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30-015-32964

CHEVRON

Fren
Eddy County, NM
Skelly Unit #945
VH - Job #32K1210976

Survey: Actual

SDI Standard Survey Report

21 December, 2010

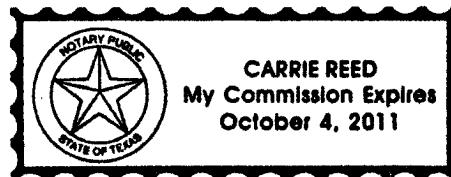
This survey is correct to the best of my knowledge and is supported by actual field data.

Robert

Notorized this date 3/27 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 #945
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 #945	North Reference:	Grid
Wellbore:	VH - Job #32K1210976	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1210976	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 #945, Vertical (Chevron's well - COG ordered survey)				
Well Position	+N-S	0.0 usft	Northing:	664,655.42 usft	Latitude: 32° 49' 34.760 N
	+E-W	0.0 usft	Easting:	646,001.98 usft	Longitude: 103° 51' 28.950 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level: 0.0 usft

Wellbore	VH - Job #32K1210976				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	12/13/2010	7.89	60.72	49,061

Design	VH - Job #32K1210976			
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	200.74

Survey Program	Date 12/21/2010			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	6,546.0	Actual (VH - Job #32K1210976)	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	0.20	186.77	100.0	-0.2	0.0	186.77	0.2
200.0	0.30	154.65	200.0	-0.6	0.1	173.07	0.6
300.0	0.36	150.66	300.0	-1.1	0.3	162.88	1.1
400.0	0.54	158.30	400.0	-1.8	0.7	159.78	1.9
500.0	0.60	164.15	500.0	-2.7	1.0	160.32	2.9
600.0	0.61	164.72	600.0	-3.8	1.3	161.41	4.0
700.0	0.66	170.46	700.0	-4.8	1.5	162.78	5.1
800.0	0.66	172.89	800.0	-6.0	1.7	164.43	6.2
900.0	0.65	176.55	900.0	-7.1	1.8	166.02	7.3
1,000.0	0.72	183.26	1,000.0	-8.3	1.8	167.97	8.5
1,100.0	0.67	195.60	1,099.9	-9.5	1.6	170.57	9.6

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Wellbore:	VH - Job #32K1210976	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1210976	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	0.40	176.19	1,199.9	-10.4	1.4	172.10	10.5
1,300.0	0.06	151.98	1,299.9	-10.8	1.5	172.14	10.9
1,400.0	0.42	40.18	1,399.9	-10.6	1.8	170.59	10.7
1,500.0	0.46	24.67	1,499.9	-9.9	2.2	167.74	10.2
1,600.0	0.40	43.22	1,599.9	-9.3	2.6	164.61	9.7
1,700.0	0.30	34.26	1,699.9	-8.8	3.0	161.55	9.3
1,800.0	0.20	29.13	1,799.9	-8.5	3.2	159.41	9.1
1,900.0	0.13	3.50	1,899.9	-8.2	3.3	158.25	8.8
2,000.0	0.26	261.47	1,999.9	-8.1	3.1	159.39	8.7
2,100.0	0.20	262.28	2,099.9	-8.2	2.7	162.00	8.6
2,200.0	0.33	235.00	2,199.9	-8.4	2.3	164.95	8.7
2,300.0	0.39	215.29	2,299.9	-8.8	1.8	168.35	9.0
2,400.0	0.30	216.72	2,399.9	-9.3	1.5	171.05	9.4
2,500.0	0.34	219.90	2,499.9	-9.7	1.1	173.45	9.8
2,600.0	0.30	216.58	2,599.9	-10.2	0.8	175.66	10.2
2,700.0	0.28	219.53	2,699.9	-10.6	0.5	177.50	10.6
2,800.0	0.26	190.78	2,799.9	-11.0	0.3	178.63	11.0
2,900.0	0.23	171.89	2,899.9	-11.4	0.2	178.75	11.4
3,000.0	0.25	180.77	2,999.9	-11.8	0.3	178.67	11.8
3,100.0	0.17	156.29	3,099.9	-12.2	0.3	178.44	12.2
3,200.0	0.22	148.22	3,199.9	-12.5	0.5	177.74	12.5
3,300.0	0.31	150.30	3,299.9	-12.9	0.7	176.77	12.9
3,400.0	0.43	142.41	3,399.9	-13.4	1.1	175.35	13.5
3,500.0	0.58	131.14	3,499.9	-14.0	1.7	173.10	14.1
3,600.0	0.77	162.02	3,599.9	-15.0	2.3	171.33	15.2
3,700.0	0.89	173.06	3,699.9	-16.4	2.6	171.04	16.6
3,800.0	1.08	188.52	3,799.9	-18.1	2.5	172.01	18.3
3,900.0	1.21	201.45	3,899.9	-20.0	2.0	174.25	20.1
4,000.0	1.57	209.17	3,999.8	-22.2	1.0	177.51	22.2
4,100.0	1.48	212.56	4,099.8	-24.5	-0.4	180.93	24.5
4,200.0	1.15	213.64	4,199.8	-26.4	-1.6	183.57	26.5
4,300.0	1.11	210.99	4,299.8	-28.1	-2.7	185.50	28.2
4,400.0	1.11	209.13	4,399.7	-29.8	-3.7	187.03	30.0
4,500.0	0.99	206.62	4,499.7	-31.4	-4.5	188.22	31.7
4,600.0	0.97	208.28	4,599.7	-32.9	-5.3	189.18	33.3
4,700.0	0.85	219.32	4,699.7	-34.2	-6.2	190.25	34.8
4,800.0	0.95	214.98	4,799.7	-35.5	-7.1	191.37	36.2
4,900.0	0.88	211.61	4,899.7	-36.8	-8.0	192.28	37.7
5,000.0	0.94	196.55	4,999.7	-38.3	-8.7	192.74	39.2
5,100.0	1.05	192.65	5,099.6	-39.9	-9.1	192.82	41.0
5,200.0	0.94	196.57	5,199.6	-41.6	-9.5	192.88	42.7
5,300.0	1.21	204.17	5,299.6	-43.4	-10.2	193.22	44.5
5,400.0	1.33	196.55	5,399.6	-45.4	-10.9	193.55	46.7
5,500.0	0.83	214.13	5,499.6	-47.2	-11.7	193.92	48.6

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Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Skelly Unit #945	North Reference:	Grid
Wellbore:	VH - Job #32K1210976	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1210976	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	0.75	223.26	5,599.6	-48.2	-12.5	194.58	49.8
5,700.0	0.49	233.82	5,699.5	-49.0	-13.3	195.24	50.7
5,800.0	0.41	217.18	5,799.5	-49.5	-13.9	195.68	51.4
5,900.0	0.29	234.89	5,899.5	-49.9	-14.3	196.00	51.9
6,000.0	0.32	234.47	5,999.5	-50.2	-14.8	196.37	52.4
6,100.0	0.38	291.28	6,099.5	-50.3	-15.3	196.92	52.5
6,200.0	0.25	321.85	6,199.5	-50.0	-15.7	197.47	52.4
6,300.0	0.29	245.20	6,299.5	-49.9	-16.1	197.87	52.5
6,400.0	0.64	229.28	6,399.5	-50.4	-16.8	198.39	53.1
6,500.0	0.91	236.13	6,499.5	-51.2	-17.8	199.21	54.2
6,546.0	1.06	235.73	6,545.5	-51.6	-18.5	199.70	54.8



Project: Fren
Eddy County, NM
Well: Skelly Unit #945
Wellbore: VH - Job #32K1210976
Design: VH - Job #32K1210976

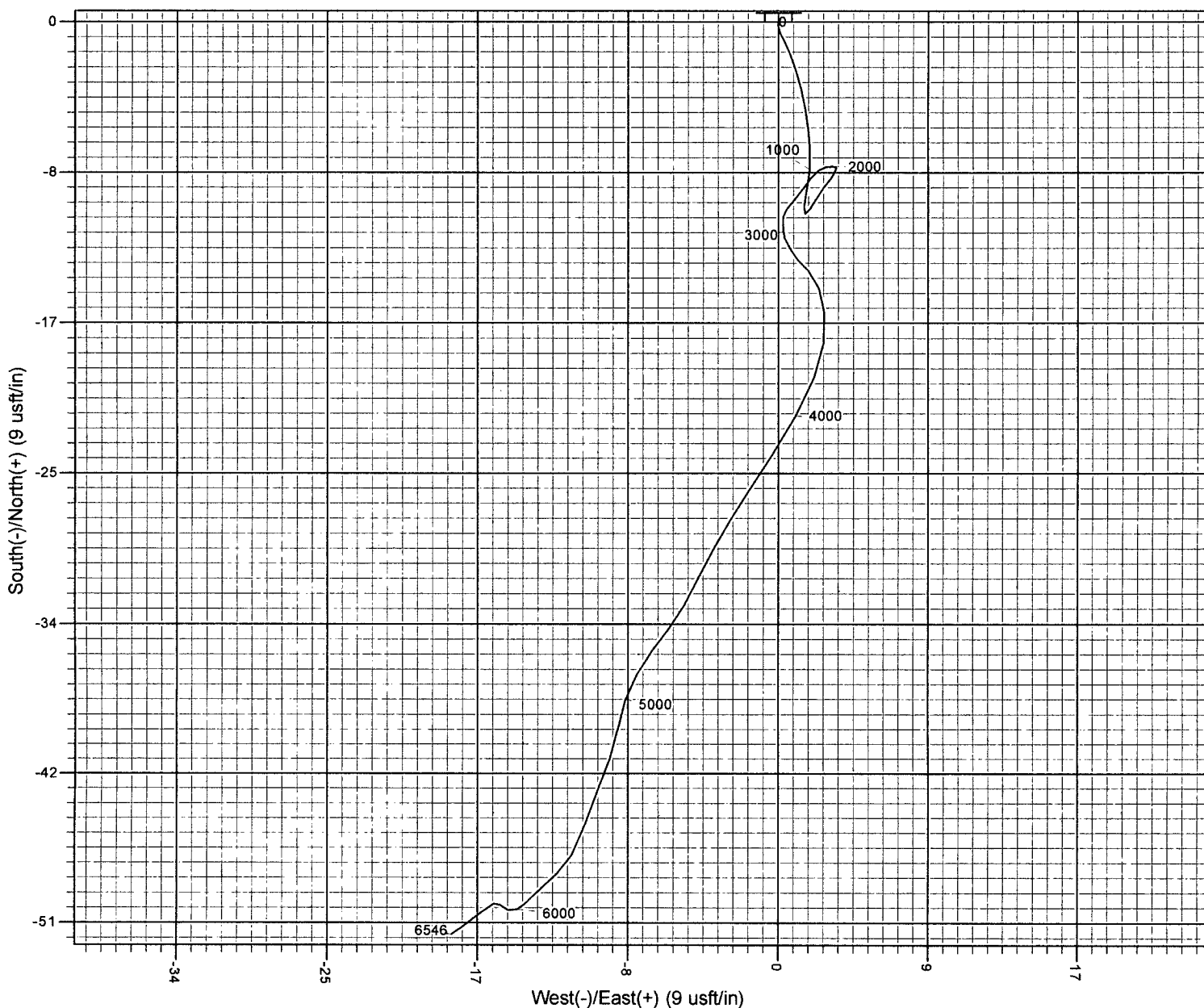


Azimuths to Grid North
True North: -0.26°
Magnetic North: 7.63°

Magnetic Field
Strength: 49061.2snT
Dip Angle: 60.72°
Date: 12/13/2010
Model: BGGM2010

WELL DETAILS: Skelly Unit #945
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	664655.42	646001.98	32° 49' 34.760 N	103° 51' 28.950 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