

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.**

OCD Hobbs

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

HOBBS OCD

NOV 07 2012

RECEIVED

1 Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5 Lease Serial No NMNM124663
2 Name of Operator CIMAREX ENERGY COMPANY OF CO		6 If Indian, Allottee or Tribe Name
Contact TERRI STATHEM E-Mail tstatthem@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 LYNCH 23 FEDERAL COM 4
4 Location of Well (Footage, Sec, T, R, M, or Survey Description) Sec 23 T20S R34E NWNE 326FNL 1727FEL		9 API Well No. 30-025-40726-00-X1
		10. Field and Pool, or Exploratory LEA
		11 County or Parish, and State LEA 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 APD
	☐ 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 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 recompleat 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 request approval move the BHL of the Lynch 23 Federal Com #4 well as follows.

approved BHL: 330' FSL & 1980' FEL, Sec. 23-20S-34E

proposed BHL: 330' FSL & 1650' FEL, Sec. 23-20S-34E

C102 & Proposed directional plan attached.

Original COA Still Applies

14 I hereby certify that the foregoing is true and correct	
Electronic Submission #156897 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Hobbs Committed to AFMSS for processing by KURT SIMMONS on 11/01/2012 (13KMS1379SE)	
Name (Printed/Typed) TERRI STATHEM	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 10/30/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By EDWARD FERNANDEZ	Title PETROLEUM ENGINEER	Date 11/01/2012
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 Hobbs

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 ****

NOV 08 2012

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 July 18, 2010

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30025-	Pool Code 37580	Pool Name Lea Bone Spring; South
Property Code 38591	Property Name LYNCH "23" FEDERAL COM	Well Number 4
GRID No. 162683	Operator Name CIMAREX ENERGY CO.	Elevation 3656'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	23	20 S	34 E		326	NORTH	1727	EAST	LEA

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
O	23	20 S	34 E		330	SOUTH	1650	EAST	LEA

Dedicated Acres 160	Joint or Infill	Consolidation Code	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

N: 670507.2 E: 785899.8 SURFACE LOCATION Lat - N 32°33'53.92" Long - W 103°31'40.53" NMSPEC - N 570208.8 E 789484.5 (NAD-83)	N: 670527.5 E: 789544.2 326' S.L. 3656.7' 3657.0' NM123524 4532.4'	N: 670547.0 E: 781100.7 1727'	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 undivided 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: <i>Terri Statham</i> Date: 10/30/12 Printed Name: Terri Statham Email Address: tstatham@cimarex.com
N: 565231.6 E: 785835.0 PROPOSED BOTTOM HOLE LOCATION Lat - N 32°33'08.16" Long - W 103°31'39.65" NMSPEC - N 565584.6 E 789575.1 (NAD-83)	NM124663 B.H. 330'	N: 667099.5 E: 781200.8 1650' NM028880	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. Date Surveyed: 10/30/12 Signature: <i>Gary L. Jones</i> Professional Surveyor 7977 Certificate No. Gary L. Jones 7977 BASIN SURVEYS 25887

ELG 11-8-2012



Cimares



A Schlumberger Company

Cactus 115

Rev.1

WELL	Lynch 23 Federal Com #4H	FIELD	NM Lea County	STRACTURE	Cactus 115
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Mapmon Parameters	Day	MR 8421	Date	October 24, 2012	Surface Location	NALCO Zone, Mesero State Plaza, Grants Zone, US Felt	Horizontal	Site	Lynch 23 Federal Com #4H	TVD Ref	81.01' N 41 above NSL3
Name	50001 2012	Mag Dec	7.524	JS	12417' NUT	Lat	N 12 11.51 819	Long	107 03 01.015	Scale Feet	0 19997960
						Long	107 03 01.015				

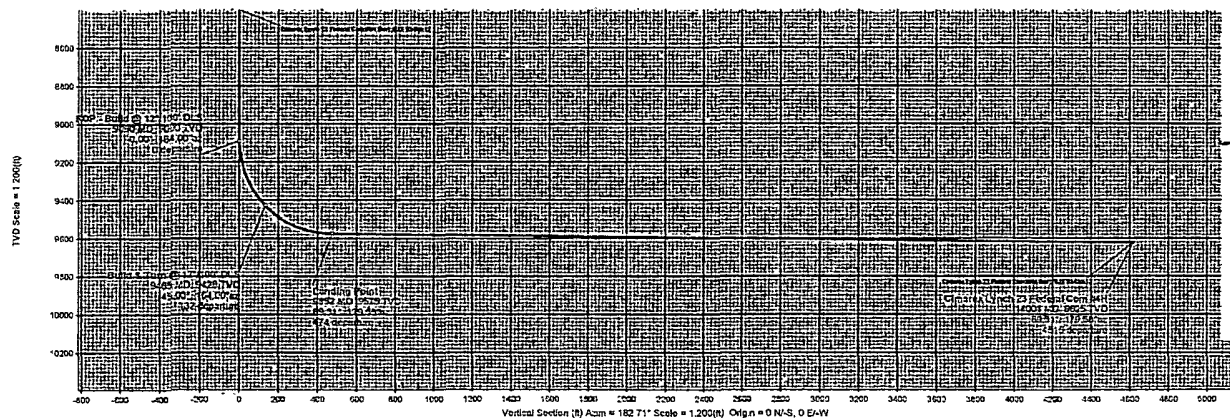


Gnd North
Tot Corr (M->G 7.0906°)
Mag Dec (7.524°)
Gnd Conv (0.434°)

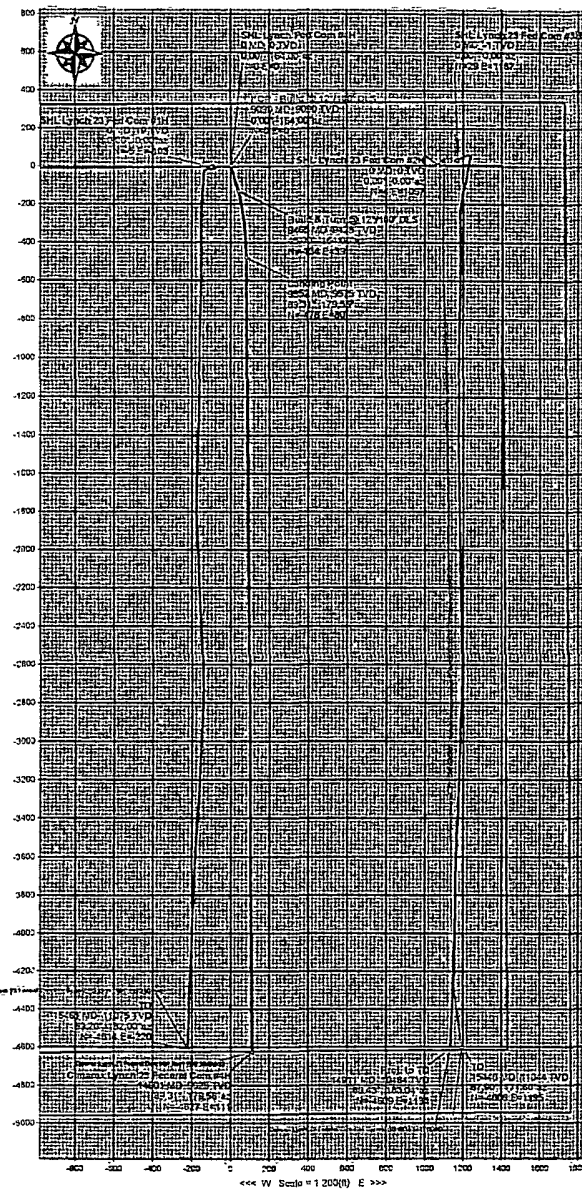
Legend

- Vertical Section (V) Azim = 182.71° Scale = 1,200(F) Origin = 0 N-S, 0 E-W
- Horizontal Section (H) Azim = 182.71° Scale = 1,200(F) Origin = 0 N-S, 0 E-W
- Vertical Section (V) Azim = 182.71° Scale = 1,200(F) Origin = 0 N-S, 0 E-W
- Horizontal Section (H) Azim = 182.71° Scale = 1,200(F) Origin = 0 N-S, 0 E-W
- Vertical Section (V) Azim = 182.71° Scale = 1,200(F) Origin = 0 N-S, 0 E-W
- Horizontal Section (H) Azim = 182.71° Scale = 1,200(F) Origin = 0 N-S, 0 E-W

Comments	Survey NDEP	Inclination(deg)	Azimuth(deg)	TVD(F)	Sub-Sea TVD	VS(F)	HS(F)	SV(F)	Logloss(deg)	Logloss(deg)	Eastings(MS)	Northings(MS)	DLSP(100M)	Total Error(ft)
SHL Lynch Fed Com #4H	0.00	0.00	184.00	0.00	-3574.00	0.00	0.00	0.00	N 32 33 53.925	W 103 31 40.534	789454.50	570208.50	0.00	154.00
RQP - Build @ 1271.00 DLS	9690.20	0.00	184.00	9690.20	9413.20	0.00	0.00	0.00	N 32 33 53.925	W 103 31 40.534	789454.50	570208.50	0.00	154.00
Build & Turn @ 1271.00 DLS	9455.20	45.00	184.00	9427.82	5733.82	132.46	-134.43	33.55	N 32 33 52.592	W 103 31 40.696	789503.05	570274.37	12.00	21.77
Landing Point	9551.90	59.31	179.59	9515.00	5501.00	473.86	-478.18	79.94	N 32 33 49.197	W 103 31 39.843	789544.43	570790.63	12.00	-104.15
Cimarex Lynch 23 Federal Com #4H	14000.84	89.31	179.59	9525.00	5551.00	4616.10	-4525.50	110.50	N 32 33 8.142	W 103 31 39.652	789575.00	570592.40	0.00	



Scale = 1,200(F) H >>>



Drawn By: R. Schmitt
Date Created: October 25, 2012 at 2:46 PM
Checked By: R. Schmitt
Checked Date: October 25, 2012 at 2:46 PM
Approved By: R. Schmitt
Approved Date: October 25, 2012 at 2:46 PM



Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12 Proposal Report 100' Interpolated (Non-Def Plan)



Report Date: October 30, 2012 - 02:17 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cactus 115 / Cimarex Lynch 23 Federal Com #4H
Well: Cimarex Lynch 23 Federal Com #4H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12
Survey Date: October 25, 2012
Tort / AHD / DDI / ERD Ratio: 91.407 * / 4635.479 ft / 5.790 / 0.482
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 33' 53.92462", W 103° 31' 40.53427"
Location Grid N/E Y/X: N 570208.800 ftUS, E 789464.500 ftUS
CRS Grid Convergence Angle: 0.4335 *
Grid Scale Factor: 0.9999796

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 182.710 * (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3674.000 ft above MSL
Seabed / Ground Elevation: 3656.000 ft above MSL
Magnetic Declination: 7.524 *
Total Gravity Field Strength: 999.1685 mgn (9.8 based)
Total Magnetic Field Strength: 48677.481 nT
Magnetic Dip Angle: 60.442 *
Declination Date: October 30, 2012
Magnetic Declination Model: BGGM 2012
North Reference: Gnd North
Grid Convergence Used: 0.4335 *
Total Corr Mag North->Grid North: 7.0906 *
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Lynch Fed Com #4H	0.00	0.00	164.00	0.00	-3674.00	0.00	0.00	0.00	N/A	N/A	N/A	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	100.00	0.00	164.00	100.00	-3574.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	200.00	0.00	164.00	200.00	-3474.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	300.00	0.00	164.00	300.00	-3374.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	400.00	0.00	164.00	400.00	-3274.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	500.00	0.00	164.00	500.00	-3174.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	600.00	0.00	164.00	600.00	-3074.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	700.00	0.00	164.00	700.00	-2974.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	800.00	0.00	164.00	800.00	-2874.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	900.00	0.00	164.00	900.00	-2774.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1000.00	0.00	164.00	1000.00	-2674.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1100.00	0.00	164.00	1100.00	-2574.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1200.00	0.00	164.00	1200.00	-2474.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1300.00	0.00	164.00	1300.00	-2374.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1400.00	0.00	164.00	1400.00	-2274.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1500.00	0.00	164.00	1500.00	-2174.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1600.00	0.00	164.00	1600.00	-2074.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1700.00	0.00	164.00	1700.00	-1974.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1800.00	0.00	164.00	1800.00	-1874.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	1900.00	0.00	164.00	1900.00	-1774.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2000.00	0.00	164.00	2000.00	-1674.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2100.00	0.00	164.00	2100.00	-1574.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2200.00	0.00	164.00	2200.00	-1474.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2300.00	0.00	164.00	2300.00	-1374.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2400.00	0.00	164.00	2400.00	-1274.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2500.00	0.00	164.00	2500.00	-1174.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2600.00	0.00	164.00	2600.00	-1074.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2700.00	0.00	164.00	2700.00	-974.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2800.00	0.00	164.00	2800.00	-874.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	2900.00	0.00	164.00	2900.00	-774.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	3000.00	0.00	164.00	3000.00	-674.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	3100.00	0.00	164.00	3100.00	-574.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	3200.00	0.00	164.00	3200.00	-474.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53
	3300.00	0.00	164.00	3300.00	-374.00	0.00	0.00	0.00	0.00	0.00	0.00	570208.80	789464.50	N 32 33 53.92	W 103 31 40.53

Comments	MD (ft)	Incl (°)	Azim Gnd (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	9200.00	13.18	164.00	9198.03	5525.03	11.91	-12.08	3.46	12.00	12.00	0.00	570196.72	789467.96	N 32 33 53.80	W 103 31 40.49
	9300.00	25.18	164.00	9293.31	5619.31	42.96	-43.60	12.50	12.00	12.00	0.00	570165.20	789477.00	N 32 33 53.49	W 103 31 40.39
Build & Turn @ 12"/100' DLS	9400.00	37.18	164.00	9378.72	5704.72	91.90	-93.27	26.74	12.00	12.00	0.00	570115.53	789491.24	N 32 33 53.00	W 103 31 40.23
	9465.20	45.00	164.00	9427.82	5753.82	132.46	-134.43	38.55	12.00	12.00	0.00	570074.37	789503.05	N 32 33 52.59	W 103 31 40.10
	9500.00	48.90	166.05	9451.57	5777.57	156.68	-158.99	45.10	12.00	11.20	5.90	570049.81	789509.60	N 32 33 52.35	W 103 31 40.02
	9600.00	60.25	170.83	9509.46	5835.46	235.55	-238.71	61.16	12.00	11.36	4.78	569970.10	789525.65	N 32 33 51.56	W 103 31 39.84
	9700.00	71.74	174.62	9550.08	5876.08	325.37	-329.17	72.56	12.00	11.49	3.79	569879.64	789537.06	N 32 33 50.66	W 103 31 39.72
Landing Point	9800.00	83.30	177.94	9571.66	5897.66	422.22	-426.43	78.82	12.00	11.56	3.31	569782.38	789543.32	N 32 33 49.70	W 103 31 39.65
	9851.90	89.31	179.58	9575.00	5901.00	473.86	-478.18	79.94	12.00	11.58	3.16	569730.63	789544.43	N 32 33 49.19	W 103 31 39.64
	9900.00	89.31	179.58	9575.58	5901.58	521.89	-526.27	80.29	0.00	0.00	0.00	569682.54	789544.79	N 32 33 48.71	W 103 31 39.64
	10000.00	89.31	179.58	9576.78	5902.78	621.73	-626.27	81.02	0.00	0.00	0.00	569582.55	789545.52	N 32 33 47.72	W 103 31 39.64
	10100.00	89.31	179.58	9577.99	5903.99	721.58	-726.26	81.76	0.00	0.00	0.00	569482.56	789546.25	N 32 33 46.73	W 103 31 39.64
	10200.00	89.31	179.58	9579.19	5905.19	821.42	-826.25	82.49	0.00	0.00	0.00	569392.57	789546.99	N 32 33 45.74	W 103 31 39.64
	10300.00	89.31	179.58	9580.40	5906.40	921.26	-926.24	83.22	0.00	0.00	0.00	569282.59	789547.72	N 32 33 44.75	W 103 31 39.64
	10400.00	89.31	179.58	9581.60	5907.60	1021.11	-1026.23	83.96	0.00	0.00	0.00	569182.60	789548.45	N 32 33 43.76	W 103 31 39.64
	10500.00	89.31	179.58	9582.81	5908.81	1120.95	-1126.22	84.69	0.00	0.00	0.00	569082.61	789549.19	N 32 33 42.78	W 103 31 39.64
	10600.00	89.31	179.58	9584.01	5910.01	1220.79	-1226.21	85.42	0.00	0.00	0.00	568982.62	789549.92	N 32 33 41.79	W 103 31 39.64
	10700.00	89.31	179.58	9585.21	5911.21	1320.64	-1326.20	86.16	0.00	0.00	0.00	568882.63	789550.66	N 32 33 40.80	W 103 31 39.64
	10800.00	89.31	179.58	9586.42	5912.42	1420.48	-1426.19	86.89	0.00	0.00	0.00	568782.65	789551.39	N 32 33 39.81	W 103 31 39.65
	10900.00	89.31	179.58	9587.62	5913.62	1520.32	-1526.18	87.63	0.00	0.00	0.00	568682.66	789552.13	N 32 33 38.82	W 103 31 39.65
	11000.00	89.31	179.58	9588.83	5914.83	1620.17	-1626.17	88.36	0.00	0.00	0.00	568582.67	789552.86	N 32 33 37.83	W 103 31 39.65
	11100.00	89.31	179.58	9590.03	5916.03	1720.01	-1726.16	89.10	0.00	0.00	0.00	568482.68	789553.60	N 32 33 36.84	W 103 31 39.65
	11200.00	89.31	179.58	9591.24	5917.24	1819.86	-1826.15	89.83	0.00	0.00	0.00	568382.70	789554.33	N 32 33 35.85	W 103 31 39.65
	11300.00	89.31	179.58	9592.44	5918.44	1919.70	-1926.14	90.57	0.00	0.00	0.00	568282.71	789555.07	N 32 33 34.86	W 103 31 39.65
	11400.00	89.31	179.58	9593.65	5919.65	2019.54	-2026.13	91.31	0.00	0.00	0.00	568182.72	789555.80	N 32 33 33.87	W 103 31 39.65
	11500.00	89.31	179.58	9594.85	5920.85	2119.39	-2126.12	92.04	0.00	0.00	0.00	568082.73	789556.54	N 32 33 32.88	W 103 31 39.65
	11600.00	89.31	179.58	9596.06	5922.06	2219.23	-2226.11	92.78	0.00	0.00	0.00	567982.74	789557.27	N 32 33 31.89	W 103 31 39.65
	11700.00	89.31	179.58	9597.26	5923.26	2319.07	-2326.10	93.51	0.00	0.00	0.00	567882.76	789558.01	N 32 33 30.90	W 103 31 39.65
	11800.00	89.31	179.58	9598.47	5924.47	2418.92	-2426.09	94.25	0.00	0.00	0.00	567782.77	789558.75	N 32 33 29.91	W 103 31 39.65
	11900.00	89.31	179.58	9599.67	5925.67	2518.76	-2526.08	94.99	0.00	0.00	0.00	567682.78	789559.48	N 32 33 28.92	W 103 31 39.65
	12000.00	89.31	179.58	9600.88	5926.88	2618.60	-2626.07	95.72	0.00	0.00	0.00	567582.79	789560.22	N 32 33 27.93	W 103 31 39.65
	12100.00	89.31	179.58	9602.08	5928.08	2718.45	-2726.06	96.46	0.00	0.00	0.00	567482.81	789560.96	N 32 33 26.94	W 103 31 39.65
	12200.00	89.31	179.58	9603.29	5929.29	2818.29	-2826.05	97.20	0.00	0.00	0.00	567382.82	789561.69	N 32 33 25.96	W 103 31 39.65
	12300.00	89.31	179.58	9604.49	5930.49	2918.13	-2926.04	97.93	0.00	0.00	0.00	567282.83	789562.43	N 32 33 24.97	W 103 31 39.65
	12400.00	89.31	179.58	9605.70	5931.70	3017.98	-3026.03	98.67	0.00	0.00	0.00	567182.84	789563.17	N 32 33 23.98	W 103 31 39.65
	12500.00	89.31	179.58	9606.91	5932.91	3117.82	-3126.02	99.41	0.00	0.00	0.00	567082.85	789563.91	N 32 33 22.99	W 103 31 39.65
	12600.00	89.31	179.58	9608.11	5934.11	3217.66	-3226.01	100.15	0.00	0.00	0.00	566982.87	789564.64	N 32 33 22.00	W 103 31 39.65
	12700.00	89.31	179.58	9609.32	5935.32	3317.51	-3326.00	100.89	0.00	0.00	0.00	566882.88	789565.38	N 32 33 21.01	W 103 31 39.65
	12800.00	89.31	179.58	9610.52	5936.52	3417.35	-3425.99	101.62	0.00	0.00	0.00	566782.89	789566.12	N 32 33 20.02	W 103 31 39.65
	12900.00	89.31	179.58	9611.73	5937.73	3517.19	-3525.98	102.36	0.00	0.00	0.00	566682.90	789566.86	N 32 33 19.03	W 103 31 39.65
	13000.00	89.31	179.58	9612.93	5938.93	3617.04	-3625.97	103.10	0.00	0.00	0.00	566582.92	789567.60	N 32 33 18.04	W 103 31 39.65
	13100.00	89.31	179.58	9614.14	5940.14	3716.88	-3725.96	103.84	0.00	0.00	0.00	566482.93	789568.34	N 32 33 17.05	W 103 31 39.65
	13200.00	89.31	179.58	9615.34	5941.34	3816.72	-3825.95	104.58	0.00	0.00	0.00	566382.94	789569.08	N 32 33 16.06	W 103 31 39.65
	13300.00	89.31	179.58	9616.55	5942.55	3916.56	-3925.94	105.32	0.00	0.00	0.00	566282.95	789569.81	N 32 33 15.07	W 103 31 39.65
	13400.00	89.31	179.58	9617.76	5943.76	4016.41	-4025.93	106.06	0.00	0.00	0.00	566182.96	789570.55	N 32 33 14.08	W 103 31 39.65
	13500.00	89.31	179.58	9618.96	5944.96	4116.25	-4125.92	106.80	0.00	0.00	0.00	566082.98	789571.29	N 32 33 13.09	W 103 31 39.65
	13600.00	89.31	179.58	9620.17	5946.17	4216.09	-4225.91	107.54	0.00	0.00	0.00	565982.99	789572.03	N 32 33 12.10	W 103 31 39.65
	13700.00	89.31	179.58	9621.37	5947.37	4315.94	-4325.90	108.27	0.00	0.00	0.00	565883.00	789572.77	N 32 33 11.11	W 103 31 39.65
	13800.00	89.31	179.58	9622.58	5948.58	4415.78	-4425.89	109.01	0.00	0.00	0.00	565783.01	789573.51	N 32 33 10.13	W 103 31 39.65
	13900.00	89.31	179.58	9623.79	5949.79	4515.62	-4525.88	109.75	0.00	0.00	0.00	565683.03	789574.25	N 32 33 9.14	W 103 31 39.65
	14000.00	89.31	179.58	9624.99	5950.99	4615.47	-4625.87	110.50	0.00	0.00	0.00	565583.04	789574.99	N 32 33 8.15	W 103 31 39.65
Cimarex Lynch 23 Federal Com #4H	14000.64	89.31	179.58	9625.00	5951.00	4616.10	-4626.50	110.50	0.00	0.00	0.00	565582.40	789575.00	N 32 33 8.14	W 103 31 39.65

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2 7955 sigma

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Survey Program:															
Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey								
	0 000	18 000		1/100 000	30 000	30 000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12							
	18 000	9050 000		1/100 000	30 000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Lynch 23 Federal Com #4H Rev1							
	9050 000	14000 638		1/100 000	30 000	30 000	SLB_MWD-STD	Original Borehole / Cimarex Lynch 23 Federal Com #4H Rev1							



Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12 Proposal Report



(Non-Def Plan)

Report Date: October 30 2012 - 02:17 PM
Client: Cimarex
Field: H/M Los County (NAD 83)
Structure / Stet.: Cactus 115 / Cimarex Lynch 23 Federal Com #4H
Well: Cimarex Lynch 23 Federal Com #4H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12
Survey Date: October 25 2012
Torn / AHD / DOI / ERD Ratio: 81 407' / 4635 478 R / 5 780 / 0 482
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone US Feet
Location Lat / Long: N 32° 33' 53.92482", W 103° 31' 40.53427"
Location Grid N/E Y/X: N 570208 800 NUS, E 789464 500 NUS
CRS Grid Convergence Angle: 0 4335 "
Grid Scale Factor: 0.9999796

Survey / DLS Computation
Vertical Section Azimuth: 182 710 " (Grid North)
Vertical Section Origin: 0 000 ft, 0 000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3674 000 ft above MSL
Seabed / Ground Elevation: 3656 000 ft above MSL
Magnetic Declination: 7 524 "
Total Gravity Field Strength: 999 1685 mgn (9.8 based)
Total Magnetic Field Strength: 46677.481 nT
Magnetic Dip Angle: 60 442 "
Declination Date: October 30, 2012
Magnetic Declination Model: BGGIM 2012
North Reference: Grid North
Grid Convergence Used: 0 4335 "
Total Corr Mag North to Grid North: 7 0906 "

Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azimuth (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S, °, ')	Longitude (E/W, °, ')
SHL Lynch Fed Com #4H	0 00	0 00	184 00	0 00	3674 00	0 00	0 00	0 00	N/A	N/A	N/A	570209 80	789464 50	N 32 33 53 02	W 103 31 40 53
KOP - Build @ 12"/100' DLS	9090 20	0 00	184 00	9090 20	5416 20	0 00	0 00	0 00	0 00	0 00	0 00	570209 80	789464 50	N 32 33 53 02	W 103 31 40 53
Bu's & Turn @ 12"/100' DLS	9465 20	45 00	184 00	9427.82	5753 82	132.46	-134 43	38 55	12.00	12 00	0 00	570074 37	789503 05	N 32 33 52 59	W 103 31 40 10
Landing Point	9651 90	89 31	179 58	9575 00	5901 00	473 06	-478 16	79 94	12.00	11 46	4 03	569730 63	789544 43	N 32 31 49 19	W 103 31 39 64
Cimarex Lynch 23 Federal Com #4H	14000 64	89 31	179 58	9625 00	5951 00	4616 10	-4626 50	110 50	0 00	0 00	0 00	569582 40	789575 00	N 32 33 8 14	W 103 31 39 65

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95 000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0 000	18 000	1/100 000	30 000	30 000	SLB_HSG+MSHOT-Depth Only	Original Borehole / Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12
	18 000	9050 000	1/100 000	30 000	30 000	SLB_HSG+MSHOT	Original Borehole / Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12
	9050 000	14000 638	1/100 000	30 000	30 000	SLB_MWD-STD	Original Borehole / Cimarex Lynch 23 Federal Com #4H Rev1 RJS 30-Oct-12