SCANNED

COMPANY: NORTHWEST NATURAL GAS

WELL: OM 43A-22-65

FIELD: MIST

COUNTY: COLUMBIA **STATE:** OREGON

COUNTY: COLUMBIA
Field: MIST
Location: 2441.82' North, 122.17' West
Well: OM 43A-22-65
Company: NORTHWEST NATURAL GAS

Schlumberger

FORMATION MICRO SCANNER
MSDip
SCALE: 5" = 100'

LOCATION

2441.82' North, 122.17' West
From the SW Section 23

Elev.:	K.B.	872.23 ft
	G.L.	862.23 ft
	D.F.	871.23 ft

Permanent Datum:	GROUND LEVEL	Elev.:	621 ft
Log Measured From:	K.B	10.0 ft	above Perm. Datum
Drilling Measured From:	K.B		

API Serial No.	SECTION	TOWNSHIP	RANGE
36-009-00352	22	6N	5W

Logging Date	3-JUN-2000			
Run Number	1			
Depth Driller	2.3e+011 ft			
Schlumberger Depth	2317 ft			
Bottom Log Interval	2309 ft			
Top Log Interval	444 ft			
Casing Driller Size @ Depth	8.625 in	@	444 ft	@
Casing Schlumberger	444 ft			
Bit Size	7.875 in			
Type Fluid In Hole	DMA			
MUD Density / Viscosity	8.8 lbm/gal	38 s		
MUD Fluid Loss / PH	6.6 cm3	8		
MUD Source Of Sample	FLOWLINE			
RM @ Measured Temperature	1.175 ohm.m	@	99 degF	@
RMF @ Measured Temperature	0.869 ohm.m	@	90 degF	@
RMC @ Measured Temperature	0.904 ohm.m	@	92 degF	@
Source RMF / RMC	PRESS	PRESS		
RM @ MRT / RMF @ MRT	1.221 @ 95	0.826 @ 95		@ @
Maximum Recorded Temperatures	95 degF	95	95	
Circulation Stopped / Time	3-JUN-2000		16:10	
Logger On Bottom / Time	3-JUN-2000		23:00	
Unit Number / Location	3152	SACRAMENTO		
Recorded By	M.KHAN			
Witnessed By	JACK MEYER			

	Run 1	Run 2
Logging Date		
Run Number		
Depth Driller		
Schlumberger Depth		
Bottom Log Interval		
Top Log Interval		
Casing Driller Size @ Depth	@	
Casing Schlumberger		
Bit Size		
Type Fluid In Hole		
MUD Density / Viscosity		
MUD Fluid Loss / PH		
MUD Source Of Sample		
RM @ Measured Temperature	@	
RMF @ Measured Temperature	@	
RMC @ Measured Temperature	@	
Source RMF / RMC		
RM @ MRT / RMF @ MRT	@	@
Maximum Recorded Temperatures		
Circulation Stopped / Time		
Logger On Bottom / Time		
Unit Number / Location		
Recorded By		
Witnessed By		

@

@ @ @ @

@

Run 3

Run 4

DISCLAIMER
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1	OTHER SERVICES2
OS1: FMS GR	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

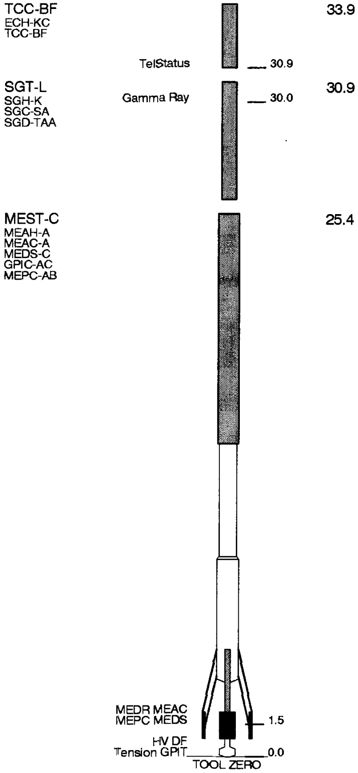
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
CASING 8 5/8" 32 LB/FT	

RUN 1		RUN 2	
SERVICE ORDER #:		SERVICE ORDER #:	
PROGRAM VERSION:	9C1-3C3	PROGRAM VERSION:	
FLUID LEVEL:	0 ft	FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1	RUN 2
SURFACE EQUIPMENT GSR-U/Y WITM (CTS)-A	
DOWNHOLE EQUIPMENT LEH-QT 36.9 LEH-QT	



MAXIMUM STRING DIAMETER 5.00 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Input DLIS Files

DEFAULT	MEST .023	FN:20	PRODUCER	04-Jun-2000 00:03	2308.0 FT	403.5 FT

Output DLIS Files

DEFAULT	MEST .026	FN:23	PRODUCER	04-Jun-2000 01:53	2316.0 FT	411.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 736.51 F3

Cement Volume = 427.58 F3 (assuming 5.50 IN casing O.D.)

Computed from 2316.0 FT to 444.0 FT using data channel(s) C1 C2

OP System Version: 9C1-303

MCM

MEST-C	9C1-303	SGT-L	OP91-KP1a
TCC-BF	OP91-KP1a		

PIP SUMMARY

⊢ Integrated Hole Volume Minor Pip Every 10 F3

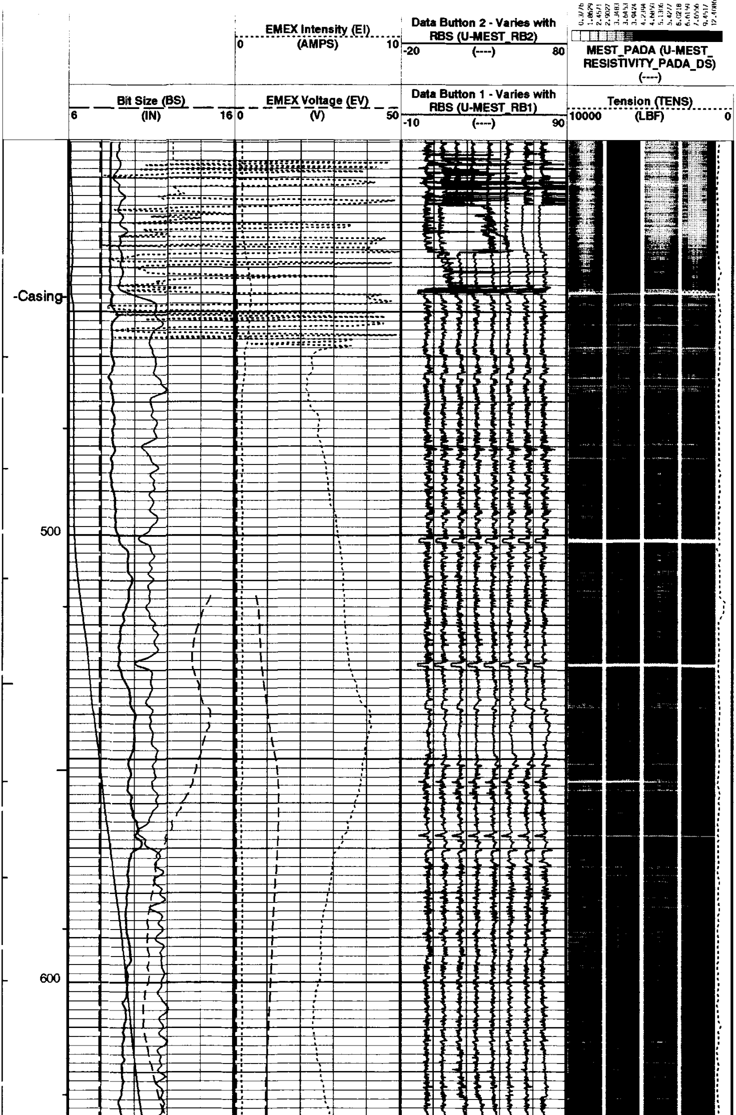
⊢ Integrated Hole Volume Major Pip Every 100 F3

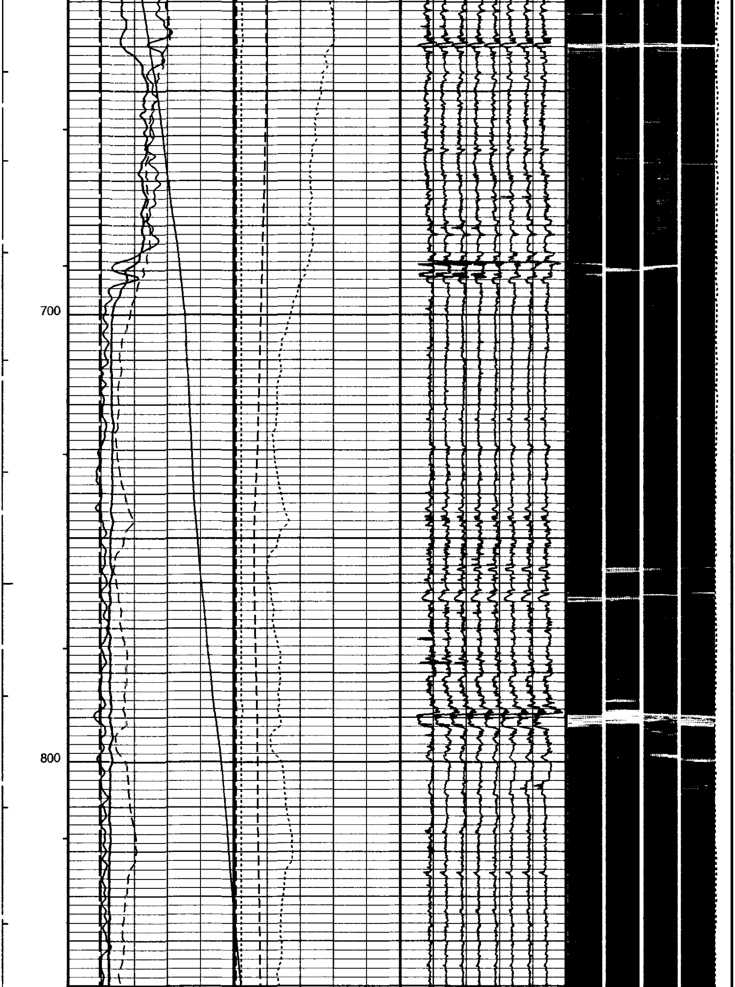
⊣ Integrated Cement Volume Minor Pip Every 10 F3

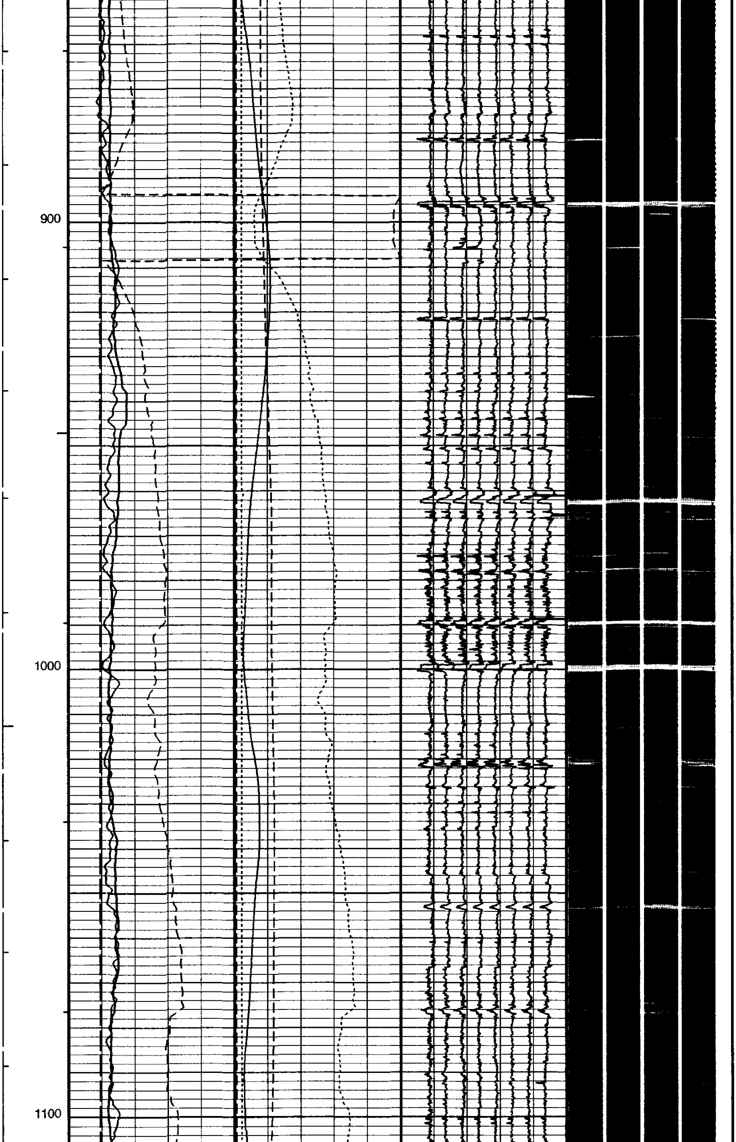
⊣ Integrated Cement Volume Major Pip Every 100 F3

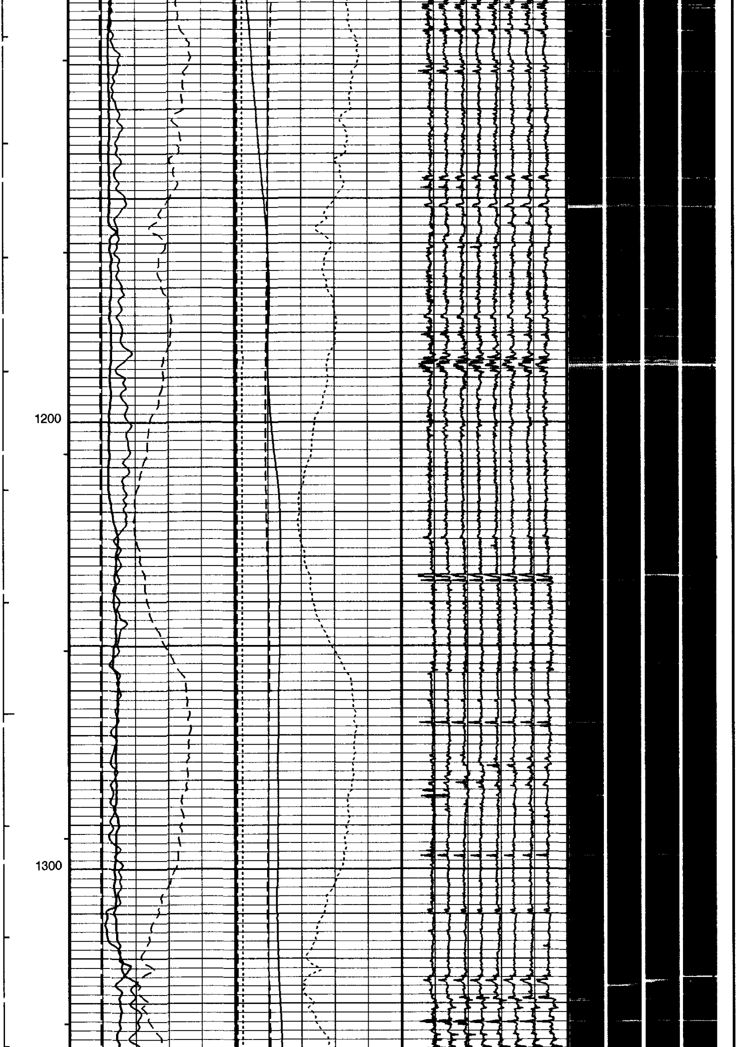
▶ Time Mark Every 60 S

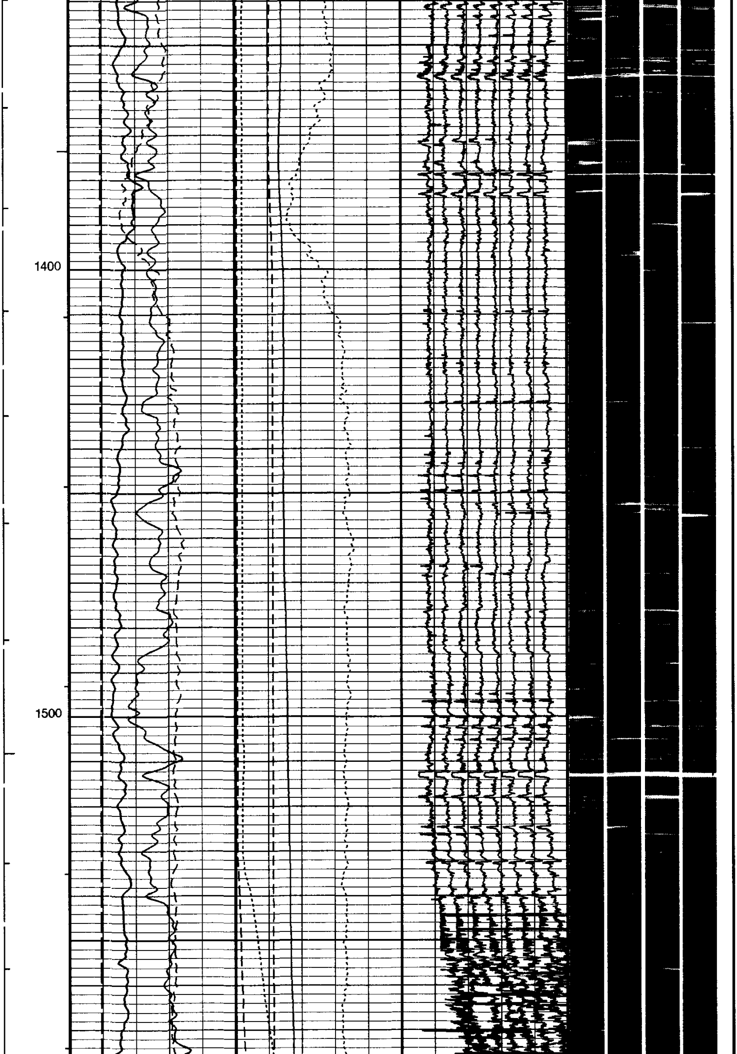
Relative Bearing (RB_MEST) -40 (DEG) 360	Data Button 8 - Varies with RBS (U-MEST_RB8) -80 (----) 20	
Pad One Azimuth (P1AZ_MEST) -40 (DEG) 360	Data Button 7 - Varies with RBS (U-MEST_RB7) -70 (----) 30	
Hole Azimuth (HAZIM) -40 (DEG) 360	Data Button 6 - Varies with RBS (U-MEST_RB6) -60 (----) 40	
Gamma Ray (GR) 0 (GAPI) 150	Data Button 5 - Varies with RBS (U-MEST_RB5) -50 (----) 50	0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086 MEST_PADD (U-MEST_RESISTIVITY_PADD_DS) (----)
Deviation (DEVIM) 0 (DEG) 30	Data Button 4 - Varies with RBS (U-MEST_RB4) -40 (----) 60	0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086 MEST_PADC (U-MEST_RESISTIVITY_PADC_DS) (----)
Caliper 2 (C2) 6 (IN) 16	Data Button 3 - Varies with RBS (U-MEST_RB3) -30 (----) 70	0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086 MEST_PADB (U-MEST_RESISTIVITY_PADB_DS) (----)

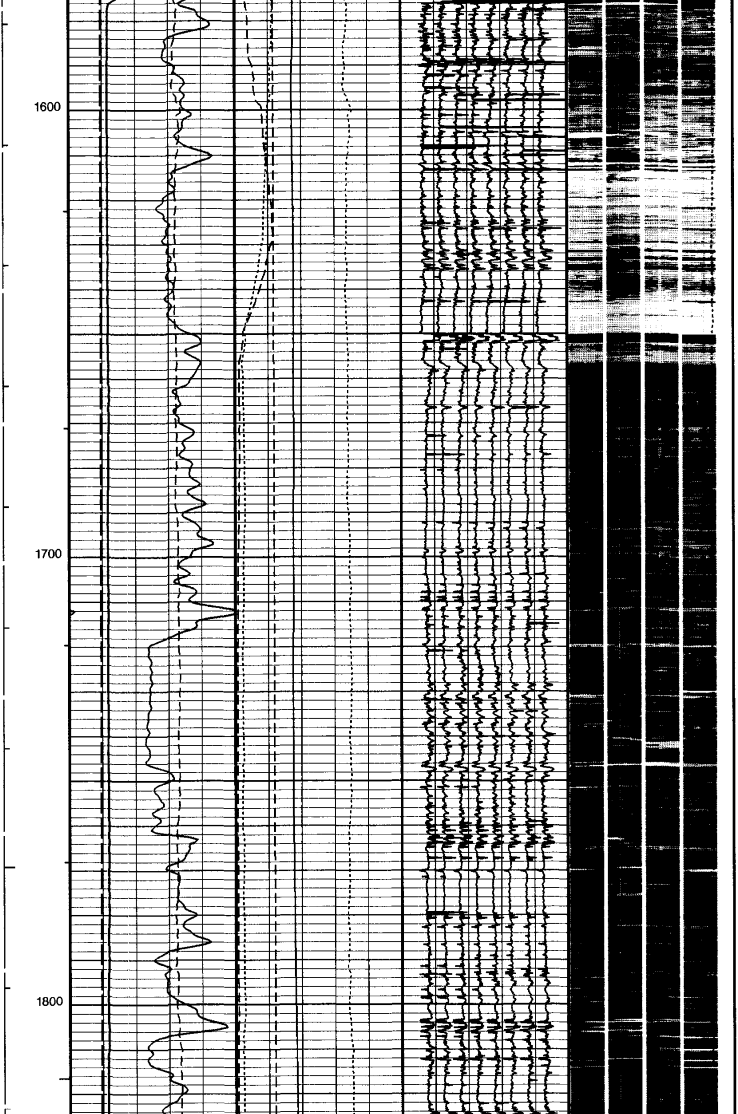


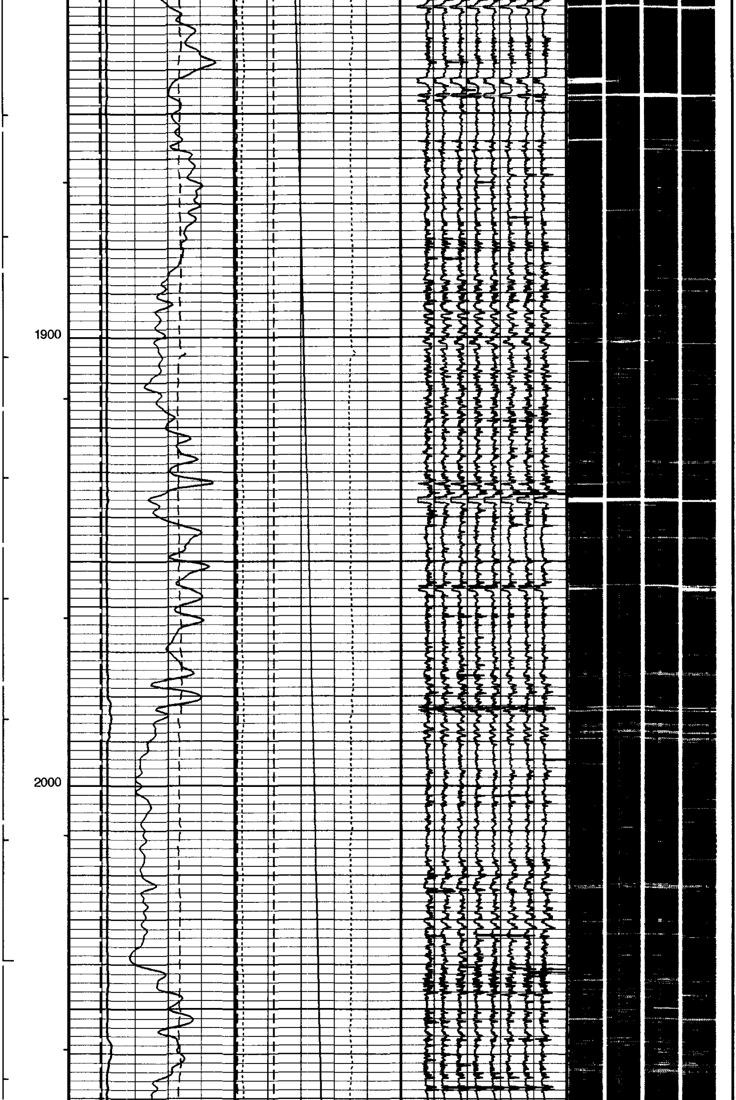


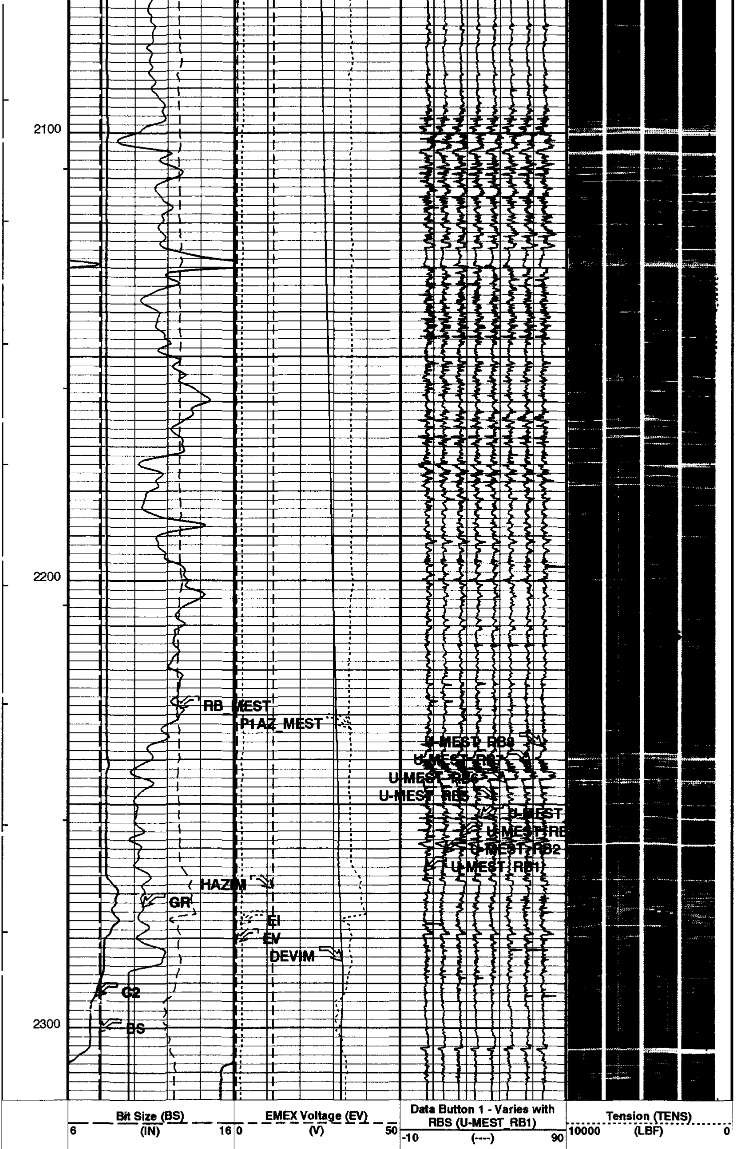












EMEX Intensity (EI)
0 (AMPS) 10

Data Button 2 - Varies with RBS (U-MEST_RB2)
-20 (----) 80

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

MEST_PADA (U-MEST_RESISTIVITY_PADA_DS)
(----)

Caliper 2 (C2)
6 (IN) 16

Data Button 3 - Varies with RBS (U-MEST_RB3)
-30 (----) 70

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

MEST_PADB (U-MEST_RESISTIVITY_PADB_DS)
(----)

Deviation (DEVIM)
0 (DEG) 30

Data Button 4 - Varies with RBS (U-MEST_RB4)
-40 (----) 60

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

MEST_PADC (U-MEST_RESISTIVITY_PADC_DS)
(----)

Gamma Ray (GR)
0 (GAPI) 150

Data Button 5 - Varies with RBS (U-MEST_RB5)
-50 (----) 50

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

MEST_PADD (U-MEST_RESISTIVITY_PADD_DS)
(----)

Hole Azimuth (HAZIM)
-40 (DEG) 360

Data Button 6 - Varies with RBS (U-MEST_RB6)
-60 (----) 40

Pad One Azimuth (P1AZ_MEST)
-40 (DEG) 360

Data Button 7 - Varies with RBS (U-MEST_RB7)
-70 (----) 30

Relative Bearing (RB_MEST)
-40 (DEG) 360

Data Button 8 - Varies with RBS (U-MEST_RB8)
-80 (----) 20

PIP SUMMARY

⊢ Integrated Hole Volume Minor Pip Every 10 F3
⊢ Integrated Hole Volume Major Pip Every 100 F3
⊣ Integrated Cement Volume Minor Pip Every 10 F3
⊣ Integrated Cement Volume Major Pip Every 100 F3
▶ Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
BS	Bit Size	7.875	IN
DO	Depth Offset for Logical Unit 1	8.0	FT
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MDEC	Magnetic Field Declination	18.3096	DEG
MLM	MEST Logging Mode	SCAN1800	
PP	Playback Processing	NORMAL	
RBS	Resistivity Button Selection	AUTO	
XGAI	Gain	GAIN_2	
XOFF	Offset	OFFSET_0	

Format: MEST_C_IMAGE Vertical Scale: 5" per 100' Graphics File Created: 04-Jun-2000 01:53

OP System Version: 9C1-303

MCM

MEST-C	9C1-303	SGT-L	OP91-KP1a
TCC-BF	OP91-KP1a		

Input DLIS Files

DEFAULT	MEST .023	FN:20	PRODUCER	04-Jun-2000 00:03	2308.0 FT	403.5 FT

Output DLIS Files

DEFAULT	MEST .026	FN:23	PRODUCER	04-Jun-2000 01:53

Input DLIS Files

DEFAULT	MEST .023	FN:20 PRODUCER	04-Jun-2000 00:03	2308.0 FT	403.5 FT

Output DLIS Files

DEFAULT	MEST .026	FN:23 PRODUCER	04-Jun-2000 01:53	2316.0 FT	411.5 FT

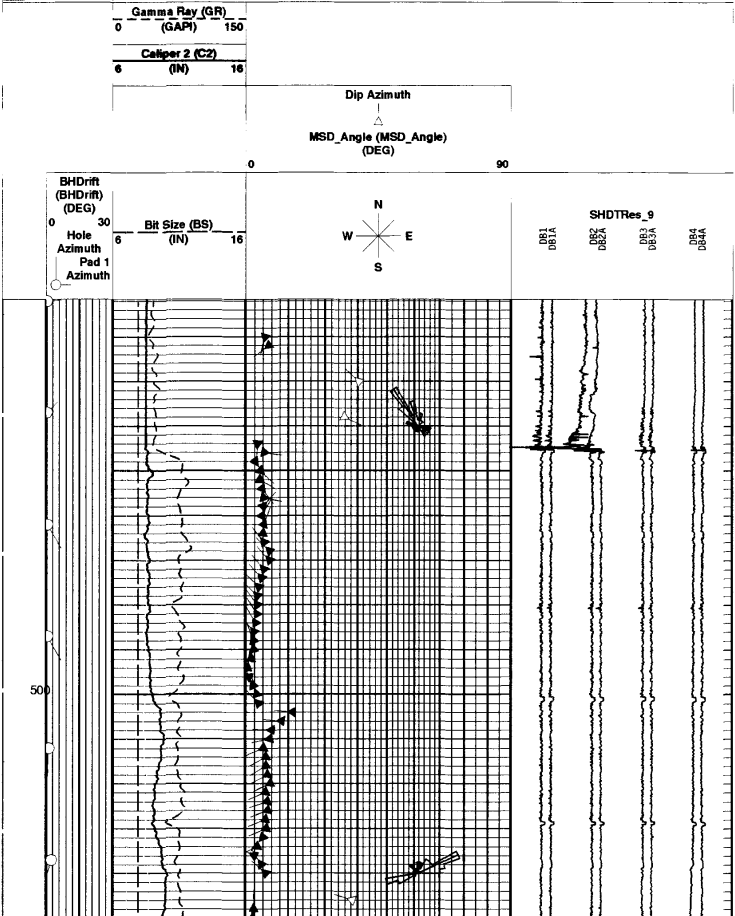
OP System Version: 9C1-303

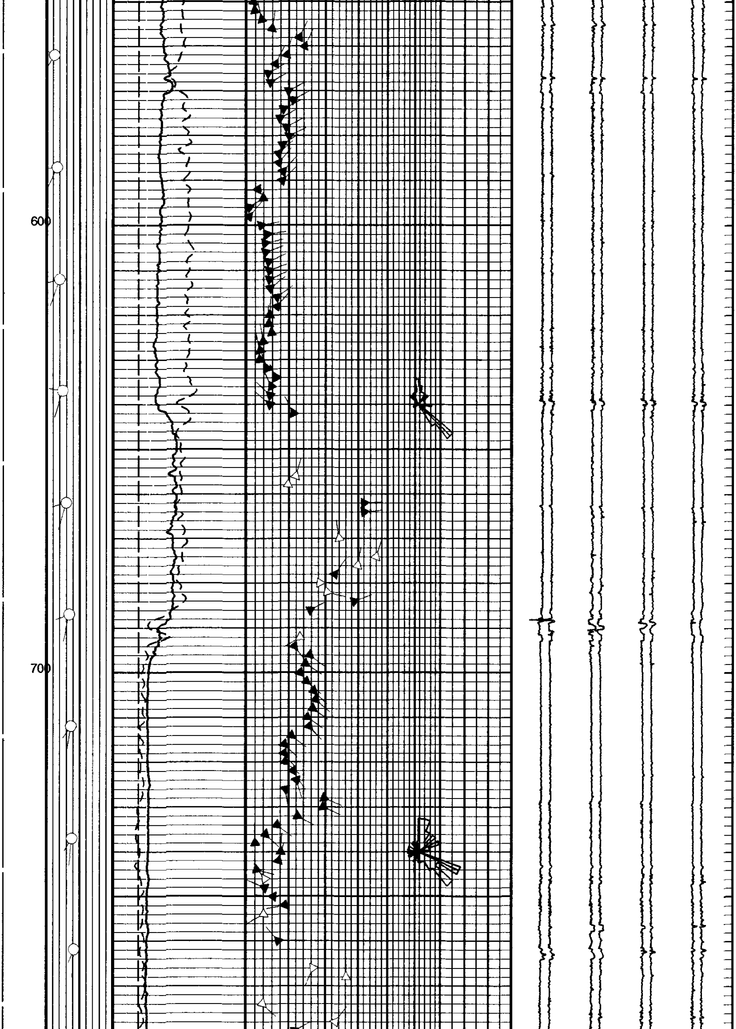
MCM

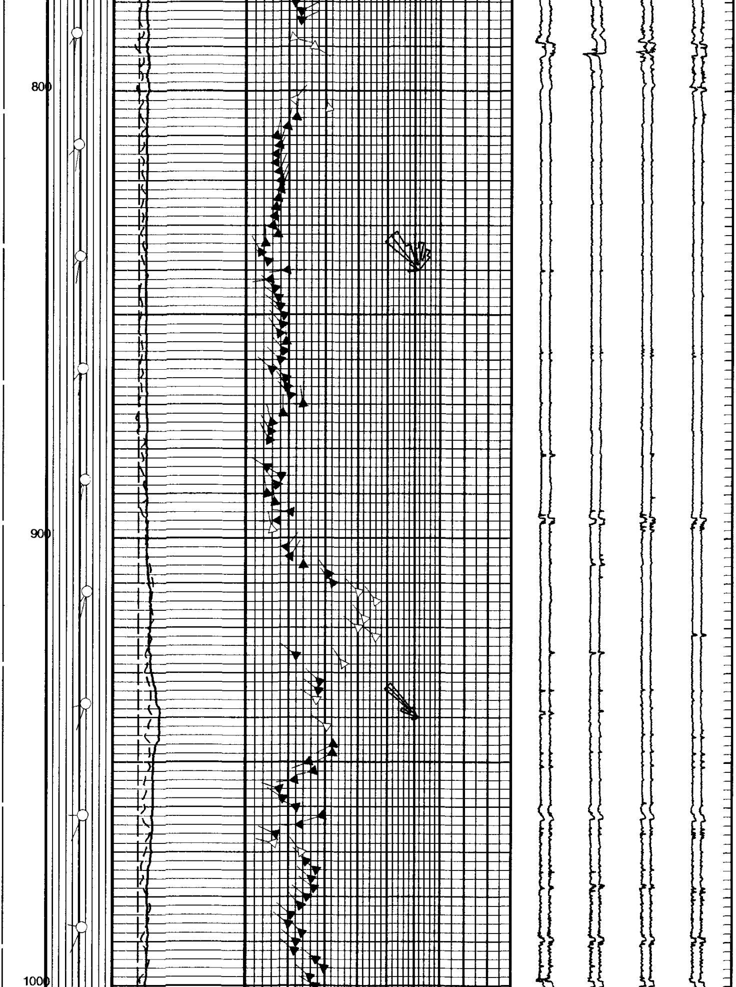
MEST-C	9C1-303	SGT-L	OP91-KP1a
TCC-BF	OP91-KP1a		

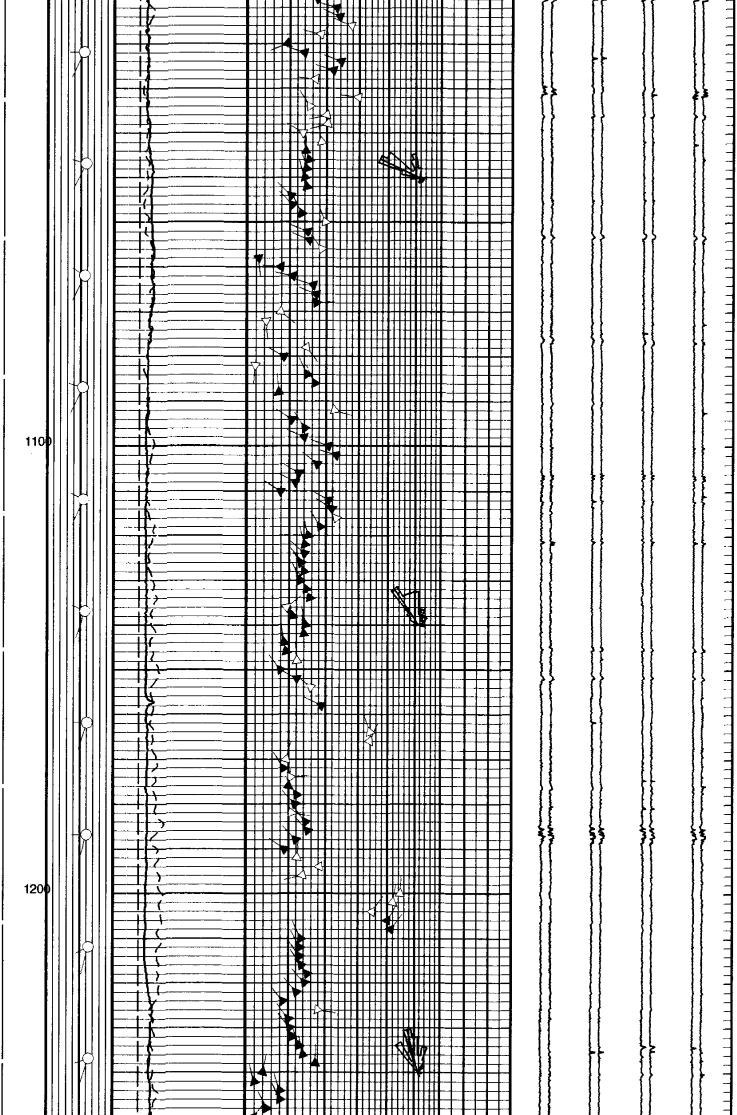
PIP SUMMARY

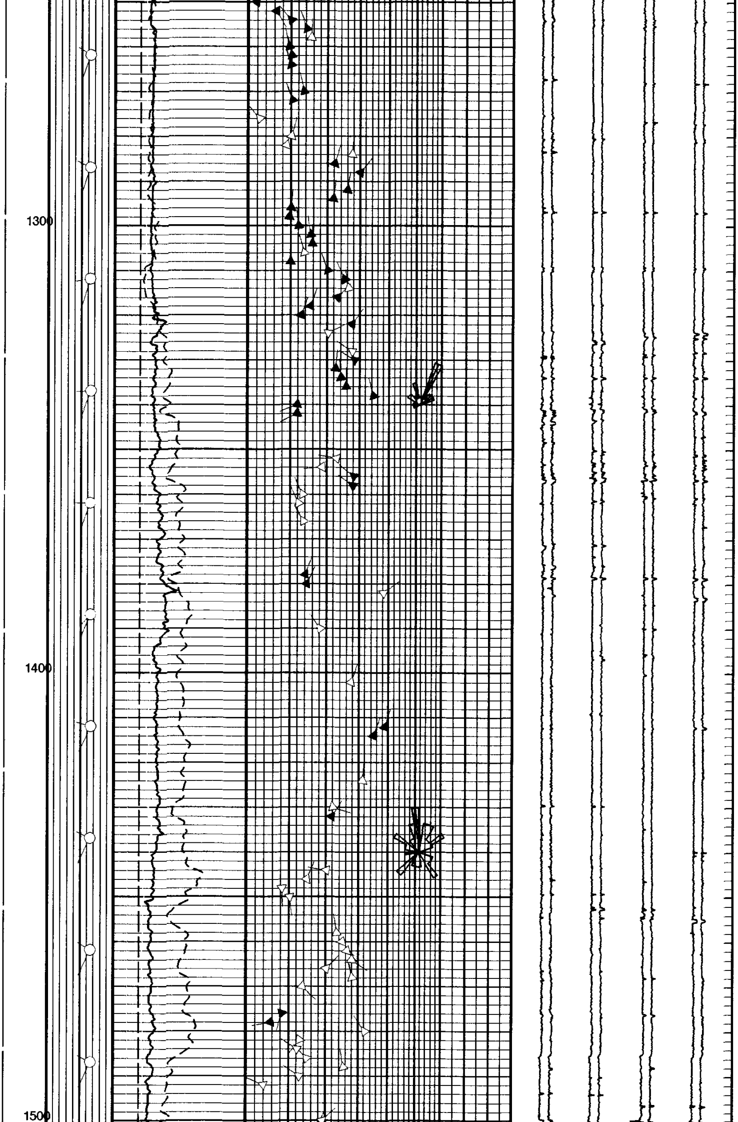
Time Mark Every 60 S

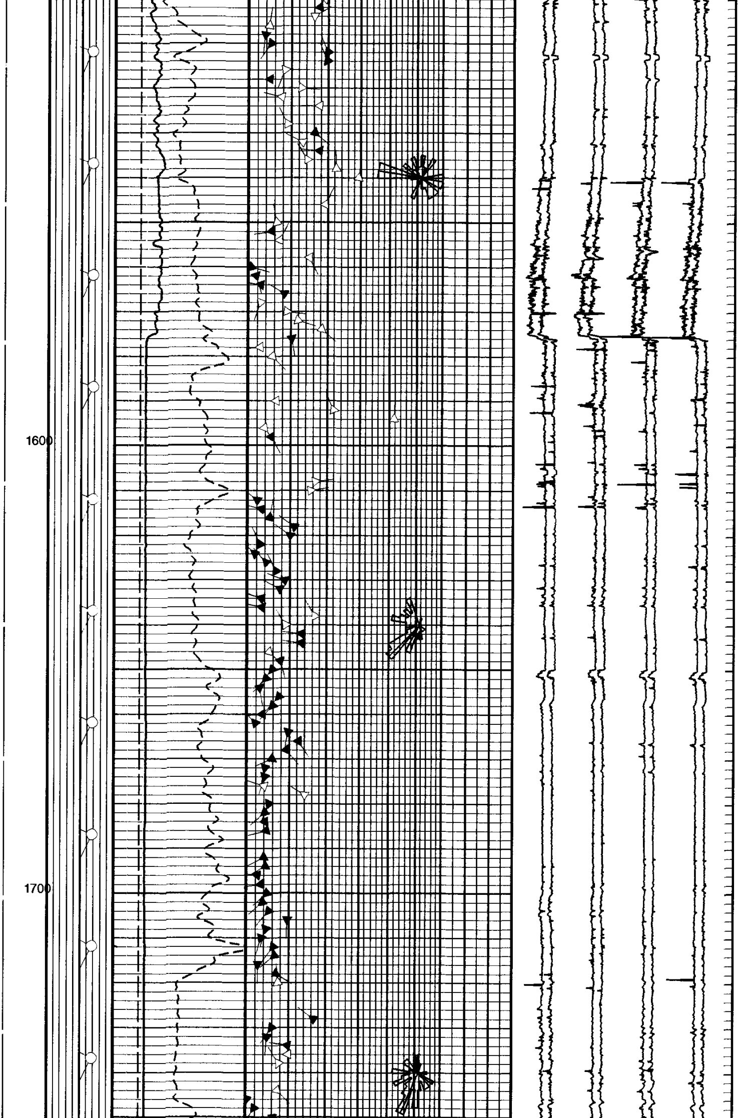


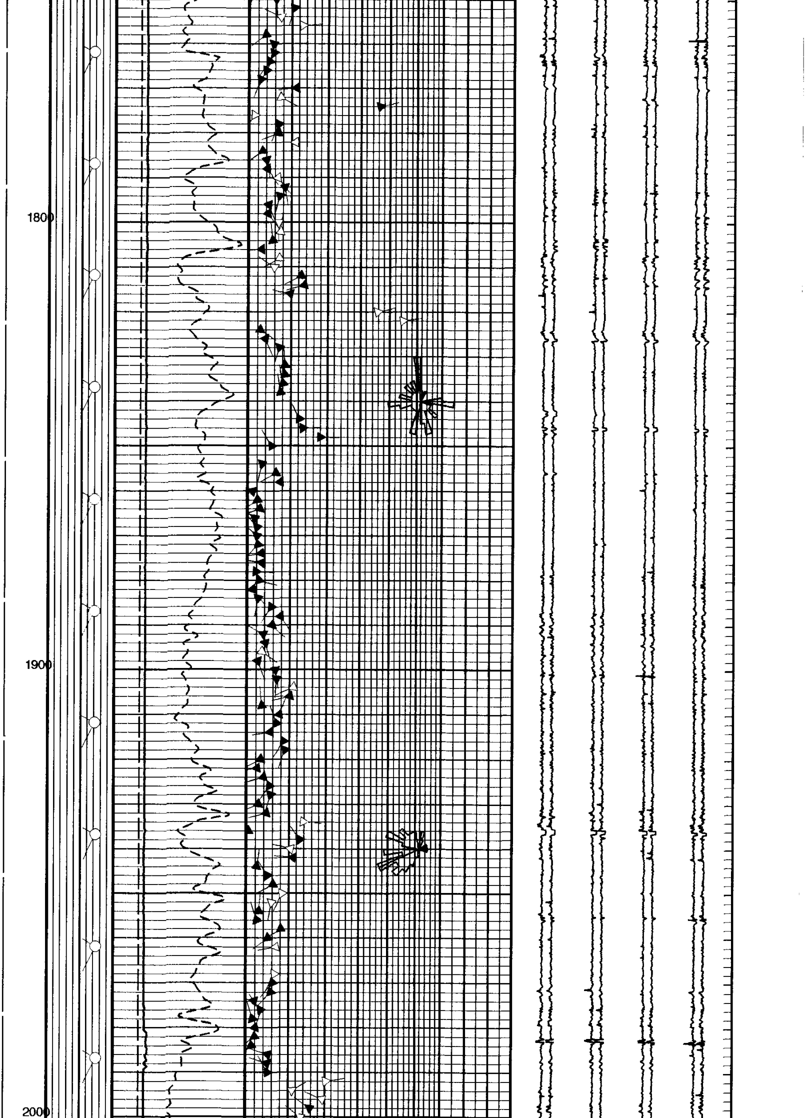


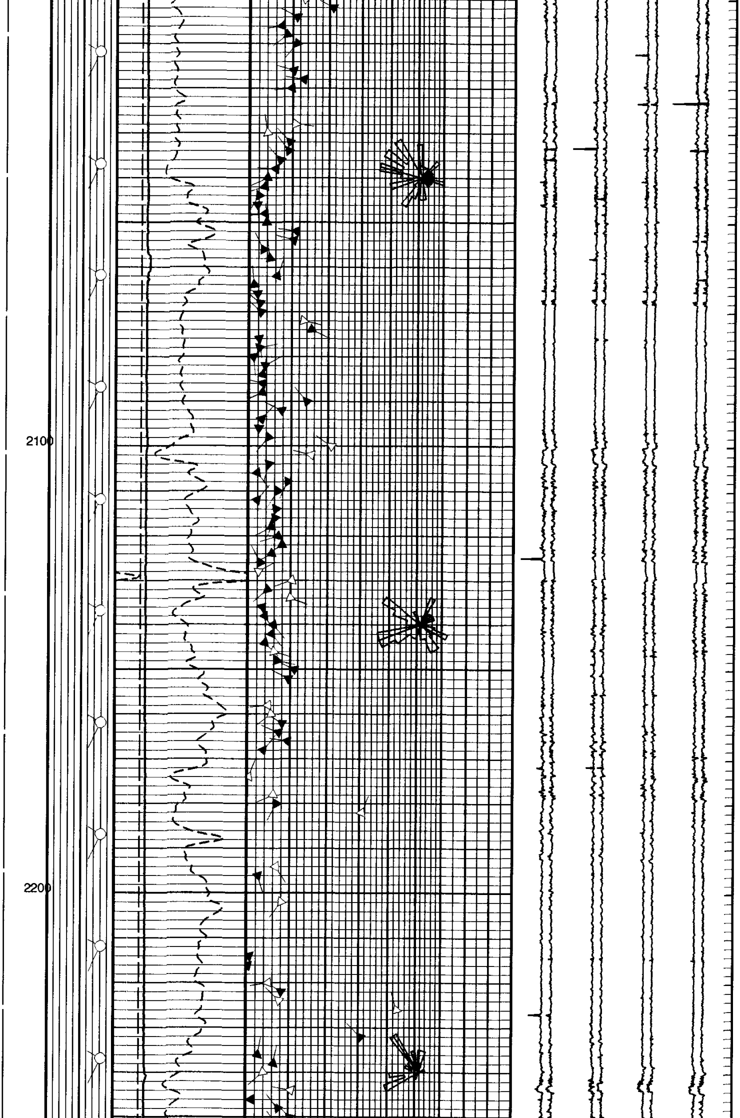


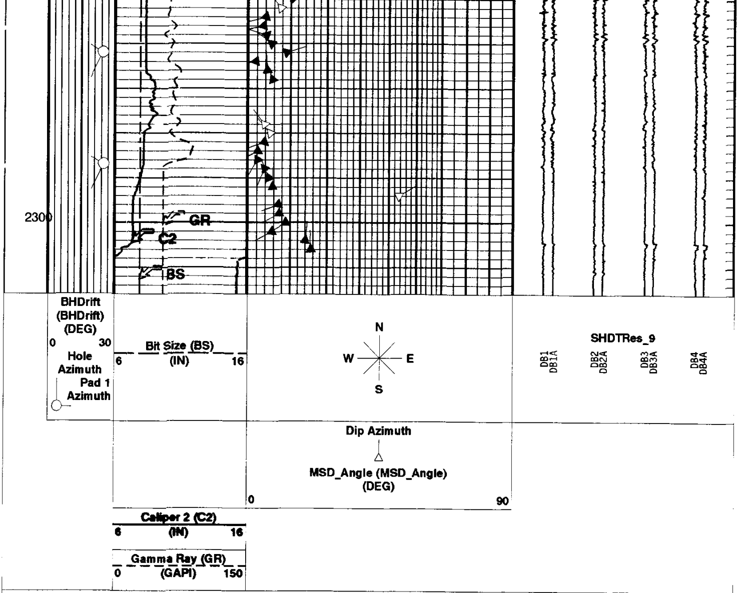












PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DIP Tool	MEST	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
BS	Bit Size	7.875	IN
CSBL	CSB DIP Number of Levels	2L	
DO	Depth Offset for Logical Unit 1	8.0	FT
DPAD	Disabled Pad	NONE	
ELRA	Electrical Radius	0.5	IN
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
INT	Correlation Interval	4	FT
MDEC	Magnetic Field Declination	18.3096	DEG
PP	Playback Processing	NORMAL	
SANG	Correlation Search Angle	35	DEG
SBUT	DIP Set of Buttons	MSD	
SDFA	Side-by-Side Distance Factor	0.9	IN
SPAN	DIP Spanning	1/4	
STDA	Structural DIP Azimuth	0	DEG
STDI	Structural DIP Angle	0	DEG
STEP	Correlation Step	2	FT
XGAI	Gain	GAIN_2	
XOFF	Offset	OFFSET_0	

Format: Dip Vertical Scale: 5" per 100' Graphics File Created: 04-Jun-2000 01:53

OP System Version: 9C1-303

MCM

MEST-C	9C1-303	SGT-L	OP91-KP1a
TCC-BF	OP91-KP1a		

Input DLIS Files

DEFAULT	MEST .023	FN:20 PRODUCER	04-Jun-2000 00:03	2308.0 FT	403.5 FT

Output DLIS Files

DEFAULT	MEST .026	FN:23 PRODUCER	04-Jun-2000 01:53

Schlumberger

REPEAT ANALYSIS

MAXIS 500 Field Log

Output DLIS Files

DEFAULT	MEST .024	FN:21 PRODUCER	04-Jun-2000 01:07	702.0 FT	413.6 FT

OP System Version: 9C1-303

MCM

MEST-C	9C1-303	SGT-L	OP91-KP1a
TCC-BF	OP91-KP1a		

PIP SUMMARY

Time Mark Every 60 S

Relative Bearing (RB_MEST) -40 (DEG) 360

Pad One Azimuth (P1AZ_MEST) -40 (DEG) 360

Hole Azimuth (HAZIM) -40 (DEG) 360

Gamma Ray (GR) 0 (GAPI) 150

Deviation (DEVIM) 0 (DEG) 10

Caliper 2 (C2) 6 (IN) 16

EMEX Intensity (EI) 0 (AMPS) 10

Bit Size (BS) 6 (IN) 16

EMEX Voltage (EV) 0 (V) 50

Data Button 8 - Varies with RBS (U-MEST_RB8) -80 (----) 20

Data Button 7 - Varies with RBS (U-MEST_RB7) -70 (----) 30

Data Button 6 - Varies with RBS (U-MEST_RB6) -60 (----) 40

Data Button 5 - Varies with RBS (U-MEST_RB5) -50 (----) 50

Data Button 4 - Varies with RBS (U-MEST_RB4) -40 (----) 60

Data Button 3 - Varies with RBS (U-MEST_RB3) -30 (----) 70

Data Button 2 - Varies with RBS (U-MEST_RB2) -20 (----) 80

Data Button 1 - Varies with RBS (U-MEST_RB1) -10 (----) 90

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

MEST_PADD (U-MEST_RESISTIVITY_PADD_DS) (----)

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

MEST_PADC (U-MEST_RESISTIVITY_PADC_DS) (----)

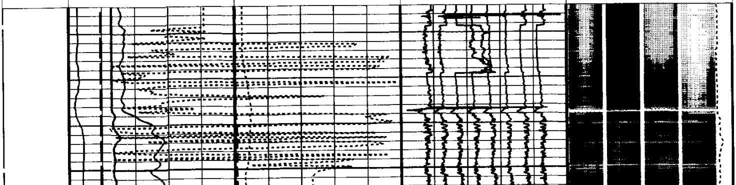
0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

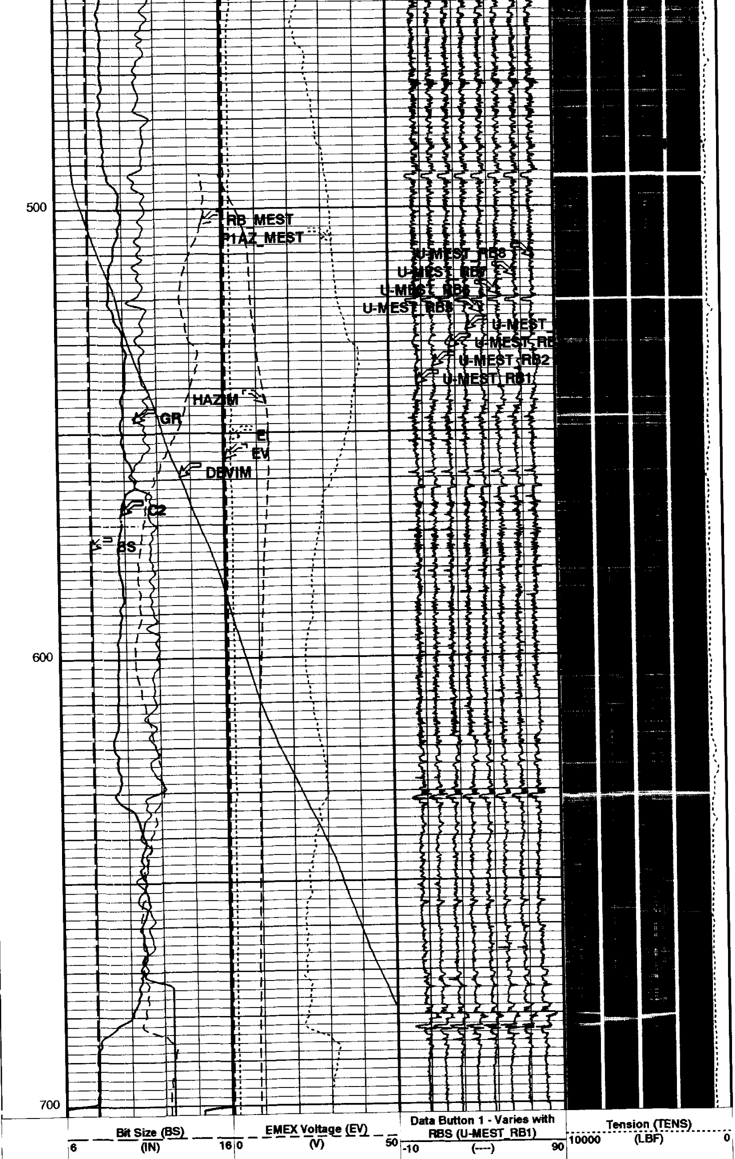
MEST_PADB (U-MEST_RESISTIVITY_PADB_DS) (----)

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086

MEST_PADA (U-MEST_RESISTIVITY_PADA_DS) (----)

Tension (TENS) 10000 (LBF) 0





EMEX Intensity (EI)
0 (AMPS) 10

Caliper 2 (C2)
6 (IN) 16

Deviation (DEVIM)
0 (DEG) 10

Gamma Ray (GR)
0 (GAPI) 150

Hole Azimuth (HAZIM)
-40 (DEG) 360

Pad One Azimuth (P1AZ_MEST)
-40 (DEG) 360

Relative Bearing (RB_MEST)
-40 (DEG) 360

Data Button 2 - Varies with RBS (U-MEST_RB2)
-20 (----) 80

Data Button 3 - Varies with RBS (U-MEST_RB3)
-30 (----) 70

Data Button 4 - Varies with RBS (U-MEST_RB4)
-40 (----) 60

Data Button 5 - Varies with RBS (U-MEST_RB5)
-50 (----) 50

Data Button 6 - Varies with RBS (U-MEST_RB6)
-60 (----) 40

Data Button 7 - Varies with RBS (U-MEST_RB7)
-70 (----) 30

Data Button 8 - Varies with RBS (U-MEST_RB8)
-80 (----) 20

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086
MEST_PADA (U-MEST_RESISTIVITY_PADA_DS)
(----)

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086
MEST_PADB (U-MEST_RESISTIVITY_PADB_DS)
(----)

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086
MEST_PADC (U-MEST_RESISTIVITY_PADC_DS)
(----)

0.3776 1.8629 2.4571 2.9027 3.3483 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6556 9.4517 12.4086
MEST_PADD (U-MEST_RESISTIVITY_PADD_DS)
(----)

PIP SUMMARY

▶ Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
BS	Bit Size	7.875	IN
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MDEC	Magnetic Field Declination	18.3096	DEG
MLM	MEST Logging Mode	SCAN1800	
RBS	Resistivity Button Selection	AUTO	
XGAI	Gain	GAIN_2	
XOFF	Offset	OFFSET_0	

Format: MEST_C_IMAGE Vertical Scale: 5" per 100' Graphics File Created: 04-Jun-2000 01:07

OP System Version: 9C1-303

MCM

MEST-C	9C1-303	SGT-L	OP91-KP1a
TCC-BF	OP91-KP1a		

Output DLIS Files

DEFAULT MEST .024 FN:21 PRODUCER 04-Jun-2000 01:07

COMPANY:	NORTHWEST NATURAL GAS	BOTTOM LOG INTERVAL	2309 ft
		SCHLUMBERGER DEPTH	2317 ft
WELL:	OM 43A-22-65	DEPTH DRILLER	2.3e+011 ft
FIELD:	MIST	KELLY BUSHING	872.23 ft
COUNTY:	COLUMBIA	DRILL FLOOR	871.23 ft
STATE:	OREGON	GROUND LEVEL	862.23 ft

Schlumberger

FORMATION MICRO SCANNER
MSDip
SCALE: 5" = 100'