

Courageous Lake Drill Results

The FAT deposit at Seabridge Gold's Courageous Lake project is located geologically in the Slave Province. The deposit's name is an acronym for its dominant rock type, Felsic Ash Tuff. This gold occurrence, hosted by Archean rocks, was formed in a rhyolite/dacite dome complex that measures about 2 kilometers along strike and about 800 meters of stratigraphic section in width. Although tuffaceous rocks are the most common in the deposit there are also clear intervals of clastic and chemical sedimentary rocks and a few late intrusives. In constructing the geological model for resource estimation, unique stratigraphic intervals were defined and labeled as ore domains 1 through 9 and domain 14. Distribution of gold within a domain and the surrounding rock is treated differently from other domains in resource modeling. Domains 3, 4 and 5 contain about 80% of the gold in the deposit.

Results of the last 21 holes and 4 wedged holes drilled this year at the FAT deposit are as follows (see news release dated November 23, 2010):

Drill Hole ID	Depth (meters)	From (meters)	To (meters)	Thickness (m)	Gold Grade (grams/tonne)	Ore Domain
CL-103	251.0	Drill hole abandoned before targeted zone				
CL-104	351.0	167.6	177.6	10	1.57	5
		205.5	213.0	7.5	3.57	4
		225.0	247.1	22.1	1.68	4
		292.1	299.5	7.4	1.98	4
		330.4	334.5	4.1	2.31	3
CL-105	879.0	300.5	306.5	6.0	1.07	29
		374.0	380.0	6.0	1.44	9
		715.5	726.5	11.0	1.39	4
		734.3	740.3	6.0	3.32	4
		823.2	828.0	4.8	1.57	3
		835.6	849.0	13.4	0.67	3
		857.0	867.5	10.5	1.63	3
CL-105W1	843.0	657.0	661.5	4.5	6.21	5
		669.0	676.5	7.5	2.48	4
		686.5	693.6	7.1	1.42	4
		708.5	716.0	7.5	2.57	4
		770.0	787.4	17.4	1.38	4/3
		796.8	801.0	4.2	1.96	3
CL-106	300.0	8.0	19.5	11.5	3.78	5
		31.5	58.5	27.0	2.34	5
		163.7	169.0	5.3	0.70	4
		188.5	201.0	12.5	0.64	4
		216.1	246.0	29.9	3.89	3
CL-107	484.0	281.2	292.5	11.3	0.82	4
CL-108	300.0	7.5	49.5	42.0	2.57	4
		73.5	124.5	51.0	1.58	4
		129.0	133.5	4.5	1.80	4
		144.0	150.0	6.0	1.45	3
		169.5	178.5	9.0	2.11	3
CL-109	201.0	13.5	20.3	6.8	3.08	4
		25.6	35.8	10.2	2.63	4
		43.7	92.3	48.6	2.71	4
		96.8	105.0	8.2	2.18	3
		123.0	126.0	3.0	3.86	3
		142.1	146.0	3.9	2.86	3
		185.5	189.5	4.0	2.14	2

CL-110	420.0	354.0	360.0	6.0	4.32	5
CL-111	300.0	178.6	217.6	39.0	2.11	4
		281.1	297.6	16.5	0.93	3
CL-112	471.0	339.2	342.0	2.8	5.43	4
		349.5	377.0	27.5	3.26	4
		390.0	418.5	28.5	1.81	4
		460.5	465.0	4.5	2.69	3
CL-113	493.0	53.4	74.3	20.9	3.49	3
		234.1	239.5	5.4	2.13	4
		245.5	250.3	4.8	2.62	4
		261.7	322.5	60.8	3.23	4
		396.4	438.0	41.6	6.62	4
		442.5	450.0	7.5	2.60	4
CL-114	501.0	457.5	466.5	9.0	3.74	4
		42.9	47.4	4.5	1.63	2
		133.0	148.0	15.0	5.91	2
		166.5	172.0	5.5	2.60	2
		203.1	229.1	26.0	1.61	3
		252.5	261.8	9.3	2.65	3
		268.5	300.1	31.6	1.76	4
		369.6	382.5	12.9	2.43	4
387.0	398.6	11.6	1.57	4		
CL-115	501.0	105.6	118.5	12.9	3.26	3
CL-116	513.0	409.6	418.6	9.0	0.63	4
CL-117	877.0	605.0	607.5	2.5	6.97	5
		670.0	707.5	37.5	3.40	4
		712.0	719.5	7.5	0.88	4
		727.0	733.3	6.3	3.33	4
		840.0	856.5	16.5	2.92	3
CL-117W1	746.5	574.5	579.0	4.5	1.91	5
		600.0	606.0	6.0	2.18	5
		673.0	698.5	25.5	5.04	4
		704.5	710.5	6.0	2.20	4
		724.6	729.0	4.4	3.28	4
CL-117W2	870.0	597.3	609.6	12.3	2.27	5
		668.4	699.0	30.6	6.06	4
		705.0	714.0	9.0	1.96	4
		726.0	730.5	4.5	2.49	4
		842.2	859.7	17.5	1.85	3
CL-118	918.0	609.0	621.8	12.8	0.67	9
		701.5	706.5	5.0	1.02	5
		774.8	794.0	19.2	2.35	5
		819.0	828.7	9.7	1.51	4
		852.0	859.5	7.5	3.43	4
		885.5	914.9	29.4	3.69	4
CL-118W1	909.5	753.0	757.5	4.5	6.81	4
		762.0	799.5	37.5	2.88	4
		865.5	877.5	12.0	1.40	3
CL-119	501.0	79.2	109.2	30.0	3.41	5
		131.6	163.8	32.2	4.59	5
CL-120	351.0	201.0	205.5	4.5	1.99	4
		214.5	225.0	10.5	1.47	4
		234.0	242.5	8.5	7.64	4

		256.7	275.1	18.4	2.41	4
		286.0	291.0	5.0	5.98	4
		333.4	349.1	15.7	4.91	3
CL-121	499.5	88.7	93.5	4.8	1.92	2
		104.0	112.5	8.5	1.15	2
		130.5	136.5	6.0	3.72	2
		142.5	153.0	10.5	1.13	2
		210.7	215.7	5.0	2.24	2
		331.5	337.8	6.3	1.28	1
		345.2	352.5	7.3	0.86	1
		357.5	363.5	6.0	0.74	1
CL-122	462.0	16.5	25.0	8.5	1.74	3
		47.6	59.3	11.7	1.91	3
		183.8	188.0	4.2	8.34	4
		201.6	221.0	19.4	3.15	4
		228.0	257.0	29.0	3.30	4
		324.7	329.7	5.0	3.08	5
		339.7	345.8	6.1	4.17	5
		414.7	419.2	4.5	2.73	6
CL-123	300.0	100.5	110.5	10.0	1.94	4
		119.8	130.8	11.0	6.95	4
		145.5	156.0	10.5	2.28	4
		169.5	178.5	9.0	1.88	4
		189.6	220.8	31.2	5.77	3
		226.5	231.0	4.5	3.69	3
		235.5	261.7	26.2	2.44	3
		274.5	288.0	13.5	2.48	3
		294.0	300.0	6.0	2.39	2

True thickness of the above reported drill hole intercepts are approximately 85-90% of the reported interval.

Drill Hole Descriptions:

CL-103: Drilled at an azimuth of 90° and an inclination of minus 62° and designed to upgrade blocks in domain 4 and the dip projections of domain 6. This hole was terminated at 251 meters, short of the target due to a severe deviation in inclination.

CL-104: Drilled at an azimuth of 90° and an inclination of minus 52° and designed to fill-in the projection of domain 5 and up-grade blocks in domain 4. The 351 meter hole encountered nearly continuous lapilli tuff units consistent with domains 4 and 5. Alteration styles varied through the section and included sericite-rich, chlorite-rich and ankerite-rich sections with diagnostic sulfide minerals. The multiple intervals through domains 3 and 4 are much higher than the predicted sub 1.0 g/t estimates in the model. Domain 5 was not previously estimated to contain grade in this area.

CL-105: Drilled at an azimuth of 90° and an inclination of minus 62° and designed to upgrade inferred blocks in domain 4 and to test domain 3. This 879 meter drill hole encountered the typical lithologies in the FAT deposit and increasing alteration intensity approaching domain 4. Results defined unexpected intervals in the lower part of the FAT deposit. Domains 3 and 4 contained much narrower intervals and lower grades than expected.

CL-105W1: Drilled as a 4° wedge off of drill hole CL-105 starting at 395.5 meters. The wedge hole was completed at 843 meters with a 35-50 meter separation up-dip (domains 4-3 respectively) from CL-105. Results were similar to the parent hole, CL-105.

CL-106: Drilled at an azimuth of 98° and an inclination of minus 48° and designed to upgrade blocks in domains 5, 4 and 3. Domain 5 alteration and lithologies were encountered as expected with grades in line to better than expected. Domain 4 lithologies were encountered as expected, with alteration and grades as predicted by the model. In domain 3 lithologies, alteration and grades were as expected.

CL-107: Drilled at an azimuth of 97° and an inclination of minus 64° and designed to test domains 5, 4 and 3 beneath underground drilling by previous operators. Unfortunately, the hole hit the workings due to greater than expected deviation and did not reach any of its targets. It did encounter unexpected mineralization in domain 9.

CL-108: Drilled at an azimuth of 90° and an inclination of minus 50° and designed to up-grade blocks in domains 3 and 4. The entire 300 meter drill hole contained intensely altered lapilli tuff that made it difficult to discriminate between the identified gold domains. Results from domain 4 are close to the predicted grades with some unexpected higher gold grade intervals. In domain 3 the model predicted lower grade intervals than encountered.

CL-109: Drilled at an azimuth of 90° and an inclination of minus 45° and designed to up-grade inferred blocks in the shallow parts of domains 2, 3 and 4. The main gold zone in domain 4 returned an interval similar to the block model as well as 2 unexpected zones of better grade. Domain 3 contained several zones narrower than predicted but at much higher grade and the predicted gold zone in domain 2 was encountered where expected but at much higher grades.

CL-110: Drilled at an azimuth of 90° and an inclination of minus 56° and designed to up-grade inferred blocks in domains 5 and 4. This 420 meter hole cut a thick section of ash and lipilli tuff characteristic of the target domains. A single intersection in domain 5 was encountered with grades much higher than predicted. Weak alteration and mineralization were cut on the margin of domain 4 but the hole was terminated early as it did not deviate as designed and missed its intended target.

CL-111: Drilled at an azimuth of 98° and an inclination of minus 50° and designed to upgrade blocks in domains 3 and 4. Lithologies and alteration of domain 4 were encountered slightly deeper than expected and contained better than predicted grades. Domain 3 was also encountered slightly deeper than expected but here the alteration and mineralization was less intense than predicted by the current model.

CL-112: Drilled at an azimuth of 98° and inclination of minus 49° and designed to up-grade domains 3, 4 and 5. Lithologies and alteration were as expected. Discontinuous grade zones were predicted in domain 4 and the zones encountered confirm this interpretation but grades were better than predicted. Results in domain 3 were narrower than expected with significantly higher grade.

CL-113: Drilled at an azimuth of 277° and an inclination of minus 60° the hole was designed to upgrade blocks in domains 3 and 4 and confirm grades from underground drilling in domain 5. Domain 3 encountered as predicted variably altered tuff with discontinuous grade; however, grades were substantially better than expected. Domain 4 lithology and alteration were consistent with the model. Grade distribution was different than expected with a higher grade core zone and lower grade footwall mineralization. Domain 5 results confirm the geology and grade distribution in the underground drilling performed by Noranda in the late 1980's.

CL-114: Drilled at an azimuth of 277° and an inclination of minus 57° and designed to upgrade blocks in domains 2, 3, 4 and test domain 5. The hole intersected domain 1 which was not expected in this area. Domain 2 contained higher than expected grades within intense sericite alteration over a narrower than expected interval. Domain 3 alteration and mineralization were concentrated along the margins of the zone as expected but with some additional intercepts in the heart of the zone not predicted by the model. Domain 4 was more discontinuous than expected in both alteration and mineralization. The hole did not encounter alteration or grade consistent with domain 5.

CL-115: Drilled at an azimuth of 98° and an inclination of -65° and designed as a geotechnical hole for pit wall stability tests collared on the eastern side of the deposit. Domain 3 was encountered slightly deeper than anticipated, with alteration and mineralization narrower than expected but with grades substantially higher than predicted.

CL-116: Drilled at an azimuth of 90° and an inclination of minus 50° and designed to complete hole CL-107. The hole was lost at 513 meters and the goal of this drill hole was not achieved. A sequence of varying rock textures and alteration was encountered consistent with what has been intersected elsewhere in the deposit. Results include several unexpected intervals that extend the strike and dip projection of domain 9.

CL-117: Drilled at an azimuth of 98° and an inclination of -65° and designed to test domains 5, 4 and 3 below the underground drilling. Domain 5 lithologies and alteration were intercepted as predicted. However, gold grade did not follow except for a narrow high-grade interval. Domain 4 was encountered slightly deeper than anticipated and initially was less intense than predicted. The core of the zone contained more intense than predicted alteration and mineralization, with the remainder of the domain discontinuous as expected. Domain 3 encountered an unexpected high-grade zone along the foot-wall and higher than predicted grades at the hanging wall while the core of the domain was as expected.

CL-117W1: A wedge off of CL-117 at 450 meters and designed to turn the hole north. Unfortunately, the hole never achieved sufficient separation from the parent and was terminated at 746 meters (296 meters from wedge). The hole does provide close spaced offset confirmation of the results in CL-117.

CL-117W2: A wedge off of CL-117 at 297 meters and directed to the south. This hole achieved a maximum separation of 20 meters and a total depth of 870 meters (573 meters below wedge). Results were similar to CL-117.

CL-118: Drilled at an azimuth of 98° and an inclination of minus 68° and designed to upgrade blocks in domain 4 and test domains 5 and 3 at depth. Moderate alteration and weak mineralization were cut in domain 9, expanding the limits of this zone. Domain 5 lithologies and alteration were encountered shallower and over a wider interval than expected. Mineralization was located along the margins of the zone. Domain 4 alteration and mineralization were discontinuous, with the most intense showing on the hanging-wall.

CL-118W1: A wedge off of CL-118 starting at 345 meters and directed to the north. This hole achieved over 100 meters of separation from CL-118. Domain 5 was encountered as predicted; however, alteration and mineralization were less intense than expected. Domain 4 was also intercepted where anticipated; expected alteration and mineralization were less intense in the first half of the domain. The hanging-wall portion of domain 4 exhibited typical alteration with better than expected grades. Domain 3 was narrower than anticipated but the grades were in line with expectations.

CL-119: Drilled at an azimuth of 139° and an inclination of minus 67° and designed as a geotechnical hole cutting a long section of domain 5 for slope stability studies. Alteration and mineralization were much stronger than predicted.

CL-120: Drilled at an azimuth of 107° and an inclination of minus 65° and designed to upgrade blocks in domains 4 and 3. Domain 4 was intercepted as predicted, with variable discontinuous alteration and mineralization and grades in line with expectations. Domain 3 started less intense than anticipated but then encountered typical alteration and lithologies with much better grades than expected.

CL-121: Drilled at an azimuth of 224° and an inclination of 70° as another geotechnical hole inside FAT. The hole cut through domain 2 and appears to have cut the strike extension of domain 1. Domain 2 was intercepted as predicted with variable alteration. Several discontinuous intervals of better than expected grade were intercepted along with the anticipated mineralization on the hanging wall. Several low-grade zones of alteration and grade intercepted at depth in this hole are interpreted to be the strike extension of domain 1. This hole should convert some waste material to ore.

CL-122: Drilled at an azimuth of 277° and an inclination of minus 55° and designed to upgrade blocks in domains 3 and 4 and test domains 5 and 6. Mineralization and alteration were intercepted slightly earlier than anticipated in domain 3. Domain 4 alteration and mineralization were intercepted as predicted but were more continuous than expected. Domain 5 was intercepted as planned but alteration was less intense than expected and grade more discontinuous. Domain 6 was encountered as predicted and contained discontinuous alteration with patchy grades.

CL-123: Drilled at an azimuth of 105° and an inclination of minus 56° and designed to upgrade blocks in domains 4 and 3. Domain 4 lithologies and alteration were intercepted as expected; both alteration and mineralization were variable and discontinuous. Grades in general were in line with expectations, although in different positions than predicted by the block model. Domain 3 was intercepted a few meters early and was more intense in both alteration and grade than anticipated. The hole terminated at the edge of domain 2 and encountered grades consistent with model predictions.