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CHEVRON

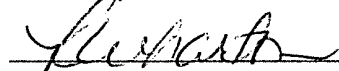
Dollarhide (Lea County, NM)
Lea County, NM
West Dollarhide Drinkard Unit #161
VH - Job #32K0211129

Survey: Actual

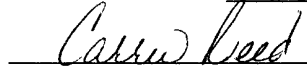
SDI Standard Survey Report

21 March, 2011

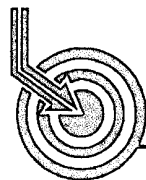
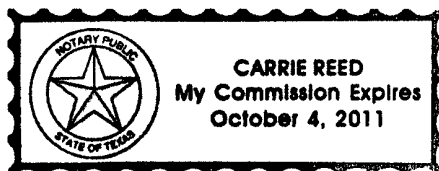
This survey is correct to the best of my knowledge and is supported by actual field data.



Notarized this date 22nd of March, 2011.



Notary Signature
County of Midland
State of Texas



Scientific Drilling
Directional Drilling Operations

APR 26 2011

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	CHEVRON	Local Co-ordinate Reference:	Well West Dollarhide Drinkard Unit #161
Project:	Dollarhide (Lea County, NM)	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	West Dollarhide Drinkard Unit #161	North Reference:	Grid
Wellbore:	VH - Job #32K0211129	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0211129	Database:	EDM-Regulatory

Project	Dollarhide (Lea County, NM)		
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	Lea County, NM		
Site Position:		Northing:	433,171.69 usft
From:	Lat/Long	Easting:	885,771.07 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 11' 5.132 N
		Longitude:	103° 5' 11.131 W
		Grid Convergence:	0.66 °

Well	West Dollarhide Drinkard Unit #161, Vertical		
Well Position	+N/-S	0.0 usft	Northing: 433,171.69 usft
	+E/-W	0.0 usft	Easting: 885,771.07 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 11' 5.132 N
		Longitude:	103° 5' 11.131 W
		Ground Level:	0.0 usft

Wellbore	VH - Job #32K0211129				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	2/12/2011	7.44	60.25	48,747

Design	VH - Job #32K0211129			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	119.59

Survey Program	Date			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,090.0	Actual (VH - Job #32K0211129)	Keeper	Keeper Gyro

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
100.0	0.41	1.29	100.0	0.4	0.0	1.29	0.4
150.0	0.50	329.56	150.0	0.7	-0.1	352.26	0.7
200.0	0.37	276.77	200.0	0.9	-0.4	338.38	1.0
250.0	0.27	312.38	250.0	1.0	-0.6	329.10	1.2
300.0	0.45	318.03	300.0	1.3	-0.8	326.38	1.5
350.0	0.41	292.61	350.0	1.5	-1.1	322.42	1.9
400.0	0.25	304.08	400.0	1.6	-1.4	319.09	2.1
450.0	0.37	320.93	450.0	1.8	-1.6	318.53	2.4
500.0	0.32	269.65	500.0	1.9	-1.8	316.39	2.6
550.0	0.17	211.72	550.0	1.8	-2.0	312.74	2.7
600.0	0.21	231.49	600.0	1.7	-2.1	309.31	2.7

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Site:	Lea County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	West Dollarhide Drinkard Unit #161	North Reference:	Grid
Wellbore:	VH - Job #32K0211129	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0211129	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
650.0	0.34	217.44	650.0	1.6	-2.3	304.35	2.8
700.0	0.23	178.35	700.0	1.3	-2.4	299.49	2.7
750.0	0.13	225.85	750.0	1.2	-2.4	296.49	2.7
800.0	0.35	205.61	800.0	1.0	-2.5	292.11	2.7
850.0	0.24	178.60	850.0	0.8	-2.6	286.79	2.7
900.0	0.15	224.78	900.0	0.6	-2.6	283.43	2.7
950.0	0.31	212.46	950.0	0.5	-2.7	279.63	2.8
1,000.0	0.21	179.20	1,000.0	0.3	-2.8	275.25	2.8
1,050.0	0.13	244.53	1,050.0	0.1	-2.9	272.84	2.9
1,100.0	0.34	206.97	1,100.0	0.0	-3.0	269.70	3.0
1,150.0	0.25	180.25	1,150.0	-0.3	-3.0	265.17	3.0
1,200.0	0.07	211.75	1,200.0	-0.4	-3.1	262.69	3.1
1,250.0	0.24	208.62	1,250.0	-0.5	-3.1	260.72	3.2
1,300.0	0.36	148.04	1,300.0	-0.7	-3.1	256.61	3.2
1,350.0	0.58	118.71	1,350.0	-1.0	-2.8	250.41	3.0
1,400.0	0.65	135.82	1,400.0	-1.3	-2.4	240.90	2.7
1,450.0	1.01	121.12	1,450.0	-1.7	-1.8	225.66	2.5
1,500.0	0.90	130.97	1,500.0	-2.2	-1.1	206.51	2.5
1,550.0	1.05	126.06	1,550.0	-2.8	-0.4	189.19	2.8
1,600.0	0.89	120.18	1,600.0	-3.2	0.3	175.39	3.2
1,650.0	0.94	121.81	1,649.9	-3.6	0.9	165.44	3.8
1,700.0	0.90	113.14	1,699.9	-4.0	1.7	157.56	4.3
1,750.0	0.92	103.44	1,749.9	-4.3	2.4	150.51	4.9
1,800.0	0.91	96.01	1,799.9	-4.4	3.2	143.98	5.4
1,850.0	1.07	97.10	1,849.9	-4.5	4.0	137.94	6.0
1,900.0	1.16	81.07	1,899.9	-4.5	5.0	131.70	6.7
1,950.0	0.96	88.43	1,949.9	-4.4	5.9	126.42	7.4
2,000.0	1.53	83.62	1,999.9	-4.3	7.0	121.46	8.2
2,050.0	1.89	71.77	2,049.9	-4.0	8.5	115.07	9.3
2,100.0	2.02	78.37	2,099.8	-3.5	10.1	109.22	10.7
2,150.0	2.00	73.56	2,149.8	-3.1	11.8	104.70	12.2
2,200.0	2.89	71.51	2,199.8	-2.5	13.8	100.05	14.1
2,250.0	3.04	68.11	2,249.7	-1.6	16.3	95.47	16.3
2,300.0	3.62	69.44	2,299.6	-0.5	19.0	91.54	19.0
2,350.0	3.76	68.10	2,349.5	0.7	22.0	88.29	22.0
2,400.0	4.05	70.96	2,399.4	1.8	25.2	85.81	25.2
2,450.0	4.26	70.77	2,449.3	3.0	28.6	83.94	28.7
2,500.0	4.42	68.65	2,499.1	4.3	32.1	82.30	32.4
2,550.0	4.56	69.87	2,549.0	5.7	35.8	80.90	36.2
2,600.0	4.52	72.15	2,598.8	7.0	39.5	79.93	40.2
2,650.0	4.42	68.63	2,648.7	8.3	43.2	79.09	44.0
2,700.0	3.96	67.00	2,698.5	9.7	46.6	78.24	47.6
2,750.0	3.50	66.14	2,748.4	11.0	49.6	77.50	50.8
2,800.0	2.95	66.64	2,798.3	12.1	52.1	76.91	53.5

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Site:	Lea County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	West Dollarhide Drinkard Unit #161	North Reference:	Grid
Wellbore:	VH - Job #32K0211129	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0211129	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
2,850.0	2.86	66.34	2,848.3	13.1	54.5	76.45	56.0
2,900.0	2.57	63.84	2,898.2	14.1	56.6	75.99	58.4
2,950.0	2.18	63.63	2,948.2	15.0	58.5	75.57	60.4
3,000.0	2.08	65.52	2,998.1	15.8	60.2	75.25	62.2
3,050.0	1.91	60.87	3,048.1	16.6	61.7	74.92	63.9
3,100.0	1.63	62.37	3,098.1	17.4	63.1	74.61	65.4
3,150.0	1.52	64.86	3,148.1	18.0	64.3	74.39	66.8
3,200.0	1.43	62.12	3,198.0	18.5	65.5	74.18	68.0
3,250.0	1.06	69.29	3,248.0	19.0	66.4	74.04	69.1
3,300.0	1.11	69.02	3,298.0	19.3	67.3	73.97	70.0
3,350.0	0.83	70.98	3,348.0	19.6	68.1	73.93	70.9
3,400.0	0.69	82.36	3,398.0	19.8	68.8	73.95	71.5
3,450.0	0.79	95.56	3,448.0	19.8	69.4	74.08	72.2
3,500.0	0.83	91.19	3,498.0	19.8	70.1	74.26	72.8
3,550.0	0.68	81.54	3,548.0	19.8	70.8	74.38	73.5
3,600.0	0.50	109.27	3,598.0	19.8	71.3	74.50	73.9
3,650.0	0.58	105.16	3,648.0	19.6	71.7	74.70	74.3
3,700.0	0.35	122.16	3,698.0	19.5	72.1	74.88	74.7
3,750.0	0.46	114.67	3,748.0	19.3	72.4	75.07	74.9
3,800.0	0.31	115.98	3,798.0	19.2	72.7	75.23	75.2
3,850.0	0.52	121.86	3,848.0	19.0	73.0	75.42	75.4
3,900.0	0.28	121.85	3,898.0	18.8	73.3	75.61	75.7
3,950.0	0.44	132.52	3,948.0	18.6	73.6	75.80	75.9
4,000.0	0.21	144.88	3,998.0	18.4	73.7	75.99	76.0
4,050.0	0.33	153.90	4,048.0	18.2	73.9	76.16	76.1
4,100.0	0.28	130.46	4,098.0	18.0	74.0	76.34	76.2
4,150.0	0.30	171.66	4,148.0	17.8	74.1	76.51	76.2
4,200.0	0.35	159.09	4,198.0	17.5	74.2	76.72	76.2
4,250.0	0.28	161.13	4,248.0	17.3	74.3	76.93	76.3
4,300.0	0.15	160.57	4,298.0	17.1	74.4	77.07	76.3
4,350.0	0.17	194.07	4,348.0	16.9	74.4	77.17	76.3
4,400.0	0.30	178.85	4,398.0	16.7	74.3	77.31	76.2
4,450.0	0.23	195.93	4,448.0	16.5	74.3	77.48	76.1
4,500.0	0.39	196.98	4,498.0	16.3	74.2	77.65	76.0
4,550.0	0.28	174.14	4,548.0	16.0	74.2	77.86	75.9
4,600.0	0.52	210.63	4,598.0	15.6	74.1	78.08	75.7
4,650.0	0.36	195.80	4,648.0	15.3	73.9	78.31	75.5
4,700.0	0.57	211.14	4,698.0	14.9	73.8	78.55	75.3
4,750.0	0.37	196.40	4,748.0	14.6	73.6	78.80	75.0
4,800.0	0.60	207.43	4,798.0	14.2	73.4	79.07	74.8
4,850.0	0.53	201.64	4,848.0	13.7	73.2	79.38	74.5
4,900.0	0.54	213.12	4,898.0	13.3	73.0	79.66	74.2
4,950.0	0.62	205.96	4,948.0	12.9	72.8	79.96	73.9
5,000.0	0.47	195.10	4,998.0	12.4	72.6	80.27	73.7

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Site:	Lea County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	West Dollarhide Drinkard Unit #161	North Reference:	Grid
Wellbore:	VH - Job #32K0211129	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0211129	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,050.0	0.64	200.19	5,048.0	12.0	72.4	80.61	73.4
5,100.0	0.73	200.38	5,098.0	11.4	72.2	81.02	73.1
5,150.0	0.68	219.16	5,148.0	10.9	71.9	81.39	72.8
5,200.0	0.97	209.23	5,197.9	10.3	71.5	81.81	72.3
5,250.0	0.98	206.81	5,247.9	9.5	71.1	82.36	71.8
5,300.0	0.85	207.97	5,297.9	8.8	70.8	82.89	71.3
5,350.0	0.94	209.48	5,347.9	8.1	70.4	83.40	70.9
5,400.0	1.09	210.49	5,397.9	7.4	70.0	83.98	70.3
5,450.0	0.86	212.88	5,447.9	6.7	69.5	84.53	69.8
5,500.0	1.09	212.37	5,497.9	5.9	69.1	85.08	69.3
5,550.0	0.95	212.39	5,547.9	5.2	68.6	85.67	68.8
5,600.0	1.19	215.26	5,597.9	4.4	68.1	86.29	68.2
5,650.0	1.20	211.23	5,647.9	3.5	67.5	86.99	67.6
5,700.0	1.11	214.21	5,697.9	2.7	66.9	87.69	67.0
5,750.0	1.16	218.19	5,747.9	1.9	66.4	88.36	66.4
5,800.0	1.27	214.30	5,797.8	1.0	65.7	89.09	65.7
5,850.0	1.30	210.75	5,847.8	0.1	65.1	89.92	65.1
5,900.0	1.21	216.66	5,897.8	-0.8	64.5	90.72	64.5
5,950.0	1.48	220.69	5,947.8	-1.7	63.8	91.55	63.8
6,000.0	1.26	217.24	5,997.8	-2.7	63.0	92.41	63.1
6,050.0	1.31	220.67	6,047.8	-3.5	62.3	93.24	62.4
6,100.0	1.20	210.86	6,097.8	-4.4	61.7	94.09	61.8
6,150.0	1.38	213.52	6,147.8	-5.4	61.1	95.01	61.3
6,200.0	1.42	210.33	6,197.7	-6.4	60.4	96.04	60.8
6,250.0	1.45	211.14	6,247.7	-7.5	59.8	97.12	60.3
6,300.0	1.72	210.34	6,297.7	-8.7	59.1	98.34	59.7
6,350.0	1.74	210.07	6,347.7	-10.0	58.3	99.70	59.2
6,400.0	1.73	206.56	6,397.7	-11.3	57.6	101.09	58.7
6,450.0	1.64	212.93	6,447.6	-12.6	56.9	102.46	58.3
6,500.0	1.71	209.54	6,497.6	-13.8	56.1	103.83	57.8
6,550.0	1.55	207.15	6,547.6	-15.1	55.5	105.21	57.5
6,600.0	1.54	210.77	6,597.6	-16.3	54.8	106.52	57.2
6,650.0	1.53	217.83	6,647.6	-17.4	54.1	107.80	56.8
6,700.0	1.72	213.68	6,697.5	-18.5	53.2	109.17	56.4
6,750.0	1.56	212.03	6,747.5	-19.7	52.5	110.60	56.0
6,800.0	1.67	217.37	6,797.5	-20.9	51.7	112.00	55.7
6,850.0	1.52	213.69	6,847.5	-22.0	50.8	113.40	55.4
6,900.0	1.59	218.45	6,897.5	-23.1	50.0	114.77	55.1
6,950.0	1.30	210.41	6,947.4	-24.1	49.3	116.07	54.9
7,000.0	1.57	214.09	6,997.4	-25.2	48.7	117.37	54.8
7,050.0	1.23	218.17	7,047.4	-26.2	47.9	118.63	54.6
7,090.0	1.41	202.45	7,097.4	-27.0	47.5	119.59	54.6

SITE DETAILS: Lea County, NM
Site Centre Latitude: 32° 11' 5.132 N
Longitude: 103° 5' 11.131 W
Positional Uncertainty: 0.0
Convergence: 0.66
Local North: Grid