

**Reference Area Photographs**  
**Inspections Conducted on**  
**October 5,6,and 11 , 2016**

**Hunter Ridge Energy Services #10442**  
**A27 CDP (Centralized Distribution Point )**  
**6" Transfer Line**  
**Spill/Release Point ID #446199**

## Hunter Ridge A27 CDP Pipeline Spill



Looking North (downgradient). Yellow marker identifies monitoring well locations. At the distance, drilling new set of MWs (approximately 20) to complete Site Assessment.



Rotosonic drilling rig . Most monitoring wells completed with 4" PVC pipes to be used for monitoring and remediation purpose.



## Hunter Ridge A27 CDP Pipeline Spill



Drilling activities



Recovering core samples



## Hunter Ridge A27 CDP Pipeline Spill



Geologist analyzing core samples. Mostly fine poorly cemented sandstone observed on MWs drilled on the west and east flanks of the valley. Rotasonic vibration pulverizes poorly cemented sandstone. Looks like sand...



Bedrock of hard sandstone on MW-19 (west side of the gulch). Depending on location and elevation, well depth between 50 and 70 feet, typically about 10 to 20 feet of water in well.



## Hunter Ridge A27 CDP Pipeline Spill



Moving south on west side of gulch to next MW location, closer to A27 pipeline spill location.



Driving the rig by remote control to next drilling location



## Hunter Ridge A27 CDP Pipeline Spill



Developing (first installed) MW20, first of this round of approximately 20.  
See free product recovered during bailing.



Dark free product on top and a distinguishable (about 2 inches) lighter layer of fluid floating on top of water

## Hunter Ridge A27 CDP Pipeline Spill



Buckets filled with water during well development.



Free product has an orange color. Compare color with clay on last slide of this presentation.



## Hunter Ridge A27 CDP Pipeline Spill



Looking west: From east to west, MW 12, MW11, S03, and S03W. According to Encana records, MW12 has no product; MW11, S03, and S03W do have free product.



Looking west. Drilling MW13 on east side of creek. Yellow marker on MW-S03A (immediately west of creek). MW20 at the distance on west side of the gulch.



## Hunter Ridge A27 CDP Pipeline Spill



A tick layer of clayey soil (orange) was observed at approximately 30 to 40 feet.



Color of wet clay is similar to free product from previous slide. Also similar to the color observed lately on the streambed, immediately downstream of the impacted springs.