

BSU GEOPHYSICS VSP OBSERVER'S LOG

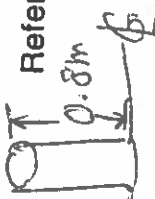
01/01/2017

Coordinate System Origin at Borehole

Casing Elevation: 0.8m above 0

Azimuth of X-Axis: 90°

Azimuth of Y-Axis: 0°



Reference Phone: Offset

Azimuth

Elev.

X=

Y=

Channel Configuration:

Borehole Phone V=Channel 1

R=Channel 2

T=Channel 3

Reference Phone (C,D)

V=Channel 4

R=Channel 5 (E,F)

T=Channel 6 (A,B)

Vert. (deg.)

V 0

R 90

T 90

Date: 10 Nov 94

Location: SPT 2 Capital Station

High Cut 1000 Hz

Low Cut 5 Hz

Sample Int. 2 ms

Number of Samples 2500

Borehole: X = 9917.75 Y = 10054.88 Z = 820.85 above S.L.

Broken box
to bottom

ACE ACE
↑↑↑ ACE
ACE

same yr
BDF BDF

H₂ = R

H₁ = T

Shot		Meters Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
1	SPT0000	1.50m						+ 0.6	90	90
2		1.50							270°	90
3		2.00							90	90
4		2.00							270	90
5		2.50							90	90
6		2.50							270	90
7		3.00							90	90
8		3.00							270	90
9		3.50							90	90
10		3.50							270	90

B31

H₂ = R 5 meters

0.8m above 0

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 10.8m
 Azimuth of X-Axis 90
 Azimuth of Y-Axis 0

Reference Phone: Offset _____
 Azimuth _____
 Elev. 0
 X= 0
 Y= -0.7m

Channel Configuration:
 Borehole Phone
 V=Channel 1
 R=Channel 2
 T=Channel 3

Reference Polarization: Azi.(deg.) Vert.(deg.)
 V 0 0
 R 0 90
 T 270 90

Date: 10 Nov 94 Location: SPT-2 Capital Station
 High Cut 1000 Low Cut 8 Sample Int. .0002 Number of Samples 2500

Shot			Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical	
11		4.0					0	+0.6	90	90	
12		4.0							270	90	
13		4.50							90	90	
14		4.50							270	90	
15		5.0							90	90	
16		5.0							270	90	
17		5.5							90	90	
18		5.5							270	90	
19		6.0							90	90	
20		6.0							270	90	

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 4.80
 Azimuth of X-Axis: 90
 Azimuth of Y-Axis: 0

Reference Phone: Offset
 Azimuth
 Elev. 6
 X= 0
 Y= -1.7m

Channel Configuration:
 Borehole Phone
 V=Channel 1
 R=Channel 2
 T=Channel 3

Reference Polarization: Azi.(deg.) Vert.(deg.)
 V 0 0
 R 0 90
 T 270 90

Date: 16 Nov 94 Location: SPT-2 Capital Station
 High Cut 1000 Low Cut 8 Sample Int. .0002 Number of Samples 2580

Shot			Borehole Geophone		Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical	
21		6.5				6.5	0	+0.6	90	90	
22		6.5						1	270	90	
23		7.0							90	90	
24		7.0						1	270	90	
25		7.5							90	90	
26		7.5							270	90	
27		8.0							90	90	
28		8.0							270	90	
29		8.5							90	90	
30		8.5							270	90	

13.48

13.55

13.59

14.00

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 1.80
 Azimuth of X-Axis 90
 Azimuth of Y-Axis 0

Reference Phone: Offset _____
 Azimuth _____
 Elev. 5
 X= 0
 Y= -1.70m

Channel Configuration:
 Borehole Phone
 V=Channel 2
 R=Channel 3
 T=Channel 3

Reference Polarization:
 V 0
 R 0
 T 270
 Azi.(deg.)
 Vert.(deg.)
0
90
90

Date: Jan 20 Location: SPT-2 Cap. Station
 High Cut 1000 Low Cut 8 Sample Int. .0002 sec Number of Samples 2500

Shot			Borehole Geophone		Source						Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical		
31		9.0					0	7.6	90	90		
32		9.0							270	90		
33		9.5							90	90		
34		9.5							270	90		
35		10.0							90	90		
36		10.0							270	90		
37		10.5							90	90		
38		10.5							270	90		
39		11.0							90	90		
40		11.0							270	90		

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 480m
 Azimuth of X-Axis 90
 Azimuth of Y-Axis 0

Reference Phone: Offset _____
 Azimuth _____
 Elev. 6
 X= 0
 Y= -10

Channel Configuration:
 Borehole Phone
 V=Channel 1
 R=Channel 2
 T=Channel 3

Reference Polarization:
 V 0
 R 0
 T 270
 Azl.(deg.)
 Vert.(deg.)
90
90

Date: 10 NOV Location: SPT-2 Capital Station
 High Cut 1000 Low Cut 8 Sample Int. .0002 Number of Samples 2500

P.W.N.V.
 Hammer
 14.42

Shot		Borehole Geophone			Source				Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical
41		1.5				6	0	+1.6	0	180
42		2.0							0	180
43		2.5							0	180
44		3.0							0	180
45		3.5							0	180
46		4.0							0	180
47		4.5							0	180
48		5.0							0	180
49		5.5							0	180
50		6.0							0	180

5

BSU GEOPHYSICS VSP OBSERVER'S LOG

Coordinate System Origin at Borehole
 Casing Elevation: 12.87m
 Azimuth of X-Axis: 90
 Azimuth of Y-Axis: 0

Reference Phone: Offset _____
 Azimuth _____
 Elev. 6
 X= _____
 Y= -70m

Channel Configuration:
 Borehole Phone
 V=Channel 1
 R=Channel 2
 T=Channel 3

Reference Polarization:
 V 0
 R 0
 T 270
 Azl. (deg.)
 Vert. (deg.)
0
90
90

Date: 10 Nov 94 Location: SPT-2 Cap. Station

High Cut 1000 Low Cut 8 Sample Int. .0002 Number of Samples 2500

Shot		Borehole Geophone			Source					Source Polarization	
Rec	File	Depth	Elev.	Offset	Azimuth	Elev.	X	Y	Azimuth	Vertical	
51		6.5				6.1	0	7.6	0	180	
52		7.0							0	180	
53		7.5							0	180	
54		8.0							0	180	
55		8.5							0	180	
56		9.0							0	180	
57		9.5							0	180	
58		10.0							0	180	
59		10.5							0	180	
60		11.0							0	180	

15:51

161

Coordinate System Origin at Borehole
Casing Elevation: 7.8m
Azimuth of X-Axis 90
Azimuth of Y-Axis 0

Reference Phone: _____

Offset _____

Azimuth _____

Elev. 6 _____

X = 0 _____

Y = -17 _____

Channel Configuration:	Borehole Phone	Reference Phone
V=Channel 1	V=Channel 4	V=Channel 4
R=Channel 2	R=Channel 5	R=Channel 5
T=Channel 3	T=Channel 6	T=Channel 6

Reference Polarization:		Azi. (deg.)	Vert. (deg.)
V		0	0
R		0	90
T		270	90

Date: 10/26/94 Location: SPT-2 Capital St. T 670
High Cut 1000 Low Cut 8 Sample Int. 0002 Number of Samples 2500

[illegible]

(1)

10 NOV 94 DOWN HOLE GEOPHONE
FIELD CHECKLIST

SPT2-
Capital Station

DATE:

ODOMETER

START: 23227

FINISH: 23282

ITEMS AT GEOSCIENCES

ITEM	OUT	IN	COMMENT
SWC TOOL OYO Tool	✓	✓	
REF PHONE AND CABLES	✓	✓	
BISON	✓	✓	
TAPE MEASURE (50M)	✓	✓	
PULLEY AND WINCH ASSEM.	✓	✓	
DUMMY SWC TOOL	✓	✓	
SLEDGE HAMMER	✓	✓	
COMPASS	✓	✓	
ROCK HAMMER	✓	✓	
ROPE	✓	✓	
WD-40	✓	✓	
OBSERVER SHEETS/ MAPS	✓	✓	
GAS CARD/ KEYS	✓	✓	
GLOVES	✓	✓	

ITEMS AT LINCOLN STREET

ITEM	OUT	IN	COMMENT
BISON CABLE BOX	✓	✓	
BISON TOOL BOX	✓	✓	
TOOL BOX	✓	✓	
TRIGGER CORD	✓	✓	
TRIPOD HEAD	✓	✓	
BATTERIES (2)	✓✓	✓	

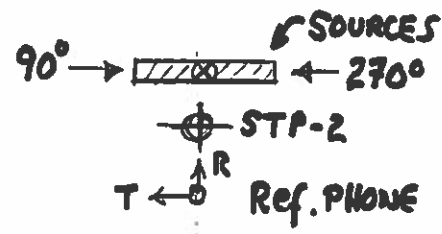
LOCATED IN GARAGE

TRIPOD LEGS	✓✓	✓	
RAIL ROAD TIE	✓	✓	
SHOVEL	✓	✓	
PICK	✓	✓	
2 FT IRON ROD	✓	✓	

~~SECRET~~
CAPITAL STATION
 Well: ~~STP-2~~ STP-2
 10 NOV 94
 [OYO Phone
 Rubber Packer]

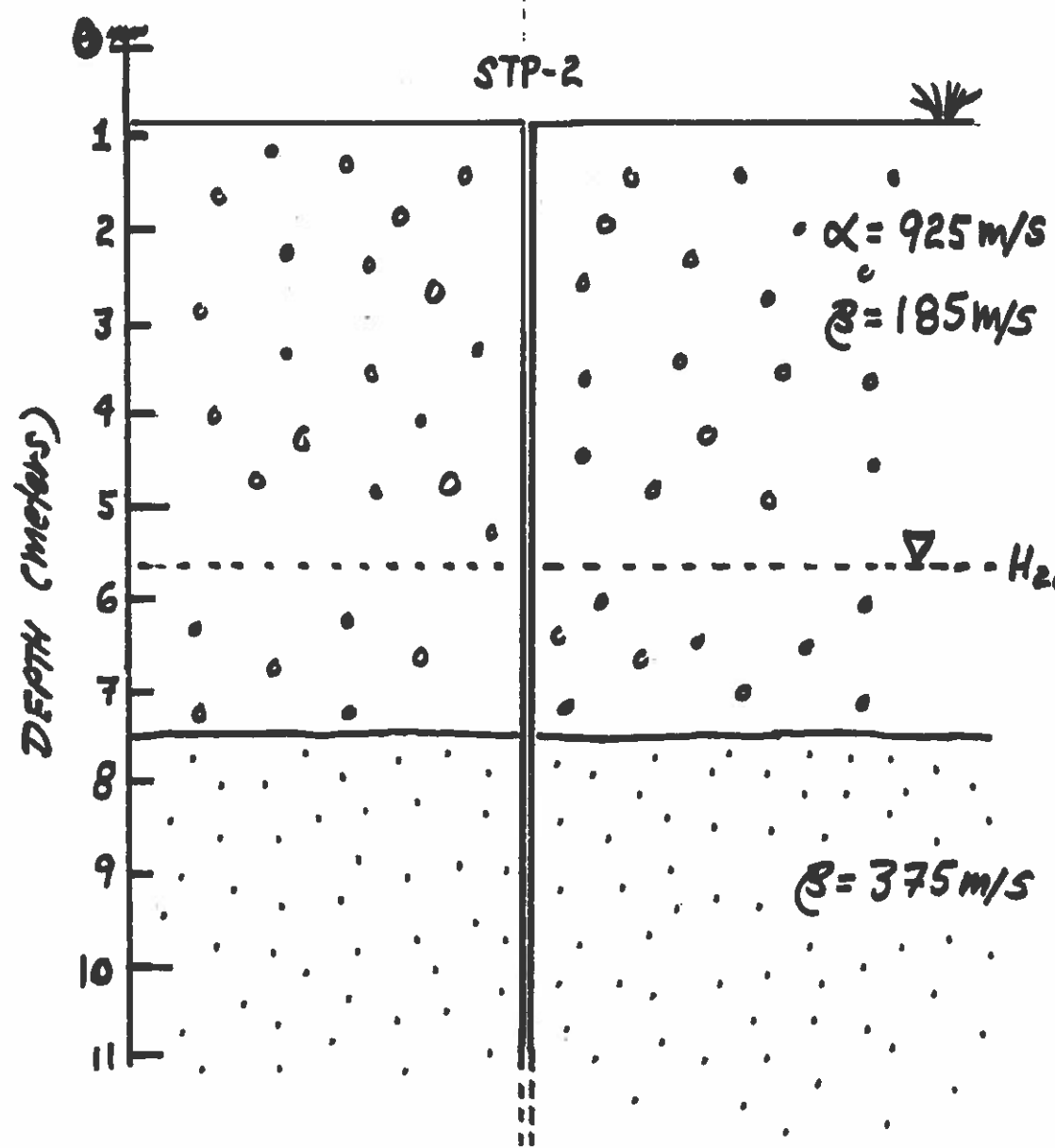


Preliminary
 Interpretation
 [Noise From Tool
 Slipping seems to
 Have overwhelmed
 P-wave DATA
 Below 5 m]



[C.E. = ± 0.8 m]

β = SH-WAVE
 Velocity
 α = P-wave
 Velocity



TRACE EQUALIZED
Plots
SOURCE: HORIZONTAL
HAMPIER

CAPITAL STATION
WELL: STP0002
10 NOVEMBER 94

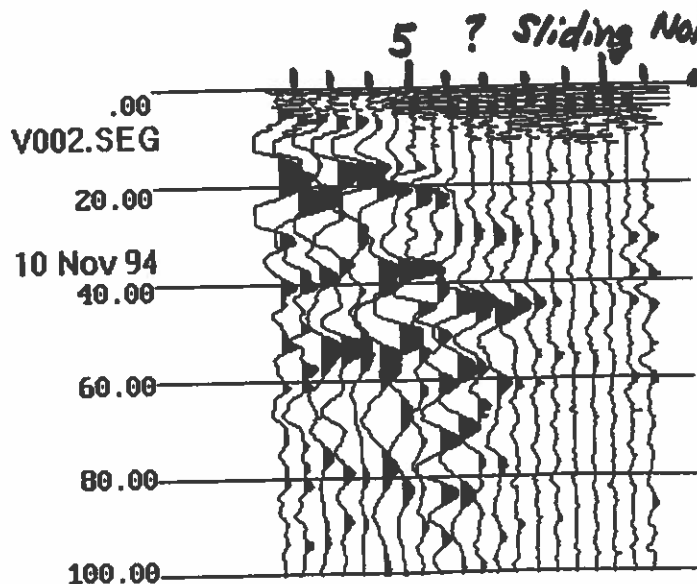
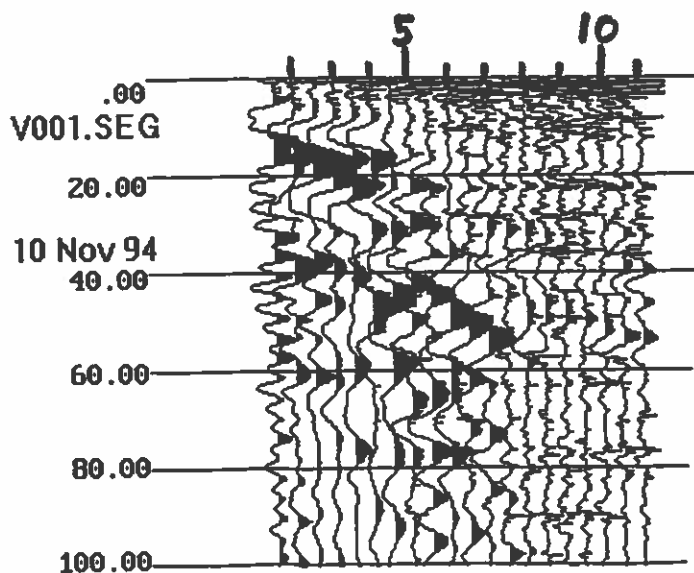
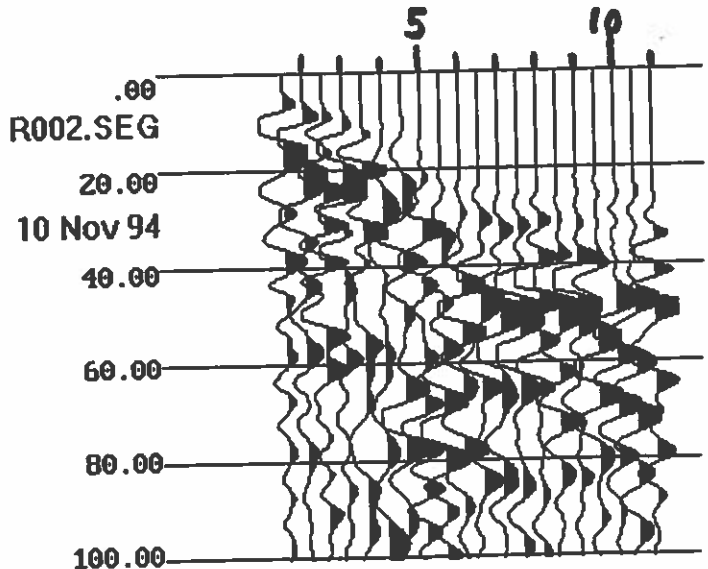
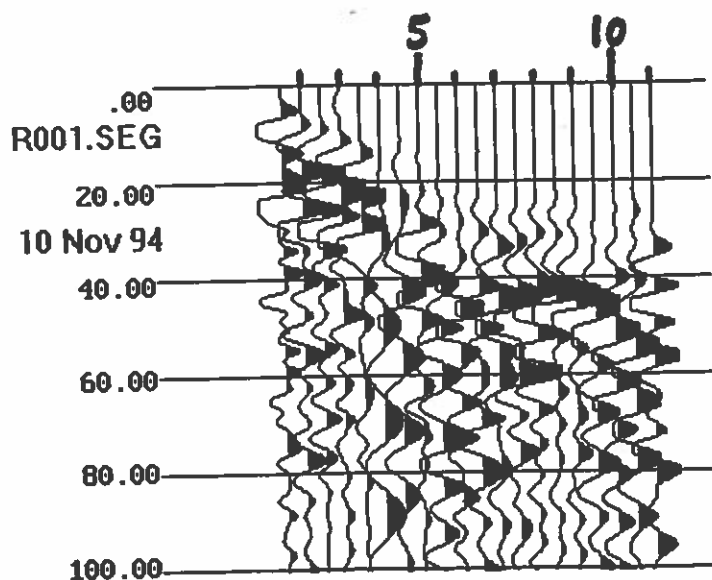
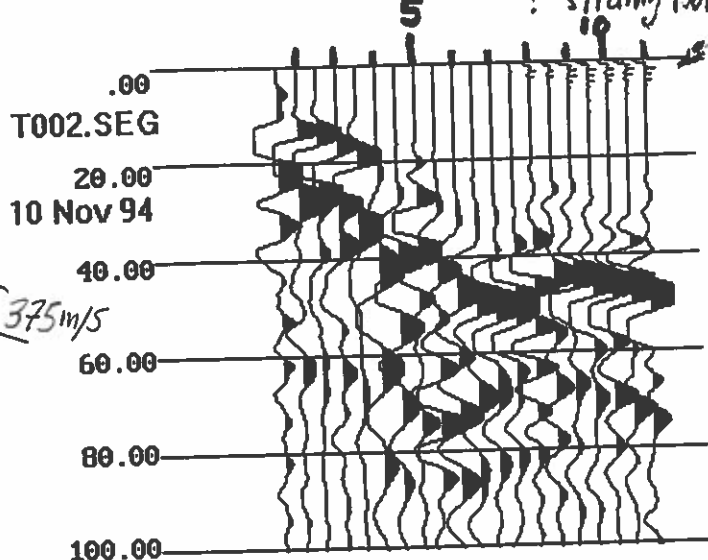
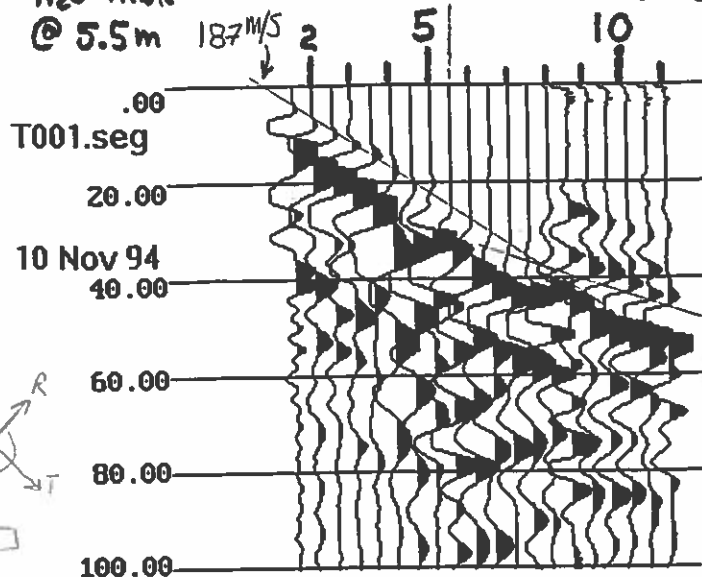
OYO Geospace 1001
Rubber Packer - Leaky Hose
or Pump

H₂O Table
@ 5.5m

Δ
meters

AZ=90°-SRC → AZ=270°

? Sliding Noi

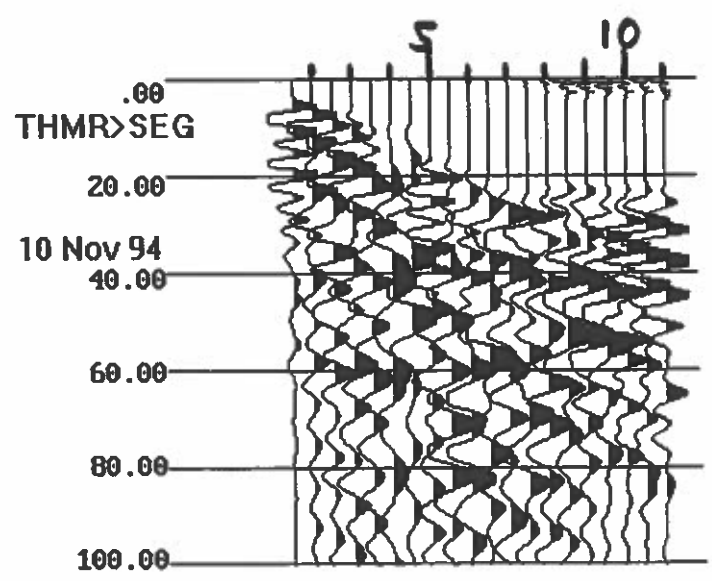
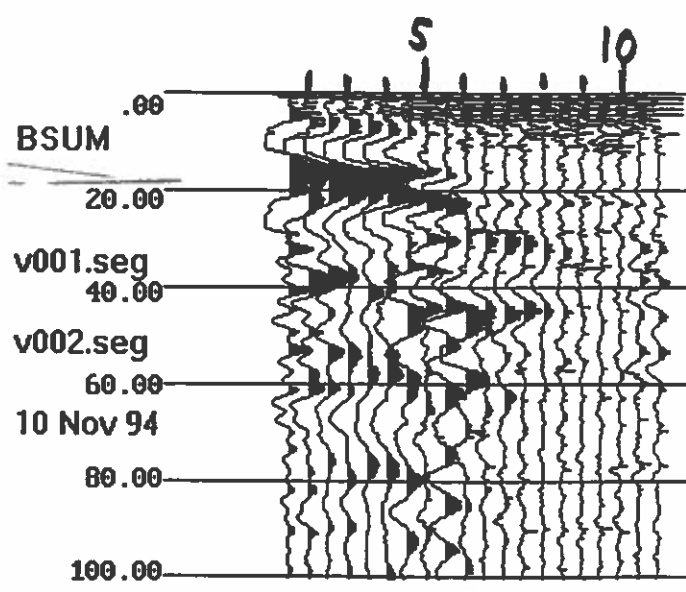
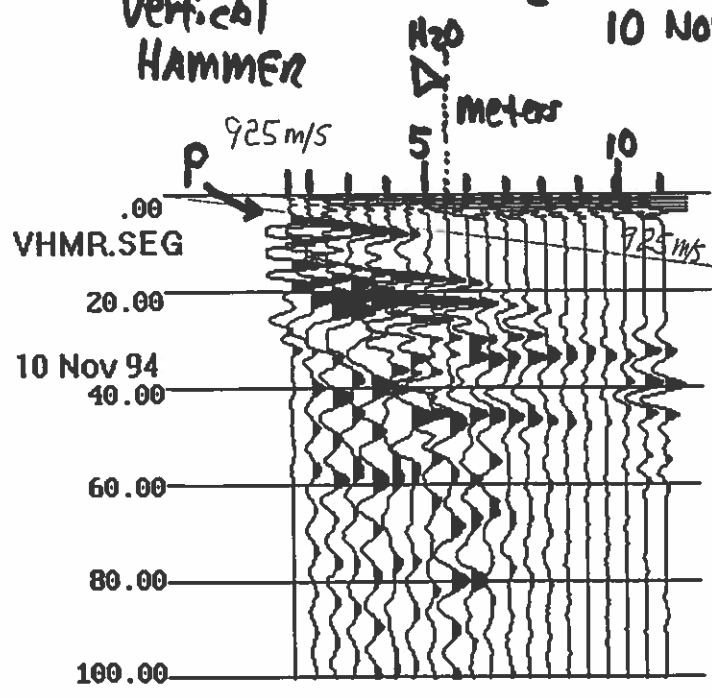


ΓSH-111117

SOURCE:
Vertical
HAMMER

CAPITAL STATION
Well: STP-2
10 Nov 94

OYO TOOL
Rubber Packer
Leaky Hose / pump



HORIZONTAL HAMMER
Sum(V001 + V002)

VERTICAL HAMMER

[P-WAVE]

P arrivals