HALLIBURTON
LOGGING SERVICES, INC.

FINAL PRINT

DUAL INDUCTION ACOUSTIC VELOCITY LOG

5" = 100'

COMPANY ______________

WELL ______________

FIELD ______________

COUNTY __________ ST __

COMPANY D Y OIL INC.

WELL LANE NO.CC-24-5

FIELD MIST

COUNTY COLUMBIA

STATE OR

API NO. N/A

LOCATION

N/A

SEC. TWP RGE

OTHER SERVICES

DIPMETER

PERMANENT DATUM G.L. ELEV. N/A

LOG MEASURED FROM K.B. 11.5FT.ABOVE PERM.DATUM

DRILLING MEASURED FROM KELLY BUSHING

ELEV.:K.B. N/A
D.F. -----
G.L. N/A

DATE	10/31/89			
RUN NO.	ONE			
DEPTH-DRILLER	1473			
DEPTH- LOGGER	1474			
BTM. LOG INTER.	1471			
TOP LOG INTER.	399			
CASING-DRILLER	8 5/8@399	@	@	@
CASING- LOGGER	399			
BIT SIZE	7 7/8			
TYPE FLUID IN HOLE	LIGNO-	SULFONATE		
DENS. : VISC	11.1 :60	:	:	:
PH : FLUID LOSS	N/A :N/A	:	:	:
SOURCE OF SAMPLE	CIRCULATED			
RM @ MEAS. TEMP.	2.48 @75	@	@	@
RMF @ MEAS. TEMP.	2.42 @75	@	@	@
RMC @ MEAS. TEMP.	3.72 @75	@	@	@
SOURCE RMF : RMC	MEAS.:MEAS.	:	:	:
RM @ BHT	1.85 @103	@	@	@
TIME SINCE CIRC.	5 HOURS			
TIME ON BOTTOM	6:30 PM			
MAX. REC. TEMP.	103 @BHT	@	@	@
EQUIP. : LOCATION	2890 :WDLND	:	:	:
RECORDED BY	B.JOHNSON			
WITNESSED BY	B.PORTWOOD			

Fold Here

Service Ticket No.: 12311 API Serial No.: N/A PGM Version: 1.31 PC

Change in Mud Type or Additional Samples		
Date/Sample No.	10/31/89:ONE	/ / :
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	1.85 @103	@
Rmf @ BHT	1.80 @103	@
Rmc @ BHT	2.77 @103	@

RESISTIVITY SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

Run No	Tool Type & No	Pad Type	Tool Pos.	Other
ONE	DUAL W109432	N/A	1.5"S.O.	M412
ONE	SGRD W108932	N/A	1.5"S.O.	M416
ONE	DIP W28575	4-ARM	CENT	M242

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.	ONE	Run No.	N/A	Run No.	N/A
Serial No.	W108581	Serial No.	W112458	Serial No.	W109740	Serial No.	W108749
Model No.	432	Model No.	305	Model No.	465	Model No.	434
Diameter	3 5/8	No.of Cent.	FOUR	Diameter	4 1/2	Diameter	3 3/8
Detector Model No.	N/A	Spacing	1 FOOT	Log Type	SDL	Log Type	DSN
Type	SCINT.			Source Type	CS 137	Source Type	AM241BE
Length	4 IN.	LSA	YES	Serial No.	118	Serial No.	66
Distance To Source	N/A	FWDA	NO	Strength	1.5 CU	Strength	19. CU

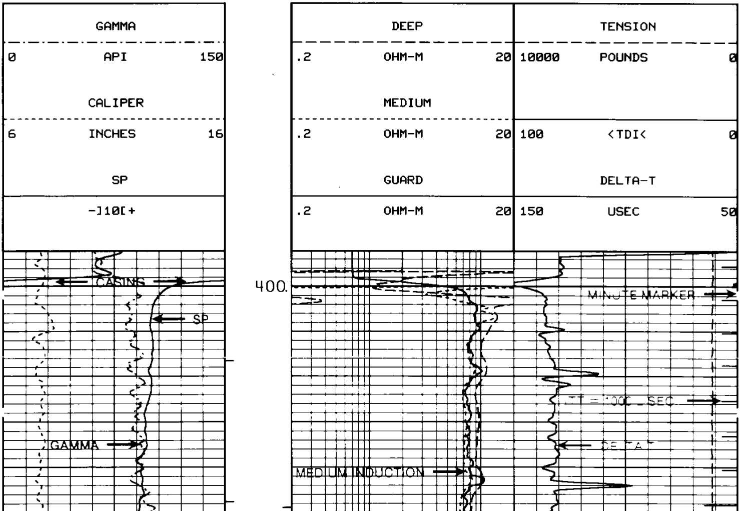
LOGGING DATA

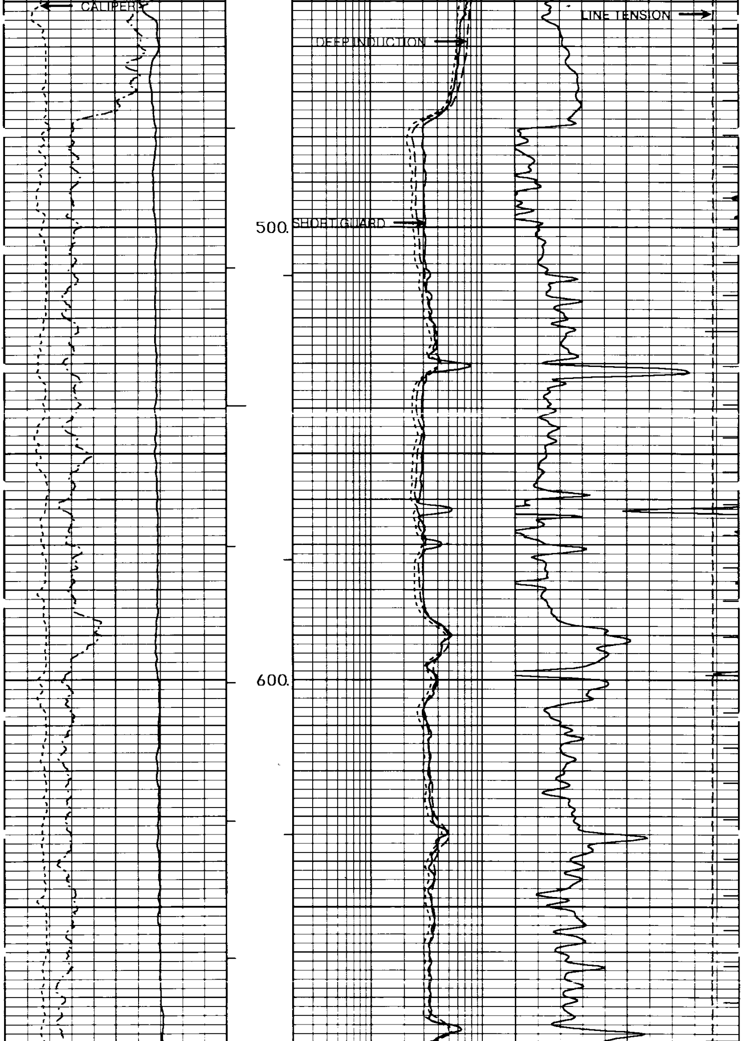
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale			Scale			Scale		
No.	From	To	Ft/Min	L	R	L	R	Matrix	L	R	Matrix	L	R	Matrix
ONE	1474	399	30	0	150	150	50	57US						
					API									

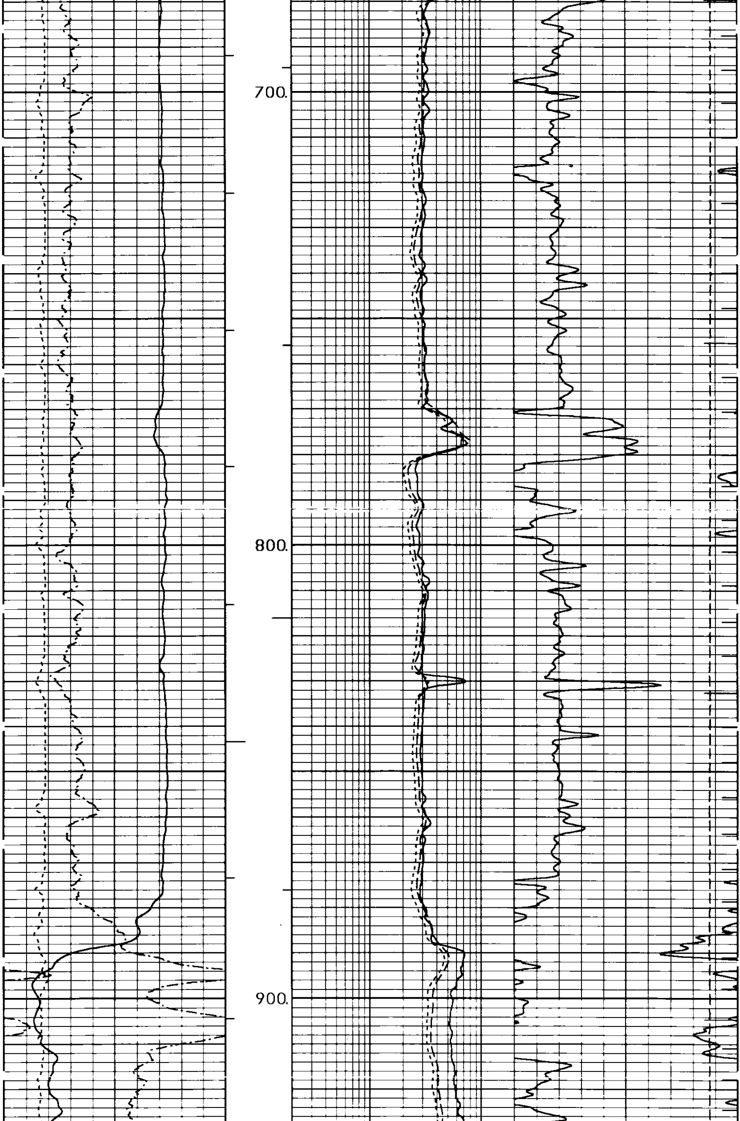
Remarks: ANNULAR HOLE VOLUME CALCULATED USING 5 1/2 INCH CASING.
LOCATION AND ELEVATION DATA NOT AVAILABLE AT TIME OF LOGGING.

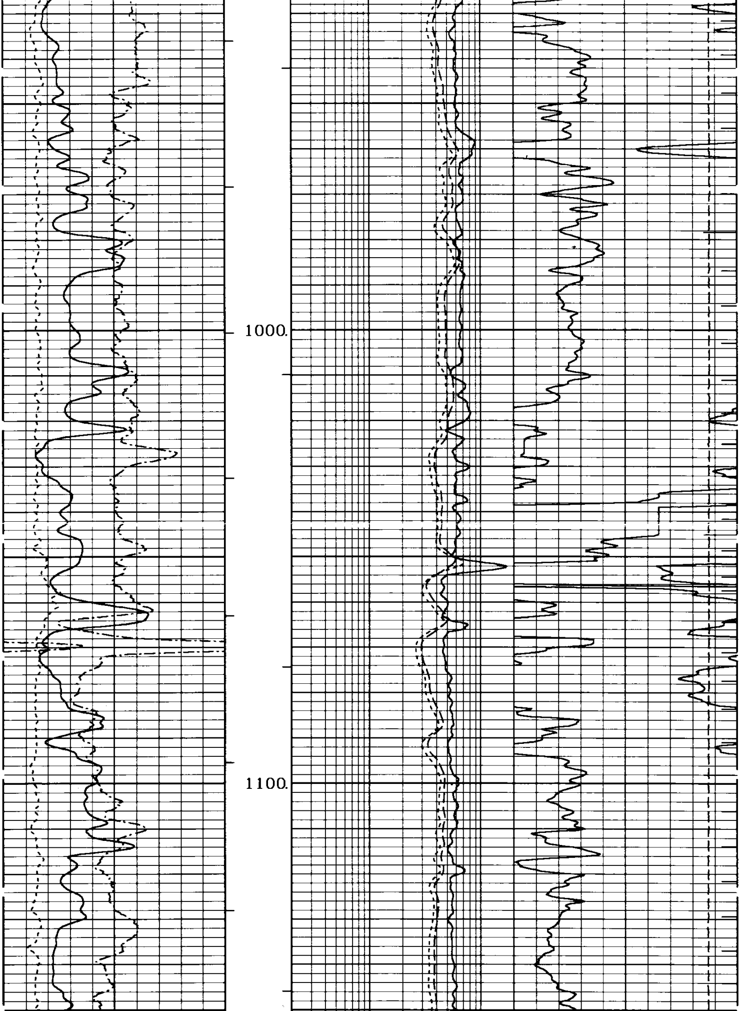
CREW ON LOCATION: KIBBE, ROUSSEAU
THANK YOU FOR USING HALLIBURTON LOGGING SERVICES!!

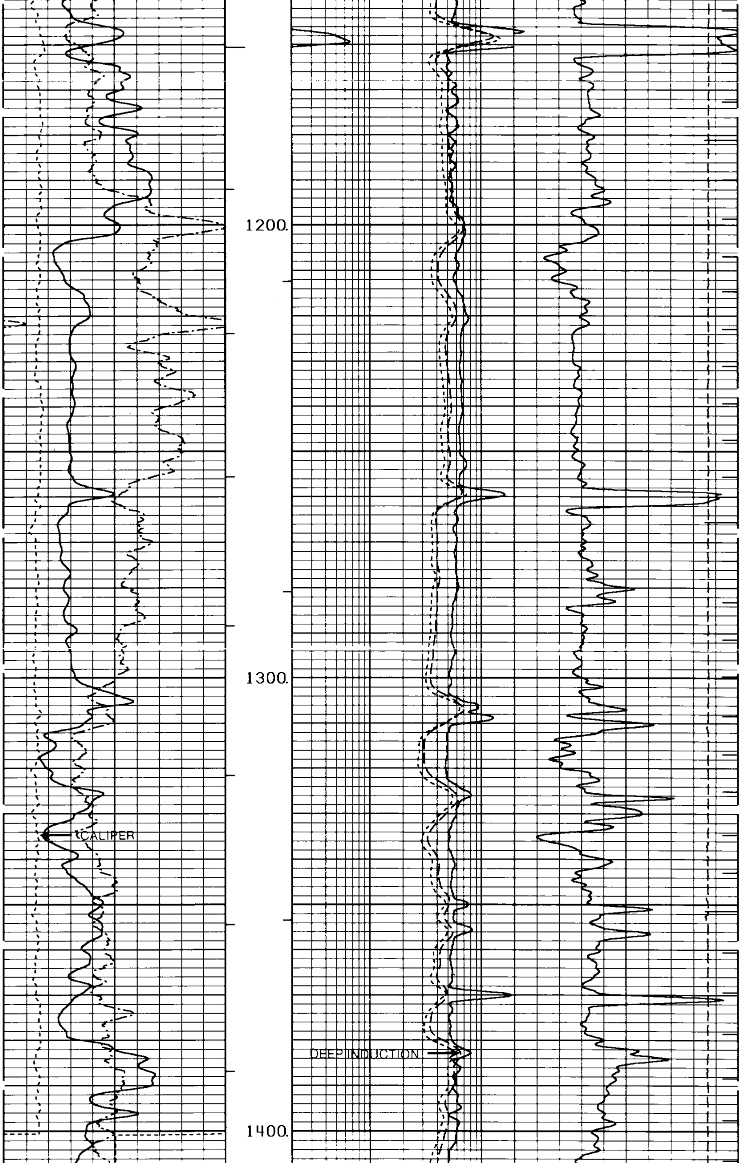
Halliburton Logging Services, Inc. does not guarantee the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by HLS personnel or which may appear on the log or in any other form. Any user of such data, interpretations, 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.

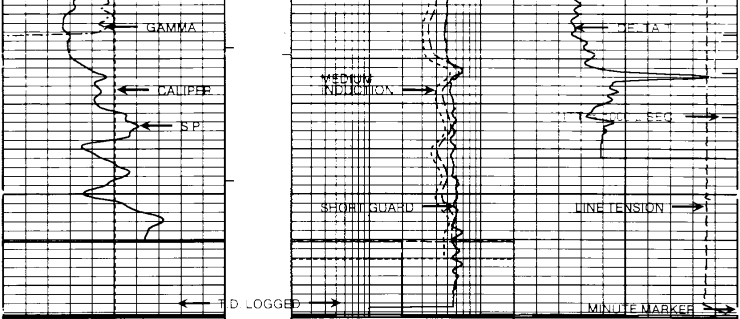






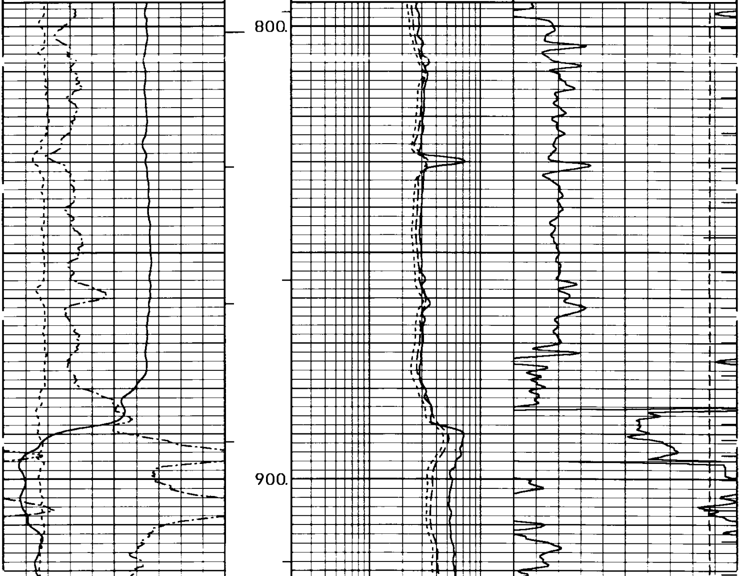


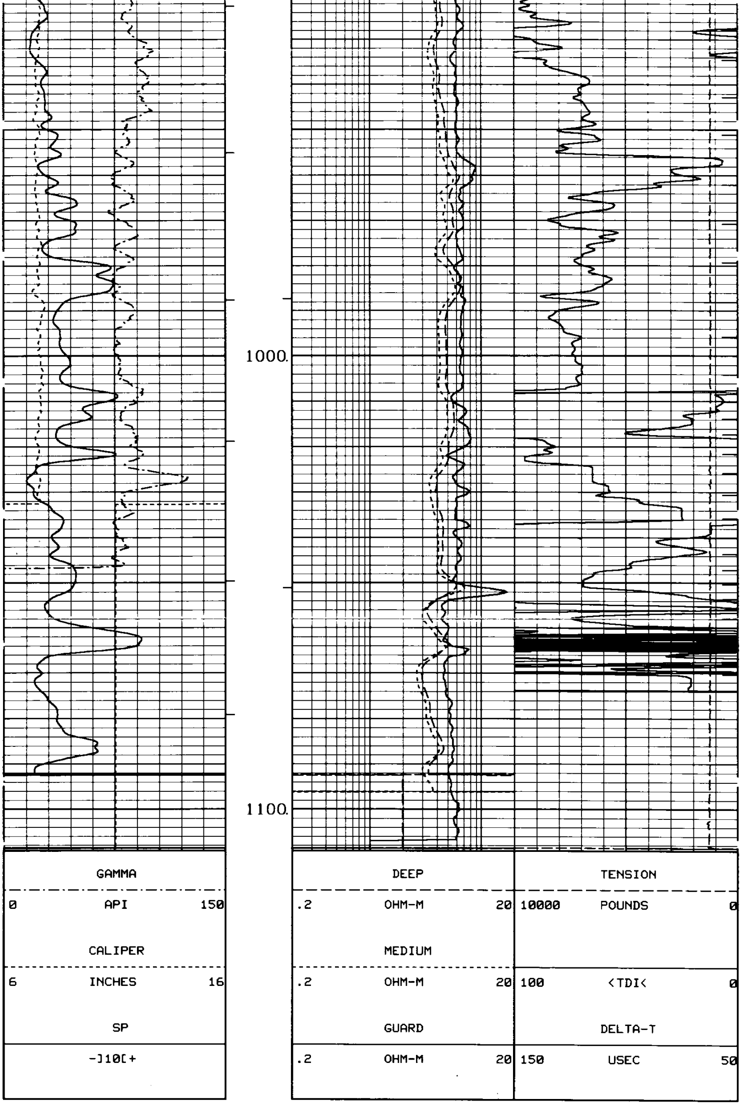




GAMMA	DEEP	TENSION
0 API 150	.2 OHM-M 20	10000 POUNDS 0
CALIPER	MEDIUM	
6 INCHES 16	.2 OHM-M 20	100 <TDI< 0
SP	GUARD	DELTA-T
-]10[+	.2 OHM-M 20	150 USEC 50

REPEAT SECTION





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                  SHORT GUARD   SHOP CALIBRATION SUMMARY
PERFORMED:  11:18:08  10/12/89    LAST SHOP CALIBRATION:   10:57:24  08/31/89
SERIAL NUMBER: 108932             PROGRAM VERSION: 1.31 PC
MODEL: #405
PERFORMED BY: JOHNSON
                        MEASURED        CALIBRATED          UNITS
                        --------        ----------          -----
EXT. CAL. POINT #1         2.007           2.000            OHM-M
EXT. CAL. POINT #2        20.018          20.000            OHM-M
EXT. CAL. POINT #3       200.207         200.000            OHM-M
INTERNAL REFERENCE        19.954          19.937            OHM-M

                  SHORT GUARD  BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  18:00:16  10/31/89    LAST SHOP CALIBRATION:   11:18:08  10/12/89

                          SHOP             FIELD            UNITS
                        --------         ---------         ------
INTERNAL REFERENCE        19.937          19.898            OHM-M


                  SHORT GUARD  AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  19:16:54  10/31/89    LAST SHOP CALIBRATION:   11:18:08  10/12/89

                         BEFORE            AFTER            UNITS
                        --------         ---------          -----
INTERNAL REFERENCE        19.898          19.901            OHM-M


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                 DUAL INDUCTION  SHOP CALIBRATION SUMMARY
PERFORMED:  11:25:10  10/12/89    LAST SHOP CALIBRATION:   11:05:42  08/31/89
SERIAL NUMBER: 109432             PROGRAM VERSION: 1.31 PC
MODEL: #412
PERFORMED BY: JOHNSON

                           DEEP INDUCTION         MEDIUM INDUCTION
                        MEASURED   CALIBRATED   MEASURED   CALIBRATED    UNITS
                        ---------------------   ---------------------   -------
TOOL ZERO                   .044        .000        .125        .000    MMHOS/M
INTERNAL REFERENCE       496.260     497.213     505.173     504.112    MMHOS/M
WHEEL                    499.256     500.000     501.897     500.000    MMHOS/M
MANDREL BASE               3.683       3.922       5.771       6.411    MMHOS/M

                 DUAL INDUCTION BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  18:01:45  10/31/89    LAST SHOP CALIBRATION:   11:25:10  10/12/89

                           DEEP INDUCTION         MEDIUM INDUCTION
                           SHOP     FIELD          SHOP       FIELD      UNITS
                        ---------------------   ---------------------   -------
TOOL ZERO                   .000       1.498        .000       -.189    MMHOS/M
INTERNAL REFERENCE       497.212     497.454     504.111     508.894    MMHOS/M
MANDREL BASE               3.922       3.922       6.411       6.411    MMHOS/M

                 DUAL INDUCTION AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  19:18:19  10/31/89    LAST SHOP CALIBRATION:   11:25:10  10/12/89

                           DEEP INDUCTION         MEDIUM INDUCTION
                          BEFORE     AFTER        BEFORE       AFTER     UNITS
                        ---------------------   ---------------------   -------
TOOL ZERO                  1.498       1.658       -.190       -.141    MMHOS/M
INTERNAL REFERENCE       497.453     494.649     508.893     509.585    MMHOS/M
MANDREL BASE               3.922       3.922       6.411       6.411    MMHOS/M


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                     GAMMA   SHOP CALIBRATION SUMMARY
PERFORMED:  14:46:48  10/12/89    LAST SHOP CALIBRATION:   14:40:51  10/12/89
SERIAL NUMBER: 108581             PROGRAM VERSION: 1.31 PC
MODEL: #432          FIELD CALIBRATOR: #2141
PERFORMED BY: JOHNSON

                        MEASURED        CALIBRATED          UNITS
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                          --------       ----------       -----
BACKGROUND                   18              18           API-CPS
BACKGROUND+CALIBRATOR       271             276           API-CPS
CALIBRATOR                  253             258           API-CPS

                     GAMMA  BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  17:55:12  10/31/89    LAST SHOP CALIBRATION:   14:46:48  10/12/89
FIELD CALIBRATOR: #2141

                            SHOP            FIELD           UNITS
                          --------       ----------         -----
BACKGROUND                   18              18           API-CPS
BACKGROUND+CALIBRATOR       276             286           API-CPS
CALIBRATOR                  258             268           API-CPS

                     GAMMA  AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  19:32:53  10/31/89    LAST SHOP CALIBRATION:   14:46:48  10/12/89

                           BEFORE           AFTER           UNITS
                          --------       ----------         -----
BACKGROUND                   18               9           API-CPS
BACKGROUND+CALIBRATOR       286             285           API-CPS
CALIBRATOR                  268             276           API-CPS


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                    CALIPER   SHOP CALIBRATION SUMMARY
PERFORMED:  12:00:42  10/05/89    LAST SHOP CALIBRATION:   14:00:58  08/07/89
SERIAL NUMBER: TAN                PROGRAM VERSION: 1.31 PC
MODEL: #202
PERFORMED BY: MCDANIEL

                          MEASURED        CALIBRATED        UNITS
                          --------       ----------         -----
VALUE 1                      8.590           8.000          INCHES
VALUE 2                     17.414          16.000          INCHES

                    CALIPER  BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  17:56:55  10/31/89    LAST SHOP CALIBRATION:   12:00:42  10/05/89

                            SHOP            FIELD           UNITS
                          --------        ---------         -----
VALUE 1                      8.000           7.883          INCHES

                    CALIPER  AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  19:19:22  10/31/89    LAST SHOP CALIBRATION:   12:00:42  10/05/89

                           BEFORE           AFTER           UNITS
                          --------        ---------         -----
VALUE 1                      7.883           7.871          INCHES


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                    TENSION   SHOP CALIBRATION SUMMARY
PERFORMED:  17:45:54  10/31/89    LAST SHOP CALIBRATION:   16:11:48  10/25/89
SERIAL NUMBER: TOP                PROGRAM VERSION: 1.31 PC


                        H L S CALIBRATION SUMMARY TABLE
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  SERVICE or SIGNAL          SHOP      BEFORE     AFTER     CHANGE   TOLERANCE
------------------------ ---------- --------- --------- -------- ---------
GUARD                        19.937    19.898    19.901    -.003     +/-.80
DEEP INDUCTION              497.212   497.453   494.649    2.804     +/- 20
MEDIUM INDUCTION            504.111   508.893   509.585    -.692     +/- 20
GAMMA                       258       268       276       -8         +/- 9.0
CALIPER VALUE 1               8.000     7.883     7.871     .012     +/- 0.50
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EVENTS

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 1 15: 8:15 00000 >DATE OF LOG: MMDD             1031
 2 15:11:14 00000 >PLS SOFTWARE REVISION         1.31
 3 15:11:14 00000 >CURRENT REVISION UPDATE NUMBER PC
 4 15:17:42 00000 >CASING SIZE O.D. (INCHES)      5.500+0
 5 15:17:42 00000 >BIT SIZE? (INCHES)             7.875+0
 6 15:17:44 00000 >DT-MATRIX(40=DOL<DT<70=SHALY)   5.700+1
 7 15:17:45 00000 >DT-SHALE (100=MIN<DT<160=MAX)   1.000+2
 8 15:17:45 00000 >FOR FORMATION FACTOR(.5<A<2.5)  1.000+0
 9 15:17:46 00000 >FOR FORMATION FACTOR(1.2<M<2.5) 2.000+0
10 15:18:22 00000 >FOR FORMATION FACTOR(.5<A<2.5)  8.100-1
11 15:18:28 00000 >>LOG PARAMETERS UPDATED HERE
12 18:13:40 01109 >LOGGING SECTION NO.               2
13 18:24:54 00794 >"HALTING" END OF SECTION
14 18:24:54 00794 >"HALTING" END OF SECTION
15 18:32:14 01477 >LOGGING SECTION NO.               3
16 19:12:52 00391 >"HALTING" END OF SECTION
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