

30-015-38338

DEVON ENERGY

Scanlon Draw
Eddy County, NM
Emerald PWU 20 #1H
VH - Job #32K0311201

HOBBS OCD

AUG 29 2011

RECEIVED

Survey: Actual

SDI Standard Survey Report

07 March, 2011

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

Substant

Notarized this date 7th of April, 2011.

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 Emerald PWU 20 #1H
Project:	Scanlon Draw	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Emerald PWU 20 #1H	North Reference:	Grid
Wellbore:	VH - Job #32K0311201	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0311201	Database:	EDM-Regulatory

Project	Scanlon Draw		
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:	600,985 03 usft
From:	Lat/Long	Easting:	570,584 54 usft
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16"
		Grid Convergence:	0 12 °

Well	Emerald PWU 20 #1H, Directional (Pathfinder)		
Well Position	+N/-S	0 0 usft	Northing: 600,985 03 usft
	+E/-W	0 0 usft	Easting: 570,584 54 usft
Position Uncertainty	0 0 usft	Wellhead Elevation:	usft
		Ground Level:	0 0 usft

Wellbore	VH - Job #32K0311201				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	3/6/2011	7 96	60 50	48,899

Design	VH - Job #32K0311201			
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	90 02

Survey Program	Date	3/7/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100 0	7,110 0	Actual (VH - Job #32K0311201)	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 22	270 35	100 0	0 0	-0 2	270 35	0 2
200 0	0 28	261 33	200 0	0 0	-0 6	266 84	0 6
300 0	0 78	284 70	300 0	0 1	-1 5	273 80	1 5
400 0	0 82	290 12	400 0	0 5	-2 9	280 33	2 9
500 0	0 76	300 54	500 0	1 1	-4 1	285 07	4 2
600 0	0 59	325 47	600 0	1 9	-5 0	290 60	5 3
700 0	0 51	41 09	700 0	2 6	-5 0	297 88	5 6
800 0	0 69	58 85	800 0	3 3	-4 2	308 22	5 3
900 0	0 76	58 26	900 0	3 9	-3 1	321 98	5 0
1,000 0	0 67	40 30	999 9	4 7	-2 1	335 72	5 2
1,100 0	0 62	24 63	1,099 9	5 7	-1 5	344 90	5 9

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Wellbore:	VH - Job #32K0311201	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0311201	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 60	359 29	1,199 9	6 7	-1 3	348 91	6 8	
1,300 0	0 67	357 74	1,299 9	7 8	-1 3	350 24	7 9	
1,400 0	0 74	349 98	1,399 9	9 0	-1 5	350 70	9 1	
1,500 0	0 80	355 52	1,499 9	10 3	-1 6	350 98	10 5	
1,600 0	0 64	351 57	1,599 9	11 6	-1 8	351 28	11 7	
1,700 0	0 65	357 87	1,699 9	12 7	-1 9	351 58	12 8	
1,800 0	0 51	350 73	1,799 9	13 7	-2 0	351 81	13 9	
1,900 0	0 35	325 45	1,899 9	14 4	-2 2	351 25	14 6	
2,000 0	0 30	301 17	1,999 9	14 8	-2 6	349 97	15 0	
2,100 0	0 33	286 09	2,099 9	15 0	-3 1	348 27	15 3	
2,200 0	0 35	293 04	2,199 9	15 2	-3 7	346 42	15 6	
2,300 0	0 33	288 61	2,299 9	15 4	-4 2	344 66	16 0	
2,400 0	0 40	296 37	2,399 9	15 7	-4 8	342 92	16 4	
2,500 0	0 47	292 05	2,499 9	16 0	-5 5	340 98	16 9	
2,600 0	0 44	287 31	2,599 9	16 2	-6 3	338 94	17 4	
2,700 0	0 50	281 76	2,699 9	16 4	-7 0	336 80	17 9	
2,800 0	0 57	289 95	2,799 9	16 7	-7 9	334 57	18 5	
2,900 0	0 57	274 56	2,899 9	16 9	-8 9	332 23	19 1	
3,000 0	0 59	281 09	2,999 9	17 1	-9 9	329 84	19 7	
3,100 0	0 61	297 21	3,099 8	17 4	-10 9	327 96	20 5	
3,200 0	0 65	298 81	3,199 8	17 9	-11 9	326 50	21 5	
3,300 0	0 63	297 81	3,299 8	18 4	-12 8	325 15	22 5	
3,400 0	0 59	295 46	3,399 8	18 9	-13 8	323 91	23 4	
3,500 0	0 59	300 13	3,499 8	19 4	-14 7	322 84	24 3	
3,600 0	0 67	307 32	3,599 8	20 0	-15 6	322 04	25 4	
3,700 0	0 97	309 76	3,699 8	20 9	-16 7	321 34	26 8	
3,800 0	1 06	308 29	3,799 8	22 0	-18 1	320 58	28 5	
3,900 0	1 27	297 31	3,899 8	23 1	-19 8	319 38	30 4	
4,000 0	1 66	295 00	3,999 7	24 2	-22 1	317 61	32 8	
4,100 0	1 54	296 70	4,099 7	25 4	-24 6	315 93	35 4	
4,200 0	1 41	304 61	4,199 7	26 7	-26 8	314 90	37 9	
4,300 0	1 35	319 84	4,299 6	28 3	-28 6	314 73	40 3	
4,400 0	1 41	331 79	4,399 6	30 3	-30 0	315 36	42 6	
4,500 0	1 32	341 48	4,499 6	32 5	-30 9	316 45	44 8	
4,600 0	1 08	351 11	4,599 6	34 5	-31 4	317 71	46 7	
4,700 0	1 00	355 04	4,699 5	36 3	-31 6	318 95	48 2	
4,800 0	0 96	357 15	4,799 5	38 0	-31 7	320 15	49 5	
4,900 0	0 79	1 72	4,899 5	39 6	-31 8	321 23	50 7	
5,000 0	0 77	346 44	4,999 5	40 9	-31 9	322 04	51 9	
5,100 0	1 24	342 90	5,099 5	42 6	-32 4	322 75	53 5	
5,200 0	1 41	343 27	5,199 5	44 8	-33 1	323 58	55 7	
5,300 0	1 48	342 16	5,299 4	47 2	-33 8	324 39	58 1	
5,400 0	1 61	344 98	5,399 4	49 8	-34 6	325 23	60 6	
5,500 0	1 74	350 66	5,499 4	52 6	-35 2	326 25	63 3	

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Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,600.0	1 70	348 52	5,599.3	55.6	-35.7	327.28	66.1
5,700.0	1 89	328 94	5,699.3	58.5	-36.9	327.77	69.1
5,800.0	2 00	329 06	5,799.2	61.4	-38.6	327.83	72.5
5,900.0	1 93	328 83	5,899.1	64.3	-40.4	327.88	75.9
6,000.0	1 83	331 60	5,999.1	67.2	-42.0	327.97	79.2
6,100.0	1 81	338 52	6,099.0	70.0	-43.3	328.24	82.4
6,200.0	1 86	348 88	6,199.0	73.1	-44.2	328.82	85.4
6,300.0	1 93	353 91	6,298.9	76.4	-44.7	329.64	88.5
6,400.0	1 71	358 08	6,398.9	79.5	-45.0	330.52	91.4
6,500.0	1 39	3 36	6,498.8	82.2	-44.9	331.34	93.7
6,600.0	1 28	12 23	6,598.8	84.5	-44.6	332.17	95.6
6,700.0	1 09	32 24	6,698.8	86.4	-43.9	333.08	96.9
6,800.0	1 22	42 13	6,798.8	88.0	-42.7	334.14	97.8
6,900.0	1 24	51 65	6,898.8	89.5	-41.1	335.33	98.5
7,000.0	1 29	56 06	6,998.7	90.8	-39.3	336.58	98.9
7,100.0	1 27	64 57	7,098.7	91.9	-37.4	337.86	99.2
7,110.0	1 27	70 02	7,108.7	92.0	-37.2	337.99	99.2



Project: Scanlon Draw
Eddy County, NM
Well: Emerald PWU 20 #1H
Wellbore: VH - Job #32K0311201
Design: VH - Job #32K0311201

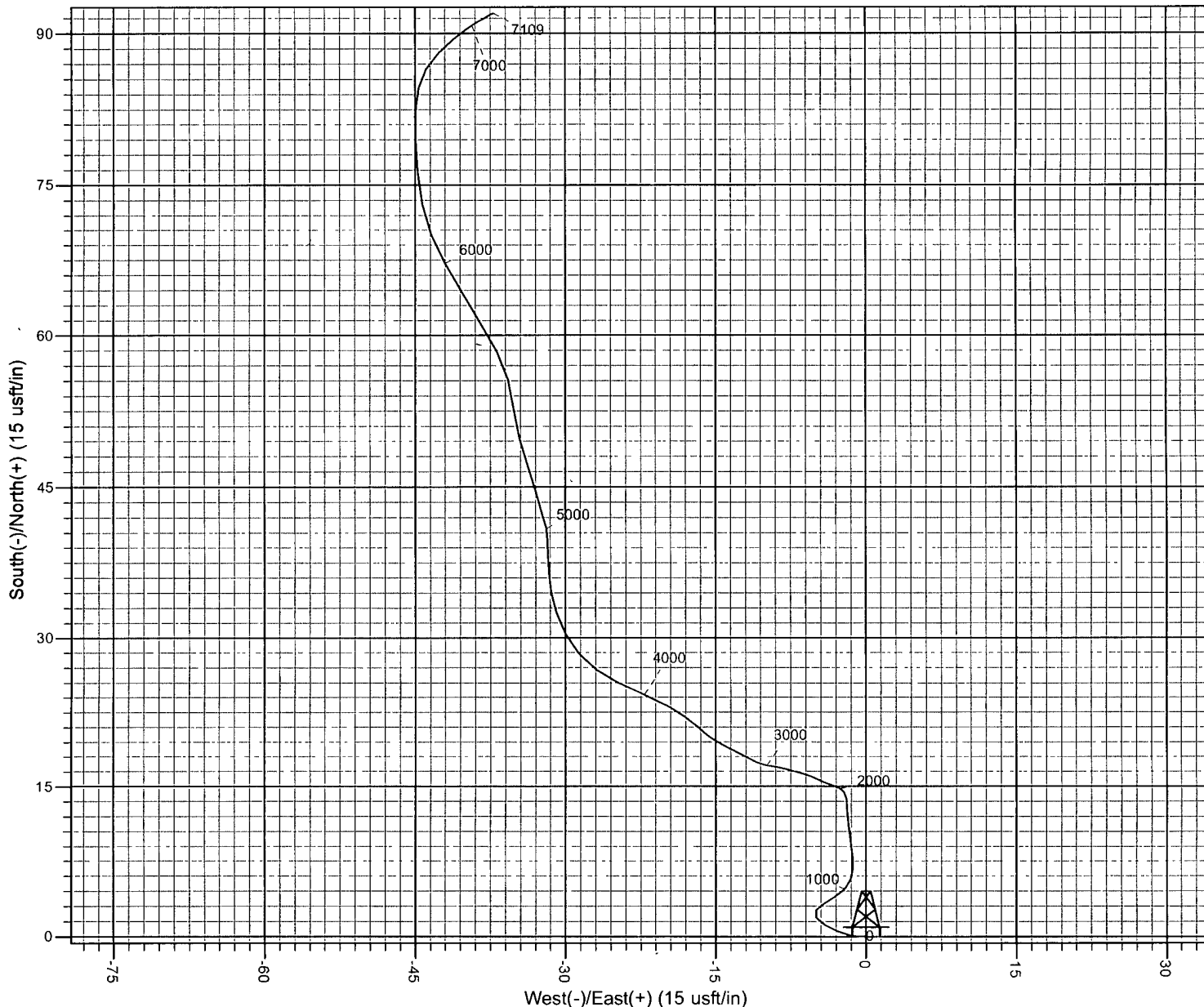


Azimuths to Grid North
True North -0.12°
Magnetic North 7.83°

Magnetic Field
Strength 48899 0snT
Dip Angle 60.50°
Date 3/6/2011
Model BGGM2010

WELL DETAILS: Emerald PWU 20 #1H
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	600985.03	570584.54	32° 39' 7.200 N	104° 6' 14.400 W	



PROJECT DETAILS: Scanlon Draw

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° 39' 7.200 N
Longitude: 104° 6' 14.400 W
Positional Uncertainty: 0.0
Convergence: 0.12
Local North: Grid