COUNTY MC MULLEN
FIELD WILDCAT
LOCATION
WELL #2-A NUECES MINERALS
COMPANY CITIES SERVICE CO.

Schlumberger

DUAL INDUCTION-SFL-SONIC

WITH LINEAR CORRELATION LOG

COMPANY CITIES SERVICE COMPANY

WELL #2-A NUECES MINERALS

FIELD WILDCAT

COUNTY MC MULLEN **STATE** TEXAS

LOCATION 1610'FSEL & 1610'FSWL B.S.&F.
SUR.#169, A-133

Other Services:
FDC/CNL/GR,
HDT

API SERIAL NO	SEC	TWP	RANGE

Permanent Datum: GROUND LEVEL ; Elev.: 325
Log Measured From K.B. , 23 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 348
D.F. 347
G.L. 325

Date	10-5-80	10-30-80	11-5-80	
Run No.	ONE	TWO	THREE	
Depth—Driller	15413	15694	16810	
Depth—Logger	15432	15690	16840	
Btm. Log Interval	15426	15684	16843	
Top Log Interval	11051	15434	15433	
Casing—Driller	9 5/8@ 11061	7 @15434	7 @15434	@
Casing—Logger	11051	15434	15433	
Bit Size	8 1/2	5 3/4	5 3/4	
Type Fluid in Hole	LIG.-LIGNO.	LIGNO.	LIGNO.	
Dens. | Visc.	14.4 | 47	15.2 | 44	16.2 | 52	|
pH | Fluid Loss	10.5 | 5.6 ml	10 | 4.4 ml	11 | 6.4 ml	| ml
Source of Sample	FLOWLINE	CIRC. PIT	PIT	
Rm @ Meas. Temp.	0.74 @ 75 °F	0.371 @ 85 °F	3.0 @ 100 °F	@ °F
Rmf @ Meas. Temp.	0.39 @ 75 °F	0.387 @ 60 °F	2.5 @ 60 °F	@ °F
Rmc @ Meas. Temp.	1.47 @ 75 °F	1.2 @ 85 °F	4.1 @ 75 °F	@ °F
Source: Rmf | Rmc	MEAS | CHART	MEAS | CHART	MEAS | CHART	|
Rm @ BHT	0.16 @ 341 °F	0.085 @ 368 °F	0.77 @ 386 °F	@ °F
TIME Circulation Stopped	2200 (10-4)	1600 (10-30)	0000 (11-5)	
TIME Logger on Bottom	1000 (10-5)	0130 (10-31)	0630 (11-5)	
Max. Rec. Temp.	341 °F	368 °F	386 °F	°F
Equip. | Location	8160 | PHARR	8103 | PHARR	8099 | PHARR	|
Recorded By	KOESTER*	WHITAKER	HERBST	
Witnessed By	MR. BERG	MR. BERG**	MR. TRUSS***	

FOLD HERE

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

RUN NO.	ONE	TWO	THREE	
Service Order No.	156483	135860	156248	
Fluid Level	FULL	FULL	--	
Salinity, PPM CL.	2300	2500	--	

EQUIPMENT DATA

Ind. Panel No.	274	281	420	
Mem. Panel No.	--	CPU-286	CSU	
Ind. Cart. No.	592	262	262	
Ind. Sonde No.	622	254	254	
Sonic Panel No.	538	440	647	
Oscil Panel No.	129	396	396	
Sonic Cart. No.	516	516	516	
Sonic Sonde No.	2119	1483	1483	
G. R. Cart. No.	3001	1050	1050	
G. R. Panel No.	615	316	333	
Caliper No.	--	--	--	
TTR No.	--	MTU-1927	--	
DRE No.	--	--	--	

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole
TENS.	14340	13000-3000	14000-4000
RESIS.	RUN 1-3	0-20	0-100
SP	RUN 1-3	10	15
COND.	RUN 1-3	1000-0	500-0
SONIC	RUN 1-3	140-40	80-40

REMARKS:

ON RUN ONE: *MC GOVERN
ON RUN TWO: **MR. WILLIAMS. LOG
WAS TAPED. $F = 1/0^2$.

SAMPLE	RM	@	MEAS. TEMP.
2	.644	@	65
3	.763	@	65
4	.729	@	65

CPW No.	--	--	--	
Centralizer Device	--	S.O.1½	--	
CALIBRATION DATA				
Surf. ILD S.E.	--	-1.9	--	
Surf. ILM S.E.	--	--	--	
ILD S.E. Corrected	--	-1.9	8.0	
ILM S.E. Corrected	--	--	--	
Depth ILD & ILM Zero Set	--	SURFACE	--	
G. R. BKGD CPS.	36	56	--	
G. R. Source CPS.	204	219	--	
G. R. Cal. Sens.	--	--	--	
G. R. T. C. CAL.	--	--	--	
LOGGING DATA				
G. R. Sens.-Log	--	100	--	
G. R. T. C.-Log	--	--	--	
Speed-F.P.M.	--	60	--	

SAMPLE	RMF	@	MEAS.TEMP.
2	.327	@	65
3	.600	@	65
4	.339	@	65

ON RUN THREE:***MR. WILLIAMS
SLT FAILED 100' FROM CASING. IRT
FAILED ON REPEAT. NO RWA WAS
PRESENTED ON THIS RUN.
ALTERNATE PRESENTATION OF SONIC
LOG PRESENTED AT BOTTOM. RUN
ONE IS DIL/SONIC, RUNS TWO AND
THREE ARE ISF/SONIC. RUN TWO IS
COMPLETELY OVERLAPPED BY RUN
THREE.

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 willful 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 our General Terms and Conditions as set out in our current Price Schedule.

SPONTANEOUS POTENTIAL

– 10 + MILLIVOLTS

GAMMA RAY (API UNITS)

0 100

DEPTH

9

RESISTIVITY OHMS. M^2/M

DEEP INDUCTION

R_{ILD}

0 20

0 200

SPHERICALLY FOCUSED LOG

R_{SFL}

0 20

0 200

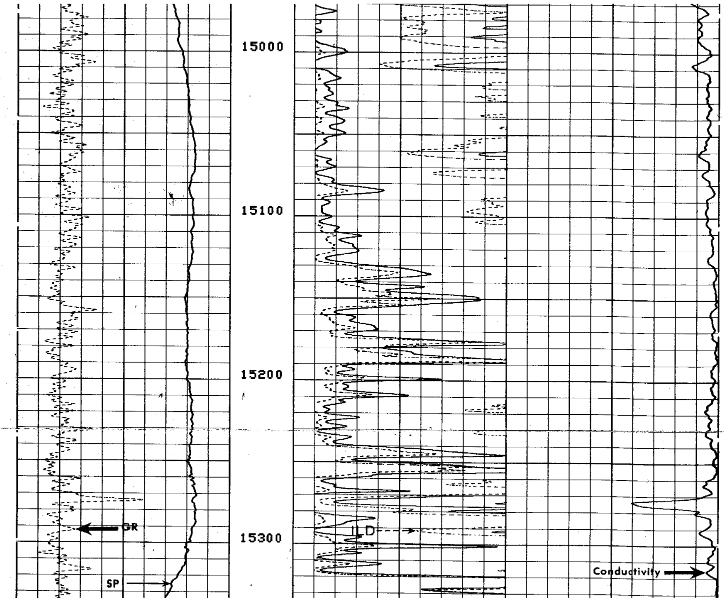
AMP. SPHERICALLY FOCUSED LOG

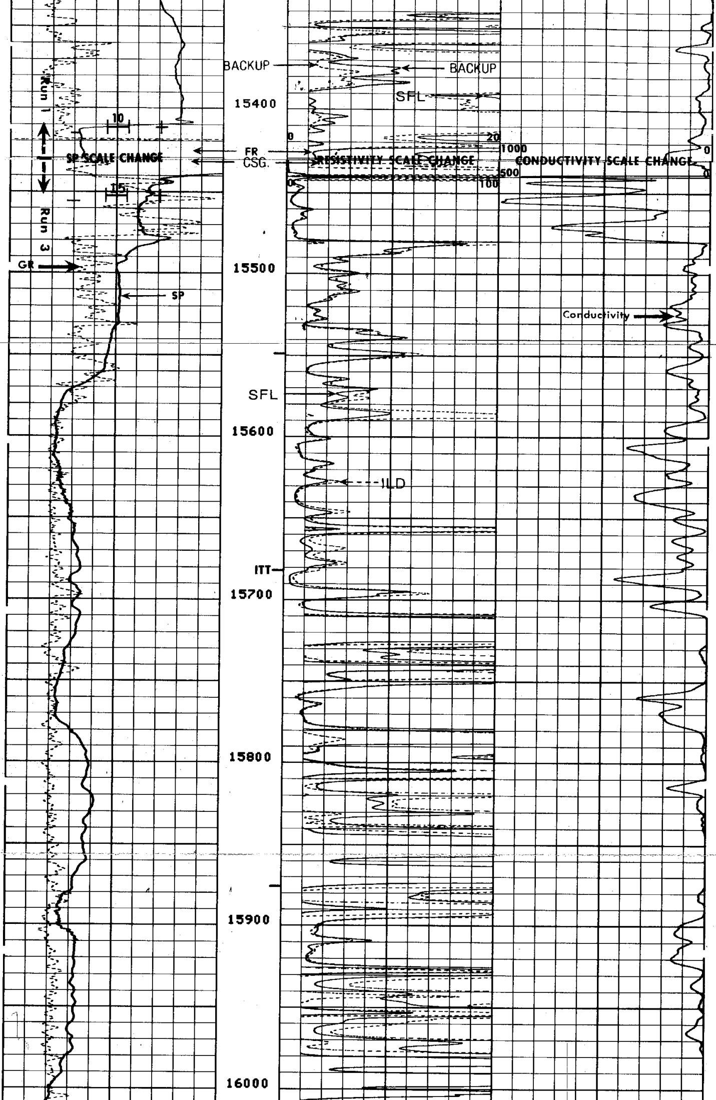
0 4

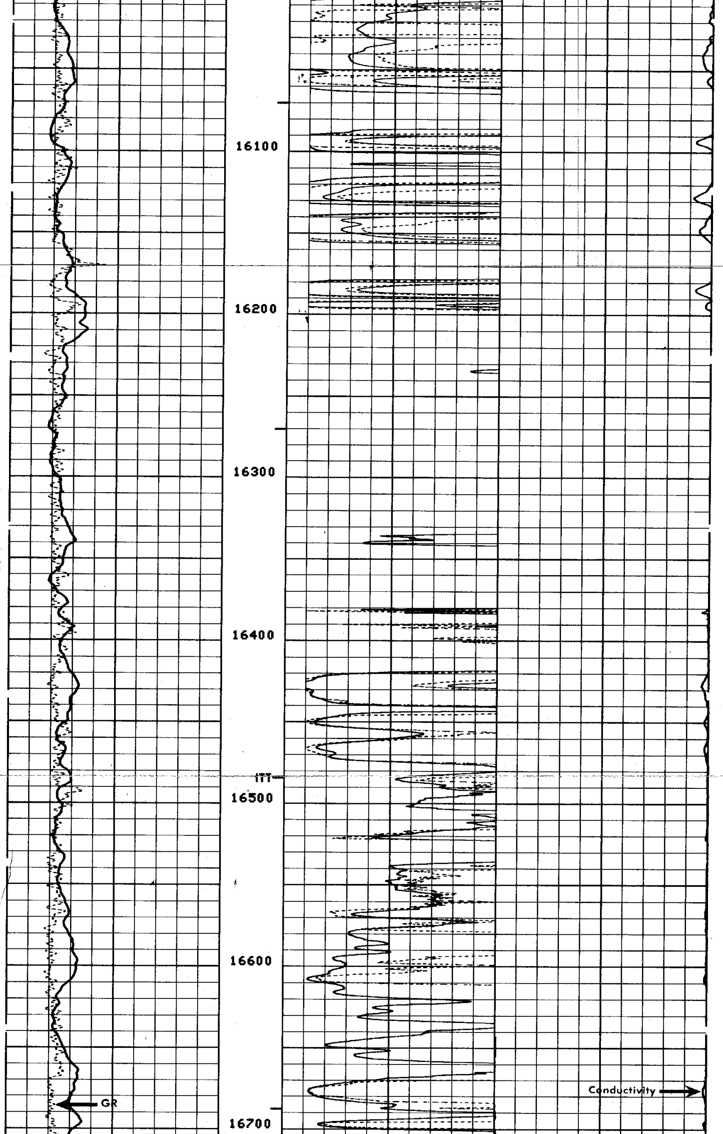
CONDUCTIVITY MILLIMHOS/M

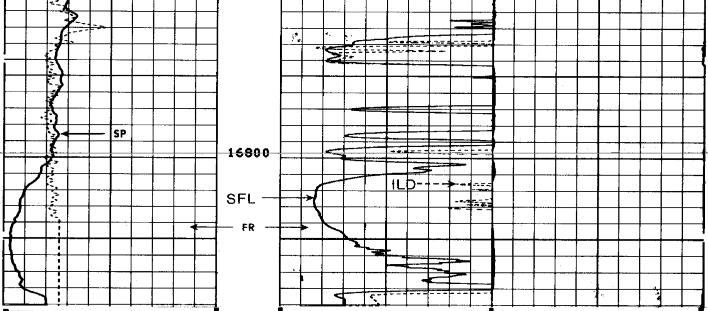
DEEP INDUCTION

1000 0









GAMMA RAY API UNITS

0 100

RESISTIVITY OHMS. M^2/M

DEEP INDUCTION

R_{ILD}

0 100

0 1000

SPHERICALLY FOCUSED

R_{SFL}

0 100

0 1000

AMP. SPHERICALLY FOCUSED LOG

0 10

6

SPONTANEOUS-POTENTIAL

— |15| + MILLIVOLTS

DEPTH

CONDUCTIVITY MILLIMOS/M = $\frac{1000}{\text{OHMS } M^2/M}$

DEEP INDUCTION

500 0

COMPANY CITIES SERVICE COMPANY

WELL #2-A NUECES MINERALS

FIELD WILDCAT

COUNTY MC MULLEN **STATE** TEXAS

SCHL. FR 16843

SCHL. TD 16840

DRLR. TD 16810

Elev: KB 348

DF 347

GL 325

DETAIL LOG

5" = 100'

SPONTANEOUS-POTENTIAL

— |10| + MILLIVOLTS

HYDROCARBON INDICATOR

OHMS. M^2/M

R_{WA}

0 0.5

9

RESISTIVITY OHMS. M^2/M

DEEP INDUCTION

0.2 1.0 10 20

MEDIUM INDUCTION

0.2 1.0 10 20

SPHERICALLY FOCUSED LOG

0.2 1.0 10 20

INTERVAL TRANSIT TIME

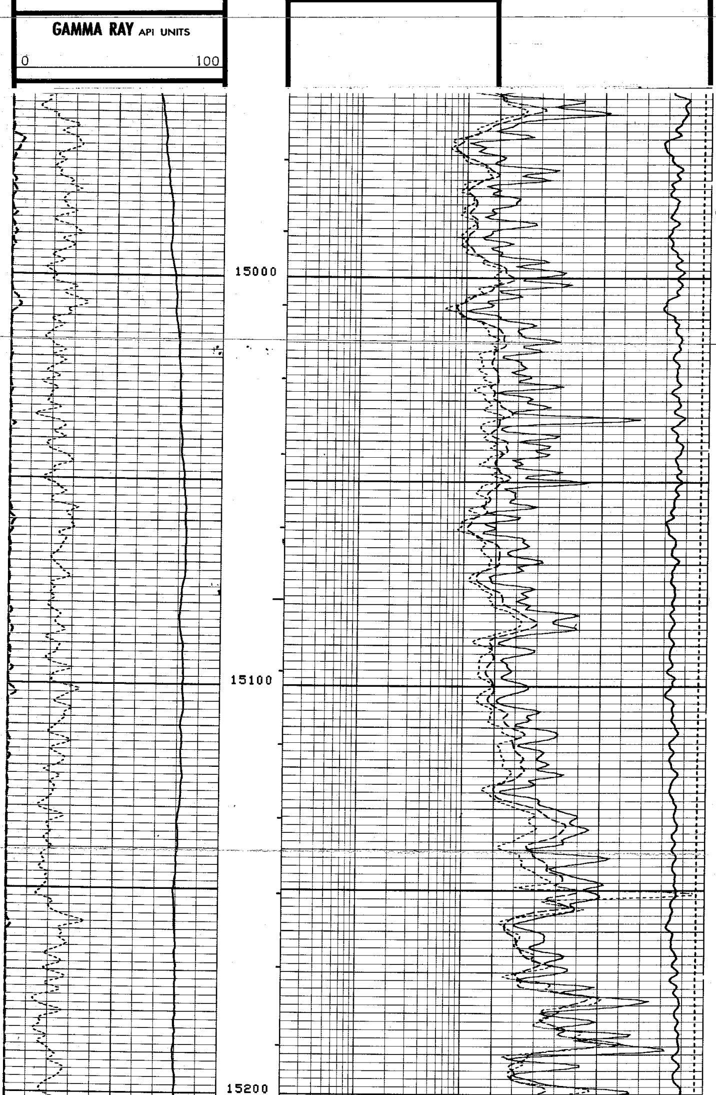
MICROSECONDS PER FOOT

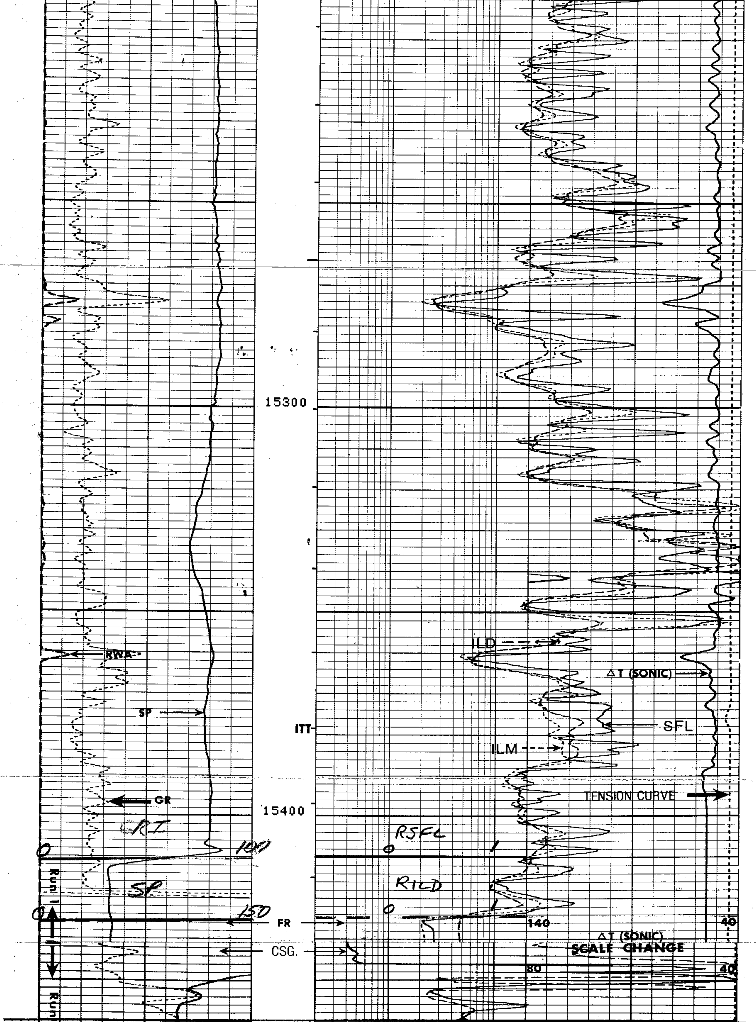
ΔT

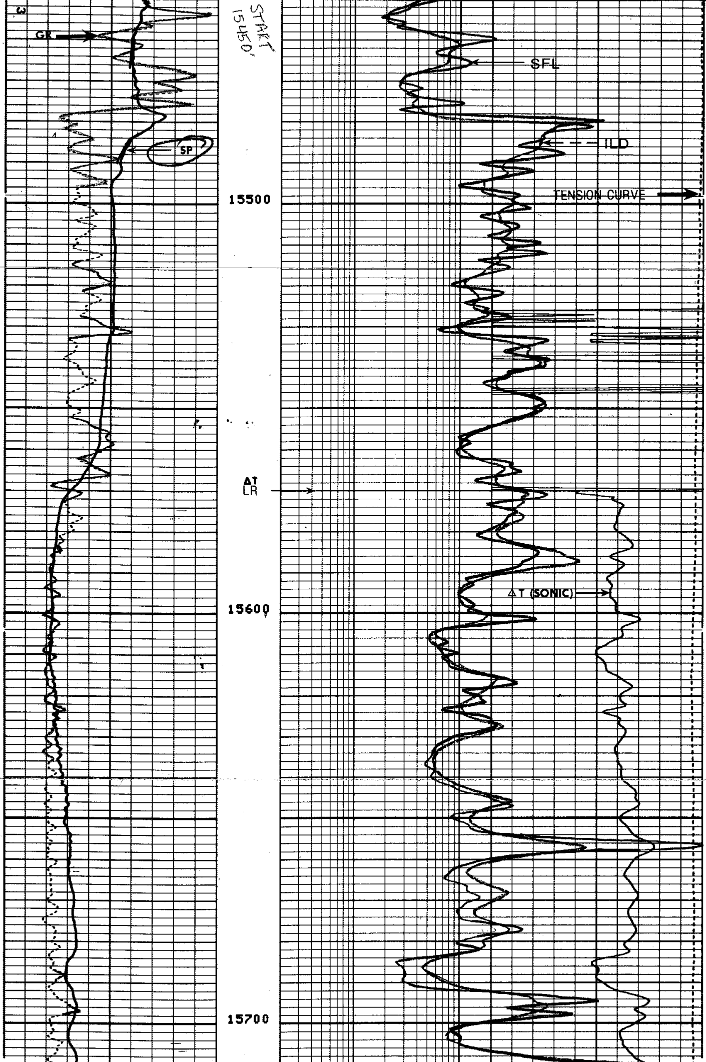
140 40

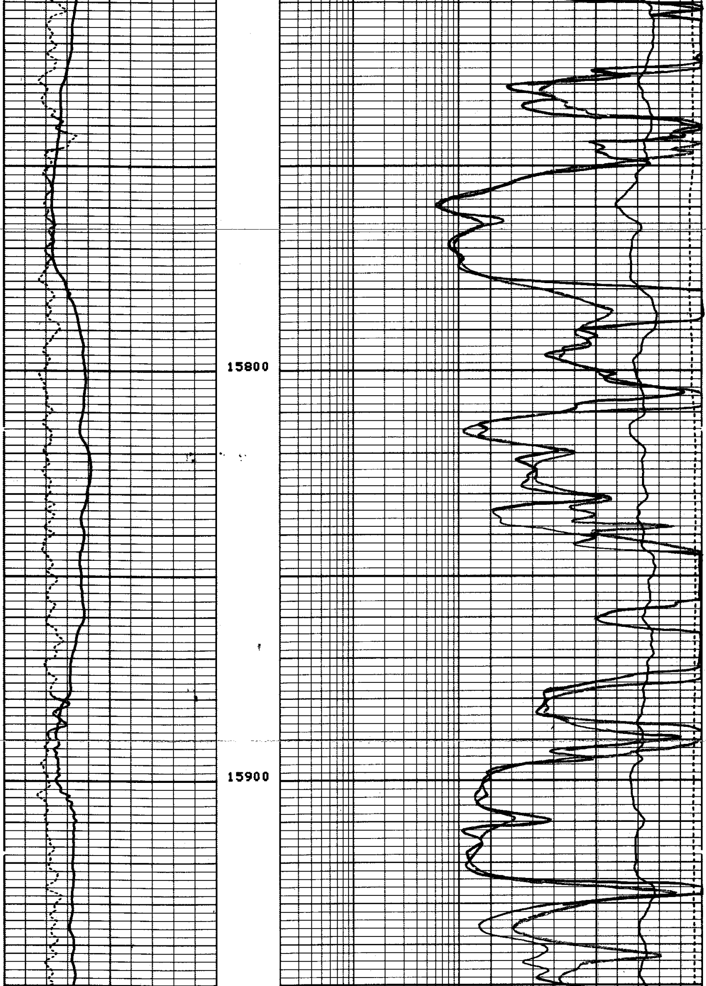
TENSION (LBS.)

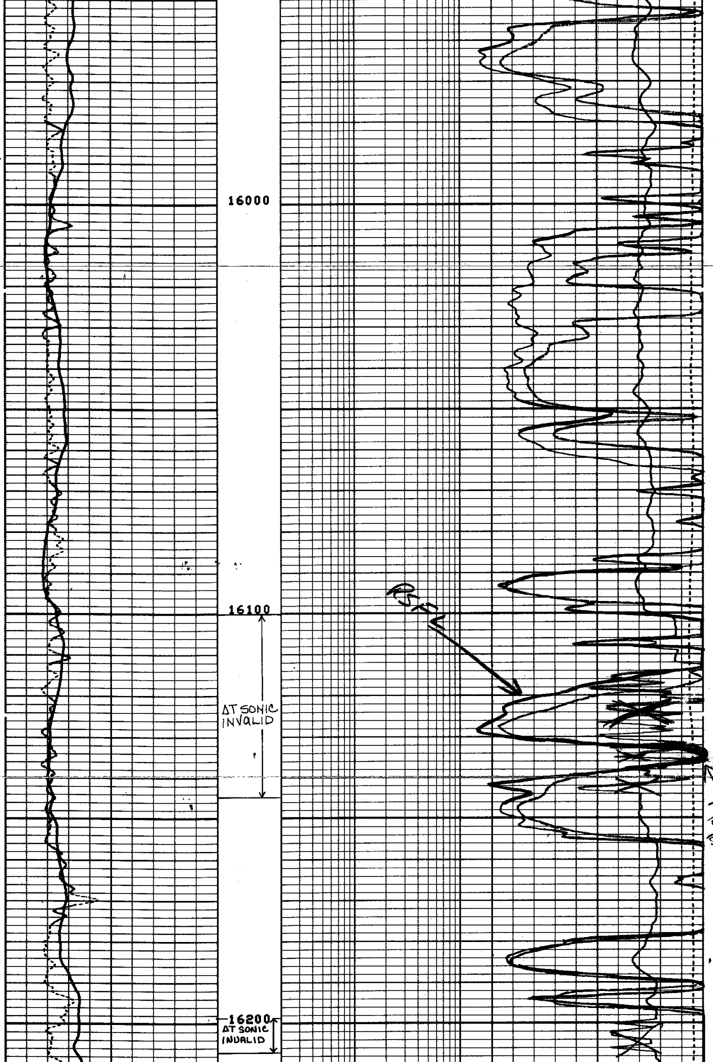
13000 3000

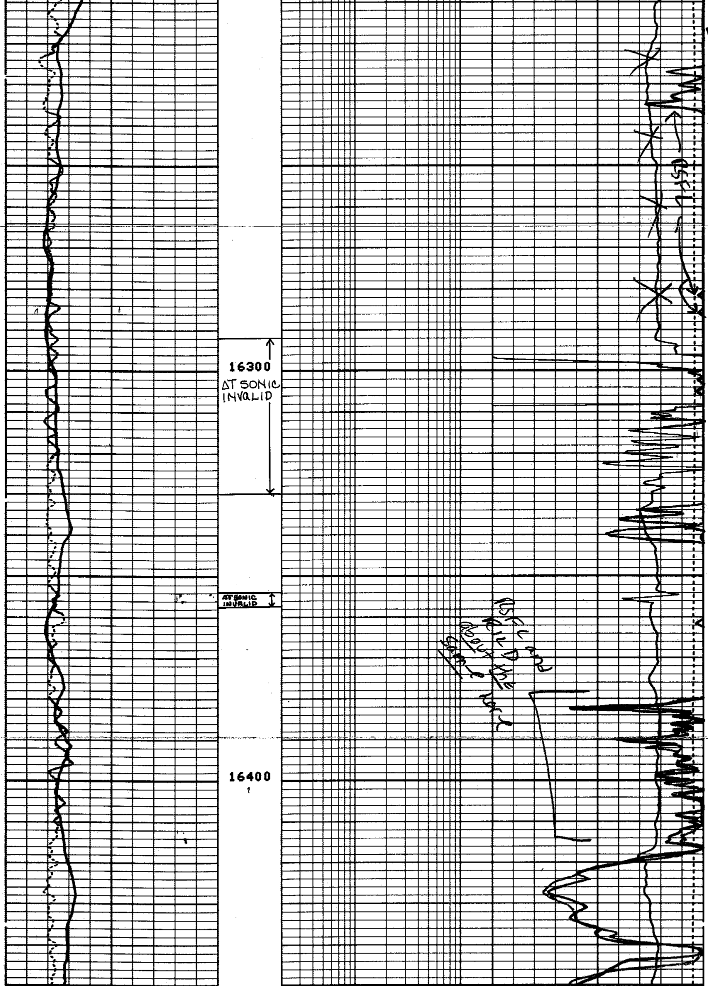






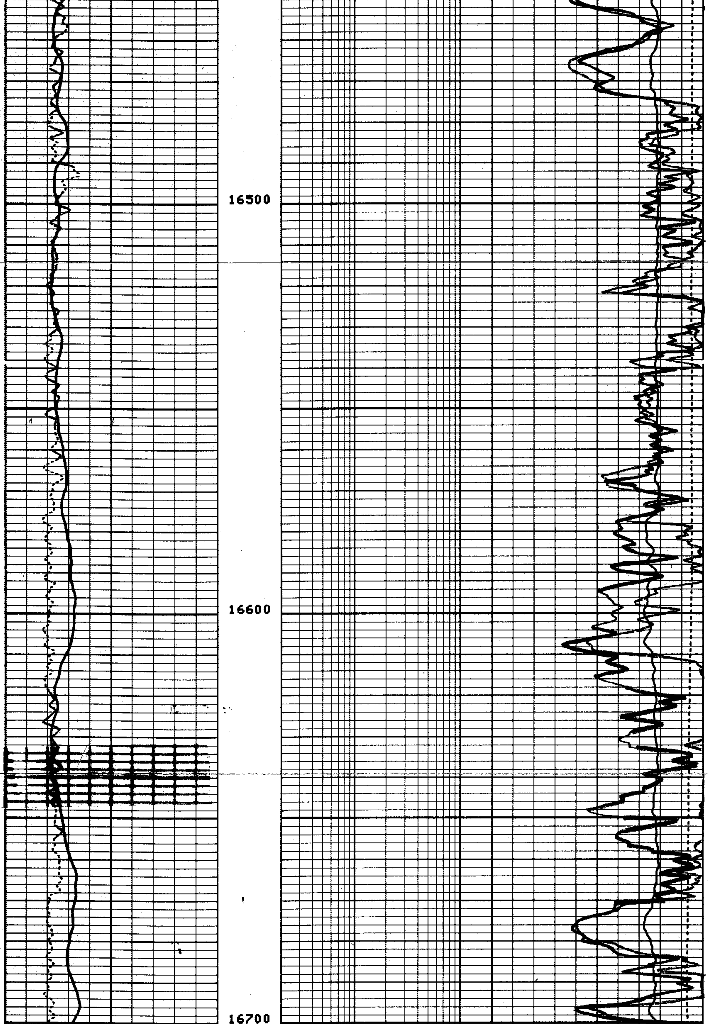


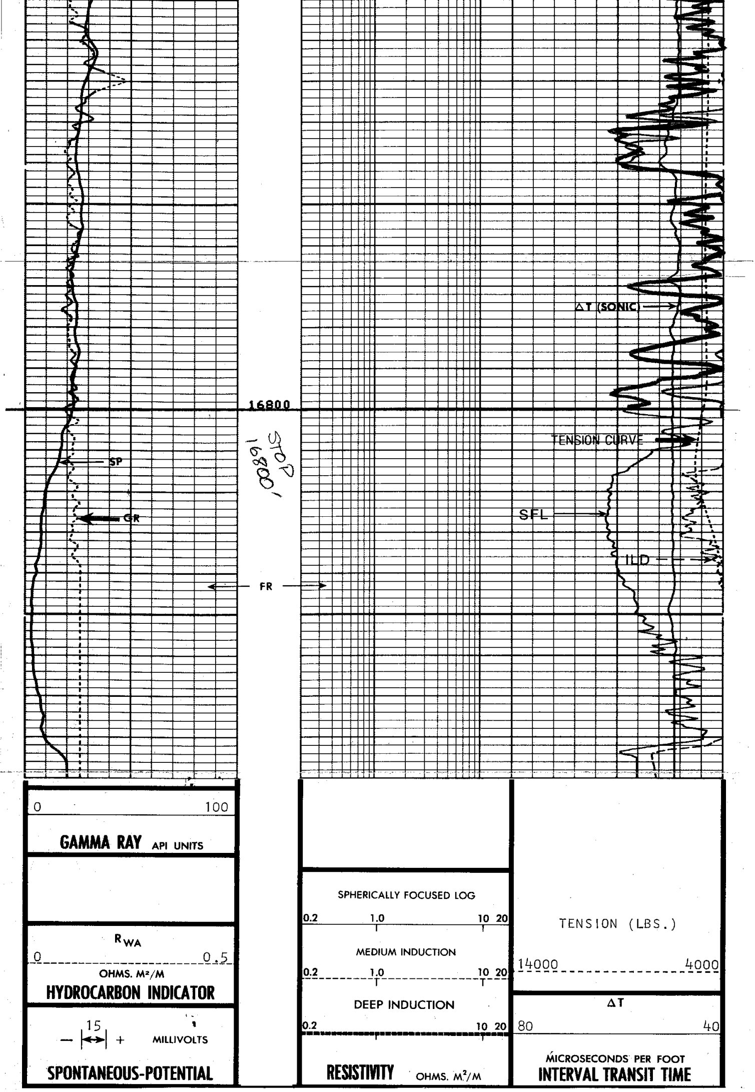




When RSFL or RILD goes to maximum, follow along top of TRACK - Neither Log should have any missing data codes along entire section

RSFL and RILD about the same track





DETAIL LOG

5" = 100'

INTERVAL TRANSIT TIME MICROSECONDS PER FOOT T___R₁___R₂

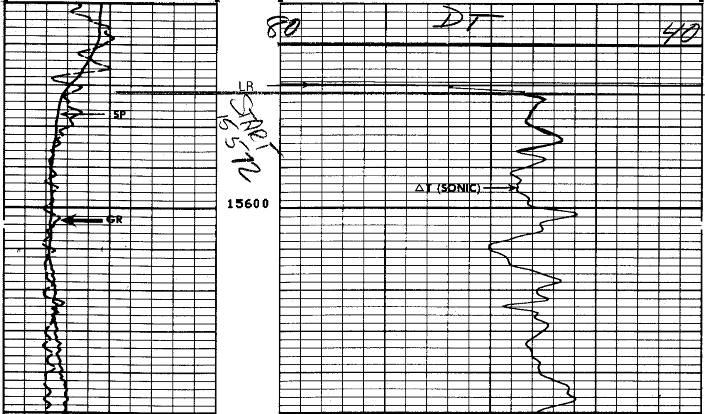
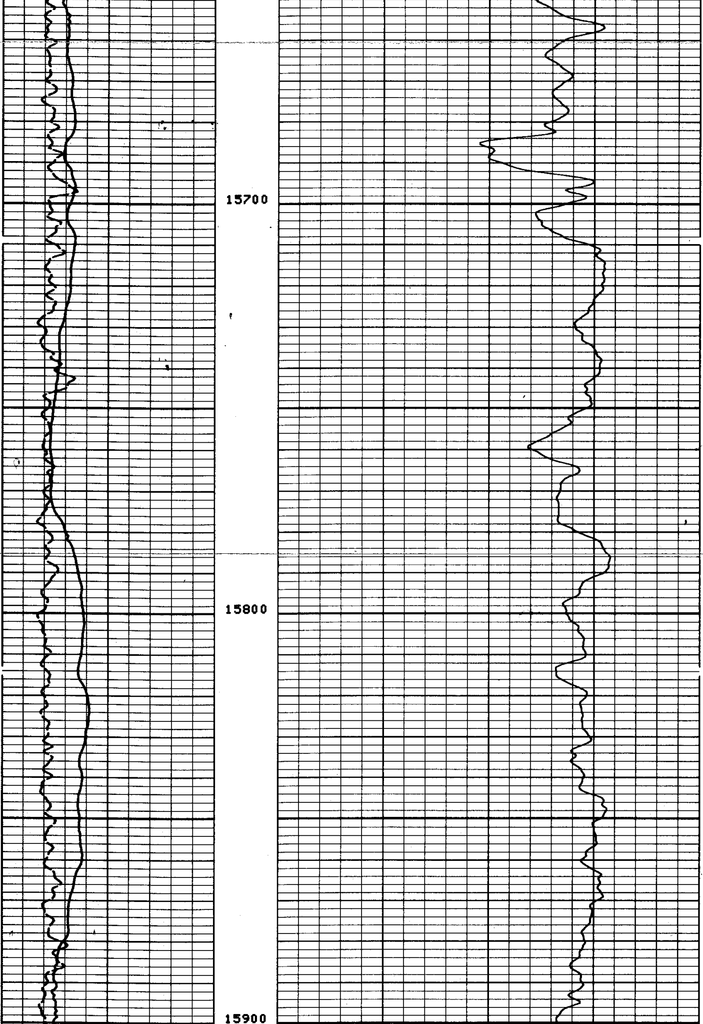
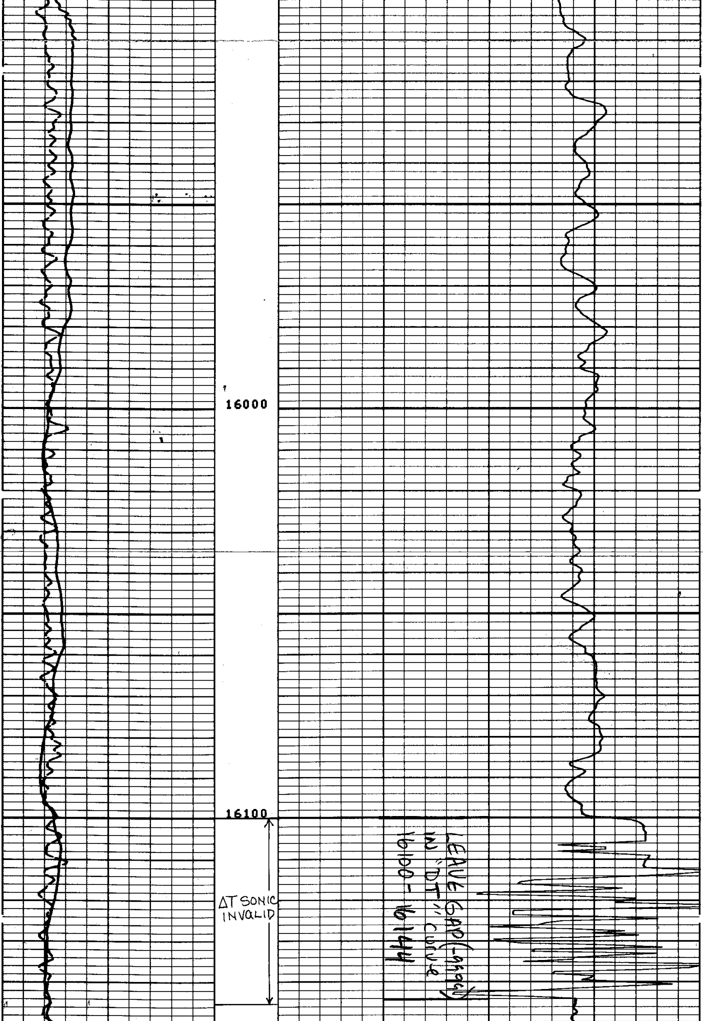
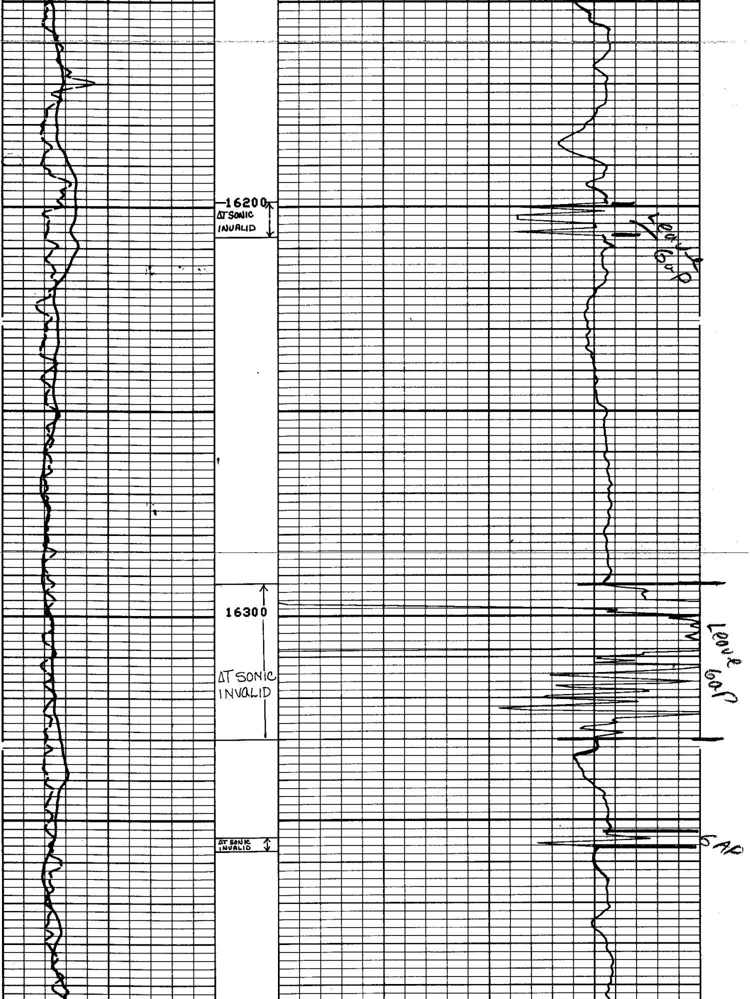
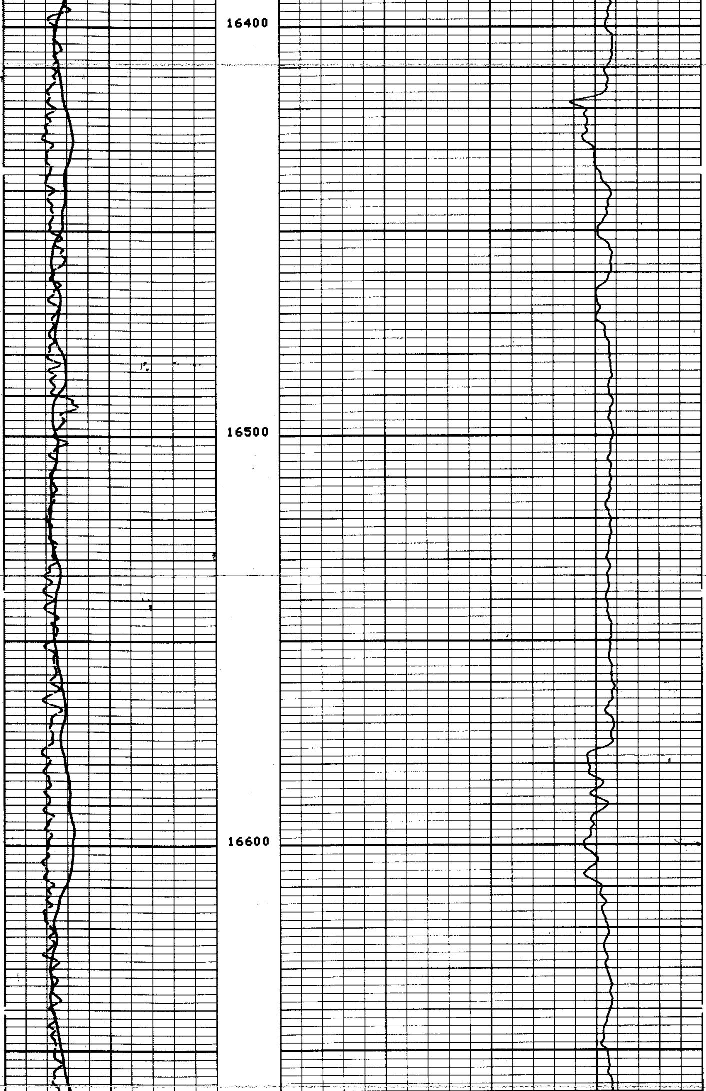
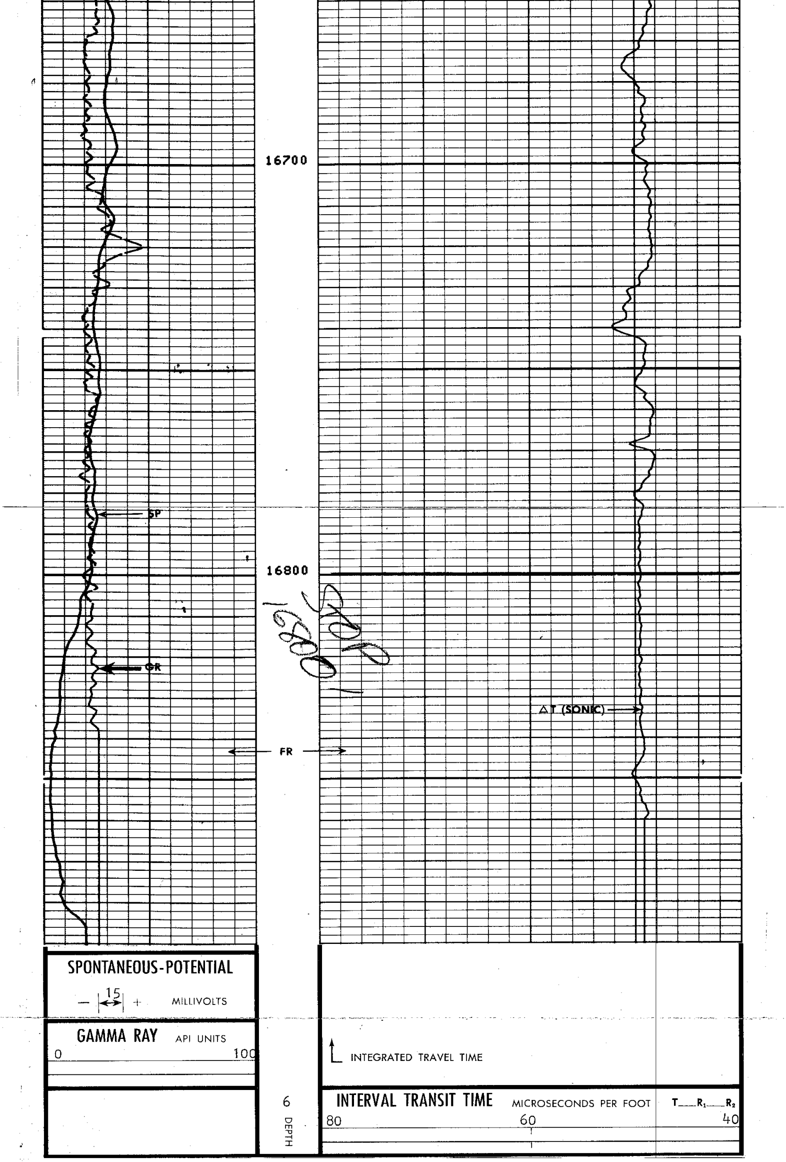
80 60 40

INTEGRATED TRAVEL TIME

GAMMA RAY API UNITS

0 100

SPONTANEOUS-POTENTIAL

— 15 + MILLIVOLTS