ENCLOSURE 15 OR.0304

HALLIBURTON LOGGING SERVICES, INC.

SPECTRAL DENSITY
DUAL SPACED NEUTRON
CSNG LOG

COMPANY SAGASCO RESOURCES L
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN

COMPANY SAGASCO RESOURCES LTD.
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN
STATE TS
API NO TASMANIA
LOCATION PERMIT: T/18P
SEISMIC: HB77A-306(SP300)
LAT: 39 35 24.331 - S
LONG: 145 31 08.780 - E
EASTING: 372835.53 M
NORTHING: 5616674.27 M
SECT N/A TWP N/A RGE N/A

OTHER SERVICES
2A-HRI/MSFL/
LSS/GR
2C-HFDT/GR
2D-SED/GR
2E,F,G,H-SFT
2I-VSP

PERMANENT DATUM M.S.L. ELEV. 0.0
LOG MEASURED FROM RT 22.3 M.ABOVE PERM DATUM
DRILLING MEASURED FROM ROTARY TABLE DF
ELEV.:K.B. N/A
D.F. 22.3 M
G.L. -72.5M

DATE	18 NOV 1992			
RUN NO.	2B			
DEPTH-DRILLER	2223.0 M			
DEPTH-LOGGER	2225.2 M			
BTM. LOG INTER	2215.4 M			
TOP LOG INTER	CASING			
CASING DRILLER	9.625@1237	@	@	@
CASING-LOGGER	1239.2 M			
BIT SIZE	8.5 INCHES			
TYPE FLUID IN HOLE	POLYMER			
DENS. : VISC.	1.14 :53	:	:	:
PH : FLUID LOSS	9.5 :6.8	:	:	:
SOURCE OF SAMPLE	FLOW LINE			
RM @ MEAS. TEMP.	1.085@18.61	@	@	@
RMF @ MEAS. TEMP.	0.945@17.88	@	@	@
RMC @ MEAS. TEMP.	1.018@19.72	@	@	@
SOURCE RMF:RMC	MEAS :MEAS	:	:	:
RM @BHT	.383 @92.22	@	@	@
TIME SINCE CIRC.	26.5 HOURS			
TIME ON BOTTOM	2322			
MAX. REC TEMP.	92.22@TD	@	@	@
EQUIP. : LOCATION	10598:SLE	:	:	:
RECORDED BY	L. JONES	A. CHANG		
WITNESSED BY	J. REEVE			

FOLD HERE

SERVICE TICKET NO.: H-1452 API SERIAL NO.: PGM VERSION: 2.24

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLES			RESISTIVITY SCALE CHANGES			
DATE:SAMPLE NO.	/ / :	/ / :	TYPE LOG	DEPTH	SCALE UP HOLE	SCALE DOWN HOLE
DEPTH-DRILLER						
TYPE FLUID						
IN HOLE					NONE	
DENS. : VISC	:	:				
PH : FLUID LOSS	:	:				

			RESISTIVITY EQUIPMENT DATA				
SOURCE OF SAMPLE			RUN NO	TOOL TYPE & NO	PAD TYPE	TOOL POS.	OTHER
RM @ MEAS TEMP	@	@	2B	DSTU #111533			
RMF @ MEAS TEMP	@	@	2B	CALI #112632	ML	2-ARM	
RMC @ MEAS TEMP	@	@	2B	ML #112632	STD	2-ARM	PAD
SOURCE: RMF:RMC	:	:	2B	DTD #AA040	CHTEN	STRAIN	
RM @ BHT	.383 @92.22	@					
RMF @ BHT	.328 @92.22	@					
RMC @ BHT	.369 @92.22	@					

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
RUN NO.	2B	RUN NO.		RUN NO.	2B	RUN NO.	2B
SERIAL NO.	113020	SERIAL NO.		SERIAL NO.	PAD145	SERIAL NO.	A009
MODEL NO.	CSNG	MODEL NO.		MODEL NO.	M465	MODEL NO.	M434
DIAMETER	3.625	NO.OF CENT.		DIAMETER.	4.5	DIAMETER	3.625
DETECTOR MODEL NO.	N/A	SPACING		LOG TYPE	SDL	LOG TYPE	DSN
TYPE	SCINT			SOURCE TYPE	CS-137	SOURCE TYPE	AM241BE
LENGTH	N/A	LSA [Y/N]		SERIAL NO.	1400GW	SERIAL NO.	DSN 103
DISTANCE TO SOURCE	N/A	FWDA [Y,N]		STRENGTH	1.5 CI	STRENGTH	18.5 CI

LOGGING DATA

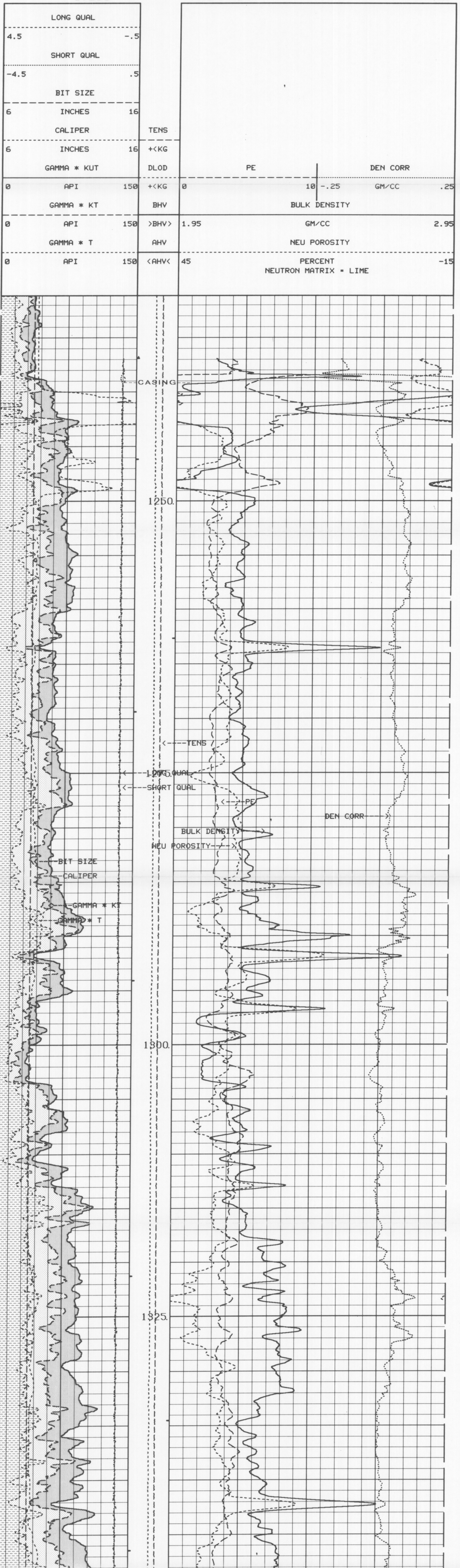
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
RUN	DEPTH		SPEED	SCALE		SCALE			SCALE			SCALE		
NO	FROM	TO	M/MIN	L	R	L	R	MATRIX	L	R	MATRIX	L	R	MATRIX
2B	TD	CSG	3	0	150				1.95	2.95	2.71	.45	-.15	LIME
				GAPI	GAPI				GM/ CC	GM/ CC	GM/ CC	LSPU	LSPU	

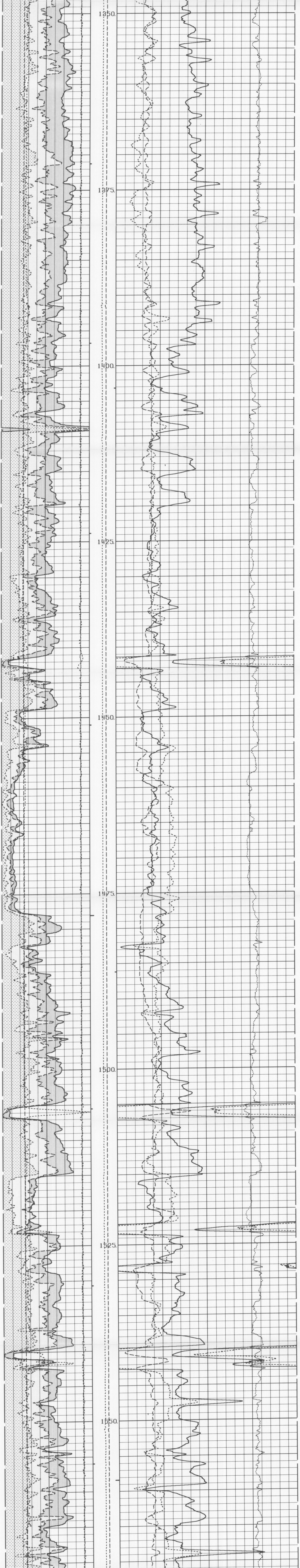
REMARKS: BHV/AHV MARKS ARE IN CUBIC METERS. TIED INTO SURFACE LOG DTD 7 NOV 92.
NEUTRON IS CALIPER CORRECTED ONLY. NO TEMPERATURE CORRECTION APPLIED TO NEUTRON.
DATA RECORDED AT HIGH RESOLUTION USING 0.25 SAMPLE RATE. EVR DATA RECORDED FOR SDL/DSN/GR. HOLE WASHED OUT AT COAL STINGERS. EVR PRESENTATION ON SEPERATE LOG.
THANK YOU FOR USING HALLIBURTON LOGGING SERVICES.

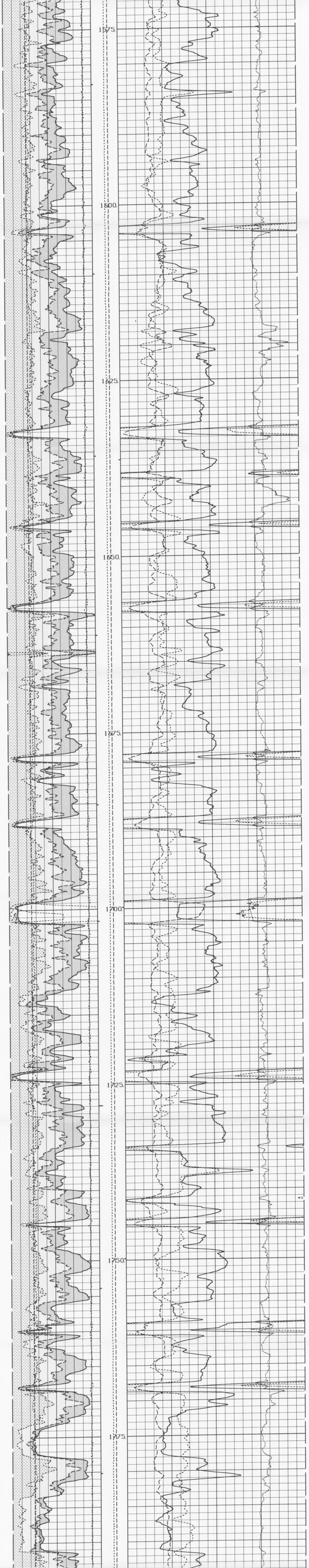
HALLIBURTON LOGGING SERVICES, INC. DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HLS PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HLS IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

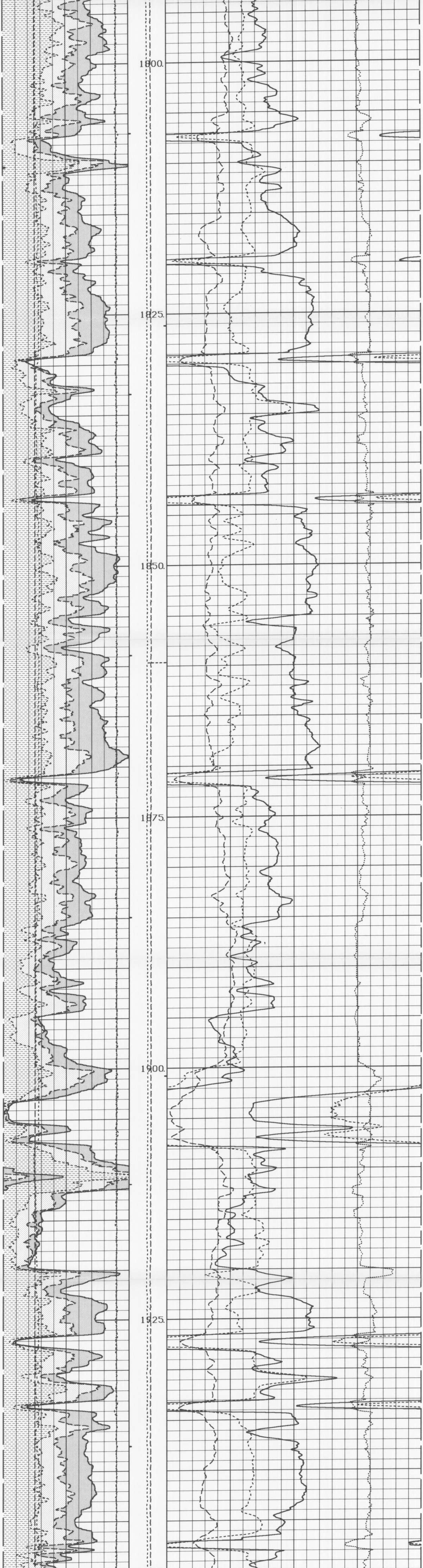
5 cm

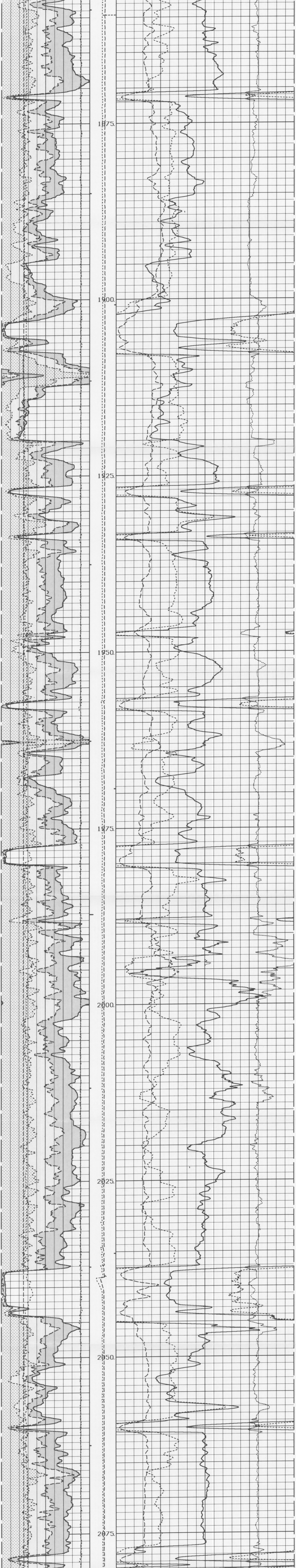
1:200 MAIN RUN

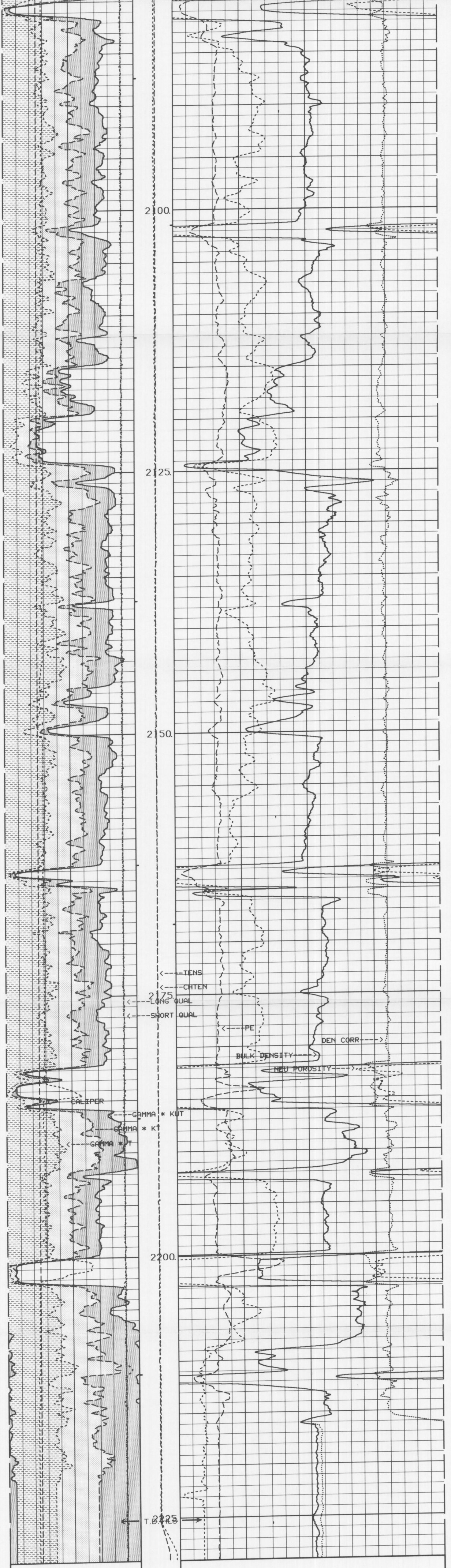










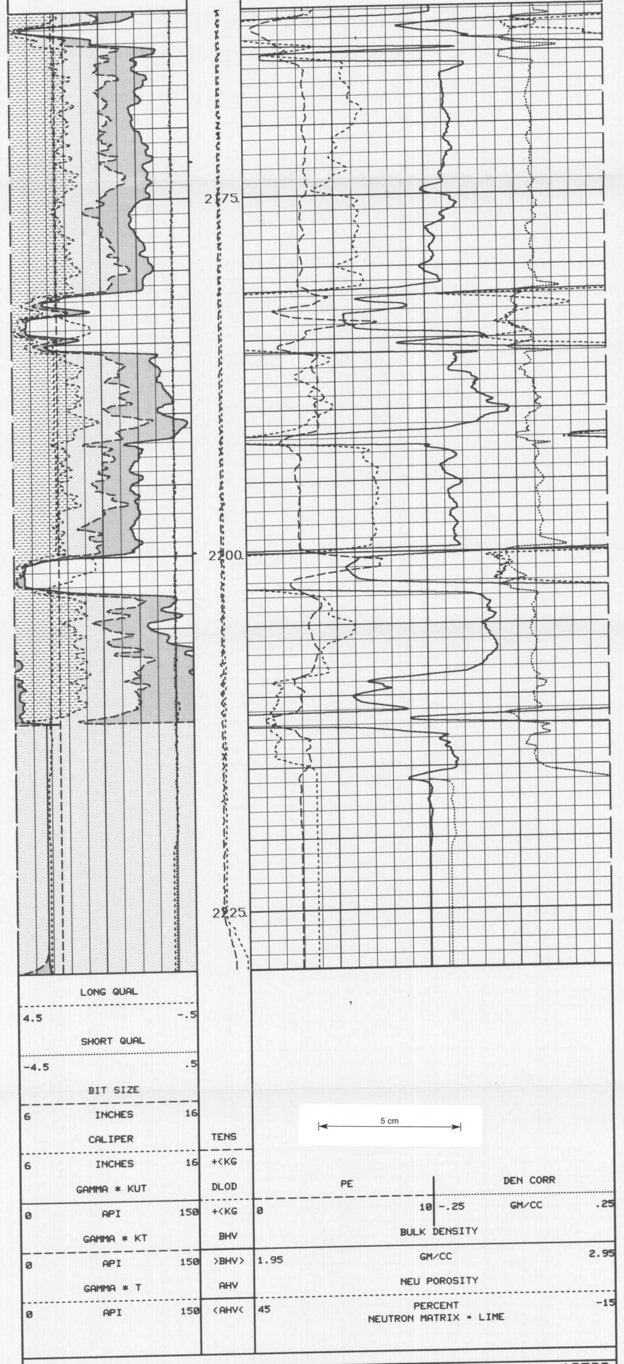


LONG QUAL		
4.5 -.5		
SHORT QUAL		
-4.5 .5		
BIT SIZE		
6 INCHES 16		
CALIPER	TENS	
6 INCHES 16	+<KG	
GAMMA * KUT	DLOD	PE DEN CORR
0 API 150	+<KG	0 10 -.25 GM/CC .25
GAMMA * KT	BHV	BULK DENSITY
0 API 150	>BHV>	1.95 GM/CC 2.95
GAMMA * T	AHV	NEU POROSITY
0 API 150	<AHV<	45 PERCENT -15 NEUTRON MATRIX = LIME

UPLOG # 1 Depth: 2229.00 Service:none. Unit:10598
Replay Log Date: Time: Vers:2.24

1:200 MAIN RUN

GAMMA * T	AHV	NEU POROSITY
0 API 150	<AHV<	45 PERCENT -15 NEUTRON MATRIX = LIME
GAMMA * KT	BHV	BULK DENSITY
0 API 150	>BHV>	1.95 GM/CC 2.95
GAMMA * KUT	DLOD	PE DEN CORR
0 API 150	+<KG	0 10 -.25 GM/CC .25
CALIPER	TENS	
6 INCHES 16	+<KG	
BIT SIZE		
6 INCHES 16		
SHORT QUAL		
-4.5 .5		
LONG QUAL		
4.5 -.5		



```
UPLOG    # 1 Depth:      2229.00 Service:none.      Unit:10598
Replay   Log Date:                 Time:             Vers:2.24
```

```
******************************************************************************

                 GAMMA RAY TOOL SHOP CALIBRATION SUMMARY
PERFORMED:  22:22:30  11/ 3/92   LAST SHOP CALIBRATION:    17:37:39  08/ 8/92
SERIAL NUMBER: 114401            MODEL: NGRT-A
TRUCK UNIT NUMBER: 10598         PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

                           MEASURED        CALIBRATED        UNITS
                           --------        ----------        -----
                                  5                 5        GAPI
BACKGROUND                      229               226        GAPI
BACKGROUND+CALIBRATOR           223               221        GAPI
CALIBRATOR

              GAMMA RAY TOOL BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:22:31  11/17/92   LAST SHOP CALIBRATION:    22:22:30  11/ 3/92

                             SHOP            FIELD           UNITS
                           --------        ----------        -----
                                  5                 5        GAPI
BACKGROUND                      226               222        GAPI
BACKGROUND+CALIBRATOR           221               217        GAPI
CALIBRATOR


              GAMMA RAY TOOL AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:16:02  11/19/92   LAST SHOP CALIBRATION:    22:22:30  11/ 3/92

                            BEFORE           AFTER           UNITS
                           --------        ----------        -----
                                  5                 7        GAPI
BACKGROUND                      222               231        GAPI
BACKGROUND+CALIBRATOR           217               223        GAPI
CALIBRATOR                                          '


******************************************************************************

          DITS SPECTRAL GAMMA - TITANIUM SHOP CALIBRATION SUMMARY
PERFORMED:  01:41:06  11/11/92   LAST SHOP CALIBRATION:    01:16:42  11/11/92
SERIAL NUMBER: 113020            MODEL: CSNGT-A
CALIBR NUM: 313
TRUCK UNIT NUMBER: 10598         PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

TITANIUM CASE              MEASURED        CALIBRATED        UNITS
-------- ----              --------        ----------        -----
  60KEV PEAK CH#              47               47            CHANNELS
 239KEV PEAK CH#             176              175            CHANNELS
 583KEV PEAK CH#              49               49            CHANNELS
2614KEV PEAK CH#             213              212            CHANNELS
CALIBRATOR VALUE             248              248            GAPI

      DITS SPECTRAL GAMMA - TITANIUM BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  01:56:17  11/11/92   LAST SHOP CALIBRATION:    01:41:06  11/11/92

                             SHOP            FIELD           UNITS
                           --------        ----------        -----
                                                             CHANNELS
  60KEV PEAK CH#              47               47            CHANNELS
 239KEV PEAK CH#             175              177            CHANNELS
 583KEV PEAK CH#              49               49            CHANNELS
2614KEV PEAK CH#             212              213            GAPI
CALIBRATOR VALUE             248              251

      DITS SPECTRAL GAMMA - TITANIUM AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:31:35  11/19/92   LAST SHOP CALIBRATION:    01:41:06  11/11/92

                            BEFORE           AFTER           UNITS
                           --------        ----------        -----
                                                             CHANNELS
  60KEV PEAK CH#              47               47            CHANNELS
 239KEV PEAK CH#             177              175            CHANNELS
 583KEV PEAK CH#              49               50            CHANNELS
2614KEV PEAK CH#             213              213            GAPI
CALIBRATOR VALUE             251              248

******************************************************************************

              DUAL SPACED NEUTRON II SHOP CALIBRATION SUMMARY
PERFORMED:  16:09:08  11/ 9/92   LAST SHOP CALIBRATION:    15:29:41  08/ 8/92
SERIAL NUMBER: A009              MODEL: DSNT-A
SOURCE NUM: DSN 103              CALIBR NUM: 4912 NE
TRUCK UNIT NUMBER: 10598         PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES


PRIMARY CALIBRATOR

                           MEASURED        CALIBRATED        UNITS
                           --------        ----------        -----
                            6.528            6.527
RATIO:                     24.688           24.685             %
POROSITY:

FIELD CHECK BLOCK

CHECK RATIO:                5.339            5.338
CHECK POROSITY:            19.130           19.127             %

MEAN(1,1) =                7.64
MEAN(1,2) =               61.84
MEAN(2,1) =                5.12
MEAN(2,2) =               60.12
MEAN(3,1) =             9684.59
MEAN(3,2) =             1685.59
MEAN(4,1) =            14859.56
MEAN(5,1) =             8859.80
MEAN(6,1) =             3259.62
          DUAL SPACED NEUTRON II BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  13:22:37  11/14/92   LAST SHOP CALIBRATION:    16:09:08  11/ 9/92
                                              '
                             SHOP            FIELD           UNITS
                           --------        ----------        -----
                            5.338            5.310
CHECK RATIO                19.127           18.995             %
CHECK POROSITY

          DUAL SPACED NEUTRON II AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:56:34  11/19/92   LAST SHOP CALIBRATION:    16:09:08  11/ 9/92

                            BEFORE           AFTER           UNITS
                           --------        ----------        -----
                            5.310            5.376
CHECK RATIO                18.995           19.308             %
CHECK POROSITY

******************************************************************************

         SPECTRAL DENSITY (8 BIT) SHOP CALIBRATION SUMMARY
PERFORMED:  18:00:35  11/10/92   LAST SHOP CALIBRATION:    17:01:54  11/10/92
SERIAL NUMBER: PAD145            MODEL: SDLT-A
SOURCE NUM: 1400GW               CALIBR NUM: SDL
TRUCK UNIT NUMBER: 10598         PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

                                 PRIMARY CALIBRATOR

MAGNESIUM BLOCK
---------------
                           MEASURED        CALIBRATED        UNITS
                           --------        ----------        -----
                            1.688            1.687          GM/CC
DENSITY                     0.023            0.021          GM/CC
CORRECTION                  3.253            3.219
Pe SHORT                    2.970            2.977
Pe LONG

ALUMINUM BLOCK
```

```
----------------
                          MEASURED        CALIBRATED        UNITS
                          --------        ----------        -----
DENSITY                      2.608             2.597        GM/CC
CORRECTION                   0.057             0.047        GM/CC
Pe SHORT                     3.224             3.190
Pe LONG                      3.205             3.200

ALUMINUM BLOCK W/SLEEVE
-----------------------
                          MEASURED        CALIBRATED        UNITS
                          --------        ----------        -----
DENSITY                      2.601             2.590        GM/CC
CORRECTION                  -0.059            -0.064        GM/CC
Pe SHORT                     6.285             6.246
Pe LONG                      6.076             5.927

                                 CALIBRATION COEFFICIENTS
                       EXPECTED RANGE     CALIBRATED        UNITS
                       --------------     ----------        -----
SHORT SPACE
-----------
DENSITY SLOPE          -6.40 -> -7.60         -7.000        GM/CC
DENSITY INTERCEPT      27.00 -> 37.00         32.152        GM/CC
PE SLOPE                1.20 ->  2.30          1.688
PE INTERCEPT           -2.20 -> -4.00         -2.710

LONG SPACE
----------
DENSITY SLOPE          -1.29 -> -1.39         -1.321        GM/CC
DENSITY INTERCEPT       7.00 ->  8.10          7.492        GM/CC
PE SLOPE                1.30 ->  2.50          1.741
PE INTERCEPT           -0.70 -> -2.10         -0.755
                                      FIELD CHECK BLOCK
ALUMINUM SLIDE
-------------
                          MEASURED        CALIBRATED        UNITS
                          --------        ----------        -----
DENSITY                      1.656             1.656        GM/CC
CORRECTION                  -0.040            -0.041        GM/CC
Pe SHORT                     4.624             4.588
Pe LONG                      4.090         '   4.041

ALUMINUM SLIDE IN
-----------------
                          MEASURED        CALIBRATED        UNITS
                          --------        ----------        -----
DENSITY                      2.172             2.159        GM/CC
CORRECTION                   0.030             0.025        GM/CC
Pe SHORT                     4.830             4.793
Pe LONG                      3.755             3.722

BRASS SLIDE
-----------
                          MEASURED        CALIBRATED        UNITS
                          --------        ----------        -----
DENSITY                      2.380             2.368        GM/CC
CORRECTION                  -0.329            -0.336        GM/CC
Pe SHORT                     6.307             6.268
Pe LONG                      3.394             3.380

         SPECTRAL DENSITY (8 BIT) BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  20:19:30  11/10/92    LAST SHOP CALIBRATION:    18:00:35  11/10/92

ALUMINUM SLIDE IN          SHOP          FIELD              UNITS
-----------------        --------      ----------           -----
ALUMINUM DENSITY           2.159         2.159              GM/CC
ALUMINUM CORRECTION        0.025         0.025              GM/CC
ALUMINUM PE SHORT          4.793         4.844
ALUMINUM PE LONG           3.722         3.749

         SPECTRAL DENSITY (8 BIT) AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:42:18  11/19/92    LAST SHOP CALIBRATION:    18:00:35  11/10/92

ALUMINUM SLIDE IN          BEFORE        AFTER              UNITS
-----------------        --------      ----------           -----
ALUMINUM DENSITY           2.159         2.170              GM/CC
ALUMINUM CORRECTION        0.025         0.024              GM/CC
ALUMINUM PE SHORT          4.844         4.738
ALUMINUM PE LONG           3.749         3.831


***************************************************************************

                   SDL CALIPER SHOP CALIBRATION SUMMARY
PERFORMED:  18:17:48  11/10/92    LAST SHOP CALIBRATION:    18:16:14  11/10/92
SERIAL NUMBER: 112632             MODEL: SDLT-A
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

                          MEASURED        CALIBRATED        UNITS
                          --------        ----------        -----
VALUE 1                      7.965             8.000        INCH
VALUE 2                     14.999            15.000        INCH

               SDL CALIPER BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  18:18:27  11/10/92    LAST SHOP CALIBRATION:    18:17:48  11/10/92

                           SHOP     FIELD    UNITS
                          -------  -------   -----
VALUE  1                   8.000    8.002   INCH

                SDL CALIPER AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  15:06:37  11/19/92    LAST SHOP CALIBRATION:    18:17:48  11/10/92

                           BEFORE   AFTER    UNITS
                          -------  -------   -----
VALUE  1                   8.002    7.880   INCH


***************************************************************************

                     MICROLOG SHOP CALIBRATION SUMMARY
PERFORMED:  21:15:06  11/10/92    LAST SHOP CALIBRATION:    21:13:23  11/10/92
SERIAL NUMBER: 112632             MODEL: SDLT-A
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

                         MICROLOG NORMAL          MICROLOG LATERAL
                      MEASURED   CALIBRATED   MEASURED   CALIBRATED   UNITS
                      --------   ----------   --------   ----------   ------
TOOL ZERO                 0.00         0.00       0.00         0.00   OHM-M
CAL POINT #1              0.00         0.00       0.00         0.00   OHM-M
CAL POINT #2             20.01        20.00      20.00        20.00   OHM-M
INTERNAL REFERENCE       28.27        28.26      21.77        21.76   OHM-M

                 MICROLOG BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  16:31:28  11/18/92    LAST SHOP CALIBRATION:    21:15:06  11/10/92

                         MICROLOG NORMAL          MICROLOG LATERAL
                        SHOP        FIELD       SHOP        FIELD     UNIT
                      --------   ----------   --------   ----------   ------
TOOL ZERO                 0.00         0.00       0.00         0.00   OHM-M
INTERNAL REFERENCE       28.26        28.26      21.76        21.91   OHM-M


                 MICROLOG AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  15:16:50  11/19/92    LAST SHOP CALIBRATION:    21:15:06  11/10/92

                         MICROLOG NORMAL          MICROLOG LATERAL
                       BEFORE       AFTER      BEFORE       AFTER     UNIT
                      --------   ----------   --------   ----------   ------
TOOL ZERO                 0.00         0.00       0.00         0.00   OHM-M
INTERNAL REFERENCE       28.26        28.07      21.91        21.62   OHM-M

                   PLS-II CALIBRATION SUMMARY TABLE
                  ---------------------------------

  SERVICE or SIGNAL           SHOP      BEFORE      AFTER      CHANGE   TOLERANCE
------------------------   ---------  ---------  ---------   --------  ---------
GAMMA                        221        217        223           -5    +/- 9.0
CSNG                         248.47     251.84     248.05       -3.79  +/-9.0
DSN POROSITY                 19.127     18.995     19.308      -0.313  +/-0.9
BULK DENSITY                  2.159      2.159      2.170      -0.012  +/-.015
DENSITY CORRECTION            0.025      0.025      0.024       0.001  +/-.015
DENSITY PE SHORT              4.793      4.844      4.738       0.106  +/-.3
DENSITY PE LONG               3.722      3.749      3.831      -0.081  +/-.3
CALIPER VALUE 1               8.000      8.002      7.880       0.122  +/-0.5
MICLOG NORMAL                28.26      28.26      28.07         0.19  +/- 0.8
MICLOG LATERAL               21.76      21.91      21.62         0.29  +/- 0.8




               PLS-II FILTER & DELAY SUMMARY

                    FILTER & DELAY SUMMARY

                 DATE: 21-NOV-1992 19:08:31

               FILTER LENGTH AND DELAY ARE IN METERS
```

```
5 cm

6         INCHES         16 |       |
          CALIPER           | TENS  |
6         INCHES         16 | +<KG  |
      GAMMA * KUT           | DLOD  |              PE                 DEN CORR
0          API          150 | +<KG  | 0                      10 -.25     GM/CC          .25
      GAMMA * KT            | BHV   |                   BULK DENSITY
0          API          150 | >BHV> | 1.95                    GM/CC                    2.95
      GAMMA * T             | AHV   |                   NEU POROSITY
0          API          150 | <AHV< | 45                     PERCENT                   -15
                            |       |              NEUTRON MATRIX = LIME

UPLOG    #  1 Depth:      2229.00 Service:none.      Unit:10598
Replay   Log Date:                Time:              Vers:2.24
```

```
****************************************************************************

                 GAMMA RAY TOOL SHOP CALIBRATION SUMMARY
PERFORMED:  22:22:30  11/ 3/92    LAST SHOP CALIBRATION:    17:37:39  08/ 8/92
SERIAL NUMBER: 114401             MODEL: NGRT-A
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
BACKGROUND                     5               5             GAPI
BACKGROUND+CALIBRATOR        229             226             GAPI
CALIBRATOR                   223             221             GAPI

             GAMMA RAY TOOL BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:22:31  11/17/92    LAST SHOP CALIBRATION:    22:22:30  11/ 3/92

                           SHOP            FIELD             UNITS
                         --------        ----------          -----
BACKGROUND                     5               5             GAPI
BACKGROUND+CALIBRATOR        226             222             GAPI
CALIBRATOR                   221             217             GAPI

             GAMMA RAY TOOL AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:16:02  11/19/92    LAST SHOP CALIBRATION:    22:22:30  11/ 3/92

                          BEFORE           AFTER             UNITS
                         --------        ----------          -----
BACKGROUND                     5               7             GAPI
BACKGROUND+CALIBRATOR        222             231             GAPI
CALIBRATOR                   217             223             GAPI
```

```
****************************************************************************

          DITS SPECTRAL GAMMA - TITANIUM SHOP CALIBRATION SUMMARY
PERFORMED:  01:41:06  11/11/92    LAST SHOP CALIBRATION:    01:16:42  11/11/92
SERIAL NUMBER: 113020             MODEL: CSNGT-A
CALIBR NUM: 313
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

TITANIUM CASE            MEASURED        CALIBRATED          UNITS
-------- ----            --------        ----------          -----
  60KEV PEAK CH#             47              47              CHANNELS
 239KEV PEAK CH#            176             175              CHANNELS
 583KEV PEAK CH#             49              49              CHANNELS
2614KEV PEAK CH#            213             212              CHANNELS
CALIBRATOR VALUE            248             248              GAPI

      DITS SPECTRAL GAMMA - TITANIUM BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  01:56:17  11/11/92    LAST SHOP CALIBRATION:    01:41:06  11/11/92

                           SHOP            FIELD             UNITS
                         --------        ----------          -----
  60KEV PEAK CH#             47              47              CHANNELS
 239KEV PEAK CH#            175             177              CHANNELS
 583KEV PEAK CH#             49              49              CHANNELS
2614KEV PEAK CH#            212             213              CHANNELS
CALIBRATOR VALUE            248             251              GAPI

      DITS SPECTRAL GAMMA - TITANIUM AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:31:35  11/19/92    LAST SHOP CALIBRATION:    01:41:06  11/11/92

                          BEFORE           AFTER             UNITS
                         --------        ----------          -----
  60KEV PEAK CH#             47              47              CHANNELS
 239KEV PEAK CH#            177             175              CHANNELS
 583KEV PEAK CH#             49              50              CHANNELS
2614KEV PEAK CH#            213             213              CHANNELS
CALIBRATOR VALUE            251             248              GAPI
```

```
****************************************************************************

              DUAL SPACED NEUTRON II SHOP CALIBRATION SUMMARY
PERFORMED:  16:09:08  11/ 9/92    LAST SHOP CALIBRATION:    15:29:41  08/ 8/92
SERIAL NUMBER: A009               MODEL: DSNT-A
SOURCE NUM: DSN 103               CALIBR NUM: 4912 NE
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES


PRIMARY CALIBRATOR

                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
RATIO:                     6.528           6.527
POROSITY:                 24.688          24.685               %

FIELD CHECK BLOCK

CHECK RATIO:               5.339           5.338
CHECK POROSITY:           19.130          19.127               %

MEAN(1,1) =              7.64
MEAN(1,2) =             61.84
MEAN(2,1) =              5.12
MEAN(2,2) =             60.12
MEAN(3,1) =           9684.59
MEAN(3,2) =           1685.59
MEAN(4,1) =          14859.56
MEAN(5,1) =           8859.80
MEAN(6,1) =           3259.62

        DUAL SPACED NEUTRON II BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  13:22:37  11/14/92    LAST SHOP CALIBRATION:    16:09:08  11/ 9/92

                           SHOP            FIELD             UNITS
                         --------        ----------          -----
CHECK RATIO                5.338           5.310
CHECK POROSITY            19.127          18.995               %

        DUAL SPACED NEUTRON II AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:56:34  11/19/92    LAST SHOP CALIBRATION:    16:09:08  11/ 9/92

                          BEFORE           AFTER             UNITS
                         --------        ----------          -----
CHECK RATIO                5.310           5.376
CHECK POROSITY            18.995          19.308               %
```

```
****************************************************************************

        SPECTRAL DENSITY (8 BIT) SHOP CALIBRATION SUMMARY
PERFORMED:  18:00:35  11/10/92    LAST SHOP CALIBRATION:    17:01:54  11/10/92
SERIAL NUMBER: PAD145             MODEL: SDLT-A
SOURCE NUM: 1400GW                CALIBR NUM: SDL
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES


                               PRIMARY CALIBRATOR

MAGNESIUM BLOCK
---------------
                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
DENSITY                    1.688           1.687             GM/CC
CORRECTION                 0.023           0.021             GM/CC
Pe SHORT                   3.253           3.219
Pe LONG                    2.970           2.977

ALUMINUM BLOCK
---------------
                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
DENSITY                    2.608           2.597             GM/CC
CORRECTION                 0.057           0.047             GM/CC
Pe SHORT                   3.224           3.190
Pe LONG                    3.205           3.200

ALUMINUM BLOCK W/SLEEVE
-----------------------
                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
DENSITY                    2.601           2.590             GM/CC
CORRECTION                -0.059          -0.064             GM/CC
Pe SHORT                   6.285           6.246
Pe LONG                    6.076           5.927

                          CALIBRATION COEFFICIENTS
                       EXPECTED RANGE    CALIBRATED          UNITS
                       --------------    ----------          -----
SHORT SPACE
-----------
DENSITY SLOPE          -6.40 -> -7.60      -7.000            GM/CC
DENSITY INTERCEPT      27.00 -> 37.00      32.152            GM/CC
PE SLOPE                1.20 ->  2.30       1.688
PE INTERCEPT           -2.20 -> -4.00      -2.710

LONG SPACE
----------
DENSITY SLOPE          -1.29 -> -1.39      -1.321            GM/CC
DENSITY INTERCEPT       7.00 ->  8.10       7.492            GM/CC
PE SLOPE                1.30 ->  2.50       1.741
PE INTERCEPT           -0.70 -> -2.10      -0.755

                               FIELD CHECK BLOCK
ALUMINUM SLIDE
-------------
                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
DENSITY                    1.656           1.656             GM/CC
CORRECTION                -0.040          -0.041             GM/CC
Pe SHORT                   4.624           4.588
Pe LONG                    4.090           4.041

ALUMINUM SLIDE IN
-----------------
                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
DENSITY                    2.172           2.159             GM/CC
CORRECTION                 0.030           0.025             GM/CC
Pe SHORT                   4.830           4.793
Pe LONG                    3.755           3.722

BRASS SLIDE
-----------
                         MEASURED        CALIBRATED          UNITS
                         --------        ----------          -----
DENSITY                    2.380           2.368             GM/CC
CORRECTION                -0.329          -0.336             GM/CC
Pe SHORT                   6.307           6.268
Pe LONG                    3.394           3.380

      SPECTRAL DENSITY (8 BIT) BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  20:19:30  11/10/92    LAST SHOP CALIBRATION:    18:00:35  11/10/92

ALUMINUM SLIDE IN           SHOP            FIELD            UNITS
-----------------         --------        ----------         -----
ALUMINUM DENSITY            2.159           2.159            GM/CC
ALUMINUM CORRECTION         0.025           0.025            GM/CC
ALUMINUM PE SHORT           4.793           4.844
ALUMINUM PE LONG            3.722           3.749

      SPECTRAL DENSITY (8 BIT) AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  14:42:18  11/19/92    LAST SHOP CALIBRATION:    18:00:35  11/10/92

ALUMINUM SLIDE IN          BEFORE           AFTER            UNITS
-----------------         --------        ----------         -----
ALUMINUM DENSITY            2.159           2.170            GM/CC
ALUMINUM CORRECTION         0.025           0.024            GM/CC
ALUMINUM PE SHORT           4.844           4.738
ALUMINUM PE LONG            3.749           3.831
```

```
****************************************************************************

                  SDL CALIPER SHOP CALIBRATION SUMMARY
PERFORMED:  18:17:48  11/10/92    LAST SHOP CALIBRATION:    18:16:14  11/10/92
SERIAL NUMBER: 112632             MODEL: SDLT-A
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES
```

```
                    MEASURED         CALIBRATED          UNITS
                    --------         ----------          -----
VALUE 1               7.965            8.000             INCH
VALUE 2              14.999           15.000             INCH

              SDL CALIPER BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  18:18:27  11/10/92    LAST SHOP CALIBRATION:   18:17:48  11/10/92

                       SHOP      FIELD    UNITS
                     -------    -------   -----
VALUE  1              8.000      8.002    INCH

              SDL CALIPER AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  15:06:37  11/19/92    LAST SHOP CALIBRATION:   18:17:48  11/10/92

                      BEFORE     AFTER    UNITS
                     -------    -------   -----
VALUE  1              8.002      7.880    INCH

******************************************************************************

                  MICROLOG SHOP CALIBRATION SUMMARY
PERFORMED:  21:15:06  11/10/92    LAST SHOP CALIBRATION:   21:13:23  11/10/92
SERIAL NUMBER: 112632             MODEL: SDLT-A
TRUCK UNIT NUMBER: 10598          PROGRAM VERSION: 2.24
PERFORMED BY: L. JONES

                       MICROLOG NORMAL          MICROLOG LATERAL
                     MEASURED   CALIBRATED   MEASURED    CALIBRATED   UNITS
                     --------   ----------   --------    ----------   ------
TOOL ZERO               0.00        0.00        0.00         0.00     OHM-M
CAL POINT #1            0.00        0.00        0.00         0.00     OHM-M
CAL POINT #2           20.01       20.00       20.00        20.00     OHM-M
INTERNAL REFERENCE     28.27       28.26       21.77        21.76     OHM-M

               MICROLOG BEFORE SURVEY FIELD CHECK SUMMARY
PERFORMED:  16:31:28  11/18/92    LAST SHOP CALIBRATION:   21:15:06  11/10/92

                       MICROLOG NORMAL          MICROLOG LATERAL
                       SHOP       FIELD       SHOP        FIELD       UNIT
                     --------   ----------   --------    ----------   ------
TOOL ZERO               0.00        0.00        0.00         0.00     OHM-M
INTERNAL REFERENCE     28.26       28.26       21.76        21.91     OHM-M


               MICROLOG AFTER SURVEY FIELD CHECK SUMMARY
PERFORMED:  15:16:50  11/19/92    LAST SHOP CALIBRATION:   21:15:06  11/10/92

                       MICROLOG NORMAL          MICROLOG LATERAL
                       BEFORE     AFTER       BEFORE      AFTER       UNIT
                     --------   ----------   --------    ----------   ------
TOOL ZERO               0.00        0.00        0.00         0.00     OHM-M
INTERNAL REFERENCE     28.26       28.07       21.91        21.62     OHM-M

                   PLS-II CALIBRATION SUMMARY TABLE
                  ----------------------------------

  SERVICE or SIGNAL          SHOP      BEFORE      AFTER     CHANGE   TOLERANCE
-----------------------   ---------  ---------  ---------  --------  ---------
GAMMA                        221        217        223         -5     +/- 9.0
CSNG                       248.47     251.84     248.05      -3.79    +/-9.0
DSN POROSITY               19.127     18.995     19.308     -0.313    +/-0.9
BULK DENSITY                2.159      2.159      2.170     -0.012    +/-.015
DENSITY CORRECTION          0.025      0.025      0.024      0.001    +/-.015
DENSITY PE SHORT            4.793      4.844      4.738      0.106    +/-.3
DENSITY PE LONG             3.722      3.749      3.831     -0.081    +/-.3
CALIPER VALUE 1             8.000      8.002      7.880      0.122    +/-0.5
MICLOG NORMAL               28.26      28.26      28.07       0.19    +/- 0.8
MICLOG LATERAL              21.76      21.91      21.62       0.29    +/- 0.8
```

PLS-II FILTER & DELAY SUMMARY

```
                     FILTER & DELAY SUMMARY

                 DATE: 21-NOV-1992 19:08:31

            FILTER LENGTH AND DELAY ARE IN METERS

                                                 FILTER             FILTER
 MNEM    TOOL             DESCRIPTION            LENGTH    DELAY     TYPE
------  ------  -------------------------------  --------  -------  --------
TENS    DITSHD  CABLE TENSION                     0.000     0.000   BLOCK
MAGMRK  DITSHD  DEPTH PANEL MAGNETIC MARK         0.000     0.000   NONE
DLOD    CH_TEN  CABLE HEAD TENSION                0.000     0.000   BLOCK
BHTEMP  CH_TEN  CH BORE HOLE TEMPERATURE          0.000     0.000   BLOCK
PLOC    CH_TEN  CABLE HEAD PAD LOCATOR            0.000     0.000   BLOCK
W2_V    DSTU    AUXILLARY POWER VOLTAGE           0.000     0.000   NONE
W5_V    DSTU    INSTRUMENT POWER VOLTAGE          0.000     0.000   NONE
DSTEMP  DSTU    DSTU TEMPERATURE (F)              1.220     0.000   BLOCK
RGR     GAMMA   NATURAL GAMMA RAY                 0.492    22.335   BLOCK
ZRGR    EVR_GR  NATURAL GAMMA RAY                 0.229    22.335   TRIANGLE
WIN1H   CSNG_T  CSNG WINDOW HIGH 1                0.381    18.243   BLOCK
WIN2H   CSNG_T  CSNG WINDOW HIGH 2                0.381    18.243   BLOCK
WIN3H   CSNG_T  CSNG WINDOW HIGH 3                0.381    18.243   BLOCK
WIN4H   CSNG_T  CSNG WINDOW HIGH 4                0.381    18.243   BLOCK
WIN5H   CSNG_T  CSNG WINDOW HIGH 5                0.381    18.243   BLOCK
WIN6H   CSNG_T  CSNG WINDOW HIGH 6                0.381    18.243   BLOCK
WIN7H   CSNG_T  CSNG WINDOW HIGH 7                0.381    18.243   BLOCK
WIN8H   CSNG_T  CSNG WINDOW HIGH 8                0.381    18.243   BLOCK
WIN9H   CSNG_T  CSNG WINDOW HIGH 9                0.381    18.243   BLOCK
WIN10H  CSNG_T  CSNG WINDOW HIGH 10               0.381    18.243   BLOCK
WIN11H  CSNG_T  CSNG WINDOW HIGH 11               0.381    18.243   BLOCK
WIN12H  CSNG_T  CSNG WINDOW HIGH 12               0.381    18.243   BLOCK
WIN13H  CSNG_T  CSNG WINDOW HIGH 13               0.381    18.243   BLOCK
WIN1L1  CSNG_T  CSNG WINDOW LITHOLOGY 1           0.381    18.243   BLOCK
WIN1L2  CSNG_T  CSNG WINDOW LITHOLOGY 2           0.381    18.243   BLOCK
WIN1L3  CSNG_T  CSNG WINDOW LITHOLOGY 3           0.381    18.243   BLOCK
WIN1CA  CSNG_T  CSNG WINDOW CASING 1              0.381    18.243   BLOCK
WIN2CA  CSNG_T  CSNG WINDOW CASING 2              0.381    18.243   BLOCK
RGRBLK  CSNG_T  RAW GAMMA - BLOCK FILTER          0.686    18.242   BLOCK
RGRDYN  CSNG_T  RAW GAMMA - DYNAMIC FILTER        0.381    18.242   BLOCK
SNOISE  CSNG_T  SPECTRAL NOISE                    0.381    18.242   BLOCK
STAB    CSNG_T  CSNG STABILIZER                   0.381    18.242   BLOCK
AMER    CSNG_T  AMERICIUM COUNTS                  0.381    18.242   BLOCK
SPECHI  CSNG_T  CSNG HIGH ENERGY SPECTRUM SUM     0.000    18.242   NONE
SPECLO  CSNG_T  CSNG LOW ENERGY SPECTRUM SUM      0.000    18.242   NONE
LSPEED  CSNG_T  LINE SPEED                        0.000     0.000   NONE
SW_POS  CSNG_T  SWITCH POSITION                   0.000    18.242   NONE
FRMCNT  CSNG_T  CSNG SPECTRAL FRAME COUNTER       0.000    18.242   NONE
C_TIME  CSNG_T  ACCUMULATION TIME                 0.000    18.242   NONE
STAB_F  CSNG_T  CSNG STABILIZER (FIXED)           0.000    18.242   NONE
AMER_F  CSNG_T  AMERICIUM COUNTS (FIXED)          0.000    18.242   NONE
CCL     CSNG_T  CSNG CCL INPUT                    0.000     0.000   NONE
NDSN    DSN_II  DSN II NEAR SPACED COUNTS         0.410    14.859   BLOCK
FDSN    DSN_II  DSN II FAR SPACED COUNTS          0.082    15.011   BLOCK
ZNDS    EVR_DN  DSN II NEAR SPACED COUNTS         0.076    13.335   BLOCK
ZFDS    EVR_DN  DSN II FAR SPACED COUNTS          0.076    13.487   BLOCK
SDENS   SDL8    SDL SHORT SPACED DENSITY          0.530     9.424   BLOCK
SBART   SDL8    SDL SHORT SPACE BARITE            0.530     9.424   BLOCK
SLITH   SDL8    SDL SHORT SPACED LITHOLOGY        0.530     9.424   BLOCK
CESHI   SDL8    SDL SHORT SPACED CESIUM HI        0.530     9.424   BLOCK
CESLO   SDL8    SDL SHORT SPACE CESIUM LO         0.530     9.424   BLOCK
LDENS   SDL8    SDL LONG SPACED DENSITY           0.380     9.525   BLOCK
LBART   SDL8    SDL LONG SPACED BARITE            0.380     9.525   BLOCK
PELBAR  SDL8    PE LONG SPACED BARITE             0.380     9.650   BLOCK
PELDEN  SDL8    PE LONG SPACED DENSITY            0.380     9.650   BLOCK
LLITH   SDL8    SDL LONG SPACED LITHOLOGY         0.380     9.525   BLOCK
CELHI   SDL8    SDL LONG SPACED CESIUM HIGH       0.380     9.525   BLOCK
CELLO   SDL8    SDL LONG SPACED CESIUM LOW        0.380     9.525   BLOCK
SBARTU  SDL8    SDL SHORT SPACE BARITE            0.000     9.424   NONE
SDENSU  SDL8    SDL SHORT SPACED DENSITY          0.000     9.424   NONE
SLITHU  SDL8    SDL SHORT SPACED LITHOLOGY        0.000     9.424   NONE
CALIP   CALI_1  SDL PAD CALIPER                   0.381     9.781   BLOCK
MICLAT  MICLOG  MICROLOG LATERAL                  0.229     9.781   BLOCK
MICNOR  MICLOG  MICROLOG NORMAL                   0.229     9.781   BLOCK
ZCELH   EVRSD8  SDL LONG SPACED CESIUM HIGH       0.229     9.525   BLOCK
ZCELL   EVRSD8  SDL LONG SPACED CESIUM LOW        0.229     9.525   BLOCK
ZCESH   EVRSD8  SDL SHORT SPACED CESIUM HI        0.381     9.424   BLOCK
ZCESL   EVRSD8  SDL SHORT SPACE CESIUM LO         0.381     9.424   BLOCK
ZLBAR   EVRSD8  SDL LONG SPACED BARITE            0.229     9.525   BLOCK
ZLDNS   EVRSD8  SDL LONG SPACED DENSITY           0.229     9.525   BLOCK
ZLLTH   EVRSD8  SDL LONG SPACED LITHOLOGY         0.229     9.525   BLOCK
ZPELBR  EVRSD8  PE LONG SPACED BARITE             0.229     9.650   BLOCK
ZPELDN  EVRSD8  PE LONG SPACED DENSITY            0.229     9.650   BLOCK
ZSBAR   EVRSD8  SDL SHORT SPACE BARITE            0.381     9.424   BLOCK
ZSDNS   EVRSD8  SDL SHORT SPACED DENSITY          0.381     9.424   BLOCK
ZSLTH   EVRSD8  SDL SHORT SPACED LITHOLOGY        0.381     9.424   BLOCK
ZSBRU   EVRSD8  SDL SHORT SPACE BARITE            0.000     9.424   NONE
ZSDSU   EVRSD8  SDL SHORT SPACED DENSITY          0.000     9.424   NONE
ZSLHU   EVRSD8  SDL SHORT SPACED LITHOLOGY        0.000     9.424   NONE
```

HLS

```
                PLS-II TOOL STRING DIAGRAM

                  21-NOV-1992 19:07:29

     :
    /=\  <----  27.8906 = DITS CABLE HEAD LOAD CELL
   /   \
   :   :
   +===+ <----  26.3506 = TELEMETRY SUB
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   +===+ <----  24.3694 = GAMMA SUB
   :   :
   :   :
   :   :
   :   :
   :   :
   :   : <----  22.3348 = GAMMA RAY
   :   :
   +===+ <----  21.9294 = COMPENSATED SPECTRAL NATURAL GAMMA
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :---:
   :   :
   :   : <----  18.2420 = GAMMA RAY
   :   :
   :   :
   :   :
   +===+ <----  17.3794 = DSN-II SUB
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   : <----  14.8590 = DSN
   :   :
   +===+ <----  14.2494 = SPECTRAL DENSITY SUB
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :
   :   :\
  /:   : \
 / :   : :: <-  9.78102 = MICROLOG
:  :   : :: <-  9.78102 = CALIPER
:  :   : :: <-  9.42440 = DENSITY
   :   : ++
   :   :
   +===+ <----  8.51000 = TOOL SPACER
   :   :
   :   :
   +===+ <----  0.20000 = TOOL SPACER
   :   :
   :   :
   +---+
```

ENCLOSURE 16 OR-0304

HALLIBURTON LOGGING SERVICES, INC.

SPECTRAL DENSITY
DUAL SPACED NEUTRON
CSNG LOG

COMPANY SAGASCO RESOURCES L
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN

COMPANY SAGASCO RESOURCES LTD.
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN
STATE TS
API NO TASMANIA
LOCATION PERMIT: T/18P
SEISMIC: HB77A-306(SP300)
LAT: 39 35 24.331 - S
LONG: 145 31 08.780 - E
EASTING: 372835.53 M
NORTHING: 5616674.27 M
SECT N/A TWP N/A RGE N/A

OTHER SERVICES
2A-HRI/LSS/
MSFL
2C-HFDT/GR
2D-SED/GR
2E,F,G,H-SFT
2I-VSP

PERMANENT DATUM M.S.L. ELEV. 0.0
LOG MEASURED FROM RT 22.3 M.ABOVE PERM DATUM
DRILLING MEASURED FROM ROTARY TABLE DF
ELEV.:K.B. N/A
D.F. 22.3 M
G.L. -72.5M

DATE	18 NOV 1992			
RUN NO.	2B			
DEPTH-DRILLER	2223.0 M			
DEPTH-LOGGER	2225.2 M			
BTM. LOG INTER	2215.4 M			
TOP LOG INTER	CASING			
CASING DRILLER	9.625@1237	@	@	@
CASING-LOGGER	1239.2 M			
BIT SIZE	8.5 INCHES			
TYPE FLUID IN HOLE	POLYMER			
DENS. : VISC.	1.14 :53	:	:	:
PH : FLUID LOSS	9.5 :6.8	:	:	:
SOURCE OF SAMPLE	FLOW LINE			
RM @ MEAS. TEMP.	1.085@18.61	@	@	@
RMF @ MEAS. TEMP.	0.945@17.88	@	@	@
RMC @ MEAS. TEMP.	1.018@19.72	@	@	@
SOURCE RMF:RMC	MEAS :MEAS	:	:	:
RM @BHT	.383 @92.22	@	@	@
TIME SINCE CIRC.	26.5 HOURS			
TIME ON BOTTOM	2322			
MAX. REC TEMP.	92.22@TD	@	@	@
EQUIP.: LOCATION	10598:SLE	:	:	:
RECORDED BY	L. JONES			
WITNESSED BY	J. REEVE			

FOLD HERE

SERVICE TICKET NO.: H-1452 API SERIAL NO.: PGM VERSION: 2.24

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	.383 @92.22	@
RMF @ BHT	.328 @92.22	@
RMC @ BHT	.369 @92.22	@

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
2B	DSTU #111533			
2B	CALI #112632	ML	2-ARM	
2B	ML #112632	STD	2-ARM	PAD
2B	DTD #AA040	CHTEN	STRAIN	

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
RUN NO.	2B	RUN NO.		RUN NO.	2B	RUN NO.	2B
SERIAL NO.	113020	SERIAL NO.		SERIAL NO.	PAD0145	SERIAL NO.	A009
MODEL NO.	CSNG	MODEL NO.		MODEL NO.	M465	MODEL NO.	M434
DIAMETER	3.625	NO.OF CENT.		DIAMETER.	4.5	DIAMETER	3.625
DETECTOR MODEL NO.	N/A	SPACING		LOG TYPE	SDL	LOG TYPE	DSN
TYPE	SCINT			SOURCE TYPE	CS-137	SOURCE TYPE	AM241BE
LENGTH	N/A	LSA [Y/N]		SERIAL NO.	10400GW	SERIAL NO.	DSN 103
DISTANCE TO SOURCE	N/A	FWDA [Y,N]		STRENGTH	1.5 CI	STRENGTH	18.5 CI

LOGGING DATA

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
RUN	DEPTH		SPEED	SCALE		SCALE			SCALE			SCALE		
NO	FROM	TO	M/MIN	L	R	L	R	MATRIX	L	R	MATRIX	L	R	MATRIX
2B	TD	CSG	3	0	150				1.95	2.95	2.71	.45	-.15	LIME
				GAPI	GAPI				GM/ CC	GM/ CC	GM/ CC	LSPU	LSPU	

REMARKS: BHV/AHV MARKS ARE IN CUBIC METERS. TIED INTO SURFACE LOG DTD 7 NOV 92.
NEUTRON IS CALIPER CORRECTED ONLY. NO TEMPERATURE CORRECTION APPLIED TO NEUTRON.
HIGH RESOLUTION DATA RECORDED AT .025 SAMPLE RATE. EVR DATA RECORDED AND
DISPLAYED ON SEPERATE PRESENTATION. HOLE WASHED OUT AT COAL STRINGERS.
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 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 WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

5 cm

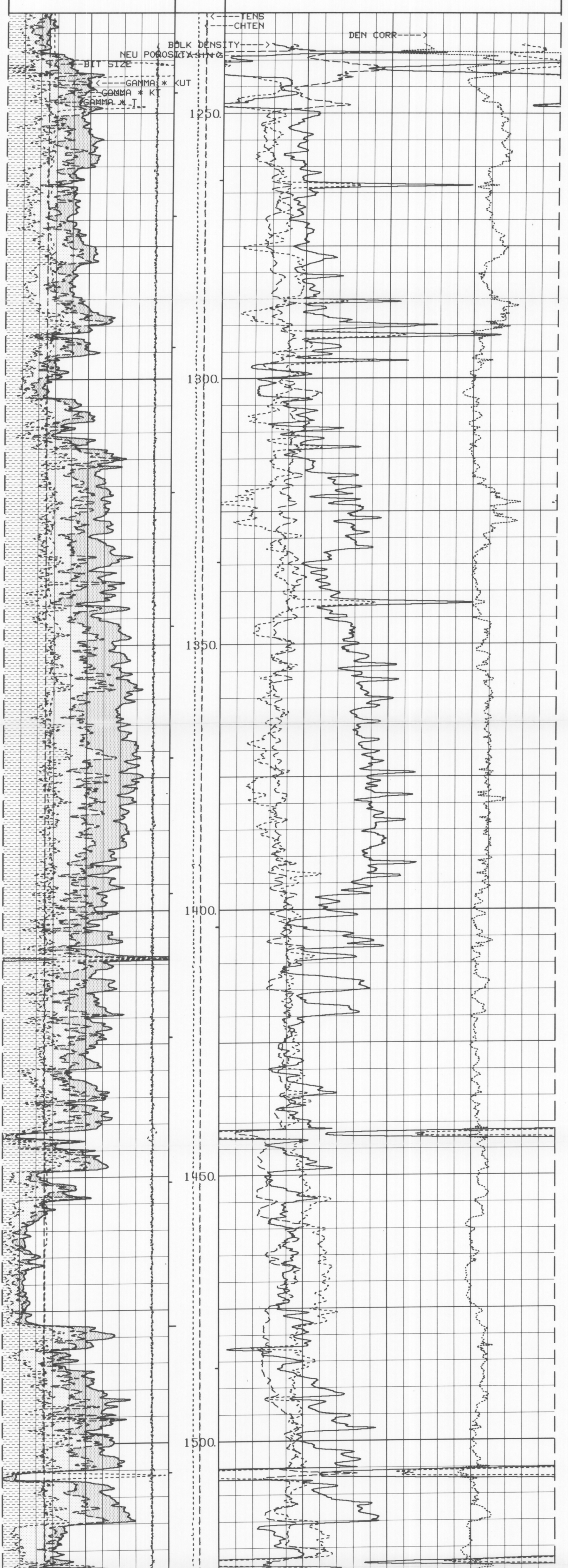
1:500

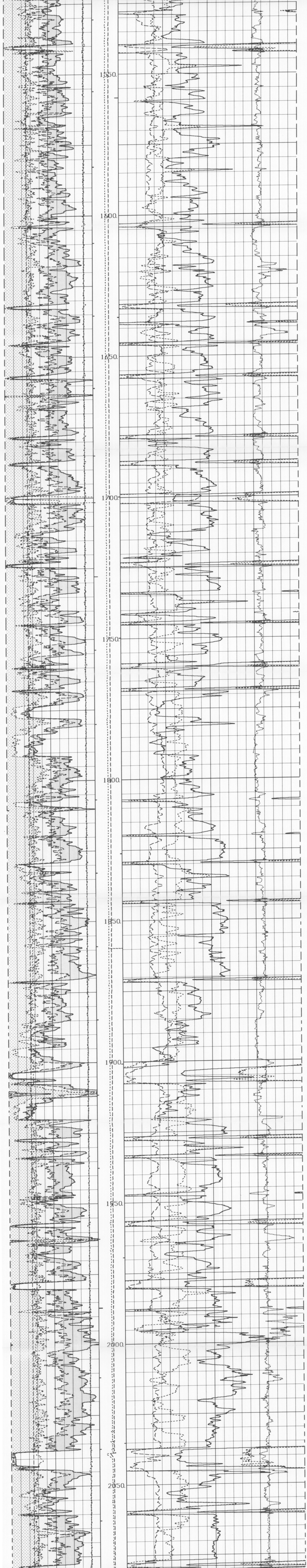
MAIN RUN

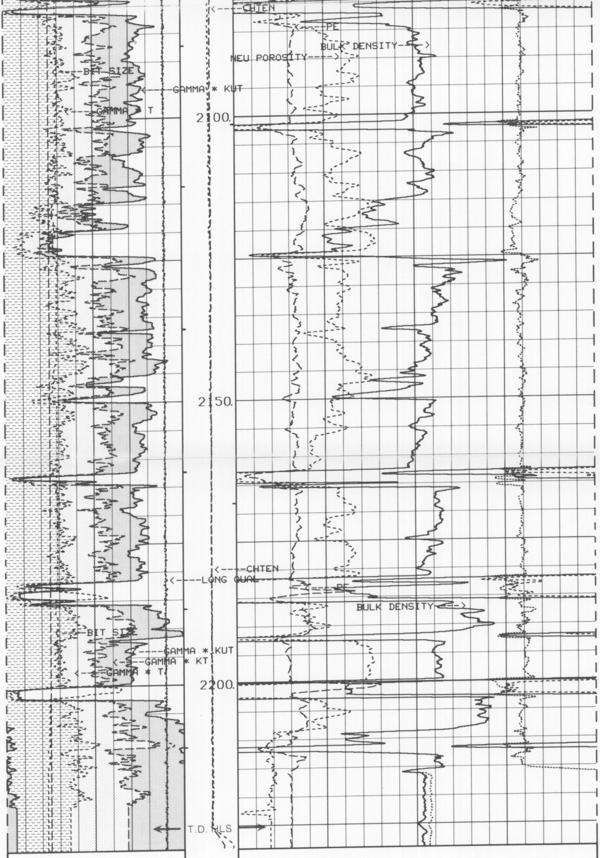
LONG QUAL
4.5 -.5
SHORT QUAL
-4.5 .5
BIT SIZE
6 INCHES 16
CALIPER
6 INCHES 16
GAMMA * KUT
0 API 150
GAMMA * KT
0 API 150
GAMMA * T
0 API 150

TENS
+<KG
DLOD
+<KG
BHV
>BHV>
AHV
<AHV<

PE
0 10
DEN CORR
-.25 GM/CC .25
BULK DENSITY
1.95 GM/CC 2.95
NEU POROSITY
45 PERCENT -15
NEUTRON MATRIX = LIME







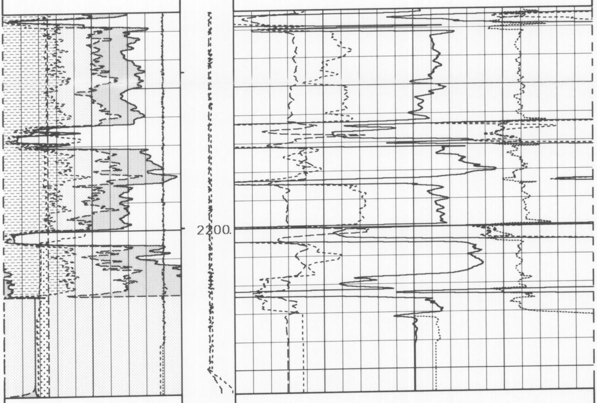
LONG QUAL	4.5		-.5						
SHORT QUAL	-4.5		.5						
BIT SIZE	6	INCHES	16						
CALIPER	6	INCHES	16	TENS	+<KG				
GAMMA * KUT	0	API	150	DLOD	+<KG	PE	0		10
						DEN CORR	-.25	GM/CC	.25
GAMMA * KT	0	API	150	BHV	>BHV>	BULK DENSITY	1.95	GM/CC	2.95
GAMMA * T	0	API	150	AHV	<AHV<	NEU POROSITY	45	PERCENT NEUTRON MATRIX = LIME	-15

UPLOG # 1 Depth: 2229.00 Service:none. Unit:10598
Replay Log Date: Time: Vers:2.24

1:500

REPEAT SECTION

GAMMA * T	0	API	150	AHV	<AHV<	NEU POROSITY	45	PERCENT NEUTRON MATRIX = LIME	-15
GAMMA * KT	0	API	150	BHV	>BHV>	BULK DENSITY	1.95	GM/CC	2.95
GAMMA * KUT	0	API	150	DLOD	+<KG	PE	0		10
						DEN CORR	-.25	GM/CC	.25
CALIPER	6	INCHES	16	TENS	+<KG				
BIT SIZE	6	INCHES	16						
SHORT QUAL	-4.5		.5						
LONG QUAL	4.5		-.5						



LONG QUAL	4.5		-.5						
SHORT QUAL	-4.5		.5						
BIT SIZE	6	INCHES	16						
CALIPER	6	INCHES	16	TENS	+<KG				
GAMMA * KUT	0	API	150	DLOD	+<KG	PE	0		10
						DEN CORR	-.25	GM/CC	.25
GAMMA * KT	0	API	150	BHV	>BHV>	BULK DENSITY	1.95	GM/CC	2.95
GAMMA * T	0	API	150	AHV	<AHV<	NEU POROSITY	45	PERCENT NEUTRON MATRIX = LIME	-15

UPLOG # 1 Depth: 2229.00 Service:none. Unit:10598
Replay Log Date: Time: Vers:2.24

5 cm

ENCLOSURE 17 OR 0304

HALLIBURTON LOGGING SERVICES, INC.

COMPANY SAGASCO RESOURCES L
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN

SPECTRAL DENSITY DUAL SPACED NEUTRON DIELECTRIC POROSITY

COMPANY SAGASCO RESOURCES LTD.
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN
STATE TS

API NO TASMANIA
LOCATION PERMIT: T/18P
SEISMIC: HB77A-306(SP300)
LAT: 39 35 24.331 - S
LONG: 145 31 08.780 - E
EASTING: 372835.53 M
NORTHING: 5616674.27 M

OTHER SERVICES
2A-HRI/MSFL/
LSS
2D-SED
2E,F,G,H-SFT
2I-VSP

SECT N/A TWP N/A RGE N/A

PERMANENT DATUM M.S.L. ELEV. 0.0
LOG MEASURED FROM RT 22.3 M.ABOVE PERM DATUM
DRILLING MEASURED FROM ROTARY TABLE DF

ELEV.:K.B. N/A
D.F. 22.3 M
G.L. -72.5M

DATE	19 NOV 1992			
RUN NO.	2B/2C			
DEPTH-DRILLER	2223.0 M			
DEPTH-LOGGER	2225.2 M			
BTM. LOG INTER	2222.7 M			
TOP LOG INTER	CASING			
CASING DRILLER	9.625@1237	@	@	@
CASING-LOGGER	1239.2 M			
BIT SIZE	8.5 INCHES			
TYPE FLUID IN HOLE	POLYMER			
DENS. : VISC.	1.14 :53	--	--	--
PH : FLUID LOSS	9.5 :6.8	--	--	--
SOURCE OF SAMPLE	FLOW LINE			
RM @ MEAS. TEMP.	1.085@18.61	@	@	@
RMF @ MEAS. TEMP.	0.945@17.88	@	@	@
RMC @ MEAS. TEMP.	1.018@19.72	@	@	@
SOURCE RMF:RMC	MEAS :MEAS	--	--	--
RM @BHT	.383 @92.22	@	@	@
TIME SINCE CIRC.	50.5 HOURS			
TIME ON BOTTOM	2322			
MAX. REC TEMP.	92.22@TD	@	@	@
EQUIP.: LOCATION	10598:SLE	--	--	--
RECORDED BY	L. JONES	A. CHANG		
WITNESSED BY	J. REEVE			

FOLD HERE

SERVICE TICKET NO.: H-1452 API SERIAL NO.: PGM VERSION: 2.24

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	.383 @92.22	@
RMF @ BHT	.328 @92.22	@
RMC @ BHT	.369 @92.22	@

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
2B	DSTU #111533		CENT	
2C	HFDT #001			
2B	CALI #112632	CALI	2-ARM	
2B/C	DTD #AA040	CHTEN	STRAIN	

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
RUN NO.	2B	RUN NO.		RUN NO.	2B	RUN NO.	2B
SERIAL NO.	113020	SERIAL NO.		SERIAL NO.	PAD145	SERIAL NO.	A009
MODEL NO.	CSNG	MODEL NO.		MODEL NO.	M465	MODEL NO.	M434
DIAMETER	3.625	NO.OF CENT.		DIAMETER.	4.5	DIAMETER	3.625
DETECTOR MODEL NO.	N/A	SPACING		LOG TYPE	SDL	LOG TYPE	DSN
TYPE	SCINT			SOURCE TYPE	CS-137	SOURCE TYPE	AM241BE
LENGTH	N/A	LSA [Y/N]		SERIAL NO.	1400GW	SERIAL NO.	DSN 103
DISTANCE TO SOURCE	N/A	FWDA [Y,N]		STRENGTH	1.5 CI	STRENGTH	18.5 CI

LOGGING DATA

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
RUN	DEPTH		SPEED	SCALE		SCALE			SCALE			SCALE		
NO	FROM	TO	M/MIN	L	R	L	R	MATRIX	L	R	MATRIX	L	R	MATRIX
2B/2C	TD	CSG	3/9	0	150				.45	-.15	LIME	.45	-.15	LIME
				GAPI	GAPI				LSPU	LSPU		LSPU	LSPU	

REMARKS: HFDT POROSITY MERGED ONTO BASE SDL/DSN/CSNG LOG.
NEUTRON IS CALIPER CORRECTED ONLY. NO TEMPERATURE CORRECTION APPLIED TO NEUTRON.

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 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 WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

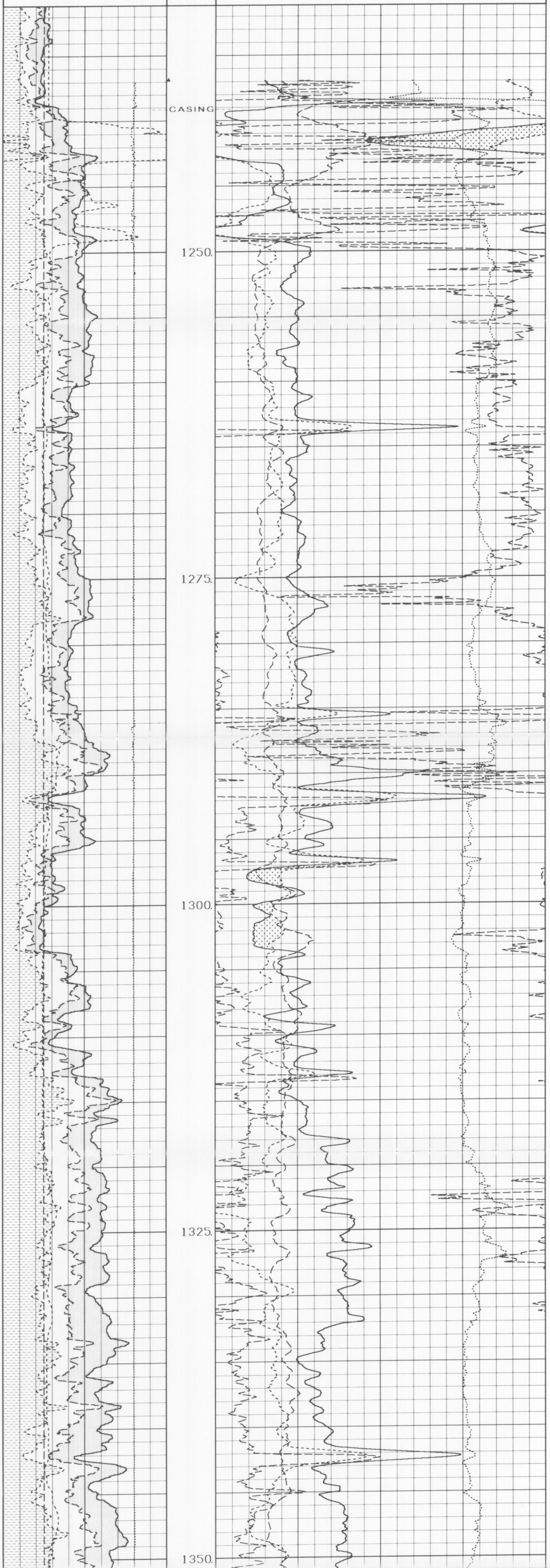
5 cm

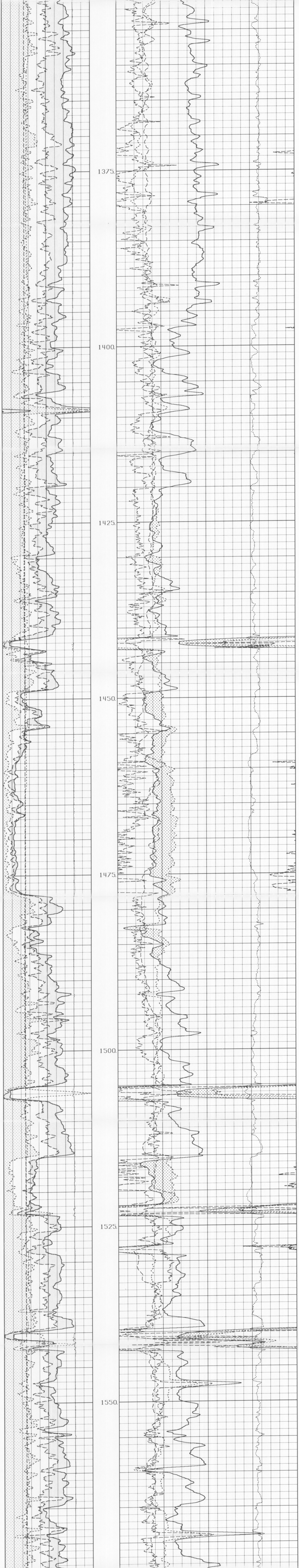
1:200

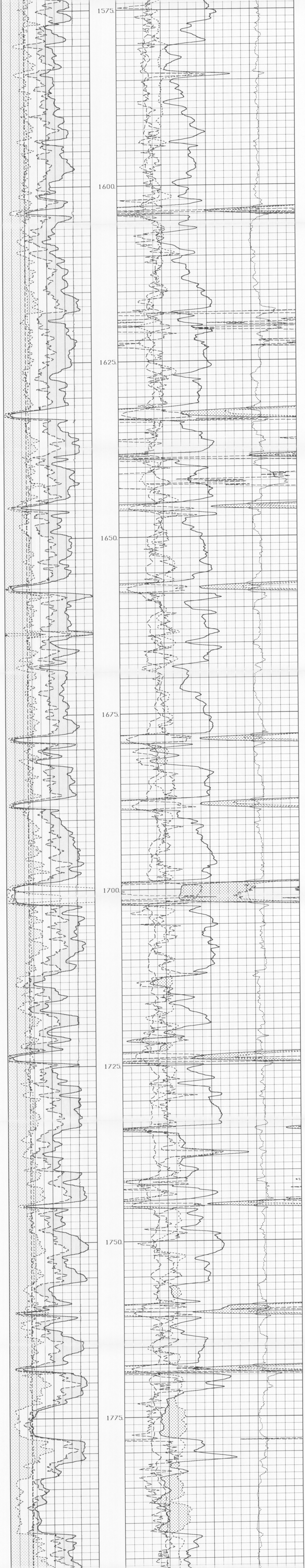
MERGED LOG

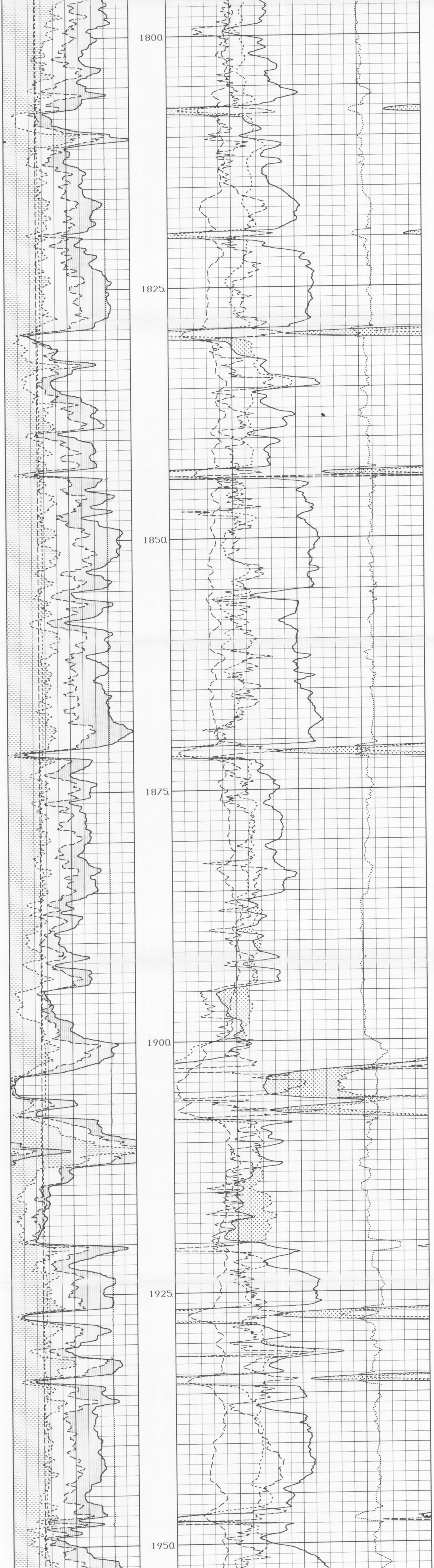
HFDT
-8 QUALITY 2
BIT SIZE
6 INCHES 16
CALIPER
6 INCHES 16
GAMMA * KUT
0 API 150
GAMMA * KT
0 API 150
GAMMA * T
0 API 150

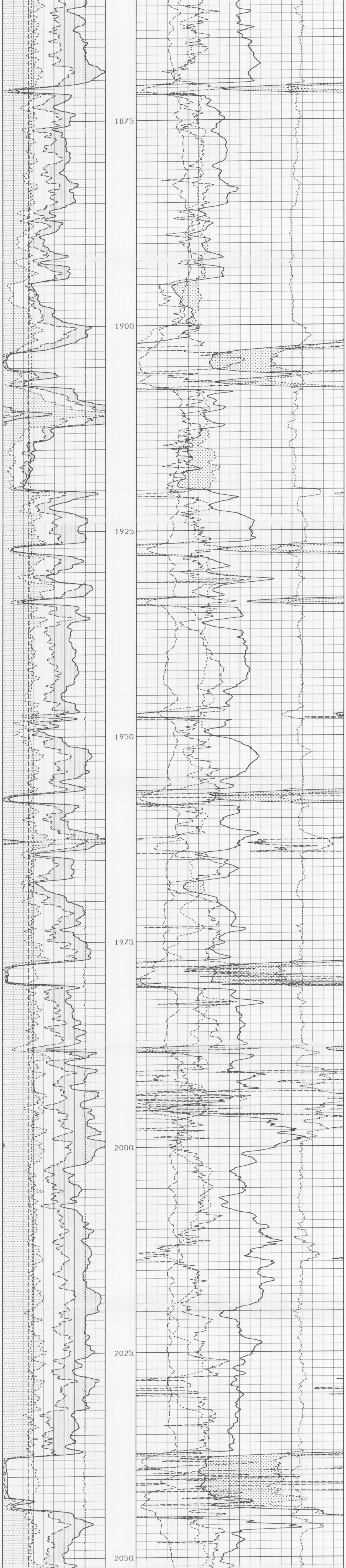
PE
0 10
DEN CORR
-.25 GM/CC .25
EPHX
45 PERCENT -15
DEN POROSITY
45 PERCENT -15
MATRIX DENSITY = 2.71
NEU POROSITY
45 PERCENT -15
NEUTRON MATRIX = LIME

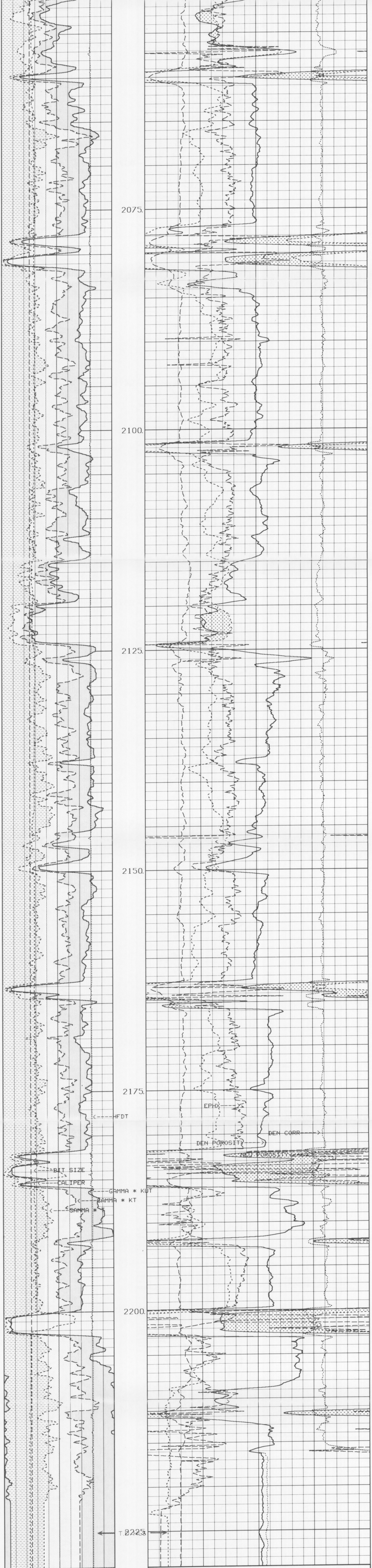












HFDT

-8 QUALITY 2

BIT SIZE

6 INCHES 16

CALIPER

6 INCHES 16

GAMMA * KUT

0 API 150

GAMMA * KT

0 API 150

GAMMA * T

0 API 150

PE | DEN CORR

0 10 | -.25 GM/CC .25

EPHX

45 PERCENT -15

DEN POROSITY

45 PERCENT -15
MATRIX DENSITY = 2.71

NEU POROSITY

45 PERCENT -15
NEUTRON MATRIX = LIME

UPLOG # 2 Depth: 2229.00 Service:none. Unit:10598
Replay Log Date: Time: Vers:2.24

5 cm

ENCLOSURE 18 OR.0304

HALLIBURTON LOGGING SERVICES, INC.

SPECTRAL DENSITY
DUAL SPACED NEUTRON
DIELECTRIC POROSITY

COMPANY SAGASCO RESOURCES L
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN

COMPANY SAGASCO RESOURCES LTD.
WELL KING-1
FIELD EXPLORATION
PROVINCE BASS BASIN
STATE TS

API NO TASMANIA
LOCATION PERMIT: T/18P
SEISMIC: HB77A-306(SP300)
LAT: 39 35 24.331 - S
LONG: 145 31 08.780 - E
EASTING: 372835.53 M
NORTHING: 5616674.27 M
SECT N/A TWP N/A RGE N/A

OTHER SERVICES
2A-HRI/MSFL/
LSS
2D-SED
2E,F,G,H-SFT
2I-VSP

PERMANENT DATUM M.S.L. ELEV. 0.0
LOG MEASURED FROM RT 22.3 M.ABOVE PERM DATUM
DRILLING MEASURED FROM ROTARY TABLE DF

ELEV.:K.B. N/A
D.F. 22.3 M
G.L. -72.5M

DATE	19 NOV 1992			
RUN NO.	2B/2C			
DEPTH-DRILLER	2223.0 M			
DEPTH-LOGGER	2225.2 M			
BTM. LOG INTER	2222.7 M			
TOP LOG INTER	CASING			
CASING DRILLER	9.625@1237	@	@	@
CASING-LOGGER	1239.2 M			
BIT SIZE	8.5 INCHES			
TYPE FLUID IN HOLE	POLYMER			
DENS. : VISC.	1.14 :53	:	:	:
PH : FLUID LOSS	9.5 :6.8	:	:	:
SOURCE OF SAMPLE	FLOW LINE			
RM @ MEAS. TEMP.	1.085@18.61	@	@	@
RMF @ MEAS. TEMP.	0.945@17.88	@	@	@
RMC @ MEAS. TEMP.	1.018@19.72	@	@	@
SOURCE RMF:RMC	MEAS :MEAS	:	:	:
RM @BHT	.383 @92.22	@	@	@
TIME SINCE CIRC.	50.5 HOURS			
TIME ON BOTTOM	2322			
MAX. REC TEMP.	92.22@TD	@	@	@
EQUIP.: LOCATION	10598:SLE	:	:	:
RECORDED BY	L. JONES	A. CHANG		
WITNESSED BY	J. REEVE			

FOLD HERE

SERVICE TICKET NO.: H-1452 API SERIAL NO.: PGM VERSION: 2.24

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLES			RESISTIVITY SCALE CHANGES			
DATE:SAMPLE NO.	/ / :	/ / :	TYPE LOG	DEPTH	SCALE UP HOLE	SCALE DOWN HOLE
DEPTH-DRILLER						
TYPE FLUID						
IN HOLE					NONE	
DENS. : VISC	:	:				
PH : FLUID LOSS	:	:				

			RESISTIVITY EQUIPMENT DATA				
SOURCE OF SAMPLE			RUN NO	TOOL TYPE & NO	PAD TYPE	TOOL POS.	OTHER
RM @ MEAS TEMP	@	@	2B	DSTU #111533		CENT	
RMF @ MEAS TEMP	@	@	2C	HFDT #001			
RMC @ MEAS TEMP	@	@	2B	CALI #112632	CALI	2-ARM	
SOURCE: RMF:RMC	:	:	2B/C	DTD #AA040	CHTEN	STRAIN	
RM @ BHT	.383 @92.22	@					
RMF @ BHT	.328 @92.22	@					
RMC @ BHT	.369 @92.22	@					

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
RUN NO.	2B	RUN NO.		RUN NO.	2B	RUN NO.	2B
SERIAL NO.	113020	SERIAL NO.		SERIAL NO.	PAD145	SERIAL NO.	A009
MODEL NO.	CSNG	MODEL NO.		MODEL NO.	M465	MODEL NO.	M434
DIAMETER	3.625	NO.OF CENT.		DIAMETER.	4.5	DIAMETER	3.625
DETECTOR MODEL NO.	N/A	SPACING		LOG TYPE	SDL	LOG TYPE	DSN
TYPE	SCINT			SOURCE TYPE	CS-137	SOURCE TYPE	AM241BE
LENGTH	N/A	LSA [Y/N]		SERIAL NO.	1400GW	SERIAL NO.	DSN 103
DISTANCE TO SOURCE	N/A	FWDA [Y,N]		STRENGTH	1.5 CI	STRENGTH	18.5 CI

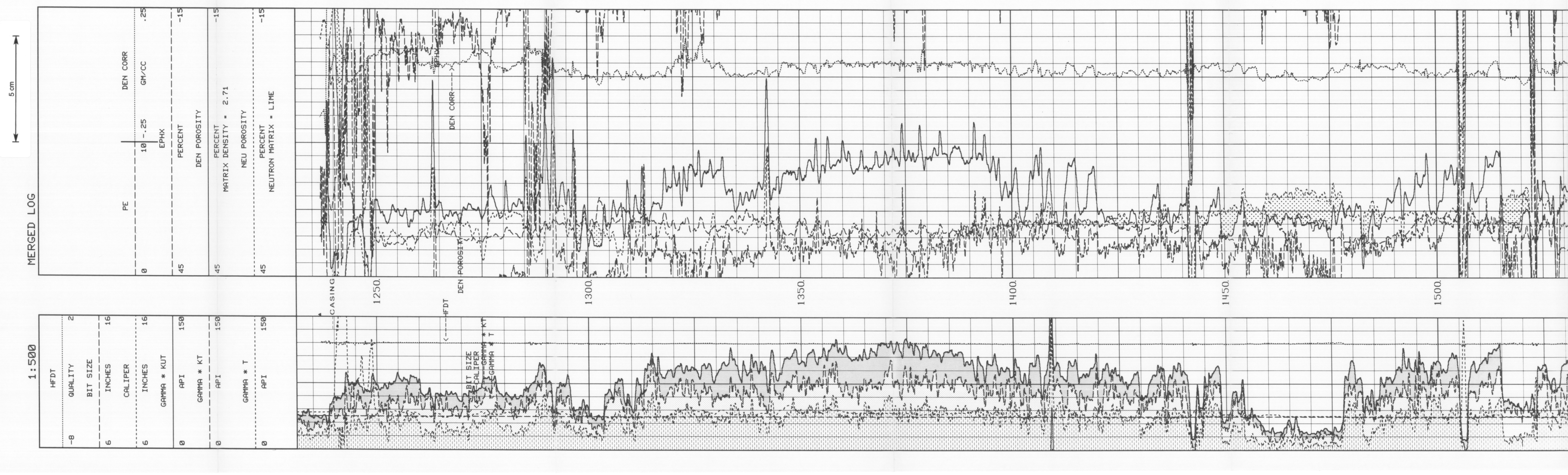
LOGGING DATA

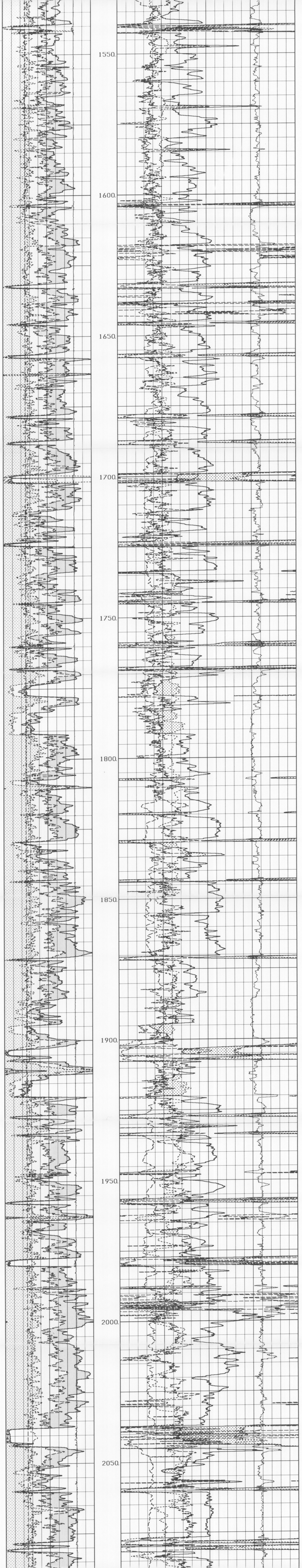
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
RUN	DEPTH		SPEED	SCALE		SCALE			SCALE			SCALE		
NO	FROM	TO	M/MIN	L	R	L	R	MATRIX	L	R	MATRIX	L	R	MATRIX
2B/2C	TD	CSG	3/9	0	150				.45	-.15	LIME	.45	-.15	LIME
				GAPI	GAPI				LSPU	LSPU		LSPU	LSPU	

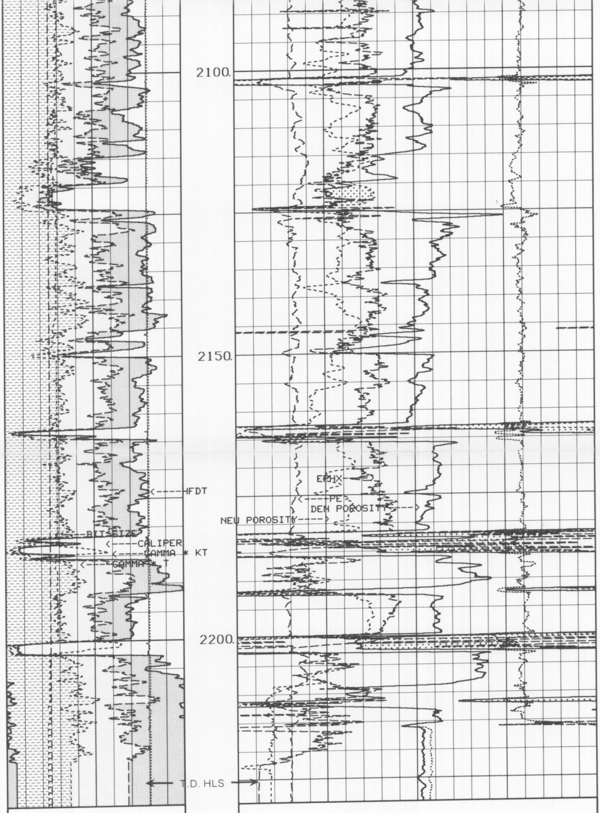
REMARKS: HFDT POROSITY MERGED ONTO BASE SDL/DSN/CSNG LOG.
NEUTRON IS CALIPER CORRECTED ONLY. NO TEMPERATURE CORRECTION APPLIED TO NEUTRON.

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 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 WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.







	HFDT	
-8	QUALITY	2
	BIT SIZE	
6	INCHES	16
	CALIPER	
6	INCHES	16
	GAMMA * KUT	
0	API	150
	GAMMA * KT	
0	API	150
	GAMMA * T	
0	API	150

	PE			DEN CORR	
0		10	-.25	GM/CC	.25
		EPHX			
45		PERCENT			-15
		DEN POROSITY			
45		PERCENT MATRIX DENSITY = 2.71			-15
		NEU POROSITY			
45		PERCENT NEUTRON MATRIX = LIME			-15

UPLOG # 2 Depth: 2229.00 Service:none. Unit:10598
Replay Log Date: Time: Vers:2.24

5 cm