

# Log Book

*Typed  
charged  
plug*

Well No. \_\_\_\_\_

Farm M. Garrett

Kans (State) Crawford (County)

8 (Section) 30 S. (Township) 23 E. (Range)

For H.C.O. (Well Owner)

**Kenneth R.  
Johnson, Inc.**

Oil-Gas-Water-Industrial Supplies

CHANUTE  
(316) 431-0479

OSAWATOMIE  
(913) 755-4182  
Nite (913) 294-3228  
Nite (913) 755-3980

GARNETT  
(913) 448-5915

API 15-037-20, 768

M. G. Smith Farm: Crawford County  
Kans State; Well No. 1

Elevation \_\_\_\_\_

Commenced Spuding 9/17 19 81

Finished Drilling \_\_\_\_\_ 19 \_\_\_\_\_

Driller's Name William J. Biller

Driller's Name \_\_\_\_\_

Driller's Name \_\_\_\_\_

Tool Dresser's Name John Porter

Tool Dresser's Name Bill Porter

Tool Dresser's Name \_\_\_\_\_

Contractor's Name \_\_\_\_\_

8 30 S. 23 E.

(Section) (Township) (Range)

Distance from EAST line, 2440 ft.

Distance from NORTH line, 2440 ft.

70' of 7" casing set with  
9 sacks cement 10# cap  
clogs.

### CASING AND TUBING RECORD

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

## Rules of Thumb

### CEMENTING ANNULUS

2" ID - 6 1/4" - 1 Sack ..... 5.8'  
 2" ID - 8" - 1 Sack ..... 3.1'  
 3" ID - 8" - 1 Sack ..... 3.5'  
 4" ID - 8" - 1 Sack ..... 4.0'

### CAPACITY

2" - 1 BBL. equals ..... 256'  
 2 1/2" - 1 BBL. equals ..... 164'  
 3" - 1 BBL. equals ..... 115'  
 4" - 1 BBL. equals ..... 64'  
 4 7/8" - 1 BBL. equals ..... 43'  
 6 1/4" - 1 BBL. equals ..... 26'  
 8" - 1 BBL. equals ..... 16'

### WATER - CEMENT RATIO

5.5 gals. to 1 sack - 2 1/2 hours  
 to thicken slurry  
 7.7 gals. to 1 sack - 2 hours  
 to thicken slurry

Thickness of Strata	Formation	Total Depth
1	Yellow Top soil	1
4	Yellow clay	5
4	Yellow shale	9
85	Gray shale	94
3	Dark Gray shale	97
2	Carbonaceous shale	99
1	Lime stone bedrock	100
1	Light Gray shale	101
2	Lime stone	103
3	Black shale	106
1	Lime stone	107
4	Carbonaceous shale	111
7	Gray shale	118
	Struck coal	118
7	Light Gray shale	125
12	Gray shale	137
19	Silly Gray shale	156
9	Sandy silt stone	165
15	Sand stone	180
53	Silly shale sandstone	233
6	Silly Gray shale	239
4	Silly Sandstone	243
4	Silly Gray shale	247
6	Sand stone	253
8	Silly Gray shale	261
31	SANDSTONE	292

8 7/8 tri cone bit to  
set ~~con~~ marks.

6 1/4" tri cone bit  
at 69'.

15 120'

show of oil 206  
start core 208  
stop core 228

Thickness of Strata	Formation	Total Depth	Remarks
3	SILTY GRAY SHALE	295	
32	SANDSTONE	327	
	STREAK OF COAL	<del>327</del>	
1	BROWN SHALE	328	
	<del>GRAY SHALE</del>		
	STREAK OF COAL	328	
8	SILTY Gray shale	336	
2	DARK SHALE	338	
	STREAK OF COAL	338	
15	GRAY SHALE	353	
17	Siltstone	370	
5	<del>SANDSTONE</del> SANDSTONE	375	
5	GRAY SHALE	380	
4	SILTY GRAY SHALE	384	
6	GRAY SHALE	390	
2	Dark Gray shale	392	
3	Gray shale	395	
	Streak of coal	395	
3	Gray shale	398	
2	Dark Gray shale	400	
	Streak of coal	400	
1	Light Gray shale	401	Bottom of hole

# Short Cuts

## TANK CAPACITY

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

D equals diameter in feet.

h equals height in feet.

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## BARRELS PER DAY

Multiply gals. per minute x 34.2

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

BPH — barrels per hour

PSI — pounds square inch

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## 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:  $\frac{\text{WATTS}}{\text{VOLTS}} = \text{AMPS}$

746 WATTS equal 1 HP

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