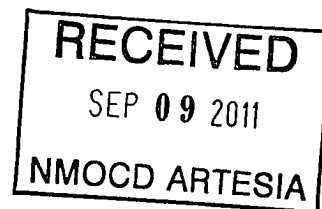


DEVON ENERGY

Hackberry
Eddy County, NM
Helios "6" Federal Com #1H
VH - Job #32K0611530

30-015-38482



Survey: Actual

SDI Standard Survey Report

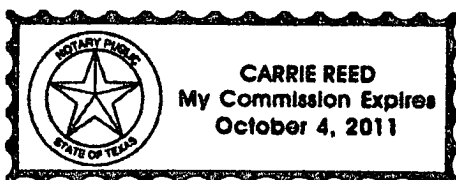
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 22nd of July, 2011.

[Signature]

Notary Signature
County of Midland
State of Texas



Scientific Drilling
Directional Drilling Operations

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Helios "6" Federal Com #1H
Project:	Hackberry	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Helios "6" Federal Com #1H	North Reference:	Grid
Wellbore:	VH - Job #32K0611530	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0611530	Database:	EDM-Regulatory

Project	Hackberry		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico Central 3002		

Site		Eddy County, NM			
Site Position:		Northing:	615,089 64 usft	Latitude:	32° 40' 8 400 N
From:	Lat/Long	Easting:	1,222,919 56 usft	Longitude:	103° 54' 3 600 W
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16"	Grid Convergence:	1 27 °

Well	Helios "6" Federal Com #1H, Directional (InWell)					
Well Position	+N/-S	0 0 usft	Northing:	620,229 03 usft	Latitude:	32° 40' 59 230 N
	+E/-W	0 0 usft	Easting:	1,222,851 93 usft	Longitude:	103° 54' 3 060 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore		VH - Job #32K0611530			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/7/2011	7 78	60 56	48,885

Design		VH - Job #32K0611530			
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	358 10	

Survey Program		Date 7/21/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100 0	9,000 0	Actual (VH - Job #32K0611530)	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 24	14 72	100 0	0 2	0.1	14.72	0 2
200.0	0 38	8 80	200 0	0 7	0 2	12.10	0 7
300 0	0 42	349 08	300 0	1 4	0.1	5.57	1 4
400.0	0 11	25 30	400 0	1 9	0 1	3 37	1 9
500 0	0 17	8 97	500 0	2 1	0 2	4 74	2 1
600 0	0 19	5 97	600 0	2 4	0 2	5 08	2 4
700 0	0 20	5 27	700 0	2 8	0 2	5 15	2 8
800 0	0 31	341 97	800 0	3 2	0 2	3 24	3 2
900.0	0 20	355 83	900 0	3 6	0 1	1 33	3 6
1,000 0	0 28	23 92	1,000 0	4 0	0 2	2 43	4 0
1,100 0	0 25	16 51	1,100 0	4 4	0 3	4 26	4 5

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Helios "6" Federal Com #1H
Project:	Hackberry	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Helios "6" Federal Com #1H	North Reference:	Grid
Wellbore:	VH - Job #32K0611530	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0611530	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	0.38	51.39	1,200.0	4.9	0.7	7.65	4.9	
1,300.0	0.44	35.96	1,300.0	5.4	1.1	11.94	5.5	
1,400.0	0.45	38.88	1,400.0	6.0	1.6	15.03	6.2	
1,500.0	0.62	53.16	1,500.0	6.6	2.3	19.06	7.0	
1,600.0	0.75	60.56	1,600.0	7.3	3.3	24.36	8.0	
1,700.0	1.13	24.62	1,700.0	8.5	4.3	26.72	9.5	
1,800.0	1.08	46.56	1,799.9	10.0	5.4	28.15	11.4	
1,900.0	1.36	52.65	1,899.9	11.4	7.0	31.53	13.4	
2,000.0	1.77	58.27	1,999.9	12.9	9.3	35.58	15.9	
2,100.0	1.82	64.94	2,099.8	14.4	12.0	39.78	18.8	
2,200.0	1.91	61.01	2,199.8	15.9	14.9	43.15	21.8	
2,300.0	1.55	54.15	2,299.7	17.5	17.5	44.93	24.7	
2,400.0	1.40	47.03	2,399.7	19.1	19.4	45.48	27.3	
2,500.0	1.20	49.64	2,499.7	20.6	21.1	45.69	29.5	
2,600.0	1.20	46.35	2,599.7	22.0	22.7	45.84	31.6	
2,700.0	0.99	48.41	2,699.6	23.3	24.1	45.92	33.5	
2,800.0	0.91	50.21	2,799.6	24.4	25.4	46.08	35.2	
2,900.0	0.71	54.47	2,899.6	25.3	26.5	46.31	36.6	
3,000.0	0.67	64.05	2,999.6	25.9	27.5	46.72	37.8	
3,100.0	0.66	60.21	3,099.6	26.4	28.5	47.17	38.9	
3,200.0	0.58	53.73	3,199.6	27.0	29.4	47.44	40.0	
3,300.0	0.37	62.35	3,299.6	27.5	30.1	47.64	40.8	
3,400.0	0.21	64.48	3,399.6	27.7	30.6	47.82	41.3	
3,500.0	0.25	70.67	3,499.6	27.9	30.9	48.01	41.6	
3,600.0	0.27	61.60	3,599.6	28.0	31.4	48.20	42.1	
3,700.0	0.27	72.16	3,699.6	28.2	31.8	48.40	42.5	
3,800.0	0.23	92.97	3,799.6	28.3	32.2	48.72	42.9	
3,900.0	0.26	84.93	3,899.6	28.3	32.6	49.08	43.2	
4,000.0	0.29	91.18	3,999.6	28.3	33.1	49.48	43.6	
4,100.0	0.21	87.26	4,099.6	28.3	33.6	49.85	43.9	
4,200.0	0.29	22.92	4,199.6	28.6	33.8	49.84	44.3	
4,300.0	0.36	31.13	4,299.6	29.1	34.1	49.57	44.8	
4,400.0	0.31	43.68	4,399.6	29.5	34.4	49.41	45.4	
4,500.0	0.35	68.46	4,499.6	29.8	34.9	49.50	45.9	
4,600.0	0.32	86.50	4,599.6	30.0	35.5	49.83	46.4	
4,700.0	0.37	97.91	4,699.6	29.9	36.1	50.32	46.9	
4,800.0	0.41	90.62	4,799.6	29.9	36.8	50.89	47.4	
4,900.0	0.44	90.45	4,899.6	29.9	37.5	51.46	47.9	
5,000.0	0.76	88.56	4,999.6	29.9	38.5	52.21	48.8	
5,100.0	1.17	82.94	5,099.5	30.0	40.2	53.26	50.2	
5,200.0	1.43	73.93	5,199.5	30.5	42.4	54.29	52.3	
5,300.0	1.51	76.42	5,299.5	31.2	44.9	55.25	54.7	
5,400.0	1.43	76.35	5,399.5	31.8	47.4	56.18	57.1	
5,500.0	1.53	80.21	5,499.4	32.3	49.9	57.12	59.5	

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company	DEVON ENERGY	Local Co-ordinate Reference:	Well Helios "6" Federal Com #1H
Project	Hackberry	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well	Helios "6" Federal Com #1H	North Reference:	Grid
Wellbore	VH - Job #32K0611530	Survey Calculation Method:	Minimum Curvature
Design	VH - Job #32K0611530	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 55	72 54	5,599.4	32.9	52.5	57.94	62.0	
5,700.0	1 48	77.98	5,699.3	33.6	55.1	58.63	64.5	
5,800.0	1 74	69.99	5,799.3	34.4	57.8	59.25	67.2	
5,900.0	1 79	71.01	5,899.3	35.4	60.7	59.74	70.3	
6,000.0	1 77	70.27	5,999.2	36.4	63.6	60.20	73.3	
6,100.0	1 49	60.84	6,099.2	37.6	66.2	60.42	76.1	
6,200.0	1 13	50.12	6,199.1	38.9	68.1	60.29	78.4	
6,300.0	0 84	53.00	6,299.1	39.9	69.4	60.10	80.1	
6,400.0	0 84	26.91	6,399.1	41.0	70.4	59.76	81.4	
6,500.0	0 82	355.14	6,499.1	42.4	70.6	59.03	82.4	
6,600.0	0 99	332.42	6,599.1	43.9	70.2	57.99	82.8	
6,700.0	1 15	321.96	6,699.1	45.4	69.2	56.70	82.7	
6,800.0	1 11	323.38	6,799.1	47.0	68.0	55.34	82.6	
6,900.0	0 98	330.53	6,899.0	48.5	67.0	54.08	82.7	
7,000.0	0 71	342.36	6,999.0	49.8	66.3	53.08	83.0	
7,100.0	0 90	8.66	7,099.0	51.2	66.3	52.31	83.8	
7,200.0	0 58	21.91	7,199.0	52.5	66.6	51.77	84.8	
7,300.0	0 65	26.25	7,299.0	53.4	67.0	51.44	85.7	
7,400.0	0 33	342.15	7,399.0	54.2	67.2	51.10	86.3	
7,500.0	0 11	275.61	7,499.0	54.5	67.0	50.87	86.4	
7,600.0	0 88	180.42	7,599.0	53.7	66.9	51.22	85.8	
7,700.0	1 18	171.03	7,699.0	52.0	67.1	52.23	84.8	
7,800.0	1 22	175.24	7,799.0	49.9	67.3	53.46	83.8	
7,900.0	1 20	174.78	7,898.9	47.8	67.5	54.70	82.7	
8,000.0	1 06	173.82	7,998.9	45.8	67.7	55.91	81.7	
8,100.0	1 02	166.42	8,098.9	44.0	68.0	57.07	81.0	
8,200.0	0 48	170.27	8,198.9	42.8	68.3	57.94	80.6	
8,300.0	0 17	227.86	8,298.9	42.2	68.2	58.24	80.3	
8,400.0	0 56	174.90	8,398.9	41.7	68.2	58.57	79.9	
8,500.0	0 71	204.35	8,498.9	40.6	68.0	59.14	79.2	
8,600.0	0 93	150.32	8,598.9	39.3	68.1	59.99	78.6	
8,700.0	1 01	174.52	8,698.9	37.8	68.6	61.17	78.3	
8,800.0	1 81	192.95	8,798.8	35.3	68.3	62.65	76.9	
8,900.0	1 87	202.06	8,898.8	32.3	67.4	64.39	74.7	
9,000.0	1 82	212.84	8,998.7	29.4	65.9	65.92	72.2	



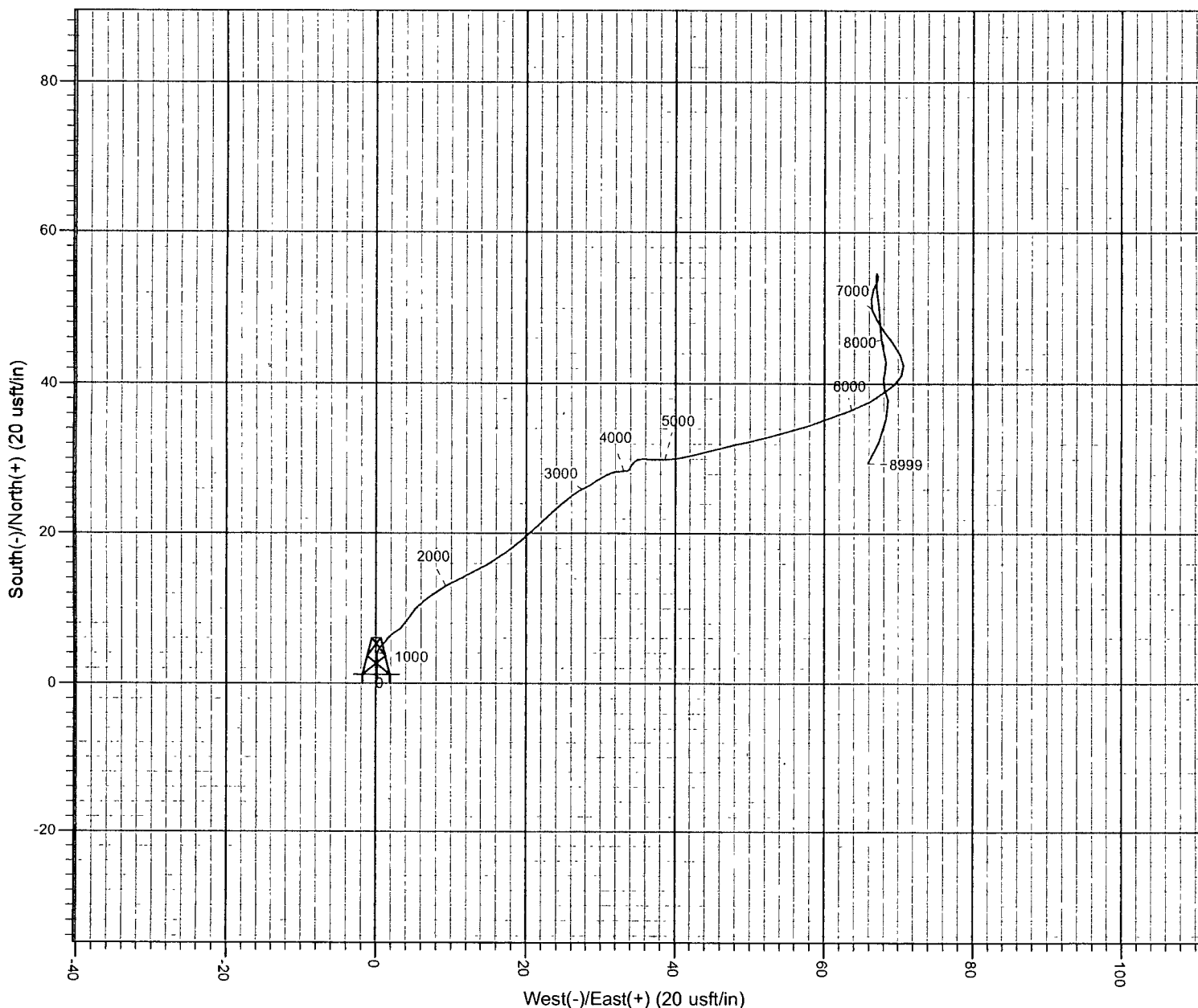
Project: Hackberry
 Eddy County, NM
 Well: Helios "6" Federal Com #1H
 Wellbore: VH - Job #32K0611530
 Design: VH - Job #32K0611530



Azimuths to Grid North
 True North -1.27°
 Magnetic North 6 51°
 Magnetic Field
 Strength 48884 8snT
 Dip Angle 60 56°
 Date 6/7/2011
 Model IGRF2010

WELL DETAILS: Helios "6" Federal Com #1H
 WELL @ 0.0usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	620229.03	1222851.93	32° 40' 59.230 N	103° 54' 3.060 W	



PROJECT DETAILS: Hackberry
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico Central 3002
 System Datum: Mean Sea Level

SITE DETAILS: Eddy County, NM
 Site Centre Latitude: 32° 40' 8.400 N
 Longitude: 103° 54' 3.600 W
 Positional Uncertainty: 0.0
 Convergence: 1.27
 Local North: Grid