

30-c15 -334cc

Company:	Marbob Energy	Date:	6/2/2004	Time:	14:24:31	Page:	1
Field:	Willow Lake; Delaware, S.W.	Co-ordinate(NE) Reference:	Site: Willow State #4-H, Grid North				
Site:	Willow State #4-H	Vertical (TVD) Reference:	System: Mean Sea Level				
Well:	Willow State #4-H	Section (VS) Reference:	Well (0.00N,0.00E,85.46Azi)				
Wellpath:	Willow State #4-H	Plan:	Plan #1 06/02/04				

Field:	Willow Lake; Delaware, S.W. Eddy County, New Mexico USA						
Map System:	US State Plane Coordinate System 1927			Map Zone:	New Mexico, Eastern Zone		
Geo Datum:	NAD27 (Clarke 1866)			Coordinate System:	Site Centre		
Sys Datum:	Mean Sea Level			Geomagnetic Model:	igrf2000		

Site:	Willow State #4-H Eddy County , New Mexico Sec. 3 , T2S R28E						
Site Position:		Northing:	ft	Latitude:			
From:	Local Only	Easting :	ft	Longitude:			
Position Uncertainty:	0.00 ft			North Reference:	Grid		
Ground Level:	0.00 ft			Grid Convergence:	deg		

Well:	Willow State #4-H			Slot Name:			
Well Position:	+N/-S	0.00 ft	Northing:	ft	Latitude:		
	+E/-W	0.00 ft	Easting :	ft	Longitude:		
Position Uncertainty:	0.00 ft						

Wellpath:	Willow State #4-H		Drilled From:	Surface			
Tie-on Depth:			Above System Datum:	Mean Sea Level			
Current Datum:	SITE	Height	0.00 ft	Declination:	0.00 deg		
Magnetic Data:	6/2/2004			Mag Dip Angle:	0.00 deg		
Field Strength:	0 nT			Direction	deg		
Vertical Section:	Depth From (TVD)	+N/-S		+E/-W	DLS		
	ft	ft		ft	deg/100ft		
	4838.00	0.00		0.00	85.46		

Plan:	Plan #1 06/02/04		Date Composed:	6/2/2004			
Principal:	Yes		Version:	1			
			Tied-to:	From Surface			

Plan Section Information

MD	Incl	Azim	TVD	+N/-S	+E/-W	DLS	Build	Turn	TFO	Target
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4360.00	0.00	0.00	4360.00	0.00	0.00	0.00	0.00	0.00	0.00	
5110.84	90.00	85.46	4838.00	37.84	476.50	11.99	11.99	0.00	85.46	
5896.80	90.00	85.46	4838.00	100.00	1260.00	0.00	0.00	0.00	0.00	PBHL Willow State #4-H

Section 1 : Start Hold

MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO
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Section 2 : Start Build 11.99

MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO
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Section 3 : Start Hold

MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO
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PathFinder Planning Report

Company: Marbob Energy
Field: Willow Lake, Delaware, S.W.
Site: Willow State #4-H
Well: Willow State #4-H
Wellpath: Willow State #4-H

Date: 6/2/2004 Time: 14:24:31 Page: 2
Co-ordinate(NE) Reference: Site: Willow State #4-H, Grid North
Vertical (TVD) Reference: System: Mean Sea Level
Section (VS) Reference: Well (0.00N,0.00E,85.46Azi)
Plan: Plan #1 06/02/04

Survey

[illegible]

Targets

[illegible]