



BJ Services Company —Treatment Report

Date FEB. 9, 1998 District BRIGHTON F. Receipt 083716 Operator PATINA OIL & GAS
 Lease DALE Well No. #1 Field _____ Location SEC 20-T2N-R64W
 County WELD State CO. Stage Number 1 This Zone ☐ This Well ☐

WELL DATA OG ☐ NG ☐ NO ☐ OO ☐ WD ☐ IW ☐ Misc. ☐ Depth TD/PB _____ Formation J SAND
 Tubing Size 2 7/8 WT. 6.5# Set at: 7600' Type Packer RETREIVABLE Set At 7600'
 Casing Size 4 1/2 WT. 11.6# Set From SURFACE To TD Liner Size N/A Wt. N/A
 Liner Set From N/A To N/A Open Hole: Size N/A From N/A To N/A Casing Perforations: Size _____
 Holes Per Foot 30 Intervals 7652-58 7672-79 7682-89
 Previous Treatment N/A Prior Production N/A

TREATMENT DATA Pad Used: Yes ☐ No ☐ Pad Type VIKING ID 35
 Treating Fluid Type: Foam ☐ Water ☐ Acid ☐ Oil ☐ Treat. Fluid Vol. 104,328 Gal.
 Base Fluid Type H₂O 2% KCL Base Fluid Vol. 136,248 Gal.
 Foam Qual.: 20 % Mitchell ☐ Slurry ☐ Surface ☐ Downhole ☐ Total Prop Qty. _____ Lbs.
 Prop Type: Sand ☐ WP-1 ☐ WP-3 ☐ Baux. ☐ Other _____
 Prop Mesh Sizes, Types and Quantities 20/40 WHITE 492,000 lbs.
 Hole Loaded With VIKING ID 30 Treat Via: Tubing ☒ Casing ☐ Anul. ☐ Tubing & Anul. ☐
 Ball Sealers: N/A In N/A Stages of N/A
 Types and Number of Pumps Used 4 Hrc Master Pumps - 2 High Rates N2
 Auxiliary Materials BF 9L, 545 gals. NE-940 140 gals., GBW-23L 203 gals.,
GS 1A 250 lbs., CRB 10 lbs., GBW-33D 7 lbs., GBWS 11 lbs.
PROCEDURE SUMMARY 1500 gal. STEP RATE, 25,000 gal. pac, 10000 gal. 2 lb SAND, 20000 3lb,
78,000 gal 4 ppa, 20000 gal 5ppa, 18,080 gal FLUSH, 7978 SCFM N2

LIQUID/GAS PUMPED AND CAPACITIES IN BBLS.

Tubing Cap. 44.
 Casing Cap. .7
 Annular Cap. 57
 Open Hole Cap. N/A
 Fluid to Load 30
 Pad Volume 720
 Treating Fluid 2484
 Flush 42
 Overflush _____
 Fluid to Recover 3244
 Total N₂ 276000
 Total CO₂ N/A

Time AM/PM	Treating Pressure-Psi		Surface Slurry BBLS. Pumped		Slurry Rate BPM	Surface CO ₂ BBLS. Pumped		CO ₂ Rate BPM	Surface N ₂ MSCF Pumped		N ₂ Rate SCFM	Comments
	STP	Annulus	Stage	Total		Stage	Total		Stage	Total		
8:30	7100											Pressure test line
9:24	3350			125								Start step rate
9:52			594	-	20.1	593	-					start pad
10:22	3917		239	594	19.9	218	593					start 2#
10:34	3830		547	833	17.8	475	811					start 3#
11:01	3916		1099	1374	17.9	944	1286					start 4#
11:57	4422		18	2473	16.7				6	0	4100	start N2
11:58	4636		553	2491	16.8	450	2230		134	6	4100	start 5# at Blender
12:30	4661		508	3044	16.8	317	2680		136	140		start 6.2# at Blender
13:01	4462		42	3552	19.5	42	3077			276		start flush
13:03	2093			3594			3119					shut down

Treating Pressure: Min. 3500 Max. 4990 Avg. 3700 Customer Representative SCOTT REASONER
 Inj. Rate on Treating Fluid 19.9-16.8 Rate on Flush 19.5 BJ Representative ROD GRIFFEN
 Avg. Inj. Rate 20 I.S.D.P. 1950 Flush Dens. lb./gal. 843 Distribution PATINA OIL & GAS
 Final Shut-in Pressure 1900 in 25 Minutes _____
 Operator's Maximum Pressure 5500

Job Number

Recommendation ID # DV060367