

Results of Directional Survey

DD

API number:	30-025-39974			
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO	
		Property:	HT FEDERAL	# 1

surface	ULSTR:	M	18	T	17S	R	32E
				780	FSL	575	FWL

BH Loc	ULSTR:	M	18	T	17S	R	32E
7018	MD	6991.7	TVD	765	FSL	783	FWL

Top Perf/OH	ULSTR:	M	18	T	17S	R	32E
5300	MD	5282.3	TVD	605	FSL	844	FWL

Bot Perf/OH	ULSTR:	M	18	T	17S	R	32E
6750	MD	6724.8	TVD	743	FSL	790	FWL

	MD	N/S	E/W	VD
	5297	-175.00	268.70	5279.3
TOP PERFS/OH	5300	-174.69	268.62	5282.29
	5328	-171.80	267.90	5310.20
	6743	-37.60	215.20	6717.80
BOT PERFS/OH	6750	-36.99	215.00	6724.75
	6774	-34.90	214.30	6748.60

NEXT TO LAST	6900	-24.30	210.80	6874.10
LAST READING	6931	-21.80	210.10	6905.00
TD	7018	-14.78	208.14	6991.72

Surface Location	780	FS	575	FW
Projected BHL	765	FS	783	FW
Location of				
Top Perfs/OH	605	FS	844	FW
Bottom Perfs/OH	743	FS	790	FW

SUMMARY of Subsurface Locations

Surface Location	M-18-17S-32E	780	FS	575	FW	Vert. Depth
Top Perfs/OH	M-18-17S-32E	605	FS	844	FW	5282.29
Bottom Perfs/OH	M-18-17S-32E	743	FS	790	FW	6724.75
Projected TD	M-18-17S-32E	765	FS	783	FW	6991.72