

Results of Directional Survey

API number:	30-025-39262		
OGRID:		Operator:	COG OPERATING LLC
		Property:	GC FEDERAL # 24

surface	ULSTR: I	20	T 17S	R 32E
		1330	FSL	1290 FEL

BH Loc	ULSTR: J	20	T 17S	R 32E
		1659	FSL	1663 FEL

At top perf/OH interval				
Top Perf/OH	ULSTR: J	20	T 17S	R 32E
	5392	1588	FSL	1586 FEL
At bottom perf/OH interval				
Bot Perf/OH	ULSTR: J	20	T 17S	R 32E
	6770	1647	FSL	1649 FEL

	MD	N/S	E/W	VD
	5269	253.24	-289.32	5247.00
TOP PERFS/OH	5392	258.44	-296.04	5370.00
	5458	261.23	-299.65	5436.00
	6718	314.66	-356.60	6693.68
BOT PERFS/OH	6770	316.97	-359.22	6745.56
	6907	323.04	-366.12	6882.26

NEXT TO LAST	6907	323.04	-366.12	6882.26
LAST READING	6998	327.10	-370.69	6973.05
TD	7045	329.20	-373.05	7019.94

Surface Location	1330	FS	1290	FE
Projected BHL	1659	FS	1663	FE
Location of				
Top Perfs/OH	1588	FS	1586	FE
Bottom Perfs/OH	1647	FS	1649	FE

SUMMARY of Subsurface Locations

Surface Location	I-20-17S-32E	1330	FS	1290	FE	Vert Depth
Top Perfs/OH	J-20-17S-32E	1588	FS	1586	FE	5370.00
Bottom Perfs/OH	J-20-17S-32E	1647	FS	1649	FE	6745.56
Projected TD	J-20-17S-32E	1659	FS	1663	FE	7019.94