ROSEBUD · SPECIFIC GRAVITY

60008475 - 60008479

60008178; 1454
4010

Table 15. - Bulk Density Results, East Zone Core Samples, Volume Displacement Method

ZONE	Hole No.	Intercept, ft.	Specific Gravity	Bulk Density, lb/cu. ft	Bulk Density, cu.ft./ton	Au	Ambient Moisture, Wt., pct.	Ag
EAST	RL-191C	625.4 - 625.9	2.60	162.2	12.3	.988	0.66	.64
	RL-191C	715.9 - 716.4	2.24	139.8	14.3	.719	0.84	1.85
	RL-198C	572.55 - 573.05	2.26	141.0	14.2	.593	1.41	1.08
	RL-198C	589.95 - 590.4	2.73	170.4	11.7	1.682	0.40	2.60
	RL-198C	596.9 - 597.35	2.09	130.4	15.3	.786	0.92	1.40
	RL-201C	590.2 - 590.625	2.23	139.2	14.4	.015	1.01	.09
	RL-201C	678.12 - 678.6	2.67	166.6	12.0	.581	0.34	.42
	RL-201C	690.9 - 691.3	2.44	152.3	13.1	.483	0.61	.48
	RL-206C	696.8 - 697.3	2.25	140.4	14.2	.102	0.76	7.22
	RL-206C	698.5 - 699	2.32	144.8	13.8	.102	0.82	7.22
	RL-206C	781.25 - 781.7	2.65	165.4	12.1	.215	0.75	1.56
	RL-207C	665.3 - 665.73	2.12	132.3	15.1	.074	1.37	.10
	RL-207C	774.6 - 775	2.40	149.8	13.4	.060	0.76	.17
	RL-243C	716.7 - 717.1	2.21	137.9	14.5	.015	1.74	.04
	RL-243C	748.3 - 748.75	2.40	149.8	13.4	.044	1.06	.13

Table 16. - Bulk Density Results, South Zone Core Samples, Volume Displacement Method

ZONE	Hole No.	Intercept, ft.	Specific Gravity	Bulk Density, lb/cu. ft	Bulk Density, cu.ft./ton	Au	Ambient Moisture, Wt., pct.	Ag
NORTH	RL-101C	1026.6 - 1027	2.67	166.6	12.0	.000	0.94	.00
SOUTH	RL-123C	547.3 - 547.8	2.38	148.5	13.5	1.591	0.46	6.76
SOUTH	RL-192C	488.4 - 488.75	2.45	152.9	13.1	.787	0.46	16.97
SOUTH	RL-193C	563.1 - 563.5	2.10	131.0	15.3	1.678	1.06	6.33
SOUTH	RL-195C	629.35 - 629.7	2.29	142.9	14.0	.086	0.70	.19
SOUTH	RL-196C	474 - 474.45	2.03	126.7	15.8	.038	1.23	.62
NORTH	RL-197C	860.15 - 860.5	2.14	133.5	15.0	.058	1.58	.12
NORTH	RL-197C	862.5 - 863	2.34	146.0	13.7	.058	1.00	.12
SOUTH	RL-208C	528 - 528.4	2.36	147.3	13.6	.457	1.04	8.49
SOUTH	RL-209C	461 - 461.4	2.34	146.0	13.7	.115	0.59	1.64
SOUTH	RL-209C	550 - 550.3	2.31	144.1	13.9	.463	0.68	.91
SOUTH	RL-210C	415 - 415.4	1.86	116.1	17.2	.301	2.09	3.25
SOUTH	RL-210C	425.5 - 425.95	2.48	154.8	12.9	.093	0.62	4.59

Table 4. - Bulk Density Measurements, Rosebud Core Samples

ZONE	Hole No.	Interval, ft	Specific Gravity	Bulk Density lb/ft³	Bulk Density ft³/ton	AU	AG
EAST	~~RL-89~~	1150.0 - 1150.3	2.86	178.5	11.2	.011	1.21
NORTH	~~RL-93~~	689.2 - 689.5	2.63	164.1	12.2	.000	.00
NORTH	~~RL-93~~	993.2 - 993.6	2.33	145.4	13.8	.360	.48
NORTH	~~RL-94~~	835.5 - 836.0	2.17	135.4	14.8	.002	.00
NORTH	~~RL-94~~	848.6 - 849.0	2.43	151.6	13.2	.028	.33
NORTH	~~RL-97~~	885.5 - 885.9	2.28	142.3	14.1	.062	.12
NORTH	~~RL-100~~	1019.6 - 1020.0	2.31	144.1	13.9	.105	117.5
NORTH	~~RL-106~~	1053.7 - 1054.0	2.12	132.3	15.1	.108	.00
SOUTH	~~RL-159~~	606.0 - 606.3	2.07	129.2	15.5	.331	.91

Table 5. - Head Assay Results and Head Grade Comparisons, Rosebud Core Composites

	Head Grade, oz/ton ore					
	RL-88C		RL-100C		RL-104C	
Determination Method	Au	Ag	Au	Ag	Au	Ag
Direct Assay: A	0.424	1.45	0.212	14.60	0.147	0.17
B	0.407	1.48	0.123	15.26*	0.201	0.17
C	0.382	1.59*	0.450*	13.01	0.139	0.11
D	--	--	0.239	12.64	--	--
E	--	--	0.197	13.14	--	--
F	--	--	0.237	11.79	--	--
Calc'd, Head Screen, 10M Feed	0.410	1.36	0.208	12.94	--	--
Calc'd, Gravity Test, 65M Feed	--	--	0.239	12.52	0.224*	0.30
Calc'd, Bottle Test, 10M Feed	0.419	1.30	0.201	13.38	--	--
Calc'd, Bottle Test, 200M Feed	0.486*	1.27	0.215	12.27	--	--
Calc'd, Mech. Agit. CN^- Test, 200 M Feed	--	--	0.203	13.24	0.179	0.38
Calc'd, Mech. Agit. CIL/CN^- Test, 200 M Feed	--	--	0.200	11.84	0.166	0.48*
Arithmetic Average	0.421	1.41	0.227	13.05	0.176	0.27
Maximum Deviation From Average	0.065	0.18	0.223	2.21	0.048	0.21
Precision, percent	86.6	88.7	50.4	85.5	78.6	56.3

* Maximum deviation occurred with this head grade determination.

The Rosebud composite did not respond well to beneficiation using conventional flotation methods. The cleaner concentrate was 3.6 percent of the feed weight, assayed 0.782 ounce gold and 18.98 ounce silver per ton, and represented gold and silver recoveries of 24.4 and 27.5 percent, respectively. Gold and silver concentration ratios for the cleaner concentrate were 6.8 to 1 and 7.7 to 1, respectively. A rougher concentrate would be 15.7 percent of the feed weight, would assay 0.266 ounce gold and 6.85 ounce silver per ton, and represent respective overall recoveries of 36.2 and 43.3 percent. The rougher tailing contained 0.087 ounce gold and 1.67 ounce silver per ton. The ground core composite contain excessive quantities of slimes (52.4 percent minus 325 mesh) which probably impeded flotation recovery.

BULK DENSITY MEASUREMENTS

A total of 11 select Rosebud core pieces were submitted separately by Kristen Kenner, LAC Minerals, for bulk density measurement. Core pieces were weighed as received, then were oven dried until no additional weight loss occurred. Dried core pieces were weighed, coated with acrylic enamel, re-weighed, and subjected to bulk density measurement. Bulk densities were determined using the volume displacement method, and were checked using the weight differential method. Bulk density results are provided in Table 1.

Table 1. - Bulk Density Measurements, Select Rosebud Core Samples

ZONE	Hole No.	Interval, ft.	Specific Gravity	Bulk Density, lb/ft³	Au	ft³/ton	Ag
SOUTH	RE-40	92.5-93	2.21	137.9	.001	14.5	.14
SOUTH	RE-40	263-263.5	2.04	127.3	.001	15.7	.00
SOUTH	RE-40	475.5-458 ? 457.5-458	2.24	139.8	0.105	14.3	1.77
SOUTH	RE-41	113-113.5	2.28	142.3	.000	14.1	.15
	RE-41	149-149.5	2.13	132.9	.002	15.0	.00
	RE-41	420-420.7	2.06	128.5	.179	15.6	1.56
	RE-41	432-432.5	2.15	134.2	.499	14.9	37.19
	RE-41	436-436.4	2.31	144.1	.041	13.9	.90
SOUTH	RE-55	400-400.5	2.31	144.1	.014	13.9	.00
	RE-55	515-515.5	2.19	136.7	.030	14.6	.05
	RE-55	684-684.5	2.52	157.2	.000	12.7	.00