Schlumberger

FORMATION DENSITY - COMP. NEUTRON W/GR

CSU

COMPANY:	ARCO OIL AND GAS
WELL:	CFI 12-12
FIELD:	MIST
COUNTY:	COLUMBIA
STATE:	OREGON
NATION:	USA
LOCATION:	1536.5' SOUTH AND 385.77' EAST FROM THE NW CORNER OF;
SEC: 12	TWP: 5 NORTH RGE: 5 WEST
PERMANENT DATUM:	GL
ELEV. OF PERM. DATUM:	969.8 F
LOG MEASURED FROM:	KB
	12.0 F ABOVE PERM. DATUM
DRLG. MEASURED FROM:	KB
ELEVATIONS-	KB: 981.8 F; DF:; GL: 969.8 F
DATE:	27 SEP 86
RUN NO:	ONE
DEPTH-DRILLER:	1892.0 F
DEPTH-LOGGER:	1887.0 F
BTM. LOG INTERVAL:	1884.0 F
TOP LOG INTERVAL:	450.0 F
CASING-DRILLER:	468.0 F
CASING-LOGGER:	468.0 F
CASING:	9 5/8"
WEIGHT:	47.0000 LB/F
BIT SIZE:	8 1/2"
DEPTH:	1892.0 F

OTHER SERVICES-
DIL
BHC
HDT

PROGRAM TAPE NO: 28.4A
SERVICE ORDER NO: 524311

TYPE FLUID IN HOLE:	DISPERSED
DENSITY:	10.20 LB/G
VISCOSITY:	37.0 S
PH:	9.9
FLUID LOSS:	5.6 C3
SOURCE OF SAMPLE:	FLOWLINE
RM:	3.370 OHMM AT 67.0 DEGF
RMF:	5.260 OHMM AT 59.0 DEGF
RMC:	7.390 OHMM AT 60.0 DEGF
SOURCE RMF/RMC:	MEAS/MEAS
RM AT BHT:	2.571 OHMM AT 90.0 DEGF
RMF AT BHT:	3.579 OHMM AT 90.0 DEGF
RMC AT BHT:	5.104 OHMM AT 90.0 DEGF
TIME CIRC. STOPPED:	1030 9/27
TIME LOGGER ON BTM.:	1300 9/27
MAX. REC. TEMP:	90.0 DEGF
LOGGING UNIT NO:	8128
LOGGING UNIT LOC:	SACRAMENTO
RECORDED BY:	BLAZE
WITNESSED BY:	T. BUTLER

REMARKS:

RIG: H&C #5
YOUR CREW: SILVIA AND SALVATO.
THANKYOU FOR USING SCHLUMBERGER!

EQUIPMENT NUMBERS-

DIS 1181	DIC 658	PGS 542	PDH 340
GSR 6608	SFT 1171	CNC 1132	

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.

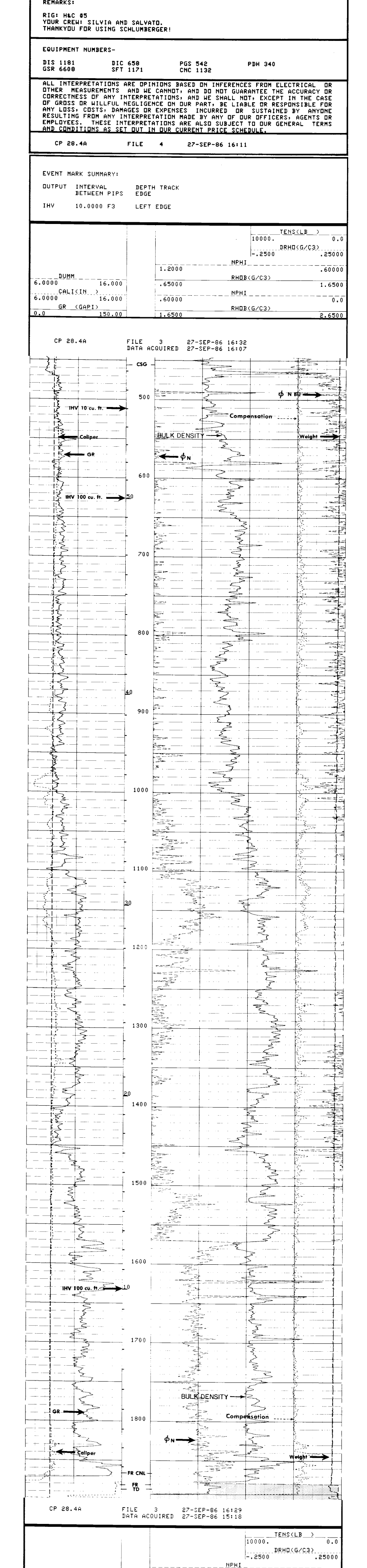
CP 28.4A FILE 4 27-SEP-86 16:11

EVENT MARK SUMMARY:

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

TENS(LB) 10000. — 0.0
DRHO(G/C3) -.2500 — .25000
NPHI 1.2000 — .60000
RHOB(G/C3) .65000 — 1.6500
NPHI .60000 — 0.0
RHOB(G/C3) 1.6500 — 2.6500
DUMM 6.0000 — 16.000
CALI(IN) 6.0000 — 16.000
GR (GAPI) 0.0 — 150.00

CP 28.4A FILE 3 27-SEP-86 16:32
DATA ACQUIRED 27-SEP-86 16:07



CP 28.4A FILE 3 27-SEP-86 16:29
DATA ACQUIRED 27-SEP-86 15:18

TENS(LB) 10000. — 0.0
DRHO(G/C3) -.2500 — .25000
NPHI 1.2000 — .60000
RHOB(G/C3) .65000 — 1.6500
NPHI .60000 — 0.0
RHOB(G/C3) 1.6500 — 2.6500
DUMM 6.0000 — 16.000
CALI(IN) 6.0000 — 16.000
GR (GAPI) 0.0 — 150.00

SENSOR MEASURE POINT TO TOOL ZERO

FCNL 18.1 FEET	GR 26.6 FEET
FFDC 2.7 FEET	NCNL 18.1 FEET
CALI 2.7 FEET	NFDC 2.7 FEET
NRAT 18.1 FEET	TENS -.3 FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
MATR	SAND		HC	CALI	
FD	1.00000	G/C3	PSNR	2.13800	
FDCC	ALLO		MDEN	2.65000	G/C3
WMUD	10.3000	LB/G	BHF	WATE	
BHS	OPEN		FPHI	PHIX	
DO	0.0	F	BS	8.50000	IN
PP	NORM				

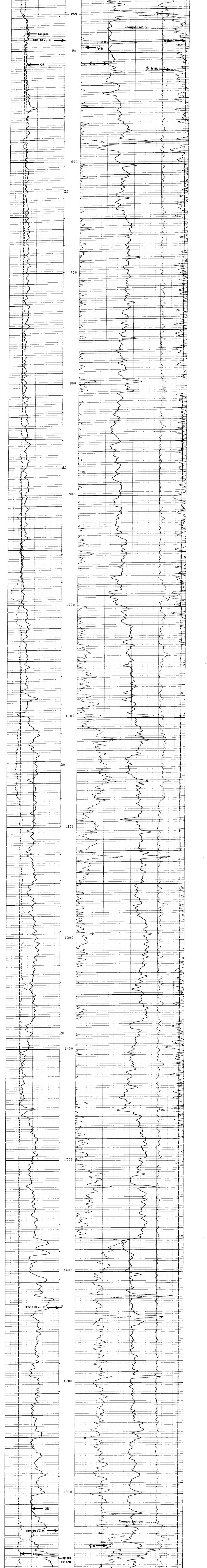
TAPE NOT MADE

EVENT MARK SUMMARY:

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

TENS(LB) 10000. — 0.0
DRHO(G/C3) -.2500 — .25000
DPHI 1.2000 — .60000
NPHI 1.2000 — .60000
NPHI .60000 — 0.0
DPHI .60000 — 0.0
DUMM 6.0000 — 16.000
CALI(IN) 6.0000 — 16.000
GR (GAPI) 0.0 — 150.00

CP 28.4A FILE 3 27-SEP-86 16:08



CP 28.4A FILE 3 27-SEP-86 15:18

TENS(LB) 10000. — 0.0
DRHO(G/C3) -.2500 — .25000
DPHI 1.2000 — .60000
NPHI 1.2000 — .60000
NPHI .60000 — 0.0
DPHI .60000 — 0.0
DUMM 6.0000 — 16.000
CALI(IN) 6.0000 — 16.000
GR (GAPI) 0.0 — 150.00

SENSOR MEASURE POINT TO TOOL ZERO

FCNL 18.1 FEET	GR 26.6 FEET
FFDC 2.7 FEET	NCNL 18.1 FEET
CALI 2.7 FEET	NFDC 2.7 FEET
NRAT 18.1 FEET	TENS -.3 FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
MATR	SAND		HC	CALI	
FD	1.00000	G/C3	PSNR	2.13800	
FDCC	ALLO		MDEN	2.65000	G/C3
WMUD	10.3000	LB/G	BHF	WATE	
BHS	OPEN		FPHI	PHIX	
BS	8.50000	IN			

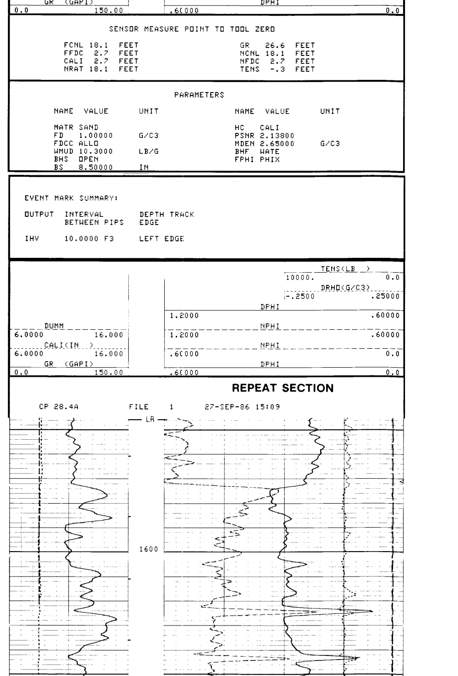
EVENT MARK SUMMARY:

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

TENS(LB) 10000. — 0.0
DRHO(G/C3) -.2500 — .25000
DPHI 1.2000 — .60000
NPHI 1.2000 — .60000
NPHI .60000 — 0.0
DPHI .60000 — 0.0
DUMM 6.0000 — 16.000
CALI(IN) 6.0000 — 16.000
GR (GAPI) 0.0 — 150.00

REPEAT SECTION

CP 28.4A FILE 1 27-SEP-86 15:09



CP 28.4A FILE 1 27-SEP-86 14:59

REPEAT SECTION

TENS(LB) 10000. — 0.0
DRHO(G/C3) -.2500 — .25000
DPHI 1.2000 — .60000
NPHI 1.2000 — .60000
NPHI .60000 — 0.0
DPHI .60000 — 0.0
CALI(IN) 6.0000 — 16.000
GR (GAPI) 0.0 — 150.00

SENSOR MEASURE POINT TO TOOL ZERO

FCNL 18.1 FEET	GR 26.6 FEET
FFDC 2.7 FEET	NCNL 18.1 FEET
CALI 2.7 FEET	NFDC 2.7 FEET
NRAT 18.1 FEET	TENS -.3 FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
MATR	SAND		HC	CALI	
FD	1.00000	G/C3	PSNR	2.13800	
FDCC	ALLO		MDEN	2.65000	G/C3
WMUD	10.3000	LB/G	BHF	WATE	
BHS	OPEN		FPHI	PHIX	
BS	8.50000	IN			

BEFORE SURVEY CALIBRATION SUMMARY

PERFORMED: 27-SEP-86 14:27
PROGRAM FILE: MISN (VERSION 28.4A 86/04/03)

SGTE DETECTOR CALIBRATION SUMMARY

	MEASURED BKGD	MEASURED JIG	CALIBRATED	UNITS
GR	39	209	165	GAPI

CNTA DETECTOR CALIBRATION SUMMARY

	TANK INPUT	TANK CALIBRATED	JIG MEASURED	JIG CALIBRATED
NRAT	2.13800	2.158	2.343	2.366

PGTK DETECTOR CALIBRATION SUMMARY

GAIN COMPUTED FROM SHOP BLOCK COUNTS

	BLOCK INPUT	BLOCK CALIBRATED	JIG MEASURED	JIG CALIBRATED	UNITS
FFDC	538	337	523	328	
NFDC	844	528	822	514	

PGTK CALIPER CALIBRATION SUMMARY

	MEASURED SMALL	MEASURED LARGE	CALIBRATED SMALL	CALIBRATED LARGE	UNITS
CALI	11.46	15.6	8.00	12.0	IN

CP 28.4A FILE 101 27-SEP-86 14:26

AFTER SURVEY TOOL CHECK SUMMARY

PERFORMED: 27-SEP-86 16:13
PROGRAM FILE: MISN (VERSION 28.4A 86/04/03)

CNTA TOOL CHECK

	JIG BEFORE	JIG AFTER
NRAT	2.366	2.382

POROSITY CHANGE (LIME): .003

PGTK TOOL CHECK

	JIG BEFORE	JIG AFTER	UNITS
FFDC	328	327	CPS
NFDC	514	513	CPS

RHOB CHANGE (WATER): -.000 G/C3

CP 28.4A FILE 5 27-SEP-86 16:13

SHOP SUMMARY

PERFORMED: 09-SEP-86 11:18
PROGRAM FILE: SHOP (VERSION 28.4 85/11/11)

CNTA DETECTOR CALIBRATION SUMMARY

	TANK MEASURED	TANK CALIBRATED	JIG MEASURED	JIG CALIBRATED
NRAT	2.318	2.158	2.363	2.201

(CNC:1132, CNB:2284)

SHOP SUMMARY

PERFORMED: 09-SEP-86 12:01
PROGRAM FILE: SHOP (VERSION 28.4 85/11/11)

PGTK DETECTOR CALIBRATION SUMMARY

	BLOCK MEASURED	BLOCK CALIBRATED	JIG MEASURED	JIG CALIBRATED	UNITS
FFDC	538	337	564	354	CPS
NFDC	844	528	848	530	CPS

(PGS:542 , PDH:340 , GSR:6608, SFT :1171)