3R – 308

2008 AGWMR

04 / 05 / 2009

Environmental Services
188 CR 4900
Bloomfield, NM 87413

April 14, 2009

Mr. Glen Von Gonten
Hydrologist
Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: 2008 GROUND WATER SUMMARY REPORT

Dear Mr. Von Gonten:

Enclosed for your review is the Williams 2008 Ground Water Summary Report. The report presents monitoring data for eight sites having petroleum hydrocarbon impacted ground water resulting from past use of unlined surface impoundments. The sites included in the report are identified in separate folders in the electronic delivery of documents (CD enclosed).

Four of the eight sites have known or suspected upgradient contaminant sources which continue to influence conditions affecting the rate of natural attenuation. Upgradient contamination at the Florence 40 has been recognized by the OCD with a directive to the leaseholder / producer to address this condition. At the Jicarilla 147-6, a condensate liquid release in the fourth quarter of 2007 has resulted in measured spikes of contaminant concentrations. Upgradient contamination at the Pritchard 2 indicates other sources of contaminants likely exist which are unrelated to the retired unlined impoundment. And at the Florence 47X, the continuing accumulation of LNAPL in well MW-3, directly adjacent to former producer equipment and an unlined pit, suggest that earlier closure actions may not have addressed all contamination. Until such time as the other responsible parties address these matters, efforts by Williams are invariably extended.

Two sites (Florence 47X and Davis #1) have episodic accumulations of LNAPL in one monitoring well at each location. Since 2002, passive collection devices have been deployed in all wells containing measurable accumulations of LNAPL. Periodic emptying of the collection devices along with active bailing of LNAPL during the quarterly sampling events continues at the aforementioned sites and at times when observed at any other site.

One site previously monitored (Pattterson A COM #1A) met closure criteria in 2008 and a closure request was submitted earlier this year. Two of the remaining sites continue to show BTEX contamination in only one well with measured contamination diminishing. These sites will likely satisfy closure conditions relatively soon. The other two sites show declining trends and conditions indicative of effective natural attenuation.

As noted in the site summaries, laboratory reports have not been included in the annual report. Lab results reports are retained in project files until such time as a site closure report is developed, but are available anytime upon request.

Thank you for your time to review this submittal. If you have any questions regarding the content of the report, or about specific conditions at any site, you may call me at (801) 232-8985 or David Bays at (505) 634-4951.

Respectfully,

Mark B. Harvey
Project Manager

Enclosure - CD

c: Bill Liess, BLM Farmington District Office
David Bays, Williams FCA Office

Site Summary Report

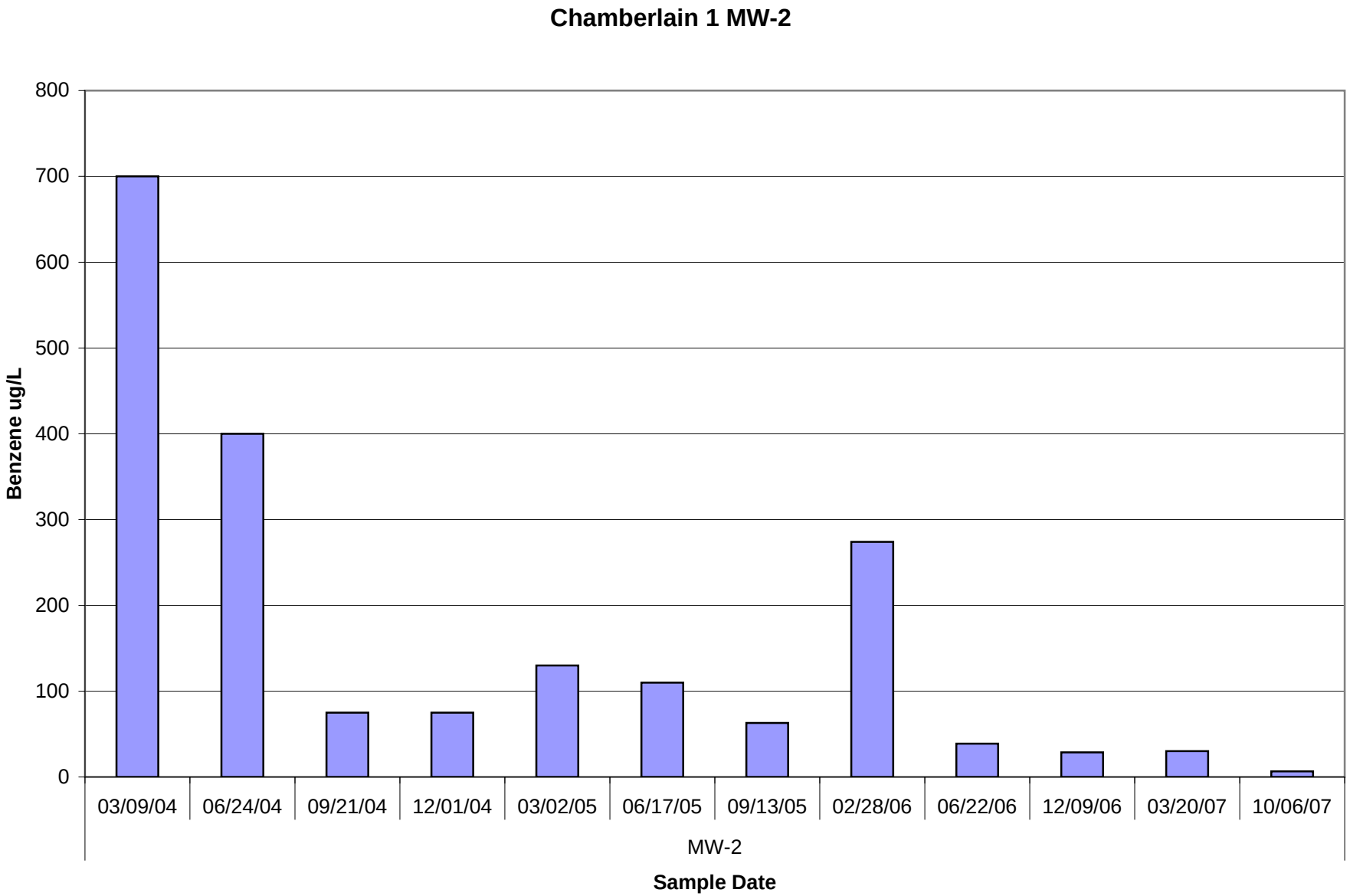
Site Name: Chamberlain 1 **Reporting Period: 2008**

Location: Unit F, Sec 14, Twn 32N, Rng 12W
Canyon: Jaquez Flat
Operator: Burlington
Vulnerable Class: extended
OCD Ranking: 0
Lead Agency: NMOCD

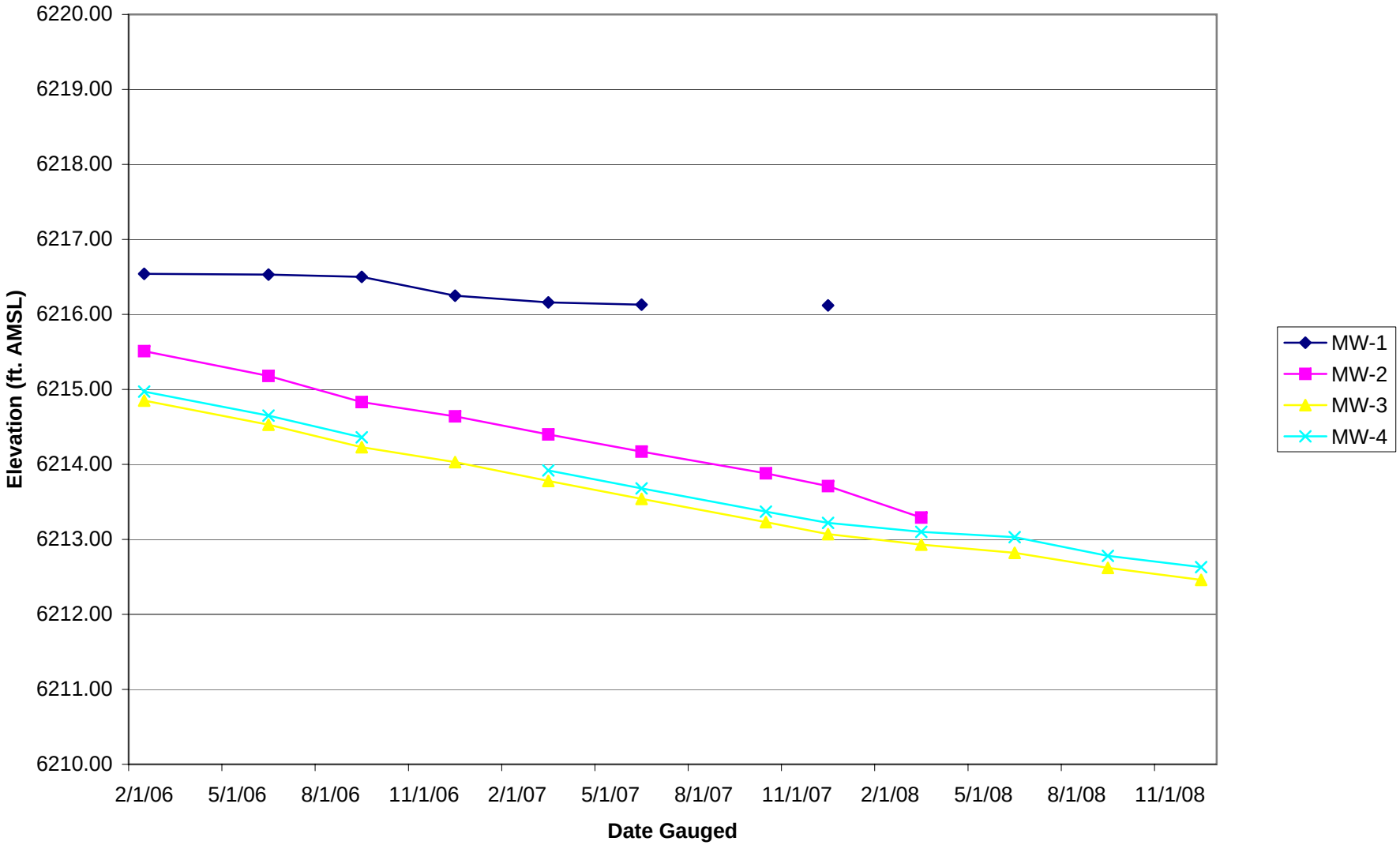
Status Narrative

Thirty five quarters of water quality data have been collected from the four monitoring wells located at this site. Water levels throughout the monitoring period were insufficient to collect samples from MW-2, the only monitoring well (located in the source area) to have contaminant concentrations in excess of NMWQCC standards. The last sample collected and analyzed revealed only Benzene in excess of WQCC standard. Monitoring well MW-1 was not sampled as it continues to be found dry at the time of monitoring. Laboratory results are provided in the attached table summarizing sampe results for 2008. Copies of individual lab reports are retained in project files to be submitted upon site closure.

Ground water flows to the west-southwest with an average hydraulic gradient of 0.012. No significant seasonal variations in flow direction or gradient have been observed. Figure 2 shows the potentiometric surface for quarterly sampling events in quarters one and four. The monitoring period hydrograph does not indicate any significant seasonal fluctuations in water table elevation. On the whole, water table elevations have decreased at the site over the past several years. Current trends indicate effective monitored natural attenuation with clean closure likely.


Chamberlain 1 MW-2
800
700
600
500
400
300
200
100
0
Benzene ug/L
03/09/04
06/24/04
09/21/04
12/01/04
03/02/05
06/17/05
09/13/05
02/28/06
06/22/06
12/09/06
03/20/07
10/06/07
MW-2
Sample Date

Chamberlain # 1 2008 Hydrograph



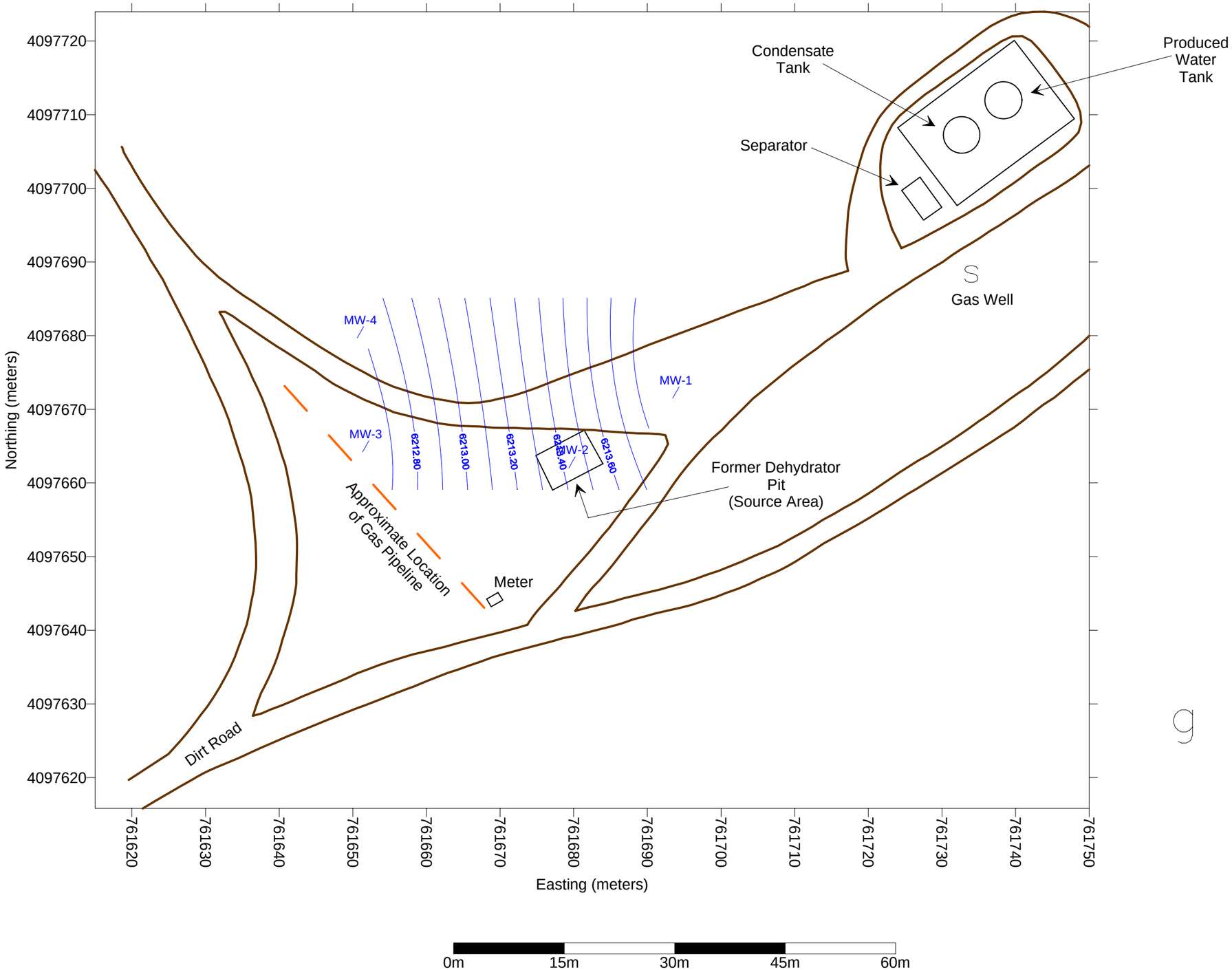


Figure 2
Potentiometric Surface Map
Chamberlain #1
(December 2008)

LEGEND

MW-2 — Monitoring Well

5585.20 — Ground Water Elevation (ft. AMSL)

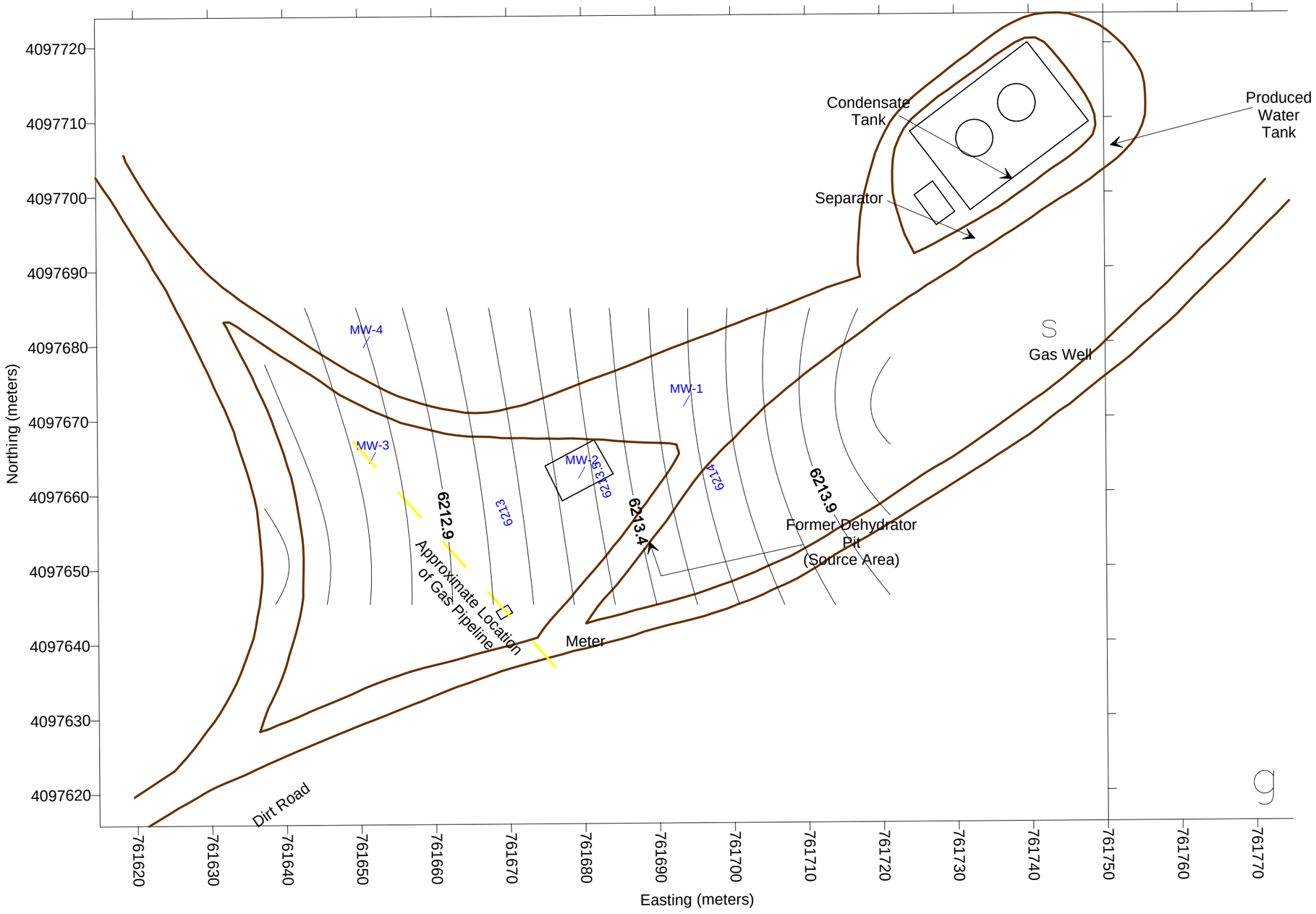


Figure 2
Potentiometric Surface Map
Chamberlain #1
(March 2008)

LEGEND

MW-2 — Monitoring Well

5585.20 — Ground Water Elevation (ft. AMSL)

Analytical Data Summary

Site Name:
Chamberlain 1

Reporting Period:
1/1/2006 To 12/31/2008

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-2						
	2/28/2006	120028FEB06	274	60.7	14.7	91.2
	6/22/2006	111022JUN06	38.9	13.2	2.1	21.1
	12/9/2006	141209DEC06	28.7	55.8	3.2	44.9
	3/20/2007	181920MAR07	30.2	68.8	5.6	68.7
	10/6/2007	151706OCT07	6.5	12.0	<1.0	12.4
MW-3						
	12/9/2006	135709DEC06	<1.0	<1.0	<1.0	<3.0
	3/20/2007	180320MAR07	<1.0	<1.0	<1.0	<3.0
	10/6/2007	145306OCT07	<1.0	<1.0	<1.0	<3.0
	12/19/2007	092319DEC07	<1.0	<1.0	<1.0	<3.0
	3/26/2008	144426MAR08	<1.0	<1.0	<1.0	<3.0
	6/10/2008	184810JUN08	<1.0	<1.0	<1.0	<3.0
	9/18/2008	180619SEP08	<1.0	<1.0	<1.0	<3.0
	12/4/2008	161604DEC08	<1.0	<1.0	<1.0	<3.0
MW-4						
	10/6/2007	150506OCT07	<1.0	<1.0	<1.0	<3.0
	12/19/2007	093519DEC07	<1.0	<1.0	<1.0	<3.0
	3/26/2008	145426MAR08	<1.0	<1.0	<1.0	<3.0
	6/10/2008	185610JUN08	<1.0	<1.0	<1.0	<3.0
	9/18/2008	181519SEP08	<1.0	<1.0	<1.0	<3.0
	12/4/2008	162504DEC08	<1.0	<1.0	<1.0	<3.0