

Table 3. Results for 3M Test 1

Well	Measurement-Based Water-Level Change, Less Pre-Mining Annual Water Level Fluctuation, For Each LBF Well Since The Start Of Mining ¹ (ft)	Model-Based Water-Level Change, For Each LBF Well Since The Start Of Mining ¹ (ft)	Difference Between Measurement-Based And Model-Based Water-Level Changes (ft)	<u>3M Criteria² and Result</u> If Any Values Are Greater Than 5 feet, Then Go To Test 2; Otherwise Go To Test 1A
LBF-01	0.00	0.00	0.00	Go To Test 1A
LBF-02	0.00	0.00	0.00	
LBF-03	0.00	0.00	0.00	
LBF-04	0.00	0.00	0.00	

¹ Evaluation is performed on Well Group 1 for the period from commencement of mining through June 2013 (Evaluation Period). If the pre-mining fluctuation is greater than the change between July 2007 and June 2013, the water-level change, if any, related to mining is not measureable, and assumed to be zero for the evaluation period. A summary of the current 2012-2013 3M evaluation is presented in Table 6.

² For the purposes of the 3M Program, mining is assumed to have commenced in August 2007.

Table 4. Results for 3M Test 1A

Well-Pair	Measurement-Based Estimated Pre-Mining Hydraulic Gradient ¹ (-)	Measurement-Based Estimated Hydraulic Gradient Since The Start Of Mining ¹ (-)	Modeled Pre-Mining Hydraulic Gradient ¹ (-)	Modeled Hydraulic Gradient Since The Start Of Mining ¹ (-)	Difference in Percent Change Of Measurement-Based Estimated And Modeled Hydraulic Gradients For Each LBF Well-Pair Since The Start Of Mining ¹ (%)	<u>3M Criteria² and Result</u> If Any Values Are Greater Than 25%, Then Go To Test 2; Otherwise Go To Test 2A.
LBF-01 : LBF-02	9.88E-05	8.88E-05	2.43E-04	2.43E-04	10	Go To Test 2 ^a
LBF-03 : LBF-04	6.48E-05	2.84E-05	6.20E-04	6.19E-04	56	

¹ Evaluation is performed on Well Group 1 for the period from commencement of mining through June 2013 (Evaluation Period). A summary of the current 2012-2013 3M evaluation is presented in Table 6.

² For the purposes of the 3M Program, mining is assumed to have commenced in August 2007.

^a See Section 6.2.

Table 5. Results for 3M Test 2A

Well Group	Well	Measurement-Based Water-Level Change ¹ (ft)	Model-Based Water-Level Change ¹ (ft)	Absolute Value Of The Difference Between Measurement-Based and Model-Based Water-Level Change ¹ (ft)	Computed Mean Value of the Difference for Group 4 and 5 wells (ft)	<u>3M Criteria² and Result</u> If Any Value Is More Than 10 Feet, Then Recalibrate The Model, Run The Mining Period Prediction, And Adjust The Mitigation As Necessary, And Wait One Year And Re-Evaluate; Otherwise Wait One Year And Re-Evaluate
4	GI-T20	7.99	0.00	7.99	6.4	Wait one year and re-evaluate.
4	GI-T25	-4.72	0.63	5.35		
4	GI-T34	38.09	26.08	12.01		
4	GI-T38	3.08	2.67	0.42		
5	G5-01A	5.35	0.00	5.35	3.2	
5	G5-01B	5.54	0.00	5.54		
5	G5-02	-1.63	0.00	1.63		
5	RB-1	0.40	0.00	0.40		

¹ Evaluation is performed on Well Groups 4 and 5 for the period from commencement of mining through June 2013 (Evaluation Period). The measurement-based water-level changes do not account for natural fluctuations or trends that occurred or began before mining commenced. A summary of the current 2012-2013 3M evaluation is presented in Table 6.

² For the purposes of the 3M Program, mining is assumed to have commenced in August 2007.

Table 6. Summary of Results for the Preliminary 2012-2013 3M Evaluation

Test	Evaluation Period	Well Group	3M Statistic	3M Criteria ¹	Result
1	Pre-Mining and 6 th Evaluation Period	1	Difference between the measurement-based and model-based estimates of transient water-level change, less the pre-mining annual water level fluctuation ² , for each LBF well since the start of mining.	If any water-level difference values are greater than 5 feet, then go to Test 2; otherwise go to Test 1A.	All values, which range from 0.00 to -0.11, are much less than 5 feet (go to Test 1A).
1A	Pre-Mining and 6 th Evaluation Period	1	Difference in percent change in transient measurement-based and model-based estimates of hydraulic gradients for each LBF well pair, less the pre-mining gradient fluctuation ² , since the start of mining.	If any gradient-change values are greater than 25%, then go to Test 2; otherwise go to Test 2A.	Since the measurement based gradients are dominated by natural fluctuations, the results are inconclusive. This evaluation is apparently not relevant to characterizing the effects of pumping. Go to Test 2A
2	Pre-Mining and 6 th Evaluation Period	2	Mean value of percent difference between measurement-based and model-based estimated water-level change.	If the percent water-level change value is more than 15%, then recalibrate the model, run the mining period prediction, and adjust the mitigation as necessary. Also, wait one year and re-evaluate. Otherwise, go to Test 2A.	Not Evaluated.
2A	Pre-Mining and 6 th Evaluation Period	4 & 5	Average of absolute differences between measurement-based and model-based estimates of water-level changes.	If the water-level difference value for either well group is more than 10 feet, then recalibrate the model, run the mining period prediction, and adjust the mitigation as necessary. Also, wait one year and re-evaluate. Otherwise wait one year and re-evaluate.	Values of the mean water-level difference for Group 4 (6.4) and for Group 5 (3.2) are less than 10 feet: Final Result: Wait one year and re-evaluate

¹ For the purposes of the 3M Program, mining is assumed to have commenced in August 2007.

² To account for and remove natural fluctuations not caused by mining.