

3R – 325

2010 AGWMR

04 / 29 / 2011



Environmental Services
188 CR 4900
Bloomfield, NM 87413

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2011 MAY -4 A 11: 04

April 29, 2011

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

RE: 2010 GROUND WATER SUMMARY REPORT

Dear Mr. Von Gonten:

Enclosed for your review is the Williams 2010 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. Information for each site includes a brief narrative, analytical summary, hydrograph, and ground water contour maps.

As has been mentioned previously, four of the eight sites have known or suspected up-gradient contaminant sources which continue to influence conditions affecting the rate of natural attenuation. These conditions likely indicate producer or third party responsibility and affect the ultimate closure schedule.

Two sites (Florence 47X and Davis #1) have regular 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 continues at the aforementioned sites and at any other site if and when LNAPL is observed.

As noted in the site summaries, laboratory reports have not been included in the annual summary 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 Aaron Dailey at (505) 634-4708.

Respectfully,

Mark B. Harvey
Project Manager

Enclosure - CD

c: Bill Liess, BLM Farmington District Office
Dan Reutlinger, Williams-TUL



**Annual
Groundwater Summary
Report
2010**

San Juan Basin, New Mexico
Unlined Surface Impoundments

3R-325

**JICARILLA CONTRACT
#147-6**

Site Summary Report

Site Name: Jicarilla Contract 147-6

Reporting Period: 2010

Location: Unit C, Sec 6, Twn 25N, Rng 5W

Canyon: Tapicito

Operator: BP

Status Narrative

Forty-five quarters of water quality data have been collected from the ten monitoring wells located at this site. Three of the wells originally installed have been lost due to historical erosion of the arroyo banks. Concentrations of BTEX in MW-2, the source area well, are now non-detectable and have been below WQCC standards for several monitoring periods. Cross-gradient well MW-8 was found to be clean in the fourth quarter of 2010 and historical results appear indicative of effective attenuation.

Concentrations of dissolved BTEX in downgradient well MW-3 were relatively stable during the monitoring period and may reflect conditions borne from a producer release event in 2007. Contaminant concentrations in MW-6 remain above the WQCC standards and are generally consistent with levels measured in 2009. This too may be related to the release event reported by the producer up gradient of the former dehydrator pit. Well MW-9 had a benzene spike in both the third and fourth quarters which was not measured during quarters one and two. Again, these spikes may be related to the release event from producer operations.

Potentiometric surface maps (Figure 2) depict a northwest by north to northwest ground water flow direction at an average hydraulic gradient of 0.025. Seasonal fluctuations in water-table elevation at the site are illustrated in the enclosed hydrograph.

It should be noted that there are now several wells / piezometers in the area where the producer excavated soil as part of a spill cleanup effort up gradient of the former dehydrator pit. The nature and extent of any remedial effort performed by the producer is unknown.

Analytical Data Summary

Site Name:

Jicarilla Contract 147-6

Reporting Period:

1/8/2008 To 12/31/2010

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-1						
	3/27/2008	145527MAR08	<1.0	<1.0	<1.0	<3.0
	6/5/2008	165405JUN08	<1.0	<1.0	<1.0	<3.0
	10/1/2008	145501OCT08	<1.0	<1.0	<1.0	<3.0
	12/5/2008	092405DEC08	<1.0	<1.0	<1.0	<3.0
	3/31/2009	140131MAR09	<1.0	<1.0	<1.0	<3.0
	7/9/2009	130609JUL09	<1.0	<1.0	<1.0	<3.0
	9/9/2009	124009SEP09	<1.0	<1.0	<1.0	<3.0
	12/19/2009	140619DEC09	<1.0	<1.0	<1.0	<3.0
	3/30/2010	155030MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	121722JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	151716SEP10	<1.0	<1.0	<1.0	<3.0
	12/8/2010	144708DEC10	<1.0	<1.0	<1.0	<3.0
MW-2						
	3/27/2008	152427MAR08	<1.0	<1.0	<1.0	<3.0
	6/5/2008	171905JUN08	<1.0	<1.0	<1.0	<3.0
	10/1/2008	152201OCT08	<1.0	<1.0	2.6	<3.0
	12/5/2008	095605DEC08	<1.0	<1.0	<1.0	<3.0
	3/31/2009	143131MAR09	<1.0	<1.0	<1.0	<3.0
	7/9/2009	132009JUL09	<1.0	<1.0	<1.0	<3.0
	9/9/2009	125109SEP09	<1.0	<1.0	<1.0	5.0
	12/19/2009	141919DEC09	<1.0	<1.0	<1.0	<3.0
	3/30/2010	160430MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	123122JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	152616SEP10	<1.0	<1.0	<1.0	4.8
	12/8/2010	145508DEC10	<1.0	<1.0	<1.0	<3.0
MW-3						
	3/27/2008	154027MAR08	<1.0	<1.0	<1.0	<3.0
	6/5/2008	174005JUN08	10.1	<1.0	<1.0	<3.0
	10/1/2008	153501OCT08	82.6	10.5	4.0	24.5
	12/5/2008	101605DEC08	98.0	58.5	5.1	66.9
	3/31/2009	144731MAR09	<1.0	<1.0	<1.0	<3.0
	9/9/2009	131509SEP09	2760	978	242	1380
	12/19/2009	144019DEC09	4150	2620	277	2360
	3/30/2010	162930MAR10	3590	1990	252	2310
	6/22/2010	125822JUN10	2710	1080	191	1170
	9/16/2010	154916SEP10	3240	3630	219	2210
	12/8/2010	151608DEC10	2950	3380	229	1900

Site Name:

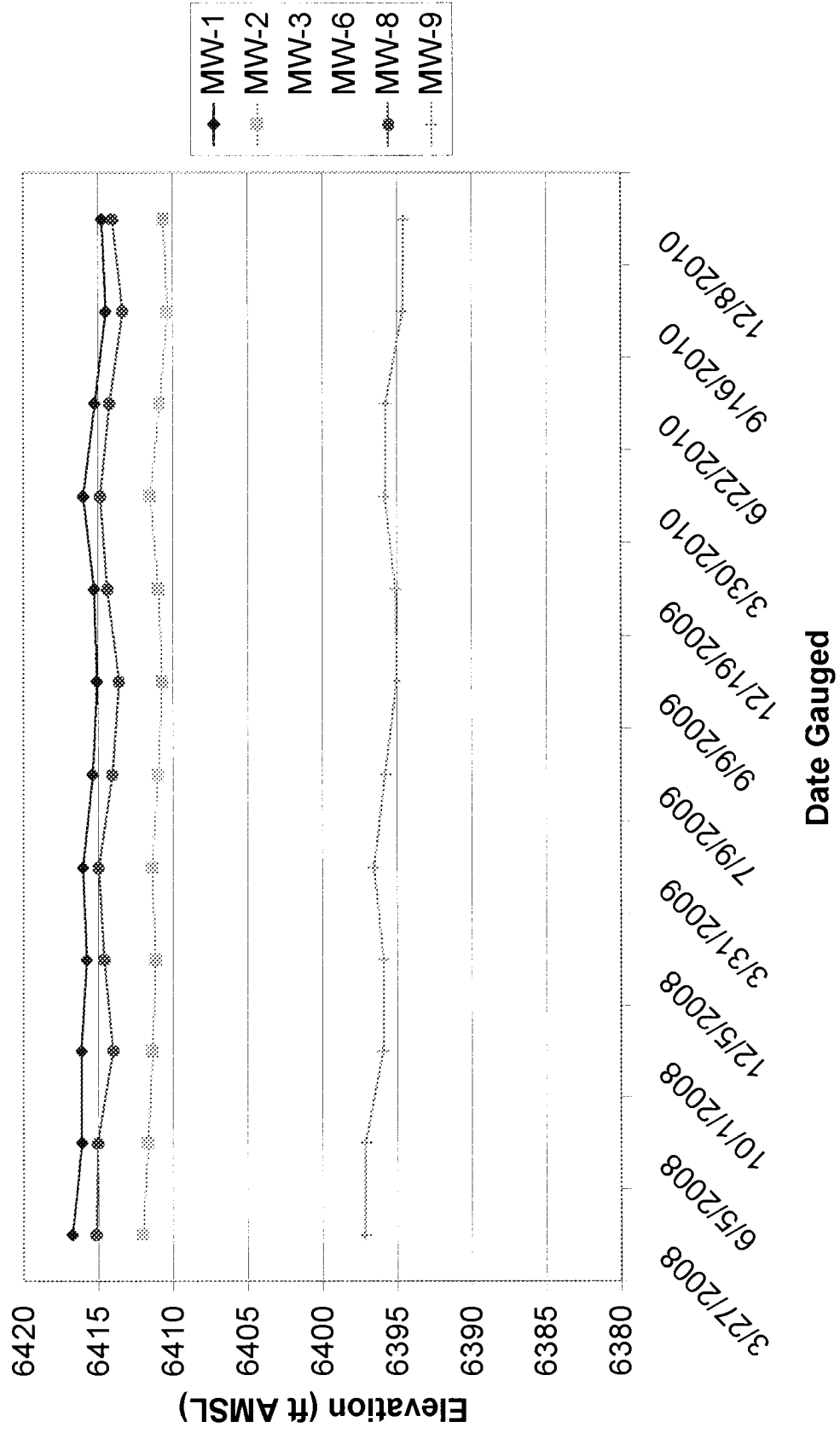
Jicarilla Contract 147-6

Reporting Period:

1/8/2008 To 12/31/2010

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-6						
	6/5/2008	175305JUN08	20700	7210	606	4170
	10/1/2008	155901OCT08	13600	7330	400	3080
	12/5/2008	103605DEC08	12300	1030	368	1390
	3/31/2009	150131MAR09	12900	4630	342	1550
	7/9/2009	135509JUL09	20600	7800	486	3580
	9/9/2009	133109SEP09	10800	2410	337	1620
	12/19/2009	145219DEC09	10500	<50.0	343	1290
	3/30/2010	165430MAR10	19400	10900	570	3330
	6/22/2010	131122JUN10	13500	<100	411	1640
	9/16/2010	160316SEP10	10200	2190	280	1410
	12/8/2010	152908DEC10	10000	495	380	1510
MW-8						
	3/27/2008	151027MAR08	23.5	<1.0	1.4	<3.0
	6/5/2008	170905JUN08	8.9	<1.0	<1.0	<3.0
	10/1/2008	151101OCT08	9.5	<1.0	<1.0	<3.0
	12/5/2008	094005DEC08	25.7	<1.0	<1.0	<3.0
	3/31/2009	141931MAR09	8.1	<1.0	<1.0	<3.0
	7/9/2009	133209JUL09	6.5	<1.0	<1.0	<3.0
	9/9/2009	130309SEP09	19.8	<1.0	<1.0	<3.0
	12/19/2009	142919DEC09	4.5	<1.0	<1.0	<3.0
	3/30/2010	161530MAR10	6.3	<1.0	<1.0	<3.0
	6/22/2010	124422JUN10	3.0	<1.0	<1.0	<3.0
	9/16/2010	153716SEP10	22.9	<1.0	<1.0	<3.0
	12/8/2010	150508DEC10	<1.0	<1.0	<1.0	<3.0
MW-9						
	3/27/2008	161527MAR08	<1.0	<1.0	<1.0	<3.0
	6/5/2008	182005JUN08	<1.0	<1.0	<1.0	<3.0
	10/1/2008	161301OCT08	46.6	<1.0	<1.0	<3.0
	12/5/2008	105105DEC08	<1.0	<1.0	<1.0	<3.0
	7/9/2009	140809JUL09	<1.0	<1.0	<1.0	<3.0
	9/9/2009	134309SEP09	16.0	<1.0	<1.0	<3.0
	12/19/2009	150519DEC09	<1.0	<1.0	<1.0	<3.0
	3/30/2010	170730MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	132722JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	161316SEP10	8.6	<1.0	<1.0	<3.0
	12/8/2010	154008DEC10	7.8	<1.0	<1.0	<3.0

2010 JIC Hydrograph



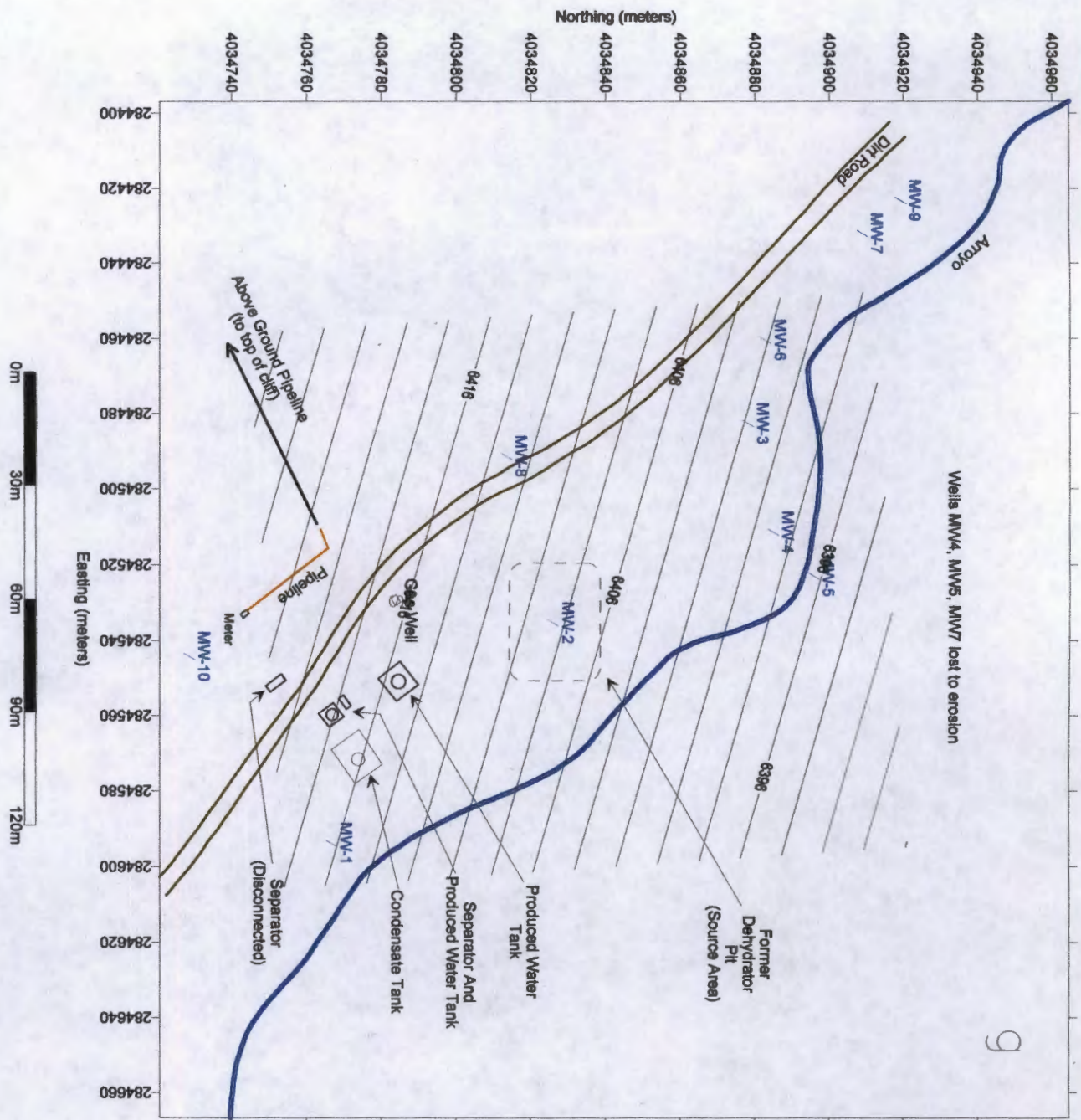


Figure 2
Potentiometric
Surface Map
Jicarilla Contract 147-6
March 2010

LEGEND

MW-2 / Monitoring Well

— 5596.20 — Ground Water Elevation (ft. AMSL)

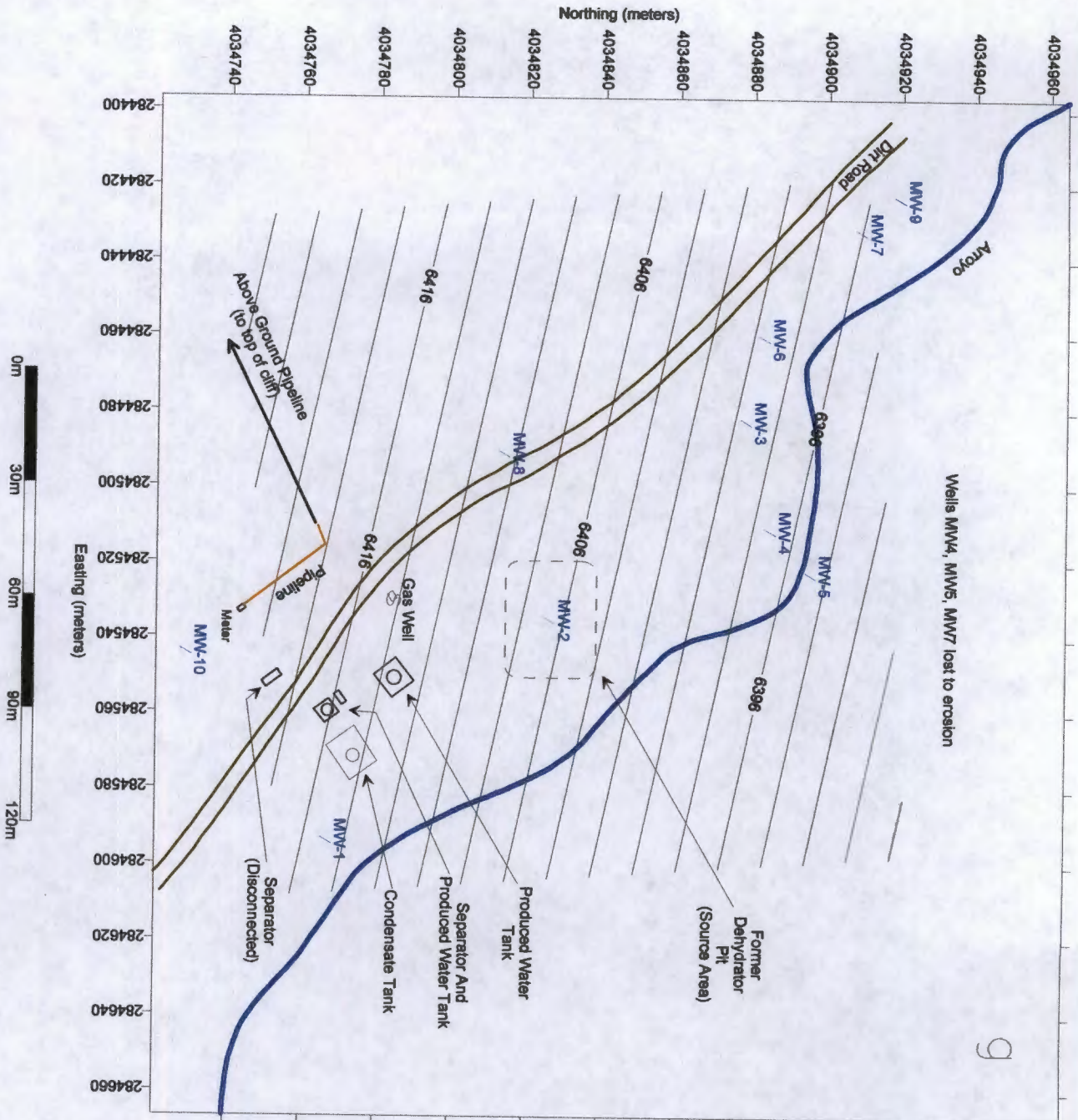


Figure 2
Potentiometric
Surface Map
Jicarilla Contract 147-6
September 2010

LEGEND	
MW-2	Monitoring Well
6396, 20	Ground Water Elevation (ft. AMSL)