

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-4
Form must be typed
July 2006

APPLICATION FOR COMMINGLING OF
PRODUCTION (K.A.R. 82-3-123) OR FLUIDS (K.A.R. 82-3-123a)

Commingling ID # CO081110

Operator Information:

License #: 30606
Name: Murfin Drilling Company, Inc.
Address: 250 N. Water
City/State/Zip: Wichita, KS 67202
Contact Person: Kenneth Dean
Phone #: 316-267-3241

Well Information:

API #: 15 - 10920973 - 00 - 00
Lease Name: Vanava Well #: 1-5
Spot: W2 - NE - NW - SE Sec. 5 Twp. 13 S. R. 32 East West
County: Logan
Feet from North / South Line of Section: 2310
Feet from East / West Line of Section: 1800

1. Name and upper and lower limit of each production interval to be commingled:

Formation: Lansing\Kansas City (Perfs): 4316-4320 and 4330-4340
Formation: Marmaton (Perfs): 4512-4520 and 4527-4534
Formation: Cherokee (Perfs): 4598-4604
Formation: _____ (Perfs): _____
Formation: _____ (Perfs): _____

2. Estimated amount of fluid production to be commingled from each interval:

Formation: Lansing\Kansas City BOPD: 15.3 MCFPD: _____ BWPD: _____
Formation: Marmaton (Communicated with Cherokee on compl.) BOPD: _____ MCFPD: _____ BWPD: _____
Formation: Cherokee BOPD: 10.7 MCFPD: _____ BWPD: 103
Formation: _____ BOPD: _____ MCFPD: _____ BWPD: _____
Formation: _____ BOPD: _____ MCFPD: _____ BWPD: _____

3. Plat map showing the location of the subject well, all other wells on the subject lease, and all wells on offsetting leases within a 1/2 mile radius of the subject well, and for each well the names and addresses of the lessee of record or operator.

4. Signed certificate showing service of the application and affidavit of publication as required in K.A.R. 82-3-135a.

For Commingling of PRODUCTION ONLY, include the following:

- 5. Wireline log of subject well.
- 6. Complete Form ACO-1 (Well Completion form) for the subject well.

For Commingling of FLUIDS ONLY, include the following:

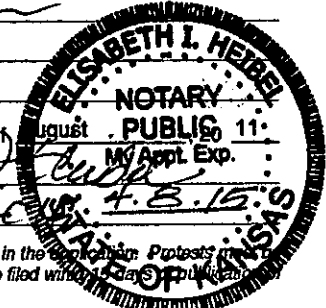
- _____ 5. Well construction diagram of subject well.
- _____ 6. Any available water chemistry data demonstrating the compatibility of the fluids to be commingled.

State of Kansas)
)
County of Logan)

69:

VERIFICATION: I hereby certify that to the best of my current information, knowledge and personal belief, this request for commingling is true and proper and I have no information or knowledge, which is inconsistent with the information supplied in this application.

Signature: Kenneth Dean
Printed Name: Kenneth Dean
Title: Production Geologist
Subscribed & sworn to before me this 18th day of August, 2011.
Notary Public: [Signature] My Appt. Exp. 4.8.15.09
My Commission Expires: 4/8/2011



RECEIVED
AUG 25 2011
KCC WICHITA

KCC Office Use Only
 Denied Approved
KCC Date Received: _____ 15-Day Periods Ends: 9/2/2011
Approved By: _____ Date: _____

Protests may be filed by any party having a valid interest in the application. Protests must be in writing and comply with K.A.R. 82-3-135b and must be filed within 15 days of publication of the notice of application.

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Ward Loyd, Commissioner
Thomas E. Wright, Commissioner

Sam Brownback, Governor

September 2, 2011

Kenneth Dean
Murfin Drilling Company, Inc.
250 N. Water
Wichita, KS 67202

RE: Approved Commingling CO081110
Vanava 1-5, Sec.5-T13S-R32W, Logan County
API No. 15-109-20973-00-00

Dear Mr. Dean:

Your Application for Commingling (ACO-4) for the above described well has been reviewed and approved by the Kansas Corporation Commission (KCC) per K.A.R. 82-3-123. Notice was examined and found to be proper per K.A.R. 82-3-135a. No protest had been filed within the 15-day protest period. This application, which was received by the KCC on August 25, 2011 concerns approval to simultaneously produce from the following sources of supply through the same tubing string in the same wellbore:

Source of Supply	Estimated Current Production			Perf Depth
	BOPD	MCFPD	BWPD	
Lansing/Kansas City	15.3			4316-4320 & 4330-4340
Marmaton (Comm. w/Cherokee on compl.)				4512-4520 & 4527-4534
Cherokee	10.7	0	103	4598-4604
Total Estimated Current Production	26	0	103	

Based upon the depth of the Cherokee formation perforations, total oil production shall not exceed 200 BOPD and total gas production shall not exceed 50% of the absolute open flow (AOF).

Commingling ID number CO081110 has been assigned to this approved application. Use this number for well completion reports (ACO-1) and other correspondence that may concern this approved commingling.

Sincerely,

Rick Hestermann
Production Department

CONFIDENTIAL

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

WELL FILE

Form ACO-1
June 2009
Form must Be Typed
Form must be Signed
All blanks must be Filled

OPERATOR: License # 30606
Name: Murfin Drilling Co., Inc.
Address 1: 250 N WATER STE 300
Address 2: _____
City: WICHITA State: KS Zip: 67202 1216
Contact Person: Leon Rodak
Phone: (316) 267-3241
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Murfin Drilling Co., Inc.
Purchaser: _____

Designate Type of Completion:
 New Well Re-Entry Workover
 Oil WSW SWD SIOW
 Gas D&A ENHR SIGW
 OG GSW Temp. Abd.
 CM (Coal Bed Methane)
 Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well info as follows:
Operator: _____
Well Name: _____
Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____
01/13/2011 01/23/2011 02/11/2011
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-109-20973-00-00
Spot Description: _____
W2_NE_NW_SE Sec. 5 Twp. 13 S. R. 32 East West
2310 Feet from North / South Line of Section
1800 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Logan
Lease Name: Vanava Well #: 1-5
Field Name: Wildcat
Producing Formation: LKC, Marmaton, Cherokee
Elevation: Ground: 3039 Kelly Bushing: 3044
Total Depth: 4740 Plug Back Total Depth: 4715
Amount of Surface Pipe Set and Cemented at: 222 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2554 Feet
If Alternate II completion, cement circulated from: 2554
feet depth to: 0 w/ 205 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 2000 ppm Fluid volume: 800 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License #: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: _____ Permit #: _____

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AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature: _____
Title: _____ Date: _____

KCC Office Use ONLY

Letter of Confidentiality Received
Date: 05/05/2011
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: _____ Date: _____

Operator Name: Murfin Drilling Co., Inc. Lease Name: Vanava Well #: 1-5
 Sec. 5 Twp. 13 S. R. 32 East West County: Logan

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken Yes No Log Formation (Top), Depth and Datum Sample
 (Attach Additional Sheets)

Samples Sent to Geological Survey Yes No Name Top Datum
 See Attachment

Cores Taken Yes No

Electric Log Run Yes No

Electric Log Submitted Electronically Yes No
 (If no, Submit Copy)

List All E. Logs Run:

Dual Induction
 Compensated Porosity
 Microresistivity

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CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (m.o.d.)	Weight lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.2500	8.6250	23	222	Common	165	3% cc, 2% gel
Production	7.8750	5.5000	15.5	4738	EA-2	175	5% CAI-Seal

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
Perforate				
Protect Casing				
Plug Back TD				
Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	4316-4320 LKC "L"	"L" & Pleasanton w/ 750 gal 15% NEFE	
4	4330-4340 Pleasanton	250 gal 15% MCA	
4	4512-4520 Lwr Paw	Lwr Paw & Ft Scott w/ 300 gal 15% MCA	
4	4527-4534 Ft/Scott		
4	4598-4604 Johnson	300 gal 15% MCA	

TUBING RECORD:	Size: 2 7/8	Set At: 4561	Packer At: None	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR. 03/10/2011	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)				
Estimated Production Per 24 Hours	Oil Bbls. 26	Gas Mcf	Water Bbls. 103	Gas-Oil Ratio	Gravity 29

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease (If vented, Submit ACO-18.)	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled (Submit ACO-5) <input type="checkbox"/> Other (Specify)	PRODUCTION INTERVAL: 4316-4604
--	--	-----------------------------------

Affidavit of Notice Served

Re: Application for: ACO-4 Application for Commingling of Production or Fluids

Well Name: Vanava #1-5 Legal Location: W/2 NE NW SE Sec. 5-13S-32W, Logan Co.

The undersigned hereby certifies that he / she is a duly authorized agent for the applicant, and that on the day 18th of August, 2011, a true and correct copy of the application referenced above was delivered or mailed to the following parties:

Note: A copy of this affidavit must be served as a part of the application.

Name Address (Attach additional sheets if necessary)

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AUG 25 2011
KCC WICHITA

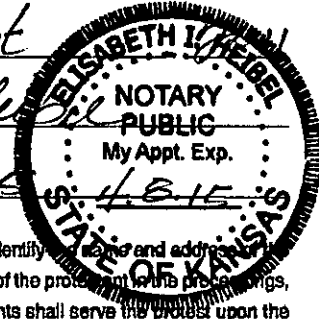
I further attest that notice of the filing of this application was published in the Oakley Graphic, the official county publication of Logan county. A copy of the affidavit of this publication is attached.

Signed this 18th day of August, 2011

[Signature]
Applicant of Duly Authorized Agent

Subscribed and sworn to before me this 18th day of August
[Signature]
Notary Public

My Commission Expires: 4/8/2015



Protests may be filed by any party having a valid interest in the application. Petitions for protests shall be in writing and shall clearly identify the name and address of the protestant and the title of the application. The petition shall include a clear and concise statement of the direct and substantial interest of the protestant in the proceedings, including the manner in which the protestant may be affected, and the nature, extent, character and grounds of the protest. Protestants shall serve the protest upon the applicant by mail or personal service at the same time or before the protestant files the protest with the Conservation Division. Protests must be filed within 15 days of the publication notice of the application.

Offset Operators, Unleased Mineral Owners and Landowners acreage
(Attach additional sheets if necessary)

Name:
 Murfin Drilling Co., Inc.
 250 N. Water, Suite 300
 Wichita, KS 67202

Shakespeare Oil Company Inc.
 202 W Main
 Salem, IL 62881

Ava Lee Maydew
 24072 240 Rd
 Portis, KS 67474

Legal Description of Leasehold:
 W/2 Sec. 4, and Sec. 5 in T13S-R32W

Sec. 8-13S-32W

S/2 of Sec. 5-13S-32W

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 KCC WICHITA

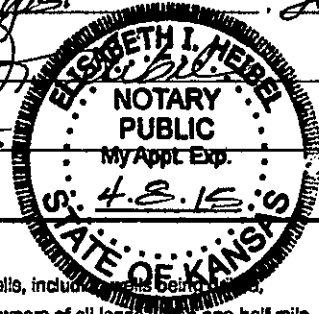
I hereby certify that the statements made herein are true and correct to the best of my knowledge and belief.

Kenneth Dean
 Applicant or Duty Authorized Agent

Subscribed and sworn before me this 18th day of August, 2011

Elizabeth J. Heibel
 Notary Public

My Commission Expires: 4.8.15

**Instructions:**

- Fully complete application, including page 4 (*plat map*) showing subject well and all known oil, gas and input wells, including inactive wells, or dry holes, within one-half mile. Show lease names and operators or unleased mineral rights owners of all lands within one-half mile. Show well numbers and elevations of producing formation tops.
- Attach some type of log (*drillers log, electric log, etc.*).
- Attach some type of verification of cementing for surface casing, longstring, D.V. tool, perforations, etc. (*Cement ticket and job log, bond log, etc.*)
- Attach Affidavit of Notice.
- Fill in schematic drawing of subsurface facilities including: size, setting depth, amount of cement, measured or calculated tops of cement for each of surface, intermediate (*if any*) and production casing; size and setting depth of tubing and packer; geological zone of injection showing top and bottom of injection interval.
- The original and one copy of the application and all attachments shall be mailed to the State Corporation Commission, Conservation Division.
- Deliver or mail one (1) copy of the application to the landowner on whose land the injection well is located and to each operator or lessee of record and each unleased mineral rights owner within one-half mile of the applicant well.
- Approval of this application, if granted, is valid only as long as there are no substantial changes in operation set forth in the application. A substantial change requires the approval of a new application. **No injection well may be used without prior written authorization.**
- All application fees must accompany the application.

Proof of Publication

Affidavit of Publication
State of Kansas,
LOGAN COUNTY, ss:

Barbara Glover
being first duly sworn, deposes and says, that

54p
is the editor of **THE OAKLEY GRAPHIC**, a weekly newspaper printed in the State of Kansas, and published in and of general circulation in Logan County, Kansas, with a general paid circulation on a weekly and that said newspaper is not a trade, religious, or fraternal publication.

Said newspaper is a weekly, published at least weekly 50 times a year; has been so published continuously and uninterruptedly in said county and state for a period of more than five years prior to the first publication of said notice; and has been admitted at the post office of Oakley in said county as second class matter.

That the attached notice is a true copy thereof and was published in the regular and entire issue of said newspaper for 1 consecutive weeks the first publication thereof being made as aforesaid on the 22 day of July, 2011 with subsequent publications being made on the following dates:

- 1st Publication was made on the 27 day of July, 2011
- 2nd Publication was made on the _____ day of _____, 20____
- 3rd Publication was made on the _____ day of _____, 20____
- 4th Publication was made on the _____ day of _____, 20____
- 5th Publication was made on the _____ day of _____, 20____
- 6th Publication was made on the _____ day of _____, 20____

Publication fee \$ 52.20
 Affidavit, Notary's Fees \$ _____
 Additional Copies @ _____ \$ _____
 Total Publication Fee \$ 52.20

(Signed) [Signature]

Witness my hand this 9 day of Aug, 2011
SUBSCRIBED and SWORN to before me this 9 day of Aug, 2011

[Signature]
(Notary Public)

My commission expires 2.7.2014

KELLY C. ANDERSON
Notary Public - State of Kansas
My Comm. Expires February 7, 2014

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KCC INCHITA
THE Oakley Graphic Wednesday, July 27, 2011 Page 8

Legal Notice

Published in the Oakley Graphic July 27, 2011 BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

NOTICE OF FILING APPLICATION and all persons whomsoever concerned.

RE: Murfin Drilling Co., Inc. Application for Commingling of Production on the Vanava #1-5, located in Logan County, Kansas.

TO: All Oil and Gas Producers, Unleased Mineral Interest Owners, Landowners, and each of you, are hereby notified that Murfin Drilling Company, Inc. has filed an application for Commingling of Production from the Lansing/Cherokee at the Vanava #1-5 well located in the W2 NE NW 1/4 of Section 5-13S-32W, Logan Co., KS.

Any persons who object to or protest this application shall be required to file their objections or protest with the Conservation Division of the State Corporation Commission of the State of Kansas within fifteen (15) days from the date of this publication. Any protests shall be pursuant to the specific regulations and provisions of the application may violate correlative interests of the natural resources of the State of Kansas.

AFFIDAVIT

STATE OF KANSAS \
- SS.
County of Sedgwick /

Mark Fletchall, of lawful age, being first duly sworn, deposeth and saith: That he is Record Clerk of The Wichita Eagle, a daily newspaper published in the City of Wichita, County of Sedgwick, State of Kansas, and having a general paid circulation on a daily basis in said County, which said newspaper has been continuously and uninterruptedly published in said County for more than one year prior to the first publication of the notice hereinafter mentioned, and which said newspaper has been entered as second class mail matter at the United States Post Office in Wichita, Kansas, and which said newspaper is not a trade, religious or fraternal publication and that a notice of a true copy is hereto attached was published in the regular and entire Morning issue of said The Wichita Eagle for _1_ issues, that the first publication of said notice was

made as aforesaid on the 3rd of

August A.D. 2011, with

subsequent publications being made on the following dates:

And affiant further says that he has personal knowledge of the statements above set forth and that they are true.

Mark Fletchall

Subscribed and sworn to before me this

3rd day of August, 2011



Penny L. Case
Notary Public Sedgwick County, Kansas

Printer's Fee : \$101.20

LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE
AUGUST 3, 2011 (3132747)
BEFORE THE STATE
CORPORATION COMMISSION
OF THE STATE OF KANSAS
NOTICE OF FILING APPLICATION

RE: Murfin Drilling Co., Inc. - Application for Commingling of Production on the Vanava #1-5, located in Logan County, Kansas.

TO: All Oil and Gas Producers, Unleased Mineral Interest Owners, Landowners, and all persons whomever concerned.

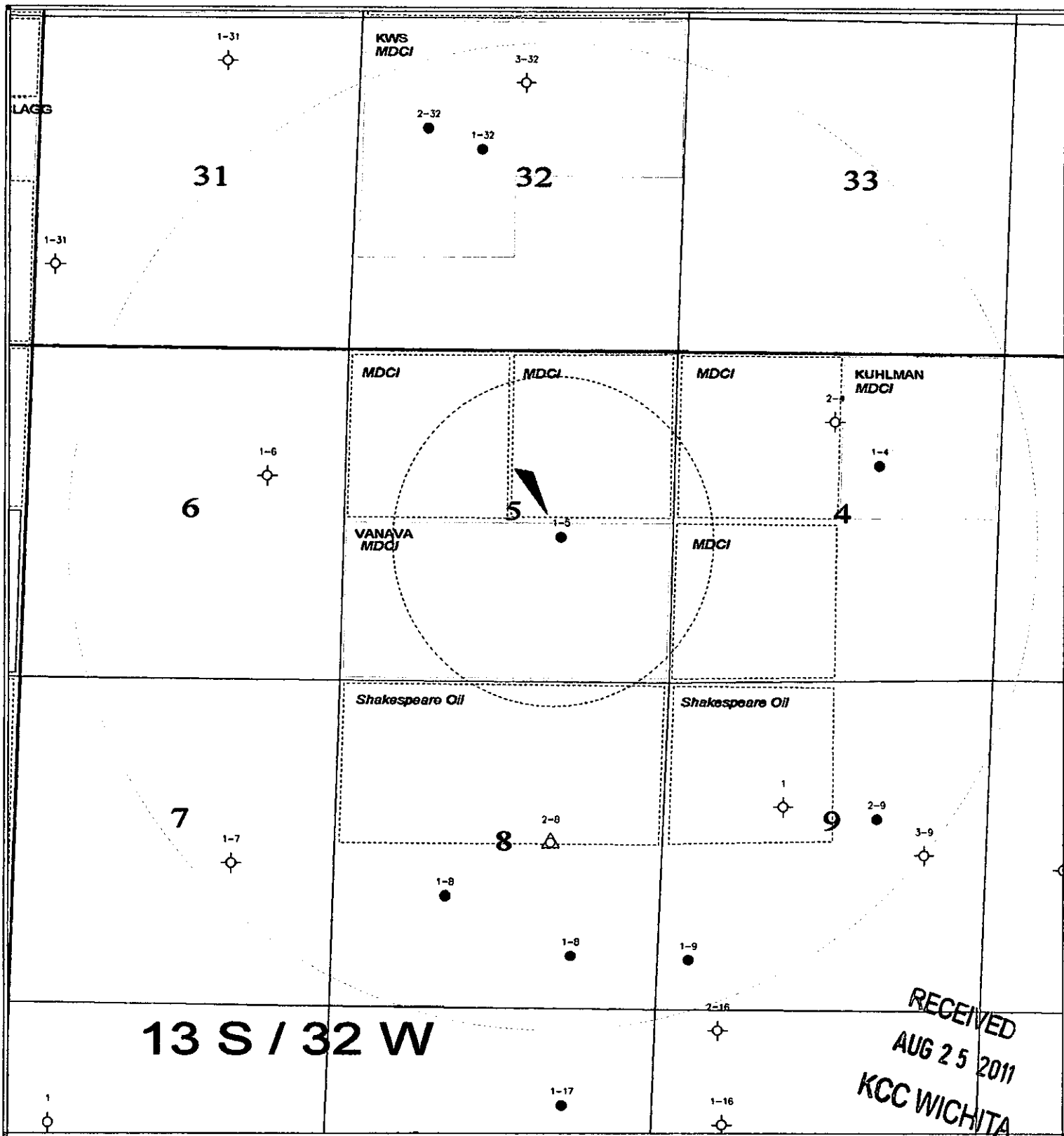
You, and each of you, are hereby notified that Murfin Drilling Company, Inc. has filed an application for Commingling of Production from the Lansing/Kansas City, Marmaton, and Cherokee at the Vanava #1-5 well located in the W2 NE NW SE of Sec. 5-13S-32W, Logan Co., KS.

Any persons who object to or protest this application shall be required to file their objections or protest with the Conservation Division of the State Corporation Commission of the State of Kansas within fifteen (15) days from the date of this publication. These protests shall be pursuant to Commission regulations and must state specific reasons why the grant of the application may cause waste, violate correlative rights or pollute the natural resources of the State of Kansas.

All persons interested or concerned shall take notice of the foregoing and shall govern themselves accordingly.

Murfin Drilling Company, Inc.
250 N. Water, Suite 300
Wichita, KS 67202
316-267-3241

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LEGEND

- ⊕ DRY HOLE
- OIL WELL
- PLUGGED OIL WELL
- △ INJECTION WELL

MURFIN DRILLING COMPANY, INC.

Vanava #1-5, Commingling App.
SEC. 5-13S-32W, LOGAN CO.

Ken Dean

8/18/2011

**DUAL RECEIVER
CEMENT BOND
LOG**

Company MURFIN DRILLING COMPANY
Well VANAVA NO. 1-5
Field WILDCAT
County LOGAN
State KANSAS

Company MURFIN DRILLING COMPANY
Well VANAVA NO. 1-5
Field WILDCAT
County LOGAN State KANSAS

Location: API #: 15-109-20,973-00-00
W2 NE NW SE
2310' FSL & 1800' FEL
SEC 5 TWP 13S RGE 32W

Other Services

Elevation

Permanent Datum GROUND LEVEL Elevation 3039
Log Measured From K.B. 5' AGL
Drilling Measured From KELLY BUSHING

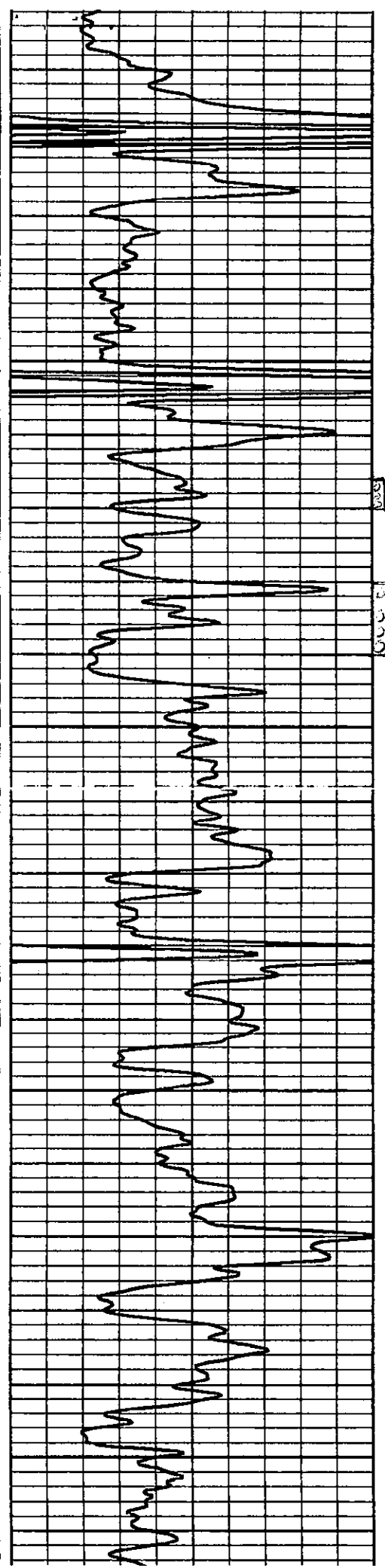
K.B. 3044
D.F.
G.L. 3039

Date	JAN 31, 2011
Run Number	ONE
Depth Driller	4740
Depth Logger	4715
Bottom Logged Interval	4714
Top Log Interval	
Open Hole Size	
Type Fluid	WATER
Density / Viscosity	
Max. Recorded Temp.	
Estimated Cement Top	3520
Time Well Ready	
Time Logger on Bottom	
Equipment Number	PT-05
Location	HAYS
Recorded By	BRAD LEIKER
Witnessed By	MR. JOHN TURNER

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	12.25	00	222				
TWO	7.875	00	4740				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8	23#	00	222
Prot. String				
Production String	5 1/2	15.5 #	00	4738
Liner				

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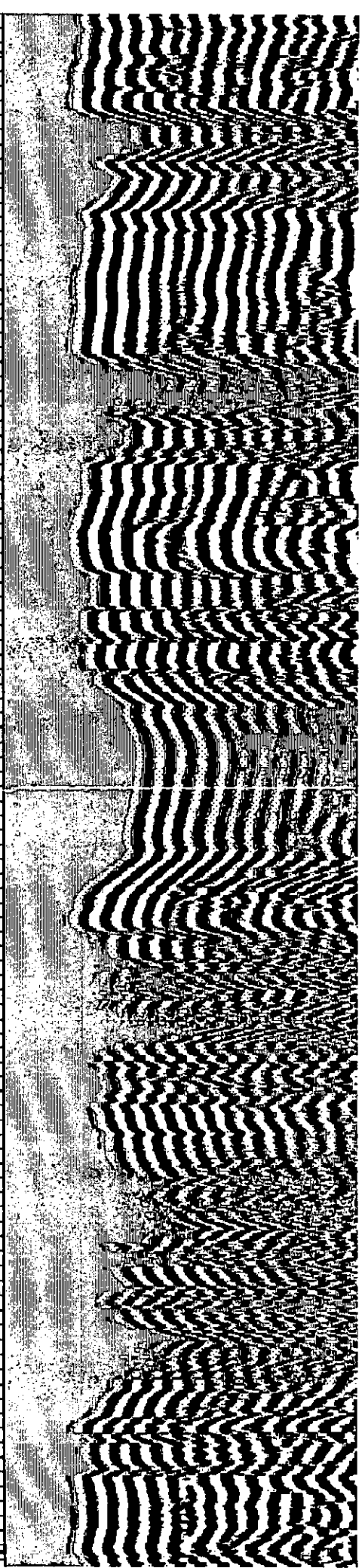
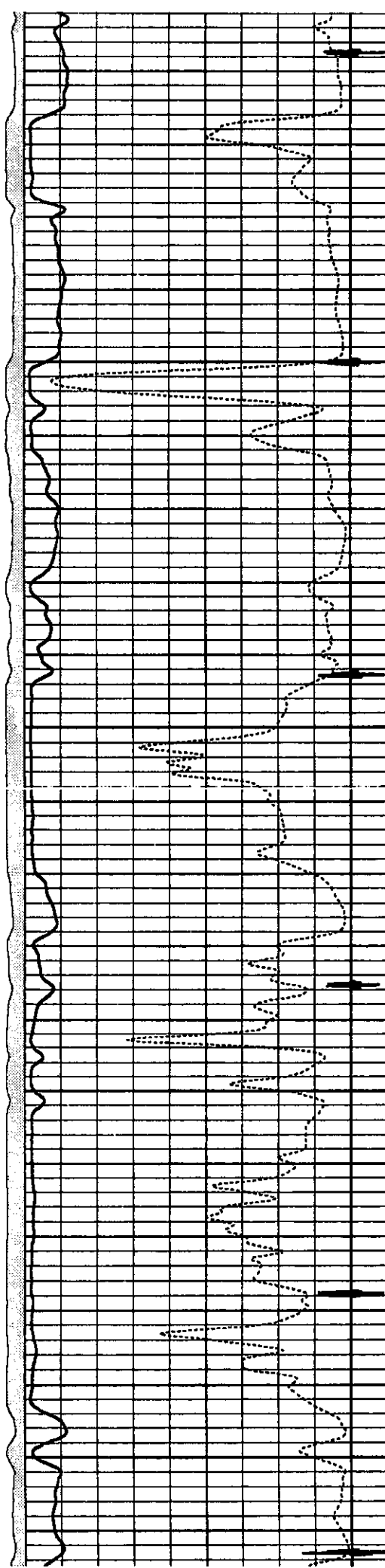


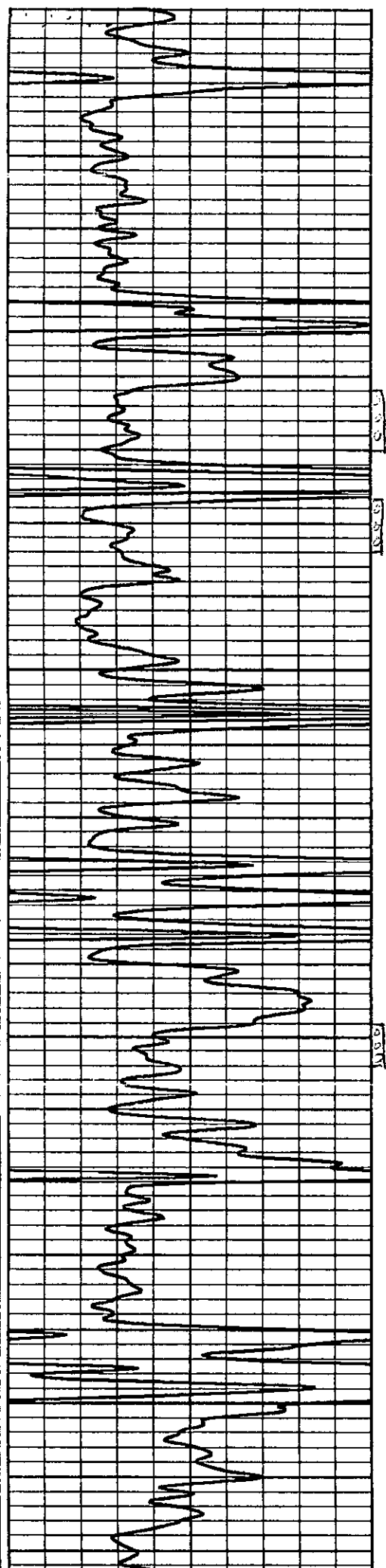
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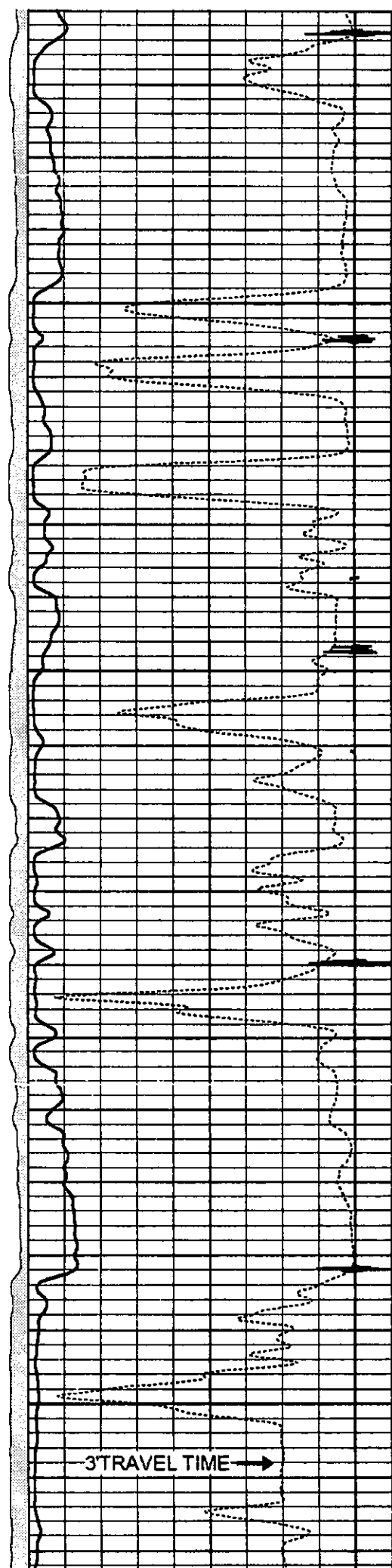


4500

4550

4600

4650



3 TRAVEL TIME →

