

Results of Directional Survey

API number:	30-005-29122		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	HANCOCK 19 STATE COM # 4H

surface	ULSTR:	A	19	T 15S	R 31E
				660 FNL	330 FEL

BH Loc	ULSTR:	D	19	T 15S	R 31E
12480	MD	8658.7	TVD	700 FNL	4268 FEL
					1012 FWL

Top Perf/OH	ULSTR:	A	19	T 15S	R 31E
8240	MD	8239.7	TVD	644 FNL	375 FEL

Bot Perf/OH	ULSTR:	D	19	T 15S	R 31E
12245	MD	8658.8	TVD	692 FNL	4034 FEL
					1246 FWL

	MD	N/S	E/W	VD
	8153.3	16.50	-45.23	8152.98
TOP PERFS/OH	8240	16.35	-44.77	8239.68
	8248.4	16.34	-44.72	8248.08
	12238	-31.75	-3696.59	8658.72
BOT PERFS/OH	12245	-32.07	-3703.58	8658.75
	12301	-34.66	-3759.52	8658.99

NEXT TO LAST	12364	-36.92	-3822.48	8658.55
LAST READING	12428	-38.82	-3886.45	8658.61
TD	12480	-40.36	-3938.43	8658.66

Surface Location	660	FN	330	FE
Projected BHL	700	FN	4268	FE
Location of				
Top Perfs/OH	644	FN	375	FE
Bottom Perfs/OH	692	FN	4034	FE

SUMMARY of Subsurface Locations

Surface Location	A-19-15S-31E	660	FN	330	FE	Vert. Depth
Top Perfs/OH	A-19-15S-31E	644	FN	375	FE	8239.68
Bottom Perfs/OH	D-19-15S-31E	692	FN	4034	FE	8658.75
Projected TD	D-19-15S-31E	700	FN	4268	FE	8658.66