

Short Cuts

TANK CAPACITY

BBLs. (42 gal.) equals $D^2 \times 1.4 \times h$

D equals diameter in feet.

h equals height in feet.

BARRELS PER DAY

Multiply gals. per minute x 34.2

HP equals BPH x PSI x .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. AI-2

Farm Holtz

KS Miami
(State) (County)

16 18 24
(Section) (Township) (Range)

For Altavista Energy
(Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East
Louisburg, KS 66053
913-710-5400

Holtz Farm: Miami County

KS State: Well No. AI-2

Elevation 921

Commenced Spuding 12-23 2015

Finished Drilling 1-4 2016

Driller's Name Wesley Dollard

Driller's Name

Driller's Name

Tool Dresser's Name Ryan Ward

Tool Dresser's Name

Tool Dresser's Name

Contractor's Name TOS

16 18 24

(Section) (Township) (Range)

Distance from S line, 165 ft.

Distance from E line, 4215 ft.

3 sacks 8 hrs
5 5/8 borehole
2 7/8 casing

CASING AND TUBING MEASUREMENTS

Feet	In.	Feet	In.	Feet	In.
522.	60	Ball	1/2		
550.	20	Float		27	1/8
560	TD				

CASING AND TUBING RECORD

- 10" Set _____ 10" Pulled _____
- 8" Set _____ 8" Pulled _____
- 7.6" Set 23 6 3/4" Pulled _____
- 4" Set _____ 4" Pulled _____
- 2" Set _____ 2" Pulled _____

Thickness of Strata	Formation	Total Depth	Remarks
0-5	soil - clay	5	
7	Lime	12	
14	Shale	26	
31	Lime	57	
9	shale	66	
20	Lime	86	
5	Shale	91	
2	Lime	93	
4	Shale	97	
6	Lime	103	
22	Shale	125	Hertha
12	sand	137	
16	sandy shale	153	broken - heavy oil
113	Shale	266	
11	sand	277	water
35	Shale	312	
5	Lime	317	
23	Shale	340	
6	Lime	346	
14	Shale	360	
4	Lime	364	
12	Shale	376	
25	Lime	401	
68	shale	469	
4	sandy shale	473	
13	sand	486	
22	sandy shale	508	solid - great saturation

508

Thickness of Strata	Formation	Total Depth	Remarks
52	shale	560	TD



REMIT TO
 Consolidated Oil Well Services, 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# 806787

Invoice Date: 01/06/16 Terms: Net 30 Page 1

ALTAVISTA ENERGY INC
 4595 K-33 HWY, PO BOX 128
 WELLSVILLE KS 66092
 USA
 7858834057

holtz # ai-2

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0450	Cement Pump Charge 0 - 1500'	1.000	1,500.0000	46.000	810.00
CE0002	Equipment Mileage Charge - Heavy Equipment	30.000	7.1500	46.000	115.83
CE0711	Minimum Cement Delivery Charge	1.000	660.0000	46.000	356.40
WE0853	80 BBL Vacuum Truck (Cement Services)	1.500	100.0000	46.000	81.00
CC5840	Poz-Blend I A (50:50)	70.000	13.5000	46.000	510.30
CC5965	Bentonite	218.000	0.3000	46.000	35.32
CC5326	Sodium Chloride, Salt	135.000	0.7500	46.000	54.68
CC6077	Kolseal	350.000	0.5000	46.000	94.50
CP8176	2 7/8" Top Rubber Plug	1.000	45.0000	46.000	24.30
CC6128	Mud Flush - C	0.500	50.0000	46.000	13.50

Subtotal 3,881.15
 Discounted Amount 1,785.33
 SubTotal After Discount 2,095.82

Amount Due 3,989.68 If paid after 02/05/16

Tax: 58.61

Total: 2,154.44



CONSOLIDATED
Oil Well Services, LLC

Invoice #806787

5097
5005

TICKET NUMBER 49956
LOCATION Ottawa KS
FOREMAN Fred Mader

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

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
1-4-16	3244	Holtz # A I-2	SW 16	18	24	M1
CUSTOMER #			TRUCK #			
H/ta vista Energy			712			
MAILING ADDRESS			DRIVER			
P.O. Box 128			Fred Mader			
CITY			TRUCK #			
Wellsville			495			
STATE			DRIVER			
KS			Harvey			
ZIP CODE			TRUCK #			
66092			675			
			DRIVER			
			Phil Mader			

JOB TYPE long string HOLE SIZE 5 7/8 HOLE DEPTH 560' CASING SIZE & WEIGHT 2 7/8 EOE
 CASING DEPTH 550 DRILL PIPE Bafflem TUBING 2 1/2 OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 28' x Ply
 DISPLACEMENT 300 BBL DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 BPM

REMARKS: Hold safety meeting. Establish pump rate. pump 1/2 Gal Mud Flush. C
+ Circulate well to condition hole. Mix & Pump 100# Gal Flush.
Mix & Pump 70 sks per Blend I A Cement 2 7/8 Gal 5% Salt 5%
Kol Seal /sk. Cement to surface Flush pump + lines clean. Displace
2 1/2" Rubber plug to baffle in casing. Pressure to 800# PSI.
Release pressure to set float valve. Shut in casing.

POS Drilling. (w/c)

Fred Mader

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0450	1	PUMP CHARGE	495	1500 ⁰⁰
CE0002	30 mi	MILEAGE	495	21450
CE0211	Minimum	Tax Miles Delivery	510	660 ⁰⁰
WE0858	1 1/2 hr	80 BBL Vac Truck	675	1500 ⁰⁰
		Sub Total		252450
		Less 46%		116127
				136323
CC 5946	70 SKS	Per Blend I A Cement		945 ⁰⁰
CC 5965	215#	Bentonite Gel		6540
CC 5326	135#	Salt		10125
CC 6077	350#	Kol Seal		175 ⁰⁰
CP 8176	1	2 1/2" Rubber Plug		45 ⁰⁰
CC 6128	1/2 Gal	Mud Flush C		25 ⁰⁰
		Sub Total		135685
		Less 46%		62406
				73279
				59
			8%	SALES TAX
				5861
				ESTIMATED TOTAL
				215441

Ravin 3737
 AUTHORIZATION Do Co Rep on Site TITLE _____ DATE (3989.68)

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.