

## Stuart Ellsworth - DNR

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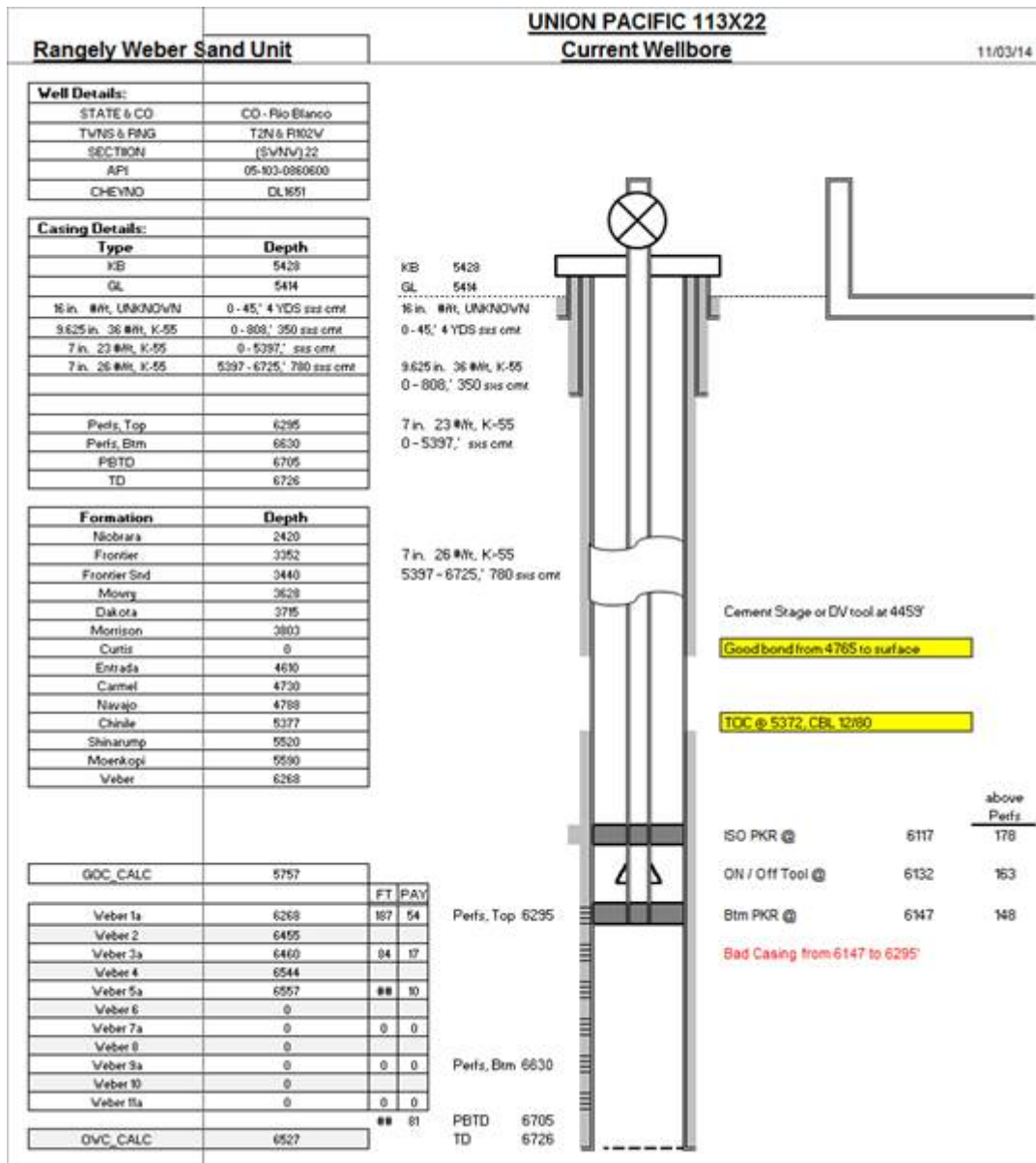
**From:** Cramer, Roy W. (RoyCramer)  
**Sent:** Tuesday, March 03, 2015 12:32 PM  
**To:** stuart.ellsworth@state.co.us; Bob.Koehler@state.co.us  
**Subject:** FW: RWSU Monitor Wells

**Flag Status:** Flagged

Stuart & Bob;

I talked to you this morning about the Union Pacific 113X22, API# 05-103-0860600 and want to ensure that we can move forward.

1. We are working on Union Pacific 113X22. The plan is to remove the rod equipment, secure the well with a packer & use as a monitor well.
2. We cannot get a packer seat within 100' of the top perforation because of poor casing. We have pre-tested the casing from 6147' to surface at 360 psi and the top perforation is at 6295.
3. I am requesting a variance in the packer setting depth. I estimate the Isolation Packer to be at ~6117' or ~178' above the top perforation.



4.

**From:** Cramer, Roy W. (RoyCramer)  
**Sent:** Monday, January 26, 2015 1:03 PM  
**To:** 'stuart.ellsworth@state.co.us'; 'Bob.Koehler@state.co.us'  
**Cc:** Woodward, Erik A; Allred, Luke C. (LUCI); Peterson, Diane L. (DLPE)  
**Subject:** RWSU Monitor Wells

Stewart and Bob;

Thank you for discussing our SI/TA wells in the Rangely Weber Sand Unit (RWSU):  
 Wellbores that are not useful for processing the Weber Sand Unit will be plugged and abandoned in a timely manner.  
 We have many idle wellbores that will be useful to future operations and development opportunities. Our mutual  
 objective is to secure the wellbores to ensure the Weber Formation fluids and pressures are contained and to prevent  
 loss of fluids into the shallower formations. I would like to change the status of many of the RWSU TA wells to monitor  
 wells. These are the steps that I propose:

- Secure the well:
  1. Install an isolation packer as close to the top perforation as possible.
  2. Circulate a packer fluid with Corrosion Inhibitor, Biocide & Oxygen Scavenger into the tubing / casing annulus.
  3. Perform a mechanical integrity test (MIT) on the tubing / casing Annulus at 300 psi for 15 minutes with

maximum 10% pressure change.

4. Install retrievable tubing plug in the tubing near the isolation packer.

- Monitoring:

1. Complete a Mechanical Integrity Test (MIT) at 300 psi on a 5 years interval thereafter.
2. Pull the tubing plug and record a static bottom hole pressure (BHP) every 2 years.
3. This minimizes shutting in active injection wells to secure BHPs

- Change of Well status and return to service:

1. When the well is returned to service an MIT will be performed and the appropriate reporting will be submitted:
2. MIT for producing wells: ESP, Rod & flowing wells at 300 psi for 15 minutes with less than 10% pressure change.
3. MIT for injection wells: Pressure test at 1200 psi for 15 minutes with less than 10% pressure change and drop to 1200 psi for subsequent MITs.
4. MIT for new injection wells: Pressure test at 2200 psi for 15 minutes with less than 10% pressure change and drop to 1200 psi for subsequent MITs.

## Example Monitor Well

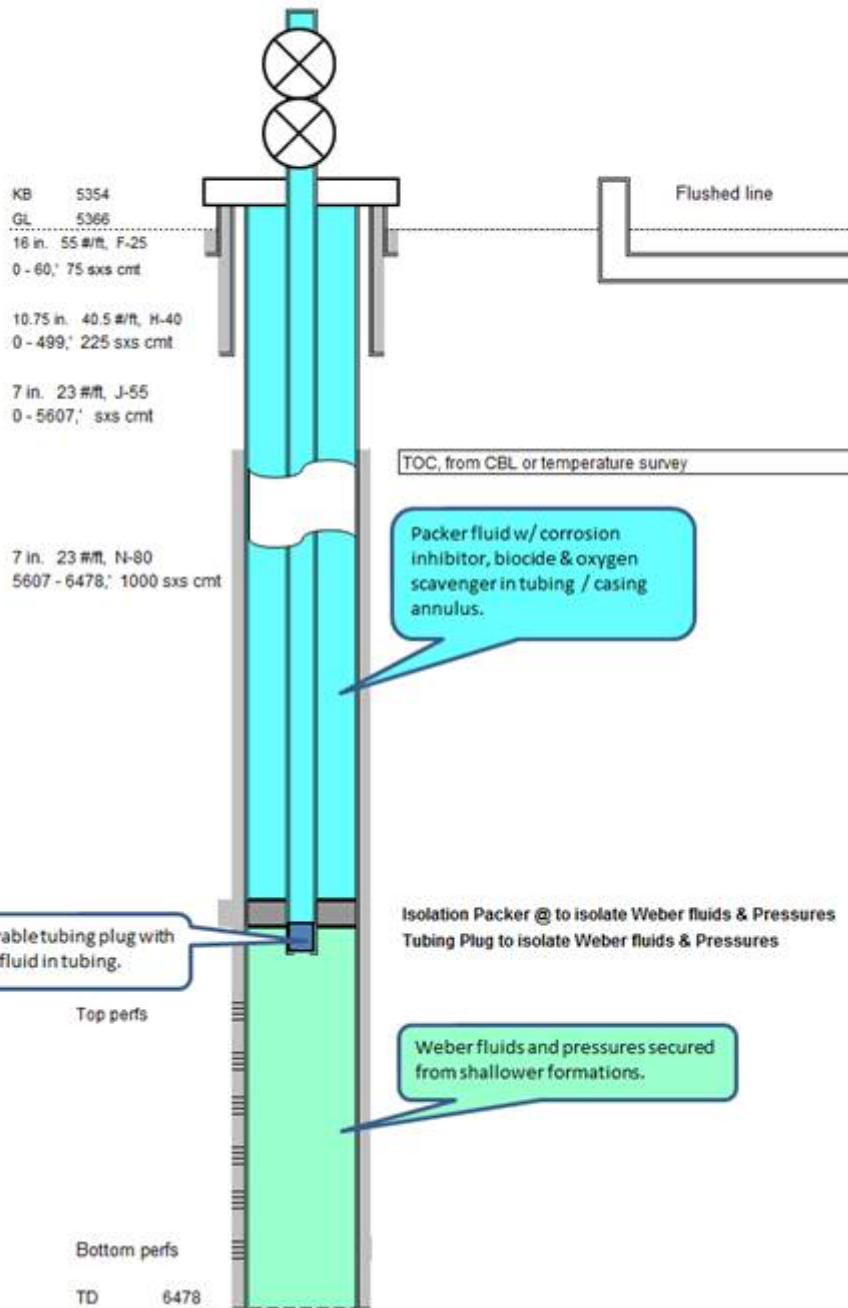
### Rangely Weber Sand Unit

Well Details:	
STATE & CO	CO - Rio Blanco
TWNS & RNG	T2N & R102W
SECTION	(NENE) 21
API	05-103-0616600
CHEVNO	DE5470

Casing Details:	
Type	Depth
KB	5354
GL	5366
16 in. 55 #/ft, F-25	0 - 60,' 75 sxs cmt
10.75 in. 40.5 #/ft, H-40	0 - 499,' 225 sxs cmt
7 in. 23 #/ft, J-55	0 - 5607,' sxs cmt
7 in. 23 #/ft, N-80	5607 - 6478,' 1000 sxs cmt
Top perfs	
Bottom perfs	
PSTD	6478
TD	6478

Formation	Depth
Niobrara	2469
Frontier	3402
Frontier Snd	3485
Mowry	3674
Dakota	3760
Morrison	3858
Curtis	4508
Entrada	4660
Carmel	4820
Navajo	4872
Chinle	5434
Shinarump	5572
Moenkopi	0
Weber	6317

GOC_CALC	5896
Weber 1a	6317
Weber 2	0
Weber 3a	0
Weber 4	0
Weber 5a	0
Weber 6	0
Weber 7a	0
Weber 8	0
Weber 9a	0
Weber 10	0
Weber 11a	0
OWC_CALC	6466



**Roy Cramer**

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## ***Roy Cramer***

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