COMPANY: NORTHWEST NATIONAL GAS CO.

WELL: OM 32-22-65

FIELD: CALVIN CREEK GAS STORAGE

COUNTY: COLUMBIA **STATE:** OREGON

Schlumberger

CEMENT BOND / VDL
GAMMA RAY
COLLAR LOG

COUNTY COLUMBIA
FIELD [illegible]

Logging Date	[illegible]	
Run No.	[illegible]	
Depth Driller	[illegible]	
Schlumberger Depth	[illegible]	
Bottom Log Interval	[illegible]	
Top Log Interval	[illegible]	
Casing Fluid Type	[illegible]	
Salinity		
Density		
Fluid Level		
BIT/CASING/TUBING STRING		
Bit Size	[illegible]	
From	[illegible]	
To	[illegible]	
Casing/Tubing Size	[illegible]	
Weight	[illegible]	
Grade	[illegible]	
From	[illegible]	
To	[illegible]	
Maximum Recorded Temperatures		
Logger On Bottom Time	20 AUG 1998	12:33
Unit Number Location	125	BAKERSFIELD
Recorded By	THORNBURY	
Witnessed By	CLAYTON ROTH	

PVT DATA

	Run 1
Oil Density	
Water Salinity	
Gas Gravity	
Bo	
Bw	
TPc	
Bubble Point Pressure	
Bubble Point Temperature	
Solution GOR	
Maximum Deviation	

Maximum Recorded Temperatures
Logger On Bottom Time
Unit Number Location
Recorded By
Witnessed By

Run 2

Run 3

Run 4

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 CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE

OTHER SERVICES1
OS1
OS2
OS3 PERFORATION
OS4
OS5

OTHER SERVICES2

REMARKS: RUN NUMBER 1

CORRELATED TO SWS PLATFORM [illegible]
DATED : 02-JUL-1996

THANK YOU FOR [illegible]

SWS CREW : RUDY CHIEPPA

RUN 1
SERVICE ORDER #
PROGRAM VERSION
LOGGED INTERVAL START STOP START STOP

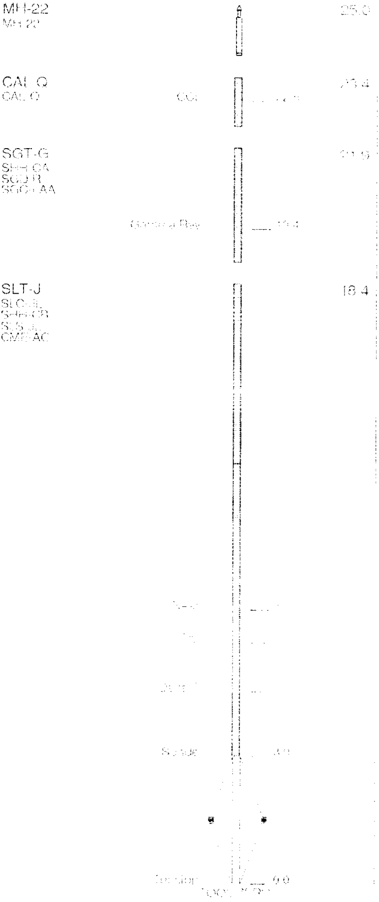
RUN 2

EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

DOWNHOLE EQUIPMENT



MAXIMUM STRING DIAMETER [illegible] IN
MEASUREMENTS RELATED TO TOOL ZERO
ALL LENGTHS IN FEET

Output DLIS Files

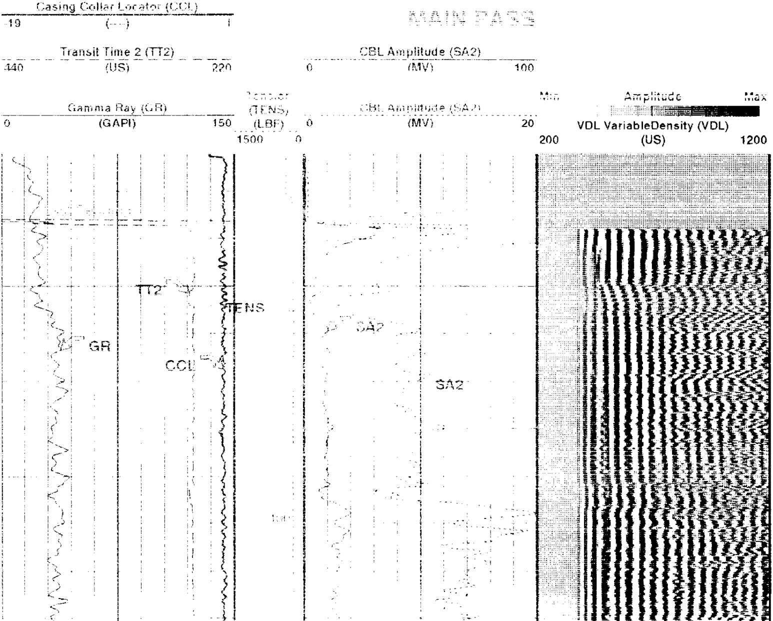
DEFAULT	SLTJ .008	FN 6	FIELD	20 Aug 1998 12:05	2261.5 FT	22.0 FT

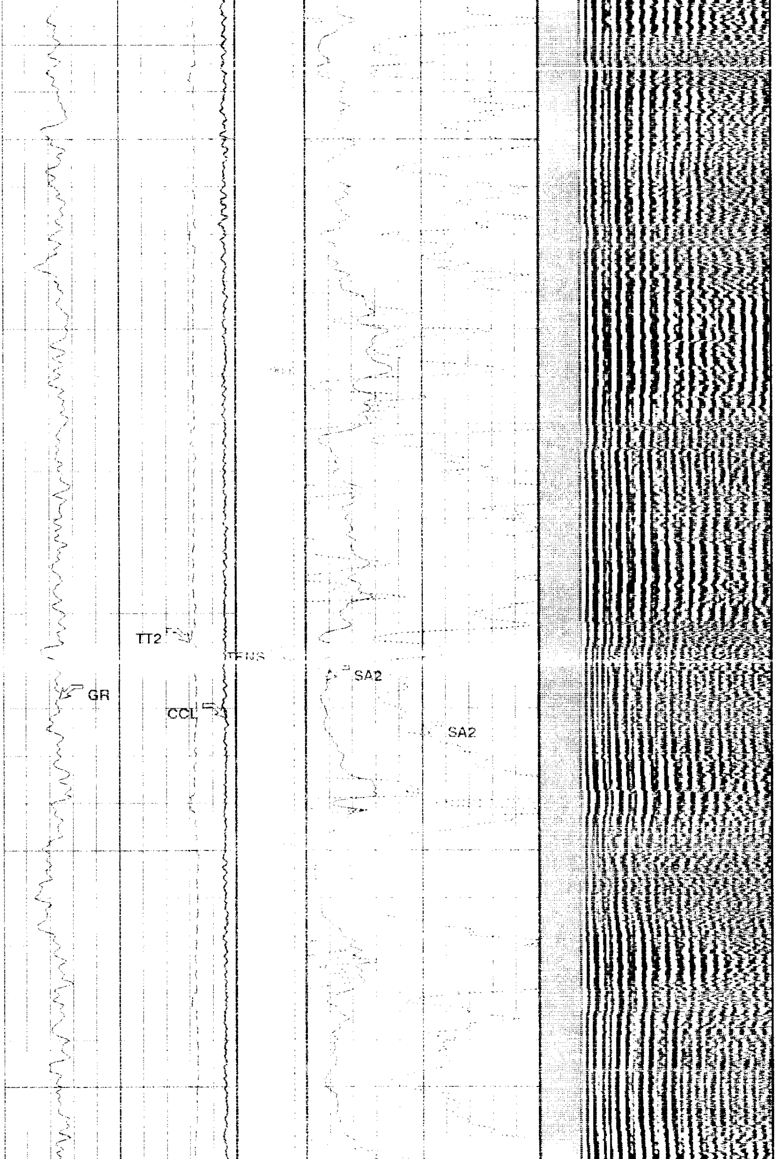
OP System Version: 8C0-609

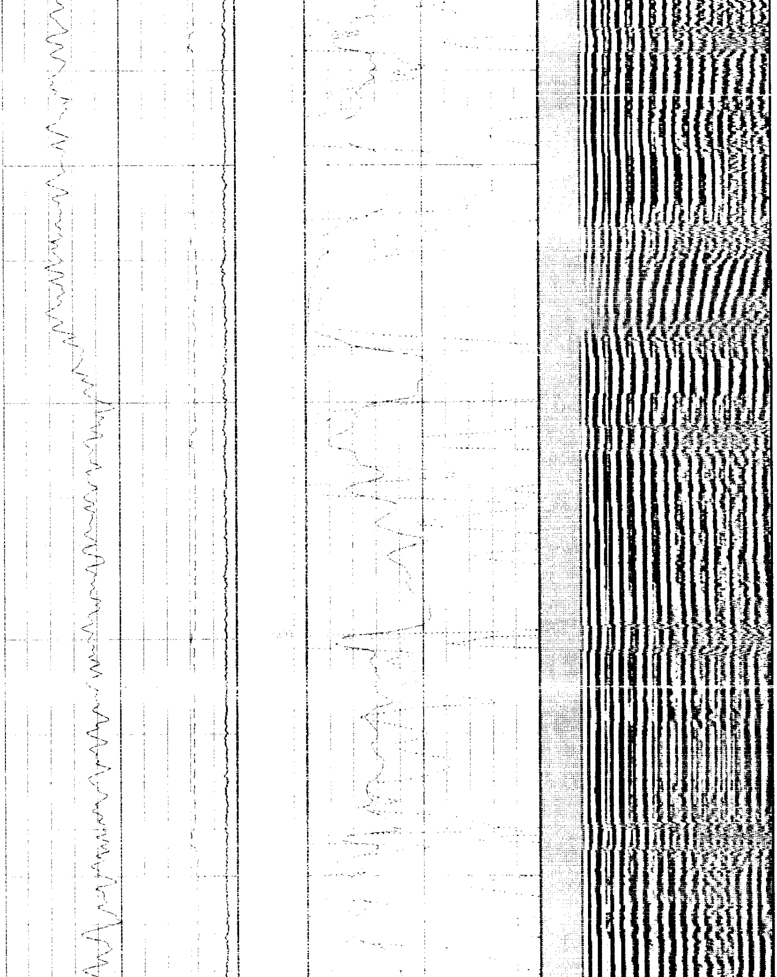
MCM

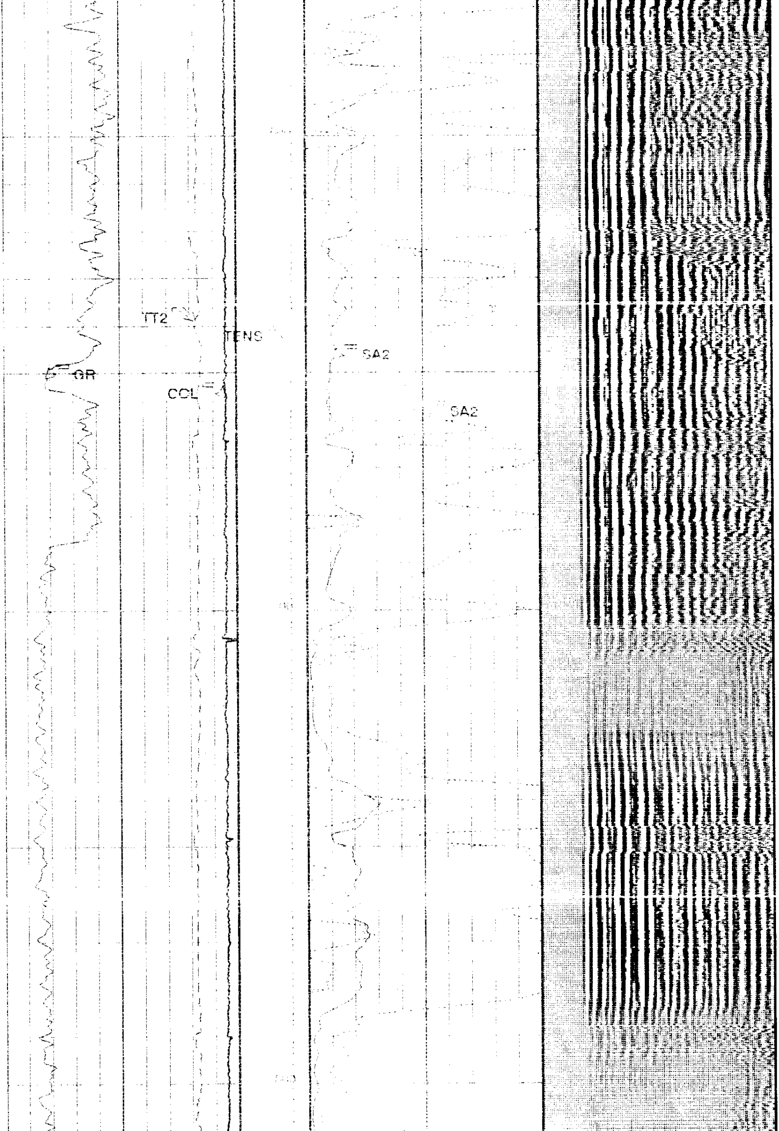
SLT-J	8C0-609	SGT-G	8C0-609
CAL-Q	8C0-609		

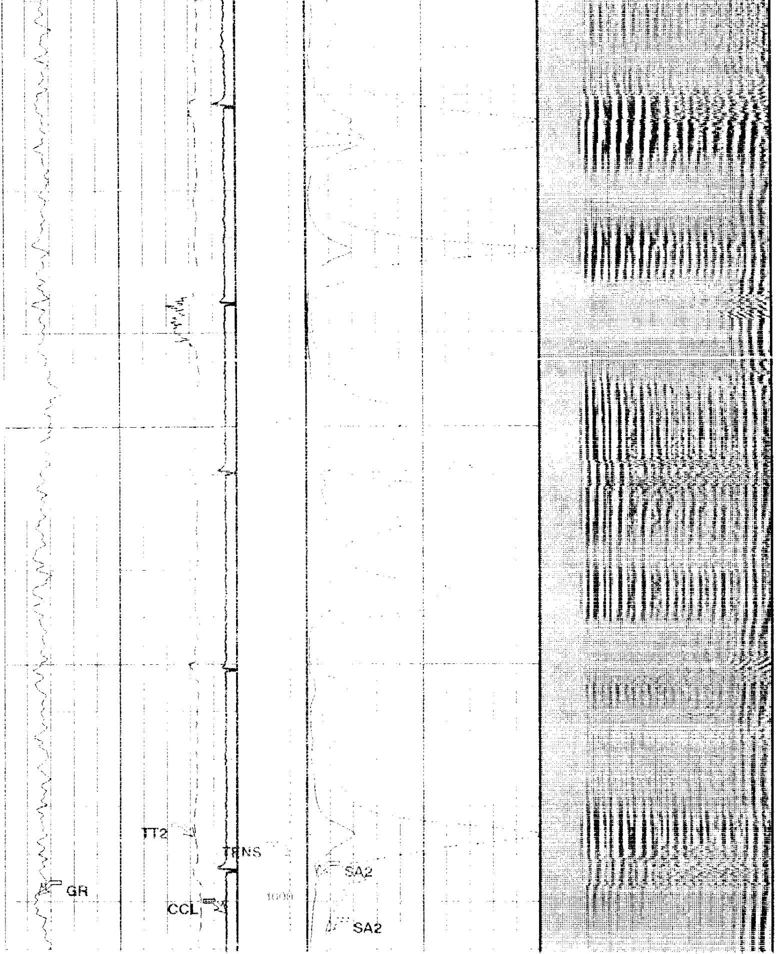
MAIN PASS

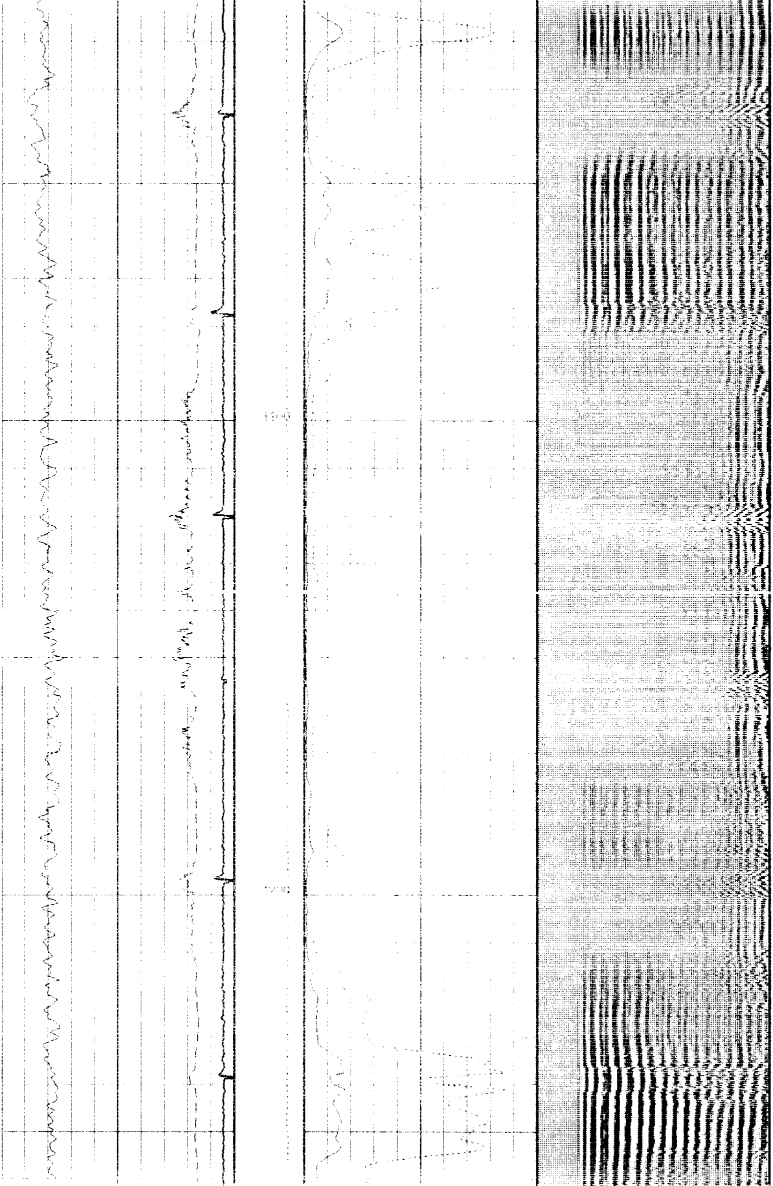


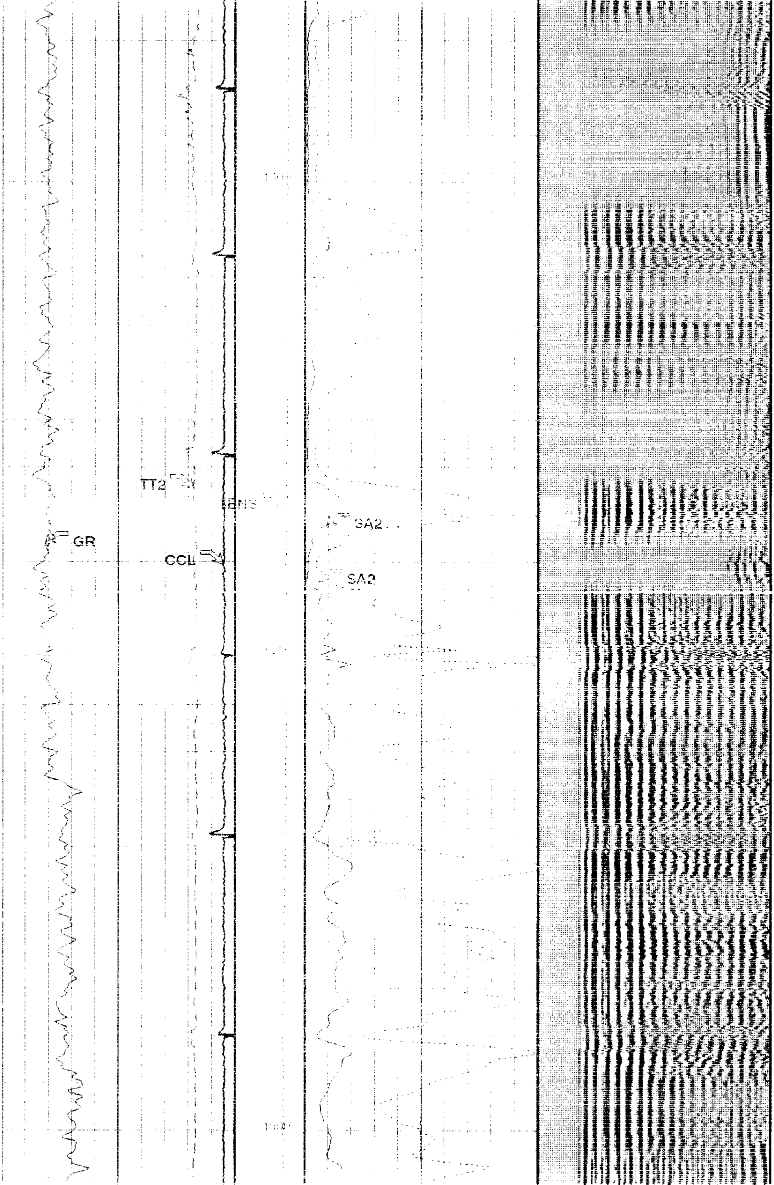


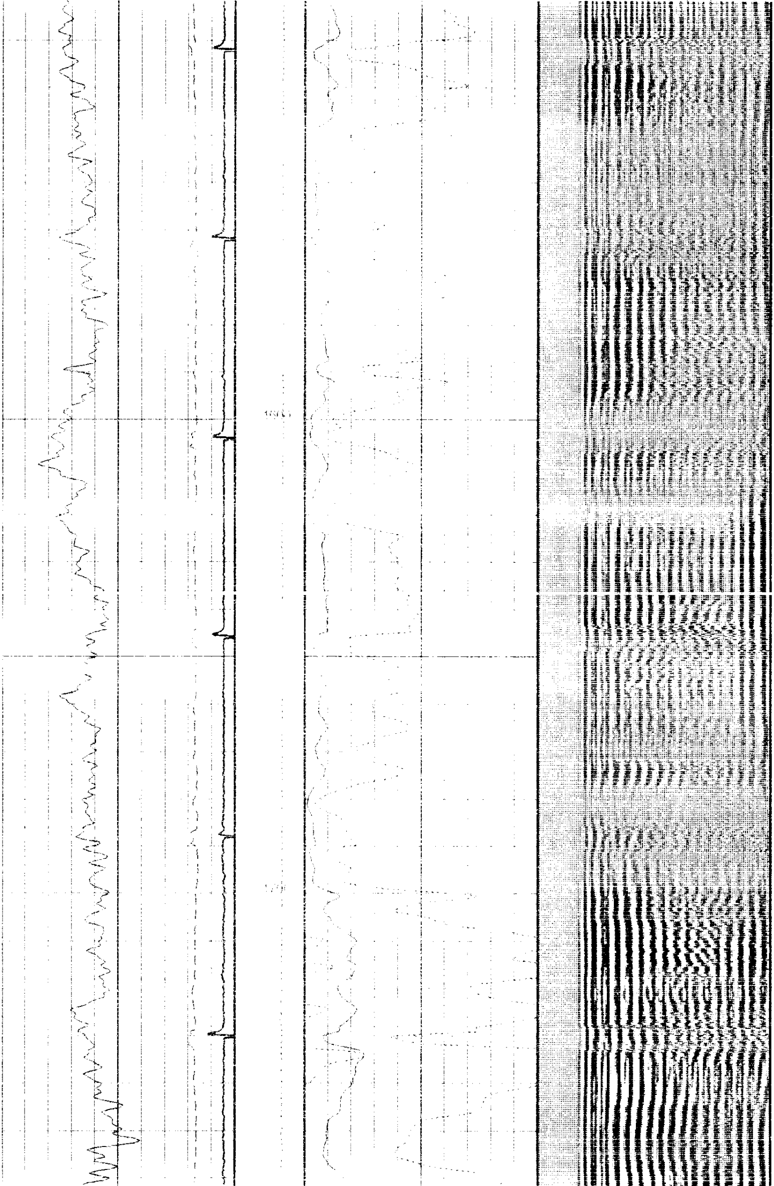


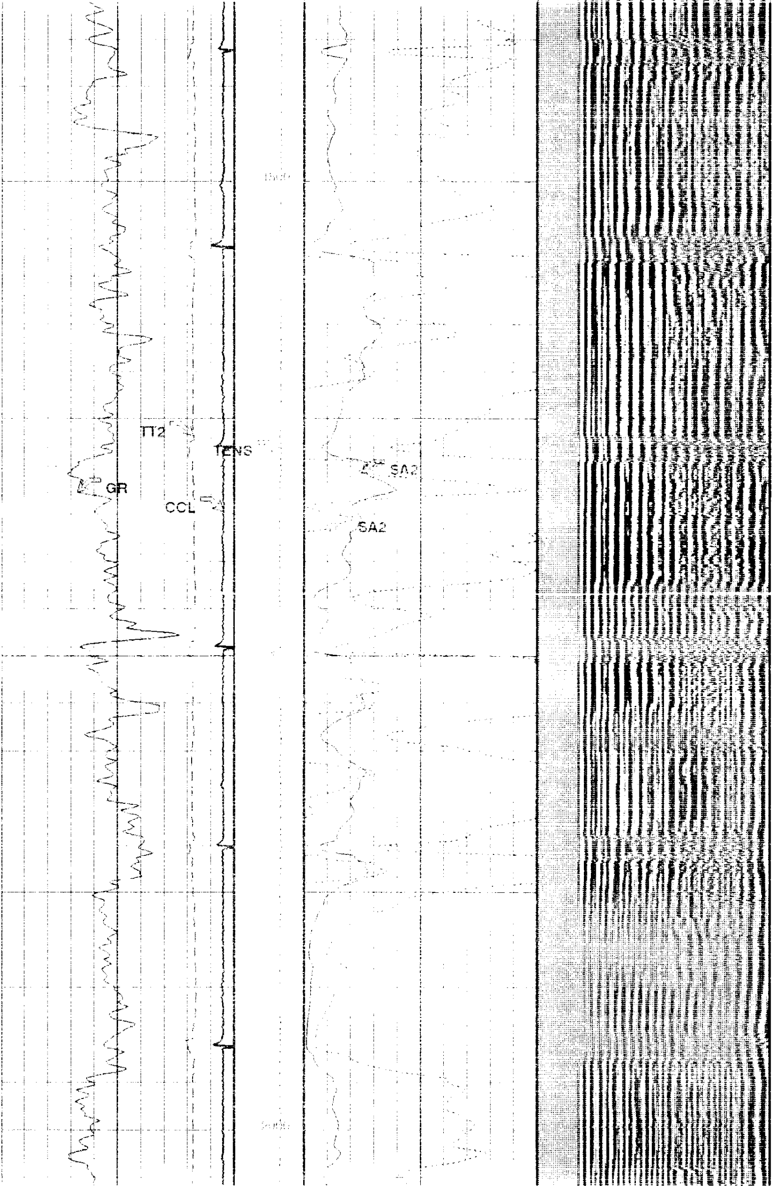


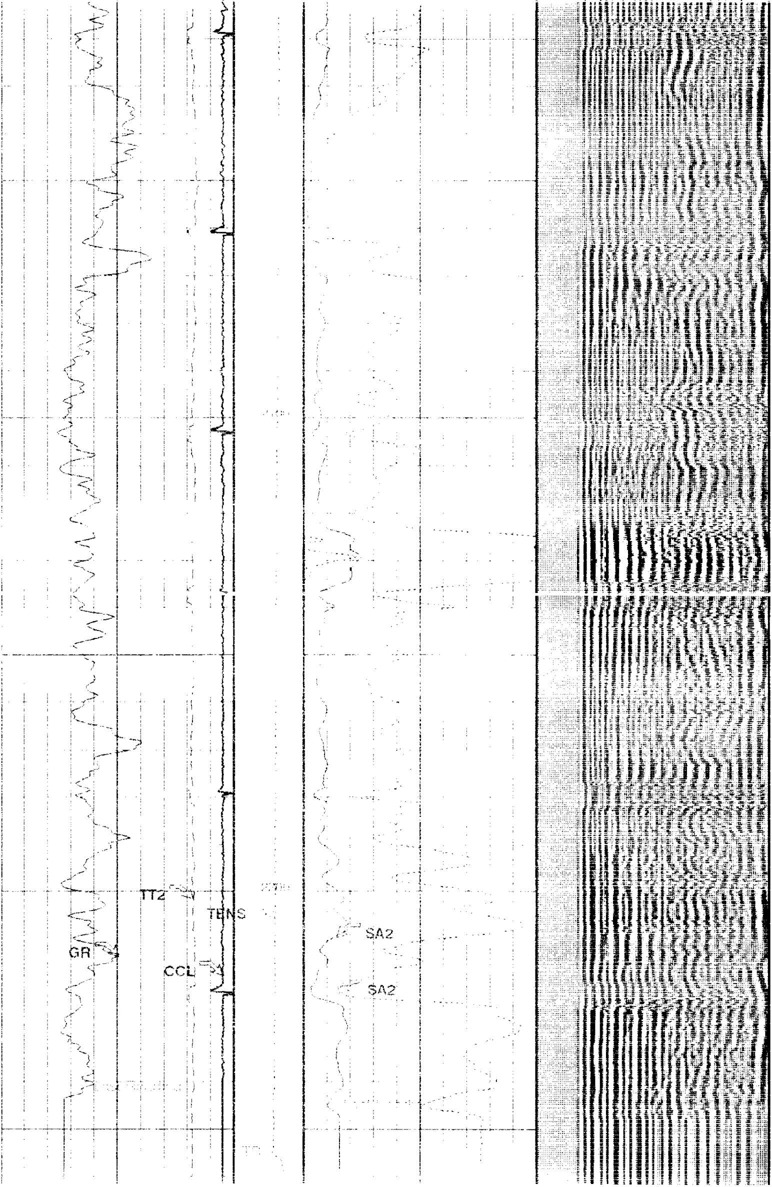












Gamma Ray (GR)
0 (GAPI) 150

Tension (TENS) (LBF)
1500 0

CBL Amplitude (SA2)
0 (MV) 20

Min Amplitude Max

VDL VariableDensity (VDL)
200 (US) 1200

Transit Time 2 (TT2)
440 (US) 220

CBL Amplitude (SA2)
0 (MV) 100

Casing Collar Locator (CCL)
-19 (---) 1

MAIN PASS

Parameters

DLIS Name	Description	Value
CCLD	CCL reset delay	12 IN
CCLT	CCL detection level	0.3 V

Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 20-Aug-1998 12:05

OP System Version: 8C0-609

MCM

SLT-J	8C0-609	SGT-G	8C0-609
CAL-Q	8C0-609		

Output DLIS Files

DEFAULT	SLTJ .008	FN:6	FIELD	20-Aug-1998 12:05

Input DLIS Files

DEFAULT	SLTJ .006	FN:4	FIELD	20-Aug-1998 11:46	2286.5 FT	1864.5 FT

Output DLIS Files

DEFAULT	SLTJ .007	FN:5	FIELD	20-Aug-1998 12:02	2290.5 FT	1868.5 FT

OP System Version: 8C0-609

MCM

SLT-J	8C0-609	SGT-G	8C0-609
CAL-Q	8C0-609		

Casing Collar Locator (CCL)
-19 (---) 1

REPEAT SECTION

Transit Time 2 (TT2)
440 (US) 220

CBL Amplitude (SA2)
0 (MV) 100

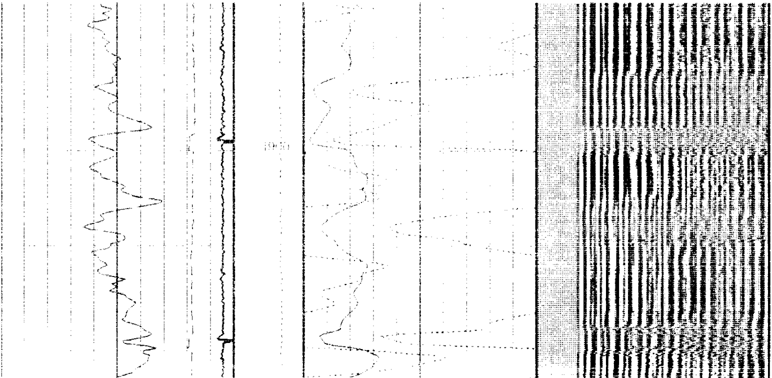
Gamma Ray (GR)
0 (GAPI) 150

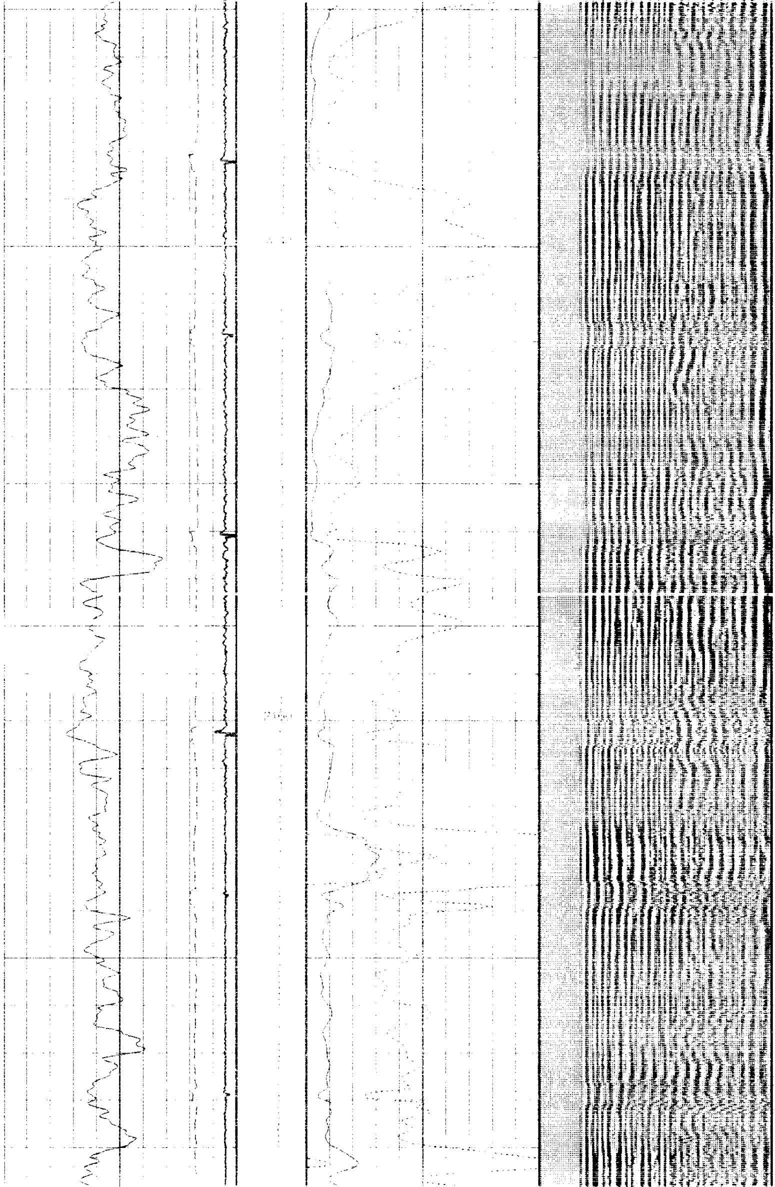
Tension (TENS) (LBF)
1500 0

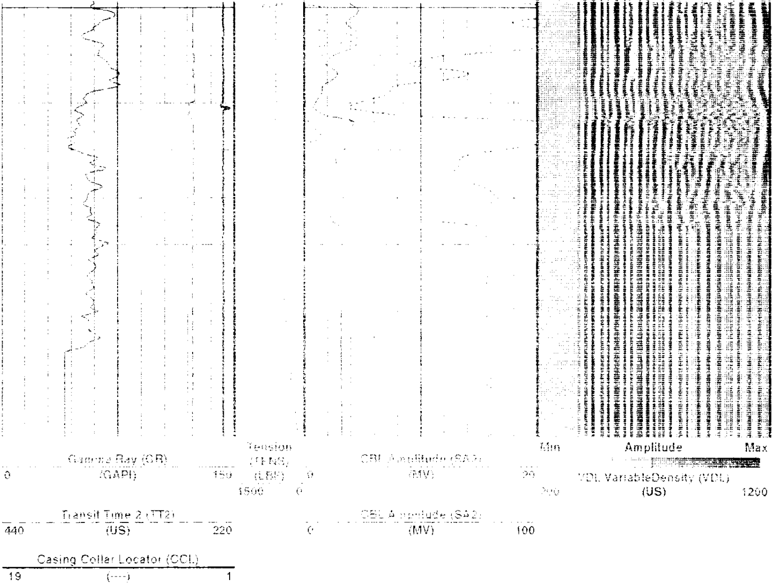
CBL Amplitude (SA2)
0 (MV) 20

Min Amplitude Max

VDL VariableDensity (VDL)
200 (US) 1200







Parameters

DLIS Name	Description	Value	
CCLD	CCL reset delay	12	IN
CCLT	CCL detection level	0.3	V
DO	Depth Offset	4.2	FT
PP	Playback Processing	NORMAL	

Format: CBL_VDL Vertical Scale: 5" per 100 Graphics File Created: 20-Aug-1998 12:02

OP System Version: 8C0-609

MCM

SLT-J	8C0-609	SGT-G	8C0-609
CAL-Q	8C0-609		

Input DLIS Files

DEFAULT SLTJ_006 FN:4 FIELD 20-Aug-1998 11:46 2286.5 FT 1864.5 FT

Output DLIS Files

DEFAULT SLTJ_007 FN:5 FIELD 20-Aug-1998 12:02

COMPANY: **NORTHWEST NATIONAL GAS CO.**

WELL: **OM 32-22-65**

FIELD: **CALVIN CREEK GAS STORAGE**

COUNTY: **COLUMBIA**

STATE: **OREGON**

[illegible] LOG INTERVAL	2217 F
[illegible] UMBERGER DEPTH	2254 F
[illegible]	[illegible] F
[illegible]	[illegible] F
[illegible] FLOOR	
[illegible] ND LEVEL	750 F

Schlumberger

CEMENT BOND / VDL
GAMMA RAY
COLLAR LOG