Chemical Composition of Eastern Kansas Limestone
by R.T. Runnels and J.A. Schleicher
Kansas Geological Survey, Bulletin 119, Part 3
Plate 1, Tables 1-12

Lab No.	Member	County	Thickness, ft.	Locality (a); sec. T. S., R. E.	Calc. CaCO3	Calc. MgCO3	Calc. CaCO3 equiv.	CaO	MgO	LOI (b)	SiO2	Al2O3 (c)	Fe2O3 (d)	K2O	Na2O	SO3	S (e)	P2O5	Total	B	Zn	Ni	Mo	Cr	Ag	Ba	Pb	Sn	Cu	V	Mn	Ti	Sr	Lab. No.
								Chemical analysis, percent*												Spectrochemical analysis, percent *														
Table 1, Nolans formation																																		
54374	Herington	Dickinson	6.5	SE 20-14-4	82.87	1.95	85.14	46.54	1.36	34.76	10.91	2.63	0.64			0.09		0.04	99.69															54374
54375	Herington	Dickinson	5.4	SW 13-16-4	80.69	5.98	87.83	45.32	3.04	38.60	9.64	2.16	0.59			0.09		0.04	99.48															54375
54373	Herington	Dickinson	10.4	NW 12-16-4	81.58	1.86	83.73	45.81	1.78	36.84	12.21	2.38	0.56			0.07		0.04	99.69															54373
C-14	Herington	Chase	14	NE 3-22-6	45.03	39.31	88.00	25.45	18.79	38.72	13.32	2.43	1.37		Trace			0.17	100.25	0.002	0.005	0.0005	0.00005				0.002		0.000075	0.0016	0.007	0.0015		C-14
53156	Herington	Butler	8	NW 8-25-4	48.67	38.49	94.23	27.32	18.40	41.46	8.97	2.69	0.25	0.34	0.29 nil		0.04	0.04	99.76			0.001							0.0005 t		0.01	0.001		53156
5194	Herington	Butler	10	NE 10-27-3	49.90	37.55	94.77	28.06	17.95	41.70	9.14	1.45	0.80			0.07	0.02	0.04	99.21	0.0005	0.005	0.0002	0.00008				0.003		0.000013	0.0011	0.0004	0.01		5194
53205	Herington	Butler	11.5	NE 15-29-3	50.03	31.28	87.61	28.35	14.95	39.38	13.45	2.64	1.15	0.47	0.14 Trace		0.03	0.03	99.56			0.003	0.0002	0.0005	0.0001		0.001		0.0005	0.001	0.03	0.02		53205
5124	Herington	Butler	7	SW 19-24-4	54.38	37.74	98.64	30.52	18.04	43.40	6.21	1.30	0.79			0.07	0.04	0.04	100.30															5124
C-8	Krider	Chase	0.8	3-22-6	47.33	39.10	91.89	26.64	18.69	40.43	10.26	2.48	1.32		Trace			0.09	99.91	0.003	0.005 t				0.000025		0.0002		0.000025	0.0012	0.01	0.002		C-8
Table 2, Winfield formation																																		
53195	Cresswell	Marshall	19	NW 32-2-7	66.52	16.30	84.45	37.52	8.39	37.76	11.01	2.71	1.23	0.47	0.13	0.36	0.06	0.02	99.60	0.001		0.0005							0.0005	0.001	0.01	0.005	0.0086	53195
53185	Cresswell	Marion	10.3	NW 7-20-4	85.69	2.41	87.93	48.12	1.15	38.69	8.97	1.39	0.55	0.13	0.07	0.08		0.04	99.19			0.0005					0.0005		0.00003	0.0005	0.004	0.002	0.04	53185
C-15	Cresswell	Chase	12.8	NW 16-22-6	88.99	3.95	90.93	50.04	1.89	40.01	6.34	1.06	0.76					0.14	100.24		0.001								0.000025	0.0024	0.006	0.01		C-15
C5, 6	Cresswell	Chase	5.1	17-22-7	88.56	1.42	90.18	50.06	0.68	41.01	5.30	2.28	0.14			0.26		0.20	99.93		0.00005	0.0001					0.0001		0.00002	0.0013	0.005	0.015		C-5, 6
5195	Cresswell	Butler	10	SE 13-27-3	86.83	1.72	89.27	49.01	0.82	39.28	8.32	1.17	0.67			0.38	0.05	0.07	99.72		0.0025	0.0005					0.0005		0.00003	0.0011	0.005	0.05		5195
53197	Cresswell	Butler	10	18-29-4	89.13	1.78	90.70	49.98	0.85	39.91	6.68	1.45	0.93		Trace		0.05	0.03	99.83	0.0005		0.001		0.005		t			0.000025	0.0005	0.01	0.01		53197
53196	Cresswell	Cowley	11.5	NE 1-31-3	73.91	3.08	77.52	41.43	1.47	34.61	15.73	4.15	1.36	0.62	0.16 Trace		0.06	0.02	99.56	0.003		0.002		0.002				0.0002	0.0005	0.0005	0.03	0.1		53196
Table 3, Doyle shale																																		
48174	Towanda	Riley	11	17-7-6	83.63	11.26	96.93	46.95	5.38	42.76	2.76	0.99	0.92			0.06		0.03	99.85															48174
53169	Towanda	Riley	7.1	NW 180706	84.47	1.74	86.48	47.45	0.83	38.05	0.28	2.50	1.00			0.10 nil		0.04	99.25	0.002		0.001		0.001					0.00005	0.002	0.03	0.14	0.02	53169
53179	Towanda	Riley	6.5	SE 11-9-4	89.06	3.49	92.55	50.01	1.67	40.72	5.01	1.27	0.83	0.12	0.04	0.13 nil		0.02	99.82			0.0003		0.0003			0.003	0.0005	0.00005	0.0025	0.01	0.04		53179
C-20	Towanda	Chase	10.3	SW 24-21-6	93.79	1.36	95.18	52.59	0.65	41.88	2.84	1.28	0.27		Trace			0.03	99.54			0.0004		0.0002					0.00002	0.01	0.007	0.004		C-20
Table 4, Barneston formation																																		
53190	Ft. Riley	Marshall	7.3	NE 34-5-6	96.95	1.13	96.82	54.37	0.54	42.60	1.01	0.57	0.42			0.06 nil	Trace		99.57			0.0003		0.0005					0.00002	0.007	0.02	0.007		53190
517	Ft. Riley	Clay	10.7	SW 17-9-4	94.13	1.65	96.55	52.82	0.77	42.48	2.31	0.61	0.34			0.08	0.02	0.02	99.43			0.0001							0.000013	0.0036	0.005	0.015	0.011	517
53304	Ft. Riley	Clay	9	NW 15-9-4	84.87	0.54	85.45	47.61	1.12	37.61	9.31	2.54	0.89	0.55	0.09 nil	nil		0.05	99.77										0.0003		0.01	0.0015		53304
53159	Ft. Riley	Geary	7.6	NW 10-12-5	62.47	3.33	66.40	35.04	2.29	29.21	22.08	7.47	1.34	1.48	0.08 Trace		0.12	0.04	99.03	0.0035		0.005		0.003					0.0003 t		0.015	0.007		53159
53157	Ft. Riley	Geary	22.2	NW 10-12-5	71.66	16.07	90.55	40.19	7.68	39.84	7.83	2.77	1.03	0.53	0.11 Trace		0.09	0.03	100.01	0.002		0.006		0.0003		0.003	0.0005	0.005	0.0015	0.002	0.003	0.03		53157
52297	Ft. Riley	Geary	3	3-13-8	95.20	1.99	96.32	53.40	0.95	42.38	2.14	0.62	0.38			0.08 nil	Trace		99.95	0.0005		0.001		0.0001			0.0005		0.00004	0.025	0.025	0.02		52297
53192	Ft. Riley	Morris	17.5	NW 32-14-7	89.42	2.20	89.75	50.18	1.05	39.49	6.90	2.15	0.94			0.10		0.01	100.82	0.0005		0.0005		0.0003					0.0002	0.005	0.02	0.035		53192
53203	Ft. Riley	Morris	16.5	SE 29-16-7	88.13	1.67	90.04	49.46	0.80	39.83	6.32	1.99	0.91			0.08 nil		0.01	99.40			0.0005					0.0005		0.00005	0.001	0.003	0.03		53203
53206	Ft. Riley	Morris	7.7	NW 20-17-6	86.08	1.69	88.02	48.30	0.81	39.00	7.95	1.79	0.89	0.28	0.08	0.18 Trace		0.02	99.30			0.0003		0.0005					0.000025	0.0005	0.01	0.032		53206
C-12	Ft. Riley	Chase	8	36-22-7	84.92	1.07	86.50	47.80	0.51	38.06	10.95	1.21	0.62		Trace			0.17	99.60	0.0005	0.003	0.0003			0.000025		0.0005		0.000015	0.0016	0.008 t			C-12
C-13	Ft. Riley	Chase	8.8	NE 6-22-6	89.49	1.38	91.84	50.14	0.66	40.41	5.69	1.65	0.65		Trace		Trace		99.43	0.002		0.003	0.0001 t			0.004	0.001		0.000013	0.0011	0.005	0.015	0.021	C-13
53171	Ft. Riley	Butler	8.5	SW 2-24-6	82.30	2.41	84.61	46.17	1.15	37.23	10.52	2.95	1.03			0.08	0.01 Trace		99.13	0.002		0.001		0.001					0.0001	0.01	0.02	0.06		53171
5128	Ft. Riley	Butler	45	NE 5-26-6	84.51	4.46	88.27	47.41	2.08	38.84	7.45	1.94	0.84				0.37	0.05	98.61															5128
5125	Ft. Riley	Butler	10	NE 9-28-4	89.24	1.50	90.98	50.05	0.70	40.03	7.49	0.71	0.46				0.16	0.04	99.47															5125
5353	Ft. Riley	Butler	11	NE 9-28-5	80.44	3.03	93.84	45.26	1.83	36.89	10.31	3.61	0.99	0.45	0.01	0.24	0.28	0.02	99.74	0.001		0.001		0.001					0.0005	0.001	0.01	0.01		5353
53207	Ft. Riley	Butler	10	SW 26-27-4	91.84	1.84	94.14	51.54	0.88	41.42	4.48	0.95	0.56			0.09 nil		0.01	99.93			0.0005		0.0005					0.0002	0.0025	0.01	0.08		53207
53173	Ft. Riley	Cowley	10	NE 26-32-4	81.76	4.23	86.73	45.91	2.02	39.30	8.08	2.54	0.69	0.27	0.15	0.12 nil		0.02	99.10	0.002		0.0004		0.001					0.0001	0.003	0.015	0.08		53173
53172	Ft. Riley	Cowley	8	NW 22-32-4	93.68	1.51	95.80	52.56	0.72	42.15	3.69	0.98	0.50			0.08 nil		0.01	100.69	0.001		0.001		0.002	0.00005				0.001	0.01	0.015	0.013		53172
53181	Ft. Riley	Cowley	8.5	SW 28-34-5	91.15	1.57	91.75	51.15	0.75	40.37	5.52	1.21	0.86			0.09		0.02	99.97			0.005			0.00005		0.005	0.001	0.001	0.001	0.0035	0.03	0.014	53181
53180	Florence	Marshall	1.6	NE 25-3-6	42.78	33.89	83.89	24.08	16.20	36.91	19.71	1.20	0.76	0.28	0.10 Trace		0.03	0.08	99.32	0.0025		0.0015		0.0005			0.001		0.000025 t		0.04 t			53180
53158	Florence	Geary	24	NW 10-12-5	60.93	2.38	63.64	34.23	1.14	28.00	33.78	1.33	0.60	0.22	0.10 Trace	nil		0.07	99.47	0.01		0.01	0.0002	0.005			0.005	0.02	0.002	0.0005	0.25	0.001		53158
52269	Florence	Wabaunsee	11	SW 25-14-9	75.23	0.40	75.66	42.29	0.24	33.57	22.31	0.61	0.39	0.05	0.02	0.06 N.D.		0.07	99.61			0.0008					0.002		0.00004		0.025 t			52269
53194	Florence	Marion	22.1	SE 6-21-5	68.96	1.26	70.27	38.71	0.60	30.92	28.25	0.76	0.42		Trace		0.02	0.06	99.72	0.003		0.0003		0.0005					0.00003 t		0.008	0.01		53194
Table 5, Matfield shale																																		
49362	Kinney	Riley	5	27-7-6	91.88	0.90	93.86	51.63	0.43	41.30	4.34	1.27	0.16			0.13		0.05	99.30			0.0005		0.001					0.00002	0.02	0.3		49362	
Table 6, Wreford formation																																		
53200	Threemile	Pottawatomie	4.8	SW 15-7-12	82.83	1.57	95.00	52.09	0.75	41.80	3.27	0.44	0.71	0.03	0.06	0.10		0.01	99.26			0.0005	0.0003		0.0001		0.003	0.005	0.000025	0.07	0.02	0.004		53200
49405	Threemile	Riley	10	2-8-6	71.25	2.38	73.39	40.24	1.14	32.39	24.93	0.46	0.42			0.20		0.01	99.82	0.002		0.0003		0.005					0.0005 t		0.03	0.001		49405
52343	Threemile	Wabaunsee	25	SE 26-13-9	95.47	2.68	97.34	53.67	1.28	42.83	1.75	0.36	0.33			0.13 Trace		0.07	100.42			0.0005					0.025		0.000025	0.05	0.03		0.054	52343
52344	Threemile	Wabaunsee	15.5	NW 10-15-10	80.87	1.63	82.09	45.47	0.78	36.12	16.94	0.29	0.34			0.10	0.02	0.07	100.11	0.001		0.001		0.0005			0.0005	0.0007	0.00004	0.0025	0.02	0.003	0.023	52344
52308	Threemile	Morris	12	SW 23-15-8	82.42	3.10	84.34	46.40	1.48	37.11	12.83	1.26	0.45			0.15 nil		0.09	99.77			0.001							0.00004		0.02	0.006		52308
Table 7, Funston formation																																		
48177	Funston	Riley	3.3	7-11-8	93.63	0.46	95.43	52.60	0.22	41.99	3.06	0.62	0.53			0.14		0.03	99.19															48177
51271	Funston	Lyon	5.6	NE 18-16-10	87.38	1.72	89.18	49.11		39.24	7.90	1.49	0.70			0.15	0.02	0.04	98.63			0.001							0.00005	0.003	0.1	0.0015	0.03	51271
51259	Florence	Lyon	2	NE 18-16-10	90.38	1.65	9195.00	50.72	0.79	40.46	4.99	1.25	1.01			0.02	0.05	0.06	99.30															51259
Table 8, Crouse formation																																		
48178	Crouse	Riley	7	7-11-8	87.81	1.19	89.43	49.20	0.57	39.68	6.79	1.89	0.45			0.08		0.05	98.71															48178
51260	Crouse	Lyon	5.6	NW 15-16-10	77.82	2.11	82.89	43.71	1.01	36.47	17.09	2.76	1.03			0.06	0.02	0.05	99.18	0.002		0.001		0.001	0.0001		0.002		0.001	0.001	0.023	0.032		51260
51261	Crouse	Lyon	2.9	NW 15-16-11	92.29	1.55	93.75	51.78	0.74	41.25	3.61	0.98	1.12			0.08	0.02	0.01	99.57															51261
C-10	Crouse	Chase	2.7	NW 4-18-9	90.65	0.59	91.89	50.79	0.28	40.43	4.94	1.31	1.49		Trace		Trace		99.23	0.0005	t		0.0003		0.000025	t				0.0004	0.002	0.008	0.1	C-10
C-11	Crouse	Chase	3.6	NW 4-18-10	91.81	1.55	93.57	51.44	0.74	41.17	4.40	1.24	0.58		Trace		Trace		99.57		t				t	t			0.00004	0.002	0.01	0.01		C-11
Table 9, Beattie formation																																		
53176	Morrill	Marshall	2.4	SW 20-2-9	85.88	2.55	88.50	48.33	1.22	38.94	8.25	1.25	0.73	0.15	0.05	0.24	0.05	0.04	99.47	0.002		0.002		0.001	0.00005		0.0005		0.00007	0.02	0.025	0.04		53176
48176	Morrill	Riley	3	10-8-7	34.75	0.96	35.86	19.91	0.46	16.20	60.71	0.70	0.52			0.56		0.04	99.10															48176
51278	Morrill	Lyon	2.4	NE 17-16-11	92.47	1.72	93.50	51.93	0.82	41.14	5.65	0.37	0.42			0.08	0.02	0.05	100.46															51278
C-17	Morrill	Morris	4	SE 34-17-9	87.44	4.85	91.61	49.25	2.32	40.31	5.67	2.00	0.76					0.19	100.50	0.002	0.003	0.0003	t		0.00005	0.02	0.0008		0.00005	0.0011	0.009	0.0085		C-17
53204	Cottonwood	Marshall	4.9	SW 20-2-9	83.04	2.68	85.30	46.66	1.28	37.53	11.78	1.71	0.64			0.13	0.02	0.04	99.77	0.0015		0.002		0.001					0.0003	0.001	0.025	0.035	0.0065	53204
51323	Cottonwood	Nemaha	4	NE 24-3-14	70.30	2.32	72.34	39.55	1.11	31.83	24.02	2.03	0.62			0.11 nil		0.07	99.34			0.0005		0.001					0.002		0.2 t			51323
53201	Cottonwood	Marshall	5.4	SE 10-5-9	84.22	2.18	85.95	47.32	1.04	37.82	10.99	1.42	0.59			0.11 nil		0.05	99.34	0.0015		0.001		0.001					0.00007 t		0.04	0.043		53201
51237	Cottonwood	Jackson	5	SE 1-6-12	83.85	1.99	84.82	47.17	0.95	37.32	11.98	1.57	0.72			0.11		0.09	99.91	0.001		0.0005		0.001	0.0001		0.001	0.001	0.03	0.025	0.015	0.03		51237
52296	Cottonwood	Wabaunsee	6	NW 23-13-10	87.11	3.26	89.30	48.97	1.56	39.29	7.47	1.40	0.60			0.17 nil		0.04	99.50			0.001						0.003	0.00007	0.0025	0.01	0.02	0.0019	52296
49397	Cottonwood	Lyon	5.3	NW 17-16-11	85.45	1.53	87.95	48.30	0.73	38.70	9.70	0.97	0.51			0.39		0.12	99.42			0.0005		0.0005					0.0002	0.001	0.025	0.0015		49397
53183	Cottonwood	Morris	5.1	SE 33-16-9	88.93	2.05	92.00	49.95	0.98	40.48	6.41	1.08	0.05			0.16 nil		0.01	99.61			0.0005					0.003	0.001	0.0001	0.003	0.005	0.01		53183
51277	Cottonwood	Lyon	5.5	NW 7-18-10	91.08	1.38	92.39	51.22	0.65	40.65	5.97	1.09	0.37			0.12	0.02	0.12	100.15			0.001					0.001		0.0001	0.001	0.02	0.003		51277
C-7	Cottonwood	Chase	6	SE 30-19-7	88.60	1.36	92.45	50.05	0.65	40.68	5.50	2.58	0.49			0.32		0.15	100.42		t		0.0001			t			0.000025	0.002	0.055	0.003		C-7
C-9	Cottonwood	Chase	6	NW 36-19-8	89.74	2.82	93.39	50.50	1.35	41.09	5.47	1.15	0.28		Trace			0.17	100.01		t					t			0.00002	0.0012	0.007			C-9
C-16	Cottonwood	Chase	3.2	SW 3-22-9	87.85	3.72	91.36	49.48	1.78	40.20	6.57	1.38	0.59		Trace			0.20	100.20	t		0.00005					0.00005		0.000025	0.002	0.005	0.0015		C-16
Table 10, Eskridge, Grenola, and Red Eagle formations																																		
C-4	Eskridge	Chase	4	NW 23-19-8	93.79	1.19	97.64	52.78	0.57	42.96	1.62	1.30	0.36			0.12		0.12	99.83			0.0001	t		0.000025	0.002	0.0001		0.0001	0.005	0.006	0.002		C-4
51238	Neva	Jackson	6.5	SE 1-6-12	84.08	3.01	86.32	47.28	1.44	37.98	8.99	2.65	1.01			0.16	0.19	0.05	99.56	0.001		0.0005		0.001	0.0001		0.001	0.001	0.05	0.003	0.015	0.05		51238
53177	Neva	Riley	5.7	NE 26-10-7	84.54	4.08	88.30	47.46	1.95	38.85	7.83	2.24	0.61	0.35	0.08	0.11		0.02	99.50			0.006						0.005	0.000025	0.0005	0.005	0.01		53177
52298	Neva	Wabaunsee	9	SW 30-14-12	95.38	1.72	96.59	53.45	0.82	42.50	2.17	0.54	0.37		Trace	Trace		0.01	99.86			0.0003		0.0003					0.00003	0.005	0.025	0.002		52298
51262	Neva	Lyon	1.7	SW 20-16-11	93.15	1.34	94.14	52.25	0.64	41.42	4.18	0.62	0.46			0.03	0.03	0.03	99.63															51262
51279	Neva	Lyon	5.7	SW 20-16-11	92.81	1.61	94.39	52.07	0.77	41.53	3.92	0.93	0.53			0.02	0.02	0.05	99.82	0.001		0.001	0.0002	0.001	0.0001		0.002	0.0005	0.001	0.01	0.005	0.05		51279
C-1	Neva	Chase	1	NW 23-19-8	80.33	1.51	84.00	45.56	0.72	36.96	11.10	3.78	0.90			0.26		0.28	99.56	0.0005	0.003	0.0003			0.000025		0.005		0.00006	0.0025	0.008	0.009	0.022	C-1
C-2	Neva	Chase	4	NW 23-19-8	88.76	1.57	91.68	50.00	0.75	40.34	6.05	2.29	0.21			0.22		0.09	99.95	0.0003	0.0002	0.0005	0.00005		0.00005		0.007		0.00004	0.003	0.015	0.004		C-2
C-3	Neva	Chae	5	NW 23-19-8	90.47	1.17	94.05	50.97	0.56	41.38	5.09	1.03	0.42			0.21		0.11	99.77		0.0001								0.000013	0.0015	0.01	0.002		C-3
51270	Howe	Lyon	4	NE 34-15-11	92.65	1.53	93.93	51.97	0.73	41.33	5.40	0.74	0.27			0.07 Trace		0.01	100.52			0.0005		0.0003					0.002	0.005	0.05	0.0015		51270
C-19	Glenrock	Chase	6	SW 26-19-7	94.02	2.20	95.57	52.86	1.05	42.05	2.85	0.90	0.32		Trace			0.14	100.17		t								0.000025	0.002	0.005	0.003		C-19
Table 11, Foraker formation and Admire Group																																		
48166	Long Creek	Riley	4.9	SE 7-10-8	55.42	35.31	97.64	31.24	16.88	42.96	4.63	1.68	2.32					0.10	99.71															48166
C-18	Long Creek	Chase	10	SE 24-21-9	74.23	8.83	84.55	41.66	4.22	37.20	13.69	1.53	0.83			0.05	0.52	0.06	99.54	0.002	0.007	0.0003	t		0.00007	0.1	0.004		0.00005	0.002	0.03	0.004 >.2		C-18
52293	Long Creek	Greenwood	10	SE 31-27-9	93.84	1.03	95.02	52.60	0.49	41.81	3.55	0.50	0.51		Trace	Trace		0.02	99.48	0.001		0.0005							0.0002	0.005	0.01	0.004		52293
51263	Americus	Lyon	1.8	SE 4-20-10	91.06	1.53	92.46	51.63	0.73	4068.00	4.52	0.75	0.72			0.14	0.08	0.39	99.56	0.001		0.001		0.0003					0.00005	0.003	0.1	0.0015		51263
51272	Aspinwall	Lyon	6	SW 16-18-11	94.63	1.30	95.84	53.12	0.62	42.17	1.99	0.61	1.24			0.04 Trace		0.06	99.85			0.001		0.0003	0.00005	0.02	0.0025	0.001	0.0005	0.005	0.25	0.009		51272
Table 12, Wabaunsee Group																																		
51269	Grandhaven	Lyon	2.6	NE 21-17-12	92.83	1.69	94.61	52.19	0.81	41.63	3.55	0.98	1.23			0.19 Trace		0.04	100.62			0.005				0.25	0.002		0.002	0.005	0.1	0.005		51269
51280	Grandhaven	Lyon	2.6	SW 15-17-12	78.82	4.27	85.02	44.36	2.04	37.41	9.56	2.93	3.08			0.01	0.01	0.01	99.54															51280
49394	Grandhaven	Lyon	7.5	SW 29-19-11	91.93	1.65	92.14	51.60	0.79	40.54	4.22	1.49	2.12		nil			0.07	100.83			0.0002					0.001		0.001	0.015	0.02	0.1		49394
51322	Tarkio	Nemaha	4.5	NE 29-5-11	77.71	8.24	87.34	43.56	3.94	38.43	5.18	2.42	6.03		nil			0.02	99.58						0.00005		0.0005	0.0005	0.0005	0.003	0.05	0.003		51322
53202	Tarkio	Riley	7.6	SE 29-10-9	88.95	1.30	90.55	49.95	0.62	39.84	5.54	1.36	2.12	0