Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOCD Artesia

FORM 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.

5. Lease Serial No.
NMNM120350

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
HORNSBY 35 FEDERAL COM 8H

2. Name of Operator
CIMAREX ENERGY COMPANY
Contact: ARICKA EASTERLING
E-Mail: aeasterling@cimarex.com

9. API Well No.
30-015-42169

3a. Address
202 S. CHEYENNE AVE, SUITE 1000
TULSA, OK 74103

3b. Phone No. (include area code)
Ph: 918-560-7060

10. Field and Pool, or Exploratory
WILDCAT BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 35 T26S R27E SESW 210FSL 1980FEL

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 to Original A PD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recomplete 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 respectfully request approval to change the original drilling plan for the above referenced well. Cimarex proposes to change the BHL there by changing the directional plan. No additional disturbance is required. Please see attached directional plan and plat.

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 12 2016
RECEIVED

Approved:
BHL: 330 FNL & 1560 FEL Sec 26-26S-27E
Proposed:
BHL: 330 FNL & 1700 FEL Sec 26-26S-27E

drilling Costs from EC# 321178 Still Stand

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #357360 verified by the BLM Well Information System
For CIMAREX ENERGY COMPANY, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH MCKINNEY on 11/08/2016 ()

Name *(Printed/Typed)* ARICKA EASTERLING — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 11/08/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

DEC 5 2016

Approved By _____ Title _____ Date _____

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

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

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-42169	30215	Hay Hollow; Bone Spring

[4] Property Code	[5] Property Name	[6] Well Number
	HORNSBY 35 FEDERAL COM	8H

[7] OGRID No.	[8] Operator Name	[9] Elevation
215099	CIMAREX ENERGY CO.	3240.3'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	35	26S	27E		290	SOUTH	2030	EAST	EDDY

[11] 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
B	26	26S	27E		330	NORTH	1700	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
224.21			

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.

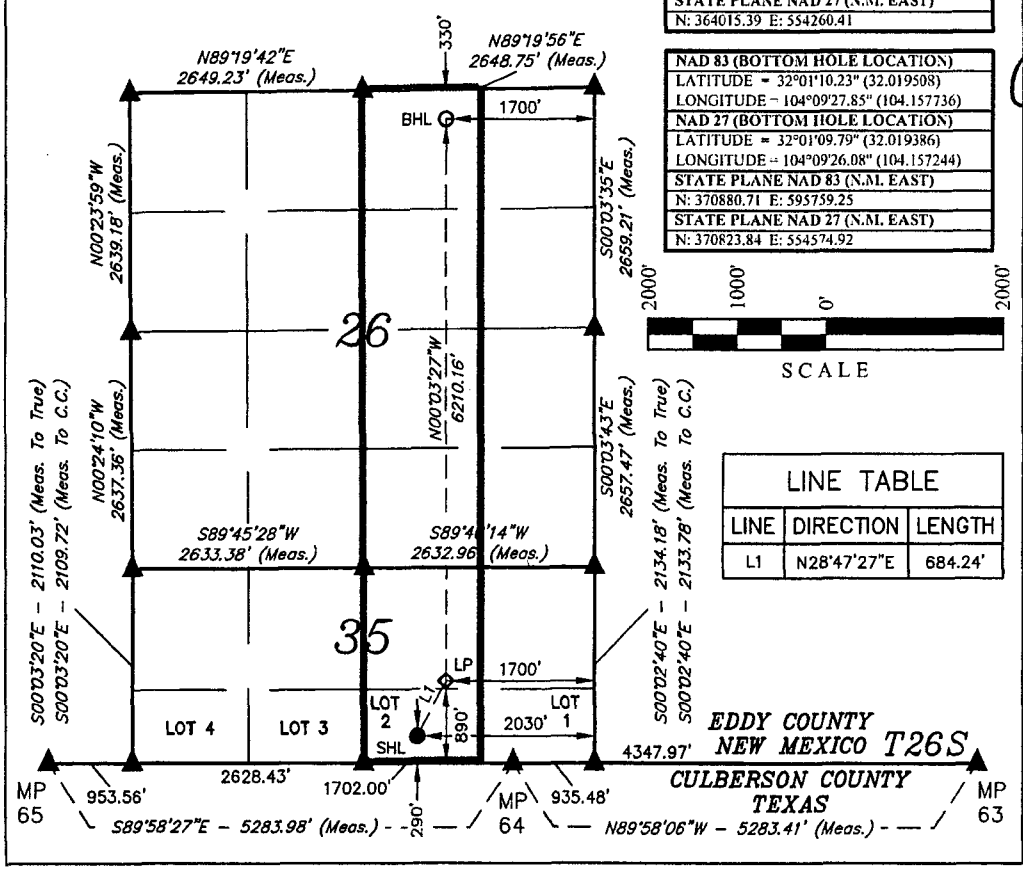
[16]
● = SURFACE HOLE LOCATION
◇ = LANDING POINT
○ = BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED

NOTE:
Distances referenced on plat to section lines are perpendicular.

REV: 1 10-28-16 D.P. (BHL MOVE)

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°00'02.86" (32.000794)
LONGITUDE = 104°09'31.63" (104.158786)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°00'02.42" (32.000672)
LONGITUDE = 104°09'29.86" (104.158294)
STATE PLANE NAD 83 (N.M. EAST)
N: 364072.13 E: 595444.86
STATE PLANE NAD 27 (N.M. EAST)
N: 364015.39 E: 554260.41

NAD 83 (BOTTOM HOLE LOCATION)
LATITUDE = 32°01'10.23" (32.019508)
LONGITUDE = 104°09'27.85" (104.157736)
NAD 27 (BOTTOM HOLE LOCATION)
LATITUDE = 32°01'09.79" (32.019386)
LONGITUDE = 104°09'26.08" (104.157244)
STATE PLANE NAD 83 (N.M. EAST)
N: 370880.71 E: 595759.25
STATE PLANE NAD 27 (N.M. EAST)
N: 370823.84 E: 554574.92



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N28°47'27"E	684.24'

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 11/7/16 Date

Aricka Easterling
Printed Name

aeasterling@cimarex.com
E-mail Address

[18] 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.

October 5, 2015
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
10-28-16
PROFESSIONAL SURVEYOR

Certificate Number:

Schlumberger

Cimarex Hornsby 35 Federal Com 8H Rev4 RM 07Nov16 Proposal
Geodetic Report
(Non-Def Plan)

CIMAREX

Report Date:	November 07, 2016 - 12:00 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex	**Vertical Section Azimuth:**	2.644 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Hornsby 35 Federal Com 8H / Cimarex Hornsby 35 Federal Com 8H	**TVD Reference Datum:**	RKB
Well:	Cimarex Hornsby 35 Federal Com 8H	**TVD Reference Elevation:**	3260.300 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3240.300 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.376 °
Survey Name:	Cimarex Hornsby 35 Federal Com 8H Rev4 RM 07Nov16	**Total Gravity Field Strength:**	998.4279mgn (9.80665 Based)
Survey Date:	November 07, 2016	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	122.577 ° / 6995.274 ft / 6.203 / 0.899	**Total Magnetic Field Strength:**	48047.013 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.715 °
Location Lat / Long:	N 32° 0' 2.85930", W 104° 9' 31.62729"	**Declination Date:**	November 07, 2016
Location Grid N/E Y/X:	N 364072.130 ftUS, E 595444.860 ftUS	**Magnetic Declination Model:**	HDGM 2016
CRS Grid Convergence Angle:	0.0925 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99991244	**Grid Convergence Used:**	0.0925 °
Version / Patch:	2.10.254.0	**Total Corr Mag North->Grid North:**	7.2836 °
		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 ° ' ")
Tie-In [290' FSL, 2030 FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	100.00	0.00	90.00	100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	200.00	0.00	90.00	200.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	300.00	0.00	90.00	300.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	400.00	0.00	90.00	400.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	500.00	0.00	90.00	500.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	600.00	0.00	90.00	600.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	700.00	0.00	90.00	700.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	800.00	0.00	90.00	800.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	900.00	0.00	90.00	900.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1000.00	0.00	90.00	1000.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1100.00	0.00	90.00	1100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1200.00	0.00	90.00	1200.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1300.00	0.00	90.00	1300.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1400.00	0.00	90.00	1400.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1500.00	0.00	90.00	1500.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1600.00	0.00	90.00	1600.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1700.00	0.00	90.00	1700.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1800.00	0.00	90.00	1800.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	1900.00	0.00	90.00	1900.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2000.00	0.00	90.00	2000.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2100.00	0.00	90.00	2100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2200.00	0.00	90.00	2200.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2300.00	0.00	90.00	2300.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2400.00	0.00	90.00	2400.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2500.00	0.00	90.00	2500.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63

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 ° ' ")
	2600.00	0.00	90.00	2600.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2700.00	0.00	90.00	2700.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2800.00	0.00	90.00	2800.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	2900.00	0.00	90.00	2900.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3000.00	0.00	90.00	3000.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3100.00	0.00	90.00	3100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3200.00	0.00	90.00	3200.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3300.00	0.00	90.00	3300.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3400.00	0.00	90.00	3400.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3500.00	0.00	90.00	3500.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3600.00	0.00	90.00	3600.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3700.00	0.00	90.00	3700.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3800.00	0.00	90.00	3800.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	3900.00	0.00	90.00	3900.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4000.00	0.00	90.00	4000.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4100.00	0.00	90.00	4100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4200.00	0.00	90.00	4200.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4300.00	0.00	90.00	4300.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4400.00	0.00	90.00	4400.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4500.00	0.00	90.00	4500.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4600.00	0.00	90.00	4600.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4700.00	0.00	90.00	4700.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4800.00	0.00	90.00	4800.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	4900.00	0.00	90.00	4900.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5000.00	0.00	90.00	5000.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5100.00	0.00	90.00	5100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5200.00	0.00	90.00	5200.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5300.00	0.00	90.00	5300.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5400.00	0.00	90.00	5400.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5500.00	0.00	90.00	5500.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5600.00	0.00	90.00	5600.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5700.00	0.00	90.00	5700.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5800.00	0.00	90.00	5800.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	5900.00	0.00	90.00	5900.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6000.00	0.00	90.00	6000.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6100.00	0.00	90.00	6100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6200.00	0.00	90.00	6200.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6300.00	0.00	90.00	6300.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6400.00	0.00	90.00	6400.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6500.00	0.00	90.00	6500.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6600.00	0.00	90.00	6600.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6700.00	0.00	90.00	6700.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6800.00	0.00	90.00	6800.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	6900.00	0.00	90.00	6900.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	7000.00	0.00	90.00	7000.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	7100.00	0.00	90.00	7100.00	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
KOP - Build 12'/100ft DLS	7120.66	0.00	90.00	7120.66	0.00	0.00	0.00	0.00	364072.13	595444.86	N 32 0 2.86	W 104 9 31.63
	7200.00	9.52	90.00	7199.64	0.30	0.00	6.58	12.00	364072.13	595451.44	N 32 0 2.86	W 104 9 31.55
	7300.00	21.52	90.00	7295.81	1.54	0.00	33.29	12.00	364072.13	595478.14	N 32 0 2.86	W 104 9 31.24
Build 12'/100ft DLS	7390.85	32.42	90.00	7376.66	3.43	0.00	74.43	12.00	364072.13	595519.28	N 32 0 2.86	W 104 9 30.76
	7400.00	32.44	87.95	7384.38	3.75	0.09	79.34	12.00	364072.22	595524.19	N 32 0 2.86	W 104 9 30.71
	7500.00	34.68	66.53	7468.00	18.52	12.42	132.43	12.00	364084.55	595577.28	N 32 0 2.98	W 104 9 30.09
First Legal Take Point	*7589.00*	*39.40*	*50.57*	*7539.19*	*48.68*	*40.53*	*177.61*	*12.00*	*364112.66*	*595622.45*	*N 32 0 3.26*	*W 104 9 29.56*
	7600.00	40.12	48.83	7547.64	53.47	45.08	182.97	12.00	364117.21	595627.81	N 32 0 3.30	W 104 9 29.50
	7700.00	47.65	35.30	7619.82	107.08	96.64	228.75	12.00	364168.76	595673.59	N 32 0 3.81	W 104 9 28.97
	7800.00	56.41	24.87	7681.39	177.01	164.84	267.76	12.00	364236.95	595712.59	N 32 0 4.49	W 104 9 28.51

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 ° ' ")
	7900.00	65.89	16.44	7729.65	260.19	246.70	298.29	12.00	364318.81	595743.13	N 32 0 5.30	W 104 9 28.16
	8000.00	75.76	9.20	7762.50	353.00	338.65	319.03	12.00	364410.75	595763.86	N 32 0 6.21	W 104 9 27.92
	8100.00	85.83	2.57	7778.50	451.38	436.66	329.05	12.00	364508.75	595773.88	N 32 0 7.18	W 104 9 27.80
Landing Point	8142.11	90.09	359.86	7780.00	493.43	478.72	329.94	12.00	364550.81	595774.77	N 32 0 7.59	W 104 9 27.79
	8200.00	90.09	359.86	7779.91	551.25	536.61	329.80	0.00	364608.69	595774.63	N 32 0 8.16	W 104 9 27.79
	8300.00	90.09	359.86	7779.75	651.14	636.61	329.56	0.00	364708.69	595774.39	N 32 0 9.15	W 104 9 27.79
	8400.00	90.09	359.86	7779.59	751.02	736.61	329.32	0.00	364808.68	595774.15	N 32 0 10.14	W 104 9 27.79
	8500.00	90.09	359.86	7779.44	850.90	836.61	329.07	0.00	364908.67	595773.91	N 32 0 11.13	W 104 9 27.79
	8600.00	90.09	359.86	7779.28	950.78	936.61	328.83	0.00	365008.66	595773.66	N 32 0 12.12	W 104 9 27.79
	8700.00	90.09	359.86	7779.12	1050.66	1036.61	328.59	0.00	365108.65	595773.42	N 32 0 13.11	W 104 9 27.79
	8800.00	90.09	359.86	7778.96	1150.55	1136.61	328.35	0.00	365208.64	595773.18	N 32 0 14.10	W 104 9 27.79
	8900.00	90.09	359.86	7778.80	1250.43	1236.61	328.10	0.00	365308.63	595772.93	N 32 0 15.09	W 104 9 27.79
	9000.00	90.09	359.86	7778.65	1350.31	1336.61	327.86	0.00	365408.62	595772.69	N 32 0 16.08	W 104 9 27.79
	9100.00	90.09	359.86	7778.49	1450.19	1436.61	327.61	0.00	365508.61	595772.45	N 32 0 17.07	W 104 9 27.80
	9200.00	90.09	359.86	7778.33	1550.07	1536.61	327.37	0.00	365608.60	595772.20	N 32 0 18.06	W 104 9 27.80
	9300.00	90.09	359.86	7778.17	1649.96	1636.61	327.13	0.00	365708.59	595771.96	N 32 0 19.05	W 104 9 27.80
	9400.00	90.09	359.86	7778.01	1749.84	1736.61	326.88	0.00	365808.58	595771.71	N 32 0 20.04	W 104 9 27.80
	9500.00	90.09	359.86	7777.86	1849.72	1836.61	326.64	0.00	365908.57	595771.47	N 32 0 21.03	W 104 9 27.80
	9600.00	90.09	359.86	7777.70	1949.60	1936.61	326.40	0.00	366008.56	595771.23	N 32 0 22.02	W 104 9 27.80
	9700.00	90.09	359.86	7777.54	2049.48	2036.61	326.15	0.00	366108.55	595770.98	N 32 0 23.01	W 104 9 27.80
	9800.00	90.09	359.86	7777.38	2149.36	2136.61	325.91	0.00	366208.54	595770.74	N 32 0 24.00	W 104 9 27.80
	9900.00	90.09	359.86	7777.22	2249.25	2236.61	325.66	0.00	366308.54	595770.49	N 32 0 24.99	W 104 9 27.80
	10000.00	90.09	359.86	7777.07	2349.13	2336.60	325.42	0.00	366408.53	595770.25	N 32 0 25.98	W 104 9 27.80
	10100.00	90.09	359.86	7776.91	2449.01	2436.60	325.18	0.00	366508.52	595770.01	N 32 0 26.97	W 104 9 27.81
	10200.00	90.09	359.86	7776.75	2548.89	2536.60	324.93	0.00	366608.51	595769.76	N 32 0 27.95	W 104 9 27.81
	10300.00	90.09	359.86	7776.59	2648.77	2636.60	324.69	0.00	366708.50	595769.52	N 32 0 28.94	W 104 9 27.81
	10400.00	90.09	359.86	7776.43	2748.66	2736.60	324.44	0.00	366808.49	595769.27	N 32 0 29.93	W 104 9 27.81
	10500.00	90.09	359.86	7776.28	2848.54	2836.60	324.20	0.00	366908.48	595769.03	N 32 0 30.92	W 104 9 27.81
	10600.00	90.09	359.86	7776.12	2948.42	2936.60	323.95	0.00	367008.47	595768.78	N 32 0 31.91	W 104 9 27.81
	10700.00	90.09	359.86	7775.96	3048.30	3036.60	323.71	0.00	367108.46	595768.54	N 32 0 32.90	W 104 9 27.81
	10800.00	90.09	359.86	7775.80	3148.18	3136.60	323.46	0.00	367208.45	595768.29	N 32 0 33.89	W 104 9 27.81
	10900.00	90.09	359.86	7775.64	3248.07	3236.60	323.22	0.00	367308.44	595768.05	N 32 0 34.88	W 104 9 27.81
	11000.00	90.09	359.86	7775.49	3347.95	3336.60	322.97	0.00	367408.43	595767.80	N 32 0 35.87	W 104 9 27.81
	11100.00	90.09	359.86	7775.33	3447.83	3436.60	322.73	0.00	367508.42	595767.56	N 32 0 36.86	W 104 9 27.81
	11200.00	90.09	359.86	7775.17	3547.71	3536.60	322.48	0.00	367608.41	595767.31	N 32 0 37.85	W 104 9 27.82
	11300.00	90.09	359.86	7775.01	3647.59	3636.60	322.24	0.00	367708.40	595767.07	N 32 0 38.84	W 104 9 27.82
	11400.00	90.09	359.86	7774.85	3747.47	3736.60	321.99	0.00	367808.39	595766.82	N 32 0 39.83	W 104 9 27.82
	11500.00	90.09	359.86	7774.70	3847.36	3836.60	321.75	0.00	367908.39	595766.58	N 32 0 40.82	W 104 9 27.82
	11600.00	90.09	359.86	7774.54	3947.24	3936.60	321.50	0.00	368008.38	595766.33	N 32 0 41.81	W 104 9 27.82
	11700.00	90.09	359.86	7774.38	4047.12	4036.60	321.26	0.00	368108.37	595766.09	N 32 0 42.80	W 104 9 27.82
	11800.00	90.09	359.86	7774.22	4147.00	4136.60	321.01	0.00	368208.36	595765.84	N 32 0 43.79	W 104 9 27.82
	11900.00	90.09	359.86	7774.06	4246.88	4236.60	320.77	0.00	368308.35	595765.60	N 32 0 44.78	W 104 9 27.82
	12000.00	90.09	359.86	7773.91	4346.77	4336.60	320.52	0.00	368408.34	595765.35	N 32 0 45.77	W 104 9 27.82
	12100.00	90.09	359.86	7773.75	4446.65	4436.60	320.27	0.00	368508.33	595765.10	N 32 0 46.76	W 104 9 27.82
	12200.00	90.09	359.86	7773.59	4546.53	4536.60	320.03	0.00	368608.32	595764.86	N 32 0 47.75	W 104 9 27.83
	12300.00	90.09	359.86	7773.43	4646.41	4636.60	319.78	0.00	368708.31	595764.61	N 32 0 48.74	W 104 9 27.83
	12400.00	90.09	359.86	7773.27	4746.29	4736.59	319.54	0.00	368808.30	595764.37	N 32 0 49.73	W 104 9 27.83
	12500.00	90.09	359.86	7773.12	4846.17	4836.59	319.29	0.00	368908.29	595764.12	N 32 0 50.71	W 104 9 27.83
	12600.00	90.09	359.86	7772.96	4946.06	4936.59	319.04	0.00	369008.28	595763.87	N 32 0 51.70	W 104 9 27.83
	12700.00	90.09	359.86	7772.80	5045.94	5036.59	318.80	0.00	369108.27	595763.63	N 32 0 52.69	W 104 9 27.83
	12800.00	90.09	359.86	7772.64	5145.82	5136.59	318.55	0.00	369208.26	595763.38	N 32 0 53.68	W 104 9 27.83
	12900.00	90.09	359.86	7772.48	5245.70	5236.59	318.30	0.00	369308.25	595763.14	N 32 0 54.67	W 104 9 27.83
	13000.00	90.09	359.86	7772.33	5345.58	5336.59	318.06	0.00	369408.24	595762.89	N 32 0 55.66	W 104 9 27.83
	13100.00	90.09	359.86	7772.17	5445.46	5436.59	317.81	0.00	369508.23	595762.64	N 32 0 56.65	W 104 9 27.83
	13200.00	90.09	359.86	7772.01	5545.35	5536.59	317.56	0.00	369608.23	595762.40	N 32 0 57.64	W 104 9 27.84
	13300.00	90.09	359.86	7771.85	5645.23	5636.59	317.32	0.00	369708.22	595762.15	N 32 0 58.63	W 104 9 27.84
	13400.00	90.09	359.86	7771.69	5745.11	5736.59	317.07	0.00	369808.21	595761.90	N 32 0 59.62	W 104 9 27.84
	13500.00	90.09	359.86	7771.54	5844.99	5836.59	316.82	0.00	369908.20	595761.66	N 32 1 0.61	W 104 9 27.84
	13600.00	90.09	359.86	7771.38	5944.87	5936.59	316.58	0.00	370008.19	595761.41	N 32 1 1.60	W 104 9 27.84

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 ° ' ")
	13700.00	90.09	359.86	7771.22	6044.76	6036.59	316.33	0.00	370108.18	595761.16	N 32 1 2.59	W 104 9 27.84
	13800.00	90.09	359.86	7771.06	6144.64	6136.59	316.08	0.00	370208.17	595760.91	N 32 1 3.58	W 104 9 27.84
	13900.00	90.09	359.86	7770.90	6244.52	6236.59	315.84	0.00	370308.16	595760.67	N 32 1 4.57	W 104 9 27.84
	14000.00	90.09	359.86	7770.75	6344.40	6336.59	315.59	0.00	370408.15	595760.42	N 32 1 5.56	W 104 9 27.84
	14100.00	90.09	359.86	7770.59	6444.28	6436.59	315.34	0.00	370508.14	595760.17	N 32 1 6.55	W 104 9 27.84
	14200.00	90.09	359.86	7770.43	6544.16	6536.59	315.09	0.00	370608.13	595759.92	N 32 1 7.54	W 104 9 27.85
	14300.00	90.09	359.86	7770.27	6644.05	6636.59	314.85	0.00	370708.12	595759.68	N 32 1 8.53	W 104 9 27.85
	14400.00	90.09	359.86	7770.11	6743.93	6736.59	314.60	0.00	370808.11	595759.43	N 32 1 9.52	W 104 9 27.85
Cimarex Hornsby 35 Federal Com 8H PBHL [330' FNL, 1700'	14472.60	90.09	359.86	7770.00	6816.45	6809.19	314.42	0.00	370880.71	595759.25	N 32 1 10.23	W 104 9 27.85

Survey Type: Non-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)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	20.000	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG-Depth Only	Original Borehole / Cimarex Hornsby 35 Federal Com 8H Rev4 RM 07Nov16
	1	20.000	14472.604	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Hornsby 35 Federal Com 8H

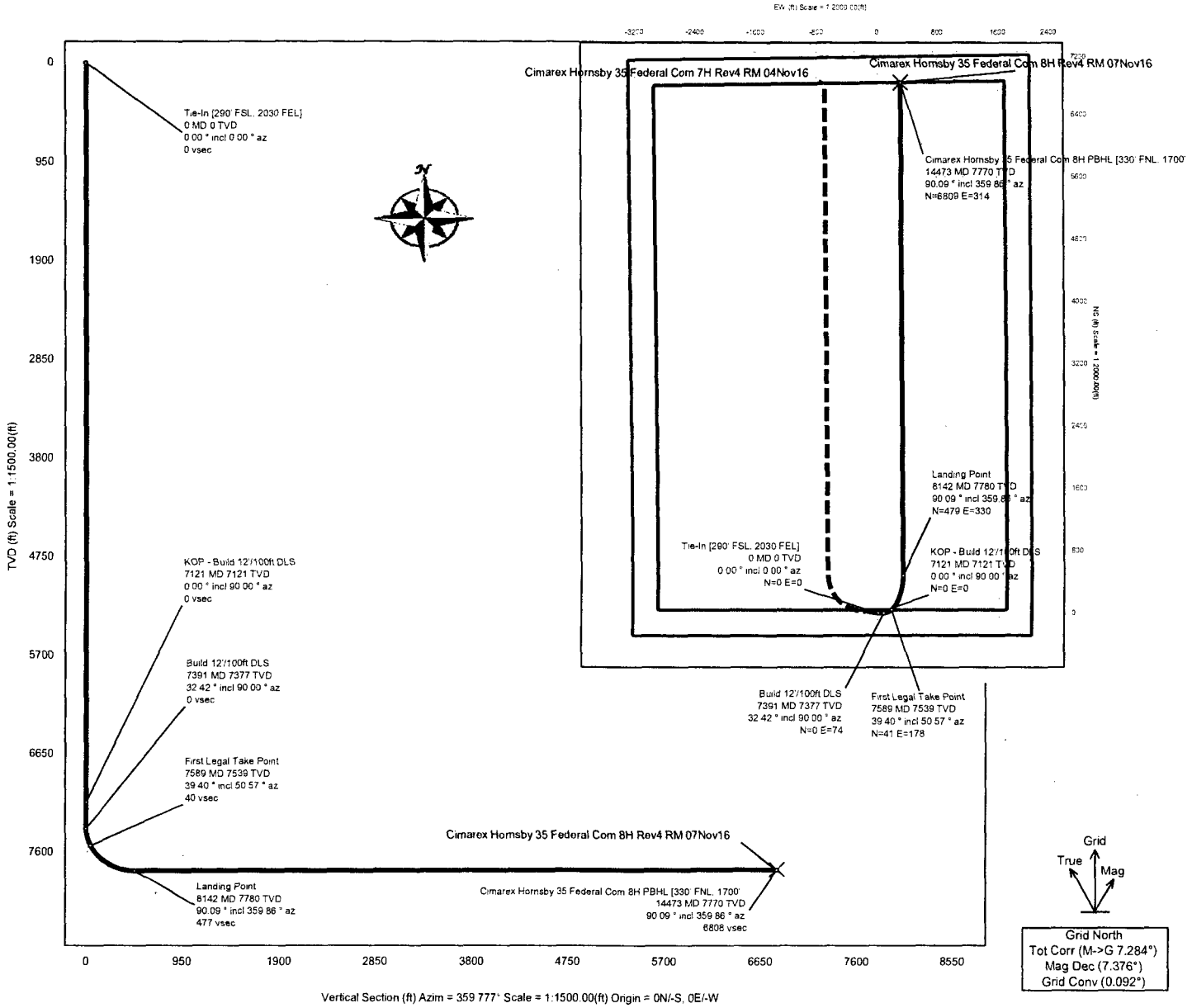
Schlumberger

Cimarex Rev 4

CIMAREX

Borehole:	Well:	Field:	Structure:
Original Borehole	Cimarex Hornsby 35 Federal Com 8H	NM Eddy County (NAD 83)	Cimarex Hornsby 35 Federal Com 8H

Gravity & Magnetic Parameters	Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous
Model: HDGM 2016 Dip: 59.715° Date: 07-Nov-2016	Lat: N 32 0 2.86 Northing: 364072.13ftUS Grid Conv: 0.0925°	Slot: Cimarex Hornsby 35 Federal Com 8H TVD Ref: RKB(3260.3ft above MSL)
MagDec: 7.376° FS: 48047.013nT Gravity FS: 998.428mgn (9.80665 Based)	Lon: W 104 9 31.63 Easting: 595444.86ftUS Scale Fact: 0.99991244	Plan: Cimarex Hornsby 35 Federal Com 8H Rev4 RM 07Nov16



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Tie-In [290' FSL, 2030 FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP - Build 12'/100ft DLS	7120.66	0.00	90.00	7120.66	0.00	0.00	0.00	0.00
Build 12'/100ft DLS	7390.85	32.42	90.00	7376.66	3.43	0.00	74.43	12.00
First Legal Take Point	7589.00	39.40	50.57	7539.19	48.68	40.53	177.61	12.00
Landing Point	8142.11	90.09	359.86	7780.00	493.43	478.72	329.94	12.00
Cimarex Hornsby 35 Federal Com 8H PBHL [330' FNL, 1700'	14472.60	90.09	359.86	7770.00	6816.45	6809.19	314.42	0.00

CONTROLLED

Plan ref	Cimarex Hornsby 35 Federal Com 8H Rev4 RM 07Nov16
Drawing ref	
Copy number	of 3
Date	07-Nov-2016

1	Client	
2	Client	
3	Office	
4	Office	

Copy number for