

30-015-37258

DEVON ENERGY

Hackberry
Eddy County, NM
Strawberry 7 Federal #4H
VH - Job #32K0810580

Survey: Actual

SDI Standard Survey Report

29 August, 2010

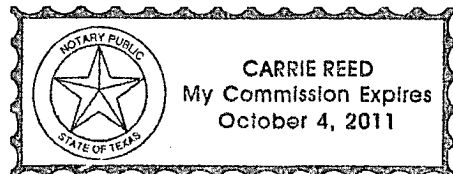
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notorized this date 31st of August, 2010.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.

SDI Standard Survey Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Strawberry 7 Federal #4H
Project:	Hackberry	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Strawberry 7 Federal #4H	North Reference:	Grid
Wellbore:	VH - Job #32K0810580	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0810580	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		

Well	Strawberry 7 Federal #4H, Directional (Pathfinder)				
Well Position	+N/-S	0.0 usft	Northing:	614,938.30 usft	Latitude: 32° 40' 6.915 N
	+E/-W	0.0 usft	Easting:	1,222,867.31 usft	Longitude: 103° 54' 4.250 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level: 0.0 usft

Wellbore	VH - Job #32K0810580				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/29/2010	7.86	60.58	48,986

Design	VH - Job #32K0810580				
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	272.10	

Survey Program	Date 8/29/2010				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	7,957.0	Actual (VH - Job #32K0810580)	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	0.27	222.96	100.0	-0.2	-0.2	222.96	0.2	
200.0	0.37	234.68	200.0	-0.5	-0.6	227.72	0.8	
300.0	0.40	246.92	300.0	-0.9	-1.2	233.82	1.4	
400.0	0.30	272.70	400.0	-1.0	-1.8	240.79	2.0	
500.0	0.06	269.58	500.0	-1.0	-2.1	244.90	2.3	
600.0	0.32	65.64	600.0	-0.9	-1.9	245.41	2.0	
700.0	0.43	64.09	700.0	-0.6	-1.3	245.72	1.4	
800.0	0.46	64.93	800.0	-0.2	-0.6	247.22	0.6	
900.0	0.49	60.26	900.0	0.1	0.2	49.04	0.2	
1,000.0	0.58	59.80	1,000.0	0.6	1.0	57.94	1.1	
1,100.0	0.59	61.95	1,100.0	1.1	1.9	59.33	2.2	
1,200.0	0.73	57.33	1,200.0	1.7	2.9	59.35	3.3	
1,300.0	1.05	55.35	1,300.0	2.6	4.1	58.33	4.9	
1,400.0	1.45	55.50	1,399.9	3.8	5.9	57.44	7.1	
1,500.0	1.92	59.89	1,499.9	5.4	8.4	57.60	10.0	
1,600.0	2.07	59.68	1,599.8	7.1	11.4	58.17	13.5	

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Well:	Strawberry 7 Federal #4H	North Reference:	Grid
Wellbore:	VH - Job #32K0810580	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0810580	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,700.0	2.30	61.57	1,699.8	9.0	14.8	58.72	17.3	
1,800.0	2.76	60.86	1,799.7	11.1	18.6	59.22	21.7	
1,900.0	2.83	60.53	1,899.5	13.5	22.9	59.49	26.6	
2,000.0	2.61	56.14	1,999.4	16.0	26.9	59.33	31.3	
2,100.0	2.44	52.55	2,099.3	18.5	30.5	58.72	35.7	
2,200.0	2.09	50.68	2,199.3	21.0	33.6	58.02	39.6	
2,300.0	1.89	49.00	2,299.2	23.2	36.3	57.37	43.1	
2,400.0	1.44	46.93	2,399.1	25.2	38.4	56.79	45.9	
2,500.0	1.40	45.58	2,499.1	26.9	40.2	56.25	48.4	
2,600.0	1.36	47.64	2,599.1	28.5	42.0	55.79	50.7	
2,700.0	1.16	55.81	2,699.1	29.9	43.7	55.61	52.9	
2,800.0	0.92	56.64	2,799.0	30.9	45.2	55.63	54.7	
2,900.0	0.90	61.57	2,899.0	31.7	46.5	55.73	56.3	
3,000.0	0.81	56.04	2,999.0	32.5	47.8	55.81	57.8	
3,100.0	0.67	53.23	3,099.0	33.2	48.9	55.79	59.1	
3,200.0	0.61	52.57	3,199.0	33.9	49.8	55.73	60.2	
3,300.0	0.50	49.15	3,299.0	34.5	50.5	55.66	61.2	
3,400.0	0.41	49.92	3,399.0	35.0	51.1	55.58	62.0	
3,500.0	0.31	39.18	3,499.0	35.5	51.6	55.48	62.6	
3,600.0	0.39	37.18	3,599.0	36.0	51.9	55.31	63.2	
3,700.0	0.44	32.18	3,699.0	36.5	52.4	55.08	63.9	
3,800.0	0.42	35.26	3,799.0	37.2	52.8	54.84	64.6	
3,900.0	0.44	42.41	3,899.0	37.8	53.2	54.66	65.3	
4,000.0	0.38	38.64	3,999.0	38.3	53.7	54.51	66.0	
4,100.0	0.43	45.54	4,099.0	38.8	54.2	54.38	66.7	
4,200.0	0.63	18.63	4,199.0	39.6	54.6	54.06	67.5	
4,300.0	0.62	14.08	4,299.0	40.6	54.9	53.50	68.3	
4,400.0	0.45	2.92	4,399.0	41.6	55.1	52.96	69.0	
4,500.0	0.29	14.10	4,499.0	42.2	55.2	52.58	69.5	
4,600.0	0.26	29.68	4,599.0	42.6	55.3	52.38	69.9	
4,700.0	0.25	36.43	4,699.0	43.0	55.6	52.26	70.3	
4,800.0	0.46	74.87	4,799.0	43.3	56.1	52.34	70.9	
4,900.0	0.76	91.01	4,899.0	43.4	57.2	52.79	71.8	
5,000.0	1.20	96.42	4,998.9	43.3	58.9	53.68	73.0	
5,100.0	1.28	94.75	5,098.9	43.1	61.0	54.79	74.7	
5,200.0	1.22	91.69	5,198.9	42.9	63.2	55.81	76.4	
5,300.0	1.00	82.91	5,298.9	43.0	65.1	56.56	78.0	
5,400.0	0.52	55.35	5,398.9	43.4	66.4	56.83	79.3	
5,500.0	0.46	51.02	5,498.9	43.9	67.0	56.79	80.1	
5,600.0	0.44	34.27	5,598.9	44.5	67.6	56.66	80.9	
5,700.0	0.45	19.20	5,698.9	45.1	67.9	56.39	81.5	
5,800.0	0.72	352.14	5,798.9	46.1	68.0	55.83	82.1	
5,900.0	0.54	10.74	5,898.8	47.2	68.0	55.21	82.8	
6,000.0	0.61	3.97	5,998.8	48.2	68.1	54.70	83.4	

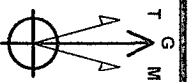
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Design:	VH - Job #32K0810580	Database:	EDM-Regulatory

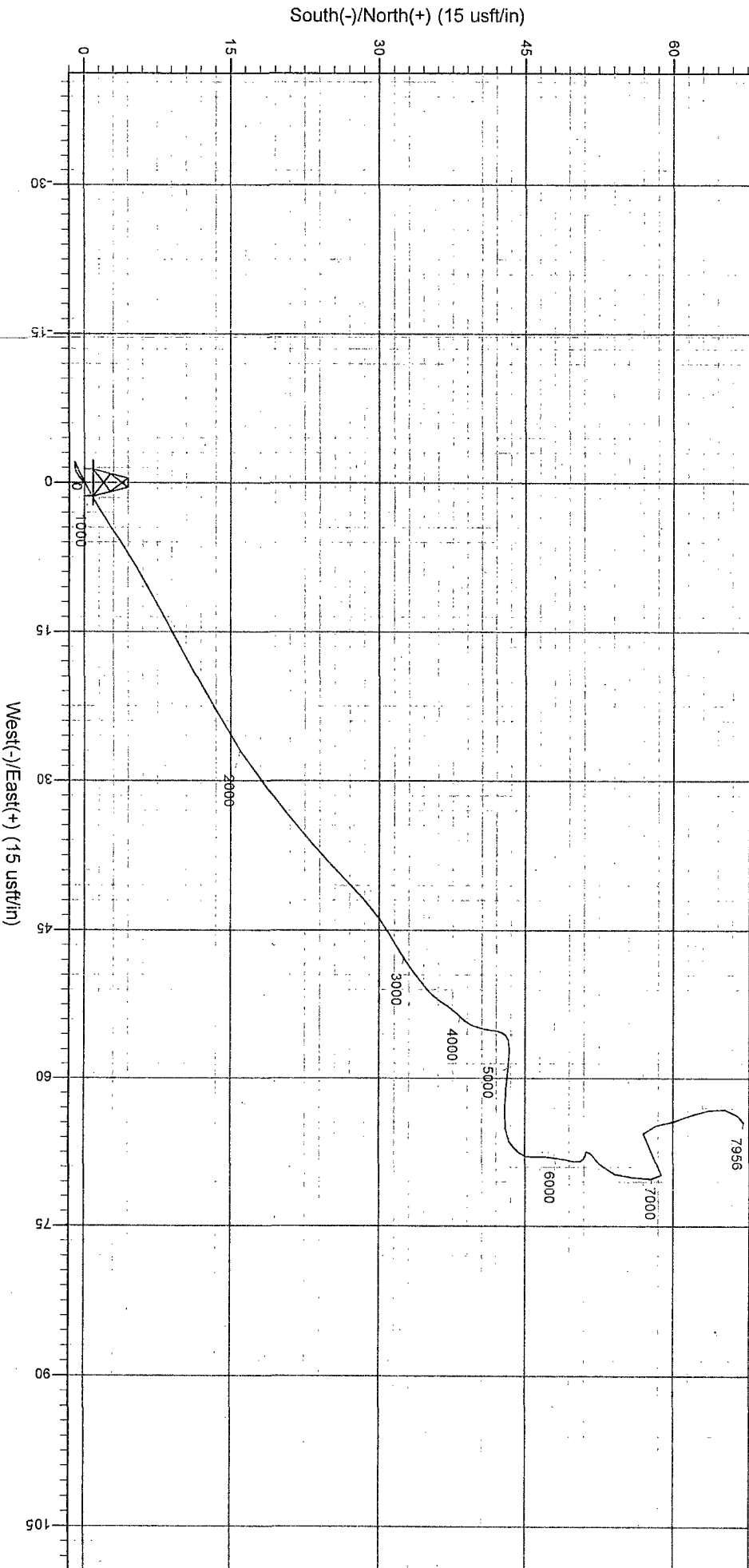
Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
6,100.0	0.51	15.51	6,098.8	49.2	68.2	54.22	84.1	
6,200.0	0.42	7.29	6,198.8	50.0	68.4	53.85	84.7	
6,300.0	0.38	355.49	6,298.8	50.7	68.4	53.49	85.1	
6,400.0	0.39	286.40	6,398.8	51.1	68.1	53.11	85.1	
6,500.0	0.37	289.52	6,498.8	51.3	67.4	52.75	84.7	
6,600.0	0.68	55.48	6,598.8	51.7	67.6	52.58	85.1	
6,700.0	0.94	47.03	6,698.8	52.6	68.7	52.55	86.6	
6,800.0	1.10	22.52	6,798.8	54.1	69.7	52.19	88.2	
6,900.0	1.10	358.57	6,898.8	55.9	70.0	51.39	89.6	
7,000.0	1.11	11.20	6,998.8	57.8	70.2	50.51	90.9	
7,100.0	0.69	276.09	7,098.8	58.8	69.8	49.86	91.3	
7,200.0	2.05	237.71	7,198.7	58.0	67.7	49.42	89.1	
7,300.0	0.68	276.68	7,298.7	57.1	65.6	48.97	86.9	
7,400.0	1.34	351.76	7,398.7	58.3	64.8	48.03	87.2	
7,500.0	1.10	338.70	7,498.7	60.3	64.3	46.82	88.2	
7,600.0	1.02	341.21	7,598.6	62.1	63.7	45.72	88.9	
7,700.0	0.86	348.53	7,698.6	63.7	63.2	44.80	89.7	
7,800.0	0.98	4.84	7,798.6	65.2	63.1	44.06	90.8	
7,900.0	0.86	48.06	7,898.6	66.6	63.8	43.76	92.2	
7,957.0	0.98	52.92	7,955.6	67.2	64.5	43.83	93.1	

Project: Hackberry
Eddy County, NM
Well: Strawberry 7 Federal #4H
Wellbore: VH - Job #32K0810580
Design: VH - Job #32K0810580



Azimuths to Grid North
True North: -1.27°
Magnetic North: 6.59°
Magnetic Field
Strength: 48986.3nT
Dip Angle: 60.58°
Date: 8/29/2010
Model: IGRF200510

WELL DETAILS: Strawberry 7 Federal #4H
WELL @ 0.0ustf (Original Well Elev)
Ground Level: 0.0
+N/-S +E/-W
0.0 0.0
Northing Easting
614938.30 1222867.31
Latitude Longitude
32° 40' 6.915 N 103° 54' 4.250 W
Slot



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