51-50

MECHANICAL ANALYSIS

Sample Number	LOCATION: 1/4 Fraction	1/4 Section	Section	Township (N)	Range (W)	Estimated Quantity (cubic yards)	Material Exposed (feet)	Overburden (feet)	Geologic Formation Member or Material	Tested For	Authority for Test Data	Washed or Dry	SIEVE ANALYSIS (% Retained): % on 3/4 inch	% on 3/8 inch	% on No. 4	% on No. 10	% on No. 20	% on No. 30	% on No. 40	% on No. 50	% on No. 80	% on No. 100	% on No. 200	SPECIFIC GRAVITY (true)	CEMENTATION	PLASTIC INDEX	REMARKS
V1	SW	NE	1	20	16	+ 10,000	6.0	0.5	Peorian	Filler	* D.R.I.	W											1		187	7	D.R.I. No. 828
												D								7		15	24				
V2	NW	NE	16	20	15	+ 5,000	6.0	0.5	"	"	"	W								2		7	11		123	6	" " 830
												D								11		24	38				
V3	SE	NE	21	20	15	+ 12,000	9.0	1.5	"	"	"	W											1		132	5	" " 832
												D								3		9	18				
V4	SE	SW	23	20	15	+ 6,000	4.0-16.0	4.0	Alluvium	Information	"	W							2	9		53	86				" " 507
V5	SW	NE	23	20	15	+ 20,000	2.0	0.5	"	"	"	W				0	1		9	23		75	95				" " 506
V6	NE	NE	35	20	15	+ 30,000	9.0	3.0	Peorian	Filler	"	W											1		200+	6	" " 831
												D								4		9	17				
V7	SE	SE	26	20	15	+ 5,000	8.0	1.0	"	"	"	W											1		137	6	" " 829
												D								9		17	24				
V8	SE	NE	13	20	15	+ 40	6.0	0 - 6.0	Sappa Clay	Information	"	W								0	1	11	2	2.66	200+	30	
V9	SW	SW	20	20	14	+ 900	9.0	0 - 15.0	Grand Island	"	"	W	10	18	26	39	54	62	70	79	90	93	96	2.65	1	NP**	
V10	NW	NW	27	20	14	+ 50,000	25.0	0 - 2.0	Peorian	"	"	W											0	2.66	173	7	
V11	SE	SW	11	20	13	+ 18,000	6.0	0 - 1.0	Dune Sand	"	"	W						0	1	5	30	52	85	2.64	1	NP	
V12	NW	NW	36	20	13	+ 500	15.0	2.0-4.0	Loveland	"	"	W						0	1	3	8	11	15	2.67	200+	16	
V13	NE	SE	34	19	13	+ 1,000	1.0	None	Alluvium	"	"	W					4		22	44		81	89				D.R.I. No. 505
V14	SW	SW	33	19	13	+ 7,000	4.0	None	Peorian	Filler	"	W										1	5		200+	7	" " 825
V15	SE	NE	32	19	13	+ 1,000	2.0-4.0	2.0	Peorian	Binder	"	W								4		18	27		163	8	" " 706
V16	SE	NW	32	19	13	+ 3,000	0 - 20.0	None	"	Filler	"	W										1	17		40		" " 823
V17	NE	SW	32	19	13	+ 8,000	0 - 4.0	None	"	"	"	W										3	20		150	2	" " 826
V18	SE	NW	31	19	13	+ 10,000	5.0	2.5	Alluvium	Information	"	W				2	4		16	35		89	96				" " 502
							3.0	7.0				W			1	5	12		30	49		94	99				
V19	SW	SW	31	19	13	+ 10,000	2.0	2.0	Peorian	Binder	"	W										1	5		157	7	" " 721
V20	SW	SW	36	19	14	+ 1,000	6.0-13.0	0 - 6.0	Loveland	Information	"	W							3	10		42	68				" " 602
V21	NE	SE	35	19	14	+ 50	0.5	0.5	Loveland Soil	"	"	W					1		7	18		57	75				" " 504
V22	NE	SE	35	19	14	+ 2,000	13.0	6.0	Loveland	"	"	W				0	1		4	11		44	60				" " 601
V23	NE	NW	9	19	14	+ 20,000	5.0	1.5	Alluvium	"	"	W				0	1		7	23		85	98				" " 509
V24	SW	SW	4	19	14	+ 10,000	5.0	1.5	"	"	"	W					1		4	8		29	59				" " 603
V25	SW	SW	4	19	14	+ 10,000	5.0	0-1.0	"	"	"	W					2		10	22		52	78				" " 508
V26	SW	NW	21	19	14	+ 7,500	9.0	1.0	Peorian	Filler	"	W										1	2		164	3	" " 834
												D								2		9	19				
V27	NW	SW	21	19	14	+ 7,500	9.0	1.5	Peorian	"	"	W											2		200+	6	" " 833
												D								9		13	32				
V28	NW	SW	5	19	14	+ 2,000	3.0	0.5	Peorian Soil	Binder	"	W										1	3		200+	14	" " 715
V29	NW	NW	6	19	14	+ 2,000	3.0	0.5	"	"	"	W										1	4		200+	13	" " 716
V30	NE	NE	21	19	15	+ 1,000	10.0	0 - 6.0	Loveland	Information	"	W						0	1	5	15	23	36	2.67	162	5	
V31	NW	NW	7	19	18	+ 20,000	20.0	0 - 2.0	Peorian	"	"	W								0	1	1	9	2.66	85	5	
V32	NE	NE	6	18	15	+ 120	6.0	4.0-10.0	Ogallala sand	"	"	W					0	1	5	15	39	54	77	2.67	14	NP	
V33	NE	NE	6	18	15	+ 140	3.0	0.- 6.0	Sappa	"	"	W						0	1	2	5	7	12	2.66	200+	14	
V34	NE	NW	24	18	14	+ 750	21.0	0- 15.0	Sappa Pearlette Ash	"	"	W							0	2	8	12	27	2.50	2	NP	Augered 13' below surface. Quality of ash excellent all the way.
V35	NE	NW	23	18	13	+ 3,000	3.0	0.5	Peorian	Binder	"	W								1		1	2		200+	11	" " 722
V36	NE	NW	23	18	13	+ 3,000	2.0	None	Peorian Soil	"	"	W											2		200+	13	" " 712
V37	NE	SW	26	18	13	+ 3,000	3.0	0.5	Peorian	"	"	W										1	2		200+	10	" " 710
V38	SE	SW	26	18	13	+ 3,000	3.0	0.5	Peorian Soil	"	"	W								1		2	4		163	11	" " 702
							2.0	3.0	Peorian			W								1		2	4		163	12	
V39	NW	SE	14	18	13	+ 1,000	1.0	1.0	"	"	"	W											1		200+	10	" " 709
V40	SW	SE	14	18	13	+ 1,000	3.0	0.5	"	"	"	W											2		163	9	" " 707
V41	NW	NW	1	18	13	+ 100	3.0	0- 15.0	Ogallala (mortar beds)	Information	"	W	2	19	30	39	43	44	46	51	63	68	83	2.59	13	NP	Rock material is too soft for Los Angeles Abrasion, Freezing and Thawing, and Specific gravity tests.
												D	3	27	38												
V42	NE	NW	36	18	13	+ 1,000	2.0	1.0	Peorian	Binder	"	W										2	4		163	11	D.R.I. No. 703
V43	NE	NW	36	18	13	+ 1,000	0-3.0	None	"	Filler	"	W										3	10		200+	5	" " 802
V44	SW	NE	36	18	13	+ 1,000	0-3.0	None	"	"	"	W										3	9		200+	8	" " 803
V45	NW	SE	36	18	13	+ 1,000	2.0	1.0	"	Binder	"	W								1		3	6		200+	7	" " 701
V46	NE	SE	36	18	13	+ 1,000	2.5	0-1.0	"	Filler	"	W								5		19	28		200+	2	" " 804
V47	SW	SE	23	17	13	+ 20,000	15.0	0 - 1.0	"	Information	"	W										0	1	2.66	200+	9	
V48	SE	SE	17	17	13	+ 100	12.0	6.0-15.0	Ogallala	"	"	W							1	2	9	15	43	2.66	22	NP	
V49	NW	NW	2	17	16	+ 50,000	15.0	0- 2.0	Peorian	"	"	W										0	1	2.66	150	5	
V50	SE	SW	4	17	16	+ 45,000	15.0	0- 2.0	Dune Sand	"	"	W					0	1	4	14	47	65	88	2.64	1	NP	

* D.R.I. abbreviated for Nebraska Department of Roads and Irrigation
** N.P. Non-plastic

CHART I