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SUMMARY OF LABORATORY RESULTS

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CLIENT Mintek

PROJECT NAME Calciment Test

PROJECT NUMBER 3036

PROJECT LOCATION Lab

Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	% #200 Sieve	Classification	Water Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
1	1.0	57	41	16							
2	1.0	59	35	24							
3	1.0	57	40	17							

LAB SUMMARY 3036 CALCEMENT TEST.GPJ GWNT US LAB.GDT 8/26/09

Form TL-32A (5/31/2005)

Soil Sample Report



Materials Division



Project No. : Calciment Investigation
 UPC No. :
 Route No. :
 For Use In :

Report No. : 9-275-08
 Sample No. : 1
 Submitted By : Jim Gay
 At :

July 27, 2007

Tests : T88 T89 T90 T99

Mechanical Analysis of Total Sample (e)				Mechanical Analysis of Soil Mortar (e)				Description of Sample (h):		
Sieve Sizes	Grams Retained	Percent Retained	Percent Passing	Sieve Sizes	Grams Retained	Percent Retained	Percent Passing	Fat CLAY (CH)		
>63.00mm (+2 1/2 in.)	0.0	0.0%	100.0%	>63.00mm (+2 1/2 in.)				Water Content (g): N/A		
63.00mm (2 1/2 in.)	0.0	0.0%	100.0%	63.00mm (2 1/2 in.)				AASHTO Soil Classification: (f) A-7-6 (24)		
50.00mm (2 in.)	0.0	0.0%	100.0%	50.00mm (2 in.)				Physical Characteristics of Soil		
37.50mm (1 1/2 in.)	0.0	0.0%	100.0%	37.50mm (1 1/2 in.)				Liquid Limit:	50.5%	
25.00mm (1 in.)	0.0	0.0%	100.0%	25.00mm (1 in.)				Plastic Limit:	27.8%	
19.00mm (3/4 in.)	0.0	0.0%	100.0%	19.00mm (3/4 in.)				Plasticity Index:	22.7%	
9.50mm (3/8 in.)	0.0	0.0%	100.0%	9.50mm (3/8 in.)				Optimum Water Content (a)		
4.75mm (#4)	0.0	0.0%	100.0%	4.75mm (#4)				Total Soil	N/A	
2.00mm (#10)	0.0	0.0%	100.0%	2.00mm (#10)			100.0%	-4 Portion	23.0%	
0.850mm (#20)	0.0	0.4%	99.6%	0.850mm (#20)	0.7	0.4%	99.6%	Maximum Density (lba./cu. ft.) (a)		
0.425mm (#40)	0.0	1.7%	97.9%	0.425mm (#40)	3.1	1.7%	97.9%	Total Soil	N/A	
0.250mm (#60)	0.0	2.6%	95.3%	0.250mm (#60)	4.8	2.6%	95.3%	-4 Portion	94.5	
0.180mm (#80)	0.0	1.0%	94.3%	0.180mm (#80)	1.9	1.0%	94.3%	CBR Data (d)		
0.150mm (#100)	0.0	0.5%	93.7%	0.150mm (#100)	1.0	0.5%	93.7%	% Water	23.73%	31.79%
0.075mm (#200)	0.0	2.4%	91.4%	0.075mm (#200)	4.4	2.4%	91.4%	% Density	101.47%	94.66%
<0.075mm (#200)	0.0	91.4%	0.0%	<0.075mm (#200)		91.4%		CBR Value		1.5%
Total	6007.0			Total	183.9			% Swell After Soaking	0.328°	7.18%
Liquid Limit (b)				Plastic Limit (c)						
Number of Blows: 28				Weight of Dish: 34.89						
Weight of Dish: 31.82				Weight of Dish + Wet Soil: 43.34						
Weight of Dish + Wet Soil: 48.57				Weight of Dish + Dry Soil: 41.50						
Weight of Dish + Dry Soil: 43				Weight of Water: 1.84						
Weight of Water: 5.57				Weight of Dry Soil: 6.61						
Weight of Dry Soil: 11.18				Plastic Limit: 27.8%						
Water Content: 49.8%										
Liquid Limit: 50.5%										

Sampled from the Property of : Mintek Resources, Inc

Location :
 Depth :
 Representing :
 Remarks : Tests performed at Eiko Soils Lab.

Reported By : Stanley L. Hill, P.E., Assistant State Materials Engineer

For : Mr. A.J. Mergenmeyer, P.E., State Materials Engineer

Test procedures include : a= T 99, b= T 89, c= T 90, d= T 193, e= T 88, f= M 145, g= T 285 and h= D2486 (D2487).

Form TL-32A (5/31/2005)

Soil Sample Report



Materials Division

Project No. : Catchment Study
 UPC No.
 Route No. :
 For Use in :

Report No. : 9-275-06 5% Catchment
 Sample No. : 2
 Submitted By : Jim Gay
 At : 0



July 27, 2007

Tests : T88 T89 T90 T99 T193

Mechanical Analysis of Total Sample (e)				Mechanical Analysis of Soil Mortar (e)				Description of Sample (h):		
Sieve Sizes	Grams Retained	Percent Retained	Percent Passing	Sieve Sizes	Grams Retained	Percent Retained	Percent Passing	Fat CLAY (CH)		
>63.00mm (+2 1/2 in.)	0.0	0.0%	100.0%	>63.00mm (+2 1/2 in.)				Water Content (g): N/A		
63.00mm (2 1/2 in.)	0.0	0.0%	100.0%	63.00mm (2 1/2 in.)				AASHTO Soil Classification: (f) A-7-6 (24)		
50.00mm (2 in.)	0.0	0.0%	100.0%	50.00mm (2 in.)				Physical Characteristics of Soil		
37.50mm (1 1/2 in.)	0.0	0.0%	100.0%	37.50mm (1 1/2 in.)				Liquid Limit:	50.5%	
25.00mm (1 in.)	0.0	0.0%	100.0%	25.00mm (1 in.)				Plastic Limit:	27.8%	
19.00mm (3/4 in.)	0.0	0.0%	100.0%	19.00mm (3/4 in.)				Plasticity Index:	22.7%	
9.50mm (3/8 in.)	0.0	0.0%	100.0%	9.50mm (3/8 in.)				Optimum Water Content (a)		
4.75mm (#4)	0.0	0.0%	100.0%	4.75mm (#4)				Total Soil	N/A	
2.00mm (#10)	0.0	0.0%	100.0%	2.00mm (#10)			100.0%	-4 Portion	23.0%	
0.850mm (#20)	0.0	0.4%	99.6%	0.850mm (#20)	0.7	0.4%	99.6%	Maximum Density (lbs./cu. ft.) (a)		
0.425mm (#40)	0.0	1.7%	97.9%	0.425mm (#40)	3.1	1.7%	97.9%	Total Soil	N/A	
0.250mm (#60)	0.0	2.6%	95.3%	0.250mm (#60)	4.6	2.6%	95.3%	-4 Portion	94.5	
0.180mm (#80)	0.0	1.0%	94.3%	0.180mm (#80)	1.9	1.0%	94.3%	CBR Data (d)		
0.150mm (#100)	0.0	0.5%	93.7%	0.150mm (#100)	1.0	0.5%	93.7%	Compacted Specimen	35.25%	
0.075mm (#200)	0.0	2.4%	91.4%	0.075mm (#200)	4.4	2.4%	91.4%	Specimen After Immersion	11.3%	
<0.075mm (-#200)	0.0	91.4%	0.0%	<0.075mm (-#200)			91.4%	% Swell After Soaking	0.026"	
Total	6007.0			Total	183.9				0.57%	
Liquid Limit (b)				Plastic Limit (c)						
Number of Blows: 28				Weight of Dish: 34.89						
Weight of Dish: 31.82				Weight of Dish + Wet Soil: 43.34						
Weight of Dish + Wet Soil: 48.57				Weight of Dish + Dry Soil: 41.50						
Weight of Dish + Dry Soil: 43				Weight of Water: 1.84						
Weight of Water: 5.57				Weight of Dry Soil: 6.81						
Weight of Dry Soil: 11.18				Plastic Limit: 27.8%						
Water Content: 49.8%				Sampled from the						
Liquid Limit: 50.5%				Property of: Mintek Resources, Inc						

Location :
 Depth :
 Representing :
 Remarks : A 10 percentage point increase of water was added to the CBR. Tests performed at Elko Soils Lab.