

Field: CALVIN CREEK-REICHOLD P  
 Location: SHL 976.5 NORTH & 1256.3  
 Well: IW 14dH-23-65  
 Company: NORTHWEST NATURAL GAS  
 LOCATION  
 SHL 976.5 NORTH & 1256.3 EAST  
 FROM THE SW CORNER  
 Permanent Datum: K.B  
 Log Measured from: K.B  
 DRING Measured from: K.B  
 GROUND LEVEL: E.M.: K.B, 923 ft  
 Q.L.: 905 ft  
 D.F.: 921.5 ft  
 18.0 ft above Perm Datum

County: COLUMBIA  
 Section: 23  
 Township: 30N  
 Range: 5W  
 AAT Serial No.: 36-099-00353  
 Log Date: 21-Oct-2001  
 Log Time: 21:58:11  
 Schlumberger Depth: 2152 ft  
 Edition Log Interval: 2152 ft  
 Casing Depth @ Depth: 13375 ft  
 Casing Schlumberger: 2144 ft

Bit Size: 12.250 in  
 Drill Pipe: 5.625 in  
 Fluid Loss: 8.5  
 MUD: 3.920 spm @ 55 degF  
 Sulfur: 3.869 spm @ 55 degF  
 Temperature: 3.869 spm @ 55 degF  
 FMI: 3.869 spm @ 55 degF  
 FMI @ MFT: 2.098 @ 90  
 FMI @ MFT: 1.888 @ 90  
 FMI @ MFT: 2.392 @ 77  
 FMI @ MFT: 2.392 @ 77  
 Log Date: 21-Oct-2001  
 Log Time: 21:58:11  
 Log Interval: 4.00  
 Log Unit Bottom: 27-Oct-2001  
 Log Unit Top: 27-Oct-2001  
 Log Unit Bottom: 28:30  
 Log Unit Top: 28:30  
 Log Unit Bottom: 28:30  
 Log Unit Top: 28:30

Run 1	Run 2	Run 3	Run 4
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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 REGARDING 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) CUSTOMERS 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: FMI-GR	OS1: USIT
OS2:	OS2: NEUTRON
OS3:	OS3: PER FMI/SONIC ON
OS4:	OS4: TLC
OS5:	OS5:

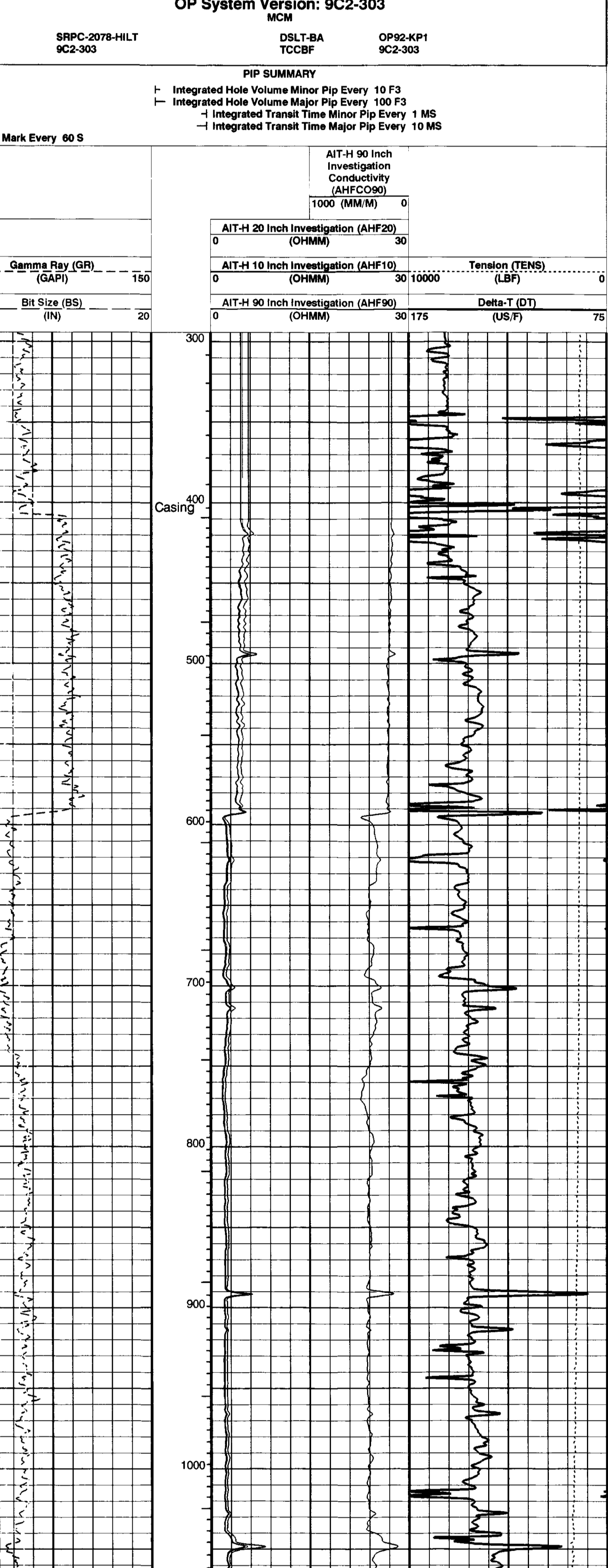
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Run 1 - FROM 1668 TO 400 FT RECORDED WITH WIRELINE	Run ON TLC
Run 2 - FROM TD 2152 TO 1500 FT RECORDED WITH TLC EQUIPMENT	USED FOUR KNUCKLE JOINTS AND THREE GEMCOS
MAXIMUM HOLE DEVIATION: 73.8 DEG AT 1776 FT.	

SERVICE ORDER #:	9C2-303	SERVICE ORDER #:	9C2-303
PROGRAM VERSION:	0 ft	PROGRAM VERSION:	0 ft
LOGGED INTERVAL	START STOP	LOGGED INTERVAL	START STOP

EQUIPMENT DESCRIPTION

RUN 1	RUN 2
SURFACE EQUIPMENT	SURFACE EQUIPMENT
WITM (CTS)-A	WITM (CTS)-A
GSR-U/Y	GSR-U/Y
NCF-B	NCF-B
CNB-AB	CNB-AB
NCS-VB	NCS-VB

DOWNHOLE EQUIPMENT



MAXIMUM STRING DIAMETER 6.88 IN  
 MEASUREMENTS RELATIVE TO TOOL ZERO  
 ALL LENGTHS IN FEET

Input DLIS Files

DEFAULT Splice\_AIT\_TLD\_MCFI\_003CUP FN:1 PRODUCER 16-Nov-2001 12:01 3024.0 FT 293.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 306.40 ft3  
 Cement Volume = 161.79 ft3 (assuming 5.50 in casing O.D.)  
 Computed from 3020.0 ft to 2144.0 ft

OP System Version: 9C2-303

MCM  
 HILTB SRPC-2078-HILT DSLL-BA OP92-KP1  
 ACTS1 9C2-303 TCCBF 9C2-303

PIP SUMMARY

Integrated Hole Volume Minor Pip Every 10 F3  
 Integrated Hole Volume Major Pip Every 100 F3  
 Integrated Transit Time Minor Pip Every 1 MS  
 Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

AIT-H 90 Inch Investigation Conductivity (AHFCO90) 0  
 1000 (MM/M) 30

AIT-H 20 Inch Investigation (AHF20) 0  
 (OHMM) 30

AIT-H 10 Inch Investigation (AHF10) 0  
 (OHMM) 30

AIT-H 90 Inch Investigation (AHF90) 0  
 (OHMM) 30

Gamma Ray (GR) (GAPI) 150

Bit Size (BS) (IN) 20

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