



SECTION II - PROPOSED & ACTUAL TREATMENT

II - 4

TREATMENT REPORT

Date <u>May 24, 2000</u>	District <u>Brighton</u>	F.Receipt <u>225115693</u>	Operator <u>Patina Oil & Gas</u>
Lease <u>DIETRICH</u>	Well No. <u>RC 7-8</u>	Field <u>Wattenberg</u>	Location <u>SENE 07-04N-64W</u>
County <u>Weld</u>	State <u>Colorado</u>	Stage No. <u>1</u>	Treatment Target(s) <u>This zone & this well</u>

WELL DATA		Well Type: <input type="checkbox"/> New Well <input checked="" type="checkbox"/> Old Well	Well Class: <input type="checkbox"/> Oil <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Disposal <input type="checkbox"/> Injection <input type="checkbox"/> Misc.
Prev. Treatment Frac <u>11/12/86</u>	Prev. Production <u>16 MCFD; 0.3 BOPD</u>	Well Dep. TD/PB <u>7190.0 ft</u>	Formation <u>CODELL RE-FRAC</u>
Perf.: Size <u>0.340 in</u>	Total No. <u>56</u>	Interval <u>7068.0-7081.0(ft)</u>	

String/TypePacker/OpenHole Description	Size (in)	Weight (lbm/ft)	Set at (ft)	From (ft)	To (ft)	Length (ft)	Capacity (bbls/ft)	Total Capacity (Bbls)
Tubing	2.875	6.40	6700.0			6700.0		
Tubing	2.375	4.60	7010.0			310.0		
Packer	2.375		7010.0					
Casing	4.500	15.10	7190.0			7190.0		
Tubing Capacity	2.875	6.40		0.0	6700.0		0.00579	38.8
Tubing Capacity	2.375	4.60		6700.0	7010.0		0.00387	1.2
Casing - Capacity	4.500	15.10		7010.0	7068.0		0.01420	0.8

TREATMENT DATA		Treating via: <input checked="" type="checkbox"/> Tubing <input type="checkbox"/> Casing <input type="checkbox"/> Annulus <input type="checkbox"/> Tubing & Annulus		Fluid to load <u>25 Bbls</u>				
Pad Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pad Type <u>22# Linear Gel / Vistar 22 LHT</u>	Pad Volume <u>971.0 Bbls</u>	Ball Sealers:	in _____ stages of _____				
Treating Fluid Type: <input type="checkbox"/> Foam <input checked="" type="checkbox"/> Water <input type="checkbox"/> Acid <input type="checkbox"/> Oil <input type="checkbox"/> Other	Volume <u>2220.0 Bbls</u>	Base Fluid Type: <u>Fresh Water</u>	Volume <u>2274.0 Bbls</u>					
Foam Type: <input type="checkbox"/> Mitchell Surface <input type="checkbox"/> Mitchell Downhole <input type="checkbox"/> Slurry Surface <input type="checkbox"/> Slurry Downhole	Foam Quality _____	Hole Loaded with <u>22# Linear Gel</u>						
Proppant Type	Size	Quantity (lbs)	Proppant Type	Size	Quantity (lbs)	Proppant Type	Size	Quantity (lbs)
Ottawa	20/40	246100						

TOTAL LIQUID/GAS PUMPED		Pad Volume: <u>971.0 Bbls</u>	Treating Fluid Volume: <u>2220.0 Bbls</u>	Flush Volume: <u>39.0 Bbls</u>
Over Flush Volume: _____	Fluid to Recover: <u>2274.0 Bbls</u>	Total CO2: _____	Total N2: _____	
Pumps Used(Type/Number): <u>2 2200 HHP Kodiaks</u>				
Auxiliary Material: <u>VSP-1 [Gelling Agent], XLW-14 [Crosslinker], GBW-23L [Gel Breaker], NE-940 [Non-Emulsifier], Flo-Back 20 [Surface Tension Reducer], BF-9L [pH Control], GS-1A [Gel Stabilizer], Ultra Perm CRB [Gel Breaker], GBW-5 [Gel Breaker], Claytreat 3C [Clay Control]</u>				
Procedure Summary: <u>Frac as per recommendation 179952160A.</u>				

TREATMENT SUMMARY		Treating Pressure: Min. <u>5172 psi</u> Max. <u>6252 psi</u> Ave. <u>5413 psi</u> Operator's Max. <u>7500 psi</u>
Injection Rate: Treating Fluid <u>14.30 bpm</u>	Flush <u>14.20 bpm</u>	Average <u>14.30 bpm</u> Flush Fluid Density <u>8.34 ppg</u>
ISDP: Pre-Job <u>2897 psi</u> Post-Job <u>4226 psi</u>	Final Shut in Pressure <u>3562 psi</u>	in <u>5.0 min</u>
Recommendation ID# <u>179952160A</u>	Job Number _____	Customer Representative <u>Mr. Dave Burger</u> Service Representative <u>Mr. Steve Devers</u>
Distribution <u>Patina O/G & BJ Services Well File</u>		

TREATMENT LOG												
Time am/pm	Treating Pressure		Stage Surface Fluid Pumped			Total Surface Fluid Pumped			Surface Fluid Pumping Rate			Comments
	STP psi	Annulus psi	Slurry Bbls	CO2 bbls	N2 scf	Slurry Bbls	CO2 bbls	N2 scf	Slurry bpm	CO2 bpm	N2 scf/min	
0858			976.0									Start Pad: 22# Linear Gel
0909	5545	509							14.30			Start Step Rate
0911	2897	369										SD R. Step Rate
0917	1575		971.0									Resume Pad: Vistar 22 LHT
1019	5427	557	254.0			971.0			14.30			Start 1.0 ppg Ottawa 20/40
1036	5313	604	756.0			1225.0			14.30			Start 2.0 ppg Ottawa 20/40
1130	5353	617	1146.0			1981.0			14.20			Start 3.0 ppg Ottawa 20/40
1249	5444	568	323.0			3127.0			14.20			Start 4.0 ppg Ottawa 20/40
1313	5698	569	39.0			3450.0			14.20			Start Flush
1316	4226					3489.0						Shut Down