



Authorization For Expenditure

| | |
|-------------------|-----------------|
| Company Entity | Prepared |
| CIMAREX ENERGY CO | August 24, 2015 |

| | | | | |
|----------|-----------------------|-------------------------|-----------------|------------------|
| Region | Well Name | Prospect or Field Name | Property Number | Drilling AFE No. |
| Anadarko | DAKOTA-CAROL 1H-2722X | CANA NORTHWEST PROSPECT | 350012-365.01 | 2215026 |

| | | | |
|------------------------------------|--------|----|---|
| Location | County | OK | Type Well |
| Sec. 27-15N-10W, Blaine County, OK | Blaine | OK | Oil <input checked="" type="checkbox"/> Expl <input checked="" type="checkbox"/> Gas <input checked="" type="checkbox"/> Prod <input checked="" type="checkbox"/> |

| | | | |
|-----------------------|-----------|-------------------|------------------|
| Estimate Type | Est Start | Comp | Measured Depth |
| Original Estimate | X | September 7, 2015 | December 2, 2015 |
| Revised Estimate | | | Meramec |
| Supplemental Estimate | | | 20,910' |
| | | | 10,940' |

Project Description
Drill and complete a horizontal test. Drill to 1500', set surface casing. Drill to 9500', set intermediate casing. Drill to 10457' (KOP). Drill curve at 12 DLS build rate to +/- 10940' TVD and a +/- 9700' long lateral in the Meramec formation. Run and cement production casing. Stage frac in 43 stages. Drill out plugs. Run production tubing. Flow to sales through new facility.

| | Dry Hole Cost | After Casing Point | Completed Well Cost |
|------------------------|---------------|--------------------|---------------------|
| Intangibles | | | \$3,144,000 |
| Drilling Costs | \$3,144,000 | | \$3,144,000 |
| Completion Costs | | \$5,690,000 | \$5,690,000 |
| Total Intangible Costs | \$3,144,000 | \$5,690,000 | \$8,834,000 |

| Tangibles | | | |
|--------------------------|-----------|-----------|-------------|
| Well Equipment | \$442,000 | \$642,800 | \$1,084,800 |
| Lease Equipment | | \$323,700 | \$323,700 |
| Total Tangible Well Cost | \$442,000 | \$966,500 | \$1,408,500 |

| | | | |
|-----------------------|-----|-----|-----|
| Plug and Abandon Cost | \$0 | \$0 | \$0 |
|-----------------------|-----|-----|-----|

| | | | |
|-----------------|-------------|-------------|--------------|
| Total Well Cost | \$3,586,000 | \$6,656,500 | \$10,242,500 |
|-----------------|-------------|-------------|--------------|

Comments

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

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 |
| | | |

Joint Interest Approval

| | | |
|---------|----|------|
| Company | By | Date |
| | | |



9/22/15

Lease Name:

| Lease Name: | | BCP - Drilling | | ACP - Drilling | | Completion / Stimulation | |
|--|-------------------------------|-----------------|-------------|----------------|-----------|--------------------------|-------------|
| | | (Dry Hole Cost) | | | | | |
| Intangibles | | Codes | | Codes | | Codes | |
| Roads & Location Preparation / Restoration | | DIDC.100 | \$180,000 | | | STIM.100 | \$23,000 |
| Damages | | DIDC.105 | \$30,000 | | | | |
| Mud / Fluids Disposal Charges | | DIDC.255 | \$115,000 | | | STIM.255 | \$60,000 |
| Day Rate | ##### DH Days | DIDC.115 | \$884,000 | DICC.120 | \$104,000 | | |
| | 34.00 ACP Days @ | DIDC.120 | \$25,000 | | | | |
| Misc Preparation Cost (mouse hole, rat hole, pads, pile clusters, misc.) | | DIDC.125 | \$150,000 | DICC.125 | \$0 | STIM.125 | \$0 |
| Bits | | DIDC.135 | \$110,000 | DICC.130 | \$0 | | |
| Fuel | \$1.80 Per Gallon | DIDC.140 | \$18,000 | DICC.135 | \$1,000 | STIM.135 | \$0 |
| | | DIDC.145 | \$300,000 | | | | |
| Water for Drilling Rig / Completion Fluids (Not Frac Water) | | DIDC.150 | \$45,000 | DICC.140 | \$0 | STIM.140 | \$120,000 |
| Mud & Additives | | DIDC.155 | \$80,000 | | | STIM.145 | \$0 |
| Surface Rentals | | DIDC.160 | \$0 | | | STIM.150 | \$0 |
| Downhole Rentals | | DIDC.170 | \$24,000 | | | | |
| Formation Evaluation (DST, Coring including evaluation, G&G Services) | | DIDC.180 | \$0 | | | | |
| Mud Logging | 24.00 Days @ | DIDC.185 | \$45,000 | DICC.155 | \$65,000 | | |
| | | DIDC.190 | \$10,000 | DICC.160 | \$10,000 | STIM.160 | \$0 |
| Open Hole Logging | | DIDC.195 | \$25,000 | DICC.165 | \$25,000 | STIM.165 | \$0 |
| Cementing & Float Equipment | | DIDC.200 | \$15,000 | DICC.170 | \$5,000 | STIM.170 | \$5,000 |
| Tubular Inspections | | DIDC.205 | \$25,000 | DICC.175 | \$9,000 | STIM.175 | \$0 |
| Casing Crews | | DIDC.210 | \$129,000 | DICC.180 | \$15,000 | STIM.180 | \$50,000 |
| Extra Labor, Welding, Etc. | | DIDC.280 | \$32,000 | DICC.255 | \$5,000 | STIM.280 | \$13,000 |
| Land Transportation (Trucking for tangibles) | | DIDC.220 | \$1,000 | DICC.190 | \$0 | STIM.190 | \$20,000 |
| Supervision | \$3,800.00 Per Day | DIDC.225 | \$10,000 | DICC.195 | \$5,000 | | |
| Trailer House / Camp / Catering | | DIDC.231 | \$0 | | | STIM.215 | \$0 |
| Other Misc Expenses | | DIDC.240 | \$210,000 | | | | |
| Overhead | | DIDC.245 | \$420,000 | | | | |
| Remedial Cementing | | DIDC.260 | \$30,000 | | | | |
| MOB/DEMOB | | DIDC.265 | \$40,000 | DICC.240 | \$7,000 | STIM.240 | \$15,000 |
| Directional Drilling Services | | DIDC.270 | \$0 | DICC.245 | \$0 | STIM.245 | \$0 |
| Crane for Construction | | | | | | STIM.115 | \$0 |
| Solids Control | | | | | | STIM.260 | \$350,000 |
| Well Control Equip (Snubbing Svcs.) | | | | | | STIM.200 | \$218,000 |
| Fishing & Sidetrack Operations | | | | | | STIM.390 | \$129,000 |
| Completion Rig | | | | | | STIM.210 | \$3,338,000 |
| Coil Tubing | | | | | | STIM.395 | \$304,000 |
| Completion Logging, Perforating, WL Units, WL Surveys | | | | | | STIM.305 | \$35,000 |
| Composite Plugs | | DIDC.300 | \$20,000 | | | | |
| Stimulation Pumping Charges, Chemicals, Additives, Sand | | DIDC.285 | \$21,000 | | | | |
| Stimulation Water / Water Transfer / Water Storage | | DIDC.435 | \$150,000 | DICC.220 | \$13,000 | STIM.220 | \$234,000 |
| Cimarex Owned Frac / Rental Equipment | | | | | | | |
| Legal / Regulatory / Curative | | | | | | | |
| Well Control Insurance | \$1.00 Per Foot | | | | | | |
| Contingency | 0.1 % of Drilling Intangibles | | | | | | |
| Construction For Flow Lines | | | | | | | |
| Construction For Sales P/L | | | | | | | |
| Total Intangible Cost | | | \$3,144,000 | | \$264,000 | | \$4,914,000 |

| | | | | | | | |
|--|--------|----------|-----------|-----------|-------------|-----------|-------------|
| Tangible - Well Equipment | | | | | | | |
| Casing | Size | Feet | \$ / Foot | | | | |
| Drive Pipe | 0 | 0.00 | \$0.00 | DWEB.150 | \$0 | | |
| Conductor Pipe | 0 | 0.00 | \$0.00 | DWEB.130 | \$0 | | |
| Water String | 0 | 0.00 | \$0.00 | DWEB.135 | \$0 | | |
| Surface Casing | 13.375 | 1500.00 | \$43.00 | DWEB.140 | \$65,000 | | |
| Intermediate Casing 1 | 9.625 | 9500.00 | \$37.00 | DWEB.145 | \$352,000 | | |
| Intermediate Casing 2 | 0 | 0.00 | \$0.00 | DWEB.155 | \$0 | | |
| Drilling Liner | 0 | 0.00 | \$0.00 | DWEB.160 | \$0 | | |
| Production Casing or Liner | 5.5 | 20910.00 | \$23.00 | | DWEA.100 | \$481,000 | |
| Production Tie-Back | 0 | 0.00 | \$0.00 | | DWEA.165 | \$0 | STIMT.101 |
| Tubing | 2.375 | 10560.00 | \$5.10 | | | | \$0 |
| Wellhead, Tree, Chokes | | | | DWEB.115 | \$25,000 | DWEA.120 | \$45,000 |
| Liner Hanger, Isolation Packer | | | | DWEB.100 | \$0 | DWEA.125 | \$0 |
| Packer, Nipples | | | | | | | STIMT.400 |
| Pumping Unit, Engine | | | | | | | \$5,000 |
| Downhole Lift Equipment (BHP, Rods, Anchors, ESP, GVLs, PC Pump) | | | | | | | STIMT.405 |
| | | | | | | | \$0 |
| | | | | | | | STIMT.410 |
| | | | | | | | \$0 |
| Tangible - Lease Equipment | | | | | | | |
| N/C Lease Equipment | | | | | | | |
| Tanks, Tanks Steps, Stairs | | | | | | | |
| Battery (Heater Treater, Separator, Gas Treating Equipment) | | | | | | | |
| Secondary Containments | | | | | | | |
| Overhead Power Distribution (electric line to facility) | | | | | | | |
| Facility Electrical & Automation | | | | | | | |
| SWD Connection | | | | | | | |
| Flow Lines (Line Pipe from wellhead to central facility) | | | | | | | |
| Pipeline to Sales | | | | | | | |
| Meters and Metering Equipment | | | | | | | |
| | | | | \$442,000 | \$526,000 | | \$45,000 |
| Total Tangibles | | | | | | | |
| P&A Costs | | | | DIDC.295 | \$0 | DICC.275 | \$0 |
| Total Cost | | | | | \$3,586,000 | \$790,000 | \$4,959,000 |

Lease Name:

| Construction | | | | |
|--|-------------------------------|-----------------------|------------|--------------------|
| Intangibles | CON.100 | \$2,500 | PCOM.100 | \$1,000 |
| Roads & Location Preparation / Restoration | CON.105 | \$0 | | \$30,000 |
| Damages | | | PCOM.255 | \$30,000 |
| Mud / Fluids Disposal Charges | | | | \$988,000 |
| Day Rate | ##### DH Days | 34.00 | ACP Days @ | \$4.00 Per Day |
| Misc Preparation Cost (mouse hole, rat hole, pods, pile clusters, misc.) | | | | \$25,000 |
| Bits | | | PCOM.125 | \$0 |
| Fuel | \$1.80 Per Gallon | ##### Gallons Per Day | PCOM.130 | \$0 |
| Water for Drilling Rig / Completion Fluids (Not Frac Water) | | | PCOM.135 | \$1,000 |
| Mud & Additives | CON.140 | \$3,000 | PCOM.140 | \$324,000 |
| Surface Rentals | | | PCOM.145 | \$0 |
| Downhole Rentals | | | | \$0 |
| Formation Evaluation (DST, Coring including evaluation, G&G Services) | | | | \$24,000 |
| Mud Logging | 24.00 Days @ | \$1,000.00 | Per Day | \$0 |
| Open Hole Logging | | | | \$110,000 |
| Cementing & Float Equipment | | | PCOM.160 | \$3,700 |
| Tubular Inspections | | | | \$50,000 |
| Casing Crews | CON.170 | \$52,000 | PCOM.170 | \$0 |
| Extra Labor, Welding, Etc. | CON.175 | \$6,500 | PCOM.175 | \$6,800 |
| Land Transportation (Trucking for tangibles) | CON.180 | \$5,100 | PCOM.180 | \$9,000 |
| Supervision | | \$3,800.00 | Per Day | \$50,000 |
| Trailer House / Camp / Catering | CON.190 | \$3,000 | PCOM.190 | \$0 |
| Other Misc Expenses | | | | \$15,000 |
| Overhead | | | PCOM.215 | \$0 |
| Remedial Cementing | | | | \$210,000 |
| MOB/DEMOB | | | | \$420,000 |
| Directional Drilling Services | CON.230 | \$4,000 | | \$4,000 |
| Crane for Construction | | | | \$30,000 |
| Solids Control | | | PCOM.240 | \$22,000 |
| Well Control Equip (Snubbing Svcs.) | | | PCOM.245 | \$0 |
| Fishing & Sidetrack Operations | | | PCOM.115 | \$14,000 |
| Completion Rig | | | PCOM.260 | \$0 |
| Coil Tubing | | | PCOM.200 | \$3,500 |
| Completion Logging, Perforating, WL Units, WL Surveys | | | PCOM.390 | \$0 |
| Composite Plugs | | | PCOM.210 | \$0 |
| Stimulation Pumping Charges, Chemicals, Additives, Sand | | | | \$304,000 |
| Stimulation Water / Water Transfer / Water Storage | | | | \$35,000 |
| Cimarex Owned Frac / Rental Equipment | CON.300 | \$0 | | \$20,000 |
| Legal / Regulatory / Curative | | | | \$21,000 |
| Well Control Insurance | | \$1.00 | Per Foot | |
| Contingency | 0.1 % of Drilling Intangibles | | CON.220 | \$2,400 |
| Construction For Flow Lines | CON.310 | \$3,500 | PCOM.220 | \$15,000 |
| Construction For Sales P/L | CON.265 | \$0 | | \$0 |
| Total Intangible Cost | | \$82,000 | | \$430,000 |
| | | | | \$8,834,500 |

| Tangible - Well Equipment | | | | |
|--|----------|------------------|-----------|---------------------------|
| | Size | Feet | \$ / Foot | |
| Casing | 0 | 0.00 | \$0.00 | \$0 |
| Drive Pipe | 0 | 0.00 | \$0.00 | \$0 |
| Conductor Pipe | 0 | 0.00 | \$0.00 | \$0 |
| Water String | 13.375 | 1500.00 | \$43.00 | \$65,000 |
| Surface Casing | 9.625 | 9500.00 | \$37.00 | \$352,000 |
| Intermediate Casing 1 | 0 | 0.00 | \$0.00 | \$0 |
| Intermediate Casing 2 | 0 | 0.00 | \$0.00 | \$0 |
| Drilling Liner | 5.5 | 20910.00 | \$23.00 | \$481,000 |
| Production Casing or Liner | 0 | 0.00 | \$0.00 | \$0 |
| Production Tie-Back | 2.375 | 10560.00 | \$5.10 | \$70,000 |
| Tubing | | | | \$110,000 |
| Wellhead, Tree, Chokes | | | | \$0 |
| Liner Hanger, Isolation Packer | | | | PCOMT.400 \$1,800 \$6,800 |
| Packer, Nipples | | | | PCOMT.405 \$0 \$0 |
| Pumping Unit, Engine | | | | PCOMT.410 \$0 \$0 |
| Downhole Lift Equipment (BHP, Rods, Anchors, ESP, GVLs, PC Pump) | | | | |
| Tangible - Lease Equipment | | | | |
| N/C Lease Equipment | CONT.400 | \$50,800 | | \$50,800 |
| Tanks, Tanks Steps, Stairs | CONT.405 | \$69,000 | | \$69,000 |
| Battery (Heater Treater, Separator, Gas Treating Equipment) | CONT.410 | \$69,100 | | \$69,100 |
| Secondary Containments | CONT.415 | \$10,200 | | \$10,200 |
| Overhead Power Distribution (electric line to facility) | CONT.420 | \$3,000 | | \$3,000 |
| Facility Electrical & Automation | CONT.425 | \$31,200 | | \$31,200 |
| SWD Connection | CONT.430 | \$0 | | \$0 |
| Flow Lines (Line Pipe from wellhead to central facility) | CONT.435 | \$23,200 | | \$23,200 |
| Pipeline to Sales | CONT.440 | \$0 | | \$0 |
| Meters and Metering Equipment | CONT.445 | \$67,200 | | \$67,200 |
| Total Tangibles | | \$323,700 | | \$71,800 |
| | | | | \$1,408,500 |
| Total Tangibles | | | | \$0 |

P&A Costs

Total Cost

\$405,700

\$501,800

\$10,242,500