



## Authorization For Expenditure

Company Entity Cimarex Energy Co.	Date Prepared September 2, 2010
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Region Permian	Well Name Lynch 23 Fed	Well No. 2H	Prospect or Field Name	Property Number	Drilling AFE No.
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Location SHL: 330 FNL 660 FEL sec 23 20S-34e BHL: 330 FSL 660 FEL	County Lea	State NM	Type Well Oil <input checked="" type="checkbox"/> <input type="checkbox"/> Gas <input type="checkbox"/> <input checked="" type="checkbox"/> Expl <input checked="" type="checkbox"/> Prod <input type="checkbox"/>
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Estimate Type Original Estimate <input checked="" type="radio"/> Revised Estimate <input type="radio"/> Supplemental Estimate <input type="radio"/>	Est. Start Date	Est. Comp Date	Formation Bone Spring	Ttl Measured Depth 15,750' Ttl Vertical Depth 11,150'
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**Project Description**  
Drill and complete a Bone spring horizontal well.

Intangibles	Dry Hole Cost	After Casing Point	Completed Well Cost
Drilling Costs	\$1,633,550		\$1,633,550
Completion Costs		\$1,355,750	\$1,355,750
<b>Total Intangible Costs</b>	<b>\$1,633,550</b>	<b>\$1,355,750</b>	<b>\$2,989,300</b>

Tangibles			
Well Equipment	\$232,000	\$986,656	\$1,218,656
Lease Equipment		\$148,750	\$148,750
<b>Total Tangible Well Cost</b>	<b>\$232,000</b>	<b>\$1,135,406</b>	<b>\$1,367,406</b>

Plug and Abandon Cost	\$150,000	\$150,000	\$0
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<b>Total Well Cost</b>	<b>\$2,015,550</b>	<b>\$2,341,156</b>	<b>\$4,356,706</b>
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**Comments on Well Costs**  
1. All tubulars, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

**Well Control Insurance**  
Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefore. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned, if available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

Well control insurance procured by Operator, provides, among other terms, for \$20,000,000 (100% W.I.) of Combined Single Limit coverage for well control and related redrilling and clean-up/pollution expense covering drilling (through completion) with a \$1,000,000 (100% W.I.) deductible.

**Comments on AFE**  
The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Cimarex Energy Co. Approval

Prepared by Mark Audas	Drilling and Completion Manager Doug Park	Regional Manager Roger Alexander
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## Joint Interest Approval

Company	By	Date

Oil Conservation Division  
Case No. 4  
Exhibit No. 4

9/7/2010 1:56 PM



## Project Cost Estimate

Lease Name: Lynch 23 Fed

Well No.: 2H

Intangibles	Is Codes	Dry Hole Cost	Y Codes	After Casing Point	Completed Well Cost
Roads & Location Preparation / Restoration	DRG-100	\$50,000	DRG-100	\$3,000	\$53,000
Damages	DRG-101	\$5,000	DRG-101		\$5,000
Mud / Fluids Disposal Charges	DRG-102	\$50,000	DRG-102	\$46,875	\$96,875
Day Rate	DRG-103	\$538,000	DRG-103	\$69,000	\$607,000
Misc Preparation Cost (mouse hole, rat hole, pads, pile clusters, misc.)	DRG-104	\$5,000			\$5,000
Rits	DRG-105	\$65,000	DRG-105	\$1,000	\$66,000
Fuel	DRG-106	\$95,000	DRG-106	\$1,000	\$96,000
Water / Completion Fluids	DRG-107	\$43,250	DRG-107	\$76,875	\$110,125
Mud & Additives	DRG-108	\$61,500			\$61,500
Surface Rentals	DRG-109	\$41,000	DRG-109	\$111,000	\$152,000
Downhole Rentals	DRG-110	\$113,000	DRG-110	\$11,000	\$124,000
Formation Evaluation (DET, Coring including evaluation, G&G Services)	DRG-111				\$0
Mud Logging	DRG-112	\$30,000			\$30,000
Open Hole Logging	DRG-113	\$18,000			\$18,000
Cementing & Float Equipment	DRG-114	\$40,000	DRG-114	\$25,000	\$65,000
Tubular Inspections	DRG-115	\$5,000	DRG-115	\$3,000	\$8,000
Casing Crews	DRG-116	\$26,000	DRG-116	\$16,000	\$42,000
Extra Labor, Welding, Etc	DRG-117	\$12,000	DRG-117	\$5,000	\$17,000
Land Transportation (Trucking)	DRG-118	\$23,000	DRG-118	\$4,000	\$27,000
Supervision	DRG-119	\$50,000	DRG-119	\$19,000	\$69,000
Trailer House / Camp / Catering	DRG-120	\$20,000	DRG-120	\$4,000	\$24,000
Other Misc Expenses	DRG-121	\$2,000	DRG-121	\$7,000	\$9,000
Overhead	DRG-122	\$12,000	DRG-122	\$3,000	\$15,000
Remedial Cementing	DRG-123		DRG-123		\$0
MOR/TH MOR	DRG-124	\$25,000			\$25,000
Directional Drilling Services	DRG-125	\$134,000			\$134,000
Hook, Dispatcher, Crane	DRG-126		DRG-126		\$0
Marine & Air Transportation	DRG-127		DRG-127		\$0
Solids Control	DRG-128	\$50,800			\$50,800
Well Control Equip (Snubbing Svcs.)	DRG-129	\$32,000	DRG-129	\$11,000	\$43,000
Fishing & Sidetrack Operations	DRG-130	\$0	DRG-130		\$0
Completion Rig	DRG-131		DRG-131	\$36,000	\$36,000
Coil Tubing	DRG-132		DRG-132	\$36,000	\$36,000
Completion Logging, Perforating, WL Units, WL Surveys	DRG-133		DRG-133	\$8,000	\$8,000
Stimulation	DRG-134		DRG-134	\$690,000	\$690,000
Legal / Regulatory / Curative	DRG-135	\$13,000	DRG-135		\$13,000
Well Control Insurance	DRG-136	\$6,000			\$6,000
Contingency	DRG-137	\$78,000	DRG-137	\$59,000	\$137,000
Construction For Well Equipment			DRG-138	\$10,000	\$10,000
Construction For Lease Equipment			DRG-139	\$100,000	\$100,000
Construction For Sales P/L			DRG-140		\$0
<b>Total Intangible Cost</b>		<b>\$1,633,550</b>		<b>\$1,355,750</b>	<b>\$2,989,300</b>

Tangible - Well Equipment							
Casing	Size	Feet	\$ / Foot				
Drive Pipe	20"	40.00	\$0.00	DRG-141	\$0		\$0
Conductor Pipe				DRG-142	\$0		\$0
Water String				DRG-143	\$0		\$0
Surface Casing	13-3/8"	450.00	\$34.00	DRG-144	\$15,000		\$15,000
Intermediate Casing	9 5/8"	4850.00	\$42.00	DRG-145	\$204,000		\$204,000
Drilling Liner				DRG-146	\$0		\$0
Drilling Liner				DRG-147	\$0		\$0
Production Casing or Liner	7"	10750.00	\$32.80	DRG-148	\$356,000		\$356,000
Production Tie-Back	4 1/2"	4800.00	\$15.97	DRG-149	\$76,656		\$76,656
Tubing	2 7/8"	10500.00	\$7.30	DRG-150	\$77,000		\$77,000
N/C Well Equipment				DRG-151	\$7,500		\$7,500
Wellhead, Tree, Chokes				DRG-152	\$13,000		\$26,000
Liner Hanger, Isolation Packer				DRG-153	\$0		\$0
Packer, Nipples				DRG-154	\$168,000		\$168,000
Pumping Unit, Engine				DRG-155	\$220,000		\$220,000
Lift Equipment (BHP, Rods, Anchors)				DRG-156	\$68,500		\$68,500
Tangible - Lease Equipment							
N/C Lease Equipment				DRG-157	\$59,750		\$59,750
Tanks, Tanks Steps, Stairs				DRG-158	\$56,500		\$56,500
Battery (Heater Treater, Separator, Gas Treating Equipment)				DRG-159	\$26,500		\$26,500
Flow Lines (Line Pipe from wellhead to central facility)				DRG-160	\$6,000		\$6,000
Offshore Production Structure for Facilities				DRG-161	\$0		\$0
Pipeline to Sales				DRG-162	\$0		\$0
<b>Total Tangibles</b>					<b>\$232,000</b>	<b>\$1,135,406</b>	<b>\$1,367,406</b>

P&A Costs	DRG-163	\$150,000	DRG-163	\$150,000	\$0
<b>Total Cost</b>		<b>\$2,015,550</b>		<b>\$2,341,156</b>	<b>\$4,356,706</b>