

## **Petroglyph Operating Company, Inc. Monthly Report – May 2008**

Petroglyph Operating Company, Inc. (Petroglyph) is submitting this monthly report for the activities that have occurred at their Little Creek Field in the Raton Basin from the last date of data collection for the April Monthly Report (April 15, 2008) through May 16, 2008. Along with this monthly report, Petroglyph is submitting an electronic copy of all data including Microsoft Excel spreadsheets from which the attached summaries and graphs were created.

### **1.0 Investigation**

Aquifer Characterization: Drilling has been completed for all of the injection and recovery (pumping) wells in the remediation system. Table 1 presents the details of the drilling for each well and a summary of the presence of gas measured in each well. The table also shows the completion intervals for each well. This table includes previously submitted information for wells completed during the last reporting period as well as information for the wells completed during this reporting period. Figure 1 shows the location of the wells. Logging information for those wells not included in the April monthly report is included in electronic format on the attached disk.

The POCI 55 monitoring well stopped producing gas during the reporting period. Three of the wells in the remediation system continue to produce gas: Recovery 1 Kittleson was producing approximately 60 mcf/day on May 10<sup>th</sup>; Recovery 3 PEI was producing approximately 15.5 mcf/day on May 12<sup>th</sup>; and Injection 5 Rohr was producing approximately 5.6 mcf/day on May 9<sup>th</sup>. Attachment 1 provides the gas flow charts for those wells which exhibit measurable gas. POCI 55 and Recovery 1 Kittleson are showing decreases in gas flow while Recovery 3 PEI is showing a slight increase. Injection 4 Rohr, Injection 6 Masters, and Injection 7 Walden all produced detectable gas upon drilling, but gas was not measurable. Attachment 1 provides the gas flow charts for those wells which exhibit measurable gas.

Water flow has also been variable in the wells drilled. No water was encountered in drilling Recovery 2 Reiss and that well was subsequently plugged and abandoned. No water was encountered in drilling Injection 3 Benevides. Limited water was encountered in Recovery 3 PEI, Recovery 4 Barrett, Injection 1 Pascual, Injection 2 Gonzales, Injection 5 Rohr, Injection 7 Walden, and Injection 8 Haeffner. The remainder experienced moderate to heavy water flows during drilling.

A multi-well testing program has been designed for the wells to improve the characterization of the Poison Canyon Formation, specifically to evaluate the hydraulic conductivity and the connectivity of the sands in the aquifer that have been penetrated by the injection and recovery wells. As a first step, pressure gages have been installed in all wells and the wells were shut in as of May 14<sup>th</sup> and will continue to be shut in for one to two weeks. Pressure changes will be monitored in the MIMMP wells and changes in methane venting will be monitored in the nearby domestic wells. Once the pressure change monitoring has been completed, pump testing will be conducted on the MIMMP

wells. The testing program is expected to take approximately 4 to 6 weeks and a final report will be prepared upon completion. Interim reports may also be prepared.

In addition to completing the drilling for all injection and recovery wells, Petroglyph has also buried approximately 22,000 feet of pipeline for connecting the remediation system. Line have been laid and buried to Injection Wells 1, 4, 5, 6, and 7 although the lines have not been connected to the wells. Recovery water and gas lines have also been laid and buried to Recovery Wells 1 and 3. The lines have been placed by digging trenches in existing rights of way, laying the pipe and then filling the trench and burying the pipe. The pipeline placement is expected to be completed during the next reporting period.

Dissolved Methane Sampling: Petroglyph's consultant, Norwest Applied Hydrology, has completed initial sampling for dissolved methane in water wells within a one mile radius of the remediation system. Sampling results were included in the April monthly report. No additional sampling of these wells occurred during this reporting period.

## **2.0 Monitoring**

### Gas Pressure Monitoring

Barrett, Bergman, Coleman, and Meyer have continuous pressure monitoring for fluid levels that have been installed by Petroglyph. Information from these wells is downloaded monthly by Petroglyph and included in electronic format with this monthly report. Attachment 2 shows graphically the changes in pressure for each of these wells. As can be seen on the graphs, pressure is trending downward in all wells. Water levels are also measured in the Barrett and Meyer wells. As shown in Attachment 2, the water levels in both wells are trending downward as well.

Gas flow monitors have been installed by Petroglyph at the Angely, Bruington, Coleman, and Smith wells. Continuous gas flow monitoring occurs at Coleman and Smith, while gas flow is spot monitored with a gage and orifice tester at Angely and Bruington. Gas pressure at Bounds and Angely wells is currently monitored by COGCC or their consultant, however the data is presented in this report. The data from this monitoring is provided in Attachment 3. While gas flow can be variable, in general gas flow has shown an overall decrease in all wells, except the Bounds well. Gas flows from the Smith and Angely wells have dropped to zero in recent measurements and appear to be sustained at or near zero for the last several months. The Bruington well has decreased from approximately 35 mcf/day in January to approximately 21 mcf/day in recent readings.

### Fluid Levels in Petroglyph Production Wells

Eleven Petroglyph production wells are monitored for fluid level and casing pressure. An additional four Petroglyph production wells are continuously monitored for fluid level pressures. Three monitoring wells are also monitored for water levels. Changes in fluid levels in Petroglyph's production wells are shown graphically in Attachment 4. As shown in the attachment and as would be expected since Petroglyph is no longer pumping these wells to draw down water levels, water levels continue to rise in all wells.

### Bi-Weekly and Monthly Water Well Monitoring

Petroglyph monitors or has monitored approximately 76 wells in the vicinity of the site. No new wells were added during the reporting period although samples from two wells were determined to be the same and were combined. Table 2 shows all of the wells that have ever been sampled, the sampling start date, the date of the last sample, the number of samples since the last reporting period and a description of the sampling results and any changes from the previous reporting period.

Of these 76 wells, 5 are no longer sampled and 16 were not sampled during this reporting period. Sampling may vary during any one reporting period due to a variety of reasons. During this reporting period 52 wells were sampled on an approximately bi-weekly schedule, 1 was sampled once during the month and 2 wells had three samples during the reporting period.

As shown on Table 2, the monitoring results for the 55 wells sampled showed that 44 wells had no or insignificant change from the previous monitoring period measurements. Changes in % LEL, % by volume CH<sub>4</sub>, and % volume O<sub>2</sub> were evaluated to determine if the wells were showing an indication of increasing or decreasing gas. Six of the wells showed measurements that would indicate decreasing gases, three of the wells showed slight increases in % LEL and % by volume CH<sub>4</sub> and 2 wells showed variable results.

### Hand Held Measurements

Petroglyph conducts periodic ground surveys using a hand held methane detector at locations where gas has previously been detected, at locations where a property owner requests such a survey or at locations where previous surveys such as the helicopter survey have detected gas seepage. These surveys are conducted based on need or urgency so can range from several times a week to a one time survey based on concerns from a property owner. During this reporting period hand held measurements occurred at the Smith and Sample properties. Results are included in the electronic database, and summarized in Table 3.

### Helicopter Survey

Petroglyph has recently completed a helicopter survey for methane seepage. Data is being generated from that survey and will be discussed in an upcoming monthly report.

## **3.0 Mitigation**

### Methane Alarms

There are currently a total of 14 homes with alarm systems provided by Petroglyph and that number has not changed from previous reports. Petroglyph's contractor is still in the process of updating the alarm systems for 8 homeowners who requested the updated system with both visual and audible alarms. In addition, one homeowner who had not previously requested a new alarm system was added to the list and had a new alarm system installed. 6 new alarms have been installed with three remaining to be installed. Petroglyph's contractor continues to work to get the alarms installed, but is missing some

needed parts. The parts were on back order and are expected to be shipped in the very near future. Upon receipt the contractor will complete installation.

#### Seep 643 Mitigation Status

As discussed in the April report, the former owner of the trailer on the property on which Seep 643 is located has moved out and the property is now vacant. Petroglyph plans to use this property as an equipment staging area for outcrop monitoring.

#### Water Supply

Petroglyph is currently providing water to eleven homes and that has not changed from the previous month. Table 5 provides a list of the homes currently receiving water and is the same table as included with the April report. Water is delivered as needed and can vary from month to month due to whether or not the residents are occupied and residential water usage.

#### Public Outreach

Craig Saldin of Petroglyph attended a meeting of the River Ridge Ranch Board of Governors on May 10, 2008.

#### Health and Safety/Emergency Planning

Petroglyph submitted the Monitoring and Response Plan in early April addressing various levels of methane detected and the response based on these levels. The Plan was based on a review of health and safety regulations from the Occupational Safety and Health Administration (OSHA), Mine Safety and Health Administration (MSHA) and California Code of Regulations. The document provided levels for various frequencies of monitoring and will result in changes to biweekly and monthly monitoring based on levels of methane detected in various wells.

### **4.0 Schedule**

The following is the currently anticipated schedule for the completion of testing for the injection system and implementation of Phase I, pumping and injection of water from the Poison Canyon Formation.

- Testing of the injection and recovery (pumping wells will occur for approximately the next six weeks.
- Upon completion of testing, a report will be prepared and submitted to the COGCC and the EPA. Report preparation will take approximately three to four weeks and the report submittal is currently expected to occur in approximately mid-July. An interim report may also be submitted if the data gathered lends itself to an interim report.
- At the time of submittal of the report, Petroglyph will request approval of the rule authorization and permission to inject Poison Canyon water from the EPA.
- Commencement of injection of the Poison Canyon water is currently anticipated to begin in late July or once all needed regulatory approvals have been obtained.



- Petroglyph's contractor will continue with installation of the updated methane alarm systems for those homeowners who have requested the updated system.
- Routine bi-weekly and monthly sampling will continue with new sampling sites added as needed. Sampling will be adjusted based on the monitoring results in accordance with the Petroglyph Monitoring and Response Plan submitted to the COGCC on April 7, 2008
- Hand held seep monitoring will continue as needed.

The currently anticipated schedule for the completion of Phase I is outlined in table form below. The schedule is contingent on a number of factors including weather conditions and equipment problems.

<b>Phase I Steps</b>	<b>Estimated Completion Date</b>
1. Testing of Mitigation Wells	Through June 24, 2008
2. Submittal of Final Mitigation Well Report	July 16, 2008 (depending on data availability)
4. Start of injection activities	July 28, 2008 (or once approval is obtained from the EPA)

**Table 1  
Remediation System Well Summary**

<b>Well Designation</b>	<b>Date Completed</b>	<b>Total Depth (feet below ground surface)</b>	<b>Depth Water Encountered (feet below ground surface)</b>	<b>Most Recent Water Level (feet below ground surface)</b>	<b>Logging</b>	<b>Well Completion</b>	<b>Gas Flow</b>
POCI 55 Monitoring Well	2/15/08	1050	451			Slotted intervals at 526-541, 687-701, 744-754, 778-788, 896-976, and 1010-1049.	Maximum gas flow at 50 mcf/d when well first drilled. Measured at 34 on 3/6/08 and 0 on 5/9/08.
Recovery Well 1 (Kittleson)	3/29/08	715	655	485.2	Gamma ray, density/ neutron, and single induction	Slotted intervals at 496-535, 614-625, and 649-668	Significant gas encountered at 510 to 530 feet. Initially measured at 135 mcf/d on 3/25/08. Gas flow measured at 68 mcf/d on 4/14/08 and at 60 on 5/10/08.
Recovery Well 2 (Reiss)	4/4/08	840	810	No significant water	Density/ neutron	No water encountered so well plugged and abandoned	No gas
Recovery Well 3 (PEI)	4/7/08	625	485	409.3	Single induction and density/ neutron	Slotted interval 466-515 and 578-588	Encountered gas at 485 feet, Gas flow, 4.2" water column through a 1" orifice measured at 12 mcf/d initially. Reading of 15.5 mcf/d on 5/12/08.
Recovery Well 4 (Barrett)					Density/ neutron	No water encountered so well plugged and abandoned	
Injection Well 1 (Pascual)	4/29/08	600	506	403.9	Density/ neutron	No water encountered so well plugged and abandoned	No gas

**Table 1  
Remediation System Well Summary**

<b>Well Designation</b>	<b>Date Completed</b>	<b>Total Depth (feet below ground surface)</b>	<b>Depth Water Encountered (feet below ground surface)</b>	<b>Most Recent Water Level (feet below ground surface)</b>	<b>Logging</b>	<b>Well Completion</b>	<b>Gas Flow</b>
Injection Well 2 (Gonzales)	4/14/08	600	518	319.4	Gamma ray, neutron/density	Slotted interval at 348-358, 399-499, 555-565	No gas
Injection Well 3 (Benevides)	4/19/08	725		348.7	Density/neutron	No water encountered so well plugged and abandoned	No gas
Injection Well 4 (Rohr)	5/6/08	675	330		Density/neutron, induction	No water encountered so well plugged and abandoned	Slight detectable gas production, not measured
Injection Well 5 (Rohr)	5/1/08	750	484	393.3	Density/neutron	No water encountered so well plugged and abandoned	5.6 mcf/day on 5/09/08
Injection Well 6 (Masters)	4/10/08	725	295	390.5	Single induction and density/neutron	Slotted intervals at 414-424, 504-524, 576-596, and 680-690	Slight detectable gas production, not measured
Injection Well 7 (Walden)	4/25/08	750		550.3	Density/neutron	No water encountered so well plugged and abandoned	Slight detectable gas production, not measured
Injection Well 8 (Haeffner)	4/25/08	650		370.4	Density/neutron	No water encountered so well plugged and abandoned	No gas

**Table 2  
Water Well Measurements**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, description of results
20783	Goemmer Cattle	9/24/07	4/22/08	4/22/08	No change from previous measurements
230572	Willis	7/11/07	5/07/08	4/22/08 and 5/07/08	No change from previous measurements
84106	Rohr	7/06/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
93386	Lowry	7/12/07	3/29/08	None	Not sampled during this reporting period
203536	Hurley	8/2/07	5/07/08	4/22/08 and 5/07/08	<ul style="list-style-type: none"> <li>No change in LEL and CO</li> <li>H2S decreased slightly from 27.5 ppm to 25 ppm</li> <li>O2 % volume slightly increased from 13.2 to 15.3</li> <li>CH4 % volume increased from 33 to 45 during the reporting period.</li> </ul>
121013	Schafer	8/15/07	4/09/08	None	Not sampled during this reporting period
123144	Searle	7/11/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
145915	Carsella	7/11/07	5/07/08	4/22/08 and 5/07/08	No change from previous measurements
169043	Burge	7/11/07	5/07/08	4/22/08 and 5/07/08	<ul style="list-style-type: none"> <li>No change in CO, H2S, % LEL, and CH4</li> <li>O2% volume increased from 16.7 to 20.9</li> </ul>
181278	Bounds	7/12/07	4/30/08	4/16/08, 4/23/08 and 4/30/08	No change from previous measurements
191079	Brian Dale (?)	8/15/07	4/09/08	None	Not sampled during this reporting period
192144	Snow	8/2/07	4/12/08	None	Not sampled during this reporting period
192203	Rankin	7/12/07	3/29/08	None	Not sampled during this reporting period
193520X	McEntee	8/2/07	5/07/08	4/23/08 and 5/07/08	No change from previous measurements
193521	Ping	7/11/07	10/19/07	None	No longer sampled
196371	Lyon	8/15/07	4/12/08	None	Not sampled during this reporting period
197472	Williams/Bartlett	8/15/07	8/15/07	None	No longer sampled
205195	Johnson	8/15/07	5/07/08	4/23/08 and 5/07/08	No change from previous measurements
210526	Bruington	8/7/07	2/29/08	None	Not sampled during this reporting period
215322	Petroglyph	7/6/07	9/24/07	None	Not sampled during this reporting period
216732	Petroglyph	7/11/07	9/24/07	None	Not sampled during this reporting period
	Petroglyph	2/13/08	2/13/08	None	Not sampled during this reporting period
215706	Brice	7/12/07	5/05/08	4/23/08 and 5/05/08	No change from previous measurements
219376	White	8/2/07	4/12/08	None	Not sampled during this reporting period

**Table 2  
Water Well Measurements**

<b>Permit Number</b>	<b>Name</b>	<b>Sampling Start Date</b>	<b>Last Sample</b>	<b>Samples Since Last Monthly Report</b>	<b>If sampled, description of results</b>
221465	Evenden	8/2/07	4/12/08	None	Not sampled during this reporting period
222294	Cramer	8/3/07	4/12/08	None	Not sampled during this reporting period
222539	Lively	7/6/07	5/05/08	4/22/09 and 5/05/08	No change from previous measurements
235292	Kerman/Hanson	7/6/07	5/05/08	4/22/08 and 5/05/08	<ul style="list-style-type: none"> <li>• No change in LEL %, CH4, CO or H2S</li> <li>• O2% volume has increased slightly from 18.8 to 20.9</li> </ul>
235516	Colorado Switzer	7/12/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
236272	Houghtling	7/6/07	5/05/08	4/22/08 and 5.05.08	<ul style="list-style-type: none"> <li>• % LEL remains unchanged at &gt;100</li> <li>• CH4 % volume has increased slightly from 89 to 90</li> <li>• O2% volume remains at 0</li> <li>• H2S has increased from 0.5 to 1.5 ppm</li> <li>• CO has decreased from 10 to 1.5</li> </ul>
238209	Salazar	8/15/07	4/09/08	None	Not sampled during this reporting period
238689	Angely	7/5/07	4/30/08	4/16/08, 4/23/08, 4/30/08	No change from previous measurements for % LEL, H2S, CO, and CH4. O2 has increased slightly from 20.1 to 20.9.
239657	Smith	7/5/07	5/05/08	4/22/08 and 5/05/08	<p>At Wellhead</p> <ul style="list-style-type: none"> <li>• % LEL has changed from 19 to 0</li> <li>• CH4 % volume has changed from 0.15 to 0</li> </ul> <p>At Well Vent</p> <ul style="list-style-type: none"> <li>• % LEL unchanged at &gt;100</li> <li>• CH4 % volume has decreased from 86 to 8</li> <li>• O2% volume has increased from 0 to 18.7</li> <li>• H2S has decreased from 22.5 to 3.5 ppm</li> <li>• CO has decreased from 10 to 0</li> </ul>
240947	Wolahan	7/12/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements for % LEL, H2S, CO, and CH4. O2 has increased from 17.7 to 20.9.

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Water Well Measurements**

<b>Permit Number</b>	<b>Name</b>	<b>Sampling Start Date</b>	<b>Last Sample</b>	<b>Samples Since Last Monthly Report</b>	<b>If sampled, description of results</b>
244403	Bergman	7/6/07	5/05/08	4/22/08 and 5/05/08	<ul style="list-style-type: none"> <li>• % LEL remains unchanged at &gt;100</li> <li>• CH4 % volume has increased from 18 to 49</li> <li>• O2% volume has decreased from 13.1 to 8.9</li> <li>• H2S and CO remain unchanged at 0 ppm</li> </ul>
246775	Sharp	9/9/07	5/07/08	4/22/08 and 5/07/08	No change from previous measurements
248680	Campbell	8/14/07	1/2/08	None	Not sampled during this reporting period
248862	Meyer	8/14/07	5/07/08	4/22/08 and 5/07/08	<ul style="list-style-type: none"> <li>• % LEL no change &gt;100</li> <li>• CH4 % volume has increased from 62 to 83</li> <li>• O2% volume has decreased from 6.4 to 0</li> <li>• H2S has increased from 0 to 35</li> <li>• CO has increased from 0 to 5</li> </ul>
248983	Tobias	8/3/07	5/07/08	4/22/08 and 5/07/08	<ul style="list-style-type: none"> <li>• % LEL has changed increased from 5 to 17</li> <li>• CH4 % volume has decreased from 10 to 0.9</li> <li>• No change in O2% volume, H2S and CO</li> </ul>
249181	Hentschel	9/9/07	5/07/08	4/22/08 and 5/07/08	No change from previous measurements
249362	Andexler	9/9/07	9/9/07	None	No longer sampled (at landowner request)
250369	Martin	7/12/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
252931	Derowitsch	7/6/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements at wellhead or well vent
253317	Gonzalez	7/12/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
254577	Ryerson	9/9/07	5/07/08	4/22/08 and 5/07/08	No change from previous measurements
255929	Conley	7/11/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
256504	Hopke	7/5/07	5/05/08	4/22/08 and 5/05/08	<ul style="list-style-type: none"> <li>• No change in % LEL at 0</li> <li>• CH4 % volume has decreased slightly from 57 to 49</li> <li>• O2% volume has decreased from 10.3 to 8.6</li> <li>• H2S has increased from 0 to 1.5 ppm</li> <li>• CO decreased from 20 to 10</li> </ul>
257113	Masters	7/6/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements

**Table 2  
Water Well Measurements**

<b>Permit Number</b>	<b>Name</b>	<b>Sampling Start Date</b>	<b>Last Sample</b>	<b>Samples Since Last Monthly Report</b>	<b>If sampled, description of results</b>
257994	Barrett	7/12/07	5/05/08	4/22/08 and 5/05/08	<ul style="list-style-type: none"> <li>• No change in % LEL at &gt;100</li> <li>• CH4 % volume has decreased slightly from 45 to 41</li> <li>• O2% volume has increased slightly from 10 to 10.6</li> <li>• CO has decreased from 5 to 0</li> <li>• H2S has not changed at 0</li> </ul>
259122	Higgins	9/26/07	5/07/08	4/22/08 and 5/07/08	No change from previous measurements
260097	Dee	7/5/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
264581	Ireland	7/12/07	5/05/08	4/23/08 and 5/05/08	No change from previous measurements
267694	Coleman	7/5/07	5/05/08	4/22/08 and 5/05/08	No changes from previous measurements for wellhead. % LEL changed at well vent from 5 to 7 during the period with a slightly increase in CH4 from 0 to 0.35. All other readings remained the same.
267695	Speh	9/4/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
269435	Goacher	7/11/07	5/05/08	4/22/08 and 5/05/08	No changes from previous measurements
270552	Chaves	9/9/07	5/07/08	4/22/08 and 5/07/08	No changes from previous measurements
271136	May	7/12/07	5/05/08	4/23/08 and 5/05.088	No changes from previous measurements
274468	Roloff	9/9/07	5/05/08	4/22/08 and 5/05/08	No changes from previous measurements
235515	English	8/16/07	5/05/08	4/23/08 and 5/05/08	No changes from previous measurements
258815	Goodwin	7/12/07	5/05/08	4/23/08 and 5/05/08	No changes from previous measurements
16861-F	Golden Cycle Land	7/12/07	5/05/08	4/23/08 and 5/05/08	No changes from previous measurements although 4/23/08 sample showed a spike in % LEL and a decrease in O2
84108-A	Mc Pherson	7/6/07	5/05/08	4/22/08 and 5/05/08	No changes from previous measurements
16861-F <sup>1</sup>	Unknown	8/13/07	5/05/08	4/22/08 and 5/05/08	No changes from previous measurements
	Andreatta	8/14/07	5/07/08	4/22/08 and 5/07/08	No changes from previous measurements
	Anselmo	8/14/07	8/14/07	None	No longer sampled
	Dernell	8/15/07	4/9/07	None	Not sampled during this reporting period
	Unknown	8/15/07	8/15/07	None	No longer sampled
	Lang	10/29/07	5/05/08	4/22/08 and 5/05/08	No change from previous measurements
220100	Cordova	10/30/07	5/07/08	4/23/08 and 5/07/08	No change from previous measurements

<b>Table 2 Water Well Measurements</b>					
<b>Permit Number</b>	<b>Name</b>	<b>Sampling Start Date</b>	<b>Last Sample</b>	<b>Samples Since Last Monthly Report</b>	<b>If sampled, description of results</b>
234836	White, Jim	1/4/08	5/07/08	4/22/08 and 5/07/08	<ul style="list-style-type: none"> <li>• % LEL decreased from &gt;100 to 0</li> <li>• CH4 % volume decreased from 5 to 0</li> <li>• O2% volume increased from 8.1 to 20.9</li> <li>• H2S and CO remain unchanged at 0</li> </ul>
192509	Eddleman, Paul	1/17/08	5/07/08	4/23/08 and 5/07/08	<ul style="list-style-type: none"> <li>• % LEL has decreased from &gt;100 to 0</li> <li>• CH4 % volume has decreased from 6 to 0</li> <li>• O2% volume has increased from 8.1 to 20.9</li> <li>• H2S has remained the same at 0 ppm</li> <li>• CO has decreased from 5 to 0</li> </ul>
226536	Eddleman, Todd	1/17/08	5/07/08	4/22/08 and 5/07/08	<ul style="list-style-type: none"> <li>• % LEL has decreased from 5 to 0</li> <li>• CH4 % volume not measured</li> <li>• O2% volume has increased from 18 to 20.9</li> <li>• H2S decreased from 0.5 ppm to 0</li> <li>• CO remains at 0</li> </ul>
31935	Garza-Vela	1/30/08	5/07/08	4/23/08 and 5/07/08	No change from previous measurements
271524-A	Modlish	1/30/08	5/07/08	4/22/08 and 5/07/08	No change from previous measurements
271748	Sample	3/10/08	5/07/08	4/23/08 and 5/07/08	<ul style="list-style-type: none"> <li>• %LEL decreased from 13 to 0</li> <li>• CH4 %, CO and H2S remain unchanged at 0</li> <li>• O2 % volume increased from 18.6 to 20.9</li> </ul>
197128	Roberts	4/08/08	5/07/08	4/23/08 and 5/07/08	<ul style="list-style-type: none"> <li>• %LEL decreased from 30 to 5</li> <li>• CH4 % volume not monitored</li> <li>• O2 % decreased from 19.9 to 18.2</li> <li>• CO at 0</li> <li>• H2S decreased from 1 to 0 ppm</li> </ul>

<sup>1</sup> Unknown wells to be verified to determine exact permit number and well owner.



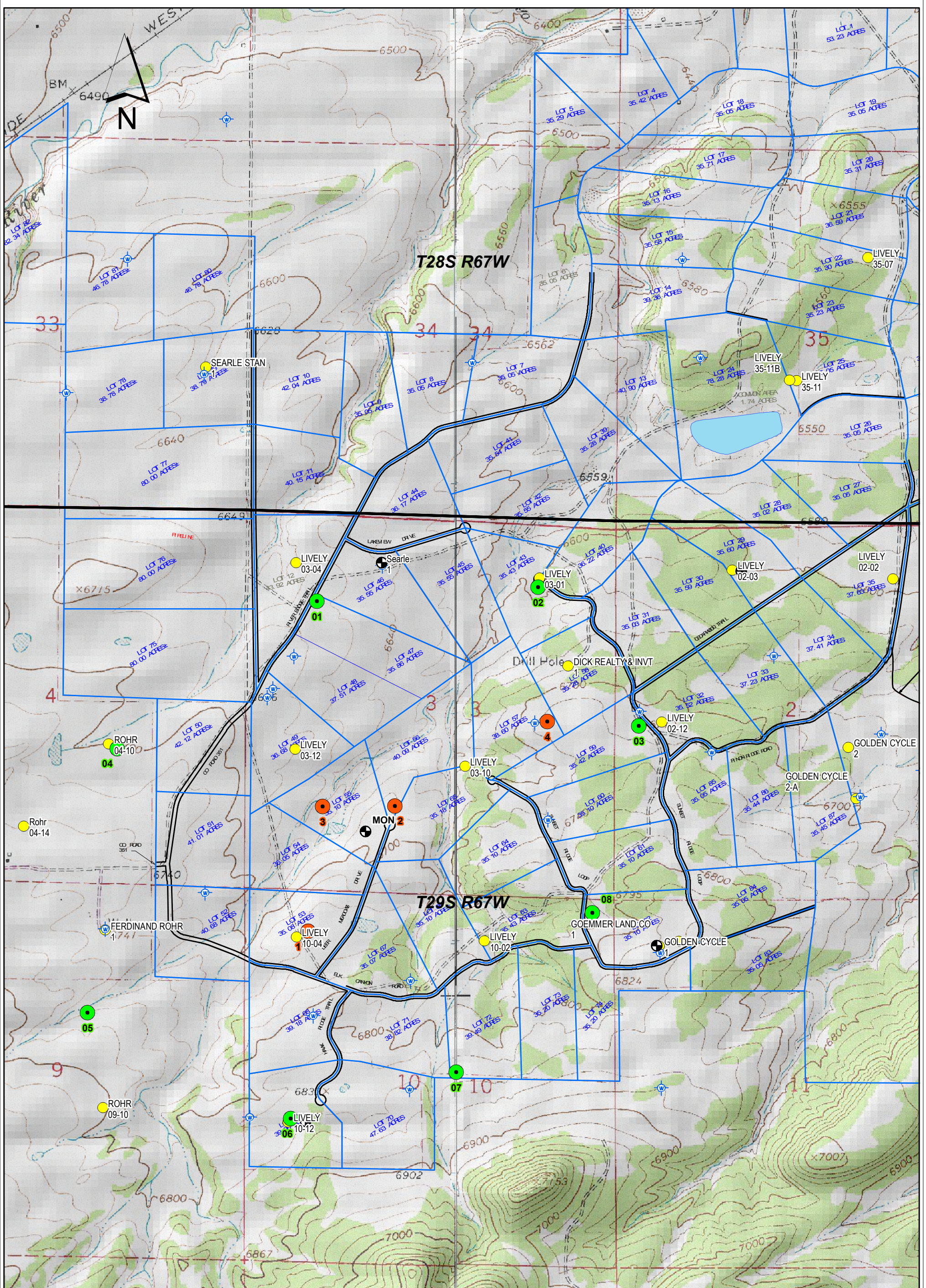
**Table 3  
Hand Held Gas Meter Results for the Period of April 16 through May 15**

Name	Date	Time	Weather Conditions	RMLD Readings				Notes
				N	E	W	S	
Kent Smith	4/18/08	17:00	15 Wind 50°	28 - 42	24 - 38	28 - 46	34 - 51	Crawlspace vents 24 - 32. Reading - Brion Stephen
	4/25/08		15 + Wind 45°	26 - 38	31 - 46	19 - 26	48 - 116	Reading - Brion Stephen
Mitch Sample	5/17/08	10:00	Snowing, 4" snow cover 10 Wind 34°					Collected water samples & RMLD readings. Basement NE corner - 68, SE corner - 61. Living Rm - 164, Kitchen ceiling - 144. Background outside - 26 - 34. At well vent - 40 - 58. Readings - Brion Stephen

**Table 4**  
**Residences Receiving Water**

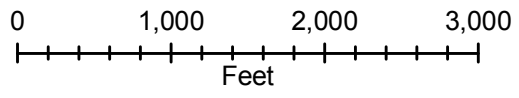
<b>Table 4</b>	
<b>Residences Receiving Water</b>	
Jerry Angely	Has received water provided by PEI in the past but his well is currently working now
Kent Smith	Has received water provided by PEI
Alan Cramer	Has received water provided by PEI
Tom Gonzales	Has received water provided by PEI
Spencer/Carol Snow	Has received water provided by PEI
Bruington	Has received water provided by PEI
Todd Eddleman	Has received water provided by PEI
Paul Eddleman	Has received water provided by PEI
Jim White	Has received water provided by PEI
Edward Lyon	New to list as of 3/12/08
Donald Sharp	New to list as of 3/14/08





**Legend**

- Injection Well
- Recovery Well
- Monitoring Wells
- Water Wells
- Petroglyph CBM Wells
- Lot Lines
- Roads
- ☪ Lake
- Townships



**Figure 1 - Petroglyph Operating Co., Inc. REMEDIATION SYSTEM**

Projection: UTM  
 Datum: NAD 1927  
 Zone: 13N  
 Units: Feet  
 Date: 5/19/2008  
 Magdalena Dohnalová

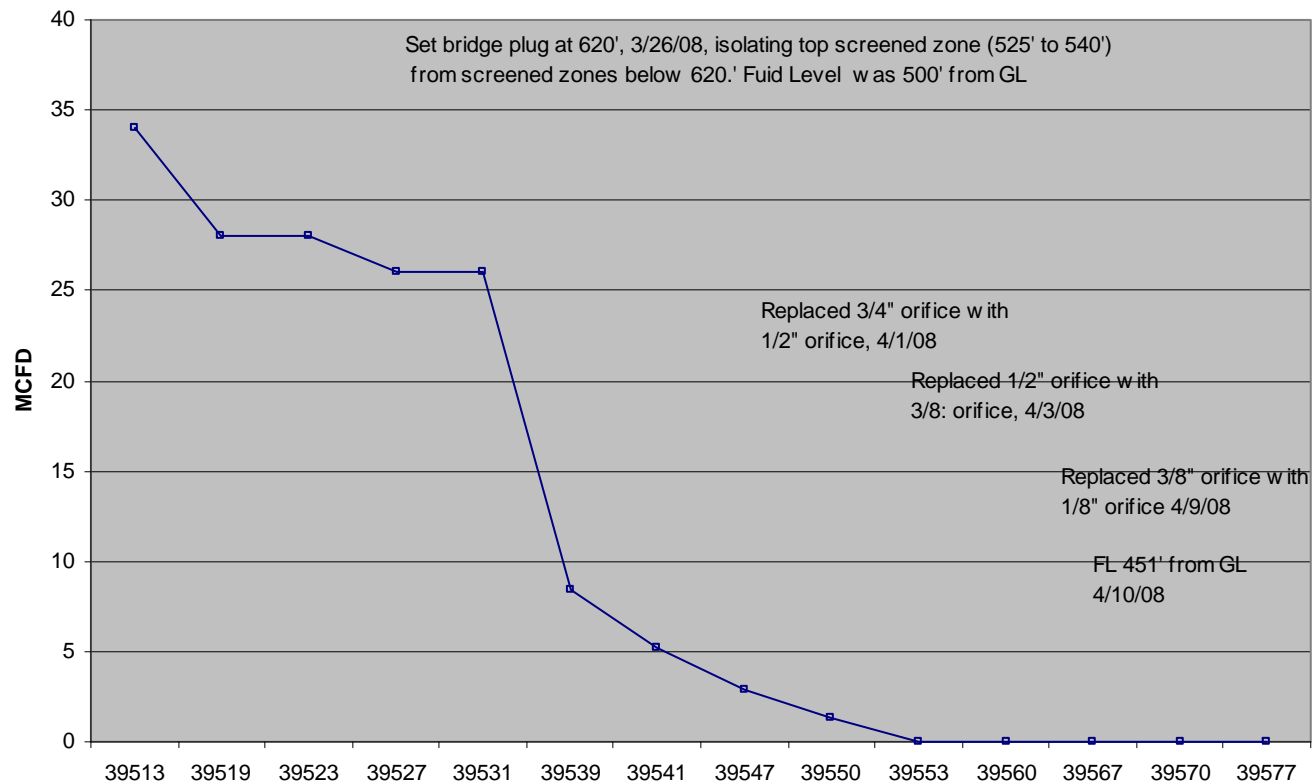


S:\05 09J Petroglyph\Raton Mitigation Wells\Drawing Layers\Figure4.mxd

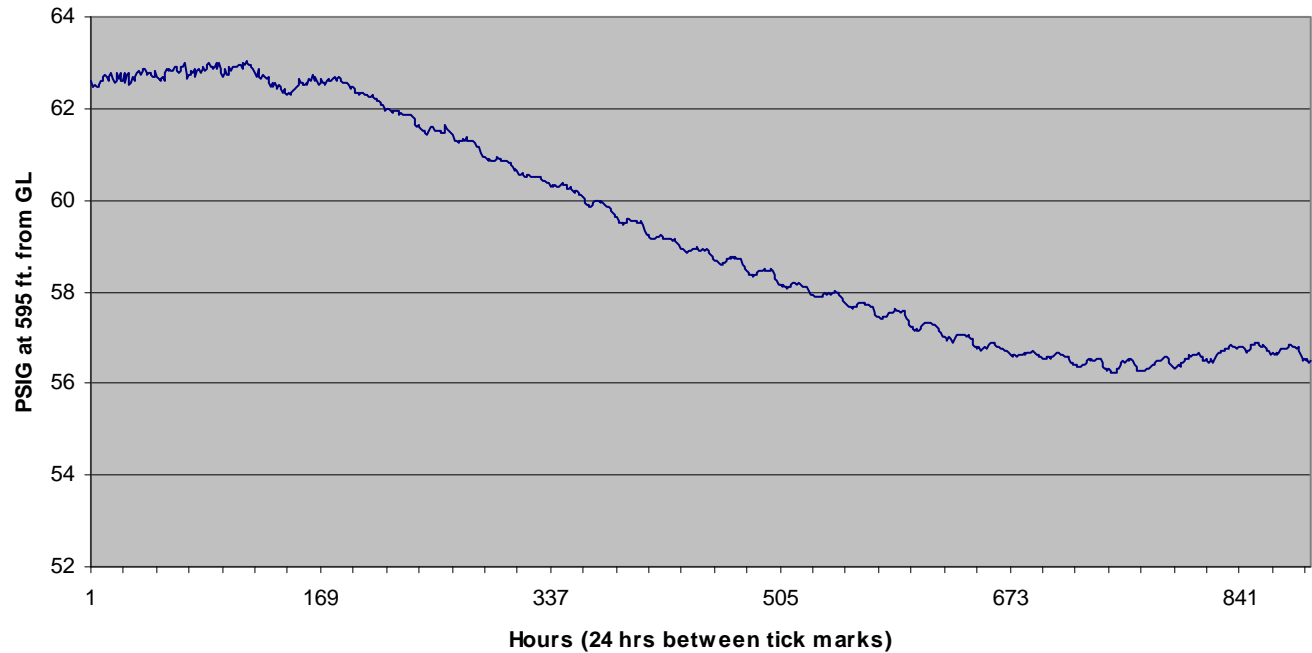


**Attachment 1**  
**Gas Flow in Monitoring Well POCI 55 and Injection/Recovery Wells**

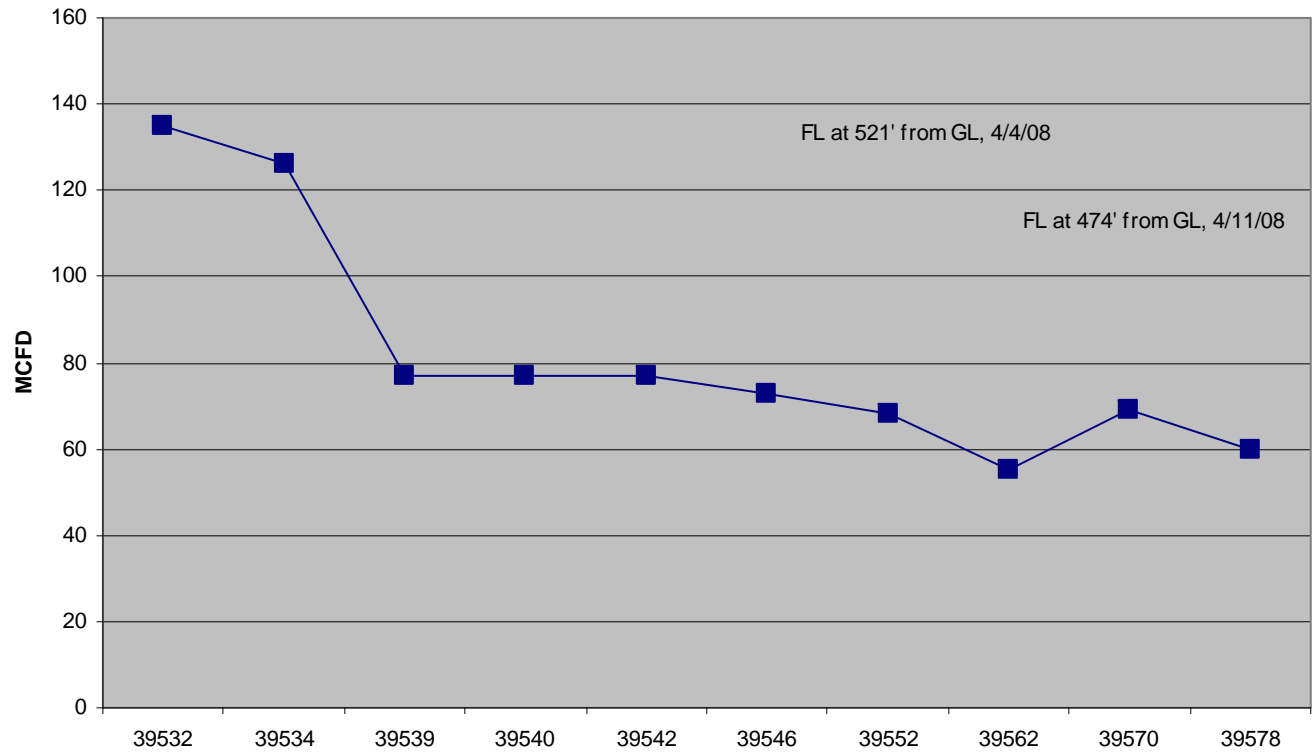
### POCI 55 MW Gas Flow from 3/6/08 to 5/9/08



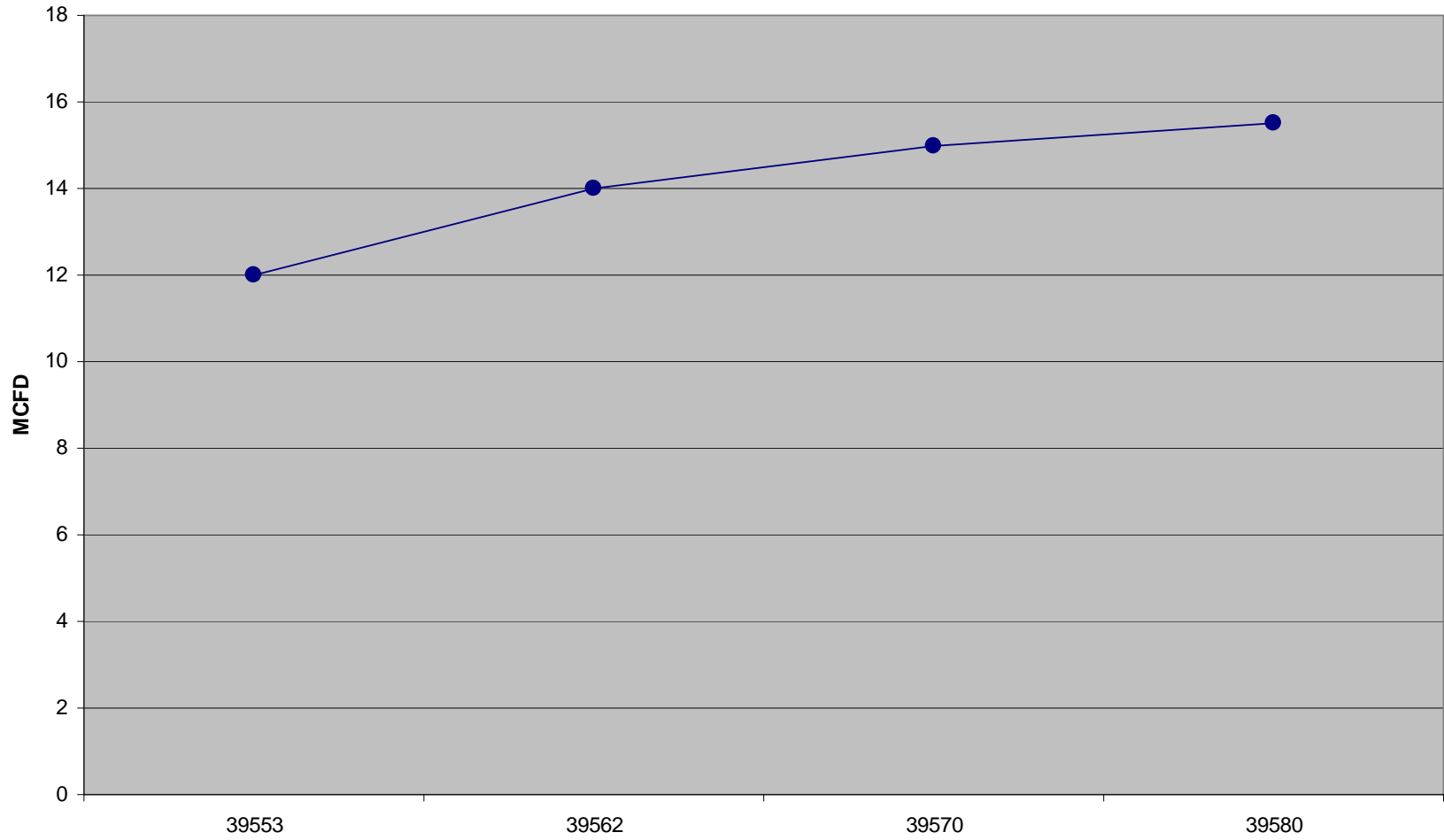
POCI 55 Monitor Well from 4/2/08 to 5/9/08  
Permit # 275819  
Lot 55 RRR  
SE SW Sec 3 29S 67W  
GL elev. 6690'



Recovery 1 Kittleson Gas Flow  
from 3/25/08 to 5/10/08



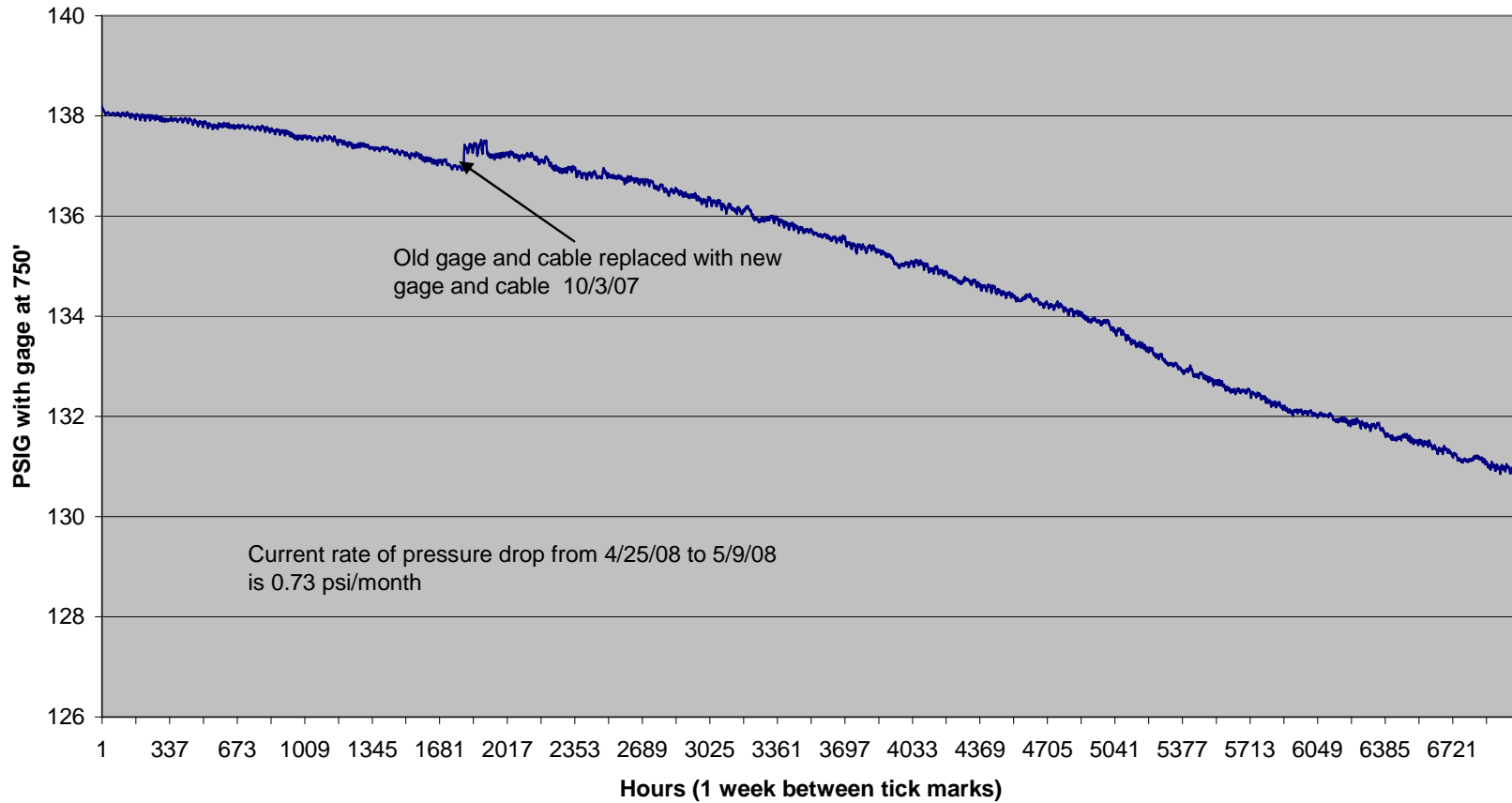
**Recovery 3 PEI Gas Flow  
from 4/15/08 to 5/12/08**



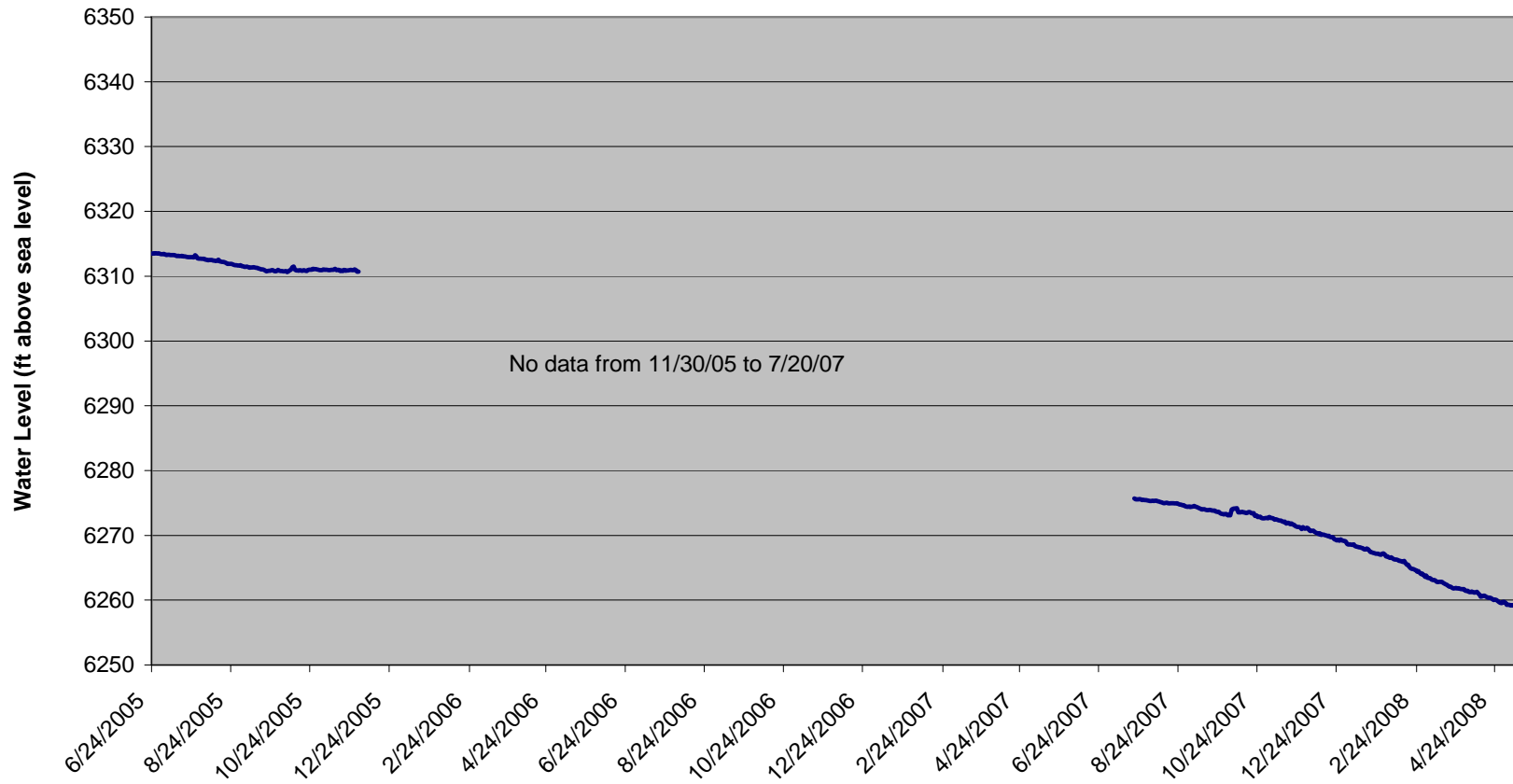


**Attachment 2**  
**Graphs of Pressure and Fluid Level Data From**  
**Barrett, Bergman, Coleman, and Meyer**

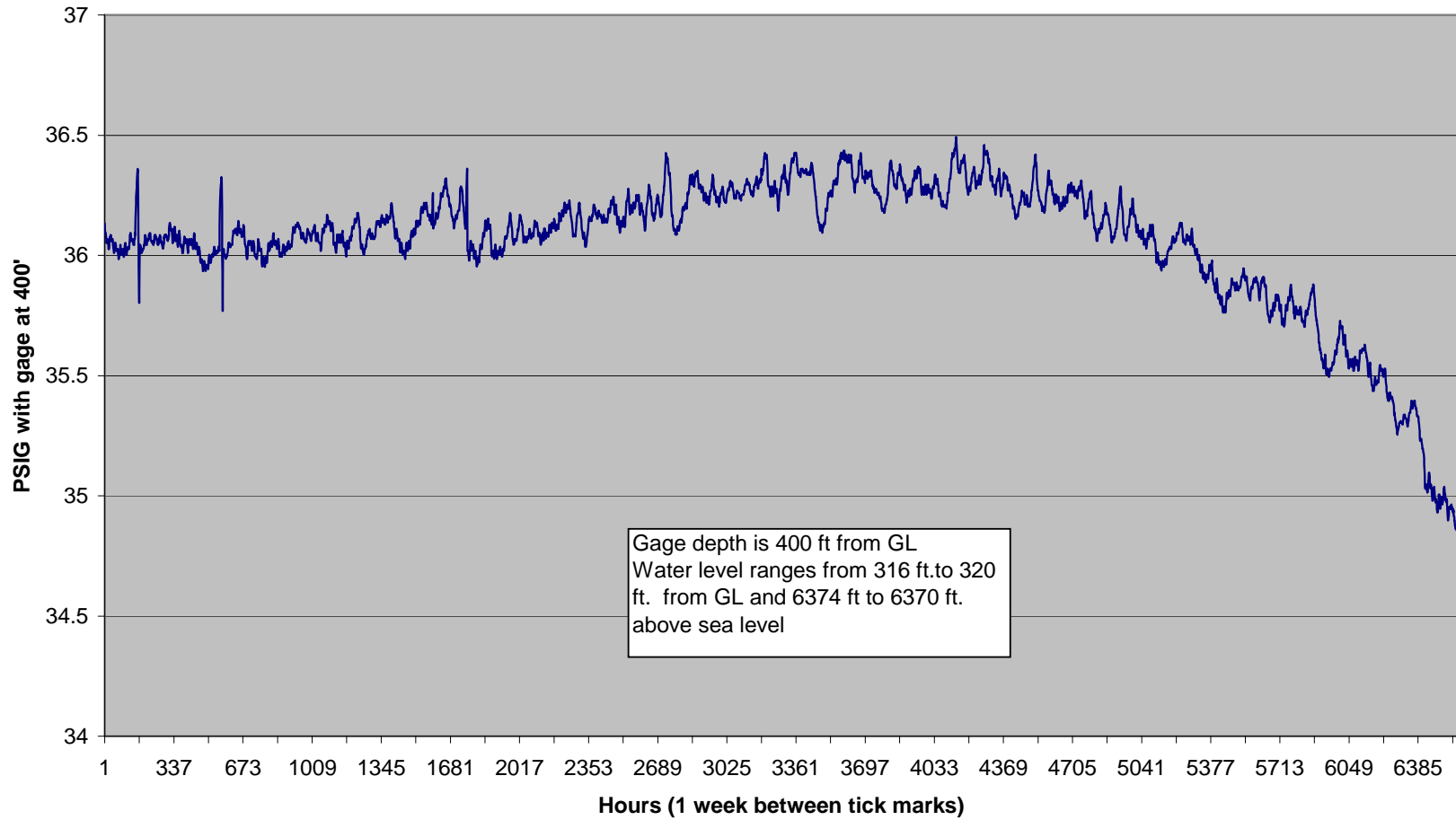
Barrett WW from 7/20/07 to 5/9/08  
Permit # 257994  
Lot 57 RRR  
NW, SE Sec 3, T29S R67W  
G.L. elev. 6707'



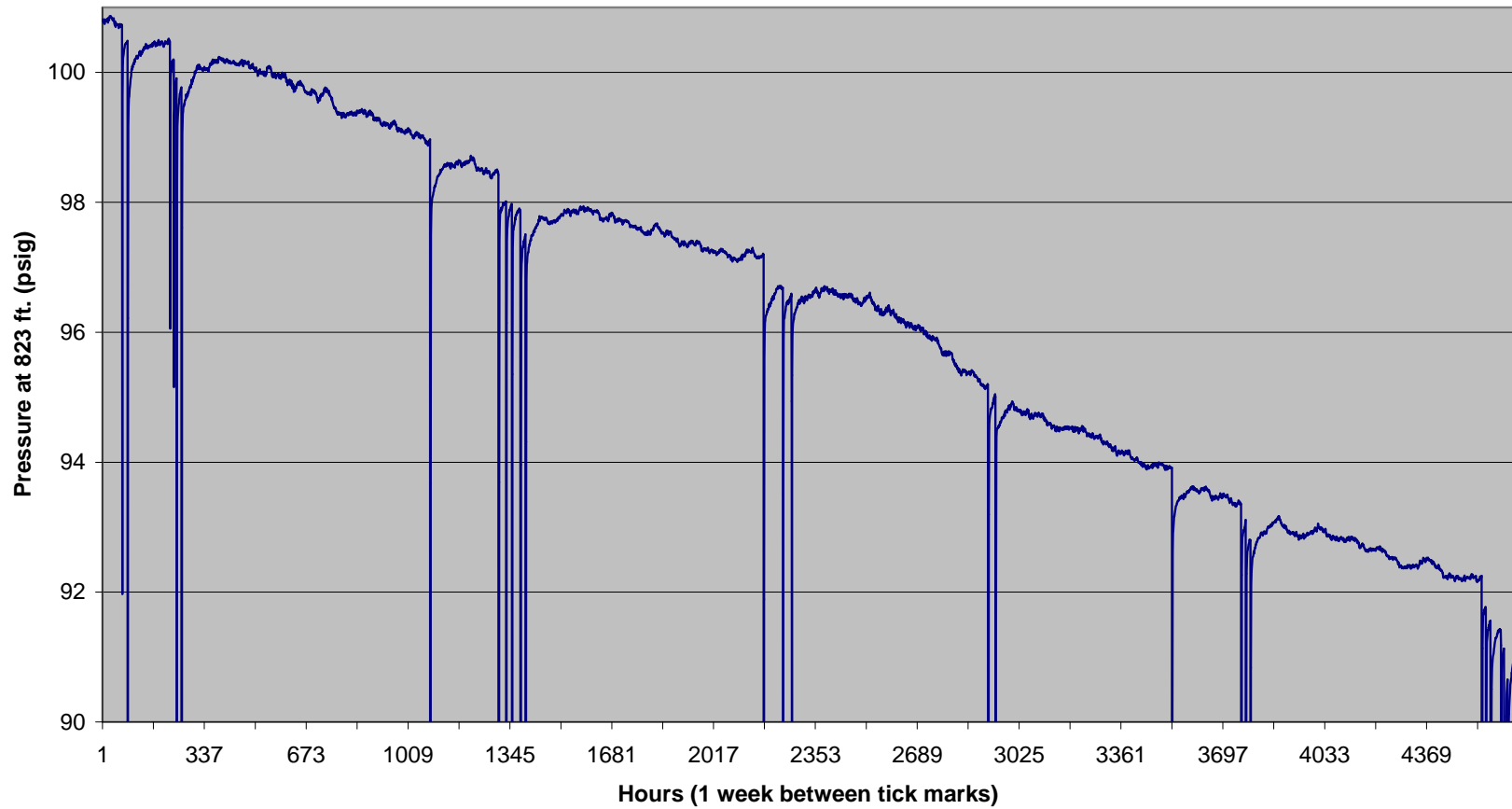
**Barrett WW**  
**Water Level from 6/24/05 to 5/9/08**  
**Permit # 257994**  
**Lot 57 RRR**  
**NW, SE Sec 3, T29S R67W**



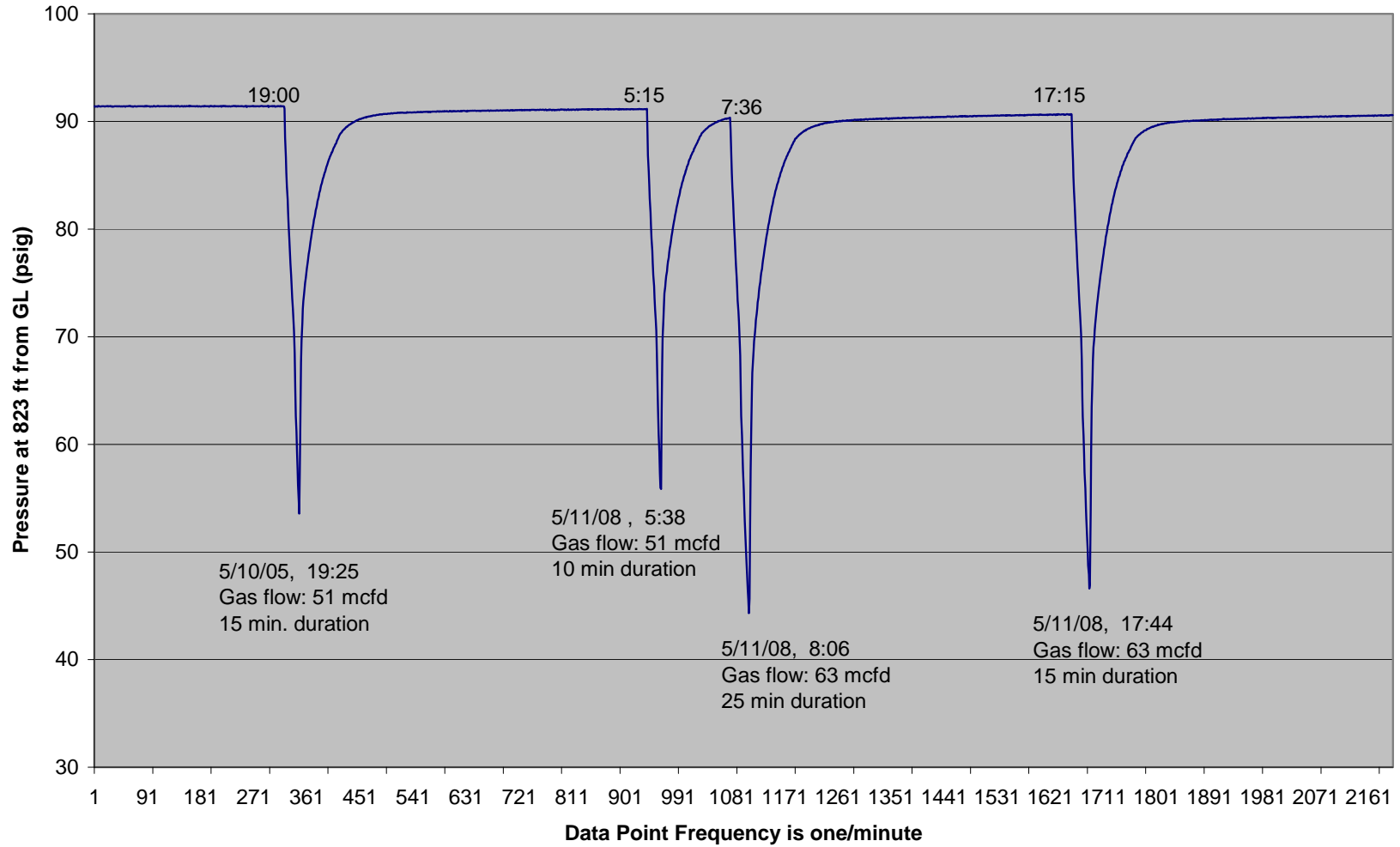
**Bergman WW pressure data from 8/9/07 to 5/9/08**  
**Permit # 24403, SW NW Sec 3 29S 67W**  
**Lot 48 RRR**



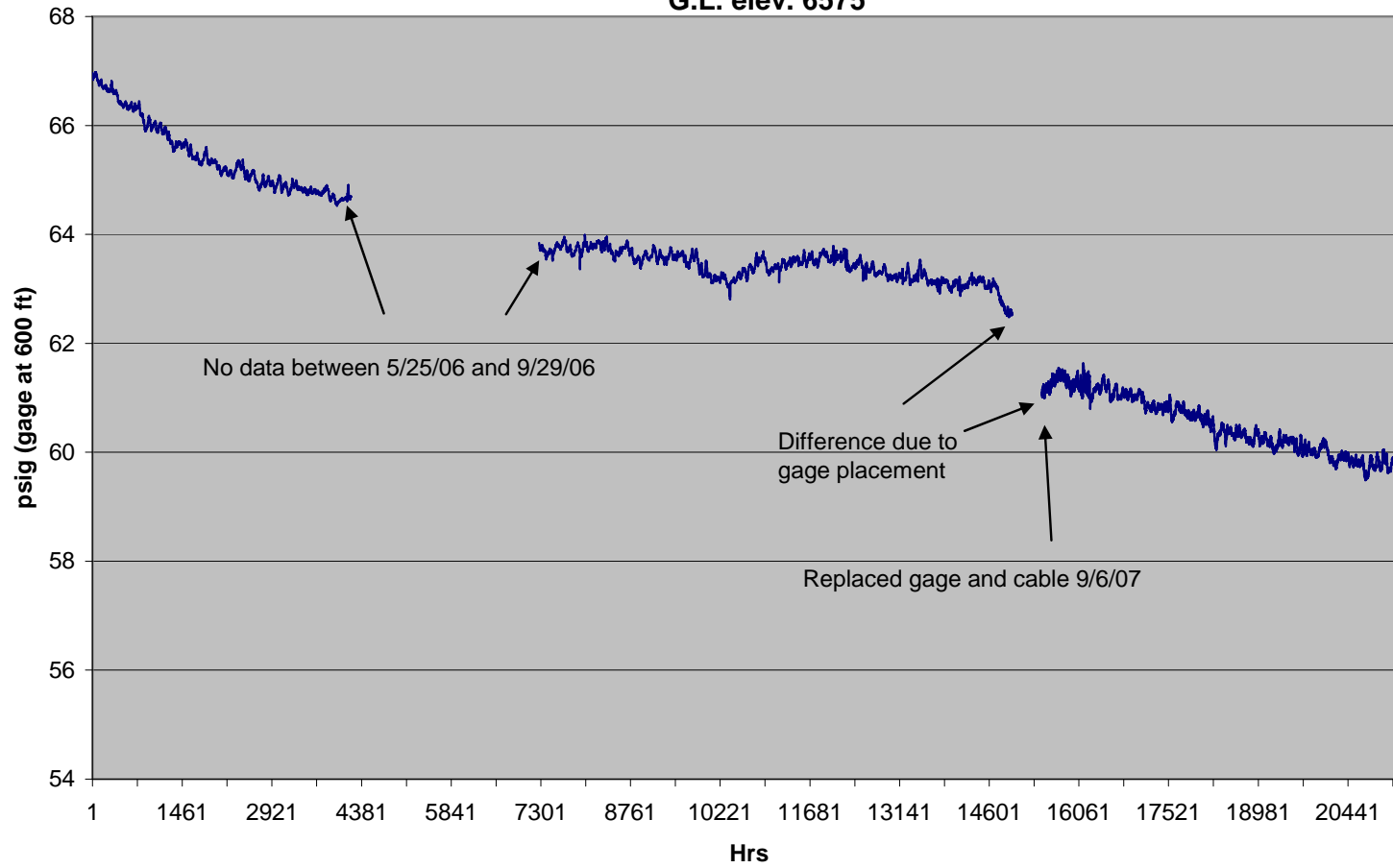
**Coleman WW Pressure Data from 10/31/07 to 5/12/08**  
**Permit # 267964 NE SW Sec 10 29S 67W**  
**Lot 70 RRR**  
**G.L. elev. 6848'**



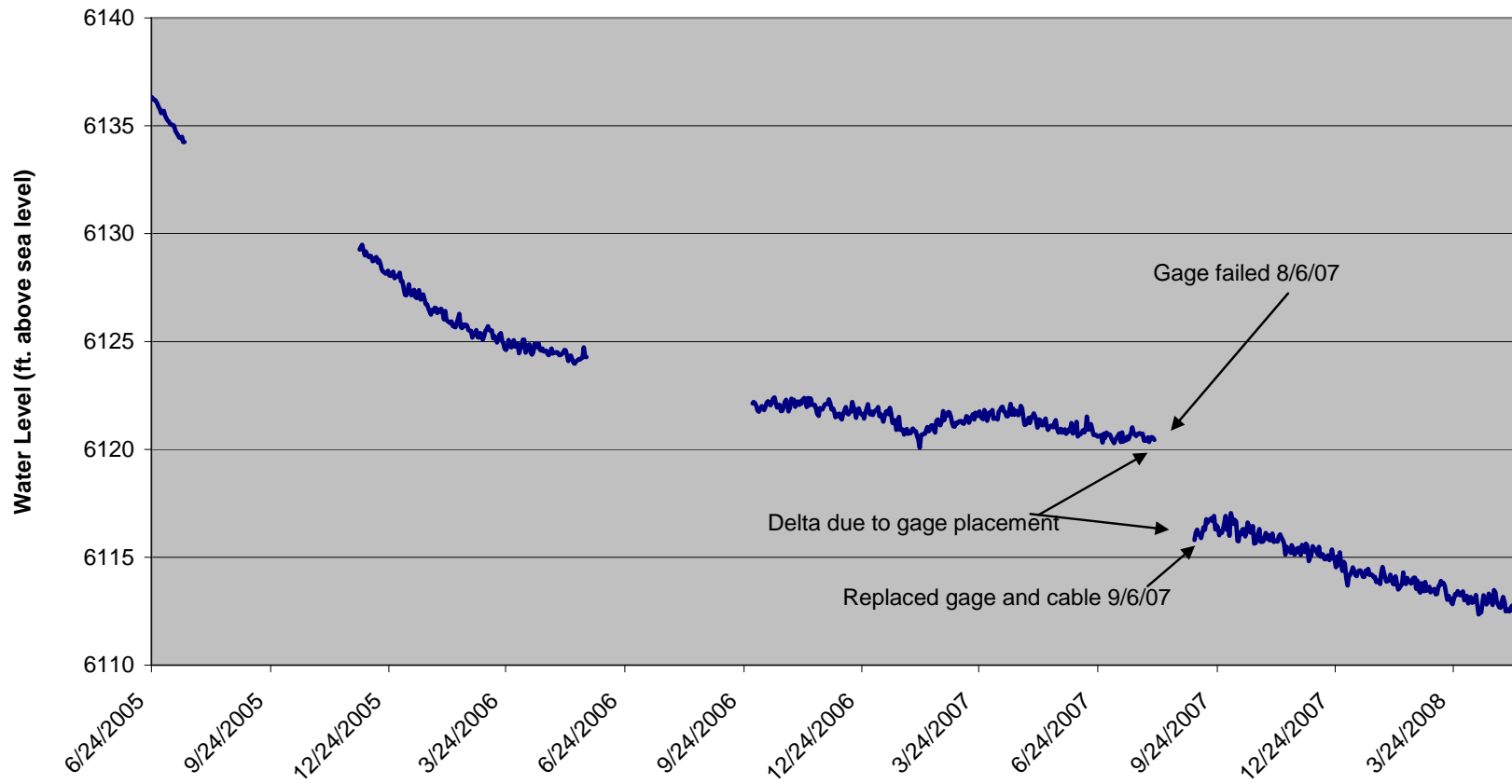
**Coleman WW (GL elev. 6848') Pressure Data from 5/10/08 to 5/12/08**



Meyers WW 11/30/05 to 5/9/08  
Permit # 248862  
Lot 120 RRR  
SW, NE Sec 30 T28S R66W  
G.L. elev. 6575'

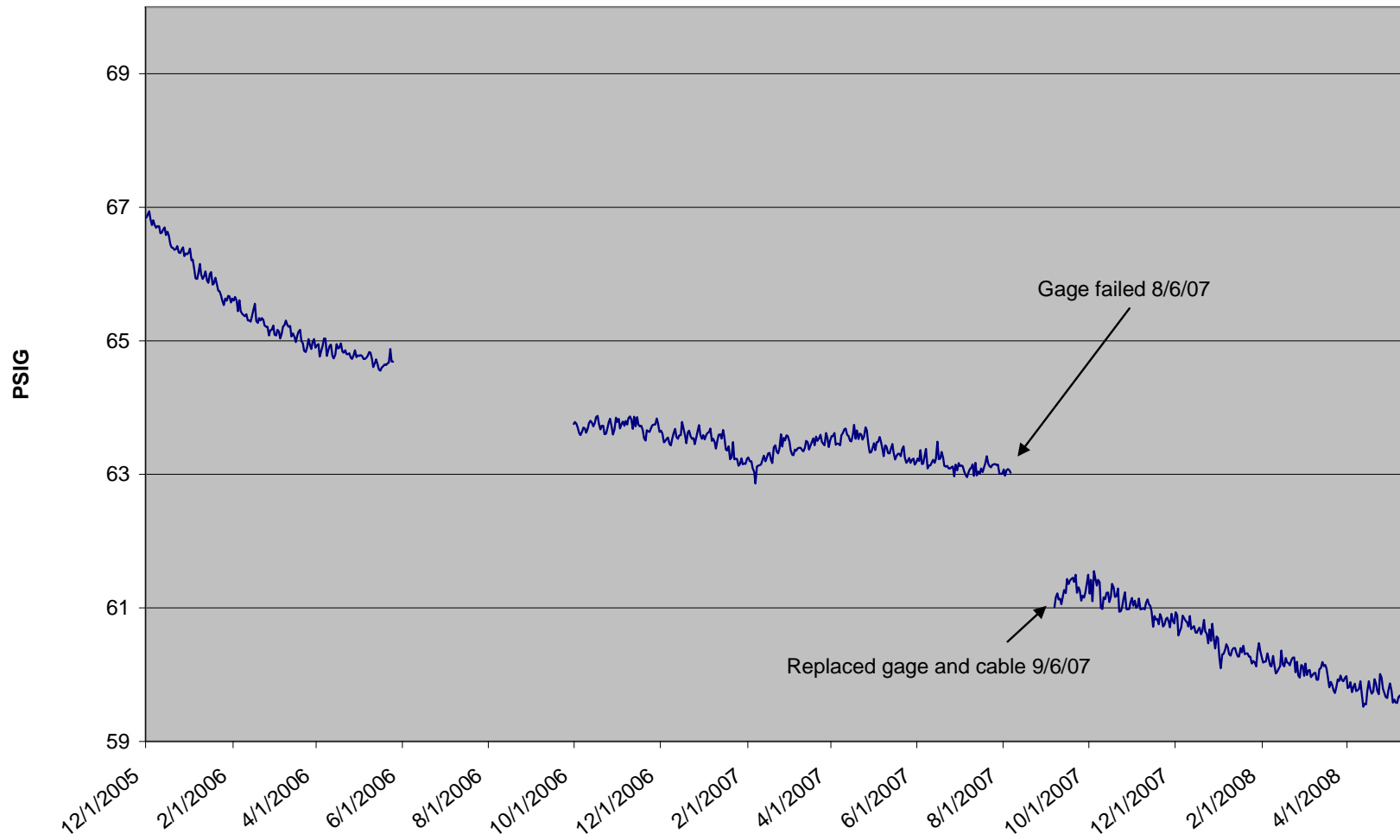


Meyer WW Water Level from 6/24/05 to 5/9/08  
Permit # 248862  
Lot 120 RRR  
SW, NE Sec 30 T28S R66W



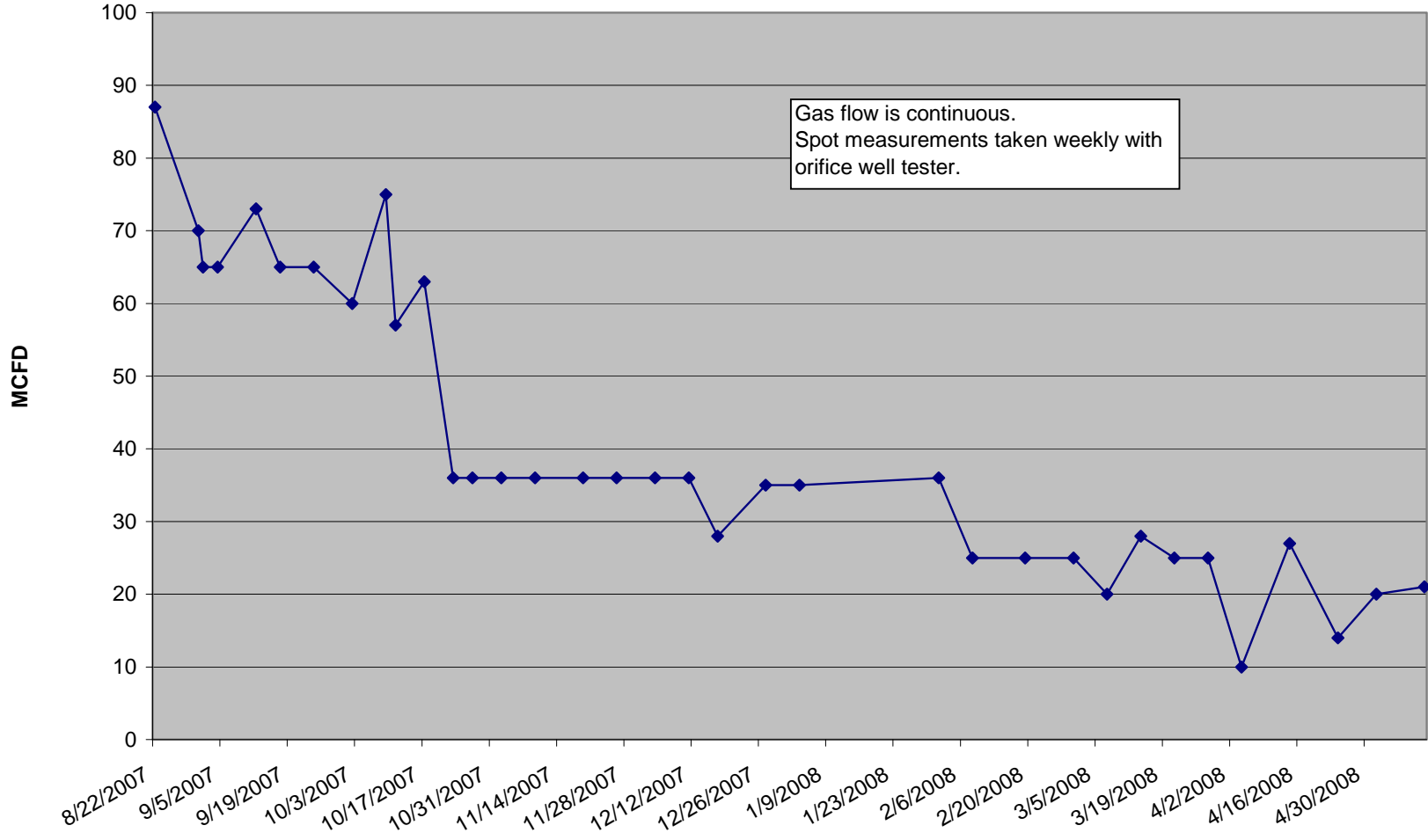


Meyers WW BHP from 12/1/05 to 5/9/08

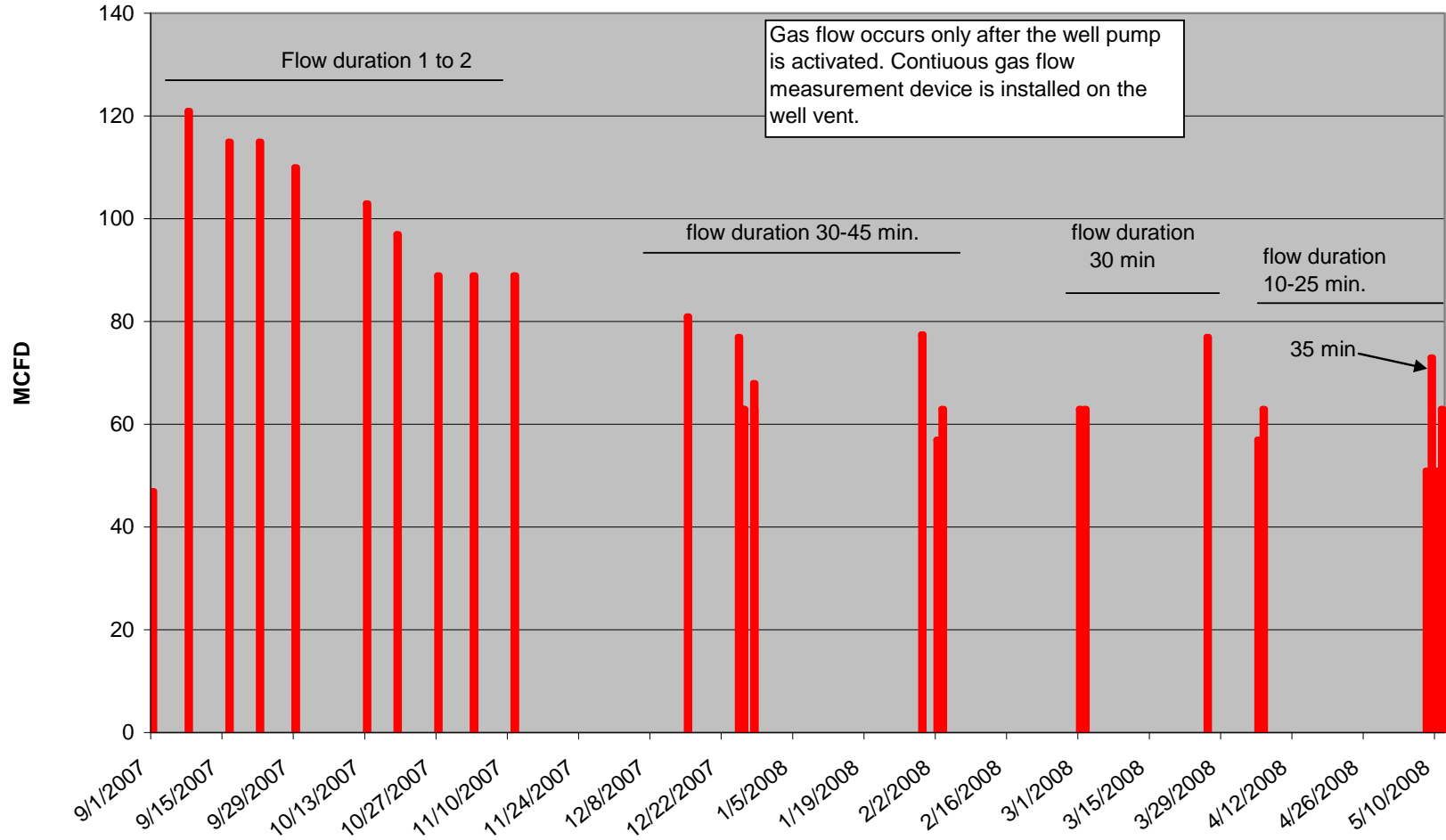


**Attachment 3**  
**Gas Flow Measurements at Bruington, Coleman, Angely, Bounds, and Smith**

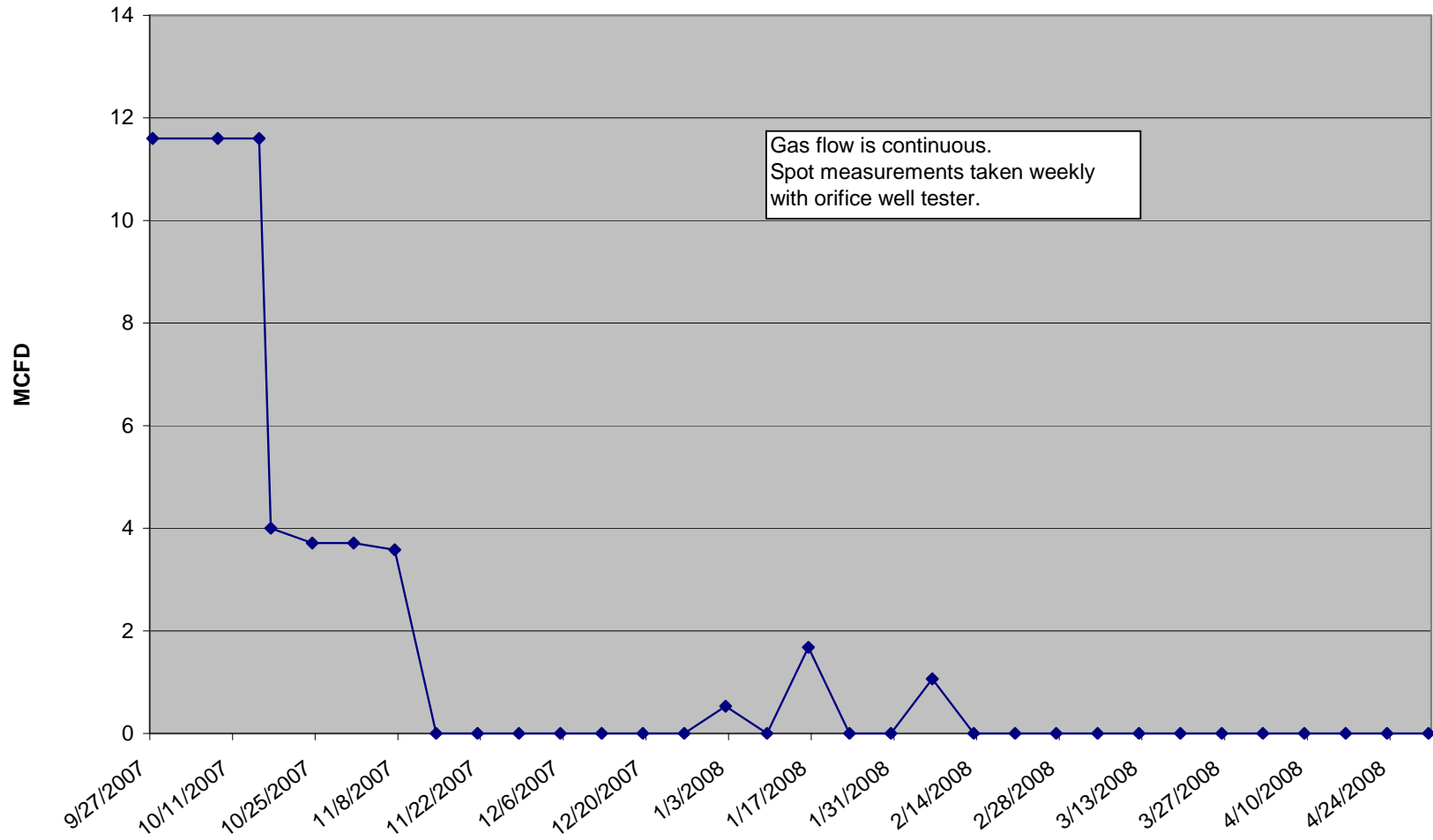
**Bruington WW # 210526 Measured Gas Flow  
from 8/22/07 to 5/12/08**



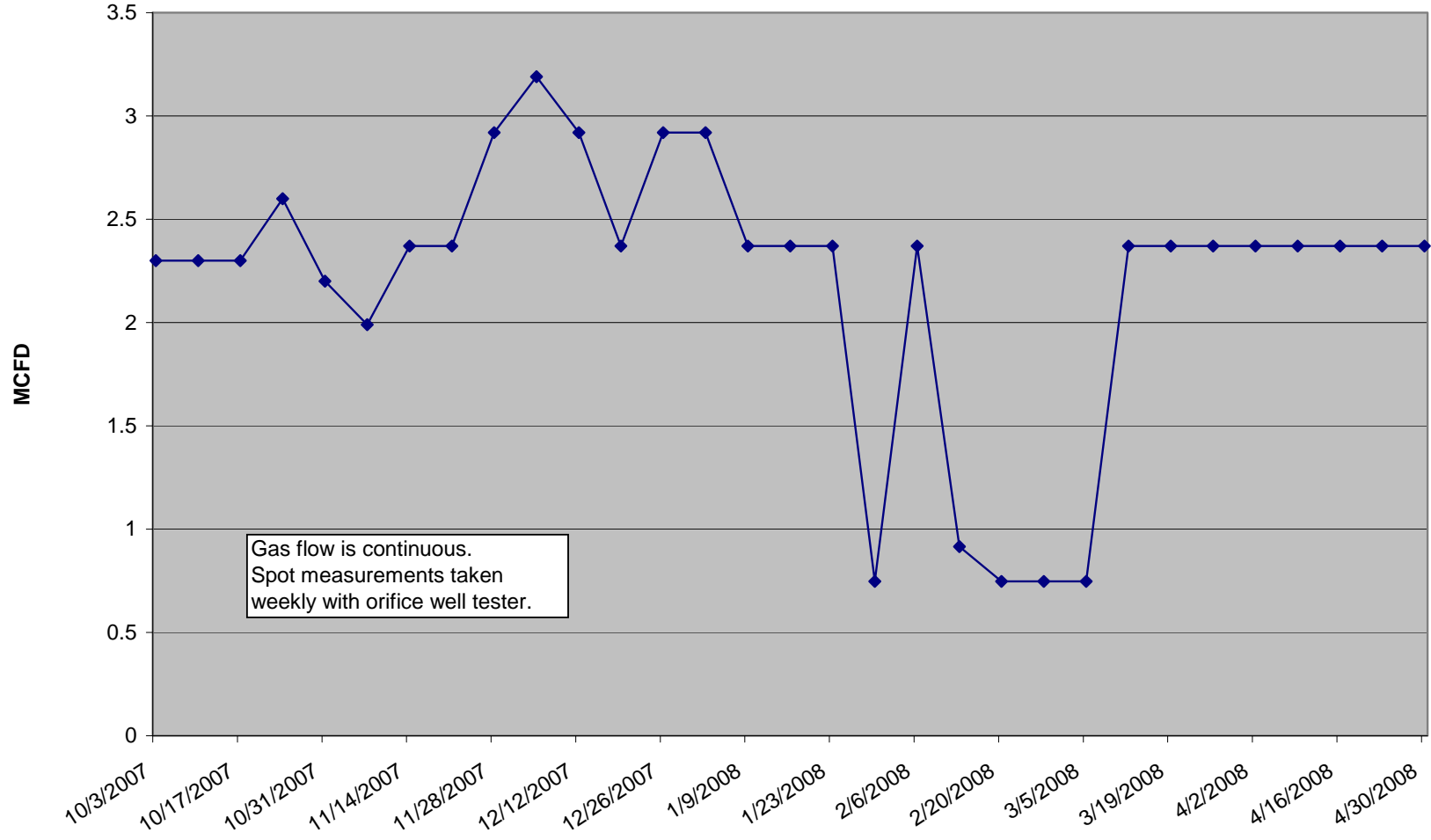
**Coleman WW #267294 Measured Gas Flow  
from 9/1/07 to 5/11/08**



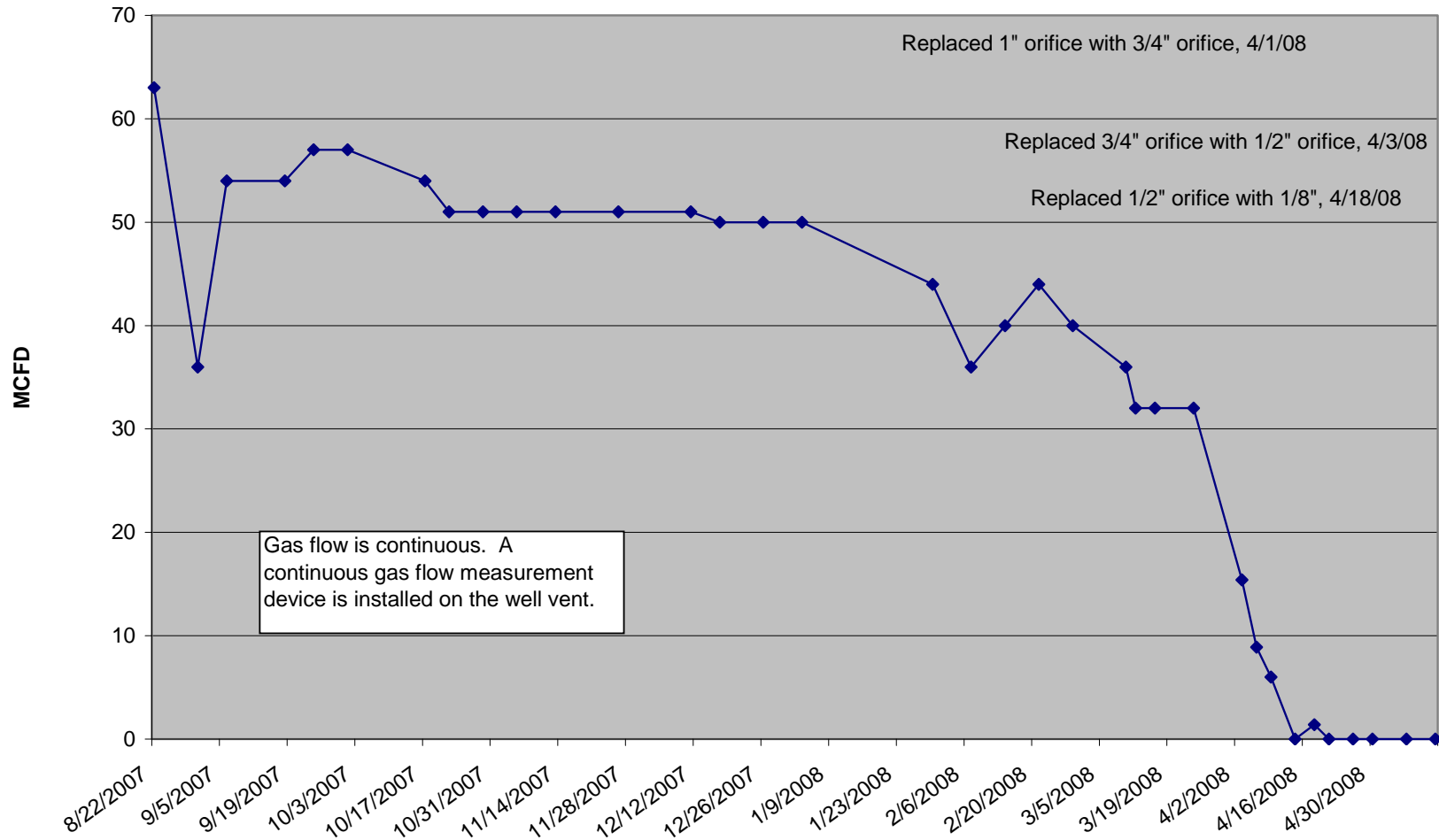
**Angely WW # 238689 Measured Gas Flow  
from 9/27/07 to 4/30/08**



**Bounds WW #181278 Measured Gas Flow  
from 10/3/07 to 4/30/08**



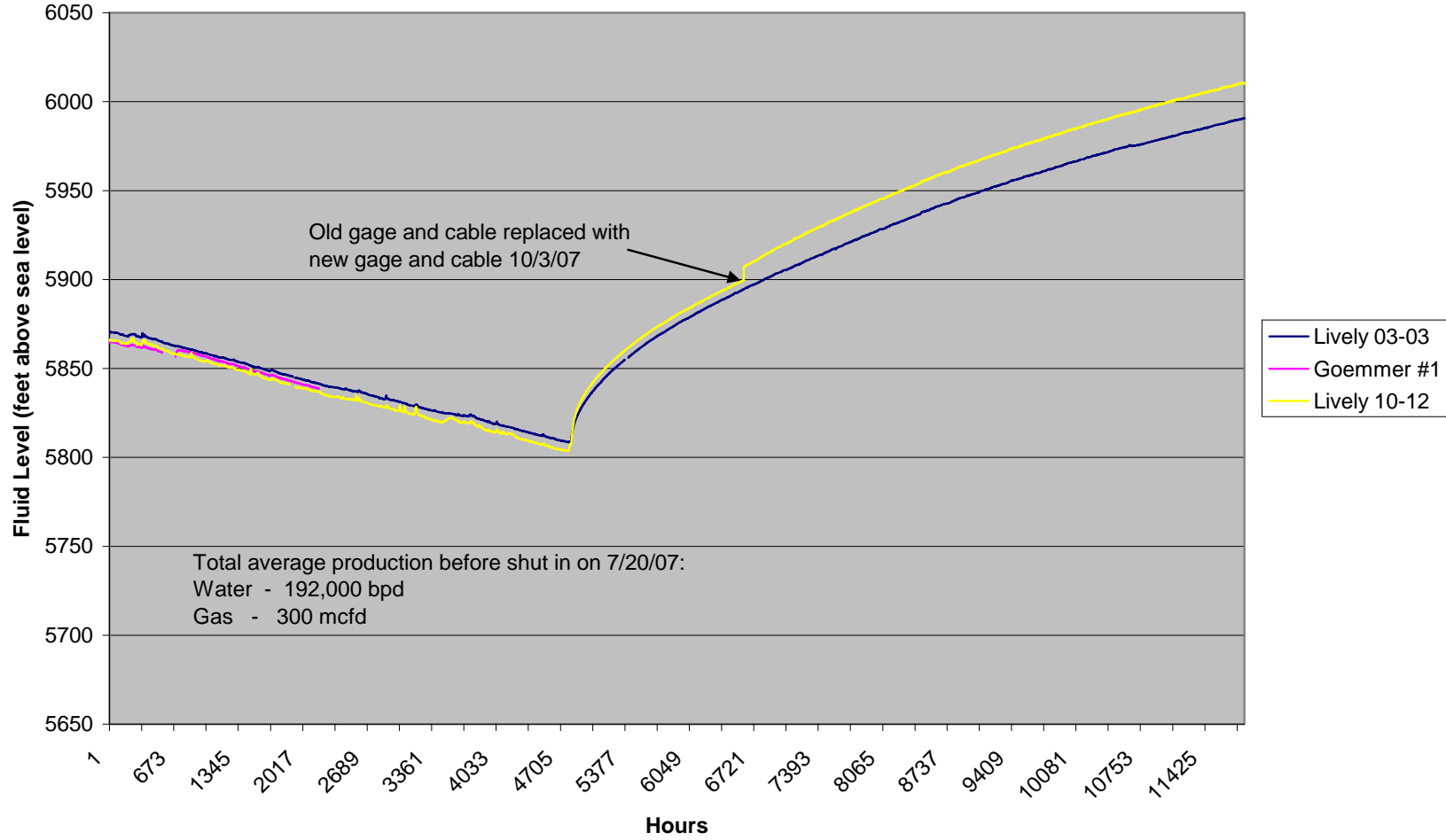
**Smith WW # 239657 Measured Gas Flow  
from 8/22/07 to 5/13/08**



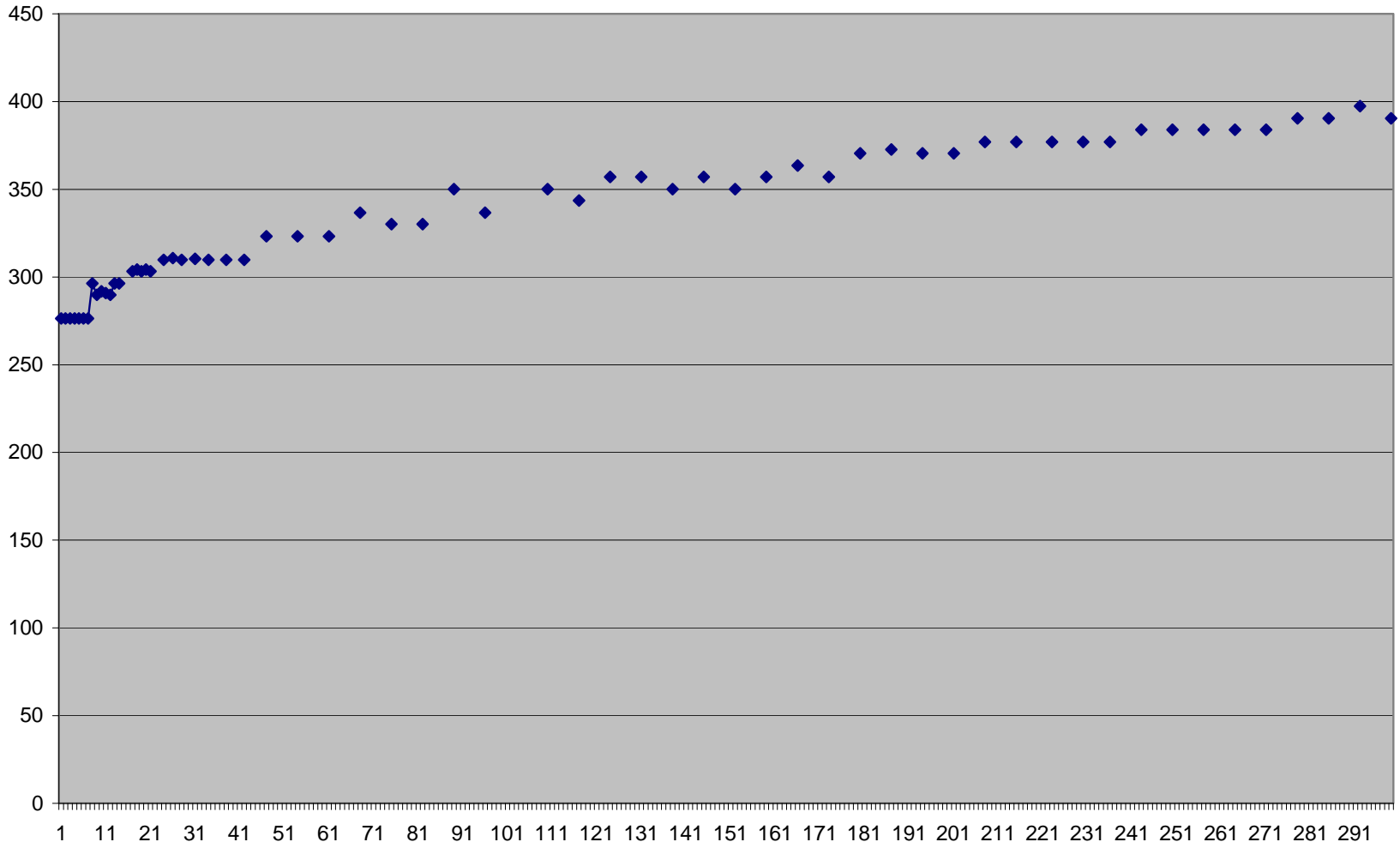
**Attachment 4**  
**Fluid Levels in Petroglyph Production Wells**



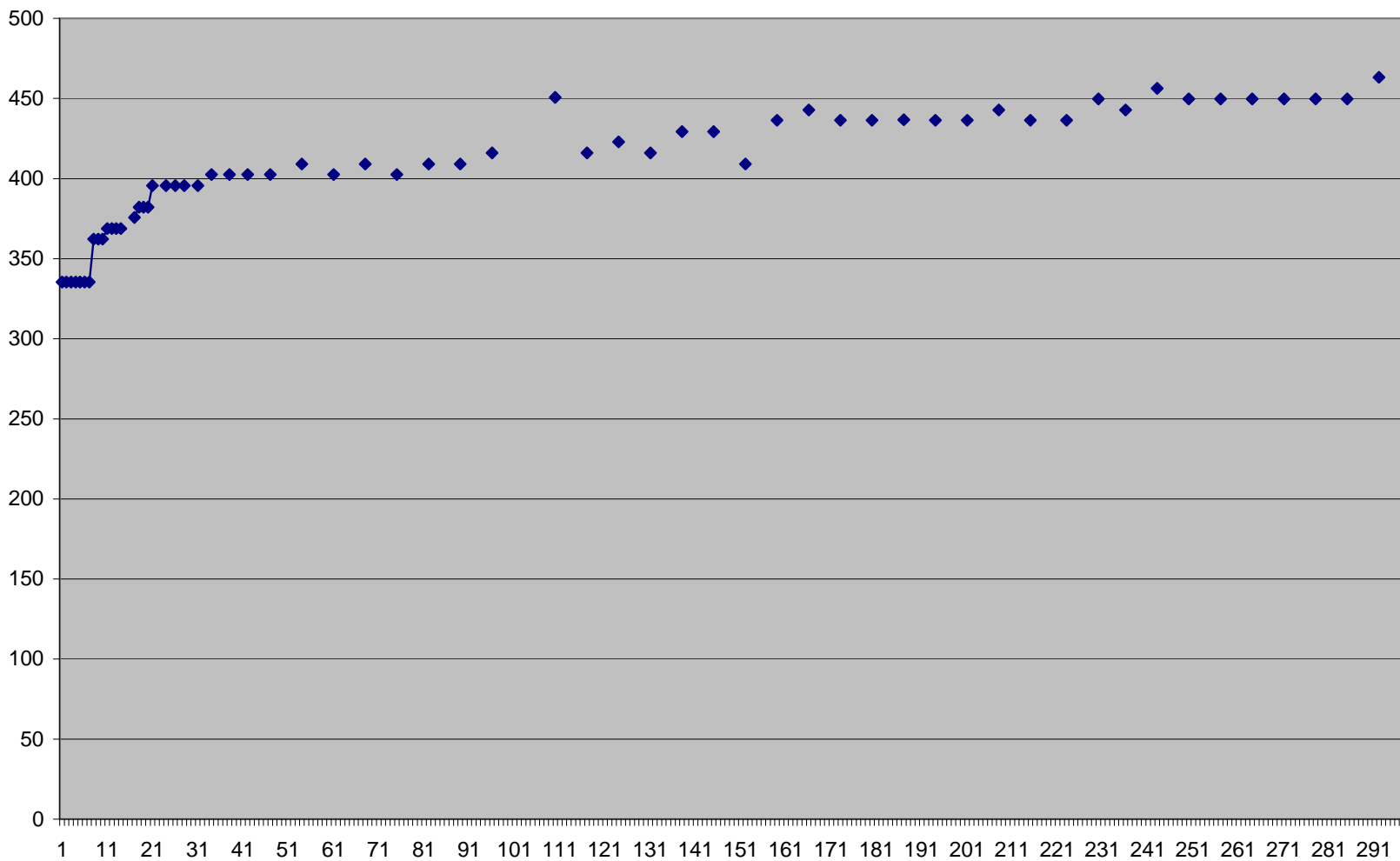
**Monitor Well Fluid Levels PBU  
from 1/1/07 to 5/9/08**



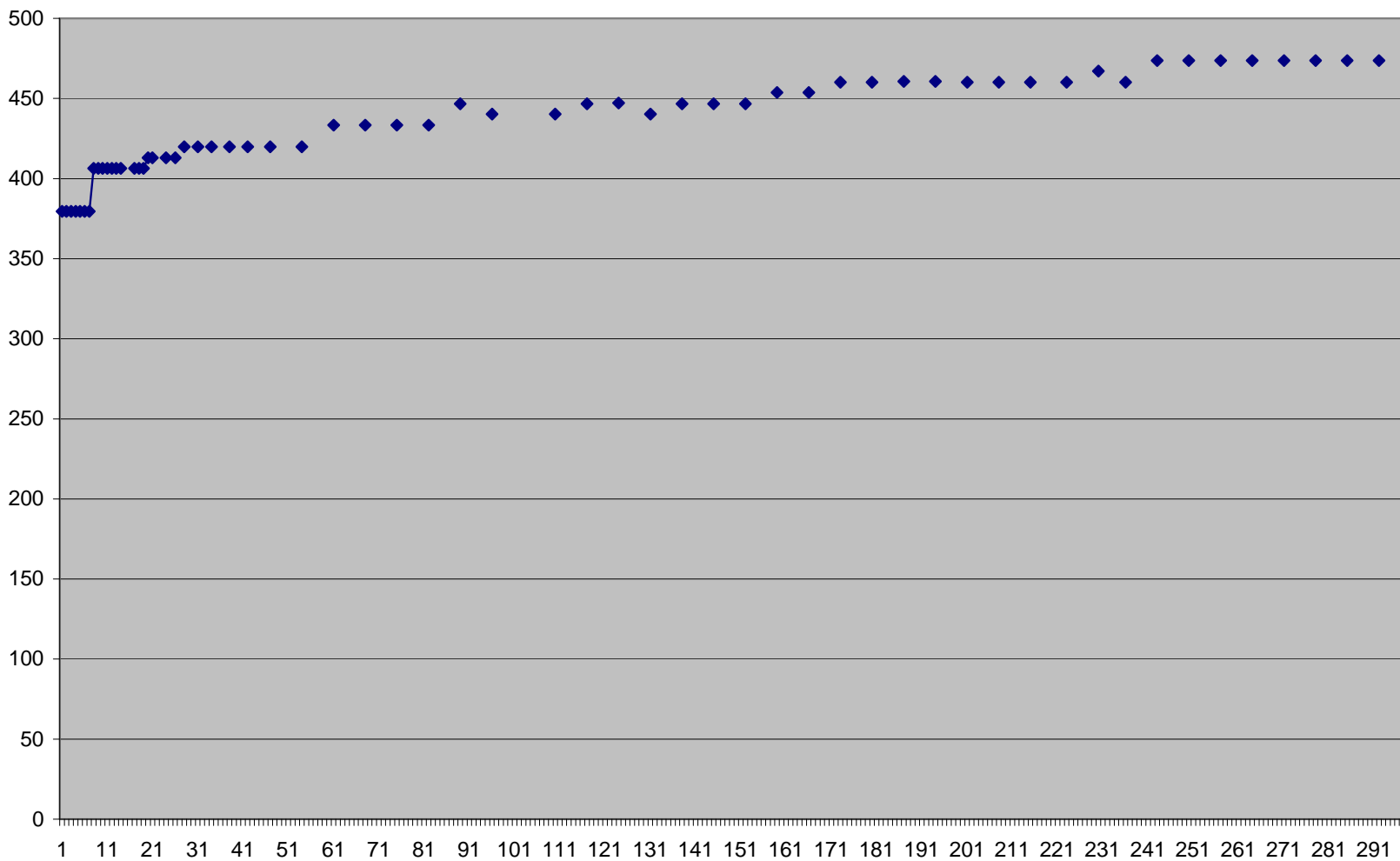
### Lively 02-02



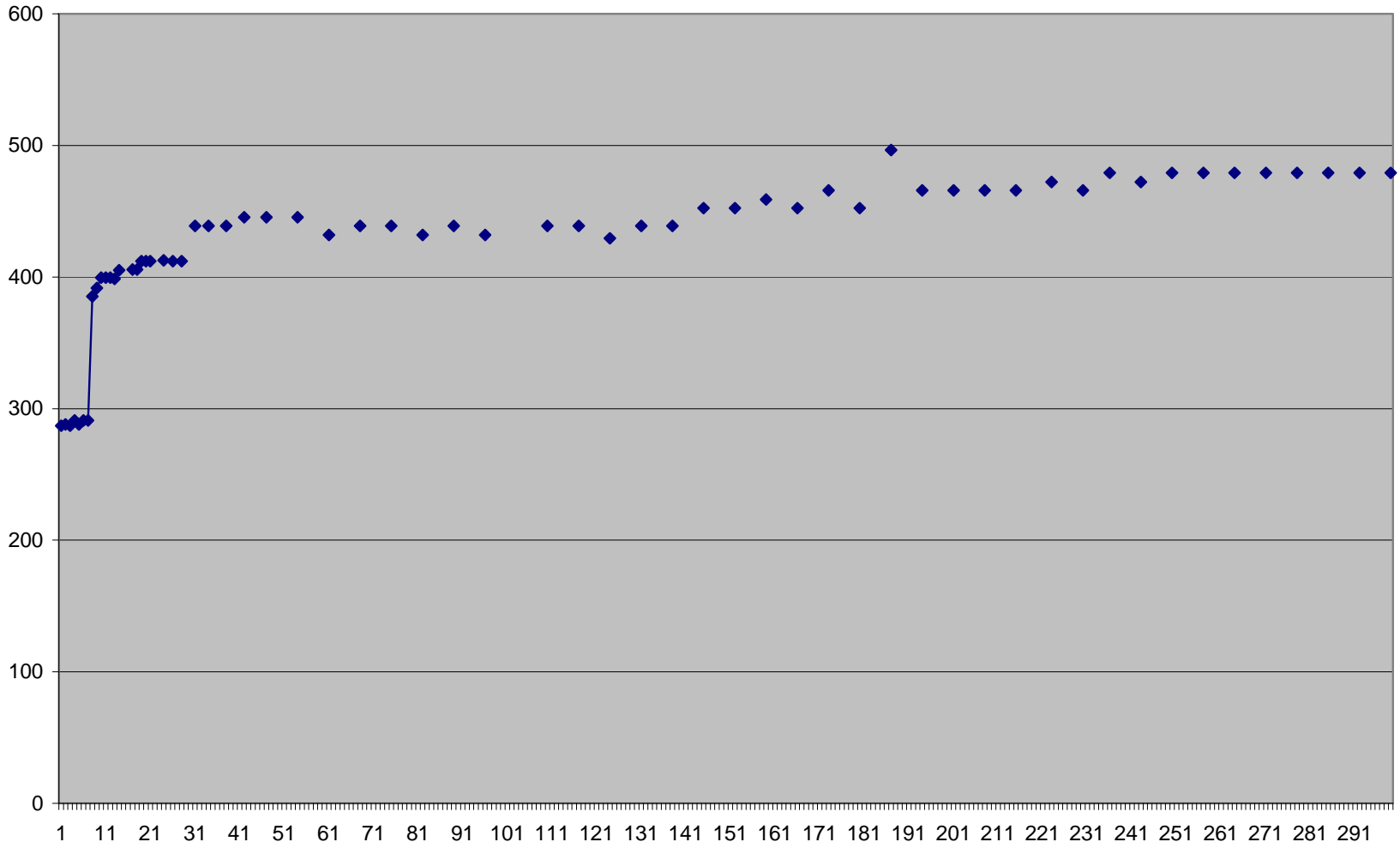
### Lively 02-12



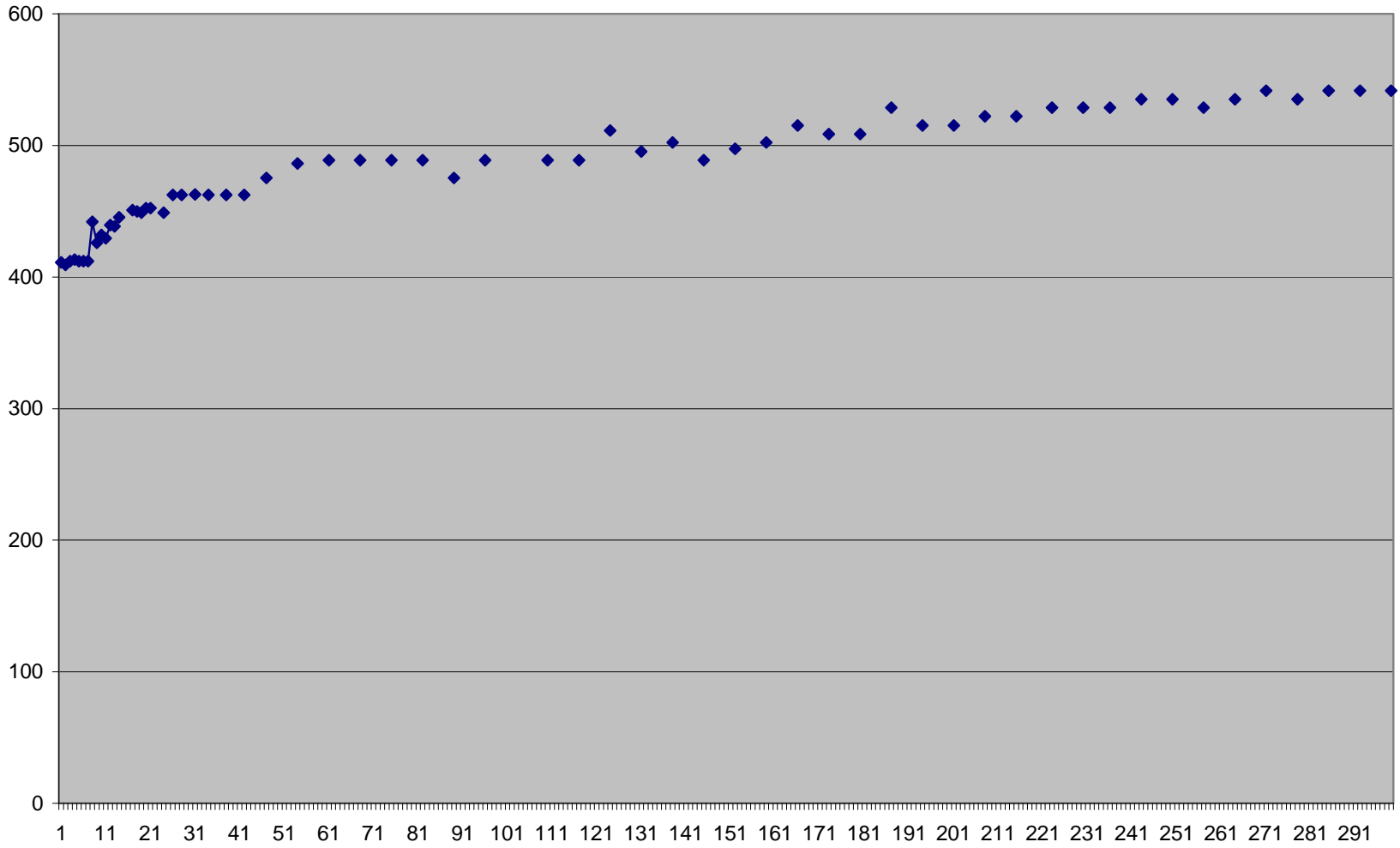
### Lively 03-01



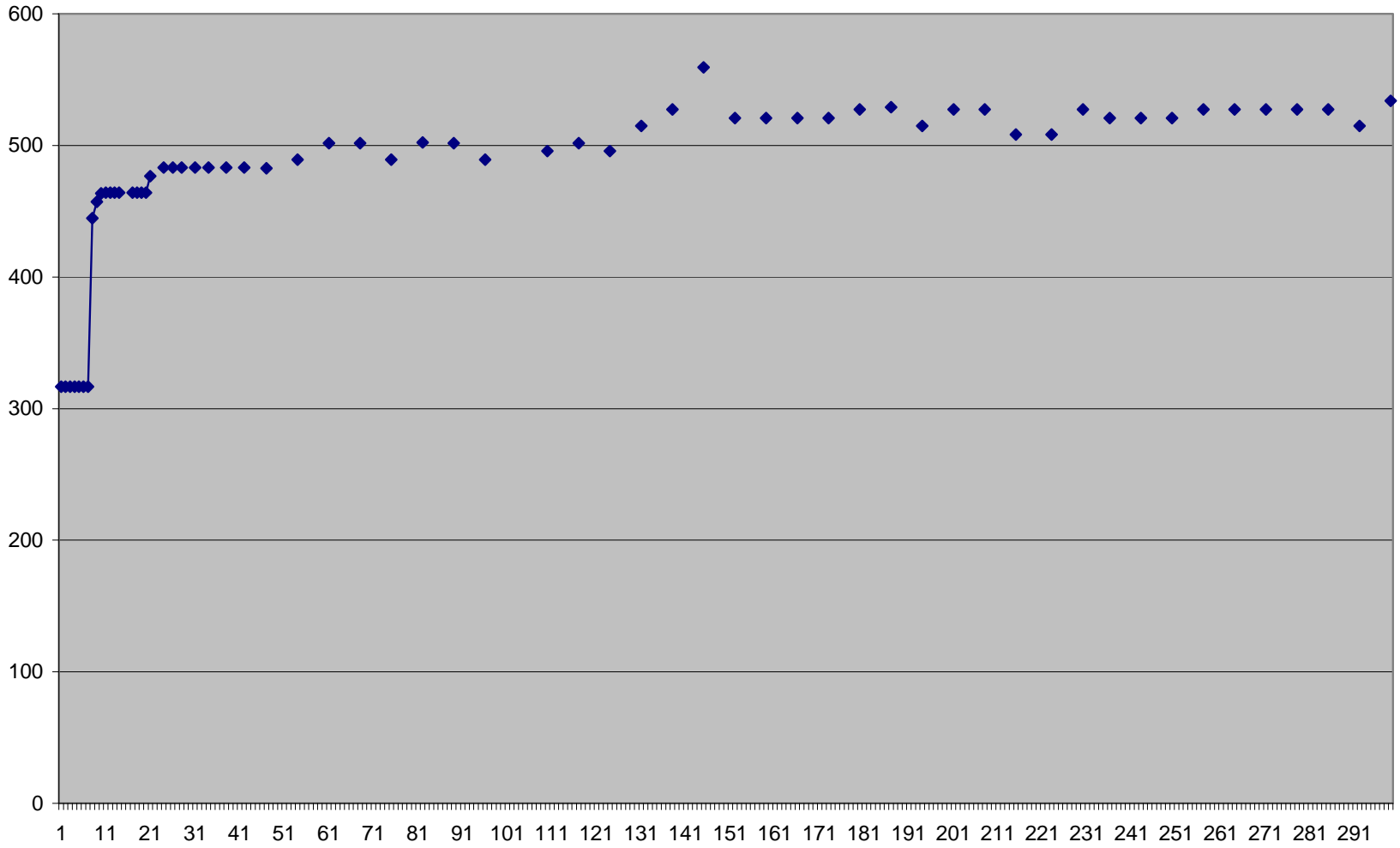
### Lively 03-10



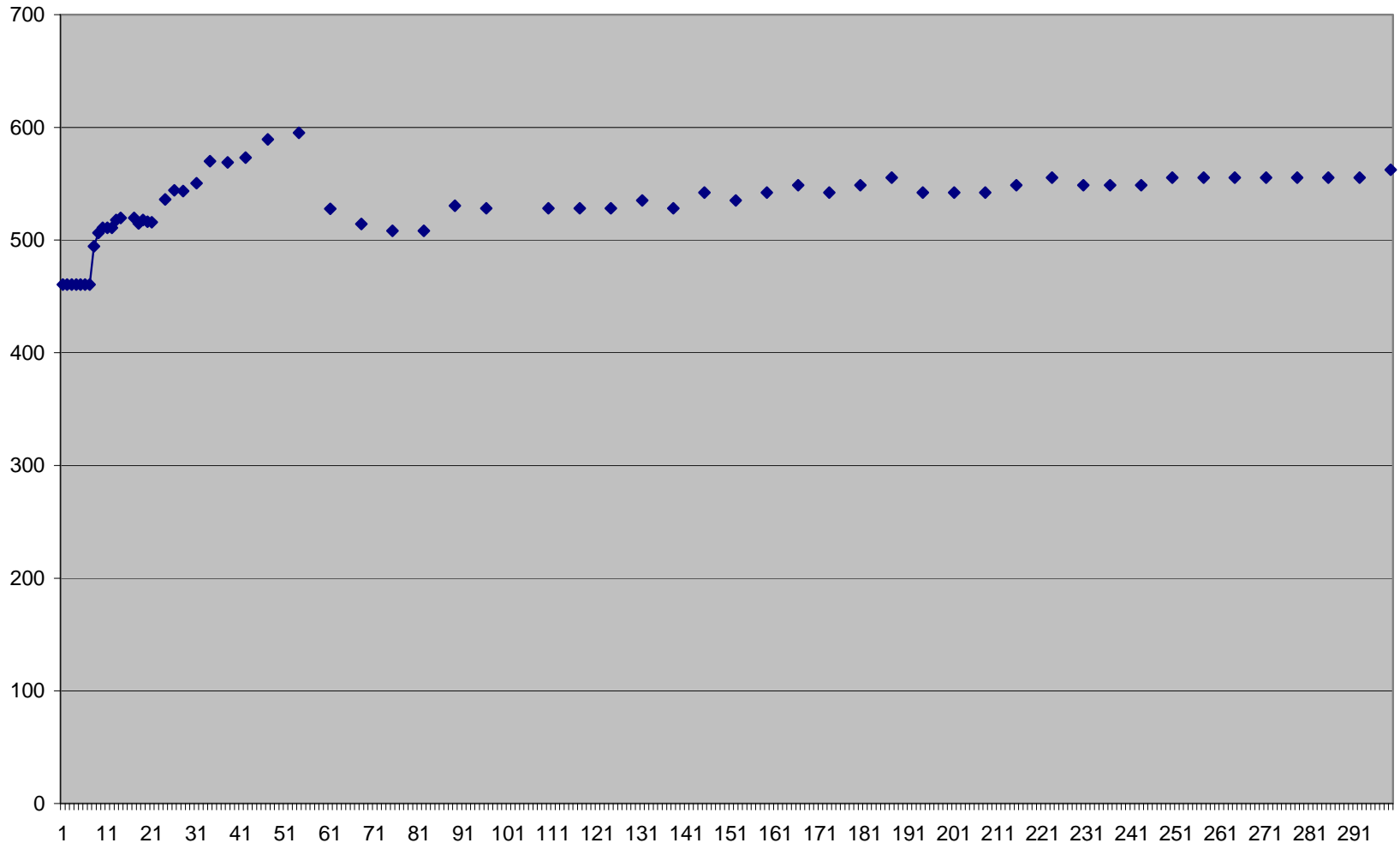
### Lively 03-12



### Lively 10-04

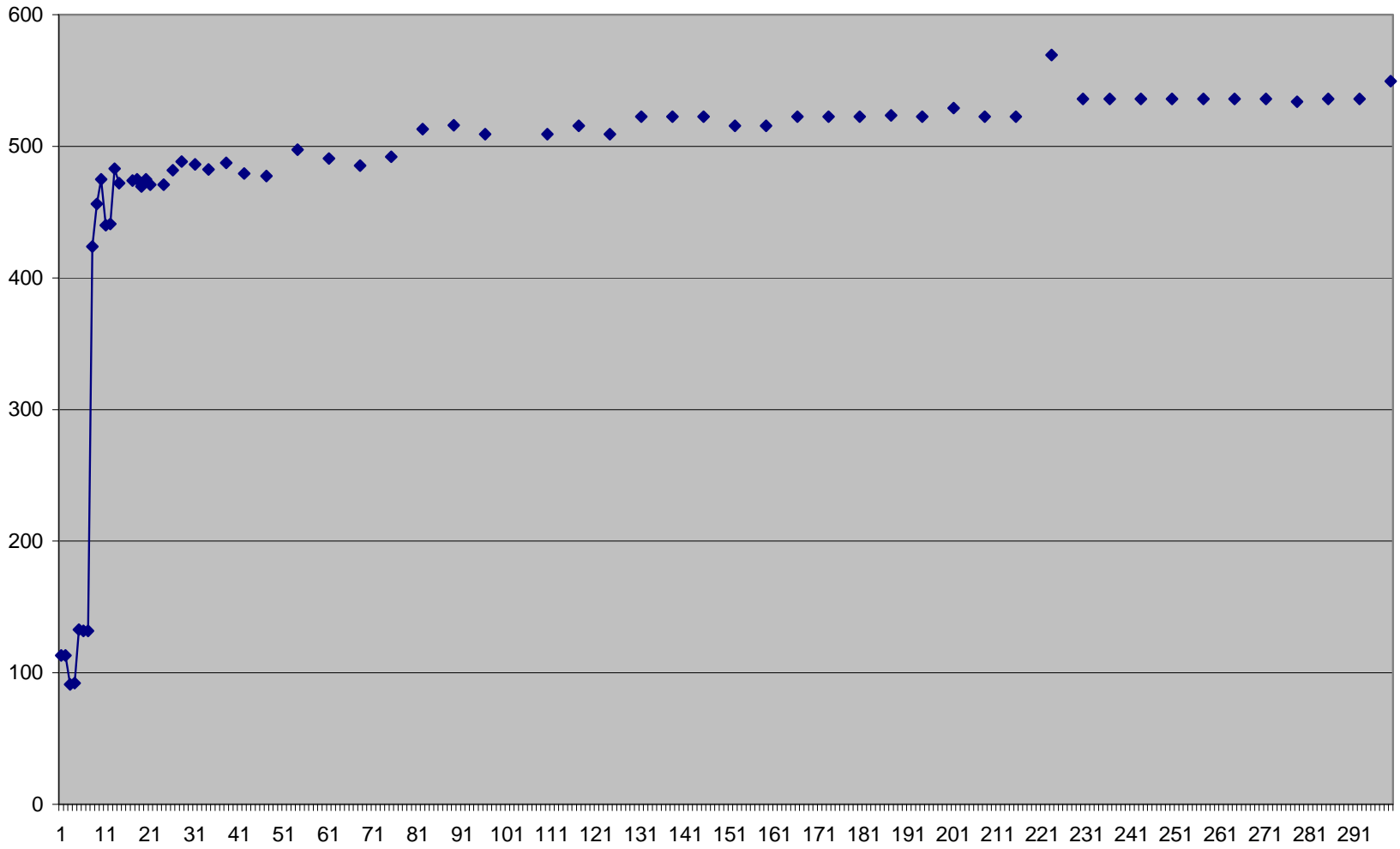


### Rohr 04-10

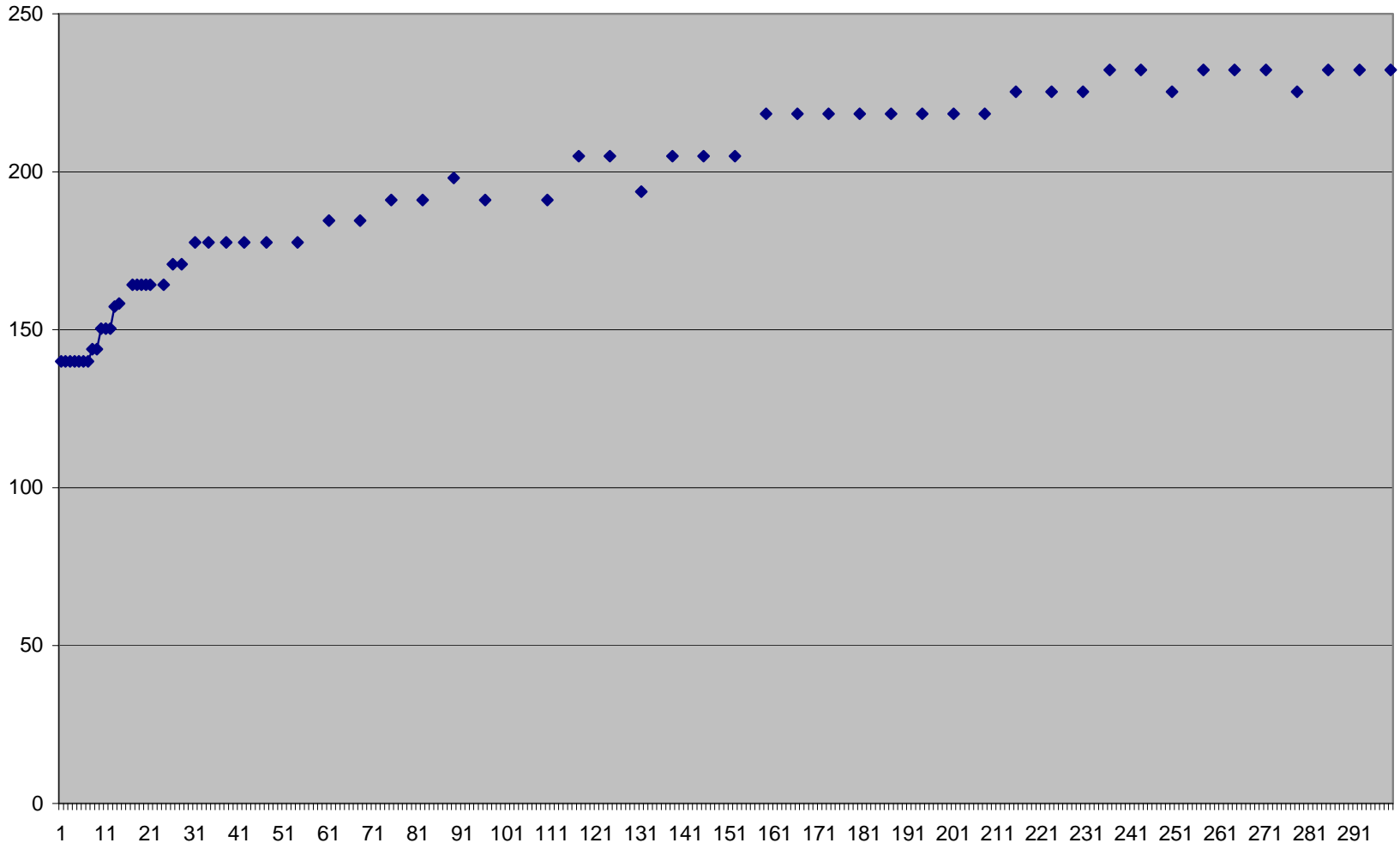




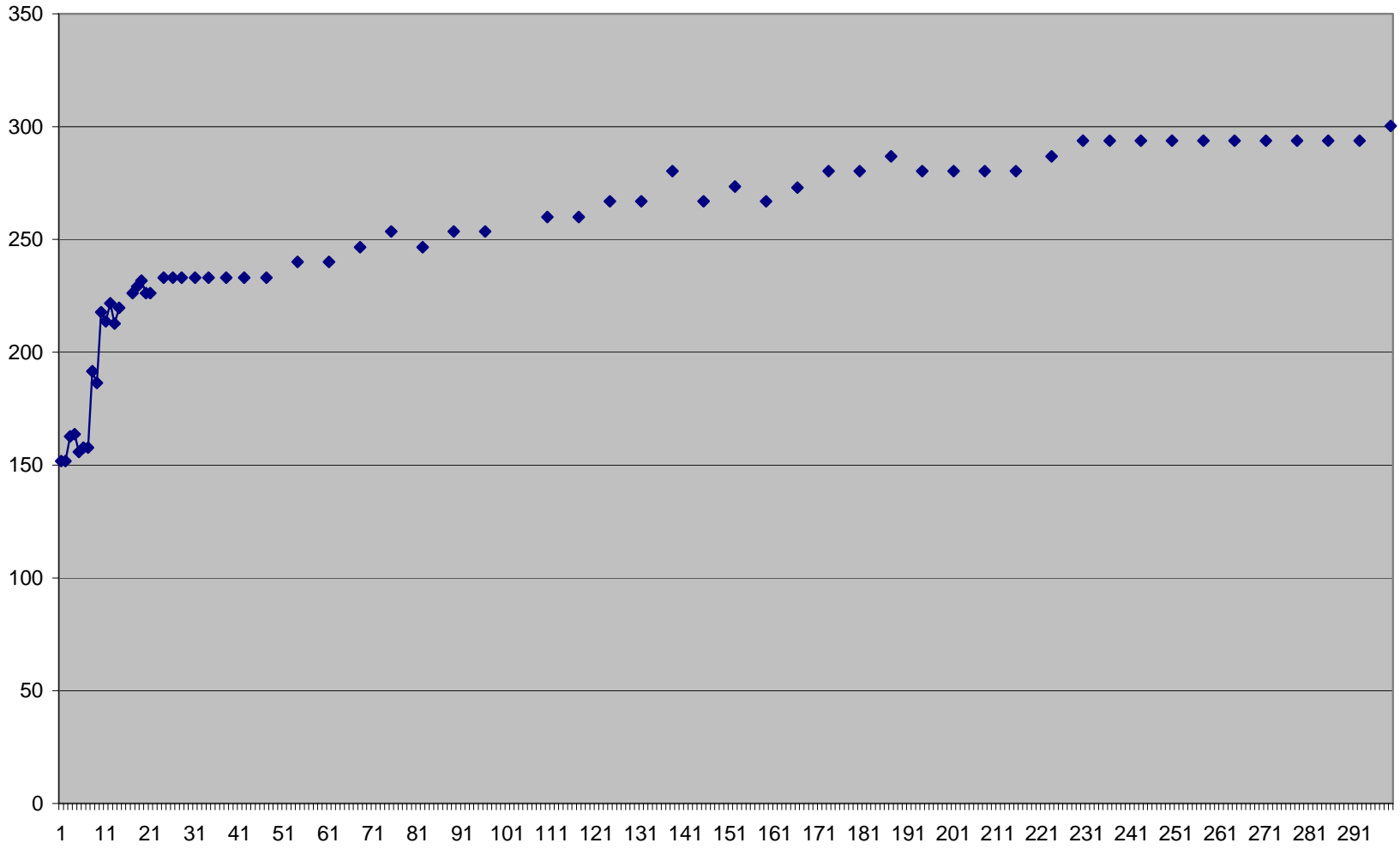
### Rohr 09-10



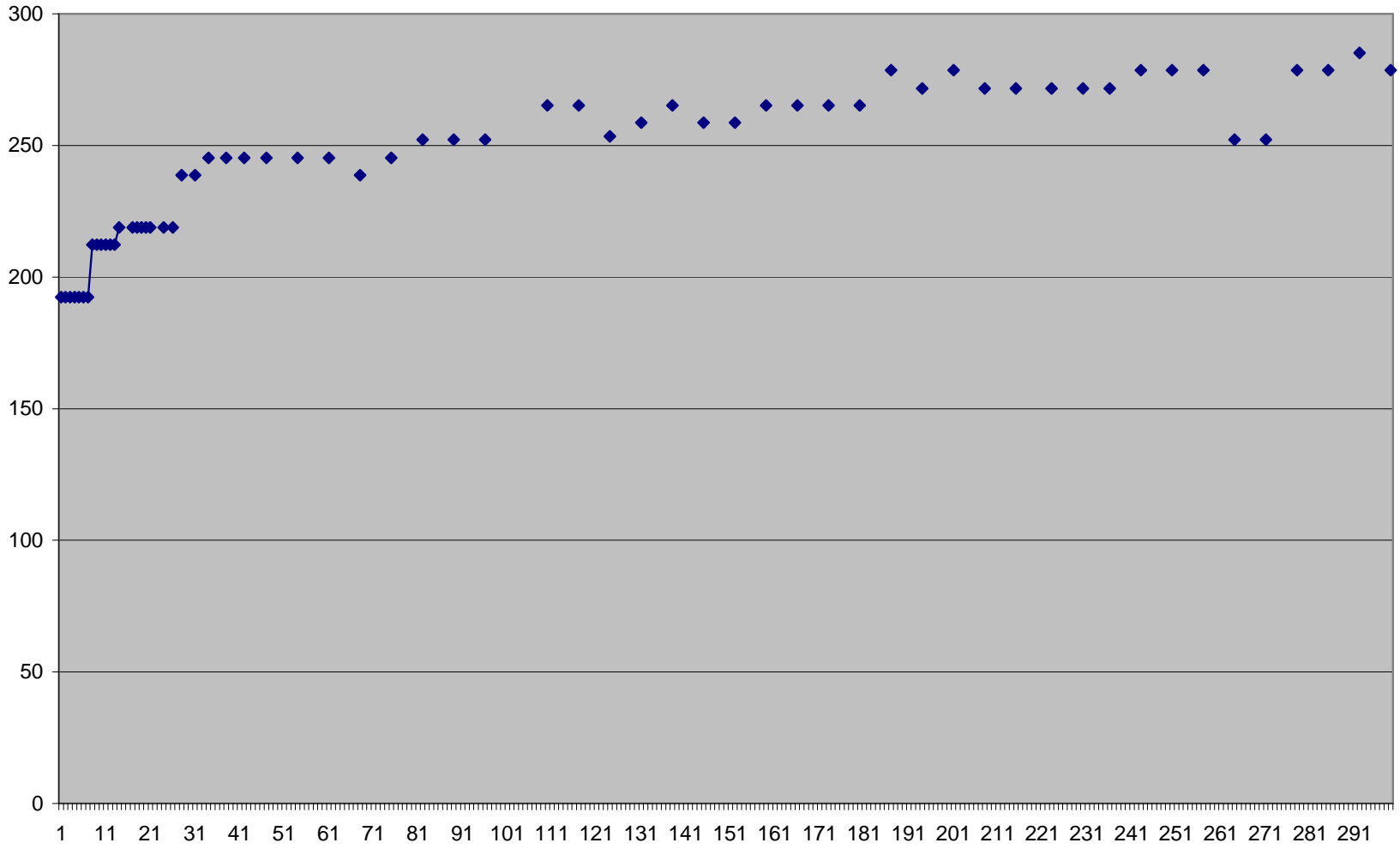
### State 36-02



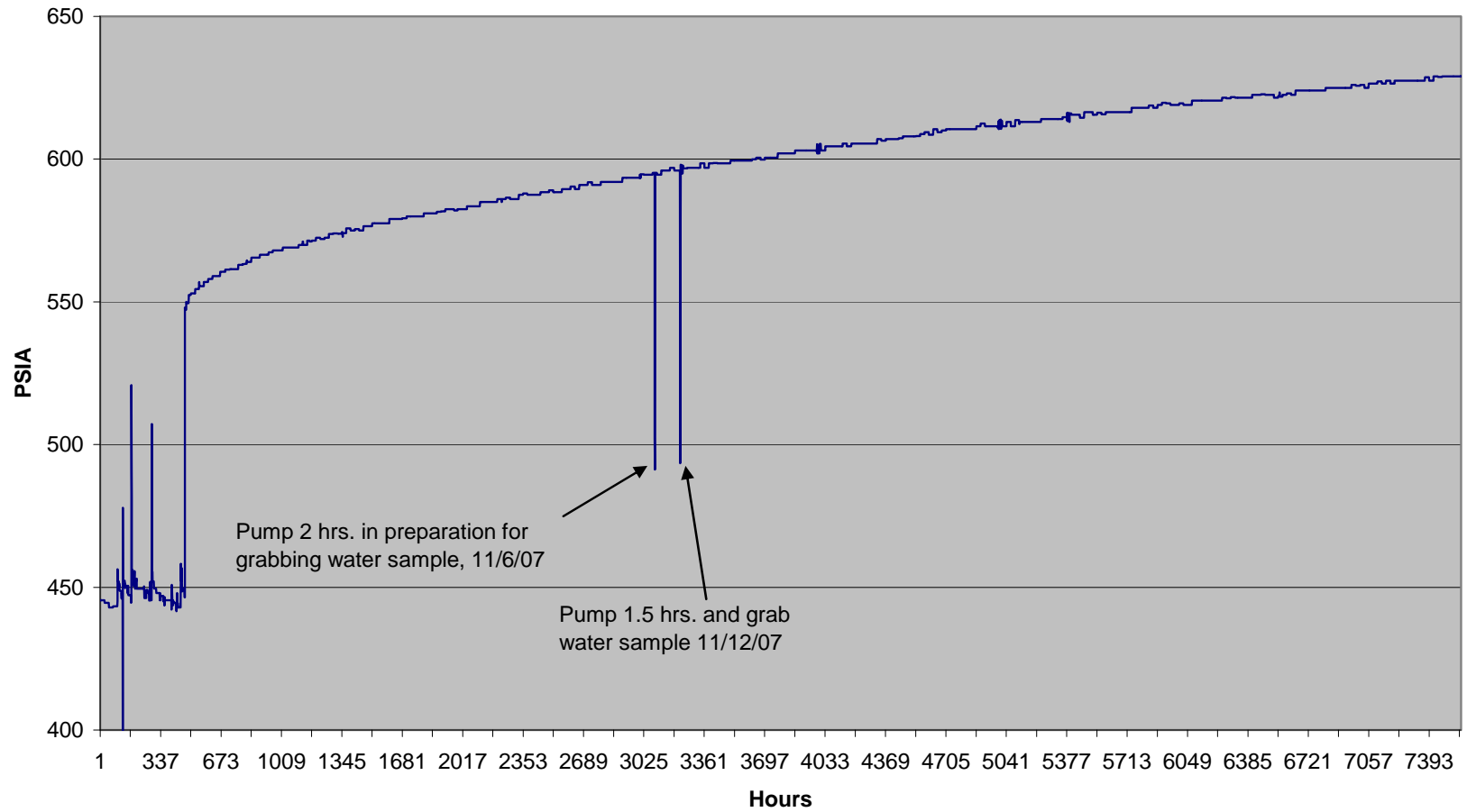
### State 36-05



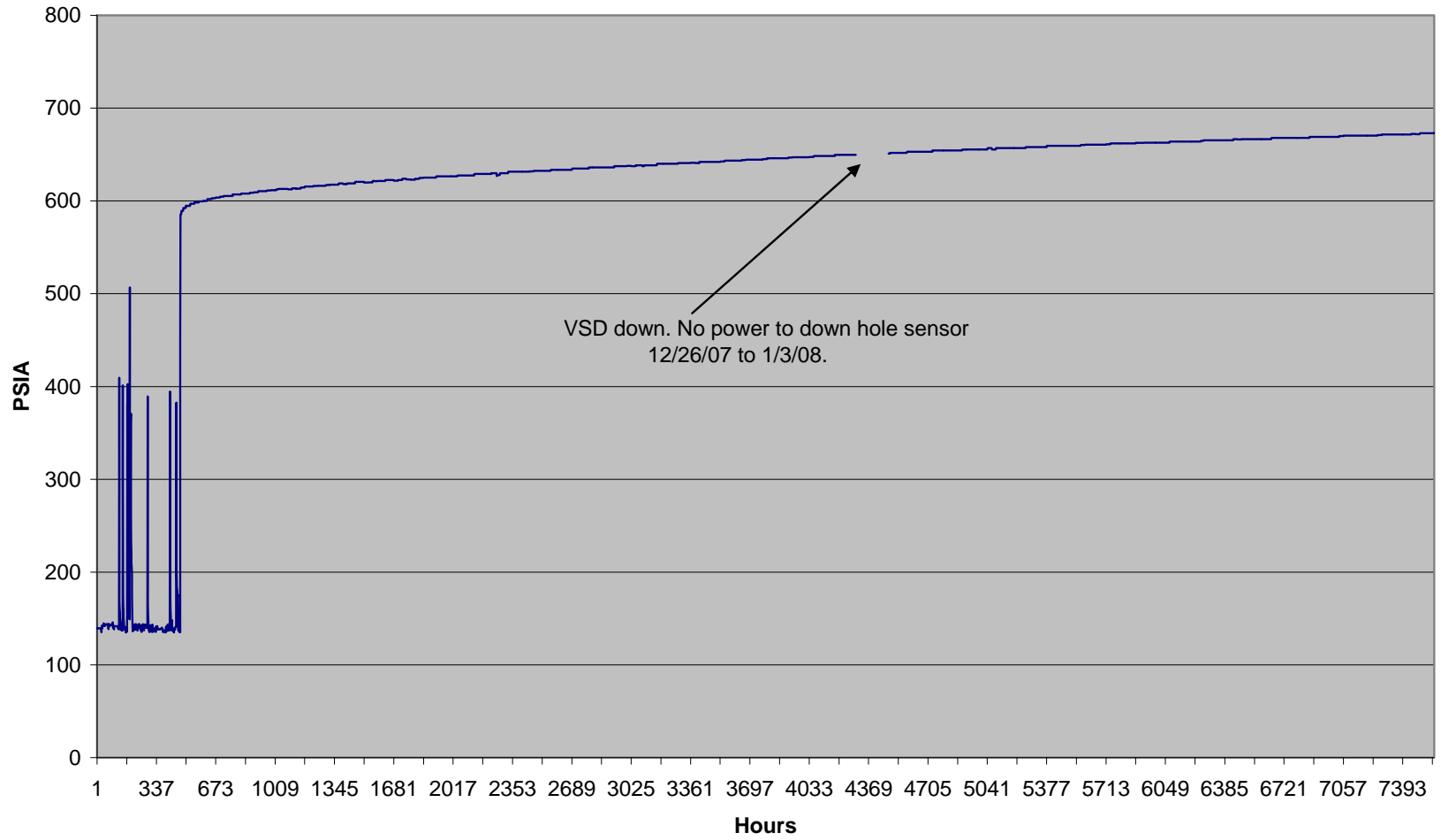
### State 36-11



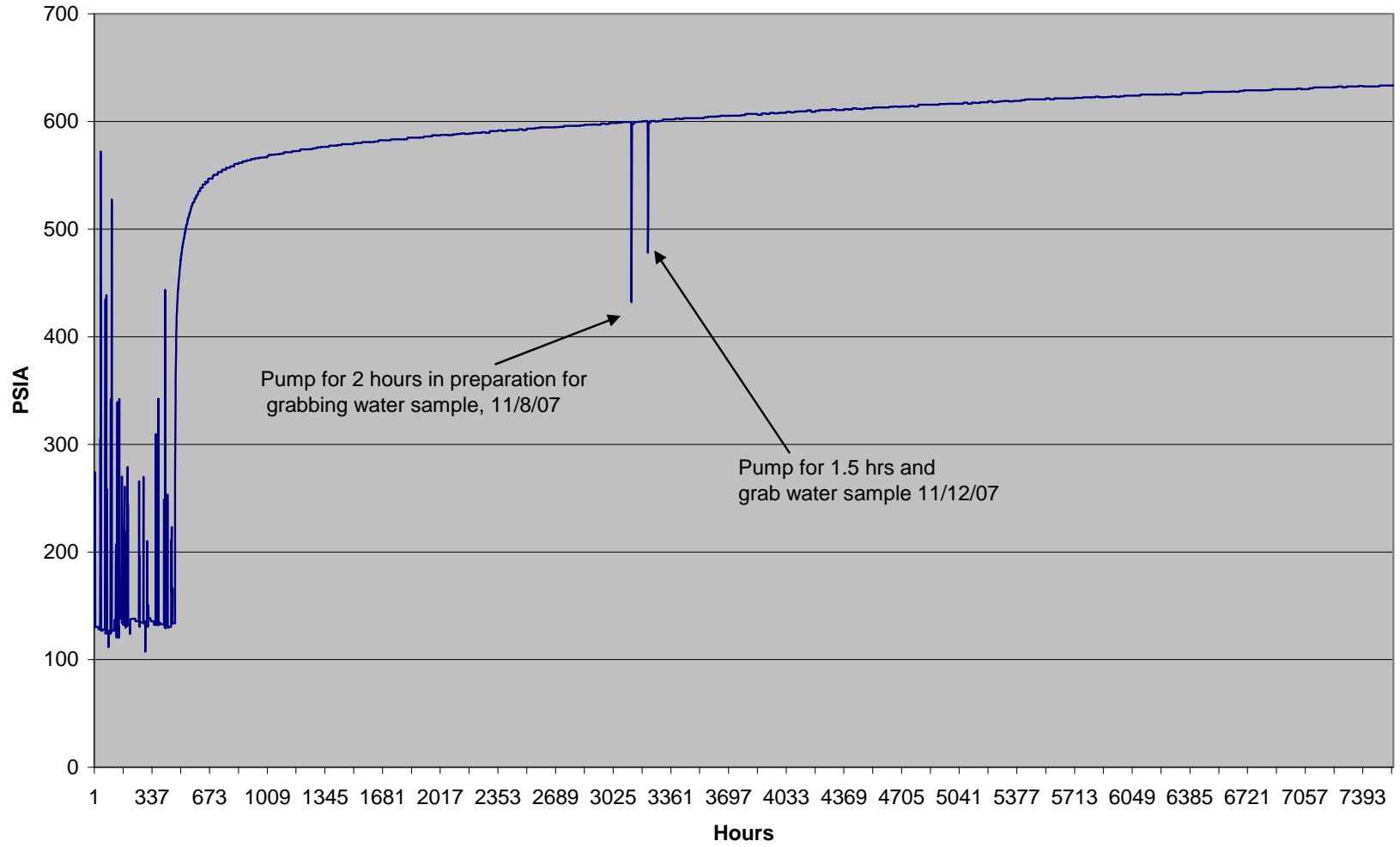
**Rohr 04-14 PBU**  
**from 7/1/07 to 5/11/08**



**Rohr 08-01 PBU**  
**from 7/1/07 to 5/11/08**



Rohr 09-04 PBU data (psia) 7/1/07 to 5/11/08



Rohr 09-05 PBU data (psia) 7/1/07 to 5/11/08

