

From: [Trey Driscoll](#)
To: [Bennett, Jim](#)
Subject: RE: Pine Valley data request
Date: Monday, August 12, 2013 9:58:23 PM
Attachments: [Pine_Valley_MWC_Well_Production.xlsx](#)

Jim,

Attached is the Excel spreadsheet that underwent QA/QC on August 12, 2013. This resulted in a change in the annual average well production from 264 to 265 AF (2000-2012) due to some incorrectly entered data.

Let me know if you have any questions.

Cheers,
Trey

TREY DRISCOLL, PG #8511, CHG #936

SENIOR HYDROGEOLOGIST

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From: Bennett, Jim [mailto:Jim.Bennett@sdcounty.ca.gov]
Sent: Monday, August 12, 2013 1:23 PM
To: Trey Driscoll
Subject: Pine Valley data request

Hi Trey,

Can you provide me the Excel spreadsheet that feeds Figure 7 in your groundwater letter report for Pine Valley? Figure 7 shows the breakdown of groundwater production per well from 2000 through 2013.

Thank you,

Jim Bennett, P.G. #7707, CHG#854
Groundwater Geologist

County of San Diego

Planning & Development Services
5510 Overland Avenue, Suite 110, San Diego, CA 92123
Phone: 858-694-3820 Fax: 858-694-3373

Month	Year	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7
January	2000	2116294	0	87890	350662	227916	65824	256040
February	2000	1933034	1997	150946	267036	344581	44282	374748
March	2000	2077600	0	155958	270103	341597	44880	279378
April	2000	1854801	0	296432	564815	333518	93201	390755
May	2000	1460433	2611	398385	776723	538994	131947	496597
June	2000	97001	0	267036	788018	651897	110779	474905
July	2000	1903787	0	321565	767149	550304	111751	477149
August	2000	2626265	247	233451	469968	544073	83103	588452
September	2000	2148533	0	69190	129105	114863	22141	121999
October	2000	2218807	0	0	403247	341694	20121	0
November	2000	2705568	0	79138	130077	112477	22814	145187
December	2000	3179935	539	0	521356	207286	43758	0
January	2001	3099712	0	0	337348	286634	0	0
February	2001	2811021	0	0	131648	247064	0	0
March	2001	3154877	0	0	363528	441896	0	0
April	2001	3011672	1085	0	226270	216868	0	0
May	2001	3031958	0	425612	1182962	936249	132994	655472
June	2001	2441195	875	249907	632434	320862	87067	363079
July	2001	2298492	1892	327998	1107489	864965	38447	589574
August	2001	1726055	0	267260	1324409	760118	81831	569901
September	2001	587502	1085	245718	645000	519636	92602	463386
October	2001	983246	0	190890	808438	461322	91854	405042
November	2001	1194893	0	69040	129404	113838	23936	132396
December	2001	906464	1017	221857	644477	525537	47124	41140
January	2002	1427281	0	156257	409979	329225	43982	29920
February	2002	1235711	0	71658	415065	336690	90957	264857
March	2002	1423998	0	0	525096	306156	44880	16007
April	2002	888302	3695	286933	533100	436832	115342	476626
May	2002	702686	0	387015	871495	566505	129703	567208
June	2002	325126	1272	353654	1208544	954874	179071	671928
July	2002	54858	0	440572	1374151	828672	203531	584861
August	2002	21019	0	363603	1795948	993591	169422	742240
September	2002	4967	1197	0	677464	248695	0	79288
October	2002	2827	0	224325	760940	192580	113621	286858
November	2002	0	0	170694	381929	178847	61218	280575
December	2002	18117	673	61336	377291	282146	42112	124692
January	2003	0	0	245942	509612	312589	91181	391952
February	2003	15708	0	121550	477074	226494	44581	273768
March	2003	7293	0	0	0	0	0	0
April	2003	3044	666	0	454111	92004	19336	0
May	2003	8437	0	109582	516718	357469	57895	186476
June	2003	0	0	348044	1153042	813749	130863	527639
July	2003	0	0	275937	1208394	993045	112574	707458
August	2003	1122	778	211235	825343	523076	101354	290448
September	2003	2768	0	131648	457851	221857	50490	217743
October	2003	598	0	147954	753610	512829	93575	487846

November	2003	2094	0	100082	398460	164859	33361	189618
December	2003	1122	0	78390	309822	138156	59765	184307
January	2004	0	2094	152592	288429	338769	53183	380283
February	2004	5984	703	278929	1073904	566356	103822	399731
March	2004	21692	546	196724	728702	596829	74426	475354
April	2004	20046	0	274666	1025358	809299	79213	463087
May	2004	2917	928	329644	1066872	729046	156556	472213
June	2004	598	875	410577	1596382	1210608	179894	658390
July	2004	748	935	295385	1198894	883538	139577	477448
August	2004	374	0	355001	1247664	760604	150946	521880
September	2004	0	90	249608	947342	694698	54754	478720
October	2004	0	658	142344	646646	349099	62009	259556
November	2004	0	456	68292	526218	0	44207	0
December	2004	374	232	13838	641485	8004	45478	10023
January	2005	0	0	0	303613	0	0	0
February	2005	1421	651	0	409530	0	15334	0
March	2005	0	0	210562	737603	0	74074	0
April	2005	42711	972	0	981152	0	0	0
May	2005	536316	0	284090	1199119	418656	101489	0
June	2005	763304	0	245793	993194	752914	94218	0
July	2005	656497	0	204204	839780	524333	80066	0
August	2005	416217	598	165458	519187	346661	66654	0
September	2005	666543	0	112574	654051	417870	44132	0
October	2005	582857	15012	53931	286559	268652	42097	169572
November	2005	663102	0	166206	478346	560102	57229	520608
December	2005	614721	0	69938	136884	534222	0	392924
January	2006	717639	0	0	0	734701	0	291346
February	2006	616561	546	0	0	643976	0	358890
March	2006	1150207	0	0	0	285235	0	263221
April	2006	1569326	0	0	0	0	0	
May	2006	1428351	995	0	524872	0	0	0
June	2006	1616047	0	267784	880845	0	90688	0
July	2006	1357149	0	255666	799612	527759	90867	496298
August	2006	1149302	0	285886	632584	650259	112671	625702
September	2006	986747	0	175780	666842	377755	69512	299873
October	2006	470761	0	151021	500412	281098	73700	296507
November	2006	836907	0	0	572519	428417	0	0
December	2006	1006950	0	111901	571846	440280	38769	205775
January	2007	900555	0	0	525470	440998	0	0
February	2007	769168	0	0	483208	441829	0	0
March	2007	0	0	285437	857881	0	97345	23188
April	2007	653759	0	0	665795	0	0	0
May	2007	988407	0	261800	781286	748194	90074	366894
June	2007	985827	0	373476	957290	848090	132441	525021
July	2007	639323	0	360985	1172266	977756	114945	569826
August	2007	368263	0	282669	1128882	786612	0	568256
September	2007	144357	0	118782	664224	540580	36211	260902

October	2007	136690	0	89685	941134	430078	39891	359863
November	2007	42786	0	248785	779192	434087	101967	297928
December	2007	61807	0	147805	453737	367769	61276	194181
January	2008	0	0	0	0	384809	0	372504
February	2008	168839	0	214601	427482	60663	80432	29247
March	2008	134842	0	242801	512455	0	95003	0
April	2008	156055	718	242128	608348	0	94929	0
May	2008	221408	0	104870	631088	0	42763	168674
June	2008	223996	0	274591	1142121	202200	104226	447229
July	2008	310779	0	192460	1379686	1163100	76356	463760
August	2008	154574	0	300397	1141224	936900	128776	555166
September	2008	86843	531	189992	823997	593643	83327	415439
October	2008	64822	0	120578	624056	562526	54567	151021
November	2008	45179	411	0	188122	317698	0	170619
December	2008	0	0	66871	617549	403232	103456	0
January	2009	0	0	0	0	373611	0	303987
February	2009	6321	673	0	401751	0	73012	0
March	2009	0	0	0	602290	0	85115	0
April	2009	255487	0	972	615454	0	21737	0
May	2009	314639	636	201960	1177053	0	72780	0
June	2009	232658	0	0	897301	638530	15	590770
July	2009	207592	0	308475	1227019	889548	126345	540280
August	2009	117840	3620	217444	1058270	978342	89969	429202
September	2009	27646	0	250281	880321	658621	107697	269205
October	2009	0	0	53183	497495	500621	21819	173237
November	2009	6500	4069	61785	380134	370933	24265	255966
December	2009	16471	0	0	467575	370769	0	0
January	2010	0	0	0	439151	278970	0	0
February	2010	28080	5064	0	0	0	77874	0
March	2010	0	0	303613	1017130	0	111003	0
April	2010	0	0	0	580224	0	0	0
May	2010	204451	5191	261880	1179446	0	90822	0
June	2010	562750	0	237116	726383	0	168831	0
July	2010	463940	0	0	868727	505961	0	268756
August	2010	633840	135	0	36951	738870	44745	769729
September	2010	500442	2633	260528	954298	468490	100815	361434
October	2010	355322	0	117286	685168	303972	41529	221333
November	2010	526973	0	204503	753909	407002	68330	330092
December	2010	650349	9058	0	595857	309996	67238	228439
January	2011	714549	0	0	0	0	0	0
February	2011	1447649	0	207794	763409	0	68794	0
March	2011	2690324	194	0	485676	0	0	0
April	2011	3162260	0	0	771338	0	0	0
May	2011	3385149	0	271449	1052586	0	89371	0
June	2011	3260592	0	0	209216	0	38829	0
July	2011	3278342	0	0	1117736	22700	0	28798
August	2011	3018995	696	211834	1098438	0	66774	0

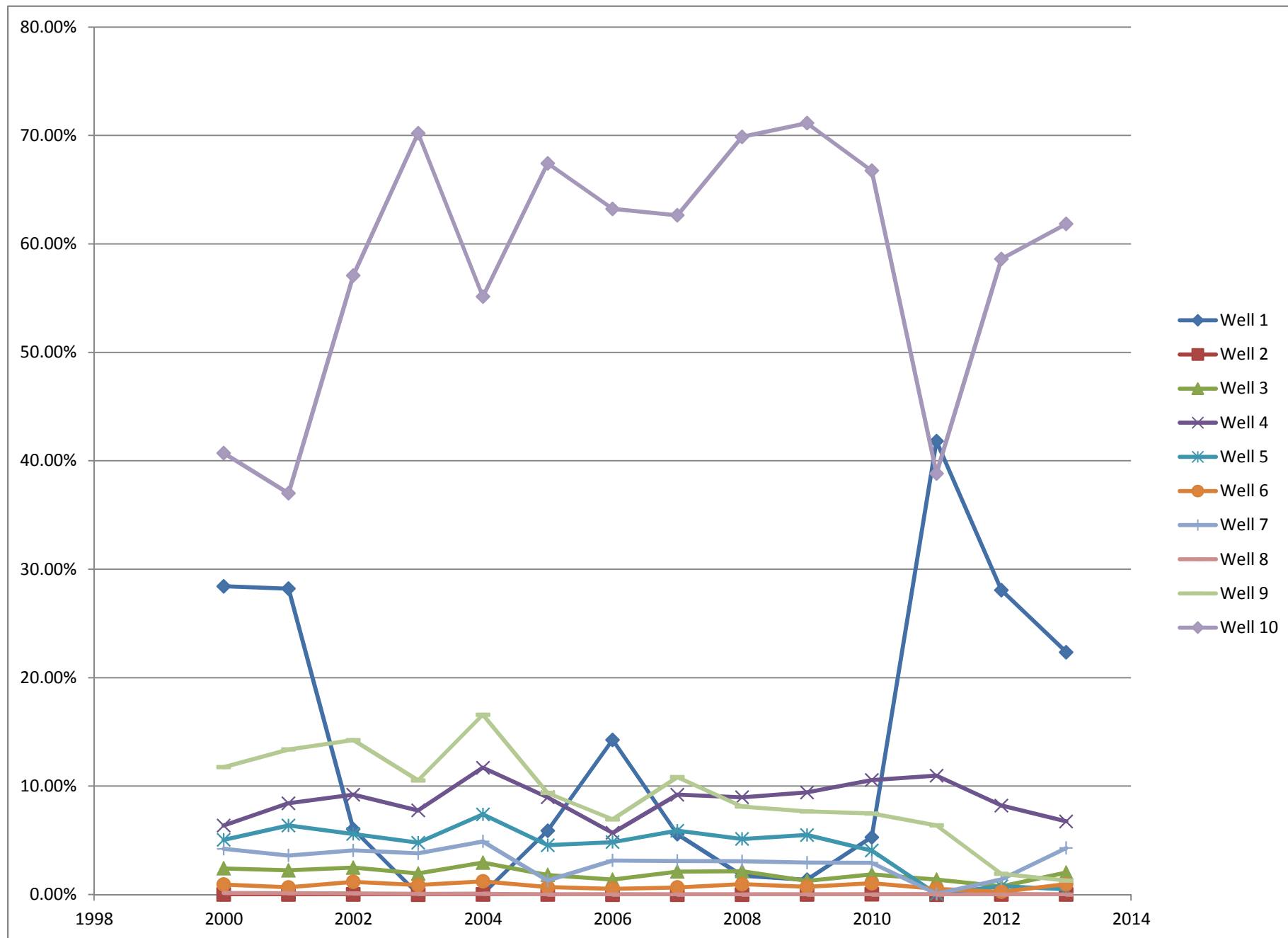
September	2011	0	0	0	0	0	0	0
October	2011	0	0	0	0	0	0	0
November	2011	0	0	0	0	0	0	0
December	2011	0	0	0	0	0	0	0
January	2012	2569552	5131	0	0	0	0	0
February	2012	2388985	0	0	0	0	0	0
March	2012	3204567	0	0	0	0	0	0
April	2012	2369223	0	0	0	0	0	0
May	2012	176461	0	0	1037027	0	0	0
June	2012	1729391	0	0	1052660	0	0	0
July	2012	2960412	4264	0	608797	0	0	0
August	2012	2754316	0	0	873440	0	0	0
September	2012	2422054	0	235844	1137858	57400	75383	380882
October	2012	0	3516	311467	1251703	223000	111676	336151
November	2012	2109420	0	62234	677613	340900	24011	416187
December	2012	0	0	0	0	0	0	0
January	2013	2695792	1840	0	472287	0	0	270178
February	2013	0	0	0	0	8000	8078	5685
March	2013	0	0	273469	1135539	0	90209	389334
April	2013	3005142	0	0	0	0	0	0
May	2013	0	0	243399	113473	115900	146144	429801
June	2013	0	0	0	0	0	0	0

Well 8	Well 9	Well 10
36652	688758	571000
24908	374374	414500
0	547611	735500
0	683223	2463000
54604	1598326	4141500
0	912336	7007000
0	1253199	6705500
6059	1452915	3888600
0	700427	5115100
0	772908	2769800
0	487322	599500
11145	583814	423000
0	319097	675000
0	306231	0
0	336974	0
17578	523600	631000
0	2122226	898000
13838	1325680	5424500
39644	1317303	4993500
0	2021096	5532000
19822	1182139	5498000
0	898722	4984000
0	775826	3504900
18700	846586	978600
0	690703	1678000
0	340415	2204800
0	884510	1420700
51238	609321	3759700
0	1356797	4955300
16755	2017730	7146000
6059	2480592	8079600
0	2231060	8479900
20944	1534148	7273000
0	1078092	5646600
0	539682	4249700
11594	665720	2944700
0	673350	2333000
0	532127	2463800
0	0	4126200
43160	268756	4245600
0	745906	5811700
0	1867606	6646600
0	2030970	7473700
6582	898423	7727100
0	1291422	7335000
0	807915	6832500

7106	0	4784000
0	474905	4181100
35231	376618	3220200
3291	1499067	392800
10921	774330	3128700
0	1138381	3263700
1646	1526219	6463200
10771	2200840	5895000
0	1876059	6089900
0	2083704	6348100
598	2030521	6013500
1945	1225972	4848700
0	271823	3026600
4264	577680	3122000
0	319620	3188000
0	0	3054000
0	0	2797800
0	795573	3609800
0	1281100	4632100
0	1211984	5977800
0	1346475	7263600
0	547536	7143200
0	694817	7202800
0	585160	5066900
0	1082954	2736000
0	6134	3986500
0	0	3682200
0	0	3577100
0	0	2548500
0	0	2937400
0	1123421	5107600
0	1320818	6680100
0	1096194	6973000
0	958038	6792200
0	639241	7156700
0	300397	5360600
0	548733	4467100
0	286334	1928300
0	151994	3155800
0	435710	1470900
0	1004564	2946000
0	771936	4213300
0	991624	5900000
0	1267336	6609900
0	1624282	7971900
0	1767374	8140000
0	1006060	7831600

0	910017	7064400	
0	695864	5954100	
0	447753	2780500	
0	526966	2018700	
0	380882	2331000	
0	401452	3828200	
0	589798	6056700	
0	753386	6521300	
0	944649	6881500	
0	957515	7272500	
0	1151172	7184900	
0	780314	7025100	
0	400479	6099200	
0	261052	5052200	
0	180193	2816000	
0	0	3455600	
0	0	2629000	
0	0	4400300	
0	977112	4918700	
0	1157754	6631900	
0	566311	6067600	
0	1096643	6963600	
0	1025807	7230100	
0	961330	6381000	
0	565338	5529500	
0	301818	4800800	
0	23188	2939200	
0	0	2640700	49578500
0	553595	2158000	
0	680755	1719200	
0	427706	3262600	
0	546489	4739800	
0	768645	6474300	
0	1142420	7864100	
0	1035157	7339600	
0	0	6444500	
0	105767	3843900	
0	0	1774300	
0	294712	1317500	
0	762436	1835000	19470300
0	669385	0	
0	232927	0	
0	0	269200	
0	0	1710600	
0	750020	4437300	
0	785400	4548700	
0	0	6669500	

0	0	0	
0	0	0	
0	0	0	
0	0	0	
0	0	1181900	47389850
0	0	783200	
0	0	510700	
0	0	1795950	
0	0	7054300	
0	0	7333000	
0	225896	7126100	
0	371606	6754600	
0	524124	4721900	
0	47573	4501600	
0	139726	1240500	
0	238014	4386100	
0	0	0	
0	184307	2974800	
0	146084	2480100	
0	0	3785900	
0	0	6534000	
0	0	0	



Pine Valley Mutual Water Company Water Production by Well in Acre-feet

Year	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7
2000	74.6	0.0	6.3	16.7	13.2	2.4	11.1
2001	77.5	0.0	6.1	23.1	17.5	1.8	9.9
2002	18.7	0.0	7.7	28.6	17.4	3.7	12.7
2003	0.1	0.0	5.4	21.7	13.4	2.4	10.6
2004	0.2	0.0	8.5	33.7	21.3	3.5	14.1
2005	15.2	0.1	4.6	23.1	11.7	1.8	3.3
2006	39.6	0.0	3.8	15.8	13.4	1.5	8.7
2007	17.5	0.0	6.7	28.9	18.5	2.1	9.7
2008	4.8	0.0	6.0	24.8	14.2	2.7	8.5
2009	3.6	0.0	3.4	25.2	14.7	1.9	7.9
2010	12.0	0.1	4.3	24.1	9.2	2.4	6.7
2011	64.3	0.0	2.1	16.9	0.1	0.8	0.1
2012	69.6	0.0	1.9	20.4	1.9	0.6	3.5
2013	17.5	0.0	1.6	5.3	0.4	0.8	3.4

Year	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7
2000	28.43%	0.01%	2.41%	6.36%	5.04%	0.93%	4.21%
2001	28.21%	0.01%	2.23%	8.42%	6.36%	0.67%	3.60%
2002	6.03%	0.01%	2.48%	9.21%	5.58%	1.18%	4.07%
2003	0.05%	0.00%	1.94%	7.75%	4.78%	0.87%	3.80%
2004	0.06%	0.01%	2.95%	11.69%	7.39%	1.22%	4.89%
2005	5.88%	0.02%	1.80%	8.97%	4.55%	0.68%	1.29%
2006	14.27%	0.00%	1.38%	5.69%	4.83%	0.53%	3.14%
2007	5.57%	0.00%	2.12%	9.20%	5.88%	0.66%	3.10%
2008	1.74%	0.00%	2.16%	8.97%	5.12%	0.96%	3.07%
2009	1.36%	0.01%	1.26%	9.42%	5.49%	0.72%	2.94%
2010	5.29%	0.03%	1.86%	10.55%	4.06%	1.04%	2.94%
2011	41.80%	0.00%	1.38%	10.97%	0.05%	0.53%	0.06%
2012	28.06%	0.02%	0.75%	8.21%	0.77%	0.26%	1.40%
2013	22.35%	0.01%	2.03%	6.75%	0.49%	0.96%	4.29%

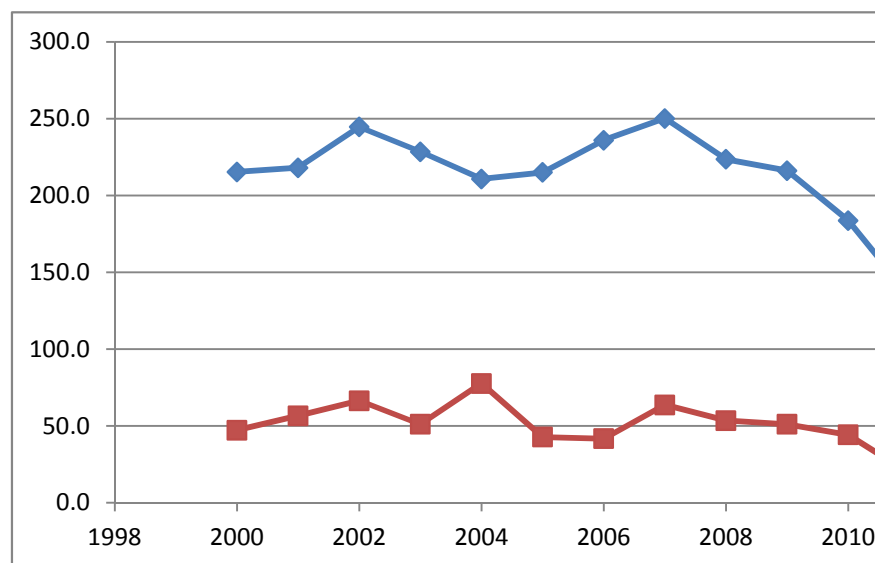
Well 8	Well 9	Well 10	Total	Wells 1 and 10
0.4	30.9	106.9	262.6	181.54
0.3	36.8	101.6	274.7	179.12
0.3	44.3	177.5	310.9	196.23
0.2	29.4	196.3	279.6	196.42
0.2	47.8	159.0	288.4	159.17
0.0	24.2	173.9	257.9	189.05
0.0	19.3	175.6	277.6	215.18
0.0	34.0	196.5	313.8	213.99
0.0	22.5	193.6	277.1	198.42
0.0	20.5	190.1	267.2	193.75
0.0	17.0	152.2	227.9	164.20
0.0	9.8	59.8	153.9	124.07
0.0	4.7	145.4	248.1	215.05
0.0	1.0	48.4	78.3	
				Total Through May
				2008-2012 average
				179.10
Avg 2000 - 2012			265	

Well 8	Well 9	Well 10	Total	
0.16%	11.75%	40.71%	100.00%	69.14%
0.12%	13.38%	37.00%	100.00%	65.21%
0.11%	14.24%	57.09%	100.00%	63.12%
0.06%	10.53%	70.21%	100.00%	70.26%
0.07%	16.58%	55.14%	100.00%	55.20%
0.00%	9.37%	67.43%	100.00%	73.31%
0.00%	6.93%	63.24%	100.00%	77.50%
0.00%	10.83%	62.64%	100.00%	68.20%
0.00%	8.12%	69.87%	100.00%	71.61%
0.00%	7.67%	71.14%	100.00%	72.50%
0.00%	7.48%	66.76%	100.00%	72.04%
0.00%	6.38%	38.84%	100.00%	80.64%
0.00%	1.91%	58.62%	100.00%	86.67%
0.00%	1.30%	61.84%	100.00%	84.19%
				76.69%

Wells 4, 5 and 9

60.77	215.3	47.3	106.0	85.3	75
77.35	218.1	56.6	111.1	94.6	10.026738
90.27	244.5	66.4	121.0	104.4	433155.08
64.48	228.5	51.1	109.7	89.1	9.9438724
102.86	210.7	77.6	128.3	115.6	
59.03	215.0	42.8	103.1	80.8	
48.46	235.9	41.8	100.3	79.8	49.27 =remaining /
81.33	250.0	63.7	117.2	101.7	62.73 =average Pir
61.53	223.6	53.5	111.3	91.5	
60.34	216.2	51.1	108.4	89.1	
50.35	183.7	44.2	107.0	82.2	
26.76	134.7	19.2	91.1	57.2	
27.03	220.5	27.6	97.7	65.6	
6.68	67.7	10.6	82.2	48.6	
45.20	195.72	39.13			

23.15%
28.16%
29.04%
23.07%
35.67%
22.89%
17.46%
25.92%
22.20%
22.58%
22.09%
17.40%
10.89%
8.53%
23.12%



gpm
cfm
cfy
AFY

AF considering max scenario of 112 AF / yr
ie North annual use including cabins and PVBCC

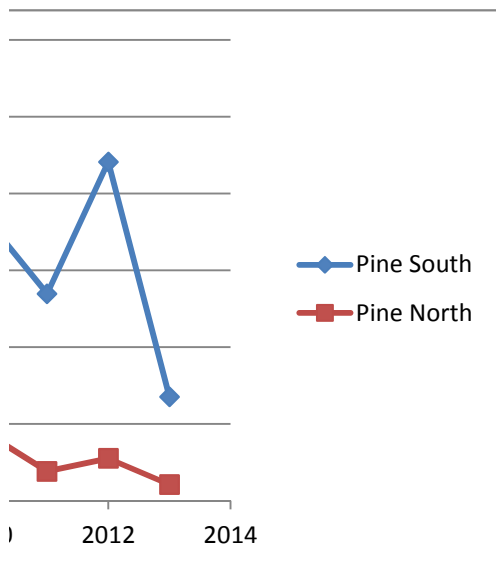


Figure 7. PVMWC Production Volumes

