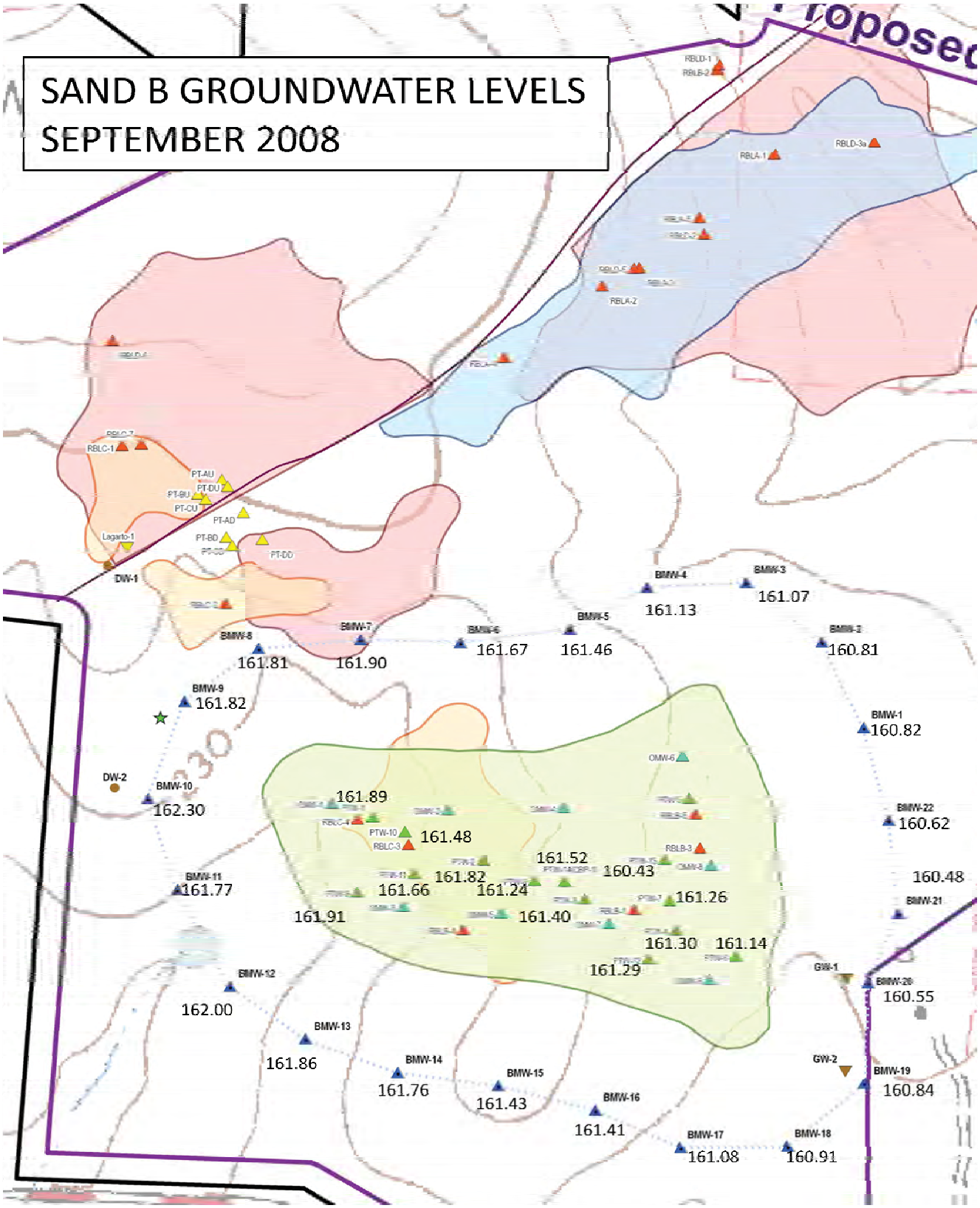
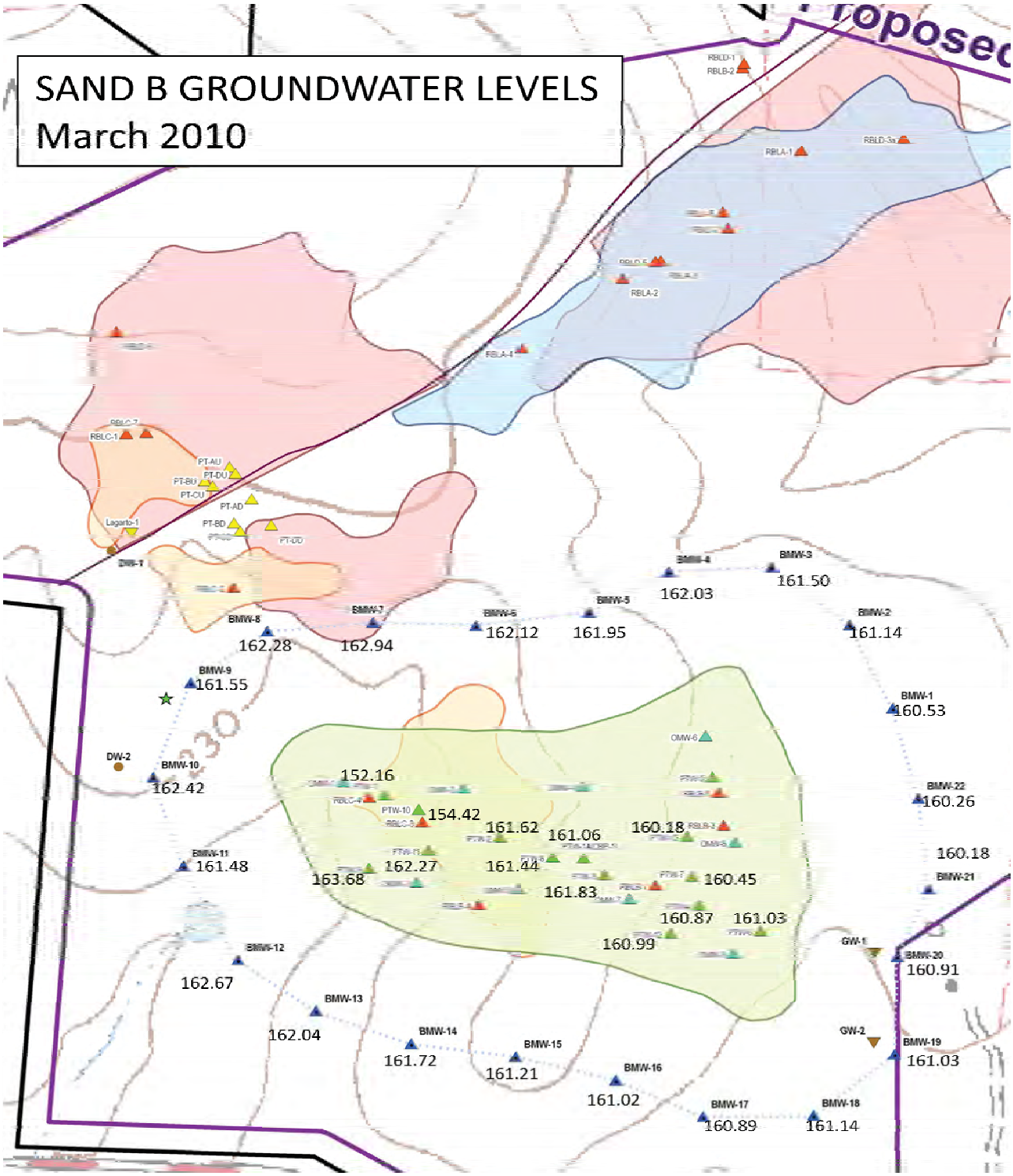
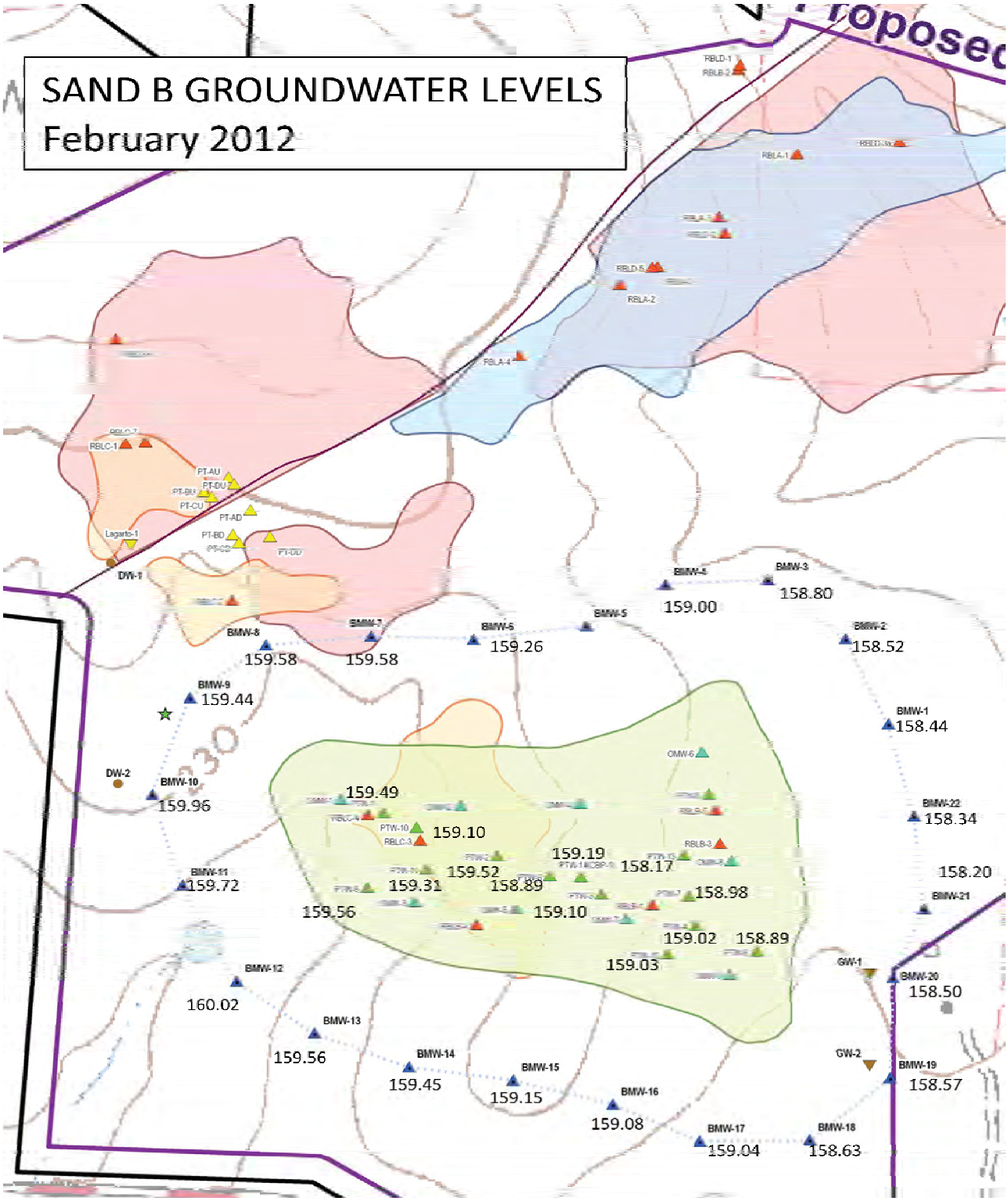
SAND B GROUNDWATER LEVELS SEPTEMBER 2008



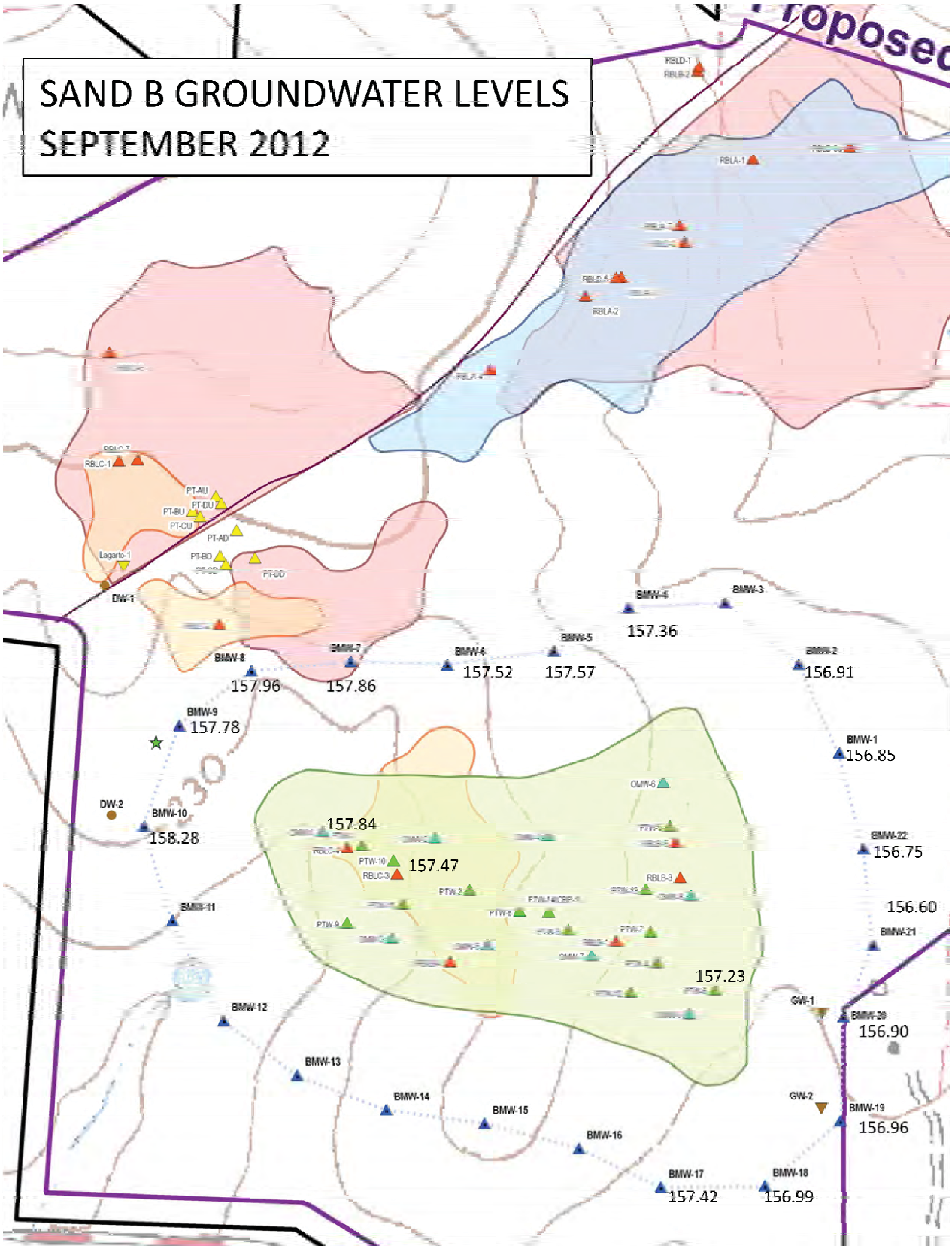
SAND B GROUNDWATER LEVELS
March 2010



SAND B GROUNDWATER LEVELS
February 2012



SAND B GROUNDWATER LEVELS
SEPTEMBER 2012



Water Well Surveys

		September-08		March-10		February-12		September-12	
WELL #	TOC Elev (ft)	Water Levels, TOC (ft)	WL Mean Sea Level (ft)	Water Levels, TOC (ft)	WL Mean Sea Level (ft)	Water Levels, TOC (ft)	WL Mean Sea Level (ft)	Water Levels, TOC (ft)	WL Mean Sea Level (ft)
BMW-1	230.72	69.90	160.82	70.19	160.53	72.28	158.44	73.87	156.85
BMW-2	231.16	70.35	160.81	70.02	161.14	72.64	158.52	74.25	156.91
BMW-3	231.44	70.37	161.07	69.95	161.50	72.64	158.80		
BMW-4	236.04	74.91	161.13	74.01	162.03	77.04	159.00	78.68	157.36
BMW-5	238.36	76.90	161.46	76.41	161.95	N/A	N/A	80.79	157.57
BMW-6	237.07	75.40	161.67	74.95	162.12	77.81	159.26	79.55	157.52
BMW-7	234.90	73.00	161.90	71.97	162.94	75.32	159.58	77.04	157.86
BMW-8	230.91	69.10	161.81	68.63	162.28	71.33	159.58	72.95	157.96
BMW-9	233.12	71.30	161.82	71.57	161.55	73.68	159.44	75.34	157.78
BMW-10	227.90	65.60	162.30	65.48	162.42	67.94	159.96	69.62	158.28
BMW-11	217.07	55.30	161.77	55.59	161.48	57.35	159.72		
BMW-12	217.28	55.28	162.00	54.61	162.67	57.26	160.02		
BMW-13	225.61	63.75	161.86	63.57	162.04	66.05	159.56		
BMW-14	234.51	72.75	161.76	72.79	161.72	75.06	159.45		
BMW-15	239.78	78.35	161.43	78.56	161.21	80.63	159.15		
BMW-16	232.68	71.27	161.41	71.66	161.02	73.60	159.08		
BMW-17	226.98	65.90	161.08	66.09	160.89	67.94	159.04	69.56	157.42
BMW-18	225.11	64.20	160.91	63.97	161.14	66.48	158.63	68.12	156.99
BMW-19	227.89	67.05	160.84	66.86	161.03	69.32	158.57	70.93	156.96
BMW-20	229.00	68.45	160.55	68.09	160.91	70.50	158.50	72.10	156.90
BMW-21	228.85	68.37	160.48	68.67	160.18	70.65	158.20	72.25	156.60
BMW-22	229.67	69.05	160.62	69.41	160.26	71.33	158.34	72.92	156.75
PTW-1	226.29	64.40	161.89	74.14	152.16	66.80	159.49	68.45	157.84
PTW-2	236.02	74.20	161.82	74.40	161.62	76.50	159.52		
PTW-3	238.80	77.40	161.40	76.97	161.83	79.70	159.10		
PTW-4	233.20	71.90	161.30	72.32	160.87	74.18	159.02		
PTW-5	235.09	73.85	161.24	73.77	161.32	76.16	158.93		
PTW-6	230.04	68.90	161.14	69.01	161.03	71.15	158.89	72.81	157.23

PTW-7	234.46	73.20	161.26	74.02	160.45	75.48	158.98		
PTW-8	239.44	78.20	161.24	78.00	161.44	80.55	158.89		
PTW-9	223.81	61.90	161.91	60.13	163.68	64.25	159.56		
PTW-10	228.68	67.20	161.48	74.26	154.42	69.58	159.10	71.21	157.47
PTW-11	229.66	68.00	161.66	67.39	162.27	70.35	159.31		
PTW-12	234.26	72.97	161.29	73.27	160.99	75.23	159.03		
PTW-13	234.38	73.95	160.43	74.20	160.18	76.21	158.17		
PTW-14 (CBP-1)	239.77	78.25	161.52	78.71	161.06	80.58	159.19		
RBLB-1	235.76	74.40	161.36	75.31	160.45	76.68	159.08		
RBLB-3	233.07	71.71	161.36	72.57	160.51	74.00	159.07		
RBLB-4	234.84	73.10	161.74	73.62	161.22	75.42	159.42		
RBLB-5	234.55	73.55	161.00	73.64	160.91	75.80	158.75	77.46	157.09

equals no data colleted

Water Well Surveys

During a telephone conference with Region 6 on September 20, 2012 to discuss Sand B Contour Maps, it was explained that BMW-7 was an outlier and should be removed from the data set. UEC was confident that a survey error was the most likely reason for the aberrant values. To resolve this issue, UEC re-surveyed the well. It was also discussed that UEC had data from subsequent years that was used to generate contour maps that were recently given to Region 6. Specifically, the contour maps that were recently provided to Region 6 were based on February 2012 data. Data from subsequent surveys are provided herein. The survey data includes a summary spreadsheet (Water Well Surveys) and a set of contour maps for Sand B for the years 2008, 2010 and 2012. With the exception of PTW-1, PTW-9 and PTW-10 for the 2010 survey, all other values are in agreement. Because these three wells are obvious outliers, they have been omitted from the contour map for the year 2010. A comparison of the 2010 water levels in these three wells with measurements from 2008 and 2012 show that they are outliers.

Region 6 also asked if UEC could reconstruct who conducted the surveys and the dates of the surveys. In this regard, UEC reviewed files and found the following:

The very latest partial survey to resolve the question regarding BMW-7 was conducted during the week of September 17, 2012 by Bob Underdown, Carl Wentz and Jon Pollock, all employees of UEC. While in the field, a number of other water levels were taken (see Water Well Surveys table (column titled September-12) and well casing heights were re-measured. Earlier surveys (2008, 2010 and 2012) were conducted by Jon Pollock, Pavan Bairu, Aiguo Bian, all employees of UEC.

A correction to the data and the new contour maps show that Sand B groundwater in the graben, as described in previous documents, moves from west to east and a very slow rate. UEC believes Regions 6 will agree with the information after it has had time to review it.