



OGMCOAL DNR <ogmcoal@utah.gov>

Fwd: Coal Hollow wells to east of HWT 2 experiencing drawdown

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To: Dana Dean <danadean@utah.gov>, OGMCOAL DNR <ogmcoal@utah.gov>

Here's a quick analysis of the wells monitoring the alluvial aquifer to the east of HWT 2 at Coal Hollow. I've sent this to tech group for Coal Hollow and was asked to send it your way as well.

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C2_C3_C4_wells near HWT 2.docx
7523K

Coal Hollow Weekly Highwall monitoring June 16, 2014 to August 14, 2015

Alton Coal's MRP required increased monitoring frequency for a group of springs and wells in the Dames Lease area or to the east of the highwall trenches. The springs and C2, C3, and C4 wells were monitored weekly from June 2014 to mid-August 2015, or beginning one month prior to highwall mining and ending one month after highwall mining in the area. The monitoring schedule is now scaled back to monthly measurements for the next six months.

The C3 and C4 well groups have experienced a dramatic drop in water levels beginning in mid-July 2015 and the water levels have not recovered (see graphs below). This drop is most likely caused by the nearby mining activity where the shallow alluvial aquifer is allowed to drain into HWT 2. The group of monitored springs with water rights do not appear to be experiencing a loss in flow due to the highwall mining activities. This is not to say that they may experience a loss in flow in the future. The wells showed a roughly one month delay in response to mining activities because of the aquifer's low hydraulic conductivity, so the springs may see reduced flow in the near future.

At this time the Division asked the Permittee in mid-August to provide a report analyzing the total volume of flow that is discharging from the alluvial aquifer into the HWT, but the Division has yet to receive one. The HWT is actively being backfilled, but it is likely the undisturbed alluvial aquifer will continue to drain into the dry backfilled sediments until the sediments are fully saturated and a stable water table is re-established in the backfill. It will be necessary to monitor the groundwater conditions of the backfilled sediments until the alluvial aquifer reaches a stable equilibrium. I propose to require the Permittee to install a monitoring well in the backfill that is screened to the depth of HWT 2.

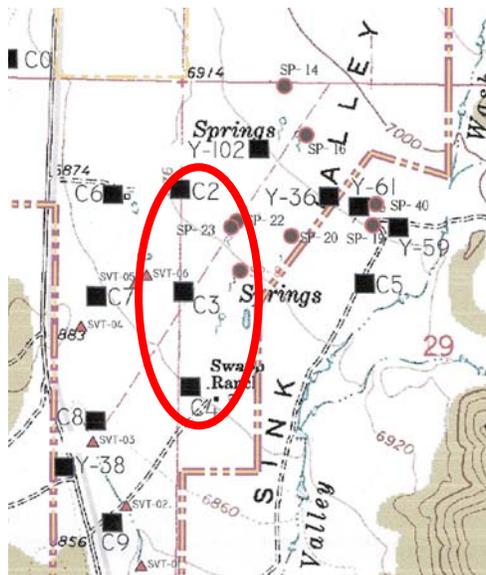
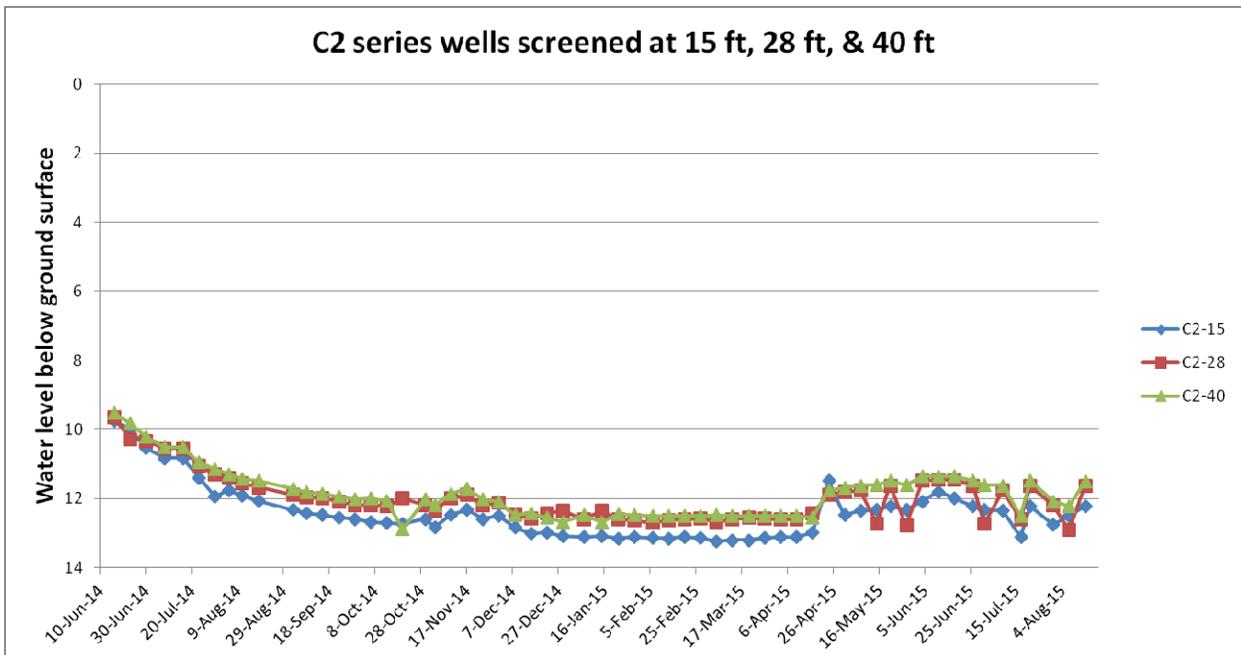


Figure 1: Location of C2, C3, and C4 series wells in south lease area of Coal Hollow.

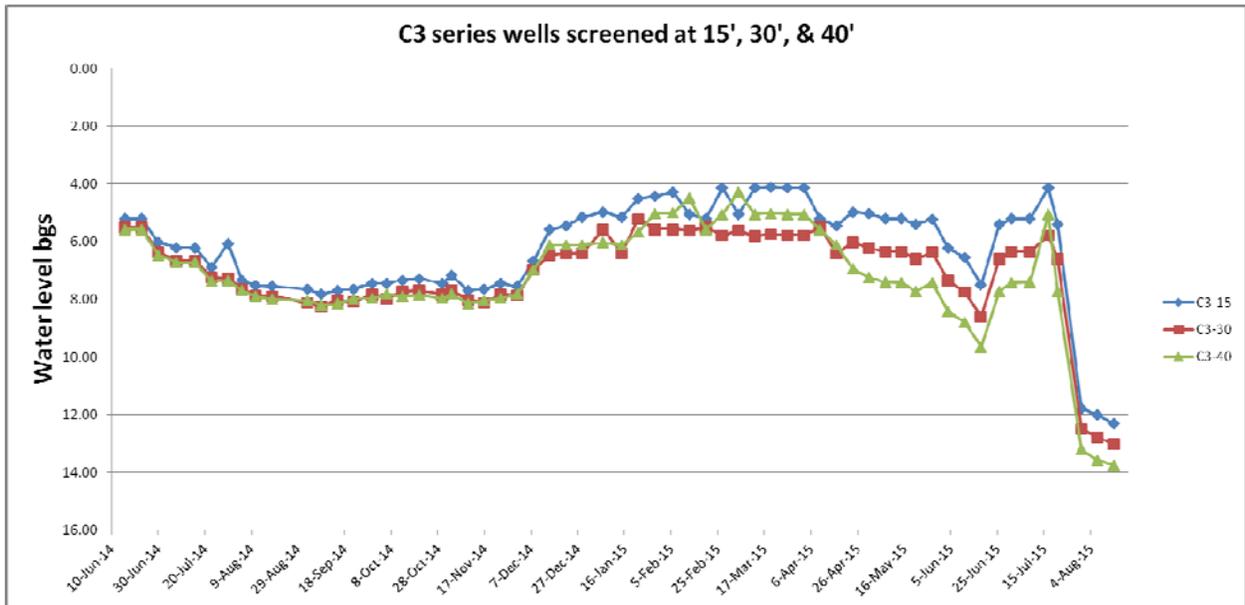


C2 wells are ~100 yds from edge of setback for Pit 10.





C3 wells are ~75 yds from edge of setback for highwall trench 2





C4 wells are ~200 yds from edge of setback for highwall trench 2 ½

