WELL ANALYSIS CORPORATION

AUDIO DETECTION SURVEY

FILING NO.				
COMPANY: SOUTHERN CALIF. GAS CO.				
WELL: FERNANDO FEE 32C				
FIELD: ALISO CANYON				
COUNTY: LOS ANGELES		STATE: CALIFORNIA		
LOCATION: DISTRICT 2		OTHER SVC:		
API NUMBER: 0403721359				
SEC: 27 TWN: 3N RNG: 16W				
CB		-ELEVATIONS-		
PERMANENT DATUM: GROUND LEVEL ELEV:		KB: Ft.		
LOG MEASURED FROM MAT 0' ABOVE PERM DATUM		DF: Ft.		
DRILLING MEASURED FROM		GL: Ft.		
DATE LOG RAN	03-09-2016	PRESSURE	FLOWING	INJECTION	SHUT-IN
RUN NUMBER	ONE	TUBING PSI			1098
EFFECTIVE DEPTH	7676'	CASING PSI			1098
PICKUP DEPTH	7141'	INJECTION RATE	N/A		
BOT LOGGED INT	7141'	OBSERVED RATE	N/A		
TOP LOGGED INT	10'	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	149.0 F.	OIL Gr.	OIL =		
AT DEPTH	7141.0'	GAS Gr.	GAS=		
TEMPERATURE SENS	1 F/DIV.	MPP	BHP =		
LOGGING SPEED	100 FPM		WATER=		
RECORDED BY	S. MACIAS				
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

COLLAR LOCATOR AT 2.0'

TEMPERATURE TOOL AT 5.0'

AUDIO DETECTOR AT 8.0'

Remarks/Survey Results

11:45 AM - ON LOCATION
12:09 PM - RAN IN HOLE
12:09 PM - BEGIN SURVEY

SAND TAG MARKERS: 7235' TOP S1
7338' TOP S4
7375' TOP S8

CASING AND TUBING RECORD

SIZE	WT(#)	FROM	TO	SIZE	WT(#)	FROM	TO
13.375"	48.0	SURFACE	798'	2.875"	6.5	7162'	7167'
8.625"	36.0	SURFACE	7339'				
6.625"	28.0	7204'	7676'				
3.500"		SURFACE	7162'				

STR.	PIPE DIA.	PERFORATIONS
A	6.625"	7300'-7676', WSO: 7324', WSO: 7325'.
		PACKERS: 7163'-7167'.
		GAS LIFT MANDREL: 7079.6'-7085.9'.
		SLIDING SLEEVES: 7120.2'-7124.2'.
		NO-GO: 7151'.
		STAGE COLLAR: 3738'.
		PENGO PATCH: 3737'-3759'.

Audio Data: c:\data\noise.txt

DEPTH	200HZ	600HZ	1000HZ	2000HZ
50	15.60	14.60	7.70	2.90
100	17.60	16.80	8.50	2.80
200	19.60	18.80	9.30	2.80
300	16.90	15.80	7.30	2.80
400	16.20	15.00	7.10	2.80
500	19.00	18.00	9.50	2.90
600	22.30	21.20	11.20	2.80
700	23.70	22.70	11.70	3.20
800	24.50	23.40	11.30	2.80
900	24.30	23.30	11.40	2.80
1000	21.60	20.20	9.90	2.80
1100	22.00	20.80	10.10	2.80
1200	22.90	21.70	10.30	2.80
1220	24.60	23.10	10.80	2.90
1240	23.90	22.60	10.60	2.80
1260	22.90	21.00	10.50	3.00
1280	23.20	21.70	10.50	2.80
1300	24.00	22.40	10.80	2.80
1320	23.80	22.40	11.00	2.80
1340	27.30	25.90	11.60	2.80
1360	25.20	23.50	10.90	2.80
1380	25.80	24.30	11.20	2.80
1400	26.70	25.10	11.90	2.80
1420	27.60	26.20	11.80	2.80
1440	28.00	26.60	12.30	3.10
1460	28.70	27.50	13.20	2.80
1480	29.30	28.10	13.30	2.80
1500	28.60	27.20	12.50	2.80
1600	25.70	24.30	12.20	2.80
1700	27.10	26.00	12.80	2.80
1800	28.50	27.00	12.00	2.80
1850	25.80	24.30	11.80	2.80
1900	26.40	24.80	11.20	2.80
1950	26.80	24.80	11.40	3.20
2000	25.50	24.10	11.40	2.90
2050	29.40	26.70	12.70	2.90
2100	25.40	24.00	11.30	2.80
2150	28.30	26.50	13.10	4.70
2200	27.70	26.20	12.70	2.90
2220	27.00	25.60	12.80	2.80
2240	26.70	25.30	12.20	2.80
2260	25.80	24.50	12.40	2.90
2280	28.10	26.60	13.10	2.80
2300	26.90	25.30	12.40	2.80
2320	27.50	25.60	12.30	3.10
2340	27.80	26.30	13.20	2.90
2360	27.60	26.00	12.00	2.80
2380	27.50	26.10	12.70	2.80
2400	25.00	23.40	12.00	2.80
2420	23.10	21.70	11.10	2.80
2440	25.00	22.60	11.80	2.90
2460	25.60	24.20	12.70	3.20
2480	26.00	24.40	12.10	3.60
2500	25.50	23.80	12.20	2.80
2520	26.50	24.90	11.90	2.80
2540	23.60	22.20	11.10	2.70
2560	24.40	22.70	11.10	2.80
2580	21.50	19.50	9.30	2.70
2600	24.20	22.10	11.50	3.00
2620	23.90	22.50	11.10	2.80
2640	24.60	22.90	11.30	2.80
2660	25.20	23.40	11.40	2.80
2680	22.40	19.90	9.90	2.80
2700	20.10	17.60	8.60	2.70
2950	18.80	16.30	7.80	2.80
3200	14.00	11.70	6.00	2.70
3450	11.20	8.40	4.60	2.80
3700	9.80	7.40	4.50	3.00
3720	10.70	7.70	4.60	3.10
3740	11.10	8.10	5.20	3.50
3760	11.00	7.80	4.70	3.00
3780	10.30	7.60	4.60	3.10
3800	9.60	7.50	4.50	2.90
3820	9.80	7.50	4.50	2.80
3840	9.90	7.70	4.80	3.10
3860	9.90	7.60	4.50	2.80
3880	9.50	7.70	4.50	2.90
3900	10.60	7.90	4.80	3.00
3920	9.40	7.60	4.50	2.80
3940	10.20	7.60	4.50	2.80
3960	9.30	7.60	4.50	2.80
3980	9.50	7.70	4.50	2.80
4000	9.30	7.70	4.50	2.80
4250	9.50	7.90	4.60	2.80
4500	9.00	7.90	4.70	2.80
4750	9.10	8.20	5.10	3.20
5000	8.70	7.90	4.60	2.80
5250	8.50	7.70	4.60	2.90
5500	8.10	7.60	4.50	2.90
5750	8.20	7.50	4.50	2.90
6000	8.70	7.90	4.90	3.30
6250	7.80	7.20	4.50	3.00
6500	7.70	7.20	4.30	2.90
6750	7.30	7.00	4.30	2.90
7000	8.50	7.30	4.70	3.20
7011	8.00	7.10	4.50	3.00
7021	7.60	7.10	4.60	3.20
7031	7.30	6.90	4.20	2.90
7041	7.50	7.00	4.40	3.00
7051	7.30	6.90	4.30	2.90
7061	7.40	7.00	4.30	2.90
7071	7.30	6.90	4.20	2.90
7081	7.40	6.90	4.30	2.90
7091	7.30	6.90	4.30	2.90
7101	7.20	6.90	4.20	2.90
7111	7.30	7.00	4.20	2.90
7121	7.80	6.90	4.30	2.90
7131	9.20	7.30	4.60	3.20
7141	7.70	7.00	4.20	2.90