

Results of Directional Survey

API number:	30-025-40227		DD
OGRID:		Operator:	COG OPERATING LLC
		Property:	GC FEDERAL # 61

surface	ULSTR:	K	19		T 17S		R 32E
					1726 FSL		2053 FWL

BH Loc	ULSTR:	K	19		T 17S		R 32E
7095	MD		7060.7	TVD	2257 FSL		2259 FWL

Top Perf/OH	ULSTR:	K	19		T 17S		R 32E
5315	MD		5293.3	TVD	2058 FSL		2189 FWL

Bot Perf/OH	ULSTR:	K	19		T 17S		R 32E
6670	MD		6638.5	TVD	2144 FSL		2242 FWL

	MD	N/S	E/W	VD
	5313	331.52	135.62	5291.33
TOP PERFS/OH	5315	331.76	135.70	5293.31
	5407	342.68	139.58	5384.58
	6649	482.92	188.35	6617.65
BOT PERFS/OH	6670	418.31	189.20	6638.49
	6743	193.72	192.17	6710.95

NEXT TO LAST	7045	525.90	204.28	7010.99
LAST READING	7095	530.86	206.20	7060.70
TD	7095	530.86	206.20	7060.70

Surface Location	1726	FS	2053	FW
Projected BHL	2257	FS	2259	FW
Location of				
Top Perfs/OH	2058	FS	2189	FW
Bottom Perfs/OH	2144	FS	2242	FW

SUMMARY of Subsurface Locations

Surface Location	K-19-17S-32E	1726	FS	2053	FW	Vert. Depth
Top Perfs/OH	K-19-17S-32E	2058	FS	2189	FW	5293.31
Bottom Perfs/OH	K-19-17S-32E	2144	FS	2242	FW	6638.49
Projected TD	K-19-17S-32E	2257	FS	2259	FW	7060.70

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