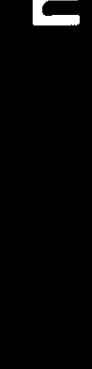


2" DUAL INDUCTION - SFL



COMPANY: ARCO EXPLORATION AND TECHNOLOGY COMPANY
 WELL: COLUMBIA COUNTY #32-32
 FIELD: HILDCAT
 COUNTY: COLUMBIA
 STATE: OREGON
 NATION: USA
 LOCATION: NE 37' W 1 & 1840'S OF THE NE CORNER OF T1P1 6N
 SEC: 32
 RGE: 5N

RECEIVED/PLD
 DEC 9 - 1985
 RECEIVED/PLD
 DEC 9 - 1985

PERMANENT DATUM: GL
 ELEV. OF PERM. DATUM: 888.0 F
 LOG MEASURED FROM: KB
 14.5 F ABOVE PERM. DATUM
 DRG. MEASURED FROM: KB

DATE: 7 NOV 85
 RUN NO: DNE

DEPTH-DRILLER: 2711.0 F
 DEPTH-LOGGER: 2711.0 F
 BTH. LOG INTERVAL: 2590.0 F
 TOP LOG INTERVAL: 4180.0 F
 CASING-DRILLER: 419.0 F
 CASING-LOGGER: 419.0 F
 HEIGHT: 9.685
 BIT SIZE: 8.5
 DEPTH: 2711.0 F

OTHER SERVICES:
 BHC-CNL-GR
 VST-AP
 VST-NSR
 HNS
 SMS

PROGRAM
 TAPE NO: 28.2A
 HNS
 SERVICE
 ORDER NO: 418267

TYPE FLUID IN HOLE: LIGNOSULFONATE
 DENSITY: 9.90 LB/G
 VISCOSITY: 41.0 S
 PH: 8.5
 FLUID LOSS: 5.0 C3
 SOURCE OF SAMPLE: FLOWLINE
 RM: 3.590 OHMM AT 56.0 DEGF
 RMC: 2.930 OHMM AT 64.0 DEGF
 SOURCE RMF/RMC: 3.970 OHMM AT 64.0 DEGF
 RM AT BHT: 1.767 OHMM AT 121. DEGF
 RMC AT BHT: 1.625 OHMM AT 121. DEGF
 MEASURED/MEASURED
 TIME CIRC. STOPPED: 0000 11-7
 TIME LOGGER ON BTH.: 0645 11-7
 MAX. REC. TEMP: 121.0 DEGF
 LOGGING UNIT NO: 8128
 LOGGING UNIT LOC: SACRAMENTO
 RECORDED BY: REIMIG
 WITNESSED BY: JACKSON

REMARKS:

RUN IN COMBINATION WITH SONIC LOG NOT STARTED AT BOTTOM DUE TO STICKY HOLE CONDITIONS
 RECORD OF LOGGERS TO ON FILE 2
 REPEAT SECTION MADE OVER ZONE OF INTEREST
 SP AND DT CURVES OFF DEPTH FOR WAVEFORM PASS

EQUIPMENT NUMBERS-

DIS-EA 217 DIC-DA 211 MCD-DA 280 SLS-RC 525
 SLC-FA 1589 SLM-DA 383 IEM-BC 1070

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.

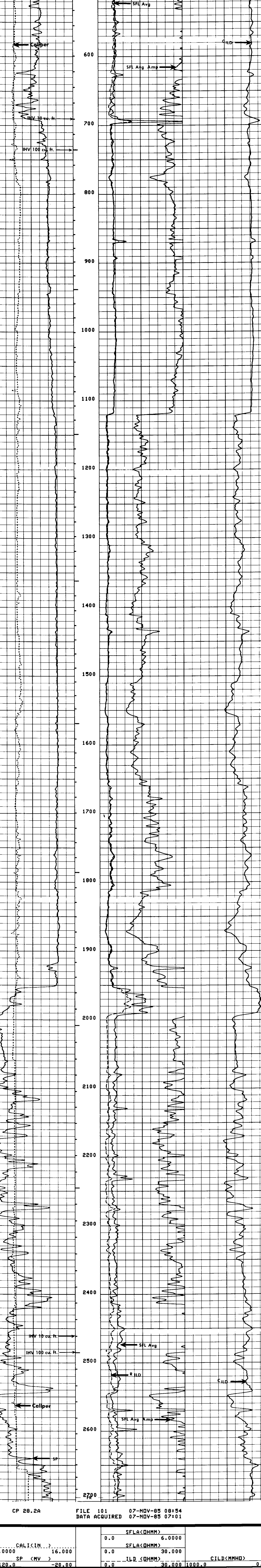
CP 28.2A FILE 102 07-NOV-85 09:31
 DATA ACQUIRED 07-NOV-85 07:47

EVENT MARK SUMMARY:

OUTPUT INTERVAL DEPTH TRACK
 BETWEEN PIPS EDGE
 IHV 10.0000 F3 LEFT EDGE

CALI (IN...)	6.0000	16.0000	SFLA (OHMM)	0.0	6.0000
SP (MV)	-120.0	-20.00	SFLA (OHMM)	0.0	30.0000
			ILD (OHMM)	0.0	30.0000 1000.0 0.0
			CILD (MMHO)		

CP 28.2A FILE 101 07-NOV-85 08:58
 DATA ACQUIRED 07-NOV-85 07:47



CP 28.2A FILE 101 07-NOV-85 08:54
 DATA ACQUIRED 07-NOV-85 07:01

CALI (IN...)	6.0000	16.0000	SFLA (OHMM)	0.0	6.0000
SP (MV)	-120.0	-20.00	SFLA (OHMM)	0.0	30.0000
			ILD (OHMM)	0.0	30.0000 1000.0 0.0
			CILD (MMHO)		

SENSOR MEASURE POINT TO TOOL ZERO

SRAT 41.4 FEET	AMPL 43.9 FEET
TT1 42.9 FEET	CBL 43.9 FEET
TT3 40.2 FEET	TT2 43.9 FEET
TO 43.9 FEET	TT4 39.2 FEET
SLTT 43.9 FEET	TT 43.9 FEET
CALI 31.8 FEET	SCBL 43.9 FEET
ILM 5.8 FEET	ILD 9.4 FEET
SP 2.5 FEET	SFL 6.4 FEET
TENS 2.5 FEET	SPAR 2.5 FEET
NDIS 2.5 FEET	

NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	100.000		SFMS	R-H	
DTF	189.000	US/F	DTM	56.0000	US/F
DSIN	5	US	DDEL	200	US
DSEC	5.40000	MMHO	DWCD	512	
MSEC	5.90000	MMHO	SBR	1.00000	OHMM
FEXP	2.15000		SPH1	SPH1	
CSIZ	9.62500	IN	BHMS	.620000	
BS	8.50000	IN	FNUM	OPEN	
PP	NDRM		DD	0.0	F

TAPE NOT MADE