



Authorization For Expenditure

Company Entry	Date Approved
Cimarex Energy Co	September 3, 2014

Region	Well Name	Project or Field Name	Property Number	Drilling AFE No.
Anadarko	Estep 1-1H	Cana Core	350016-202.01	264122

Location	County	State	Type Well		
255' FSL and 165' FEL 1 - 14N - 10W	Canadian	OK	Oil		Expl
			Gas	x	Prod

Estimate Type	Est. Start Date	Est. Comp Date	Formation	TN Measured Depth
Original Estimate	August 18, 2014	October 18, 2014	Woodford	15,160'
Revised Estimate				TN Varied Depth
Supplemental Estimate				11,460'

Project Description
Drill and complete a horizontal test. Drill to 1500', set surface casing. Drill to 9631', set intermediate casing. Drill to 10982' (KOP). Drill curve at 12 DLS build rate to +/- 11460' TVD and a +/- 4400' long lateral in the Upper Woodford formation. Run and cement production casing. Stage frac in 23 stages. Drill out plugs. Run production tubing. Flow to sales through new facility.

Intangibles	Dry Hole Cost	After Casing Point	Completed Well Cost
Drilling Costs	\$3,335,000		\$3,335,000
Completion Costs		\$4,187,000	\$4,187,000
Total Intangible Costs	\$3,335,000	\$4,187,000	\$7,522,000

Tangibles			
Well Equipment	\$484,000	\$497,000	\$981,000
Lease Equipment		\$223,000	\$223,000
Total Tangible Well Cost	\$484,000	\$720,000	\$1,204,000

Plug and Abandon Cost	\$0	\$0	\$0
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Total Well Cost	\$3,819,000	\$4,907,000	\$8,726,000
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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.

Marketing Election
Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

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
Brad Cantrell	Randy Reynolds	

Joint Interest Approval

Company	By	Date



9/3/2014 1:33 PM

CD-2014-6914



Project Cost Estimate

Well Name: Etap 1-1H

Item/Service	Unit	Qty	Unit Price	Subtotal	Material	Installation	Production	Post-Completion	Final Well Cost
Drill & Location Preparation / Restoration	DRILL 100	1	\$140,000	\$140,000	\$140,000	\$12,000	\$1,000	\$0	\$153,000
Dampers	DRILL 100	1	\$30,000	\$30,000	\$30,000	\$0	\$0	\$0	\$30,000
Mud / Fluids Original Charges	DRILL 100	1	\$125,000	\$125,000	\$125,000	\$0	\$0	\$0	\$125,000
Day Rate 33.00 / Hr (incl. 3.00 / Hr Pump Up)	DRILL 100	1	\$23,500	\$23,500	\$23,500	\$0	\$0	\$0	\$23,500
After Preparation Cost (mud/water, not hole, pads, pipe, etc.)	DRILL 100	1	\$24,000	\$24,000	\$24,000	\$0	\$0	\$0	\$24,000
Risk	DRILL 100	1	\$160,000	\$160,000	\$160,000	\$0	\$0	\$0	\$160,000
Fuel \$2.40 / Hr (incl. 1.800 / Hr Pump Up)	DRILL 100	1	\$233,000	\$233,000	\$233,000	\$0	\$0	\$0	\$233,000
Water for Drilling / Completion Fluids (Not Fuel Water)	DRILL 100	1	\$10,000	\$10,000	\$10,000	\$0	\$0	\$0	\$10,000
Mud & Additives	DRILL 100	1	\$431,000	\$431,000	\$431,000	\$0	\$0	\$0	\$431,000
Surface Rentals	DRILL 100	1	\$57,000	\$57,000	\$57,000	\$0	\$0	\$0	\$57,000
Overhead Rentals	DRILL 100	1	\$126,000	\$126,000	\$126,000	\$0	\$0	\$0	\$126,000
Formation Evaluation (DST, Coning, etc.)	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mud Logging	DRILL 100	1	\$900	\$900	\$900	\$0	\$0	\$0	\$900
Open Hole Logging	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction & Fleet Equipment	DRILL 100	1	\$59,000	\$59,000	\$59,000	\$0	\$0	\$0	\$59,000
Tubular Inspection	DRILL 100	1	\$18,000	\$18,000	\$18,000	\$0	\$0	\$0	\$18,000
Coning Control	DRILL 100	1	\$33,000	\$33,000	\$33,000	\$0	\$0	\$0	\$33,000
Form Labor, Working, Etc.	DRILL 100	1	\$16,000	\$16,000	\$16,000	\$0	\$0	\$0	\$16,000
Land Transportation (Traveling for materials)	DRILL 100	1	\$11,000	\$11,000	\$11,000	\$0	\$0	\$0	\$11,000
Equipment	DRILL 100	1	\$11,000	\$11,000	\$11,000	\$0	\$0	\$0	\$11,000
Trailer House / Camp / Catering	DRILL 100	1	\$92,000	\$92,000	\$92,000	\$0	\$0	\$0	\$92,000
Other Misc Expenses	DRILL 100	1	\$4,000	\$4,000	\$4,000	\$0	\$0	\$0	\$4,000
Overhead	DRILL 100	1	\$6,000	\$6,000	\$6,000	\$0	\$0	\$0	\$6,000
Remedial Cementing	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ACID/DEGRAD	DRILL 100	1	\$181,000	\$181,000	\$181,000	\$0	\$0	\$0	\$181,000
Electrical Drilling Services	DRILL 100	1	\$12,000	\$12,000	\$12,000	\$0	\$0	\$0	\$12,000
Costs for Construction	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Safety Control	DRILL 100	1	\$38,000	\$38,000	\$38,000	\$0	\$0	\$0	\$38,000
Well Control Equip (Shooting Svc.)	DRILL 100	1	\$46,000	\$46,000	\$46,000	\$0	\$0	\$0	\$46,000
Fishing & Sidetrack Operations	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Completion Rig	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Coil Tubing	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Completion Logging, Performance, W/L Units, W/L Purveys	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Completion Pump	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stimulation Pumping Charges, Chemicals, Additives, Sand	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Isolation Water / Water Transfer / Water Storage	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Chemical Mixing / Water / Chemicals	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Legal / Regulatory / Corrosive	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Well Control Insurance	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contingency	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction for Flow Lines	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction for Wells P/L	DRILL 100	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Intangible Cost			\$1,135,000	\$1,135,000	\$1,135,000	\$0	\$0	\$0	\$1,135,000
Well Completion	Size	Feet	\$ / Foot						
Casing	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Drill Pipe	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Conductor Pipe	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Water Tank	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Surface Casing	13 3/8"	1200	\$41.30	\$53,760	\$53,760	\$0	\$0	\$0	\$53,760
Intermediate Casing 1	9 5/8"	9531	\$40.00	\$381,240	\$381,240	\$0	\$0	\$0	\$381,240
Intermediate Casing 2	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Drilling Liner	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Production Casing or Liner	5 1/2"	16160	\$23.70	\$383,000	\$383,000	\$0	\$0	\$0	\$383,000
Production Well-Block	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Traverse	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Wellhead, Tree, Choke	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Light Hanger, Injection Packoff	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Plucker, Wipac	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Pumping Unit, Engine	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Overhead Lift Equipment (BHP, ROPS, Anchors, ESP, GVs, PC Pump)	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Wellhead, Tree, Choke	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
Light Hanger, Injection Packoff	10	0	\$0.60	\$0	\$0	\$0	\$0	\$0	\$0
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