

Casing Cementing



Company: SHELL ROCKIES
Well Name: Dawson Creeek 1-25
Field: WFU/Swan
County: Moffatt
State: CO

Date: 9/18/2012

Well Location:

Well Number (API):

Proposal Number: 1

Contact: Keith Smelker

Made By: Pyeboone Arunakul

Service from District: SWY - RockSprings

District Phone: 1-307-352-5000

Objective: Cement Surface casing 75% excess

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Schlumberger



EXECUTIVE SUMMARY

Enclosed are our recommendations for Schlumberger intervention on the referenced well. The proposal includes well data, design data, materials and resources requirements and cost estimates. The purpose of our services is to perform a Casing Cementing treatment.

Schlumberger has established a safety policy to which all Schlumberger personnel must adhere. A pre-job safety meeting will be held with customer representatives and other on location personnel to familiarize everyone with existing hazards and safety procedures. We would appreciate close cooperation between the customer representative and the Schlumberger representative to ensure a safe operation.

The estimated total cost of our services is **\$ 37,679.84**. All costs are estimates only. Actual costs will be determined by time, material and equipment used during treatment. Taxes are not included. All work will be subject to Schlumberger then-current General Terms and Conditions or to the terms and conditions of a Master Service Agreement if one is in force between Schlumberger and Customer. This quote is valid for a period of thirty (30) days from the date submitted.

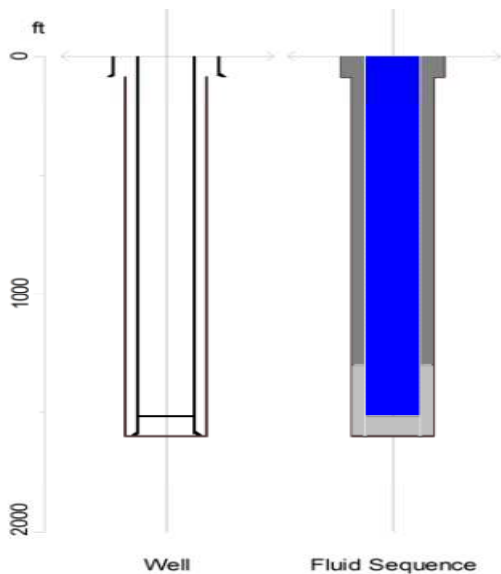
Thank you for considering Schlumberger.
Please do not hesitate to contact me with any questions or concerns.

Sincerely,

Pyeboone Arunakul
1-720-412-0375
PArunakul@slb.com



WELL DATA



IMPORTANT:

The well data shown on this page is based on information available when this treatment program was prepared. This data must be confirmed on location with the wellsite supervisor prior to the treatment. Any changes in the well data need to be reviewed for their impact on the treatment design.

Fluid Placement			
Fluid Name	Volume bbl	Density lb/gal	Top of Fluid ft
CW7	40.0	8.32	0.0
Surface 14.5 tail Slurry	159.0	14.50	0.0
15.8ppg Tail	41.9	15.80	1300.0
Water	149.1	8.32	0.0

Total Liquid Volume : 390.0 bbl

Well Data	
Job Type :	Casing Cementing
Total Depth (Measured) :	1600.0 ft
True Vertical Depth (TVD) :	1595.0 ft
BHST (Tubular Bottom Static Temperature) :	98 degF
BHCT (Tubular Bottom Circulating Temperature) :	81 degF

Open Hole		
Mean Diameter without Excess	Bottom Depth	Annular Excess
13.500 in	1600.0 ft	75.00 %

Previous Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
20 in	94.0 lb/ft	J-55	BTC	1.99 ft3/ft	90.0 ft

Casing					
OD	Weight	Grade	Thread	Inner Capacity	Bottom Depth
10 3/4 in	40.5 lb/ft	J-55	STC	0.55 ft3/ft	1600.0 ft

Annular Capacity (without Excess) : Casing Bottom / Open Hole : 0.36 ft3/ft
 Annular Capacity (without Excess) : Previous Casing Bottom / Casing : 1.36 ft3/ft



FLUID SYSTEMS

CW7			
System	CW7		
Density	8.32 lb/gal		
Total Volume	40.0 bbl		
Additives	Code	Description	Concentration

Surface 14.5 tail Slurry (629 sacks, 94 lb per sack of Blend)			
System	Conventional		
Density	14.50 lb/gal		
Yield	1.42 ft ³ /sk		
Mixed Water	6.962 gal/sk		
Mixed Fluid	6.962 gal/sk		
Total Volume	159.0 bbl		
Additives	Code	Description	Concentration
	D907	Cement	94.02 lb/sk WBWOB
	D029	Lost Circulation Control Agent	0.25 lb/sk WBWOB
	S001	CaCl ₂	2.00 % BWOB

15.8ppg Tail (201 sacks, 94 lb per sack of Blend)			
System	Conventional		
Density	15.80 lb/gal		
Yield	1.17 ft ³ /sk		
Mixed Water	5.115 gal/sk		
Mixed Fluid	5.115 gal/sk		
Total Volume	41.9 bbl		
Additives	Code	Description	Concentration
	D907	Cement	94.02 lb/sk WBWOB
	S001	CaCl ₂	2.00 % BWOB
	D029	Lost Circulation Control Agent	0.25 lb/sk WBWOB

Water			
System	Water		
Density	8.32 lb/gal		
Total Volume	149.1 bbl		
Additives	Code	Description	Concentration

Some of the chemicals specified in this program may have toxic properties. All personnel should be familiar with the inherent dangers and appropriate safeguards to prevent accidental injury. Use of the chemicals may be governed by certain laws and regulations and should only be used in accordance with such. Please refer to the MSDS sheets for the recommended safety precautions and required minimum personal protective equipment.



PROCEDURES

1. Volumes Loaded will vary 3% to 5% based on dead volumes of bulk units.
2. Arrive on location and check in with company man
3. MI (Move in) Schlumberger equipment.
4. Confirm all procedures, volumes and calculations with company man before or after rig up
5. Conduct Rig-up, Prime-up and pressure test safety meeting.
6. RU (Rig up) Schlumberger equipment and pressure test to customer master valve.
7. Conduct pre-job safety meeting and review pump schedule with all crews to inform them of job details
8. (pump rates, pressure, volumes and wash up procedures as location rig up allows)
9. Perform treatment per design pumping schedule and instructions of client representative.
10. Conduct post job rig down meeting with SLB and Rig crews.
11. Rig down Schlumberger equipment.
12. Conduct convoy meeting and move out Schlumberger equipment.



PRICE ESTIMATE

Equipment and Services						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
48019000	Cement Bulk Unit	4 HR	107.50	430.00	42 %	249.40
48019000	Cement Bulk Unit after 4 hrs	1 HR	107.50	107.50	25 %	80.63
48020000	Pumps by unit, additional time	1 HR	570.00	570.00	25 %	427.50
48021000	Silo Setup	1 EA	570.00	570.00	42 %	330.60
48601000	Cementing Well Head Hardware	1 JOB	520.00	520.00	42 %	301.60
49100000	Cement Service Charge	861 CF	2.27	1,954.47	42 %	1,133.59
49102000	Cement Transport	7771 MI	2.02	15,697.42	42 %	9,104.50
56702106	Cementing Plugs	1 EA	614.00	614.00	42 %	356.12
58498000	Safety Restrain System	1 JOB	812.50	812.50	0 %	812.50
59200002	Pump Truck/ Silo mover Mileage	390 MI	5.52	2,152.80	42 %	1,248.62
59200005	Car/PU Mileage	390 MI	3.24	1,263.60	42 %	732.89
59697004	Job Monitoring	1 JOB	880.00	880.00	42 %	510.40
102476000	Personnel: Field Specialist/Field Engineer	1 HR	105.00	105.00	25 %	78.75
102476001	Personnel: Operator/Technician	3 HR	85.00	255.00	25 %	191.25
102871020	Pumps by unit, depth charge	1 EA	2,240.00	2,240.00	42 %	1,299.20
102946002	Fuel Surcharge	4 EA	700.00	2,800.00	0 %	2,800.00
107264001	DOT Vehicle Charge	4 EA	341.00	1,364.00	0 %	1,364.00

Subtotals: \$ 32,336.29 \$ 21,021.55

The charges above are showing 5hrs on location which is 4 base hrs and 1hr of overtime for reference at 25% discount for overtime



Volumes Loaded will vary 3% to 5% based on dead volumes of bulk units.

Materials						
Code	Standard Description	Quantity	Unit List Price	Total List Price \$	Discount Rate	Discounted Price \$
D029	Lost Circulation Control Agent	208 LB	3.97	825.76	42 %	478.94
D826	CW7	40 BBL	44.80	1,792.00	42 %	1,039.36
D907	Cement	830 CF	22.55	18,716.50	42 %	10,855.57
D974	CemNET Conversion	100 BBL	57.50	5,750.00	42 %	3,335.00
S001	CaCl2	1559 LB	1.05	1,636.95	42 %	949.43
Subtotals:				\$ 28,721.21		\$ 16,658.30
Total Discount:					\$	23,377.66
Job Price Estimate*:					\$	37,679.84