

MURCHISON OIL & GAS

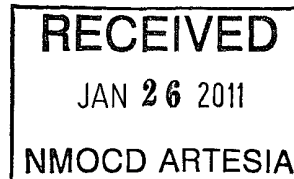
Dog Canyon
Eddy County, NM
Carbon Valley 26 Federal Com #2H
VH - job #32K1010829

30-015-37684

Survey: Actual

SDI Standard Survey Report

14 November, 2010



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

[Signature]

Notorized this date 16th of November, 2010.

[Signature]

Notary Signature
County of Midland
State of Texas



PLEASE KEEP CONFIDENTIAL

Scientific Drilling International, Inc.

SDI Standard Survey Report

Company:	MURCHISON OIL & GAS	Local Co-ordinate Reference:	Well Carbon Valley 26 Federal Com #2H
Project:	Dog Canyon	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Carbon Valley 26 Federal Com #2H	North Reference:	Grid
Wellbore:	VH - job #32K1010829	Survey Calculation Method:	Minimum Curvature
Design:	VH - job #32K1010829	Database:	EDM-Regulatory

Project	Dog Canyon		
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:	687,764.48 usft
From:	Lat/Long	Easting:	533,554.60 usft
Position Uncertainty:	0.0 usft	Slot Radius:	0"
		Latitude:	32° 53' 26.509 N
		Longitude:	104° 13' 26.476 W
		Grid Convergence:	0.06 °

Well	Carbon Valley 26 Federal Com #2H, Directional (Pathfinder)		
Well Position	+N/-S	0.0 usft	Northing: 686,975.40 usft
	+E/-W	0.0 usft	Easting: 528,239.34 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 53' 18.751 N
		Longitude:	104° 14' 28.820 W
		Ground Level:	0.0usft

Wellbore	VH - job #32K1010829				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	BGGM2010	10/26/2010	8.09	60.71	49,064

Design	VH - job #32K1010829			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	268.00

Survey Program	Date 11/14/2010			
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	6,119.0	Actual (VH - job #32K1010829)	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	0.56	5.03	100.0	0.5	0.0	5.03	0.5
200.0	0.57	22.78	200.0	1.4	0.3	11.00	1.5
300.0	0.59	25.28	300.0	2.4	0.7	16.34	2.5
400.0	0.50	41.36	400.0	3.1	1.2	20.84	3.4
500.0	0.51	42.15	500.0	3.8	1.8	25.13	4.2
600.0	0.39	22.15	600.0	4.5	2.2	26.43	5.0
700.0	0.24	21.36	700.0	5.0	2.4	25.97	5.5
800.0	0.34	37.60	800.0	5.4	2.7	26.38	6.0
900.0	0.42	29.91	900.0	5.9	3.0	27.07	6.7
1,000.0	0.42	41.08	1,000.0	6.5	3.5	27.90	7.4
1,100.0	0.40	4.13	1,100.0	7.2	3.7	27.49	8.1

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Wellbore:	VH - job #32K1010829	Survey Calculation Method:	Minimum Curvature
Design:	VH - job #32K1010829	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	0.22	305.88	1,200.0	7.6	3.6	25.26	8.4
1,300.0	0.26	272.08	1,300.0	7.7	3.2	22.55	8.4
1,400.0	0.42	255.10	1,400.0	7.7	2.6	18.98	8.1
1,500.0	0.73	264.79	1,500.0	7.5	1.6	12.37	7.7
1,600.0	0.78	263.84	1,599.9	7.4	0.3	2.60	7.4
1,700.0	0.77	257.64	1,699.9	7.2	-1.0	352.06	7.2
1,800.0	0.82	256.62	1,799.9	6.8	-2.4	341.06	7.2
1,900.0	0.50	252.56	1,899.9	6.6	-3.5	332.15	7.4
2,000.0	0.50	256.43	1,999.9	6.3	-4.3	325.75	7.6
2,100.0	0.33	244.97	2,099.9	6.1	-5.0	320.71	7.9
2,200.0	0.46	262.37	2,199.9	5.9	-5.6	316.35	8.2
2,300.0	0.58	277.92	2,299.9	5.9	-6.5	312.21	8.8
2,400.0	0.53	267.36	2,399.9	6.0	-7.5	308.56	9.6
2,500.0	0.54	275.21	2,499.9	6.0	-8.4	305.44	10.4
2,600.0	0.48	267.47	2,599.9	6.0	-9.3	302.88	11.1
2,700.0	0.46	263.55	2,699.9	6.0	-10.1	300.46	11.8
2,800.0	0.47	258.85	2,799.9	5.8	-10.9	298.09	12.4
2,900.0	0.36	236.57	2,899.9	5.6	-11.6	295.71	12.9
3,000.0	0.34	208.86	2,999.9	5.2	-12.0	293.23	13.1
3,100.0	0.28	211.68	3,099.9	4.7	-12.3	290.89	13.2
3,200.0	0.26	223.54	3,199.9	4.3	-12.6	288.95	13.3
3,300.0	0.35	219.25	3,299.9	3.9	-12.9	286.86	13.5
3,400.0	0.37	201.51	3,399.9	3.4	-13.2	284.33	13.7
3,500.0	0.22	204.19	3,499.9	2.9	-13.4	282.20	13.7
3,600.0	0.22	239.82	3,599.9	2.6	-13.7	280.90	13.9
3,700.0	0.30	236.27	3,699.9	2.4	-14.1	279.65	14.3
3,800.0	0.23	233.01	3,799.9	2.1	-14.4	278.37	14.6
3,900.0	0.33	253.78	3,899.9	1.9	-14.9	277.37	15.0
4,000.0	0.44	231.88	3,999.9	1.6	-15.5	275.93	15.5
4,100.0	0.26	223.60	4,099.9	1.2	-15.9	274.33	16.0
4,200.0	0.52	234.51	4,199.9	0.8	-16.4	272.71	16.5
4,300.0	0.42	251.17	4,299.9	0.4	-17.2	271.32	17.2
4,400.0	0.84	273.57	4,399.9	0.3	-18.2	271.01	18.2
4,500.0	0.75	276.35	4,499.9	0.4	-19.6	271.29	19.6
4,600.0	0.63	267.70	4,599.8	0.5	-20.8	271.35	20.8
4,700.0	0.64	273.67	4,699.8	0.5	-21.9	271.32	21.9
4,800.0	0.64	269.56	4,799.8	0.5	-23.0	271.33	23.0
4,900.0	0.44	263.39	4,899.8	0.5	-24.0	271.17	24.0
5,000.0	0.36	162.83	4,999.8	0.1	-24.3	270.34	24.3
5,100.0	0.58	146.30	5,099.8	-0.6	-23.9	268.61	23.9
5,200.0	0.60	152.56	5,199.8	-1.5	-23.4	266.42	23.4
5,300.0	0.70	145.24	5,299.8	-2.4	-22.8	263.91	22.9
5,400.0	0.42	145.24	5,399.8	-3.2	-22.2	261.72	22.5
5,500.0	0.89	119.49	5,499.8	-3.9	-21.3	259.60	21.7

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Wellbore:	VH - job #32K1010829	Survey Calculation Method:	Minimum Curvature
Design:	VH - job #32K1010829	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	0.97	121.23	5,599.8	-4.7	-19.9	256.63	20.5
5,700.0	1.21	112.91	5,699.8	-5.6	-18.2	252.97	19.1
5,800.0	1.32	103.21	5,799.7	-6.3	-16.1	248.81	17.3
5,900.0	1.18	95.36	5,899.7	-6.6	-14.0	244.69	15.5
6,000.0	1.05	103.64	5,999.7	-6.9	-12.1	240.16	13.9
6,100.0	0.86	113.30	6,099.7	-7.4	-10.5	234.67	12.9
6,119.0	0.96	114.07	6,118.7	-7.6	-10.2	233.51	12.7



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Wellbore: VH - job #32K1010829
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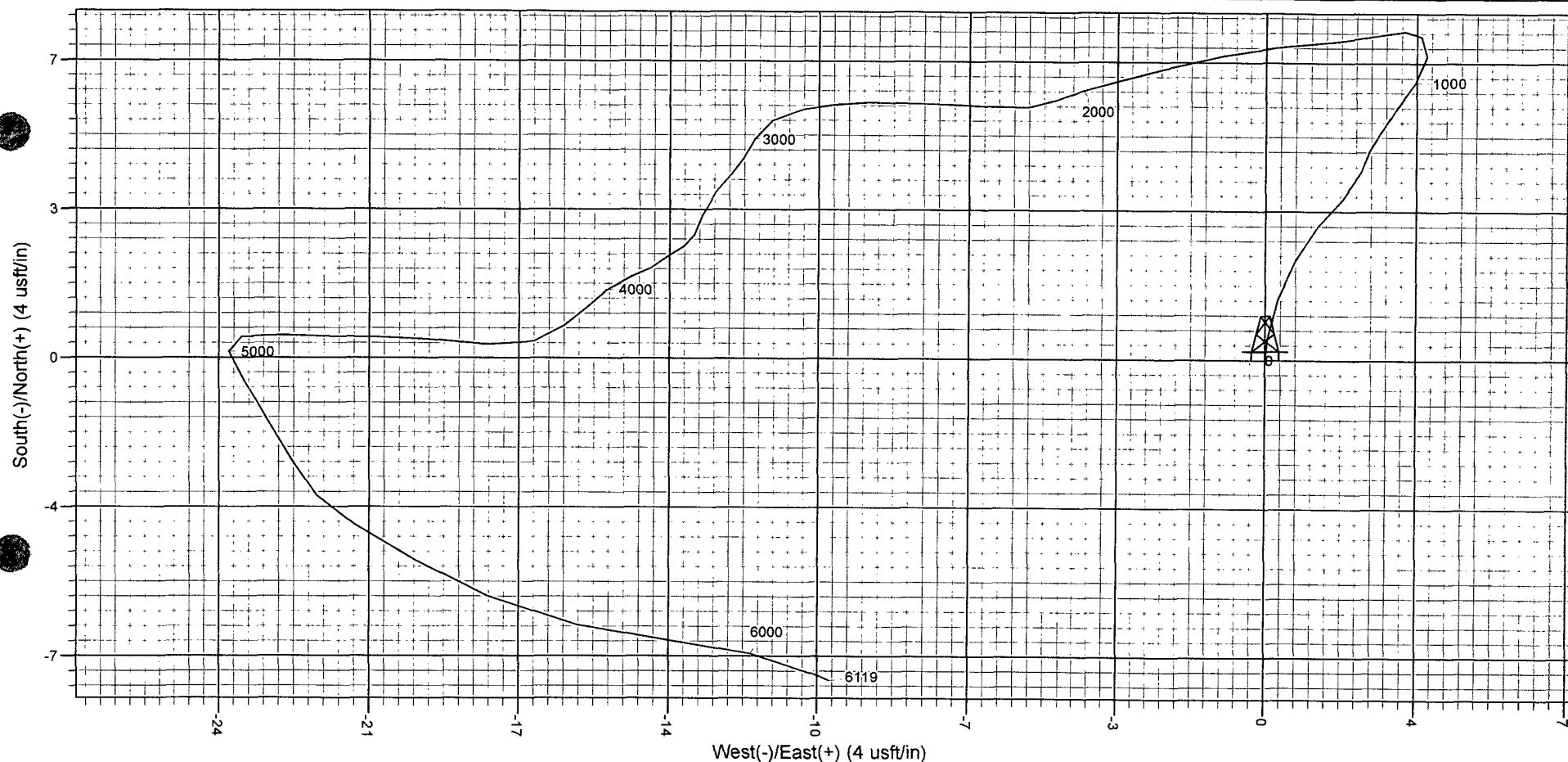


Azimuths to Grid North
True North: -0.05°
Magnetic North: 8.04°

Magnetic Field
Strength: 49063.6snT
Dip Angle: 60.71°
Date: 10/26/2010
Model: BGGM2010

WELL DETAILS: Carbon Valley 26 Federal Com #2H
WELL @ 0.0usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	686975.40	528239.34	32° 53' 18.751 N	104° 14' 28.820 W	



PROJECT DETAILS: Dog Canyon
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° 53' 26.509 N
Longitude: 104° 13' 26.476 W
Positional Uncertainty: 0.0
Convergence: 0.06
Local North: Grid