



## Authorization For Expenditure

Company/Entity

Cimarex Energy Co.

Date Prepared

March 1, 2010

Region	Well Name	Well No.	Prospect or Field Name	Property Number	Drilling AFE No.
Permian	West Shugart 32 State	1H	Shugart		

Location	County	State	Type Well
W/2 W/2 of Sec 32, 185-31E	Eddy	NM	Oil x Gas Expl Prod x

Estimate Type	Est. Start Date	Est. Comp Date	Formation	Est. TD
Original Estimate <input checked="" type="radio"/>			2nd Bone Spring SS	13,300'
Revised Estimate <input type="radio"/>				
Supplemental Estimate <input type="radio"/>				

## Project Description

Drill and complete a NM Bone Spring horizontal well. With no pilot hole. 8 stages 3200' VS

Intangibles	Dry Hole Cost	After Casing Point	Completed Well Cost
Drilling Costs	\$1,256,375		\$1,256,375
Completion Costs		\$927,000	\$927,000
Total Intangible Costs	\$1,256,375	\$927,000	\$2,183,375

Tangibles			
Well Equipment	\$188,000	\$837,436	\$1,025,436
Lease Equipment		\$97,500	\$97,500
Total Tangible Well Cost	\$188,000	\$934,936	\$1,122,936

Plug and Abandon Cost	\$150,000	-\$150,000	\$0
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Total Well Cost	\$1,594,375	\$1,711,936	\$3,306,311
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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	Drilling and Completion Manager	Regional Manager
Mark Audas Engineer - PB	Doug Park, Mgr Operations PB	Roger Alexander, Regional Manager PB

## Joint Interest Approval

Company	By	Date

Oil Conservation Division  
Case No. 4  
Exhibit No. 4



## Project Cost Estimate

Lease Name: West Shugart 32 State

Well No.: 1H

Intangibles	Codes	Dry Hole Cost	Codes	After Casing Point	Completed Well Cost
Roads & Location Preparation / Restoration	DHRC-100	\$35,000	DHRC-100	\$3,000	\$38,000
Damages	DHRC-105	\$10,000	DHRC-105		\$10,000
Mud / Fluids Disposal Charges	DHRC-106	\$45,000	DHRC-106	\$40,500	\$85,500
Day Rate 28 DH Days 5 ACP Days @ Per Day	DHRC-111	\$336,000	DHRC-111	\$60,000	\$396,000
Misc Preparation Cost (mouse hole, rat hole, pads, pile clusters, misc.)	DHRC-120	\$8,000			\$8,000
Bits	DHRC-125	\$50,750	DHRC-125	\$1,000	\$51,750
Fuel \$2.65 Per Gallon Gallons Per Day	DHRC-135	\$67,000	DHRC-135	\$12,000	\$79,000
Water / Completion Fluids	DHRC-140	\$45,000	DHRC-140	\$67,500	\$112,500
Mud & Additives	DHRC-145	\$53,625			\$53,625
Surface Rentals	DHRC-150	\$46,000	DHRC-150	\$66,000	\$112,000
Downhole Rentals	DHRC-155	\$100,000	DHRC-155	\$9,000	\$109,000
Formation Evaluation (DST, Coring including evaluation, G&G Services)	DHRC-160				\$0
Mud Logging \$850 Days @ 20 Per Day	DHRC-170	\$21,000			\$21,000
Open Hole Logging	DHRC-180	\$0			\$0
Cementing & Float Equipment	DHRC-185	\$35,000	DHRC-185	\$20,000	\$55,000
Tubular Inspections	DHRC-190	\$5,000	DHRC-190	\$3,000	\$8,000
Casing Crews	DHRC-205	\$13,000	DHRC-205	\$16,000	\$29,000
Extra Labor, Welding, Etc.	DHRC-210	\$8,000	DHRC-210	\$5,000	\$13,000
Land Transportation (Trucking)	DHRC-215	\$17,000	DHRC-215	\$4,000	\$21,000
Supervision Per Day	DHRC-220	\$41,000	DHRC-220	\$14,000	\$55,000
Trailer House / Camp / Catering 400 Per Day	DHRC-230	\$17,000	DHRC-230	\$4,000	\$21,000
Other Misc Expenses	DHRC-235	\$8,000	DHRC-235	\$7,000	\$15,000
Overhead 300 Per Day	DHRC-240	\$10,000	DHRC-240	\$3,000	\$13,000
Remedial Cementing	DHRC-245				\$0
MOB/DEMOB	DHRC-250	\$37,000			\$37,000
Directional Drilling Services 13 Days @ 7,200 Per Day	DHRC-255	\$121,000			\$121,000
Dock, Dispatcher, Crane	DHRC-260		DHRC-260		\$0
Marine & Air Transportation	DHRC-265		DHRC-265		\$0
Solids Control Per Day	DHRC-270	\$33,000			\$33,000
Well Control Equip (Snubbing Svcs.)	DHRC-275	\$22,000	DHRC-275	\$11,000	\$33,000
Fishing & Sidetrack Operations	DHRC-280	\$0	DHRC-280		\$0
Completion Rig 7 Days @ 3,400 Per Day	DHRC-285		DHRC-285	\$36,000	\$36,000
Coil Tubing 1 Days @ 25,000 Per Day	DHRC-290		DHRC-290	\$25,000	\$25,000
Completion Logging, Perforating, WL Units, WL Surveys	DHRC-295		DHRC-295	\$8,000	\$8,000
Stimulation	DHRC-300		DHRC-300	\$425,000	\$425,000
Legal / Regulatory / Curative	DHRC-305	\$7,000	DHRC-305		\$7,000
Well Control Insurance \$0.35 Per Foot	DHRC-310	\$5,000			\$5,000
Contingency 5% of Drilling Intangibles	DHRC-315	\$60,000	DHRC-315	\$42,000	\$102,000
Construction For Well Equipment	DHRC-320		DHRC-320	\$25,000	\$25,000
Construction For Lease Equipment	DHRC-325		DHRC-325	\$20,000	\$20,000
Construction For Sales P/L	DHRC-330		DHRC-330		\$0
Total Intangible Cost		\$1,256,375		\$927,000	\$2,183,375

Tangible - Well Equipment						
Casing	Size	Feet	\$ / Foot			
Drive Pipe	20"	40.00	\$0.00	DWEL-150	\$0	\$0
Conductor Pipe				DWEL-150	\$0	\$0
Water String				DWEL-155	\$0	\$0
Surface Casing	13-3/8"	755.00	\$60.46	DWEL-160	\$46,000	\$46,000
Intermediate Casing	9 5/8"	3200.00	\$41.34	DWEL-165	\$132,000	\$132,000
Drilling Liner				DWEL-170	\$0	\$0
Drilling Liner				DWEL-175	\$0	\$0
Production Casing or Liner	7"	8500.00	\$35.64	DWEL-180	\$303,000	\$303,000
Production Tie-Back	4 1/2"	3600.00	\$15.26	DWEL-185	\$54,936	\$54,936
Tubing	2 7/8"	8300.00	\$7.30	DWEL-190	\$61,000	\$61,000
N/C Well Equipment				DWEL-195	\$65,000	\$65,000
Wellhead, Tree, Chokes				DWEL-200	\$10,000	\$20,000
Liner Hanger, Isolation Packer				DWEL-205	\$0	\$0
Packer, Nipples				DWEL-210	\$140,000	\$140,000
Pumping Unit, Engine				DWEL-215	\$140,000	\$140,000
Lift Equipment (BHP, Rds, Anchors)				DWEL-220	\$63,500	\$63,500
Tangible - Lease Equipment						
N/C Lease Equipment				DWEL-225	\$7,500	\$7,500
Tanks, Tanks Steps, Stairs				DWEL-230	\$62,000	\$62,000
Battery (Heater Treater, Separator, Gas Treating Equipment)				DWEL-235	\$22,500	\$22,500
Flow Lines (Line Pipe from wellhead to central facility)				DWEL-240	\$5,500	\$5,500
Offshore Production Structure for Facilities				DWEL-245	\$0	\$0
Pipeline to Sales				DWEL-250	\$0	\$0
Total Tangibles					\$188,000	\$934,936
P&A Costs				DWEL-255	\$150,000	\$150,000
Total Cost					\$1,594,375	\$3,306,311