WELL ANALYSIS CORPORATION

AUDIO DETECTION SURVEY

WELL TYPE:	GS
COMPANY:	SOUTHERN CALIF. GAS CO.
WELL:	FERNANDO FEE 33
FIELD:	ALISO CANYON
COUNTY:	LOS ANGELES
STATE:	CALIFORNIA
LOCATION:	DISTRICT 2
OTHER SVC:	DL
API NUMBER:	0403700687
SEC: 34	TWN: 03N RNG: 16W
PERMANENT DATUM:	GROUND LEVEL ELEV: 2060'
LOG MEASURED FROM	KB 7' ABOVE PERM DATUM
DRILLING MEASURED FROM	

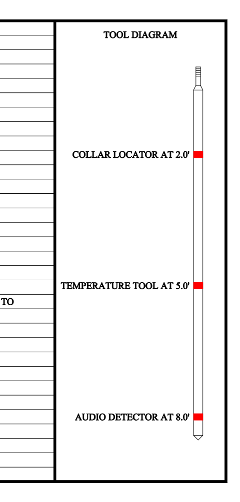
-ELEVATIONS-
KB: 2067 Ft.
DF: Ft.
GL: 2060 Ft.

			PRESSURE	FLOWING	INJECTION	SHUT-IN
DATE LOG RAN	04-04-2016					
RUN NUMBER	ONE		TUBING PSI			0
EFFECTIVE DEPTH	7740'		CASING PSI			0
PICKUP DEPTH	7475'		INJECTION RATE		N/A	
BOT LOGGED INT	7475'		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	171.5 F.		OIL Gr.		OIL =	
AT DEPTH	7475.0'		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	N/A					

Equipment Data

Collar Locator	1.375"		
Temperature Tool	1.375"		
Audio Detector	1.375"		

TOOL DIAGRAM



Remarks/Survey Results

11:00 AM - ON LOCATION
11:15 AM - RAN IN HOLE
11:20 AM - BEGIN SURVEY
02:30 PM - PULL OUT OF HOLE
03:00 PM - OFF LOCATION
SAND TAG MARKERS: 7322' TOP MP
7553' TOP S1
7641' TOP S4
7712' TOP S8

CASING AND TUBING RECORD

SIZE	WT(#)	FROM	TO	SIZE	WT(#)	FROM	TO
13.375"	54.5	SURFACE	996'				
7.000"	23	SURFACE	7570'				
4.500"	11.6	7532'	7739'				
2.375"	9.7	SURFACE	7479.3'				

STR.	PIPE DIA.	PERFORATIONS
A	7.000"	WSO: 7570', SQUEEZED: 6302'-6307'.
	4.500"	WIRESCREEN: 7532'-7572', 7610'-7738'.
		PACKERS: 7477'-7848.8'.
		MANDRELS: 2307.4', 3642.9', 4840.4', 5849.5', 6703.5', 7403.8'.
		NO-GO: 7442.4'.
		PENGO PATCH: 6285'-6327'.

Audio Data: C:\data\NOISE.txt

DEPTH	200HZ	600HZ	1000HZ	2000HZ
100	15.50	7.10	4.20	1.80
250	15.60	7.00	4.20	1.50
500	15.70	7.10	4.20	1.80
700	16.10	7.00	4.20	1.50
720	16.20	7.10	4.20	1.50
740	15.50	7.10	4.20	1.50
760	15.70	7.10	4.20	1.50
780	15.60	7.00	4.20	1.50
800	17.80	7.00	4.20	1.50
820	17.50	7.00	4.20	1.50
840	16.80	7.10	4.20	1.50
860	17.00	7.00	4.20	1.50
880	16.30	7.00	4.10	1.40
900	16.50	7.10	4.20	1.50
920	15.70	7.00	4.10	1.50
940	16.60	7.00	4.20	1.50
960	16.10	6.90	4.10	1.40
980	16.60	7.00	4.20	1.50
1000	16.40	7.00	4.10	1.40
1020	15.80	7.10	4.20	1.60
1040	16.40	6.90	4.10	1.50
1060	16.40	7.00	4.20	1.50
1080	16.40	7.00	4.20	1.50
1100	16.30	7.00	4.20	1.60
1120	15.70	6.90	4.20	1.50
1140	15.80	7.00	4.20	1.60
1160	15.60	7.00	4.20	1.50
1180	15.80	6.90	4.20	1.50
1200	16.00	6.90	4.10	1.50
1220	15.60	6.90	4.10	1.50
1240	15.50	6.90	4.10	1.50
1260	15.00	6.80	4.10	1.50
1280	15.90	6.90	4.20	1.50
1300	15.20	6.90	4.10	1.50
1500	15.10	6.80	4.10	1.50
1750	14.70	6.80	4.10	1.50
2000	14.50	6.90	4.20	1.50
2200	15.00	6.90	4.20	1.50
2220	15.30	7.00	4.30	1.50
2240	15.10	6.90	4.20	1.50
2260	15.10	6.80	4.10	1.50
2280	14.90	6.80	4.10	1.50
2300	14.70	6.80	4.20	1.50
2500	14.30	6.80	4.20	1.50
2780	14.10	6.80	4.20	1.50
3000	14.10	6.70	4.20	1.50
3280	13.80	6.80	4.20	1.50
3500	14.10	6.70	4.20	1.60
3660	14.00	6.80	4.20	1.50
3680	13.90	6.80	4.20	1.50
3700	13.80	6.80	4.20	1.50
3720	13.80	6.80	4.20	1.50
3740	13.80	6.70	4.20	1.50
3760	13.90	6.80	4.30	1.60
4000	15.80	6.70	4.20	1.50
4250	14.10	6.70	4.20	1.50
4500	13.60	6.70	4.20	1.60
4750	13.30	6.70	4.20	1.60
5000	13.50	6.80	4.30	1.60
5280	13.20	6.70	4.30	1.60
5500	13.20	6.60	4.30	1.60
5750	13.00	6.60	4.20	1.50
6000	13.10	6.70	4.30	1.70
6250	13.10	6.60	4.30	1.60
6500	12.90	6.60	4.30	1.60
6780	12.70	6.60	4.30	1.60
7000	12.60	6.50	4.30	1.60
7250	12.70	6.60	4.30	1.60
7300	12.60	6.60	4.30	1.60
7310	12.50	6.60	4.30	1.60
7320	12.70	6.70	4.40	1.60
7330	12.50	6.60	4.30	1.60
7340	12.60	6.70	4.40	1.70
7350	12.50	6.60	4.30	1.60
7360	12.60	6.60	4.40	1.60
7370	12.60	6.60	4.30	1.60
7380	12.60	6.70	4.40	1.80
7390	12.60	6.70	4.50	1.80
7400	12.50	6.60	4.40	1.70
7410	12.40	6.60	4.30	1.60
7420	12.40	6.50	4.30	1.60
7430	12.50	6.70	4.50	1.80
7440	12.40	6.60	4.40	1.80
7450	12.30	6.60	4.40	1.80
7460	12.30	6.50	4.30	1.60
7470	12.30	6.50	4.30	1.60
7475	12.10	6.40	4.20	1.50

1470 COLLAR LOCATOR (MV) 2115

70 TEMPERATURE (DEG F) 90

0.02 AUDIO DETECTION LOG (MV) 200

-2 DIFFERENTIAL TEMPERATURE (DEG F) 2