

MARBOB ENERGY

Rock Spur
Eddy County, NM
Showstopper 19 Federal #6H
VH - Job #32K1010762

30-015-37480

Survey: Actual

SDI Standard Survey Report

31 October, 2010



This survey is correct to the best of my knowledge and is supported by actual field data.

Robertson

Notorized this date 2nd of November, 2010.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report

Company:	MARBOB ENERGY	Local Co-ordinate Reference:	Well Showstopper 19 Federal #6H
Project:	Rock Spur	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Showstopper 19 Federal #6H	North Reference:	Grid
Wellbore:	VH - Job #32K1010762	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1010762	Database:	EDM-Regulatory

Project	Rock Spur		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Eddy County, NM		
Site Position:		Northing:	403,511.11 usft
From:	Lat/Long	Easting:	594,179.04 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 6' 32.411 N
		Longitude:	104° 1' 44.994 W
		Grid Convergence:	0.16 °

Well	Showstopper 19 Federal #6H, Directional (DDC)		
Well Position	+N/-S	0.0 usft	Northing: 403,511.11 usft
	+E/-W	0.0 usft	Easting: 594,179.04 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 6' 32.411 N
		Longitude:	104° 1' 44.994 W
		Ground Level:	0.0 usft

Wellbore	VH - Job #32K1010762		
Magnetics	Model Name	Sample Date	Declination
	BGGM2010	10/7/2010	(°)
			7.93
			Dip Angle
			(°)
			60.02
			Field Strength
			(nT)
			48,622

Design	VH - Job #32K1010762		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			354.99

Survey Program	Date	10/31/2010		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	6,350.0	Actual (VH - Job #32K1010762)	Keeper	Keeper Gyro

Survey								
Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance	
(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
100.0	0.41	35.38	100.0	0.3	0.2	35.38	0.4	
200.0	0.93	46.38	200.0	1.1	1.0	41.23	1.5	
300.0	0.88	45.30	300.0	2.2	2.1	43.59	3.1	
400.0	0.94	50.08	400.0	3.3	3.3	45.00	4.7	
500.0	0.98	47.24	500.0	4.4	4.6	45.96	6.4	
600.0	0.95	46.67	599.9	5.6	5.8	46.17	8.0	
700.0	0.90	47.22	699.9	6.7	7.0	46.30	9.7	
800.0	0.65	29.45	799.9	7.7	7.8	45.50	11.0	
900.0	0.41	12.68	899.9	8.5	8.2	43.81	11.8	
1,000.0	0.24	248.26	999.9	8.8	8.1	42.50	12.0	
1,100.0	0.67	244.32	1,099.9	8.5	7.4	40.93	11.2	

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Wellbore:	VH - Job #32K1010762	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1010762	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,200.0	0.73	265.50	1,199.9	8.2	6.2	37.13	10.3
1,300.0	0.86	286.03	1,299.9	8.3	4.8	30.12	9.6
1,400.0	0.84	294.58	1,399.9	8.8	3.4	21.29	9.5
1,500.0	1.31	269.55	1,499.9	9.1	1.6	10.15	9.3
1,600.0	1.92	260.77	1,599.8	8.9	-1.2	352.55	8.9
1,700.0	1.56	264.06	1,699.8	8.5	-4.2	333.76	9.4
1,800.0	1.39	261.02	1,799.7	8.1	-6.7	320.41	10.5
1,900.0	1.34	255.16	1,899.7	7.6	-9.0	310.16	11.8
2,000.0	0.69	236.58	1,999.7	7.0	-10.7	303.26	12.8
2,100.0	1.52	120.96	2,099.7	6.0	-10.0	300.81	11.7
2,200.0	1.70	119.65	2,199.6	4.6	-7.6	300.98	8.9
2,300.0	2.22	109.19	2,299.6	3.2	-4.5	305.44	5.5
2,400.0	2.78	106.89	2,399.5	1.9	-0.4	349.33	1.9
2,500.0	2.87	105.11	2,499.4	0.5	4.4	83.43	4.4
2,600.0	1.92	108.02	2,599.3	-0.7	8.4	94.53	8.4
2,700.0	1.21	119.08	2,699.2	-1.7	10.9	98.84	11.0
2,800.0	0.74	135.54	2,799.2	-2.7	12.3	102.27	12.6
2,900.0	0.50	130.66	2,899.2	-3.4	13.1	104.65	13.5
3,000.0	0.61	136.92	2,999.2	-4.1	13.8	106.55	14.4
3,100.0	0.57	139.29	3,099.2	-4.9	14.5	108.57	15.2
3,200.0	0.53	150.60	3,199.2	-5.6	15.0	110.58	16.0
3,300.0	0.56	178.14	3,299.2	-6.5	15.2	113.17	16.6
3,400.0	0.37	170.98	3,399.2	-7.3	15.3	115.59	17.0
3,500.0	0.31	160.91	3,499.2	-7.9	15.5	117.10	17.4
3,600.0	0.26	153.19	3,599.2	-8.4	15.6	118.14	17.7
3,700.0	0.25	138.76	3,699.2	-8.7	15.9	118.79	18.1
3,800.0	0.26	137.33	3,799.2	-9.1	16.2	119.25	18.6
3,900.0	0.20	154.88	3,899.2	-9.4	16.4	119.77	18.9
4,000.0	0.14	202.21	3,999.2	-9.7	16.4	120.43	19.1
4,100.0	0.15	153.86	4,099.2	-9.9	16.5	121.01	19.2
4,200.0	0.22	171.57	4,199.2	-10.2	16.5	121.66	19.4
4,300.0	0.19	193.57	4,299.2	-10.5	16.5	122.55	19.6
4,400.0	0.25	206.65	4,399.2	-10.9	16.4	123.63	19.7
4,500.0	0.32	201.41	4,499.2	-11.4	16.2	125.05	19.8
4,600.0	0.30	193.56	4,599.2	-11.9	16.0	126.53	19.9
4,700.0	0.40	191.99	4,699.2	-12.5	15.9	128.11	20.2
4,800.0	0.52	193.96	4,799.2	-13.3	15.7	130.14	20.6
4,900.0	0.61	194.89	4,899.2	-14.2	15.5	132.57	21.0
5,000.0	0.78	192.84	4,999.2	-15.4	15.2	135.39	21.6
5,100.0	1.06	178.16	5,099.2	-17.0	15.1	138.42	22.7
5,200.0	1.04	175.89	5,199.1	-18.8	15.2	141.14	24.1
5,300.0	1.03	171.13	5,299.1	-20.6	15.4	143.29	25.7
5,400.0	1.11	164.95	5,399.1	-22.4	15.7	144.92	27.4
5,500.0	1.13	160.12	5,499.1	-24.3	16.3	146.07	29.3

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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Showstopper 19 Federal #6H	North Reference:	Grid
Wellbore:	VH - Job #32K1010762	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1010762	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	1.26	157.13	5,599.1	-26.2	17.1	146.90	31.3
5,700.0	1.31	166.34	5,699.0	-28.3	17.8	147.88	33.5
5,800.0	1.11	159.51	5,799.0	-30.4	18.4	148.78	35.5
5,900.0	1.23	157.15	5,899.0	-32.3	19.2	149.30	37.5
6,000.0	1.46	156.79	5,999.0	-34.4	20.1	149.75	39.8
6,100.0	1.56	153.77	6,098.9	-36.8	21.2	150.09	42.5
6,200.0	1.65	157.33	6,198.9	-39.4	22.3	150.43	45.3
6,300.0	1.70	164.88	6,298.9	-42.1	23.3	151.07	48.1
6,350.0	1.99	172.32	6,348.8	-43.7	23.6	151.64	49.7



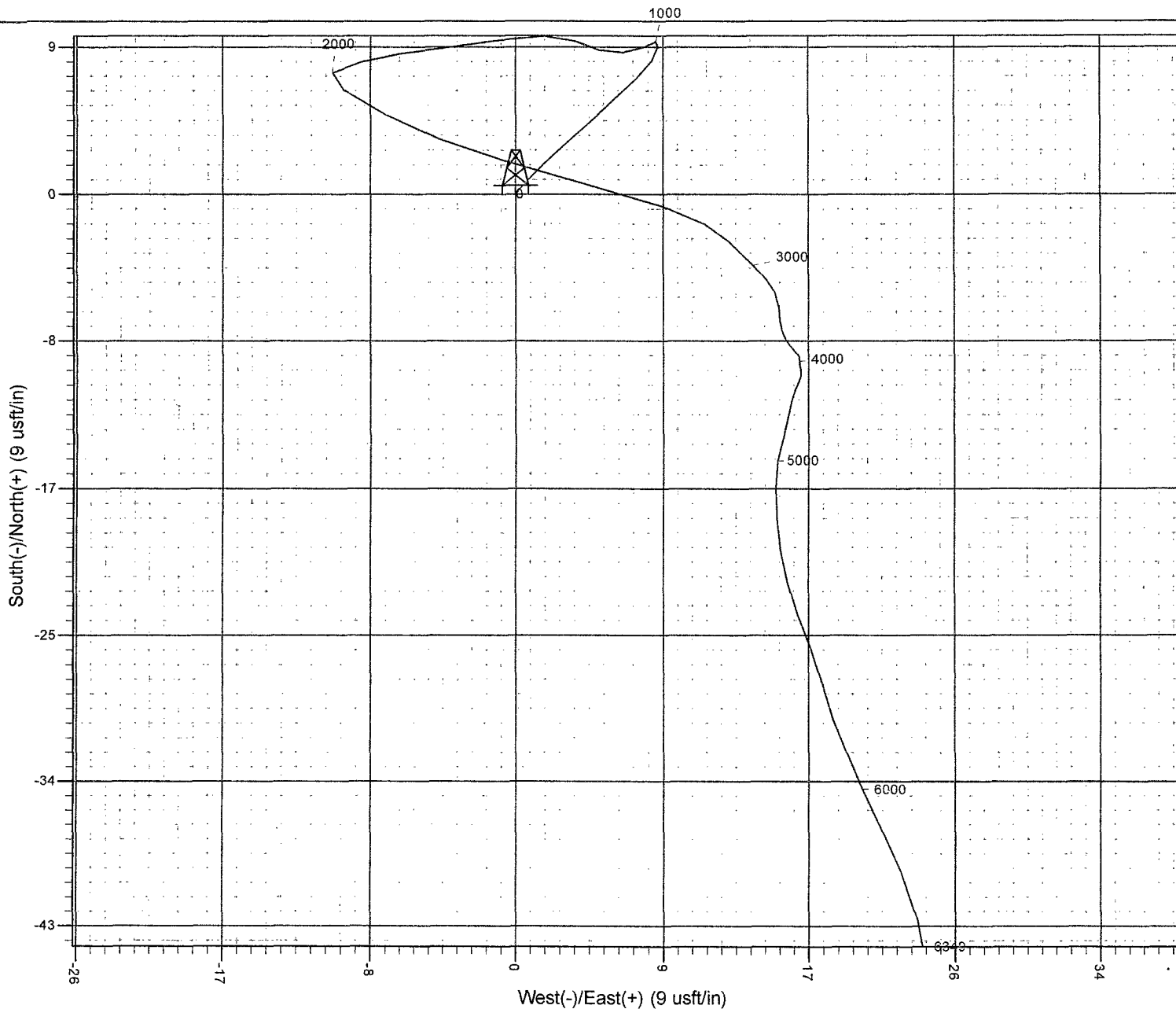
Project: Rock Spur
 Eddy County, NM
 Well: Showstopper 19 Federal #6H
 Wellbore: VH - Job #32K1010762
 Design: VH - Job #32K1010762



Azimuths to Grid North
 True North: -0.16°
 Magnetic North: 7.77°
 Magnetic Field
 Strength: 48621.9nT
 Dip Angle: 60.02°
 Date: 10/7/2010
 Model: BGGM2010

WELL DETAILS: Showstopper 19 Federal #6H
 WELL @ 0.0usft (Original Well Elev)
 Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	403511.11	594179.04	32° 6' 32.411 N	104° 1' 44.994 W	



PROJECT DETAILS: Rock Spur
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level

SITE DETAILS: Eddy County, NM
 Site Centre Latitude: 32° 6' 32.411 N
 Longitude: 104° 1' 44.994 W
 Positional Uncertainty: 0.0
 Convergence: 0.16
 Local North: Grid