WELL ANALYSIS CORPORATION

AUDIO DETECTION SURVEY

COMPANY:	SOUTHERN CALIF. GAS CO.
WELL:	FREW 6
FIELD:	ALISO CANYON
COUNTY:	LOS ANGELES
STATE:	CALIFORNIA
LOCATION:	DISTRICT 2
OTHER SVC:	
WELL TYPE	GS
API NUMBER:	0403700669
SEC: 29	TWN: 3N RNG: 16W
BFW	

PERMANENT DATUM: GROUND LEVEL ELEV: 2130.00'
LOG MEASURED FROM KB 9' ABOVE PERM DATUM
DRILLING MEASURED FROM

-ELEVATIONS-
KB: 2139.00 Ft.
DF: Ft.
GL: 2130.00 Ft.

DATE LOG RAN	04-08-2016	PRESSURE	FLOWING	INJECTION	SHUT-IN
RUN NUMBER	ONE	TUBING PSI		1255	
EFFECTIVE DEPTH	8900'	CASING PSI		1255	
PICKUP DEPTH	8860'	INJECTION RATE		N/A	
BOT LOGGED INT	8860'	OBSERVED RATE		N/A	
TOP LOGGED INT	25'	R/A SOURCE		N/A	
TYPE OF INJECT	NONE	ACTIVITY		N/A	
FLUID IN WELL	O/W/G	HALF LIFE		N/A	
FLUID LEVEL	N/A				
WELL STATUS	STATIC			PRODUCTION DATA	
MAX TEMPERATURE	193.8 F	OIL Gr.	N/A	OIL =	N/A
AT DEPTH	8860.0'	GAS Gr.	N/A	GAS=	N/A
TEMPERATURE SENS	1 F/DIV.	MPP	N/A	BHP =	N/A
LOGGING SPEED	100 FPM			WATER=	N/A
RECORDED BY	C.FITZPATRICK				
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

07:00AM - ON LOCATION
07:30AM - RAN IN HOLE
07:45AM - BEGIN SURVEY
11:00AM - PULL OUT OF HOLE
11:30AM - OFF LOCATION

SAND TAG MARKERS: 8430' TOP MP
8580' TOP S4
8703' SOP S8

CASING AND TUBING RECORD

SIZE	WT(#)	FROM	TO	SIZE	WT(#)	FROM	TO
13.375"	54	SURFACE	748'				
7.000"	23	SURFACE	8580'				
5.000"	18	8531'	8896'				
2.875"	6.5	SURFACE	8513'				

STR.	PIPE DIA.	PERFORATIONS
A	7.000"	WSO: 8511'
	5.000"	8585'-8628', 8645'-8698', 8708'-8720', 8740'-8808', 8816'-8878'.
		PACKERS: 8494'-8495.6', 8505.8'-8506'.
		GAS LIFT MANDRELS: 1668'-1676', 3076.6'-3076.3', 4379.4'-4387.3', 5586.6'-5594.6', 6642.6'-6650.6', 7584.3'-7592.3', 8402.5'-8410.5'.
		SLIDING SLEEVE: 8445'-8459'.
		NO-GO: 8483'.

Audio Data: C:\data\NOISE.txt

DEPTH	200HZ	600HZ	1000HZ	2000HZ	COMMENTS
100	4.00	3.20	1.70	0.70	
300	3.50	2.90	1.50	0.60	
500	3.30	2.90	1.50	0.60	
700	3.80	3.30	1.80	0.60	
720	3.50	3.10	1.70	0.60	
740	3.30	3.00	1.60	0.60	
760	3.30	3.10	1.80	0.60	
780	3.60	3.00	1.70	0.60	
800	3.30	3.00	1.70	0.60	
820	3.40	3.10	1.70	0.60	
840	3.80	3.40	2.10	0.70	
860	3.70	3.40	2.10	0.70	
880	3.70	3.40	2.30	0.90	
900	4.00	3.60	2.50	1.10	
920	3.70	3.30	2.00	0.70	
940	3.70	3.30	2.00	0.70	
960	3.70	3.10	1.60	0.60	
980	4.10	3.40	1.80	0.60	
1000	4.40	3.20	1.70	0.60	
1100	4.30	3.30	1.70	0.60	
1350	4.50	3.50	2.00	0.60	
1600	3.90	3.20	1.60	0.60	
1850	3.90	2.90	1.50	0.60	
2100	3.10	2.80	1.50	0.60	
2350	3.90	3.30	1.90	0.60	
2600	3.10	2.80	1.50	0.60	
2620	3.10	2.70	1.40	0.60	
2640	3.00	2.70	1.40	0.60	
2660	3.00	2.80	1.50	0.60	
2680	3.20	2.80	1.50	0.60	
2700	3.20	2.90	1.50	0.60	
2720	3.00	2.80	1.50	0.60	
2740	3.20	2.90	1.60	0.60	
2760	3.20	2.80	1.50	0.60	
2780	3.30	2.80	1.50	0.60	
2800	3.00	2.80	1.40	0.60	
2820	3.40	2.80	1.50	0.60	
2840	3.20	2.80	1.40	0.60	
2860	3.20	2.80	1.40	0.60	
2880	3.50	2.80	1.50	0.60	
2900	3.80	2.90	1.50	0.60	
2920	3.90	2.90	1.50	0.60	
2940	3.00	2.80	1.50	0.60	
2960	3.30	3.00	1.70	0.60	
2980	3.50	3.20	1.90	0.60	
3000	3.10	2.80	1.50	0.60	
3250	3.40	2.80	1.50	0.60	
3500	3.20	2.90	1.60	0.60	
3750	3.90	2.90	1.50	0.60	
4000	3.60	3.10	1.70	0.60	
4250	3.90	3.10	1.80	0.60	
4500	3.50	2.90	1.50	0.60	
4750	3.40	2.90	1.50	0.60	
5000	3.30	2.80	1.50	0.60	
5250	3.70	2.80	1.50	0.60	
5500	4.40	3.20	1.60	0.60	
5750	4.20	3.40	2.10	0.70	
6000	3.90	3.00	1.60	0.60	
6250	3.40	2.90	1.50	0.60	
6550	3.50	2.90	1.50	0.60	
6750	3.70	3.10	1.70	0.60	
7000	3.20	2.80	1.50	0.60	
7250	3.50	2.80	1.50	0.60	
7500	3.10	2.80	1.50	0.60	
7750	3.80	3.00	1.60	0.60	
8000	4.50	4.00	2.50	0.80	TOOL LYING AGAINST WALL
8250	3.90	2.90	1.50	0.60	
8400	3.90	3.20	1.80	0.60	
8405	3.60	2.90	1.50	0.60	
8415	3.70	2.90	1.50	0.60	
8425	3.80	2.90	1.50	0.60	
8435	3.40	2.90	1.60	0.60	
8445	4.00	3.30	1.80	0.60	
8455	3.60	3.20	1.70	0.60	
8465	4.50	3.80	1.90	0.60	
8475	4.10	3.50	2.00	0.60	
8485	4.40	3.80	2.00	0.70	
8495	4.00	3.50	1.90	0.60	
8505	3.60	3.20	1.60	0.60	
8515	3.60	2.90	1.50	0.60	
8525	4.50	3.00	1.50	0.60	
8535	3.60	3.30	1.80	0.80	
8545	3.40	2.90	1.60	0.60	
8555	3.50	3.00	1.70	0.70	
8565	3.30	2.80	1.50	0.60	
8575	3.60	3.00	1.70	0.70	
8585	3.60	2.90	1.60	0.70	
8630	13.20	5.30	2.80	0.70	
8700	48.30	26.70	17.80	6.80	-
8730	58.30	31.80	25.20	11.70	| GAS
8810	81.00	59.30	48.70	30.30	| MOVING
8860	66.30	38.00	31.20	9.10	-