

HALLIBURTON

EXXONMOBIL CORPORATION

HOUSTON, Texas

Well: PCU 197-34A4 (Production)
Rig: H&P-325

Post Job Summary

Cement Production Casing

Prepared for: Jamie Turner
Date Prepared: 8/21/10
Version: 1

Service Supervisor: Ken Dearing

Submitted by: Kyle King

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Wellbore Geometry

| Job Tubulars | | | | | MD | | TVD | | Excess % | Shoe Joint Length ft |
|--------------|-------------------------|------------|----------|--------------|---------|--------------|---------|--------------|-------------|-------------------------------|
| Type | Description | Size in | ID in | Wt lbm/ft | Top ft | Bottom ft | Top ft | Bottom ft | | |
| Casing | Intermediate Casing | 7.00 | 6.276 | 26.00 | 0.0 | 8,605.0 | 0.0 | 8,369.0 | | |
| Open Hole | Production Open Hole | | 6.125 | | 8,605.0 | 12,641.0 | 8,369.0 | 12,405.0 | 350.00 | |
| Casing | Production Casing | 4.50 | 3.826 | 15.10 | 0.0 | 12,622.0 | 0.0 | 12,385.0 | | 86.4 |

Pumping Schedule

| Fluid # | Fluid Type | Fluid Name | Density lbm/gal | Avg Rate bbl/min | Volume |
|---------|--------------|------------------|--------------------|---------------------|-------------|
| 1 | Spacer | Tuned Spacer III | 11.0 | 5.0 | 40.0 bbl |
| 2 | Cement | Priamry Cement | 12.0 | 5.5 | 915.0 sacks |
| 3 | Displacement | 2% NaCl Water | 8.45 | 6.0 | 178.1 bbl |

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Fluids Pumped

Fluid 1: Tuned Spacer III

3 lbm/bbl Fe-2
59.8 lbm/bbl Barite

Fluid Density: 11.0 lbm/gal
Fluid Volume: 40.0 bbl
Pump Rate: 5.0 bbl/min

Fluid 2: Primary Cement

0.25 % Fe-2

Fluid Weight: 12.0 lbm/gal
Slurry Yield: 2.17 cuft/sk
Water Requirement: 11.95 Gal
Volume: 915.0 sacks
Recorded Volume: 385.0 bbl
Calculated Fill: 3,544.00 ft
Calculated Top of Fluid: 9,215.00 ft
Pump Rate: 5.5 bbl/min

Fluid 3: 2% NaCl Water

7.15 lbm/bbl Salt

Fluid Density: 8.45 lbm/gal
Fluid Volume: 178.1 bbl
Pump Rate: 6.0 bbl/min

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Job Summary

Job Information

| | |
|--|----------------------|
| Job Start Date | 8/16/2010 4:45:00 PM |
| Job MD | 12,622.0 ft |
| Job TVD | 12,385.0 ft |
| Height of Plug Container/Swage Above Rig Floor | 5.0 ft |
| Surface Temperature at Time of Job | 65 degF |
| Mud Type | Water Based Mud |
| Name of Mud Company | BAROID |
| Mud Density | 10.3 lbm/gal |
| Mud YP | 20 lb/100 sqft |
| Mud PV | 18 cp |
| Gels | 9/14/18 |
| Time Circulated before job | 4.42 hour(s) |
| Mud Volume Circulated | 1,193.00 bbl |
| Rate at Which Well was Circulated | 4.5 bbl/min |
| Mud loss while Circulating | 20.00 bbl |
| Units of Gas Detected While Circulating | 1600 API Gas Units |
| Pipe Movement During Hole Circulation | Reciprocated |
| Time From End Mud Circ. To Job Start | 30.00 minute |
| Mud loss during Cement Job | 132.00 bbl |
| Pipe Movement During Cementing | Reciprocated |
| Calculated Displacement | 178.0 bbl |
| Recorded Displacement | 178.1 bbl |
| Recorded Bump Pressure | 2250.0 psi |
| Job Displaced by (rig/halco) | Cement Unit HP Pumps |
| Length of Rat Hole | 19.00 ft |

Cementing Equipment

| | |
|-----------------------------------|------------------------------|
| Number of Centralizers Used | 146 |
| Pipe Centralization | Through Entire Cement Column |
| Brand of Float Equipment Used | Weatherford |
| Did Float Equipment Hold? | Yes |
| Brand of Plug set used? | Weatherford |
| Did Plugs Bump? | Yes |
| Calculated Pressure to Bump Plugs | 1,900.0 psig |

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Service Supervisor Reports

Job Log

| Date/Time | Chart # | Activity Code | Rate | Volume | Comments |
|---------------------|---------|---------------------------------------|------|--------|--|
| 08/15/2010 10:30 | | Call Out | | | |
| 08/15/2010 11:00 | | Pre-Convoy Safety Meeting | | | DISCUSS SAFETY AND HAZARDS OF TRAVEL. |
| 08/15/2010 11:15 | | Other | | | LOAD EQUIPMENT FOR JOB. |
| 08/15/2010 11:45 | | Pre-Convoy Safety Meeting | | | DISCUSS SAFETY AND HAZARDS OF TRAVEL. |
| 08/15/2010 12:00 | | Crew Leave Yard | | | |
| 08/15/2010 15:30 | | Other | | | ARRIVE AT WHITE RIVER YARD. |
| 08/15/2010 15:35 | | Safety Huddle | | | DISCUSS SAFETY AND HAZARDS. |
| 08/15/2010 15:40 | | Other | | | CHECK OUT AND PICK UP BULK EQUIPMENT FOR JOB. |
| 08/15/2010 16:15 | | Pre-Convoy Safety Meeting | | | DISCUSS SAFETY AND HAZARDS OF TRAVEL. |
| 08/15/2010 18:00 | | Arrive At Loc | | | CASING @ 8230.0'. |
| 08/15/2010 18:05 | | Assessment Of Location Safety Meeting | | | SIGN IN AT SAFETY SHACK, GET WORK PERMIT SIGNED, WALK LOCATION AND DISCUSS SAFETY AND HAZARDS OF SPOTING OF EQUIPMENT. |
| 08/15/2010 18:10 | | Safety Meeting | | | MEET WITH CO.MAN, GET WELL INFORMATION, DISCUSS WELL CONDITIONS, DISCUSS PRESSURE TEST AND MAX PRESSURE, DISCUSS SAFETY AND HAZARDS. |
| 08/15/2010 18:20 | | Safety Huddle | | | DISCUSS SAFETY AND HAZARDS. |
| 08/15/2010 18:25 | | Other | | | SPOT EQUIPMENT. |
| 08/15/2010 18:45 | | Safety Meeting - Pre Rig-Up | | | DISCUSS SAFETY AND HAZARDS. |
| 08/15/2010 18:50 | | Rig-Up Equipment | | | RIG UP IRON AND SUCTION HOSE TO RED ZONE, TEST H2O. |
| 08/15/2010 20:15 | | Safety Meeting | | | DISCUSS SAFETY AND HAZARDS OF PRESSURE WITH CO.MAN AND RIG CREW.. |

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| Date/Time | Chart # | Activity Code | Rate | Volume | Comments |
|---------------------|---------|--------------------------------|------|--------|--|
| 08/15/2010 20:38 | | Pressure Test | | | 5000.0 PRE JOB PRESSURE TEST. |
| 08/15/2010 21:50 | | Safety Meeting - Pre Rig-Up | | | DISCUSS SAFETY AND HAZARDS. |
| 08/15/2010 22:00 | | Rig-Up Equipment | | | WHILE RIG CIRCULATES BOTTOMS UP, RIG UP IRON TO STAND PIPE, SPOT IRON FOR FLOOR UNDER CRANE WITH HELP FROM RIG CREW. |
| 08/15/2010 22:45 | | Other | | | WAIT ON RIG TO FINISH RUNNING CASING, CASING @ 9520.0' |
| 08/16/2010 09:30 | | Other | | | Casing @ 12306.0' |
| 08/16/2010 11:50 | | Casing on Bottom | | | @ 12,622ft |
| 08/16/2010 12:00 | | Circulate Well | | | Rig Circulating 4.5 bpm, 750 psi, 1600 gas units |
| 08/16/2010 14:20 | | Safety Meeting - Pre Rig-Up | | | Discuss safety and hazards. |
| 08/16/2010 14:35 | | Rig-Up Equipment | | | Rig up cement head onto casing. |
| 08/16/2010 14:45 | | Rig-Down Equipment | | | Rig laying down CRT |
| 08/16/2010 14:50 | | Other | | | Rig starts circulating through HES cement |
| 08/16/2010 15:15 | | Safety Meeting - Pre Rig-Up | | | Discuss safety and hazards. |
| 08/16/2010 15:30 | | Rig-Up Equipment | | | Rig Floor up |
| 08/16/2010 16:00 | | Pre-Job Safety Meeting | | | Safety meeting With Rig Crew and Company Man, discuss safety and hazards of job. |
| 08/16/2010 16:25 | 1 | Start Job | | | |
| 08/16/2010 16:40 | | Pump Water | | | Start pumping H2O to Fill Lines |
| 08/16/2010 16:42 | 3,4,5,6 | Pressure Test | | | 345.0 Low pressure test. |
| 08/16/2010 16:45 | | Pressure Test | | | 5000.0 High pressure test. |
| 08/16/2010 16:55 | 7 | Pump Spacer | 5 | 41 | 1000.0 Start pumping 11.0# Tuned Spacer, Design 40 bbl Recorded 41 |
| 08/16/2010 17:05 | | Shutdown | | | End spacer-shut down. |
| 08/16/2010 17:07 | 8 | Drop Bottom Plug | | | |

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| Date/Time | Chart # | Activity Code | Rate | Volume | Comments |
|---------------------|---------|--|------|--------|--|
| 08/16/2010 17:12 | 9 | Pump Cement | 5.5 | 385 | 550.0 Start pumping cement, DEN 12.0#, YLD 2.17 cuft/sk, WR 11.95 gal/sk Design (Slurry Volume 354 bbl, MixWater Volume 260 bbl) Recorded (Slurry Volume 385 bbl, MixWater Volume 258 bbl)*** Slurry Volume taken from Barrel Counter |
| 08/16/2010 18:21 | | Shutdown | | | End cement-shut down. |
| 08/16/2010 18:23 | 10 | Clean Lines | | | Wash Lines to Pit |
| 08/16/2010 18:28 | 11 | Drop Top Plug | | | |
| 08/16/2010 18:28 | 12 | Pump Displacement | 6 | 178.1 | 2300.0 7.15 lb/bbl 2% NaCl Water Design 178 bbl Recorded 178.1 bbl |
| 08/16/2010 18:30 | | Pressure Up | 7 | 14 | 1200.0 Caught Cement |
| 08/16/2010 18:50 | | Slow Rate | 5 | 165 | 2400.0 Slow to 5 BPM with 165 away into displacement |
| 08/16/2010 18:54 | | Slow Rate | 3 | 170 | 2200.0 slow to 3 BPM with 170 away into displacement |
| 08/16/2010 18:55 | 13 | Bump Plug | 3 | 178.1 | 2250.0 Design 1925 psi Recorded 2250 psi |
| 08/16/2010 18:59 | 14 | Check Floats | | | Hold for 4 minutes. Floats Hold, 2 bbl Flow back |
| 08/16/2010 19:01 | 15 | End Job | | | |
| 08/16/2010 19:10 | | Post-Job Safety Meeting (Pre Rig-Down) | | | Discuss job and BBP and HOC observations, discuss safety and hazards of rig down.. |
| 08/16/2010 19:30 | | Shutdown | | | 3150.0 Pressure up to 3150-shut down, 900psi over. |
| 08/16/2010 19:30 | | Rig-Down Equipment | | | Rig down Iron off of rig floor. |
| 08/16/2010 19:45 | | Safety Huddle | | | Discuss safety and hazards. |
| 08/16/2010 19:50 | | Other | | | Wash up RCM to pit. |
| 08/16/2010 20:15 | | Safety Meeting - Pre Rig-Down | | | Discuss safety and hazards. |
| 08/16/2010 20:25 | | Rig-Down Equipment | | | Rig down and rack up Iron and suction hose. |
| 08/16/2010 21:45 | | Pre-Convoy Safety Meeting | | | Discuss safety and hazards of travel. |
| 08/16/2010 22:00 | | Crew Leave Location | | | |
| 08/16/2010 22:00 | | Other | | | Thank You-Ken, Kyle< and Crew. |

HALLIBURTON

The Road to Excellence Starts with Safety

| | | | |
|---|------------------------------------|---------------------------|------------------------|
| Sold To #: 331699 | Ship To #: 2771899 | Quote #: | Sales Order #: 7554886 |
| Customer: EXXONMOBIL CORPORATION | Customer Rep: LOVE, JOSH | | |
| Well Name: PCU | Well #: 197-34A4 | API/UWI #: 05-103-11541 | |
| Field: PICEANCE CREEK | City (SAP): MEEKER | County/Parish: Rio Blanco | State: Colorado |
| Legal Description: Section 34 Township 1S Range 97W | | | |
| Contractor: H&P | Rig/Platform Name/Num: 325 | | |
| Job Purpose: Cement Production Casing | | | |
| Well Type: Development Well | Job Type: Cement Production Casing | | |
| Sales Person: TURNER, JAMIE | Srvs Supervisor: DEARING, KEN | MBU ID Emp #: 239372 | |

Job Personnel

| HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # |
|--------------------------|---------|--------|---------------------|---------|--------|----------------|---------|--------|
| DEAN, MARK Christophe | 28 | 454214 | DEARING, KEN A | 28 | 239372 | ESTEP, KENNETH | 28 | 121420 |
| KING, KYLE Endres | 14 | 465538 | MCGHIE, SETH Bunker | 28 | 470775 | PEAY, SHANE | 28 | 472880 |
| WEYERMAN, JEREMY | 28 | 477287 | | | | | | |

Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| 10638378 | 140 mile | 10872435 | 140 mile | 10897817 | 140 mile | 10948686 | 140 mile |
| 10994447 | 140 mile | 11263211 | 140 mile | 11410666 | 140 mile | | |

Job Hours

| Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours |
|-------|-------------------|-----------------|--|-------------------|-----------------|------|-------------------|-----------------|
| 8/15 | 6 | 0 | 8/16 | 22 | 2.5 | - | - | - |
| TOTAL | | | Total is the sum of each column separately | | | | | |

Job**Job Times**

| Formation Name | Formation Depth (MD) | Top | Bottom | Called Out | Date | Time | Time Zone |
|------------------------|----------------------|-----|-------------------|---------------|-----------------|-------|-----------|
| Form Type | | | BHST | On Location | 15 - Aug - 2010 | 10:30 | MST |
| Job depth MD | 12622. ft | | Job Depth TVD | Job Started | 15 - Aug - 2010 | 18:00 | MST |
| Water Depth | | | Wk Ht Above Floor | Job Completed | 16 - Aug - 2010 | 16:45 | MST |
| Perforation Depth (MD) | From | | To | Job Completed | 16 - Aug - 2010 | 19:15 | MST |
| | | | | Departed Loc | 16 - Aug - 2010 | 22:00 | MST |

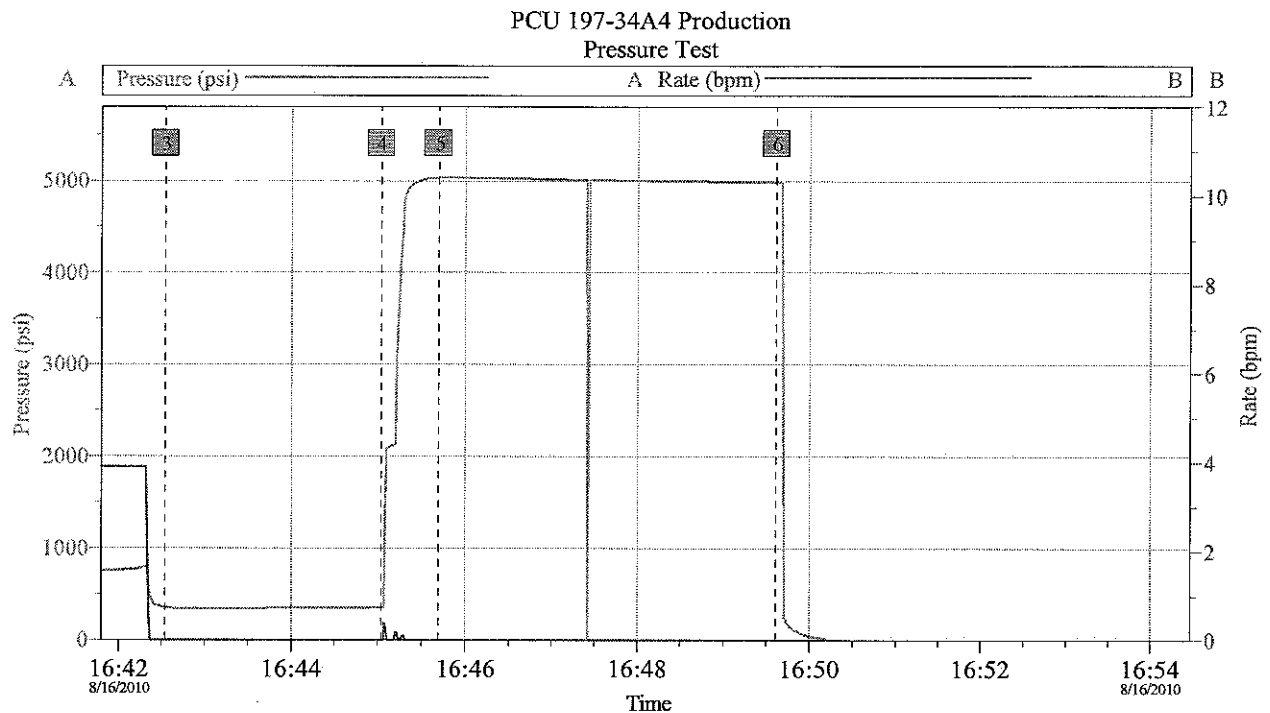
Well Data

| Description | New / Used | Max pressure psig | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|----------------------|------------|-------------------|---------|-------|---------------|------------------------------|-------|-----------|--------------|------------|---------------|
| Production Open Hole | | | | 6.125 | | | | 8605 | 12641 | 8369 | 12405 |
| Intermediate Casing | Unknown | | 7. | 6.276 | 26. | HYDRIL - SERIES 500 TYPE 513 | P-110 | 0 | 8605 | 0 | 8369 |
| Production Casing | New | | 4.5 | 3.826 | 15.1 | LTC | P-110 | 0 | 12622 | | 12385 |

| Fluid Data | | | | | | | | | |
|--|---------------|--------------------------------------|-----------------------------------|---------|------------------------|---------------------------|------------------|--------------|---------------------|
| Stage/Plug #: 1 | | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty uom | Mixing Density lbm/gal | Yield ft ³ /sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid bbl |
| 1 | Spacer | TUNED SPACER III - SBM (483826) | 40.0 | bbl | 11.0 | 7.45 | 50.95 | 5.0 | 37 |
| | 38.32 gal/bbl | FRESH WATER | | | | | | | |
| | 3 lbm/bbl | FE-2 (100001615) | | | | | | | |
| | 59.8 lbm/bbl | BARITE, 100 LB SK (100003680) | | | | | | | |
| 2 | Cement | VARICEM (TM) Primary CEMENT (452009) | 915.0 | sacks | 12.0 | 2.17 | 11.95 | 5.5 | 260 |
| | 12.124 Gal | FRESH WATER | | | | | | | |
| | 0.25 % | FE-2 (100001615) | | | | | | | |
| 3 | Displacement | 2% NaCl Water | 178.1 | bbl | 8.45 | | | 6.0 | |
| | 7.15 lbm/bbl | SALT, 100 LB BAG (100003652) | | | | | | | |
| The Information Stated Herein Is Correct | | | Customer Representative Signature | | | | | | |

HALLIBURTON

Data Acquisition



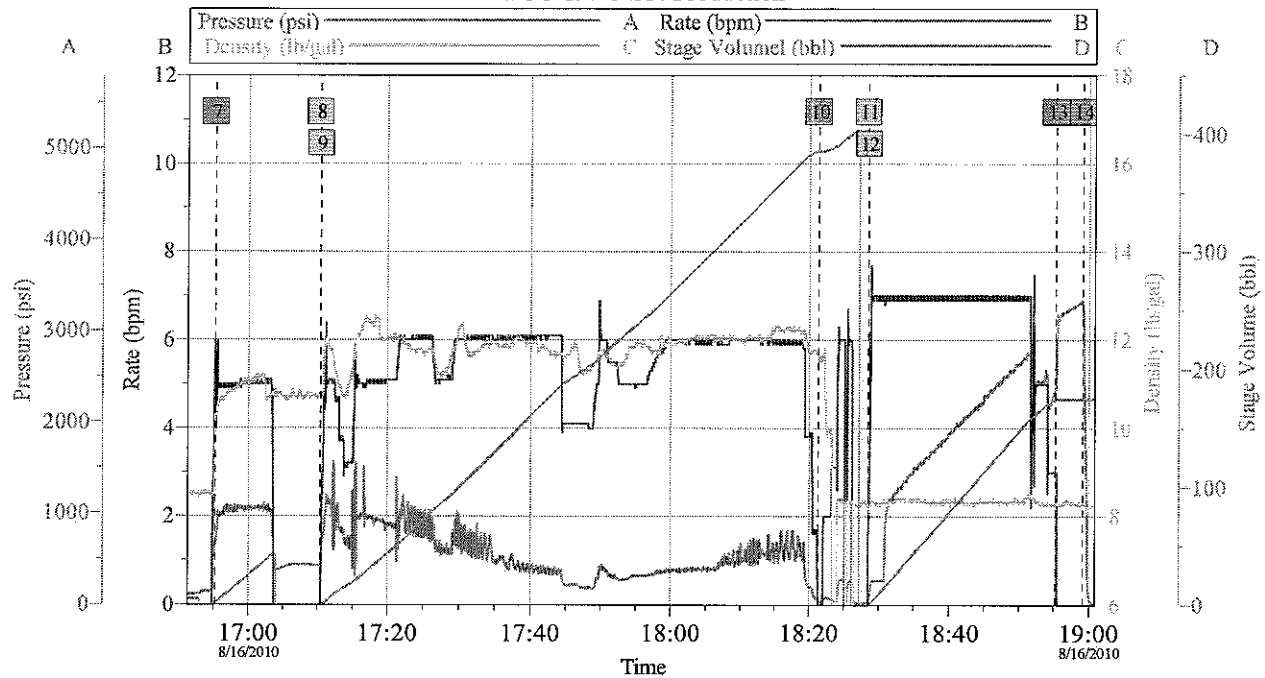
| Job Log | | | | | | | |
|--------------|--------------------------|----------|-------|--------------|------------------------|----------|-------|
| Intersection | | | psi | Intersection | | | psi |
| 1 | Start Low Pressure Test | 16:42:33 | 353.5 | 1 | End Low Pressure Test | 16:45:02 | 353.0 |
| 2 | Start High Pressure Test | 16:45:41 | 5034 | 2 | End High Pressure Test | 16:49:37 | 4988 |

| | | |
|--------------------------------|-----------------------|------------------------|
| Customer: EXXONMOBIL | Job Date: 16-Aug-2010 | Sales Order #: 7554886 |
| Well Description: PCU 197-34A4 | UWI: 05-103-11541 | Rig: H&P 325 |

OptiCem v6.4.9
16-Aug-10 16:50

HALLIBURTON

PCU 197-34A4 Production



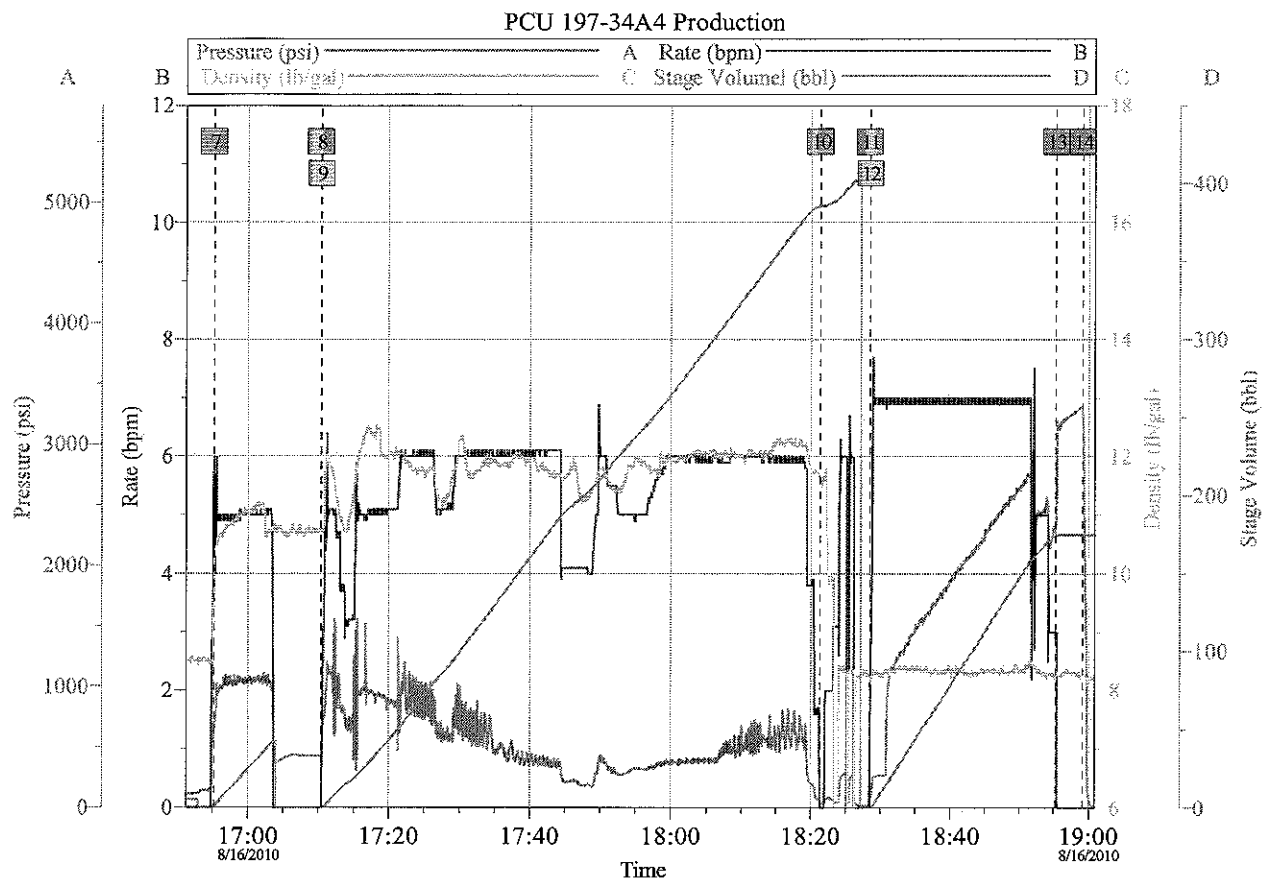
Job Log

| | | | | | |
|----------------------|----------|--------------------|----------|-------------------------|----------|
| 7 TS III 11.0# | 16:55:16 | 8 Drop Bottom Plug | 17:10:21 | 9 Primary Cement 12.0# | 17:10:26 |
| 10 Wash lines to Pit | 18:21:18 | 11 Drop Top Plug | 18:28:28 | 12 2% NaCl Displacement | 18:28:32 |
| 13 Bump Plug | 18:55:14 | 14 Check Floats | 18:59:05 | | |

| | | |
|--------------------------------|-----------------------|------------------------|
| Customer: EXXONMOBIL | Job Date: 16-Aug-2010 | Sales Order #: 7554886 |
| Well Description: PCU 197-34A4 | UWI: 05-103-11541 | Rig: H&P 325 |

OptiCem v6.4.9
16-Aug-10 19:03

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| | | |
|--------------------------------|-----------------------|------------------------|
| Customer: EXXONMOBIL | Job Date: 16-Aug-2010 | Sales Order #: 7554886 |
| Well Description: PCU 197-34A4 | UWI: 05-103-11541 | Rig: H&P 325 |

OptiCem v6.4.9
16-Aug-10 19:04

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UCA Graph

