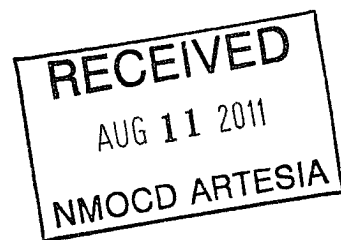


EOG

30-015-38388

Pierce Crossing
Eddy County, NM
Elk Wallow "11" State #5
VH - Job #32K0511498



Survey: Actual

SDI Standard Survey Report

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

LeWharton

Notarized this date 30th of June, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling
Directional Drilling Operations

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	EOG	Local Co-ordinate Reference:	Well Elk Wallow "11" State #5
Project:	Pierce Crossing	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Elk Wallow "11" State #5	North Reference:	True
Wellbore:	VH - Job #32K0511498	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0511498	Database:	EDM-Regulatory

Project	Pierce Crossing		
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:		416,966.61 usft		Latitude:		32° 8' 44.791 N				
From:		Lat/Long		Easting:		618,850.73 usft		Longitude:		103° 56' 57.587 W			
Position Uncertainty:			0 0 usft		Slot Radius:		13-3/16"		Grid Convergence:			0 20 °	

Well	Elk Wallow "11" State #5, Vertical					
Well Position	+N/-S	0 0 usft	Northing:	1,975,497.23 usft	Latitude:	36° 25' 43.273 N
	+E/-W	0.0 usft	Easting:	612,967 60 usft	Longitude:	103° 56' 57.587 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore	VH - Job #32K0511498				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/27/2011	8 11	63.88	51,085

Design		VH - Job #32K0511498			
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	160 66	

Survey Program		Date 7/5/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,980.0	Actual (VH - Job #32K0511498)	Keeper	Keeper Surface Readout 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	0.28	9.43	100.0	0 2	0 0	9.43	0 2	
200 0	0.05	79.14	200 0	0 5	0 1	14.07	0 5	
300.0	0.26	185.34	300 0	0.3	0 1	27.95	0.3	
400.0	0.43	124.42	400.0	-0 2	0.4	110.90	0.5	
500 0	0.48	119.78	500 0	-0 6	1 1	117.89	1 3	
600.0	0.49	122.89	600.0	-1.0	1.8	119.29	2.1	
700.0	0.49	162.82	700 0	-1 7	2 3	125.76	2 9	
800 0	0.79	157.35	800 0	-2 7	2.7	135.06	3.8	
900 0	0.95	145.03	900.0	-4.0	3.4	139.44	5.3	
1,000.0	1.45	154.68	999.9	-5.8	4.5	142.66	7.4	
1,100.0	1.85	155.14	1,099.9	-8 5	5.7	146.10	10.2	

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SDI Standard Survey Report



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Project:	Pierce Crossing	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Elk Wallow "11" State #5	North Reference:	True
Wellbore:	VH - Job #32K0511498	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0511498	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	2.35	160.98	1,199.8	-11.9	7.0	149.35	13.8
1,300.0	1.63	150.66	1,299.8	-15.0	8.4	150.83	17.2
1,400.0	0.98	107.74	1,399.8	-16.5	9.9	149.08	19.3
1,500.0	0.82	129.10	1,499.7	-17.3	11.3	146.83	20.6
1,600.0	0.53	199.72	1,599.7	-18.1	11.7	147.23	21.6
1,700.0	0.30	196.38	1,699.7	-18.8	11.4	148.70	22.0
1,800.0	0.28	196.52	1,799.7	-19.3	11.3	149.66	22.4
1,900.0	0.27	179.48	1,899.7	-19.8	11.2	150.40	22.7
2,000.0	0.48	145.79	1,999.7	-20.4	11.5	150.60	23.4
2,100.0	0.83	115.45	2,099.7	-21.0	12.4	149.54	24.4
2,200.0	1.02	112.94	2,199.7	-21.7	13.8	147.45	25.7
2,300.0	1.07	113.41	2,299.7	-22.4	15.5	145.29	27.2
2,400.0	0.97	118.93	2,399.7	-23.2	17.1	143.56	28.8
2,500.0	1.59	126.23	2,499.7	-24.4	19.0	142.14	30.9
2,600.0	3.68	123.30	2,599.5	-27.0	22.8	139.84	35.3
2,700.0	4.07	140.65	2,699.3	-31.5	27.7	138.66	41.9
2,800.0	4.81	150.41	2,799.0	-37.9	32.0	139.79	49.6
2,900.0	4.84	140.53	2,898.7	-44.8	36.8	140.61	58.0
3,000.0	3.98	123.70	2,998.4	-50.0	42.3	139.72	65.5
3,100.0	2.07	69.35	3,098.2	-51.3	46.9	137.53	69.5
3,200.0	1.63	44.11	3,198.2	-49.6	49.6	135.00	70.1
3,300.0	0.57	113.20	3,298.2	-48.8	51.1	133.69	70.6
3,400.0	0.59	131.04	3,398.2	-49.3	51.9	133.54	71.6
3,500.0	0.52	130.60	3,498.2	-49.9	52.6	133.50	72.6
3,600.0	0.67	127.12	3,598.2	-50.6	53.4	133.43	73.6
3,700.0	0.69	124.57	3,698.2	-51.3	54.4	133.31	74.8
3,800.0	0.72	131.53	3,798.1	-52.0	55.4	133.23	76.0
3,900.0	0.54	134.46	3,898.1	-52.8	56.2	133.22	77.1
4,000.0	0.51	126.27	3,998.1	-53.4	56.9	133.19	78.0
4,100.0	0.53	147.79	4,098.1	-54.0	57.5	133.23	78.9
4,200.0	0.64	154.66	4,198.1	-54.9	58.0	133.46	79.9
4,300.0	0.60	144.52	4,298.1	-55.9	58.5	133.68	80.9
4,400.0	0.67	170.58	4,398.1	-56.9	58.9	133.99	81.9
4,500.0	0.67	170.73	4,498.1	-58.0	59.1	134.48	82.8
4,600.0	0.74	179.05	4,598.1	-59.2	59.2	135.02	83.8
4,700.0	0.84	174.50	4,698.1	-60.6	59.3	135.64	84.8
4,800.0	0.86	175.64	4,798.1	-62.1	59.4	136.27	85.9
4,900.0	0.90	178.30	4,898.1	-63.6	59.5	136.93	87.1
5,000.0	1.00	185.18	4,998.1	-65.3	59.4	137.69	88.3
5,100.0	1.08	175.61	5,098.0	-67.1	59.4	138.47	89.6
5,200.0	1.15	176.20	5,198.0	-69.0	59.6	139.21	91.2
5,300.0	0.89	199.34	5,298.0	-70.8	59.4	140.00	92.4
5,400.0	0.58	254.02	5,398.0	-71.6	58.6	140.70	92.6
5,500.0	0.46	278.62	5,498.0	-71.7	57.7	141.16	92.1

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	EOG	Local Co-ordinate Reference:	Well Elk Wallow "11" State #5
Project:	Pierce Crossing	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Elk Wallow "11" State #5	North Reference:	True
Wellbore:	VH - Job #32K0511498	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0511498	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	0.65	270.38	5,598.0	-71.7	56.8	141.61	91.4
5,700.0	0.79	249.78	5,698.0	-71.9	55.6	142.30	90.9
5,800.0	1.08	241.41	5,798.0	-72.6	54.1	143.30	90.5
5,900.0	1.38	257.88	5,897.9	-73.3	52.1	144.60	89.9
6,000.0	1.17	261.30	5,997.9	-73.7	49.9	145.90	89.0
6,100.0	0.87	260.56	6,097.9	-74.0	48.1	146.94	88.3
6,200.0	0.84	239.67	6,197.9	-74.5	46.8	147.87	87.9
6,300.0	0.83	214.87	6,297.9	-75.4	45.7	148.78	88.2
6,400.0	0.76	202.71	6,397.9	-76.6	45.0	149.55	88.9
6,500.0	0.88	204.82	6,497.9	-77.9	44.5	150.30	89.7
6,600.0	1.05	200.88	6,597.8	-79.5	43.8	151.14	90.8
6,700.0	1.09	195.95	6,697.8	-81.3	43.2	151.99	92.1
6,800.0	1.01	201.66	6,797.8	-83.0	42.6	152.81	93.3
6,900.0	1.17	199.95	6,897.8	-84.8	42.0	153.66	94.6
7,000.0	1.11	186.70	6,997.8	-86.7	41.5	154.42	96.1
7,100.0	0.88	218.15	7,097.8	-88.3	40.9	155.13	97.3
7,200.0	0.60	210.51	7,197.8	-89.3	40.2	155.78	97.9
7,300.0	0.09	207.99	7,297.8	-89.8	39.9	156.07	98.3
7,400.0	0.38	63.30	7,397.7	-89.8	40.1	155.91	98.3
7,500.0	0.71	308.82	7,497.7	-89.2	40.0	155.88	97.8
7,600.0	0.87	307.98	7,597.7	-88.4	38.9	156.26	96.5
7,700.0	1.53	306.99	7,697.7	-87.1	37.2	156.87	94.7
7,800.0	1.84	302.50	7,797.7	-85.4	34.8	157.85	92.2
7,900.0	2.09	290.30	7,897.6	-83.9	31.7	159.30	89.7
7,980.0	1.77	286.07	7,977.6	-83.1	29.2	160.66	88.1



Project: Pierce Crossing
Eddy County, NM
Well: Elk Wallow "11" State #5
Wellbore: VH - Job #32K0511498
Design: VH - Job #32K0511498

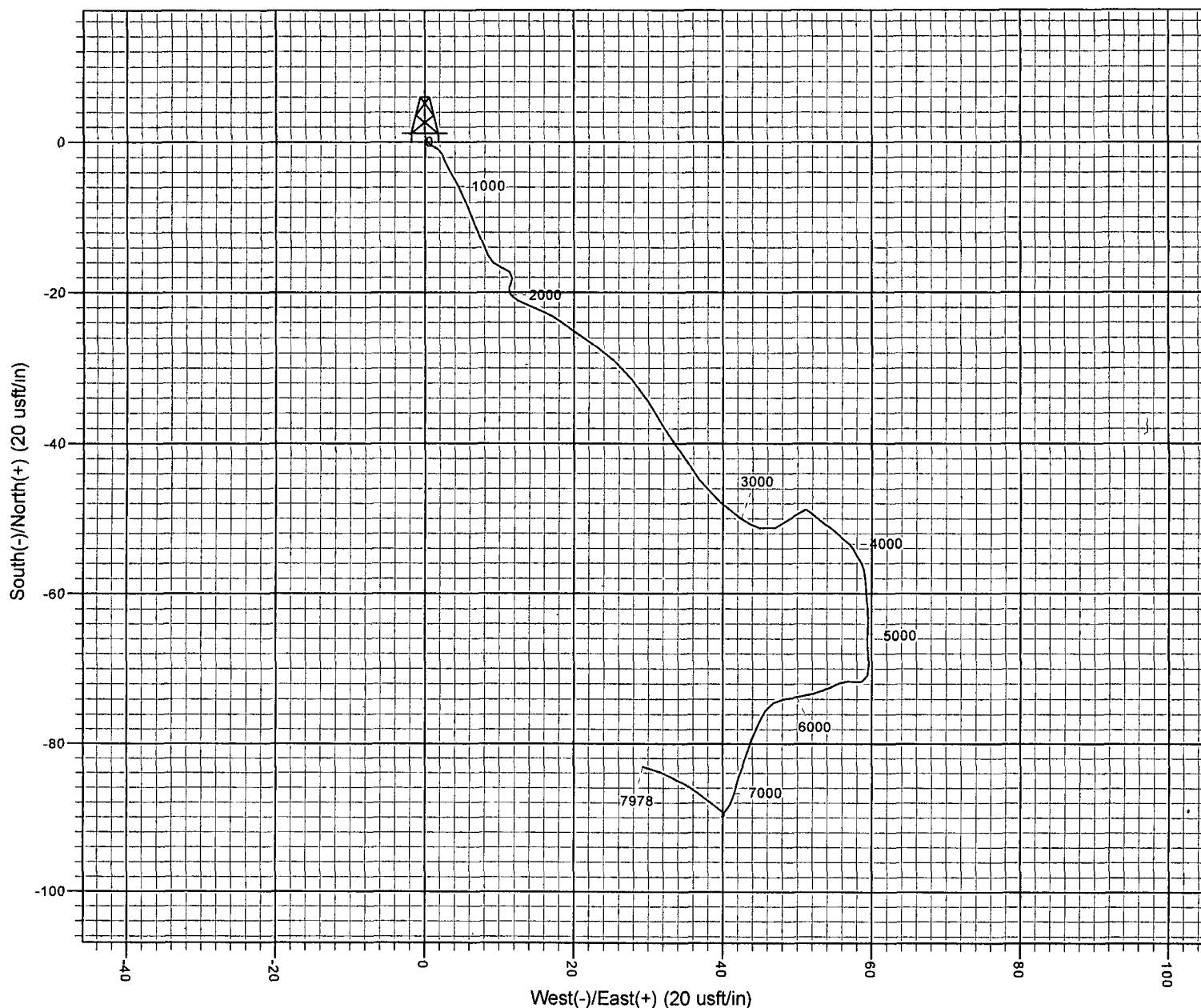


Azimuths to True North
Magnetic North: 8 11°

Magnetic Field
Strength: 51084 8snT
Dip Angle: 63 88°
Date: 5/27/2011
Model: IGRF2010

WELL DETAILS: Elk Wallow "11" State #5
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0 0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1975497.23	612967.60	36° 25' 43.273 N	103° 56' 57.587 W	



PROJECT DETAILS: Pierce Crossing
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° 8' 44.791 N
Longitude: 103° 56' 57.587 W
Positional Uncertainty: 0.0
Convergence: 0.20
Local North: True