

SIMULATION TREATMENT REPORT



Date 24-JUN-11 District Brighton F.Receipt 1001823127 Customer Noble Energy - Denver
 Lease GUTTERSEN #D22-24 Well Name GUTTERSEN #D22-24
 Field WATTENBERG Location 22-3N-64W
 County Weld State Colorado Stage No 1 Well API - API 05123329980000

WELL DATA		Well Type:	NEW	Well Class:	GAS	Depth TD/PB:	6900	Formation:	NIOBRARA
Geometry Type	Tubular Type	OD	Weight	ID	Grade	Top	Bottom	Perf Intervals	
TUBULAR	CSG	4.5	11.6	4	M-80	0	6900	Top	Bottom
								SPF	Diameter
								6759	6771
								6858	6870

Packer Type N/A Packer Depth 0 FT

TREATMENT DATA				LIQUID PUMPED AND CAPACITIES IN BBLs.	
Fluid Type	Fluid Desc	Pumped Volume(Gals)	Prop. Description	Volume Pumped(Lbs)	
PAD	Slickwater	43,176	Sand, White, 40/70	250,320	Tubing Cap. 0
PAD	Vistar 18 (Pad)	8,106			Casing Cap. 105
TREATMENT FLUID	Vistar 18	99,960	Total Prop Qty:	250,320	Annular Cap. 0
					Open Hole Cap. 0
					Fluid to Load 0
					Pad Volume 1221
					Treating Fluid 2380
					Flush 105
					Overflush 0
					Fluid to Recover 3706

Previous Treatment N/A Previous Production N/A
 Hole Loaded With Treated Water Treat Via: Tubing ☐ Casing ☒ Anul. ☐ Tubing & Anul. ☐
 Ball Sealers: 0 In 0 Stages Type _____
 Auxiliary Materials GW-45LF,XLW-14,XLW-22C,BF-9L,CLAYCARE,INFLO/NE,FRW-14,BC-3,CRB-LT,GBW-5

PROCEDURE SUMMARY

Time AM/PM	Treating Pressure-Psi		Surface Slurry BBLs. Pumped		Slurry Rate BPM	Comments
	STP	Annulus	Stage	Total		
15:15	5142	0	0	0	0	safety meeting/psi test
15:32	3303	0	0	0	0	open wellhead
15:32	4329	0	269	0	40.2	stg slickwater, break 4891 psi @ 2.5 bpm
15:58	3739	0	0	269	0	shutdown
15:58	4340	0	458	269	41.3	resume slickwater
16:04	3656	0	0	727	0	shutdown, FRW-14 pump clogged off
16:33	4398	0	301	727	32.3	resume slickwater
16:47	4372	0	193	1028	32.2	stg x-link
16:53	4380	0	392	1221	35.2	stg 1.0 psa
17:03	4460	0	803	1613	41.3	stg 2.0 psa
17:23	4296	0	947	2416	41.3	stg 3.0 psa
17:46	4184	0	511	3363	41.1	stg 4.0 psa
17:58	3985	0	105	3874	41.3	stg flush
18:02	3689	0	0	3979	0	shutdown

Treating Pressure		Injection Rates		Shut In Pressures		Customer Rep.	
Minimum	2752	Treating Fluid	41.3	ISDP	3689	BJ Rep.	KEVIN D REDD
Maximum	4891	Flush	20	5 Min.	0	Job Number	1001823127
Average	4220	Average	41.3	10 Min.	0	Rec. ID No.	
Operators Max. Pressure 5000				15 Min.	0	Distribution	
				Final	3689	In	0
				Flush Dens. lb./gal.	8.34		