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HOBBSOCD

CHEVRON

Fren

Eddy County, NM

Skelly Unit #961

VH - Job #32K1110893

Survey: Actual

SDI Standard Survey Report

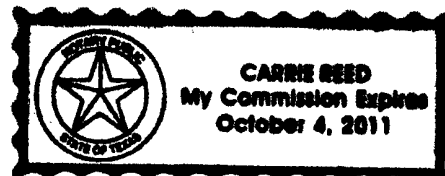
This survey is correct to the best of my knowledge and is supported by actual field data.

Robert

Notorized this date 8th of December, 2010.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report

Company:	CHEVRON	Local Co-ordinate Reference:	Well Skelly Unit #961
Project:	Fren	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Skelly Unit #961	North Reference:	Grid
Wellbore:	VH - Job #32K1110893	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1110893	Database:	EDM-Regulatory

Project	Fren		
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:	669,273.33 usft	Latitude:	32° 50' 20.400 N
From:	Lat/Long	Easting:	647,222.60 usft	Longitude:	103° 51' 14.400 W
Position Uncertainty:	0.0 usft	Slot Radius:	0"	Grid Convergence:	0.26 °

Well	Skelly Unit #961, Vertical (COG is managing and paid for survey)					
Well Position	+N/-S	0.0 usft	Northing:	666,009.29 usft	Latitude:	32° 49' 47.940 N
	+E/-W	0.0 usft	Easting:	650,791.32 usft	Longitude:	103° 50' 32.750 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore	VH - Job #32K1110893				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	11/13/2010	7.89	60.73	49,074

Design	VH - Job #32K1110893			
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	54.42

Survey Program		Date	12/8/2010		
From (usft)	To (usft)	Survey (Wellbore)		Tool Name	Description
100.0	6,648.0	Actual (VH - Job #32K1110893)		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	0.53	49.12	100.0	0.3	0.3	49.12	0.5	
200.0	0.38	58.34	200.0	0.8	1.0	51.55	1.3	
300.0	0.31	59.10	300.0	1.1	1.5	53.86	1.9	
400.0	0.14	6.18	400.0	1.4	1.7	52.16	2.2	
500.0	0.17	55.54	500.0	1.6	1.9	50.30	2.4	
600.0	0.12	135.84	600.0	1.6	2.1	52.90	2.6	
700.0	0.12	138.74	700.0	1.4	2.2	57.45	2.6	
800.0	0.20	134.15	800.0	1.2	2.4	63.27	2.7	
900.0	0.16	159.87	900.0	1.0	2.6	69.60	2.8	
1,000.0	0.21	133.88	1,000.0	0.7	2.8	75.74	2.8	
1,100.0	0.16	151.09	1,100.0	0.5	3.0	81.31	3.0	

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Design:	VH - Job #32K1110893	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	0.36	110.41	1,200.0	0.2	3.3	86.19	3.3
1,300.0	0.44	76.30	1,300.0	0.2	4.0	87.10	4.0
1,400.0	1.10	54.84	1,400.0	0.8	5.1	80.67	5.2
1,500.0	1.52	47.24	1,500.0	2.3	6.9	71.59	7.3
1,600.0	1.80	47.02	1,599.9	4.3	9.0	64.69	10.0
1,700.0	1.81	48.88	1,699.9	6.4	11.4	60.70	13.0
1,800.0	1.39	57.82	1,799.8	8.1	13.6	59.31	15.8
1,900.0	1.17	64.56	1,899.8	9.1	15.5	59.50	18.0
2,000.0	0.67	75.90	1,999.8	9.7	17.0	60.25	19.6
2,100.0	0.42	90.80	2,099.8	9.9	18.0	61.21	20.5
2,200.0	0.34	93.92	2,199.8	9.8	18.6	62.14	21.1
2,300.0	0.07	189.74	2,299.8	9.8	18.9	62.69	21.3
2,400.0	0.08	226.55	2,399.8	9.7	18.8	62.87	21.2
2,500.0	0.30	249.83	2,499.8	9.5	18.5	62.84	20.8
2,600.0	0.30	247.73	2,599.8	9.3	18.1	62.69	20.3
2,700.0	0.31	244.53	2,699.8	9.1	17.6	62.60	19.8
2,800.0	0.36	246.99	2,799.8	8.9	17.0	62.50	19.2
2,900.0	0.34	246.03	2,899.8	8.6	16.5	62.37	18.6
3,000.0	0.46	237.14	2,999.8	8.3	15.9	62.42	17.9
3,100.0	0.75	236.18	3,099.8	7.7	15.0	62.79	16.9
3,200.0	0.92	235.71	3,199.7	6.9	13.8	63.44	15.4
3,300.0	0.89	237.07	3,299.7	6.0	12.5	64.24	13.8
3,400.0	0.86	242.91	3,399.7	5.3	11.1	64.77	12.3
3,500.0	0.85	254.35	3,499.7	4.7	9.8	64.25	10.8
3,600.0	0.70	262.33	3,599.7	4.4	8.4	62.33	9.5
3,700.0	0.65	263.21	3,699.7	4.3	7.3	59.54	8.4
3,800.0	0.46	265.71	3,799.7	4.2	6.3	56.47	7.6
3,900.0	0.43	291.56	3,899.7	4.3	5.6	52.36	7.0
4,000.0	0.45	320.91	3,999.7	4.7	5.0	46.38	6.9
4,100.0	0.47	322.25	4,099.7	5.4	4.5	39.80	7.0
4,200.0	0.47	333.71	4,199.7	6.1	4.0	33.69	7.3
4,300.0	0.45	352.72	4,299.7	6.8	3.8	29.18	7.8
4,400.0	0.48	351.79	4,399.7	7.6	3.7	25.88	8.5
4,500.0	0.30	359.37	4,499.7	8.3	3.6	23.65	9.1
4,600.0	0.34	14.19	4,599.7	8.8	3.7	22.72	9.6
4,700.0	0.20	332.35	4,699.7	9.3	3.7	21.69	10.0
4,800.0	0.20	331.72	4,799.7	9.6	3.5	20.20	10.2
4,900.0	0.20	349.69	4,899.7	9.9	3.4	19.00	10.5
5,000.0	0.20	167.17	4,999.7	9.9	3.4	19.04	10.5
5,100.0	0.18	183.87	5,099.7	9.6	3.5	19.79	10.2
5,200.0	0.41	122.43	5,199.7	9.2	3.7	22.04	10.0
5,300.0	0.75	105.43	5,299.7	8.9	4.7	27.78	10.0
5,400.0	0.66	117.37	5,399.7	8.4	5.8	34.58	10.3
5,500.0	0.57	144.03	5,499.6	7.8	6.6	40.43	10.2

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Wellbore:	VH - Job #32K1110893	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1110893	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	0.56	138.54	5,599.6	7.0	7.2	45.95	10.1
5,700.0	0.46	144.17	5,699.6	6.3	7.8	51.01	10.0
5,800.0	0.50	147.37	5,799.6	5.6	8.3	55.80	10.0
5,900.0	0.23	141.37	5,899.6	5.1	8.6	59.44	10.0
6,000.0	0.17	251.75	5,999.6	4.9	8.6	60.41	9.9
6,100.0	0.05	282.03	6,099.6	4.9	8.4	60.06	9.7
6,200.0	0.13	347.60	6,199.6	5.0	8.4	59.26	9.7
6,300.0	0.29	18.65	6,299.6	5.3	8.4	57.69	10.0
6,400.0	0.31	43.21	6,399.6	5.8	8.7	56.44	10.4
6,500.0	0.23	27.14	6,499.6	6.1	9.0	55.60	10.9
6,600.0	0.54	48.93	6,599.6	6.6	9.4	54.85	11.5
6,648.0	0.31	25.04	6,647.6	6.9	9.6	54.42	11.8



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 Well: Skelly Unit #961
 Wellbore: VH - Job #32K1110893
 Design: VH - Job #32K1110893

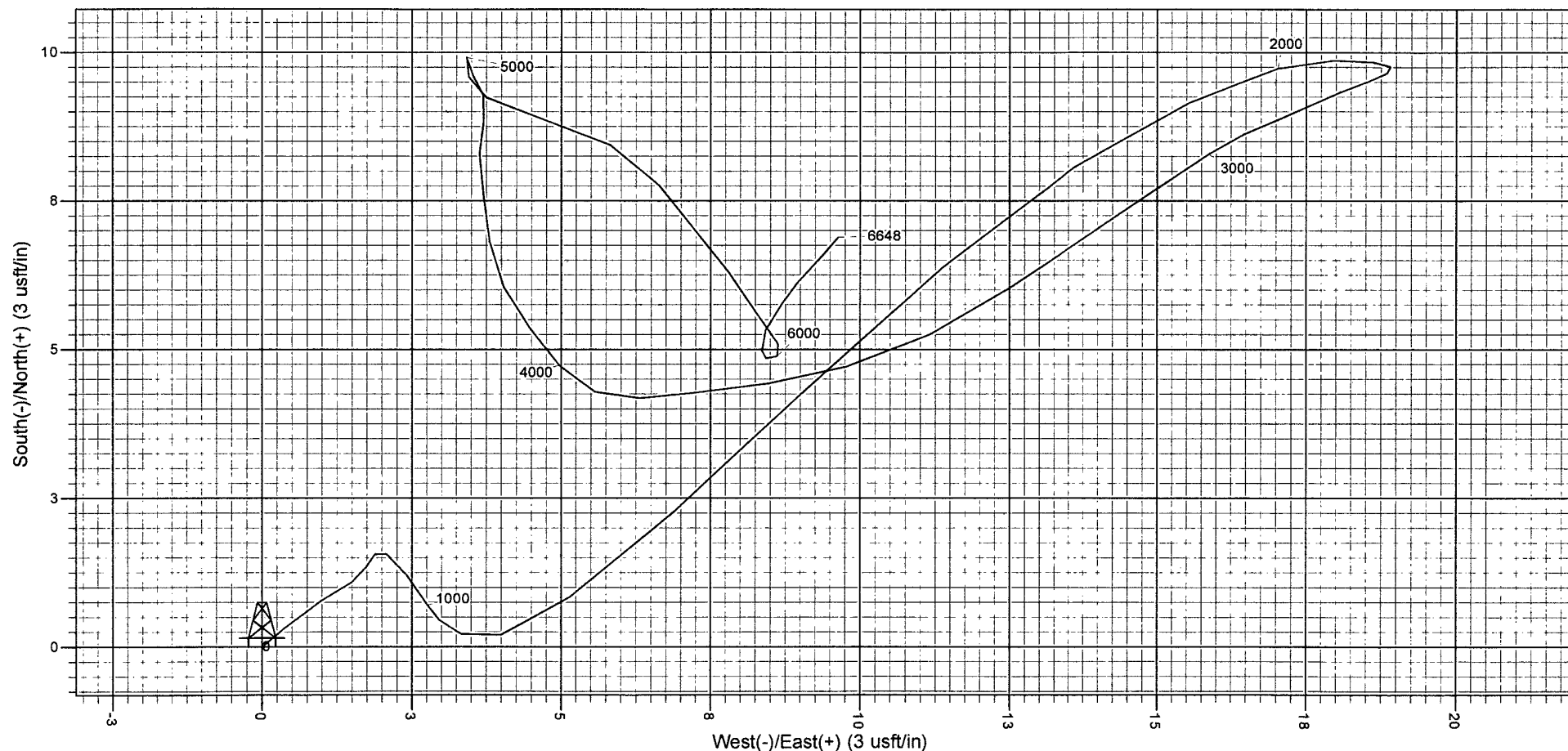


Azimuths to Grid North
 True North: -0.27°
 Magnetic North: 7.62°

Magnetic Field
 Strength: 49074.3snT
 Dip Angle: 60.73°
 Date: 11/13/2010
 Model: BGGM2010

WELL DETAILS: Skelly Unit #961
 WELL @ 0.0usft (Original Well Elev)
 Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	666009.29	650791.32	32° 49' 47.940 N	103° 50' 32.750 W	



PROJECT DETAILS: Fren
 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° 50' 20.400 N
 Longitude: 103° 51' 14.400 W
 Positional Uncertainty: 0.0
 Convergence: 0.26
 Local North: Grid