



# Cement

Well Name: Suden 34U-243

## Cement

### Surface Casing Cement, Casing, 1/18/2015 23:30

|                |                              |                         |                                 |                           |   |                                       |                  |                                   |
|----------------|------------------------------|-------------------------|---------------------------------|---------------------------|---|---------------------------------------|------------------|-----------------------------------|
| Type<br>Casing | String<br>Surface, 929.0ftKB | Start Date<br>1/18/2015 | Cementing End Date<br>1/19/2015 | Wellbore<br>Original Hole | Job<br>Drilling - original, 1/16/2015 06:00 | Cementing Company<br>Cementers Energy | Cement Objective | Eval Method<br>Returns to Surface |
|----------------|------------------------------|-------------------------|---------------------------------|---------------------------|---|---------------------------------------|------------------|-----------------------------------|

### Cement Stages

|                                  |                                      |                           |  |                         |           |                           |                    |                                   |                          |                              |                              |                       |            |                            |                     |                             |                 |                   |  |                |  |                     |
|----------------------------------|--------------------------------------|---------------------------|--|-------------------------|-----------|---------------------------|--------------------|-----------------------------------|--------------------------|------------------------------|------------------------------|-----------------------|------------|----------------------------|---------------------|-----------------------------|-----------------|-------------------|--|----------------|--|---------------------|
| Stg #<br>1                       | Description<br>Surface Casing Cement |                           |  |                         |           | Objective                 |                    |                                   | Top Depth (ftKB)<br>15.0 | Bottom Depth (ftKB)<br>932.0 | Pump Start Date<br>1/18/2015 |                       |            | Pump End Date<br>1/19/2015 |                     | Top Plug?<br>No             | Btm Plug?<br>No |                   |  |                |  |                     |
| Initial Pump Rate (bbl/min)<br>4 |                                      | Final Pump Rate (bbl/min) |  | Avg Pump Rate (bbl/min) |           | Final Pump Pressure (psi) |                    | Plug Bump Pressure (psi)<br>800.0 |                          | Pressure Held (psi)          |                              | Pressure Release Date |            |                            | Full Return?<br>Yes | Vol Cement Ret (bbl)<br>6.0 |                 | Volume Lost (bbl) |  |                |  |                     |
| Recip?<br>No                     | Stroke (ft)                          | Recip Rate (...)          |  | Rotat...<br>No          | RPM (rpm) |                           | Pipe Movement Note |                                   |                          | MD Tagged (...)              |                              |                       | Tag Method |                            | Tag Wt (100...      | Prop...<br>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<br>(gal/sack) | Yield (ft³/sack) | Vol Pumped<br>(bbl) | Excess (%) | Dens (lb/gal) |
|-------|----------------|----------------|-----------------|---------------|-------|----------------|-----------------------------|------------------|---------------------|------------|---------------|
| Tail  | 15.0           | 929.0          | 1/18/2015       | 1/19/2015     | G     | 830            |                             | 1.18             | 174.4               | 100.0      | 15.20         |

### Intermediate Casing Cement, Casing, 1/23/2015 02:30

|                |                                     |                         |                                 |                           |   |                                       |                  |                                   |
|----------------|-------------------------------------|-------------------------|---------------------------------|---------------------------|---|---------------------------------------|------------------|-----------------------------------|
| Type<br>Casing | String<br>Intermediate, 7,162.0ftKB | Start Date<br>1/23/2015 | Cementing End Date<br>1/23/2015 | Wellbore<br>Original Hole | Job<br>Drilling - original, 1/16/2015 06:00 | Cementing Company<br>Sanjel (USA) Inc | Cement Objective | Eval Method<br>Returns to Surface |
|----------------|-------------------------------------|-------------------------|---------------------------------|---------------------------|---|---------------------------------------|------------------|-----------------------------------|

### Cement Stages

|                                  |             |   |                                |                |                              |           |                                      |                          |                                     |                                |                            |                              |                       |  |                            |                     |                  |                              |  |                   |  |                     |
|----------------------------------|-------------|---|--------------------------------|----------------|------------------------------|-----------|--------------------------------------|--------------------------|-------------------------------------|--------------------------------|----------------------------|------------------------------|-----------------------|--|----------------------------|---------------------|------------------|------------------------------|--|-------------------|--|---------------------|
| Stg #<br>1                       |             | Description<br>Intermediate Casing Cement |                                |                |                              | Objective |                                      | Top Depth (ftKB)<br>15.0 |                                     | Bottom Depth (ftKB)<br>7,162.0 |                            | Pump Start Date<br>1/23/2015 |                       |  | Pump End Date<br>1/23/2015 |                     | Top Plug?<br>Yes | Btm Plug?<br>No              |  |                   |  |                     |
| Initial Pump Rate (bbl/min)<br>5 |             |   | Final Pump Rate (bbl/min)<br>2 |                | Avg Pump Rate (bbl/min)<br>3 |           | Final Pump Pressure (psi)<br>1,650.0 |                          | Plug Bump Pressure (psi)<br>1,650.0 |                                | Pressure Held (psi)<br>0.0 |                              | Pressure Release Date |  |                            | Full Return?<br>Yes |                  | Vol Cement Ret (bbl)<br>10.0 |  | Volume Lost (bbl) |  |                     |
| Recip?<br>No                     | Stroke (ft) | Recip Rate (...)                          |                                | Rotat...<br>No | RPM (rpm)                    |           | Pipe Movement Note                   |                          |                                     |                                | MD Tagged (...)            |                              | Tag Method            |  | Tag Wt (100...             | Prop...<br>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<br>(gal/sack) | Yield (ft³/sack) | Vol Pumped<br>(bbl) | Excess (%) | Dens (lb/gal) |
|-------|----------------|----------------|-----------------|---------------|---------------|----------------|-----------------------------|------------------|---------------------|------------|---------------|
| Lead  | 15.0           | 5,100.0        | 1/23/2015       | 1/23/2015     | 1:1:0 POZ III | 365            |                             | 2.33             | 151.5               |            | 11.60         |
| Tail  | 5,100.0        | 7,162.0        | 1/23/2015       | 1/23/2015     | 1:1:2 G       | 290            |                             | 1.42             | 73.3                |            | 14.60         |