

March 8, 2017

Douglas Haywood Lands and Minerals Supervisor Bureau of Land Management Las Cruces District Office 1800 Marquess Street Las Cruces, NM 88005

RE: Additional Water Balance Detail for Copper Flat Mining Scenarios Considered by BLM Proposed Action, Alternative 1, and Alternative 2

Dear Mr. Haywood,

Based on comments received from members of the public during the NEPA process, BLM asked NMCC to expand the water balance that was presented previously to BLM. This previous water balance focused on uses of water during the period of mining operations, the period which encompasses by far the largest share of project water use. Specifically, you requested information about project start-up, which we define to include project construction, and rapid fill of the Copper Flat Pit following mining. In preparing our response to your request, we completed a full review of water needs for the entire project, including pre- and post-operational periods, which will require water at greatly reduced rates from the operational period. Thus, in addition to addressing water needed for start-up and pit rapid fill, this letter also provides information on water use during post mining reclamation of Copper Flat. We have incorporated start-up, operation, pit rapid fill, and site reclamation into the broader project water balance to cover the full project life cycle from pre-mining through the expected end of managed reclamation in order to assist BLM with more fully evaluating the comments received. As discussed in this letter, although we have expanded the water balance information, we respectfully submit that the additional information is neither significant in terms of impacts from water usage, nor justification for reaching any different conclusions from those set forth in the DEIS.

In November 2016, New Mexico Copper Corporation (NMCC) completed an update to the mine water balance to quantify water requirements for the full project life cycle beyond the period of mining operations, which is by far the period of the greatest water use during the full cycle. The prior water balance, used to develop water requirements for the proposed action and two alternatives considered in the DEIS, focused on water supply and use during the operating period, and represents nearly 95% of the requirements of the full project life cycle for each of the three operating alternatives. The water balance for the full project life cycle expands the period of coverage to add construction and plant startup for pre-operations water use, pit rapid fill at the end of mining operations, and post-mining reclamation to the water balance. In order to distinguish between the two water balances discussed in this letter, the operation only water balance is labeled "DEIS water balance"; the updated water balance is labeled "Nov-2016 water balance".

In this letter we are providing information for estimated freshwater needs for mine construction and startup water before operation as well as rapid fill of the pit and reclamation after operation cea

EXHIBIT



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the Nov-2016 water balance. We are presenting with this letter information for the three mining scenarios being evaluated by the BLM for the Copper Flat Mine. For each scenario, we anticipate these pre- and post-operation water uses will be fulfilled by pumping freshwater from the production wells, just as will be the case for the water needed for operation. Relative to the total water the mine will use over its period of mining operations, the pre- and post-operation water uses will not be significant.

The table and graph below present these additions for DEIS Alternative 2. The attached tables and figures address the DEIS Proposed Action, Alternative 1, and Alternative 2. During operating years, the Nov-2016 water balance substantially matches the quantities reported for the DEIS; however, there is a slight reduction in the Nov-2016 water balance quantities shown for that period due to the use of monthly calculations versus annual averages. The total water supply increases due to the addition of pre-operation and post-operation requirements.

Water required for construction, pit rapid fill, and site reclamation is constant between the three DEIS cases (Proposed Action, Alternative 1, and Alternative 2) considered in BLM's evaluation due to the common design. Water required for start-up differs between the plans due to the differing ore processing rates. The table below presents the Nov-2016 water balance for EIS Alternative 2 and notes the percent of the total water use for each stage, from construction through 12 years of reclamation.

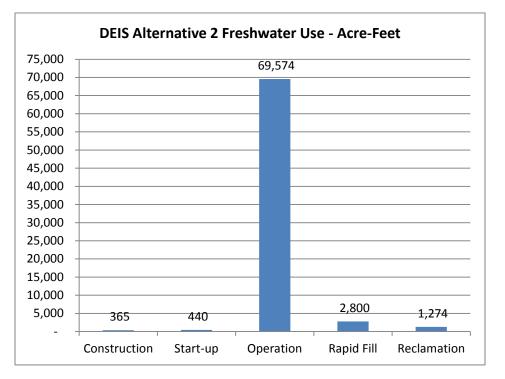
Water Use	Total Amount (acre-feet)	% of Total
Construction	365	0.50%
Start-Up	440	0.60%
Operation	69,574	93%
Rapid Fill	2,800	4%
Reclamation	1,274	2%
Total	74,453	100%

## Freshwater Pumping for DEIS Alternative 2

The chart below graphs the data contained in the table above and demonstrates that total freshwater use for construction, start-up, rapid fill and reclamation is not significant compared to total operational water use. We also note that the total operational water use (69,574 acre-feet) is less than that estimated in the DEIS (69,750 acre-feet). *See, e,g,* DEIS Table 3-19, at 3-72.







As shown in the table and figure above, water used during the operation period, the period covered in the DEIS water balance, accounts for nearly 95% of the total water requirement.

To assist BLM in review of these added details, the attached tables and figures are provided to facilitate comparison between groundwater drawdown based on the DEIS water balance and the Nov-2016 water balance with the additions of construction and start-up water in the 2 years leading to operation, rapid fill of the pit in the final year of operation after the end of mining, and water use for all reclamation not completed during operational years, to be used in the 12 years after the end of mining. The DEIS did not present drawdown maps showing groundwater effects 12 years after mine operation ceases, so we have generated these for comparison using the DEIS water balance.

We believe that the pumping explained above does not cause significant change to groundwater drawdown, and that this is reflected in the attached tables and figures. We are providing these additional details as well as drawdown maps and figures so that BLM may evaluate them.

If you have any questions, please contact me. Thank you for your time and attention to this matter.

Sincerely, New Mexico Copper Corporation

Jeff Smith Chief Operating Officer



CC: Dave Henney, Project Manager, Solv, LLC

# Tables and Figures Attached:

Lis	t of Tables	Water Balance	Mine Plan	Notes
1	Mine Production Well Water Balance	DEIS	Proposed Action	
2	Mine Production Well Water Balance	Nov 2016	Proposed Action	
3	Mine Production Well Water Balance	DEIS	Alternative 1	
4	Mine Production Well Water Balance	Nov 2016	Alternative 1	
5	Mine Production Well Water Balance	DEIS	Alternative 2	
6	Mine Production Well Water Balance	Nov 2016	Alternative 2	
7	Factors Used on Groundwater Modeling of Mining Scenarios	DEIS	All	Corresponds to DEIS Table 3-19
8	Factors Used on Groundwater Modeling of Mining Scenarios	Nov 2016	All	Corresponds to DEIS Table 3-19

List	of Figures	Water Balance	Mine Plan	Notes
1	Drawdown Contour Map	DEIS	Proposed Action	EOM*
2	Drawdown Contour Map	Nov 2016**	Proposed Action	EOM
3	Drawdown Contour Map	DEIS	Proposed Action	EOM +12***
4	Drawdown Contour Map	Nov 2016	Proposed Action	EOM +12
5	Drawdown Contour Map	DEIS	Alternative 1	EOM
6	Drawdown Contour Map	Nov 2016	Alternative 1	EOM
7	Drawdown Contour Map	DEIS	Alternative 1	EOM +12
8	Drawdown Contour Map	Nov 2016	Alternative 1	EOM +12
9	Drawdown Contour Map	DEIS	Alternative 2	EOM
10	Drawdown Contour Map	Nov 2016	Alternative 2	EOM
11	Drawdown Contour Map	DEIS	Alternative 2	EOM +12
12	Drawdown Contour Map	Nov 2016	Alternative 2	EOM +12
13	Projected Water Level at GWQ11-26	DEIS	Alternative 2	Corresponds to DEIS Figure Fig 3-20a
14	Projected Water Level at GWQ11-26	Nov 2016	Alternative 2	Corresponds to DEIS Figure Fig 3-20a
15	Projected Water Level at PW-1	DEIS	Alternative 2	Corresponds to DEIS Figure Fig 3-20b





List	of Figures	Water Balance	Mine Plan	Notes
16	Projected Water Level at PW-1	Nov 2016	Alternative 2	Corresponds to DEIS Figure Fig 3-20b
17	Impacts of Alt 2 on Water Balance Components	DEIS	Alternative 2	Corresponds to DEIS Figure Fig 3-21a
18	Impacts of Alt 2 on Water Balance Components	Nov 2016	Alternative 2	Corresponds to DEIS Figure Fig 3-21a
19	Breakout of "Reduced Discharge" Impact in Figure 3-21a	DEIS	Alternative 2	Corresponds to DEIS Figure Fig 3-21b
20	Breakout of "Reduced Discharge" Impact in Figure 3-21a	Nov 2016	Alternative 2	Corresponds to DEIS Figure Fig 3-21b
21	Comparison of Total Regional Water Budget Impacts of Alternatives	DEIS	All Alternatives	Corresponds to DEIS Figure Fig 3-22
22	Comparison of Total Regional Water Budget Impacts of Alternatives	Nov 2016	All Alternatives	Corresponds to DEIS Figure Fig 3-22

\*EOM: End of Mining

\*\*Nov-2016 water balance includes all pre-operation, operation, and post-operation water needs

\*\*\*EOM +12: End of Mining + 12 years of reclamation efforts

YEAR	Prod Wells	Operation	Constructi	Startup	Rapid Fill	Reclamatio
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	3,773	3,773	0	0	0	0
4	3,803	3,803	0	0	0	0
5	3,788	3,788	0	0	0	0
6	3,791	3,791	0	0	0	0
7	3,791	3,791	0	0	0	0
8	3,817	3,817	0	0	0	0
9	3,797	3,797	0	0	0	0
10	3,797	3,797	0	0	0	0
11	3,797	3,797	0	0	0	0
12	3,817	3,817	0	0	0	0
13	3,797	3,797	0	0	0	0
14	3,797	3,797	0	0	0	0
15	3,799	3,799	0	0	0	0
16	3,820	3,820	0	0	0	0
17	3,801	3,801	0	0	0	0
18	2,619	2,619	0	0	0	0
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	0	0	0	0
22	0	0	0	0	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
25	0	0	0	0	0	0
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	0	0	0
29	0	0	0	0	0	0
Total	59,605	59,605	0	0	0	0

## Table 1. Mine Production Well Water Balance DEIS Proposed Action, DEIS Balance, Annual Acre-Feet

## Table 2. Mine Production Well Water Balance DEIS Proposed Action, Nov-16 Balance, Annual Acre-Feet

VEAD	Due d Malle	Onerstien	Constant	Chautuus	Deniel Fill	Dealamatia
YEAR	Prod Wells		Constructi			Reclamatio
1	132	0	132	0	0	0
2	673	0	233	440	0	0
3	3,785	3,785	0	0	0	0
4	3,785	3,785	0	0	0	0
5	3,768	3,768	0	0	0	0
6	3,783	3,783	0	0	0	0
7	3,773	3,773	0	0	0	0
8	3,787	3,787	0	0	0	0
9	3,791	3,791	0	0	0	0
10	3,793	3,793	0	0	0	0
11	3,792	3,792	0	0	0	0
12	3,787	3,787	0	0	0	0
13	3,791	3,791	0	0	0	0
14	3,792	3,792	0	0	0	0
15	3,795	3,795	0	0	0	0
16	3,797	3,797	0	0	0	0
17	3,797	3,797	0	0	0	0
18	4,875	2,617	0	0	1,888	371
19	1,428	0	0	0	913	515
20	152	0	0	0	0	152
21	97	0	0	0	0	97
22	62	0	0	0	0	62
23	31	0	0	0	0	31
24	20	0	0	0	0	20
25	11	0	0	0	0	11
26	9	0	0	0	0	9
27	5	0	0	0	0	5
28	1	0	0	0	0	1
29	0	0	0	0	0	0
Total	64,311	59,432	365	440	2,800	1,274

YEAR	Prod Wells	Operation	Constructi	Startup	Rapid Fill	Reclamatio
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	5,266	5,266	0	0	0	0
4	5,306	5,306	0	0	0	0
5	5,284	5,284	0	0	0	0
6	5,282	5,282	0	0	0	0
7	5,290	5,290	0	0	0	0
8	5,314	5,314	0	0	0	0
9	5,290	5,290	0	0	0	0
10	5,290	5,290	0	0	0	0
11	5,289	5,289	0	0	0	0
12	5,318	5,318	0	0	0	0
13	4,865	4,865	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	0	0	0	0
22	0	0	0	0	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
25	0	0	0	0	0	0
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	0	0	0
29	0	0	0	0	0	0
Total	57,794	57,794	0	0	0	0

#### Table 3. Mine Production Well Water Balance DEIS Alternative 1, DEIS Balance, Annual Acre-Feet

#### Table 4. Mine Production Well Water Balance DEIS Alternative 1, Nov-16 Balance, Annual Acre-Feet

VEAD	Due d Malle	Onerstien	Construct	Chautuus	Denid Fill	De clausetie
YEAR		Operation 0	Constructi	Startup 0		Reclamatio
1 2	132	0	132	÷	0	0
3	673	Ų	233	440	0	0
-	5,278	5,278	0	0		0
4	5,284	5,284	0	0	0	0
5	5,264	5,264	0	0	0	0
6	5,274	5,274	0	0	0	0
7	5,271	5,271	0	0	0	0
8	5,280	5,280	0	0	0	0
9	5,284	5,284	0	0	0	0
10	5,285	5,285	0	0	0	0
11	5,283	5,283	0	0	0	0
12	5,283	5,283	0	0	0	0
13	5,430	4,859	0	0	477	94
14	3,035	0	0	0	2,323	712
15	208	0	0	0	0	208
16	97	0	0	0	0	97
17	73	0	0	0	0	73
18	37	0	0	0	0	37
19	22	0	0	0	0	22
20	12	0	0	0	0	12
21	10	0	0	0	0	10
22	7	0	0	0	0	7
23	2	0	0	0	0	2
24	0	0	0	0	0	0
25	0	0	0	0	0	0
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	0	0	0
29	0	0	0	0	0	0
Total	62,523	57,645	365	440	2,800	1,274

YEAR	Prod Wells	Operation	Constructi	Startup	Rapid Fill	Reclamatio
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	6,069	6,069	0	0	0	0
4	6,117	6,117	0	0	0	0
5	6,091	6,091	0	0	0	0
6	6,097	6,097	0	0	0	0
7	6,097	6,097	0	0	0	0
8	6,129	6,129	0	0	0	0
9	6,097	6,097	0	0	0	0
10	6,099	6,099	0	0	0	0
11	6,100	6,100	0	0	0	0
12	6,132	6,132	0	0	0	0
13	6,100	6,100	0	0	0	0
14	2,625	2,625	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	0	0	0	0
22	0	0	0	0	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
25	0	0	0	0	0	0
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	0	0	0
29	0	0	0	0	0	0
Total	69,750	69,750	0	0	0	0

# Table 5. Mine Production Well Water Balance DEIS Alternative 2, DEIS Balance, Annual Acre-Feet

#### Table 6. Mine Production Well Water Balance DEIS Alternative 2, Nov-16 Balance, Annual Acre-Feet

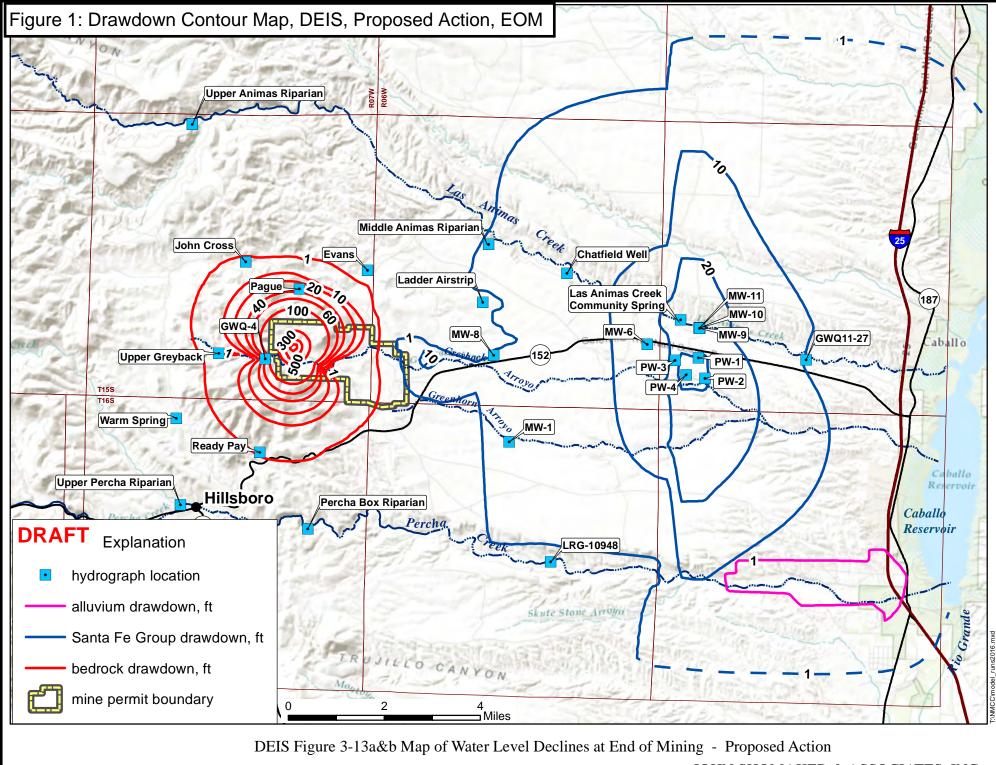
						-
YEAR	Prod Wells			Startup		Reclamatio
1	132	0	132	0	0	0
2	673	0	233	440	0	0
3	6,081	6,081	0	0	0	0
4	6,087	6,087	0	0	0	0
5	6,071	6,071	0	0	0	0
6	6,088	6,088	0	0	0	0
7	6,078	6,078	0	0	0	0
8	6,086	6,086	0	0	0	0
9	6,090	6,090	0	0	0	0
10	6,095	6,095	0	0	0	0
11	6,095	6,095	0	0	0	0
12	6,090	6,090	0	0	0	0
13	6,093	6,093	0	0	0	0
14	6,071	2,621	0	0	2,800	651
15	321	0	0	0	0	321
16	97	0	0	0	0	97
17	97	0	0	0	0	97
18	50	0	0	0	0	50
19	24	0	0	0	0	24
20	15	0	0	0	0	15
21	10	0	0	0	0	10
22	6	0	0	0	0	6
23	5	0	0	0	0	5
24	0	0	0	0	0	0
25	0	0	0	0	0	0
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	0	0	0
29	0	0	0	0	0	0
Total	74,453	69,574	365	440	2,800	1,274

#### Table 7. Factors Used in Groundwater Modeling of Mining Scenarios Table 3-19 As Presented in DEIS Based on DEIS Water Balance

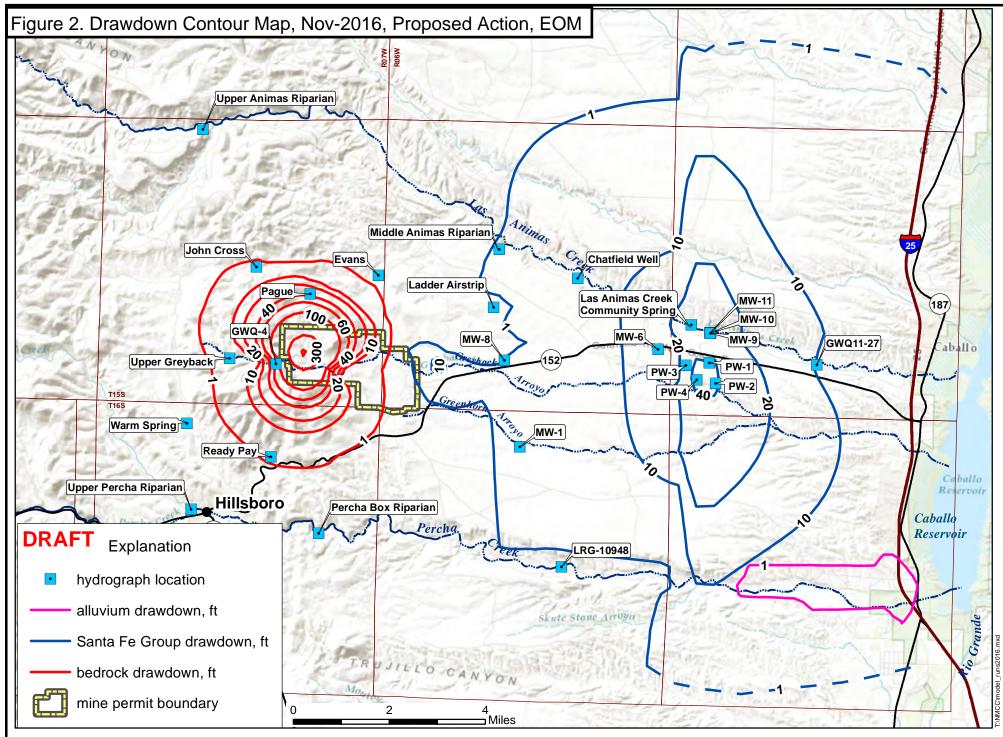
Buseu on	DEIS Water Dalance	-	
	DEIS Proposed Action	DEIS Alternative 1	DEIS Alternative 2
Mining Rate (tpd)	17,500	25,000	30,000
Mining Duration (years/months)	15 yrs 8 Months	10 yrs 11 Months	11 yrs 5 Months
Average Supply Pumping (gpm)	2,357	3,280	3,785
Summer Maximum Supply Pumping (gpm)	2,802	3,727	4,227
Winter Minimum Supply Pumping (gpm)	1,971	2,896	3,396
Total Supply Pumping for Mining Duration (AF)	59,605	57,794	69,750
Average Supply Pumping (AFY)	3,805	5,294	6,109
Average Pit Dewatering Rate (gpm) (after initial 4.5 months)	27	28	28
Cumulative Volume Removed From Aquifer as of End of Mining (AF)	60,278	58,260	70,239

#### Table 8. Factors Used in Groundwater Modeling of Mining Scenarios Table 3-19 Recalculated Based on Nov-2016 Water Balance

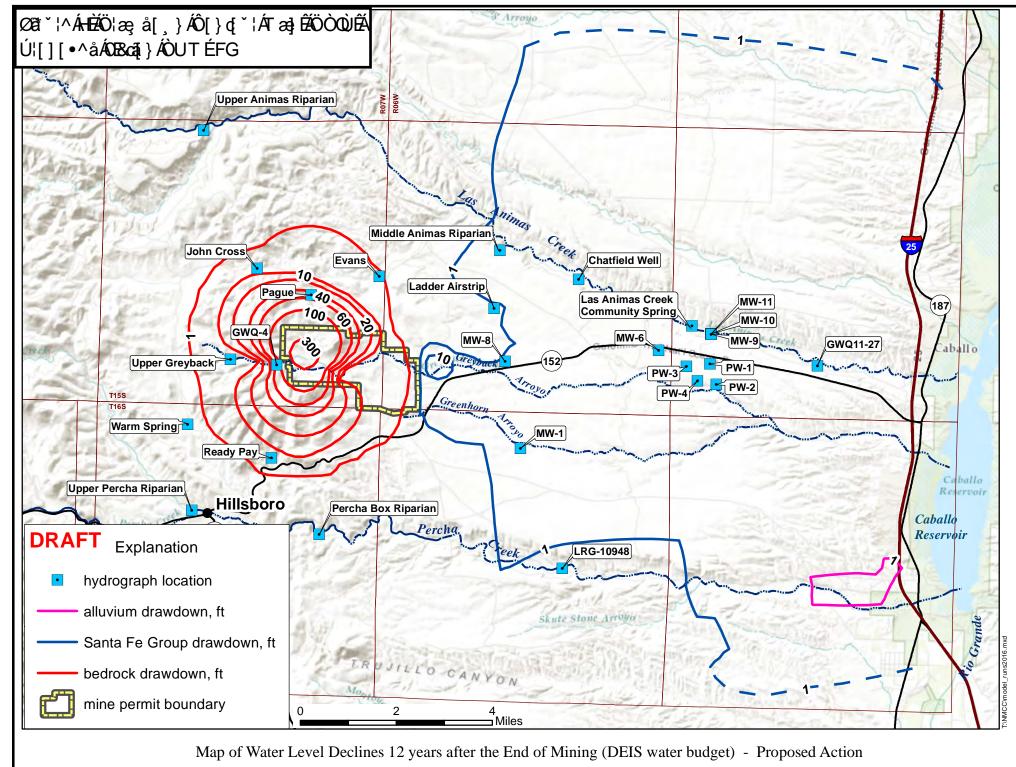
	DEIS Proposed Action	DEIS Alternative 1	DEIS Alternative 2
Mining Rate (tpd)	17,500	25,000	30,000
Mining Duration (years/months)	15 yrs 8 Months	10 yrs 11 Months	11 yrs 5 Months
Project Duration (years/months)	25 yrs 3 Months	20 yrs 6 Months	21 yrs 0 Months
Average Supply Pumping (gpm)	1,579	1,891	2,198
Summer Maximum Supply Pumping (gpm) (Mining Duration)	2,800	3,723	4,224
Winter Minimum Supply Pumping (gpm) (Mining Duration)	1,968	2,888	3,388
Total Supply Pumping for Mining Duration (AF)	59,432	57,645	69,574
Total Supply Pumping for Project Duration (AF)	64,311	62,523	74,453
Average Supply Pumping (AFY)	2,547	3,050	3,545
Average Pit Dewatering Rate (gpm) (after initial 4.5 months)	27	28	28
Cumulative Volume Removed From Aquifer as of End of Mining (AF)	64,977	62,999	74,952

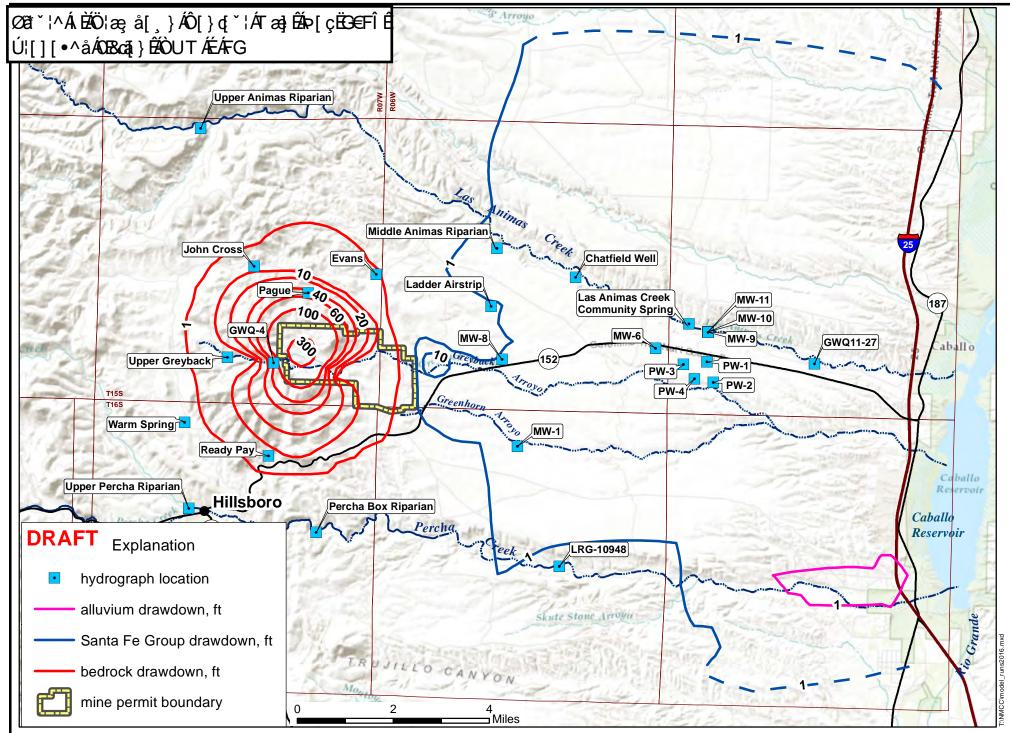


JOHN SHOMAKER & ASSOCIATES, INC.

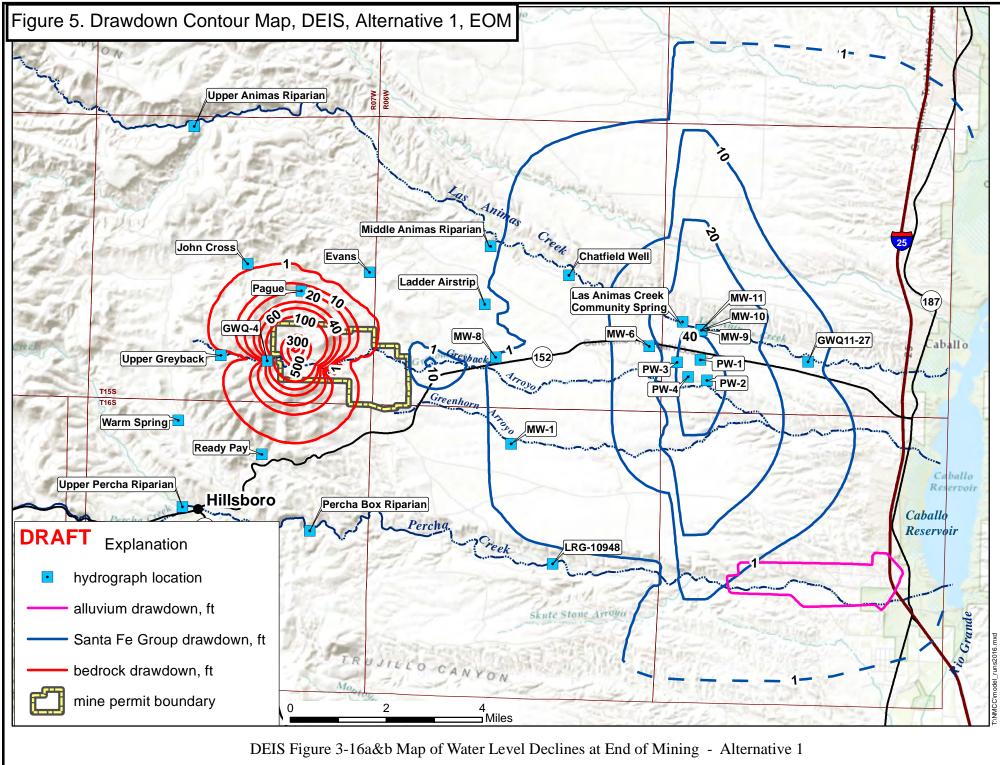


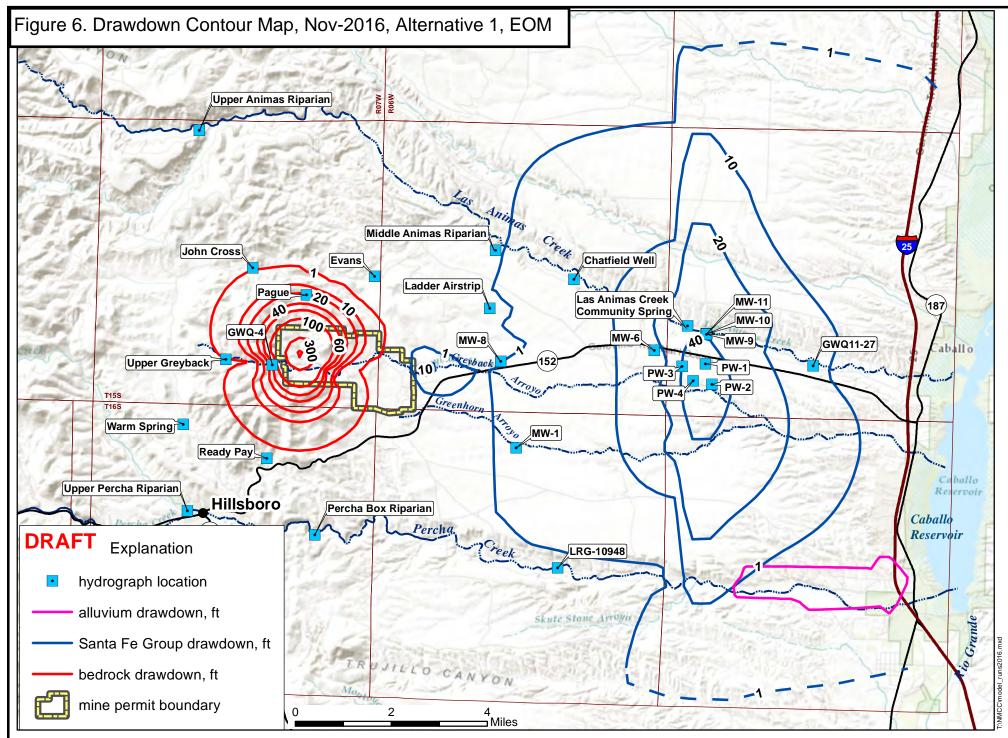
Map of Water Level Declines at the End of Mining including construction, start-up, operations (updated water balance of 18Nov2016), and rapid-fill - Proposed Action JOHN SHOMAKER & ASSOCIATES, INC.



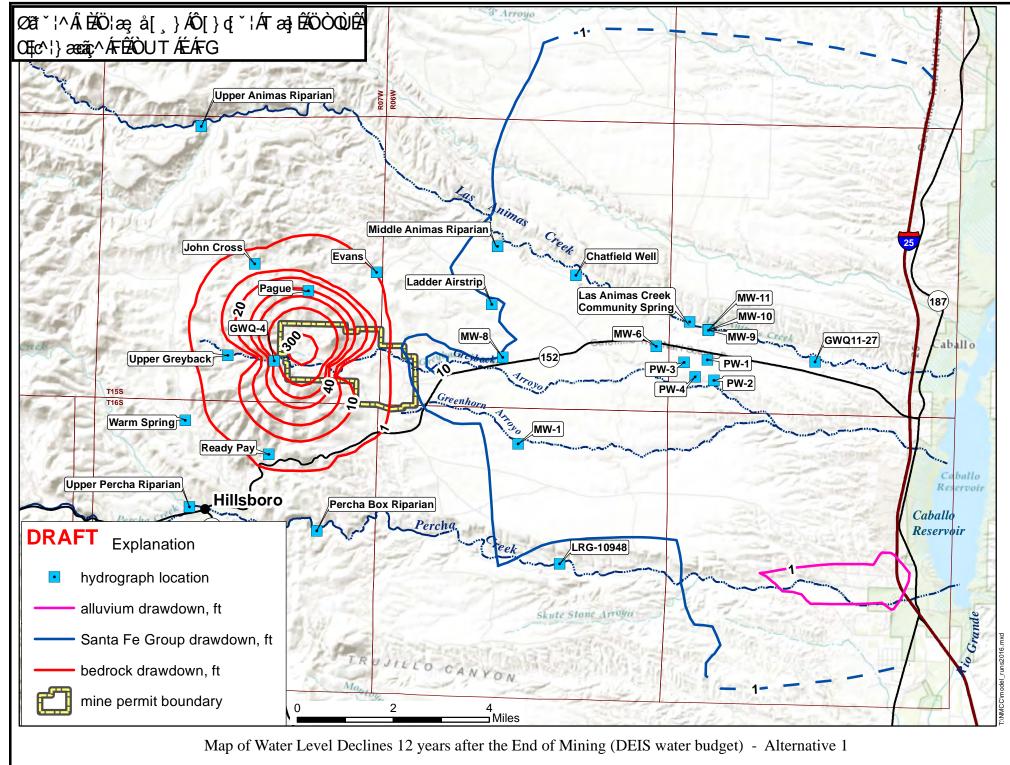


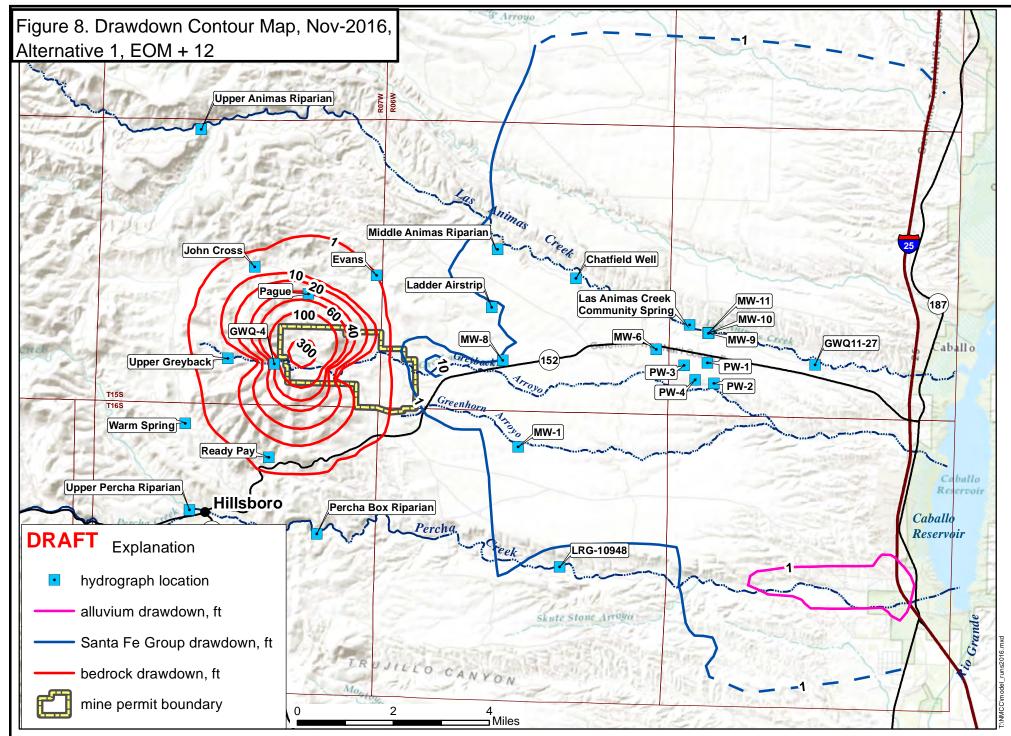
Map of Water Level Declines 12 years after the End of Mining including construction, start-up, operations (updated water balance of 18Nov2016), rapid-fill and reclamation - Proposed Action



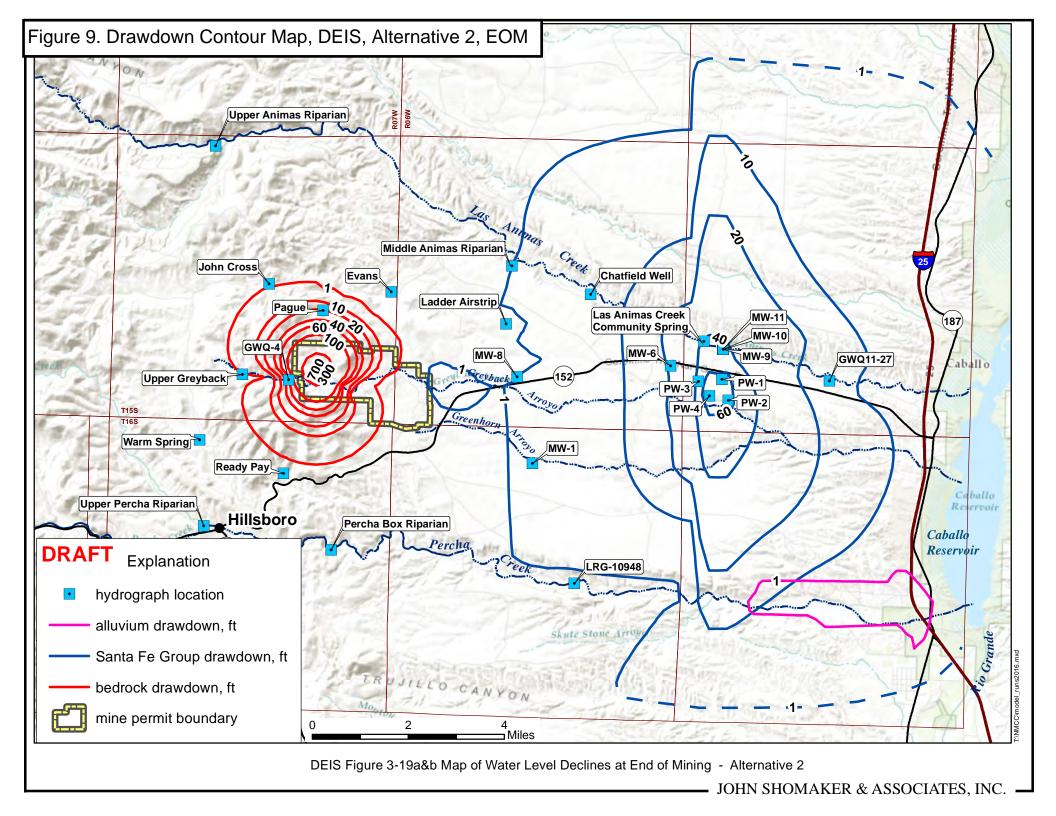


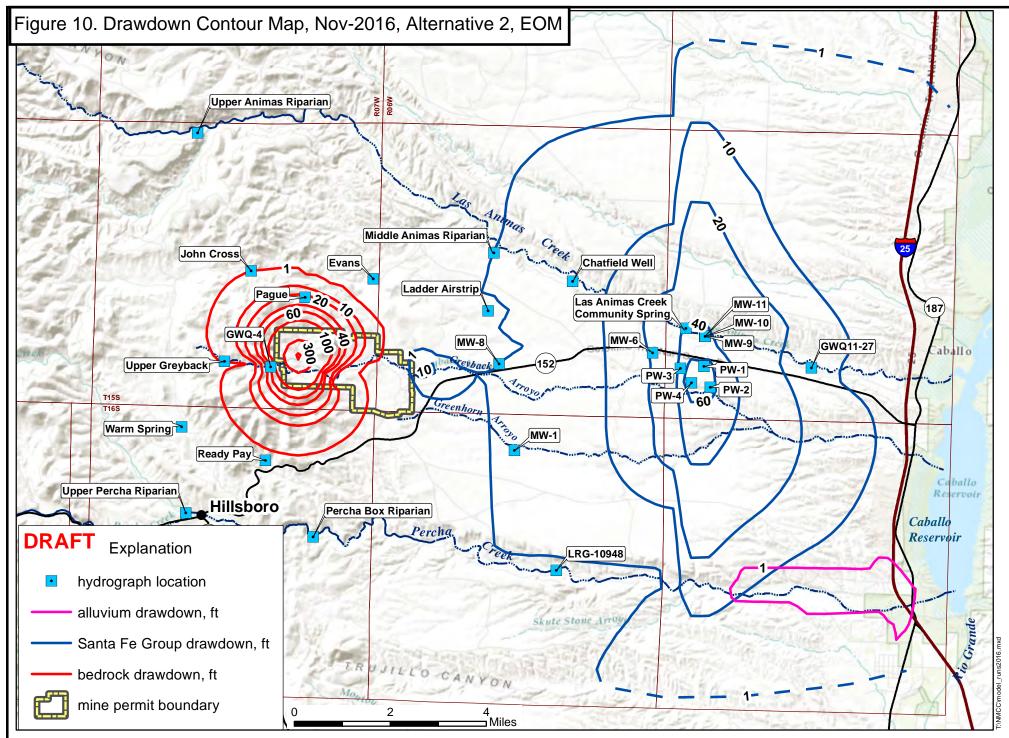
Map of Water Level Declines at the End of Mining including construction, start-up, operations (updated water balance of 18Nov2016), and rapid-fill - Alternative 1



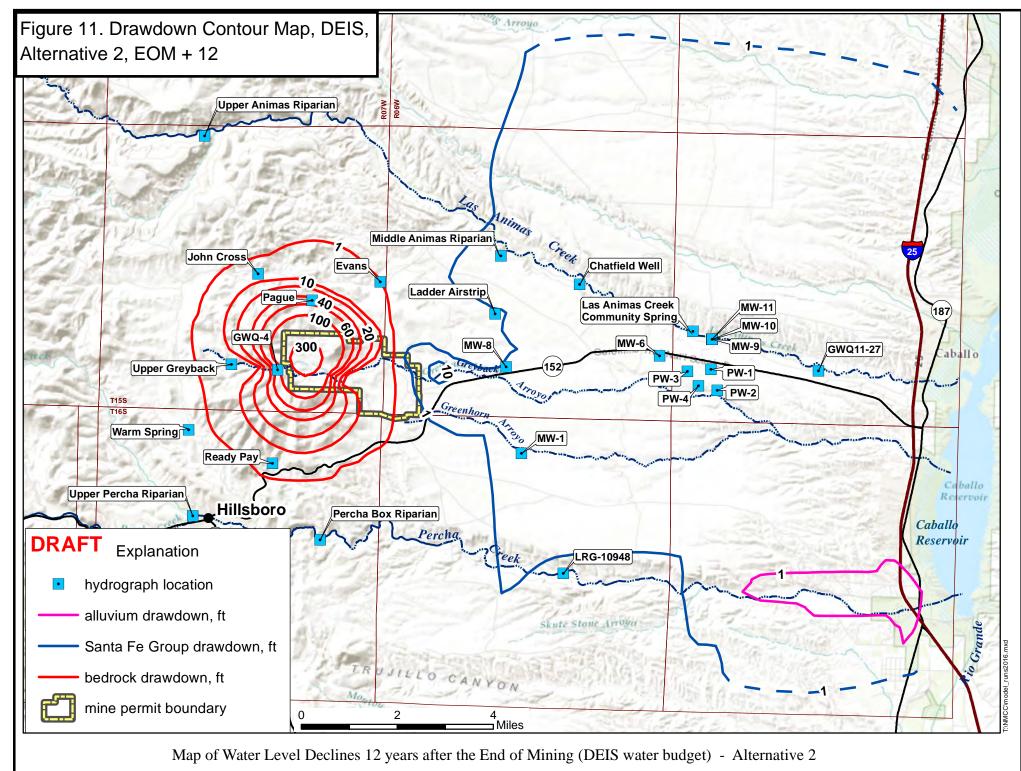


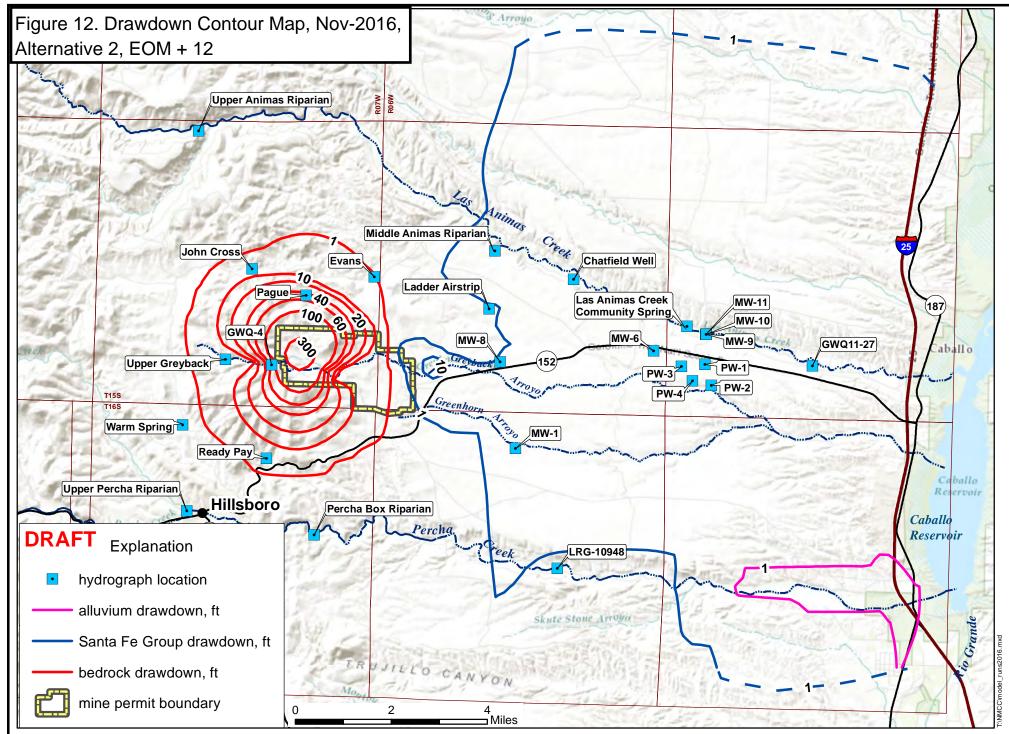
Map of Water Level Declines 12 years after the End of Mining including construction, start-up, operations (updated water balance of 18Nov2016), rapid-fill and reclamation - Alternative 1





Map of Water Level Declines at the End of Mining including construction, start-up, operations (updated water balance of 18Nov2016), and rapid-fill - Alternative 2





Map of Water Level Declines 12 years after the End of Mining including construction, start-up, operations (updated water balance of 18Nov2016), rapid-fill and reclamation - Alternative 2

Figure 3-20a. Projected Water Level at GWQ11-26- Alternative 2



Figure 13. Projected Water Level at GWQ11-26, Alternative 2, DEIS

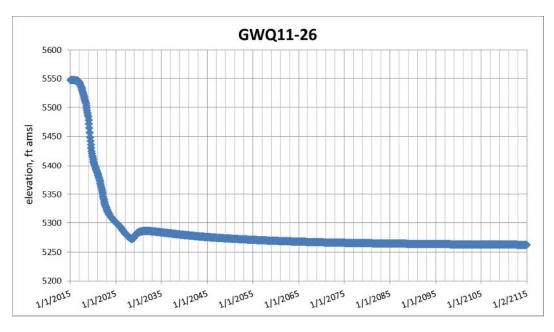


Figure 3-20a. Projected Water Level at GWQ11-26 – Alternative 2 (Nov2016 balance)

Figure 14. Projected Water Level at GWQ11-26, Alternative 2, Nov2016

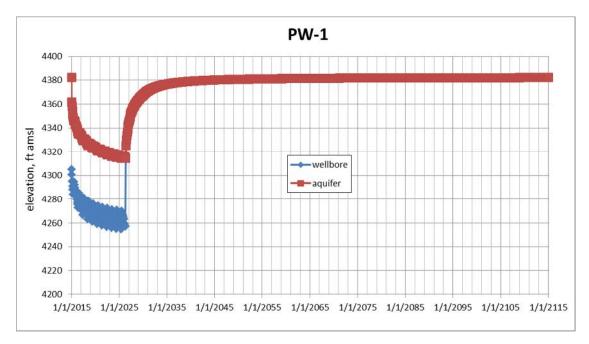


Figure 3-20b. Projected Water Level at PW-1 – Alternative 2

Figure 15. Projected Water Level at PW-1, Alternative 2, DEIS

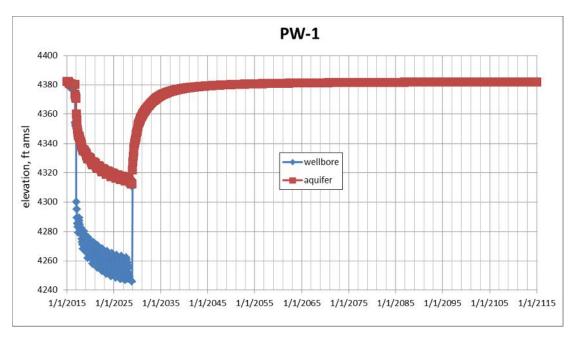


Figure 3-20b. Projected Water Level at PW-1 – Alternative 2 (Nov2016 balance)

Figure 16. Projected Water Level at PW-1, Alternative 2, Nov2016

Figure 3-21a. Impacts of Alternative 2 on Water Balance Components

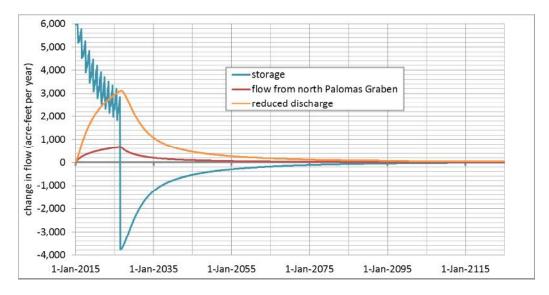


Figure 17. Impacts of Alt2 on Water Balance Components, DEIS

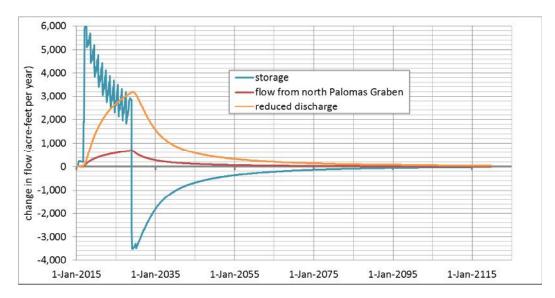


Figure 3-21a. Impacts of Alternative 2 on Water Balance Components (Nov2016 balance)

Figure 18. Impacts of Alt2 on Water Balance Components, Nov2016

Figure 3-21b. Breakout of "Reduced Discharge" Impact in Figure 3-21a

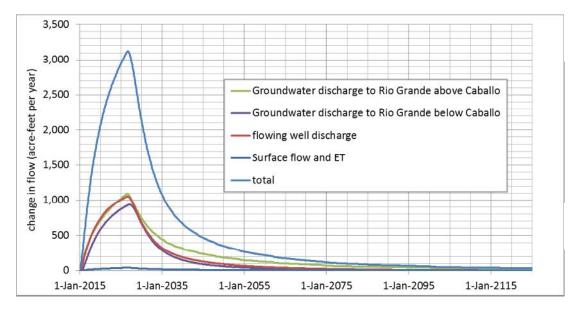


Figure 19. Breakout of "Reduced Discharge" Impact in Figure 3-21a, DEIS

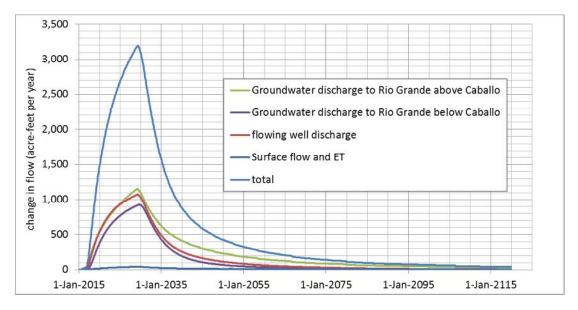


Figure 3-21b. Breakout of "Reduced Discharge" Impact in Figure 3-21a (Nov2016 balance)

Figure 20. Breakout of "Reduced Discharge" Impact on Figure 3-21a, Nov2016

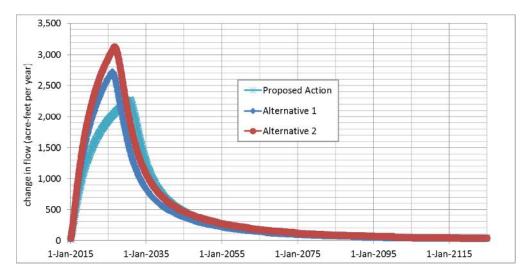


Figure 3-22. Comparison of Total Regional Water Budget Impacts of Alternatives

Figure 21. Comparison of Total Regional Water Budget Impacts of Alternatives, DEIS

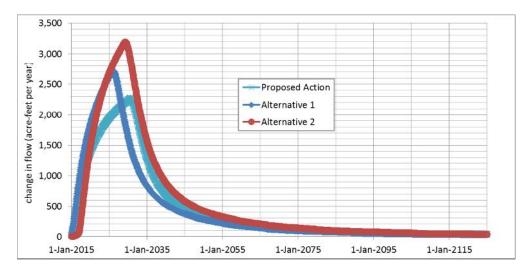


Figure 3-22. Comparison of Total Regional Water Budget Impacts of Alternatives (Nov2016 balance)

Figure 22. Comparison of Total Regional Water Budget Impacts of Alternatives, Nov2016