HERB DEINES
CONSULTING GEOLOGIST

108 W. 35th ST. PH. 785-625-3380 HAYS, KS 67601

COMPANY IDI, Inc.

WELL Irvin #2

FIELD Reichert North

COUNTY Ellis STATE Kansas

LOCATION: 1300' FNL & 2100' FEL, NE/4

SEC 6 TWP 15s RGE 19w

Elevations
KB 2063'
DF ?
GL 2053'

Logging by: Log-Tech

1. Dual Induction Log
2. Dual Compensated Porosity Log
3. MicroResistivity log
4.
5.
6.

Contractor Southwind Drilling Inc Rig # 1

Commenced 5-05-2011 Completed 5-12-2011

RTD 3739' LTD 3736'

Surface Casing 8 5/8" set to 236.17' w/ 150 sxs Common 2% Gel 3% CC

Production Casing 5 1/2" set to 3734.73' w/ 130 sxs EA2
Port Collar @ 1322'

Drilling Time 2400' - RTD Samples 2400 - RTD

Daily Penetration Rate

Date	Depth	Activity	Date	Depth	Activity
5-05-11		Rig, spud, set SP			
5-06-11	590'	Drlg			
5-07-11	2010'	Drlg			
5-08-11	2795'	Drlg			
5-09-11	3330'	Drlg DST #1			
5-10-11	3452'	Drlg DST 2 DST 3			
5-11-11	3613'	Drlg DST 4			
5-12-11	3739'	RTD Logs Run Csg			

FOLD HERE

REMARKS [illegible] casing ran [illegible] zones in [illegible] LKC and Penn [illegible] sand

[illegible]

Bit Record

Make & Type	Serial No.	Nozzles	Depth In	Depth Out	Hours

Formation	Sample	Log	Datum	*
Anhydrite Top		1306	+757	
Anhydrite Base		1342	+721	
Dover Lime		2833	-770	
Tarkio Lime		2878	-815	
Topeka		3045	-982	
Heebner Shale		3314	-1251	
Toronto		3337	-1274	
LKC		3362	-1299	
BKC		3602	-1539	
Arbuckle		3708	-1645	
Reagan Sand		3733	-1670	
RTD	3739			
LTD		3736	-1673	

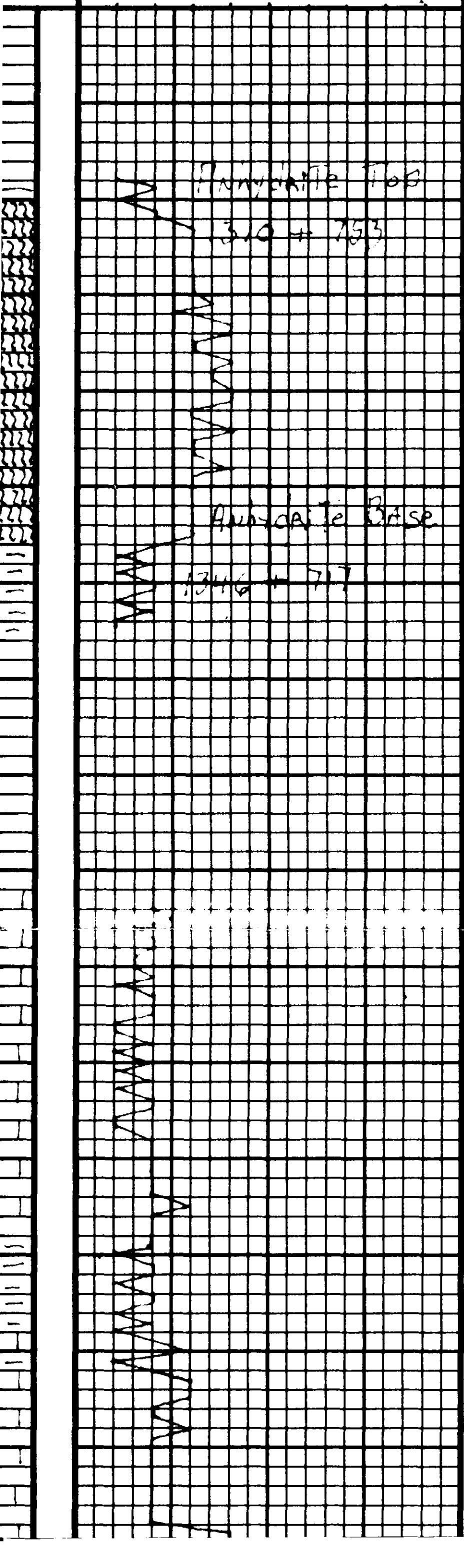
Formation	Sample	Log	Datum	*

*Structural Position to:

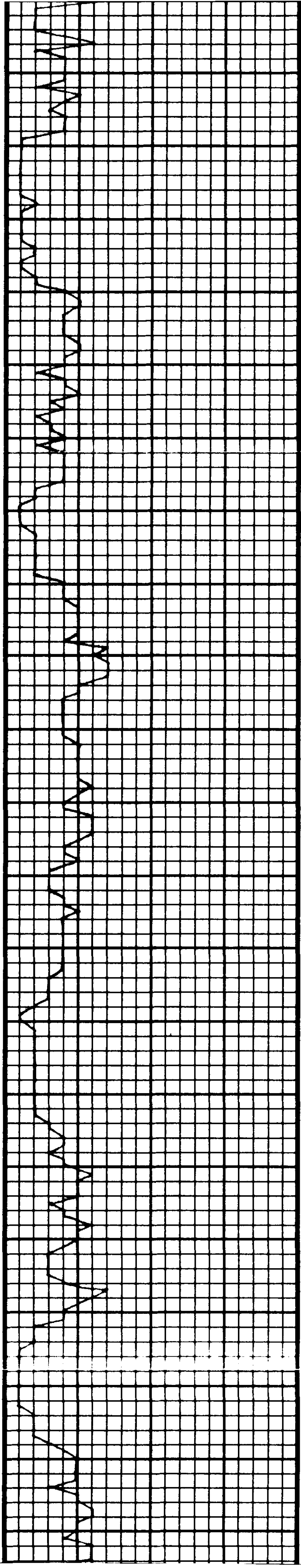
LEGEND

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool.Lime	Chert	Dolomite

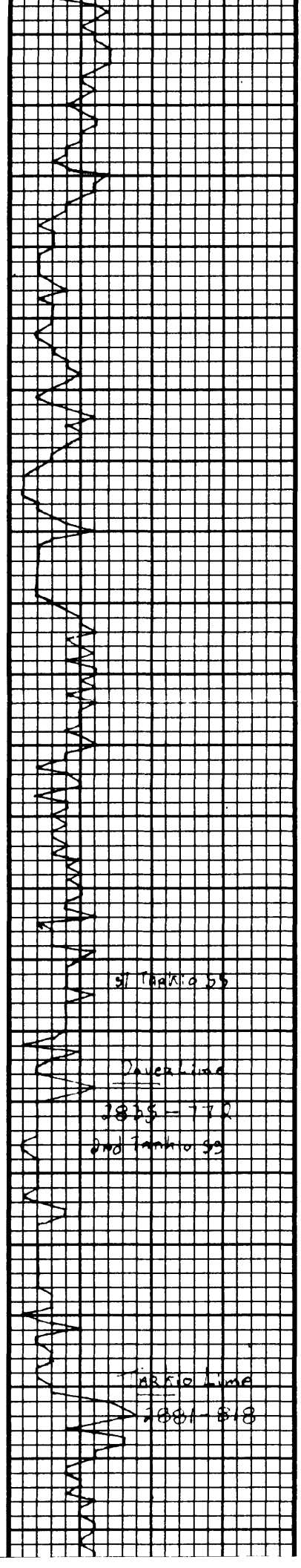
SCALE " = 100'



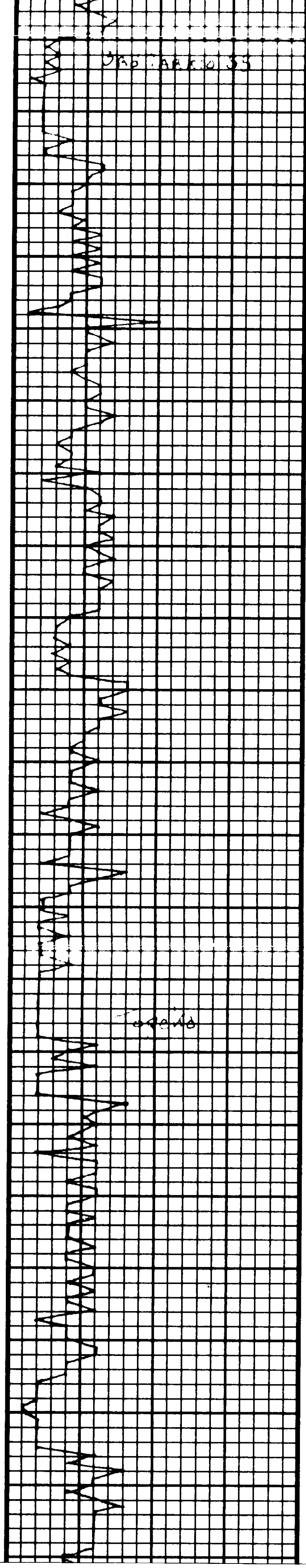
Lithology	Drilling time in minutes (1 2 3 4 5 6 7 8 9)	DEPTH	Sample Description	Remarks, drill stem tests, etc.
				Mud System - Gel Chemical Mud-Co
		1300		
		10		
		20		Slope Survey 235' ½°
		30		Eog Tops consistently 1' higher than sample tops. No Pipe Strap due to winds
		40		
		50		
		60		
				Displaced mud system 2342'-2363'
		2400		
		10	Lm [illegible] granular; Sl chalk [illegible]; Same gray mottling in part	
		20	Lm tan - lt - med brn fnxln - granular; Sl chalk gray mottling in part	
		30	Lm lt brn fnxln - granular; Sli chalk in part Clean lm	
		40	Sh lt gray - red - brn soft, sticky	
		50	Lm lt brn fn - vfxln dense; Sh red soft	
		60	[illegible] - lt brn fnxln; Same lt brn lm vfxln Sli Foss	
		70	Lm [illegible] lt brn fnxln	



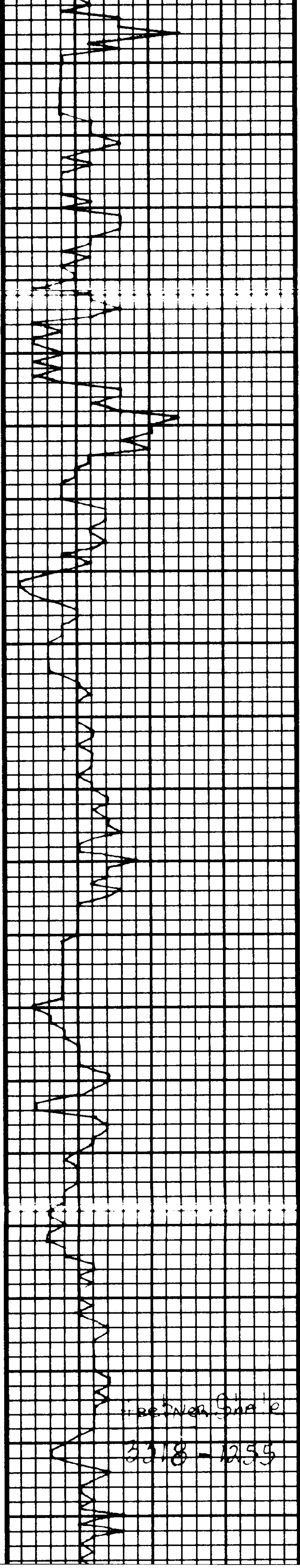
Depth	Description
70	
80	Lm LT BRN FNXN w oolitic-oomoldic mix NS No odor No wet cut
90	Lm LT-med BRN granular w Foss NS No wet cut
2500	Lm LT-dk BRN granular w Chalk in part Foss in part
10	Lm LT-med BRN FNXN, Sli Foss Some Lm off wht FNXN
20	Lm LT-med BRN FNXN-granular Some Lm TAN VFXN
30	Lm LT med BRN-gray FNXN-granular Sli Chalk in part Foss in part
40	
50	Lm LT-med BRN granular Sli Chalk in part Foss in part NS No odor
60	Lm BRN FN-VFXN Sh LT gray soft
70	Lm wht granular NS
80	Lm LT-dk gray FN-VFXN
90	Lm LT-med gray FNXN
2600	Lm LT BRN-pale gRN FNXN Sli Foss in part
10	Lm LT-med BRN Granular w Chalk in part NS No wet cut
20	Lm TAN-LT BRN granular Chalk in part Sli pyritic
30	Sh gray Lm TAN-BRN FNXN-granular in part Chalk in part
40	Lm TAN-BRN FN-VFXN Sh gray calcareous
50	Lm TAN FNXN
60	Lm TAN-[illegible] BRN granular [illegible] NS
70	Sh LT gray soft Sticky
80	Lm TAN-BRN FN-VFXN Sli Foss in part Sli Chalk



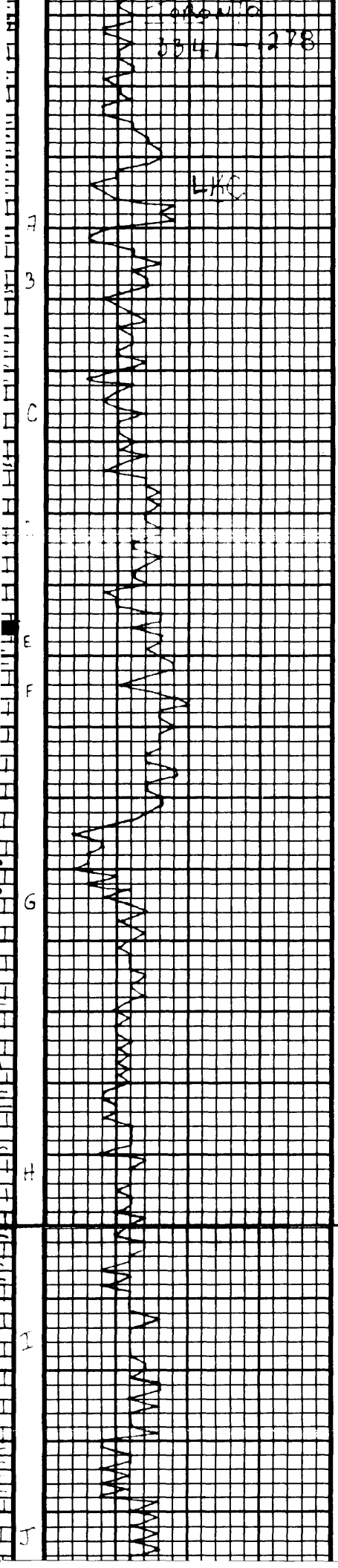
90	Lm gRAY - BAN FNX'N gRAY mottling Sli Foss INPART
	Lm OFFWHT - BAN - gRAY FNX'N w same gRANULAR Sli Foss
2700	Lm offwht - BAN - gRAY FNX'N Foss in part
10	Sh gRAY - BAN
	Lm LT BAN gRAY FNX'N lot of Fusilinids
20	Lm BAN - gRAY FNX'N - gRANULAR lot of Fusilinids large size
30	Lm LT BAN - gRAY FNX'N - gRANULAR
	Sh med gRAY
40	Lm BAN - gRAY FNX'N Foss in part
	Sh gRAY - gAN
	Lm BAN - gRAY FNX'N
50	Foss in part
60	Lm TAN - BAN FNX'N Chk in part Foss
	Sh LT - Med gRAY
70	
	Lm TAN - BAN FNX'N Chalk in part Sli Foss
80	
	Lm TAN BAN FNX'N Sli Chalk in part
90	
	Lm gRAY FNX'N
	Sh LT gRAY - LT GREEN SOFT
2800	
	Lm TAN - BAN FNX'N - gRANULAR Sli Chalk in part Sli Foss
10	
	Sh LT gRAY SOFT STICKY
20	
	SS VFN gRITTY POORLY DEVELOPED Dicaceous & Sli glauconitic NS NoSTAIN
30	Sh Red, LT gRAY SOFT & STICKY
	Lm CRM - LT gRN FNX'N
40	
	SS QTz, POORLY SORTED, FINE - VF gRITTY Mica flakes in part NS No wet cut
50	
	Sh LT - Med gRAY
60	
70	
80	
	Lm LT Med BAN FNX'N Foss in part
90	
	Lm LT Med BAN FNX'N Sli Foss Sli Chalk in part
2900	
	Lm LT - med grayish BAN FNX'N



Depth	Lithology
	SS LT gRN gRAIN, POORLY developed NS
20	Sh LT-Med gRAY
30	Lm bRN FNX'N
40	Lm LT-Med BRN FN-VFX'N
	Lm BRN-gRAY FNX'N
50	Lm bRN - BROWNISH gRAY FNX'N - GRANULAR IN PART
60	Lm BRN - BROWNISH gRAY FNX'N
70	Lm CRM - LT bRN - gRAY FNX'N - gRANULAR IN PART
80	Lm off WHT - LT-Med BRN FNX'N
90	Sh LT gRAY SOFT Calc IN PART
3000	Lm LT-Med BRN FNX'N Sli Foss
:0	Sh LT-med gRAY SOFT
	Lm LT-Med BRN FNX'N - gRANULAR
20	Sh LT gRAY SOFT
	Lm BRN FNX'N
30	Sh LT gRAY SOFT
40	
50	Lm CRM - LT BRN FNX'N
60	Lm CRM - LT BRN FNX'N Chalk IN PART
70	Lm LT-Med BRN - LT gRAY FN-VFX'N Sli Foss IN PART
80	Lm off WHT - LT Med BRN FN-VFX'N
90	Lm LT BRN FNX'N - GRANULAR SFO ON BRK W VLT Odor Gd WET CUT - STREAMING ON BRK
3100	
:0	Lm LT BRN gRANULAR
	Lm LT gRAY - LT BRN FN-VFX'N
20	



	[illegible]
30	Lm brn VFX'n
40	Lm gray - med brn FNX'N granular in part Sli Foss
50	Lm lt brn - lt gray FN - VFX'n granular in part Sli Chalk
60	[illegible]
70	Lm brn granular Sli Foss
	Sh gray - blk Carb
80	Lm lt - med brn FN - VFX'n Sli Foss
90	Lm off wht crm FN VFX'N
3200	Lm off wht - lt brn FN - VFX'N
10	Lm lt brn FNX'N granular VS [illegible] Foss Sli [illegible] in part
20	Lm crm - brn lt gray FNX'N granular
30	Lm lt - dk brn FNX'N
40	Sh blk Carb
	Lm lt - med Brn w gray mottling
50	Lm lt - med brn FNX'N
60	Lm lt med brn FNX'N - granular few pcs w fair wht cut NFO VLT odor
70	Lm med brn FNX'N - Granular NS
80	Lm med - dk brn FNX'N
90	Lm lt - med brn FNX'N - granular
3300	Lm lt - med brn FNX'N
10	Lm lt - med brn FNX'N Sli Chalk in part Some VFX'N brn Lm
20	Sh blk Carb
	Lm brn VFX'N
30	Sh lt gry soft sticky

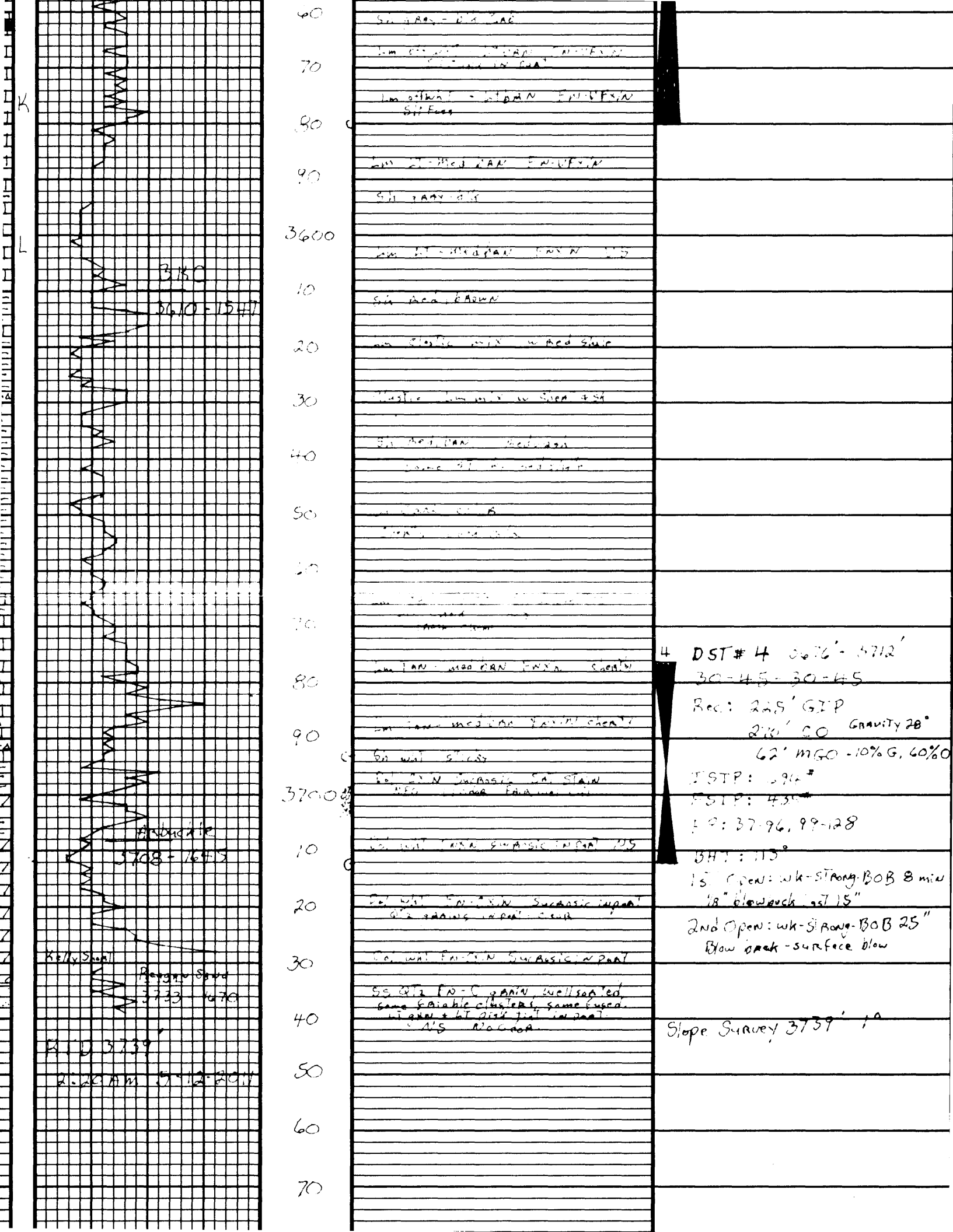


40
Lm wht - CRM microxln
Sl chk in part
50
Sh Red soft
Lm CRM - LT brn microxln
60
Sh Red, brn Red wash soft
Lm LT - med brn FN - VFxln
Sl Calc
70
80
Lm LT - med gray FNxln gray mottling
Sl Fass
90
Sh gray / calc
3400
Lm LT - med brn FNxln - granular
VFD
Sh Red soft
10
20
Lm med brn FN - VFxln
granular in part VFD Needles
Sl brn carb
30
Lm CRM FNxln beat stain
in veggy & vms FD, VLT oil
Sl dolomitic in part
40
Lm wht - CRM FN - VFxln
50
Lm tan FNxln
60
Lm CRM - tan FNxln Oolitic - comeldic
Clay
70
Lm CRM - off wht - lt brn
VFxln Sl Clay
80
Lm LT - med brn FN - VFxln
90
Lm brn FN - VFxln Sl Fass
3500
Lm CRM - lt tan - gray FNxln
Scattered intergran vis oil stain
10
Lm CRM - LT tan FN - VFxln
Chalky in part
20
Lm CRM - off wht mostly FNxln
Scattered intergran vis oil stain
Fossiliferous in part
30
Lm CRM LT tan FN - VFxln
Chalky in part
50
Lm LT brn - CRM Mostly VFxln
Chalky in part

DST #1 3348' - 3406'
30 - 30 - 0 - 0
Rec: 5' Mud NS
ISIP: 553#
FP: 16-17, 18-19
BHT: 104°
1st Open: Surface blow - died 14"
No blow back
2nd Open: No blow

DST #2 3402' - 3452'
30 - 45 - 15 - 0
FP: 8, 28-30
BHT: 103°
1st Open: W/S blow 14" - 1/2"
No blow back
2nd Open: No blow, Flushed tool

DST #3 3499' - 3580'
30 - 45 - 60 - 60
Rec: 150' GIP
30' OGCM - 5%G, 15%O
80%M
ISIP: 457#
FSIP: 736#
FP: 18-19, 18-25
BHT: 107°
1st Open: W/S blow 1/4"
No blow back
2nd Open: 2" Strong blow


K
L
3760
3610 - 150'
Brushkie
3708 - 162'
Kelly Shale
Reagan Sand
3733 - 137'
RTD 3739'
2:20 AM 5-12-2011
DST # 4 3676' - 3712'
30-45-30-45
Rec: 225' GTP
210' GO
62' MGO - 10% G, 60% O
Gravity 28°
ISTP: 996#
FSTP: 436#
IF: 37-96, 99-128
BHT: 115°
1st Open: wk-Strong-BOB 8 min
18" blow back - 1st 15"
2nd Open: wk-Strong-BOB 25"
Blow back - surface blow
Slope Survey 3739' TD

JOB LOG

SWIFT Services, Inc.

DATE 5-12-11 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
TOI	#2	Irwin	Long String	19423

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1600							on Loc
								R.g Laying down D.P.
								175 sks EA-2 Cmt.
	1715							Start in hole with 5½" 14# Csg.
								Insert Float Shoe
								Latch down Baffle
								Cent on #1, #3, #5, #6, #8, #10, #12, #56
								Basket #2, #11, #57
								Port Collar #57 @ 1325'
	1900							Drop Ball Tag Bottom
	1915							Circulate + Rotate Csg.
	1945							Plug R.H. 30sks M.H. 15sks
	1950		12					Pump 500gal Mud Flush
			20					20ssl KCL Flush
								Mix 130sks cmt
			32					Finish mixing
								Wash out pump + Line
	2015	6						Displ. L.D. Plug
								1st 18ssl KCL water
	2030		91				1500	Plug down 1500psi holding
								Release press.
								wash + Rack up truck
	2100							Job Complete
								Thank You
								Roger, Nick, Joe

JOB LOG

SWIFT Services, Inc.

DATE 6-9-11 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
TDI	# 2	Irwin	Cmt Top 5½x5⅝	19765

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1300					1"		On location
								Set up TP
								1" tbg @ 398'
		1¼				400		Brk circ - est rate 1¼ BPM
								Start 5sks cmt.
								Cmt circ
			17					Fin 30 sks cmt
								Rig pull 1"
								Press 5½ to 300#
								Hook to 5½ x 5⅝ Ann
						~~400~~ 300		Start cmt
						~~600~~ 500		Stage 600 / 400
		½ / 1½				~~600~~ 500		Brake circ
			25			500		Pump 45 sks cmt down Ann
						200		Shut in
	1530							Job complete
								Wash up & Rack up
	1600							
								75 sks sks used

Thanks

Ken & Doug

JOB LOG **SWIFT Services, Inc.** DATE 6-8-11 PAGE NO. 1

CUSTOMER TDI | WELL NO. #2 | LEASE Irwin | JOB TYPE Port Collar | TICKET NO. 19723

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1045							on location set up Trk
								2 3/8" x 5 1/2"
								P.C. 1322'
								RBP 2662'
	1125	3	0					Turn hole over
			65					Hole clean
	1140						1160	Test Csg
	1145	3	0					Spot 15# sand
			9					Sand spotted
								let set 20 min
								locate P.C.
								Open P.C.
	1250	3	4			350		Take inj rate & check for blow
	1300	3	0			350		Start Cement 150sks SMD
	1315		40			500		Plugged off/lost circ/shut down
								Try to clean out risers
	1325	3	40			350		resume cement/partial returns
	1330		55			500		Lost Circ./shut down
								Clean out risers
	1340	3	55			400		resume cement/partial returns
	1345		66					Lost Circ./shut down/clean Head
	1400	3	66			400		resume cement/no returns
	1402	3	72			500		raise weight
	1404	3	78/0			500		End Cement/start Displacement
	1405		4.5					Cement displaced
								Close P.C.
	1410						1000	Test Csg
								run 9 jts
	1420	3	0				150	Reverse out
	1425		16					Hole Clean
								wash up Trk
								Thank you
								Nick, Josh F & Lane

Did not circulate cement

LINER SETTING WITNESS REPORT

Date: 06/08/2011

Operator: T.D.I., Inc. # 4787 Lease: Irvin

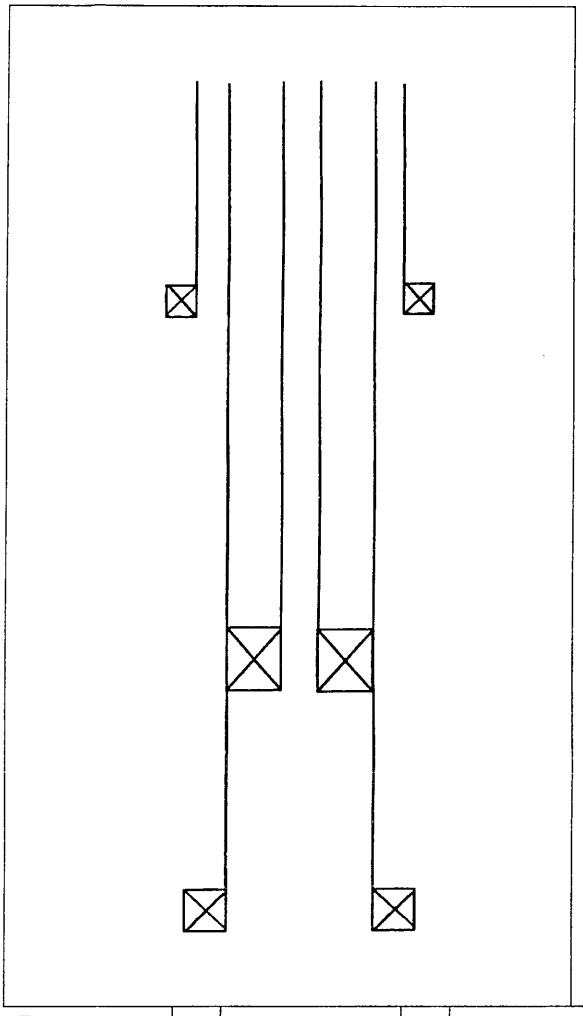
Address: 1310 Bison RD. Well# 2

Hays, Kansas 67601 Location SE SW SW/4 6-15-19

County Ellis

Phone# 785-628-2593 API# 15-051-26124-00-00

GPS LAT: 38.78013 LONG: -099.47447



Pipe Info	Size	Set from	Set to	sx cmt	circ?
Conductor					
Surface	8.625"	0'	236'	150sx	YES
Production	5.50"	0'	3734'	130sx	NO
Liner					
Liner					

Remarks:

Open port collar and pumped 75 sx of SMD cement and loss circulation. Stop and let set pumped again. Stop and clean out head and try again with little to no returns. Pumped total of 150sx of SMD Shut Down.

06/09/2011 Run Temp Survey and found TOC @710' Run 1" tubing and stacked out @ 417' Hooked to tubing and pumped 25sx of cement and it circulated. POOH and hooked to casing and pumped 35sx of cement @ 500# of PSI. SIP of 300# (Witness by Bruce Rodie)

06/10/2011 Ran bond log and showed every thing covered.

Port collar [X] DV tool [ ] @ 1322' Sx cmt 150 Circ ? Yes [ ] **No** [X]

Cement Company Swift Cementing Ticket # 19722

Witness Yes [X] No [ ] Roy A Dike signature 06/08/2011 date

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 **Home Office P.O. Box 32 Russell, KS 67665** **No. 4903**

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-5-11	6	15	19	Ellis	Ks		7:30 PM

Lease Irwin Well No. #2 Location Antonino, Ks, 4½ W, S/S

Contractor Southwind #1 Owner

Type Job Surface To Quality Oilwell Cementing, Inc.

Hole Size 12¼" T.D. 2381 You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Csg. 8⅝" Depth 236' Charge To TDI Inc.

Tbg. Size Depth Street

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 14 BBLS Cement Amount Ordered 150 common 3%cc 2%gel

EQUIPMENT

Pumptrk 1 No. Cementer Helper C. Isco

Bulktrk 10 No. Driver Driver Cory

Bulktrk 5W No. Driver Driver Rick

JOB SERVICES & REMARKS

Remarks: Cement did Circulate

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Common	150
Poz. Mix	
Gel.	3
Calcium	5
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	158
Mileage	
FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	13
Tax	
Discount	
Total Charge	

X Signature Frank Rouse