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TECHNICAL MEMORANDUM

TO: Julie L'Heureux – De Beers Canada **1780**

FROM: Houmao Liu
Dong Ding

DATE: 3 October 2013

SUBJECT: Predicted TDS Concentration in Mine Water Discharge Based on Calculated TDS Values

INTRODUCTION

In the 2013 Snap Lake groundwater model update, Itasca Denver, Inc., (Itasca) used a predicted groundwater flow rate to the mine from the groundwater flow model (Itasca 2013) and the measured TDS concentrations from 2008 to 2013 at various locations and depths to predict the TDS concentration of the mine discharge water. De Beers Canada and Golder Associates Ltd. (Golder) recently requested that Itasca update the predicted TDS concentration based on the calculated TDS concentrations provided by the laboratory ("Calculated TDS" hereafter) instead of the measured values.

The Calculated TDS were available for the data set in 2008 and 2010 but not for the 2013 data set. The Calculated TDS for the 2013 data set were estimated as follows:

1. Established a linear correlation between the Calculated TDS versus the measured TDS concentration based upon the 2008 and 2010 data set (provided by De Beers on 1 October 2013).
2. Obtained the ratio of Calculated to measured TDS from the linear relation (0.9258 as shown in Figure 1).
3. Used this ratio to estimate the Calculated TDS for the 2013 data set.

Tables 1 and 2 summarize the measured and Calculated TDS values for 2008 and 2010, and 2013, respectively. For your reference, the geometric mean and arithmetic mean of the TDS values using the Calculated TDS is about 7% less than the means using the measured TDS values. The Calculated TDS values were used for the prediction of the TDS concentration in the mine discharge. The detailed description of the calculation was discussed in Itasca (2013).



Instead of providing all of the sensitivity simulations described in Itasca (2013), Itasca has provided the results of two groundwater model simulations based on the discussion with you. One simulation is the Base Case. The other is the simulation that assumes the hydraulic conductivity values of structure zones related to the Crackle and Snap faults outside of the current mining extent were increased by an order of magnitude from the Base Case (which was referred to as Simulation 4 in Itasca (2013)). The predicted inflow rate for the Base Case and Simulation 4 are summarized in Tables 3 and 5.

For each of the groundwater model simulations, the TDS concentrations in the mine discharge were estimated using both arithmetic and geometric mean values of the Calculated TDS. The predicted TDS concentrations of the mine discharge are summarized in Tables 4 and 6, respectively for both flow simulations.

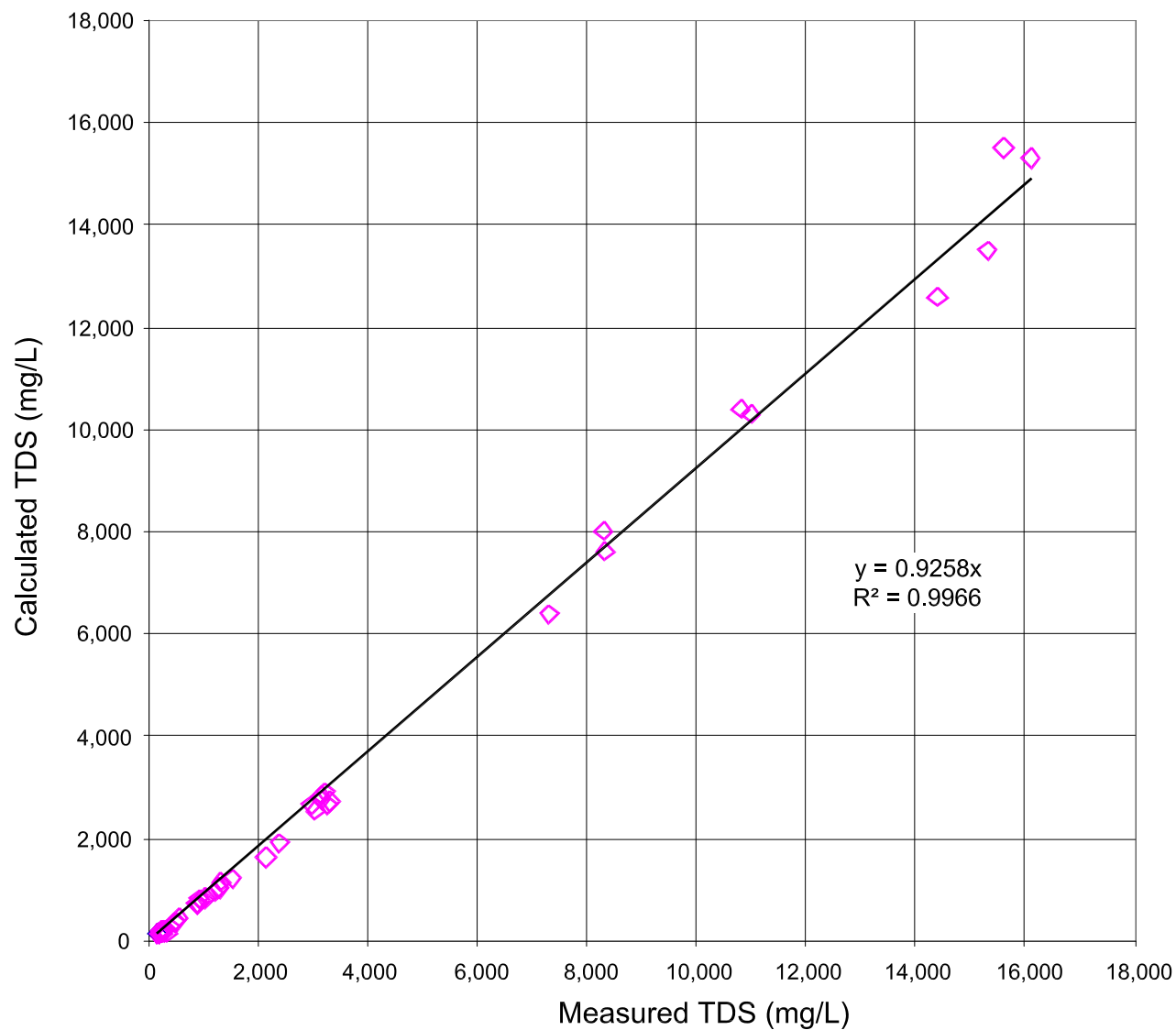
CLOSURE

Itasca hopes that this memorandum addresses your needs. Please contact us if you have any comments or questions.

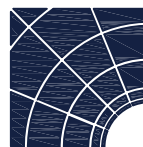
REFERENCES

Itasca Denver. 2013. Prediction of mine water inflow and concentration of total dissolved solids at Snap Lake. Technical memorandum prepared for De Beers Canada by Itasca Denver, Inc., 30 August.

Attachments: Figure 1 – Relationship Between Measured vs. Calculated TDS (2008-2010)
Table 1 – Summary of Measured and Calculated TDS Concentrations for 2008 and 2010
Table 2 – Summary of Measured and Calculated TDS Concentrations in 2013
Table 3 – Predicted Groundwater Inflow Components to the Mine Workings - Base Case
Table 4 – Predicted TDS Concentrations of the Mine Water Discharge - Base Case
Table 5 – Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4
Table 6 – Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4



PROJECT NO.	1780
BY	DD
CHECKED	HL
DRAWN	SAC
DRAWING NAME	MEAS-VS-CALC-TDS
DRAWING DATE	2 OCT 2013
REVISION DATE	--



ITASCA[™]
Denver, Inc.

Relationship between
Measured vs. Calculated TDS (2008-2010)

CLIENT:
De Beers Canada - Snap Lake Mine

FIGURE NO.
1

TABLE 1

Summary of Measured and Calculated TDS Concentrations for 2008 and 2010

(Page 1 of 2)

Sample	Date	Collar Elevation (melev) ¹	End of Hole Elevation (melev) ¹	Collar Depth (m)	End of Hole Depth (m)	Average Depth Below Lake (m)	Measured TDS (mg/L)	Calculated TDS (mg/L)	Related to Dyke
DW5	13-Jun-08	5280	5280	164	164	164	216	200	Above
	6-Nov-08						162	150	
	28-Aug-10						243	225	
GP08-1	14-Jun-08	5314	5314	130	130	130	181	168	
	7-Nov-08						160	148	
UG04-305	23-Aug-08	5285	5292	159	152	152	187	173	
UG04-306	24-Aug-08	5284	5289	160	155	155	182	168	
UG04-310	23-Aug-08	5284	5336	160	108	129	206	191	
	9-Nov-08						159	147	
UG04-311	24-Aug-08	5284	5316	160	128	128	184	170	
UG04-312	24-Aug-08	5284	5298	160	146	146	190	176	
UG05-413	16-Jun-08	5294	5213	150	231	125	218	202	
	6-Nov-08						157	145	
UG05-464	13-Jun-08	5282	5282	162	162	162	203	188	
	9-Nov-08						162	150	
	28-Aug-10						257	238	
UG06-496	13-Jun-08	5321	5378	123	66	97	210	194	
	27-Aug-10						245	227	
	7-Nov-08						338	313	
UG06-531	16-Jun-08	5229	5229	215	215	215	208	193	
UG06-532 (surrogate for 502)	16-Jun-08	5257	5288	187	156	156	175	162	
UG06-532	7-Nov-08	5257	5288	187	156	156	176	163	
UG06-535	14-Jun-08	5234	5286	210	158	182	204	189	
	6-Nov-08						153	142	
	29-Aug-10						212	196	
UG06-536	15-Jun-08	5212	5219	232	225	229	200	185	
	8-Nov-08						181	168	
	31-Aug-10						254	235	
UG06-536 (duplicate)	31-Aug-10	5212	5219	232	225	229	257	238	
UG07-670	16-Jun-08	5230	5230	214	214	214	210	194	
	6-Nov-08						169	156	
UG08-736	23-Aug-08	5289	5334	155	110	125	186	172	
	7-Nov-08						176	163	
UG08-737	23-Aug-08	5289	5342	155	102	306	274	254	
	7-Nov-08						224	207	
	27-Aug-10						246	228	

TABLE 1

Summary of Measured and Calculated TDS Concentrations for 2008 and 2010

(Page 2 of 2)

Sample	Date	Collar Elevation (melev) ¹	End of Hole Elevation (melev) ¹	Collar Depth (m)	End of Hole Depth (m)	Average Depth Below Lake (m)	Measured TDS (mg/L)	Calculated TDS (mg/L)	Related to Dyke
DW11A-N	15-Jun-08	5183	5183	261	261	261	3320	3074	Below
	5-Nov-08						3260	3018	
DW11A-S	15-Jun-08	5183	5183	261	261	261	2130	1972	
	5-Nov-08						2370	2194	
FLT65/020	14-Jun-08	5234	5234	210	210	210	192	178	
UG07-650	13-Jun-08	5280	5223	164	221	200	199	184	
	9-Nov-08						151	140	
	28-Aug-10						256	237	
UG07-711	15-Jun-08	5196	4924	248	520	520	1280	1185	
UG07-711-W (duplicate)	15-Jun-08	5196	4924	248	520	520	1270	1176	
UG07-711-Z1	2-Aug-10	5196	4924	248	520	520	11000	10184	
UG07-711-Z3	2-Aug-10	5196	4924	248	520	520	8330	7712	
UG07-711-Z5	2-Aug-10	5196	4924	248	520	520	7300	6758	
UG08-720 (696-716 ft~Zone 3)	16-Jun-08	5196	4995	248	449	356	3030	2805	
UG08-720-Z1	25-Aug-08	5196	4995	248	449	409	3140	2907	
	8-Nov-08						3220	2981	
	2-Aug-10						4910	4546	
UG08-720-Z3	25-Aug-08	5196	4995	248	449	356	2970	2750	
	8-Nov-08						3140	2907	
	2-Aug-10						5100	4722	
UG08-720-Z3 (duplicate)	2-Aug-10	5196	4995	248	449	356	4910	4546	
UG08-720-Z5	25-Aug-08	5196	4995	248	449	294	1190	1102	
	8-Nov-08						1310	1213	
	2-Aug-10						3810	3527	
UG08-720-Z6	25-Aug-08	5196	4995	248	449	269	1040	963	
UG08-724	15-Jun-08	5196	5174	248	270	268.5	877	812	
UG08-730	5-Nov-08	5196	5209	248	235	238	537	497	
UG08-730 (Dis) - filtered	15-Jun-08	5196	5209	248	235	238	492	455	
UG08-730 (Tot) - unfiltered	15-Jun-08	5196	5209	248	235	238	481	445	
UG08-734	14-Jun-08	5230	5192	214	252	234	202	187	
UG08-740	14-Jun-08	5230	5109	214	335	275	1520	1407	
UG08-756	22-Jun-08	5171	5171	273	273	273	14400	13332	
UG08-762 (pre-grout)	12-Jul-08	5172	5180	272	264	264	15300	14165	
UG08-762G (post-grout)	13-Jul-08	5172	5180	272	264	264	16100	14905	
UG08-763G	14-Jul-08	5172	5180	272	264	268.5	14400	13332	
UG08-762GD (duplicate)	13-Jul-08	5172	5180	272	264	264	15600	14442	

Note: 1. melev = meters above mean sea level + 5000 m

TABLE 2

Summary of Measured and Calculated TDS Concentrations in 2013

(Page 1 of 1)

Sample	Date	Collar Elevation (melev) ¹	Average Depth Below Lake (m)	Measured TDS (mg/L)	Calculated TDS (mg/L)	Related to Dyke
UG ORE 1	6/15/2013	5126	318	481	445	Above
UG ORE 2	6/15/2013	5293	151	379	351	
UG ORE 3	6/15/2013	5298	146	482	446	
UG ORE 4	6/15/2013	5295	149	470	435	
UG ORE 5	6/15/2013	5283	161	415	384	
UG ORE 6	6/15/2013	5306	138	402	372	
UG ORE 7	6/30/2013	5158	286	427	395	
UG ORE 8	6/30/2013	5193	251	416	385	
UG ORE 9	6/30/2013	5266	178	387	358	
UG FW1	6/14/2013	4936	508	5350	4953	Below
UG FW2	6/14/2013	4936	508	8070	7471	
UG FW3	6/14/2013	4981	463	7790	7212	
UG FW4	6/14/2013	4980	464	8700	8054	
UG FW5	6/14/2013	4991	453	18100	16757	
UG FW5	6/30/2013		453	19200	17775	
UG FW6	6/14/2013	5000	444	18100	16757	
UG FW6	6/30/2013		444	18500	17127	
UG FW7	6/14/2013	5019	425	14800	13702	
UG FW7	6/30/2013		425	13800	12776	
UG FW8	6/14/2013	5108	336	7830	7249	
UG FW9	6/14/2013	5158	286	3590	3324	
UG FW10	6/15/2013	5160	284	3430	3175	
UG FW10	6/30/2013		284	3240	3000	

Note: 1. melev = meters above mean sea level + 5000 m

TABLE 3

Predicted Groundwater Inflow Components to the Mine Workings - Base Case
 (Page 1 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Jan-04	0	0	0	0	0	0	0	0	0
Feb-04	0	0	0	0	0	0	0	0	0
Mar-04	0	0	0	0	0	0	0	0	0
Apr-04	0	0	0	0	0	0	0	0	0
May-04	346	346	0	0	0	298	298	0	0
Jun-04	346	346	0	0	0	298	298	0	0
Jul-04	432	432	0	0	0	399	399	0	0
Aug-04	1382	1210	86	86	173	1362	1362	0	0
Sep-04	2160	1987	86	86	173	2141	2141	0	0
Oct-04	2938	2678	173	86	259	2931	2931	0	0
Nov-04	3283	3024	173	86	259	3283	3283	0	0
Dec-04	3370	3110	173	86	259	3370	3370	0	0
Jan-05	4147	3802	259	86	346	4027	4027	0	0
Feb-05	4147	3802	259	86	346	3999	3999	0	0
Mar-05	4406	4061	259	86	346	4367	4367	0	0
Apr-05	4752	4406	259	86	346	4621	4621	0	0
May-05	5184	4838	259	86	346	5184	5184	0	0
Jun-05	5702	5270	346	86	432	5669	5669	0	0
Jul-05	6048	5270	346	432	778	5875	5875	0	0
Aug-05	6394	5702	259	432	691	6307	6307	0	0
Sep-05	6653	5875	259	518	778	6566	6566	0	0
Oct-05	6653	5789	259	605	864	6653	6653	0	0
Nov-05	6826	5789	259	778	1037	6653	6653	0	0
Dec-05	6826	5789	259	778	1037	6653	6653	0	0
Jan-06	7258	6221	259	778	1037	6998	6998	0	0
Feb-06	7344	6221	259	864	1123	7171	7171	0	0
Mar-06	7517	6394	259	864	1123	7258	7258	0	0
Apr-06	7517	6307	259	950	1210	7258	7258	0	0
May-06	8208	6998	259	950	1210	7949	7949	0	0
Jun-06	8122	6826	259	1037	1296	7949	7949	0	0
Jul-06	8554	6998	259	1296	1555	8208	8208	0	0
Aug-06	8813	7258	259	1296	1555	8640	8640	0	0
Sep-06	8726	7171	259	1296	1555	8640	8640	0	0
Oct-06	8813	7171	259	1382	1642	8640	8640	0	0
Nov-06	10454	8899	259	1296	1555	10022	10022	0	0
Dec-06	12182	10454	346	1382	1728	11405	11405	0	0
Jan-07	13306	11664	259	1382	1642	12182	12182	0	0
Feb-07	13910	12269	346	1296	1642	12355	12355	0	0
Mar-07	13824	12269	259	1296	1555	12269	12269	0	0
Apr-07	13651	12182	173	1296	1469	12182	12182	0	0
May-07	13910	12355	259	1296	1555	12528	12528	0	0
Jun-07	13651	12096	259	1296	1555	12528	12528	0	0
Jul-07	13133	11578	173	1382	1555	12442	12442	0	0
Aug-07	13910	12442	173	1296	1469	13046	13046	0	0
Sep-07	13910	12355	259	1296	1555	13046	13046	0	0

TABLE 3

Predicted Groundwater Inflow Components to the Mine Workings - Base Case
 (Page 2 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Oct-07	13824	12269	259	1296	1555	13046	13046	0	0
Nov-07	13392	11837	259	1296	1555	12874	12787	86	0
Dec-07	13306	11750	259	1296	1555	12787	12701	86	0
Jan-08	13392	11837	259	1296	1555	12787	12701	86	0
Feb-08	13738	12269	259	1210	1469	12960	12874	86	0
Mar-08	13651	12182	259	1210	1469	13133	13046	86	0
Apr-08	13824	12355	259	1210	1469	13219	13133	86	0
May-08	14083	12614	259	1210	1469	13306	13219	86	0
Jun-08	13738	12269	259	1210	1469	13306	13219	86	0
Jul-08	14342	12874	346	1123	1469	13651	13565	86	0
Aug-08	14861	13392	259	1210	1469	14170	14083	86	0
Sep-08	15206	13824	259	1123	1382	14602	14515	86	0
Oct-08	15466	14083	259	1123	1382	14947	14861	86	0
Nov-08	17280	15811	346	1123	1469	16157	16070	86	0
Dec-08	18403	16762	346	1296	1642	17280	17194	86	0
Jan-09	18576	17021	346	1210	1555	17366	17280	86	0
Feb-09	18490	16934	346	1210	1555	17194	17107	86	0
Mar-09	18490	16934	346	1210	1555	17280	17194	86	0
Apr-09	18403	16762	346	1296	1642	17280	17194	86	0
May-09	18576	16848	432	1296	1728	17366	17280	86	0
Jun-09	18490	16934	259	1296	1555	17453	17366	86	0
Jul-09	18922	17194	346	1382	1728	17798	17712	86	0
Aug-09	18230	16589	259	1382	1642	17626	17539	86	0
Sep-09	17885	16243	259	1382	1642	17453	17366	86	0
Oct-09	17971	16157	259	1555	1814	17453	17366	86	0
Nov-09	18058	16243	259	1555	1814	17539	17453	86	0
Dec-09	18230	16330	259	1642	1901	17626	17539	86	0
Jan-10	19786	17712	346	1728	2074	18662	18576	86	0
Feb-10	19786	17626	432	1728	2160	18749	18662	86	0
Mar-10	19613	17366	432	1814	2246	18749	18662	86	0
Apr-10	20045	17885	432	1728	2160	19094	19008	86	0
May-10	20650	18576	432	1642	2074	19440	19354	86	0
Jun-10	20218	18144	432	1642	2074	19526	19440	86	0
Jul-10	20304	18144	432	1728	2160	19526	19440	86	0
Aug-10	21859	19786	432	1642	2074	20390	20304	86	0
Sep-10	23069	20822	518	1728	2246	21168	21082	86	0
Oct-10	22723	20563	432	1728	2160	21082	20995	86	0
Nov-10	23069	20909	432	1728	2160	21427	21341	86	0
Dec-10	23846	21686	432	1728	2160	22118	22032	86	0
Jan-11	23674	21427	432	1814	2246	22378	22291	86	0
Feb-11	23501	21254	432	1814	2246	22464	22291	173	0
Mar-11	24019	21514	432	2074	2506	22723	22550	173	0
Apr-11	24624	22118	432	2074	2506	23242	23069	173	0
May-11	24624	21859	432	2333	2765	23501	23328	173	0
Jun-11	25142	22291	432	2419	2851	23846	23674	173	0

TABLE 3

Predicted Groundwater Inflow Components to the Mine Workings - Base Case
 (Page 3 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Jul-11	25229	22291	432	2506	2938	24106	23933	173	0
Aug-11	25488	22464	518	2506	3024	24192	24019	173	0
Sep-11	26352	23414	518	2419	2938	24538	24365	173	0
Oct-11	26438	23501	518	2419	2938	24797	24624	173	0
Nov-11	26957	23846	518	2592	3110	25315	25142	173	0
Dec-11	26957	24019	432	2506	2938	25488	25315	173	0
Jan-12	27130	24106	432	2592	3024	25661	25488	173	0
Feb-12	27648	24538	518	2592	3110	26006	25834	173	0
Mar-12	27821	24624	518	2678	3197	26179	26006	173	0
Apr-12	28339	25229	518	2592	3110	26438	26266	173	0
May-12	27907	24710	518	2678	3197	26266	26093	173	0
Jun-12	27994	24797	518	2678	3197	26179	26006	173	0
Jul-12	28512	25229	518	2765	3283	26438	26266	173	0
Aug-12	28512	24883	518	3110	3629	26698	26525	173	0
Sep-12	31882	28080	605	3197	3802	27907	27734	173	0
Oct-12	31882	28080	518	3283	3802	28685	28426	259	0
Nov-12	31450	27389	605	3456	4061	28944	28685	259	0
Dec-12	32573	28598	605	3370	3974	29462	29203	259	0
Jan-13	33523	29549	605	3370	3974	29981	29722	259	0
Feb-13	33869	29808	691	3370	4061	30326	30067	259	0
Mar-13	35165	30931	864	3370	4234	30931	30672	259	0
Apr-13	34301	29894	864	3542	4406	31277	31018	259	0
May-13	34301	29894	864	3542	4406	31450	31190	259	0
Jun-13	37843	33523	864	3456	4320	32659	32400	259	0
Jul-13	39658	35424	864	3370	4234	33264	33005	259	0
Aug-13	39658	35338	864	3456	4320	33869	33610	259	0
Sep-13	40003	35683	864	3456	4320	34646	34301	346	0
Oct-13	39658	35251	778	3629	4406	35078	34733	346	0
Nov-13	40781	36634	691	3456	4147	35683	35338	346	0
Dec-13	40435	36374	691	3370	4061	35942	35597	346	0
Jan-14	40608	36634	605	3370	3974	36115	35770	346	0
Feb-14	43286	39571	605	3110	3715	37238	36893	346	0
Mar-14	44410	40781	605	3024	3629	38102	37670	346	86
Apr-14	42941	39312	605	3024	3629	38448	37930	432	86
May-14	42509	38707	605	3197	3802	38707	38189	432	86
Jun-14	43200	39485	605	3110	3715	39053	38534	432	86
Jul-14	43891	40003	605	3283	3888	39485	38966	432	86
Aug-14	43286	39226	605	3456	4061	39830	39312	432	86
Sep-14	43632	39226	605	3802	4406	40003	39485	432	86
Oct-14	51062	46742	691	3629	4320	41040	40435	518	86
Nov-14	53827	49766	605	3456	4061	42163	41558	518	86
Dec-14	53482	49248	605	3629	4234	43027	42336	518	173
Jan-15	51494	47174	605	3715	4320	43373	42682	518	173
Feb-15	51322	46397	605	4320	4925	43546	42854	518	173
Mar-15	51581	46829	605	4147	4752	44064	43373	518	173

TABLE 3

Predicted Groundwater Inflow Components to the Mine Workings - Base Case
 (Page 4 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Apr-15	50976	46310	605	4061	4666	44237	43459	605	173
May-15	50198	45187	605	4406	5011	44323	43546	605	173
Jun-15	50371	45187	605	4579	5184	44582	43805	605	173
Jul-15	50112	45014	605	4493	5098	44928	44064	605	259
Aug-15	54000	49248	691	4061	4752	45187	44323	605	259
Sep-15	52877	48298	691	3888	4579	45014	44150	605	259
Oct-15	52704	47779	691	4234	4925	45014	44064	691	259
Nov-15	51494	46570	691	4234	4925	45101	44150	691	259
Dec-15	58579	53482	691	4406	5098	45878	44928	691	259
Jan-16	56592	52013	691	3888	4579	45878	44842	691	346
Feb-16	53827	49421	605	3802	4406	45878	44842	691	346
Mar-16	53395	48384	605	4406	5011	46051	45014	691	346
Apr-16	53309	48211	605	4493	5098	46397	45360	691	346
May-16	52963	47002	605	5357	5962	46656	45533	778	346
Jun-16	52272	46483	605	5184	5789	46829	45706	778	346
Jul-16	53914	47434	605	5875	6480	47347	46138	778	432
Aug-16	55296	48384	605	6307	6912	47779	46570	778	432
Sep-16	63850	57715	605	5530	6134	48470	47261	778	432
Oct-16	58579	51322	605	6653	7258	48384	47174	778	432
Nov-16	56333	49421	605	6307	6912	48384	47174	778	432
Dec-16	61603	55987	605	5011	5616	49162	47952	778	432
Jan-17	56765	51494	605	4666	5270	48902	47693	778	432
Feb-17	57629	52531	691	4406	5098	49421	48038	864	518
Mar-17	55728	50717	691	4320	5011	49507	48125	864	518
Apr-17	56419	50803	605	5011	5616	49766	48384	864	518
May-17	54864	49334	691	4838	5530	49680	48298	864	518
Jun-17	55814	50717	691	4406	5098	49766	48384	864	518
Jul-17	54864	49853	691	4320	5011	49853	48470	864	518
Aug-17	55382	49680	691	5011	5702	50026	48643	864	518
Sep-17	55037	49507	691	4838	5530	50285	48816	864	605
Oct-17	54864	48643	691	5530	6221	50285	48816	864	605
Nov-17	54605	48557	691	5357	6048	50371	48902	864	605
Dec-17	54605	47952	691	5962	6653	50371	48902	864	605
Jan-18	57629	50544	691	6394	7085	50544	48989	950	605
Feb-18	56592	48902	691	6998	7690	50630	49075	950	605
Mar-18	56765	49421	778	6566	7344	50717	49162	950	605
Apr-18	55987	48816	778	6394	7171	50976	49334	950	691
May-18	57802	51494	778	5530	6307	50976	49334	950	691
Jun-18	55469	49421	691	5357	6048	50976	49334	950	691
Jul-18	55555	49939	691	4925	5616	50976	49334	950	691
Aug-18	54778	49248	691	4838	5530	50976	49334	950	691
Sep-18	54950	48730	691	5530	6221	50976	49334	950	691
Oct-18	54778	48557	691	5530	6221	50976	49334	950	691
Nov-18	54346	48211	691	5443	6134	50976	49334	950	691
Dec-18	54778	48643	691	5443	6134	51235	49507	950	778

TABLE 3

Predicted Groundwater Inflow Components to the Mine Workings - Base Case
 (Page 5 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Jan-19	56074	50717	691	4666	5357	51235	49507	950	778
Feb-19	54173	48902	691	4579	5270	51235	49507	950	778
Mar-19	54173	48902	691	4579	5270	51235	49507	950	778
Apr-19	54346	49075	691	4579	5270	51322	49594	950	778
May-19	54000	48730	691	4579	5270	51322	49594	950	778
Jun-19	54173	48902	691	4579	5270	51235	49507	950	778
Jul-19	53914	48643	691	4579	5270	51322	49507	1037	778
Aug-19	53827	48643	691	4493	5184	51322	49507	1037	778
Sep-19	55296	50630	778	3888	4666	51494	49680	1037	778
Oct-19	54173	49680	691	3802	4493	51494	49594	1037	864
Nov-19	54173	49680	691	3802	4493	51581	49680	1037	864
Dec-19	54173	49594	691	3888	4579	51667	49766	1037	864
Jan-20	54432	49853	691	3888	4579	51754	49853	1037	864
Feb-20	55037	50285	691	4061	4752	51926	50026	1037	864
Mar-20	54173	49421	691	4061	4752	51667	49766	1037	864
Apr-20	54173	49421	691	4061	4752	51667	49766	1037	864
May-20	54086	49334	691	4061	4752	51754	49853	1037	864
Jun-20	54173	49421	691	4061	4752	51667	49853	950	864
Jul-20	54000	49334	691	3974	4666	51667	49853	950	864
Aug-20	54605	50026	691	3888	4579	51754	49939	950	864
Sep-20	53827	49248	691	3888	4579	51667	49853	950	864
Oct-20	56074	51581	691	3802	4493	52013	50112	950	950
Nov-20	54432	49939	691	3802	4493	52013	50112	950	950
Dec-20	54346	49939	691	3715	4406	52099	50198	950	950
Jan-21	54086	49680	691	3715	4406	52099	50112	1037	950
Feb-21	53827	49421	691	3715	4406	52099	50112	1037	950
Mar-21	53914	49507	691	3715	4406	52099	50112	1037	950
Apr-21	53827	49421	691	3715	4406	52013	50026	1037	950
May-21	53568	49248	691	3629	4320	52013	50026	1037	950
Jun-21	53568	49162	778	3629	4406	52013	50026	1037	950
Jul-21	53568	49162	778	3629	4406	52013	50026	1037	950
Aug-21	53741	49334	778	3629	4406	52099	50112	1037	950
Sep-21	54518	50112	864	3542	4406	52013	50026	1037	950
Oct-21	53309	48989	778	3542	4320	52013	50026	1037	950
Nov-21	53568	49248	778	3542	4320	51754	49766	1037	950
Dec-21	53482	49075	864	3542	4406	51754	49766	1037	950
Jan-22	53482	49162	864	3456	4320	51754	49766	1037	950
Feb-22	53568	49248	864	3456	4320	51840	49853	1037	950
Mar-22	53568	49248	864	3456	4320	52013	49939	1037	1037
Apr-22	53568	49248	864	3456	4320	52013	49939	1037	1037
May-22	53568	49248	864	3456	4320	52099	50026	1037	1037
Jun-22	53309	48989	864	3456	4320	52013	49939	1037	1037
Jul-22	53482	49162	864	3456	4320	52099	50026	1037	1037
Aug-22	53395	49075	864	3456	4320	52099	50026	1037	1037
Sep-22	53482	49162	864	3456	4320	52099	50026	1037	1037

TABLE 3

Predicted Groundwater Inflow Components to the Mine Workings - Base Case
 (Page 6 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Oct-22	53482	49162	864	3456	4320	52099	50026	1037	1037
Nov-22	53309	48989	864	3456	4320	52099	50026	1037	1037
Dec-22	53654	49334	864	3456	4320	52099	50026	1037	1037
Jan-23	53309	48989	864	3456	4320	52099	50026	1037	1037
Feb-23	53395	49162	864	3370	4234	52099	50026	1037	1037
Mar-23	53222	48989	864	3370	4234	52272	50112	1123	1037
Apr-23	53395	49162	864	3370	4234	52272	50112	1123	1037
May-23	53395	49162	864	3370	4234	52272	50112	1123	1037
Jun-23	53309	49162	864	3283	4147	52272	50112	1123	1037
Jul-23	53222	49075	864	3283	4147	52272	50112	1123	1037
Aug-23	53222	49075	864	3283	4147	52272	50112	1123	1037
Sep-23	53309	49248	864	3197	4061	52272	50112	1123	1037
Oct-23	53136	49075	950	3110	4061	52272	50112	1123	1037
Nov-23	53050	48989	950	3110	4061	52272	50112	1123	1037
Dec-23	53050	48989	950	3110	4061	52272	50112	1123	1037
Jan-24	53050	48989	950	3110	4061	52272	50112	1123	1037
Feb-24	53050	48989	950	3110	4061	52272	50112	1123	1037
Mar-24	53050	48989	950	3110	4061	52272	50112	1123	1037
Apr-24	53050	48989	950	3110	4061	52272	50112	1123	1037
May-24	53050	48989	950	3110	4061	52272	50112	1123	1037
Jun-24	53050	48989	950	3110	4061	52272	50112	1123	1037
Jul-24	53136	49075	950	3110	4061	52358	50198	1123	1037
Aug-24	53050	48989	950	3110	4061	52445	50198	1123	1123
Sep-24	53050	48989	950	3110	4061	52445	50198	1123	1123
Oct-24	53050	48989	950	3110	4061	52358	50112	1123	1123
Nov-24	53050	48989	950	3110	4061	52358	50112	1123	1123
Dec-24	53050	48989	950	3110	4061	52358	50112	1123	1123
Jan-25	52963	48902	950	3110	4061	52358	50112	1123	1123
Feb-25	52963	48902	950	3110	4061	52358	50112	1123	1123
Mar-25	52963	48902	950	3110	4061	52358	50112	1123	1123
Apr-25	53050	48989	950	3110	4061	52445	50198	1123	1123
May-25	53050	48989	950	3110	4061	52445	50198	1123	1123
Jun-25	53050	48989	950	3110	4061	52358	50112	1123	1123
Jul-25	53050	48989	950	3110	4061	52445	50198	1123	1123
Aug-25	53050	48989	950	3110	4061	52445	50198	1123	1123
Sep-25	53136	49075	950	3110	4061	52445	50198	1123	1123
Oct-25	52963	48902	950	3110	4061	52445	50198	1123	1123
Nov-25	53136	49075	950	3110	4061	52445	50198	1123	1123
Dec-25	53050	48989	950	3110	4061	52445	50198	1123	1123
Jan-26	53309	49248	1037	3024	4061	52531	50285	1123	1123
Feb-26	54950	48816	3110	3024	6134	53914	51667	1123	1123
Mar-26	55037	49075	2938	3024	5962	54173	51926	1123	1123
Apr-26	54864	48989	2851	3024	5875	54173	51926	1123	1123
May-26	55037	49162	2851	3024	5875	54346	52099	1123	1123
Jun-26	56851	49334	4493	3024	7517	55469	53222	1123	1123

TABLE 3

Predicted Groundwater Inflow Components to the Mine Workings - Base Case
 (Page 7 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Jul-26	57197	49853	4320	3024	7344	55901	53654	1123	1123
Aug-26	56851	49507	4320	3024	7344	55901	53654	1123	1123
Sep-26	61258	54605	4234	2419	6653	56506	54259	1123	1123
Oct-26	57715	51235	4147	2333	6480	56160	53914	1123	1123
Nov-26	57542	52445	2765	2333	5098	55814	53568	1123	1123
Dec-26	57197	52099	2765	2333	5098	55728	53482	1123	1123
Jan-27	56938	53136	1469	2333	3802	55469	53222	1123	1123
Feb-27	56765	52963	1469	2333	3802	55382	53136	1123	1123
Mar-27	56506	52704	1469	2333	3802	55210	52963	1123	1123
Apr-27	56333	52531	1469	2333	3802	55296	53050	1123	1123
May-27	56160	52445	1382	2333	3715	55382	53136	1123	1123
Jun-27	56160	52445	1382	2333	3715	55382	53136	1123	1123
Jul-27	56160	52445	1382	2333	3715	55469	53222	1123	1123
Aug-27	56074	52358	1382	2333	3715	55469	53222	1123	1123
Sep-27	56419	52618	1469	2333	3802	55555	53309	1123	1123
Oct-27	56506	52704	1469	2333	3802	55642	53395	1123	1123
Nov-27	56246	52445	1469	2333	3802	55642	53395	1123	1123
Dec-27	56506	52790	1469	2246	3715	55728	53482	1123	1123
Jan-28	56246	52531	1469	2246	3715	55555	53309	1123	1123
Feb-28	56160	52445	1469	2246	3715	55555	53309	1123	1123
Mar-28	55814	52099	1469	2246	3715	55469	53222	1123	1123
Apr-28	55987	52272	1469	2246	3715	55469	53222	1123	1123
May-28	55901	52272	1469	2160	3629	55555	53309	1123	1123
Jun-28	55901	52272	1469	2160	3629	55555	53309	1123	1123
Jul-28	55901	52272	1469	2160	3629	55555	53309	1123	1123
Aug-28	55901	52272	1469	2160	3629	55555	53309	1123	1123
Sep-28	56074	52445	1469	2160	3629	55555	53309	1123	1123
Oct-28	55814	52186	1469	2160	3629	55555	53309	1123	1123
Nov-28	55901	52272	1469	2160	3629	55555	53309	1123	1123
Dec-28	55814	52186	1469	2160	3629	55555	53309	1123	1123

TABLE 4

Predicted TDS Concentrations of the Mine Water Discharge - Base Case
 (Page 1 of 7)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jan-04	214.7	2490.2		228.7	5727.9	
Feb-04	214.7	3490.2		228.7	5727.9	
Mar-04	214.7	3490.2		228.7	5727.9	
Apr-04	214.7	3490.2		228.7	5727.9	
May-04	214.7	3490.2	214.7	228.7	5727.9	228.70
Jun-04	214.7	3490.2	214.7	228.7	5727.9	228.70
Jul-04	214.7	3490.2	214.7	228.7	5727.9	228.70
Aug-04	214.7	3490.2	624.1	228.7	5727.9	916.10
Sep-04	214.7	3490.2	476.7	228.7	5727.9	668.64
Oct-04	214.7	3490.2	503.7	228.7	5727.9	713.92
Nov-04	214.7	3490.2	473.3	228.7	5727.9	662.85
Dec-04	214.7	3490.2	466.7	228.7	5727.9	651.72
Jan-05	214.7	3490.2	487.7	228.7	5727.9	686.97
Feb-05	214.7	3490.2	487.7	228.7	5727.9	686.97
Mar-05	214.7	3490.2	471.6	228.7	5727.9	660.01
Apr-05	214.7	3490.2	452.9	228.7	5727.9	628.64
May-05	214.7	3490.2	433.1	228.7	5727.9	595.31
Jun-05	214.7	3490.2	462.8	228.7	5727.9	645.31
Jul-05	214.7	3490.2	635.8	228.7	5727.9	935.74
Aug-05	214.7	3490.2	568.8	228.7	5727.9	823.21
Sep-05	214.7	3490.2	597.6	228.7	5727.9	871.46
Oct-05	214.7	3490.2	640.1	228.7	5727.9	942.88
Nov-05	214.7	3490.2	712.2	228.7	5727.9	1064.02
Dec-05	214.7	3490.2	712.2	228.7	5727.9	1064.02
Jan-06	214.7	3490.2	682.6	228.7	5727.9	1014.30
Feb-06	214.7	3490.2	715.7	228.7	5727.9	1069.75
Mar-06	214.7	3490.2	704.1	228.7	5727.9	1050.42
Apr-06	214.7	3490.2	741.8	228.7	5727.9	1113.63
May-06	214.7	3490.2	697.4	228.7	5727.9	1039.11
Jun-06	214.7	3490.2	737.4	228.7	5727.9	1106.23
Jul-06	214.7	3490.2	810.2	228.7	5727.9	1228.55
Aug-06	214.7	3490.2	792.7	228.7	5727.9	1199.15
Sep-06	214.7	3490.2	798.5	228.7	5727.9	1208.76
Oct-06	214.7	3490.2	824.8	228.7	5727.9	1253.06
Nov-06	214.7	3490.2	702.0	228.7	5727.9	1046.76
Dec-06	214.7	3490.2	679.3	228.7	5727.9	1008.73
Jan-07	214.7	3490.2	618.8	228.7	5727.9	907.17
Feb-07	214.7	3490.2	601.2	228.7	5727.9	877.67
Mar-07	214.7	3490.2	583.2	228.7	5727.9	847.36
Apr-07	214.7	3490.2	567.1	228.7	5727.9	820.39
May-07	214.7	3490.2	580.9	228.7	5727.9	843.52
Jun-07	214.7	3490.2	587.9	228.7	5727.9	855.19
Jul-07	214.7	3490.2	602.6	228.7	5727.9	879.92
Aug-07	214.7	3490.2	560.6	228.7	5727.9	809.36

TABLE 4

Predicted TDS Concentrations of the Mine Water Discharge - Base Case
 (Page 2 of 7)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Sep-07	214.7	3490.2	580.9	228.7	5727.9	843.52
Oct-07	214.7	3490.2	583.2	228.7	5727.9	847.36
Nov-07	214.7	3490.2	595.1	228.7	5727.9	867.32
Dec-07	214.7	3490.2	597.6	228.7	5727.9	871.46
Jan-08	214.7	3490.2	595.1	228.7	5727.9	867.32
Feb-08	214.7	3490.2	564.9	228.7	5727.9	816.66
Mar-08	214.7	3490.2	567.1	228.7	5727.9	820.39
Apr-08	214.7	3490.2	562.7	228.7	5727.9	812.99
May-08	214.7	3490.2	556.3	228.7	5727.9	802.24
Jun-08	214.7	3490.2	564.9	228.7	5727.9	816.66
Jul-08	214.7	3490.2	550.1	228.7	5727.9	791.87
Aug-08	214.7	3490.2	538.4	228.7	5727.9	772.23
Sep-08	214.7	3490.2	512.5	228.7	5727.9	728.63
Oct-08	214.7	3490.2	507.5	228.7	5727.9	720.25
Nov-08	214.7	3490.2	493.1	228.7	5727.9	696.13
Dec-08	214.7	3490.2	506.9	228.7	5727.9	719.24
Jan-09	214.7	3490.2	488.9	228.7	5727.9	689.10
Feb-09	214.7	3490.2	490.2	228.7	5727.9	691.25
Mar-09	214.7	3490.2	490.2	228.7	5727.9	691.25
Apr-09	214.7	3490.2	506.9	228.7	5727.9	719.24
May-09	214.7	3490.2	519.4	228.7	5727.9	740.25
Jun-09	214.7	3490.2	490.2	228.7	5727.9	691.25
Jul-09	214.7	3490.2	513.8	228.7	5727.9	730.91
Aug-09	214.7	3490.2	509.7	228.7	5727.9	723.89
Sep-09	214.7	3490.2	515.3	228.7	5727.9	733.46
Oct-09	214.7	3490.2	545.4	228.7	5727.9	783.91
Nov-09	214.7	3490.2	543.8	228.7	5727.9	781.25
Dec-09	214.7	3490.2	556.2	228.7	5727.9	802.08
Jan-10	214.7	3490.2	558.0	228.7	5727.9	805.04
Feb-10	214.7	3490.2	572.3	228.7	5727.9	829.05
Mar-10	214.7	3490.2	589.9	228.7	5727.9	858.56
Apr-10	214.7	3490.2	567.7	228.7	5727.9	821.29
May-10	214.7	3490.2	543.6	228.7	5727.9	780.92
Jun-10	214.7	3490.2	550.6	228.7	5727.9	792.72
Jul-10	214.7	3490.2	563.2	228.7	5727.9	813.72
Aug-10	214.7	3490.2	525.4	228.7	5727.9	750.36
Sep-10	214.7	3490.2	533.7	228.7	5727.9	764.20
Oct-10	214.7	3490.2	526.1	228.7	5727.9	751.44
Nov-10	214.7	3490.2	521.4	228.7	5727.9	743.61
Dec-10	214.7	3490.2	511.4	228.7	5727.9	726.82
Jan-11	214.7	3490.2	525.5	228.7	5727.9	750.52
Feb-11	214.7	3490.2	527.8	228.7	5727.9	754.36
Mar-11	214.7	3490.2	556.4	228.7	5727.9	802.36
Apr-11	214.7	3490.2	548.0	228.7	5727.9	788.27

TABLE 4

Predicted TDS Concentrations of the Mine Water Discharge - Base Case
 (Page 3 of 7)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
May-11	214.7	3490.2	582.5	228.7	5727.9	846.15
Jun-11	214.7	3490.2	586.1	228.7	5727.9	852.32
Jul-11	214.7	3490.2	596.1	228.7	5727.9	869.02
Aug-11	214.7	3490.2	603.3	228.7	5727.9	881.15
Sep-11	214.7	3490.2	579.8	230.7	5727.9	841.73
Oct-11	214.7	3490.2	578.6	233.7	5727.9	841.46
Nov-11	214.7	3490.2	592.6	237.0	5727.9	867.63
Dec-11	214.7	3490.2	571.6	239.9	5727.9	835.34
Jan-12	214.7	3490.2	579.8	243.0	5727.9	851.65
Feb-12	214.7	3490.2	583.2	246.2	5727.9	860.06
Mar-12	214.7	3490.2	591.1	249.5	5727.9	876.09
Apr-12	214.7	3490.2	574.2	252.7	5727.9	850.81
May-12	214.7	3490.2	589.9	255.9	5727.9	879.85
Jun-12	214.7	3490.2	588.8	259.1	5727.9	880.80
Jul-12	214.7	3490.2	591.9	262.5	5727.9	888.87
Aug-12	214.7	3490.2	631.6	266.4	5727.9	958.07
Sep-12	214.7	3490.2	605.3	270.5	5727.9	917.59
Oct-12	214.7	3490.2	605.3	274.6	5727.9	921.24
Nov-12	214.7	3490.2	637.6	279.1	5727.9	978.72
Dec-12	214.7	3490.2	614.4	283.4	5727.9	943.92
Jan-13	214.7	3490.2	603.0	287.6	5727.9	928.87
Feb-13	214.7	3490.2	607.4	292.0	5727.9	939.92
Mar-13	214.7	3490.2	609.0	296.6	5727.9	946.45
Apr-13	215.8	3490.2	635.5	301.5	5727.9	994.34
May-13	218.6	3490.2	635.5	306.3	5727.9	998.57
Jun-13	221.2	3490.2	588.6	310.9	5727.9	925.19
Jul-13	223.7	3490.2	565.6	315.3	5727.9	889.19
Aug-13	226.3	3490.2	574.9	319.9	5727.9	904.93
Sep-13	228.7	3490.2	574.0	324.3	5727.9	903.88
Oct-13	231.3	3490.2	586.4	328.9	5727.9	924.74
Nov-13	233.5	3490.2	558.0	333.0	5727.9	877.98
Dec-13	235.6	3490.2	555.9	337.0	5727.9	874.84
Jan-14	237.6	3490.2	549.5	340.7	5727.9	864.60
Feb-14	239.3	3490.2	512.1	344.0	5727.9	803.10
Mar-14	240.9	3490.2	500.3	347.1	5727.9	783.94
Apr-14	242.5	3490.2	510.9	350.2	5727.9	801.84
May-14	244.3	3490.2	528.4	353.6	5727.9	831.14
Jun-14	245.9	3490.2	518.9	356.7	5727.9	815.75
Jul-14	247.8	3490.2	528.9	360.1	5727.9	832.51
Aug-14	249.7	3490.2	547.6	363.8	5727.9	863.70
Sep-14	252.0	3490.2	572.7	368.0	5727.9	905.53
Oct-14	254.2	3490.2	521.6	372.0	5727.9	821.47
Nov-14	256.1	3490.2	494.0	375.6	5727.9	776.09
Dec-14	258.2	3490.2	507.8	379.4	5727.9	799.28

TABLE 4

Predicted TDS Concentrations of the Mine Water Discharge - Base Case
 (Page 4 of 7)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jan-15	260.3	3490.2	525.1	383.3	5727.9	828.10
Feb-15	263.0	3490.2	566.1	388.2	5727.9	896.18
Mar-15	265.5	3490.2	556.2	392.7	5727.9	880.11
Apr-15	267.9	3490.2	556.6	397.1	5727.9	881.01
May-15	270.6	3490.2	585.6	401.9	5727.9	929.22
Jun-15	273.4	3490.2	598.0	407.0	5727.9	950.05
Jul-15	276.2	3490.2	596.8	411.9	5727.9	948.29
Aug-15	278.6	3490.2	555.1	416.2	5727.9	879.74
Sep-15	280.7	3490.2	552.8	420.2	5727.9	876.23
Oct-15	283.2	3490.2	576.8	424.7	5727.9	916.18
Nov-15	285.7	3490.2	586.2	429.2	5727.9	931.90
Dec-15	288.3	3490.2	560.8	433.9	5727.9	890.27
Jan-16	290.4	3490.2	543.7	437.7	5727.9	862.24
Feb-16	292.3	3490.2	548.6	441.2	5727.9	870.74
Mar-16	294.8	3490.2	588.8	445.6	5727.9	937.32
Apr-16	297.3	3490.2	596.7	450.1	5727.9	950.71
May-16	300.7	3490.2	653.2	456.0	5727.9	1044.19
Jun-16	303.8	3490.2	650.4	461.5	5727.9	1039.83
Jul-16	307.6	3490.2	683.4	468.1	5727.9	1094.52
Aug-16	311.8	3490.2	702.1	475.4	5727.9	1125.61
Sep-16	315.1	3490.2	613.7	481.3	5727.9	980.01
Oct-16	319.6	3490.2	705.2	488.9	5727.9	1131.30
Nov-16	323.6	3490.2	705.4	495.9	5727.9	1131.74
Dec-16	326.4	3490.2	609.0	500.8	5727.9	972.90
Jan-17	328.7	3490.2	616.8	505.1	5727.9	986.11
Feb-17	330.9	3490.2	605.1	509.0	5727.9	967.04
Mar-17	333.0	3490.2	611.8	512.8	5727.9	978.29
Apr-17	335.7	3490.2	644.1	517.5	5727.9	1031.88
May-17	338.2	3490.2	650.5	522.0	5727.9	1042.60
Jun-17	340.3	3490.2	623.0	525.7	5727.9	997.43
Jul-17	342.3	3490.2	624.9	529.3	5727.9	1000.89
Aug-17	345.0	3490.2	663.4	534.0	5727.9	1064.60
Sep-17	347.4	3490.2	658.0	538.3	5727.9	1055.83
Oct-17	350.5	3490.2	700.8	543.7	5727.9	1126.76
Nov-17	353.4	3490.2	695.3	548.8	5727.9	1117.93
Dec-17	356.8	3490.2	732.7	554.8	5727.9	1179.80
Jan-18	360.7	3490.2	739.2	561.4	5727.9	1190.75
Feb-18	365.0	3490.2	783.1	568.9	5727.9	1263.39
Mar-18	369.0	3490.2	766.6	575.7	5727.9	1236.31
Apr-18	372.8	3490.2	766.1	582.2	5727.9	1235.64
May-18	375.7	3490.2	710.2	587.3	5727.9	1143.71
Jun-18	378.3	3490.2	712.6	591.9	5727.9	1147.81
Jul-18	380.5	3490.2	690.2	595.8	5727.9	1111.12
Aug-18	382.6	3490.2	691.8	599.6	5727.9	1113.89

TABLE 4

Predicted TDS Concentrations of the Mine Water Discharge - Base Case
 (Page 5 of 7)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Sep-18	385.3	3490.2	731.8	604.3	5727.9	1180.12
Oct-18	388.0	3490.2	735.4	609.0	5727.9	1186.18
Nov-18	390.6	3490.2	735.6	613.6	5727.9	1186.85
Dec-18	393.2	3490.2	735.2	618.1	5727.9	1186.32
Jan-19	395.0	3490.2	686.5	621.3	5727.9	1106.22
Feb-19	396.7	3490.2	693.6	624.4	5727.9	1118.11
Mar-19	398.4	3490.2	695.2	627.4	5727.9	1120.88
Apr-19	400.1	3490.2	695.8	630.4	5727.9	1122.04
May-19	401.7	3490.2	699.2	633.4	5727.9	1127.91
Jun-19	403.3	3490.2	699.8	636.3	5727.9	1129.01
Jul-19	405.0	3490.2	702.7	639.2	5727.9	1134.04
Aug-19	406.5	3490.2	699.7	642.0	5727.9	1129.30
Sep-19	407.5	3490.2	664.3	643.9	5727.9	1071.09
Oct-19	408.4	3490.2	660.8	645.5	5727.9	1065.52
Nov-19	409.2	3490.2	661.6	647.1	5727.9	1067.01
Dec-19	410.1	3490.2	667.3	648.8	5727.9	1076.59
Jan-20	411.0	3490.2	666.9	650.6	5727.9	1076.13
Feb-20	412.0	3490.2	674.6	652.5	5727.9	1088.95
Mar-20	413.1	3490.2	679.8	654.5	5727.9	1097.73
Apr-20	414.1	3490.2	680.8	656.4	5727.9	1099.51
May-20	415.2	3490.2	682.2	658.3	5727.9	1101.98
Jun-20	416.2	3490.2	682.7	660.2	5727.9	1103.01
Jul-20	417.1	3490.2	679.6	661.9	5727.9	1098.04
Aug-20	417.9	3490.2	672.7	663.5	5727.9	1086.77
Sep-20	418.7	3490.2	677.2	665.1	5727.9	1094.35
Oct-20	419.5	3490.2	662.7	666.5	5727.9	1070.73
Nov-20	420.2	3490.2	670.8	667.9	5727.9	1084.27
Dec-20	420.8	3490.2	667.0	669.2	5727.9	1078.18
Jan-21	421.5	3490.2	668.9	670.4	5727.9	1081.30
Feb-21	422.1	3490.2	670.7	671.7	5727.9	1084.43
Mar-21	422.7	3490.2	670.8	672.9	5727.9	1084.91
Apr-21	423.3	3490.2	671.8	674.1	5727.9	1086.69
May-21	423.9	3490.2	668.7	675.2	5727.9	1081.65
Jun-21	424.5	3490.2	674.1	676.3	5727.9	1090.78
Jul-21	425.1	3490.2	674.7	677.5	5727.9	1091.88
Aug-21	425.7	3490.2	674.5	678.7	5727.9	1091.62
Sep-21	426.3	3490.2	671.5	679.8	5727.9	1086.79
Oct-21	426.8	3490.2	672.7	680.9	5727.9	1088.92
Nov-21	427.2	3490.2	671.9	681.9	5727.9	1087.87
Dec-21	427.8	3490.2	677.8	683.0	5727.9	1097.60
Jan-22	428.3	3490.2	673.4	684.0	5727.9	1090.49
Feb-22	428.8	3490.2	673.4	684.9	5727.9	1090.73
Mar-22	429.3	3490.2	673.9	685.9	5727.9	1091.62
Apr-22	429.7	3490.2	674.3	686.8	5727.9	1092.51

TABLE 4

Predicted TDS Concentrations of the Mine Water Discharge - Base Case
 (Page 6 of 7)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
May-22	430.2	3490.2	674.8	687.8	5727.9	1093.38
Jun-22	430.7	3490.2	676.4	688.7	5727.9	1096.22
Jul-22	431.1	3490.2	676.1	689.6	5727.9	1095.76
Aug-22	431.6	3490.2	676.9	690.6	5727.9	1097.27
Sep-22	432.0	3490.2	676.9	691.5	5727.9	1097.45
Oct-22	432.5	3490.2	677.4	692.4	5727.9	1098.29
Nov-22	432.9	3490.2	678.6	693.3	5727.9	1100.43
Dec-22	433.3	3490.2	677.4	694.1	5727.9	1098.62
Jan-23	433.8	3490.2	679.4	695.0	5727.9	1102.06
Feb-23	434.1	3490.2	674.5	695.7	5727.9	1094.06
Mar-23	434.5	3490.2	675.6	696.5	5727.9	1096.03
Apr-23	434.8	3490.2	675.2	697.2	5727.9	1095.40
May-23	435.1	3490.2	675.5	697.9	5727.9	1096.06
Jun-23	435.4	3490.2	671.2	698.5	5727.9	1089.20
Jul-23	435.6	3490.2	671.9	699.0	5727.9	1090.36
Aug-23	435.9	3490.2	672.1	699.6	5727.9	1090.89
Sep-23	436.0	3490.2	667.0	700.0	5727.9	1082.62
Oct-23	436.2	3490.2	668.0	700.4	5727.9	1084.25
Nov-23	436.4	3490.2	668.5	700.8	5727.9	1085.26
Dec-23	436.5	3490.2	668.7	701.2	5727.9	1085.64
Jan-24	436.7	3490.2	668.8	701.6	5727.9	1086.0
Feb-24	436.8	3490.2	669.0	702.0	5727.9	1086.4
Mar-24	437.0	3490.2	669.1	702.4	5727.9	1086.8
Apr-24	437.2	3490.2	669.3	702.8	5727.9	1087.1
May-24	437.3	3490.2	669.5	703.2	5727.9	1087.5
Jun-24	437.5	3490.2	669.6	703.6	5727.9	1087.9
Jul-24	437.6	3490.2	669.4	704.0	5727.9	1087.6
Aug-24	437.8	3490.2	669.9	704.4	5727.9	1088.6
Sep-24	437.9	3490.2	670.1	704.8	5727.9	1088.9
Oct-24	438.0	3490.2	670.2	705.1	5727.9	1089.3
Nov-24	438.2	3490.2	670.4	705.5	5727.9	1089.6
Dec-24	438.3	3490.2	670.5	705.9	5727.9	1089.9
Jan-25	438.5	3490.2	671.0	706.2	5727.9	1090.9
Feb-25	438.6	3490.2	671.2	706.6	5727.9	1091.2
Mar-25	438.8	3490.2	671.3	706.9	5727.9	1091.6
Apr-25	438.9	3490.2	671.1	707.3	5727.9	1091.3
May-25	439.0	3490.2	671.2	707.6	5727.9	1091.6
Jun-25	439.2	3490.2	671.3	708.0	5727.9	1091.9
Jul-25	439.3	3490.2	671.5	708.3	5727.9	1092.2
Aug-25	439.4	3490.2	671.6	708.6	5727.9	1092.5
Sep-25	439.6	3490.2	671.4	709.0	5727.9	1092.2
Oct-25	439.7	3490.2	672.3	709.3	5727.9	1093.8
Nov-25	439.8	3490.2	671.6	709.6	5727.9	1092.8
Dec-25	439.9	3490.2	672.1	710.0	5727.9	1093.8

TABLE 4

Predicted TDS Concentrations of the Mine Water Discharge - Base Case
 (Page 7 of 7)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jan-26	440.1	3490.2	671.1	710.3	5727.9	1092.2
Feb-26	442.1	3490.2	779.5	713.8	5727.9	1270.4
Mar-26	444.0	3490.2	771.2	717.0	5727.9	1256.9
Apr-26	445.8	3490.2	769.1	720.0	5727.9	1253.6
May-26	447.5	3490.2	769.7	723.0	5727.9	1254.6
Jun-26	450.8	3490.2	848.8	728.5	5727.9	1384.8
Jul-26	453.9	3490.2	840.0	733.7	5727.9	1370.4
Aug-26	456.9	3490.2	845.1	738.8	5727.9	1378.8
Sep-26	459.3	3490.2	785.3	742.8	5727.9	1280.6
Oct-26	461.5	3490.2	798.6	746.5	5727.9	1302.5
Nov-26	462.4	3490.2	728.8	748.1	5727.9	1187.8
Dec-26	463.2	3490.2	731.2	749.6	5727.9	1191.9
Jan-27	462.9	3490.2	664.3	749.1	5727.9	1082.0
Feb-27	462.6	3490.2	664.6	748.7	5727.9	1082.6
Mar-27	462.2	3490.2	665.2	748.3	5727.9	1083.7
Apr-27	461.9	3490.2	665.6	747.8	5727.9	1084.3
May-27	461.5	3490.2	661.2	747.2	5727.9	1077.3
Jun-27	461.1	3490.2	660.9	746.7	5727.9	1076.7
Jul-27	460.7	3490.2	660.5	746.1	5727.9	1076.2
Aug-27	460.3	3490.2	660.5	745.6	5727.9	1076.2
Sep-27	460.0	3490.2	663.5	745.2	5727.9	1081.3
Oct-27	459.7	3490.2	662.9	744.7	5727.9	1080.4
Nov-27	459.4	3490.2	663.6	744.3	5727.9	1081.6
Dec-27	459.0	3490.2	657.7	743.8	5727.9	1072.0
Jan-28	458.6	3490.2	658.3	743.3	5727.9	1073.0
Feb-28	458.3	3490.2	658.3	742.8	5727.9	1073.0
Mar-28	457.9	3490.2	659.2	742.2	5727.9	1074.6
Apr-28	457.5	3490.2	658.2	741.7	5727.9	1073.1
May-28	457.1	3490.2	653.5	741.1	5727.9	1065.4
Jun-28	456.6	3490.2	653.1	740.4	5727.9	1064.8
Jul-28	456.2	3490.2	652.7	739.8	5727.9	1064.2
Aug-28	455.8	3490.2	652.3	739.2	5727.9	1063.6
Sep-28	455.3	3490.2	651.3	738.6	5727.9	1062.0
Oct-28	454.9	3490.2	651.8	738.0	5727.9	1062.9
Nov-28	454.5	3490.2	651.1	737.3	5727.9	1061.9
Dec-28	454.1	3490.2	651.0	736.7	5727.9	1061.8

TABLE 5

Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4

(Page 1 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Jan-04	0	0	0	0	0	0	0	0	0
Feb-04	0	0	0	0	0	0	0	0	0
Mar-04	0	0	0	0	0	0	0	0	0
Apr-04	0	0	0	0	0	0	0	0	0
May-04	346	346	0	0	0	298	298	0	0
Jun-04	346	346	0	0	0	298	298	0	0
Jul-04	432	432	0	0	0	399	399	0	0
Aug-04	1382	1210	86	86	173	1362	1362	0	0
Sep-04	2160	1987	86	86	173	2141	2141	0	0
Oct-04	2938	2678	173	86	259	2931	2931	0	0
Nov-04	3283	3024	173	86	259	3283	3283	0	0
Dec-04	3370	3110	173	86	259	3456	3456	0	0
Jan-05	4147	3802	259	86	346	4061	4061	0	0
Feb-05	4147	3802	259	86	346	4061	4061	0	0
Mar-05	4406	4061	259	86	346	4406	4406	0	0
Apr-05	4752	4406	259	86	346	4666	4666	0	0
May-05	5184	4838	259	86	346	5270	5270	0	0
Jun-05	5702	5270	346	86	432	5702	5702	0	0
Jul-05	6048	5270	346	432	778	5875	5875	0	0
Aug-05	6394	5702	259	432	691	6307	6307	0	0
Sep-05	6739	5962	259	518	778	6566	6566	0	0
Oct-05	6739	5875	259	605	864	6653	6653	0	0
Nov-05	6826	5789	259	778	1037	6653	6653	0	0
Dec-05	6826	5789	259	778	1037	6653	6653	0	0
Jan-06	7258	6221	259	778	1037	6998	7085	0	0
Feb-06	7430	6307	259	864	1123	7171	7258	0	0
Mar-06	7517	6394	259	864	1123	7258	7344	0	0
Apr-06	7517	6307	259	950	1210	7344	7430	0	0
May-06	8208	6998	259	950	1210	7949	8035	0	0
Jun-06	8122	6826	259	1037	1296	8035	8122	0	0
Jul-06	8554	6998	259	1296	1555	8208	8294	0	0
Aug-06	8813	7258	259	1296	1555	8640	8726	0	0
Sep-06	8813	7258	259	1296	1555	8640	8726	0	0
Oct-06	8813	7171	259	1382	1642	8640	8726	0	0
Nov-06	10454	8899	259	1296	1555	10022	10109	0	0
Dec-06	12182	10454	346	1382	1728	11405	11491	0	0
Jan-07	13306	11664	259	1382	1642	12096	12182	0	0
Feb-07	13997	12355	346	1296	1642	12355	12442	0	0
Mar-07	13824	12269	259	1296	1555	12269	12355	0	0
Apr-07	13651	12182	173	1296	1469	12182	12269	0	0
May-07	13910	12355	259	1296	1555	12528	12614	0	0
Jun-07	13651	12096	259	1296	1555	12528	12614	0	0
Jul-07	13133	11578	173	1382	1555	12442	12528	0	0
Aug-07	13910	12442	173	1296	1469	13046	13133	0	0

TABLE 5

Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4

(Page 2 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Sep-07	13910	12355	259	1296	1555	13046	13133	0	0
Oct-07	13824	12269	259	1296	1555	13046	13133	0	0
Nov-07	13478	11923	259	1296	1555	12874	12960	0	0
Dec-07	13478	11923	259	1296	1555	12874	12874	86	0
Jan-08	13478	11923	259	1296	1555	12874	12874	86	0
Feb-08	13738	12269	259	1210	1469	13046	13046	86	0
Mar-08	13738	12269	259	1210	1469	13133	13133	86	0
Apr-08	13910	12442	259	1210	1469	13219	13219	86	0
May-08	14083	12614	259	1210	1469	13392	13392	86	0
Jun-08	13738	12269	259	1210	1469	13306	13306	86	0
Jul-08	14429	12960	346	1123	1469	13651	13651	86	0
Aug-08	14947	13478	259	1210	1469	14256	14256	86	0
Sep-08	15206	13824	259	1123	1382	14602	14602	86	0
Oct-08	15466	14083	259	1123	1382	14947	14947	86	0
Nov-08	17280	15811	346	1123	1469	16243	16243	86	0
Dec-08	18490	16848	346	1296	1642	17280	17280	86	0
Jan-09	18576	17021	346	1210	1555	17280	17280	86	0
Feb-09	18490	16934	346	1210	1555	17194	17194	86	0
Mar-09	18576	17021	346	1210	1555	17194	17194	86	0
Apr-09	18403	16762	346	1296	1642	17280	17280	86	0
May-09	18490	16848	346	1296	1642	17366	17366	86	0
Jun-09	18490	16934	259	1296	1555	17453	17453	86	0
Jul-09	18749	17021	346	1382	1728	17798	17798	86	0
Aug-09	18144	16502	259	1382	1642	17539	17539	86	0
Sep-09	17885	16243	259	1382	1642	17453	17453	86	0
Oct-09	17971	16157	259	1555	1814	17539	17539	86	0
Nov-09	18058	16243	259	1555	1814	17539	17539	86	0
Dec-09	18317	16416	259	1642	1901	17712	17712	86	0
Jan-10	19872	17798	346	1728	2074	18749	18749	86	0
Feb-10	19786	17626	432	1728	2160	18835	18835	86	0
Mar-10	19613	17366	432	1814	2246	18835	18835	86	0
Apr-10	19958	17798	432	1728	2160	19094	19094	86	0
May-10	20650	18576	432	1642	2074	19440	19440	86	0
Jun-10	20218	18144	432	1642	2074	19526	19526	86	0
Jul-10	20304	18144	432	1728	2160	19613	19613	86	0
Aug-10	21946	19872	432	1642	2074	20477	20477	86	0
Sep-10	23069	20909	518	1642	2160	21254	21254	86	0
Oct-10	22896	20736	432	1728	2160	21168	21168	86	0
Nov-10	23069	20909	432	1728	2160	21514	21514	86	0
Dec-10	23760	21600	432	1728	2160	22118	22118	86	0
Jan-11	23760	21514	432	1814	2246	22378	22378	86	0
Feb-11	23587	21341	432	1814	2246	22464	22464	86	0
Mar-11	24192	21686	432	2074	2506	22723	22723	86	0
Apr-11	24624	22118	432	2074	2506	23242	23155	173	0

TABLE 5

Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4

(Page 3 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
May-11	24710	21946	432	2333	2765	23587	23501	173	0
Jun-11	25229	22378	432	2419	2851	24019	23933	173	0
Jul-11	25315	22378	432	2506	2938	24192	24106	173	0
Aug-11	25747	22723	518	2506	3024	24365	24278	173	0
Sep-11	26438	23501	518	2419	2938	24624	24538	173	0
Oct-11	26352	23414	518	2419	2938	24797	24710	173	0
Nov-11	27043	23933	518	2592	3110	25315	25229	173	0
Dec-11	27216	24278	432	2506	2938	25661	25574	173	0
Jan-12	27302	24278	432	2592	3024	25920	25834	173	0
Feb-12	27907	24797	518	2592	3110	26266	26179	173	0
Mar-12	27994	24797	518	2678	3197	26438	26352	173	0
Apr-12	28512	25402	518	2592	3110	26784	26698	173	0
May-12	28166	24970	518	2678	3197	26870	26698	173	0
Jun-12	28339	25142	518	2678	3197	26957	26784	173	0
Jul-12	28598	25315	518	2765	3283	26611	26438	173	0
Aug-12	28771	25142	518	3110	3629	26611	26438	173	0
Sep-12	32400	28598	605	3197	3802	27821	27648	173	0
Oct-12	32746	28858	518	3370	3888	28253	28080	173	0
Nov-12	32141	27994	605	3542	4147	28685	28512	173	0
Dec-12	33005	28944	605	3456	4061	29376	29203	173	0
Jan-13	33955	29894	605	3456	4061	30240	29981	259	0
Feb-13	34301	30154	691	3456	4147	30758	30499	259	0
Mar-13	35856	31622	864	3370	4234	31622	31363	259	0
Apr-13	35338	30845	864	3629	4493	32054	31795	259	0
May-13	35424	30845	950	3629	4579	32400	32141	259	0
Jun-13	39398	34906	864	3629	4493	33869	33610	259	0
Jul-13	41299	36893	864	3542	4406	34646	34387	259	0
Aug-13	41213	36720	864	3629	4493	35338	35078	259	0
Sep-13	41818	37238	864	3715	4579	36202	35942	259	0
Oct-13	41472	36893	778	3802	4579	36547	36288	259	0
Nov-13	42854	38621	691	3542	4234	37152	36893	259	0
Dec-13	42854	38621	691	3542	4234	37584	37238	346	0
Jan-14	43027	38880	605	3542	4147	37843	37498	346	0
Feb-14	46397	42509	605	3283	3888	39485	39053	346	86
Mar-14	47866	44064	605	3197	3802	40608	40176	346	86
Apr-14	46570	42768	605	3197	3802	41040	40608	346	86
May-14	46224	42250	605	3370	3974	41645	41213	346	86
Jun-14	47347	43459	605	3283	3888	42163	41731	346	86
Jul-14	49334	44150	605	4579	5184	43027	42509	432	86
Aug-14	48730	43200	605	4925	5530	43546	43027	432	86
Sep-14	49162	43027	605	5530	6134	44064	43546	432	86
Oct-14	58320	52531	691	5098	5789	45533	44928	432	173
Nov-14	63763	58061	691	5011	5702	47606	47002	432	173
Dec-14	65232	58406	605	6221	6826	49594	48989	432	173

TABLE 5

Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4

(Page 4 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Jan-15	62813	55987	605	6221	6826	50803	50112	518	173
Feb-15	62986	55037	605	7344	7949	51926	51235	518	173
Mar-15	63936	56246	605	7085	7690	53222	52531	518	173
Apr-15	63072	55469	605	6998	7603	54086	53309	518	259
May-15	62726	54691	691	7344	8035	54691	53827	605	259
Jun-15	67738	59530	605	7603	8208	55210	54346	605	259
Jul-15	65664	57542	691	7430	8122	55642	54778	605	259
Aug-15	72144	64714	691	6739	7430	56765	55814	605	346
Sep-15	70934	64109	691	6134	6826	57456	56506	605	346
Oct-15	68342	61085	691	6566	7258	57974	56938	691	346
Nov-15	66787	59443	691	6653	7344	58493	57370	691	432
Dec-15	76118	68429	691	6998	7690	60307	59184	691	432
Jan-16	74045	66960	691	6394	7085	61517	60394	691	432
Feb-16	71539	64541	691	6307	6998	62294	61171	691	432
Mar-16	71021	63504	605	6912	7517	62899	61690	691	518
Apr-16	71453	63072	605	7776	8381	63504	62208	778	518
May-16	71107	61949	605	8554	9158	63936	62640	778	518
Jun-16	70157	61258	605	8294	8899	64195	62899	778	518
Jul-16	73526	63850	605	9072	9677	65491	64109	778	605
Aug-16	96682	87005	605	9072	9677	72662	71280	778	605
Sep-16	96854	88214	605	8035	8640	74822	73440	778	605
Oct-16	89597	80179	605	8813	9418	75859	74477	778	605
Nov-16	86400	77242	605	8554	9158	76550	74995	864	691
Dec-16	91757	84067	605	7085	7690	78019	76464	864	691
Jan-17	87091	79747	605	6739	7344	78451	76896	864	691
Feb-17	101779	95040	778	5962	6739	82771	81216	864	691
Mar-17	91411	84931	691	5789	6480	82598	80957	864	778
Apr-17	93917	85104	691	8122	8813	83462	81821	864	778
May-17	90029	81648	778	7603	8381	82771	81130	864	778
Jun-17	92621	85795	691	6134	6826	82944	81302	864	778
Jul-17	90547	83808	778	5962	6739	82944	81302	864	778
Aug-17	90547	82858	778	6912	7690	83203	81562	864	778
Sep-17	89597	82080	778	6739	7517	83462	81648	950	864
Oct-17	90115	80438	691	8986	9677	83808	81994	950	864
Nov-17	89251	79747	691	8813	9504	83722	81907	950	864
Dec-17	90202	78883	691	10627	11318	83894	82080	950	864
Jan-18	93485	79315	691	13478	14170	83981	82166	950	864
Feb-18	93312	77933	691	14688	15379	84067	82253	950	864
Mar-18	93139	78538	778	13824	14602	84240	82339	950	950
Apr-18	92016	78192	691	13133	13824	84413	82512	950	950
May-18	93485	81302	691	11491	12182	84413	82512	950	950
Jun-18	91238	79402	691	11146	11837	84413	82512	950	950
Jul-18	91325	80006	691	10627	11318	84499	82598	950	950
Aug-18	90374	79229	691	10454	11146	84499	82598	950	950

TABLE 5

Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4

(Page 5 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Sep-18	90461	78797	691	10973	11664	84586	82598	950	1037
Oct-18	90374	79056	691	10627	11318	84499	82512	950	1037
Nov-18	89683	78451	691	10541	11232	84499	82512	950	1037
Dec-18	90029	78970	691	10368	11059	84672	82685	950	1037
Jan-19	90979	80784	691	9504	10195	84672	82685	950	1037
Feb-19	89597	79488	691	9418	10109	84758	82685	1037	1037
Mar-19	89251	79229	691	9331	10022	84845	82771	1037	1037
Apr-19	89338	79402	691	9245	9936	84931	82858	1037	1037
May-19	88906	78970	691	9245	9936	84845	82685	1037	1123
Jun-19	88819	78970	691	9158	9850	84931	82771	1037	1123
Jul-19	88474	78624	691	9158	9850	84845	82685	1037	1123
Aug-19	88301	78538	691	9072	9763	84845	82685	1037	1123
Sep-19	91238	84154	691	6394	7085	84931	82858	950	1123
Oct-19	88819	82080	691	6048	6739	84845	82771	950	1123
Nov-19	88819	82166	691	5962	6653	84931	82858	950	1123
Dec-19	88733	81994	691	6048	6739	84931	82858	950	1123
Jan-20	88646	81907	691	6048	6739	85018	82944	950	1123
Feb-20	89597	82685	691	6221	6912	85190	83117	950	1123
Mar-20	88733	81821	691	6221	6912	85190	83030	950	1210
Apr-20	88646	81734	691	6221	6912	85277	83030	1037	1210
May-20	88301	81475	691	6134	6826	85190	82944	1037	1210
Jun-20	88301	81475	691	6134	6826	85190	82944	1037	1210
Jul-20	88387	81562	691	6134	6826	85277	83030	1037	1210
Aug-20	88819	82166	691	5962	6653	85363	83117	1037	1210
Sep-20	88214	81562	691	5962	6653	85363	83117	1037	1210
Oct-20	89856	83203	691	5962	6653	85450	83203	1037	1210
Nov-20	88474	81907	691	5875	6566	85450	83203	1037	1210
Dec-20	88387	81821	691	5875	6566	85536	83290	1037	1210
Jan-21	88214	81648	691	5875	6566	85536	83290	1037	1210
Feb-21	87869	81389	691	5789	6480	85536	83290	1037	1210
Mar-21	88042	81562	691	5789	6480	85622	83376	1037	1210
Apr-21	88042	81562	691	5789	6480	85622	83376	1037	1210
May-21	87782	81302	691	5789	6480	85709	83376	1037	1296
Jun-21	87955	81389	778	5789	6566	85709	83376	1037	1296
Jul-21	87782	81302	778	5702	6480	85709	83376	1037	1296
Aug-21	87955	81475	778	5702	6480	85795	83462	1037	1296
Sep-21	88474	81907	864	5702	6566	85795	83462	1037	1296
Oct-21	87437	81043	778	5616	6394	85795	83462	1037	1296
Nov-21	87610	81216	778	5616	6394	85795	83462	1037	1296
Dec-21	87782	81302	864	5616	6480	85795	83462	1037	1296
Jan-22	87523	81130	864	5530	6394	85795	83462	1037	1296
Feb-22	87523	81130	864	5530	6394	85795	83462	1037	1296
Mar-22	87523	81130	864	5530	6394	85795	83462	1037	1296
Apr-22	87523	81130	864	5530	6394	85795	83462	1037	1296

TABLE 5

Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4

(Page 6 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
May-22	87437	81043	864	5530	6394	85882	83462	1123	1296
Jun-22	87437	81043	864	5530	6394	85882	83462	1123	1296
Jul-22	87437	81043	864	5530	6394	85882	83462	1123	1296
Aug-22	87437	81043	864	5530	6394	85882	83462	1123	1296
Sep-22	87437	81043	864	5530	6394	85882	83462	1123	1296
Oct-22	87350	80957	864	5530	6394	85882	83462	1123	1296
Nov-22	87350	80957	864	5530	6394	85882	83462	1123	1296
Dec-22	87610	81216	864	5530	6394	85882	83462	1123	1296
Jan-23	87264	80957	864	5443	6307	85968	83462	1123	1382
Feb-23	87437	81130	864	5443	6307	85968	83462	1123	1382
Mar-23	87264	80957	864	5443	6307	85968	83462	1123	1382
Apr-23	87350	81043	864	5443	6307	85968	83462	1123	1382
May-23	87178	80957	864	5357	6221	85968	83462	1123	1382
Jun-23	87350	81130	864	5357	6221	85968	83462	1123	1382
Jul-23	87264	81043	864	5357	6221	85968	83462	1123	1382
Aug-23	87264	81043	864	5357	6221	85968	83462	1123	1382
Sep-23	87178	81130	864	5184	6048	85968	83462	1123	1382
Oct-23	87091	80957	950	5184	6134	85968	83462	1123	1382
Nov-23	87091	80957	950	5184	6134	85968	83462	1123	1382
Dec-23	87091	80957	950	5184	6134	85968	83462	1123	1382
Jan-24	87091	80957	950	5184	6134	85968	83462	1123	1382
Feb-24	87091	80957	950	5184	6134	85968	83462	1123	1382
Mar-24	87005	80870	950	5184	6134	85968	83462	1123	1382
Apr-24	87005	80870	950	5184	6134	85968	83462	1123	1382
May-24	87005	80870	950	5184	6134	85968	83462	1123	1382
Jun-24	87005	80870	950	5184	6134	86054	83549	1123	1382
Jul-24	87005	80870	950	5184	6134	86054	83549	1123	1382
Aug-24	87005	80870	950	5184	6134	86054	83549	1123	1382
Sep-24	87005	80870	950	5184	6134	86054	83549	1123	1382
Oct-24	87005	80870	950	5184	6134	86054	83549	1123	1382
Nov-24	87005	80870	950	5184	6134	86054	83549	1123	1382
Dec-24	87005	80870	950	5184	6134	86054	83549	1123	1382
Jan-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Feb-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Mar-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Apr-25	86918	80784	950	5184	6134	86054	83549	1123	1382
May-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Jun-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Jul-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Aug-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Sep-25	86918	80784	950	5184	6134	86054	83549	1123	1382
Oct-25	86918	80784	950	5184	6134	86141	83549	1123	1469
Nov-25	86918	80784	950	5184	6134	86141	83549	1123	1469
Dec-25	86918	80784	950	5184	6134	86141	83549	1123	1469

TABLE 5

Predicted Groundwater Inflow Components to the Mine Workings - Sensitivity Simulation 4

(Page 7 of 7)

Date	Total Groundwater Inflow (m ³ /day)	Groundwater Flow to the HW (m ³ /day)	Groundwater Flow to the FW (m ³ /day)			Water Discharge from the Lakes (m ³ /day)			
			Upper	Lower	Total	Total	Snap Lake	North Lake	NE Lake
Jan-26	87178	81043	1037	5098	6134	86227	83635	1123	1469
Feb-26	88992	80784	3110	5098	8208	87610	85018	1123	1469
Mar-26	88992	80957	2938	5098	8035	87869	85277	1123	1469
Apr-26	88646	80698	2851	5098	7949	87869	85277	1123	1469
May-26	88992	81043	2851	5098	7949	87955	85363	1123	1469
Jun-26	90461	80870	4493	5098	9590	88906	86314	1123	1469
Jul-26	90806	81389	4320	5098	9418	89424	86832	1123	1469
Aug-26	90374	81130	4234	5011	9245	89251	86659	1123	1469
Sep-26	105408	97891	4234	3283	7517	93312	90720	1123	1469
Oct-26	95386	88042	4147	3197	7344	92534	89942	1123	1469
Nov-26	95386	89424	2765	3197	5962	92794	90202	1123	1469
Dec-26	94954	89078	2678	3197	5875	92966	90374	1123	1469
Jan-27	94954	90374	1382	3197	4579	92794	90202	1123	1469
Feb-27	94435	89942	1382	3110	4493	92880	90288	1123	1469
Mar-27	94435	89942	1382	3110	4493	92966	90374	1123	1469
Apr-27	94176	89683	1382	3110	4493	92794	90202	1123	1469
May-27	93917	89424	1382	3110	4493	92621	90029	1123	1469
Jun-27	94003	89510	1382	3110	4493	92707	90115	1123	1469
Jul-27	93658	89165	1382	3110	4493	92794	90202	1123	1469
Aug-27	93571	89078	1382	3110	4493	92794	90202	1123	1469
Sep-27	94176	89597	1469	3110	4579	92880	90288	1123	1469
Oct-27	94003	89424	1469	3110	4579	92966	90374	1123	1469
Nov-27	93830	89251	1469	3110	4579	92966	90374	1123	1469
Dec-27	93744	89251	1469	3024	4493	93053	90461	1123	1469
Jan-28	93917	89424	1469	3024	4493	92880	90288	1123	1469
Feb-28	93485	88992	1469	3024	4493	92966	90374	1123	1469
Mar-28	93485	88992	1469	3024	4493	92794	90202	1123	1469
Apr-28	93485	88992	1469	3024	4493	92794	90202	1123	1469
May-28	93398	88906	1469	3024	4493	92794	90202	1123	1469
Jun-28	93485	88992	1469	3024	4493	92880	90288	1123	1469
Jul-28	93658	89165	1469	3024	4493	92966	90374	1123	1469
Aug-28	93398	88906	1469	3024	4493	92794	90202	1123	1469
Sep-28	93226	88733	1469	3024	4493	92707	90115	1123	1469
Oct-28	93312	88819	1469	3024	4493	92707	90115	1123	1469
Nov-28	93312	88819	1469	3024	4493	92794	90202	1123	1469
Dec-28	93485	88992	1469	3024	4493	92880	90288	1123	1469

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 1 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jan-04	214.7	3490.2		228.7	5727.9	
Feb-04	214.7	3490.2		228.7	5727.9	
Mar-04	214.7	3490.2		228.7	5727.9	
Apr-04	214.7	3490.2		228.7	5727.9	
May-04	214.7	3490.2	214.7	228.7	5727.9	228.7
Jun-04	214.7	3490.2	214.7	228.7	5727.9	228.7
Jul-04	214.7	3490.2	214.7	228.7	5727.9	228.7
Aug-04	214.7	3490.2	624.1	228.7	5727.9	916.1
Sep-04	214.7	3490.2	476.7	228.7	5727.9	668.6
Oct-04	214.7	3490.2	503.7	228.7	5727.9	713.9
Nov-04	214.7	3490.2	473.3	228.7	5727.9	662.8
Dec-04	214.7	3490.2	466.7	228.7	5727.9	651.7
Jan-05	214.7	3490.2	487.7	228.7	5727.9	687.0
Feb-05	214.7	3490.2	487.7	228.7	5727.9	687.0
Mar-05	214.7	3490.2	471.6	228.7	5727.9	660.0
Apr-05	214.7	3490.2	452.9	228.7	5727.9	628.6
May-05	214.7	3490.2	433.1	228.7	5727.9	595.3
Jun-05	214.7	3490.2	462.8	228.7	5727.9	645.3
Jul-05	214.7	3490.2	635.8	228.7	5727.9	935.7
Aug-05	214.7	3490.2	568.8	228.7	5727.9	823.2
Sep-05	214.7	3490.2	592.6	228.7	5727.9	863.2
Oct-05	214.7	3490.2	634.6	228.7	5727.9	933.7
Nov-05	214.7	3490.2	712.2	228.7	5727.9	1064.0
Dec-05	214.7	3490.2	712.2	228.7	5727.9	1064.0
Jan-06	214.7	3490.2	682.6	228.7	5727.9	1014.3
Feb-06	214.7	3490.2	709.8	228.7	5727.9	1060.0
Mar-06	214.7	3490.2	704.1	228.7	5727.9	1050.4
Apr-06	214.7	3490.2	741.8	228.7	5727.9	1113.6
May-06	214.7	3490.2	697.4	228.7	5727.9	1039.1
Jun-06	214.7	3490.2	737.4	228.7	5727.9	1106.2
Jul-06	214.7	3490.2	810.2	228.7	5727.9	1228.6
Aug-06	214.7	3490.2	792.7	228.7	5727.9	1199.1
Sep-06	214.7	3490.2	792.7	228.7	5727.9	1199.1
Oct-06	214.7	3490.2	824.8	228.7	5727.9	1253.1
Nov-06	214.7	3490.2	702.0	228.7	5727.9	1046.8
Dec-06	214.7	3490.2	679.3	228.7	5727.9	1008.7
Jan-07	214.7	3490.2	618.8	228.7	5727.9	907.2
Feb-07	214.7	3490.2	598.9	228.7	5727.9	873.7
Mar-07	214.7	3490.2	583.2	228.7	5727.9	847.4
Apr-07	214.7	3490.2	567.1	228.7	5727.9	820.4
May-07	214.7	3490.2	580.9	228.7	5727.9	843.5
Jun-07	214.7	3490.2	587.9	228.7	5727.9	855.2

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 2 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jul-07	214.7	3490.2	602.6	228.7	5727.9	879.9
Aug-07	214.7	3490.2	560.6	228.7	5727.9	809.4
Sep-07	214.7	3490.2	580.9	228.7	5727.9	843.5
Oct-07	214.7	3490.2	583.2	228.7	5727.9	847.4
Nov-07	214.7	3490.2	592.6	228.7	5727.9	863.2
Dec-07	214.7	3490.2	592.6	228.7	5727.9	863.2
Jan-08	214.7	3490.2	592.6	228.7	5727.9	863.2
Feb-08	214.7	3490.2	564.9	228.7	5727.9	816.7
Mar-08	214.7	3490.2	564.9	228.7	5727.9	816.7
Apr-08	214.7	3490.2	560.6	228.7	5727.9	809.4
May-08	214.7	3490.2	556.3	228.7	5727.9	802.2
Jun-08	214.7	3490.2	564.9	228.7	5727.9	816.7
Jul-08	214.7	3490.2	548.1	228.7	5727.9	788.5
Aug-08	214.7	3490.2	536.6	228.7	5727.9	769.1
Sep-08	214.7	3490.2	512.5	228.7	5727.9	728.6
Oct-08	214.7	3490.2	507.5	228.7	5727.9	720.2
Nov-08	214.7	3490.2	493.1	228.7	5727.9	696.1
Dec-08	214.7	3490.2	505.5	228.7	5727.9	716.9
Jan-09	214.7	3490.2	488.9	228.7	5727.9	689.1
Feb-09	214.7	3490.2	490.2	228.7	5727.9	691.2
Mar-09	214.7	3490.2	488.9	228.7	5727.9	689.1
Apr-09	214.7	3490.2	506.9	228.7	5727.9	719.2
May-09	214.7	3490.2	505.5	228.7	5727.9	716.9
Jun-09	214.7	3490.2	490.2	228.7	5727.9	691.2
Jul-09	214.7	3490.2	516.6	228.7	5727.9	735.5
Aug-09	214.7	3490.2	511.1	228.7	5727.9	726.2
Sep-09	214.7	3490.2	515.3	228.7	5727.9	733.5
Oct-09	214.7	3490.2	545.4	228.7	5727.9	783.9
Nov-09	214.7	3490.2	543.8	228.7	5727.9	781.3
Dec-09	214.7	3490.2	554.6	228.7	5727.9	799.4
Jan-10	214.7	3490.2	556.5	228.7	5727.9	802.5
Feb-10	214.7	3490.2	572.3	228.7	5727.9	829.0
Mar-10	214.7	3490.2	589.9	228.7	5727.9	858.6
Apr-10	214.7	3490.2	569.2	228.7	5727.9	823.9
May-10	214.7	3490.2	543.6	228.7	5727.9	780.9
Jun-10	214.7	3490.2	550.6	228.7	5727.9	792.7
Jul-10	214.7	3490.2	563.2	228.7	5727.9	813.7
Aug-10	214.7	3490.2	524.2	228.7	5727.9	748.3
Sep-10	214.7	3490.2	521.4	228.7	5727.9	743.6
Oct-10	214.7	3490.2	523.7	228.7	5727.9	747.5
Nov-10	214.7	3490.2	521.4	228.7	5727.9	743.6
Dec-10	214.7	3490.2	512.5	228.7	5727.9	728.6

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 3 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jan-11	214.7	3490.2	524.4	228.7	5727.9	748.6
Feb-11	214.7	3490.2	526.7	228.7	5727.9	752.4
Mar-11	214.7	3490.2	553.9	228.7	5727.9	798.3
Apr-11	214.7	3490.2	548.0	228.7	5727.9	788.3
May-11	214.7	3490.2	581.2	228.7	5727.9	844.0
Jun-11	214.7	3490.2	584.9	228.7	5727.9	850.2
Jul-11	214.7	3490.2	594.8	228.7	5727.9	866.8
Aug-11	214.7	3490.2	599.4	228.7	5727.9	874.6
Sep-11	214.7	3490.2	578.6	230.5	5727.9	839.7
Oct-11	214.7	3490.2	579.8	233.5	5727.9	843.3
Nov-11	214.7	3490.2	591.4	236.8	5727.9	865.4
Dec-11	214.7	3490.2	568.2	239.7	5727.9	829.5
Jan-12	214.7	3490.2	577.5	242.8	5727.9	847.6
Feb-12	214.7	3490.2	579.8	246.0	5727.9	854.2
Mar-12	214.7	3490.2	588.8	249.3	5727.9	872.0
Apr-12	214.7	3490.2	572.0	252.5	5727.9	847.0
May-12	214.7	3490.2	586.5	255.7	5727.9	873.9
Jun-12	214.7	3490.2	584.2	259.0	5727.9	873.0
Jul-12	214.7	3490.2	590.7	262.3	5727.9	886.8
Aug-12	214.7	3490.2	627.8	266.2	5727.9	951.6
Sep-12	214.7	3490.2	599.0	270.3	5727.9	907.0
Oct-12	214.7	3490.2	603.6	274.6	5727.9	918.3
Nov-12	214.7	3490.2	637.3	279.2	5727.9	978.2
Dec-12	214.7	3490.2	617.7	283.6	5727.9	949.6
Jan-13	214.7	3490.2	606.4	288.0	5727.9	934.7
Feb-13	214.7	3490.2	610.7	292.6	5727.9	945.8
Mar-13	214.7	3490.2	601.4	297.2	5727.9	934.3
Apr-13	214.7	3490.2	631.1	302.1	5727.9	987.6
May-13	214.7	3490.2	638.1	307.2	5727.9	1003.5
Jun-13	216.8	3490.2	588.2	312.1	5727.9	925.4
Jul-13	219.4	3490.2	566.1	316.8	5727.9	890.0
Aug-13	222.1	3490.2	576.0	321.6	5727.9	906.7
Sep-13	224.8	3490.2	580.0	326.5	5727.9	913.6
Oct-13	227.5	3490.2	585.4	331.4	5727.9	922.9
Nov-13	229.9	3490.2	549.9	335.6	5727.9	864.5
Dec-13	232.2	3490.2	552.0	339.8	5727.9	868.3
Jan-14	234.4	3490.2	546.2	343.8	5727.9	859.1
Feb-14	236.3	3490.2	507.2	347.4	5727.9	795.0
Mar-14	238.1	3490.2	494.7	350.7	5727.9	774.7
Apr-14	239.9	3490.2	503.6	354.1	5727.9	789.7
May-14	241.9	3490.2	519.4	357.7	5727.9	816.1
Jun-14	243.7	3490.2	508.6	361.1	5727.9	798.6

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 4 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jul-14	246.9	3490.2	584.9	366.6	5727.9	925.0
Aug-14	250.3	3490.2	614.9	372.6	5727.9	974.9
Sep-14	254.3	3490.2	654.6	379.5	5727.9	1040.8
Oct-14	257.9	3490.2	575.5	385.9	5727.9	910.4
Nov-14	261.4	3490.2	547.0	392.0	5727.9	863.6
Dec-14	266.0	3490.2	599.2	399.9	5727.9	950.3
Jan-15	270.5	3490.2	616.3	407.7	5727.9	978.8
Feb-15	276.1	3490.2	676.8	417.2	5727.9	1079.1
Mar-15	281.3	3490.2	662.6	426.2	5727.9	1055.9
Apr-15	286.4	3490.2	668.1	435.0	5727.9	1065.3
May-15	291.9	3490.2	696.8	444.4	5727.9	1113.0
Jun-15	297.5	3490.2	679.5	454.0	5727.9	1084.6
Jul-15	303.0	3490.2	692.4	463.3	5727.9	1106.3
Aug-15	307.7	3490.2	631.3	471.4	5727.9	1005.5
Sep-15	311.8	3490.2	614.0	478.5	5727.9	977.2
Oct-15	316.3	3490.2	649.3	486.2	5727.9	1035.9
Nov-15	320.8	3490.2	665.3	493.9	5727.9	1062.5
Dec-15	325.6	3490.2	641.0	502.1	5727.9	1022.6
Jan-16	329.7	3490.2	628.4	509.2	5727.9	1002.1
Feb-16	333.7	3490.2	638.9	516.2	5727.9	1019.8
Mar-16	338.2	3490.2	667.8	523.9	5727.9	1067.8
Apr-16	343.5	3490.2	707.9	532.9	5727.9	1134.3
May-16	349.4	3490.2	748.8	543.0	5727.9	1202.0
Jun-16	355.1	3490.2	747.8	552.6	5727.9	1200.7
Jul-16	361.4	3490.2	767.7	563.3	5727.9	1233.7
Aug-16	367.7	3490.2	674.6	573.9	5727.9	1080.2
Sep-16	372.9	3490.2	646.2	582.8	5727.9	1033.7
Oct-16	378.8	3490.2	700.5	592.7	5727.9	1123.6
Nov-16	384.3	3490.2	708.6	602.2	5727.9	1137.1
Dec-16	388.4	3490.2	644.6	609.2	5727.9	1031.7
Jan-17	392.2	3490.2	650.0	615.7	5727.9	1040.9
Feb-17	395.3	3490.2	597.3	621.1	5727.9	954.2
Mar-17	398.1	3490.2	614.7	626.0	5727.9	983.1
Apr-17	403.2	3490.2	688.3	634.6	5727.9	1104.8
May-17	407.7	3490.2	690.5	642.4	5727.9	1108.7
Jun-17	410.8	3490.2	634.9	647.6	5727.9	1017.1
Jul-17	413.7	3490.2	640.0	652.7	5727.9	1025.8
Aug-17	417.5	3490.2	675.0	659.2	5727.9	1083.7
Sep-17	421.1	3490.2	675.3	665.4	5727.9	1084.5
Oct-17	426.7	3490.2	750.6	674.9	5727.9	1209.0
Nov-17	432.0	3490.2	752.9	683.9	5727.9	1212.9
Dec-17	439.0	3490.2	815.8	695.7	5727.9	1316.8

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 5 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jan-18	448.6	3490.2	901.5	711.7	5727.9	1458.4
Feb-18	459.2	3490.2	949.9	729.4	5727.9	1538.5
Mar-18	468.9	3490.2	934.3	745.7	5727.9	1513.0
Apr-18	477.8	3490.2	922.8	760.6	5727.9	1494.2
May-18	485.0	3490.2	870.3	772.7	5727.9	1407.9
Jun-18	491.9	3490.2	874.9	784.3	5727.9	1415.6
Jul-18	498.2	3490.2	863.5	794.9	5727.9	1397.0
Aug-18	504.2	3490.2	867.2	805.1	5727.9	1403.2
Sep-18	510.7	3490.2	889.2	815.9	5727.9	1439.8
Oct-18	516.7	3490.2	883.8	826.1	5727.9	1431.1
Nov-18	522.7	3490.2	889.1	836.1	5727.9	1440.0
Dec-18	528.4	3490.2	887.2	845.7	5727.9	1437.0
Jan-19	533.2	3490.2	860.3	853.9	5727.9	1392.8
Feb-19	537.9	3490.2	866.8	861.9	5727.9	1403.8
Mar-19	542.5	3490.2	869.4	869.6	5727.9	1408.3
Apr-19	546.9	3490.2	870.3	877.1	5727.9	1409.9
May-19	551.3	3490.2	875.9	884.6	5727.9	1419.3
Jun-19	555.6	3490.2	877.2	891.8	5727.9	1421.7
Jul-19	559.8	3490.2	882.3	899.0	5727.9	1430.2
Aug-19	563.9	3490.2	883.8	905.9	5727.9	1432.9
Sep-19	565.5	3490.2	791.1	908.8	5727.9	1280.3
Oct-19	566.9	3490.2	787.5	911.2	5727.9	1274.5
Nov-19	568.1	3490.2	785.8	913.4	5727.9	1272.0
Dec-19	569.4	3490.2	790.0	915.7	5727.9	1279.1
Jan-20	570.7	3490.2	791.4	918.0	5727.9	1281.6
Feb-20	572.1	3490.2	795.9	920.5	5727.9	1289.1
Mar-20	573.5	3490.2	799.4	923.0	5727.9	1295.0
Apr-20	574.9	3490.2	800.9	925.5	5727.9	1297.7
May-20	576.2	3490.2	800.2	927.8	5727.9	1296.7
Jun-20	577.5	3490.2	801.4	930.1	5727.9	1298.9
Jul-20	578.8	3490.2	802.4	932.4	5727.9	1300.6
Aug-20	579.9	3490.2	796.8	934.4	5727.9	1291.6
Sep-20	581.0	3490.2	799.3	936.4	5727.9	1295.9
Oct-20	582.0	3490.2	796.3	938.3	5727.9	1291.1
Nov-20	583.0	3490.2	797.9	940.2	5727.9	1293.8
Dec-20	584.0	3490.2	799.0	941.9	5727.9	1295.8
Jan-21	585.0	3490.2	800.3	943.7	5727.9	1298.2
Feb-21	585.9	3490.2	799.2	945.3	5727.9	1296.5
Mar-21	586.8	3490.2	799.6	946.9	5727.9	1297.3
Apr-21	587.6	3490.2	800.5	948.5	5727.9	1298.8
May-21	588.5	3490.2	801.9	950.1	5727.9	1301.3
Jun-21	589.4	3490.2	805.1	951.8	5727.9	1306.8

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 6 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jul-21	590.3	3490.2	803.6	953.3	5727.9	1304.4
Aug-21	591.1	3490.2	803.9	954.9	5727.9	1305.1
Sep-21	592.0	3490.2	806.3	956.5	5727.9	1309.1
Oct-21	592.7	3490.2	803.9	957.9	5727.9	1305.4
Nov-21	593.5	3490.2	804.2	959.2	5727.9	1306.0
Dec-21	594.3	3490.2	807.3	960.7	5727.9	1311.2
Jan-22	595.0	3490.2	805.8	962.0	5727.9	1308.9
Feb-22	595.7	3490.2	806.5	963.3	5727.9	1310.2
Mar-22	596.4	3490.2	807.1	964.6	5727.9	1311.4
Apr-22	597.1	3490.2	807.8	965.9	5727.9	1312.6
May-22	597.8	3490.2	808.6	967.2	5727.9	1314.1
Jun-22	598.5	3490.2	809.3	968.4	5727.9	1315.3
Jul-22	599.1	3490.2	809.9	969.7	5727.9	1316.5
Aug-22	599.8	3490.2	810.5	970.9	5727.9	1317.6
Sep-22	600.5	3490.2	811.1	972.1	5727.9	1318.8
Oct-22	601.1	3490.2	812.0	973.3	5727.9	1320.2
Nov-22	601.7	3490.2	812.6	974.5	5727.9	1321.4
Dec-22	602.4	3490.2	812.5	975.7	5727.9	1321.4
Jan-23	602.9	3490.2	811.1	976.8	5727.9	1319.2
Feb-23	603.5	3490.2	811.2	977.8	5727.9	1319.5
Mar-23	604.0	3490.2	812.1	978.8	5727.9	1321.1
Apr-23	604.6	3490.2	812.4	979.8	5727.9	1321.7
May-23	605.0	3490.2	810.5	980.7	5727.9	1318.6
Jun-23	605.5	3490.2	810.5	981.6	5727.9	1318.8
Jul-23	605.9	3490.2	811.1	982.4	5727.9	1319.9
Aug-23	606.4	3490.2	811.5	983.3	5727.9	1320.7
Sep-23	606.7	3490.2	806.4	983.9	5727.9	1312.4
Oct-23	607.0	3490.2	809.8	984.6	5727.9	1318.0
Nov-23	607.4	3490.2	810.1	985.3	5727.9	1318.7
Dec-23	607.7	3490.2	810.4	986.0	5727.9	1319.3
Jan-24	608.1	3490.2	810.8	986.7	5727.9	1320.0
Feb-24	608.4	3490.2	811.1	987.4	5727.9	1320.6
Mar-24	608.8	3490.2	811.6	988.0	5727.9	1321.6
Apr-24	609.1	3490.2	811.9	988.7	5727.9	1322.2
May-24	609.4	3490.2	812.2	989.4	5727.9	1322.8
Jun-24	609.8	3490.2	812.5	990.0	5727.9	1323.5
Jul-24	610.1	3490.2	812.9	990.7	5727.9	1324.1
Aug-24	610.4	3490.2	813.2	991.3	5727.9	1324.7
Sep-24	610.7	3490.2	813.5	991.9	5727.9	1325.3
Oct-24	611.1	3490.2	813.8	992.6	5727.9	1325.8
Nov-24	611.4	3490.2	814.1	993.2	5727.9	1326.4
Dec-24	611.7	3490.2	814.3	993.8	5727.9	1327.0

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 7 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jan-25	612.0	3490.2	814.8	994.4	5727.9	1327.9
Feb-25	612.3	3490.2	815.1	995.0	5727.9	1328.5
Mar-25	612.6	3490.2	815.4	995.6	5727.9	1329.0
Apr-25	612.9	3490.2	815.7	996.2	5727.9	1329.6
May-25	613.2	3490.2	816.0	996.8	5727.9	1330.1
Jun-25	613.5	3490.2	816.2	997.4	5727.9	1330.7
Jul-25	613.8	3490.2	816.5	997.9	5727.9	1331.2
Aug-25	614.1	3490.2	816.8	998.5	5727.9	1331.8
Sep-25	614.3	3490.2	817.1	999.1	5727.9	1332.3
Oct-25	614.6	3490.2	817.3	999.6	5727.9	1332.8
Nov-25	614.9	3490.2	817.6	1000.2	5727.9	1333.3
Dec-25	615.2	3490.2	817.8	1000.7	5727.9	1333.8
Jan-26	615.5	3490.2	817.5	1001.2	5727.9	1333.3
Feb-26	617.5	3490.2	880.6	1004.8	5727.9	1437.2
Mar-26	619.5	3490.2	876.9	1008.0	5727.9	1431.2
Apr-26	621.3	3490.2	876.9	1011.1	5727.9	1431.2
May-26	623.1	3490.2	877.5	1014.2	5727.9	1432.4
Jun-26	626.3	3490.2	927.1	1019.5	5727.9	1513.9
Jul-26	629.4	3490.2	923.3	1024.6	5727.9	1507.8
Aug-26	632.2	3490.2	922.0	1029.4	5727.9	1505.7
Sep-26	633.5	3490.2	836.0	1031.6	5727.9	1364.4
Oct-26	634.7	3490.2	853.5	1033.6	5727.9	1393.2
Nov-26	634.6	3490.2	813.1	1033.5	5727.9	1327.0
Dec-26	634.4	3490.2	811.3	1033.4	5727.9	1324.0
Jan-27	633.1	3490.2	772.2	1031.3	5727.9	1259.8
Feb-27	631.8	3490.2	769.1	1029.2	5727.9	1254.8
Mar-27	630.5	3490.2	767.8	1027.1	5727.9	1252.7
Apr-27	629.1	3490.2	766.9	1025.0	5727.9	1251.3
May-27	627.8	3490.2	766.0	1022.9	5727.9	1250.0
Jun-27	626.5	3490.2	764.6	1020.9	5727.9	1247.8
Jul-27	625.3	3490.2	763.9	1018.8	5727.9	1246.7
Aug-27	624.0	3490.2	762.8	1016.8	5727.9	1244.9
Sep-27	622.8	3490.2	763.4	1015.0	5727.9	1245.9
Oct-27	621.6	3490.2	762.5	1013.1	5727.9	1244.5
Nov-27	620.5	3490.2	761.6	1011.3	5727.9	1243.2
Dec-27	619.3	3490.2	758.0	1009.3	5727.9	1237.3
Jan-28	618.0	3490.2	756.6	1007.4	5727.9	1235.1
Feb-28	616.8	3490.2	756.1	1005.5	5727.9	1234.3
Mar-28	615.7	3490.2	754.9	1003.6	5727.9	1232.5
Apr-28	614.5	3490.2	753.8	1001.8	5727.9	1230.7
May-28	613.3	3490.2	752.8	999.9	5727.9	1229.1
Jun-28	612.2	3490.2	751.6	998.1	5727.9	1227.1

TABLE 6

Predicted TDS Concentrations of the Mine Water Discharge - Sensitivity Simulation 4
 (Page 8 of 8)

Date	Using Geometric Mean Value of TDS			Using Arithmetic Mean Value of TDS		
	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge	HW TDS (mg/L)	FW TDS (mg/L)	Calculated TDS in the Mine Discharge
	Assigned from Snap Lake ¹	Constant ¹	(mg/L)	Assigned from Snap Lake ¹	Constant ¹	(mg/L)
Jul-28	611.0	3490.2	750.2	996.3	5727.9	1225.0
Aug-28	609.9	3490.2	749.5	994.5	5727.9	1223.9
Sep-28	608.8	3490.2	748.7	992.7	5727.9	1222.6
Oct-28	607.7	3490.2	747.5	990.9	5727.9	1220.7
Nov-28	606.6	3490.2	746.4	989.2	5727.9	1219.0
Dec-28	605.5	3490.2	745.1	987.5	5727.9	1216.9