CONFIDENTIAL KANSAS CORP. OIL & GAS CO

Title: Engineering Technician II

Date: 10/21/2010

Kansas Corporation Commission
Oil & Gas Conservation Division

ORIGINAL

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

10/25/17

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

| 34269 | API No. 15 - 119-21270-00-00 |
|---|---|
| OPERATOR: License # 34269 Apache Corporation | |
| Name. | Spot Description:NE_SW Sec. 20 Twp. 34 S. R. 27 ☐ East ✓ West |
| Address 1: 6120 S. Yale Ave., Ste. 1500 | _ · · · |
| Address 2: | 1,980 Feet from North / ✓ South Line of Section |
| City: Tulsa State: OK Zip: 74136 + 4224 | |
| Contact Person: Amanda Pickney | Footages Calculated from Nearest Outside Section Corner: |
| Phone: (918) 491-4852 KCC | □NE □NW □SE ☑SW |
| CONTRACTOR: License # 34000 | County: Meade |
| | Lease Name: O'Brien Well #: 1-20 |
| Wellsite Geologist: CONFIDENTIAL | Field Name: Johan |
| Purchaser: Oil-NCRA Gas-DCP | Producing Formation: Cherokee |
| Designate Type of Completion: | Elevation: Ground: 2,283 Kelly Bushing: 2,295 |
| ✓ New Well Re-Entry Workover | Total Depth: 5,825 Plug Back Total Depth: 5,825 |
| ☑ Oil WSW SWD SIOW | Amount of Surface Pipe Set and Cemented at: 1,600 Feet |
| ☐ Gas ☐ D&A ☐ ENHR ☐ SIGW | Multiple Stage Cementing Collar Used? 🔲 Yes 🕢 No |
| ☐ OG ☐ GSW ☐ Temp. Abd. | If yes, show depth set: N/A Feet |
| CM (Coal Bed Methane) | If Alternate II completion, cement circulated from: |
| Cathodic Other (Core, Expl., etc.): | feet depth to:w/sx cmt. |
| If Workover/Re-entry: Old Well Info as follows: | |
| Operator: | Drilling Fluid Management Plan |
| Well Name: | (Data must be collected from the Reserve Pit) |
| Original Comp. Date: Original Total Depth: | Chloride content: < 10,000 ppm Fluid volume: 480 bbls |
| ☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD | Dewatering method used: Hauled off |
| Conv. to GSW | |
| Plug Back: Plug Back Total Depth | Location of fluid disposal if hauled offsite: |
| Commingled Permit #: | Operator Name: General Inc. |
| ☐ Dual Completion Permit #: | Lease Name: NW #2 License #: 23084 |
| ENHR Permit #: | Quarter SE Sec. 24 Twp. 26N S. R. 26 East / West |
| GSW Permit #: | County: Harper, OK Permit #: 059-21237 |
| 8-15-10 8-27-10 9-29-10 | |
| Spud Date or Date Reached TD Completion Date or Recompletion Date | |
| INSTRUCTIONS: An original and two copies of this form shall be filed with Kansas 67202, within 120 days of the spud date, recompletion, workover or cope side two of this form will be held confidential for a period of 12 months if requirality in excess of 12 months). One copy of all wireline logs and geologist we BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 for | onversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information uested in writing and submitted with the form (see rule 82-3-107 for confiden- Ill report shall be attached with this form. ALL CEMENTING TICKETS MUST m with all temporarily abandoned wells. |
| AFFIDAVIT | KCC Office Use ONLY |
| I am the affiant and I hereby certify that all requirements of the statutes, rules and r lations promulgated to regulate the oil and gas industry have been fully complied and the statements herein are complete and correct to the best of my knowledge | with Letter of Confidentiality Received |

✓ Wireline Log Received☐ Geologist Report Received

UIC Distribution

Side Two

KCC 0CT 2 5 2010

| perator Name: Apac | he Corporation | | Lease N | lame: _ | O'Brien | | Well #:1-2 | 20 |
|---|---|--|--------------------------------|------------|--------------------|--|-----------------|-------------------------------|
| ес. <u>20</u> тwp. <u>34</u> | s. R. <u>27</u> | ☐ East 🗸 West | County: | Mead | de | | | CONFIDEN |
| me tool open and close | ed, flowing and shu if gas to surface to | nd base of formations p ut-in pressures, whethe est, along with final cha I well site report. | r shut-in press | ure rea | ched static level, | hydrostatic press | ures, bottom | hole temperature, fluid |
| rill Stem Tests Taken (Attach Additional Sh | eets) | ☐ Yes 📝 No | | √ L | og Formatio | n (Top), Depth and | d Datum | Sample |
| amples Sent to Geolog | | ☐ Yes 🔽 No | | Nam | | | Top | Datum -2,053 |
| ores Taken | giodi Cdi 10) | ☐ Yes ☑ No | | | Heebner | | 4,378 5,147 | -2,053 -2,852 |
| lectric Log Run | | ✓ Yes ✓ No | | Oswe | | | 5,630 | -3,335 |
| lectric Log Submitted I (If no, Submit Copy) | Electronically | Yes 🕡 No | | 13 Fin | | | 5,735 | -3,440 |
| ist All E. Logs Run: Microlog, DIL G | R, Neutron I | Density | ļ | | | | | |
| | | CASIN Report all strings so | iG RECORD et-conductor, sur | ✓ Ne | _ | ion, etc. | | |
| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weig Lbs./ | | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
| Surface | 12-1/4" | 8-5/8" | 32 & 24# | : | 1,600' | Stand A & PP | 655 | .5 lbm polyflake + 3% CC |
| Production | 7-7/8" | 5-1/2" | 17 & 23# | | 5,825' | 50/50 POZ, | 690 | 3 lbm Kolseal + 5% Calseal |
| | | | | | | Extend & CI H | | + .6% Halad + .125 polyflake |
| | | ADDITION | AL CEMENTIN | IG / SQL | JEEZE RECORD | | | |
| Purpose: Perforate Protect Casing Plug Back TD Plug Off Zone | Depth Top Bottom | Type of Cement | # Sacks | Used | | Type and P | ercent Additive | S |
| Shots Per Foot | | ION RECORD - Bridge P Footage of Each Interval F | | | | acture, Shot, Cement mount and Kind of Ma | | ord Depth |
| 4 | 5,638'-5,643' | | | | 19,650 gal 2 | 2% KCI Slickwate | er, 20,000 g | al 20% 5,638' |
| | | | | | gelled acid a | % 507,900 SCF 1 | Nitrogen | |
| | | 1 | | | | | | |
| | | | . | | | | | RECEIVED |
| TUBING RECORD: 2- | Size: 7/8" | Set At: 5,658' | Packer At | : | Liner Run: | Yes ✓ No | | OCT 2 7 2010 |
| Date of First, Resumed P 09/28/2010 | roduction, SWD or EN | NHR. Producing M | lethod: Pumping | g [| Gas Lift (| Other (Explain) | K | CC WICHITA |
| Estimated Production Per 24 Hours | 0il 33 | Bbis. Gas | Mcf | Wat | er B | | as-Oil Ratio | Gravity 40.80 |
| DISPOSITION Vented Sold (If vented, Subm | Used on Lease | Open Hole | METHOD OF ✓ Perf. | | y Comp. 🔲 Co | mmingled 5, | PRODUCT: | ON INTERVAL: |

Summit Version: 7.20.130

KCC 0CT 2 5 2010

Cementing Job Summary

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| | | VAVA () () () () () () () () () (| | | | | CONTRACTOR OF THE PARTY OF THE | and Acc | ********** | rice | | | | | | | and burns |
|--------------|---------|--|--------------------------------|--------------|----------|------------------------------------|---|-----------|------------|------------|------------------------|------|-----------------|---------------------|-----------------|--------------------|-------------|
| Ту | | Size | Qty | Make | Depth | Туре | Size | Qty | Mak | | epth | | Туре | Size | Qt | y Ma | ake |
| Guide | | | | - | | Packer | | | | | | op F | n Plug | | | | |
| Float 9 | | | | | | Bridge Plug Retainer | | | | | | | plug set | - | | | |
| Insert | | | | | | Retaille | | | | | | | Container | • | | | |
| Stage | | | | | | | | | | | | | alizers | | ** | | |
| | | | | | | | liscell | aneous | Mate | rials | | | | | | | |
| Gellin | a Aat | | Utmassverey) | Со | nc | Surfac | 2-33 14 1M3M1 VIMI 40 60 60 6 | | | Conc | 7 | \cid | Type | (| Qty | Conc | % |
| | nent Fl | ld | 1 - | Co | nc | Inhibit | or | | (| Conc | S | Sand | Туре | , | Size | Qty | |
| | | | Trice. | | | | | Fluid Da | ita | | | | | | | | |
| S | tage/P | lug# | 1 | | | arantus a | | | | | | | | | | | |
| Fluid # | | ige Tyj | | | FI | uid Name | | Qt | у | Qty uom | Mixid Dens Ibm/g | ity | Yield ft3/sk | Mix Fluid Gal/sk | Rate bbl/min | Total I Fluid G | |
| 1 | Wate | r Spac | or | . + 5 18 (| | 4 (4 m) (4 m) nn (m) (m) (44 (4 c) | : | 20.0 | 00 | bbl | 8.3 | | .0 | .0 | .0 | | ****** |
| 2 | | rflush | | | | · · · | | 20.0 | | bbl | 9.3 | _ | .0 | .0 | .0 | | |
| | 68 lbr | | | HALLIBI | JRTON S | SUPER FLUS | H (1000 | | | | 1 | | | | | l | |
| 3 | | r Spac | er | | | | , , | 20.0 | 00 | bbl | 8.3 | 3 | .0 | .0 | .0 | | |
| 4 | | | | POZ PR | EMIUM : | 50/50 - SBM (| 12302) | 350 | _ | sacks | 14.3 | | 1.43 | 5.79 | | 5.79 | |
| | 5.792 | | | FRESH | | | | · | | | • | • | | | | | |
| | 0.6 | | | HALAD(| R)-322, | 50 LB (100003 | 646) | | | | | | | | | | |
| | 3 lk | om | | KOL-SE | AL, BUL | K (100064233 |) | | | | | | | | | | |
| • | 5 ' | % | | CAL-SE | AL 60, B | ULK (1000640 |)22) | | | • | | | | | | | |
| | 10 | % | | SALT, 1 | 00 LB BA | AG (10000365 | 2) | | | | | | | | | | |
| 5 | Mud | | · | | | | | 134. | .00 | bbl | 9. | | | , | .0 | | |
| | | cemer | INVESTIGATION OF THE PROPERTY. | | | | | | | | | | | | | | |
| ************ | ***** | 'lug# | ******* | | | (7) Section and Co. | | | | | | | | | | | |
| Fluid # | Sta | ige Ty _l | pe | | FI | uid Name | | Qt | У | Qty uom | Mixii Dens uor | ity | Yield uom | Mix Fluid uom | Rate uom | Total I Fluid u | |
| 1 | | r Spac | | | | | | 20.0 | | bbl | 8.3 | _ | .0 | .0 | .0 | | |
| 2 | | er Flus | h | | | | | 20.0 | 00 | bbl | 9.3 | | .0 | .0 | .0 | | |
| | 68 lbr | | | HALLIB | URTON : | SUPER FLUS | H (1000 | | | | | | | | , | T | |
| 3 | | r Spac | | | | | | 20.0 | | bbl | 8.3 | _ | .0 | .0 | .0 | | |
| 4 | | Ceme | nt | | | (TM) SYSTEN | (45298 | 31) 240 | 0.0 | sacks | 11.3 | 2 | 3.07 | 18.29 | | 18.2 | 9 |
| | 0.125 | | | | | (101216940) | | | | | | | | | | | |
| | 18.29 | | 4 | | WATER | | | n=) 455 | | | 1 40 | . 1 | 4.67 | 4 40 | | | |
| 5 | | Cemen | t | | | CEMENT (10 | | | | sacks | | | 1.07 | 4.43 | | 4.43 | <u> </u> |
| | 94 | | | | | 1 - CLASS H F | | ITPE V, | , BUL | N (100 | WU308/ |) | • | | • | | |
| | | % 5 lbm | | | | ACK (101619 (101216940) | 144) | | | | | | | | | | |
| | | Gal | | | WATER | | | | | | | | | | | | |
| | 4.420 | Joai | | 1-VEOU | VVAICK | | | | | | | | | | | | |

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7.20.130

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Cementing Job Summary

| | age/Plug i | *************************************** | | | | | | | | | | - | | |
|-----------------------|---------------------|---|-----------|----------------|-----------|---------|------------|------------|------------------------------|-----------------|---------------------|-------------------|---------------------------|--|
| Fluid Stage Type # | | ype | | Fluid | lame | | Qty | Qty uom | Mixing Density Ibm/gal | Yield ft3/sk | Mix Fluid Gal/sk | d Rate bbl/min | Total Mix Fluid Gal/sk | |
| 6 | Water Displaceme | ent | | | | | 89.00 | bbl | 8.33 | .0 | .0 | .0 | | |
| C | alculated \ | /alues | BLOSS III | Pressu | res | and a | | | V | olumes | | | | |
| Displa | cement | | Sh | ut In: Instant | | Lost R | eturns | | Cement S | lurry | | Pad | | |
| | f Cement | | 5 N | lin | | Cemen | t Returns | 3 | Actual Di | splaceme | ent | Treatn | nent | |
| | radient | | 15 Min | | | Spacers | | | Load and | Breakdo | wn | Total Job | | |
| | | | | | | F | lates | | | | | | | |
| Circu | lating | 0.0000000000000000000000000000000000000 | | Mixing | | | Displac | cement | | | Avg. Jo | ob | | |
| | ent Left In | Pipe | Amour | t 50 ft Re | ason Shoe | Joint | • | 1.4.1 | | | | | | |
| Frac | Ring # 1 @ | T | ID D | Frac ring # | 2@ | D C | Frac Rin | ıg # 3 @ | 10 | וֹ כ | rac Ring | #4@ | ID | |
| | | | Stated | l Herein Is | | Custor | ner Repres | entative S | Signature | | | | | |

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OCT 2 7 2010

KCC WICHITA

Wednesday, September 15, 2010 15:31:00

KCC OCT 2 5 2010

HALLIBURTON

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Cementing Job Summary

The Road to Excellence Starts with Safety Quote #: Sales Order #: 7592191 **Ship To #:** 2801099 Sold To #: 300496 Customer Rep: Hudson, Jim **Customer: APACHE CORP** API/UWI #: Well #: 1-20 Well Name: O'Brien City (SAP): MEADE County/Parish: Meade State: Kansas Field: Legal Description: Section 13 Township 34S Range 27W Rig/Platform Name/Num: 58 Contractor: Kenai Job Purpose: Cement Multiple Stages Well Type: Development Well Job Type: Cement Multiple Stages Sales Person: MEREDITH, JERRY Srvc Supervisor: WILTSHIRE, MBU ID Emp #: 195811 MERSHEK Job Personnel Exp Hrs Exp Hrs HES Emp Name Exp Hrs Emp# **HES Emp Name** Emp# **HES Emp Name** Emp# LOPEZ, JUAN R 198514 TORRES, CLEMENTE 10 344233 10 BERUMEN. 10 267804 **EDUARDO** 10 WILTSHIRE. 195811 MERSHEK Tonje Equipment HES Unit# Distance-1 way **HES Unit #** Distance-1 way HES Unit # Distance-1 way HES Unit# Distance-1 way **Job Hours** On Location Operating Date On Location Operating Date On Location Operating Date Hours Hours Hours Hours Hours Hours Total is the sum of each column separately TOTAL Job Job Times Time Zone Date Time Formation Name 26 - Aug - 2010 09:00 CST Bottom Called Out Formation Depth (MD) Top 26 - Aug - 2010 13:00 CST 130 degF BHST On Location Form Type 26 - Aug - 2010 CST 15:09 Job Depth TVD Job depth MD 5825. ft 5825. ft Job Started 26 - Aug - 2010 21:40 CST Water Depth Wk Ht Above Floor Job Completed CST Perforation Depth (MD) From То Departed Loc 26 - Aug - 2010 23:00 Well Data Top MD Bottom ID Weight Thread Grade **Bottom** Description New / Max Size qoT MD TVD Used lbm/ft ft TVD pressure in in ft ft ft psig 7-7/8" Production 7.875 1600. 5850. Open Hole Multiple Stage 3850. Cementer 5825. 5-1/2" 17 ppf New 5.5 4.892 17. 8 RD (LT&C) J-55 Production Casing J-55 8.625 24. 8 RD (ST&C) 1600. 8-5/8" Surface New 8.097 Casing Sales/Rental/3rd Party (HES) Qty | Qty uom Depth Supplier Description SHOE FLOAT, 5 1/2 8RD, 2 3/4 SUPER SEAL EΑ 1 CLR,FLOAT,5 1/2 LG 8RD,14-23#/FT,2 3/4 1 EΑ 10 RECEIVED CTRZR ASSY,5 1/2 CSG X 7 7/8 HOLE, HINGED EΑ CLAMP - LIMIT - 5-1/2 - HINGED -2 EΑ

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Summit Version:

BSKT,CEM,5 1/2 CSG X 7 7/8,8 3/4 H

7.20.130

KCC OCT 2 5 2010 CONFIDENTIAL

Cementing Job Log

The Road to Excellence Starts with Safety

| Sold To #: 300496 | Ship To #: 280109 | 9 Quote #: | Sales Order #: 7592191 |
|-------------------------------|--------------------------|----------------------------|------------------------|
| Customer: APACHE CORP | | Customer Rep: I | Hudson, Jim |
| Well Name: O'Brien | V | Vell #: 1-20 | API/UWI #: |
| Field: Cir | ty (SAP): MEADE | County/Parish: Meade | State: Kansas |
| Legal Description: Section 1: | 3 Township 34S Rar | nge 27W | |
| Lat: | | Long: | |
| Contractor: Kenai | Rig/Plati | form Name/Num: 58 | - 1/807 W |
| Job Purpose: Cement Multipl | e Stages | | Ticket Amount: |
| Well Type: Development Wel | Job Typ | e: Cement Multiple Stages | |
| Sales Person: MEREDITH, J | ERRY Srvc Suj MERSHE | pervisor: WILTSHIRE, EK | MBU ID Emp #: 195811 |

| | IVIENS | 11517 | | | | <u>, luu</u> | | |
|------------------------------|--|-------|---------------------|-------|------------|--------------|-------------|------------------------------------|
| Activity Description | Date/Time | Cht | Rate bbl/ min | | ume ibi | | sure sig | Comments |
| | Erithesu upubbatinesi K Erita dilah di Lebah di | # | | Stage | Total | Tubing | Casing | |
| Call Out | 08/26/2010 14:33 | | | | | | | |
| Arrive At Loc | 08/26/2010 14:33 | | | | | | | |
| Pre-Job Safety Meeting | 08/26/2010 14:33 | | | | 1 | | | |
| Start Job | 08/26/2010 15:09 | | | | | | | 5825' MULTIPLE STAGE, 1st STAGE |
| Test Lines | 08/26/2010 15:09 | | | | | | 4000. 0 | |
| Pump Spacer 1 | 08/26/2010 15:11 | | 6 | 20 | | | 350.0 | WATER |
| Pump Spacer 2 | 08/26/2010 15:15 | | 6 | 20 | | | 350.0 | SUPERFLUSH |
| Pump Spacer 1 | 08/26/2010 15:20 | | 6.5 | 20 | | | 350.0 | WATER |
| Pump Cement | 08/26/2010 15:23 | | 6.5 | 89 | | | 350.0 | 350 SKS 50/50 POZ @ 14.2# |
| Drop Top Plug | 08/26/2010 15:41 | | 6 | | 89 | | 130.0 | END CEMENT |
| Clean Lines | 08/26/2010 15:41 | | | | | | | |
| Pump Displacement | 08/26/2010 15:46 | | 6.5 | 134 | | | 80.0 | 50 BBLS WATER/// 84 BBLS MUD |
| Other | 08/26/2010 16:11 | | | | | | 1400. 0 | PRESSURE BEFORE LANDING PLUG |
| Bump Plug | 08/26/2010 16:11 | | 2 | | 134 | | 3000. 0 | FLOAT HELD |
| Drop Plug | 08/26/2010 16:14 | | | | RECE | VED | | FREE FALL PLUG |
| Open Multiple Stage Cementer | 08/26/2010 16:38 | | | | OCT 2 | 2010 | 1300. 0 | CIRCULATE WITH RIG FOR 4 HOURS |
| Start Job | 08/26/2010 20:33 | | | K | CC WI | CHITA | | DV TOOL @ 3825' 2nd STAGE |

Sold To #: 300496 Ship To #:2801099 Quote #: Sales Order #: 7592191

SUMMIT Version: 7.20.130 Wednesday, September 15, 2010 03:31:00

CONFIDENTIAL

Cementing Job Log

| Activity Description | Date/Time | Cht | Rate bbl/ min | | ume bl | Pres ps | sure ilg | Comments | | |
|-------------------------------|---------------------|-----|---------------------|-------|-----------|------------|-------------|-------------------------------|--|--|
| | | # | | Stage | Total | Tubing | Casing | | | |
| Pump Spacer 1 | 08/26/2010 20:33 | | 5 | 20 | | | 130.0 | WATER | | |
| Pump Spacer 2 | 08/26/2010 20:38 | | 5 | 20 | | | 130.0 | SUPERFLUSH | | |
| Pump Spacer 1 | 08/26/2010 20:43 | | 5 | 20 | | | 130.0 | WATER | | |
| Pump Lead Cement | 08/26/2010 20:47 | | 5 | 131 | | | 150.0 | 240 SKS EXTENDACEM @ 11.2# | | |
| Pump Tail Cement | 08/26/2010 21:10 | | 5.5 | 19 | | | 100.0 | 100 SKS CLASS H @ 16.4# | | |
| Drop Top Plug | 08/26/2010 21:14 | | 5 | | 150 | | 190.0 | END CEMENT | | |
| Pump Displacement | 08/26/2010 21:16 | | 5.5 | 89 | | | 80.0 | WATER | | |
| Other | 08/26/2010 21:30 | | 2 | 69 | | | 600.0 | SLOW RATE | | |
| Other | 08/26/2010 21:37 | | | | | | 900.0 | PRESSURE BEFORE LANDING PLUG | | |
| Bump Plug | 08/26/2010 21:37 | | 2 | | 89 | | 2400. 0 | FLOAT HELD | | |
| Close Multiple Stage Cementer | 08/26/2010 21:38 | | | | | | | | | |
| End Job | 08/26/2010 21:40 | | | | | | | | | |

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Sold To #: 300496

Ship To #:2801099

Quote #:

Sales Order # :

7592191

SUMMIT Version: 7.20.130

Wednesday, September 15, 2010 03:31:00

KCC 0CT 2 5 2010

HALLIBURTON

CONFIDENTIAL Cementing Job Summary

| | | | | | Th | ie Ro | ad to | Exc | ellen | ce S | tarts | with | Safe | ty | | | | | | | | |
|-------------------------|----------|---|--|---------------|----------|-------------------|---|----------|-----------------|-------------------|------------------------|--------|-------------|-----------|--------------|--------|----------|----------------|------|--------------|----------------------|----------|
| Sold To # : 3 | 00496 | 6 | | Ship | To | #: 28 | 0109 | 9 | | Qu | ote# | : | | _ | | S | ales (| Orde | г#: | 75683 | 25 | |
| Customer: A | | | ORP | | | | | | | Cu | stom | er R | ep: B | one, | Mr. C | Henn | | | | | | |
| Well Name: | O'Brie | en | | | | | We | :II #: | 1-20 | • | | | | | AP | /UW | l #: | | | | | |
| Field: | | | Ci | ty (SA | \P): N | MEAD | E | | Cour | ity/Pa | arish: | Mea | ıde | | | S | tate: | Kans | as | | | |
| Legal Descr | iptio | n: Sec | | | | | | | | | | | | | | | | | | | | |
| Contractor: | | | | | | | | | | e/Nu | m: 5 | 8 | | | | | | | | | | |
| Job Purpos | | | Surfac | e Cas | sina | 1 | | | | | | | | | | | | • | | | | |
| Well Type: [| | | | | 55 | lob | Type | : Ce | men | t Surf | ace C | asin | a | | | | | | | | | |
| Sales Perso | | | | | , | | | | | | <u>соо о</u> ГН, Во | | | М | BU II |) Em | p #: | 1060 | 36 | | | |
| Sales Feiso | 11. IVI | LINED | 1111, 0 | | r | 0110 | , our | | | | nnel | | • | | | | , | | | | | |
| HES Emp | Nam | <u>α</u> F | Exp Hr | s Fn | 1p# | Т і | HES E | | | | Ехр Н | rs | Emp# | - | HE | S Em | p Nan | ne | Ex | p Hrs | Em | o # |
| LOPEZ, JUA | | | 8 | | 514 | | RTILLO | | | | 4.5 | _ | 57847 | | | | BY W | | 8 | - + | 1060 | |
| TORRES, | | | 4.5 | | 233 | + | | | | | | | | + | | · | | | + | | | |
| CLEMENTE | | | 7.0 | 577 | 200 | | | | | | | | | | | | | | | | | |
| | | | | _ | | | *** | | Equ | uipm | ent | | | | | | | | | | | |
| HES Unit # | Dist | tance-1 | l way | HES | Unit | # C | Distar | ice-1 | way | Н | ES Ur | nit# | Dis | tance | -1 wa | ıy | HES L | Jnit# |] [| Distand | e-1 v | vay |
| 10240245 | 45 n | nile | | 1024 | 3558 | 45 | mile | | | 10 | 24414 | ·8 | 45 1 | nile | | 1 | 02867 | 731 | 4 | 5 mile | | |
| 10714253C | 45 n | nile | | 1094 | 9718 | 45 | 5 mile | | | 10 | 99444 | 9 | 45 1 | nile | | | | | | | | |
| | <u> </u> | | | | | <u> </u> | | | Jol | o Hou | urs | | | | | 1 | | | _ | | | |
| Date | On I | Locatio | on C | perat | ina | Da | ate | (| | catio | | Dera | ating | " | Da | e | On | Loca | tion | Or | erati | na |
| Date | 1 | lours | ` ` | Hour | | - | | | | ours | | | urs | | | _ | 1 | Hour | | | Hours | _ |
| | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | Tota | al is the | sun | ı of ea | ch co | lumn | sepai | rately | ····· | | | | |
| | | 100 (50 (00 (00 (00 (00 (00 (00 (00 (00 (| | Jol |) | | | | | | | - E | | | | Job | Time | 98 | | | unit e | i Gr |
| Formation Na | ıme | | | | | | | | | | | | | | | Date | | | me | Tir | ne Zo | ne |
| Formation De | epth (f | VID) T | ор | | | | Botto | m | , | | | lled (| | | | Aug - | | _ | :00 | _ | CST | |
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| Open Hole | | | | | | | | | | | | | | | | | | | | | | |
| 20" Pre-Set | | New | | | 20. | 19. | 124 | 94. | | | | | | | | | . | 60 | . | | | |
| Conductor | | Manu | | - | 0 625 | - 0.0 | 97 | 24. | _ | | RD (S | TR C\ | | J-(| 56 | | | 160 | | | | |
| 8-5/8" Surfac Casing | e | New | 1 | | 8.625 | ۰.۰ | 97 | 24. | | 0 | אט (ס | rac) | | J-; | 00 | | • | 100 | U. | | | |
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| PLUG,CMTG, | | | | | | | | | | | | | | 1 | | Α | | | | | | |
| | - 1 | - 111 | | | | representation of | | Took | s an | d Acr | esso: | ries | | GERT CERT | <u> </u> | | L | | | | | |
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| Guide Shoe | J125 | ~., | man | | | acker | | 3,2 | | ~· <i>y</i> | 1.3161 | - | - 00 111 | | Plug | | <u>-</u> | | | y = L | | |
| Float Shoe | | | | + | | ridge | | <u> </u> | _ | | <u> </u> | + | | | tom F | | | | CT | 277 | 010 | |
| Float Collar | | | | + ···· | | letaine | | | | | | + | | | plug | | | | Ţ: | <u> </u> | VIV. | |
| Insert Float | | <u> </u> | | | | | | | | | 1 | \top | | | | taine | r | KC | C1 | WICH- | J) T ^ | |
| Stage Tool | - | | | 1 | | | | | | | | | | | traliz | | | - 1 | Y 1 | | III 1 / | |
| | | | | | | | ħ | Aisce | llan | eous | Mate | rials | | | Griffia da | | | Michiga | | | | |
| Gelling Agt | | | C | onc | | s | urfac | | | | | onc | *********** | Aci | d Typ | е | | Q | ty | | Conc | 9 |
| Treatment Flo | d | | С | onc | | li | nhibit | or | | | | onc | | Sar | id Ty | ре | | | ize | | Qty | 1 |

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Wednesday, September 15, 2010 15:30:00

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HALLIBURTON

CONFIDENTIAL

Cementing Job Summary

| | | | | luid Data | | | | pater character pater | gaegwalia (1) an j | entraŭa de estrado |
|------------|---------------------|----------------------------------|------------------|--------------|------------|------------------------------|-----------------|-----------------------|--------------------|---------------------------|
| Si | age/Plug #: 1 | | | | and and | | | | | |
| Fluid # | Stage Type | Fluid N | lame | Qty | Qty uom | Mixing Density Ibm/gal | Yield ft3/sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
| 1 | Lead Cement | MIDCON-2 CEMENT (15078) | STANDARD - SE | 3M 450.0 | sacks | 11.4 | 2.95 | 18.09 | 8.0 | 18.09 |
| • | 3 % | CALCIUM CHLORIDE | - HI TEST PELL | ET (1000050 | 053) | | | • | | |
| | 0.5 lbm | POLY-E-FLAKE (101: | 216940) | | | | | | | |
| | 0.01 % | WG-17, 50 LB SK (10 | 0003623) | | | | | | | |
| | 18.09 Gal | FRESH WATER | | | | | | • | | |
| 2 | Tail Cement | CMT - PREMIUM PLI (100012205) | JS CEMENT | 205.0 | sacks | 14.8 | 1.34 | 6.28 | 6.0 | 6.28 |
| | 94 lbm | CMT - STANDARD - 0 | CLASS A REG O | R TYPE I, BU | JLK (100 | 003684) | | <u> </u> | | |
| | 2 % | CALCIUM CHLORIDE | E - HI TEST PELL | ET (1000050 | 053) | | | | | |
| | 0.5 lbm | POLY-E-FLAKE (101) | 216940) | | | | | | | |
| | 6.283 Gal | FRESH WATER | | | | | | | | |
| 3 | Mud Displacement | | | 99.00 | bbl | 9.2 | .0 | .0 | 8.0 | |
| iiii G | ilculated Values | ressu | res | | | in in the N | olumes | | | eksi sida |
| Displa | cement | Shut In: Instant | Lost | Returns | | Cement S | lurry | | Pad | |
| Top Of | Cement | 5 Min | Cem | ent Returns | 90 | Actual Di | isplacem | ent | Treatm | ent |
| Frac G | radient | 15 Min | Spa | cers | | Load and | Breakdo | wn | Total J | ob |
| | | | | Rates | | | | | 2018/20149 | marging a |
| | lating | Mixing | | | cement | | | Avg. J | ob | |
| | ent Left In Pipe | Amount 43.19 ft Re | | | | | | | | |
| | Ring # 1 @ | ID Frac ring # 2 | 2.@0i inDl | Frac Rin | na # 3 @ | | ol I | Frac Ring | # 4 @ [| I ID I |

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