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Conditions of approval, if any:

RICHARDSON OPERATING COMPANY

FRACTURE TREATMENT REPORT

		perating C	perating Company			WF State 2-1					
Date: Field:	11/12/2000 Basin Fruitland Coal Harper Hill Fr Sand PC Ext.				Location:	2-30N-14W		County:	San Juan	_State:	NM
Stimulation		Schlumberger/Dowell			_Supervisor:	John Durham				-	
Stage #:	1/1										
Sand on location (design): 110,000				_Weight ticket:	110,000		_Size/type:	20/40 Arizona			
Fluid on lo	cation:	No. of Tar	nks:	4	_ Strap:	80'	Amount:	1600 bbls	- Usable:	1520	
Perforati	ons										
		Depth:	FC PC	1610'-161 1620'-162		-	Total Holes:	FC 32 PC 8		PBTD:	1770'
		Shots per	foot:	FC 4 PC 1		-	EHD:	0.41	-		
Breakdo	wn										
	-	Acid:		1000 gals	· · · · · · · · · · · · · · · · · · ·	_					
		Balls:		5	0	_		2 balls/bar	rrel @		
		Pressure:		650#		-	Rate:	5 barrels/r	-	_	
Stimulat	ion										
		ATP:		1050#		_	AIR:	45 bpm		-	
		MTP:		1470#		_	MIR:	45 bpm		_	
	ISIP: 5 min: 10 min: 15 min:	390#		- <u>-</u> -	pad 1 ppg 2 ppg 3 ppg 4 ppg 5ppg 6ppg	Pressure 1250# 1020# 920# 810# 750# 755# 755#	-		Breaker test 17 cps break in 42 m	- nin	
	Job Complet	e at:	8:55AM	hrs.		Date	11/12/2000	<u>)</u>	Start flow back	:	N/A
	Total Fluid Po	umped:	46.520 ga	ls 1163	bbls	_					
	Total Sand P	umped:	109,000			_	Total Sand or	n Formation	108,430)	
	Total Nitroge	n Pumped	:	NA				_			
Notes:							<u>, ,</u>		 		