

**Monday June 2, 2008**

**399-2-13**

**C6190**

Well completion activities were resumed and completed today. The 4" ID pvc permanent casing was tripped into the hole. The ERTs and thermistor cables were taped to the outside of the permanent casing from 33.5 ft bgs to surface. 10-20 silica sand was added from 53.7 to 28.9 ft bgs. 40-140 sand was added from 28.9 ft bgs to 11.5 ft bgs. Granular bentonite was added to the hole from 11.5 ft to 3.0 ft bgs. All temporary casing was removed from the borehole.

**Current Depths (ft bgs)**

Bentonite pellets: 62.3 – 56.5

10-20 mesh silica sand: 56.5 – 28.9

40-140 mesh silica sand: 28.9 – 11.5

Granular bentonite: 11.5 – 3.0

20 ft pvc screen (0.020") and end cap: 56.2 – 31.2

4" ID pvc casing: 31.2– 4.2 ft ags

Borehole: 0

~~7 5/8" single wall temporary casing: 0~~

**Plan**

Tomorrow the cement grout will be poured in preparation for a concrete pad and final surface completion.

**Monday June 2, 2008**

**399-2-19**

**C6197**

Drillers continued attempts to “fish” the tag weight from the borehole, but could not remove it. The drillers attempted to push down the stickup on the casing with the jaws on the hydraulic jack so that the sonic rig could setup over the borehole. The casing was pushed down about 0.9 ft.

**Current Depths (ft bgs)**

Bentonite pellets: 60.0 – 56.3

10-20 mesh silica sand: 58.75 – 45.7

Borehole: 45.7

7 5/8” single wall temporary casing: 46.3

**Plan**

Tomorrow the sonic rig will be moved to the borehole and will re-drill the hole to TD.

**Tuesday June 3, 2008**

**399-2-19**

**C6197**

Attended POD. Drillers moved sonic rig over borehole. Drillers cleaned out the borehole to 57.6 ft bgs, recovering the steel tag weight from the borehole at 51 ft bgs. Drillers moved sonic rig to another borehole and moved well setting rig onto this borehole. The 4" ID pvc permanent casing was tripped into the hole. The ERTs and thermistor cables were taped to the outside of the permanent casing from 33.5 ft bgs to surface. 10-20 silica sand was added from 57.6 to 29.1 ft bgs. 40-140 sand was added from 29.1 ft bgs to 10.0 ft bgs. Granular bentonite was added to the hole from 10.0 ft to 3.0 ft bgs. All temporary casing was removed from the borehole.

**Current Depths (ft bgs)**

Bentonite pellets: 60.0 – 57.6  
10-20 mesh silica sand: 57.6 – 29.1  
40-140 mesh silica sand: 29.1-10.0  
Granular bentonite: 10.0-3.0

Borehole: 3.0  
~~7 5/8" single wall temporary casing: 0~~

**Plan**

Tomorrow the well development will take place at the completed wells.

**Monday June 2, 2008**

**399-2-24**

**C6208**

**Site Activities**

Attended POD. Resumed drilling and advanced the casing from 46 to 63.2 ft bgs. Advanced the borehole from 47 to 67.5 ft bgs. Collected 9 samples via split spoon (lexan liners) and 5 grab samples via drive barrel. Depth to water was 26.3 ft bgs. [The hole reached total depth.](#)

RCT coverage was provided in the AM/PM, IH coverage was provided in the AM. The RCT reported readings at or below background. IH indicated the reading was less than detect.

**Sampling Performed**

The table will be updated this week.

**Current Depths (ft bgs)**

Borehole 67.5  
7 5/8" single wall temporary casing 63.2  
Depth to water 26.3  
Expected total depth = ~ 58

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-7	sandy gravel
7- 10	gravelly sand
10-18	sandy gravel
18-26	silty sandy gravel
26-36	gravel
36-40	sandy gravel
40-41	sand
41-42	sandy gravel
42-47.5	sand
47.5-49	silt
49-51.5	sandy gravel
51.5-52.5	silt
52.5-58	sandy gravel
58-65	silt

**Plan**

Mobilize rig to next location –C6197 – to drill down and remove the tagger weight from borehole.

**Tuesday June 3, 2008**

**399-2-18**

**C6196**

**Site Activities**

Attended POD. Completed setting up on the location and began drilling in the afternoon. The borehole was advanced from surface to 10 ft bgs. Six grab samples were collected- all via drive barrel. Note that all samples from this borehole are grab and therefore collected with the drive barrel.

RCT coverage was provided in the PM. The RCT reported readings at or below background.

**Sampling Performed**

Six samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 10.0  
7 5/8" single wall temporary casing 10  
Expected total depth = ~ 58

**Borehole Log Summary (ft bgs)**

0-0.5 gravel drill pad  
0.5-10 sandy gravel

**Plan**

Resume drilling tomorrow.

**Tuesday June 3, 2008**

**399-2-19**

**C6197**

Attended POD. Drillers moved sonic rig over borehole. Drillers cleaned out the borehole to 57.6 ft bgs, recovering the steel tag weight from the borehole at 51 ft bgs. Drillers moved sonic rig to another borehole and moved well setting rig onto this borehole. The 4" ID pvc permanent casing was tripped into the hole. The ERTs and thermistor cables were taped to the outside of the permanent casing from 33.5 ft bgs to surface. 10-20 silica sand was added from 57.6 to 29.1 ft bgs. 40-140 sand was added from 29.1 ft bgs to 10.0 ft bgs. Granular bentonite was added to the hole from 10.0 ft to 3.0 ft bgs. All temporary casing was removed from the borehole.

**Current Depths (ft bgs)**

Bentonite pellets: 60.0 – 57.6  
10-20 mesh silica sand: 57.6 – 29.1  
40-140 mesh silica sand: 29.1-10.0  
Granular bentonite: 10.0-3.0

20 ft pvc screen (0.020") and end cap: 56.6 – 31.3  
4" ID pvc casing: 31.3 – 5.5 ft ags  
Centralizers placed at the top and bottom of the screen (31.3 and 56.3).

Borehole: 3.0  
~~7-5/8" single wall temporary casing: 0~~

**Plan**

Tomorrow the well development will take place at the completed wells.

**Wednesday June 4, 2008**

**399-2-18**

**C6196**

**Site Activities**

Attended POD. The borehole was advanced from 10 to 15 ft bgs. Three grab samples were collected. At that point problems developed with the hydraulic controls. The rig was off the borehole for repairs. It is anticipated drilling will not resume until sometime next week.

RCT coverage was provided in the AM. The RCT reported readings at or below background.

**Sampling Performed**

Three samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 15.0  
7 5/8" single wall temporary casing 18.7  
Expected total depth = ~ 58

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-10	sandy gravel
10-15	gravelly sand

**Plan**

Resume drilling next week.

**Wednesday June 4, 2008**

**399-2-9**

**C6186**

## **Summary**

Attended POD. Well development was performed. The initial water level was 26.11 ft bgs. The pump was placed at 50.9 and 40.9 ft bgs and approximately 3120 gallons of water was pumped at rates from 40-60 gpm. A transducer was placed in C6186 and C6190. Drawdown was negligible on the pumped well.

## **Final Parameters**

Turbidity(NTU):	4.89
pH:	7.51
Conductivity(mS):	3.81
Temperature (C)	18.4
DO (mg/L)	8.47

## **Current Depths (ft bgs)**

Bentonite pellets: 63.7 – 58.75  
10-20 mesh silica sand: 58.75 – 30.65  
40-140 mesh silica sand: 30.65 – 9.75  
Granular bentonite: 9.75 – 3.4 (current)

25 ft pvc screen (0.020") and end cap: 58.75 – 33.47  
4" ID pvc casing: 33.47 – 6.3 ft ags

Borehole: 3.4  
~~7 5/8" single wall temporary casing: 0~~

## **Plan**

Install concrete pad. Development will continue on the other newly installed wells.

**Thursday June 5, 2008**

**399-3-26**

**C6203**

## **Summary**

Attended POD. Well development was performed. The initial water level was 25.93 ft bgs. The pump was placed at 39.7 and 48.7 ft bgs and approximately 3280 gallons of water was pumped at rates from 45-60 gpm. A transducer was placed in C6203 and C6190 and drawdown/recovery data was collected on a datalogger while pumping from 48.7 ft bgs.

## **Final Parameters**

Turbidity(NTU):	3.52
pH:	7.64
Conductivity(uS/cm):	478
Temperature (C)	16.7
DO (mg/L)	9.49

## **Current Depths (ft bgs)**

Bentonite pellets: 64.0 – 53.9  
10-20 mesh silica sand: 53.7 – 30.0  
40-140 mesh silica sand: 30.0 – 9.6  
Granular bentonite: 9.6 – 3.0

20 ft pvc screen (0.020") and end cap: 52.31 – 32.0  
4" ID pvc casing: 32.0 – 5.5 ft ags

## **Plan**

Finish the surface completion

**Thursday June 5, 2008**

**399-2-19**

**C6197**

### **Summary**

Attended POD. Well development was performed. The initial water level was 25.64 ft bgs. The pump was placed at 40 and 50.9 ft bgs and approximately 2840 gallons of water was pumped at rates from 50-64 gpm. A transducer was placed in C6197 and C6190 and drawdown/recovery data was collected on a datalogger while pumping from 50.9 ft bgs.

### **Final Parameters**

Turbidity(NTU):	4.14
pH:	7.85
Conductivity(uS/cm):	334
Temperature (C)	16.5
DO (mg/L)	9.22

### **Current Depths (ft bgs)**

Bentonite pellets: 60.0 – 57.6  
10-20 mesh silica sand: 57.6 – 29.1  
40-140 mesh silica sand: 29.1-10.0  
Granular bentonite: 10.0-3.0

Borehole: 3.0

### **Plan**

Finish the surface completion.

**Friday June 6, 2008**

**399-2-13**

**C6190**

### **Summary**

Attended POD. Well development was performed. The initial water level was 26.35 ft bgs. The pump was placed at 39.6 and 49.6 ft bgs and approximately 3115 gallons of water was pumped at rates from 49-80 gpm. A transducer was placed in C6190 and C6197 and drawdown/recovery data was collected on a datalogger while pumping from 49.6 ft bgs.

### **Final Parameters**

Turbidity(NTU):	3.34
pH:	7.79
Conductivity(uS/cm):	447
Temperature (C)	16.2
DO (mg/L)	9.32

### **Plan**

**Friday June 6, 2008**

**399-2-124**

**C6208**

Well completion activities were started and completed today. Bentonite pellets were added to the borehole to a depth of 59.7 ft bgs. The 4" ID pvc permanent casing and screen were tripped into the hole with centralizers placed at the top and bottom of the screen. The ERTs and thermistor cables were taped to the outside of the permanent casing from 33.5 ft bgs to surface. 10-20 silica sand was added from 59.7 to 31.2 ft bgs. 40-140 sand was added from 31.2 ft bgs to 10.0 ft bgs. Granular bentonite was added to the hole from 10.0 ft to 3.0 ft bgs. All temporary casing was removed from the borehole.

**Current Depths (ft bgs)**

Bentonite pellets: 65.2 – 59.7

10-20 mesh silica sand: 59.7 – 31.2

40-140 mesh silica sand: 31.2 – 10.0

Granular bentonite: 10.0 – 3.0

20 ft pvc screen (0.020") and end cap: 58.3 – 33.0

4" ID pvc casing: 33.0– 5.2 ft ags

Borehole: 2.5

~~7 5/8" single wall temporary casing: 0~~

**Plan**

Monday final surface completion will be started for boreholes C6186, C6190, C6197, C6203, and C6208.

**Monday June 9, 2008**

**399-2-24**

**C6208**

## **Summary**

Attended POD. Well development was performed. The initial water level was 26.80 ft bgs. The pump was placed at 40.6 and 50.6 ft bgs and approximately 2860 gallons of water was pumped at rates from 50-80 gpm. A transducer was placed in C6208 and C6197 and drawdown/recovery data was collected on a datalogger while pumping from 50.6 ft bgs.

## **Final Parameters**

Turbidity(NTU):	3.61
pH:	7.84
Conductivity(uS/cm):	292
Temperature (C)	17.3
DO (mg/L)	9.00

## **Current Depths (ft bgs)**

Bentonite pellets: 65.2 – 59.7  
10-20 mesh silica sand: 59.7 – 31.2  
40-140 mesh silica sand: 31.2 – 10.0  
Granular bentonite: 10.0 – 3.0

20 ft pvc screen (0.020") and end cap: 58.3 – 33.0  
4" ID pvc casing: 33.0– 2.8 ft ags

Borehole: 2.5

## **Plan**

**Wednesday June 11, 2008**

**399-2-18**

**C6196**

**Site Activities**

Attend POD. Set the rig and equipment up on the location and resumed drilling. The borehole was advanced from 15 to 65 ft bgs and the casing was advanced from 18.7 to 60 ft bgs. The borehole reached total depth. Thirty-seven grab samples were collected.

RCT coverage was provided in the AM/PM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

The rig and equipment was mobed to C6201.

**Sampling Performed**

Thirty-seven samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 65.0  
7 5/8" single wall temporary casing 60  
Expected total depth = ~ 58  
Depth to water: 27.5

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-10	sandy gravel
10-17	gravelly sand
17-21	sandy gravel
21-22.5	silt
22.5-46	sandy gravel
46-56	gravelly sand
56-57	gravel
57-65	silt

**Plan**

Anticipate the well design. Begin drilling C6201.

**Thursday June 12, 2008**

**399-2-21**

**C6201**

**Site Activities**

Attend POD. The borehole was advanced from surface to 61.7 ft bgs and the casing was advanced from surface to 58 ft bgs. The borehole reached total depth. Thirty-two grab samples were collected.

RCT coverage was provided in the AM/PM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

The rig and equipment was mobed to C6195.

**Sampling Performed**

Thirty-two samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 61.7  
7 5/8" single wall temporary casing 58  
Expected total depth = ~ 58  
Depth to water:

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-6	sandy gravel
6-6.5	sand
6.5-17	sandy gravel
17-19	silty gravel
19-45	sandy gravel
45-55	gravelly sand
55-61.7	silt

**Plan**

Anticipate the well design. Complete drilling C6195.

**Thursday June 12, 2008**

**399-2-17**

**C6195**

**Site Activities**

Drill rig was moved to 6195 after TD on 6201. The borehole was advanced from surface to 30 ft bgs and the casing was advanced from surface to 25 ft bgs. 20 grab samples were collected.

RCT coverage was provided at the initial sample depth. All reading were reported as at or below background.

**Sampling Performed**

Twenty samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 30  
7 5/8" single wall temporary casing 25  
Expected total depth = ~ 58  
Depth to water: ~26.5

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-10	sandy gravel
10-15	sandy gravel
15-20	sandy gravel
20-25	sandy gravel
25-30	sandy gravel

**Plan**

Following the POD tomorrow morning, drilling will resume on this borehole. Anticipate a TD for this borehole tomorrow.

**Friday June 13, 2008**

**399-2-17**

**C6195**

**Site Activities**

Drilling activities resumed this morning at this borehole. The borehole was advanced to a TD of 63.0 ft bgs and the temporary casing was set at 59.5 ft bgs. 11 grab samples were collected.

RCT coverage was provided in the AM. All readings were at or below background.

The rig was moved to borehole C6191 after TD of this hole.

**Sampling Performed**

Eleven samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 63  
7 5/8" single wall temporary casing 59.5  
Expected total depth =  
Depth to water: 26.3

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-10	sandy gravel
10-15	sandy gravel
15-20	sandy gravel
20-25	sandy gravel
25-30	sandy gravel
30-35	sandy gravel
35-40	sandy gravel
45-50	gravelly sand
50-56.5	gravelly sand
56.5-63	silt

**Plan**

Awaiting well design. Drilling on C6191.

**Friday June 13, 2008**

**399-2-14**

**C6191**

**Site Activities**

Attend POD. Rig and equipment was set-up on the location. The borehole and casing was advanced from surface to 55 ft bgs. Thirty-seven grab samples were collected.

RCT coverage was provided in the AM/PM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

**Sampling Performed**

Thirty-seven samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 55  
7 5/8" single wall temporary casing 55  
Expected total depth = ~ 58  
Depth to water: ~ 26 ft

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-18	sandy gravel
18-20	silty gravel
20-28	sandy gravel
28-32	gravelly sand
32-33	silt
33-39	sandy gravel
39-40.5	silt
40.5-47	gravelly sand
47-52	gravel
52-55	silt

**Plan**

Complete drilling.

**Monday June 16, 2008**

**399-2-18**

**C6196**

### **Site Activities**

Completion activities were initiated on the borehole today. Bentonite pellets were added to the borehole to a depth of 58.5 ft bgs. When the casing was backpulled, it was discovered that the bentonite had bridged in the casing and plugged the hole. The driller attempted to knock the bentonite plug from the casing, but was unsuccessful.

### **Current Depths (ft bgs)**

Borehole ~60  
7 5/8" single wall temporary casing 55  
Depth to water:

### **Plan**

The drill rig which is currently on borehole C6200 will be moved to this hole after reaching TD of C6200. Well completion will continue after the borehole has been cleaned out, either tomorrow afternoon or Weds.

**Monday June 16, 2008**

**399-2-14**

**C6191**

**Site Activities**

Attend POD. The borehole was advanced from 55 to 58.5 ft bgs and the casing was advanced from 55 to 56 ft bgs. Three grab samples were collected. Total depth was reached.

RCT coverage was provided in the AM. The RCT reported readings at or below background. IH daily coverage was provided in the AM and the reading was less than detect.

Moved rig and equipment to C6200.

**Sampling Performed**

Three samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 58.5  
7 5/8" single wall temporary casing 56  
Expected total depth = ~ 58  
Depth to water: ~ 26 ft

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-18	sandy gravel
18-20	silty gravel
20-28	sandy gravel
28-32	gravelly sand
32-33	silt
33-39	sandy gravel
39-40.5	silt
40.5-47	gravelly sand
47-52	gravel
52-58.5	silt

**Plan**

Log borehole.

**Monday June 16, 2008**

**399-3-25**

**C6200**

**Site Activities**

Attend POD. Rig and equipment was set-up on the location. The borehole and casing was advanced from surface to 55 ft bgs. Thirty-three core samples (in lexan liners) and 2 grab samples were collected.

RCT coverage was provided in the AM/PM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

**Sampling Performed**

A total of thirty-five samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 55  
7 5/8" single wall temporary casing 55  
Expected total depth = ~ 58  
Depth to water: ~ 26 ft

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-18	sandy gravel
18-23	silty gravel
23-40	sandy gravel
40-44.5	gravelly sand
44.5-45	silt
45-55	sandy gravel

**Plan**

Complete drilling.

**Tuesday June 17, 2008**

**399-2-18**

**C6196**

### **Site Activities**

Following the POD this morning, the sonic rig moved from borehole 6201 to 6196 to clear out a bentonite plug in the casing. The completions rig was then moved back onto this borehole and completion activities were resumed.

The 4" ID pvc permanent casing and screen were tripped into the borehole. The ERTs and thermistors were taped to the outside of the casing from 33.5 ft bgs to surface. 10-20 silica sand was added from 58.7 to 30.7 ft bgs. 40-140 sand was added from 30.7 to 10.1 ft bgs and granular bentonite was added to the borehole from 10.1 to 3.0 ft bgs. All temporary casing was removed from the borehole.

### **Current Depths (ft bgs)**

Bentonite pellets: 63.2 – 58.7

10-20 mesh silica sand: 58.7 – 30.7

40-140 mesh silica sand: 30.7-10.1

Granular bentonite: 10.1 - 3.0

25 ft pvc screen (0.020") and end cap: 58.3 – 33.0

4" ID pvc casing: 33.0 – ~3.5 ft ags

Borehole: 3.0

~~7-5/8" single wall temporary casing: 0~~

### **Plan**

Well development is planned to take place Thursday, June 19.

**Tuesday June 17, 2008**

**399-3-25**

**C6200**

**Site Activities**

Attend POD. Resume drilling and advanced the borehole from 55 to 65 ft bgs and advanced the casing from 55 to 61 ft bgs. Total depth was reached. Ten core samples (in lexan liners) were collected.

RCT coverage was provided in the AM. The RCT reported readings at or below background.

**Sampling Performed**

A total of ten samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 65  
7 5/8" single wall temporary casing 61  
Expected total depth = ~ 58  
Depth to water: ~ 26 ft

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-18	sandy gravel
18-23	silty gravel
23-40	sandy gravel
40-44.5	gravelly sand
44.5-45	silt
45-57.5	sandy gravel
57.5-65	silt

**Plan**

Perform geophysical logging.

**Tuesday June 17, 2008**

**399-2-21**

**C6201**

### **Site Activities**

After finishing completions on borehole 6196, the rig was moved to hole 6201 for well completion.

Coated bentonite pellets were added to the borehole from 61.1 to 57.1 ft bgs. The 4" ID pvc permanent casing and screen was tripped into the borehole. The ERTs and thermistors were taped to the outside of the casing from 33.5 ft bgs to surface. 10-20 silica sand was added to the borehole from 57.1 to 39.2 ft bgs.

### **Current Depths (ft bgs)**

Bentonite pellets: 61.1 – 57.1

10-20 mesh silica sand: 57.1 – 39.2 (current)

25 ft pvc screen (0.020") and end cap: 56.4 – 31.1

4" ID pvc casing: 31.1 – ~5.5 ft ags

Borehole: 39.2

7 5/8" single wall temporary casing: 51

### **Plan**

Completion activities will resume tomorrow morning. The day will be cut short due to the monthly safety meeting and driller training to begin at 1200 PM.

**Tuesday June 17, 2008**

**399-2-12**

**C6189**

**Site Activities**

Attend POD. Rig and equipment was set-up on the location. The borehole was advanced from surface to 25 ft bgs and the casing was advanced from surface to 15 ft bgs. Twenty core samples in lexan liners were collected.

RCT coverage was provided in the PM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

**Sampling Performed**

Twenty samples were taken. A sample summary table will be prepared tomorrow.

**Current Depths (ft bgs)**

Borehole 25  
7 5/8" single wall temporary casing 15  
Expected total depth = ~ 58  
Depth to water:

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-17.5	sandy gravel
17.5-20	silty gravel
20-25	sandy gravel

**Plan**

Complete drilling.

**Wednesday June 18, 2008**

**399-2-21**

**C6201**

**Site Activities**

Well completion activities resumed following the morning POD.

10-20 silica sand was added to the borehole from 39.2 to 29.0 ft bgs. 40-140 sand was added to the borehole from 29.0 to 9.5 ft bgs and the granular bentonite was added from 9.5 to 2.5 ft bgs. The rig and jacks were then moved to borehole C6191 to begin completion there. All temporary casing was removed from the borehole.

In addition, it should be noted that centralizers were placed at the bottom and top of the 20-slot screen, and the sand pack was surged at two separate intervals.

**Current Depths (ft bgs)**

Bentonite pellets: 61.1 – 57.1

10-20 mesh silica sand: 57.1 – 29

40-140 mesh silica sand: 29 – 9.5

Granular bentonite: 9.5 – 2.5 (current)

25 ft pvc screen (0.020") and end cap: 56.4 – 31.1

4" ID pvc casing: 31.1 – ~5.5 ft ags

Borehole: 0

~~7-5/8" single wall temporary casing: 0~~

**Plan**

Well development is expected to occur tomorrow.

**Wednesday June 18, 2008**

**399-2-14**

**C6191**

### **Site Activities**

After finishing completions on borehole 6201, the rig was moved to hole 6191 for well completion.

While setting up the jacks and the completions rig on the borehole, the temporary casing was backpulled too far and the bottom of the borehole collapsed. The current depth is 2 feet less than what is needed to set the permanent screen, so the sonic rig will need to be moved over to drill out the bottom of the borehole. Today's safety meetings prevented this from occurring today, and it is expected to occur first thing tomorrow (Thursday) morning.

### **Current Depths (ft bgs)**

Borehole: 54.2

7 5/8" single wall temporary casing: 52

### **Plan**

The sonic rig will be moved to this hole to redrill the bottom 2-3 feet. Completion activities are expected to take place Friday, following development of wells 6201 and 6196.

**Wednesday June 18, 2008**

**399-2-12**

**C6189**

**Site Activities**

Attend POD. The borehole was advanced from 25 to 65 ft bgs and the casing was advanced from 15 to 59 ft bgs. Total depth was reached. Twenty-five core samples in lexan liners and 4 grab samples were collected.

RCT coverage was provided in the AM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

Shut down early for training.

**Sampling Performed**

Twenty samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 65  
7 5/8" single wall temporary casing 59  
Expected total depth = ~ 58  
Depth to water: 26.5 est

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-17.5	sandy gravel
17.5-31	silty gravel
31-51	gravelly sand
51-52	gravel
52-60	silt
60-65	sandy silt

**Plan**

Mobilize to next location and perform geophysical logging on this borehole.

**Thursday June 19, 2008**

**399-2-31**

**C6218**

**Site Activities**

Attend POD. Rig and equipment was set-up on the location. The borehole and casing was advanced from surface to 25 ft bgs. Eleven grab samples were collected. Crew participated in a take cover drill in the morning.

RCT coverage was provided in the PM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

**Sampling Performed**

A total of 11 grab samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 25  
7 5/8" single wall temporary casing 25  
Expected total depth = ~ 58  
Depth to water: ~ 26 ft

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-3	sandy gravel
3-4.5	silty gravel
4.5-10	sandy gravel
10-25	sandy gravel

**Plan**

Complete drilling.

Thursday June 19, 2008

399-2-18

C6196

### Site Activities

Well development activities took place on this well today. Both the pump and the tremmie used were pulled out of the well.

#### Well Development Summary:

	<b>XD Initial</b>	<b>XD Final</b>	<b>Final Conductivity</b>	<b>Final pH</b>	<b>Starting Turbidity</b>	<b>Final Turbidity</b>	<b>Intake Depth (BGS)</b>	<b>Total Pumped</b>
<b>Test 1:</b>	3.238	3.243	367	7.69	53.7	5.12	40.0	1825
<b>Test 2:</b>	3.270	3.291	393	7.69	26.5	2.45	50.0	1332

It should be noted that well development was monitored in well C6197 (399-2-19) during test #2 as well. Initial xD was 3.427 and final was 3.436. This data was recorded on transducer 5218.

	<b>Static Water Level (BGS)</b>	<b>Depth to Bottom (BGS)</b>
Start of Job:	26.15	58.6
End of Job:	26.35	58.6

### Current Depths (ft bgs)

Bentonite pellets: 63.2 – 58.7  
10-20 mesh silica sand: 58.7 – 30.7  
40-140 mesh silica sand: 30.7-10.1  
Granular bentonite: 10.1 - 3.0

25 ft pvc screen (0.020") and end cap: 58.6 – 33.3  
4" ID pvc casing: 33.0 – ~3.5 ft ags

Borehole: 3.0  
7 5/8" single wall temporary casing: 0

### Plan

No more work is scheduled for this well until development and completion activities are finished with other wells. The cement pad and vault still need to be installed.

Thursday June 19, 2008

399-2-21

C6201

### Site Activities

Well development activities took place on this well today. Both the pump and the tremmie used were pulled out of the well.

#### Well Development Summary:

	<b>XD Initial</b>	<b>XD Final</b>	<b>Final Conductivity</b>	<b>Final pH</b>	<b>Starting Turbidity</b>	<b>Final Turbidity</b>	<b>Intake Depth (BGS)</b>	<b>Total Pumped</b>
<b>Test 1:</b>	3.113	3.136	345	7.70	4.26	0.98	40.0	2050
<b>Test 2:</b>	3.037	3.059	380	7.80	22.8	5.20	50.0	975

It should be noted that well development was monitored in well C6197 (399-2-19) during test #2 as well. Initial xD was 3.408 and final was 3.404. This data was recorded on transducer 5218.

	<b>Static Water Level (BGS)</b>	<b>Depth to Bottom (BGS)</b>
Start of Job:	26.5	56.3
End of Job:	26.3	56.3

### Current Depths (ft bgs)

Bentonite pellets: 61.1 – 57.1  
10-20 mesh silica sand: 57.1 – 29  
40-140 mesh silica sand: 29 – 9.5  
Granular bentonite: 9.5 – 2.5 (current)

25 ft pvc screen (0.020") and end cap: 56.3 – 31.0  
4" ID pvc casing: 31.1 – ~5.5 ft ags

Borehole: 3  
~~7 5/8" single wall temporary casing: 0~~

### Plan

No more work is scheduled for this well until development and completion activities are finished with other wells. The cement pad and vault still need to be installed.

**Friday June 20, 2008**

**399-2-14**

**C6191**

### **Site Activities**

Completion activities were initiated on this borehole this morning. Coated bentonite pellets were added to the borehole from a depth of 61.7 ft bgs to 56.0 ft bgs. The permanent 4" pvc screen and casing was tripped into the borehole, and the thermistors and ERTs were taped to the outside of the screen and casing from 33.5 ft bgs to surface. 10-20 silica sand was added to the borehole from 56.0 ft bgs to the current depth of 29 ft bgs.

Centralizers were placed at the top and bottom of the screen. The screen was surged at the lower interval, but surging will need to be continued Monday morning because the sand pack for the screen has not finished settling.

### **Current Depths (ft bgs)**

Bentonite pellets: 61.7 – 56.0

10-20 silica sand: 56.0 – 29.0 (current)

25 ft pvc screen (0.020") and end cap: 56.0 – 30.7

4" ID pvc casing: 30.7 – ~5.5 ft ags

Borehole: 29 (current)

7 5/8" single wall temporary casing: 35

### **Plan**

Surging of the screen will continue first thing Monday morning. Completion activities will resume and well development may also occur Monday afternoon.

**Friday June 20, 2008**

**399-3-31**

**C6214**

**Site Activities**

Attend POD. Rig and equipment was set-up on the location. The borehole was advanced from surface to 25 ft bgs and the casing was advanced from surface to 15 ft bgs. Fifteen grab samples were collected.

RCT coverage was provided in the PM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

**Sampling Performed**

A total of 15 grab samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 25  
7 5/8" single wall temporary casing 15  
Expected total depth = ~ 58  
Depth to water: ~ 26 ft

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-11.5	sandy gravel
11.5-18	gravelly sand
18-20.5	silty gravel
20.5-25	sandy gravel

**Plan**

Complete drilling.

**Friday June 20, 2008**

**399-2-31**

**C6218**

**Site Activities**

Attend POD. Resume drilling. The borehole was advanced 25 to 63 ft bgs and casing was advanced from 25 to 59 ft bgs. Total depth was reached. Sixteen grab samples were collected.

RCT coverage was provided in the AM. The RCT reported readings at or below background. IH daily coverage was provided and the reading was less than detect.

**Sampling Performed**

A total of 16 grab samples were taken. A sample summary table is attached.

**Current Depths (ft bgs)**

Borehole 63  
7 5/8" single wall temporary casing 59  
Expected total depth = ~ 58  
Depth to water: ~ 26 ft

**Borehole Log Summary (ft bgs)**

0-0.5	gravel drill pad
0.5-3	sandy gravel
3-4.5	silty gravel
4.5-10	sandy gravel
10-25	sandy gravel
25-35	gravel
35-55.5	sandy gravel
55.5-63	silt

**Plan**

Perform geophysical logging and install well.