



# Discovery Drilling

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

## DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: Discovery Drilling Co., Inc. LIC#31548  
370 West Wichita Avenue - P.O. Box 352 PO Box 763  
Russell, KS 67601 Hays, KS 67601

Lease: McNinch Unit # 1 Location: 1130 FSL / 2580 FWL  
NE/NE/SE/SW  
Section 2/ 17S/ 25W  
Ness County, KS

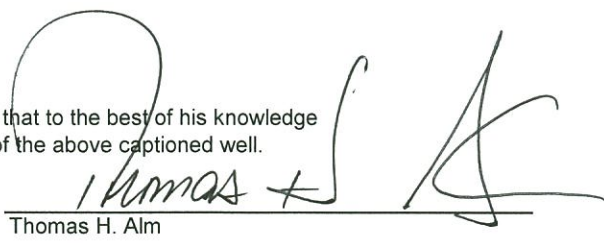
Loggers Total Depth: 4501' API#15- 135-25,619-00-00  
 Rotary Total Depth: 4500' Elevation: 2457 GL / 2465 KB  
 Commenced: 6/6/2013 Completed: 6/13/2013  
 Casing: 8 5/8" @ 220.60'W/150sks Status: D & A

### DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>1845'</u>
Dakota Sand	<u>1144'</u>	Shale & Lime	<u>2362'</u>
Shale	<u>1200'</u>	Shale	<u>2653'</u>
Cedar Hill Sand	<u>1325'</u>	Shale & Lime	<u>2997'</u>
Red Bed Shale	<u>1540'</u>	Lime & Shale	<u>3822'</u>
Anhydrite	<u>1814'</u>	RTD	<u>4500'</u>
Base Anhydrite	<u>1845'</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.

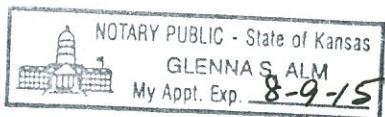
  
 Thomas H. Alm

Subscribed and sworn to before me on 6-25-13

My Commission expires: 8-9-15

(Place stamp or seal below)

  
 Notary Public



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

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

No. 7905

Date	6-6-13	Sec.	2	Twp.	17	Range	25	County	Ness	State	Ks	On Location		Finish	6:45 PM
Lease	Maninch			unit				Location	Ainold, Ks - 1W to J Rd, 2 1/2 S						
Contractor	Discovery			3	Well No.	1			Owner	to tanks, E/Into on lease Rd					
Type Job	Surface						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.								
Hole Size	12 1/4"			T.D.	221'			Charge To	J.O. Farmer						
Csg.	8 3/8"			Depth	221'			Street							
Tbg. Size				Depth				City	State						
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.	15'			Shoe Joint	15'			Cement Amount Ordered	150 common 3% CC 2% Gc						
Meas Line				Displace	13 BLS										
<b>EQUIPMENT</b>								Common 150							
Pumptrk	15	No.	Cement	Helper			Nick			Poz. Mix					
Bulktrk	14	No.	Driver	Driver			Billu			Gel. 3					
Bulktrk	P.U.	No.	Driver	Driver			Rick			Calcium 5					
<b>JOB SERVICES &amp; REMARKS</b>								Hulls							
Remarks	Cement did			Circulate.			Salt								
Rat Hole							Flowseal								
Mouse Hole							Kol-Seal								
Centralizers							Mud CLR 48								
Baskets							CFL-117 or CD110 CAF 38								
D/V or Port Collar							Sand								
							Handling 150								
							Mileage								
<b>FLOAT EQUIPMENT</b>								Guide Shoe							
<b>FLOAT EQUIPMENT</b>								Centralizer							
<b>FLOAT EQUIPMENT</b>								Baskets							
<b>FLOAT EQUIPMENT</b>								AFU Inserts							
<b>FLOAT EQUIPMENT</b>								Float Shoe							
<b>FLOAT EQUIPMENT</b>								Latch Down							
							Pumptrk Charge Surface								
							Mileage 24								
<b>Signature</b>								Tax							
<b>Signature</b>								Discount							
<b>Signature</b>								Total Charge							

X Signature *[Handwritten Signature]*

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

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

No. 6926

Date	6-13-13	Sec.	2	Twp.	17	Range	25	County	NESS	State	KS	On Location	1:30 AM	Finish	7:30 AM
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Location Arnold 1W 2 1/2 S Finto

Lease McMinch unit Well No. 4 Owner

Contractor Discrany 3 To Quality Oilwell Cementing, Inc.  
You are hereby requested to rent cementing equipment and furnish  
Type Job plug 30¢ cementer and helper to assist owner or contractor to do work as listed.

Hole Size 11 1/2 PVC T.D. 4500 Charge To Joe Farmer Inc

Csg. Depth Street

Tbg. Size Depth City State

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

Cement Left in Csg. Shoe Joint Cement Amount Ordered 300 SH 60/40

Meas Line Displace 49% gel 1/4 flow seal

**EQUIPMENT**

Pumptrk <u>5</u> No.	Cementer <u>mt</u>	Common <u>180</u>
Bulktrk <u>13</u> No.	Helper <u>Brett</u>	Poz. Mix <u>120</u>
Bulktrk <u>04</u> No.	Driver <u>Lorraine</u>	Gel. <u>11</u>
	Driver	Calcium

**JOB SERVICES & REMARKS**

Remarks: Halls Salt

Rat Hole 30 SH Flowseal 75

Mouse Hole 2054 Kol-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

1st 1890ft 50 SHS Handling 311

2nd 1150ft 80 SHS Mileage

3rd 550ft 50 SHS

4th 250ft 50 SHS

5th 60ft 20 SHS

**FLOAT EQUIPMENT**

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge plug

Mileage 24

Tax

Discount

Total Charge

X Signature Ab Duller