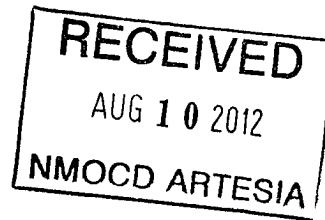


30-015-39073



DEVON ENERGY

Avalon
Eddy County, NM
Snapping 2 State #5H
VH - Job #32K1011966

Survey: Actual

SDI Standard Survey Report

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

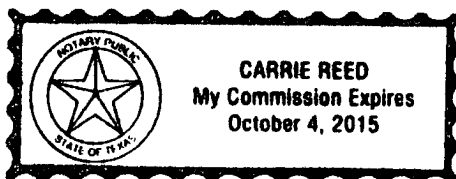
Richardson

Notarized this date 15th of November 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas

Submit survey to TS



Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Snapping 2 State #5H
Project:	Avalon	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Snapping 2 State #5H	North Reference:	Grid
Wellbore:	VH - Job #32K1011966	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1011966	Database:	EDM-Regulatory

Project	Avalon		
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:	409,001 95 usft	Latitude:	32° 7' 26 400 N
From:	Lat/Long	Easting:	605,978 73 usft	Longitude:	103° 59' 27 600 W
Position Uncertainty:	0 0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0 18 °

Well	Snapping 2 State #5H, Directional (Pathfinder)					
Well Position	+N/-S	0 0 usft	Northing:	388,157 99 usft	Latitude:	32° 3' 56 829 N
	+E/-W	0 0 usft	Easting:	682,926 78 usft	Longitude:	103° 44' 34 150 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K1011966				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/8/2011	7 62	60 00	48,496

Design		VH - Job #32K1011966			
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	357 28	

Survey Program		Date	11/15/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100 0	7,860 0	Actual (VH - Job #32K1011966)	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 35	206 36	100 0	-0 3	-0 1	206 36	0 3
200 0	0 53	206 34	200 0	-1 0	-0 5	206 35	1 1
300 0	0 52	216 81	300 0	-1 7	-1 0	208 73	2 0
400 0	0 81	241 40	400 0	-2 4	-1 8	217 10	3 1
500 0	1 33	246 74	500 0	-3 2	-3 5	227 49	4 8
600 0	1 30	247 19	599 9	-4 1	-5 6	233 77	7 0
700 0	1 31	260 27	699 9	-4 8	-7 8	238 61	9 2
800 0	1 07	260 55	799 9	-5 1	-9 9	242 59	11 1
900 0	1 10	269 35	899 9	-5 3	-11 7	245 80	12 9
1,000 0	1 10	275 32	999 9	-5 2	-13 7	249 16	14 6
1,100 0	1 22	284 61	1,099 8	-4 8	-15 6	252 80	16 4

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Snapping 2 State #5H
Project:	Avalon	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Snapping 2 State #5H	North Reference:	Grid
Wellbore:	VH - Job #32K1011966	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1011966	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	1 36	294 18	1,199 8	-4 1	-17 8	257 03	18 2
1,300 0	1 46	291 94	1,299 8	-3 1	-20 0	261 12	20 3
1,400 0	1 56	290 12	1,399 7	-2 2	-22 5	264 45	22 6
1,500 0	1 84	291 12	1,499 7	-1 1	-25 3	267 42	25 3
1,600 0	2 04	285 72	1,599 6	-0 1	-28 5	269 85	28 5
1,700 0	1 98	283 76	1,699 6	0 8	-31 9	271 47	31 9
1,800 0	1 86	270 23	1,799 5	1 2	-35 2	272 01	35 2
1,900 0	1 83	262 07	1,899 5	1 0	-38 4	271 52	38 4
2,000 0	2 01	258 01	1,999 4	0 4	-41 7	270 60	41 7
2,100 0	2 23	258 70	2,099 4	-0 3	-45 3	269 61	45 3
2,200 0	2 25	255 87	2,199 3	-1 2	-49 1	268 64	49 1
2,300 0	2 21	254 61	2,299 2	-2 2	-52 9	267 66	52 9
2,400 0	2 28	249 24	2,399 1	-3 4	-56 6	266 58	56 7
2,500 0	2 34	247 59	2,499 0	-4 9	-60 3	265 39	60 5
2,600 0	2 12	261 97	2,599 0	-5 9	-64 0	264 74	64 3
2,700 0	1 90	256 34	2,698 9	-6 5	-67 5	264 46	67 8
2,800 0	1 93	257 00	2,798 8	-7 3	-70 7	264 09	71 1
2,900 0	2 43	253 05	2,898 8	-8 3	-74 4	263 62	74 9
3,000 0	2 86	252 74	2,998 7	-9 7	-78 8	263 00	79 4
3,100 0	1 53	235 75	3,098 6	-11 2	-82 3	262 28	83 1
3,200 0	1 16	228 94	3,198 6	-12 6	-84 2	261 50	85 1
3,300 0	1 45	240 69	3,298 5	-13 9	-86 0	260 85	87 1
3,400 0	1 34	238 14	3,398 5	-15 1	-88 1	260 28	89 4
3,500 0	0 58	182 03	3,498 5	-16 2	-89 1	259 69	90 6
3,600 0	1 41	131 81	3,598 5	-17 6	-88 2	258 75	90 0
3,700 0	1 40	128 61	3,698 5	-19 1	-86 4	257 51	88 5
3,800 0	2 76	117 75	3,798 4	-21 0	-83 3	255 84	85 9
3,900 0	3 99	128 17	3,898 2	-24 3	-78 4	252 79	82 1
4,000 0	4 02	127 70	3,998 0	-28 6	-72 9	248 60	78 3
4,100 0	2 98	126 47	4,097 8	-32 3	-68 1	244 63	75 3
4,200 0	2 37	127 70	4,197 7	-35 1	-64 3	241 39	73 3
4,300 0	2 15	129 65	4,297 6	-37 5	-61 2	238 49	71 8
4,400 0	2 00	128 68	4,397 5	-39 8	-58 4	235 72	70 7
4,500 0	2 01	127 27	4,497 5	-42 0	-55 7	232 99	69 7
4,600 0	1 85	125 91	4,597 4	-44 0	-53 0	230 30	68 9
4,700 0	1 78	124 75	4,697 4	-45 8	-50 4	227 72	68 1
4,800 0	1 77	125 23	4,797 3	-47 6	-47 9	225 16	67 5
4,900 0	1 89	121 83	4,897 3	-49 4	-45 2	222 48	66 9
5,000 0	1 98	121 47	4,997 2	-51 1	-42 3	219 61	66 4
5,100 0	1 64	119 94	5,097 2	-52 7	-39 6	216 90	66 0
5,200 0	1 57	121 44	5,197 1	-54 2	-37 2	214 47	65 7
5,300 0	1 08	124 98	5,297 1	-55 4	-35 3	212 46	65 7
5,400 0	0 70	119 17	5,397 1	-56 3	-34 0	211 11	65 7
5,500 0	0 81	110 26	5,497 1	-56 8	-32 8	209 97	65 6

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well Snapping 2 State #5H
Project:	Avalon	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	Snapping 2 State #5H	North Reference:	Grid
Wellbore:	VH - Job #32K1011966	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K1011966	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 85	101 96	5,597 1	-57 2	-31 4	208 73	65 2
5,700 0	0 68	99 59	5,697 0	-57 5	-30 1	207 61	64 8
5,800 0	0 79	88 69	5,797 0	-57 5	-28 8	206 57	64 3
5,900 0	0 66	99 40	5,897 0	-57 6	-27 5	205 53	63 9
6,000 0	0 69	96 83	5,997 0	-57 8	-26 4	204 52	63 5
6,100 0	0 52	120 50	6,097 0	-58 1	-25 4	203 59	63 4
6,200 0	0 79	116 30	6,197 0	-58 6	-24 4	202 56	63 5
6,300 0	0 77	130 49	6,297 0	-59 4	-23 2	201 37	63 8
6,400 0	0 87	128 81	6,397 0	-60 3	-22 1	200 16	64 2
6,500 0	0 71	150 07	6,497 0	-61 3	-21 2	199 10	64 9
6,600 0	0 83	178 63	6,597 0	-62 6	-20 9	198 48	66 0
6,700 0	0 98	179 17	6,697 0	-64 1	-20 9	198 03	67 4
6,800 0	1 04	197 68	6,796 9	-65 9	-21 1	197 79	69 2
6,900 0	1 04	200 00	6,896 9	-67 6	-21 7	197 82	71 0
7,000 0	1 03	198 82	6,996 9	-69 3	-22 3	197 86	72 8
7,100 0	1 18	203 13	7,096 9	-71 1	-23 0	197 94	74 7
7,200 0	1 21	207 18	7,196 9	-73 0	-23 9	198 14	76 8
7,300 0	1 07	213 07	7,296 9	-74 7	-24 9	198 43	78 7
7,400 0	1 24	213 37	7,396 8	-76 4	-26 0	198 80	80 7
7,500 0	1 37	211 96	7,496 8	-78 3	-27 2	199 18	82 9
7,600 0	1 28	196 63	7,596 8	-80 4	-28 2	199 32	85 2
7,700 0	1 55	186 27	7,696 8	-82 8	-28 6	199 09	87 6
7,800 0	1 41	176 78	7,796 7	-85 4	-28 7	198 60	90 1
7,860 0	1 30	181 75	7,856 7	-86 8	-28 7	198 30	91 4



Scientific Drilling
Directional Drilling Operations

Project: Avalon
Eddy County, NM
Well: Snapping 2 State #5H
Wellbore: VH - Job #32K1011966
Design: VH - Job #32K1011966



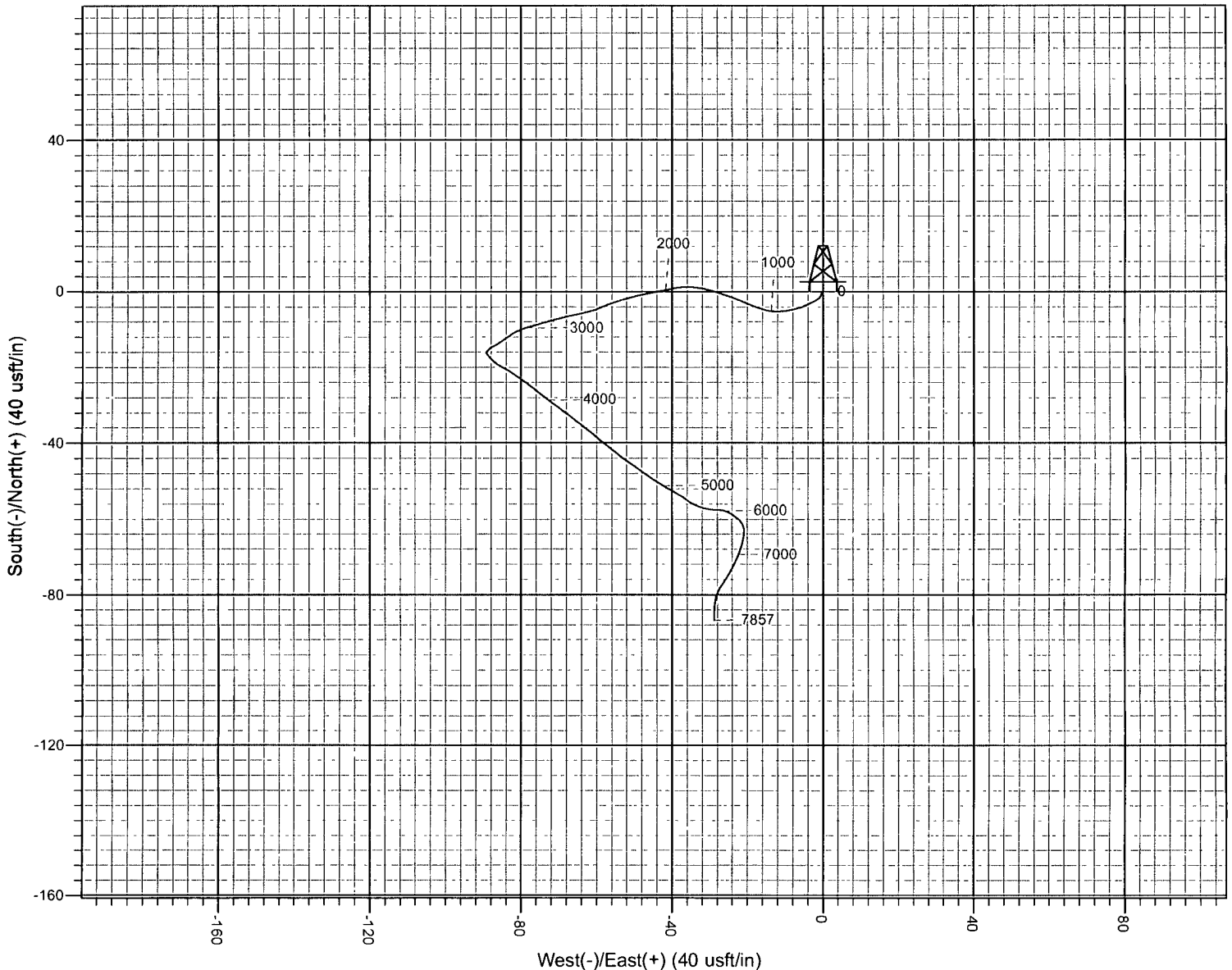
Azimuths to Grid North
True North -0 31°
Magnetic North 7 30°

Magnetic Field
Strength 48495 9snT
Dip Angle 60 00°
Date 10/8/2011
Model IGRF2010

WELL DETAILS: Snapping 2 State #5H
WELL @ 0.0usft (Original Well Elev)

Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	388157.99	682926.78	32° 3' 56.829 N	103° 44' 34.150 W	



PROJECT DETAILS: Avalon
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° 7' 26.400 N
Longitude: 103° 59' 27.600 W
Positional Uncertainty: 0.0
Convergence: 0.18
Local North: Grid



Stimulations Summary

District PERMIAN BASIN	County EDDY	Field Name AVALON SHALE	Project Group PB NEW MEXICO	State/Province NM
Surface Legal Location SEC2 T26S R31E	API/UWI 3001539073	Latitude (DMS) 32° 3' 56.829" N	Longitude (DMS) 103° 44' 34.15" W	Ground Elev 3,265.70
			KB - GL (ft) 26.20	Orig KB Elev (ft) 3,291.90
				TH Elev (ft)

<Type?>, <Date?>, <Zone?>, <Min Top Depth?> - <Max Btm Depth?>, SCHLUMBERGER, <Total Add Amount?>

Proppant De	V (pumped) (bbl)	Pre Trt S/I Prs (psi)	Pst Trt S/I Prs (psi)	P(break) (psi)	ISIP (psi)	P (avg) (psi)	Rate (avg) (bbl/m)	P (max) (psi)	Rate (max) (bbl/m)	Max Conc
HYDRAULIC FRAC, 12/28/2011 19:07, AVALON SHALE, OH, 12,887.0 ftKB - 13,112.0 ftKB, BHI, WHITE 5456 LBS; 201395 LBS										
202,950.0	6000.00	0.0	2,431.0	4,863.0		6,823.0	63	8,050.0	70	3.00
HYDRAULIC FRAC, 12/29/2011 12:50, AVALON SHALE, OH, 12,553.0 ftKB - 12,778.0 ftKB, BHI, WHITE 5448 LBS; 232779 LBS										
202,950.0	6260.20	0.0	1,597.0	5,497.0		6,663.0	66	8,007.0	70	3.00
HYDRAULIC FRAC, 12/30/2011 08:27, AVALON SHALE, OH, 12,219.0 ftKB - 12,432.0 ftKB, BHI, 203353 LBS; WHITE 5452 LBS										
202,950.0	6040.70	0.0	481.0	5,000.0		6,145.0	67	7,593.0	70	3.00
HYDRAULIC FRAC, 12/30/2011 13:46, AVALON SHALE, OH, 11,884.0 ftKB - 12,109.0 ftKB, BHI, WHITE 5270 LBS; 201256 LBS										
202,950.0	5988.20	0.0	1,029.0	5,291.0		6,700.0	70	7,920.0	70	3.00
HYDRAULIC FRAC, 12/30/2011 18:21, AVALON SHALE, OH, 11,550.0 ftKB - 11,762.0 ftKB, BHI, WHITE 5631 LBS; 204645 LBS										
202,950.0	5991.10	0.0	1,451.0	5,395.0		6,841.0	69	6,924.0	70	3.00
HYDRAULIC FRAC, 12/31/2011 09:10, AVALON SHALE, OH, 11,215.0 ftKB - 11,440.0 ftKB, BHI, 202333 LBS; WHITE 5647 LBS										
202,950.0	5970.90	0.0	1,348.0	5,631.0		5,877.0	71	6,994.0	71	3.00
HYDRAULIC FRAC, 12/31/2011 13:38, AVALON SHALE, OH, 10,881.0 ftKB - 11,097.0 ftKB, BHI, WHITE 5512 LBS; 201056 LBS										
202,950.0	5918.00	0.0	1,431.0	4,843.0		6,167.0	70	7,211.0	72	3.00
HYDRAULIC FRAC, 12/31/2011 18:09, AVALON SHALE, OH, 10,547.0 ftKB - 10,772.0 ftKB, BHI, WHITE 5570 LBS; 203683 LBS										
202,950.0	5929.20	0.0	1,494.0	5,533.0		5,695.0	71	6,410.0	72	3.00
HYDRAULIC FRAC, 12/31/2011 22:40, AVALON SHALE, OH, 10,213.0 ftKB - 10,452.0 ftKB, BHI, 205450 LBS; WHITE 5554 LBS										
202,950.0	5958.40	0.0	1,357.0	5,255.0		5,665.0	70	6,373.0	72	3.00
HYDRAULIC FRAC, 1/1/2012 13:44, AVALON SHALE, OH, 9,878.0 ftKB - 10,103.0 ftKB, BHI, WHITE 5528 LBS; 204471 LBS										
202,950.0	5552.10	0.0	1,581.0	5,512.0		5,655.0	70	6,387.0	70	3.00
HYDRAULIC FRAC, 1/2/2012 08:00, AVALON SHALE, OH, 9,209.0 ftKB - 9,434.0 ftKB, BHI, WHITE 83007.3 LBS; 60146.099 LBS										
5907.50		0.0		3,000.0		5,200.0	63	7,771.0	0	2.00
HYDRAULIC FRAC, 1/2/2012 16:00, AVALON SHALE, OH, 9,209.0 ftKB - 9,434.0 ftKB, BHI, WHITE 83010.602 LBS; 60439.198 LBS										
5932.50		0.0	1,731.0	6,056.0		61.0	61	70.5	70	2.00
HYDRAULIC FRAC, 1/3/2012 08:00, AVALON SHALE, OH, 9,209.0 ftKB - 9,434.0 ftKB, BHI, 60439.198 LBS; WHITE 83010.602 LBS										
5932.50		0.0	1,731.0	6,056.0		61.0	61	70.5	70	2.00