CEMENTING TREATMENT REPORT

PIONEER NATURAL RESOURCES

TREATMENT NUMBER	FG2014015	DATE	5/9/2014
STAGE	2	JOB TYPE	Production

WELL NAME AND NO.	San Pablo 11-4 WDW	LOCATION (LEGAL)	NW/NW SEC 4-T31S R67W
FIELD	Raton	FORMATION	RATON
COUNTY	LAS ANIMAS	STATE	COLORADO
		API NO.	05-071-09916

RIG NAME: Pense #31

CEMENT PUMPER: 23005

WELL DATA			BOTTOM	FT	TOP	FT
BIT SIZE	8 3/4"	CSG/Liner Size		7"		
TOTAL DEPTH	7215'	WEIGHT		23#		
MUD TYPE		FOOTAGE		6604.84'		
☐ BHST		GRADE		J-55		
☐ BHCT		THREAD		ST&C		
MUD DENSITY		Shoe Joint		61.43'		TOTAL
MUD VISC		Disp. Capacity		269		269

Include Footage From Ground Level To Head In Disp. Capacity

SHOE FLOAT	TYPE	Stage Tool	TYPE		DCP / DV
	DEPTH		DEPTH		Top @ 2331.5 - Bottom @ 2345.6'
	TYPE		TYPE		
	DEPTH		DEPTH		

Head & Plugs ☐ TOP ☐ D.P. SQUEEZE JOB

☐ Double Pin 6	WEIGHT		TOOL TYPE	
☐ Single	GRADE		DEPTH	
☐ Swage	THREADS		TAIL PIPE: SIZE	DEPTH
☐ Knockout ☐ New ☐ Used			TUBING VOLUME	BBLs
	DEPTH		CSG VOL. BELOW TOOL	BBLs
CEMENT TEMPERATURE:		72	TOTAL	BBLs
WATER QUALITY:		6 pH	ANNULAR VOLUME 0 PPM	BBLs
			68	TEMP

SPECIAL INSTRUCTIONS

Personnel: Jose Madrid,Ronald Trujillo,Don Wilson, J.R. Ortiz,Bruce Green

Engineer: Greg Wright

LIFT PRESSURE	2813	psi	BUMP PLUG TO 3000
PRESSURE LIMIT	4500	psi	NO. of Centralizer: 12

TIME (HH:MM 24HR)	PRESSURE TBG	PRESSURE CSG	VOLUME PUMPED INCR	VOLUME PUMPED CUM	RATE	FLUID TYPE	DENSITY	
					JOB SCHEDULED FOR TIME: 11:30 DATE: 5/9/2014			ARRIVE ON LOCATION TIME: 10:00 DATE: 5/9/2014 / RIG UP TIME: 11:30 DATE: 5/9/2014 / LEFT LOCATION TIME: 20:00 DATE: 5/9/2014
13:00								Safety meeting
13:18			3	3	1	H2O		Load Lines
13:19		4600	0.3	3.3	1	H2O	8.3	Pressure Test
13:21		110	280	283.5	4	H2O	8.3	Water Ahead
14:19		480	104	387.5	3	Cmt.	13.7	Pump 1st. Stage Cement @ 13.7 PPG (411 Sks.)
14:39		450			3.5	Cmt.	13.7	
15:00		300	39	426.5	4	Cmt.	15.8	Pump 2nd. Part 1st. Stage Cement @ 15.8 PPG (145 Sks.)
15:12								Done
15:14						H2O	8.3	DROP PLUG
15:14		269			3.5	H2O	8.3	Pump Displacement
15:28			506.5	359.5	5	H2O	8.3	1st. Call Out
15:48			586.5	434.5	5	H2O	8.3	2nd. Call Out
16:07			666.5	504.5	4	H2O	8.3	3rd. Call Out
16:23			695.5		2	H2O	8.3	Final Lift
16:23		1400			2	H2O	8.3	Bump Plug
16:31		3000				H2O	8.3	Open tool
16:36						H2O	8.3	Drop Bomb - Wait 15 Minutes
17:02		693	1	505.5	1	H2O	8.3	Open DV Tool
17:04		130	165	670.5	5	H2O	8.3	Pump Water Ahead
17:36		70	90	760.5	2	Cmt.	13.7	Pump 1st stg: cmt. Of 2nd. Stage @ 13.7 PPG. (356 Sks.)

System Used	Sacks	Yield ft³/sk	COMPOSITION OF SYSTEM	SLURRY MIXED BBLS	SLURRY MIXED DENSITY
50/50	767	1.42	Class G,Poz, P167, P065, P154, P046	194	13.7
50/50	145	1.51	Class G, P030,P800	39	15.8
50/50	102	1.48	Class G, Poz, P167,P065,P154,P046,P030	20	14.5

CIRCULATION	YES ☐ Yes ☐ No	WASHED CASING DOWN	NO ☐ Yes	RETURNED TO SURFACE:	BREAKDOWN	110 PSI	FINAL 2600 PSI
DISPLACEMENT VOL.	434 BBLS			6	BEFORE PLUG BUMP PRESSURE	893 PSI	RATE 4 BPM