

**Petroglyph Operating Company  
April 2009  
Monthly Report**

**Covering the period of 4/06/09 through 5/12/09**

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

**May 18, 2009**

**Prepared by  
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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 April Monthly Report (April 6, 2009) through May 12, 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 7.27 MCFD on May 4, 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 until late February and then began a slow and steady decline to 0.48 MCFD on May 4, 2009. Recovery 4 has shown the most variability ranging between 0.9 MCFD and 0 until mid April when the readings are consistently under 0.001 MCFD. Readings at Recovery 4 on May 4, 2009 were 0 MCFD. The average pumping rate for Recovery 1 has been 19 gpm while Recovery 3 has been 4 gpm intermittently (or averaging about 1 gpm over a day's time) (Table 1).

As discussed in the last monthly report, Petroglyph attempted clean out of Recovery 4 from February 10<sup>th</sup> through April 8<sup>th</sup> of the previous reporting period. The well was pumped for 15 minutes each weekday. A total of 3,580 gallons were pumped from the well, however the well yield remained low, the water remained cloudy and the quality remained 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.

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 1.00 to 6.70 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 3.76 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 2% 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 Subdivision; and Evenden and Garza-Vela located in the Silver Spurs Ranch Subdivision. POCI 55 decreased in pressure at the start of remediation and has leveled off with a slight overall rise. The Barrett well water level increased slightly at the start of remediation to approximately early January 2009, and has stayed relatively constant since that time (Attachment 2). The pressure in the Coleman well was not measured for the last two reporting periods, but has dropped from the previous recorded pressure (Attachment 2). The Bruington well showed a sharp rise in water pressure beginning April 7, 2009 and continuing through this reporting period. The rise was confirmed by Petroglyph with a water level tape on April 29, 2009. The reason for the rise is not known. Bergman, Evenden and Meyer have shown decrease in water pressures while Garza-Vela has shown an increase.

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 pumped seven times during this reporting period. The maximum flow rates ranged from 40 to 49 MCFD and the durations lasted from 12 to 45 minutes. 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 5 includes charts of twice-weekly gas monitoring of eighteen wells near the mitigation system. The wells being monitored have not indicated a direct 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 expected to be issued for public comment during the next reporting period. A public meeting on the draft permit will be held June 29<sup>th</sup> in Walsenburg. 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 the James Meyer well in River Ridge Ranch during the reporting period. Results received for samples since the last reporting period are included on the data disk. The results for all dissolved methane sampling collected to date, including the most recent sample results, are shown in Table 2.

#### Water Quality Sampling

No general water quality samples were collected during the reporting period.

#### 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. The BLM has approved the drilling of the well and Petroglyph has begun to drill the well.

The drilling has also been approved by the Colorado Division of Water Resources.

### **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. The pressure in the Coleman well was not measured for the last two reporting periods, but has dropped from the previous recorded pressure (Attachment 2). The Bruington well showed a sharp rise in water pressure beginning April 7, 2009 and continuing through this reporting period. The rise was confirmed by Petroglyph with a water level tape on April 29, 2009. The reason for the rise is not known. Bergman and Evenden have shown overall decreases in water pressures while Graza-Vela has shown an overall increase.

#### 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 0.648 MCFD and 0.528 MCFD.

The Coleman well only shows gas flows when the well is pumped. During this reporting period the well was pumped seven times and the measurements varied between 40 MCFD and 49 MCFD.

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 86 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, Ernie Haynes, was added during the reporting period.

Table 3 shows all of the wells that have 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 the 86 wells, six were not sampled during this reporting period and one well was a new well with no detectable methane. Sampling may vary during any one reporting period due to a variety of reasons. During this reporting period 19 wells were sampled once, 8 wells were sampled twice, 40 wells were sampled three times, 11 wells were sampled five times, and 1 well was sampled six times.

Table 3 has been reformatted 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 79 wells previously sampled showed that overall gas levels at 57 wells had no change from the previous monitoring period measurements. Of those 47 wells with no changes, 54 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 22 wells, 11 showed increases in methane, with 5 of those only slight increases and 11 showed decreases with 5 of those well showing a slight decrease.

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

**Within 1 Mile of Remediation System**

- Gas near 24 wells monitored
- 14 wells showed no change and no detectable methane gas with 2 wells well showing no change and detectable methane levels
- 5 wells showed increased methane with 2 of those only a slight increase
- 3 wells showed slightly decreased methane levels

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

- Gas near 20 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
- One new well added showing no detectable methane

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

- Gas near 12 well monitored
- 10 wells showed no change and no detectable methane gas
- 1 well showed a slight increase in methane gas
- 1 wells showed slightly decreased levels of methane gas

#### **Silver Spurs Ranch**

- Gas near 23 wells monitored
- 15 wells showed no change and no detectable methane
- 1 well showed no change but detectable methane
- 4 wells showed increased methane with one of those only a slight increase
- 3 wells showed decreased levels of methane gas with one of the wells showing only a slight decrease

#### **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.

### **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. 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 attended River Ridge Board of Manager's Meetings on April 11, 2009 and May 9, 2009.

### Health and Safety/Emergency Planning

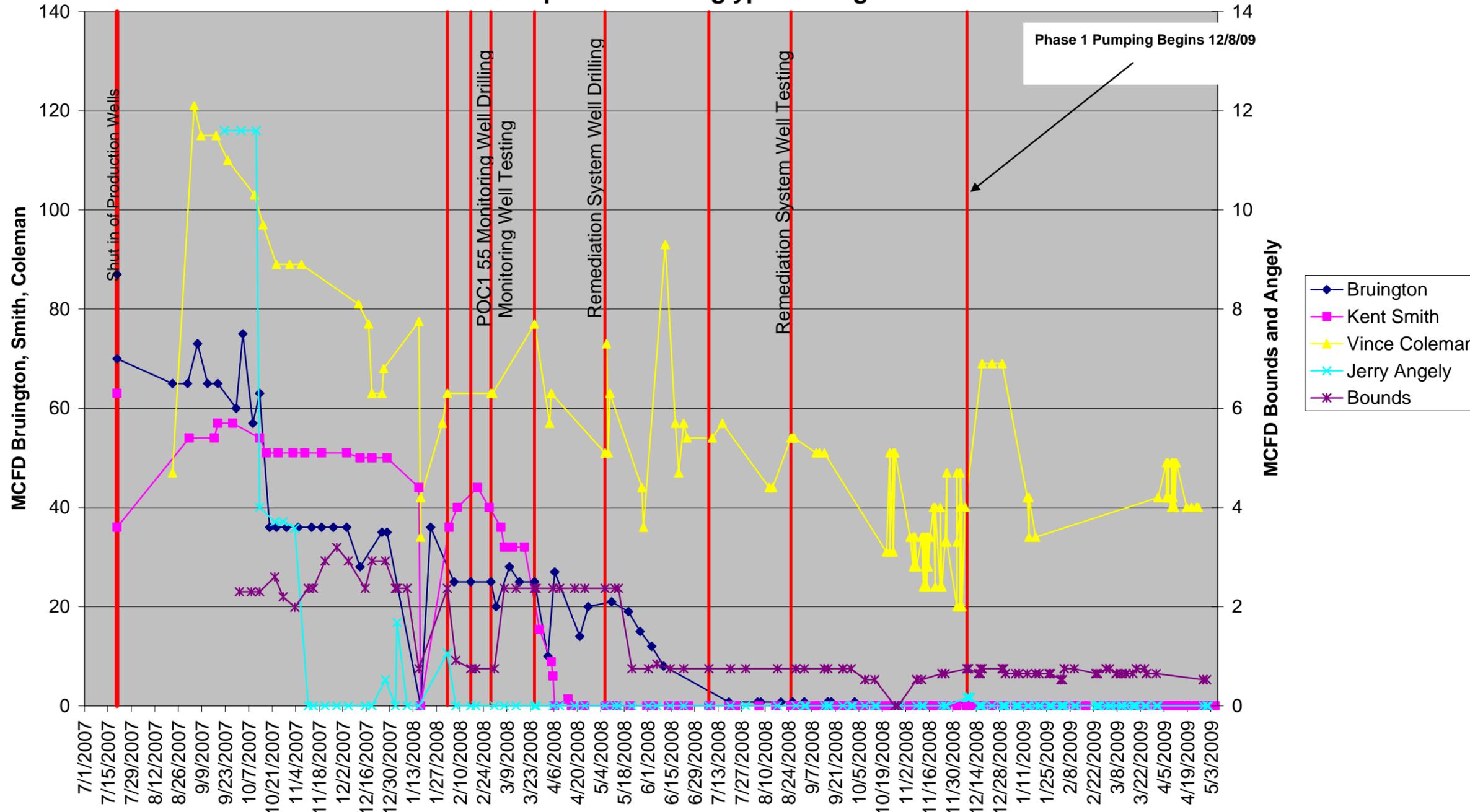
No changes to Petroglyph's health, safety and emergency planning occurred during the reporting period.

## **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 May.
- A public meeting on the Phase II UIC permit will be held June 29<sup>th</sup> in Walsenburg.
- 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 has begun and will be completed during the next reporting period.

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



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

<b>Well Number</b>	<b>TD</b>	<b>PBTD</b>	<b>Injection Tubing Depth</b>	<b>Start-up Date</b>	<b>Average Injection Rate (gpm)</b>	<b>Water Totals as of 3/31/09 (gal)</b>	<b>Notes</b>
Injection 01 Pascual	600	526	458	12/9/2008	1.2	206,000	
Injection 02 Gonzales	600	575	362	12/10/2008	1.00	195,000	
Injection 03 Benevides	725	629	454	12/10/2008	1.00	195,000	
Injection 04 Rohr	675	667	455	12/9/2008	5.30	995,000	
Injection 05 Rohr	750	735	458	12/10/2008	6.70	1,152,000	
Injection 06 Masters	725	695	438	12/10/2008	4.60	792,000	
Injection 07 Walden	750	713	457	12/10/2008	1.00	153,000	
Injection 08 Haeffner	650	713	365	12/10/2008	see note	1,780	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	19.00	3,574,000	
Recovery 3 PEI	625	591	575	12/8/2008	1 (see note)	179,000	Intermittent pumping at 4 gpm. Rate over 24 hrs is approx 1 gpm
Recovery 4 Barrett	500	484	463	2/10/2009	(see note)	3,580	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	2	
	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	7	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		
Meyer, J		4/29/09	Ethane	ND		
Meyer, J		4/29/09	Methane	19,000		

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	
	Stetler	3/20/09	Methane	20,000	
	Stetler	3/20/09	Ethane	50	
	Modlish	3/20/09	Methane	0.33	
	Modlish	3/20/09	Ethane	ND	
Other	Rohr 04-14	11/11/07	Methane	10,070	CBM water
	Rohr 09-04	11/11/07	Methane	6,350	CBM water

<b>Table 3</b>					
<b>Water Well Measurements for the Period of April 6 to May 12, 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>
<b>Wells Within Approximately One Mile of Pumping and Injection System or of Special Interest</b>					
238689	Angely	7/5/07	5/1/09	5/1/09	<ul style="list-style-type: none"> <li>• % LEL decreased from 13 to 0 by end of reporting period</li> <li>• CH4% volume remained unchanged at 0</li> <li>• O2% volume increased slightly from 20.8 to 20.9</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
257994	Barrett	7/12/07	5/5/09	4/7/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	<ul style="list-style-type: none"> <li>• % LEL varied during the period ranging from 0 to 51 and ending the period at 29</li> <li>• CH4% volume varied during the period between 0 and 2.75 and ending the period at 1.45</li> <li>• O2% volume varied between 20.8 to 20.9 and ended the period at 20.5</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
244403	Bergman	7/6/07	5/5/09	4/9/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	<ul style="list-style-type: none"> <li>• % LEL remained unchanged at &gt;100</li> <li>• CH4% volume varied between 22 to 73 and ended at the period at 11</li> <li>• O2% volume varied between 16.3 to 8.9 and ended at 18</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S increased from 0 to 6, then back to 0 ppm</li> </ul>
181278	Bounds	7/12/07	5/1/09	5/1/09	<ul style="list-style-type: none"> <li>• % LEL remained unchanged at 100</li> <li>• CH4% volume remained unchanged at 97</li> <li>• O2% volume remained unchanged at 0</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S decreased from 3 ppm to 0 ppm</li> </ul>
169043	Burge	3/20/09	5/7/09	4/9/09, 4/23/09, 5/7/09	<ul style="list-style-type: none"> <li>• % LEL remained unchanged at 0</li> <li>• CH4% volume remained unchanged at 0</li> <li>• O2% volume decreased from 20.9 to 19</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>

**Table 3**  
**Water Well Measurements for the Period of April 6 to May 12, 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
267694	Coleman	7/5/07	5/9/09	4/9/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09, 5/9/09	At the wellhead no change from previous measurements with 0% LEL and CH <sub>4</sub> , O <sub>2</sub> % volume at 20.9 and no detectable CO and H <sub>2</sub> S: At the well vent: <ul style="list-style-type: none"> <li>• % LEL varied between 0 to &gt;100 ending at &gt;100</li> <li>• CH<sub>4</sub>% volume varied between 0 to 6.0-7.0 and ended the period at 87</li> <li>• O<sub>2</sub>% volume varied between 20.9 to 16.3 and then dropped to 0 at the end of the period</li> <li>• CO and H<sub>2</sub>S remained unchanged at 0 ppm</li> </ul>
235516	Colorado Switzer	7/12/07	5/5/09	4/7/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O <sub>2</sub> % volume at 20.9 and CO and H <sub>2</sub> S at 0 ppm.
255929	Conley	7/11/07	5/5/09	4/21/09, 5/5/09	No change from previous measurements with no detectable methane and O <sub>2</sub> % volume at 20.9; CO and H <sub>2</sub> S at 0 ppm. Sampling also attempted 4/7/09 but gate was locked preventing access.
260097	Dee	7/5/07	4/7/09	4/7/09	No change from previous measurements with 0% LEL, no detectable methane, O <sub>2</sub> % volume at 20.9 and CO and H <sub>2</sub> S at 0 ppm.
252931	Derowitsch	7/6/07	5/5/09	4/7/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	At the wellhead: no changes from previous measurements with 0% LEL, no detectable methane, O <sub>2</sub> % volume at 20.9 and CO and H <sub>2</sub> S at 0 ppm. At the well vent: <ul style="list-style-type: none"> <li>• % LEL varied between 0 to 8 and ended at 0</li> <li>• CH<sub>4</sub>% volume varied between 0 to 0.4 and ended at 0</li> <li>• O<sub>2</sub>% volume remained unchanged at 20.9</li> <li>• CO and H<sub>2</sub>S remained unchanged at 0 ppm</li> </ul> At the cistern: <ul style="list-style-type: none"> <li>• % LEL varied between 0 to 10 and ended at 0</li> <li>• CH<sub>4</sub>% volume varied between 0 to 0.5 and ended at 0</li> <li>• O<sub>2</sub>% volume varied between 20.9 to 20.7 and ended at 20.9</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H<sub>2</sub>S varied between 0 to 5 and ended at 0 ppm</li> </ul>

**Table 3**  
**Water Well Measurements for the Period of April 6 to May 12, 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
235515	English	8/16/07	12/1/08	Not sampled during this reporting period	Sampling attempted 4/7/09 and 5/5/09 but gate was locked preventing access.
16861-F	Golden Cycle Land	7/12/07	5/5/09	4/7/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	<ul style="list-style-type: none"> <li>• %LEL remained at unchanged at &gt;100</li> <li>• CH4% volume varied between 70 to 49 and ended at 56</li> <li>• O2% volume remained at 0</li> <li>• CO varied between 20 to 165 and ended at 88 ppm</li> <li>• H2S varied between 5.5 to 0 and ended at 4.5 ppm</li> </ul>
253317	Gonzalez	7/12/07	5/6/09	4/7/09, 4/21/09, 5/6/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
256504	Hopke	7/5/07	5/5/09	4/9/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	<p>At the wellhead:</p> <ul style="list-style-type: none"> <li>• % LEL remained unchanged at &gt;100</li> <li>• CH4% volume varied between 5 to 37 and ended at 23</li> <li>• O2% volume varied between from 17.3 to 5 and ended at 11.4</li> <li>• CO varied between 22 to 0, ending the period at 0 ppm</li> <li>• H2S decreased from 4.5 to 0 ppm</li> </ul> <p>At the cistern: no changes from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.</p>
236272	Houghtling	7/6/07	5/5/09	4/7/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	<p>At the wellhead:</p> <ul style="list-style-type: none"> <li>• % LEL remained unchanged at &gt;100</li> <li>• CH4% volume varied between 23 to 78, ending the period at 75</li> <li>• O2% volume varied between 0 to 12.6 ending at 0</li> <li>• CO varied between 0 to 18 ending at 0 ppm</li> <li>• H2S decreased from 3 to 0 ppm</li> </ul> <p>At the cistern: maintenance being performed on 5/1/09 and 5/5/09, no sample taken on those dates, otherwise all values remained unchanged with 0 % LEL, no methane, O2% volume at 20.9 and CO and H2S at 0 ppm.</p>

<b>Table 3</b>					
<b>Water Well Measurements for the Period of April 6 to May 12, 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>
35292	Kerman/Hanson	7/6/07	5/5/09	4/9/09, 4/21/09, 5/5/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL increased from 0 to 6</li> <li>• CH4% volume increased from 0 to 0.30</li> <li>• O2% volume decreased from 20.9 to 18.3</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S decreased from 0.5 to 0 ppm</li> </ul> At the cistern: <ul style="list-style-type: none"> <li>• % LEL and CH4% volume remained unchanged at 0</li> <li>• O2% volume remained unchanged at 20.9</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S decreased from 3 to 0 ppm</li> </ul>
	Lively 10-02	12/22/2008	5/5/09	4/7/09, 4/17/09, 4/21/09, 5/5/09, 5/5/09	<ul style="list-style-type: none"> <li>• % LEL increased from 0 to &gt;100 for the last two readings</li> <li>• CH4% volume increased from 0 to 5 for the last two readings</li> <li>• O2% volume varied between 20.9 to 0 with 0 for the last two readings</li> <li>• CO varied between 0 to 254 ppm, ending at 254 ppm</li> <li>• H2S varied between 7.5 to 0 ppm, ending at 7.5 ppm</li> </ul>
222539	Lively	7/6/07	5/5/09	4/7/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
16861-F	Masters #1	8/13/07	5/5/09	4/9/09, 4/17/09, 4/21/09, 5/1/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
257113	Masters #2	7/6/07	5/5/09	4/9/09, 4/15/09, 4/21/09, 5/1/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
271136	May	7/12/07	4/7/09	4/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
84108-A	McPherson	7/6/07	5/5/09	4/7/09, 4/21/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
84106	Rohr	7/06/07	4/7/09	1/13/09, 4/7/09	No change from previous measurements 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 April 6 to May 12, 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>
123144	Searle	7/11/07	5/5/09	4/7/09, 4/21/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
239657	Smith	7/5/07	3/31/09	3/6/09, 3/13/09, 3/16/09, 3/24/09, 3/31/09	At the wellhead AND the cistern all values remained unchanged with 0 %LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm. At the well vent: <ul style="list-style-type: none"> <li>• % LEL varied between &gt;100 to 6 and ended at 13</li> <li>• CH4% volume varied between 50 to 0.3 and ended at 0.65</li> <li>• O2% volume varied between 20.9 to 0 ending at 20.9</li> <li>• CO increased from 0 to 8 and back to 0 ppm</li> <li>• H2S increased from 0 to 2.5 ppm</li> </ul>
<b>Wells Within Or in Close Proximity to River Ridge Ranch Subdivision</b>					
249362	Andexler	9/9/07	4/21/09	4/21/09	<ul style="list-style-type: none"> <li>• % LEL decreased from 2 to 0</li> <li>• CH4% volume decreased from 0.10 to 0</li> <li>• O2% volume increased from 5.7 to 20.9</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S decreased to 0 ppm</li> </ul>
215706	Brice	7/12/07	4/7/09	4/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
248680	Campbell	8/14/07	5/7/09	5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm. Sampling also attempted 4/9/09 but gate was locked preventing access.
270552	Chaves	9/9/07	5/7/09	4/9/09, 4/21/09, 5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and 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	5/5/09	4/7/09, 4/21/09, 5/5/09	<ul style="list-style-type: none"> <li>• % LEL and CH4 % volume remained unchanged at 0</li> <li>• O2% volume decreased from 20.9 to 20.5 and back to 20.9</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S went from 0 to 1 to 0 ppm</li> </ul>

**Table 3**  
**Water Well Measurements for the Period of April 6 to May 12, 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
	Haynes	5/5/09	5/5/09	5/5/09	No detectable methane with 0%LEL and CH4 % volume, O2% volume at 20.9 and 0 ppm CO and H2S.
249181	Hentschel	9/9/07	5/7/09	4/9/09, 4/21/09, 5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
259122	Higgins	9/26/07	5/7/09	4/9/09, 4/23/09, 5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
269435	Hoppe (formerly Goacher)	7/11/07	5/6/09	4/9/09, 4/23/09, 5/6/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
264581	Ireland	7/12/07	5/5/09	4/21/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
	Lang	10/29/07	7/28/08	Not sampled during this reporting period	Sampling attempted 4/7/09 and 5/5/09, 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	4/21/09	4/21/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
248862	Meyer	8/14/07	5/6/09	4/9/09, 4/21/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL remained unchanged at &gt;100</li> <li>• CH4 % volume increased from 22 to 58</li> <li>• O2% volume decreased from 11 to 5.8</li> <li>• CO remained at 0 with a reading of 5 ppm on 4/21/09</li> <li>• H2S increased from 0.5 to 6 and ended the period at 0 ppm</li> </ul>
192203	Rankins	7/12/07	4/21/09	4/21/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
276994	Rhodes	9/9/08	4/21/09	4/21/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
274468	Roloff	9/9/07	4/21/09	4/21/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm. Sampling attempted 4/9/09 and 5/5/09 but gate was locked preventing access.
254577	Ryerson	9/9/07	5/7/09	4/9/09, 4/21/09, 5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.

Table 3 Water Well Measurements for the Period of April 6 to May 12, 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
246775	Sharp	9/9/07	5/7/09	4/9/09, 4/21/09, 5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
267695	Speh	9/4/07	5/5/09	4/9/09, 4/21/09, 5/5/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
230572	Willis	7/11/07	5/7/09	4/9/09, 4/23/09, 5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
240947	Wolahan	7/12/07	5/6/09	4/7/09, 4/21/09, 5/6/09	No change from previous measurements at the wellhead and cistern with both showing 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
City Ranch and Other Properties					
	Andreatta	8/14/07	5/7/09	4/9/09, 5/7/09	No change from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
197472	Williams/Bartlett	8/15/07	5/7/09	4/9/09, 5/7/09	No changes from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
210526	Bruington	8/7/07	5/5/09	4/9/09, 4/22/09, 5/5/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL remained unchanged at &gt;100</li> <li>• CH4% volume decreased from 90 to 59</li> <li>• O2% volume remained unchanged at 0</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S decreased from 6 to 3.5 and back to 4.5 with a 'slight odor' at final sampling</li> </ul> At the cistern: no changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
220100	Cordova	10/30/07	5/5/09	4/7/09, 4/22/09, 5/5/09	<ul style="list-style-type: none"> <li>• No changes from previous measurements with % LEL and CH4% volume at 0, O2% volume at 20.9 and CO and H2S at 0 ppm</li> </ul>
191079	Brian Dale	8/15/07	4/22/09	4/22/09	No change from previous measurement at Well #1 or Well #2 with 0% LEL, no detectable methane, O2% volume at 20.9, and CO and H2S at 0 ppm.
193092	Degan	8/25/08	5/7/09	4/7/09, 4/22/09, 5/7/09	<ul style="list-style-type: none"> <li>• % LEL and CH4% volume remained at 0</li> <li>• O2% volume remained at 20.9</li> <li>• CO remained at 0 ppm</li> <li>• H2S decreased from 0.5 to 0 ppm</li> </ul>

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**Water Well Measurements for the Period of April 6 to May 12, 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
	Dernell	8/15/07	4/22/09	4/22/09	No changes from previous measurements with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
258651	Gonzalez	5/22/08	5/7/09	4/9/09, 4/22/09, 5/7/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL varied between &gt;100 to 14 ending at 38</li> <li>• CH4% volume varied between 36 to 0.70 ending at 1.90</li> <li>• O2% volume varied between 11.3 to 20.7 ending at 20.7</li> <li>• CO and H2S remained at 0 ppm</li> </ul> At the cistern: no changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
203536	Hurley	8/2/07	5/7/09	4/9/09, 4/22/09, 5/7/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL remained unchanged at &gt;100</li> <li>• CH4% volume increased from 8 to 31</li> <li>• O2% volume varied between 18.2 to 11.4 ending at 13.3</li> <li>• CO went from 0 to 69 to 0 ppm for the rest of the sample period</li> <li>• H2S went from 1 to 1.5 to 0 ppm for the rest of the sample period</li> </ul> At the cistern: no changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
205195	Johnson	8/15/07	5/7/09	4/7/09, 4/22/09, 5/7/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL went from 5 to 0 to 11 back to 0 at the end of the period</li> <li>• CH4% volume went from 0.25 to 0 to 0.55 back to 0</li> <li>• O2% volume changed from 20.5 to 20.9 to 19.1 to 20.9</li> <li>• CO and H2S remained at 0 ppm</li> </ul> At the cistern AND the 2 <sup>nd</sup> wellhead: no changes from previous measurement 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 April 6 to May 12, 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>
193520X	McEntee	8/2/07	5/7/09	4/7/09, 4/22/09, 5/7/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL went from 0 to 5 to 0</li> <li>• CH4% volume went from 0 to 0.25 to 0</li> <li>• O2% volume went from 20.9 to 18.7 back to 20.9</li> <li>• CO and H2S remained at 0 ppm</li> </ul> At the East Wellhead: no changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
121013	Schafer	8/15/07	3/23/09	Not sampled during this reporting period.	
248983	Tobias	8/3/07	5/7/09	4/9/09, 4/23/09, 5/7/09	<ul style="list-style-type: none"> <li>• % LEL went from 5 to 0 to &gt;100 back to 0</li> <li>• CH4% volume increased from 0.25 to 6 back to 0</li> <li>• O2% volume changed from 11 to 20.9 to 19 to 20.9</li> <li>• CO remained at 0 ppm</li> <li>• H2S went from 0 to 0.5 to 0 ppm</li> </ul>
<b>Silver Spurs Ranch</b>					
268180	Billstrand	8/12/08	5/6/09	4/6/09, 4/23/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL increased from 0 to 5</li> <li>• CH4% volume increased from 0 to 0.25</li> <li>• O2% volume changed from 11 to 20.9 to 19.8 to 20.9</li> <li>• CO remained at 0 ppm</li> <li>• H2S decreased from 4.5 to 0 to 1.5 ppm</li> </ul>
215807	Brown	12/8/08	5/6/09	4/22/09, 5/6/09	No changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm. Sampling attempted 4/6/09 but mud prevented access.

Table 3 Water Well Measurements for the Period of April 6 to May 12, 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
222294	Cramer	8/3/07	4/22/09	4/22/09	<p>At the wellhead:</p> <ul style="list-style-type: none"> <li>• % LEL decreased from &gt;100 to 6</li> <li>• CH4% volume decreased from 5 to 0.30</li> <li>• O2% volume increased from 0 to 16.4</li> <li>• CO decreased from 50 to 24 ppm</li> <li>• H2S remained at 0 ppm</li> </ul> <p>At the cistern: no changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.</p>
192509	Eddleman, Paul	1/17/08	5/6/09	4/6/09, 4/22/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL went from &gt;100 to 0 to &gt;100 back to 0</li> <li>• CH4% volume went from 15 to 0 to 12 back to 0</li> <li>• O2% volume decreased from 20.9 to 0 back to 20.9</li> <li>• CO went from 10 to 0 to 18 back to 0 ppm</li> <li>• H2S went from 2.5 to 0 to 3 back to 0 ppm</li> </ul>
226536	Eddleman, Todd	1/17/08	5/6/09	4/6/09, 4/22/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL increased from 0 to 14 back to 0</li> <li>• CH4% volume increased from 0 to 0.7 back to 0</li> <li>• O2% volume decreased from 20.9 to 8.6 back to 20.9</li> <li>• CO increased from 0 to 28 back to 0 ppm</li> <li>• H2S increased from 0 to 3 back to 0 ppm</li> </ul>
221465	Evenden	8/2/07	5/6/09	4/6/09, 4/23/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL decreased from 8 to 0</li> <li>• CH4% volume decreased from 0.40 to 0</li> <li>• O2% volume changed from 13 to 20.9 to 15</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
	Fischer	1/26/09	3/26/09	Not sampled during this reporting period.	
214145A	Fitzner	11/18/08	5/6/09	4/6/09, 4/23/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL decreased from &gt;100 to 0</li> <li>• CH4% volume decreased from 5.00 to 0</li> <li>• O2% volume increased from 0 to 20.9</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>

**Table 3**  
**Water Well Measurements for the Period of April 6 to May 12, 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
31935	Garza-Vela	1/30/08	5/6/09	4/6/09, 4/22/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL went from 2 to 0 to 4 back to 0</li> <li>• CH4% volume went from 0.10 to 0 to 0.8 back to 0</li> <li>• O2% volume went from 10.1 to 20.9 to 6.3 back to 20.9</li> <li>• CO remained unchanged at 0 ppm</li> <li>• H2S increased from 0 to 0.5 back to 0 ppm</li> </ul>
196372	Geiselbrecht	8/12/08	5/6/09	4/6/09, 4/23/09, 5/6/09	No changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
246350	Gumpert	7/29/08	5/6/09	4/6/09, 4/22/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL went from &gt;100 to 0 to &gt;100 back to 0</li> <li>• CH4% volume went from 5 to 0 to 0.5 back to 0</li> <li>• O2% volume went from 0 to 20.9 to 16.5 back to 20.9</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
196371	Lyon	8/15/07	4/22/09	4/22/09	<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 8.2</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
271524-A	Modlish	1/30/08	5/6/09	4/6/09, 4/22/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL went from 2 to 0 to 4 back to 0</li> <li>• CH4% volume went from 0.10 to 0 to 0.20 back to 0</li> <li>• O2% volume went from 10.1 to 20.9 to 8.6 back to 20.9</li> <li>• CO increased from 0 to 28 back to 0 ppm</li> <li>• H2S went from 1 to 0 to 3 back to 0 ppm</li> </ul>
28093MH	Morine	9/10/08	4/23/09	4/23/09	<ul style="list-style-type: none"> <li>• No change from previous measurements with 0 % LEL and CH4 % volume, O2% volume at 20.9 and CO and H2S at 0 ppm</li> </ul>
35227MH	Morris	10/8/08	4/22/09	4/22/09	<p>The last sample collected prior to April for this well was collected in October 2008 so no comparisons are made here.</p> <ul style="list-style-type: none"> <li>• % LEL was at 43</li> <li>• CH4% volume was at 2.15</li> <li>• O2% volume was at 13.7</li> <li>• CO was at 61 ppm</li> <li>• H2S was at 5 ppm</li> </ul>
190327	Palmer	8/12/08	5/6/09	4/6/09, 4/22/09, 5/6/09	No changes from previous measurement 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 April 6 to May 12, 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>
197128	Roberts	4/08/08	5/6/09	4/6/09, 4/22/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL went from &gt;100 to 0 to 8 back to 0</li> <li>• CH4% volume went from 5.00 to 0 to 0.40 back to 0</li> <li>• O2% volume went from 6.3 to 20.9 to 18.3 back to 20.9</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
271748	Sample	3/10/08	5/6/09	4/6/09, 4/22/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL went from 7 to 0 to 14 back to 0</li> <li>• CH4% volume went from 0.35 to 0 to 0.70 back to 0</li> <li>• O2% volume went from 12.2 to 20.9 to 8.6 back to 20.9</li> <li>• CO increased from 0 to 28 back to 0 ppm</li> <li>• H2S went from 1.5 to 0 to 3 back to 0 ppm</li> </ul>
192144	Snow	8/2/07	4/22/09	4/22/09	<ul style="list-style-type: none"> <li>• % LEL remained unchanged at &gt;100</li> <li>• CH4% volume remained unchanged at 5</li> <li>• O2% volume remained unchanged at 0</li> <li>• CO increased from 2 to 14 ppm</li> <li>• H2S decreased from 2.5 to 0.5 ppm</li> </ul>
213070	Stephens	8/12/08	5/6/09	4/6/09, 4/23/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL and CH4% volume remained unchanged at 0</li> <li>• O2% volume changed from 20.9 to 17.2 back to 20.9</li> <li>• CO and H2S remained unchanged at 0 ppm</li> </ul>
233286A	Stetler	3/17/09	5/6/09	4/6/09, 4/22/09, 5/6/09	<p>At the wellhead:</p> <ul style="list-style-type: none"> <li>• % LEL changed from 6 to 0 to 21</li> <li>• CH4% volume changed from 0.3 to 0 to 1.05</li> <li>• O2% volume decreased from 20.9 to 19.4</li> <li>• CO and H2S remained at 0 ppm</li> </ul> <p>At the cistern: no changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.</p>

**Table 3**  
**Water Well Measurements for the Period of April 6 to May 12, 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	5/6/09	4/6/09, 4/22/09, 5/6/09	At the wellhead: <ul style="list-style-type: none"> <li>• % LEL changed from &gt;100 to 5 to &gt;100 to 0</li> <li>• CH4% volume changed from 5.00 to 0.25 to 5.00 to 0.00</li> <li>• O2% volume decreased from 0 to 12.2 to 0 then increased to 20.9</li> <li>• CO increased from 0 to 7 then decreased back to 0 ppm</li> <li>• H2S started with a 'slight odor, then decreased to 0 ppm</li> </ul> At the cistern: no changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
219376	White, Orlie	8/2/07	4/23/09	4/23/09	<ul style="list-style-type: none"> <li>• % LEL decreased from 30 to 0</li> <li>• CH4% volume decreased from 1.5 to 0</li> <li>• O2% volume increased from 9.6 to 19.2</li> <li>• CO and H2S remained at 0 ppm</li> </ul>
234839	Waltz	8/12/08	4/23/09	4/23/09	No changes from previous measurement with 0% LEL, no detectable methane, O2% volume at 20.9 and CO and H2S at 0 ppm.
<b>Black Hawk Ranch</b>					
218719	Goza	1/14/09	5/6/09	4/7/09, 4/23/09, 5/6/09	<ul style="list-style-type: none"> <li>• % LEL and CH4% volume remained unchanged at 0</li> <li>• O2% volume went from 20.9 to 18.1 to 20.9</li> <li>• CO and H2S remained 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>							
Kathy Dee	River Ridge				X		
R. Gonzalez	River Ridge			X			
McPherson	River Ridge			X			
Rohr	River Ridge					X	
Houghtling	River Ridge		X	X			
Kent Smith	River Ridge		X	X			X
Bergman	River Ridge			X			X
Lively	River Ridge				X		
Kerman	River Ridge		X	X			
Conley	River Ridge			X			
Searle	River Ridge			X			
Derowitsch	River Ridge		X	X			X
Colorado-Switzer	River Ridge			X			X
English	River Ridge		X		X		
Golden Cycle Land (Goemmer)	River Ridge			X			X
Burge	La Veta Pines			X			X
Barrett	River Ridge			X			X
Hopke	River Ridge		X	X			X
Masters #1	River Ridge			X			X
Masters #2	River Ridge			X			X
Coleman	River Ridge			X			
Lively 10-02	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>							
<b><u>Landowner</u></b>	<b><u>Subdivision</u></b>	<b><u>Water Level</u></b>	<b><u>Cistern</u></b>	<b><u>Bi-Monthly</u></b>	<b><u>Monthly</u></b>	<b><u>Quarterly</u></b>	<b><u>Weekly</u></b>
<b>Tobias</b>	City Ranch			X			
<b>Dale</b>	City Ranch				X		
<b>McEntee</b>	City Ranch			X			
<b>Johnson</b>	City Ranch		X	X			
<b>Cordova</b>	City Ranch			X			
<b>Dernell</b>	City Ranch						
<b>Schaefer</b>	City Ranch					X	
<b>Bruington</b>	City Ranch		X	X			
<b>Bartlett</b>	City Ranch					X	
<b>Deagan</b>	City Ranch			X			
<b>Bear Creek/Silver Spurs</b>							
<b>Andreatta/Carsella</b>	Bear Creek				X		
<b>Orlie White</b>	Silver Spurs	X			X		
<b>Evendon</b>	Silver Spurs			X			
<b>Roberts</b>	Silver Spurs			X			
<b>Snow</b>	Silver Spurs	X			X		
<b>Cramer</b>	Silver Spurs	X	X		X		
<b>Lyon</b>	Silver Spurs				X		
<b>Jim White</b>	Silver Spurs		X	X			
<b>Garza-Vela</b>	Silver Spurs			X			
<b>Modlish</b>	Silver Spurs			X			
<b>Todd Eddleman</b>	Silver Spurs			X			
<b>Paul Eddleman</b>	Silver Spurs			X			
<b>Sample</b>	Silver Spurs		X	X			
<b>Billstrand</b>	Silver Spurs			X			
<b>Waltz</b>	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.**

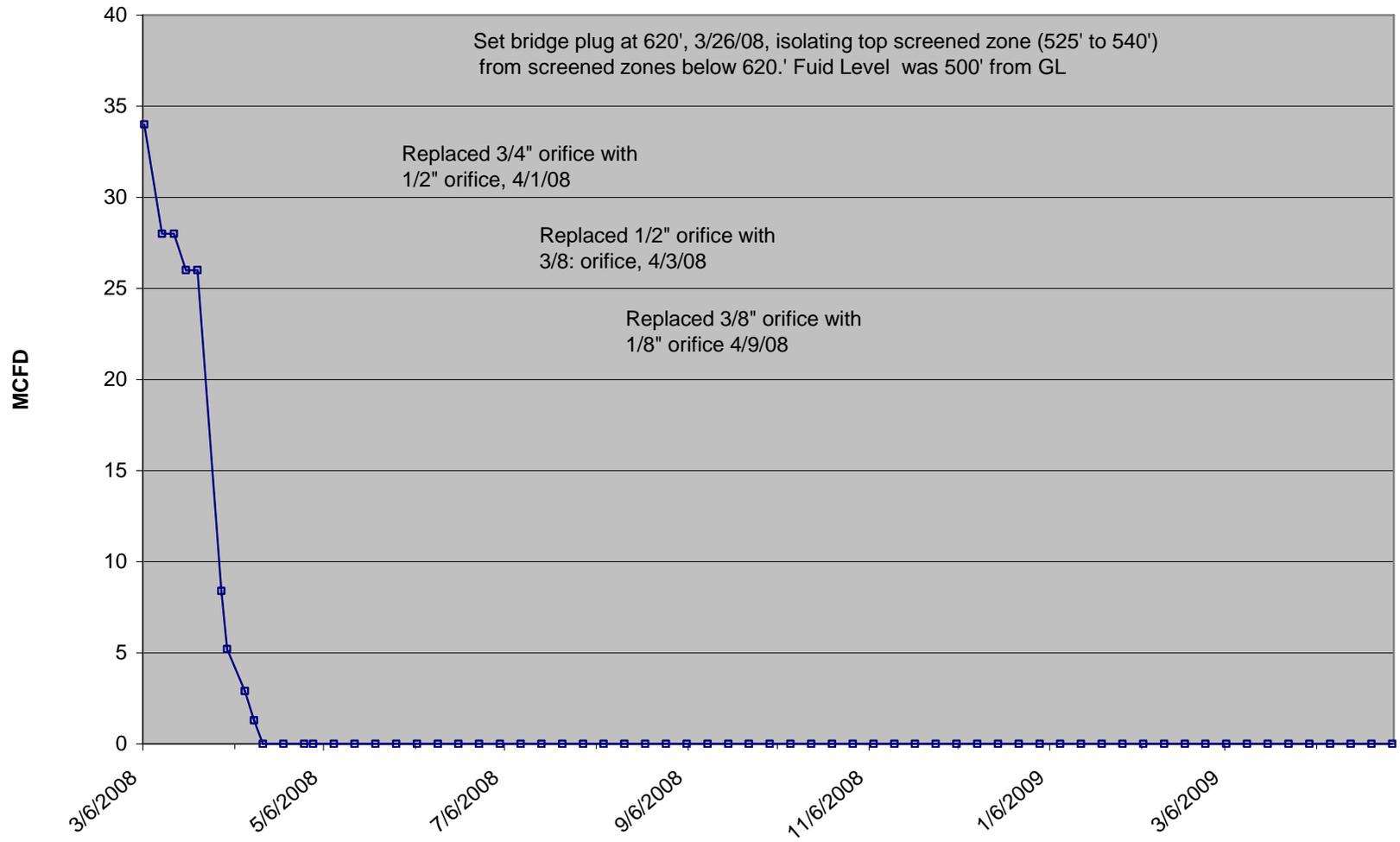
**Table 5**  
**Residences Receiving Water**

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

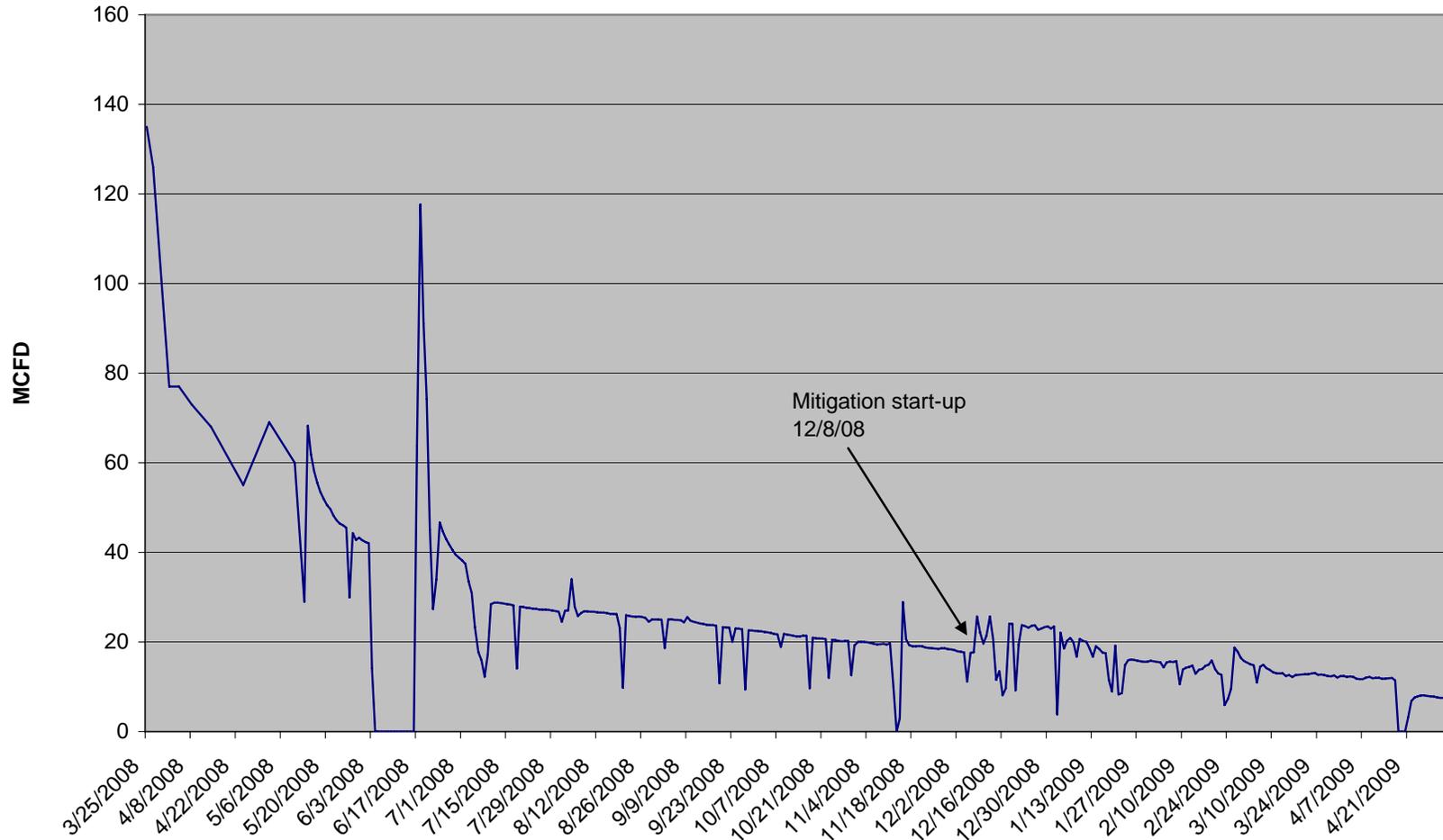
**Note one new name added to list from February Monthly Report.**

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

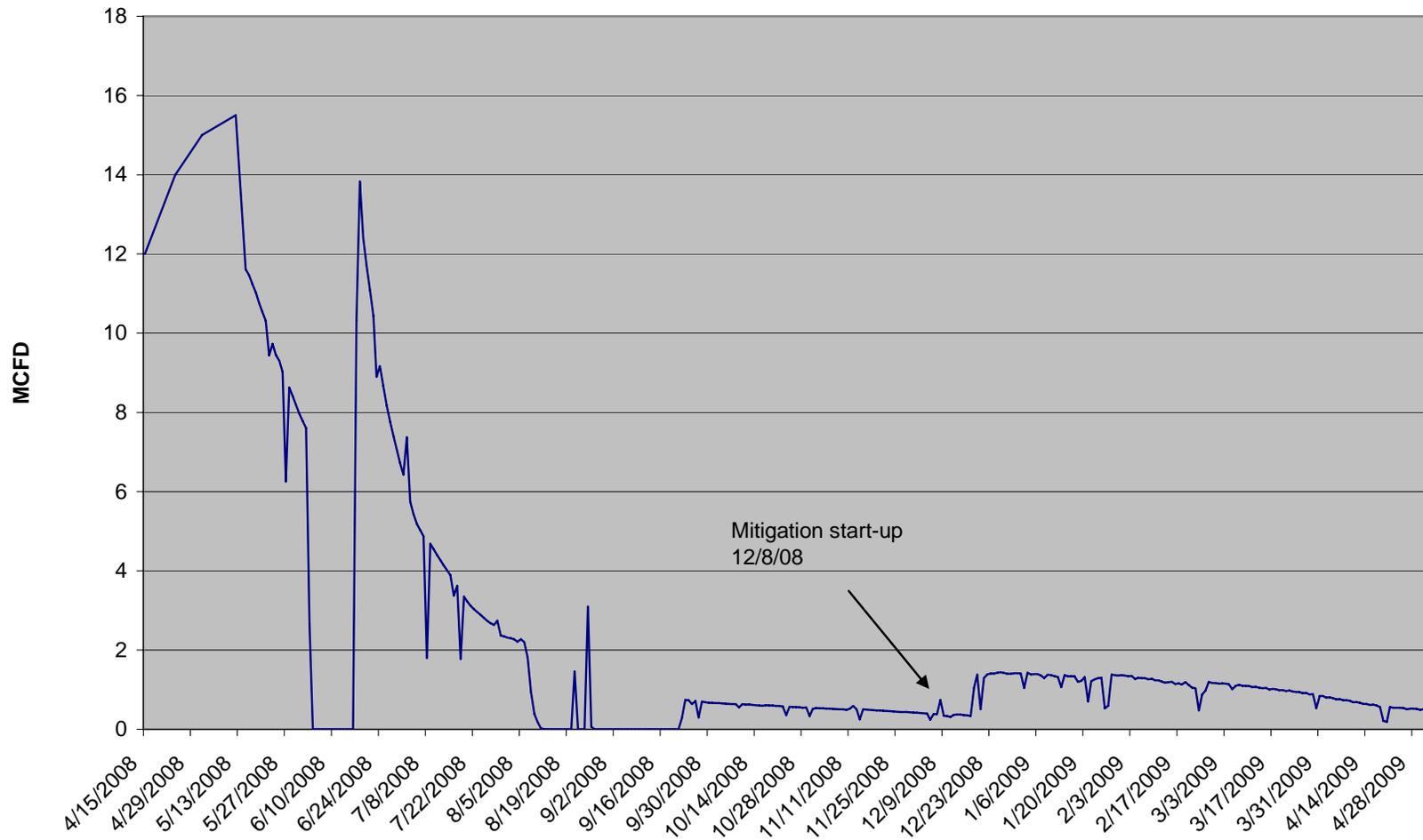
### POCI 55 MW Gas Flow from 3/6/08 to 5/1/09



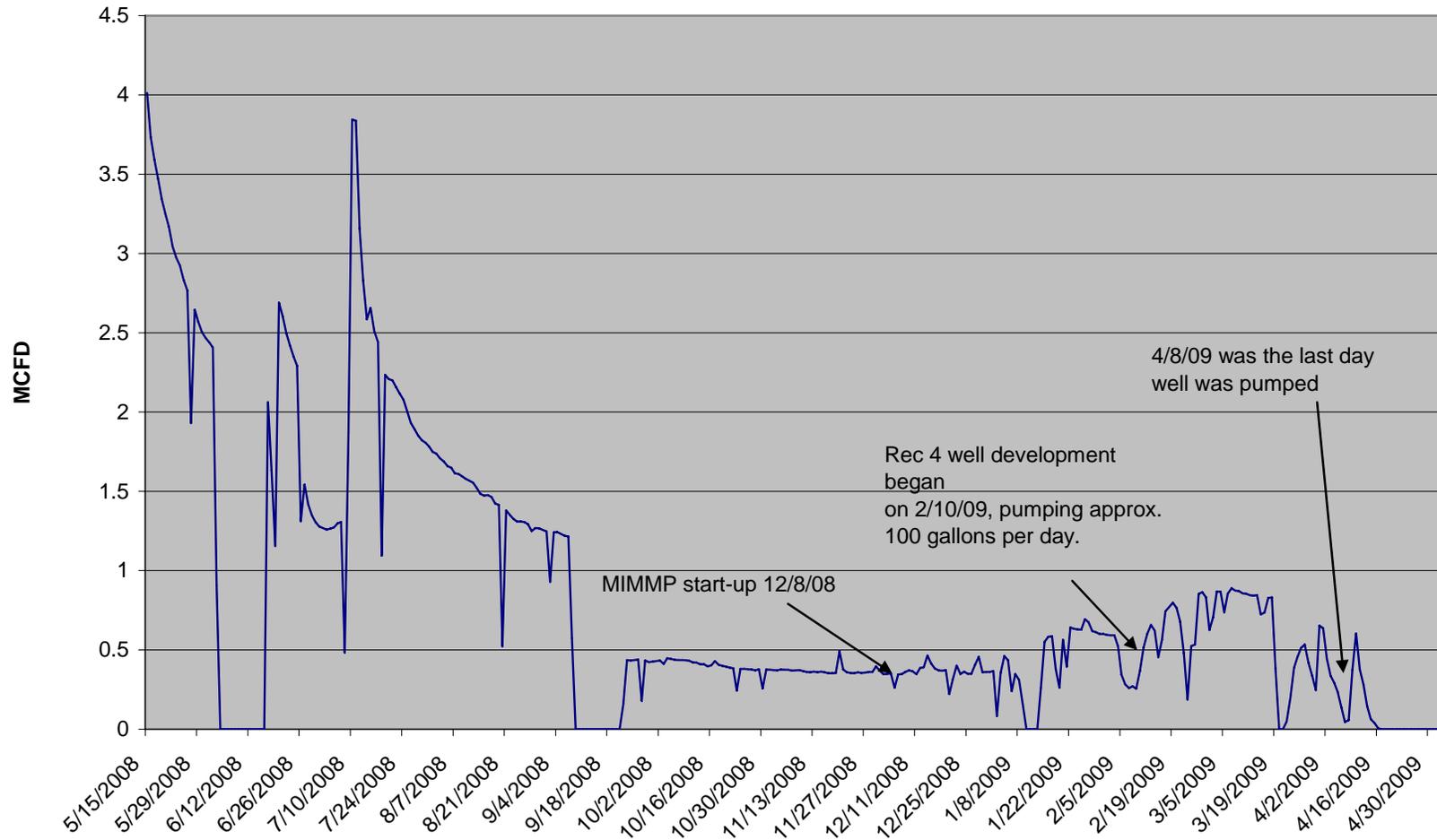
### Recovery 1 Kittleson Gas Flow from 3/25/08 to 5/4/09



**Recovery 3 PEI Gas Flow  
from 4/15/08 to 5/4/09**

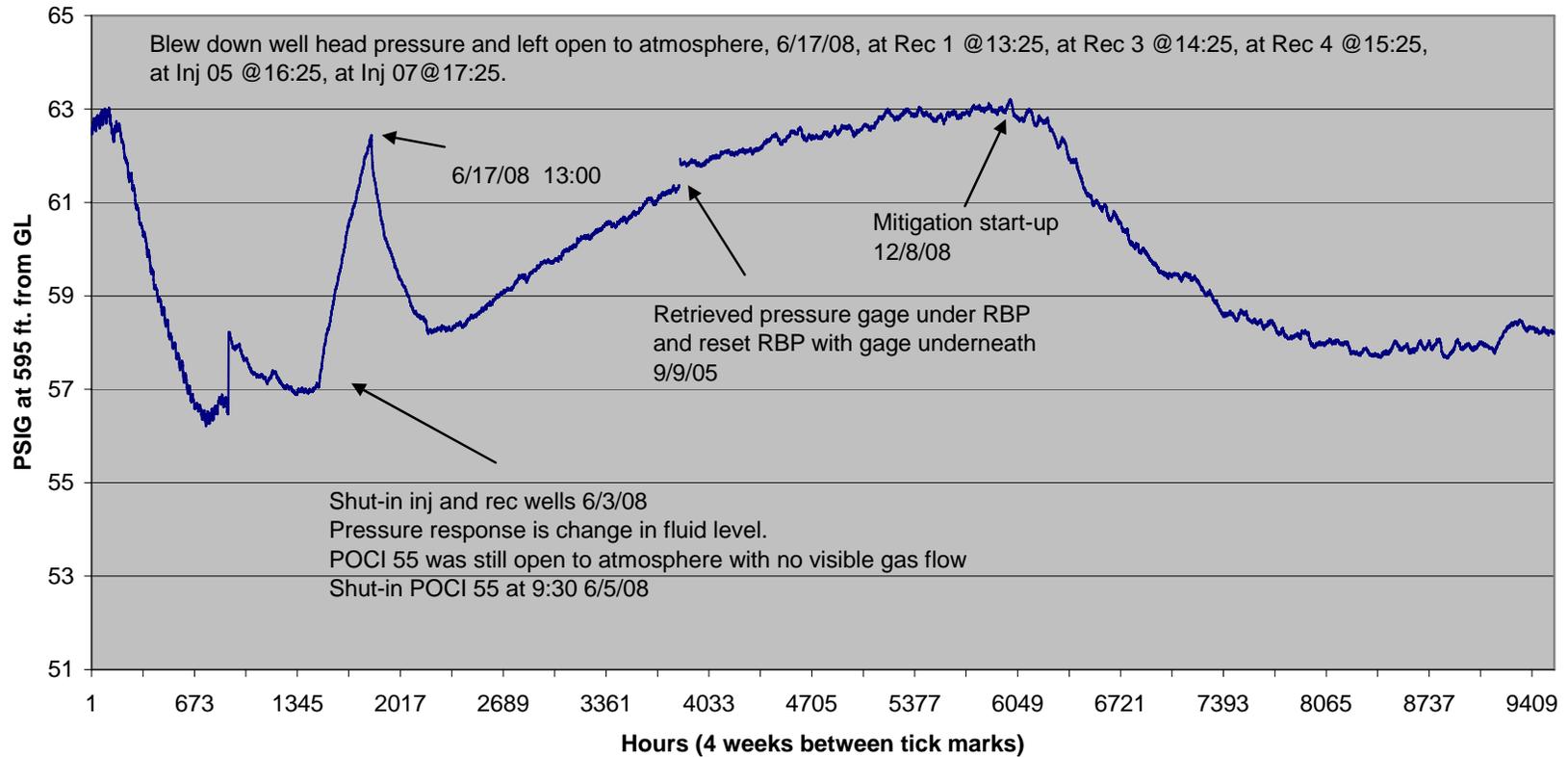


### Recovery 4 Barrett Gas Flow from 5/15/08 to 5/4/09

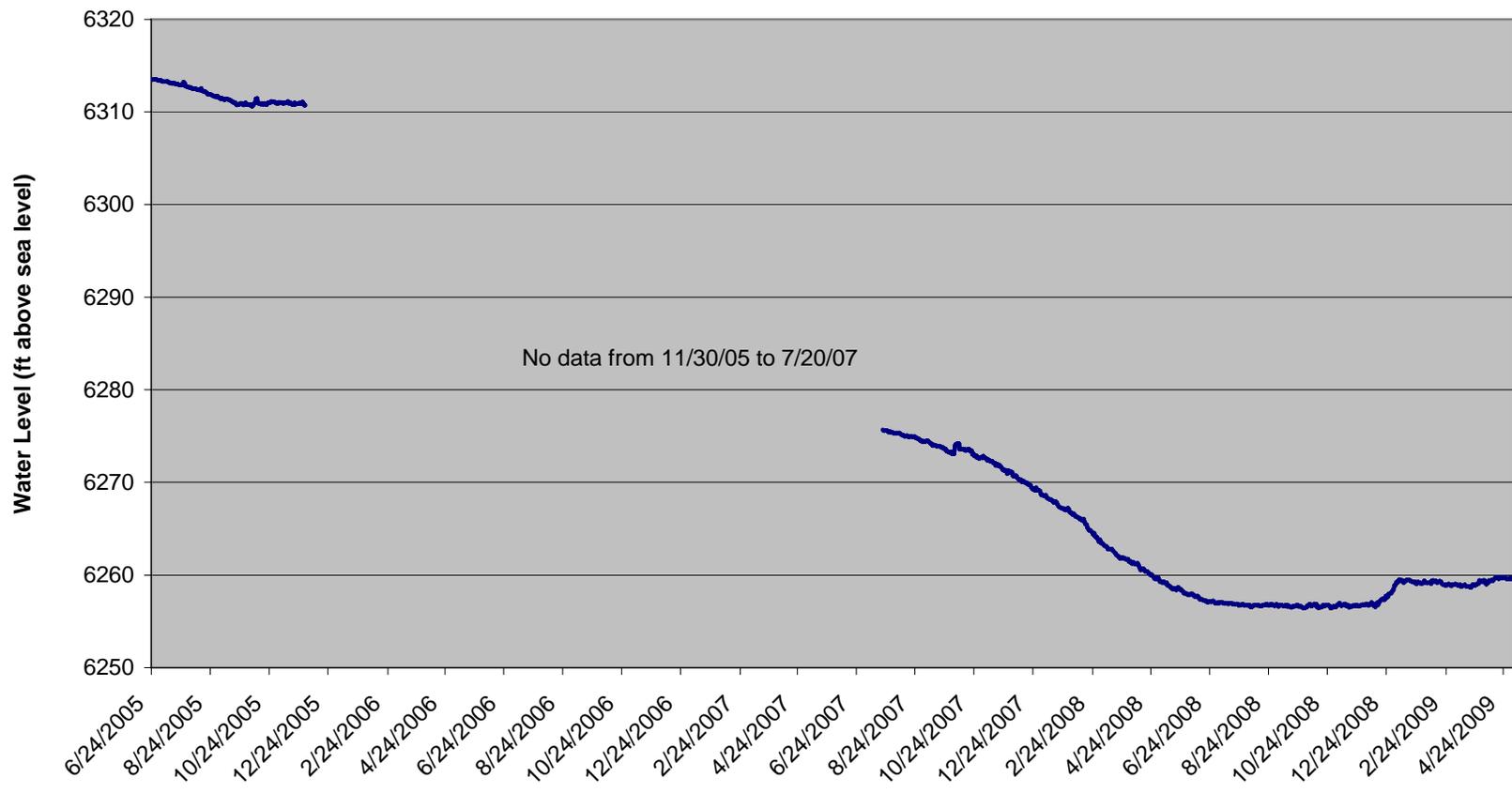


**Attachment 2**  
**Graphs of Pressure and Fluid Level Data From**  
**POCI 55, Barrett, Bergman, Bruington, Coleman, Evendon, Garza-Vela and Meyer**

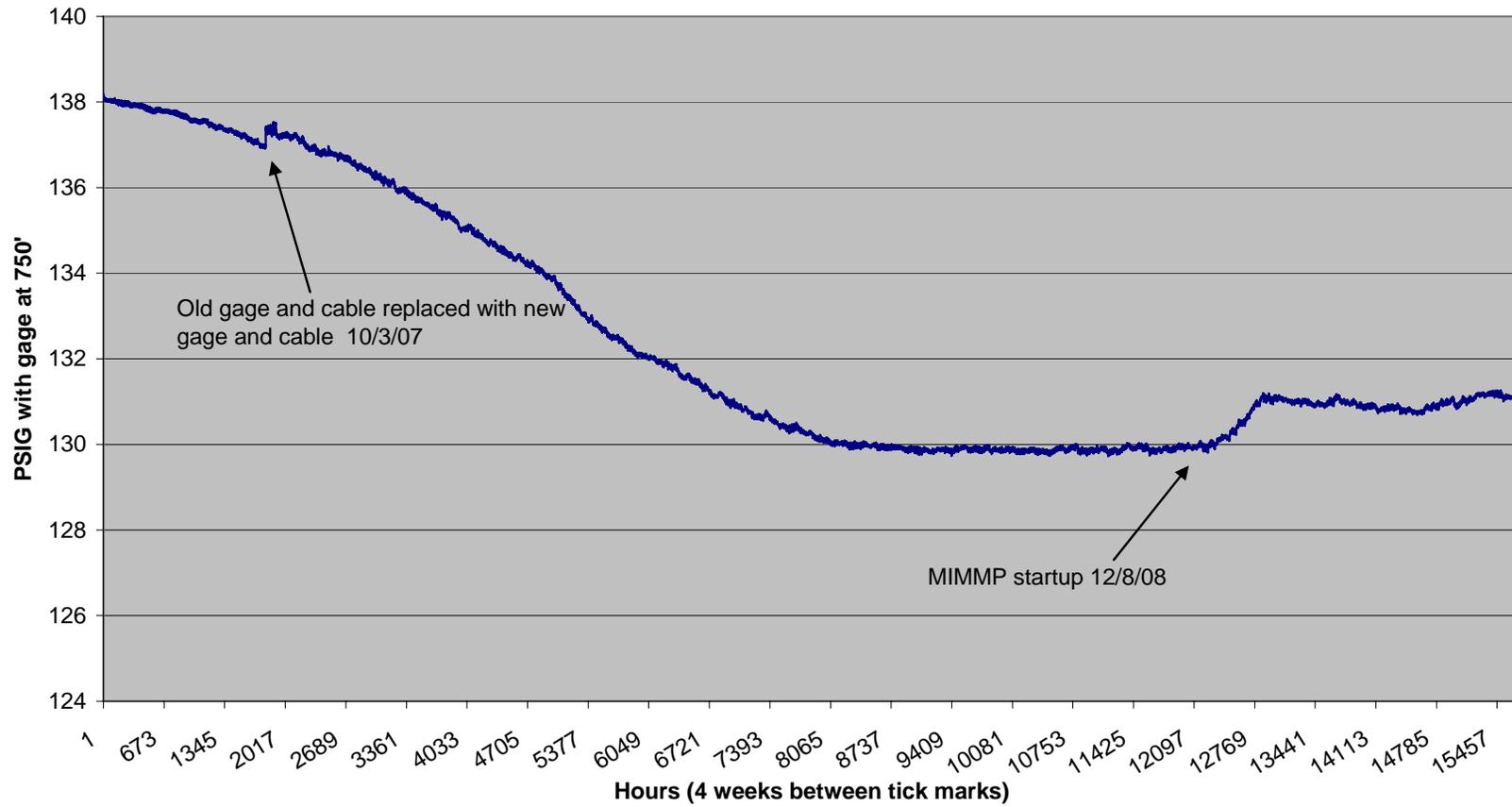
**POCI 55 Monitor Well from 4/2/08 to 5/5/09**  
**Permit # 275819**  
**Lot 55 RRR**  
**SE SW Sec 3 29S 67W**  
**GL elev. 6690'**



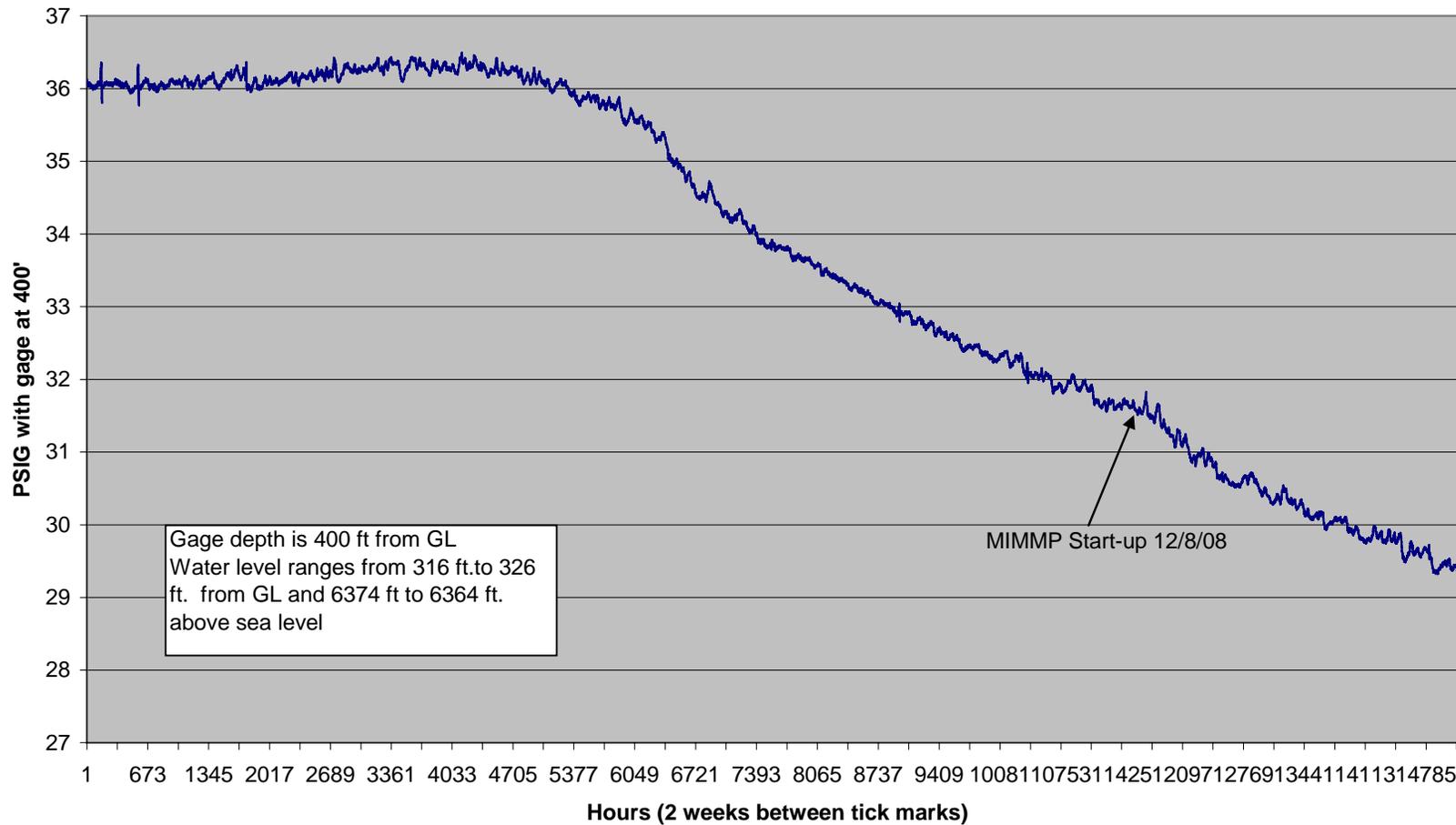
**Barrett WW**  
**Water Level from 6/24/05 to 5/5/09**  
**Permit # 257994**  
**Lot 57 RRR**  
**NW, SE Sec 3, T29S R67W**



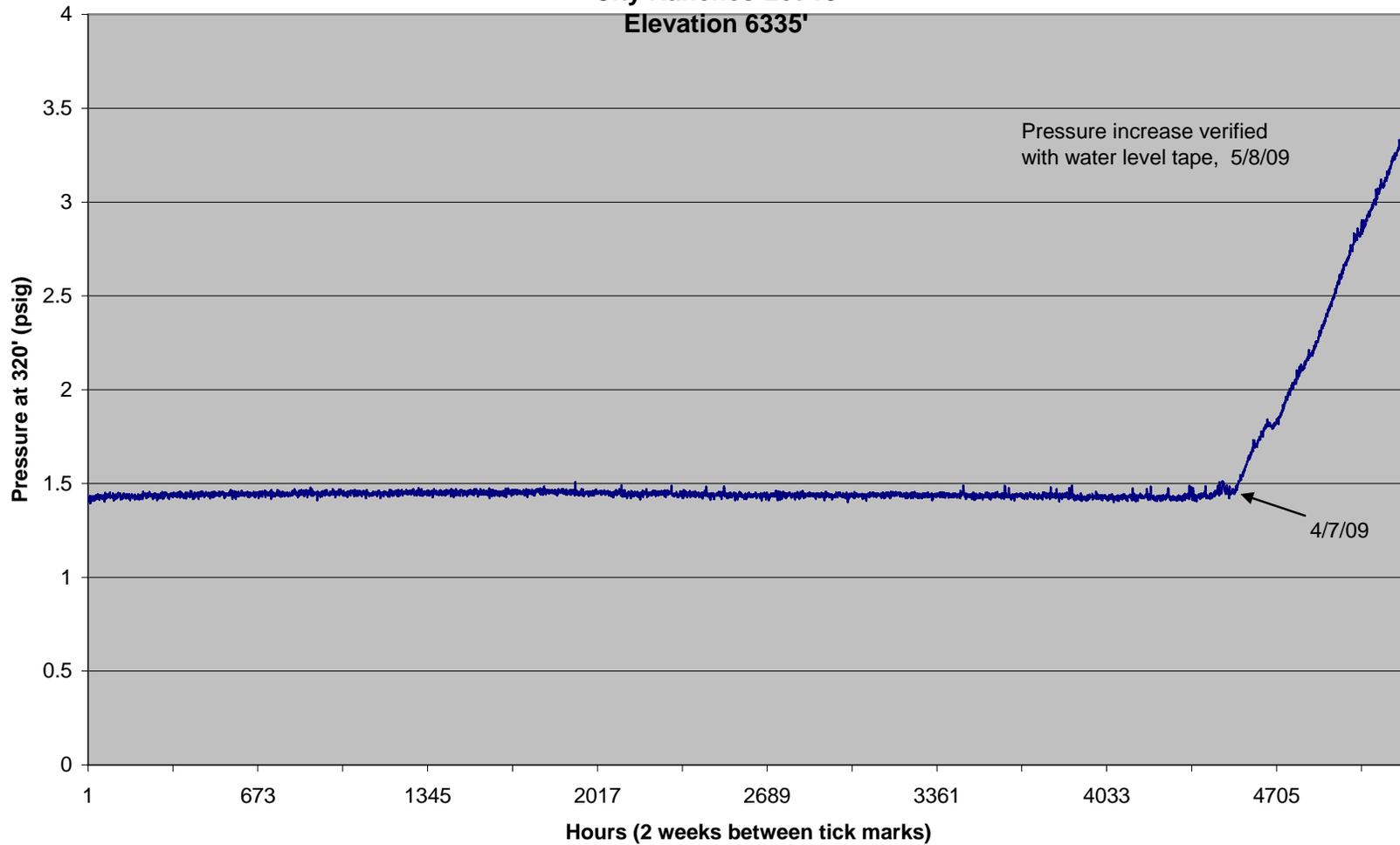
**Barrett WW from 7/20/07 to 5/5/09**  
**Permit # 257994**  
**Lot 57 RRR**  
**NW, SE Sec 3, T29S R67W**  
**G.L. elev. 6707'**



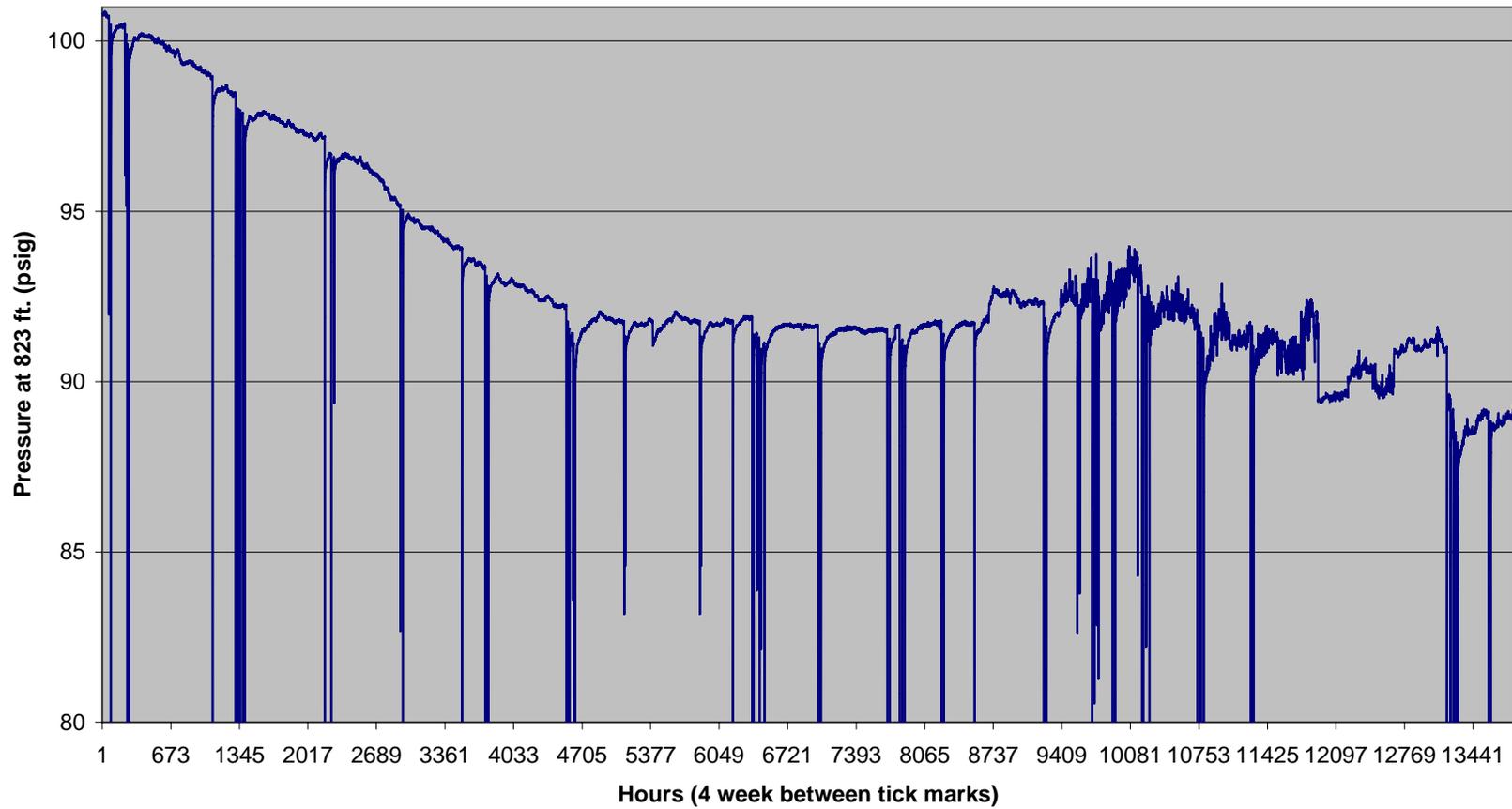
**Bergman WW pressure data from 8/9/07 to 5/5/09**  
**Permit # 24403, SW NW Sec 3 29S 67W**  
**Lot 48 RRR**



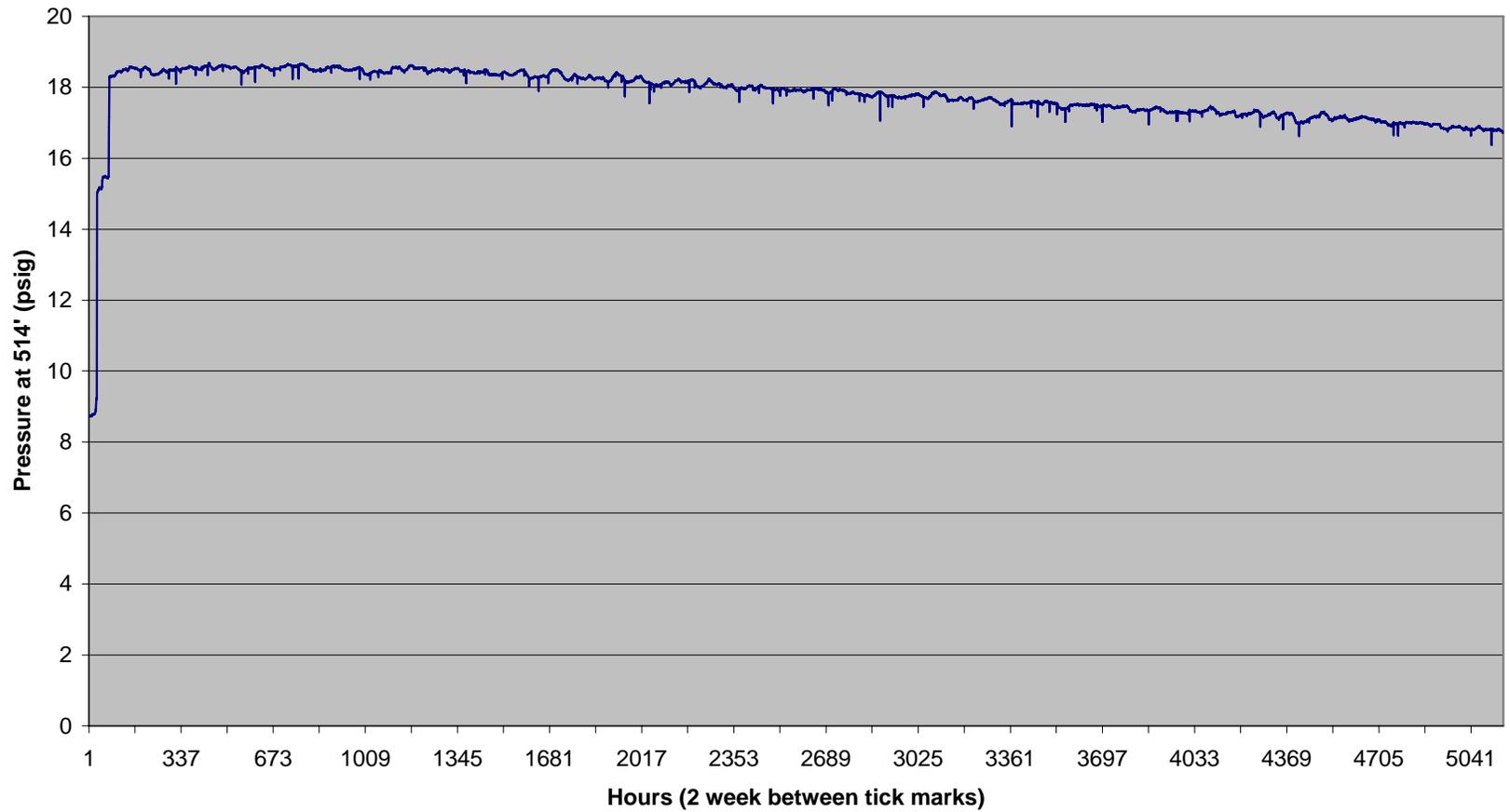
**Pressure at 320' from 9/29/08 to 5/5/09**  
**Bruington WW, Permit # 210526**  
**City Ranches Lot 15**  
**Elevation 6335'**



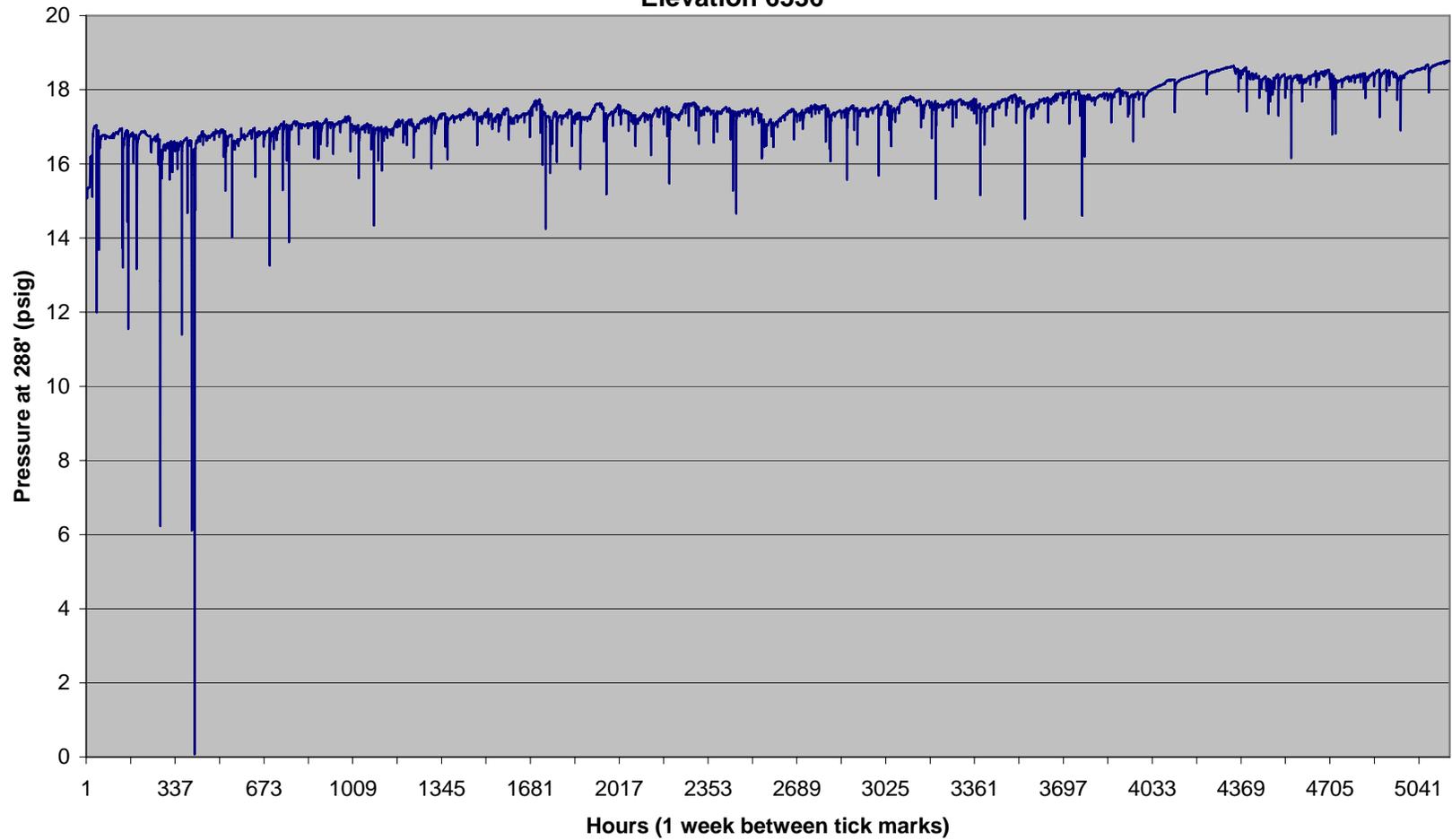
**Coleman WW Pressure Data from 10/31/07 to 5/5/09**  
**Permit # 267964 NE SW Sec 10 29S 67W**  
**Lot 70 RRR**  
**G.L. elev. 6848'**



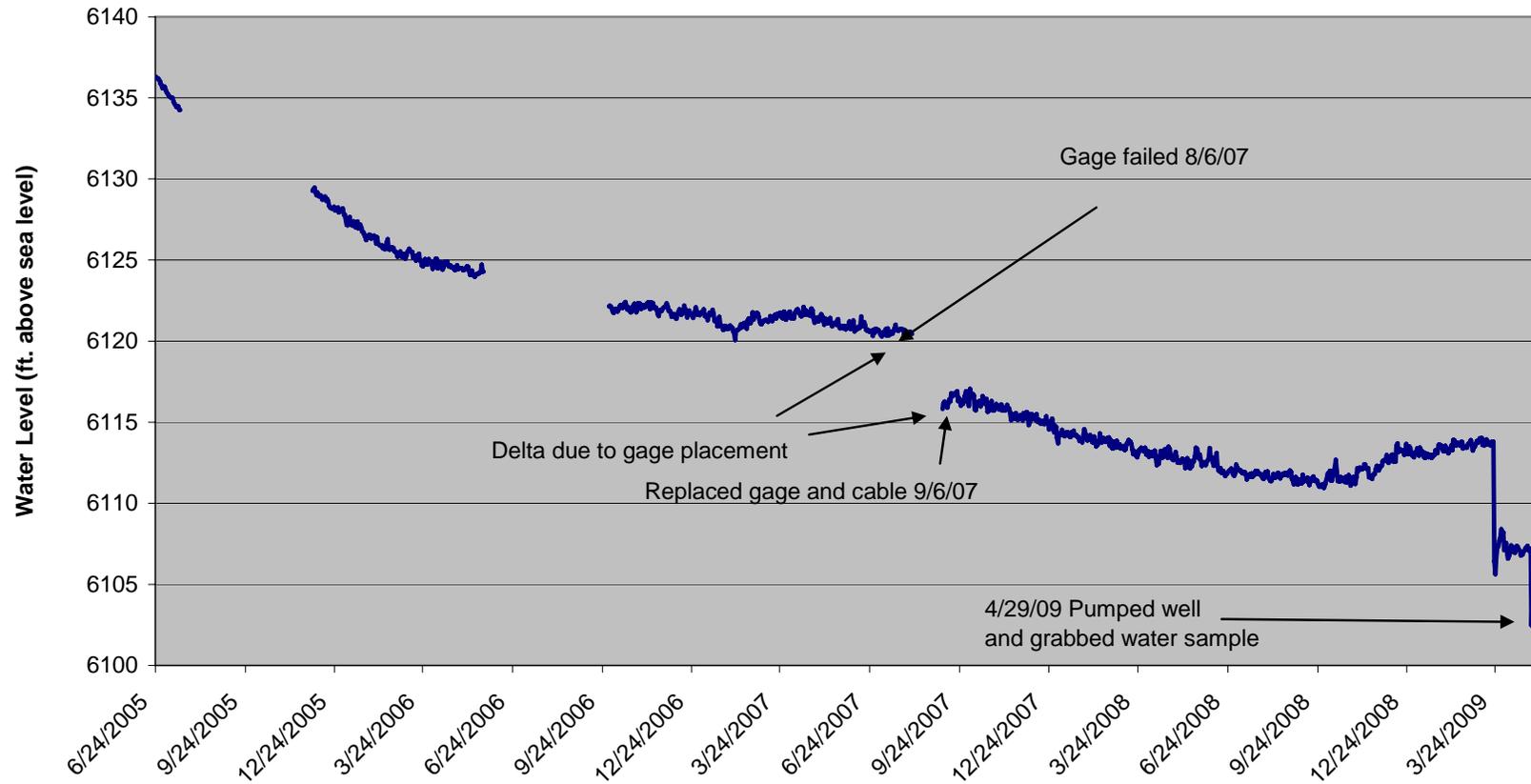
**Pressure at 595' from 10/3/08 to 5/6/09**  
**Evenden WW, Permit # 221465**  
**Lot 117 Silver Spurs Ranch**  
**Elevation 6712'**



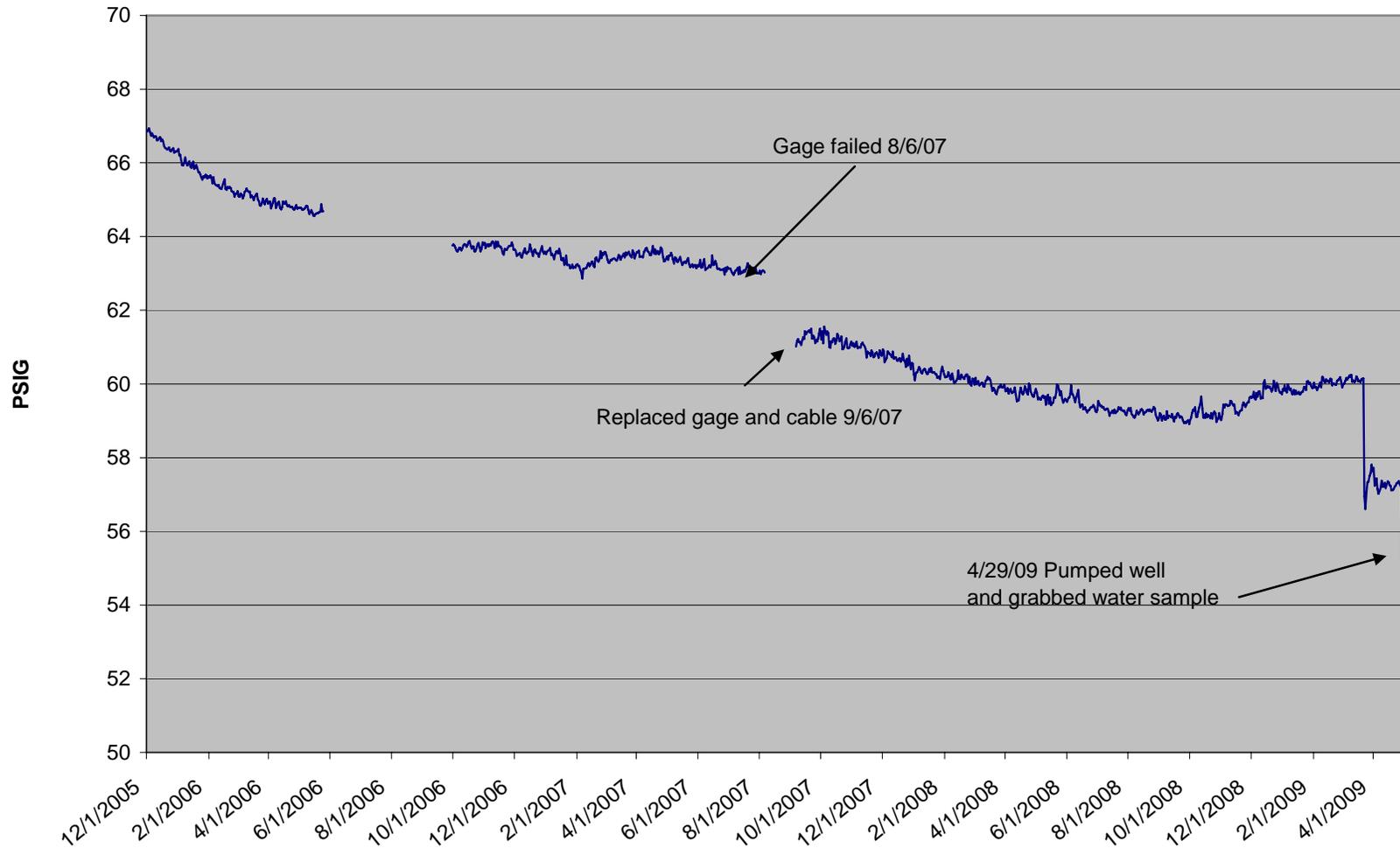
**Pressure at 288' from 10/3/08 to 5/6/09**  
**Garza WW, Permit # 206886**  
**Silver Spurs Ranch, Lot 60**  
**Elevation 6536'**



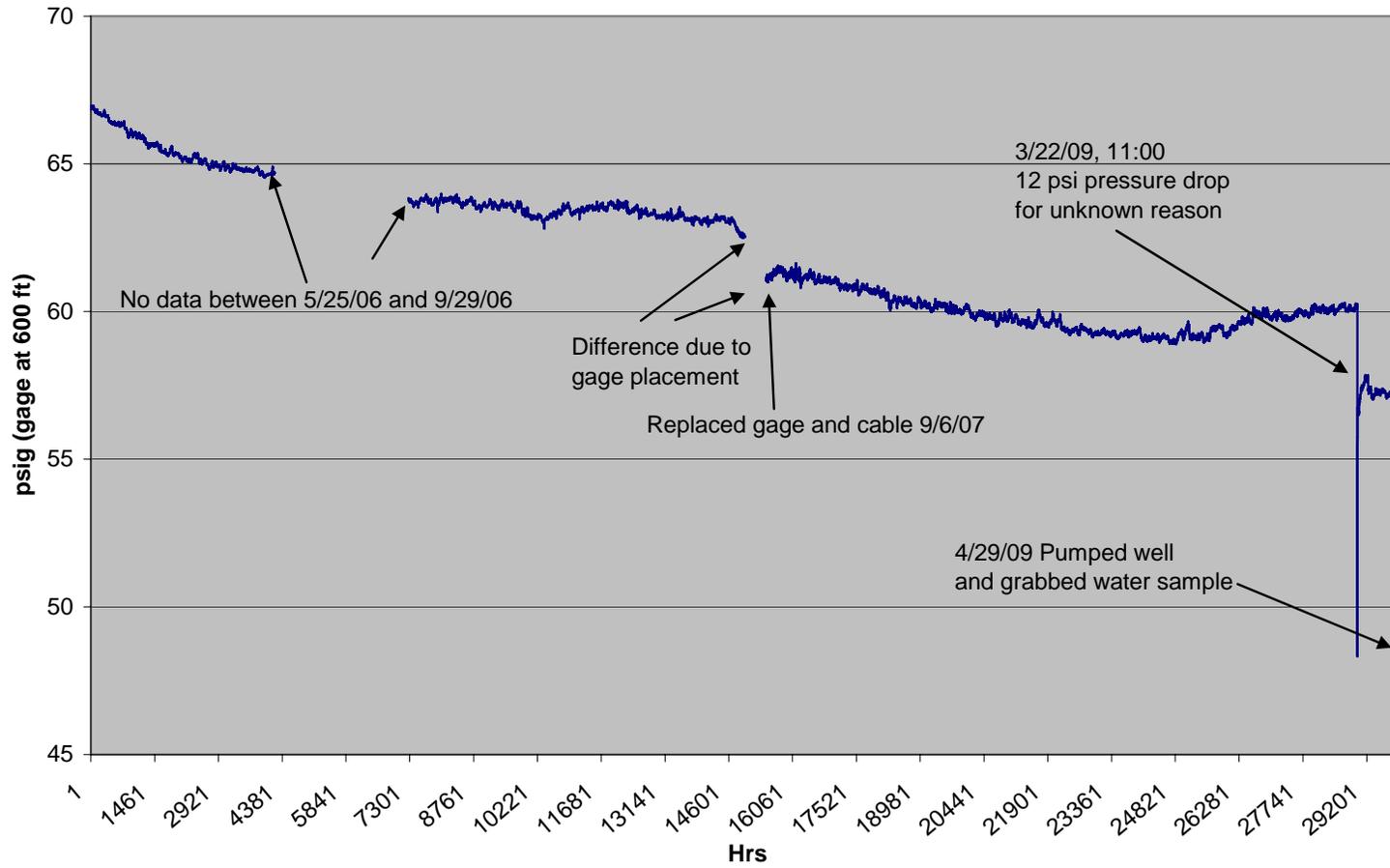
**Meyer WW Water Level from 6/24/05 to 5/6/09**  
**Permit # 248862**  
**Lot 120 RRR**  
**SW, NE Sec 30 T28S R66W**



### Meyers WW BHP from 12/1/05 to 5/6/09

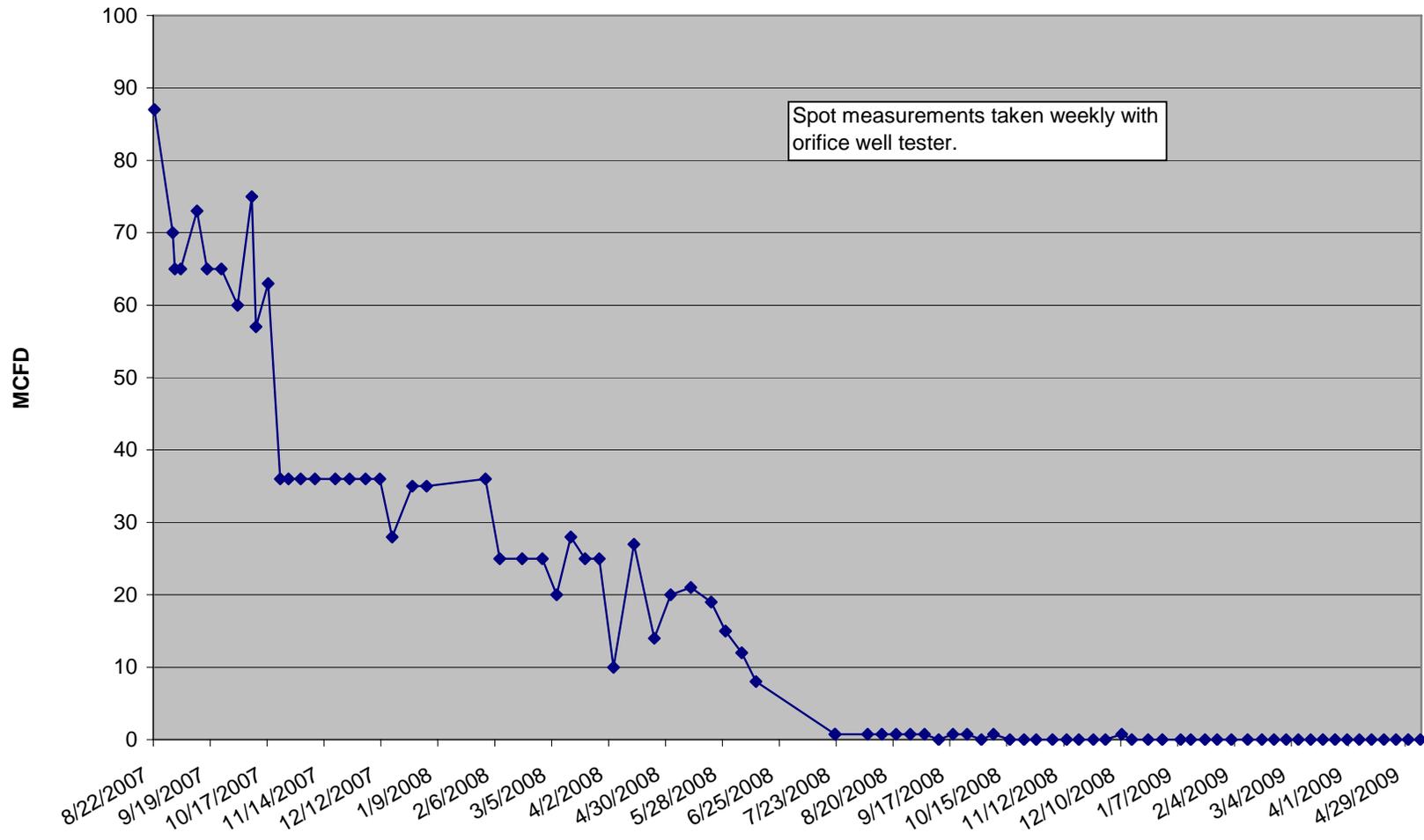


**Meyers WW 11/30/05 to 5/6/09**  
**Permit # 248862**  
**Lot 120 RRR**  
**SW, NE Sec 30 T28S R66W**  
**G.L. elev. 6575'**

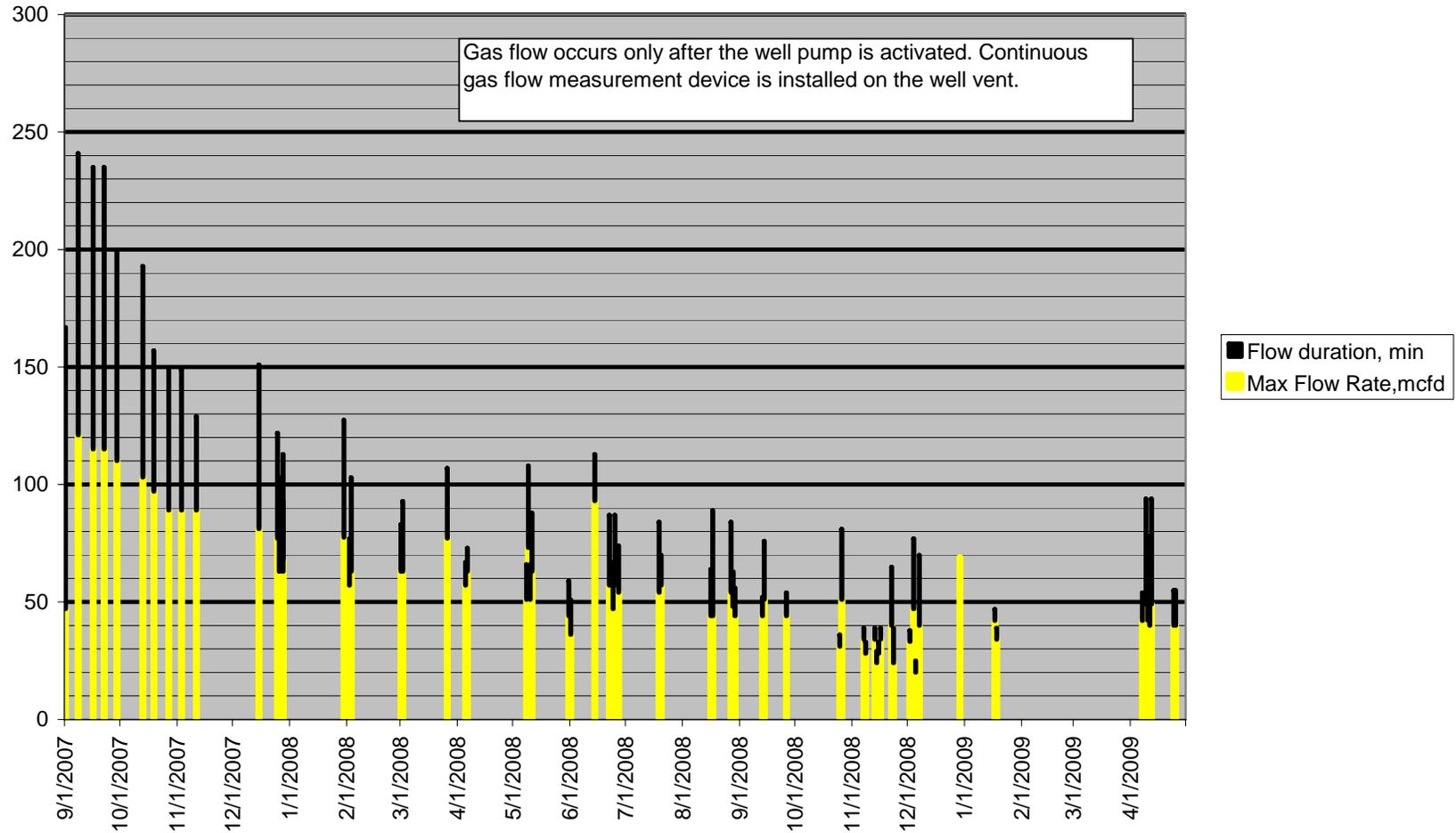


**Attachment 3**  
**Gas Flow Measurements at Bruington, Coleman, Angely, Bounds, and Smith**

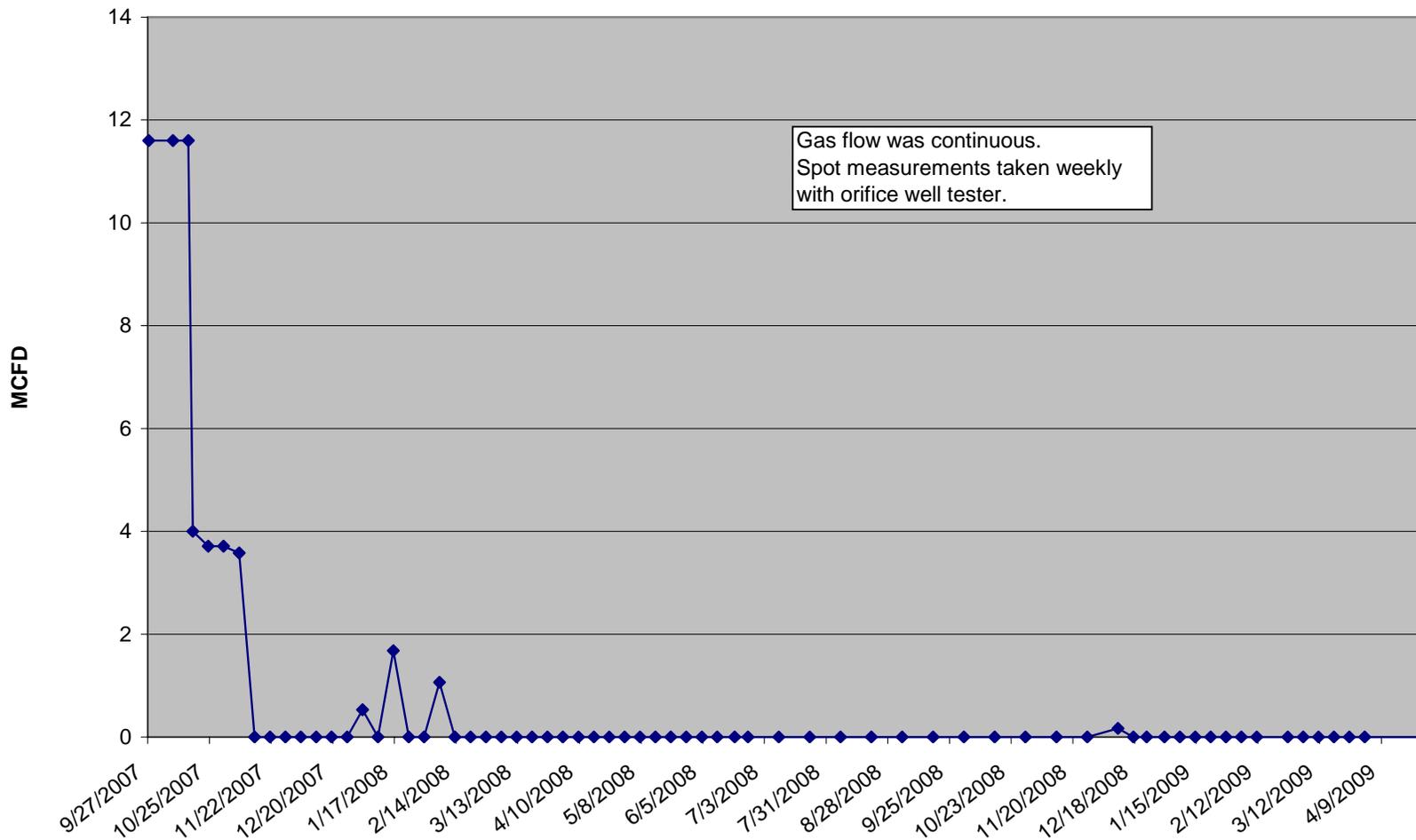
**Bruington WW # 210526 Measured Gas Flow  
from 8/22/07 to 5/6/09**



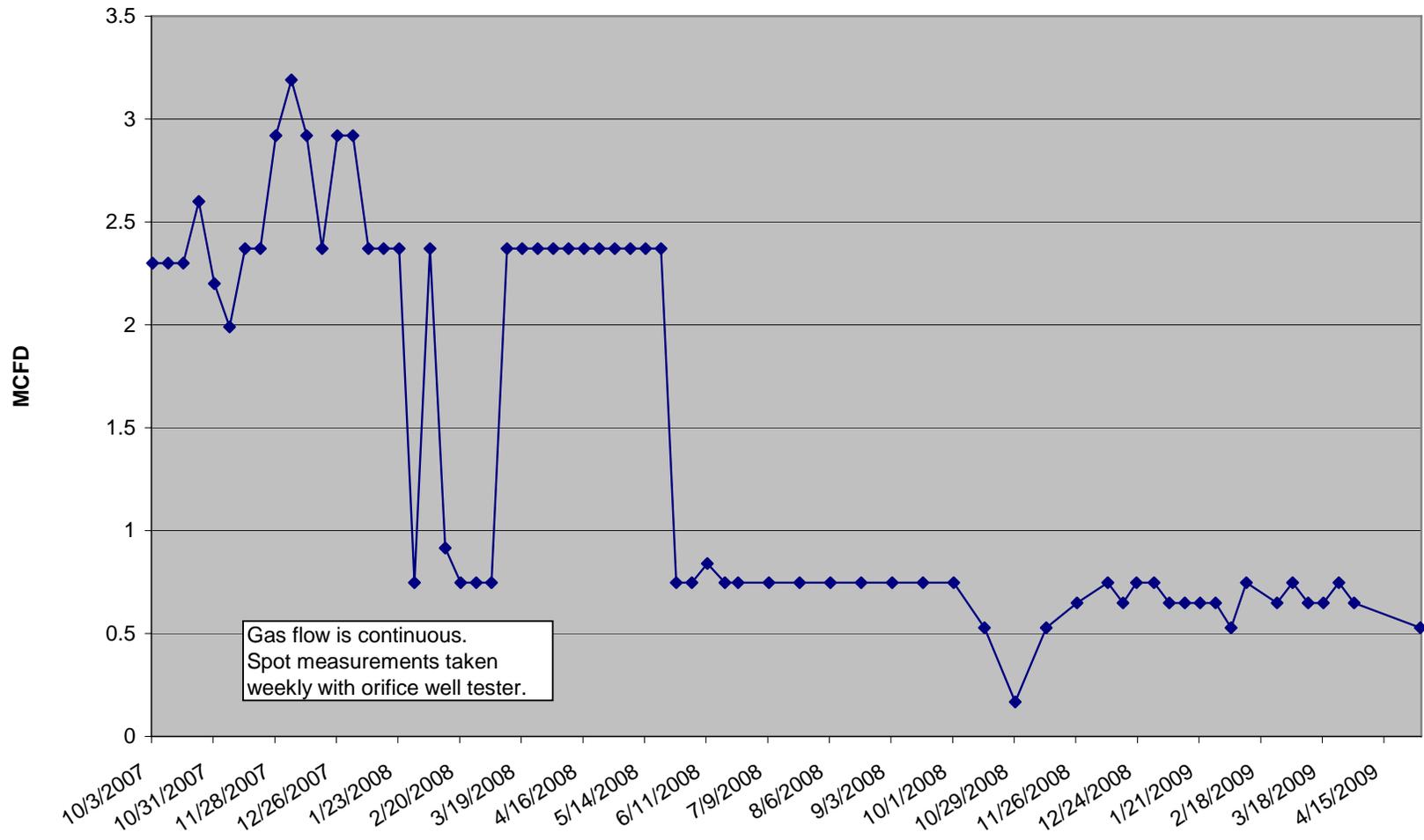
**Coleman WW #267294 Measured Gas Flow  
from 9/1/07 to 4/25/09**



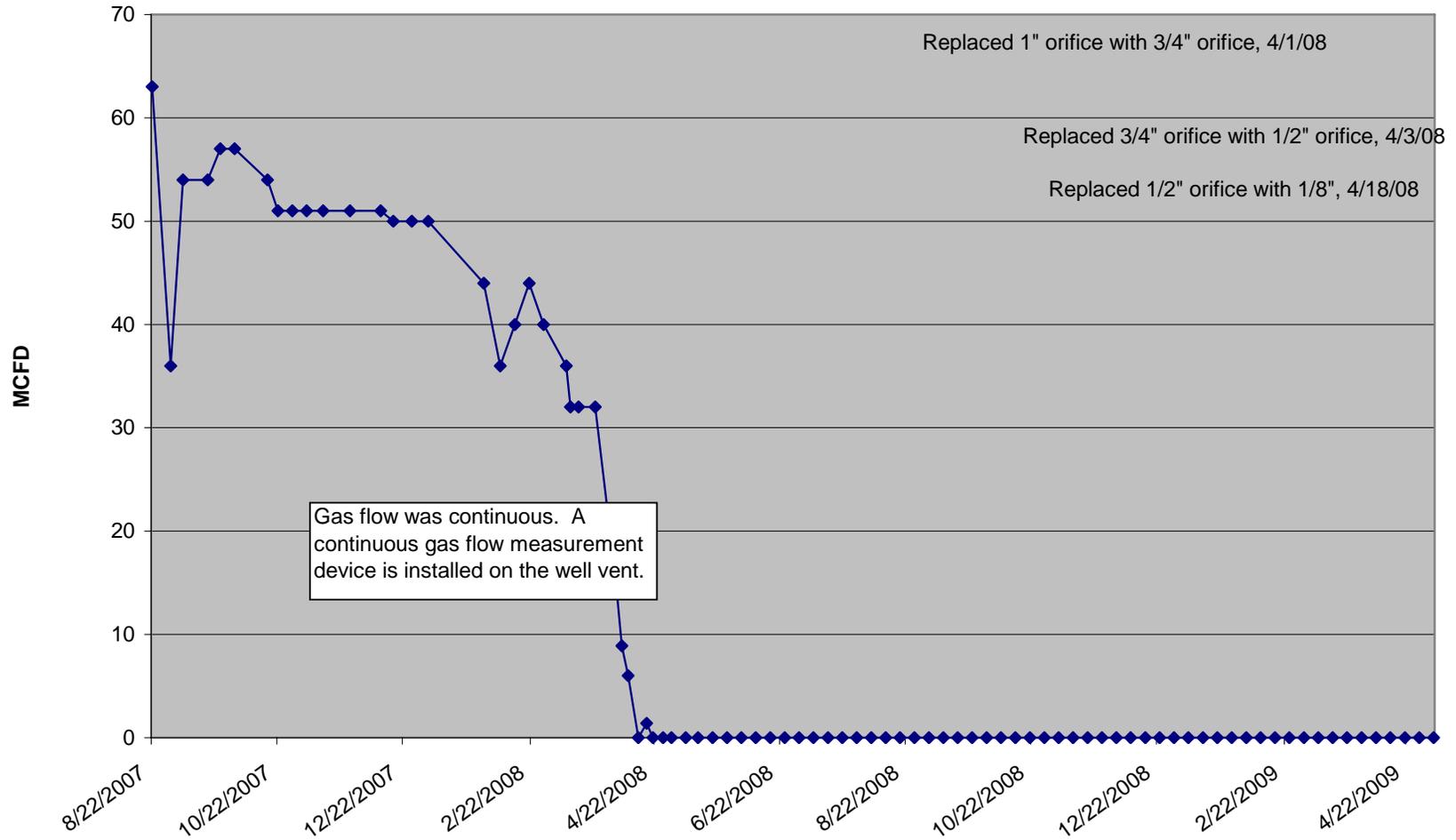
**Angely WW # 238689 Measured Gas Flow  
from 9/27/07 to 5/1/09**



**Bounds WW #181278 Measured Gas Flow  
from 10/3/07 to 5/1/09**

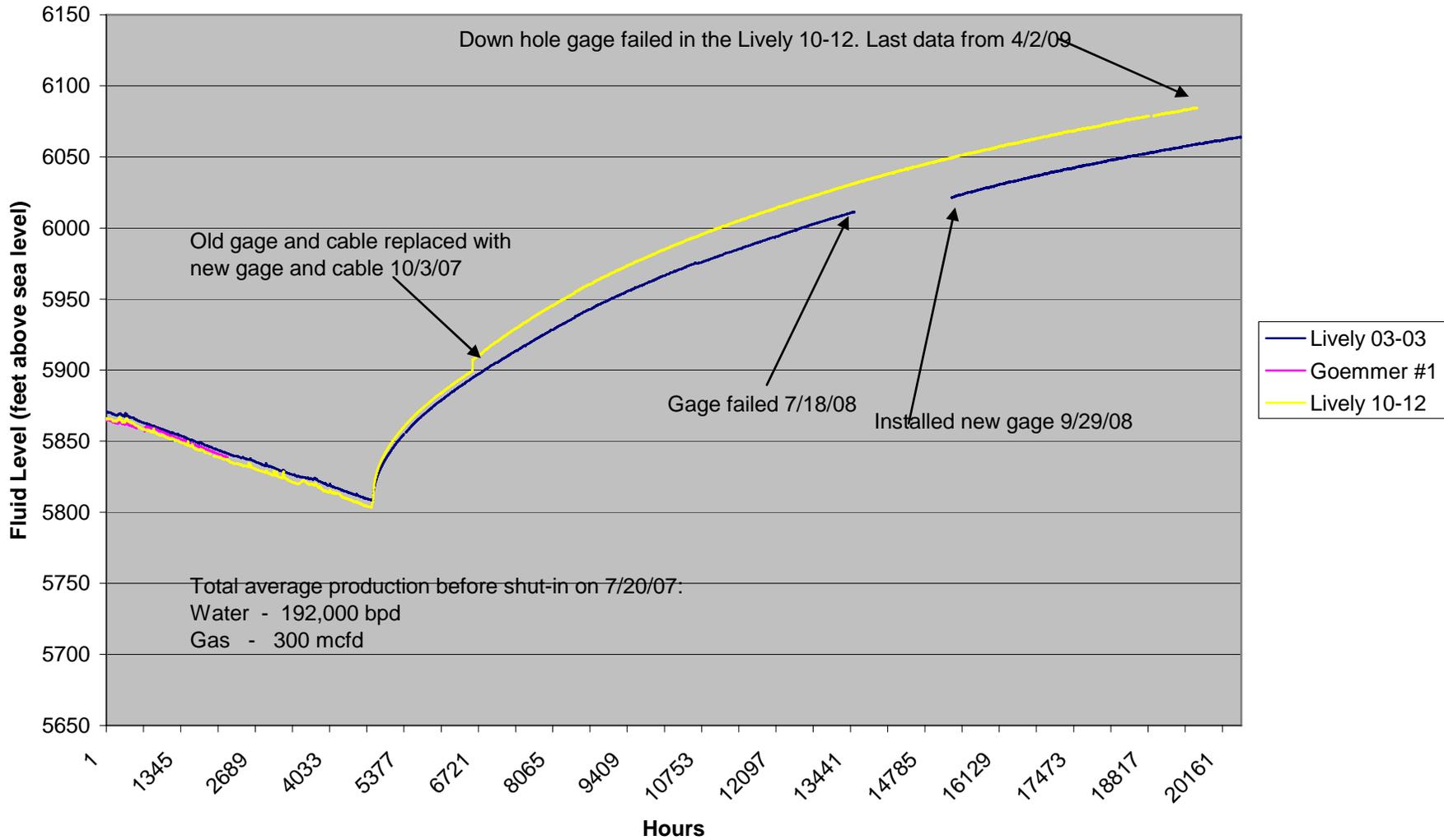


**Smith WW # 239657 Measured Gas Flow  
from 8/22/07 to 5/5/09**

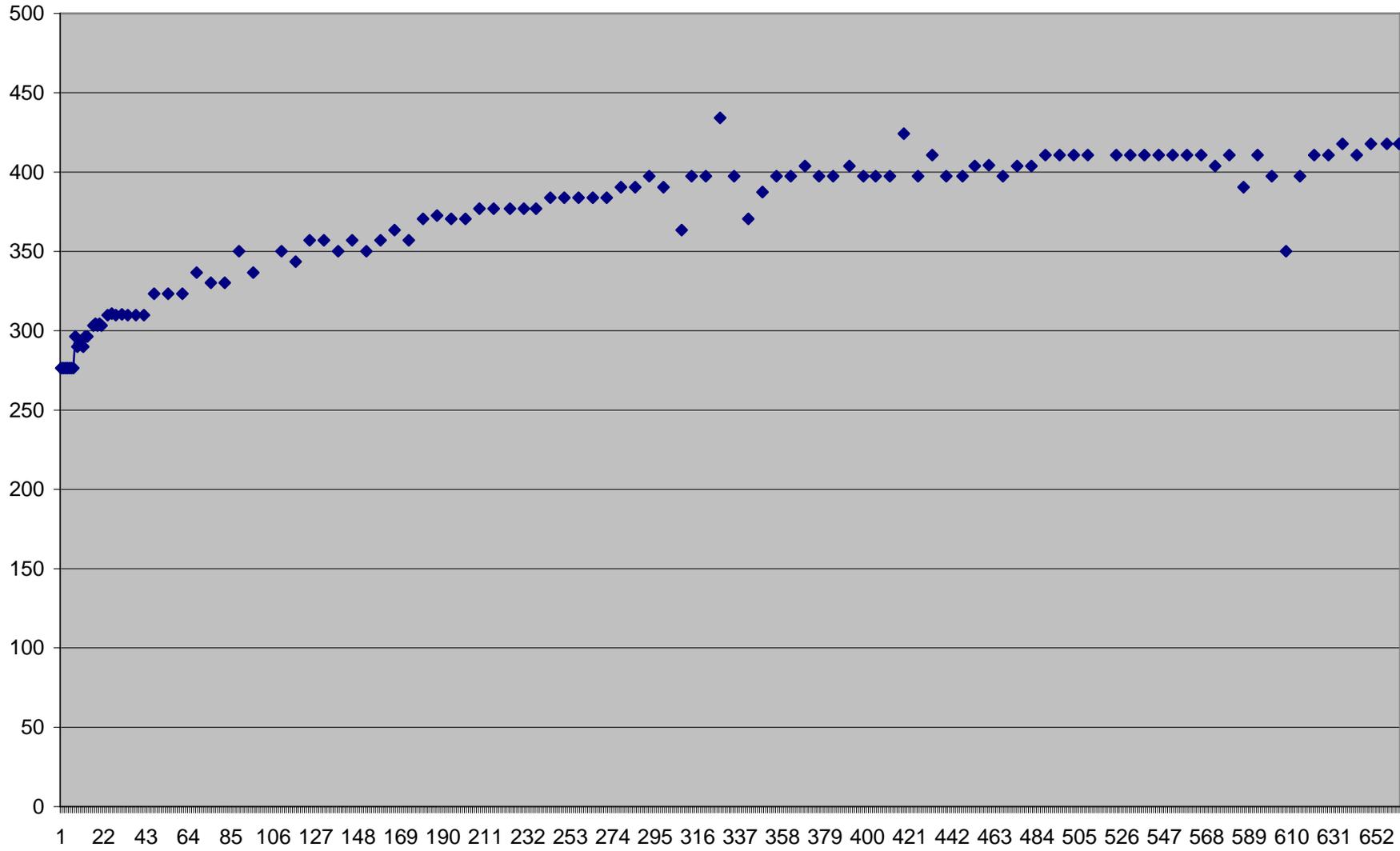


**Attachment 4**  
**Fluid Levels in Petroglyph Production Wells**  
**(Results in psia, unless stated otherwise)**

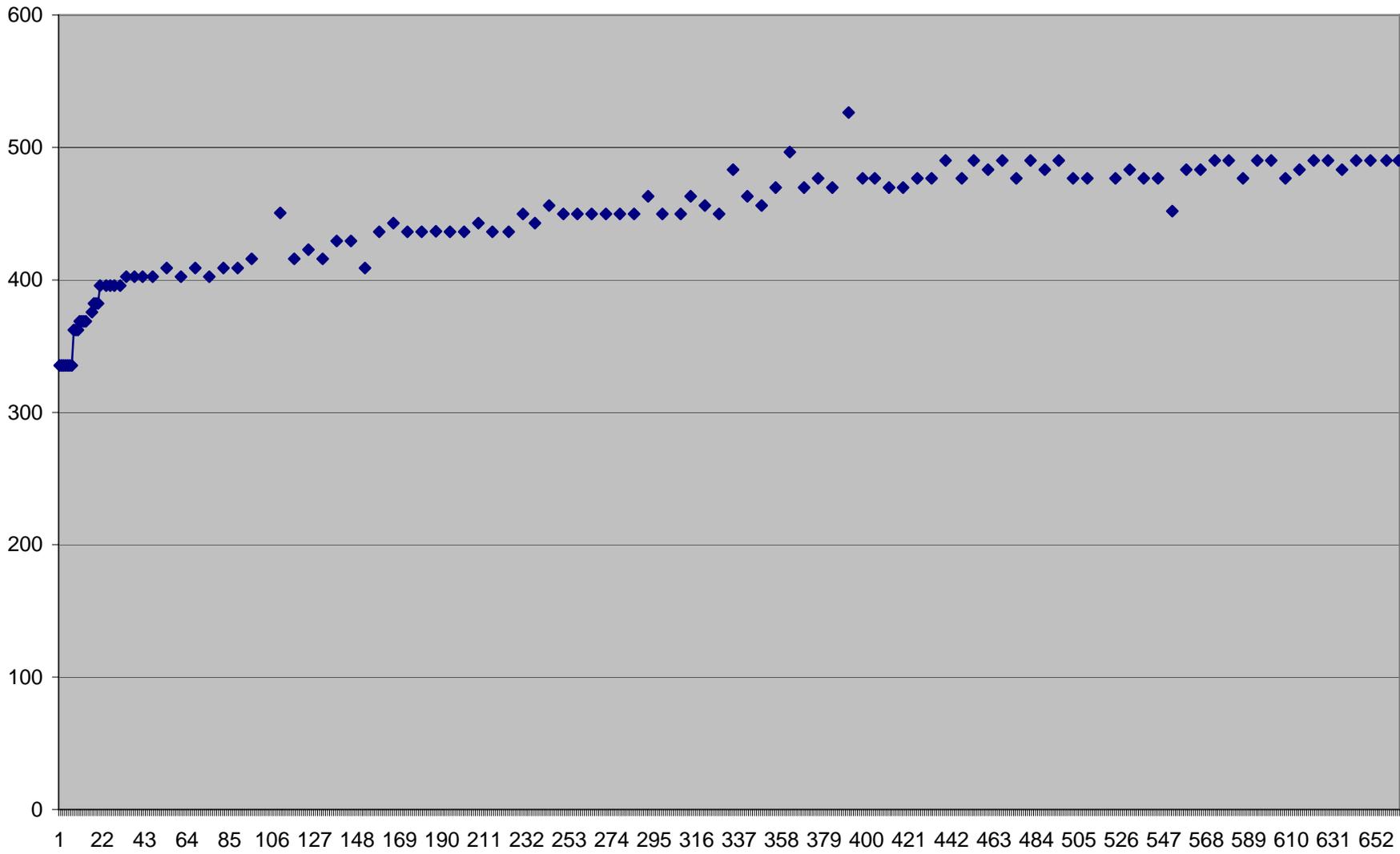
### Monitor Well Fluid Levels PBU from 1/1/07 to 5/5/09



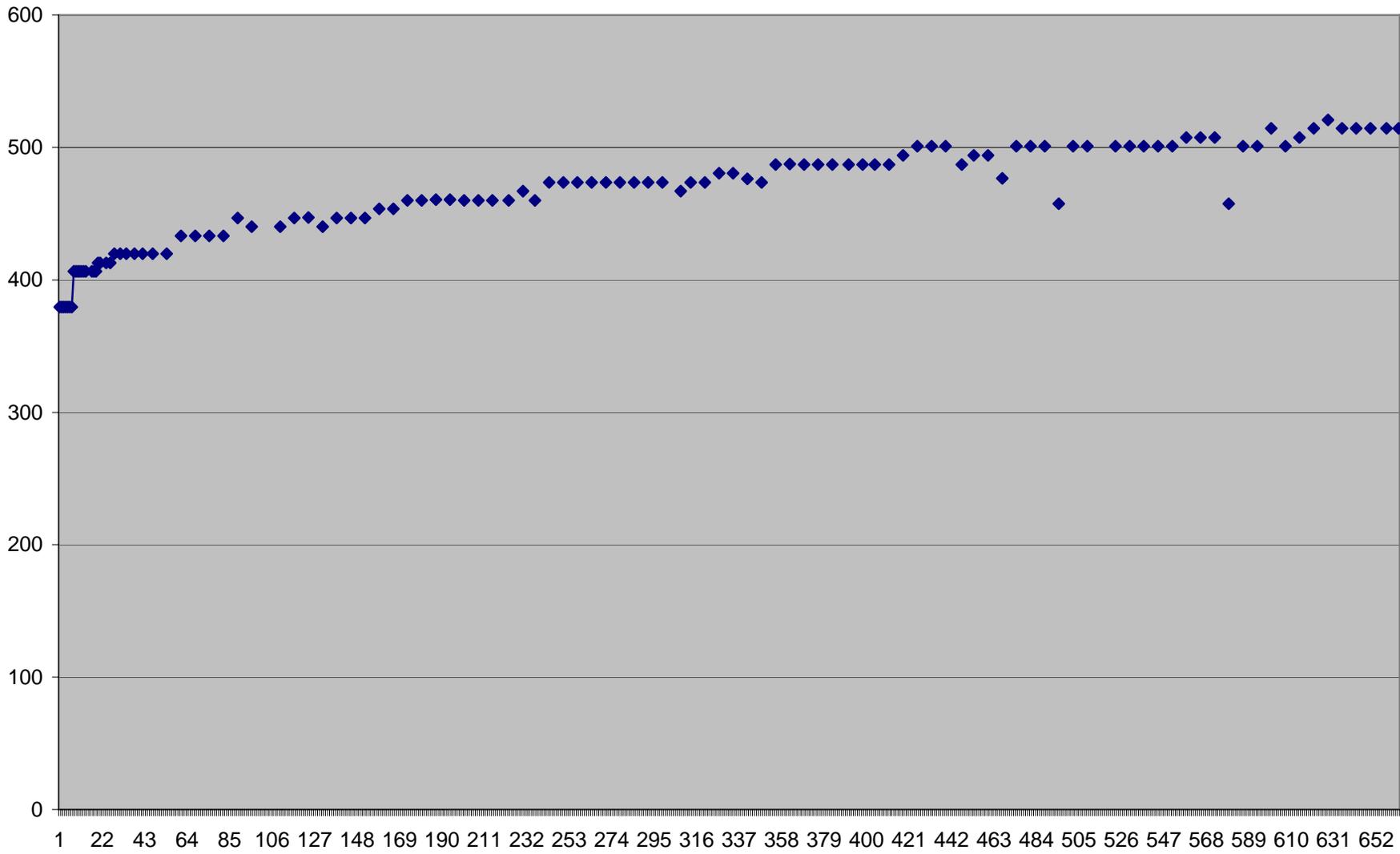
### Lively 02-02



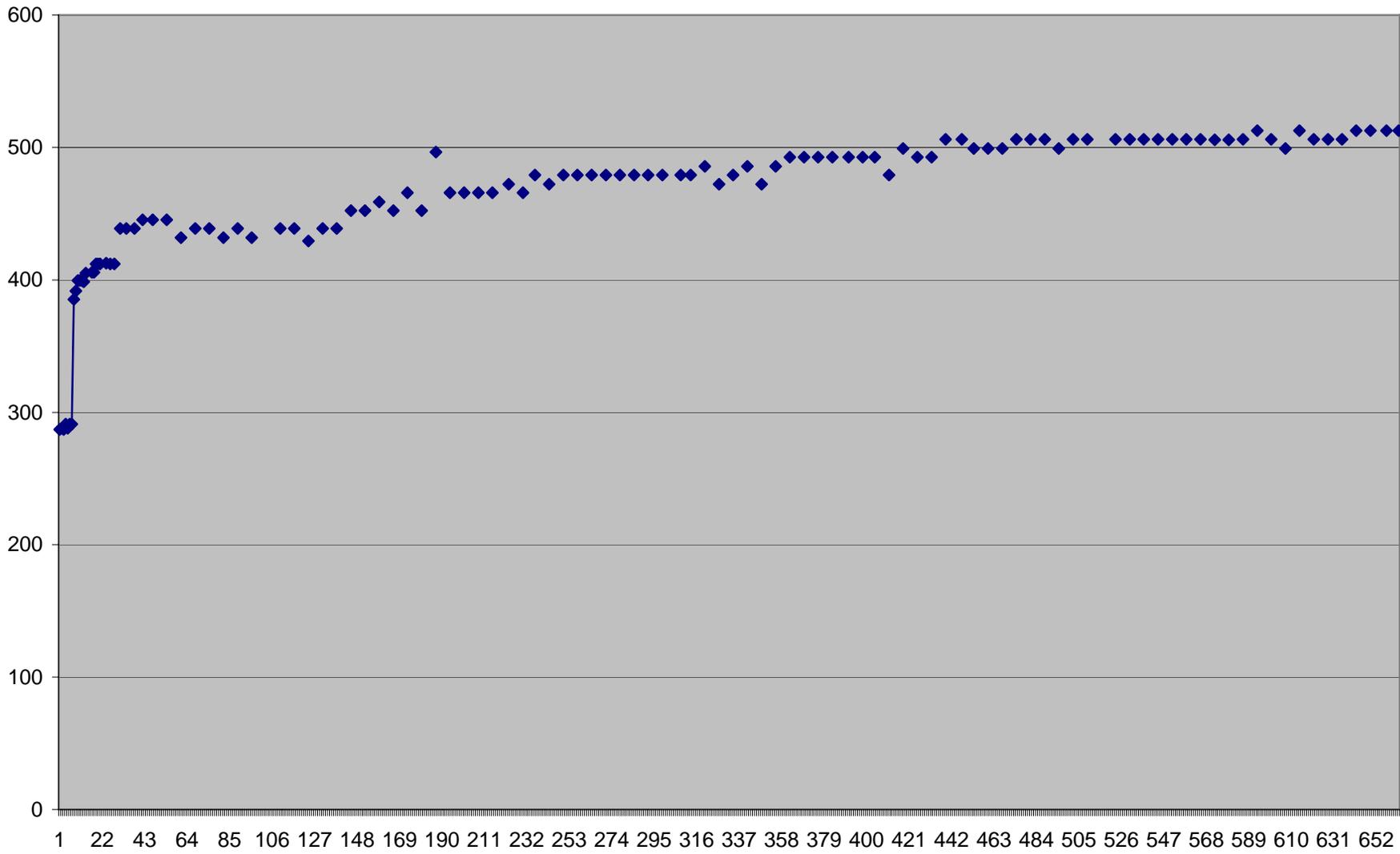
### Lively 02-12



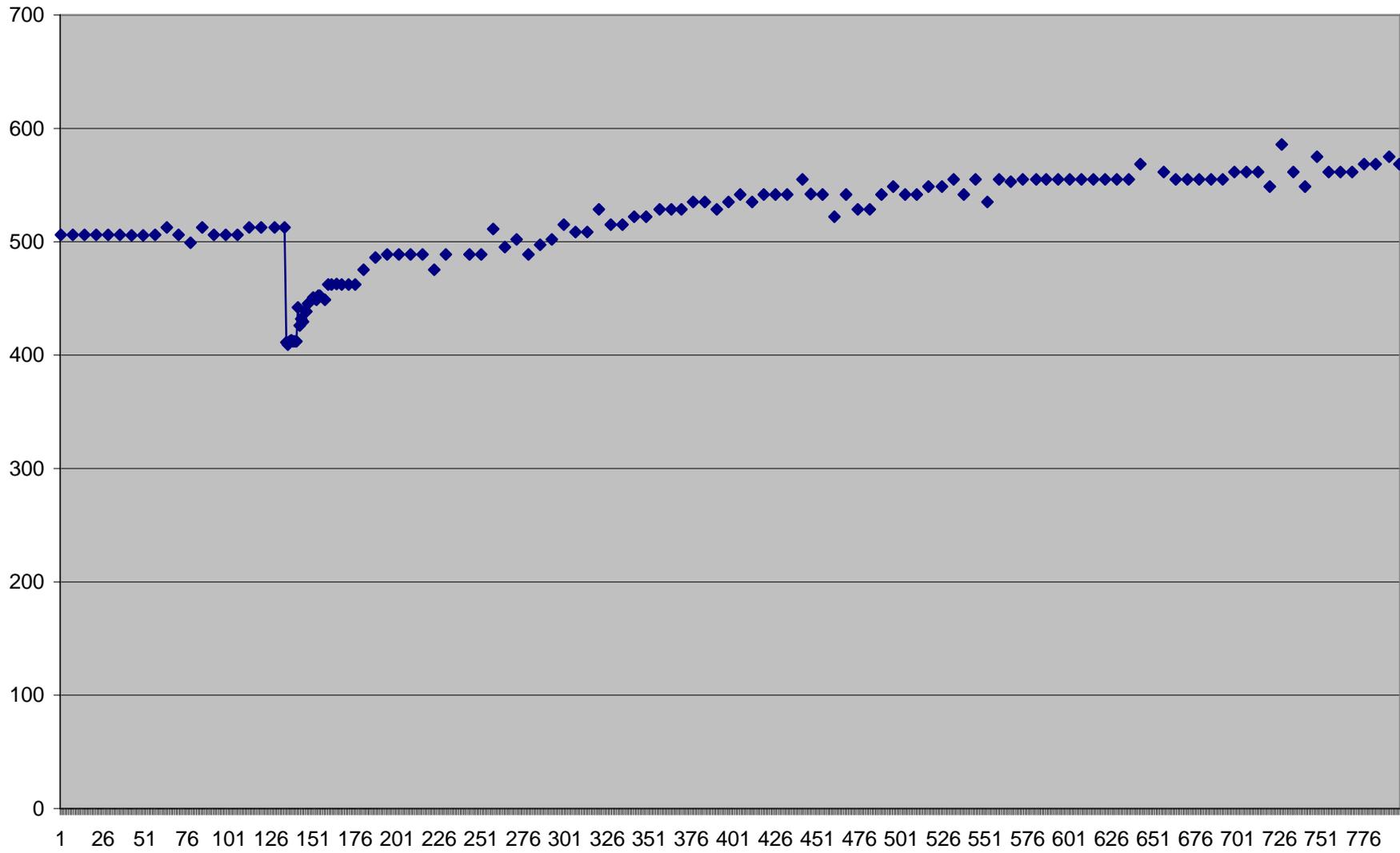
### Lively 03-01



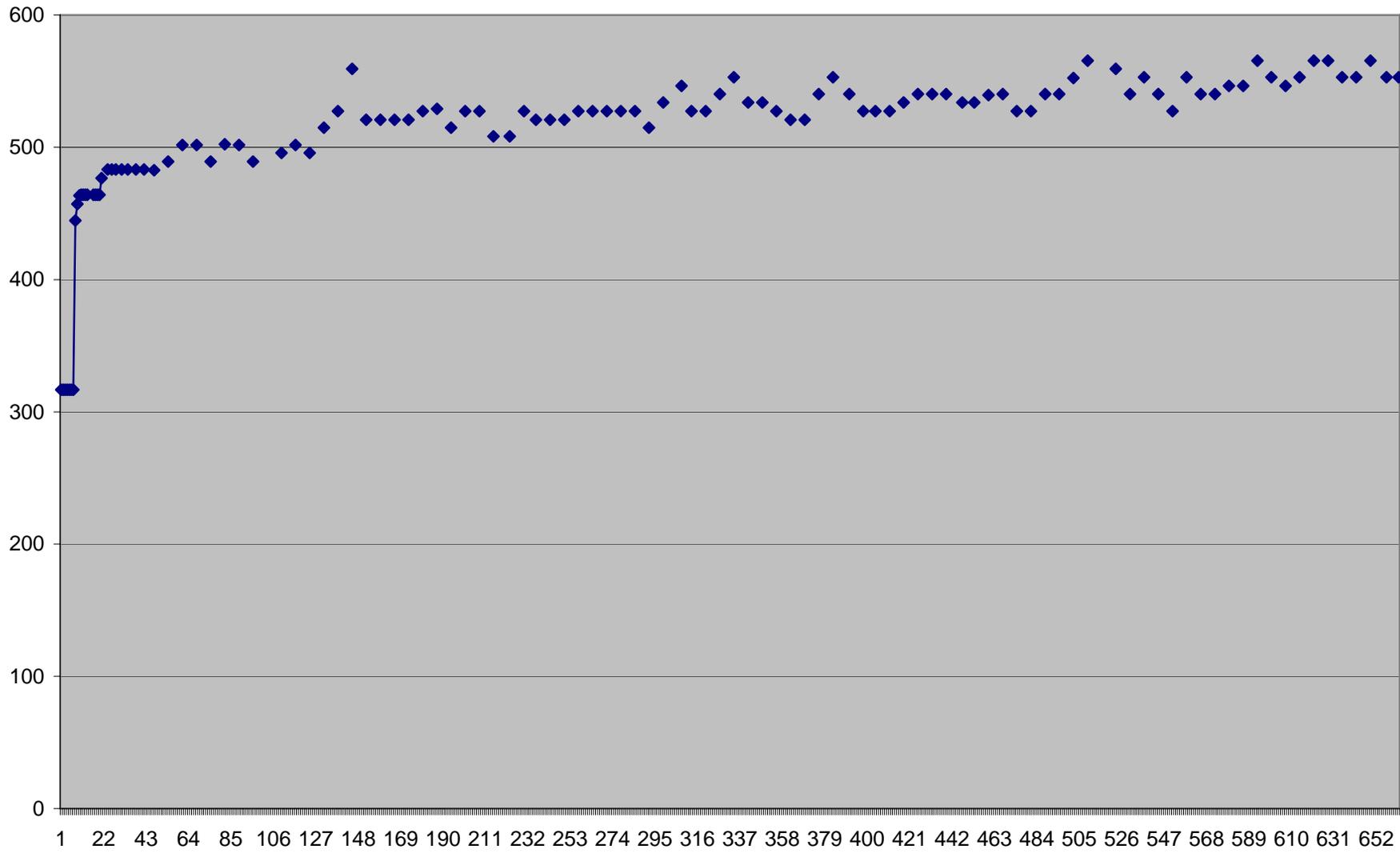
### Lively 03-10



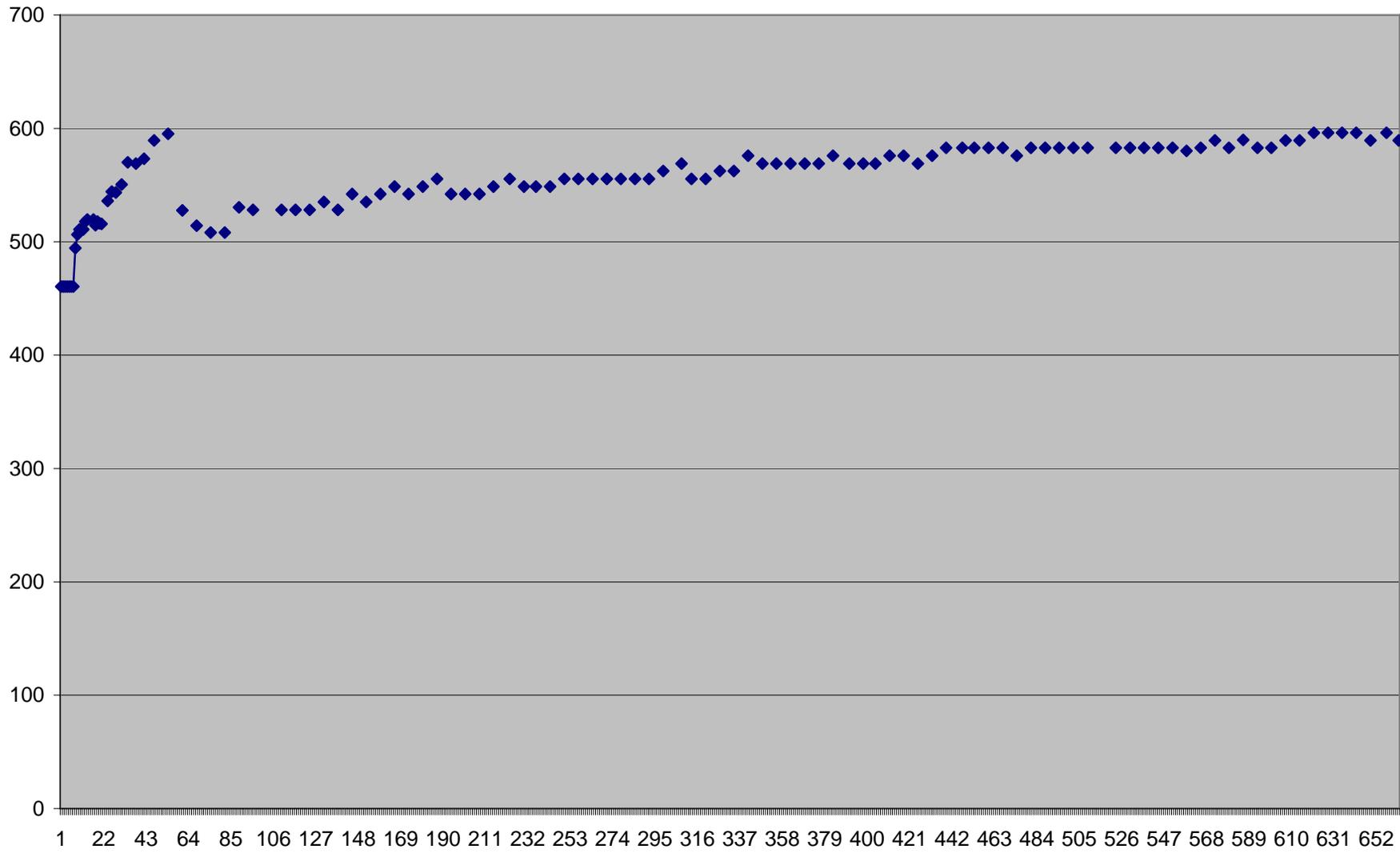
### Lively 03-12



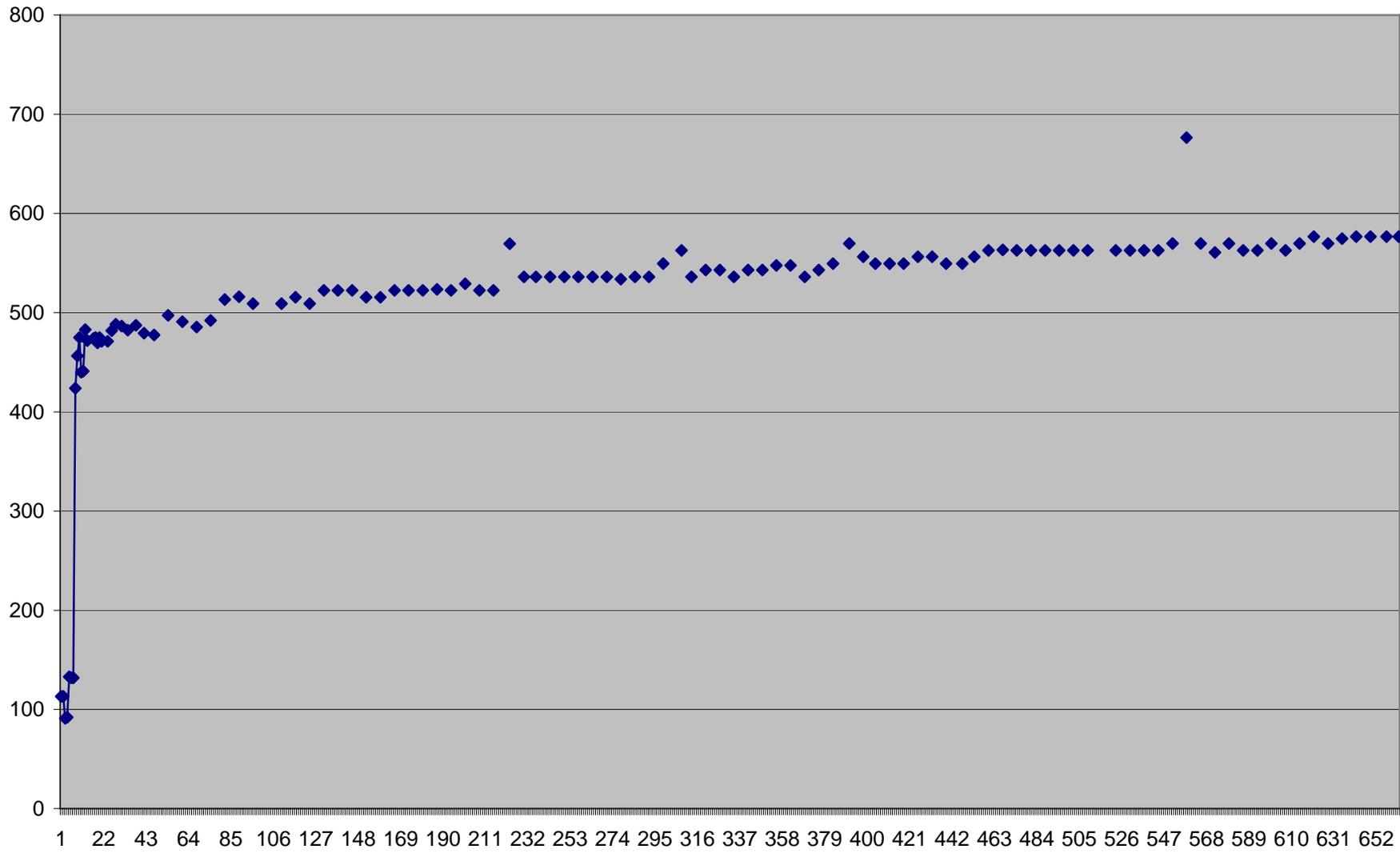
### Lively 10-04



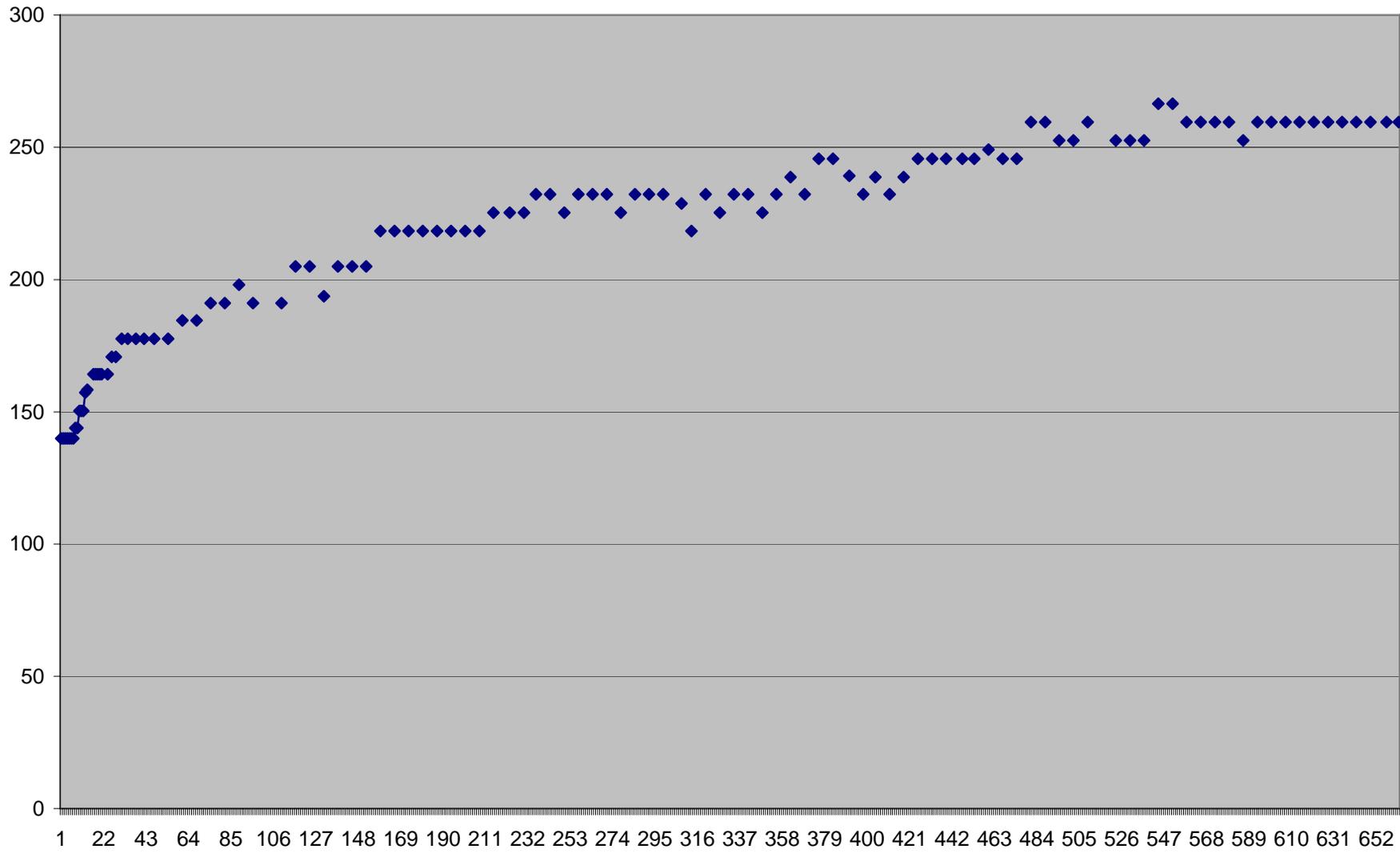
### Rohr 04-10



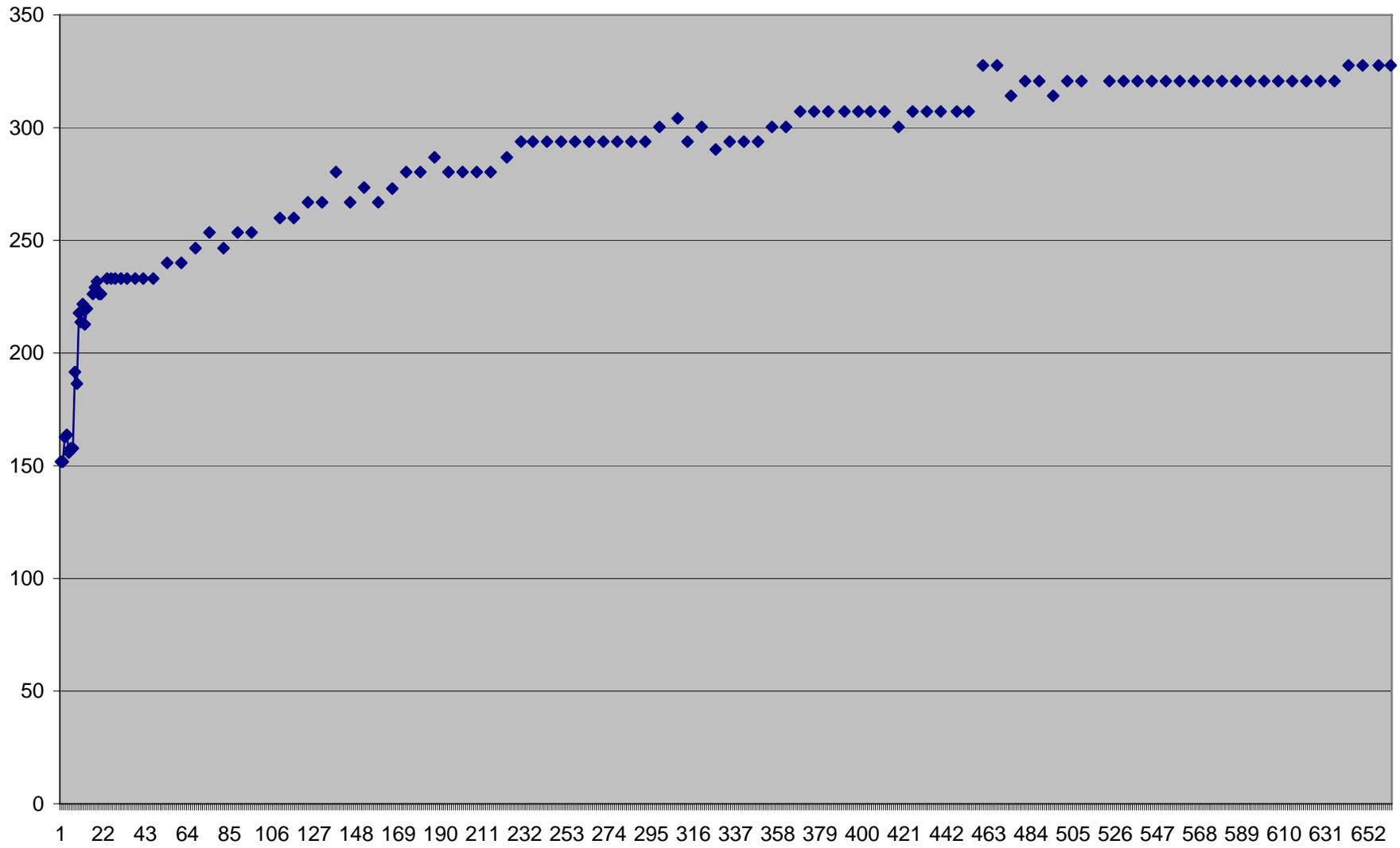
### Rohr 09-10



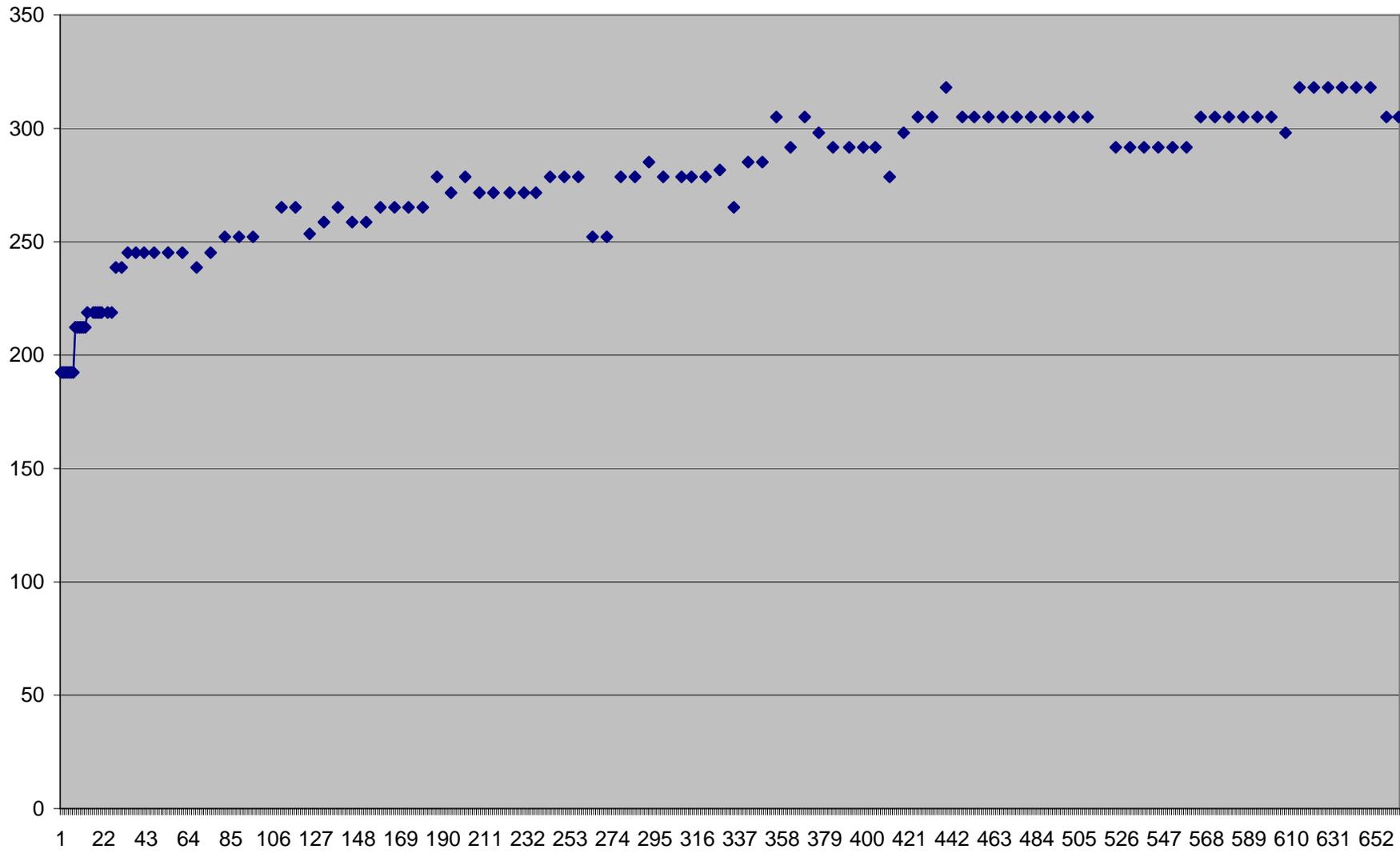
### State 36-02



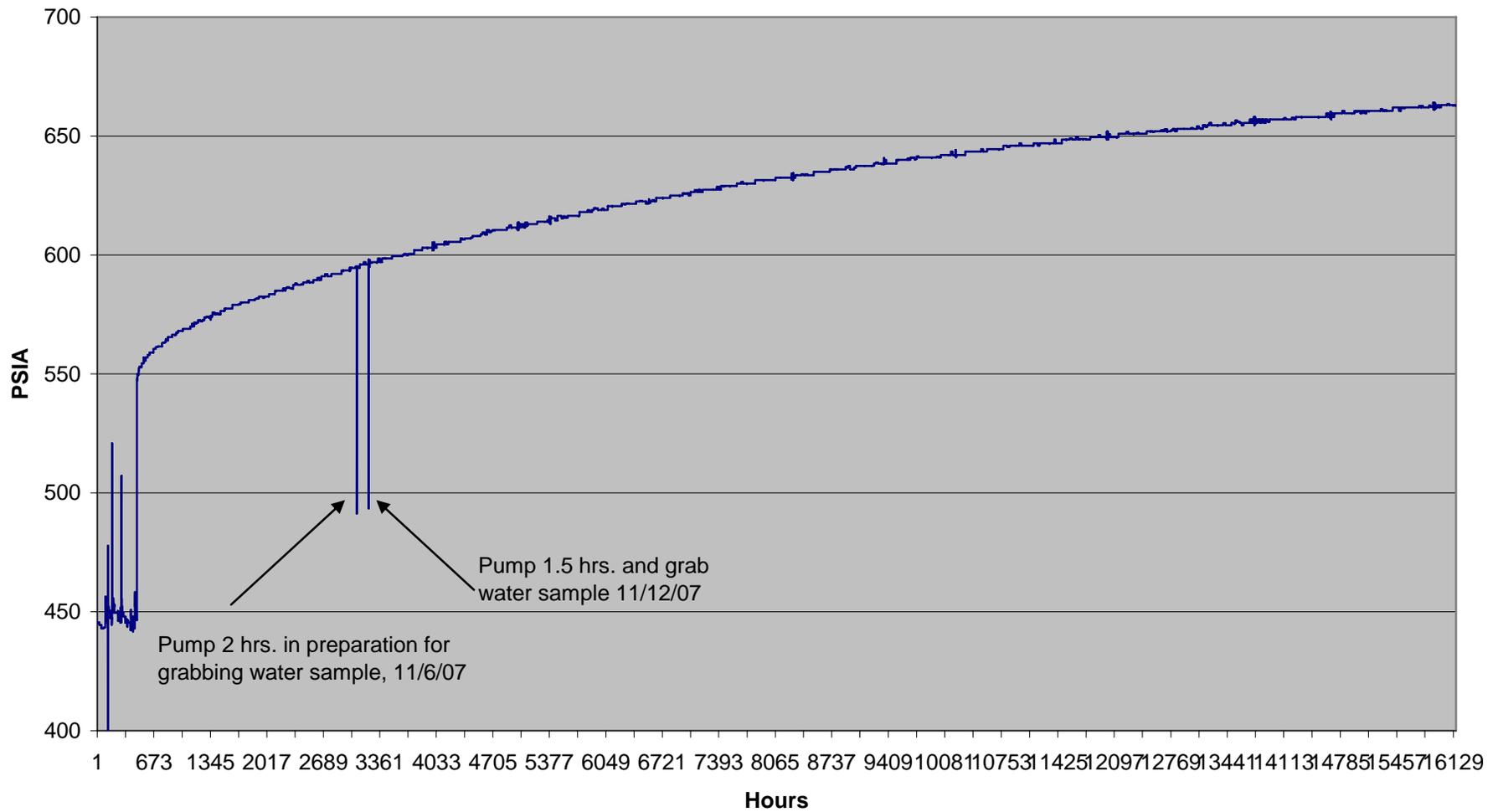
### State 36-05



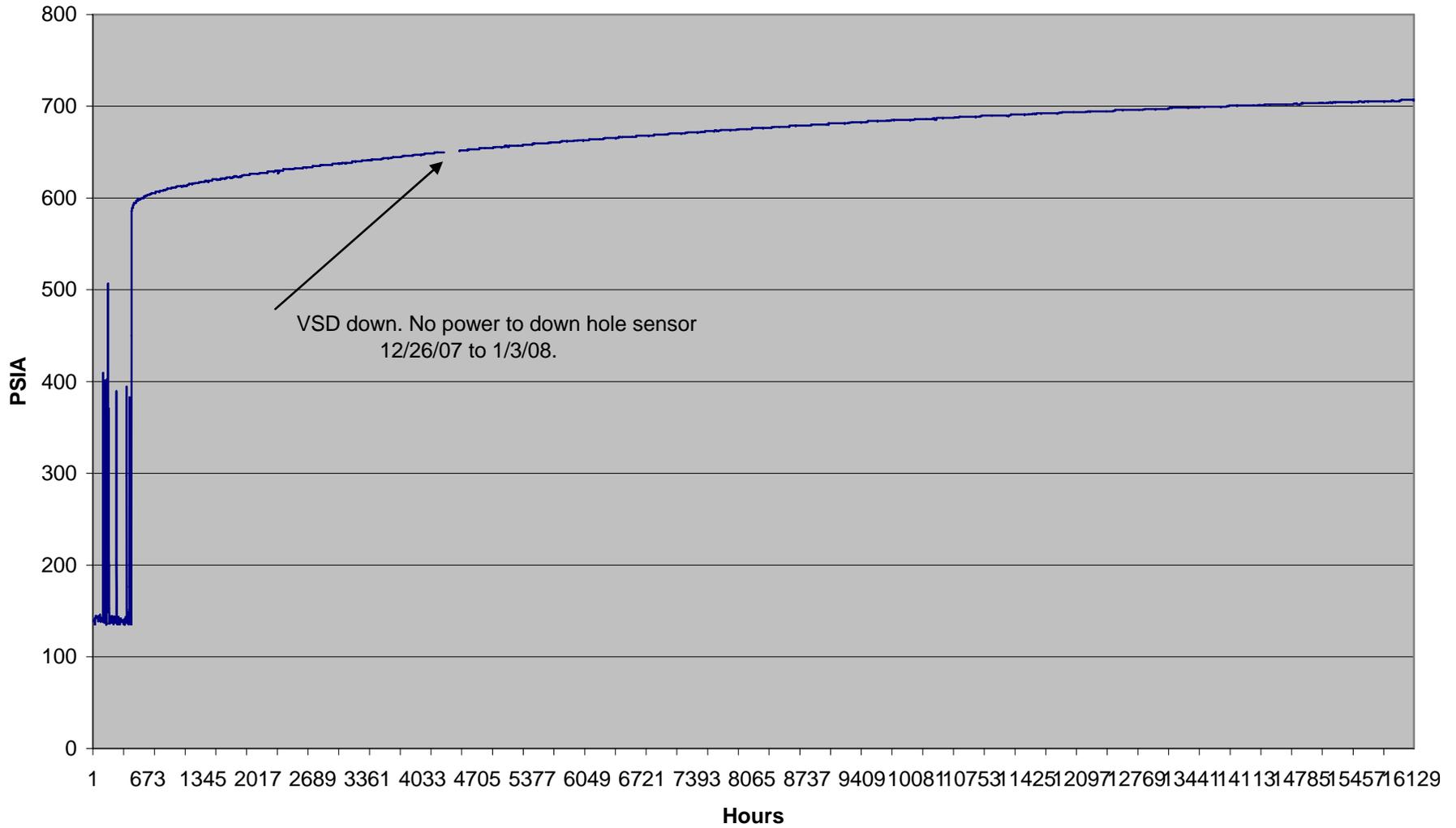
### State 36-11



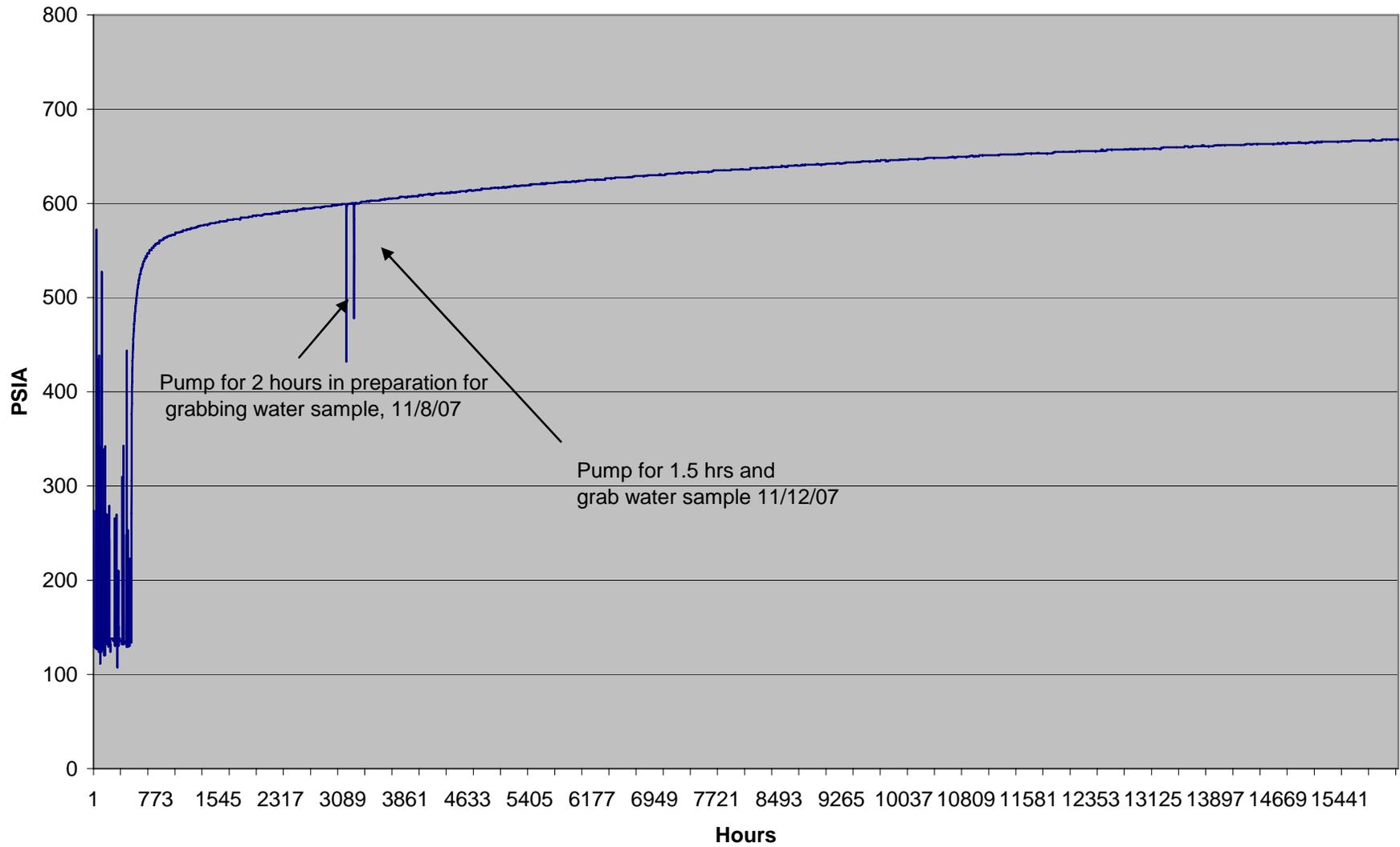
**Rohr 04-14 PBU**  
**from 7/1/07 to 5/4/09**



**Rohr 08-01 PBU**  
**from 7/1/07 to 5/4/09**



Rohr 09-04 PBU data (psia) 7/1/07 to 5/4/09



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

