COMPANY: NORTHWEST NATURAL GAS

WELL: OM 22-26-65 RD

FIELD: MIST

COUNTY: COLUMBIA **STATE:** OREGON

COUNTY: COLUMBIA
Field: MIST
Location: 1744.22' SOUTH, 2512.13' EAS
Well: OM 22-26-65 RD
Company: NORTHWEST NATURAL GAS

Schlumberger

FORMATION MICRO IMAGER
MSDip
SCALE: 5" = 100'

LOCATION	1744.22' SOUTH, 2512.13' EAST FROM THE NW CORNER OF 26	Elev.:	K.B. 631 ft G.L. 621 ft D.F. 629 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
36-009-00330	26	6N	5W

Logging Date	21-MAY-2000		
Run Number	1		
Depth Driller	2151 ft		
Schlumberger Depth	2144 ft		
Bottom Log Interval	2136 ft		
Top Log Interval	487 ft		
Casing Driller Size @ Depth	7.000 in	@	487 ft
Casing Schlumberger	487 ft		
Bit Size	6.250 in		
Type Fluid In Hole	DMA		
MUD Density / Viscosity	8.9 lbm/gal	45 s	
Fluid Loss / PH	6.6 cm3	9	
Source Of Sample	FLOWLINE		
RM @ Measured Temperature	1.185 ohm.m	@	76 degF
RMF @ Measured Temperature	1.050 ohm.m	@	72 degF
RMC @ Measured Temperature	0.930 ohm.m	@	76 degF
Source RMF / RMC	PRESS	PRESS	
RM @ MRT / RMF @ MRT	0.936 @ 98	0.789	@ 98
Maximum Recorded Temperatures	98 degF	98	98
Circulation Stopped / Time	21-MAY-2000		9:30
Logger On Bottom / Time	21-MAY-2000		15:26
Unit Number / Location	3152	SACRAMENTO	
Recorded By	M.KHAN		
Witnessed By	JACK MEYER		

SCANNED

	Run 1	Run 2	Run 3	Run 4
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				
Fluid Loss / PH				
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				

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: PEX	OS1:
OS2: BHC	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2

RUN 1		RUN 2	
SERVICE ORDER #		SERVICE ORDER #	
PROGRAM VERSION:	9C1-303	PROGRAM VERSION:	
FLUID LEVEL:	0 ft	FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

GSR-U/Y
WITM (DTS)-A

DOWNHOLE EQUIPMENT

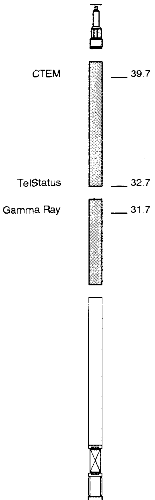
LEH-QT 43.6
LEH-QT

DTC-A 40.7
ECH-KN
DTC-A

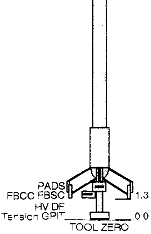
SGT-N 32.7
SGH-K
SGC-SA
SGD-TAA

FBST-A 27.2
ECH-MRA
FBCC-A
AH-184
AH-185
FBSS-A
FBSC-A

GPIC-C



RUN 2



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

Output DLIS Files

DEFAULT	FBSTA .013	FN:12 PRODUCER	21-May-2000 15:42	2156.0 FT	466.0 FT

OP System Version: 9C1-303

MCM

FBST-A	9C1-303	SGT-N	OP91-KP1a
DTC-A	OP91-KP1a		

FMI Dip buttons values are Not corrected by Emex or Gain.

PIP SUMMARY

Time Mark Every 60 S

Gamma Ray (GR)
0 (GAPI) 150

Caliper 2 (C2)
6 (IN) 11

Dip Azimuth

△

MSD_Angle (MSD_Angle)
(DEG)
0 90

BHDrift
(BHDrift)
(DEG)
0 30

Hole
Azimuth

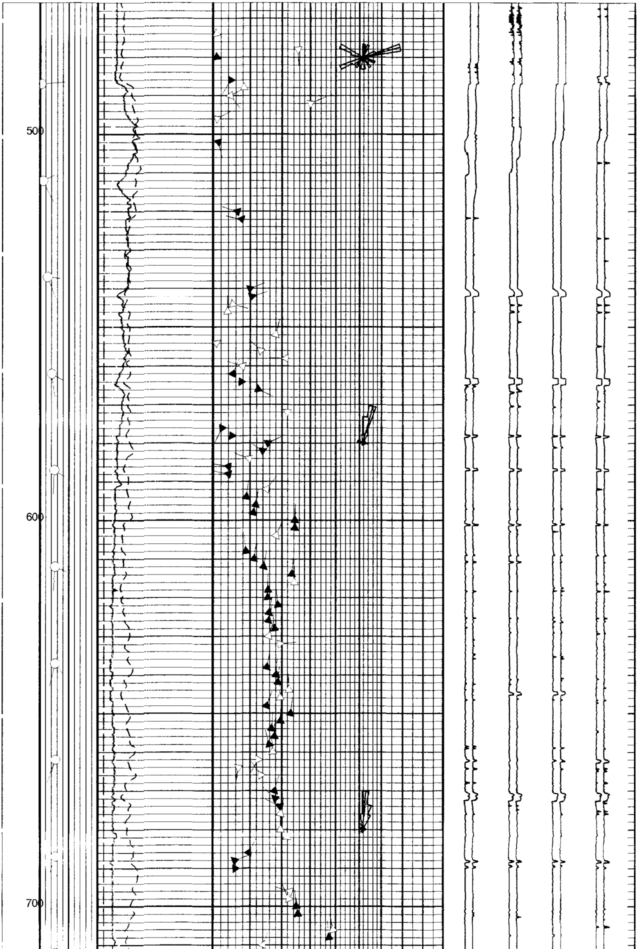
Pad 1
Azimuth

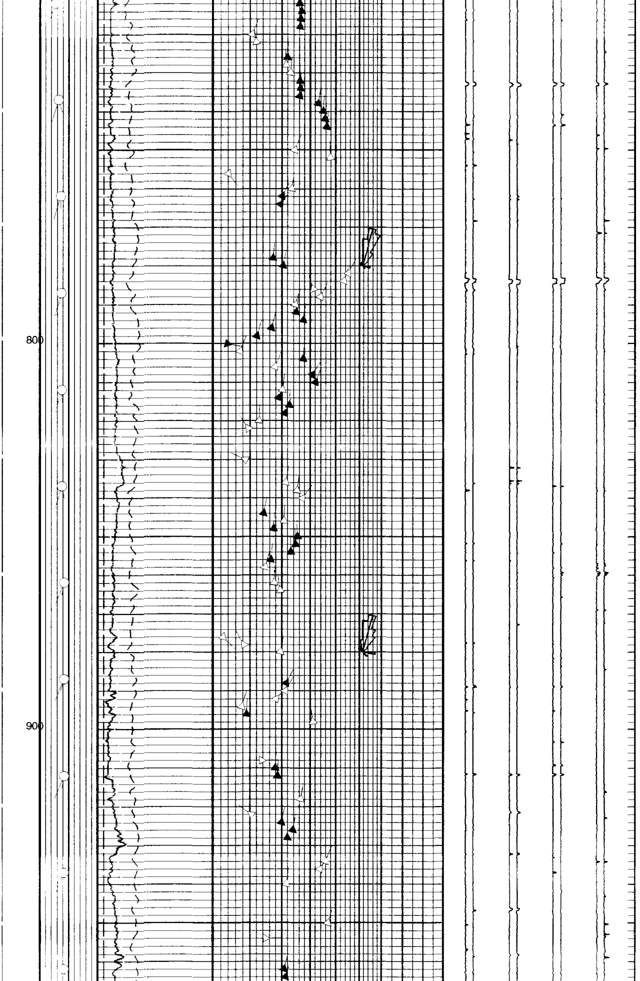
Bit Size (BS)
6 (IN) 11

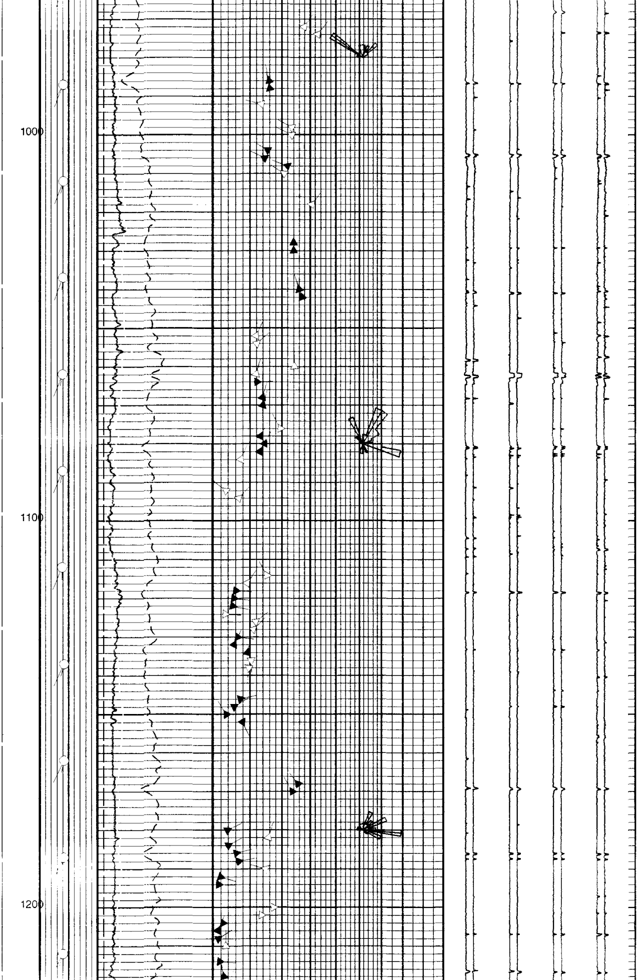
N
W E
S

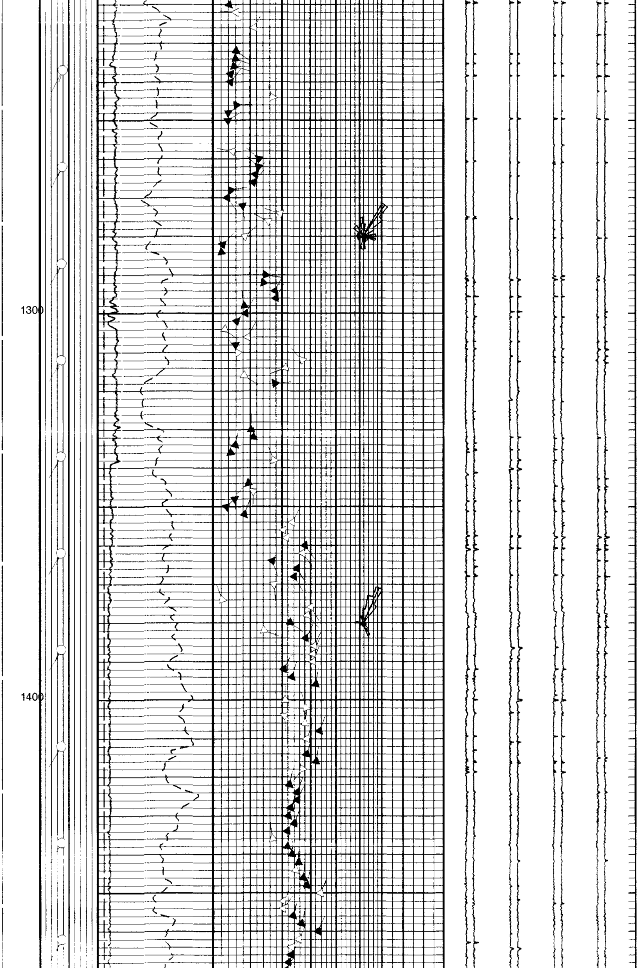
FMI dip buttons

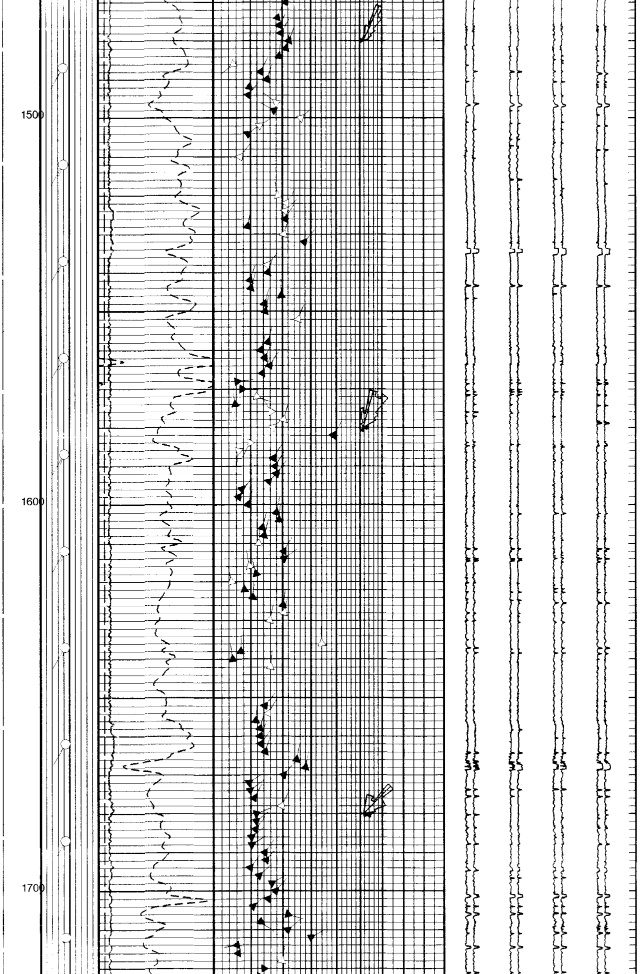
DB4A DB4
DB3A DB3
DB2A DB2
DB1A DB1

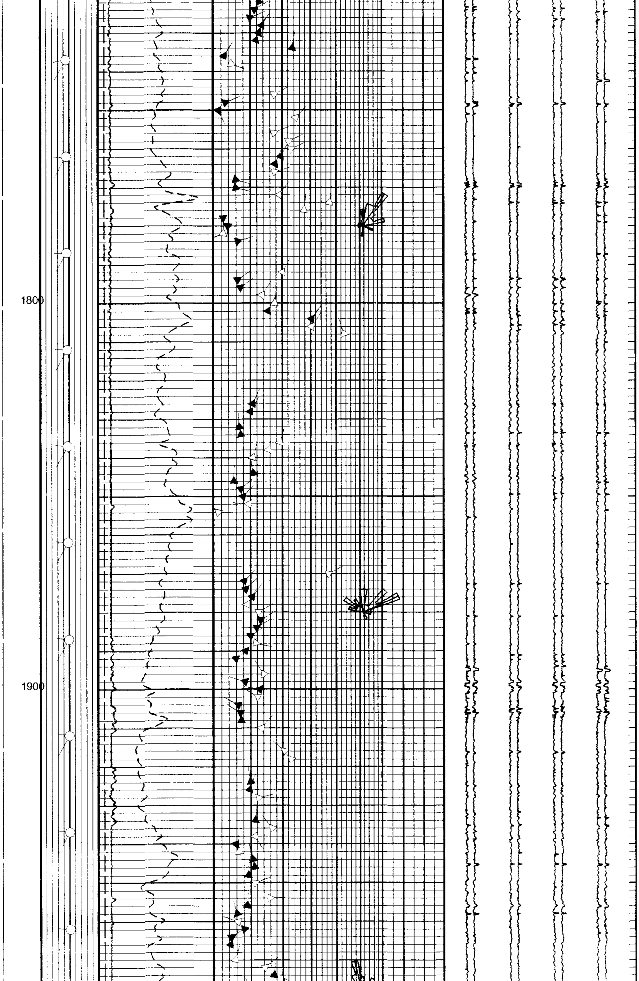


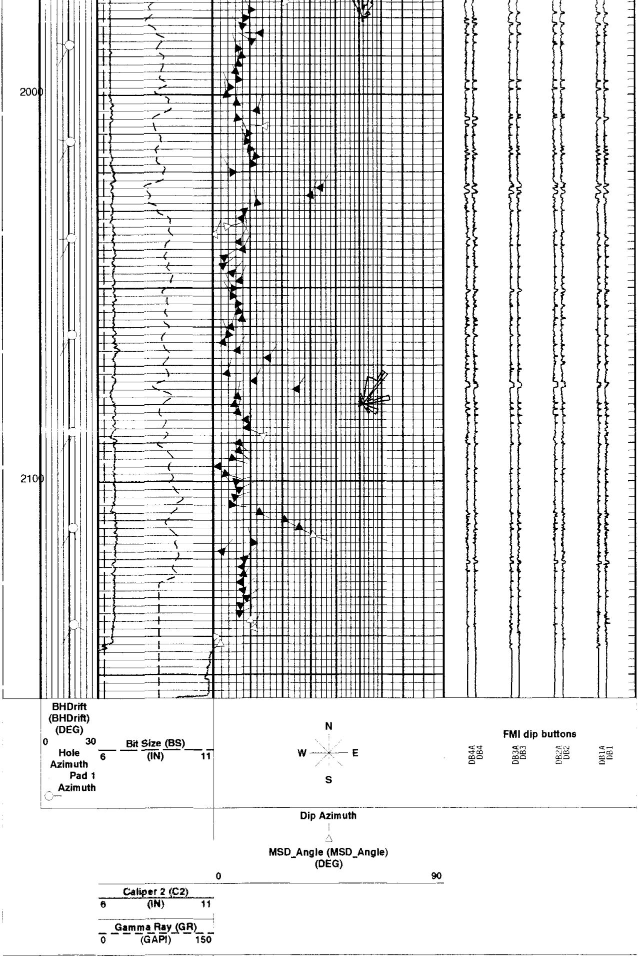












PIP SUMMARY

Time Mark Every 60 S

FMI Dip buttons values are Not corrected by Emex or Gain.

Format: FMI_MSDip Vertical Scale: 5" per 100' Graphics File Created: 21-May-2000 15:42

OP System Version: 9C1-303

MCM

FBST-A	9C1-303	SGT-N	OP91-KP1a
DTC-A	OP91-KP1a		

Parameters

DLIS Name	Description	Value	
	DIP Tool	FBST	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
BS	Bit Size	6.250	IN
CSBL	CSB DIP Number of Levels	2L	
DPAD	Disabled Pad	NONE	
ELRA	Electrical Radius	0.5	IN
FBCD	FMI Correct Dip values from Emex, Gain	OFF	
FLM	FMI Logging Mode	8PAD	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
INT	Correlation Interval	4	FT
MDEC	Magnetic Field Declination	18.3206	DEG
SANG	Correlation Search Angle	35	DEG
SBUT	DIP Set of Buttons	MSD	
SDFA	Side-by-Side Distance Factor	0.9	IN
SOFF	Stand-Off	0	IN
SPAN	DIP Spanning	1/4	
STDA	Structural DIP Azimuth	0	DEG
STDI	Structural DIP Angle	0	DEG
STEP	Correlation Step	2	FT

Output DLIS Files

DEFAULT FBSTA .013 FN:12 PRODUCER 21-May-2000 15:42

Output DLIS Files

DEFAULT FBSTA .012 FN:11 PRODUCER 21-May-2000 15:26 2150.0 FT 1841.5 FT

OP System Version: 9C1-303

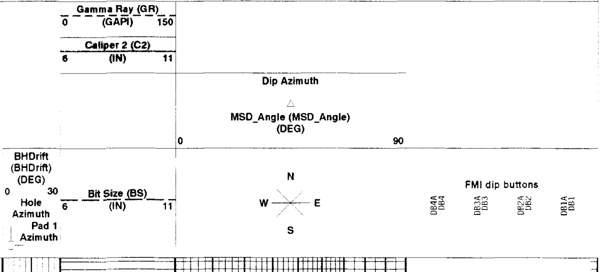
MCM

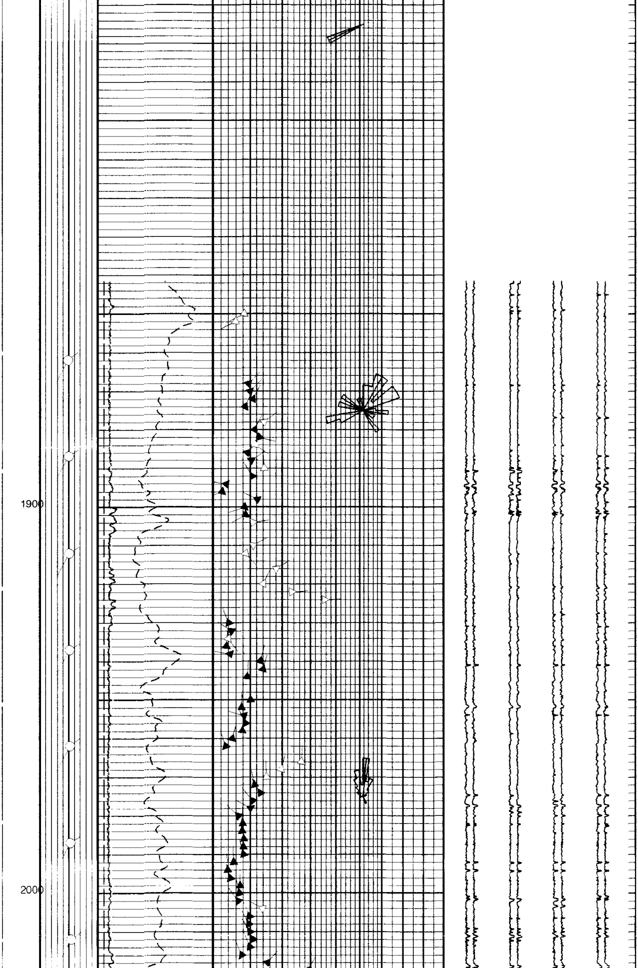
FBST-A	9C1-303	SGT-N	OP91-KP1a
DTC-A	OP91-KP1a		

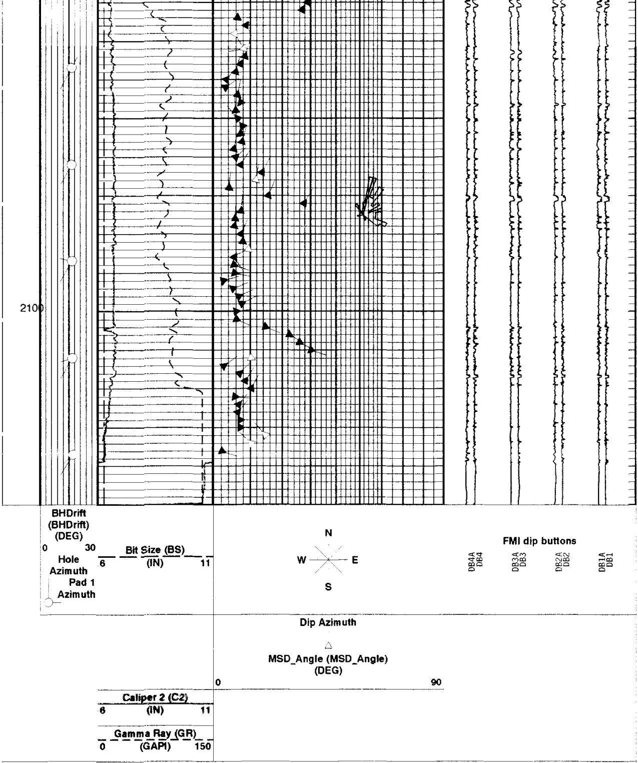
FMI Dip buttons values are Not corrected by Emex or Gain.

PIP SUMMARY

Time Mark Every 60 S







PIP SUMMARY

Time Mark Every 60 S

FMI Dip buttons values are Not corrected by Emex or Gain.

Format: FMI_MSDip   Vertical Scale: 5" per 100'   Graphics File Created: 21-May-2000 15:26

OP System Version: 9C1-303

MCM

FBST-A	9C1-303	SGT-N	OP91-KP1a
DTC-A	OP91-KP1a		

Parameters

DLIS Name	Description	Value

	DIP Tool	FBST	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
BS	Bit Size	6.250	IN
CSBL	CSB DIP Number of Levels	2L	
DPAD	Disabled Pad	NONE	
ELRA	Electrical Radius	0.5	IN
FBCD	FMI Correct Dip values from Emex, Gain	OFF	
FLM	FMI Logging Mode	8PAD	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
INT	Correlation Interval	4	FT
MDEC	Magnetic Field Declination	18.3206	DEG
SANG	Correlation Search Angle	35	DEG
SBUT	DIP Set of Buttons	MSD	
SDFA	Side-by-Side Distance Factor	0.9	IN
SOFF	Stand-Off	0	IN
SPAN	DIP Spanning	1/4	
STDA	Structural DIP Azimuth	0	DEG
STDI	Structural DIP Angle	0	DEG
STEP	Correlation Step	2	FT

Output DLIS Files

DEFAULT FBSTA .012 FN:11 PRODUCER 21-May-2000 15:26

COMPANY:	**NORTHWEST NATURAL GAS**	BOTTOM LOG INTERVAL	2136 ft
		SCHLUMBERGER DEPTH	2144 ft
WELL:	**OM 22-26-65 RD**	DEPTH DRILLER	2151 ft
FIELD:	**MIST**	KELLY BUSHING	631 ft
COUNTY:	**COLUMBIA**	DRILL FLOOR	629 ft
STATE:	**OREGON**	GROUND LEVEL	621 ft

Schlumberger

FORMATION MICRO IMAGER
MSDip
SCALE: 5" = 100'