



Bison Oil Well Cementing
Single Cement Surface Pipe

| | |
|-----------|-----------------|
| Date: | 2/9/2014 |
| Invoice # | 12829 |
| API# | 05-087-08178-00 |
| Foreman: | Calvin Reimers |

Customer: Ensign
Well Name: David Bender 1A

| | | | |
|---------|--------|---------------------------|-----------|
| County: | Morgan | Consultant: | Byron |
| State: | Colo. | Rig Name & Number: | Ensign 12 |
| | | Distance To Location: | 51 Miles |
| Sec: | 12 | Units On Location: | 3106/3205 |
| Twp: | 4N | Time Requested: | 900am |
| Range: | 60W | Time Arrived On Location: | 845am |
| | | Time Left Location: | 345pm |

| WELL DATA | Cement Data |
|--|--|
| <div>Casing Size OD (in) : 8.6250</div> <div>Casing Weight (lb) : 24</div> <div>Casing Depth (ft.) : 524</div> <div>Total Depth (ft) : 550</div> <div>Open Hole Diameter (in.) : 12.25</div> <div>Conductor Length (ft) :</div> <div>Conductor ID :</div> <div>Shoe Joint Length (ft) : 45</div> <div>Landing Joint (ft) : 14</div> <div>Max Rate: 7</div> <div>Max Pressure: 2500</div> | <div>Cement Name: BFN III</div> <div>Cement Density (lb/gal) : 15.2</div> <div>Cement Yield (cuft) : 1.27</div> <div>Gallons Per Sack: 5.89</div> <div>% Excess: 60%</div> <div>Displacement Fluid lb/gal: 8.3</div> <div>BBL to Pit: 8.0</div> <div>Fluid Ahead (bbls):</div> <div>H2O Wash Up (bbls): 20.0</div> <div>Spacer Ahead Makeup</div> <div>0bbls H2O+KCL+Dye in 2nd 10bbls</div> |

| | | | |
|---|--------------------|--|----------------|
| Casing ID | 8.097 | Casing Grade | J-55 only used |
| Calculated Results | | Displacement: 31.42 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint) | |
| cuft of Shoe | 15.93 cuft | Pressure of cement in annulus | |
| (Casing ID Squared) X (.005454) X (Shoe Joint ft) | | Hydrostatic Pressure: 413.68 PSI | |
| cuft of Conductor | 0.00 cuft | Pressure of the fluids inside casing | |
| (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft) | | Displacement: 206.70 psi | |
| cuft of Casing | 216.23 cuft | Shoe Joint: 35.17 psi | |
| (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length) | | Total 241.86 psi | |
| Total Slurry Volume | 232.15 cuft | Differential Pressure: 171.82 psi | |
| (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing) | | | |
| bbls of Slurry | 66.15 bbls | Collapse PSI: 1370.00 psi | |
| (Total Slurry Volume) X (.1781) X (% Excess Cement) | | Burst PSI: 2950.00 psi | |
| Sacks Needed | 292 sk | Total Water Needed: 61.02 bbls | |
| (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement) | | | |
| Mix Water | 41.02 bbls | | |
| (Sacks Needed) X (Gallons Per Sack) ÷ 42 | | | |

X

Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.



Bison Oil Well Cementing
Single Cement Surface Pipe

Customer
Well Name

| |
|-----------------|
| Ensign |
| David Bender 1A |

INVOICE #
LOCATION
FOREMAN
Date

| |
|----------------|
| 12829 |
| Morgan |
| Calvin Reimers |
| 2/9/2014 |

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

| | | | | | | | | | | | | | | | | |
|----------------|-------|------------|-------|-----|------------|------|-----|------------|------|-----|------------|------|-----|------------|------|-----|
| Safety Meeting | 140pm | Displace 1 | | | Displace 2 | | | Displace 3 | | | Displace 4 | | | Displace 5 | | |
| MIRU | 115pm | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI |
| CIRCULATE | 206pm | 0 | 239pm | 130 | 0 | | | 0 | | | 0 | | | 0 | | |
| Drop Plug | 236pm | 10 | 241pm | 170 | 10 | | | 10 | | | 10 | | | 10 | | |
| | | 20 | 243pm | 220 | 20 | | | 20 | | | 20 | | | 20 | | |
| | | 30 | 246pm | 190 | 30 | | | 30 | | | 30 | | | 30 | | |
| | | 40 | 247pm | 190 | 40 | | | 40 | | | 40 | | | 40 | | |
| M & P | | 50 | Bump | 570 | 50 | | | 50 | | | 50 | | | 50 | | |
| Time | Sacks | 60 | | | 60 | | | 60 | | | 60 | | | 60 | | |
| 211pm | 292 | 70 | | | 70 | | | 70 | | | 70 | | | 70 | | |
| 225pm | | 80 | | | 80 | | | 80 | | | 80 | | | 80 | | |
| | | 90 | | | 90 | | | 90 | | | 90 | | | 90 | | |
| | | 100 | | | 100 | | | 100 | | | 100 | | | 100 | | |
| | | 110 | | | 110 | | | 110 | | | 110 | | | 110 | | |
| % Excess | 60% | 120 | | | 120 | | | 120 | | | 120 | | | 120 | | |
| Mixed bbls | 41 | 130 | | | 130 | | | 130 | | | 130 | | | 130 | | |
| Total Sacks | 292 | 140 | | | 140 | | | 140 | | | 140 | | | 140 | | |
| | | 150 | | | 150 | | | 150 | | | 150 | | | 150 | | |
| bbl Returns | 8 | | | | | | | | | | | | | | | |

Notes:

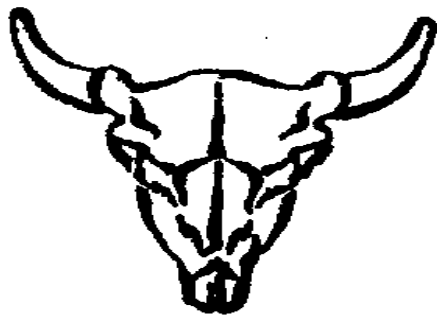
The day

Closed in with 560 PSI

X
Work Preformed

X
Title

X
Date



Bison Oil Well Cementing
Single Cement Surface Pipe

Cementing Customer Satisfaction Survey

| | |
|--------------|-----------------|
| Service Date | 2/9/2014 |
| Well Name | David Bender 1A |
| County | Morgan |
| State | Colo. |
| SEC | 12 |
| TWP | 4N |
| RNG | 60W |

| | |
|----------------|----------------------------|
| Invoice Number | 20511 |
| API # | 05-087-08178-00 |
| Job Type | Single Cement Surface Pipe |
| Company Name | Ensign |

| | |
|-------------------------|-------|
| Customer Representative | Byron |
|-------------------------|-------|

| | |
|-----------------|----------------|
| Supervisor Name | Calvin Reimers |
|-----------------|----------------|

| Employee Name (Including Supervisor) |
|--------------------------------------|
| Calvin Reimers |
| Pablo S |
| Tim V |
| Keith P |
| |

| Exposure Hours (Per Employee) |
|-------------------------------|
| 7 |
| 7 |
| 7 |
| 7 |
| |

Total Exposure Hours 28

Did we encounter any problems on this job? ☐ Yes ☒ No

To Be Completed By Customer

Rating/Description
5 - Superior Performance (Established new quality/performance standards)
4 - Exceeded Expectation (Provided more than what was required/expected)
3 - Met Expectations (Did what was expected)
2 - Below Expectations (Job problems/failures occurred - *Recovery made)
1 - Poor Performance (Job problems/failures occurred - *Some recovery made)
*Recovery: resolved issue(s) on jobsite in a timely and professional manner

| RATING | CATEGORY | CUSTOMER SATISFACTION RATING |
|--------|------------------------|---|
| | Personnel - | Did our personnel perform to your satisfaction? |
| | Equipment - | Did our equipment perform to your satisfaction? |
| | Job Design - | Did we perform the job to the agreed upon design? |
| | Product/Material - | Did our products and materials perform as you expected? |
| | Health & Safety - | Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc..)? |
| | Environmental - | Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc..)? |
| | Timeliness - | Was job performed as scheduled (On time to site, accessible to customers, completed when expected)? |
| | Condition/Appearance - | Did the equipment condition and appearance meet your expectations? |
| | Communication - | How well did our personnel communicate during mobilization, rig up and job execution? |

Please Circle:
Yes No Did an accident or injury occur?
Yes No Did an injury requiring medical treatment occur?
Yes No Did a first-aid injury occur?
Yes No Did a vehicle accident occur?
Yes No Was a post-job safety meeting held?

Please Circle:
Yes No Was a pre-job safety meeting held?
Yes No Was a job safety analysis completed?
Yes No Were emergency services discussed
Yes No Did environmental incident occur?
Yes No Did any near misses occur?

Additional Comments:

THE INFORMATION HEREIN IS CORRECT -

X

Customer Representative's Signature

DATE: _____

Any additional Customer Comments or HSE concerns should be described on the back of this form