER LEVELS
SITE: GUNNISON

FORMATION OF COMPLETION ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
107	4594.5	4873.3	05/08/84	12:00	7644.4	7.00	7637.4
107	4594.5	4873.3	05/15/84	12:00	7644.4	6.28	7638.1
107	4594.5	4873.3	05/22/84	12:00	7644.4	5.90	7638.5
107	4594.5	4873.3	05/29/84	12:00	7644.4	4.94	7639.5
107	4594.5	4873.3	06/05/84	12:00	7644.4	4.73	7639.7
107	4594.5	4873.3	06/12/84	12:00	7644.4	4.77	7639.7
107	4594.5	4873.3	06/19/84	12:00	7644.4	4.22	7639.2
107	4594.5	4873.3	06/26/84	12:00	7644.4	3.49	7639.9
107	4594.5	4873.3	07/10/84	12:00	7644.4	4.27	7639.2
107	4594.5	4873.3	07/17/84	12:00	7644.4	3.42	7639.0
107	4594.5	4873.3	07/24/84	12:00	7644.4	4.75	7639.7
107	4594.5	4873.3	07/31/84	12:00	7644.4	5.46	7638.0
107	4594.5	4873.3	08/07/84	12:00	7644.4	5.90	7638.5
107	4594.5	4873.3	08/14/84	12:00	7644.4	6.07	7638.4
107	4594.5	4873.3	08/21/84	12:00	7644.4	6.27	7638.2
107	4594.5	4873.3	08/28/84	12:00	7644.4	6.10	7638.3
107	4594.5	4873.3	09/04/84	12:00	7644.4	6.24	7638.2
107	4594.5	4873.3	09/11/84	12:00	7644.4	6.40	7637.0
107	4594.5	4873.3	09/18/84	12:00	7644.4	6.52	7636.9
107	4594.5	4873.3	09/25/84	12:00	7644.4	6.49	7637.0
107	4594.5	4873.3	10/02/84	12:00	7644.4	6.34	7637.1
107	4594.5	4873.3	10/09/84	12:00	7644.4	6.64	7636.8
107	4594.5	4873.3	02/27/85	09:30	7644.4	40.20	7633.2
107	4594.5	4873.3	04/18/85	12:30	7644.4	4.00	7640.4
109	4437.0	4811.0	10/05/83	12:00	7643.2	6.62	7636.6
109	4437.0	4811.0	02/11/84	12:00	7643.2	9.55	7633.7
109	4437.0	4811.0	03/27/84	12:00	7643.2	9.78	7633.5
109	4437.0	4811.0	04/10/84	12:00	7643.2	8.72	7634.5
109	4437.0	4811.0	04/24/84	12:00	7643.2	7.42	7636.0
109	4437.0	4811.0	05/08/84	12:00	7643.2	7.99	7635.2
109	4437.0	4811.0	05/15/84	12:00	7643.2	7.39	7635.8
109	4437.0	4811.0	05/22/84	12:00	7643.2	5.94	7637.3
109	4437.0	4811.0	05/29/84	12:00	7643.2	4.78	7638.5
109	4437.0	4811.0	06/05/84	12:00	7643.2	4.74	7638.6
109	4437.0	4811.0	06/12/84	12:00	7643.2	4.84	7638.6
109	4437.0	4811.0	06/19/84	12:00	7643.2	4.20	7639.0
109	4437.0	4811.0	06/26/84	12:00	7643.2	3.93	7639.7
109	4437.0	4811.0	07/10/84	12:00	7643.2	3.28	7640.2
109	4437.0	4811.0	07/17/84	12:00	7643.2	4.4	7639.8
109	4437.0	4811.0	07/24/84	12:00	7643.2	4.91	7639.3
109	4437.0	4811.0	07/31/84	12:00	7643.2	5.94	7637.3
109	4437.0	4811.0	08/07/84	12:00	7643.2	6.30	7636.9
109	4437.0	4811.0	08/14/84	12:00	7643.2	6.53	7636.7
109	4437.0	4811.0	08/21/84	12:00	7643.2	6.67	7636.5
109	4437.0	4811.0	08/28/84	12:00	7643.2	6.54	7636.6

STATIC GROUND WATER SITE: CUNNINGSON

FORMATION & COMPLETION ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT., MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT., MSL)
100	1437.0	1811.0	09/04/84	12:00	7643.20	6.70	7636.50
109	1437.0	1811.0	09/11/84	12:00	7643.20	6.09	7636.31
109	1437.0	1811.0	09/18/84	12:00	7643.20	7.03	7636.17
109	1437.0	1811.0	09/25/84	12:00	7643.20	6.96	7636.24
109	1437.0	1811.0	10/02/84	12:00	7643.20	6.78	7636.42
109	1437.0	1811.0	10/09/84	12:00	7643.20	7.19	7636.01
109	1437.0	1811.0	10/26/84	18:15	7643.20	10.54	7632.66
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.85	7637.17
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.84	7637.40
110	1424.7	1811.0	10/26/84	12:00	7644.02	10.50	7633.52
110	1424.7	1811.0	10/26/84	12:00	7644.02	10.27	7633.75
110	1424.7	1811.0	10/26/84	12:00	7644.02	9.04	7633.98
110	1424.7	1811.0	10/26/84	12:00	7644.02	7.50	7636.52
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.52	7637.10
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.94	7637.00
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.06	7637.96
110	1424.7	1811.0	10/26/84	12:00	7644.02	4.46	7635.56
110	1424.7	1811.0	10/26/84	12:00	7644.02	4.35	7639.67
110	1424.7	1811.0	10/26/84	12:00	7644.02	4.44	7639.18
110	1424.7	1811.0	10/26/84	12:00	7644.02	3.73	7640.29
110	1424.7	1811.0	10/26/84	12:00	7644.02	3.40	7640.67
110	1424.7	1811.0	10/26/84	12:00	7644.02	3.94	7640.08
110	1424.7	1811.0	10/26/84	12:00	7644.02	4.11	7639.91
110	1424.7	1811.0	10/26/84	12:00	7644.02	4.56	7639.46
110	1424.7	1811.0	10/26/84	12:00	7644.02	5.67	7638.35
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.29	7637.73
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.61	7637.41
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.82	7637.20
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.62	7637.40
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.57	7637.45
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.74	7637.26
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.09	7637.13
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.86	7637.24
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.78	7637.24
110	1424.7	1811.0	10/26/84	12:00	7644.02	7.20	7636.07
110	1424.7	1811.0	10/26/84	12:00	7644.02	10.79	7633.03
110	1424.7	1811.0	10/26/84	12:00	7644.02	3.31	7640.71
110	1424.7	1811.0	10/26/84	12:00	7644.02	9.51	7633.09
110	1424.7	1811.0	10/26/84	12:00	7644.02	9.48	7633.47
110	1424.7	1811.0	10/26/84	12:00	7644.02	7.98	7633.62
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.67	7635.58
110	1424.7	1811.0	10/26/84	12:00	7644.02	7.06	7635.56
110	1424.7	1811.0	10/26/84	12:00	7644.02	7.04	7635.56
110	1424.7	1811.0	10/26/84	12:00	7644.02	6.77	7635.83
110	1424.7	1811.0	10/26/84	12:00	7644.02	3.68	7633.92

STATIC GROUND WATER
SITE: GUNNSUN

FORMATION OF COMPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
111	1430.8	1179.4	06/05/84	12:00	7642.60	3.76	7640.90
111	1430.8	1179.4	06/12/84	12:00	7642.60	3.79	7638.81
111	1430.8	1179.4	06/19/84	12:00	7642.60	3.00	7639.60
111	1430.8	1179.4	06/26/84	12:00	7642.60	2.91	7639.69
111	1430.8	1179.4	07/10/84	12:00	7642.60	3.52	7639.08
111	1430.8	1179.4	07/17/84	12:00	7642.60	3.62	7638.98
111	1430.8	1179.4	07/24/84	12:00	7642.60	4.16	7638.44
111	1430.8	1179.4	07/31/84	12:00	7642.60	5.10	7637.50
111	1430.8	1179.4	08/07/84	12:00	7642.60	5.62	7636.98
111	1430.8	1179.4	08/14/84	12:00	7642.60	5.09	7636.51
111	1430.8	1179.4	08/21/84	12:00	7642.60	6.04	7636.56
111	1430.8	1179.4	08/28/84	12:00	7642.60	5.87	7636.73
111	1430.8	1179.4	09/04/84	12:00	7642.60	5.92	7636.68
111	1430.8	1179.4	09/11/84	12:00	7642.60	6.15	7636.45
111	1430.8	1179.4	09/18/84	12:00	7642.60	6.26	7636.34
111	1430.8	1179.4	09/25/84	12:00	7642.60	6.13	7636.47
111	1430.8	1179.4	10/02/84	12:00	7642.60	6.00	7636.60
111	1430.8	1179.4	10/09/84	12:00	7642.60	6.17	7636.43
111	1430.8	1179.4	10/26/85	09:10	7642.60	9.16	7632.44
111	1430.8	1179.4	06/18/85	14:30	7642.60	2.98	7639.62
112	1192.5	1733.2	10/05/85	12:00	7643.15	6.89	7636.26
112	1192.5	1733.2	02/11/84	12:00	7643.15	10.43	7632.72
112	1192.5	1733.2	03/27/84	12:00	7643.15	10.14	7633.01
112	1192.5	1733.2	04/10/84	12:00	7643.15	9.10	7633.05
112	1192.5	1733.2	04/24/84	12:00	7643.15	7.37	7635.78
112	1192.5	1733.2	06/08/84	12:00	7643.15	7.70	7635.45
112	1192.5	1733.2	05/15/84	12:00	7643.15	7.77	7635.38
112	1192.5	1733.2	05/22/84	12:00	7643.15	6.23	7636.92
112	1192.5	1733.2	05/29/84	12:00	7643.15	7.68	7635.47
112	1192.5	1733.2	06/05/84	12:00	7643.15	4.54	7638.61
112	1192.5	1733.2	06/12/84	12:00	7643.15	4.62	7638.53
112	1192.5	1733.2	06/19/84	12:00	7643.15	3.70	7639.45
112	1192.5	1733.2	06/26/84	12:00	7643.15	2.95	7640.70
112	1192.5	1733.2	07/10/84	12:00	7643.15	3.25	7639.90
112	1192.5	1733.2	07/17/84	12:00	7643.15	3.45	7639.70
112	1192.5	1733.2	07/24/84	12:00	7643.15	3.81	7639.34
112	1192.5	1733.2	07/31/84	12:00	7643.15	5.50	7637.65
112	1192.5	1733.2	08/07/84	12:00	7643.15	6.00	7637.15
112	1192.5	1733.2	08/14/84	12:00	7643.15	6.48	7636.17
112	1192.5	1733.2	08/21/84	12:00	7643.15	6.52	7636.13
112	1192.5	1733.2	08/28/84	12:00	7643.15	6.52	7636.13
112	1192.5	1733.2	09/04/84	12:00	7643.15	6.10	7636.50
112	1192.5	1733.2	09/11/84	12:00	7643.15	6.93	7635.67
112	1192.5	1733.2	09/18/84	12:00	7643.15	6.10	7636.55
112	1192.5	1733.2	09/25/84	12:00	7643.15	6.10	7636.55

STATIC GROUND WATER
SITE: CUNNINGSON

FORMATION OF SUPPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
142	1492.5	1733.2	10/07/85	12:00	7643.45	6.64	7636.81
142	1492.5	1733.2	10/09/85	12:00	7643.45	7.42	7636.03
142	1492.5	1733.2	07/20/85	14:35	7643.45	10.88	7632.57
143	991.8	1003.3	10/12/83	12:00	7641.79	6.63	7635.16
143	991.8	1003.3	10/14/83	12:00	7641.79	6.72	7635.07
143	991.8	1003.3	02/11/85	12:00	7641.79	12.23	7629.56
143	991.8	1003.3	03/27/85	12:00	7641.79	10.77	7631.02
143	991.8	1003.3	04/10/85	12:00	7641.79	9.77	7631.02
143	991.8	1003.3	04/24/85	12:00	7641.79	7.98	7633.81
143	991.8	1003.3	05/08/85	12:00	7641.79	9.77	7631.02
143	991.8	1003.3	05/15/85	12:00	7641.79	8.81	7632.98
143	991.8	1003.3	05/22/85	12:00	7641.79	5.77	7636.02
143	991.8	1003.3	05/29/85	12:00	7641.79	3.31	7638.48
143	991.8	1003.3	06/05/85	12:00	7641.79	3.50	7638.29
143	991.8	1003.3	06/12/85	12:00	7641.79	3.87	7637.92
143	991.8	1003.3	06/19/85	12:00	7641.79	2.50	7639.29
143	991.8	1003.3	06/26/85	12:00	7641.79	2.27	7639.52
143	991.8	1003.3	07/10/85	12:00	7641.79	3.02	7638.77
143	991.8	1003.3	07/17/85	12:00	7641.79	3.50	7638.29
143	991.8	1003.3	07/24/85	12:00	7641.79	4.27	7635.52
143	991.8	1003.3	07/31/85	12:00	7641.79	6.31	7635.48
143	991.8	1003.3	08/07/85	12:00	7641.79	6.98	7634.81
143	991.8	1003.3	08/14/85	12:00	7641.79	7.44	7634.35
143	991.8	1003.3	08/21/85	12:00	7641.79	7.60	7634.19
143	991.8	1003.3	08/28/85	12:00	7641.79	7.23	7634.56
143	991.8	1003.3	09/04/85	12:00	7641.79	7.30	7634.49
143	991.8	1003.3	09/11/85	12:00	7641.79	7.46	7634.33
143	991.8	1003.3	09/18/85	12:00	7641.79	7.58	7634.21
143	991.8	1003.3	09/25/85	12:00	7641.79	7.45	7634.34
143	991.8	1003.3	10/02/85	12:00	7641.79	7.89	7633.90
143	991.8	1003.3	10/09/85	12:00	7641.79	11.39	7633.40
143	991.8	1003.3	02/19/85	13:45	7641.79	3.57	7638.22
143	991.8	1003.3	06/17/85	09:50	7641.79	10.57	7630.22
143	991.8	1003.3	02/03/86	09:00	7641.79	276.46	7638.50
143	991.8	1003.3	02/14/86	14:20	7641.79	274.09	7638.50
143	991.8	1003.3	06/19/85	09:30	7641.79	7.84	7636.95
143	991.8	1003.3	02/13/86	18:20	7641.79	1.16	7636.63
143	991.8	1003.3	06/19/85	09:45	7641.79	7.95	7636.73
143	991.8	1003.3	02/17/86	14:30	7641.79	7.49	7636.30
143	991.8	1003.3	02/13/86	12:25	7641.79	5.73	7635.06
143	991.8	1003.3	02/12/86	09:00	7641.79	7.17	7633.62
143	991.8	1003.3	02/12/86	18:35	7641.79	7.57	7633.22
143	991.8	1003.3	02/12/86	11:00	7641.79	12.26	7627.53
143	991.8	1003.3	02/18/86	18:15	7641.79	4.36	7638.43
143	991.8	1003.3	06/18/85	15:25	7641.79		

STATIC GROUND WATER
SITE: GUNNISON

FORMATION OF COMPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL.)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL.)
132	433.7	1424.6	07/18/85	18:15	7639.74	13.34	7626.40
132	433.7	1424.6	06/20/85	09:45	7639.74	8.05	7631.69
136	-743.6	-1457.6	03/06/85	16:15	7624.44	4.42	7620.02
136	-744.4	-1448.5	02/14/85	16:00	7624.51	5.27	7619.24
137	-745.5	-1437.7	02/06/85	14:49	7624.59	5.54	7619.05
137	-745.5	-1437.7	06/20/85	08:30	7624.59	2.60	7621.99
140	392.9	2724.0	02/18/85	14:35	7640.79	6.76	7634.03
140	392.9	2724.0	06/11/85	14:53	7640.79	1.75	7639.04
141	379.0	2727.6	02/18/85	10:20	7640.75	8.44	7632.31
141	379.0	2727.6	02/04/88	09:15	7630.75	5.85	7634.90
142	364.3	2722.4	02/18/85	10:10	7640.63	8.76	7631.87
142	364.3	2722.4	06/11/85	13:56	7640.63	4.68	7635.95
145	-1146.3	653.5	02/12/85	18:25	7630.76	7.41	7623.35
145	-1146.3	653.5	06/18/85	17:25	7630.76	.08	7629.68
147	-1132.8	637.5	02/12/85	09:04	7631.10	8.97	7622.13
147	-1132.8	637.5	06/20/85	14:45	7611.10	4.68	7615.42
155	-2676.0	-1381.2	02/05/85	08:20	7618.87	4.45	7614.41
157	-2668.8	-1402.9	02/05/85	15:30	7618.87	1.50	7617.37
160	-1792.0	-5280.3	02/05/85	09:45	7618.84	2.68	7616.16
160	-1792.0	-5280.3	06/12/85	10:20	7597.52	4.24	7593.28
161	-1803.3	-5286.9	02/05/85	09:47	7597.52	2.35	7595.17
163	-38.7	-5678.2	02/05/85	18:30	7597.35	4.29	7593.06
163	-38.7	-5678.2	06/13/85	16:15	7604.50	10.42	7594.08
170	872.1	1009.5	02/18/85	09:30	7604.50	3.84	7600.66
170	872.1	1009.5	06/18/85	19:33	7640.58	13.92	7626.66
181	-1357.9	-2639.7	02/06/85	09:20	7640.58	8.29	7632.29
181	-1357.9	-2639.7	06/13/85	07:45	7615.31	4.94	7610.37
183	-1344.4	-2652.6	02/06/85	10:27	7615.31	3.61	7611.70
183	-1344.4	-2652.6	06/13/85	08:59	7615.25	4.90	7610.35
184	-1819.1	-4210.4	02/06/85	13:04	7615.25	3.47	7611.78
184	-1819.1	-4210.4	06/13/85	13:04	7606.88	2.11	7604.77
185	-1825.7	-4208.5	02/06/85	17:43	7606.88	1.41	7605.47
185	-1825.7	-4208.5	06/13/85	12:55	7606.95	2.38	7604.57
186	-67.2	-1798.4	02/12/85	14:00	7606.95	1.88	7605.07
186	-67.2	-1798.4	06/12/85	12:02	7624.26	5.70	7618.56
187	-68.7	-1794.2	06/16/85	10:30	7624.26	3.20	7621.06
187	-68.7	-1794.2	06/17/85	12:40	7624.39	6.39	7618.00
187	-68.7	-1794.2	02/07/85	13:04	7624.39	3.82	7620.57
188	-978.6	-4343.5	02/03/88	13:04	7624.39	5.67	7618.72
188	-978.6	-4343.5	06/17/88	09:55	7612.07	2.62	7609.45
194	1894.6	-1445.3	06/16/85	15:40	7612.07	2.83	7609.24
194	1894.6	-1445.3	02/01/85	10:50	7611.43	6.80	7627.63
195	1893.0	-1450.9	06/16/85	10:49	7614.43	4.59	7629.01
195	1893.0	-1450.9	02/17/85	09:50	7614.22	9.04	7625.18
195	1893.0	-1450.9	06/12/85	09:30	7614.22	5.72	7620.50

STATIC GROUND WATER LEVELS
SITE: GUNNTSEN

FORMATION OF COMPLETION: ALLUVIUM

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT. MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT. MSL)
195	361.7	-3542.0	02/17/85	14:40	7610.62	3.90	7614.62
196	361.7	-3542.0	06/16/85	13:39	7610.62	2.54	7616.08
197	354.6	-3554.1	02/07/85	11:30	7610.82	2.96	7615.16
197	354.6	-3554.1	06/16/85	08:40	7610.82	1.84	7615.98

FILES DISPLAYED AS NINES INDICATE DATA IS UNAVAILABLE

MAPPER DATA FILE: GUN01#UDPSGML00289

FORMATION TO COMPLETION: NO RECOVERY IN DATA FOR CLASSIFIED

LOCATION ID	NORTH COORDINATE (FT.)	EAST COORDINATE (FT.)	LOG DATE	LOG TIME	GROUND ELEVATION (FT., MSL)	GROUND WATER DEPTH (FT.)	GROUND WATER ELEVATION (FT., MSL)
505	45773.7	26548.4	02/10/85	10:29	7779.40	54.02	7728.07
506	45629.7	26347.5	02/13/85	16:43	7774.30	46.44	7728.49
507	45629.7	26403.5	02/10/85	12:56	7706.90	50.24	7736.69
508	45596.7	26464.4	02/13/85	13:35	7707.40	50.78	7736.62
540	46902.0	25429.2	10/17/86	14:24	7770.50	64.28	7659.22
540	46902.0	25429.2	10/23/86	10:40	7770.50	64.43	7659.07
544	46904.9	26625.6	10/17/86	11:16	7773.70	28.63	7705.07
544	46904.9	26625.6	10/23/86	10:30	7773.70	29.22	7704.48
542	46081.4	27208.5	10/17/86	11:43	7790.50	56.34	7734.16
543	46115.9	27208.5	10/23/86	10:35	7790.50	56.28	7734.22
543	46135.9	24148.8	10/17/86	10:47	7657.90	47.36	7640.54
544	46199.6	24148.8	10/23/86	09:55	7657.90	47.65	7640.25
544	46199.6	25352.8	10/17/86	11:04	7664.20	20.79	7640.44
545	46290.6	25352.8	10/23/86	10:05	7664.20	49.99	7644.30
545	47107.7	24925.8	10/17/86	10:56	7716.60	58.32	7656.28
545	47107.7	24925.8	10/23/86	10:00	7716.60	63.83	7650.77
546	46145.6	25517.4	10/17/86	11:14	7730.00	40.83	7689.17
546	46145.6	25517.4	10/23/86	11:30	7730.00	40.82	7689.18
547	47246.9	28406.4	10/17/86	14:35	7045.20	43.17	7772.03
548	47246.9	28406.4	10/23/86	10:20	7045.20	42.95	7772.25
548	46909.8	25409.8	10/17/86	11:22	7770.00	94.33	7628.67
549	46909.8	25409.8	10/23/86	10:40	7770.00	416.75	7603.25
520	46352.6	30474.4	10/17/86	10:50	8274.20	DRY	DRY
524	46352.6	30474.4	10/23/86	13:07	8274.20	55.95	7997.95
524	46409.0	30430.9	10/17/86	11:40	8061.90	95.20	7958.70
524	46409.0	30430.9	10/23/86	12:56	7944.90	33.65	7878.25
527	47004.6	34264.5	10/17/86	10:40	7931.90	96.09	7845.84
527	47004.6	34264.5	10/23/86	13:00	8277.60	DRY	DRY
523	43973.4	34923.7	10/17/86	11:05	8277.60	225.67	805.13
523	43973.4	34923.7	10/23/86	12:26	8265.20	DRY	DRY
524	46399.0	28757.7	10/17/86	10:50	8265.20	274.98	7993.72
524	46399.0	28757.7	10/23/86	12:50	7040.30	32.90	7807.40
525	46449.7	24459.2	10/17/86	10:37	7040.30	32.87	7807.43
525	46449.7	24459.2	10/23/86	10:45	7650.20	16.93	7644.27
526	45978.2	30778.0	10/17/86	09:55	7650.20	47.22	7640.98
526	45978.2	30778.0	10/23/86	12:58	7951.60	8.88	7942.52
526	45978.2	30778.0	10/23/86	10:45	7951.60	8.82	7942.58

STATE GROUND WATER SITE: 1300-11, CORNELL

FORMATION IN COMPLETION: NO RECOVERY OF DATA FOR CLASSIFYING

LOCATION ID	NORTH COORDINATE (F.T.)	EAST COORDINATE (F.T.)	LOG DATE	LOG TIME	GROUND ELEVATION (F.T. MSL)	GROUND WATER DEPTH (F.T.)	GROUND WATER ELEVATION (F.T. MSL)
609	44961.0	42563.3	01/30/88	14:40	8010.73	95.76	7914.97
610	45114.6	42566.5	01/30/88	12:45	8014.98	99.50	7915.48
611	45087.3	42754.4	01/29/88	11:45	9999.99	999.99	7965.40
629	999999.9	999999.9	01/30/88	09:55	9999.99	999.99	9999.99
630	999999.9	999999.9	02/01/88	10:30	9999.99	999.99	9999.99
631	999999.9	999999.9	01/30/88	08:40	9999.99	999.99	9999.99
632	999999.9	999999.9	02/02/88	13:25	9999.99	999.99	9999.99
634	999999.9	999999.9	02/02/88	09:45	9999.99	999.99	9999.99
635	999999.9	999999.9	01/31/88	12:35	9999.99	999.99	9999.99
638	999999.9	999999.9	02/01/88	13:55	9999.99	999.99	9999.99
640	999999.9	999999.9	01/29/88	13:45	9999.99	999.99	9999.99

FIELDS DISPLAYED AS LINES INDICATE DATA IS UNAVAILABLE

MAPPER DATA FILE: GUN001DDPS.M 00282

Table D.2.4 Water level measurements

Well	Date	Depth to ground water (feet below top of casing)
201A	02-11-84	9.81
	03-27-84	10.21
	04-10-84	8.58
	04-24-84	7.15
	05-08-84	7.63
	05-15-84	7.96
	05-22-84	8.31
	05-29-84	9.33
201B	02-11-84	9.90
	03-27-84	10.35
	04-10-84	8.71
	04-24-84	7.21
	05-08-84	7.79
	05-15-84	8.15
	05-22-84	8.46
	05-29-84	8.52
202A	10-05-83	4.92
	10-12-83	5.18
	10-14-83	5.26
	02-11-84	8.19
	03-27-84	8.73
	04-10-84	7.58
	04-24-84	5.19
	05-08-84	5.58
	05-15-84	5.85
	05-22-84	5.94
	05-29-84	5.54
202B	10-05-83	2.71
	10-12-83	2.86
	10-14-83	2.93
	02-11-84	5.93
	03-27-84	8.65
	04-10-84	7.44
	04-24-84	4.90
	05-08-84	5.31
	05-15-84	5.63
	05-22-84	5.85
	05-29-84	5.54

Table D.2.4 Water level measurements (Continued)

Well	Date	Depth of ground water (feet below top of casing)
203A	10-05-83	
	10-12-83	7.37
	10-14-83	7.43
	02-11-84	7.43
	03-27-84	9.97
	04-10-84	9.60
	04-24-84	8.38
	05-08-84	8.06
	05-15-84	8.25
	05-22-84	7.98
	05-29-84	6.90
		5.67
203B	10-05-83	
	10-12-83	7.17
	10-14-83	7.20
	02-11-84	7.22
	03-27-84	9.62
	04-10-84	9.29
	04-24-84	7.96
	05-08-84	7.85
	05-15-84	8.00
	05-22-84	7.83
	05-29-84	6.69
204A		5.44
	10-05-83	
	02-11-84	22.80
	03-27-84	25.55
	04-10-84	25.60
	04-24-84	24.85
	05-08-84	23.08
	05-15-84	23.29
	05-22-84	23.25
	05-29-84	22.60
		22.94
204B	02-11-84	
	03-27-84	25.37
	04-10-84	25.25
	04-24-84	24.65
	05-08-84	22.65
	05-15-84	22.83
	05-22-84	22.79
	05-29-84	22.33
		21.60

Table D.2.4 Water level measurements (Continued)

Well	Date	Depth to ground water (feet below top of casing)
205A	10-05-83	5.46
	10-12-83	6.50
	02-11-84	9.24
	03-27-84	8.81
	04-10-84	7.67
	04-24-84	6.77
	05-08-84	7.08
	05-15-84	6.52
	05-22-84	4.96
	05-29-84	4.48
205B	10-05-83	5.35
	10-12-83	5.39
	02-11-84	8.21
	03-27-84	8.00
	04-10-84	6.77
	04-24-84	5.96
	05-08-84	6.21
	05-15-84	8.73
	05-22-84	3.92
	05-29-84	3.46
206A	10-05-83	8.98
	02-11-84	12.39
	03-27-84	12.29
	04-10-84	11.08
	04-24-84	9.48
	05-08-84	9.73
	05-15-84	9.81
	05-22-84	8.52
	05-29-84	7.08
206B	10-05-83	8.69
	02-11-84	12.16
	03-27-84	12.04
	04-10-84	10.81
	04-24-84	9.15
	05-08-84	9.40
	05-15-84	9.46
	05-22-84	8.40
	05-29-84	6.88

Table D.2.4 Water level measurements (Continued)

Well	Date	Depth to ground water (feet below top of casing)
207A	10-05-83	
	02-11-84	8.46
	03-27-84	11.67
	04-10-84	11.56
	04-24-84	10.46
	05-08-84	8.83
	05-15-84	9.06
	05-22-84	9.04
	05-29-84	8.04
207B		7.00
	10-05-83	
	02-11-84	7.60
	03-27-84	10.75
	04-10-84	10.71
	04-24-84	9.58
	05-08-84	7.81
	05-15-84	7.92
	05-22-84	8.06
208		7.58
	05-29-84	6.88
	10-05-83	
	03-27-84	7.44
	04-10-84	10.56
	04-24-84	9.40
	05-08-84	7.69
	05-15-84	7.88
	05-22-84	8.04
209A		7.31
	05-29-84	6.02
	10-05-83	
	02-11-84	8.38
	03-27-84	11.71
	04-10-84	11.54
	04-24-84	10.48
	05-08-84	10.88
	05-15-84	9.75
	05-22-84	9.15
	05-29-84	7.67
		6.54

Table D.2.4 Water level measurements (Continued)

Well	Date	Depth to ground water (feet below top of casing)
209B	10-05-83	7.58
	02-11-84	10.89
	03-27-84	10.75
	04-10-84	9.50
	04-24-84	7.83
	05-08-84	9.19
	05-15-84	8.17
	05-22-84	7.48
	05-29-84	6.04
210A	10-12-83	8.64
	10-14-83	8.63
	02-11-84	12.29
	03-27-84	12.06
	04-10-84	10.83
	04-24-84	9.29
	05-08-84	8.71
	05-15-84	8.73
	05-22-84	7.85
210B	05-29-84	6.25
	10-12-83	8.24
	10-14-83	8.24
	02-11-84	11.70
	03-27-84	11.69
	04-10-84	10.33
	04-24-84	8.88
	05-08-84	8.19
	05-15-84	9.25
211A	05-22-84	7.65
	05-29-84	5.96
	02-11-84	11.43
	03-27-84	11.10
	04-10-84	9.90
	04-24-84	8.57
	05-08-84	8.98
	05-15-84	8.96
	05-22-84	8.69
	05-29-84	5.60

Table D.2.4 Water level measurements (Continued)

Well	Date	Depth to ground water (feet below top of casing)
2118	02-11-84	10.78
	03-27-84	10.46
	04-10-84	9.02
	04-24-84	7.75
	05-08-84	8.19
	05-15-84	8.21
	05-22-84	5.83
	05-29-84	4.38
212A	10-05-83	8.54
	02-11-84	12.08
	03-27-84	11.79
	04-10-84	10.75
	04-24-84	9.02
	05-08-84	9.35
	05-15-84	9.42
	05-22-84	7.88
212B	05-29-84	6.31
	10-05-83	8.70
	02-11-84	11.68
	03-27-84	11.92
	04-10-84	10.75
	04-24-84	9.00
	05-08-84	9.33
	05-15-84	9.48
213A	05-22-84	8.31
	05-29-84	6.52
	10-12-83	8.61
	10-14-83	8.70
	02-11-84	14.21
	03-27-84	12.75
	04-10-84	11.75
	04-24-84	9.96
	05-08-84	10.75
	05-15-84	10.79
	05-22-84	7.75
	05-29-84	5.29

Table D.2.4 Water level measurements (Continued)

Well	Date	Depth to ground water (feet below top of casing)
213B	10-12-83	8.48
	10-14-83	8.45
	02-11-84	13.07
	03-27-84	12.73
	04-10-84	11.67
	04-24-84	9.85
	05-08-84	10.71
	05-15-84	10.77
	05-22-84	7.71
	05-29-84	5.08
214	10-05-83	9.21
	02-11-84	13.17
	04-24-84	9.75
	05-08-84	10.42
	05-15-84	10.42
	05-22-84	8.69
	05-29-84	6.83
SP-1	03-27-84	*
	04-10-84	*
	04-24-84	*
	05-08-84	8.58
	05-15-84	8.67
	05-22-84	8.67
	05-29-84	8.56
SP-2	03-27-84	*
	04-10-84	*
	04-24-84	*
	05-08-84	*
	05-15-84	*
	05-22-84	*
	05-29-84	*

* No water found.

Table D.2.4 Water level measurements (Continued)

Well	Date	Depth to ground water (feet below top of casing)
SP-3	05-08-84	
	05-15-84	5.83
	05-22-84	*
	05-29-84	5.71
CSU-209	03-27-84	*
	04-10-84	*
	04-24-84	
	05-08-84	8.67
	05-15-84	8.92
	05-22-84	9.04
	05-29-84	8.25
CSU-212A		6.67
	03-27-84	*
	04-10-84	*
	04-24-84	
	05-08-84	15.02
	05-15-84	14.67
	05-22-84	14.92
CSU-214	05-29-84	14.75
		14.04
	03-27-84	*
	04-10-84	*
	04-24-84	*
	05-08-84	*
	05-15-84	*
	05-22-84	
	05-29-84	7.33
		6.75
306	10-05-83	7.42
309	10-05-83	8.03
311	10-05-83	8.39
312	10-05-83	7.73
313	10-12-83	7.45
314	10-05-83	7.02
315	10-05-83	7.77

Table D.2.4 Water level measurements (Concluded)

Well	Date	Depth to ground water (feet below top of casing)
316	10-05-83	7.73
317	10-05-83	7.16
318	10-05-83	5.25
319	10-05-83	4.83
	10-12-83	4.86
320	10-05-83	7.35
321	10-05-83	6.26
322	10-05-83	7.03
323	10-05-83	8.49
	10-12-83	8.46
324	10-05-83	7.39
331	10-05-83	6.53
332	10-05-83	4.33
	10-12-83	4.33

DATE _____

SUBJECT

WELL COORDINATES

BY _____ CHKD _____

SHEET NO _____

JOB NO _____

ORIGEN = 50,000; 50,000

#		N	E
201	A 101	53,523.56	52,399.56 ✓
	B 001	52,523.97	52,399.53 ✓
202	A 102	52,453.42	52,405.55 ✓
	B 002	52,453.04	52,399.05 ✓
203	A 103	52,800.92	51,056.52 ✓
	B 003	52,799.81	51,063.31 ✓
204	A 104	52,459.81	51,765.56 ✓
	B 004	52,448.86	51,765.08 ✓
205	A 105	52,148.12	51,130.10 ✓
	B 005	52,148.99	51,126.03 ✓
206	A 106	51,634.03	51,634.18 ✓
	B 006	51,633.84	51,639.58 ✓
207	A 107	51,591.51	51,873.31 ✓
	B 007	51,591.88	51,868.79 ✓
208	A 108	51,539.13	51,872.34 ✓
209	A 109	51,436.97	51,811.04
	B 009	51,435.00	51,816.46
210	A 110	51,421.70	51,459.45 ✓
	B 010	51,421.89	51,453.71 ✓
211	A 111	51,430.78	51,179.38 ✓
	B 011	51,428.55	51,187.49 ✓

DATE _____

SUBJECT _____

BY _____ CHKD _____

SHEET NO _____

JOB NO _____

	#	N	E
212	A 112	51,192.48	51,733.20
	B 012	51,193.71	51,738.28
213	A 113	50,991.81	51,003.27
	B 013	50,912.64	50,997.60
214	B 014	50,755.87	51,616.94
332		52780.81	52,275.72
331		53,162.57	52,221.43
324		53,336.87	52,139.50
323		53,282.78	51,941.23
322		53,177.58	51,739.11
320		53,190.79	51,535.04
319		53,085.36	51,337.65
321		52,997.18	51,144.74
318		52,859.16	51,110.06
304		51,647.05	52,010.80
306		51,596.80	51,800.51
309		51,596.86	51,608.21
312		51,555.51	51,408.09

JE JACOBS ENGINE' NG

DATE _____

SUBJECT _____

BY _____

CHKD. _____

SHEET NO. _____

JOB NO. _____

	N	E
315	51,588.89	51,213.69
316	51,390.82	51,214.24
313	51,393.63	51,413.31
310	51,387.62	51,614.34
307	51,392.41	51,808.61
308	51,192.93	51,809.96
311	51,198.59	51,609.54
314	51,189.60	51,424.47
317	51,184.91	51,225.17

DATE _____

SUBJECT

APPROXIMATE TAC

BY _____ CHKD _____

COORDINATES

SHEET NO _____

OF DOMESTIC WELLS

JOB NO _____

	N	E
WOODS 402	51,000	52,200
SINGER	52,200	54,000 53,700
SINGER 422	52,600	51,100
DAVID 453	52,500	51,000
DESCHERE 454	51,500	51,000
COLEMAN 455	51,100	50,700
FITTLE 456	52,400	49,600
SJOBERG 457	51,800	48,700
HATCHER 458	50,900	48,200
WALLACE 463	50,900 50,400	48,500
TRAINER 464	49,100	47,600
GOLLING 465	48,600	47,000
MARKS 468	48,500	46,100
HITT 466	47,500	47,800
TONICHI 467	47,800	
CONDOS	47,200	47,000
CITY 423	54,00	51,000
GOERL 450	52,400	50,800



JACOBS ENGINEERING

VG

≈ TAC

DATE _____

SUBJECT

COORDINATES OF
PRIVATE WELLS

SHEET NO. _____

BY _____ CHKD. _____

JOB NO. _____

N

E

~~MILLSITE~~ 461 51,500

52,200

460 462 50,800

52,200

190 51,730

51,170

403 51,900

53,700

404 51,600

53,400

451 52,500

50,100

452 52,000

50,800

~~458 459~~ 460 51,100

48,900

459 51,400

48,500

DATE _____

SUBJECT

≈ WELL

COORDINATES

BY _____ CHKD. _____

SHEET NO. _____

JOB NO. _____

#	N	E
SPT 191	53,100	51,770
SP2	52,190	52,250

~~SP3~~

SP2 192	52,090	51,850
---------	--------	--------

SP3 193	52,190	52,250
---------	--------	--------

CSO 200	52,970	52,080
---------	--------	--------

CSO 201	52,330	52,260
---------	--------	--------

CSO 202	53,120	51,790
---------	--------	--------

CSO 203 ²⁰⁵	52,340	51,830
-----------------------------------	--------	--------

OLD CSO 209 ²⁰⁹	51,450	51,820
---------------------------------------	--------	--------

CSO 212 212	51,850	51,430
------------------------	--------	--------

CSO 213 213	51,420	51,540
-------------	--------	--------

214	51,910	51,130
-----	--------	--------

	<u>Nothing</u>	<u>East ing</u>	<u>TOC (elevation)</u>
201A	3523.56	2399.56	7655.61
201B	3528.91	2399.53	7655.81
202A	2453.42	2405.55	7649.18
202B	2453.04	2399.05	7649.20
203A	2800.92	1056.52	7649.53
203B	2799.81	1063.31	7649.64
204B	2448.86	1765.08	7664.41
204A	2459.81	1765.56	7664.49
205A	2148.12	1130.10	7645.99
205B	2148.99	1126.03	7645.78
206A	1634.03	1634.18	7647.18
206B	1633.84	1639.58	7647.07
207A	1591.51	1873.31	7646.25
207B	1591.88	1868.79	7646.21
208	1539.13	1872.34	7645.41
209A	1436.97	1811.04	7644.96
209B	1435.00	1816.46	7645.24
210A	1421.70	1459.45	7645.81
210B	1421.89	1453.71	7645.90
211A	1430.78	1179.38	7644.52
211B	1428.55	1187.49	7644.45
212A	1192.48	1733.20	7644.80
212B	1193.71	1738.28	7645.35
213A	911.81	1003.27	7643.77
213B	912.64	997.60	7643.70
214	755.87	1616.94	7644.07



DATE _____

SUBJECT

GUNNISON

WATER LEVELS

10-5-83

SHEET NO. _____

BY _____ CHKD. _____

JOB NO. _____

WELLLEVEL
(MSL = 0')

202A 7644.26

202B 7644.45

332 7645.54

331 7646.73

201A 7649.10

201B 7649.03

324 7647.11

323 7646.76

322 46.12

320 45.6

319 44.78

321 43.55

318 42.96

203A 42.16

203B 42.47

204(N) A 41.69

204(S) B 42.29

205A 40.53

205B 40.43

DATE _____

SUBJECT 10-5-83

BY _____ CHKD. _____

SHEET NO. _____

JOB NO. _____

304

7639.00'

207 A

37.79

207 B

38.61

306

38.95

206A

38.20

206B

38.38

309

38.21

312

38.11

315

37.95

316

37.14

209A

36.58

209B

37.66

307

37.49

308

36.93

212A

36.26

212B

36.65

311

36.43

314

~ 36.63 (CASING BROKEN)

317

36.47

208 (PUMPED)

37.97

DATE _____

SUBJECT 10-5-83

SHEET NO _____

BY _____ CHKD. _____

JOB NO _____

214B

7634.86'

~~213A~~

SP3

43.32

SP1

46.87

TH 212A

39.14

~~TH 214~~

~~ESU 209 ALEW~~
~~(TH 2092)~~

DATE _____

SUBJECT

GUNNISON
WATER LEVELS
10-12-83

SHEET NO. _____

BY _____ CHKD. _____

JOB NO. _____

WELL

LEVEL
(MSL = 0')

Δ FROM 10-5

213A
213B

7635.16
35.22

205A
205B

(2) 39.49
40.39

-0.04'

203A
203B

42.10
42.44

-0.06'

319

44.75

-0.03'

323

46.79

+0.03'

317

36.49

+0.02'

313

37.56

210A
210B

37.17
37.66

332

45.54

0

202A
202B

~~44.28~~ 44.00
44.30

-0.26

-0.15



JACOBS ENGINEER. JG

GUNNISON
WATER LEVELS

DATE _____

SUBJECT

10-14-83

SHEET NO _____

BY _____ CHKD. _____

JOB NO _____

WELLLEVEL
(MSL = 0')Δ FROM 10-12

213A	35.07	-0.09
213B	35.25	+0.03
203A	42.10	0
203B	42.42	-0.02
202A	43.92	-0.08
202B	44.23	-0.07
210A	37.18	+0.01
210B	37.66	0

GUNNISON WATER LEVELS, 2-11-84
(FT. BELOW GROUND SURFACE)

ELEVATION (FMSL)

201 A B	7645.8 45.91
202 A B	40.99 41.23
203 A B	39.56 40.02
204 A(N) B(S)	38.94 39.04
205 A B	36.75 37.57
206 A B	34.79 34.91
207 A B	34.58 34.58 35.46
208 A B	
209 A B	33.25 34.35
210 A B	33.52 34.13
211 A B	33.09 33.67
212 A B	32.72 33.22
213 A B	29.56 30.63
214 B	30.90

WATER LEVELS FOR 2/2/85

SUMMIT ENGINEERING OF GUNNISON, INC. ENGINEERS AND LAND SURVEYORS

322 North Main Street
Gunnison, Colorado 81230
(303) 641-5064

March 29, 1985

JOB # G-2110

MONITORING WELLS NEAR GUNNISON, COLORADO A. SOUTHWEST GUNNISON

WATER
LEVEL

WELL #	NORTHING	EASTING	GROUND ELEVATION	TOP OF P.V.C. ELEVATION	TOP OF CASING ELEVATION
120	11180.481	9806.976	7634.96	7636.50	7636.62
121	11459.342	9819.058	7634.76	7636.44	7636.52
122	11457.686	9812.244	7634.68	7636.57	7636.75
123	11473.485	9790.649	7634.92	7636.68	7636.77
125	10131.009	9846.705	7630.84	7632.57	7632.82
126	10121.324	9835.729	7631.02	7632.82	7633.04
127	10112.108	9825.527	7630.97	7632.91	7632.95
130	10433.015	11400.521	7639.63	7641.48	7641.76
132	10433.688	11421.576	7639.74	7641.57	7641.67
133	11641.047	11697.421	7639.72	7641.70	7642.01
134	11634.379	11690.942	7639.59	7641.91	7642.12
135	9256.437	8542.445	7624.44	7626.17	7626.48
136	9255.862	8551.489	7624.51	7626.28	7626.57
137	9254.477	8562.311	7624.59	7626.11	7626.25
145	8853.684	10653.521	7630.76	7632.53	7632.66
147	8867.241	10637.489	7631.10	7632.76	7632.86
155	7324.041	8618.774	7618.87	7620.70	7620.91
157	7331.233	8597.088	7618.84	7620.55	7620.66
160	8208.009	4719.733	7597.52	7599.12	7599.45
161	8196.670	4713.086	7597.35	7599.11	7599.27
163	9961.292	4321.812	7604.50	7606.62	7606.83
170	10872.131	11009.504	7640.58	7642.26	7642.39
181	8642.127	7360.256	7615.31	7617.40	7617.53
183	8655.550	7347.410	7615.25	7617.32	7617.56
184	8181.929	5789.603	7606.88	7608.76	7608.83
185	8174.279	5791.481	7606.95	7608.87	7608.99
186	9932.702	8201.622	7624.26	7626.01	7626.05
187	9931.332	8208.819	7624.39	7625.76	7625.89
188	9021.410	5656.486	7612.07	7613.67	7614.19
189	9012.474	5653.082	7612.37	7613.75	7613.82
140 + 190	10392.873	12722.965	7640.79	7642.81	7643.01
141 + 191	10378.999	12722.573	7640.75	7642.85	7642.93
142 + 192	10364.304	12722.403	7640.63	7642.43	7642.61
194	11894.600	8554.738	7634.43	7636.26	7636.38
195	11883.034	8549.103	7634.22	7636.41	7636.67
196	10361.268	6158.037	7618.62	7620.53	7620.62
197	10354.563	6445.853	7618.82	7620.58	7620.63
198 (B-756)					

WATER LEVELS

2/85

GUNNISON MILL TAILINGS SITE GUNNISON, COLORADO

CONTRACT ASD-34-6702-S-83-0028
OBSERVATION WELLS COORDINATES

November 11, 1985
Page 1 of 2

Observation Well Designation	"X" (E-W)	"Y" (N-S)	Top of pipe at notch	"Z" (ELEVATION) at ground surface
202A 102	N 2453.42	E 2405.55	7649.1840.39	7647.22
202B 002	N 2453.04	E 2399.05	7649.2040.43	7647.18
332	N 2780.81	E 2275.72	7649.87	7648.78
331	N 3162.57	E 2221.43	7653.26	7652.07
201A 101	N 3523.56	E 2399.56	7655.6145.61	7653.74
201B 001	N 3528.91	E 2399.53	7655.8145.81	7653.87
324	N 3336.87	E 2139.50	7654.50	7653.39
323	N 3282.78	E 1941.23	7655.25	7653.80
322	N 3177.58	E 1739.11	7653.15	7651.94
320	N 3190.79	E 1535.04	7652.95	7651.86
319	N 3085.36	E 1337.65	7649.61	7648.34
311	N 2997.18	E 1244.74	7649.81	7648.60
318	N 2859.16	E 1110.06	7648.21	7647.43
203A	N 2800.92	E 1056.52	7649.5339.39	7647.69
203B	N 2799.81	E 1063.31	7649.644.84	7647.62
204 A 304 North	N 2459.81	E 1765.56	7664.49	7662.48
204 B 304 South	N 2448.86	E 1765.08	7664.41	7662.42
205A	N 2148.12	E 1130.10	7645.89	7644.12
205B	N 2148.99	E 1126.03	7645.78	7644.15
304	N 1647.05	E 2010.80	7644.48	7642.77
207A	N 1591.51	E 1873.31	7646.25	7644.19
207B	N 1591.88	E 1868.79	7646.21	7644.20
306	N 1596.90	E 1800.51	7646.37	7644.77
206A	N 1634.03	E 1634.18	7647.1834.18	7645.14
206B	N 1633.84	E 1639.58	7647.0734.44	7645.09

GRIMMOND MILL TAILINGS SITE

GRIMMOND, COLORADO

CONTRACT ASD-34-6702-S-83-0028
OBSERVATION WELLS COORDINATES

November 11, 1983
Page 2 of 2

Observation Well Designation	"N" (N-S)		"E" (E-W)		"Z" (ELEVATION)	
					Top of pipe at notch	at ground surface
309	N 1596.86	E 1608.21	7646.24	7644.78		
312	N 1555.51	E 1408.09	7645.84	7644.80		
315	N 1588.84	E 1213.69	7645.72	7644.66		
211A	N 1430.78	E 1179.38	7644.52	7642.60		
211B	N 1428.55	E 1187.49	7644.45	7642.65		
316	N 1390.82	E 1214.24	7644.87	7643.90		
210A 110	N 1421.70	E 1459.45	7645.81	7644.02		
210B 20	N 1421.89	E 1453.71	7645.90	7643.95		
313	N 1393.63	E 1413.31	7645.01	7643.90		
310	N 1387.62	E 1614.34	7644.95	7643.81		
209A	N 1436.97	E 1811.04	7644.96	7643.20		
209B	N 1435.00	E 1816.46	7645.24	7643.22		
307	N 1392.41	E 1808.61	7643.86	7642.90		
300	N 1192.93	E 1809.96	7645.37	7644.20		
212A 112	N 1192.48	E 1733.20	7644.80	7643.15		
212B 012	N 1193.71	E 1738.28	7645.35	7643.22		
311	N 1198.59	E 1609.54	7644.82	7643.48		
314	N 1189.60	E 1424.47	(2)	7643.65		
317	N 1184.91	E 1225.17	7643.63	7642.73		
208 8" Dia. well	N 1539.13	E 1872.34	7645.41	7643.92		
214B	N 755.87	E 1616.94	7644.07	7642.11		
213A	N 911.81	E 1003.27	7643.77	7641.79		
213B	N 912.04	E 997.60	7643.70	7642.07		

- Note (1) Neither A nor B designation was found on the well or casing.
(2) Well pipe was broken off near the ground surface.

Table E-1. Results of water-level measurements in monitoring wells at the Gunnison site

Well number	Ground elevation (feet mean sea level)	June 30, 1982		July 13, 1982		August 13, 1982		October 12, 1982	
		Depth (feet)	Water-level elevation (feet mean sea level)	Depth (feet)	Water-level elevation (feet mean sea level)	Depth (feet)	Water-level elevation (feet mean sea level)	Depth (feet)	Water-level elevation (feet mean sea level)
CSU-200	7654.5	Dry	<7648	Dry	<7648	Dry	<7648	Dry	<7648
CSU-201	7656.0	Dry	<7647	Dry	<7647	Dry	<7647	Dry	<7647
CSU-202	7652.1	Dry	<7647	Dry	<7647	Dry	<7647	Dry	<7647
CSU-205	7662.8	Dry	<7652	Dry	<7652	Dry	<7652	Dry	<7652
CSU-206	7662.0	Dry	<7649	Dry	<7649	Dry	<7649	Dry	<7649
CSU-209	7643.3	4.9	7638.4	13.9	7639.4	5.9	7637.4	7.6	7635.7
CSU-211	7656.2	Dry	<7649	Dry	<7649	Dry	<7649	Dry	<7649
CSU-212	7653.3	Dry	7647	Dry	<7647	Dry	<7647	Dry	<7647
CSU-212A	7653.2	14.2*	7639.0*	10.9	7642.3	12.0	7641.2	13.6	7639.6
CSU-213	7643.3	1.8*	7641.5*	2.2	7641.1	3.2	7640.1	5.7	7637.6
CSU-214	7646.3	3.2	7643.1	3.1	7643.2	4.2	7642.1	6.0	7640.3
SP-1	7652.4	6.0	7646.4	NM	--	4.9	7647.5	6.3	7646.1
SP-2	7661.9	19.1	7642.8	NM	--	20.0*	7641.9*	20.3	7641.6
SP-3	7646.2	3.5	7642.7	NM	--	3.7	7642.5	4.5	7641.7

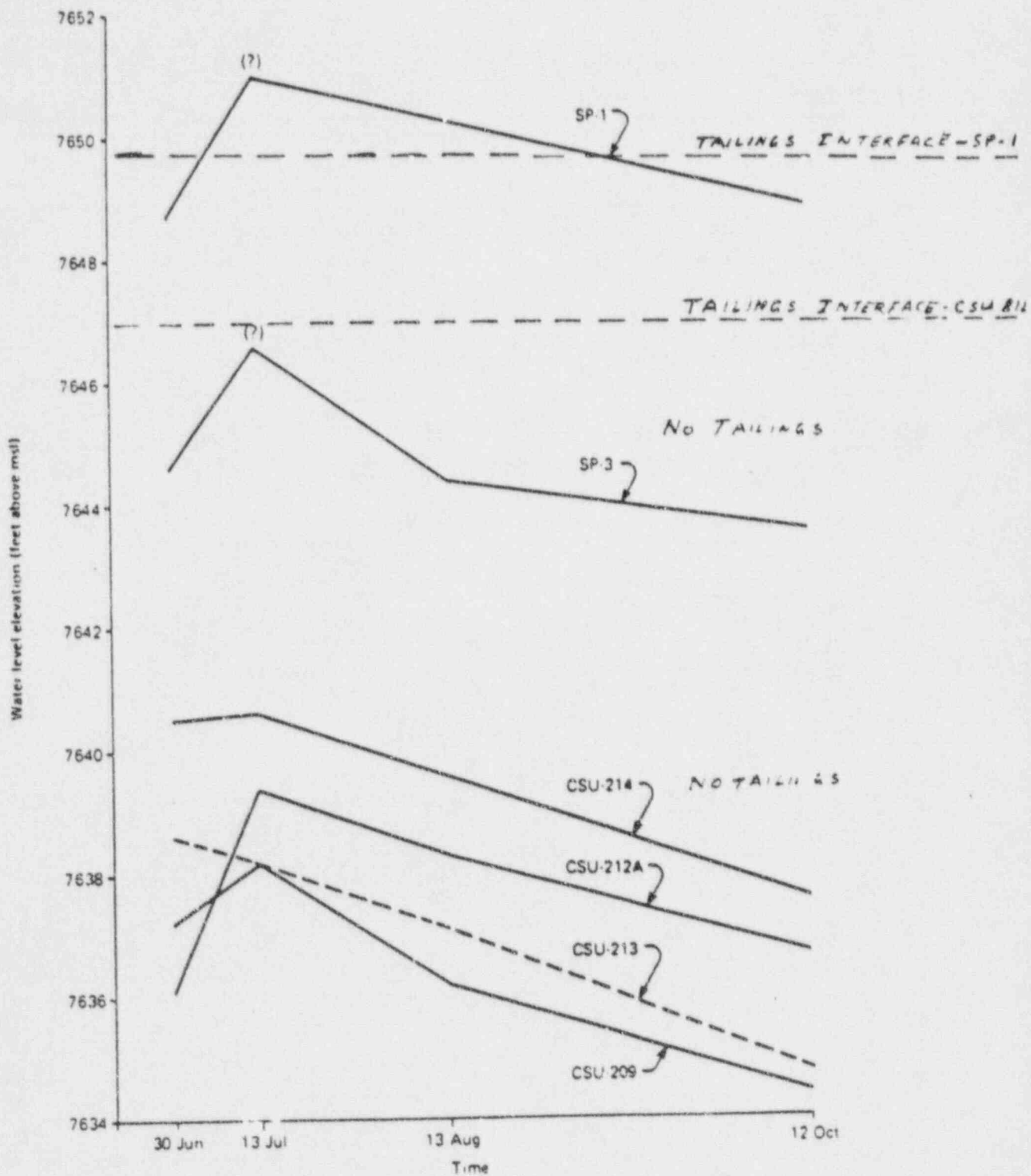
*Questionable data; probable field measurement or reporting error.
 NM = no measurement.

TABLE 4

SUMMARY OF WELL DATA FOR THE CITY OF GUNNISON, COLORADO

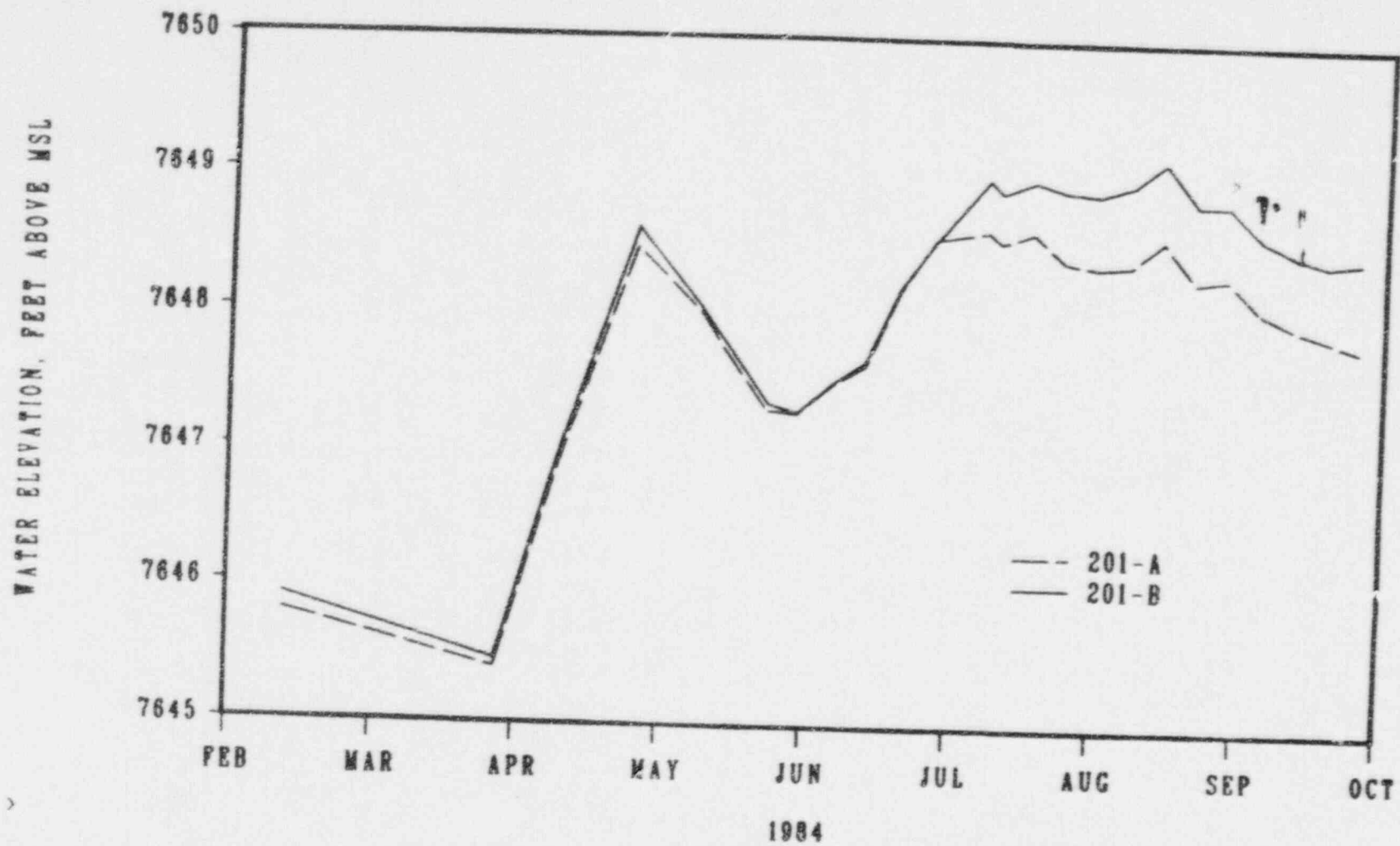
Well Number	Location	Date Drilled	Driller	Method Used	Well Depth, Feet	Casing Depth, Feet	Casing Diameter, Inches	Inlet, Feet	Static Water Level, Feet	Test Yield, gpm	Water Level Depth, Feet	Date Tested
1	Virginia Avenue & 6th Street	1940	unknown	Hand Dug	+34		72	+32	--	--	--	--
1A	Same as above	1940	unknown	Hand Dug	+34		72	+32	--	Water Pumped Into Well No. 1		--
2	Gothic Avenue & 9th Street	9/24/58 to 10/18/58	Howard Price	Fort Worth Spudder	62	0-18 18-39 39-60	16 16* 14*	56	8	300	56	10/20/58
3	Ohio Avenue & 9th Street	3/24/58 to 5/10/58	Howard Price	Fort Worth Spudder	65	0-16 16-56	16 16*	53	7	525	53	5/11/58
4	Gunnison Avenue & 10th Street	6/02/58 to 6/12/58	Homer McAnich	Homemade Suction Bucket Rig	83	0-23 23-71 71-83	18 18* 14*	78	10	310	70	6/12/58
5	Railroad Avenue & 9th Street	5/29/58 to 6/30/58	Howard Price	Fort Worth Spudder	72	0-20 20-72	16 16*	69	6	310	69	7/01/58
6	West Virginia Avenue & 10th Street	8/16/58 to 8/20/58	Homer McAnich	Homemade Suction Bucket Rig	61	0-15 15-58	18 18*	55	8	466 325	40 55	8/23/58 4/30/60
7	Palisade Addition Lot 1, Block 2	4/29/66 to 5/07/66	Clyde L. Peeples	Cable Tool	83	0-10 10-82	12 12*	83	9	90	9	5/06/66
Test Well	Same as above	4/04/66 to 4/18/66	Clyde L. Peeples	Cable Tool	106	--	--	--	11	--	--	4/04/66
Abandoned Not in Use	George Avenue between blocks 5 & 8 in West Gunnison Addition	first used 8/16/58	--	--	60	0-18 18-58	16 16*	--	--	--	--	--
Test Well Not in Use	Lot 13, Block 106 in West Gunnison Addition	Completed 10/13/55	Bill Howard	--	470	0-35 35-140	16 12*	--	7	230	140	--
Not in Use	Sewage Plant	Completed 9/59 to 9/60	--	--	16	0-8 8-16	18 18*	--	6	150	8	--

* Perforated Casing

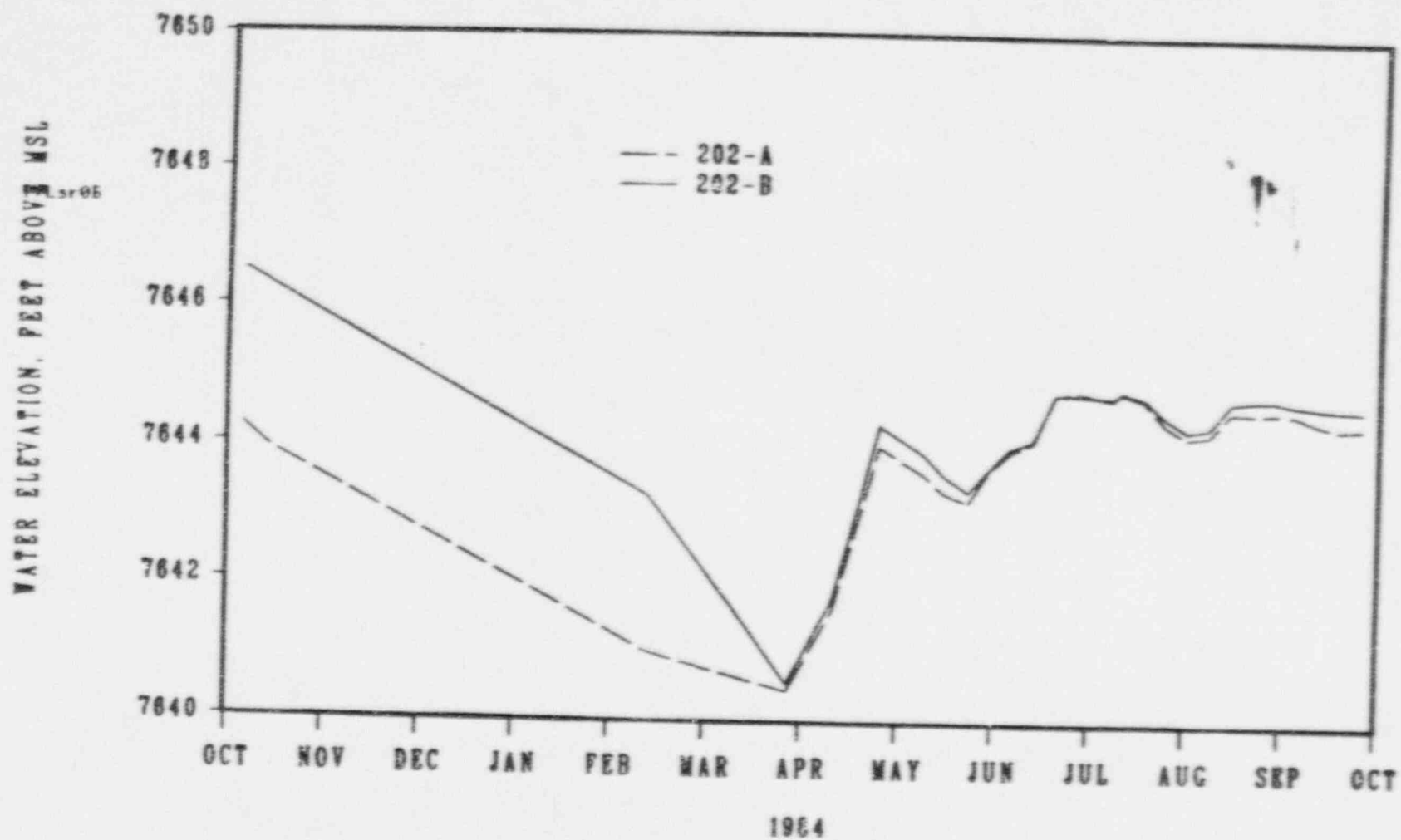


Ground-water elevations at selected monitoring wells.

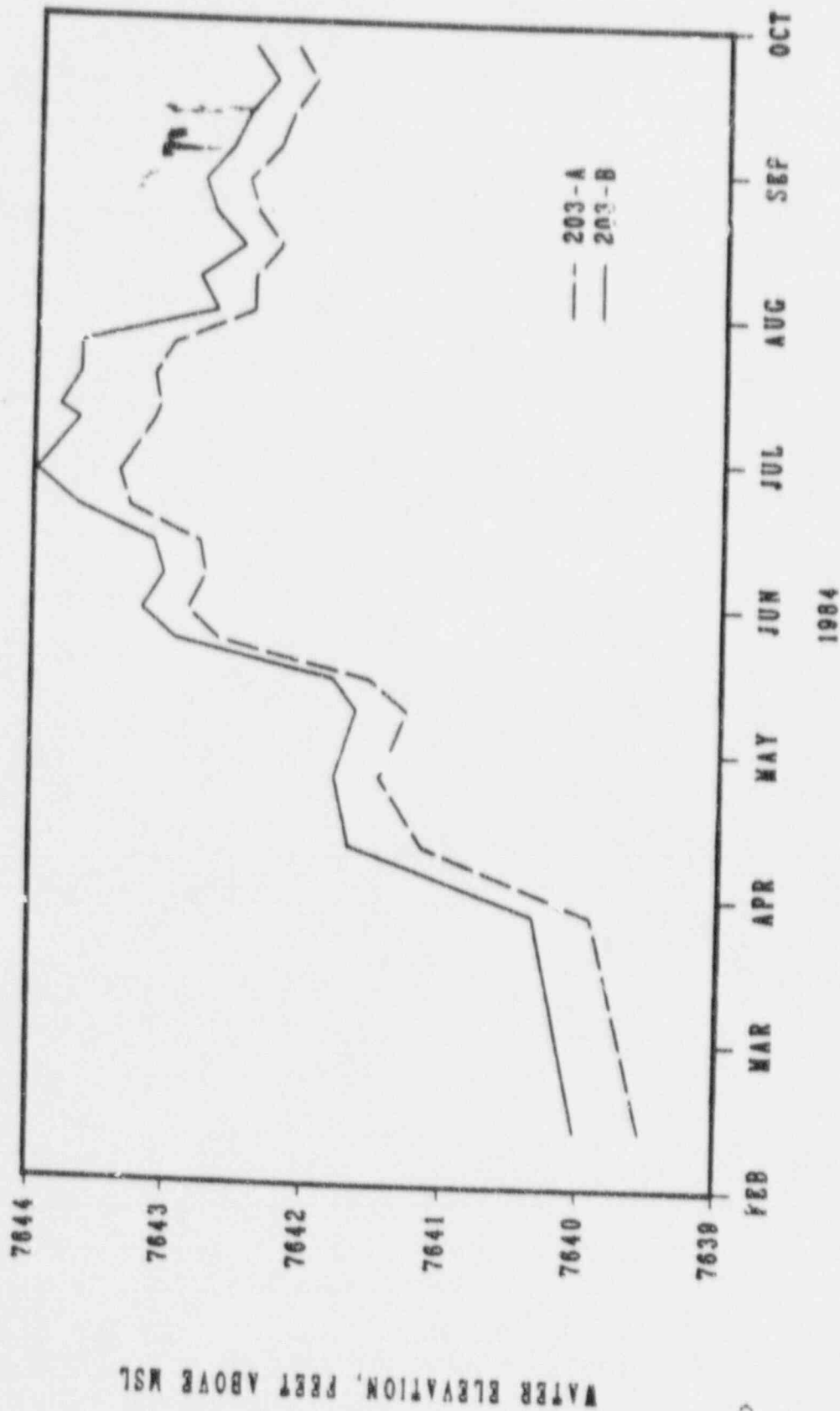
GUNNISON WELLS 201-A 201-B



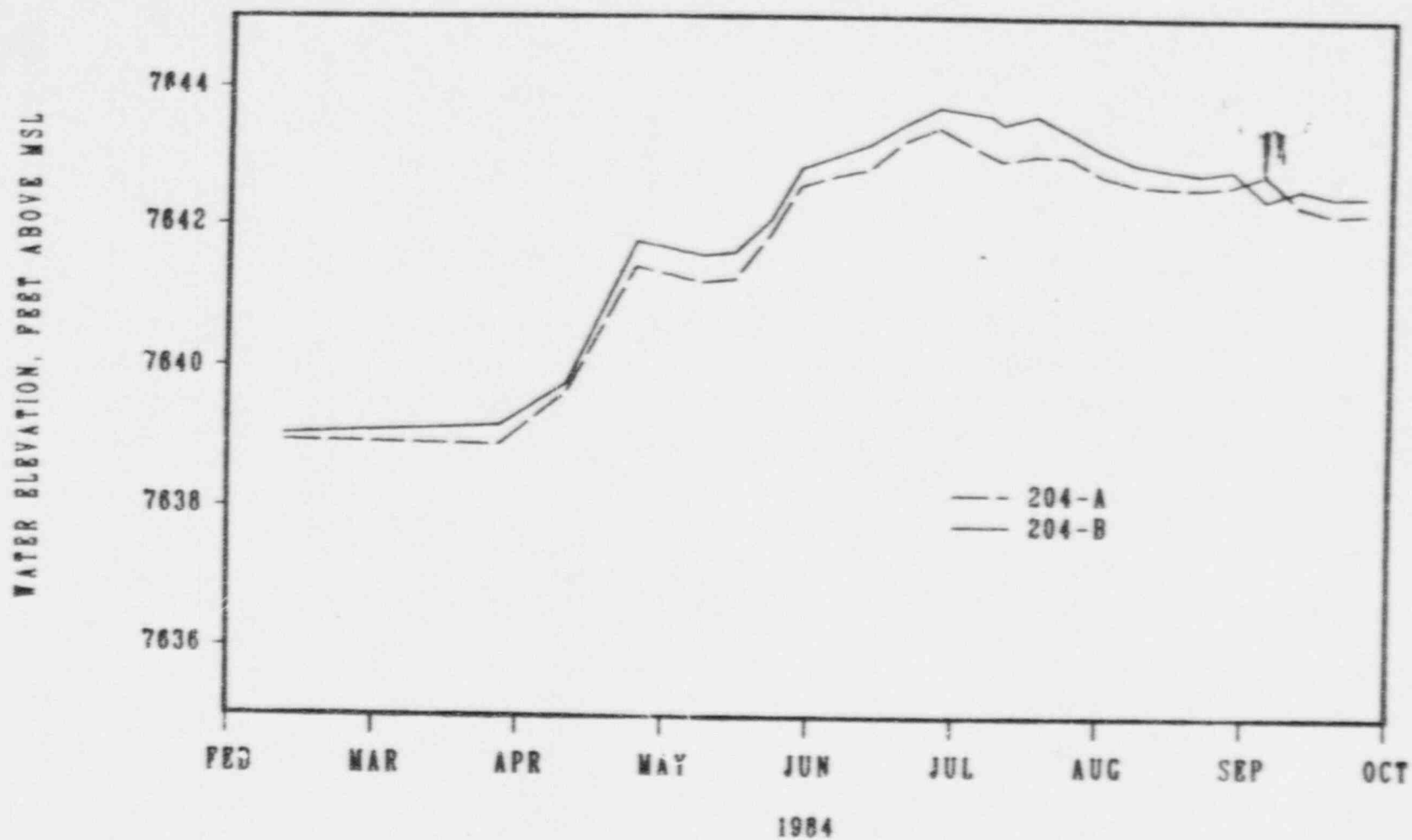
GUNNISON WELLS 202-A 202-B



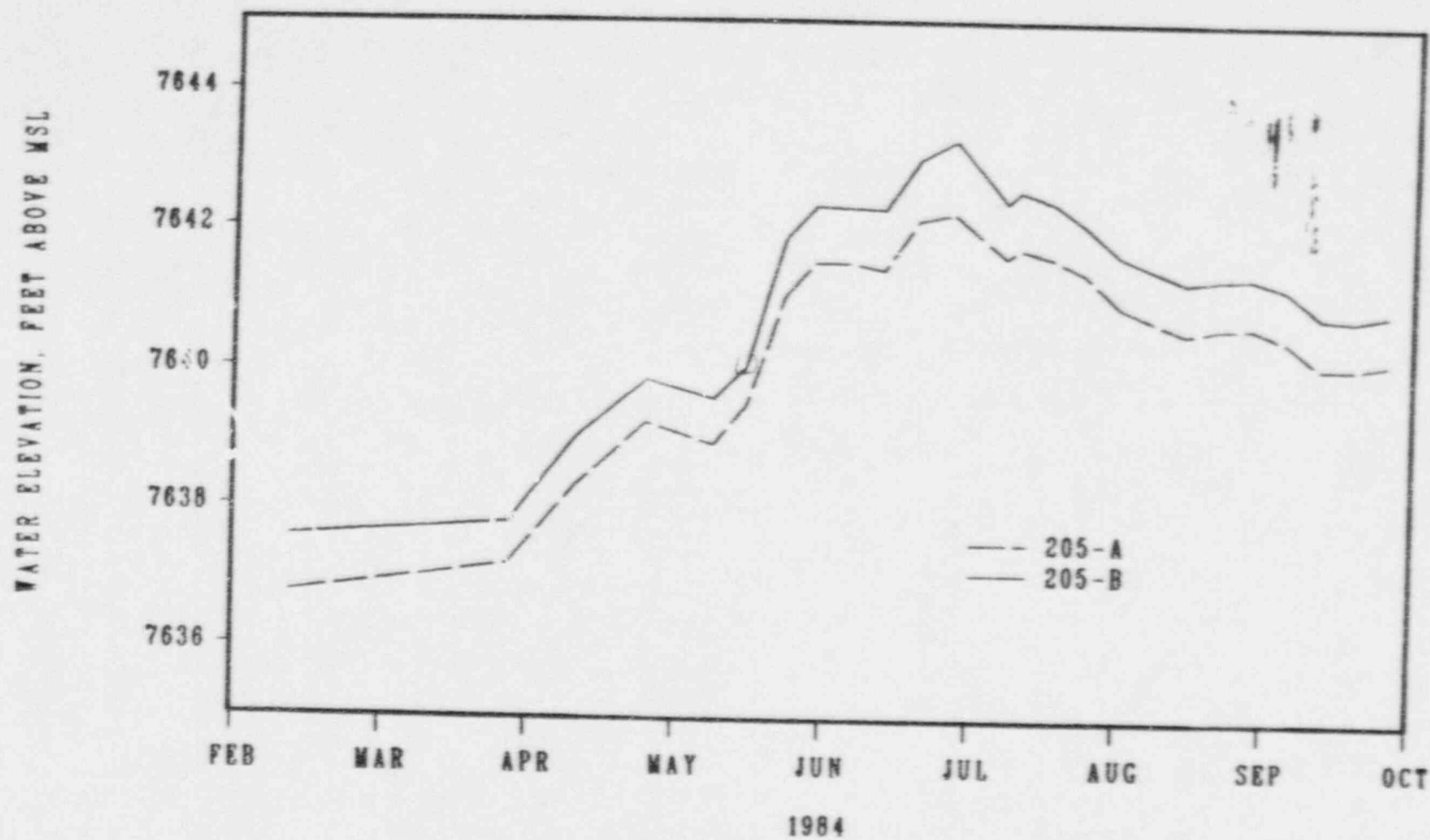
GUNNISON WELLS 203-A 203-B



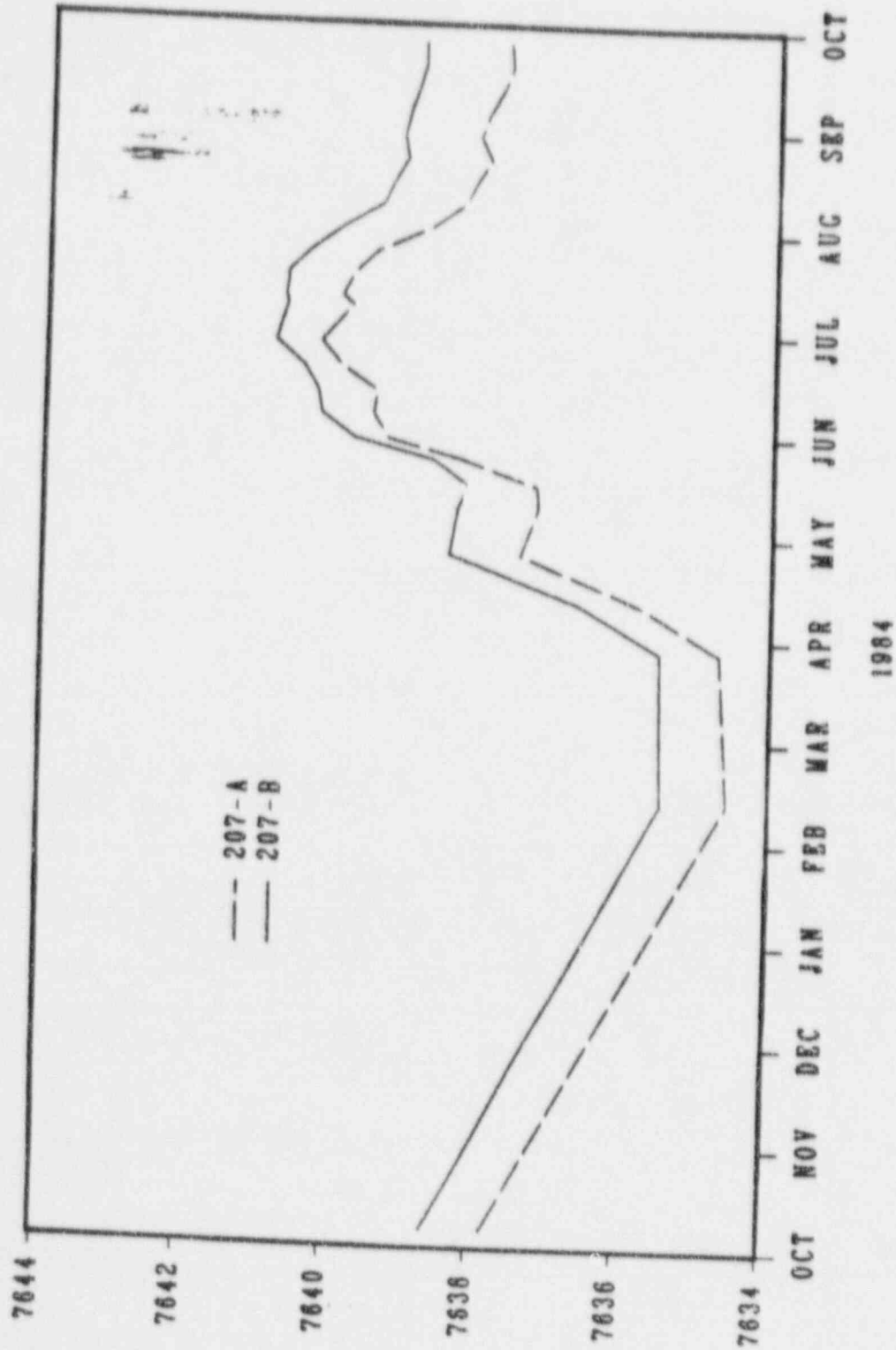
GUNNISON WELLS 204-A 204-B



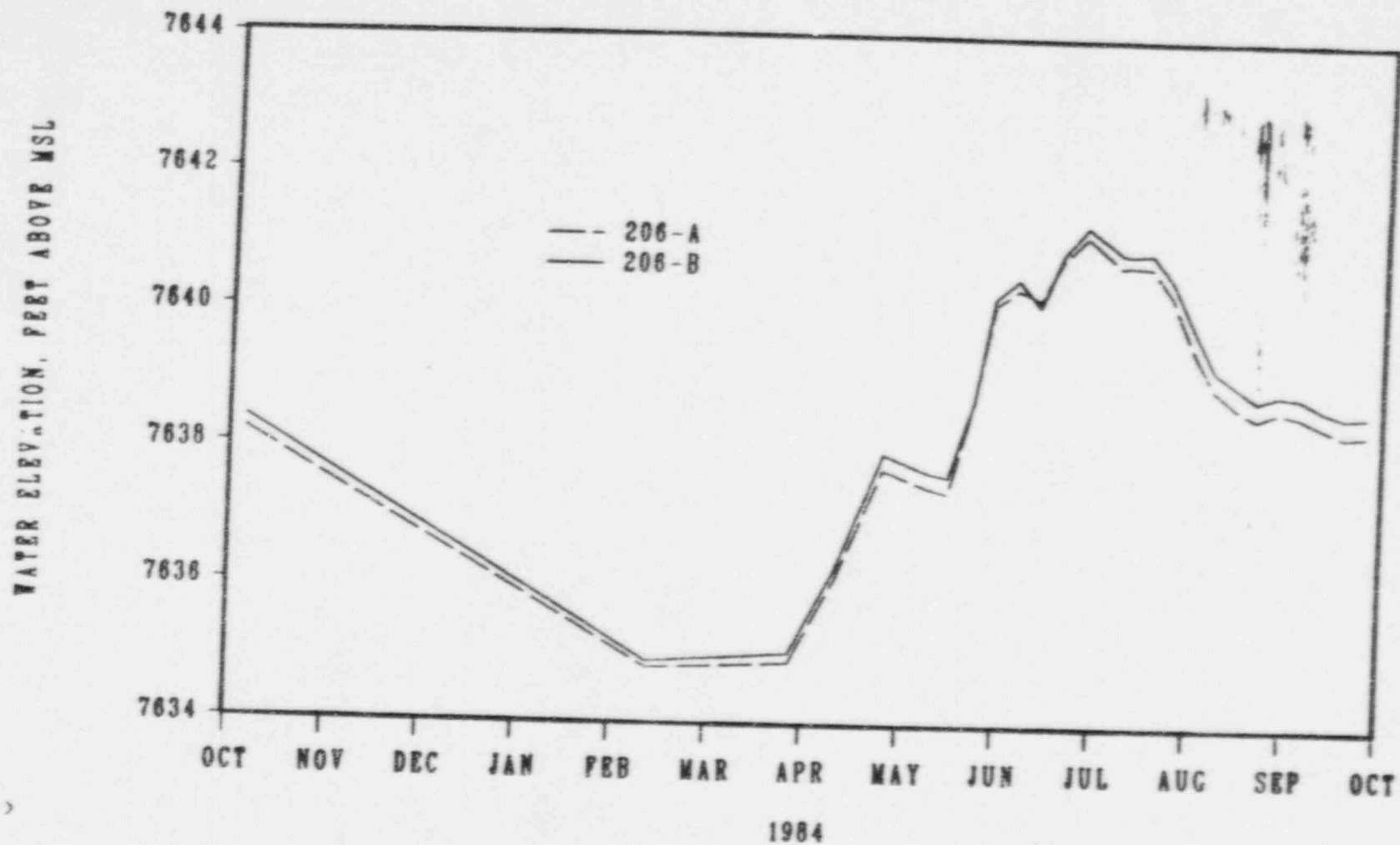
GUNNISON WELLS 205-A 205-B



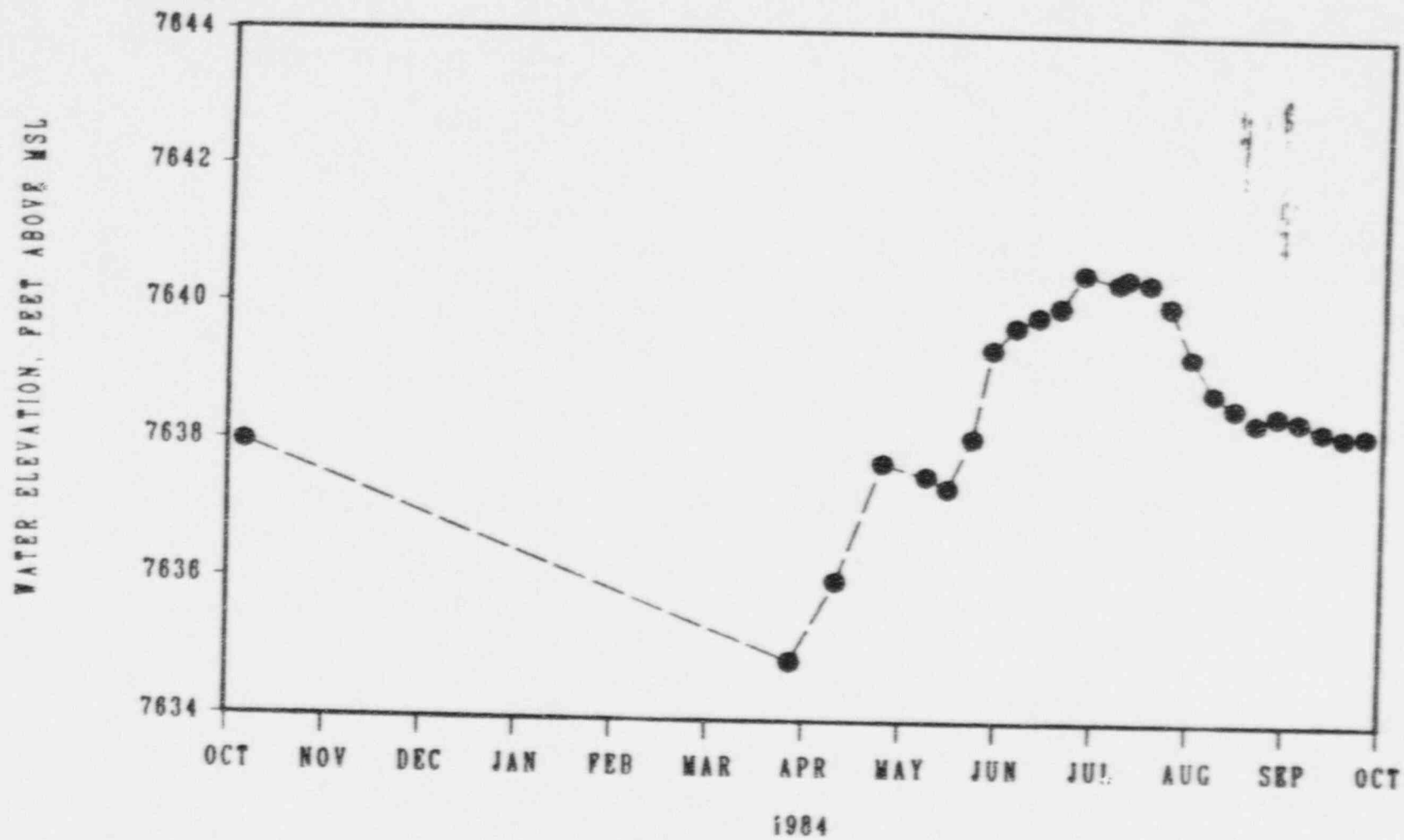
GUNNISON WELLS 207-A 207-B



GUNNISON WELLS 206-A 205-B



GUNNISON WELL 208



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ATTACHMENT 1

206 B

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ADVANCED SYSTEMS DIVISION, ALBUQUERQUE OPERATIONS

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AQUIFER TEST DATA FORM

SITE ID: Gun #1 LOCATION ID: 006
START TEST: DATE 8/3/02 END TEST: DATE _____
TIME 1425 TIME _____
DATUM ELEV. (FT. MSL): _____ AVERAGE PUMPING RATE (GAL/MIN): _____
STATIC WATER LEVEL (FT. MSL): _____ METHOD: _____
INITIAL (AT 10) _____ WELL DEPTH (FT.): _____
FINAL _____ CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 250
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): G. RICE, R. POWERS, C. TIMM
COMMENTS: _____

PUMP TESTRECOVERY TESTELAPSED
TIME
(MIN.)DEPTH TO
WATER
BELOW DATUMPUMPING
RATE
(GAL/MIN)ELAPSED
TIME
(MIN.)RESIDUAL
DRAWDOWN
(FT.)

PUMP/RECOVERY TEST

Page 2 of 2

SITE ID: GUN-αLOCATION ID: 006DATE: 8/3/02

PUMP TEST

RECOVERY TEST

ELAPSED
TIME
(MIN.)DEPTH TO
WATER
(FT.)TOTAL VOL.
PUMPED
(GAL)ELAPSED
TIME
(MIN.)DEPTH TO
WATER
(FT.)

0	5.00	
14	5.00	
33	5.00	
35	4.96	
37	4.90	
44	5.05	
256	5.10	
426	5.10	
587	5.12	
840	5.11	
816	5.115	
915	5.115	
1023	5.11	
1104	5.12	
1195	5.13	
1246	5.13	
1306	5.13	
1366	5.135	
1402	5.13	
1823	5.16	
1997	5.17	
2358	5.18	
2631	5.20	
2855	5.19	

PUMP/RECOVERY TEST

Page 2 of 2

SITE ID: GUN-01LOCATION ID: 007DATE: 8/3/02

PUMP TEST

ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)	TOTAL VOL. PUMPED (GAL)
1.42	5.00	
3.15	5.02	
5.58	5.04	
8.78	5.05	
9.55	5.05	
11.2	5.06	
13.0	5.07	
17.1	5.07	
21	5.07	
24	5.08	
30	5.09	
34	5.10	
43	5.10	
55	5.11	
72	5.12	
72	5.13	
114	5.13	
13.9	5.16	
156	5.18	
169	5.19	
227	5.185	
374	5.20	
480	5.21	
574	5.29	
653	5.30	
701	5.32	
783	5.33	
848	5.33	
890	5.34	
950	5.345	
997	5.36	
1061	5.37	
1126	5.38	
1172	5.39	
1235	5.39	
1297	5.395	
1357	5.40	
1576	5.43	
1793	5.45	
1973	5.46	
2327	5.50	
2605	5.52	
2872	5.53	

RECOVERY TEST

ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)
0	5.54
0.78	5.52
2.17	5.52
4.15	5.50
6.20	5.47
8.20	5.48
11.2	5.47
15	5.47
18	5.47
24	5.46
33	5.455
42	5.45
57	5.45
62	5.44
89	5.42
135	5.41
179	5.40
224	5.37
326	5.33
418	5.33
509	5.32
555	5.305
677	5.26
1157	5.25
1254	5.245
1364	5.23
1478	5.22

JE

JACOBS ENGINEERING GROUP INC.
ADVANCED SYSTEMS DIVISION, ALBUQUERQUE OPERATIONS

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AQUIFER TEST DATA FORM

SITE ID: GUN-01 LOCATION ID: 009
START TEST: DATE 8/3/02 END TEST: DATE _____
TIME 1435 TIME _____
DATUM ELEV. (FT. MSL): _____
STATIC WATER LEVEL (FT. MSL): _____
INITIAL (AT 10) _____
FINAL _____
AVERAGE PUMPING RATE (GAL/MIN): _____
METHOD: _____
WELL DEPTH (FT.): _____
CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 120
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): G. RICE, P. ZELLE, C. TIMM
COMMENTS: _____

RECOVERY TEST

ELAPSED TIME (MIN.)	DEPTH TO WATER BELOW DATUM	PUMPING RATE (GAL/MIN)
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

ELAPSED TIME (MIN.)	RESIDUAL DRAWDOWN (FT.)
0	0
1	0.1
2	0.2
3	0.3
4	0.4
5	0.5
6	0.6
7	0.7
8	0.8
9	0.9
10	1.0
11	1.1
12	1.2
13	1.3
14	1.4
15	1.5
16	1.6
17	1.7
18	1.8
19	1.9
20	2.0
21	2.1
22	2.2
23	2.3
24	2.4
25	2.5
26	2.6
27	2.7
28	2.8
29	2.9
30	3.0
31	3.1
32	3.2
33	3.3
34	3.4
35	3.5
36	3.6
37	3.7
38	3.8
39	3.9
40	4.0
41	4.1
42	4.2
43	4.3
44	4.4
45	4.5
46	4.6
47	4.7
48	4.8
49	4.9
50	5.0
51	5.1
52	5.2
53	5.3
54	5.4
55	5.5
56	5.6
57	5.7
58	5.8
59	5.9
60	6.0
61	6.1
62	6.2
63	6.3
64	6.4
65	6.5
66	6.6
67	6.7
68	6.8
69	6.9
70	7.0
71	7.1
72	7.2
73	7.3
74	7.4
75	7.5
76	7.6
77	7.7
78	7.8
79	7.9
80	8.0
81	8.1
82	8.2
83	8.3
84	8.4
85	8.5
86	8.6
87	8.7
88	8.8
89	8.9
90	9.0
91	9.1
92	9.2
93	9.3
94	9.4
95	9.5
96	9.6
97	9.7
98	9.8
99	9.9
100	10.0

PUMP/RECOVERY TEST

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SITE ID: GUN-01LOCATION ID: 009DATE: 8/3/012

PUMP TEST

RECOVERY TEST

ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)	TOTAL VOL PUMPED (GAL)	ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)
1.00	5.01		0	5.56
4.18	5.02		1.42	5.55
7.05	5.03		4.10	5.54
10.00	5.04		6.40	5.52
12.08	5.04		9.15	5.52
16.00	5.04		11.5	5.51
19.13	5.05		14.0	5.51
22.67	5.05		16.2	5.50
25.58	5.06		18.3	5.50
28.33	5.06		20.3	5.50
31	5.07		22.7	5.50
34	5.07		26.3	5.49
36	5.08		31.7	5.49
47	5.08		34.3	5.48
51	5.09		35.4	5.485
58	5.10		39.0	5.49
73	5.11		43.6	5.48
84	5.12		51.8	5.47
93	5.13		56.2	5.47
102	5.14		62.0	5.46
111	5.15		72.1	5.46
121	5.15		83.6	5.45
130	5.16		86.6	5.45
143	5.17		89.9	5.45
153	5.17		118	5.43
163	5.18		149	5.42
174	5.18		162	5.41
235	5.22		176	5.40
373	5.25		187	5.40
478	5.28		231	5.40
555	5.29		332	5.39
717	5.28		425	5.36
800	5.33		515	5.35
895	5.365	5.37	560	5.33
974	5.38		982	5.265
1070	5.39		1164	5.26
1120	5.40		1245	5.26
1181	5.405	5.41	1372	5.245
1241	5.41			
1301	5.42			
1361	5.425	5.43		
1591	5.45			
1809	5.47			
1980	5.49			
2342	5.54			
2619	5.55			
2864	5.56			

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AQUIFER TEST DATA FORM

SITE ID: GUN-01 LOCATION ID: 012
START TEST: DATE 8/3/82 END TEST: DATE _____
TIME 1435 TIME _____
DATUM ELEV. (FT. MSL): _____ AVERAGE PUMPING RATE (GAL/MIN): _____
STATIC WATER LEVEL (FT. MSL): _____ METHOD: _____
INITIAL (AT 10) _____ WELL DEPTH (FT.): _____
FINAL _____ CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 37.5
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): _____
COMMENTS: _____

PUMP TESTRECOVERY TESTELAPSED
TIME
(MIN.)DEPTH TO
WATER
BELOW DATUMPUMPING
RATE
(GAL/MIN)ELAPSED
TIME
(MIN.)RESIDUAL
DRAWDOWN
(FT.)

PUMP/RECOVERY TEST

Page 2 of 2SITE ID: GUN-01LOCATION ID: 012DATE: 8/3/02

PUMP TEST

RECOVERY TEST

ELAPSED
TIME
(MIN.)DEPTH TO
WATER
(FT.)TOTAL VOL
PUMPED
(GAL)ELAPSED
TIME
(MIN.)DEPTH TO
WATER
(FT.)

0	5.00	
3	5.00	
65	5.03	
66	5.04	
67	5.02	
68	5.03	
69	5.035	
112	5.02	
263	5.10	
447	5.13	
608	5.14	
750	5.15	
830	5.15	
930	5.16	
1039	5.16	
1115	5.18	
1187	5.19	
1255	5.19	
1318	5.19	
1373	5.20	
1616	5.21	
1842	5.23	
2011	5.24	
2373	5.27	
2445	5.295	
2839	5.31	

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AQUIFER TEST DATA FORM

SITE ID: GUV 01 LOCATION ID: 106
 START TEST: DATE 8/10/82 END TEST: DATE _____
 TIME 1425 TIME _____
 DATUM ELEV. (FT. MSL): _____ AVERAGE PUMPING RATE (GAL/MIN): _____
 STATIC WATER LEVEL (FT. MSL): _____ METHOD: _____
 INITIAL (AT 10) _____ WELL DEPTH (FT.): _____
 FINAL _____ CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
 DISTANCE FROM PUMPED WELL, r (FT.): 259
 DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
 FIELD REP(S): G. RICE, R. POWERS, C. TITM
 COMMENTS: _____

PUMP TEST

RECOVERY TEST

ELAPSED
TIME
(MIN.)DEPTH TO
WATER
BELOW DATUMPUMPING
RATE
(GAL/MIN)ELAPSED
TIME
(MIN.)RESIDUAL
DRAWDOWN
(FT.)

JE

JACOBS ENGINEERING GROUP INC.
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SITE ID: GEV-01 LOCATION ID: 107
START TEST: DATE 03/01/12 END TEST: DATE _____
TIME 1435 TIME _____
DATUM ELEV. (FT. MSL): _____ AVERAGE PUMPING RATE (GAL/MIN): _____
STATIC WATER LEVEL (FT. MSL): _____ METHOD: _____
INITIAL (AT 10) _____ WELL DEPTH (FT.): _____
FINAL _____ CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 50
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): G. RICE, C. TIMA
COMMENTS: _____

[illegible]

PUMP/RECOVERY TEST

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SITE ID: GUN-01

LOCATION ID: 107

DATE: 8/3/12

PUMP TEST

ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)	TOTAL VOL. PUMPED (GAL)
0	8.44	
0.37	8.43	
2.37	8.65	
4.55	9.12	
6.91	9.42	
8.70	9.54	
10.29	9.61	
12.12	9.67	
13.85	9.69	
14.55	9.70	
15.25	9.70	
16.25	9.71	
17.92	9.73	
18.90	9.735 9.74	
19.73	9.74	
22.25	9.75	
27.55	9.75	
33.17	9.775 9.78	
41.42	9.78	
53.57	9.78	
75.30	9.78	
90.73	9.79	
112.82	9.79	
137.27	9.79	
155.5	9.80	
167.	9.80	
225.	9.81	
372.	9.83	
478.	9.83	
545	9.83	
647	9.835	
698	9.83	
785	9.83	
845	9.835 9.84	
888	9.835 9.84	
947	9.83	
995	9.835 9.84	
1059	9.84	
1124	9.84	
1175	9.84	
1232	9.84	
1295	9.84	
1355	9.84	
1563	9.83	
1790	9.87	
2323	9.87	
2602	9.88	
2871	9.89	

RECOVERY TEST

ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)
0	9.89
1.25	9.89
1.52	9.86
2.97	9.63
3.65	9.50
4.92	9.27
5.42	9.12
6.67	9.04
7.20	9.00
9.60	8.87
10.2	8.85
12.2	8.79
12.9	8.77
13.8	8.74
16.1	8.70
17.3	8.69
19.7	8.68
22.0	8.655 8.66
25.5	8.65
31.5	8.645 8.65
40.5	8.62
45.5	8.63
56.0	8.64
70	8.63
80	8.62
134	8.61
178	8.62
218	8.62
325	8.61
417.	8.60
511	8.60
554	8.60
975	8.60
1155	8.59
1252	8.59
1368	8.58
1476	8.59

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ADVANCED SYSTEMS DIVISION, ALBUQUERQUE OPERATIONS

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SITE ID: Gun-01 LOCATION ID: 109
 START TEST: DATE 8/3/02 END TEST: DATE _____
 TIME 1435 TIME _____
 DATUM ELEV. (FT. MSL): _____
 STATIC WATER LEVEL (FT. MSL): _____
 INITIAL (AT 10) _____
 FINAL _____
 AVERAGE PUMPING RATE (GAL/MIN): _____
 METHOD: _____
 WELL DEPTH (FT.): _____
 CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 120
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): G. RICE, A. ZELLE, C. TITZ
COMMENTS: _____

[illegible]

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ADVANCED SYSTEMS DIVISION, ALBUQUERQUE OPERATIONS

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SITE ID: GUL-81 LOCATION ID: 112
 START TEST: DATE 8/31/12 END TEST: DATE _____
 TIME 1435 TIME _____
 DATUM ELEV. (FT. MSL): _____
 STATIC WATER LEVEL (FT. MSL): _____
 INITIAL (AT 10) _____
 FINAL _____
 AVERAGE PUMPING RATE (GAL/MIN): _____
 METHOD: _____
 WELL DEPTH (FT.): _____
 CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 375
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): L. POWERS, G. RICE, C. TIMM
COMMENTS: _____

RECOVERY TEST

RESIDUAL
DRAWDOWN
(FT.)

JE

JACOBS ENGINEERING GROUP INC.
ADVANCED SYSTEMS DIVISION, ALBUQUERQUE OPERATIONS

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AQUIFER TEST DATA FORM

SITE ID: GUN-01 LOCATION ID: 303
 START TEST: DATE 8/31/12 END TEST: DATE _____
 TIME 1435 TIME _____
 DAYUM ELEV. (FT. MSL): _____ AVERAGE PUMPING RATE (GAL/MIN): _____
 STATIC WATER LEVEL (FT. MSL): _____ METHOD: _____
 INITIAL (AT t₀): _____ WELL DEPTH (FT.): _____
 FINAL _____ CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 4.50
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): R. POWERS, G. RICE, C. TITZ
COMMENTS: _____

[illegible]

SITE ID: 66N-01

PUMP/RECOVERY TEST

LOCATION ID: 303

DATE: B31012

PUMP TEST

RECOVERY TEST

ELAPSED
TIME
(MIN.)

DEPTH TO
WATER
(FT.)

TOTAL VOL
PUMPED
(GAL)

ELAPSED
TIME
(MIN.)

DEPTH TO
WATER
(FT.)

0	5.00
5	5.00
73	5.00
74	5.00
75	5.02
76	5.00
115	5.01
285	5.03
453	5.05
615	5.05
763	5.06
886	5.07
936	5.08
1050	5.09
1203	5.09
1259	5.09
1322	5.10
1876	5.10
1622	5.13
1848	5.15
2017	5.165
2377	5.17
2650	5.20
2830	5.21

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AQUIFER TEST DATA FORM

SITE ID: GCN-01 LOCATION ID: 304
 START TEST: DATE 8/3/12 END TEST: DATE _____
 TIME 1435 TIME _____
 DATUM ELEV. (FT. MSL): _____ AVERAGE PUMPING RATE (GAL/MIN): _____
 STATIC WATER LEVEL (FT. MSL): _____ METHOD: _____
 INITIAL (AT 10) _____ WELL DEPTH (FT.): _____
 FINAL _____ CASING DIAMETER (IN.): _____

WATER LEVEL MEASUREMENT METHOD: _____
 DISTANCE FROM PUMPED WELL, r (FT.): 175
 DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
 FIELD REP(S): L. POWERS, G. PRICE, C. J. TIT
 COMMENTS: _____

PUMP TEST

RECOVERY TEST

ELAPSED
TIME
(MIN.)

DEPTH TO
WATER
BELOW DATUM

PUMPING
RATE
(GAL/MIN)

ELAPSED
TIME
(MIN.)

RESIDUAL
DRAWDOWN
(FT.)

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WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 94
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): R. LENT, G. RICE, C. TINA
COMMENTS: _____

[illegible]

PUMP/RECOVERY TEST

Page 201SITE ID: GUN-01LOCATION ID: 306DATE: 8/10/12

PUMP TEST

RECOVERY TEST

ELAPSED
TIME
(MIN.)DEPTH TO
WATER
(FT.)TOTAL VOL
PUMPED
(GAL)ELAPSED
TIME
(MIN.)DEPTH TO
WATER
(FT.)

0	5.00	
0.35	5.02	
1.47	4.99	
2.67	5.00	
3.92	5.01	
4.88	5.00	
6.02	5.02	
6.82	5.02	
7.82	5.02	
8.80	5.01	
9.72	5.01	
10.6	5.00	
11.5	5.01	
12.2	5.01	
13.1	5.00	
13.9	5.01	
14.6	5.00	
15.5	5.00	
16.3	5.01	
17.2	5.01	
18.5	5.0	
19.7	5.01	
20.7	5.01	
22.0	5.01	
23.3	5.01	
24.4	5.01	
27.0	5.01	
29.0	5.01	
31.25	5.01	
33.0	5.01	
36.6	5.00	
38.1	5.01	
40.4	5.005	
43.7	5.02	
46.1	5.02	
47.1	5.015	
48.3	5.02	
49.5	5.02	
51.5	5.02	
55.0	5.02	
57.0	5.015	
58.9	5.02	
61.6	5.02	
63.8	5.02	
66.3	5.015	
68.7	5.015	
71.3	5.02	
75.8	5.02	
77.4	5.02	
81.0	5.02	

JUL 18 1985

Page 1 of 2

AQUIFER TEST DATA FORM

WATER LEVEL MEASUREMENT METHOD: _____
DISTANCE FROM PUMPED WELL, r (FT.): 150
DATA ADJUSTED FOR REGIONAL WATER LEVEL CHANGES? _____
FIELD REP(S): P. ZELE, C. TIMM, G. RICE
COMMENTS: _____

COMMENTS: _____

[illegible]

SITE ID: 6UN-01

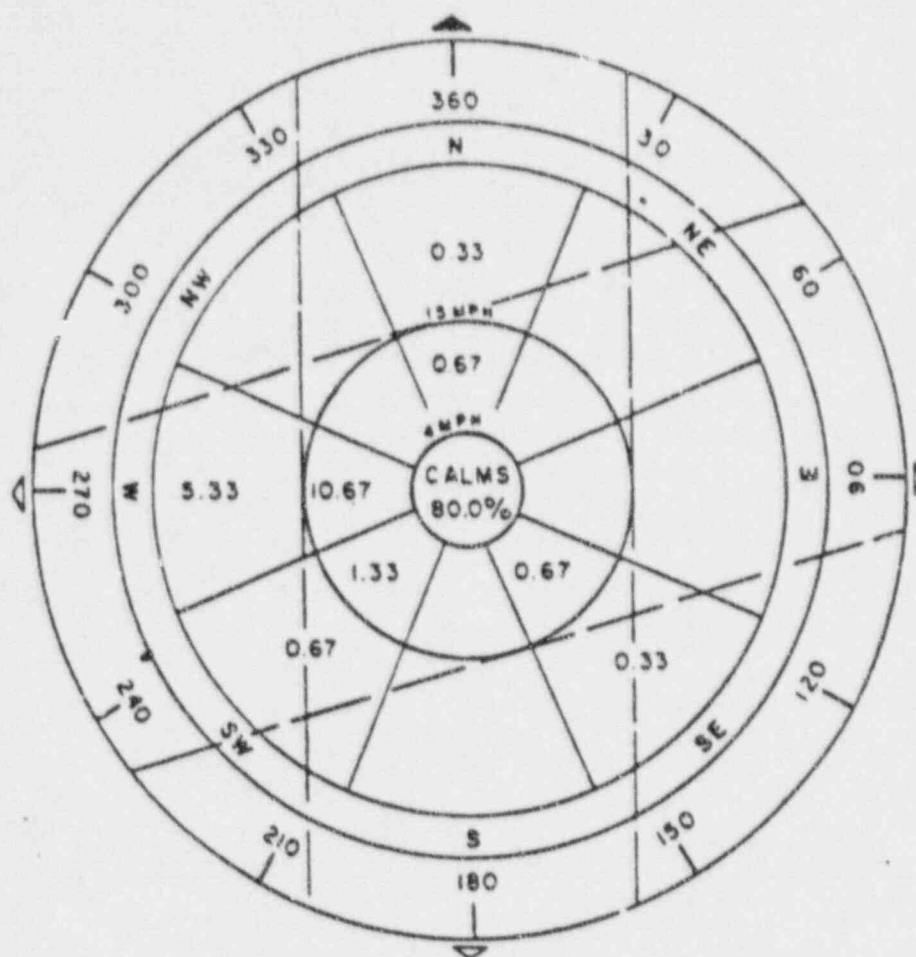
PUMP/RECOVERY TEST

LOCATION ID: 307

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DATE: 8/3/02

PUMP TEST			RECOVERY TEST	
ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)	TOTAL VOL PUMPED (GAL)	ELAPSED TIME (MIN.)	DEPTH TO WATER (FT.)
0	5.00			
2.08	5.00			
5.15	5.00			
8.00	4.99			
10.90	4.99			
13.9	4.99			
17.0	4.99			
20.1	5.01			
23.7	5.02			
26.5	5.02			
29.2	5.02			
32.2	5.03			
35	5.03			
41	5.03			
48	5.02			
53	5.04			
59	5.05			
74	5.07			
85	5.08			
94	5.08			
103	5.09			
113	5.10			
123	5.11			
133	5.12			
144	5.13			
155	5.13			
165	5.13			
175	5.13			
238	5.16			
388	5.21			
490	5.23			
560	5.26			
720	5.29			
805	5.30			
905	5.32			
978	5.32			
1071	5.33			
1117	5.35			
1183	5.36			
1243	5.36			
1303	5.365 5.37			
1363	5.375 5.38			
1594	5.41			
1814	5.44			
1987	5.44			
2346	5.48			
2622	5.52			
2866	5.53			



WIND ROSE 15 MPH

GUNNISON COUNTY AIRPORT

- SOURCE OF DATA - SCIENCE DEPT WESTERN STATE COLLEGE, GUNNISON COLORADO.
- DATA IS APPROXIMATE.
- CLIMATIC SUMMARY OF THE UNITED STATES SECTION 22, PAGE 25 SHOWS PREVAILING WIND DIRECTION FOR A PERIOD OF 32 YEARS TO BE FROM THE SOUTHWEST.

INFORMATION OBTAINED FROM PREVIOUS MASTER PLAN DATED MAY 1948 -REVISED MAY 1949

ENE-WSW COVERAGE = APPROX. 98.2 %
 N-S COVERAGE = APPROX. 94.2 %
 TOTAL COVERAGE BOTH RUNWAYS =
 APPROX. 99.7%

(Isbill, 1980)

JAN 31 1982

Table D-2. Wind data for Gunnison and Montrose, Colorado

Direction	Gunnison County Airport ^a (January 1973- December 1977)		Gunnison County Airport ^b (1975-1976)		Montrose, Colorado ^c (January 1970- December 1972)	
	Average speed (miles per hour)	Frequency (percent)	Average speed (miles per hour)	Frequency (percent)	Average speed (miles per hour)	Frequency (percent)
N	6.7	15.1	5.9	17.6	7.7	2.4
NNE	5.2	6.3	6.0	8.2	7.3	0.8
NE	4.1	3.7	5.9	5.2	7.8	0.2
ENE	3.9	3.4	5.9	2.8	7.9	0.7
E	4.4	4.1	5.3	2.9	7.9	1.5
ESE	4.1	3.6	5.9	3.1	7.7	2.6
SE	3.5	2.8	5.9	2.6	8.8	0.5
SSE	3.5	2.6	6.1	2.2	8.0	1.6
S	4.4	4.2	6.2	3.1	8.6	2.7
SSW	4.6	4.6	6.3	3.0	11.2	3.9
SW	4.8	4.8	6.5	4.5	13.6	1.9
WSW	5.3	6.0	7.1	2.1	10.3	5.2
W	4.9	5.0	6.7	1.8	8.5	5.8
WNW	4.3	4.0	6.5	1.9	8.6	8.9
NW	4.0	3.5	6.1	4.0	8.2	6.4
NNW	4.8	5.1	6.1	8.0	7.9	3.1
All directions	4.7	78.8	6.1	73.0	0	51.7
Calm	0	21.1	0	27.0	8.7	48.2
		99.9		100.0		99.9

^aSource: All-weather wind rose, 1973-1977, in Isbill Associates, Inc., 1980.

^bSource: Fercheau, 1980.

^cSource: All-weather wind rose, 1970-1972, in Isbill Associates, Inc., 1980.

Precipitation - Frequency, Gunnison, Colorado

<u>Rainfall Duration</u>	<u>Probability of Occurrence</u>	<u>Rainfall (Inches)</u>
6 - hour	0.50	0.7
6 - hour	0.20	1.0
6 - hour	0.10	1.2
24 - hour	0.01	1.8
24 - hour	0.50	0.8
- hour	0.20	1.2
24 - hour	0.10	1.4
24 - hour	0.01	2.2
1 - hour*	0.50	0.5
1 - hour*	0.01	1.6

*Estimated for period of May through October according to the procedure shown on Page 15 of precipitation frequency Atlas of the Western United States; Miller, J.F.; Frederick R.H.; and Tracey, R.J., NUAA, 1973.

JAN 31 1963

Table 8.1 Local climatological data, Gunnison (NOAA, 1982)

Temperature (°F)	Data source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Highest	a	63	58	75	78	87	96	95	105	91	82	69	62	105
Average daily maximum	a	26	31	41	56	67	76	81	79	73	63	46	30	56
Average daily minimum	a	-8	-3	10	23	29	37	42	41	32	21	10	-4	19
Lowest	a	-45	-44	-29	-10	9	18	26	25	13	-6	-26	-47	-47

Precipitation (inches)	Data source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average	a	.86	.83	.73	.76	.81	.72	1.52	1.40	.86	.68	.60	.70	10.46
Average number of days > 1/10 inch	a	4	5	4	3	2	1	4	4	3	3	2	4	39
Average number of days > 1/2 inch	a	+	+	+	+	0	+	1	+	+	+	+	+	1
Average snowfall	b	13.9	11.0	7.6	3.5	.6	.0	.0	.0	.5	2.1	7.8	11.2	58.2

Table 8.1 Local climatological data, Gunnison (NCAA, 1982) (Continued)

Relative humidity (%)	Data source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average	c	68	56	42	39	34	34	36	36	41	36	56	83	46

Wind	Data source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average speed (mph)	c	5.4	6.6	8.1	9.5	9.7	10.0	9.4	9.0	9.0	8.0	6.6	5.7	8.1

Evaporation (inches)	Data source	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average		1.25	1.51	3.46	5.74	7.95	9.28	9.06	7.7	5.52	3.34	1.59	1.30	60.36
Maximum	d	1.53	1.90	5.15	7.06	9.19	11.78	10.88	9.39	7.21	4.34	2.36	1.69	72.48

NOTES:

a-U.S. Department of Commerce, 1964, Climatology of the United States, No. 86-5 (data for Gunnison extracted).

b-NOAA, 1982.

c-U.S. Department of Commerce, 1968, Climatology of the United States, No. 60-5, Revised (Data for Grand Junction extracted).

T-Trace, an amount too small to be measured.

+Event has occurred at least once during the period of record; average is less than 1/2 day or frequency is less than 0.5%.

d-U.S. Weather Service, 1952-1975, Climatology Data, Colorado, Volumes 57 through 80. (MONTROSE DATA)

Table C.1.1 Temperature and precipitation at Gunnison, Colorado and evaporation at Montrose, Colorado^a

Month	Temperature (°F) ^b					Average precipitation ^c (inches)	Mean evaporation ^b (inches)
	Normal ^c	Highest	Mean daily maximum	Mean daily minimum	Lowest		
January	11.4	63	25.7	- 7.8	-45	0.97	1.26
February	15.6	58	30.8	- 2.7	-44	0.98	1.53
March	26.2	75	41.8	10.4	-29	0.81	3.40
April	39.7	78	58.3	22.7	-10	0.80	5.68
May	48.3	87	66.8	29.2	9	0.76	7.67
June	56.6	96	76.4	37.2	18	0.78	9.75
July	62.3	95	80.9	42.4	26	1.47	9.68
August	60.6	105	79.1	40.8	25	1.46	7.65
September	53.3	91	73.3	31.8	13	0.89	6.23
October	43.0	82	62.6	21.3	- 6	0.72	3.77
November	28.2	69	45.8	9.9	-26	0.60	1.74
December	16.4	62	29.9	- 3.5	-47	0.76	1.30
Annual	38.5	105	55.7	19.8	-47	11.00	59.66

^aThe elevation of the weather station at Gunnison is 7,694 feet; at Montrose it is 5,830 feet. The distance between Gunnison and Montrose is about 50 miles.

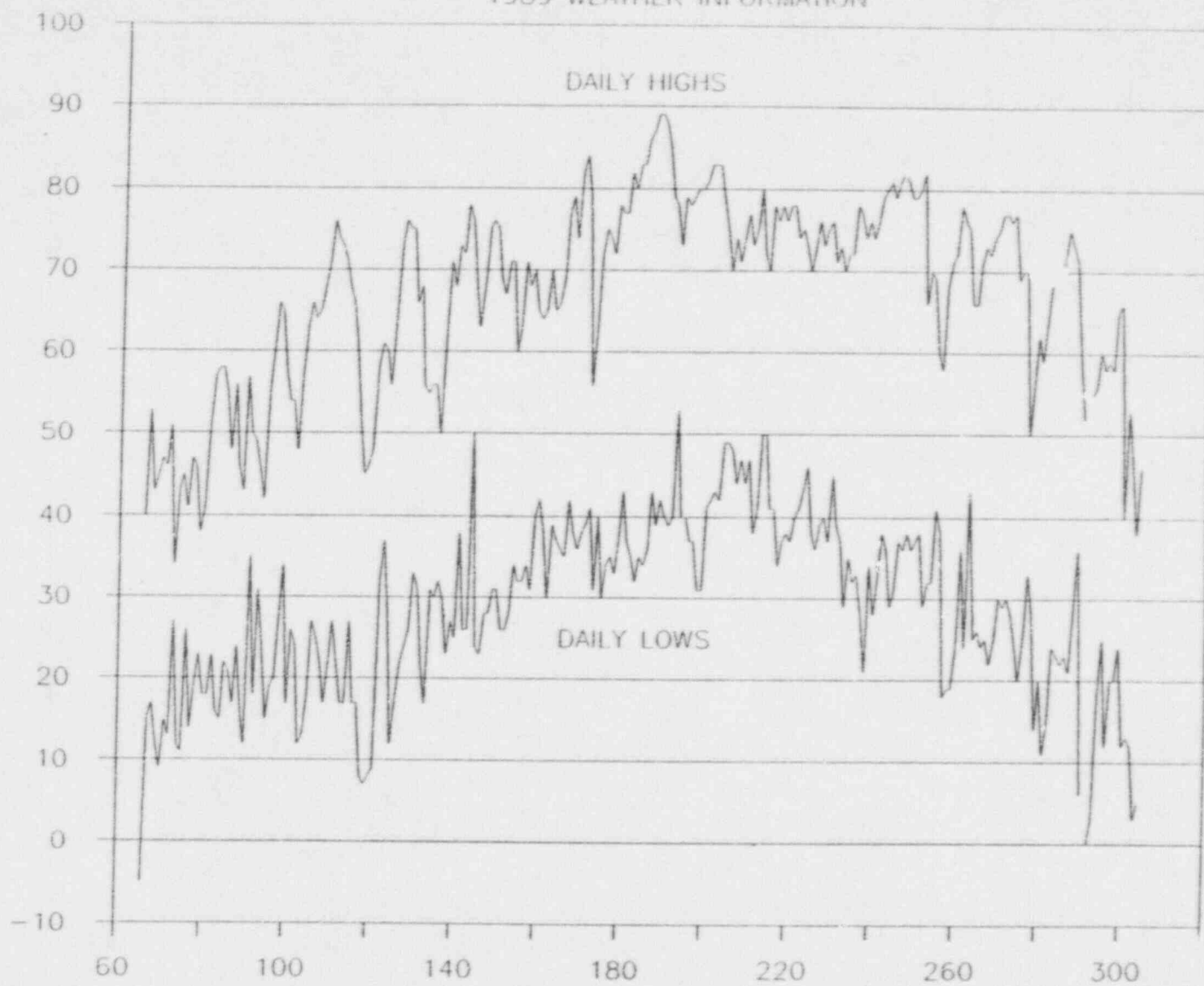
^bSource: U.S. Department of Commerce, 1964. The maximum and minimum temperature data are averaged from a 64 year record of observations. The mean evaporation data are averaged from a 20-year period.

^cSource: U.S. Department of Commerce, 1973. Normal temperature and precipitation are averaged from a 70-year record.

GUNNISON TEMPERATURE CHART

1989 WEATHER INFORMATION

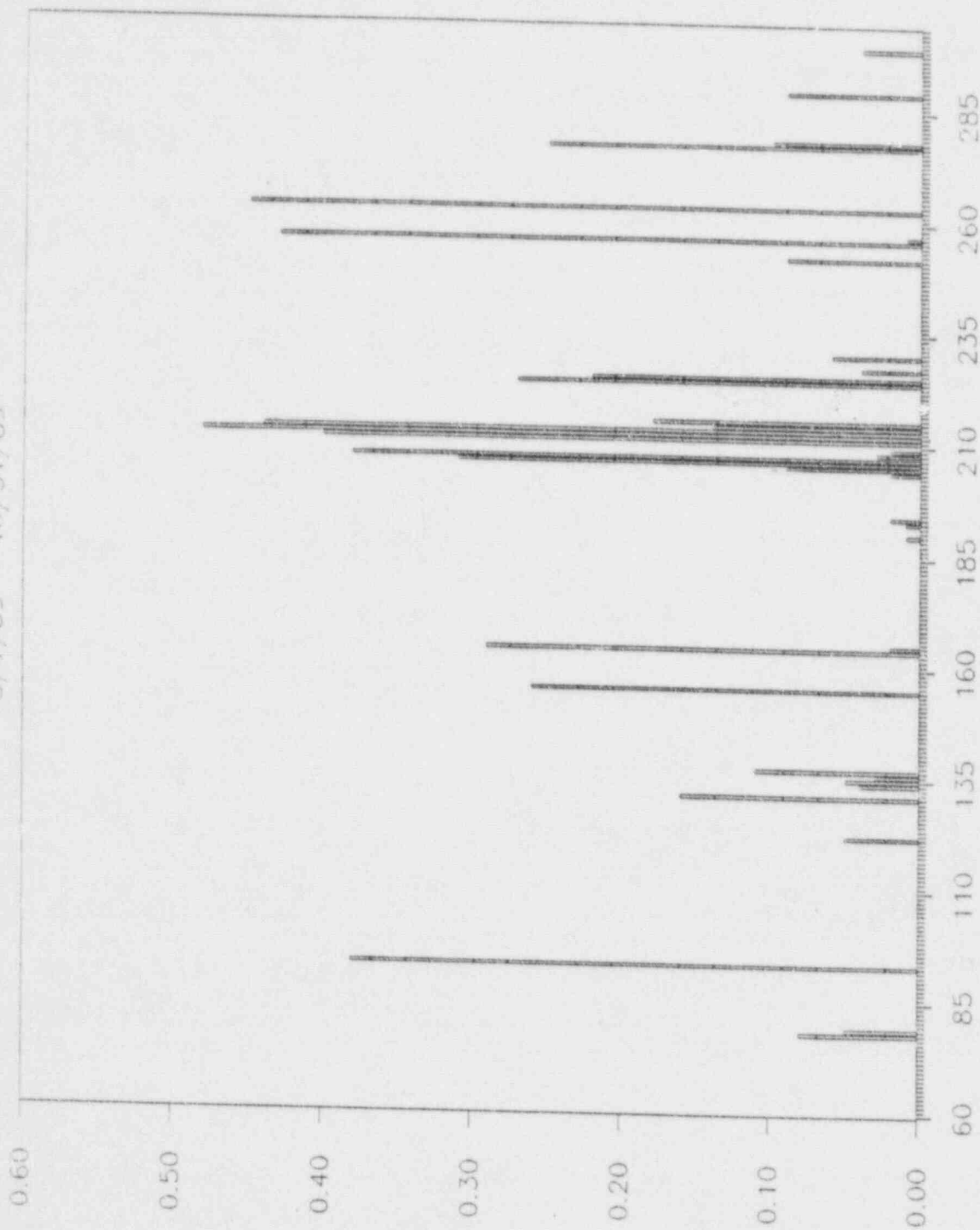
TEMPERATURE RANGE



DAYS - 3/1/89 THRU 8/31/89

GUNNISON PRECIPITATION

3/1/89 - 10/31/89



DAYS 3/1/89 - 10/31/89

PRECIPITATION IN INCHES