Miami County, KS
Well: Holtz A-3
Lease Owner: AltaVista

Town Oilfield Service, Inc.
(913) 837-8400

Commenced Spudding:
1/6/2016

WELL LOG

Thickness of Strata	Formation	Total Depth
0-2	Soil-Clay	2
3	Lime	5
13	Shale	18
34	Lime	52
6	Shale	58
22	Lime	80
4	Shale	84
2	Lime	86
4	Shale	90
7	Lime	97
20	Shale	117
14	Sand	131
49	Sandy Shale	180
81	Shale	261
9	Sand	270
36	Shale	306
5	Lime	311
19	Shale	330
6	Lime	336
17	Shale	353
4	Lime	357
14	Shale	371
24	Lime	395
73	Shale	468
5	Sandy Shale	473
1	Sand	474
18	Core	492
27	Shale	519
1	Lime	520
20	Shale	540-TD

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Commenced Spudding:
1/6/2016

Core		
		474
1	Sand	475
17	Sandy Shale	492

Short Cuts

TANK CAPACITY

BBLS. (42 gal.) equals D^2x.14xh
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 - RPMxd over SPMxR
d - SPMxRxD over RPM
SPM - RPMXD over RxD
R - RPMXD over SPMxD

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

* Need these to figure belt length

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

746 WATTS equal 1 HP

Log Book

Well No. A-3

Farm Holtz

KS (State) Miami (County)

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

For Altavista Energy inc (Well Owner)

Town Oilfield Services, Inc.
1207 N. 1st East
Louisburg, KS 66053
913-710-5400

Holtz Farm: Miami County

KS State; Well No. A-3

Elevation 923

Commenced Spuding 1-6 20 16

Finished Drilling 1-11 20 16

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, 495 ft.

Distance from E line, 4815 ft.

3 sacks 5 5/8 borehole

1 core 2 7/8 casing

9 hrs

1 hr Dozer time

CASING AND TUBING RECORD

10" Set _____ 10" Pulled _____

8" Set _____ 8" Pulled _____

7 6¾" Set 23 6¼" Pulled _____

4 Set _____ 4 Pulled _____

2" Set _____ 2" Pulled _____

CASING AND TUBING MEASUREMENTS

Feet	In.	Feet	In.	Feet	In.
469.	75	Seat nipple			
501.	45	Baffle			
525.	40	Float			
				2 7/8	
540	TD				

Thickness of Strata	Formation	Total Depth	Remarks
0-2	soil - clay	2	
3	Lime	5	
13	Shale	18	
34	Lime	52	
6	Shale	58	
22	Lime	80	
4	Shale	84	
2	Lime	86	
4	Shale	90	
7	Lime	97	Hertha
20	Shale	117	
14	Sand	131	broken Oil
49	sandy shale	180	
81	shale	261	
9	Sand	270	no Oil
36	shale	306	
5	Lime	311	
19	Shale	330	
6	Lime	336	
17	Shale	353	
4	Lime	357	
14	Shale	371	
24	Lime	395	
73	Shale	468	
5	sandy shale	473	
1	Sand	474	broken Oil
16	core	490	

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Thickness of Strata	Formation	Total Depth	Remarks
27	Shale	519	
1	Lime	520	
20	Shale	540	TD

Thickness of Strata	Formation	Total Depth	Remarks
	Core		
		474	
1	Sand	475	mostly solid - good saturation
17	sandy shale	492	sandy shale - no oil

CONSOLIDATED
Oil Well Services, LLC

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# 806823

Invoice Date: 01/13/16 Terms: Net 30 Page 1

ALTAVISTA ENERGY INC

4595 K-33 HWY, PO BOX 128
WELLSVILLE KS 66092
USA

7858834057

holtz #a-3

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)	1.000	100.0000	46.000	54.00
CC5840	Poz-Blend I A (50:50)	73.000	13.5000	46.000	532.17
CC5965	Bentonite	223.000	0.3000	46.000	36.13
CC5326	Sodium Chloride, Salt	141.000	0.7500	46.000	57.11
CC6077	Kolseal	365.000	0.5000	46.000	98.55
CP8176	2 7/8" Top Rubber Plug	1.000	45.0000	46.000	24.30

Subtotal	3,860.15
Discounted Amount	1,775.67
SubTotal After Discount	2,084.48

Amount Due 3,971.00 If paid after 02/12/16

Tax:	59.86
Total:	2,144.35

CONSOLIDATED
Oil Well Services, LLC

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

Invoice #806823 5131/5034

TICKET NUMBER 49959
LOCATION Ottawa KS
FOREMAN Fred Mader

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
1-11-16	3244	Holtz # A-3	SW 16	18	24	MI

CUSTOMER: Altavista Energy
MAILING ADDRESS: P. O. Box 128
CITY: Wellsville | STATE: KS | ZIP CODE: 66092

TRUCK #	DRIVER	TRUCK #	DRIVER
712	Fre Mad		
495	Nat Bec		

JOB TYPE Long string HOLE SIZE 5 7/8 HOLE DEPTH 540 CASING SIZE & WEIGHT 2 7/8 EUE
CASING DEPTH 525' DRILL PIPE Baffle in TUBING @ 501 OTHER
SLURRY WEIGHT SLURRY VOL WATER gal/sk CEMENT LEFT In CASING 24' + Plug
DISPLACEMENT 2.9 BBL DISPLACEMENT PSI MIX PSI RATE 4 BPM.

REMARKS: Hold Safety meeting. Establish pump rate. Mix + Pump 100# Gel Flush. Mix + Pump 73 SKS Pozblend I-A Cement 2% Gel 5% Salt 5# Kol Seal/Sk. Cement to Surface. Flush pump + lines clean. Displace 2 7/8" Rubber plug to Baffle in Casing. Pressure to 800# PSI. Release pressure to set float Valve. Shut in Casing.

TQS Drilling - Wes Dollard Fred Mader

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0450	1	PUMP CHARGE	1500.00	
CE0002	30 mi	MILEAGE	2.145	
CE07A	Minimum	Ton Miles Delivery	660.00	
WED853	1 hr	80 BBL Vac Truck	100.00	
		Sub Total.	2474.50	
		Less 46%	-1138.23	1336.23
1471 CC5840	73 sks	Poz Blend I A Cement	9.85.50	
CC5965	223#	Bentonite Gel	6.60	
CC5326	141#	Salt	1.05.75	
CC6077	365#	Kol Seal	1.82.50	
CP8176	1	2 7/8" Rubber Plug	45.00	
		Sub Total	1385.65	
		Less 46%	-637.40	748.25
		6%	SALES TAX	59.66
Ravin 3737			ESTIMATED TOTAL	2144.35

AUTHORIZTION TITLE DATE (3971.00)

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