



Cement

Well Name: Waste Management 2T-401

Cement

Surface Casing Cement, Casing, 8/3/2013 11:30

| | | | | | | | | |
|----------------|------------------------------|------------------------|--------------------------------|---------------------------|---|---------------------------------------|------------------|-----------------------------------|
| Type Casing | String Surface, 938.0ftKB | Start Date 8/3/2013 | Cementing End Date 8/3/2013 | Wellbore Original Hole | Job Drilling - original, 7/30/2013 07:00 | Cementing Company Cementers Energy | Cement Objective | Eval Method Returns to Surface |
|----------------|------------------------------|------------------------|--------------------------------|---------------------------|---|---------------------------------------|------------------|-----------------------------------|

Cement Stages

| | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------------------------------|--------------------------------|--|-------------------------|-----------|------------------------------------|--------------------|--------------------------|------------------------------|-----------------------------|------------|---------------------------|----------------|---------------------|-----------------------------|-----------------|-------------------|----------------|---------------------|
| Stg # 1 | Description Surface Casing Cement | | | | Objective | | | Top Depth (ftKB) 23.0 | Bottom Depth (ftKB) 938.0 | Pump Start Date 8/3/2013 | | Pump End Date 8/3/2013 | | Top Plug? No | Btm Plug? No | | | | |
| Initial Pump Rate (bbl/min) 4 | | Final Pump Rate (bbl/min) 5 | | Avg Pump Rate (bbl/min) | | Final Pump Pressure (psi) 800.0 | | Plug Bump Pressure (psi) | | Pressure Held (psi) 0.0 | | Pressure Release Date | | Full Return? Yes | Vol Cement Ret (bbl) 5.0 | | Volume Lost (bbl) | | |
| Recip? No | Stroke (ft) | Recip Rate (...) | | Rotat... No | RPM (rpm) | | Pipe Movement Note | | | MD Tagged (...) | Tag Method | | Tag Wt (100... | Prop... No | Depth Plug... | Tag Cement Date | | Drill Out Date | Drill Out Dia (...) |

Cement Fluids

| Fluid | Est Top (ftKB) | Est Btm (ftKB) | Pump Start Date | Pump End Date | Class | Amount (sacks) | Mix H2O Ratio (gal/sack) | Yield (ft³/sack) | Vol Pumped (bbl) | Excess (%) | Dens (lb/gal) |
|-------|----------------|----------------|-----------------|---------------|-------|----------------|--------------------------|------------------|------------------|------------|---------------|
| Lead | 23.0 | 938.0 | 8/3/2013 | 8/3/2013 | G | 840 | | 1.18 | 176.5 | 100.0 | 15.20 |

Intermediate Casing Cement, Casing, 8/11/2013 21:00

| | | | | | | | | |
|----------------|-------------------------------------|-------------------------|---------------------------------|---------------------------|---|--|------------------|-----------------------------------|
| Type Casing | String Intermediate, 7,323.0ftKB | Start Date 8/11/2013 | Cementing End Date 8/11/2013 | Wellbore Original Hole | Job Drilling - original, 7/30/2013 07:00 | Cementing Company BJ Services Company | Cement Objective | Eval Method Returns to Surface |
|----------------|-------------------------------------|-------------------------|---------------------------------|---------------------------|---|--|------------------|-----------------------------------|

Cement Stages

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|----------------------------------|---|--------------------------------|--|-------------------------|-----------|--------------------------------------|--------------------|-------------------------------------|--------------------------------|------------------------------|--|----------------------------|------------|---------------------|------------------------------|---------------|-------------------|----------------|---------------------|
| Stg # 1 | Description Intermediate Casing Cement | | | | | Objective | | Top Depth (ftKB) 23.0 | Bottom Depth (ftKB) 7,323.0 | Pump Start Date 8/11/2013 | | Pump End Date 8/11/2013 | | Top Plug? Yes | Btm Plug? No | | | | |
| Initial Pump Rate (bbl/min) 6 | | Final Pump Rate (bbl/min) 4 | | Avg Pump Rate (bbl/min) | | Final Pump Pressure (psi) 2,030.0 | | Plug Bump Pressure (psi) 2,944.0 | | Pressure Held (psi) | | Pressure Release Date | | Full Return? Yes | Vol Cement Ret (bbl) 10.0 | | Volume Lost (bbl) | | |
| Recip? No | Stroke (ft) | Recip Rate (...) | | Rotat... No | RPM (rpm) | | Pipe Movement Note | | | MD Tagged (...) | | | Tag Method | Tag Wt (100... | Prop... No | Depth Plug... | Tag Cement Date | Drill Out Date | Drill Out Dia (...) |

Cement Fluids

| Fluid | Est Top (ftKB) | Est Btm (ftKB) | Pump Start Date | Pump End Date | Class | Amount (sacks) | Mix H2O Ratio (gal/sack) | Yield (ft³/sack) | Vol Pumped (bbl) | Excess (%) | Dens (lb/gal) |
|-------|----------------|----------------|-----------------|---------------|--------------|----------------|--------------------------|------------------|------------------|------------|---------------|
| Lead | 23.0 | 5,000.0 | 8/11/2013 | 8/11/2013 | Premium Lite | 330 | | 2.99 | 175.7 | | 11.20 |
| Tail | 5,000.0 | 7,323.0 | | | 50/50 Poz | 325 | | 1.38 | 79.9 | | 14.40 |