8. I hereby certify that the forest signed are for Federal or State APPROVED BY CONDITIONS OF APPROVAL	Blanch TITLE ate office use) TITLE	Production Superintenden	DEC 2 3 1987 DATE DEC 2 1 1987
	Blancett TITLE	Production Superintenden	
8. I hereby cartify that the force	oing is true and correct		DEC 23 1987
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			N 19 19 19 19 19 19 19 19 19 19 19 19 19
			The second secon
,			
See attached for fr	acture treatment rep	ort	
proposed work. If weil is nent to this work.)*	directionally drilled, give subsurfs	ce locations and measured and true vertica	depths for all markers and zones perti-
(Other) 7. bescribe Proposed or Comple	TED OPERATIONS (Clearly state all	Completion or Recomple	of multiple completion on Well etion Report and Log form.) including estimated date of starring any
REPAIR WELL	CHANGE PLANS	SHOOTING OR ACIDIZING (Other)	ABANDONMENT ⁴
FRACTURE TREAT SHOOT OR ACIDIZE	MULTIPLE COMPLETE	FRACTUBE TREATMENT X	ALTERING CASING
TEST WATER SHUT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL
Cne	eck Appropriate Box to Indi	cate Nature of Notice, Report, or C	Other Data SENT REPORT OF:
16. CL	6847 GR	6861 KB	Rio Arriba New Mexico
14. PERMIT NO.	15. ELEVATIONS (Show wh		12. COUNTY OR PARISH 13. STATE
			NWNE Sec. 5-T23N-R6W
See also space 17 below.)	NL, 2270' FEL		Counselors Gallup-Dakota 11. SEC., T., R., M., OR BLK, AND
P.O. Box 191, Farm:	12 10. FIELD AND POOL, OR WILDCAT		
3. ADDRESS OF OPERATOR			Marcus A 8. WELL NO.
2. NAME OF OPERATOR Jack A. Cole	8. FARM OR LEASE NAME		
	THER		7. UNIT AGREEMENT NAME
OIL GAS O	APPLICATION FOR PERMIT—" fo	r such proposals.)	3 (1)
Use "/	r propositis to urill or in deepen ,		/
(Do not use this form fo Use "/	NOTICES AND REPO		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
SUNDRY (Do not use this form for Use "/		RTS ON WELLS	5. LEASE DESIGNATION AND SERIAL NO. SF-078362 6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Title 18 U.S.C. Section 1901, makes it a drime for any person knowingly and willfully to make to any department or agency of the Suite i state. In the continuous or intermediate or representations to the parter within the intermediate.

FRACTURE TREATMENT Date December 10, 1987 Formation Gallup Stage No. 1 (Marye) Lease and Well Marcus A#12 Operator Jack A. Cole From 5718 To 5350 Type CCL-GR Correlation Log Type Set At Temporary Bridge Plug 5559-5565 5630-5640 5568-5580 5685-5698 Perforations 2 Per foot type 3 1/8" Bull Jet 10,000 gallons. Additives gelled oil Pad 29,500 gallons. Additives_____ 75,000 ___ lbs. Size 20-40 Sand 3,712 gallons. Additives lease crude Flush 11 Breakdown 5568-5580 = 2090 psi5630-5640 = 2250 psi1650 psig Ave. Treating Pressure 5685-5698 = 2950 psi2000 psig Max. Treating Pressure Ave. Injecton Rate 25 BPM 1011 Hydraulic Horsepower HHP 1300 psig Instantaneous SIP 5 Minute SIP 1100 psig 10 Minute SIP 1100 psig 15 Minute SIP 1100 psig Balls at psig gallons Ball Drops: increa ___Balls at 23500 gallons 100 40 psig

increa Balls at gallons____ psig incre:

Remarks: Broke down perforated intervals individually with RTTS and bridge plug with 250 gallons 15% HCL per interval.

FRACTURE TREATMENT

Formation Gallup Stage	Date December 11, 1987			
Operator Jack A. Cole		_ Lease an	d Well Marcus	A #12
Correlation Log	Type	Fro	m	To
Temporary Bridge Plug	Type drillabl	e	Set	At 5488
Perforations	5426-5438			
•	4 Per fo	ot type	3 1/8" Bull Jet	
Pad	10,000	gallons.	Additives_g	elled oil
Waxxx Gelled Oil	26,500	gallons.	Additives	
Sand	75,000	lbs. Siz		
Flush	3,640	gallons.	Additives 16	ase crude
<i>j</i> /				
Breakdown		3		
Ave. Treating Pressure		3		
Max. Treating Pressure		3		•
Ave. Injecton Rate	34 BPM			
Hydraulic Horsepower	2333 HHP			
Instantaneous SIP	1200 psi	3		••
5 Minute SIP	1100 psi	3		
10 Minute SIP	psi	3		
15 Minute SIP		ਭ		
Eall Drops:	None Bal	ls at	gallons	
	Bal	ls at	gallons	
	Ral	ls at	gallons	increa psig
				increa
Remarks:			·	