

COMPANY: NORTHWEST NATURAL GAS

WELL: I.W. 24C-23-65

FIELD: CALVIN CREEK GAS STORAGE

COUNTY: COLUMBIA **STATE: OREGON**

Schlumberger **PLATFORM EXPRESS**
BHC SONIC /SP/GR
SCALE: 2" = 100'

LOCATION: 965.3' N & 1258.4' E FROM THE
W. 24C-23-65
NORTHWEST NATURAL GAS

LOG MEASUREMENT FROM: KCB
PERMANENT DATUM: JBRUND LEVEL
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PERMANENT DATUM: JBRUND LEVEL

APR DEPTH NO: 38-009-00300
SECTION: 23
TOWNSHIP: 23N
RANGE: 36E

Logging Date: 28/05/2000
Log Depth: 2591.1
Depth of Well: 1724 ft
Bottom of Hole: 2591 ft
Bottom of Hole: 1724 ft
Bottom of Hole: 1724 ft
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Wellbore Diameter: 4.863 in @ 1724 ft
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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 WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED DATA; AND (c) CUSTOMERS FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED DATA.

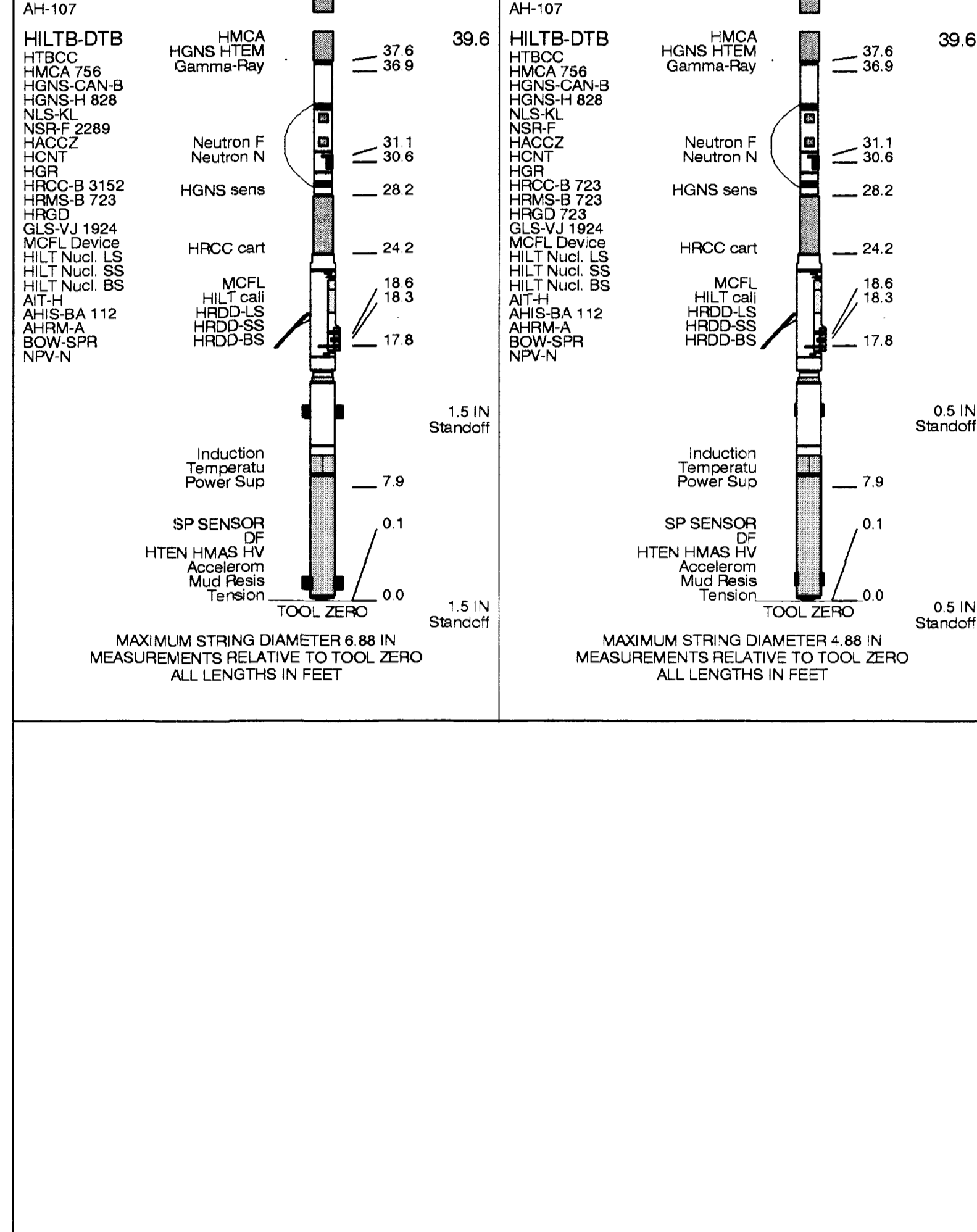
OTHER SERVICES: OS1: FM GR
OS2:
OS3:
OS4:
OS5:
REMARKS: RUN NUMBER 1

OTHER SERVICES: OS1: FM GR
OS2:
OS3:
OS4:
OS5:
REMARKS: RUN NUMBER 2

SERVICE ORDER #
PROGRAM VERSION:
FLUID LEVEL:
LOGGED INTERVAL: START STOP

SERVICE ORDER #
PROGRAM VERSION:
FLUID LEVEL:
LOGGED INTERVAL: START STOP

EQUIPMENT DESCRIPTION



Input DLIS Files

DEFAULT HILTB_036 FN:1 PRODUCER 07-May-2000 13:15 2807.0 FT 300.0 FT

Output DLIS Files

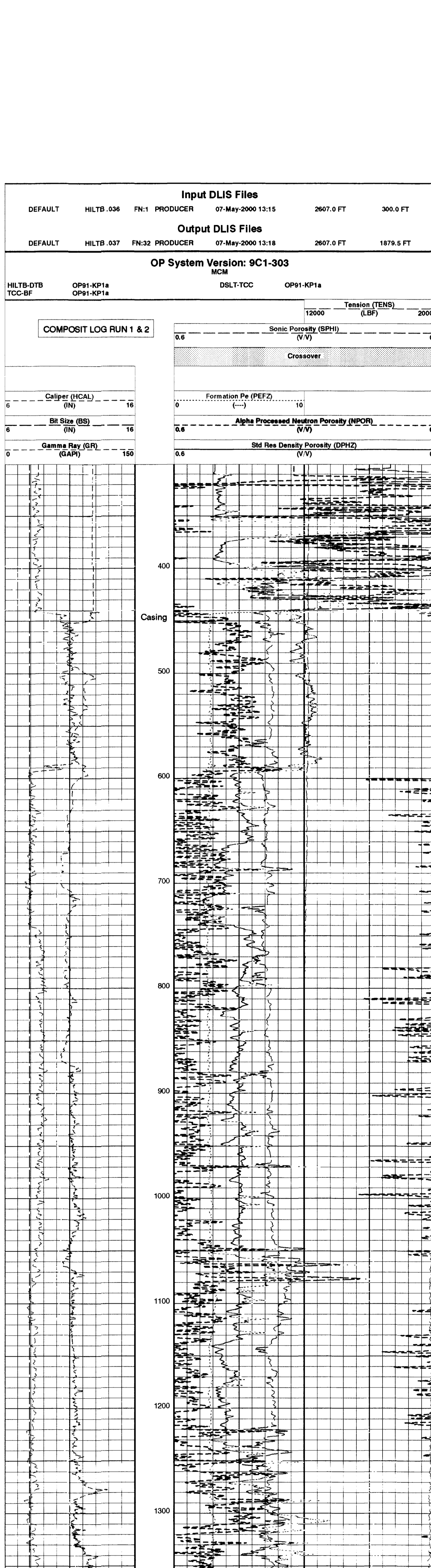
DEFAULT HILTB_037 FN:32 PRODUCER 07-May-2000 13:18 2807.0 FT 1879.5 FT

OP System Version: 9C1-303

HILTB-DTB OP91-KP1a DMLT-TCC OP91-KP1a

TCC-BF OP91-KP1a

COMPOSIT LOG RUN 1 & 2



AIT-H Answer Product Processing Summary: Data taken with Tool # 112 (AHTNO)
...Acquired data from HILT/HAIT

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)
Tool is run in ECCENTERED mode with a tool stand-off of 1.50 IN. Bit Size is 7.88 IN.

Caliper (GCSE): HCAL Mud Resistivity (GRSE): AHMF Temperature (GTSE): LINEAR_ESTIMATE Porosity (FPHI): DPHZ

Surface Depth Temperature (SHT) 68.000 DEG F Bottom Temperature (BHT) 92.000 DEG F

Total Hole (TD) 2591.000 FT Form Factor Element (FEXP) 2.00

Mud Filtrate Sample Resistivity (RMFS) 1.250 OHMM Mud Filtrate Sample Temperature (MFT) 52.000 DEG F

Resistivity Connate Water (RW) 1.000 OHMM

Playback Mode: NORMAL

Parameters

DLIS Name	Description	Value
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BSAL	Bit Size	7.875 IN
BSCO	Borehole Saliinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
COIS	C-Data-T Site	100 PPM
CWEI	Casing Weight	34.00 LB/FT
DO	Depth Offset for Logical Unit 1	0.0 FT
DIC	Depth of Inflow Control Valve	189 FT
DTM	Delta-T Matrix	56 US/F
FDL	Fluid Density	1 G/C3
FRAL	Formation Saliinity	NATU
FSCO	Formation Saliinity Correction Option	-50000
GCSE	Generalized Core Selection	NO
GGRO	Average Angular Deviation of Borehole from Normal	HCAL
HCON	Geothermal Gradient	35 DEG
HSCO	Hole Size Correction Option	NO
HSTI	Hole Size Correction Option	YES
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
MCCO	Mud Cake Correction Option	NO
MCCR	Mud Correction	NO
MDEN	Matrix Density	1.25 G/C3
MWCO	Mud Weight Correction Option	NATU
NAAC	HRDD APS Activation Correction	OFF
NM	HRDD Nuclear Mud Type	NO
NFM	HRDD Processing Mode	NO
NSAR	HRDD Depth Sampling Rate	1 IN
PTCO	Pressure/Temperature Correction Option	NORMAL
SDAT	Standoff Data Source	NO
SHT	Surface Hole Temperature	58 DEG F
SOCC	Standoff Correction Option	0.125 IN
SPFS	Sonic Porosity Formula	RAYMER_HUNT
SPO	Sonic Porosity Source	NO
TLD	TVD of Starting Point	DT
TVD	Total Depth - Logger	500 FT
TVD	Along-hole depth of Tie-in Point	500 FT
TVD	TVD of Tie-in Point	500 FT
TVD	TVD of Tie-in Point	500 FT

Form: POROS2 Vertical Scale: 2" per 100' Graphics File Created: 07-May-2000 13:18

OP System Version: 9C1-303

HILTB-DTB OP91-KP1a DMLT-TCC OP91-KP1a

TCC-BF OP91-KP1a

Input DLIS Files

DEFAULT HILTB_036 FN:1 PRODUCER 07-May-2000 13:15 2807.0 FT 300.0 FT

Output DLIS Files

DEFAULT HILTB_037 FN:32 PRODUCER 07-May-2000 13:18 2807.0 FT 1879.5 FT

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WELL: I.W. 24C-23-65

FIELD: CALVIN CREEK GAS STORAGE

COUNTY: COLUMBIA

STATE: OREGON

BOTTOM LOG INTERVAL: 1740 ft

SCHLUMBERGER DEPTH: 1748 ft

DEPTH DRILLER: 1748 ft

KELLY BUSHING: 922.5 ft

DRILL FLOOR: 922.3 ft

GROUND LEVEL: 905 ft

Schlumberger **PLATFORM EXPRESS**
BHC SONIC /SP/GR
SCALE: 2" = 100'