

Snow Consulting & Services, Inc

**Daily Reports for
Bureau of Land Management
Diamond Wells**

Federal 5-15

Report Dates

November 6, 2017

Thru

November 9, 2017

And

November 27, 2017

Thru

November 29, 2017

November 6, 2017 Monday

MI, RU Monument well Service Rig #27 TP 600 psi, CP 550 psi Pumped 10 bbls into tbg, pumped 30 bbls in casing. ND tree, Pulled hanger, continued pumping a trickle of water into casing. Pulled on tbg, 15,000# over string and pulled seal assembly out of packer. NU BOP. POOH, laid down 118 jts tbg, seal assembly. Sdfn.

November 7, 2017 Tuesday

CP 300 psi, Top killed well with 15 bbls. PU 5-1/2 casing scraper and work string. RIH to tag at 3750' POOH, RIH 5-1/2" CICR and set at 3745' Pressured to 2500 psi and pumped into perfs, several minutes to break down and establish injection rate of 3 bpm at 1000 psi, Mixed and pumped 60 sks Class B cement @ 15.6 ppg, displaced with 12.5 bbls water, final pump in 1/2 bpm at 2500 psi, sting out of retainer with 50 sks below and left 10 sks on top. POOH with tbg. PU 5-1/2" CICR, RIH and set at 3199' Pressured Perfs to 2500 psi and injected water at 1/4 bpm 5 minutes. Surged back pressure and pumped into perfs Broke back to 3 bpm at 1400 psi. Mixed and pumped 80 sks class B cement Displaced and squeezed to 1400 psi with 10.5 bbls water 70 sks below retainer and 10 sks on top. Pulled 4 joints and reverse circulated well full of 9.3 ppg brine water. POOH with 10 jts tbg. Sdfn.

November 8, 2017 Wednesday

Laid down work string to 230'. Mixed and spotted 12 sks class B cement in 5-1/2 casing. Laid down work string. RD SU and moved off location. Dug up well head and found plus or minus 200 psi on Braden Head. **Consulted BLM representative** Bled off gas to tank. **(fairly large volume)** Mixed and pumped 35 sks Class B and pumped into surface casing, flushed with 1 bbl and left SI for the night.

November 9, 2017 Thursday

Surface casing on a vacuum. Cut off well head. Mixed 80 sks Class B, pumped 7 sks into 5-1/2 casing thru 1" tbg. pumped remainder into surface casing. WOC 4 hrs. Mixed and pumped 25 sks Class B with 4% Cacl-2, WOC 1 hr. Mixed and pumped 45 sks into surface csg, WOC overnight.

November 10, 2017 Friday

Wait for Orders, Move equipment off, finish at a later date

November 27, 2017 Monday

MI cement mixer, cement, water, reverse tank.

String tagged cement at 450' **Consulted BLM representative,** Mixed and pumped a 35 sk plug and pumped into casing and WOC overnight.

November 28, 2017 Tuesday

String tag cement at 270' Mixed and pumped 35 sks with 3% cacl-2 and pumped into surface casing. WOC for 1 hr. String tag cement at 90' Mixed and pumped 13 sks into surface casing, top of cement about 10' hand mixed 1 sk to fill up surface casing, Installed dry hole marker. Cleaned up location and moved equipment off of the location.

November 29, 2017 Wednesday

MI track hoe and back filled cellar and mob equipment off location .

Inspection Remarks

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|-------------------------|-------------------------|---------------------------------|--|---------------------|----------------------------|----------------------------|----------------|
| Case Number COC35037 | Type 312011 | Case Name COC35037 | Operator DIAMOND OPERATIONS GROUP LTD | | | | |
| Insp Type PD | Open Date 11/06/2017 | Close Date 11/09/2017 | | | | | |
| Identifier PD | Date 11/09/2017 | Author ALEXANDER PROVSTGAARD | Subject INSP | Category GENERAL | API / Fac ID 0504506401 | Well / Fac Name FEDERAL | Number 5-15 |
| | | | | | | | |
| Category | GENERAL | | | | | | |
| Date | 11/09/2017 | | | | | | |

November 7, 2017
630: Arrive on location Rig is warming up.
730: Run in hole with a scraper tool and tricone bit to dress and clean the inside of the 5.5" production casing.
740: Got low pressure water returns up the tubing. Shut down operations and installed TIW onto tubing and closed TIW. Opened backside valve and observed low pressure water returns. Observed for less than five minutes and water returns ceased. Determined that water was being displaced from the casing bore up the tubing via the "u-tubing" effect. Continued to run tubing into the 5.5" bore for scraper run.
1000: tagged depth at 3750' with 118 joints of tubing in. Began to pull tubing out of the well. Laid down two 2 joints and put the rest in the pipe rack.
1100: Install and run in cast iron cement retainer (CICR) to a depth of 3750'.
1230: tried to establish injection, but could not. Pressure rose and fell. Pumped down tubing to try to break over perforations several times. Filled tubing and casing volume from top of perforations to CICR then pumped at a higher rate of velocity very quickly to slam open perforations. Perforations broke open at 2500 psi and injection was established at .5 bbl/minute.
1250: started pumping 60 sacks of Class G 15.8 ppg cement. Pumped 10.2 bbl of slurry under the CICR, left 2 bbl slurry in the tubing. Stung out of CICR and displaced with 13 bbl of water to clean out the tubing and place 10 sacks worth of cement on top of the CICR.
1330: Pulled tubing out of well to run the next plug at 3200'.
1430: Installed second CICR and ran into well to a depth of 3200'.
1530: Tried to establish injection rate and had difficulty. Pressured up to 2500 psi and quickly bled off pressure to blow down tank. Began pumping again and established injection at 1800 psi at .5 bbl/minute. Began pumping 80 sacks of cement. Placed 14.3 bbl. of slurry beneath the CICR and left 2 bbl. of slurry in the tubing. Stung out of CICR and displaced with 10.3 bbl. of water leaving 10 sacks worth of cement slurry on top to the CICR.
1620: Pulled and laid down three joints of tubing, then began to fill the casing bore to surface with 9 ppg KCL salt solution as per approval by BLM engineer.
1650: Finished pumping salt solution and began pulling all tubing out of the well. Placed 6 joints in the pipe racks and laid down the rest.
1715: Shut in and secured well for the night. Left location.

November 8, 2017
630: Arrive on location, rig warming up. No pressure on well.
700: Pull out all tubing and remove stinger tool.
800: Run in well to tag top of fluid level after calculating the displacement of the workstring.
830: Ran tubing to a depth of 255' and did not tag fluid, circulated with water to raise fluid level so we could balance cement.
840: circulated 5.5 bbl. and saw returns to surface. Began mixing and pumping 12 sacks of cement.
850: Pumped 2.5 bbl. of cement slurry and .8 bbl. of flush, no pressure observed throughout job.
900: Pull tubing and begin to rig down workover and BOPE.
1030: Began digging out around well head.
1045: Noticed gas bubbles at hammer union that attached well head to 8 5/8" surface casing. Dug out ball valve in surface casing and bled pressure off of surface and production casings annulus. Pressure was approximately 200 psi and bled off for three to four minutes. Left ball valve open to vent off. No fluid returns only gas was noticed.
1115: contacted BLM engineer to come up with a plan to mitigate gas. It was decided to run a 35 sack kill slug of cement down the annulus and then WOC overnight and recheck the pressure.
1130: Pumped 7.2 bbl. of class G cement and flushed with 1 bbl. to clean out surface lines. No pressure noticed throughout job. After pumping, removed line and opened ball valve to find annulus on a vacuum. Closed valve and continued rig down and move out to the National 1 well, leaving cement pumping equipment on the 5-15 location to finish top out tomorrow.

November 9 2017.
630: Arrived on location. Opened Backside valve for annular space between 8 5/8" and 5.5" casings. The annulus was still on a vacuum. Equalized vacuum for approximately 20 seconds.
705: Start cutting off wellhead.
745: Begin pumping cement into 5.5" casing using 1" line of approximately 50' length. 5.5" casing took Approx. 7 sacks of cement to top out. Placed 73 sacks in annulus between casings and did not reach surface. Cleaned up surface lines and WOC.
820: Decided to WOC for 4 hours and then pump a 25 sack cement pill with 4% KCL salt to accelerate the curing process so the cement thickens to bridge off the hole, crack, or broken formation that is sucking up cement.
1400: Begin mixing and pumping 25 sacks class G 15.8 ppg. cement with 4% KCL. Calculated coverage of approximately 150 ft inside the annulus between casings. Cleaned up surface lines and WOC 1 hr then re-asses TOC depth.
1515: Attempted to check TOC depth. Mixed and pumped 45 sacks Class G 15.8 ppg cement with no KCL salt to try to bring cement to surface. After pumping, cement still did not reach surface. Cleaned surface lines and WOC over weekend. Passed witnessing on to E. Fancher.
1600: Left location