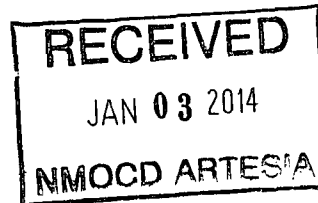


DEVON ENERGY

Wildcat (Eddy County, NM)
Eddy County, NM
Apache 25 Federal Com #2
VH - Job #320413-KW-418

15-27478



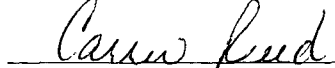
Survey: Gyro

SDI Standard Survey Report

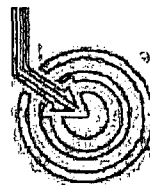
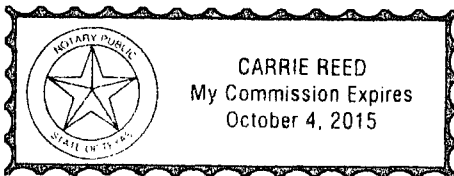
This survey is correct to the best of my knowledge and is supported by actual field data.

_____

Notarized this date 16th of May, 2013.

_____

Notary Signature
County of Midland
State of Texas



Scientific Drilling

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Apache 25 Federal Com #2
Project:	Wildcat (Eddy County, NM)	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	Apache 25 Federal Com #2	North Reference:	Grid:
Wellbore:	VH - Job #320413-KW-418	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320413-KW-418	Database:	EDM-Regulatory

Project:		Wildcat (Eddy County, NM)	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Eddy County, NM			
Site Position:		Northing:	387,530.63 usft	Latitude:	32° 3' 50.850 N
From:	Lat/Long	Easting:	717,555.20 usft	Longitude:	103° 45' 52.110 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well	Apache 25 Federal Com #2, Vertical					
Well Position	+N/-S	0.00 usft	Northing:	494,206.75 usft	Latitude:	32° 21' 27.500 N
	+E/-W	0.00 usft	Easting:	696,868.48 usft	Longitude:	103° 49' 46.700 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	0.00 usft	

Wellbore	VH - Job #320413-KW-418				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/18/13	7.49	60.22	48,510

Design:	VH - Job #320413-KW-418				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	186.83	

Survey Program		Date - 05/09/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	11,287.00	Gyro (VH - Job #320413-KW-418)	Keeper	Keeper Gyro

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.21	157.99	100.00	-0.17	0.07	157.99	0.18
200.00	0.32	208.90	200.00	-0.58	0.00	179.76	0.58
300.00	0.23	201.20	300.00	-1.02	-0.21	191.42	1.04
400.00	0.17	170.69	400.00	-1.35	-0.25	190.65	1.37
500.00	0.25	99.31	500.00	-1.53	-0.01	180.54	1.53
600.00	0.30	110.82	600.00	-1.66	0.45	164.97	1.72
700.00	0.20	119.78	699.99	-1.84	0.84	155.41	2.02
800.00	0.27	101.07	799.99	-1.97	1.22	148.15	2.32
900.00	0.28	160.49	899.99	-2.25	1.54	145.62	2.72
1,000.00	0.42	145.52	999.99	-2.78	1.83	146.69	3.33
1,100.00	0.48	144.06	1,099.99	-3.42	2.28	146.32	4.11

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Apache 25 Federal Com #2
Project:	Wildcat (Eddy County, NM)	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	Apache 25 Federal Com #2	North Reference:	Grid
Wellbore:	VH - Job #320413-KW-418	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320413-KW-418	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,200.00	0.42	135.76	1,199.98	-4.02	2.78	145.34	4.89	
1,300.00	0.44	154.78	1,299.98	-4.63	3.20	145.36	5.63	
1,400.00	0.45	146.94	1,399.98	-5.31	3.58	146.02	6.40	
1,500.00	0.40	141.81	1,499.98	-5.91	4.01	145.86	7.14	
1,600.00	0.43	126.48	1,599.97	-6.41	4.53	144.77	7.85	
1,700.00	0.59	120.91	1,699.97	-6.90	5.27	142.62	8.68	
1,800.00	0.60	119.24	1,799.96	-7.42	6.17	140.25	9.65	
1,900.00	0.44	119.89	1,899.96	-7.86	6.96	138.50	10.50	
2,000.00	0.41	127.10	1,999.96	-8.27	7.58	137.51	11.22	
2,100.00	0.47	117.90	2,099.95	-8.68	8.22	136.54	11.96	
2,200.00	0.23	120.86	2,199.95	-8.97	8.76	135.70	12.54	
2,300.00	0.29	113.05	2,299.95	-9.18	9.16	135.04	12.97	
2,400.00	0.23	128.08	2,399.95	-9.40	9.55	134.53	13.40	
2,500.00	0.18	165.39	2,499.95	-9.67	9.75	134.77	13.74	
2,600.00	0.36	189.05	2,599.95	-10.14	9.74	136.14	14.06	
2,700.00	0.53	211.36	2,699.95	-10.84	9.45	138.92	14.38	
2,800.00	0.64	207.24	2,799.94	-11.73	8.96	142.65	14.76	
2,900.00	0.74	196.33	2,899.93	-12.85	8.52	146.46	15.42	
3,000.00	0.99	168.47	2,999.92	-14.32	8.51	149.27	16.65	
3,100.00	1.40	143.63	3,099.90	-16.15	9.41	149.77	18.69	
3,200.00	1.33	149.68	3,199.87	-18.13	10.72	149.41	21.06	
3,300.00	1.46	137.34	3,299.84	-20.07	12.17	148.78	23.47	
3,400.00	1.69	134.45	3,399.81	-22.04	14.08	147.42	26.15	
3,500.00	1.63	130.79	3,499.76	-24.00	16.21	145.96	28.96	
3,600.00	1.44	126.04	3,599.73	-25.67	18.30	144.51	31.53	
3,700.00	0.95	121.60	3,699.71	-26.84	20.03	143.28	33.49	
3,800.00	0.86	117.61	3,799.69	-27.63	21.40	142.24	34.94	
3,900.00	0.64	117.51	3,899.68	-28.23	22.56	141.37	36.14	
4,000.00	0.67	117.89	3,999.68	-28.76	23.57	140.67	37.19	
4,100.00	0.60	124.68	4,099.67	-29.33	24.52	140.11	38.23	
4,200.00	0.60	133.14	4,199.67	-29.99	25.33	139.82	39.26	
4,300.00	0.56	142.67	4,299.66	-30.74	26.01	139.76	40.26	
4,400.00	0.52	145.80	4,399.66	-31.50	26.56	139.86	41.20	
4,500.00	0.85	133.85	4,499.65	-32.39	27.35	139.82	42.39	
4,600.00	0.56	145.23	4,599.64	-33.31	28.16	139.78	43.62	
4,700.00	0.44	155.36	4,699.64	-34.06	28.60	139.97	44.47	
4,800.00	0.48	140.56	4,799.63	-34.73	29.03	140.11	45.26	
4,900.00	0.40	153.60	4,899.63	-35.36	29.45	140.21	46.02	
5,000.00	0.53	166.84	4,999.63	-36.13	29.71	140.57	46.78	
5,100.00	0.60	151.95	5,099.62	-37.04	30.06	140.94	47.70	
5,200.00	0.69	139.20	5,199.62	-37.96	30.70	141.03	48.82	
5,300.00	0.52	158.31	5,299.61	-38.84	31.26	141.17	49.86	
5,400.00	0.62	162.16	5,399.61	-39.77	31.60	141.54	50.80	
5,500.00	0.53	158.87	5,499.60	-40.72	31.93	141.90	51.74	

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Apache 25 Federal Com #2
Project:	Wildcat (Eddy County, NM)	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	Apache 25 Federal Com #2	North Reference:	Grid:
Wellbore:	VH - Job #320413-KW-418	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320413-KW-418	Database:	EDM-Regulatory

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
5,600.00	0.44	190.20	5,599.60	-41.53	32.03	142.36	52.44	
5,700.00	0.69	169.38	5,699.59	-42.50	32.07	142.96	53.24	
5,800.00	0.49	193.22	5,799.59	-43.51	32.08	143.59	54.06	
5,900.00	0.76	224.90	5,899.58	-44.39	31.52	144.63	54.44	
6,000.00	0.80	234.21	5,999.57	-45.27	30.48	146.04	54.58	
6,100.00	0.83	218.94	6,099.56	-46.24	29.46	147.50	54.83	
6,200.00	0.83	217.87	6,199.55	-47.38	28.56	148.92	55.32	
6,300.00	0.85	228.20	6,299.54	-48.44	27.56	150.36	55.74	
6,400.00	0.89	222.65	6,399.53	-49.51	26.49	151.85	56.15	
6,500.00	0.86	229.61	6,499.52	-50.57	25.39	153.34	56.58	
6,600.00	1.02	220.02	6,599.51	-51.73	24.24	154.89	57.13	
6,700.00	1.04	223.64	6,699.49	-53.07	23.04	156.53	57.86	
6,800.00	0.92	223.95	6,799.47	-54.31	21.86	158.07	58.54	
6,900.00	0.93	215.16	6,899.46	-55.55	20.84	159.44	59.33	
7,000.00	1.06	215.23	6,999.45	-56.97	19.84	160.80	60.32	
7,100.00	1.09	215.47	7,099.43	-58.50	18.75	162.23	61.43	
7,200.00	1.16	222.16	7,199.41	-60.02	17.52	163.73	62.53	
7,300.00	1.45	213.19	7,299.38	-61.83	16.15	165.36	63.91	
7,400.00	1.61	206.78	7,399.35	-64.14	14.82	166.99	65.83	
7,500.00	1.69	204.17	7,499.31	-66.74	13.58	168.50	68.11	
7,600.00	1.58	203.13	7,599.27	-69.36	12.44	169.83	70.46	
7,700.00	1.40	202.47	7,699.23	-71.75	11.43	170.95	72.66	
7,800.00	0.99	189.18	7,799.21	-73.74	10.83	171.65	74.53	
7,900.00	0.21	156.19	7,899.20	-74.76	10.76	171.81	75.53	
8,000.00	0.18	10.90	7,999.20	-74.77	10.87	171.73	75.55	
8,100.00	0.71	328.44	8,099.20	-74.09	10.57	171.88	74.84	
8,200.00	0.12	279.78	8,199.20	-73.54	10.14	172.15	74.24	
8,300.00	0.68	195.26	8,299.20	-74.10	9.88	172.40	74.75	
8,400.00	0.41	262.75	8,399.19	-74.71	9.37	172.85	75.30	
8,500.00	0.43	196.93	8,499.19	-75.12	8.91	173.24	75.64	
8,600.00	0.18	199.67	8,599.19	-75.62	8.75	173.40	76.13	
8,700.00	1.85	306.99	8,699.17	-74.80	7.40	174.35	75.17	
8,800.00	1.77	308.80	8,799.12	-72.86	4.91	176.14	73.03	
8,900.00	1.26	314.82	8,899.09	-71.12	2.93	177.64	71.18	
9,000.00	0.97	317.04	8,999.07	-69.73	1.57	178.71	69.74	
9,100.00	0.65	67.50	9,099.06	-68.89	1.52	178.74	68.91	
9,200.00	0.69	116.51	9,199.06	-68.94	2.58	177.86	68.99	
9,300.00	0.65	115.49	9,299.05	-69.45	3.63	177.01	69.55	
9,400.00	0.50	183.30	9,399.04	-70.13	4.12	176.64	70.25	
9,500.00	0.76	198.07	9,499.04	-71.20	3.89	176.87	71.31	
9,600.00	1.18	208.63	9,599.02	-72.73	3.19	177.49	72.80	
9,700.00	0.98	196.97	9,699.01	-74.46	2.45	178.12	74.50	
9,800.00	0.80	186.38	9,798.99	-75.97	2.12	178.40	76.00	
9,900.00	0.70	201.94	9,898.99	-77.23	1.81	178.65	77.25	

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Apache 25 Federal Com #2
Project:	Wildcat (Eddy County, NM)	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	Apache 25 Federal Com #2	North Reference:	Grid
Wellbore:	VH - Job #320413-KW-418	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #320413-KW-418	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
10,000.00	0.69	235.59	9,998.98	-78.13	1.09	179.20	78.14
10,100.00	0.84	244.61	10,098.97	-78.79	-0.07	180.05	78.79
10,200.00	1.38	203.64	10,198.95	-80.21	-1.22	180.87	80.22
10,300.00	2.66	184.71	10,298.89	-83.62	-1.89	181.29	83.64
10,400.00	2.58	184.97	10,398.78	-88.18	-2.27	181.48	88.21
10,500.00	2.58	188.69	10,498.68	-92.64	-2.81	181.74	92.69
10,600.00	2.14	198.22	10,598.60	-96.64	-3.73	182.21	96.71
10,700.00	2.19	204.80	10,698.53	-100.15	-5.12	182.93	100.28
10,800.00	1.79	213.36	10,798.47	-103.19	-6.78	183.76	103.41
10,900.00	1.84	197.60	10,898.42	-106.02	-8.12	184.38	106.33
11,000.00	1.57	199.14	10,998.37	-108.85	-9.06	184.76	109.22
11,100.00	1.63	207.59	11,098.33	-111.40	-10.17	185.21	111.87
11,200.00	1.76	224.23	11,198.29	-113.76	-11.90	185.97	114.38
11,287.00	1.51	238.73	11,285.26	-115.32	-13.81	186.83	116.14

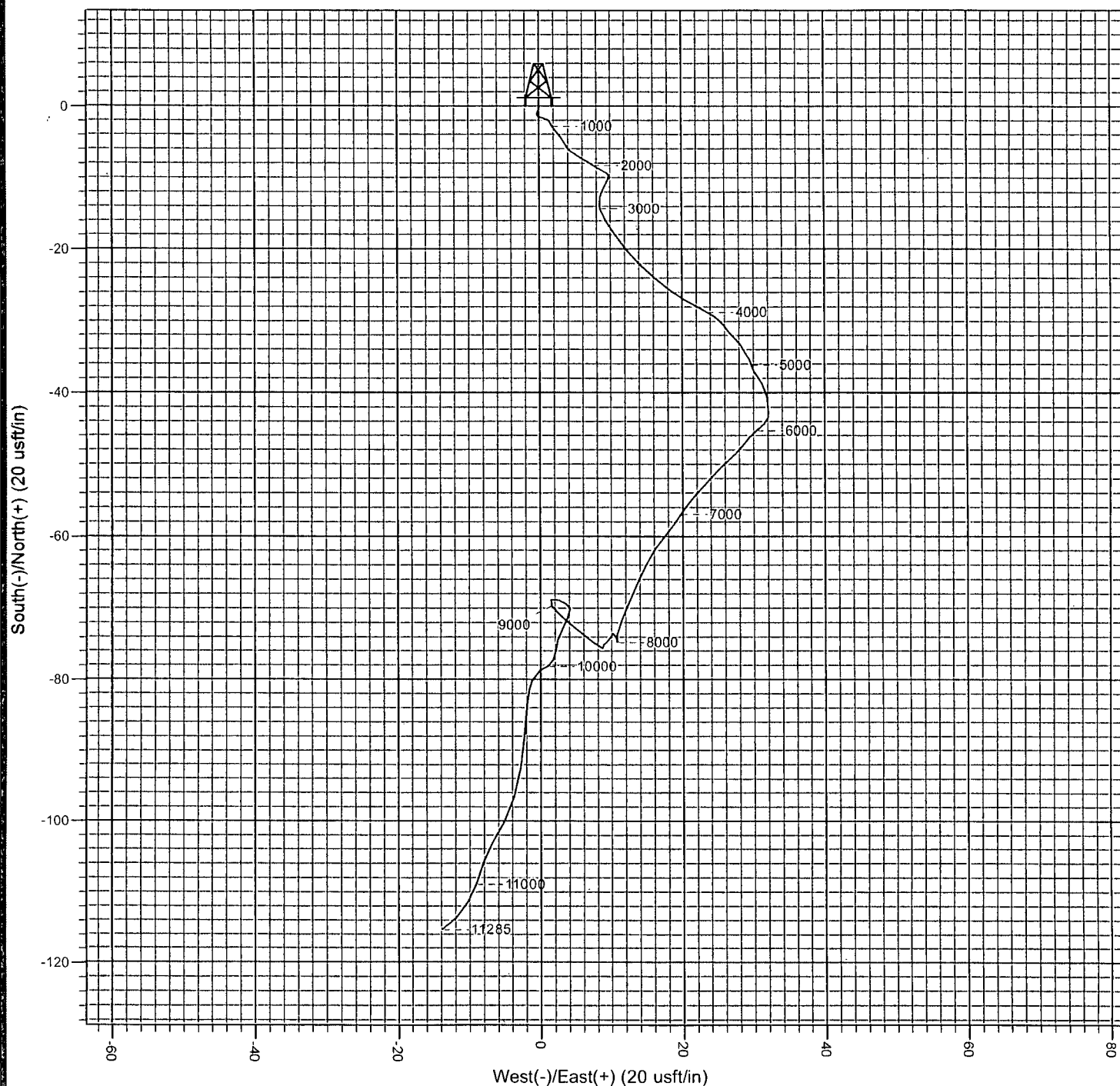


Scientific Drilling

Project: Wildcat (Eddy County, NM)
Eddy County, NM
Well: Apache 25 Federal Com #2
Wellbore: VH - Job #320413-KW-418
Design: VH - Job #320413-KW-418

WELL DETAILS: Apache 25 Federal Com #2
WELL @ 0.00usft (Original Well Elev)
Ground Level: 0.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	494206.75	696868.48	32° 21' 27.500 N	103° 49' 46.700 W	



PROJECT DETAILS: Wildcat (Eddy County, NM)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

SITE DETAILS: Eddy County, NM
Site Centre Latitude: 32° 3' 50.850 N
Longitude: 103° 45' 52.110 W
Positional Uncertainty: 0.00
Convergence: 0.30
Local North: Grid