Schlumberger

RADIOACTIVE TRACER SURVEY

COUNTY	[illegible]
FIELD	MIST
LOCATION	2 1 72N AND 472 19W
WELL	COLUMBIA COUNTY #44-21
COMPANY	NAHAMA & WEAGANT ENERGY CO

COMPANY NAHAMA & WEAGANT ENERGY CO

WELL "COLUMBIA COUNTY" #44-21

FIELD MIST

COUNTY COLUMBIA **STATE** OREGON

LOCATION 271 72'N AND 472 19'W
OF SE CORNER

Other Services:

API SERIAL NO.	SECT.	TWP.	RANGE
36-009-00137	21	6N	5W

Permanent Datum GL Elev. 869.6 F
Log Measured From KB 10.0 F above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 879.6 F
D.F.
G.L. 869.6 F

Date	19 NOV 199[illegible]
Run No.	ONE
Depth Driller	2138.0 F
Depth Logger (Schl.)	1912.0 F
Btm. Log Interval	1912.0 F
Top Log Interval	150.0 F
Type Fluid in Hole	LEASE WATER
Salinity NaCl	
Density	8.30 LB/G
Fluid Level	
Max. Rec. Temp.	
Deviation	
Logger on Bottom	11:37 11-19
Equip. / Location	8504 / SACRAMENTO
Recorded By	SCOTT PILCH / JOHN LOPEZ
Witnessed By	TODD THOMAS

BOREHOLE RECORD

Bit Size	8 3/4"	
Depth	4500.0 F	

CASING & TUBING RECORD

Size	5 1/2"	2 3/8"
Weight	17.0000 LB/F	4.6000 LB/F
Casing Top-Driller		
Casing Top-Logger		
Casing Shoe-Driller	2138.0 F	1694.0 F
Casing-Logger	1912.0 F	1694.0 F

The well name, location and borehole reference data were furnished by the customer.

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 wilful 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.

Run No.	ONE
Service Order No.	454483
Logging Speed	3600.0 F/HR
EQUIPMENT DATA	
Tool Number 1	SGC-R 41
Tool Number 2	ATT-B 1515
Tool Number 3	TET-E 329
Tool Number 4	CAL-U 1193
Tool Number 5	ATM-AA 218
Tool Number 6	
Tool Number 7	
Tool Number 8	

Tool Number 9	
Tool Number 10	
Tool Number 11	
Tool Number 12	

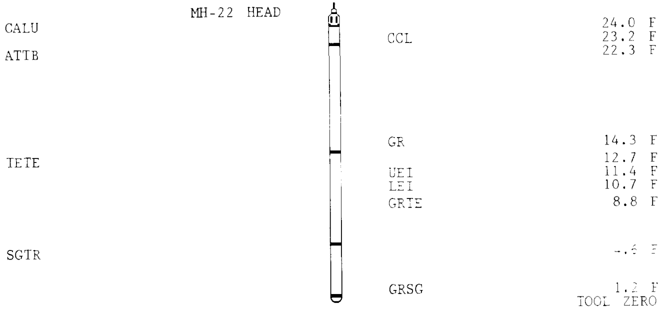
REMARKS:

CORRELATED TO TUBING AND CASING MEASUREMENTS PROVIDED BY CLIENT

EACH LINE REPRESENTS 1 SECOND ON VELOCITY SHOTS.

PUMP FLOWRATE NOT AVAILABLE.

LOGGING TOOL STRING SKETCH

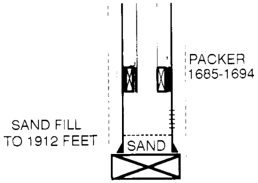

MH-22 HEAD
CALU
ATTB
TETE
SGTR
CCL
GR
UEI
LEI
GRTE
GRSG
24.0 F
23.2 F
22.3 F
14.3 F
12.7 F
11.4 F
10.7 F
8.8 F
4.6 F
1.2 F
TOOL ZERO

TOTAL TOOL STRING LENGTH IS 26.5 F.
TOTAL TOOL STRING WEIGHT IS 177. LB IN AIR.

>> Wellsketch <<

based on Driller Depth

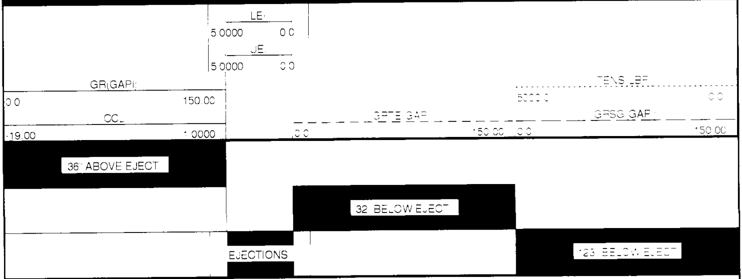
			Driller Depth (ft)	Wireline Depth (ft)	
2.375"	TBG	SHOE	@ 1694	1694	TUBING TAIL
5.500"	PERF	TOP	@ 1890	1890	
5.500"	PERF	BOT	@ 1905	1905	
5.500"	CSG	SHOE	@ 2138	2138	PBTD


PACKER
1685-1694
SAND FILL
TO 1912 FEET
SAND

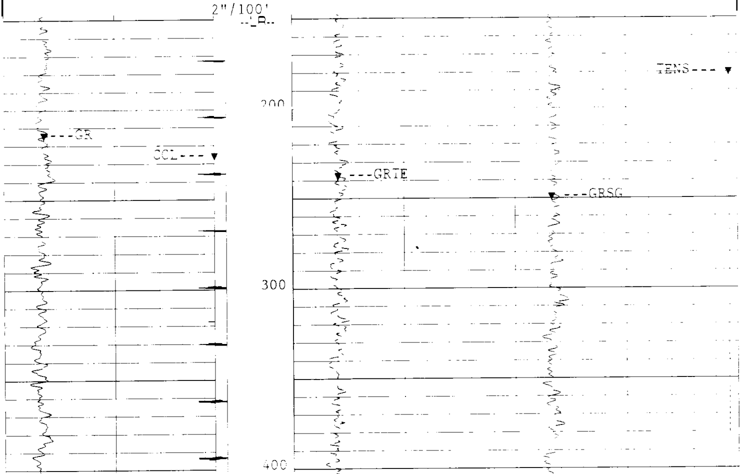
8.750"   CH   TD   @ 4500   ------------   4500

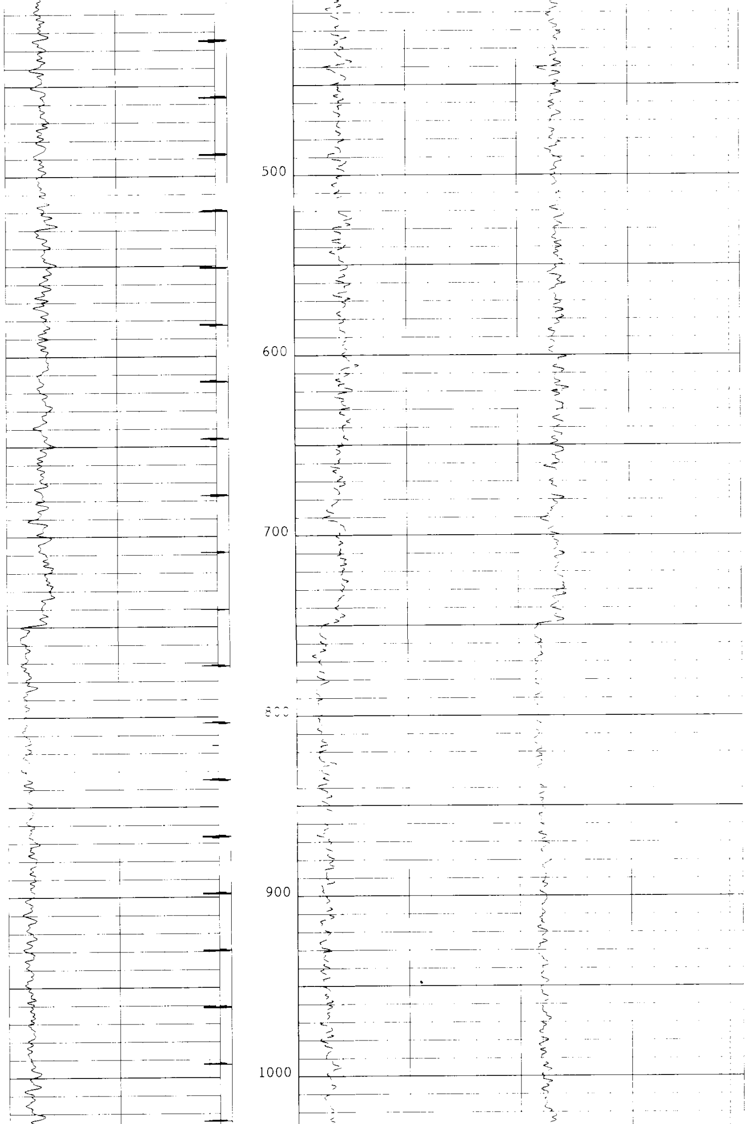
INITIAL GAMMA RAY PASS

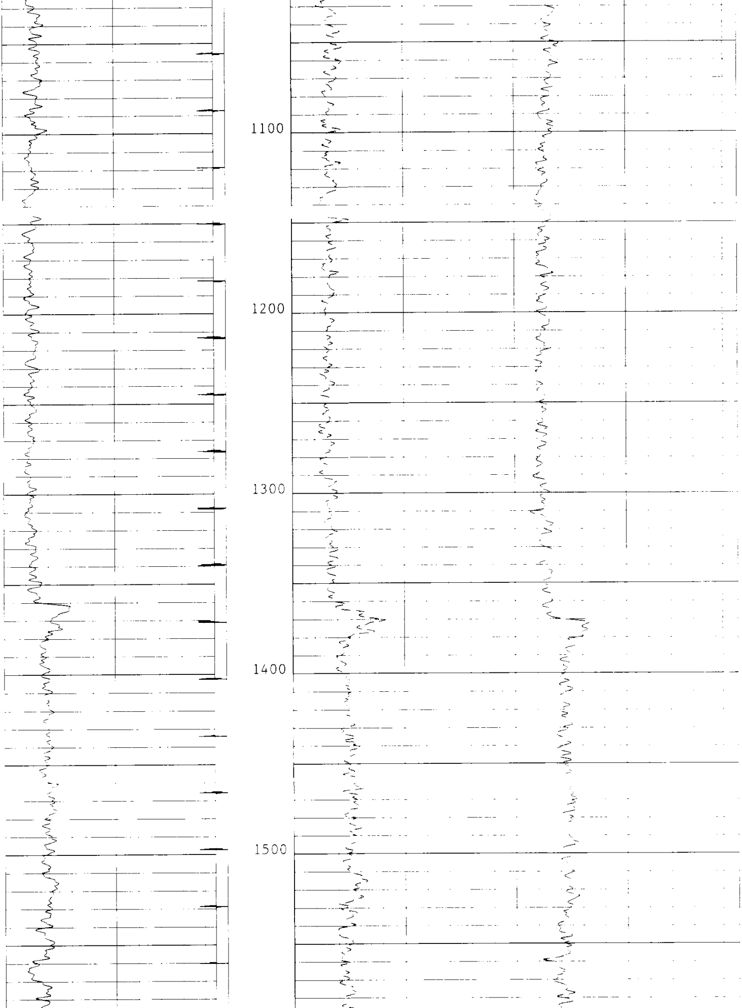
DATA ACQUIRED LOGGING UP

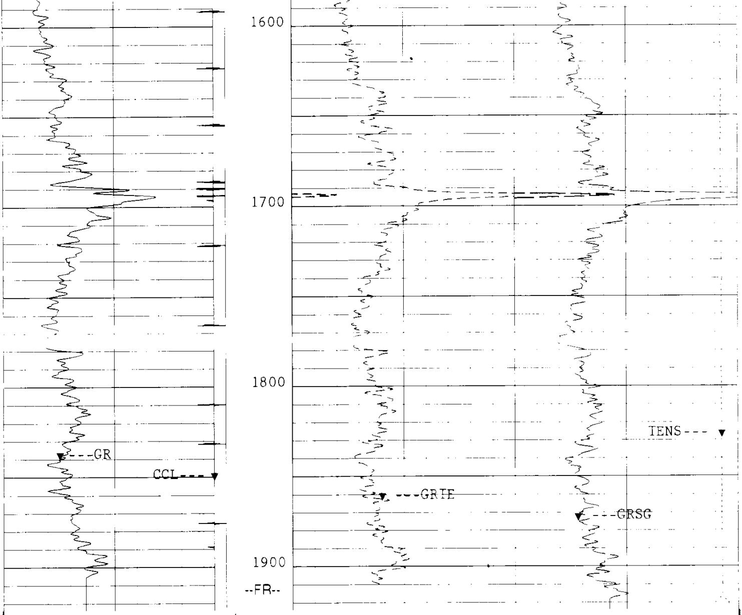

LEF
5.0000 0.0
UEF
5.0000 0.0
GR(GAPI)
0.0 150.00
CCL
-19.00 1.0000
TENS(LBF)
5000.0 0.0
GRTE(GAPI)
0.0 150.00
GRSG(GAPI)
0.0 150.00
36" ABOVE EJECT
32" BELOW EJECT
123" BELOW EJECT
EJECTIONS

CP 32.6   FILE 8   19-NOV-1992 10:31   (UP)



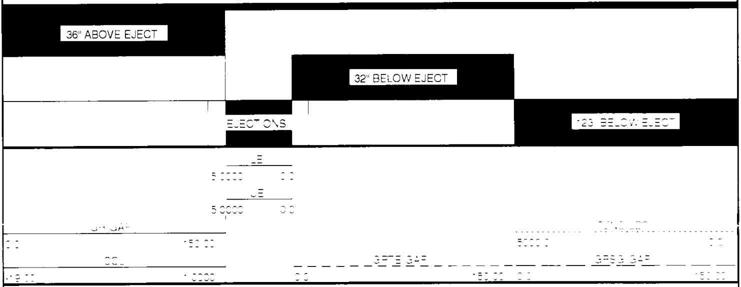






2"/100'

CP 32.6 FILE 8 19-NOV-1992 10:03 (UP)

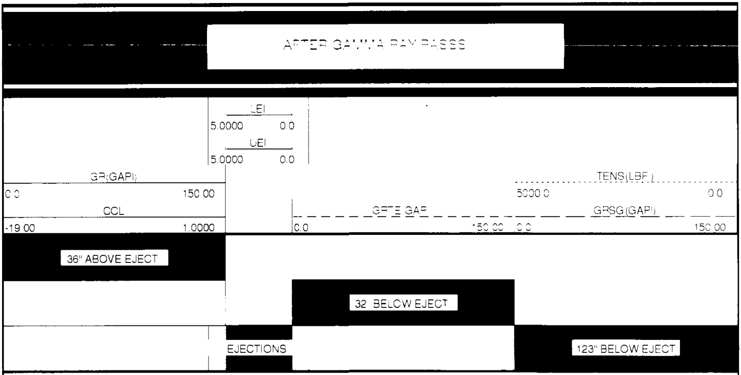

36" ABOVE EJECT
32" BELOW EJECT
EJECTIONS
123 BELOW EJECT
LEI
5.0000 0.0
UEI
5.0000 0.0
GR GAP
0.0 150.00
CCL
-19.00 1.0000
GRTE GAP
0.0 150.00
TENS
5000.0 0.0
GRSG GAP
0.0 150.00

SENSOR MEASURE POINT TO TOOL ZERO

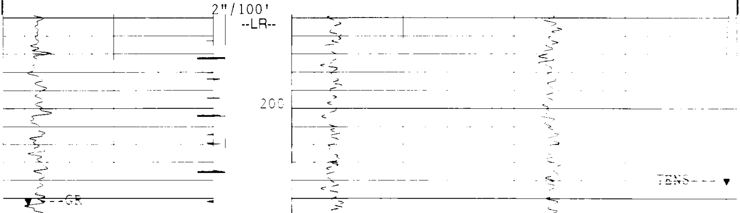
GR	14.3	FEET	CVEL	0.0	FEET
LEI	10.7	FEET	GRTE	8.8	FEET
GRSG	1.2	FEET	UEI	11.4	FEET
EXP3	0.0	FEET	EXT	0.0	FEET
EXP1	0.0	FEET	EXP2	0.0	FEET
CCL	23.2	FEET	TENS	-5.0	FEET

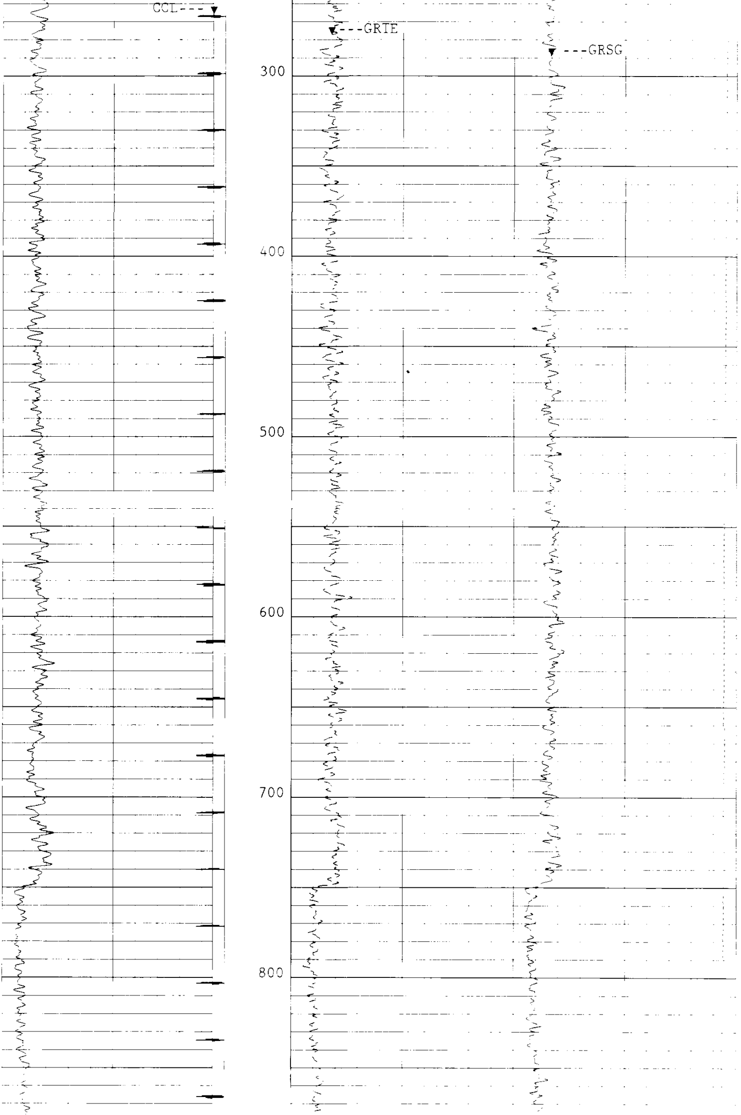
PARAMETERS

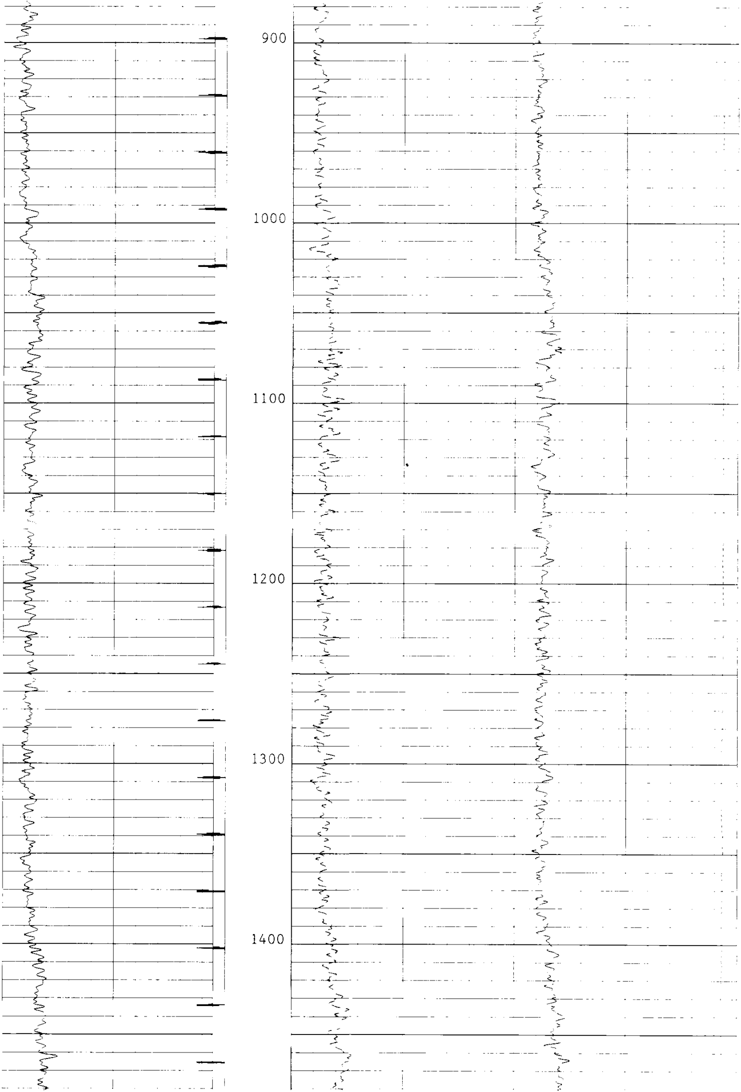
PARAMETER	VALUE	UNIT
WMUD - Weight of Mud	8.30000	LB/G
NCJT - NGT Calibration Jig Type	GSRE	
FCHD - Flag for Cased Hole Diameter	CSID	
PTHR - Positive Spinner Threshold	10.0000	F/MN
NTHR - Negative Spinner Threshold	-10.0000	F/MN
TIRA - Threshold Intercept Ratio	.500000	
VPCF - Velocity Profile Correction Factor	.830000	
DEVI - Hole Deviation	0.0	DEG
FDSH - Fluid Density Shift	0.0	G/C3
QIOP - Flow Interpretation Option	FLOW	
TCSH - Thru Tubing Caliper Shift	0.0	IN
BS - Bit Size	7.87500	IN
BHS - BoreHole Status (Open or Cased)	CASE	

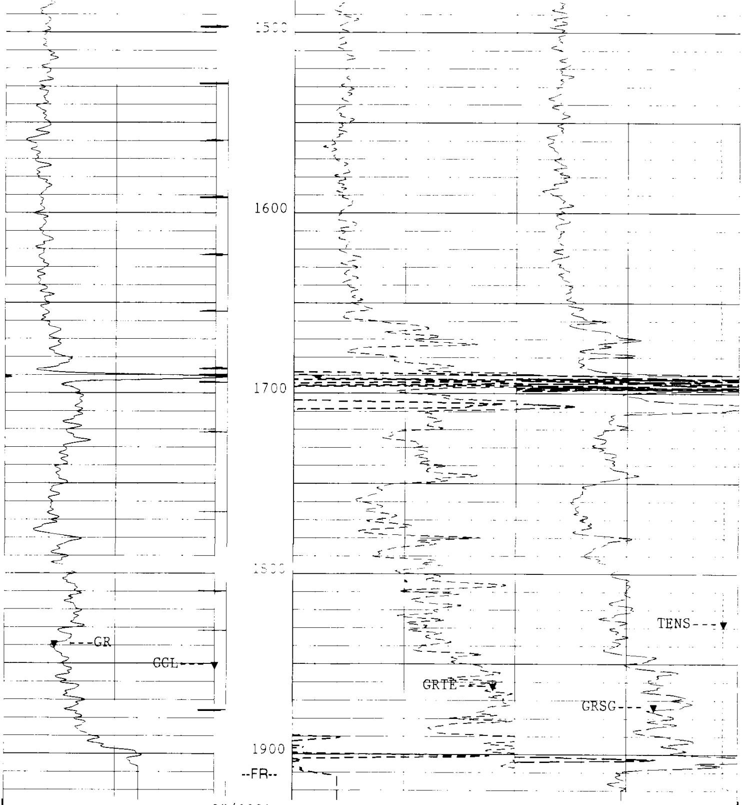

AFTER GAMMA RAY PASSS
CEI
5.0000 0.0
CEI
5.0000 0.0
GR(GAPI)
0.0 150.00
CCL
-19.00 1.0000
TENS(LBF)
5000.0 0.0
GRTE GAPI
0.0 150.00
GRSG(GAPI)
0.0 150.00
36" ABOVE EJECT
32 BELOW EJECT
EJECTIONS
123" BELOW EJECT

CP 32.6 FILE 23 19-NOV-1992 11:58 (UP)



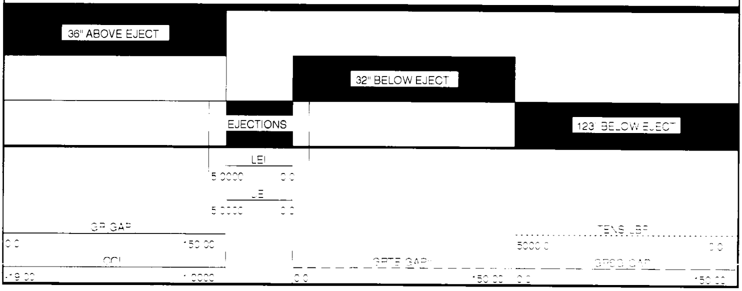






2"/100'

CP 32.6 FILE 23 19-NOV-1992 11:37 (UP)



VELOCITY SHOT AT 200 FEET

LEI
5.0000 0.0

UEI
5.0000 0.0

GR(GAPI)
0.0 250.00

CCL
-19.00 1.0000

GRTE(GAPI)
0.0 250.00

TENS(LBF)
5000.0 0.0

GRSG(GAPI)
0.0 250.00

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

23" BELOW EJECT

```
CP 32.6          FILE    32        19-NOV-1992 12:38

                 INPUT FILE(S)     CREATION DATE
                       24          19-NOV-1992 11:58

                  6"/MIN
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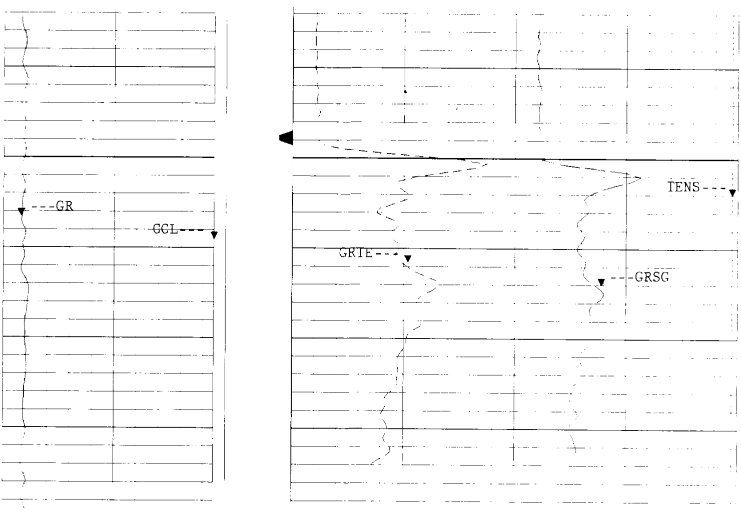
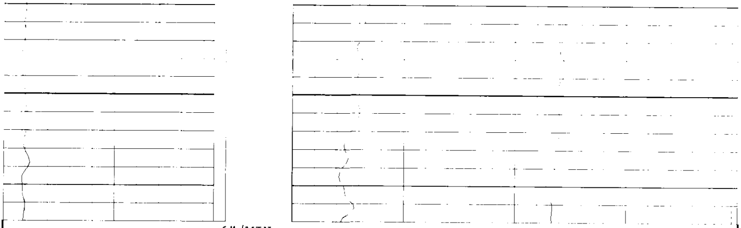




6"/MIN

CP 32.6 FILE 32 19-NOV-1992 12:37

INPUT FILE(S) 24

CREATION DATE 19-NOV-1992 11:58

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

123" BELOW EJECT

LEI
5.0000 0.0

UE
5.0000 0.0

GR(GAPI)
0.0 250.00

CCL
-19.00 1.0000

GRTE(GAPI)
0.0 250.00

TENS(LBF)
5000.0 0.0

GRSG(GAPI)
0.0 [illegible]

VELOCITY SHOT AT 1650 FEET

LEI
5.0000 0.0

UE
5.0000 0.0

GR(GAPI)
0.0 500.00

CCL
-19.00 1.0000

GRTE(GAPI)
0.0 500.00

TENS(LBF)
5000.0 0.0

GRSG(GAPI)
0.0 500.00

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

123" BELOW EJECT

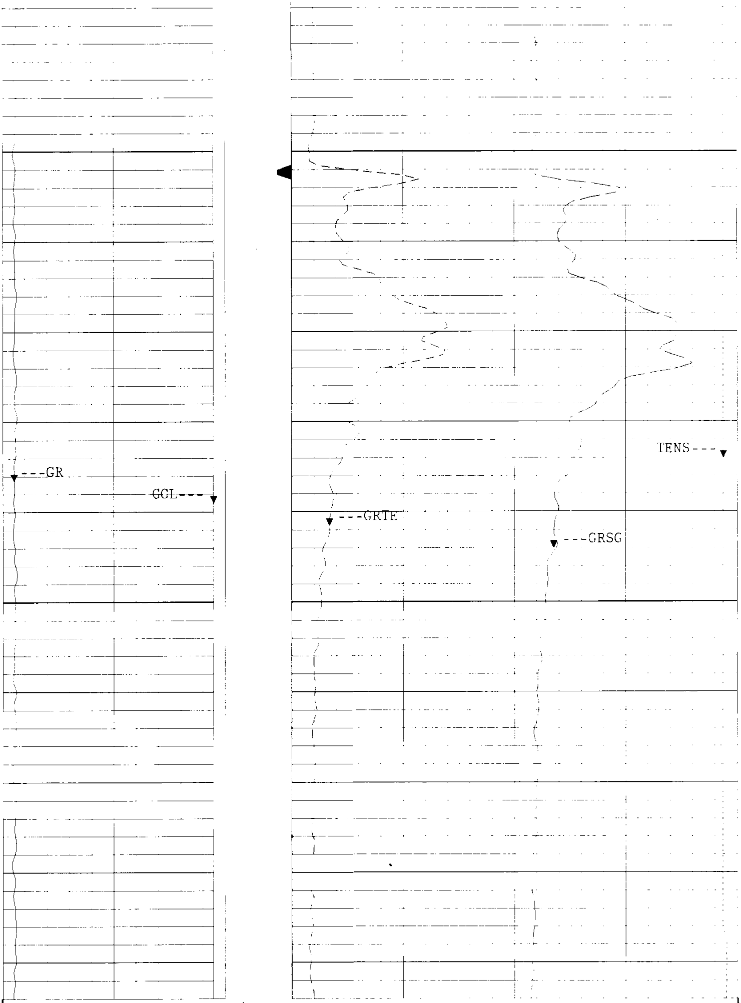
VERIFYING THE INTEGRITY OF TUBING STRING.

CP 32.6 FILE 28 19-NOV-1992 12:24

INPUT FILE(S) 17

CREATION DATE 19-NOV-1992 11:05

6"/MIN



6"/MIN

CP 32.6 FILE 28 19-NOV-1992 12:24

INPUT FILE(S) CREATION DATE
17 19-NOV-1992 11:05

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

123" BELOW EJECT

LE
5.0000 0.0

UE
5.0000 0.0

GR(GAPI)
0.0 500.00

CCL
-19.00 1.0000

TENS(LBF)
5000.0 0.0

GRTE(GAPI)
0.0 500.00

GRSG(GAPI)
0.0 500.00

VELOCITY SHOT AT 1705 FEET

LE
5.0000 0.0

UE
5.0000 0.0

GR(GAPI)
0.0 1200.0

CCL
-19.00 1.0000

TENS(LBF)
5000.0 0.0

GRTE(GAPI)
0.0 1200.0

GRSG(GAPI)
0.0 1200.0

36" ABOVE EJECT

32" BELOW EJECT

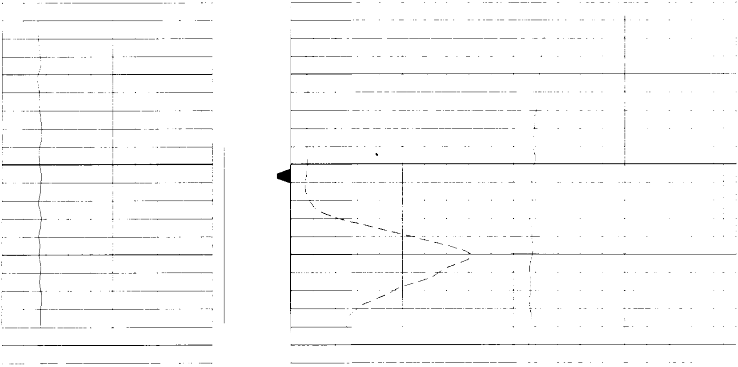
EJECTIONS

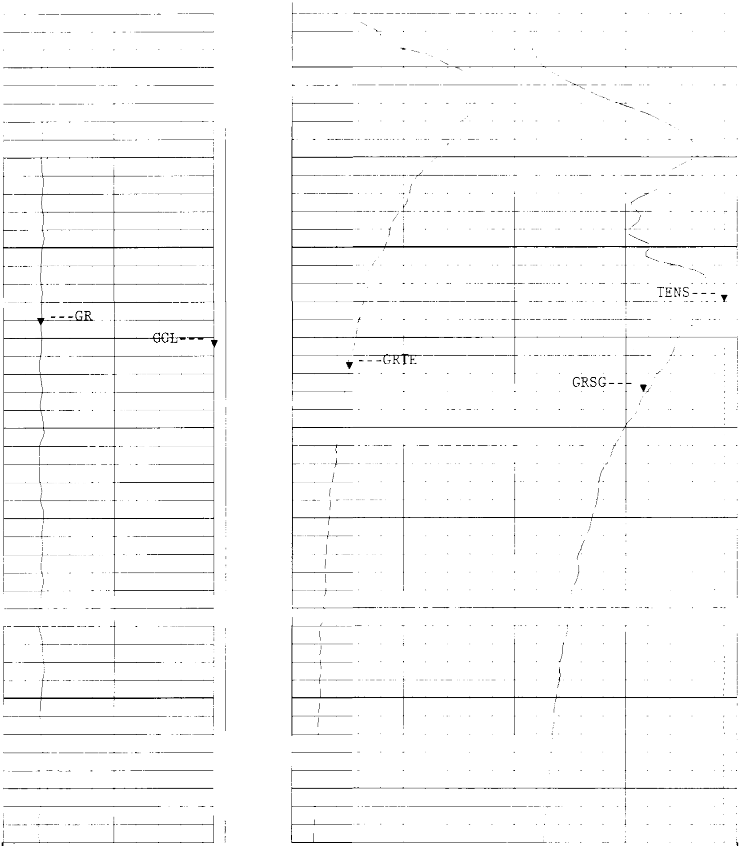
123" BELOW EJECT

CP 32.6 FILE 29 19-NOV-1992 12:29

INPUT FILE(S) CREATION DATE
18 19-NOV-1992 11:08

6"/MIN





6"/MIN

CP 32.6   FILE 29   19-NOV-1992 12:28

INPUT FILE(S)   CREATION DATE
18   19-NOV-1992 11:08

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

123 BELOW EJECT

LE
5.0000   0.0

LE
5.0000   0.0

GR(GAPI)

TENS(LBF)

0.0 1200.0 5000.0 0.0

CCL GRTE GAP GRSG GAP

-19.00 1.0000 0.0 1200.0 0.0 1200.0

VELOCTIY SHOT AT 1880 FEET

LEI
5.0000 0.0
UE
5.0000 0.0

GR(GAPI)
0.0 1000.0

TENS(LBF)
5000.0 0.0

CCL
-19.00 1.0000

GRTE GAPI
0.0 1000.0

GRSG(GAPI)
0.0 1000.0

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

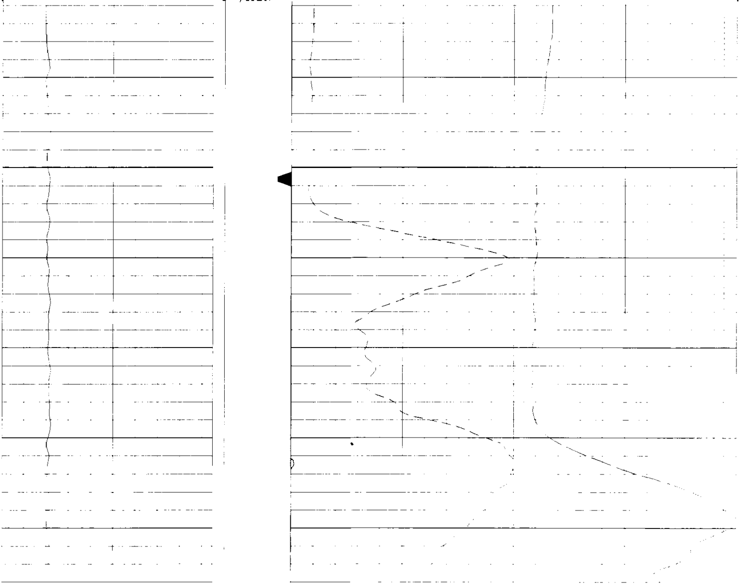
123" BELOW EJECT

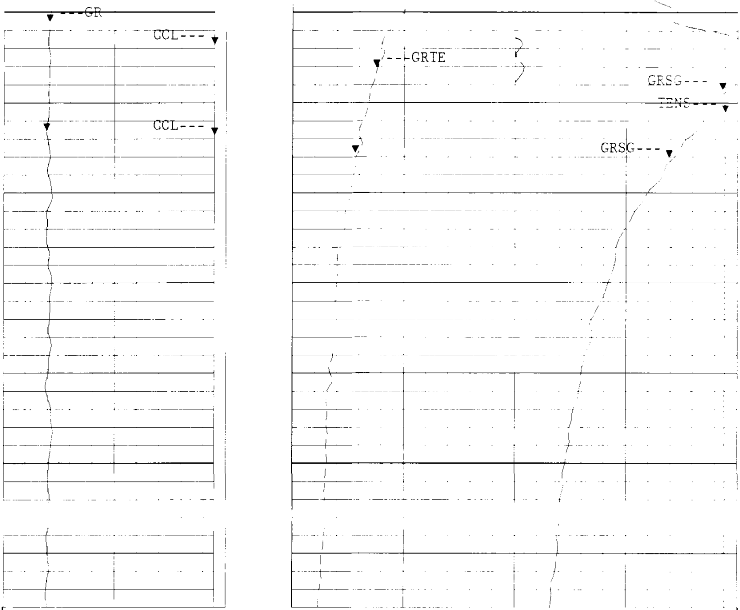
VELOCTIY SHOT JUST ABOVE PERFS.

CP 32.6 FILE 30 19-NOV-1992 12:32

INPUT FILE(S) CREATION DATE
18 19-NOV-1992 11:08

6"/MIN





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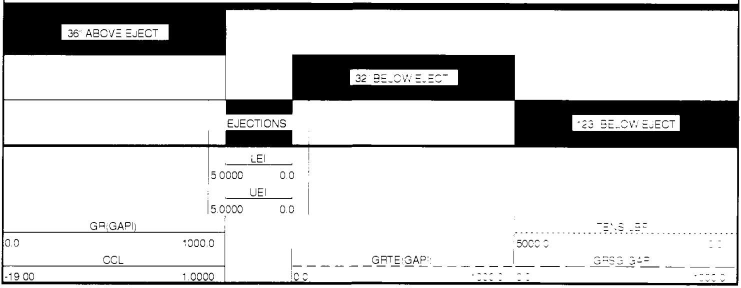
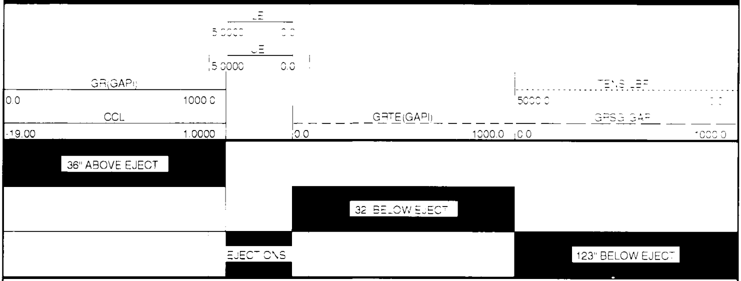
CP 32.6 FILE 30 19-NOV-1992 12:31

INPUT FILE(S) CREATION DATE
18 19-NOV-1992 11:08


36' ABOVE EJECT
32' BELOW EJECT
EJECTIONS
123' BELOW EJECT
LEI
5.0000 0.0
UEI
5.0000 0.0
GR(GAPI)
0.0 1000.0
CCL
-19.00 1.0000
GRTE(GAPI)
0.0 1000.0
TENS(LBF)
5000.0 0.0
GRSG(GAPI)
0.0 1000.0

VELOCTIY SHOT AT 1900 FEET

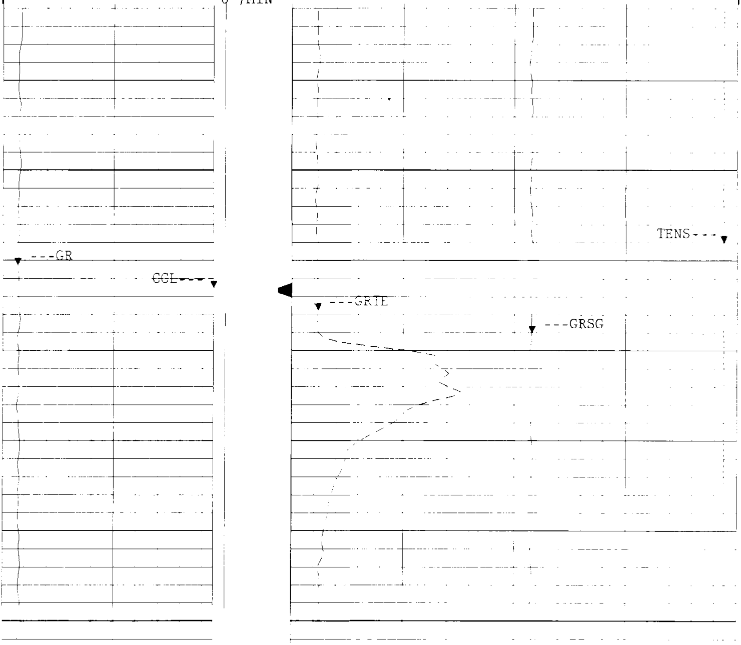

LE
5.0000
0.0
LE
5.0000
0.0
GR(GAPI)
0.0
1000.0
TENS LBF
5000.0
0.0
CCL
-19.00
1.0000
GRTE(GAPI)
0.0
1000.0
GRSG GAPI
0.0
1000.0
36" ABOVE EJECT
32" BELOW EJECT
EJECTIONS
123" BELOW EJECT

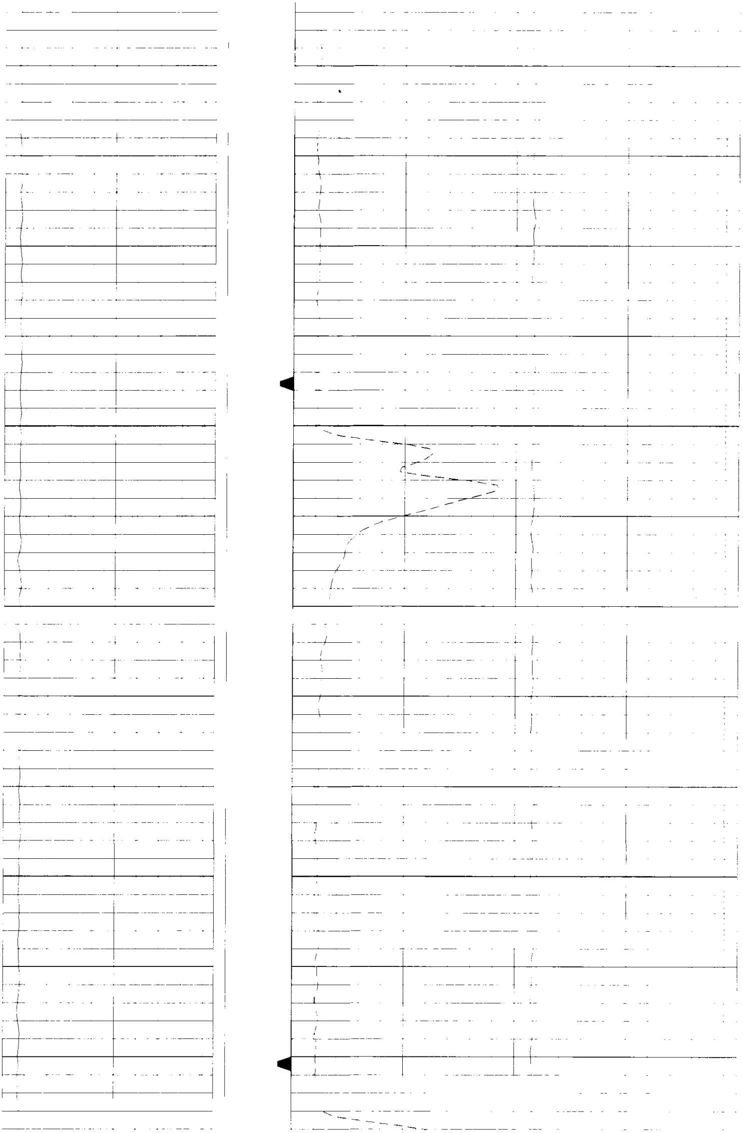
EJECTOR AND GRTE IN PERFS
GR ABOVE PERFS
GRSG BELOW PERFS

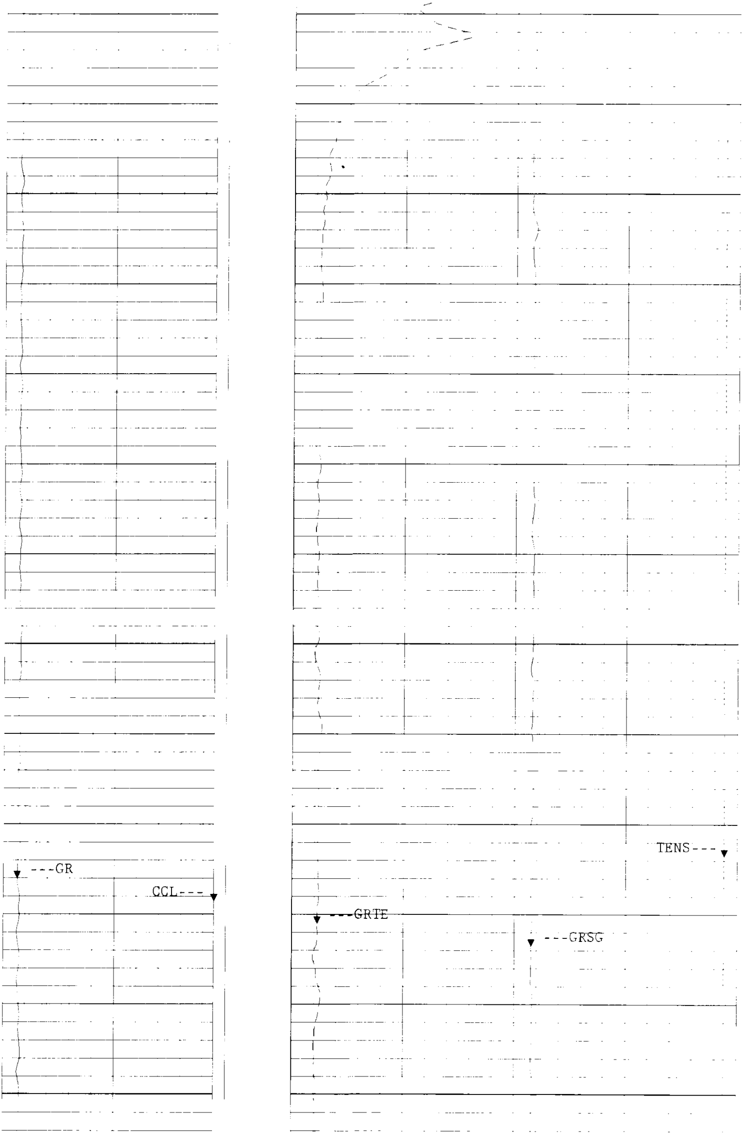
CP 32.6 FILE 31 19-NOV-1992 12:35

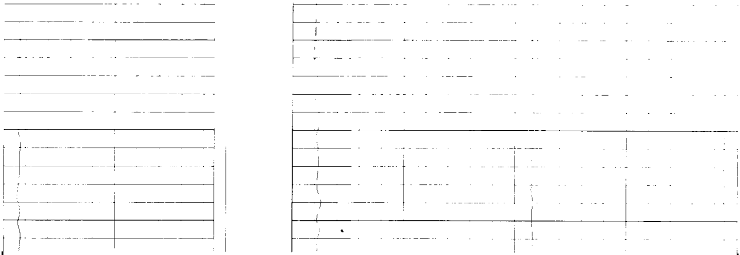
INPUT FILE(S) CREATION DATE
22 19-NOV-1992 11:27

6"/MIN





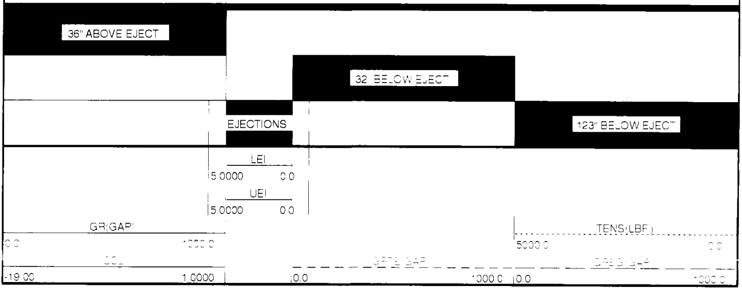




6"/MIN

CP 32.6 FILE 31 19-NOV-1992 12:33

INPUT FILE(S) 22 CREATION DATE 19-NOV-1992 11:27



COMPANY	NAHAMA & WEAGANT ENERGY CO	SCHL. FR	1912.0 F
		SCHL. TD	1912.0 F
WELL	COLUMBIA COUNTY #44-21	DRLR. TD	2138.0 F
FIELD	MIST	Elev: KB	879.6 F
		DF	
COUNTY	COLUMBIA **STATE** OREGON	GL	869.6 F

Schlumberger

RADIOACTIVE TRACER SURVEY