

Results of Directional Survey

API number:	30-025-39697		
OGRID:		Operator:	COG OPERATING LLC
		Property:	G C FEDERAL # 37

surface	ULSTR:	J	20	T	17S	R	32E
				2550	FSL	1970	FEL

BH Loc	ULSTR:	J	20	T	17S	R	32E
7147	MD	7126.0	TVD	2303	FSL	1662	FEL

Top Perf/OH	ULSTR:	J	20	T	17S	R	32E
5420	MD	5399.0	TVD	2303	FSL	1662	FEL

Bot Perf/OH	ULSTR:	J	20	T	17S	R	32E
6770	MD	6749.0	TVD	2303	FSL	1662	FEL

	MD	N/S	E/W	VD
TOP PERFS/OH	5420	-246.90	307.90	5399.00
BOT PERFS/OH	6770	-246.90	307.90	6749.00

NEXT TO LAST				
LAST READING				
TD	7147	-246.90	307.90	7126.00

Surface Location	2550	FS	1970	FE
Projected BHL	2303	FS	1662	FE
Location of				
Top Perfs/OH	2303	FS	1662	FE
Bottom Perfs/OH	2303	FS	1662	FE

SUMMARY of Subsurface Locations

Surface Location	J-20-17S-32E	2550	FS	1970	FE	Vert. Depth
Top Perfs/OH	J-20-17S-32E	2303	FS	1662	FE	5399.00
Bottom Perfs/OH	J-20-17S-32E	2303	FS	1662	FE	6749.00
Projected TD	J-20-17S-32E	2303	FS	1662	FE	7126.00