Schlumberger

RADIOACTIVE TRACER SURVEY

COUNTY [illegible]
FIELD MIST
LOCATION NOT AVAILABLE
WELL COLUMBIA COUNTY #13-1 RD #1
COMPANY NAHAMA & WEAGANT ENERGY CO

COMPANY NAHAMA & WEAGANT ENERGY CO

WELL "COLUMBIA COUNTY" #13-1 RD #1

FIELD MIST

COUNTY COLUMBIA **STATE** OREGON

LOCATION NOT AVAILABLE

Other Services:

API SERIAL NO.	SECT.	TWP.	RANGE
NA	1	6N	5W

Permanent Datum	GL	Elev.	1163.2 F	Elev.: K.B.1174.6 F
Log Measured From	KB	11.4 F	above Perm. Datum	D.F.
Drilling Measured From	KB			G.L.1163.2 F

Date	19-NOV-1992			
Run No.	ONE			
Depth Driller	2822.0 F			
Depth Logger (Schl.)	2500.0 F			
Btm. Log Interval	2500.0 F			
Top Log Interval	100.0 F			
Type Fluid in Hole	LEASE WATER			
Salinity NaCl				
Density	8.30 LB/G			
Fluid Level				
Max. Rec. Temp.				
Deviation				
Logger on Bottom	16:06 11-19			
Equip. | Location	8504	SACRAMENTO		
Recorded By	SCOTT PILCH / JOHN LOPEZ			
Witnessed By	TODD THOMAS			

BOREHOLE RECORD

Bit Size				
Depth				

CASING & TUBING RECORD

Size	4 1/2"	2 3/8"		
Weight	10.5000 LB/F	4.7000 LB/F		
Casing Top-Driller				
Casing Top-Logger				
Casing Shoe-Driller	2822.0 F	2284.0 F		
Casing-Logger	2822.0 F	2284.0 F		

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

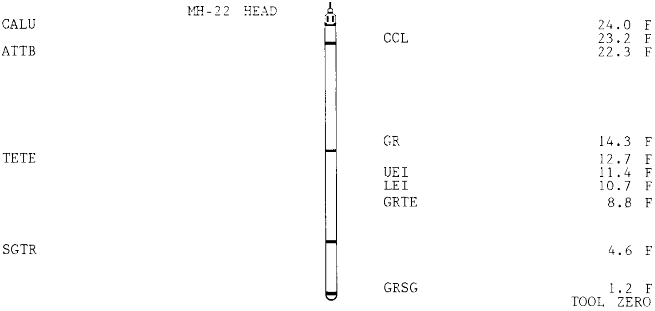
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations 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.	454482	
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 SWS TRACER SURVEY OF 9-17-86.
PUMP RATE NOT AVAILABLE.
EACH LINE REPRESENTS 2 SECONDS ON VELOCITY SHOTS.

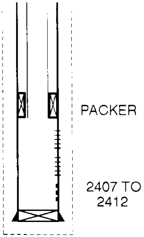
LOGGING TOOL STRING SKETCH


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


PACKER
2407 TO
2412

			Driller Depth (ft)	Wireline Depth (ft)
2.375"	TBG	SHOE	@ 2284	2284
4.500"	PERF	TOP	@ 2380	2380
4.500"	PERF	BOT	@ 2387	2387
4.500"	PERF	TOP	@ 2397	2397
4.500"	PERF	BOT	@ 2402	2402
4.500"	CSG	SHOE	@ 2822	2822
4.500"	CSG	PLUG	@ 2822	2822
7.875"	OH	TD	@ 2830	2830

INITIAL GAMMA RAY PASS

LEI 5.0000 0.0

UEI 5.0000 0.0

GR(GAPI) 0.0 150.00

CCL -19.00 1.0000

GRTE(GAPI) 0.0 150.00

TENS(LBF) 10000 0.0

GRSG(GAPI) 0.0 150.00

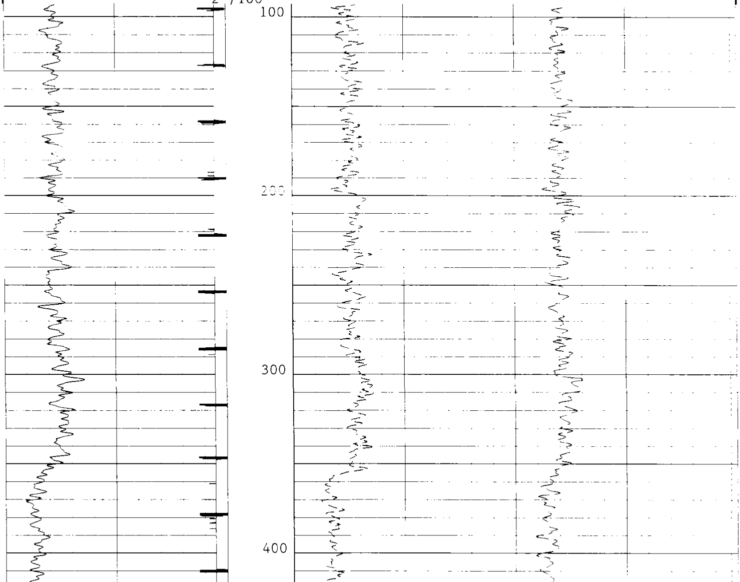
36" ABOVE EJECT

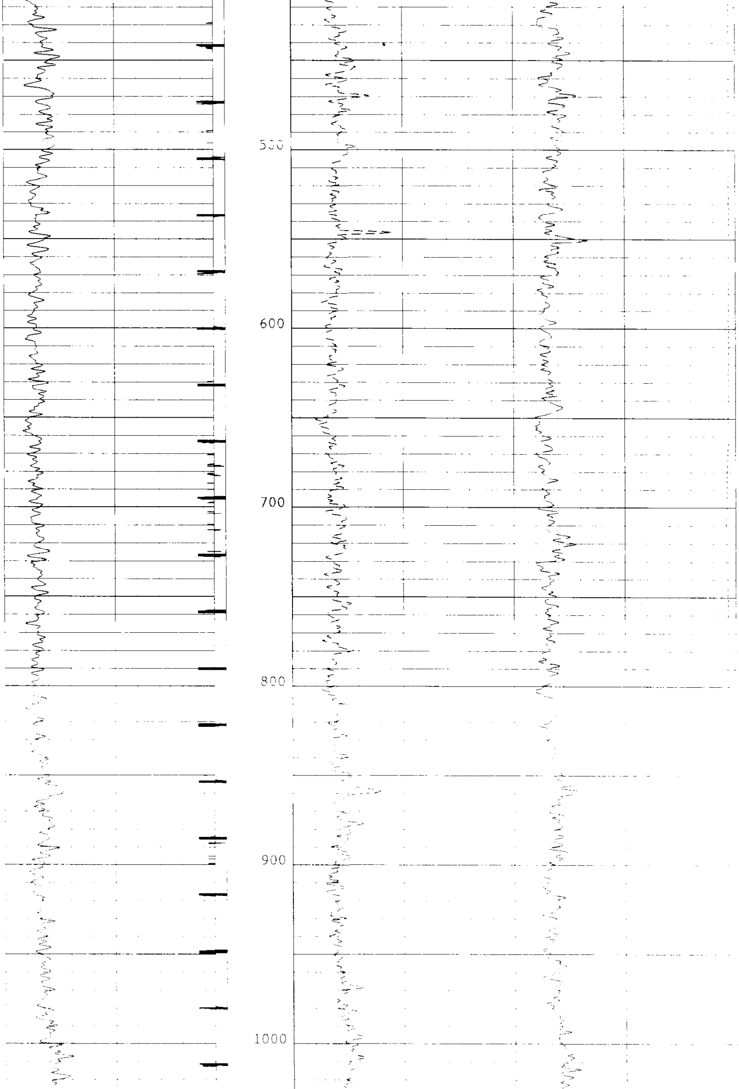
32" BELOW EJECT

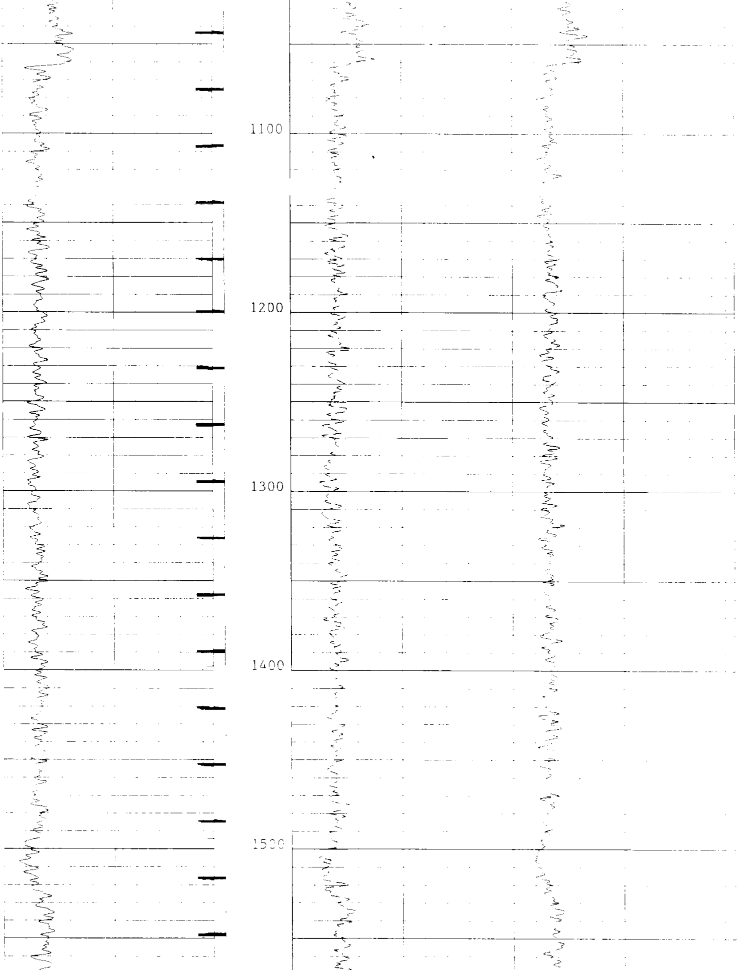
EJECTIONS

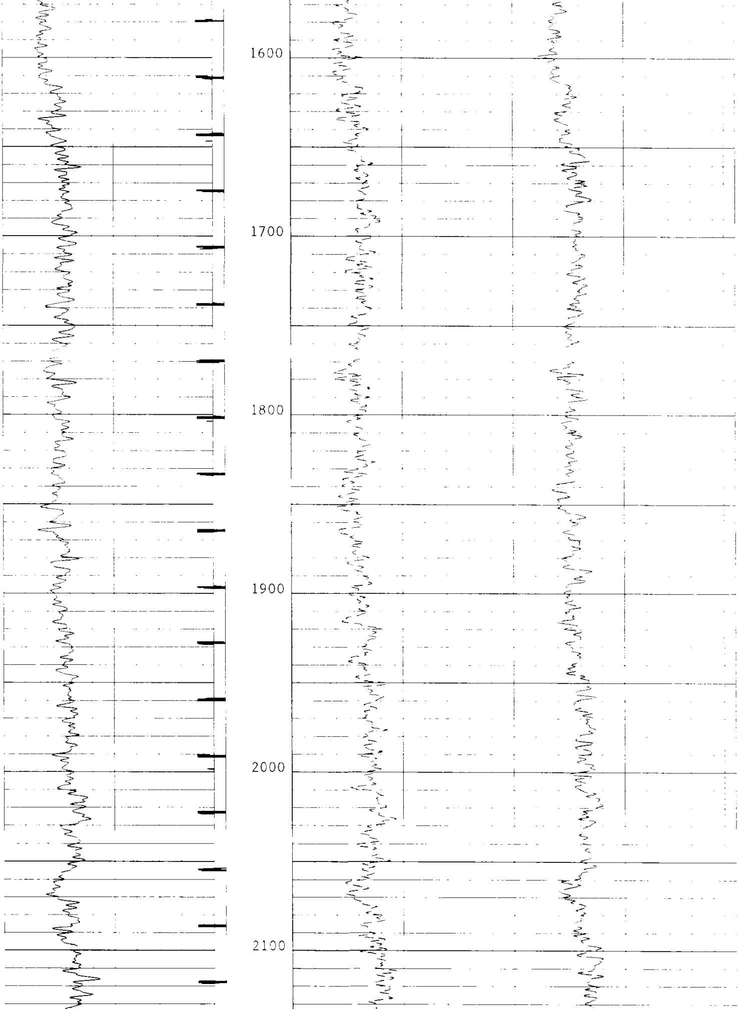
123" BELOW EJECT

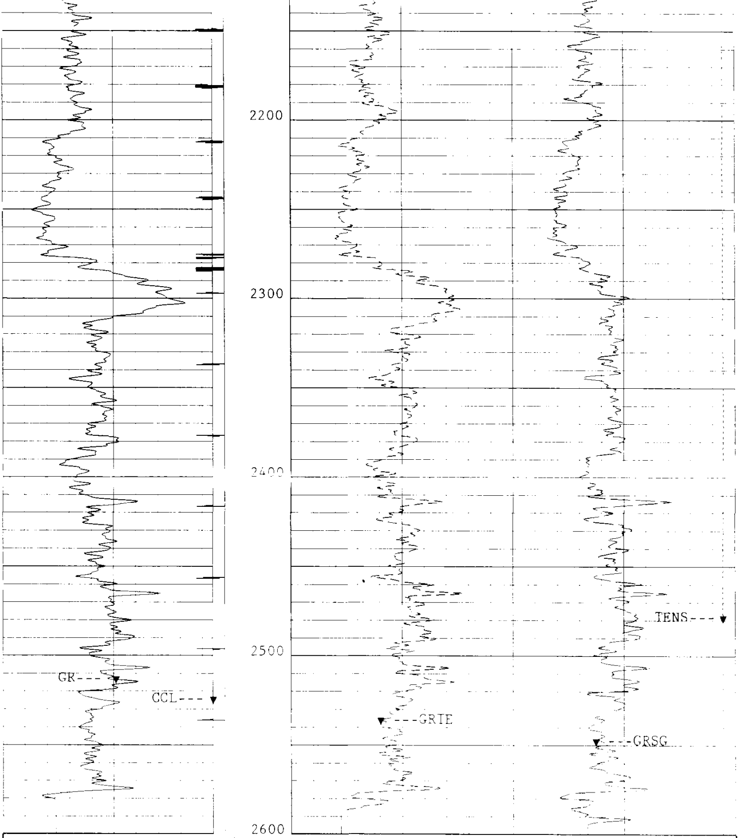
```
CP 32.6              FILE    56       19-NOV-1992 17:52

                     INPUT FILE(S)    CREATION DATE
                          2           18-NOV-1992 16:42

                     2"/100'
```











2"/100'

CP 32.6 FILE 56 19-NOV-1992 17:45

INPUT FILE(S) CREATION DATE
2 18-NOV-1992 16:42

36 ABOVE EJECT

32 BELOW EJECT

EJECTIONS

123 BELOW EJECT

JE
5.0000 0.0
JE

5.0000 0.0

GR(GAPI)

0.0 150.00

CCL

-19.00 1.0000

TENS(LBF)

10000 0.0

GRTE(GAPI)

0.0 150.00

GRSG(GAPI)

0.0 150.00

AFTER GAMMA RAY PASSES

LE

5.0000 0.0

LE

5.0000 0.0

GR(GAPI)

0.0 150.00

CCL

-19.00 1.0000

TENS(LBF)

10000 0.0

GRTE(GAPI)

0.0 150.00

GRSG(GAPI)

0.0 150.00

36 ABOVE EJECT

32" BELOW EJECT

EJECTIONS

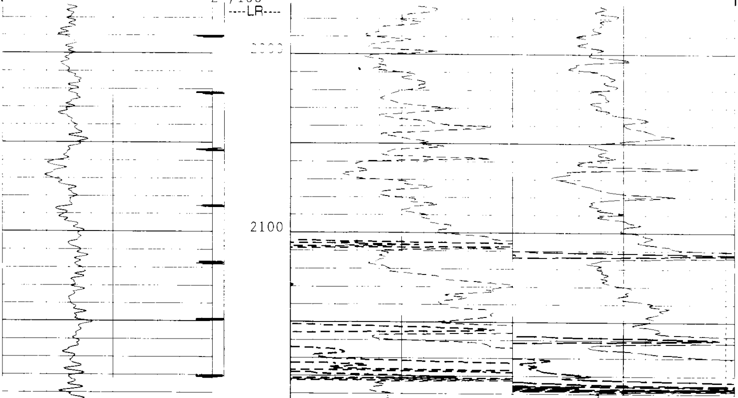
123 BELOW EJECT

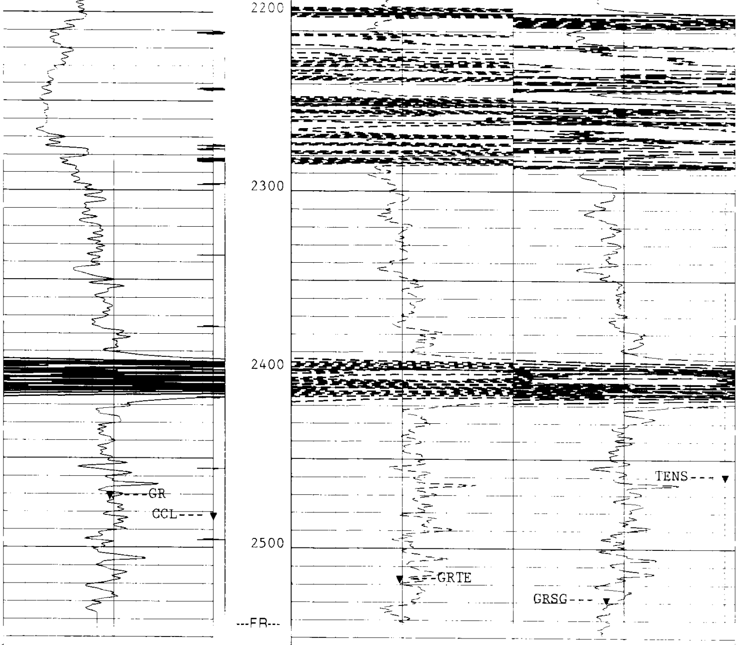
WE ASSUME EITHER TOOL IS LEAKING TRACER FLUID OR
OR A RADIOACTIVE SLUG IS FOLLOWING US UP THE HOLE
WE WERE SHORT OF WATER AND PUMPS WERE SHOT OFF.

CP 32.6 FILE 41 19-NOV-1992 16:01 (UP)

2"/100'

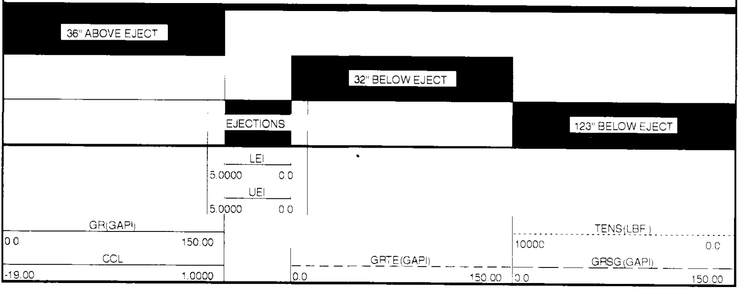
----LR----

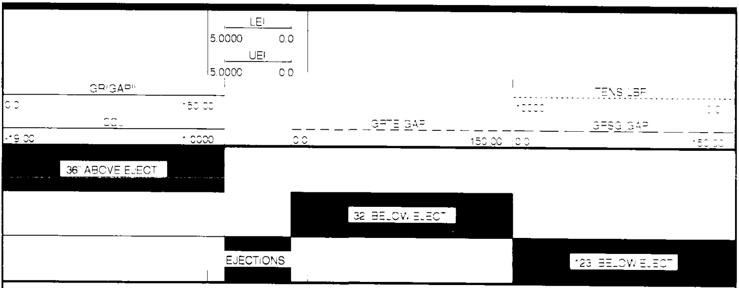




2"/100'

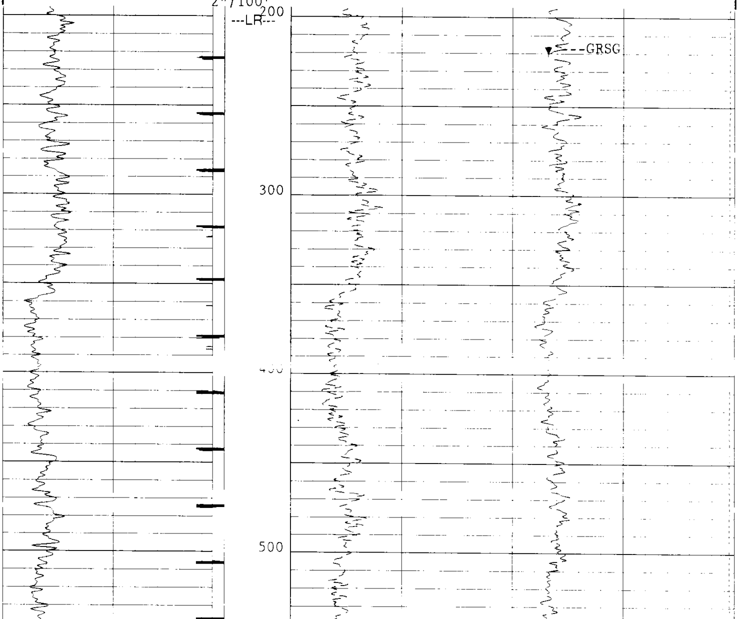
CP 32.6 FILE 41 19-NOV-1992 15:51 (UP)

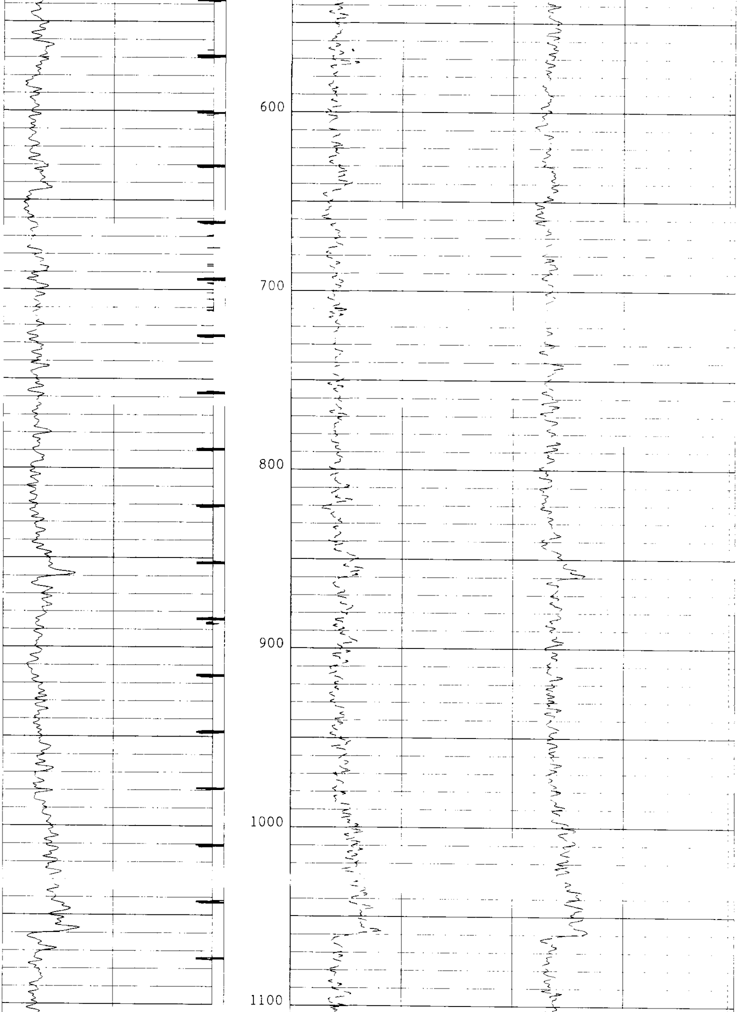


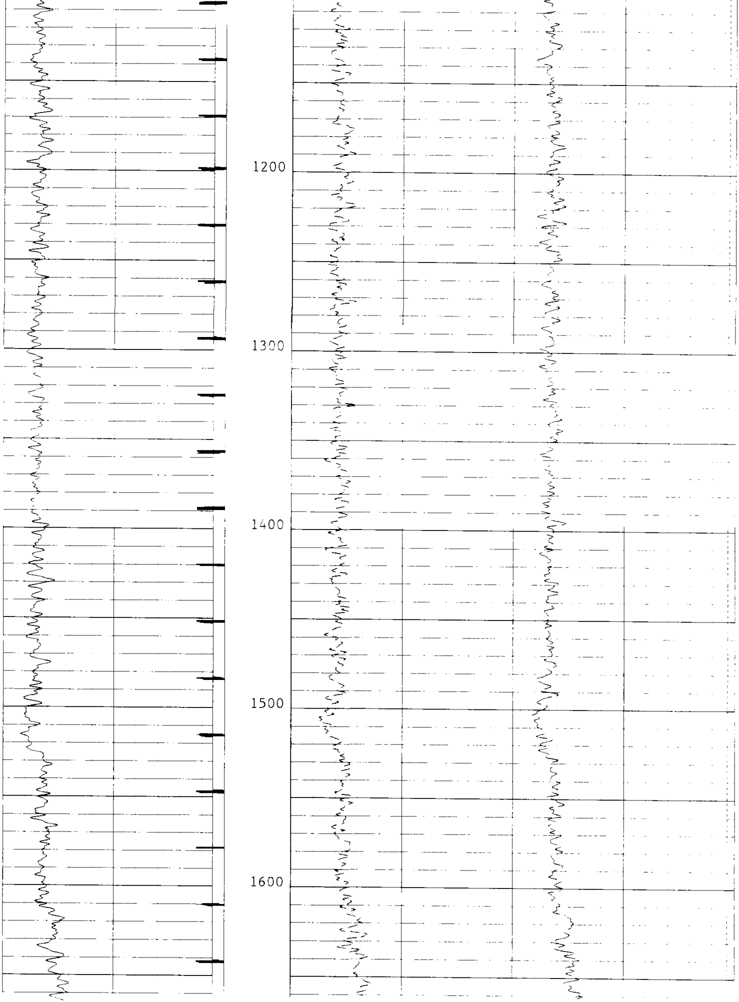

LEI
5.0000
0.0
UEI
5.0000
0.0
GR/GAPI
0.0
150.00
TENS LBF
10000
0.0
CCL
-19.00
1.0000
GRTE GAPI
0.0
150.00
GRSG GAPI
0.0
150.00
36" ABOVE EJECT
32" BELOW EJECT
EJECTIONS
123" BELOW EJECT

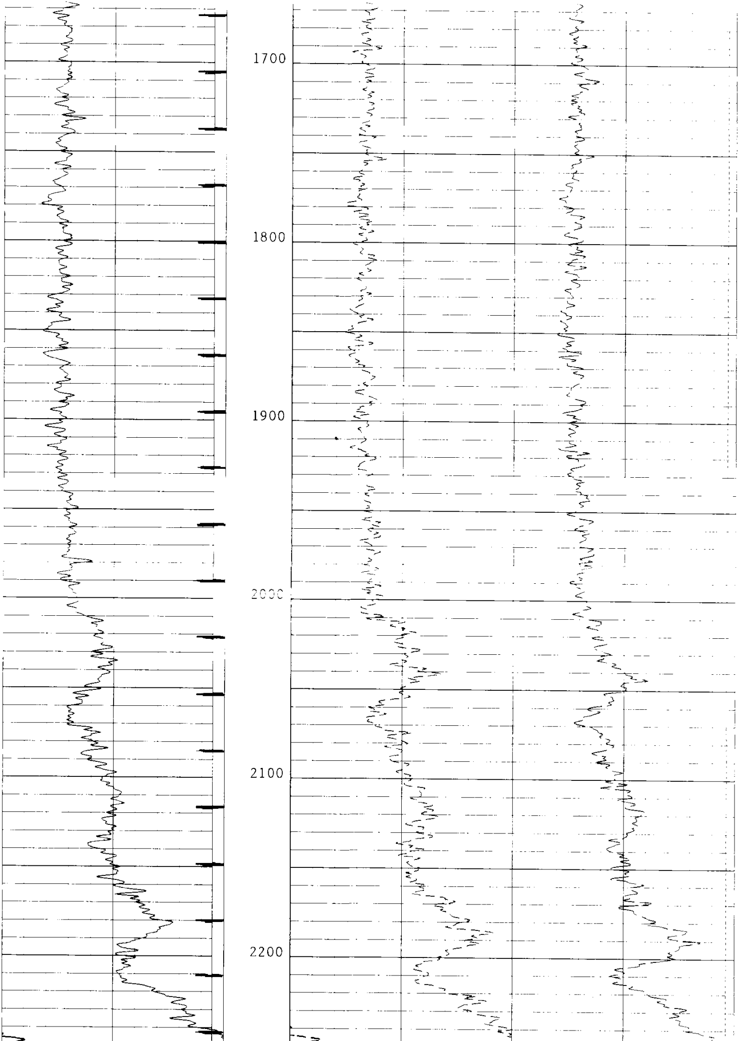
TRACER SHOWS UP ON ALL 3 GR'S ON THIS PASS.

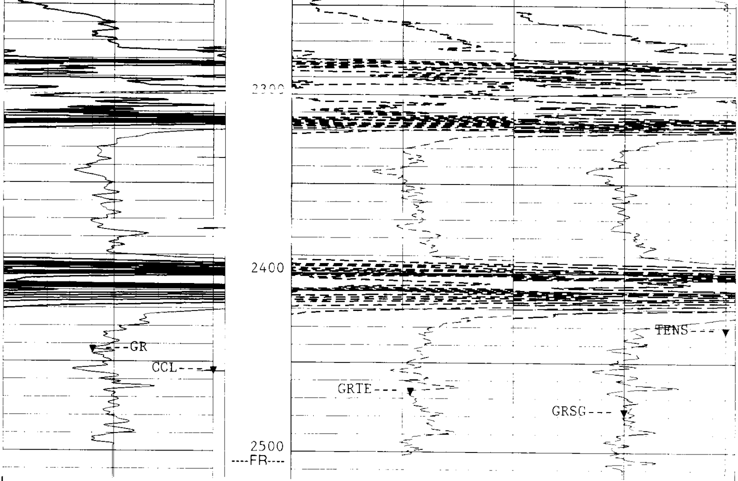
CP 32.6 FILE 42 19-NOV-1992 16:33 (UP)











2"/100'

CP 32.6 FILE 42 19-NOV-1992 16:06 (UP)

36 ABOVE EJECT

32 BELOW EJECT

EJECTIONS

123 BELOW EJECT

LE
5.0000 0.0

JE
5.0000 0.0

GR(GAPI)
0.0 150.00

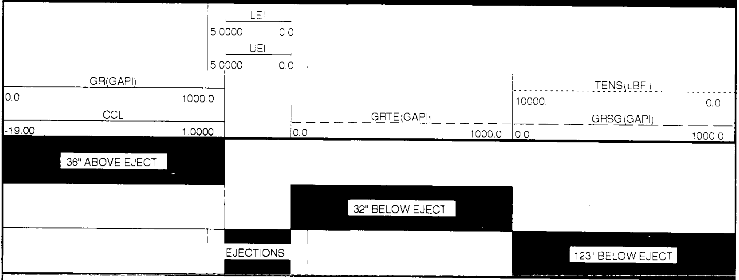
CCL
-19.00 1.0000

GRTE(GAPI)
0.0 150.00

TENS(LBF)
10000 0.0

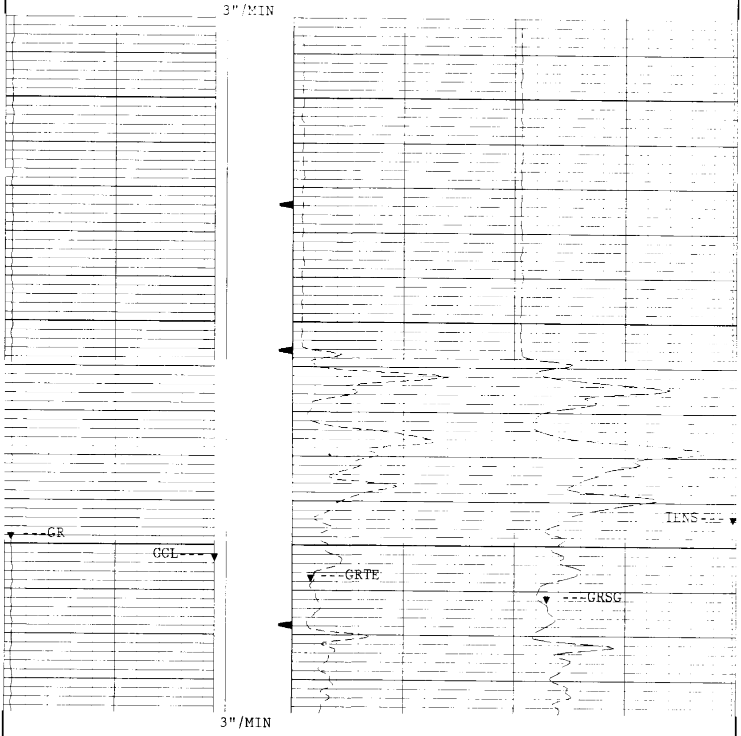
GRSG(GAPI)
0.0 150.00

SHOT AT 200 FEET



CP 32.6 FILE 54 19-NOV-1992 17:34

INPUT FILE(S) CREATION DATE
43 19-NOV-1992 16:33



CP 32.6 FILE 54 19-NOV-1992 17:34

INPUT FILE(S) CREATION DATE
43 19-NOV-1992 16:33

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)
10000 0.0
GRSG(GAPI)
0.0 1000.0

VELOCITY SHOT AT 2270 FEET

LEI
5.0000 0.0
UEI
5.0000 0.0

GR(GAPI)
0.0 500.00
CCL
-19.00 1.0000

GRTE(GAPI)
0.0 500.00

TENS(LBF)
10000 0.0
GRSG(GAPI)
0.0 500.00

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

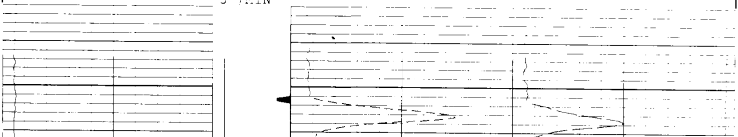
123" BELOW EJECT

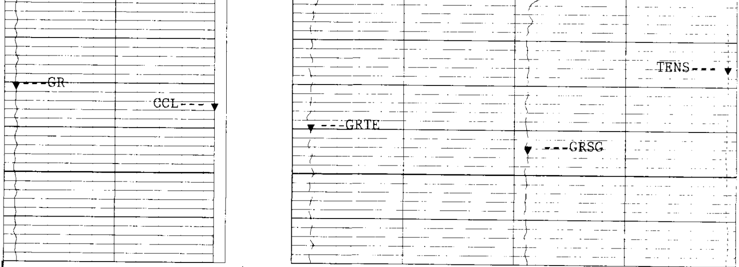
SHOT TAKEN WITH EJECTORS AND GRS IN TUBING.

CP 32.6 FILE 46 19-NOV-1992 16:52

INPUT FILE(S) CREATION DATE
35 19-NOV-1992 15:24

3"/MIN



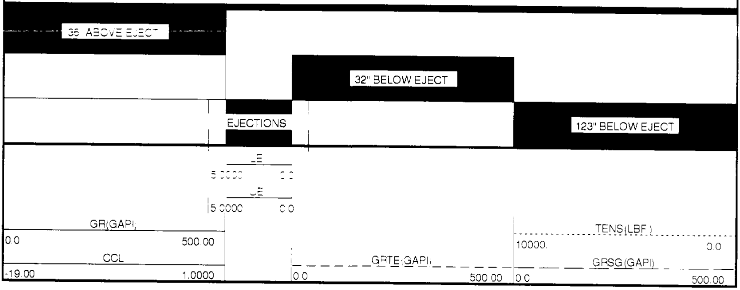


3"/MIN

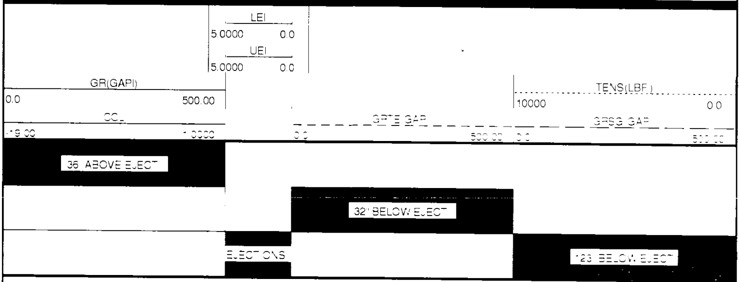
CP 32.6 FILE 46 19-NOV-1992 16:51

INPUT FILE(S) 35

CREATION DATE 19-NOV-1992 15:24


36" ABOVE EJECT
32" BELOW EJECT
EJECTIONS
123" BELOW EJECT
LEI
5.0000 0.0
UEI
5.0000 0.0
GR(GAPI)
0.0 500.00
CCL
-19.00 1.0000
GRTE(GAPI)
0.0 500.00
TENS(LBF)
10000. 0.0
GRSG(GAPI)
0.0 500.00

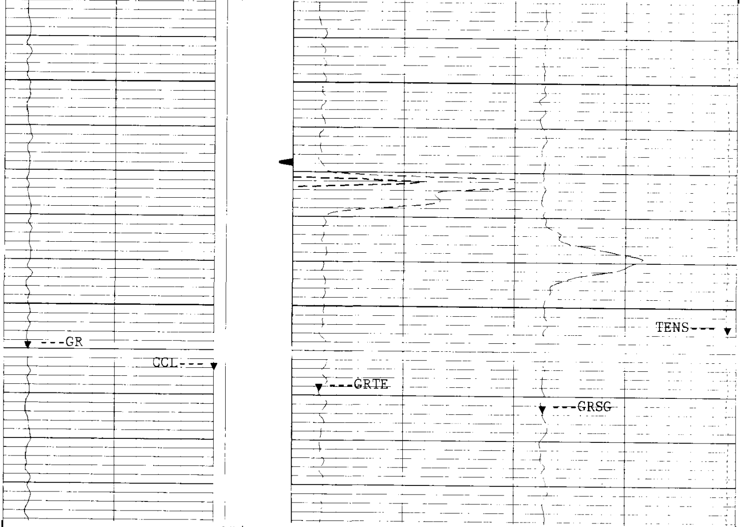
VELOCITY SHOT AT 2290 FEET



CP 32.6 FILE 47 19-NOV-1992 16:53

INPUT FILE(S)   CREATION DATE
36   19-NOV-1992 15:27

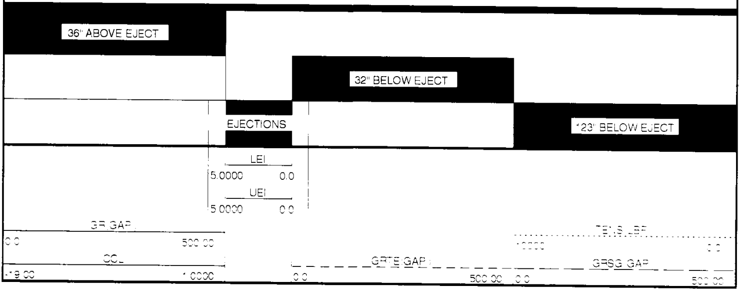
3"/MIN



3"/MIN

CP 32.6   FILE 47   19-NOV-1992 16:53

INPUT FILE(S)   CREATION DATE
36   19-NOV-1992 15:27


36" ABOVE EJECT
32" BELOW EJECT
EJECTIONS
123" BELOW EJECT
LEI
5.0000
0.0
UEI
5.0000
0.0
GR GAPI
0.0
500.00
CCL
-19.00
1.0000
GRTE GAPI
0.0
500.00
TENS LBF
10000
0.0
GRSG GAPI
0.0
500.00

VELOCTIY SHOT AT 2355 FEET

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)
10000 0.0
GRSG(GAPI)
0.0 1000.0

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

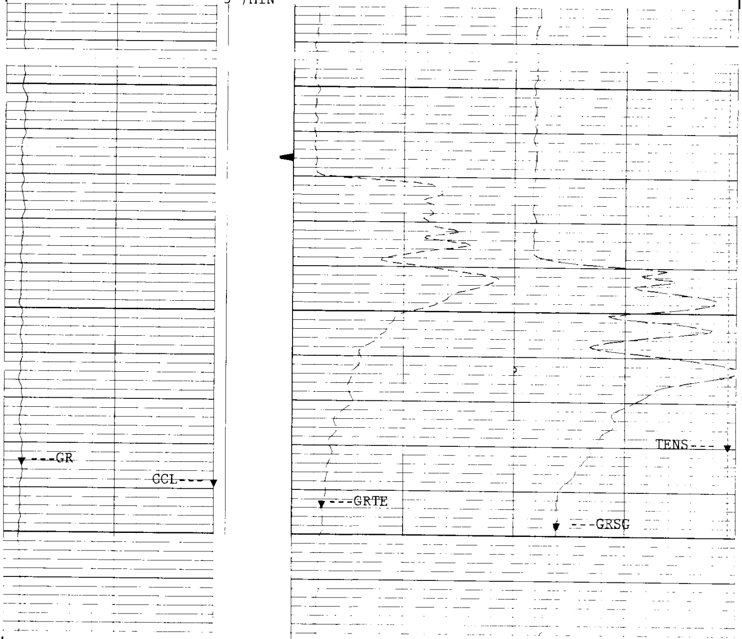
123" BELOW EJECT

EJECTOR AND GR'S JUST ABOVE PERFS.

CP 32.6 FILE 50 19-NOV-1992 17:00

INPUT FILE(S) CREATION DATE
37 19-NOV-1992 15:30

3"/MIN



3"/MIN

CP 32.6 FILE 50 19-NOV-1992 17:03

INPUT FILE(S) CREATION DATE
37 19-NOV-1992 15:30

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)
10000 0.0

GRSG(GAPI)
0.0 1000.0

VELOCITY SHOT AT 2395

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)
10000 0.0

GRSG(GAPI)
0.0 1000.0

36" ABOVE EJECT

32" BELOW EJECT

EJECTIONS

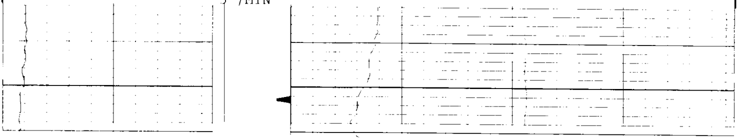
123" BELOW EJECT

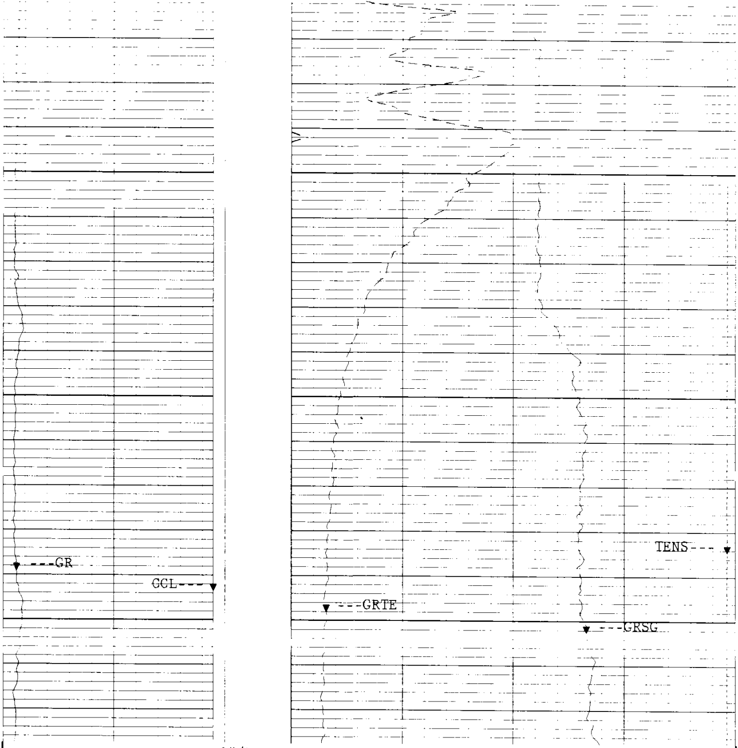
EJECTOR BETWEEN TOP AND MIDDLE PERFS.
GRTE IN PERFS AND GRSG BETWEEN MIDDLE AND BOTTOM PERFS.

CP 32.6 FILE 52 19-NOV-1992 17:04

INPUT FILE(S) CREATION DATE
39 19-NOV-1992 15:40

3"/MIN





3"/MIN

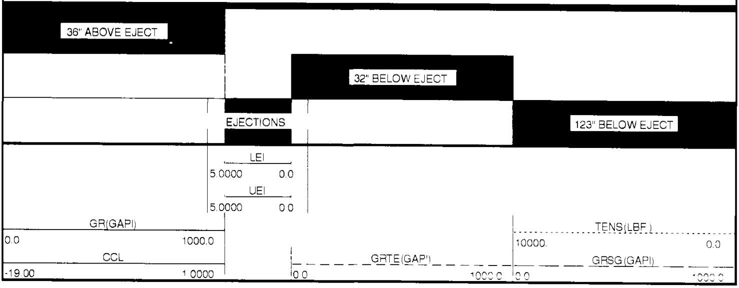
CP 32.6

FILE 52

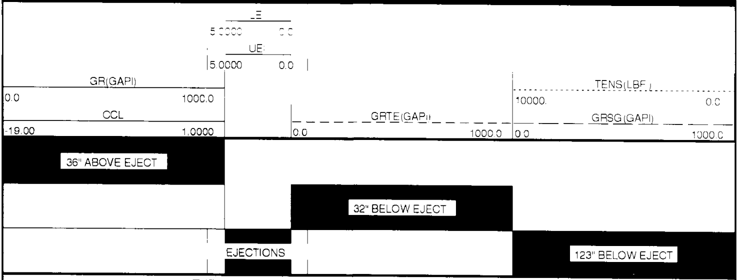
19-NOV-1992 17:03

INPUT FILE(S) 39

CREATION DATE 19-NOV-1992 15:40


36" ABOVE EJECT
32" BELOW EJECT
123" BELOW EJECT
EJECTIONS
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)
10000.
0.0
GRSG(GAPI)
0.0
1000.0

SHOT AT 2405

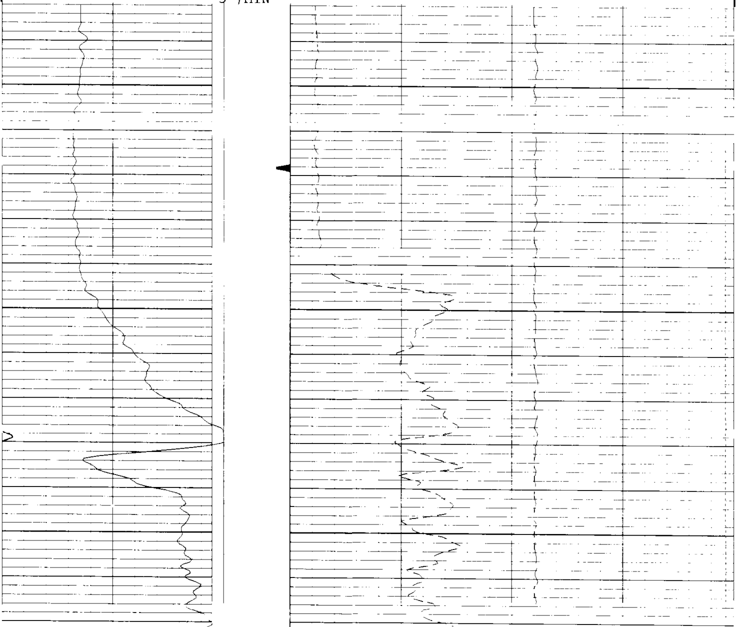


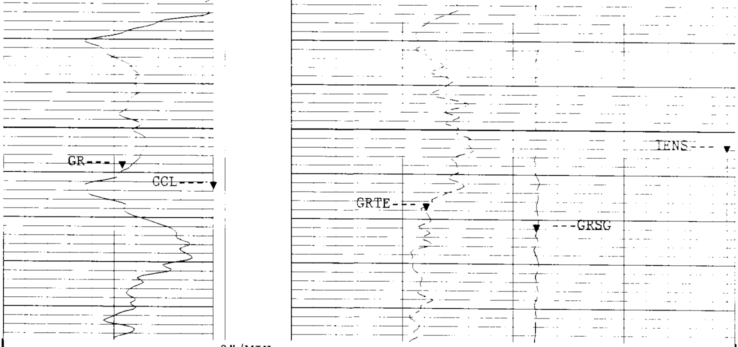
EJECTOR BETWEEN MIDDLE AND BOTTOM PERFS.
GRTE IN BOTTOM PERFS.
GRSG BELOW ALL PERFS.

CP 32.6 FILE 53 19-NOV-1992 17:06

INPUT FILE(S) CREATION DATE
40 19-NOV-1992 15:44

3"/MIN



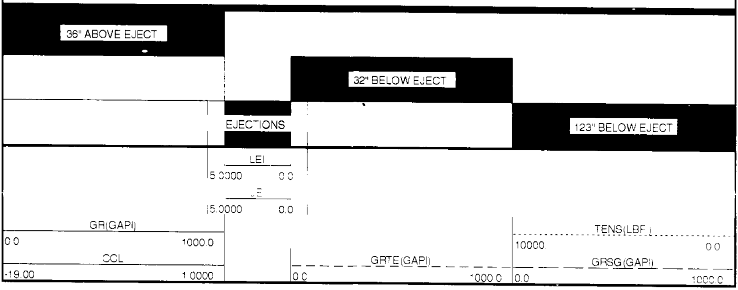


3"/MIN

CP 32.6 FILE 53 19-NOV-1992 17:05

INPUT FILE(S) 40

CREATION DATE 19-NOV-1992 15:44



COMPANY	NAHAMA & WEAGANT ENERGY CO			SCHL.	FR	2500.0 F
				SCHL.	TD	2500.0 F
WELL	"COLUMBIA COUNTY" #13-1 RD #1			DRLR.	TD	2822.0 F
FIELD	MIST			Elev:	KB	1174.6 F
					DF	
COUNTY	COLUMBIA	**STATE**	OREGON		GL	1163.2 F

Schlumberger

RADIOACTIVE TRACER SURVEY