Colorado Oil and Gas Conservation Commission

Monitor Wells Summary Report
January 2008

3M Project Monitoring Program
La Plata County, Colorado

Fruitland Formation West of Basin Creek Monitoring Well Site MW-34-9-7

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1.0 INTRODUCTION

The 3M Project Monitoring Program in La Plata County, Colorado was initiated by the Colorado Oil and Gas Conservation Commission (COGCC) in January 2001. This report describes the results of wellhead and bottomhole pressure monitoring at four monitoring well sites through December 13, 2007. The monitoring work was carried out by staff of the COGCC and Norwest Applied Hydrology (Norwest) on behalf of the COGCC. Figure 1 shows the location of the four monitoring well sites. Table 1 identifies the monitoring wells, locations, and the depths of completion at the four monitoring well sites. Table 2 lists the depth and type of pressures transducers used in each monitoring well. Table 3 provides a chronology of monitoring well installation, operation and maintenance activities from January 2001 through December 13, 2007.

2.0 MONITORING ACTIVITIES AND DATA SUMMARY

2.1 MONITORING ACTIVITIES – FEBRUARY 2007 - DECEMBER 2007

Remote downloading of well pressure measurements automatically recorded at each of the four monitoring sites was continued on a weekly basis by Norwest in Denver via telemetry through July 2007. Analog telecommunication service was replaced with digital service by provider in August 2007. Since August 2007, extraction of automatically recorded monitoring site data in analog format must be performed on site via a lap top computer link to each Hermit data logger.

Monitoring site maintenance activities performed during this reporting period included three site inspections on June 20, November 11-12, and December 12-13, 2007. The 3.6v clock battery in all Hermit 3000 Data Loggers was replaced on June 20, 2007. South Fork Texas Creek well MW 35 -7-8-2 pressure transducer cables and wellhead strain relief fittings were replaced on June 20, 2007 to address minor wellhead leakage issues. Subsequently, the leaky upper transducer cable strain relief fitting at well MW 35-7-8-2 was refitted with a Swageloc fitting on December 12, 2007.

2.2 MONITOR WELL PRESSURE DATA SUMMARY

Well pressure continues to be measured and recorded twice daily (12-hour interval) at all sites with minor exceptions. No well pressure data were recorded between May 3 and June 20, 2007 at Basin Creek, between May 20 and June 20, 2007 at Shamrock Mines, and between June 11 and June 20, 2007 at Beaver Creek due to failure of the clock battery in each of the Hermit 3000 Data Loggers. The batteries were replaced on June 20, 2007.

Applicable well pressure and calculated water level data for the entire period of record for each monitoring well are plotted in annotated charts. The water level in a well is calculated using the depth of the lower transducer and the difference in pressure between upper and lower transducers. This calculation is applicable at sites where the water level in a well is above the lower pressure transducer and below the upper pressure transducer.

Well pressure data analysis and interpretation by site and monitor well are summarized below. Well pressure measurements recorded by the data logger at each monitor well site are available upon request to all interested parties.

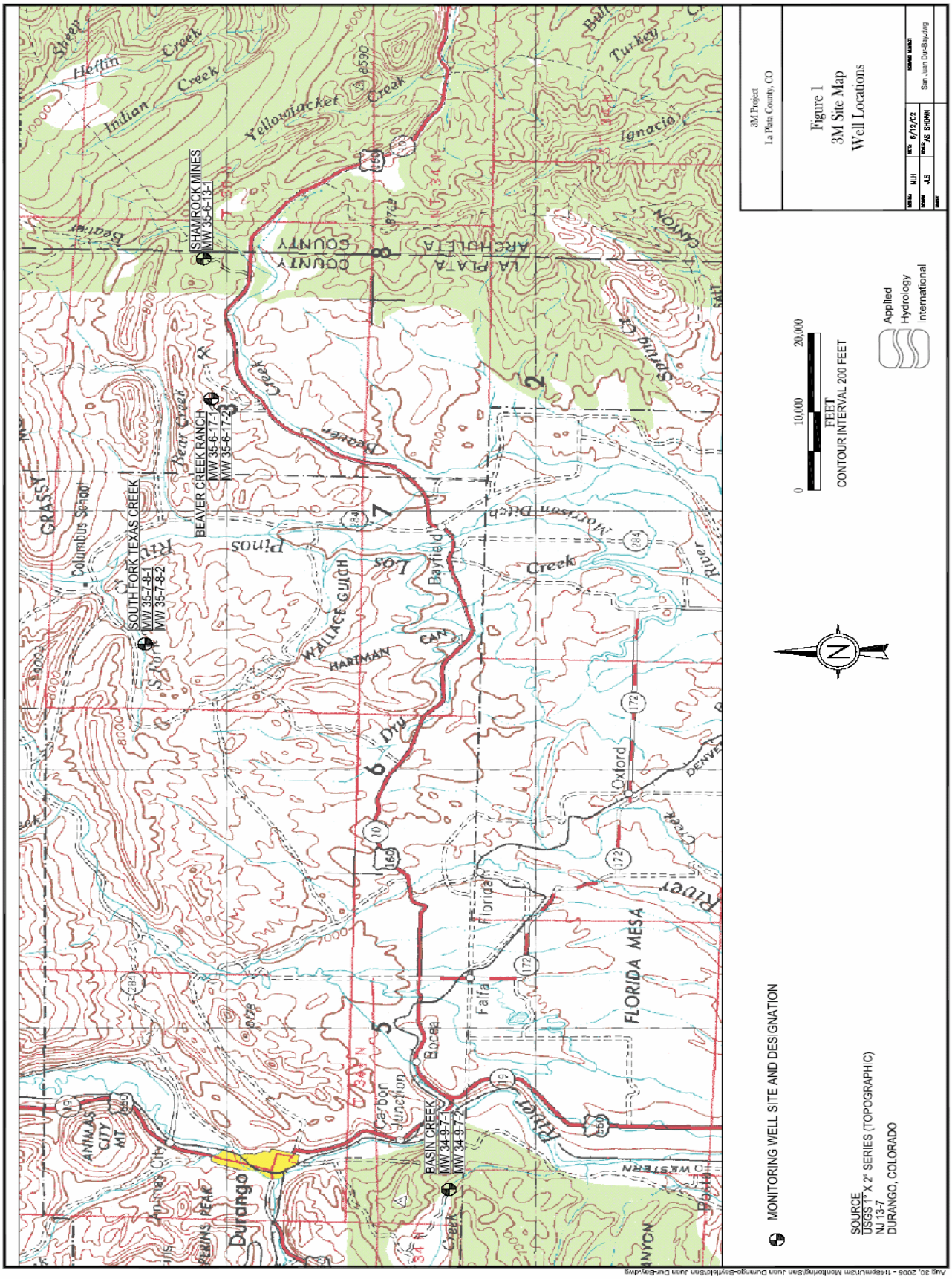

SHAMROCK MINES
MW 35-6-13-1
BEAVER CREEK RANCH
MW 35-6-17-1
MW 35-6-17-2
SOUTH FORK TEXAS CREEK
MW 35-7-8-1
MW 35-7-8-2
BASIN CREEK
MW 34-9-7-1
MW 34-9-7-2
Durango
FLORIDA MESA
Bayfield
Oxford
Carbon Junction
ANIMAS CITY MT
LA PLATA COUNTY
ARCHULETA COUNTY
Yellowjacket Creek
Indian Creek
Hoffin Creek
Bear Creek
Wallace Gulch
Hartman Draw
Dry Creek
Florida River
Los Pinos River
Morrison Ditch
Spring Cr
Ignacio
Turkey Canyon
Columbus Senior
GRASSY
MONITORING WELL SITE AND DESIGNATION
SOURCE
USGS 1° X 2° SERIES (TOPOGRAPHIC)
NJ 13-7
DURANGO, COLORADO
0
10,000
20,000
FEET
CONTOUR INTERVAL 200 FEET
N
Applied Hydrology International
3M Project
La Plata County, CO
Figure 1
3M Site Map
Well Locations
NJH
8/12/02
JLS
PG
SHOWN
San Juan Dur-Bay.dwg

Table 1
3M Project Monitor Well Completion Summary

Location	Well ID	Construction Completion Date	Drilled Depth (fbgs)	Cored Intervals (fbgs)	Casing Depth (fbgs)	Casing Stickup (fags)	Well Casing Material	Perforated Interval in Coal seam(s) (fbgs)	Log Type	Logged Depth (fbgs)	Log Date
Basin Creek	MW 34-9-7-1	01/28/01	820		802	1	2 ", Schedule 40 galvanized steel pipe	578 - 609	gamma ray, bulk density, caliper, resistance	819	01/27/01
									64" normal resistivity, 16" normal resistivity, sp	822	01/27/01
									temperature, differential temperature	822	01/27/01
									gamma ray, casing collar locator	763	09/27/01
	MW 34-9-7-2	04/25/02	570	359 - 374 * 498 - 513 578 - 593	561	1.5	2.875" & 2.375", Oilfield steel tubing	496 - 526	gamma ray, casing collar locator	550	05/02/02
South Fork Texas Creek	MW 35-7-8-1	09/20/01	486		463	1.6	2 ", Schedule 40 galvanized steel pipe	403 - 416	gamma ray, bulk density, caliper, resistance	485	09/19/01
									64" normal resistivity, 16" normal resistivity, sp	485	09/19/01
									temperature, differential temperature	485	09/19/01
									gamma ray, casing collar locator	462	09/27/01
	MW 35-7-8-2	09/21/01	420	410 - 425	425	1.6	2", Schedule 40 galvanized steel pipe	235 - 241 254 - 258 264 - 274	gamma ray, casing collar locator	420	09/27/01
Beaver Creek Ranch	MW 35-6-17-1	04/04/02	1,645	1,457 - 1,467 1,564 - 1,572	1,631	1.5	2.875", Oilfield steel tubing	1,572 - 1,576 1,582 - 1,584	64" normal resistivity, 16" normal resistivity, sp	1,645	04/03/02
									temperature, differential temperature	1,640	04/03/02
									gamma ray, bulk density, caliper, resistance	1,643	04/03/02
									gamma ray, casing collar locator	1,618	05/02/02
	MW 35-6-17-2	10/04/01	1,550		1,500	2	2", Schedule 40 galvanized steel pipe	1,437 - 1,449 1,458 - 1,472	gamma ray, neutron	1,499	10/10/01
									temperature, 4Pi density	1,493	11/14/01
									signal amplitude, travel time \ D T, VDL	1,484	11/14/01
									gamma ray, casing collar locator	1,483	11/27/01
Shamrock Mines	MW 35-6-13-1	05/07/02	627		606	1.5	2.375", Oilfield steel tubing	507 - 511 517 - 533 539 - 562	gamma ray, bulk density, caliper, resistance	626	05/06/02
									64" normal resistivity, 16" normal resistivity, sp	626	05/06/02
									gamma ray, casing collar locator	626	05/10/02

* Cored interval from initial well drilled, plugged and abandoned in February 2001.

Table 2
3M Project Monitor Well Pressure Transducers

Location	Well ID	Upper Transducer		Lower Transducer	
		Depth (fbgs)	Type and Rating	Depth (fbgs)	Type and Rating
Basin Creek	MW 34-9-7-1	0.5	PXD-261-30 psig	570	PXD-461-500 psia
	MW 34-9-7-2	4.6[1]	PXD-461-500 psia	485	PXD-461-500 psia
South Fork Texas Creek	MW 35-7-8-1	5	PXD-261-30 psig	390	PXD-461-500 psia
	MW 35-7-8-2	4	PXD-461-500 psia	225	PXD-461-500 psia
Beaver Creek Ranch	MW 35-6-17-1	5	PXD-461-500 psia	1,565	PXD-461-1,000 psia
	MW 35-6-17-2	2.5 ftags[2]	PXD-461-1,000 psia	None[3]	PXD-461-1,000 psia
Shamrock Mines	MW 35-6-13-1	5	PXD-461-500 psia	500	PXD-461-1,000 psia

1 MW34-9-7-2 upper transducer raised from 4.6 fbgs to ground surface April 23, 2004 and to 1.65 ftags August 25, 2004; upper transducer lowered from 1.65 ftags to 4.6 fbgs June 14, 2005
2 MW 35-6-17-2 lower transducer raised from 1420 fbgs to 1415 fbgs August 22, 2003
3 MW 35-6-17-2 lower transducer removed and upper transducer raised to 2.5 ftags April 22, 2004

Table 3
3M Project Monitor Well Chronology

Location	Well	2001				2002									2003				
		Jan	Sept	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Oct - Nov	December	Jan	Feb - Apr	May - Jun	Aug	Oct - Dec
Basin Creek	MW 34-9-7-1	Jan. 24-28: Drill & install well	Sept. 27: Perforate well	Nov. 28: Set up telemetry unit; replace bad xds cables	Survey	Jan. 18:Tighten wellhead fittings; rewire telemetry sys	Replace telemetry 12v battery sys, In-Situ assist							Lost telemetry communitcation with data logger	Jan 20: New well 34-9-7-1 upper xd (30 psig, sn 7201); rewire pwr regultr; replace logger bkup lith. batt; re-flash modem memory; enable modem auto pwr-up;	Telemetry system malfunction	May 20: Replace modem and cell phone;	Aug 21: Vent both wells and tighten wellhead xd	Oct 8: Conduct rapid blowdown & shutin test
	MW 34-9-7-2								April 24-25: Drill & install well	May 5: Perforate well May 9: Fish out cable May 22:	Survey							Aug 21: Vent both wells and tighten wellhead xd cable strain relief fittings	Oct 8: Conduct rapid blowdown & shut-in test
South Fork Texas Creek	MW 35-7-8-1		Sept. 17-20: Drill/install well; Sept. 27: Perforate well	Nov. 29: Set up telemetry unit; replace bad xd cables	Survey	Jan. 18: Tighten wellhead fittings; rewire telemetry sys	Replace telemetry 12v battery sys, In-Situ assist			May 21: Ck for leaks				Dec. 4: Data lost through end of year due to Hermit internal battery failure; lost telemetry communitcation with data logger Dec 7: Tightened wellhead fittings	Jan 20: rewire pwr regultr; replace logger bkup lith. batt; re-flash modem memory; enable modem auto pwr-up;	Telemetry system malfunction;	June 16: lower xd failed		Oct 8: Well pressure buildup test
	MW 35-7-8-2		Sept. 20-21: Drill/install well Sept. 27: Perforate well	Nov. 29: Set up telemetry unit; replace bad xd cables	Survey	Jan. 18: Tighten wellhead fittings				May 21: Ck for leaks			Oct 25: Vent well; replaced strain relief fittings; shut in well				May 20: Replace modem and cell phone;		Oct 8: Well pressure buildup test
Beaver Creek Ranch	MW 35-6-17-1						Replace telemetry 12v battery sys, In-Situ assist	Mar. 5-Apr 4: Drill & install well		May 2: Perforate well; May 20-21: Install xds	Survey	July 10: Replace lower xd cable with unvented cable		Dec 13: Insp by Raymond Const.- no wellhead gas leak; ; logger batt @ 0% capacity; modem problem Dec. 19: Data lost through end of year due to bad data logger bkup battery	Jan 7 & Jan 21: No wellhead gas leak @ MW35-6-17-2; Jan 21: rewire pwr regultr; replace logger bkup lith. batt; re-flash modem memory; enable modem auto pwr-up;	Telemetry system malfunction	May 20: Replace modem and cell phone;		Oct 7 & 21: Well pressure buildup test
	MW 35-6-17-2		Sept. 22-Oct. 4: Drill/install well	Nov. 26: Perforate well Nov. 27: Set up telemetry unit	Survey	Jan. 17 - Install new xd cables with SwageLok fittings; rewire telemetry unit			Apr 8: Pull lower xd cable; no data Apr 8 to May 20	May 21: Install unvented, heavy duty xd cable; shut in well		Gas leak @ top bushing; July 10: Vent well & ck bushing galls; July 11: shut in well	Nov. 14: Vent well; replaced valve and reseal all connections			Wellhead bushing leak	May 20: Wellhead bushing leak; wellhead assembly to be redesigned	Aug 20: New flanged wellhead assembly; xd cable leak at swagelok fitting	Oct 8 & 21: Well pressure buildup test; wellhead leaks @ pressure >570 psia;
Shamrock Mines	MW 35-6-13-1									May 3-7: Drill/install well; May 10: Perforate well; May 20, 21: Install pad, telemetry & data logger	Survey			Lost telmetry communitcation with data logger	Jan 21: rewire pwr regultr; replace logger bkup lith. batt; re-flash modem memory; enable modem auto pwr-up;	Telemetry system malfunction	May 20: Replace modem and cell phone;	Aug 20: Modem pwr down; replaced 12v battery	Oct 7: Replaced 12v battery pack; Oct 8: well pressure buildup tests; Oct 21: Replaced solar panel

Table 3, Continued
3M Project Monitor Well Chronology

Location	Well	2004			2005			2006			2007		
		Jan - Mar	April	August	March	June	Oct - Dec	January	June -Nov	December	June	August	Nov - Dec
Basin Creek	MW 34-9-7-1			Aug 25: New data logger battery pack; vent well; gas sample		June 14: Inspection			June 21: Inspection		June 20: Inspection; replace logger battery; start new test	Analog modem telemtry sys. off line; local telecom. service changed to digital by provider	Nov 12 & Dec 12: Inspection and Hermit logger data download
	MW 34-9-7-2		Apr 23: vent well & raise upper xd from 5 fbgs to ground surface	Aug 25: vent well; raise upper xd to 1.65 ft above ground; gas sample		June 14: Inspection; pressure gauge leaking; vented well (artesian flow < 0.5 gpm); lowered upper xd to 4.6 fbgs (under water); replaced gauge with plug			June 21: Inspection				
South Fork Texas Creek	MW 35-7-8-1	No data reported for 6/16/03 to 4/22/04 -lower xd failed	Apr 22: vent well; temperarily replaced lower xd with 1000 psia xd	Aug 25: New data logger battery pack; vent well; tighten xd fittings; gas sample		June 13: Inspection; new data logger test started			June 21: Inspection		June 20: Inspection; replace logger battery; start new test	See above	Nov 12 & Dec 12: Inspection and logger data download
	MW 35-7-8-2	Well pressure data suggest that wellhead xd cable strain relief fittings leak intermittently in winter	Apr 22: vent well; replaced strain relief fittings	Aug 25: vent well; tighten xd fittings replace lwr 1000 psia xd with new 500 psia xd; gas sample	Mar: Well pressure deviation from previous norm; possible wellhead leak or xd failure or decline in well gas pressure	June 13: Wellhead fitting leaks detected; June 14: Vented well and replaced both 500 psia xds; new data logger test started	Oct 25: Vent well; replaced strain relief fittings Dec 7: Tightened wellhead fittings	Jan 3: Tightened wellhead fittings	June 21: Tightened wellhead fittings October 31: Replaced all well head fittings November 10: Developed well and water sample collected	Dec 11 &13: Tightened wellhead strain relief fittings	June 20: Wellhead fittings leak; vent well; replaced xd cables with rugged polyethylene cables;		Dec 12: Wellhead strain relief cable fitting leak; vent well; installed Swaglok tube connector fitting on upper xd cable at wellhead
Beaver Creek Ranch	MW 35-6-17-1			Aug 24: New data logger battery pack; vent well; Aug 25: gas sample		June 13: Inspection			June 21: Inspection		June 20: Inspection; replace logger battery; start new test	See above	Nov 12 & Dec 12: Inspection and logger data download
	MW 35-6-17-2	Wellhead leaks @ pressure >570 psia	Apr 22: vent well/removed lower xd; attached upper xd externally to wellhead; no leaks	Aug 24: vent well; Aug 25: gas sample		June 13: Inspection; slight leak detected from wellhead xd bushing			June 21: Inspection; slight leak detected from wellhead xd bushing October 31: Leaky wellhead xd bushing sealed				
Shamrock Mines	MW 35-6-13-1			Aug 24: New data logger battery pack; vent well, no gas to sample		June 13: Inspection			June 21: Inspection		June 20: Inspection; replace logger battery; start new test	See above	Nov 12 & Dec 12: Inspection and logger data download

2.2.1 BASIN CREEK

MW 34-9-7-1

This well has been monitored continuously since November 29, 2001, except for a period of data logger battery failure between May 3, 2007 and June 20, 2007. Figure 2 charts the upper and lower pressure transducer data and the calculated water level in the well for the period of record. Initial and ending monitoring well pressures and calculated water levels in the well are summarized in Table 4 for the period of record.

Table 4
Well Pressure Data Summary for Basin Creek Monitoring Wells

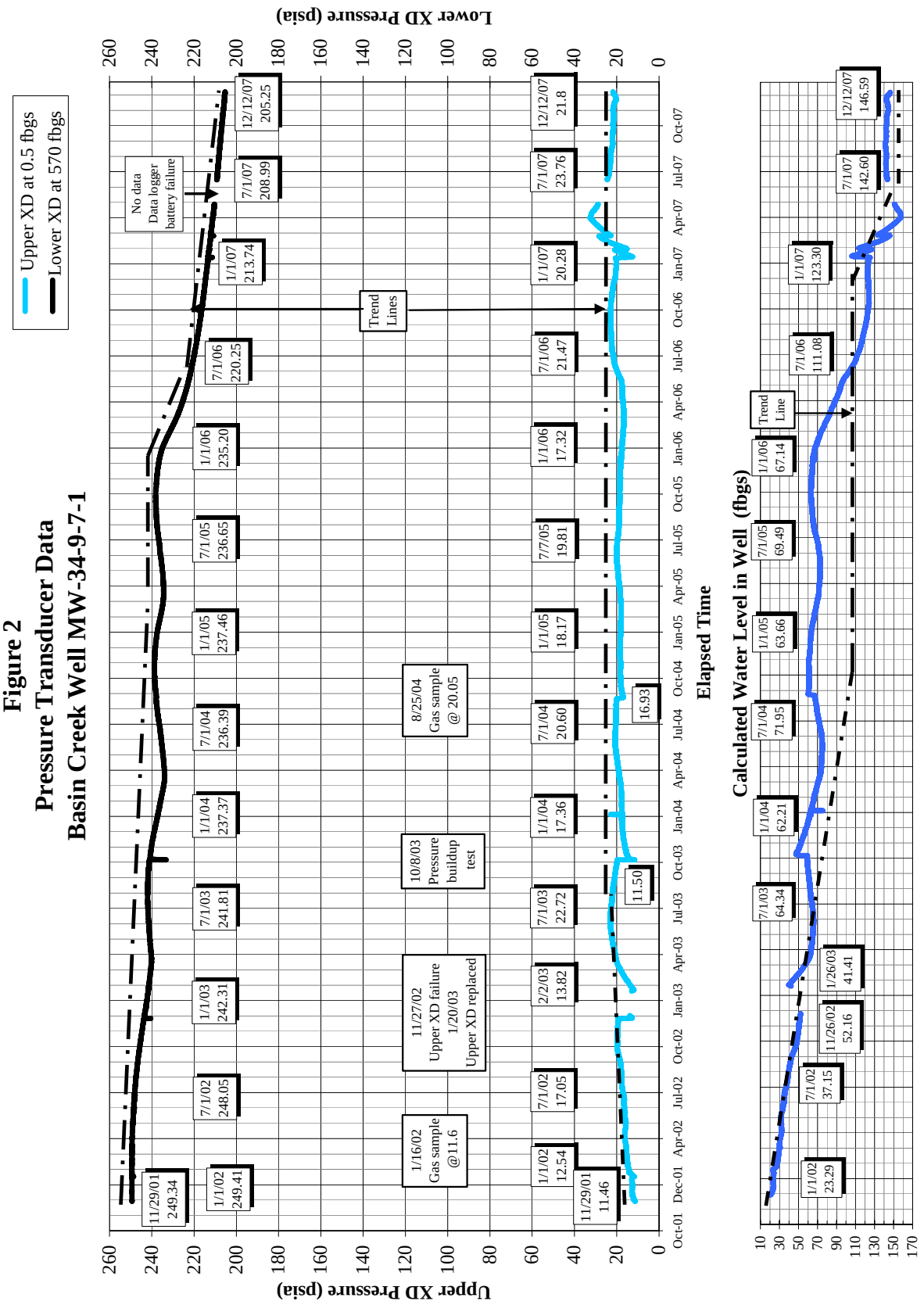
Well ID and Transducers (XD)	Period of Record	Initial Well Pressure psia	Ending Well Pressure psia	Net Change in Well Pressure psi	Initial Water Level in Well fbgs	Ending Water Level in Well fbgs	Net Water Level Change in Well ft
MW 34-9-7-1 Upper XD	11/29/01 to 12/12/07	11.46	21.80	10.34	20.97	146.59	-125.62
Lower XD		249.34	205.25	-44.09			
MW 34-9-7-2 Upper XD[1]	5/24/02 to 12/12/07	31.20[1]	18.26[1]	-12.94[1]	Well water level is above ground level; see discussion and Figures 3 and 3a for more details		
Lower XD		241.42	225.14	-16.28			

1 MW 34-9-7-2 upper XD at 4.6 ft below ground level is under water.

Since January 1, 2006, Figure 2 shows a departure from the previous trend of seasonal fluctuations in bottomhole pressure and the well water level that occurred between November 1, 2003 and January 1, 2006. The bottomhole pressure and calculated well water level have been in a declining trend since January 1, 2006. As of December 12, 2007, the bottomhole pressure (205.25 psia) was at the lowest level for the period of record.

In contrast, Figure 2 shows a 5.5 psia increase in wellhead pressure from 17.48 psia on May 1, 2006 to a recorded high of 22.99 psia on September 30, 2006, followed by a gradual decline to 20.18 psia on January 15, 2007. Additionally, Figure 2 shows pronounced fluctuations in the wellhead pressure pattern between January 15, 2007 and April 6, 2007. The cause of this erratic pattern may be wellhead pressure transducer performance related rather than an erratic change in wellhead pressure since the bottomhole pressure curve does not exhibit the same erratic pressure curve for the same period of record. Since May 2007, Figure 2 shows a smoother and gradually declining wellhead pressure trend similar to the bottomhole pressure curve.

Figure 2
Pressure Transducer Data
Basin Creek Well MW-34-9-7-1



MW 34-9-7-2

Well MW 34-9-7-2 has been monitored continuously since May 24, 2002, except for a period of data logger battery failure between May 3, 2007 and June 20, 2007. Recorded pressure data for well MW-34-9-7-2 are charted on Figures 3 and 3a. Figure 3 also charts the calculated bottomhole and wellhead differential pressure in the well for the period of record. Initial and ending monitoring well pressures and apparent water level in the well are summarized in Table 4 for the period of record with the upper transducer set at 4.6 feet below ground surface (fbgs) and the bottomhole transducer set at about 485 fbgs.

Figures 3 and 3a continue to show a trend of gradually declining well pressure for the period of record. As of December 12, 2007, the bottomhole pressure (225.14 psia) and wellhead pressure (18.26 psia) were at their lowest levels for the period of record. Figure 3a also shows slight seasonal fluctuations in wellhead and bottomhole pressures within the overall declining trend for the period of record.

Figure 3a shows a variation in the magnitude of seasonal fluctuations in bottomhole pressure occurred within the overall declining trend in 2005. The bottomhole pressure started to gradually increase in mid-January 2005 and reached a seasonal peak of about 235 psia in June 2005. Since July 2005, Figure 3a shows a trend of gradually declining wellhead and bottomhole pressures.

Figures 3 and 3a show a notable difference in wellhead pressure relative to the location of the upper transducer. On April 23, 2004 (Figure 3a), the wellhead shut-in pressure at 4.6 fbgs was 27.8 psia versus 25.73 psia at ground level, a difference of about 2 psia. On August 25, 2004, the shut-in pressure at ground level was 26.13 psia verses 25.08 psia at 1.65 feet above ground surface (ftags), a difference of about 1 psia. In both cases, there was no corresponding measurable difference in the bottomhole pressure (Figure 3a). Differential wellhead shut-in pressures between 4.6 fbgs and 1.65 ftags confirm the upper transducer is under water at 4.6 fbgs and the apparent water level in well MW 34-9-7-2 is above ground level when the well is shut in.

On June 14, 2005, the upper pressure transducer was set to the original installation level of 4.6 fbgs to monitor the overall trend of wellhead pressures since May 2002. Figure 3 shows slight seasonal fluctuations in calculated differential well pressures, between about 206.8 psia and 208.1 psia, for the period of record with the upper transducer set at 4.6 fbgs.

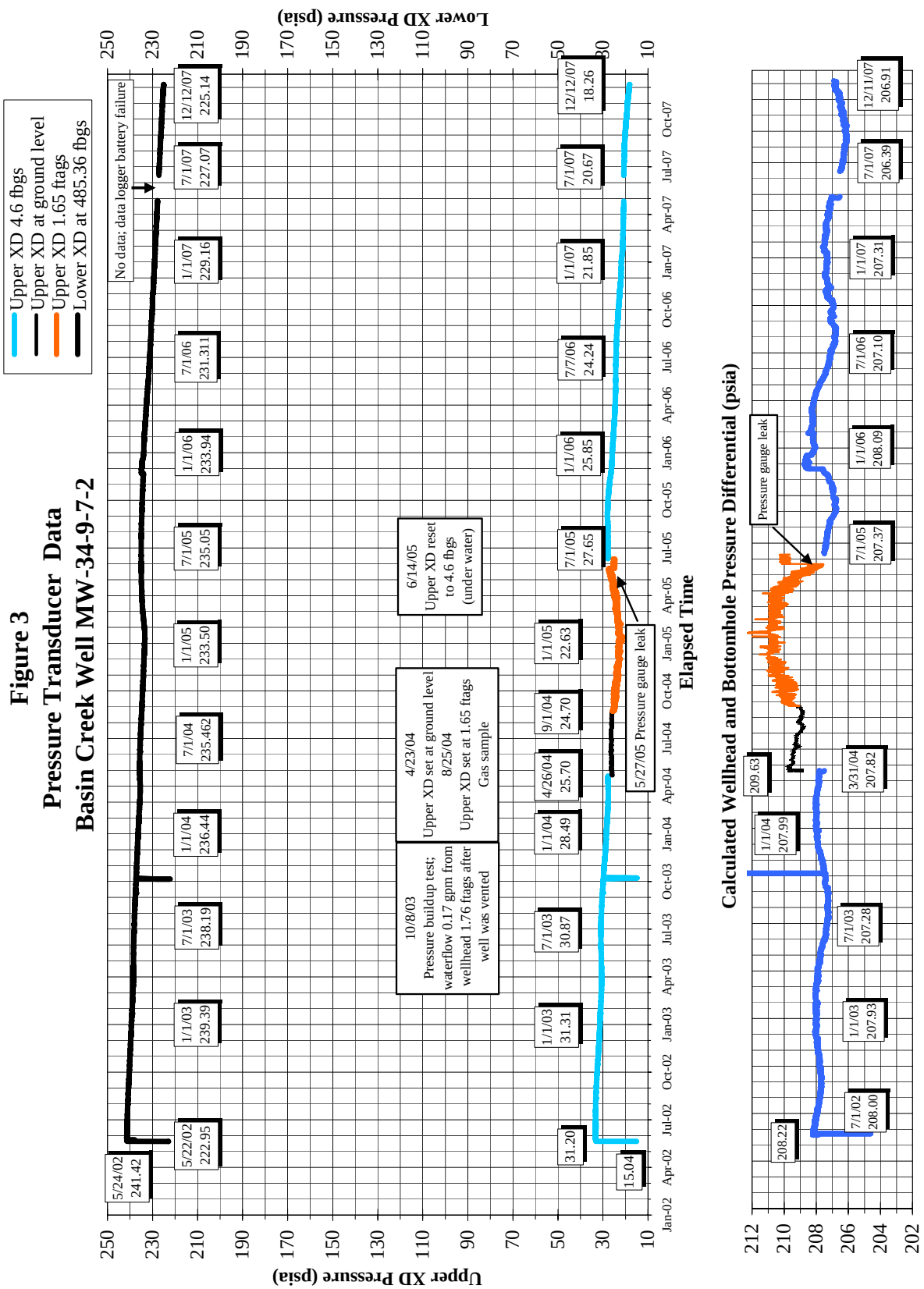


Figure 3
Pressure Transducer Data
Basin Creek Well MW-34-9-7-2
Upper XD 4.6 fbgs
Upper XD at ground level
Upper XD 1.65 ftags
Lower XD at 485.36 fbgs
Upper XD Pressure (psia)
Lower XD Pressure (psia)
Elapsed Time
No data; data logger battery failure
10/8/03
Pressure buildup test; waterflow 0.17 gpm from wellhead 1.76 ftags after well was vented
4/23/04
Upper XD set at ground level
8/25/04
Upper XD set at 1.65 ftags
Gas sample
6/14/05
Upper XD reset to 4.6 fbgs (under water)
5/27/05 Pressure gauge leak
Calculated Wellhead and Bottomhole Pressure Differential (psia)
Pressure gauge leak

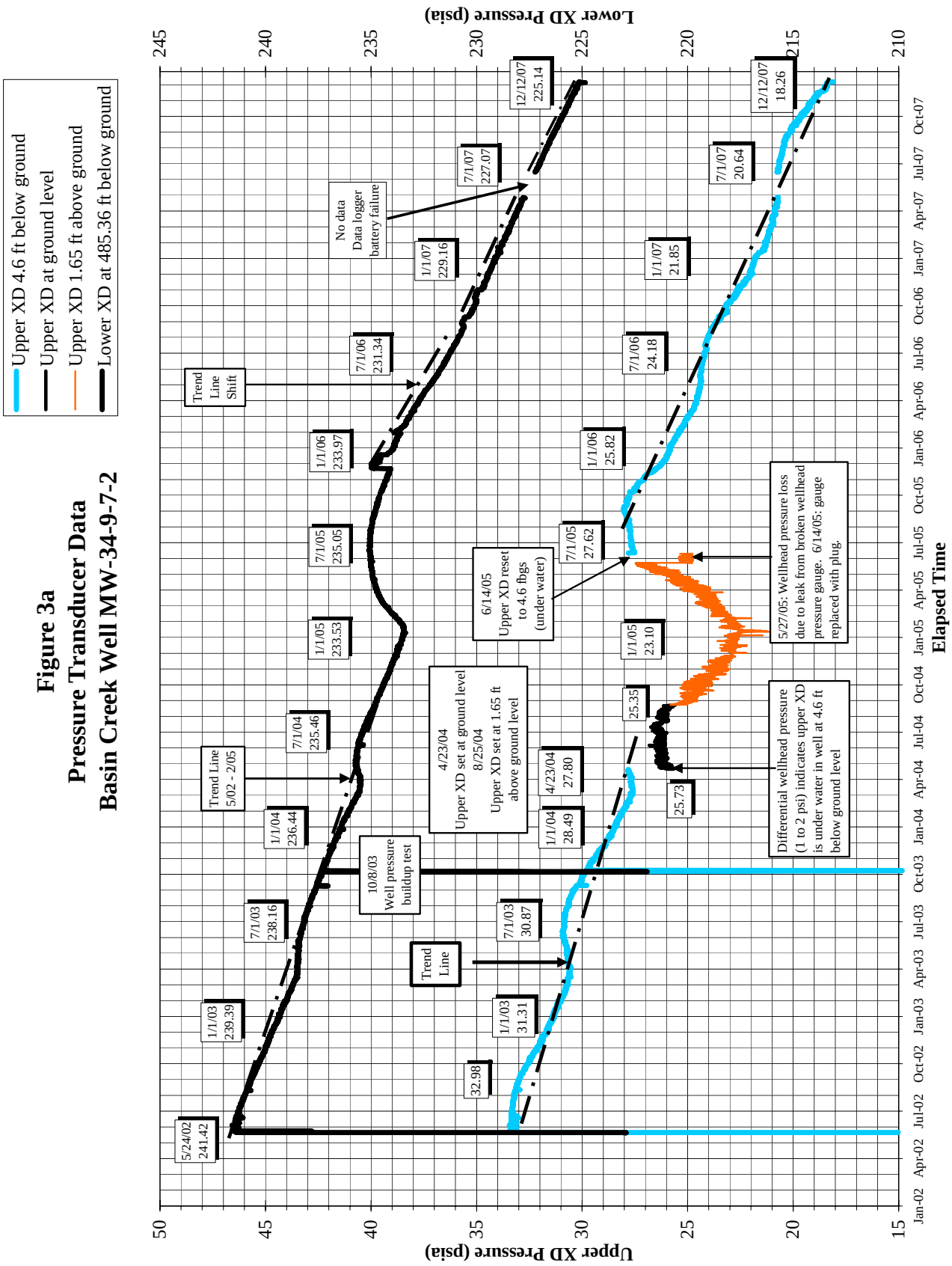


Figure 3a
Pressure Transducer Data
Basin Creek Well MW-34-9-7-2

2.2.2 SOUTH FORK TEXAS CREEK

Both monitoring wells have been monitored continuously since November 29, 2001, except for the period of monitoring system power failure between December 4, 2002 and January 20, 2003, and a data logger battery failure from May 3, 2007 to June 20, 2007.

MW 35-7-8-1

Data for MW 35-7-8-1 are charted in Figure 4 and summarized in Table 5. Upper transducer data recorded since January 1, 2002 indicate a relatively stable wellhead pressure, consistently ranging between 12.98 psia and 13.8 psia, about 2 psi above atmospheric pressure. The data logger recorded an atmospheric pressure at this site of about 11.17 psi. on December 12, 2007.

Figure 4 shows a trend of gradually increasing bottomhole pressure and rising water level in the well for the period of record between November 2001 and May 2005. Overall, the recorded bottomhole pressure increased about 8.3 psi, from 144.41 psia on November 1, 2001 to a high of 152.71 psia on May 18, 2005, which is nearly equivalent to the calculated 19.2 feet of water level rise in the well for the same period of record. (1 psi equals about 2.31 feet of water.) Since May 2005, Figure 4 shows a trend of gradually declining water level in the well and corresponding decline in bottomhole pressure. The wellhead pressure (12.98 psia) and bottomhole pressure (143.59 psia) on December 13, 2007 were about 0.8 psi lower than the initial well pressures recorded on December 1, 2001, as shown in Table 5.

Figure 4 also shows slight seasonal fluctuations in bottomhole pressure and the calculated water level in the well within the overall increasing trend prior to May 2005 and within the overall declining trend since May 2005.

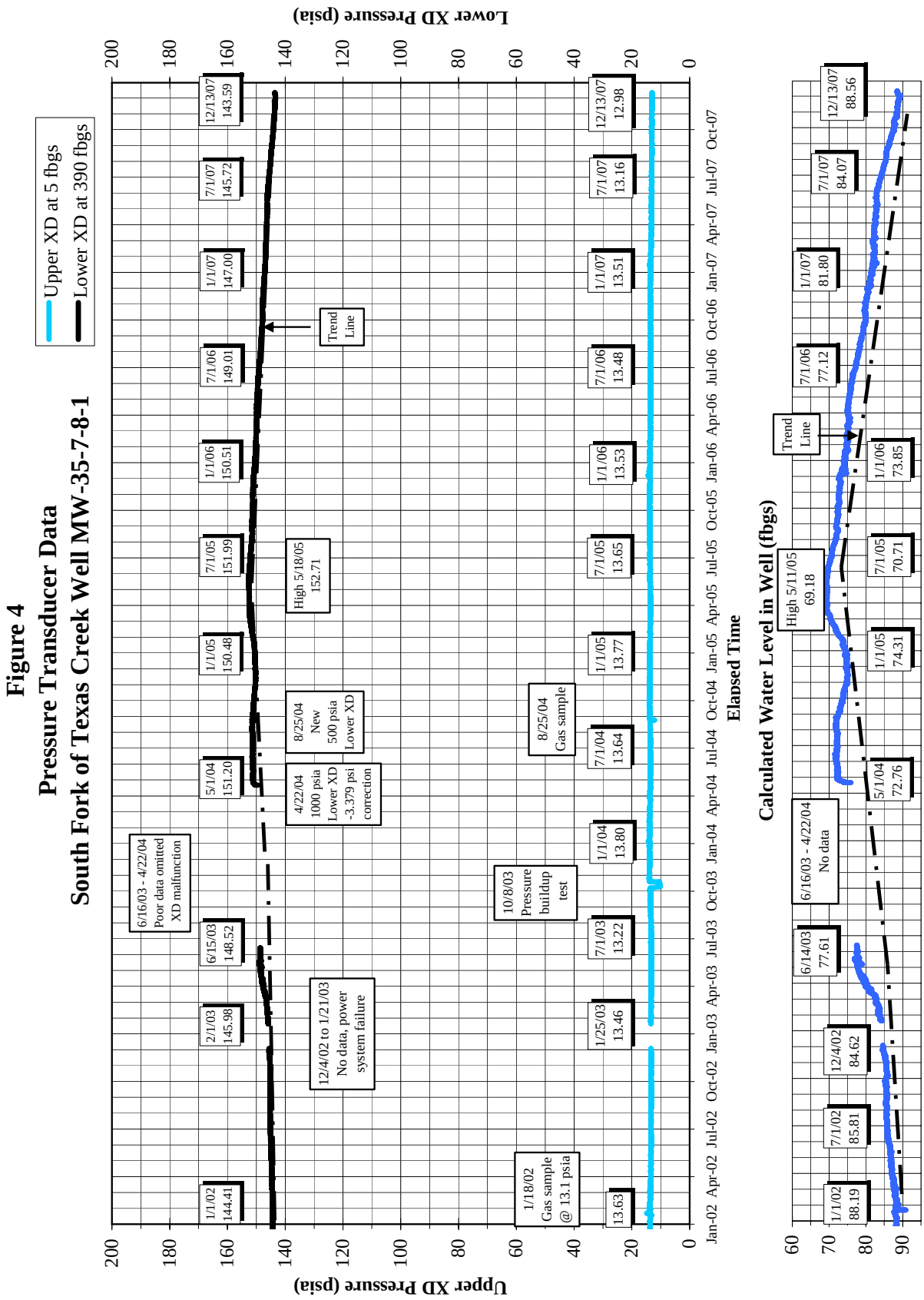
Table 5
Well Pressure Data Summary for South Fork Texas Creek Monitoring Wells

Well ID and Transducers (XD)	Period of Record	Initial Well Pressure psia	Ending Well Pressure psia	Net Change in Well Pressure psi	Initial Water Level in Well fbgs	Ending Water Level in Well fbgs	Net Water Level Change in Well ft
MW 35-7-8-1 Upper XD	12/01/01 to 12/13/07	13.79	12.98	-0.81	88.39	88.56	0.17
Lower XD		144.47	143.59	-0.88			
MW 35-7-8-2 Upper XD	1/15/02 to 12/13/07	91.32[1]	14.06[2]	N/A[2]	Water level in well is >225 fbgs with complete shut-in; calculated water level in well is about 103 fbgs at 66.61 psia bottomhole pressure and 14.06 psia wellhead pressure		
Lower XD		91.91[1]	66.61	-24.65			

1 Both bottomhole and wellhead pressure are typically the same in MW 35-7-8-2 with complete shut in; periods of differential well pressures shown in Figure 5 since March 2005 represent an incomplete shut in condition due to wellhead fitting leaks.

2 Pressure buildup in progress after well was vented to replace Upper XD cable wellhead fitting on December 12, 2007.

Figure 4
Pressure Transducer Data
South Fork of Texas Creek Well MW-35-7-8-1



MW 35-7-8-2

Figure 5 charts the pressure data for well MW 35-7-8-2, which exhibits an entirely different pressure regime than the deeper monitoring well MW 35-7-8-1. Figure 5 (page 15) shows equal wellhead and bottomhole pressures for the period of record when the well is completely shut in. For example, wellhead and bottomhole recorded on October 1, 2005 were essentially the same (85.38 psia and 85.43 psia respectively).

After about March 1, 2005, both upper and lower transducer charts show a differential drop in well pressure caused by leaks from several wellhead fittings. After the leaky fittings were replaced on June 14, 2005, well pressures gradually returned to previous levels with complete wellhead shut in.

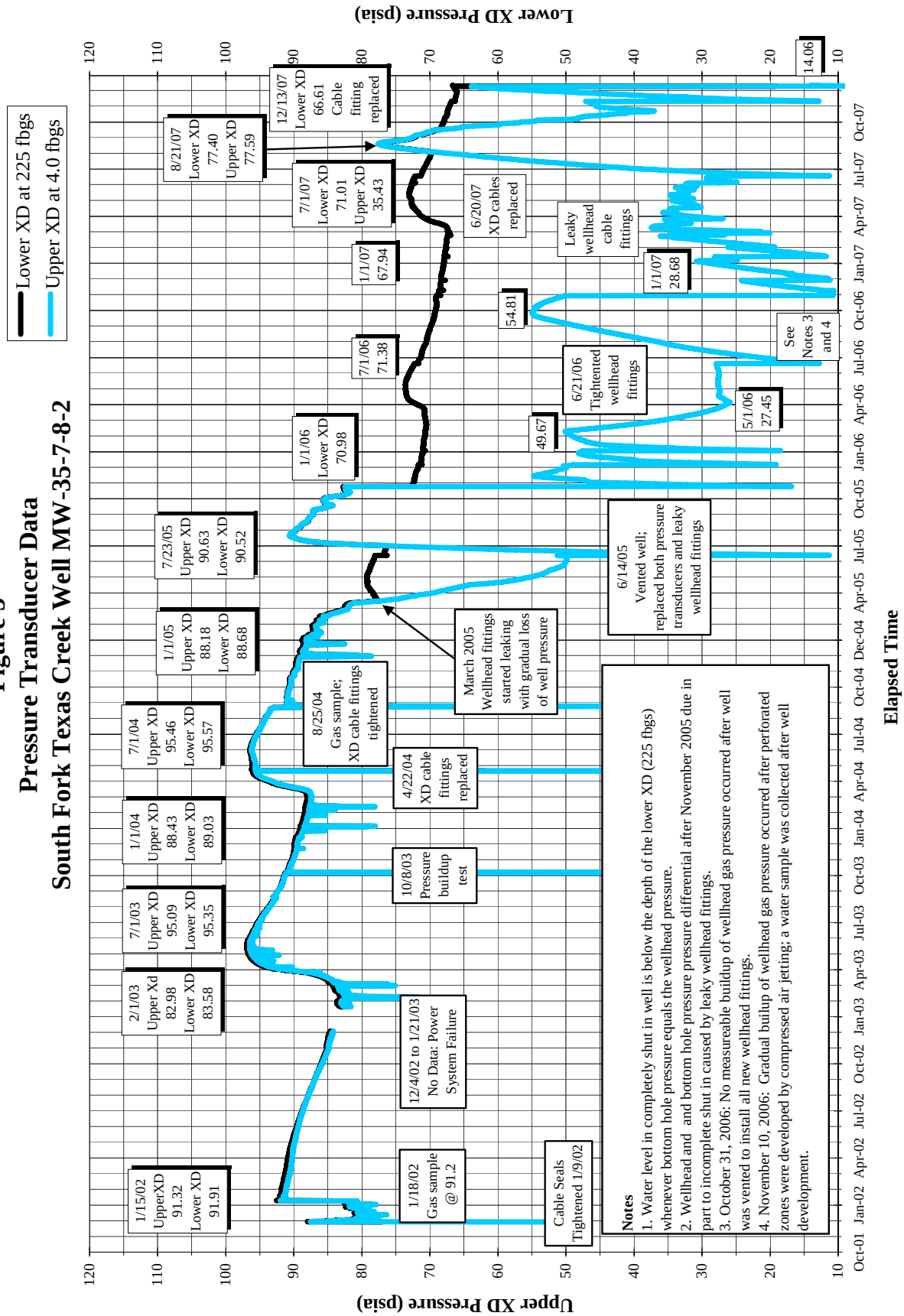
The occurrences of leaky fittings resulting in incomplete wellhead shut in have provided the opportunity to observe that the well acts as a gas and water separator. The water in the well is gradually displaced by gas after the well is shut in and entirely displaced by gas once the wellhead pressure equals the bottomhole pressure. For example, the depth to water in the vented well on June 14, 2005 was calculated to be about 75 feet below ground surface based on the differential well pressures of 11.33 psia (wellhead) and 76.56 psia (bottomhole). The charts in Figure 5 show differential well pressures after the well was shut in on June 14, 2005 and until the wellhead pressure buildup equaled the bottomhole pressure of approximately 76 psia on July 2, 2005.

Leak-proof transducer cable seals required for complete well shut in have been difficult to maintain at the MW 35-7-8-2 wellhead since October 2005. One or more gas leaks from wellhead cable connections were confirmed during wellhead inspections performed in 2006 and 2007. Figure 5 shows the wellhead pressure is erratic for the period of record between October 2005 and December 2007. The cause of this erratic pattern is apparently related to leaky wellhead fittings rather than an erratic change in wellhead pressure since the bottomhole pressure curve does not show erratic pressure fluctuations for the same period of record.

True pressures and trends can not be measured until a complete shut in is accomplished. Attempts to achieve leak-proof seals in 2006 and 2007 included tightening of fitting connections, installation of new connection fittings and replacement of the cable strain relief fitting elastomer inserts. In addition, the thin-walled transducer cables originally installed in the well were replaced with rugged polyethylene cable on June 20, 2007. After the wellhead was shut in on June 20, 2007, the well pressure curves indicate complete shut in of the well was achieved until the buildup of both bottom hole and wellhead pressures peaked at about 77 psia on August 21, 2007 (see Figure 5).

The charted decline and erratic pattern of wellhead pressure since August 21, 2007 is indicative of a potentially incomplete shut in. The recurrence of incomplete shut in was confirmed by detection of a wellhead gas leak at the upper pressure transducer cable strain relief connection during the November 12, 2007 wellhead inspection. Since the strain relief fitting replacement did not maintain a leak-proof seal at the cable connection, the wellhead design was subsequently changed to incorporate a different type of transducer cable connection. On December 12, 2007, the upper pressure transducer cable strain relief fitting was replaced with a bored-through Swageloc tube fitting designed to provide a leak-proof seal at polyethylene cable connections. The results of this design change will be presented in the next monitoring report.

Figure 5
Pressure Transducer Data
South Fork Texas Creek Well MW-35-7-8-2



2.2.3 BEAVER CREEK RANCH

MW 35-6-17-1

Monitoring data for well MW 35-6-27-1 are charted in Figure 6 and summarized in Table 6. This well has been monitored almost continuously since May 21, 2002. As described below, the pressure regime for this well is different than the regime exhibited by well MW 35-6-17-2.

Figure 6 shows a notable change in well pressure regime subsequent to two pressure buildup tests conducted on October 7, 2003 and October 21, 2003. Between October 7, 2003 and March 5, 2004, the wellhead pressure increased about 91.3 psi, from 14.36 psia to a recorded high of 105.65 psia. This pattern was followed by a gradual wellhead pressure decline until July 2005, followed by a gradual increase in pressure through January 2005. Wellhead pressure gradually declined from about 87 psia in January 2005 to about 72.9 psia on January 1, 2006. Between January 1, 2006 and December 12, 2007, the wellhead pressure curve shows a net increase of about 11.4 psi, 72.86 psia to 84.27 psia.

Just prior to the October 7, 2003 buildup test, Figure 6 shows a bottomhole pressure of about 602 psia. After the well was vented and shut in on October 7, 2003, there was a bottomhole pressure buildup of about 23 psi, from 602 psia to 625.42 psia (October 21, 2003). Between October 21, 2003 and December 12, 2007, the bottomhole pressure curve shows a decline of about 56.5 psi, from 625.42 psia to 568.97 psia.

Figure 6 also shows changes in the water level regime since the October 7, 2003 buildup test. The calculated water level in the well declined almost 200 feet, from 219.08 fbgs on October 7, 2003 to 418.02 fbgs on March 10, 2004. Between March 10, 2004 and July 26, 2004, there was a rise of about 55 feet in the calculated well water level, from 418.02 fbgs to 362.83 fbgs, followed by a decline of about 35 feet (362.83 to 398.28 fbgs) in the water level between July 26, 2004 and December 10, 2004. Figure 6 shows slight seasonal fluctuations in the water level within an overall rising trend in 2005, followed by an overall declining trend in 2006 through November 2007. Figure 6 shows a net decline of about 63 feet in the water level in the well between January 1, 2006 (383.68 fbgs) and December 12, 2007 (446.79 fbgs).

Table 6
Well Pressure Data Summary for Beaver Creek Ranch Monitoring Wells

Well ID and Transducers (XD)	Period of Record	Initial Well Pressure psia	Ending Well Pressure psia	Net Change in Well Pressure psi	Initial Water Level in Well fbgs	Ending Water Level in Well fbgs	Net Water Level Change in Well ft
MW 35-6-17-1 Upper XD	08/01/02 to 12/12/07	15.44	84.27	68.83	194.37	446.79	-252.42
Lower XD		609.55	568.97	-40.58			
MW 35-6-17-2 Upper XD	06/15/02 to 12/12/07	614.23	501.54	-112.69	1,377.64	No Data Lower XD removed	--
Lower XD		632.63	XD removed	--			

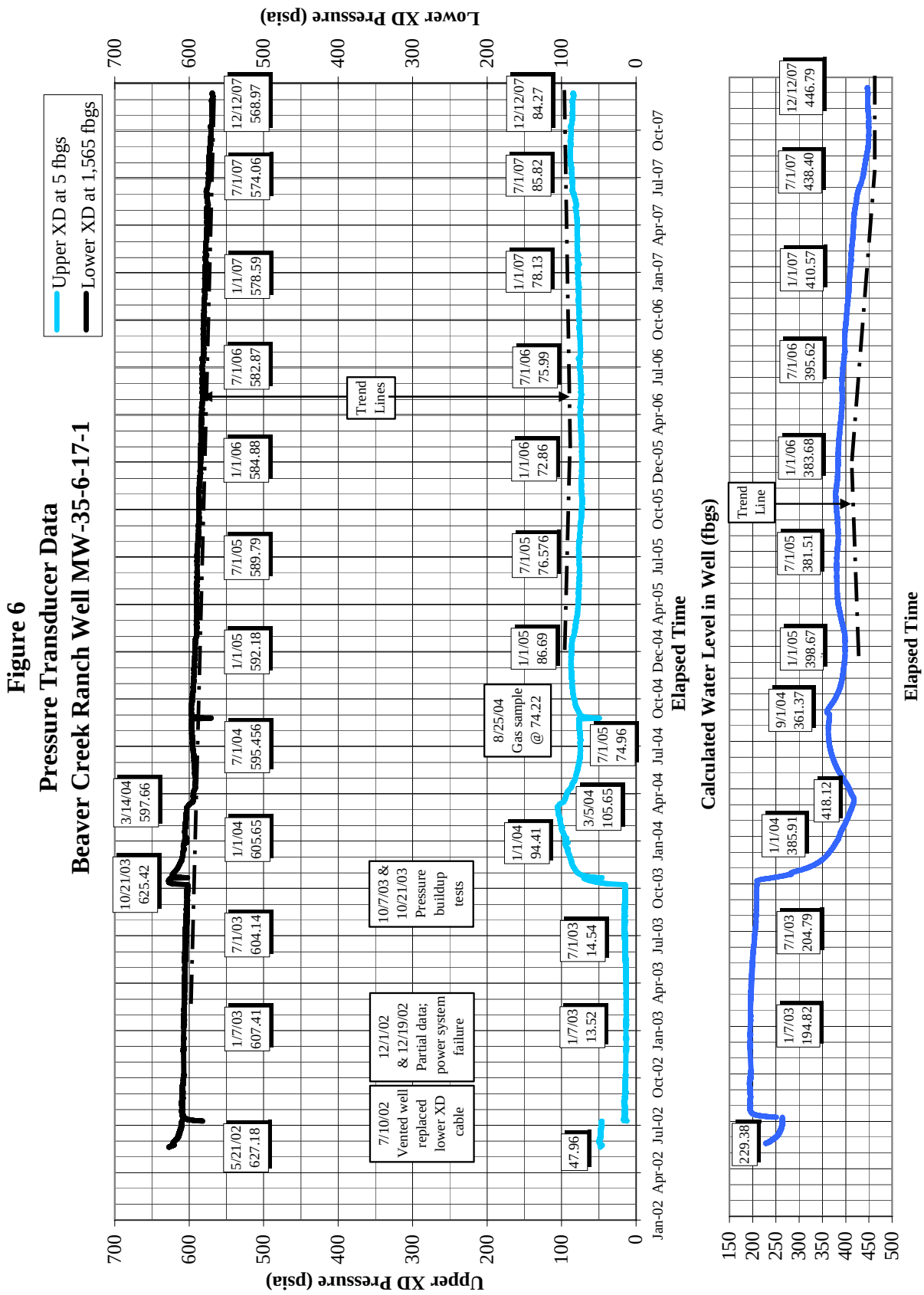


Figure 6
Pressure Transducer Data
Beaver Creek Ranch Well MW-35-6-17-1

MW 35-6-17-2

Wellhead pressure, bottomhole pressure, and calculated well water level data for well MW 35-6-17-2 are charted in Figure 7 and summarized in Table 6 for the period of record. This well has been monitored since December 3, 2001. Data were not collected between April 8, 2002 and May 20, 2002 due to a damaged lower transducer cable. There are no data for the periods December 1, 2002 to December 13, 2002 and December 19, 2002 to January 7, 2003 due to power system failure. Monitoring of bottomhole pressure ended after the lower transducer was removed from the well on April 22, 2004.

The wellhead pressure has been measured in excess of 600 psia, which is notably higher than in the other 3M monitoring wells. However, the wellhead was not completely shut in between February 2002 and mid-April 2004 because of a variety of wellhead fittings leaks. Consequently, the pressure data charted in Figure 7 between February 15, 2002 and April 22, 2004 are only considered to be minimum values. True pressures and trends could not be measured until a complete shut in was accomplished in April 2004.

On April 22, 2004, the well was vented and both pressure transducer systems were removed from inside the well. One 1000 psia transducer was adapted to tap directly into the top of the flanged wellhead assembly. This external transducer adaptation makes it possible to measure wellhead pressure without passing flexible transducer cables through the wellhead assembly. Bottomhole pressure and water level data are not available without a lower pressure transducer set below the water level in the well.

Figure 7 shows a trend of gradual wellhead pressure decline, about 27.5 psi, between January 1, 2004 (572.19 psia) and October 1, 2005 (544.73 psia). For the period of record from June 15, 2002 (614.23 psia) to October 25, 2005 (538.14 psia), Figure 7 shows a total decline of about 76 psi in wellhead pressure. The June 13, 2005 and October 25, 2005 wellhead inspections revealed a very slight leak from the pressure transducer bushing, which may have contributed to this gradual decline in pressure.

In response to erratic pressure transducer measurements recorded for second and third quarters of 2005, the 1000 psia wellhead transducer was replaced on October 25, 2005. After the well was shut in on October 26, 2005, Figure 7 shows a relatively rapid pressure build up to a measured peak wellhead pressure of 572.55 psia on October 27, 2005, followed by a drop off to about 521.96 psia on October 28, 2005. A second period of wellhead pressure build up, to about 551.76 psia, occurred between October 28, 2005 and November 1, 2005.

Between January 1, 2006 and September 30, 2006, wellhead pressure declined about 17.6 psi, from 545.7 psia to 528.08 psia, possibly in response to the continuing slight leak from around the pressure transducer bushing detected during the wellhead inspections on June 21, 2006 and October 31, 2006. The wellhead leak was eliminated on October 31, 2006 by permanently sealing the bushing to the flanged plate.

True wellhead pressures charted after a complete shut in was accomplished on October 31, 2006 confirm a continuing trend of gradually declining well pressures. Figure 7 shows a decline of about 25.15 psi between October 31, 2006 (526.69 psia) and December 12, 2007 (501.54 psia).

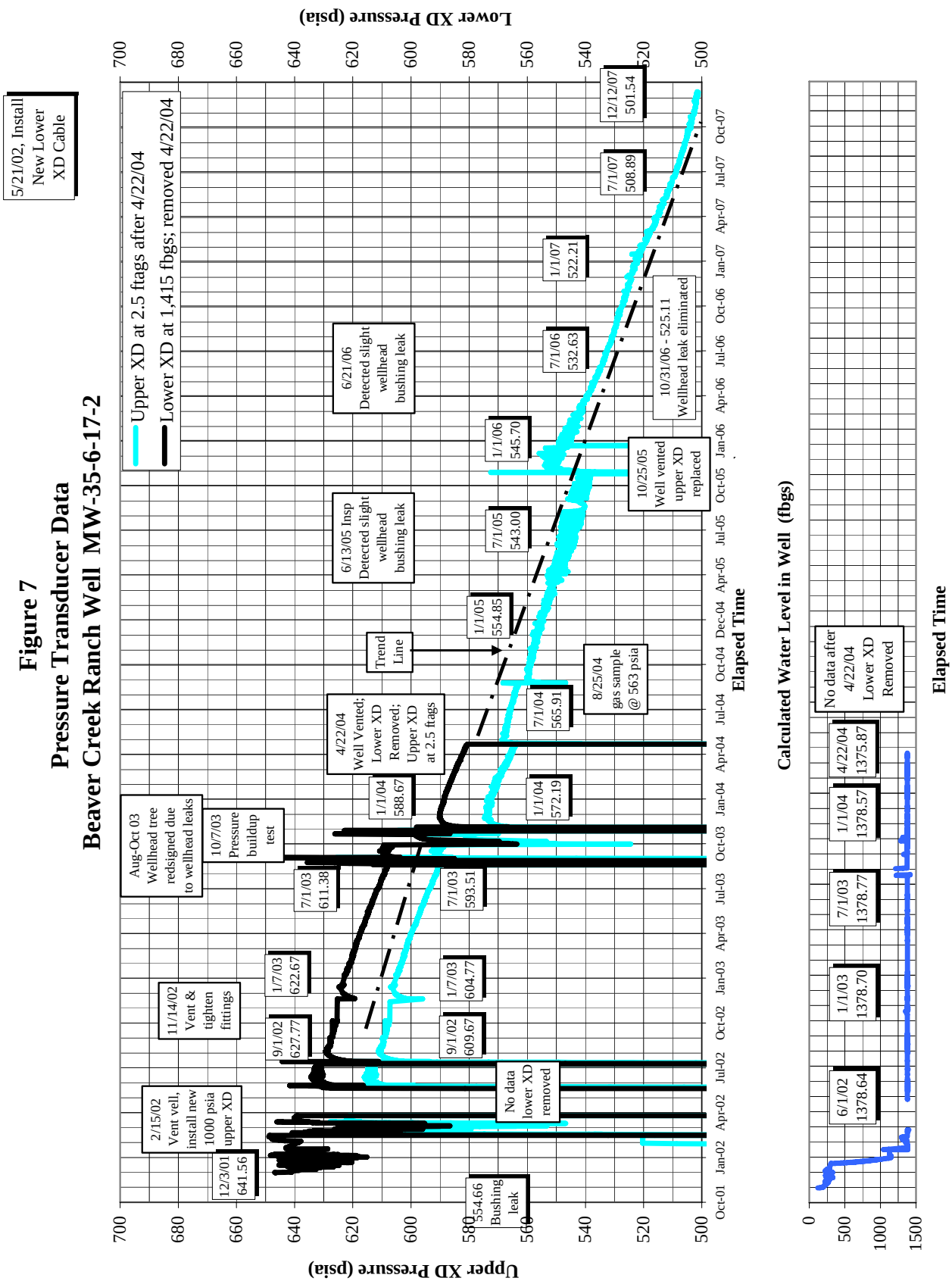


Figure 7
Pressure Transducer Data
Beaver Creek Ranch Well MW-35-6-17-2
Upper XD at 2.5 ftags after 4/22/04
Lower XD at 1,415 fbgs; removed 4/22/04
5/21/02, Install New Lower XD Cable
Upper XD Pressure (psia)
Lower XD Pressure (psia)
Elapsed Time
Calculated Water Level in Well (fbgs)
12/3/01 641.56
2/15/02 Vent well, install new 1000 psia upper XD
11/14/02 Vent & tighten fittings
9/1/02 627.77
1/7/03 622.67
Aug-Oct 03 Wellhead tree redsigned due to wellhead leaks
10/7/03 Pressure buildup test
7/1/03 611.38
1/1/04 588.67
4/22/04 Well Vented; Lower XD Removed; Upper XD at 2.5 ftags
554.66 Bushing leak
No data lower XD removed
9/1/02 609.67
1/7/03 604.77
7/1/03 593.51
Trend Line
6/13/05 Insp Detected slight wellhead bushing leak
6/21/06 Detected slight wellhead bushing leak
1/1/05 554.85
7/1/05 543.00
1/1/06 545.70
7/1/06 532.63
1/1/07 522.21
7/1/07 508.89
12/12/07 501.54
10/31/06 - 525.11 Wellhead leak eliminated
10/25/05 Well vented upper XD replaced
1/1/04 572.19
7/1/04 565.91
8/25/04 gas sample @ 563 psia
No data after 4/22/04 Lower XD Removed
6/1/02 1378.64
1/1/03 1378.70
7/1/03 1378.77
1/1/04 1378.57
4/22/04 1375.87

2.2.4 SHAMROCK MINES

Well MW 35-6-13-1 monitoring data are charted in Figures 8 and 8a and summarized in Table 7 for the entire period of record. Since there are no producing wells in close proximity to this area, this well is used to collect background data and has been monitored continuously since May 22, 2002. Data were not collected for the period of June 11, 2007 to June 20, 2007 due to failure of the data logger battery.

Table 7
Well Pressure Data Summary for Shamrock Mines Monitoring Well

Well ID and Transducers (XD)	Period of Record	Initial Well Pressure psia	Ending Well Pressure psia[1]	Net Change in Well Pressure psi	Initial Water Level in Well fbgs	Ending Water Level in Well fbgs[1]	Net Water Level Change in Well ft
MW 35-6-13-1 Upper XD	5/22/02 to 12/12/07	12.06	11.38	Atmospheric Pressure	39.66	36.78	2.88
Lower XD		211.60	212.16	0.46			

1 On May 26, 2005, the measured bottomhole pressure (216.89 psia) and calculated depth to water (26.38 ft) in well MW 35-6-13-1 were at their highest levels for the period of record.

Figures 8 and 8a show the wellhead pressure regime continues to be stable at about atmospheric pressure and fluctuates within a range of 1 psi (between 11 psia and 12 psia). With wellhead pressure equal to atmospheric pressure, bottomhole pressure is equal to atmospheric pressure plus water pressure, which is a function of the water level in the well. Table 8 shows a measured bottomhole pressure of 212.16 psia when the water level in the well is 36.78 feet below ground surface.

Figures 8 and 8a show the bottomhole pressure and calculated water level in the well continue to exhibit a similar trend of seasonal fluctuation. With wellhead pressure equal to atmospheric pressure, fluctuation of bottomhole pressure is attributable to the fluctuation of water pressure in the well that occurs whenever the water level fluctuates. Seasonal fluctuations in bottomhole pressure occur within an overall slightly declining trend prior to February 2004. The bottomhole pressure and water level curves show seasonal fluctuations of higher magnitude occurred within an overall increasing pressure trend after February 2004. The decline and subsequent increase in bottomhole pressure and the water level in the well may be related to the return to more "normal" levels of precipitation in 2004 and 2005 after several years of "drought."

Bottomhole pressure fluctuated between 210 and 211 psia, during the first quarter of 2004, and then between 211 and 213 psia during the remainder of the 2004. During the first five months of 2005, bottomhole pressure increased from a low of 212.12 psia to a new recorded seasonal high of 216.89 psia on May 26, 2005. Likewise, the calculated well water level reached a new high of about 26.38 fbgs on May 26, 2005. Since May 2005, Figures 8 and 8a show seasonal fluctuations in the calculated water level and bottomhole pressure curves occur within an overall slightly declining trend. In 2006, the seasonal rise in bottomhole pressure began in mid-April, peaked at about 214.12 psia in May 2006, and then gradually declined to about 212.23 psia on March 1, 2007. The 2007 seasonal rise in bottomhole pressure began in March, peaked at about 213.49 psia on July 2, 2007, and then gradually declined to 212.16 psia as of December 12, 2007.

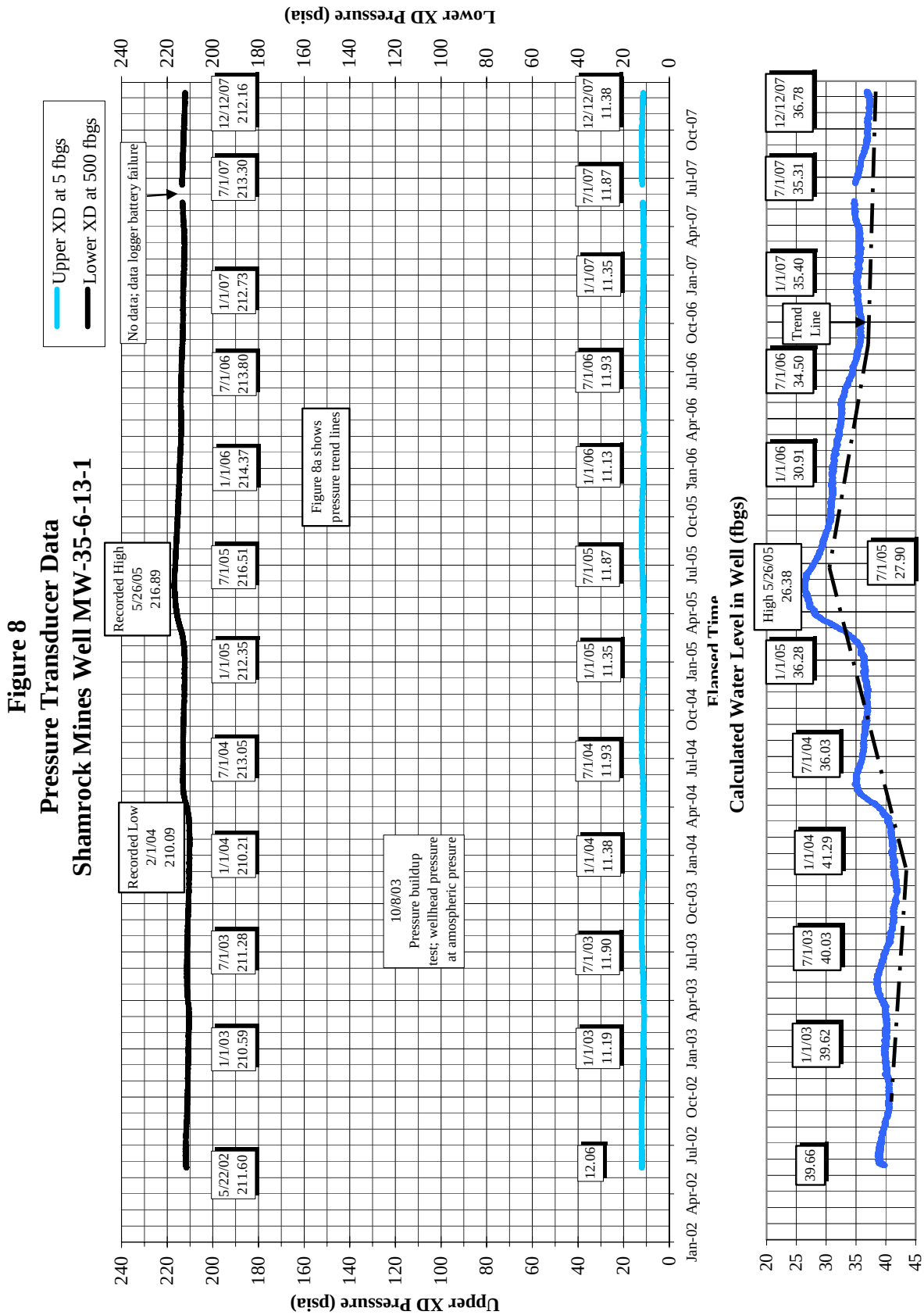


Figure 8
Pressure Transducer Data
Shamrock Mines Well MW-35-6-13-1
Upper XD at 5 fbgs
Lower XD at 500 fbgs
Lower XD Pressure (psia)
Upper XD Pressure (psia)
Recorded High 5/26/05 216.89
Recorded Low 2/1/04 210.09
No data; data logger battery failure
Figure 8a shows pressure trend lines
10/8/03 Pressure buildup test; wellhead pressure at amospheric presure
Calculated Water Level in Well (fbgs)
High 5/26/05 26.38
Trend Line
Elapsed Time

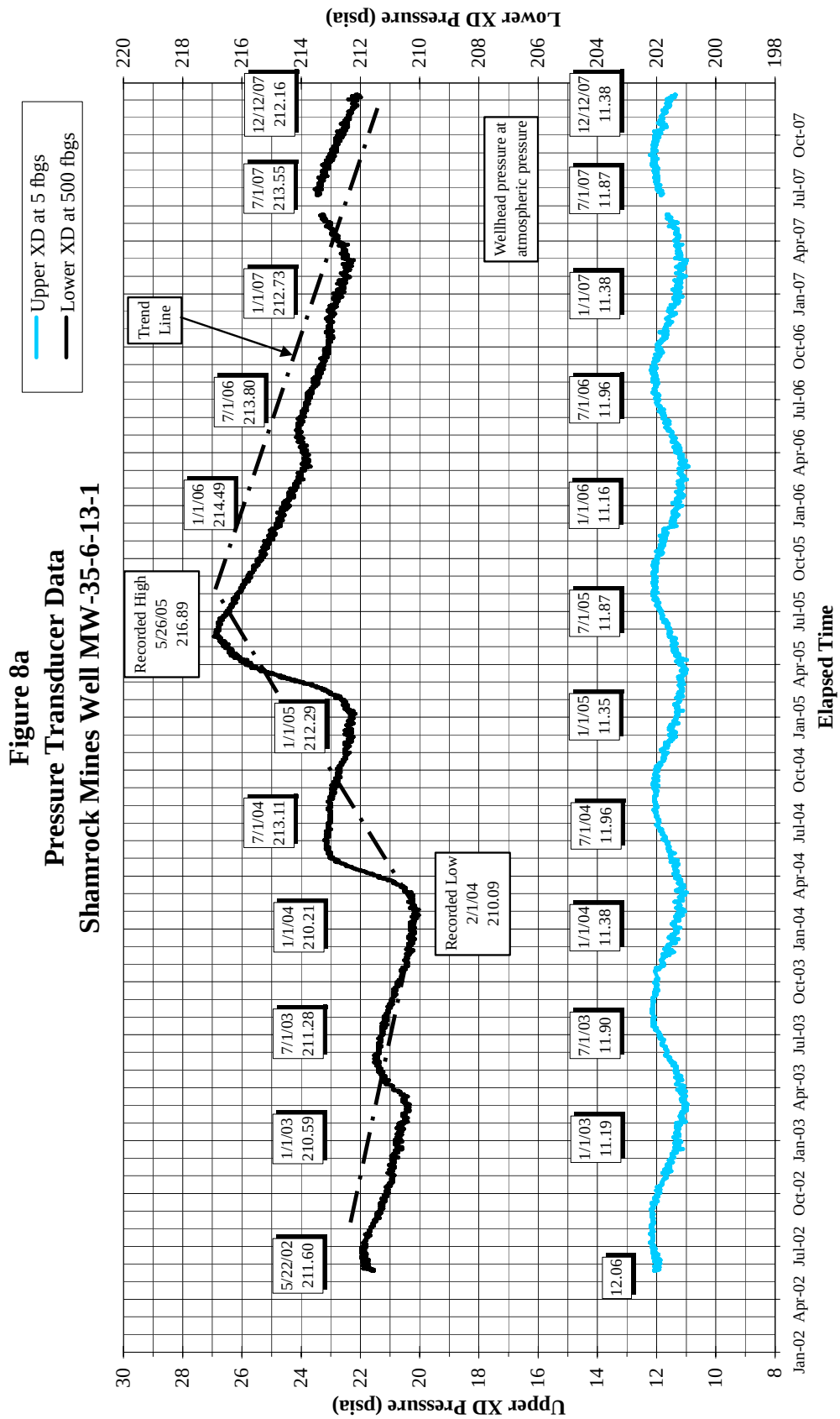


Figure 8a
Pressure Transducer Data
Shamrock Mines Well MW-35-6-13-1

3.0 FUTURE WORK

Routine work will continue to include periodic checks of each monitoring system and download of recorded pressure measurement data. Planned maintenance activities during the first quarter of 2008 may include inspection of all monitor well sites and download of data logger records. The current well monitoring data loggers and telemetry systems use analog technology. Effective in August 2007, the telemetry systems could no longer be used for remote monitoring since telecommunications provider discontinued using analog telecommunication systems. Digital data logger and satellite communication systems are now required to continue with remote monitoring well pressures. Alternatives for converting to digital monitoring systems will by evaluated by the COGCC in 2008 in conjunction with the planned expansion of the well monitoring program in La Plata and Archuleta counties. In the meantime, the Hermit 3000 Data Loggers will continue to be used to automatically record well pressure measurements and site visits will be required to extract logger data.