

Submit To Appropriate District Office State Lease - 6 copies Fee Lease - 5 copies 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 Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 CONFIDENTIAL	Form C-105 Revised June 10, 2003
		WELL API NO. 30-015-35779
		5. Indicate Type of Lease STATE ☒ FEE ☐
		State Oil & Gas Lease No.
WELL COMPLETION OR RECOMPLETION REPORT AND LOG		
1a. Type of Well: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER _____ b. Type of Completion: NEW ☒ WORK ☐ DEEPEN ☐ PLUG ☐ DIFF. ☐ WELL OVER BACK RESVR. ☐ OTHER _____		7. Lease Name or Unit Agreement Name MAY 12 2008 OCD-ARTESIA
2. Name of Operator Cimarex Energy Co. of Colorado		8. Well No. 003
3. Address of Operator PO Box 140907; Irving, TX 75014-0907		9. Pool name or Wildcat AWC; Crow Flats; ABO
4. Well Location SHL Unit Letter <u>L</u> : <u>1980</u> Feet From The <u>South</u> Line and <u>330</u> Feet From The <u>West</u> Line BHL Unit Letter <u>I</u> : <u>2012</u> Feet From The <u>South</u> Line and <u>401</u> Feet From The <u>East</u> Line Section <u>16</u> Township <u>16S</u> Range <u>28E</u> NMPM County <u>Eddy</u>		
10. Date Spudded 11-29-07	11. Date T.D. Reached 01-10-08	12. Date Compl. (Ready to Prod) 02-14-08
13. Elevations (DF& RKB, RT, GR, etc.) 3549' GR		14. Elev. Casinghead
15. Total Depth MD 10897' TVD 6489'	16. Plug Back T.D. MD 10550' TVD 6489'	17. If Multiple Compl. How Many Zones?
18. Intervals Drilled By Rotary Tools Rotary		Cable Tools
19. Producing Interval(s), of this completion - Top, Bottom, Name Abo Wildcat 6179'-10261' (MD)		20. Was Directional Survey Made Yes
21. Type Electric and Other Logs Run Laterolog, Neutron Log		22. Was Well Cored No
23. CASING RECORD (Report all strings set in well)		
CASING SIZE	WEIGHT LB./FT.	DEPTH SET
13 7/8"	48	360'
9 5/8"	40	1830'
7"	26	6912'
24. LINER RECORD		25. TUBING RECORD
SIZE	TOP	BOTTOM
4 1/2"	6179'	10550'
26. Perforation record (interval, size, and number) 7300'-7304' 4 spf 16 holes		27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED _____ _____ _____ _____
28. PRODUCTION		
Date First Production 02-12-08		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing
Date of Test 03-05-08		Well Status (Prod. or Shut-in) Producing
Hours Tested 24	Choke Size 48/64	Prod'n For Test Period
Oil - Bbl 209	Gas - MCF 611	Water - Bbl. 42
Gas - Oil Ratio 2923		
Flow Tubing Press. 140	Casing Pressure 0	Calculated 24 Hour Rate
Oil - Bbl.	Gas - MCF	Water - Bbl.
		Oil Gravity - API - (Corr.) 42.0
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Sold		Test Witnessed By
30. List Attachments C-102		
31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief		
Signature <u>Natalie Krueger</u>		Printed Name <u>Natalie Krueger</u>
Title <u>Reg Analyst I</u>		Date <u>5/1/2008</u>
E-mail Address <u>nkrueger@cimarex.com</u>		

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka	T. Penn. "D"	T. Leadville
T. Yates	T. Miss	T. Cliff House	T. Madison
T. 7 Rivers	T. Devonian	T. Menefee	T. Elbert
T. Queen	T. Silurian	T. Point Lookout	T. McCracken
T. Grayburg	T. Montoya	T. Mancos	T. Ignacio Otzte
T. San Andres 1865'	T. Simpson	T. Gallup	T. Granite
T. Glorieta 3200'	T. McKee	B. Greenhorn	T.
T. Paddock	T. Ellenburger	T. Dakota	T.
T. Blinebry	T. Gr. Wash	T. Morrison	T.
T. Tubb	T. Delaware	T. Todilto	T.
T. Drinkard	T. Bone Spring	T. Entrada	T.
T. Abo 5280'	T. Morrow	T. Wingate	T.
T. Wolfcamp 6570'	T.	T. Chinle	T.
T. Penn	T.	T. Permian	T.
T. Cisco (Bough C)	T.	T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, fromto.....
No. 2, fromto.....
No. 3, fromto.....
No. 4, fromto.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

Acid, Fracture, Treatment, Cement Squeeze, etc. Attachment
Crow Flats 16 State Com No. 3
16-16S-28E
Eddy County, NM

Depth Interval	Amount and Type of Material Used
Stage 1 8491' - 10261'	Pump 119 bbl 15% HCl NeFe acid, 721 bbl slickwater, SD, ISIP 3908#, 120 bbl Deepspot 15% HCl acid, 595 bbl slickwater, 239 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand on lightning 2000 gel, 714 bbl slickwater, 238 bbl Lightning 2000 x-linker pad, 1.1 ppg 30/50# white sand & flush with 20# linear gel. Pumped down 7" & 4 ½" liner 60 bpm. Max psi 6236#. Drop 2¾" ball. Pump 154 bbl 15% HCl NeFe acid & 139 bbl slickwater, seat ball, open port at 9867' at 5731#. 12500# 30/50 sand pumped.
Stage 2 8457' - 9481'	Cont pumping 235 bbl slickwater, SD, ISIP 3349#, 534 bbl slickwater, 119 bbl Deepspot 15% HCl acid, 833 bbl slickwater, 239 bbl Lightning 2000 x-linker pad, 0.75 ppg 30/50# white sand 1075 bbl slick water, 238 bbl Lightning 2000 x-linker pad, 0.9 ppg 30/50# white sand, & flush with 20# linear gel. Drop 3" ball. Pump 119 bbl 15% HCl NeFe acid, 160 bbl slickwater, seat ball, open port at 9759' at 7213#. ISIP 8962' at 3957#. Max psi 6010#. Avg rate 65 bpm. 12500# 30/50 sand pumped.
Stage 3 7669' - 8457'	Cont pumping 142 bbl slickwater, SD, ISIP 3498#, 238 bbl Deepspot 15% HCl acid, 833 bbl slickwater, 179 bbl Deepspot 15% HCl acid, 952 bbl slick water, 239 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand, 1071 bbl slickwater, 238 bbl lightning 2000 x-link 0.75 ppg 30/50# white sand & flush with 20# linear gel. Drop 3¼" ball. Pump 124 bbl 15% HCl NeFe acid, 141 bbl slickwater, seat ball, open port at 8064' at 3750#. Max psi 5245#. Avg rate 65 bpm. 12500# 30/50# sand pumped.
Stage 4 6179' - 7669'	Cont pumping 128 bbl slickwater, SD, ISIP 3743#, 238 bbl Deepspot 15% HCl acid, 596 bbl slickwater, 237 bbl Deepspot 15% HCl acid, 598 bbl slickwater, 240 bbl Lightning 2000 x-linker pad, 0.5 ppg 30/50# white sand, 595 bbl slickwater, 238 bbl lightning 2000 x-linker, 0.5 to 1 ppg 30/50# white sand & flush with 275 bbl of slickwater. Max psi 4940#. Avg rate 65 bpm. 12500# 30/50# sand pumped.
Stage 5	RU Enertech e-line with 10K lube & grease. RIH with weatherford 4½" frac plug & set at 7380', pull up & perf at 7300-7304' 4 SPF 60 deg phasing making 16 hole RD e-line, drop ball & pump 289 bbl 15% HCl NeFe acid, 250 bbl slickwater, SD, ISIP 3734#, Cont pumping 415 bbl slickwater, 400 bbl Deepspot 15% HCl acid, 714 bbl slickwater, 238 bbl lightning 2000 x-linker, 0.5 to 1 ppg 30/50 white sand, 714 bbl slickwater, 238 bbl lightning 2000 x-linker & flush with 254 bbl of 20# linear gel. ISIP 3637#. Max psi 5763#. Avg rate 65 bpm. 12500# 30/50# sand pumped. RD BJ frac equipment & isolation tool. RU flowback iron & start flowback operations.

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 30-015-35779	Pool Code 97691	Pool Name Wx; Crow Flats; ABO
Property Code 35931	Property Name CROW FLATS 16 STATE COM	Well Number 3
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3549'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	16	16 S	28 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
I	16	16 S	28 E		2012'	SOUTH	401'	EAST	EDDY

Dedicated Acres 160	Joint or Infill	Consolidation Code P	Order No.
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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

<u>SURFACE LOCATION</u> Lat - N32°55'14.79" Long - W104°11'17.92" NMSPCE- N 698740.784 E 585840.742 (NAD-83)				
	SHL & Penetration Point		BHL	
330'	4549'	401'		
1980'		2012'		

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.

Zeno Farris 05-01-08
Signature Date

Zeno Farris
Printed Name

SURVEYOR CERTIFICATION

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

JULY 26, 2007

Date Surveyed

GARY L. JONES
Signature & Seal of Professional Surveyor

W. 9. 163. 00

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

OPERATOR
WELL/LEASE
COUNTY

CIMAREX ENERGY COMPANY
CROW FLATS 16 STATE COM #3
EDDY, NM

RIG 623

STATE OF NEW MEXICO
DEVIATION REPORT

428	1.00
830	0.75
1,263	1.00
1,674	2.50
2,253	0.25
2,828	1.00
3,318	1.25
3,787	1.00
4,005	1.00
4,503	1.25
4,942	1.25
5,351	1.00
5,791	1.00
6,607	1.75

STATE OF TEXAS

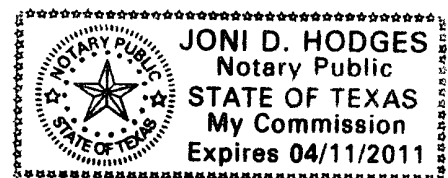
COUNTY OF MIDLAND

BY: Steve Moore

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

January 15, 2008, by Steve

Joni D. Hodges
Notary Public for Midland County, Texas
My Commission Expires: 4/11/11





Actual Wellpath Report

#3-H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	#3-H_SHL
Area	Eddy County, NM	Well	#3-H
Field	Crow Flats 16 State COM	Wellbore	#3-H_AWB
Facility	Crow Flats 16 State #3-H	Sidetrack from	#3-H_AWB OH at 6200.00 MD

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect™ 1.2
North Reference	Grid	User	Victor Hernandez
Scale	0.999911	Report Generated	01/07/08 at 13:38:19
Wellbore last revised	12/26/07	Database/Source file	WA_Midland/#3-H_AWB.xl

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	0.00	0.00	585840.74	698740.78	32 55 14.767N	104 11 17.883W
Facility Reference Pt			585840.74	698740.78	32 55 14.767N	104 11 17.883W
Field Reference Pt			585840.74	698740.78	32 55 14.767N	104 11 17.883W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on #3-H_SHL (RT) to Facility Vertical Datum	18.00 feet
Horizontal Reference Pt	Facility Center	Rig on #3-H_SHL (RT) to GRN. ELEV.	3567.00 feet
Vertical Reference Pt	Rig on #3-H_SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Rig on #3-H_SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	GRN. ELEV.	Section Azimuth	89.63°



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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	#3-H_SHL
Area	Eddy County, NM	Well	#3-H
Field	Crow Flats 16 State COM	Wellbore	#3-H AWB
Facility	Crow Flats 16 State #3-H	Sidetrack from	#3-H AWB OH at 6200.00 MD

WELLPATH DATA (156 stations)								
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Path Comment
0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	
100.00	0.340	147.910	100.00	0.16	-0.25	0.16	0.34	
200.00	0.280	152.140	200.00	0.42	-0.72	0.43	0.06	
300.00	0.220	145.060	300.00	0.65	-1.09	0.65	0.07	
400.00	0.220	145.010	400.00	0.86	-1.41	0.87	0.00	
500.00	0.240	145.500	500.00	1.09	-1.74	1.10	0.02	
600.00	0.220	136.540	599.99	1.34	-2.05	1.35	0.04	
700.00	0.190	117.320	699.99	1.62	-2.26	1.63	0.07	
800.00	0.170	112.710	799.99	1.90	-2.40	1.92	0.02	
900.00	0.220	116.990	899.99	2.21	-2.54	2.22	0.05	
1000.00	0.230	129.980	999.99	2.53	-2.76	2.55	0.05	
1100.00	0.190	178.470	1099.99	2.69	-3.05	2.71	0.18	
1200.00	0.210	177.190	1199.99	2.70	-3.40	2.72	0.02	
1300.00	0.150	208.630	1299.99	2.64	-3.70	2.67	0.11	
1400.00	0.180	275.630	1399.99	2.42	-3.80	2.45	0.18	
1500.00	0.190	270.730	1499.99	2.10	-3.78	2.13	0.02	
1600.00	0.240	277.620	1599.99	1.73	-3.75	1.75	0.06	
1700.00	0.310	247.710	1699.99	1.27	-3.83	1.29	0.16	
1800.00	0.050	118.240	1799.99	1.06	-3.95	1.08	0.34	
1900.00	0.140	56.030	1899.99	1.20	-3.90	1.22	0.12	
2000.00	0.220	58.410	1999.99	1.46	-3.73	1.49	0.08	
2100.00	0.230	84.280	2099.99	1.83	-3.61	1.85	0.10	
2200.00	0.290	113.470	2199.99	2.26	-3.69	2.28	0.14	
2300.00	0.430	143.350	2299.98	2.71	-4.10	2.74	0.23	
2400.00	0.740	154.490	2399.98	3.21	-4.98	3.24	0.33	
2500.00	0.870	144.480	2499.97	3.92	-6.18	3.96	0.19	
2600.00	0.950	65.740	2599.96	5.12	-6.46	5.16	1.16	
2700.00	0.800	58.800	2699.95	6.47	-5.75	6.51	0.18	
2800.00	0.680	57.000	2799.94	7.57	-5.07	7.60	0.12	
2900.00	0.610	79.590	2899.93	8.60	-4.65	8.63	0.26	
3000.00	0.630	75.970	2999.93	9.65	-4.42	9.68	0.04	
3100.00	0.470	88.610	3099.92	10.60	-4.28	10.63	0.20	
3200.00	0.430	67.290	3199.92	11.36	-4.12	11.38	0.17	
3300.00	0.350	58.400	3299.92	11.96	-3.82	11.99	0.10	
3400.00	0.430	47.510	3399.91	12.50	-3.40	12.53	0.11	
3500.00	0.400	79.720	3499.91	13.13	-3.09	13.15	0.23	
3600.00	0.310	95.840	3599.91	13.74	-3.05	13.76	0.13	
3700.00	0.200	99.640	3699.91	14.18	-3.11	14.20	0.11	
3800.00	0.110	60.770	3799.91	14.44	-3.09	14.46	0.13	
3900.00	0.290	32.440	3899.91	14.66	-2.83	14.67	0.20	



Actual Wellpath Report

#3-H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
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Area	Eddy County, NM	Well	#3-H
Field	Crow Flats 16 State COM	Wellbore	#3-H AWB
Facility	Crow Flats 16 State #3-H	Sidetrack from	#3-H AWB OH at 6200.00 MD

WELLPATH DATA (156 stations)								
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Path Comment
4000.00	0.380	41.110	3999.91	15.01	-2.37	15.03	0.10	
4100.00	0.470	57.920	4099.90	15.58	-1.90	15.59	0.15	
4200.00	0.350	78.330	4199.90	16.23	-1.62	16.24	0.19	
4300.00	0.370	44.480	4299.90	16.76	-1.33	16.77	0.21	
4400.00	0.290	72.650	4399.90	17.23	-1.02	17.23	0.18	
4500.00	0.150	67.140	4499.90	17.59	-0.90	17.60	0.14	
4600.00	0.350	340.420	4599.90	17.61	-0.56	17.61	0.37	
4700.00	0.440	338.960	4699.89	17.37	0.09	17.37	0.09	
4800.00	0.410	328.330	4799.89	17.05	0.75	17.05	0.08	
4900.00	0.550	319.600	4899.89	16.56	1.42	16.55	0.16	
5000.00	0.630	331.890	4999.88	15.99	2.27	15.98	0.15	
5100.00	0.540	8.000	5099.88	15.81	3.22	15.79	0.37	
5200.00	0.520	23.070	5199.87	16.06	4.11	16.03	0.14	
5300.00	0.700	32.860	5299.87	16.57	5.04	16.54	0.21	
5400.00	1.090	76.160	5399.86	17.83	5.78	17.79	0.75	
5500.00	1.440	94.510	5499.83	20.01	5.91	19.97	0.53	
5600.00	1.450	81.910	5599.80	22.51	5.99	22.48	0.32	
5700.00	1.460	78.310	5699.77	25.02	6.42	24.98	0.09	
5800.00	1.620	71.790	5799.73	27.61	7.12	27.57	0.24	
5900.00	1.830	85.670	5899.69	30.55	7.68	30.50	0.47	
6000.00	2.290	78.250	5999.62	34.10	8.21	34.05	0.53	
6100.00	2.500	72.410	6099.54	38.14	9.28	38.08	0.32	
6200.00	2.220	66.010	6199.45	42.00	10.72	41.93	0.38	
6286.00	6.200	84.200	6285.20	48.15	11.87	48.08	4.82	
6314.00	10.900	84.200	6312.89	52.29	12.29	52.22	16.79	
6346.00	14.300	97.600	6344.12	59.22	12.07	59.15	13.95	
6378.00	20.800	97.200	6374.61	68.78	10.84	68.71	20.32	
6408.00	38.600	99.000	6400.57	83.41	8.69	83.36	59.40	
6440.00	49.800	97.900	6423.47	105.43	5.44	105.39	35.08	
6472.00	59.900	95.500	6441.87	131.36	2.42	131.35	32.15	
6502.00	69.300	91.300	6454.73	158.36	0.86	158.36	33.78	
6534.00	76.300	88.100	6464.19	188.91	1.03	188.91	23.87	
6566.00	78.700	88.800	6471.11	220.14	1.88	220.13	7.80	
6597.00	81.800	88.800	6476.36	250.69	2.52	250.68	10.00	
6629.00	85.100	89.200	6480.01	282.47	3.07	282.46	10.39	
6661.00	85.500	89.900	6482.64	314.36	3.32	314.35	2.51	
6692.00	87.000	90.600	6484.66	345.29	3.19	345.28	5.34	
6724.00	89.500	90.600	6485.64	377.27	2.85	377.26	7.81	
6755.00	89.800	90.200	6485.83	408.27	2.63	408.26	1.61	
6787.00	90.000	90.600	6485.89	440.27	2.41	440.26	1.40	



Actual Wellpath Report

#3-H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
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WELLPATH DATA (156 stations)								
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Path Comment
6819.00	90.000	90.600	6485.89	472.26	2.08	472.26	0.00	
6851.00	90.100	90.600	6485.86	504.26	1.74	504.26	0.31	
6882.00	90.400	90.600	6485.72	535.25	1.42	535.25	0.97	
6914.00	89.700	90.600	6485.69	567.25	1.08	567.25	2.19	
6946.00	89.800	89.900	6485.83	599.25	0.94	599.25	2.21	
7009.00	89.400	88.800	6486.27	662.24	1.66	662.24	1.86	
7072.00	91.800	88.500	6485.61	725.22	3.14	725.22	3.84	
7104.00	91.700	88.500	6484.64	757.20	3.98	757.19	0.31	
7136.00	92.000	88.500	6483.60	789.18	4.82	789.17	0.94	
7167.00	91.800	89.500	6482.58	820.16	5.36	820.14	3.29	
7199.00	91.400	88.800	6481.68	852.15	5.83	852.13	2.52	
7262.00	90.500	88.800	6480.64	915.13	7.15	915.10	1.43	
7294.00	90.200	88.100	6480.44	947.12	8.02	947.09	2.38	
7325.00	90.000	88.500	6480.39	978.11	8.93	978.08	1.44	
7357.00	90.800	88.500	6480.16	1010.11	9.77	1010.07	2.50	
7389.00	90.900	89.200	6479.69	1042.10	10.41	1042.06	2.21	
7452.00	90.100	88.800	6479.14	1105.09	11.51	1105.04	1.42	
7515.00	90.600	89.200	6478.76	1168.09	12.61	1168.03	1.02	
7579.00	92.200	89.900	6477.19	1232.07	13.12	1232.01	2.73	
7611.00	92.200	89.500	6475.96	1264.04	13.28	1263.98	1.25	
7643.00	91.500	89.200	6474.93	1296.03	13.65	1295.97	2.38	
7706.00	92.900	89.500	6472.51	1358.98	14.36	1358.91	2.27	
7738.00	92.600	89.200	6470.98	1390.94	14.72	1390.87	1.33	
7801.00	92.300	89.200	6468.28	1453.88	15.60	1453.81	0.48	
7864.00	91.800	89.200	6466.03	1516.84	16.48	1516.76	0.79	
7928.00	91.100	89.200	6464.41	1580.82	17.37	1580.74	1.09	
7991.00	90.000	90.200	6463.81	1643.81	17.70	1643.73	2.36	
8023.00	90.300	89.200	6463.72	1675.81	17.87	1675.73	3.26	
8086.00	89.400	89.900	6463.89	1738.81	18.37	1738.73	1.81	
8150.00	90.700	89.200	6463.83	1802.81	18.87	1802.72	2.31	
8212.00	90.300	89.200	6463.29	1864.80	19.73	1864.71	0.65	
8276.00	89.800	88.800	6463.23	1928.80	20.85	1928.70	1.00	
8339.00	89.400	88.800	6463.67	1991.79	22.17	1991.69	0.63	
8371.00	89.900	88.800	6463.87	2023.79	22.84	2023.68	1.56	
8403.00	90.700	88.800	6463.70	2055.78	23.51	2055.67	2.50	
8466.00	90.000	89.900	6463.32	2118.78	24.23	2118.67	2.07	
8498.00	89.500	89.200	6463.46	2150.78	24.48	2150.67	2.69	
8561.00	91.500	90.200	6462.91	2213.77	24.81	2213.66	3.55	
8624.00	90.900	89.900	6461.59	2276.76	24.75	2276.64	1.06	
8688.00	90.800	89.900	6460.64	2340.75	24.86	2340.64	0.16	



Actual Wellpath Report

#3-H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	#3-H_SHL
Area	Eddy County, NM	Well	#3-H
Field	Crow Flats 16 State COM	Wellbore	#3-H_AWB
Facility	Crow Flats 16 State #3-H	Sidetrack from	#3-H_AWB OH at 6200.00 MD

WELLPATH DATA (156 stations)								
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Path Comment
8719.00	90.800	90.900	6460.21	2371.74	24.65	2371.63	3.23	
8783.00	88.900	89.500	6460.37	2435.73	24.42	2435.63	3.69	
8846.00	88.400	90.200	6461.86	2498.72	24.59	2498.61	1.37	
8910.00	88.200	89.200	6463.76	2562.69	24.92	2562.58	1.59	
8972.00	87.800	89.200	6465.92	2624.65	25.79	2624.54	0.65	
9036.00	89.300	90.900	6467.54	2688.62	25.73	2688.51	3.54	
9099.00	89.200	92.300	6468.36	2751.58	23.97	2751.48	2.23	
9131.00	89.100	92.700	6468.84	2783.53	22.58	2783.44	1.29	
9194.00	90.400	92.000	6469.11	2846.46	20.00	2846.39	2.34	
9258.00	90.400	90.600	6468.67	2910.43	18.54	2910.37	2.19	
9321.00	89.400	89.500	6468.78	2973.43	18.49	2973.37	2.36	
9384.00	89.100	89.500	6469.60	3036.42	19.04	3036.36	0.48	
9447.00	88.900	90.900	6470.70	3099.41	18.82	3099.35	2.24	
9510.00	89.100	87.800	6471.80	3162.39	19.53	3162.33	4.93	
9573.00	89.600	87.800	6472.52	3225.35	21.95	3225.28	0.79	
9637.00	89.400	88.100	6473.07	3289.32	24.24	3289.23	0.56	
9700.00	87.300	90.200	6474.89	3352.29	25.18	3352.19	4.71	
9763.00	89.000	90.200	6476.92	3415.25	24.96	3415.16	2.70	
9826.00	89.200	89.500	6477.91	3478.24	25.12	3478.15	1.16	
9889.00	89.100	90.200	6478.85	3541.23	25.29	3541.14	1.12	
9952.00	89.100	90.200	6479.84	3604.22	25.07	3604.13	0.00	
10046.00	89.300	90.600	6481.15	3698.20	24.41	3698.12	0.48	
10110.00	89.000	89.200	6482.10	3762.19	24.52	3762.11	2.24	
10173.00	87.900	87.800	6483.80	3825.15	26.17	3825.07	2.83	
10236.00	88.600	88.800	6485.73	3888.11	28.04	3888.01	1.94	
10299.00	89.500	90.200	6486.77	3951.10	28.59	3950.99	2.64	
10362.00	89.700	89.900	6487.21	4014.09	28.53	4013.99	0.57	
10425.00	89.700	89.500	6487.54	4077.09	28.86	4076.99	0.63	
10489.00	89.700	89.500	6487.87	4141.09	29.42	4140.99	0.00	
10552.00	88.200	89.900	6489.03	4204.08	29.75	4203.97	2.46	
10615.00	87.800	89.200	6491.23	4267.04	30.24	4266.93	1.28	
10678.00	87.900	89.500	6493.59	4329.99	30.96	4329.88	0.50	
10742.00	87.800	89.500	6495.99	4393.95	31.52	4393.84	0.16	
10805.00	88.000	89.900	6498.30	4456.91	31.85	4456.79	0.71	
10853.00	88.000	89.900	6499.98	4504.88	31.93	4504.76	0.00	
10897.00	88.000	89.900	6501.51	4548.85	32.01	4548.74	0.00	PROJ. TO BIT



Actual Wellpath Report

#3-H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	#3-H_SHL
Area	Eddy County, NM	Well	#3-H
Field	Crow Flats 16 State COM	Wellbore	#3-H AWB
Facility	Crow Flats 16 State #3-H	Sidetrack from	#3-H AWB OH at 6200.00 MD

TARGETS									
Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
#3-H_BHL		6515.00	29.20	4558.96	590399.28	698769.98	32 55 14.990N	104 10 24.402W	point

WELLPATH COMPOSITION					Ref Wellbore: #3-H AWB		Ref Wellpath: #3-H AWP	
Start MD [feet]	End MD [feet]	Positional Uncertainty Model			Log Name/Comment		Wellbore	
0.00	6200.00	Gyrodatta standard - Continuous gyro			GYRO		#3-H AWB OH	
6200.00	10897.00	NaviTrak (Standard)			MWD		#3-H AWB	



Cimarex Energy Co.

Location Eddy County, NM
Field: Crow Flats 16 State COM
Facility Crow Flats 16 State #3-H

Slot #3-H_SHL
Well: #3-H
Wellbore #3-H_AWB



Pit reference wellpath is #3-H_AWB

True vertical depths are referenced to Rig on #3-H_SHL (RT)

Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (2011) US feet

Measured depths are referenced to Rig on #3-H_SHL (RT)

North Reference: Grid north

Rig on #3-H_SHL (RT) to GRN ELEV: 3587 feet

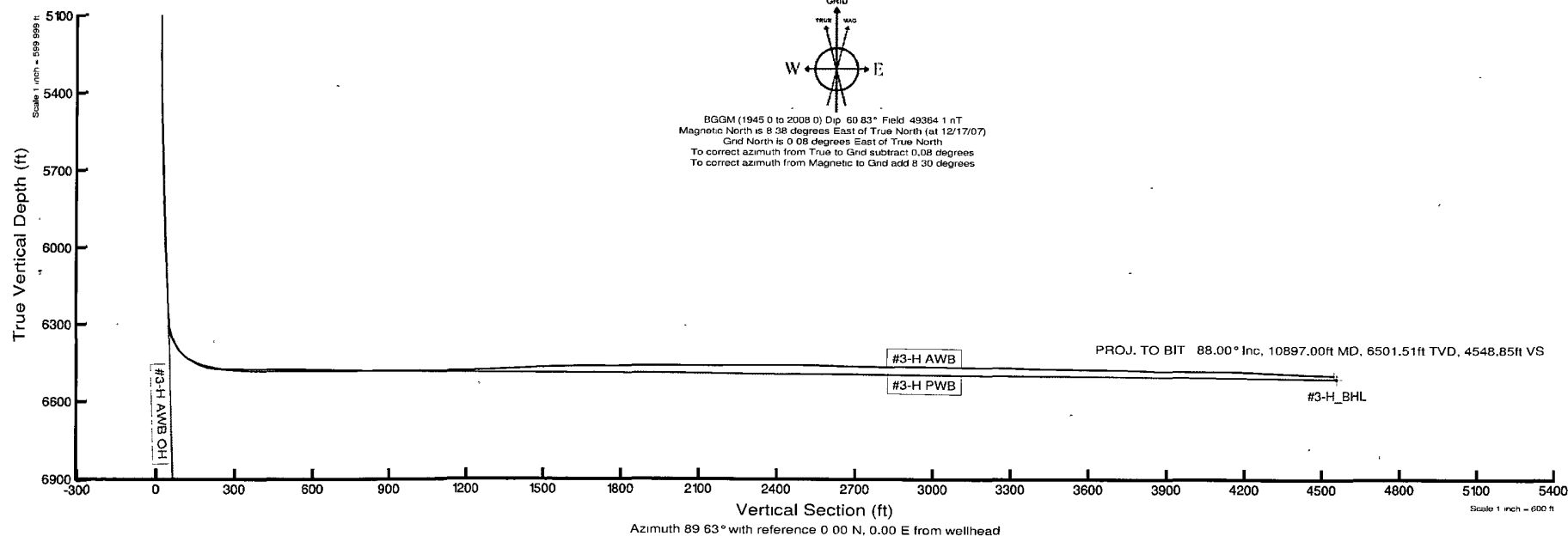
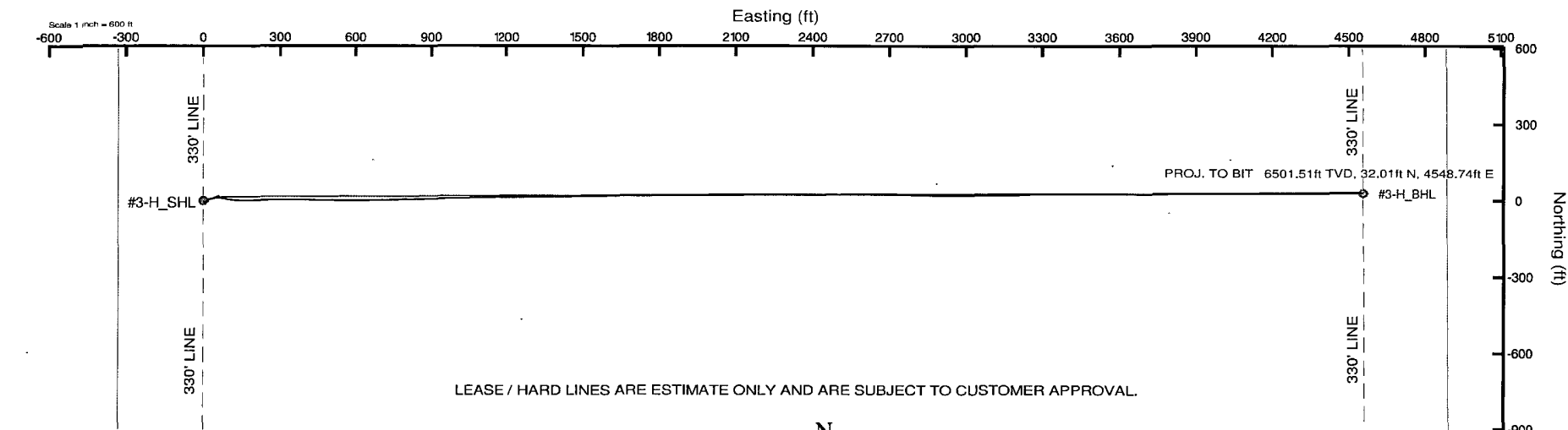
Scale: True distance

GRN ELEV to Mud line (Facility - Crow Flats 16 State #3-H) -3140 feet

Depths are in feet

Coordinates are in feet referenced to Facility Center

Created by: Victor Hernandez on 1/7/2009



ACTUAL WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ

Software System: WellArchitect™1.2

REFERENCE WELLPATH IDENTIFICATION

Operator Cimarex Energy Co.
 Area Eddy County, NM
 Field Crow Flats 16 State COM
 Facility Crow Flats 16 State #3
 Slot #3_SHL
 Well #3
 Wellbore #3 AWB
 Wellpath #3 AWP
 Sidetrack #3 AWB OH at 6200.00 MD

REPORT SETUP INFORMATION

Projection NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
 North Refe Grid
 Scale 0.999911
 Wellbore L 12/26/2007
 Software S WellArchitect™
 User Victor Hernandez
 Report Gei 01/07/08 at 13:38:16
 DataBase/ WA_Midland/ev23.xml

WELLPAT	Local North	Local East	Grid East	Grid North	Latitude	Longitude
	[ft]	[ft]	[ft]	[ft]	[°]	[°]
Slot Locati	0	0	585840.7	698740.8	32 55 14.7	104 11 17.883W
Facility Re			585840.7	698740.8	32 55 14.7	104 11 17.883W
Field Refer			585840.7	698740.8	32 55 14.7	104 11 17.883W

WELLPATH DATUM

Calculation Minimum curvature
 Horizontal Facility Center
 Vertical Re Rig on #3_SHL (RT)
 MD Refere Rig on #3_SHL (RT)
 Field Vertic GRN. ELEV.
 Rig on #3_ 18.00 feet
 Rig on #3_ 3567.00 feet
 Facility Ver 0.00 feet
 Section Or 0.00 feet
 Section Or 0.00 feet
 Section Az 89.63°

WELLPATH DATA Wellbore: #3 AWB Wellpath: #3 AWP † = interpolated/extrapolated station								
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	DLS	Path Comr Tgt#
feet	deg	deg	feet	feet	feet	feet	deg/100ft	
0	0	0	0	0	0	0	0	0
100	0.34	147.91	100	0.16	-0.25	0.16	0.34	
200	0.28	152.14	200	0.42	-0.72	0.43	0.06	
300	0.22	145.06	300	0.65	-1.09	0.65	0.07	
400	0.22	145.01	400	0.86	-1.41	0.87	0	
500	0.24	145.5	500	1.09	-1.74	1.1	0.02	
600	0.22	136.54	599.99	1.34	-2.05	1.35	0.04	
700	0.19	117.32	699.99	1.62	-2.26	1.63	0.07	
800	0.17	112.71	799.99	1.9	-2.4	1.92	0.02	

900	0.22	116.99	899.99	2.21	-2.54	2.22	0.05
1000	0.23	129.98	999.99	2.53	-2.76	2.55	0.05
1100	0.19	178.47	1099.99	2.69	-3.05	2.71	0.18
1200	0.21	177.19	1199.99	2.7	-3.4	2.72	0.02
1300	0.15	208.63	1299.99	2.64	-3.7	2.67	0.11
1400	0.18	275.63	1399.99	2.42	-3.8	2.45	0.18
1500	0.19	270.73	1499.99	2.1	-3.78	2.13	0.02
1600	0.24	277.62	1599.99	1.73	-3.75	1.75	0.06
1700	0.31	247.71	1699.99	1.27	-3.83	1.29	0.16
1800	0.05	118.24	1799.99	1.06	-3.95	1.08	0.34
1900	0.14	56.03	1899.99	1.2	-3.9	1.22	0.12
2000	0.22	58.41	1999.99	1.46	-3.73	1.49	0.08
2100	0.23	84.28	2099.99	1.83	-3.61	1.85	0.1
2200	0.29	113.47	2199.99	2.26	-3.69	2.28	0.14
2300	0.43	143.35	2299.98	2.71	-4.1	2.74	0.23
2400	0.74	154.49	2399.98	3.21	-4.98	3.24	0.33
2500	0.87	144.48	2499.97	3.92	-6.18	3.96	0.19
2600	0.95	65.74	2599.96	5.12	-6.46	5.16	1.16
2700	0.8	58.8	2699.95	6.47	-5.75	6.51	0.18
2800	0.68	57	2799.94	7.57	-5.07	7.6	0.12
2900	0.61	79.59	2899.93	8.6	-4.65	8.63	0.26
3000	0.63	75.97	2999.93	9.65	-4.42	9.68	0.04
3100	0.47	88.61	3099.92	10.6	-4.28	10.63	0.2
3200	0.43	67.29	3199.92	11.36	-4.12	11.38	0.17
3300	0.35	58.4	3299.92	11.96	-3.82	11.99	0.1
3400	0.43	47.51	3399.91	12.5	-3.4	12.53	0.11
3500	0.4	79.72	3499.91	13.13	-3.09	13.15	0.23
3600	0.31	95.84	3599.91	13.74	-3.05	13.76	0.13
3700	0.2	99.64	3699.91	14.18	-3.11	14.2	0.11
3800	0.11	60.77	3799.91	14.44	-3.09	14.46	0.13
3900	0.29	32.44	3899.91	14.66	-2.83	14.67	0.2
4000	0.38	41.11	3999.91	15.01	-2.37	15.03	0.1
4100	0.47	57.92	4099.9	15.58	-1.9	15.59	0.15
4200	0.35	78.33	4199.9	16.23	-1.62	16.24	0.19
4300	0.37	44.48	4299.9	16.76	-1.33	16.77	0.21
4400	0.29	72.65	4399.9	17.23	-1.02	17.23	0.18
4500	0.15	67.14	4499.9	17.59	-0.9	17.6	0.14
4600	0.35	340.42	4599.9	17.61	-0.56	17.61	0.37
4700	0.44	338.96	4699.89	17.37	0.09	17.37	0.09
4800	0.41	328.33	4799.89	17.05	0.75	17.05	0.08
4900	0.55	319.6	4899.89	16.56	1.42	16.55	0.16
5000	0.63	331.89	4999.88	15.99	2.27	15.98	0.15
5100	0.54	8	5099.88	15.81	3.22	15.79	0.37
5200	0.52	23.07	5199.87	16.06	4.11	16.03	0.14
5300	0.7	32.86	5299.87	16.57	5.04	16.54	0.21
5400	1.09	76.16	5399.86	17.83	5.78	17.79	0.75
5500	1.44	94.51	5499.83	20.01	5.91	19.97	0.53
5600	1.45	81.91	5599.8	22.51	5.99	22.48	0.32
5700	1.46	78.31	5699.77	25.02	6.42	24.98	0.09
5800	1.62	71.79	5799.73	27.61	7.12	27.57	0.24
5900	1.83	85.67	5899.69	30.55	7.68	30.5	0.47
6000	2.29	78.25	5999.62	34.1	8.21	34.05	0.53
6100	2.5	72.41	6099.54	38.14	9.28	38.08	0.32
6200	2.22	66.01	6199.45	42	10.72	41.93	0.38
6286	6.2	84.2	6285.2	48.15	11.87	48.08	4.82
6314	10.9	84.2	6312.89	52.29	12.29	52.22	16.79
6346	14.3	97.6	6344.12	59.22	12.07	59.15	13.95

6378	20.8	97.2	6374.61	68.78	10.84	68.71	20.32
6408	38.6	99	6400.57	83.41	8.69	83.36	59.4
6440	49.8	97.9	6423.47	105.43	5.44	105.39	35.08
6472	59.9	95.5	6441.87	131.36	2.42	131.35	32.15
6502	69.3	91.3	6454.73	158.36	0.86	158.36	33.78
6534	76.3	88.1	6464.19	188.91	1.03	188.91	23.87
6566	78.7	88.8	6471.11	220.14	1.88	220.13	7.8
6597	81.8	88.8	6476.36	250.69	2.52	250.68	10
6629	85.1	89.2	6480.01	282.47	3.07	282.46	10.39
6661	85.5	89.9	6482.64	314.36	3.32	314.35	2.51
6692	87	90.6	6484.66	345.29	3.19	345.28	5.34
6724	89.5	90.6	6485.64	377.27	2.85	377.26	7.81
6755	89.8	90.2	6485.83	408.27	2.63	408.26	1.61
6787	90	90.6	6485.89	440.27	2.41	440.26	1.4
6819	90	90.6	6485.89	472.26	2.08	472.26	0
6851	90.1	90.6	6485.86	504.26	1.74	504.26	0.31
6882	90.4	90.6	6485.72	535.25	1.42	535.25	0.97
6914	89.7	90.6	6485.69	567.25	1.08	567.25	2.19
6946	89.8	89.9	6485.83	599.25	0.94	599.25	2.21
7009	89.4	88.8	6486.27	662.24	1.66	662.24	1.86
7072	91.8	88.5	6485.61	725.22	3.14	725.22	3.84
7104	91.7	88.5	6484.64	757.2	3.98	757.19	0.31
7136	92	88.5	6483.6	789.18	4.82	789.17	0.94
7167	91.8	89.5	6482.58	820.16	5.36	820.14	3.29
7199	91.4	88.8	6481.68	852.15	5.83	852.13	2.52
7262	90.5	88.8	6480.64	915.13	7.15	915.1	1.43
7294	90.2	88.1	6480.44	947.12	8.02	947.09	2.38
7325	90	88.5	6480.39	978.11	8.93	978.08	1.44
7357	90.8	88.5	6480.16	1010.11	9.77	1010.07	2.5
7389	90.9	89.2	6479.69	1042.1	10.41	1042.06	2.21
7452	90.1	88.8	6479.14	1105.09	11.51	1105.04	1.42
7515	90.6	89.2	6478.76	1168.09	12.61	1168.03	1.02
7579	92.2	89.9	6477.19	1232.07	13.12	1232.01	2.73
7611	92.2	89.5	6475.96	1264.04	13.28	1263.98	1.25
7643	91.5	89.2	6474.93	1296.03	13.65	1295.97	2.38
7706	92.9	89.5	6472.51	1358.98	14.36	1358.91	2.27
7738	92.6	89.2	6470.98	1390.94	14.72	1390.87	1.33
7801	92.3	89.2	6468.28	1453.88	15.6	1453.81	0.48
7864	91.8	89.2	6466.03	1516.84	16.48	1516.76	0.79
7928	91.1	89.2	6464.41	1580.82	17.37	1580.74	1.09
7991	90	90.2	6463.81	1643.81	17.7	1643.73	2.36
8023	90.3	89.2	6463.72	1675.81	17.87	1675.73	3.26
8086	89.4	89.9	6463.89	1738.81	18.37	1738.73	1.81
8150	90.7	89.2	6463.83	1802.81	18.87	1802.72	2.31
8212	90.3	89.2	6463.29	1864.8	19.73	1864.71	0.65
8276	89.8	88.8	6463.23	1928.8	20.85	1928.7	1
8339	89.4	88.8	6463.67	1991.79	22.17	1991.69	0.63
8371	89.9	88.8	6463.87	2023.79	22.84	2023.68	1.56
8403	90.7	88.8	6463.7	2055.78	23.51	2055.67	2.5
8466	90	89.9	6463.32	2118.78	24.23	2118.67	2.07
8498	89.5	89.2	6463.46	2150.78	24.48	2150.67	2.69
8561	91.5	90.2	6462.91	2213.77	24.81	2213.66	3.55
8624	90.9	89.9	6461.59	2276.76	24.75	2276.64	1.06
8688	90.8	89.9	6460.64	2340.75	24.86	2340.64	0.16
8719	90.8	90.9	6460.21	2371.74	24.65	2371.63	3.23
8783	88.9	89.5	6460.37	2435.73	24.42	2435.63	3.69
8846	88.4	90.2	6461.86	2498.72	24.59	2498.61	1.37

8910	88.2	89.2	6463.76	2562.69	24.92	2562.58	1.59
8972	87.8	89.2	6465.92	2624.65	25.79	2624.54	0.65
9036	89.3	90.9	6467.54	2688.62	25.73	2688.51	3.54
9099	89.2	92.3	6468.36	2751.58	23.97	2751.48	2.23
9131	89.1	92.7	6468.84	2783.53	22.58	2783.44	1.29
9194	90.4	92	6469.11	2846.46	20	2846.39	2.34
9258	90.4	90.6	6468.67	2910.43	18.54	2910.37	2.19
9321	89.4	89.5	6468.78	2973.43	18.49	2973.37	2.36
9384	89.1	89.5	6469.6	3036.42	19.04	3036.36	0.48
9447	88.9	90.9	6470.7	3099.41	18.82	3099.35	2.24
9510	89.1	87.8	6471.8	3162.39	19.53	3162.33	4.93
9573	89.6	87.8	6472.52	3225.35	21.95	3225.28	0.79
9637	89.4	88.1	6473.07	3289.32	24.24	3289.23	0.56
9700	87.3	90.2	6474.89	3352.29	25.18	3352.19	4.71
9763	89	90.2	6476.92	3415.25	24.96	3415.16	2.7
9826	89.2	89.5	6477.91	3478.24	25.12	3478.15	1.16
9889	89.1	90.2	6478.85	3541.23	25.29	3541.14	1.12
9952	89.1	90.2	6479.84	3604.22	25.07	3604.13	0
10046	89.3	90.6	6481.15	3698.2	24.41	3698.12	0.48
10110	89	89.2	6482.1	3762.19	24.52	3762.11	2.24
10173	87.9	87.8	6483.8	3825.15	26.17	3825.07	2.83
10236	88.6	88.8	6485.73	3888.11	28.04	3888.01	1.94
10299	89.5	90.2	6486.77	3951.1	28.59	3950.99	2.64
10362	89.7	89.9	6487.21	4014.09	28.53	4013.99	0.57
10425	89.7	89.5	6487.54	4077.09	28.86	4076.99	0.63
10489	89.7	89.5	6487.87	4141.09	29.42	4140.99	0
10552	88.2	89.9	6489.03	4204.08	29.75	4203.97	2.46
10615	87.8	89.2	6491.23	4267.04	30.24	4266.93	1.28
10678	87.9	89.5	6493.59	4329.99	30.96	4329.88	0.5
10742	87.8	89.5	6495.99	4393.95	31.52	4393.84	0.16
10805	88	89.9	6498.3	4456.91	31.85	4456.79	0.71
10853	88	89.9	6499.98	4504.88	31.93	4504.76	0
10897	88	89.9	6501.51	4548.85	32.01	4548.74	0 PROJ. TO BIT

T A R G E T S

Name	MD feet	TVD feet	North feet	East feet	Grid East us survey f	Grid North us survey f	Latitude DegMinSec	Longitude DegMinSec	Shape	Comment
#3_BHL		6515	29.2	4558.96	590399.3	698770	32 55 14.9	104 10 24.	point	

WELLPATH COMPOSITION Ref Wellbore: #3 AWB Ref Wellpath: #3 AWP

Log Name	Start MD feet	End MD feet	Pos Unc	Model
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GYRO	0	6200	Gyrodata standard - Continuous gyro
MWD	6200	10897	NaviTrak (Standard)