

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTJUN 30 2014
ArtesiaFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM120350
2. Name of Operator CIMAREX ENERGY COMPANY OF CO		6. If Indian, Allottee or Tribe Name
Contact: TERRI STATHEM E-Mail: tstathem@cimarex.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 600 NORTH MARIENFELD STREET SUITE 600 MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 432-620-1936	8. Well Name and No. HORNSBY 35 FEDERAL COM 3H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 35 T26S R27E Lot 4 0210FSL 1310FWL 32.000208 N Lat, 104.095399 W Lon		9. API Well No. 30-015-42208-00-X1
		10. Field and Pool or Exploratory WILDCAT <i>Hay Hollow, BS</i>
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Cimarex Energy Co. respectfully requests approval to change the APD as follows:

Change to the directional plan resulting in change of casing setting depth and/or length for the 7" casing and the 4-1/2" casing. The first change in directional plan is a change in the landing point. The TVD has changed from 10080 to 10147'. Other changes in directional plan are that we changed from a 12 deg/100' build rate to a combination build rate of 12 deg/100' to 70 degrees (casing to be set at this point) and 4 deg/100 from 70 degrees to landing point. The location of landing point was also moved to the West in order to get closer to 790 FWL quicker. Although landing point VS has increase to 1029' from 477', we will not lose any completed VS. The change in directional plan increased the total well depth to 16872' from 16752' (BHL TVD remains the same). The 4-1/2" liner will be set at 16872'. It also resulted in a change of MD and TVD of the 7" casing string. See below:

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct. Electronic Submission #250315 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad Committed to AFMSS for processing by WESLEY INGRAM on 06/20/2014 (14WWI0299SE)	
Name (Printed/Typed) TERRI STATHEM	Title COORDINATOR REGULATORY COMPLIA
Signature (Electronic Submission)	Date 06/20/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>WESLEY INGRAM</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>06/20/2014</u>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office <u>Carlsbad</u>

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.

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

C-102 Denison: Revised with correct API #
AND POOL. 6-30-14 TES

Additional data for EC transaction #250315 that would not fit on the form

32. Additional remarks, continued

The 7" approved setting depth is
10128' MD and 9993' TVD

The 7" setting depth will be changed to
10268' MD and 10021' TVD

We are currently at kick off point running intermediate logs.

Directional Plan attached.



Cactus 112

Cimarex

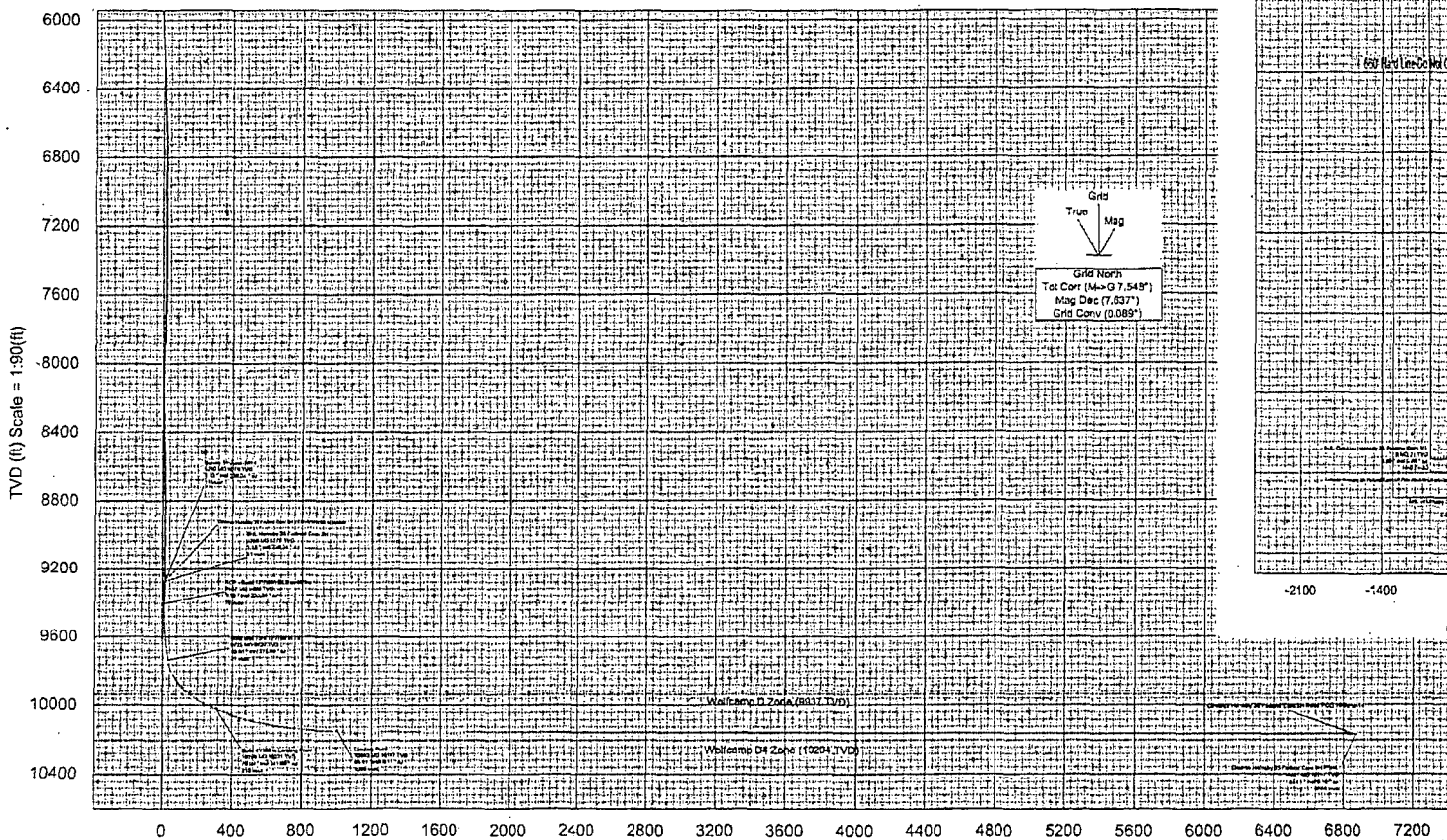
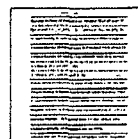
Rev6



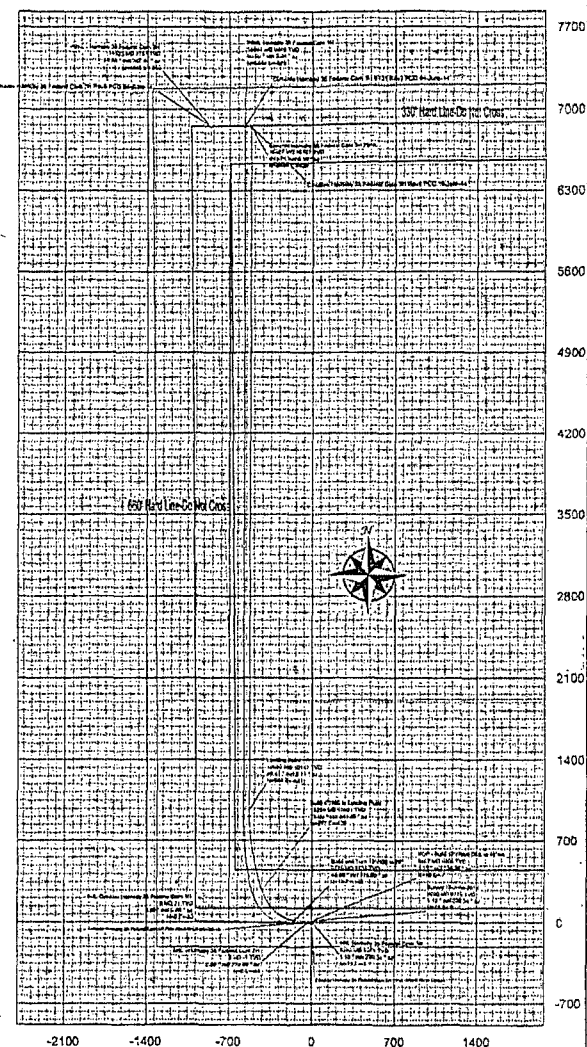
A Schlumberger Company

Borehole:	Well:	Field:	Structure:
Original Borehole	Hornsby 35 Federal Com 3H	NM Eddy County	Cactus 112
Gravity & Magnetic Parameters			
Model: 800M 2014	Date: 27-May-2014	Surface Location: NAD83 New Mexico State Plane, Eastern Zone, US Feet	Min/Elevation: Hornsby 35
MagDec: 7.437°	FG: 48081.815mT	Lat: N 32 0 2.08	Well: Hornsby 35
		Long: W 104 0 53.98	Well Ref: RKR(238m above)
		Heading: 583519.587TUD	Plan: Rev6 PCD 19-Jun-14
		Scale Fact: 0.0001231	

Crest Point														
SNL Hornsby 35 Federal Com 3H	0.00	0.00	355.20	0.00	-3290.00	0.00	0.00	8.00H 32 0 2.089	W 104 0 53.980	583519.587	35391.26	1	288.53	
SNL Hornsby 35 Federal Com 3H	3280.00	1.10	230.34	3278.70	5980.70	11.47	11.10	-4.951	32 0 2.195	W 104 0 54.045	583514.63	35402.37	0.33	230.34
KOP - Build 1271000 DLS to 45°	3405.82	1.10	230.34	3405.50	6187.50	18.08	9.52	-6.821	32 0 2.184	W 104 0 54.067	583512.74	35403.81	0.03	235.00
Build and Turn 1271000 to 70°	9775.35	45.00	275.00	9736.63	6438.63	31.10	19.13	-16.341	32 0 2.281	W 104 0 55.087	583373.26	35418.39	12.00	88.18
Build 471000 to Landing Point	18260.65	70.00	341.00	18221.16	6723.16	319.44	276.82	-49.361	32 0 4.835	W 104 0 58.854	583389.25	35428.06	12.00	44.76
Landing Point	11987.38	90.45	0.14	18147.80	6849.00	1128.94	988.32	-54.681	32 0 11.877	W 104 0 61.779	582984.95	35479.50	3.75	-144.99
Cimarex Hornsby 35 Federal Com 3H PSHL	18872.27	90.45	0.14	18108.00	6892.00	6872.55	6873.00	-20.001	32 1 9.511	W 104 0 59.903	582999.63	37063.65	0.00	



Vertical Section (ft) Azim = 355.284° Scale = 1:90(ft) Origin = 0N/-S, 0E/-W



CONTROLLED	
Drawn by:	Checked by:
Reviewed by:	Approved by:
Scale:	Date:
Notes:	



Cimarex Hornsby 35 Federal Com 3H Rev6 PCG 19-June-14 Proposal
Geodetic Report 100ft Interpolated
(Def Plan)



Report Date: June 20, 2014 - 01:17 AM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Hornsby 35 Federal Com 3H / Cimarex Hornsby 35 Federal Com 3H
Well: Cimarex Hornsby 35 Federal Com 3H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Hornsby 35 Federal Com 3H Rev6 PCG 19-June-14
Survey Date: October 09, 2013
Tort / AHD / DDI / ERD Ratio: 173.785 ° / 6915.985 ft / 8.291 / 0.680
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 0' 2.08923", W 104° 9' 53.98777"
Location Grid N/E Y/X: N 363991.264 ftUS, E 593519.582 ftUS
CRS Grid Convergence Angle: 0.0892 °
Grid Scale Factor: 0.99991221
Version / Patch: 2.7.1043.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 355.284 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3298.000 ft above
Seabed / Ground Elevation: 3274.000 ft above
Magnetic Declination: 7.637 °
Total Gravity Field Strength: 998.6833mgn (9.80665 Based)
Gravity Model: DOX
Total Magnetic Field Strength: 48081.935 nT
Magnetic Dip Angle: 59.792 °
Declination Date: May 27, 2014
Magnetic Declination Model: BGGM 2014
North Reference: Grid North
Grid Convergence Used: 0.0892 °
Total Corr Mag North->Grid North: 7.5482 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Hornsby 35 Federal Com 3H	0.00	0.00	355.28	0.00	0.00	0.00	0.00	N/A	363991.26	593519.58	N 32 0 2.09	W 104 9 53.99
	398.00	1.58	288.53	397.95	2.17	1.74	-5.20	0.40	363993.01	593514.38	N 32 0 2.11	W 104 9 54.05
	491.00	0.09	6.54	490.94	2.74	2.22	-6.41	1.68	363993.49	593513.17	N 32 0 2.11	W 104 9 54.06
	585.00	0.22	323.42	584.94	2.97	2.44	-6.51	0.18	363993.71	593513.07	N 32 0 2.11	W 104 9 54.06
	682.00	0.09	102.55	681.94	3.10	2.58	-6.55	0.30	363993.84	593513.04	N 32 0 2.11	W 104 9 54.06
	767.00	0.00	7.50	766.94	3.08	2.56	-6.48	0.11	363993.82	593513.10	N 32 0 2.11	W 104 9 54.06
	861.00	0.00	118.72	860.94	3.08	2.56	-6.48	0.00	363993.82	593513.10	N 32 0 2.11	W 104 9 54.06
	953.00	0.62	340.95	952.94	3.57	3.03	-6.64	0.67	363994.29	593512.94	N 32 0 2.12	W 104 9 54.06
	1043.00	0.00	141.35	1042.93	4.04	3.49	-6.80	0.69	363994.76	593512.78	N 32 0 2.12	W 104 9 54.07
	1132.00	0.09	252.54	1131.93	4.02	3.47	-6.87	0.10	363994.73	593512.71	N 32 0 2.12	W 104 9 54.07
	1224.00	0.00	296.04	1223.93	4.01	3.45	-6.94	0.10	363994.71	593512.64	N 32 0 2.12	W 104 9 54.07
	1320.00	0.00	7.50	1319.93	4.01	3.45	-6.94	0.00	363994.71	593512.64	N 32 0 2.12	W 104 9 54.07
	1419.00	0.09	246.12	1418.93	3.98	3.42	-7.01	0.09	363994.68	593512.57	N 32 0 2.12	W 104 9 54.07
	1513.00	0.09	140.34	1512.93	3.90	3.33	-7.03	0.15	363994.59	593512.55	N 32 0 2.12	W 104 9 54.07
	1608.00	0.09	5.52	1607.93	3.91	3.35	-6.97	0.17	363994.61	593512.61	N 32 0 2.12	W 104 9 54.07
	1707.00	0.00	9.43	1706.93	3.99	3.42	-6.97	0.09	363994.69	593512.62	N 32 0 2.12	W 104 9 54.07
	1799.00	0.00	7.05	1798.93	3.99	3.42	-6.97	0.00	363994.69	593512.62	N 32 0 2.12	W 104 9 54.07
	1896.00	0.09	184.33	1895.93	3.91	3.35	-6.97	0.09	363994.61	593512.61	N 32 0 2.12	W 104 9 54.07
	1991.00	0.00	30.39	1990.93	3.84	3.27	-6.98	0.09	363994.54	593512.60	N 32 0 2.12	W 104 9 54.07
	2082.00	0.22	60.45	2081.93	3.91	3.36	-6.83	0.24	363994.62	593512.76	N 32 0 2.12	W 104 9 54.07

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	2117.00	0.00	207.05	2116.93	3.94	3.39	-6.77	0.63	363994.66	593512.81	N 32 0	2.12 W 104 9 54.07
	2238.00	0.09	207.05	2237.93	3.86	3.31	-6.81	0.07	363994.57	593512.77	N 32 0	2.12 W 104 9 54.07
	2266.00	0.09	292.75	2265.93	3.85	3.30	-6.84	0.44	363994.56	593512.74	N 32 0	2.12 W 104 9 54.07
	2362.00	0.09	204.63	2361.93	3.82	3.26	-6.94	0.13	363994.52	593512.64	N 32 0	2.12 W 104 9 54.07
	2456.00	0.22	205.12	2455.93	3.60	3.03	-7.05	0.14	363994.29	593512.53	N 32 0	2.12 W 104 9 54.07
	2551.00	0.40	223.62	2550.93	3.22	2.62	-7.36	0.21	363993.89	593512.23	N 32 0	2.12 W 104 9 54.07
	2645.00	0.40	242.12	2644.93	2.87	2.23	-7.87	0.14	363993.50	593511.71	N 32 0	2.11 W 104 9 54.08
	2740.00	1.71	279.03	2739.91	3.08	2.30	-9.57	1.49	363993.56	593510.02	N 32 0	2.11 W 104 9 54.10
	2836.00	1.71	289.05	2835.87	4.00	2.99	-12.33	0.31	363994.26	593507.25	N 32 0	2.12 W 104 9 54.13
	2930.00	0.31	233.42	2929.85	4.43	3.30	-13.86	1.66	363994.56	593505.72	N 32 0	2.12 W 104 9 54.15
	3026.00	1.32	152.34	3025.84	3.27	2.16	-13.56	1.36	363993.43	593506.02	N 32 0	2.11 W 104 9 54.15
	3124.00	1.32	161.04	3123.82	1.14	0.10	-12.67	0.20	363991.36	593506.91	N 32 0	2.09 W 104 9 54.13
	3217.00	1.10	172.25	3216.80	-0.79	-1.80	-12.20	0.35	363989.46	593507.38	N 32 0	2.07 W 104 9 54.13
	3311.00	0.70	160.25	3310.79	-2.25	-3.24	-11.88	0.47	363988.03	593507.70	N 32 0	2.06 W 104 9 54.13
	3406.00	0.62	130.63	3405.78	-3.17	-4.12	-11.30	0.36	363987.15	593508.28	N 32 0	2.05 W 104 9 54.12
	3504.00	0.48	109.05	3503.77	-3.72	-4.60	-10.51	0.25	363986.67	593509.08	N 32 0	2.04 W 104 9 54.11
	3598.00	0.70	113.45	3597.77	-4.15	-4.95	-9.61	0.24	363986.31	593509.97	N 32 0	2.04 W 104 9 54.10
	3692.00	0.70	111.82	3691.76	-4.67	-5.39	-8.55	0.02	363985.87	593511.03	N 32 0	2.04 W 104 9 54.09
	3787.00	0.48	109.45	3786.76	-5.10	-5.74	-7.64	0.23	363985.52	593511.95	N 32 0	2.03 W 104 9 54.08
	3881.00	0.40	158.36	3880.76	-5.57	-6.18	-7.14	0.40	363985.09	593512.44	N 32 0	2.03 W 104 9 54.07
	3975.00	0.70	174.93	3974.75	-6.46	-7.06	-6.97	0.36	363984.21	593512.61	N 32 0	2.02 W 104 9 54.07
	4071.00	0.48	126.06	4070.75	-7.31	-7.88	-6.59	0.55	363983.39	593512.99	N 32 0	2.01 W 104 9 54.06
	4165.00	0.70	114.24	4164.74	-7.84	-8.34	-5.75	0.27	363982.92	593513.83	N 32 0	2.01 W 104 9 54.05
	4268.00	0.48	129.93	4267.74	-8.45	-8.88	-4.85	0.26	363982.39	593514.73	N 32 0	2.00 W 104 9 54.04
	4354.00	0.40	148.34	4353.73	-8.97	-9.37	-4.41	0.19	363981.90	593515.17	N 32 0	2.00 W 104 9 54.04
	4449.00	0.48	140.52	4448.73	-9.59	-9.96	-3.99	0.11	363981.31	593515.60	N 32 0	1.99 W 104 9 54.03
	4545.00	0.48	173.83	4544.73	-10.33	-10.67	-3.69	0.29	363980.60	593515.89	N 32 0	1.98 W 104 9 54.03
	4640.00	0.62	192.86	4639.72	-11.21	-11.56	-3.76	0.24	363979.70	593515.82	N 32 0	1.97 W 104 9 54.03
	4735.00	0.70	105.76	4734.72	-11.91	-12.22	-3.32	0.96	363979.04	593516.27	N 32 0	1.97 W 104 9 54.03
	4830.00	0.09	144.25	4829.72	-12.17	-12.44	-2.71	0.67	363978.83	593516.87	N 32 0	1.97 W 104 9 54.02
	4925.00	0.40	51.84	4924.72	-12.08	-12.30	-2.41	0.44	363978.97	593517.17	N 32 0	1.97 W 104 9 54.02
	5021.00	0.62	49.42	5020.71	-11.57	-11.75	-1.75	0.23	363979.51	593517.83	N 32 0	1.97 W 104 9 54.01
	5116.00	0.70	41.73	5115.70	-10.87	-10.98	-0.97	0.13	363980.28	593518.61	N 32 0	1.98 W 104 9 54.00
	5211.00	0.48	81.54	5210.70	-10.44	-10.49	-0.19	0.48	363980.77	593519.39	N 32 0	1.99 W 104 9 53.99
	5306.00	0.31	87.52	5305.70	-10.42	-10.42	0.46	0.18	363980.84	593520.04	N 32 0	1.99 W 104 9 53.98
	5403.00	0.48	111.57	5402.70	-10.61	-10.56	1.10	0.24	363980.71	593520.68	N 32 0	1.98 W 104 9 53.98
	5497.00	0.70	30.83	5496.69	-10.32	-10.21	1.76	0.83	363981.05	593521.34	N 32 0	1.99 W 104 9 53.97
	5592.00	0.79	31.62	5591.68	-9.32	-9.16	2.40	0.10	363982.11	593521.98	N 32 0	2.00 W 104 9 53.96
	5689.00	0.48	344.34	5688.68	-8.38	-8.19	2.64	0.60	363983.07	593522.22	N 32 0	2.01 W 104 9 53.96
	5782.00	0.48	295.73	5781.68	-7.80	-7.65	2.18	0.42	363983.61	593521.76	N 32 0	2.01 W 104 9 53.96
	5879.00	0.79	285.05	5878.67	-7.37	-7.30	1.17	0.34	363983.96	593520.75	N 32 0	2.02 W 104 9 53.97
	5969.00	2.11	327.86	5968.64	-5.69	-5.74	-0.31	1.80	363985.53	593519.27	N 32 0	2.03 W 104 9 53.99
	6063.00	2.29	341.74	6062.57	-2.33	-2.49	-1.82	0.60	363988.78	593517.76	N 32 0	2.06 W 104 9 54.01
	6159.00	2.59	327.55	6158.49	1.46	1.16	-3.58	0.70	363992.43	593518.00	N 32 0	2.10 W 104 9 54.03
	6255.00	1.89	338.36	6254.41	4.89	4.47	-5.33	0.85	363995.73	593514.25	N 32 0	2.13 W 104 9 54.05
	6350.00	1.80	346.36	6349.36	7.86	7.37	-6.26	0.29	363998.64	593513.32	N 32 0	2.16 W 104 9 54.06
	6443.00	1.49	23.62	6442.33	10.37	9.90	-6.12	1.17	364001.16	593513.46	N 32 0	2.19 W 104 9 54.06
	6539.00	1.71	2.42	6538.29	12.89	12.47	-5.56	0.65	364003.74	593514.02	N 32 0	2.21 W 104 9 54.05

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")		Longitude (E/W ° ' ")	
	6634.00	1.58	27.54	6633.25	15.40	15.05	-4.90	0.76	364006.31	593514.69	N 32 0	2.24	W 104	9 54.04
	6729.00	1.58	94.42	6728.22	16.30	16.11	-2.98	1.83	364007.37	593516.60	N 32 0	2.25	W 104	9 54.02
	6824.00	1.71	70.95	6823.19	16.45	16.47	-0.34	0.72	364007.74	593519.24	N 32 0	2.25	W 104	9 53.99
	6918.00	1.10	72.36	6917.16	17.00	17.21	1.85	0.65	364008.47	593521.43	N 32 0	2.26	W 104	9 53.97
	7012.00	1.19	76.05	7011.14	17.35	17.71	3.65	0.12	364008.98	593523.24	N 32 0	2.26	W 104	9 53.95
	7109.00	0.88	93.15	7108.12	17.41	17.92	5.38	0.45	364009.18	593524.96	N 32 0	2.27	W 104	9 53.93
	7204.00	0.62	115.03	7203.11	17.06	17.66	6.57	0.40	364008.92	593526.15	N 32 0	2.26	W 104	9 53.91
	7300.00	0.40	109.05	7299.11	16.67	17.33	7.36	0.24	364008.59	593526.94	N 32 0	2.26	W 104	9 53.90
	7395.00	0.22	123.64	7394.11	16.42	17.12	7.82	0.21	364008.38	593527.40	N 32 0	2.26	W 104	9 53.90
	7489.00	0.79	108.75	7488.11	16.05	16.81	8.59	0.62	364008.07	593528.17	N 32 0	2.26	W 104	9 53.89
	7583.00	1.01	142.54	7582.09	15.09	15.95	9.70	0.60	364007.21	593529.28	N 32 0	2.25	W 104	9 53.87
	7678.00	1.10	176.33	7677.08	13.48	14.37	10.27	0.65	364005.63	593529.85	N 32 0	2.23	W 104	9 53.87
	7774.00	1.01	184.33	7773.06	11.72	12.61	10.27	0.18	364003.87	593529.85	N 32 0	2.21	W 104	9 53.87
	7870.00	1.49	184.95	7869.04	9.66	10.52	10.09	0.50	364001.78	593529.68	N 32 0	2.19	W 104	9 53.87
	7965.00	2.29	177.12	7963.99	6.54	7.39	10.08	0.88	363998.66	593529.66	N 32 0	2.16	W 104	9 53.87
	8057.00	1.29	135.86	8055.94	3.90	4.82	10.90	1.71	363996.08	593530.48	N 32 0	2.14	W 104	9 53.86
	8152.00	0.40	66.03	8150.94	3.19	4.18	11.95	1.28	363995.45	593531.53	N 32 0	2.13	W 104	9 53.85
	8248.00	0.40	351.46	8246.93	3.63	4.65	12.20	0.50	363995.91	593531.78	N 32 0	2.14	W 104	9 53.85
	8343.00	1.89	328.34	8341.91	5.36	6.31	11.33	1.61	363997.58	593530.91	N 32 0	2.15	W 104	9 53.86
	8438.00	1.41	314.34	8436.87	7.64	8.46	9.67	0.66	363999.73	593529.25	N 32 0	2.17	W 104	9 53.88
	8533.00	1.41	315.64	8531.84	9.42	10.11	8.02	0.03	364001.38	593527.60	N 32 0	2.19	W 104	9 53.89
	8629.00	1.32	308.13	8627.82	11.08	11.64	6.32	0.21	364002.90	593525.90	N 32 0	2.20	W 104	9 53.91
	8722.00	1.19	297.75	8720.79	12.33	12.75	4.63	0.28	364004.02	593524.21	N 32 0	2.22	W 104	9 53.93
	8817.00	1.01	279.34	8815.78	13.06	13.35	2.93	0.41	364004.61	593522.51	N 32 0	2.22	W 104	9 53.95
	8913.00	1.19	270.34	8911.76	13.36	13.49	1.09	0.26	364004.75	593520.68	N 32 0	2.22	W 104	9 53.97
	9006.00	1.01	252.23	9004.74	13.26	13.25	-0.65	0.42	364004.51	593518.93	N 32 0	2.22	W 104	9 54.00
	9101.00	1.10	248.14	9099.73	12.80	12.65	-2.30	0.12	364003.91	593517.29	N 32 0	2.21	W 104	9 54.01
	9198.00	0.88	239.44	9196.71	12.20	11.93	-3.80	0.27	364003.19	593515.78	N 32 0	2.21	W 104	9 54.03
SHL Hornsby 35 Federal Com 3H	9280.00	1.10	230.34	9278.70	11.47	11.10	-4.95	0.33	364002.37	593514.63	N 32 0	2.20	W 104	9 54.05
KOP - Build 12°/100ft DLS to 45°Inc	9406.82	1.10	230.34	9405.50	10.08	9.55	-6.82	0.00	364000.81	593512.76	N 32 0	2.18	W 104	9 54.07
	9500.00	11.98	272.09	9497.95	10.71	9.33	-17.21	12.00	364000.59	593502.38	N 32 0	2.18	W 104	9 54.19
	9600.00	23.97	274.02	9592.90	15.04	11.14	-47.95	12.00	364002.40	593471.64	N 32 0	2.20	W 104	9 54.54
	9700.00	35.96	274.70	9679.37	22.96	14.98	-97.65	12.00	364006.25	593421.94	N 32 0	2.24	W 104	9 55.12
Build and Turn 12°/100 to 70°	9775.35	45.00	275.00	9736.63	31.10	19.13	-146.34	12.00	364010.39	593373.26	N 32 0	2.28	W 104	9 55.69
	9800.00	45.17	279.17	9754.03	34.67	21.28	-163.66	12.00	364012.54	593355.94	N 32 0	2.30	W 104	9 55.89
	9900.00	47.38	295.52	9823.39	61.80	42.87	-232.12	12.00	364034.13	593287.48	N 32 0	2.52	W 104	9 56.68
	10000.00	51.71	310.26	9888.47	108.24	84.23	-295.50	12.00	364075.49	593224.11	N 32 0	2.93	W 104	9 57.42
Wolfcamp D Zone	10082.67	56.52	320.98	9937.00	159.78	132.10	-342.08	12.00	364123.35	593177.53	N 32 0	3.40	W 104	9 57.96
	10100.00	57.65	323.06	9946.42	171.95	143.57	-351.04	12.00	364134.82	593168.58	N 32 0	3.52	W 104	9 58.06
	10200.00	64.71	334.16	9994.72	250.13	218.29	-396.29	12.00	364209.54	593123.33	N 32 0	4.26	W 104	9 58.59
Build 4°/100 to Landing Point	10268.65	70.00	341.00	10021.16	310.44	276.82	-420.36	12.00	364268.06	593099.26	N 32 0	4.83	W 104	9 58.86
	10300.00	70.84	341.90	10031.67	339.12	304.82	-429.76	3.81	364296.06	593089.86	N 32 0	5.11	W 104	9 58.97

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Landing Point	10400.00	73.54	344.73	10062.27	432.25	396.01	-457.06	3.81	364387.24	593062.56	N 32 0 6.01	W 104 9 59.29
	10500.00	76.27	347.48	10088.31	527.54	489.72	-480.23	3.81	364480.94	593039.40	N 32 0 6.94	W 104 9 59.56
	10600.00	79.04	350.16	10109.69	624.59	585.53	-499.15	3.81	364576.75	593020.47	N 32 0 7.89	W 104 9 59.77
	10700.00	81.83	352.80	10126.31	722.97	683.04	-513.75	3.81	364674.24	593005.88	N 32 0 8.86	W 104 9 59.94
	10800.00	84.63	355.40	10138.10	822.23	781.80	-523.95	3.81	364772.99	592995.68	N 32 0 9.83	W 104 10 0.06
	10900.00	87.45	357.97	10145.00	921.94	881.37	-529.72	3.81	364872.56	592989.91	N 32 0 10.82	W 104 10 0.12
	10983.46	89.81	0.11	10147.00	1005.19	964.79	-531.11	3.81	364955.96	592988.52	N 32 0 11.64	W 104 10 0.14
	11000.00	89.80	0.11	10147.06	1021.67	981.33	-531.08	0.00	364972.50	592988.55	N 32 0 11.81	W 104 10 0.14
	11100.00	89.80	0.11	10147.40	1121.31	1081.33	-530.89	0.00	365072.49	592988.74	N 32 0 12.80	W 104 10 0.13
	11200.00	89.80	0.11	10147.74	1220.96	1181.33	-530.70	0.00	365172.48	592988.93	N 32 0 13.79	W 104 10 0.13
	11300.00	89.80	0.11	10148.08	1320.60	1281.32	-530.50	0.00	365272.47	592989.13	N 32 0 14.78	W 104 10 0.13
	11400.00	89.80	0.11	10148.42	1420.25	1381.32	-530.31	0.00	365372.46	592989.32	N 32 0 15.77	W 104 10 0.12
	11500.00	89.80	0.11	10148.77	1519.89	1481.32	-530.12	0.00	365472.45	592989.51	N 32 0 16.76	W 104 10 0.12
	11600.00	89.80	0.11	10149.11	1619.54	1581.32	-529.92	0.00	365572.44	592989.71	N 32 0 17.75	W 104 10 0.11
	11700.00	89.80	0.11	10149.46	1719.18	1681.32	-529.73	0.00	365672.43	592989.90	N 32 0 18.73	W 104 10 0.11
	11800.00	89.80	0.11	10149.80	1818.83	1781.32	-529.53	0.00	365772.42	592990.09	N 32 0 19.72	W 104 10 0.11
	11900.00	89.80	0.11	10150.15	1918.47	1881.32	-529.34	0.00	365872.42	592990.29	N 32 0 20.71	W 104 10 0.10
	12000.00	89.80	0.11	10150.50	2018.12	1981.32	-529.15	0.00	365972.41	592990.48	N 32 0 21.70	W 104 10 0.10
	12100.00	89.80	0.11	10150.84	2117.76	2081.32	-528.95	0.00	366072.40	592990.68	N 32 0 22.69	W 104 10 0.09
	12200.00	89.80	0.11	10151.19	2217.41	2181.32	-528.76	0.00	366172.39	592990.87	N 32 0 23.68	W 104 10 0.09
	12300.00	89.80	0.11	10151.54	2317.05	2281.32	-528.56	0.00	366272.38	592991.07	N 32 0 24.67	W 104 10 0.08
	12400.00	89.80	0.11	10151.89	2416.69	2381.32	-528.36	0.00	366372.37	592991.27	N 32 0 25.66	W 104 10 0.08
	12500.00	89.80	0.11	10152.24	2516.34	2481.32	-528.17	0.00	366472.36	592991.46	N 32 0 26.65	W 104 10 0.08
	12600.00	89.80	0.11	10152.59	2615.98	2581.31	-527.97	0.00	366572.35	592991.66	N 32 0 27.64	W 104 10 0.07
	12700.00	89.80	0.11	10152.95	2715.63	2681.31	-527.77	0.00	366672.34	592991.86	N 32 0 28.63	W 104 10 0.07
	12800.00	89.80	0.11	10153.30	2815.27	2781.31	-527.58	0.00	366772.33	592992.05	N 32 0 29.62	W 104 10 0.06
	12900.00	89.80	0.11	10153.65	2914.92	2881.31	-527.38	0.00	366872.32	592992.25	N 32 0 30.61	W 104 10 0.06
	13000.00	89.80	0.11	10154.01	3014.56	2981.31	-527.18	0.00	366972.31	592992.45	N 32 0 31.60	W 104 10 0.06
	13100.00	89.80	0.11	10154.36	3114.21	3081.31	-526.98	0.00	367072.30	592992.65	N 32 0 32.59	W 104 10 0.05
	13200.00	89.80	0.11	10154.72	3213.85	3181.31	-526.78	0.00	367172.29	592992.84	N 32 0 33.58	W 104 10 0.05
	13300.00	89.80	0.11	10155.08	3313.49	3281.31	-526.59	0.00	367272.28	592993.04	N 32 0 34.57	W 104 10 0.04
	13400.00	89.80	0.11	10155.43	3413.14	3381.31	-526.39	0.00	367372.27	592993.24	N 32 0 35.56	W 104 10 0.04
	13500.00	89.79	0.11	10155.79	3512.78	3481.31	-526.19	0.00	367472.26	592993.44	N 32 0 36.55	W 104 10 0.04
	13600.00	89.79	0.11	10156.15	3612.43	3581.31	-525.99	0.00	367572.25	592993.64	N 32 0 37.54	W 104 10 0.03
	13700.00	89.79	0.11	10156.51	3712.07	3681.31	-525.79	0.00	367672.24	592993.84	N 32 0 38.53	W 104 10 0.03
	13800.00	89.79	0.11	10156.87	3811.72	3781.30	-525.59	0.00	367772.23	592994.04	N 32 0 39.52	W 104 10 0.02
	13900.00	89.79	0.11	10157.23	3911.36	3881.30	-525.39	0.00	367872.22	592994.24	N 32 0 40.50	W 104 10 0.02
	14000.00	89.79	0.12	10157.59	4011.00	3981.30	-525.19	0.00	367972.21	592994.44	N 32 0 41.49	W 104 10 0.02
	14100.00	89.79	0.12	10157.95	4110.65	4081.30	-524.99	0.00	368072.20	592994.64	N 32 0 42.48	W 104 10 0.01
	14200.00	89.79	0.12	10158.32	4210.29	4181.30	-524.79	0.00	368172.19	592994.84	N 32 0 43.47	W 104 10 0.01
	14300.00	89.79	0.12	10158.68	4309.94	4281.30	-524.58	0.00	368272.18	592995.04	N 32 0 44.46	W 104 10 0.00
	14400.00	89.79	0.12	10159.04	4409.58	4381.30	-524.38	0.00	368372.17	592995.25	N 32 0 45.45	W 104 10 0.00
	14500.00	89.79	0.12	10159.41	4509.22	4481.30	-524.18	0.00	368472.16	592995.45	N 32 0 46.44	W 104 9 59.99
	14600.00	89.79	0.12	10159.78	4608.87	4581.30	-523.98	0.00	368572.15	592995.65	N 32 0 47.43	W 104 9 59.99
	14700.00	89.79	0.12	10160.14	4708.51	4681.30	-523.78	0.00	368672.14	592995.85	N 32 0 48.42	W 104 9 59.99
	14800.00	89.79	0.12	10160.51	4808.16	4781.30	-523.57	0.00	368772.13	592996.06	N 32 0 49.41	W 104 9 59.98
	14900.00	89.79	0.12	10160.88	4907.80	4881.29	-523.37	0.00	368872.12	592996.26	N 32 0 50.40	W 104 9 59.98

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	15000.00	89.79	0.12	10161.25	5007.44	4981.29	-523.17	0.00	368972.11	592996.46	N 32 0 51.39	W 104 9 59.97
	15100.00	89.79	0.12	10161.61	5107.09	5081.29	-522.96	0.00	369072.10	592996.67	N 32 0 52.38	W 104 9 59.97
	15200.00	89.79	0.12	10161.98	5206.73	5181.29	-522.76	0.00	369172.09	592996.67	N 32 0 53.37	W 104 9 59.97
	15300.00	89.79	0.12	10162.36	5306.37	5281.29	-522.55	0.00	369272.08	592997.08	N 32 0 54.36	W 104 9 59.96
	15400.00	89.79	0.12	10162.73	5406.02	5381.29	-522.35	0.00	369372.07	592997.28	N 32 0 55.35	W 104 9 59.96
	15500.00	89.79	0.12	10163.10	5505.66	5481.29	-522.14	0.00	369472.06	592997.49	N 32 0 56.34	W 104 9 59.95
	15600.00	89.79	0.12	10163.47	5605.31	5581.29	-521.94	0.00	369572.05	592997.69	N 32 0 57.33	W 104 9 59.95
	15700.00	89.79	0.12	10163.85	5704.95	5681.29	-521.73	0.00	369672.04	592997.90	N 32 0 58.32	W 104 9 59.94
	15800.00	89.79	0.12	10164.22	5804.59	5781.29	-521.53	0.00	369772.03	592998.10	N 32 0 59.31	W 104 9 59.94
	15900.00	89.78	0.12	10164.60	5904.24	5881.29	-521.32	0.00	369872.02	592998.31	N 32 1 0 30	W 104 9 59.94
	16000.00	89.78	0.12	10164.97	6003.88	5981.28	-521.11	0.00	369972.01	592998.52	N 32 1 1 28	W 104 9 59.93
	16100.00	89.78	0.12	10165.35	6103.52	6081.28	-520.91	0.00	370072.00	592998.72	N 32 1 2 27	W 104 9 59.93
	16200.00	89.78	0.12	10165.72	6203.17	6181.28	-520.70	0.00	370171.99	592998.93	N 32 1 3 26	W 104 9 59.92
	16300.00	89.78	0.12	10166.10	6302.81	6281.28	-520.49	0.00	370271.98	592999.14	N 32 1 4 25	W 104 9 59.92
	16400.00	89.78	0.12	10166.48	6402.45	6381.28	-520.28	0.00	370371.97	592999.34	N 32 1 5 24	W 104 9 59.92
	16500.00	89.78	0.12	10166.86	6502.10	6481.28	-520.08	0.00	370471.96	592999.55	N 32 1 6 23	W 104 9 59.91
Cimarex Hornsby 35 Federal Com 3H PBHL	16536.72	89.78	0.12	10167.00	6538.69	6518.00	-520.00	0.00	370508.68	592999.63	N 32 1 6 60	W 104 9 59.91

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	24.000	Act Stns	30.000	30.000	SLB_MWD-POOR-Depth Only	Original Borehole / Cimarex Hornsby 35 Federal Com 3H
	1	24.000	398.000	1/98.425	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hornsby 35 Federal Com 3H
	1	398.000	9280.000	Act Stns	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hornsby 35 Federal Com 3H
	1	9280.000	9602.500	1/100.000	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hornsby 35 Federal Com 3H Rev6
	2	9338.500	16536.720	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Hornsby 35 Federal Com 3H Rev6

Hornsby 35 Federal Com 3H
30-015-42208
Cimarex Energy Company of Colorado
June 20, 2014
Conditions of Approval

- 1. Cement excess for 7" now calculates to 22% excess. Operator may need additional cement.**
- 2. Cement excess for 4.5" casing now calculates to 6% as operator did not provide any cement details. Additional cement may be required to reach 7" casing shoe. Operator approved to cement back to the 7" casing shoe.**

WWI 062014