

Results of Directional Survey

DD

API number:	30-025-39875		
OGRID:		Operator:	COG OPERATING LLC
		Property:	MC FEDERAL # 55

surface	ULSTR:	H	21	T	17S	R	32E
				1810	FNL	1140	FEL

BH Loc	ULSTR:	H	21	T	17S	R	32E
7138	MD	7109.7	TVD	2297	FNL	971	FEL

Top Perf/OH	ULSTR:	H	21	T	17S	R	32E
5496	MD	5469.7	TVD	2220	FNL	981	FEL

Bot Perf/OH	ULSTR:	H	21	T	17S	R	32E
6870	MD	6842.1	TVD	2283	FNL	974	FEL

	MD	N/S	E/W	VD
	5462	-408.09	158.29	5435.72
TOP PERFS/OH	5496	-410.21	158.64	5469.65
	5556	-413.95	159.26	5529.53
	6789	-468.63	165.64	6761.24
BOT PERFS/OH	6870	-473.34	166.49	6842.10
	6884	-474.15	166.64	6856.08

NEXT TO LAST	6979	-479.31	167.48	6950.93
LAST READING	7087	-484.64	168.33	7058.80
TD	7138	-487.16	168.73	7109.74

Surface Location	1810	FN	1140	FE
Projected BHL	2297	FN	971	FE
Location of				
Top Perfs/OH	2220	FN	981	FE
Bottom Perfs/OH	2283	FN	974	FE

SUMMARY of Subsurface Locations

Surface Location	H-21-17S-32E	1810	FN	1140	FE	Vert. Depth
Top Perfs/OH	H-21-17S-32E	2220	FN	981	FE	5469.65
Bottom Perfs/OH	H-21-17S-32E	2283	FN	974	FE	6842.10
Projected TD	H-21-17S-32E	2297	FN	971	FE	7109.74

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