

Miami County, KS
Well: O'Brien AI-31
Lease Owner: AltaVista

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

Commenced Spudding:
4/14/16

WELL LOG

| Thickness of Strata | Formation | Total Depth |
|---------------------|-------------|-------------|
| 0-9 | Soil-Clay | 9 |
| 19 | Lime | 28 |
| 9 | Shale | 37 |
| 2 | Lime | 39 |
| 8 | Shale | 47 |
| 9 | Lime | 56 |
| 41 | Shale | 97 |
| 16 | Lime | 113 |
| 9 | Shale | 122 |
| 31 | Lime | 153 |
| 7 | Shale | 160 |
| 19 | Lime | 179 |
| 5 | Shale | 184 |
| 5 | Lime | 189 |
| 3 | Shale | 192 |
| 4 | Lime | 196 |
| 24 | Shale | 220 |
| 7 | Sand | 227 |
| 119 | Shale | 346 |
| 3 | Lime | 349 |
| 3 | Shale | 352 |
| 6 | Limey Sand | 358 |
| 13 | Lime | 371 |
| 45 | Shale | 416 |
| 7 | Lime | 423 |
| 12 | Shale | 435 |
| 2 | Lime | 437 |
| 15 | Shale | 452 |
| 5 | Lime | 457 |
| 23 | Shale | 480 |
| 2 | Lime | 482 |
| 5 | Shale | 487 |
| 6 | Lime | 493 |
| 5 | Shale | 498 |
| 2 | Sand | 500 |
| 3 | Sandy Shale | 503 |
| 15 | Sand | 518 |
| 15 | Sandy Shale | 533 |
| 87 | Shale | 620-TD |
| | | |

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. AI-31

Farm O'Brien

KS Miami
(State) (County)

1 18 21
(Section) (Township) (Range)

For Altavista Energy Inc
(Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East

Louisburg, KS 66053

913-710-5400

O'Brien Farm: Miami County

KS State; Well No. AI-31

Elevation 885

Commenced Spuding 4-14 20 16

Finished Drilling 4-15 20 16

Driller's Name Wesley Dollard

Driller's Name

Driller's Name

Tool Dresser's Name Ryan Wood

Tool Dresser's Name

Tool Dresser's Name

Contractor's Name TOS

1 18 21

(Section) (Township) (Range)

Distance from S line, 116.20 ft.

Distance from E line, 1275 ft.

3 sacks

8 hrs

5 7/8 borehole

2 7/8 casing

CASING AND TUBING RECORD

10" Set _____ 10" Pulled _____
8" Set _____ 8" Pulled _____
7 1/4" Set 20 6 1/4" Pulled _____
4" Set _____ 4" Pulled _____
2" Set _____ 2" Pulled _____

CASING AND TUBING MEASUREMENTS

Table with 6 columns: Feet, In., Feet, In., Feet, In. Handwritten entries include 583, 615, 620, and 2 7/8.

| Thickness of Strata | Formation | Total Depth | Remarks |
|---------------------|-------------|-------------|----------|
| 0-9 | Soil - clay | 9 | |
| 19 | Lime | 28 | |
| 9 | Shale | 37 | |
| 2 | Lime | 39 | |
| 8 | Shale | 47 | |
| 9 | Lime | 56 | |
| 41 | Shale | 97 | |
| 16 | Lime | 113 | |
| 9 | Shale | 122 | |
| 31 | Lime | 153 | |
| 7 | Shale | 160 | |
| 19 | Lime | 179 | |
| 5 | Shale | 184 | |
| 5 | Lime | 189 | |
| 3 | Shale | 192 | |
| 4 | Lime | 196 | Heather |
| 24 | Shale | 220 | |
| 7 | Sand | 227 | no Oil |
| 119 | Shale | 346 | |
| 3 | Lime | 349 | |
| 3 | Shale | 352 | |
| 6 | limy sand | 358 | oil show |
| 13 | Lime | 371 | |
| 45 | Shale | 416 | |
| 7 | Lime | 423 | |
| 12 | Shale | 435 | |
| 2 | Lime | 437 | |

437

| Thickness of Strata | Formation | Total Depth | Remarks |
|---------------------|-------------|-------------|--------------------------------|
| 15 | Shale | 452 | |
| 5 | Lime | 457 | |
| 23 | Shale | 480 | |
| 2 | Lime | 482 | |
| 5 | Shale | 487 | |
| 6 | LIME | 493 | odor |
| 5 | Shale | 498 | |
| 2 | Sand | 500 | odor - no show |
| 3 | Sandy shale | 503 | no oil |
| 15 | Sand | 518 | mostly solid - good saturation |
| 15 | Sandy shale | 533 | |
| 87 | Shale | 620 | TD |
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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# 807472

Invoice Date: 04/21/16 Terms: Net 30 Page 1

ALTAVISTA ENERGY INC
 PO BOX 128
 WELLSVILLE KS 66092
 USA
 7858834057

OBRIEN AI-31

| Part No | Description | Quantity | Unit Price | Discount(%) | Total |
|---------|--|----------|------------|-------------|--------|
| CE0450 | Cement Pump Charge 0 - 1500' | 1.000 | 1,500.0000 | 62.000 | 570.00 |
| CE0002 | Equipment Mileage Charge - Heavy Equipment | 20.000 | 7.1500 | 62.000 | 54.34 |
| CE0711 | Minimum Cement Delivery Charge | 1.000 | 660.0000 | 62.000 | 250.80 |
| WE0853 | 80 BBL Vacuum Truck (Cement Services) | 1.500 | 100.0000 | 62.000 | 57.00 |
| CC5840 | Poz-Blend I A (50:50) | 85.000 | 13.5000 | 62.000 | 436.05 |
| CC5965 | Bentonite | 243.000 | 0.3000 | 62.000 | 27.70 |
| CC5326 | Sodium Chloride, Salt | 164.000 | 1.0000 | 62.000 | 62.32 |
| CC6077 | Kolseal | 425.000 | 0.5000 | 62.000 | 80.75 |
| CP8176 | 2 7/8" Top Rubber Plug | 1.000 | 45.0000 | 62.000 | 17.10 |
| CC6128 | Mud Flush - C | 0.500 | 50.0000 | 62.000 | 9.50 |

Subtotal 4,119.90
 Discounted Amount 2,554.34
 SubTotal After Discount 1,565.56

Amount Due 4,253.25 If paid after 05/21/16

Tax: 50.67
 Total: 1,616.23



CONSOLIDATED
Oil Well Services, LLC

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

56075
5580
INVOICE # 87472

FIELD TICKET & TREATMENT REPORT
CEMENT

TICKET NUMBER 50057

LOCATION Ottawa KS

FOREMAN Fred Maden

| DATE | CUSTOMER # | WELL NAME & NUMBER | SECTION | TOWNSHIP | RANGE | COUNTY |
|---|------------|--------------------|-------------------------------|----------|-------|--------|
| 4-15-16 | 3244 | O'Brien # A I-31 | SE 1 | 18 | 21 | MI |
| CUSTOMER <u>Altavista Energy Inc</u> | | | TRUCK # DRIVER TRUCK # DRIVER | | | |
| MAILING ADDRESS <u>P.O. Box 128</u> | | | 712 / <u>Fred Maden</u> | | | |
| CITY STATE ZIP CODE <u>Wellsville KS 66092</u> | | | 495 / <u>Harbac</u> | | | |
| | | | 675 / <u>Rte Det</u> | | | |
| | | | 516 / <u>Cosken</u> | | | |

JOB TYPE Long string HOLE SIZE 3 1/8 HOLE DEPTH 620 CASING SIZE & WEIGHT 2 7/8 EUE
 CASING DEPTH 615 DRILL PIPE Baffle in tubing @ 583 OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 32' + Ply
 DISPLACEMENT 3.4 BBL DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 BPM

REMARKS: Hold safety mixing. Establish pump rate. Pump 1/2 Gal Mud Flush "C" Polymer. Circulate well to condition hole. Mix + Pump 100# Gal Flush. Mix + Pump 85 SKS Por Blend I.A Cement 27% 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.

TOS Drilling - Wes. Fred Maden

| ACCOUNT CODE | QUANTITY or UNITS | DESCRIPTION of SERVICES or PRODUCT | UNIT PRICE | TOTAL |
|--------------|-------------------|------------------------------------|---------------------|--------------------|
| CE0450 | 1 | PUMP CHARGE | 495 | 1500 ⁰⁰ |
| CE0002 | 20 mi | MILEAGE | 495 | 1432 ⁰⁰ |
| CE0711 | Minimum | Ten Miles Delivery | 510 | 660 ⁰⁰ |
| WE0853 | 1 1/2 hr | 80 BBL Vac Truck | 675 | 1500 ⁰⁰ |
| | | Sub Total | | 2453 ⁰⁰ |
| | | less 62% | -1520 ⁰⁰ | 932 ¹⁴ |
| CC5840 | 85 SKS | Por Blend I.A Cement | | 1147 ⁵⁰ |
| CC5965 | 243# | Bentonite Gel | | 72 ⁹⁰ |
| CC5326 | 164# | Salt | | 164 ⁰⁰ |
| CC6077 | 425# | Kol Seal | | 212 ⁵⁰ |
| CP8176 | 1 | 2 1/2" Rubber Plug | | 45 ⁰⁰ |
| CC6125 | 1/2 Gal | Mud Flush "C" | | 25 ⁰⁰ |
| | | Sub Total | | 1666 ⁹⁰ |
| | | Less 62% | -1033 ⁴⁸ | 633 ⁴² |
| | | 6% | SALES TAX | 50 ⁶⁷ |
| | | | ESTIMATED TOTAL | 1616 ²⁵ |

Ravin 3737

AUTHORIZATION No Co Rep on Site. TITLE _____ DATE _____

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