

WELL NAME: Government #5

API NUMBER: 05-103-07618

FIELD/COUNTY/STATE: Rangely, Rio Blanco County, CO

LOCATION: 400' FSL & 660' FEL SESE Sec 24-T2N-R102W

DATE: 07/31/2019

ENGINEER/ SUPERVISOR: Edith Difima, Tyson Dunham

PROCEDURE: Wellbore Clean Up and RTP

SUMMARY: Pump Chemicals + Produced Water at matrix rates and pressures, displacing chemicals into perforated zone down the annulus, soak for 72hours, and RTP.

VALKYRIE RESOURCES CONTACTS:

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HS&E

This workover does not introduce any new equipment, materials or process hazards.

PROCEDURE:

- 1) Inspect area for safety hazards. Hold safety meeting to discuss operation
- 2) Check pressure on surface casing valve. If surface casing pressure and intermediate casing pressure are equal, notify Office for updated procedure to replace wellhead seals.
- 3) Blow well down to production equipment or tank.
- 4) Pressure test tubing.
- 5) Pressure test annulus casing-tubing.
- 6) MI Valkyrie Vac Truck
- 7) Pump chemical mix and flush through the annulus with produced water from the lease. (See volumes and composition on the table below). Leave for 72 hours. RTP.

CAS#	Chemical	Product	Per 1,000 gals	Total Job Vol. gals
	H2O	Produced Water	993	3360
99439-28-8	Silicon Dioxide Water	SiLo	4.9	15
Mixture	Nonionic Microemulsion Surfactant	MICROSURF N	2.1	7
1355146-10-6	Micro Biocide	BUSAN 1059 WS	N/A	5#
8002 09 3	Organic Pine Oil	Sylvapine CRDB	990	504
Mixture	Oil Soluble Surfactant	OSS-1	4.9	2.5
Mixture	Paraffin Inhibitor	OPI-2522	4.9	2.5

CAS #	Microsurf N Mixture
67 63 0	Isopropyl Alcohol 5-15%
104 76 7	2 Ethyl hexanol 10-25%
111 76 2	2 Butoxyethanol 35-55%
100 54 3	EO/PO Alcohol 5-15%

CAS #	OSS-1 Mixture
1330 20 7	Xylene 30-40%
108 88 3	Toluene 30-40%
110 82 7	Cyclohexane 5-15%
26264 05 1	Alkyl aryl Sulfonates 5-15%
100 54 3	Hexane 5-15%
104 76 7	2-Ethylhexanol 0-10%
64742 9 6	Solvent naphtha, Petrol, Light Aromatic
95 63 6	Benzene, 1,2,4,-trimethyl 0-5%

CAS #	OPI 2522 Mixture
1330-20-7	Xylene 60-100%
100-41-4	Ethylbenzene 10-30 %
64742-47-8	Petroleum Distillate 5-10%
98-82-8	Cumene 0-1%

OPERATIONAL PRESSURE

Max injection pressure (pumping pressure): < 1,000psi

Flowback disposal program / description: There will be no flowback during the well cleaning/enhancement process.