

**Summary of Moisture Content Determinations
at 40° C and 200° C Oven Temperatures
and Estimate of Gypsum Component**

Boring	SPT Split Spoon Sample Depth Interval (feet)	Soil Type	Moisture Content			- 200 (%)	+ 200 (%)	Gypsum (%)	Non-Gypsum Component * (%)
			W ₄₀ (%)	W ₂₀₀ (%)	D _{WC} (%)				
STN-28	0.0 - 1.5	Lean Clay	21.5	33.5	12	93.7	6.3	57.4	42.6
	1.5 - 3.0	Cast Gypsum	14.6	25.2	10.6			50.7	49.3
	3.0 - 4.5	Cast Gypsum	20.8	32.9	12.1			57.8	42.2
	4.5 - 6.0	Cast Gypsum	18.5	31.9	13.4			64.1	35.9
	6.0 - 7.5	Sedimented Gypsum	25.2	40.1	14.9			71.2	28.8
	7.5 - 9.0	Sedimented Gypsum	20.1	27.3	7.2			34.4	65.6
	9.0 - 10.5	Sedimented Gypsum	25.4	40.4	15			71.7	28.3
	12.5 - 14.0	Sedimented Gypsum	17.2	33.9	16.7			79.8	20.2
	14.0 - 15.5	Sedimented Gypsum	21.5	37	15.5			74.1	25.9
	15.5 - 17.0	Sedimented Gypsum	18.0	35.7	17.7			84.6	15.4
	17.0 - 18.5	Sedimented Gypsum	19.2	36.2	17			81.3	18.7
	18.5 - 20.0	Sedimented Gypsum	18.0	34.7	16.7			79.8	20.2
	20.0 - 21.5	Sedimented Gypsum	17.3	33.6	16.3			77.9	22.1
	21.5 - 23.0	Sedimented Gypsum	17.7	34.3	16.6			79.3	20.7
	23.0 - 24.5	Sedimented Gypsum	17.1	32.4	15.3			73.1	26.9
	24.5 - 26.0	Sedimented Gypsum	16.0	31.7	15.7			75.0	25.0
	26.0 - 27.5	Sedimented Gypsum	18.7	33.9	15.2			72.7	27.3
	27.5 - 29.0	Sedimented Gypsum	21.6	40.4	18.8			89.9	10.1
	29.0 - 30.5	Sedimented Gypsum	22.7	41.4	18.7			89.4	10.6
	30.5 - 32.0	Sedimented Gypsum	20.0	39	19			90.8	9.2
	32.0 - 33.5	Sedimented Gypsum	20.8	38.1	17.3			82.7	17.3
	33.5 - 35.0	Sedimented Gypsum	25.7	42.2	16.5			78.9	21.1
	35.0 - 36.5	Sedimented Gypsum	27.9	42.6	14.7			70.3	29.7
	36.5 - 38.0	Sedimented Gypsum	23.4	40.7	17.3			82.7	17.3
	38.0 - 39.5	Sedimented Gypsum	29.4	44.2	14.8			70.7	29.3
	41.5 - 43.0	Sedimented Gypsum	26.8	39.9	13.1			62.6	37.4
43.0 - 44.5	Sedimented Gypsum	27.3	38.4	11.1	53.1	46.9			
44.5 - 46.0	Sedimented Gypsum	25.3	41	15.7	75.0	25.0			
46.0 - 47.5	Sedimented Gypsum	24.0	45.4	21.4	102.3	-2.3			
47.5 - 49.0	Sedimented Gypsum	29.0	42.5	13.5	64.5	35.5			
49.0 - 49.7	Sedimented Gypsum	26.8	40.8	14	66.9	33.1			
54.0 - 55.5	Sedimented Gypsum	27.5	42.5	15	71.7	28.2			
Average		22.0	37.3	15.3			73.0	27.0	
STN-29	9.0 - 10.5	Sedimented Gypsum	20.5	35.8	15.3			73.3	26.7
STN-32	1.5 - 3.0	Cast Gypsum	11.5	25.7	14.2	72.1	27.9	68.0	32.0
	4.5 - 6.0	Cast Gypsum	14.0	31.1	17.1			81.9	18.1
	6.0 - 7.5	Cast Gypsum	17.0	34.3	17.3			82.8	17.2
	7.5 - 9.0	Cast Gypsum	18.9	38.9	20			95.8	4.2
	9.0 - 10.5	Cast Gypsum	22.0	36.5	14.5			69.4	30.6
	10.5 - 12.0	Sedimented Gypsum	18.9	35.8	16.9			80.9	19.1
	12.0 - 13.5	Sedimented Gypsum	18.6	33.3	14.7			70.4	29.6
	13.5 - 15.0	Sedimented Gypsum	18.4	32	13.6			65.1	34.9
	15.0 - 16.5	Sedimented Gypsum	19.5	30.8	11.3			54.1	45.9
	16.5 - 18.0	Sedimented Gypsum	21.6	36.3	14.7			70.4	29.6
	18.0 - 19.5	Sedimented Gypsum	20.5	33.2	12.7			60.8	39.2
	21.5 - 23.0	Sedimented Gypsum	19.7	29.7	10			47.9	52.1
	23.0 - 24.5	Sedimented Gypsum	25.6	37.6	12			57.5	42.5
	24.5 - 26.0	Sedimented Gypsum	22.8	35.7	12.9			61.8	38.2
	26.0 - 27.5	Sedimented Gypsum	19.8	34.4	14.6			69.9	30.1
	32.0 - 33.5	Sedimented Gypsum	27.4	39.1	11.7			56.0	44.0
Average		19.8	34.0	14.3			68.3	31.7	

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Boring	SPT Split Spoon Sample Depth Interval (feet)	Soil Type	Moisture Content			- 200 (%)	+ 200 (%)	Gypsum (%)	Non-Gypsum Component * (%)
			W ₄₀ (%)	W ₂₀₀ (%)	D _{WC} (%)				
STN-33	4.0 - 5.5	Cast Gypsum	13.6	22.1	8.5			40.7	59.3
	5.5 - 7.0	Sedimented Gypsum	12.7	21.4	8.7			41.7	58.3
	12.0 - 13.5	Sedimented Gypsum	21.6	37.2	15.6			74.7	25.3
	13.5 - 15.0	Sedimented Gypsum	22.5	37.8	15.3			73.3	26.7
	19.0 - 20.5	Sedimented Gypsum	27.3	49	21.7			103.9	-3.9
	Average		19.5	33.5	14.0			66.8	33.2
STN-34	25.0 - 26.5	Cast Gypsum	21.6	39	17.4			83.3	16.7
	30.0 - 31.5	Sedimented Gypsum	25.0	42.7	17.7			84.8	15.2
	35.0 - 36.5	Cast Gypsum	22.2	41.6	19.4			92.9	7.1
	40.0 - 41.5	Cast Gypsum	23.3	41.7	18.4			88.1	11.9
	45.0 - 46.5	Cast Gypsum	22.0	31.5	9.5			45.5	54.5
	Average		22.8	39.3	16.5			78.9	21.1
STN-35	0.0 - 1.5	Lean Clay	17.1	30	12.9			61.8	38.2
	1.5 - 3.0	Cast Gypsum	16.2	28.5	12.3			58.9	41.1
	4.5 - 6.0	Cast Gypsum	16.8	32.9	16.1			77.1	22.9
	6.0 - 7.5	Cast Gypsum	15.9	31.6	15.7			75.2	24.8
	7.5 - 9.0	Cast Gypsum	15.6	30.1	14.5			69.4	30.6
	9.0 - 10.5	Cast Gypsum	19.8	35.4	15.6			74.7	25.3
	10.5 - 12.0	Cast Gypsum	19.8	36.2	16.4			78.5	21.5
	12.0 - 13.5	Cast Gypsum	22.0	39.9	17.9			85.7	14.3
	13.5 - 15.0	Cast Gypsum	20.7	37.1	16.4			78.5	21.5
	15.0 - 16.5	Cast Gypsum	23.5	38.9	15.4			73.7	26.3
	16.5 - 18.0	Cast Gypsum	20.4	37.2	16.8			80.4	19.6
	18.0 - 19.5	Cast Gypsum	22.5	39.7	17.2			82.4	17.6
	19.5 - 21.0	Cast Gypsum	22.7	40.7	18			86.2	13.8
	21.0 - 22.5	Cast Gypsum	19.5	36.4	16.9			80.9	19.1
22.5 - 24.0	Cast Gypsum	21.5	39.7	18.2			87.1	12.9	
24.0 - 25.5	Cast Gypsum	23.6	38.5	14.9			71.3	28.7	
	Average		20.6	37.0	16.5			78.8	21.2
STN-37	15.0 - 16.5		17.0	41	24			114.9	-14.9
STN-38	0.0 - 1.5	Cast Gypsum	14.5	28.8	14.3			68.5	31.5
	1.5 - 3.0	Cast Gypsum	18.7	37.3	18.6			89.1	10.9
	3.0 - 4.5	Cast Gypsum	15.4	31.4	16			76.6	23.4
	4.5 - 6.0	Cast Gypsum	16.8	34.1	17.3			82.8	17.2
	6.0 - 7.5	Cast Gypsum	18.2	39	20.8			99.6	0.4
	7.5 - 9.0	Cast Gypsum	15.2	30.6	15.4			73.7	26.3
	9.0 - 10.5	Cast Gypsum	16.5	32.1	15.6			74.7	25.3
	10.5 - 12.0	Cast Gypsum	20.9	34.1	13.2			63.2	36.8
	14.0 - 15.5	Cast Gypsum	25.2	42.3	17.1	94.1	5.9	81.9	18.1
	15.5 - 17.0	Cast Gypsum	26.7	44.5	17.8			85.2	14.8
	17.0 - 18.5	Cast Gypsum	24.7	41.1	16.4			78.5	21.5
	18.5 - 20.0	Cast Gypsum	32.0	45.5	13.5			64.6	35.4
	20.0 - 21.5	Cast Gypsum	28.5	44.2	15.7			75.2	24.8
	21.5 - 23.0	Weak Sedimented Gypsum	30.7	44.8	14.1			67.5	32.5
	23.0 - 24.5	Weak Sedimented Gypsum	37.1	48.7	11.6			55.5	44.5
	24.5 - 26.0	Weak Sedimented Gypsum	35.9	47.3	11.4			54.6	45.4
	59.5 - 61.0	Sedimented Gypsum	20.8	35.2	14.4	87.6	12.4	69.0	31.0
64.5 - 66.0	Sedimented Gypsum	29.7	51.1	21.4			102.5	-2.5	
69.5 - 71.0	Sedimented Gypsum	31.1	50.5	19.4			92.9	7.1	
	Average		24.1	40.1	16.0			76.6	23.4

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			W ₄₀ (%)	W ₂₀₀ (%)	D _{WC} (%)				
STN-39	5.0 - 6.5	Cast Gypsum	14.3	28	13.7			65.6	34.4
	6.5 - 8.0	Cast Gypsum	13.6	27.4	13.8			66.1	33.9
	8.0 - 9.5	Cast Gypsum	14.5	28.1	13.6			65.1	34.9
	9.5 - 11.0	Cast Gypsum	14.8	30.7	15.9			76.1	23.9
	11.0 - 12.5	Cast Gypsum	20.5	37.5	17			81.4	18.6
	12.5 - 14.0	Cast Gypsum	15.7	31.5	15.8			75.7	24.3
	14.0 - 15.5	Cast Gypsum	15.5	28.9	13.4			64.2	35.8
	15.5 - 17.0	Cast Gypsum	13.9	25.3	11.4			54.6	45.4
	17.0 - 18.5	Cast Gypsum	19.6	34.1	14.5			69.4	30.6
	18.5 - 20.0	Cast Gypsum	19.2	30.4	11.2			53.6	46.4
	20.0 - 21.5	Cast Gypsum	20.2	34	13.8			66.1	33.9
	21.5 - 23.0	Sedimented Gypsum	19.4	34.7	15.3			73.3	26.7
	23.0 - 24.5	Sedimented Gypsum	22.6	39.2	16.6			79.5	20.5
	24.5 - 26.0	Sedimented Gypsum	20.6	38.1	17.5			83.8	16.2
	26.0 - 27.5	Sedimented Gypsum	21.7	36.3	14.6			69.9	30.1
	29.5 - 31.0	Sedimented Gypsum	21.3	35.4	14.1			67.5	32.5
	31.0 - 32.5	Sedimented Gypsum	21.6	33.9	12.3			58.9	41.1
	32.5 - 34.0	Sedimented Gypsum	24.3	35	10.7			51.2	48.8
	34.0 - 35.5	Sedimented Gypsum	18.6	25.5	6.9			33.0	67.0
	35.5 - 37.0	Sedimented Gypsum	17.9	26.8	8.9			42.6	57.4
	39.0 - 40.5	Sedimented Gypsum	21.8	34.3	12.5			59.9	40.1
	40.5 - 42.0	Sedimented Gypsum	20.8	35	14.2			68.0	32.0
	42.0 - 43.5	Sedimented Gypsum	17.7	30.6	12.9			61.8	38.2
	43.5 - 45.0	Sedimented Gypsum	20.9	38.1	17.2			82.4	17.6
	45.0 - 46.5	Sedimented Gypsum	28.3	48.7	20.4			97.7	2.3
	46.5 - 48.0	Sedimented Gypsum	28.2	46	17.8			85.2	14.8
48.0 - 49.5	Weak Sedimented Gypsum	43.9	57	13.1			62.7	37.3	
51.5 - 53.0	Weak Sedimented Gypsum	33.3	41.4	8.1			38.8	61.2	
Average		20.9	34.7	13.8			66.2	33.8	
STN-40	4.0 - 5.5	Cast Gypsum	21.9	36	14.1			67.5	32.5
	9.5 - 11.0	Cast Gypsum	22.3	42.3	20			95.8	4.2
	Average		22.1	39.2	17.1			81.6	18.4
STN-42	10.0 - 11.5	Cast Gypsum	18.8	34.4	15.6			74.7	25.3
	15.0 - 16.5	Cast Gypsum	19.0	37.3	18.3			87.6	12.4
	16.5 - 18.0	Cast Gypsum	19.1	33.9	14.8			70.9	29.1
	18.0 - 19.5	Cast Gypsum	20.1	35.2	15.1			72.3	27.7
	19.5 - 21.0	Cast Gypsum	18.6	32.4	13.8			66.1	33.9
	21.0 - 22.5	Cast Gypsum	19.5	34.1	14.6			69.9	30.1
	22.5 - 24.0	Cast Gypsum	17.5	31.8	14.3			68.5	31.5
	24.0 - 25.5	Cast Gypsum	19.4	34.1	14.7			70.4	29.6
	25.5 - 27.0	Sedimented Gypsum	17.6	29.8	12.2			58.4	41.6
	27.0 - 28.5	Sedimented Gypsum	16.3	28.9	12.6			60.3	39.7
	40.5 - 42.0	Weak Sedimented Gypsum	39.2	52.3	13.1			62.7	37.3
	49.0 - 50.5	Weak Sedimented Gypsum	21.0	37.9	16.9			80.9	19.1
	50.5 - 52.0	Weak Sedimented Gypsum	33.9	47.4	13.5			64.6	35.4
	52.0 - 53.5	Weak Sedimented Gypsum	35.5	47.3	11.8			56.5	43.5
	53.5 - 55.5	Weak Sedimented Gypsum	39.7	52.4	12.7			60.8	39.2
	55.0 - 56.5	Weak Sedimented Gypsum	30.6	40.2	9.6			46.0	54.0
Average		24.1	38.1	14.0			66.9	33.1	

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Boring	SPT Split Spoon Sample Depth Interval (feet)	Soil Type	Moisture Content			- 200 (%)	+ 200 (%)	Gypsum (%)	Non-Gypsum Component * (%)
			W ₄₀ (%)	W ₂₀₀ (%)	D _{WC} (%)				
STN-45	0.0 - 1.5	Lean Clay	17.0	NA	NA			NA	NA
	1.5 - 3.0	Cast Gypsum	15.0	NA	NA			NA	NA
	3.0 - 4.5	Cast Gypsum	16.0	NA	NA			NA	NA
	4.5 - 6.0	Cast Gypsum	16.0	NA	NA			NA	NA
	6.0 - 7.5	Cast Gypsum	20.0	NA	NA			NA	NA
	7.5 - 9.0	Cast Gypsum	17.0	NA	NA			NA	NA
	9.0 - 10.5	Cast Gypsum	20.0	NA	NA			NA	NA
	10.5 - 12.0	Cast Gypsum	20.0	NA	NA			NA	NA
	12.0 - 13.5	Cast Gypsum	21.0	NA	NA			NA	NA
	13.5 - 15.0	Cast Gypsum	20.0	NA	NA			NA	NA
	15.0 - 16.5	Cast Gypsum	22.0	NA	NA			NA	NA
	16.5 - 18.0	Cast Gypsum	20.0	NA	NA			NA	NA
	18.0 - 19.5	Cast Gypsum	20.0	NA	NA			NA	NA
	19.5 - 21.0	Cast Gypsum	19.0	NA	NA			NA	NA
	21.0 - 22.5	Cast Gypsum	20.0	NA	NA			NA	NA
	22.5 - 24.0	Cast Gypsum	24.0	NA	NA			NA	NA
	24.0 - 25.5	Cast Gypsum	24.0	NA	NA			NA	NA
	25.5 - 27.0	Cast Gypsum	23.0	NA	NA			NA	NA
	27.0 - 28.5	Cast Gypsum	22.0	NA	NA			NA	NA
	28.5-30.0	Cast Gypsum	23.0	NA	NA			NA	NA
	30.0-31.5	Cast Gypsum	24.0	NA	NA			NA	NA
	31.5-33.0	Weak Sedimented Gypsum	22.0	NA	NA			NA	NA
	33.0-34.5	Weak Sedimented Gypsum	32.0	NA	NA			NA	NA
	34.5-36.0	Weak Sedimented Gypsum	30.0	NA	NA			NA	NA
	36.0-37.5	Weak Sedimented Gypsum	29.0	NA	NA			NA	NA
	37.5-39.0	Weak Sedimented Gypsum	29.0	NA	NA			NA	NA
	39.0-40.5	Weak Sedimented Gypsum	31.0	NA	NA			NA	NA
	40.5 - 42.0	Fat Clay	45.0	NA	NA			NA	NA
42.0-43.5	Fat Clay	21.0	NA	NA			NA	NA	
43.5-45.0	Fat Clay	21.0	NA	NA			NA	NA	
45.0-46.5	Fat Clay	19.0	NA	NA			NA	NA	
46.5-48.0	Fat Clay	20.0	NA	NA			NA	NA	
48.0-49.5	Fat Clay	22.0	NA	NA			NA	NA	
Average		22.5	NA	NA			NA	NA	
STN-46	23.5-25.0	Sedimented Gypsum	13.9	26.9	13			62.2	37.8
	25.0-26.5	Sedimented Gypsum	15.8	29.4	13.6			65.1	34.9
	26.5-28.0	Sedimented Gypsum	17.4	32.2	14.8			70.9	29.1
	28.0-29.5	Sedimented Gypsum	20.6	35.7	15.1			72.3	27.7
	29.5-31.0	Sedimented Gypsum	18.2	36.3	18.1			86.7	13.3
	31.0-32.5	Sedimented Gypsum	18.0	34.2	16.2			77.6	22.4
	Average		17.3	32.5	15.1			72.5	27.5

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			W ₄₀ (%)	W ₂₀₀ (%)	D _{WC} (%)				
STN-48	0.0 - 1.5		17.0	NA	NA			NA	NA
	1.5 - 3.0		15.0	NA	NA			NA	NA
	3.0 - 4.5	Cast Gypsum	15.0	NA	NA			NA	NA
	4.5 - 6.0	Cast Gypsum	14.0	NA	NA			NA	NA
	6.0 - 7.5	Cast Gypsum	16.0	NA	NA			NA	NA
	7.5 - 9.0	Cast Gypsum	17.0	NA	NA			NA	NA
	9.0 - 10.5	Cast Gypsum	17.0	NA	NA			NA	NA
	10.5 - 12.0	Cast Gypsum	20.0	NA	NA			NA	NA
	12.0 - 13.5	Cast Gypsum	21.0	NA	NA			NA	NA
	13.5 - 15.0	Cast Gypsum	20.0	NA	NA			NA	NA
	15.0 - 16.5	Cast Gypsum	21.0	NA	NA			NA	NA
	16.5 - 18.0	Cast Gypsum	20.0	NA	NA			NA	NA
	18.0 - 19.5	Cast Gypsum	19.0	NA	NA			NA	NA
	19.5 - 21.0	Cast Gypsum	20.0	NA	NA			NA	NA
	21.0 - 22.5	Cast Gypsum	23.0	NA	NA			NA	NA
	22.5 - 24.0	Cast Gypsum	22.0	NA	NA			NA	NA
	24.0 - 25.5	Cast Gypsum	21.0	NA	NA			NA	NA
	25.5 - 27.0	Cast Gypsum	22.0	NA	NA			NA	NA
	27.0 - 28.5	Cast Gypsum	21.0	NA	NA			NA	NA
	28.5-30.0	Cast Gypsum	22.0	NA	NA			NA	NA
	30.0-31.5	Cast Gypsum	21.0	NA	NA			NA	NA
	31.5-33.0	Cast Gypsum	19.0	NA	NA			NA	NA
	33.0-34.5	Cast Gypsum	34.0	NA	NA			NA	NA
	34.5-36.0	Weak Sedimented Gypsum	33.0	NA	NA			NA	NA
	36.0-37.5	Weak Sedimented Gypsum	36.0	NA	NA			NA	NA
	37.5-39.0	Weak Sedimented Gypsum	46.0	NA	NA			NA	NA
	39.0-40.5	Weak Sedimented Gypsum	42.0	NA	NA			NA	NA
	40.5 - 42.0	Weak Sedimented Gypsum	45.0	NA	NA			NA	NA
	42.0-43.5	Cast Gypsum	51.0	NA	NA			NA	NA
	43.5-45.0	Cast Gypsum	25.0	NA	NA			NA	NA
	45.0-46.5	Cast Gypsum	22.0	NA	NA			NA	NA
	46.5-48.0	Cast Gypsum	23.0	NA	NA			NA	NA
48.0-49.5	Cast Gypsum	22.0	NA	NA			NA	NA	
49.5-51.0	Cast Gypsum	29.0	NA	NA			NA	NA	
51.0-52.5	Fat Clay	31.0	NA	NA			NA	NA	
52.5-54.0	Fat Clay	30.0	NA	NA			NA	NA	
54.0-55.5	Fat Clay	24.0	NA	NA			NA	NA	
55.5-57.0	Fat Clay	25.0	NA	NA			NA	NA	
57.0-57.4	Fat Clay	13.0	NA	NA			NA	NA	
	Average		24.5	NA	NA			NA	NA

**Summary of Moisture Content Determinations
at 40° C and 200° C Oven Temperatures
and Estimate of Gypsum Component**

Boring	SPT Split Spoon Sample Depth Interval (feet)	Soil Type	Moisture Content			- 200 (%)	+ 200 (%)	Gypsum (%)	Non-Gypsum Component * (%)
			W ₄₀ (%)	W ₂₀₀ (%)	D _{WC} (%)				
STN-49	0.0 - 1.5	Cast Gypsum	13.0	NA	NA			NA	NA
	1.5 - 3.0	Cast Gypsum	14.0	NA	NA			NA	NA
	3.0 - 4.5	Cast Gypsum	16.0	NA	NA			NA	NA
	4.5 - 6.0	Cast Gypsum	17.0	NA	NA			NA	NA
	6.0 - 7.5	Cast Gypsum	17.0	NA	NA			NA	NA
	7.5 - 9.0	Cast Gypsum	19.0	NA	NA			NA	NA
	9.0 - 10.5	Cast Gypsum	19.0	NA	NA			NA	NA
	10.5 - 12.0	Cast Gypsum	20.0	NA	NA			NA	NA
	12.0 - 13.5	Cast Gypsum	21.0	NA	NA			NA	NA
	13.5 - 15.0	Cast Gypsum	19.0	NA	NA			NA	NA
	15.0 - 16.5	Cast Gypsum	22.0	NA	NA			NA	NA
	16.5 - 18.0	Cast Gypsum	20.0	NA	NA			NA	NA
	18.0 - 19.5	Cast Gypsum	21.0	NA	NA			NA	NA
	19.5 - 21.0	Cast Gypsum	22.0	NA	NA			NA	NA
	21.0 - 22.5	Cast Gypsum	22.0	NA	NA			NA	NA
	22.5 - 24.0	Cast Gypsum	19.0	NA	NA			NA	NA
	24.0 - 25.5	Cast Gypsum	19.0	NA	NA			NA	NA
	25.5 - 27.0	Cast Gypsum	19.0	NA	NA			NA	NA
	27.0 - 28.5	Cast Gypsum	23.0	NA	NA			NA	NA
	28.5-30.0	Cast Gypsum	20.0	NA	NA			NA	NA
	30.0-31.5	Weak Sedimented Gypsum	24.0	NA	NA			NA	NA
	31.5-33.0	Weak Sedimented Gypsum	24.0	NA	NA			NA	NA
	33.0-34.5	Weak Sedimented Gypsum	25.0	NA	NA			NA	NA
	34.5-36.0	Weak Sedimented Gypsum	47.0	NA	NA			NA	NA
	36.0-37.5	Weak Sedimented Gypsum	49.0	NA	NA			NA	NA
	37.5-39.0	Weak Sedimented Gypsum	35.0	NA	NA			NA	NA
	39.0-40.5	Fat Clay	39.0	NA	NA			NA	NA
	40.5 - 42.0	Fat Clay	33.0	NA	NA			NA	NA
	42.0-43.5	Fat Clay	26.0	NA	NA			NA	NA
	43.5-45.0	Fat Clay	25.0	NA	NA			NA	NA
	45.0-46.5	Fat Clay	28.0	NA	NA			NA	NA
	46.5-48.0	Fat Clay	26.0	NA	NA			NA	NA
	48.0-49.5	Fat Clay	19.0	NA	NA			NA	NA
	49.5-51.0	Fat Clay	22.0	NA	NA			NA	NA
	51.0-52.5	Fat Clay	21.0	NA	NA			NA	NA
	52.5-54.0	Fat Clay	18.0	NA	NA			NA	NA
54.0-55.5	Fat Clay	21.0	NA	NA			NA	NA	
55.5-57.0	Fat Clay	19.0	NA	NA			NA	NA	
57.0-58.5	Fat Clay	20.0	NA	NA			NA	NA	
58.5-60.0	Fat Clay	21.0	NA	NA			NA	NA	
60.0-61.5	Fat Clay	20.0	NA	NA			NA	NA	
61.5-62.1	Fat Clay	14.0	NA	NA			NA	NA	
	Average		22.8	NA	NA			NA	NA

**Summary of Moisture Content Determinations
at 40° C and 200° C Oven Temperatures
and Estimate of Gypsum Component**

Boring	SPT Split Spoon Sample Depth Interval (feet)	Soil Type	Moisture Content			- 200 (%)	+ 200 (%)	Gypsum (%)	Non-Gypsum Component * (%)
			W ₄₀ (%)	W ₂₀₀ (%)	D _{wc} (%)				
STN-50	0.0 - 1.5	Cast Gypsum	13.0	NA	NA			NA	NA
	1.5 - 3.0	Cast Gypsum	14.0	NA	NA			NA	NA
	3.0 - 4.5	Cast Gypsum	16.0	NA	NA			NA	NA
	4.5 - 6.0	Cast Gypsum	17.0	NA	NA			NA	NA
	6.0 - 7.5	Cast Gypsum	17.0	NA	NA			NA	NA
	7.5 - 9.0	Cast Gypsum	19.0	NA	NA			NA	NA
	9.0 - 10.5	Cast Gypsum	19.0	NA	NA			NA	NA
	10.5 - 12.0	Cast Gypsum	20.0	NA	NA			NA	NA
	12.0 - 13.5	Cast Gypsum	21.0	NA	NA			NA	NA
	13.5 - 15.0	Cast Gypsum	19.0	NA	NA			NA	NA
	15.0 - 16.5	Cast Gypsum	22.0	NA	NA			NA	NA
	16.5 - 18.0	Sedimented Gypsum	20.0	NA	NA			NA	NA
	18.0 - 19.5	Sedimented Gypsum	21.0	NA	NA			NA	NA
	19.5 - 21.0	Sedimented Gypsum	22.0	NA	NA			NA	NA
	21.0 - 22.5	Sedimented Gypsum	22.0	NA	NA			NA	NA
	22.5 - 24.0	Sedimented Gypsum	19.0	NA	NA			NA	NA
	24.0 - 25.5	Sedimented Gypsum	19.0	NA	NA			NA	NA
	25.5 - 27.0	Sedimented Gypsum	19.0	NA	NA			NA	NA
	27.0 - 28.5	Cast Gypsum	23.0	NA	NA			NA	NA
	28.5-30.0	Cast Gypsum	20.0	NA	NA			NA	NA
	30.0-31.5	Cast Gypsum	24.0	NA	NA			NA	NA
	31.5-33.0	Cast Gypsum	24.0	NA	NA			NA	NA
	33.0-34.5	Cast Gypsum	25.0	NA	NA			NA	NA
	34.5-36.0	Fat Clay	47.0	NA	NA			NA	NA
	36.0-37.5	Fat Clay	49.0	NA	NA			NA	NA
	37.5-39.0	Fat Clay	35.0	NA	NA			NA	NA
	39.0-40.5	Fat Clay	39.0	NA	NA			NA	NA
	40.5 - 42.0	Fat Clay	33.0	NA	NA			NA	NA
	42.0-43.5	Fat Clay	26.0	NA	NA			NA	NA
	43.5-45.0	Fat Clay	25.0	NA	NA			NA	NA
	45.0-46.5	Fat Clay	28.0	NA	NA			NA	NA
	46.5-48.0	Fat Clay	26.0	NA	NA			NA	NA
	48.0-49.5	Fat Clay	19.0	NA	NA			NA	NA
	49.5-51.0	Fat Clay	22.0	NA	NA			NA	NA
	51.0-52.5	Fat Clay	21.0	NA	NA			NA	NA
	52.5-54.0	Fat Clay	18.0	NA	NA			NA	NA
54.0-55.5	Fat Clay	21.0	NA	NA			NA	NA	
55.5-57.0	Fat Clay	19.0	NA	NA			NA	NA	
57.0-58.5	Fat Clay	20.0	NA	NA			NA	NA	
58.5-60.0	Fat Clay	21.0	NA	NA			NA	NA	
60.0-61.5	Fat Clay	20.0	NA	NA			NA	NA	
	Average		23.0	NA	NA			NA	NA
	Total Average		22.4	36.5	15.0			71.7	28.3
Where: W ₄₀ = Moisture content at 40°C; W ₂₀₀ - Moisture Content at 200°C; D _{wc} = Change in apparent moisture content [W ₂₀₀ - W ₄₀]; and -200 = Percent fines content by dry weight of solids									
*Assumes that the calcium sulfate phase (gypsum) is in dihydrate form.									

Consolidated Undrained Triaxial Results

Boring	Sample	Soil Type	Depth (feet)	Total Wet Unit Weight (pcf)	Dry Unit Weight (pcf)	c' (psf)	ϕ' (deg.)
STN-28	ST-1	Sedimented Gypsum	10.5-11	111.7	77.7	0	43.9
	ST-2		39.7-40.2	113.8	81.3		
			40.3-40.8	73.8	48.9		
STN-32	ST-2	Fat Clay	35.0-35.5	123.4	97.5	380	24.7
			35.6-36.1	121.1	90.8		
			36.2-36.7	125.3	99.9		
STN-33	ST-2	Sedimented Gypsum	15.2-15.7	116.8	88.4	0	40.6
			15.8-16.3	102.9	68.1		
			16.5-16.8	119.0	81.7		
STN-34	ST-1	Cast Gypsum	15.2-15.7	114.9	80.2	0	40.7
			15.8-16.3	114.3	81.3		
			16.4-16.9	113.1	77.4		
STN-38	ST-1	Cast Gypsum	12.2-12.7	110.4	78.6	0	38.7
			12.8-13.3	105.2	71.8		
			13.4-13.9	113.0	81.2		
	ST-3	Sedimented Gypsum	71.2-71.7	113.1	78.7	0	42.7
			71.8-72.3	107.7	71.0		
STN-39	ST-2	Sedimented Gypsum	37.8-38.3	121.5	100.6	0	43.2
		Weak	50.1-50.6	102.6	75.3		
	ST-3	Sedimented Gypsum	50.7-51.2	104.6	73.1		
STN-41	ST-1	Cast Gypsum	22.1-22.6	117.9	83.8	0	42.0
			22.7-23.2	109.3	69.4		
			23.3-23.8	115.3	76.8		
STN-42	ST-3	Sedimented Gypsum	32.7-33.2	121.1	99.3	0	35.8
			33.3-33.8	121.0	98.9		
			33.9-34.4	118.4	98.0		
	ST-9	Weak Sedimented Gypsum	46.8-47.3	116.6	85.9	0	41.7
STN-44	ST-2	Cast Gypsum	37.0-37.5	115.4	81.7	0	40.3

Permeability Test Results

Boring	Sample	Soil Type	Depth (feet)	Sample Center Elevation (MSL)	Effective Confining Pressure (psf)	Initial Conditions			Final Conditions				Coefficient of Permeability K _v (cm/sec)	
						Dry Density (pcf)	Moisture Content (%) @ 20°C	Void Ratio, e	Degree of Saturation (%)	Dry Density (pcf)	Moisture Content (%) @ 20°C	Void Ratio, e		Degree of Saturation (%)
STN-28	ST-2	Sedimented Gypsum	39.5-41.5	610.8	1152	82.4	31.2	0.787	93.5	85.4	31.0	0.725	100.8	4.47x10 ⁻⁵
	ST-1	Cast Gypsum	22.0-24.0	632.8	1440	93	21.5	0.658	80.6	97.6	20.6	0.58	87.7	3.22x10 ⁻⁵
STN-44	ST-3	Sedimented Gypsum	52.0-54.0	602.8	1440	57	70	1.726	100.9	67.3	55.2	1.311	104.9	2.02x10 ⁻⁶
	ST-2	Cast Gypsum	35.0-37.0	619.5	1440	92.8	33.3	0.668	123.6	94.6	25.9	0.637	100.7	2.68x10 ⁻⁶

Sedimented Gypsum Average
 Cast Gypsum Average
 Average

1296
1440
1368

69.7
92.9
81.3

50.6
27.4
39

1.2565
0.663
0.95975

97.2
102.1
99.65

76.35
96.1
86.225

43.1
23.25
33.175

1.018
0.6085
0.81325

102.85
94.2
98.525

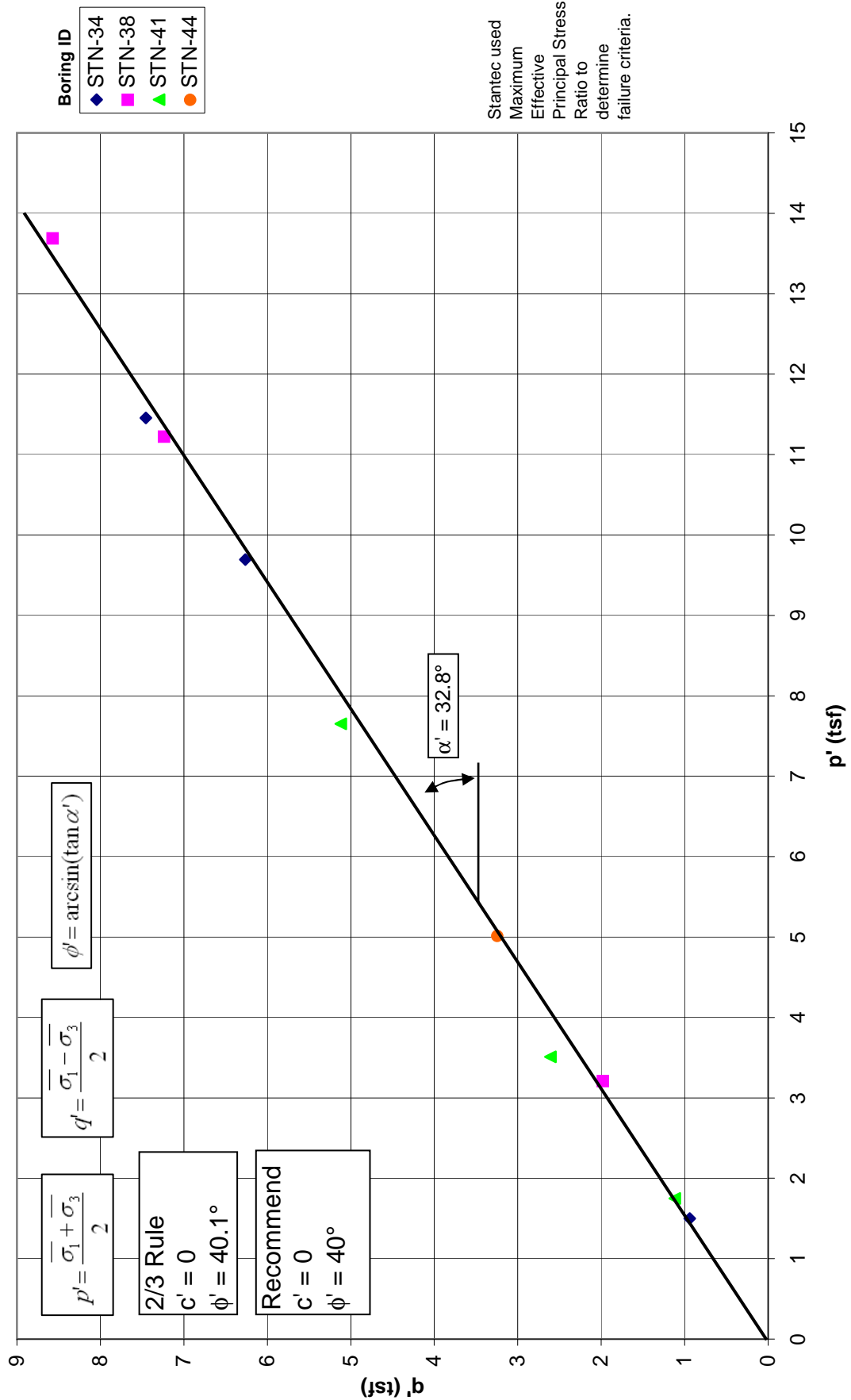
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1.74E-05
2.04E-05

Unit Weight Summary

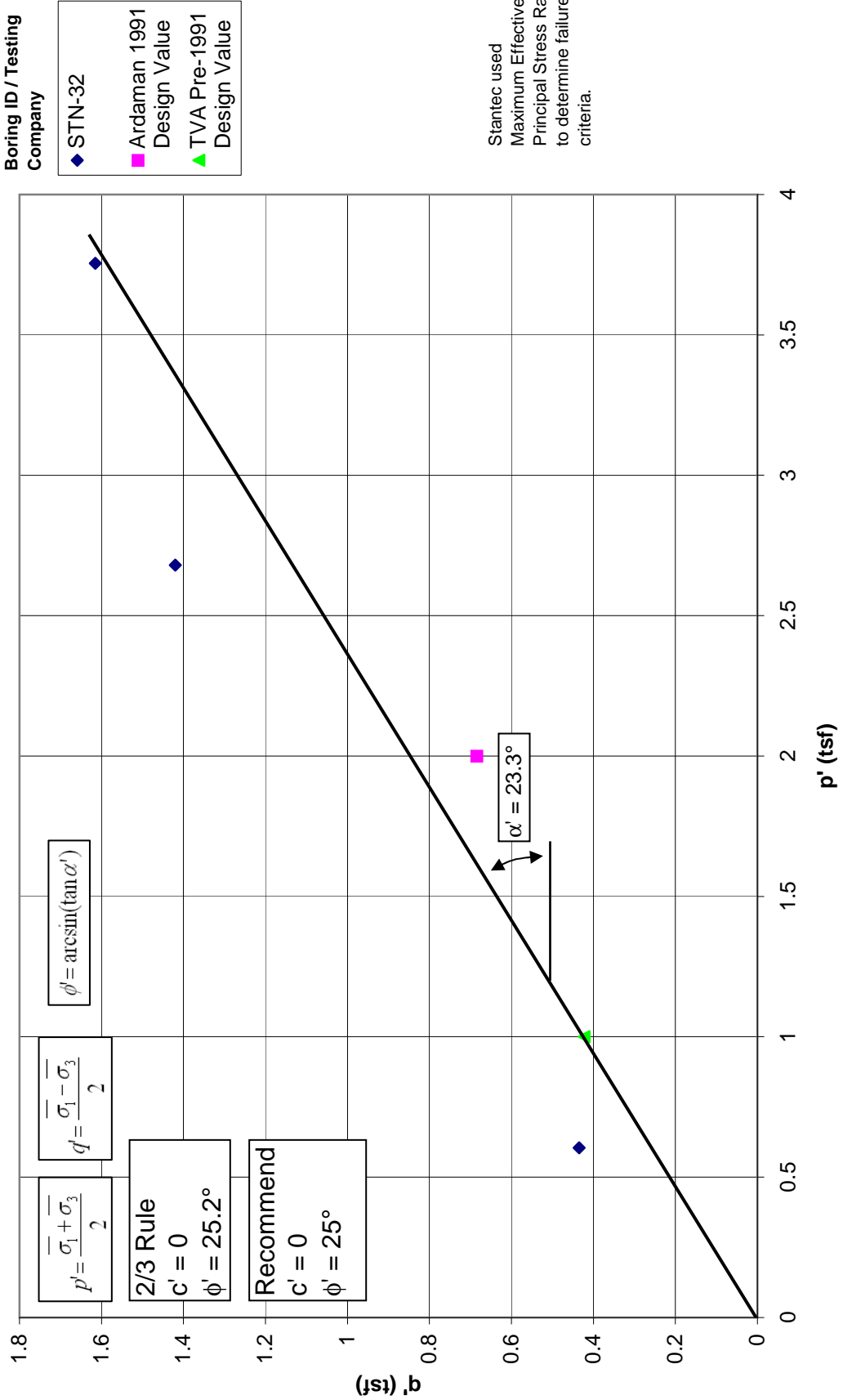
Boring	Sample	Soil Type	Depth (feet)	Sample Center Elevation (MSL)	Natural Moisture Content (%) @ 40° C	Total Unit Weight (pcf)	Dry Density (pcf)	Void Ratio, e	Porosity, n
SB-28	ST-1	Sedimented Gypsum	10.5-11	640.6	27.4	108.0	84.7	0.84	0.46
			11-11.5	640.1	20.3	121.9	101.3	0.54	0.35
	ST-2	Sedimented Gypsum	39.7-40.2	611.4	23.4	111.1	90.0	0.73	0.42
40.3-40.8			610.8	28.4	105.4	82.1	0.90	0.47	
41-41.5			610.1	31.7	105.0	79.7	0.96	0.49	
SB-29	ST-1	Cast Gypsum	4.7-5.2	619.0	18.3	122.8	103.9	0.50	0.33
SB-31	ST-2	Sedimented Gypsum	44.5-45	627.9	19.6	124.0	103.6	0.51	0.34
			45.1-45.6	627.3	18.8	119.6	100.7	0.55	0.35
SB-32	ST-2	Fat Clay	35-35.5	621.0	28.9	123.4	95.7	0.63	0.39
			35.6-36.1	620.4	32.5	121.3	91.6	0.70	0.41
			36.1-36.7	619.9	26.3	125.3	99.2	0.57	0.36
SB-33	ST-2	Sedimented Gypsum	15.2-15.7	608.8	20.7	116.8	96.7	0.61	0.38
			15.8-16.3	608.2	32.8	108.2	81.5	0.91	0.48
			16.5-17	607.5	35.7	108.3	79.8	0.95	0.49
SB-34	ST-1	Cast Gypsum	15.2-15.7	658.7	22.0	110.1	90.3	0.73	0.42
			15.8-16.3	658.1	22.8	114.1	92.9	0.68	0.40
			16.4-16.9	657.5	22.7	110.8	90.3	0.73	0.42
SB-35	ST-1	Fat Clay	25.7-26.2	630.2	27.8	114.3	89.4	0.74	0.43
	ST-1	Cast Gypsum	12-12.5	663.3	20.0	107.7	89.7	0.74	0.43
			12.6-13.1	662.7	25.4	104.8	83.5	0.87	0.46
			13.2-13.7	662.1	27.4	107.5	84.4	0.85	0.46
SB-38	ST-3	Sedimented Gypsum	71.2-71.7	604.1	31.7	113.6	86.3	0.81	0.45
			71.8-72.3	603.5	36.4	109.6	80.3	0.94	0.49
			72.4-72.9	602.9	28.1	110.9	86.6	0.80	0.44
	ST-5	Sedimented Gypsum	83.2-83.7	592.1	31.8	110.2	83.7	0.86	0.46
			83.7-84.2	591.6	31.8	111.4	84.5	0.85	0.46
SB-39	ST-2	Sedimented Gypsum	37.2-37.7	617.8	29.4	119.2	92.1	0.69	0.41
			37.8-38.3	617.2	25.5	116.2	92.5	0.69	0.41
			38.4-38.9	616.6	25.8	114.3	90.9	0.72	0.42
	ST-3	Sedimented Gypsum	49.5-50	605.5	23.6	115.3	93.3	0.67	0.40
			50.1-50.6	604.9	28.8	114.2	88.7	0.76	0.43
			50.7-51.2	604.3	50.5	102.9	68.4	1.28	0.56
SB-41	ST-1	Cast Gypsum	22.1-22.6	635.5	32.7	106.9	80.6	0.94	0.48
			22.7-23.2	634.9	57.9	104.0	65.8	1.37	0.58
			23.3-23.8	635.3	55.5	111.4	71.7	1.18	0.54
SB-42	ST-3	Sedimented Gypsum	32.7-33.2	626.1	21.6	121.6	100.0	0.56	0.36
			33.3-33.8	625.5	22.2	120.9	99.0	0.58	0.37
			33.9-34.4	624.9	18.3	118.4	100.0	0.56	0.36
	ST-9	Sedimented Gypsum	46.2-46.7	612.6	42.1	110.8	78.0	1.00	0.50
			46.8-47.3	612.0	26.7	116.6	92.0	0.70	0.41
			47.5-48	611.3	21.4	117.5	96.8	0.61	0.38
SB-44	ST-1	Cast Gypsum	22.2-22.7	633.4	28.0	110.9	86.6	0.80	0.44
			37-37.5	618.6	45.3	115.4	79.5	0.96	0.49
	ST-2	Cast Gypsum	38-38.5	617.6	28.8	107.8	83.7	0.86	0.46
			37.5-38	618.1	39.4				
ST-3	Sedimented Gypsum	52.2-52.7	603.4	39.9	106.1	75.8	1.06	0.51	
		52.8-53.3	602.8	50.7	63.0	94.9	0.64	0.39	
		53.4-53.9	602.2	24.2					
SB-47	ST-2	Cast Gypsum	35.1-35.6	620.2	35.0				
			35.7-36.2	619.7	31.5	100.6	76.5	1.04	0.51
			36.3-36.8	619.1	25.0	114.4	91.5	0.70	0.41
Sedimented Gypsum Average				612.4	29.0	111.8	89.1	0.8	0.4
Cast Gypsum Average				637.2	31.6	109.9	84.7	0.9	0.5
Fat Clay Average				624.2	28.7	121.1	94.0	0.7	0.4
North Average				646.8	24.7	112.3	90.7	0.7	0.4
South Average				622.0	24.9	112.4	90.3	0.7	0.4
East Average				614.3	29.5	117.2	90.8	0.7	0.4
West Average				618.8	32.2	110.1	85.9	0.8	0.4

*North includes SB-34 and SB-35. South includes SB-28 and SB-29. East includes SB-32 and SB-33. West includes SB-38, SB-39, SB-

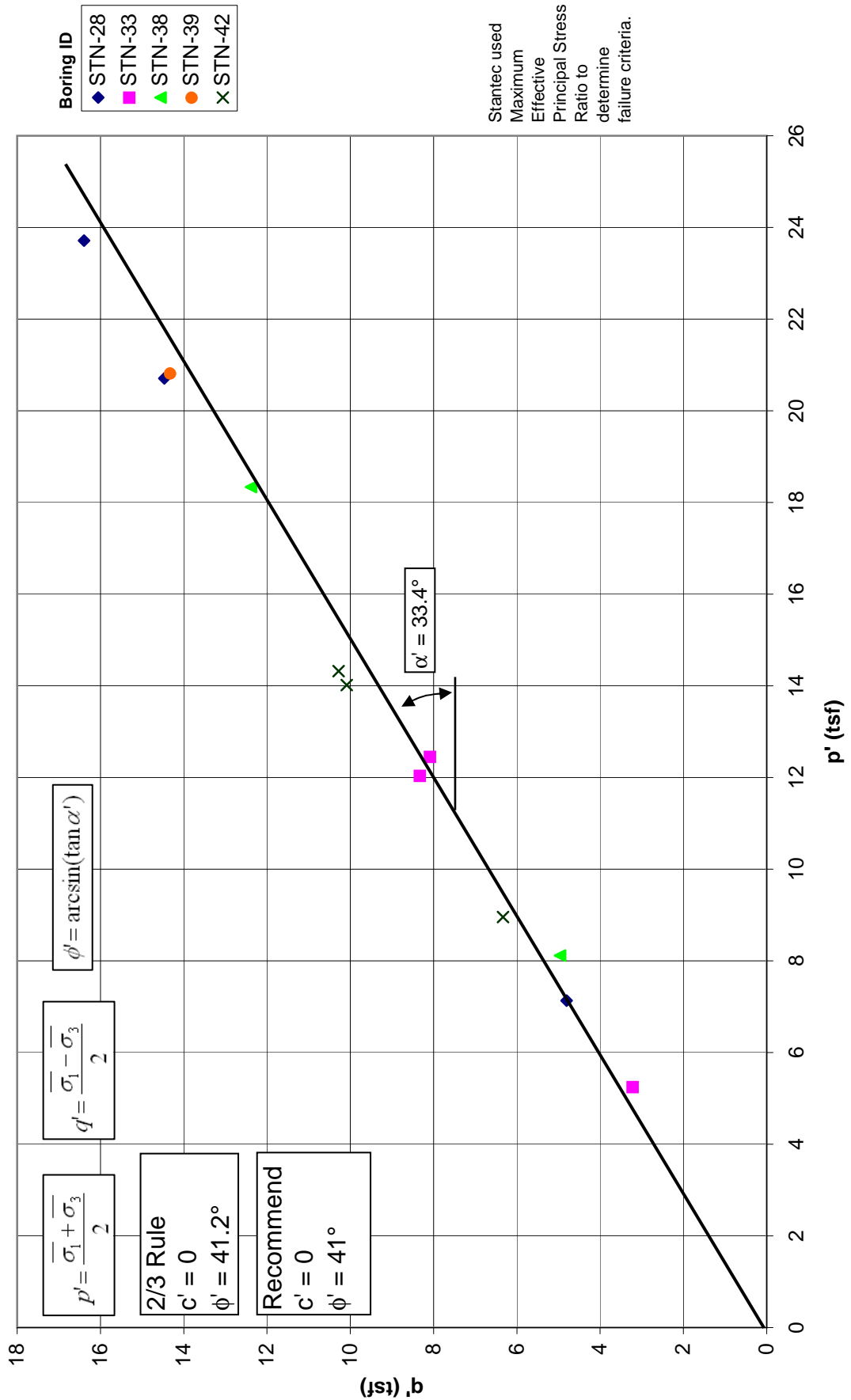
Comingled Cast Gypsum & Flyash Effective Stress from CU Triaxial Tests



Residual Clay Effective Stress from CU Triaxial Tests



Comingled Sedimented Gypsum & Flyash Effective Stress from CU Triaxial Tests



Comingled Weak Sedimented Gypsum & Flyash Effective Stress from CU Triaxial Tests

