

Results of Directional Survey

API number:	30-025-40253		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	CHAPARRAL 33 FEDERAL # 3H

surface	ULSTR:	A	33	T 19S	R 34E
				220 FNL	880 FEL

BH Loc	ULSTR:	P	33	T 19S	R 34E
15302	MD	10851.5	TVD	328 FSL	649 FEL
				4952 FNL	

Top Perf/OH	ULSTR:	A	33	T 19S	R 34E
11100	MD	10827.2	TVD	758 FNL	798 FEL

Bot Perf/OH	ULSTR:	P	33	T 19S	R 34E
15225	MD	10851.7	TVD	405 FSL	653 FEL
				4875 FNL	

	MD	N/S	E/W	VD
	11085	-522.82	82.56	10826.02
TOP PERFS/OH	11100	-537.71	82.25	10827.22
	11116	-553.60	81.92	10828.50
	15218	-4647.77	227.06	10851.68
BOT PERFS/OH	15225	-4654.77	227.32	10851.66
	15274	-4703.73	229.13	10851.53

NEXT TO LAST	15274	-4703.73	229.13	10851.53
LAST READING	15302	-4731.69	230.57	10851.48
TD	15302	-4731.69	230.57	10851.48

Surface Location	220	FN	880	FE
Projected BHL	4952	FN	649	FE
Location of				
Top Perfs/OH	758	FN	798	FE
Bottom Perfs/OH	4875	FN	653	FE

SUMMARY of Subsurface Locations

Surface Location	A-33-19S-34E	220	FN	880	FE	Vert. Depth
Top Perfs/OH	A-33-19S-34E	758	FN	798	FE	10827.22
Bottom Perfs/OH	P-33-19S-34E	4875	FN	653	FE	10851.66
Projected TD	P-33-19S-34E	4952	FN	649	FE	10851.48

MAR 21 2013