



Sierrita Operations  
Environment, Land & Water Department  
6200 W Duval Mine Road  
PO Box 527  
Green Valley, AZ 85622-0527

March 31, 2015

**Via Certified Mail # 7013 1090 0000 3213 5094**  
**Return Receipt Requested**

Ms. Madeline Keller  
Arizona Department of Environmental Quality  
Water Quality Compliance Section  
1110 West Washington Street  
Phoenix, Arizona 85007-2935

**Re: Mitigation Order on Consent Docket No. P-50-06  
Reporting Year 2014 Mitigation Facilities Monitoring Report**

Dear Ms. Keller:

In accordance with Section 5.1.1 of the Mitigation Plan<sup>1</sup>, Freeport-McMoRan Sierrita Inc. (Sierrita) submits the enclosed *Mitigation Facilities Monitoring Report* for reporting year 2014. In the past, Sierrita has submitted this report annually under the title of *Well Field Operations Monitoring Report*, which Sierrita agreed to submit in the Mitigation Plan approval deferral letter sent to ADEQ on March 18, 2009<sup>2</sup>.

Please do not hesitate to contact me at (520) 393-2347 if you have any questions regarding this submittal.

Sincerely,

A handwritten signature in black ink that reads "Deborah L. Chismar".

Deborah Chismar  
Sr. Environmental Specialist  
Freeport-McMoRan Sierrita Inc.

<sup>1</sup> Clear Creek Associates. 2013. Mitigation Plan for Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Freeport-McMoRan Sierrita Inc. Tailing Impoundment, Mitigation Order on Consent Docket No. P-50-06. December 18, 2013.

<sup>2</sup> Correspondence from Chad D. Fretz, Sierrita, to Cynthia S. Campbell, ADEQ Water Quality Compliance Section, Re: Mitigation Order on Consent Docket No. P-50-06 - Mitigation Plan. March 18, 2010.



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March 31, 2015  
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xc: Mindi Cross, Arizona Department of Environmental Quality  
David Haag, Arizona Department of Environmental Quality  
John Broderick, Sierrita  
Lana Fretz, Sierrita  
Ned Hall, Freeport-McMoRan Inc.  
Stuart Brown, Freeport-McMoRan Inc.  
Jim Norris, Clear Creek Associates

**TECHNICAL MEMORANDUM REPORT**



TO: Ms. Deborah Chismar  
Senior Environmental Specialist  
Freeport--McMoRan Sierrita Inc.  
6200 West Duval Mine Road  
Post Office Box 527  
Green Valley, AZ 85622-0527

FROM: BasinWells Associates, PLLC

PREPARED BY: Buck Schmidt, Principal Hydrologist  
BasinWells Associates, PLLC

REVIEWED BY:

DATE: March 31, 2015

PROJECT NO.: 13-005

SUBJECT: 2014 Freeport -- McMoran Sierrita Inc. - Mitigation Facilities Operation  
Technical Memorandum Report.

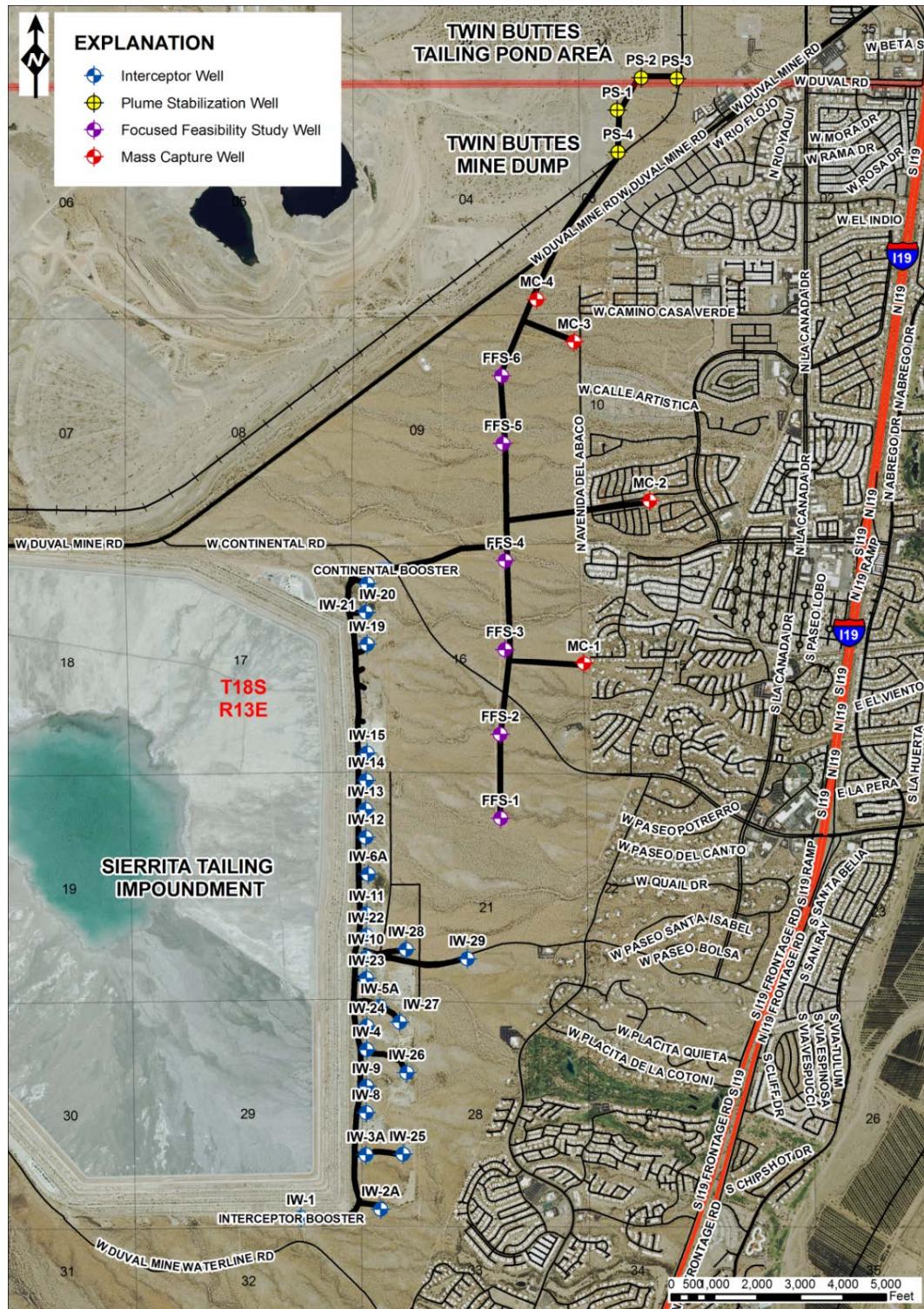
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## **1.0 INTRODUCTION**

This Mitigation Facilities Operation Technical Memorandum Report documents groundwater pumping for the Freeport-McMoRan Sierrita Inc. (Sierrita) Sulfate Mitigation Action Well Field (Well Field) under the *Mitigation Plan For Sulfate With Respect to Drinking Water Supplies in the Vicinity of the Freeport-McMoran Sierrita Inc. Tailing Impoundment, Mitigation Order on Consent, Docket No. P-50-06* (Clear Creek Associates PLC, 2013). This report describes wellfield and conveyance operational conditions for calendar year 2014 and consist of data on pumping system availability, well pumping rates, and total system pumping. The actual system pumping is compared to design specifications to assess the mitigation facilities with respect to their mechanical capacity to pump and convey the required volumes of water.

The Well Field consists of two major parts: the Interceptor Well Field and the Mitigation Well Field. The Interceptor Well Field currently consists of 25 active interceptor wells (IWs) with full operation of IW-29 in October 2014 . The Mitigation Well Field consists of four plume stabilization (PS) wells, four mass capture (MC) wells, and six focused feasibility study (FFS) wells. The PS, MC, and FFS wells were installed between 2011 and 2013 with full operation occurring in early 2014. The locations of the wells

of the Well Field are shown on Figure 1. Table 1 tabulates well information including cadastral legal locations, performance and target yield rates, well construction details, completion date and well age.



**Figure 1. Sierrita Sulfate Mitigation Action Well Field**

**BasinWells Associates PLLC**

Groundwater from the Interceptor Well Field is pumped through a series of booster stations to the Mill Reservoir. The Mitigation Well Field groundwater is likewise pumped through a separate series of booster stations for delivery to the Mill Reservoir. Both systems are combined with water from other Sierrita sources at several locations along the flow path. The mixed water in the Mill Reservoir is then used as process water for mine operations.

Well field performance goals established by Sierrita to meet the goal of operation include:

- Meet performance goals of pumping rates on a well by well basis and volumes of water based on a 100-percent duty cycle of performance goal pumping rates as tabulated on Table 1. Sulfate "plume" stabilization is predicted at these rates.
- Approach target goals of pumping rates on a well by well basis and volumes of water based on a 100-percent duty cycle of target goal pumping rates also as tabulated on Table 1. Sulfate "plume" reduction is predicted at these rates.

TABLE 1. SIERRITA SULFATE MITIGATION ACTION WELL FIELD CONSTRUCTION INFORMATION

Well	Cadastral Location	ADWR Reg. No. (55-)	2014-2020 Performance Goal Pumping Rates (gpm)	Target Pumping Rates (gpm)	Well Depth (ft)	Well Dia. (in.)	Borehole Diameter (in.)	Casing Material	Upper Screen Depth (ft bls)	Lower Screen Depth (ft bls)	Pump Gallery?/Interval (ft bls)	Current Pump Setting (ft bls)	Filter Pack Material	Basinfill Alluvium Base Depth (ft bls)	Drill Year	Well Age
IW-1	D-18-13 29DCD	623129	250	250	855	14		STEEL	234	843	No	480	GRAVEL	760	1978	36.7
IW-2A	D-18-13 28CCC	216464	300	300	1051	14	20	STEEL	350	1031	600-640	620	GRAVEL	1020	2008	7.0
IW-3A	D-18-13 28CBC	201732	500	500	1052	14	20	STEEL	400	1030	No	540	GRAVEL	820	2004	11.2
IW-8	D-18-13 28BCC	508236	350	350	783	14	20	STEEL	382	783	No	540	GRAVEL	759	1984	30.7
IW-9	D-18-13 28BCC	508238	200	200	853	14	20	STEEL	412	853	No	605	GRAVEL	740	1984	30.7
IW-4	D-18-13 28BCB	623132	40	40	946	14		STEEL	312	946	No	600	GRAVEL	490	1978	36.7
IW-24	D-18-13 28BBB	200556	50	50	884	14	20	STEEL	348	860	No	602	GRAVEL	410	2004	11.2
IW-5A	D-18-13 28BBB	219131	40	40	900	14.5	20	STAINLESS STEEL	382	890	620-640	630	TACNA	436	2010	4.9
IW-23	D-18-13 21CCB	200555	120	120	964	14	20	STEEL	375	935	No	550	TACNA	420	2004	11.2
IW-10	D-18-13 21CBC	508237	250	250	831	14	20	STEEL	420	831	No	600	GRAVEL	730	1984	30.6
IW-22	D-18-13 21CBC	200554	300	300	590	14	20	STEEL	359	560	No	550	GRAVEL	550	2004	11.2
IW-11	D-18-13 21CBC	508235	325	325	605	14	20	STEEL	371	605	No	500	GRAVEL	563	1984	30.6
IW-6A	D-18-13 21BCC	545565	80	80	497	12	20	STEEL	356	456	No	460	GRAVEL	456	1994	20.3
IW-12	D-18-13 21BCB	545555	125	125	600	12	20	STEEL	358	560	No	560	GRAVEL	498	1994	20.3
IW-13	D-18-13 21BBC	545556	0	0	497	12	20	STEEL	355	456	No	460	GRAVEL	452	1994	20.3
IW-14	D-18-13 21BBB	545557	60	60	549	12	20	STEEL	357	508	No	520	GRAVEL	509	1994	20.3
IW-15	D-18-13 16CCC	545558	40	40	547	12	20	STEEL	357	506	No	505	GRAVEL	507	1995	20.2
IW-19	D-18-13 16BCC	545562	150	150	540	12	20	STEEL	379	499	No	522	GRAVEL	498	1995	20.2
IW-20	D-18-13 16BCB	545563	0	0	502	12	20	STEEL	380	460	No	460	GRAVEL	470	1995	20.1
IW-21	D-18-13 16BBC	545564	100	100	601	12	20	STEEL	400	560	No	520	GRAVEL	520	1995	20.2
IW-25	D-18-13 28CBD	219596	400	400	782	16	24	STAINLESS STEEL	359	720	No	732	SILICA SAND	475	2010	4.4
IW-26	D-18-13 28BCD	219143	350	350	780	16	24	STAINLESS STEEL	340	720	No	732	SILICA SAND	475	2010	4.4
IW-27	D-18-13 28BBD	219136	100	100	720	14	22	STAINLESS STEEL	380	660	No	672	SILICA SAND	465	2010	4.4
IW-28	D-18-13 21CCA	219137	400	400	760	16	24	STAINLESS STEEL	380	700	No	712	SILICA SAND	680	2010	4.4
IW-29	D-18-13 21CDA	222865	600	600	770	16.62	24	STAINLESS STEEL	440	730	No		SILICA SAND	730	2014	1.0
PS-1	D-18-13 03BBA	220861	750	700	1020	16.62	24	HSLA	560	980	640-680	890	SILICA SAND	914	2011	3.3
PS-2	D-17-13 34CDC	220862	800	800	1130	16.62	24	HSLA	560	1090	640-680	870	SILICA SAND	1090	2012	2.9
PS-3	D-17-13 34CDD	220863	800	800	1200	16.62	24	HSLA	520	1160	600-640		SILICA SAND	1160	2012	2.9
PS-4	D-18-13 03BCA	220864	1000	1000	1060	16.62	24	HSLA	560	1020	640-680	893	SILICA SAND	1020	2012	2.8
MC-1	D-18-13 16DAA	221660	0	900	915	16.62	24	HSLA	479	875	599-639	824	SILICA SAND	875	2013	1.9
MC-2	D-18-13 10CCB	221761	0	700	980	16.62	24	HSLA	479	940	600-640	855	SILICA SAND	940	2013	2.1
MC-3	D-18-13 09AAA	221661	750	600	870	16.62	24	HSLA	530	810	No	830	SILICA SAND	810	2012	2.4
MC-4	D-18-13 04DDC	220842	600	600	830	16.62	24	HSLA	560	770	No	810	SILICA SAND	770	2012	2.7
FFS-1	D-18-13 21ABC	221662	338	800	790	16.62	24	HSLA	448	729	No	753	SILICA SAND	730	2013	2.0
FFS-2	D-18-13 16DCA	221663	300	700	750	16.62	24	HSLA	470	690	No	703	SILICA SAND	680	2013	2.0
FFS-3	D-18-13 16ACD	221664	225	400	800	16.62	24	HSLA	510	740	No	762	SILICA SAND	736	2013	2.2
FFS-4	D-18-13 16ABA	221665	150	200	871	16.62	24	HSLA	540	830	640-680	788	SILICA SAND	830	2012	2.3
FFS-5	D-18-13 09DBA	221666	225	1000	800	16.62	24	HSLA	569	739	No	775	SILICA SAND	740	2012	2.3
FFS-6	D-18-13 09ACA	221667	225	600	830	16.62	24	HSLA	528	769	No	750	SILICA SAND	770	2012	2.4

Notes: ft bsls = feet below land surface; in. = inches; HSLA = High Strength Low Alloy Steel

## 2.0 WELL FIELD OPERATIONS

Total groundwater withdrawals in 2014 of the Well Field are tabulated on Table 2. The well field withdrew about 19,528 acre-feet (AF) of groundwater in 2014 (average pumping rate of 12,107 gpm).

TABLE 2. 2014 SIERRITA SULFATE MITIGATION ACTION WELL FIELD TOTAL GROUNDWATER WITHDRAWAL	
Total Gallons Pumped:	6,363,497,480
Total Acre-Feet Pumped:	19,528

The Well Field, in total, produced about 107 percent of the performance goals with respect to potential total groundwater withdrawal considering the 2014-2020 performance goal rates (Table 1) at a 100% duty cycle (total pumping rate of 11, 293 gpm or 18, 214 AF).

The Well Field, in total, produced about 81 percent of the target goals with respect to potential total groundwater withdrawal considering the target goal rates (Table 1) at a 100% duty cycle (total pumping rate of 14, 930 gpm or 24, 081 AF).

Well performance in 2014 on a well by well basis are tabulated in Attachment A. Run time percentages of the Interceptor Well Field wells ranged from 20.5 to 92.5 percent. Run time percentages of the Mitigation Well Field wells ranged from 71.9 to 92.1 percent. IW-26 of the Interceptor Well Field was inactive in all of 2014 due to pump equipment failure. IW-29 was only activated in October 2014 and has a limited runtime percentage in 2014.

Shutdown of wells was required due the following:

- As needed well and transmission line maintenance activities,
- Perform non-pumping monitoring activities,
- Exceedance of storage capacity of the Mill Reservoir.

Well field data plots including a well construction diagram; static and pumping water levels; yield rates; calculated specific capacity; sulfate concentrations; static saturated thickness of basin fill alluvium; and annotated descriptions of maintenance activities from 2005 to 2015 are included in Attachment B.

## 3.0 SUMMARY OF WELL MAINTENANCE ACTIVITIES

Summary of well and pump maintenance activities performed in 2014 are tabulated on Table 3 below. All maintenance activities were performed following collection and evaluation of maintenance monitoring parameters as described in the *Sulfate Mitigation Action Well Field (Well Field) Operation and Maintenance Plan* (BasinWells, 2013).

**TABLE 3. 2014 SIERRITA SULFATE MITIGATION ACTION WELL FIELD SUMMARY OF WELL AND PUMP MAINTENANCE ACTIVITIES**

Well	Approx. Dates Off Line for Maintenance	Maintenance Activities
IW-1	9/4/2014 (1 Day)	Replace flow meter-reroute fill line
IW-2A	1/2014	Stretch tube warranty
IW-8	3/11/2014 - 6/16/2014	Pump equipment refurbished
IW-9	11/2014 - 12/2014	Pump equipment failure
IW-5A	8/2014 - 12/2014	Pump equipment failure
IW-23	3/6/2014 (1 Day)	Installed header
IW-11	7/2014 - 10/2014; 12/2014	Replaces top shaft; Pump equipment failure
IW-6A	5/9/2014 (1 Day)	Replaced check valve
IW-12	3/3/2014 - 4/21/2014	Pump equipment refurbished
IW-13	8/2014 - 12/2014	Unstable, low flow conditions-utility of well pending
IW-14	5/14/2014 (1 Day)	Replace 4" check valve
IW-15	3/7/2014 (1 Day)	Replace 2" check valve
IW-21	6/2014 - 10/2014	Pump equipment refurbished
IW-26	1/2014 - 12/2014	Replace motor for test/Pump equipment failure
IW-27	1/2014 - 9/2014; 10/15/2014	Pump equipment refurbished; Motor replaced
IW-29	1/2014 - 9/2014	Pending construction and activation in 10/2014
PS-2	8/2014	Motor replaced

#### 4.0 FUTURE MAINTENANCE ACTIVITIES

Future maintenance activities will continue to adhere to activities and frequencies as described in *Sulfate Mitigation Action Well Field (Well Field) Operation and Maintenance Plan* (BasinWells, 2013). All maintenance activities to be performed following collection and evaluation of maintenance monitoring parameters.

Pump equipment in IW-9, IW-5A, IW-11, IW-13 and IW-26 will be evaluated and refurbished in early 2015. (IW-26 has been refurbished and pumping as of the date of this report.)

#### 5.0 REFERENCES

BasinWells Associates, PLLC, *Freeport-McMoran Sierrita Inc., Sulfate Mitigation Action Well Field (Well Field) Operation and Maintenance Plan*, December 31, 2013.

Clear Creek Associates, PLC, *Mitigation Plan For Sulfate With Respect to Drinking Water Supplies in the Vicinity of the Freeport-McMoran Sierrita Inc. Tailing Impoundment, Mitigation Order on Consent, Docket No. P-50-06*, December 18, 2013.

ATTACHMENT A

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**SIERRITA SULFATE MITIGATION ACTION WELL FIELD PERFORMANCE SUMMARY**

BasinWells Associates PLLC

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**ATTACHMENT A.**  
**SUMMARY OF 2014 INTERCEPTOR WELL PERFORMANCE**  
**FREEPORT MCMORAN SIERRITA, INC.**

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
IW-1	Jan	17,203,000	740	52.8	387
	Feb	15,299,000	642	46.9	397
	Mar	14,230,000	593	43.7	400
	Apr	13,201,800	595	40.5	370
	May	9,307,555	500	28.6	310
	Jun	1,347,525	65	4.1	344
	Jul	3,941,100	257	12.1	256
	Aug	474,993	47	1.5	168
	Sep	3,789,907	282	11.6	224
	Oct	6,385,280	380	19.6	280
	Nov	11,713,680	653	35.9	299
	Dec	9,436,020	666	29.0	236
<b>IW-1 Total Gallons Pumped:</b> 106,329,860 <b>IW-1 Total Acre-Feet Pumped:</b> 326 <b>IW-1 Average Yield Rate (gpm):</b> 327 <b>IW-1 % Run Time:</b> 61.9%					
IW-2A	Jan	9,933,000	544	30.5	304
	Feb	12,089,000	624	37.1	323
	Mar	13,478,000	712	41.4	315
	Apr	12,242,000	638	37.6	320
	May	8,302,000	442	25.5	313
	Jun	9,930,000	516	30.5	321
	Jul	8,371,000	435	25.7	321
	Aug	9,319,000	484	28.6	321
	Sep	7,790,000	407	23.9	319
	Oct	6,086,520	320	18.7	317
	Nov	11,540,000	611	35.4	315
	Dec	9,619,000	521	29.5	308
<b>IW-2A Total Gallons Pumped:</b> 118,699,520 <b>IW-2A Total Acre-Feet Pumped:</b> 364 <b>IW-2A Average Yield Rate (gpm):</b> 316 <b>IW-2A % Run Time:</b> 71.4%					
IW-3A	Jan	23,797,000	686	73.0	578
	Feb	22,041,000	638	67.6	576
	Mar	24,540,000	718	75.3	570
	Apr	22,516,000	649	69.1	578
	May	15,301,000	448	47.0	569
	Jun	17,616,000	506	54.1	580
	Jul	14,495,000	416	44.5	581
	Aug	16,686,000	477	51.2	583
	Sep	22,232,000	644	68.2	575
	Oct	12,855,000	377	39.4	568
	Nov	20,275,000	629	62.2	537
	Dec	16,685,000	523	51.2	532
<b>IW-3A Total Gallons Pumped:</b> 229,039,000 <b>IW-3A Total Acre-Feet Pumped:</b> 703 <b>IW-3A Average Yield Rate (gpm):</b> 569 <b>IW-3A % Run Time:</b> 76.6%					
IW-8	Jan	17,235,000	705	52.9	407
	Feb	14,979,000	616	46.0	405
	Mar	1,204,000	51	3.7	390
	Apr	0	0	0.0	0
	May	0	0	0.0	0
	Jun	8,576,000	352	26.3	406
	Jul	12,031,000	494	36.9	406
	Aug	12,606,000	517	38.7	406
	Sep	15,915,000	653	48.8	406
	Oct	8,729,000	358	26.8	406
	Nov	14,833,000	612	45.5	404
	Dec	12,319,000	517	37.8	397
<b>IW-8 Total Gallons Pumped:</b> 118,427,000 <b>IW-8 Total Acre-Feet Pumped:</b> 363 <b>IW-8 Average Yield Rate (gpm):</b> 405 <b>IW-8 % Run Time:</b> 55.7%					
IW-9	Jan	8,190,000	716	25.1	191
	Feb	7,064,000	622	21.7	189
	Mar	8,344,000	741	25.6	188
	Apr	7,874,000	640	24.2	205
	May	5,383,000	460	16.5	195
	Jun	5,498,000	449	16.9	204
	Jul	5,231,000	429	16.1	203
	Aug	5,168,000	426	15.9	202
	Sep	1,680,000	139	5.2	202
	Oct	13,000	1	0.0	202
	Nov	0	0	0.0	0
	Dec	0	0	0.0	0
<b>IW-9 Total Gallons Pumped:</b> 54,445,000 <b>IW-9 Total Acre-Feet Pumped:</b> 167 <b>IW-9 Average Yield Rate (gpm):</b> 196 <b>IW-9 % Run Time:</b> 52.8%					
IW-4	Jan	2,933,000	600	9.0	81
	Feb	3,072,000	610	9.4	84
	Mar	3,413,000	671	10.5	85
	Apr	3,249,000	660	10.0	82
	May	2,642,000	565	8.1	78
	Jun	2,634,000	523	8.1	84
	Jul	2,032,000	289	6.2	117
	Aug	3,088,000	341	9.5	151
	Sep	3,886,000	429	11.9	151
	Oct	3,123,000	345	9.6	151
	Nov	5,312,000	586	16.3	151
	Dec	4,406,000	525	13.5	140
<b>IW-4 Total Gallons Pumped:</b> 39,790,000 <b>IW-4 Total Acre-Feet Pumped:</b> 122 <b>IW-4 Average Yield Rate (gpm):</b> 108 <b>IW-4 % Run Time:</b> 70.1%					
IW-24	Jan	2,017,000	652	6.2	52
	Feb	1,997,000	626	6.1	53
	Mar	2,164,000	689	6.6	52
	Apr	2,126,000	299	6.5	118
	May	1,443,000	425	4.4	57
	Jun	2,897,000	720	8.9	67
	Jul	3,345,000	729	10.3	76
	Aug	3,633,000	713	11.1	85
	Sep	3,546,000	705	10.9	84
	Oct	3,153,000	635	9.7	83
	Nov	1,793,000	396	5.5	75
	Dec	1,520,000	318	4.7	80
<b>IW-24 Total Gallons Pumped:</b> 29,634,000 <b>IW-24 Total Acre-Feet Pumped:</b> 91 <b>IW-24 Average Yield Rate (gpm):</b> 71 <b>IW-24 % Run Time:</b> 78.9%					
IW-5A	Jan	1,393,000	444	4.3	52
	Feb	1,285,000	630	3.9	34
	Mar	1,361,000	666	4.2	34
	Apr	1,710,000	713	5.2	40
	May	1,125,000	354	3.5	53
	Jun	1,192,000	368	3.7	54
	Jul	1,180,000	393	3.6	50
	Aug	0	0	0.0	0
	Sep	0	0	0.0	0
	Oct	0	0	0.0	0
	Nov	0	0	0.0	0
	Dec	0	0	0.0	0
<b>IW-5A Total Gallons Pumped:</b> 9,246,000 <b>IW-5A Total Acre-Feet Pumped:</b> 28 <b>IW-5A Average Yield Rate (gpm):</b> 43 <b>IW-5A % Run Time:</b> 40.7%					

BasinWells Associates PLLC

**ATTACHMENT A.**  
**SUMMARY OF 2014 INTERCEPTOR WELL PERFORMANCE**  
**FREEPORT MCMORAN SIERRITA, INC.**

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
IW-23	Jan	6,939,000	507	21.3	228
	Feb	8,752,000	637	26.9	229
	Mar	9,848,000	717	30.2	229
	Apr	8,149,000	571	25.0	238
	May	6,950,000	487	21.3	238
	Jun	9,148,000	517	28.1	295
	Jul	4,672,000	644	14.3	121
	Aug	4,715,000	655	14.5	120
	Sep	4,805,000	690	14.7	116
	Oct	2,955,000	436	9.1	113
	Nov	2,845,000	395	8.7	120
	Dec	2,407,000	332	7.4	121
<b>IW-23 Total Gallons Pumped:</b> 72,185,000 <b>IW-23 Total Acre-Feet Pumped:</b> 222 <b>IW-23 Average Yield Rate (gpm):</b> 183 <b>IW-23 % Run Time:</b> 75.2%					
IW-10	Jan	12,303,000	704	37.8	291
	Feb	10,877,000	634	33.4	286
	Mar	12,256,000	721	37.6	283
	Apr	11,655,000	689	35.8	282
	May	9,350,000	555	28.7	281
	Jun	10,874,000	612	33.4	296
	Jul	9,904,000	539	30.4	306
	Aug	10,245,000	560	31.4	305
	Sep	11,999,000	669	36.8	299
	Oct	7,463,000	417	22.9	298
	Nov	9,584,000	527	29.4	303
	Dec	7,746,000	430	23.8	300
<b>IW-10 Total Gallons Pumped:</b> 124,256,000 <b>IW-10 Total Acre-Feet Pumped:</b> 381 <b>IW-10 Average Yield Rate (gpm):</b> 293 <b>IW-10 % Run Time:</b> 80.6%					
IW-22	Jan	13,689,000	674	42.0	338
	Feb	13,163,000	662	40.4	332
	Mar	14,359,000	727	44.1	329
	Apr	13,337,000	680	40.9	327
	May	13,003,000	667	39.9	325
	Jun	14,448,000	704	44.3	342
	Jul	13,492,000	642	41.4	350
	Aug	13,061,000	617	40.1	353
	Sep	14,217,000	675	43.6	351
	Oct	10,237,000	489	31.4	349
	Nov	7,994,000	374	24.5	356
	Dec	6,065,000	289	18.6	350
<b>IW-22 Total Gallons Pumped:</b> 147,065,000 <b>IW-22 Total Acre-Feet Pumped:</b> 451 <b>IW-22 Average Yield Rate (gpm):</b> 340 <b>IW-22 % Run Time:</b> 82.2%					
IW-11	Jan	14,577,000	706	44.7	344
	Feb	12,942,000	637	39.7	339
	Mar	14,518,000	721	44.6	335
	Apr	13,277,000	664	40.6	332
	May	7,024,000	354	21.6	331
	Jun	31,000	2	0.1	331
	Jul	0	0	0.0	0
	Aug	0	0	0.0	0
	Sep	0	0	0.0	0
	Oct	0	0	0.0	0
	Nov	161,000	25	0.5	106
	Dec	0	0	0.0	0
<b>IW-11 Total Gallons Pumped:</b> 62,480,000 <b>IW-11 Total Acre-Feet Pumped:</b> 192 <b>IW-11 Average Yield Rate (gpm):</b> 335 <b>IW-11 % Run Time:</b> 35.5%					
IW-6A	Jan	3,132,000	644	9.6	81
	Feb	2,965,000	641	9.1	77
	Mar	3,379,000	732	10.4	77
	Apr	3,041,000	685	9.3	74
	May	2,107,000	488	6.5	72
	Jun	2,882,000	600	8.8	80
	Jul	2,603,000	510	8.0	85
	Aug	2,806,000	563	8.6	83
	Sep	3,105,000	609	9.5	85
	Oct	2,003,000	384	6.1	87
	Nov	2,594,000	509	8.0	85
	Dec	2,060,000	429	6.3	80
<b>IW-6A Total Gallons Pumped:</b> 32,677,000 <b>IW-6A Total Acre-Feet Pumped:</b> 100 <b>IW-6A Average Yield Rate (gpm):</b> 80 <b>IW-6A % Run Time:</b> 77.6%					
IW-12	Jan	2,731,000	327	8.4	139
	Feb	0	0	0.0	0
	Mar	0	0	0.0	0
	Apr	3,948,000	480	12.1	137
	May	3,919,000	477	12.0	137
	Jun	5,141,000	612	15.8	140
	Jul	4,647,000	534	14.3	145
	Aug	4,768,000	544	14.6	146
	Sep	5,492,000	649	16.9	141
	Oct	2,857,000	350	8.8	136
	Nov	4,533,000	517	13.9	146
	Dec	3,647,000	434	11.2	140
<b>IW-12 Total Gallons Pumped:</b> 41,683,000 <b>IW-12 Total Acre-Feet Pumped:</b> 128 <b>IW-12 Average Yield Rate (gpm):</b> 141 <b>IW-12 % Run Time:</b> 56.2%					
IW-13	Jan	946,000	689	2.9	23
	Feb	870,000	642	2.7	23
	Mar	839,000	630	2.6	22
	Apr	238,000	248	0.7	16
	May	146,000	152	0.4	16
	Jun	270,000	281	0.8	16
	Jul	14,000	15	0.0	16
	Aug	0	0	0.0	0
	Sep	0	0	0.0	0
	Oct	0	0	0.0	0
	Nov	0	0	0.0	0
	Dec	0	0	0.0	0
<b>IW-13 Total Gallons Pumped:</b> 3,323,000 <b>IW-13 Total Acre-Feet Pumped:</b> 10 <b>IW-13 Average Yield Rate (gpm):</b> 21 <b>IW-13 % Run Time:</b> 30.3%					
IW-14	Jan	1,715,000	388	5.3	74
	Feb	2,694,000	606	8.3	74
	Mar	2,872,000	697	8.8	69
	Apr	2,564,000	628	7.9	68
	May	1,981,000	479	6.1	69
	Jun	2,421,000	684	7.4	59
	Jul	2,121,000	570	6.5	62
	Aug	1,416,000	352	4.3	67
	Sep	1,360,000	333	4.2	68
	Oct	1,456,000	352	4.5	69
	Nov	1,626,000	437	5.0	62
	Dec	1,337,000	391	4.1	57
<b>IW-14 Total Gallons Pumped:</b> 23,563,000 <b>IW-14 Total Acre-Feet Pumped:</b> 72 <b>IW-14 Average Yield Rate (gpm):</b> 66 <b>IW-14 % Run Time:</b> 67.6%					

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**ATTACHMENT A.**  
**SUMMARY OF 2014 INTERCEPTOR WELL PERFORMANCE**  
**FREEPORT MCMORAN SIERRITA, INC.**

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)	Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
IW-15	Jan	1,942,000	686	6.0	47	IW-19	Jan	8,760,000	697	26.9	210
	Feb	1,810,400	647	5.6	47		Feb	7,994,000	651	24.5	205
	Mar	1,944,500	705	6.0	46		Mar	8,724,000	721	26.8	202
	Apr	1,762,700	653	5.4	45		Apr	7,929,000	674	24.3	196
	May	1,437,900	557	4.4	43		May	7,189,000	624	22.1	192
	Jun	1,634,400	649	5.0	42		Jun	7,937,000	693	24.4	191
	Jul	1,170,300	476	3.6	41		Jul	6,864,000	596	21.1	192
	Aug	1,464,800	595	4.5	41		Aug	7,408,000	640	22.7	193
	Sep	1,594,000	664	4.9	40		Sep	7,937,000	689	24.4	192
	Oct	868,700	371	2.7	39		Oct	5,311,000	461	16.3	192
	Nov	868,100	381	2.7	38		Nov	5,237,000	448	16.1	195
	Dec	696,600	298	2.1	39		Dec	4,293,000	373	13.2	192
<b>IW-15 Total Gallons Pumped:</b>						<b>IW-19 Total Gallons Pumped:</b>					
<b>IW-15 Total Acre-Feet Pumped:</b>						<b>IW-19 Total Acre-Feet Pumped:</b>					
<b>IW-15 Average Yield Rate (gpm):</b>						<b>IW-19 Average Yield Rate (gpm):</b>					
<b>IW-15 % Run Time:</b>						<b>IW-19 % Run Time:</b>					
IW-20	Jan	1,271,400	710	3.9	30	IW-21	Jan	2,652,000	426	8.1	104
	Feb	1,161,200	646	3.6	30		Feb	4,043,000	660	12.4	102
	Mar	1,269,900	724	3.9	29		Mar	4,251,000	698	13.0	101
	Apr	1,145,700	658	3.5	29		Apr	4,061,000	677	12.5	100
	May	1,092,900	651	3.4	28		May	811,000	138	2.5	98
	Jun	1,137,900	677	3.5	28		Jun	0	0	0.0	0
	Jul	1,008,700	600	3.1	28		Jul	0	0	0.0	0
	Aug	1,056,700	629	3.2	28		Aug	0	0	0.0	0
	Sep	852,500	507	2.6	28		Sep	0	0	0.0	0
	Oct	572,400	341	1.8	28		Oct	1,000	0	0.0	190
	Nov	775,100	445	2.4	29		Nov	3,085,000	271	9.5	190
	Dec	625,700	360	1.9	29		Dec	5,878,000	516	18.0	190
<b>IW-20 Total Gallons Pumped:</b>						<b>IW-21 Total Gallons Pumped:</b>					
<b>IW-20 Total Acre-Feet Pumped:</b>						<b>IW-21 Total Acre-Feet Pumped:</b>					
<b>IW-20 Average Yield Rate (gpm):</b>						<b>IW-21 Average Yield Rate (gpm):</b>					
<b>IW-20 % Run Time:</b>						<b>IW-21 % Run Time:</b>					
IW-25	Jan	18,821,000	698	57.8	449	IW-26	Jan	0	0	0.0	0
	Feb	10,362,000	387	31.8	446		Feb	0	0	0.0	0
	Mar	19,604,000	716	60.2	456		Mar	0	0	0.0	0
	Apr	18,618,000	680	57.1	457		Apr	0	0	0.0	0
	May	18,806,000	685	57.7	458		May	0	0	0.0	0
	Jun	19,835,000	713	60.9	464		Jun	0	0	0.0	0
	Jul	19,956,000	709	61.2	469		Jul	0	0	0.0	0
	Aug	19,761,000	710	60.6	464		Aug	0	0	0.0	0
	Sep	19,112,000	693	58.6	460		Sep	0	0	0.0	0
	Oct	19,449,000	715	59.7	453		Oct	0	0	0.0	0
	Nov	19,855,000	720	60.9	460		Nov	0	0	0.0	0
	Dec	18,396,000	676	56.5	453		Dec	0	0	0.0	0
<b>IW-25 Total Gallons Pumped:</b>						<b>IW-26 Total Gallons Pumped:</b>					
<b>IW-25 Total Acre-Feet Pumped:</b>						<b>IW-26 Total Acre-Feet Pumped:</b>					
<b>IW-25 Average Yield Rate (gpm):</b>						<b>IW-26 Average Yield Rate (gpm):</b>					
<b>IW-25 % Run Time:</b>						<b>IW-26 % Run Time:</b>					
IW-27	Jan	0	0	0.0	0	IW-28	Jan	13,402,000	673	41.1	332
	Feb	0	0	0.0	0		Feb	12,172,000	643	37.4	316
	Mar	0	0	0.0	0		Mar	13,457,000	697	41.3	322
	Apr	0	0	0.0	0		Apr	11,759,000	623	36.1	315
	May	0	0	0.0	0		May	10,006,000	541	30.7	308
	Jun	0	0	0.0	0		Jun	13,025,000	711	40.0	305
	Jul	0	0	0.0	0		Jul	12,499,000	709	38.4	294
	Aug	0	0	0.0	0		Aug	11,728,000	668	36.0	293
	Sep	0	0	0.0	0		Sep	11,250,000	648	34.5	289
	Oct	7,072,000	404	21.7	292		Oct	12,458,000	725	38.2	286
	Nov	12,614,000	720	38.7	292		Nov	12,504,000	720	38.4	289
	Dec	11,526,000	672	35.4	286		Dec	11,589,000	682	35.6	283
<b>IW-27 Total Gallons Pumped:</b>						<b>IW-28 Total Gallons Pumped:</b>					
<b>IW-27 Total Acre-Feet Pumped:</b>						<b>IW-28 Total Acre-Feet Pumped:</b>					
<b>IW-27 Average Yield Rate (gpm):</b>						<b>IW-28 Average Yield Rate (gpm):</b>					
<b>IW-27 % Run Time:</b>						<b>IW-28 % Run Time:</b>					

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**ATTACHMENT A.**  
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**FREEPORT MCMORAN SIERRITA, INC.**

Well	Month	Gallons Pumped	Hours <sup>1</sup>	Yield (Acrefeet)	Ave. Yield Rate (gpm)
IW-29	Jan	0	0	0.0	0
	Feb	0	0	0.0	0
	Mar	0	0	0.0	0
	Apr	0	0	0.0	0
	May	0	0	0.0	0
	Jun	0	0	0.0	0
	Jul	0	0	0.0	0
	Aug	0	0	0.0	0
	Sep	5,704,000	-	17.5	558
	Oct	23,560,000	-	72.3	569
	Nov	3,859,000	-	11.8	555
	Dec	43,186,000	-	132.5	551

IW-29 Total Gallons Pumped:	76,309,000
IW-29 Total Acre-Feet Pumped:	234
IW-29 Average Yield Rate (gpm):	558
IW-29 % Run Time:	-

1 - Totalizer/hour meter issues.

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
PS-1	Jan	17,951,000	457	55.1	655
	Feb	25,959,000	654	79.7	661
	Mar	28,412,000	717	87.2	661
	Apr	26,332,000	688	80.8	638
	May	27,406,000	714	84.1	640
	Jun	27,952,000	720	85.8	647
	Jul	26,807,000	698	82.3	640
	Aug	25,175,000	668	77.3	628
	Sep	26,264,000	689	80.6	635
	Oct	26,015,000	680	79.8	638
	Nov	26,874,000	698	82.5	642
	Dec	24,156,000	631	74.1	638

PS-1 Total Gallons Pumped:	309,303,000
PS-1 Total Acre-Feet Pumped:	949
PS-1 Average Yield Rate (gpm):	643
PS-1 % Run Time:	91.5%

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
PS-3	Jan	20,567,000	516	63.1	664
	Feb	25,907,000	644	79.5	671
	Mar	28,319,000	704	86.9	670
	Apr	26,865,000	675	82.4	664
	May	27,360,000	686	84.0	665
	Jun	28,008,000	720	85.9	648
	Jul	26,619,000	688	81.7	645
	Aug	24,988,000	655	76.7	636
	Sep	26,219,000	680	80.5	642
	Oct	25,421,000	665	78.0	637
	Nov	26,920,000	710	82.6	632
	Dec	23,389,000	622	71.8	627

PS-3 Total Gallons Pumped:	310,582,000
PS-3 Total Acre-Feet Pumped:	953
PS-3 Average Yield Rate (gpm):	650
PS-3 % Run Time:	90.9%

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
PS-2	Jan	9,575,000	240	29.4	664
	Feb	26,355,000	653	80.9	672
	Mar	29,748,000	736	91.3	674
	Apr	27,129,000	672	83.3	672
	May	28,372,000	712	87.1	664
	Jun	28,613,000	720	87.8	662
	Jul	28,598,000	721	87.8	661
	Aug	26,098,000	664	80.1	655
	Sep	27,437,000	694	84.2	659
	Oct	26,594,000	673	81.6	658
	Nov	28,170,000	713	86.4	658
	Dec	24,266,000	625	74.5	647

PS-2 Total Gallons Pumped:	310,955,000
PS-2 Total Acre-Feet Pumped:	954
PS-2 Average Yield Rate (gpm):	663
PS-2 % Run Time:	89.3%

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
PS-4	Jan	26,082,000	519	80.0	838
	Feb	27,741,000	545	85.1	848
	Mar	15,930,000	315	48.9	843
	Apr	34,665,000	685	106.4	843
	May	35,390,000	701	108.6	841
	Jun	35,630,000	720	109.3	825
	Jul	34,911,000	709	107.1	821
	Aug	31,025,000	639	95.2	810
	Sep	33,594,000	688	103.1	814
	Oct	32,515,000	667	99.8	813
	Nov	34,918,000	716	107.2	813
	Dec	30,046,000	621	92.2	807

PS-4 Total Gallons Pumped:	372,447,000
PS-4 Total Acre-Feet Pumped:	1143
PS-4 Average Yield Rate (gpm):	825
PS-4 % Run Time:	85.9%

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
MC-1	Jan	28,605,000	503	87.8	947
	Feb	35,895,000	630	110.2	950
	Mar	37,813,000	666	116.0	947
	Apr	35,449,000	629	108.8	939
	May	39,474,000	698	121.1	942
	Jun	39,625,000	703	121.6	939
	Jul	39,535,000	703	121.3	937
	Aug	37,650,000	675	115.5	930
	Sep	38,333,000	686	117.6	931
	Oct	36,954,000	664	113.4	927
	Nov	39,883,000	720	122.4	923
	Dec	34,342,000	619	105.4	925

MC-1 Total Gallons Pumped:	443,558,000
MC-1 Total Acre-Feet Pumped:	1361
MC-1 Average Yield Rate (gpm):	936
MC-1 % Run Time:	90.1%

MC-2 Total Gallons Pumped:	325,497,000
MC-2 Total Acre-Feet Pumped:	999
MC-2 Average Yield Rate (gpm):	673
MC-2 % Run Time:	92.1%

**BasinWells Associates PLLC**

**ATTACHMENT A.**  
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**FREEPORT MCMORAN SIERRITA, INC.**

Well	Month	Gallons Pumped	Hours	Yield (Acrefeet)	Ave. Yield Rate (gpm)
<b>MC-3</b>	Jan	20,319,000	416	62.4	815
	Feb	25,022,000	509	76.8	819
	Mar	27,524,000	562	84.5	816
	Apr	14,368,000	306	44.1	781
	May	34,878,000	744	107.0	781
	Jun	26,455,000	562	81.2	785
	Jul	26,304,000	560	80.7	783
	Aug	24,905,000	538	76.4	771
	Sep	25,033,000	537	76.8	777
	Oct	24,035,000	520	73.8	771
	Nov	25,585,000	558	78.5	765
	Dec	21,785,000	484	66.9	750
<b>MC-3 Total Gallons Pumped:</b> 296,213,000 <b>MC-3 Total Acre-Feet Pumped:</b> 909 <b>MC-3 Average Yield Rate (gpm):</b> 784 <b>MC-3 % Run Time:</b> 71.9%					
<b>FFS-1</b>	Jan	27,221,000	450	83.5	1008
	Feb	37,316,000	613	114.5	1014
	Mar	41,469,000	684	127.3	1010
	Apr	38,718,000	644	118.8	1001
	May	39,939,000	664	122.6	1003
	Jun	40,211,000	674	123.4	994
	Jul	36,816,000	621	113.0	989
	Aug	37,444,000	633	114.9	985
	Sep	38,527,000	652	118.2	984
	Oct	36,740,000	628	112.7	975
	Nov	42,108,000	720	129.2	975
	Dec	32,039,000	547	98.3	977
<b>FFS-1 Total Gallons Pumped:</b> 448,548,000 <b>FFS-1 Total Acre-Feet Pumped:</b> 1376 <b>FFS-1 Average Yield Rate (gpm):</b> 993 <b>FFS-1 % Run Time:</b> 86.0%					
<b>FFS-3</b>	Jan	8,895,000	479	27.3	309
	Feb	1,456,000	78	4.5	310
	Mar	13,377,000	713	41.0	313
	Apr	12,293,000	680	37.7	301
	May	12,569,000	691	38.6	303
	Jun	12,799,000	710	39.3	300
	Jul	11,578,000	647	35.5	298
	Aug	11,471,000	657	35.2	291
	Sep	11,505,600	661	35.3	290
	Oct	9,157,000	530	28.1	288
	Nov	12,401,000	720	38.1	287
	Dec	10,725,000	623	32.9	287
<b>FFS-3 Total Gallons Pumped:</b> 128,226,600 <b>FFS-3 Total Acre-Feet Pumped:</b> 393 <b>FFS-3 Average Yield Rate (gpm):</b> 297 <b>FFS-3 % Run Time:</b> 82.1%					
<b>FFS-5</b>	Jan	29,057,000	453	89.2	1069
	Feb	39,761,000	620	122.0	1069
	Mar	46,818,000	730	143.7	1069
	Apr	43,527,000	691	133.6	1050
	May	45,263,000	716	138.9	1053
	Jun	45,601,000	714	139.9	1064
	Jul	45,626,000	715	140.0	1063
	Aug	41,942,000	663	128.7	1055
	Sep	41,178,000	647	126.4	1060
	Oct	39,027,000	614	119.8	1059
	Nov	45,048,000	710	138.2	1058
	Dec	39,587,000	623	121.5	1059
<b>FFS-5 Total Gallons Pumped:</b> 502,435,000 <b>FFS-5 Total Acre-Feet Pumped:</b> 1542 <b>FFS-5 Average Yield Rate (gpm):</b> 1060 <b>FFS-5 % Run Time:</b> 90.1%					
<b>FFS-6</b>	Jan	20,248,000	538	62.1	627
	Feb	23,350,000	619	71.7	629
	Mar	24,136,000	641	74.1	628
	Apr	25,002,000	680	76.7	613
	May	25,930,000	704	79.6	614
	Jun	26,236,000	719	80.5	608
	Jul	25,861,000	716	79.4	602
	Aug	23,811,000	667	73.1	595
	Sep	24,815,400	693	76.2	597
	Oct	23,637,600	663	72.5	594
	Nov	25,403,000	716	78.0	591
	Dec	22,074,000	627	67.7	587
<b>FFS-6 Total Gallons Pumped:</b> 290,504,000 <b>FFS-6 Total Acre-Feet Pumped:</b> 891 <b>FFS-6 Average Yield Rate (gpm):</b> 607 <b>FFS-6 % Run Time:</b> 91.1%					

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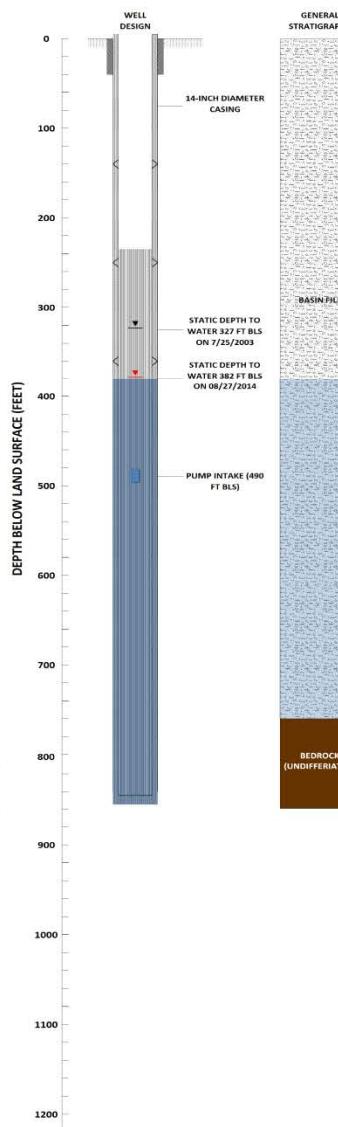
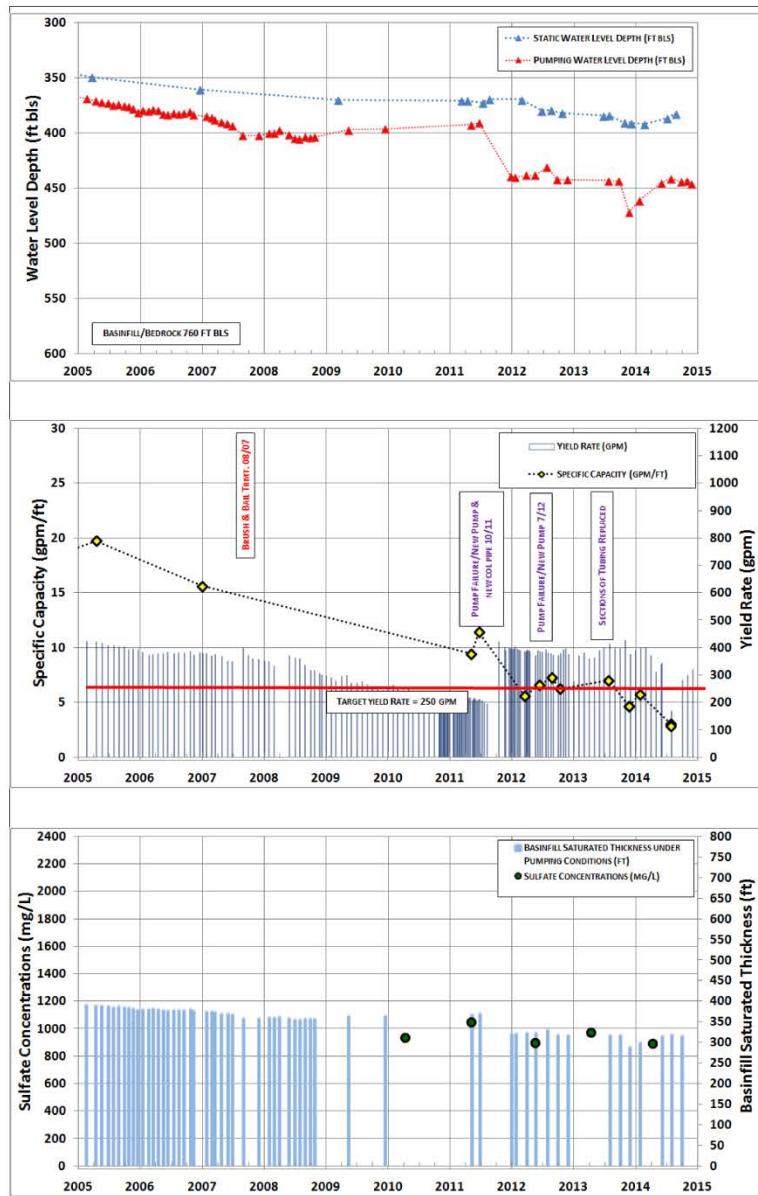
ATTACHMENT B

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**SIERRITA SULFATE MITIGATION ACTION WELL FIELD WELL FIELD DATA PLOTS**

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13



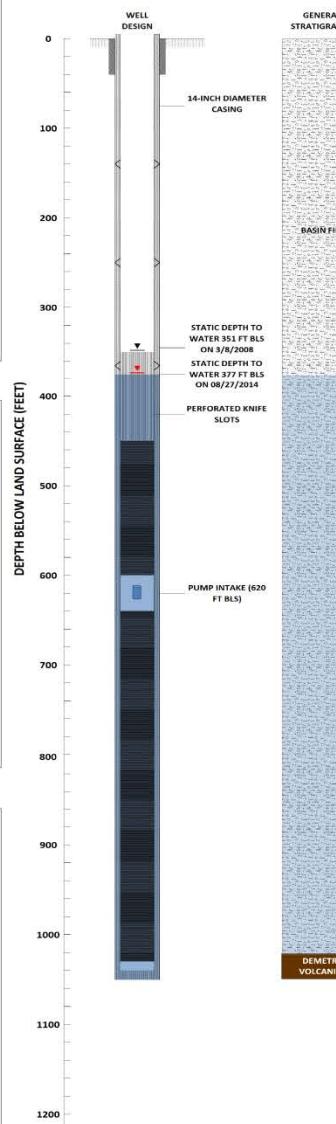
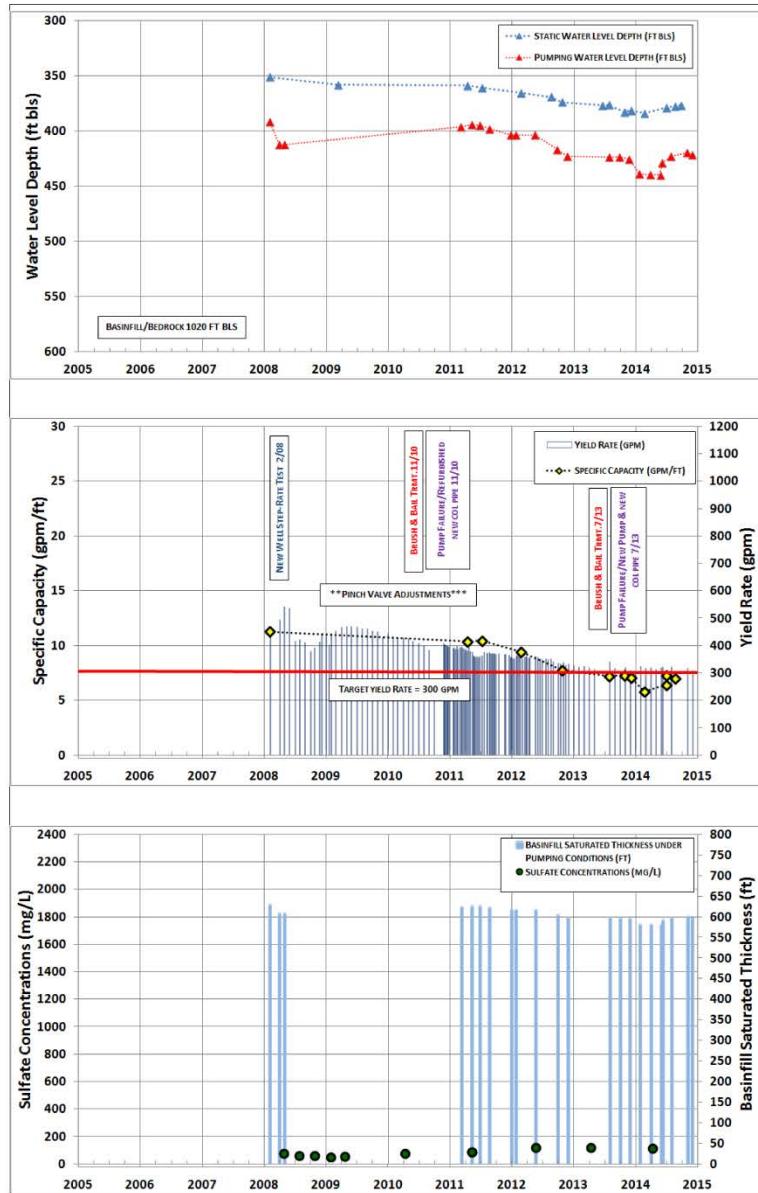
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**COPPER & GOLD**

VERSION DATE:  
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IW-1: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 29DCD  
ADWR REG. NO.: 55-623129  
DRILL YEAR: 1978



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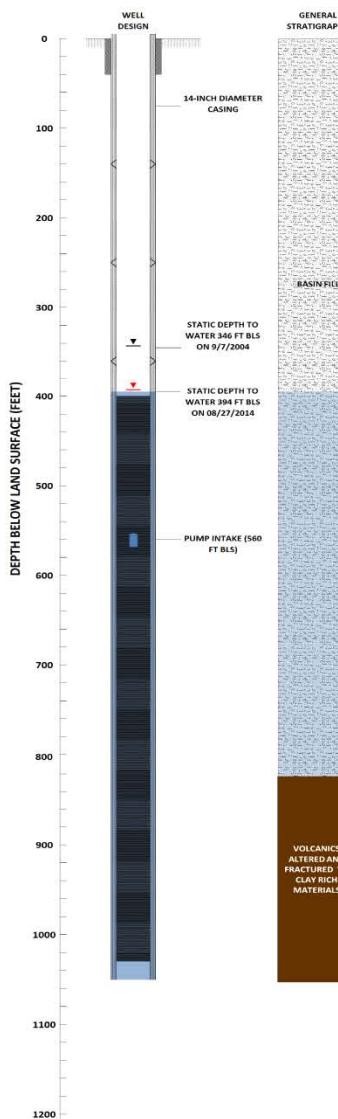
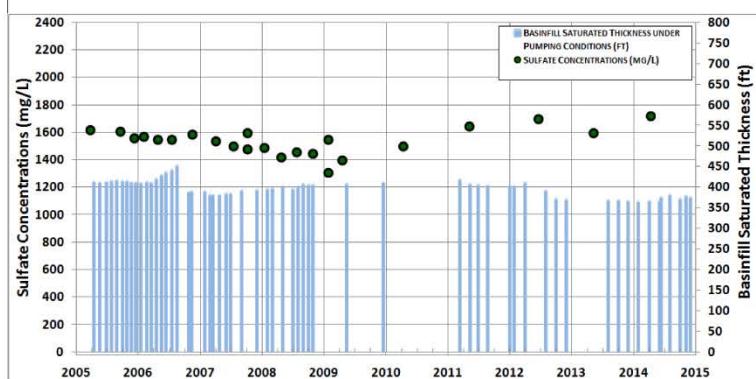
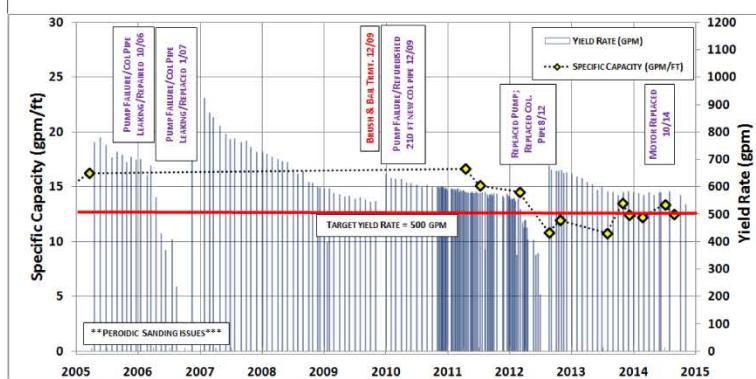
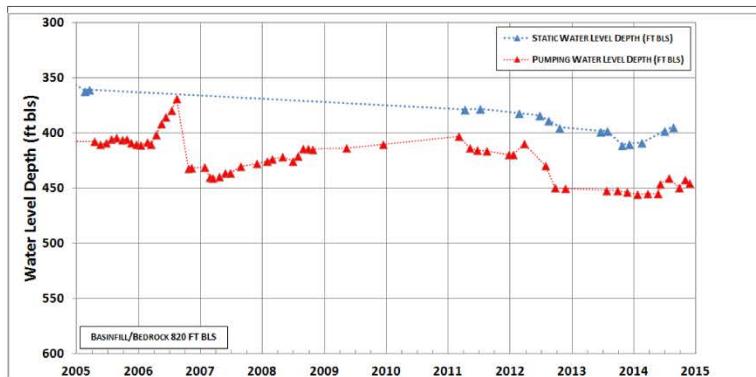
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VERSION DATE:  
DECEMBER 2, 201

**IW-2A: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

CADASTRAL: D-18-13 28CC  
ADWR REG. NO.: 55-216464  
DRILL YEAR: 2008

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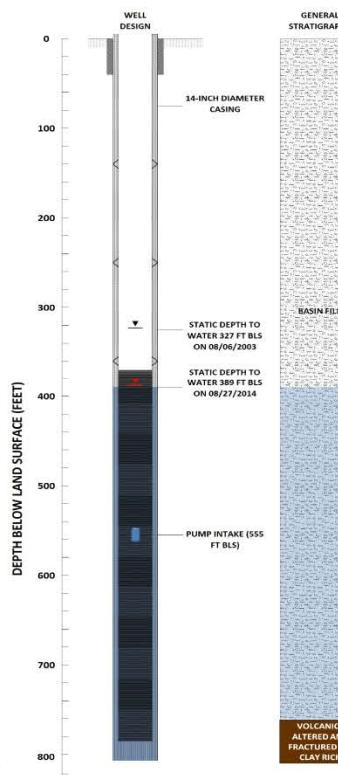
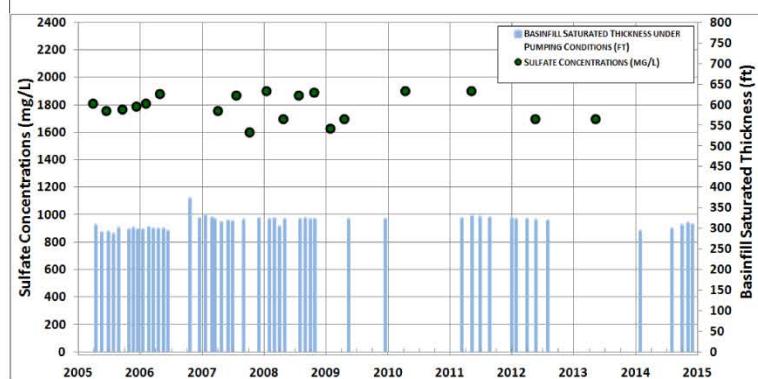
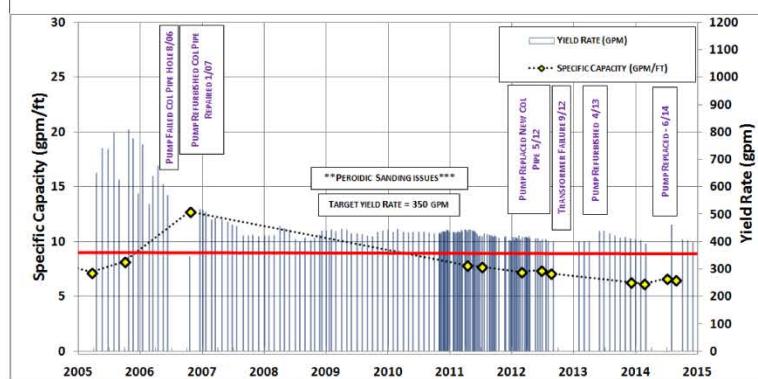
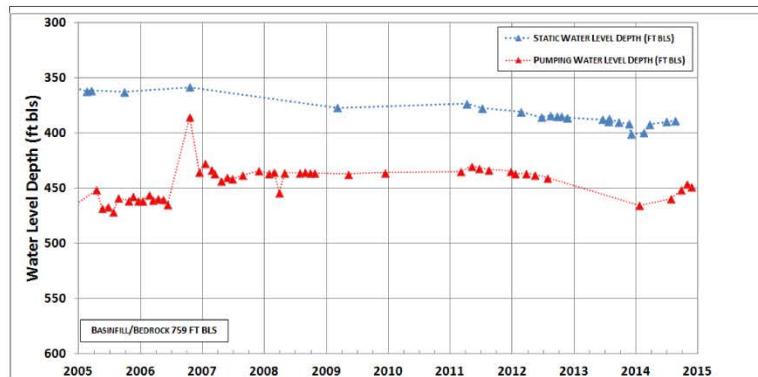
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IW-3A: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 28CBC  
ADWR REG. NO.: 55-201732  
DRILL YEAR: 2004



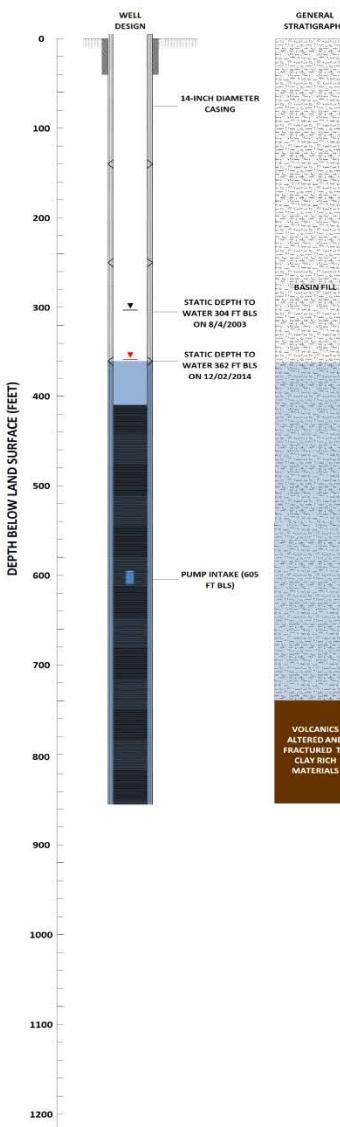
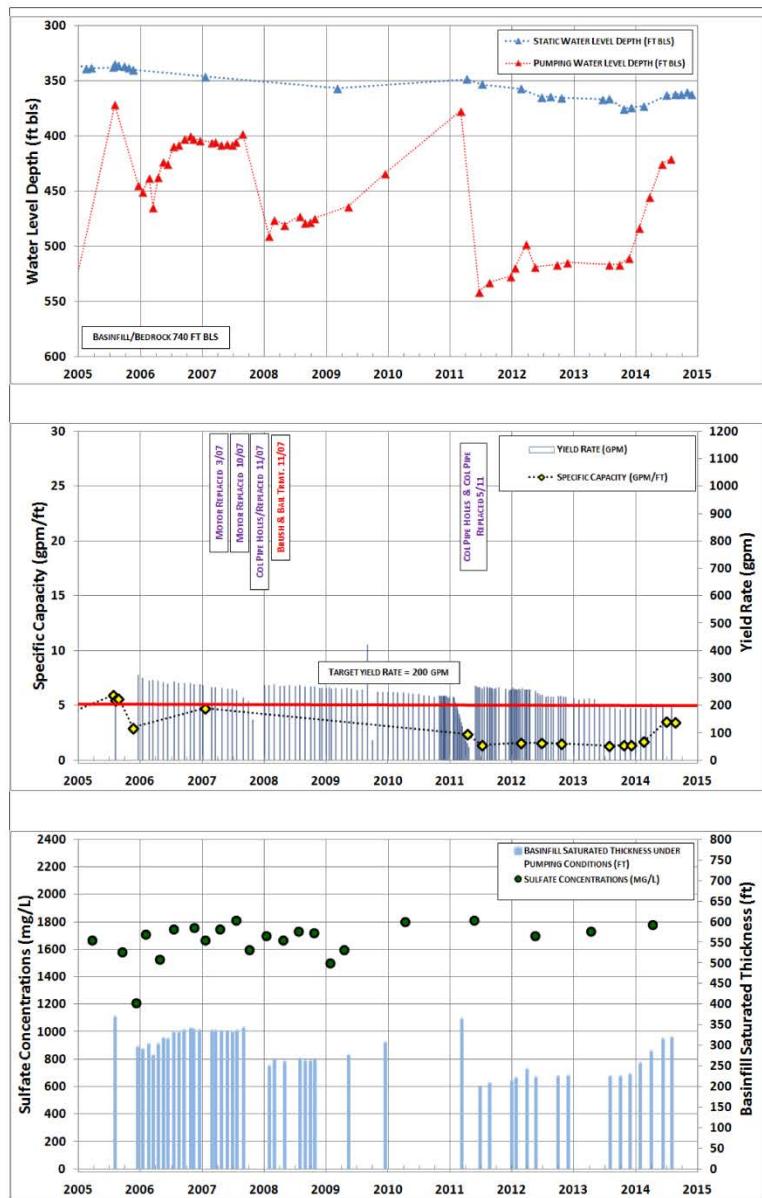
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IW-8: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 28BCC  
ADWR REG. NO.: 55-508236  
DRILL YEAR: 1984



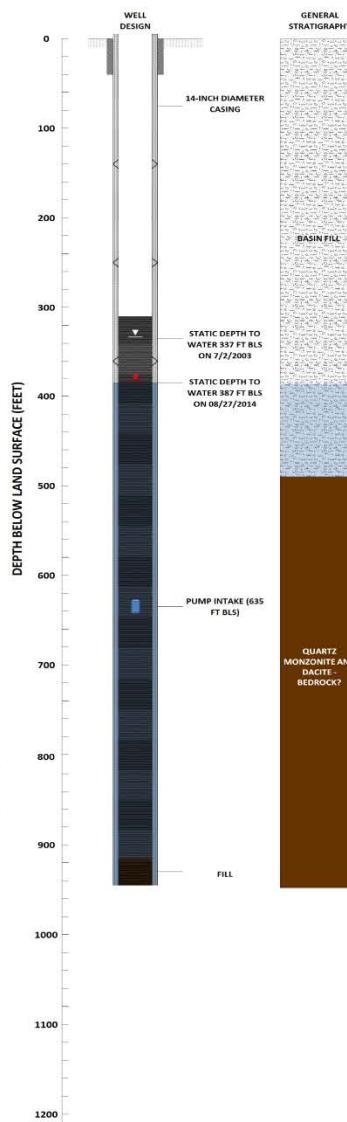
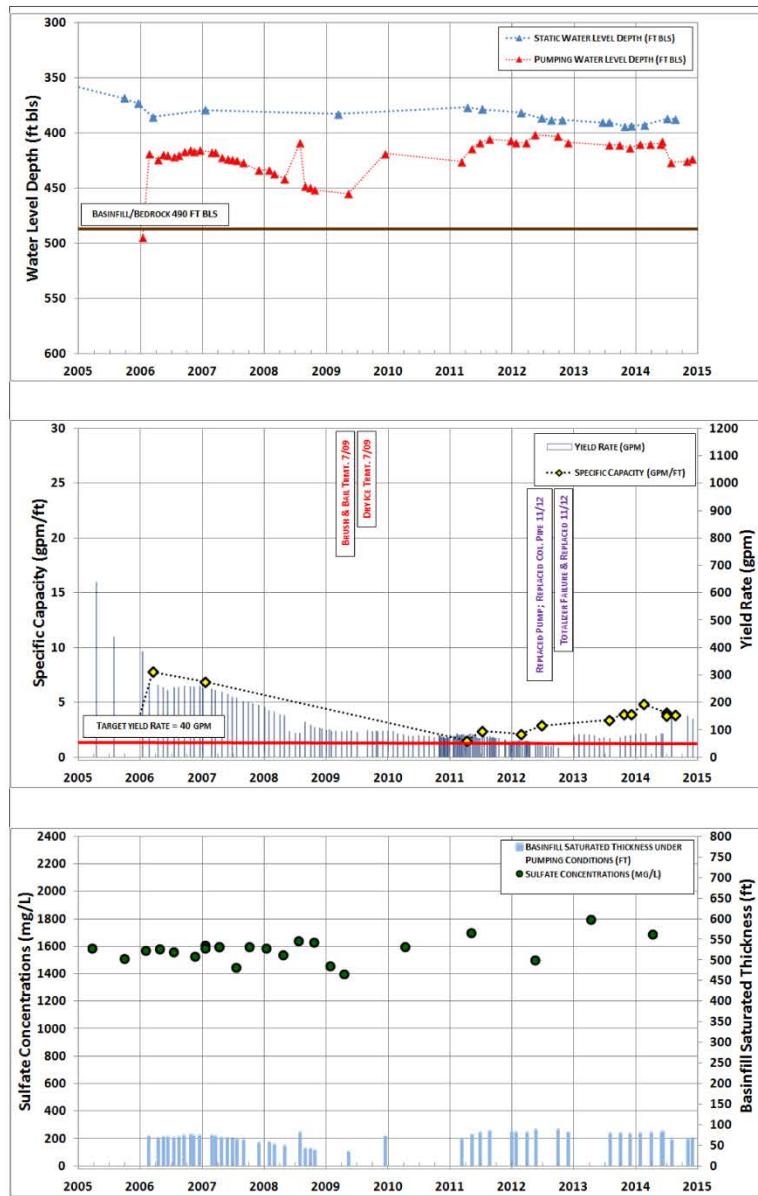
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IW-9: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL D-18-13 28BCC  
ADWR REG. NO.: 55-508238  
DRILL YEAR: 1984



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CORPORATE & COMMERCIAL DOCUMENTS

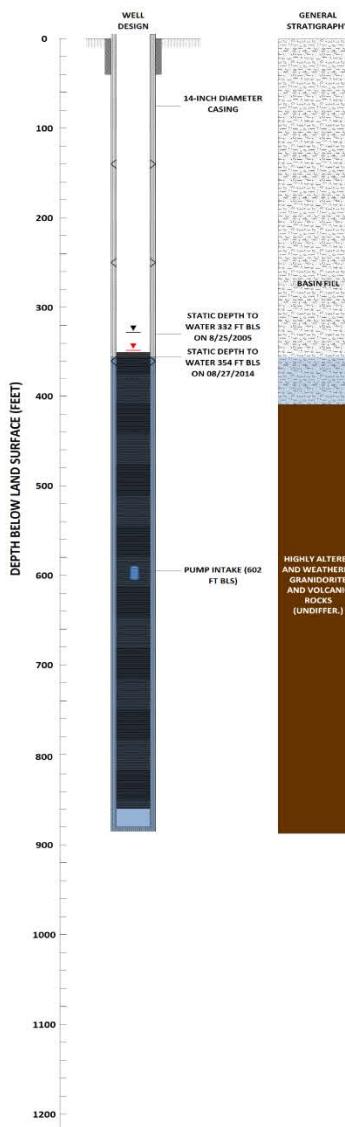
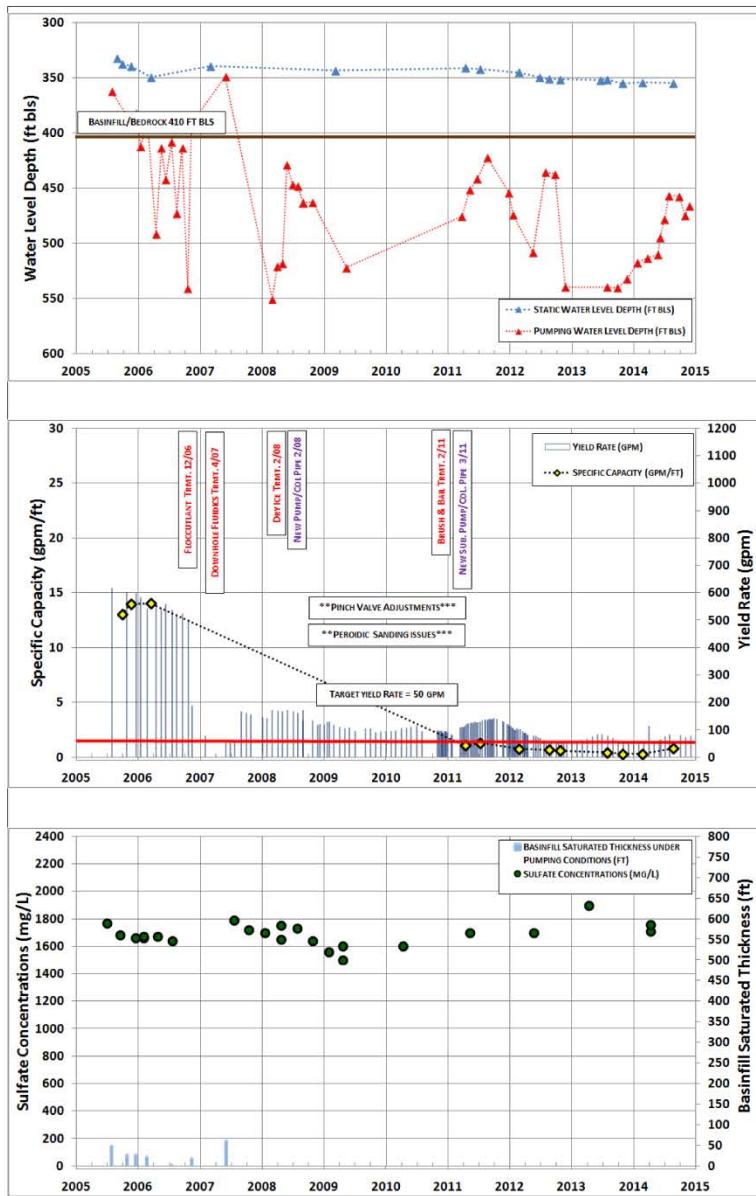
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VERSION DATE:  
DECEMBER 2, 2014

**IW-4: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

CADASTRAL:D-18-13 28BC  
ADWR REG. NO.: 55-62313  
DRILL YEAR: 1978

BasinWells Associates PLLC



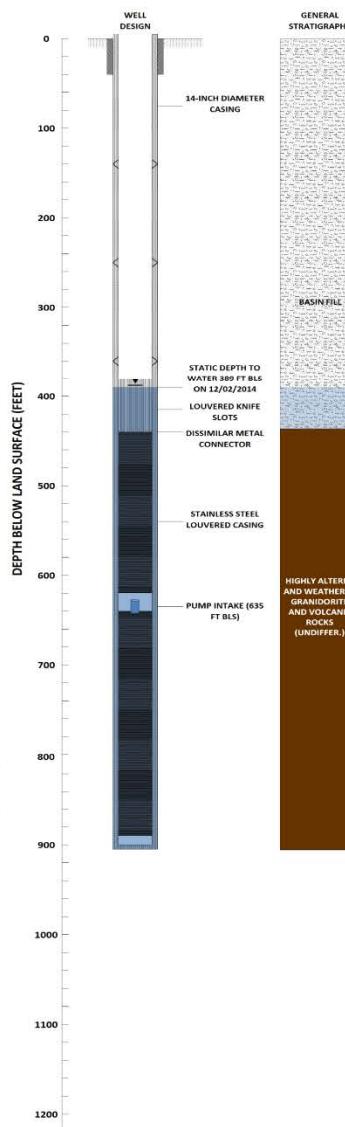
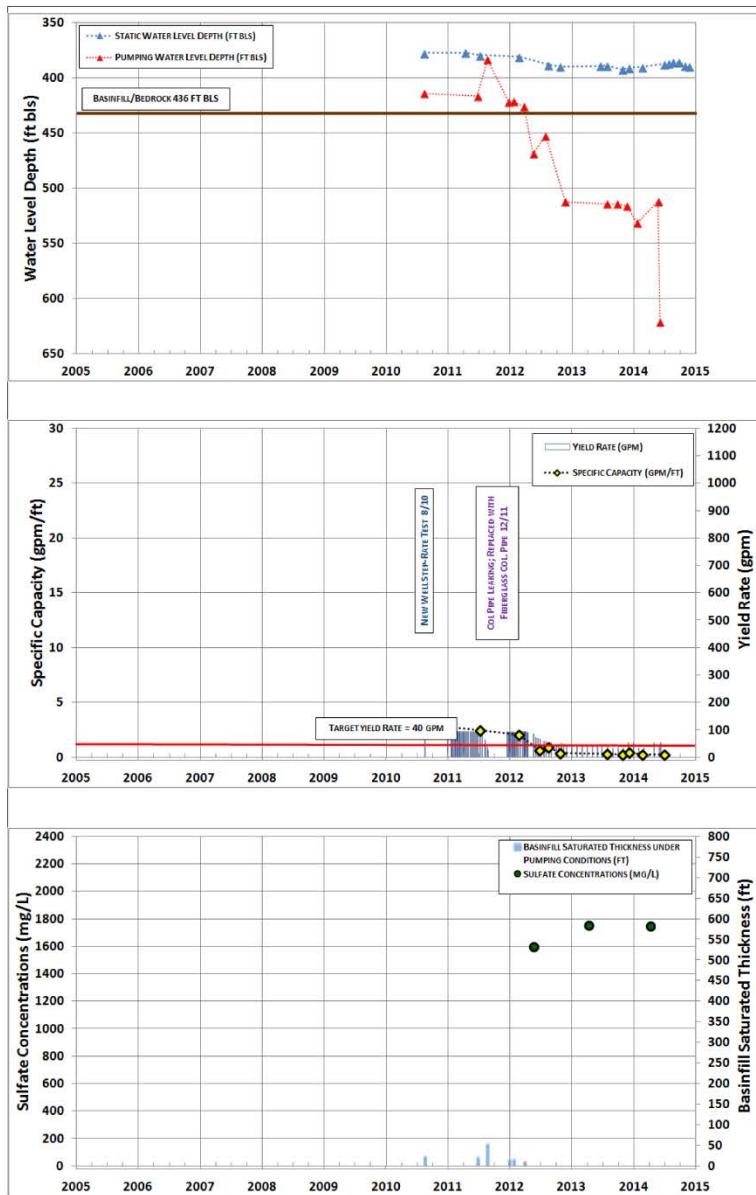
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DECEMBER 2, 2014**

**IW-24: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

**CADAstral-D-18-13 28bbb  
ADWR REG. NO.: 55-200556  
DRILL YEAR: 2004**



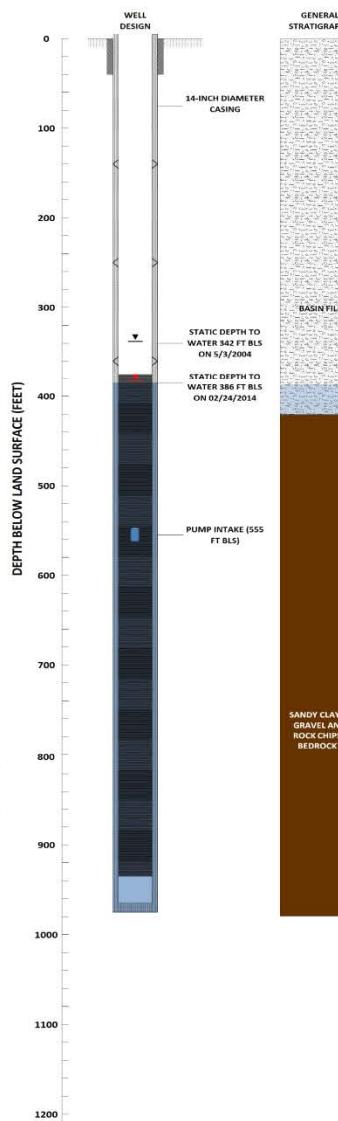
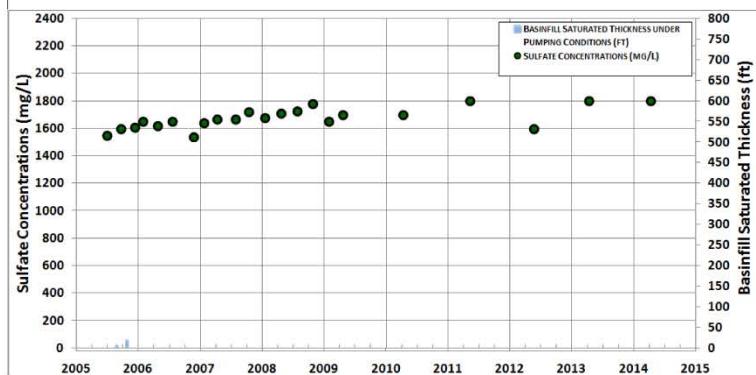
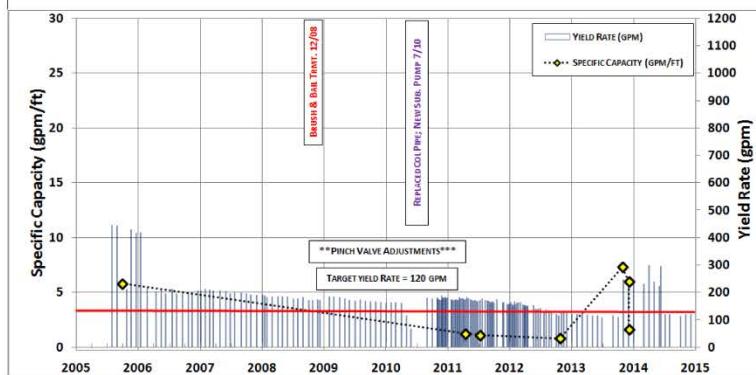
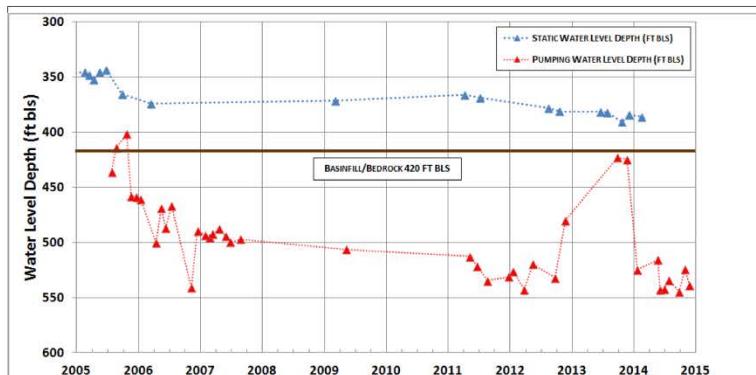
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IW-5A: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL D-18-13 288BBB  
ADWR REG. NO.: 55-219131  
DRILL YEAR: 2010



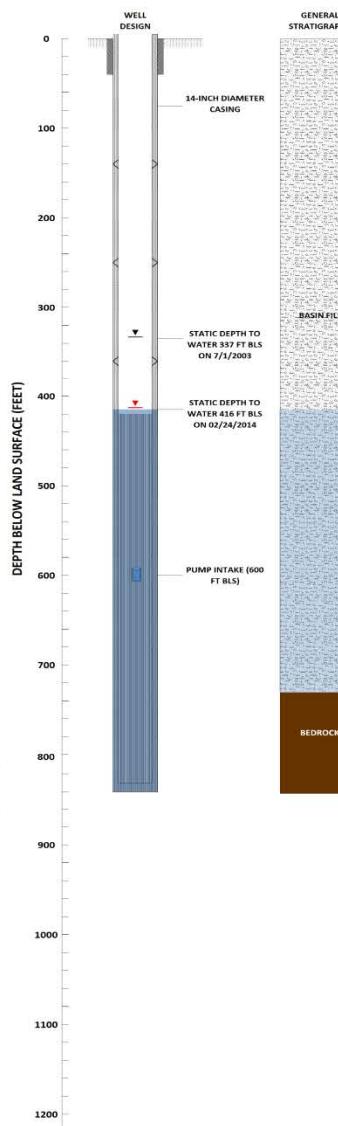
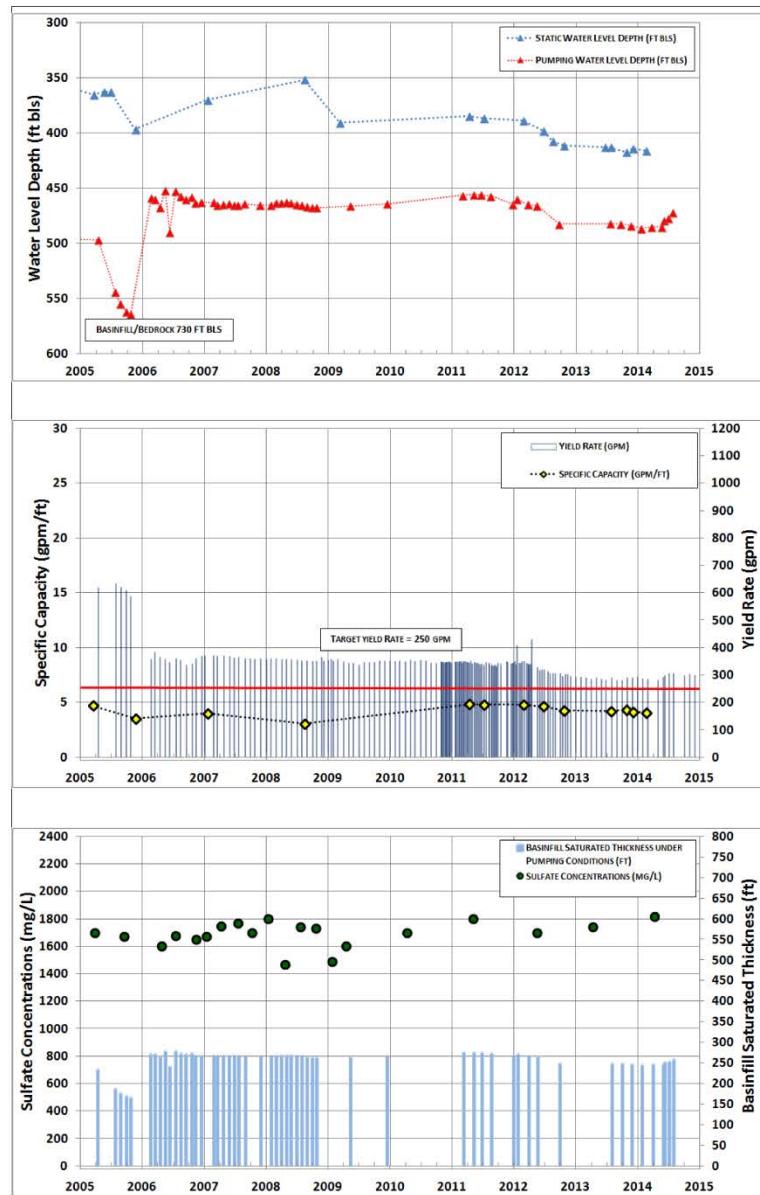
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IW-23: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL-D-18-13 21CCB  
ADWR REG. NO.: 55-200555  
DRILL YEAR: 2004



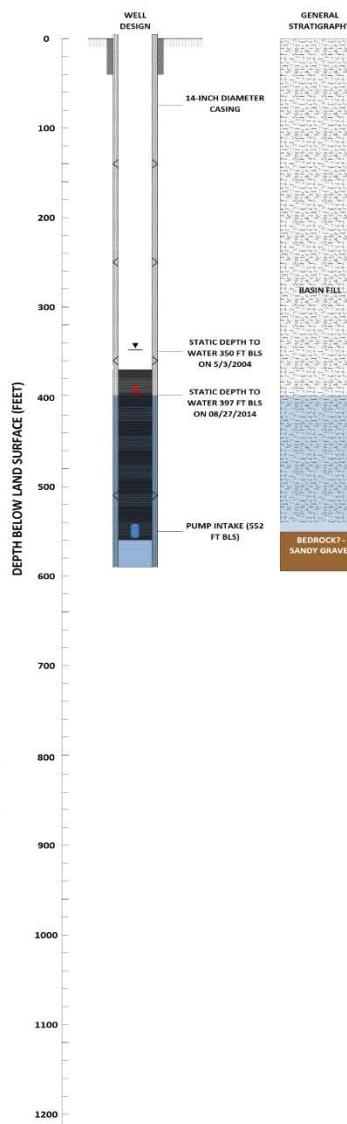
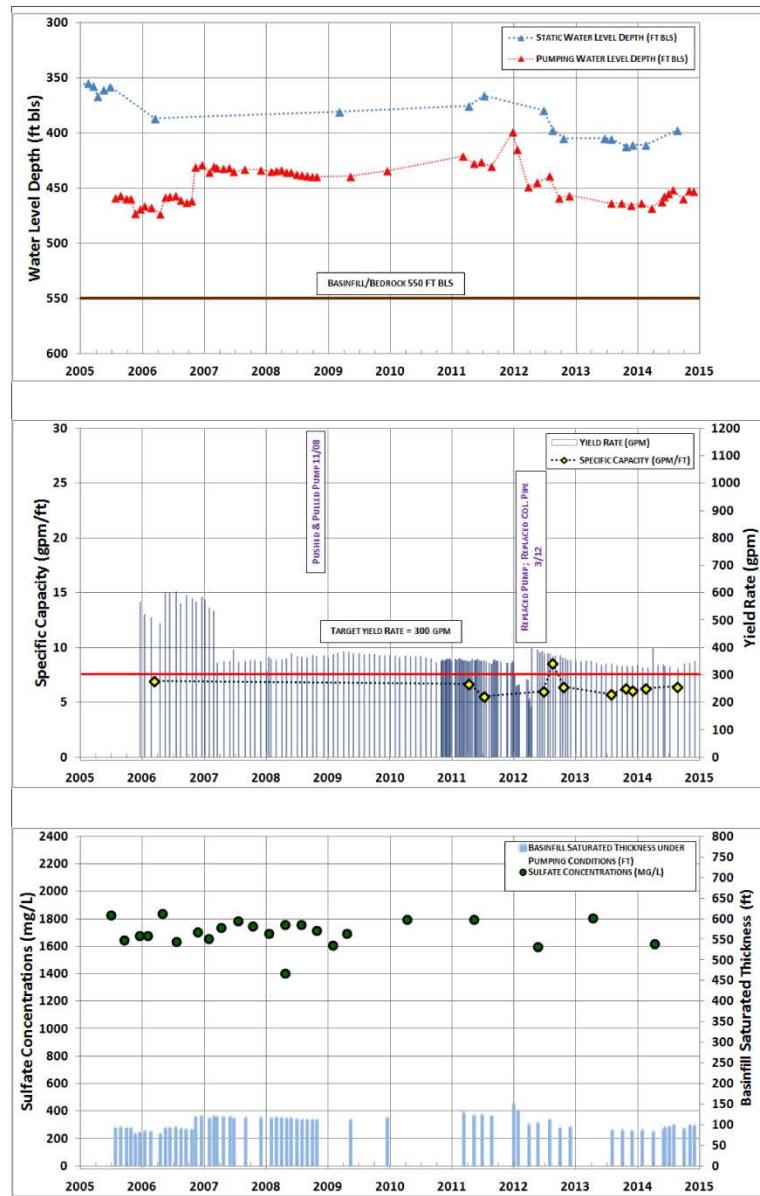
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**IW-10: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

**CADASTRAL: D-18-13 21CBC  
ADWR REG. NO.: 55-508237  
DRILL YEAR: 1984**



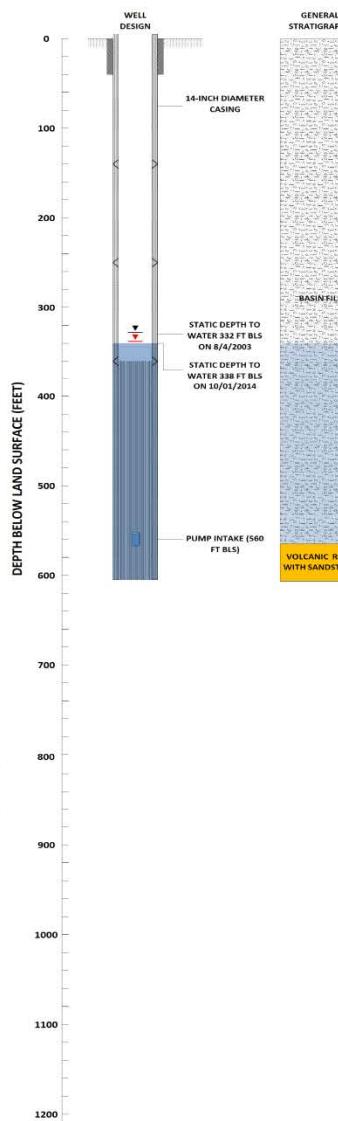
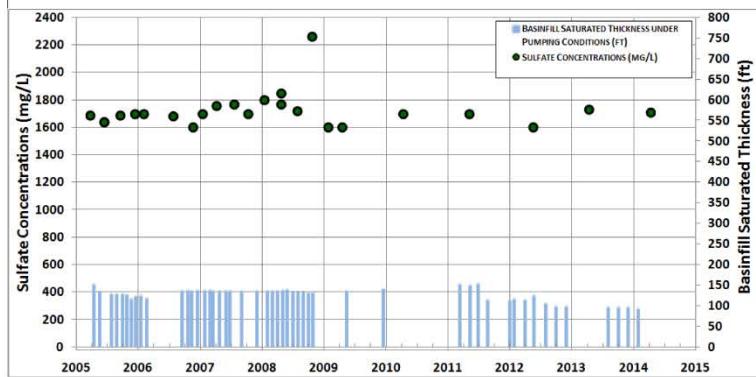
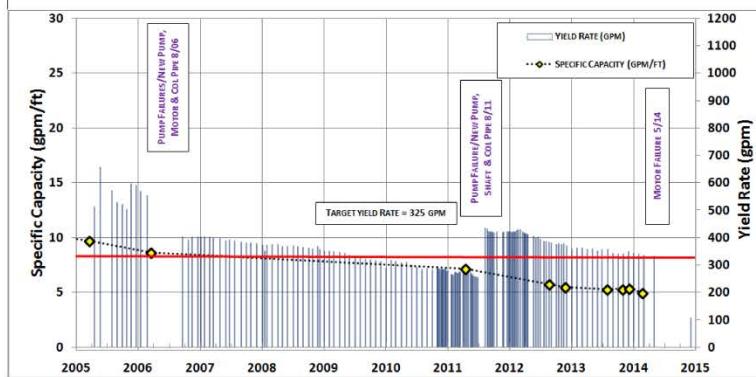
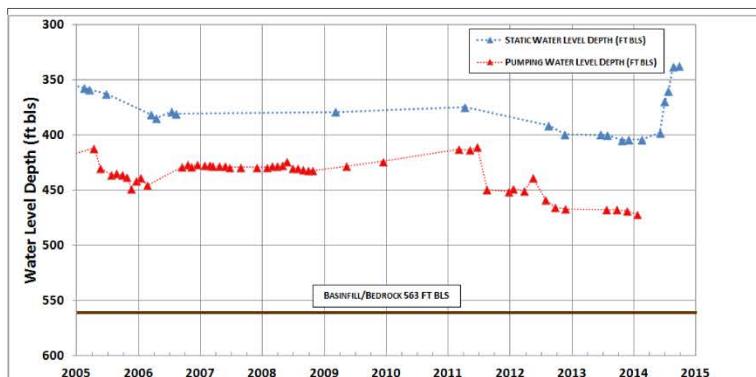
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IW-22: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21CBC  
ADWR REG. NO.: 55-200554  
DRILL YEAR: 2004



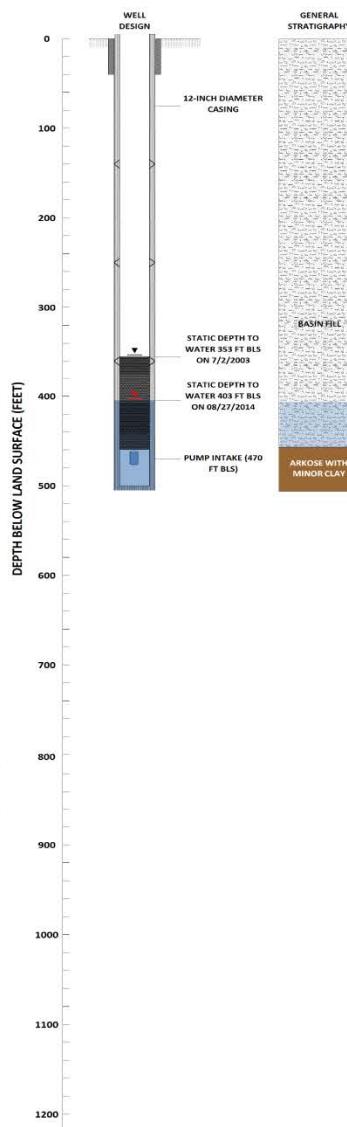
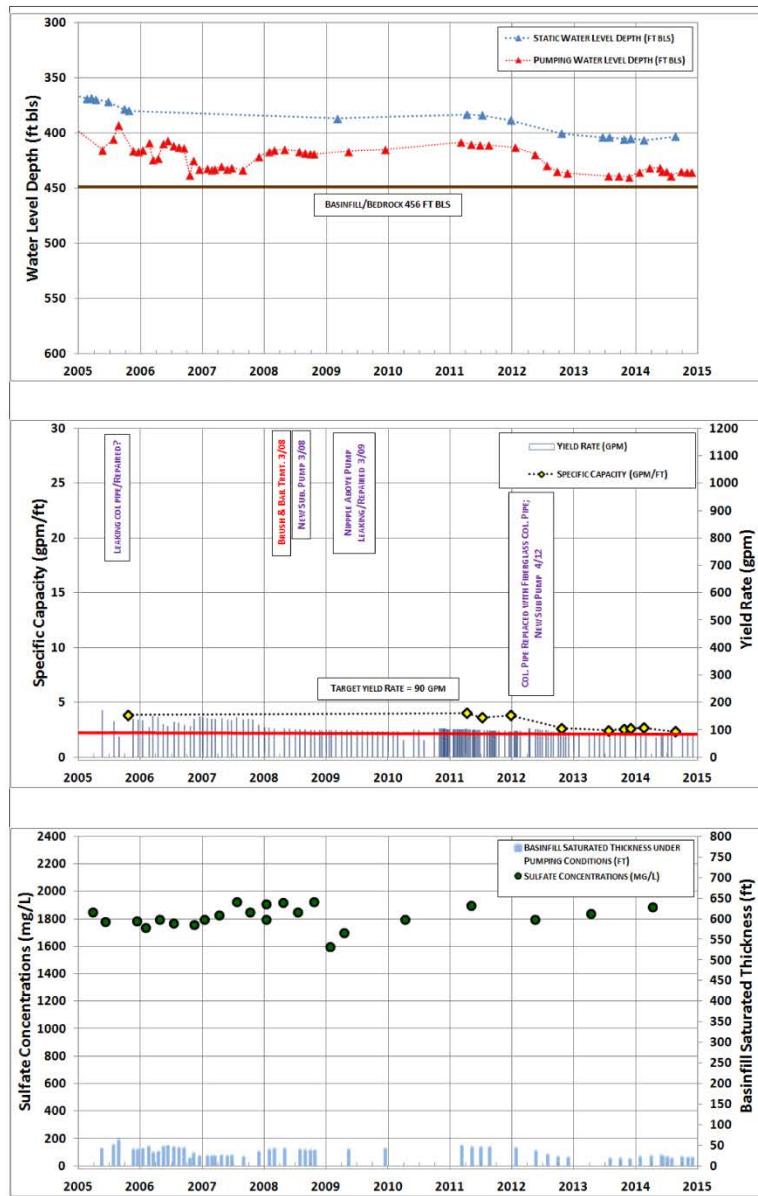
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IW-11: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21CBC  
ADWR REG. NO.: 55-508235  
DRILL YEAR: 1984



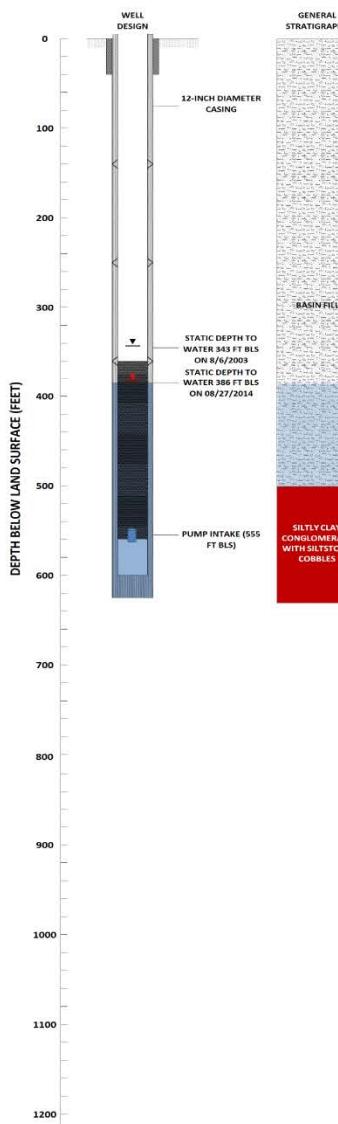
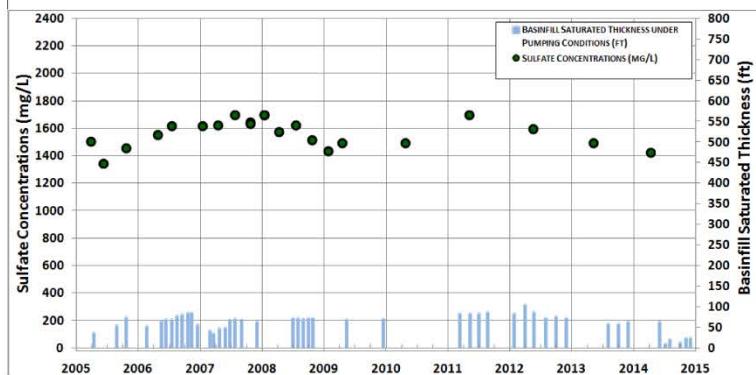
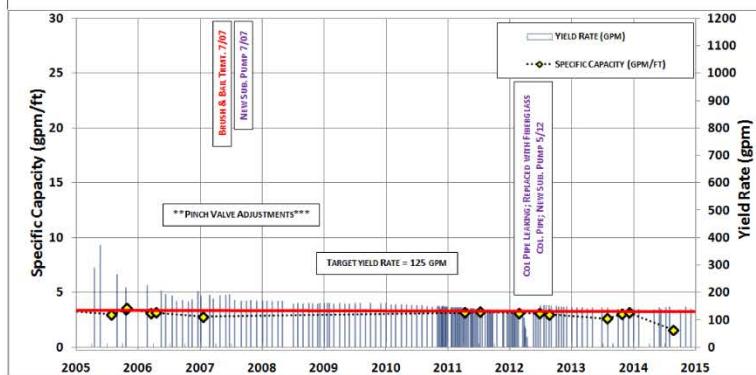
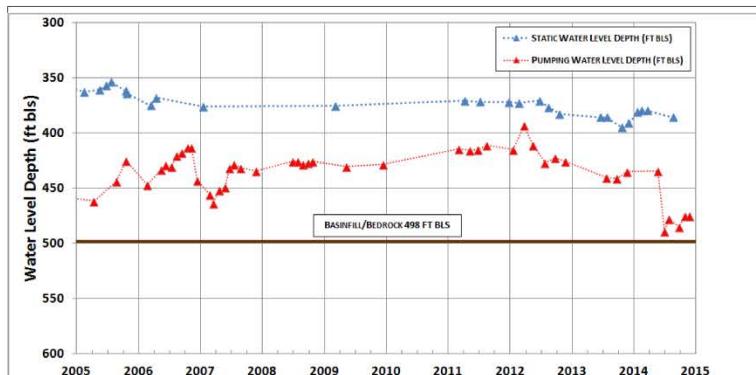
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IW-6A: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21BCC  
ADWR REG. NO.: 55-545565  
DRILL YEAR: 1994



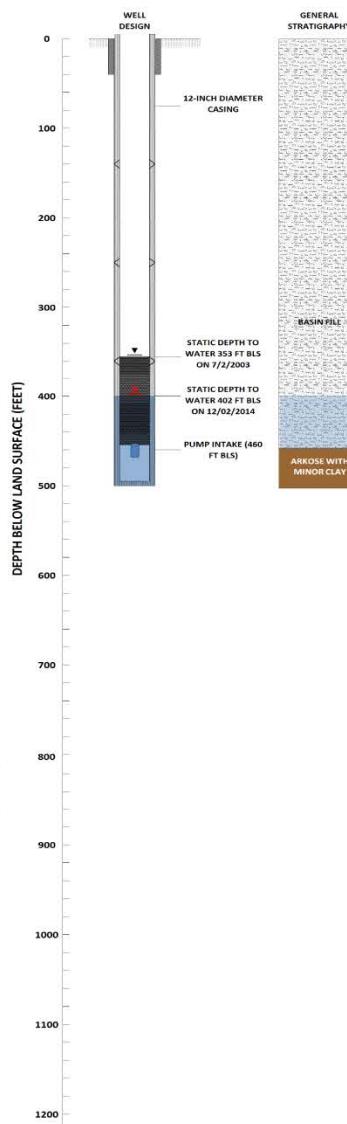
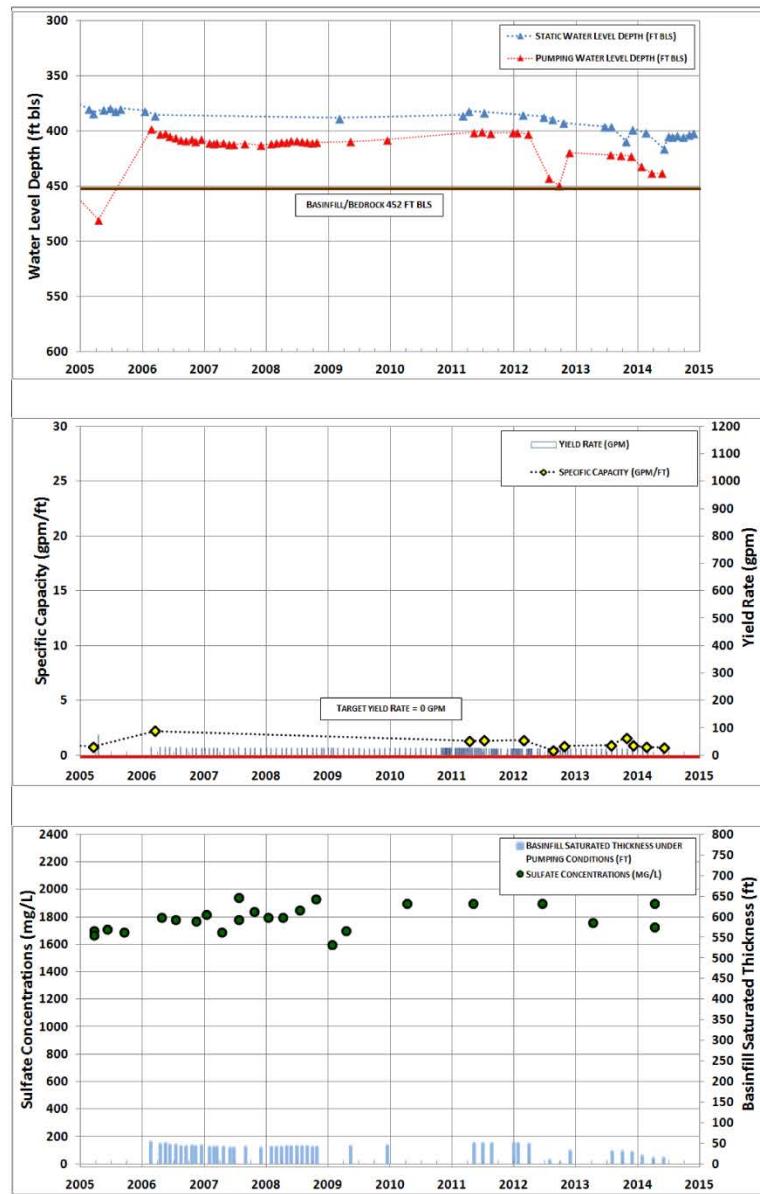
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IW-12: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21BCB  
ADWR REG. NO.: 55-545555  
DRILL YEAR: 1994



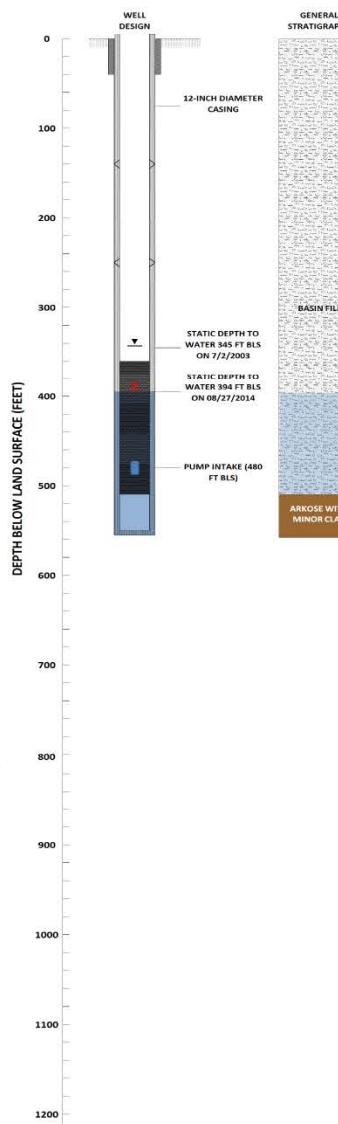
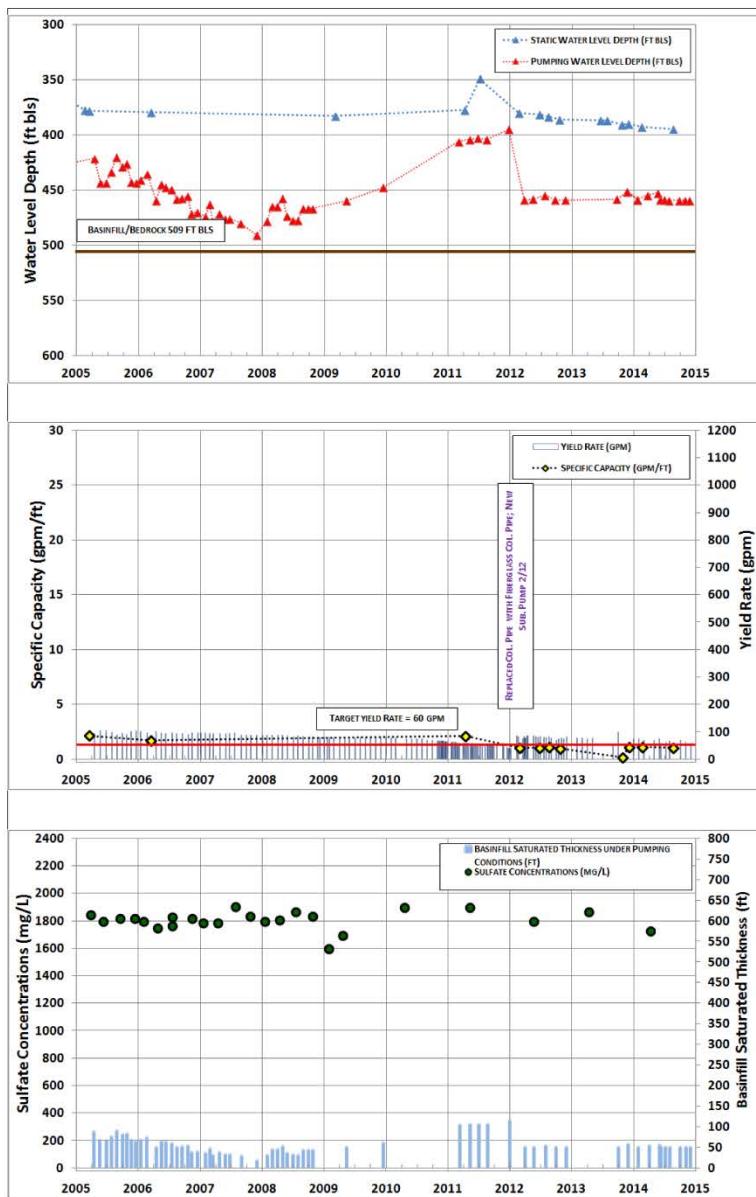
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IW-13: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21BBC  
ADWR REG. NO.: 55-545556  
DRILL YEAR: 1994



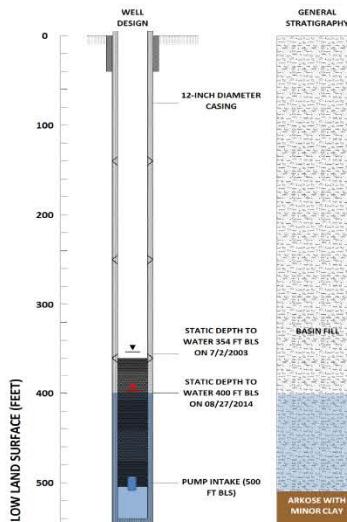
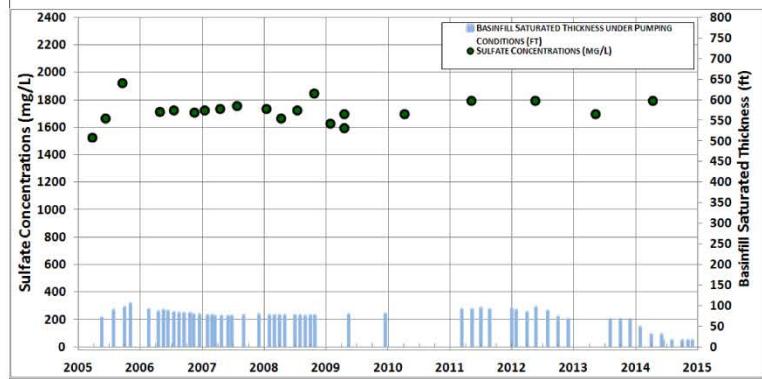
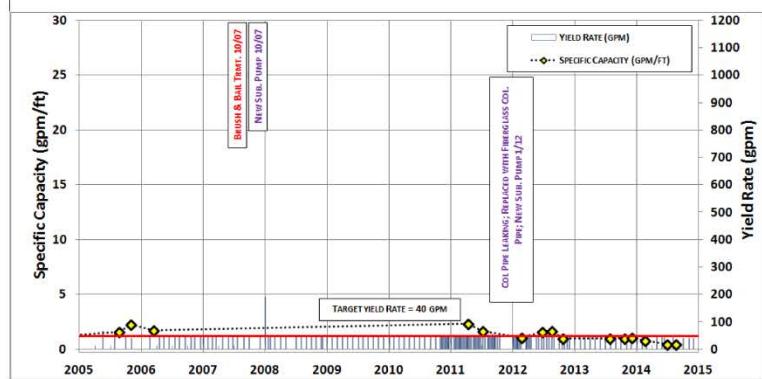
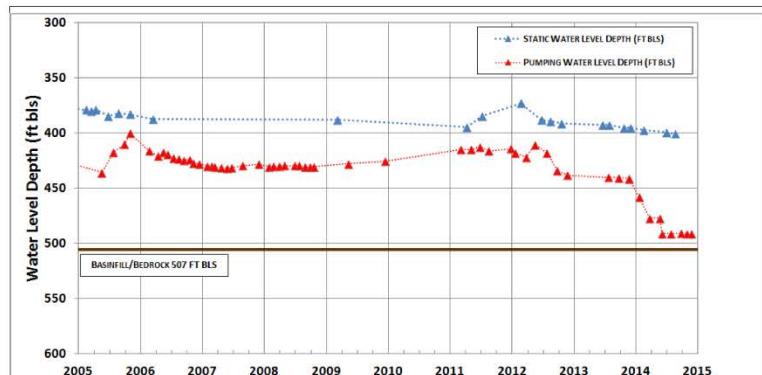
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DECEMBER 2, 2014

IW-14: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21BBB  
ADWR REG. NO.: 55-545557  
DRILL YEAR: 1994



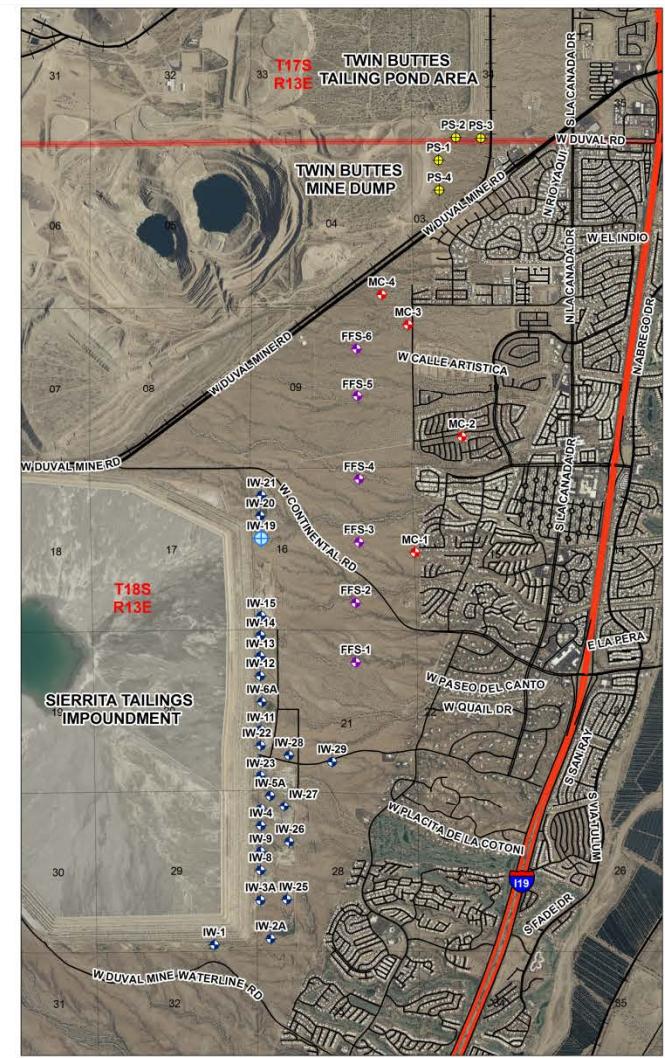
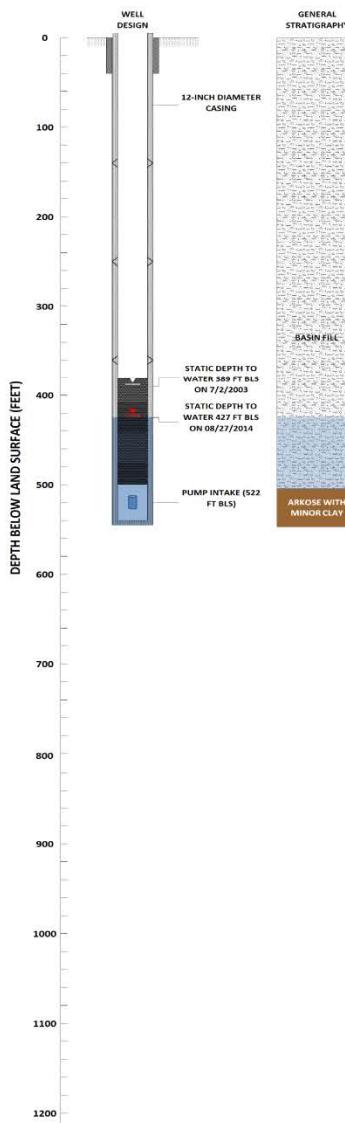
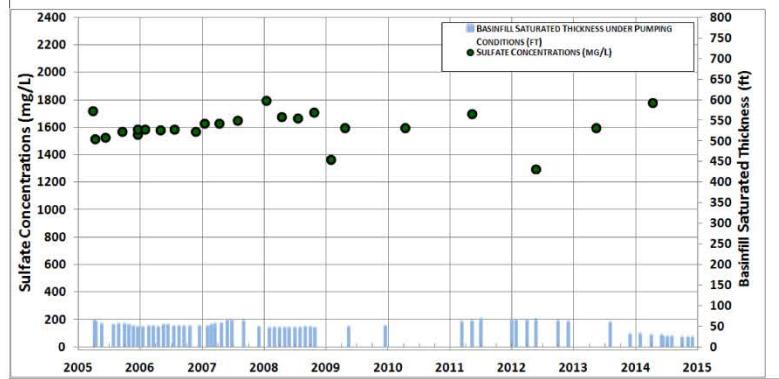
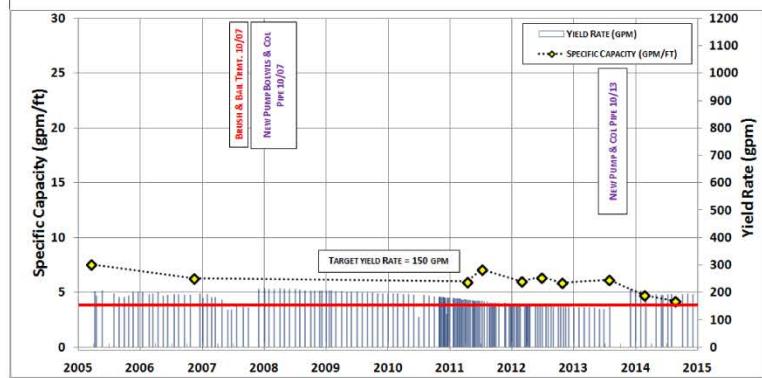
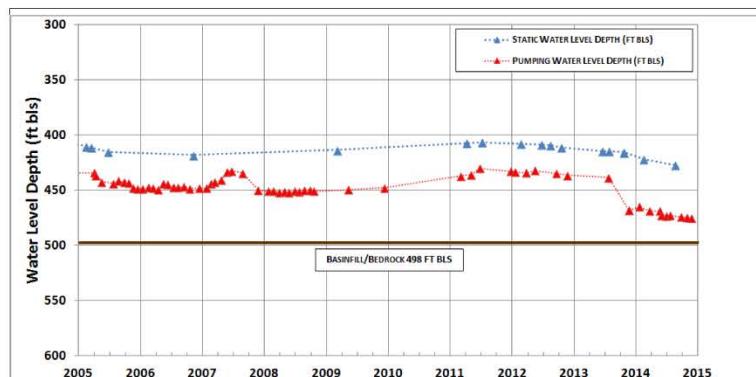
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IW-15: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

VERSION DATE:  
DECEMBER 2, 2014

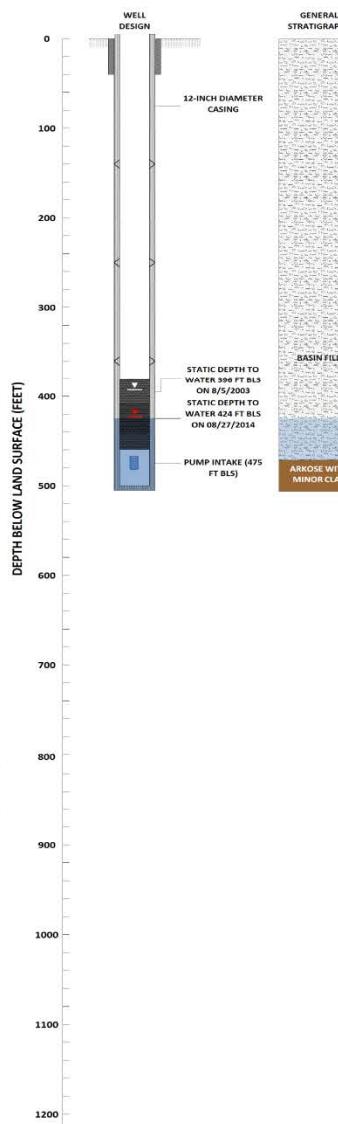
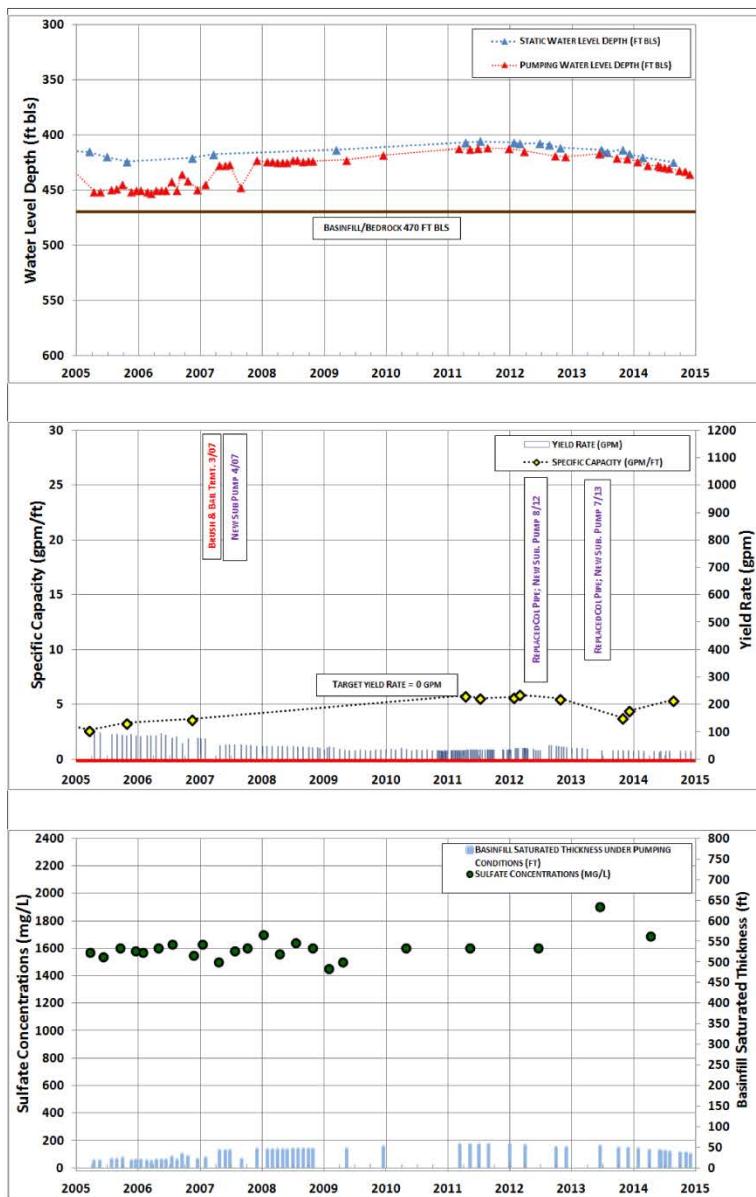
CADASTRAL: D-18-13 16CCC  
ADWR REG. NO.: 55-545558  
DRILL YEAR: 1995



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VERSION DATE:  
DECEMBER 2, 2014



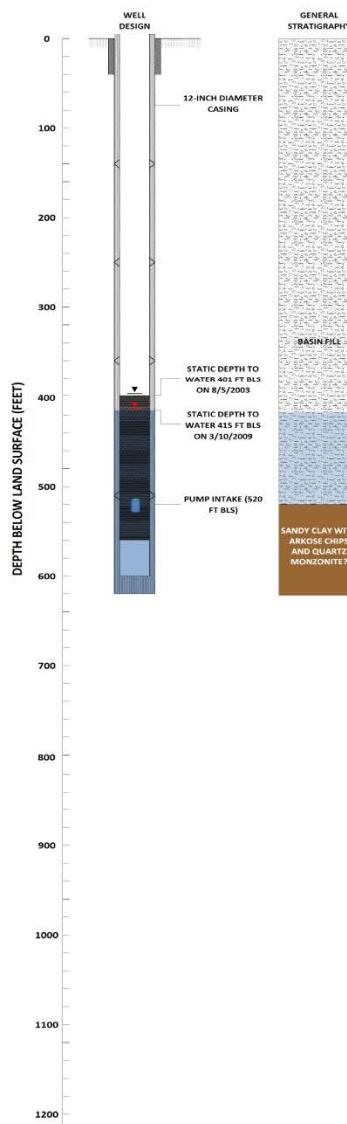
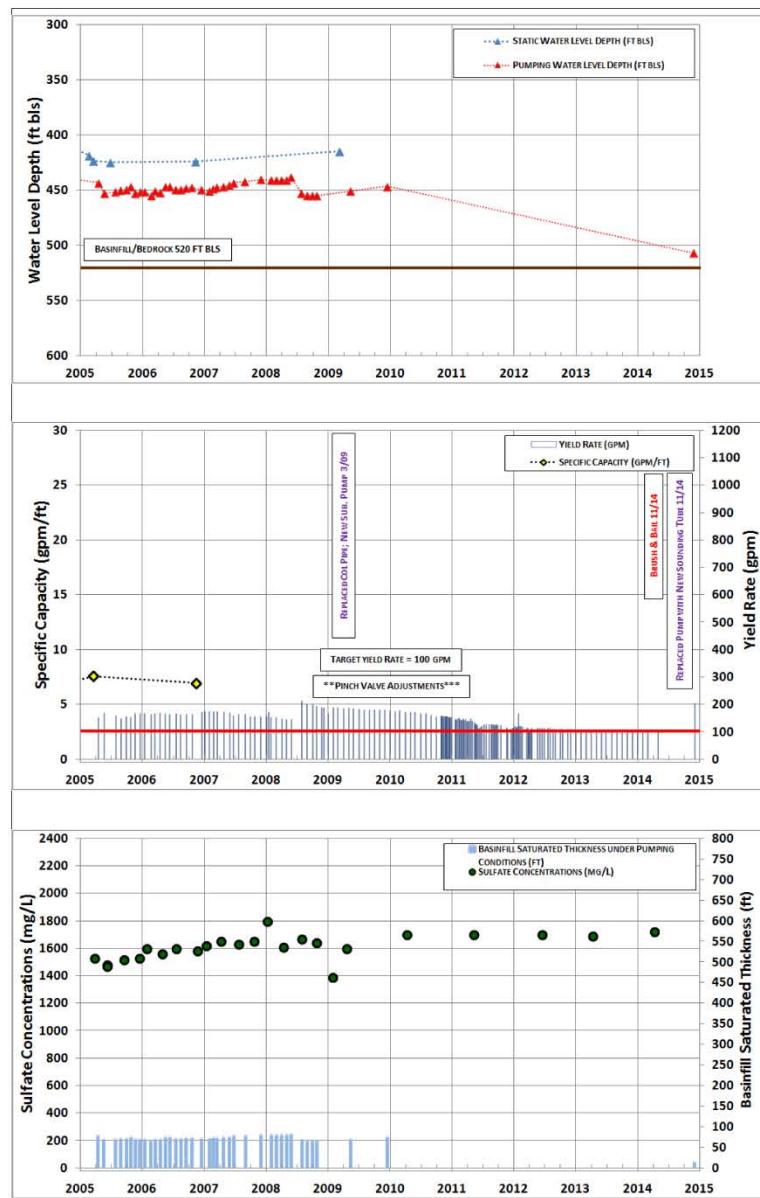
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**DECEMBER 2, 2014**

**IW-20: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

**CADASTRAL: D-18-13 16BCB  
ADWR REG. NO.: 55-545563  
DRILL YEAR: 1995**



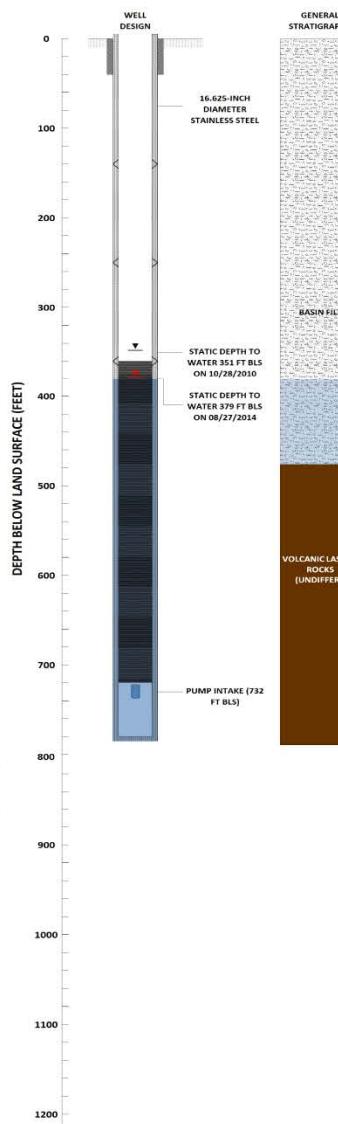
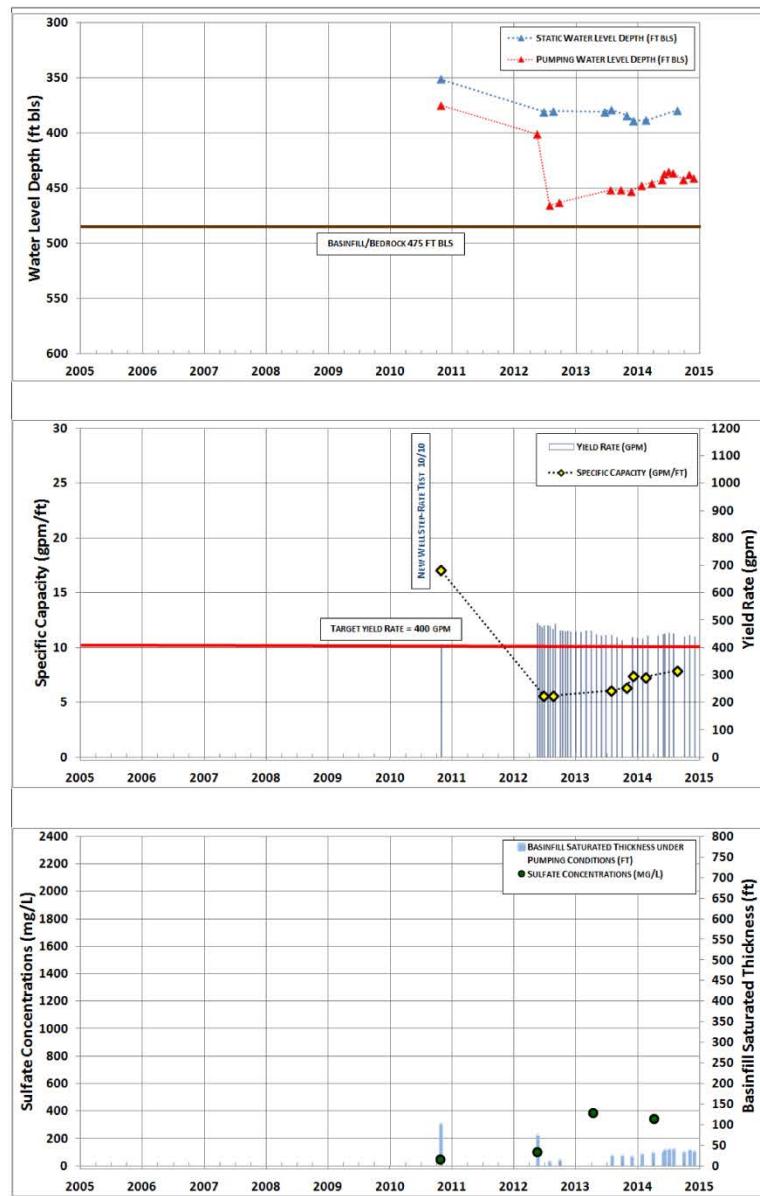
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SPECIALISTS IN GROUNDWATER DEVELOPMENT

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**COPPER & GOLD**

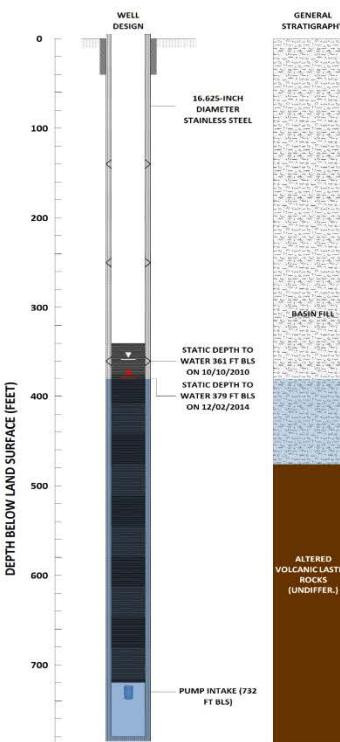
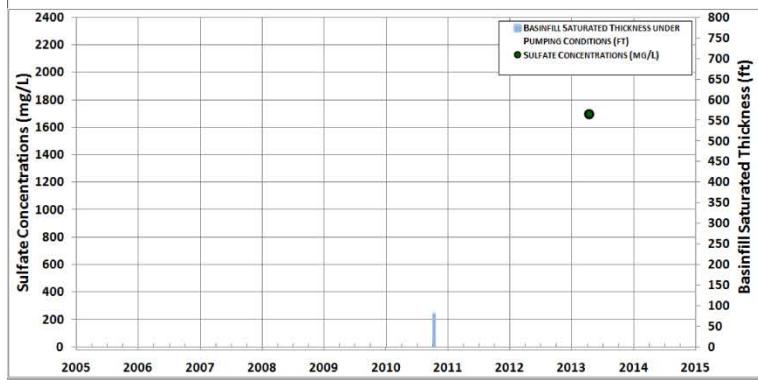
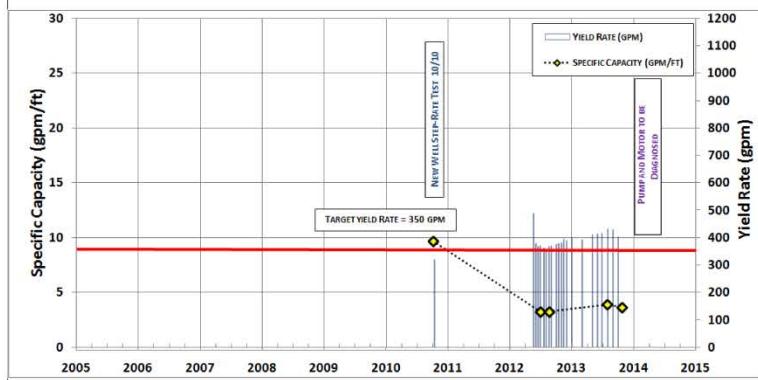
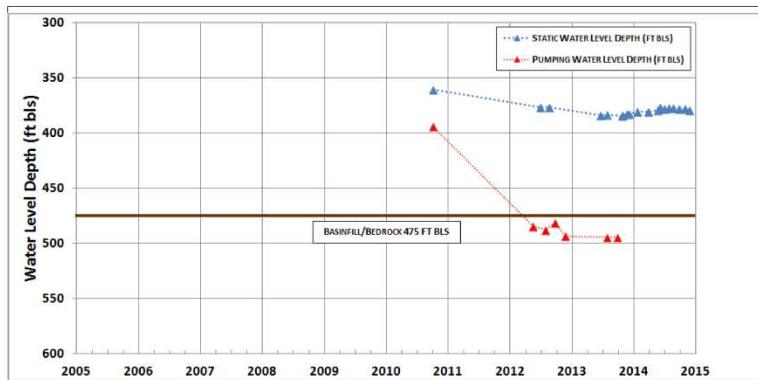
VERSION DATE:  
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IW-21: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 16BBC  
ADWR REG. NO.: 55-545564  
DRILL YEAR: 1995



<b>BasinWells</b> ASSOCIATES PLLC <small>SPECIALISTS IN GROUNDWATER DEVELOPMENT</small>	<b>FREEPORT-MCMORAN COPPER &amp; GOLD</b>	IW-25: WATER LEVELS, YIELD, SPECIFIC CAPACITY, BASINFILL SAT. THK. AND SULFATE
VERSION DATE: <b>DECEMBER 2, 2014</b>	CADASTRAL: D-18-13 28CBD ADWR REG. NO.: 55-219596 DRILL YEAR: 2010	



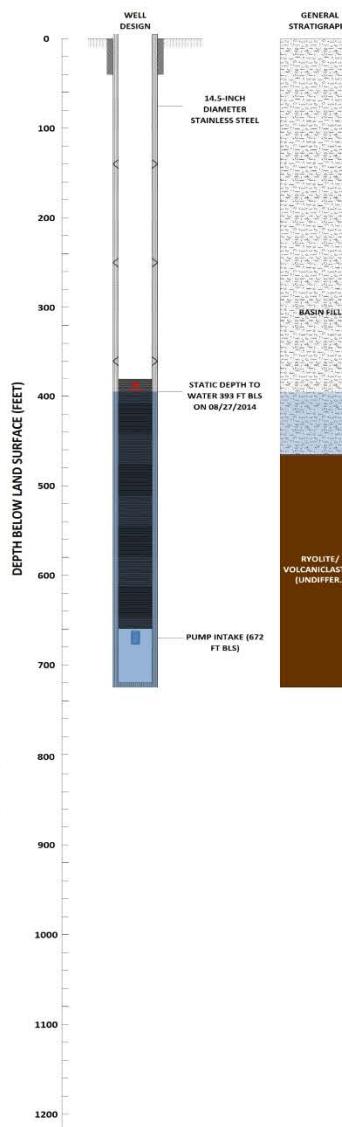
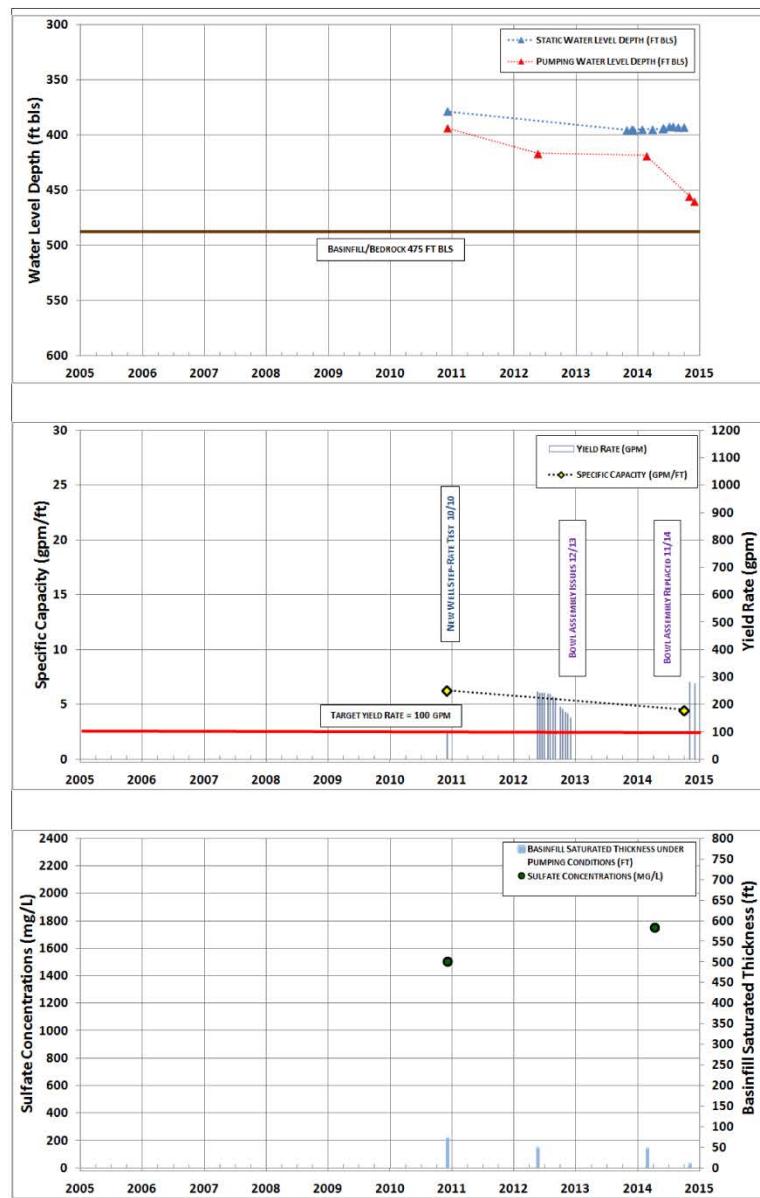
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**FREEPORT-McMORAN**  
**COPPER & GOLD**

**VERSION DATE:**  
**DECEMBER 2, 2014**

IW-26: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 28BCD  
ADWR REG. NO.: 55-219143  
DRILL YEAR: 2010



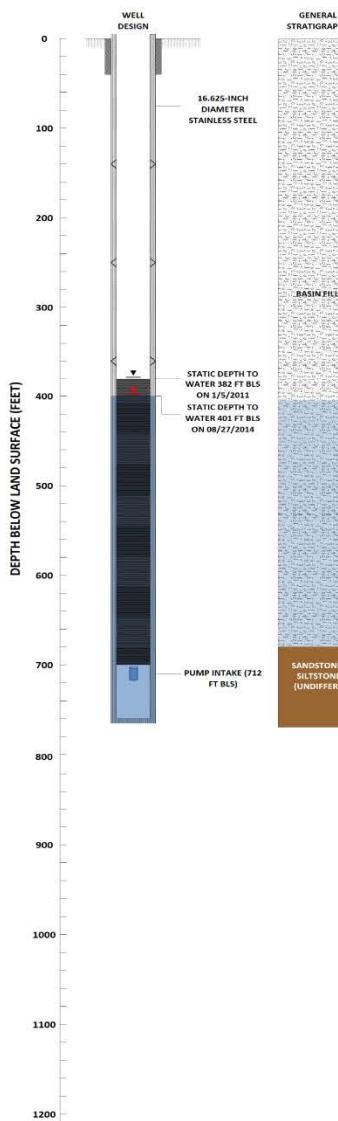
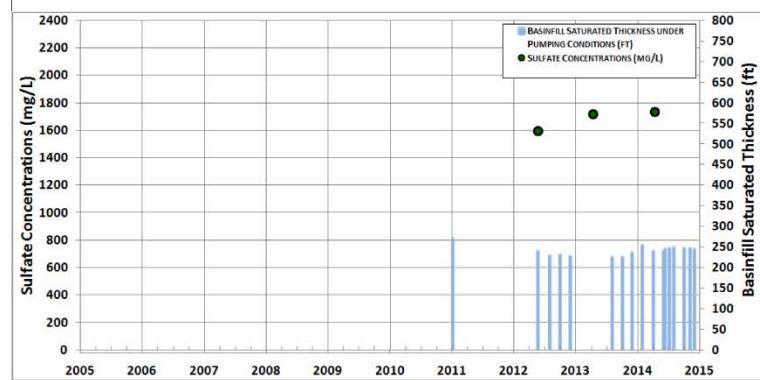
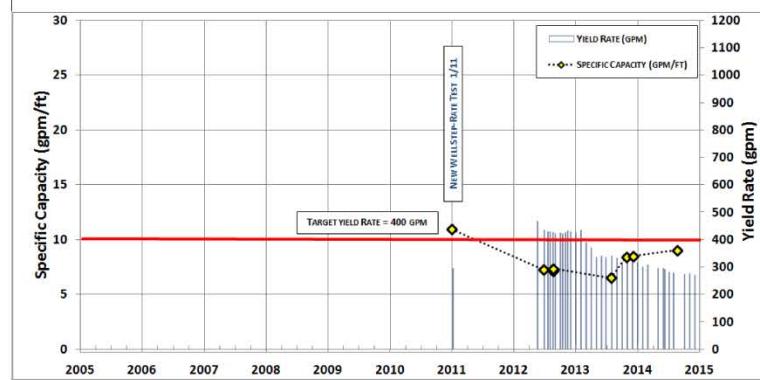
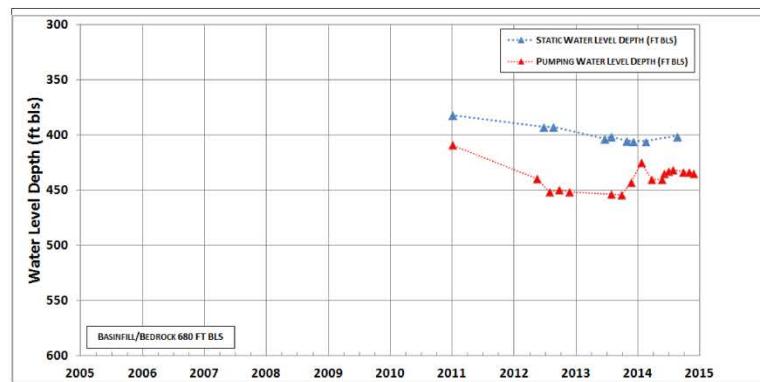
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**COPPER & GOLD**

**VERSION DATE:**  
**DECEMBER 2, 2014**

**IW-27: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

**CADASTRAL: D-18-13 28BBB  
ADWR REG. NO.: 55-219136  
DRILL YEAR: 2010**



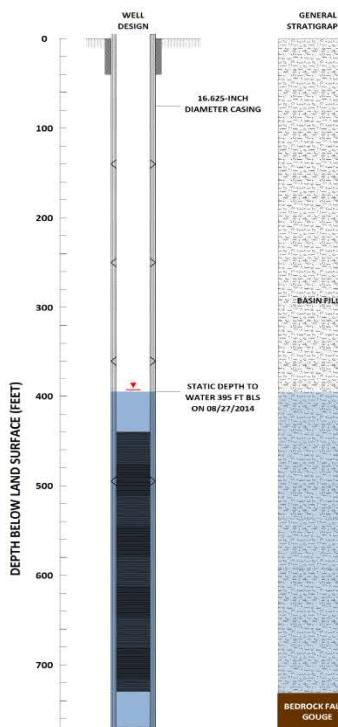
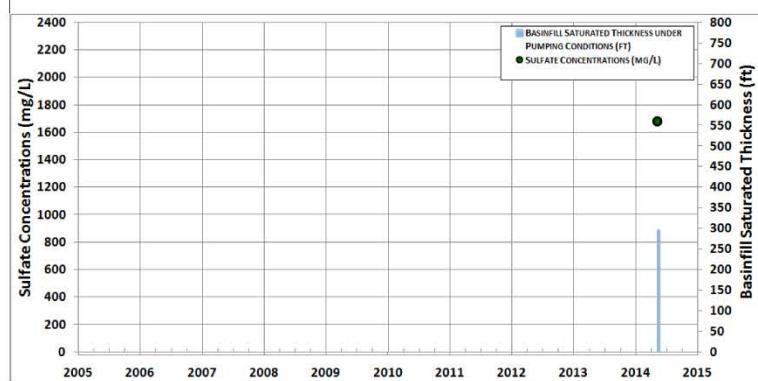
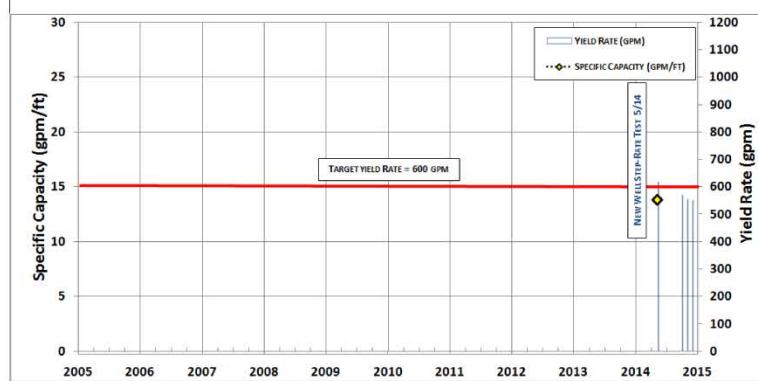
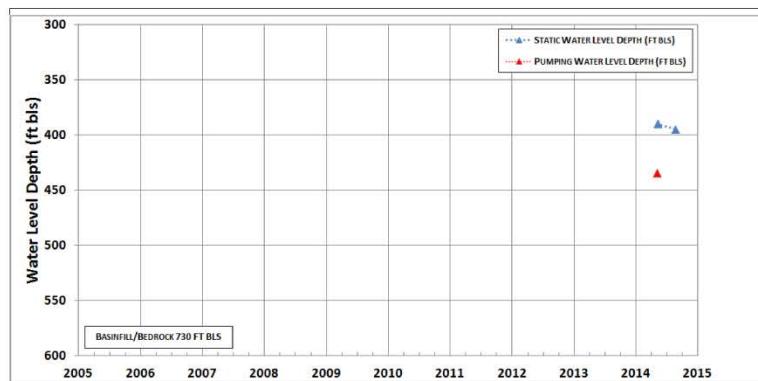
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**COPPER & GOLD**

VERSION DATE:  
DECEMBER 2, 2014

IW-28: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21CCA  
ADWR REG. NO.: 55-219137  
DRILL YEAR: 2010



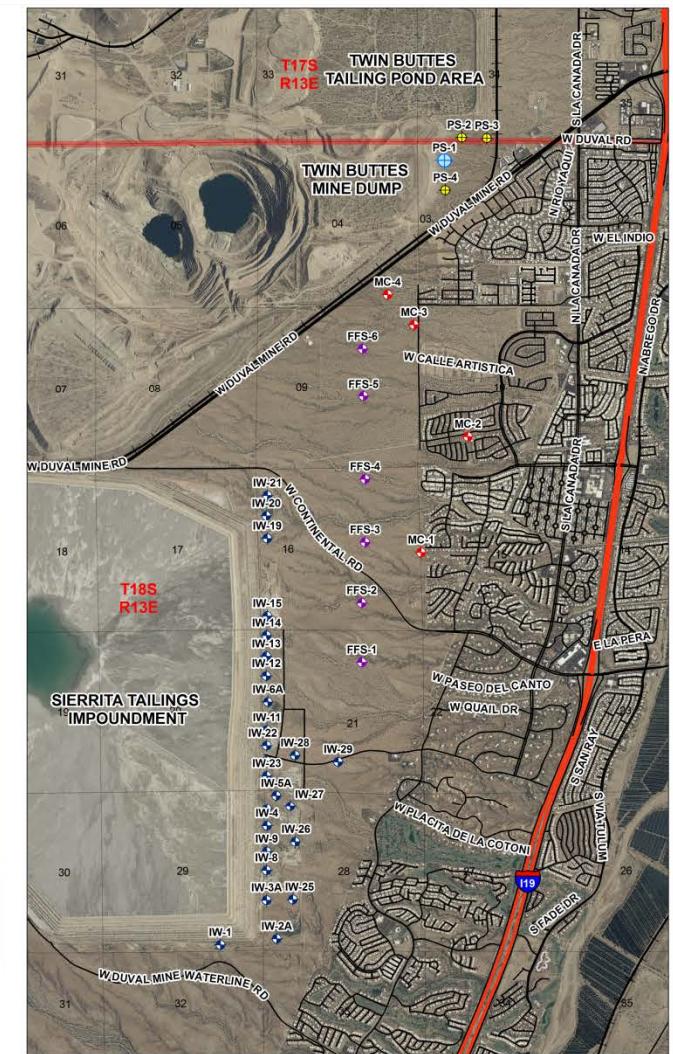
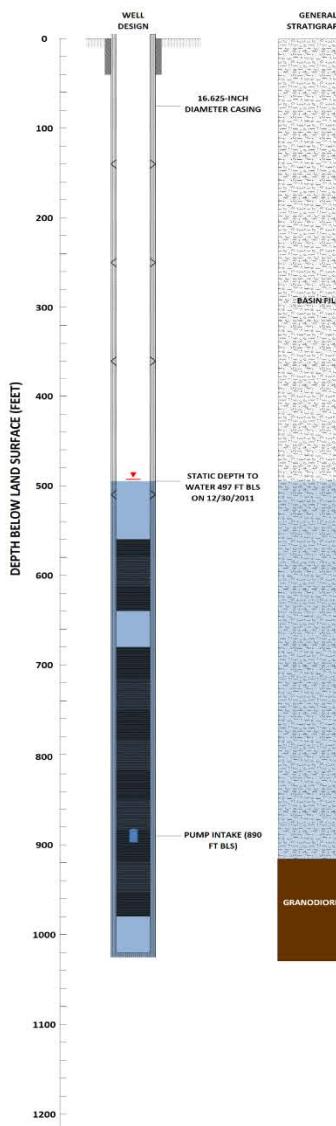
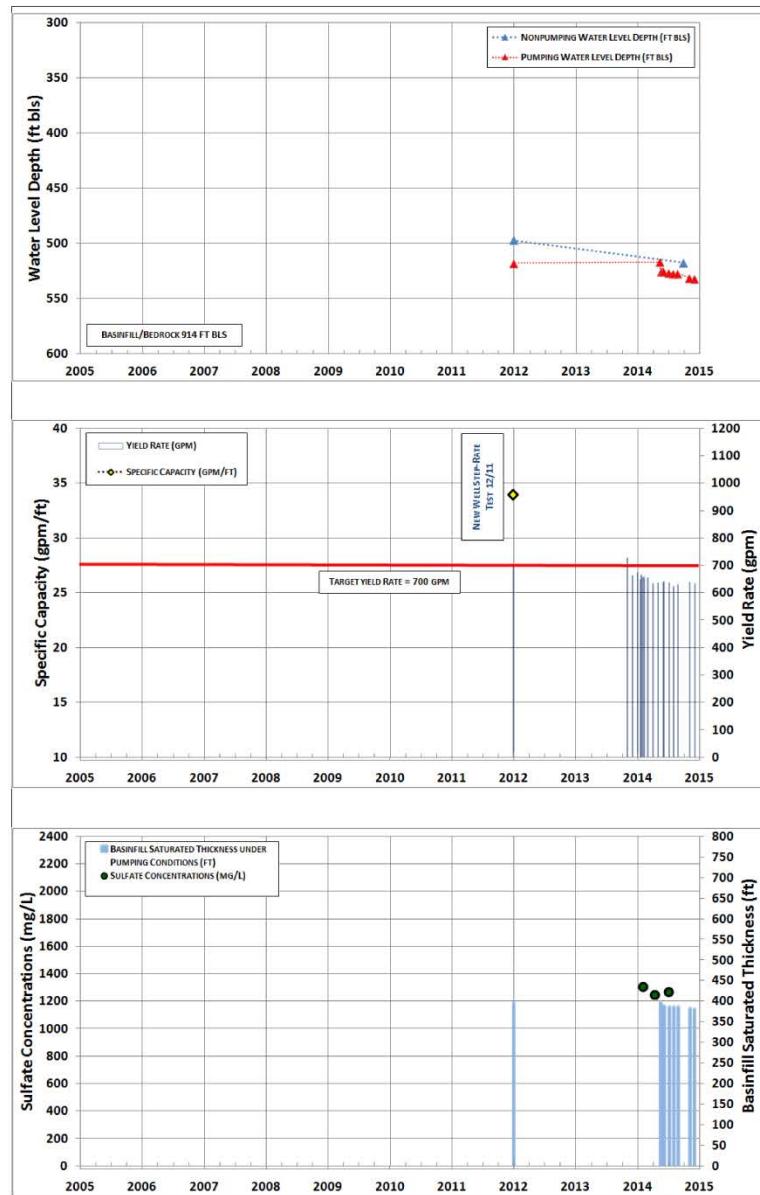
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**FREEPORT-MCMORAN**  
**COPPER & GOLD**

VERSION DATE:  
DECEMBER 2, 2014

IW-29: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 21CDA  
ADWR REG. NO.: 55-222865  
DRILL YEAR: 2014



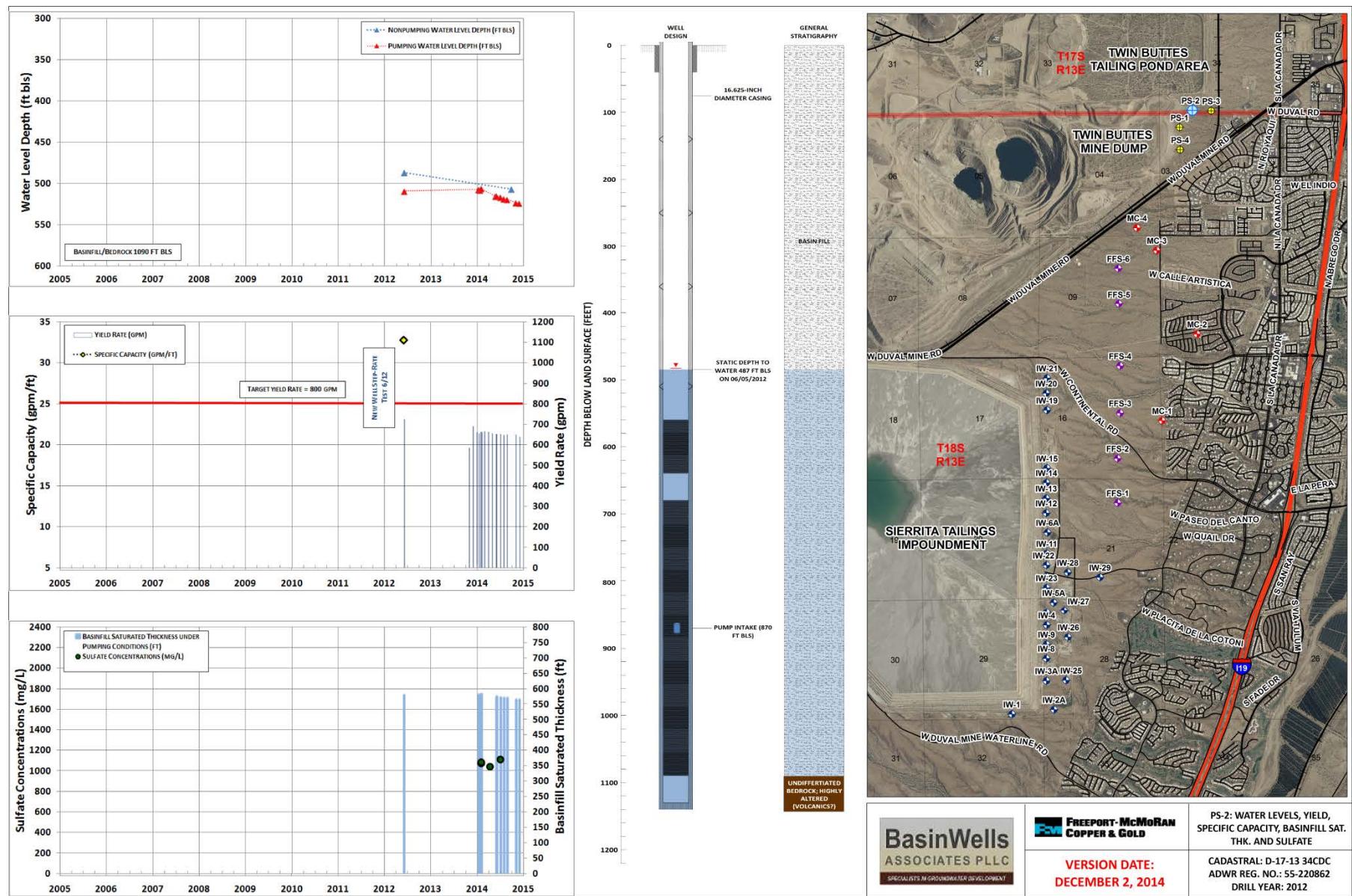
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**COPPER & GOLD**

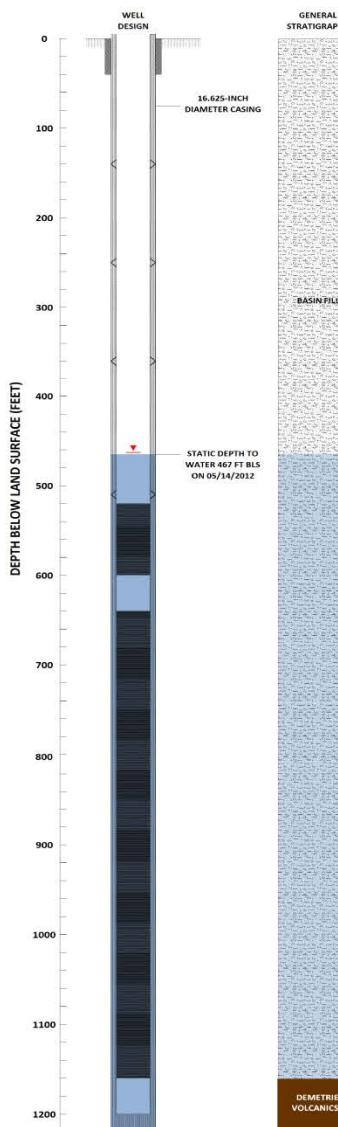
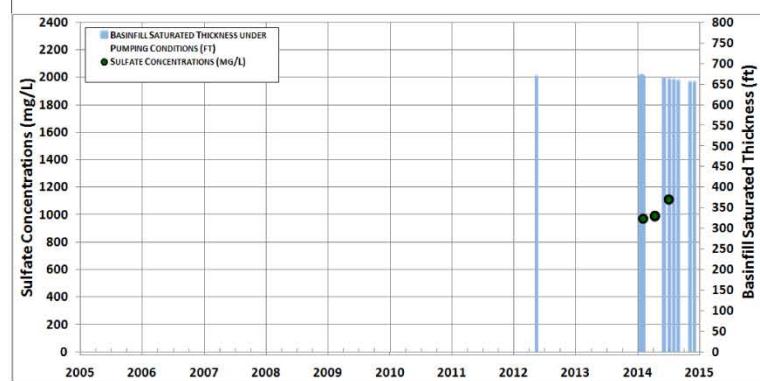
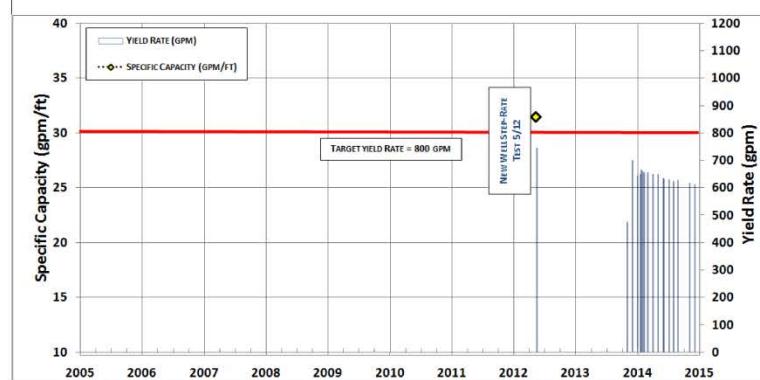
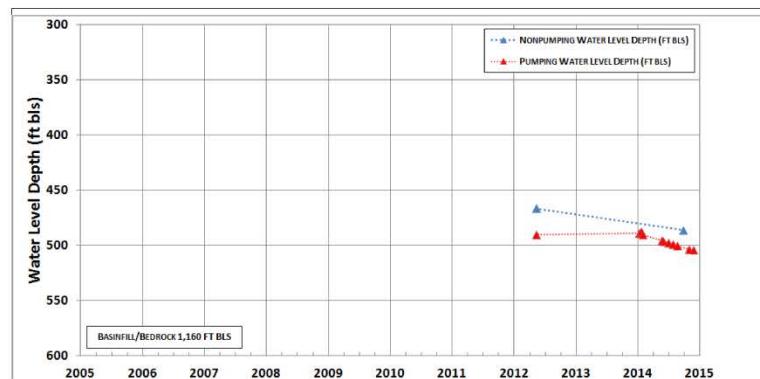
**VERSION DATE:**  
**DECEMBER 2, 2014**

**PS-1: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

**CADASTRAL: D-18-13 03BBA  
ADWR REG. NO.: 55-220861  
DRILL YEAR: 2011**



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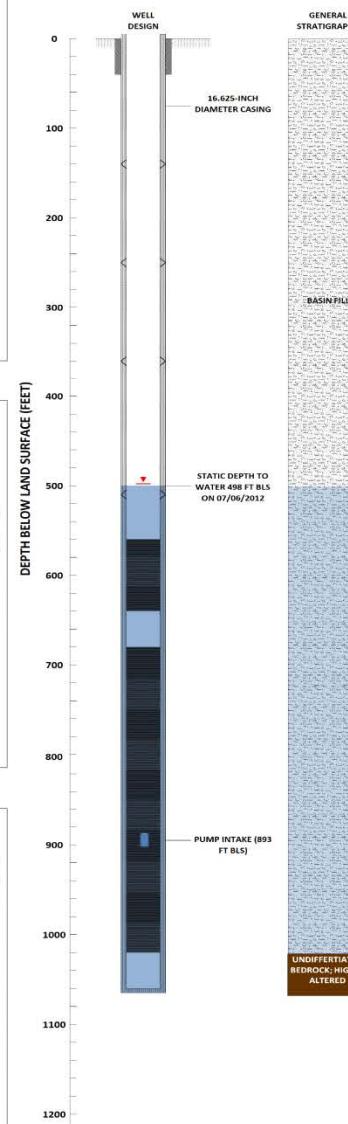
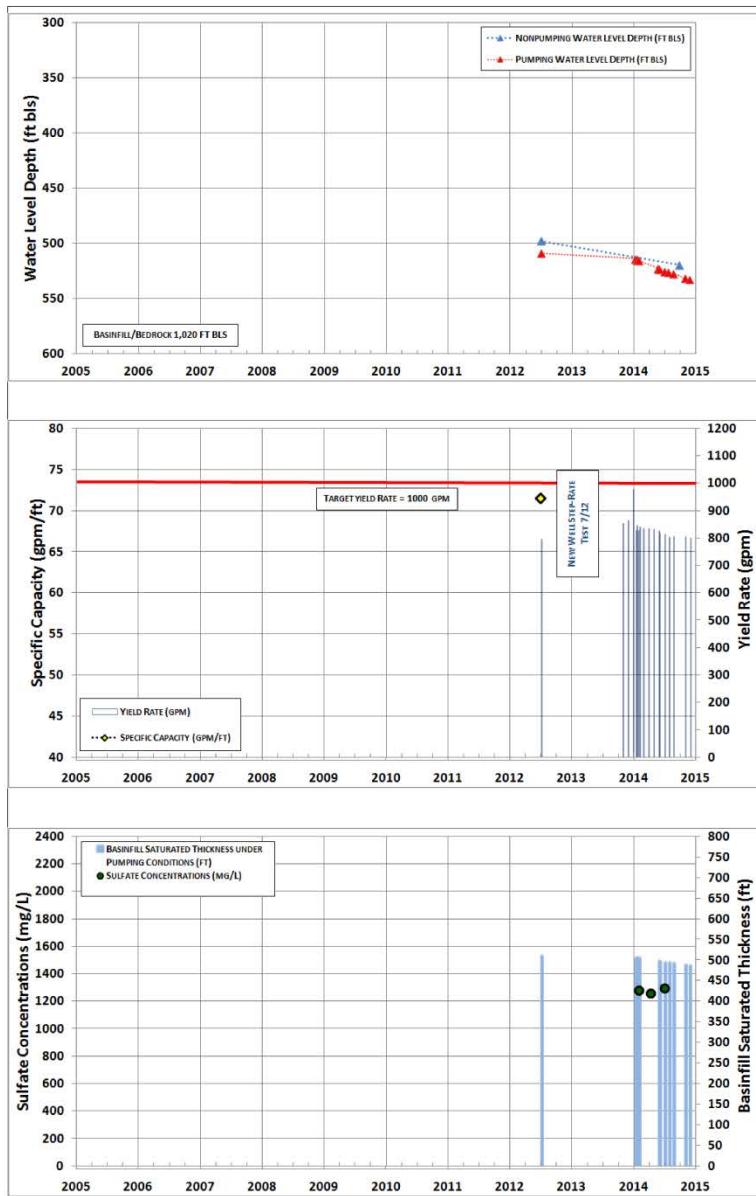
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**COPPER & GOLD**

VERSION DATE:  
DECEMBER 2, 2014

PS-3: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-17-13 34CDD  
ADWR REG. NO.: 55-220863  
DRILL YEAR: 2012



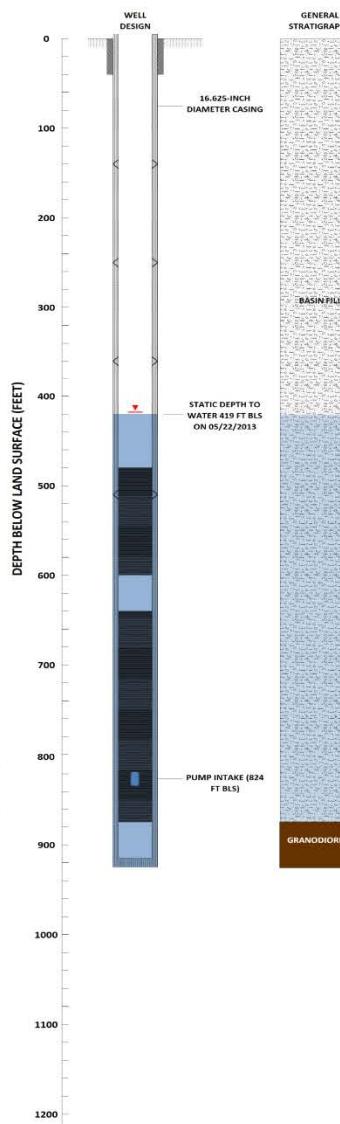
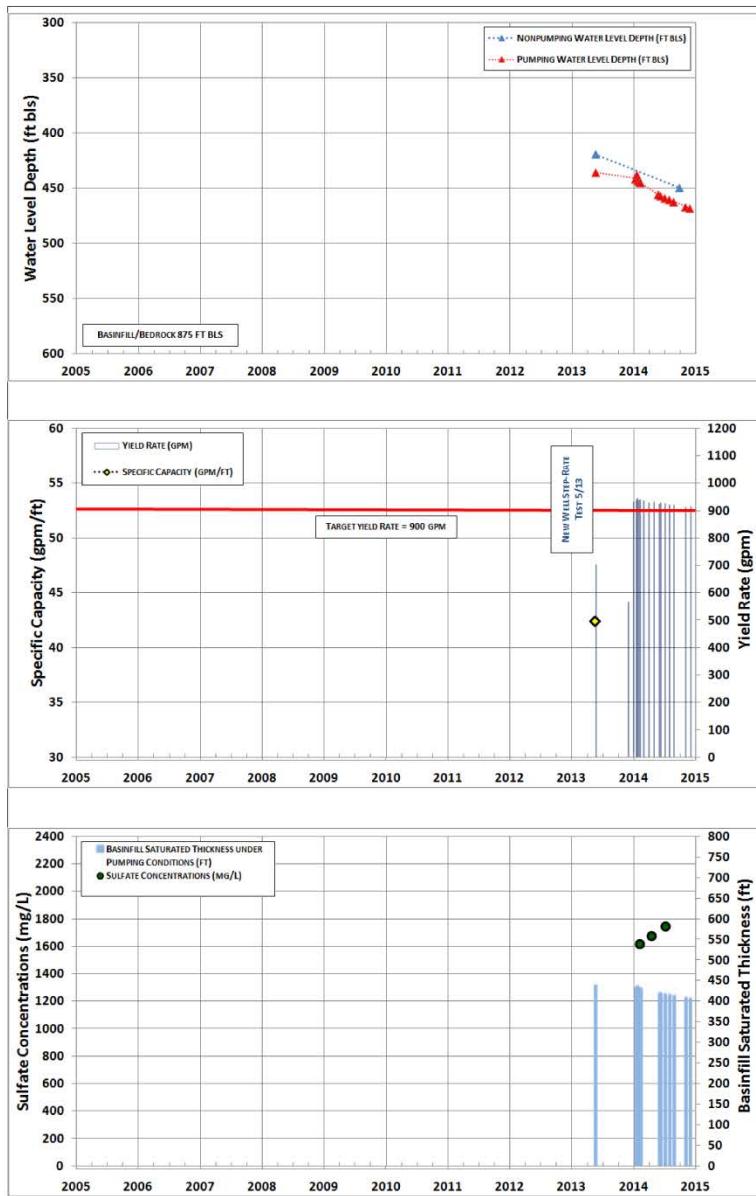
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DECEMBER 2, 2014

**PS-4: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASIN FILL SAT.  
THK. AND SULFATE**

CADASTRAL: D-18-13 03BCA  
ADWR REG. NO.: 55-220864  
DRILL YEAR: 2012



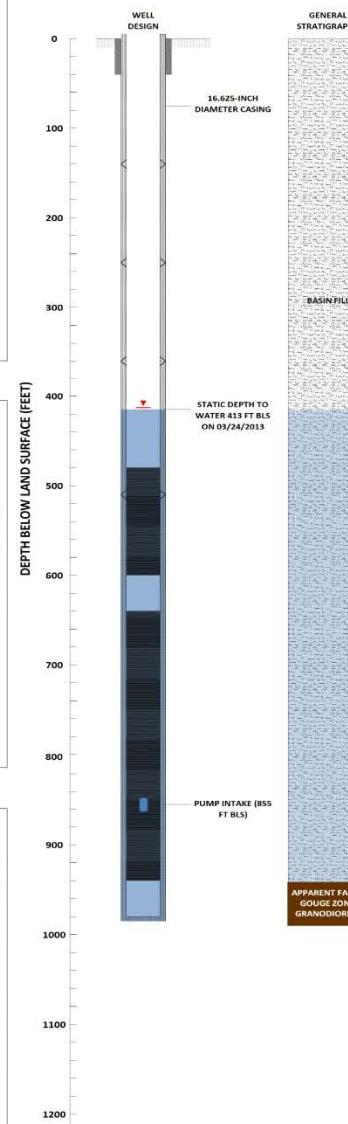
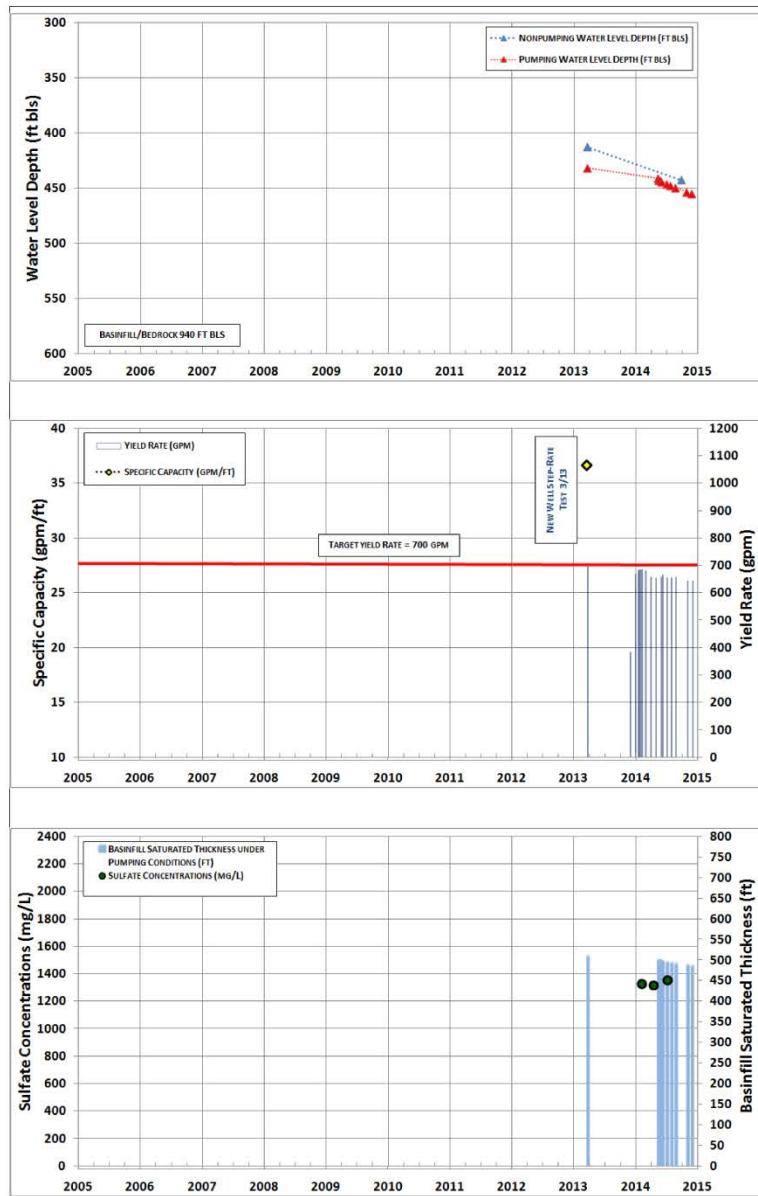
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**VERSION DATE:  
DECEMBER 2, 2014**

**MC-1: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASIN FILL SAT.  
THK. AND SULFATE**

CADASTRAL: D-18-13 16DAA  
ADWR REG. NO.: 55-221660  
DRILL YEAR: 2013



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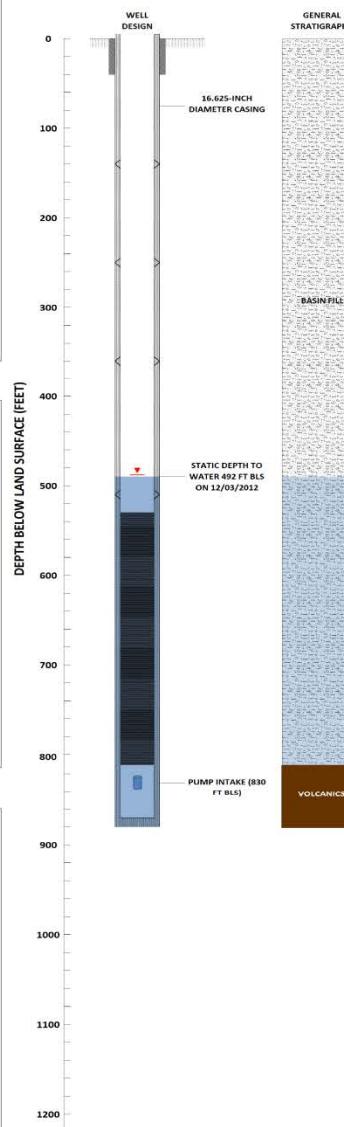
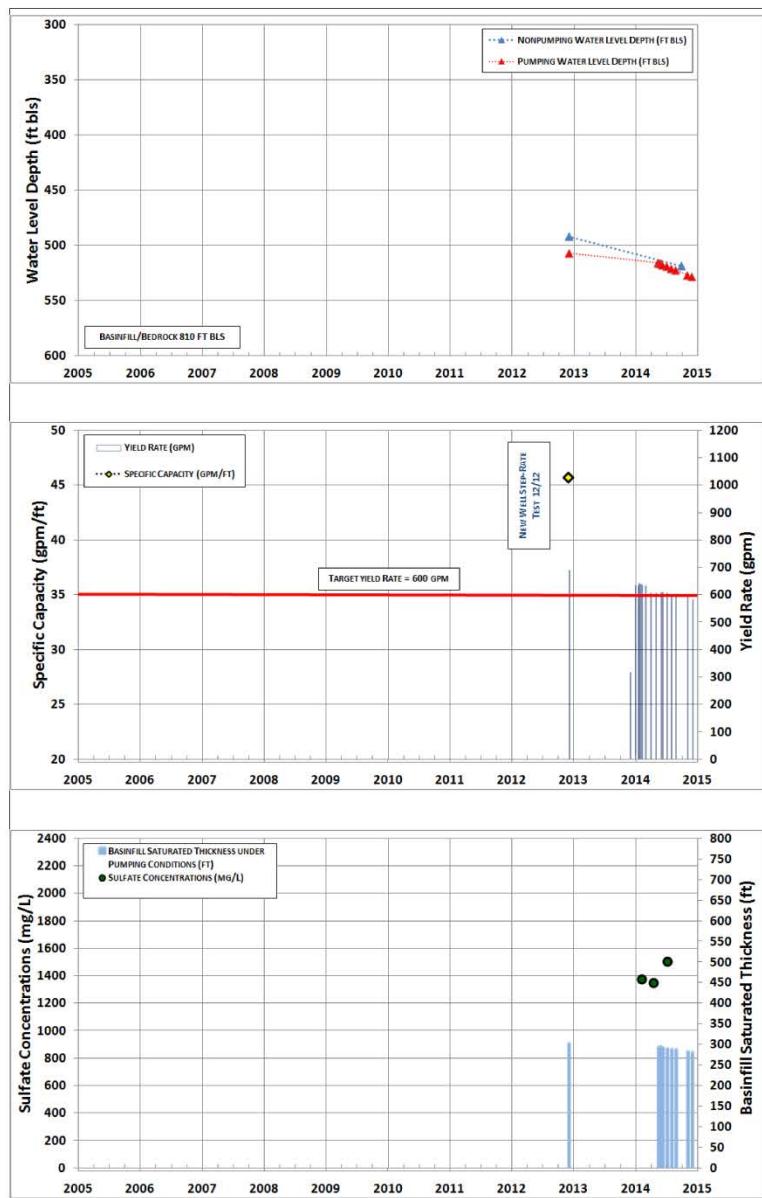
**FREEPORT-MCMORAN  
COPPER & GOLD**

VERSION DATE:  
DECEMBER 2, 2014

MC-2: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 10CCB  
ADWR REG. NO.: 55-221761  
DRILL YEAR: 2013

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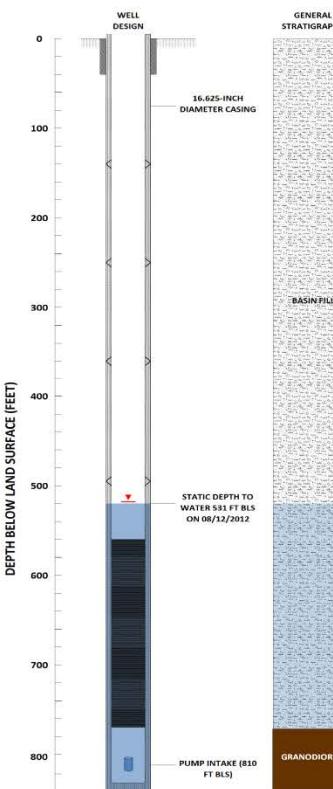
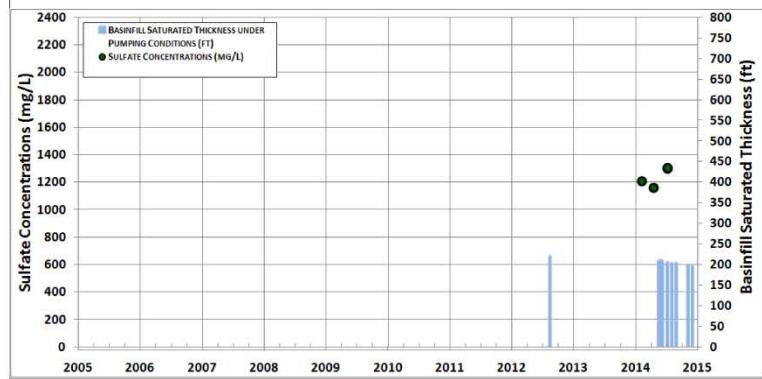
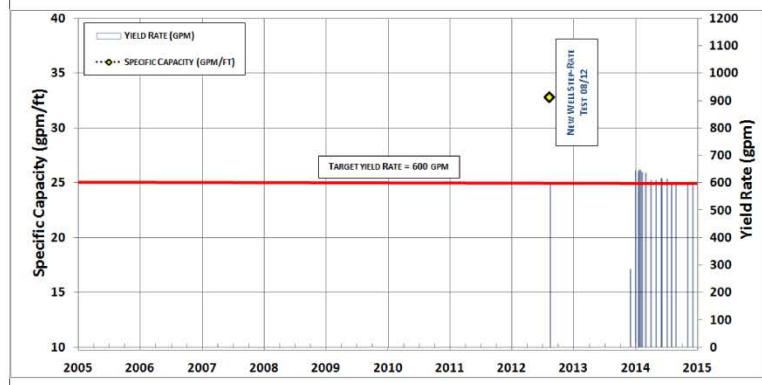
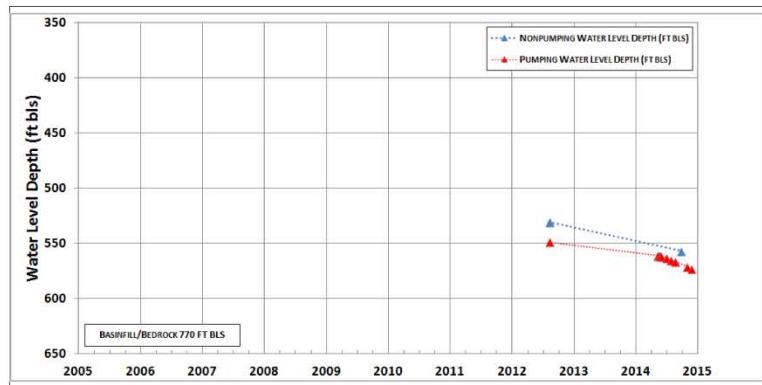
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**COPPER & GOLD**

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MC-3: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 09AAA  
ADWR REG. NO.: 55-221661  
DRILL YEAR: 2012



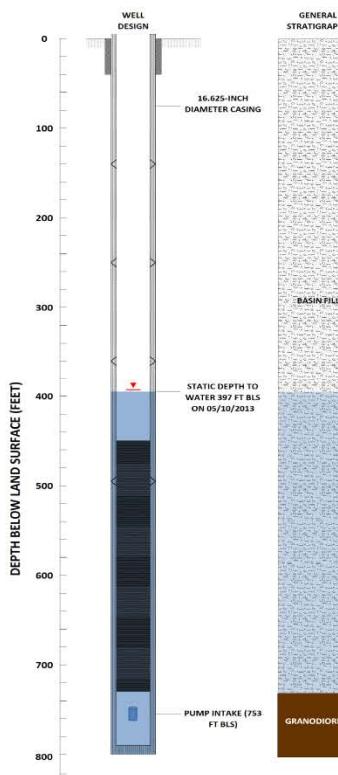
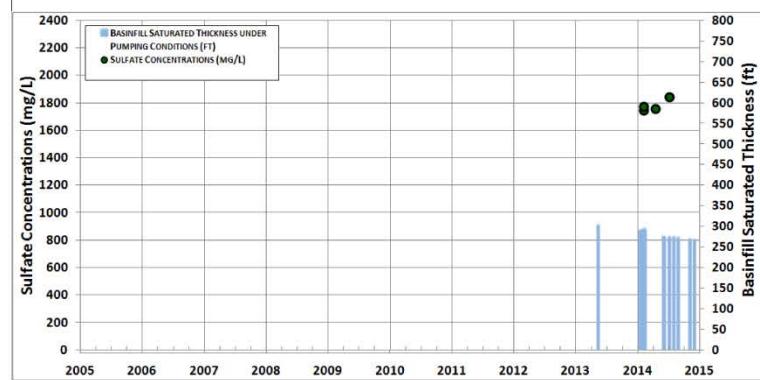
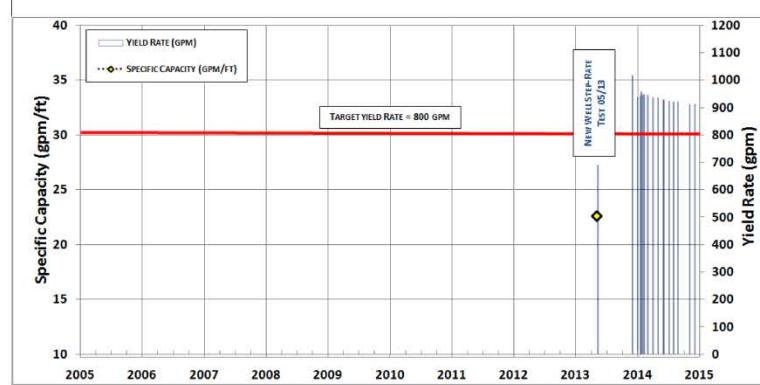
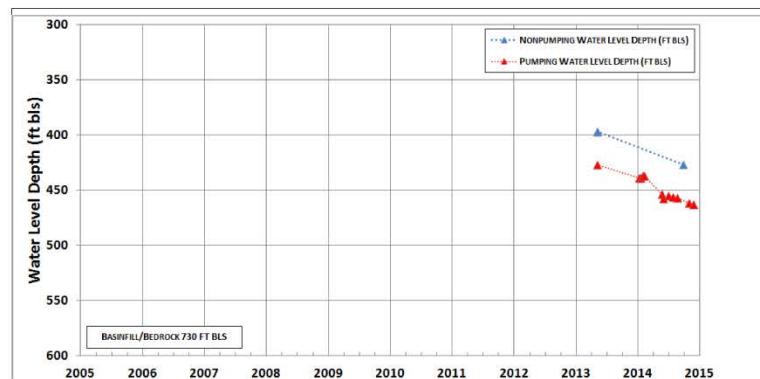
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VERSION DATE:  
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MC-4: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 04DDC  
ADWR REG. NO.: 55-220842  
DRILL YEAR: 2012

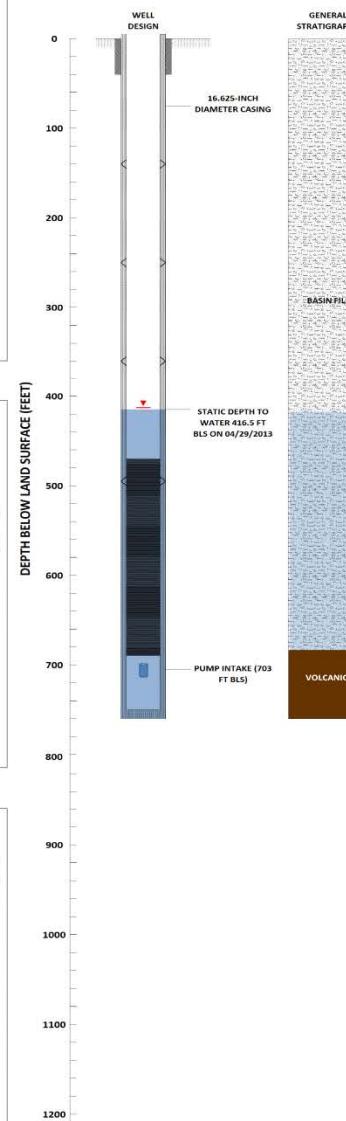
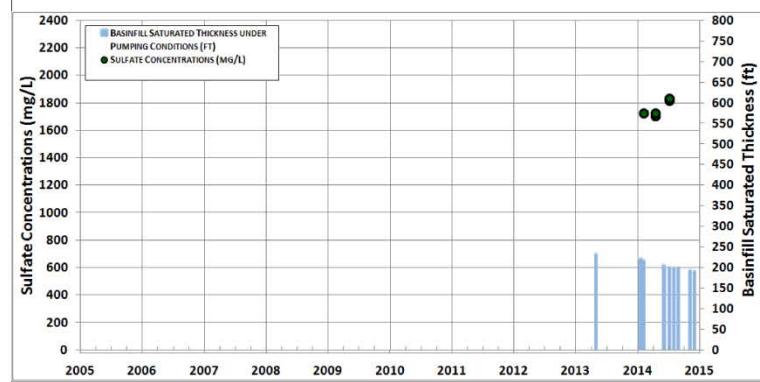
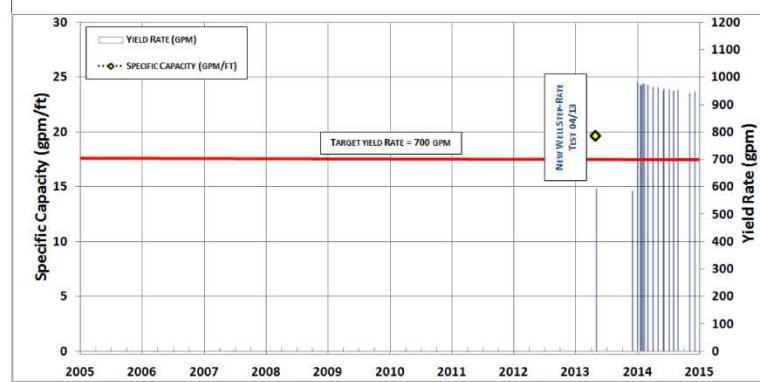
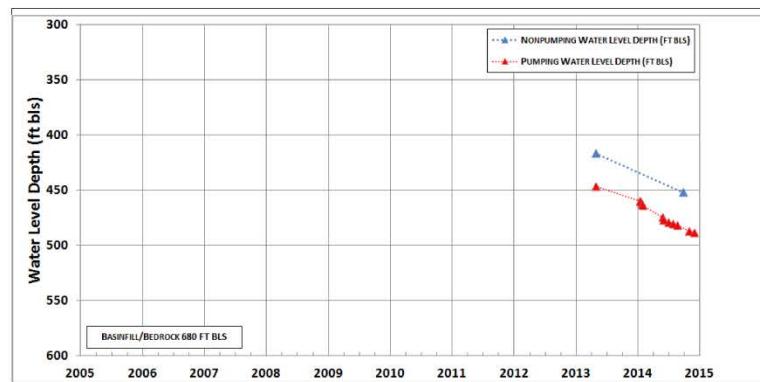


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DECEMBER 2, 2014

FFS-1: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE  
  
CADASTRAL: D-18-13 21ABC  
ADWR REG. NO.: 55-221662  
DRILL YEAR: 2013

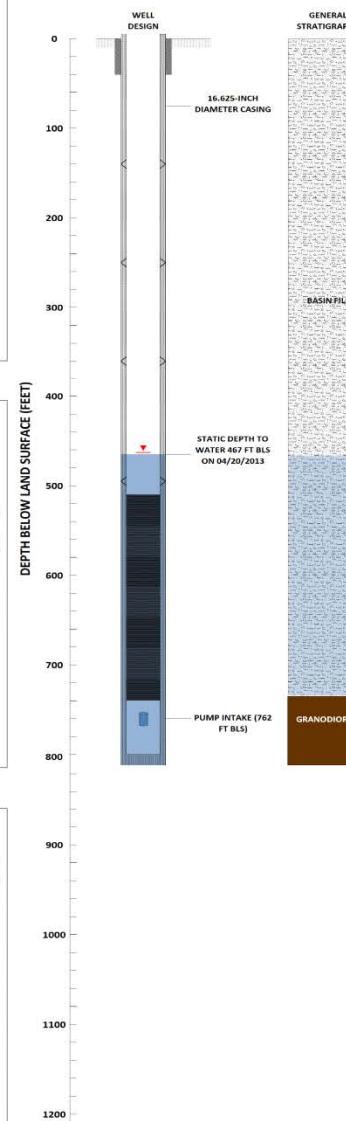
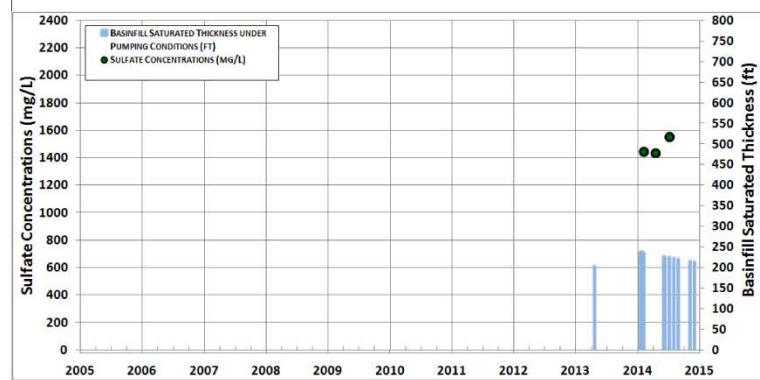
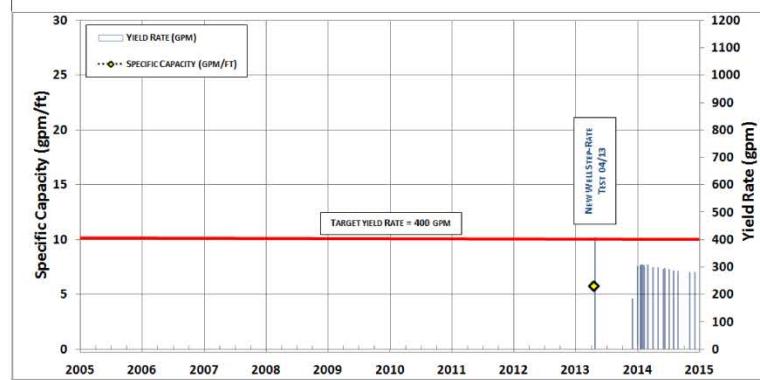
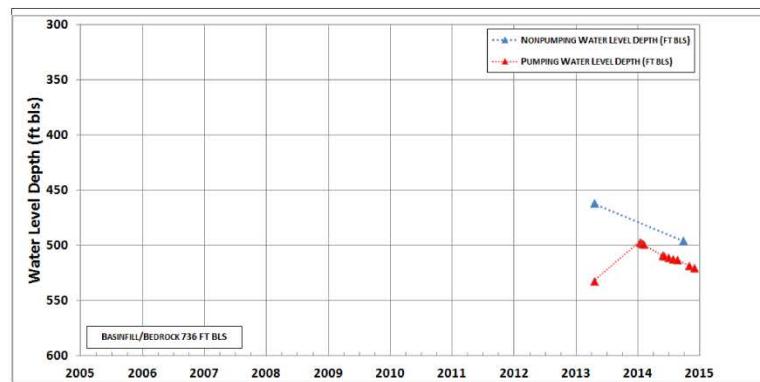


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FFS-2: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE  
VERSION DATE:  
DECEMBER 2, 2014

FFS-2: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE  
VERSION DATE:  
DECEMBER 2, 2014  
CADASTRAL: D-18-13 16DCA  
ADWR REG. NO.: 55-221663  
DRILL YEAR: 2013



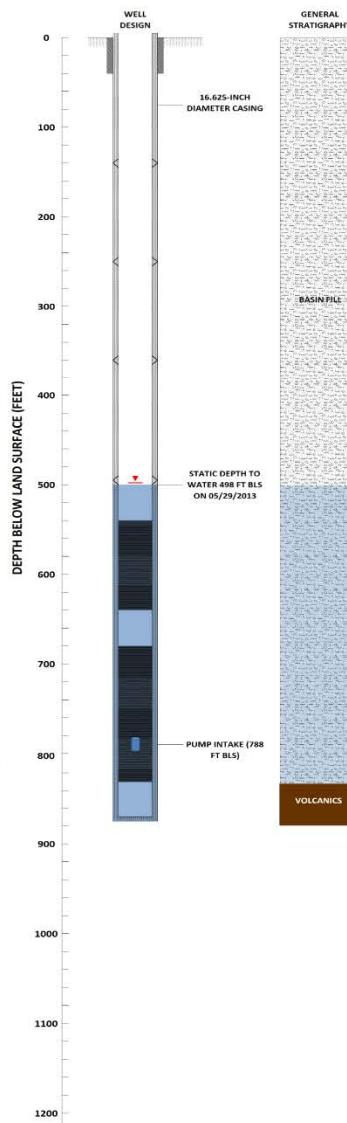
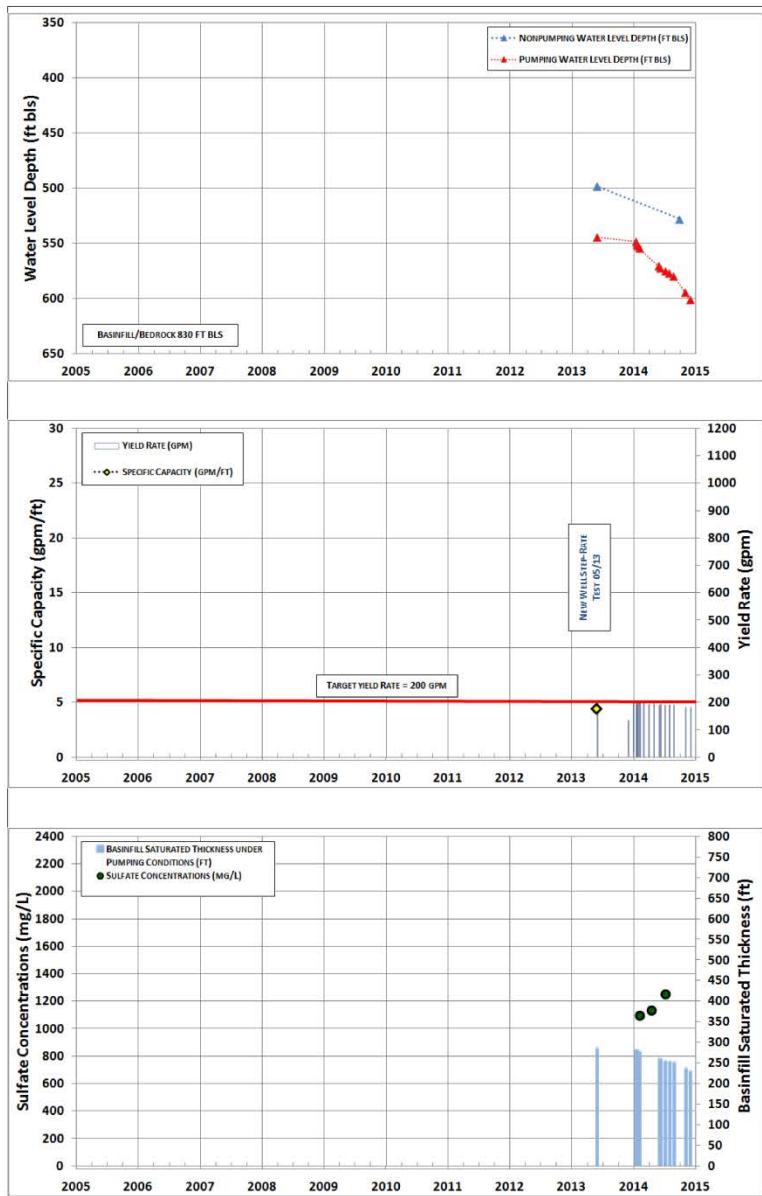
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FFS-3: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 16ACD  
ADWR REG. NO.: 55-221664  
DRILL YEAR: 2013



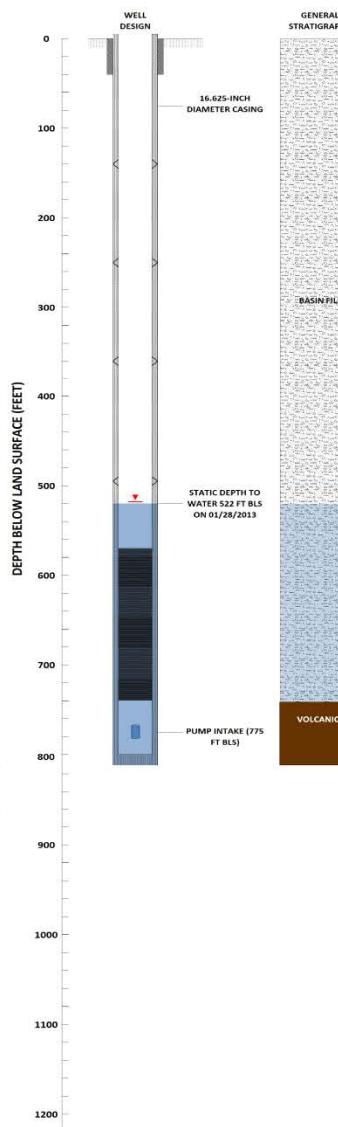
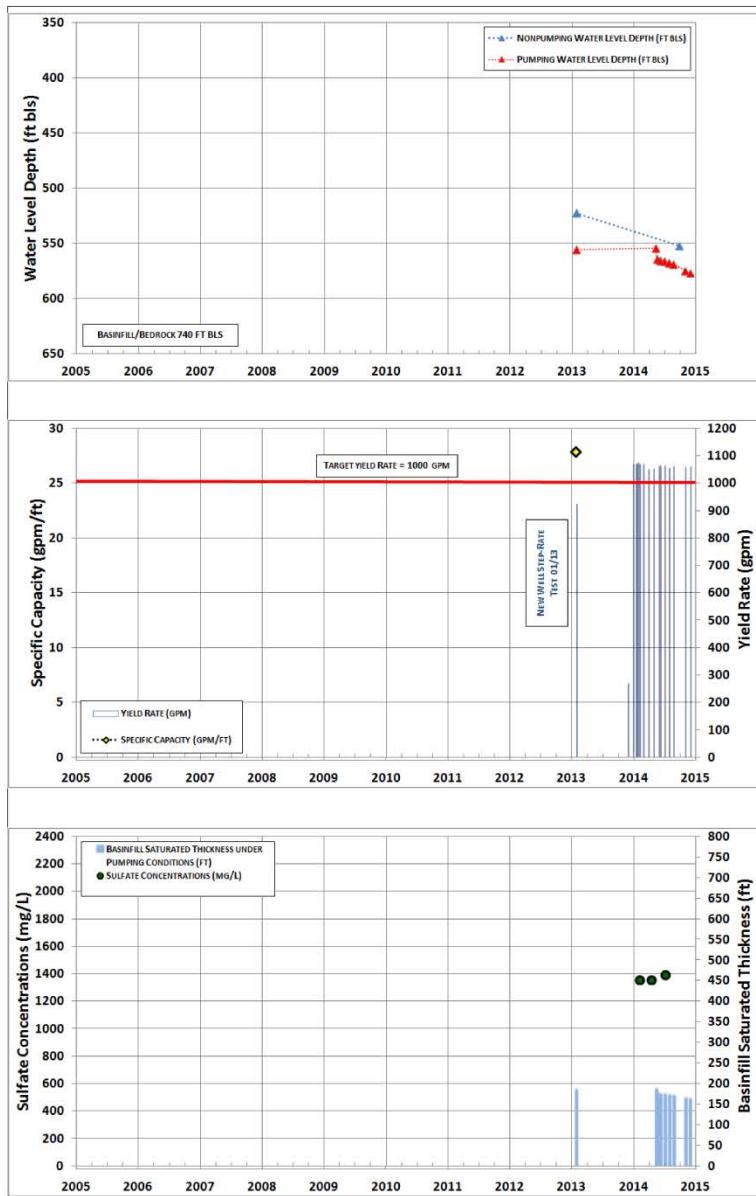
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**FFS-4: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE**

**CADASTRAL: D-18-13 16ABA  
ADWR REG. NO.: 55-221665  
DRILL YEAR: 2012**



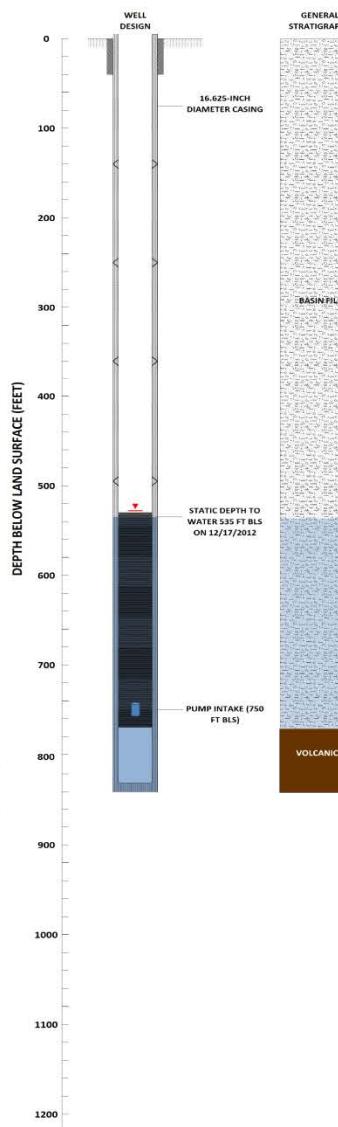
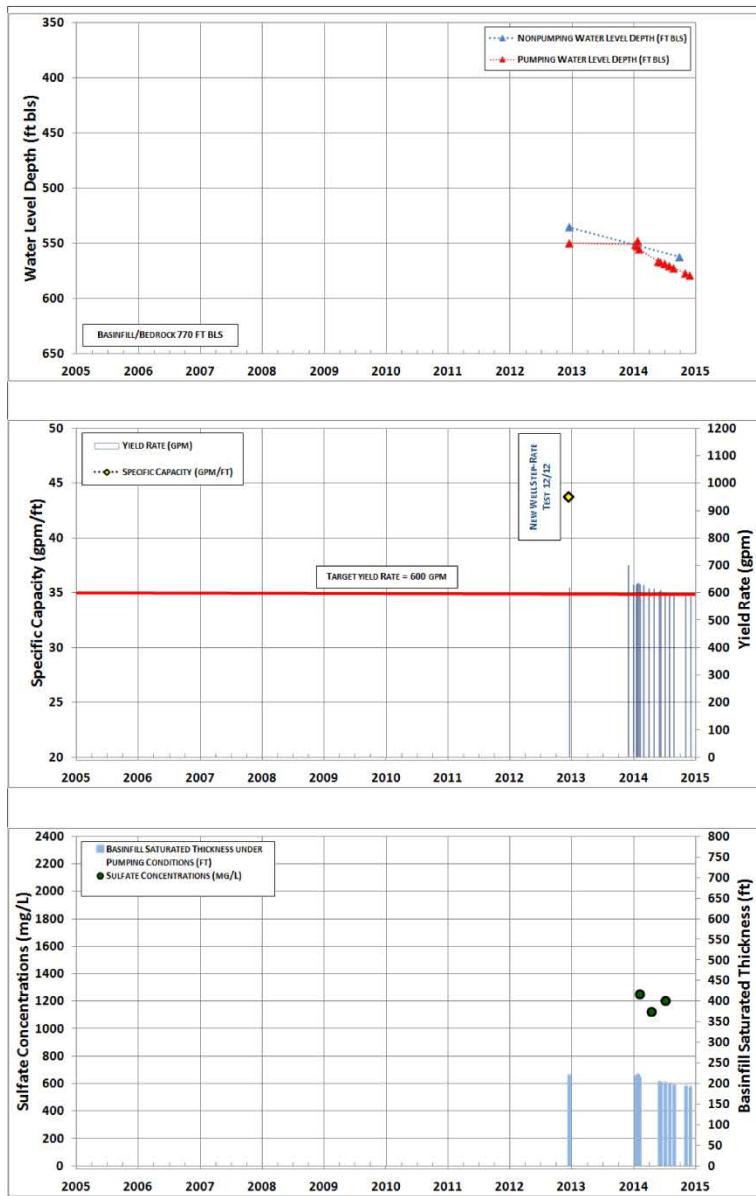
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**COPPER & GOLD**

VERSION DATE:  
DECEMBER 2, 2014

F5: WATER LEVELS, YIELD,  
SPECIFIC CAPACITY, BASINFILL SAT.  
THK. AND SULFATE

CADASTRAL: D-18-13 09DBA  
ADWR REG. NO.: 55-221666  
DRILL YEAR: 2012



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