

Results of Directional Survey

API number:	30-025-41574		
OGRID:		Operator:	COG OPERATING LLC
		Property:	TUSK FEDERAL # 5H

surface	ULSTR:	P	25	T 19S	R 34E
				190 FSL	330 FEL

BH Loc	ULSTR:	A	25	T 19S	R 34E
15361	MD	10872.0	TVD	345 FNL	446 FEL
4935 FSL					

Top Perf/OH	ULSTR:	P	25	T 19S	R 34E
11209	MD	10207.5	TVD	281 FSL	335 FEL

Bot Perf/OH	ULSTR:	A	25	T 19S	R 34E
15235	MD	10877.5	TVD	471 FNL	445 FEL
4809 FSL					

	MD	N/S	E/W	VD
	11200.00	91.32	-4.61	10198.54
TOP PERFS/OH	11209.00	91.23	-4.91	10207.53
	11250.00	90.84	-6.26	10248.51
	15182.00	4566.10	-115.40	10879.70
BOT PERFS/OH	15235.00	4619.06	-115.36	10877.50
	15307.00	4691.00	-115.30	10874.50

NEXT TO LAST	15307.00	4691.00	-115.30	10874.50
LAST READING	15356.00	4739.90	-115.50	10872.20
TD	15361.00	4744.89	-115.52	10871.97

Surface Location	190	FS	330	FE
Projected BHL	4935	FS	446	FE
Location of				
Top Perfs/OH	281	FS	335	FE
Bottom Perfs/OH	4809	FS	445	FE

SUMMARY of Subsurface Locations

Surface Location	P-25-19S-34E	190	FS	330	FE	Vert. Depth
Top Perfs/OH	P-25-19S-34E	281	FS	335	FE	10207.53
Bottom Perfs/OH	A-25-19S-34E	4809	FS	445	FE	10877.50
Projected TD	A-25-19S-34E	4935	FS	446	FE	10871.97

JAN 29 2015