



Office (620) 588-4250 212 Main St. - P.O. Box 215 - Claflin, KS 67525 Home (620) 587-3444

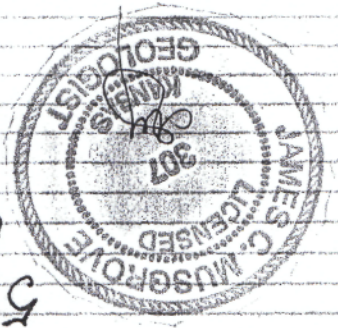
# GEOLOGIST'S REPORT

## DRILLING TIME AND SAMPLE LOG

COMPANY Mai Oil Operations Inc.  
 LEASE Diets #4  
 FIELD Trapp  
 LOCATION w/2-Sec. 16 NW (2310' FNL 2025' Fwd)  
 SEC 3 TWP 16 S RGE 14 W  
 COUNTY Barton STATE Kansas  
 CONTRACTOR Southwind Drilling Co. (rig #3)  
 SPUD 7-12-12 COMP 7-18-2012  
 RTD 3461 LTD 3460  
 MUD UP 2700 TYPE MUD Chemical displaced  
 SURFACE CASING 8 5/8" 433  
 PRODUCTION 5 1/2" 6  
 ELECTRICAL SURVEYS  
By Superior Well Services; DDL, CPL/OLY MEL  
 SAMPLES SAVED FROM 2800  
 DRILLING TIME KEPT FROM 2800 TO RTD  
 SAMPLES EXAMINED FROM 2800 TO TO  
 GEOLOGICAL SUPERVISION FROM 2900 TO TO  
 GEOLOGIST ON WELL Jim Musgrove

FORMATION TOPS	LOG	SAMPLES
Anhydrite	913 +1017	
Base anhydrite	947 +983	
Topeka	2840 - 910	
Hobner	3070 - 1140	
Toronto	3088 - 1158	
Manasing	3136 - 1206	
Base Kansas City	3342 - 1412	
Conglomerate	3361 - <del>1431</del> - 1431	
Orbuckle	3370 - 1440	
RTD	3461 - 1531	
LTD	3460 - 1530	

5 1/2" production casing was set & cemented on the Diets #4.  
 Requested (submitted)  
 James C. Musgrove  
 Petroleum Geologist



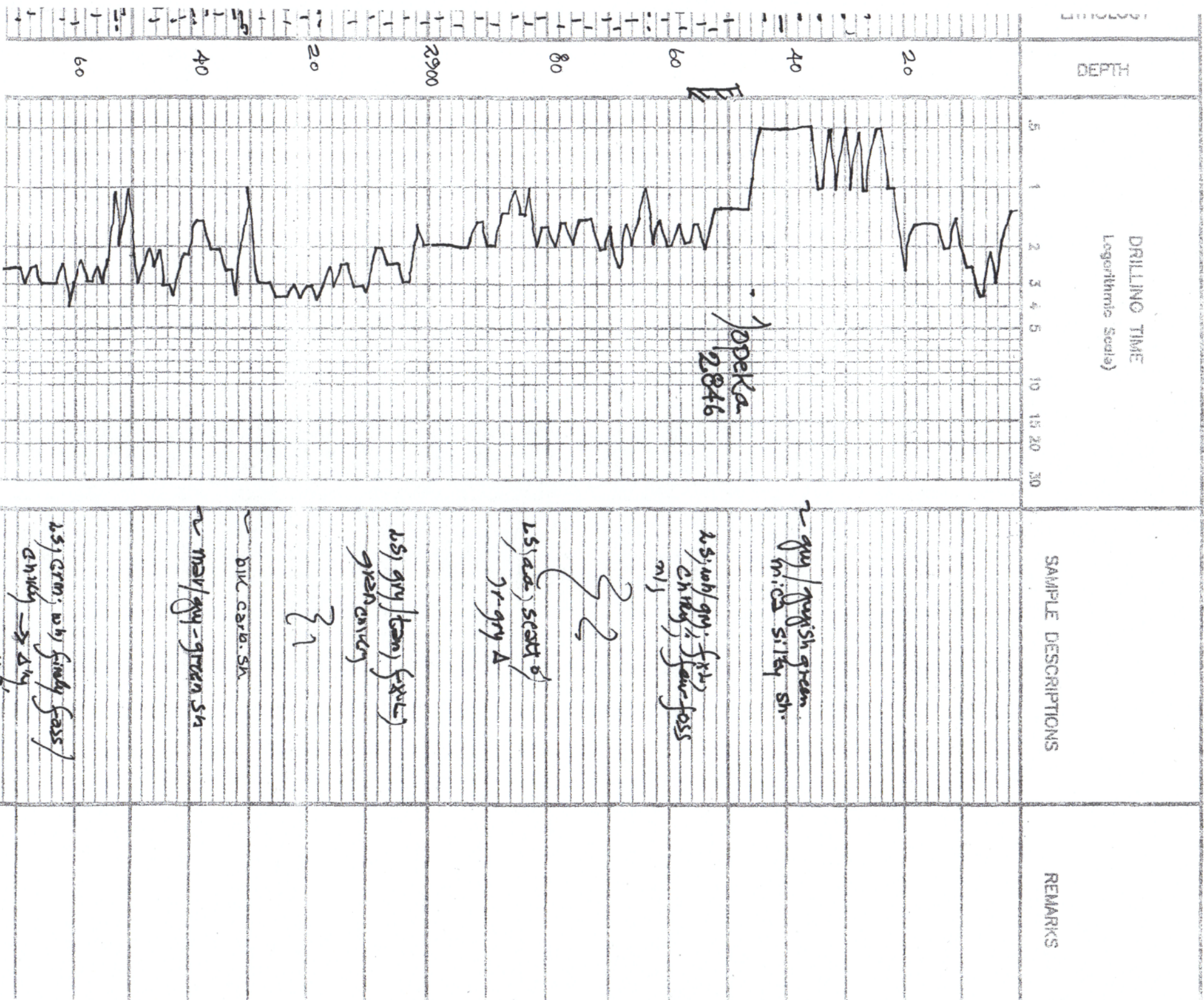
REMARKS

LEGEND

	Anhydrite
	Salt
	Sandstone
	Shale
	Carbonaceous shale
	Limestone
	Collima
	Chert
	Dolomite

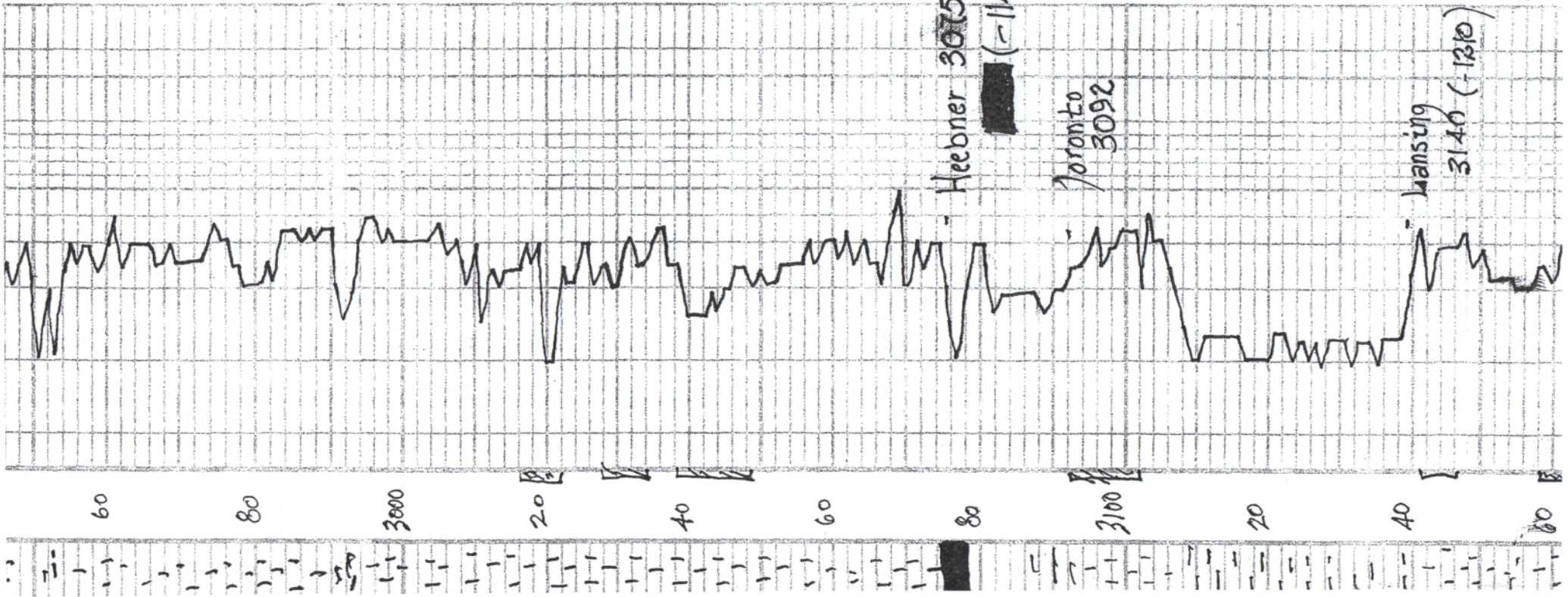
DRILLING TIME





Jopeka  
 12846





ls, crm, wh, finely foss,  
chky → Δ<sub>14</sub>  
poor vis<sup>o</sup>

31

~ blk carb. sh

Tr. gry / amber Δ

ls, crm, wh, ool / foss, chky,  
poor vis<sup>o</sup>, Tr. brown sh,  
ns fo, no odor

- 1930 KB -

ls, gry / wh, ool, chky,  
poor vis<sup>o</sup>, n/s

32

Tr. gry, brny = opaque A

~ blk carb. sh.

~ gry, grayish green sh.

ls, wh, gm, fxb, foss in  
part, spamy, calc. c. cement  
n/s

31

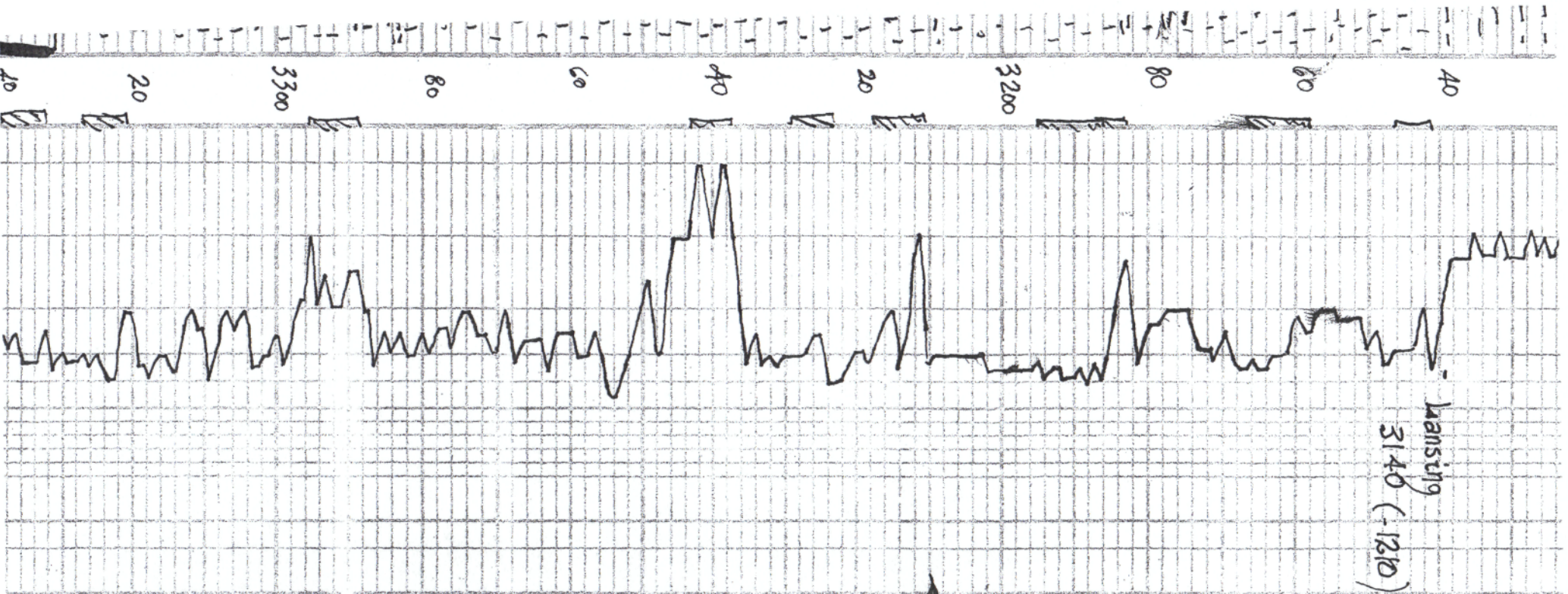
blk, gry - green soft  
ool. sh.

Tr. vfg, mica sand,  
37 soft 150' n/s

ls, tan, gry, fxb, chky =  
Δ<sub>14</sub> (dense) n/s

ls, gry, highly ool, Δ<sub>14</sub> in  
part, poor vis<sup>o</sup>, n/s





can. sn  
 2 2 SCOT 1 5 0 m/s

LS tan, gray, fXh, chunky =  
 dry (dense) m/s

LS gray; highly ool, dry in  
 part; poor vis & m/s

LS gray/wh, ool, chunky,  
 SCOT, light brown str, Jr. fcs  
 no odor

1 yr. gray - blk sh.

LS, sm, wh, sub-ool, chunky  
 Poor vis & fr. blk, dk  
 heavy str, sfo (Jawny); head-on

LS, wh, tan, ool, sub-ool,  
 chunky, fr. Poor str, m/s fo  
 ft. odor.

LS, gray, cream, ool, good  
 ool (barren)

LS, wh, gray, chunky / few  
 dry (dx)

2 2  
 ool, Jr. gray A

~ blk canke sh

LS, wh, ool / fcs, fr.  
 gray - brown str, m/s fo, no odor.

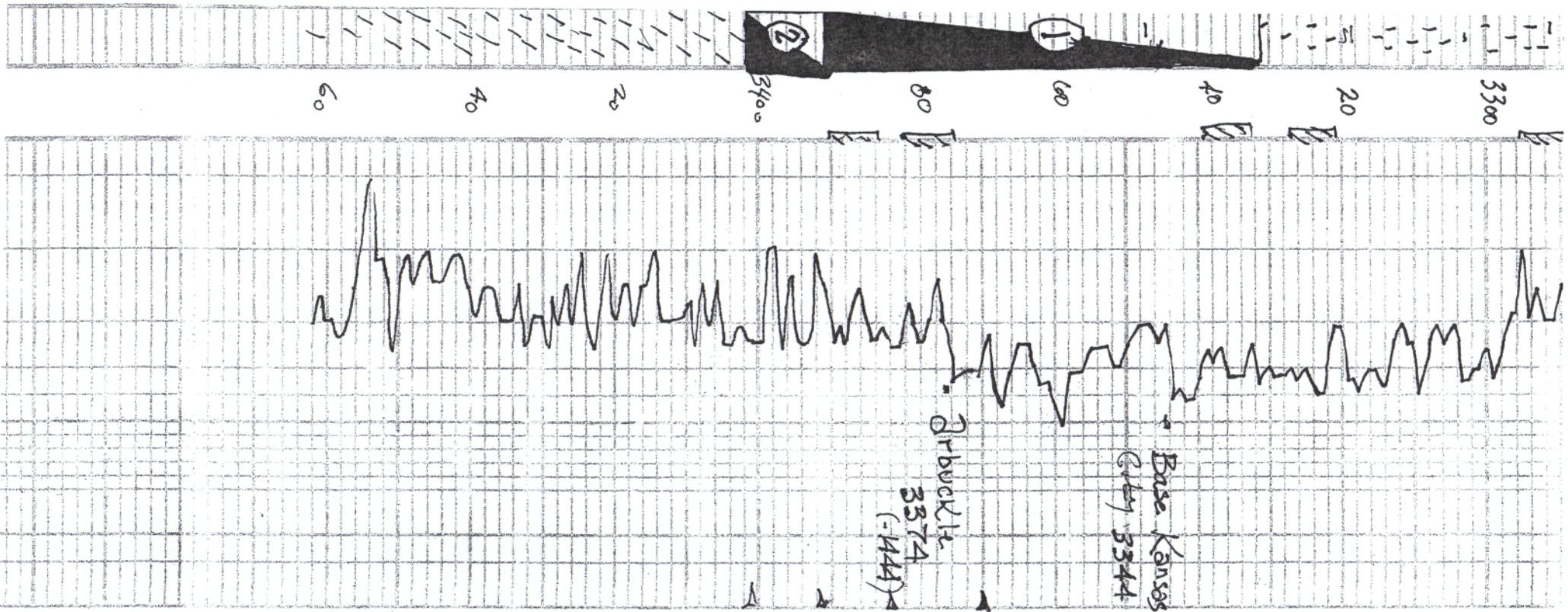
few sub-ool, fr. str, m/s fo  
 fr. odor

LS, wh, ool / fcs, SCOT &  
 Jr. brown str, m/s fo, fr. odor

1930 KB-

odor  
 odor





US, wh, cool, fossil, fr.  
 grey - brown skin, n.s.f.o., no odor

few sub-equm fr. skin n.s.f.a.  
 + FeS<sub>2</sub> fr. odor

US, wh, cool, fossil, scatt of  
 grey brown skin, n.s.f.o., fr. odor

gr. US, grey, chunky,

gr. US, grey, chunky, -A's

US, wh, grey, chunky, -A's  
 grey/green sh  
 US, wh, grey, fr. wh, chunky, poor, fr. skin, n.s.f.o., fr. odor

med. tan, buff, fr. wh, few  
 med. wh, skin, fr. wh, few  
 light brown, golden brown skin  
 SFe, fr. odor

very fr. good odor/SK  
 SFe, good odor.

doi, wh, grey, fr. sucra part  
 dense 1xt. v. grey, fr. br. skin  
 fr. fo. fl. odor

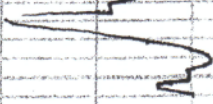
doi, grey, buff, fr. med. skin  
 br. wh. skin, ??? fr. fo. n.s.f.o.  
 Plus wh. boony Δ

doi, grey, buff, fr. med. skin, gran  
 in part, fr. spotty blk. skin, n.s.f.o.  
 no odor, few scattered in type,  
 thick - th. grey Δ

odor }  
 odor }  
 Dst #1 3331-33  
 30-30-30-30  
 Blow, weak  
 Recovery, 2' clean  
 18' oil spots  
 Pressures, ISIP 864  
 ISIP 73  
 ISIP 31  
 ISIP 36  
 1672  
 -144  
 Dst #2 3331-34  
 30-15-30-30  
 Blow, weak  
 Recovery,  
 3' slighly o  
 cur muddy  
 (396 oil, 7796  
 2070 mud)  
 3' mud  
 Pressures, ISIP 864  
 ISIP 894  
 ISIP 15  
 ISIP 22  
 1681  
 1688

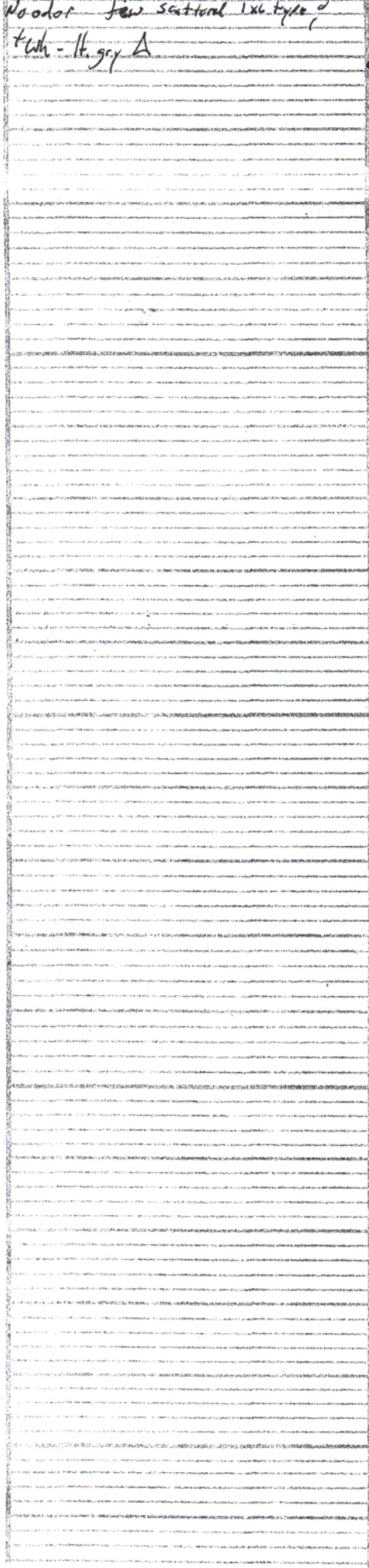
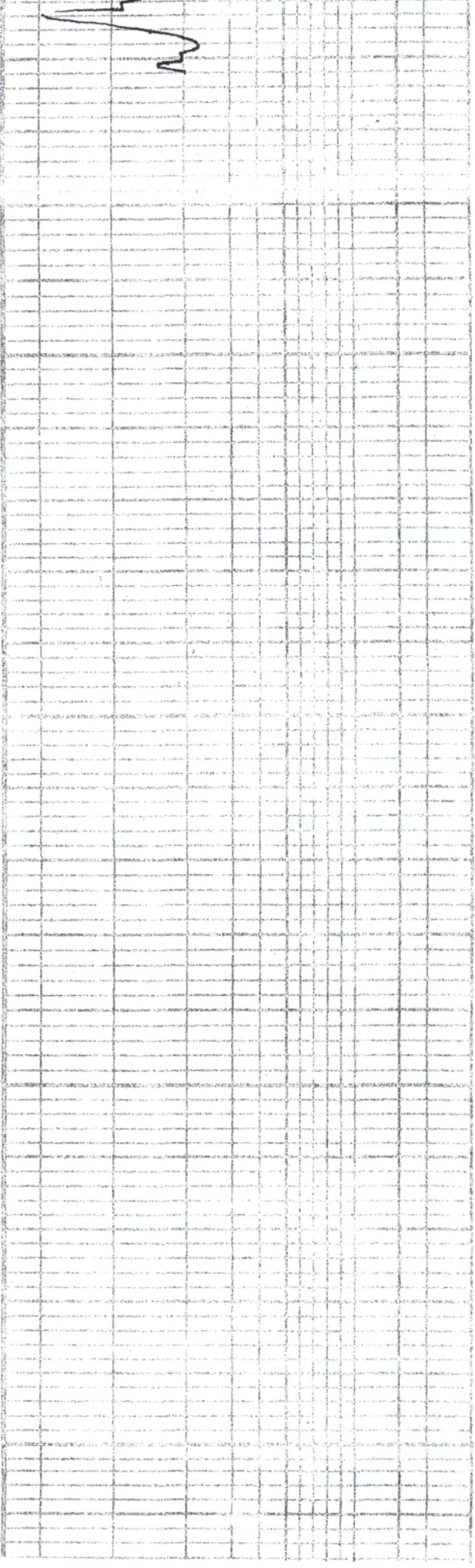


60



Woodor few scattered lvs. type of  
+ wh - lt. grey A

HSM  
1688-1612









# 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. 911

Date	7-13-12	Sec.	3	Twp.	16	Range	14	County	Barton	State	Ks	On Location	Finish	1:45 AM	
Lease	Dietz		Well No.	4		Location	Barton + Russell County Line, SW								
Contractor	Southwind #3						Owner	1/2 S, E 1 Into							
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.	433'		Charge To	Main oil operations								
Csg.	8 3/8"		Depth	433'		Tbg. Size	Depth								
Tool	Depth		City		State										
Cement Left in Csg.	15'		Shoe Joint	15'		The above was done to satisfaction and supervision of owner agent or contractor.									
Meas Line	Displace		26 1/2 BCS		Cement Amount Ordered		225 sx 60/40 3% CC 2% Gel								
<b>EQUIPMENT</b>															
Pumptrk	5	No.	Cementer	Brett		Common									
Bulktrk	8	No.	Driver	Jason		Poz. Mix									
Bulktrk	p.u.	No.	Driver	Rick		Gel.									
<b>JOB SERVICES &amp; REMARKS</b>															
Remarks:	Cement did Circulate.						Calcium								
Rat Hole							Hulls								
Mouse Hole							Salt								
Centralizers							Flowseal								
Baskets							Kol-Seal								
D/V or Port Collar							Mud CLR 48								
							CFL-117 or CD110 CAF 38								
							Sand								
							Handling								
							Mileage								
<b>FLOAT EQUIPMENT</b>															
							Guide Shoe								
							Centralizer								
							Baskets								
							AFU Inserts								
							Float Shoe								
							Latch Down								
							1-wooden plug								
							Pumptrk Charge								
							Mileage								
							Tax								
							Discount								
							Total Charge								
X Signature	Jay Hines														



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

No. 918

Date	7-18-12	Sec.	3	Twp.	16	Range	14	County	Barton	State	KS	On Location	Finish	9:45pm
Lease	Dietz		Well No.	4		Location	Barton + Russell Co. Line + 281 Hwy, 1W							
Contractor	Southwind #3					Owner	K.S. E/Intro							
Type Job	Production					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	7 7/8"		T.D.	3461'		Charge To	Main oil operations							
Csg.	5 1/2" 14# New		Depth	3459'		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.	21.38'		Shoe Joint	21.38'		Cement Amount Ordered 155 sx 60/40 10% Salt + 2%								
Meas Line			Displace	84 BLS		Gel 1/2 Fl. seal - 1000 gal Mud Clear 48								

**EQUIPMENT**

Pumptrk	15	No.	Cementer	Nick	Helper	Common
Bulktrk	8	No.	Driver	<del>Lucas</del>	Cody	Poz. Mix
Bulktrk		No.	Driver	Rick		Gel.

**JOB SERVICES & REMARKS**

Remarks: pipe on bottom, break	Calcium
Rat Hole	Hulls
Mouse Hole	Salt
Centralizers	Flowseal
Baskets	Kol-Seal
D/V or Port Collar	Mud CLR 48
down, wash pump + lines.	CFL-117 or CD110 CAF 38
Release of displaced with	Sand
89 BLS of water. Released	Handling
Float held.	Mileage

**FLOAT EQUIPMENT**

Lift pressure 700 #	Guide Shoe
Land plug to 1500 #	Centralizer 9 turbo's
turbo's on Jts. 1-9	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
	Pumptrk Charge
	Mileage

	Tax	
	Discount	
X Signature <i>[Signature]</i>	Total Charge	