

OPERATOR
WELL/LEASE
COUNTY

Cimarex Energy Company
Caudill South 21 Fee 2H
Lea, New Mexico

075-0047

STATE OF NEW MEXICO
DEVIATION REPORT

255	0.75
722	1.00
1,304	1.00
1,703	1.00
1,798	1.00
2,189	1.00
2,904	1.00
3,501	1.00
3,819	1.00
4,300	1.00
4,638	1.00
4,867	1.00
5,561	0.50
6,080	1.00
6,538	1.00
6,941	1.00
7,280	1.50
7,550	1.00
7,761	0.00
7,954	1.00
8,163	0.75
8,461	1.00
8,616	1.00
8,903	1.00
9,101	1.00
9,314	2.00
9,456	2.75
9,602	3.00
9,886	1.00
10,155	3.00
10,596	2.50

SUR: L-21-15s-36e, 2000/S & 940/W
BHL: E-21-15s-36e, 3621/S & 945/W
API #30-025-37925



BY: Steve Moore

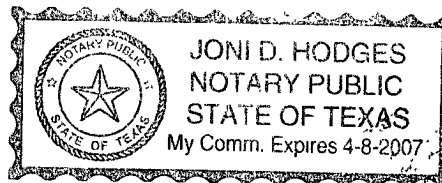
STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Moore on behalf of Patterson-UTL Drilling Company LP, LLLP.

November 10, 2006, by Steve

Joni D. Hodges
Notary Public for Midland County, Texas
My Commission Expires: 4/08/07



Results of Directional Survey

API number:	30-025-37925		
OGRID:		Operator:	CIMAREX ENERGY CO OF COLORADO
		Property:	CAUDILL SOUTH 21 FEE # 2

surface	ULSTR:	L	21	T	15S	R	36E
			2000	FSL	940	FWL	

BH Loc	ULSTR:	E	21	T	15S	R	36E
			3621	FSL	945	FWL	

	MD	N/S	E/W	VD
	10650	227.16	113.80	10615.55
TOP PERFS/OH	10654	230.57	113.49	10617.60
	10700	269.83	109.87	10641.18
	11950	1511.29	13.37	10598.20
BOT PERFS/OH	12060	1620.52	5.14	10588.28
	11996	1556.97	9.93	10594.05

NEXT TO LAST	11950	1511.29	13.37	10598.20
LAST READING	11996	1556.97	9.93	10594.05
TD	12060	1620.52	5.14	10588.28

Surface Location	2000	FS	940	FW
Projected BHL	3621	FS	945	FW
Location of				
Top Perfs/OH	2231	FS	1053	FW
Bottom Perfs/OH	3621	FS	945	FW

SUMMARY of Subsurface Locations

Surface Location	L-21-15S-36E	2000	FS	940	FW	Vert. Depth
Top Perfs/OH	L-21-15S-36E	2231	FS	1053	FW	10617.60
Bottom Perfs/OH	E-21-15S-36E	3621	FS	945	FW	10588.28
Projected TD	E-21-15S-36E	3621	FS	945	FW	10588.28

SUR: L-21-15s-36e, 2000/S & 940/W
 BHL: E-21-15s-36e, 3621/S & 945/W
 API #30-025-37925



Project Lea County (NAD 83)
 Site Caudill South 21 Fee #2H
 Well Caudill South 21 Fee #2H
 Wellbore Lateral #1
 Plan Plan #3 (Caudill South 21 Fee #2H/Lateral #1)



PROJECT DETAILS Lea County (NAD 83)

Geodetic System US State Plane 1983
 Datum North American Datum 1983
 Ellipsoid GRS 1980
 Zone New Mexico Eastern Zone
 System Datum Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	11211 00	94 00	355 00	10626 82	775 04	65 91	0 00	0 00	775 01	
2	11375 00	90 00	355 60	10621 09	938 35	52 49	2 47	171 46	938 33	
3	11575 00	90 00	355 60	10621 09	1137 76	37 14	0 00	0 00	1137 75	
4	11650 00	91 98	355 62	10619 80	1212 53	31 40	2 64	0 58	1212 52	
5	12068 98	91 80	355 62	10605 98	1630 06	-0 59	0 04	-178 88	1630 06	PBHL#3(Fee#2H)

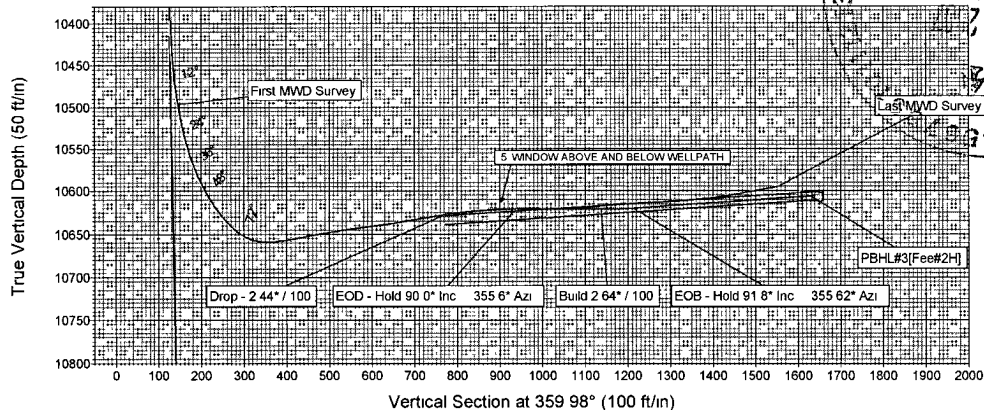
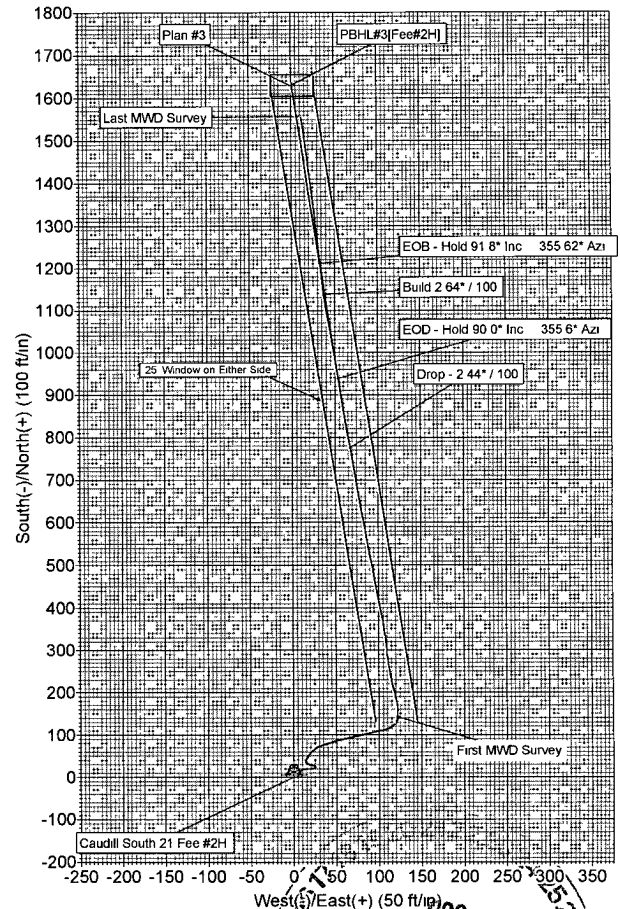
ANNOTATIONS

TVD	MD	Annotation
10626 82	11211 00	Drop - 2 44" / 100
10621 09	11375 00	EOD - Hold 90 0° Inc 355 6° Azi
10621 09	11575 00	Build 2 64" / 100
10619 80	11650 00	EOB - Hold 91 8° Inc 355 62° Azi



Azimuths to Grid North
 True North -0 55°
 Magnetic North 7 56°

Magnetic Field
 Strength 49665 nT
 Dip Angle 61 09°
 Date 6/6/2006
 Model IGRF200510



Plan Plan #3 (Caudill South 21 Fee #2H/Lateral #1)
 Created By L.D. Burton Date 10/09/2006



Cimarex Energy Co., Inc.

Lea County (NAD 83)

Caudill South 21 Fee #2H

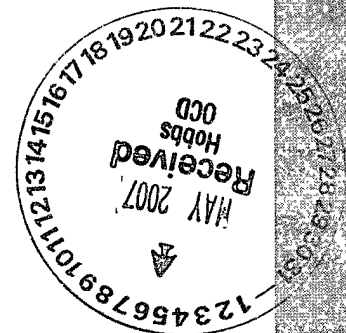
Caudill South 21 Fee #2H

Lateral #1

Survey: MWD Survey #1

Standard Survey Report

26 October, 2006





Black Viper Energy
Survey Report



Company:	Cimarex Energy Co, Inc	Local Co-ordinate Reference:	Well Caudill South 21 Fee #2H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0 00ft (Original Well Elev)
Site:	Caudill South 21 Fee #2H	MD Reference:	WELL @ 0 00ft (Original Well Elev)
Well:	Caudill South 21 Fee #2H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003 14 10 Server DB

Project:	Lea County (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Caudill South 21 Fee #2H			
Site Position:		Northing:	729,498 40ft	Latitude:	33° 0' 4.433 N
From:	Map	Easting:	853,664 79ft	Longitude:	103° 18' 52.520 W
Position Uncertainty:	0 00 ft	Slot Radius:	"	Grid Convergence:	0 55 °

Well	Caudill South 21 Fee #2H					
Well Position	+N/-S	0 00 ft	Northing:	729,498 40 ft	Latitude:	33° 0' 4 433 N
	+E/-W	0 00 ft	Easting:	853,664 79 ft	Longitude:	103° 18' 52 520 W
Position Uncertainty		0 00 ft	Wellhead Elevation:	ft	Ground Level:	0 00 ft

Wellbore		Lateral : #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/6/2006	8 12	61 09	49,666

Design	Lateral #1				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	10,400 00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0 00	0 00	0 00	0 00	

Survey Program		Date	10/26/2006		
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
100 00	10,400 00	Gyro Survey #1 (OH)	GM	Gyro Multi-Shot	
10,400 00	11,996 00	MWD Survey #1 (Lateral #1)	MWD	Standard MWD	

Survey	Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
	Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate
	(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)
	10,400 00	1 66	25 62	10,396 35	126 72	118 71	126 72	0 00	0 00	0 00
	10,502 00	17 99	2 82	10,496 53	143 91	120 13	143 91	16 15	16 01	-22 35
First MWD Survey										
	10,520 00	20 90	2 50	10,513 50	149 89	120 41	149 89	16 15	16 14	-1 79
	10,530 00	23 30	1 90	10,522 76	153 65	120 55	153 65	24 11	24 00	-6 00
	10,540 00	25 90	359 60	10,531 85	157 81	120 60	157 81	27 70	26 00	-23 00
	10,551 00	28 30	357 10	10,541 65	162 82	120 45	162 82	24 15	21 82	-22 73
	10,561 00	31 30	355 90	10,550 32	167 78	120 15	167 78	30 59	30 00	-12 00
	10,571 00	33 80	355 20	10,558 75	173 14	119 73	173 14	25 28	25 00	-7 00
	10,582 00	36 40	355 00	10,567 75	179 44	119 19	179 44	23 66	23 64	-1 82
	10,592 00	39 20	354 30	10,575 65	185 55	118 62	185 55	28 33	28 00	-7 00
	10,602 00	42 00	353 90	10,583 24	192 02	117 95	192 02	28 12	28 00	-4 00



Black Viper Energy Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Caudill, South 21 Fee #2H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0 00ft (Original Well Elev)
Site:	Caudill, South 21 Fee #2H	MD Reference:	WELL @ 0 00ft (Original Well Elev)
Well:	Caudill, South 21 Fee #2H	North Reference:	Grd
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003 14 10 Server DB

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
10,614 00	44 30	353 20	10,592 00	200 17	117 02	200 17	19 58	19 17	-5 83	
10,624 00	47 20	353 00	10,598 98	207 28	116 16	207 28	29 04	29 00	-2 00	
10,634 00	49 80	353 00	10,605 60	214 72	115 25	214 72	26 00	26 00	0 00	
10,646 00	52 40	353 50	10,613 14	223 99	114 15	223 99	21 91	21 67	4 17	
10,656 00	55 20	354 50	10,619 04	232 01	113 31	232 01	29 14	28 00	10 00	
10,666 00	57 60	355 00	10,624 57	240 31	112 55	240 31	24 36	24 00	5 00	
10,677 00	59 40	355 00	10,630 32	249 65	111 73	249 65	16 36	16 36	0 00	
10,687 00	61 50	354 70	10,635 25	258 31	110 95	258 31	21 16	21 00	-3 00	
10,697 00	63 60	354 60	10,639 86	267 15	110 12	267 15	21 02	21 00	-1 00	
10,709 00	66 90	355 20	10,644 89	278 00	109 16	278 00	27 87	27 50	5 00	
10,719 00	70 40	356 90	10,648 53	287 29	108 52	287 29	38 41	35 00	17 00	
10,729 00	74 00	357 60	10,651 58	296 80	108 06	296 80	36 61	36 00	7 00	
10,740 00	77 70	357 50	10,654 27	307 46	107 60	307 46	33 65	33 64	-0 91	
10,771 00	87 60	355 90	10,658 23	338 11	105 83	338 11	32 34	31 94	-5 16	
10,802 00	92 50	355 30	10,658 21	369 01	103 46	369 01	15 92	15 81	-1 94	
10,834 00	94 60	354 10	10,656 22	400 81	100 51	400 81	7 55	6 56	-3 75	
10,866 00	95 80	354 10	10,653 32	432 51	97 23	432 51	3 75	3 75	0 00	
10,898 00	95 80	354 80	10,650 09	464 20	94 15	464 20	2 18	0 00	2 19	
10,929 00	94 60	355 20	10,647 28	494 95	91 46	494 95	4 08	-3 87	1 29	
10,960 00	94 00	354 40	10,644 96	525 73	88 66	525 73	3 22	-1 94	-2 58	
11,023 00	94 10	354 50	10,640 51	588 28	82 58	588 28	0 22	0 16	0 16	
11,054 00	93 40	354 80	10,638 48	619 08	79 70	619 08	2 46	-2 26	0 97	
11,117 00	94 60	354 90	10,634 08	681 67	74 06	681 67	1 91	1 90	0 16	
11,149 00	94 60	355 00	10,631 52	713 45	71 25	713 45	0 31	0 00	0 31	
11,180 00	94 40	355 10	10,629 09	744 24	68 58	744 24	0 72	-0 65	0 32	
11,211 00	94 00	355 00	10,626 82	775 04	65 91	775 04	1 33	-1 29	-0 32	
11,243 00	94 00	354 90	10,624 58	806 83	63 10	806 83	0 31	0 00	-0 31	
11,274 00	93 10	355 20	10,622 66	837 66	60 43	837 66	3 06	-2 90	0 97	
11,306 00	91 30	355 30	10,621 44	869 52	57 79	869 52	5 63	-5 63	0 31	
11,337 00	90 30	355 60	10,621 00	900 42	55 33	900 42	3 37	-3 23	0 97	
11,368 00	89 90	355 50	10,620 95	931 33	52 92	931 33	1 33	-1 29	-0 32	
11,400 00	90 20	355 40	10,620 92	963 23	50 38	963 23	0 99	0 94	-0 31	
11,431 00	90 50	355 40	10,620 73	994 13	47 90	994 13	0 97	0 97	0 00	
11,462 00	91 10	355 30	10,620 30	1,025 02	45 38	1,025 02	1 96	1 94	-0 32	
11,494 00	91 10	354 70	10,619 68	1,056 90	42 60	1,056 90	1 87	0 00	-1 88	
11,525 00	91 50	354 30	10,618 98	1,087 75	39 63	1,087 75	1 82	1 29	-1 29	
11,557 00	93 20	355 40	10,617 67	1,119 59	36 76	1,119 59	6 33	5 31	3 44	
11,588 00	92 70	357 30	10,616 07	1,150 48	34 78	1,150 48	6 33	-1 61	6 13	
11,619 00	91 50	357 30	10,614 94	1,181 43	33 33	1,181 43	3 87	-3 87	0 00	
11,650 00	91 50	356 80	10,614 13	1,212 37	31 73	1,212 37	1 61	0 00	-1 61	
11,682 00	91 40	356 60	10,613 32	1,244 31	29 89	1,244 31	0 70	-0 31	-0 63	
11,713 00	91 40	356 50	10,612 56	1,275 25	28 02	1,275 25	0 32	0 00	-0 32	
11,743 00	91 60	356 20	10,611 77	1,305 17	26 11	1,305 17	1 20	0 67	-1 00	
11,774 00	92 80	357 00	10,610 58	1,336 10	24 28	1,336 10	4 65	3 87	2 58	
11,807 00	92 80	357 10	10,608 97	1,369 01	22 58	1,369 01	0 30	0 00	0 30	
11,838 00	93 30	356 20	10,607 32	1,399 92	20 77	1,399 92	3 32	1 61	-2 90	
11,870 00	94 60	356 10	10,605 12	1,431 77	18 63	1,431 77	4 07	4 06	-0 31	
11,901 00	94 80	356 70	10,602 58	1,462 60	16 69	1,462 60	2 03	0 65	1 94	
11,933 00	95 30	355 80	10,599 76	1,494 41	14 60	1,494 41	3 21	1 56	-2 81	
11,964 00	95 20	355 90	10,596 92	1,525 20	12 37	1,525 20	0 46	-0 32	0 32	
11,996 00	95 10	355 30	10,594 05	1,556 97	9 93	1,556 97	1 89	-0 31	-1 88	
Last MWD Survey										



Black Viper Energy
Survey Report



Company:	Cimarex Energy Co, Inc	Local Co-ordinate Reference:	Well Caudill South 21 Fee #2H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	Caudill South 21 Fee #2H	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Well:	Caudill South 21 Fee #2H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	EDM 2003 14 1 0' Server DB

Targets										
Target Name	hit/miss	target Dip	Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	
Shape		(°)		(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude Longitude
PBHL#2[Fee2H]		2 13		175 70	10,594 24	1,630 00	0 00	731,128 40	853,664 79	33° 0' 20 559 N 103° 18' 52 334 W
- survey misses by 73 70ft at 119980ft MD 10594.05 TVD, 155697 N, 9 93 E										
- Rectangle (sides W50 00 H50 00 D5 00)										
PBHL#1[Fee2H]		-2 13		0 00	10,602 38	1,630 00	0 00	731,128 40	853,664 79	33° 0' 20 559 N 103° 18' 52 334 W
- survey misses by 74 17ft at 11996 00ft MD (10594 05 TVD, 1556 97 N, 9 93 E)										
- Rectangle (sides W50 00 H50 00 D5 00)										
PBHL#3[Fee#2H]		2 13		0 00	10,605 98	1,630 06	-0 59	731,128 46	853,664 20	33° 0' 20 560 N 103° 18' 52 341 W
- survey misses by 74 80ft at 11996 00ft MD (10594 05 TVD, 1556 97 N, 9 93 E)										
- Rectangle (sides W50 00 H50 00 D5 00)										

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
10,502 00	10,496 53	143 91	120 13	First MWD Survey
11,996 00	10,594 05	1,556 97	9 93	Last MWD Survey

Checked By: _____ Approved By: _____ Date: _____

Caudill South 21 Fee #2H Plan #3 Report 10-26-06.txt
Cimarex Energy Co., Inc.
Caudill South 21 Fee #2H - MWD Survey #1

Lea County (NAD 83)
Caudill South 21 Fee #2H

Measured Dogleg Depth Rate (ft) (°/100ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)
10400.00	1.660	25.620	10396.35	126.72 N	118.71 E	126.72
0.00						
10450.00	9.607	4.808	10446.07	131.54 N	119.37 E	131.54
16.15						
10500.00	17.672	2.865	10494.62	143.29 N	120.10 E	143.29
16.15						
10550.00	28.080	357.311	10540.77	162.35 N	120.48 E	162.35
21.24						
10600.00	41.440	353.976	10581.75	190.70 N	118.09 E	190.70
26.98						
10650.00	53.519	353.909	10615.55	227.16 N	113.80 E	227.16
24.16						
10700.00	64.425	354.753	10641.18	269.83 N	109.87 E	269.83
21.86						
10750.00	80.893	356.975	10656.13	317.27 N	107.13 E	317.27
33.21						
10800.00	92.184	355.339	10658.29	367.02 N	103.62 E	367.02
22.82						
10850.00	95.200	354.100	10654.86	416.67 N	98.87 E	416.67
6.52						
10900.00	95.723	354.826	10649.89	466.18 N	93.97 E	466.18
1.78						
10950.00	94.194	354.658	10645.67	515.81 N	89.61 E	515.81
3.08						
11000.00	94.063	354.463	10642.14	565.45 N	84.79 E	565.45
0.47						
11050.00	93.490	354.761	10638.72	615.11 N	80.06 E	615.11
1.29						
11100.00	94.276	354.873	10635.40	664.79 N	75.57 E	664.79
1.59						
11150.00	94.594	355.003	10631.44	714.44 N	71.16 E	714.44
0.69						
11200.00	94.142	355.035	10627.60	764.11 N	66.87 E	764.11
0.91						
11250.00	93.797	354.968	10624.11	813.79 N	62.49 E	813.79
0.70						
11300.00	91.638	355.281	10621.59	863.55 N	58.28 E	863.55
4.36						
11350.00	90.132	355.558	10620.95	913.38 N	54.32 E	913.38
3.06						
11400.00	90.200	355.400	10620.92	963.23 N	50.38 E	963.23
0.34						
11450.00	90.868	355.339	10620.50	1013.07 N	46.36 E	1013.07
1.34						
11500.00	91.177	354.623	10619.57	1062.87 N	42.04 E	1062.87
1.56						
11550.00	92.828	355.159	10618.04	1112.62 N	37.33 E	1112.62
3.47						
11600.00	92.235	357.300	10615.56	1162.46 N	34.22 E	1162.46
4.44						

Caudill South 21 Fee #2H Plan #3 Report 10-26-06.txt

11650.00	91.500	356.800	10614.13	1212.37 N	31.73 E	1212.37
1.78						
11700.00	91.400	356.542	10612.88	1262.27 N	28.81 E	1262.27
0.55						
11750.00	91.871	356.381	10611.56	1312.16 N	25.66 E	1312.16
1.00						
11800.00	92.800	357.079	10609.31	1362.03 N	22.94 E	1362.03
2.32						
11850.00	93.788	356.163	10606.58	1411.87 N	19.97 E	1411.87
2.69						
11900.00	94.794	356.681	10602.66	1461.61 N	16.75 E	1461.61
2.26						
11950.00	95.245	355.855	10598.20	1511.29 N	13.37 E	1511.29
1.88						
11996.00	95.100	355.300	10594.05	1556.97 N	9.93 E	1556.97
1.24						

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to WELL. Northings and Eastings are relative to well.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from slot and calculated along an Azimuth of 0.000° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.
Central meridian is -104.333°.
Grid Convergence at Surface is 0.555°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 11996.00ft., the Bottom Hole Displacement is 1557.01ft., in the Direction of 0.000° (Grid).