ATLAS
IRFLINE
CES

[redacted]

DUAL INDUCTION FOCUSED LOG

NO.

API NO.

5" = 100'

COMPANY ARCO OIL & GAS COMPANY
WELL LF 32-20-65-R
FIELD MIST
COUNTY COLUMBIA STATE OR.

LOCATION:
1561' S & 1334' W FROM
THE NE CORNER OF
SEC 20 TWP 6N RGE 5W

OTHER SERVICES
BHC/AL
DIP

PERMANENT DATUM GL ELEV. 1023'
LOGGING MEASURED FROM KB 10' FT. ABOVE P.D.
DRILLING MEASURED FROM KB

ELEVATIONS
KB 1033'
DF -
GL 1023

DATE	8/11/88				
RUN	1				
SERVICE ORDER	159038				
DEPTH-DRILLER	3230'				
DEPTH-LOGGER	3227'				
BOTTOM LOGGED INTERVAL	3225'				
TOP LOGGED INTERVAL	1533'				
CASING - DRILLER	7"	@ 1533'	@	@	@
CASING - LOGGER	1533'				
BIT SIZE	6 1/4"				
TYPE FLUID IN HOLE	E Z MUD				
DENSITY / VISCOSITY	10.9	40			
PH / FLUID LOSS	9.5	4.8			
SOURCE OF SAMPLE	FLOWLINE				
RM AT MEAS. TEMP.	2.47	@ 80 F	@	@	@
RMF AT MEAS. TEMP.	1.53	@ 80 F	@	@	@
RMC AT MEAS. TEMP.	3.05	@ 80 F	@	@	@
SOURCE OF RMF / RMC	MEAS	MEAS			
RM AT BHT	1.8	@ 110 F	@	@	@
TIME SINCE CIRCULATION	2 HRS				
MAX. REC. TEMP. DEG. F	110 F				
EQUIP. NO. / LOC.	HL 6406	SAC			
RECORDED BY	B. WELCH				
WITNESSED BY	J. W. THOMPSON				

FOLD HERE

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT, BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASURMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

Western Atlas
International
A Litton/Dresser Company

ATLAS
WIRELINE
SERVICES

REMARKS RUN (1)

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	DIFL	72831	1503	FREE
1	1	AC	79725	1603	CENT
1	1	GR	60484	1309	CENT
1	1	CAL	79090	4209	CENT

CURVE DELAYS

CURVE	DELAY	UNITS
CFOC	0	FT,IN
CILM	6,0	FT,IN
CILD	9,3	FT,IN
SP	9,3	FT,IN
GR	42,9	FT,IN
CAL	53,3	FT,IN
ACQ	27,0	FT,IN
AC	27,0	FT,IN

PARAMETERS

NAME	DEPTH INTERVAL	VALUE	UNITS
A	3235 TO 1527	0.000	
M	3235 TO 1527	0.000	
O.D.	3235 TO 1527	0.000	INCH
DEL-T F	3235 TO 1527	0.000	MICS/FT
DEL-T M	3235 TO 1527	***********	MICS/FT
DEL-T S	3235 TO 1527	0.000	MICS/FT

DISPLAY SCALE CHANGES

*** NONE ***

COMPANY: ARCO OIL & GAS COMPANY

WELL NAME: LF 32-20-65-R

SERVICE: KC214N FILE: 2 DATE: 08/11/88

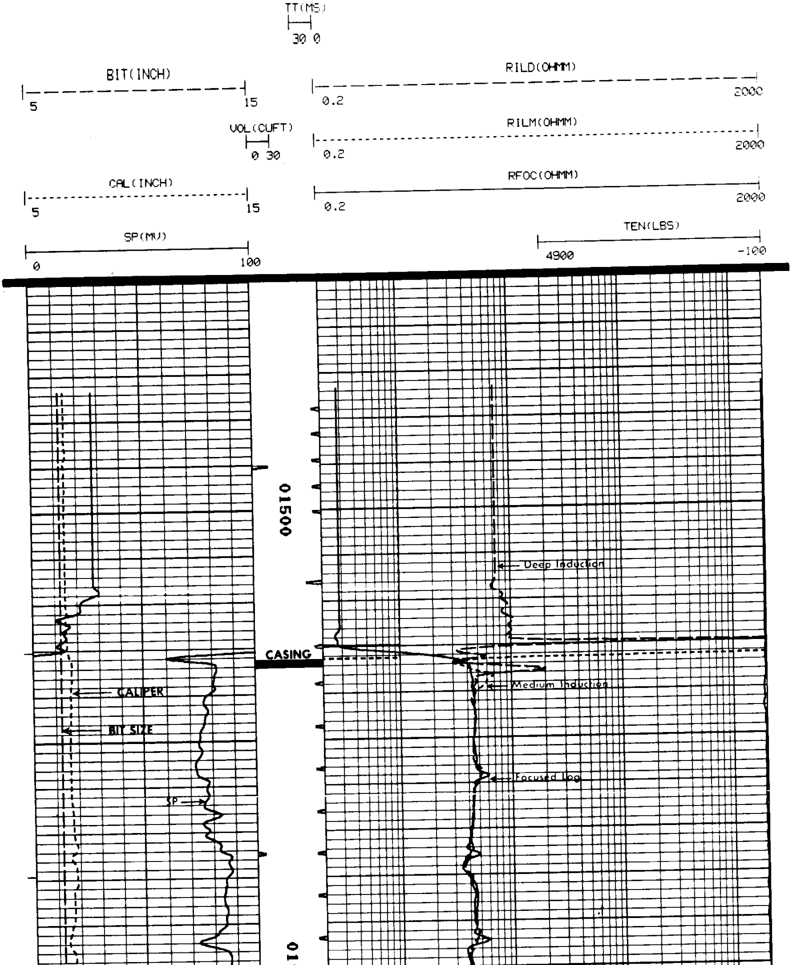
REVISION: FSYSAL REV GS08 VER 2

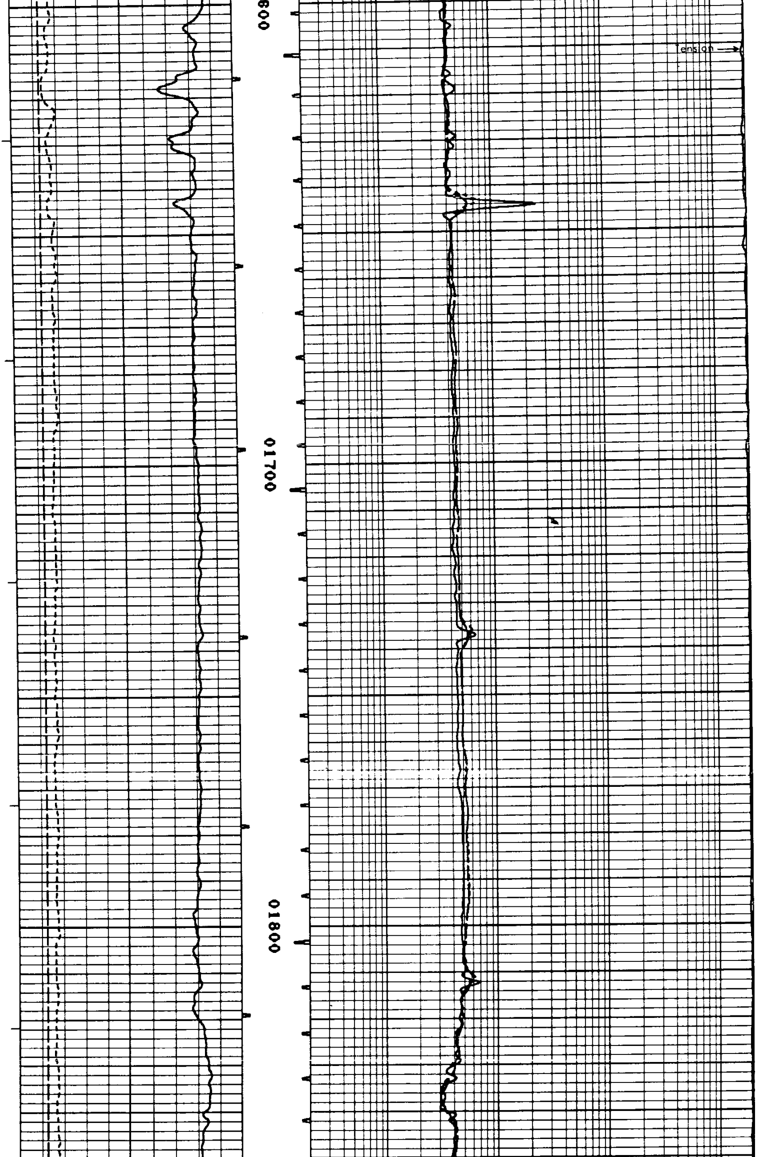
RUN: 1

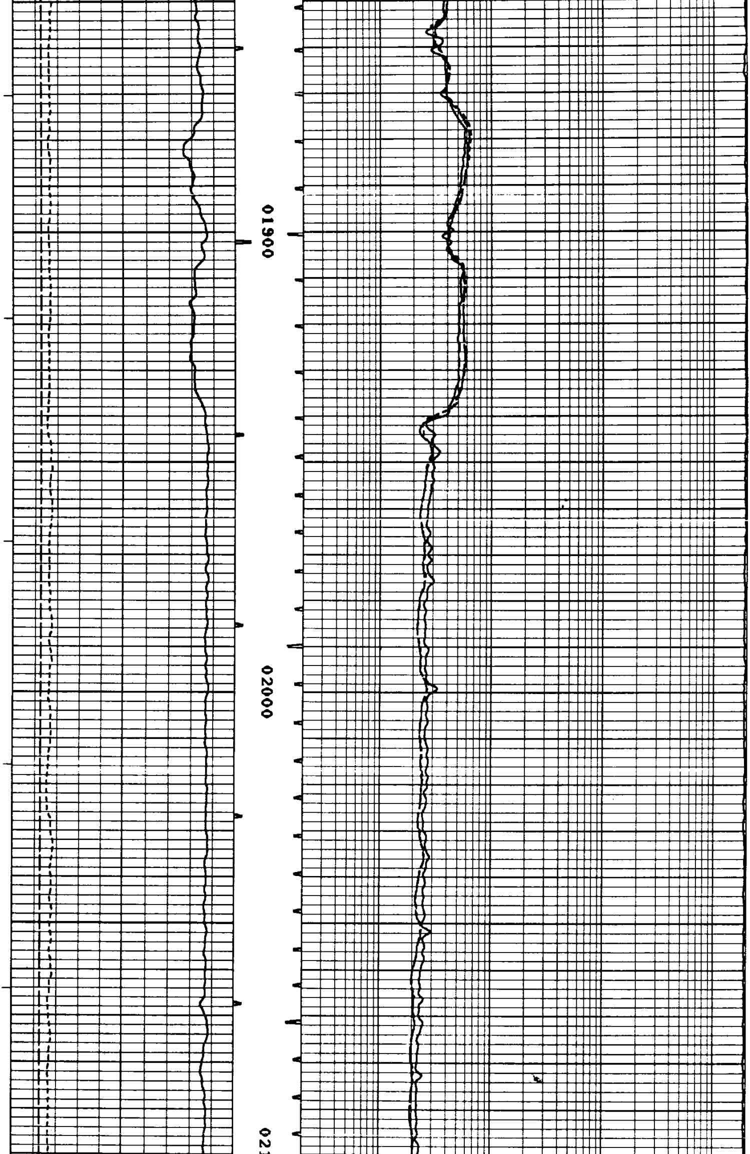
TRIP: 1

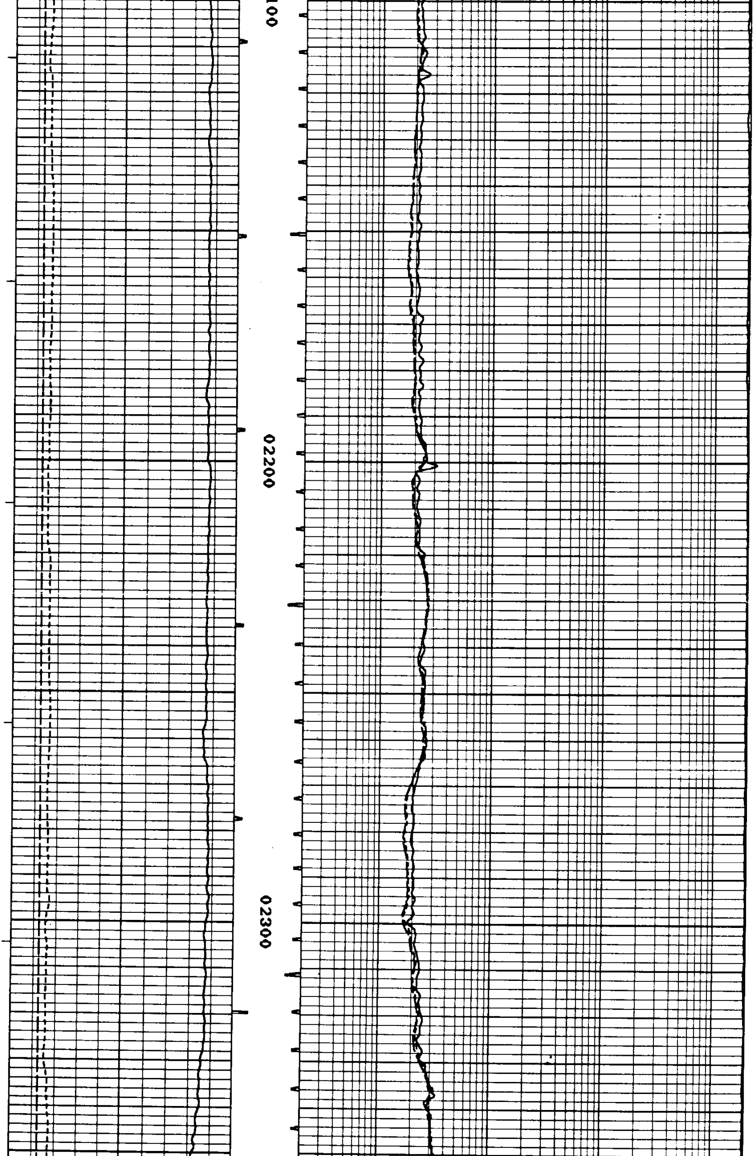
TIME: 06:05:38

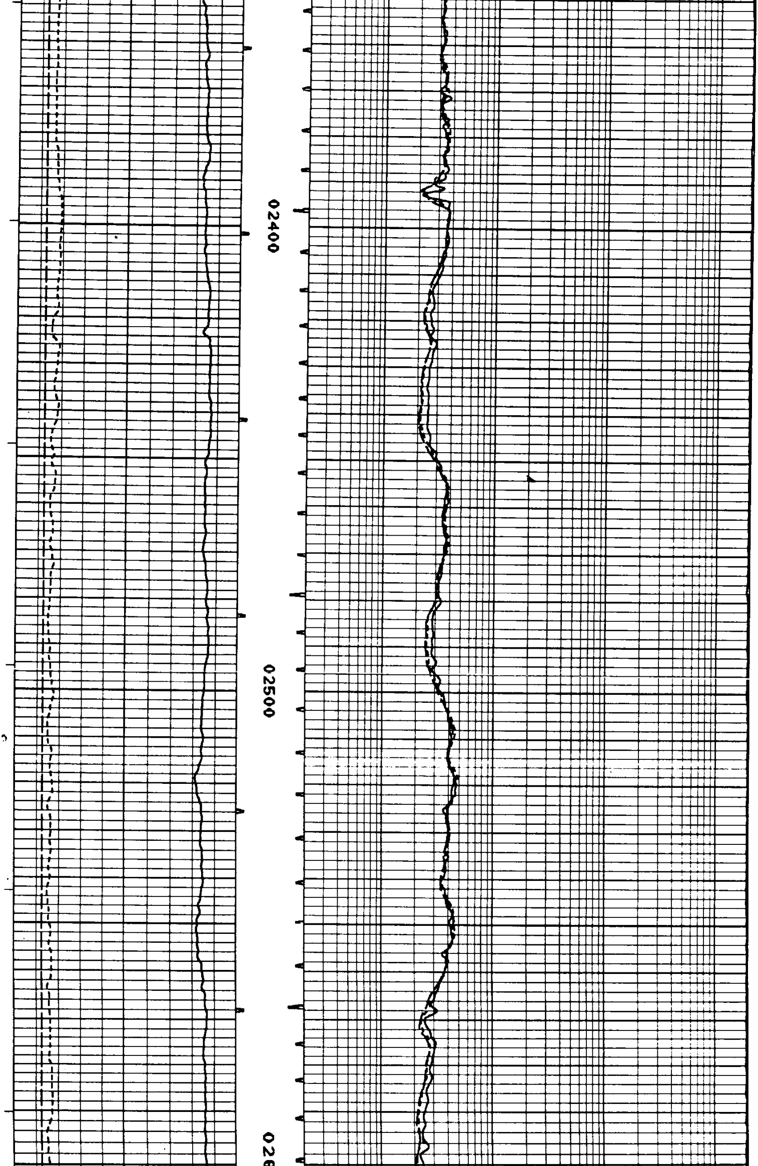
MODE: RECORD

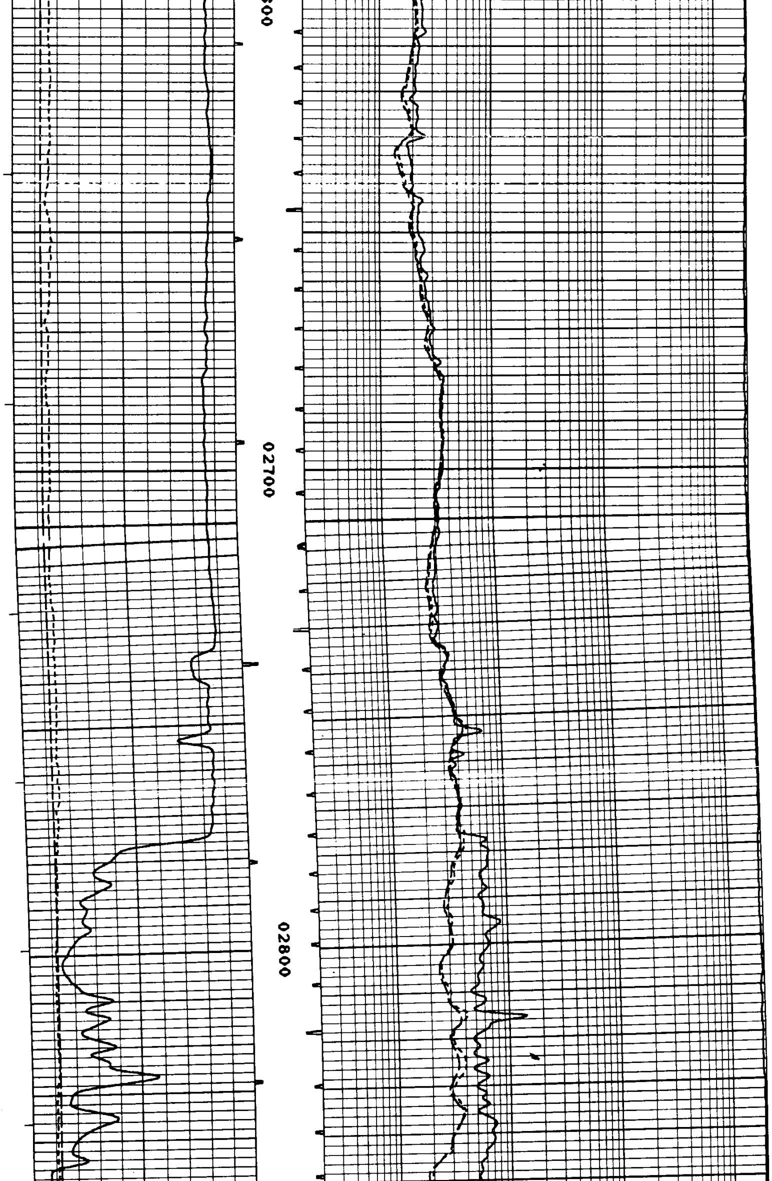


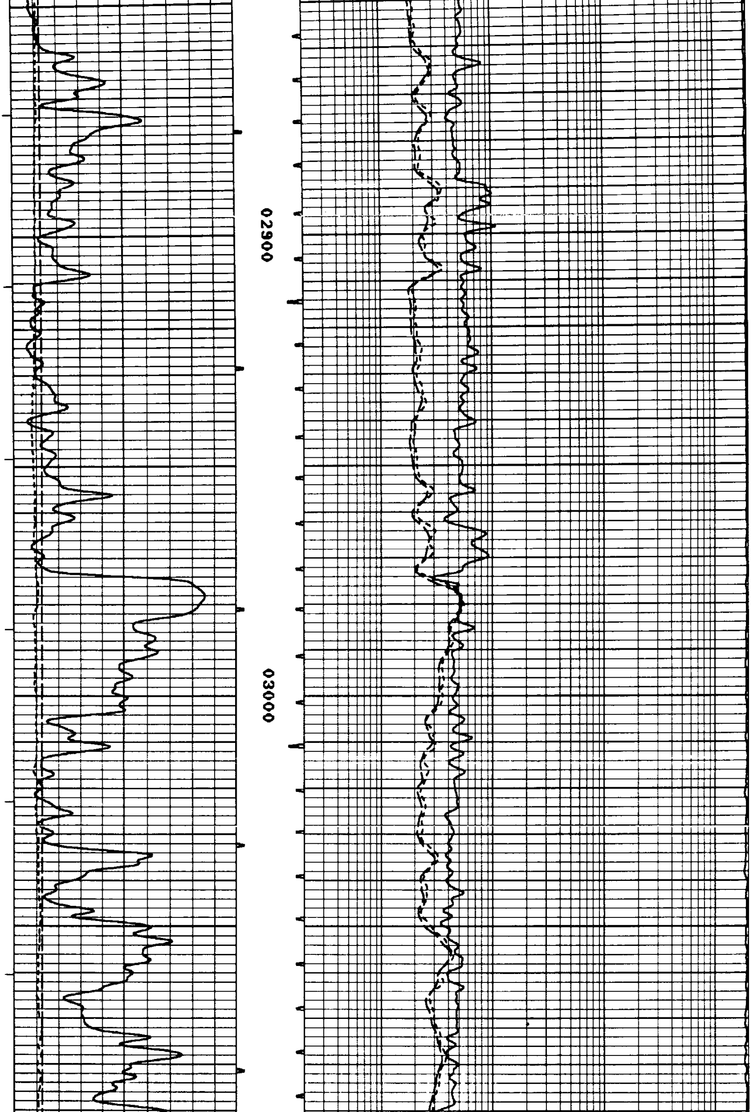


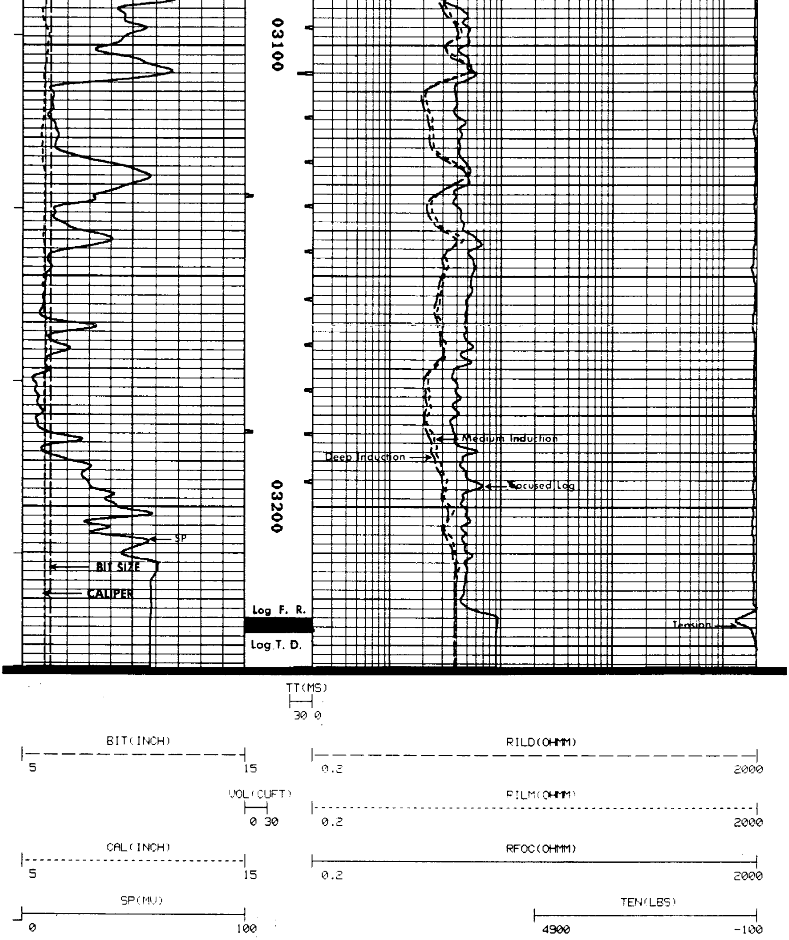












CURVE DELAYS

CURVE	DELAY	UNITS
CFOC	0	FT,IN
CILM	6,0	FT,IN
CILD	9,3	FT,IN
SP	9,3	FT,IN
GR	42,9	FT,IN
CAL	53,3	FT,IN
ACQ	27,0	FT,IN
AC	27,0	FT,IN

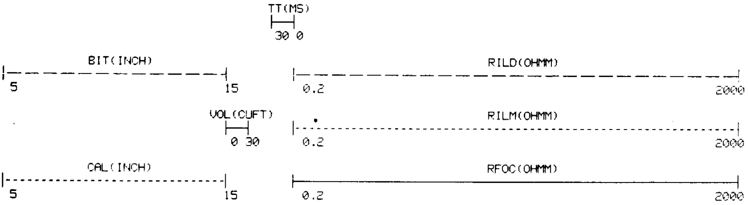
PARAMETERS

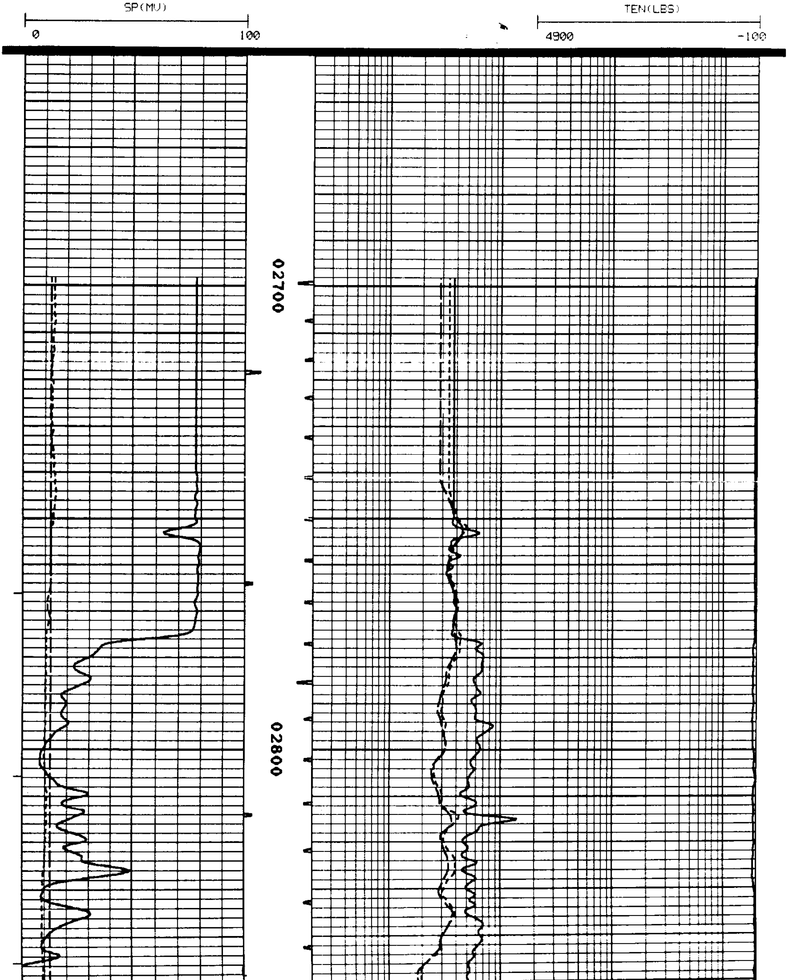
NAME	DEPTH INTERVAL	VALUE	UNITS
A	3236 TO 2752	0.000	
M	3236 TO 2752	0.000	
O.D.	3236 TO 2752	0.000	INCH
DEL-T F	3236 TO 2752	0.000	MICS/FT
DEL-T M	3236 TO 2752	***********	MICS/FT
DEL-T S	3236 TO 2752	0.000	MICS/FT

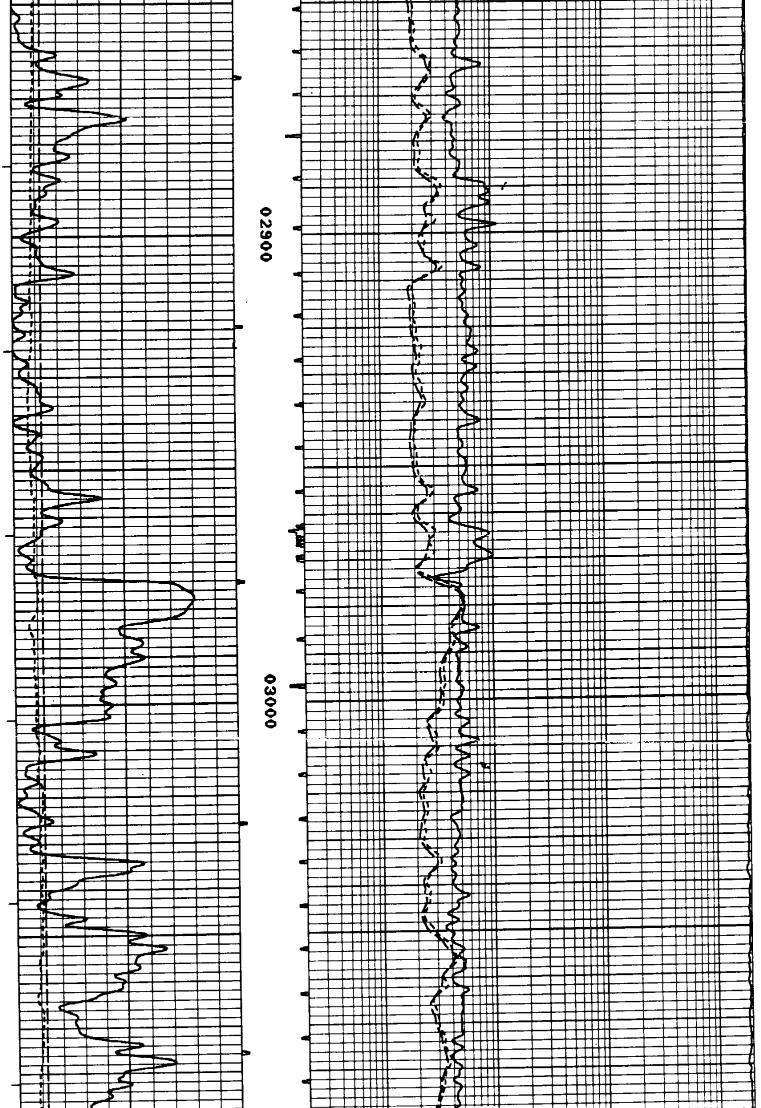
DISPLAY SCALE CHANGES

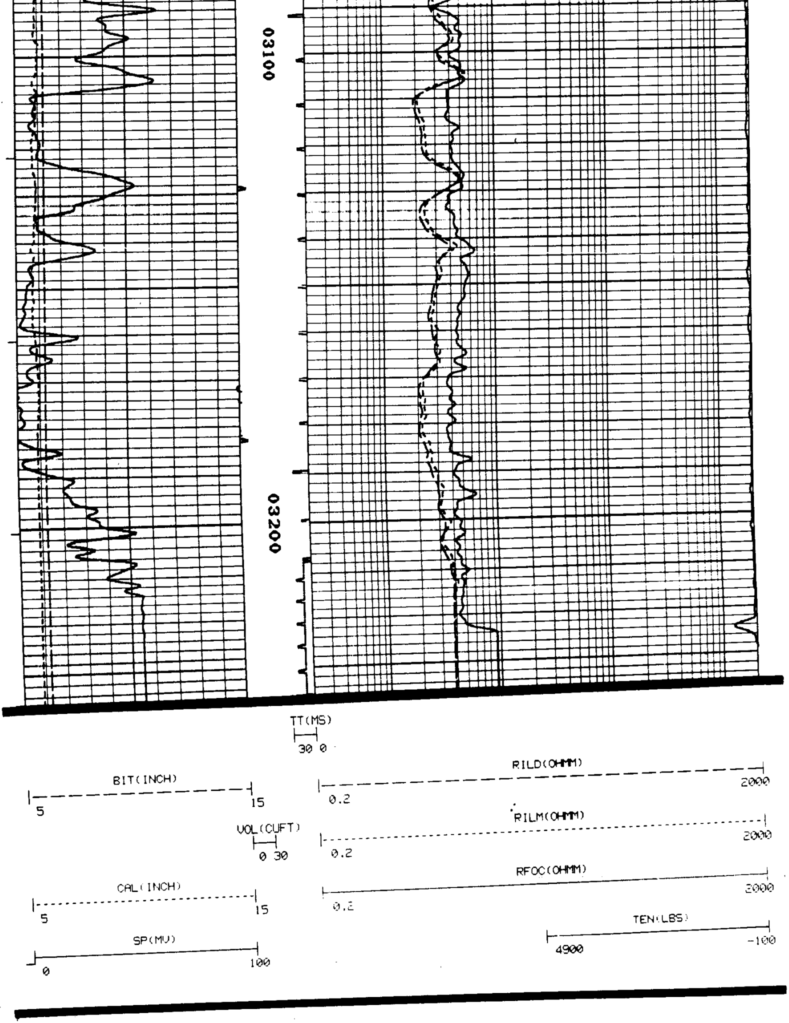
*** NONE ***

COMPANY: ARCO OIL & GAS COMPANY RUN: 1
WELL NAME: LF 32-20-65-R TRIP: 1
SERVICE: KC214N FILE: 1 DATE: 08/11/88 TIME: 05:45:28
REVISION: FSYSAL REV GS08 VER 2 **REPEAT SECTION** MODE: RECORD









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    ******************************************
    *                                        *
    *  CALIBRATION/VERIFICATION SUMMARIES   *
    *  DATE 08/11/88          TIME 07:40:19  *
    *  RUN  1                 TRIP 1         *
    *                                        *
    ******************************************


       LOG NAME DIFL    ASSET NO. 72831    UNIT NO. HL 6406
    CALIBRATION ENTERED ON  08/11/88 AT 03:12:06

 CURVE   MILLIVOLTS     SCALING FACTORS    ENGINEERING VALUES    UNITS
           LOW    HIGH   ADD.   . MULT.      LOW          HIGH
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       DATE 07/13/88         CALIBRATION           TIME 12:18:04

 CILD      2.0   488.0   -0.621    2.0031      1.000     500.000 MMHO
 CILM     -0.5   536.9    1.458    2.0956      1.000     500.000 MMHO
 CFOC      5.8   514.5   -4.680    2.3933      1.000     500.000 MMHO

       DATE 07/13/88    PRIMARY VERIFICATION       TIME 12:20:06

 CILD     -0.2   490.7   -0.621    2.0031     -0.793     502.561 MMHO
 CILM     -0.2   548.2    1.458    2.0956      1.271     511.260 MMHO
 CFOC      6.2   520.9   -4.680    2.3933      1.445     506.282 MMHO

       DATE 08/11/88   BEFORE LOG VERIFICATION     TIME 05:34:06

 CILD     -0.2   492.2   -0.641    1.9970     -0.793     502.561 MMHO
 CILM     -0.2   548.8    1.448    2.0933      1.271     511.260 MMHO
 CFOC      6.4   509.9   -4.993    2.4466      1.445     506.282 MMHO

       DATE 08/11/88    AFTER LOG VERIFICATION     TIME 06:48:51

 CILD     -0.1   493.6   -0.641    1.9970     -0.719     504.289 MMHO
 CILM     -0.4   550.3    1.448    2.0933      1.212     512.780 MMHO
 CFOC      6.3   508.4   -4.993    2.4466      1.496     504.753 MMHO


       LOG NAME GR      ASSET NO. 60484P   UNIT NO.
    CALIBRATION ENTERED ON  08/11/88 AT 03:13:14

 CURVE   COUNTS/SEC.    SCALING FACTORS    ENGINEERING VALUES    UNITS
           LOW    HIGH   ADD.    MULT.       LOW          HIGH
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       DATE 08/01/88         CALIBRATION           TIME 12:53:08

 GR       65.2   278.3    0.000    0.7041      0.000     150.000 API

       DATE 08/01/88    PRIMARY VERIFICATION       TIME 12:57:32

 GR       65.7   276.3    0.000    0.7041     46.239     194.532 API

       DATE 08/11/88   BEFORE LOG VERIFICATION     TIME 03:26:07

 GR      247.1   457.1    0.000    0.7041    173.991     321.808 API

       DATE 08/11/88    AFTER LOG VERIFICATION     TIME 07:32:04

 GR      256.4   466.2    0.000    0.7041    180.486     328.233 API


       LOG NAME CAL     ASSET NO. 79090    UNIT NO. HL 6406
    CALIBRATION ENTERED ON  08/11/88 AT 03:20:03

 CURVE   MILLIVOLTS     SCALING FACTORS    ENGINEERING VALUES    UNITS
           LOW    HIGH   ADD.    MULT.       LOW          HIGH
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       DATE 07/24/88         CALIBRATION           TIME 09:49:45

 CAL    3452.0  8259.3    1.692    0.0091      6.000      12.000 INCH

                        PRIMARY VERIFICATION             NOT DONE

       DATE 08/11/88   BEFORE LOG VERIFICATION     TIME 05:[illegible]

 CAL       E    [illegible]  1.692  0.0091     E           6.451 INCH

       DATE 08/11/88    AFTER LOG VERIFICATION     TIME 06:[illegible]

 CAL       E    3745.1    1.692    0.0091      E           6.366 INCH
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