

***Marick 1A***

API #05-121-08461

Ground level = 4799'

Perfs = 4318'-4321'

Casing = 5 ½"

PBTD = 4342'

ESP= 3,986'

***Impetro Resources LLC***

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**This is to notice that Impetro Resources has purchased the subject lease and is moving forward with Phase II of the process review. Original Process Review is shown below on page two of this document.**

**Phase II Plan: Reducing Rate**

- Options to upsize the facility were evaluated and the risk associated with additional fluid handling on surface was discussed with Rob Young. It was determined that a downsize of the pump so that the existing facility can effectively separate oil from water was a better option (however more expensive) than adding fluid capacity on surface.
- Impetro Resources LLC operates other leases in the area with ESP's and similar fluid properties. The analogue lease is the Loudder lease near Anton, CO. Based off review of this analogue lease it was determined that the fluid rates for effective retention time and separation utilizing the existing facility layout at the subject Marick 1A is approximately 1,000 BPD of total fluid.
- Impetro Resources LLC will remove the existing ESP and run a smaller ESP designed to move 1,000 BPD of total fluid.
- The well will be restarted utilizing a smaller pump, and results will be closely monitored by field personnel.

## **PROCESS REVIEW – COGCC Document #401761628**

Marick 1A was shut in since 9/1/2018 and PO&G Operating is currently working to remediate the oil carryover problem that was documented on August 1, 2018.

### **Timeline:**

9/1/2018: Marick 1A was SI due to evaporation pits reaching max capacity.

9/5/2018: Robert young filed COGCC field inspection report from August 1, 2018 documenting oil carry over into the Marick 1A skim pit.

9/7/2018: As the pits were dropping we noticed that there was a bathtub ring of hydrocarbons along the dried banks that would contaminate the water. Roustabout crew removed hydrocarbon ring to prevent future contaminations.

### **Phase 1: Chemicals (Increased treating rate in conjunction with new Demulsifier)**

*Start Date: ~September 15, 2018*

- 2X/Month batch treatments down backside of well with demulsifier 2491
- Confirm that oil/water levels in FWKO/HT are appropriately set
- Once well reaches steady state conduct Millipore analysis on both vessels water legs to determine if any oil is being carried over to water tanks
- If we continue to face oil carrying over into the pit we will move into phase 2 that incorporates facility upsizing & reducing rate

### **Phase 2: Facility Upsizing / Reducing Rate**

- Facility Upsizing
  - Install larger/secondary FWKO to increase retention time
- Decrease rate of ESP
  - Install VFD to slow down ESP
  - Install smaller ESP
  - Change artificial lift method

Attachments:

**(1) Marick 1A Facility Overview**