

Short Cuts

TANK CAPACITY

BBLS. (42 gal.) equals $D^2 \times 14 \times h$

D equals diameter in feet.

h equals height in feet.

BARRELS PER DAY

Multiply gals. per minute x 34.2

HP equals $BPH \times PSI \times .0004$

BPH - barrels per hour

PSI - pounds square inch

TO FIGURE PUMP DRIVES

* D - Diameter of Pump Sheave

* d - Diameter of Engine Sheave

SPM - Strokes per minute

RPM - Engine Speed

R - Gear Box Ratio

*C - Shaft Center Distance

D - $RPM \times d$ over $SPM \times R$

d - $SPM \times R \times D$ over RPM

SPM - $RPM \times D$ over $R \times D$

R - $RPM \times D$ over $SPM \times D$

BELT LENGTH - $2C + 1.57(D + d) + \frac{(D-d)^2}{4C}$

* Need these to figure belt length

TO FIGURE AMPS: $\frac{WATTS}{VOLTS} = AMPS$

746 WATTS equal 1 HP

Log Book

Well No. A-28

Farm Knocke

KS Miami
(State) (County)

10 18 24
(Section) (Township) (Range)

For Altavista Energy
(Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East

Louisburg, KS 66053

913-710-5400

| Thickness of Strata | Formation | Total Depth | Remarks |
|---------------------|-------------|-------------|------------------------|
| 0-19 | soil-clay | 19 | |
| 32 | Lime | 51 | |
| 7 | Shale | 58 | |
| 20 | Lime | 78 | |
| 5 | Shale | 83 | |
| 2 | Lime | 85 | |
| 4 | Shale | 89 | |
| 6 | Lime | 95 | Heitha |
| 23 | Shale | 118 | |
| 9 | Sand | 127 | broken - good oil show |
| 10 | sandy shale | 137 | |
| 118 | Shale | 255 | |
| 9 | sandy Lime | 264 | white - no oil |
| 41 | Shale | 305 | 293 - red bed |
| 5 | Lime | 310 | |
| 19 | Shale | 329 | |
| 7 | Lime | 336 | odor |
| 16 | Shale | 352 | |
| 4 | Lime | 356 | |
| 11 | Shale | 367 | |
| 23 | Lime | 390 | |
| 7 | Shale | 397 | |
| 2 | Lime | 399 | |
| 9 | Shale | 408 | |
| 2 | Lime | 410 | |
| 30 | Shale | 440 | |
| 4 | sandy shale | 444 | odor - no show |



REMIT TO
 QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston, TX 77210-4346

MAIN OFFICE
 P.O.Box884
 Chanute, KS 66720
 620/431-9210, 1-800/467-8676
 Fax 620/431-0012

Invoice

Invoice#

811258

Invoice Date: 09/15/17

Terms: Net 30

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ALTAVISTA ENERGY INC

PO BOX 128
 WELLSVILLE KS 66092
 USA
 7858834057

KNOCHE #A-28

| Part No | Description | Quantity | Unit Price | Discount(%) | Total |
|---------|--|----------|------------|-------------|--------|
| CE0450 | Cement Pump Charge 0 - 1500' | 1.000 | 1,500.0000 | 55.000 | 675.00 |
| CE0002 | Equipment Mileage Charge - Heavy Equipment | 30.000 | 7.1500 | 55.000 | 96.53 |
| CE0711 | Minimum Cement Delivery Charge | 1.000 | 660.0000 | 55.000 | 297.00 |
| WE0853 | 80 BBL Vacuum Truck (Cement Services) | 2.000 | 100.0000 | 55.000 | 90.00 |
| CC5840 | Poz-Blend I A (50:50) | 67.000 | 13.5000 | 55.000 | 407.03 |
| CC5965 | Bentonite | 213.000 | 0.3000 | 55.000 | 28.76 |
| CC5326 | Sodium Chloride, Salt | 135.000 | 1.0000 | 55.000 | 60.75 |
| CC6077 | Kolseal | 335.000 | 0.5000 | 55.000 | 75.38 |
| CP8176 | 2 7/8" Top Rubber Plug | 1.000 | 45.0000 | 55.000 | 20.25 |

Subtotal 3,890.40

Discounted Amount 2,139.72

SubTotal After Discount 1,750.68

Amount Due 3,995.67 If paid after 10/15/17

Tax: 47.37

Total: 1,798.07



PRESSURE PUMPING LLC
 PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

9039 / 8931

TICKET NUMBER 53874
 LOCATION OTTAWA KS
 FOREMAN FRED MADER

FIELD TICKET & TREATMENT REPORT
 CEMENT

Invoice #811258

| DATE | CUSTOMER # | WELL NAME & NUMBER | SECTION | TOWNSHIP | RANGE | COUNTY |
|--|------------|--------------------|-------------------------------|----------|-------|--------|
| 9-14-17 | 3244 | Kuache # A-28 | NW 16 | 18 | 24 | MI |
| CUSTOMER Altavista Energy Inc | | | TRUCK # DRIVER TRUCK # DRIVER | | | |
| MAILING ADDRESS P.O. Box 128 | | | 712 / Fre Mad / | | | |
| CITY STATE ZIP CODE Wellsville KS 66092 | | | 467 / Mad Car / | | | |
| | | | 675 / Kel Det / | | | |
| | | | 804 / Arl Mad / | | | |

JOB TYPE Longstring HOLE SIZE 5 7/8 HOLE DEPTH 540 CASING SIZE & WEIGHT 2 7/8 EUE
 CASING DEPTH 524 DRILL PIPE Baffle in tubing @ 492 OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 20' Plug
 DISPLACEMENT 2.9 DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 BPM

REMARKS: Hold Safety meeting. Establish pump rate. Mix & Pump
100# Gel Flush. Mix & Pump 67 sks Poz Blend IA Cement 2% Gel
5% Salt 5" Kal Seal/sk. Cement to surface. Flush pump &
lines clean. Displace 2 1/2" Rubber plug to baffle in casing.
Pressure to 200# PSI. Release pressure to set float valve.
Shut in casing

TOS Drilling

Fred Mader

| ACCOUNT CODE | QUANTITY or UNITS | DESCRIPTION of SERVICES or PRODUCT | UNIT PRICE | TOTAL |
|--------------|-------------------|------------------------------------|------------|---------|
| CE0450 | 1 | PUMP CHARGE | 467 | 1500.00 |
| CE0002 | 30 mi | MILEAGE | 467 | 214.00 |
| CE0711 | Minimum | Ton Miles Delivery | 804 | 660.00 |
| WB0853 | 2 hrs | 80 BBL Vac Truck | 675 | 200.00 |
| | | Sub Total | | 2574.00 |
| | | less 55% | | 1158.53 |
| CC5810 | 67 sks | Poz Blend IA Cement | | 904.50 |
| CC5965 | 213# | Bentonite Gel. | | 632.00 |
| CC5326 | 135# | Salt | | 135.00 |
| CC6077 | 335# | Kal Seal | | 167.50 |
| CP8176 | 1 | 2 1/2" Rubber Plug | | 4.50 |
| | | Sub Total | | 1315.20 |
| | | less 55% | | 592.16 |
| | | 8% | SALES TAX | 47.37 |
| | | | ESTIMATED | |
| | | | TOTAL | 1798.00 |

Ravin 3737
 AUTHORIZATION No Co Rep on Site. TITLE _____ DATE (39956)

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.