

FILE NO. \_\_\_\_\_

COMPANY: ARCO OIL & GAS COMPANY

WELL: WELLS

FIELD: WEST

COUNTY: COULMBRY STATE: OREGON

LOCATION: 709 N. & 114th W. OF THE S.E. CORNER OF

SEC. 8 TWP. 33N. RGE. 11E

Other Services: DENLOG, GR, CAL

Run No. \_\_\_\_\_ Date: 6-28-88

Source: \_\_\_\_\_

Bottom Logged Interval: 1841'

Top Logged Interval: 1841'

Change-Logger: 1841' @ 1841'

Bit Size: 11 1/2"

Type Fluid in Hole: H<sub>2</sub>O

Depth and Tendency: H<sub>2</sub>O

Source of Sample: F.L.C. W.L.L. #1

Time @ Mass Temp: 1.84 @ 70 °F

Time @ Mass Temp: 1.10 @ 70 °F

Time @ Mass Temp: 1.86 @ 118 °F

Time Since Core: 1 HRS.

Max Rec. Temp. Deg. F: 118

Excess Rec. Location: WELLS

Witnessed By: M.V. DAHLBLEN

FOLD HERE

In making interpretations of logs our employees will give Customer the benefit of their best judgment, but since all interpretations are opinions based on inferences from electrical or other measurements, we cannot and we do not guarantee the accuracy or the correctness of any interpretation. We shall not be liable for any loss or damages or expenses whatsoever incurred or sustained by the Customer resulting from any interpretation made by any of our employees.

Remarks

EQUIPMENT DATA

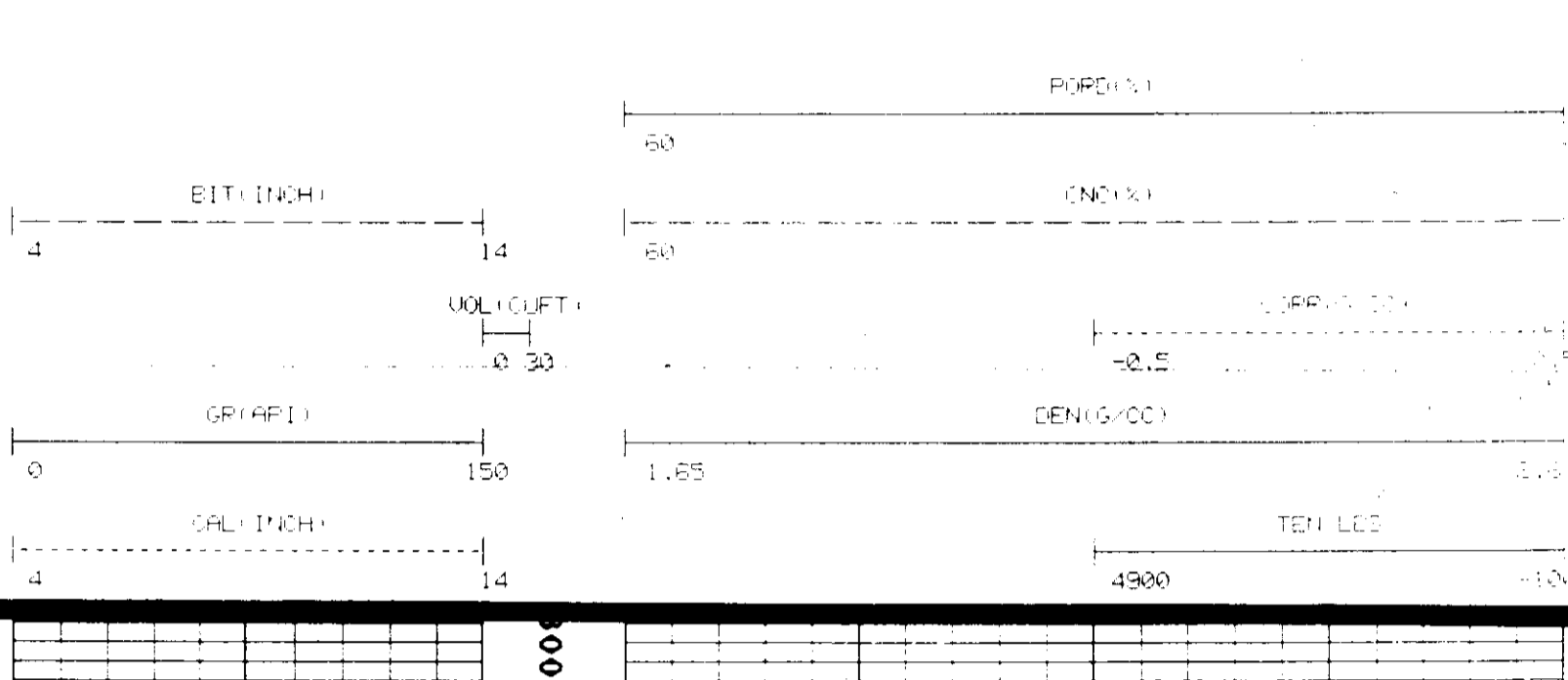
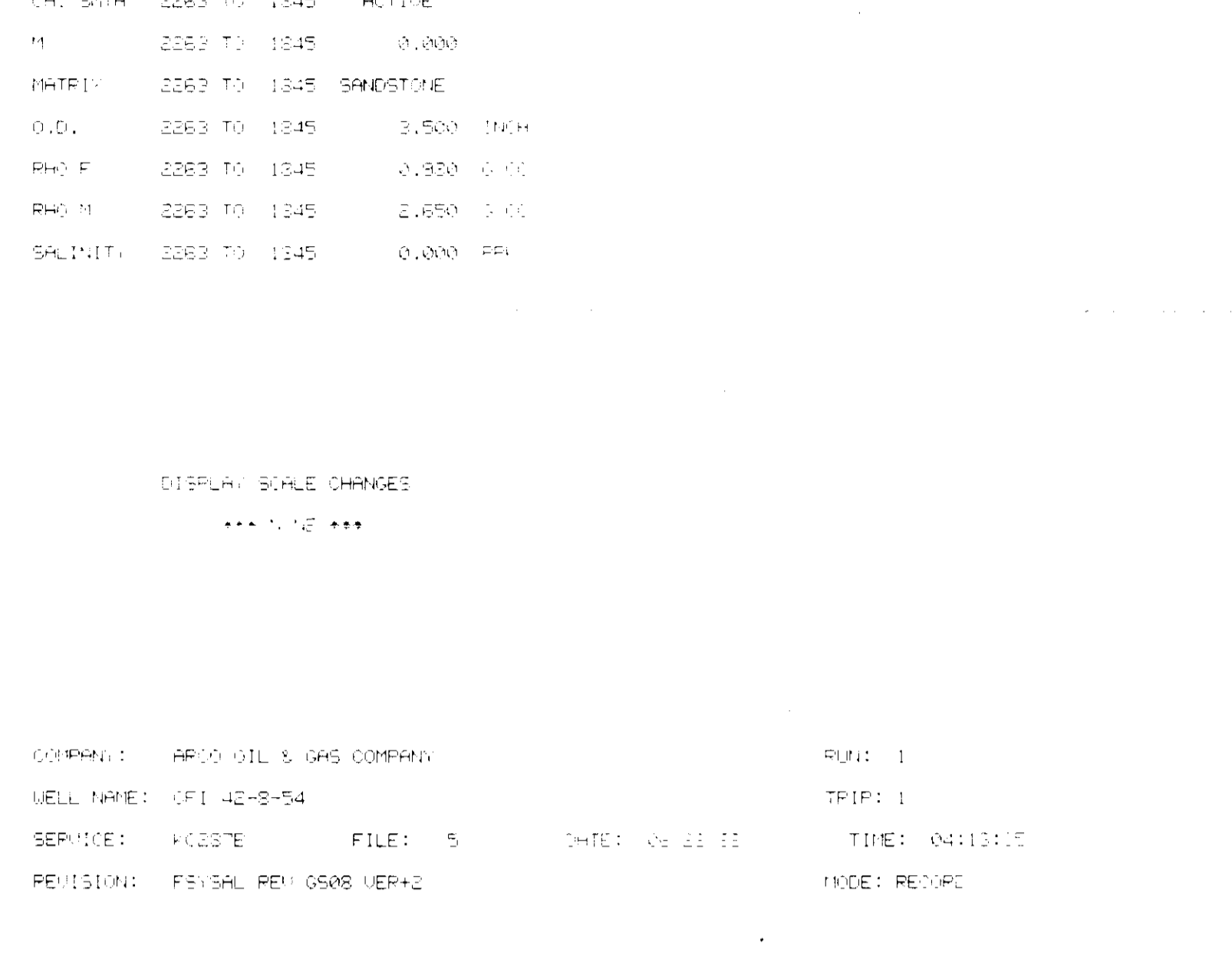
Run No. 1	Run No. 2	Run No. 3
CDL	CNLog	GR
Tool Series No. 2212	2475	1000
Serial No. 51833	50094	33107

PARAMETERS

NAME	DEPTH	INTERVAL	VALUE	UNITS
A	2263	TO 1845	0.000	
CAL CORP	2263	TO 1845	6.250	INCH
CHI SMTH	2263	TO 1845	ACTIVE	
M	2263	TO 1845	0.000	
MATRIX	2263	TO 1845	SANDSTONE	
R.D.V.	2263	TO 1845	3.500	INCH
RHO F	2263	TO 1845	0.850	G/CC
RHO M	2263	TO 1845	2.650	G/CC
SALINITY	2263	TO 1845	0.000	PPM

DISPLAY SCALE CHANGES  
 \*\*\* 1/2 \*\*\*

COMPANY: ARCO OIL & GAS COMPANY RUN: 1  
 WELL NAME: WELLS-428-54 TRIP: 1  
 SERVICE: KCSSTE FILE: 5 DATE: 06 28 88 TIME: 0413:12  
 PERMISSION: FSYBAL REV 0508 VER+2 MODE: RECORD



\*\*\*\*\*  
 • CALIBRATION/VERIFICATION SUMMARIES •  
 • DATE 06-28-88 TIME 0413:12 •  
 • PUL 1 •  
 \*\*\*\*\*

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE

LOG NAME: WELLS ASSET NO. 57133 UNIT NO. HL 8406  
 CALIBRATION ENTERED ON 06 28 88 AT 03:02:14

CURVE: COUNTS/SEC. SCALING FACTORS ENGINEERING VALUES UNITS

CURVE	LOW	HIGH	ADD.	MULT.	UNIT	VALUE	UNITS
LSI	195.8	0.000	1.0000	0.0000	CPM	195.8	CPM
SPH	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM
CHI	185.8	0.000	1.0000	0.0000	CPM	185.8	CPM

DATE 06-18-88 CALIBRATION TIME 15:02:35

DATE 06-02-88 PRIMARY VERIFICATION TIME 11:07:11

DATE 06-02-88 BEFORE LOG VERIFICATION TIME 03:04:11

AFTER LOG VERIFICATION NOT DONE