

MURCHISON OIL & GAS

Dog Canyon

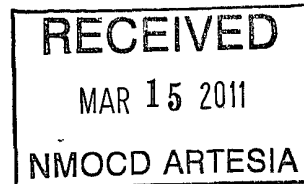
Eddy County, NM

Carbon Valley 25 Federal Com #7H

VH - job #32K12101012

30-015-38060

Survey: Actual



SDI Standard Survey Report

10 January, 2011

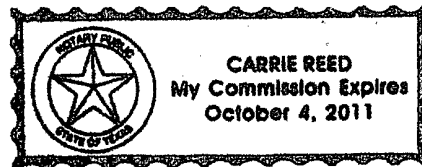
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 17th of January, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report

Company:	MURCHISON OIL & GAS	Local Co-ordinate Reference:	Well Carbon Valley 25 Federal Com #7H
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 25 Federal Com #7H	North Reference:	Grid
Wellbore:	VH - job #32K12101012	Survey Calculation Method:	Minimum Curvature
Design:	VH - job #32K12101012	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	Latitude:	32° 53' 26.509 N
From:	Lat/Long	Easting:	533,554.60 usft	Longitude:	104° 13' 26.476 W
Position Uncertainty:	0.0 usft	Slot Radius:	0"	Grid Convergence:	0.06 °

Well:	Carbon Valley 25 Federal Com #7H, Directional (Pathfinder)					
Well Position	+N/-S	0.0 usft	Northing:	690,393.19 usft	Latitude:	32° 53' 52.566 N
	+E/-W	0.0 usft	Easting:	528,843.17 usft	Longitude:	104° 14' 21.703 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore:	VH - job #32K12101012				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	BGGM2010	12/26/2010	(°)	(°)	(nT)
			8.07	60.71	49,051

Design:	VH - job #32K12101012				
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	92.23	

Survey Program	Date: 1/10/2011			
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	6,026.0	Actual (VH - job #32K12101012)	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	0.13	98.15	100.0	0.0	0.1	98.15	0.1	
200.0	0.05	342.33	200.0	0.0	0.2	87.45	0.2	
300.0	0.04	277.20	300.0	0.1	0.2	71.29	0.2	
400.0	0.12	343.47	400.0	0.2	0.1	31.74	0.2	
500.0	0.14	300.56	500.0	0.3	0.0	353.64	0.3	
600.0	0.14	320.33	600.0	0.5	-0.2	335.41	0.5	
700.0	0.04	314.97	700.0	0.6	-0.3	331.69	0.7	
800.0	0.13	186.74	800.0	0.5	-0.4	324.77	0.6	
900.0	0.10	176.11	900.0	0.3	-0.4	310.15	0.5	
1,000.0	0.21	189.43	1,000.0	0.0	-0.4	276.12	0.4	
1,100.0	0.09	235.88	1,100.0	-0.2	-0.5	249.39	0.5	

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Wellbore:	VH - job #32K12101012	Survey Calculation Method:	Minimum Curvature
Design:	VH - job #32K12101012	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	0.09	246.44	1,200.0	-0.3	-0.6	247.49	0.7
1,300.0	0.32	288.01	1,300.0	-0.2	-1.0	258.05	1.0
1,400.0	0.33	286.82	1,400.0	0.0	-1.5	268.71	1.5
1,500.0	0.33	279.71	1,500.0	0.1	-2.1	272.73	2.1
1,600.0	0.34	265.27	1,600.0	0.1	-2.6	272.65	2.6
1,700.0	0.48	280.80	1,700.0	0.2	-3.3	273.01	3.4
1,800.0	0.37	278.44	1,800.0	0.3	-4.1	274.24	4.1
1,900.0	0.34	264.82	1,900.0	0.3	-4.7	273.93	4.7
2,000.0	0.29	253.12	2,000.0	0.2	-5.2	272.44	5.2
2,100.0	0.31	228.47	2,100.0	0.0	-5.7	269.69	5.7
2,200.0	0.28	231.02	2,200.0	-0.4	-6.1	266.57	6.1
2,300.0	0.31	224.85	2,300.0	-0.7	-6.4	263.73	6.5
2,400.0	0.24	213.07	2,400.0	-1.1	-6.8	260.95	6.8
2,500.0	0.29	237.95	2,500.0	-1.4	-7.1	258.93	7.2
2,600.0	0.33	217.71	2,600.0	-1.7	-7.5	256.84	7.7
2,700.0	0.30	173.68	2,700.0	-2.2	-7.6	253.65	7.9
2,800.0	0.38	157.53	2,800.0	-2.8	-7.5	249.42	8.0
2,900.0	0.27	137.50	2,900.0	-3.3	-7.2	245.43	7.9
3,000.0	0.22	181.30	3,000.0	-3.6	-7.0	242.55	7.9
3,100.0	0.29	172.07	3,100.0	-4.1	-7.0	239.68	8.1
3,200.0	0.19	158.09	3,200.0	-4.5	-6.9	236.91	8.2
3,300.0	0.30	139.91	3,300.0	-4.8	-6.7	233.97	8.2
3,400.0	0.08	30.15	3,400.0	-5.0	-6.5	232.33	8.2
3,500.0	0.15	34.21	3,500.0	-4.8	-6.4	232.82	8.0
3,600.0	0.21	48.43	3,600.0	-4.6	-6.1	233.23	7.7
3,700.0	0.22	55.42	3,700.0	-4.4	-5.8	233.29	7.3
3,800.0	0.10	44.32	3,800.0	-4.2	-5.6	233.35	7.0
3,900.0	0.21	21.23	3,900.0	-4.0	-5.5	234.29	6.8
4,000.0	0.19	20.02	4,000.0	-3.6	-5.4	235.99	6.5
4,100.0	0.22	39.61	4,100.0	-3.3	-5.2	237.40	6.2
4,200.0	0.21	50.15	4,200.0	-3.1	-4.9	238.21	5.8
4,300.0	0.17	67.47	4,300.0	-2.9	-4.7	238.23	5.5
4,400.0	0.10	298.27	4,400.0	-2.8	-4.6	238.78	5.4
4,500.0	0.05	313.65	4,500.0	-2.7	-4.7	240.02	5.4
4,600.0	0.08	299.78	4,600.0	-2.7	-4.8	241.08	5.5
4,700.0	0.07	350.75	4,700.0	-2.6	-4.9	242.30	5.5
4,800.0	0.18	6.96	4,800.0	-2.3	-4.9	244.29	5.4
4,900.0	0.31	8.29	4,900.0	-1.9	-4.8	248.24	5.2
5,000.0	0.33	35.77	5,000.0	-1.4	-4.6	252.88	4.8
5,100.0	0.64	59.41	5,100.0	-0.9	-3.9	257.19	4.0
5,200.0	0.50	64.83	5,200.0	-0.4	-3.1	262.07	3.1
5,300.0	0.48	66.93	5,299.9	-0.1	-2.3	268.05	2.3
5,400.0	0.64	87.60	5,399.9	0.1	-1.3	274.64	1.4
5,500.0	1.01	87.58	5,499.9	0.2	0.1	28.18	0.2

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Well:	Carbon Valley 25 Federal Com #7H	North Reference:	Grid
Wellbore:	VH - job #32K12101012	Survey Calculation Method:	Minimum Curvature
Design:	VH - job #32K12101012	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	1.24	83.19	5,599.9	0.3	2.0	80.69	2.1
5,700.0	1.62	85.35	5,699.9	0.6	4.5	82.72	4.6
5,800.0	1.78	85.18	5,799.8	0.8	7.5	83.72	7.5
5,900.0	1.45	85.02	5,899.8	1.1	10.3	84.10	10.3
6,000.0	1.29	86.66	5,999.8	1.2	12.7	84.42	12.7
6,026.0	1.32	85.71	6,025.8	1.3	13.3	84.50	13.3



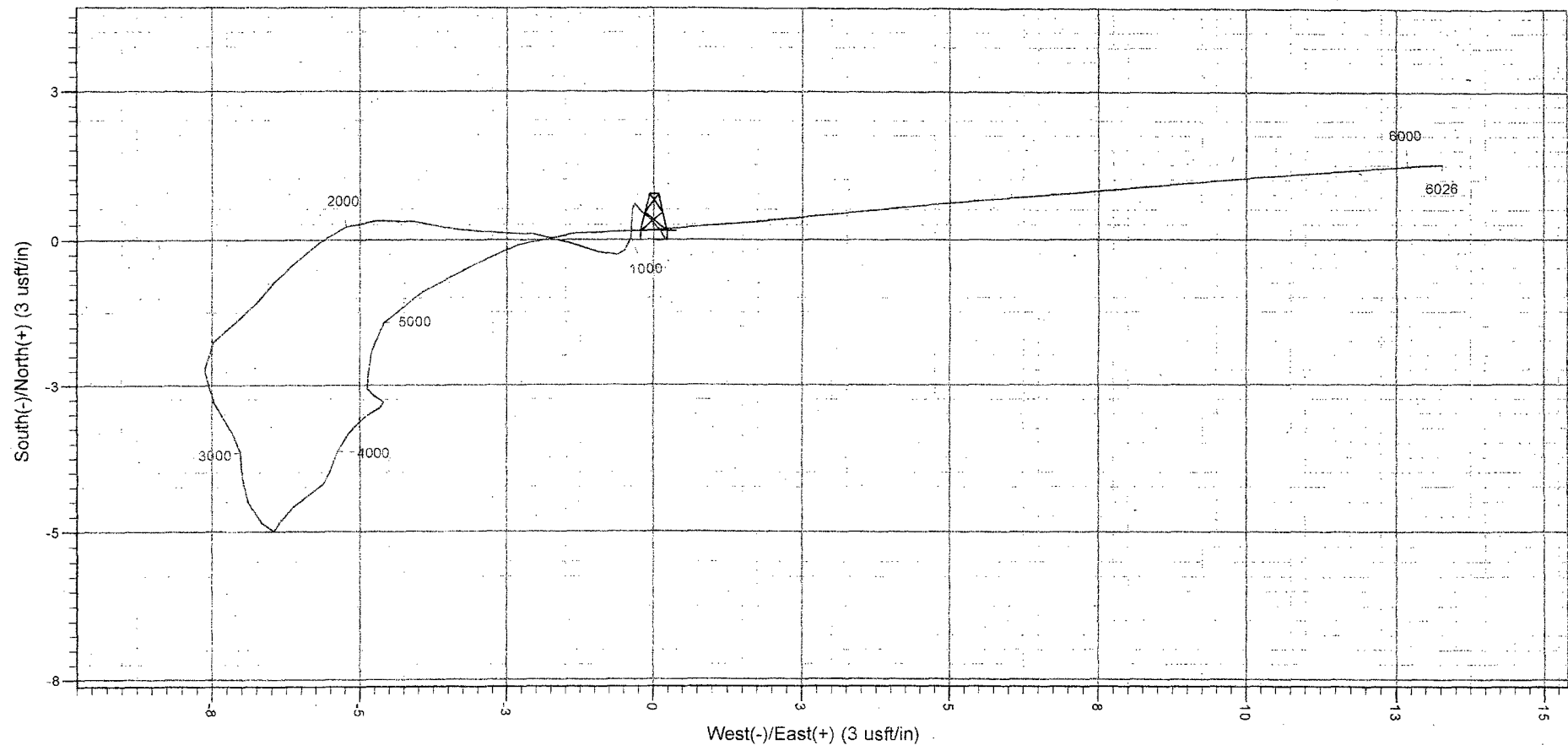
Project: Dog Canyon
Eddy County, NM
Well: Carbon Valley 25 Federal Com #7H
Wellbore: VH - job #32K12101012
Design: VH - job #32K12101012



Azimuths to Grid North
True North: -0.05°
Magnetic North: 8.02°
Magnetic Field
Strength: 49051.5nT
Dip Angle: 60.71°
Date: 12/26/2010
Model: BGGM2010

WELL DETAILS: Carbon Valley 25 Federal Com #7H
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	690393.19	528843.17	32° 53' 52.566 N	104° 14' 21.703 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