

**Petroglyph Operating Company  
March 2009  
Monthly Report**

**Covering the period of 2/27/09 through 4/05/09**

**Prepared for  
Colorado Oil and Gas Conservation Commission**

**April 13, 2009**

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## **Petroglyph Operating Company, Inc. Monthly Report – March 2009**

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 December/January Monthly Report (February 27, 2009) through April 5, 2009. 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 Phase 1 Remediation System**

The Phase 1 remediation system associated with the Methane Investigation, Monitoring and Mitigation Program (MIMMP) was put into operation on December 8<sup>th</sup>. The system was started with pumping from Recovery 1 Kittleson and Recovery 3 PEI. Recovery 1 gas production has dropped from approximately 25.7 MCFD at the start of mitigation to approximately 12.52 MCFD on March 29, 2009. Readings showed a fairly slow and steady decline during the reporting period. Recovery 3 was at approximately 0.75 MCFD at the start of mitigation and increased to approximately 1 MCFD and remained around 1 under late February and then began a slow and steady decline to 0.88 MCFD on March 29, 2009. Recovery 4 has shown the most variability ranging between 0.9 MCFD and 0. Readings at Recovery 4 on March 29, 2009 were approximately 0.3379 MCFD. The average pumping rate for Recovery 1 has been 18.9 gpm while Recovery 3 has been 4 gpm intermittently (or averaging about 1 gpm over a day's time) (Table 1).

Petroglyph has attempted clean out of Recovery 4 from February 10<sup>th</sup> through this reporting period. The well has been pumped for 15 minutes each weekday. A total of 3,480 gallons have been pumped from the well, however the well yield remains low, the water remains cloudy and the quality remains indicative of poor development. Petroglyph has ceased attempts to clean out the well and will determine a further course of action for the well within the next several months. Current water quality of the well is included on the data disk.

Gas flow in POCI 55 monitoring well and the Recovery wells is shown graphically in Attachment 1.

Injection started in Injection 01 and 04 on December 9, 2008 and Injection 02, 03, 05, 06 and 07 on December 10, 2008 (Table 1). Injection rates vary for the individual injection wells and range from 0.75 to 5.88 gpm. The two wells on the Rohr property (Injection 04 and 05) have accepted the most water. Injection 08 Haeffner has not accepted water very well. All of the approximately 2.8 million gallons of water that have been recovered have been re-injected following methane off gassing. Meter readings between recovery and injection flow rates continue to show less than a 5% difference. Based on testing and observation there are no system losses and the difference is most likely a result of limitations in calibration of the instrument readings.

Attachment 2 includes graphs of pressure and fluid level data from POCI55, Barrett water well, Bergman water well and Coleman water well which are within one mile of the remediation system. Attachment 2 also includes graphs for Meyer located in the River Ridge Ranch Subdivision but more than one mile from the remediation system; Bruington located in City Ranch Sundivision; and Evendon and Garza-Vela located in the Silver Spurs Ranch Subdivision. The Barrett well water level increased steadily from the start of remediation to January 3, 2009, and has stayed relatively constant since that time (Attachment 2). The pressure in the Coleman well appears to be showing a decrease from the start of the remediation system to mid to late February and is now showing a relatively constant reading (Attachment 2). Other wells have not shown responses that could potentially be attributed to the remediation system.

Attachment 3 includes gas flow measurements from Bruington, Coleman, Angely, Bounds and Smith. All wells except the Bruington and Bounds wells are located within one mile of the remediation system. The Coleman well was not pumped during this reporting period. The Bruington, Angely and Smith wells are not showing any gas. None of the wells appear to be showing any response that can be directly attributable to the remediation system pumping.

Attachment 4 includes charts of twice-weekly gas monitoring of fourteen water wells near the mitigation system. Petroglyph started monitoring the Lively 10-02, (which is a CBM well plugged and abandoned in 1998 and reopened to check for gas in 2007). It exhibited an increase in gas concentration about the same time as the mitigation start up but is not clear that this is related to the mitigation system. The remaining water wells in this attachment do not indicate a response to the remediation pumping and injection.

## **2.0 Phase II Remediation System**

Petroglyph submitted the Phase II Methane Remediation System Class V Underground Injection Control (UIC) permit application to Region 8 of the EPA on January 7, 2009. The draft permit is currently under internal review and is expected to be issued for public comment during the next reporting period. A Colorado Division of Water Resources application for the Phase II system was submitted on February 18, 2009 and is under review.

## **3.0 Ongoing Investigation**

### Aquifer Characterization

Petroglyph continues to evaluate data collected through the remediation system operation and ongoing monitoring to refine the aquifer characterization.

### Dissolved Methane Sampling

Petroglyph collected samples for dissolved methane in two wells during the reporting period, Modlish and Stetler. Results for these samples have not yet been reported. Results from samples collected during the last reporting period for Recovery 4, Injection 5,

Campbell and Rhoades are included on the data disk. The results for all dissolved methane sampling collected to date are shown in Table 2.

#### Water Quality Sampling

Water samples are available in the electronic disk for drinking water parameters from Recovery 4. The results show Fluoride levels of 12.1 mg/l and a pH of 9.4, both above the drinking water limits.

#### Methane Source Investigation

In an ongoing effort to understand the source of the methane which has migrated and the zones in which migration is occurring (as well as the potential role of dikes in the methane movement), Petroglyph has applied to the Bureau of Land Management (BLM) for permission to drill an exploratory hole on BLM land in the vicinity of the Bounds property. This hole will be located to determine if gas is present, at what level the gas occurs and whether or not additional venting or treatment is needed at that location. The hole should provide additional information on gas that may be contributing to the Bounds well. A decision from the BLM is expected in the near future. Draft permit stipulations have been presented to Petroglyph for review prior to issuance of the final permit.

An application to drill the well on BLM land has been approved by the Colorado Division of Water Resources for the hole on BLM land. Drilling will commence once all permit approvals have been received and the weather conditions permit.

### **4.0 Monitoring**

#### Down-hole Pressure and Fluid Level Monitoring

Petroglyph has installed continuous pressure monitoring for fluid levels in water wells at Barrett, Bergman and Coleman located within one mile of the remediation system; Meyer located in the River Ridge Ranch Subdivision but more than one mile from the remediation system; Bruington located in City Ranch Subdivision; and Evendon and Garza-Vela located in the Silver Spurs Ranch Subdivision. Information from these wells is downloaded monthly by Petroglyph, graphed, and included in electronic data disk with this monthly report. The POCI 55 Monitoring Well located near the remediation system also has a pressure gage. Attachment 2 shows graphically the changes in pressure for each of these wells. There are no significant changes in down hole pressures or fluid levels from previous monthly reports. As can be seen on the graphs, many of the wells have pressure and associated water levels that are relatively constant varying within a small range (Barrett, Bergman, Bruington, Coleman, and POCI 55). One well had pressure and associated water levels trending slightly upward (Garza). The remaining two wells showed downward trends with Evendon showing a slight downward trend and Meyer showing a downward drop on March 23<sup>rd</sup>.

#### Gas Flow Monitoring

Gas flow monitors have been installed by Petroglyph at the Angely, Bounds, Bruington, Coleman, and Smith wells. All of these wells except for Bruington and Bounds lie within one mile of the remediation system. Continuous gas flow monitoring occurs at Coleman

and Smith, while gas flow is spot monitored with a gage and orifice tester at Angely, Bounds, and Bruington. Gas pressure at the 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 graph form in Attachment 3.

While gas flow can be variable, in general gas flow has shown an overall decrease in all wells ranging from over the last year to over the last several months. However, measurements taken just after the start of the remediation system pumping have shown a slight increase in methane levels in the Angely and Bruington wells, which then decreased quickly to zero from 0.168 MCFD and 0.747 MCFD respectively. Gas flow from the Smith well has been at zero for a sustained period of time and has shown no changes during the reporting period. It appears that there was no long-term effect to these two wells from the remedial pumping.

The Bounds well continues to vary slightly in gas flow. During this reporting period the measurements varied between 0.747 MCFD and 0.648 MCFD.

The Coleman well only shows gas flows when the well is pumped. The well was not pumped during this reporting period.

Figure 1 shows the monitored gas flows in each well and the timing for drilling and testing of Petroglyph remediation system wells as well as start up of the remediation system. As shown on this figure, the drop in gas flow in the domestic wells appears to have occurred in correlation with the drilling of remediation system wells and venting of gas through these wells. This would indicate that the remediation system has been correctly located to remediate the area of largest gas concentration in the domestic wells.

#### Fluid Levels in Petroglyph Production Wells

Fourteen Petroglyph production wells are currently monitored for fluid level and casing pressure: Lively 02-02, Lively 02-12, Lively 02-03, 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. There is no data provided for the Rohr 09-05 well because the power in the well is off and waiting some repair work. Two monitoring wells are also monitored continuously for water levels (Lively 03-03, and Lively 10-12). The monitoring occurs in the formation into which the wells are completed, the Vermejo Formation. Changes in fluid levels in Petroglyph's production wells are shown graphically in Attachment 4.

Since Petroglyph is no longer pumping these wells to draw down water levels, pressure is equalizing within the Vermejo coals. Consequently, water levels are generally rising in all wells as would be expected, although the rate of rise is slowing.

#### Bi-Weekly and Monthly Water Well Monitoring

Petroglyph currently monitors for methane gas levels near approximately 85 wells in the vicinity of the site. Measurements are taken near the wellhead at the well vent and in some cases are also taken at the cistern. One new well, Lightcap, was added during this reporting period.

Table 3 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. Attachment 5 consists of graphs of selected gas readings.

Of the 85 wells, seven 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 18 wells were sampled once, 45 wells were sampled twice, 1 well was sampled three times, 1 well was sampled four times, and 13 wells were sampled five times.

Table 3 has been revised to show the gas monitoring near wells by area or subdivision as follows:

- Wells within approximately one mile of the remediation system or of special interest (i.e. Bounds well)
- Wells within the River Ridge Ranch Subdivision outside of one mile
- Wells within City Ranch Subdivision or within the same general distance from the site (i.e. Bounds well)
- Wells within Silver Spurs Ranch Subdivision
- Wells within Black Hawk Ranch Subdivision

As shown on Table 3, the monitoring results for the 78 wells sampled showed that overall gas levels at 53 wells had no change from the previous monitoring period measurements. Of those 53 wells with no changes, 52 wells had no detectable methane. 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 methane gas content. Of the remaining 25 wells, 18 showed increases in methane, with 9 of those only slight increases and 7 showed decreases with 5 of those well showing slight decrease.

The breakdown by Subdivision or area as on Table 3 is as follows:

**Within 1 Mile of Remediation System**

- Gas near 21 wells monitored
- 15 wells showed no change and no detectable methane gas with one well showing no change and detectable methane levels
- 4 wells showed increased methane with 3 of those only a slight increase
- 2 wells showed slightly decreased methane levels with 1 of those only a slight decrease

**River Ridge Ranch Subdivision Outside of One Mile**

- Gas near 19 wells monitored
- 17 wells showed no change and no detectable methane gas
- 1 well showed slightly increased methane levels
- 1 well showed slightly decreased methane levels

### **City Ranch and Other Properties**

- Gas near 12 well monitored
- 8 wells showed no change and no detectable methane gas
- 2 wells showed increased methane with 1 of those only a slight increase
- 2 wells showed slightly decreased levels of methane gas

### **Silver Spurs Ranch**

- 23 wells sampled with one of these a new site with no history
- 11 wells showed no change and no detectable methane
- 11 wells showed increased methane levels with 4 of those only a slight increase

### **Black Hawk Ranch**

- Gas near 1 well monitored with no change

Table 4 shows the current monitoring schedule including which wells are monitored bi-weekly and which wells are monitored monthly or at a different frequency. The schedule also includes those wells which will be monitored semi-weekly or weekly at the start up of the injection system for any changes as a result of system start up. A reduction in the monitoring was approved by the COGCC on February 10, 2009. That change called for a reduction in twice weekly sampling to once a week for the next month and if no changes were observed the sampling would drop to bi-monthly. Table 4 reflects the approved changes to the monitoring schedule.

### 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 the reporting period no additional ground surveys were conducted.

One homeowner, Stetler, expressed concerns with effervescence in the water coming from his faucet so his wellhead and cistern were checked for the presence of methane gas. No gas was detected at the cistern, but low levels were detected at the wellhead.

### Helicopter Survey

Petroglyph completed a helicopter survey for methane seepage (May 16, 17, and 18, 2008) and provided that data to the COGCC under separate cover. Hand held methane detector ground surveys have been conducted for areas where the helicopter survey indicated a potential new presence of methane or to confirm other helicopter readings. These hand held surveys have been completed for the May helicopter survey.



## **5.0 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. No alarms have ever been triggered by the presence of methane.

### Water Supply

Petroglyph is currently providing water to 16 homes. One new name was added to the list during this reporting period. Table 5 provides a list of the homes currently receiving water. Water is delivered as needed and can vary from month to month due to residential water use and whether or not the homes are occupied.

### Public Outreach

Craig Saldin and Ken Smith attended a River Ridge Board of Manager's Meeting on March 21, 2009. Ken Smith gave a presentation at the meeting on coal bed methane production and safety.

Ken Smith attended a meeting of the Colorado Agricultural Committee from the Colorado legislature in Walsenberg on March 25, 2009 where he made a presentation on coal bed methane and safety.

### Health and Safety/Emergency Planning

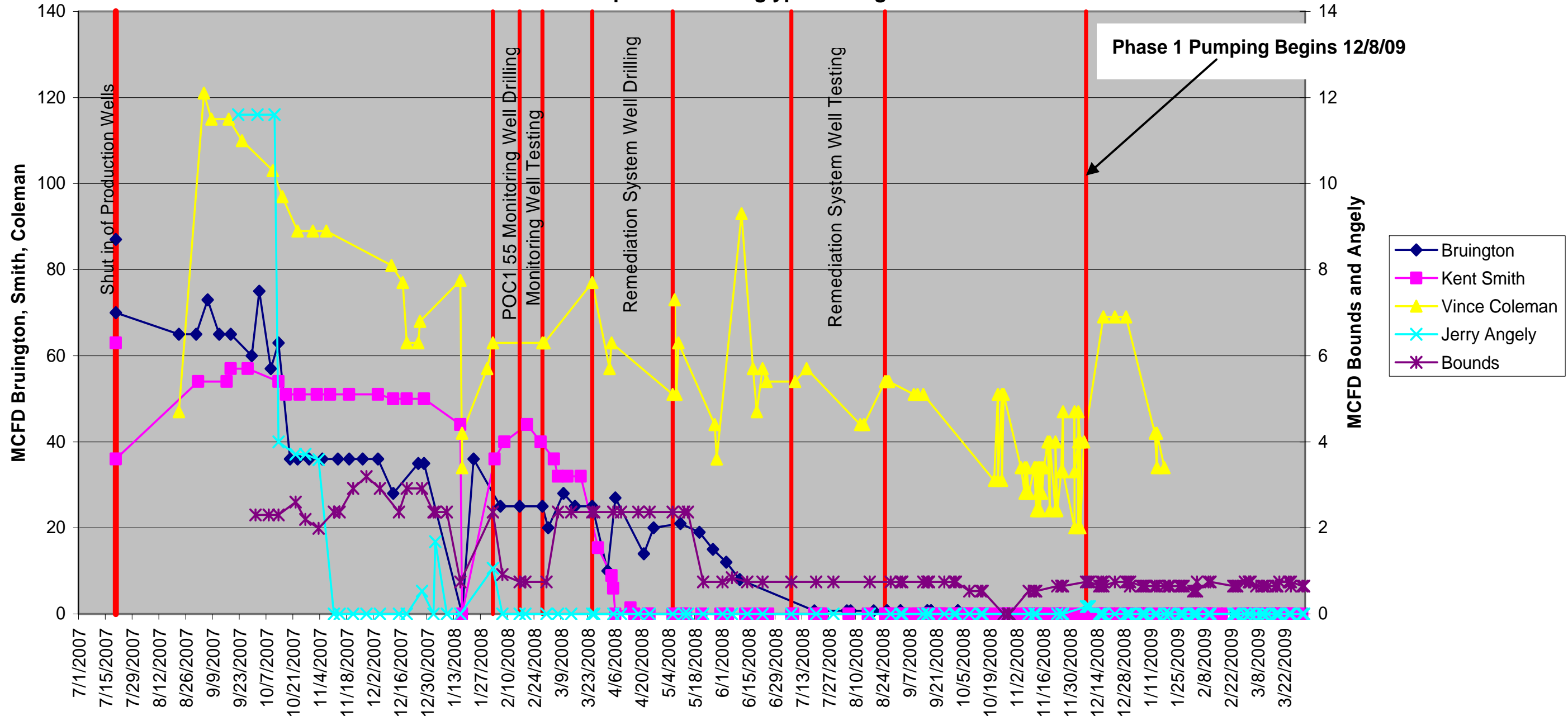
No changes to Petroglyph's health, safety and emergency planning occurred during the reporting period.

## **6.0 Schedule**

The following is the currently anticipated schedule for Phase I and Phase II of the Methane Investigation Monitoring and Mitigation Program.

- Continued pumping and injection of the Phase I system with ongoing monitoring to evaluate the response in surrounding wells.
- Publication of the draft Phase II UIC permit by EPA is expected to occur in late April.
- 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 and commitments made to COGCC and EPA for monitoring during injection start up.
- Hand held seep monitoring will continue as needed.
- Drilling of the hole on BLM land will occur once all regulatory approvals have been obtained and the weather permits.

**Figure 1**  
**Measured Gas Flow in Domestic Wells**  
**Compared to Petroglyph Drilling Activities**



**Table 1: Recovery and Injection Rates associated with Phase 1 MIMMP**

Well Number	TD	PBTD	Injection Tubing Depth	Start-up Date	Average Injection Rate (gpm)	Water Totals as of 3/31/09 (gal)	Notes
Injection 01 Pascual	600	526	458	12/9/2008	1.0	152,000	
Injection 02 Gonzales	600	575	362	12/10/2008	0.95	144,000	
Injection 03 Benevides	725	629	454	12/10/2008	0.90	141,000	
Injection 04 Rohr	675	667	455	12/9/2008	5.00	731,000	
Injection 05 Rohr	750	735	458	12/10/2008	5.88	836,000	
Injection 06 Masters	725	695	438	12/10/2008	4.27	578,000	
Injection 07 Walden	750	713	457	12/10/2008	0.75	105,000	
Injection 08 Haeffner	650	713	365	12/10/2008	see note	1,500	Well does not accept water very well. Inject approx. 100 gallons once a week.
			<b>Pump Depth</b>		<b>Average Pump Rate (gpm)</b>		
Recovery 1 Kittleson	715	705	686	12/8/2008	18.90	2,671,000	
Recovery 3 PEI	625	591	575	12/8/2008	1 (see note)	135,000	Intermittent pumping at 4 gpm. Rate over 24 hrs is approx 1 gpm
Recovery 4 Barrett	500	484	463	2/10/2009	(see note)	3,480	Started pump 2/10/09 to develop well. Pumps about 100 gallons in 15 minutes, per day .Water disposed off site and not injected due to quality concerns.

**Table 2: Sampling of Dissolved Gases in Water Wells**

Location	Well Name	Date of Sample Collection	Parameter	Result (in ug/L)	Comment
Mitigation wells	Injection 03 Benavides	7/17/08	Ethane	5	
	Injection 03 Benavides	7/17/08	Methane	280	
	Injection 04 Rohr	7/22/08	Ethane	2	
	Injection 04 Rohr	7/22/08	Methane	4,500	
	Injection 05 Rohr	7/28/08	Ethane	3	
	Injection 05 Rohr	7/28/08	Methane	3,100	
	Injection 05 Rohr	3/9/09	Ethane	11	
	Injection 05 Rohr	3/9/09	Methane	5,200	
	Injection 06 Masters	7/15/08	Ethane	4	
	Injection 06 Masters	7/15/08	Methane	6,300	
	Injection 07 Walden	7/29/08	Ethane	12	
	Injection 07 Walden	7/29/08	Methane	12,000	
	Injection 02 Gonzales	8/20/08	Ethane	3	
	Injection 02 Gonzales	8/20/08	Methane	4	
	Recovery 1 Kittleson	7/8/08	Ethane	3	
	Recovery 1 Kittleson	7/8/08	Methane	4,800	
	Recovery 1 Kittleson	8/4/08	Ethane	7	
	Recovery 1 Kittleson	8/4/08	Methane	6,800	
	Recovery 1 Kittleson	1/15/09	Ethane	3	
	Recovery 1 Kittleson	1/15/09	Methane	2,000	
	Recovery 2 Reiss	4/4/08	Ethane	ND	
	Recovery 2 Reiss	4/4/08	Methane	ND	
	Recovery 3 PEI	8/25/08	Ethane	13	
	Recovery 3 PEI	8/25/08	Methane	9,600	
	Recovery 3 PEI	1/16/09	Ethane	15	
	Recovery 3 PEI	1/16/09	Methane	13,000	
	Recovery 4 Barrett	7/10/08	Ethane	5	
	Recovery 4 Barrett	7/10/08	Methane	3,500	
	Recovery 4 Barrett	3/12/09	Ethane	12	
	Recovery 4 Barrett	3/12/09	Ethene	48	
Recovery 4 Barrett	3/12/09	Methane	8,600		
Wells within 1 mile of Mitigation System	Angely, J	3/26/08	Ethane	35	
	Angely, J	3/26/08	Methane	15,000	
	Burge, K	8/5/08	Methane	3,900	
	Burge, K	12/18/08	Ethane	U	
	Burge, K	12/18/08	Methane	3,600	
	Coleman, V	3/1/08	Methane	4,600	raw- not filtered
	Coleman, V	9/23/07	Methane	4,300	filtered via house water filter
	Coleman, V	9/23/07	Methane	5,000	raw- not filtered
	Coleman, V	3/1/08	Methane	5,100	raw- not filtered

Location	Well Name	Date of Sample Collection	Parameter	Result (in ug/L)	Comment	
Wells within 1 mile of Mitigation System or of Special Interest	Coleman, V	12/4/08	Ethane	U	raw- not filtered	
	Coleman, V	12/4/08	Methane	5,900	raw- not filtered	
	Conley, J	3/24/08	Methane	ND		
	Conley, J	12/4/08	Ethane	U		
	Conley, J	12/4/08	Methane	2		
	Deroswitch, D	3/1/08	Methane	4,000		
	Deroswitch, D	1/15/09	Ethane	4		
	Deroswitch, D	1/15/09	Methane	2,200		
	English, B	3/14/08	Methane	ND		
	English, B	12/8/08	Ethane	U		
	English, B	12/8/08	Methane	U		
	Hopke, B	2/25/08	Methane	5,900		
	Hopke, B	3/26/08	Ethane	11		
	Hopke, B	3/26/08	Methane	3,000		
	Hopke, B	12/31/08	Ethane	U		
	Hopke, B	12/31/08	Methane	660		
	Hoppe, C	10/23/08	Ethane	ND		
	Hoppe, C	10/23/08	Methane	19		
	Houghtling, J	2/25/08	Methane	9		
	Kerman, T	3/1/08	Methane	170		
	Kerman, T	12/4/08	Ethane	U		
	Kerman, T	12/4/08	Methane	1		
	McPherson	3/29/08	Methane	54		
	McPherson, P	12/4/08	Ethane	U		
	McPherson, P	12/4/08	Methane	950		
	Searle, S	3/14/08	Methane	8		
	Searle, S	12/8/08	Ethane	U		
	Searle, S	12/8/08	Methane	6		
	Wells on RRR ex near Mitigation System	Campbell, J	2/23/09	Ethane	1	
		Campbell, J	2/23/09	Methane	110	
Goodwin, R		3/14/08	Methane	240		
Goodwin, R		12/15/08	Ethane	U		
Goodwin, R		12/15/08	Methane	U		
Rhoads, K		2/23/09	Methane	21		
Roloff, B		8/5/08	Methane	3,800		
Speh, D		10/8/08	Methane	7,200		
Wolahan		3/10/08	Methane	75		
Wolahan, E		12/4/08	Ethane	U		
Wolahan, E		12/4/08	Methane	210		

Location	Well Name	Date of Sample Collection	Parameter	Result (in ug/L)	Comment
Wells on Silver Spurs Ranch unless noted	Goza, C	1/15/09	Ethane	1	Blackhawk Ranch
	Goza, C	1/15/09	Methane	580	Blackhawk Ranch
	Gumpert, K	8/5/08	Methane	1,700	
	Sample, Mitch	3/10/08	Methane	19,000	
	Stephens, K	9/30/08	Methane	ND	
	Evenden, V	9/30/08	Methane	20,000	
	Fitzner, P	12/1/08	Methane	4,600	
	Geisklbrecht, G	9/30/08	Methane	ND	
	Morine, J	1/15/09	Methane	14	
	Palmer (GIS)	9/30/08	Methane	ND	
Other	Rohr 04-14	11/11/07	Methane	10,070	CBM water
	Rohr 09-04	11/11/07	Methane	6,350	CBM water

**Table 3**  
**Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
<b>Wells Within Approximately One Mile of Pumping and Injection System or of Special Interest</b>					
238689	Angely	7/5/07	4/1/09	3/4/09, 3/11/09, 3/18/09, 3/25/09, 4/1/09	<ul style="list-style-type: none"> <li>• %LEL increased from 2 to 100 and then dropped back to 13 by end of reporting period</li> <li>• CH4 % volume went from &lt;5 to 0</li> <li>• O2% went from 20.9 to 19.8 and then back to 20.8</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
257994	Barrett	7/12/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	<ul style="list-style-type: none"> <li>• % LEL decreased from &gt;100 to 18.</li> <li>• CH4 % volume decreased from 11 to 0.9.</li> <li>• O2% volume increased from 18 to 10.8.</li> <li>• CO and H2S remained at 0 ppm</li> </ul>
244403	Bergman	7/6/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/24/09, 3/31/09	<ul style="list-style-type: none"> <li>• % LEL remains unchanged at &gt;100</li> <li>• CH4 % volume went from 17 to 41 and back to 31 at the end of the reporting period</li> <li>• O2% volume went from 15.8 to 10.8 and then back up to 13.1 at the end of the reporting period</li> <li>• CO remain unchanged at 0 ppm</li> <li>• H2S increased from 0 to 1.5 ppm</li> </ul>
181278	Bounds	7/12/07	4/1/09	3/4/09, 3/11/09, 3/18/09, 3/25/09, 4/1/09	No larges changes from previous sampling with %LEL remaining at 100; CH4% remains at 100 with several readings of 97 during the reporting period; O2% remained at 0; CO remained at 0 ppm. H2S went from 0 to 3 ppm in the last reading.
169043	Burge	3/20/09	3/20/09	3/16/09, 3/20/09	No change from previous measurements of no detectable methane. O2% volume increased from 14.1 to 20.9. CO and H2S were 0 ppm
267694	Coleman	7/5/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	No changes from previous measurements for wellhead with no detectable methane and O2% volume at 20.9 and 0 ppm CO and H2S. No change from the ending measurement for the last period at the well vent with no detectable methane and O2% volume at 20.9 and 0 ppm CO and H2S.
235516	Colorado Switzer	7/12/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	No change from previous measurements with no detectable methane and O2% volume at 20.9
255929	Conley	7/11/07	3/24/09	3/16/09, 3/24/09	No change from previous measurements with no detectable methane and O2% volume at 20.9

**Table 3**  
**Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
260097	Dee	7/5/07	3/16/09	3/16/09	No change from previous measurements with no detectable methane and O2% volume at 20.9.
252931	Derowitsch	7/6/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	No change from previous measurements at wellhead or well vent with no detectable methane and O2% at 20.9. At the cistern there was a detectable methane reading on 3/13/09 with 13% LEL and CH4% at 0.65: Otherwise the cistern measurements showed no detectable methane and 20.9 for O2%. H2S at the cistern ended the reporting period at 1.5 ppm.
235515	English	8/16/07	12/1/08	Not sampled during this reporting period	Sampling attempted 3/16/ and 3/25 but gate was locked preventing access.
16861-F	Golden Cycle Land	7/12/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	<ul style="list-style-type: none"> <li>• %LEL went from &gt;100 to 0 and ended the reporting period at &gt;100</li> <li>• %CH4 went from 20 to 0 and ended the reporting period at 57</li> <li>• O2% went from 18.7 to 20.9 and ended the reporting period at 0</li> <li>• CO started and ended the reporting period with 35 ppm, but had a high of 54 ppm and a low of 0 ppm.</li> <li>• H2S increased from 0 to 3.5 ppm</li> </ul>
253317	Gonzalez	7/12/07	3/24/09	3/16/09, 3/24/09	No change from previous measurements with 0 % LEL, no detectable methane and O2% volume at 20.9, and 0 ppm CO and H2S.
256504	Hopke	7/5/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	<p>At wellhead:</p> <ul style="list-style-type: none"> <li>• No change in % LEL at &gt;100</li> <li>• CH4 % volume went from 23 to 35 and ended the period at 20</li> <li>• O2% volume went from 14.6 to 0 and ended the period at 17.3</li> <li>• CO remains at 0</li> <li>• Light H2S odor noted and H2S was at 1.5 ppm at the end of the reporting period</li> </ul> <p>No change at cistern with no detectable methane and O2% volume at 20.9</p>



**Table 3**  
**Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
236272	Houghtling	7/6/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/24/09, 3/31/09	<ul style="list-style-type: none"> <li>• % LEL remains unchanged at &gt;100</li> <li>• CH4 % volume went from 56 to 90 and dropped to 27 at the end of the period</li> <li>• O2% volume went from 6 to a high of 12.8 and a low of 0, ending the period at 12.6.</li> <li>• CO remain unchanged at 0 ppm</li> <li>• H2S went from 0 to 1.5 and then back to 0 during the period.</li> </ul> Cistern remained unchanged with no detectable methane, an O2% volume at 20.9, and CO and H2S were 0 ppm
35292	Kerman/Hanson	7/6/07	3/24/09	3/20/09, 3/24/09	No change at wellhead or cistern with no detectable methane and O2% at 20.9.
	Lively 10-02	12/22/2008	3/31/09	3/6/09, 3/13/09, 3/25/09, 3/31/09	<ul style="list-style-type: none"> <li>• % LEL remains unchanged at 0 except for one reading of 11%</li> <li>• CH4 % volume remained at 0</li> <li>• O2% volume went from 20.5 to 0 and ended the period at 15.3</li> <li>• CO varied from 0 to 372 ppm with the last reading at 73 ppm</li> <li>• H2S varied from 7.5 to 0 and ended the period at 4 ppm.</li> </ul>
222539	Lively	7/6/07	3/24/09	3/16/09 and 3/24/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
16861-F	Masters #1	8/13/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
257113	Masters #2	7/6/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/25/09, 3/31/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
271136	May	7/12/07	3/16/09	3/16/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
84108-A	McPherson	7/6/07	3/24/09	3/16/09, 3/24/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm..
84106	Rohr	7/06/07	10/27/08	Not sampled during this reporting period	
123144	Searle	7/11/07	3/24/09	3/16/09 and 3/24/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.

**Table 3  
 Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
239657	Smith	7/5/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/24/09, 3/31/09	At Wellhead all values at 0 except O2% which is at 20.9. At Well Vent: <ul style="list-style-type: none"> <li>• % LEL decreased from &gt;100 to 0</li> <li>• CH4 % changed from 37 to 8 to 39 to 1.2 at the end of the period</li> <li>• O2% volume went from 10.7 to 20.7</li> <li>• CO remain at 0 ppm</li> <li>• H2S went from 3.5 to 0 ppm</li> </ul> The cistern showed unchanged values with 0%LEL, no detectable methane, O2% at 20.9, and CO and H2S at 0 ppm.
<b>Wells Within Or in Close Proximity to River Ridge Ranch Subdivision</b>					
249362	Andexler	9/9/07	3/25/09	3/25/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to 2</li> <li>• %CH4 increased from 0 to 0.10</li> <li>• O2% decreased from 20.9 to 5.7</li> <li>• CO stayed the same at 0 ppm</li> <li>• H2S increased from 0 to 1.5</li> </ul>
215706	Brice	7/12/07	3/16/09	3/16/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
248680	Campbell	8/14/07	3/25/09	3/25/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
270552	Chaves	9/9/07	3/25/09	3/20/09, 3/25/09	No change from previous measurements with no detectable methane and O2% at 20.9; CO and H2S at 0 ppm.
20783	Goemmer Cattle	7/12/07	2/2/09	Not sampled during this reporting period	
258815	Goodwin	7/12/07	3/24/09	3/16/09, 3/24/09	At wellhead and cistern no change from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
249181	Hentschel	9/9/07	3/25/09	3/20/09, 3/25/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.

**Table 3  
 Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
259122	Higgins	9/26/07	3/25/09	3/20/09, 3/25/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
269435	Hoppe (formerly Goacher)	7/11/07	3/24/09	3/20/09, 3/24/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
264581	Ireland	7/12/07	3/24/09	3/16/09, 3/24/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
	Lang	10/29/07	7/28/08	Not sampled during this reporting period	Sampling attempted 3/16/09, but gate was locked preventing access.
93386	Lowry	7/12/07	2/2/09	Not sampled during this reporting period	
250369	Martin	7/12/07	3/16/09	3/16/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
248862	Meyer	8/14/07	3/25/09	3/20/09, 3/25/09	<ul style="list-style-type: none"> <li>• % LEL remained at &gt;100</li> <li>• CH4 % volume decreased from 68 to 22</li> <li>• O2% volume increased from 4.6 to 11</li> <li>• CO remains at 0</li> <li>• H2S has increased from 0 to 1.5.</li> </ul>
192203	Rankins	7/12/07	1/14/09	Not sampled during this reporting period	Previously had no detectable methane and O2% at 20.9.
276994	Rhodes	9/9/08	3/24/09	3/24/09	No change from previous measurements with 0% IEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
274468	Roloff	9/9/07	3/24/09	3/17/09, 3/24/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
254577	Ryerson	9/9/07	3/25/09	3/20/09, 3/25/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
246775	Sharp	9/9/07	3/25/09	3/20/09 and 3/25/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
267695	Speh	9/4/07	3/24/09	3/20/09, 3/24/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
230572	Willis	7/11/07	3/20/09	3/20/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.

<b>Table 3</b>					
<b>Water Well Measurements for the Period of February 27 to April 5, 2009</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, comparison of results from this period to last period</b>
240947	Wolahan	7/12/07	3/31/09	3/16/09, 3/31/09	No change from previous measurements with 0 % LEL, no detectable methane, O2% at 20.9 and CO and H2S at 0 ppm. No change at the cistern with no detectable methane and O2% at 20.9; CO and H2S at 0 ppm.
<b>City Ranch and Other Properties</b>					
	Andreatta	8/14/07	3/20/09	3/20/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
197472	Williams/Bartlett	8/15/07	3/18/09	3/18/09	No changes from previous measurements with 0% LEL, no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
210526	Bruington	8/7/07	3/26/09	3/6/09, 3/20/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL remains unchanged at &gt;100</li> <li>• CH4% went from 94 to 90 with a low of 78 during the reporting period</li> <li>• O2 % has decreased from 4.2 to 0</li> <li>• CO has remained at 0 ppm but had a high reading of 15 during the reporting period</li> <li>• H2S has increased from 4 to 6.5 ppm</li> </ul> Values at the cistern remain unchanged with no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
220100	Cordova	10/30/07	3/26/09	3/20/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL went from 0 to 6 and back to 0</li> <li>• CH4% went from 0 to 0.3 and back to 0</li> <li>• O2 % remained at 20.9 through the period</li> <li>• CO and H2S remained at 0</li> </ul>
191079	Brian Dale	8/15/07	3/20/09	3/20/09	No change at well #1 with no detectable methane and O2% volume at 20.9 and CO at 0ppm, except H2S went from 3 to 0 ppm. At Well #2: <ul style="list-style-type: none"> <li>• %LEL increased 30 to &gt;100</li> <li>• CH4 % volume increased 2 to 10</li> <li>• O2 % volume decreased from 17.6 to 0</li> <li>• CO remained at 0 ppm</li> <li>• H2S went from 3.5 to 55 ppm.</li> </ul>

**Table 3**  
**Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
193092	Degan	8/25/08	3/23/09	3/20/09, 3/23/09	<ul style="list-style-type: none"> <li>No change from previous measurements with %LEL at 0, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.</li> </ul>
	Dernell	8/15/07	3/26/09	3/26/09	No change from previous measurements with %LEL at 0 and no detectable methane; O2% volume at 20.9 and CO and H2S at 0 ppm.
258651	Gonzalez	5/22/08	3/26/09	3/18/09, 3/26/09	<p>At wellhead:</p> <ul style="list-style-type: none"> <li>%LEL did not change at &gt;100</li> <li>CH4 % volume went from 33 to 10 and back to 36</li> <li>O2 % went from 13 to 18.8 and back to 11.3</li> <li>CO and H2S remained at 0 ppm</li> </ul> <p>Measurements at the cistern showed no change with 0% LEL, no detectable methane, O2% at 20.9 and CO and H2S at 0 ppm..</p>
203536	Hurley	8/2/07	3/25/09	3/20/09, 3/25/09	<p>At the well head:</p> <ul style="list-style-type: none"> <li>No change in LEL at &gt;100</li> <li>CH4 % volume went from 12 to 19 then dropped to 8</li> <li>O2 % volume increased from 17.7 to 18.2</li> <li>H2S increased from 0 to 1 ppm</li> <li>CO remained at 0</li> </ul> <p>No change at the cistern with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.</p>
205195	Johnson	8/15/07	3/23/09	3/20/09, 3/23/09	<p>At the well head:</p> <ul style="list-style-type: none"> <li>% LEL went from 0 to 25 and then dropped to 5</li> <li>CH4 % volume went from 0 to 1.25 and then dropped to 0.25</li> <li>O2 % volume decreased from 20.9 to 15.4 and then increased to 20.5</li> <li>CO and H2S remain at 0 ppm</li> </ul> <p>Values at the cistern and 2<sup>nd</sup> wellhead have remained unchanged with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.</p>
193520X	McEntee	8/2/07	3/23/09	3/20/09, 3/23/09	No change at the well head or east well head with 0% LEL, no detectable methane, O2% volume at 20.9, and CO and H2S at 0 ppm.

<b>Table 3</b>					
<b>Water Well Measurements for the Period of February 27 to April 5, 2009</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, comparison of results from this period to last period</b>
121013	Schafer	8/15/07	3/23/09	3/23/09	No change from previous measurements with 0% LEL, no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
248983	Tobias	8/3/07	3/26/09	3/20/09, 3/26/09	<ul style="list-style-type: none"> <li>• % LEL increased from 10 to &gt;100 and then back to 5 in the last reading</li> <li>• CH4 % volume increased from 0.5 to 119 and back to 0.25.</li> <li>• O2 has increased from 18.5 to 20.9</li> <li>• No change for CO and H2S at 0 ppm with a light H2S odor noted at 3/20 reading.</li> </ul>
<b>Silver Spurs Ranch</b>					
268180	Billstrand	8/12/08	3/26/09	3/17/09, 3/26/09	No change from previous measurement with all values at 0 except for O2% volume at 20.9.
215807	Brown	12/8/08	3/26/09	3/20/09, 3/26/09	No change from previous measurements with no detectable methane and all values at 0 except for O2% volume at 20.9.
222294	Cramer	8/3/07	3/26/09	3/26/09	No change from previous measurements with no detectable methane and O2% volume at 20.9; CO and H2S at 0 ppm.
192509	Eddleman, Paul	1/17/08	3/26/09	3/17/09, 3/26/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL went from 32 to 5 and ended the period at &gt;100</li> <li>• CH4 % went from 1.6 to 0.25 and ended the period at 15</li> <li>• O2% volume went from 12.8 to 20.9 and ended the period at 0</li> <li>• CO increased from 0 to 10 ppm</li> <li>• H2S increased from 0 to 2.5 ppm</li> </ul>
226536	Eddleman, Todd	1/17/08	3/25/09	3/17/09, 3/25/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to 31</li> <li>• CH4 % increased from 0 to 1.55</li> <li>• O2 % decreased from 20.9 to 4.8</li> <li>• CO remained at 0 ppm</li> <li>• H2S increased from 0 to 3.5.</li> </ul>
221465	Evenden	8/2/07	3/26/09	3/17/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL increased from 5 to 8</li> <li>• CH4 % increased from 0.25 to 0.4</li> <li>• O2 % decreased from 14.2 to 13</li> <li>• CO stayed the same at 0 ppm</li> <li>• H2S decreased from 3 to 0 ppm</li> </ul>

**Table 3**  
**Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
	Fischer	1/26/09	3/26/09	3/17/09, 3/26/09	No change from last measurement with all values at 0 except for O2% volume at 20.9.
214145A	Fitzner	11/18/08	3/26/09	3/17/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to &gt;100</li> <li>• CH4 % increased from 0 to 5</li> <li>• O2 % decreased from 20.9 to 0</li> <li>• CO and H2S remain at 0 ppm</li> </ul>
31935	Garza-Vela	1/30/08	3/25/09	3/17/09, 3/25/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to 2</li> <li>• CH4 % increased from 0 to 0.1</li> <li>• O2 % decreased from 20.9 to 10.1</li> <li>• CO and H2S remain at 0 ppm</li> </ul>
196372	Geiselbrecht	8/12/08	3/26/09	3/17/09, 3/26/09	No change from previous measurements with no detectable methane and all values at 0 except O2% volume at 20.9.
246350	Gumpert	7/29/08	3/26/09	3/17/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to &gt;100</li> <li>• CH4 % increased from 0 to 5</li> <li>• O2 % decreased from 20.9 to 0</li> <li>• CO stayed the same at 0 ppm</li> <li>• H2S increased from 0 to 0.5 ppm</li> </ul>
196371	Lyon	8/15/07	3/17/09	3/17/09	NO change from no detectable methane, 0% LEL and 0 ppm CO. O2% volume went from 18.9 to 20.9. H2S went from 1.5 ppm to 0.
271524-A	Modlish	1/30/08	3/25/09	3/17/09, 3/25/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to 2</li> <li>• CH4 % increased from 0 to 0.1</li> <li>• O2 % decreased from 20.9 to 10.1</li> <li>• CO remains at 0 ppm</li> <li>• H2S increased from 0 to 1 ppm</li> </ul>
28093MH	Morine	9/10/08	3/26/09	3/26/09	No change from previous measurements for %LEL at 0, CH4% at 0 and CO at 0 ppm. O2% volume remains at 20 and H2S decreased from 3 ppm to 0.
35227MH	Morris	10/8/08	10/8/08	Not sampled during this reporting period.	Will start sampling again in spring.
190327	Palmer	8/12/08	3/26/09	3/17/09, 3/26/09	No change from previous measurements with no detectable methane and all values at 0 except O2% volume at 20.9.

Table 3 Water Well Measurements for the Period of February 27 to April 5, 2009					
Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
197128	Roberts	4/08/08	3/26/09	3/17/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to &gt;100</li> <li>• CH4 % increased from 0 to 5</li> <li>• O2 % volume decreased from 20.9 to 6.3</li> <li>• CO and H2S remain at 0</li> </ul>
271748	Sample	3/10/08	3/26/09	3/17/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to 7</li> <li>• CH4 % increased from 0 to 0.35</li> <li>• O2 % volume decreased from 20.9 to 12.2</li> <li>• CO remains at 0</li> <li>• H2S increased from 0 to 1.5 with a light odor</li> </ul>
192144	Snow	8/2/07	3/26/09	3/26/09	<ul style="list-style-type: none"> <li>• % LEL increased from 0 to &gt;100</li> <li>• CH4 % volume increased from 0 to 5</li> <li>• O2% volume decreased from 20.9 to 0</li> <li>• CO increased from 0 to 2</li> <li>• H2S increased from 0 to 2.5</li> </ul>
213070	Stephens	8/12/08	3/26/09	3/17/09, 3/26/09	%LEL, CH4%, and CO remain at 0. O2% volume decreased from 20.2 to 19.8 and ended the period at 20.9. H2S decreased from 4.5 to 0.
233286A	Stetler	3/17/09	3/26/09	3/17/09, 3/26/09	<p>New sampling site. Initial readings at wellhead showed:</p> <ul style="list-style-type: none"> <li>• % LELat 5-6</li> <li>• CH4 % volume at 0.25 to 0.30</li> <li>• O2% volume at 20.8</li> <li>• No CO or H2S</li> </ul> <p>No detectable methane at cistern with all values at 0 except for O2% volume at 20.9.</p>



**Table 3**  
**Water Well Measurements for the Period of February 27 to April 5, 2009**

Permit Number	Name	Sampling Start Date	Last Sample	Samples Since Last Monthly Report	If sampled, comparison of results from this period to last period
234836	White, Jim	1/4/08	3/26/09	3/17/09, 3/26/09	At wellhead <ul style="list-style-type: none"> <li>• % LEL decreased from &gt;100 to 0 and back to &gt;100 at the end of the period</li> <li>• CH4 % volume decreased from 5 to 0 and back to 5 at the end of the period</li> <li>• O2% volume increased from 9.3 to 20.9 and then fell to 0 at the end of the period</li> <li>• CO remains at 0</li> <li>• H2S decreased from 3.5 to 0 and back to 2 at the end of the period</li> </ul> No change at cistern with no detectable methane and O2% at 20.9; CO and H2S at 0 ppm.
219376	White, Orlie	8/2/07	3/26/09	3/26/09	<ul style="list-style-type: none"> <li>• %LEL increased from 0 to 30</li> <li>• CH4 % increased from 0 to 1.5</li> <li>• O2 % decreased from 20.9 to 9.6</li> <li>• CO and H2S remain at 0 ppm</li> </ul>
234839	Waltz	8/12/08	3/26/09	3/17/09, 3/26/09	No change from previous measurements with no detectable methane and all values at 0 except O2% at 20.9.
<b>Black Hawk Ranch</b>					
218719	Goza	1/14/09	3/26/09	3/17/09, 3/26/09	<ul style="list-style-type: none"> <li>• %LEL and Ch4% remain at 0</li> <li>• O2 % volume increased from 17.6 to 20.9</li> <li>• CO and H2S remain at 0 ppm</li> </ul>

<b>Table 4 Methane Readings Schedule (3 April 2009)</b>							
<b>Landowner</b>	<b>Subdivision</b>	<b>Water Level</b>	<b>Cistern</b>	<b>Bi-Monthly</b>	<b>Monthly</b>	<b>Quarterly</b>	<b>Weekly</b>
<b>Monitoring Within 1 Mile Radius or of Special Interest</b>							
<b>Kathy Dee</b>	River Ridge				X		
<b>R. Gonzalez</b>	River Ridge			X			
<b>McPherson</b>	River Ridge			X			
<b>Rohr</b>	River Ridge					X	
<b>Houghtling</b>	River Ridge		X	X			
<b>Kent Smith</b>	River Ridge		X	X			X
<b>Bergman</b>	River Ridge			X			X
<b>Lively</b>	River Ridge				X		
<b>Kerman</b>	River Ridge		X	X			
<b>Conley</b>	River Ridge			X			
<b>Searle</b>	River Ridge			X			
<b>Derowitsch</b>	River Ridge		X	X			X
<b>Colorado-Switzer</b>	River Ridge			X			X
<b>English</b>	River Ridge		X		X		
<b>Golden Cycle Land (Goemmer)</b>	River Ridge			X			X
<b>Burge</b>	La Veta Pines			X			X
<b>Barrett</b>	River Ridge			X			X
<b>Hopke</b>	River Ridge		X	X			X
<b>Masters #1</b>	River Ridge			X			X
<b>Masters #2</b>	River Ridge			X			X
<b>Coleman</b>	River Ridge			X			
<b>Lively 10-02</b>	River Ridge			X			

<b>Table 4 Methane Readings Schedule (3 April 2009)</b>							
<u>Landowner</u>	<u>Subdivision</u>	<u>Water Level</u>	<u>Cistern</u>	<u>Bi-Monthly</u>	<u>Monthly</u>	<u>Quarterly</u>	<u>Weekly</u>
<b>River Ridge Ranch</b>							
<b>Wolahan</b>	River Ridge		X	X			
<b>Martin</b>	River Ridge				X		
<b>Speh</b>	River Ridge			X			
<b>Lang</b>	River Ridge		X			X	
<b>Roloff</b>	River Ridge	X		X			
<b>Hoppe (Goacher)</b>	River Ridge			X			
<b>May</b>	River Ridge				X		
<b>Brice</b>	River Ridge				X		
<b>Goodwin</b>	River Ridge		X	X			
<b>Ireland</b>	River Ridge			X			
<b>Andexler</b>	River Ridge		X		X		
<b>Sharp</b>	River Ridge		X	X			
<b>Ryerson</b>	River Ridge	X		X			
<b>Meyers</b>	River Ridge			X			
<b>Chaves</b>	River Ridge	X		X			
<b>Hentschel</b>	River Ridge			X			
<b>Rankins</b>	River Ridge					X	
<b>Lowry</b>	River Ridge					X	
<b>Goemmer Cattle</b>	River Ridge					X	
<b>Higgins</b>	River Ridge	X		X			
<b>Campbell</b>	River Ridge				X		
<b>Rhodes</b>	River Ridge				X		
<b>City Ranch</b>							
<b>T. Gonzalez</b>	City Ranch		X	X			
<b>Hurley</b>	City Ranch	X	X	X			

<b>Table 4 Methane Readings Schedule (3 April 2009)</b>							
<u>Landowner</u>	<u>Subdivision</u>	<u>Water Level</u>	<u>Cistern</u>	<u>Bi-Monthly</u>	<u>Monthly</u>	<u>Quarterly</u>	<u>Weekly</u>
Tobias	City Ranch			X			
Dale	City Ranch				X		
McEntee	City Ranch			X			
Johnson	City Ranch		X	X			
Cordova	City Ranch			X			
Dernell	City Ranch						
Schaefer	City Ranch					X	
Bruington	City Ranch		X	X			
Bartlett	City Ranch					X	
Deagan	City Ranch			X			
<b>Bear Creek/Silver Spurs</b>							
Andreatta/Carsella	Bear Creek				X		
Orlie White	Silver Spurs	X			X		
Evendon	Silver Spurs			X			
Roberts	Silver Spurs			X			
Snow	Silver Spurs	X			X		
Cramer	Silver Spurs	X	X		X		
Lyon	Silver Spurs				X		
Jim White	Silver Spurs		X	X			
Garza-Vela	Silver Spurs			X			
Modlish	Silver Spurs			X			
Todd Eddleman	Silver Spurs			X			
Paul Eddleman	Silver Spurs			X			
Sample	Silver Spurs		X	X			
Billstrand	Silver Spurs			X			
Waltz	Silver Spurs				X		

<b>Table 4 Methane Readings Schedule (3 April 2009)</b>							
<u>Landowner</u>	<u>Subdivision</u>	<u>Water Level</u>	<u>Cistern</u>	<u>Bi-Monthly</u>	<u>Monthly</u>	<u>Quarterly</u>	<u>Weekly</u>
Stephens	Silver Spurs			X			
Palmer (G/S)	Silver Spurs			X			
Geoselbrecht	Silver Spurs			X			
Morine	Silver Spurs				X		
Brown	Silver Spurs	X		X			
Fitzner	Silver Spurs			X			
Fischer	Silver Spurs					X	
Stetler	Silver Spurs		X	X			
<b>Black Hawk Ranch</b>							
Goza	Black Hawk			X			

**Rohr will be checked Quarterly with Rankin, Lowry, and Goemmer Cattle.  
 Betty Morris WW - Will not check over the winter, per request of landowner.**

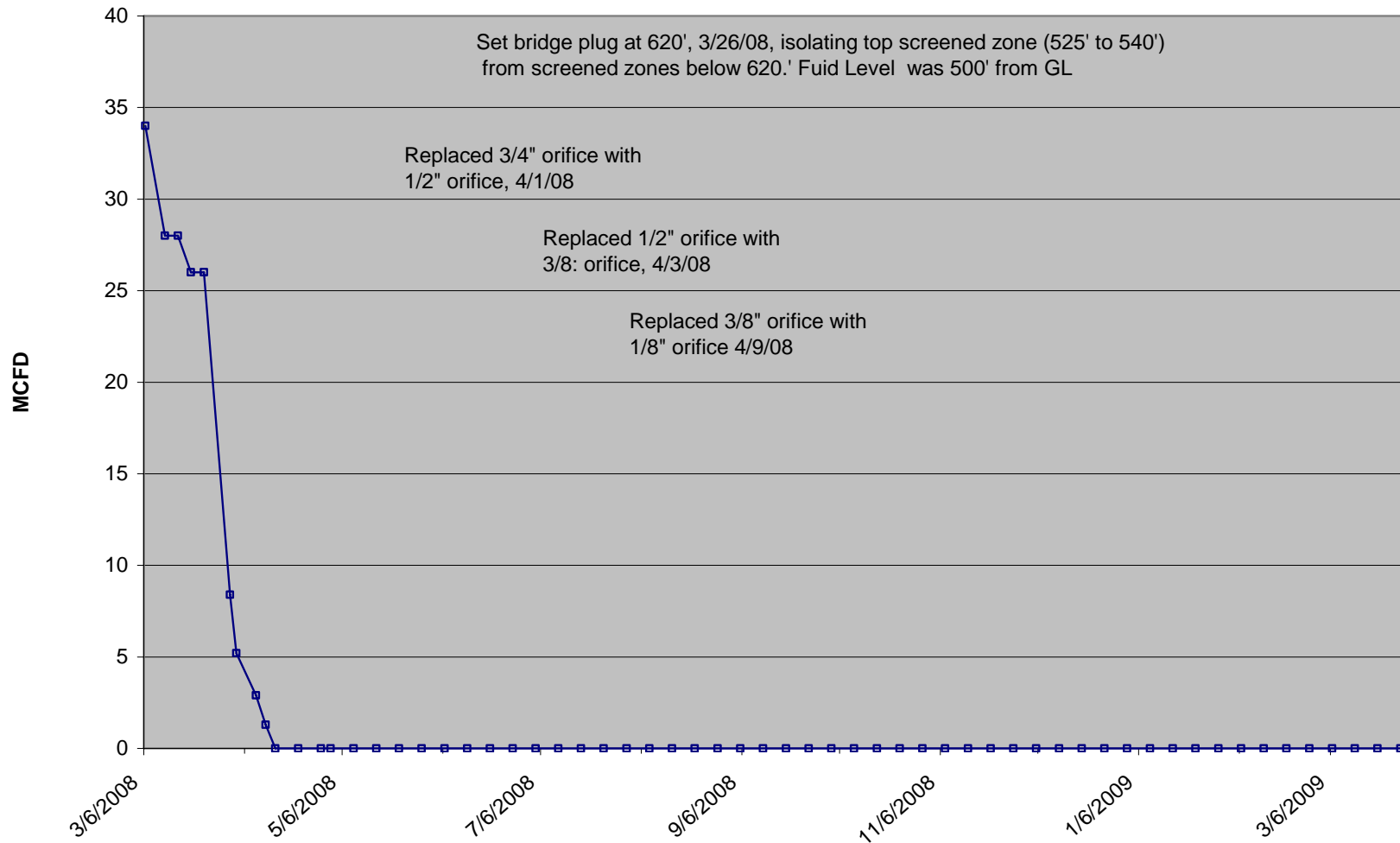
**Table 5**  
**Residences Receiving Water**

Jerry Angely	Has received water provided by PEI
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	Has received water provided by PEI
Donald Sharp	Has received water provided by PEI
Edward Johnson	Has received water provided by PEI
Richard McEntee	Has received water provided by PEI
P.C. Roberts	Has received water provided by PEI
Ireland-Murphy	Has received water provided by PEI
Keith Lightcap	New to list as of 3/24/09

**Note one new name added to list from February Monthly Report.**

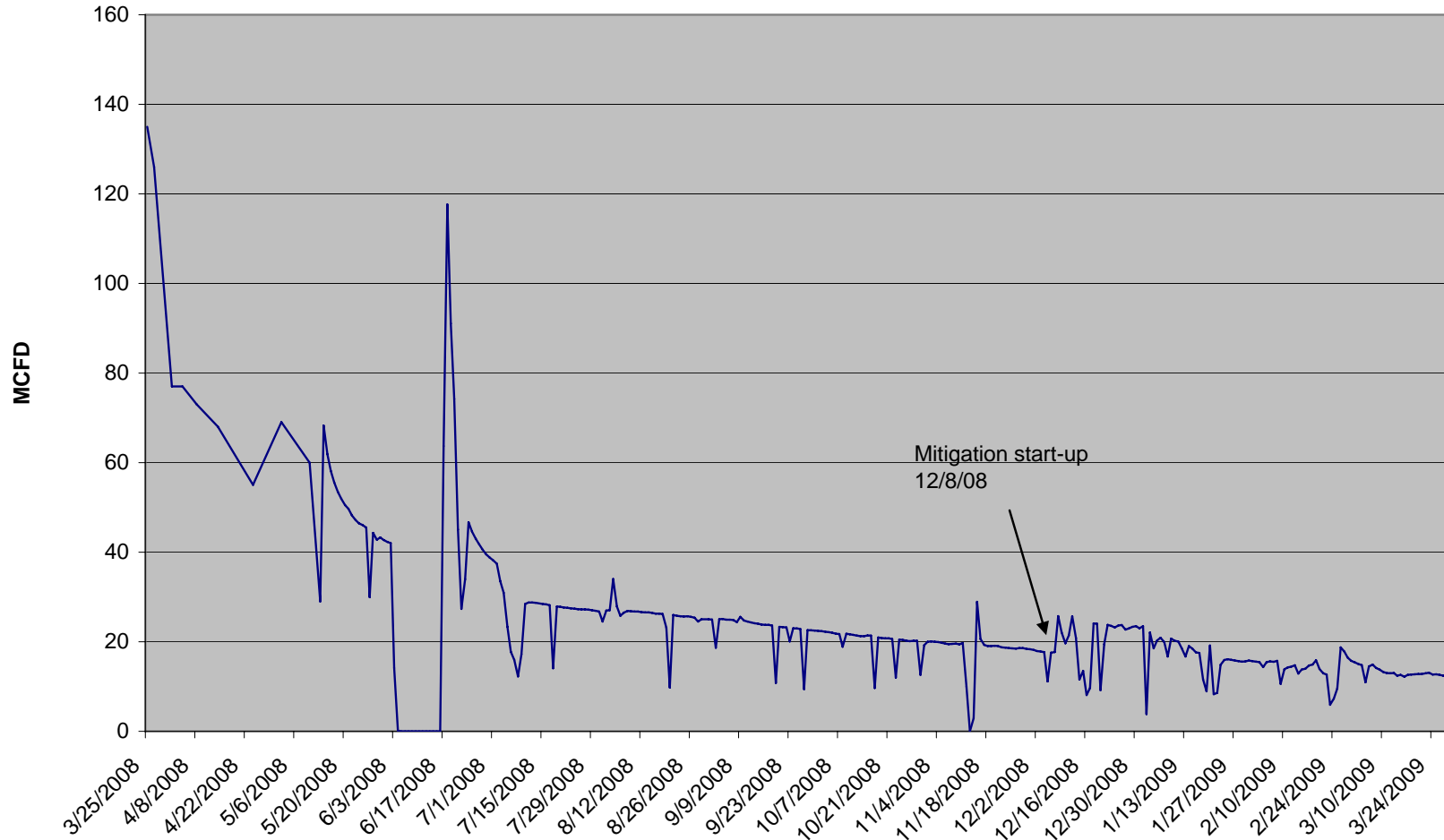
**Attachment 1**  
**Gas Flow in Monitoring Well POCI 55, Recovery 1 Kittleson,**  
**Recovery 3 PEI and Recovery 4 Barrett**

### POCI 55 MW Gas Flow from 3/6/08 to 3/27/09

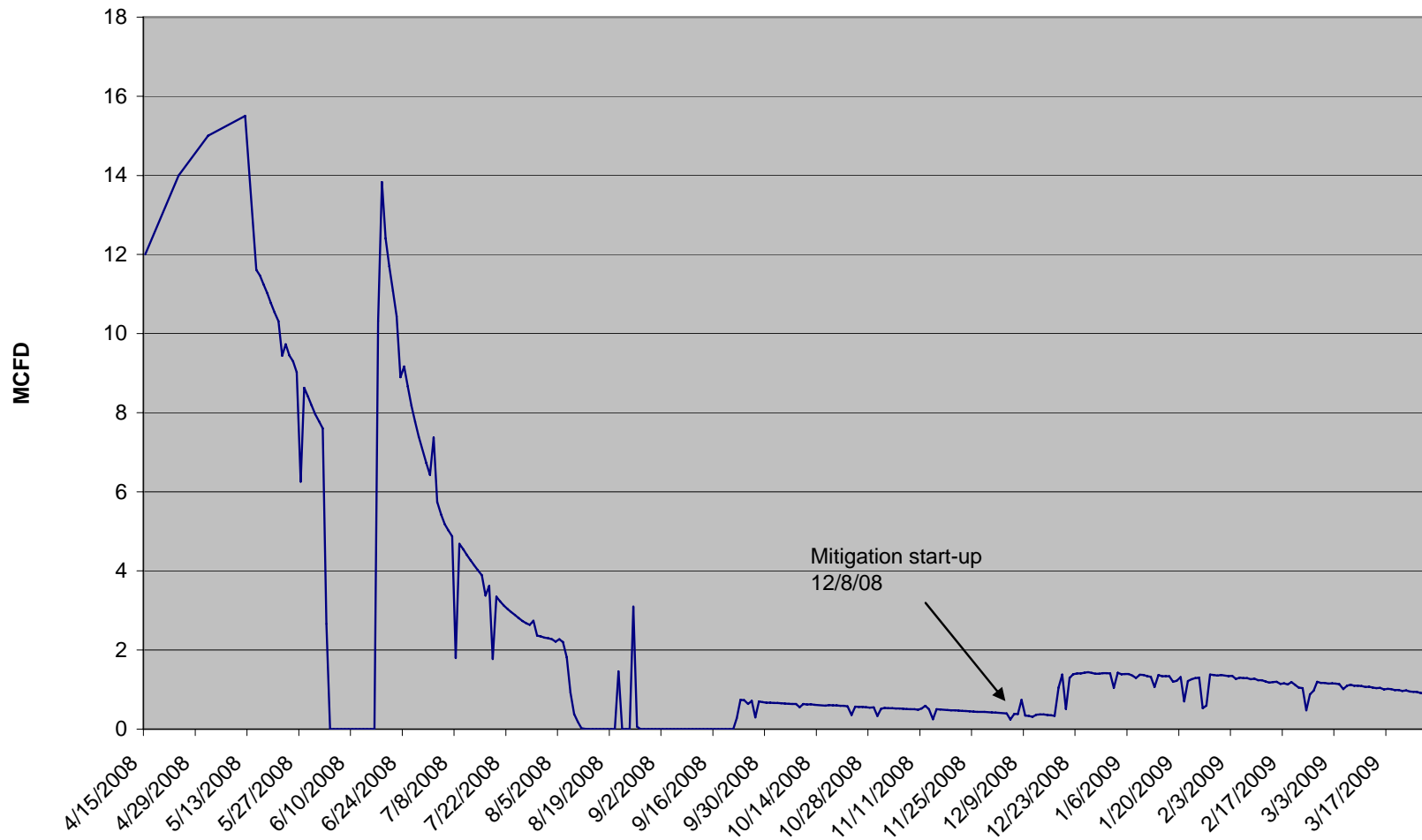




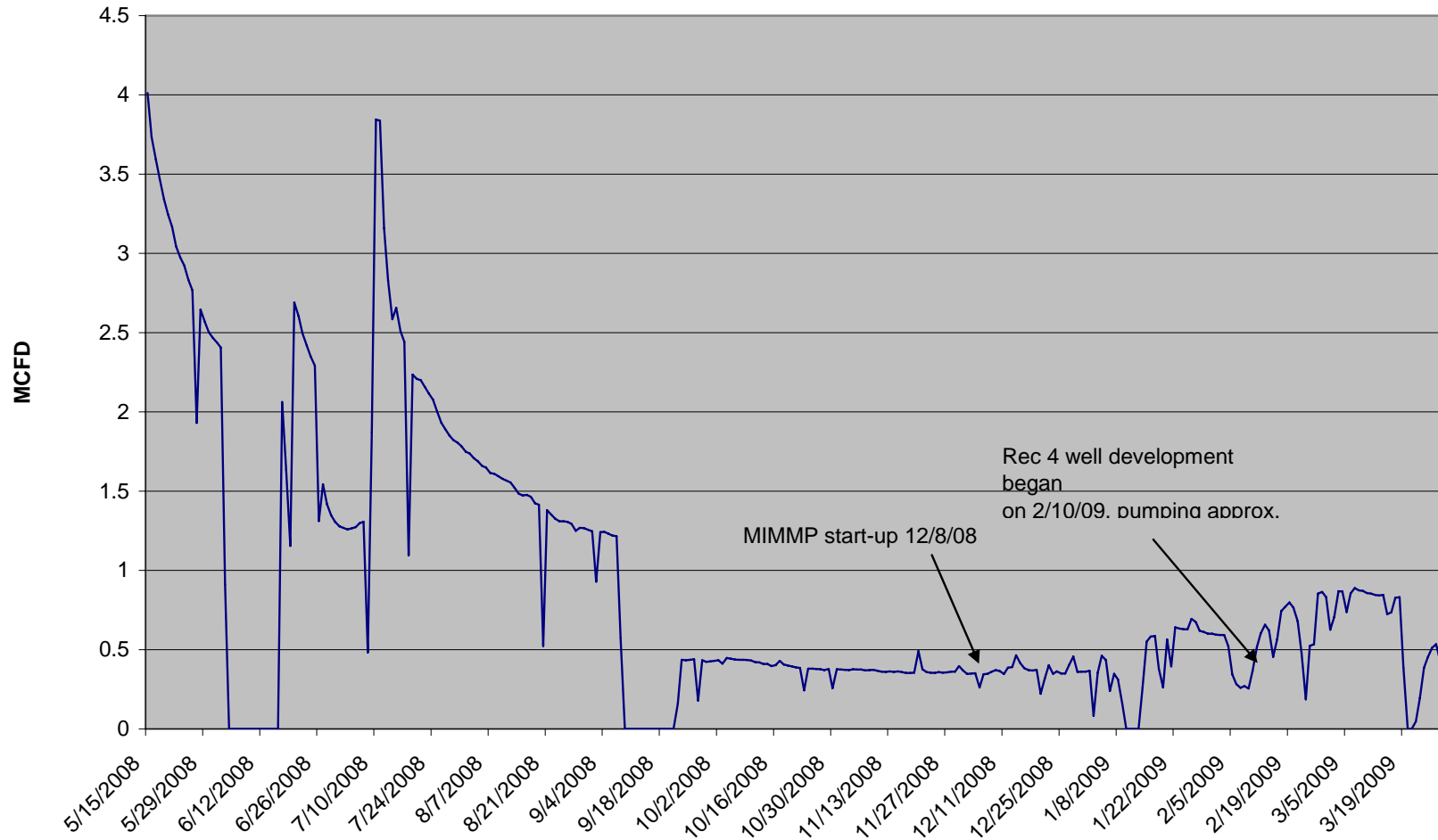
**Recovery 1 Kittleson Gas Flow  
from 3/25/08 to 3/29/09**



**Recovery 3 PEI Gas Flow  
from 4/15/08 to 3/29/09**

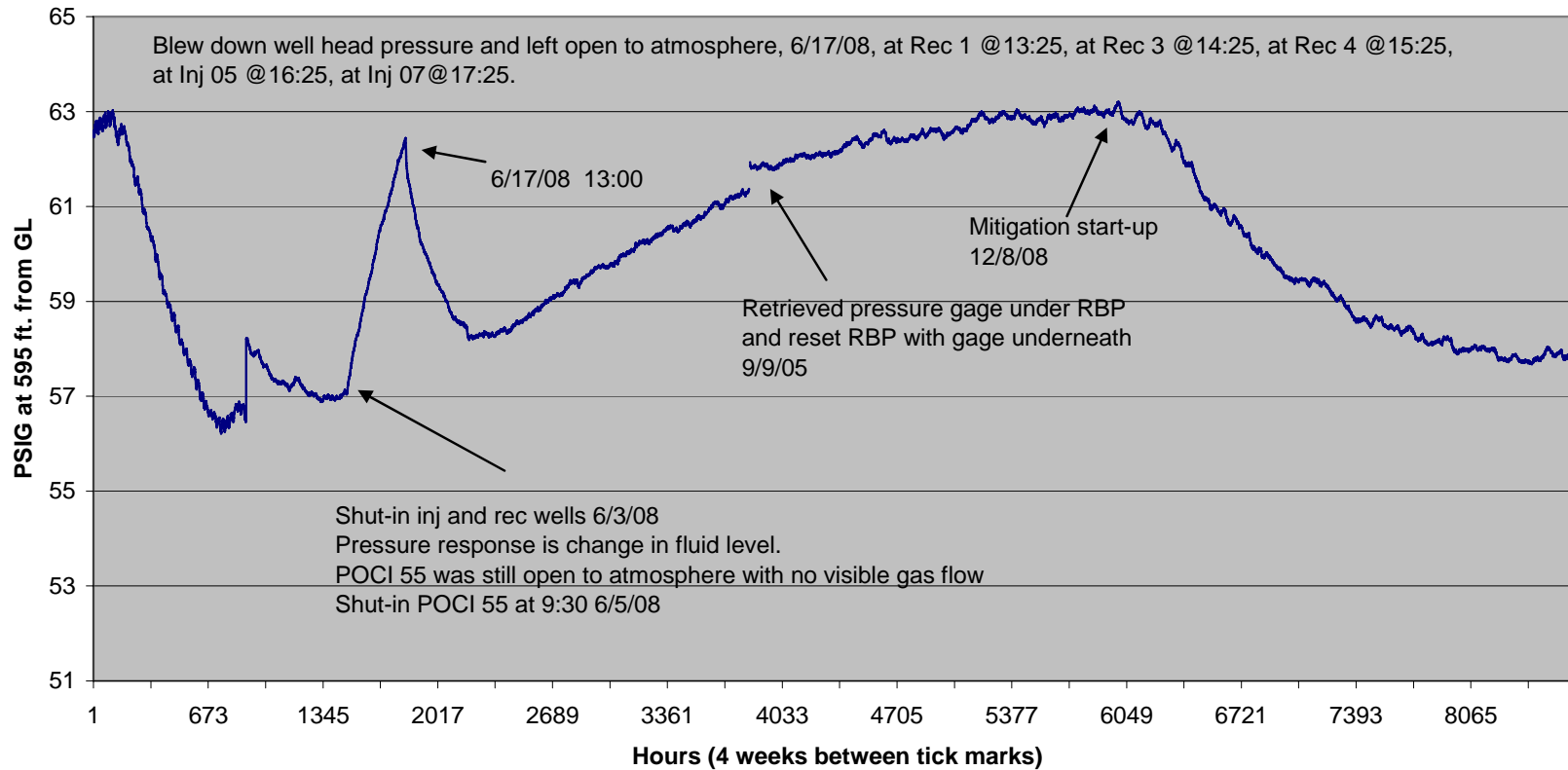


### Recovery 4 Barrett Gas Flow from 5/15/08 to 3/29/09

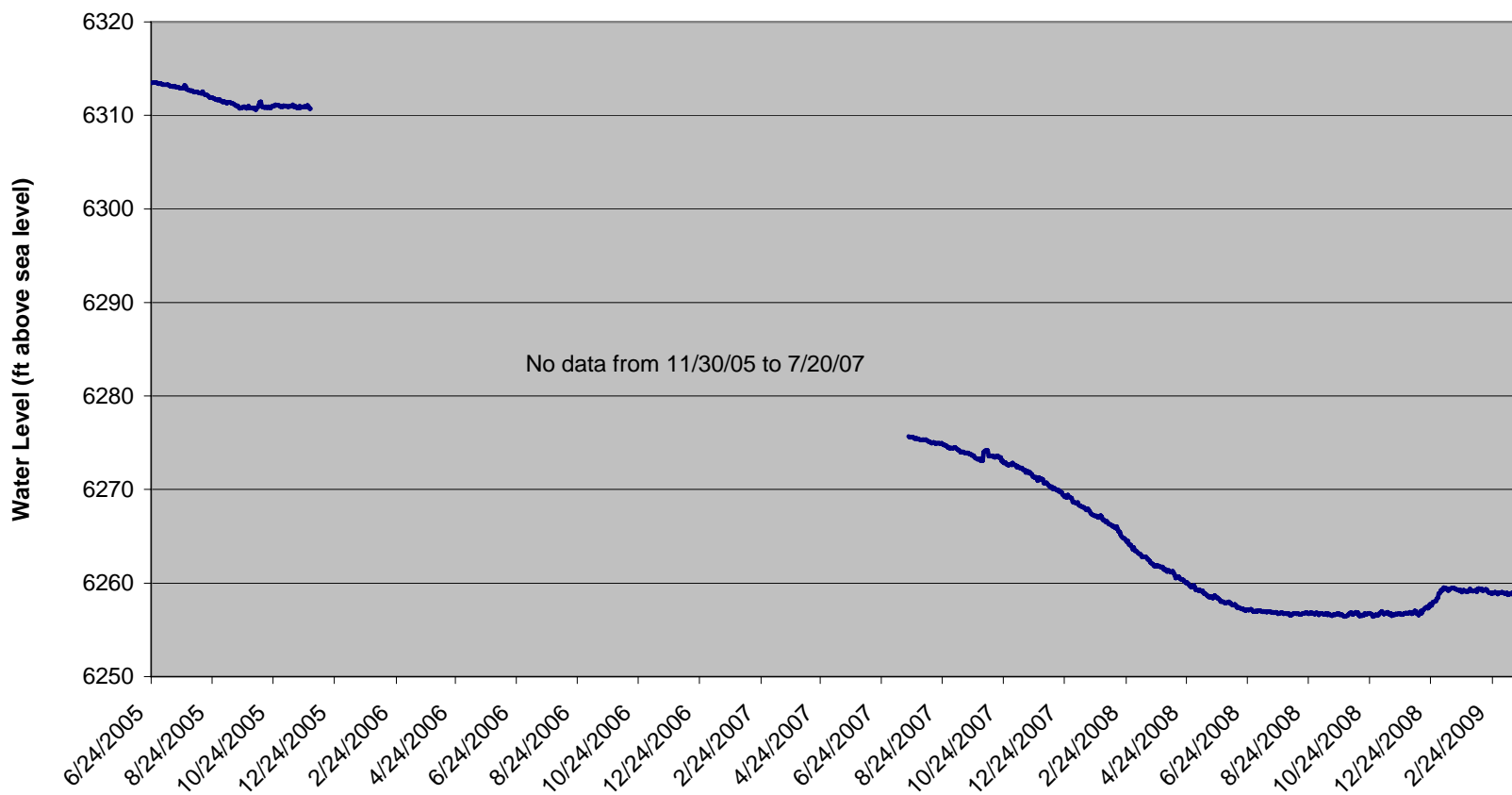


**Attachment 2**  
**Graphs of Pressure and Fluid Level Data From**  
**POCI 55, Barrett, Bergman, Bruington, Coleman, Evendon, Garza-Vela and Meyer**

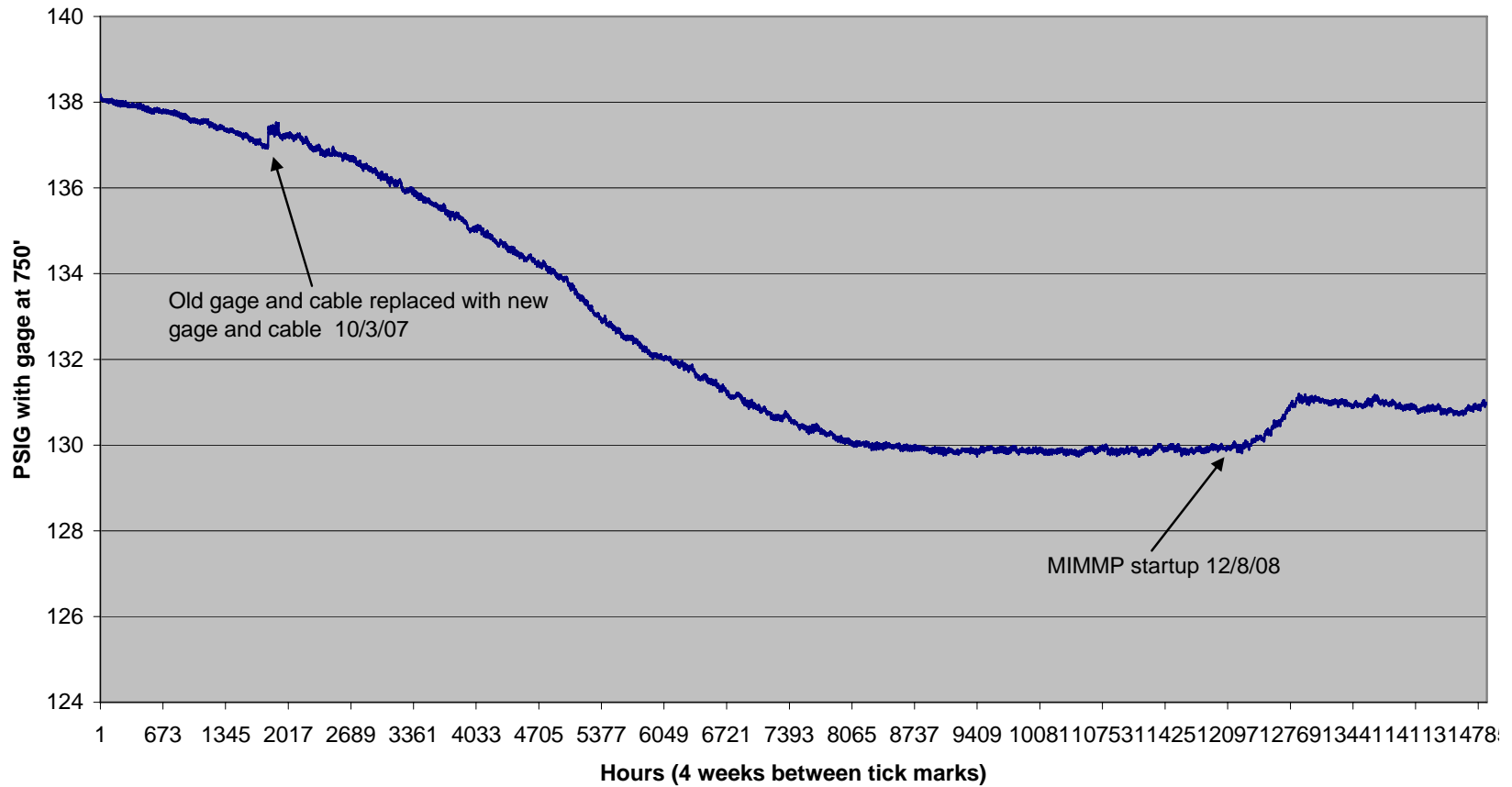
**POCI 55 Monitor Well from 4/2/08 to 3/31/09**  
**Permit # 275819**  
**Lot 55 RRR**  
**SE SW Sec 3 29S 67W**  
**GL elev. 6690'**



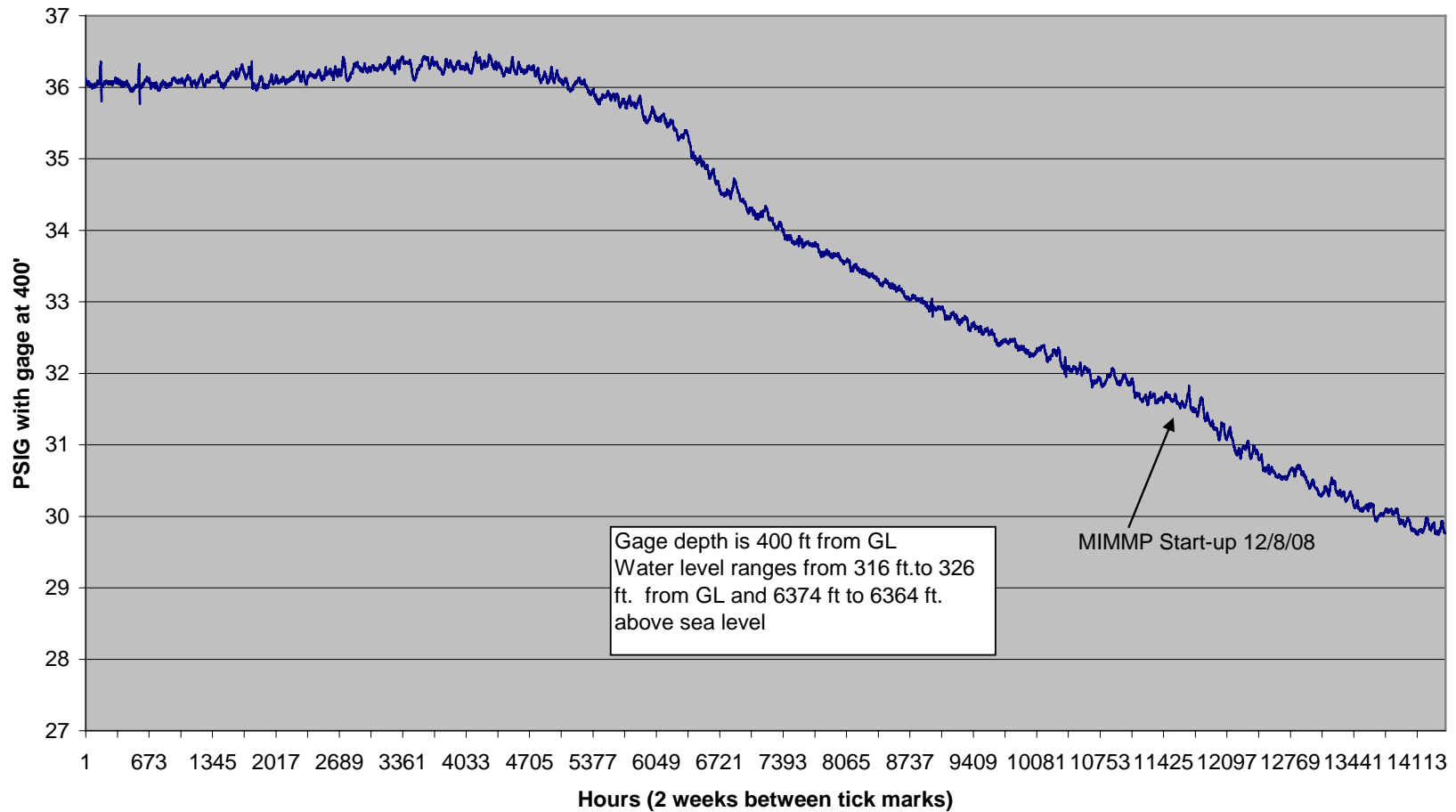
**Barrett WW**  
**Water Level from 6/24/05 to 3/31/09**  
**Permit # 257994**  
**Lot 57 RRR**  
**NW, SE Sec 3, T29S R67W**



**Barrett WW from 7/20/07 to 3/31/09**  
**Permit # 257994**  
**Lot 57 RRR**  
**NW, SE Sec 3, T29S R67W**  
**G.L. elev. 6707'**

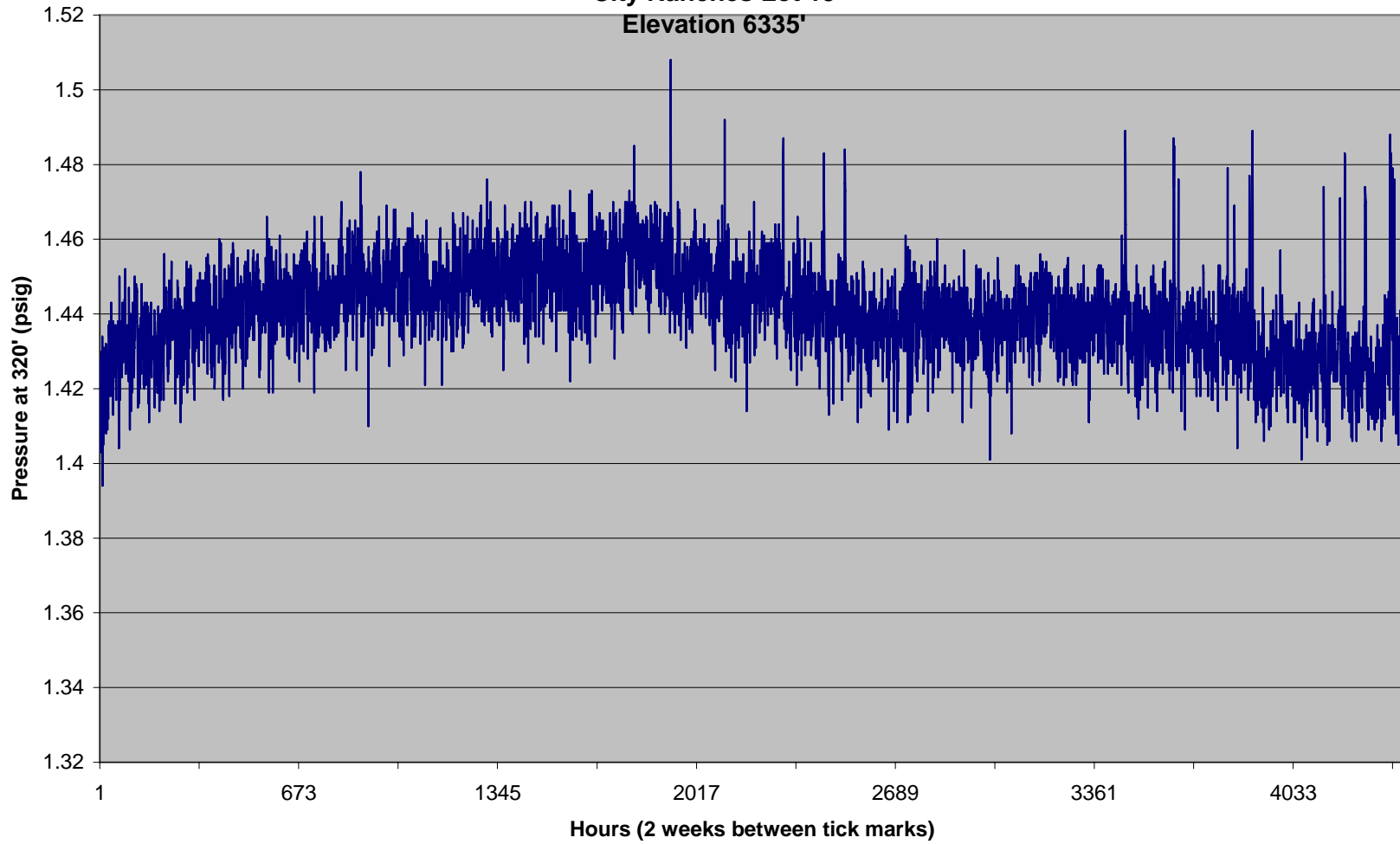


**Bergman WW pressure data from 8/9/07 to 3/31/09**  
**Permit # 24403, SW NW Sec 3 29S 67W**  
**Lot 48 RRR**

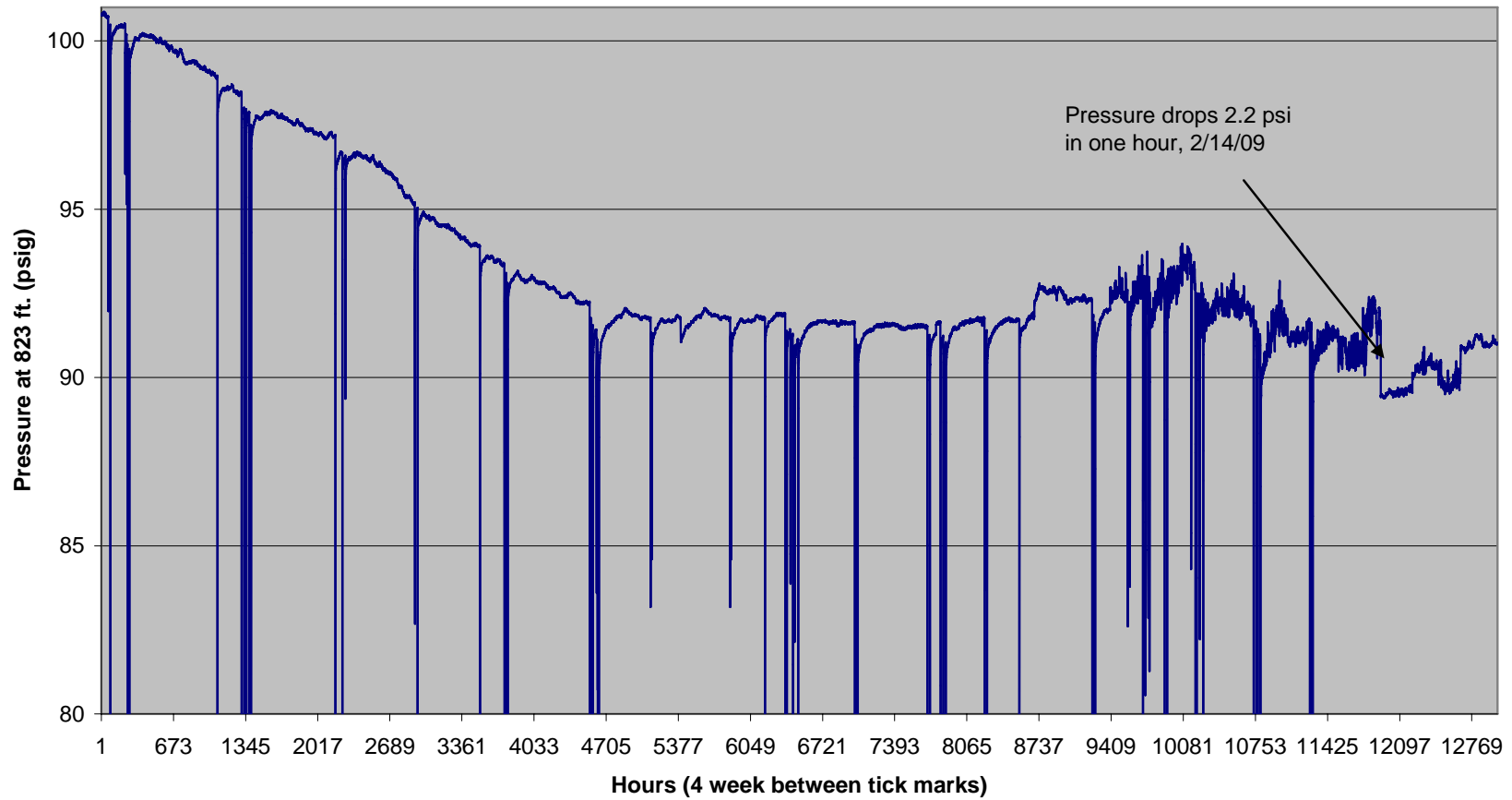




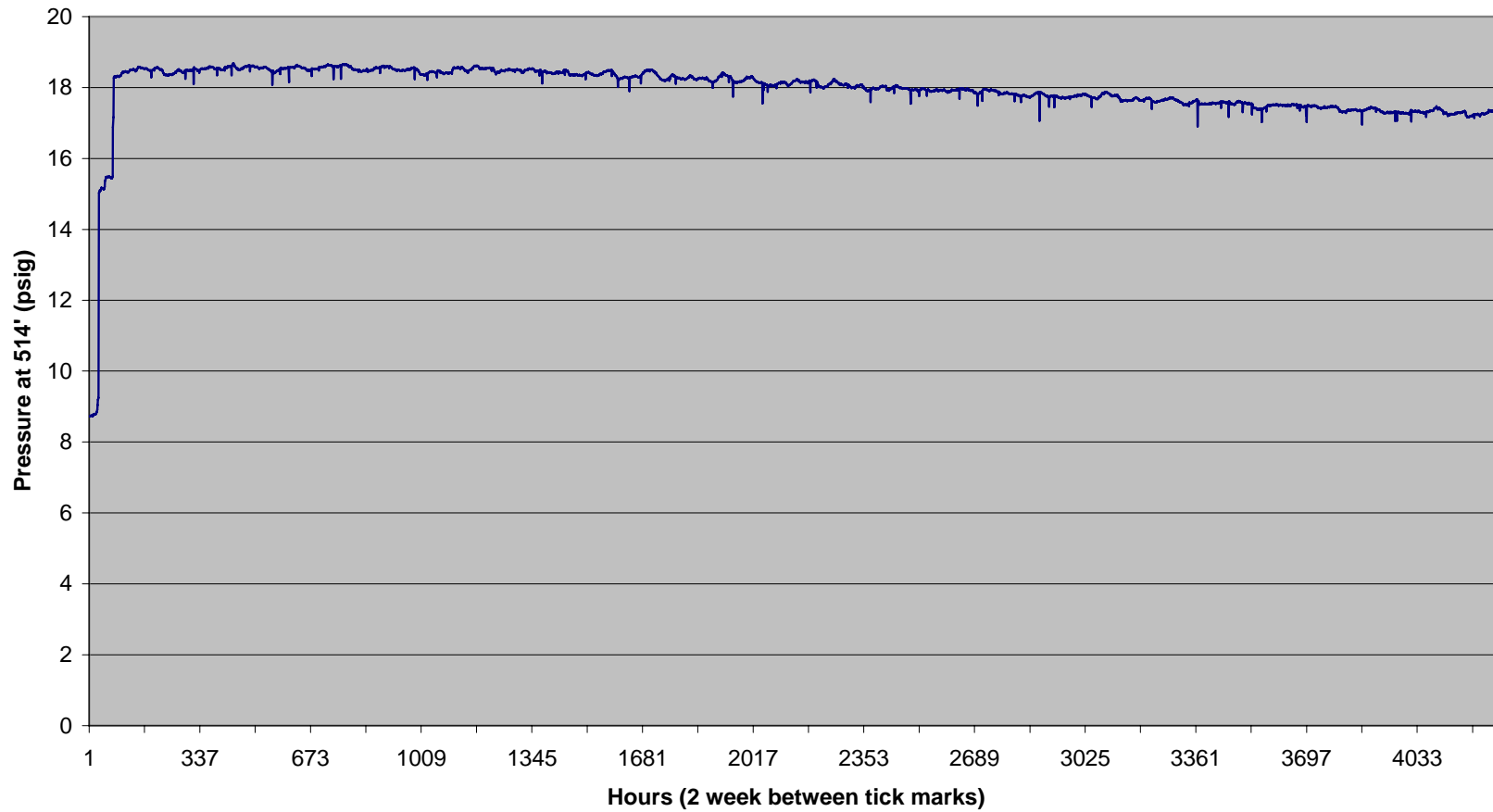
**Pressure at 320' from 9/29/08 to 4/1/09**  
**Bruington WW, Permit # 210526**  
**City Ranches Lot 15**  
**Elevation 6335'**



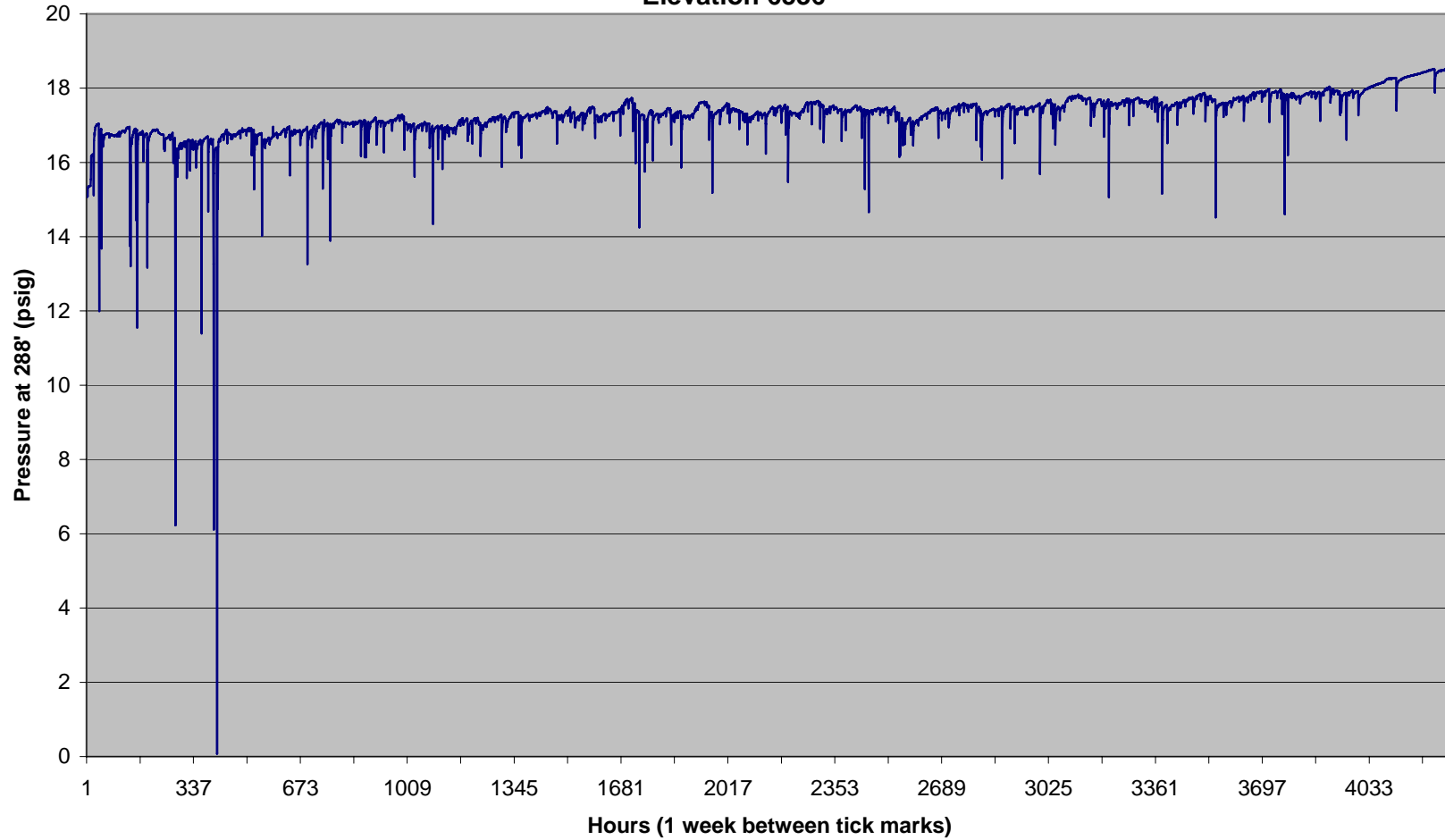
**Coleman WW Pressure Data from 10/31/07 to 3/31/09**  
**Permit # 267964 NE SW Sec 10 29S 67W**  
**Lot 70 RRR**  
**G.L. elev. 6848'**



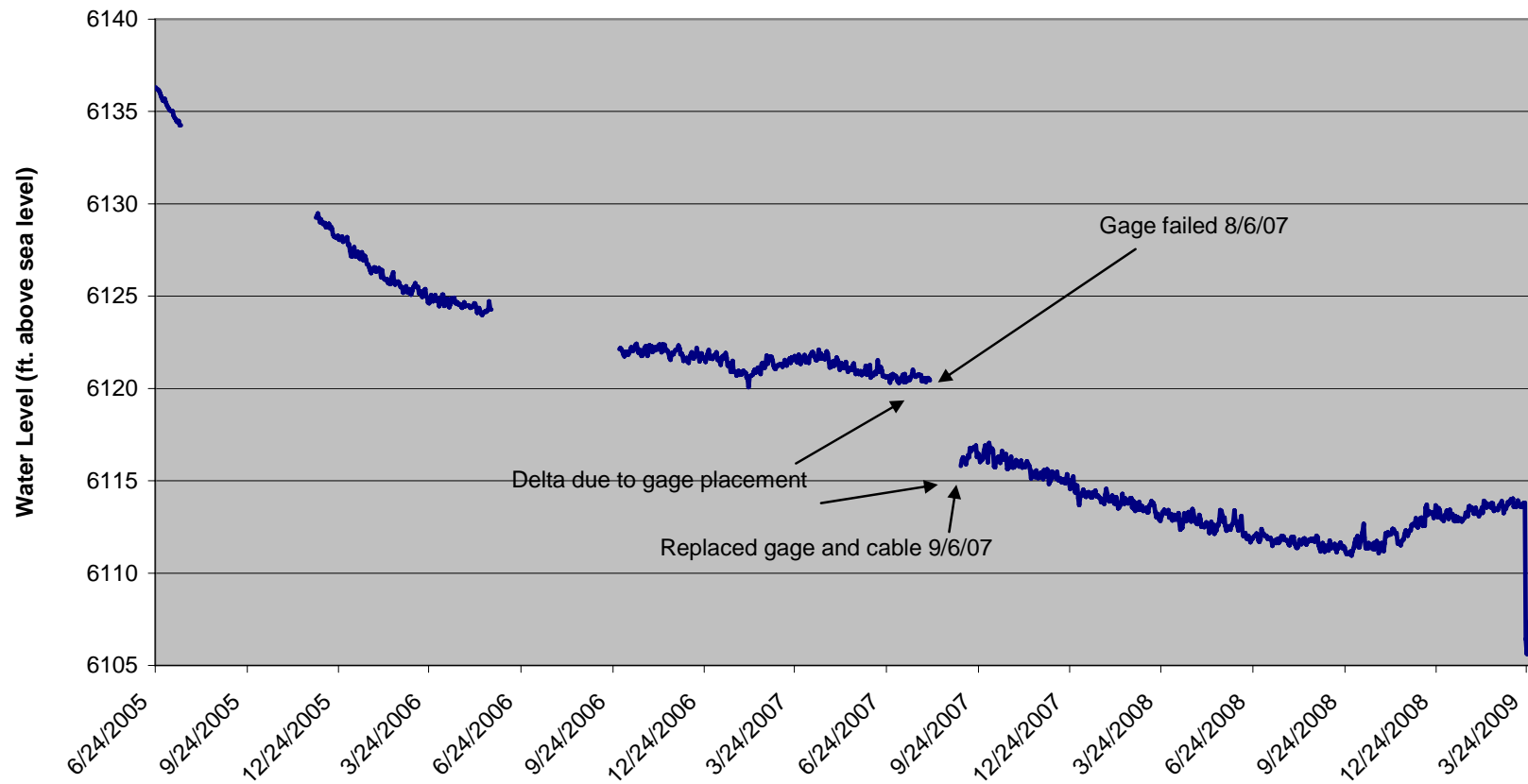
**Pressure at 595' from 10/3/08 to 3/31/09**  
**Evenden WW, Permit # 221465**  
**Lot 117 Silver Spurs Ranch**  
**Elevation 6712'**



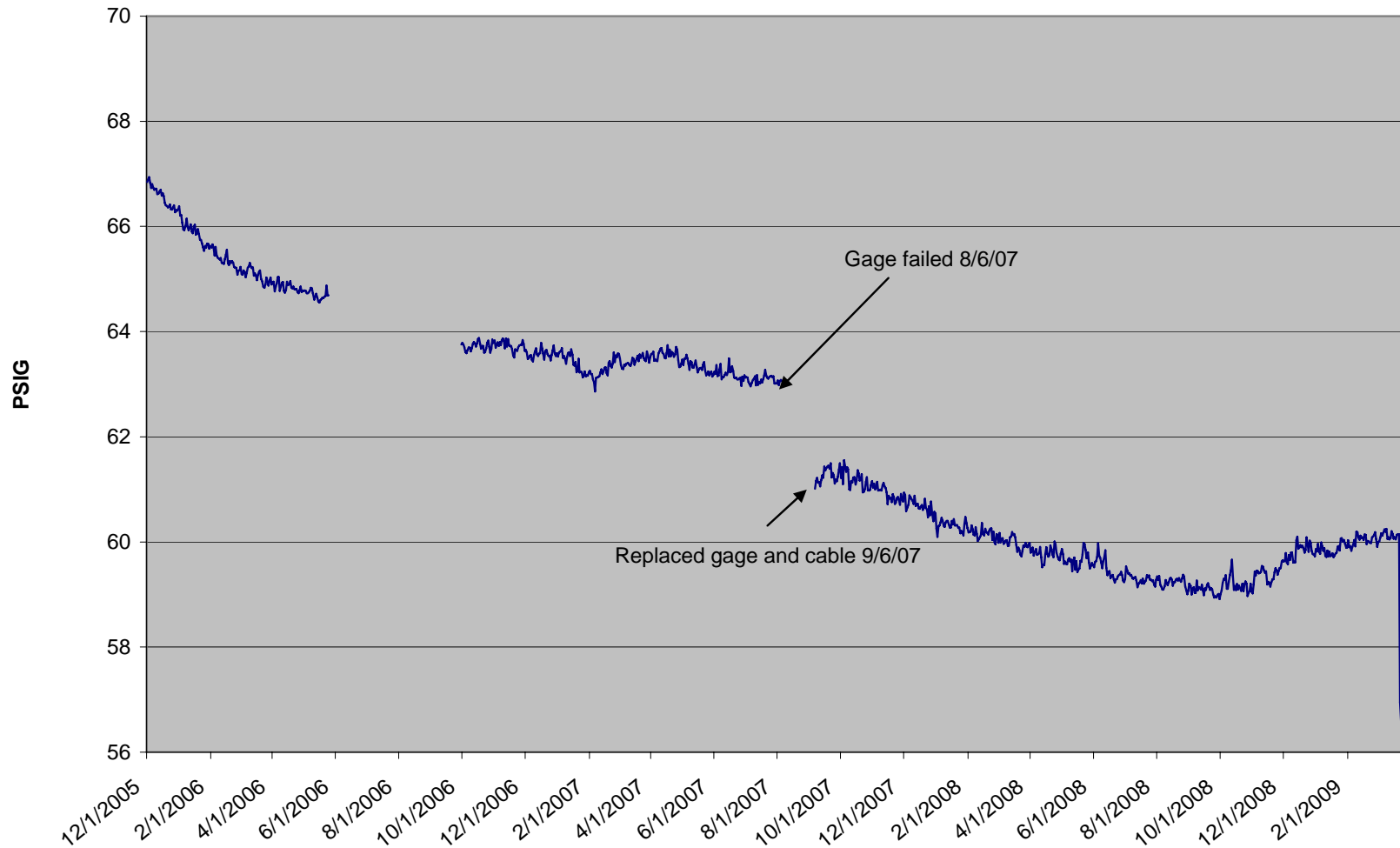
**Pressure at 288' from 10/3/08 to 3/31/09**  
**Garza WW, Permit # 206886**  
**Silver Spurs Ranch, Lot 60**  
**Elevation 6536'**



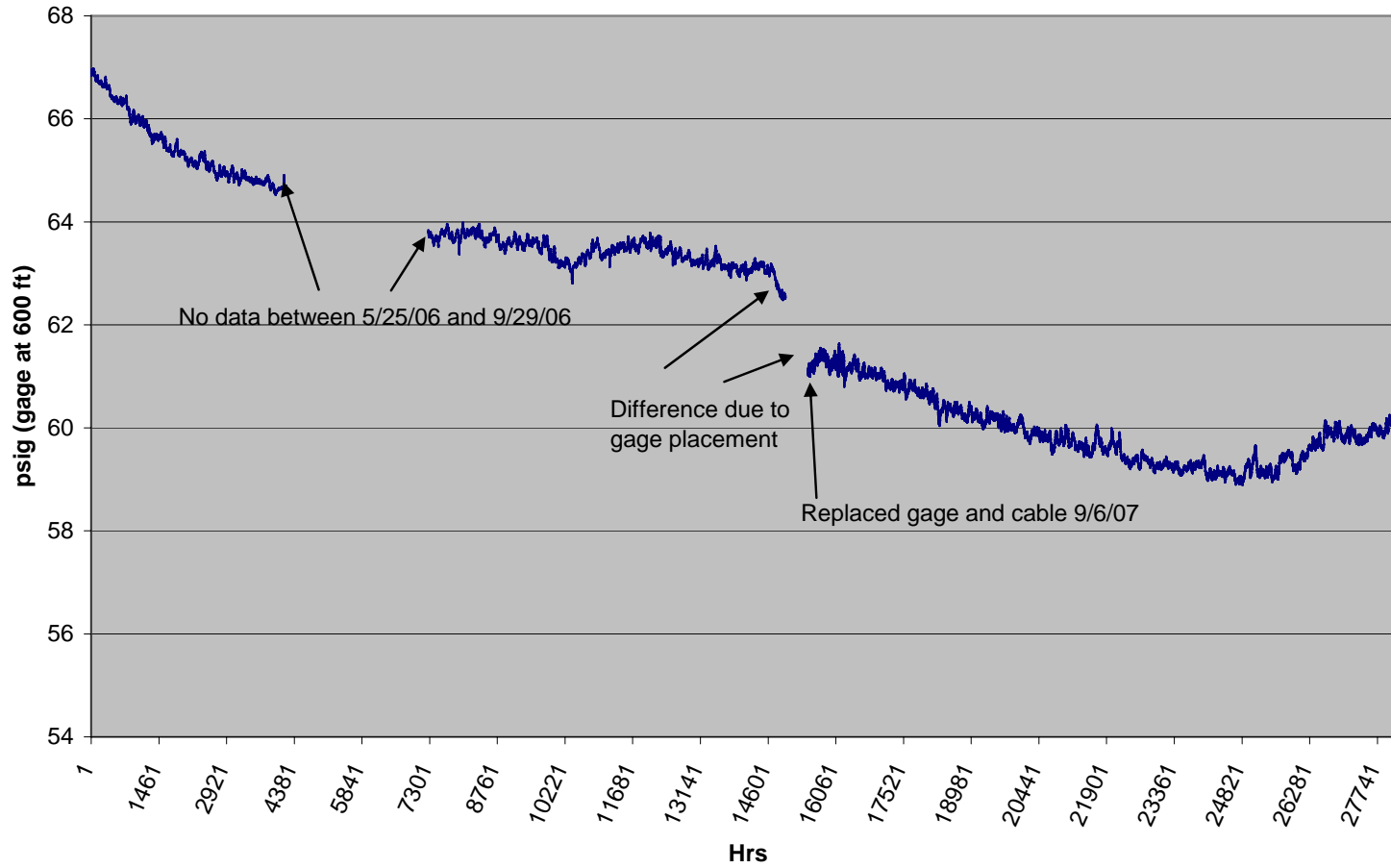
**Meyer WW Water Level from 6/24/05 to 3/31/09**  
**Permit # 248862**  
**Lot 120 RRR**  
**SW, NE Sec 30 T28S R66W**



**Meyers WW BHP from 12/1/05 to 3/31/09**



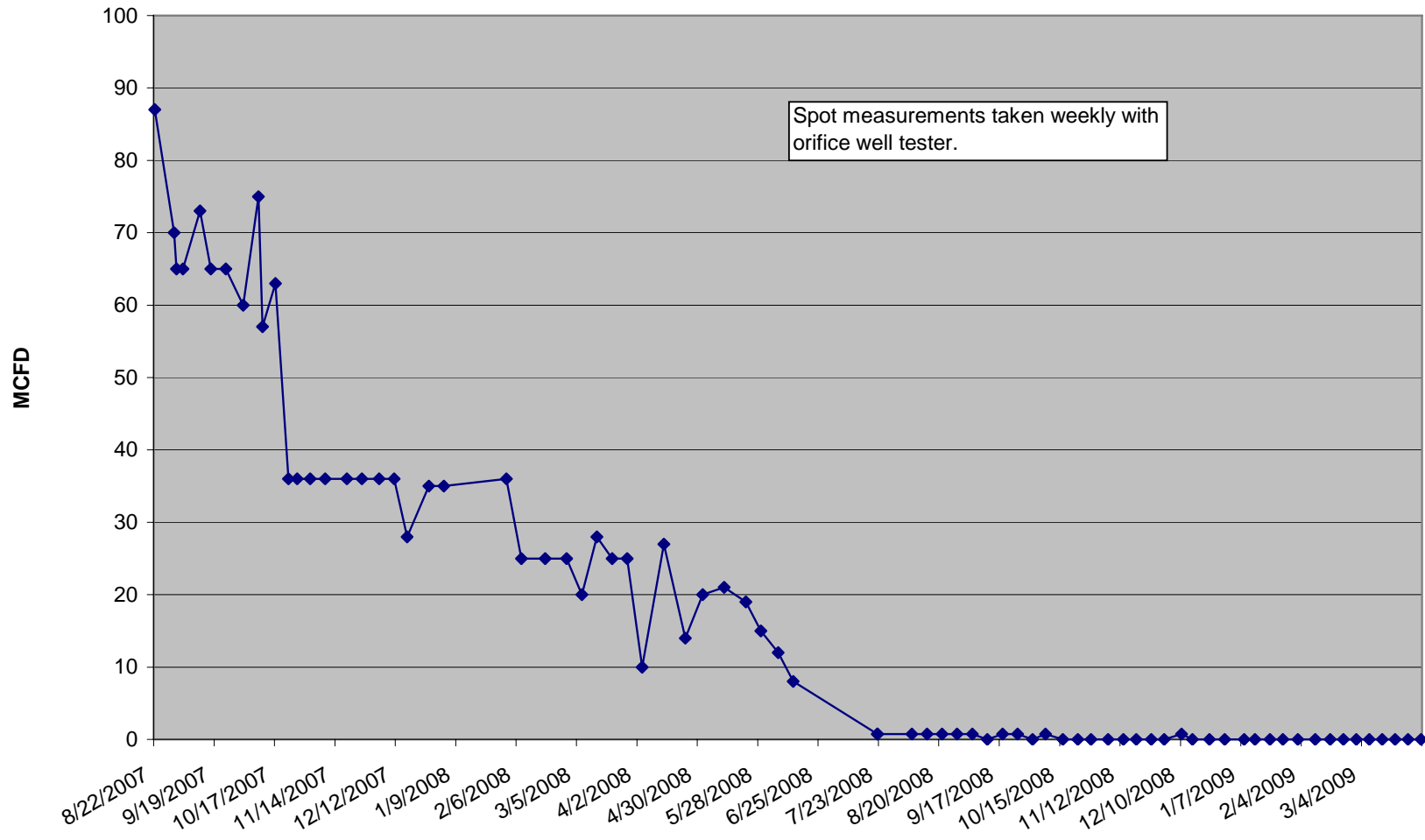
**Meyers WW 11/30/05 to 2/23/09**  
**Permit # 248862**  
**Lot 120 RRR**  
**SW, NE Sec 30 T28S R66W**  
**G.L. elev. 6575'**



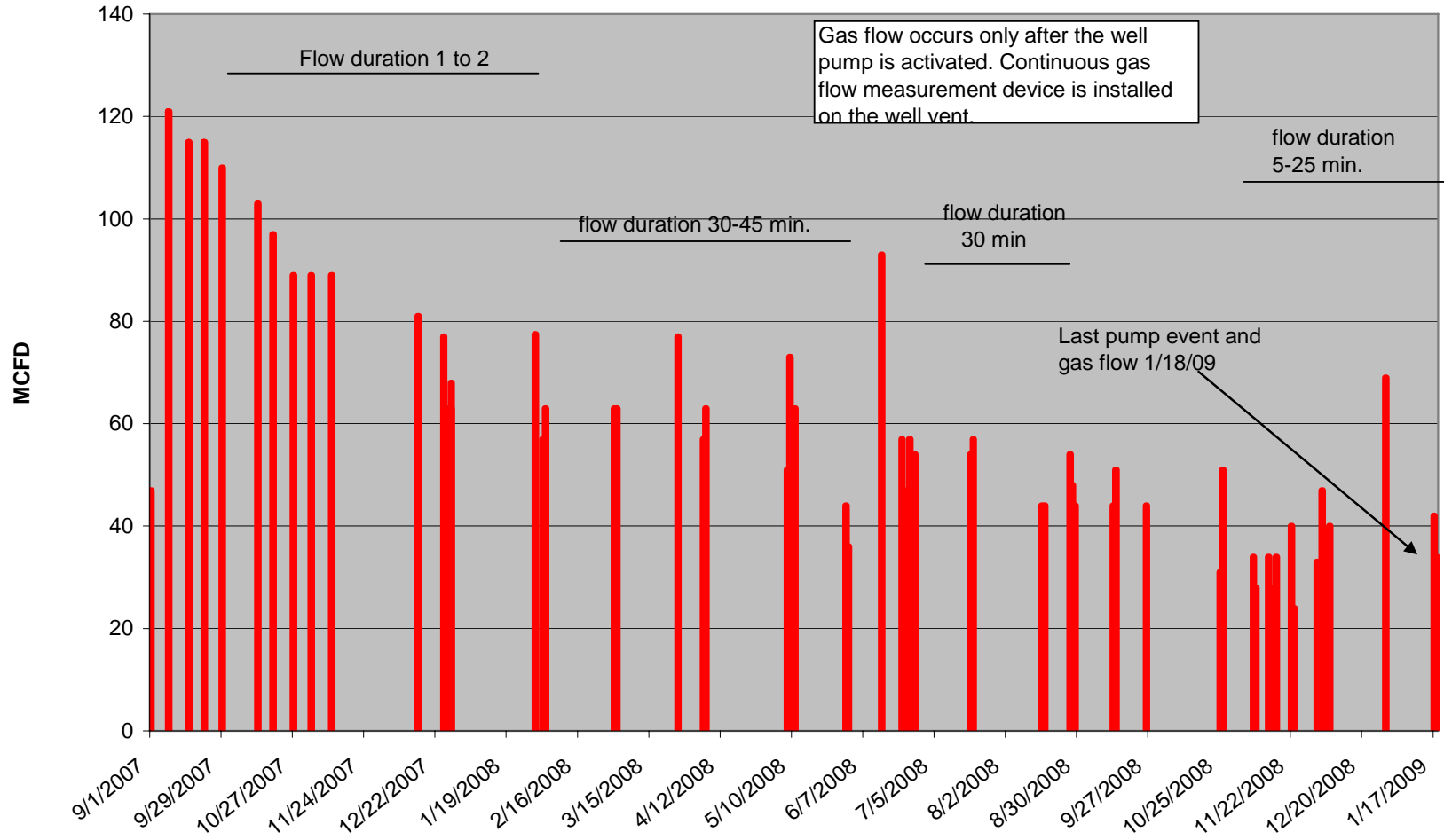
**Attachment 3**  
**Gas Flow Measurements at Bruington, Coleman, Angely, Bounds, and Smith**



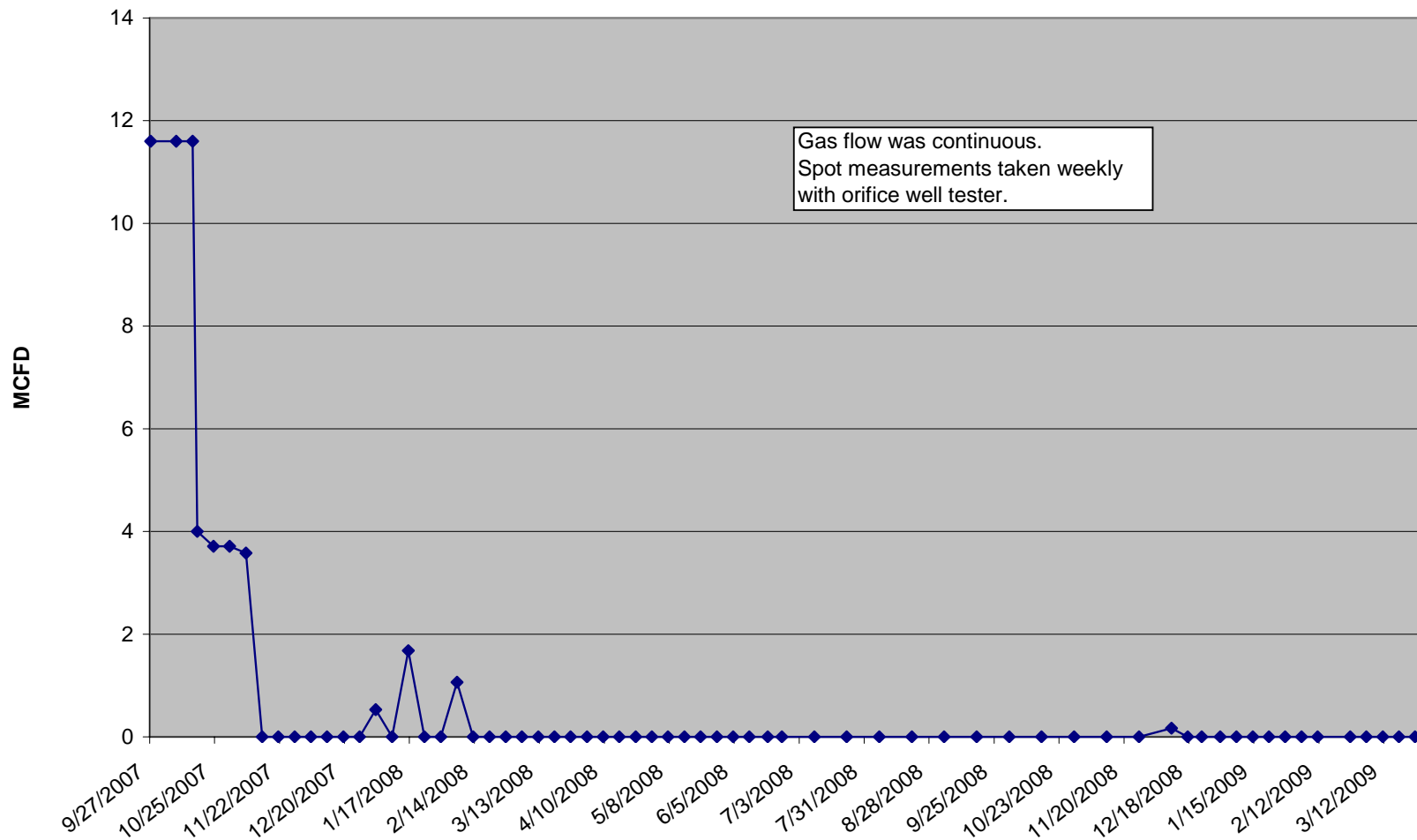
**Bruington WW # 210526 Measured Gas Flow  
from 8/22/07 to 3/31/09**



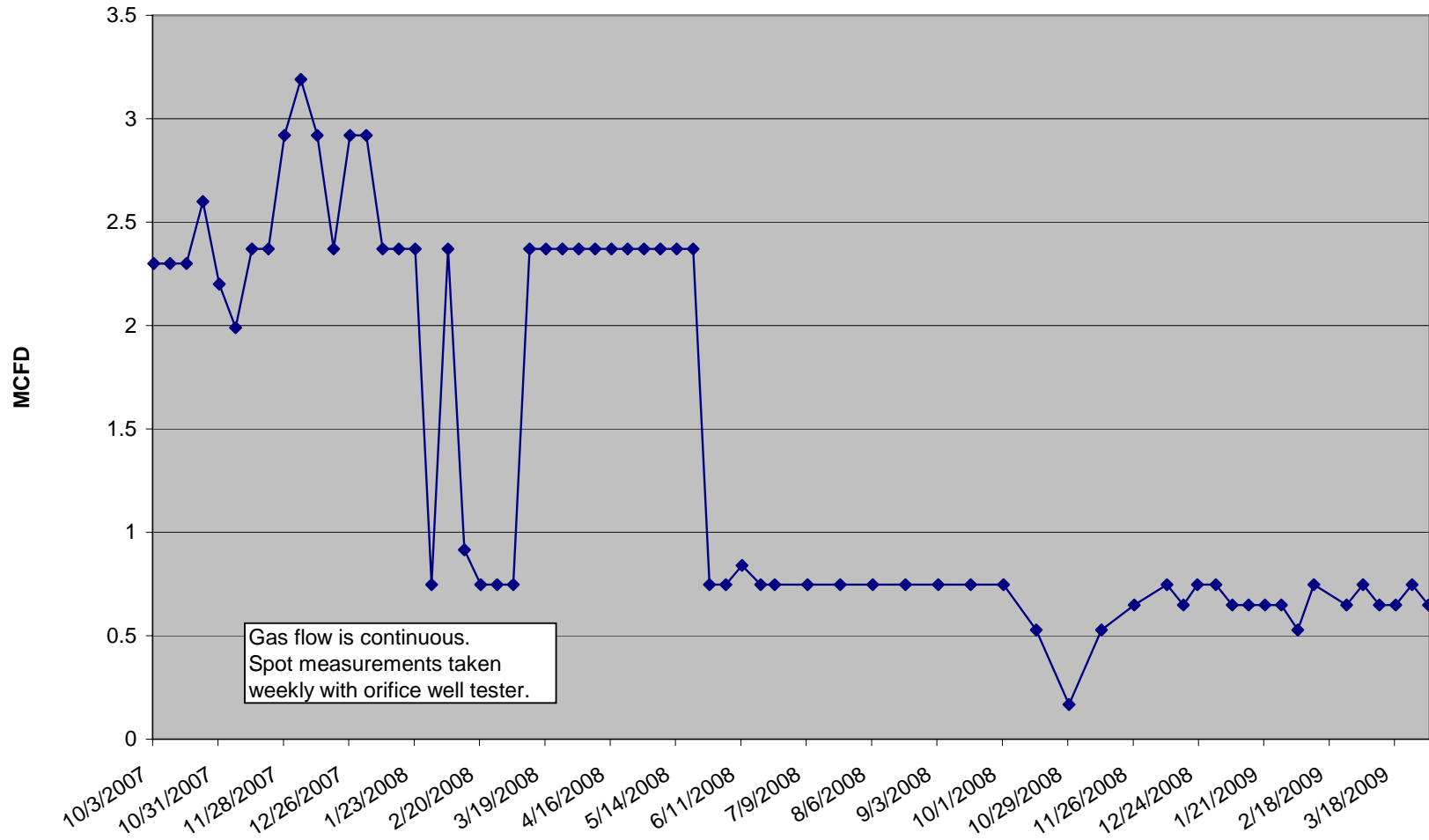
**Coleman WW #267294 Measured Gas Flow  
from 9/1/07 to 3/31/09**



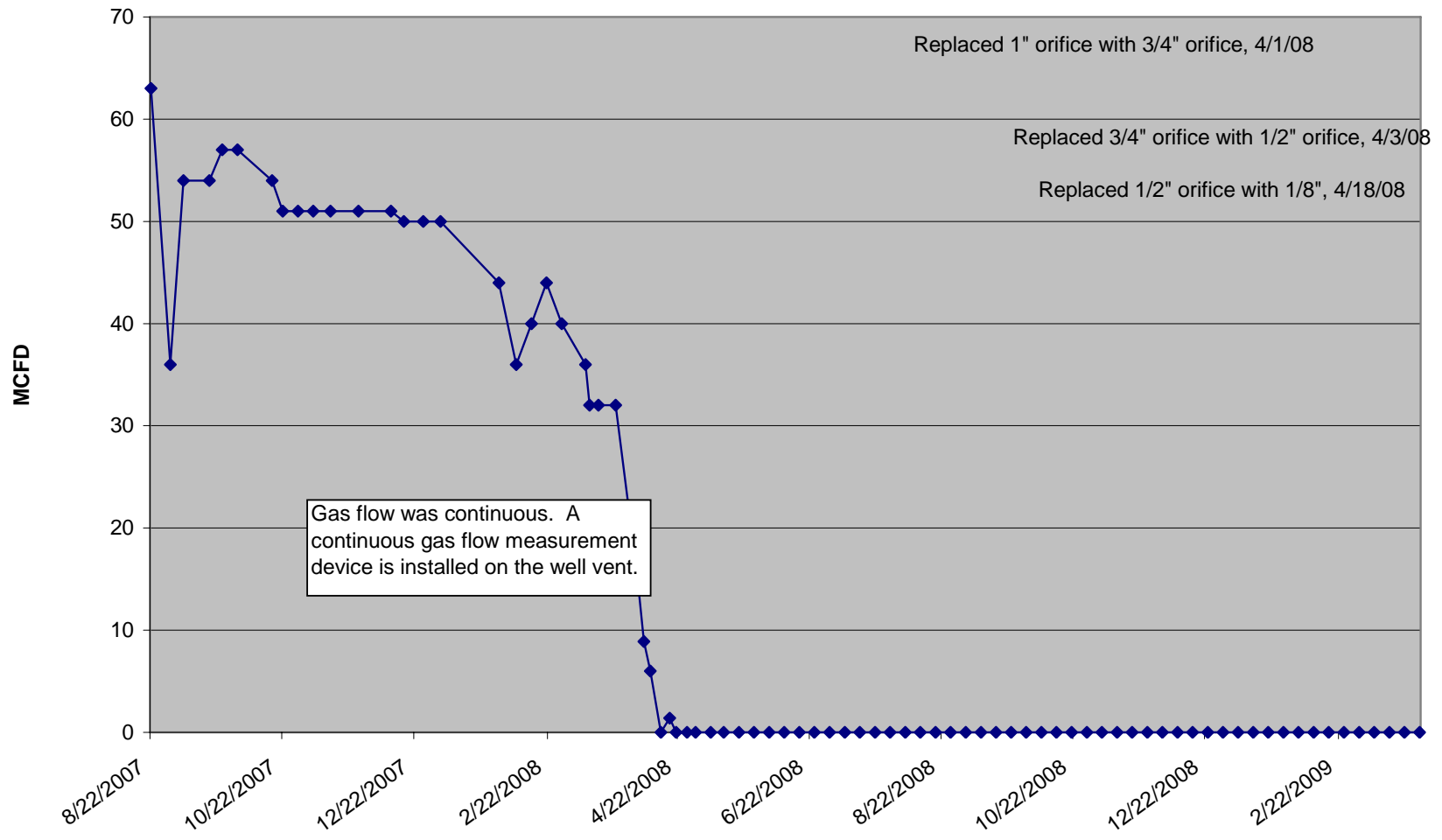
**Angely WW # 238689 Measured Gas Flow  
from 9/27/07 to 4/1/09**



**Bounds WW #181278 Measured Gas Flow  
from 10/3/07 to 4/1/09**

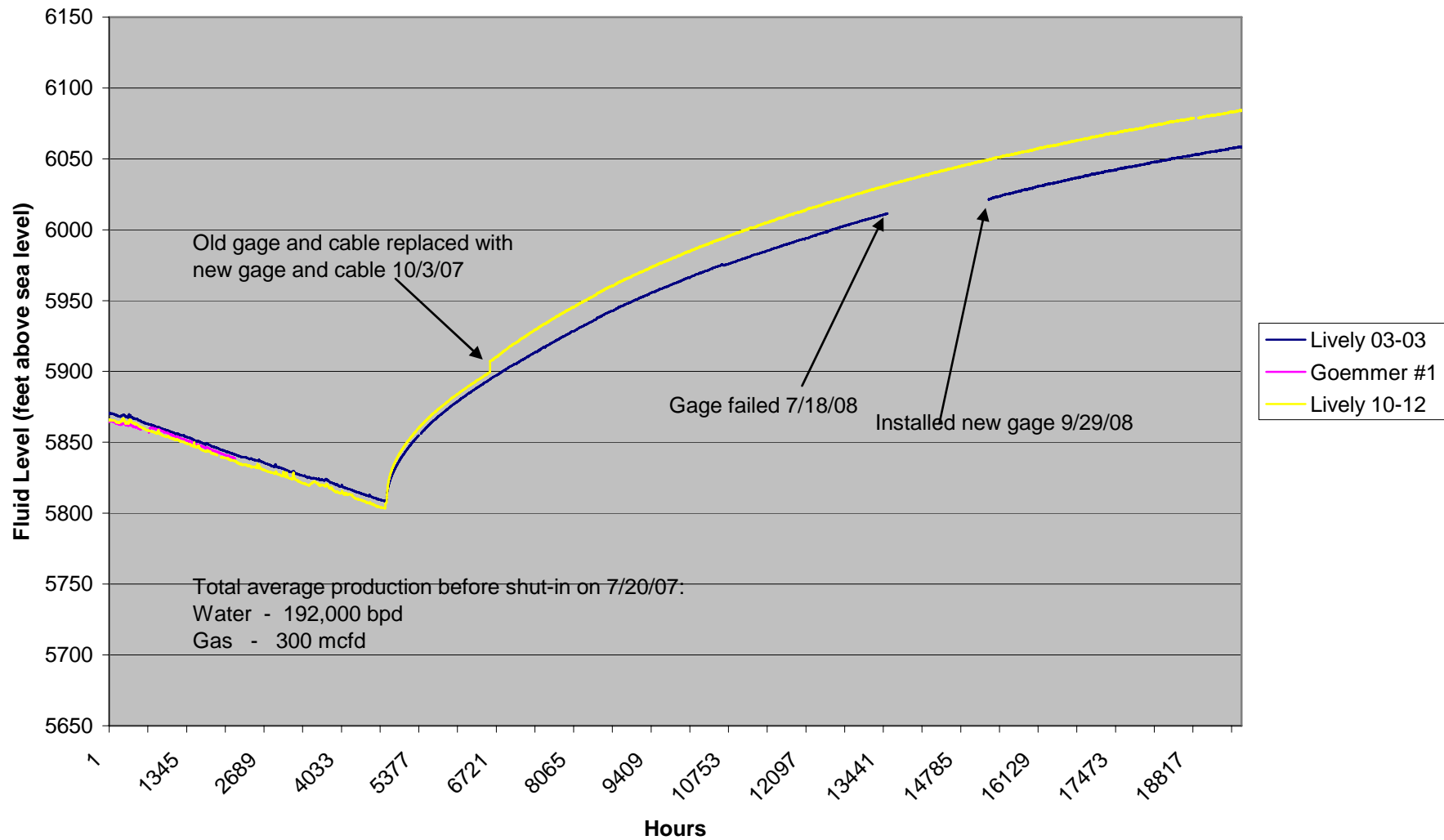


**Smith WW # 239657 Measured Gas Flow  
from 8/22/07 to 3/31/09**

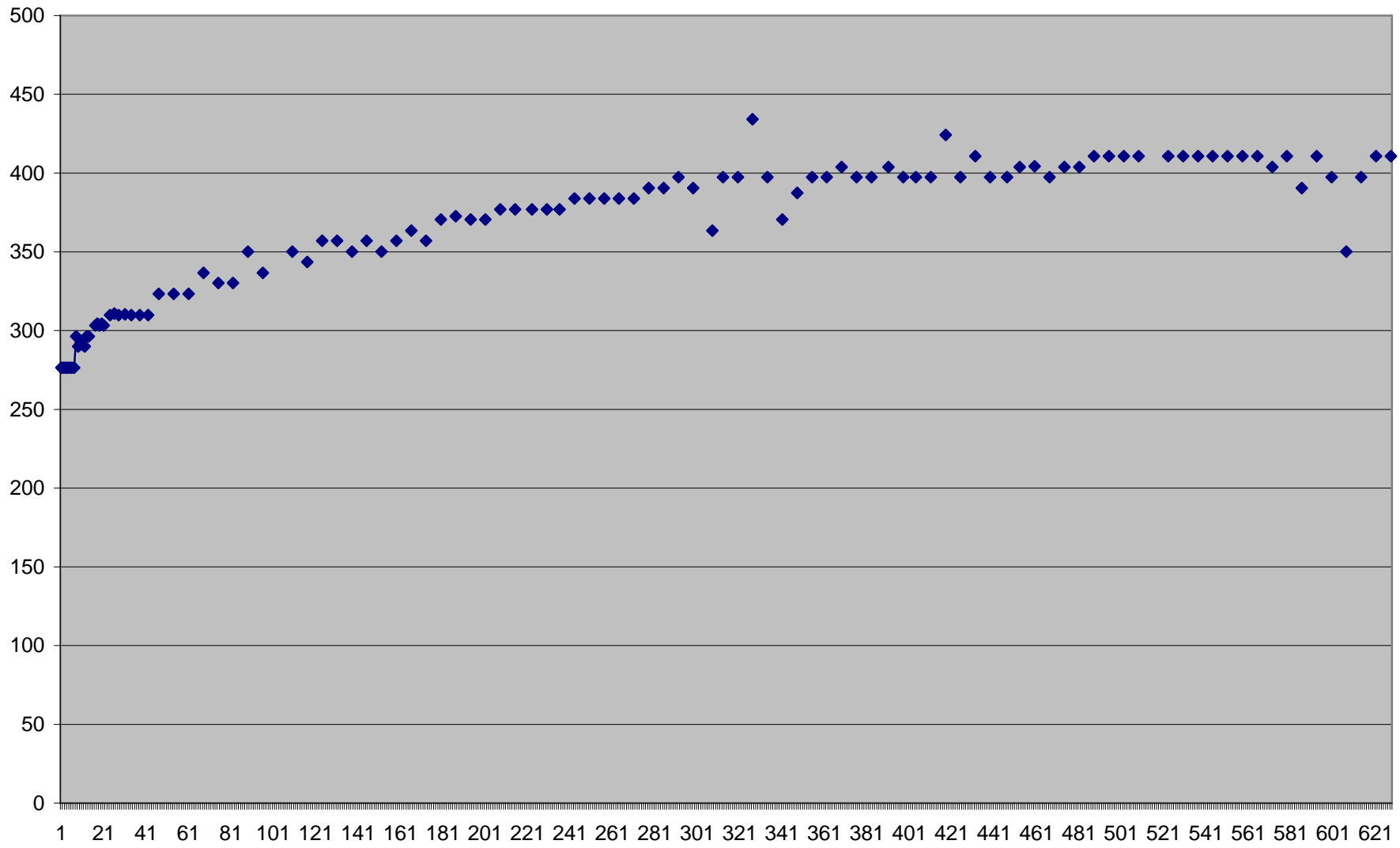


**Attachment 4**  
**Fluid Levels in Petroglyph Production Wells**  
**(Results in psia, unless stated otherwise)**

### Monitor Well Fluid Levels PBU from 1/1/07 to 3/31/09

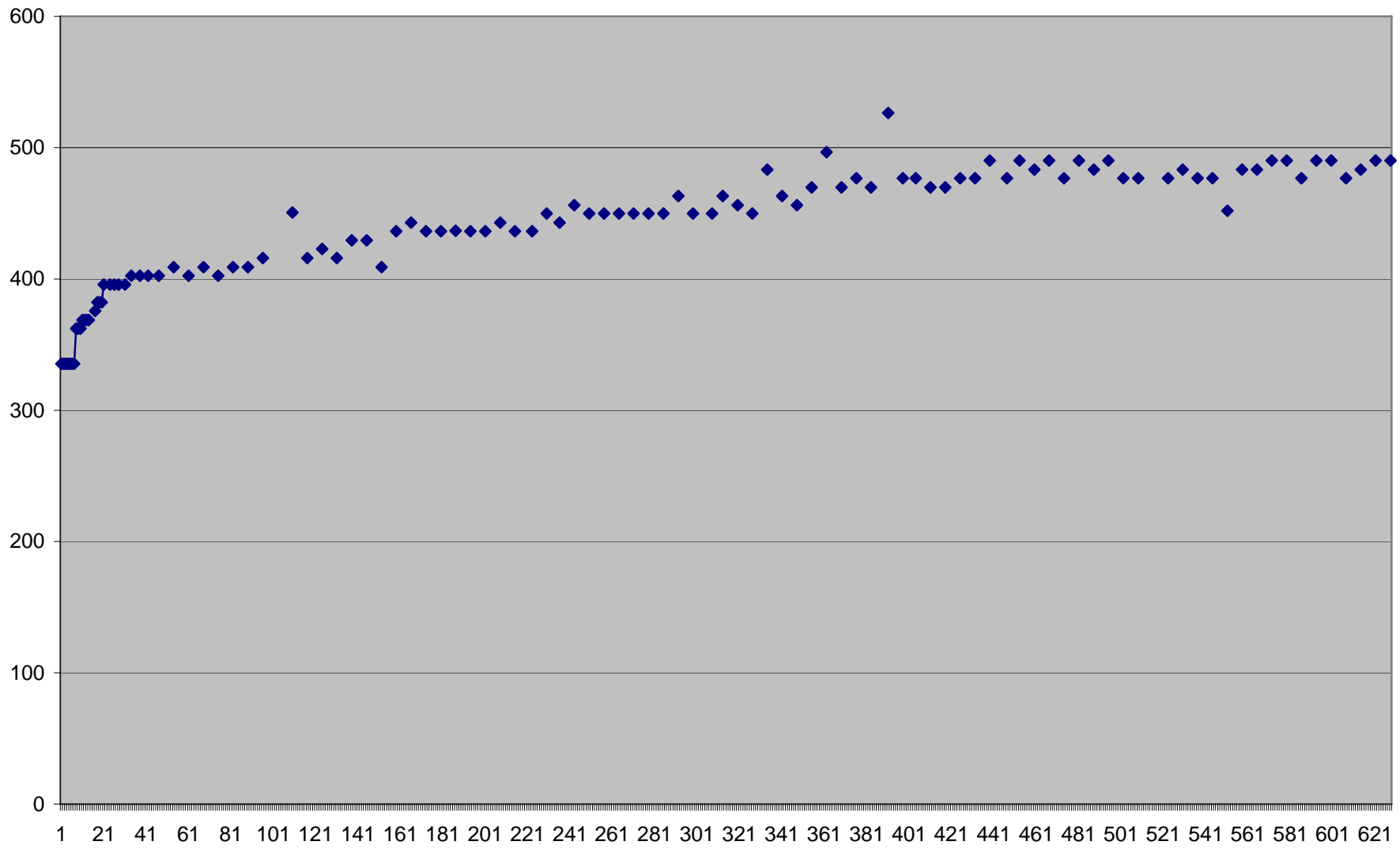


### Lively 02-02

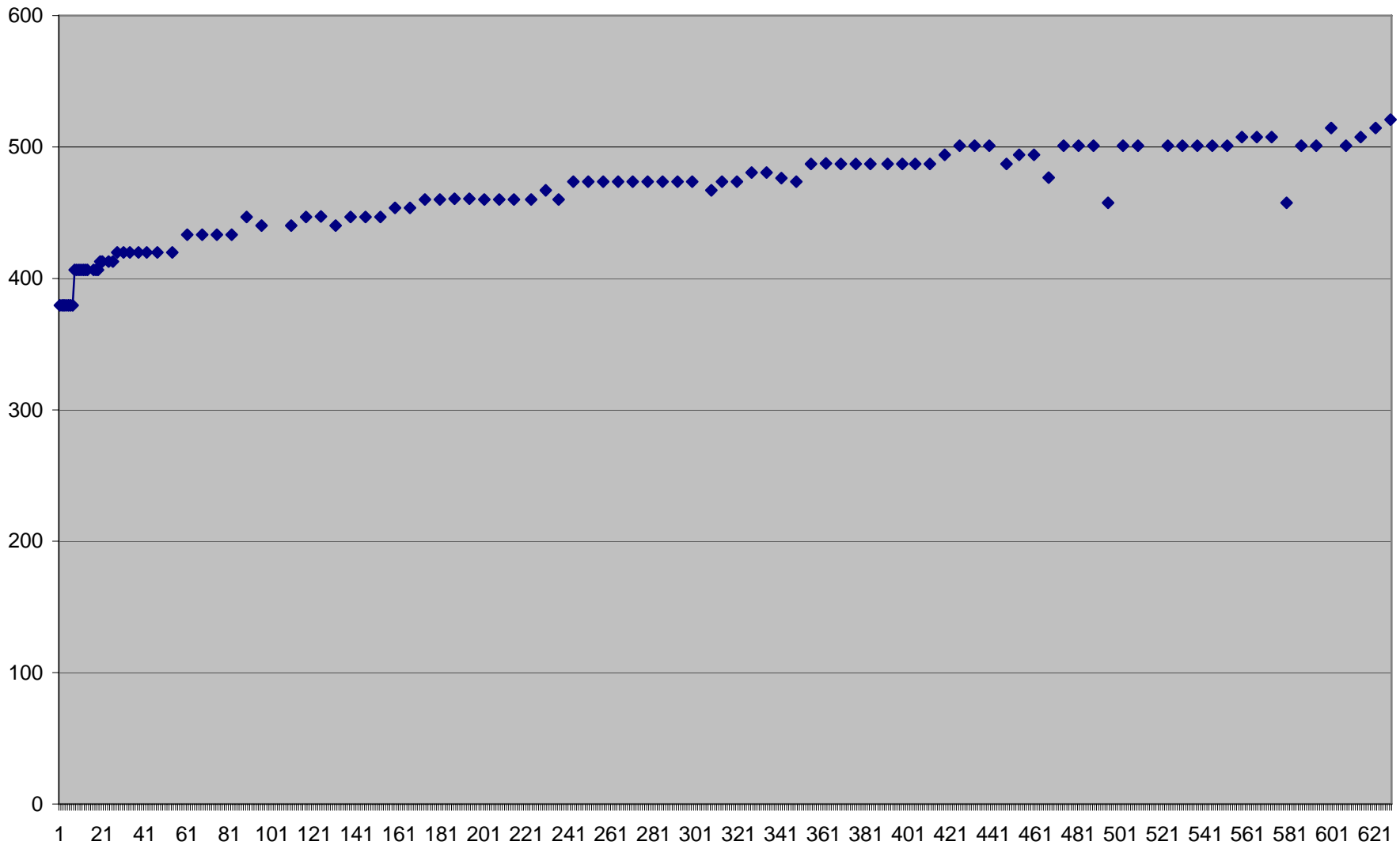




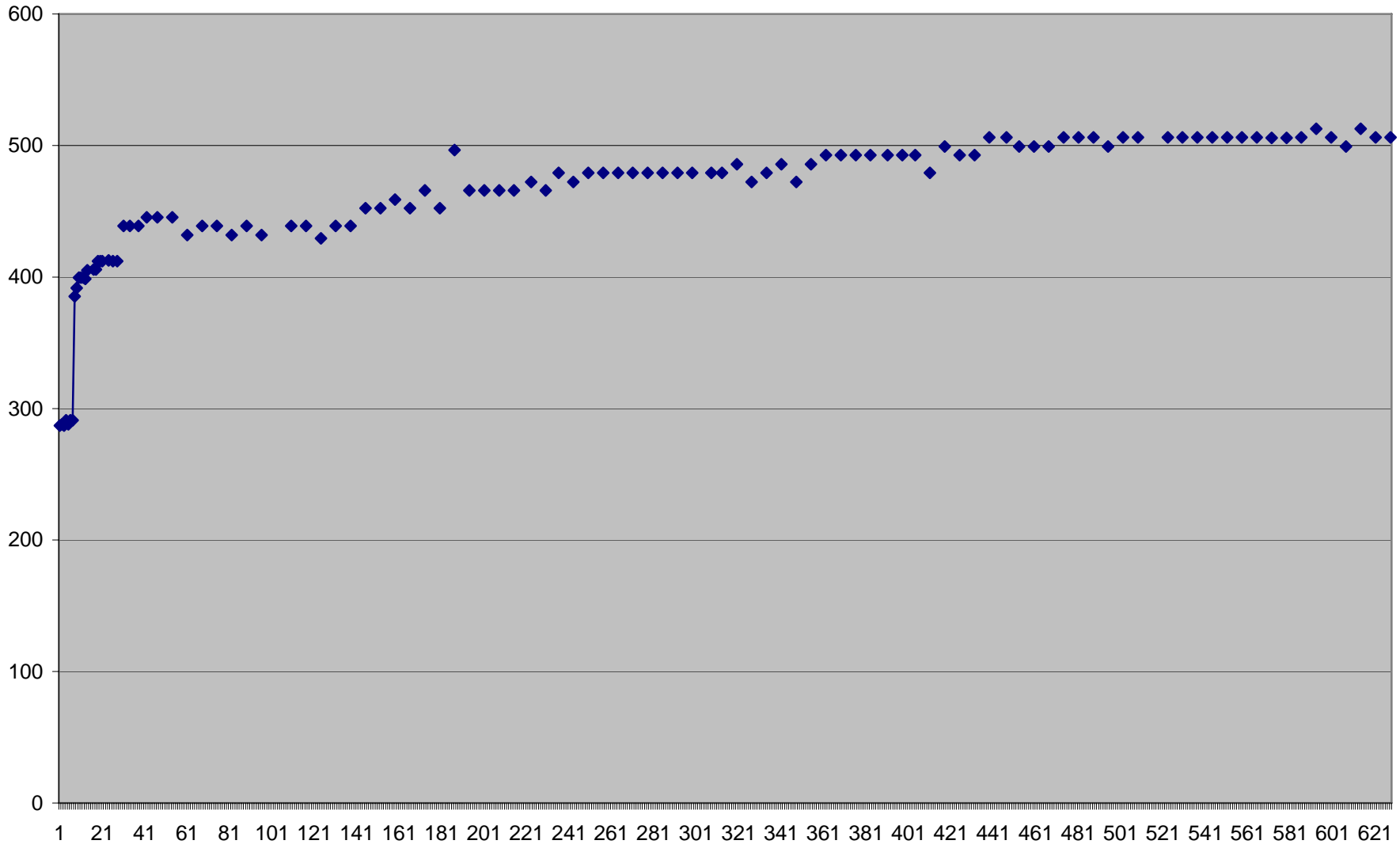
### Lively 02-12



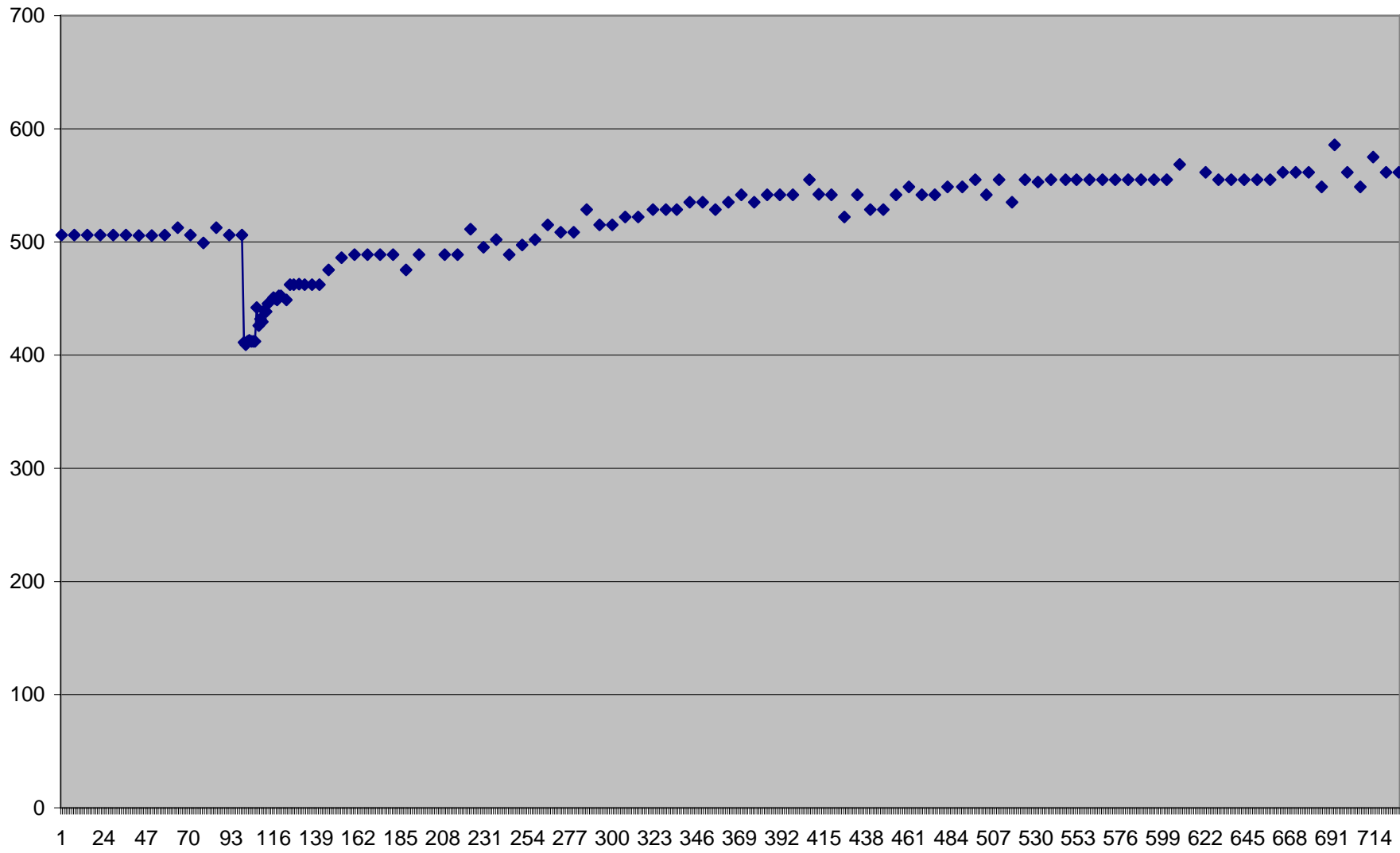
### Lively 03-01



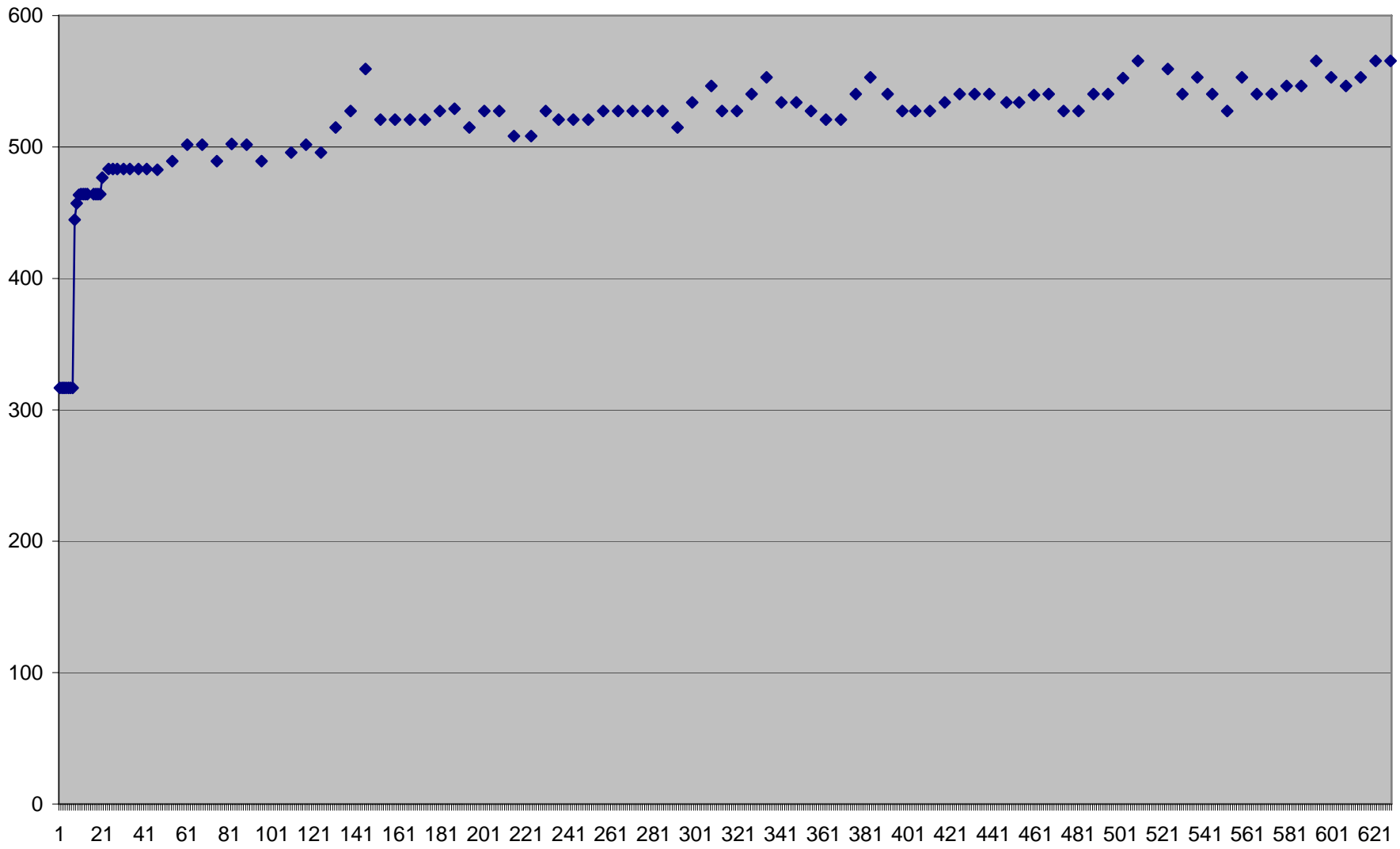
### Lively 03-10



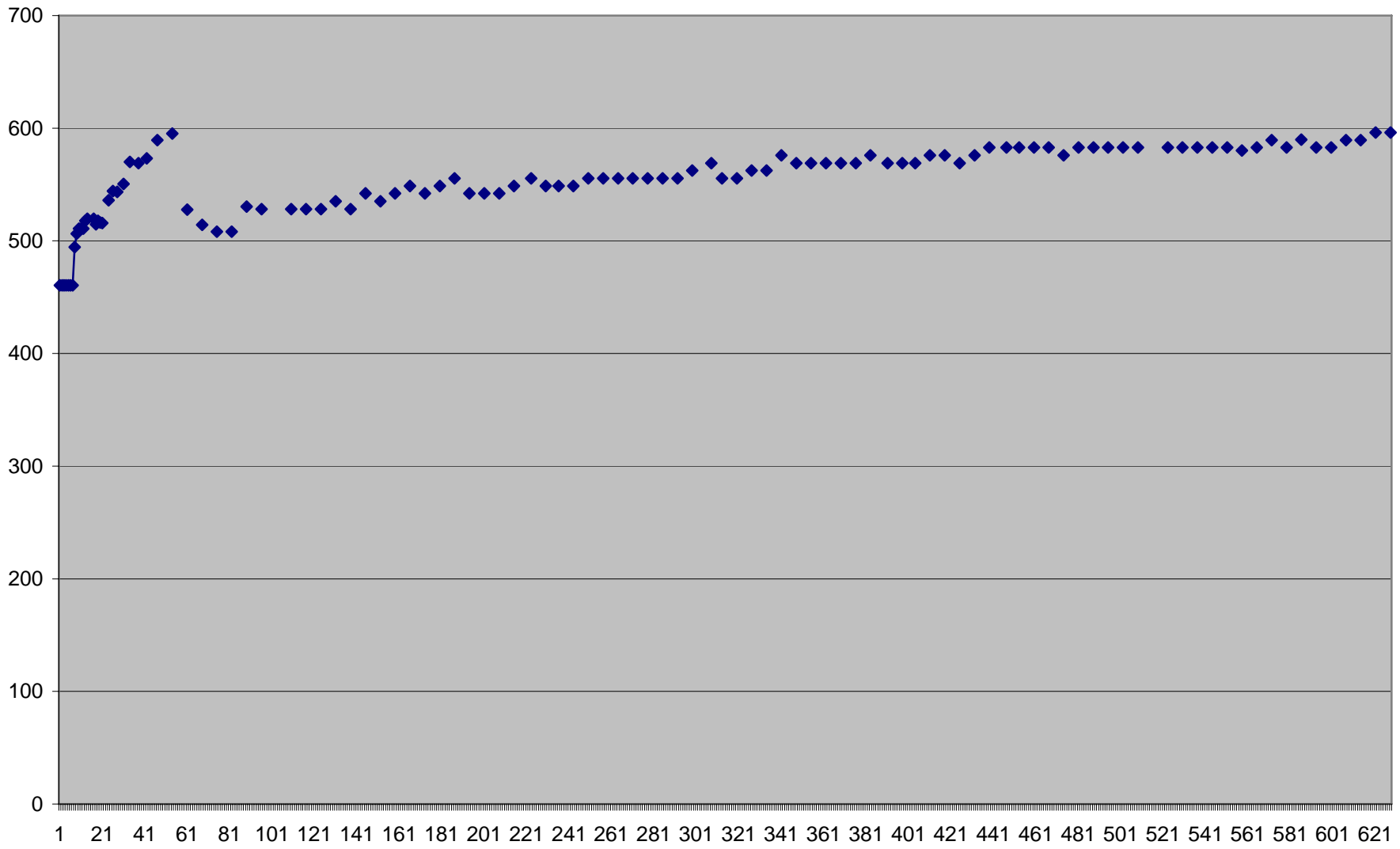
### Lively 03-12



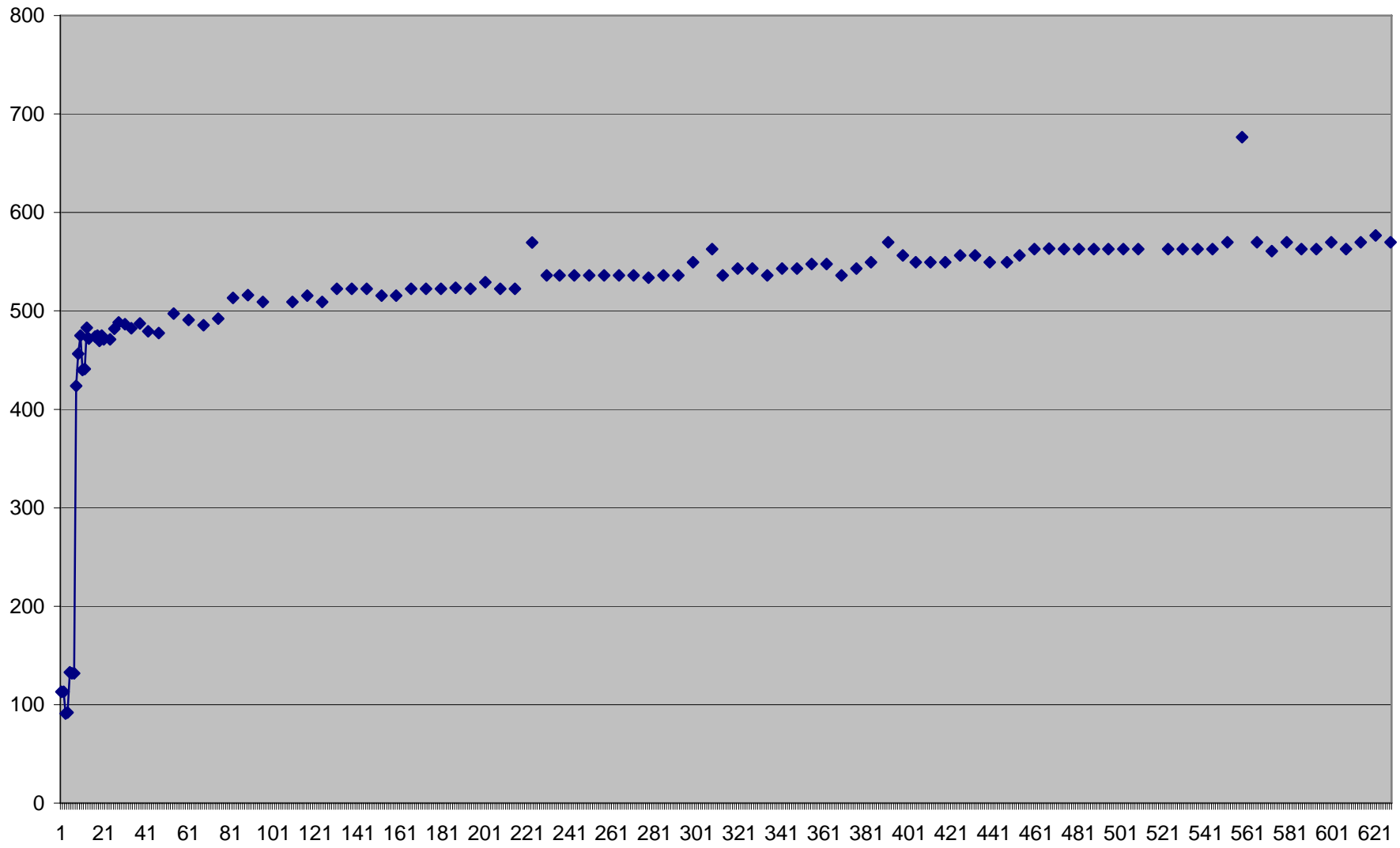
### Lively 10-04



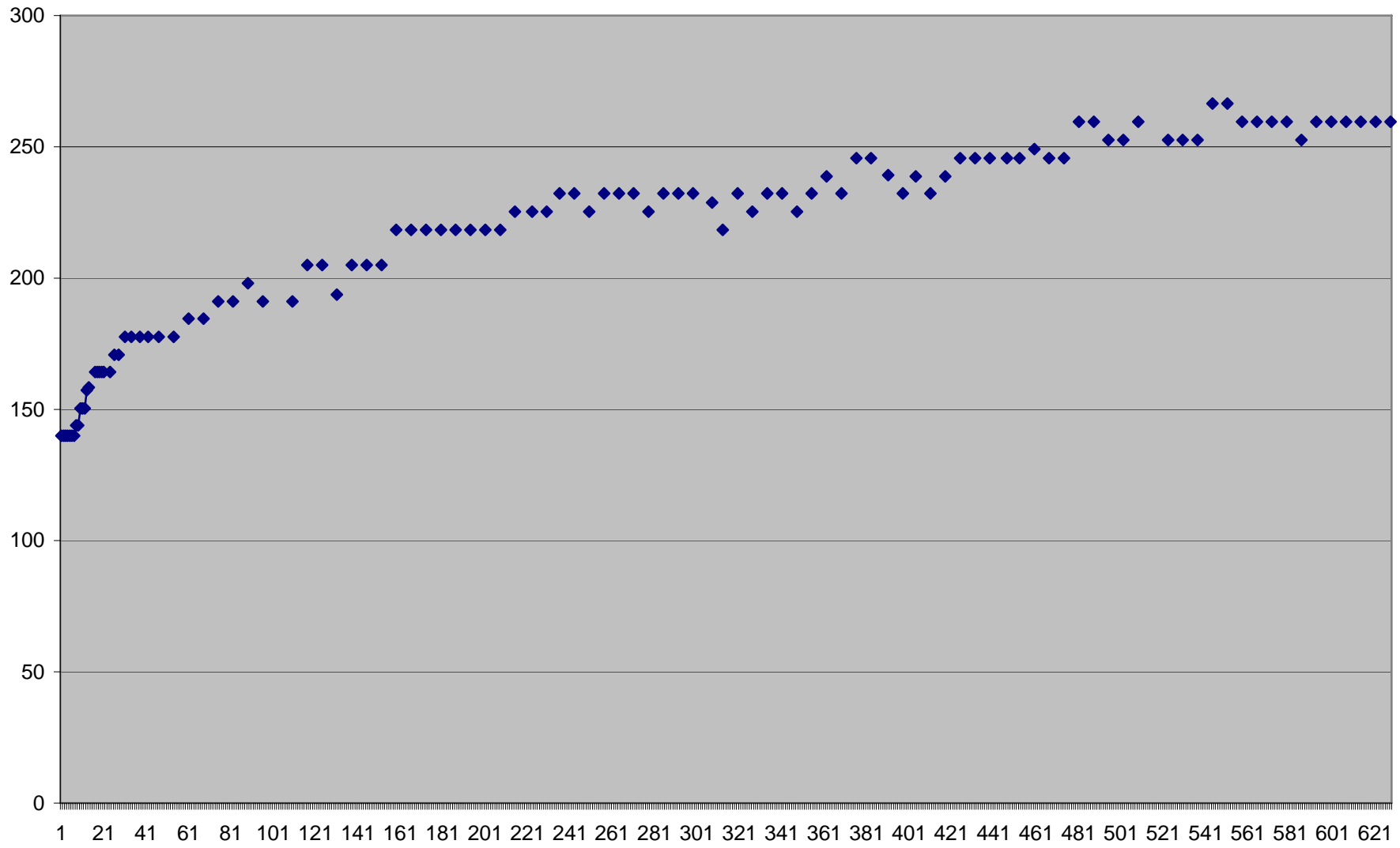
### Rohr 04-10



### Rohr 09-10

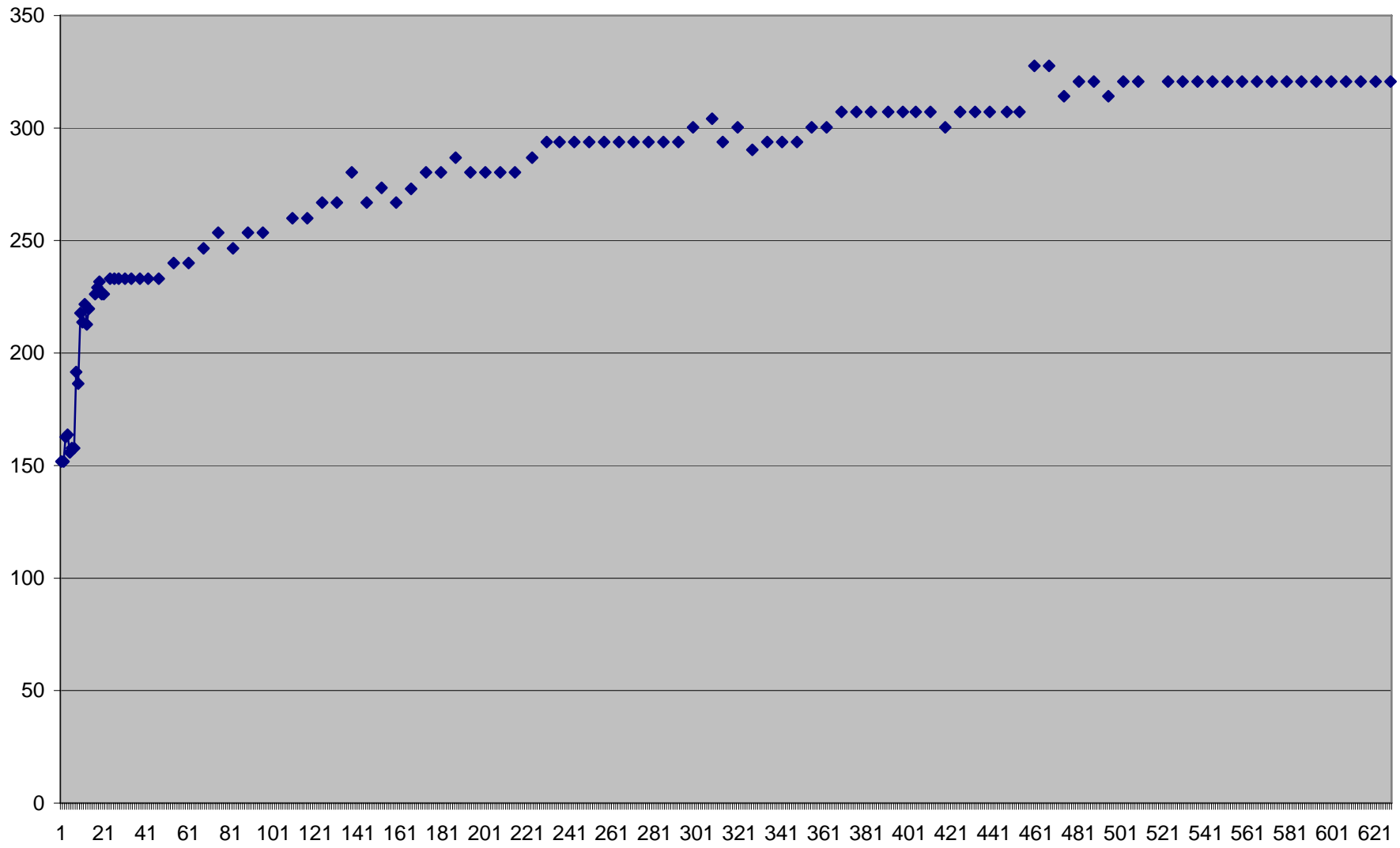


### State 36-02

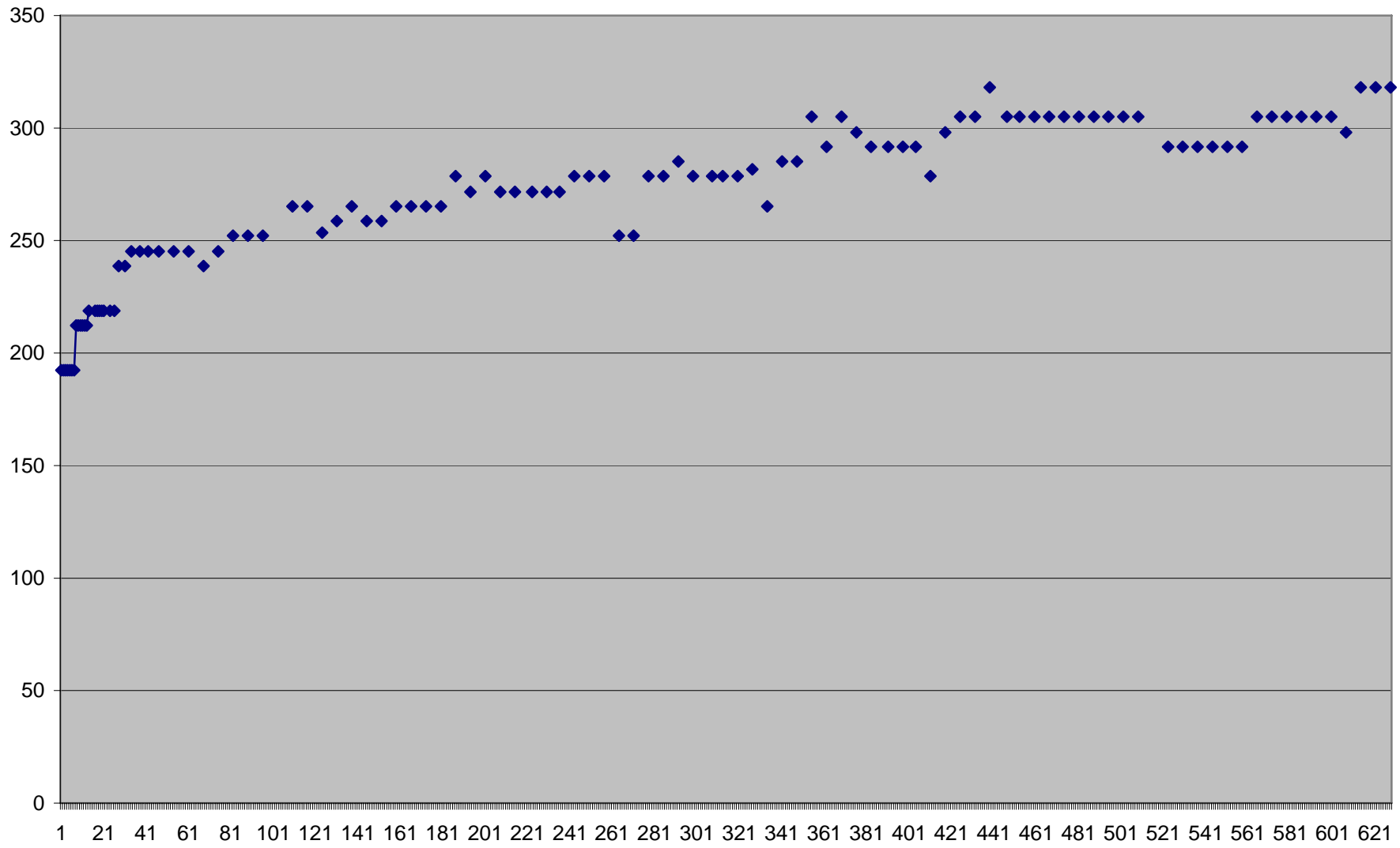




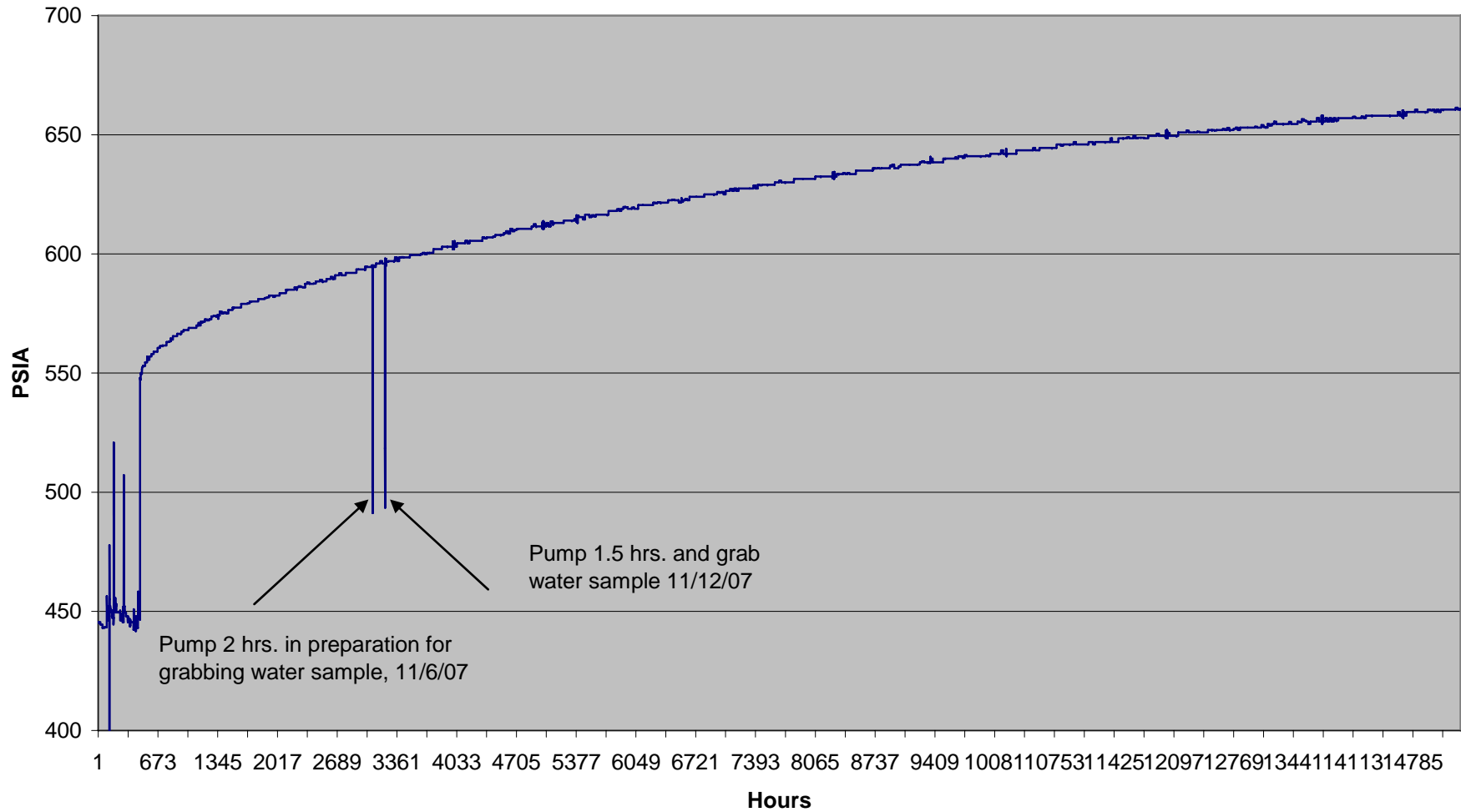
### State 36-05



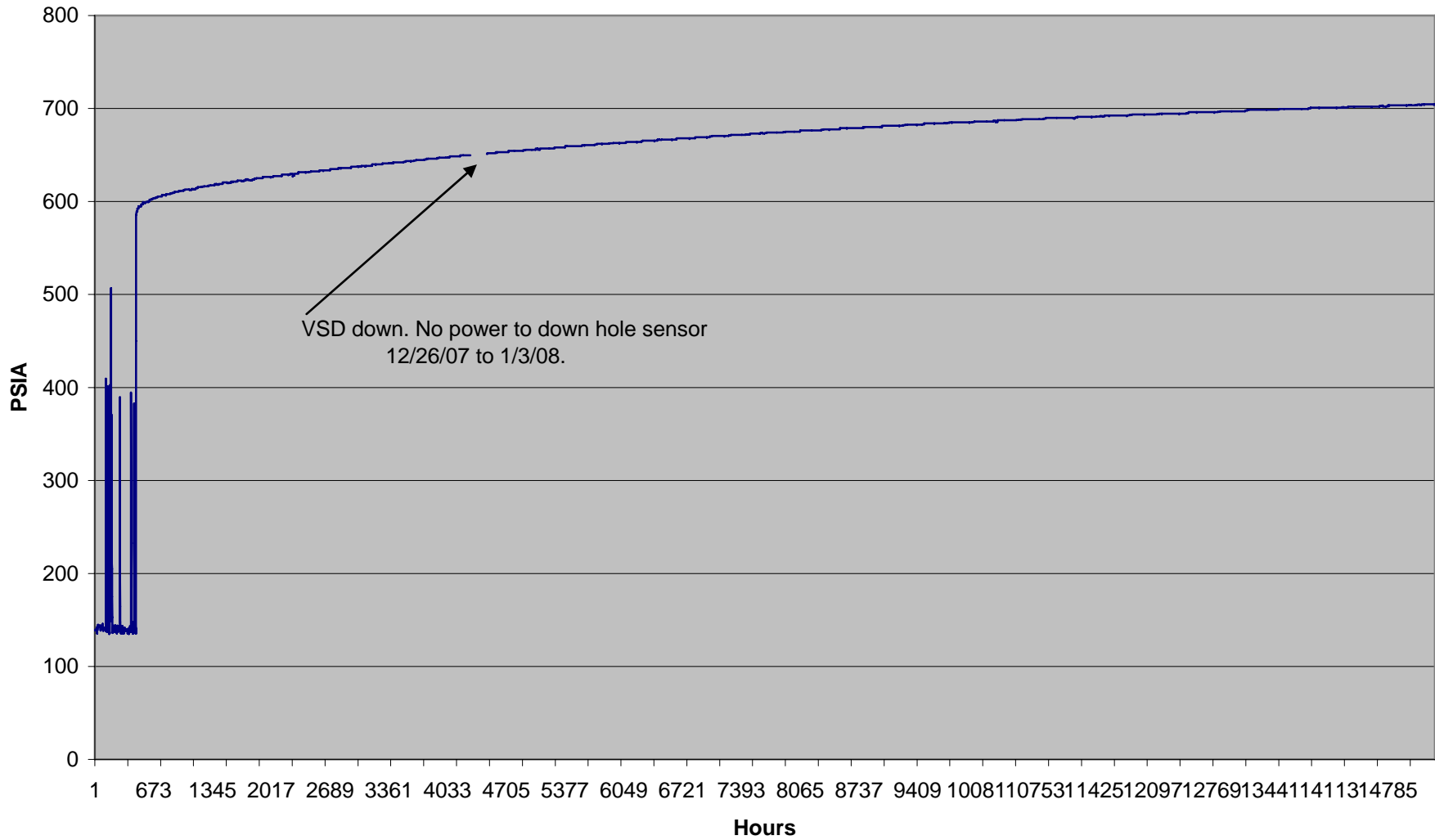
### State 36-11



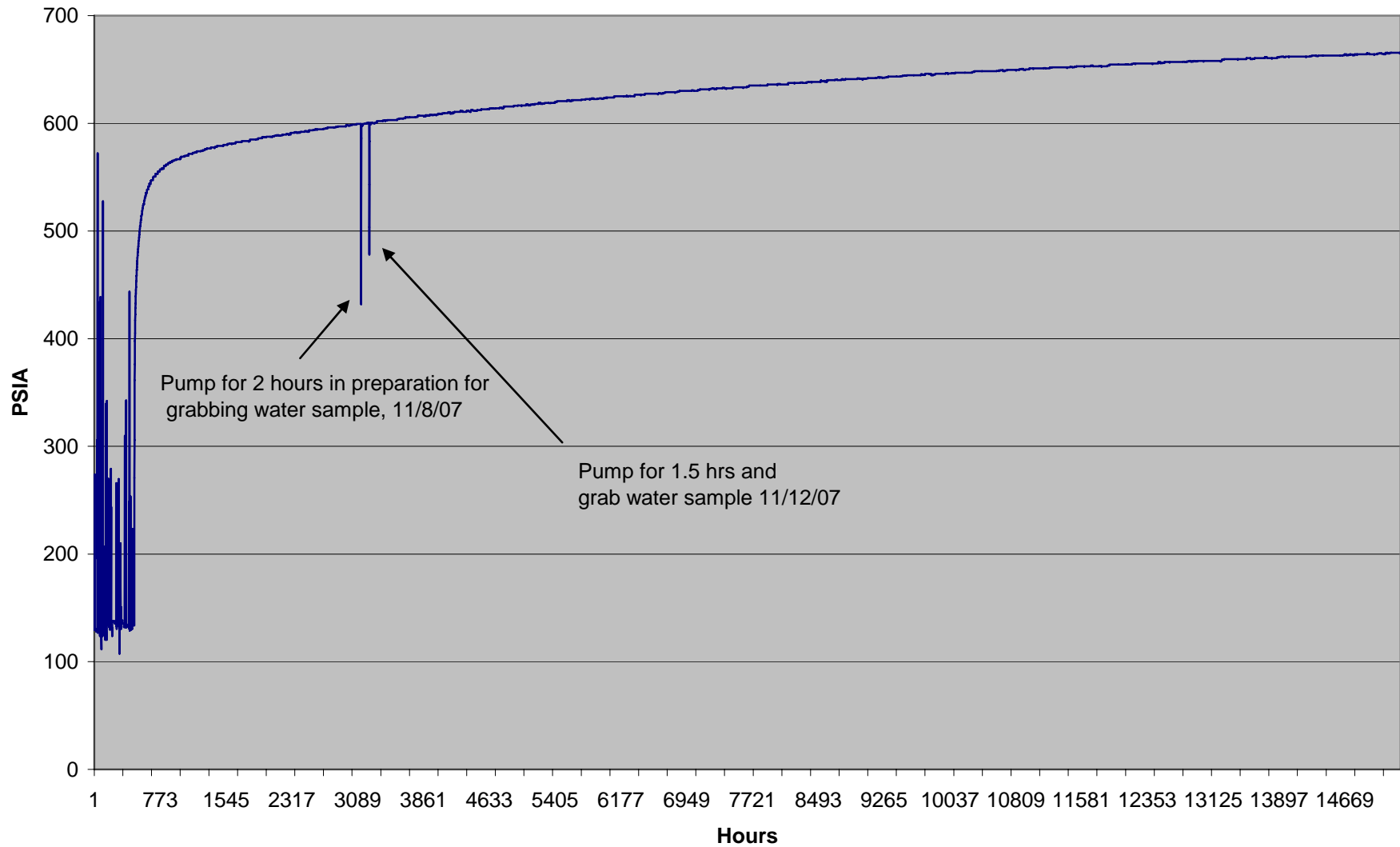
**Rohr 04-14 PBU**  
**from 7/1/07 to 3/30/09**



**Rohr 08-01 PBU**  
**from 7/1/07 to 3/30/09**



Rohr 09-04 PBU data (psia) 7/1/07 to 3/30/09



**Attachment 5**  
**Gas Concentrations in**  
**Private Water Wells near the Mitigation Project**

