Schlumberger

SIMULTANEOUS

COMPENSATED NEUTRON-FORMATION DENSITY

COUNTY MORROW	COMPANY	AHCO OIL AND GAS	
FIELD WILDCAT	WELL	"AHCO HANNA" 1	
LOCATION	FIELD	WILDCAT	
WELL "AHCO HANNA"	COUNTY	MORROW	STATE OREGON

LOCATION				Other Services:
17 AND 1414'W FR 4 CORNER				DIL-BHC-GR FDC-CNL GR SHDT
API SERIAL NO.	SECT. 23	TWP 2S	RANGE 27E	

Permanent Datum		Elev.	3199.5 F	Elev.:	K.B.3225.5 F
Log Measured From		26.0 F	above Perm. Datum		D.F.3224.5 F
Drilling Measured From					G.L.3199.5 F

Date	03-A 88			
Run No	1			
Depth Driller	7331.			
Depth Logger (Schl.)	7244			
Btm. Log Interval	7241.0			
Top Log Interval	1598.0			
Casing-Driller		@1598.0 F	@	@
Casing-Logger	0			
Bit Size	8			
Type Fluid in Hole	A			
Dens. | Visc.	B/	48.0 S		
pH | Fld. Loss		6.1 C3		
Source of Sample	A			
Rm @ Meas. Temp.	OHMM	@ 79.0 DEGF	@	
Rmf @ Meas. Temp.	4 OHMM	@ 73.0 DEGF	@	
Rmc @ Meas. Temp.	3.0 OHMM	@ 72.0 DEGF	@	
Source: Rmf | Rmc	MEASURED	MEASURED		
Rm @ BHT	3.72 OHMM	@ 166. DEGF	@	
TIME Circulation Ended	07:0 4 AUG			
TIME Logger on Bottom	19:34 4 AUG			
Max. Rec. Temp.	166 DEGF			
Equip. | Location	8604	SACRAMENTO		
Recorded By	DAVID ROTHERS			
Witnessed By	FRANK MARTIN JR.			

The well name, location and borehole reference data were furnished by the customer.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Schlumberger

SIMULTANEOUS

COMPENSATED NEUTRON-FORMATION DENSITY

COUNTY MORROW	COMPANY	A O AND GA	
FIELD WILDCAT	WELL	"A O ANNA" #1	
LOCATION 1755'S AND 1414'W	FIELD	WILDCA	
WELL "ARCO HANNA" #	COUNTY	MORROW	STATE OREGON
COMPANY			

LOCATION				Other Services:
1755'S AND 1414 W FROM NE CORNER				DIL-BHC-GR
API SERIAL NO 049-00002	SECT.	TWP. 2S	RANGE 27E	

Permanent Datum	GL	Ele	3199.5 F	Elev.:	K B 3225.5 F
Log Measured From	KB	2 F	above Perm. Datum		D F 3224.5 F
Drilling Measured From	KB				G L 3199.5 F

Date	24-AUG-88			
Run No	2			
Depth Driller	9211.0 F			
Depth Logger (Schl.)	9213.0 F			
Btm. Log Interval	9210.0 F			
Top Log Interval	7276.0 F			
Casing-Driller	13 3/8"	@ 7276.0 F	@	@
Casing-Logger	7276.0 F			
Bit Size	12 1/4"			
Type Fluid in Hole	POLYACRYLAMIDE			
Dens. | Visc.	8.70 LB/G	42 S		
pH | Fld. Loss	10.7	6.2 3		
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	2.190 OHMM	@ 8.0 DEGF	@	
Rmf @ Meas. Temp.	2.610 OHMM	@ 0 DEGF	@	
Rmc @ Meas. Temp.	1.930 OHMM	@ 0 DEGF	@	
Source: Rmf | Rmc	MEASURED	MEASURED		
Rm @ BHT	1.054 OHMM	@ 180 DEGF	@	
TIME Circulation Ended	08:50 8-24			
TIME Logger on Bottom	18:26 8-24			
Max. Rec. Temp.	180. DEGF			
Equip. | Location	8504	SACRAMENTO		
Recorded By	SCOTT PILCH			
Witnessed By	MARC KAMERLING			

The well name, location and borehole reference data were furnished by the customer.

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Run No.	1				
Service Order No.	527488				
Drilling Fluid Level	0.0 F				
Salinity	50.0 PPM				
Rmf @ BHT	1.854 OHMM	@	166. DEGF		@
Rmc @ BHT	1.384 OHMM	@	166. DEGF		@
Logging Speed	1800.0 F/HR				
EQUIPMENT DATA					
Tool Number 1	PGS 86				
Tool Number 2	CNC 2359				
Tool Number 3	SGC 581				
Tool Number 4	NLM 418				
Tool Number 5					
Tool Number 6					
Tool Number 7					
Tool Number 8					
Tool Number 9					
Tool Number 10					
Tool Number 11					
Tool Number 12					

REMARKS:

Run No.	2				
Service Order No.	527575				
Drilling Fluid Level	0.0 F				
Salinity	300.0 PPM				
Rmf @ BHT	[illegible]7 OHMM	@	18C DEGF		@
Rmc @ BHT	826 OHMM	@	18C DEGF		@
Logging Speed	180C C F/HR				
EQUIPMENT DATA					
Tool Number 1	PGS-HB 86				
Tool Number 2	CNC-A 2359				
Tool Number 3	SGC-JC 581				
Tool Number 4	PGC-JA 433				
Tool Number 5	NLM-BC 418				
Tool Number 6					
Tool Number 7					
Tool Number 8					
Tool Number 9					
Tool Number 10					
Tool Number 11					
Tool Number 12					

REMARKS:

MAXIMUM RECORDING THERMOMETERS: T1=180, T2=180

CNL BOWSPRING USED

```
CEMENT VOLUME = 4068.91 F3
HOLE VOLUME =   9601.22 F3
FROM  7270.5 TO  1598.0 FEET
```

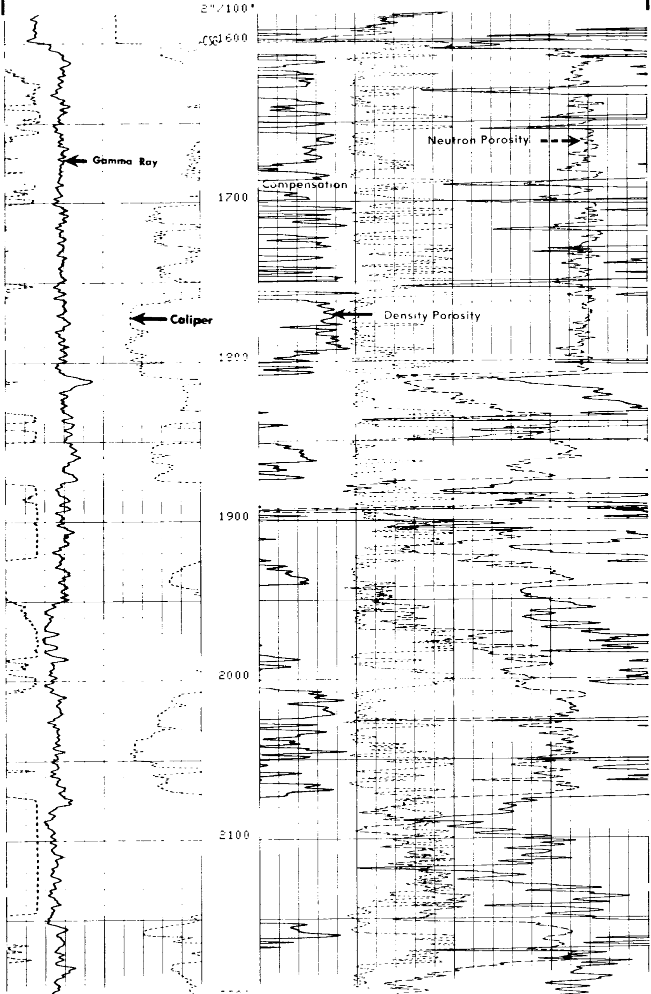
```
                                   DRHO(G/C3)
                          -.2500              .25000
          CALI(IN  )                     NPOR
10.000            20.000  .60000                                  0.0
```

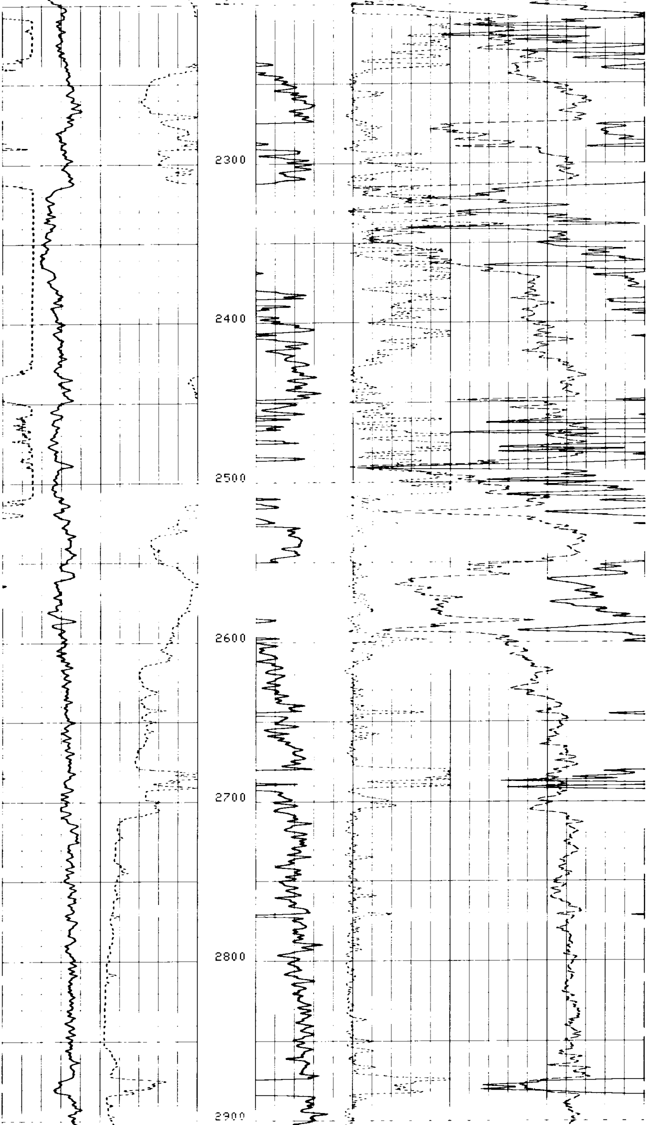
GR (GAPI)
0.0 150.00
.60000 0.0

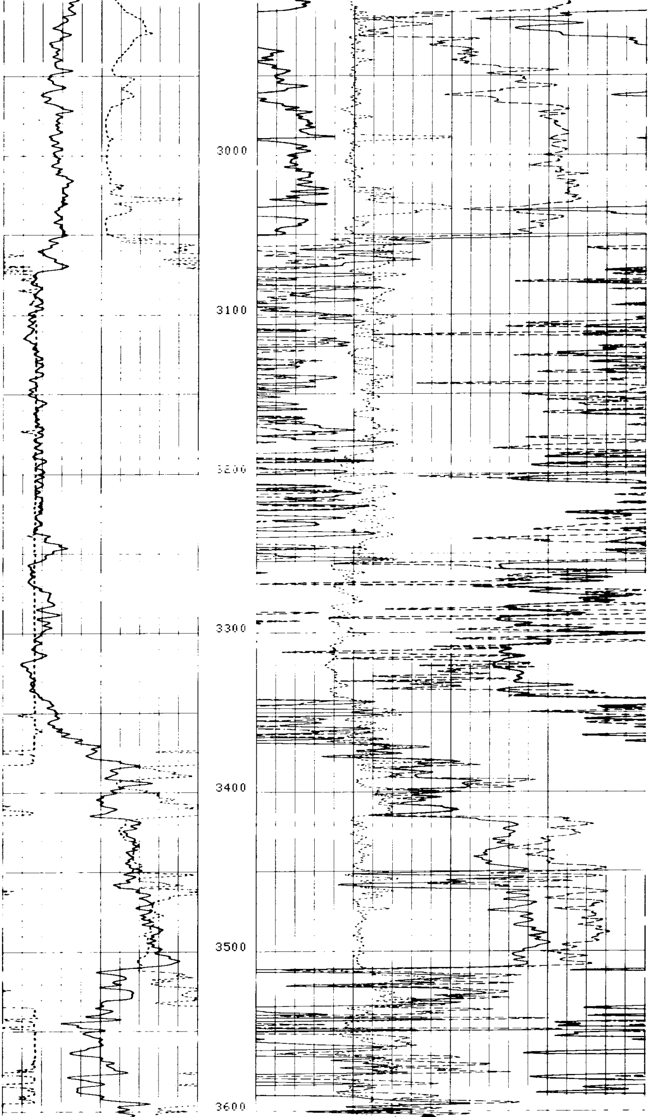
CP 30.4 FILE 3 06-NOV-88 10:37

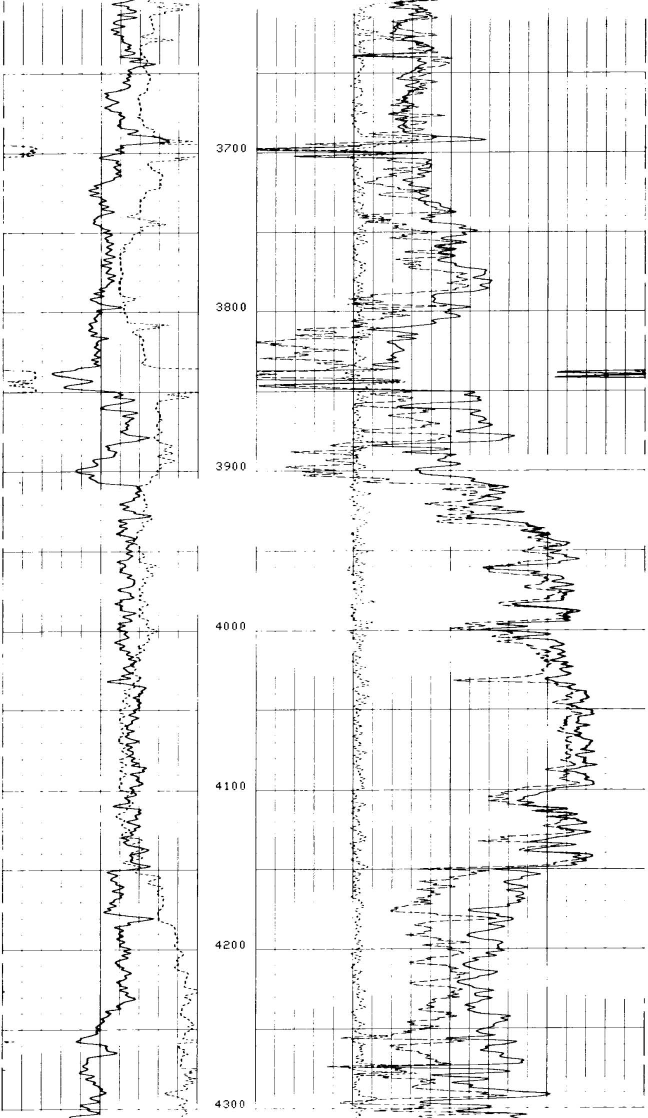
INPUT FILES
3

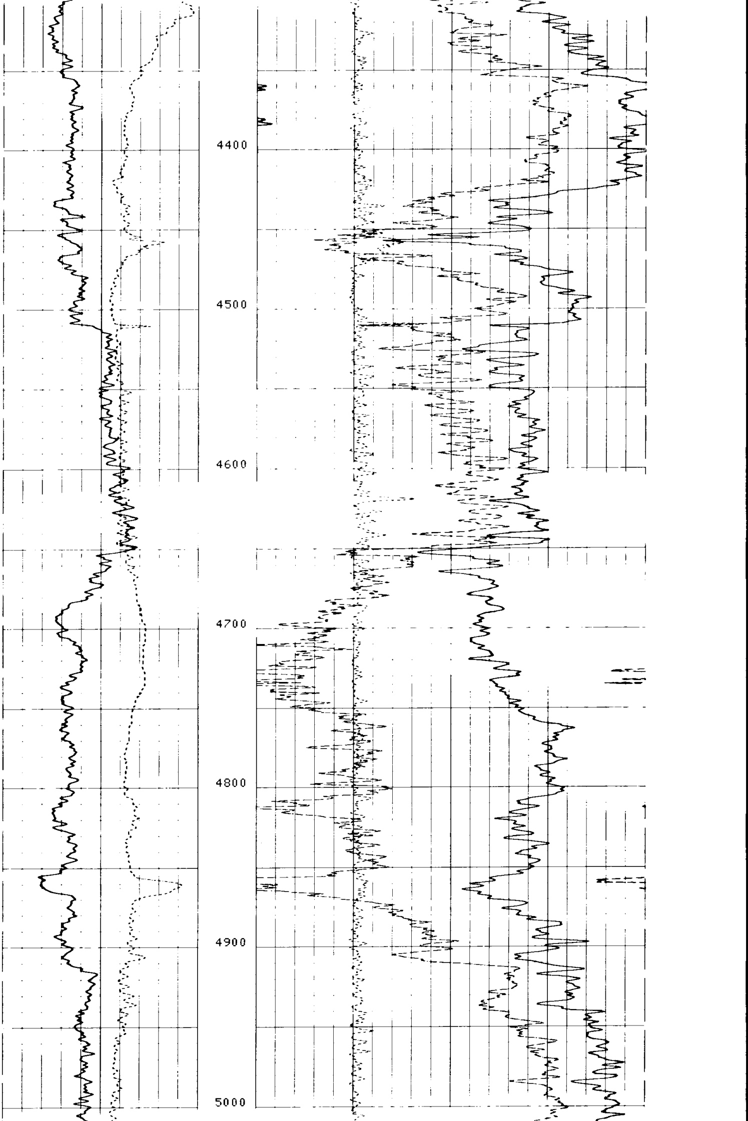
DATA ACQUIRED
04-AUG-88 22:28

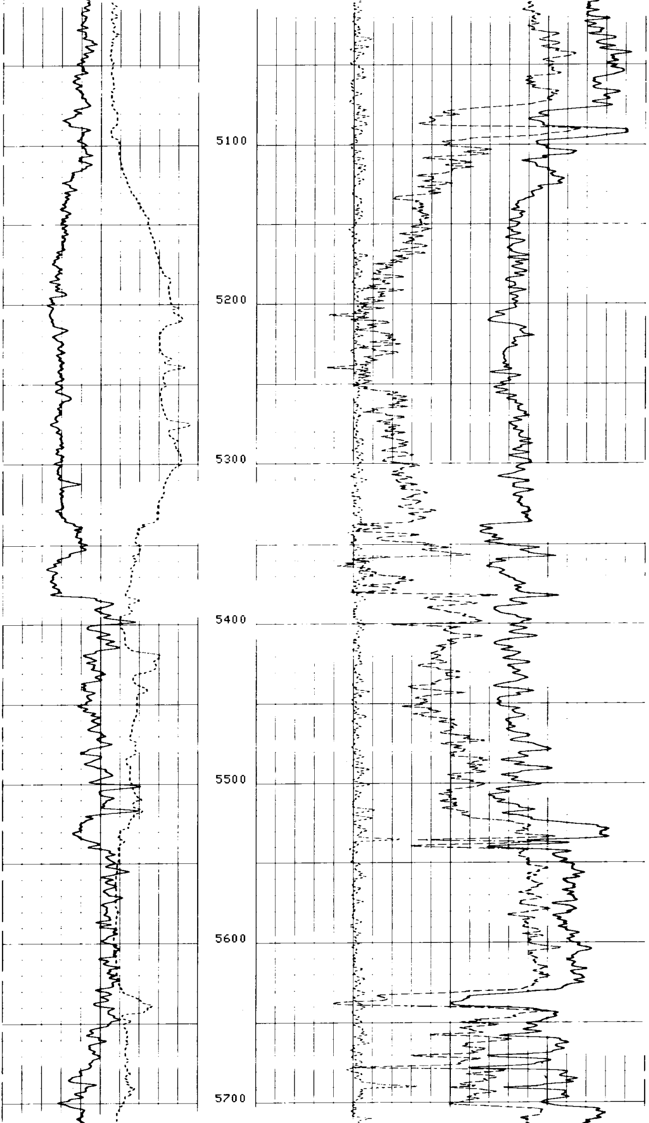


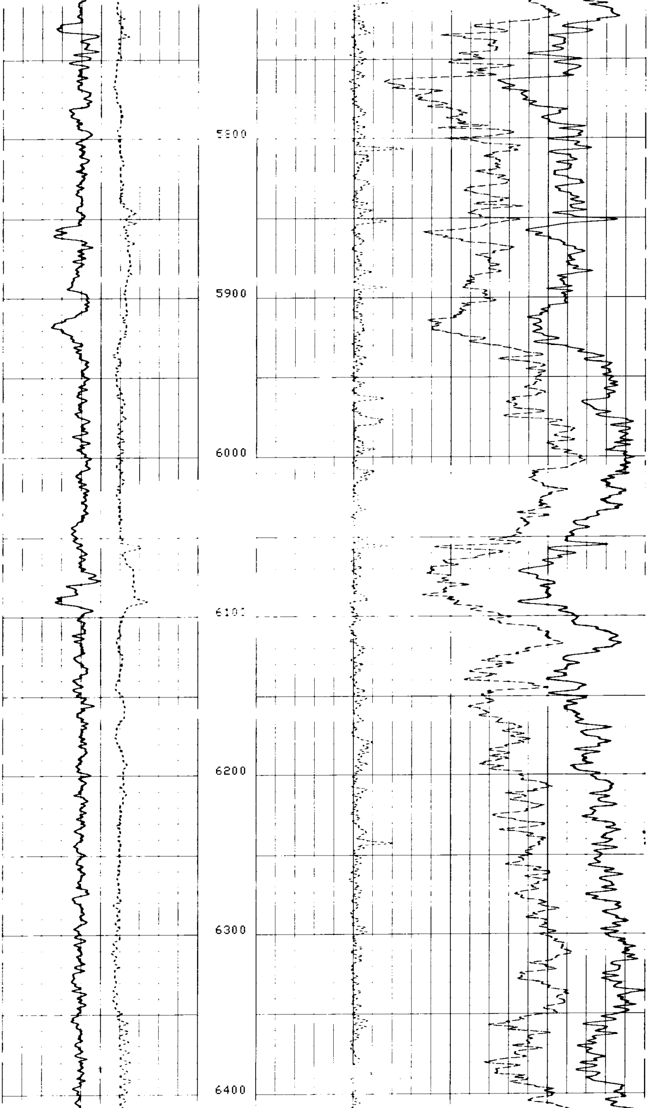


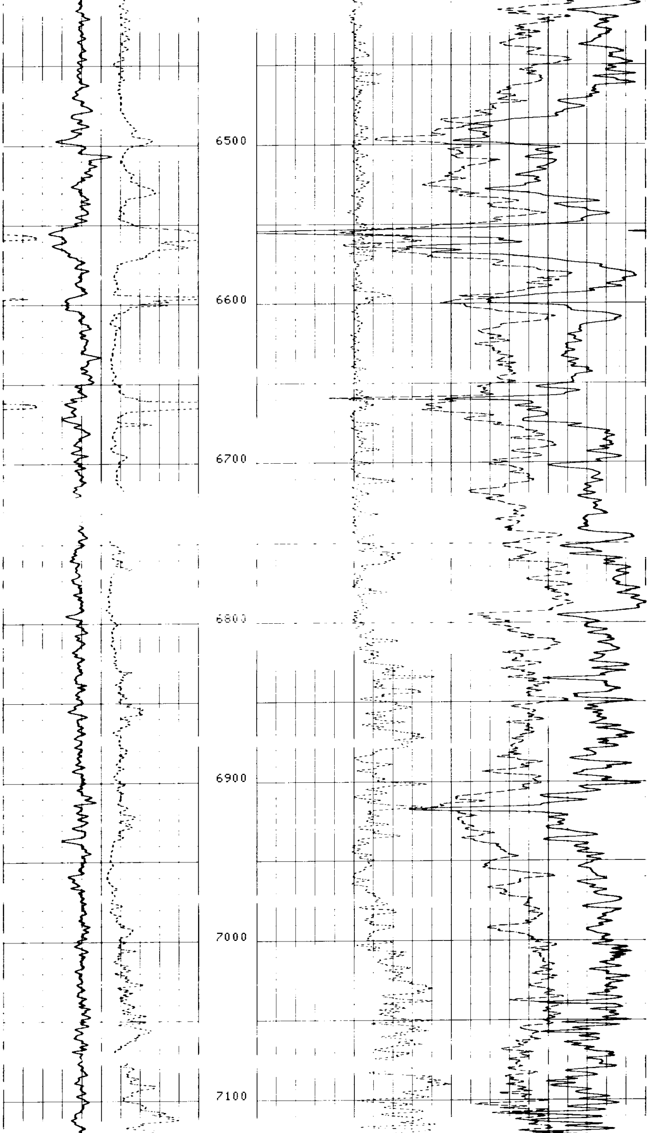


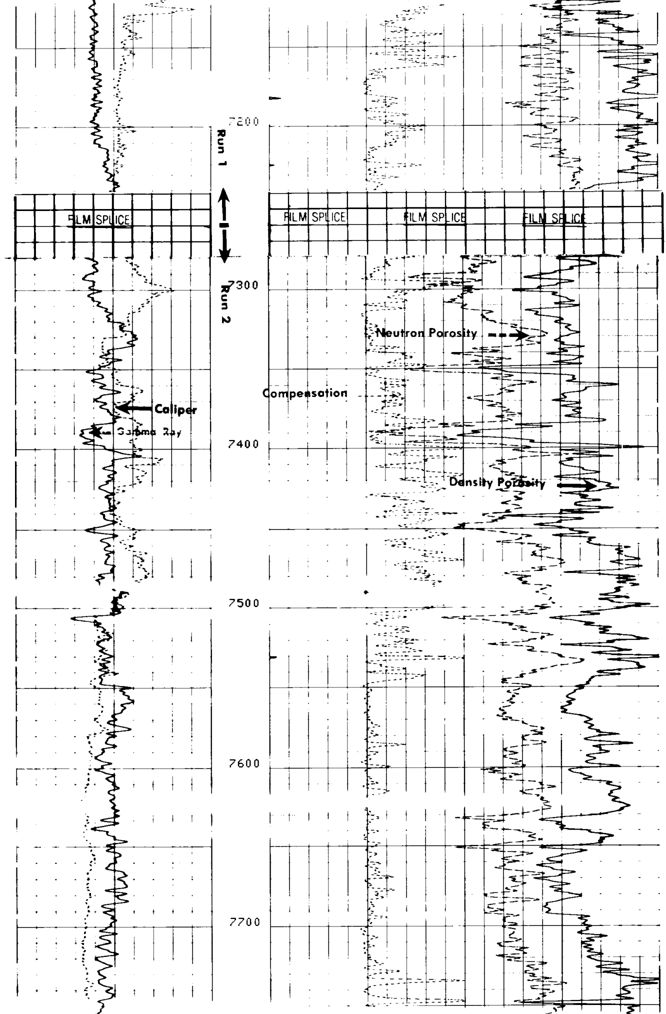


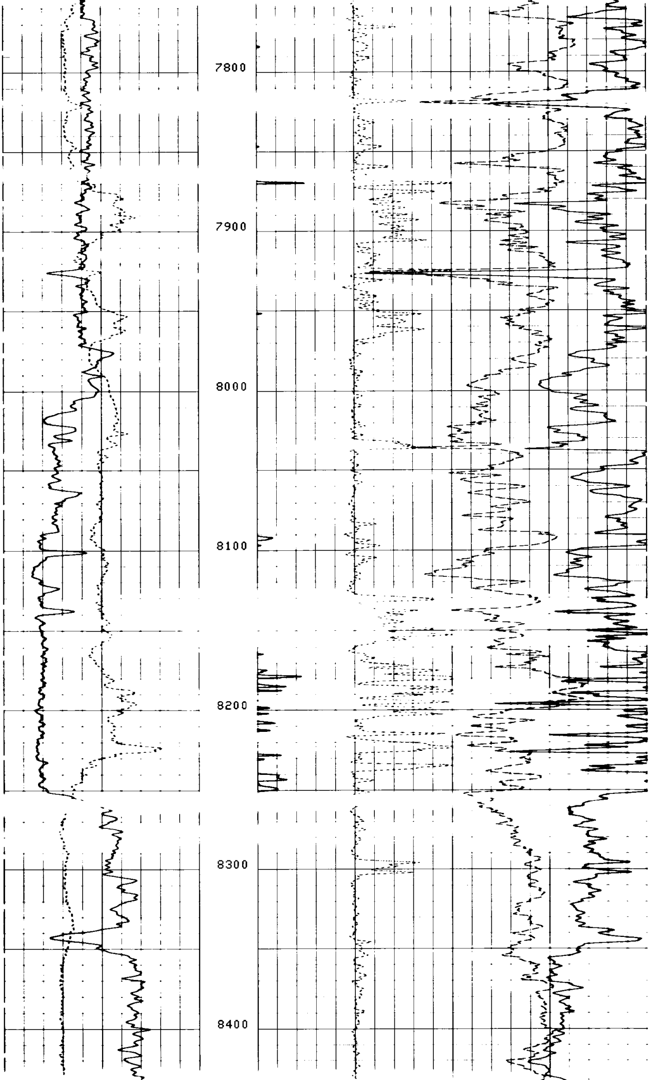


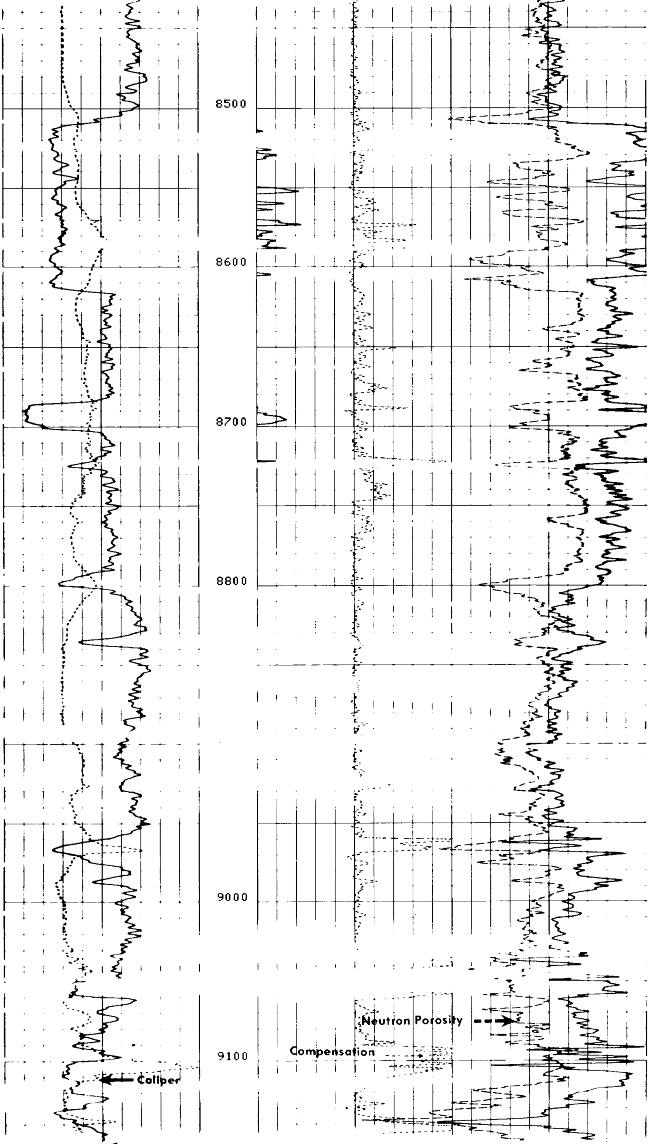


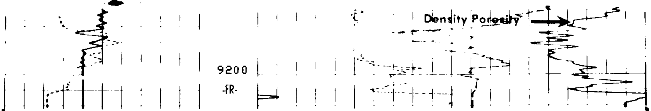












2"/100'

CP 30.4　　FILE [illegible] 24 - [illegible] :36

DRHO(G/C3)
-.2500　.25000

CALI(IN)
10.000　20.000

NPOR
.60000　0.0

GR (GAPI)
0.0　150.00

DPHI
.60000　0.0

SENSOR MEASURE POINT TO TOOL ZERO

[illegible]			GR	26.6	FEET
FFDC	2.7	FEET	[illegible]		
CALI	2.7	FEET	NFDC	2.7	FEET
TNRA	18.6	FEET	TENS	-.3	FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
BS	12.2500	IN	BHS	OPEN	
HC	CALI		FPHI	SPHI	
BHFL	WATE		MATR	SAND	
ANGL	0.0	DEG	GGRD	.0100000	DF/F
SOCN	.500000	IN	FSAL	-50000.0	PPM
SDAT	SOCN		MCOR	NATU	
MWCO	NO		PTCO	NO	
BSCO	NO		FSCO	NO	
SOCO	NO		MCCO	NO	
NPDC	0		HSCO	YES	
MDEN	2.65000	G/C3	FD	1.00000	G/C3
BHF	WATE		FDCC	ALLO	
WMUD	8.70000	LB/G			