



Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

DRILLER'S LOG

Operator: Hupfer Operating, Inc. Lic# 30380 Contractor: Discovery Drilling Co., Inc. LIC#31548
P.O. Box 3912 PO Box 763
Shawnee, KS 66203-0912 Hays, KS 67601

Lease: DeWerff "B" # 1 Location: 530 FNL - 2100 FWL
SW/NE/NE/NW
Section 20/ 19S/ 10W
Rice County, KS

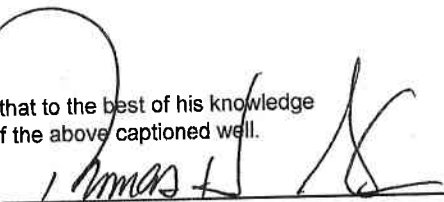
Loggers Total Depth: 3363' API#15- 159-22,787-00-00
Rotary Total Depth: 3360' Elevation: 1765 GI - 173 KB
Commenced: 8/26/2014 Completed: 9/3/2014
Casing: 8 5/8" @ 304.40'W/225sks Status: D & A

DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>508'</u>
Dakota Sand	<u>147'</u>	Shale & Lime	<u>1249'</u>
Shale	<u>206'</u>	Shale	<u>1590'</u>
Cedar Hill Sand	<u>229'</u>	Shale & Lime	<u>1912'</u>
Red Bed Shale	<u>316'</u>	Lime & Shale	<u>3001'</u>
Anhydrite	<u>496'</u>	RTD	<u>3360'</u>
Base Anhydrite	<u>508'</u>		

STATE OF KANSAS)
) ss
COUNTY OF ELLIS)

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.



Thomas H. Alm

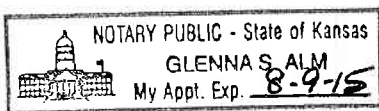
Subscribed and sworn to before me on 9-11-14

My Commission expires: 8-9-15

(Place stamp or seal below)



Notary Public



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

No. 625

ie 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

785-324-1041

Date	9-3-14	Sec.	20	Twp.	19	Range	10	County	Rice	State	Ks	On Location		Finish	3:45 PM
								Location							
								Ellinwood, Ks - E to 2nd Rd, 310, 1/2E							

Lease **Dewerff**

Well No. **B-1**

Contractor **Discovery 2**

Type Job **Plug**

Hole Size **7 7/8"** T.D. **3360'**

Csg. _____ Depth _____

Tbg. Size **4 1/2" D.P.** Depth **3308'**

Tool _____ Depth _____

Cement Left in Csg. _____ Shoe Joint _____

Meas Line _____ Displace **H₂O / mud**

Owner **S/L into**

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To **Header operating**

Street _____

City _____ State _____

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered **215 60/40 4% Gel 1/4# Flo**

EQUIPMENT

Pumptrk	16	No.	Cementer	
			Helper	Billy
Bulktrk	3	No.	Driver	Clayton
			Driver	Rich
Bulktrk	p.u.	No.	Driver	
			Driver	

Common	129
Poz. Mix	86
Gel.	8
Calcium	
Hulls	
Salt	
Flowseal	50#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	223
Mileage	

JOB SERVICES & REMARKS

Remarks: **3308' - 35 SX**

Rat Hole **1350' - 35 SX**

Mouse Hole **850' - 35 SX**

Centralizers **300' - 35 SX**

Baskets **60' - 25 SX**

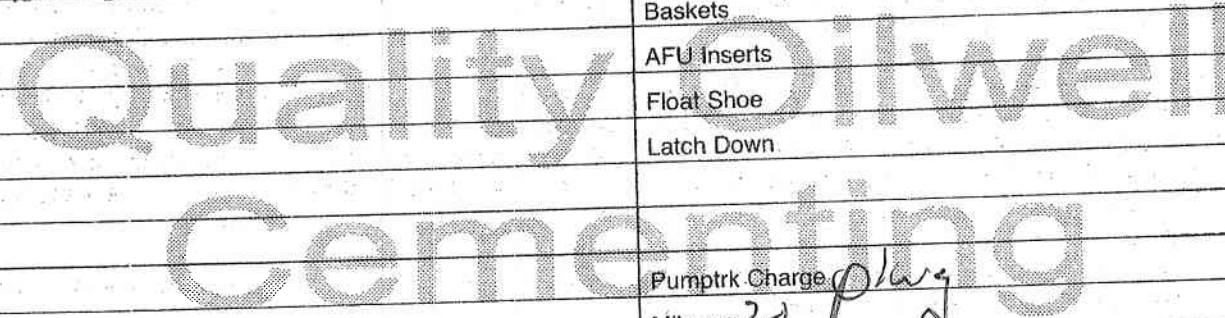
D/V or Port Collar **Rathole - 30 SX**

Mousehole - 20 SX

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Cement did **Circulate**



Pumptrk Charge **plug**

Mileage **20**

Tax _____

Discount _____

Total Charge _____

X Signature **[Signature]**

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Home Office P.O. Box 32 Russell, KS 67665

No. 590

785-483-2025
85-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
8-27-2014	20	19s	10w	Rice	KANSAS		6:30 AM
Location <u>ELLENWOOD KS. E TO R#2 3N 1/2E</u>							

Lease	Well No.	Owner	
De Werff	B-1	To Quality Oilwell Cementing, Inc.	
Contractor	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.		
Type Job	Charge To		
LONG SURFACE	HUPFER OPERATING INC.		
Hole Size	T.D.	Street	
12 1/4	304		
Csg.	Depth	City	
8 5/8 New	304	State	
Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
		Cement Amount Ordered <u>225 sx Comm.</u>	
Tool	Shoe Joint	<u>3% CC 2% Gel</u>	
Cement Left in Csg.	Displace	Common <u>225</u>	
15	18 1/2	Poz. Mix	
Meas Line		Gel. <u>5</u>	
		Calcium <u>8</u>	

EQUIPMENT

Pumptrk	No.	Cementer	Glenn G.
16		Helper	Billy
Bulktrk	No.	Driver	Donny H.
9		Driver	
Bulktrk	No.	Driver	
		Driver	

JOB SERVICES & REMARKS

Remarks:
Rat Hole
Mouse Hole
Centralizers
Baskets
D/V or Port Collar
Ran 7 New JOINTS OF 23 #
8 5/8 csg.
Set @ 304, Received Circulation
Cement w/ 225 sx Comm. 3+2.
Release wooden wiper plug.
Displaced a total of 18 1/2 BBL
H₂O. SHUT IN @ 300 #.

FLOAT EQUIPMENT

Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	238
Mileage	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
2 Cup wooden wiper Plug	
Pumptrk Charge	Surface
Mileage	20

Cement did circulate to surface.

Thanking
[Signature]

X Signature

Tax	
Discount	
Total Charge	