WELL ANALYSIS CORPORATION

AUDIO DETECTION SURVEY

FILING NO.

COMPANY: SOUTHERN CALIF. GAS CO.
WELL: FERNANDO FEE 38C
FIELD: ALISO CANYON
COUNTY: LOS ANGELES STATE: CALIFORNIA
LOCATION: DISTRICT 2
OTHER SVC:

API NUMBER: 0403724232
SEC: 27 TWN: 3N RNG: 16W

CB

PERMANENT DATUM: GROUND LEVEL ELEV: 1708.00 FT.
LOG MEASURED FROM KB 32' ABOVE PERM DATUM
DRILLING MEASURED FROM

-ELEVATIONS-
KB: 1740.00 Ft.
DF: Ft.
GL: 1708.00 Ft.

DATE LOG RAN	03-10-2016	PRESSURE	FLOWING	INJECTION	SHUT-IN
RUN NUMBER	ONE	TUBING PSI			1068
EFFECTIVE DEPTH	7304' PLUG	CASING PSI			1068
PICKUP DEPTH	7273'	INJECTION RATE	N/A		
BOT LOGGED INT	7273'	OBSERVED RATE	N/A		
TOP LOGGED INT	100'	R/A SOURCE	N/A		
TYPE OF INJECT	NONE	ACTIVITY	N/A		
FLUID IN WELL	GAS	HALF LIFE	N/A		
FLUID LEVEL	N/A				
WELL STATUS	STATIC	PRODUCTION DATA			
MAX TEMPERATURE	156.9 F	OIL Gr.		OIL =	
AT DEPTH	6978.5'	GAS Gr.		GAS=	
TEMPERATURE SENS	1 F/DIV.	MPP		BHP =	
LOGGING SPEED	100 FPM			WATER=	
RECORDED BY	D. PROKUSKI				
WITNESSED BY	N/A				
EMAIL TO	A. KARGAR				
DEPTH CORRELATION	LINER TOP				

Equipment Data

COLLAR LOCATOR	1.375"		
TEMPERATURE TOOL	1.375"		
AUDIO DETECTOR	1.375"		

TOOL DIAGRAM

COLLAR LOCATOR AT 2.0'
TEMPERATURE TOOL AT 5.0'
AUDIO DETECTOR AT 8.0'

Remarks/Survey Results

07:30 AM - ON LOCATION
08:00 AM - RAN IN HOLE
08:10 AM - BEGIN SURVEY
11:15 AM - PULL OUT OF HOLE
11:30 AM - OFF LOCATION

CASING AND TUBING RECORD

SIZE	WT(#)	FROM	TO	SIZE	WT(#)	FROM	TO
13.375"	54.5	SURFACE	862'				
9.625"	47.0	SURFACE	7326'				
5.500"	17.0	6804'	7279'				
2.875"	6.5	SURFACE	6785'				

STR.	PIPE DIA.	PERFORATIONS
A	9.625"	7065'-7086', 7098'-7127', 7160'-7230', 7244'-7257'.
	5.500"	SLOTTED: 6804'-7279'.
		GAS LIFT MANDREL: 4497.8'-4503.9'.
		SLIDING SLEEVES: 6742.3'-6745.5'.
		NO-GO: 6776.6', 6814.2'.
		PACKERS: 6804.6'-6808.7', 6880.7'-6902.6'.

Audio Data: c:\data\noise.txt

DEPTH	200HZ	600HZ	1000HZ	2000HZ
100	10.40	5.40	3.80	2.30
250	11.10	5.30	3.70	2.20
500	10.20	5.20	3.60	2.20
750	9.80	5.20	3.70	2.20
800	9.80	5.20	3.70	2.20
820	9.70	5.20	3.70	2.20
840	9.80	5.30	3.70	2.20
860	9.80	5.20	3.70	2.20
880	9.80	5.20	3.60	2.10
900	9.80	5.20	3.70	2.20
1000	9.80	5.20	3.60	2.10
1250	9.70	5.20	3.70	2.20
1500	9.70	5.20	3.60	2.20
1750	9.60	5.20	3.60	2.20
2000	9.50	5.10	3.60	2.20
2250	9.50	5.10	3.70	2.20
2500	9.40	5.10	3.60	2.20
2750	9.30	5.10	3.60	2.20
3000	9.30	5.10	3.70	2.20
3250	9.40	5.10	3.70	2.30
3500	9.30	5.20	3.80	2.40
3750	9.20	5.10	3.70	2.20
4000	9.00	5.00	3.70	2.30
4250	9.10	5.10	3.70	2.30
4400	9.10	5.30	4.00	2.40
4420	9.00	5.10	3.80	2.30
4440	9.00	5.20	3.90	2.40
4460	9.00	5.00	3.70	2.30
4480	8.80	5.10	3.70	2.30
4500	8.90	5.00	3.70	2.30
4520	9.00	5.30	4.00	2.50
4540	8.90	5.20	3.90	2.50
4560	9.20	5.00	3.70	2.30
4580	8.70	5.00	3.60	2.30
4599	8.70	5.00	3.70	2.30
4750	8.80	5.00	3.70	2.30
5000	8.70	5.00	3.70	2.30
5250	8.80	5.00	3.70	2.30
5500	9.00	5.10	3.80	2.40
5750	8.60	4.90	3.60	2.20
6000	9.40	4.90	3.70	2.30
6250	12.00	5.00	3.70	2.30
6500	11.80	5.00	3.70	2.30
6520	11.90	5.00	3.70	2.30
6540	13.10	5.10	3.70	2.30
6560	12.40	5.10	3.70	2.30
6580	12.90	5.10	3.70	2.30
6600	13.20	5.20	3.80	2.40
6610	12.70	5.10	3.80	2.30
6620	12.50	5.10	3.80	2.30
6630	12.40	5.10	3.70	2.30
6640	14.00	5.20	3.80	2.30
6650	15.00	5.30	3.80	2.40
6660	13.50	5.20	3.80	2.30
6670	14.00	5.20	3.80	2.40
6680	16.20	5.30	3.90	2.40
6690	14.10	5.70	4.40	2.90
6700	13.80	5.20	3.80	2.40
6710	15.70	5.30	3.80	2.40
6720	15.40	5.40	3.90	2.40
6730	14.30	5.30	3.80	2.40
6740	14.90	5.40	3.90	2.40
6750	15.50	5.20	3.80	2.40
6760	13.50	5.10	3.80	2.30
6770	11.90	5.10	3.70	2.30
6780	10.20	5.00	3.70	2.30
6790	8.10	4.90	3.70	2.30
6800	8.20	4.90	3.70	2.30
6810	8.60	4.90	3.70	2.30
6820	8.70	5.00	3.70	2.30
6830	8.50	5.00	3.70	2.30
6840	8.60	4.90	3.70	2.30
6850	9.00	5.10	3.80	2.40
6860	8.70	4.90	3.70	2.30
6870	8.60	4.90	3.70	2.30
6880	9.20	5.00	3.70	2.30
6890	8.90	5.00	3.70	2.30
6900	8.90	4.90	3.70	2.30
6910	8.80	5.00	3.70	2.30
6920	8.70	5.00	3.70	2.30
6930	8.70	5.00	3.70	2.30
6940	8.80	4.90	3.70	2.30
6950	8.90	5.00	3.80	2.30
6960	8.80	5.00	3.70	2.30
6970	8.30	4.90	3.70	2.30
6980	8.40	5.00	3.70	2.30
6990	7.50	4.90	3.50	2.20
7000	7.80	5.00	3.60	2.30
7100	7.10	5.00	3.50	2.20
7200	6.90	4.90	3.50	2.20
7273	6.80	4.80	3.40	2.20