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## **Cement Recommendation**

Intermediate Casing

**Prepared by:**

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**Prepared for:**

Company Engineer  
CM@ABC.com

**ABC Energy**

**ABC # 123**

Martin County, Texas  
3/19/2019

**Sales Representative:**

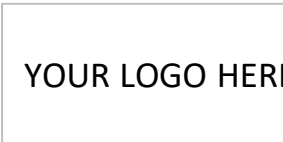
John Walker

**District Manager:**

Good Man

**Service Point**

Midland, Tx  
Office: 432-210-5432  
Fax: 432-698-8765



**Intermediate Casing**

Job Data			
<b>MD / TVD</b>	5,019.0	<b>Casing</b>	8.625 in 32 #, ( 0 to 5,019ft )
<b>Est, BHST/BHCT</b>	118F/96F (0.76F/100 ft)	<b>Previous Casing</b>	13.375 in. 48#( Surface to 575 ft )
<b>Mud Weight / Type</b>	10 ppg, Brine	<b>Open Hole</b>	11 in. ( 575 to 5,019ft )

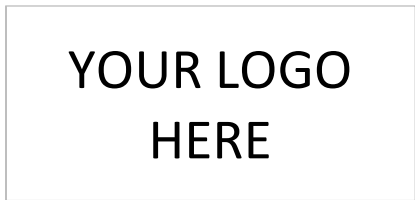
Calculations										
Stage	Length, ft	Csg / OH ID, in	Csg OD,in	Exs, %	cf/ft	Vol,cf	Vol, bbl			
Lead	575	12.715	8.625	0	0.476	274	48.7			
Lead	3,444	11.000	8.625	50	0.381	1,312	233.7			
Tail	1,000	11.000	8.625	50	0.381	381	67.9			
Shoe Cement	80	7.921		0	0.342	27	4.9			

Spacer	
50 bbls Spacer: Fresh Water @ 8.34 ppg	

Lead Cement			
50:50 (POZ:Class C) + 3% Salt BWOW + 10% Bentonite + 0.3% CFL-1 + 0.3% CR-1 + 1.5 lb/sk PhenoSeal + 0.125 lb/sk Celloflake			
<b>TOC</b>	Surface	<b>Slurry Density (ppg)</b>	11.8
<b>Vol (Sks)</b>	669	<b>Yield (cf/sx)</b>	2.37
<b>Exs, (%)</b>	50	<b>Water (gps)</b>	13.32
Other info add later			

Tail Cement			
Class C + 0.2% CFL-1 + 0.3% CR-1 + 0.3% CFR-1			
<b>TOC</b>	4,019.0	<b>Slurry Density (ppg)</b>	14.8
<b>Vol (Sks)</b>	305	<b>Yield (cf/sx)</b>	1.34
<b>Exs, (%)</b>	50	<b>Water (gps)</b>	6.43
Other info add later			

ABC Energy  
 ABC # 123  
 March 19, 2019



Intermediate Casing

MIDLAND, TX						
	Quantity	Unit	Unit Price	Discount	Amount	After Discount
<b>Depth Charge</b>						
Casing 4500'-6000' 6hrs on Location	1	Ea	\$6,000.00	0.0%	\$6,000.00	\$6,000.00
<b>Mileage Charge</b>						
Equipment Mileage	50	Mile	\$11.00	0.0%	\$550.00	\$550.00
Pick-up Mileage Charge	50	Mile	\$8.00	0.0%	\$400.00	\$400.00
<b>Cement Delivery Charge</b>						
Cement Delivery/Return Charge	2,360	T/M	\$2.80	0.0%	\$6,607.15	\$6,607.15
<b>Bulk Plant</b>						
Bulk Material Mixing Service Charge	1,140	Cuft	\$2.35	0.0%	\$2,678.51	\$2,678.51
<b>Cementing Head</b>						
Cementing Head & Manifold 65/8 -103/4	1	Job	\$1,000.00	0.0%	\$1,000.00	\$1,000.00
Valve and Swage	1	Job	\$800.00	0.0%	\$800.00	\$800.00
<b>Miscellaneous Services</b>						
Crew Safety and Performance	2	Job	\$1,450.00	0.0%	\$2,900.00	\$2,900.00
Transfer Pump Trailer	1	Day	\$1,250.00	0.0%	\$1,250.00	\$1,250.00
Environmental Charge	1	Job	\$550.00	0.0%	\$550.00	\$550.00
Safety Restraint System	1	Job	\$600.00	0.0%	\$600.00	\$600.00
<b>Cementing Materials</b>						
Class C Cement	640	Sks	\$29.00	0.0%	\$18,545.50	\$18,545.50
POZ ( C )	335	Sks	\$23.00	0.0%	\$7,693.50	\$7,693.50
Bentonite	5,620	Lbs	\$1.10	0.0%	\$6,181.56	\$6,181.56
Celloflake	84	Lbs	\$7.05	0.0%	\$589.56	\$589.56
PhenoSeal	1,004	Lbs	\$2.40	0.0%	\$2,408.40	\$2,408.40
CDF-1	19	Gal	\$94.00	0.0%	\$1,786.00	\$1,786.00
CFL-1	226	Lbs	\$22.00	0.0%	\$4,970.42	\$4,970.42
CR-1	255	Lbs	\$19.20	0.0%	\$4,888.28	\$4,888.28
CFR-1	86	Lbs	\$19.00	0.0%	\$1,634.19	\$1,634.19
Salt	2,230	Lbs	\$0.99	0.0%	\$2,207.32	\$2,207.32
<b>Laboratory Testing Charges</b>						
Lab Testing	2	Test	\$2,250.00	0.0%	\$4,500.00	\$4,500.00

	<b>Price Book Total</b>	<b>\$78,740.39</b>
0%	<b>Discount</b>	<b>\$0.00</b>
	<b>Price</b>	<b>\$78,740.39</b>

## Oil Service Company

Sales Order#: 123456789A

Date: 43543

Customer : ABC Energy

Well name: ABC # 123

Job Type Intermediate Casing

Paul Aahlin

Office: 432-210-5432

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Mobile: 432-123-4567

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## Product Description

**Class C** Is an API cement intended for surface to a depth of 6000 ft. Class C is sulfate resistant and yields early compressive strengths.

**Class H** Is an API cement intended for use from surface to 8000 feet without any modifications. When used with accelerators or retarders class H can be used for different depths or temperatures.

**CaCl<sub>2</sub> - (Calcium Chloride)** Is an accelerating additive used for slurries that require fast set times and early strength development, or can be used as an accelerator for Sodium Silicate applications

**Gel** Bentonite, is a clay material used as an extender in both lower density and pozzolan slurries. It controls excessive free water.