Authorization for Expenditure

AFE # XX-118231.01

Well Name: MARMOT 19_18-16N-10W 1HX

Cost Center Number: 1093467101

Legal Description: SECTIONS 19 & 18-16N-10W

Revision: 📋

AFE Date:

02/23/2016

State: County/Parish: OK

BLAINE

Explanation and Justification:

THE PROPOSED MERAMEC WELL WILL BE A 20,000' MD (10,000 TVD') MISSISSIPPIAN HORIZONTAL WITH APPROXIMATELY 10,000' OF LATERAL. IT WILL BE DRILLED FROM A SINGLE WELL PAD. THE PROJECT DETAILS ARE AS FOLLOWS: 17-1/2" HOLE TO 1,500' W/ 13-3/8" CASING, 12-1/4" HOLE WITH NUDGE TO +/-9,000' W/ 9-5/8" INTERMEDIATE CASING, AND 8-3/4" LATERAL IN THE MISSISSIPPIAN W/ 5-1/2" CASING TO SURFACE CEMENTED BACK INTO THE 9-5/8" CASING.

| Code | intangible Description | Drilling Costs | Completion Costs | Dry Hole Costs | Total Costs |
|---------|---------------------------|-------------------|---------------------|-------------------|----------------|
| 6060100 | DYED LIQUID FUELS | 108,000.00 | 0.00 | 0.00 | 108,000.00 |
| 6060130 | GASEOUS FUELS | 31,000.00 | 0.00 | 0.00 | 31,000.00 |
| | GENERATORS SVC | 24,000.00 | 0.00 | 0.00 | 24,000.00 |
| | DISPOSAL - SOLIDS | 115,000.00 | 0.00 | 0.00 | 115,000.00 |
| | DISP-SALTWATER & OTH | 0.00 | 121,010.00 | 0.00 | 121,010.00 |
| 6090100 | FLUIDS - WATER | 7,000.00 | 43,450.00 | 0.00 | 50,450.00 |
| 6100100 | PERMIT SURVEY&TITLE | 20,000.00 | 0.00 | 0.00 | 20,000.00 |
| 6100110 | RIGHT OF WAY | 5,000.00 | 0.00 | 0.00 | 5,000.00 |
| 6110130 | ROAD&SITE PREP SVC | 133,000.00 | 0.00 | 0.00 | 133,000.00 |
| 6110170 | DAMAGE & REMEDIATION | 25,000.00 | 0.00 | 0.00 | 25,000.00 |
| 6130170 | COMM SVCS - OTHER | 10,000.00 | 0.00 | 0.00 | 10,000.00 |
| 6130360 | RTOC - ENGINEERING | 37,000.00 | 0.00 | 0.00 | 37,000,00 |
| 6130370 | RTOC - GEOSTEERING | 40,000.00 | 0.00 | 0.00 | 40,000.00 |
| | ENV-SERVICES | 0.00 | 10,800.00 | 0.00 | 10,800.00 |
| | CH LOG PERFRTG&WL SV | 0.00 | 213,200.00 | 0.00 | 213,200.00 |
| | MATERIALS & SUPPLIES | 16,000.00 | 0.00 | 0.00 | 16,000.00 |
| 6170100 | PULLING&SWABBING SVC | 0.00 | 14,000.00 | 0.00 | 14,000.00 |
| 6170110 | SNUBBG&COIL TUBG SVC | 0.00 | 336,400.00 | 0.00 | 336,400.00 |
| 6190100 | TRCKG&HL-SOLID&FLUID | 5,000.00 | 0.00 | 0.00 | 5,000.00 |
| 6190110 | TRUCKING&HAUL OF EQP | 14,000.00 | 2,050.00 | 0.00 | 16,050.00 |
| 6200130 | CONSLT-TECH&PROF SVC | 157,000.00 | 64,750.00 | 0.00 | 221,750.00 |
| 6230120 | SAFETY SERVICES | 28,000.00 | 6,800.00 | 0.00 | 34,800.00 |
| 6300270 | SOLIDS CONTROL SRVCS | 38,000.00 | 0.00 | 0.00 | 38,000.00 |
| 6310120 | STIMULATION SERVICES | 0.00 | 3,261,000.00 | 0.00 | 3,261,000.00 |
| 6310200 | CASING & TUBULAR SVC | 85,000.00 | 0.00 | 0.00 | 85,000.00 |
| 6310250 | CEMENTING SERVICES | 187,000.00 | 0.00 | 0.00 | 187,000.00 |
| 6310280 | DAYWORK COSTS | 957,000.00 | 0.00 | 0.00 | 957,000.00 |
| 6310300 | DIRECTIONAL SERVICES | 304,000.00 | 0.00 | 0.00 | 304,000.00 |
| 6310310 | DRILL BITS | 152,000.00 | 0.00 | 0.00 | 152,000.00 |
| 6310330 | DRILL&COMP FLUID&SVC | 387,000.00 | 0.00 | 0.00 | 387,000.00 |
| 6310360 | FOOTAGE COSTS | 0.00 | 13,120.00 | 0.00 | 13,120.00 |
| 6310370 | MOB & DEMOBILIZATION | 207,000.00 | 0.00 | 0.00 | 207,000.00 |
| 6310380 | OPEN HOLE EVALUATION | 22,000.00 | 0.00 | 0.00 | 22,000.00 |
| | TSTNG-WELL, PL & OTH | 0.00 | 164,395.00 | 0.00 | 164,395.00 |
| 6310600 | MISC PUMPING SERVICE | 0.00 | 78,600.00 | 0.00 | 78,600.00 |
| | EQPMNT SVC-SRF RNTL | 106,000.00 | 309,290.00 | 0.00 | 415,290.00 |
| 6320110 | EQUIP SVC - DOWNHOLE | 87,000.00 | 53,308.00 | 0.00 | 140,308.00 |
| 6320160 | WELDING SERVICES | 3,000.00 | 0.00 | 0.00 | 3,000.00 |
| 6520100 | EGAL FEES | 5,000.90 | 0.00 | 0.00 | 5,000.00 |
| 6550110 | MISCELLANEOUS SVC | 64,000.00 | 97,194.16 | 0.00 | 161,194.16 |
| 6550120 | OTHER ROUSTABOUT SER | 0.00 | 51,500.00 | 0.00 | 51,500.00 |

MAR 01 2016





Authorization for Expenditure

AFE # XX-118231.01

Well Name: MARMOT 19_18-16N-10W 1HX

Cost Center Number: 1093467101

Legal Description: SECTIONS 19 & 18-16N-10W

Revision:

AFE Date:

02/23/2016

State: County/Parish: OK BLAINE

| Code | Intangible Description | Drilling Costs | Completion Costs | Dry Hole Costs | Total Costs |
|---------|---------------------------|-------------------|---------------------|-------------------|----------------|
| 6630110 | CAPITAL OVERHEAD | 19,000.00 | 17,500.00 | 0.00 | 36,500.00 |
| 6740340 | TAXES OTHER | 0.00 | 161,759.92 | 0.00 | 161,759.92 |
| | Total Intangibles | 3,398,000.00 | 5,020,127.08 | 0.00 | 8,418,127.08 |

| Code | Tangible Description | Drilling Costs | Completion Costs | Dry Hole Costs | Total Costs |
|-----------------|-------------------------|-------------------|---------------------|-------------------|----------------|
| 6120110 | I&C EQUIPMENT | 0.00 | 86,000.00 | 0.00 | 86,000.00 |
| 6120120 | MEASUREMENT EQUIP | 0.00 | 41,000.00 | 0.00 | 41,000.00 |
| 6300150 | SEPARATOR EQUIPMENT | 0.00 | 60,000.00 | 0.00 | 60,000.00 |
| 6300220 | STORAGE VESSEL&TANKS | 0.00 | 77,000.00 | 0.00 | 77,000.00 |
| 6310150 | CASG-COND&DRIVE PIPE | 20,000.00 | 0.00 | 0.00 | 20,000.00 |
| 6310420 | TUBING & COMPONENTS | 0.00 | 63,800.00 | 0.00 | 63,800.00 |
| 6310 <u>460</u> | WELLHEAD EQUIPMENT | 36,000.00 | 108,500.00 | 0.00 | 144,500.00 |
| 6310530 | SURFACE CASING | 56,000.00 | 0.00 | 0.00 | 56,000.00 |
| 6310540 | INTERMEDIATE CASING | 357,000.00 | 0.00 | 0.00 | 357,000.00 |
| 6310550 | PRODUCTION CASING | 493,000.00 | 0.00 | 0.00 | 493,000.00 |
| 6310580 | CASING COMPONENTS | 52,000.00 | 0.00 | 0.00 | 52,000.00 |
| 6330100 | PIPE,FIT,FLANG,CPLNG | 0.00 | 45,000.00 | 0.00 | 45,000.00 |
| | Total Tangibles | 1,014,000.00 | 481,300.00 | 0.00 | 1,495,300.00 |

| TOTAL ESTIMATED COST | 4,412,000.00 | 5,501,427.08 | 0.00 | 9,913,427.08 |
|----------------------|--------------|--------------|------|--------------|

WORKING INTEREST OWNER APPROVAL

| Company Name: | | | | | |
|---------------|-------------|---------|--|--|--|
| Signature: | Print Name: | | | | |
| Title: | | | | | |
| Date: | | <u></u> | | | |
| Email: | | | | | |

Note: Please include/attach well requirement data with ballot.