

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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. NM-0556811																																																													
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		8. Lease Name and Well No Nitro 11 Federal No. 2																																																													
3a. Phone No. (include area code) 972-443-6489		9. API Well No 30-015-36100																																																													
4. Location of Well (Report Location clearly and in accordance with Federal requirements)* At surface 375' FNL & 660' FEL At top prod. interval reported below 355 FNL & 667 FEL At total depth 393' FNL & 333' FEL		10. Field and Pool, or Exploratory County Line Tank; Abo																																																													
14. Date Spudded 05.13.08		15. Date T.D. Reached 06.20.08																																																													
16. Date Completed ☐ D & A ☒ Ready to Prod.		17. Elevations (DF, RKB, RT, GL)* 3,735' GR																																																													
18. Total Depth MD 11514' Pilot hole 7715' TVD 7261'		19. Plug Back TD MD 11514' pilot hole 7098' TVD 7261'																																																													
20. Depth Bridge Plug Set MD 7098'		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) Neutron, DLML, GR																																																													
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)																																																													
<table border="1" style="width:100%"><thead><tr><th>Hole Size</th><th>Size/Grade</th><th>Wt. (#/ft)</th><th>Top (MD)</th><th>Bottom (MD)</th><th>Stage Cementer Depth</th><th>No. of Sks. & Type of Cement</th><th>Slurry Vol (BBL)</th><th>Cement Top*</th><th>Amount Pulled</th></tr></thead><tbody><tr><td>17 1/2"</td><td>13 3/4" H-40</td><td>48#</td><td>0'</td><td>456'</td><td></td><td>425 sx Prem Plus</td><td></td><td>0' circ</td><td></td></tr><tr><td>12 1/4"</td><td>9 5/8" J-55</td><td>40#</td><td>0'</td><td>2515'</td><td></td><td>8410 sx IntC/PremP</td><td></td><td>0' circ</td><td></td></tr><tr><td>8 3/4"</td><td>7" P-110</td><td>26#</td><td>0'</td><td>7715'</td><td></td><td>1025 sx PBSH</td><td></td><td>100' calc.</td><td></td></tr><tr><td>6 1/2"</td><td>4 1/2" P-110</td><td>11.6#</td><td>6950'</td><td>7606'</td><td>BTC</td><td>PEAK, no cement</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td>7606'</td><td>11000'</td><td>LTC</td><td>PEAK, no cement</td><td></td><td></td><td></td></tr></tbody></table>				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'	456'		425 sx Prem Plus		0' circ		12 1/4"	9 5/8" J-55	40#	0'	2515'		8410 sx IntC/PremP		0' circ		8 3/4"	7" P-110	26#	0'	7715'		1025 sx PBSH		100' calc.		6 1/2"	4 1/2" P-110	11.6#	6950'	7606'	BTC	PEAK, no cement							7606'	11000'	LTC	PEAK, no cement			
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'	456'		425 sx Prem Plus		0' circ																																																							
12 1/4"	9 5/8" J-55	40#	0'	2515'		8410 sx IntC/PremP		0' circ																																																							
8 3/4"	7" P-110	26#	0'	7715'		1025 sx PBSH		100' calc.																																																							
6 1/2"	4 1/2" P-110	11.6#	6950'	7606'	BTC	PEAK, no cement																																																									
			7606'	11000'	LTC	PEAK, no cement																																																									
24. Tubing Record																																																															
<table border="1" style="width:100%"><thead><tr><th>Size</th><th>Depth Set (MD)</th><th>Packer Depth (MD)</th><th>Size</th><th>Depth Set (MD)</th><th>Packer Depth (MD)</th><th>Size</th><th>Depth Set (MD)</th><th>Packer Depth (MD)</th></tr></thead><tbody><tr><td>2 7/8"</td><td>6883'</td><td>6,750'</td><td>7" x 2 7/8"</td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>				Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	2 7/8"	6883'	6,750'	7" x 2 7/8"																																															
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)																																																							
2 7/8"	6883'	6,750'	7" x 2 7/8"																																																												
25. Producing Intervals																																																															
<table border="1" style="width:100%"><thead><tr><th>Formation</th><th>Top</th><th>Bottom</th><th>Perforated Interval</th><th>Size</th><th>No Holes</th><th>Perf. Status</th></tr></thead><tbody><tr><td>A) Abo</td><td>7084'</td><td>11514'</td><td></td><td></td><td></td><td></td></tr><tr><td>B)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>C)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>D)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>				Formation	Top	Bottom	Perforated Interval	Size	No Holes	Perf. Status	A) Abo	7084'	11514'					B)							C)							D)																															
Formation	Top	Bottom	Perforated Interval	Size	No Holes	Perf. Status																																																									
A) Abo	7084'	11514'																																																													
B)																																																															
C)																																																															
D)																																																															
26. Perforation Record																																																															
27. Acid, Fracture, Treatment, Cement Squeeze, etc.																																																															
<table border="1" style="width:100%"><thead><tr><th>Depth Interval</th><th>Amount and Type of Material</th></tr></thead><tbody><tr><td></td><td>Please see attachment.</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></tbody></table>				Depth Interval	Amount and Type of Material		Please see attachment.																																																								
Depth Interval	Amount and Type of Material																																																														
	Please see attachment.																																																														
28. Production - Interval A																																																															
<table border="1" style="width:100%"><thead><tr><th>Date First Produced</th><th>Test Date</th><th>Hours Tested</th><th>Test Production</th><th>Oil BBL</th><th>Gas MCF</th><th>Water BBL</th><th>Oil Gravity Corr. API</th><th>Gas Gravity (BTU)</th><th>Production Method</th></tr></thead><tbody><tr><td>07.26.08</td><td>07.28.08</td><td>24</td><td>→</td><td>80</td><td>126</td><td>375</td><td>38.5</td><td>1.3484</td><td>Pumping</td></tr><tr><td>Choke Size</td><td>Tbg Press Flwg</td><td>Csg. Press.</td><td>24 Hr. Rate</td><td>Oil BBL</td><td>Gas MCF</td><td>Water BBL</td><td>Gas/Oil Ratio</td><td>Well Status</td><td></td></tr><tr><td>22/64</td><td>SI</td><td>200</td><td>→</td><td>80</td><td>126</td><td>1575</td><td></td><td>Producing</td><td></td></tr></tbody></table>				Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity (BTU)	Production Method	07.26.08	07.28.08	24	→	80	126	375	38.5	1.3484	Pumping	Choke Size	Tbg Press Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status		22/64	SI	200	→	80	126	1575		Producing																					
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity (BTU)	Production Method																																																						
07.26.08	07.28.08	24	→	80	126	375	38.5	1.3484	Pumping																																																						
Choke Size	Tbg Press Flwg	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status																																																							
22/64	SI	200	→	80	126	1575		Producing																																																							
28. Production - Interval B																																																															
<table border="1" style="width:100%"><thead><tr><th>Date First Produced</th><th>Test Date</th><th>Hours Tested</th><th>Test Production</th><th>Oil BBL</th><th>Gas MCF</th><th>Water BBL</th><th>Oil Gravity Corr. API</th><th>Gas Gravity</th><th>Production Method</th></tr></thead><tbody><tr><td></td><td></td><td></td><td>→</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Choke Size</td><td>Tbg Press Flwg</td><td>Csg. Press.</td><td>24 Hr. Rate</td><td>Oil BBL</td><td>Gas MCF</td><td>Water BBL</td><td>Gas/Oil Ratio</td><td>Well Status</td><td></td></tr><tr><td></td><td>SI</td><td></td><td>→</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>				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		→																										
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 - NMOCD

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
				Yates	1,018'
				Queen	1,763'
				San Andres	2,519'
				Glorieta	4,014'
				Abo	6,006'
				Wolfcamp	7,330'
				Strawn	9,390'
				Atoka	9,884'
				Morrow	10,158'
				Mississippian	10,356'

32. Additional remarks (include plugging procedure):

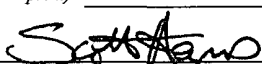
07.26.08 Installed 25-200 HHBC-20-2 Quinn pump

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:

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) Scott Haynes Title Regulatory Analyst

Signature  Date December 15, 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.

Acid, Fracture, Treatment, Cement Squeeze, etc. Attachment
Nitro 11 Federal No. 2
11-16S-29E
Eddy County, NM

Depth Interval	Amount and Type of Material Used
Stage 1 10795'-11514'	Pump 119 bbl 15% HCl NeFe acid, 333 bbl slick water, 238 bbl Deepspot 15% HCl acid, 595 bbl slick water, 238 bbl Lightning 2,000 x-linker pad, 0.5 to 1. ppg 30/50# white sand on lightning 2,000 gel, 1667 bbls slick water & flush with 20# liner gel. Pumped down 7" & 4½" liner 60 BPM. Max psi 7282#. Drop 2½" ball. Pump 95 bbl of 15% HCl NeFe acid, & 166 bbl slick water, seat ball, open port at 10,448' at 4796#. 15,000# 30/50.
Stage 2 10147'-10795'	Cont pumping 155 bbl slick water, SD, ISIP 4240#, 36 bbls slick water, 238 bbl Deepspot 15% HCl acid, 595 bbl slick water, 238 bbl Lightning 2,000 x-linker pad, 0.5 to 1 ppg 30/50# white sand on Lighting 2,000 gel, 1429 bbl slick water & flush with 20# liner gel, Drop 2¾" ball. Pump 119 bbls 15% HCl NeFe acid, 142 bbl slick water, seat ball, open port at 9,714' at 5113#. Max psi 6,344#. Avg rate 60 BPM. 15000# 30/50 white sand.
Stage 3 9290'-10147'	Cont pumping 168 bbl slick water,SD, ISIP 4300#, 286 bbls slick water, 238 bbl Deepspot 15% HCl acid, 595 bbl slick water, 238 bbl Lightning 2,000 x-linker pad, 0.5 to 1 ppg 30/50# white sand on Lighting 2,000 gel, 2143 bbl slick water & flush with 20# liner gel. Drop 3" ball. 143 bbl 15% HCl NeFe acid, 134 bbl slick water, seat ball, open port at 8436' at 5300#, Max psi 7456#. Avg rate 70 BPM. . 17500 # 30/50# sand.
Stage 4 8820'-9290'	Cont pumping 152 bbl slick water, sd, ISIP 4958#, 286 bbls slick water, 286 bbl Deepspot 15% HCl acid, 595 bbl slick water, 238 bbl Lightning 2000 x-linker pad, 0.5 to 1 ppg 30/50# white sand on Lighting 2,000 gel, 3214 bbl slick water & flush with 20# liner gel. Drop 3.25" ball. 95 bbl 15% HCl NeFe acid, 120 bbl slick water, seat ball, open port at 7608' at 4537#. Max psi 6,173#. Avg rate 70 BPM. 20000# 30/50 white sand.
Stage 5 7084'-8220'	Cont pumping 154 bbl slick water, SD, ISIP 4300#, 83 bbls slick water, 238 bbl Deepspot 15% HCl acid, 476 bbl slick water, 238 bbl lightning 2,000 x-linker pad, 0.5 to 1 ppg 30/50 sand in lightning 2000 gel, 1667 bbl slick waterflush with 270 bbls 20# liner gel. Max psi 5518#. Avg rate 60 BPM. 15000# 30/50 white sand.

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

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-36100	Pool Code 97197	Pool Name Countyline Tank; Abo
Property Code	Property Name NITRO "11" FEDERAL	Well Number 2
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3735'

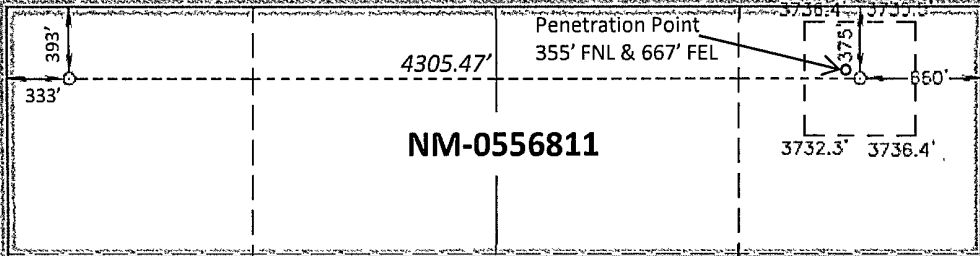
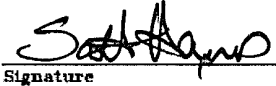
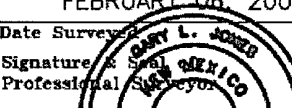
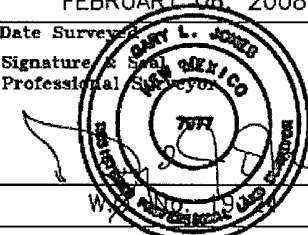
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	11	16 S	29 E		375	NORTH	660	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
D	11	16 S	29 E		393	NORTH	333	WEST	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

		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 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.  Signature 12-12-08 Date Scott Haynes Printed Name
BOTTOM HOLE LOCATION Lat - N32°56'32.568" Long - W104°03'10.819"	SURFACE LOCATION Lat - N32°56'32.63" Long - W104°02'20.30" NMSPCE- N 706705.6 E 631640.6 (NAD-83)	
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. FEBRUARY 06, 2008 Date Surveyed  Signature Professional Surveyor  Certificate No. Gary L. Jones 7977 BASIN SURVEYS		

	sx	yeild	volume,ft3
Lead	550	2.77	1523.5
Tail	475	1.62	<u>769.5</u>
			2293

	Volume factors				
(tubular)	Inside 7"	0.214829 ft3/ft			
(annular)	7" X 8 3/4" hole	0.15033 ft3/ft	with	1.38 loss	0.357603 ft3/ft
(annular)	7" X 9 5/8" csg	0.158483 ft3/ft	with	0.10 loss	0.174331 ft3/ft

Production String depth	7715 ft
Intermediate String depth	2515 ft
Float Length	90 ft

Inside 7" (tail)

Length, ft	88
Volume , ft3	18.90495

Remaining tail, ft3	750.595
---------------------	---------

7" X 8 3/4"

Tail RemaingVol, ft3	750.595
Length, ft (tail)	2098.962
TOT Depth, ft	5616.038

Length, ft (TOT to int)	3101.038
Volume	1108.94

Remaining lead, ft3	414.5598
---------------------	----------

7" X 9 5/8"

Remaing lead Vol, ft3	414.5598
Length, ft	2378
depth, ft	100



WINDOW @ 6477' FTS

3.06 Strata Port 7608'

ANCHOR #2 7660'

ISO PAK #4 8220'

2.81 ID Port 8436'

ISO Pak #3 9290'

2.56 ID Strata Port 9714'

ISO Pak #2 10147'

2.31" Strata Port 10448'

ISO Pak#1 10795'

Anchor #1 10893'

Pumpout Plug 11149'

Top of RSB Packer 6950'

DOWNHOLE WELL PROFILE

WELL NAME	Nitro 11 Fed 2h	DATE	6/19/08
SUPERVISOR	Leo	TOOL HAND	James Daugherty
PHONE #		PHONE #	432-664-6392
RIG #	Patterson 74	FIELD TICKET #	

ELEVATIONS

KB ELEV	GL ELEV	KB TO THF	KB TO SCF	RIG KBD	PBTD
CASING / OPEN HOLE LAYOUT		OD (IN)	LANDED DEPTH	WEIGHT (LB/FT)	TOP OF (FTKB)
CASING DESCRIPTION		7		26#	
WINDOW DESCRIPTION					
OPEN HOLE DESCRIPTION		6.125		JUNCTION @	6477'

DESCRIPTION

STEERING DIRECTIONS

DOWNHOLE DESCRIPTION FROM BOTTOM UP (Tubing String)

BOTTOM @	DESCRIPTION	LENGTH	ID	OD
11149.00	Pumpout Plug	0.91	0.750	4.430
11148.09	XO 4 1/2 LTC BOX x 3 1/2 8 Rd Pin	0.63	3.000	5.188
11147.46	6 Jts 4 1/2 11.6# P-110 LTC Liner	249.73	4.000	4.500
10897.73	2 Ft Pup Jt 4 1/2 LTC 11.6# P-110	1.72	4.000	4.500
10896.01	5 7/8 Open Hole Anchor 1	4.90	3.995	5.875
10891.11	6 Ft Pup Jt 4 1/2 LTC 11.6# P-110	5.79	4.000	4.500
10885.32	2 Jts 4 1/2 11.6# P-110 Liner	84.25	4.000	4.500
10801.07	2 Ft Pup Jt 4 1/2 LTC 11.6# P-110	2.09	3.995	4.500
10798.98	5 7/8 ISO PAK 1	6.10	3.995	5.875
10792.88	6 Ft Pup Jt 4 1/2 LTC 11.6# P-110	6.08	4.000	4.500
10786.80	8 Jts 4 1/2 11.6# P-110 LTC LINER	337.24	4.000	4.500
10449.56	Strata Port 2.31" ID	2.90	2.310	5.875
10446.66	7 Jts 4 1/2 11.6# P-110 LTC Liner	294.47	4.000	4.500
10152.19	2 Ft Pup Jt 4 1/2 LTC 11.6# P-110	2.10	4.000	5.875
10150.09	5 7/8 ISO PAK 2	6.09	3.995	5.875
10144.00	6 Ft Pup Jt 4 1/2 LTC 11.6# P-110	6.08	4.000	4.500
10137.92	10 Jts 4 1/2 11.6# P-110 LTC Liner	422.89	4.000	4.500
9715.03	Strata Port 2.56" ID	2.90	2.560	5.875
9712.13	10 Jts 4 1/2 11.6# P-110 LTC Liner	417.09	4.000	4.500
9295.04	2 Ft Pup Jt 4 1/2 LTC 11.6# P-110	1.99	4.000	4.500
9293.05	5 7/8 ISO PAK 3	6.10	3.995	5.875
9286.95	6 Ft Pup Jt 4 1/2 LTC 11.6# P-110	6.09	4.000	4.500
9280.86	20 Jts 4 1/2 11.6# P-110 LTC Liner	843.38	4.000	4.500
8437.48	Strata Port 2.81" ID	2.90	2.810	5.875
8434.58	5 Jts 4 1/2 11.6# P-110 LTC Liner	210.07	4.000	4.500
8224.51	2 Ft Pup Jt 4 1/2 LTC 11.6# P-110	2.10	4.000	4.500
8222.41	5 7/8 ISO PAK 4	6.10	3.995	5.875
8216.31	6 Ft Pup Jt 4 1/2 LTC 11.6# P-110	6.11	4.000	4.500
8210.20	13 Jts 4 1/2 11.6# P-110 LTC Liner	545.16	4.000	4.500
7665.04	2 Ft Pup Jt 4 1/2 LTC 11.6# P-110	2.09	4.000	4.500
7662.95	5 7/8 Open Hole Anchor 2	4.90	3.995	5.875
7658.05	6 Ft Pup Jt 4 1/2 LTC 11.6# P-110	6.10	4.000	4.500
7651.95	1 Jt 4 1/2 11.6# P-110 LTC Liner	42.10	4.000	4.500
7609.85	Strata Port 3.06" ID	2.90	3.060	5.875
7606.95	2 Ft Pup Jt 4 1/2 BTC Box x LTC Pin	2.16	4.000	4.500
7604.79	15 Jts 4 1/2 11.6# P-110 BTC Liner	647.48	4.000	4.500
6957.31	Double Pin 4 1/2 LTC x 4 1/2 BTC	1.42	4.000	4.500
6955.89	7" 26# x 4" RSB Packer	5.47	4.000	5.940
6950.42	Hydraulic Setting Tool	5.06	3.500	5.810
6945.36	XO 3 1/2 IF BOX x 3 1/2 8 Rd Pin	0.95	2.992	4.820
6944.41	8 Ft Pup Jt 3 1/2 IF	7.67	2.250	3.500
6936.74	216 Jts 3 1/2 IF DP 13.3#	6937.23		

-0.49	Stickup			
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				
-0.49				

WEIGHT OF STRING	110k	TOTAL STRING LENGTH	3486.05
PUSH / PULL TEST	25K	STICK-UP OFF RIG FLOOR	7658.05
LINER STRING WEIGHT	5K	TUBING BOTTOM	11149.00

TOTAL MEASURED DEPTH
@ 11514' FT

*** CONFIDENTIAL ***
NOT TO BE DISCLOSED OUTSIDE
** Cimarex Energy **

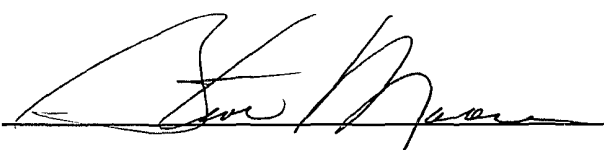
OPERATOR Cimarex Energy Company
WELL/LEASE Nitro 11 Fed. 2 H
COUNTY Eddy RIG 74

STATE OF NEW MEXICO
DEVIATION REPORT

254	0.25
456	0.50
915	0.75
1,409	0.75
2,010	1.00
2,767	1.00
3,052	0.75
3,562	0.75
4,069	1.00
4,578	1.00
5,087	1.00
5,591	0.50
6,103	1.00
6,612	1.00
7,088	2.00
7,184	1.25
7,309	1.00
7,715	1.00

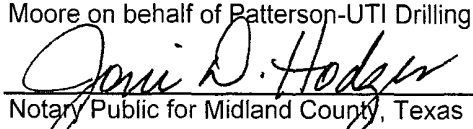
STATE OF TEXAS

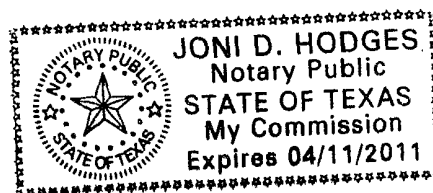
COUNTY OF MIDLAND

BY: 

The foregoing instrument was acknowledged before me on
Moore on behalf of Patterson-UTI Drilling Company LLC.

July 7th, 2008 , by Steve


Notary Public for Midland County, Texas
My Commission Expires: 4/11/11





Actual Wellpath Report

No. 2H AWP

Page 1 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999918	Report Generated	6/20/2008 at 12:11:27 PM
Convergence at slot	0.16° East	Database/Source file	WA_Midland/No. 2H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	631640.60	706705.60	32°56'32.633"N	104°02'20.298"W
Facility Reference Pt			631640.60	706705.60	32°56'32.633"N	104°02'20.298"W
Field Reference Pt			631977.90	703778.60	32°56'03.661"N	104°02'16.437"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 2H SHL (RT) to Facility Vertical Datum	22.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 2H SHL (RT) to Mean Sea Level	3757.00ft
Vertical Reference Pt	Rig on No. 2H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	270.00°



Actual Wellpath Report

No. 2H AWP

Page 2 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
0.00	0.000	257.770	0.00	0.00	0.00	0.00	631640.60	706705.60	32°56'32.633"N	104°02'20.298"W	0.00	0.000	0.00
149.00	0.180	257.770	149.00	0.23	-0.05	-0.23	631640.37	706705.55	32°56'32.632"N	104°02'20.301"W	0.23	257.770	0.12
242.00	0.210	241.800	242.00	0.52	-0.16	-0.52	631640.08	706705.44	32°56'32.631"N	104°02'20.305"W	0.55	252.843	0.07
334.00	0.330	127.830	334.00	0.46	-0.40	-0.46	631640.14	706705.20	32°56'32.629"N	104°02'20.304"W	0.61	228.826	0.50
427.00	0.440	124.480	427.00	-0.04	-0.77	-0.04	631640.64	706704.83	32°56'32.625"N	104°02'20.298"W	0.77	176.664	0.12
520.00	0.120	307.340	520.00	-0.26	-0.91	0.26	631640.86	706704.69	32°56'32.624"N	104°02'20.295"W	0.95	163.996	0.60
613.00	0.610	267.540	612.99	0.31	-0.87	-0.31	631640.29	706704.73	32°56'32.624"N	104°02'20.302"W	0.93	199.525	0.56
705.00	0.470	279.220	704.99	1.17	-0.84	-1.17	631639.43	706704.76	32°56'32.625"N	104°02'20.312"W	1.44	234.516	0.19
798.00	0.370	293.250	797.99	1.82	-0.66	-1.82	631638.78	706704.94	32°56'32.626"N	104°02'20.320"W	1.94	250.228	0.15
889.00	0.330	353.350	888.99	2.12	-0.28	-2.12	631638.48	706705.32	32°56'32.630"N	104°02'20.323"W	2.14	262.505	0.39
981.00	0.320	15.060	980.98	2.09	0.23	-2.09	631638.51	706705.83	32°56'32.635"N	104°02'20.323"W	2.10	276.330	0.13
1073.00	0.350	15.100	1072.98	1.95	0.75	-1.95	631638.65	706706.35	32°56'32.640"N	104°02'20.321"W	2.09	291.079	0.03
1165.00	0.320	22.290	1164.98	1.78	1.26	-1.78	631638.82	706706.86	32°56'32.645"N	104°02'20.319"W	2.18	305.325	0.06
1292.00	0.270	356.070	1291.98	1.66	1.89	-1.66	631638.94	706707.49	32°56'32.651"N	104°02'20.318"W	2.52	318.590	0.11
1387.00	0.220	9.310	1386.98	1.65	2.29	-1.65	631638.95	706707.89	32°56'32.655"N	104°02'20.318"W	2.82	324.230	0.08
1482.00	0.340	351.910	1481.98	1.66	2.75	-1.66	631638.94	706708.35	32°56'32.660"N	104°02'20.318"W	3.21	328.875	0.15
1578.00	0.340	346.560	1577.98	1.77	3.31	-1.77	631638.83	706708.91	32°56'32.666"N	104°02'20.319"W	3.75	331.901	0.03
1673.00	0.370	349.080	1672.97	1.89	3.88	-1.89	631638.71	706709.48	32°56'32.671"N	104°02'20.321"W	4.32	334.050	0.04
1769.00	0.200	323.520	1768.97	2.05	4.32	-2.05	631638.55	706709.92	32°56'32.676"N	104°02'20.322"W	4.78	334.646	0.22
1864.00	0.060	53.290	1863.97	2.11	4.49	-2.11	631638.49	706710.09	32°56'32.677"N	104°02'20.323"W	4.96	334.840	0.22
1959.00	0.020	288.910	1958.97	2.08	4.52	-2.08	631638.52	706710.12	32°56'32.678"N	104°02'20.323"W	4.98	335.264	0.08
2055.00	0.050	151.110	2054.97	2.08	4.49	-2.08	631638.52	706710.09	32°56'32.677"N	104°02'20.323"W	4.95	335.158	0.07
2150.00	0.140	265.700	2149.97	2.17	4.44	-2.17	631638.43	706710.04	32°56'32.677"N	104°02'20.324"W	4.95	333.934	0.18
2245.00	0.120	6.810	2244.97	2.28	4.53	-2.28	631638.32	706710.13	32°56'32.678"N	104°02'20.325"W	5.07	333.326	0.21
2341.00	0.090	209.050	2340.97	2.30	4.57	-2.30	631638.30	706710.17	32°56'32.678"N	104°02'20.325"W	5.12	333.250	0.21
2436.00	0.140	122.500	2435.97	2.24	4.44	-2.24	631638.36	706710.04	32°56'32.677"N	104°02'20.325"W	4.97	333.222	0.17
2532.00	0.220	222.470	2531.97	2.27	4.24	-2.27	631638.33	706709.84	32°56'32.675"N	104°02'20.325"W	4.81	331.883	0.29
2627.00	0.260	258.110	2626.97	2.60	4.06	-2.60	631638.00	706709.66	32°56'32.673"N	104°02'20.329"W	4.82	327.377	0.16
2722.00	0.680	314.610	2721.97	3.21	4.41	-3.21	631637.39	706710.01	32°56'32.677"N	104°02'20.336"W	5.46	323.952	0.61
2817.00	0.580	299.290	2816.96	4.03	5.05	-4.03	631636.57	706710.65	32°56'32.683"N	104°02'20.346"W	6.46	321.360	0.21



Actual Wellpath Report

No. 2H AWP

Page 3 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
2913.00	0.520	238.030	2912.96	4.83	5.05	-4.83	631635.77	706710.65	32°56'32.683"N	104°02'20.355"W	6.99	316.309	0.59
3008.00	0.600	225.110	3007.95	5.54	4.47	-5.55	631635.06	706710.07	32°56'32.677"N	104°02'20.363"W	7.12	308.894	0.16
3104.00	0.460	301.520	3103.95	6.23	4.32	-6.23	631634.37	706709.92	32°56'32.676"N	104°02'20.371"W	7.58	304.740	0.69
3199.00	0.400	296.610	3198.95	6.85	4.67	-6.85	631633.75	706710.27	32°56'32.679"N	104°02'20.379"W	8.29	304.268	0.07
3294.00	0.420	324.300	3293.95	7.35	5.10	-7.35	631633.25	706710.70	32°56'32.683"N	104°02'20.385"W	8.95	304.749	0.21
3389.00	0.450	283.310	3388.94	7.92	5.47	-7.92	631632.68	706711.07	32°56'32.687"N	104°02'20.391"W	9.62	304.631	0.32
3485.00	0.410	274.330	3484.94	8.63	5.58	-8.63	631631.97	706711.18	32°56'32.688"N	104°02'20.400"W	10.27	302.900	0.08
3580.00	0.230	14.570	3579.94	8.92	5.79	-8.92	631631.68	706711.39	32°56'32.690"N	104°02'20.403"W	10.63	302.999	0.53
3675.00	0.330	14.710	3674.94	8.80	6.24	-8.80	631631.80	706711.84	32°56'32.695"N	104°02'20.402"W	10.79	305.340	0.11
3771.00	0.320	31.730	3770.94	8.59	6.74	-8.59	631632.01	706712.33	32°56'32.700"N	104°02'20.399"W	10.91	308.104	0.10
3872.00	0.380	4.450	3871.94	8.41	7.31	-8.41	631632.19	706712.91	32°56'32.705"N	104°02'20.397"W	11.15	310.979	0.17
3962.00	0.360	47.250	3961.93	8.18	7.80	-8.18	631632.42	706713.40	32°56'32.710"N	104°02'20.394"W	11.30	313.620	0.30
4057.00	0.420	310.300	4056.93	8.23	8.23	-8.23	631632.37	706713.83	32°56'32.714"N	104°02'20.395"W	11.64	314.987	0.62
4152.00	0.660	80.880	4151.93	7.95	8.54	-7.96	631632.65	706714.14	32°56'32.717"N	104°02'20.392"W	11.67	317.024	1.04
4247.00	0.880	21.900	4246.92	7.14	9.30	-7.14	631633.46	706714.90	32°56'32.725"N	104°02'20.382"W	11.73	322.479	0.82
4343.00	0.900	11.010	4342.91	6.72	10.73	-6.72	631633.88	706716.33	32°56'32.739"N	104°02'20.377"W	12.66	327.917	0.18
4438.00	0.820	358.280	4437.90	6.60	12.14	-6.60	631634.00	706717.74	32°56'32.753"N	104°02'20.376"W	13.82	331.458	0.22
4534.00	0.670	7.180	4533.89	6.55	13.38	-6.55	631634.05	706718.98	32°56'32.765"N	104°02'20.375"W	14.90	333.910	0.20
4629.00	0.540	328.030	4628.89	6.72	14.31	-6.72	631633.88	706719.91	32°56'32.775"N	104°02'20.377"W	15.81	334.848	0.45
4725.00	0.400	344.530	4724.88	7.05	15.02	-7.05	631633.55	706720.62	32°56'32.782"N	104°02'20.381"W	16.59	334.858	0.20
4820.00	0.250	46.000	4819.88	6.99	15.48	-6.99	631633.61	706721.08	32°56'32.786"N	104°02'20.380"W	16.99	335.707	0.38
4916.00	0.250	356.940	4915.88	6.85	15.84	-6.85	631633.75	706721.44	32°56'32.790"N	104°02'20.378"W	17.25	336.614	0.22
5011.00	0.370	311.600	5010.88	7.09	16.25	-7.09	631633.51	706721.85	32°56'32.794"N	104°02'20.381"W	17.73	336.427	0.28
5106.00	0.350	264.350	5105.88	7.61	16.42	-7.61	631632.99	706722.02	32°56'32.795"N	104°02'20.387"W	18.10	335.145	0.30
5202.00	0.360	299.120	5201.88	8.16	16.54	-8.16	631632.44	706722.14	32°56'32.797"N	104°02'20.394"W	18.45	333.734	0.22
5297.00	0.290	308.600	5296.88	8.61	16.84	-8.61	631631.99	706722.43	32°56'32.800"N	104°02'20.399"W	18.91	332.911	0.09
5392.00	0.190	344.640	5391.88	8.84	17.14	-8.84	631631.76	706722.74	32°56'32.803"N	104°02'20.402"W	19.28	332.712	0.19
5487.00	0.320	301.500	5486.87	9.11	17.43	-9.11	631631.49	706723.03	32°56'32.805"N	104°02'20.405"W	19.67	332.406	0.23
5583.00	0.230	14.260	5582.87	9.29	17.76	-9.29	631631.31	706723.35	32°56'32.809"N	104°02'20.407"W	20.04	332.380	0.35
5678.00	0.360	24.650	5677.87	9.12	18.21	-9.12	631631.48	706723.81	32°56'32.813"N	104°02'20.405"W	20.37	333.403	0.15



Actual Wellpath Report

No. 2H AWP

Page 4 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
5773.00	0.400	23.650	5772.87	8.86	18.79	-8.86	631631.74	706724.38	32°56'32.819"N	104°02'20.402"W	20.77	334.748	0.04
5868.00	0.420	69.660	5867.87	8.40	19.21	-8.40	631632.20	706724.81	32°56'32.823"N	104°02'20.396"W	20.97	336.379	0.34
5964.00	0.400	59.390	5963.87	7.78	19.50	-7.78	631632.82	706725.10	32°56'32.826"N	104°02'20.389"W	21.00	338.245	0.08
5059.00	0.550	62.640	6058.86	7.09	19.88	-7.09	631633.51	706725.48	32°56'32.830"N	104°02'20.381"W	21.11	340.367	0.16
5156.00	0.540	71.460	6155.86	6.24	20.24	-6.25	631634.35	706725.84	32°56'32.833"N	104°02'20.371"W	21.18	342.851	0.09
5250.00	0.470	126.620	6249.85	5.52	20.15	-5.52	631635.08	706725.75	32°56'32.832"N	104°02'20.363"W	20.89	344.691	0.50
5345.00	0.190	95.240	6344.85	5.05	19.91	-5.05	631635.55	706725.50	32°56'32.830"N	104°02'20.357"W	20.54	345.773	0.34
5441.00	0.030	17.470	6440.85	4.88	19.92	-4.88	631635.72	706725.51	32°56'32.830"N	104°02'20.355"W	20.50	346.229	0.19
5536.00	0.590	121.960	6535.85	4.46	19.68	-4.46	631636.14	706725.28	32°56'32.828"N	104°02'20.350"W	20.18	347.235	0.63
5631.00	1.130	94.180	6630.84	3.11	19.35	-3.11	631637.49	706724.95	32°56'32.824"N	104°02'20.334"W	19.60	350.873	0.70
5726.00	1.200	96.040	6725.82	1.18	19.18	-1.19	631639.41	706724.78	32°56'32.823"N	104°02'20.312"W	19.22	356.462	0.08
5822.00	1.130	150.290	6821.80	-0.28	18.25	0.28	631640.88	706723.85	32°56'32.813"N	104°02'20.295"W	18.25	0.889	1.11
5917.00	0.540	136.400	6916.79	-1.06	17.11	1.06	631641.66	706722.71	32°56'32.802"N	104°02'20.286"W	17.15	3.531	0.65
7012.00	0.190	113.090	7011.79	-1.51	16.73	1.51	631642.11	706722.33	32°56'32.798"N	104°02'20.280"W	16.80	5.157	0.39
7106.00	5.300	268.700	7105.66	-2.69	16.57	-2.69	631637.91	706722.17	32°56'32.797"N	104°02'20.330"W	16.79	350.777	5.82
7139.00	14.000	275.500	7138.16	8.20	16.92	-8.20	631632.40	706722.52	32°56'32.800"N	104°02'20.394"W	18.80	334.145	26.54
7171.00	22.900	272.900	7168.49	18.29	17.60	-18.29	631622.31	706723.20	32°56'32.807"N	104°02'20.513"W	25.39	313.907	27.92
7203.00	31.500	271.100	7196.92	32.89	18.08	-32.89	631607.71	706723.68	32°56'32.813"N	104°02'20.684"W	37.54	298.797	26.99
7234.00	40.500	268.500	7221.98	51.09	17.97	-51.09	631589.51	706723.57	32°56'32.812"N	104°02'20.897"W	54.16	289.380	29.44
7266.00	50.000	266.400	7244.48	73.76	16.93	-73.77	631566.84	706722.53	32°56'32.802"N	104°02'21.164"W	75.68	282.925	30.05
7298.00	59.200	265.300	7263.00	99.75	15.03	-99.75	631540.86	706720.63	32°56'32.784"N	104°02'21.468"W	100.88	278.568	28.89
7326.00	67.200	264.500	7275.62	124.62	12.80	-124.62	631515.99	706718.40	32°56'32.763"N	104°02'21.760"W	125.28	275.865	28.68
7359.00	75.100	266.800	7286.27	155.74	10.45	-155.74	631484.87	706716.05	32°56'32.740"N	104°02'22.126"W	156.09	273.839	24.83
7391.00	79.500	265.500	7293.30	186.88	8.35	-186.88	631453.74	706713.95	32°56'32.721"N	104°02'22.491"W	187.06	272.559	14.31
7422.00	82.500	271.100	7298.16	217.46	7.45	-217.47	631423.15	706713.05	32°56'32.712"N	104°02'22.850"W	217.59	271.962	20.30
7454.00	84.800	267.200	7301.70	249.26	6.98	-249.26	631391.36	706712.58	32°56'32.709"N	104°02'23.223"W	249.35	271.603	14.08
7487.00	85.400	272.500	7304.52	282.12	6.89	-282.12	631358.50	706712.49	32°56'32.709"N	104°02'23.609"W	282.21	271.399	16.10
7518.00	86.600	272.300	7306.68	313.02	8.19	-313.02	631327.61	706713.79	32°56'32.722"N	104°02'23.971"W	313.13	271.498	3.92
7550.00	88.200	270.500	7308.13	344.98	8.97	-344.98	631295.65	706714.57	32°56'32.731"N	104°02'24.346"W	345.09	271.489	7.52
7582.00	88.500	273.400	7309.05	376.94	10.06	-376.94	631263.69	706715.65	32°56'32.743"N	104°02'24.721"W	377.08	271.528	9.41



Actual Wellpath Report

No. 2H AWP

Page 5 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
7613.00	90.400	270.900	7309.35	407.91	11.22	-407.91	631232.72	706716.82	32°56'32.755"N	104°02'25.085"W	408.07	271.575	10.13
7645.00	90.900	269.600	7308.99	439.91	11.36	-439.91	631200.73	706716.96	32°56'32.757"N	104°02'25.460"W	440.06	271.479	4.35
7677.00	90.900	270.400	7308.49	471.91	11.36	-471.91	631168.73	706716.96	32°56'32.758"N	104°02'25.835"W	472.04	271.379	2.50
7709.00	89.600	270.400	7308.35	503.90	11.58	-503.90	631136.74	706717.18	32°56'32.761"N	104°02'26.211"W	504.04	271.317	4.06
7740.00	87.100	273.600	7309.24	534.87	12.66	-534.87	631105.78	706718.26	32°56'32.773"N	104°02'26.574"W	535.02	271.356	13.10
7772.00	86.900	272.200	7310.91	566.78	14.28	-566.78	631073.87	706719.88	32°56'32.790"N	104°02'26.949"W	566.96	271.443	4.41
7804.00	88.400	272.200	7312.23	598.73	15.51	-598.73	631041.92	706721.10	32°56'32.803"N	104°02'27.323"W	598.93	271.483	4.69
7836.00	88.500	273.300	7313.09	630.68	17.04	-630.68	631009.97	706722.64	32°56'32.819"N	104°02'27.698"W	630.91	271.548	3.45
7868.00	88.700	272.700	7313.87	662.63	18.71	-662.63	630978.03	706724.31	32°56'32.836"N	104°02'28.073"W	662.89	271.618	1.98
7900.00	88.600	271.900	7314.63	694.59	20.00	-694.59	630946.07	706725.60	32°56'32.850"N	104°02'28.448"W	694.88	271.649	2.52
7932.00	88.400	265.200	7315.47	726.55	19.19	-726.55	630914.11	706724.79	32°56'32.843"N	104°02'28.823"W	726.81	271.513	20.94
7964.00	88.400	267.500	7316.36	758.47	17.15	-758.47	630882.19	706722.75	32°56'32.823"N	104°02'29.198"W	758.67	271.296	7.18
7996.00	89.900	269.400	7316.83	790.45	16.29	-790.46	630850.21	706721.89	32°56'32.816"N	104°02'29.573"W	790.62	271.180	7.56
8028.00	90.300	269.200	7316.78	822.45	15.90	-822.45	630818.22	706721.50	32°56'32.813"N	104°02'29.949"W	822.61	271.107	1.40
8060.00	90.200	269.100	7316.64	854.45	15.42	-854.45	630786.22	706721.02	32°56'32.809"N	104°02'30.324"W	854.59	271.034	0.44
8091.00	90.000	269.000	7316.58	885.44	14.91	-885.44	630755.23	706720.51	32°56'32.805"N	104°02'30.688"W	885.57	270.965	0.72
8123.00	89.800	269.900	7316.64	917.44	14.60	-917.44	630723.23	706720.20	32°56'32.802"N	104°02'31.063"W	917.56	270.912	2.88
8155.00	90.800	267.300	7316.47	949.43	13.82	-949.43	630691.25	706719.42	32°56'32.796"N	104°02'31.438"W	949.53	270.834	8.71
8187.00	90.100	267.500	7316.22	981.39	12.37	-981.40	630659.29	706717.97	32°56'32.782"N	104°02'31.814"W	981.47	270.722	2.28
8219.00	91.600	269.900	7315.75	1013.38	11.64	-1013.38	630627.30	706717.24	32°56'32.776"N	104°02'32.189"W	1013.45	270.658	8.84
8251.00	92.300	267.300	7314.66	1045.35	10.86	-1045.35	630595.34	706716.46	32°56'32.769"N	104°02'32.564"W	1045.41	270.595	8.41
8283.00	92.400	267.000	7313.35	1077.28	9.27	-1077.28	630563.41	706714.87	32°56'32.754"N	104°02'32.939"W	1077.32	270.493	0.99
8314.00	92.300	269.900	7312.07	1108.24	8.43	-1108.24	630532.45	706714.03	32°56'32.747"N	104°02'33.302"W	1108.27	270.436	9.35
8346.00	92.300	270.500	7310.79	1140.22	8.54	-1140.22	630500.48	706714.14	32°56'32.749"N	104°02'33.677"W	1140.25	270.429	1.87
8378.00	92.100	267.700	7309.56	1172.18	8.04	-1172.19	630468.51	706713.64	32°56'32.745"N	104°02'34.052"W	1172.21	270.393	8.77
8410.00	93.400	267.600	7308.03	1204.12	6.73	-1204.12	630436.58	706712.33	32°56'32.732"N	104°02'34.427"W	1204.14	270.320	4.07
8442.00	93.500	268.800	7306.10	1236.05	5.73	-1236.05	630404.66	706711.33	32°56'32.723"N	104°02'34.802"W	1236.06	270.266	3.76
8473.00	93.300	270.200	7304.26	1266.99	5.46	-1266.99	630373.72	706711.06	32°56'32.722"N	104°02'35.165"W	1267.00	270.247	4.55
8505.00	93.200	268.200	7302.45	1298.93	5.01	-1298.93	630341.77	706710.61	32°56'32.718"N	104°02'35.540"W	1298.94	270.221	6.25
8537.00	93.400	270.900	7300.60	1330.88	4.76	-1330.88	630309.83	706710.36	32°56'32.716"N	104°02'35.915"W	1330.89	270.205	8.45



Actual Wellpath Report

No. 2H AWP

Page 6 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
3568.00	91.100	270.500	7299.39	1361.85	5.14	-1361.85	630278.87	706710.74	32°56'32.721"N	104°02'36.278"W	1361.86	270.216	7.53
3600.00	90.900	270.300	7298.83	1393.84	5.36	-1393.84	630246.87	706710.96	32°56'32.724"N	104°02'36.653"W	1393.85	270.220	0.88
3632.00	90.700	270.600	7298.38	1425.84	5.61	-1425.84	630214.88	706711.21	32°56'32.727"N	104°02'37.029"W	1425.85	270.226	1.13
3664.00	90.700	268.700	7297.99	1457.83	5.42	-1457.83	630182.89	706711.02	32°56'32.726"N	104°02'37.404"W	1457.84	270.213	5.94
3696.00	91.500	269.900	7297.38	1489.82	5.03	-1489.83	630150.90	706710.63	32°56'32.723"N	104°02'37.780"W	1489.83	270.193	4.51
3728.00	91.500	268.400	7296.54	1521.81	4.55	-1521.81	630118.92	706710.15	32°56'32.720"N	104°02'38.155"W	1521.82	270.171	4.69
3760.00	91.300	270.500	7295.76	1553.80	4.25	-1553.80	630086.93	706709.85	32°56'32.717"N	104°02'38.530"W	1553.80	270.157	6.59
3792.00	91.300	270.300	7295.03	1585.79	4.47	-1585.79	630054.94	706710.07	32°56'32.720"N	104°02'38.906"W	1585.79	270.162	0.62
3823.00	91.400	266.600	7294.30	1616.76	3.63	-1616.76	630023.97	706709.23	32°56'32.713"N	104°02'39.269"W	1616.77	270.129	11.94
3855.00	91.100	269.200	7293.60	1648.73	2.46	-1648.73	629992.01	706708.06	32°56'32.702"N	104°02'39.644"W	1648.73	270.085	8.18
3887.00	92.300	268.300	7292.65	1680.71	1.76	-1680.71	629960.03	706707.36	32°56'32.696"N	104°02'40.020"W	1680.71	270.060	4.69
3919.00	92.300	268.300	7291.37	1712.67	0.81	-1712.67	629928.07	706706.41	32°56'32.688"N	104°02'40.395"W	1712.67	270.027	0.00
3951.00	92.100	268.700	7290.14	1744.63	-0.02	-1744.63	629896.11	706705.58	32°56'32.680"N	104°02'40.770"W	1744.63	269.999	1.40
3982.00	92.000	268.000	7289.03	1775.60	-0.92	-1775.60	629865.15	706704.68	32°56'32.672"N	104°02'41.133"W	1775.60	269.970	2.28
4014.00	91.800	267.100	7287.97	1807.55	-2.28	-1807.55	629833.20	706703.32	32°56'32.660"N	104°02'41.508"W	1807.55	269.928	2.88
4046.00	91.800	267.600	7286.97	1839.50	-3.76	-1839.50	629801.25	706701.84	32°56'32.646"N	104°02'41.883"W	1839.51	269.883	1.56
4077.00	91.800	269.900	7285.99	1870.48	-4.44	-1870.48	629770.28	706701.16	32°56'32.640"N	104°02'42.247"W	1870.48	269.864	7.42
4109.00	91.700	267.800	7285.01	1902.46	-5.08	-1902.46	629738.30	706700.52	32°56'32.635"N	104°02'42.622"W	1902.46	269.847	6.57
4141.00	91.600	268.700	7284.09	1934.43	-6.06	-1934.43	629706.33	706699.54	32°56'32.626"N	104°02'42.997"W	1934.44	269.821	2.83
4174.00	91.600	268.300	7283.17	1967.40	-6.92	-1967.40	629673.36	706698.68	32°56'32.618"N	104°02'43.384"W	1967.41	269.798	1.21
4206.00	91.400	271.500	7282.33	1999.39	-6.98	-1999.39	629641.38	706698.63	32°56'32.618"N	104°02'43.759"W	1999.40	269.800	10.02
4238.00	91.000	268.700	7281.66	2031.38	-6.92	-2031.38	629609.39	706698.68	32°56'32.620"N	104°02'44.135"W	2031.39	269.805	8.84
4270.00	90.900	269.100	7281.13	2063.37	-7.53	-2063.37	629577.41	706698.07	32°56'32.615"N	104°02'44.510"W	2063.38	269.791	1.29
4302.00	90.500	269.300	7280.74	2095.36	-7.98	-2095.36	629545.41	706697.62	32°56'32.611"N	104°02'44.885"W	2095.38	269.782	1.40
4334.00	90.900	270.300	7280.35	2127.36	-8.09	-2127.36	629513.42	706697.51	32°56'32.611"N	104°02'45.261"W	2127.37	269.782	3.37
4366.00	90.800	273.300	7279.88	2159.34	-7.09	-2159.34	629481.45	706698.51	32°56'32.622"N	104°02'45.636"W	2159.35	269.812	9.38
4398.00	90.900	273.200	7279.40	2191.28	-5.27	-2191.28	629449.50	706700.33	32°56'32.640"N	104°02'46.011"W	2191.29	269.862	0.44
4430.00	91.300	269.300	7278.79	2223.26	-4.58	-2223.26	629417.53	706701.02	32°56'32.648"N	104°02'46.386"W	2223.27	269.882	12.25
4461.00	91.600	269.800	7278.00	2254.25	-4.82	-2254.25	629386.54	706700.78	32°56'32.647"N	104°02'46.750"W	2254.25	269.878	1.88
4493.00	91.400	268.400	7277.16	2286.23	-5.32	-2286.23	629354.56	706700.28	32°56'32.642"N	104°02'47.125"W	2286.24	269.867	4.42



Actual Wellpath Report

No. 2H AWP

Page 7 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
9525.00	90.300	270.000	7276.69	2318.23	-5.77	-2318.23	629322.57	706699.83	32°56'32.639"N	104°02'47.500"W	2318.23	269.857	6.07
9557.00	90.800	269.600	7276.38	2350.22	-5.88	-2350.22	629290.57	706699.72	32°56'32.639"N	104°02'47.876"W	2350.23	269.857	2.00
9588.00	90.800	269.100	7275.95	2381.22	-6.23	-2381.22	629259.58	706699.37	32°56'32.636"N	104°02'48.240"W	2381.23	269.850	1.61
9620.00	90.300	269.600	7275.64	2413.22	-6.59	-2413.21	629227.59	706699.01	32°56'32.633"N	104°02'48.615"W	2413.22	269.843	2.21
9652.00	89.800	273.100	7275.62	2445.20	-5.84	-2445.20	629195.60	706699.76	32°56'32.642"N	104°02'48.990"W	2445.21	269.863	11.05
9684.00	89.900	269.500	7275.70	2477.19	-5.11	-2477.19	629163.62	706700.49	32°56'32.650"N	104°02'49.366"W	2477.19	269.882	11.25
9714.00	91.000	273.400	7275.46	2507.17	-4.36	-2507.17	629133.64	706701.24	32°56'32.658"N	104°02'49.717"W	2507.17	269.900	13.51
9747.00	91.000	272.700	7274.89	2540.12	-2.60	-2540.12	629100.69	706703.00	32°56'32.676"N	104°02'50.104"W	2540.12	269.941	2.12
9779.00	90.800	270.900	7274.38	2572.10	-1.60	-2572.10	629068.72	706704.00	32°56'32.687"N	104°02'50.479"W	2572.10	269.964	5.66
9810.00	90.700	269.900	7273.98	2603.09	-1.38	-2603.09	629037.72	706704.22	32°56'32.690"N	104°02'50.843"W	2603.09	269.970	3.24
9842.00	90.400	270.900	7273.67	2635.09	-1.16	-2635.09	629005.73	706704.44	32°56'32.693"N	104°02'51.218"W	2635.09	269.975	3.26
9874.00	90.300	269.100	7273.48	2667.09	-1.16	-2667.09	628973.73	706704.44	32°56'32.694"N	104°02'51.594"W	2667.09	269.975	5.63
9906.00	90.300	270.600	7273.31	2699.09	-1.24	-2699.09	628941.74	706704.36	32°56'32.694"N	104°02'51.969"W	2699.09	269.974	4.69
9937.00	90.000	270.100	7273.23	2730.09	-1.05	-2730.09	628910.74	706704.55	32°56'32.697"N	104°02'52.333"W	2730.09	269.978	1.88
9969.00	89.600	269.300	7273.34	2762.09	-1.22	-2762.09	628878.74	706704.38	32°56'32.696"N	104°02'52.708"W	2762.09	269.975	2.80
10001.00	89.100	270.000	7273.70	2794.08	-1.41	-2794.08	628846.75	706704.19	32°56'32.695"N	104°02'53.084"W	2794.08	269.971	2.69
10033.00	89.900	270.800	7273.98	2826.08	-1.19	-2826.08	628814.76	706704.41	32°56'32.698"N	104°02'53.459"W	2826.08	269.976	3.54
10065.00	89.800	272.000	7274.07	2858.07	-0.41	-2858.07	628782.77	706705.19	32°56'32.706"N	104°02'53.835"W	2858.07	269.992	3.76
10096.00	91.200	271.800	7273.79	2889.05	0.62	-2889.05	628751.79	706706.22	32°56'32.717"N	104°02'54.198"W	2889.05	270.012	4.56
10128.00	91.400	272.000	7273.07	2921.03	1.68	-2921.03	628719.82	706707.28	32°56'32.729"N	104°02'54.573"W	2921.03	270.033	0.88
10159.00	91.500	272.700	7272.28	2951.99	2.95	-2951.99	628688.86	706708.55	32°56'32.742"N	104°02'54.937"W	2951.99	270.057	2.28
10191.00	91.400	272.500	7271.47	2983.95	4.40	-2983.95	628656.90	706710.00	32°56'32.757"N	104°02'55.311"W	2983.95	270.085	0.70
10223.00	91.100	273.900	7270.78	3015.89	6.19	-3015.89	628624.96	706711.79	32°56'32.776"N	104°02'55.686"W	3015.89	270.118	4.47
10255.00	90.900	273.700	7270.22	3047.81	8.31	-3047.81	628593.04	706713.91	32°56'32.798"N	104°02'56.061"W	3047.82	270.156	0.88
10287.00	90.800	271.600	7269.74	3079.77	9.79	-3079.77	628561.08	706715.39	32°56'32.813"N	104°02'56.436"W	3079.79	270.182	6.57
10319.00	90.700	272.000	7269.32	3111.75	10.79	-3111.75	628529.11	706716.39	32°56'32.824"N	104°02'56.811"W	3111.77	270.199	1.29
10350.00	90.400	273.100	7269.03	3142.72	12.17	-3142.72	628498.14	706717.77	32°56'32.839"N	104°02'57.174"W	3142.75	270.222	3.68
10382.00	90.400	272.100	7268.80	3174.69	13.62	-3174.69	628466.18	706719.22	32°56'32.854"N	104°02'57.549"W	3174.72	270.246	3.12
10414.00	90.300	271.600	7268.61	3206.67	14.66	-3206.67	628434.20	706720.26	32°56'32.865"N	104°02'57.925"W	3206.70	270.262	1.59
10446.00	90.500	272.600	7268.38	3238.65	15.83	-3238.65	628402.22	706721.43	32°56'32.877"N	104°02'58.300"W	3238.69	270.280	3.19



Actual Wellpath Report

No. 2H AWP

Page 8 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
10478.00	90.400	273.000	7268.13	3270.61	17.39	-3270.61	628370.27	706722.99	32°56'32.894"N	104°02'58.675"W	3270.65	270.305	1.29
10509.00	90.400	273.100	7267.92	3301.56	19.04	-3301.56	628339.31	706724.64	32°56'32.911"N	104°02'59.038"W	3301.62	270.330	0.32
10541.00	90.300	269.400	7267.72	3333.55	19.74	-3333.55	628307.33	706725.34	32°56'32.919"N	104°02'59.413"W	3333.61	270.339	11.57
10573.00	90.400	270.100	7267.53	3365.55	19.60	-3365.55	628275.33	706725.20	32°56'32.918"N	104°02'59.789"W	3365.61	270.334	2.21
10605.00	90.200	270.500	7267.36	3397.55	19.77	-3397.55	628243.34	706725.37	32°56'32.920"N	104°03'00.164"W	3397.61	270.333	1.40
10637.00	89.900	270.900	7267.33	3429.54	20.16	-3429.55	628211.34	706725.76	32°56'32.925"N	104°03'00.540"W	3429.60	270.337	1.56
10669.00	90.200	270.000	7267.30	3461.54	20.41	-3461.54	628179.35	706726.01	32°56'32.929"N	104°03'00.915"W	3461.60	270.338	2.96
10701.00	89.900	268.100	7267.27	3493.54	19.88	-3493.54	628147.35	706725.48	32°56'32.924"N	104°03'01.290"W	3493.59	270.326	6.01
10733.00	89.300	268.300	7267.50	3525.52	18.87	-3525.52	628115.37	706724.47	32°56'32.915"N	104°03'01.666"W	3525.57	270.307	1.98
10765.00	88.800	267.100	7268.03	3557.49	17.59	-3557.49	628083.41	706723.19	32°56'32.903"N	104°03'02.041"W	3557.53	270.283	4.06
10796.00	89.700	266.100	7268.43	3588.43	15.75	-3588.43	628052.47	706721.35	32°56'32.886"N	104°03'02.404"W	3588.47	270.252	4.34
10828.00	89.900	267.400	7268.55	3620.38	13.94	-3620.38	628020.52	706719.54	32°56'32.869"N	104°03'02.779"W	3620.41	270.221	4.11
10860.00	90.800	268.500	7268.35	3652.36	12.79	-3652.36	627988.55	706718.39	32°56'32.858"N	104°03'03.154"W	3652.38	270.201	4.44
10892.00	91.100	267.100	7267.82	3684.33	11.57	-3684.33	627956.58	706717.16	32°56'32.847"N	104°03'03.529"W	3684.35	270.180	4.47
10924.00	91.300	267.600	7267.15	3716.29	10.09	-3716.29	627924.62	706715.69	32°56'32.833"N	104°03'03.904"W	3716.30	270.156	1.68
10956.00	91.300	267.800	7266.42	3748.25	8.80	-3748.25	627892.66	706714.40	32°56'32.821"N	104°03'04.280"W	3748.26	270.135	0.62
10987.00	91.100	267.900	7265.77	3779.22	7.64	-3779.23	627861.69	706713.24	32°56'32.811"N	104°03'04.643"W	3779.23	270.116	0.72
11019.00	91.000	266.400	7265.19	3811.18	6.05	-3811.18	627829.74	706711.65	32°56'32.796"N	104°03'05.018"W	3811.18	270.091	4.70
11051.00	91.000	269.400	7264.63	3843.15	4.88	-3843.15	627797.77	706710.48	32°56'32.785"N	104°03'05.393"W	3843.15	270.073	9.37
11083.00	90.800	266.600	7264.13	3875.12	3.76	-3875.12	627765.80	706709.36	32°56'32.775"N	104°03'05.768"W	3875.12	270.056	8.77
11115.00	90.900	266.600	7263.65	3907.06	1.86	-3907.06	627733.86	706707.46	32°56'32.757"N	104°03'06.143"W	3907.06	270.027	0.31
11147.00	90.800	265.600	7263.18	3938.98	-0.31	-3938.98	627701.94	706705.29	32°56'32.736"N	104°03'06.518"W	3938.98	269.995	3.14
11178.00	90.700	265.400	7262.77	3969.89	-2.75	-3969.89	627671.05	706702.85	32°56'32.713"N	104°03'06.881"W	3969.89	269.960	0.72
11210.00	90.700	265.900	7262.38	4001.79	-5.17	-4001.79	627639.14	706700.43	32°56'32.690"N	104°03'07.255"W	4001.80	269.926	1.56
11242.00	90.200	267.200	7262.13	4033.73	-7.10	-4033.73	627607.20	706698.50	32°56'32.672"N	104°03'07.630"W	4033.74	269.899	4.35
11274.00	90.900	268.900	7261.82	4065.71	-8.19	-4065.71	627575.23	706697.41	32°56'32.662"N	104°03'08.005"W	4065.72	269.885	5.74
11305.00	90.800	268.400	7261.36	4096.70	-8.92	-4096.70	627544.24	706696.68	32°56'32.655"N	104°03'08.369"W	4096.71	269.875	1.64
11337.00	90.400	268.000	7261.03	4128.68	-9.92	-4128.68	627512.26	706695.68	32°56'32.646"N	104°03'08.744"W	4128.69	269.862	1.77
11369.00	90.400	267.000	7260.80	4160.65	-11.32	-4160.65	627480.30	706694.28	32°56'32.633"N	104°03'09.119"W	4160.66	269.844	3.12
11401.00	90.300	267.100	7260.61	4192.61	-12.97	-4192.61	627448.34	706692.64	32°56'32.618"N	104°03'09.494"W	4192.63	269.823	0.44



Actual Wellpath Report

No. 2H AWP

Page 9 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Nitro)Section 11 T16S R 29E	Wellbore	No. 2H AWB
Facility	Nitro 11 Fed Com No. 2H	Sidetrack from	No. 2 AWB OH at 7012.00 MD

WELLPATH DATA (213 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
11433.00	89.900	265.800	7260.55	4224.55	-14.95	-4224.54	627416.41	706690.65	32°56'32.599"N	104°03'09.869"W	4224.57	269.797	4.25
11464.00	89.800	268.100	7260.63	4255.50	-16.60	-4255.50	627385.46	706689.01	32°56'32.583"N	104°03'10.232"W	4255.53	269.777	7.43
11514.00†	89.800	268.100	7260.81	4305.47	-18.25	-4305.47	627335.49	706687.35	32°56'32.568"N	104°03'10.819"W	4305.51	269.757	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 2H BHL		7269.00	-0.28	-4309.62	627331.34	706705.32	32°56'32.746"N	104°03'10.867"W	point

WELLPATH COMPOSITION Ref Wellbore: No. 2H AWB Ref Wellpath: No. 2H AWP

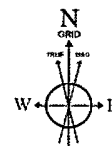
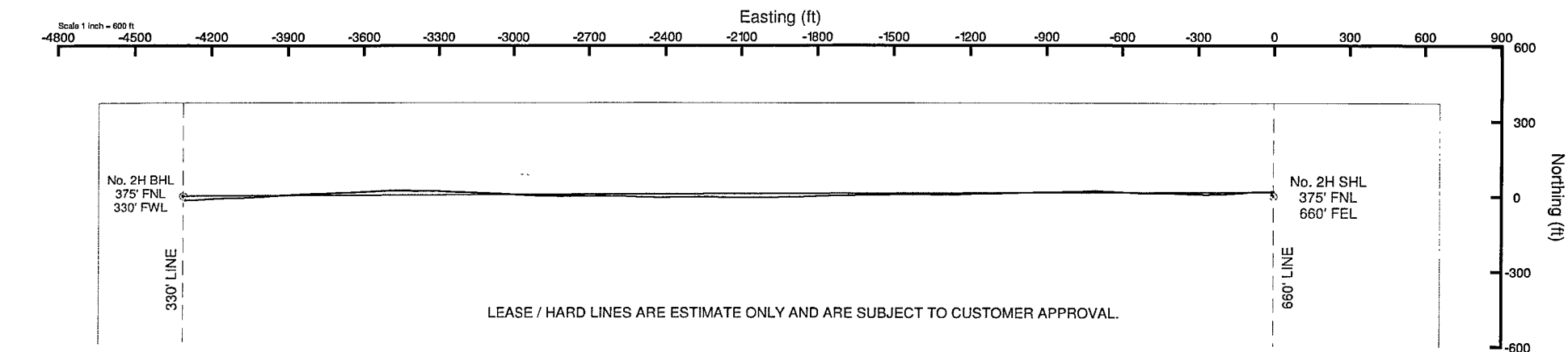
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	7012.00	Gyrodata standard - Drop gyro or Multi-shot	GYRO	No. 2 AWB OH
7012.00	11464.00	NaviTrak (Standard)	MWD	No. 2H AWB
11464.00	11514.00	Blind Drilling (std)	Projection to bit	No. 2H AWB



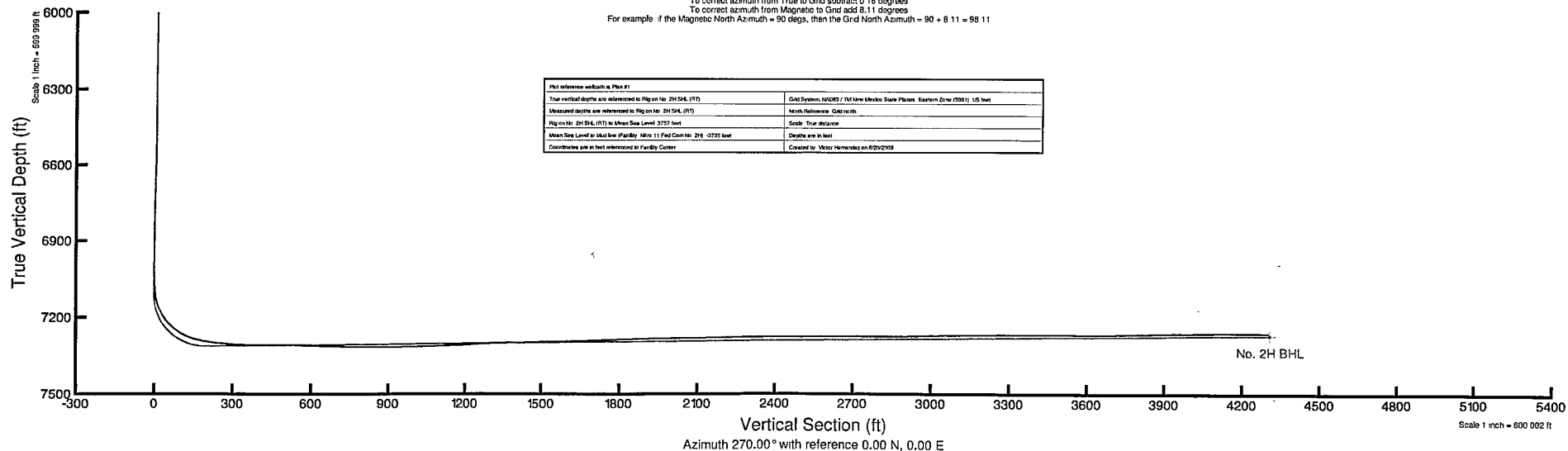
Cimarex Energy Co. of Colorado

Location: Eddy County, NM
Field: (Nitro) Section 11 T16S R 29E
Facility: Nitro 11 Fed Com No. 2H

Slot: No. 2H SHL
Well: No. 2H
Wellbore: No. 2H PWB



BGGM (1945 0 to 2009 0) Dip 60.85° Field 49322.1 nT
Magnetic North is 8.27 degrees East of True North (at 6/3/2008)
Grid North is 0.18 degrees East of True North
To correct azimuth from True to Grid subtract 0.18 degrees
To correct azimuth from Magnetic to Grid add 8.11 degrees
For example: if the Magnetic North Azimuth = 90 degrees, then the Grid North Azimuth = 90 + 8.11 = 98.11



ACTUAL WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ

Software System: WellArchitect®2.0

REFERENCE WELLPATH IDENTIFICATION

Operator Cimarex Energy Co. of Colorado
 Area Eddy County, NM
 Field (Nitro)Section 11 T16S R 29E
 Facility Nitro 11 Fed Com No. 2H
 Slot No. 2H SHL
 Well No. 2H
 Wellbore No. 2H AWB
 Wellpath No. 2H AWP
 Sidetrack No. 2 AWB OH at 7012.00 MD

REPORT SETUP INFORMATION

Projection : NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
 North Refe Grid
 Scale 0.999918
 Convergen 0.16° East
 Software S WellArchitect®
 User Victor Hernandez
 Report Ger 6/19/2008 at 8:25:39 AM
 DataBase/' WA_Midland/ev8182.xml

WELLPATH	Local North [ft]	Local East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude
Slot Location	0	0	631640.6	706705.6	32°56'32.6	104°02'20.298"W
Facility Ref			631640.6	706705.6	32°56'32.6	104°02'20.298"W
Field Refer			631977.9	703778.6	32°56'03.6	104°02'16.437"W

WELLPATH DATUM

Calculation Minimum curvature
 Horizontal Facility Center
 Vertical Re Rig on No. 2H SHL (RT)
 MD Refere Rig on No. 2H SHL (RT)
 Field Vertic Mean Sea Level
 Rig on No. 22.00ft
 Rig on No. 3757.00ft
 Facility Ver 0.00ft
 Section Ori 0.00ft
 Section Ori 0.00ft
 Section Azi 270.00°

WELLPATH DATA Wellbore: No. 2H AWB				Wellpath: No. 2H AWP				† = interpolated/extrapc	
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]		
0	0	257.77	0	0	0	0	0	0	
149	0.18	257.77	149	0.23	-0.05	-0.23	0.12		
242	0.21	241.8	242	0.52	-0.16	-0.52	0.07		
334	0.33	127.83	334	0.46	-0.4	-0.46	0.5		

427	0.44	124.48	427	-0.04	-0.77	0.04	0.12
520	0.12	307.34	520	-0.26	-0.91	0.26	0.6
613	0.61	267.54	612.99	0.31	-0.87	-0.31	0.56
705	0.47	279.22	704.99	1.17	-0.84	-1.17	0.19
798	0.37	293.25	797.99	1.82	-0.66	-1.82	0.15
889	0.33	353.35	888.99	2.12	-0.28	-2.12	0.39
981	0.32	15.06	980.98	2.09	0.23	-2.09	0.13
1073	0.35	15.1	1072.98	1.95	0.75	-1.95	0.03
1165	0.32	22.29	1164.98	1.78	1.26	-1.78	0.06
1292	0.27	356.07	1291.98	1.66	1.89	-1.66	0.11
1387	0.22	9.31	1386.98	1.65	2.29	-1.65	0.08
1482	0.34	351.91	1481.98	1.66	2.75	-1.66	0.15
1578	0.34	346.56	1577.98	1.77	3.31	-1.77	0.03
1673	0.37	349.08	1672.97	1.89	3.88	-1.89	0.04
1769	0.2	323.52	1768.97	2.05	4.32	-2.05	0.22
1864	0.06	53.29	1863.97	2.11	4.49	-2.11	0.22
1959	0.02	288.91	1958.97	2.08	4.52	-2.08	0.08
2055	0.05	151.11	2054.97	2.08	4.49	-2.08	0.07
2150	0.14	265.7	2149.97	2.17	4.44	-2.17	0.18
2245	0.12	6.81	2244.97	2.28	4.53	-2.28	0.21
2341	0.09	209.05	2340.97	2.3	4.57	-2.3	0.21
2436	0.14	122.5	2435.97	2.24	4.44	-2.24	0.17
2532	0.22	222.47	2531.97	2.27	4.24	-2.27	0.29
2627	0.26	258.11	2626.97	2.6	4.06	-2.6	0.16
2722	0.68	314.61	2721.97	3.21	4.41	-3.21	0.61
2817	0.58	299.29	2816.96	4.03	5.05	-4.03	0.21
2913	0.52	238.03	2912.96	4.83	5.05	-4.83	0.59
3008	0.6	225.11	3007.95	5.54	4.47	-5.55	0.16
3104	0.46	301.52	3103.95	6.23	4.32	-6.23	0.69
3199	0.4	296.61	3198.95	6.85	4.67	-6.85	0.07
3294	0.42	324.3	3293.95	7.35	5.1	-7.35	0.21
3389	0.45	283.31	3388.94	7.92	5.47	-7.92	0.32
3485	0.41	274.33	3484.94	8.63	5.58	-8.63	0.08
3580	0.23	14.57	3579.94	8.92	5.79	-8.92	0.53
3675	0.33	14.71	3674.94	8.8	6.24	-8.8	0.11
3771	0.32	31.73	3770.94	8.59	6.74	-8.59	0.1
3872	0.38	4.45	3871.94	8.41	7.31	-8.41	0.17
3962	0.36	47.25	3961.93	8.18	7.8	-8.18	0.3
4057	0.42	310.3	4056.93	8.23	8.23	-8.23	0.62
4152	0.66	80.88	4151.93	7.95	8.54	-7.96	1.04
4247	0.88	21.9	4246.92	7.14	9.3	-7.14	0.82
4343	0.9	11.01	4342.91	6.72	10.73	-6.72	0.18
4438	0.82	358.28	4437.9	6.6	12.14	-6.6	0.22
4534	0.67	7.18	4533.89	6.55	13.38	-6.55	0.2
4629	0.54	328.03	4628.89	6.72	14.31	-6.72	0.45
4725	0.4	344.53	4724.88	7.05	15.02	-7.05	0.2
4820	0.25	46	4819.88	6.99	15.48	-6.99	0.38
4916	0.25	356.94	4915.88	6.85	15.84	-6.85	0.22
5011	0.37	311.6	5010.88	7.09	16.25	-7.09	0.28
5106	0.35	264.35	5105.88	7.61	16.42	-7.61	0.3
5202	0.36	299.12	5201.88	8.16	16.54	-8.16	0.22
5297	0.29	308.6	5296.88	8.61	16.84	-8.61	0.09

5392	0.19	344.64	5391.88	8.84	17.14	-8.84	0.19
5487	0.32	301.5	5486.87	9.11	17.43	-9.11	0.23
5583	0.23	14.26	5582.87	9.29	17.76	-9.29	0.35
5678	0.36	24.65	5677.87	9.12	18.21	-9.12	0.15
5773	0.4	23.65	5772.87	8.86	18.79	-8.86	0.04
5868	0.42	69.66	5867.87	8.4	19.21	-8.4	0.34
5964	0.4	59.39	5963.87	7.78	19.5	-7.78	0.08
6059	0.55	62.64	6058.86	7.09	19.88	-7.09	0.16
6156	0.54	71.46	6155.86	6.24	20.24	-6.25	0.09
6250	0.47	126.62	6249.85	5.52	20.15	-5.52	0.5
6345	0.19	95.24	6344.85	5.05	19.91	-5.05	0.34
6441	0.03	17.47	6440.85	4.88	19.92	-4.88	0.19
6536	0.59	121.96	6535.85	4.46	19.68	-4.46	0.63
6631	1.13	94.18	6630.84	3.11	19.35	-3.11	0.7
6726	1.2	96.04	6725.82	1.18	19.18	-1.19	0.08
6822	1.13	150.29	6821.8	-0.28	18.25	0.28	1.11
6917	0.54	136.4	6916.79	-1.06	17.11	1.06	0.65
7012	0.19	113.09	7011.79	-1.51	16.73	1.51	0.39
7106	5.3	268.7	7105.66	2.69	16.57	-2.69	5.82
7139	14	275.5	7138.16	8.2	16.92	-8.2	26.54
7171	22.9	272.9	7168.49	18.29	17.6	-18.29	27.92
7203	31.5	271.1	7196.92	32.89	18.08	-32.89	26.99
7234	40.5	268.5	7221.98	51.09	17.97	-51.09	29.44
7266	50	266.4	7244.48	73.76	16.93	-73.77	30.05
7298	59.2	265.3	7263	99.75	15.03	-99.75	28.89
7326	67.2	264.5	7275.62	124.62	12.8	-124.62	28.68
7359	75.1	266.8	7286.27	155.74	10.45	-155.74	24.83
7391	79.5	265.5	7293.3	186.88	8.35	-186.88	14.31
7422	82.5	271.1	7298.16	217.46	7.45	-217.47	20.3
7454	84.8	267.2	7301.7	249.26	6.98	-249.26	14.08
7487	85.4	272.5	7304.52	282.12	6.89	-282.12	16.1
7518	86.6	272.3	7306.68	313.02	8.19	-313.02	3.92
7550	88.2	270.5	7308.13	344.98	8.97	-344.98	7.52
7582	87.5	273.4	7309.33	376.93	10.05	-376.93	9.32
7613	90.4	270.9	7309.9	407.9	11.22	-407.9	12.35
7645	90.9	269.6	7309.54	439.89	11.36	-439.9	4.35
7677	90.9	270.4	7309.04	471.89	11.36	-471.89	2.5
7709	89.6	270.4	7308.9	503.89	11.58	-503.89	4.06
7740	87.1	273.6	7309.79	534.85	12.66	-534.85	13.1
7772	86.9	272.2	7311.46	566.76	14.28	-566.77	4.41
7804	88.4	272.2	7312.78	598.71	15.5	-598.71	4.69
7836	88.5	273.3	7313.64	630.66	17.04	-630.67	3.45
7868	88.7	272.7	7314.42	662.61	18.71	-662.61	1.98
7900	88.6	271.9	7315.18	694.58	20	-694.58	2.52
7932	88.4	265.2	7316.02	726.54	19.19	-726.54	20.94
7964	88.4	267.5	7316.91	758.46	17.15	-758.46	7.18
7996	89.9	269.4	7317.38	790.44	16.29	-790.44	7.56
8028	90.3	269.2	7317.33	822.44	15.9	-822.44	1.4
8060	90.2	269.1	7317.19	854.43	15.42	-854.43	0.44
8091	90	269	7317.13	885.43	14.91	-885.43	0.72
8123	89.8	269.9	7317.19	917.43	14.6	-917.43	2.88
8155	90.9	267.3	7316.99	949.41	13.82	-949.41	8.82

8187	90.1	267.5	7316.72	981.38	12.37	-981.38	2.58
8219	91.5	269.9	7316.27	1013.36	11.64	-1013.37	8.68
8251	92.3	267.3	7315.21	1045.33	10.86	-1045.34	8.5
8283	92.4	267	7313.9	1077.27	9.27	-1077.27	0.99
8314	92.3	269.9	7312.62	1108.23	8.43	-1108.23	9.35
8346	92.3	270.5	7311.34	1140.2	8.54	-1140.2	1.87
8378	92.1	267.7	7310.11	1172.17	8.04	-1172.17	8.77
8410	93.4	267.6	7308.58	1204.11	6.73	-1204.11	4.07
8442	93.5	268.8	7306.65	1236.03	5.73	-1236.03	3.76
8473	93.3	270.2	7304.81	1266.98	5.46	-1266.98	4.55
8505	93.2	268.2	7303	1298.92	5.01	-1298.92	6.25
8537	93.4	270.9	7301.15	1330.86	4.76	-1330.86	8.45
8568	91.1	270.5	7299.94	1361.83	5.14	-1361.83	7.53
8600	90.9	270.3	7299.38	1393.83	5.36	-1393.83	0.88
8632	90.7	270.6	7298.93	1425.82	5.61	-1425.82	1.13
8664	90.7	268.7	7298.54	1457.82	5.42	-1457.82	5.94
8696	91.5	269.9	7297.93	1489.81	5.03	-1489.81	4.51
8728	91.5	268.4	7297.09	1521.8	4.55	-1521.8	4.69
8760	91.3	270.5	7296.31	1553.78	4.25	-1553.78	6.59
8792	91.3	270.3	7295.58	1585.77	4.47	-1585.77	0.62
8823	91.4	266.6	7294.85	1616.75	3.63	-1616.75	11.94
8855	91.1	269.2	7294.15	1648.72	2.46	-1648.72	8.18
8887	92.3	268.3	7293.2	1680.69	1.76	-1680.69	4.69
8919	92.3	268.3	7291.92	1712.65	0.81	-1712.65	0
8951	92.1	268.7	7290.69	1744.62	-0.02	-1744.62	1.4
8982	92	268	7289.58	1775.59	-0.92	-1775.59	2.28
9014	91.8	267.1	7288.52	1807.54	-2.28	-1807.54	2.88
9046	91.8	267.6	7287.52	1839.49	-3.76	-1839.49	1.56
9077	91.8	269.9	7286.54	1870.46	-4.44	-1870.46	7.42
9109	91.7	267.8	7285.56	1902.44	-5.08	-1902.44	6.57
9141	91.6	268.7	7284.64	1934.41	-6.06	-1934.41	2.83
9174	91.6	268.3	7283.72	1967.39	-6.92	-1967.39	1.21
9206	91.4	271.5	7282.88	1999.37	-6.98	-1999.37	10.02
9238	91	268.7	7282.21	2031.36	-6.92	-2031.36	8.84
9270	90.9	269.1	7281.68	2063.35	-7.53	-2063.35	1.29
9302	90.5	269.3	7281.29	2095.35	-7.98	-2095.35	1.4
9332	90.9	270.3	7280.93	2125.34	-8.09	-2125.34	3.59
9365	90.8	273.3	7280.44	2158.32	-7.05	-2158.32	9.09
9397	90.9	273.2	7279.96	2190.27	-5.24	-2190.27	0.44
9429	91.3	269.3	7279.35	2222.25	-4.54	-2222.25	12.25
9461	91.6	269.8	7278.54	2254.23	-4.79	-2254.23	1.82
9493	91.4	268.4	7277.7	2286.22	-5.29	-2286.22	4.42
9525	90.3	270	7277.22	2318.21	-5.74	-2318.21	6.07
9556	90.8	269.9	7276.93	2349.21	-5.77	-2349.21	1.64
9588	90.8	269.1	7276.48	2381.2	-6.04	-2381.2	2.5
9620	90.3	269.6	7276.17	2413.2	-6.41	-2413.2	2.21
9652	89.8	273.1	7276.14	2445.19	-5.65	-2445.19	11.05
9684	89.9	269.5	7276.23	2477.17	-4.93	-2477.17	11.25
9714	91	273.4	7275.99	2507.16	-4.17	-2507.16	13.51
9747	91	272.7	7275.42	2540.1	-2.41	-2540.1	2.12
9779	90.8	270.9	7274.91	2572.08	-1.41	-2572.08	5.66
9810	90.7	269.9	7274.51	2603.08	-1.19	-2603.08	3.24

9842	90.4	270.9	7274.2	2635.08	-0.97	-2635.08	3.26
9874	90.3	269.1	7274.01	2667.07	-0.97	-2667.07	5.63
9906	90.3	270.6	7273.84	2699.07	-1.05	-2699.07	4.69
9937	90	270.1	7273.76	2730.07	-0.86	-2730.07	1.88
9969	89.6	269.3	7273.87	2762.07	-1.03	-2762.07	2.8
10001	89.1	270	7274.23	2794.07	-1.23	-2794.07	2.69
10033	89.9	270.8	7274.51	2826.07	-1	-2826.07	3.54
10065	89.8	272	7274.59	2858.06	-0.22	-2858.06	3.76
10096	91.2	271.8	7274.32	2889.04	0.81	-2889.04	4.56
10128	91.4	272	7273.6	2921.01	1.87	-2921.01	0.88
10159	91.5	272.7	7272.81	2951.97	3.14	-2951.97	2.28
10191	91.4	272.5	7272	2983.93	4.59	-2983.93	0.7
10223	91.1	273.9	7271.31	3015.87	6.38	-3015.87	4.47
10255	90.9	273.7	7270.75	3047.8	8.5	-3047.8	0.88
10287	90.8	271.6	7270.27	3079.76	9.97	-3079.76	6.57
10319	90.7	272	7269.85	3111.74	10.98	-3111.74	1.29
10350	90.4	273.1	7269.56	3142.71	12.36	-3142.71	3.68
10382	90.4	272.1	7269.33	3174.67	13.81	-3174.67	3.12
10414	90.3	271.6	7269.14	3206.65	14.84	-3206.66	1.59
10446	90.5	272.6	7268.91	3238.63	16.02	-3238.63	3.19
10478	90.4	273	7268.66	3270.59	17.58	-3270.59	1.29
10509	90.4	273.1	7268.45	3301.55	19.23	-3301.55	0.32
10541	90.3	269.4	7268.25	3333.53	19.93	-3333.54	11.57
10573	90.4	270.1	7268.06	3365.53	19.79	-3365.53	2.21
10605	90.2	270.5	7267.89	3397.53	19.95	-3397.53	1.4
10637	89.9	270.9	7267.86	3429.53	20.35	-3429.53	1.56
10669	90.2	270	7267.83	3461.53	20.6	-3461.53	2.96
10701	89.9	268.1	7267.8	3493.52	20.07	-3493.52	6.01
10733	89.3	268.3	7268.03	3525.51	19.06	-3525.51	1.98
10765	88.8	267.1	7268.56	3557.47	17.78	-3557.48	4.06
10796	89.7	266.1	7268.96	3588.42	15.94	-3588.42	4.34
10828	89.9	267.4	7269.08	3620.36	14.12	-3620.37	4.11
10860	90.8	268.5	7268.88	3652.34	12.98	-3652.34	4.44
10892	91.1	267.1	7268.35	3684.31	11.75	-3684.31	4.47
10924	91.3	267.6	7267.68	3716.27	10.27	-3716.27	1.68
10956	91.3	267.8	7266.95	3748.24	8.99	-3748.24	0.62
10987	91.1	267.9	7266.3	3779.21	7.83	-3779.21	0.72
11019	91	266.4	7265.72	3811.16	6.24	-3811.16	4.7
11051	91	269.4	7265.16	3843.13	5.06	-3843.13	9.37
11083	90.8	266.6	7264.66	3875.11	3.95	-3875.11	8.77
11115	90.9	266.6	7264.18	3907.05	2.05	-3907.05	0.31
11147	90.8	265.6	7263.71	3938.97	-0.13	-3938.97	3.14
11178	90.7	265.4	7263.3	3969.87	-2.56	-3969.87	0.72
11210	90.7	265.9	7262.91	4001.78	-4.99	-4001.78	1.56
11242	90.2	267.2	7262.66	4033.72	-6.91	-4033.72	4.35
11274	90.9	268.9	7262.35	4065.7	-8	-4065.7	5.74
11305	90.8	268.4	7261.89	4096.68	-8.73	-4096.68	1.64
11337	90.4	268	7261.56	4128.67	-9.74	-4128.67	1.77

T A R G E T S

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude
------	------------	-------------	---------------	--------------	-----------------------	------------------------	----------	-----------

No. 2H BHL 7269 -0.28 -4309.62 627331.3 706705.3 32°56'32.7" 104°03'10.3"

WELLPATH COMPOSITION Ref Wellbore: No. 2H AWB Ref Wellpath: No. 2H AWP

Log Name/ Start MD End MD Pos Unc Model

	[ft]	[ft]	
GYRO	0	7012	Gyrodata standard - Drop gyro or Multi-shot
MWD	7012	11337	NaviTrak (Standard)