

Results of Directional Survey

API number:	30-025-39667		
OGRID:		Operator:	SHERIDAN PRODUCTION CO LLC
		Property:	NORTH VACUUM ABO UNIT # 196

surface	ULSTR:	G	02	T 17S	R 34E
				2310 FNL	1370 FEL

BH Loc	ULSTR:	H	02	T 17S	R 34E
9066	MD	9012.6	TVD	2624 FNL	1117 FEL

Top Perf/OH	ULSTR:	G	02	T 17S	R 34E
8708	MD	8654.6	TVD	2625 FNL	1116 FEL

Bot Perf/OH	ULSTR:	H	02	T 17S	R 34E
8757	MD	8703.6	TVD	2625 FNL	1116 FEL

	MD	N/S	E/W	VD
	7437	-319.73	259.07	7383.63
TOP PERFS/OH	8708	-314.96	254.30	8654.63
	7453	-319.67	259.01	7399.63
	7437	-319.73	259.07	7383.63
BOT PERFS/OH	8757	-314.78	254.12	8703.63
	7453	-319.67	259.01	7399.63

NEXT TO LAST	7437	-319.73	259.07	7383.63
LAST READING	7453	-319.67	259.01	7399.63
TD	9066	-313.62	252.96	9012.63

Surface Location	2310 FN	1370 FE
Projected BHL	2624 FN	1117 FE
Location of		
Top Perfs/OH	2625 FN	1116 FE
Bottom Perfs/OH	2625 FN	1116 FE

SUMMARY of Subsurface Locations

Surface Location	G-02-17S-34E	2310 FN	1370 FE	Vert. Depth
Top Perfs/OH	G-02-17S-34E	2625 FN	1116 FE	8654.63
Bottom Perfs/OH	H-02-17S-34E	2625 FN	1116 FE	8703.63
Projected TD	H-02-17S-34E	2624 FN	1117 FE	9012.63



15 June 2010

State of New Mexico EMNRD
Oil Conservation Division
1625 N French Dr.
Hobbs, NM 88240

Attention: Ms. Donna Mull

Re: Sheridan Production Company
NVANU 196
Lea County, NM
API #30-025-39297 **39667**
Job No. 1010274

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JUN 21 2010

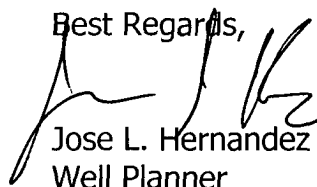
HOBBSOCD

Enclosed please find the survey certification, and the original and one copy of the survey performed on the above referenced well by Nevis Energy Services Houston, Inc. (P-5 No. 606018). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Bill Oehlert	19	4656	7453	5/28/10	6/03/10	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,


Jose L. Hernandez
Well Planner

Certified mail receipt number: 7008 2810 0001 2946 7733

NEVIS ENERGY SERVICES INC. SURVEY DATA CERTIFICATION

RECEIVED

JUN 21 2010
HOBBSDO



NEVIS JOB NUMBER 1010274

OPERATOR SHERIDAN

WELL NAME NVANU 19

COUNTY & STATE

LEA CO. N.M.

API WELL NUMBER	30-025-39297
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PROPOSED DIRECTION	141.38
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TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
4,236 ft	4,622.89 ft	0.06	176.16	1.11	-19.32	gyro

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
28-May-10	4,656 ft	0.1	73.7

SURVEY INSTRUMENT
TYPE
Nevis MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
3-Jun-10	7,453 ft	0.3	311.6

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
3-Jun-10	7,500 ft	0.3	311.6

BILL OEHLERT

PRINT YOUR NAME ABOVE

Bill Oehlert

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.33
DECLINATION OR GRID	-0.4

6/3/2010

TODAY'S DATE

MWD SUPERVISOR 1 WILLIAM OEHLERT

DIRECTIONAL DRILLER 1

LARRY TALLEY

MWD SUPERVISOR 2 0

DIRECTIONAL DRILLER 2

FRANK SULLIVAN

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)

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JUN 21 2010

Form C-102

Revised October 15, 2009

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

HUBBSOCD

Submit one copy to appropriate District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-39667	Pool Code 61760	Pool Name Vacuum Rbd North
Property Code 303854	Property Name NVANU 19	Well Number 196
GRID No. 252496	Operator Name SHERIDAN PRODUCTION COMPANY	Elevation 4048'

Surface Location

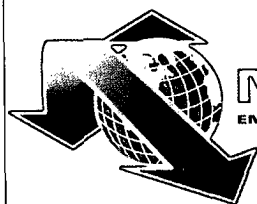
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	2	17 S	34 E		2310	NORTH	1370	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres		Joint or Infill		Consolidation Code		Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION Lat - N 32°51'53.90" Long - W 103°31'36.19" NMSPCE - N 679334.486 E 747673.723 (NAD-27)	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>[Signature]</i> 4/1/10 Signature Date Chris Tomlinson Printed Name
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.
	NEW MEXICO Professional Surveyor 7977 <i>[Signature]</i> Date Surveyed
	Certificate No. Gary L. Jones 7977 BASIN SURVEYS



NEVIS
ENERGY SERVICES INC.
1805 Brittmoore Rd.
Houston, Texas 77043
1-800-909-9819
www.nevisenergy.com

Job Number: 1010XXX

Company: Sheridan Production Company

Lease/Well: NVANU 19

Location: Lea county

Rig Name:

RKB:

G.L. or M.S.L.: GL 4048'

State/Country: New Mexico USA

Declination: 7.73270

Grid: -0.40

File name: C:\101027~3\NVAN4.SVY

Date/Time: 04-Jun-10 / 07:23

Curve Name: NVANU 19 Surveys

NVANU 19 Surveys

RECEIVED

JUN 21 2010

HOBBSOCD

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 141.39
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
Gyro Tie In point									
4623.00	.06	176.16	4622.89	1.11	-19.32	-12.92	19.35	273.29	.00
First Nevis MWD Surveys									
4656.00	.10	73.70	4655.89	1.10	-19.29	-12.90	19.32	273.27	.39
4688.00	1.50	135.20	4687.89	.81	-18.97	-12.47	18.99	272.45	4.55
4719.00	3.20	134.60	4718.86	-.08	-18.07	-11.21	18.07	269.73	5.48
4751.00	4.90	130.40	4750.78	-1.60	-16.39	-8.98	16.47	264.43	5.39
4783.00	5.80	128.90	4782.64	-3.50	-14.09	-6.06	14.52	256.06	2.85
4814.00	6.50	131.60	4813.46	-5.65	-11.56	-2.80	12.87	243.97	2.44
4846.00	7.70	140.20	4845.21	-8.50	-8.83	1.13	12.26	226.11	5.00
4877.00	8.70	151.90	4875.90	-12.16	-6.40	5.51	13.74	207.75	6.26
4909.00	9.20	159.30	4907.51	-16.69	-4.36	10.32	17.25	194.63	3.92
4940.00	9.30	154.90	4938.11	-21.28	-2.42	15.12	21.41	186.48	2.30
4972.00	9.80	141.50	4969.67	-25.75	.38	20.35	25.75	179.16	7.10
5004.00	10.30	130.80	5001.18	-29.75	4.24	25.89	30.05	171.89	6.03
5035.00	10.40	128.70	5031.68	-33.31	8.52	31.34	34.38	165.65	1.26
5067.00	10.40	128.00	5063.15	-36.89	13.05	36.97	39.13	160.52	.39
5098.00	10.50	131.80	5093.64	-40.50	17.36	42.48	44.06	156.80	2.25
5130.00	11.00	140.40	5125.08	-44.80	21.48	48.41	49.68	154.38	5.25
5161.00	11.90	144.40	5155.46	-49.67	25.23	54.56	55.71	153.08	3.87
5193.00	12.50	142.50	5186.74	-55.10	29.25	61.31	62.39	152.04	2.26
5225.00	12.90	141.10	5217.95	-60.63	33.61	68.35	69.32	151.00	1.58
5256.00	14.20	140.30	5248.09	-66.25	38.21	75.61	76.48	150.03	4.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5288.00	15.10	138.40	5279.05	-72.39	43.48	83.70	84.44	149.01	3.19
5319.00	16.40	137.50	5308.89	-78.63	49.12	92.10	92.71	148.01	4.27
5351.00	17.90	137.40	5339.46	-85.58	55.50	101.51	102.00	147.04	4.69
5382.00	18.60	137.10	5368.90	-92.71	62.09	111.19	111.58	146.19	2.28
5414.00	18.60	136.90	5399.23	-100.18	69.05	121.37	121.67	145.42	.20
5509.00	18.60	137.00	5489.27	-122.32	89.74	151.58	151.71	143.74	.03
5604.00	17.90	142.50	5579.50	-144.98	108.96	181.28	181.36	143.07	1.96
5698.00	17.90	143.20	5668.95	-168.01	126.41	210.17	210.25	143.04	.23
5730.00	18.00	143.20	5699.39	-175.91	132.31	220.02	220.12	143.05	.31
5761.00	17.40	142.30	5728.92	-183.41	138.02	229.45	229.54	143.04	2.13
5824.00	16.00	137.90	5789.27	-197.31	149.60	247.53	247.61	142.83	2.99
5888.00	15.20	136.80	5850.91	-209.97	161.26	264.70	264.75	142.48	1.33
5951.00	15.10	135.80	5911.72	-221.87	172.63	281.10	281.12	142.11	.44
6014.00	15.10	135.90	5972.54	-233.65	184.06	297.43	297.44	141.77	.04
6077.00	15.00	135.90	6033.38	-245.40	195.45	313.72	313.72	141.46	.16
6140.00	14.80	140.20	6094.27	-257.43	206.27	329.88	329.88	141.30	1.78
6205.00	14.20	142.20	6157.20	-270.11	216.47	346.15	346.15	141.29	1.20
6268.00	12.60	145.40	6218.48	-281.87	225.11	360.73	360.73	141.39	2.80
6332.00	11.30	144.30	6281.09	-292.71	232.73	373.96	373.96	141.51	2.06
6395.00	9.90	138.20	6343.02	-301.76	239.95	385.53	385.53	141.51	2.85
6458.00	7.80	122.60	6405.27	-308.11	247.16	394.99	394.99	141.26	5.03
6521.00	4.10	130.50	6467.92	-311.87	252.48	401.25	401.26	141.01	6.00
6584.00	3.30	150.20	6530.79	-314.91	255.09	405.25	405.26	140.99	2.37
6648.00	2.20	147.60	6594.72	-317.54	256.66	408.30	408.30	141.05	1.73
6711.00	1.20	147.00	6657.69	-319.12	257.67	410.15	410.16	141.08	1.59
6774.00	1.10	150.10	6720.68	-320.20	258.33	411.41	411.41	141.10	.19
6837.00	1.10	150.20	6783.67	-321.25	258.93	412.60	412.61	141.13	.00
6900.00	1.10	147.60	6846.65	-322.28	259.56	413.80	413.81	141.15	.08
6963.00	.40	137.30	6909.65	-322.95	260.03	414.62	414.63	141.16	1.13
7026.00	.70	355.80	6972.65	-322.73	260.15	414.52	414.53	141.13	1.66
7090.00	.80	347.60	7036.64	-321.90	260.03	413.80	413.81	141.07	.23
7153.00	.60	344.40	7099.64	-321.16	259.84	413.10	413.11	141.02	.32
7216.00	.40	337.50	7162.63	-320.64	259.67	412.59	412.60	141.00	.33
7279.00	.30	331.50	7225.63	-320.29	259.51	412.21	412.22	140.98	.17
7342.00	.20	325.70	7288.63	-320.05	259.37	411.94	411.95	140.98	.16
7407.00	.30	313.70	7353.63	-319.84	259.18	411.66	411.67	140.98	.17
7437.00	.30	318.80	7383.63	-319.73	259.07	411.50	411.51	140.98	.09
Last Nevis MWD Surveys									
7453.00	.30	311.60	7399.63	-319.67	259.01	411.42	411.43	140.98	.24
Projection to TD									
7500.00	.30	311.60	7446.63	-319.51	258.83	411.18	411.19	140.99	.00



NEVIS
ENERGY SERVICES INC.
1805 Brittmoore Rd.
Houston, Texas 77043
1-800-909-9819
www.nevisenergy.com

Job Number: 1010XXX
Company: Sheridan Production Company
Lease/Well: NVANU 19
Location: Lea county
Rig Name:
RKB:
G.L. or M.S.L.: GL 4048'

State/Country: New Mexico USA
Declination: 7.73270
Grid: -0.40
File name: C:\101027~3\NVAN4.SVY
Date/Time: 04-Jun-10 / 07:23
Curve Name: NVANU 19 Surveys

NVANU 19 Surveys

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 141.39
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
Gyro Tie In point									
4623.00	.06	176.16	4622.89	1.11	-19.32	-12.92	19.35	273.29	.00
First Nevis MWD Surveys									
4656.00	.10	73.70	4655.89	1.10	-19.29	-12.90	19.32	273.27	.39
4688.00	1.50	135.20	4687.89	.81	-18.97	-12.47	18.99	272.45	4.55
4719.00	3.20	134.60	4718.86	-.08	-18.07	-11.21	18.07	269.73	5.48
4751.00	4.90	130.40	4750.78	-1.60	-16.39	-8.98	16.47	264.43	5.39
4783.00	5.80	128.90	4782.64	-3.50	-14.09	-6.06	14.52	256.06	2.85
4814.00	6.50	131.60	4813.46	-5.65	-11.56	-2.80	12.87	243.97	2.44
4846.00	7.70	140.20	4845.21	-8.50	-8.83	1.13	12.26	226.11	5.00
4877.00	8.70	151.90	4875.90	-12.16	-6.40	5.51	13.74	207.75	6.26
4909.00	9.20	159.30	4907.51	-16.69	-4.36	10.32	17.25	194.63	3.92
4940.00	9.30	154.90	4938.11	-21.28	-2.42	15.12	21.41	186.48	2.30
4972.00	9.80	141.50	4969.67	-25.75	.38	20.35	25.75	179.16	7.10
5004.00	10.30	130.80	5001.18	-29.75	4.24	25.89	30.05	171.89	6.03
5035.00	10.40	128.70	5031.68	-33.31	8.52	31.34	34.38	165.65	1.26
5067.00	10.40	128.00	5063.15	-36.89	13.05	36.97	39.13	160.52	.39
5098.00	10.50	131.80	5093.64	-40.50	17.36	42.48	44.06	156.80	2.25
5130.00	11.00	140.40	5125.08	-44.80	21.48	48.41	49.68	154.38	5.25
5161.00	11.90	144.40	5155.46	-49.67	25.23	54.56	55.71	153.08	3.87
5193.00	12.50	142.50	5186.74	-55.10	29.25	61.31	62.39	152.04	2.26
5225.00	12.90	141.10	5217.95	-60.63	33.61	68.35	69.32	151.00	1.58
5256.00	14.20	140.30	5248.09	-66.25	38.21	75.61	76.48	150.03	4.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5288.00	15.10	138.40	5279.05	-72.39	43.48	83.70	84.44	149.01	3.19
5319.00	16.40	137.50	5308.89	-78.63	49.12	92.10	92.71	148.01	4.27
5351.00	17.90	137.40	5339.46	-85.58	55.50	101.51	102.00	147.04	4.69
5382.00	18.60	137.10	5368.90	-92.71	62.09	111.19	111.58	146.19	2.28
5414.00	18.60	136.90	5399.23	-100.18	69.05	121.37	121.67	145.42	.20
5509.00	18.60	137.00	5489.27	-122.32	89.74	151.58	151.71	143.74	.03
5604.00	17.90	142.50	5579.50	-144.98	108.96	181.28	181.36	143.07	1.96
5698.00	17.90	143.20	5668.95	-168.01	126.41	210.17	210.25	143.04	.23
5730.00	18.00	143.20	5699.39	-175.91	132.31	220.02	220.12	143.05	.31
5761.00	17.40	142.30	5728.92	-183.41	138.02	229.45	229.54	143.04	2.13
5824.00	16.00	137.90	5789.27	-197.31	149.60	247.53	247.61	142.83	2.99
5888.00	15.20	136.80	5850.91	-209.97	161.26	264.70	264.75	142.48	1.33
5951.00	15.10	135.80	5911.72	-221.87	172.63	281.10	281.12	142.11	.44
6014.00	15.10	135.90	5972.54	-233.65	184.06	297.43	297.44	141.77	.04
6077.00	15.00	135.90	6033.38	-245.40	195.45	313.72	313.72	141.46	.16
6140.00	14.80	140.20	6094.27	-257.43	206.27	329.88	329.88	141.30	1.78
6205.00	14.20	142.20	6157.20	-270.11	216.47	346.15	346.15	141.29	1.20
6268.00	12.60	145.40	6218.48	-281.87	225.11	360.73	360.73	141.39	2.80
6332.00	11.30	144.30	6281.09	-292.71	232.73	373.96	373.96	141.51	2.06
6395.00	9.90	138.20	6343.02	-301.76	239.95	385.53	385.53	141.51	2.85
6458.00	7.80	122.60	6405.27	-308.11	247.16	394.99	394.99	141.26	5.03
6521.00	4.10	130.50	6467.92	-311.87	252.48	401.25	401.26	141.01	6.00
6584.00	3.30	150.20	6530.79	-314.91	255.09	405.25	405.26	140.99	2.37
6648.00	2.20	147.60	6594.72	-317.54	256.66	408.30	408.30	141.05	1.73
6711.00	1.20	147.00	6657.69	-319.12	257.67	410.15	410.16	141.08	1.59
6774.00	1.10	150.10	6720.68	-320.20	258.33	411.41	411.41	141.10	.19
6837.00	1.10	150.20	6783.67	-321.25	258.93	412.60	412.61	141.13	.00
6900.00	1.10	147.60	6846.65	-322.28	259.56	413.80	413.81	141.15	.08
6963.00	.40	137.30	6909.65	-322.95	260.03	414.62	414.63	141.16	1.13
7026.00	.70	355.80	6972.65	-322.73	260.15	414.52	414.53	141.13	1.66
7090.00	.80	347.60	7036.64	-321.90	260.03	413.80	413.81	141.07	.23
7153.00	.60	344.40	7099.64	-321.16	259.84	413.10	413.11	141.02	.32
7216.00	.40	337.50	7162.63	-320.64	259.67	412.59	412.60	141.00	.33
7279.00	.30	331.50	7225.63	-320.29	259.51	412.21	412.22	140.98	.17
7342.00	.20	325.70	7288.63	-320.05	259.37	411.94	411.95	140.98	.16
7407.00	.30	313.70	7353.63	-319.84	259.18	411.66	411.67	140.98	.17
7437.00	.30	318.80	7383.63	-319.73	259.07	411.50	411.51	140.98	.09
Last Nevis MWD Surveys									
7453.00	.30	311.60	7399.63	-319.67	259.01	411.42	411.43	140.98	.24
Projectiopn to TD									
7500.00	.30	311.60	7446.63	-319.51	258.83	411.18	411.19	140.99	.00



Job Number: 1010XXX
 Company: Sheridan Production Company
 Lease/Well: NVANU 19
 Location: Lea county
 Rig Name:
 RKB:
 G.L. or M.S.L.: GL 4048'

State/Country: New Mexico USA
 Declination: 7.73270
 Grid: -0.40
 File name: C:\101027~3\NVAN4.SVY
 Date/Time: 04-Jun-10 / 07:23
 Curve Name: NVANU 19 Surveys

NVANU 19 Surveys

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 141.39
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
Gyro Tie In point									
4623.00	.06	176.16	4622.89	1.11	-19.32	-12.92	19.35	273.29	.00
First Nevis MWD Surveys									
4656.00	.10	73.70	4655.89	1.10	-19.29	-12.90	19.32	273.27	.39
4688.00	1.50	135.20	4687.89	.81	-18.97	-12.47	18.99	272.45	4.55
4719.00	3.20	134.60	4718.86	-.08	-18.07	-11.21	18.07	269.73	5.48
4751.00	4.90	130.40	4750.78	-1.60	-16.39	-8.98	16.47	264.43	5.39
4783.00	5.80	128.90	4782.64	-3.50	-14.09	-6.06	14.52	256.06	2.85
4814.00	6.50	131.60	4813.46	-5.65	-11.56	-2.80	12.87	243.97	2.44
4846.00	7.70	140.20	4845.21	-8.50	-8.83	1.13	12.26	226.11	5.00
4877.00	8.70	151.90	4875.90	-12.16	-6.40	5.51	13.74	207.75	6.26
4909.00	9.20	159.30	4907.51	-16.69	-4.36	10.32	17.25	194.63	3.92
4940.00	9.30	154.90	4938.11	-21.28	-2.42	15.12	21.41	186.48	2.30
4972.00	9.80	141.50	4969.67	-25.75	.38	20.35	25.75	179.16	7.10
5004.00	10.30	130.80	5001.18	-29.75	4.24	25.89	30.05	171.89	6.03
5035.00	10.40	128.70	5031.68	-33.31	8.52	31.34	34.38	165.65	1.26
5067.00	10.40	128.00	5063.15	-36.89	13.05	36.97	39.13	160.52	.39
5098.00	10.50	131.80	5093.64	-40.50	17.36	42.48	44.06	156.80	2.25
5130.00	11.00	140.40	5125.08	-44.80	21.48	48.41	49.68	154.38	5.25
5161.00	11.90	144.40	5155.46	-49.67	25.23	54.56	55.71	153.08	3.87
5193.00	12.50	142.50	5186.74	-55.10	29.25	61.31	62.39	152.04	2.26
5225.00	12.90	141.10	5217.95	-60.63	33.61	68.35	69.32	151.00	1.58
5256.00	14.20	140.30	5248.09	-66.25	38.21	75.61	76.48	150.03	4.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5288.00	15.10	138.40	5279.05	-72.39	43.48	83.70	84.44	149.01	3.19
5319.00	16.40	137.50	5308.89	-78.63	49.12	92.10	92.71	148.01	4.27
5351.00	17.90	137.40	5339.46	-85.58	55.50	101.51	102.00	147.04	4.69
5382.00	18.60	137.10	5368.90	-92.71	62.09	111.19	111.58	146.19	2.28
5414.00	18.60	136.90	5399.23	-100.18	69.05	121.37	121.67	145.42	.20
5509.00	18.60	137.00	5489.27	-122.32	89.74	151.58	151.71	143.74	.03
5604.00	17.90	142.50	5579.50	-144.98	108.96	181.28	181.36	143.07	1.96
5698.00	17.90	143.20	5668.95	-168.01	126.41	210.17	210.25	143.04	.23
5730.00	18.00	143.20	5699.39	-175.91	132.31	220.02	220.12	143.05	.31
5761.00	17.40	142.30	5728.92	-183.41	138.02	229.45	229.54	143.04	2.13
5824.00	16.00	137.90	5789.27	-197.31	149.60	247.53	247.61	142.83	2.99
5888.00	15.20	136.80	5850.91	-209.97	161.26	264.70	264.75	142.48	1.33
5951.00	15.10	135.80	5911.72	-221.87	172.63	281.10	281.12	142.11	.44
6014.00	15.10	135.90	5972.54	-233.65	184.06	297.43	297.44	141.77	.04
6077.00	15.00	135.90	6033.38	-245.40	195.45	313.72	313.72	141.46	.16
6140.00	14.80	140.20	6094.27	-257.43	206.27	329.88	329.88	141.30	1.78
6205.00	14.20	142.20	6157.20	-270.11	216.47	346.15	346.15	141.29	1.20
6268.00	12.60	145.40	6218.48	-281.87	225.11	360.73	360.73	141.39	2.80
6332.00	11.30	144.30	6281.09	-292.71	232.73	373.96	373.96	141.51	2.06
6395.00	9.90	138.20	6343.02	-301.76	239.95	385.53	385.53	141.51	2.85
6458.00	7.80	122.60	6405.27	-308.11	247.16	394.99	394.99	141.26	5.03
6521.00	4.10	130.50	6467.92	-311.87	252.48	401.25	401.26	141.01	6.00
6584.00	3.30	150.20	6530.79	-314.91	255.09	405.25	405.26	140.99	2.37
6648.00	2.20	147.60	6594.72	-317.54	256.66	408.30	408.30	141.05	1.73
6711.00	1.20	147.00	6657.69	-319.12	257.67	410.15	410.16	141.08	1.59
6774.00	1.10	150.10	6720.68	-320.20	258.33	411.41	411.41	141.10	.19
6837.00	1.10	150.20	6783.67	-321.25	258.93	412.60	412.61	141.13	.00
6900.00	1.10	147.60	6846.65	-322.28	259.56	413.80	413.81	141.15	.08
6963.00	.40	137.30	6909.65	-322.95	260.03	414.62	414.63	141.16	1.13
7026.00	.70	355.80	6972.65	-322.73	260.15	414.52	414.53	141.13	1.66
7090.00	.80	347.60	7036.64	-321.90	260.03	413.80	413.81	141.07	.23
7153.00	.60	344.40	7099.64	-321.16	259.84	413.10	413.11	141.02	.32
7216.00	.40	337.50	7162.63	-320.64	259.67	412.59	412.60	141.00	.33
7279.00	.30	331.50	7225.63	-320.29	259.51	412.21	412.22	140.98	.17
7342.00	.20	325.70	7288.63	-320.05	259.37	411.94	411.95	140.98	.16
7407.00	.30	313.70	7353.63	-319.84	259.18	411.66	411.67	140.98	.17
7437.00	.30	318.80	7383.63	-319.73	259.07	411.50	411.51	140.98	.09
Last Nevis MWD Surveys									
7453.00	.30	311.60	7399.63	-319.67	259.01	411.42	411.43	140.98	.24
Projectionpn to TD									
7500.00	.30	311.60	7446.63	-319.51	258.83	411.18	411.19	140.99	.00



Job Number: 1010XXX

Company: Sheridan Production Company

Lease/Well: NVANU 19

Location: Lea county

Rig Name:

RKB:

G.L. or M.S.L.: GL 4048'

State/Country: New Mexico USA

Declination: 7.73270

Grid: -0.40

File name: C:\101027-3\NVAN4.SVY

Date/Time: 04-Jun-10 / 07:23

Curve Name: NVANU 19 Surveys

NVANU 19 Surveys

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 141.39
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
Gyro Tie In point									
4623.00	.06	176.16	4622.89	1.11	-19.32	-12.92	19.35	273.29	.00
First Nevis MWD Surveys									
4656.00	.10	73.70	4655.89	1.10	-19.29	-12.90	19.32	273.27	.39
4688.00	1.50	135.20	4687.89	.81	-18.97	-12.47	18.99	272.45	4.55
4719.00	3.20	134.60	4718.86	-.08	-18.07	-11.21	18.07	269.73	5.48
4751.00	4.90	130.40	4750.78	-1.60	-16.39	-8.98	16.47	264.43	5.39
4783.00	5.80	128.90	4782.64	-3.50	-14.09	-6.06	14.52	256.06	2.85
4814.00	6.50	131.60	4813.46	-5.65	-11.56	-2.80	12.87	243.97	2.44
4846.00	7.70	140.20	4845.21	-8.50	-8.83	1.13	12.26	226.11	5.00
4877.00	8.70	151.90	4875.90	-12.16	-6.40	5.51	13.74	207.75	6.26
4909.00	9.20	159.30	4907.51	-16.69	-4.36	10.32	17.25	194.63	3.92
4940.00	9.30	154.90	4938.11	-21.28	-2.42	15.12	21.41	186.48	2.30
4972.00	9.80	141.50	4969.67	-25.75	.38	20.35	25.75	179.16	7.10
5004.00	10.30	130.80	5001.18	-29.75	4.24	25.89	30.05	171.89	6.03
5035.00	10.40	128.70	5031.68	-33.31	8.52	31.34	34.38	165.65	1.26
5067.00	10.40	128.00	5063.15	-36.89	13.05	36.97	39.13	160.52	.39
5098.00	10.50	131.80	5093.64	-40.50	17.36	42.48	44.06	156.80	2.25
5130.00	11.00	140.40	5125.08	-44.80	21.48	48.41	49.68	154.38	5.25
5161.00	11.90	144.40	5155.46	-49.67	25.23	54.56	55.71	153.08	3.87
5193.00	12.50	142.50	5186.74	-55.10	29.25	61.31	62.39	152.04	2.26
5225.00	12.90	141.10	5217.95	-60.63	33.61	68.35	69.32	151.00	1.58
5256.00	14.20	140.30	5248.09	-66.25	38.21	75.61	76.48	150.03	4.24

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5288.00	15.10	138.40	5279.05	-72.39	43.48	83.70	84.44	149.01	3.19
5319.00	16.40	137.50	5308.89	-78.63	49.12	92.10	92.71	148.01	4.27
5351.00	17.90	137.40	5339.46	-85.58	55.50	101.51	102.00	147.04	4.69
5382.00	18.60	137.10	5368.90	-92.71	62.09	111.19	111.58	146.19	2.28
5414.00	18.60	136.90	5399.23	-100.18	69.05	121.37	121.67	145.42	.20
5509.00	18.60	137.00	5489.27	-122.32	89.74	151.58	151.71	143.74	.03
5604.00	17.90	142.50	5579.50	-144.98	108.96	181.28	181.36	143.07	1.96
5698.00	17.90	143.20	5668.95	-168.01	126.41	210.17	210.25	143.04	.23
5730.00	18.00	143.20	5699.39	-175.91	132.31	220.02	220.12	143.05	.31
5761.00	17.40	142.30	5728.92	-183.41	138.02	229.45	229.54	143.04	2.13
5824.00	16.00	137.90	5789.27	-197.31	149.60	247.53	247.61	142.83	2.99
5888.00	15.20	136.80	5850.91	-209.97	161.26	264.70	264.75	142.48	1.33
5951.00	15.10	135.80	5911.72	-221.87	172.63	281.10	281.12	142.11	.44
6014.00	15.10	135.90	5972.54	-233.65	184.06	297.43	297.44	141.77	.04
6077.00	15.00	135.90	6033.38	-245.40	195.45	313.72	313.72	141.46	.16
6140.00	14.80	140.20	6094.27	-257.43	206.27	329.88	329.88	141.30	1.78
6205.00	14.20	142.20	6157.20	-270.11	216.47	346.15	346.15	141.29	1.20
6268.00	12.60	145.40	6218.48	-281.87	225.11	360.73	360.73	141.39	2.80
6332.00	11.30	144.30	6281.09	-292.71	232.73	373.96	373.96	141.51	2.06
6395.00	9.90	138.20	6343.02	-301.76	239.95	385.53	385.53	141.51	2.85
6458.00	7.80	122.60	6405.27	-308.11	247.16	394.99	394.99	141.26	5.03
6521.00	4.10	130.50	6467.92	-311.87	252.48	401.25	401.26	141.01	6.00
6584.00	3.30	150.20	6530.79	-314.91	255.09	405.25	405.26	140.99	2.37
6648.00	2.20	147.60	6594.72	-317.54	256.66	408.30	408.30	141.05	1.73
6711.00	1.20	147.00	6657.69	-319.12	257.67	410.15	410.16	141.08	1.59
6774.00	1.10	150.10	6720.68	-320.20	258.33	411.41	411.41	141.10	.19
6837.00	1.10	150.20	6783.67	-321.25	258.93	412.60	412.61	141.13	.00
6900.00	1.10	147.60	6846.65	-322.28	259.56	413.80	413.81	141.15	.08
6963.00	.40	137.30	6909.65	-322.95	260.03	414.62	414.63	141.16	1.13
7026.00	.70	355.80	6972.65	-322.73	260.15	414.52	414.53	141.13	1.66
7090.00	.80	347.60	7036.64	-321.90	260.03	413.80	413.81	141.07	.23
7153.00	.60	344.40	7099.64	-321.16	259.84	413.10	413.11	141.02	.32
7216.00	.40	337.50	7162.63	-320.64	259.67	412.59	412.60	141.00	.33
7279.00	.30	331.50	7225.63	-320.29	259.51	412.21	412.22	140.98	.17
7342.00	.20	325.70	7288.63	-320.05	259.37	411.94	411.95	140.98	.16
7407.00	.30	313.70	7353.63	-319.84	259.18	411.66	411.67	140.98	.17
7437.00	.30	318.80	7383.63	-319.73	259.07	411.50	411.51	140.98	.09
Last Nevis MWD Surveys									
7453.00	.30	311.60	7399.63	-319.67	259.01	411.42	411.43	140.98	.24
Projection to TD									
7500.00	.30	311.60	7446.63	-319.51	258.83	411.18	411.19	140.99	.00