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File No. Aa-16A.3.19B

Subject: SACATON STATISTICAL ANALYSIS
Pinal County, Arizona

H.C.

AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

March 31, 1969

J.H.C. - file
MAR 31 1969

Memorandum to: Mr. J. H. Courtright

SACATON WEST
Statistical Analysis

This analysis was performed on the drill hole intervals that fall within the proposed open pit limits and assay plus .4% sulfide copper.

The drill hole intervals used were the weighted 40 ft. (bench height) intervals; the same data that was used for the computerized ore reserve calculations.

A total of 122 ore intervals (40 ft.) from 22 drill holes were included within the pit and used in this analysis.

Three statistical runs were made on the computer: (1) the average grades of the 22 holes; (2) the entire 122 intervals; and (3) the intervals of each hole. The first two runs are the most significant and show very low, favorable variations. This is proof enough statistically that the ore body was drilled sufficiently.

The last run (the intervals of each hole) was not statistically sound because a minimum of 10 samples (grade intervals) are needed in any statistical study. Only three of the holes qualified (91,106 and 110) because of the magnitude of the intervals used.

Computer Run		Number of Intervals	Average Grade	% Variation From Average Grade
1	Average grades of all holes			13.18
2	All intervals	122	.87	11.16
3	Hole # 91	15	.86	28.85
	#106	11	.62	14.60
	#110	14	.83	26.68

C. E. Williams
C. E. WILLIAMS

CEW:js
cc: JJCollins, w/attach
RBMeen, wo/ "

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	6	0.820	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	8	0.400	0.610	0.296	0.210	48.68	67.47	0.19 TO 1.02
3	10	1.170	0.796	0.385	0.222	48.39	54.76	0.36 TO 1.23
4	13	0.990	0.844	0.329	0.164	38.96	38.19	0.52 TO 1.16
5	17	0.600	0.795	0.305	0.136	38.37	33.64	0.52 TO 1.06
6	30	1.110	0.848	0.301	0.123	35.57	28.46	0.60 TO 1.08
7	90	0.780	0.838	0.276	0.104	33.00	24.44	0.63 TO 1.04
8	91	0.860	0.841	0.256	0.090	30.46	21.11	0.66 TO 1.01
9	93	1.040	0.863	0.248	0.082	28.81	18.82	0.70 TO 1.02
10	94	0.900	0.866	0.234	0.074	27.08	16.78	0.72 TO 1.01
11	95	0.870	0.867	0.222	0.067	25.68	15.17	0.73 TO 0.99
12	101	1.600	0.928	0.299	0.086	32.28	18.26	0.75 TO 1.09
13	102	0.950	0.929	0.287	0.079	30.86	16.77	0.77 TO 1.08
14	103	0.520	0.900	0.296	0.079	32.94	17.25	0.74 TO 1.05
15	106	0.620	0.881	0.295	0.076	33.44	16.92	0.73 TO 1.03
16	107	0.530	0.859	0.298	0.074	34.68	16.99	0.71 TO 1.00
17	109	0.800	0.856	0.289	0.070	33.76	16.05	0.71 TO 0.99
18	111	1.090	0.869	0.285	0.067	32.88	15.19	0.73 TO 1.00
19	112	0.630	0.856	0.283	0.064	33.05	14.86	0.72 TO 0.98
20	114	0.730	0.850	0.277	0.061	32.58	14.28	0.72 TO 0.97
21	115	0.740	0.845	0.271	0.059	32.08	13.72	0.72 TO 0.96
22	125	0.750	0.840	0.265	0.056	31.56	13.18	0.72 TO 0.95

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	6	1.000	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	6	0.820	0.910	0.127	0.089	13.98	19.38	0.73 TO 1.08
3	6	0.630	0.816	0.185	0.106	22.65	25.63	0.60 TO 1.02
4	8	0.400	0.712	0.257	0.128	36.11	35.39	0.46 TO 0.96
5	10	0.840	0.737	0.230	0.102	31.17	27.32	0.53 TO 0.93
6	10	1.910	0.933	0.520	0.212	55.80	44.65	0.51 TO 1.35
7	10	1.080	0.954	0.478	0.180	50.16	37.15	0.59 TO 1.30
8	10	1.500	1.022	0.483	0.170	47.27	32.75	0.68 TO 1.35
9	10	0.510	0.965	0.483	0.161	50.05	32.70	0.64 TO 1.28
10	13	0.940	0.962	0.455	0.144	47.32	29.33	0.68 TO 1.24
11	13	1.080	0.973	0.433	0.130	44.55	26.33	0.71 TO 1.22
12	13	2.020	1.060	0.512	0.147	48.27	27.31	0.77 TO 1.35
13	13	0.670	1.030	0.502	0.139	48.72	26.48	0.75 TO 1.30
14	13	0.710	1.007	0.490	0.130	48.62	25.47	0.75 TO 1.26
15	13	0.500	0.973	0.490	0.126	50.31	25.46	0.72 TO 1.22
16	17	0.600	0.950	0.482	0.120	50.76	24.87	0.71 TO 1.18
17	30	0.410	0.918	0.485	0.117	52.82	25.11	0.68 TO 1.14
18	30	1.920	0.974	0.526	0.124	54.04	24.96	0.73 TO 1.21
19	30	0.990	0.975	0.511	0.117	52.48	23.59	0.74 TO 1.20
20	90	1.150	0.983	0.499	0.111	50.78	22.25	0.76 TO 1.20
21	90	0.420	0.957	0.502	0.109	52.48	22.44	0.74 TO 1.17
22	91	0.840	0.951	0.490	0.104	51.57	21.55	0.74 TO 1.15
23	91	2.030	0.998	0.529	0.110	53.03	21.67	0.78 TO 1.21
24	91	1.770	1.030	0.541	0.110	52.52	21.01	0.81 TO 1.24
25	91	1.090	1.033	0.530	0.106	51.31	20.11	0.82 TO 1.24
26	91	1.260	1.041	0.521	0.102	50.03	19.23	0.84 TO 1.24
27	91	0.500	1.021	0.521	0.100	51.06	19.26	0.82 TO 1.21
28	91	0.390	0.999	0.525	0.099	52.61	19.48	0.80 TO 1.19
29	91	0.440	0.979	0.526	0.097	53.73	19.55	0.78 TO 1.17
30	91	0.780	0.973	0.518	0.094	53.29	19.07	0.78 TO 1.15
31	91	0.790	0.967	0.511	0.091	52.83	18.59	0.78 TO 1.14
32	91	0.960	0.967	0.502	0.088	51.98	18.01	0.79 TO 1.14
33	91	0.510	0.953	0.501	0.087	52.57	17.93	0.78 TO 1.12
34	91	0.590	0.942	0.497	0.085	52.77	17.74	0.77 TO 1.10
35	91	0.460	0.928	0.496	0.083	53.49	17.72	0.76 TO 1.09
36	91	0.560	0.918	0.493	0.082	53.72	17.55	0.75 TO 1.07
37	93	1.430	0.932	0.493	0.081	52.96	17.06	0.77 TO 1.09
38	93	1.560	0.948	0.497	0.080	52.44	16.67	0.79 TO 1.10
39	93	0.660	0.941	0.493	0.078	52.38	16.44	0.78 TO 1.09
40	93	0.490	0.930	0.492	0.077	52.89	16.39	0.77 TO 1.08
41	94	0.680	0.924	0.487	0.076	52.74	16.14	0.77 TO 1.07
42	94	2.080	0.951	0.513	0.079	53.95	16.31	0.79 TO 1.10
43	94	1.320	0.960	0.510	0.077	53.15	15.88	0.80 TO 1.11
44	94	0.610	0.952	0.507	0.076	53.26	15.73	0.80 TO 1.10

45	94	0.860	0.950	0.501	0.074	52.78	15.42	0.80	TO	1.09
46	94	0.890	0.948	0.496	0.073	52.27	15.10	0.80	TO	1.09
47	94	0.620	0.941	0.492	0.071	52.33	14.96	0.80	TO	1.08
48	94	0.550	0.933	0.490	0.070	52.58	14.87	0.79	TO	1.07
49	94	0.520	0.925	0.489	0.069	52.89	14.81	0.78	TO	1.06
50	95	2.110	0.948	0.512	0.072	54.01	14.97	0.80	TO	1.09
51	95	1.040	0.950	0.507	0.071	53.38	14.65	0.81	TO	1.09
52	95	0.730	0.946	0.503	0.069	53.19	14.45	0.80	TO	1.08
53	95	0.880	0.945	0.498	0.068	52.75	14.20	0.81	TO	1.07
54	95	0.780	0.942	0.494	0.067	52.48	13.99	0.81	TO	1.07
55	95	0.480	0.933	0.493	0.066	52.88	13.97	0.80	TO	1.06
56	95	0.570	0.927	0.491	0.065	53.02	13.88	0.79	TO	1.05
57	95	0.700	0.923	0.488	0.064	52.88	13.72	0.79	TO	1.05
58	95	0.520	0.916	0.486	0.063	53.12	13.67	0.79	TO	1.04
59	101	3.080	0.953	0.558	0.072	58.63	14.96	0.81	TO	1.09
60	101	2.090	0.971	0.573	0.073	58.96	14.92	0.82	TO	1.11
61	101	0.540	0.964	0.571	0.073	59.18	14.85	0.82	TO	1.10
62	101	0.400	0.955	0.570	0.072	59.72	14.86	0.81	TO	1.09
63	101	0.970	0.956	0.566	0.071	59.23	14.62	0.81	TO	1.09
64	101	2.550	0.980	0.596	0.074	60.76	14.88	0.83	TO	1.12
65	102	0.410	0.972	0.595	0.073	61.26	14.89	0.82	TO	1.11
66	102	0.780	0.969	0.591	0.072	61.02	14.72	0.82	TO	1.11
67	102	1.620	0.978	0.592	0.072	60.50	14.48	0.83	TO	1.12
68	102	1.340	0.984	0.589	0.071	59.89	14.23	0.84	TO	1.12
69	102	0.590	0.978	0.587	0.070	59.99	14.15	0.84	TO	1.11
70	103	0.520	0.971	0.585	0.069	60.22	14.10	0.83	TO	1.10
71	103	0.580	0.966	0.583	0.069	60.32	14.03	0.83	TO	1.10
72	103	0.470	0.959	0.581	0.068	60.64	14.00	0.82	TO	1.09
73	103	0.500	0.953	0.580	0.067	60.87	13.96	0.82	TO	1.08
74	106	0.720	0.950	0.576	0.067	60.72	13.83	0.81	TO	1.08
75	106	0.780	0.947	0.573	0.066	60.49	13.69	0.81	TO	1.07
76	106	0.730	0.944	0.570	0.065	60.33	13.56	0.81	TO	1.07
77	106	0.920	0.944	0.566	0.064	59.95	13.39	0.81	TO	1.07
78	106	0.560	0.939	0.564	0.063	60.05	13.32	0.81	TO	1.06
79	106	0.520	0.934	0.562	0.063	60.22	13.27	0.81	TO	1.05
80	106	0.430	0.928	0.561	0.062	60.55	13.26	0.80	TO	1.05
81	106	0.600	0.924	0.559	0.062	60.56	13.18	0.80	TO	1.04
82	106	0.580	0.919	0.557	0.061	60.60	13.11	0.79	TO	1.04
83	106	0.620	0.916	0.555	0.060	60.57	13.03	0.79	TO	1.03
84	106	0.400	0.910	0.554	0.060	60.93	13.03	0.79	TO	1.02
85	107	0.470	0.904	0.553	0.060	61.14	12.99	0.78	TO	1.02
86	107	0.710	0.902	0.550	0.059	60.98	12.88	0.78	TO	1.01
87	107	0.530	0.898	0.548	0.058	61.07	12.83	0.78	TO	1.01
88	107	0.610	0.895	0.546	0.058	61.04	12.75	0.78	TO	1.00
89	107	0.480	0.890	0.545	0.057	61.21	12.71	0.77	TO	1.00
90	107	0.440	0.885	0.544	0.057	61.44	12.69	0.77	TO	0.99
91	107	0.510	0.881	0.542	0.056	61.55	12.64	0.76	TO	0.99
92	107	0.570	0.877	0.540	0.056	61.56	12.57	0.76	TO	0.98
93	107	0.450	0.873	0.539	0.055	61.75	12.55	0.76	TO	0.98
94	109	0.800	0.872	0.536	0.055	61.48	12.42	0.76	TO	0.98
95	111	3.270	0.897	0.587	0.060	65.44	13.16	0.77	TO	1.01
96	110	0.870	0.897	0.584	0.059	65.12	13.02	0.78	TO	1.01
97	110	1.960	0.908	0.591	0.060	65.09	12.95	0.79	TO	1.02
98	110	0.440	0.903	0.590	0.059	65.31	12.93	0.78	TO	1.02
99	110	0.540	0.899	0.588	0.059	65.36	12.87	0.78	TO	1.01
100	110	0.580	0.896	0.586	0.058	65.36	12.81	0.78	TO	1.01
101	110	0.450	0.892	0.584	0.058	65.55	12.78	0.77	TO	1.00

102	110	0.420	0.887	0.583	0.057	65.71	12.76	0.77	TO	1.00
103	110	0.480	0.883	0.582	0.057	65.90	12.72	0.77	TO	0.99
104	110	0.920	0.884	0.579	0.056	65.56	12.60	0.77	TO	0.99
105	110	1.180	0.886	0.577	0.056	65.11	12.45	0.77	TO	0.99
106	110	0.890	0.886	0.574	0.055	64.80	12.33	0.77	TO	0.99
107	110	1.240	0.890	0.573	0.055	64.37	12.19	0.78	TO	0.99
108	110	0.910	0.890	0.570	0.054	64.06	12.08	0.78	TO	0.99
109	110	0.750	0.889	0.567	0.054	63.87	11.99	0.78	TO	0.99
110	111	1.640	0.895	0.569	0.054	63.59	11.88	0.78	TO	1.00
111	111	0.650	0.893	0.567	0.053	63.52	11.81	0.78	TO	0.99
112	111	0.570	0.890	0.565	0.053	63.53	11.76	0.78	TO	0.99
113	111	0.500	0.887	0.564	0.053	63.62	11.73	0.78	TO	0.99
114	111	0.470	0.883	0.563	0.052	63.76	11.70	0.78	TO	0.98
115	111	0.500	0.880	0.562	0.052	63.85	11.67	0.77	TO	0.98
116	112	0.630	0.878	0.560	0.052	63.78	11.60	0.77	TO	0.98
117	114	0.900	0.878	0.557	0.051	63.49	11.50	0.77	TO	0.97
118	114	0.560	0.875	0.556	0.051	63.50	11.45	0.77	TO	0.97
119	115	0.740	0.874	0.553	0.050	63.33	11.37	0.77	TO	0.97
120	125	0.970	0.875	0.551	0.050	63.02	11.27	0.77	TO	0.97
121	125	0.470	0.872	0.550	0.050	63.14	11.25	0.77	TO	0.97
122	125	0.810	0.871	0.548	0.049	62.91	11.16	0.77	TO	0.96

CONTROL RESEARCH LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	6	1.000	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	6	0.820	0.910	0.127	0.089	13.98	19.38	0.73 TO 1.08
3	6	0.630	0.816	0.185	0.106	22.65	25.63	0.60 TO 1.02

COMPUTE
RESEARC
LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	10	0.840	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	10	1.910	1.375	0.756	0.535	55.02	76.26	0.32 TO 2.42
3	10	1.080	1.276	0.561	0.324	43.97	49.76	0.64 TO 1.91
4	10	1.500	1.332	0.471	0.235	35.40	34.70	0.87 TO 1.79
5	10	0.510	1.167	0.549	0.245	47.07	41.25	0.68 TO 1.64

COMPUTE RESEARC LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	13	0.940	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	13	1.080	1.009	0.098	0.070	9.80	13.58	0.87 TO 1.14
3	13	2.020	1.346	0.587	0.339	43.61	49.35	0.68 TO 2.01
4	13	0.670	1.177	0.586	0.293	49.84	48.84	0.60 TO 1.75
5	13	0.710	1.083	0.549	0.245	50.69	44.43	0.60 TO 1.56
6	13	0.500	0.986	0.546	0.223	55.37	44.30	0.54 TO 1.42

COMPUTE RESEARC LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	30	0.410	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	30	1.920	1.164	1.067	0.755	91.65	127.02	-0.31 TO 2.64
3	30	0.990	1.106	0.761	0.439	68.83	77.88	0.24 TO 1.96

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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	90	1.150	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	90	0.420	0.784	0.516	0.365	65.75	91.13	0.06 TO 1.50

COMPUTE
RESEARC
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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	91	0.840	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	91	2.030	1.434	0.841	0.594	58.63	81.26	0.26 TO 2.60
3	91	1.770	1.546	0.625	0.361	40.45	45.77	0.83 TO 2.25
4	91	1.090	1.432	0.559	0.279	39.06	38.27	0.88 TO 1.98
5	91	1.260	1.397	0.490	0.219	35.09	30.76	0.96 TO 1.82
6	91	0.500	1.248	0.571	0.233	45.80	36.65	0.79 TO 1.70
7	91	0.390	1.125	0.614	0.232	54.59	40.44	0.67 TO 1.58
8	91	0.440	1.039	0.618	0.218	59.47	41.21	0.61 TO 1.46
9	91	0.780	1.011	0.585	0.195	57.86	37.80	0.62 TO 1.39
10	91	0.790	0.988	0.555	0.175	56.21	34.84	0.64 TO 1.33
11	91	0.960	0.986	0.527	0.159	53.48	31.60	0.67 TO 1.29
12	91	0.510	0.946	0.521	0.150	55.08	31.16	0.65 TO 1.24
13	91	0.590	0.919	0.508	0.141	55.36	30.09	0.64 TO 1.19
14	91	0.460	0.886	0.504	0.134	56.87	29.79	0.62 TO 1.15
15	91	0.560	0.864	0.493	0.127	57.02	28.85	0.61 TO 1.11

DATA RESEARCH LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	93	1.430	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	93	1.560	1.495	0.091	0.064	6.14	8.52	1.36 TO 1.62
3	93	0.660	1.216	0.486	0.280	39.98	45.24	0.66 TO 1.76
4	93	0.490	1.035	0.538	0.269	52.00	50.96	0.50 TO 1.56

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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	94	0.680	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	94	2.080	1.380	0.989	0.700	71.73	99.42	0.00 TO 2.75
3	94	1.320	1.359	0.700	0.404	51.53	58.31	0.56 TO 2.15
4	94	0.610	1.172	0.684	0.342	58.35	57.18	0.50 TO 1.84
5	94	0.860	1.109	0.608	0.272	54.84	48.07	0.57 TO 1.64
6	94	0.890	1.073	0.551	0.225	51.41	41.14	0.63 TO 1.51
7	94	0.620	1.008	0.532	0.201	52.75	39.08	0.61 TO 1.40
8	94	0.550	0.951	0.518	0.183	54.52	37.78	0.59 TO 1.31
9	94	0.520	0.903	0.505	0.168	56.01	36.59	0.57 TO 1.23

COMPUTE RESEARC LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	95	2.110	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	95	1.040	1.575	0.756	0.534	48.03	66.57	0.52 TO 2.62
3	95	0.730	1.293	0.724	0.418	55.98	63.35	0.47 TO 2.11
4	95	0.880	1.189	0.626	0.313	52.62	51.57	0.57 TO 1.80
5	95	0.780	1.107	0.572	0.256	51.67	45.29	0.60 TO 1.60
6	95	0.480	1.003	0.572	0.233	57.07	45.67	0.54 TO 1.46
7	95	0.570	0.941	0.547	0.207	58.19	43.10	0.53 TO 1.34
8	95	0.700	0.911	0.514	0.181	56.44	39.11	0.55 TO 1.26
9	95	0.520	0.867	0.498	0.166	57.44	37.52	0.54 TO 1.19

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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	101	3.080	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	101	2.090	2.585	0.700	0.495	27.08	37.53	1.61 TO 3.55
3	101	0.540	1.903	1.280	0.739	67.26	76.11	0.45 TO 3.35
4	101	0.400	1.527	1.287	0.643	84.28	82.60	0.26 TO 2.78
5	101	0.970	1.415	1.142	0.510	80.68	70.72	0.41 TO 2.41
6	101	2.550	1.604	1.121	0.458	69.90	55.93	0.70 TO 2.50

COMPUTE RESEARC LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	102	0.410	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	102	0.780	0.595	0.261	0.185	43.97	60.94	0.23 TO 0.95
3	102	1.620	0.936	0.620	0.357	66.19	74.90	0.23 TO 1.63
4	102	1.340	1.037	0.544	0.272	52.52	51.47	0.50 TO 1.57
5	102	0.590	0.947	0.512	0.229	54.07	47.39	0.49 TO 1.39

COMPUTE RESEARC LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	103	0.520	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	103	0.580	0.550	0.042	0.029	7.71	10.69	0.49 TO 0.60
3	103	0.470	0.523	0.055	0.031	10.52	11.90	0.46 TO 0.58
4	103	0.500	0.517	0.046	0.023	8.97	8.79	0.47 TO 0.56

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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	106	0.720	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	106	0.780	0.750	0.042	0.029	5.65	7.83	0.69 TO 0.80
3	106	0.730	0.743	0.032	0.018	4.32	4.89	0.70 TO 0.77
4	106	0.920	0.787	0.092	0.046	11.70	11.46	0.69 TO 0.87
5	106	0.560	0.741	0.129	0.057	17.42	15.27	0.62 TO 0.85
6	106	0.520	0.704	0.146	0.059	20.84	16.67	0.58 TO 0.82
7	106	0.430	0.665	0.169	0.064	25.49	18.88	0.54 TO 0.79
8	106	0.600	0.657	0.158	0.056	24.15	16.73	0.54 TO 0.76
9	106	0.580	0.648	0.150	0.050	23.23	15.18	0.55 TO 0.74
10	106	0.620	0.645	0.142	0.045	22.05	13.66	0.55 TO 0.73
11	106	0.400	0.623	0.154	0.046	24.71	14.60	0.53 TO 0.71

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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	107	0.470	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	107	0.710	0.590	0.169	0.119	28.76	39.86	0.35 TO 0.82
3	107	0.530	0.570	0.124	0.072	21.91	24.79	0.42 TO 0.71
4	107	0.610	0.580	0.103	0.051	17.91	17.55	0.47 TO 0.68
5	107	0.480	0.559	0.100	0.044	17.94	15.73	0.47 TO 0.64
6	107	0.440	0.539	0.102	0.041	18.95	15.16	0.45 TO 0.62
7	107	0.510	0.535	0.094	0.035	17.57	13.01	0.46 TO 0.60
8	107	0.570	0.539	0.087	0.031	16.29	11.29	0.47 TO 0.60
9	107	0.450	0.529	0.087	0.029	16.52	10.79	0.47 TO 0.58

COMPUTE RESEARC LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	110	0.870	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	110	1.960	1.414	0.770	0.545	54.46	75.49	0.34 TO 2.48
3	110	0.440	1.089	0.783	0.452	71.88	81.34	0.20 TO 1.97
4	110	0.540	0.952	0.696	0.348	73.10	71.64	0.27 TO 1.63
5	110	0.580	0.877	0.625	0.279	71.25	62.45	0.32 TO 1.42
6	110	0.450	0.806	0.586	0.239	72.67	58.15	0.33 TO 1.27
7	110	0.420	0.751	0.554	0.209	73.82	54.69	0.34 TO 1.16
8	110	0.480	0.717	0.522	0.184	72.82	50.46	0.35 TO 1.07
9	110	0.920	0.739	0.493	0.164	66.67	43.55	0.41 TO 1.06
10	110	1.180	0.783	0.485	0.153	61.92	38.38	0.48 TO 1.08
11	110	0.890	0.793	0.461	0.139	58.17	34.38	0.52 TO 1.06
12	110	1.240	0.830	0.458	0.132	55.21	31.23	0.57 TO 1.09
13	110	0.910	0.836	0.439	0.121	52.54	28.56	0.59 TO 1.07
14	110	0.750	0.830	0.423	0.113	50.93	26.68	0.60 TO 1.05

RESEARCH LTD.

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	111	1.640	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	111	0.650	1.144	0.700	0.495	61.13	84.73	0.17 TO 2.11
3	111	0.570	0.953	0.596	0.344	62.51	70.74	0.27 TO 1.62
4	111	0.500	0.839	0.536	0.268	63.90	62.63	0.31 TO 1.36
5	111	0.470	0.765	0.493	0.220	64.42	56.47	0.33 TO 1.19
6	111	0.500	0.721	0.454	0.185	62.98	50.39	0.35 TO 1.08
7	111	3.270	1.085	1.048	0.396	96.59	71.55	0.30 TO 1.86

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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	114	0.900	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	114	0.560	0.730	0.240	0.170	32.93	45.64	0.39 TO 1.06

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PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON WEST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	125	0.970	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	125	0.470	0.720	0.353	0.249	49.10	68.05	0.23 TO 1.20
3	125	0.810	0.749	0.255	0.147	34.04	38.52	0.46 TO 1.03

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W.E.S.
MAR 25 1969

J. H. C.
MAR 24 1969

MR. LOUES
READ AND RETURN
PREPARE ANSWERS ____ HANDLE ____
FILE ____ INITIALS ____

Air Mail

March 18, 1969

Mr. Carl E. Williams
Mining Department
Tucson Office

Sacaton East, Arizona

Dear Carl:

Thank you for my copy of your report on the statistical analysis of the drill hole sampling data in this deposit and I hasten to agree with your conclusions. We should not be content with an accuracy of ±21% for the average of the ore columns in 10 drill holes, and more specifically with the average of the analyses in individual drill holes which show variances as great as 35%, 41% and 45% plus or minus the calculated mean.

The foregoing applies to the variations that would be expectable from any draw point in a block caving system. However, it is noteworthy that from the exploration standpoint the average grade of the whole ore body is stabilized at ±8% and an acceptable variance had been reached half way through the drilling program with respect to the grade of the whole ore body. This implies that the exploration period ended half way through the drilling program and since then the drilling should be considered as development work to give greater precision to proposed mining operations.

I think it would be helpful if you and Mr. Courtright arrange the ore body in various groups of triangles or quadrangles of drill holes and then you calculated the variance within each of these groups. The results should show which triangles or which quadrangles most needed a central drill hole to help improve the accuracy of the localized ore reserve.

It is a pleasure to see the good work you are doing.

Sincerely,

John J. Collins

CC: JHCourtright
RBMeen
TASnedden
CENelson

MR. HES
READ AND RETURN ✓
PREPARE ANSWERS ____ HANDLE ____
INITIALS ____

AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

March 11, 1969

J.H.C. - file

W.E.S.
MAR 17 1969

MAR 11 1969

Mr. J. H. Courtright
Building

SACATON EAST
Statistical Analysis

Enclosed is the computer output of the statistical analysis study performed on the 10 ft. composites of the drill hole assays that were included in the ore zone outlined for block caving. Only the holes that intersected the proposed panels were used, and of these holes only the assays that made up the ore columns were used.

An individual run was made of each hole; of the means of each hole; and of the entire group of assays.

HOLE NUMBER	PERCENT VARIANCE FROM THE MEAN
37	24.14
96	24.10
98	13.92
104	17.24
105	15.66
108	20.83
113	41.21
118	18.16
120	44.85
123	35.24
The means of all 10 holes	21.10
The assays of all 10 holes *	8.04

Since only four of the ten holes are in a safe range of variance, this should suggest that further drilling be necessary.

C. E. Williams
C. E. WILLIAMS

CEW:js
Enclosures

cc: JJCollins, w/encs
RBMeen, Wo/ "

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	37	1.350	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	96	1.010	1.180	0.240	0.170	20.37	28.23	0.84 TO 1.51
3	98	2.350	1.569	0.696	0.402	44.36	50.20	0.78 TO 2.35
4	104	1.790	1.625	0.579	0.289	35.64	34.93	1.05 TO 2.19
5	105	1.570	1.613	0.502	0.224	31.11	27.27	1.17 TO 2.05
6	103	1.240	1.551	0.474	0.193	30.57	24.46	1.17 TO 1.93
7	113	0.910	1.459	0.496	0.187	34.00	25.18	1.09 TO 1.82
8	118	1.030	1.406	0.484	0.171	34.42	23.85	1.07 TO 1.74
9	120	0.980	1.358	0.474	0.158	34.92	22.81	1.04 TO 1.66
10	123	1.110	1.333	0.454	0.143	34.05	21.10	1.05 TO 1.61

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	37	4.780	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	37	1.690	3.235	2.184	1.544	67.54	93.60	0.20 TO 6.26
3	37	2.280	2.916	1.640	0.947	56.24	63.64	1.06 TO 4.77
4	37	1.990	2.684	1.417	0.708	52.78	51.72	1.29 TO 4.07
5	37	1.050	2.357	1.428	0.638	60.58	53.10	1.10 TO 3.61
6	37	1.440	2.204	1.331	0.543	60.39	48.32	1.13 TO 3.27
7	37	1.480	2.101	1.246	0.471	59.30	43.93	1.17 TO 3.02
8	37	1.520	2.028	1.171	0.414	57.76	40.02	1.21 TO 2.84
9	37	1.430	1.962	1.114	0.371	56.78	37.09	1.23 TO 2.69
10	37	0.900	1.855	1.102	0.348	59.42	36.83	1.17 TO 2.53
11	37	0.770	1.757	1.096	0.330	62.38	36.86	1.10 TO 2.40
12	37	0.850	1.681	1.077	0.311	64.08	36.25	1.07 TO 2.29
13	37	1.790	1.689	1.032	0.286	61.07	33.20	1.12 TO 2.25
14	37	2.060	1.716	0.996	0.266	58.06	30.41	1.19 TO 2.23
15	37	1.280	1.687	0.966	0.249	57.30	29.00	1.19 TO 2.17
16	37	1.290	1.662	0.939	0.234	56.50	27.68	1.20 TO 2.12
17	37	1.140	1.631	0.918	0.222	56.28	26.75	1.19 TO 2.06
18	37	1.230	1.609	0.895	0.211	55.67	25.71	1.19 TO 2.02
19	37	1.180	1.586	0.876	0.201	55.22	24.83	1.19 TO 1.98
20	37	0.900	1.552	0.866	0.193	55.82	24.46	1.17 TO 1.93
21	37	0.700	1.511	0.864	0.188	57.20	24.46	1.14 TO 1.88
22	37	0.650	1.472	0.863	0.184	58.65	24.51	1.11 TO 1.83
23	37	0.660	1.437	0.860	0.179	59.88	24.47	1.08 TO 1.78
24	37	0.500	1.398	0.863	0.176	61.74	24.70	1.05 TO 1.74
25	37	0.530	1.363	0.862	0.172	63.27	24.80	1.02 TO 1.70
26	37	1.020	1.350	0.848	0.166	62.80	24.14	1.02 TO 1.67
27	96	2.140	1.379	0.845	0.162	61.27	23.11	1.06 TO 1.69
28	96	2.710	1.427	0.866	0.163	60.74	22.49	1.10 TO 1.74
29	96	1.130	1.416	0.853	0.158	60.20	21.91	1.10 TO 1.72
30	96	0.180	1.375	0.868	0.158	63.10	22.58	1.06 TO 1.69
31	96	0.050	1.332	0.886	0.159	66.47	23.40	1.02 TO 1.64
32	96	0.030	1.292	0.901	0.159	69.77	24.17	0.97 TO 1.60
33	96	0.030	1.253	0.914	0.159	72.90	24.87	0.94 TO 1.56
34	96	1.540	1.262	0.901	0.154	71.42	24.00	0.95 TO 1.56
35	96	3.370	1.322	0.956	0.161	72.35	23.97	1.00 TO 1.63
36	96	0.640	1.303	0.950	0.158	72.87	23.80	0.99 TO 1.61
37	96	1.260	1.302	0.936	0.154	71.92	23.17	1.00 TO 1.60
38	96	0.780	1.288	0.927	0.150	72.00	22.89	0.99 TO 1.58
39	96	0.950	1.279	0.917	0.146	71.66	22.49	0.99 TO 1.56
40	96	1.010	1.273	0.906	0.143	71.18	22.06	0.99 TO 1.55
41	96	1.270	1.273	0.895	0.139	70.29	21.51	0.99 TO 1.54
42	96	1.310	1.274	0.884	0.136	69.38	20.98	1.00 TO 1.54
43	96	1.090	1.269	0.873	0.133	68.82	20.57	1.00 TO 1.53
44	96	1.050	1.264	0.864	0.130	68.33	20.19	1.00 TO 1.52
45	96	1.310	1.265	0.854	0.127	67.50	19.72	1.01 TO 1.51

46	96	1.250	1.265	0.844	0.124	66.77	19.29	1.02 TO 1.50
47	96	0.730	1.254	0.839	0.122	66.93	19.13	1.01 TO 1.49
48	96	0.800	1.244	0.832	0.120	66.92	18.93	1.00 TO 1.48
49	96	0.990	1.239	0.825	0.117	66.56	18.63	1.00 TO 1.47
50	96	1.190	1.238	0.816	0.115	65.93	18.27	1.01 TO 1.46
51	96	1.070	1.235	0.808	0.113	65.47	17.97	1.01 TO 1.45
52	96	0.980	1.230	0.801	0.111	65.15	17.70	1.01 TO 1.44
53	96	0.650	1.219	0.797	0.109	65.43	17.61	1.00 TO 1.43
54	96	0.520	1.206	0.795	0.108	65.98	17.59	0.99 TO 1.41
55	96	0.650	1.196	0.792	0.106	66.21	17.50	0.98 TO 1.40
56	96	0.650	1.186	0.788	0.105	66.43	17.40	0.97 TO 1.39
57	96	0.580	1.175	0.785	0.104	66.78	17.33	0.97 TO 1.37
58	96	0.490	1.163	0.783	0.102	67.31	17.32	0.96 TO 1.36
59	98	0.900	1.159	0.777	0.101	67.05	17.11	0.96 TO 1.35
60	98	1.570	1.166	0.772	0.099	66.25	16.76	0.97 TO 1.36
61	98	1.990	1.179	0.773	0.099	65.56	16.45	0.98 TO 1.37
62	98	3.330	1.214	0.814	0.103	67.04	16.68	1.01 TO 1.41
63	98	3.250	1.246	0.847	0.106	67.96	16.78	1.03 TO 1.45
64	98	3.010	1.274	0.869	0.108	68.19	16.70	1.06 TO 1.48
65	98	3.060	1.301	0.890	0.110	68.38	16.62	1.08 TO 1.51
66	98	2.940	1.326	0.906	0.111	68.29	16.47	1.10 TO 1.54
67	98	2.620	1.345	0.912	0.111	67.83	16.24	1.12 TO 1.56
68	98	3.080	1.371	0.930	0.112	67.82	16.12	1.15 TO 1.59
69	98	3.650	1.404	0.963	0.115	68.58	16.18	1.17 TO 1.63
70	98	3.300	1.431	0.982	0.117	68.64	16.08	1.20 TO 1.66
71	98	2.610	1.448	0.985	0.116	68.06	15.83	1.21 TO 1.67
72	98	2.800	1.466	0.991	0.116	67.59	15.61	1.23 TO 1.69
73	98	3.380	1.493	1.009	0.118	67.62	15.51	1.26 TO 1.72
74	98	3.190	1.516	1.022	0.118	67.41	15.36	1.28 TO 1.74
75	98	2.970	1.535	1.028	0.118	67.01	15.16	1.30 TO 1.76
76	98	2.470	1.547	1.027	0.117	66.39	14.92	1.31 TO 1.77
77	98	2.030	1.554	1.022	0.116	65.78	14.69	1.32 TO 1.78
78	98	2.040	1.560	1.017	0.115	65.19	14.46	1.33 TO 1.78
79	93	2.380	1.570	1.014	0.114	64.61	14.24	1.34 TO 1.79
80	98	2.550	1.582	1.014	0.113	64.08	14.04	1.36 TO 1.80
81	98	2.500	1.594	1.013	0.112	63.54	13.83	1.37 TO 1.81
82	98	0.900	1.585	1.009	0.111	63.67	13.78	1.36 TO 1.80
83	98	0.750	1.575	1.007	0.110	63.95	13.75	1.35 TO 1.79
84	98	0.970	1.568	1.003	0.109	64.00	13.68	1.35 TO 1.78
85	98	1.090	1.562	0.999	0.108	63.93	13.59	1.35 TO 1.77
86	98	0.690	1.552	0.997	0.107	64.25	13.58	1.34 TO 1.76
87	98	2.260	1.560	0.994	0.106	63.73	13.39	1.35 TO 1.76
88	104	0.610	1.549	0.994	0.105	64.14	13.40	1.34 TO 1.75
89	104	1.500	1.549	0.988	0.104	63.80	13.25	1.34 TO 1.75
90	104	2.180	1.556	0.985	0.103	63.30	13.07	1.35 TO 1.75
91	104	1.450	1.555	0.979	0.102	63.00	12.94	1.35 TO 1.75
92	104	3.300	1.574	0.991	0.103	62.96	12.86	1.37 TO 1.77
93	104	4.070	1.601	1.019	0.105	63.66	12.93	1.39 TO 1.80
94	104	3.290	1.619	1.028	0.106	63.53	12.84	1.41 TO 1.82
95	104	2.670	1.630	1.028	0.105	63.11	12.69	1.42 TO 1.83
96	104	3.340	1.647	1.038	0.105	62.99	12.60	1.44 TO 1.85
97	104	1.090	1.642	1.034	0.105	62.98	12.53	1.43 TO 1.84
98	104	2.910	1.655	1.036	0.104	62.64	12.40	1.44 TO 1.85
99	104	1.080	1.649	1.033	0.103	62.64	12.34	1.44 TO 1.85
100	104	1.050	1.643	1.029	0.102	62.66	12.28	1.44 TO 1.84
101	104	1.730	1.644	1.024	0.101	62.31	12.15	1.44 TO 1.84
102	104	1.920	1.646	1.019	0.100	61.92	12.01	1.44 TO 1.84
103	104	1.590	1.646	1.014	0.100	61.64	11.90	1.45 TO 1.84

104	104	2.130	1.650	1.011	0.099	61.24	11.77	1.45 TO 1.84
105	104	1.420	1.648	1.006	0.098	61.04	11.67	1.45 TO 1.84
106	104	1.690	1.649	1.001	0.097	60.73	11.56	1.45 TO 1.83
107	104	1.720	1.649	0.996	0.096	60.42	11.44	1.46 TO 1.83
108	104	2.030	1.653	0.992	0.095	60.05	11.32	1.46 TO 1.84
109	104	1.960	1.656	0.988	0.094	59.70	11.20	1.47 TO 1.84
110	104	2.070	1.659	0.985	0.093	59.34	11.08	1.47 TO 1.84
111	104	2.940	1.671	0.988	0.093	59.11	10.99	1.48 TO 1.85
112	104	1.570	1.670	0.983	0.092	58.88	10.90	1.48 TO 1.85
113	104	2.900	1.681	0.986	0.092	58.64	10.81	1.49 TO 1.86
114	104	3.440	1.696	0.995	0.093	58.66	10.76	1.51 TO 1.87
115	104	4.370	1.720	1.021	0.095	59.40	10.85	1.53 TO 1.90
116	104	1.290	1.716	1.018	0.094	59.32	10.79	1.53 TO 1.90
117	104	1.110	1.711	1.015	0.093	59.33	10.75	1.52 TO 1.89
118	104	1.060	1.705	1.012	0.093	59.37	10.71	1.52 TO 1.89
119	104	1.050	1.700	1.010	0.092	59.42	10.67	1.51 TO 1.88
120	104	0.880	1.693	1.008	0.092	59.57	10.65	1.51 TO 1.87
121	104	0.970	1.687	1.006	0.091	59.66	10.63	1.50 TO 1.86
122	104	1.010	1.681	1.004	0.090	59.72	10.59	1.50 TO 1.86
123	104	0.940	1.675	1.002	0.090	59.82	10.57	1.49 TO 1.85
124	104	1.050	1.670	1.000	0.089	59.85	10.53	1.49 TO 1.84
125	104	0.830	1.663	0.998	0.089	60.02	10.52	1.48 TO 1.83
126	104	0.540	1.655	0.999	0.089	60.41	10.54	1.48 TO 1.82
127	104	0.540	1.646	1.000	0.088	60.79	10.57	1.47 TO 1.82
128	104	0.420	1.636	1.002	0.088	61.26	10.61	1.46 TO 1.81
129	105	0.920	1.631	1.000	0.088	61.35	10.58	1.45 TO 1.80
130	105	2.910	1.640	1.003	0.087	61.13	10.50	1.46 TO 1.81
131	105	1.380	1.638	0.999	0.087	60.98	10.44	1.46 TO 1.81
132	105	1.730	1.639	0.995	0.086	60.73	10.36	1.46 TO 1.80
133	105	1.400	1.637	0.992	0.086	60.57	10.29	1.46 TO 1.80
134	105	1.610	1.637	0.988	0.085	60.35	10.21	1.47 TO 1.80
135	105	0.490	1.629	0.989	0.085	60.75	10.24	1.46 TO 1.79
136	105	2.400	1.634	0.988	0.084	60.45	10.15	1.46 TO 1.80
137	105	1.200	1.631	0.985	0.084	60.38	10.11	1.46 TO 1.79
138	105	1.850	1.633	0.981	0.083	60.12	10.03	1.46 TO 1.79
139	105	1.970	1.635	0.978	0.083	59.83	9.94	1.47 TO 1.79
140	105	1.740	1.636	0.975	0.082	59.59	9.87	1.47 TO 1.79
141	105	1.740	1.637	0.971	0.081	59.36	9.79	1.47 TO 1.79
142	105	1.360	1.635	0.968	0.081	59.23	9.74	1.47 TO 1.79
143	105	0.800	1.629	0.967	0.080	59.39	9.73	1.47 TO 1.78
144	105	1.260	1.626	0.964	0.080	59.31	9.68	1.46 TO 1.78
145	105	1.660	1.627	0.961	0.079	59.09	9.61	1.47 TO 1.78
146	105	1.830	1.628	0.958	0.079	58.85	9.54	1.47 TO 1.78
147	105	1.660	1.628	0.955	0.078	58.64	9.47	1.47 TO 1.78
148	108	2.400	1.633	0.953	0.078	58.38	9.40	1.48 TO 1.78
149	103	1.820	1.635	0.950	0.077	58.14	9.33	1.48 TO 1.78
150	108	2.080	1.638	0.948	0.077	57.89	9.26	1.48 TO 1.78
151	108	1.560	1.637	0.945	0.076	57.71	9.20	1.48 TO 1.78
152	108	1.040	1.633	0.943	0.076	57.74	9.17	1.48 TO 1.78
153	108	1.170	1.630	0.940	0.076	57.70	9.14	1.48 TO 1.77
154	108	1.610	1.630	0.937	0.075	57.51	9.08	1.48 TO 1.77
155	108	1.570	1.630	0.934	0.075	57.34	9.02	1.48 TO 1.77
156	108	1.010	1.626	0.933	0.074	57.38	9.00	1.47 TO 1.77
157	108	0.830	1.621	0.932	0.074	57.51	8.99	1.47 TO 1.76
158	108	0.640	1.614	0.932	0.074	57.75	9.00	1.46 TO 1.76
159	108	0.650	1.608	0.932	0.073	57.98	9.01	1.46 TO 1.75
160	108	0.810	1.603	0.931	0.073	58.11	9.00	1.45 TO 1.74
161	108	1.020	1.600	0.930	0.073	58.13	8.97	1.45 TO 1.74

162	108	0.860	1.595	0.929	0.072	58.23	8.96	1.45 TO 1.73
163	108	0.880	1.591	0.927	0.072	58.31	8.95	1.44 TO 1.73
164	113	1.130	1.588	0.925	0.072	58.28	8.92	1.44 TO 1.73
165	113	1.040	1.585	0.923	0.071	58.29	8.89	1.44 TO 1.72
166	113	1.970	1.587	0.921	0.071	58.06	8.83	1.44 TO 1.72
167	113	2.050	1.590	0.919	0.071	57.82	8.77	1.45 TO 1.72
168	113	2.510	1.595	0.919	0.070	57.62	8.71	1.45 TO 1.73
169	113	2.550	1.601	0.919	0.070	57.43	8.65	1.46 TO 1.73
170	113	1.780	1.602	0.917	0.070	57.23	8.60	1.46 TO 1.74
171	113	0.400	1.595	0.919	0.070	57.60	8.63	1.45 TO 1.73
172	113	0.220	1.587	0.922	0.070	58.10	8.68	1.44 TO 1.72
173	113	0.180	1.579	0.925	0.070	58.62	8.73	1.44 TO 1.71
174	113	0.120	1.570	0.929	0.070	59.19	8.79	1.43 TO 1.70
175	113	0.700	1.565	0.929	0.070	59.35	8.79	1.42 TO 1.70
176	113	0.850	1.561	0.928	0.069	59.44	8.78	1.42 TO 1.69
177	113	0.190	1.553	0.931	0.070	59.93	8.83	1.41 TO 1.69
178	113	0.110	1.545	0.935	0.070	60.48	8.88	1.40 TO 1.68
179	113	0.080	1.537	0.938	0.070	61.05	8.94	1.40 TO 1.67
180	113	0.360	1.531	0.940	0.070	61.41	8.97	1.39 TO 1.66
181	113	0.550	1.525	0.940	0.069	61.64	8.98	1.38 TO 1.66
182	113	0.670	1.520	0.940	0.069	61.80	8.97	1.38 TO 1.65
183	118	0.700	1.516	0.939	0.069	61.94	8.97	1.38 TO 1.65
184	118	1.640	1.517	0.936	0.069	61.75	8.92	1.38 TO 1.65
185	118	1.660	1.517	0.934	0.068	61.55	8.87	1.38 TO 1.65
186	118	0.780	1.513	0.933	0.068	61.65	8.86	1.37 TO 1.64
187	118	0.400	1.508	0.934	0.068	61.96	8.88	1.37 TO 1.64
188	118	0.750	1.503	0.933	0.068	62.07	8.87	1.37 TO 1.63
189	118	1.250	1.502	0.931	0.067	61.98	8.83	1.36 TO 1.63
190	118	1.000	1.499	0.929	0.067	61.97	8.81	1.36 TO 1.63
191	118	1.130	1.498	0.927	0.067	61.91	8.78	1.36 TO 1.62
192	118	0.850	1.494	0.926	0.066	61.97	8.76	1.36 TO 1.62
193	118	0.670	1.490	0.925	0.066	62.11	8.76	1.35 TO 1.62
194	118	0.740	1.486	0.924	0.066	62.22	8.75	1.35 TO 1.61
195	118	0.700	1.482	0.924	0.066	62.34	8.75	1.35 TO 1.61
196	118	0.730	1.478	0.923	0.065	62.45	8.74	1.34 TO 1.60
197	118	0.490	1.473	0.923	0.065	62.68	8.75	1.34 TO 1.60
198	118	0.670	1.469	0.923	0.065	62.82	8.75	1.34 TO 1.59
199	118	1.160	1.468	0.921	0.065	62.74	8.71	1.34 TO 1.59
200	118	1.150	1.466	0.919	0.064	62.67	8.68	1.33 TO 1.59
201	118	2.320	1.470	0.918	0.064	62.47	8.63	1.34 TO 1.59
202	118	1.900	1.472	0.916	0.064	62.26	8.58	1.34 TO 1.59
203	118	1.680	1.473	0.914	0.064	62.07	8.53	1.34 TO 1.59
204	118	1.200	1.472	0.912	0.063	61.98	8.50	1.34 TO 1.59
205	118	2.020	1.475	0.911	0.063	61.77	8.45	1.35 TO 1.59
206	118	2.500	1.480	0.911	0.063	61.60	8.41	1.35 TO 1.60
207	118	1.260	1.479	0.909	0.063	61.51	8.37	1.35 TO 1.60
208	118	1.840	1.480	0.907	0.062	61.31	8.33	1.35 TO 1.60
209	118	1.760	1.482	0.905	0.062	61.12	8.28	1.35 TO 1.60
210	118	0.990	1.479	0.904	0.062	61.11	8.26	1.35 TO 1.60
211	118	0.490	1.475	0.904	0.062	61.34	8.27	1.35 TO 1.59
212	118	0.330	1.469	0.906	0.062	61.65	8.29	1.34 TO 1.59
213	118	0.320	1.464	0.907	0.062	61.96	8.32	1.34 TO 1.58
214	118	0.360	1.459	0.908	0.062	62.25	8.34	1.33 TO 1.58
215	118	0.510	1.454	0.908	0.061	62.45	8.34	1.33 TO 1.57
216	118	0.570	1.450	0.908	0.061	62.62	8.35	1.32 TO 1.57
217	118	0.570	1.446	0.908	0.061	62.79	8.35	1.32 TO 1.56
218	118	0.680	1.443	0.907	0.061	62.90	8.35	1.32 TO 1.56
219	118	0.640	1.439	0.907	0.061	63.03	8.34	1.31 TO 1.55

220	120	2.180	1.442	0.906	0.061	62.83	8.30	1.32	TO	1.56
221	120	2.310	1.446	0.906	0.060	62.65	8.26	1.32	TO	1.56
222	120	2.130	1.449	0.905	0.060	62.45	8.21	1.33	TO	1.56
223	120	1.290	1.449	0.903	0.060	62.35	8.18	1.33	TO	1.56
224	120	0.620	1.445	0.903	0.060	62.49	8.18	1.32	TO	1.56
225	120	0.530	1.441	0.903	0.060	62.67	8.18	1.32	TO	1.55
226	120	0.380	1.436	0.904	0.060	62.92	8.20	1.31	TO	1.55
227	120	0.520	1.432	0.904	0.060	63.10	8.20	1.31	TO	1.55
228	120	0.550	1.428	0.903	0.059	63.27	8.21	1.31	TO	1.54
229	120	0.380	1.424	0.904	0.059	63.52	8.22	1.30	TO	1.54
230	120	0.360	1.419	0.905	0.059	63.78	8.24	1.30	TO	1.53
231	120	0.530	1.415	0.905	0.059	63.95	8.24	1.29	TO	1.53
232	123	1.160	1.414	0.903	0.059	63.87	8.21	1.29	TO	1.53
233	123	1.640	1.415	0.901	0.059	63.69	8.17	1.29	TO	1.53
234	123	1.430	1.415	0.899	0.058	63.56	8.14	1.30	TO	1.53
235	123	1.670	1.416	0.897	0.058	63.38	8.10	1.30	TO	1.53
236	123	2.770	1.422	0.900	0.058	63.30	8.07	1.30	TO	1.53
237	123	1.340	1.422	0.898	0.058	63.18	8.04	1.30	TO	1.53
238	123	0.860	1.419	0.897	0.058	63.20	8.03	1.30	TO	1.53
239	123	0.400	1.415	0.897	0.058	63.43	8.04	1.30	TO	1.52
240	123	0.110	1.409	0.899	0.058	63.82	8.07	1.29	TO	1.52
241	123	0.360	1.405	0.900	0.058	64.07	8.08	1.29	TO	1.51
242	123	0.320	1.401	0.901	0.057	64.33	8.10	1.28	TO	1.51
243	123	0.410	1.397	0.901	0.057	64.55	8.11	1.28	TO	1.51
244	123	1.340	1.396	0.899	0.057	64.43	8.08	1.28	TO	1.50
245	123	1.870	1.398	0.898	0.057	64.24	8.04	1.28	TO	1.51

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	37	4.780	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	37	1.690	3.235	2.184	1.544	67.54	93.60	0.20 TO 6.26
3	37	2.280	2.916	1.640	0.947	56.24	63.64	1.06 TO 4.77
4	37	1.990	2.684	1.417	0.708	52.78	51.72	1.29 TO 4.07
5	37	1.050	2.357	1.428	0.638	60.58	53.10	1.10 TO 3.61
6	37	1.440	2.204	1.331	0.543	60.39	48.32	1.13 TO 3.27
7	37	1.480	2.101	1.246	0.471	59.30	43.93	1.17 TO 3.02
8	37	1.520	2.028	1.171	0.414	57.76	40.02	1.21 TO 2.84
9	37	1.430	1.962	1.114	0.371	56.78	37.09	1.23 TO 2.69
10	37	0.900	1.855	1.102	0.348	59.42	36.83	1.17 TO 2.53
11	37	0.770	1.757	1.096	0.330	62.38	36.86	1.10 TO 2.40
12	37	0.850	1.681	1.077	0.311	64.08	36.25	1.07 TO 2.29
13	37	1.790	1.689	1.032	0.286	61.07	33.20	1.12 TO 2.25
14	37	2.060	1.716	0.996	0.266	58.06	30.41	1.19 TO 2.23
15	37	1.280	1.687	0.966	0.249	57.30	29.00	1.19 TO 2.17
16	37	1.290	1.662	0.939	0.234	56.50	27.68	1.20 TO 2.12
17	37	1.140	1.631	0.918	0.222	56.28	26.75	1.19 TO 2.06
18	37	1.230	1.609	0.895	0.211	55.67	25.71	1.19 TO 2.02
19	37	1.180	1.586	0.876	0.201	55.22	24.83	1.19 TO 1.98
20	37	0.900	1.552	0.866	0.193	55.82	24.46	1.17 TO 1.93
21	37	0.700	1.511	0.864	0.188	57.20	24.46	1.14 TO 1.88
22	37	0.650	1.472	0.863	0.184	58.65	24.51	1.11 TO 1.83
23	37	0.660	1.437	0.860	0.179	59.88	24.47	1.08 TO 1.78
24	37	0.500	1.398	0.863	0.176	61.74	24.70	1.05 TO 1.74
25	37	0.530	1.363	0.862	0.172	63.27	24.80	1.02 TO 1.70
26	37	1.020	1.350	0.848	0.166	62.80	24.14	1.02 TO 1.67

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	96	2.140	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	96	2.710	2.425	0.403	0.284	16.62	23.03	1.86 TO 2.98
3	96	1.130	1.993	0.800	0.461	40.14	45.42	1.08 TO 2.89
4	96	0.180	1.539	1.117	0.558	72.56	71.11	0.44 TO 2.63
5	96	0.050	1.241	1.175	0.525	94.60	82.92	0.21 TO 2.27
6	96	0.030	1.039	1.161	0.474	111.69	89.37	0.11 TO 1.96
7	96	0.030	0.895	1.127	0.425	125.82	93.21	0.06 TO 1.73
8	96	1.540	0.976	1.068	0.377	109.39	75.80	0.23 TO 1.71
9	96	3.370	1.242	1.278	0.426	102.92	67.24	0.40 TO 2.07
10	96	0.640	1.181	1.220	0.385	103.24	63.99	0.42 TO 1.93
11	96	1.260	1.189	1.158	0.349	97.38	57.55	0.50 TO 1.87
12	96	0.780	1.154	1.110	0.320	96.13	54.39	0.52 TO 1.78
13	96	0.950	1.139	1.064	0.295	93.45	50.80	0.56 TO 1.71
14	96	1.010	1.129	1.023	0.273	90.57	47.44	0.59 TO 1.66
15	96	1.270	1.139	0.986	0.254	86.62	43.83	0.63 TO 1.63
16	96	1.310	1.149	0.954	0.238	82.99	40.66	0.68 TO 1.61
17	96	1.090	1.146	0.924	0.224	80.61	38.32	0.70 TO 1.58
18	96	1.050	1.141	0.896	0.211	78.59	36.31	0.72 TO 1.55
19	96	1.310	1.149	0.872	0.200	75.86	34.11	0.75 TO 1.54
20	96	1.250	1.154	0.849	0.189	73.55	32.23	0.78 TO 1.52
21	96	0.730	1.134	0.833	0.181	73.42	31.40	0.77 TO 1.49
22	96	0.800	1.119	0.816	0.174	72.90	30.46	0.77 TO 1.46
23	96	0.990	1.113	0.797	0.166	71.63	29.27	0.78 TO 1.44
24	96	1.190	1.117	0.780	0.159	69.87	27.95	0.80 TO 1.42
25	96	1.070	1.115	0.764	0.152	68.52	26.86	0.81 TO 1.41
26	96	0.980	1.109	0.749	0.146	67.49	25.94	0.82 TO 1.39
27	96	0.650	1.092	0.739	0.142	67.70	25.53	0.81 TO 1.37
28	96	0.520	1.072	0.734	0.138	68.45	25.35	0.80 TO 1.34
29	96	0.650	1.057	0.725	0.134	68.54	24.94	0.79 TO 1.32
30	96	0.650	1.044	0.716	0.130	68.60	24.54	0.78 TO 1.30
31	96	0.580	1.029	0.709	0.127	68.90	24.25	0.77 TO 1.27
32	96	0.490	1.012	0.704	0.124	69.55	24.10	0.76 TO 1.25

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	98	0.900	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	98	1.570	1.235	0.473	0.335	38.36	53.16	0.57 TO 1.89
3	98	1.990	1.486	0.549	0.317	36.97	41.84	0.86 TO 2.10
4	98	3.330	1.947	1.025	0.512	52.63	51.58	0.94 TO 2.95
5	98	3.250	2.208	1.061	0.474	48.09	42.15	1.27 TO 3.13
6	98	3.010	2.341	1.004	0.410	42.90	34.32	1.53 TO 3.14
7	98	3.060	2.444	0.956	0.361	39.12	28.98	1.73 TO 3.15
8	98	2.940	2.506	0.902	0.319	36.01	24.95	1.88 TO 3.13
9	98	2.620	2.518	0.845	0.281	33.55	21.92	1.96 TO 3.07
10	98	3.080	2.574	0.816	0.258	31.70	19.65	2.06 TO 3.08
11	98	3.650	2.672	0.839	0.253	31.41	18.56	2.17 TO 3.16
12	98	3.300	2.724	0.820	0.236	30.11	17.04	2.26 TO 3.18
13	98	2.610	2.716	0.786	0.218	28.95	15.73	2.28 TO 3.14
14	98	2.800	2.722	0.755	0.202	27.76	14.54	2.32 TO 3.11
15	98	3.380	2.765	0.747	0.193	27.04	13.68	2.38 TO 3.14
16	98	3.190	2.792	0.730	0.182	26.15	12.81	2.43 TO 3.15
17	98	2.970	2.802	0.708	0.171	25.27	12.01	2.46 TO 3.13
18	98	2.470	2.784	0.691	0.163	24.84	11.47	2.46 TO 3.10
19	98	2.030	2.744	0.694	0.159	25.29	11.37	2.43 TO 3.05
20	98	2.040	2.709	0.693	0.155	25.60	11.22	2.40 TO 3.01
21	98	2.380	2.693	0.680	0.148	25.24	10.79	2.40 TO 2.98
22	98	2.550	2.687	0.664	0.141	24.72	10.33	2.40 TO 2.96
23	98	2.500	2.679	0.650	0.135	24.27	9.91	2.41 TO 2.94
24	98	0.900	2.604	0.732	0.149	28.11	11.24	2.31 TO 2.89
25	98	0.750	2.530	0.807	0.161	31.89	12.50	2.21 TO 2.84
26	98	0.970	2.470	0.848	0.166	34.32	13.19	2.14 TO 2.79
27	98	1.090	2.419	0.873	0.168	36.08	13.61	2.09 TO 2.74
28	98	0.690	2.357	0.916	0.173	38.89	14.40	2.01 TO 2.69
29	98	2.260	2.354	0.900	0.167	38.25	13.92	2.02 TO 2.68

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	104	0.610	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	104	1.500	1.055	0.629	0.445	59.65	82.67	0.18 TO 1.92
3	104	2.180	1.429	0.787	0.454	55.05	62.30	0.53 TO 2.32
4	104	1.450	1.434	0.642	0.321	44.80	43.90	0.80 TO 2.06
5	104	3.300	1.807	1.002	0.448	55.46	48.61	0.92 TO 2.68
6	104	4.070	2.184	1.287	0.525	58.91	47.14	1.15 TO 3.21
7	104	3.290	2.342	1.247	0.471	53.23	39.43	1.41 TO 3.26
8	104	2.670	2.383	1.160	0.410	48.68	33.73	1.57 TO 3.18
9	104	3.340	2.489	1.131	0.377	45.43	29.68	1.75 TO 3.22
10	104	1.090	2.349	1.154	0.365	49.14	30.45	1.63 TO 3.06
11	104	2.910	2.400	1.108	0.334	46.17	27.28	1.74 TO 3.05
12	104	1.080	2.290	1.123	0.324	49.04	27.75	1.65 TO 2.92
13	104	1.050	2.195	1.129	0.313	51.44	27.96	1.58 TO 2.80
14	104	1.730	2.162	1.092	0.291	50.51	26.46	1.58 TO 2.73
15	104	1.920	2.145	1.054	0.272	49.13	24.86	1.61 TO 2.67
16	104	1.590	2.111	1.028	0.257	48.69	23.86	1.60 TO 2.61
17	104	2.130	2.112	0.995	0.241	47.12	22.40	1.63 TO 2.58
18	104	1.420	2.073	0.979	0.230	47.22	21.81	1.62 TO 2.52
19	104	1.690	2.053	0.955	0.219	46.54	20.92	1.62 TO 2.48
20	104	1.720	2.036	0.933	0.208	45.82	20.08	1.62 TO 2.44
21	104	2.030	2.036	0.909	0.198	44.66	19.10	1.64 TO 2.42
22	104	1.960	2.033	0.887	0.189	43.67	18.25	1.66 TO 2.40
23	104	2.070	2.034	0.867	0.180	42.63	17.42	1.68 TO 2.38
24	104	2.940	2.072	0.868	0.177	41.90	16.76	1.72 TO 2.41
25	104	1.570	2.052	0.856	0.171	41.71	16.35	1.71 TO 2.38
26	104	2.900	2.084	0.855	0.167	41.01	15.76	1.75 TO 2.41
27	104	3.440	2.135	0.878	0.168	41.12	15.51	1.80 TO 2.46
28	104	4.370	2.214	0.959	0.181	43.32	16.04	1.85 TO 2.57
29	104	1.290	2.183	0.957	0.177	43.87	15.96	1.83 TO 2.53
30	104	1.110	2.147	0.961	0.175	44.77	16.02	1.80 TO 2.49
31	104	1.060	2.112	0.965	0.173	45.69	16.08	1.77 TO 2.45
32	104	1.050	2.079	0.967	0.171	46.55	16.12	1.74 TO 2.41
33	104	0.880	2.042	0.975	0.169	47.74	16.28	1.70 TO 2.37
34	104	0.970	2.011	0.977	0.167	48.61	16.34	1.68 TO 2.33
35	104	1.010	1.982	0.978	0.165	49.33	16.34	1.65 TO 2.30
36	104	0.940	1.953	0.979	0.163	50.13	16.37	1.63 TO 2.27
37	104	1.050	1.929	0.977	0.160	50.65	16.32	1.61 TO 2.24
38	104	0.830	1.900	0.980	0.159	51.58	16.40	1.58 TO 2.21
39	104	0.540	1.865	0.991	0.158	53.15	16.68	1.55 TO 2.17
40	104	0.540	1.832	1.000	0.158	54.62	16.92	1.52 TO 2.14
41	104	0.420	1.797	1.012	0.158	56.32	17.24	1.48 TO 2.10

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	105	0.920	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	105	2.910	1.914	1.407	0.995	73.48	101.83	-0.03 TO 3.86
3	105	1.380	1.736	1.041	0.601	59.99	67.88	0.55 TO 2.91
4	105	1.730	1.734	0.850	0.425	49.02	48.04	0.90 TO 2.56
5	105	1.400	1.667	0.751	0.336	45.07	39.50	1.00 TO 2.32
6	105	1.610	1.658	0.672	0.274	40.57	32.46	1.11 TO 2.19
7	105	0.490	1.491	0.756	0.285	50.72	37.57	0.93 TO 2.05
8	105	2.400	1.604	0.770	0.272	48.00	33.26	1.07 TO 2.13
9	105	1.200	1.559	0.733	0.244	47.00	30.71	1.08 TO 2.03
10	105	1.850	1.588	0.697	0.220	43.88	27.20	1.15 TO 2.02
11	105	1.970	1.623	0.671	0.202	41.35	24.44	1.22 TO 2.02
12	105	1.740	1.633	0.641	0.185	39.25	22.20	1.27 TO 1.99
13	105	1.740	1.641	0.614	0.170	37.43	20.35	1.30 TO 1.97
14	105	1.360	1.621	0.595	0.159	36.70	19.22	1.30 TO 1.93
15	105	0.800	1.566	0.611	0.157	39.03	19.75	1.25 TO 1.87
16	105	1.260	1.547	0.595	0.148	38.49	18.86	1.25 TO 1.83
17	105	1.660	1.554	0.577	0.140	37.15	17.66	1.27 TO 1.82
18	105	1.830	1.569	0.563	0.132	35.93	16.60	1.30 TO 1.82
19	105	1.660	1.574	0.548	0.125	34.84	15.66	1.32 TO 1.82

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	108	2.400	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	108	1.820	2.110	0.410	0.289	19.43	26.93	1.54 TO 2.67
3	108	2.080	2.099	0.290	0.167	13.83	15.65	1.77 TO 2.42
4	108	1.560	1.964	0.359	0.179	18.28	17.92	1.61 TO 2.31
5	108	1.040	1.779	0.517	0.231	29.08	25.49	1.32 TO 2.23
6	108	1.170	1.678	0.525	0.214	31.32	25.06	1.25 TO 2.09
7	108	1.610	1.668	0.480	0.181	28.80	21.33	1.31 TO 2.02
8	108	1.570	1.656	0.446	0.157	26.94	18.67	1.34 TO 1.96
9	108	1.010	1.584	0.469	0.156	29.65	19.37	1.27 TO 1.89
10	108	0.830	1.508	0.503	0.159	33.34	20.66	1.19 TO 1.82
11	108	0.640	1.429	0.544	0.164	38.07	22.50	1.10 TO 1.75
12	108	0.650	1.364	0.565	0.163	41.45	23.45	1.04 TO 1.68
13	108	0.810	1.322	0.563	0.156	42.59	23.15	1.01 TO 1.62
14	108	1.020	1.300	0.547	0.146	42.06	22.03	1.01 TO 1.58
15	108	0.860	1.271	0.539	0.139	42.42	21.47	0.99 TO 1.54
16	108	0.880	1.246	0.530	0.132	42.52	20.83	0.98 TO 1.50

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	113	1.130	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	113	1.040	1.085	0.063	0.044	5.86	8.12	0.99 TO 1.17
3	113	1.970	1.379	0.512	0.296	37.16	42.06	0.79 TO 1.96
4	113	2.050	1.547	0.536	0.268	34.65	33.96	1.02 TO 2.07
5	113	2.510	1.739	0.633	0.283	36.39	31.90	1.18 TO 2.29
6	113	2.550	1.874	0.655	0.267	34.97	27.98	1.35 TO 2.39
7	113	1.780	1.861	0.599	0.226	32.22	23.87	1.41 TO 2.30
8	113	0.400	1.678	0.758	0.268	45.18	31.30	1.15 TO 2.20
9	113	0.220	1.516	0.860	0.286	56.71	37.05	0.95 TO 2.07
10	113	0.180	1.382	0.914	0.289	66.12	40.98	0.81 TO 1.94
11	113	0.120	1.268	0.947	0.285	74.71	44.15	0.70 TO 1.82
12	113	0.700	1.220	0.918	0.265	75.20	42.55	0.70 TO 1.74
13	113	0.850	1.192	0.885	0.245	74.23	40.35	0.71 TO 1.67
14	113	0.190	1.120	0.891	0.238	79.55	41.67	0.65 TO 1.58
15	113	0.110	1.053	0.897	0.231	85.23	43.13	0.59 TO 1.50
16	113	0.080	0.992	0.900	0.225	90.77	44.47	0.55 TO 1.43
17	113	0.360	0.955	0.885	0.214	92.71	44.07	0.53 TO 1.37
18	113	0.550	0.932	0.864	0.203	92.68	42.81	0.53 TO 1.33
19	113	0.670	0.918	0.842	0.193	91.66	41.21	0.54 TO 1.29

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	118	0.700	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	118	1.640	1.170	0.664	0.470	56.81	78.73	0.24 TO 2.09
3	118	1.660	1.333	0.548	0.316	41.14	46.55	0.71 TO 1.95
4	118	0.780	1.194	0.526	0.263	44.05	43.17	0.67 TO 1.71
5	118	0.400	1.035	0.578	0.258	55.80	48.91	0.52 TO 1.54
6	118	0.750	0.988	0.530	0.216	53.64	42.92	0.56 TO 1.41
7	118	1.250	1.025	0.493	0.186	48.15	35.67	0.65 TO 1.39
8	118	1.000	1.022	0.457	0.161	44.73	30.99	0.70 TO 1.33
9	118	1.130	1.034	0.429	0.143	41.50	27.11	0.75 TO 1.31
10	118	0.850	1.015	0.408	0.129	40.25	24.95	0.76 TO 1.26
11	118	0.670	0.984	0.401	0.121	40.80	24.11	0.74 TO 1.22
12	118	0.740	0.964	0.389	0.112	40.40	22.85	0.74 TO 1.18
13	118	0.700	0.943	0.380	0.105	40.26	21.89	0.73 TO 1.15
14	118	0.730	0.928	0.369	0.098	39.80	20.85	0.73 TO 1.12
15	118	0.490	0.899	0.373	0.096	41.55	21.03	0.71 TO 1.08
16	118	0.670	0.884	0.365	0.091	41.30	20.24	0.70 TO 1.06
17	118	1.160	0.901	0.360	0.087	39.97	19.00	0.72 TO 1.07
18	118	1.150	0.914	0.354	0.083	38.72	17.89	0.75 TO 1.07
19	118	2.320	0.988	0.471	0.108	47.69	21.44	0.77 TO 1.20
20	118	1.900	1.034	0.502	0.112	48.55	21.27	0.81 TO 1.25
21	118	1.680	1.065	0.509	0.111	47.82	20.45	0.84 TO 1.28
22	118	1.200	1.071	0.497	0.106	46.47	19.42	0.86 TO 1.27
23	118	2.020	1.112	0.525	0.109	47.20	19.29	0.89 TO 1.32
24	118	2.500	1.170	0.586	0.119	50.11	20.04	0.93 TO 1.40
25	118	1.260	1.173	0.574	0.114	48.93	19.18	0.94 TO 1.39
26	118	1.840	1.199	0.577	0.113	48.16	18.51	0.97 TO 1.42
27	118	1.760	1.220	0.576	0.110	47.26	17.82	1.00 TO 1.43
28	118	0.990	1.212	0.567	0.107	46.83	17.34	1.00 TO 1.42
29	118	0.490	1.187	0.573	0.106	48.29	17.57	0.97 TO 1.39
30	118	0.330	1.158	0.584	0.106	50.46	18.05	0.94 TO 1.36
31	118	0.320	1.131	0.594	0.106	52.51	18.48	0.92 TO 1.34
32	118	0.360	1.107	0.600	0.106	54.20	18.78	0.89 TO 1.31
33	118	0.510	1.089	0.599	0.104	55.07	18.79	0.88 TO 1.29
34	118	0.570	1.074	0.597	0.102	55.62	18.69	0.87 TO 1.27
35	118	0.570	1.059	0.594	0.100	56.12	18.59	0.86 TO 1.25
36	118	0.680	1.049	0.589	0.098	56.19	18.35	0.85 TO 1.24
37	118	0.640	1.038	0.585	0.096	56.37	18.16	0.84 TO 1.22

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	120	2.180	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	120	2.310	2.245	0.091	0.064	4.09	5.67	2.11 TO 2.37
3	120	2.130	2.206	0.092	0.053	4.21	4.76	2.10 TO 2.31
4	120	1.290	1.977	0.464	0.232	23.49	23.02	1.52 TO 2.43
5	120	0.620	1.705	0.728	0.325	42.69	37.42	1.06 TO 2.34
6	120	0.530	1.509	0.809	0.330	53.59	42.88	0.86 TO 2.15
7	120	0.380	1.348	0.853	0.322	63.27	46.87	0.71 TO 1.98
8	120	0.520	1.244	0.842	0.297	67.67	46.89	0.66 TO 1.82
9	120	0.550	1.167	0.821	0.273	70.34	45.95	0.63 TO 1.70
10	120	0.380	1.088	0.813	0.257	74.70	46.30	0.58 TO 1.59
11	120	0.360	1.022	0.802	0.241	78.46	46.37	0.54 TO 1.49
12	120	0.530	0.981	0.778	0.224	79.28	44.85	0.54 TO 1.42

PROGRESSIVE SAMPLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON EAST PROSPECT

N	DH NO	ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	123	1.160	0.000	0.000	0.000	0.00	0.00	0.00 TO 0.00
2	123	1.640	1.400	0.339	0.239	24.24	33.59	0.92 TO 1.87
3	123	1.430	1.410	0.240	0.138	17.06	19.31	1.13 TO 1.68
4	123	1.670	1.474	0.235	0.117	15.97	15.65	1.24 TO 1.70
5	123	2.770	1.733	0.614	0.274	35.41	31.03	1.19 TO 2.27
6	123	1.340	1.668	0.572	0.233	34.30	27.44	1.21 TO 2.12
7	123	0.860	1.552	0.605	0.228	38.97	28.87	1.10 TO 2.00
8	123	0.400	1.408	0.692	0.244	49.18	34.08	0.92 TO 1.88
9	123	0.110	1.264	0.779	0.259	61.64	40.27	0.75 TO 1.77
10	123	0.360	1.173	0.788	0.249	67.16	41.63	0.68 TO 1.66
11	123	0.320	1.096	0.791	0.238	72.16	42.64	0.62 TO 1.56
12	123	0.410	1.039	0.779	0.225	75.05	42.46	0.59 TO 1.48
13	123	1.340	1.062	0.751	0.208	70.72	38.44	0.65 TO 1.47
14	123	1.870	1.119	0.753	0.201	67.27	35.24	0.72 TO 1.51

W.E.S.
FEB 14 1968

J.H.C.
JAN 25 1968

Air Mail

January 23, 1968

Mr. Carl E. Williams
Tucson Office

Sacaton, Arizona - Analyses

Dear Carl:

I am happy to acknowledge receipt of your letter of January 17th transmitting the computer data on the drill holes in the two Sacaton ore bodies and I am glad to hear that you will keep up-to-date with the drilling data. However there is always the geologic problem of where to draw the boundaries for the ore zone, and I trust you will keep in touch with Mr. Courtright on this subject. I like to make use of statistics to test the precision in sampling data but the statistics would be meaningless without geologic control.

With best wishes,

Sincerely,

John J. Collins

CC;CENelson
JHCourtright

AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

January 17, 1968

J.H.C.

JAN 17 1968

16A.3.19B
Aa ~~19 8 18~~

W.E.S.

JAN 18 1968

Mr. John J. Collins, Chief Geologist
American Smelting and Refining Company
120 Broadway
New York, New York 10005

Dear John:

This letter describes the grouping of the Sacaton drill hole data and the subsequent statistical analysis performed on the different groups.

As you are aware, there is a shortage of drill hole data on the property. Within the two proposed minable areas there are only two drill holes each, DH 10 and DH 13 in the West ore body and DH 37 and DH 49 in the East ore body. As a result, I composited each of the four drill holes, within the mine areas, into 10-ft assay intervals for (1) total Cu, (2) oxides, (3) chalcocite, and (4) chalcopyrite, as per your suggestion. A computer listing of the composited data is attached.

You will note that the oxides are negligible because they were not included in the ore zones; therefore, an analysis was not made of them. Chalcopyrite was prominent only in drill hole No. 13; therefore, an analysis was made of (1) total copper, (2) chalcocite, and (3) chalcopyrite for that hole only. The remaining three holes were analyzed for total copper only.

After each hole was analyzed for variation within itself, I then grouped the assay intervals by ore bodies and ran an analysis of both ore bodies in terms of total copper only.

All of the statistical analysis computer output is attached.

When the new drilling program gets underway at the Sacaton property, we have proposed to punch the drill hole data on cards as they are received and therefore do the compositing by computer and in turn run a progressive statistical analysis of the program.

Sincerely,

Carl E. Williams

CEW:dh
Attachment

cc: TASHEDDEN w/attach
RENTEEN "
JHCOURTRIGHT "

SACATON PROJECT COMPOSITE ASSAY PROGRAM. 1

DDH	EAST	NORTH	ELEV	TOTAL CU	OXIDE	CU2S	CUFES2
49	2770.00	1560.00	-210.0	2.15	0.00	2.15	0.00
49	2770.00	1560.00	-220.0	0.62	0.00	0.62	0.00
49	2770.00	1560.00	-230.0	0.01	0.00	0.01	0.00
49	2770.00	1560.00	-240.0	0.02	0.00	0.02	0.00
49	2770.00	1560.00	-250.0	0.02	0.00	0.02	0.00
49	2770.00	1560.00	-260.0	0.01	0.00	0.01	0.00
49	2770.00	1560.00	-270.0	0.04	0.00	0.04	0.00
49	2770.00	1560.00	-280.0	0.59	0.00	0.59	0.00
49	2770.00	1560.00	-290.0	1.91	0.00	1.91	0.00
49	2770.00	1560.00	-300.0	2.62	0.00	2.62	0.00
49	2770.00	1560.00	-310.0	3.20	0.00	3.20	0.00
49	2770.00	1560.00	-320.0	3.17	0.00	3.17	0.00
49	2770.00	1560.00	-330.0	1.91	0.00	1.91	0.00
49	2770.00	1560.00	-340.0	0.97	0.00	0.97	0.00
49	2770.00	1560.00	-350.0	1.97	0.00	1.97	0.00
49	2770.00	1560.00	-360.0	1.43	0.00	1.43	0.00
49	2770.00	1560.00	-370.0	2.44	0.00	2.44	0.00
49	2770.00	1560.00	-380.0	2.50	0.00	2.50	0.00
37	2575.00	2140.00	-70.0	1.75	0.00	1.75	0.00
37	2575.00	2140.00	-80.0	2.11	0.00	2.11	0.00
37	2575.00	2140.00	-90.0	2.15	0.00	2.15	0.00
37	2575.00	2140.00	-100.0	1.01	0.00	1.01	0.00
37	2575.00	2140.00	-110.0	1.63	0.00	1.63	0.00
37	2575.00	2140.00	-120.0	1.40	0.00	1.40	0.00
37	2575.00	2140.00	-130.0	1.45	0.00	1.45	0.00
37	2575.00	2140.00	-140.0	1.55	0.00	1.55	0.00
37	2575.00	2140.00	-150.0	1.00	0.00	1.00	0.00
37	2575.00	2140.00	-160.0	0.67	0.00	0.67	0.00
37	2575.00	2140.00	-170.0	0.72	0.00	0.72	0.00
37	2575.00	2140.00	-180.0	1.66	0.00	1.66	0.00
37	2575.00	2140.00	-190.0	2.11	0.00	2.11	0.00
37	2575.00	2140.00	-200.0	1.40	0.00	1.40	0.00
37	2575.00	2140.00	-210.0	1.28	0.00	1.28	0.00
37	2575.00	2140.00	-220.0	1.16	0.00	1.16	0.00
37	2575.00	2140.00	-230.0	1.20	0.00	1.20	0.00
37	2575.00	2140.00	-240.0	1.26	0.00	1.26	0.00
37	2575.00	2140.00	-250.0	0.94	0.00	0.94	0.00
37	2575.00	2140.00	-260.0	0.76	0.00	0.76	0.00
37	2575.00	2140.00	-270.0	0.60	0.00	0.60	0.00
37	2575.00	2140.00	-280.0	0.73	0.00	0.73	0.00
37	2575.00	2140.00	-290.0	0.52	0.00	0.52	0.00
37	2575.00	2140.00	-300.0	0.48	0.00	0.48	0.00
37	2575.00	2140.00	-310.0	0.94	0.00	0.94	0.00
37	2575.00	2140.00	-320.0	1.20	0.00	1.20	0.00
37	2575.00	2140.00	-330.0	0.54	0.00	0.54	0.00
37	2575.00	2140.00	-340.0	0.55	0.00	0.55	0.00
37	2575.00	2140.00	-350.0	0.59	0.00	0.59	0.00

SACATON PROJECT COMPOSITE ASSAY PROGRAM. 2

DDH	EAST	NORTH	ELEV	TOTAL CU	OXIDE	CU2S	CUFES2
13	22558.56	22544.82	990.0	0.66	0.00	0.66	0.00
13	22558.56	22544.82	980.0	0.93	0.00	0.93	0.00
13	22558.56	22544.82	970.0	0.88	0.00	0.88	0.00
13	22558.56	22544.82	960.0	1.03	0.00	1.03	0.00
13	22558.56	22544.82	950.0	0.94	0.00	0.94	0.00
13	22558.56	22544.82	940.0	0.53	0.07	0.46	0.00
13	22558.56	22544.82	930.0	0.79	0.29	0.50	0.00
13	22558.56	22544.82	920.0	0.48	0.23	0.25	0.00
13	22558.56	22544.82	910.0	2.53	0.13	2.40	0.00
13	22558.56	22544.82	900.0	4.86	0.11	4.75	0.00
13	22558.56	22544.82	890.0	2.09	0.04	2.04	0.00
13	22558.56	22544.82	880.0	0.63	0.00	0.55	0.07
13	22558.56	22544.82	870.0	0.49	0.00	0.00	0.49
13	22558.56	22544.82	860.0	0.45	0.00	0.00	0.45
13	22558.56	22544.82	850.0	0.82	0.00	0.00	0.82
13	22558.56	22544.82	840.0	0.82	0.00	0.00	0.82
13	22558.56	22544.82	830.0	0.58	0.00	0.00	0.58
13	22558.56	22544.82	820.0	0.68	0.00	0.00	0.68
13	22558.56	22544.82	810.0	0.66	0.00	0.00	0.66
13	22558.56	22544.82	800.0	0.61	0.00	0.00	0.61
13	22558.56	22544.82	790.0	0.89	0.00	0.00	0.89
13	22558.56	22544.82	780.0	0.53	0.00	0.00	0.53
13	22558.56	22544.82	770.0	0.59	0.00	0.00	0.59
13	22558.56	22544.82	760.0	0.50	0.00	0.00	0.50
13	22558.56	22544.82	750.0	0.37	0.00	0.00	0.37
13	22558.56	22544.82	740.0	0.38	0.00	0.00	0.38
13	22558.56	22544.82	730.0	0.34	0.00	0.00	0.34
13	22558.56	22544.82	720.0	0.17	0.00	0.00	0.17
10	22013.99	22534.13	1080.0	1.29	0.00	1.29	0.00
10	22013.99	22534.13	1070.0	2.27	0.00	2.27	0.00
10	22013.99	22534.13	1060.0	3.31	0.00	3.31	0.00
10	22013.99	22534.13	1050.0	2.21	0.00	2.21	0.00
10	22013.99	22534.13	1040.0	1.22	0.00	1.22	0.00
10	22013.99	22534.13	1030.0	0.89	0.00	0.89	0.00
10	22013.99	22534.13	1020.0	1.10	0.00	1.10	0.00
10	22013.99	22534.13	1010.0	0.58	0.00	0.58	0.00
10	22013.99	22534.13	1000.0	0.75	0.00	0.75	0.00
10	22013.99	22534.13	990.0	1.88	0.00	1.88	0.00
10	22013.99	22534.13	980.0	2.53	0.00	2.53	0.00
10	22013.99	22534.13	970.0	1.83	0.00	1.83	0.00
10	22013.99	22534.13	960.0	0.93	0.00	0.93	0.00
10	22013.99	22534.13	950.0	0.71	0.00	0.71	0.00
10	22013.99	22534.13	940.0	0.50	0.00	0.50	0.00
10	22013.99	22534.13	930.0	0.46	0.00	0.46	0.00
10	22013.99	22534.13	920.0	0.60	0.00	0.60	0.00
10	22013.99	22534.13	910.0	0.69	0.00	0.69	0.00

DH NO. 10

PROGRESSIVE DRILL HOLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	ELEV	T. CU ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	1070.	2.27	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	1060.	3.31	2.79	0.73	0.51	26.35	36.53	1.77 TO 3.80
3	1050.	2.21	2.59	0.61	0.35	23.81	26.95	1.89 TO 3.29
4	1040.	1.22	2.25	0.85	0.42	37.90	37.14	1.41 TO 3.08
5	1030.	0.89	1.97	0.95	0.42	48.38	42.41	1.14 TO 2.81
6	1020.	1.10	1.83	0.92	0.37	50.68	40.55	1.08 TO 2.57
7	1010.	0.58	1.65	0.97	0.36	58.72	43.50	0.93 TO 2.37
8	1000.	0.75	1.54	0.95	0.33	61.93	42.92	0.87 TO 2.20
9	990.	1.88	1.57	0.90	0.30	57.00	37.24	0.99 TO 2.16
10	980.	2.53	1.67	0.90	0.28	53.78	33.33	1.11 TO 2.23
11	970.	1.83	1.68	0.85	0.25	50.67	29.94	1.18 TO 2.19
12	960.	0.93	1.62	0.84	0.24	51.96	29.40	1.14 TO 2.10
13	950.	0.71	1.55	0.84	0.23	54.50	29.63	1.09 TO 2.01
14	940.	0.50	1.47	0.86	0.23	58.24	30.50	1.02 TO 1.93
15	930.	0.46	1.41	0.87	0.22	61.71	31.22	0.97 TO 1.85
16	920.	0.60	1.36	0.86	0.21	63.61	31.16	0.93 TO 1.78

DH NO. 13

PROGRESSIVE DRILL HOLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	ELEV	T. CU ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	980.	0.93	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	970.	0.88	0.90	0.03	0.02	3.90	5.41	0.85 TO 0.95
3	960.	1.03	0.94	0.07	0.04	8.06	9.12	0.86 TO 1.03
4	950.	0.94	0.94	0.06	0.03	6.60	6.47	0.88 TO 1.00
5	940.	0.53	0.86	0.19	0.08	22.42	19.65	0.69 TO 1.03
6	930.	0.79	0.84	0.17	0.07	20.63	16.51	0.70 TO 0.99
7	920.	0.48	0.79	0.21	0.08	26.66	19.75	0.63 TO 0.95
8	910.	2.53	1.01	0.64	0.22	63.47	43.98	0.56 TO 1.45
9	900.	4.86	1.44	1.41	0.47	98.28	64.21	0.51 TO 2.36
10	890.	2.09	1.50	1.35	0.42	89.70	55.60	0.66 TO 2.34
11	880.	0.63	1.42	1.30	0.39	91.74	54.21	0.65 TO 2.19
12	850.	0.82	1.37	1.25	0.36	91.57	51.81	0.66 TO 2.08
13	860.	0.45	1.30	1.23	0.34	94.53	51.39	0.63 TO 1.97
14	870.	0.49	1.24	1.20	0.32	96.65	50.63	0.61 TO 1.87
15	840.	0.82	1.21	1.16	0.30	95.74	48.45	0.62 TO 1.80
16	830.	0.58	1.17	1.13	0.28	96.58	47.32	0.62 TO 1.73
17	820.	0.68	1.14	1.10	0.26	96.47	45.86	0.62 TO 1.67
18	810.	0.66	1.12	1.08	0.25	96.40	44.53	0.62 TO 1.62
19	800.	0.61	1.09	1.05	0.24	96.59	43.43	0.61 TO 1.57
20	790.	0.89	1.08	1.03	0.23	95.00	41.63	0.63 TO 1.53
21	780.	0.53	1.05	1.01	0.22	95.59	40.88	0.62 TO 1.49
22	770.	0.59	1.03	0.99	0.21	95.68	39.98	0.62 TO 1.45
23	760.	0.50	1.01	0.97	0.20	96.27	39.34	0.61 TO 1.41
24	750.	0.37	0.98	0.96	0.19	97.63	39.06	0.60 TO 1.37
25	740.	0.38	0.96	0.95	0.19	98.79	38.72	0.58 TO 1.33
26	730.	0.34	0.93	0.93	0.18	100.11	38.48	0.57 TO 1.29

DH NO. 13

PROGRESSIVE DRILL HOLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	ELEV	CU2 S ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	980.	0.93	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	970.	0.88	0.90	0.03	0.02	3.90	5.41	0.85 TO 0.95
3	960.	1.03	0.94	0.07	0.04	8.06	9.12	0.86 TO 1.03
4	950.	0.94	0.94	0.06	0.03	6.60	6.47	0.88 TO 1.00
5	940.	0.46	0.84	0.22	0.09	26.36	23.10	0.65 TO 1.04
6	930.	0.50	0.78	0.24	0.10	31.04	24.84	0.59 TO 0.98
7	920.	0.25	0.71	0.30	0.11	42.50	31.48	0.48 TO 0.93
8	910.	2.40	0.92	0.65	0.23	71.35	49.44	0.46 TO 1.38
9	900.	4.75	1.34	1.41	0.47	105.02	68.61	0.42 TO 2.27
10	890.	2.04	1.41	1.35	0.42	95.44	59.15	0.57 TO 2.25
11	880.	0.55	1.33	1.31	0.39	97.85	57.82	0.56 TO 2.11

DH NO. 13

PROGRESSIVE DRILL HOLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	ELEV	CUFES2 ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	850.	0.82	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	860.	0.45	0.63	0.26	0.18	41.20	57.10	0.27 TO 0.99
3	870.	0.49	0.58	0.20	0.11	34.61	39.16	0.35 TO 0.81
4	840.	0.82	0.64	0.20	0.10	31.43	30.80	0.44 TO 0.84
5	830.	0.58	0.63	0.17	0.07	28.15	24.68	0.47 TO 0.78
6	820.	0.68	0.63	0.16	0.06	25.05	20.05	0.51 TO 0.76
7	810.	0.66	0.64	0.14	0.05	22.80	16.89	0.53 TO 0.75
8	800.	0.61	0.63	0.13	0.04	21.32	14.77	0.54 TO 0.73
9	790.	0.89	0.66	0.15	0.05	22.87	14.94	0.56 TO 0.76
10	780.	0.53	0.65	0.15	0.04	22.98	14.24	0.55 TO 0.74
11	770.	0.59	0.64	0.14	0.04	22.19	13.11	0.56 TO 0.73
12	760.	0.50	0.63	0.14	0.04	22.58	12.78	0.55 TO 0.71
13	750.	0.37	0.61	0.15	0.04	25.34	13.77	0.52 TO 0.69
14	740.	0.38	0.59	0.16	0.04	27.13	14.21	0.51 TO 0.68
15	730.	0.34	0.58	0.16	0.04	29.26	14.81	0.49 TO 0.66

DH NO. 37

PROGRESSIVE DRILL HOLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	ELEV	T. CU ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	-80.	2.11	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	-90.	2.15	2.13	0.02	0.01	1.32	1.83	2.09 TO 2.16
3	-100.	1.01	1.75	0.64	0.37	36.82	41.67	1.02 TO 2.48
4	-110.	1.63	1.72	0.53	0.26	30.84	30.22	1.20 TO 2.24
5	-120.	1.40	1.65	0.48	0.21	29.10	25.51	1.23 TO 2.08
6	-130.	1.45	1.62	0.44	0.17	27.10	21.69	1.27 TO 1.97
7	-140.	1.55	1.61	0.40	0.15	24.97	18.50	1.31 TO 1.91
8	-150.	1.00	1.53	0.43	0.15	28.08	19.46	1.23 TO 1.83
9	-160.	0.67	1.44	0.49	0.16	34.47	22.52	1.11 TO 1.76
10	-170.	0.72	1.36	0.52	0.16	38.05	23.58	1.04 TO 1.69
11	-180.	1.66	1.39	0.50	0.15	35.96	21.25	1.09 TO 1.69
12	-190.	2.11	1.45	0.52	0.15	35.81	20.26	1.16 TO 1.74
13	-200.	1.40	1.45	0.49	0.13	34.40	18.70	1.17 TO 1.72
14	-210.	1.28	1.43	0.48	0.12	33.48	17.54	1.18 TO 1.69
15	-220.	1.16	1.41	0.46	0.12	33.08	16.74	1.18 TO 1.65
16	-230.	1.20	1.40	0.45	0.11	32.50	15.92	1.18 TO 1.63
17	-240.	1.26	1.39	0.44	0.10	31.77	15.10	1.18 TO 1.60
18	-250.	0.94	1.37	0.44	0.10	32.36	14.95	1.16 TO 1.57
19	-260.	0.76	1.33	0.45	0.10	33.87	15.23	1.13 TO 1.54
20	-270.	0.60	1.30	0.47	0.10	36.20	15.86	1.09 TO 1.50
21	-280.	0.73	1.27	0.47	0.10	37.35	15.97	1.07 TO 1.47
22	-290.	0.52	1.24	0.49	0.10	39.64	16.56	1.03 TO 1.44
23	-300.	0.48	1.20	0.50	0.10	41.90	17.12	1.00 TO 1.41
24	-310.	0.94	1.19	0.49	0.10	41.62	16.65	0.99 TO 1.39
25	-320.	1.20	1.19	0.48	0.09	40.74	15.97	1.00 TO 1.38
26	-330.	0.54	1.17	0.49	0.09	42.23	16.23	0.98 TO 1.36
27	-340.	0.55	1.14	0.49	0.09	43.51	16.41	0.96 TO 1.33
28	-350.	0.59	1.12	0.50	0.09	44.44	16.46	0.94 TO 1.31

DH NO. 49

PROGRESSIVE DRILL HOLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	ELEV	T. CU ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	-220.	0.62	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	-230.	0.01	0.31	0.43	0.30	136.93	189.77	-0.28 TO 0.91
3	-240.	0.02	0.21	0.34	0.20	161.23	182.44	-0.17 TO 0.61
4	-250.	0.02	0.16	0.30	0.15	180.12	176.51	-0.12 TO 0.46
5	-260.	0.01	0.13	0.27	0.12	198.97	174.41	-0.10 TO 0.37
6	-270.	0.04	0.11	0.24	0.10	204.32	163.49	-0.07 TO 0.31
7	-280.	0.59	0.18	0.28	0.10	152.69	113.11	-0.02 TO 0.39
8	-290.	1.91	0.40	0.66	0.23	164.99	114.33	-0.05 TO 0.86
9	-300.	2.62	0.64	0.96	0.32	148.79	97.21	0.01 TO 1.27
10	-310.	3.20	0.90	1.21	0.38	134.55	83.39	0.15 TO 1.65
11	-320.	3.17	1.10	1.34	0.40	120.81	71.39	0.31 TO 1.90
12	-330.	1.91	1.17	1.29	0.37	110.42	62.47	0.44 TO 1.91
13	-340.	0.97	1.16	1.24	0.34	107.28	58.31	0.48 TO 1.83
14	-350.	1.97	1.21	1.21	0.32	99.77	52.26	0.58 TO 1.85
15	-360.	1.43	1.23	1.17	0.30	95.15	48.15	0.63 TO 1.82
16	-370.	2.44	1.30	1.17	0.29	89.64	43.92	0.73 TO 1.88

ORE BODY WEST

PROGRESSIVE DRILL HOLE STATISTICS FOR 95.0 PERCENT CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	DH NO	T. CU ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	10	2.27	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	10	3.31	2.79	0.73	0.51	26.35	36.53	1.77 TO 3.80
3	10	2.21	2.59	0.61	0.35	23.81	26.95	1.89 TO 3.29
4	10	1.22	2.25	0.85	0.42	37.90	37.14	1.41 TO 3.08
5	10	0.89	1.97	0.95	0.42	48.38	42.41	1.14 TO 2.81
6	10	1.10	1.83	0.92	0.37	50.68	40.55	1.08 TO 2.57
7	10	0.58	1.65	0.97	0.36	58.72	43.50	0.93 TO 2.37
8	10	0.75	1.54	0.95	0.33	61.93	42.92	0.87 TO 2.20
9	10	1.88	1.57	0.90	0.30	57.00	37.24	0.99 TO 2.16
10	10	2.53	1.67	0.90	0.28	53.78	33.33	1.11 TO 2.23
11	10	1.83	1.68	0.85	0.25	50.67	29.94	1.18 TO 2.19
12	10	0.93	1.62	0.84	0.24	51.96	29.40	1.14 TO 2.10
13	10	0.71	1.55	0.84	0.23	54.50	29.63	1.09 TO 2.01
14	10	0.50	1.47	0.86	0.23	58.24	30.50	1.02 TO 1.93
15	10	0.46	1.41	0.87	0.22	61.71	31.22	0.97 TO 1.85
16	10	0.60	1.36	0.86	0.21	63.61	31.16	0.93 TO 1.78
17	13	0.82	1.32	0.84	0.20	63.83	30.34	0.92 TO 1.73
18	13	0.45	1.27	0.84	0.20	66.29	30.62	0.88 TO 1.67
19	13	0.49	1.23	0.84	0.19	68.17	30.65	0.85 TO 1.61
20	13	0.82	1.21	0.82	0.18	67.93	29.77	0.85 TO 1.58
21	13	0.58	1.18	0.81	0.17	68.91	29.47	0.83 TO 1.53
22	13	0.68	1.16	0.80	0.17	69.21	28.92	0.82 TO 1.50
23	13	0.66	1.14	0.79	0.16	69.52	28.41	0.81 TO 1.46
24	13	0.61	1.11	0.78	0.16	70.02	28.01	0.80 TO 1.43
25	13	0.89	1.11	0.76	0.15	69.23	27.14	0.80 TO 1.41
26	13	0.53	1.08	0.76	0.14	70.01	26.91	0.79 TO 1.38
27	13	0.59	1.06	0.75	0.14	70.41	26.56	0.78 TO 1.35
28	13	0.50	1.04	0.74	0.14	71.18	26.36	0.77 TO 1.32
29	13	0.37	1.02	0.74	0.13	72.54	26.40	0.75 TO 1.29
30	13	0.38	1.00	0.74	0.13	73.75	26.39	0.73 TO 1.26
31	13	0.34	0.98	0.73	0.13	75.08	26.43	0.72 TO 1.24
32	13	0.93	0.98	0.72	0.12	73.99	25.63	0.72 TO 1.23
33	13	0.88	0.97	0.71	0.12	73.08	24.93	0.73 TO 1.22
34	13	1.03	0.97	0.70	0.12	71.85	24.15	0.74 TO 1.21
35	13	0.94	0.97	0.69	0.11	70.88	23.48	0.74 TO 1.20
36	13	0.53	0.96	0.68	0.11	71.18	23.25	0.74 TO 1.19
37	13	0.79	0.96	0.67	0.11	70.60	22.74	0.74 TO 1.18
38	13	0.48	0.94	0.67	0.10	71.04	22.59	0.73 TO 1.16
39	13	2.53	0.98	0.71	0.11	71.94	22.57	0.76 TO 1.21
40	13	4.86	1.08	0.93	0.14	85.78	26.58	0.79 TO 1.37
41	13	2.09	1.11	0.93	0.14	84.02	25.72	0.82 TO 1.39
42	13	0.63	1.09	0.92	0.14	84.13	25.44	0.81 TO 1.37

PROGRESSIVE DRILL HO[illegible] STATISTICS FOR 95.0 PERC[illegible]T CONFIDENCE LIMITS

SACATON PROJECT ASSAY DATA

N	DH NO	T. CU ASSAY	MEAN	STD DEV	S.E.MEAN	COEF.VAR.	PCT VAR	CONF. INTER.
1	49	0.62	0.00	0.00	0.00	0.00	0.00	0.00 TO 0.00
2	49	0.01	0.31	0.43	0.30	136.93	189.77	-0.28 TO 0.91
3	49	0.02	0.21	0.34	0.20	161.23	182.44	-0.17 TO 0.61
4	49	0.02	0.16	0.30	0.15	180.12	176.51	-0.12 TO 0.46
5	49	0.01	0.13	0.27	0.12	198.97	174.41	-0.10 TO 0.37
6	49	0.04	0.11	0.24	0.10	204.32	163.49	-0.07 TO 0.31
7	49	0.59	0.18	0.28	0.10	152.69	113.11	-0.02 TO 0.39
8	49	1.91	0.40	0.66	0.23	164.99	114.33	-0.05 TO 0.86
9	49	2.62	0.64	0.96	0.32	148.79	97.21	0.01 TO 1.27
10	49	3.20	0.90	1.21	0.38	134.55	83.39	0.15 TO 1.65
11	49	3.17	1.10	1.34	0.40	120.81	71.39	0.31 TO 1.90
12	49	1.91	1.17	1.29	0.37	110.42	62.47	0.44 TO 1.91
13	49	0.97	1.16	1.24	0.34	107.28	58.31	0.48 TO 1.83
14	49	1.97	1.21	1.21	0.32	99.77	52.26	0.58 TO 1.85
15	49	1.43	1.23	1.17	0.30	95.15	48.15	0.63 TO 1.82
16	49	2.44	1.30	1.17	0.29	89.64	43.92	0.73 TO 1.88
17	37	2.11	1.35	1.15	0.27	84.99	40.40	0.80 TO 1.90
18	37	2.15	1.39	1.13	0.26	80.96	37.40	0.87 TO 1.92
19	37	1.01	1.37	1.10	0.25	80.12	36.02	0.88 TO 1.87
20	37	1.63	1.39	1.07	0.24	77.38	33.91	0.91 TO 1.86
21	37	1.40	1.39	1.04	0.22	75.40	32.25	0.94 TO 1.84
22	37	1.45	1.39	1.02	0.21	73.45	30.69	0.96 TO 1.82
23	37	1.55	1.40	1.00	0.20	71.45	29.20	0.99 TO 1.81
24	37	1.00	1.38	0.98	0.20	70.97	28.39	0.99 TO 1.77
25	37	0.67	1.35	0.97	0.19	71.72	28.11	0.97 TO 1.73
26	37	0.72	1.33	0.96	0.18	72.17	27.74	0.96 TO 1.70
27	37	1.66	1.34	0.94	0.18	70.29	26.51	0.98 TO 1.69
28	37	2.11	1.37	0.93	0.17	68.42	25.34	1.02 TO 1.71
29	37	1.40	1.37	0.92	0.17	67.14	24.43	1.03 TO 1.70
30	37	1.28	1.36	0.90	0.16	66.13	23.66	1.04 TO 1.69
31	37	1.16	1.36	0.89	0.16	65.40	23.02	1.04 TO 1.67
32	37	1.20	1.35	0.87	0.15	64.61	22.38	1.05 TO 1.66
33	37	1.26	1.35	0.86	0.15	63.74	21.74	1.05 TO 1.64
34	37	0.94	1.34	0.85	0.14	63.56	21.36	1.05 TO 1.62
35	37	0.76	1.32	0.84	0.14	63.83	21.15	1.04 TO 1.60
36	37	0.60	1.30	0.84	0.14	64.56	21.08	1.02 TO 1.58
37	37	0.73	1.28	0.83	0.13	64.84	20.89	1.02 TO 1.55
38	37	0.52	1.26	0.83	0.13	65.71	20.89	1.00 TO 1.53
39	37	0.48	1.24	0.83	0.13	66.67	20.92	0.98 TO 1.51
40	37	0.94	1.24	0.82	0.13	66.33	20.55	0.98 TO 1.49
41	37	1.20	1.24	0.81	0.12	65.55	20.06	0.99 TO 1.48
42	37	0.54	1.22	0.81	0.12	66.22	20.02	0.97 TO 1.46
43	37	0.55	1.20	0.80	0.12	66.82	19.97	0.96 TO 1.44
44	37	0.59	1.19	0.80	0.12	67.27	19.87	0.95 TO 1.43