

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other						5. Lease Serial No. LC-061622			
b. Type of Completion. ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ 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.			
3. Address PO Box 140907; Irving, TX 75014				3a. Phone No. (include area code) 972-443-6489		8. Lease Name and Well No. County Line 1 Federal No. 1			
4. Location of Well (Report Location clearly and in accordance with Federal requirements)*						9. API Well No. 30-015-35933			
At surface 1980' FSL & 330' FWL						10. Field and Pool, or Exploratory County Line Tank; Abo			
At top prod. interval reported below 1980' FSL & 330' FWL						11. Sec., T., R., M., on Block and Survey or Area 1-16S-29E			
At total depth 1985' FSL & 344' FEL						12. County or Parish Eddy			
						13. State NM			
14. Date Spudded 01.14.08		15. Date T.D. Reached 02.17.08		16. Date Completed 03.23.08 ☐ D & A ☒ Ready to Prod.		17. Elevations (DF, RKB, RT, GL)* 3,735' GR			
18. Total Depth. MD 11,844' TVD 7,362'		19. Plug Back TD MD 11,476' TVD 7,364'		20. Depth Bridge Plug Set MD TVD					
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CBL, DSN, DLL				22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit report) Directional Survey ☐ No ☒ 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 Sks & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17 1/2"	13 3/4" H-40	48	0'	357'		390 sx CI C		0'	
12 1/4"	9 5/8" J-55	40	0'	2,500'		750 sx 35-65 POZ C/CI C		0'	
8 3/4"	7" P-110	26	0'	7,700'		650 sx 50-50 POZ C/TXI Ltwt		0'	
6 1/2"	4 1/2" P-110	11.6	6,980'	11,476'		0			
*790' of the 4 1/2" casing was BTC - BTC from 6980' to 7776' & LTC from 7776' to 11476'.									
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"	6,919'	6,980'							
25. Producing Intervals					26. Perforation Record				
Formation		Top	Bottom	Perforated Interval		Size	No Holes	Perf. Status	
A) Abo		6,063'	7,311'						
B)									
C)									
D)									
27. Acid, Fracture, Treatment, Cement Squeeze, etc.									
Depth Interval		Amount and Type of Material							
		Please see attachment...							
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	Production Method
03.23.08	04.18.08	24	→	64	244	64	39.6	1.384	Pumping
Choke Size	Tbg Press. Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
48/64	SI 350	60	→				3,813	Producing	
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		→						

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

ACCEPTED FOR RECORD

JUN 6 2008

JERRY FANT
PETROLEUM GEOLOGIST

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
				San Andres	2,576'
				Abo	6,063'
				Base Anhydrite	7,311'
				Wolfcamp	7,379'

32. Additional remarks (include plugging procedure):

2½" x 2" x 20' RHBC frac pump installed.

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: PEAK Systems Drawing

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 Analyst
 Signature *Natalie Krueger* Date May 21, 2008

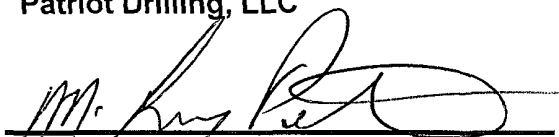
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

OPERATOR: Cimarex Energy Co.
WELL/LEASE: County Line Fed # 1 - H
COUNTY: Eddy Co., NM

STATE OF NEW MEXICO
DEVIATION REPORT

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
363	1		
819	3/4		
1,291	1/4		
1,734	1/5		
2,176	1/2		
2,669	1		
3,111	1		
3,586	1 1/4		
3,934	1		
4,384	1		
4,828	1		
5,271	5/6		
5,714	3/4		
6,157	1/2		
6,498	0		
6,630	1 1/4		
7,058	2 1/4		

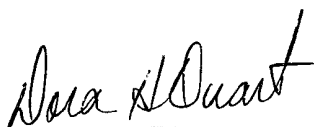
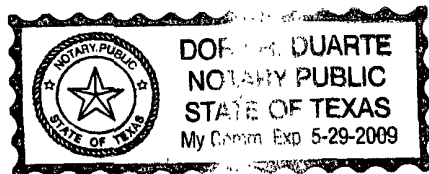
Patriot Drilling, LLC



M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 5th day of March, 2008 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 5/29/2009



Dora H. Duarte
Notary Public for Midland Co., Texas

Acid, Fracture, Treatment, Cement Squeeze, etc. Attachment
County Line 1 Federal No. 1
 1-16S-29E
 Eddy County, NM

Depth Interval	Amount and Type of Material Used
11083' - 11844'	Pump 119 bbl of 15% HCl NeFe acid, 372 bbl slick-water. Pump 717 bbl Deepspot 15% HCl acid, 956 bbl slickwater, 359 bbl Lightning 2000 x-linker pad, 0.5 to 1 ppg 30/50# white sand in lightning 2000 gel, 10.5 to 2 ppg 20/40# white sand in lightning 2000 gel & flush with 20# linear gel. Pump 119 bbl of 15% HCl NeFe acid & 120 bbl slick water, seat ball open port at 10732.' 15000# 30/50 sand & 35000# 20/40 sand pumped.
10412' - 11083'	Cont pumping 124 bbl slickwater, 359 bbl Deepspot 15% HCl acid, 600 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand, 716 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 1 ppg 30/50# white sand & flush with 20# linear gel. Drop 2½" ball. Pump 134 bbl 15% HCl NeFe acid, 180 bbl slickwater, seat ball, open port at 9986.' 15000# 30/50 sand pumped.
9557' - 10412'	Cont pumping 138 bbl slickwater, 183 bbl Deepspot 15% HCl acid, 959 bbl slickwater, 240 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand, 1074 bbl slickwater, 239 bbl Lightning 2000 x-linker pad, 0.75 ppg 30/50# white sand & flush flush with 20# linear gel. Drop 2¾" ball. Pump 119 bbl 15% HCl NeFe acid, 181 bbl slickwater, seat ball, open port at 9110.' 6250# 30/50# sand pumped.
8650' - 9557'	Cont pumping 119 bbl slickwater, 238 bbl Deepspot 15% HCl acid, 716 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand, 830 bbl slickwater, 240 bbl lightning 2000 pad, 1 ppg 30/50# white sand & flush with 20# gel. Drop 3" ball. Pump 130 bbl 15% NeFe acid, 156 bbl slickwater, seat ball, open port at 8237.' 20000# 30/50# sand pumped.
7775' - 8650'	Cont pumping 121 bbl slickwater, 238 bbl Deepspot 15% HCl acid, 720 bbl slickwater, 238 bbl lightning 2000 x-linker, 0.5 ppg 30/50 white sand, 835 bbl slickwater, 238 bbl lightning 2000 x-linker, 1 ppg 30/50 white sand, 373 bbl slickwater & flush with 20# linear gel. Drop 3¼" ball. Pump 365 bbl 15% NeFe acid, seat ball, open port at 7613.' 27500 30/50# sand pumped.
6980' - 7775'	Cont pumping 279 bbl slickwater, 783 bbl Deepspot 15% HCl acid, 252 bbl slickwater, 247 bbl lightning 2000 x-linker, 0.5 to 2 ppg 30/50 white sand, 134 bbl slickwater, 122 bbl lightning 2000 pad, 0.5 to 1 ppg 20/40# white sand & flush with 278 bbl of slickwater.

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 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-35933	Pool Code 97197	Pool Name County Line Tank; Abo (O)
Property Code	Property Name COUNTY LINE "1" FEDERAL	Well Number 1
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3735'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
U	1	16 S	29 E		1980	SOUTH	330	WEST	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
X	1	16 S	29 E		1985	SOUTH	344	EAST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code P	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

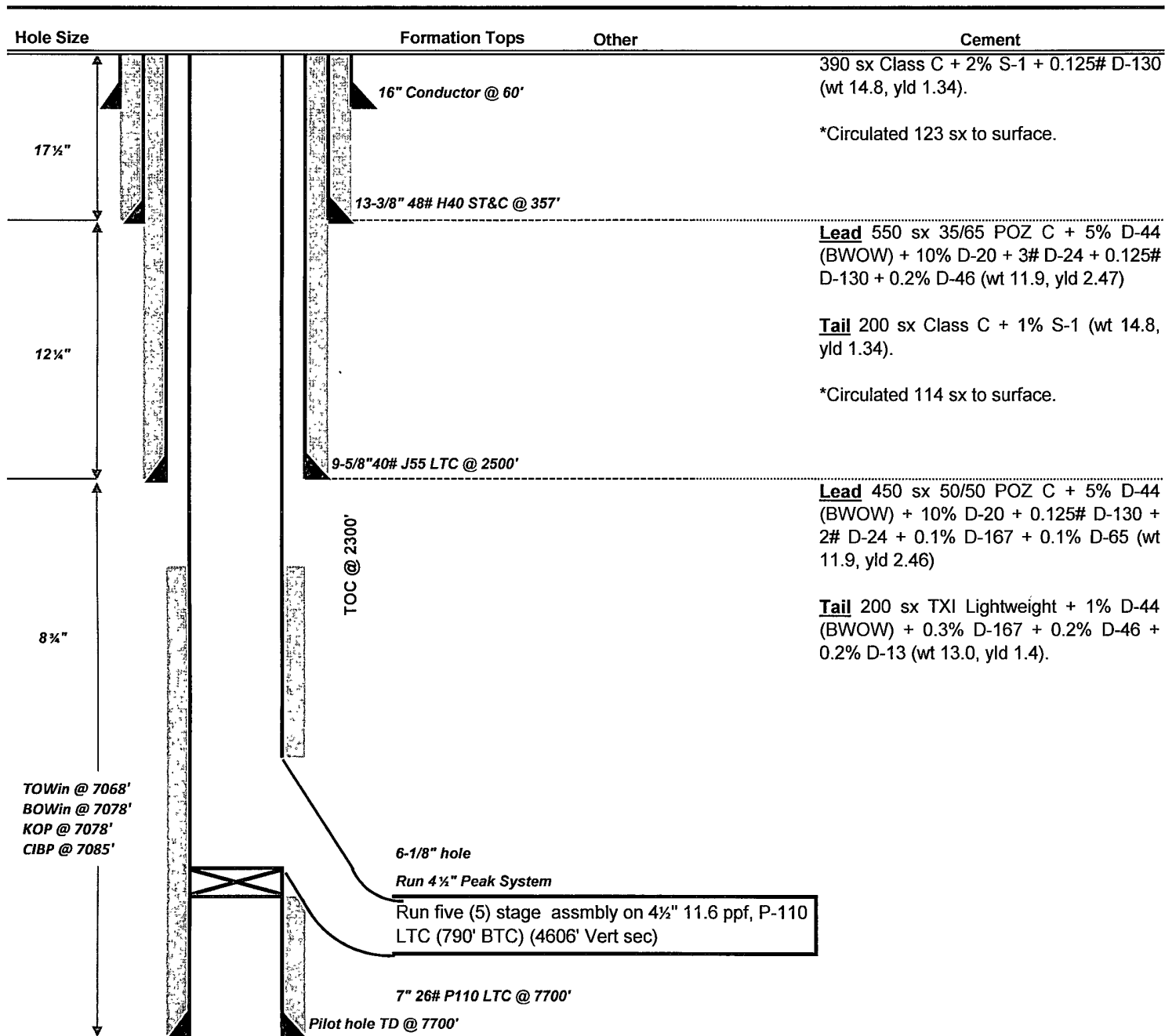
1/4 LINE		1/4 LINE	
1/4 LINE		1/4 LINE	
330'		344'	
1980'		1985'	
4606'		LC-061622	
SURFACE LOCATION Lat - N32°56'55.96" Long - W104°02'08.74" NMSPCE- N 709063.898 E 632622.027 (NAD-83)		BOTTOM HOLE LOCATION Lat - N32°56'55.9" Long - W104°01'14.6" NMSPCE- N 709068.571 E 637234.849 (NAD-83)	
OPERATOR CERTIFICATION <i>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 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> Zeno Farris 05-21-08 Signature Date Zeno Farris Printed Name			
SURVEYOR CERTIFICATION <i>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.</i> SEPTEMBER 04, 2007 Date Surveyed GARY L. JONES Signature Professional Surveyor 7977 Certificate No. Gary L. Jones BASIN SURVEYS			



WBD
Cimarex Energy Company

Well: County Line Fed #1
Location: 1-16S-29E
County, State: Eddy County, NM
Surface Location: 1980 FSL, 330 FWL
Bottomhole Loc: 1985 FSL, 344 FEL
Tubing: 2 7/8" L80 EUE

Lse Serial #:
Field:
Objective:
TVD/MD: 7362/11844
Cementing: Halliburton



Cimarex Energy Company

**Eddy County, NM
County Line "1" Federal
#1**

ST01

Design: ST01 Surveys

Sperry Drilling Services Combo Report

18 February, 2008

Well Coordinates: 709,063.90 N, 632,622.03 E (32° 56' 55.94" N, 104° 02' 08.70" W)
Ground Level: 3,735.00 ft

Local Coordinate Origin:	Centered on Well #1
Viewing Datum:	3,735' GL +21' KB @ 3756.00ft (Patriot 4)
TVDs to System:	N
North Reference:	Grid
Unit System:	API - U.S. Survey Feet

Version: 2003.16 Build: 42B

HALLIBURTON

HALLIBURTON**Design Report for #1 - ST01 Surveys**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
0.00	0.00	0.00	-3,756.00	0.00	0.00 N	0.00 E	709,063.90	632,622.03	0.00	0.00
100.00	0.22	95.36	-3,656.00	100.00	0.02 S	0.19 E	709,063.88	632,622.22	0.22	0.19
200.00	0.54	108.06	-3,556.00	200.00	0.18 S	0.83 E	709,063.72	632,622.86	0.33	0.83
300.00	0.63	141.63	-3,456.01	299.99	0.76 S	1.62 E	709,063.14	632,623.65	0.35	1.62
400.00	0.66	149.55	-3,356.01	399.99	1.69 S	2.25 E	709,062.21	632,624.28	0.09	2.25
500.00	0.42	154.49	-3,256.02	499.98	2.51 S	2.70 E	709,061.38	632,624.73	0.24	2.70
600.00	0.43	155.66	-3,156.02	599.98	3.19 S	3.01 E	709,060.71	632,625.04	0.01	3.01
700.00	0.32	91.36	-3,056.02	699.98	3.54 S	3.45 E	709,060.36	632,625.48	0.41	3.45
739.03	0.34	86.00	-3,016.99	739.01	3.53 S	3.67 E	709,060.37	632,625.70	0.09	3.67
833.92	0.39	71.62	-2,922.11	833.89	3.41 S	4.26 E	709,060.49	632,626.29	0.11	4.26
928.81	0.37	69.33	-2,827.22	928.78	3.20 S	4.85 E	709,060.70	632,626.88	0.03	4.85
1,023.70	0.30	59.23	-2,732.33	1,023.67	2.96 S	5.35 E	709,060.94	632,627.38	0.10	5.35
1,118.59	0.22	53.40	-2,637.44	1,118.56	2.73 S	5.71 E	709,061.17	632,627.74	0.09	5.71
1,213.48	0.18	44.40	-2,542.55	1,213.45	2.51 S	5.96 E	709,061.39	632,627.99	0.05	5.96
1,308.37	0.13	20.65	-2,447.66	1,308.34	2.30 S	6.11 E	709,061.59	632,628.13	0.08	6.10
1,403.26	0.11	15.12	-2,352.77	1,403.23	2.12 S	6.17 E	709,061.78	632,628.20	0.02	6.17
1,498.15	0.16	32.99	-2,257.88	1,498.12	1.92 S	6.26 E	709,061.98	632,628.29	0.07	6.26
1,593.04	0.19	346.21	-2,162.99	1,593.01	1.65 S	6.30 E	709,062.24	632,628.33	0.15	6.30
1,687.93	0.17	343.64	-2,068.10	1,687.90	1.37 S	6.22 E	709,062.53	632,628.25	0.02	6.22
1,782.82	0.18	359.63	-1,973.21	1,782.79	1.08 S	6.18 E	709,062.82	632,628.21	0.05	6.18
1,877.71	0.21	354.27	-1,878.32	1,877.68	0.76 S	6.16 E	709,063.14	632,628.19	0.04	6.16
1,972.60	0.25	22.06	-1,783.43	1,972.57	0.39 S	6.22 E	709,063.50	632,628.25	0.12	6.22
2,067.49	0.34	4.33	-1,688.55	2,067.45	0.08 N	6.32 E	709,063.98	632,628.35	0.13	6.32
2,162.38	0.29	325.46	-1,593.66	2,162.34	0.56 N	6.21 E	709,064.45	632,628.23	0.23	6.21
2,257.27	0.45	321.26	-1,498.77	2,257.23	1.05 N	5.84 E	709,064.94	632,627.86	0.17	5.84
2,352.16	0.57	328.24	-1,403.88	2,352.12	1.74 N	5.36 E	709,065.64	632,627.38	0.14	5.36
2,447.05	0.65	341.89	-1,309.00	2,447.00	2.65 N	4.94 E	709,066.55	632,626.97	0.17	4.94
2,541.94	0.68	294.47	-1,214.11	2,541.89	3.40 N	4.26 E	709,067.29	632,626.29	0.56	4.26
2,636.83	0.97	328.73	-1,119.23	2,636.77	4.31 N	3.33 E	709,068.21	632,625.36	0.59	3.34
2,731.72	0.98	314.75	-1,024.36	2,731.64	5.57 N	2.34 E	709,069.47	632,624.36	0.25	2.34
2,826.61	0.93	283.89	-929.48	2,826.52	6.33 N	1.01 E	709,070.23	632,623.04	0.54	1.02
2,921.50	0.95	336.37	-834.60	2,921.40	7.23 N	0.05 W	709,071.13	632,621.98	0.88	-0.04
3,016.39	0.98	328.92	-739.72	3,016.28	8.65 N	0.78 W	709,072.55	632,621.24	0.14	-0.77
3,111.28	1.03	323.86	-644.85	3,111.15	10.03 N	1.70 W	709,073.93	632,620.32	0.11	-1.69
3,206.17	1.15	330.97	-549.98	3,206.02	11.56 N	2.67 W	709,075.45	632,619.36	0.19	-2.66
3,301.06	1.11	310.10	-455.10	3,300.90	12.98 N	3.84 W	709,076.88	632,618.19	0.43	-3.82
3,395.95	1.00	312.45	-360.23	3,395.77	14.13 N	5.15 W	709,078.03	632,616.88	0.12	-5.13
3,490.84	0.99	315.21	-265.35	3,490.65	15.27 N	6.34 W	709,079.17	632,615.69	0.05	-6.32
3,585.73	1.02	299.68	-170.48	3,585.52	16.27 N	7.65 W	709,080.17	632,614.38	0.29	-7.63
3,680.62	0.91	294.43	-75.60	3,680.40	17.00 N	9.07 W	709,080.90	632,612.96	0.15	-9.05
3,775.51	0.78	281.16	19.28	3,775.28	17.44 N	10.39 W	709,081.34	632,611.64	0.25	-10.37
3,870.40	0.77	297.00	114.16	3,870.16	17.85 N	11.59 W	709,081.75	632,610.44	0.23	-11.57
3,965.29	0.91	303.10	209.04	3,965.04	18.55 N	12.79 W	709,082.45	632,609.24	0.17	-12.77
4,060.18	0.78	246.38	303.92	4,059.92	18.71 N	14.01 W	709,082.60	632,608.01	0.85	-13.99
4,155.07	0.69	288.19	398.80	4,154.80	18.63 N	15.15 W	709,082.52	632,606.88	0.56	-15.13

Design Report for #1 - ST01 Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
4,249.96	0.59	268.84	493.69	4,249.69	18.79 N	16.18 W	709,082.69	632,605.85	0.25	-16.16
4,344.85	0.51	258.44	588.57	4,344.57	18.70 N	17.08 W	709,082.60	632,604.95	0.13	-17.06
4,439.74	0.49	261.05	683.46	4,439.46	18.55 N	17.90 W	709,082.45	632,604.13	0.03	-17.88
4,534.63	0.53	260.85	778.35	4,534.35	18.42 N	18.73 W	709,082.32	632,603.30	0.04	-18.71
4,629.52	0.57	277.03	873.23	4,629.23	18.41 N	19.63 W	709,082.30	632,602.40	0.17	-19.61
4,724.41	0.61	254.76	968.12	4,724.12	18.33 N	20.59 W	709,082.23	632,601.44	0.24	-20.57
4,819.30	0.65	257.44	1,063.00	4,819.00	18.08 N	21.60 W	709,081.98	632,600.43	0.05	-21.58
4,914.19	0.71	262.96	1,157.88	4,913.88	17.89 N	22.71 W	709,081.79	632,599.32	0.09	-22.69
5,009.08	0.73	276.40	1,252.77	5,008.77	17.89 N	23.89 W	709,081.79	632,598.13	0.18	-23.87
5,103.97	0.76	287.36	1,347.65	5,103.65	18.14 N	25.09 W	709,082.04	632,596.93	0.15	-25.08
5,198.86	0.78	260.57	1,442.53	5,198.53	18.23 N	26.33 W	709,082.12	632,595.70	0.38	-26.31
5,293.75	0.74	259.80	1,537.41	5,293.41	18.01 N	27.57 W	709,081.91	632,594.46	0.04	-27.55
5,388.64	0.68	254.89	1,632.29	5,388.29	17.76 N	28.72 W	709,081.65	632,593.31	0.09	-28.70
5,483.53	0.67	258.03	1,727.18	5,483.18	17.49 N	29.81 W	709,081.39	632,592.22	0.04	-29.79
5,578.42	0.66	259.31	1,822.06	5,578.06	17.28 N	30.88 W	709,081.18	632,591.14	0.02	-30.87
5,673.31	0.72	253.59	1,916.95	5,672.95	17.01 N	31.99 W	709,080.91	632,590.03	0.10	-31.98
5,768.20	0.70	257.30	2,011.83	5,767.83	16.71 N	33.13 W	709,080.61	632,588.90	0.05	-33.11
5,863.09	0.67	252.54	2,106.71	5,862.71	16.42 N	34.23 W	709,080.32	632,587.80	0.07	-34.21
5,957.98	0.58	254.90	2,201.60	5,957.60	16.13 N	35.22 W	709,080.02	632,586.81	0.10	-35.20
6,052.87	0.45	228.08	2,296.48	6,052.48	15.75 N	35.96 W	709,079.65	632,586.07	0.28	-35.94
6,147.76	0.51	218.50	2,391.37	6,147.37	15.17 N	36.50 W	709,079.07	632,585.53	0.11	-36.48
6,242.65	0.39	194.90	2,486.26	6,242.26	14.53 N	36.85 W	709,078.43	632,585.18	0.23	-36.83
6,337.54	0.38	175.64	2,581.14	6,337.14	13.90 N	36.90 W	709,077.80	632,585.12	0.14	-36.89
6,432.43	0.48	165.99	2,676.03	6,432.03	13.20 N	36.78 W	709,077.10	632,585.24	0.13	-36.77
6,527.32	0.63	158.36	2,770.92	6,526.92	12.33 N	36.50 W	709,076.23	632,585.53	0.18	-36.48
6,622.21	0.89	143.52	2,865.80	6,621.80	11.26 N	35.87 W	709,075.15	632,586.16	0.34	-35.85
6,717.10	1.23	133.81	2,960.67	6,716.67	9.96 N	34.69 W	709,073.86	632,587.33	0.40	-34.68
6,811.99	1.50	126.56	3,055.53	6,811.53	8.51 N	32.96 W	709,072.41	632,589.07	0.34	-32.95
6,906.88	1.76	127.62	3,150.39	6,906.39	6.88 N	30.81 W	709,070.78	632,591.22	0.28	-30.80
7,001.77	1.91	125.12	3,245.23	7,001.23	5.09 N	28.36 W	709,068.98	632,593.67	0.18	-28.36
7,078.00	1.91	90.49	3,321.42	7,077.42	4.34 N	26.05 W	709,068.24	632,595.98	1.49	-26.05
7,101.00	8.79	106.06	3,344.30	7,100.30	3.85 N	23.98 W	709,067.75	632,598.05	30.30	-23.97
7,117.00	13.15	97.52	3,360.01	7,116.01	3.28 N	21.00 W	709,067.18	632,601.03	29.01	-20.99
7,134.00	16.57	96.57	3,376.44	7,132.44	2.75 N	16.67 W	709,066.64	632,605.36	20.17	-16.67
7,150.00	20.87	93.09	3,391.59	7,147.59	2.33 N	11.55 W	709,066.23	632,610.47	27.76	-11.55
7,166.00	24.08	90.86	3,406.37	7,162.37	2.13 N	5.44 W	709,066.03	632,616.58	20.75	-5.44
7,182.00	28.80	88.79	3,420.69	7,176.69	2.16 N	1.68 E	709,066.06	632,623.71	30.05	1.68
7,198.00	32.62	88.53	3,434.45	7,190.45	2.35 N	9.85 E	709,066.25	632,631.87	23.89	9.85
7,214.00	35.88	91.03	3,447.67	7,203.67	2.38 N	18.85 E	709,066.28	632,640.87	22.19	18.85
7,229.00	39.82	90.50	3,459.51	7,215.51	2.26 N	28.05 E	709,066.16	632,650.08	26.36	28.05
7,245.00	43.19	90.85	3,471.50	7,227.50	2.13 N	38.65 E	709,066.03	632,660.68	21.11	38.65
7,258.00	45.48	91.60	3,480.79	7,236.79	1.94 N	47.73 E	709,065.84	632,669.76	18.07	47.73
7,274.00	48.78	89.20	3,491.68	7,247.68	1.86 N	59.45 E	709,065.76	632,681.48	23.37	59.46
7,290.00	51.32	89.05	3,501.95	7,257.95	2.05 N	71.72 E	709,065.95	632,693.74	15.89	71.72
7,306.00	54.78	88.83	3,511.57	7,267.57	2.29 N	84.50 E	709,066.19	632,706.53	21.65	84.50

Design Report for #1 - ST01 Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
7,322.00	57.78	89.12	3,520.45	7,276.45	2.52 N	97.80 E	709,066.42	632,719.83	18.81	97.81
7,338.00	61.39	88.98	3,528.55	7,284.55	2.75 N	111.60 E	709,066.65	632,733.63	22.58	111.60
7,353.00	64.37	89.42	3,535.38	7,291.38	2.94 N	124.95 E	709,066.84	632,746.97	20.04	124.95
7,369.00	68.03	90.00	3,541.84	7,297.84	3.01 N	139.58 E	709,066.91	632,761.61	23.11	139.59
7,385.00	70.63	90.36	3,547.49	7,303.49	2.96 N	154.55 E	709,066.86	632,776.58	16.39	154.55
7,401.00	72.80	90.77	3,552.51	7,308.51	2.81 N	169.74 E	709,066.71	632,791.77	13.78	169.74
7,417.00	73.06	91.24	3,557.20	7,313.20	2.55 N	185.03 E	709,066.44	632,807.06	3.24	185.04
7,433.00	74.13	90.84	3,561.72	7,317.72	2.27 N	200.38 E	709,066.17	632,822.41	7.10	200.38
7,449.00	76.41	91.11	3,565.79	7,321.79	2.00 N	215.85 E	709,065.90	632,837.88	14.34	215.85
7,465.00	78.05	90.79	3,569.33	7,325.33	1.75 N	231.45 E	709,065.64	632,853.48	10.43	231.45
7,480.00	80.24	90.57	3,572.15	7,328.15	1.57 N	246.18 E	709,065.47	632,868.21	14.67	246.18
7,496.00	81.91	90.62	3,574.63	7,330.63	1.41 N	261.99 E	709,065.31	632,884.01	10.44	261.99
7,512.00	82.60	90.81	3,576.79	7,332.79	1.21 N	277.84 E	709,065.11	632,899.87	4.47	277.84
7,528.00	83.69	91.02	3,578.70	7,334.70	0.96 N	293.72 E	709,064.85	632,915.75	6.94	293.72
7,544.00	85.93	91.13	3,580.15	7,336.15	0.66 N	309.65 E	709,064.55	632,931.68	14.02	309.65
7,575.00	87.62	91.26	3,581.89	7,337.89	0.01 N	340.60 E	709,063.91	632,962.62	5.47	340.60
7,607.00	87.93	91.23	3,583.13	7,339.13	0.68 S	372.57 E	709,063.21	632,994.59	0.97	372.56
7,639.00	88.03	91.20	3,584.26	7,340.26	1.36 S	404.54 E	709,062.54	633,026.57	0.33	404.54
7,671.00	90.28	91.03	3,584.73	7,340.73	1.98 S	436.53 E	709,061.91	633,058.55	7.05	436.52
7,702.00	92.13	91.10	3,584.08	7,340.08	2.56 S	467.51 E	709,061.34	633,089.54	5.97	467.51
7,734.00	93.13	90.27	3,582.61	7,338.61	2.94 S	499.48 E	709,060.96	633,121.50	4.06	499.47
7,766.00	93.35	90.25	3,580.80	7,336.80	3.09 S	531.43 E	709,060.81	633,153.45	0.69	531.42
7,797.00	93.76	89.91	3,578.88	7,334.88	3.13 S	562.37 E	709,060.77	633,184.39	1.72	562.36
7,829.00	94.01	90.07	3,576.71	7,332.71	3.13 S	594.29 E	709,060.77	633,216.32	0.93	594.29
7,861.00	93.17	90.20	3,574.71	7,330.71	3.20 S	626.23 E	709,060.70	633,248.26	2.66	626.23
7,892.00	91.88	90.18	3,573.34	7,329.34	3.30 S	657.20 E	709,060.59	633,279.22	4.16	657.19
7,924.00	90.34	89.75	3,572.72	7,328.72	3.28 S	689.19 E	709,060.61	633,311.22	5.00	689.19
7,956.00	90.71	89.47	3,572.43	7,328.43	3.07 S	721.19 E	709,060.83	633,343.22	1.45	721.19
7,988.00	91.05	88.87	3,571.94	7,327.94	2.60 S	753.18 E	709,061.30	633,375.21	2.15	753.18
8,019.00	90.55	88.86	3,571.51	7,327.51	1.99 S	784.17 E	709,061.91	633,406.20	1.61	784.17
8,051.00	89.35	88.87	3,571.53	7,327.53	1.35 S	816.17 E	709,062.54	633,438.19	3.75	816.16
8,083.00	88.51	89.04	3,572.13	7,328.13	0.77 S	848.15 E	709,063.13	633,470.18	2.68	848.15
8,114.00	88.55	89.40	3,572.93	7,328.93	0.35 S	879.14 E	709,063.55	633,501.17	1.17	879.14
8,146.00	88.89	89.56	3,573.64	7,329.64	0.06 S	911.13 E	709,063.84	633,533.16	1.17	911.13
8,178.00	89.20	89.81	3,574.18	7,330.18	0.12 N	943.13 E	709,064.02	633,565.15	1.24	943.13
8,210.00	89.54	89.62	3,574.53	7,330.53	0.28 N	975.12 E	709,064.17	633,597.15	1.22	975.12
8,241.00	88.25	89.02	3,575.13	7,331.13	0.64 N	1,006.12 E	709,064.54	633,628.14	4.59	1,006.12
8,273.00	88.52	88.72	3,576.03	7,332.03	1.27 N	1,038.10 E	709,065.17	633,660.12	1.26	1,038.10
8,305.00	88.83	88.78	3,576.77	7,332.77	1.97 N	1,070.08 E	709,065.87	633,692.11	0.99	1,070.08
8,336.00	88.89	89.11	3,577.38	7,333.38	2.54 N	1,101.07 E	709,066.44	633,723.10	1.08	1,101.07
8,368.00	89.20	89.08	3,577.92	7,333.92	3.05 N	1,133.06 E	709,066.95	633,755.09	0.97	1,133.06
8,399.00	89.53	89.05	3,578.26	7,334.26	3.55 N	1,164.05 E	709,067.45	633,786.08	1.07	1,164.06
8,431.00	89.91	88.56	3,578.42	7,334.42	4.22 N	1,196.05 E	709,068.12	633,818.07	1.94	1,196.05
8,463.00	90.37	88.35	3,578.34	7,334.34	5.08 N	1,228.03 E	709,068.98	633,850.06	1.58	1,228.04
8,494.00	91.11	87.93	3,577.94	7,333.94	6.09 N	1,259.02 E	709,069.99	633,881.04	2.74	1,259.02

Design Report for #1 - ST01 Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
8,526.00	89.88	88.04	3,577.66	7,333.66	7.22 N	1,290.99 E	709,071.11	633,913.02	3.86	1,291.00
8,558.00	89.72	87.78	3,577.77	7,333.77	8.38 N	1,322.97 E	709,072.28	633,945.00	0.95	1,322.98
8,590.00	89.60	87.63	3,577.96	7,333.96	9.66 N	1,354.95 E	709,073.56	633,976.97	0.60	1,354.96
8,621.00	89.04	88.31	3,578.33	7,334.33	10.76 N	1,385.92 E	709,074.66	634,007.95	2.84	1,385.93
8,652.00	88.83	87.77	3,578.91	7,334.91	11.82 N	1,416.90 E	709,075.72	634,038.93	1.87	1,416.91
8,685.00	87.87	88.13	3,579.86	7,335.86	13.00 N	1,449.87 E	709,076.90	634,071.89	3.11	1,449.88
8,716.00	87.92	87.77	3,581.00	7,337.00	14.11 N	1,480.82 E	709,078.01	634,102.85	1.17	1,480.84
8,748.00	88.08	87.61	3,582.11	7,338.11	15.40 N	1,512.78 E	709,079.30	634,134.81	0.71	1,512.79
8,780.00	88.27	87.45	3,583.13	7,339.13	16.78 N	1,544.73 E	709,080.68	634,166.76	0.78	1,544.75
8,812.00	88.55	87.60	3,584.02	7,340.02	18.16 N	1,576.69 E	709,082.06	634,198.72	0.99	1,576.71
8,843.00	88.71	87.98	3,584.76	7,340.76	19.35 N	1,607.66 E	709,083.25	634,229.69	1.33	1,607.68
8,875.00	89.08	87.81	3,585.38	7,341.38	20.53 N	1,639.63 E	709,084.43	634,261.66	1.27	1,639.65
8,907.00	89.41	88.85	3,585.80	7,341.80	21.46 N	1,671.61 E	709,085.36	634,293.64	3.41	1,671.64
8,938.00	89.72	90.35	3,586.04	7,342.04	21.68 N	1,702.61 E	709,085.58	634,324.64	4.94	1,702.63
8,970.00	89.97	91.12	3,586.12	7,342.12	21.27 N	1,734.61 E	709,085.17	634,356.64	2.53	1,734.63
9,002.00	89.94	90.53	3,586.15	7,342.15	20.81 N	1,766.61 E	709,084.71	634,388.63	1.85	1,766.63
9,033.00	90.71	91.30	3,585.97	7,341.97	20.31 N	1,797.60 E	709,084.21	634,419.63	3.51	1,797.62
9,065.00	92.16	92.42	3,585.17	7,341.17	19.27 N	1,829.57 E	709,083.17	634,451.60	5.72	1,829.59
9,097.00	93.82	93.48	3,583.50	7,339.50	17.63 N	1,861.48 E	709,081.53	634,483.51	6.15	1,861.50
9,129.00	94.04	93.90	3,581.31	7,337.31	15.58 N	1,893.34 E	709,079.47	634,515.37	1.48	1,893.36
9,160.00	94.53	93.48	3,578.99	7,334.99	13.59 N	1,924.19 E	709,077.48	634,546.22	2.08	1,924.21
9,192.00	94.04	93.90	3,576.60	7,332.60	11.53 N	1,956.04 E	709,075.43	634,578.06	2.01	1,956.05
9,224.00	93.27	94.53	3,574.56	7,330.56	9.18 N	1,987.88 E	709,073.08	634,609.91	3.11	1,987.89
9,255.00	91.79	94.91	3,573.19	7,329.19	6.64 N	2,018.75 E	709,070.53	634,640.78	4.93	2,018.75
9,287.00	90.12	95.86	3,572.66	7,328.66	3.63 N	2,050.60 E	709,067.53	634,672.63	6.00	2,050.60
9,319.00	90.34	95.95	3,572.53	7,328.53	0.34 N	2,082.43 E	709,064.24	634,704.46	0.74	2,082.43
9,350.00	90.37	95.11	3,572.34	7,328.34	2.65 S	2,113.29 E	709,061.25	634,735.31	2.71	2,113.28
9,382.00	89.69	93.13	3,572.32	7,328.32	4.94 S	2,145.20 E	709,058.95	634,767.23	6.54	2,145.20
9,414.00	89.51	90.89	3,572.55	7,328.55	6.07 S	2,177.18 E	709,057.83	634,799.21	7.02	2,177.17
9,446.00	89.62	90.49	3,572.79	7,328.79	6.45 S	2,209.18 E	709,057.45	634,831.20	1.30	2,209.17
9,477.00	88.89	90.15	3,573.19	7,329.19	6.63 S	2,240.17 E	709,057.27	634,862.20	2.60	2,240.16
9,509.00	89.04	90.18	3,573.77	7,329.77	6.72 S	2,272.17 E	709,057.18	634,894.19	0.48	2,272.16
9,541.00	89.60	90.11	3,574.15	7,330.15	6.80 S	2,304.16 E	709,057.10	634,926.19	1.76	2,304.16
9,572.00	88.03	90.05	3,574.79	7,330.79	6.84 S	2,335.16 E	709,057.06	634,957.18	5.07	2,335.15
9,604.00	87.62	89.42	3,576.00	7,332.00	6.69 S	2,367.13 E	709,057.20	634,989.16	2.35	2,367.13
9,636.00	87.86	89.18	3,577.27	7,333.27	6.30 S	2,399.11 E	709,057.59	635,021.13	1.06	2,399.10
9,668.00	88.89	89.03	3,578.17	7,334.17	5.80 S	2,431.09 E	709,058.09	635,053.12	3.25	2,431.08
9,699.00	89.10	88.81	3,578.72	7,334.72	5.22 S	2,462.08 E	709,058.68	635,084.11	0.98	2,462.07
9,731.00	89.38	88.81	3,579.14	7,335.14	4.56 S	2,494.07 E	709,059.34	635,116.10	0.87	2,494.06
9,763.00	89.48	88.98	3,579.46	7,335.46	3.94 S	2,526.06 E	709,059.96	635,148.09	0.62	2,526.06
9,794.00	88.48	88.80	3,580.01	7,336.01	3.34 S	2,557.05 E	709,060.56	635,179.08	3.28	2,557.05
9,826.00	88.64	88.83	3,580.82	7,336.82	2.68 S	2,589.03 E	709,061.22	635,211.06	0.51	2,589.03
9,858.00	87.29	88.69	3,581.95	7,337.95	1.98 S	2,621.00 E	709,061.91	635,243.03	4.24	2,621.00
9,890.00	87.57	88.75	3,583.39	7,339.39	1.27 S	2,652.96 E	709,062.63	635,274.99	0.89	2,652.96
9,921.00	88.09	88.54	3,584.56	7,340.56	0.54 S	2,683.93 E	709,063.36	635,305.96	1.81	2,683.93

Design Report for #1 - ST01 Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
9,953.00	88.09	88.68	3,585.63	7,341.63	0.24 N	2,715.91 E	709,064.14	635,337.93	0.44	2,715.91
9,985.00	86.40	88.58	3,587.17	7,343.17	1.00 N	2,747.86 E	709,064.90	635,369.89	5.29	2,747.86
10,022.00	85.72	86.05	3,589.71	7,345.71	2.73 N	2,784.73 E	709,066.63	635,406.75	7.06	2,784.73
10,053.00	87.14	87.08	3,591.64	7,347.64	4.58 N	2,815.61 E	709,068.48	635,437.64	5.65	2,815.61
10,085.00	86.52	87.34	3,593.41	7,349.41	6.14 N	2,847.52 E	709,070.04	635,469.55	2.10	2,847.53
10,117.00	87.56	87.95	3,595.06	7,351.06	7.45 N	2,879.45 E	709,071.35	635,501.48	3.77	2,879.46
10,149.00	87.84	87.97	3,596.35	7,352.35	8.59 N	2,911.41 E	709,072.49	635,533.43	0.88	2,911.41
10,180.00	88.43	89.14	3,597.35	7,353.35	9.37 N	2,942.38 E	709,073.27	635,564.41	4.23	2,942.39
10,212.00	89.63	89.87	3,597.90	7,353.90	9.65 N	2,974.37 E	709,073.55	635,596.40	4.39	2,974.38
10,244.00	90.25	89.88	3,597.93	7,353.93	9.72 N	3,006.37 E	709,073.62	635,628.40	1.94	3,006.38
10,275.00	90.71	89.88	3,597.67	7,353.67	9.78 N	3,037.37 E	709,073.68	635,659.40	1.48	3,037.38
10,307.00	89.97	89.78	3,597.48	7,353.48	9.88 N	3,069.37 E	709,073.78	635,691.40	2.33	3,069.38
10,339.00	90.34	89.79	3,597.39	7,353.39	10.00 N	3,101.37 E	709,073.90	635,723.40	1.16	3,101.38
10,371.00	89.26	90.91	3,597.51	7,353.51	9.80 N	3,133.37 E	709,073.70	635,755.40	4.86	3,133.38
10,402.00	89.48	91.12	3,597.85	7,353.85	9.25 N	3,164.36 E	709,073.15	635,786.39	0.98	3,164.37
10,434.00	88.43	91.93	3,598.43	7,354.43	8.40 N	3,196.35 E	709,072.30	635,818.37	4.14	3,196.35
10,466.00	86.98	92.03	3,599.71	7,355.71	7.30 N	3,228.30 E	709,071.20	635,850.33	4.54	3,228.31
10,497.00	87.17	92.16	3,601.29	7,357.29	6.17 N	3,259.24 E	709,070.06	635,881.27	0.74	3,259.24
10,529.00	87.22	92.15	3,602.86	7,358.86	4.96 N	3,291.18 E	709,068.86	635,913.20	0.16	3,291.18
10,561.00	88.15	91.98	3,604.15	7,360.15	3.81 N	3,323.13 E	709,067.71	635,945.16	2.95	3,323.13
10,593.00	88.43	92.02	3,605.11	7,361.11	2.70 N	3,355.10 E	709,066.59	635,977.12	0.88	3,355.10
10,624.00	88.80	91.80	3,605.86	7,361.86	1.66 N	3,386.07 E	709,065.56	636,008.10	1.39	3,386.07
10,656.00	89.51	91.54	3,606.33	7,362.33	0.73 N	3,418.05 E	709,064.63	636,040.08	2.36	3,418.05
10,688.00	90.00	91.62	3,606.46	7,362.46	0.15 S	3,450.04 E	709,063.75	636,072.07	1.55	3,450.04
10,719.00	89.17	91.14	3,606.69	7,362.69	0.90 S	3,481.03 E	709,063.00	636,103.06	3.09	3,481.03
10,751.00	89.10	90.95	3,607.17	7,363.17	1.48 S	3,513.02 E	709,062.42	636,135.05	0.63	3,513.02
10,783.00	89.08	90.01	3,607.68	7,363.68	1.75 S	3,545.02 E	709,062.15	636,167.04	2.94	3,545.01
10,814.00	88.61	89.40	3,608.31	7,364.31	1.59 S	3,576.01 E	709,062.31	636,198.04	2.48	3,576.01
10,846.00	88.86	89.40	3,609.01	7,365.01	1.26 S	3,608.00 E	709,062.64	636,230.03	0.78	3,608.00
10,878.00	89.38	89.38	3,609.50	7,365.50	0.91 S	3,639.99 E	709,062.98	636,262.02	1.63	3,639.99
10,909.00	87.92	89.48	3,610.23	7,366.23	0.61 S	3,670.98 E	709,063.29	636,293.01	4.72	3,670.98
10,941.00	88.06	89.51	3,611.36	7,367.36	0.32 S	3,702.96 E	709,063.57	636,324.99	0.45	3,702.96
10,972.00	88.74	89.26	3,612.22	7,368.22	0.01 N	3,733.95 E	709,063.91	636,355.97	2.34	3,733.95
11,004.00	88.98	89.26	3,612.86	7,368.86	0.42 N	3,765.94 E	709,064.32	636,387.97	0.75	3,765.94
11,036.00	88.86	89.23	3,613.46	7,369.46	0.84 N	3,797.93 E	709,064.74	636,419.96	0.39	3,797.93
11,067.00	89.32	89.22	3,613.95	7,369.95	1.26 N	3,828.92 E	709,065.16	636,450.95	1.48	3,828.92
11,099.00	89.41	89.55	3,614.31	7,370.31	1.61 N	3,860.92 E	709,065.50	636,482.95	1.07	3,860.92
11,131.00	90.09	89.78	3,614.45	7,370.45	1.79 N	3,892.92 E	709,065.69	636,514.95	2.24	3,892.92
11,163.00	90.53	89.83	3,614.27	7,370.27	1.90 N	3,924.92 E	709,065.80	636,546.94	1.38	3,924.92
11,194.00	90.43	89.93	3,614.01	7,370.01	1.97 N	3,955.92 E	709,065.86	636,577.94	0.46	3,955.92
11,226.00	90.62	89.98	3,613.72	7,369.72	1.99 N	3,987.92 E	709,065.89	636,609.94	0.61	3,987.92
11,258.00	91.05	89.96	3,613.26	7,369.26	2.01 N	4,019.91 E	709,065.91	636,641.94	1.35	4,019.91
11,289.00	90.86	89.91	3,612.74	7,368.74	2.04 N	4,050.91 E	709,065.94	636,672.93	0.63	4,050.91
11,321.00	90.62	89.99	3,612.33	7,368.33	2.07 N	4,082.90 E	709,065.97	636,704.93	0.79	4,082.90
11,353.00	91.57	90.14	3,611.71	7,367.71	2.04 N	4,114.90 E	709,065.93	636,736.93	3.01	4,114.90

HALLIBURTON**Design Report for #1 - ST01 Surveys**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)
					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)		
11,384.00	92.53	90.21	3,610.60	7,366.60	1.94 N	4,145.88 E	709,065.84	636,767.90	3.10	4,145.88
11,416.00	91.45	90.06	3,609.49	7,365.49	1.87 N	4,177.86 E	709,065.76	636,799.89	3.41	4,177.86
11,448.00	90.89	90.16	3,608.84	7,364.84	1.80 N	4,209.85 E	709,065.70	636,831.88	1.78	4,209.85
11,480.00	90.80	90.36	3,608.37	7,364.37	1.66 N	4,241.85 E	709,065.56	636,863.87	0.69	4,241.85
11,511.00	90.74	89.99	3,607.95	7,363.95	1.56 N	4,272.84 E	709,065.46	636,894.87	1.21	4,272.84
11,543.00	90.22	89.71	3,607.68	7,363.68	1.65 N	4,304.84 E	709,065.55	636,926.87	1.85	4,304.84
11,575.00	90.52	90.05	3,607.48	7,363.48	1.71 N	4,336.84 E	709,065.61	636,958.87	1.42	4,336.84
11,606.00	90.68	90.01	3,607.15	7,363.15	1.70 N	4,367.84 E	709,065.60	636,989.87	0.53	4,367.84
11,638.00	90.96	89.98	3,606.69	7,362.69	1.70 N	4,399.84 E	709,065.60	637,021.86	0.88	4,399.84
11,670.00	91.30	90.06	3,606.06	7,362.06	1.69 N	4,431.83 E	709,065.59	637,053.86	1.09	4,431.83
11,702.00	90.55	89.49	3,605.55	7,361.55	1.82 N	4,463.83 E	709,065.71	637,085.85	2.94	4,463.83
11,733.00	89.32	88.75	3,605.58	7,361.58	2.29 N	4,494.82 E	709,066.19	637,116.85	4.63	4,494.82
11,765.00	89.60	88.46	3,605.88	7,361.88	3.07 N	4,526.81 E	709,066.97	637,148.84	1.26	4,526.81
11,797.00	89.78	88.54	3,606.06	7,362.06	3.91 N	4,558.80 E	709,067.81	637,180.83	0.62	4,558.80
Last MWD at 11,797' MD										
11,844.00	89.78	88.54	3,606.24	7,362.24	5.11 N	4,605.78 E	709,069.00	637,227.81	0.00	4,605.79
Projection to TD at 11,844' MD										

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,797.00	7,362.06	3.91	4,558.80	Last MWD at 11,797' MD
11,844.00	7,362.24	5.11	4,605.78	Projection to TD at 11,844' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	C.L. 1 PBHL (P1)	89.94	Slot	0.00	0.00	0.00
7,078.00	11,844.00	MWD Survey			MWD	

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
C.L. 1 PBHL (P1)	0.00	0.00	7,326.00	4.67	4,612.82	709,068.57	637,234.85	32° 56' 55.854 N	104° 1' 14.569 W
- actual wellpath misses by 36.92ft at 11844.00ft MD (7362.24 TVD, 5.11 N, 4605.78 E)									
- Point									

HALLIBURTON**North Reference Sheet for County Line "1" Federal - #1 - ST01**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to 3,735' GL +21' KB @ 3756.00ft (Patriot 4). Northing and Easting are relative to #1

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°

False Easting: 541,337.50ft, False Northing: 0.00ft, Scale Reduction: 0.99991863

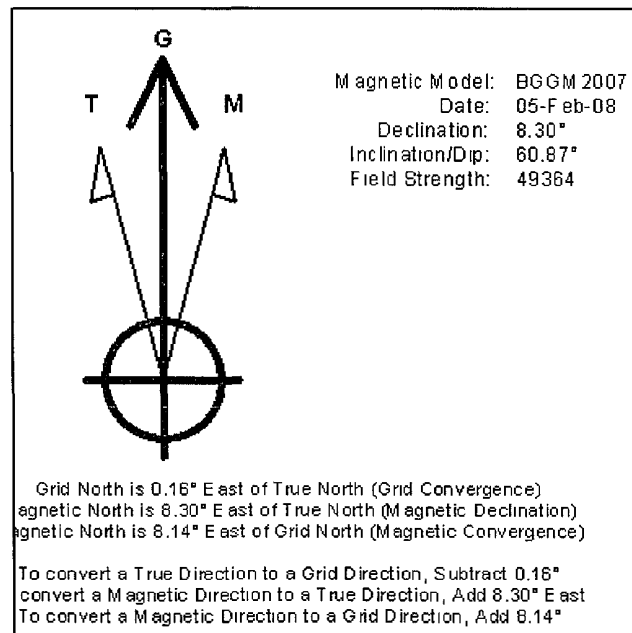
Grid Coordinates of Well: 709,063.90 ft N, 632,622.03 ft E

Geographical Coordinates of Well: 32° 56' 55.94" N, 104° 02' 08.70" W

Grid Convergence at Surface is: 0.16°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,844.00ft the Bottom Hole Displacement is 4,605.79ft in the Direction of 89.94° (Grid).

Magnetic Convergence at surface is: -8.14° (5 February 2008, , BGGM2007)



Cimarex Energy Company

HALLIBURTON

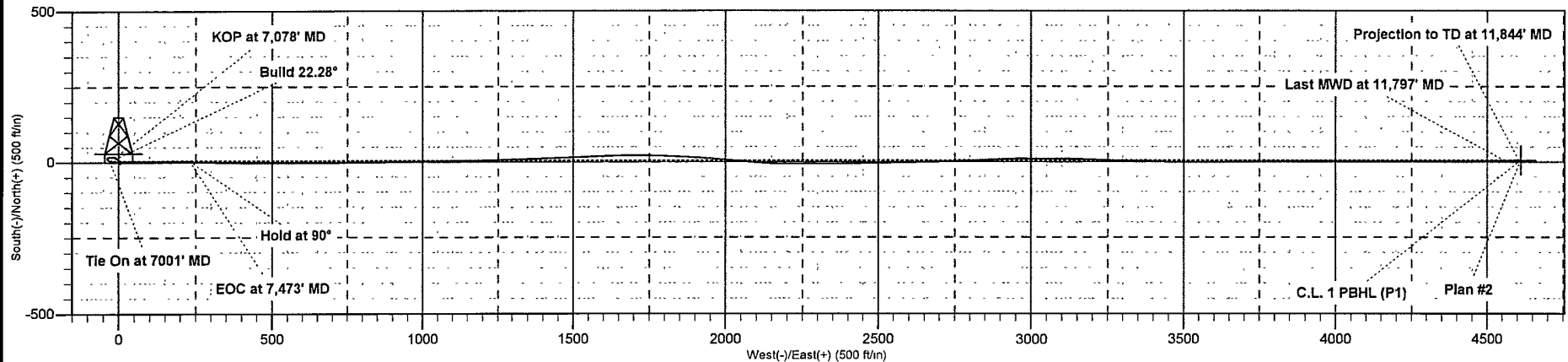
Sperry Drilling Services



Project: Eddy County, NM
 Site: County Line "1" Federal
 Well: #1
 Wellbore: ST01
 Design: ST01 Surveys (#1/ST01)
 Rig: Patriot 4

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
C.L. 1 PBHL (P1)	7326.00	4.67	4612.82	709068.57	637234.85	Point



Surface Location:

US State Plane 1983
 New Mexico Eastern Zone
 Elevation: 3,735' GL +21' KB @ 3756.00ft (Patriot 4)
 Northing 709063.90 Easting 632622.03 Latitude 32° 56' 55.940 N Longitude 104° 2' 8.703 W

To convert a Magnetic Direction to a Grid Direction, Add 8.14°

Magnetic Model: BGGM2007 Date: 05-Feb-08
 Azimuths to Grid North

