



Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Box 1416; Abingdon, VA 24212
Telephone: (276) 676-5423

Tracking Number: 646
Company: CNX Gas Company LLC
File Number: TA-0402
Operations Name: CBM AW140A W/PL
Operation Type: Coalbed/Pipeline
Drilling Report Type: Original

DRILLING REPORT (DGO-GO-14)

1. Drilling Data

Date drilling commenced: 4/5/2007 Drilling Contractor: Noah Horn
Date drilling completed: 4/12/2007 Rig Type: Rotary Cable Tool
Driller's Total Depth (feet): 2,530
Log Total Depth (feet): 2,506 Coal Seam At Total Depth Pocahontas

2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 1,032,058 Final Plat State Plane X: 1,032,059
Permitted State Plane Y: 303,003 Final Plat State Plane Y: 303,004

Plat Previously Submitted Or...

List of Attached Items:

| Description | FileName |
|-------------|----------|
| Plat | Plat.pdf |

3. Geological Data

Fresh Water At:

| Depth (in feet) | Rate | Unit of Measure |
|-----------------|------|-----------------|
| 127 | Damp | GPM |
| 330 | Damp | GPM |

Salt Water At:

| Depth (in feet) | Rate | Unit of Measure |
|-----------------|------|-----------------|
| 1,656 | Damp | GPM |

Coal Seams

List of Attached Items:

| Description | FileName |
|-------------|----------------------|
| Exhibit A | AW140A Exhibit A.doc |

Gas and Oil Shows

List of Attached Items:

| Description | FileName |
|-------------|---------------------|
| Gas Show | AW140A Gas Show.xls |

4. Electric Logs (As required by 4VAC25-150-280.A.)

List all logs run: Caliper Gamma Denstiy Temp Deviation

Did logs disclose vertical locations of a coal seam? Yes No

5. Survey Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

| Description | FileName |
|-----------------|----------------------------|
| Cement Bond Log | AW140A Cement Bond Log.pdf |
| Deviation | Deviation.pdf |

6. Casing and Tubing Program

List of Attached Items:

| Description | FileName |
|-------------|-------------------|
| Casing | AW140A Casing.xls |

7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurrence.

41/2" TOC @ 550'

8. Drillers Log

Compiled By: Noah Horn

List of Attached Items:

| Description | FileName |
|-------------|----------------|
| Drill Data | Drill Data.pdf |

9. Comments

deviation log is missing from 170'-860' [ljs 10/11/07]
the coal protection/production string is required to be cemented to surface; verify is submitted info is true or if additional cementing data is available [ljs 10/11/07]

10. Signature

Permitee: CNX Gas Company LLC Date: 11/17/2007 (Company)

Signed By: Leslie K Arrington Title: Manager (Signature)

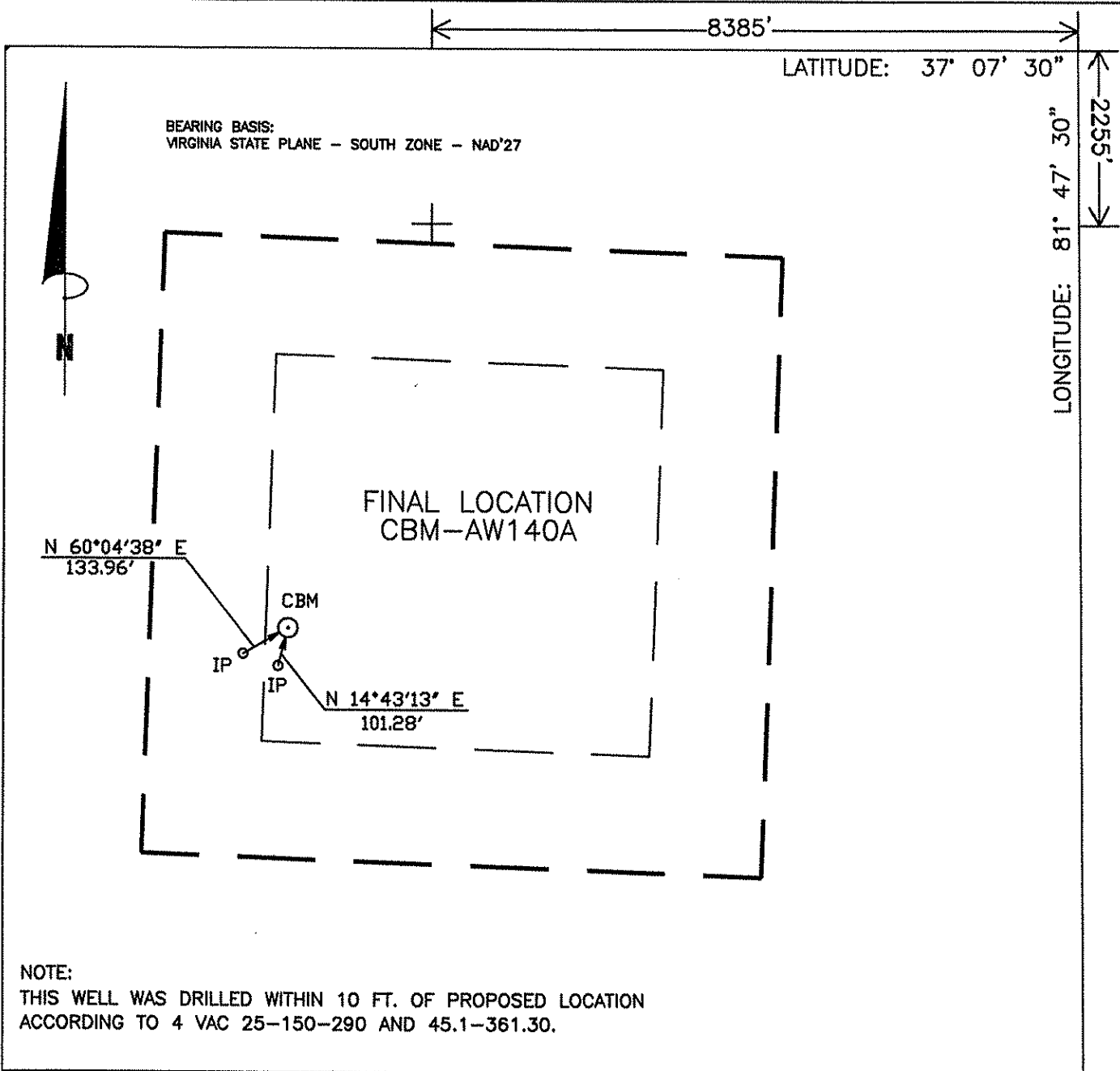
INTERNAL USE ONLY

Submit Date: 11/17/2007

Status: Inspr Approved

Date: 12/11/2007

Final PDF Date: 12/11/2007



WELL LOCATION PLAT

AW140AFNL
RDASHCNX8/82-536/48

COMPANY CNX GAS COMPANY, LLC. WELL NAME OR NUMBER CBM-AW140A
 TRACT NUMBER RESERVE COAL QUADRANGLE RICHLANDS
 DISTRICT: MAIDEN SPRINGS

WELL COORDINATES (VIRGINIA STATE PLANE): STATE PLANE: N 303,003.67 E 1,032,058.53
 ELEVATION: 2740.22' METHOD USED TO DETERMINE ELEVATION: BY TRIG. LEVELS FROM CONSOL INC BM'S
 COUNTY TAZEWELL Scale: 1" = 400' Date 04-13-07

THIS PLAT IS A NEW PLAT _____; AN UPDATED PLAT _____; OR A FINAL LOCATION PLAT X

+ Denotes the location of a well on United States Topographic Maps, scale 1" = 24,000' (optional).
 PRICE

D. Price

Licensed Professional Engineer or Licensed Land Surveyor (Affix Seal)

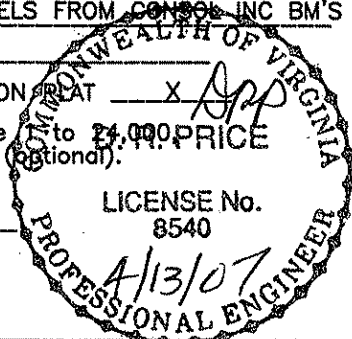


Exhibit A

Well Name: 07 CBM AW140A
 SURFACE ELEV: 2740.22 EASTING: 1032058.53 NORTHING: 303003.67

| SEAM | DEPTH FROM (FT) | DEPTH TO (FT) | ELEVATION (TOSE) | THK. (FT) | REMARKS |
|-------|-----------------------|---------------------|---------------------|--------------|---------|
| RA1 | 115.30 | 117.90 | 2624.92 | 2.60 | |
| | 117.90 | 146.10 | 2622.32 | 28.20 | |
| RA2 | 146.10 | 148.10 | 2594.12 | 2.00 | |
| | 148.10 | 236.80 | 2592.12 | 88.70 | |
| COAL | 236.80 | 237.90 | 2503.42 | 1.10 | |
| | 237.90 | 314.30 | 2502.32 | 76.40 | |
| JB1 | 314.30 | 316.90 | 2425.92 | 2.60 | |
| | 316.90 | 363.10 | 2423.32 | 46.20 | |
| JB3 | 363.10 | 363.80 | 2377.12 | 0.70 | |
| | 363.80 | 416.20 | 2376.42 | 52.40 | |
| T2 | 416.20 | 418.50 | 2324.02 | 2.30 | |
| | 418.50 | 469.10 | 2321.72 | 50.60 | |
| TI | 469.10 | 469.80 | 2271.12 | 0.70 | |
| | 469.80 | 609.50 | 2270.42 | 139.70 | |
| US1 | 609.50 | 610.00 | 2130.72 | 0.50 | |
| | 610.00 | 852.10 | 2130.22 | 242.10 | |
| COAL | 852.10 | 852.50 | 1888.12 | 0.40 | |
| | 852.50 | 869.90 | 1887.72 | 17.40 | |
| *GC1 | 869.90 | 870.10 | 1870.32 | 0.20 | |
| | 870.10 | 920.30 | 1870.12 | 50.20 | |
| *GC2 | 920.30 | 923.00 | 1819.92 | 2.70 | |
| | 923.00 | 962.20 | 1817.22 | 39.20 | |
| *COAL | 962.20 | 962.80 | 1778.02 | 0.60 | |
| | 962.80 | 964.70 | 1777.42 | 1.90 | |
| *SE1 | 964.70 | 965.50 | 1775.52 | 0.80 | |
| | 965.50 | 1006.20 | 1774.72 | 40.70 | |
| *SE2 | 1006.20 | 1006.50 | 1734.02 | 0.30 | |
| | 1006.50 | 1007.00 | 1733.72 | 0.50 | |
| *SE2 | 1007.00 | 1009.00 | 1733.22 | 2.00 | |
| | 1009.00 | 1071.40 | 1731.22 | 62.40 | |
| *LS1 | 1071.40 | 1073.50 | 1668.82 | 2.10 | |
| | 1073.50 | 1073.50 | 1666.72 | 0.00 | |
| *LS2 | 1073.50 | 1073.90 | 1666.72 | 0.40 | |
| | 1073.90 | 1098.10 | 1666.32 | 24.20 | |
| *LS3 | 1098.10 | 1098.70 | 1642.12 | 0.60 | |
| | 1098.70 | 1099.50 | 1641.52 | 0.80 | |
| *LS3 | 1099.50 | 1100.00 | 1640.72 | 0.50 | |
| | 1100.00 | 1163.00 | 1640.22 | 63.00 | |
| *UH1 | 1163.00 | 1165.20 | 1577.22 | 2.20 | |
| | 1165.20 | 1193.20 | 1575.02 | 28.00 | |
| *UH2 | 1193.20 | 1194.10 | 1547.02 | 0.90 | |
| | 1194.10 | 1194.30 | 1546.12 | 0.20 | |
| *UH3 | 1194.30 | 1196.20 | 1545.92 | 1.90 | |
| | 1196.20 | 1242.80 | 1544.02 | 46.60 | |
| *MH1 | 1242.80 | 1244.20 | 1497.42 | 1.40 | |
| | 1244.20 | 1323.80 | 1496.02 | 79.60 | |
| *MH2 | 1323.80 | 1326.00 | 1416.42 | 2.20 | |

| | | | | |
|-------|---------|---------|---------|--------|
| | 1326.00 | 1326.50 | 1414.22 | 0.50 |
| *MH2 | 1326.50 | 1327.00 | 1413.72 | 0.50 |
| | 1327.00 | 1367.90 | 1413.22 | 40.90 |
| *P11 | 1367.90 | 1370.50 | 1372.32 | 2.60 |
| | 1370.50 | 1389.00 | 1369.72 | 18.50 |
| *P10 | 1389.00 | 1389.80 | 1351.22 | 0.80 |
| | 1389.80 | 1404.50 | 1350.42 | 14.70 |
| *COAL | 1404.50 | 1405.00 | 1335.72 | 0.50 |
| | 1405.00 | 1410.70 | 1335.22 | 5.70 |
| *COAL | 1410.70 | 1411.00 | 1329.52 | 0.30 |
| | 1411.00 | 1412.50 | 1329.22 | 1.50 |
| *LH1 | 1412.50 | 1414.10 | 1327.72 | 1.60 |
| | 1414.10 | 1479.70 | 1326.12 | 65.60 |
| *COAL | 1479.70 | 1480.00 | 1260.52 | 0.30 |
| | 1480.00 | 1496.00 | 1260.22 | 16.00 |
| *P91 | 1496.00 | 1498.50 | 1244.22 | 2.50 |
| | 1498.50 | 1532.90 | 1241.72 | 34.40 |
| *P81 | 1532.90 | 1533.50 | 1207.32 | 0.60 |
| | 1533.50 | 1533.70 | 1206.72 | 0.20 |
| *P82 | 1533.70 | 1534.70 | 1206.52 | 1.00 |
| | 1534.70 | 1562.40 | 1205.52 | 27.70 |
| *P71 | 1562.40 | 1563.80 | 1177.82 | 1.40 |
| | 1563.80 | 1613.70 | 1176.42 | 49.90 |
| *COAL | 1613.70 | 1614.20 | 1126.52 | 0.50 |
| | 1614.20 | 1615.20 | 1126.02 | 1.00 |
| *COAL | 1615.20 | 1615.80 | 1125.02 | 0.60 |
| | 1615.80 | 1639.40 | 1124.42 | 23.60 |
| *COAL | 1639.40 | 1640.00 | 1100.82 | 0.60 |
| | 1640.00 | 1640.20 | 1100.22 | 0.20 |
| *COAL | 1640.20 | 1640.90 | 1100.02 | 0.70 |
| | 1640.90 | 1643.50 | 1099.32 | 2.60 |
| *P72 | 1643.50 | 1644.00 | 1096.72 | 0.50 |
| | 1644.00 | 1685.50 | 1096.22 | 41.50 |
| *COAL | 1685.50 | 1685.90 | 1054.72 | 0.40 |
| | 1685.90 | 1711.40 | 1054.32 | 25.50 |
| *COAL | 1711.40 | 1711.80 | 1028.82 | 0.40 |
| | 1711.80 | 1713.20 | 1028.42 | 1.40 |
| *COAL | 1713.20 | 1713.40 | 1027.02 | 0.20 |
| | 1713.40 | 1726.10 | 1026.82 | 12.70 |
| *COAL | 1726.10 | 1726.50 | 1014.12 | 0.40 |
| | 1726.50 | 1742.70 | 1013.72 | 16.20 |
| *COAL | 1742.70 | 1743.10 | 997.52 | 0.40 |
| | 1743.10 | 1828.80 | 997.12 | 85.70 |
| *P61 | 1828.80 | 1829.50 | 911.42 | 0.70 |
| | 1829.50 | 1856.20 | 910.72 | 26.70 |
| *P51 | 1856.20 | 1857.00 | 884.02 | 0.80 |
| | 1857.00 | 1887.40 | 883.22 | 30.40 |
| *P52 | 1887.40 | 1889.20 | 852.82 | 1.80 |
| | 1889.20 | 1925.30 | 851.02 | 36.10 |
| *COAL | 1925.30 | 1926.20 | 814.92 | 0.90 |
| | 1926.20 | 1972.50 | 814.02 | 46.30 |
| *P41 | 1972.50 | 1975.10 | 767.72 | 2.60 |
| | 1975.10 | 2085.20 | 765.12 | 110.10 |
| *P31 | 2085.20 | 2086.80 | 655.02 | 1.60 |
| | 2086.80 | 2087.00 | 653.42 | 0.20 |
| *P32 | 2087.00 | 2088.50 | 653.22 | 1.50 |
| | 2088.50 | 2088.50 | 651.72 | 0.00 |

| | | | | |
|------|---------|---------|--------|--------|
| *P33 | 2088.50 | 2089.90 | 651.72 | 1.40 |
| | 2089.90 | 2090.90 | 650.32 | 1.00 |
| *P34 | 2090.90 | 2091.10 | 649.32 | 0.20 |
| | 2091.10 | 2118.40 | 649.12 | 27.30 |
| *P35 | 2118.40 | 2119.30 | 621.82 | 0.90 |
| | 2119.30 | 2252.20 | 620.92 | 132.90 |
| *P01 | 2252.20 | 2252.80 | 488.02 | 0.60 |
| | 2252.80 | 2305.10 | 487.42 | 52.30 |
| *SJ3 | 2305.10 | 2305.50 | 435.12 | 0.40 |
| | 2305.50 | 2312.00 | 434.72 | 6.50 |
| *SJ2 | 2312.00 | 2312.20 | 428.22 | 0.20 |
| | 2312.20 | 2318.80 | 428.02 | 6.60 |
| *SJ1 | 2318.80 | 2320.00 | 421.42 | 1.20 |
| | 2320.00 | 2506.17 | 420.22 | 186.17 |

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO TOPOGRAPHY.
 GAMMA-CALIPER LOG FROM 0 TO 448.00
 GAMMA-DENSITY LOG FROM 448.00 TO TD.
 NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
 FILE: D:\PROJECTS\VP_JJK\GAS\AW140A.CMP
 DATE: 04/19/07

Well: AW140A

Oil & Gas Show

| Formation | Top | Bottom | Thickness | IPF (MCFD/BOPD) | Pressure | Hours Tested |
|------------|------|--------|-----------|--------------------|----------|-----------------|
| Lee/Norton | 920 | 1498 | 578 | | | |
| Pocahontas | 1562 | 2320 | 758 | | | |
| Total IPF | | | | Not Taken | | |
| | | | | | | |



SUPERIOR
Black Lick, Pa.
Meadow, Pa.
Woods, Ohio
Grand, Ok.

**GAMMA RAY
CCL / VDL
CEMENT BOND LOG**

| | | | |
|------------------------|-----------------------------|----------------------|-----------|
| Company | | CNX GAS COMPANY, LLC | |
| Well | | 07-AW-140-A | |
| Field | | TAZEWELL | |
| County | | TAZEWELL | |
| State | | VIRGINIA | |
| Location: | | API #: | |
| SEC | TWP | RGE | Elevation |
| Permanent Datum | | GROUND LEVEL | |
| Log Measured From | | GROUND LEVEL | |
| Drilling Measured From | | GROUND LEVEL | |
| Date | 4-18-2007 | | |
| Run Number | ONE | | |
| Depth Driller | 2530 | | |
| Depth Logger | 2336 | | |
| Bottom Logged Interval | 2336 | | |
| Top Log Interval | 0.0' | | |
| Open Hole Size | 6.50" | | |
| Type Fluid | WATER | | |
| Density / Viscosity | | | |
| Max. Recorded Temp. | 550 | | |
| Estimated Cement Top | 2000 | | |
| Time Well Ready | 2000 | | |
| Time Logger on Bottom | 461 | | |
| Equipment Number | BECKLEY, WV B.BENNINGTON | | |
| Location | | | |
| Recorded By | | | |
| Witnessed By | | | |
| Borehole Record | | | |
| Run Number | Bit | From | To |
| | | | |
| Tubing Record | | | |
| | Size | Weight | From |
| | | | To |
| Casing Record | | | |
| | Size | Wgt/Ft | Top |
| | | | Bottom |
| Surface String | | | |
| Prot. String | | | |
| Production String | | | |
| Liner | | | |

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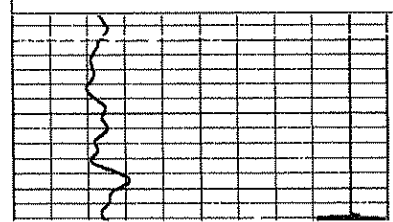
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, damages, 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 our general terms and conditions set out in our current Price Schedule.

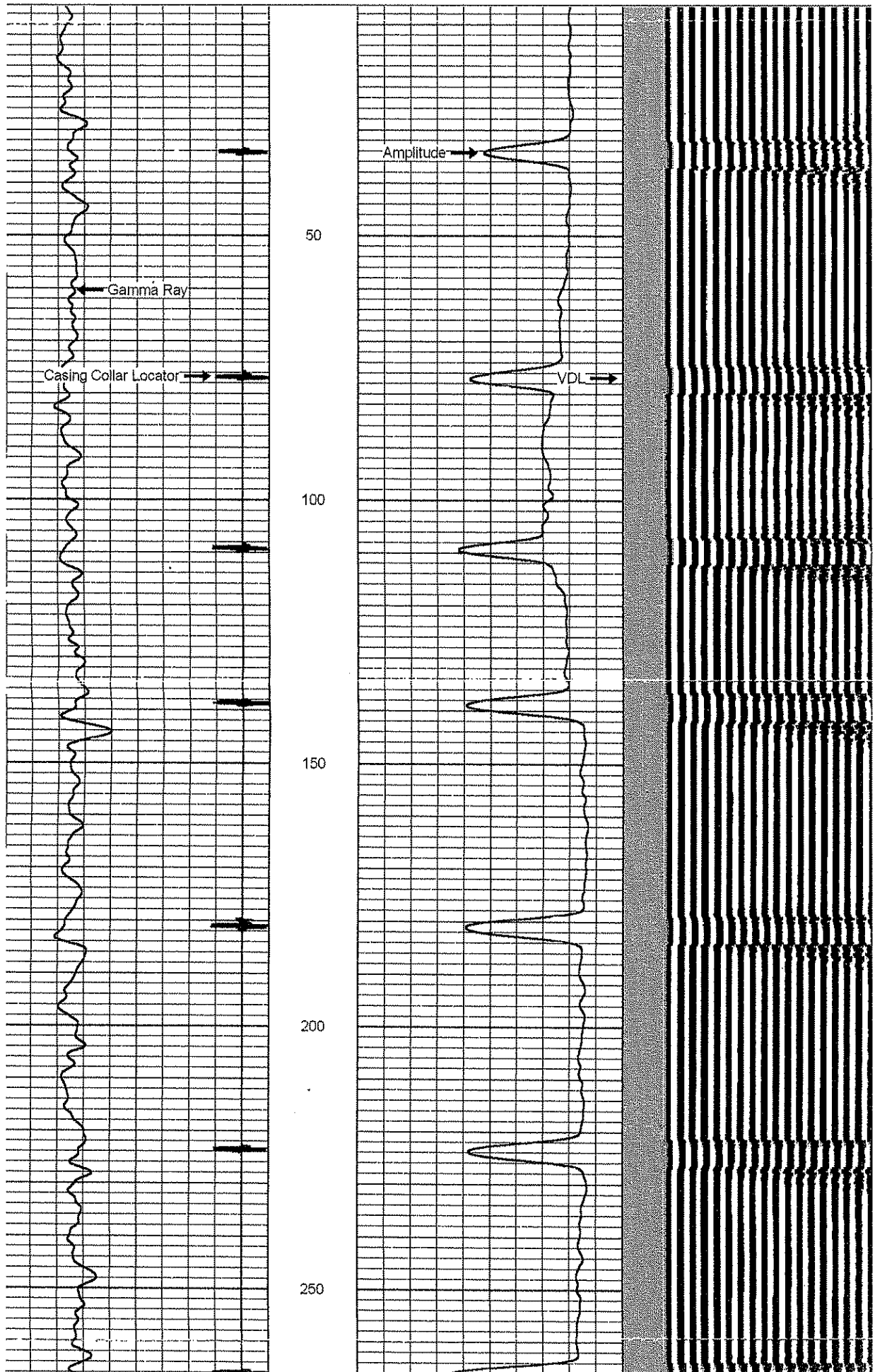
Comments

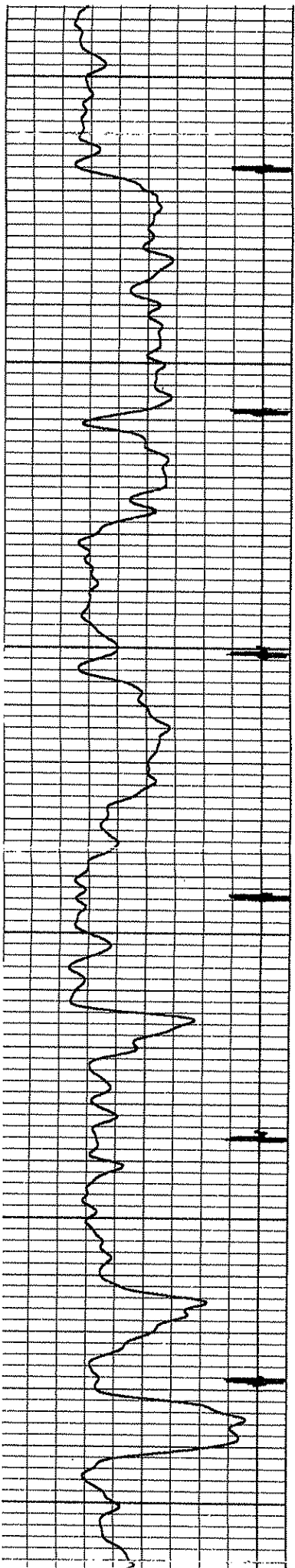
TICKET # 4906
CREW TODAY: JODY THOMAS, THOMAS KIMBALL
THANK YOU FOR USING SUPERIOR WELL SERVICES

Database File: 4-18-07-cn-x-aw-140-a.db
Dataset Pathname: pase3
Presentation Format: scbl_dr
Dataset Creation: Wed Apr 18 19:52:38 2007 by Log Open-Cased 060407
Charted by: Depth in Feet scaled 1:240

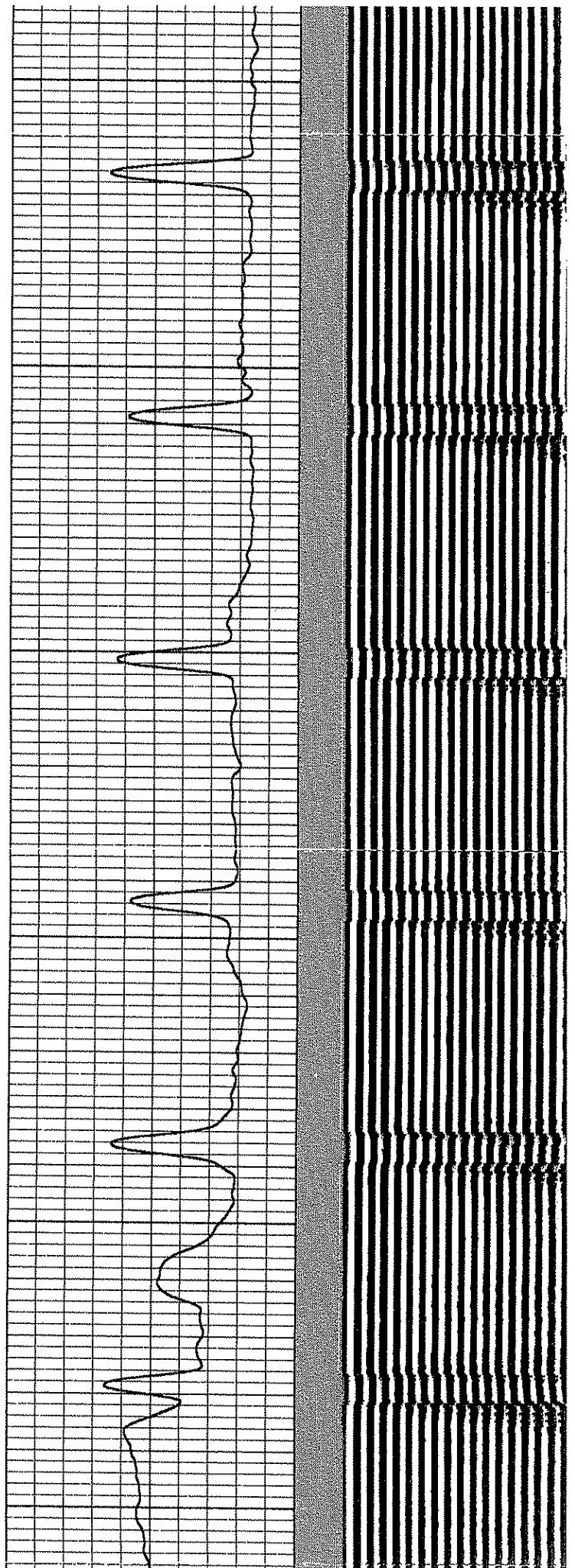
| | | | | | | | |
|---|----------------|-----|---|----------------|-----|-----|-----|
| 9 | Collar Locator | -1 | 0 | Amplitude (mV) | 100 | 200 | VDL |
| 0 | Gamma Ray | 200 | | | | | |

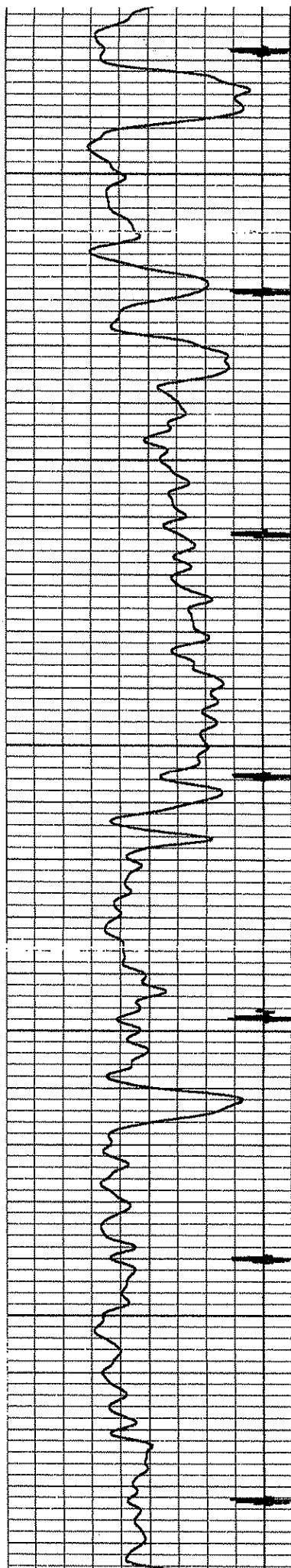






250
300
350
400
450
500





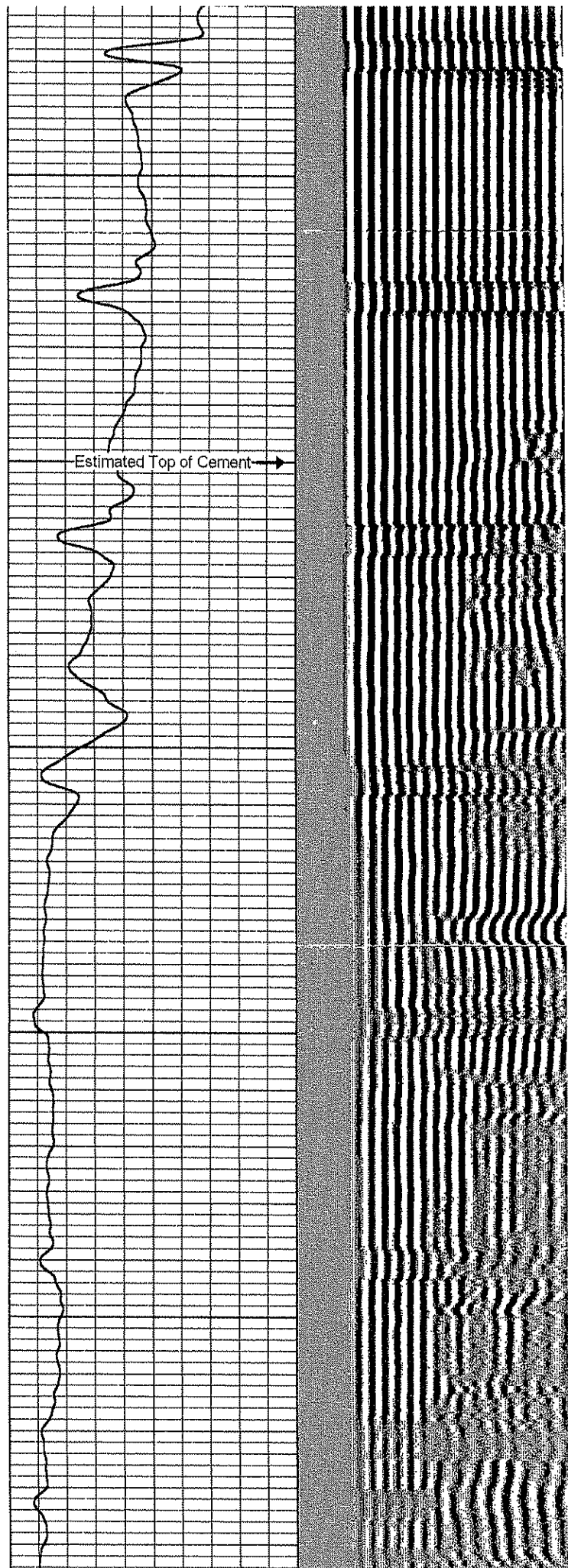
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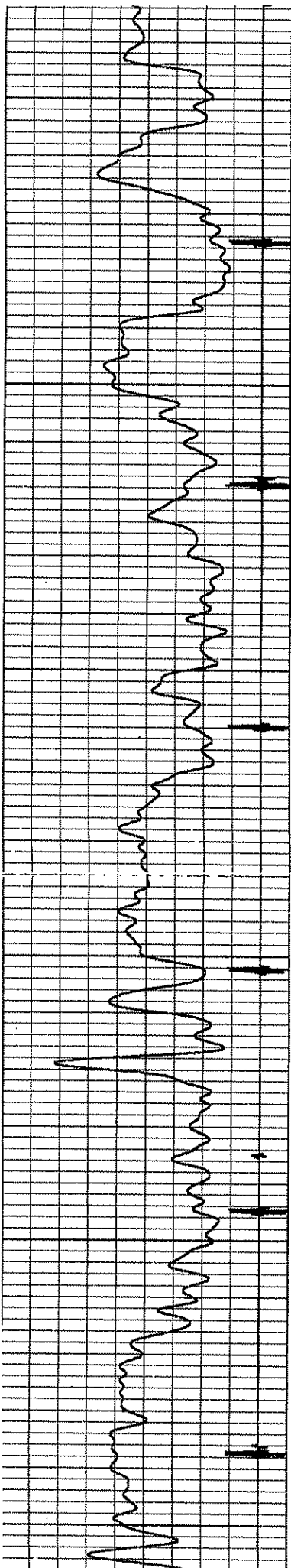
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650

700



Estimated Top of Cement →



750

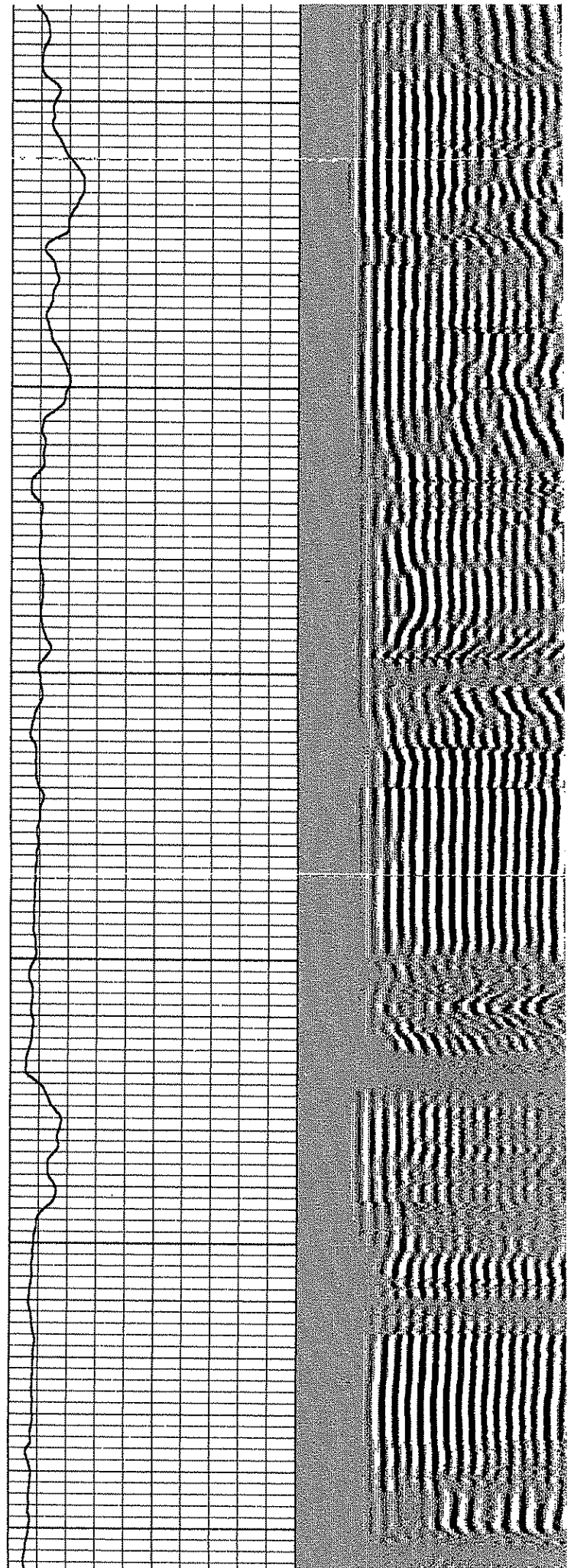
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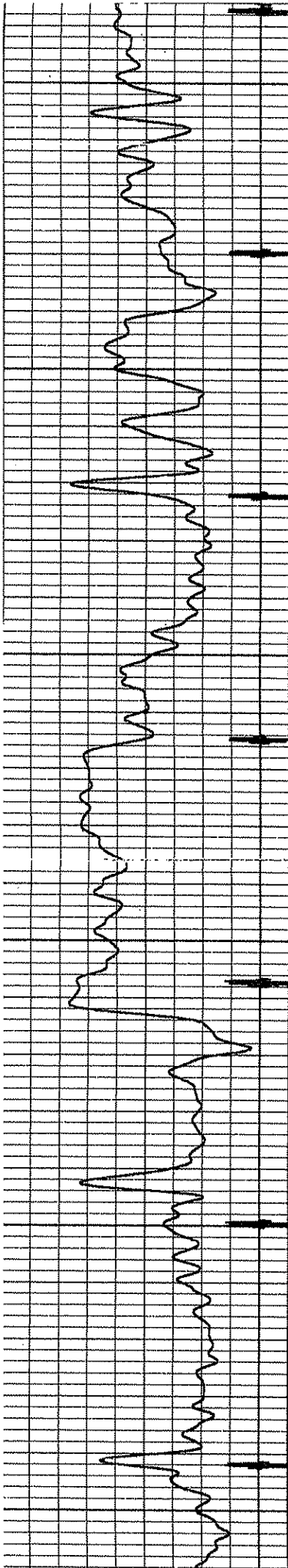
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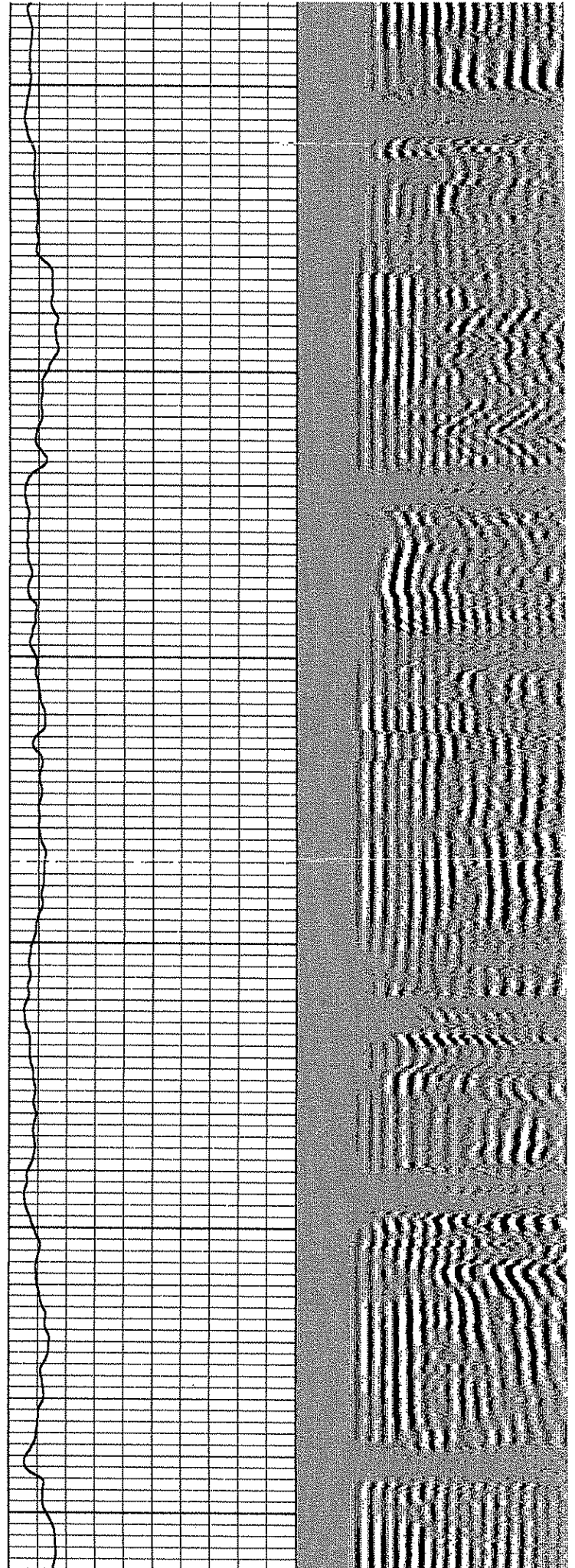
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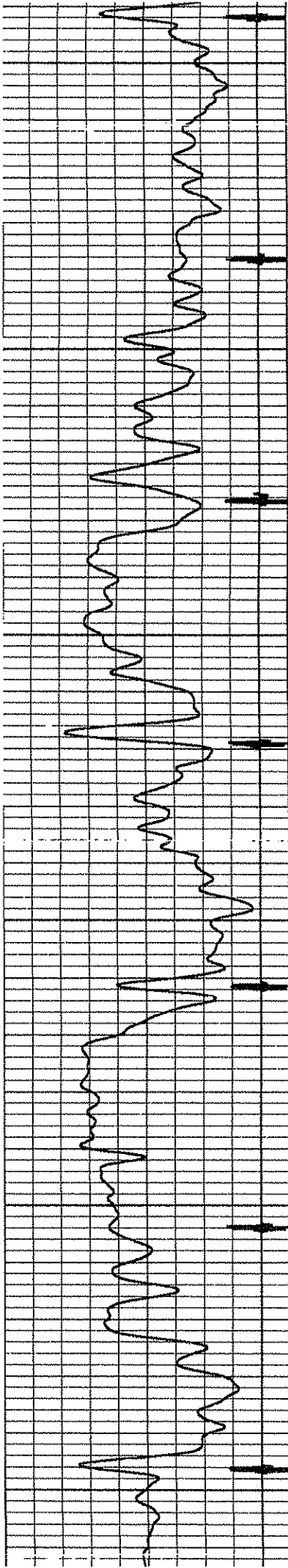
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1000
1050
1100
1150
1200
1250





1250

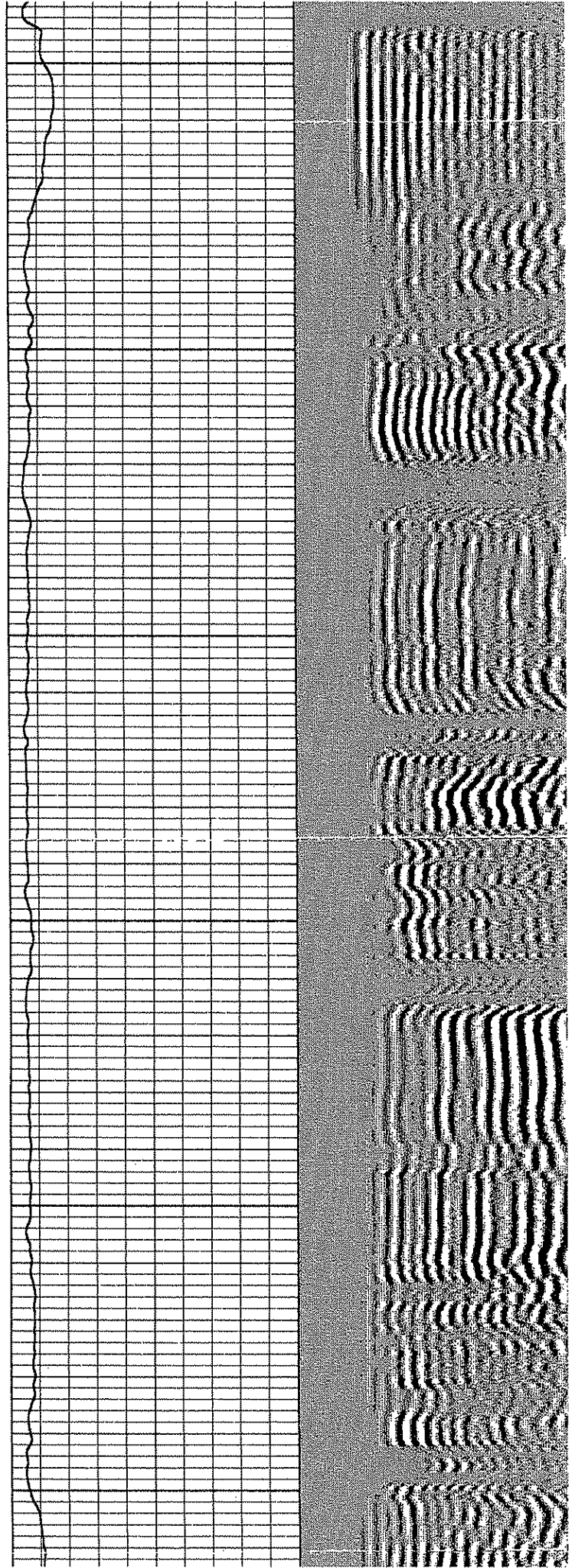
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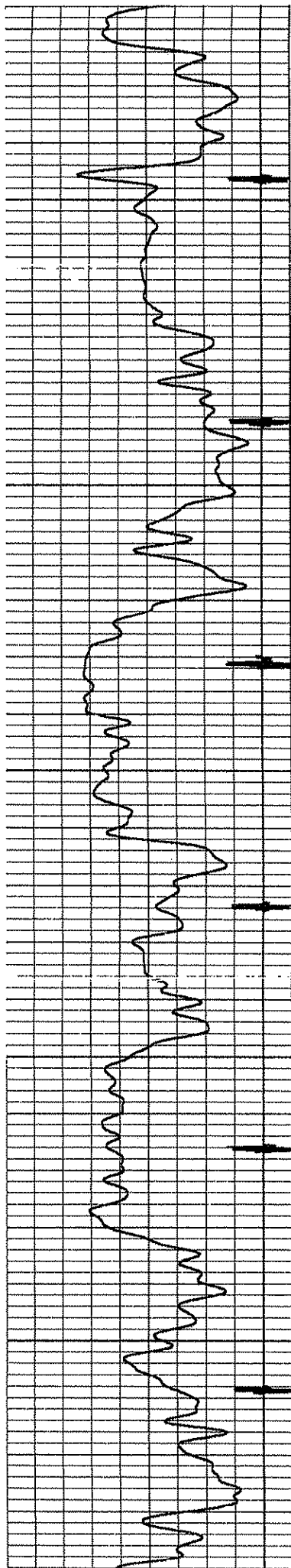
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1400

1450

1500





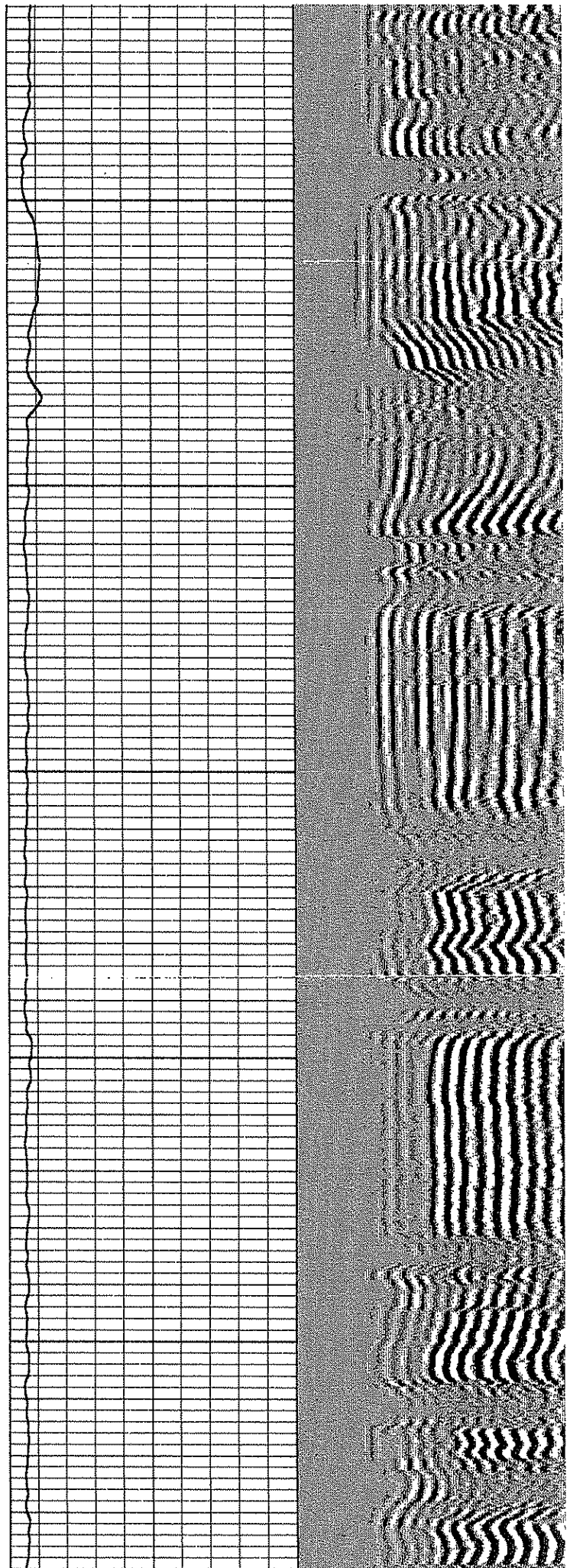
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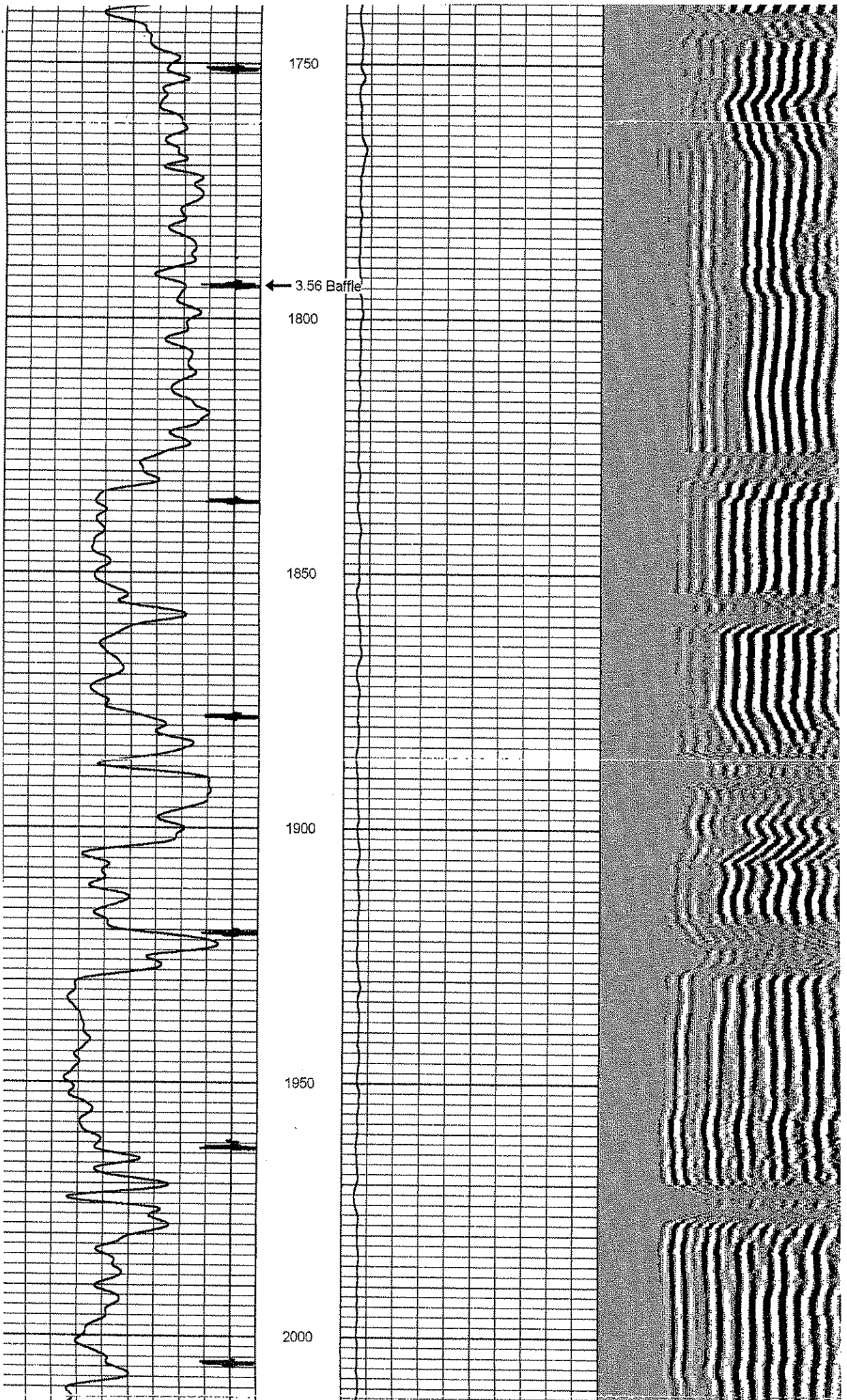
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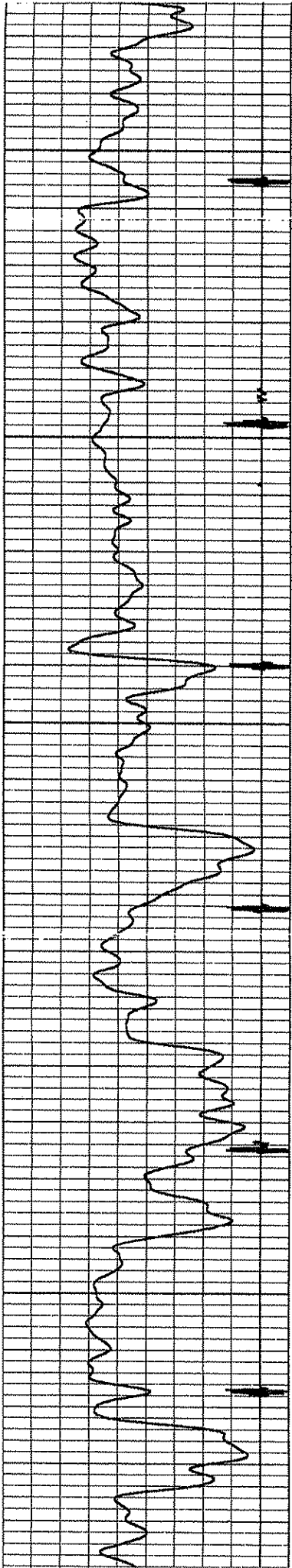
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1700







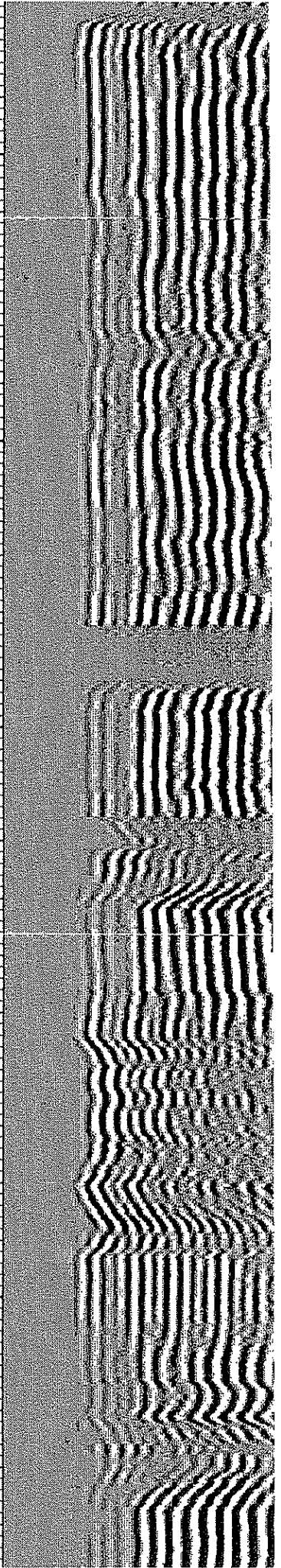
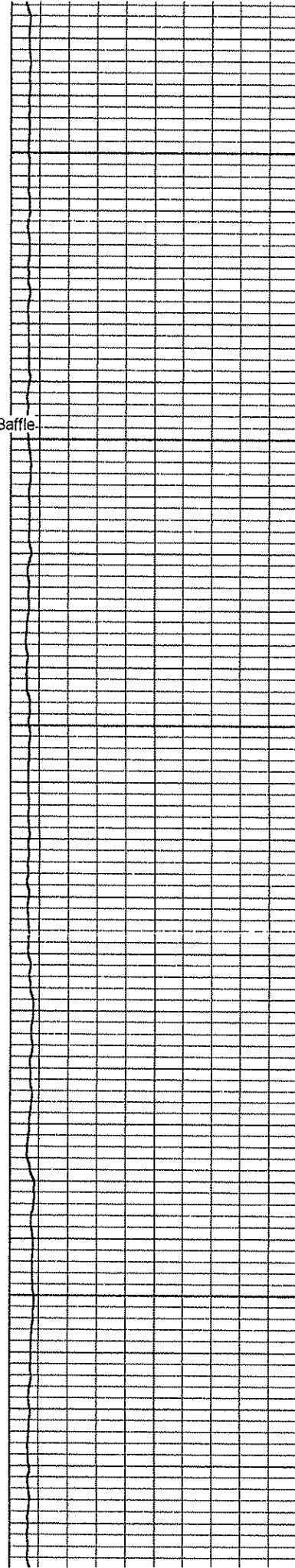
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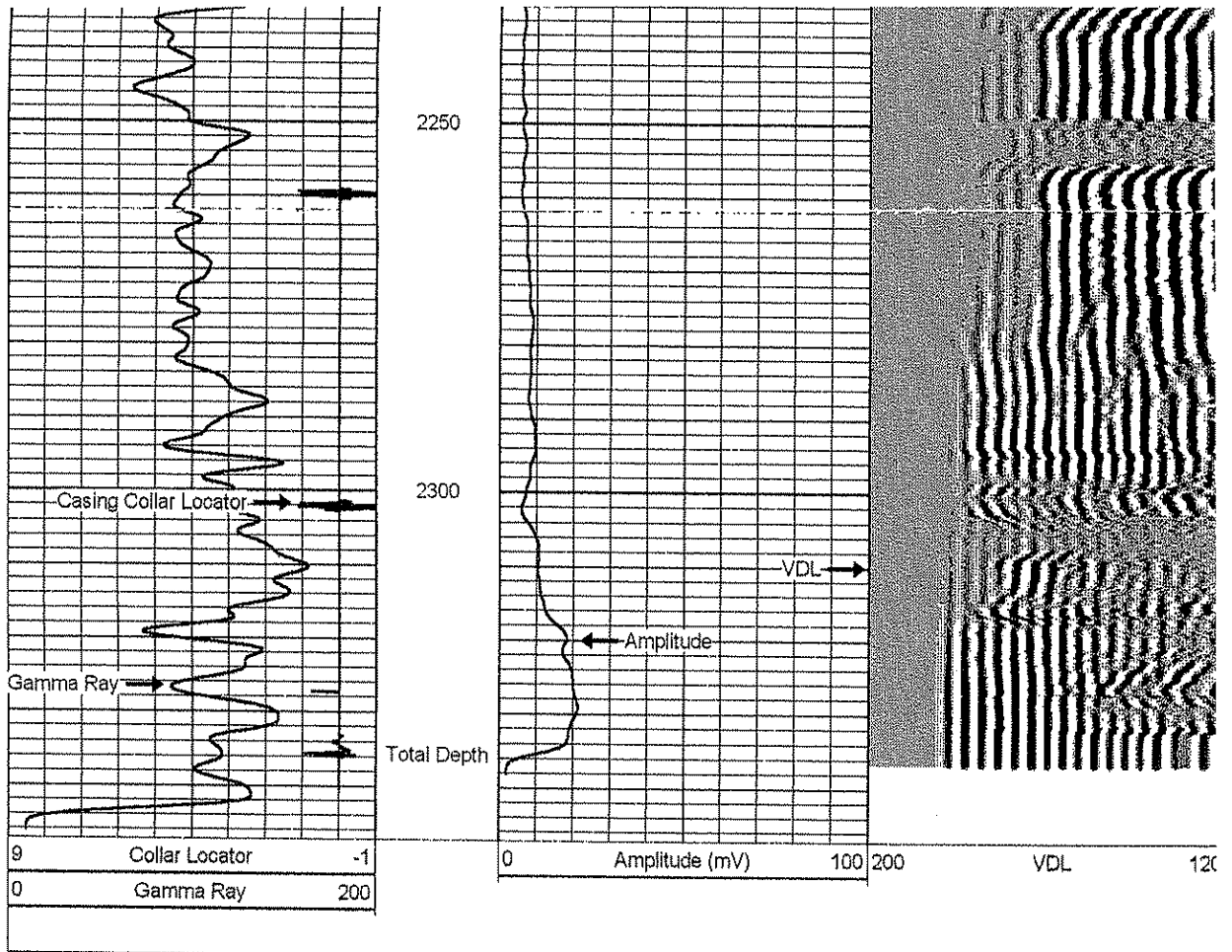
← 3.31 Baffle
2050


2100

2150

2200





| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|--------|-------------|---|--|----------|---------|---------|
| CENT | 19.29 |  | SDSCENT Centralizer for testing | 3.00 | 2.75 | 20.00 |
| WVF3FT | 11.73 | | CBLPROBE-Probe35 (PRB275_001) 7-5-06_Probe 2 3/4" Dual Receiver Bond Tool | 8.75 | 2.75 | 92.00 |
| WVF5FT | 10.73 | | | | | |

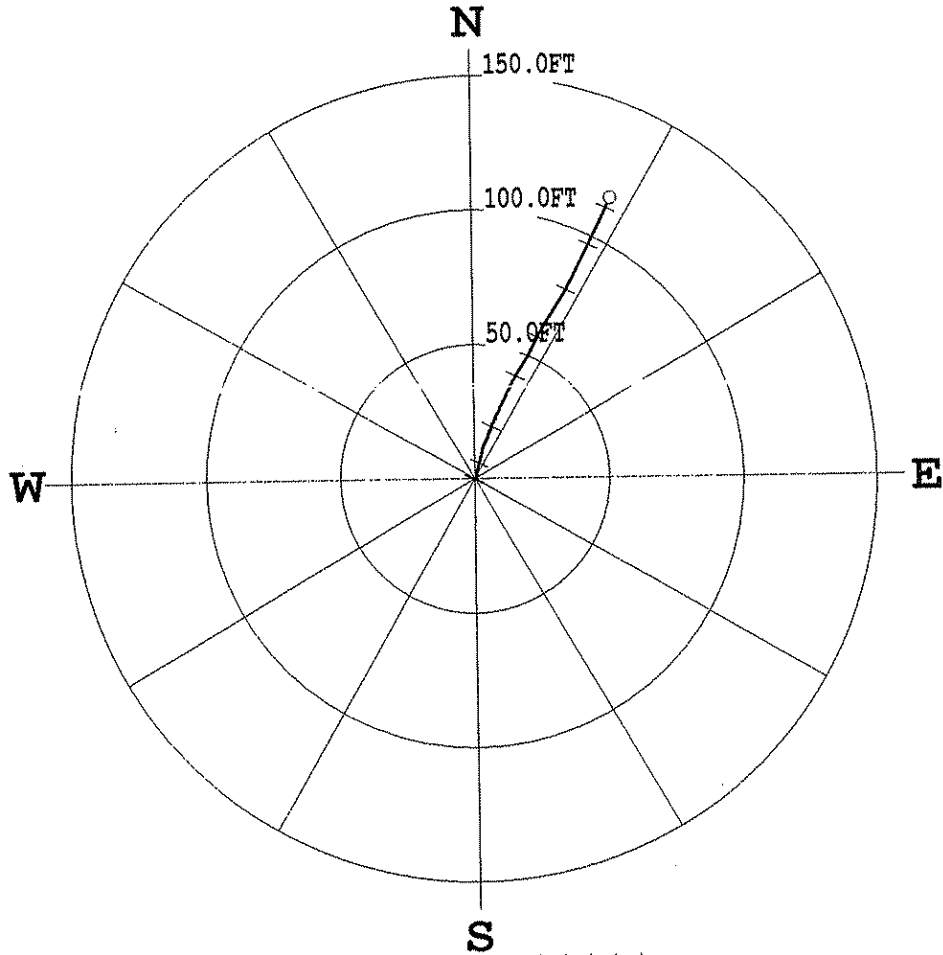
| | | | | | | |
|---|-------|--|--|------|------|-------|
| WVF3FT | 11.73 | | CBLPROBE-Probe35 (PRB275_001) 7-5-06_Probe 2 3/4" Dual Receiver Bond Tool | 8.75 | 2.75 | 92.00 |
| WVF6FT | 10.73 | | | | | |
| WVFSYNC | 7.54 | | | | | |
| GR_CCL | 7.54 | | | | | |
| CCL | 6.63 | | GR_CCL-PRB275 (Prb275_001) 7-5-06_Probe 2 3/4" Gamma Ray - CCL | 4.54 | 2.75 | 57.00 |
| GR | 3.90 | | | | | |
| CENT | 3.00 | | SDSCENT Centralizer for testing | 3.00 | 2.75 | 20.00 |
| Dataset: 4-18-07-cnx-aw-140-a.db: field/well/run1/pass3 Total Length: 19.29 ft Total Weight: 189.00 lb O.D.: 2.75 in | | | | | | |

PLAN VIEW COMPU-LOG DEVIATION

CLIENT: CONSOL ENERGY
 LOCATION:
 HOLE ID: 07-CNX-AW-140A
 DATE OF LOG: 04/12/07
 PROBE: 9136CH 1279



SCALE: 50 FT/IN
 TRUE DEPTH: 2502.26 F
 AZIMUTH: 26.4
 DISTANCE: 115.9 FT
 + = 300 FT INCR
 ○ = BOTTOM OF HOLE



* * * * * COMPU-LOG - VERTICAL DEVIATION * * * * *

| | | | |
|--------------|---|-------------|-----------------|
| CLIENT | : CONSOL ENERGY | HOLE ID. | : 07-CNX-AW-140 |
| FIELD OFFICE | : O'DRISCOLL | DATE OF LOG | : 04/12/07 |
| DATA FROM | : - | PROBE | : 9136CH , 1279 |
| MAG. DECL. | : -7.100 | DEPTH UNITS | : FEET |
| LOG: | 07-CNX-AW-140A_04-12-07_07-44_9136CH_10_0.00_2506.00_DEVI.log | | |

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
|-------------|------------|------------|-----------|----------|---------|------|-------|
| 0.5 | 0.50 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10.0 | 10.00 | -0.01 | -0.03 | 0.0 | 243.6 | 0.5 | 233.0 |
| 20.0 | 20.00 | -0.03 | -0.09 | 0.1 | 249.8 | 0.6 | 297.5 |
| 30.0 | 30.00 | -0.01 | -0.07 | 0.1 | 258.9 | 0.5 | 77.4 |
| 40.0 | 40.00 | -0.02 | 0.01 | 0.0 | 163.4 | 0.5 | 111.2 |
| 50.0 | 50.00 | -0.07 | 0.09 | 0.1 | 128.1 | 0.5 | 119.3 |
| 60.0 | 60.00 | -0.14 | 0.16 | 0.2 | 130.3 | 0.6 | 126.0 |
| 70.0 | 70.00 | -0.17 | 0.25 | 0.3 | 124.2 | 0.6 | 102.1 |
| 80.0 | 80.00 | -0.16 | 0.34 | 0.4 | 115.7 | 0.6 | 72.1 |
| 90.0 | 90.00 | -0.13 | 0.43 | 0.4 | 106.8 | 0.6 | 53.4 |
| 100.0 | 100.00 | -0.06 | 0.49 | 0.5 | 97.2 | 0.5 | 28.7 |
| 110.0 | 110.00 | 0.02 | 0.52 | 0.5 | 88.2 | 0.4 | 28.8 |
| 120.0 | 119.99 | 0.10 | 0.52 | 0.5 | 79.5 | 0.4 | 349.8 |
| 130.0 | 129.99 | 0.17 | 0.49 | 0.5 | 71.1 | 0.5 | 335.3 |
| 140.0 | 139.99 | 0.23 | 0.45 | 0.5 | 63.4 | 0.3 | 326.0 |
| 150.0 | 149.99 | 0.29 | 0.40 | 0.5 | 54.3 | 0.5 | 314.6 |
| 160.0 | 159.99 | 0.32 | 0.34 | 0.5 | 46.4 | 0.3 | 286.7 |
| 170.0 | 169.99 | 0.33 | 0.26 | 0.4 | 38.1 | 0.5 | 273.2 |

| | | | | | | | |
|--------|---------|-------|-------|------|-------|-----|-------|
| 60.0 | 60.00 | -0.14 | 0.16 | 0.2 | 130.3 | 0.6 | 126.0 |
| 70.0 | 70.00 | -0.17 | 0.25 | 0.3 | 124.2 | 0.6 | 102.1 |
| 80.0 | 80.00 | -0.16 | 0.34 | 0.4 | 115.7 | 0.6 | 72.1 |
| 90.0 | 90.00 | -0.13 | 0.43 | 0.4 | 106.8 | 0.6 | 53.4 |
| 100.0 | 100.00 | -0.06 | 0.49 | 0.5 | 97.2 | 0.5 | 28.7 |
| 110.0 | 110.00 | 0.02 | 0.52 | 0.5 | 88.2 | 0.4 | 28.8 |
| 120.0 | 119.99 | 0.10 | 0.52 | 0.5 | 79.5 | 0.4 | 349.8 |
| 130.0 | 129.99 | 0.17 | 0.49 | 0.5 | 71.1 | 0.5 | 335.3 |
| 140.0 | 139.99 | 0.23 | 0.45 | 0.5 | 63.4 | 0.3 | 326.0 |
| 150.0 | 149.99 | 0.29 | 0.40 | 0.5 | 54.3 | 0.5 | 314.6 |
| 160.0 | 159.99 | 0.32 | 0.34 | 0.5 | 46.4 | 0.3 | 286.7 |
| 170.0 | 169.99 | 0.33 | 0.26 | 0.4 | 38.1 | 0.5 | 273.2 |
| 180.0 | 179.99 | 0.32 | 0.18 | 0.4 | 28.7 | 0.5 | 270.4 |
| 190.0 | 189.99 | 0.29 | 0.10 | 0.3 | 19.3 | 0.5 | 229.1 |
| 200.0 | 199.99 | 0.22 | 0.03 | 0.2 | 7.1 | 0.6 | 218.7 |
| 210.0 | 209.99 | 0.16 | -0.04 | 0.2 | 345.0 | 0.7 | 208.7 |
| 220.0 | 219.99 | 0.07 | -0.10 | 0.1 | 305.9 | 0.6 | 214.4 |
| 230.0 | 229.99 | 0.01 | -0.10 | 0.1 | 277.0 | 0.1 | 59.2 |
| 240.0 | 239.99 | 0.06 | -0.11 | 0.1 | 298.3 | 0.3 | 309.6 |
| 250.0 | 249.99 | 0.08 | -0.17 | 0.2 | 295.5 | 0.4 | 282.8 |
| 260.0 | 259.99 | 0.06 | -0.25 | 0.3 | 283.2 | 0.6 | 247.8 |
| 270.0 | 269.99 | -0.01 | -0.34 | 0.3 | 269.1 | 0.6 | 236.2 |
| 280.0 | 279.99 | -0.11 | -0.39 | 0.4 | 254.6 | 0.7 | 199.0 |
| 290.0 | 289.99 | -0.22 | -0.40 | 0.5 | 241.4 | 0.6 | 173.5 |
| 300.0 | 299.99 | -0.32 | -0.38 | 0.5 | 229.9 | 0.6 | 168.2 |
| 310.0 | 309.99 | -0.43 | -0.35 | 0.6 | 219.0 | 0.7 | 147.3 |
| 320.0 | 319.99 | -0.49 | -0.28 | 0.6 | 209.7 | 0.6 | 121.5 |
| 330.0 | 329.99 | -0.52 | -0.20 | 0.6 | 200.7 | 1.0 | 59.7 |
| 340.0 | 339.99 | -0.50 | -0.09 | 0.5 | 189.9 | 0.8 | 63.3 |
| 350.0 | 349.98 | -0.39 | 0.03 | 0.4 | 175.5 | 1.0 | 37.4 |
| 360.0 | 359.98 | -0.24 | 0.15 | 0.3 | 148.1 | 1.1 | 32.8 |
| 370.0 | 369.98 | -0.04 | 0.25 | 0.3 | 98.6 | 1.3 | 24.8 |
| 380.0 | 379.98 | 0.18 | 0.35 | 0.4 | 63.0 | 1.5 | 21.5 |
| 390.0 | 389.97 | 0.42 | 0.45 | 0.6 | 46.9 | 1.5 | 19.8 |
| 400.0 | 399.97 | 0.66 | 0.55 | 0.9 | 39.7 | 1.7 | 17.1 |
| 410.0 | 409.97 | 0.95 | 0.64 | 1.1 | 34.1 | 1.7 | 12.2 |
| 420.0 | 419.96 | 1.22 | 0.72 | 1.4 | 30.4 | 1.6 | 14.3 |
| 430.0 | 429.96 | 1.51 | 0.76 | 1.7 | 26.9 | 1.3 | 7.7 |
| 440.0 | 439.95 | 1.76 | 0.80 | 1.9 | 24.5 | 1.7 | 8.8 |
| 450.0 | 449.95 | 1.96 | 0.81 | 2.1 | 22.3 | 0.8 | 243.5 |
| 460.0 | 459.95 | 2.04 | 0.71 | 2.2 | 19.2 | 1.5 | 325.2 |
| 470.0 | 469.94 | 2.28 | 0.77 | 2.4 | 18.6 | 1.7 | 0.3 |
| 480.0 | 479.94 | 2.49 | 0.74 | 2.6 | 16.6 | 1.5 | 68.2 |
| 490.0 | 489.94 | 2.68 | 0.91 | 2.8 | 18.8 | 1.7 | 27.3 |
| 500.0 | 499.93 | 2.93 | 0.81 | 3.0 | 15.4 | 1.8 | 48.8 |
| 510.0 | 509.93 | 3.11 | 0.91 | 3.2 | 16.3 | 1.6 | 1.8 |
| 520.0 | 519.92 | 3.33 | 1.07 | 3.5 | 17.8 | 1.5 | 18.4 |
| 530.0 | 529.92 | 3.59 | 0.97 | 3.7 | 15.1 | 1.7 | 68.1 |
| 540.0 | 539.92 | 3.72 | 1.16 | 3.9 | 17.3 | 1.6 | 5.8 |
| 550.0 | 549.91 | 4.02 | 1.19 | 4.2 | 16.6 | 1.9 | 36.1 |
| 560.0 | 559.91 | 4.27 | 1.32 | 4.5 | 17.2 | 1.8 | 347.3 |
| 570.0 | 569.90 | 4.57 | 1.42 | 4.8 | 17.3 | 2.0 | 40.9 |
| 580.0 | 579.89 | 4.93 | 1.49 | 5.1 | 16.8 | 2.1 | 16.4 |
| 590.0 | 589.89 | 5.29 | 1.55 | 5.5 | 16.3 | 2.3 | 2.8 |
| 600.0 | 599.88 | 5.61 | 1.73 | 5.9 | 17.2 | 2.6 | 17.4 |
| 610.0 | 609.87 | 6.06 | 1.83 | 6.3 | 16.8 | 2.7 | 5.7 |
| 620.0 | 619.86 | 6.47 | 1.94 | 6.8 | 16.7 | 2.4 | 4.2 |
| 630.0 | 629.85 | 6.91 | 2.02 | 7.2 | 16.3 | 2.5 | 3.1 |
| 640.0 | 639.84 | 7.36 | 2.12 | 7.7 | 16.1 | 2.6 | 22.6 |
| 650.0 | 649.83 | 7.80 | 2.21 | 8.1 | 15.8 | 2.7 | 30.6 |
| 660.0 | 659.82 | 8.19 | 2.41 | 8.5 | 16.4 | 2.7 | 23.6 |
| 670.0 | 669.80 | 8.60 | 2.61 | 9.0 | 16.9 | 3.0 | 347.5 |
| 680.0 | 679.79 | 9.05 | 2.61 | 9.4 | 16.1 | 2.7 | 28.0 |
| 690.0 | 689.78 | 9.53 | 2.63 | 9.9 | 15.5 | 2.9 | 354.7 |
| 700.0 | 699.77 | 9.95 | 2.85 | 10.3 | 16.0 | 2.8 | 16.1 |
| 710.0 | 709.76 | 10.41 | 2.89 | 10.8 | 15.5 | 2.9 | 42.8 |
| 720.0 | 719.74 | 10.87 | 3.04 | 11.3 | 15.6 | 2.8 | 11.2 |
| 730.0 | 729.73 | 11.28 | 3.11 | 11.7 | 15.4 | 2.6 | 83.5 |
| 740.0 | 739.72 | 11.65 | 3.25 | 12.1 | 15.6 | 2.6 | 43.3 |
| 750.0 | 749.71 | 12.03 | 3.42 | 12.5 | 15.9 | 2.6 | 48.6 |
| 760.0 | 759.70 | 12.45 | 3.45 | 12.9 | 15.5 | 2.8 | 10.6 |
| 770.0 | 769.69 | 12.78 | 3.73 | 13.3 | 16.3 | 2.5 | 56.5 |
| 780.0 | 779.68 | 13.22 | 3.76 | 13.7 | 15.9 | 2.8 | 27.5 |
| 790.0 | 789.67 | 13.61 | 4.06 | 14.2 | 16.6 | 3.1 | 12.3 |
| 800.0 | 799.65 | 14.07 | 4.24 | 14.7 | 16.8 | 3.0 | 57.0 |
| 810.0 | 809.64 | 14.35 | 4.63 | 15.1 | 17.9 | 3.2 | 33.2 |
| 820.0 | 819.62 | 14.92 | 4.60 | 15.6 | 17.1 | 3.6 | 341.4 |
| 830.0 | 829.60 | 15.31 | 5.01 | 16.1 | 18.1 | 3.5 | 31.8 |
| 840.0 | 839.58 | 15.97 | 5.12 | 16.8 | 17.8 | 4.0 | 340.7 |
| 850.0 | 849.55 | 16.53 | 5.17 | 17.3 | 17.4 | 3.8 | 55.3 |
| 860.0 | 859.53 | 17.02 | 5.62 | 17.9 | 18.3 | 4.0 | 53.2 |
| 870.0 | 869.50 | 17.64 | 5.47 | 18.5 | 17.2 | 4.6 | 347.0 |
| 880.0 | 879.48 | 18.03 | 6.01 | 19.0 | 18.4 | 4.1 | 15.1 |
| 890.0 | 889.45 | 18.74 | 6.20 | 19.7 | 18.3 | 4.2 | 27.5 |
| 900.0 | 899.42 | 19.40 | 6.48 | 20.5 | 18.5 | 4.2 | 5.2 |
| 910.0 | 909.39 | 20.11 | 6.56 | 21.2 | 18.1 | 4.2 | 18.9 |
| 920.0 | 919.37 | 20.76 | 6.88 | 21.9 | 18.3 | 4.1 | 30.2 |
| 930.0 | 929.34 | 21.24 | 7.33 | 22.5 | 19.0 | 4.3 | 353.3 |
| 940.0 | 939.31 | 21.89 | 7.56 | 23.2 | 19.1 | 4.3 | 356.7 |
| 950.0 | 949.29 | 22.39 | 7.95 | 23.8 | 19.5 | 4.3 | 80.0 |
| 960.0 | 959.26 | 22.98 | 7.90 | 24.3 | 19.0 | 4.9 | 352.6 |
| 970.0 | 969.22 | 23.64 | 8.34 | 25.1 | 19.4 | 4.4 | 28.9 |
| 980.0 | 979.19 | 24.34 | 8.66 | 25.8 | 19.6 | 4.4 | 36.7 |
| 990.0 | 989.16 | 24.85 | 9.22 | 26.5 | 20.3 | 4.4 | 29.8 |
| 1000.0 | 999.14 | 25.58 | 9.42 | 27.3 | 20.2 | 4.4 | 356.8 |
| 1010.0 | 1009.11 | 26.27 | 9.61 | 28.0 | 20.1 | 4.3 | 47.9 |

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|--------|---------|-------|-------|------|------|-----|-------|
| 530.0 | 529.92 | 3.59 | 0.97 | 3.7 | 15.1 | 1.7 | 68.1 |
| 540.0 | 539.92 | 3.72 | 1.16 | 3.9 | 17.3 | 1.6 | 5.8 |
| 550.0 | 549.91 | 4.02 | 1.19 | 4.2 | 16.6 | 1.9 | 36.1 |
| 560.0 | 559.91 | 4.27 | 1.32 | 4.5 | 17.2 | 1.8 | 347.3 |
| 570.0 | 569.90 | 4.57 | 1.42 | 4.8 | 17.3 | 2.0 | 40.9 |
| 580.0 | 579.89 | 4.93 | 1.49 | 5.1 | 16.8 | 2.1 | 16.4 |
| 590.0 | 589.89 | 5.29 | 1.55 | 5.5 | 16.3 | 2.3 | 2.8 |
| 600.0 | 599.88 | 5.61 | 1.73 | 5.9 | 17.2 | 2.6 | 17.4 |
| 610.0 | 609.87 | 6.06 | 1.83 | 6.3 | 16.8 | 2.7 | 5.7 |
| 620.0 | 619.86 | 6.47 | 1.94 | 6.8 | 16.7 | 2.4 | 4.2 |
| 630.0 | 629.85 | 6.91 | 2.02 | 7.2 | 16.3 | 2.5 | 3.1 |
| 640.0 | 639.84 | 7.36 | 2.12 | 7.7 | 16.1 | 2.6 | 22.6 |
| 650.0 | 649.83 | 7.80 | 2.21 | 8.1 | 15.8 | 2.7 | 30.6 |
| 660.0 | 659.82 | 8.19 | 2.41 | 8.5 | 16.4 | 2.7 | 23.6 |
| 670.0 | 669.80 | 8.60 | 2.61 | 9.0 | 16.9 | 3.0 | 347.5 |
| 680.0 | 679.79 | 9.05 | 2.61 | 9.4 | 16.1 | 2.7 | 28.0 |
| 690.0 | 689.78 | 9.53 | 2.63 | 9.9 | 15.5 | 2.9 | 354.7 |
| 700.0 | 699.77 | 9.95 | 2.85 | 10.3 | 16.0 | 2.8 | 16.1 |
| 710.0 | 709.76 | 10.41 | 2.89 | 10.8 | 15.5 | 2.9 | 42.8 |
| 720.0 | 719.74 | 10.87 | 3.04 | 11.3 | 15.6 | 2.8 | 11.2 |
| 730.0 | 729.73 | 11.28 | 3.11 | 11.7 | 15.4 | 2.6 | 83.5 |
| 740.0 | 739.72 | 11.65 | 3.25 | 12.1 | 15.6 | 2.6 | 43.3 |
| 750.0 | 749.71 | 12.03 | 3.42 | 12.5 | 15.9 | 2.6 | 48.6 |
| 760.0 | 759.70 | 12.45 | 3.45 | 12.9 | 15.5 | 2.8 | 10.6 |
| 770.0 | 769.69 | 12.78 | 3.73 | 13.3 | 16.3 | 2.5 | 56.5 |
| 780.0 | 779.68 | 13.22 | 3.76 | 13.7 | 15.9 | 2.8 | 27.5 |
| 790.0 | 789.67 | 13.61 | 4.06 | 14.2 | 16.6 | 3.1 | 12.3 |
| 800.0 | 799.65 | 14.07 | 4.24 | 14.7 | 16.8 | 3.0 | 57.0 |
| 810.0 | 809.64 | 14.35 | 4.63 | 15.1 | 17.9 | 3.2 | 33.2 |
| 820.0 | 819.62 | 14.92 | 4.60 | 15.6 | 17.1 | 3.6 | 341.4 |
| 830.0 | 829.60 | 15.31 | 5.01 | 16.1 | 18.1 | 3.5 | 31.8 |
| 840.0 | 839.58 | 15.97 | 5.12 | 16.8 | 17.8 | 4.0 | 340.7 |
| 850.0 | 849.55 | 16.53 | 5.17 | 17.3 | 17.4 | 3.8 | 55.3 |
| 860.0 | 859.53 | 17.02 | 5.62 | 17.9 | 18.3 | 4.0 | 53.2 |
| 870.0 | 869.50 | 17.64 | 5.47 | 18.5 | 17.2 | 4.6 | 347.0 |
| 880.0 | 879.48 | 18.03 | 6.01 | 19.0 | 18.4 | 4.1 | 15.1 |
| 890.0 | 889.45 | 18.74 | 6.20 | 19.7 | 18.3 | 4.2 | 27.5 |
| 900.0 | 899.42 | 19.40 | 6.48 | 20.5 | 18.5 | 4.2 | 5.2 |
| 910.0 | 909.39 | 20.11 | 6.56 | 21.2 | 18.1 | 4.2 | 18.9 |
| 920.0 | 919.37 | 20.76 | 6.88 | 21.9 | 18.3 | 4.1 | 30.2 |
| 930.0 | 929.34 | 21.24 | 7.33 | 22.5 | 19.0 | 4.3 | 353.3 |
| 940.0 | 939.31 | 21.89 | 7.56 | 23.2 | 19.1 | 4.3 | 356.7 |
| 950.0 | 949.29 | 22.39 | 7.95 | 23.8 | 19.5 | 4.3 | 80.0 |
| 960.0 | 959.26 | 22.98 | 7.90 | 24.3 | 19.0 | 4.9 | 352.6 |
| 970.0 | 969.22 | 23.64 | 8.34 | 25.1 | 19.4 | 4.4 | 28.9 |
| 980.0 | 979.19 | 24.34 | 8.66 | 25.8 | 19.6 | 4.4 | 36.7 |
| 990.0 | 989.16 | 24.85 | 9.22 | 26.5 | 20.3 | 4.4 | 29.8 |
| 1000.0 | 999.14 | 25.58 | 9.42 | 27.3 | 20.2 | 4.4 | 356.8 |
| 1010.0 | 1009.11 | 26.27 | 9.61 | 28.0 | 20.1 | 4.3 | 47.9 |
| 1020.0 | 1019.08 | 26.92 | 9.94 | 28.7 | 20.3 | 4.4 | 29.2 |
| 1030.0 | 1029.05 | 27.53 | 10.38 | 29.4 | 20.7 | 4.4 | 30.8 |
| 1040.0 | 1039.02 | 28.22 | 10.65 | 30.2 | 20.7 | 4.3 | 30.6 |
| 1050.0 | 1048.99 | 28.87 | 10.98 | 30.9 | 20.8 | 4.2 | 24.8 |
| 1060.0 | 1058.97 | 29.50 | 11.35 | 31.6 | 21.1 | 4.1 | 32.4 |
| 1070.0 | 1068.94 | 30.16 | 11.66 | 32.3 | 21.1 | 4.2 | 24.2 |
| 1080.0 | 1078.91 | 30.81 | 11.97 | 33.1 | 21.2 | 4.2 | 24.0 |
| 1090.0 | 1088.89 | 31.46 | 12.24 | 33.8 | 21.3 | 4.0 | 11.1 |
| 1100.0 | 1098.87 | 32.02 | 12.60 | 34.4 | 21.5 | 3.6 | 27.5 |
| 1110.0 | 1108.84 | 32.66 | 12.88 | 35.1 | 21.5 | 4.3 | 32.1 |
| 1120.0 | 1118.82 | 33.27 | 13.21 | 35.8 | 21.6 | 3.7 | 30.2 |
| 1130.0 | 1128.79 | 33.88 | 13.48 | 36.5 | 21.7 | 3.9 | 24.4 |
| 1140.0 | 1138.77 | 34.49 | 13.79 | 37.1 | 21.8 | 3.9 | 24.6 |
| 1150.0 | 1148.75 | 35.07 | 14.11 | 37.8 | 21.9 | 3.8 | 28.5 |
| 1160.0 | 1158.73 | 35.66 | 14.37 | 38.4 | 21.9 | 3.7 | 16.7 |
| 1170.0 | 1168.71 | 36.21 | 14.67 | 39.1 | 22.1 | 3.6 | 35.6 |
| 1180.0 | 1178.69 | 36.77 | 14.99 | 39.7 | 22.2 | 3.7 | 25.8 |
| 1190.0 | 1188.67 | 37.35 | 15.31 | 40.4 | 22.3 | 3.7 | 31.1 |
| 1200.0 | 1198.65 | 37.89 | 15.61 | 41.0 | 22.4 | 3.5 | 22.1 |
| 1210.0 | 1208.63 | 38.44 | 15.91 | 41.6 | 22.5 | 3.7 | 22.7 |
| 1220.0 | 1218.61 | 38.99 | 16.22 | 42.2 | 22.6 | 3.6 | 35.3 |
| 1230.0 | 1228.59 | 39.51 | 16.55 | 42.8 | 22.7 | 3.7 | 30.0 |
| 1240.0 | 1238.57 | 40.04 | 16.88 | 43.4 | 22.9 | 3.6 | 30.6 |
| 1250.0 | 1248.55 | 40.60 | 17.20 | 44.1 | 23.0 | 3.5 | 33.9 |
| 1260.0 | 1258.53 | 41.08 | 17.56 | 44.7 | 23.1 | 3.7 | 34.6 |
| 1270.0 | 1268.51 | 41.59 | 17.86 | 45.3 | 23.2 | 3.3 | 35.1 |
| 1280.0 | 1278.49 | 42.08 | 18.16 | 45.8 | 23.3 | 3.2 | 33.3 |
| 1290.0 | 1288.48 | 42.55 | 18.46 | 46.4 | 23.4 | 3.1 | 36.1 |
| 1300.0 | 1298.46 | 43.01 | 18.75 | 46.9 | 23.5 | 3.1 | 29.3 |
| 1310.0 | 1308.45 | 43.48 | 19.01 | 47.5 | 23.6 | 2.9 | 51.6 |
| 1320.0 | 1318.43 | 43.94 | 19.27 | 48.0 | 23.7 | 3.3 | 27.8 |
| 1330.0 | 1328.42 | 44.42 | 19.55 | 48.5 | 23.8 | 3.3 | 28.2 |
| 1340.0 | 1338.40 | 44.89 | 19.85 | 49.1 | 23.9 | 3.1 | 30.6 |
| 1350.0 | 1348.39 | 45.37 | 20.11 | 49.6 | 23.9 | 3.1 | 27.0 |
| 1360.0 | 1358.37 | 45.85 | 20.36 | 50.2 | 23.9 | 3.0 | 27.4 |
| 1370.0 | 1368.36 | 46.34 | 20.60 | 50.7 | 24.0 | 3.3 | 31.3 |
| 1380.0 | 1378.34 | 46.82 | 20.89 | 51.3 | 24.1 | 3.3 | 28.7 |
| 1390.0 | 1388.33 | 47.33 | 21.16 | 51.8 | 24.1 | 3.4 | 28.6 |
| 1400.0 | 1398.31 | 47.82 | 21.42 | 52.4 | 24.1 | 3.4 | 24.2 |
| 1410.0 | 1408.29 | 48.32 | 21.69 | 53.0 | 24.2 | 3.3 | 25.4 |
| 1420.0 | 1418.28 | 48.83 | 21.96 | 53.5 | 24.2 | 3.4 | 25.2 |
| 1430.0 | 1428.26 | 49.35 | 22.21 | 54.1 | 24.2 | 3.3 | 29.2 |
| 1440.0 | 1438.24 | 49.86 | 22.47 | 54.7 | 24.3 | 3.3 | 28.1 |
| 1450.0 | 1448.23 | 50.37 | 22.73 | 55.3 | 24.3 | 3.3 | 32.8 |
| 1460.0 | 1458.21 | 50.86 | 22.98 | 55.8 | 24.3 | 3.1 | 29.4 |
| 1470.0 | 1468.20 | 51.38 | 23.22 | 56.4 | 24.3 | 3.3 | 31.0 |
| 1480.0 | 1478.18 | 51.69 | 23.31 | 56.7 | 24.3 | 3.3 | 140.5 |

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|--------|---------|-------|-------|-------|------|-----|-------|
| 1410.0 | 1408.29 | 48.32 | 21.69 | 53.0 | 24.2 | 3.3 | 25.4 |
| 1420.0 | 1418.28 | 48.83 | 21.96 | 53.5 | 24.2 | 3.4 | 25.2 |
| 1430.0 | 1428.26 | 49.35 | 22.21 | 54.1 | 24.2 | 3.3 | 29.2 |
| 1440.0 | 1438.24 | 49.86 | 22.47 | 54.7 | 24.3 | 3.3 | 28.1 |
| 1450.0 | 1448.23 | 50.37 | 22.73 | 55.3 | 24.3 | 3.3 | 32.8 |
| 1460.0 | 1458.21 | 50.86 | 22.98 | 55.8 | 24.3 | 3.1 | 29.4 |
| 1470.0 | 1468.20 | 51.38 | 23.22 | 56.4 | 24.3 | 3.3 | 31.0 |
| 1480.0 | 1478.18 | 51.69 | 23.31 | 56.7 | 24.3 | 3.3 | 140.5 |
| 1490.0 | 1488.16 | 51.91 | 23.53 | 57.0 | 24.4 | 3.2 | 34.5 |
| 1500.0 | 1498.15 | 52.45 | 23.77 | 57.6 | 24.4 | 3.5 | 35.1 |
| 1510.0 | 1508.13 | 52.96 | 24.10 | 58.2 | 24.5 | 3.5 | 28.7 |
| 1520.0 | 1518.11 | 53.50 | 24.37 | 58.8 | 24.5 | 3.4 | 31.2 |
| 1530.0 | 1528.09 | 54.00 | 24.56 | 59.3 | 24.5 | 3.7 | 253.5 |
| 1540.0 | 1538.07 | 53.81 | 24.62 | 59.2 | 24.6 | 3.2 | 193.0 |
| 1550.0 | 1548.05 | 54.26 | 24.82 | 59.7 | 24.6 | 4.3 | 30.6 |
| 1560.0 | 1558.02 | 54.96 | 25.17 | 60.5 | 24.6 | 4.6 | 28.3 |
| 1570.0 | 1567.99 | 55.62 | 25.56 | 61.2 | 24.7 | 4.3 | 38.5 |
| 1580.0 | 1577.96 | 56.26 | 25.94 | 62.0 | 24.8 | 4.4 | 34.3 |
| 1590.0 | 1587.93 | 56.92 | 26.32 | 62.7 | 24.8 | 4.3 | 30.9 |
| 1600.0 | 1597.90 | 57.56 | 26.72 | 63.5 | 24.9 | 4.3 | 34.5 |
| 1610.0 | 1607.87 | 58.21 | 27.09 | 64.2 | 25.0 | 4.3 | 27.6 |
| 1620.0 | 1617.85 | 58.84 | 27.47 | 64.9 | 25.0 | 4.3 | 17.1 |
| 1630.0 | 1627.82 | 59.48 | 27.84 | 65.7 | 25.1 | 4.4 | 38.1 |
| 1640.0 | 1637.79 | 60.11 | 28.20 | 66.4 | 25.1 | 4.3 | 37.0 |
| 1650.0 | 1647.76 | 60.73 | 28.62 | 67.1 | 25.2 | 4.5 | 25.9 |
| 1660.0 | 1657.73 | 61.39 | 29.03 | 67.9 | 25.3 | 4.3 | 32.7 |
| 1670.0 | 1667.70 | 62.02 | 29.43 | 68.6 | 25.4 | 4.2 | 35.7 |
| 1680.0 | 1677.68 | 62.65 | 29.82 | 69.4 | 25.5 | 4.3 | 31.1 |
| 1690.0 | 1687.65 | 63.30 | 30.17 | 70.1 | 25.5 | 4.1 | 39.7 |
| 1700.0 | 1697.62 | 63.89 | 30.59 | 70.8 | 25.6 | 4.3 | 32.3 |
| 1710.0 | 1707.59 | 64.52 | 30.98 | 71.6 | 25.7 | 4.2 | 30.9 |
| 1720.0 | 1717.57 | 65.12 | 31.41 | 72.3 | 25.7 | 4.2 | 26.3 |
| 1730.0 | 1727.54 | 65.74 | 31.80 | 73.0 | 25.8 | 4.1 | 35.2 |
| 1740.0 | 1737.51 | 66.34 | 32.19 | 73.7 | 25.9 | 4.2 | 29.4 |
| 1750.0 | 1747.49 | 66.97 | 32.56 | 74.5 | 25.9 | 4.1 | 34.8 |
| 1760.0 | 1757.46 | 67.56 | 32.96 | 75.2 | 26.0 | 4.2 | 29.4 |
| 1770.0 | 1767.44 | 68.17 | 33.34 | 75.9 | 26.1 | 4.1 | 29.0 |
| 1780.0 | 1777.41 | 68.77 | 33.72 | 76.6 | 26.1 | 4.1 | 33.2 |
| 1790.0 | 1787.38 | 69.39 | 34.07 | 77.3 | 26.1 | 4.1 | 30.9 |
| 1800.0 | 1797.36 | 70.00 | 34.43 | 78.0 | 26.2 | 4.0 | 30.1 |
| 1810.0 | 1807.34 | 70.61 | 34.78 | 78.7 | 26.2 | 4.0 | 30.0 |
| 1820.0 | 1817.31 | 71.22 | 35.12 | 79.4 | 26.2 | 4.0 | 29.1 |
| 1830.0 | 1827.29 | 71.83 | 35.44 | 80.1 | 26.3 | 3.9 | ?? 1 |
| 1840.0 | 1837.26 | 72.43 | 35.76 | 80.8 | 26.3 | 3.9 | 27.9 |
| 1850.0 | 1847.24 | 73.02 | 36.09 | 81.5 | 26.3 | 3.9 | 31.3 |
| 1860.0 | 1857.22 | 73.61 | 36.40 | 82.1 | 26.3 | 3.7 | 31.1 |
| 1870.0 | 1867.20 | 74.17 | 36.73 | 82.8 | 26.3 | 3.8 | 29.3 |
| 1880.0 | 1877.18 | 74.76 | 37.01 | 83.4 | 26.3 | 3.7 | 22.0 |
| 1890.0 | 1887.16 | 75.32 | 37.31 | 84.1 | 26.3 | 3.5 | 30.9 |
| 1900.0 | 1897.14 | 75.89 | 37.60 | 84.7 | 26.4 | 3.7 | 31.7 |
| 1910.0 | 1907.11 | 76.47 | 37.86 | 85.3 | 26.3 | 3.7 | 29.3 |
| 1920.0 | 1917.09 | 77.01 | 38.18 | 86.0 | 26.4 | 3.5 | 26.4 |
| 1930.0 | 1927.07 | 77.59 | 38.43 | 86.6 | 26.4 | 3.5 | 25.7 |
| 1940.0 | 1937.06 | 78.13 | 38.73 | 87.2 | 26.4 | 3.6 | 26.1 |
| 1950.0 | 1947.04 | 78.69 | 39.00 | 87.8 | 26.4 | 3.6 | 31.0 |
| 1960.0 | 1957.02 | 79.24 | 39.29 | 88.4 | 26.4 | 3.5 | 24.3 |
| 1970.0 | 1967.00 | 79.79 | 39.56 | 89.1 | 26.4 | 3.4 | 27.1 |
| 1980.0 | 1976.98 | 80.32 | 39.81 | 89.6 | 26.4 | 3.4 | 33.5 |
| 1990.0 | 1986.96 | 80.85 | 40.07 | 90.2 | 26.4 | 3.4 | 24.7 |
| 2000.0 | 1996.95 | 81.38 | 40.33 | 90.8 | 26.4 | 3.4 | 22.6 |
| 2010.0 | 2006.93 | 81.91 | 40.58 | 91.4 | 26.4 | 3.4 | 31.4 |
| 2020.0 | 2016.91 | 82.44 | 40.84 | 92.0 | 26.4 | 3.3 | 26.5 |
| 2030.0 | 2026.90 | 82.95 | 41.08 | 92.6 | 26.3 | 3.2 | 20.6 |
| 2040.0 | 2036.88 | 83.46 | 41.34 | 93.1 | 26.3 | 3.2 | 35.1 |
| 2050.0 | 2046.86 | 83.96 | 41.60 | 93.7 | 26.4 | 3.3 | 28.2 |
| 2060.0 | 2056.85 | 84.47 | 41.85 | 94.3 | 26.4 | 3.2 | 27.4 |
| 2070.0 | 2066.83 | 84.97 | 42.10 | 94.8 | 26.4 | 3.3 | 23.9 |
| 2080.0 | 2076.82 | 85.48 | 42.35 | 95.4 | 26.4 | 3.1 | 29.8 |
| 2090.0 | 2086.80 | 85.98 | 42.60 | 96.0 | 26.4 | 3.2 | 26.9 |
| 2100.0 | 2096.78 | 86.47 | 42.86 | 96.5 | 26.4 | 3.1 | 30.2 |
| 2110.0 | 2106.77 | 86.98 | 43.10 | 97.1 | 26.4 | 3.2 | 26.0 |
| 2120.0 | 2116.75 | 87.47 | 43.34 | 97.6 | 26.4 | 3.1 | 29.1 |
| 2130.0 | 2126.74 | 87.94 | 43.60 | 98.2 | 26.4 | 3.1 | 25.9 |
| 2140.0 | 2136.72 | 88.43 | 43.85 | 98.7 | 26.4 | 3.1 | 27.1 |
| 2150.0 | 2146.71 | 88.91 | 44.09 | 99.2 | 26.4 | 3.1 | 26.2 |
| 2160.0 | 2156.70 | 89.38 | 44.31 | 99.8 | 26.4 | 2.8 | 25.7 |
| 2170.0 | 2166.68 | 89.82 | 44.58 | 100.3 | 26.4 | 3.0 | 31.2 |
| 2180.0 | 2176.67 | 90.29 | 44.83 | 100.8 | 26.4 | 2.9 | 22.0 |
| 2190.0 | 2186.65 | 90.75 | 45.06 | 101.3 | 26.4 | 2.9 | 34.1 |
| 2200.0 | 2196.64 | 91.22 | 45.31 | 101.8 | 26.4 | 3.0 | 27.8 |
| 2210.0 | 2206.63 | 91.68 | 45.54 | 102.4 | 26.4 | 3.0 | 26.1 |
| 2220.0 | 2216.61 | 92.14 | 45.78 | 102.9 | 26.4 | 3.0 | 27.0 |
| 2230.0 | 2226.60 | 92.60 | 46.00 | 103.4 | 26.4 | 2.9 | 28.1 |
| 2240.0 | 2236.59 | 93.05 | 46.24 | 103.9 | 26.4 | 3.0 | 22.4 |
| 2250.0 | 2246.57 | 93.52 | 46.46 | 104.4 | 26.4 | 2.9 | 26.2 |
| 2260.0 | 2256.56 | 93.96 | 46.70 | 104.9 | 26.4 | 2.8 | 27.7 |
| 2270.0 | 2266.55 | 94.42 | 46.90 | 105.4 | 26.4 | 2.9 | 21.7 |
| 2280.0 | 2276.54 | 94.86 | 47.13 | 105.9 | 26.4 | 2.8 | 23.1 |
| 2290.0 | 2286.52 | 95.29 | 47.34 | 106.4 | 26.4 | 2.8 | 29.6 |
| 2300.0 | 2296.51 | 95.74 | 47.54 | 106.9 | 26.4 | 2.9 | 21.3 |
| 2310.0 | 2306.50 | 96.18 | 47.76 | 107.4 | 26.4 | 2.8 | 18.3 |
| 2320.0 | 2316.49 | 96.63 | 47.98 | 107.9 | 26.4 | 2.8 | 26.8 |
| 2330.0 | 2326.47 | 97.10 | 48.15 | 108.4 | 26.4 | 2.8 | 17.6 |
| 2340.0 | 2336.46 | 97.44 | 48.34 | 108.8 | 26.4 | 2.6 | 27.7 |
| 2350.0 | 2346.45 | 97.78 | 48.51 | 109.2 | 26.4 | 2.7 | 22.8 |
| 2360.0 | 2356.44 | 98.22 | 48.70 | 109.6 | 26.4 | 2.7 | 21.9 |

| | | | | | | | |
|--------|---------|--------|-------|-------|------|-----|-------|
| 2290.0 | 2286.52 | 95.29 | 47.34 | 106.4 | 26.4 | 2.8 | 29.6 |
| 2300.0 | 2296.51 | 95.74 | 47.54 | 106.9 | 26.4 | 2.9 | 21.3 |
| 2310.0 | 2306.50 | 96.18 | 47.76 | 107.4 | 26.4 | 2.8 | 18.3 |
| 2320.0 | 2316.49 | 96.63 | 47.98 | 107.9 | 26.4 | 2.8 | 26.8 |
| 2330.0 | 2326.47 | 97.10 | 48.15 | 108.4 | 26.4 | 2.8 | 17.6 |
| 2340.0 | 2336.46 | 97.44 | 48.34 | 108.8 | 26.4 | 2.6 | 27.7 |
| 2350.0 | 2346.45 | 97.78 | 48.51 | 109.2 | 26.4 | 2.7 | 22.8 |
| 2360.0 | 2356.44 | 98.22 | 48.70 | 109.6 | 26.4 | 2.7 | 21.9 |
| 2370.0 | 2366.43 | 98.66 | 48.88 | 110.1 | 26.4 | 2.8 | 18.3 |
| 2380.0 | 2376.42 | 99.08 | 49.10 | 110.6 | 26.4 | 2.9 | 19.2 |
| 2390.0 | 2386.41 | 99.55 | 49.30 | 111.1 | 26.3 | 2.9 | 22.9 |
| 2400.0 | 2396.39 | 99.99 | 49.50 | 111.6 | 26.3 | 2.8 | 24.9 |
| 2410.0 | 2406.38 | 100.37 | 49.63 | 112.0 | 26.3 | 2.8 | 142.4 |
| 2420.0 | 2416.37 | 100.61 | 49.80 | 112.3 | 26.3 | 2.8 | 1.0 |
| 2430.0 | 2426.36 | 101.07 | 49.97 | 112.7 | 26.3 | 2.8 | 24.5 |
| 2440.0 | 2436.35 | 101.45 | 50.06 | 113.1 | 26.3 | 2.8 | 328.9 |
| 2450.0 | 2446.33 | 101.63 | 50.25 | 113.4 | 26.3 | 3.0 | 35.1 |
| 2460.0 | 2456.32 | 102.08 | 50.44 | 113.9 | 26.3 | 2.9 | 22.3 |
| 2470.0 | 2466.31 | 102.53 | 50.65 | 114.4 | 26.3 | 2.9 | 34.7 |
| 2480.0 | 2476.30 | 102.87 | 50.78 | 114.7 | 26.3 | 3.3 | 39.6 |
| 2490.0 | 2486.28 | 103.17 | 50.97 | 115.1 | 26.3 | 3.1 | 26.2 |
| 2500.0 | 2496.27 | 103.64 | 51.23 | 115.6 | 26.3 | 3.1 | 54.0 |
| 2506.0 | 2502.26 | 103.82 | 51.49 | 115.9 | 26.4 | 3.1 | 56.1 |

DRILL DATA HOLE-NOAH HORN WELL DRILLING, INC

COMPANY: CNX

HOLE #: AW-140A

LOCATION:

DRILL RIG #: 19

DATE STARTED: 04-05-07

DATED COMPLETED: 04-12-07

ELECTRIC LOGGED: YES

GROUTED: YES

| DEPTH | | THICKNESS | STRATA | REMARKS |
|-------|-------|-----------|------------------------------|---------|
| FROM | TO | FT | DESCRIPTION, VOIDS ETC | |
| 0 | 34.85 | 34.85 | OVERBURDEN | |
| 34.85 | 66 | 31.15 | SANDY SHALE/SAND | |
| 66 | 97 | 31 | SAND/SANDY SHALE | |
| 97 | 127 | 30 | SANDY SHALE/SAND | |
| 127 | 157 | 30 | SAND/COAL/SANDY SHALE | |
| 157 | 187 | 30 | SANDY SHALE/SAND | |
| 187 | 217 | 30 | SAND/SANDY SHALE/SAND | |
| 217 | 240 | 23 | SAND/SANDY SHALE | |
| 240 | 270 | 30 | SAND/SANDY SHALE | |
| 270 | 300 | 30 | SANDY SHALE/SAND | |
| 300 | 330 | 30 | SAND/COAL/SANDY SHALE | |
| 330 | 360 | 30 | SANDY SHALE/SAND | |
| 360 | 390 | 30 | SAND/SANDY SHALE | |
| 390 | 420 | 30 | SANDY SHALE/COAL/SAND | |
| 420 | 450 | 30 | SAND/SANDY SHALE | |
| 450 | 460 | 10 | SANDY SHALE | |
| 460 | 486 | 26 | SANDY SHALE/COAL/SAND | |
| 486 | 516 | 30 | SAND/SANDY SHALE | |
| 516 | 546 | 30 | SANDY SHALE/COAL/SAND | |
| 546 | 576 | 30 | SAND/SANDY SHALE | |
| 576 | 606 | 30 | SANDY SHALE | |
| 606 | 636 | 30 | SANDY SHALE/COAL/SAND | |
| 636 | 666 | 30 | SAND/SANDY SHALE | |
| 666 | 696 | 30 | SANDY SHALE | |
| 696 | 726 | 30 | SANDY SHALE/SAND | |
| 726 | 756 | 30 | SAND/SANDY SHALE | |
| 756 | 786 | 30 | SANDY SHALE | |
| 786 | 816 | 30 | SANDY SHALE/COAL/SAND | |
| 816 | 846 | 30 | SAND/COAL/SAND | |
| 846 | 876 | 30 | SAND/SANDY SHALE | |
| 876 | 906 | 30 | SANDY SHALE/SAND | |
| 906 | 936 | 30 | SAND/COAL/SANDY SHALE | |
| 936 | 966 | 30 | SANDY SHALE/SAND | |
| 966 | 996 | 30 | SAND | |
| 996 | 1026 | 30 | SANDY SHALE/COAL/SAND | |
| 1026 | 1056 | 30 | SAND/SANDY SHALE/SAND | |
| 1056 | 1086 | 30 | SAND/COAL/SANDY SHALE | |
| 1086 | 1116 | 30 | SANDY SHALE/SAND | |
| 1116 | 1146 | 30 | SAND | |
| 1146 | 1176 | 30 | SAND/COAL/SANDY SHALE | |
| 1176 | 1206 | 30 | SANDY SHALE/COAL/SANDY SHALE | |
| 1206 | 1236 | 30 | SANDY SHALE/SAND/SANDY SHALE | |

| | | | |
|------|------|----|------------------------------|
| 1236 | 1266 | 30 | SANDY SHALE/COAL/SANDY SHALE |
| 1266 | 1296 | 30 | SANDY SHALE/SAND |
| 1296 | 1326 | 30 | SAND |
| 1326 | 1356 | 30 | SAND/SANDY SHALE |
| 1356 | 1386 | 30 | SANDY SHALE/COAL/SANDY SHALE |
| 1386 | 1416 | 30 | SANDY SHALE/COAL/SAND |
| 1416 | 1446 | 30 | SAND/SANDY SHALE/SAND |
| 1446 | 1476 | 30 | SAND/SANDY SHALE |
| 1476 | 1536 | 60 | SANDY SHALE/COAL/SANDY SHALE |
| 1536 | 1566 | 30 | SANDY SHALE/SAND |
| 1566 | 1596 | 30 | SAND/COAL/SANDY SHALE |
| 1596 | 1626 | 30 | SAND |
| 1626 | 1656 | 30 | SAND/COAL/SAND |
| 1656 | 1686 | 30 | SAND/SANDY SHALE |
| 1686 | 1716 | 30 | SANDY SHALE/SAND |
| 1716 | 1746 | 30 | SANDY SHALE |
| 1746 | 1776 | 30 | SANDY SHALE/SAND |
| 1776 | 1806 | 30 | SAND/SANDY SHALE/SAND |
| 1806 | 1836 | 30 | SAND/COAL/SAND |
| 1836 | 1866 | 30 | SAND |
| 1866 | 1896 | 30 | SAND/COAL/SANDY SHALE |
| 1896 | 1926 | 30 | SANDY SHALE/COAL/SAND |
| 1926 | 1956 | 30 | SAND |
| 1956 | 1986 | 30 | SAND/COAL/SAND |
| 1986 | 2016 | 30 | SAND/SANDY SHALE |
| 2016 | 2046 | 30 | SANDY SHALE/SAND |
| 2046 | 2076 | 30 | SAND/SANDY SHALE/SAND |
| 2076 | 2080 | 4 | SAND/SANDY SHALE |
| 2080 | 2083 | 3 | COAL |
| 2083 | 2106 | 23 | SANDY SHALE/SAND |
| 2106 | 2110 | 4 | SAND |
| 2110 | 2111 | 1 | COAL |
| 2111 | 2136 | 25 | SANDY SHALE/SAND |
| 2136 | 2166 | 30 | SAND/SANDY SHALE/SAND |
| 2166 | 2196 | 30 | SANDY SHALE/SAND |
| 2196 | 2286 | 90 | SAND/SANDY SHALE/SAND |
| 2286 | 2316 | 30 | SAND/COAL/SANDY SHALE/SAND |
| 2316 | 2346 | 30 | SAND |
| 2346 | 2406 | 60 | SAND |
| 2406 | 2436 | 30 | SAND/SANDY SHALE/SAND |
| 2436 | 2496 | 60 | SAND |
| 2496 | 2530 | 34 | SAND/SANDY SHALE/RED SHALE |

2530' – TOTAL DEPTH
34.85' – 13 3/8" CASING
223.25' – 9 5/8" CASING
444.75' – 7" CASING
2350.85' – 4 1/2" CASING