

FOUR CORNERS DRILLING CO.

P. O. BOX 1067
491 HWY. 64
FARMINGTON, NEW MEXICO 87499

TELEPHONE: (505) 326-3371
FAX: (505) 326-3370

December 26, 1990

Maralex Resources
415 W. Wall, Suite 2215
Midland, Texas 79701
Attn: Carrie Baze

Dear Carrie:

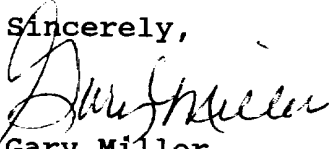
This is to certify the deviation surveys on the following wells:

Sec. 3, T27N, R8W
Graham BWN Fed #9

DEPTH

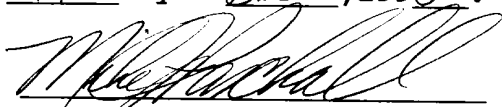
301 - 3/4°
801 - 1/2°
1297 - 1°
1724 - 3/4°
2197 - 3°

Sincerely,


Gary Miller
Drilling Superintendent

GM/jp

Subscribed and sworn to, before me, this 26TH day of DEC, 1990.



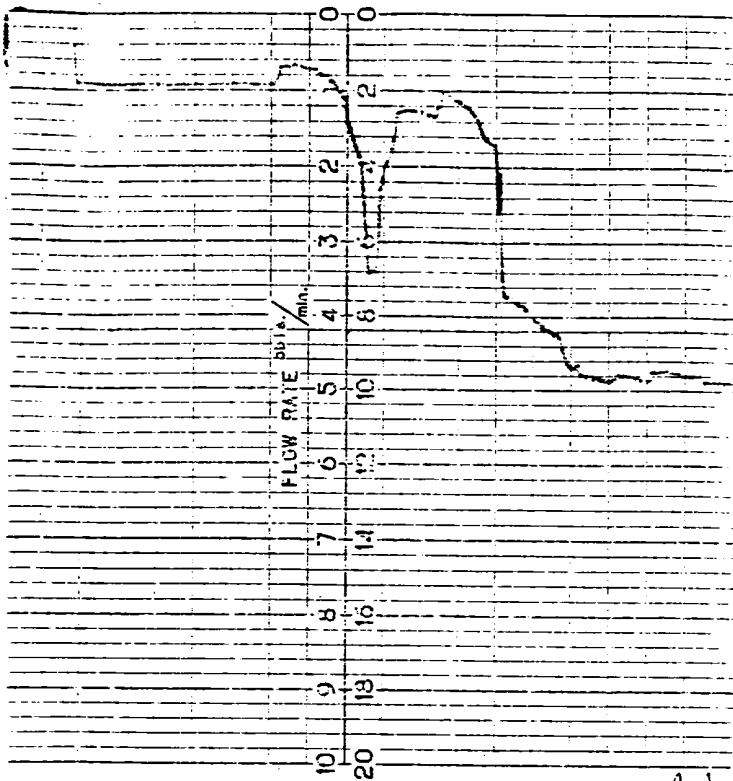
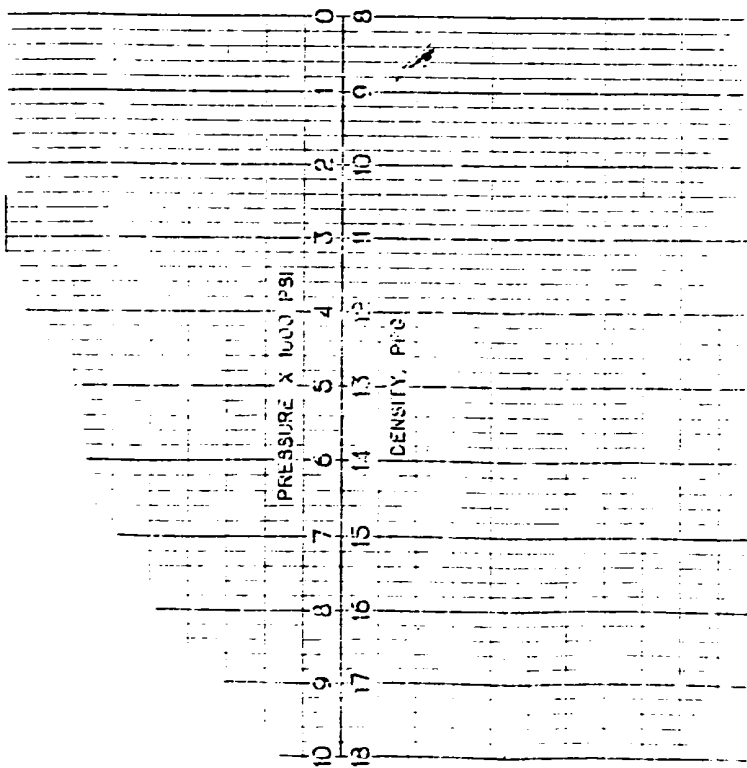
Notary Public in and for the County of SAN JUAN, State of NM

My commission expires 8.29.94

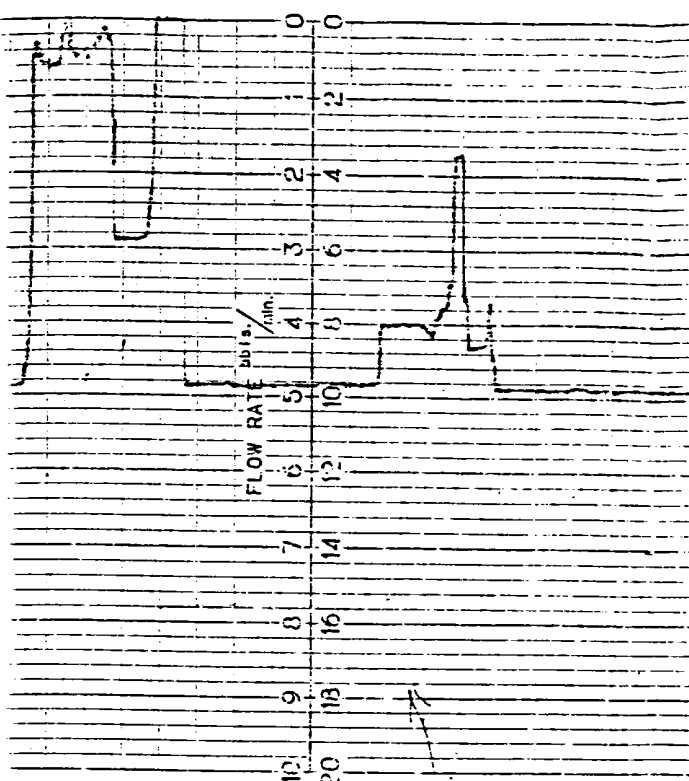
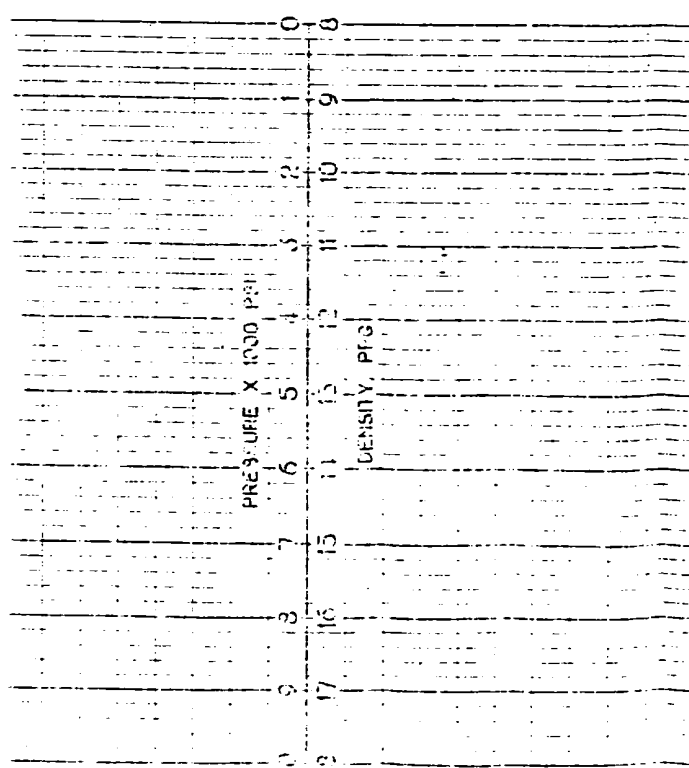


THE WESTERN COMPANY
CEMENT JOB DETAIL SHEET

CUSTOMER Mara Lex		DATE 11-9-90	FR # 7148565	SER SUP T.M. C. A. H. b.	TYPE JOB 13							
LEASE & WELL NAME-DCSG Graham B.W.N. Fed. #9		LOCATION Sec 3-T27N-R8W		COUNTY-PARISH-BLOCK SAN JUAN								
DISTRICT Farmington		DRILLING CONTRACTOR RIG # FC#9		OPERATOR Michael Otero								
MATERIAL FURNISHED BY WPS	TYPE OF PLUGS	LIST-CSG-HARDWARE		SO MANI FOLD	TOP OF EACH FLUID	PHYSICAL SLURRY PROPERTIES						
	5 1/2 Rubber			Y	N	SLURRY WGT PPG	SLURRY YIELD PPG	WATER GPS	PUMP TIME HR:MIN.	SSI SLURRY	SSI MIX WATER	
	225 sz 65/35/17.5 lb + 1/4 #1 CS					1238	1.55	9.72		74	52	
	100 sz B & 75% Flo-Loc					15.7	1.85	5.19		21	12	
Available Mix Water 300 Bbl.		Available Displ. Fluid 300 Bbl.				TOTAL		95		64		
HOLE		TBG-CSG-D.P.		TBG-CSG-D.P.		COLLAR DEPTHS						
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	SIZE	WGT.	TYPE	DEPTH	SIZE	WGT.
7 7/8		2220	5 1/2	17		22125					2172L	
LAST CASING		PKR-CMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN		WELL FLUID				
SIZE	WGT.	TYPE	DEPTH	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	WGT.	TYPE	WGT.	
8 3/4			150									
CAL DISP. VOL.-Bbl.		CAL. PSI		CAL. MAX PSI		OP. MAX		MAX TBG PSI		MAX CSG PSI		DISPL. FLUID
CSG	CSG	TOTAL	BLVD PLUG	TO REV	SO PSI	RATED	OP	RATED	OP	TYPE	WGT	WATER SOURCE
50.4		50.4	1200									H2O 8.34 Rig
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:												
PRESSURE/RATE DETAIL						EXPLANATION						
TIME	PRESSURE-PSI		RATE	Bbl. FLUID	FLUID	SAFETY MEETING WPS CREW ☒ CO REP ☐						
HR: MIN.	PIPE	ANNULUS	BPM	PUMPED	TYPE	TEST LINES ☐ PSI						
						CIRCULATING WELL-RIG ☒ WPS ☐						
11:00 AM						On Location						
3:30 AM						Drop Bottom plug +						
3:32 AM						Grab top plug						
3:36 AM 250			5	5	H2O	Break down						
3:42 AM 250			5	74	65/35/17.5	Lead slurry						
4:07 AM 250			5	21	BY 15/17	Lead slurry						
4:16						Shut down (H2O wash lines)						
4:17						Drop top plug						
4:17 AM						Dig the cement						
4:34 AM 1000			5	50.4	H2O	Drop bump plug						
4:36 AM						Check flow						
BUMPED						PSI TO BUMP PLUG	TEST FLOAT EQUIP	TOTAL Bbl PUMPED	RETURNS/ REVERSED	PSI LEFT ON CSG	SPOT TOP CEMENT	SER SUP T.M. C. A. H. b.
								150.4				



Diapher
30.4 BBL



Wool
Pump
Line

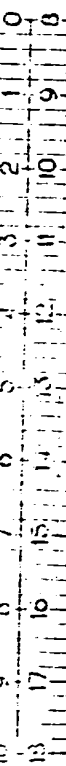
TAIL
Cmt.

Switch
to Batch
mixer

Lead
cont.

PRESSURE X 1000 PSI

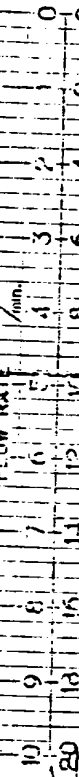
DENSITY, PPC



man. w. 5 1/2 L.S.
2020
Growth in 13" W.N. Fed. #19
4/48565
11-9-90

PRESSURE X 1000 PSI

FLOW RATE ml/min



5.000000
slangy - 80

4.000000
4.000000
4.000000

Drop
Bottom
Flug

kid
TANEDUC

FLOW RATE ml/min