

Results of Directional Survey

API number:	30-025-38103			
OGRID:		Operator:	CHESAPEAKE OPERATING INC	
		Property:	MILLARD DECK ESTATE 28 FEDERAL	# 1

surface	ULSTR:	B	28	T	22S	R	36E
			965	FNL	1590	FEL	

BH Loc	ULSTR:	B	28	T	22S	R	36E
			789	FNL	1466	FEL	

Top Perf/OH	ULSTR:	B	28	T	22S	R	36E
		9201	791	FNL	1469	FEL	

Bot Perf/OH	ULSTR:	B	28	T	22S	R	36E
		9255	790	FNL	1469	FEL	

	MD	N/S	E/W	VD
	9136	173.70	120.90	9132.2
TOP PERFS/OH	9201	174.38	121.17	9197.20
	9232	174.70	121.30	9228.20
	9232	174.70	121.30	9228.20
BOT PERFS/OH	9255	174.80	121.45	9251.20
	9326	175.10	121.90	9322.20

NEXT TO LAST	9750	176.10	124.20	9746.20
LAST READING	9800	176.20	124.40	9796.20
TD	9800	176.20	124.40	9796.20

Surface Location	965	FN	1590	FE
Projected BHL	789	FN	1466	FE
Location of				
Top Perfs/OH	791	FN	1469	FE
Bottom Perfs/OH	790	FN	1469	FE

SUMMARY of Subsurface Locations

Surface Location	B-28-22S-36E	965	FN	1590	FE	Vert. Depth
Top Perfs/OH	B-28-22S-36E	791	FN	1469	FE	9197.20
Bottom Perfs/OH	B-28-22S-36E	790	FN	1469	FE	9251.20
Projected TD	B-28-22S-36E	789	FN	1466	FE	9796.20