

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION 1164262

Form ACO-1 June 2009 Form Must Be Typed Form must be Signed All blanks must be Filled

WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

| OPERATOR: License # | | API No. 15 | |
|--|--------------------------------------|---------------------------------|--|
| Name: | | Spot Description: | |
| Address 1: | | Sec | TwpS. R 🗌 East 🗌 West |
| Address 2: | | Fe | eet from North / South Line of Section |
| City: State: Zip: | + | Fe | eet from East / West Line of Section |
| Contact Person: | | Footages Calculated from I | Nearest Outside Section Corner: |
| Phone: () | | | |
| CONTRACTOR: License # | | County: | |
| | | | \\/\oll #: |
| | | Eedse Name: | vven # |
| | | Preducing Formation: | |
| Purchaser: | | | |
| Designate Type of Completion: | | Elevation: Ground: | Kelly Bushing: |
| New Well Re-Entry | _ Workover | Total Depth: Plu | ig Back Total Depth: |
| Oil WSW SWD | SIOW | Amount of Surface Pipe Se | t and Cemented at: Feet |
| Gas D&A ENHR | SIGW | Multiple Stage Cementing | Collar Used? 🗌 Yes 🗌 No |
| ☐ OG ☐ GSW | Temp. Abd. | If yes, show depth set: | Feet |
| CM (Coal Bed Methane) | | If Alternate II completion, c | ement circulated from: |
| Cathodic Other (Core, Expl., etc.): | | feet depth to: | w/sx cmt. |
| If Workover/Re-entry: Old Well Info as follows: | | | |
| Operator: | | Drilling Eluid Managomor | at Blan |
| Well Name: | | (Data must be collected from th | he Reserve Pit) |
| Original Comp. Date: Original Tota | al Depth: | Oblarida contenti | |
| Deepening Re-perf. Conv. to E | NHR Conv. to SWD | | ppm Fluid volume: bbis |
| Conv. to G | SW | Dewatering method used: _ | |
| Plug Back: Plug I Plug | Back Total Depth | Location of fluid disposal if | hauled offsite: |
| Commingled Permit #: | | Operator Name | |
| Dual Completion Permit #: | | | Licence #: |
| SWD Permit #: | | | |
| ENHR Permit #: | | Quarter Sec. | IwpS. R [_] East [_] West |
| GSW Permit #: | | County: | Permit #: |
| Spud Date or Date Reached TD Recompletion Date | Completion Date or Recompletion Date | | |

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

| KCC Office Use ONLY | | | | | | |
|------------------------------------|--|--|--|--|--|--|
| Letter of Confidentiality Received | | | | | | |
| Date: | | | | | | |
| Confidential Release Date: | | | | | | |
| Wireline Log Received | | | | | | |
| Geologist Report Received | | | | | | |
| UIC Distribution | | | | | | |
| ALT I II III Approved by: Date: | | | | | | |

| | Side Two | 1164262 |
|-----------------------|-------------|---------|
| Operator Name: | Lease Name: | Well #: |
| Sec TwpS. R East West | County: | |
| | | |

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

| Drill Stem Tests Taken (Attach Additional She | eets) | Yes No | | .og Formatio | n (Top), Depth an | d Datum | Sample |
|---|----------------------|---------------------------------------|----------------------------|--------------------|-------------------|-----------------|-------------------------------|
| Samples Sent to Geolog | ical Survey | Yes No | Nan | ie | | юр | Datum |
| Cores Taken Electric Log Run Electric Log Submitted E (If no, Submit Copy) | Electronically | <pre>Yes □ No Yes □ No Yes □ No</pre> | | | | | |
| List All E. Logs Run: | | | | | | | |
| | | CASIN | G RECORD | ew Used | | | |
| | | Report all strings se | et-conductor, surface, int | ermediate, product | ion, etc. | | |
| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
| | | | | | | | |

ADDITIONAL CEMENTING / SQUEEZE RECORD

| Purpose: Perforate | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
|-----------------------------|---------------------|----------------|--------------|----------------------------|
| Protect Casing Plug Back TD | | | | |
| Plug Off Zone | | | | |

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | | | | Acid, Fracture, Shot, Co (Amount and Kind | ement Squeeze Record I of Material Used) | Depth | | | |
|--------------------------------------|---|-----------------|---------|----------------|--|---|-----------------|------------------------------|-----------------|---------|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| TUBING RECORD: | Siz | ze: | Set At: | | Packer | At: | Liner R | un: | No | |
| Date of First, Resumed F | Product | ion, SWD or ENH | ۲. | Producing N | /lethod: | ping | Gas Lift | Other (Explain) | | |
| Estimated Production Per 24 Hours | | Oil Bb | ls. | Gas | Mcf | Wate | ər | Bbls. | Gas-Oil Ratio | Gravity |
| | | | | | | | | | Ι | |
| DISPOSITIO | N OF C | BAS: | | | METHOD | OF COMPLE | TION: | | PRODUCTION INTE | RVAL: |
| Vented Sold | <u> </u> | Jsed on Lease | | Open Hole | Perf. | Dually (Submit) | Comp. ACO-5) | Commingled (Submit ACO-4) | | |
| (If vented, Subi | mit ACC |)-18.) | | Other (Specify |) | | | | | |

| Form | ACO1 - Well Completion |
|-----------|------------------------|
| Operator | American Warrior, Inc. |
| Well Name | Glen Marcellus B 3-36 |
| Doc ID | 1164262 |

All Electric Logs Run

| Induction | |
|-----------|--|
| Porosity | |
| Micro | |
| Sonic | |

| Form | ACO1 - Well Completion |
|-----------|------------------------|
| Operator | American Warrior, Inc. |
| Well Name | Glen Marcellus B 3-36 |
| Doc ID | 1164262 |

Tops

| Name | Тор | Datum |
|----------|-------|-------|
| Heebner | 4185' | -1242 |
| Lansing | 4313' | -1370 |
| Swope | 4850' | -1907 |
| Marmaton | 4987' | -2044 |
| Cherokee | 5200' | -2257 |
| Atoka | 5442' | -2499 |
| Morrow | 5602' | -2659 |
| Chester | 5916' | -2973 |
| St.Louis | 6256' | -3313 |



DRILL STEM TEST REPORT

Prepared For: American Warrior, Inc

PO Box 399 Garden City, KS 67846

ATTN: Keith Reavis

Glen Marcellus B3-36

36-32s-35w Stevens,KS

Start Date: 2013.05.06 @ 00:41:00 End Date: 2013.05.06 @ 06:09:15 Job Ticket #: 53228 DST #: 1

Trilobite Testing, Inc PO Box 362 Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620

| | DRILL STEM TES | T REPC | DRT | | |
|--|---|---|---|-------------------------------|--|
| | American Warrior, Inc | | 36-32s-35w Stevens,KS | | |
| ESTING, INC. | PO Box 399 | | Glen Marcellus B3-36 | | |
| | Garden City, KS 67846 | | Job Ticket: 53228 DST | #: 1 | |
| | ATTN: Keith Reavis | | Test Start: 2013.05.06 @ 00:41:0 | 0 | |
| GENERAL INFORMATION: | | | | | |
| Formation:Chester SandDeviated:NoWhipstock:Time Tool Opened:03:22:15Time Test Ended:06:09:15 | ft (KB) | | Test Type: Conventional Bottom Tester: Bradley Walter Unit No: 53 | Hole (Initial) | |
| Interval:6094.00 ft (KB) To61Total Depth:6132.00 ft (KB) (TVHole Diameter:7.88 inchesHole | 32.00 ft (KB) (TVD) /D) · Condition: Good | Reference Elevations: 2943.00 ft (KB) 2932.00 ft (CF) KB to GR/CF: 11.00 ft | | | |
| Serial #: 8522OutsidePress@RunDepth:psigStart Date:2013.05.06Start Time:00:41:05TEST COMMENT:Mis-run - failure | @ 6095.00 ft (KB) End Date: End Time: of packers to seat. | 2013.05.06 06:09:14 | Capacity: 8000 Last Calib.: 2013.05 Time On Btm: 2013.05.06 @ 03:22 Time Off Btm: 2013.05.06 @ 03:25 | .00 psig .06 :00 :15 | |
| Pressure vs. T | ime | | PRESSURE SUMMARY | | |
| BEZZ Pressure Peter descent d | Temperature 0022 Temperature 000 000 000 000 000 000 000 0 | Time (Min.) 0 1 4 | Pressure (psig) Temp (deg F) Annotation 3031.36 126.90 Initial Hydro-static 1408.83 125.98 Open To Flow (1) 2966.29 129.50 Final Hydro-static | | |
| Recovery | 1,,, | | Gas Rates | | |
| Length (tt) Description 500.00 Mud 100m | Volume (bbl) 3.69 | | Choke (inches) Pressure (psig) | Gas Rate (Mct/d) | |

| | DR | ILL STE | MTEST | REPOR | Т | TOOL DIAGRAM |
|---------------------------------|--------------------|-----------------|---------------|--------------|------------------------|--|
| I RILUDITE | Amerio | can Warrior, In | С | | 36-32s-35w Steve | ns,KS |
| ESTING , I | С _{РО Во} | x 399 | | | Glen Marcellus B | 3-36 |
| | Garde | n City, KS 678 | 46 | | Job Ticket: 53228 | DST#:1 |
| | ATTN: | Keith Reavis | ; | | Test Start: 2013.05.06 | 6 @ 00:41:00 |
| Tool Information | I | | | | | |
| Drill Pipe: Length: 5729.00 | t Diameter | : 3.80 in | ches Volume: | 80.36 bbl | Tool Weight: | 2500.00 lb |
| Heavy Wt. Pipe: Length: 0.00 | t Diameter | : 0.00 in | ches Volume: | 0.00 bbl | Weight set on Pack | er: 25000.00 lb |
| Drill Collar: Length: 365.00 | t Diameter | : 2.25 in | ches Volume: | 1.80 bbl | Weight to Pull Loos | e: 110000.0 lb |
| | | | Total Volume: | 82.16 bbl | Tool Chased | 0.00 ft |
| Dopth to Top Packer: 6004.00 | ι + | | | | String Weight: Initia | l 99000.00 lb |
| Depth to Bottom Packer: 0034.00 | t | | | | Fina | l 101000.0 lb |
| Interval between Packers: 38.00 | t | | | | | |
| Tool Length: 65.00 | t | | | | | |
| Number of Packers: 2 | Diameter | : 6.75 in | ches | | | |
| Tool Comments: | | | | | | |
| | | | | | | |
| | | | | | | |
| Tool Description | ength (ft) | Serial No. | Position | Depth (ft) A | ccum. Lengths | |
| Change Over Sub | 1.00 | | | 6068.00 | | |
| Shut In Tool | 5.00 | | | 6073.00 | | |
| Hydraulic tool | 5.00 | | | 6078.00 | | |
| Jars | 5.00 | | | 6083.00 | | |
| Safety Joint | 2.00 | | | 6085.00 | | |
| Packer | 5.00 | | | 6090.00 | 27.00 | Bottom Of Top Packer |
| Packer | 4.00 | | | 6094.00 | | |
| Stubb | 1.00 | | | 6095.00 | | |
| Recorder | 0.00 | 8677 | Inside | 6095.00 | | |
| Recorder | 0.00 | 8522 | Outside | 6095.00 | | |
| Perforations | 2.00 | | | 6097.00 | | |
| Change Over Sub | 1.00 | | | 6098.00 | | |
| Drill Pipe | 30.00 | | | 6128.00 | | |
| Change Over Sub | 1.00 | | | 6129.00 | | |
| Bullnose | 3.00 | | | 6132.00 | 38.00 | Bottom Packers & Anchor |
| Total Tool Length | 65.00 | 1 | | | | ······································ |
| | 05.00 | , | | | | |
| | | | | | | |

| C Amer IG , INC. PO BO Garde ATTN | ican Warrior, Inc ox 399 en City, KS 67846 : Keith Reavis | | 36-32s-35v Glen Marc | v Stevens,K | 6 | |
|--|--|--|---|--|---|--|
| IG , INC. Garde | ox 399 en City, KS 67846 : Keith Reavis | | Glen Marc | | | |
| | | | Glen Marcellus B3-36 Job Ticket: 53228 DST#:1 Test Start: 2013.05.06 @ 00:41:00 | | | |
| mation | | | | | | |
| jal c/qt m.m m hes | Cushion Type: Cushion Length: Cushion Volume: Gas Cushion Type: Gas Cushion Pressu | re: | ft bbl psig | Oil API: Water Salinity: | 0 c 0 r | leg API ›pm |
| | | | | | | |
| 1. 4 | Recovery Table | | | 1 | | |
| Length ft | Description | | Volume bbl | | | |
| 500.00 | Mud 100m | | 3.689 | | | |
| Length: 50 | 0.00 ft Total Volume: | 3.689 bbl | | | | |
| Fluid Samples: 0 | Num Gas Bombs: Laboratory Locat | 0 ion [.] | Serial # | | | |
| very Comments: N | liss-Run | | | | | |
| | | | | | | |
| | jal ;/qt n.m n hes Length ft 500.00 Length: 50 Fluid Samples: 0 ratory Name: very Comments: N | A Cushion Length: 2/qt Cushion Volume: Gas Cushion Type: n.m Gas Cushion Pressu n hes Recovery Table Length Description ft 500.00 Mud 100m Length: 500.00 ft Total Volume: Fluid Samples: 0 Num Gas Bombs: ratory Name: Laboratory Locat very Comments: Miss-Run | gal Cushion Length: :/qt Cushion Volume: Gas Cushion Type: nm m Gas Cushion Pressure: n hes Recovery Table Length Description ft 0 500.00 Mud 100m Length: 500.00 ft Total Volume: 3.689 bbl Fluid Samples: 0 Num Gas Borrbs: 0 ratory Name: Laboratory Location: very Comments: Miss-Run | Cushion lype: jal Qushion Volume: bbl Gas Cushion Volume: bbl Gas Cushion Type: n.m Gas Cushion Pressure: psig n hes Recovery Table Length Description Volume 500.00 Mud 100m 3.689 Length: 500.00 ft Total Volume: 3.689 bbl Fluid Samples: 0 Num Gas Bombs: 0 Serial #: ratory Name: Laboratory Location: very Comments: Miss-Run | Cushion Length: ft Water Salinity: /(t Qushion Colume: bbl Gas Cushion Type: n.m Gas Cushion Pressure: psig n hes Recovery Table Length Description Volume ft Description 3.689 Length: 500.00 ft Total Volume: 3.689 bbl Fluid Samples: 0 Num Gas Bombs: 0 Serial #: ratory Name: Laboratory Location: very Comments: Miss-Run | Cushion Iype: Oil AH: Oic jal Cushion Length: ft Water Salinity: Op Zas Cushion Volume: bbl Gas Cushion Pressure: psig n hes <u>Recovery Table</u> <u>Length: Description Volume ft Description 3.689</u> Length: 500.00 ft Total Volume: 3.689 bbl Fluid Samples: 0 Num Gas Borrbs: 0 Serial #: ratory Name: Laboratory Location: very Comments: Mss-Run |

Printed: 2013.05.15 @ 09:57:23

Ref. No: 53228





American Warrior, Inc

Glen Marcellus B3-36



DRILL STEM TEST REPORT

Prepared For: American Warrior, Inc

PO Box 399 Garden City, KS 67846

ATTN: Keith Reavis

Glen Marcellus B3-36

36-32s-35w Stevens,KS

Start Date: 2013.05.06 @ 06:26:00 End Date: 2013.05.06 @ 14:26:00 Job Ticket #: 53229 DST #: 2

Trilobite Testing, Inc PO Box 362 Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620 American Warrior, Inc

36-32s-35w Stevens,KS

Glen Marcellus B3-36

DST # 2

Chester Sand

2013.05.06

| | DRILL STEM TEST REPORT | | | | | | |
|---|---|------------------------|---|------------------------------|-----------------------------------|--|--|
| | American Warrior, Inc | | 36- | 32s-35w | Stevens, | KS | |
| ESTING , INC | PO Box 399 | | Gle | en Marce | ellus B3-3 | 6 | |
| | Garden City, KS 67846 | | Job | Ticket: 53 | 3229 | DST#:2 | |
| | ATTN: Keith Reavis | | Tes | t Start: 20 | 013.05.06 @ | 06:26:00 | |
| GENERAL INFORMATION: | | | | | | | |
| Formation:Chester SandDeviated:NoWhipstock:Time Tool Opened:08:47:30Time Test Ended:14:26:00 | ft (KB) | | Tes Tes Unit | t Type: 0 ter: E No: 5 | Conventiona Bradley Walt 53 | l Bottom Hole (Reset) ter | |
| Interval:6034.00 ft (KB) To6Total Depth:6132.00 ft (KB) (THole Diameter:7.88 inches Hole | 132.00 ft (KB) (TVD) VD) e Condition: Good | | Ref | erence Ele KB ti | evations: o GR/CF: | 2943.00 ft (KB) 2932.00 ft (CF) 11.00 ft | |
| Serial #: 8522OutsidePress@RunDepth:44.77 psigStart Date:2013.05.06Start Time:06:26:05TEST COMMENT:IF: 1/2" blow . ISI: No return. FF: No blow . FSI: No return. | @ 6035.00 ft (KB) End Date: End Time: | 2013.05.06 14:25:59 | Capacity Last Calil Time On Time Off | : b.: Btm: 2 Btm: 2 | ; 2013.05.06 (2013.05.06 (| 8000.00 psig 2013.05.06 @ 08:47:15 @ 11:44:15 | |
| | | I | | | | | |
| Pressure vs. 7 | Time ⊽ 8522 Temperature | | PF | RESSUR | | ARY | |
| 3000 | el Hydro-static | (Min.) | Pressure (psig) | (deg F) | Annotatio | n | |
| | 130 | 0 | 3024.94 | 133.52 | Initial Hydro | o-static | |
| | 120 | 1 | 27.14 | 132.27 | Open To Fl | ow (1) | |
| | 110 | 91 | 102.43 | 135.72 | End Shut-Ir | n(1) | |
| g E / | | 92 | 61.25 | 135.71 | Open To Fl | ow (2) | |
| | | 111 | 44.77 | 136.25 | Shut-In(2) | | |
| | | 177 | 96.58 2974.86 | 137.84 | End Shut-Ir | n(2) | |
| 6 Mon May 2013 | 12PM ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ ∞ | | 2374.00 | 130.00 | | | |
| Recovery | | | | Gas | s Rates | | |
| Length (ft) Description | Volume (bbl) | | | Choke (ii | nches) Pressu | re (psig) Gas Rate (Mcf/d) | |
| 20.00 mud 100m (oil spots in to | DOI) 0.10 | | | - | | | |
| * Recovery from multiple tests | | | | | | | |

| | DRILL STEM TES | T REPOF | RT | |
|--|---|---------------------------------|--|---|
| HILUDITE | American Warrior, Inc | | 36-32s-35w Stev | ens,KS |
| ESTING , INC. | PO Box 399 Cordon City, KS 67846 | | Glen Marcellus | B3-36 |
| | Garden City, KS 67646 | | Job Ticket: 53229 | DST#:2 |
| | ATTN: Keith Reavis | | Test Start: 2013.05. | 06 @ 06:26:00 |
| GENERAL INFORMATION: | | | | |
| Formation:Chester SandDeviated:NoWhipstock:Time Tool Opened:08:47:30Time Test Ended:14:26:00 | ft (KB) | | Test Type: Conver Tester: Bradley Unit No: 53 | ntional Bottom Hole (Reset) / Walter |
| Interval: 6034.00 ft (KB) To 61 | 32.00 ft (KB) (TVD) | | Reference Elevation | s: 2943.00 ft (KB) |
| Hole Diameter: 7.88 inchesHole | 2D) Se Condition: Good | | KB to GR/C | 2932.00 ft (CF) CF: 11.00 ft |
| Serial #: 8677InsidePress@RunDepth:psigStart Date:2013.05.06Start Time:06:26:35 | @ 6035.00 ft (KB) End Date: End Time: | (2013.05.06 L 14:25:14 - | Capacity: Last Calib.: Time On Btm: Time Off Btm: | 8000.00 psig 2013.05.06 |
| TEST COMMENT: IF: 1/2" blow . ISI: No return. FF: No blow . FSI: No return. | | | | |
| Pressure vs. T | ime | | PRESSURE SU | IMMARY |
| 8077 Presure 800 200 200 200 200 200 200 200 | 8877 Temperature 400 400 400 400 400 400 400 40 | Time Pr (Min.) (| ressure Temp Ann (psig) (deg F) | otation |
| Recovery | | | Gas Rate | es |
| Length (ft) Description 20.00 mud 100m (oil spots in to | Volume (bbl) OI) 0.10 | | Choke (inches) | Pressure (psig) Gas Rate (Mcf/d) |
| Recovery in orr multiple tests | | 1 | | |

Trilobite Testing, Inc

| | DRILL STE | MTEST | REPOR | Г | TOOL DIAGRAM |
|------------------------------------|-----------------------|---------------|---------------|--------------------------|------------------------|
| I NILUDITE | American Warrior, In | IC | | 36-32s-35w Stevens | s,KS |
| ESTING , INC | PO Box 399 | 40 | | Glen Marcellus B3- | -36 |
| | Garden City, KS 678 | 46 | | Job Ticket: 53229 | DST#:2 |
| | ATTN: Keith Reavis | 3 | | Test Start: 2013.05.06 @ | 2 06:26:00 |
| Tool Information | | | | | |
| Drill Pipe: Length: 5764.00 ft | Diameter: 3.80 in | ches Volume: | 80.85 bbl | Tool Weight: | 2500.00 lb |
| Heavy Wt. Pipe: Length: 0.00 ft | Diameter: 0.00 in | ches Volume: | 0.00 bbl | Weight set on Packer | : 25000.00 lb |
| Drill Collar: Length: 272.00 ft | Diameter: 2.25 in | ches Volume: | 1.34 bbl | Weight to Pull Loose: | 120000.0 lb |
| Drill Bing Above KB: 20.00 ft | | Total Volume: | 82.19 bbl | Tool Chased | 0.00 ft |
| Depth to Top Packer: 6034.00 ft | | | | String Weight: Initial | 90000.00 lb |
| Depth to Bottom Packer: ft | | | | Final | 90000.00 lb |
| Interval between Packers: 98.00 ft | | | | | |
| Tool Length: 125.00 ft | | | | | |
| Number of Packers: 2 | Diameter: 6.75 in | ches | | | |
| Tool Comments: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Tool Description Le | ength (ft) Serial No. | Position | Depth (ft) Ac | cum. Lengths | |
| Change Over Sub | 1.00 | | 6008.00 | | |
| Shut In Tool | 5.00 | | 6013.00 | | |
| Hydraulic tool | 5.00 | | 6018.00 | | |
| Jars | 5.00 | | 6023.00 | | |
| Safety Joint | 2.00 | | 6025.00 | | |
| Packer | 5.00 | | 6030.00 | 27.00 | Bottom Of Top Packer |
| Packer | 4.00 | | 6034.00 | | |
| Stubb | 1.00 | | 6035.00 | | |
| Recorder | 0.00 8677 | Inside | 6035.00 | | |
| Recorder | 0.00 8522 | Outside | 6035.00 | | |
| Perforations | 31.00 | | 6066.00 | | |
| Change Over Sub | 1.00 | | 6067.00 | | |
| Drill Pipe | 61.00 | | 6128.00 | | |
| Change Over Sub | 1.00 | | 6129.00 | | |
| Bullnose | 3.00 | | 6132.00 | 98.00 Bo | ottom Packers & Anchor |
| Total Tool Length: | 125.00 | | | | |
| | . 20100 | | | | |
| | | | | | |

| + | | | | | | | |
|--------------|--------------------------------|-----------------------|------------------------------------|-----------|---------------|-----------------|-----------|
| Con- | | DRI | LL STEM TEST R | I | FLUID SUMMARY | | |
| | | Americ | can Warrior, Inc | | 36-32s-35 | w Stevens,K | S |
| | ESTING, INC. | PO Box | x 399 | | Glen Mar | cellus B3-36 | |
| | | Garden City, KS 67846 | | | Job Ticket: 5 | 53229 | DST#:2 |
| | | ATTN: | Keith Reavis | | Test Start: 2 | 2013.05.06 @ 06 | 6:26:00 |
| Mud and C | ushion Information | | | | | | |
| Mud Type: C | | | Cushion Type: | | | Oil API: | 0 deg API |
| Viscosity: | 52.00 sec/qt | | Cushion Length: Cushion Volume: | | bbl | water Salinity: | 0 ppm |
| Water Loss: | 6.38 in ³ | | Gas Cushion Type: | | | | |
| Resistivity: | ohm.m | | Gas Cushion Pressure | | psig | | |
| Filter Cake: | 2.00 inches | | | | | | |
| Recovery I | nformation | | | | | | |
| | | | Recovery Table | | | - | |
| | Lengt ft | th | Description | | Volume bbl | | |
| | | 20.00 | mud 100m (oil spots in tool) | | 0.098 | 8 | |
| | Total Length: | 20 | 0.00 ft Total Volume: | 0.098 bbl | | | |
| | Num Fluid Samp | les: 0 | Num Gas Bombs: | 0 | Serial # | :: | |
| | Laboratory Nam Recovery Com | ne: nents: | Laboratory Location | 1: | | | |
| | , | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Printed: 2013.05.15 @ 09:56:35

Ref. No: 53229





Printed: 2013.05.15 @ 09:56:36

Ref. No: 53229







DRILL STEM TEST REPORT

Prepared For: American Warrior, Inc

PO Box 399 Garden City, KS 67846

ATTN: Keith Reavis

Glen Marcellus B3-36

36-32s-35w Stevens,KS

Start Date: 2013.05.07 @ 10:56:00 End Date: 2013.05.07 @ 18:26:30 Job Ticket #: 53230 DST #: 3

Trilobite Testing, Inc PO Box 362 Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620 American Warrior, Inc

| | DRILL STEM TES | TREP | ORT | | | | | |
|---|---|----------------|----------------------|------------------------------|------------------------------------|-------------------|----------------|--|
| | American Warrior, Inc | | 36-3 | 32s-35w | Stevens, | KS | | |
| ESTING , INC. | PO Box 399 | | Gle | n Marce | ellus B3-3 | 6 | | |
| | Garden City, KS 67846 | | Job | Ticket: 532 | 230 | DST#:3 | | |
| | ATTN: Keith Reavis | | Test | Start: 20 | 13.05.07 @ | 10:56:00 | | |
| GENERAL INFORMATION: | | | | | | | | |
| Formation:St LouisDeviated:NoWhipstock:Time Tool Opened:13:38:15Time Test Ended:18:26:30 | ft (KB) | | Test Test Unit | t Type: C ter: B No: 5 | Conventional Bradley Walte 3 | Bottom Hole er | e (Reset) | |
| Interval: 6240.00 ft (KB) To 62 | 280.00 ft (KB) (TVD) | | Refe | erence Elev | vations: | 2943.00 | ft (KB) | |
| Total Depth: 6280.00 ft (KB) (T Hole Diameter: 7 88 inches Hole | /D) Condition: Good | | | KB to | GR/CF | 2932.00 11.00 | ft (CF) | |
| | | | | | | 11.00 | | |
| Serial #: 8522 Outside | @ 6241.00 ft (KB) | | Capacity | | | 8000.00 | ncia | |
| Start Date: 2013.05.07 | End Date: | 2013.05.07 | Last Calib | D.: | 2 | 2013.05.07 | psig | |
| Start Time: 10:56:05 | End Time: | 18:26:29 | Time On E | Btm: 2 | 013.05.07 @ | 2 13:38:00 | | |
| TEST COMMENT: IF: Surface blow , died @ 22 min. ISI: No return. FF: No blow , flushed tool no help. FSI: No return | | | | | | | | |
| Pressure vs. T | ime | | PF | RESSUR | E SUMMA | ARY | | |
| | 85/22 Temperature - 140 Fina Bydio-static | Time (Min.) | Pressure (psig) | Temp (deg F) | Annotatio | n | | |
| 300 | | , o | 3083.35 | 129.05 | Initial Hydro | -static | | |
| | | 1 | 26.32 | 127.94 | Open To Flo | ow (1) | | |
| | | 28 76 | 32.97 62.77 | 131.36 | End Shut-In | (1) | | |
| | | 76 | 44.73 | 134.75 | Open To Flo | ow (2) | | |
| | | 97 | 39.17 | 135.94 | Shut-In(2) | (2) | | |
| | | 113 | 2988.40 | 136.77 | Final Hydro | (∠) -static | | |
| 7 Tue May 2013 | BPM | | | | | | | |
| Recovery | | | - | Gas | Rates | _ | | |
| Length (ft) Description | Volume (bbl) | | | Choke (in | iches) Pressur | e (psig) Ga | s Rate (Mcf/d) | |
| 10.00 Mud 100m | 0.05 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| * Recovery from multiple tests | ł | | | | | | | |
| Trilobite Testing, Inc | Ref. No: 53230 | | | Printed: 2 | 2013.05.15 | @ 09:55:43 | | |

| | DRILL STEM TES | ST REPO | ORT | | | | | |
|---|---|----------------|--|---|--|--|--|--|
| I HILUDIIL | American Warrior, Inc | | 36-32s-35w S | tevens,KS | | | | |
| ESTING , INC. | PO Box 399 | | Glen Marcell | us B3-36 | | | | |
| | Garden City, KS 67846 | | Job Ticket: 5323 | 0 DST#: 3 | | | | |
| | ATTN: Keith Reavis | | Test Start: 2013 | .05.07 @ 10:56:00 | | | | |
| GENERAL INFORMATION: | | | | | | | | |
| Formation:St LouisDeviated:NoWhipstock:Time Tool Opened:13:38:15Time Test Ended:18:26:30 | ft (KB) | | Test Type: Cor Tester: Bra Unit No: 53 | iventional Bottom Hole (Reset) dley Walter | | | | |
| Interval: 6240.00 ft (KB) To 62 | 280.00 ft (KB) (TVD) | | Reference Elevat | tions: 2943.00 ft (KB) | | | | |
| Total Depth: 6280.00 ft (KB) (T Hole Diameter: 7 88 inches Hole | /D) e Condition: Good | | KB to C | 2932.00 ft (CF) BR/CF 11.00 ft | | | | |
| | | | | | | | | |
| Serial #: 8677 Inside | @ 6241.00 ft (KP) | | Canacity: | 8000.00 paig | | | | |
| Start Date: 2013.05.07 | End Date: | 2013.05.07 | Last Calib.: | 2013.05.07 | | | | |
| Start Time: 10:56:35 | End Time: | 18:25:44 | Time On Btm: | | | | | |
| | | | Time Off Btm: | | | | | |
| TEST COMMENT: IF: Surface blow ISI: No return. FF: No blow , flus FSI: No return | TEST COMMENT: IF: Surface blow , died @ 22 min. ISI: No return. FF: No blow , flushed tool no help. FSI: No return | | | | | | | |
| Pressure vs. 1 | ĩme | | PRESSURE | SUMMARY | | | | |
| | 00// respective 140 130 130 120 110 Temperature 120 100 Temperature 100 Temper | Time (Min.) | Pressure Temp / (psig) (deg F) | Annotation | | | | |
| a. 1000 1000 1000 1000 1000 12PM 3PM Time (Hous) | EPM | | | | | | | |
| Recovery | | | Gas F | Rates | | | | |
| Length (ft) Description | Volume (bbl) | | Choke (inche | s) Pressure (psig) Gas Rate (Mcf/d) | | | | |
| 10.00 Mud 100m | 0.05 | | • | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| * Recovery from multiple tests | | | | | | | | |

| | TE | DRI | LL STI | EMTEST | REPOR | RT | TOOL DIAGRAM |
|----------------------------|------------|-----------|-------------|----------------|------------|------------------------|------------------------|
| I IILUDI | IC I | America | an Warrior, | Inc | | 36-32s-35w Steven | s,KS |
| ESTI | NG , INC. | PO Box | 399 | 20.40 | | Glen Marcellus B3 | -36 |
| | | Garden | City, KS 67 | 846 | | Job Ticket: 53230 | DST#:3 |
| | | ATTN: | Keith Reav | is | | Test Start: 2013.05.07 | @ 10:56:00 |
| Tool Information | | | | | | | |
| Drill Pipe: Length: | 5955.00 ft | Diameter: | 3.80 | inches Volume: | 83.53 bbl | Tool Weight: | 2500.00 lb |
| Heavy Wt. Pipe: Length: | 0.00 ft | Diameter: | 0.00 | inches Volume: | 0.00 bbl | Weight set on Packer | :: 25000.00 lb |
| Drill Collar: Length: | 272.00 ft | Diameter: | 2.25 | inches Volume: | 1.34 bbl | Weight to Pull Loose: | 115000.0 lb |
| Drill Ding Above KP: | 14 00 ft | | | Total Volume: | 84.87 bbl | Tool Chased | 0.00 ft |
| Drill Fipe Above KB. | 14.00 IL | | | | | String Weight: Initial | 92000.00 lb |
| Depth to Bottom Packer: | 5240.00 ft | | | | | Final | 92000.00 lb |
| Interval betw een Packers: | 40.00 ft | | | | | | |
| Tool Length: | 67.00 ft | | | | | | |
| Number of Packers: | 2 | Diameter: | 6.75 | inches | | | |
| Tool Comments: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Tool Description | Ler | nath (ft) | Serial No | . Position | Depth (ft) | Accum. Lenaths | |
| Change Over Sub | - | 1.00 | | | 6214.00 | J | |
| Shut In Tool | | 5.00 | | | 6219.00 | | |
| Hydraulic tool | | 5.00 | | | 6224.00 | | |
| Jars | | 5.00 | | | 6229.00 | | |
| Safety Joint | | 2.00 | | | 6231.00 | | |
| Packer | | 5.00 | | | 6236.00 | 27.00 | Bottom Of Top Packer |
| Packer | | 4.00 | | | 6240.00 | | |
| Stubb | | 1.00 | | | 6241.00 | | |
| Recorder | | 0.00 | 8677 | Inside | 6241.00 | | |
| Recorder | | 0.00 | 8522 | Outside | 6241.00 | | |
| Perforations | | 3.00 | | | 6244.00 | | |
| Change Over Sub | | 1.00 | | | 6245.00 | | |
| Drill Pipe | | 31.00 | | | 6276.00 | | |
| Change Over Sub | | 1.00 | | | 6277.00 | | |
| Bullnose | | 3.00 | | | 6280.00 | 40.00 Bo | ottom Packers & Anchor |
| Total Tool I | ength: | 67.00 | | | | | |
| | - | | | | | | |
| | | | | | | | |

| an. | | DRI | LL ST | EM TEST F | REPORT | _ | | FLUID SUMMA | RY |
|---------------------------|----------------------------|------------------|-------------------------------------|---------------------|-----------|----------------------------------|-----------------------------|-------------|----|
| | | Americ | an Warrio | r, Inc | | 36-32s-35v | v Stevens,K | S | |
| | ESTING , INC. | PO Bo> Garder | PO Box 399 Garden City, KS 67846 | | | Glen Mar Job Ticket: 5 | cellus B3-36 3230 | DST#: 3 | |
| | | ATTN: | Keith Rea | avis | | Test Start: 2 | 013.05.07 @ 1 | 0:56:00 | |
| Mud and C | Cushion Information | | | | | | | | |
| Mud Type: | Gel Chem | | C | ushion Type: | | | Oil A PI: | 0 deg Al | PI |
| Mud Weight: | 9.00 lb/gal | | C | ushion Length: | | ft | Water Salinity: | 0 ppm | |
| Viscosity: | 54.00 sec/qt | | C | ushion Volume: | | bbl | | | |
| Water Loss: | 6.39 in ³ | | G | as Cushion Type: | | | | | |
| Resistivity: | ohm.m | | G | as Cushion Pressure |): | psig | | | |
| Salinity: Filter Cake: | 1500.00 ppm 2.00 inches | | | | | | | | |
| Recovery | | | | | | | | | |
| Recovery | | | R | ecovery Table | | | | | |
| | Leng ft | th | | Description | | Volume bbl |] | | |
| | | 10.00 | Mud 100 | m | | 0.049 | 9 | | |
| | Total Length: | 10 | .00 ft | Total Volume: | 0.049 bbl | | | | |
| | Num Fluid Samp | les: 0 | | Num Gas Bombs: | 0 | Serial # | : | | |
| | Laboratory Nam | ne: | | Laboratory Locatio | n: | | | | |
| | Recovery Com | nents: | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Printed: 2013.05.15 @ 09:55:46

Ref. No: 53230



120

130

140

Serial #: 8522 Outside American Warrior, Inc

Glen Marcellus B3-36

Pressure vs. Time

DST Test Number: 3

Trilobite Testing, Inc

Printed: 2013.05.15 @ 09:55:46

Ref. No: 53230

Trilobite Testing, Inc





Serial #: 8677 Inside American Warrior, Inc

Glen Marcellus B3-36

DST Test Number: 3

| 4/10 RILOBITE ESTING 1515 Commerce Pa | <i>INC.</i> Irkway • Hays, Kansas 6760 | 1 | Test NO. | Ticket 53228 | |
|---|---|---|---|--|------------------------------|
| Well Name & No. <u>Clen</u> <u>Marce</u> Company <u>AMerican</u> Way Address <u>PO Box 399</u> Co. Rep / Geo. <u>Keith Reavis</u> Location: Sec. <u>36</u> Twp. <u>3</u> Interval Tested <u>6094 - 6132</u> Anchor Length <u>38</u> Top Packer Depth <u>6089</u> | ellus B 3-36 <u>Frior</u> , Inc <u>Garden</u> City, <u>25</u> Rge. <u>35</u> w Zone Tested (Drill Pipe Run Drill Collars Run | Test No Elevation Ks 67 Rig Dut CoSteve Chester Sa 572 365 | 2943 646 ce #6 ens nd 9 M | Date <u>5/6/</u> _KB <u>293</u> StateK ud Wt. <u>9,3</u> s <u>52</u> | 1 <u>2</u> 2GL |
| Bottom Packer Depth 6094 Total Depth 6132 Blow Description MISS-RUN Packer | Wt. Pipe Run Chlorides failed fo sect | 0 1500 ppm | System LC | п∟ <u>6.4</u> см <u>10</u> # | |
| Rec 5CO Feet of MUD Rec Feet of | | %gas %gas %gas %gas | %oil %oil %oil %oil | %water %water %water %water | %mud %mud %mud %mud |
| Rec Feet of Rec Total CO BHT (A) Initial Hydrostatic (B) First Initial Flow | Gravity A | %gas NPI RW@ | %oil —°F C T-On Loca T-Started | %water Chlorides ation <u>2330</u> 0041 | %mud ppm 5/5/13 |
| (C) First Final Flow | Safety Joint75 | 27 299.15 | T-Open T-Pulled _ T-Out Comment | 0330 0340 0609 Is | |
| Initial Open | Straddle Shale Packer Extra Packer Extra Recorder Day Standby Accessibility | | Ruine Ruine Extra Sub Total Total MP/DST | ed Shale Packer_320 Copies0 2194.15 Disc't 2 | |
| Approved By | Sub Total 1874 . Our | 15 Representative | the for | han | > |

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

| | RILOBITE | | | Tes | t Tic | ket | |
|--|--|-----------------------------|-----------------------|------------|-------------|----------------|-----------|
| 4/10 | ESTING INC 1515 Commerce Parkwa | y ∙ Hays, Kansas 67601 | | NO. | 532 | 29 | |
| Well Name & No Company Amer Address P.O. Box | Ien Marcellu Vican Warrior, 5 599 Gardon | 15 B 3-36 Inc City Ks | Test No _Elevation | 2 2943 | Date KB_ | 5/c/13 2932 | GL |
| Co. Rep / Geo. Key | th Reaves | | Big \mathcal{D} | the #6 | | | |
| Location: Sec. 36 | Twp. 32.5 | | Co. 5- | tevens | | State Ks | |
| Interval Tested | 34 6137 | Zono Tostod | boctor | Sand | | | |
| Anchor Length | 98 | Zone rested | -ncsicr < | 5764 | Mud M/t | 9.3 | |
| Top Packer Depth | 229 | Drill Collars Bup | ~ | 277 | Vie | 52 | |
| Bottom Packer Depth | 034 | Wt. Pipe Bun | | Ø | wi | C.IL | |
| Total Depth la | 132 | Chlorides IS | 00 1 | opm System | | 10# | |
| Blow Description JF IST FF | 1 1/2" blow No reform, No blow | | | | | | |
| 161 | No retorn. | | | | | | |
| Rec <u>Lo</u> Fee | et of (0 | The spots in rod) | %gas | %0il | | %water 100 | %mud |
| Rec Fee | et of | | %gas | %0il | | %water | %mud |
| Rec Fee | et of | | %gas | %011 | | %water | %mud |
| Rec Fee | et of | | %gas | %oil | | %water | %mud |
| Rec Fee | | Grovitu | | 76011 | E Chlorid | | 781100 |
| (A) Initial Hydrostatic | 2075 | Tost 1450 | | | ocation | 0609 | ppm |
| (B) First Initial Flow | 27 | V lars 250 | | T-Start | ted | C626 | |
| (C) First Final Flow | 46 | Safety Joint 75 | - | T-Ope | n | 0846 | |
| (D) Initial Shut-In | 102 | Circ Sub | | T-Pulle | ed | @ 1140 | |
| (E) Second Initial Flow | 61 | Hourly Standby | | T-Out | | 1426 | |
| (F) Second Final Flow | 45 | Mileage 19.3 Kh | | Comm | ients5 | hut fin and | |
| (G) Final Shut-In | 97 | Sampler | | P | olugging | problems. | i aalad |
| (H) Final Hydrostatic | 2975 | Straddle | | | uined Sha | le Packer | re renosr |
| | | Shale Packer | | 🗆 Ri | uined Pac | ker | |
| Initial Open | 30 | Extra Packer | | — 🗆 Ex | tra Copie | S | |
| Initial Shut-In | 60 | Extra Recorder | | Sub To | otal 0 | | |
| Final Flow | 20 | Day Standby | | Total_ | 1775 |) | |
| Final Shut-In | 60 | Accessibility | | MP/D | ST Disc' | | |
| | 2 | Sub Total 1775 | | _ / | A Company | | |
| Approved By | | Our F | lepresentative | - Jay | af. | P | |

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

| | RILOBITE | | | Test Ti | cket | |
|-----------------------------|---------------------|------------------------|------------|-----------------|-------------|--------|
| | ESTING INC. | | | NO 53 | 230 | |
| 4/10 15 | 15 Commerce Parkway | y • Hays, Kansas 67601 | | NO. 00 | 200 | |
| Wall Name & Na Gilad | Marallye | B 2-36 - | | D -1 | 2/1/12 | |
| Weir Name & No. <u>Alen</u> | 1 laice us | <u> </u> | ST INO. | Date | 217/13 | |
| Company merica | D Warrior, | LAC Ele | evation | <u>кв</u> | 2932 | GL |
| Address 4.0 | 150× 399 | Gargien City, 13 | ní | et / | | |
| Co. Rep / Geo. Mer | 19 Keavis | Ri | g_pulle | - 2 | 1. | |
| Location: Sec. 36 | Twp <u>32 s</u> | Rge <u>35</u> Co | Steve | ns | _State _15 | |
| nterval Tested 60 | 34 6240-625 | D Zone Tested | Louis | | | |
| Anchor Length | 40 | Drill Pipe Run5 | 955 | Mud W | n. 9,2 | |
| Top Packer Depth | 6235 | Drill Collars Run | 27.2 | Vis | 54 | |
| Bottom Packer Depth | 6240 | Wt. Pipe Run | ø | WL_ | 6.4 | |
| Total Depth | 6280 | Chlorides 1500 | ppm Sys | tem LCM_ | 8# | |
| Blow Description TF | Surface blow. die | de 22 min | | - | | |
| Terr | No Peturn | | | | | |
| CE: 1 | 1. bland Flucks | d tool | | | | |
| rry, 1 | o biolo, reusile | | | | | |
| | Man | | %das | %oil | %water 100 | %mud |
| Rec Feel C | | | % aas | %oil | %water | %mud |
| lec Feet c | i | | %gas | 76011 9/ eil | %water | %mud |
| Rec Feet c | .f | | %gas | %00II | 76Water | %mud |
| Rec Feet c | of | | %gas | %011 | %water | 7omuu |
| Rec Feet c | of | | %gas | %oil | %water | %mud |
| Rec Total 10 | BHT 138 | Gravity API RW | @ | F Chlor | ides | ppm |
| (A) Initial Hydrostatic | 3683 | Test 1450 | | T-On Location | 1013 | |
| B) First Initial Flow | 26 | 🔀 Jars 250 | | T-Started | 1026 | |
| (C) First Final Flow | 33 | Safety Joint 75 | | T-Open | 1570 | |
| (D) Initial Shut-In | 63 | Circ Sub N/L | | T-Pulled | 10.25 | |
| (E) Second Initial Flow | 45 | Hourly Standby | | 1-Out | 1827 | |
| (F) Second Final Flow | 39 | Mileage 193 pt 5 | 98.30 | Comments | r. l. aka | 0 =/ |
| (G) Final Shut-In | 50 | Sampler | | | t Hald | 0 2/01 |
| (H) Final Hydrostatic | 2988 | Straddle | | | halo Packer | |
| | | Shale Packer | | | nale Facker | |
| Initial Open | 72 24 | | | C Ruined Pa | аскег | |
| | | | | Extra Cop | oles | |
| Initial Shut-In | <u> </u> | Extra Recorder | | Sub lotal | U 2 20 | |
| Final Flow | 20 | Day Standby | | Iotal 237 | 3.30 | |
| Final Shut-In | 1.5 | Accessibility | | MP/DST Dis | sc't | |
| | | Sub Total 2373.30 | / | 1 th | | |
| Approved By | | Our Repre | esentative | my v | m | |

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the part for whom the test is made.

ALLIED OIL & GAS SERVICES, LLC 053027

| | | Federal Tax | LD.# 20-5975804 | | | | | | |
|-------------------------------------|---------------|-------------------------|---------------------|------------------|---------------------|----------------------|--|--|--|
| REMIT TO P.O. BOX 31 RUSSELL, K. | ANSAS 6766 | 5 | | SERV | ICE POINT: | | | | |
| | | | Liberalts | | | | | | |
| DATE 04-27-13 36 | 325 | RANGE W | CALLED OUT | ON LOCATION | JOB START | JOB FINISH | | | |
| Glen Marsellos WELL | B3-56 | LOCATION AL. E. L | tuantas ba | | COUNTY | STATE | | | |
| OLD OR NEW (Circle one) | | | | | Stevens | | | | |
| CONTRACTOR D. | les # 1 | | | | | | | | |
| TYPE OF JOB Sur fo | ice. | | UWNER /-// | nerican U | arrior | | | | |
| HOLE SIZE 19.14 | T.D. | 1736 feet | CEMENT | 110 5 | . " | | | | |
| TUBING SIZE | DER DER | <u>ТН 17294се</u> Лн | AMOUNT ORI | DERED <u>423</u> | SKA 3 | 1.CC, 2-2 | | | |
| DRILL PIPE | DEF | 2TH | 150sk" | 27.60 | HIDISK P | 10 Deely | | | |
| TOOL | DER | TH | | 9 6" 1"A | | 7107 50 | | | |
| MEAS, LINE | SHO | E JOINT 41. 37 | _ COMMON <u>* 7</u> | 23 ar A | _@ <u>\</u> @ | 1607.00 | | | |
| CEMENT LEFT IN CSG. | 41.37 | oronal These | GEL | | _@ | | | | |
| PERFS. | - 17 m | | CHLORIDE | 19 ok | @ 64,00 | 1,216.00 | | | |
| DISPLACEMENT 10 | 1.5 15B | S H20 | _ ASC | * (150 sk | -@ 9N 40 | 341000 | | | |
| E | UIPMENT | | NAMS | 79916 | @ 3.30 | 2636.70 | | | |
| PUMPTRUCK CEMEN | TERBub | en Chaver | - GoSent | Bsk | @ <u>37.60</u> | | | | |
| #530/484 HELPE | R Cesar | Pavia 4 | - +121-+ | 10 Jean 1061 | <u>b@_2.7/</u> @ | 514.00 | | | |
| BULK TRUCK | | - 10 | | | _@ | | | | |
| BULK TRUCK | MIQL | c lorres! | - | | _@ | | | | |
| #457/251 DRIVE | R Code | rik. Nu | HANDLING | 99 C. ++ | -@ <u></u> | 1959 92 | | | |
| | | c | MILEAGE | 27 Jon M. | 2 50 | 1370.20 | | | |
| R | EMARKS: | | | | TOTA | L 18,665.4 | | | |
| Jest lines at | 2,500, | ump 10 BBL | <u>s</u> | | | | | | |
| Hao-Spour. | MIXTP | mp 575 sk | | SERVI | ICE | | | | |
| sisplace it wi | th 10 | 7:5 BBIS H20 | DEPTH OF JO | B | | | | | |
| Bump plug at | 1200, | Release press | PUMPTRUCK | CHARGE | | 2,213.75 | | | |
| Flow hold Cu | what 3 | 30 BBE to | _ EXTRA FOOT | AGE | -@- <u></u> | 160 00 | | | |
| Thank | dan | | _ MILEAGE | Com bead 1 | @ <u>9.75</u> " | - 2.75.** | | | |
| | | | Light Veh | de 20 Mi | @ 4,40 | 88,00 | | | |
| ٨ | 2.047 | | | | _@ | | | | |
| CHARGE TO: Ameri | cao Wa | 17107 | - | | - | 9730.75 | | | |
| STREET | | | | | 101A | L-100- | | | |
| CITY | STATE | ZIP | <u></u> | DI 11C 8. ET OA | TEOUDME | NT | | | |
| | | | 111- 4 | PLUG & FLUA | I EQUITME | | | | |
| | | | - Weat | her Toro | @410.9 | \$ 460.98 | | | |
| | | | AFU-Float | t Value 1_ | @446.9 | 1 446.94 | | | |
| To: Allied Oil & Gas Se | rvices, LLC | . | Contrali | ter 3 | - @ <u>74.85</u> | 1 204.64 1 269.16 | | | |
| You are hereby requeste | d to rent cer | menting equipment | Coment Di | asket 1 | @131.07 | 131,04 | | | |
| and furnish cementer an | d helper(s) | to assist owner or | 100 1000 | | | | | | |
| contractor to do work as | is listed. T | he above work was | 5 | | TOTA | L 1,822.50 | | | |
| contractor I have read | and underst | and the "GENERAL | L | | | | | | |
| TERMS AND CONDIT | IONS" liste | d on the reverse sid | e. SALES TAX | (If Any) | 1,0 55 | | | | |
| - 0 | | | TOTAL CHAI | RGES 2 9 | 2/1. | | | | |
| PRINTED NAME | poio Koj | Tas | DISCOUNT _ | | IF P. | ALD IN 30 DAYS | | | |
| 1. | · · · | <u>,</u> | F | - :01 | 576 64 | | | | |
| SIGNATURE Former | in 10 | po | - NE | 12 10,5 | 515.0 | | | | |
| 0 | | 6 S | | | | | | | |
| | | | | | | | | | |
| A | | | | | | | | | |

| Service Locations | ices, In | | | HARGE TO: DDRESS ITY, STATE, Z | ZIP CO | American U | COUNTY/PARISH | | STATE | | | | 0 | | KET 47(1 | 0F VER | |
|---|--|----------------|-------------------|--------------------------------------|----------------|----------------------|--|-------------|----------------------|----------------|-----------|-------------------|-----------|--------------|-----------------|---------------|----------|
| 2. | T | ICKET TYPE CON | NTRACT | OR | <u>1en</u> | Marsellus | RIG NAME/NO. | | SHIPPED | DELIVERED | o li | | - 8 | RDER NO. | 1 | | |
| 3 | | SALES | | WE | LL CAT | EGORY JOBPL | RPOSE | | 121 | WELL PERMIT | NO. | <u>m</u> | Ŵ | ELL LOCATION | | | |
| 4. REFERRAL LOCATION | | | | | bu | elipment ce | muit long st | eing | • | | | | | 36-32- | 34 | > | |
| | SECONDARY | | 1 1 | CCOUNTING | | | | | | | | | | 111.000 | | | |
| FERENCE | PART NL | JMBER | LOC | ACCT | DF | | DESCRIPTION | | | QTY. | UM | QTY. | UM | PRICE | | AMOUNT | |
| 575 | | | L | | - | MILEAGE TE | K114 | | | 100 | lui | | | 6 | ċΟ | 600 | 100 |
| 578 | | | $ \mathcal{L} $ | | _ | HUIMp Char | je | · · · · · · | | | i | 6 | i 🗐 | 1500 | 8 | 1500 | 20 |
| 402 | | | | | | Centralize | R | | | 52 | in | - 4 | 24 | 0 | 00 | 650 | 000 |
| 403 | | | 1 | - | | Cement BA | sket | 10 | | 52 | m | _2 | eh | 285 | 00 | 370 | 00 |
| 400 | | | 14 | | | CATCH dou | n plug 7 per | <u>fæ</u> | 190 C - 5 | 22 | in | | PA | 215 | 20 | 215 | Tea |
| | | | | | - | Inseer Flai | SHAG W/ AUT | DFIL | 2 | .52 | lin | -/- | 29 | 313 | 1 | 310 | - |
| | | | | 10 - 10 Mar | | | 3 91 201 · · · · · · · · · · · · · · · · · · · | | | | <u>i</u> | | 1 | | | | 1 |
| | | | | | | | | | | | 1 | | 1 | | | | İ |
| | | | | | | | | | | | i | | Ì | | I | | |
| | | | | | | | | | | | | | | | | | <u> </u> |
| | and the second | | | | | | | | | | ill | - r - 101- | | | | | |
| LEGAL TERMS: C | Sustomer hereb | y acknowledge | es and | agrees to | | REMIT PAY | MENT TO: | OURE | SUR | VEY | AGR | EE DECIDE | AGRE | PAGE TOT | AL / | 3950 | 00 |
| but are not limited | to, PAYMENT. | RELEASE, IN | or whice IDEM | NITY, and | | | | WITHO | UT BREAK | DOWN? D AND | | | + | | 2 | 6944 | 88 |
| LIMITED WARRA | NTY provisions | i. | | 64 | | SWIFT SER | VICES INC | MET Y | OUR NEED | \$7 \\$ | _ | | + | subtot | JT, | 0894 | 88 |
| MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVEBY OF GOODS | | | | PO BO | X 466 | WE OF | ORMED WITHOUT DELAY? | | , | | | devens | | | | | |
| ×A LS | $\leq >$ | - | フ | | | NESS CITY | KS 67560 | CALCU | LATIONS FACTORILY | 7 | | | - | 6.3 | 20 | 444 | 21 |
| DATE DIGNED | TIM | ESIGNED | | D PM | 1 | 785-70 | 8-2300 | ARE Y | OU SATISFI | | SERVICE | | | | 4106 - 11 | 11 239 | 04 |
| V | | | 130 | | | 100-19 | 0-2000 | | | TOMER DID NO | DT WISH T | O RESPOND | | IUIAL | 1.2210 | 1, 501 | |
| SWIFT OPERATOR | | REpat | RACC | APP | DF MA PROVA | TERIALS AND SERVICES | The customer hereby ackn | owledges r | eceipt of t | he materials a | nd servic | es listed on t | his ticke | 2.1 | | Thank ? | You! |

| | | | | 1 | | | | | | |
|---------|---------------------|----------------------------|----------|------------------------|---------------------------------------|------------------|---------------------|--------------------|-------------|----------------|
| SW | IFT PO | O Box 466 | | TICKET CO | NTINUATION | | | No. 24 | 4707 | |
| Service | Ness Off: 1 | City, KS 675 785-798-23 | 60 00 | CUSTOMER Alle Eican | Warrior | Glen Mar | rsellus 83-3 | 6 00 MAY 13 | 3 PAGE 2 OF | 2 |
| PRICE | SECONDARY REFERENCE | | IG | DES | CRIPTION CRIPTION | orr all | | | AMOUN | |
| 330 | | 1 | | SIND cem | ont | 250 | sk | 17 0 | 4250 | 00 |
| 276 | | 1 | | Flocole | | 75 | 15 | 20 | 150 | 00 |
| 281 | | 1 | • | mud Flush | | (5W) | aci | 1 28 | 625 | 100 |
| 221 | | 1 | | KCL Pri | uzd | 2 | | 250 | 50 | 00 |
| 290 | | 1 | | D-Air | | 3 | and i | 4200 | 126 | 00 |
| • | | | | | | | | | | 1 |
| | | | | | | <u>† – †</u> | - | - | | <u> </u> |
| | | | | | · · · · · · · · · · · · · · · · · · · | | | | | |
| | | | | | | ++ | | <u> </u> | | İ |
| | | | | | | <u> </u> | | | | |
| | | | | | | | | | | 1 |
| | | | | | | | | <u> </u> | | † |
| | | | | | | 1 | <u> </u> | | | |
| | | | | | | | | | | 1 |
| | | | _ | | | | | | | <u>i</u> |
| | | | | | | + | | | | |
| | | | - | | - 11 | ┼──┼ | | 1 | | 1 |
| | | | | | | | | | | ! |
| | | | | ······ | | | | | | + |
| | | | | | | <u> </u> | | <u> i</u> | | i – |
| | | | | | | i | - - - | + | | <u> </u> |
| | | | - | | | | | | | |
| | | | | | | + | | - i - | | i — |
| | | | | | | <u> i</u> | <u> </u> | - !- | | |
| 581 | | | | SERVICE CHARGE | 15] | CUBIC FEET | | | 57.0 | 102 |
| 682 | | | | MILEAGE TOTAL WEIGHT | LOADED MILES | TON MILES | 1042 0.0 | 1/2 | 1747 | 40 |
| 905 | | | | CHARGE 2.4477.1 | /00 | | 1242. 80 | FATTANA A DECISION | | 00 |
| | | | | | | | CON | INUATION TOTAL | 6744 | . 80 |
| | | | | | | | | | | |

| JOB LOG | | • | SWIFT Services, Inc. | /3 PAGE NO. |
|---------------------|---------------|---------------------------------|--|-------------|
| HURENAN UD | 2012 | WELL NO36 | Clen Marsellus JUBTYFE long staing maket to | 1707 |
| CHART TIME NO. | RATE (BPM) | VOLUME PUMPS (BBL) (GAL) T C | PRESSURE (PS) DESCRIPTION OF OPERATION AND MATERIALS | |
| | | | 2026 SWDW/47 Hocle | |
| | | | 52× 10# Cari, 5/4/ + TO + & | 380' |
| | | | Cent 24,6, 8,10,12, 14,16,18 | |
| | | | Comit Broket 1, 10 | |
| 140 | | | | |
| Crav | | | ON LOC VER IT | |
| <i>bbiij</i> | | | Start 52" 17" CASing in UN | 61 |
| Sta | | | Drop 6011- cieculate | |
| • | | | ~ · · · · · · · · · · · · · · · · · · · | |
| 0945 | 57 | 12 | 200 Purp 500 gal mudflosh | |
| | 12 | R | 200 Rung 20 bbi KCh fleah | |
| | | - | - 543 11 M 1.C 1C- | 1/2 |
| 0420 | | 15 | Flug KH - IM H 300 - 20 | |
| 0456 | 43 | , 8 | Zoo Mix SIND comment 2054 @ | 12. Tao |
| | 43 | 24 | 200 Mix SIND center 100545 @ | 13.500 |
| | ket. | 14 | 200 Mix SMD and 50345 @ | 14.57092 |
| | | S/0 440 | | 21 |
| | | | Unip Atta down plup | |
| | | | union out punp & line | |
| 200 | 21 | | The Dergen Cline | |
| 1000 | 63 | 105 | Land marking and | |
| 1045 | 67 | 118 | 1500 LAND plug- | |
| | • | | 0 - | |
| | | | Release preserve to treve - des | ed yo |
| 1055 | | | 1 wall truck | |
| | | | | |
| | | | RACK UP | |
| | | | | |
| 0/11 | | | Jab complete | |
| | | | fluth | |
| | | | Flint, Maine, France | |
| | | | | |
| | | | | |

| Company: Address: Contact Geologist: Contact Phone Nbr: | OPERATO American Warrior, Inc. 3118 Cummings Rd. PO Box 399 Garden City, KS 67846 Kevin Wiles 620-275-2963 Clap Margallug B #2.26 | DR | | | | | | | | |
|--|--|---|---|--|--|--|--|--|--|--|
| Location: Pool: State: | Sec. 36 - T32S - R35W | API: Field: Country: | 15-189-22800-0000 Shuck Northwest USA | | | | | | | |
| | 0 1 4 0 4 0 1 | · . | | | | | | | | |
| Well Neme | Scale 1:240 In | nperial | | | | | | | | |
| Surface Location: Bottom Location: | Sec. 36 - T32S - R35W | | | | | | | | | |
| License Number: Spud Date: Region: | 4058 4/25/2013 Stevens County | Time: | 00:00 | | | | | | | |
| Drilling Completed: Surface Coordinates: Bottom Hole Coordinates: | 5/8/2013 1000' FNL & 340' FEL | Time: | 17:50 | | | | | | | |
| Ground Elevation: K.B. Elevation: Logged Interval: Total Depth: Formation: Drilling Fluid Type: | 2932.00ft 2943.00ft 4200.00ft 6380.00ft Mississippian Chemical/Fresh Water G | To: el | 6380.00ft | | | | | | | |
| | SURFACE CO-OR | DINATES | | | | | | | | |
| Well Type: | Vertical | La Chada | | | | | | | | |
| N/S Co-ord: E/W Co-ord: | 1000' FNL 340' FEL | Latitude: | | | | | | | | |
| LOGGED BY | | | | | | | | | | |
| Keith Reavis | | | | | | | | | | |
| Consulting Geologist | | | | | | | | | | |
| Company: Address: | Keith Reavis, Inc. 3420 22nd Street Great Bend, KS 67530 | | | | | | | | | |
| Phone Nbr: Logged By: | 620-617-4091 KLG #136 | Name: | Keith Reavis | | | | | | | |
| | CONTRACI | OR | | | | | | | | |
| Contractor: Rig #: Big Type: | Duke Drilling Company 6 mud rotary | | | | | | | | | |
| Spud Date: TD Date: Rig Release: | 4/25/2013 5/8/2013 | Time: Time: Time: | 00:00 17:50 | | | | | | | |
| | ELEVATIO | NS | | | | | | | | |
| K.B. Elevation: K.B. to Ground: | 2943.00ft 11.00ft | Ground Elevation: | 2932.00ft | | | | | | | |
| | NOTES | | | | | | | | | |
| Based upon DST #2 and DST #3, set pipe into the Marmaton and ut The following intervals were recor Lansing/KC 4336'-4350. | it was determined that this ilizing electrical logs and lit nmended based on logs an | well would prove non hology, pick several z d samples: Marmator | -commercial. The operator elected to cones to utilize for salt water disposal. 1 5010'-5030', Lansing/KC 4850'-4862', | | | | | | | |

A Bloodhound gas detection system operated by Bluestem Environmental Engineering was employed on this well. ROP and gas data curves were imported from the Bloodhound into this log. The gamma ray and caliper curves from the electrical log data were also imported into this log. Actual electrical log tops were generally within a couple of ft. of formation tops picked off of ROP. The curves were not shifted to provide an exact match, but left as recorded in the field.

The samples were saved and will be available for review at Kansas Geological Survey Well Sample Library located in Wichita, KS.

-

American Warrior daily drilling report

| DATE | 7:00 AM DEPTH | REMARKS |
|------------|---------------|---|
| 04/30/2013 | | Geologist Keith Reavis on location @ 2000 hrs, 4297 ft., drilling ahead upper Lansing, check bloodhound |
| 05/01/2013 | 4505 | drilling ahead, Lansing |
| 05/02/2013 | 4944 | drilling ahead, Lansing, short trip @ 4960', resume drilling, Lansing, Marmaton |
| 05/03/2013 | 5275 | drilling ahead, Marmaton, Cherokee Group, Atokan |
| 05/04/2013 | 5563 | drilling ahead, Atokan, Morrow, upper Chester |
| 05/05/2013 | 5997 | drilling ahead, Chester, show in Chester Sand warrants test, short trip, ctch, TOH w/bit |
| 05/06/2013 | 6132 | TIH w/tools, conducting DST #1, DST #1 mis-run, packer failure, OOH w/tools, reset test interval, back in hole, conducting DST #2, successful test, back in hole w/bit, resume drilling St. Gen |
| 05/07/2013 | 6271 | drilling ahead, St. Gen, St. Louis, cfs @ 6280 ft., show and gas kick in St. Louis warrants test, TOH for DST #3, conduct and complete DST #3, successful test, TIH w/bit, resume drilling |
| 05/08/2013 | 6380 | rathole ahead St. Louis, TD @ 6380, 0625 hrs, conduct logging operations Complete Logging Operations 1805 hrs, geologist released |

American Warrior well comparison sheet

| | | DRILLING | VELL | | COMPARISON WELL | | | COMPARISON WELL | | | | |
|--------------|--------|------------|----------|---------|-----------------------------|----------------------|--------|-----------------------------|----------------------|---------|--------|-----|
| | GI | en Marcel | lus B 3- | 36 | Mobil - Glen Marcellus B #1 | | | Mobil - Glen Marcellus B #2 | | | | |
| | 1 | 000' FNL S | 340' FI | EL. | 1980' FNL & 660' FEL | | | 660' FNL & 1980' FEL | | | | |
| | | Sec 36-T3 | 2S-R35W | | Sec 36-T32S-R35W | | | Sec 36-T32S-R35W | | | | |
| | | | | | | Structural | | | Structural | | | |
| | 2943 | KB | | | 2949 | 2949 KB Relationship | | | 2950 KB Relationship | | | |
| Formation | Sample | Sub-Sea | Log | Sub-Sea | Log | Sub-Sea | Sample | Log | Log | Sub-Sea | Sample | Log |
| Heebner | 4186 | -1243 | 4185 | -1242 | 4205 | -1256 | 13 | 14 | 4195 | -1245 | 2 | 3 |
| Lansing | 4319 | -1376 | 4313 | -1370 | 4338 | -1389 | 13 | 19 | 4326 | -1376 | 0 | 6 |
| Swope | 4853 | -1910 | 4850 | -1907 | 4884 | -1935 | 25 | 28 | 4874 | -1924 | 14 | 17 |
| Marmaton | 4985 | -2042 | 4987 | -2044 | 5022 | -2073 | 31 | 29 | 5000 | -2050 | 8 | 6 |
| Cherokee | 5204 | -2261 | 5200 | -2257 | 5230 | -2281 | 20 | 24 | 5204 | -2254 | -7 | -3 |
| Atokan | 5444 | -2501 | 5442 | -2499 | 5472 | -2523 | 22 | 24 | 5454 | -2504 | 3 | 5 |
| Morrow | 5604 | -2661 | 5602 | -2659 | 5628 | -2679 | 18 | 20 | 5615 | -2665 | 4 | 6 |
| Morrow LS | 5807 | -2864 | 5804 | -2861 | 5839 | -2890 | 26 | 29 | 5822 | -2872 | 8 | 11 |
| Chester B | 5918 | -2975 | 5916 | -2973 | 5956 | -3007 | 32 | 34 | 5935 | -2985 | 10 | 12 |
| Chester Sand | 6096 | -3153 | 6093 | -3150 | 6134 | -3185 | 32 | 35 | 6120 | -3170 | 17 | 20 |
| St. Gen | 6123 | -3180 | 6126 | -3183 | 6167 | -3218 | 38 | 35 | 6173 | -3223 | 43 | 40 |
| St. Louis B | 6258 | -3315 | 6256 | -3313 | 6272 | -3323 | 8 | 10 | 6260 | -3310 | -5 | -3 |
| Total Depth | 6380 | -3437 | 6379 | -3436 | 6514 | -3565 | 128 | 129 | 6400 | -3450 | 13 | 14 |

| | DRILL STEM TEST REPORT | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| HILUDITE | American Warrior, Inc | 36 32s 35w, Ks | | | | | | |
| ESTING, INC | P.O. Box 399 | Glen Marcellus B3- | Glen Marcellus B3-36 | | | | | |
| | Garden Oty, Ks 67846 | Job Ticket: 53229 | DST#:2 | | | | | |
| | ATTN: Keith Reavis | Test Start: 2013.05.06 @ | 06:26:05 | | | | | |
| · · · · | | Consider a second to the contraction of the | | | | | | |
| GENERAL INFORMATION: | | | | | | | | |
| GENERAL INFORMATION: Formation: Chester Sand | | | | | | | | |
| GENERAL INFORMATION: Formation: Chester Sand Deviated: No Whipstock: | ft (KB) | Test Type: Conventiona | al Bottom Hole (Reset) | | | | | |
| GENERAL INFORMATION: Formation: Chester Sand Deviated: No Whipstock: Time Tool Opened: 08:47:30 | ft (KB) | Test Type: Conventiona Tester: Bradley Wa | al Bottom Hole (Reset) Iter | | | | | |
| GENERAL INFORMATION: Formation: Chester Sand Deviated: No Whipstock: Time Tool Opened: 08:47:30 Time Test Ended: 14:25:59 | ft (KB) | Test Type: Conventiona Tester: Bradley Wa Unit No: 53 | al Bottom Hole (Reset) Iter | | | | | |
| GENERAL INFORMATION: Formation: Chester Sand Deviated: No Whipstock: Time Tool Opened: 08:47:30 Time Test Ended: 14:25:59 Interval: 6034.00 ft (KB) To 6 | ft (KB) 132.00 ft (KB) (TV D) | Test Type: Conventiona Tester: Bradley Wa Unit No: 53 Reference Bevations: | al Bottom Hole (Reset) Iter 2943.00 ft (KB) | | | | | |
| GENERAL INFORMATION: Formation: Chester Sand Deviated: No Whipstock: Time Tool Opened: 08:47:30 Time Test Ended: 14:25:59 Interval: 6034.00 ft (KB) To 6 Total Depth: 6132.00 ft (KB) (T | ft (KB) 132.00 ft (KB) (TV D) VD) | Test Type: Conventiona Tester: Bradley Wa Unit No: 53 Reference Elevations: | al Bottom Hole (Reset) lter 2943.00 ft (KB) 2932.00 ft (CF) | | | | | |



Recovery from multiple tests





△ Chert White

OTHER SYMBOLS

| D | ST | |
|---|------|-----|
| | DST | Int |
| | DST | alt |
| | Core | ; |
| | 4 | : |

| II tail pipe | | | | |
|-------------------|---------------------------------------|----------|----------------------------------|---|
| | | | Drinted by GEOstrin V/C Strinles | - |
| Curve Track #1 | | | | TG, C1 - C5 |
| ROP (min/ft) | | | | Total Gas (units) |
| Gamma (API) | als | | | C1 (units) |
| | erv | | | |
| Cal (in) | <u>I</u> | <u> </u> | | |
| | oth | | | C3 (units) |
| | | itho | Geological Descriptions | C4 (units) |
| - | , , , , , , , , , , , , , , , , , , , | | | |
| | rval | | | |
| | Inte | | | |
| | ST | | | |
| 1:240 Imperial | | | | 1:240 Imperial Total Gas (units) 50 |
| 0 Samma (API) 150 | | | | C1 (units) 50 |
| 6 Cal (in) 16 | | | | $\begin{array}{c c} \hline C2 (units) \\ \hline C3 (units) \\ \hline \end{array}$ |
| | | | | C4 (units) 50 |
| 2 | | | | |
| | | | | |
| | 4020 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | 4040 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| N S I | | | | |
| | 1000 | | | |
| | 4060 | | | |
| | | | | |
| reset depth | | | | |
| | | | | |
| | | | | |
| | | | | |
| | 4080 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| \mathbb{R} | | | | |
| | 4100 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | 4120 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | 4140 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | Turbo Mud chk |
| | | | | @ 4197 ft. |
| | 1160 | | | 1120 hrs. 4/30/13 |
| | +100 | | | PV 17 YP 10 |
| | | | | WL 7.6 |
| | | | | pH 10.5 |
| | | | | CHL 1500 ppm |
| | | | | Sol 5.0 LCM 6# |
| | | | | DMC \$1762 |
| | 4180 | | | |
| | 1 | | | |



Heebner Shale 4186 -1243

shale, black carbonaceous

begin 10 ft wet and dry samples @ 4200'

limestone, white to light gray, fine grainy bioclastic, chalky, friable, poor visible porosity, no shows, some chalk, bright green mineral fluoresence

shale, gray to green, silty to micaceous, with scattered micaceous siltstone, limestones, gray to tan and cream, micro-cryptocrystalline, fossiliferous to pelletal and oolitic, mostly dense, no shows

as above, influx limestone, gray to brown, microcrystalline, fossiliferous, with large clasts

grades to mostly gray shale, silty, dense, limey, with limestone, dark







limestone, as above with limestone, light gray, microcrystalline, grainy fossilifeorus, chalky in part, abundant chalk, no shows

as above, with influx limestone, brown to gray, cryptocrystalline, dense recrystallized oolitic to fossiliferous, no shows

limestone, light gray, chalky weathered fossiliferous and light gray to tan fine oolitic to sub-oomoldic, some scattered mold porosity, no shows, no fluoresence

shale, mixed gray to green and brick red, some limey, with gray argillaceous gritty limestone, some mixed chalky fossiliferous limestones, no shows

shales as above with limestone, mixed cream to tan and gray, some mottled, microcrystalline, fossiliferous, some bioclastic and pelletal, some large clast and secondary calcite xtals

as above

F

F

L

C

F

ó

L

FL

F

6

C L

 \sim

1

C

F

_

1

С

Ø

— F

¢

F

F L

••

- 1

LF.

¢

F -

F

F

C ¢

F

F

F

1

F

C

F

F

լ Գ -

L

¢

F

C

F

Marmaton 4985 -2042

in 5110 sample, grades to limestone, cream to light gray, mostly cryptocrystalline, fossiliferous to lithographic, some oolitic, poor visible porosity, no shows, abundant chalk, marked decrease in shale from above

limestone, cream to tan, oomoldic to oolitic, some good intermold porosity, barren, light fluoresence, abundant chalk

limestone, cream to light gray, mostly cryptocrystalline, fossiliferous to lithographic, oolitic, poor visible porosity, no shows, abundant chalk

influx cream grainy bioclastic, poor visible porosity, with mixed fossiliferous to dense oolitic and chalky cryptocrystalline limestone, white to gray, no shows

limestone, cream, chalky oolitic to pelletal, some gray mottling, grainy in part, poor visible porosity, no shows, abundant chalk in samples

as above, flood chalk

limestones, white chalky fossiliferous: cream to gray cryptocrystalline, lithographic: gray bioclastic, dense, grainy, no visible porosity or shows, moderate chalk in samples



poor samples, very fine, cream to gray fossiliferous limestones

limestone, cream to light gray, microcrystalline, fossilifeorus, chalky, some secondary calcite xtals, no visible porosity or shows, abundant chalk

shale, black carbonaceous

limestone, cream to light gray, chalky weathered fossiliferous, limestone, gray to brown, microcrystalline, dense fossiliferous to oolitic, abundant chalk, black and gray shales, no shows

Cherokee 5204 -2261

grades to limestone, gray, microcrystalline, fossiliferous, mottled to grainy, dense to brittle/weathered, abundant black and gray shales, no shows

limestone, grading to dark gray to gray, dense cryptocrystalline, lithographic to argillaceous, increase in shales, black and gray, some dense and limey, no shows

as above

limestone, gray to cream, chalky pelletal, poor visible porosity, abundant chalk, no shows

limestone, gray to, crypto-microcrystalline, very fossiliferous to pelletal to flattened oolitic, very dense, with dark gray argillaceous limestones as above, dense black and gray shales as above, decrease in shales

limestone and shale as above, with influx limestone, light gray cryptocrystalline lithographic to fossiliferous, dense to chalky, no shows

limestone, dark gray to black, cryptocrystalline smooth lithographic to arenaceous/argillaceous, shale, black to gray, dense, limey, abundant light gray shale, limey to silty, brittle to soft, no shows

as above

as above

Turbo Mud chk _@ 5343 ft. _1230 hrs. 5/3/13 -Vis. 65 Wt. 9.0 -PV 22 YP 14 WL 7.6 Cake 2/32, pH 10.5 CHL 1500 ppm Ca 40 ppm Sol 5.0 LCM 5# DMC \$2871 CMC \$19499.00 Total Gas (units)

Total Gas (units)

C2 (units)

C3 (units)

C4 (units)

gas test

5

-5(





gray and black shales

in 5460 sample, limestone, brown to tan, cryptocrystalline, dense, lithographic to slightly fossiliferous,

Atokan 5444 -2501

black carbonaceous shale

limestone as above, with limestone, gray to dark gray, cryptocrystalline, dense, with small white calcite viens, no shows

shales as above, with limestone, gray to brown, micro-cryptocrystalline, fossilferous to arenacoues, dense, no shows







С



Total Gas (units)

C2 (units)

C3 (units) C4 (units)

5

-50



••

C

••

1

••

••

••

..

• F

സ

ιP. F ີ່

Ρ

L F

F

F

C

F

L

P

limestone, gray to light gray, mottled, pelletal, dense to chalky and friable, no porosity, no shows

shale, gray, soft silty to darker gray dense block

Morrow LS 5807 -2864

limestone, cream to gray, mottled in part, microcrystalline, fossilifeorus, large clasts, sandy, pyritic, glauconitic, dense, some secondary calcite, no shows, spotty light fluoresence

limestone as above, shale as above with: sandstone, dirty gray, fine to very fine grain, round to sub-angular, poorly sorted, some shale loaded, some limestone inclusions, slightly glauconitic to pyritic, well cemented, poor porosity, no shows, no fluoresence

gray and black dense to silty shales, some possible sand stringers of sandstone as above

limestone, gray, microcrystallne, microcrystalline, recrystallized fossiliferous, grainy, secondary calcite, dense, no shows

shale, gray to light gray, soft

Chester B 5918 -2975

a.a.

limestone, gray to tan mottled, microcrystalline, fossiliferous, some oolitic, large clasts, grainy, no shows

limestone, a.a. weathered to chalky, poor visible porosity, no shows

a.a. with light gray, limey shale, pyritic

limestone, cream, microcrystalline, chalky bioclastic, soft, poor visible porosty, no shows, found 1 cluster fine grain qtz sand, well rounded and sorted, barren, some rounded sand grains bottom of tray

grades to limestone, light gray, cryptocrystalline, firm shaley arenaceous to dense compact lithographic, some limestone a.a., very fine cuttings, abundant gray shale, some black carbonaceous, no shows



conglomerate? - gray and olive shales, trace olive and black shale loaded siltstone, dense green to jade calcareous shale?, conchoidal fracs, with similar green limestone, some cream to gray dense fossilferous limestones and some mixed dirty sandstones, some chalk

limestone, white to pale green, chalky, lithograhic, brittle, with abundant chalk, light gray argillaceous limestone, black and gray shales

limestone, gray, cryptocrystalline, compact smooth lithgraphic, with chalk and shales as above

starting 6090 sample, limestone, gray mottled, fossiliferous to pelletal, some large clasts and secondary calcite, limestone and shale as above, abundant pyrite, no shows

| 1 | | | | |
|---|------|--|--|--|
| | Tota | Gas (I | units) | 50 |
| | | 1 (unit 2 (unit 3 (unit 4 (unit | s) s) s) s) | 50 50 50 50 |
| |) | | | |
| | | | urbo M 6029 30 hrs s. 52 V V 20 YI | ud chk ft. . 5/5/13 Vt. 9.3 P 12 |
| | | | 'L 6.4 ake 2/3 H 9.5 HL 150 a 60 pp ol 7.0 L MC \$14 | 62, 00 ppm 0m .CM 6# 433 00 |
| | | C | MC \$2 [°] | 1784.00 |
| | | | | |
| | | | | |



| 6340 | as above, trace gray translucent cherts - no shows or fluoresence | |
|------|--|--|
| | as above with: flood light gray and some light green shales in 6360 sample, few scattered pieces light gray, microcrystalline dolomite, sub- sucrosic, dense, no show, good fluoresence limestone as above, very small fine samples, samples flooded with shales (sluff from above?) poor samples over all | |
| | TD @ 6380 ft 0625 hrs 5/8/13 Pioneer Log TD 6379 ft. Complete Logging Operations 1805 hrs 5/8/13 | |