

Miami County, KS
 Well: Morrow A-8
 Lease Owner: Altavista Energy

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

Commenced Spudding:
 7-13-2015

WELL LOG

Thickness of Strata	Formation	Total Depth
0 - 6	Soil - Clay	6
40	Lime	46
38	Shale	84
13	Lime	97
14	Shale	111
4	Lime	115
40	Shale	155
10	Lime	165
16	Shale	181
25	Lime	206
8	Shale	214
20	Lime	234
4	Shale	238
3	Lime	241
6	Shale	247
6	Lime	253
7	Shale	260
1	Sand	261
3	Sand	264
17	Shale	281
7	Sand	288
9	Sand	297
4	Sand	301
19	Sandy Shale	320
46	Shale	366
6	Sand	372
3	Sandy Shale	375
27	Shale	402
4	Limey Sand	406
28	Shale	434
2	Limey Sand	436
18	Shale	454
5	Lime	459
3	Shale	462
5	Lime	467
5	Shale	472
9	Lime	481
18	Shale	499
4	Lime	503
9	Shale	512

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-8

Farm Morrow

KS (State) Miami (County)

17 (Section) 16 (Township) 24 (Range)

For Altavista Energy inc (Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East

Louisburg, KS 66053

913-710-5400

Thickness of Strata	Formation	Total Depth	Remarks
0-6	soil - clay	6	field stone
40	Lime	46	
38	shale	84	
13	Lime	97	
14	shale	111	redbed
4	Lime	115	
40	shale	155	
10	Lime	165	
16	shale	181	
25	Lime	206	slight show
8	shale	214	
20	Lime	234	
4	shale	238	
3	Lime	241	
6	shale	247	
6	Lime	253	Hertha
7	shale	260	
1	sand	261	oil - broken
3	sand	264	no oil
17	shale	281	
7	sand	288	no oil
9	sand	297	gas
4	sand	301	oil show - broken
19	sandy shale	320	
46	shale	366	
6	sand	372	
3	sandy shale	375	grey

375

Thickness of Strata	Formation	Total Depth	Remarks
27	Shale	402	
4	limy sand	406	
28	Shale	434	no oil
2	limy sand	436	
18	Shale	454	slight show
5	Lime	459	
3	Shale	462	
5	Lime	467	
5	Shale	472	
9	Lime	481	
18	Shale	499	
4	Lime	503	
9	Shale	512	
3	Lime	515	
1	Shale	516	
2	Lime	518	
6	Shale	524	
1	Lime	525	
2	Shale	527	
5	Lime	532	
8	Shale	540	
1	Lime	541	
24	Shale	565	
1	Lime	566	
38	Shale	604	
3	sand	607	
9	sandy shale	616	no oil



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# 804974

Invoice Date: 07/20/15 Terms: Net 30 Page 1

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

morrow # a-8

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)	2.000	100.0000	46.000	108.00
CC5840	Poz-Blend I A (50:50)	129.000	13.5000	46.000	940.41
CC5965	Bentonite	417.000	0.3000	46.000	67.55
CC5326	Sodium Chloride, Salt	271.000	0.7500	46.000	109.76
CC6077	Kolseal	645.000	0.5000	46.000	174.15
CP8176	2 7/8" Top Rubber Plug	1.000	45.0000	46.000	24.30

Subtotal 5,011.85
 Discounted Amount 2,305.45
 SubTotal After Discount 2,706.40

Amount Due 5,206.84 If paid after 08/19/15

Tax: 105.29
 Total: 2,811.69



CONSOLIDATED
Oil Well Services, LLC

3524
3451

TICKET NUMBER 49724

LOCATION Ottawa, KS

FOREMAN Casey Kennedy

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

FIELD TICKET & TREATMENT REPORT
CEMENT

Invoice # **804974**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7/14/15	3244	Morrow # A-8	SE 17	116	24	Mi
CUSTOMER <u>Havista Energy</u>			TRUCK #			
MAILING ADDRESS <u>PO Box 128</u>			DRIVER			
CITY <u>Wellsville</u>			STATE <u>KS</u>			
STATE <u>KS</u>			ZIP CODE <u>66092</u>			
			TRUCK #	DRIVER	TRUCK #	DRIVER
			<u>729</u>	<u>Casey</u>	<u>✓</u>	<u>✓</u>
			<u>467</u>	<u>Kei Car</u>	<u>✓</u>	<u>✓</u>
			<u>548</u>	<u>Trobor</u>	<u>✓</u>	<u>✓</u>
			<u>309</u>	<u>Mikhaa</u>	<u>✓</u>	<u>✓</u>

JOB TYPE longstring HOLE SIZE 6 3/4" HOLE DEPTH 700' CASING SIZE & WEIGHT 2 7/8" EUE
 CASING DEPTH 1084' DRILL PIPE _____ TUBING baffle - 652' OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 32'
 DISPLACEMENT 3.77 bbls DISPLACEMENT PSI _____ MIX PSI _____ RATE 5.5 bpm

REMARKS: held safety meeting, established circulation, mixed & pumped 200 # Gel followed by 10 bbls fresh water mixed & pumped 129 sks 50/50 Pozblend cement w/ 2% gel, 5% salt, 5 # Kd seal per sk, cement to surface, flushed pump clean, pumped 2 1/2" rubber plug to baffle w/ 3.77 bbls fresh water, pressured to 800 PSI, released pressure, shut in casing.

[Handwritten signature]

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0450	1	PUMP CHARGE	1500.00	✓
CE0002	30 mi	MILEAGE	214.50	✓
CE0711	main	ten mileage	600.00	✓
WE0853	2 hrs	80 Vac	200.00	✓
		trucks	2574.50	
		-46%	1184.27	
		subtotal		1390.23
CC5840	129 sks	50/50 Pozblend	1741.50	✓
CC5965	417 #	Gel	125.10	✓
CC5326	271 #	Salt	203.25	✓
CC6077	645 #	Kd seal	322.50	✓
CP8176	1 #	Salt	45.00	✓
		materials	2437.35	
		-46%	1121.18	
		subtotal		1316.17
		8%	SALES TAX	105.29 ✓
		ESTIMATED TOTAL		2811.69 ✓

AUTHORIZATION Byron Miller TITLE _____ DATE (5206.84)

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.