FORM MUST BE TYPED

SIDE ONE

ORIGINAL

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

CONFIDENTIAL

Operator: License # 32334

Name: Chesapeake Operating, Inc.

Address P. O. Box 18496

City/State/Zip Okla. City, OK 73154-0496

Purchaser:

Operator Contact Person: Jim Gowens/Barbara Bale

Phone (405) 848-8000

Contractor: Name: Murfin Drl. #22

License: 30606

Wellsite Geologist: Hickman

Designate Type of Completion
X New Well ____ Re-Entry ____ Workover

____ Oil ____ SWD ____ SIOW ____ Temp. Abd.
X Gas ____ ENHR ____ SIGW
____ Dry ____ Other (Core, WSW, Expl., Cathodic, etc)

If Workover:

Operator:

Well Name:

Comp. Date ____ Old Total Depth ____

____ Deepening ____ Re-perf. ____ Conv. to Inj/SWD
____ Plug Back ____ PBTD
____ Commingled Docket No. ____
____ Dual Completion Docket No. ____
____ Other (SWD or Inj?) Docket No. ____

06/21/99 Spud Date
06/29/99 Date Reached TD
07/31/99 Completion Date

API NO. 15- 025-21185-00-00

County Clark

W/2 - SE - SE Sec. 17 Twp. 35 Rge. 25 E X W

660 Feet from S N (circle one) Line of Section

990 Feet from E W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, SE, NW or SW (circle one)

Lease Name THEIS Well # 4-17

Field Name McKinney

Producing Formation Morrow/Chester

Elevation: Ground 2067' KB 2078'

Total Depth 6150' PBTD

Amount of Surface Pipe Set and Cemented at 775 Feet

Multiple Stage Cementing Collar Used? ____ Yes X No

If yes, show depth set NA Feet

If Alternate II completion, cement circulated from ____

feet depth to ____ w/ ____ sx cmt.

Drilling Fluid Management Plan ALT 1 JH 1-23-01
(Data must be collected from the Reserve Pit)

Chloride content ____ ppm Fluid volume ____ bbls

Dewatering method used

Location of fluid disposal if hauled offsite:

Operator Name

Lease Name License No.

____ Quarter Sec. ____ Twp. ____ S Rng. ____ E/W

County ____ Docket No. ____

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10-12-99
OCT 12 1999
CONSERVATION DIVISION
WICHITA, KS

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.

Signature Barbara Bale Barbara Bale

Title Regulatory Analyst Date 10/07/99

Subscribed and sworn to before me this 7th day of October, 19 99.

Notary Public Barry R Anderson

Date Commission Expires 08-24-2000

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APR 20 2001

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K.C.C. OFFICE USE ONLY
F V Letter of Confidentiality Attached
C V Wireline Log Received
C V Geologist Report Received (MUD LOG)

Distribution
____ KCC ____ SWD/Rep ____ NGPA
____ KGS ____ Plug ____ Other (Specify)

Form ACO-1 (7-91)

X

SIDE TWO

Operator Name Chesapeake Operating, Inc. Lease Name THEIS Well # 4-17

Sec. 17 Twp. 35S Rge. 25W ☐ East ☒ West County Clark

CONFIDENTIAL

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem 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 during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.) ☐ Yes ☒ No

Samples Sent to Geological Survey ☐ Yes ☒ No

Cores Taken ☐ Yes ☒ No

Electric Log Run (Submit Copy.) ☒ Yes ☐ No

List All E.Logs Run:
REEVES DIS, CNS/PDS/MLS

☒ Log Formation (Top), Depth and Datums ☐ Sample

| Name | Top | Datum |
|---|---|---|
| Heebner Shale | 4424 | -2346 |
| Lansing | 4602 | -2524 |
| Stark Shale | 5178 | -3100 |
| Marmaton | 5310 | -3232 |
| Cherokee Shale | 5503 | -3425 |
| Atoka | 5690 | -3612 |
| Morrow Shale | 5819 | -3741 |
| Chester | 5874 | -3796 |

CASING RECORD ☒ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, 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 |
|---|---|---|---|---|---|---|---|
| Surface | 12-1/4 | 8-5/8" | 24# | 775' | (35/65)poz Cl. C | 'C' 360 135 | |
| Production | 7-7/8 | 4-1/2" | 11.6# | 6150' | Cl. H | 360 | |
| | | | | | | | |

ADDITIONAL CEMENTING/SQUEEZE RECORD

| Purpose: | Depth Top | Bottom | Type of Cement | #Sacks Used | Type and Percent Additives |
|---|---|---|---|---|---|
| ___ Perforate | | | | | |
| ___ 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, Cement Squeeze Record (Amount and Kind of Material Used) | Depth |
|---|---|---|---|
| 2 | 5973-75'; 5968-75'; 5968-71' | 1000 gal 15% HCL, 250 bbl slick wtr | |
| 2 | 5935-51' | Frac: 3000 gal 15% HCL, 21,980# 20/40 Ottawa Sand | |
| 2 | 5866-71' | Frac: 34,300# Sand + 582 bbl gelled wtr | |
| | | | |

| TUBING RECORD | Size | Set At | Packer At | Liner Run |
|---|---|---|---|---|
| | 2-3/8" | 5823' | NA | ☐ Yes ☒ No |

| Date of First, Resumed Production, SWD or Inj. | Producing Method |
|---|---|
| 07/29/99 | ☒ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain) |

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|---|---|---|---|---|---|
| | 0 | 596 | 11 | NA | |

Disposition of Gas: METHOD OF COMPLETION

☐ Vented ☒ Sold ☐ Used on Lease (If vented, submit ACO-18.)

☐ Open Hole ☒ Perf. ☐ Dually Comp. ☐ Commingled

☐ Other (Specify) _____

Production Interval 5973'-5975' 5968'-5975' 5935'-5951' 5866'-5871'

ORIGINAL

Schlumberger
Dowell

# Cementing Service Report

CONFIDENTIAL

| Customer | Job Number |
|---|---|
| CHESAPEAKE OPERATING INC | 20112505 |

| Well | Location (legal) | Dowell Location | Job Start |
|---|---|---|---|
| KCC THEIS 4-17 | SEC 17-35S-25W | Ulysses, KS | 6/22/99 |

OCT 0 8 1999

| Field | Formation Name/Type | Deviation | Bit Size | Well MD | Well TVD |
|---|---|---|---|---|---|
| | surface | 0 ° | 0 in | 775 ft | 775 ft |

CONFIDENTIAL

| County | State/Province | BHP | BHST | BHCT | Pore Press. Gradient |
|---|---|---|---|---|---|
| CLARK | KANSAS | 0 psi | 100 °F | 80 °F | 0 psi/ft |

| Rig Name | Drilled For | Service Via |
|---|---|---|
| MURFIN 22 | Gas | Land |

| Offshore Zone | Well Class | Well Type |
|---|---|---|
| | New | Development |

| Drilling Fluid Type | Max. Density | Plastic Viscosity |
|---|---|---|
| | 0 lb/gal | 0 cp |

| Service Line | Job Type |
|---|---|
| Cementing | Cem Surface Casing |

| Max. Allowed Tubing Pressure | Max. Allowed Ann. Pressure | Wellhead Connection |
|---|---|---|
| 500 psi | 500 psi | Single cement head |

**Service Instructions**

Cement 8 5/8" surface at ~1000' with 360 sks lead and 135 sks of tail. Bring 200 sks C with 2% S1 on the side in case it is needed for top out.

**Casing/Liner**

| Depth, ft | Size, in | Weight, lb/ft | Grade | Thread |
|---|---|---|---|---|
| 781 | 8.63 | 24 | | |
| 0 | 0 | 0 | | |

**Tubing/Drill Pipe**

| Depth, | Size, in | Weight, lb/ft | Grade | Thread |
|---|---|---|---|---|
| 0 | 0 | 0 | | |
| 0 | 0 | 0 | | |

**Perforations/Open Hole**

| Top, ft | Bottom, ft | spf | No. of Shots | Total Interval |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 ft |
| 0 | 0 | 0 | 0 | Diameter |
| 0 | 0 | 0 | 0 | 0 in |

| Treat Down | Displacement | Packer Type | Packer Depth |
|---|---|---|---|
| Casing | 46 bbl | None | 0 ft |

| Tubing Vol. | Casing Vol. | Annular Vol. | OpenHole Vol |
|---|---|---|---|
| 0 bbl | 48 bbl | 0 bbl | 0 bbl |

Casing/Tubing Secured ☑ 1 Hole Volume Circulated prior to Cementing ☐

Lift Pressure: 0 psi

Pipe Rotated ☐ Pipe Reciprocated ☐

No. Centralizers: 3 Top Plugs: 1 Bottom Plugs: 0

Cement Head Type: Single

Job Scheduled For:

Arrived on Location: 6/22/99 5:00

Leave Location: 6/22/99 12:30

**Casing Tools**

| | | | |
|---|---|---|---|
| Shoe Type: | Other | Squeeze Type | |
| Shoe Depth: | 763 ft | Tool Type: | |
| Stage Tool Type | n/a | Tool Depth: | 0 ft |
| Stage Tool Depth: | 0 ft | Tail Pipe Size: | 0 in |
| Collar Type: | Auto-Fill | Tail Pipe Depth: | 0 ft |
| Collar Depth: | 736 ft | Sqz Total Vol: | 0 bbl |

**Squeeze Job**

| Time 24 hr clock | CumVol bbl | Density ppg | Elapsed Time min | Pressure DT psi | TotFlowrate bpm | | | Message |
|---|---|---|---|---|---|---|---|---|
| 10:31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | START ACQUISITION |
| 10:31 | 0. | -6.25 | 0. | -3507 | 0. | 0 | 0 | |
| 10:33 | 0. | 8.39 | 2. | 0. | 0. | 0 | 0 | |
| 10:33 | 0. | 8.39 | 2. | 0. | 0. | 0 | 0 | Start Job |
| 10:34 | 0. | 8.39 | 2. | 0. | 0. | 0 | 0 | Start Pumping Water |
| 10:35 | 0. | 8.39 | 2. | 0. | 0. | 0 | 0 | Start Mixing Lead Slurry |
| 10:35 | 0. | 8.39 | 2. | 0. | 0. | 0 | 0 | [CumVol]=6.965 bbl |
| 10:35 | 0. | 8.39 | 2. | 0. | 0. | 0 | 0 | Reset Volume |
| 10:35 | 2.5 | 13.77 | 4. | 141.9 | 4.95 | 0 | 0 | |
| 10:37 | 12.42 | 13. | 6.01 | 123.6 | 4.95 | 0 | 0 | |
| 10:39 | 22.36 | 13.03 | 8.01 | 91.58 | 4.98 | 0 | 0 | |
| 10:41 | 32.35 | 13. | 10.02 | 109.9 | 4.98 | 0 | 0 | |
| 10:43 | 42.34 | 12.79 | 12.03 | 105.3 | 4.98 | 0 | 0 | |
| 10:45 | 52.33 | 13.01 | 14.04 | 109.9 | 5. | 0 | 0 | |
| 10:47 | 62.31 | 12.96 | 16.05 | 119. | 4.95 | 0 | 0 | |
| 10:49 | 72.3 | 12.97 | 18.06 | 105.3 | 4.95 | 0 | 0 | |
| 10:51 | 82.28 | 12.9 | 20.07 | 105.3 | 4.98 | 0 | 0 | |
| 10:53 | 92.27 | 12.7 | 22.08 | 96.15 | 4.98 | 0 | 0 | |
| 10:55 | 102.3 | 12.71 | 24.1 | 100.7 | 4.98 | 0 | 0 | |
| 10:57 | 112.2 | 14.12 | 26.11 | 109.9 | 4.95 | 0 | 0 | |
| 10:57 | 112.2 | 14.12 | 26.11 | 109.9 | 4.95 | 0 | 0 | Start Mixing Tail Slurry |

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OCT 12 1999
CONSERVATION DIVISION
WICHITA, KS

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ORIGINAL

| Well | Field | Service Date | Customer | Job Number |
|---|---|---|---|---|
| THEIS #4-17 | | | HESAPEAKE OPERATING | 20112505 |

| Time 24 hr clock | CumVol bbl | Density ppg | Elapsed Time min | Pressure DH psi | Total Rate bpm | | | Message |
|---|---|---|---|---|---|---|---|---|
| 10:59 | 122.2 | 14.95 | 28.12 | 123.6 | 4.98 | 0 | 0 | |
| 11:01 | 132.2 | 14.74 | 30.13 | 132.8 | 4.98 | 0 | 0 | |
| 11:03 | 142.2 | 14.74 | 32.14 | 132.8 | 4.95 | 0 | 0 | |
| 11:04 | 142.2 | 14.74 | 32.14 | 132.8 | 4.95 | 0 | 0 | End Tail Slurry |
| 11:05 | 142.2 | 14.74 | 32.14 | 132.8 | 4.95 | 0 | 0 | [CumVol]=146.6 bbl |
| 11:05 | 142.2 | 14.74 | 32.14 | 132.8 | 4.95 | 0 | 0 | Reset Volume |
| 11:05 | 142.2 | 14.74 | 32.14 | 132.8 | 4.95 | 0 | 0 | Drop Top Plug |
| 11:05 | 142.2 | 14.74 | 32.14 | 132.8 | 4.95 | 0 | 0 | Start Displacement |
| 11:05 | 1.09 | 10.98 | 34.15 | 105.3 | 4.95 | 0 | 0 | |
| 11:07 | 11.09 | 8.3 | 36.16 | 27.47 | 4.95 | 0 | 0 | |
| 11:09 | 21.1 | 8.34 | 38.17 | 22.89 | 4.98 | 0 | 0 | |
| 11:11 | 30.89 | 8.36 | 40.18 | 0. | 3.72 | 0 | 0 | |
| 11:13 | 39.04 | 8.39 | 42.19 | 13.74 | 2.88 | 0 | 0 | |
| 11:15 | 44.28 | 8.36 | 44.2 | 36.63 | 2.49 | 0 | 0 | |
| 11:16 | 47.7 | 8.39 | 46.22 | 773.8 | 0. | 0 | 0 | |
| 11:16 | 47.7 | 8.39 | 46.22 | 773.8 | 0. | 0 | 0 | Bump Top Plug |
| 11:18 | 47.7 | 8.39 | 46.22 | 773.8 | 0. | 0 | 0 | Bleed Off Pressure |
| 11:19 | 47.7 | 8.39 | 46.22 | 773.8 | 0. | 0 | 0 | STOP ACQUISITION |
| 11:22 | 47.7 | 8.39 | 46.22 | 773.8 | 0. | 0 | 0 | START ACQUISITION |
| 11:22 | 47.7 | -6.25 | 0. | -3507 | 0. | 0 | 0 | |
| 11:22 | 47.7 | -6.25 | 0. | -3507 | 0. | 0 | 0 | Remark |
| 11:22 | 47.7 | -6.25 | 0. | -3507 | 0. | 0 | 0 | [CumVol]=47.7 bbl |
| 11:22 | 47.7 | -6.25 | 0. | -3507 | 0. | 0 | 0 | Reset Volume |
| 11:22 | 47.7 | -6.25 | 0. | -3507 | 0. | 0 | 0 | Start Cement Slurry |
| 11:24 | 1.05 | 14.13 | 2.01 | 9.16 | 1.31 | 0 | 0 | |
| 11:26 | 3.67 | 16.63 | 4.02 | 18.32 | 1.29 | 0 | 0 | |
| 11:28 | 6.86 | 16.67 | 6.03 | 27.47 | 1.73 | 0 | 0 | |
| 11:30 | 10.39 | 16.56 | 8.04 | 22.89 | 1.73 | 0 | 0 | |
| 11:32 | 13.92 | 16.39 | 10.06 | 13.74 | 1.76 | 0 | 0 | |
| 11:34 | 17.69 | 16.69 | 12.07 | 36.63 | 1.9 | 0 | 0 | |
| 11:36 | 22.52 | 16.45 | 14.08 | 41.21 | 2.46 | 0 | 0 | |
| 11:38 | 25.19 | 16.33 | 16.09 | 18.32 | 2.21 | 0 | 0 | |
| 11:40 | 30.09 | 15.12 | 18.1 | 22.89 | 2.43 | 0 | 0 | |
| 11:42 | 33.83 | 15.32 | 20.11 | 4.58 | 0. | 0 | 0 | |
| 11:44 | 33.83 | 15.32 | 22.12 | -4.58 | 0. | 0 | 0 | |
| 11:46 | 33.84 | 15.32 | 24.13 | 9.16 | 0.727 | 0 | 0 | |
| 11:48 | 35.55 | 11.81 | 26.14 | 0. | 0. | 0 | 0 | |

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OCT 12 1999

CONSERVATION DIVISION
WICHITA, KS

## Post Job Summary

| Average Pump Rates, bpm | | | | Volume of Fluid Injected, bbl | | | |
|---|---|---|---|---|---|---|---|
| Slurry | N2 | Mud | Maximum Rate | Total Slurry | Mud | Spacer | N2 |
| 4.5 | 0 | 0 | 5 | 188 | 0 | 5 | 0 |

| Treating Pressure Summary, psi | | | | | Breakdown Fluid | | |
|---|---|---|---|---|---|---|---|
| Maximum | Final | Average | Bump Plug to | Breakdown | Type | Volume | Density |
| 800 | 20 | 100 | 800 | 0 | | 0 bbl | 0 lb/gal |

| Avg. N2 Percent | Designed Slurry Volume | Displacement | Mix Water Temp | Cement Circulated to Surface? | Volume |
|---|---|---|---|---|---|
| 0 % | 197 bbl | 47 bbl | 60 °F | ☐ Washed Thru Perfs To | 0 bbl / 0 ft |

| Customer or Authorized Representative | Dowell Supervisor | | |
|---|---|---|---|
| Ken Turner | Jeff Diseker | ☑ Circulation Lost | ☑ Job Completed |

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ORIGINAL

Schlumberger
Dowell

# Cementing Service Report

| Customer | Job Number |
|---|---|
| CHESAPEAKE OPERATING INC | 20114051 |

| Well | Location (legal) | Dowell Location | Job Start |
|---|---|---|---|
| THEIS 4-17 | SEC 17-35S-25W | Ulysses, KS | 7/1/99 |

| Field | Formation Name/Type | Deviation | Bit Size | Well MD | Well TVD |
|---|---|---|---|---|---|
| THEIS | Chester | 0 ° | 0 in | 6,150 ft | 6,150 ft |

| County | State/Province | BHP | BHST | BHCT | Pore Press. Gradient |
|---|---|---|---|---|---|
| CLARK | KANSAS | 0 psi | 140 °F | 113 °F | 0 psi/ft |

| Rig Name | Drilled For | Service Via |
|---|---|---|
| MURFIN 22 | Gas | Land |

| Offshore Zone | Well Class | Well Type |
|---|---|---|
| | New | Development |

| Drilling Fluid Type | Max. Density | Plastic Viscosity |
|---|---|---|
| Visplex | 9 lb/gal | 0 cp |

| Service Line | Job Type |
|---|---|
| Cementing | Cem Prod Casing |

| Max. Allowed Tubing Pressure | Max. Allowed Ann. Pressure | WellHead Connection |
|---|---|---|
| 3000 psi | 500 psi | Single cement head |

**Service Instructions**

Cement 4 1/2" longstring as instructed.

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**Casing/Liner**

| Depth, ft | Size, in | Weight, lb/ft | Grade | Thread |
|---|---|---|---|---|
| 6158 | 4.5 | 11.6 | N80 | 8RD |
| 0 | 0 | 0 | | |

**Tubing/Drill Pipe**

| Depth, | Size, in | Weight, lb/ft | Grade | Thread |
|---|---|---|---|---|
| 0 | 0 | 0 | | |
| 0 | 0 | 0 | | |

**Perforations/Open Hole**

| Top, ft | Bottom, ft | spf | No. of Shots | Total Interval |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 ft |
| 0 | 0 | 0 | 0 | Diameter |
| 0 | 0 | 0 | 0 | 0 in |

| Treat Down | Displacement | Packer Type | Packer Depth |
|---|---|---|---|
| Casing | 94.77 bbl | None | 0 ft |

| Tubing Vol. | Casing Vol. | Annular Vol. | OpenHole Vol |
|---|---|---|---|
| bbl | 95.44 bbl | 275 bbl | 0 bbl |

Casing/Tubing Secured ☑ 1 Hole Volume Circulated prior to Cementing ☐

Lift Pressure: psi

Pipe Rotated ☐ Pipe Reciprocated ☐

| No. Centralizers: | 0 | Top Plugs: | 1 | Bottom Plugs: | 0 |
|---|---|---|---|---|---|

Cement Head Type: Single

| Job Scheduled For: | Arrived on Location: | Leave Location: |
|---|---|---|
| | 7/1/99 1:00 | 7/1/99 7:00 |

**Casing Tools**

| Shoe Type: | Guide |
|---|---|
| Shoe Depth: | 6150 ft |
| Stage Tool Type | Port C |
| Stage Tool Depth: | 0 ft |
| Collar Type: | Auto-Fill |
| Collar Depth: | 6114.47 ft |

**Squeeze Job**

| Squeeze Type | |
|---|---|
| Tool Type: | |
| Tool Depth: | 0 ft |
| Tail Pipe Size: | 0 in |
| Tail Pipe Depth: | 0 ft |
| Sqz Total Vol: | 0 bbl |

| Time (24 hr clock) | CumVol bbl | Density ppg | Elapsed Time min | Pressure PI psi | TotFlowrate bpm | | | Message |
|---|---|---|---|---|---|---|---|---|
| 5:31 | 0. | 0 | 0. | 0 | 0. | 0 | 0 | Start Job |
| 5:31 | 0. | | .50 | 100 | 2 | 0 | 0 | Start Pumping Wash |
| 5:33 | 8.16 | 0. | 2.01 | 370.9 | 5.73 | 0 | 0 | |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | Start Cement Slurry |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | [CumVol]=20.75 bbl |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | Reset Volume |
| 5:37 | 12.15 | 15.03 | 6.03 | 554. | 7.91 | 0 | 0 | |
| 5:39 | 28.07 | 14.74 | 8.04 | 398.4 | 7.88 | 0 | 0 | |
| 5:41 | 43.87 | 14.93 | 10.04 | 398.4 | 7.91 | 0 | 0 | |
| 5:43 | 59.75 | 14.92 | 12.05 | 402.9 | 7.91 | 0 | 0 | |
| 5:45 | 75.63 | 14.71 | 14.06 | 366.3 | 7.88 | 0 | 0 | |
| 5:47 | 91.52 | 14.74 | 16.08 | 398.4 | 7.91 | 0 | 0 | |
| 5:48 | 93.45 | 14.74 | 16.08 | 398.4 | 7.91 | 0 | 0 | End Cement Slurry |
| 5:48 | 95.64 | 14.74 | 16.08 | 398.4 | 7.91 | 0 | 0 | Reset Volume |
| 5:48 | 98.37 | 14.74 | 16.08 | 398.4 | 7.91 | 0 | 0 | [CumVol]=99.24 bbl |
| 5:52 | 0. | 8.49 | 17.28 | 13.74 | 0. | 0 | 0 | Start Displacement |
| 5:53 | 1.07 | 8.4 | 19.28 | 82.42 | 3.83 | 0 | 0 | |
| 5:55 | 16.25 | 8.31 | 21.29 | 164.8 | 7.94 | 0 | 0 | |
| 5:57 | 32.09 | 8.36 | 23.29 | 160.3 | 7.91 | 0 | 0 | |
| 5:59 | 47.92 | 8.37 | 25.3 | 164.8 | 7.91 | 0 | 0 | |

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OCT 12 1999
CONSERVATION DIVISION
WICHITA, KS

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ORIGINAL

| Well | Field | Service Date | Customer | Job Number |
|---|---|---|---|---|
| THEIS #4-17 | THEIS | | HESAPEAKE OPERATING | 20114051 |

| Time 24 hr clock | Cum Vol bbl | Density ppg | Elapsed Time min | Pressure PI psi | Tot Flowrate bpm | | | Message |
|---|---|---|---|---|---|---|---|---|
| 6:01 | 63.75 | | 27.3 | 453.3 | 7.88 | 0 | 0 | |
| 6:03 | 79.57 | | 29.31 | 860.8 | 7.91 | 0 | 0 | |
| 6:06 | 87.42 | | 31.31 | 691.4 | 2.43 | 0 | 0 | |
| 6:08 | 91.82 | | 33.32 | 842.5 | 1.96 | 0 | 0 | |
| 6:09 | 92 | | 33.32 | 842.5 | 1.96 | 0 | 0 | [CumVol]=96 bbl |
| 6:10 | 94 | | 35.32 | 950 | 1.87 | 0 | 0 | |
| 6:10 | 96 | | 35.40 | 1000 | 1.87 | 0 | 0 | End Displacement |
| 6:11 | 95 | | 35.50 | 1500 | 1.87 | 0 | 0 | Bump Top Plug |
| 6:11 | 95 | | 35.55 | 400 | 1.87 | 0 | 0 | Bleed Off Pressure |
| 6:11 | 95 | | 35.59 | 0 | 1.87 | 0 | 0 | End Job |

**Post Job Summary**

Average Pump Rates, bpm

| Slurry | N2 | Mud | Maximum Rate |
|---|---|---|---|
| 8 | 0 | 0 | 8 |

Volume of Fluid Injected, bbl

| Total Slurry | Mud | Spacer | N2 |
|---|---|---|---|
| 98 | 0 | 20 | 0 |

Treating Pressure Summary, psi

| Maximum | Final | Average | Bump Plug to | Breakdown |
|---|---|---|---|---|
| 1500 | 900 | 400 | 0 | 0 |

Breakdown Fluid

| Type | Volume | Density |
|---|---|---|
| | 0 bbl | 0 lb/gal |

| Avg. N2 Percent | Designed Slurry Volume | Displacement | Mix Water Temp | Cement Circulated to Surface? | Volume |
|---|---|---|---|---|---|
| 0 % | 98 bbl | 95 bbl | 60 °F | ☐ Washed Thru Perfs To | 0 bbl 0 ft |

| Customer or Authorized Representative | Dowell Supervisor | | |
|---|---|---|---|
| Ken Turner | Jeff Diseker | ☐ Circulation Lost | ☑ Job Completed |

KCC

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OCT 12 1999

CONSERVATION DIVISION
WICHITA, KS

RELEASED

APR 20 2001

FROM CONFIDENTIAL

Schlumberger
Dowell

# Cementing Service Report

| Company | Job Number |
|---|---|
| CHESAPEAKE OPERATING INC | 201140S1 |

| Well | Location (Legal) | Dowell Location | Job Start |
|---|---|---|---|
| THEIS 4-17 | SEC 17-35S-25W | Ulysses, KS | 7/1/99 |

| Field | Formation Name/Type | Deviation | Bit Size | Well MD | Well TVD |
|---|---|---|---|---|---|
| THEIS | Chester | 0 ° | 0 in | 6,150 ft | 6,150 ft |

| County | State/Province | BHP | BHST | BHCT | Bore Press. Gradient |
|---|---|---|---|---|---|
| CLARK | KANSAS | 0 psi | 140 °F | 113 °F | 0 psi/ft |

| Rig Name | Drilled For | Service Via |
|---|---|---|
| MURFIN 22 | Gas | Land |

| Offshore Zone | Well Class | Well Type |
|---|---|---|
| | New | Development |

| Drilling Fluid Type | Max. Density | Plastic Viscosity |
|---|---|---|
| Visplex | 9 lb/gal | 0 cp |

| Service Line | Job Type |
|---|---|
| Cementing | Cem Prod Casing |

| Max. Allowed Tubing Pressure | Max. Allowed Ann. Pressure | Wellhead Connection |
|---|---|---|
| 3000 psi | 500 psi | Single cement head |

**Service Instructions**

Cement 4 1/2" longstring as instructed.

**Casing/Liner**

| Depth, ft | Size, in | Weight, lb/ft | Grade | Thread |
|---|---|---|---|---|
| 6158 | 4.5 | 11.6 | N80 | 8RD |
| 0 | 0 | 0 | | |

**Tubing/Drill Pipe**

| Depth, | Size, in | Weight, lb/ft | Grade | Thread |
|---|---|---|---|---|
| 0 | 0 | 0 | | |
| 0 | 0 | 0 | | |

**Perforations/Open Hole**

| Top, ft | Bottom ft | spf | No. of Shots | Total Interval |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 ft |
| 0 | 0 | 0 | 0 | Diameter |
| 0 | 0 | 0 | 0 | 0 in |

| Treat Down | Displacement | Packer Type | Packer Depth |
|---|---|---|---|
| Casing | 94.77 bbl | None | 0 ft |

| Tubing Vol. | Casing Vol. | Annular Vol. | Open Hole Vol |
|---|---|---|---|
| bbl | 95.44 bbl | 275 bbl | 0 bbl |

Casing/Tubing Secured ☑ 1 Hole Volume Circulated prior to Cementing ☐

Lift Pressure: psi

Pipe Rotated ☐ Pipe Reciprocated ☐

No. Centralizers: 0 Top Plugs: 1 Bottom Plugs: 0

Cement Head Type: Single

Job Scheduled For: Arrived on Location: 7/1/99 1:00 Leave Location: 7/1/99 7:00

**Casing Tools**

| | |
|---|---|
| Shoe Type: | Guide |
| Shoe Depth: | 6150 ft |
| Stage Tool Type: | Port C |
| Stage Tool Depth: | 0 ft |
| Collar Type: | Auto-Fill |
| Collar Depth: | 6114.47 ft |

**Squeeze Job**

| | |
|---|---|
| Squeeze Type | |
| Tool Type: | |
| Tool Depth: | 0 ft |
| Tail Pipe Size: | 0 in |
| Tail Pipe Depth: | 0 ft |
| Est Total Vol: | 0 bbl |

| Time (24 hr clock) | CumVol (bbl) | Density (ppg) | Elapsed Time (min) | Pressure DS (psi) | Tot Pump (bbm) | | | Message |
|---|---|---|---|---|---|---|---|---|
| 5:31 | 0 | 0 | 0. | 0 | 0. | 0 | 0 | Start Job |
| 5:31 | 0. | | .50 | 100 | 2 | 0 | 0 | Start Pumping Wash |
| 5:33 | 8.18 | 0. | 2.01 | 370.9 | 5.73 | 0 | 0 | |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | Start Cement Slurry |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | [CumVol]=20.75 bbl |
| 5:35 | 19.6 | 8.26 | 4.01 | 325.1 | 5.73 | 0 | 0 | Reset Volume |
| 5:37 | 12.15 | 15.03 | 6.03 | 554 | 7.91 | 0 | 0 | |
| 5:39 | 28.07 | 14.74 | 8.04 | 366.4 | 7.88 | 0 | 0 | |
| 5:41 | 43.87 | 14.93 | 10.04 | 398.4 | 7.91 | 0 | 0 | |
| 5:43 | 59.75 | 14.92 | 12.05 | 402.9 | 7.91 | 0 | 0 | |
| 5:45 | 75.53 | 14.71 | 14.05 | 366.3 | 7.88 | 0 | 0 | |
| 5:47 | 91.52 | 14.74 | 16.05 | 398.4 | 7.91 | 0 | 0 | |
| 5:48 | 93.45 | 14.74 | 16.09 | 398.4 | 7.91 | 0 | 0 | End Cement Slurry |
| 5:48 | 95.64 | 14.74 | 16.09 | 398.4 | 7.91 | 0 | 0 | Reset Volume |
| 5:48 | 98.37 | 14.74 | 16.08 | 398.4 | 7.91 | 0 | 0 | [CumVol]=99.24 bbl |
| 5:52 | 0. | 8.49 | 17.28 | 13.74 | 0. | 0 | 0 | Start Displacement |
| 5:53 | 1.07 | 8.4 | 19.28 | 82.42 | 3.83 | 0 | 0 | |
| 5:55 | 16.25 | 8.31 | 21.29 | 164.8 | 7.94 | 0 | 0 | |
| 5:57 | 32.09 | 8.36 | 23.29 | 160.3 | 7.91 | 0 | 0 | |
| 5:59 | 47.92 | 8.37 | 25.3 | 154.8 | 7.91 | 0 | 0 | |

| Well | Field | Service Date | Company | Job Number |
|---|---|---|---|---|
| THEIS #4-17 | THEIS | | HESAPEAKE OPERATING | 2011405? |

| Time 24-hr clock | Cmt Vol bbl | Density ppg | Elapsed Time min | Pressure psi | Total Volume bbls | | | Message |
|---|---|---|---|---|---|---|---|---|
| 6:01 | 63.75 | | 27.3 | 453.3 | 7.68 | 0 | 0 | |
| 6:03 | 79.57 | | 29.31 | 660.8 | 7.91 | 0 | 0 | |
| 6:06 | 87.42 | | 31.31 | 691.4 | 2.43 | 0 | 0 | |
| 6:08 | 91.82 | | 33.32 | 842.5 | 1.96 | 0 | 0 | |
| 6:09 | 92 | | 33.32 | 842.5 | 1.96 | 0 | 0 | CumVol=95 bbl |
| 6:10 | 94 | | 35.32 | 850 | 1.87 | 0 | 0 | |
| 6:10 | 95 | | 35.40 | 1000 | 1.87 | 0 | 0 | End Displacement |
| 6:11 | 95 | | 35.50 | 1500 | 1.87 | 0 | 0 | Bump Top Plug |
| 6:11 | 95 | | 35.55 | 400 | 1.87 | 0 | 0 | Bleed Off Pressure |
| 6:11 | 95 | | 35.59 | 0 | 1.87 | 0 | 0 | End Job |

Post Job Summary

Average Pump Rates, bpm

| Slurry | N2 | other | Maximum Rate |
|---|---|---|---|
| 8 | 0 | 0 | 8 |

Volume of Fluid Injected, bbl

| Total Slurry | Mud | Spacer | N2 |
|---|---|---|---|
| 98 | 0 | 20 | 0 |

Treating Pressure Summary, psi

| Maximum | Final | Average | Bump Plug to | Breakdown |
|---|---|---|---|---|
| 1500 | 900 | 400 | 0 | 0 |

Breakdown Fluid

| Type | Volume | Density |
|---|---|---|
| | 0 bbl | 0 lb/gal |

| Avg. N2 Percent | Designed Slurry Volume | Displacement | Min Water Temp | Circulated to Surface? | Volume |
|---|---|---|---|---|---|
| 0 % | 98 bbl | 95 bbl | 60 °F | Wiper Plug Tops To | 0 bbl 0 ft |

| Customer or Authorized Representative | Dowell Supervisor | | |
|---|---|---|---|
| Ken Turner | Jeff Diesker | Circulation Lost | Job Completed |

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FROM CONFIDEN



10-12-1999 8:49AM FROM