CC 34-28-65

HALLIBURTON
LOGGING SERVICES, INC.

FINAL PRINT

DUAL INDUCTION
GUARD LOG

5"=100'

COMPANY ______________
WELL ______________
FIELD ______________
COUNTY __________ ST __

COMPANY ARCO OIL AND GAS COMPANY

WELL DEEP CREEK PROSPECT
CC NO. 34-28-65

FIELD MIST

COUNTY COLUMBIA

STATE OR

API NO. NA
LOCATION 1003.69 FT. NORTH
AND 2843.76 FT. WEST FROM
THE SOUTHEAST CORNER OF

SEC. 28 TWP 6N RGE 5W

OTHER SERVICES
AVL
CDL/DSN/GR

PERMANENT DATUM G.L. ELEV. 732.1
LOG MEASURED FROM K.B. 11.5 FT.ABOVE PERM.DATUM
DRILLING MEASURED FROM K.B.

ELEV.:K.B. 743.6
D.F.
G.L. 732.1

DATE	10/27/89			
RUN NO.	ONE			
DEPTH-DRILLER	2240			
DEPTH- LOGGER	2233			
BTM. LOG INTER.	2230			
TOP LOG INTER.	CASING			
CASING-DRILLER	9.625@449	@	@	@
CASING- LOGGER	448			
BIT SIZE	6.25			
TYPE FLUID IN HOLE	LSND/POLYMR			
DENS. : VISC	10.7 :45	:	:	:
PH : FLUID LOSS	9.0 :4.4	:	:	:
SOURCE OF SAMPLE	CIRCULATED			
RM @ MEAS. TEMP.	2.74 @75	@	@	@
RMF @ MEAS. TEMP.	2.50 @75	@	@	@
RMC @ MEAS. TEMP.	3.08 @75	@	@	@
SOURCE RMF : RMC	MEAS.:MEAS.	:	:	:
RM @ BHT	2.00 @105	@	@	@
TIME SINCE CIRC.	2 HOURS			
TIME ON BOTTOM	06:15			
MAX. REC. TEMP.	105 @TD	@	@	@
EQUIP. : LOCATION	50632:BKFLD	:	:	:
RECORDED BY	DOMBROWSKI			
WITNESSED BY	J. EASTER			

Fold Here

Service Ticket No.: 28521 API Serial No.: NA PGM Version: 2.20 E

Change in Mud Type or Additional Samples		
Date/Sample No.	/ / :	/ / :
Depth-Driller		
Type Fluid in Hole		
Dens. : Visc.	:	:
pH. : Fluid Loss	:	:
Source of Sample		
Rm @ Meas.Temp.	@	@
Rmf @ Meas.Temp.	@	@
Rmc @ Meas.Temp.	@	@
Source: Rmf:Rmc	:	:
Rm @ BHT	2.00 @105	@
Rmf @ BHT	1.83 @105	@
Rmc @ BHT	2.25 @105	@

RESISTIVITY SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole
		NONE	

RESISTIVITY EQUIPMENT DATA

Run No	Tool Type & No	Pad Type	Tool Pos.	Other
ONE	DSTU #111527	M430		
ONE	DILT #W109415	M412	FREE	
ONE	SGRD #W108937	M416	FREE	

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.		Run No.		Run No.		Run No.	
Serial No.		Serial No.		Serial No.		Serial No.	
Model No.		Model No.		Model No.		Model No.	
Diameter		No.of Cent.		Diameter		Diameter	
Detector Model No.		Spacing		Log Type		Log Type	
Type				Source Type		Source Type	
Length		LSA		Serial No.		Serial No.	
Distance To Source		FWDA		Strength		Strength	

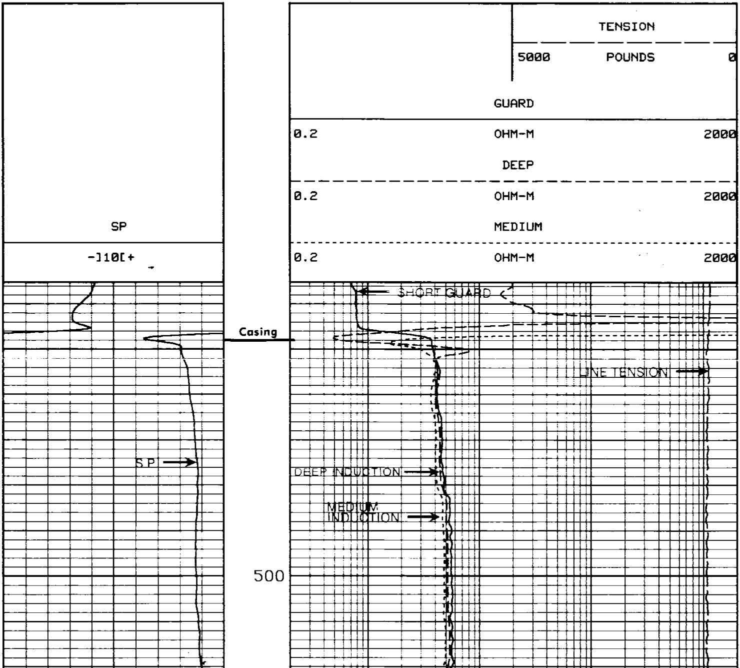
LOGGING DATA

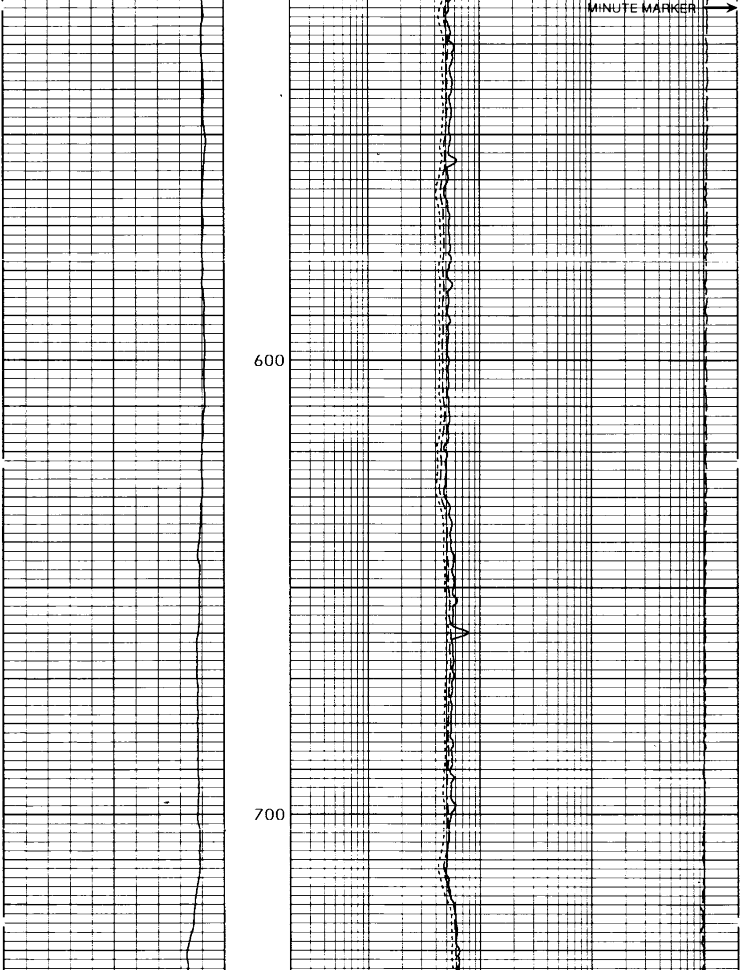
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale			Scale			Scale		
No.	From	To	Ft/Min	L	R	L	R	Matrix	L	R	Matrix	L	R	Matrix
ONE	TD	CSG	100											

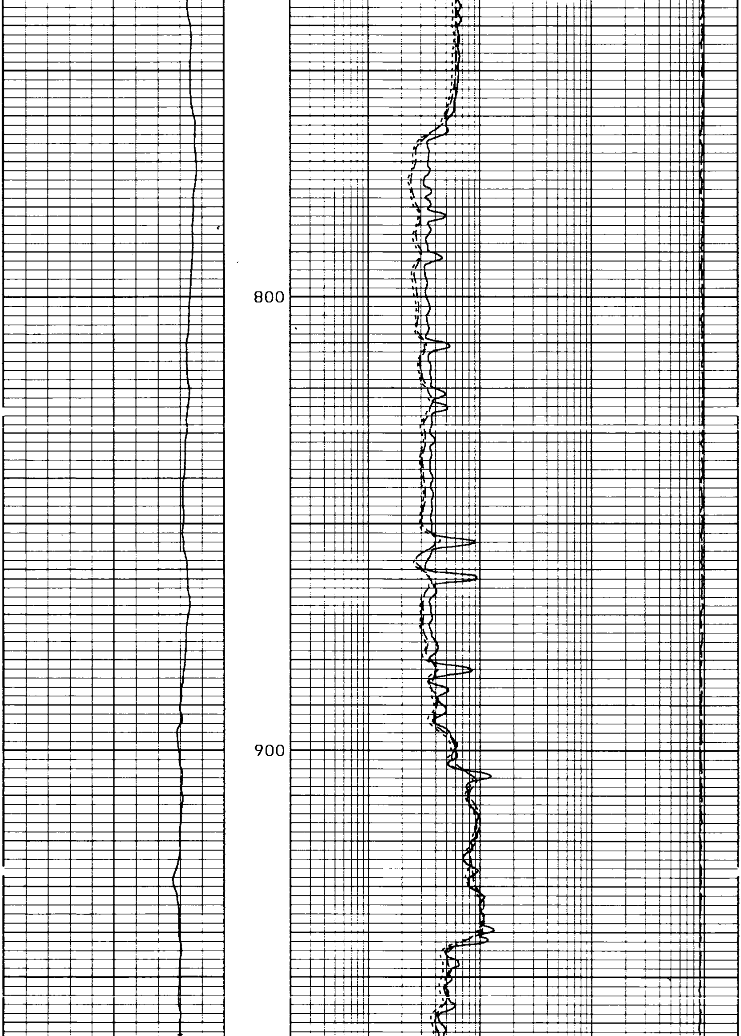
Remarks:

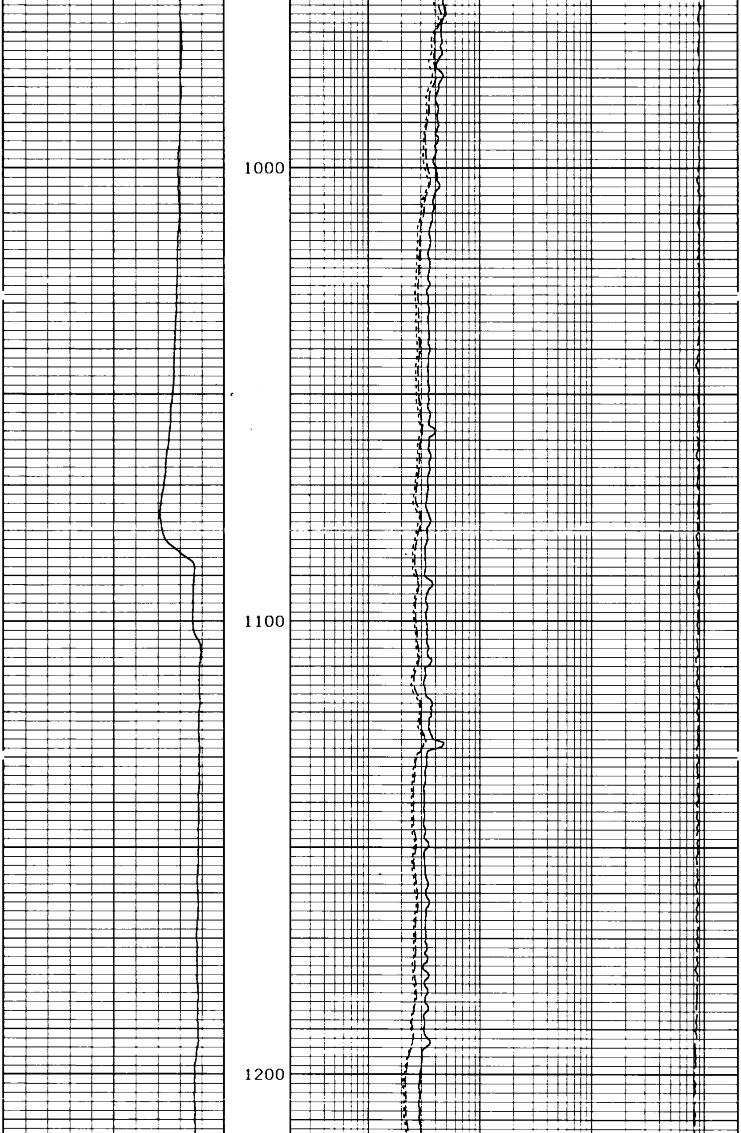
CREW: J. HARES, W. LARSON

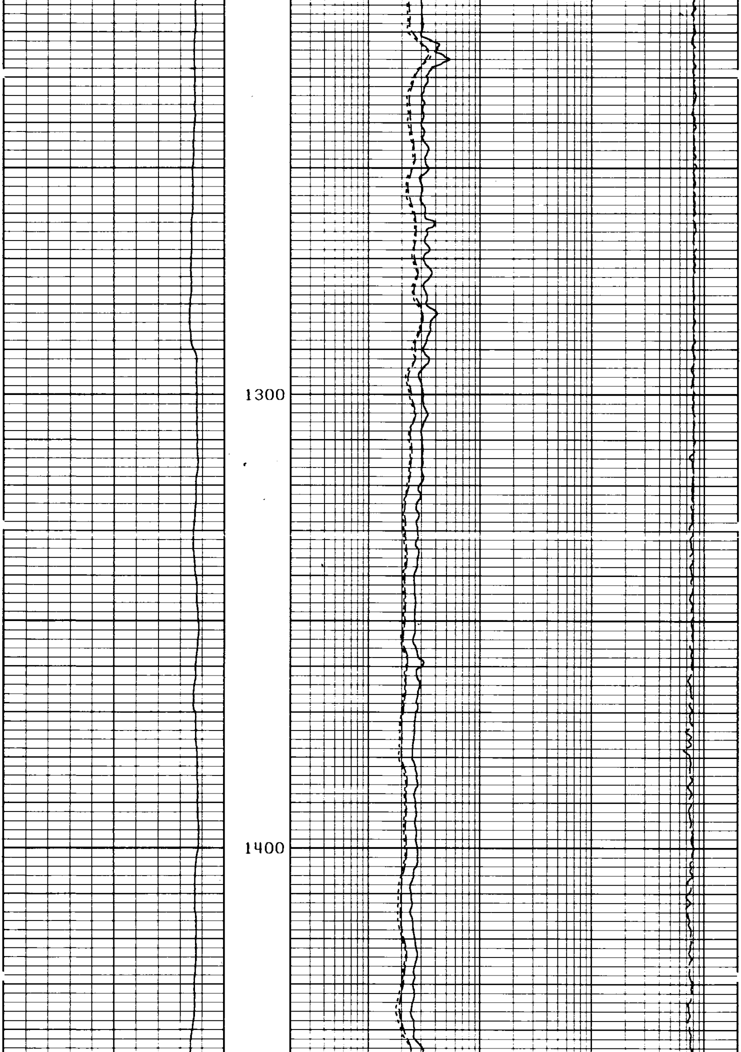
Halliburton Logging Services, Inc. does not guarantee the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by HLS personnel or which may appear on the log or in any other form. Any user of such data, interpretations, conversions or recommendations agrees that HLS is not responsible except where due to gross negligence or wilful misconduct, for any loss, damages, or expenses resulting from the use thereof.

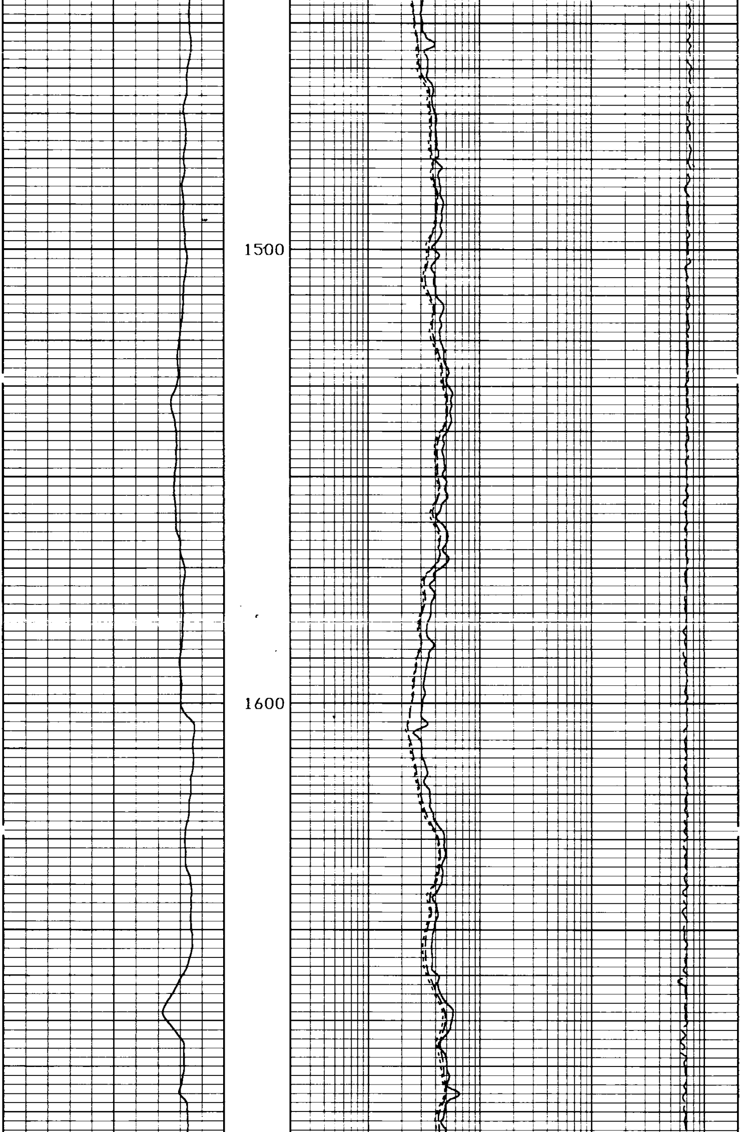


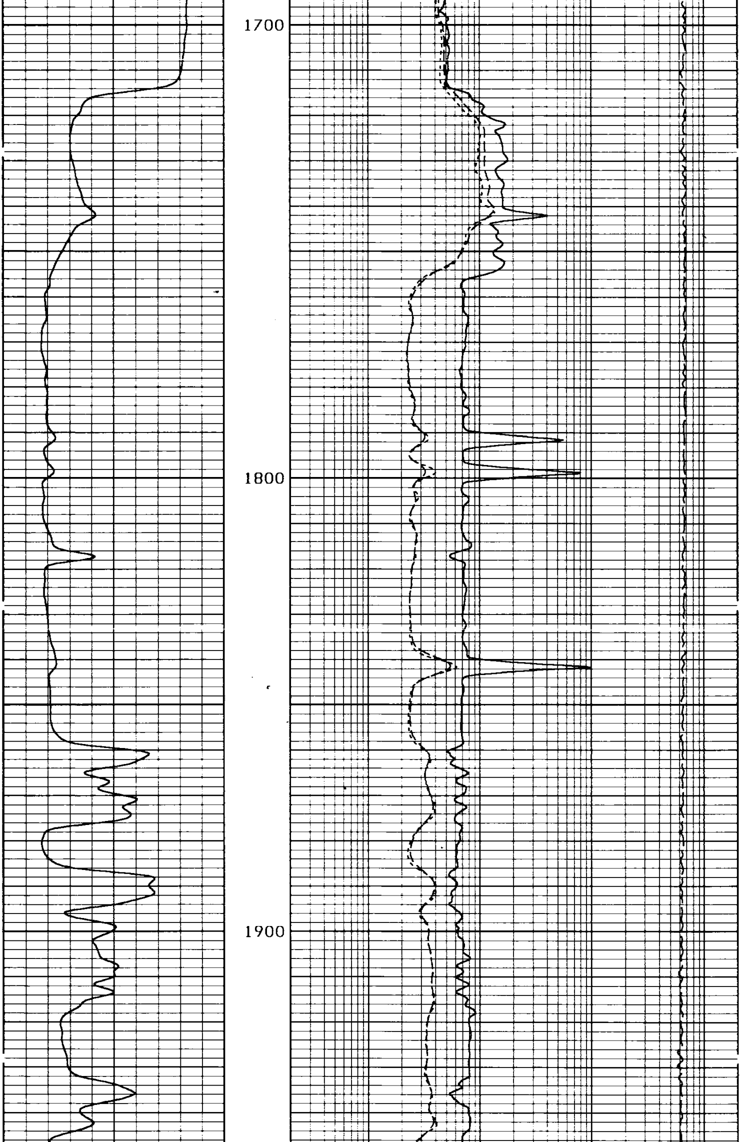


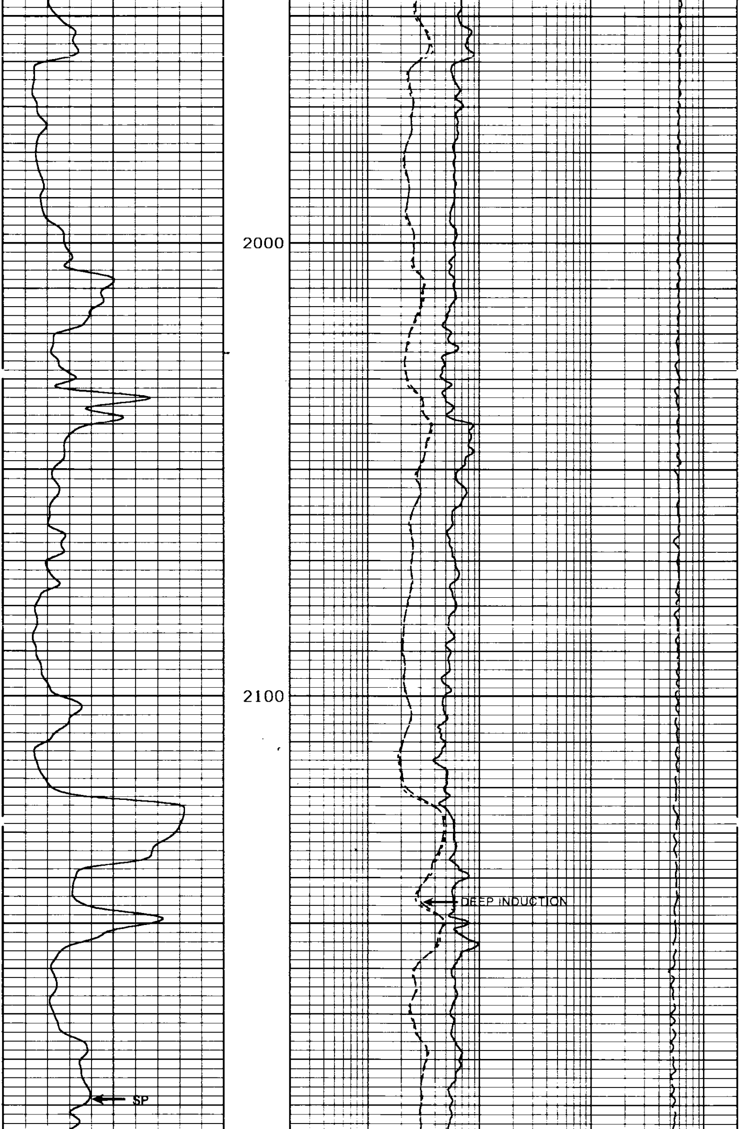


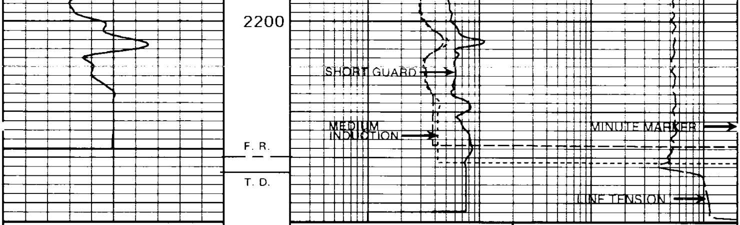












TENSION
5000 POUNDS 0

GUARD
0.2 OHM-M 2000

DEEP
0.2 OHM-M 2000

MEDIUM
0.2 OHM-M 2000

SP
-]10[+

SECTION # 2 Date:10/27/89 Time: 6:24 Version:2.20 E

REPEAT SECTION

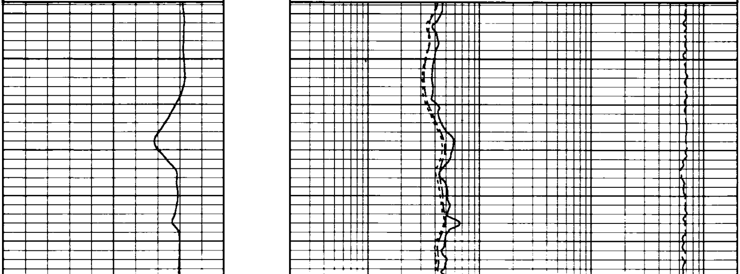
TENSION
5000 POUNDS 0

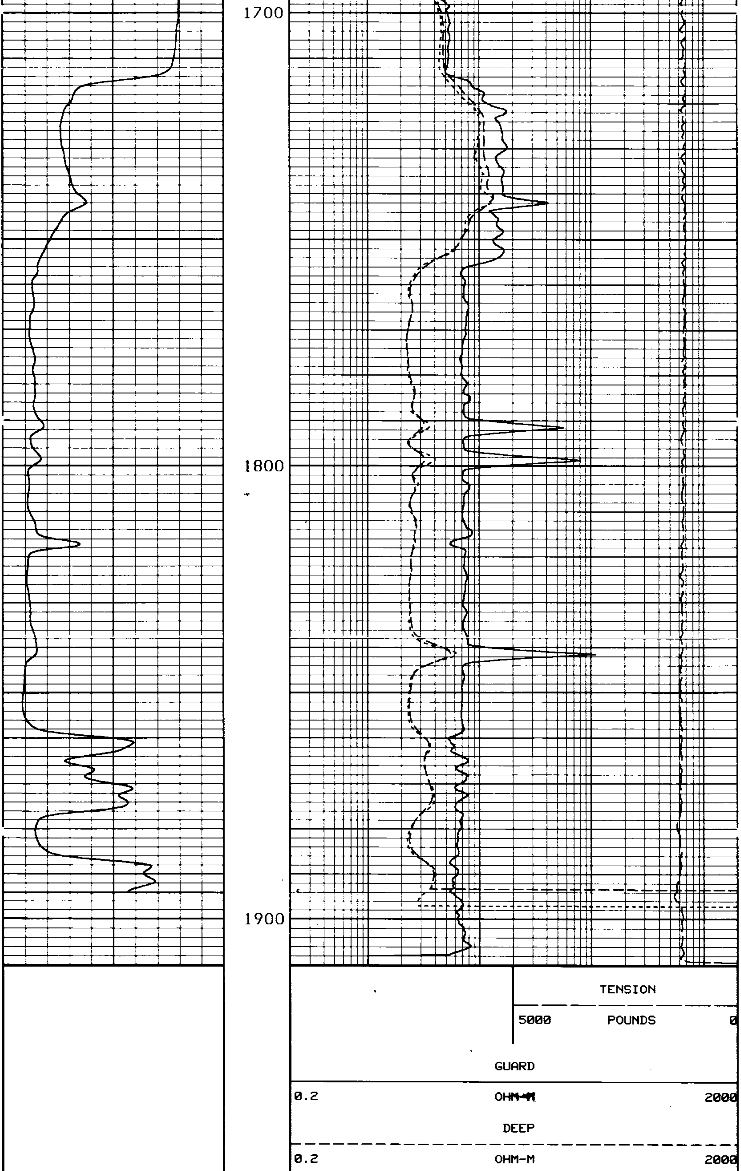
GUARD
0.2 OHM-M 2000

DEEP
0.2 OHM-M 2000

MEDIUM
0.2 OHM-M 2000

SP
-]10[+





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          SP                                        MEDIUM
        -]10[+                  0.2                 OHM-M                     2000

 SECTION # 1   Date:10/27/89   Time: 6:16   Version:2.20 E

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                    SHORT GUARD   SHOP CALIBRATION SUMMARY
PERFORMED:  16:26:49  10/18/89    LAST SHOP CALIBRATION:   16:33:16  10/04/89
SERIAL NUMBER: 108937             PROGRAM VERSION: 2.20 G
MODEL: #M416
PERFORMED BY: SHIU
                         MEASURED         CALIBRATED          UNITS
                         --------         ----------          -----
EXT. CAL. POINT #1         1.002             1.000            OHM-M
EXT. CAL. POINT #2        20.006            20.000            OHM-M
EXT. CAL. POINT #3       200.010           200.000            OHM-M
INTERNAL REFERENCE        19.756            19.749            OHM-M

                    SHORT GUARD  BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  00:47:26  10/27/89    LAST SHOP CALIBRATION:   16:26:49  10/18/89

                           SHOP             FIELD             UNITS
                         --------         ---------          ------
INTERNAL REFERENCE        19.749           19.789             OHM-M


                    SHORT GUARD  AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  06:47:01  10/27/89    LAST SHOP CALIBRATION:   16:26:49  10/18/89

                          BEFORE            AFTER             UNITS
                         --------         ---------           -----
INTERNAL REFERENCE        19.789           19.773             OHM-M

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                   DUAL INDUCTION  SHOP CALIBRATION SUMMARY
PERFORMED:  16:15:14  10/18/89    LAST SHOP CALIBRATION:   11:42:42  10/16/89
SERIAL NUMBER: 109415             PROGRAM VERSION: 2.20 G
MODEL: #M412
PERFORMED BY: SHIU

                            DEEP INDUCTION         MEDIUM INDUCTION
                         MEASURED  CALIBRATED   MEASURED  CALIBRATED    UNITS
                         --------------------   --------------------   -------
TOOL ZERO                  -.101       .000       -.458       .000     MMHOS/M
INTERNAL REFERENCE       501.330    504.936     502.471    495.028     MMHOS/M
WHEEL                    495.876    500.000     507.785    500.000     MMHOS/M
MANDREL BASE               3.744      3.420       4.879      5.032     MMHOS/M

                   DUAL INDUCTION BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  00:49:15  10/27/89    LAST SHOP CALIBRATION:   16:15:14  10/18/89

                            DEEP INDUCTION         MEDIUM INDUCTION
                            SHOP     FIELD        SHOP      FIELD       UNITS
                         --------------------   --------------------   -------
TOOL ZERO                   .000       .100        .000       .048     MMHOS/M
INTERNAL REFERENCE       504.936    504.401     495.027    497.241     MMHOS/M
MANDREL BASE               3.420      3.420       5.032      5.032     MMHOS/M

                   DUAL INDUCTION AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  06:48:09  10/27/89    LAST SHOP CALIBRATION:   16:15:14  10/18/89

                            DEEP INDUCTION         MEDIUM INDUCTION
                          BEFORE     AFTER       BEFORE     AFTER       UNITS
                         --------------------   --------------------   -------
TOOL ZERO                   .100       .104        .048       .020     MMHOS/M
INTERNAL REFERENCE       504.400    505.778     497.240    498.489     MMHOS/M
MANDREL BASE               3.420      3.420       5.032      5.032     MMHOS/M
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                               H L S CALIBRATION SUMMARY TABLE
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   SERVICE or SIGNAL            SHOP       BEFORE      AFTER      CHANGE   TOLERANCE
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GUARD                          19.749      19.789     19.773       .015     +/-.80
DEEP INDUCTION                504.936     504.400    505.778     -1.377     +/- 20
MEDIUM INDUCTION              495.027     497.240    498.489     -1.248     +/- 20
UM INDUCTION              495.027     497.240     498.489     -1.248      +/- 20
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#	TIME	FT	EVENT	REMARKS
			PRE-LOGGING DATA	
1	6: 5: 2	00000	DATE OF LOG: MMDD 1027	
2	6: 7: 6	01135	PLS SOFTWARE REVISION 2.20	
3	6:17:15	01910	LOGGING SECTION NO. 1	
4	6:26: 6	02244	LOGGING SECTION NO. 2	

-END-