

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

CONFIDENTIALITY REQUESTED
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007

1a Type of Well <input checked="" type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other		5 Lease Serial No. NM-19423, NM-94839	
b. Type of Completion <input type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other _____		6 If Indian, Allottee or Tribe Name	
2 Name of Operator Cimarex Energy Co. of Colorado		7 Unit or CA Agreement Name and No Pending	
3. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701		8 Lease Name and Well No Cottonwood Draw 22 Federal Com No. 5	
3a. Phone No (include area code) 432-571-7800		9 API Well No 30-015-37431	
4. Location of Well (Report Location clearly and in accordance with Federal requirements)* At surface 530 FNL & 210 FEL At top prod interval reported below 759 FNL & 246 FEL At total depth 344 FSL & 344 FEL		10 Field and Pool, or Exploratory Bone Spring Wildcat	
14. Date Spudded 12.16.09		15 Date T.D Reached 01.10.10	
16 Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod		17 Elevations (DF, RKB, RT, GL)* 3289' GL	

18 Total Depth MD 10340' TVD 6081'	19 Plug Back TD MD 10249' TVD 6077'	20 Depth Bridge Plug Set
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) PEX-HRLA-HNGS		22 Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit report) Directional Survey <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit copy)

23 Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/Grade	Wt (#/ft)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No of Skis & Type of Cement	Slurry Vol (BBL)	Cement Top*	Amount Pulled
12 1/4"	9 5/8" K-55	36	0'	445'		300 sx C		0'	
8 3/4"	7" L-80	26	0'	5845'		1200 sx POZC/C		0'	
8 3/4"	2 7/8" U	2.18	5845'	6602'					
6 1/2"	4 1/2" P-110	11.6	5675'	10340'		400 sx PVL		5,623'	

24 Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2 7/8"	5565'								
25 Producing Intervals					26 Perforation Record				
Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf Status			
A) Bone Spring	6154'	9901'	Please see attachment						
B)									
C)									
D)									

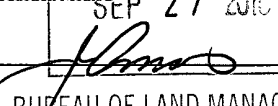
27 Acid, Fracture, Treatment, Cement Squeeze, etc.		Amount and Type of Material
Depth Interval		Please see attachment

RECEIVED
 SEP 20 2010
 NMOC D ARTESIA

28 Production - Interval A -									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity btu	Production Method
04.13.10	05.13.10	24	→	11	1259	778	53.2	0.995	Pumping
Choke Size	Tbg Press Flwg	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
wo	360	800	→				114,454	Producing	

ACCEPTED FOR RECORD

28. Production - Interval B -									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
			→						
Choke Size	Tbg Press Flwg	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
SI			→						

SEP 27 2010

 BUREAU OF LAND MANAGEMENT
 CARI SRAD FIELD OFFICE

* (See instructions and spaces for additional data on page 2)

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

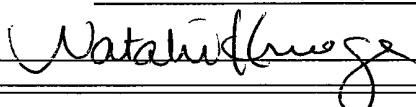
Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
				T. Salt	1032'
				B. Salt	1677'
				Delaware	1879'
				Cherry Canyon	2861'
				Brushy Canyon	3851'
				Bone Spring	5410'
				FBSS	6407'

32. Additional remarks (include plugging procedure):
04-06-10 Installed Baker P-18 114HP 2330V 30 amp submersible pump.

33. Indicate which items have been attached by placing a check in the appropriate boxes.

- Electrical/Mechanical Logs (1 full set req'd)
 Geologic Report
 DST Report
 Directional Survey
 Sundry Notice for plugging and cement verification
 Core Analysis
 Other: Stimulation Details, Deviation/well path

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Natalie Krueger Title Regulatory
 Signature  Date September 3, 2010

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

Acid, Fracture, Treatment, Cement Squeeze, etc. Attachment

Cottonwood Draw 22 Federal Com No. 5

22-25S-26E

Eddy County, NM

Stage	Perf Details	Amount and Type of Material Used
1	9899-9901 6 spf, 48 holes, 0.42	325,910 total gals, 6,000 gals of 15% HCL acid, 51,794 gals 20# Linear gel, 89,212 gals 20# XL Borate gel. Proppant pumped was 117,161# 100 Mesh & 161,316# 20/40 Versalite
2	9339-9551 6 spf, 60 holes, 0.37	361,764 total gals, 7,055 gals of 10% HCL acid, 65,271 gals 15# Linear gel, 112,151 gals 20# XL Borate gel. Proppant pumped was 122,319# 100 Mesh & 190,245# 20/40 Versalite
3	9024-9251 6 spf, 48 holes, 0.42	346,771 total gals. 162,137 gals of slick water, 112,897# 100 mesh, 220,750# of 20/40# Versalite
4	8644-8931 6 spf, 48 holes, 0.42	351,551 total gals. 166,682 gals of slick water, 112,274# 100 mesh, 225,454# of 20/40# Versalite
5	8224-8546 6 spf, 48 holes, 0.42	346,178 total gals. 179,678 gals of slick water, 107,673# 100 mesh, 174,193# of 20/40# Versalite
6	7794-8126 6 spf, 48 holes, 0.42	355,551 total gals. 171,999 gals of slick water, 118,502# 100 mesh, 211,325# of 20/40# Versalite
7	7327-7711 6 spf, 60 holes, 0.42	391,589 total gals. 163,093 gals of slick water, 97,005# 100 mesh, 245,414# of 20/40# Versalite
8	7024-7296 6 spf, 48 holes, 0.42	373,224 total gals. 192,970 gals of slick water, 132,806# 100 mesh, 241,395# of 20/40# Versalite
9	6594-6941 6 spf, 48 holes, 0.42	348,812 total gals. 172,916 gals of slick water, 106,516# 100 mesh, 206,146# of 20/40# Versalite
10	6154-6516 6 spf, 48 holes, 0.42	347,174 total gals. 174,739 gals of slick water, 109,530# 100 mesh, 241,812# of 20/40# Versalite

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

Form C-102
Revised October 15, 2009

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number 30-015-37431	Pool Code	Pool Name Bone Spring Wildcat
Property Code 37373	Property Name COTTONWOOD DRAW "22" FEDERAL COM	Well Number 5
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3332'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	22	25 S	26 E		530	NORTH	210	EAST	EDDY

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
P	22	25 S	26 E		344	SOUTH	344	EAST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No. NSL-6125
------------------------	-----------------	--------------------	-----------------------

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
Lot - N 32°07'15.96"
Long - W 104°16'21.67"
NMSPC- N 407797.195
E 560112.506
(NAD-83)

SHL & P. P.
530 FNL & 210 FEL

Top Per
759 FNL & 246 FEL

BHL
344 FSL & 344 FEL

NM-19423
NM-94839

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.

Zeno Farris 9/3/2010
Signature Date

Zeno Farris
Printed Name

SURVEYOR CERTIFICATION

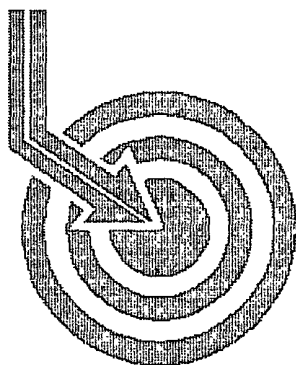
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

OCT 15 2009
Date Surveyed

GARY L. JONES
Signature & Seal of Professional Surveyor 7977

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



Scientific Drilling

CIMAREX ENERGY

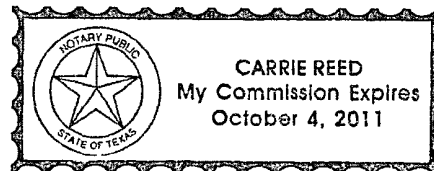
Field: Bone Spring Wildcat
Site: Eddy County, NM
Well: Cottonwood Draw 22 Federal Com #5H
Wellpath: VH - Job #32K0110001
Survey: 01/01/10

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

.....*Shastin*.....Company Representative

Notorized this date 28th of January, 2010.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: CIMAREX ENERGY	Date: 01/12/2010	Time: 09:38:58	Page: 1
Field: Bone Spring Wildcat	Co-ordinate(NE) Reference: Eddy County, NM, Grid North	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference: Well (0.00N,0.00E,185.63Azi)	SITE: 0.0	
Well: Cottonwood Draw 22 Federal Com	Section (VS) Reference: Survey Calculation Method:	Well: (0.00N,0.00E,185.63Azi)	
Wellpath: VH - Job #32K0110001		Minimum Curvature	
		Db: Sybase	

Survey: 01/01/10	Start Date: 01/01/2010	
KSRG 0'-5858'		
Company: Scientific Drilling Internatio	Engineer: Madrid w/Gray	
Tool: Keeper;Keeper Gyro	Tied-to: From Surface	

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	CIsD ft	CIsA deg
0.00	0.00	359.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.44	354.07	100.00	-0.38	0.38	-0.04	0.44	0.38	354.07
200.00	0.60	290.29	200.00	-0.88	0.95	-0.57	0.57	1.10	328.89
300.00	1.01	259.98	299.99	-0.78	0.97	-1.93	0.58	2.16	296.78
400.00	0.94	259.27	399.97	-0.31	0.67	-3.60	0.07	3.66	280.50
500.00	0.82	231.91	499.96	0.41	0.07	-4.97	0.43	4.97	270.85
600.00	0.91	219.07	599.95	1.57	-0.98	-6.04	0.21	6.12	260.74
700.00	1.09	218.85	699.93	3.03	-2.34	-7.13	0.18	7.51	251.83
800.00	1.01	200.13	799.92	4.68	-3.91	-8.03	0.35	8.93	244.05
900.00	1.12	165.91	899.90	6.45	-5.69	-8.10	0.64	9.90	234.93
1000.00	1.28	155.89	999.88	8.34	-7.65	-7.40	0.26	10.65	224.05
1100.00	1.94	124.14	1099.84	10.12	-9.62	-5.55	1.09	11.11	209.96
1200.00	3.11	112.28	1199.74	11.71	-11.60	-1.64	1.28	11.72	188.03
1300.00	3.42	117.60	1299.58	13.60	-14.01	3.52	0.43	14.45	165.91
1400.00	4.41	111.73	1399.35	15.78	-16.82	9.73	1.07	19.43	149.94
1500.00	5.05	108.50	1499.01	17.83	-19.64	17.48	0.69	26.29	138.33
1600.00	5.21	108.46	1598.60	19.82	-22.47	25.96	0.16	34.33	130.88
1700.00	4.92	108.88	1698.21	21.81	-25.30	34.32	0.29	42.64	126.39
1800.00	4.04	112.87	1797.91	23.83	-28.05	41.63	0.93	50.20	123.98
1900.00	3.22	118.47	1897.71	25.97	-30.76	47.34	0.89	56.46	123.01
2000.00	2.78	120.34	1997.57	28.07	-33.32	51.90	0.45	61.68	122.70
2100.00	2.46	122.28	2097.46	30.05	-35.70	55.81	0.33	66.25	122.60
2200.00	2.31	123.55	2197.38	31.95	-37.96	59.30	0.16	70.41	122.62
2300.00	2.11	126.66	2297.30	33.85	-40.17	62.46	0.23	74.26	122.75
2400.00	1.86	130.77	2397.24	35.73	-42.33	65.17	0.29	77.71	123.00
2500.00	1.66	141.16	2497.20	37.70	-44.52	67.30	0.38	80.69	123.48
2600.00	1.52	141.00	2597.16	39.68	-46.67	69.05	0.14	83.34	124.06
2700.00	1.57	137.88	2697.12	41.54	-48.72	70.80	0.10	85.94	124.53
2800.00	1.60	137.26	2797.08	43.39	-50.76	72.67	0.03	88.64	124.94
2900.00	1.37	135.37	2897.05	45.08	-52.64	74.45	0.24	91.18	125.26
3000.00	1.17	137.86	2997.03	46.53	-54.25	75.98	0.21	93.36	125.53
3100.00	1.03	143.60	3097.01	47.88	-55.73	77.20	0.18	95.21	125.82
3200.00	0.89	147.12	3196.99	49.16	-57.10	78.15	0.15	96.79	126.15
3300.00	0.75	155.89	3296.98	50.34	-58.35	78.84	0.19	98.09	126.51
3400.00	0.74	168.49	3396.97	51.52	-59.58	79.24	0.16	99.14	126.94
3500.00	0.73	182.82	3496.97	52.77	-60.85	79.33	0.18	99.98	127.49
3600.00	0.75	184.77	3596.96	54.07	-62.14	79.25	0.03	100.71	128.10
3700.00	0.86	194.79	3696.95	55.46	-63.52	79.00	0.18	101.37	128.80
3800.00	0.90	201.63	3796.94	56.96	-64.97	78.52	0.11	101.92	129.61
3900.00	0.93	204.24	3896.92	58.48	-66.44	77.90	0.05	102.39	130.46
4000.00	0.97	192.93	3996.91	60.09	-68.01	77.38	0.19	103.02	131.31
4100.00	0.86	179.95	4096.90	61.68	-69.58	77.19	0.23	103.92	132.03
4200.00	0.78	198.44	4196.89	63.09	-70.98	76.97	0.28	104.70	132.68
4300.00	0.91	205.86	4296.88	64.50	-72.34	76.41	0.17	105.22	133.43
4400.00	0.91	209.10	4396.86	65.97	-73.75	75.68	0.05	105.67	134.26
4500.00	0.90	209.01	4496.85	67.42	-75.13	74.91	0.01	106.10	135.08
4600.00	1.00	204.57	4596.84	68.96	-76.61	74.17	0.12	106.63	135.93
4700.00	1.14	213.78	4696.82	70.67	-78.23	73.25	0.22	107.17	136.88
4800.00	1.05	217.63	4796.80	72.32	-79.78	72.14	0.12	107.56	137.88



Scientific Drilling International Survey Report

Company: CIMAREX ENERGY	Date: 01/12/2010	Time: 09:38:58	Page: 2
Field: Bone Spring Wildcat	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Cottonwood Draw 22 Federal Com	Section (VS) Reference:	Well (0.00N,0.00E,185.63Azi)	
Wellpath: VH - Job #32K0110001	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

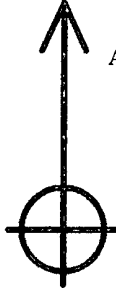
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	1.17	218.55	4896.78	73.95	-81.31	70.94	0.12	107.91	138.89
5000.00	1.24	222.17	4996.76	75.68	-82.91	69.58	0.10	108.24	139.99
5100.00	1.20	232.89	5096.74	77.26	-84.34	68.02	0.23	108.35	141.11
5200.00	1.35	237.40	5196.71	78.70	-85.61	66.19	0.18	108.21	142.29
5300.00	1.48	241.84	5296.68	80.15	-86.85	64.06	0.17	107.92	143.59
5400.00	1.20	246.76	5396.66	81.37	-87.87	61.96	0.30	107.52	144.81
5500.00	0.40	319.55	5496.65	81.64	-88.02	60.77	1.15	106.96	145.38
5600.00	0.62	322.17	5596.64	81.00	-87.33	60.21	0.22	106.08	145.41
5700.00	1.19	331.47	5696.63	79.75	-85.99	59.39	0.59	104.50	145.37
5800.00	1.51	336.86	5796.60	77.73	-83.87	58.37	0.34	102.18	145.16
5858.00	0.97	338.71	5854.59	76.63	-82.71	57.89	0.93	100.95	145.01



**Scientific
Drilling**

Field: Bone Spring Wildcat
Site: Eddy County, NM
Well: Cottonwood Draw 22 Federal Com #5
Path: VH - Job #32K0110001
Survey: 01/01/10

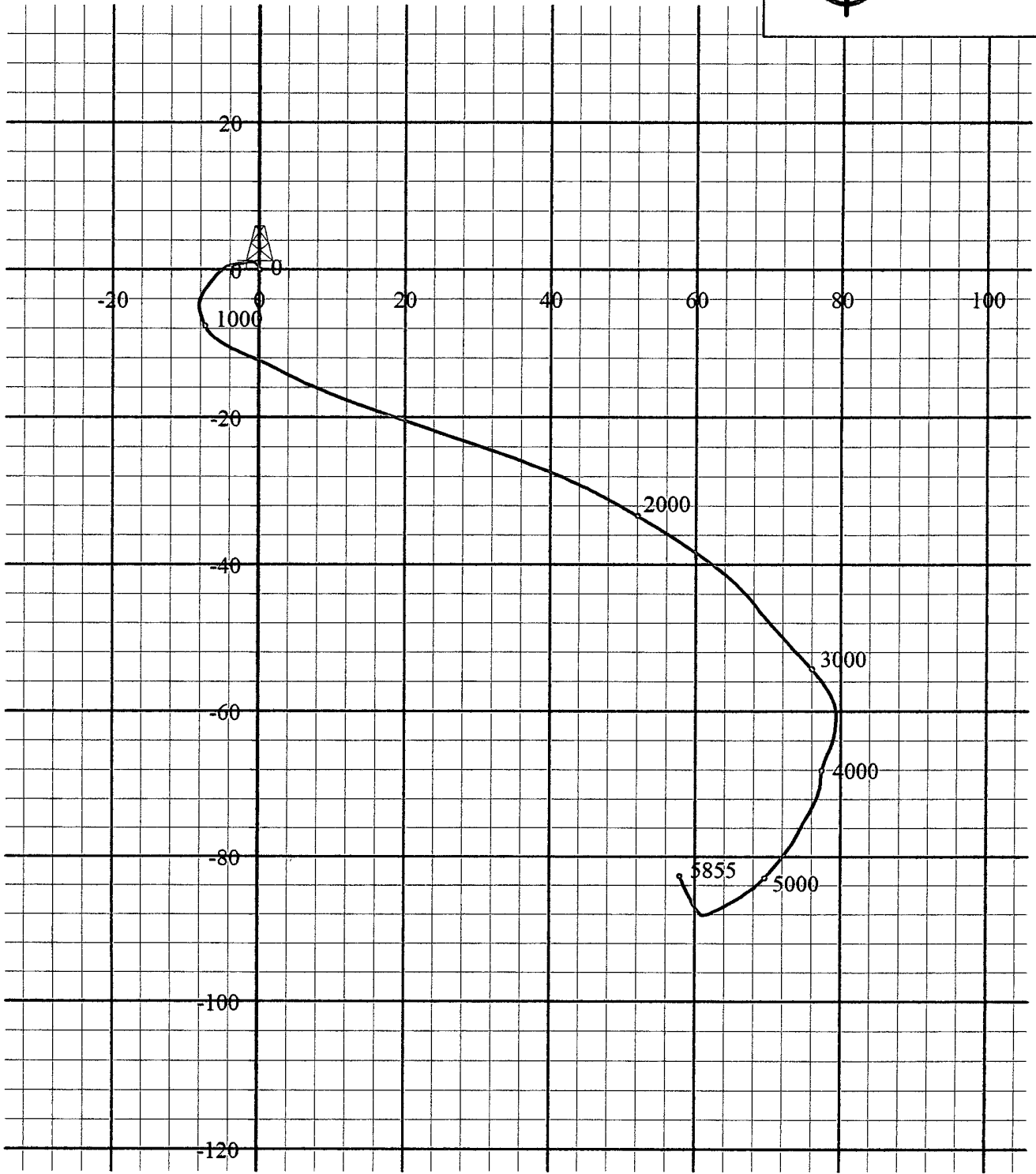
G/T/M



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 01/12/2010
Model: igrf2000

South(-)/North(+) [20ft/in]



West(-)/East(+) [20ft/in]



Cimarex Energy Co.

Eddy County (NM83E)

Sec 22 - T25S - R26

Cottonwood Draw 22 Fed #5

Wellbore #1

Survey: MWD Survey

Standard Survey Report

11 January, 2010



Cimarex Energy Co.

Project Eddy County (NM83E)
 Site Sec 22 - T25S - R26
 Well Cottonwood Draw 22 Fed #5
 Wellbore Wellbore #1
 Design Plan #3

WELL DETAILS: Cottonwood Draw 22 Fed #5



+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	407797.19	560112.51	32° 7' 15.956 N	104° 16' 21.672 W
			SHL: 530' FNL / 210' FEL		
			BHL: 330' FSL / 380' FEL		



Azimuths to Grid North
 Total Correction: 8.04°
 Magnetic Field
 Strength 48691.2nT
 Dip Angle 60.02°
 Date 2009/11/05
 Model: IGRF200510

WELLBORE TARGET DETAILS

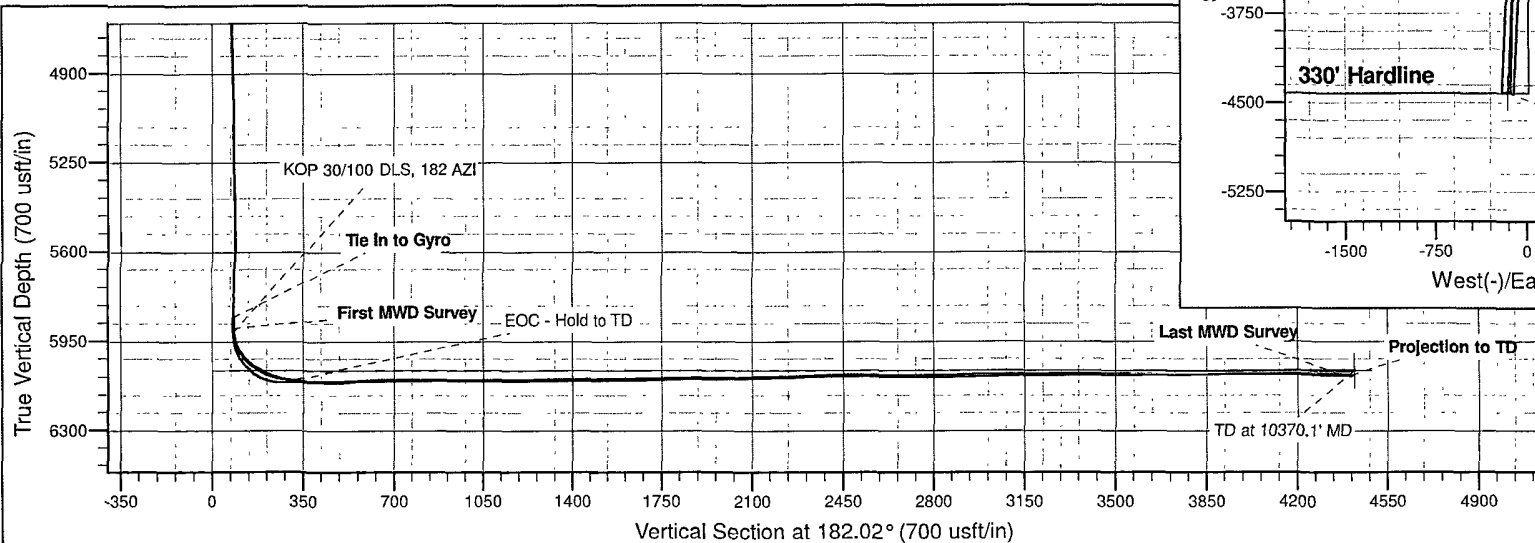
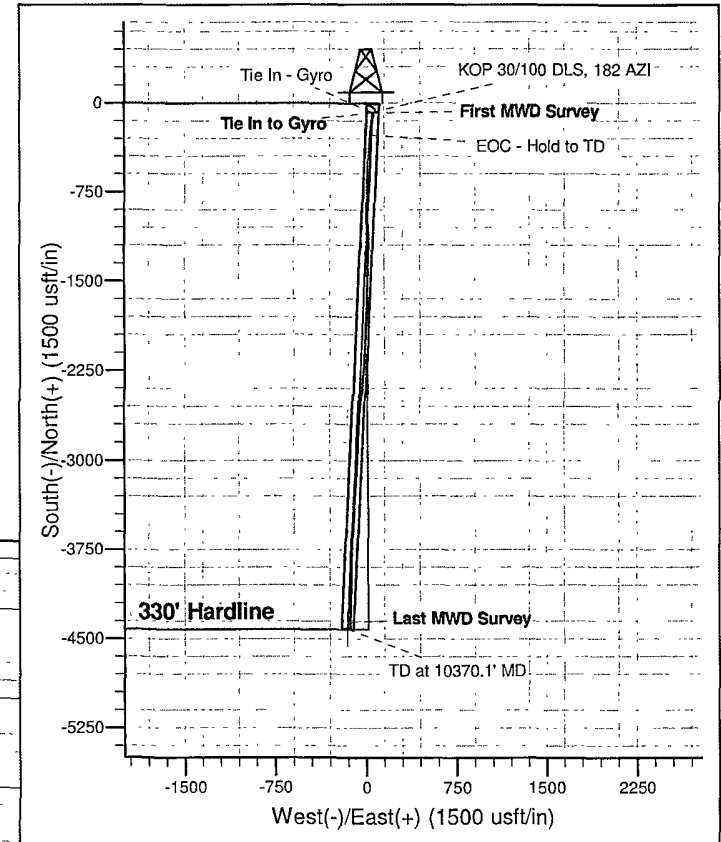
Name	TVD	+N/-S	+E/-W	Northing	Easting
Cottonwood #5	6063.0	-4416.1	-155.5	403381.11	559957.04
Drilling Coondor Cottonwood #5	6063.0	-4416.1	-155.5	403381.11	559957.04

PLAN DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
5858.0	0.97	338.71	5854.6	-82.7	57.9	0.00	0.00	80.6	
5918.0	0.97	338.71	5914.6	-81.8	57.5	0.00	0.00	79.7	
6223.8	90.63	182.80	6109.0	-275.0	46.7	29.92	-155.90	273.2	
10370.1	90.64	182.79	6063.0	-4416.1	-155.5	0.00	-40.84	4418.8	Cottonwood #5

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
5854.6	5858.0	0.97	338.71	-82.7	57.9	80.6	0.0	Tie In - Gyro
5914.6	5918.0	0.97	338.71	-81.8	57.5	79.7	1.0	KOP 30/100 DLS, 182 AZI
6109.0	6223.8	90.62	182.80	-275.0	46.7	273.2	194.7	EOC - Hold to TD
6063.0	10370.0	90.64	182.79	-4416.0	-155.5	4418.7	4340.6	TD at 10370.1' MD



Great White Directional Services

Survey Report

Company:	Cimarex Energy Co.	Local Co-ordinate Reference:	Well Cottonwood Draw 22 Fed #5
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 22 - T25S - R26	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cottonwood Draw 22 Fed #5	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project Eddy County (NM83E)			
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Sec 22 - T25S - R26					
Site Position:	Northing:	407,849.00 usft	Latitude:	32° 7' 16.470 N	
From: Map	Easting:	559,962.20 usft	Longitude:	104° 16' 23.419 W	
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.03 °

Well Cottonwood Draw 22 Fed #5						
Well Position	+N/-S	0.0 usft	Northing:	407,797.19 usft	Latitude:	32° 7' 15.956 N
	+E/-W	0.0 usft	Easting:	560,112.51 usft	Longitude:	104° 16' 21.672 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	0.0 usft

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	2009/11/05	(°)	(°)	(nT)
			8.08	60.02	48,691

Design Wellbore #1					
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	182.02	

Survey Program		Date 2010/01/11			
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.0	5,858.0	Gryo (Wellbore #1)	MWD	MWD - Standard	
5,900.0	10,340.0	MWD Survey (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100ft)	(°/100ft)	(°/100ft)	
5,858.0	0.97	338.71	5,854.6	-82.7	57.9	80.6	0.00	0.00	0.00	
Tie In to Gyro										
5,900.0	0.80	290.20	5,896.6	-82.3	57.5	80.2	1.77	-0.40	-115.50	
First MWD Survey										
5,932.0	9.10	168.00	5,928.5	-84.7	57.8	82.6	29.84	25.94	-381.88	
5,964.0	20.80	186.60	5,959.3	-92.8	57.7	90.7	39.07	36.56	58.13	
5,995.0	30.20	188.40	5,987.3	-106.0	55.9	104.0	30.42	30.32	5.81	
6,027.0	40.20	189.70	6,013.4	-124.2	53.0	122.3	31.34	31.25	4.06	
6,059.0	49.50	189.20	6,036.1	-146.5	49.3	144.6	29.08	29.06	-1.56	

Great White Directional Services

Survey Report

Company:	Cimarex Energy Co.	Local Co-ordinate Reference:	Well Cottonwood Draw 22 Fed #5
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 22 - T25S - R26	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cottonwood Draw 22 Fed #5	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,090.0	59.50	190.30	6,054.0	-171.3	45.0	169.6	32.39	32.26	3.55
6,122.0	65.20	189.70	6,068.9	-199.2	40.1	197.7	17.89	17.81	-1.88
6,154.0	70.80	187.40	6,080.9	-228.5	35.7	227.1	18.72	17.50	-7.19
6,185.0	76.30	183.60	6,089.6	-258.1	32.9	256.8	21.28	17.74	-12.26
6,217.0	80.40	181.70	6,096.1	-289.4	31.4	288.1	14.07	12.81	-5.94
6,249.0	83.00	181.90	6,100.7	-321.1	30.4	319.8	8.15	8.13	0.63
6,280.0	85.60	183.60	6,103.8	-351.9	28.9	350.6	10.01	8.39	5.48
6,313.0	88.60	185.10	6,105.5	-384.7	26.4	383.6	10.16	9.09	4.55
6,345.0	88.50	184.00	6,106.3	-416.6	23.9	415.5	3.45	-0.31	-3.44
6,375.0	87.90	183.50	6,107.2	-446.5	21.9	445.5	2.60	-2.00	-1.67
6,408.0	91.10	182.50	6,107.5	-479.5	20.2	478.5	10.16	9.70	-3.03
6,440.0	93.40	182.30	6,106.3	-511.4	18.9	510.4	7.21	7.19	-0.63
6,472.0	93.40	182.00	6,104.4	-543.3	17.7	542.4	0.94	0.00	-0.94
6,503.0	93.50	181.90	6,102.5	-574.3	16.6	573.3	0.46	0.32	-0.32
6,567.0	92.30	182.10	6,099.3	-638.2	14.4	637.2	1.90	-1.88	0.31
6,630.0	90.10	182.40	6,097.9	-701.1	11.9	700.2	3.52	-3.49	0.48
6,693.0	88.90	182.40	6,098.5	-764.0	9.3	763.2	1.90	-1.90	0.00
6,757.0	89.50	181.10	6,099.4	-828.0	7.3	827.2	2.24	0.94	-2.03
6,820.0	89.10	180.90	6,100.2	-891.0	6.2	890.2	0.71	-0.63	-0.32
6,883.0	90.20	179.30	6,100.5	-954.0	6.1	953.2	3.08	1.75	-2.54
6,947.0	89.10	178.50	6,100.9	-1,018.0	7.3	1,017.1	2.13	-1.72	-1.25
7,010.0	90.10	178.40	6,101.4	-1,080.9	9.0	1,079.9	1.60	1.59	-0.16
7,105.0	90.70	178.30	6,100.7	-1,175.9	11.8	1,174.7	0.64	0.63	-0.11
7,200.0	90.30	178.90	6,099.9	-1,270.9	14.1	1,269.6	0.76	-0.42	0.63
7,295.0	90.30	180.60	6,099.4	-1,365.9	14.5	1,364.5	1.79	0.00	1.79
7,390.0	90.60	181.90	6,098.6	-1,460.8	12.4	1,459.5	1.40	0.32	1.37
7,485.0	89.10	181.90	6,098.9	-1,555.8	9.3	1,554.5	1.58	-1.58	0.00
7,581.0	91.50	180.20	6,098.4	-1,651.7	7.5	1,650.4	3.06	2.50	-1.77
7,676.0	92.20	182.80	6,095.3	-1,746.6	5.1	1,745.4	2.83	0.74	2.74
7,771.0	91.10	183.10	6,092.6	-1,841.5	0.2	1,840.3	1.20	-1.16	0.32
7,867.0	89.90	183.20	6,091.7	-1,937.3	-5.1	1,936.3	1.25	-1.25	0.10
7,962.0	90.70	183.00	6,091.2	-2,032.2	-10.2	2,031.3	0.87	0.84	-0.21
8,056.0	91.10	183.60	6,089.8	-2,126.0	-15.7	2,125.3	0.77	0.43	0.64
8,151.0	91.40	184.80	6,087.7	-2,220.7	-22.6	2,220.2	1.30	0.32	1.26
8,246.0	91.70	185.20	6,085.1	-2,315.3	-30.9	2,315.0	0.53	0.32	0.42
8,341.0	91.60	184.90	6,082.4	-2,409.9	-39.2	2,409.8	0.33	-0.11	-0.32
8,437.0	89.40	185.50	6,081.5	-2,505.5	-47.9	2,505.7	2.38	-2.29	0.63
8,532.0	88.60	184.30	6,083.2	-2,600.2	-56.1	2,600.5	1.52	-0.84	-1.26
8,627.0	89.40	184.00	6,084.9	-2,694.9	-62.9	2,695.4	0.90	0.84	-0.32
8,722.0	89.70	182.90	6,085.6	-2,789.7	-68.7	2,790.4	1.20	0.32	-1.16
8,817.0	91.60	182.40	6,084.5	-2,884.6	-73.0	2,885.4	2.07	2.00	-0.53
8,912.0	91.30	184.00	6,082.1	-2,979.4	-78.3	2,980.3	1.71	-0.32	1.68
9,007.0	90.90	183.80	6,080.3	-3,074.2	-84.8	3,075.3	0.47	-0.42	-0.21

Great White Directional Services

Survey Report

Company:	Cimarex Energy Co.	Local Co-ordinate Reference:	Well Cottonwood Draw 22 Fed #5
Project:	Eddy County (NM83E)	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 22 - T25S - R26	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Well:	Cottonwood Draw 22 Fed #5	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,102.0	90.20	183.70	6,079.4	-3,169.0	-91.0	3,170.2	0.74	-0.74	-0.11
9,197.0	91.60	183.70	6,077.9	-3,263.8	-97.1	3,265.2	1.47	1.47	0.00
9,291.0	90.30	183.10	6,076.3	-3,357.6	-102.7	3,359.1	1.52	-1.38	-0.64
9,386.0	89.20	183.10	6,076.8	-3,452.5	-107.9	3,454.1	1.16	-1.16	0.00
9,482.0	90.50	183.50	6,077.0	-3,548.3	-113.4	3,550.1	1.42	1.35	0.42
9,577.0	91.20	183.10	6,075.6	-3,643.1	-118.9	3,645.0	0.85	0.74	-0.42
9,672.0	89.70	181.90	6,074.9	-3,738.0	-123.0	3,740.0	2.02	-1.58	-1.26
9,767.0	91.50	180.90	6,073.9	-3,833.0	-125.3	3,835.0	2.17	1.89	-1.05
9,862.0	90.10	180.70	6,072.5	-3,928.0	-126.6	3,930.0	1.49	-1.47	-0.21
9,957.0	89.30	180.70	6,073.0	-4,023.0	-127.8	4,025.0	0.84	-0.84	0.00
10,053.0	90.10	181.40	6,073.5	-4,118.9	-129.6	4,120.9	1.11	0.83	0.73
10,148.0	88.40	180.40	6,074.8	-4,213.9	-131.1	4,215.9	2.08	-1.79	-1.05
10,243.0	88.80	180.90	6,077.1	-4,308.9	-132.1	4,310.9	0.67	0.42	0.53
10,297.0	87.60	180.80	6,078.8	-4,362.8	-132.9	4,364.8	2.23	-2.22	-0.19
Last MWD Survey									
10,340.0	87.60	180.80	6,080.6	-4,405.8	-133.5	4,407.8	0.00	0.00	0.00
Projection to TD - Drilling Corridor Cottonwood #5 - Cottonwood #5									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,858.0	5,854.6	-82.7	57.9	Tie In to Gyro
5,900.0	5,896.6	-82.3	57.5	First MWD Survey
10,297.0	6,078.8	-4,362.8	-132.9	Last MWD Survey
10,340.0	6,080.6	-4,405.8	-133.5	Projection to TD

Checked By: _____ Approved By: _____ Date: _____